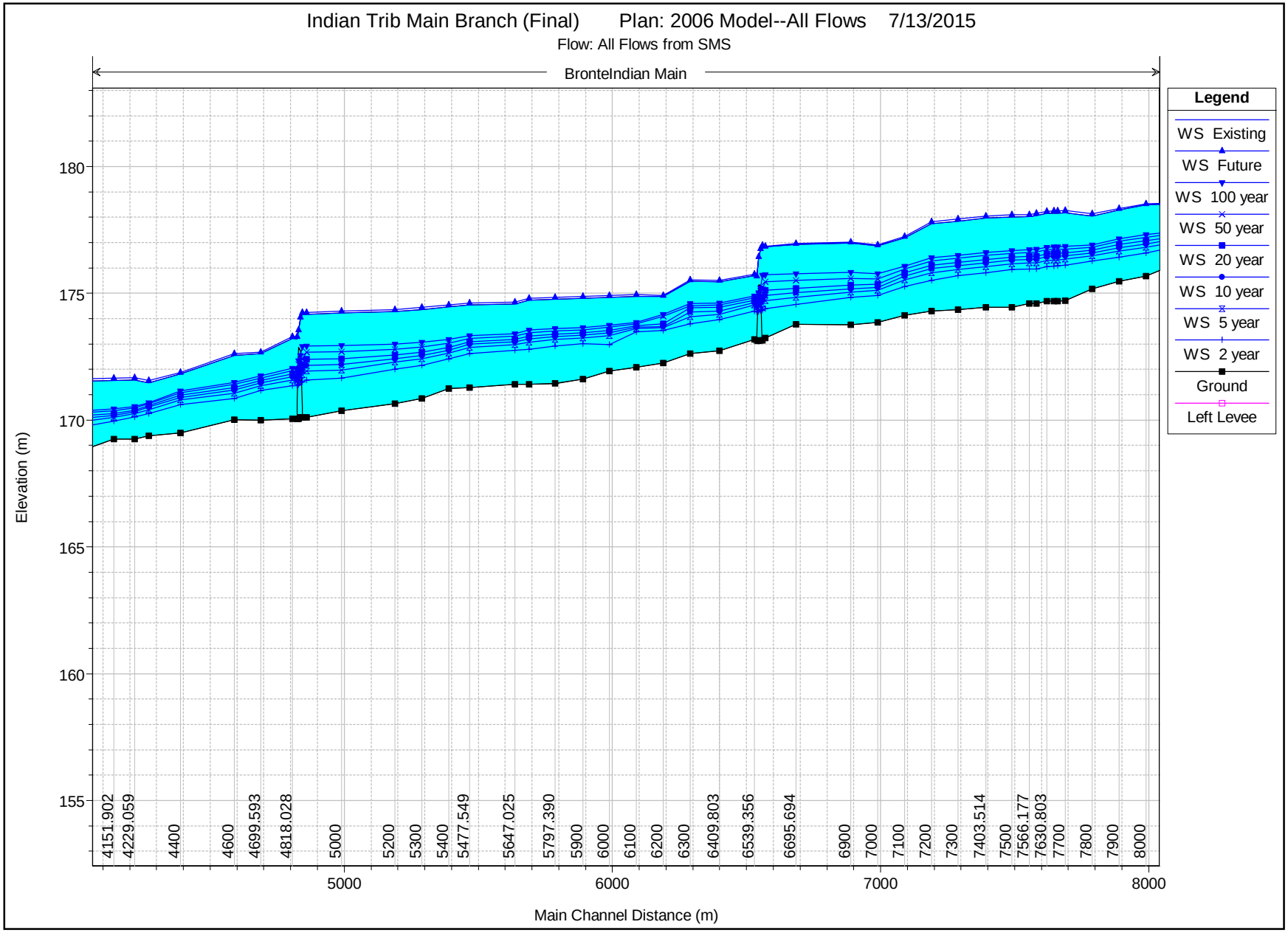

Indian Trib Main Branch (Final) Plan: 2006 Model--All Flows 7/13/2015
Flow: All Flows from SMS
BronteIndian Main
Legend
WS Existing
WS Future
WS 100 year
WS 50 year
WS 20 year
WS 10 year
WS 5 year
WS 2 year
Ground
Left Levee
Elevation (m)
180
175
170
165
160
155
4151.902
4229.059
4400
4600
4699.593
4818.028
5000
5200
5300
5400
5477.549
5647.025
5797.390
5900
6000
6100
6200
6300
6409.803
6539.356
6695.694
6900
7000
7100
7200
7300
7403.514
7500
7566.177
7630.803
7700
7800
7900
8000
5000
6000
7000
8000
Main Channel Distance (m)

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	14266.72	Existing	40.88	186.32	187.46		187.53	0.003478	1.73	62.81	183.37	0.61
Main	14266.72	Future	53.58	186.32	187.54		187.61	0.003548	1.85	76.57	197.09	0.62
Main	14266.72	100 year	13.60	186.32	187.20	187.14	187.28	0.004356	1.49	19.88	118.08	0.64
Main	14266.72	50 year	12.40	186.32	187.18	187.12	187.26	0.004381	1.47	17.80	112.56	0.63
Main	14266.72	20 year	10.50	186.32	187.15	187.10	187.22	0.004202	1.38	14.53	86.17	0.61
Main	14266.72	10 year	8.89	186.32	187.11	187.07	187.19	0.004101	1.30	12.00	72.63	0.60
Main	14266.72	5 year	6.97	186.32	187.07	187.00	187.14	0.003963	1.20	9.09	60.43	0.58
Main	14266.72	2 year	3.97	186.32	186.97		187.02	0.003714	0.98	4.38	28.95	0.54
Main	14200	Existing	40.88	185.84	187.22		187.29	0.004002	1.84	63.17	201.24	0.64
Main	14200	Future	53.58	185.84	187.28		187.36	0.004152	1.97	76.72	208.25	0.66
Main	14200	100 year	13.60	185.84	186.98		187.03	0.003181	1.31	25.54	122.12	0.54
Main	14200	50 year	12.40	185.84	186.96		187.01	0.003168	1.27	23.34	116.03	0.54
Main	14200	20 year	10.50	185.84	186.93		186.98	0.003141	1.22	19.84	106.93	0.53
Main	14200	10 year	8.89	185.84	186.89		186.94	0.003107	1.17	16.74	96.92	0.52
Main	14200	5 year	6.97	185.84	186.85		186.90	0.003182	1.11	12.61	81.75	0.52
Main	14200	2 year	3.97	185.84	186.75		186.79	0.003346	0.97	6.11	48.90	0.51
Main	14100	Existing	40.88	185.70	186.87	186.79	186.91	0.003267	1.53	80.06	271.60	0.57
Main	14100	Future	53.58	185.70	186.92	186.82	186.97	0.003467	1.65	95.06	277.57	0.60
Main	14100	100 year	13.60	185.70	186.71	186.64	186.74	0.002468	1.12	37.10	252.04	0.48
Main	14100	50 year	12.40	185.70	186.70	186.62	186.73	0.002336	1.08	34.80	249.98	0.46
Main	14100	20 year	10.50	185.70	186.66	186.60	186.69	0.002472	1.05	25.87	183.61	0.47
Main	14100	10 year	8.89	185.70	186.61	186.54	186.66	0.002556	1.15	19.03	142.87	0.48
Main	14100	5 year	6.97	185.70	186.57	186.43	186.61	0.002426	1.08	14.46	83.53	0.47
Main	14100	2 year	3.97	185.70	186.47		186.51	0.002292	0.95	7.37	59.17	0.44
Main	14000	Existing	40.88	185.43	186.37		186.42	0.007601	1.77	60.65	254.57	0.81
Main	14000	Future	53.58	185.43	186.45		186.49	0.006463	1.79	81.34	306.97	0.77
Main	14000	100 year	13.60	185.43	186.15	186.15	186.24	0.014352	1.97	18.16	141.07	1.06
Main	14000	50 year	12.40	185.43	186.13	186.13	186.23	0.015485	2.00	15.94	121.76	1.09
Main	14000	20 year	10.50	185.43	186.12	186.12	186.20	0.013243	1.81	14.65	106.51	1.01
Main	14000	10 year	8.89	185.43	186.11	186.11	186.18	0.011977	1.68	13.25	101.78	0.95
Main	14000	5 year	6.97	185.43	186.08	186.08	186.15	0.010997	1.55	11.07	94.26	0.90
Main	14000	2 year	3.97	185.43	186.03	186.03	186.09	0.009815	1.32	6.79	76.06	0.83
Main	13900	Existing	40.88	185.25	186.20		186.21	0.001132	0.76	119.30	285.85	0.32
Main	13900	Future	53.58	185.25	186.26		186.27	0.001286	0.87	136.61	294.97	0.35
Main	13900	100 year	13.60	185.25	185.94		185.94	0.001178	0.52	53.86	209.81	0.30
Main	13900	50 year	12.40	185.25	185.91		185.92	0.001258	0.51	49.21	202.72	0.30

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	13900	20 year	10.50	185.25	185.88		185.88	0.001390	0.50	42.15	190.73	0.31
Main	13900	10 year	8.89	185.25	185.85		185.85	0.001506	0.49	36.43	180.51	0.32
Main	13900	5 year	6.97	185.25	185.81		185.81	0.001679	0.46	29.67	163.03	0.33
Main	13900	2 year	3.97	185.25	185.73		185.74	0.001914	0.59	18.59	141.93	0.37
Main	13800	Existing	40.88	185.15	186.14		186.14	0.000872	0.67	131.73	318.57	0.28
Main	13800	Future	53.58	185.15	186.18		186.19	0.001093	0.79	147.44	347.59	0.32
Main	13800	100 year	13.60	185.15	185.89		185.89	0.000510	0.35	70.36	215.72	0.20
Main	13800	50 year	12.40	185.15	185.87		185.87	0.000540	0.35	64.98	211.88	0.20
Main	13800	20 year	10.50	185.15	185.83		185.83	0.000558	0.39	56.94	195.59	0.21
Main	13800	10 year	8.89	185.15	185.79		185.80	0.000587	0.38	50.42	189.55	0.21
Main	13800	5 year	6.97	185.15	185.76		185.76	0.000521	0.35	44.01	178.38	0.20
Main	13800	2 year	3.97	185.15	185.69		185.69	0.000433	0.29	31.96	165.01	0.18
Main	13700	Existing	68.16	184.84	185.98	185.80	186.02	0.003402	1.63	112.53	307.47	0.59
Main	13700	Future	78.27	184.84	186.02	185.84	186.06	0.003358	1.67	125.46	340.84	0.59
Main	13700	100 year	26.50	184.84	185.78	185.67	185.81	0.002772	1.21	60.48	229.02	0.51
Main	13700	50 year	22.60	184.84	185.77	185.66	185.79	0.002442	1.11	56.50	226.02	0.47
Main	13700	20 year	17.80	184.84	185.73	185.65	185.75	0.002184	1.01	49.57	220.02	0.44
Main	13700	10 year	14.30	184.84	185.69	185.62	185.71	0.002405	1.00	40.84	211.46	0.46
Main	13700	5 year	11.00	184.84	185.67	185.59	185.69	0.002038	0.89	35.65	205.93	0.42
Main	13700	2 year	6.50	184.84	185.59	185.54	185.62	0.002228	0.87	21.25	171.57	0.43
Main	13600	Existing	68.16	184.74	185.59		185.64	0.003335	1.48	99.63	250.01	0.58
Main	13600	Future	78.27	184.74	185.63		185.69	0.003258	1.53	111.37	257.79	0.58
Main	13600	100 year	26.50	184.74	185.31		185.37	0.006151	1.41	37.19	184.22	0.72
Main	13600	50 year	22.60	184.74	185.26		185.33	0.008356	1.50	29.12	151.70	0.81
Main	13600	20 year	17.80	184.74	185.21	185.21	185.29	0.010344	1.52	22.23	143.97	0.89
Main	13600	10 year	14.30	184.74	185.20	185.20	185.26	0.008250	1.32	20.41	142.53	0.78
Main	13600	5 year	11.00	184.74	185.14	185.14	185.22	0.013296	1.42	12.59	98.17	0.96
Main	13600	2 year	6.50	184.74	185.08	185.08	185.14	0.012417	1.18	7.97	64.32	0.89
Main	13500	Existing	68.16	184.43	185.41		185.45	0.001224	1.12	134.04	305.01	0.37
Main	13500	Future	78.27	184.43	185.46		185.49	0.001236	1.17	148.50	307.08	0.37
Main	13500	100 year	26.50	184.43	185.13		185.16	0.000989	0.80	59.20	178.05	0.31
Main	13500	50 year	22.60	184.43	185.09		185.11	0.000893	0.73	52.49	152.71	0.29
Main	13500	20 year	17.80	184.43	185.03		185.05	0.000764	0.63	44.39	123.21	0.27
Main	13500	10 year	14.30	184.43	184.98		185.00	0.000675	0.56	38.80	107.74	0.25
Main	13500	5 year	11.00	184.43	184.93		184.94	0.000576	0.48	33.65	97.85	0.23
Main	13500	2 year	6.50	184.43	184.84		184.84	0.000471	0.37	24.61	88.00	0.20

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	13388.83	Existing	68.16	184.12	185.30		185.31	0.001292	0.98	158.29	314.09	0.36
Main	13388.83	Future	78.27	184.12	185.34		185.36	0.001283	1.01	173.33	315.48	0.37
Main	13388.83	100 year	26.50	184.12	185.02		185.03	0.001347	0.73	76.28	248.99	0.34
Main	13388.83	50 year	22.60	184.12	184.98		184.99	0.001349	0.69	67.55	235.60	0.34
Main	13388.83	20 year	17.80	184.12	184.93		184.94	0.001484	0.66	54.90	210.16	0.35
Main	13388.83	10 year	14.30	184.12	184.89		184.89	0.001526	0.62	46.60	200.15	0.34
Main	13388.83	5 year	11.00	184.12	184.84		184.85	0.001634	0.58	37.86	187.03	0.35
Main	13388.83	2 year	6.50	184.12	184.76		184.76	0.001667	0.47	24.51	130.44	0.33
Main	13300	Existing	68.16	184.04	185.16		185.17	0.001152	0.87	172.32	321.09	0.34
Main	13300	Future	78.27	184.04	185.20		185.21	0.001153	0.91	187.82	323.09	0.34
Main	13300	100 year	26.50	184.04	184.91		184.91	0.000735	0.51	100.73	250.64	0.25
Main	13300	50 year	22.60	184.04	184.87		184.88	0.000690	0.47	92.67	246.74	0.24
Main	13300	20 year	17.80	184.04	184.81		184.81	0.000754	0.47	76.54	236.82	0.25
Main	13300	10 year	14.30	184.04	184.76		184.76	0.000772	0.45	65.51	228.98	0.24
Main	13300	5 year	11.00	184.04	184.71		184.71	0.000778	0.41	54.19	215.88	0.24
Main	13300	2 year	6.50	184.04	184.63		184.63	0.000704	0.33	37.87	184.22	0.22
Main	13200	Existing	68.16	183.74	185.06		185.07	0.001151	0.96	169.51	336.91	0.34
Main	13200	Future	78.27	183.74	185.11		185.12	0.001150	1.00	185.92	344.06	0.35
Main	13200	100 year	26.50	183.74	184.84		184.85	0.000903	0.68	97.92	299.72	0.29
Main	13200	50 year	22.60	183.74	184.81		184.81	0.000878	0.65	89.00	291.35	0.28
Main	13200	20 year	17.80	183.74	184.75		184.75	0.000725	0.55	74.03	216.98	0.25
Main	13200	10 year	14.30	183.74	184.71		184.71	0.000630	0.50	65.09	197.29	0.23
Main	13200	5 year	11.00	183.74	184.66		184.66	0.000561	0.46	55.95	185.99	0.22
Main	13200	2 year	6.50	183.74	184.59		184.59	0.000396	0.37	43.44	172.93	0.18
Main	13100	Existing	68.16	183.51	184.83		184.85	0.004680	1.44	105.51	277.04	0.57
Main	13100	Future	78.27	183.51	184.87		184.90	0.004312	1.42	119.30	293.37	0.55
Main	13100	100 year	26.50	183.51	184.61	184.53	184.63	0.007047	1.57	50.50	238.27	0.68
Main	13100	50 year	22.60	183.51	184.59	184.53	184.61	0.007031	1.54	45.18	232.24	0.67
Main	13100	20 year	17.80	183.51	184.56	184.50	184.58	0.005915	1.40	40.04	223.72	0.61
Main	13100	10 year	14.30	183.51	184.54	184.48	184.55	0.005625	1.34	34.37	209.17	0.60
Main	13100	5 year	11.00	183.51	184.50	184.46	184.52	0.006327	1.39	27.09	199.39	0.63
Main	13100	2 year	6.50	183.51	184.45		184.48	0.005623	1.26	18.17	169.25	0.59
Main	13000	Existing	68.16	182.62	184.63		184.65	0.001261	1.29	155.67	338.58	0.38
Main	13000	Future	78.27	182.62	184.68		184.71	0.001241	1.32	175.82	380.96	0.38
Main	13000	100 year	26.50	182.62	184.24		184.28	0.002266	1.34	53.98	187.34	0.47

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	13000	50 year	22.60	182.62	184.18		184.23	0.002658	1.38	43.81	173.74	0.51
Main	13000	20 year	17.80	182.62	184.09		184.16	0.003632	1.48	29.46	143.94	0.58
Main	13000	10 year	14.30	182.62	184.00	183.93	184.10	0.004253	1.66	18.05	106.65	0.63
Main	13000	5 year	11.00	182.62	183.91	183.87	184.02	0.004720	1.62	12.58	51.39	0.65
Main	13000	2 year	6.50	182.62	183.72	183.72	183.87	0.007912	1.73	4.90	28.27	0.81
Main	12900	Existing	68.16	182.13	184.58	183.88	184.58	0.000391	0.84	216.81	277.33	0.22
Main	12900	Future	78.27	182.13	184.63	183.91	184.64	0.000441	0.91	231.04	288.52	0.23
Main	12900	100 year	26.50	182.13	184.21	183.67	184.22	0.000237	0.54	127.32	218.54	0.16
Main	12900	50 year	22.60	182.13	184.16	183.65	184.17	0.000216	0.50	116.75	211.56	0.15
Main	12900	20 year	17.80	182.13	184.08	183.60	184.09	0.000197	0.46	100.93	200.39	0.14
Main	12900	10 year	14.30	182.13	184.02	183.55	184.02	0.000185	0.42	87.39	191.09	0.14
Main	12900	5 year	11.00	182.13	183.93	183.50	183.93	0.000183	0.40	71.74	179.54	0.14
Main	12900	2 year	6.50	182.13	183.71	183.20	183.72	0.000297	0.46	36.77	135.21	0.17
Main	12834.18	Existing	68.16	182.13	184.49	184.27	184.54	0.001458	1.53	135.46	276.16	0.41
Main	12834.18	Future	78.27	182.13	184.54	184.31	184.59	0.001544	1.61	148.02	285.64	0.43
Main	12834.18	100 year	26.50	182.13	184.09	184.01	184.17	0.002514	1.60	42.30	187.64	0.51
Main	12834.18	50 year	22.60	182.13	184.04	183.94	184.12	0.002617	1.57	33.40	148.98	0.52
Main	12834.18	20 year	17.80	182.13	183.96	183.87	184.05	0.002740	1.52	23.51	101.62	0.52
Main	12834.18	10 year	14.30	182.13	183.89	183.57	183.98	0.002571	1.48	17.49	71.06	0.51
Main	12834.18	5 year	11.00	182.13	183.81	183.43	183.90	0.002454	1.37	12.25	62.39	0.49
Main	12834.18	2 year	6.50	182.13	183.60	183.18	183.67	0.001980	1.15	5.63	7.64	0.43
Main	12738.43	Existing	113.14	182.12	184.43	184.10	184.45	0.000608	1.20	315.20	488.06	0.29
Main	12738.43	Future	122.72	182.12	184.48	184.11	184.50	0.000585	1.20	338.28	492.45	0.28
Main	12738.43	100 year	39.80	182.12	183.99	183.67	184.03	0.001057	1.31	87.31	222.39	0.36
Main	12738.43	50 year	34.10	182.12	183.94	183.34	183.99	0.001012	1.25	77.23	217.72	0.35
Main	12738.43	20 year	27.00	182.12	183.89	183.34	183.92	0.000837	1.11	65.32	205.75	0.32
Main	12738.43	10 year	21.90	182.12	183.82	183.25	183.86	0.000772	1.03	53.74	170.80	0.30
Main	12738.43	5 year	16.90	182.12	183.75	183.11	183.79	0.000685	0.93	42.38	151.07	0.28
Main	12738.43	2 year	10.20	182.12	183.55	182.90	183.58	0.000591	0.76	22.14	66.07	0.25
Main	12718.60	Existing	113.14	182.12	184.40	183.79	184.44	0.001042	1.55	208.47	273.00	0.37
Main	12718.60	Future	122.72	182.12	184.44	183.98	184.48	0.001048	1.58	221.04	277.61	0.38
Main	12718.60	100 year	39.80	182.12	183.99	183.64	184.01	0.000577	0.97	112.13	201.76	0.27
Main	12718.60	50 year	34.10	182.12	183.94	183.59	183.96	0.000663	1.01	91.46	197.58	0.28
Main	12718.60	20 year	27.00	182.12	183.89	183.55	183.91	0.000538	0.89	82.37	190.48	0.25
Main	12718.60	10 year	21.90	182.12	183.83	183.40	183.84	0.000468	0.80	72.50	174.92	0.23
Main	12718.60	5 year	16.90	182.12	183.76	183.23	183.77	0.000380	0.69	62.60	155.66	0.21

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	12718.60	2 year	10.20	182.12	183.44	182.96	183.55	0.001711	1.48	6.89	114.97	0.44
Main	12704.46		Culvert									
Main	12690.09	Existing	113.14	182.09	184.41	183.59	184.42	0.000236	0.73	405.57	413.44	0.18
Main	12690.09	Future	122.72	182.09	184.45	183.60	184.46	0.000252	0.76	420.32	417.02	0.18
Main	12690.09	100 year	39.80	182.09	183.94	183.59	183.95	0.000213	0.56	208.77	368.80	0.16
Main	12690.09	50 year	34.10	182.09	183.88	183.59	183.88	0.000191	0.51	187.68	352.46	0.15
Main	12690.09	20 year	27.00	182.09	183.79	183.59	183.79	0.000195	0.49	158.23	333.93	0.15
Main	12690.09	10 year	21.90	182.09	183.71	183.56	183.71	0.000193	0.46	135.82	299.58	0.15
Main	12690.09	5 year	16.90	182.09	183.63	183.38	183.63	0.000186	0.43	112.52	288.64	0.14
Main	12690.09	2 year	10.20	182.09	183.33	183.11	183.52	0.004169	1.92	5.31	189.71	0.66
Main	12673.19	Existing	113.14	181.90	184.36		184.40	0.001124	1.59	224.97	401.84	0.38
Main	12673.19	Future	122.72	181.90	184.40		184.44	0.001131	1.61	239.48	411.18	0.39
Main	12673.19	100 year	39.80	181.90	183.90		183.93	0.000959	1.19	89.13	184.09	0.34
Main	12673.19	50 year	34.10	181.90	183.83		183.87	0.000962	1.16	77.78	173.42	0.33
Main	12673.19	20 year	27.00	181.90	183.74		183.78	0.000990	1.11	62.41	159.11	0.33
Main	12673.19	10 year	21.90	181.90	183.66		183.70	0.001033	1.08	50.38	147.63	0.34
Main	12673.19	5 year	16.90	181.90	183.57		183.61	0.001096	1.05	37.77	135.00	0.34
Main	12673.19	2 year	10.20	181.90	183.37		183.41	0.001197	1.01	16.86	64.65	0.35
Main	12507.17	Existing	113.14	181.68	184.02	183.81	184.10	0.001889	2.01	167.39	313.69	0.49
Main	12507.17	Future	122.72	181.68	184.05	183.84	184.13	0.001983	2.09	175.88	317.36	0.51
Main	12507.17	100 year	39.80	181.68	183.65	183.42	183.71	0.001304	1.42	73.71	174.96	0.39
Main	12507.17	50 year	34.10	181.68	183.60	183.36	183.65	0.001248	1.35	64.66	151.53	0.38
Main	12507.17	20 year	27.00	181.68	183.51	183.31	183.56	0.001182	1.25	52.95	132.68	0.37
Main	12507.17	10 year	21.90	181.68	183.43	182.97	183.48	0.001214	1.21	42.48	121.73	0.37
Main	12507.17	5 year	16.90	181.68	183.33	182.87	183.39	0.001281	1.19	30.92	112.74	0.37
Main	12507.17	2 year	10.20	181.68	183.13		183.19	0.001341	1.13	11.88	57.21	0.38
Main	12266.35	Existing	113.14	181.68	183.56		183.61	0.001890	1.88	226.60	532.16	0.49
Main	12266.35	Future	122.72	181.68	183.61		183.65	0.001621	1.78	255.38	544.59	0.46
Main	12266.35	100 year	39.80	181.68	183.08		183.18	0.003314	1.92	57.63	213.50	0.61
Main	12266.35	50 year	34.10	181.68	183.03	182.93	183.13	0.003418	1.88	47.30	179.65	0.61
Main	12266.35	20 year	27.00	181.68	182.95	182.85	183.05	0.003445	1.79	35.66	132.68	0.61
Main	12266.35	10 year	21.90	181.68	182.90		182.99	0.003138	1.64	29.80	98.07	0.57
Main	12266.35	5 year	16.90	181.68	182.84		182.91	0.002775	1.47	24.20	86.14	0.53
Main	12266.35	2 year	10.20	181.68	182.75		182.80	0.001777	1.09	17.78	66.06	0.42

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	12122.54	Existing	113.14	181.32	183.49		183.50	0.000335	0.84	400.78	590.25	0.21
Main	12122.54	Future	122.72	181.32	183.54		183.55	0.000368	0.90	427.99	596.91	0.22
Main	12122.54	100 year	39.80	181.32	183.05		183.05	0.000284	0.63	194.57	390.18	0.18
Main	12122.54	50 year	34.10	181.32	183.00		183.00	0.000282	0.61	175.39	375.13	0.18
Main	12122.54	20 year	27.00	181.32	182.91		182.92	0.000303	0.60	145.41	368.21	0.19
Main	12122.54	10 year	21.90	181.32	182.85		182.86	0.000326	0.60	122.14	362.75	0.19
Main	12122.54	5 year	16.90	181.32	182.76		182.77	0.000437	0.65	88.77	336.59	0.22
Main	12122.54	2 year	10.20	181.32	182.57		182.60	0.001147	0.91	31.24	264.32	0.34
Main	11952.80	Existing	113.14	180.94	183.41		183.43	0.000513	1.18	368.46	654.46	0.27
Main	11952.80	Future	122.72	180.94	183.46		183.47	0.000496	1.18	398.14	674.65	0.26
Main	11952.80	100 year	39.80	180.94	182.93		182.97	0.000857	1.27	116.22	393.90	0.33
Main	11952.80	50 year	34.10	180.94	182.87		182.92	0.000895	1.27	94.99	348.05	0.33
Main	11952.80	20 year	27.00	180.94	182.79		182.83	0.000865	1.20	69.76	262.18	0.33
Main	11952.80	10 year	21.90	180.94	182.72	182.20	182.76	0.000880	1.16	52.53	221.32	0.33
Main	11952.80	5 year	16.90	180.94	182.59		182.65	0.001073	1.20	29.14	129.12	0.35
Main	11952.80	2 year	10.20	180.94	182.34		182.40	0.001159	1.07	11.47	35.20	0.35
Main	11733.26	Existing	113.14	180.67	183.26		183.30	0.000805	1.52	290.15	571.67	0.34
Main	11733.26	Future	122.72	180.67	183.32		183.35	0.000742	1.49	323.51	636.75	0.32
Main	11733.26	100 year	39.80	180.67	182.64		182.73	0.001548	1.67	67.80	193.00	0.44
Main	11733.26	50 year	34.10	180.67	182.57		182.66	0.001649	1.66	54.14	168.67	0.45
Main	11733.26	20 year	27.00	180.67	182.45	182.14	182.56	0.001922	1.69	35.76	136.28	0.48
Main	11733.26	10 year	21.90	180.67	182.34	181.98	182.47	0.002167	1.70	22.81	110.95	0.50
Main	11733.26	5 year	16.90	180.67	182.24		182.34	0.001910	1.50	15.31	49.54	0.46
Main	11733.26	2 year	10.20	180.67	182.04		182.11	0.001485	1.15	9.69	17.96	0.40
Main	11600	Existing	113.14	180.45	183.18		183.21	0.000537	1.32	325.39	616.09	0.28
Main	11600	Future	122.72	180.45	183.24		183.26	0.000532	1.34	362.98	702.30	0.28
Main	11600	100 year	39.80	180.45	182.54		182.58	0.000676	1.20	98.34	202.38	0.30
Main	11600	50 year	34.10	180.45	182.47		182.51	0.000655	1.14	84.84	181.68	0.29
Main	11600	20 year	27.00	180.45	182.37		182.40	0.000578	1.03	68.55	142.59	0.27
Main	11600	10 year	21.90	180.45	182.29		182.31	0.000509	0.93	57.63	117.90	0.25
Main	11600	5 year	16.90	180.45	182.18		182.21	0.000475	0.85	45.83	103.77	0.24
Main	11600	2 year	10.20	180.45	181.97		181.99	0.000493	0.77	25.78	83.41	0.24
Main	11500	Existing	113.14	180.25	183.16		183.17	0.000220	0.86	488.48	802.30	0.18
Main	11500	Future	122.72	180.25	183.21		183.22	0.000220	0.87	535.49	861.36	0.18
Main	11500	100 year	39.80	180.25	182.51		182.52	0.000353	0.87	155.33	351.42	0.21
Main	11500	50 year	34.10	180.25	182.43		182.45	0.000389	0.89	130.46	325.66	0.22

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	11500	20 year	27.00	180.25	182.33		182.35	0.000394	0.86	98.61	294.79	0.22
Main	11500	10 year	21.90	180.25	182.25		182.27	0.000397	0.83	76.04	228.76	0.22
Main	11500	5 year	16.90	180.25	182.14		182.16	0.000397	0.78	55.94	154.32	0.22
Main	11500	2 year	10.20	180.25	181.93		181.95	0.000397	0.70	30.15	87.36	0.21
Main	11400	Existing	113.14	180.15	183.12		183.14	0.000408	1.16	360.13	625.16	0.24
Main	11400	Future	122.72	180.15	183.17		183.19	0.000409	1.18	397.44	694.56	0.24
Main	11400	100 year	39.80	180.15	182.47		182.49	0.000349	0.87	125.77	229.92	0.21
Main	11400	50 year	34.10	180.15	182.40		182.42	0.000342	0.83	109.78	203.82	0.21
Main	11400	20 year	27.00	180.15	182.30		182.32	0.000322	0.78	91.65	167.12	0.20
Main	11400	10 year	21.90	180.15	182.22		182.23	0.000308	0.73	77.70	162.52	0.19
Main	11400	5 year	16.90	180.15	182.11		182.12	0.000295	0.68	61.22	144.07	0.19
Main	11400	2 year	10.20	180.15	181.90		181.91	0.000295	0.61	35.80	96.25	0.18
Main	11300	Existing	113.14	180.03	183.07		183.09	0.000406	1.07	391.29	621.30	0.23
Main	11300	Future	122.72	180.03	183.13		183.14	0.000378	1.05	428.22	639.22	0.23
Main	11300	100 year	39.80	180.03	182.38		182.43	0.001017	1.31	97.06	281.92	0.35
Main	11300	50 year	34.10	180.03	182.30		182.35	0.001116	1.32	75.68	241.02	0.36
Main	11300	20 year	27.00	180.03	182.19		182.25	0.001289	1.34	52.50	185.79	0.38
Main	11300	10 year	21.90	180.03	182.10		182.17	0.001402	1.33	37.36	143.36	0.39
Main	11300	5 year	16.90	180.03	182.00		182.06	0.001437	1.26	25.37	91.33	0.39
Main	11300	2 year	10.20	180.03	181.79		181.85	0.001554	1.13	12.31	45.64	0.39
Main	11200	Existing	113.14	180.04	183.05		183.06	0.000181	0.78	502.27	628.88	0.16
Main	11200	Future	122.72	180.04	183.11		183.12	0.000175	0.78	540.74	666.46	0.16
Main	11200	100 year	39.80	180.04	182.35		182.36	0.000343	0.85	161.46	374.30	0.21
Main	11200	50 year	34.10	180.04	182.26		182.28	0.000388	0.88	131.18	342.30	0.22
Main	11200	20 year	27.00	180.04	182.14		182.16	0.000482	0.93	92.61	277.56	0.24
Main	11200	10 year	21.90	180.04	182.04		182.07	0.000584	0.97	66.66	233.38	0.27
Main	11200	5 year	16.90	180.04	181.92		181.96	0.000718	1.01	40.73	182.82	0.29
Main	11200	2 year	10.20	180.04	181.69		181.73	0.000806	0.94	15.26	61.75	0.30
Main	11100	Existing	113.14	180.07	182.96		183.02	0.000825	1.66	214.97	288.05	0.35
Main	11100	Future	122.72	180.07	183.03		183.08	0.000805	1.67	232.98	296.34	0.34
Main	11100	100 year	39.80	180.07	182.20		182.29	0.001306	1.61	56.66	107.33	0.41
Main	11100	50 year	34.10	180.07	182.12		182.20	0.001307	1.56	47.93	96.31	0.41
Main	11100	20 year	27.00	180.07	182.00		182.08	0.001284	1.46	37.35	81.57	0.40
Main	11100	10 year	21.90	180.07	181.90		181.98	0.001246	1.37	29.88	70.61	0.39
Main	11100	5 year	16.90	180.07	181.79		181.86	0.001164	1.25	22.72	61.06	0.37
Main	11100	2 year	10.20	180.07	181.59		181.64	0.000996	1.02	12.22	38.63	0.33

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	11000	Existing	113.14	180.09	182.89		182.93	0.000688	1.49	213.10	246.45	0.32
Main	11000	Future	122.72	180.09	182.95		183.00	0.000693	1.52	228.38	252.28	0.32
Main	11000	100 year	39.80	180.09	182.13		182.17	0.000773	1.20	77.58	105.89	0.31
Main	11000	50 year	34.10	180.09	182.05		182.08	0.000789	1.16	68.46	103.91	0.31
Main	11000	20 year	27.00	180.09	181.92		181.96	0.000825	1.12	55.96	100.74	0.31
Main	11000	10 year	21.90	180.09	181.82		181.86	0.000880	1.09	45.68	98.13	0.32
Main	11000	5 year	16.90	180.09	181.70		181.74	0.000982	1.08	34.23	96.16	0.33
Main	11000	2 year	10.20	180.09	181.50		181.54	0.001071	0.98	17.71	62.49	0.33
Main	10900	Existing	113.14	180.09	182.69		182.82	0.001760	2.30	131.16	157.81	0.50
Main	10900	Future	122.72	180.09	182.73		182.87	0.001918	2.43	138.19	169.07	0.53
Main	10900	100 year	39.80	180.09	181.92		182.04	0.002022	1.84	44.69	73.14	0.50
Main	10900	50 year	34.10	180.09	181.85		181.95	0.001956	1.74	39.19	67.68	0.49
Main	10900	20 year	27.00	180.09	181.74		181.83	0.001863	1.60	32.14	60.81	0.47
Main	10900	10 year	21.90	180.09	181.64		181.73	0.001787	1.48	26.74	54.67	0.45
Main	10900	5 year	16.90	180.09	181.54		181.61	0.001677	1.34	21.37	48.12	0.43
Main	10900	2 year	10.20	180.09	181.36		181.41	0.001455	1.10	13.73	36.85	0.39
Main	10800	Existing	113.14	180.15	182.53		182.64	0.001681	2.22	140.25	189.28	0.49
Main	10800	Future	122.72	180.15	182.56		182.68	0.001766	2.30	147.29	193.03	0.50
Main	10800	100 year	39.80	180.15	181.76		181.84	0.001719	1.65	51.09	76.86	0.46
Main	10800	50 year	34.10	180.15	181.69		181.76	0.001681	1.57	45.43	73.61	0.45
Main	10800	20 year	27.00	180.15	181.58		181.65	0.001660	1.47	37.68	69.71	0.44
Main	10800	10 year	21.90	180.15	181.48		181.55	0.001756	1.42	30.79	66.40	0.45
Main	10800	5 year	16.90	180.15	181.36		181.43	0.001937	1.37	23.25	62.56	0.46
Main	10800	2 year	10.20	180.15	181.16		181.23	0.002287	1.27	12.12	44.68	0.48
Main	10700	Existing	113.14	179.94	182.41		182.48	0.001426	1.88	157.40	202.10	0.44
Main	10700	Future	122.72	179.94	182.43		182.51	0.001573	1.99	162.31	207.42	0.46
Main	10700	100 year	39.80	179.94	181.69		181.71	0.000806	1.02	68.76	73.70	0.30
Main	10700	50 year	34.10	179.94	181.62		181.64	0.000726	0.93	63.83	70.98	0.29
Main	10700	20 year	27.00	179.94	181.52		181.54	0.000627	0.81	56.93	67.53	0.26
Main	10700	10 year	21.90	179.94	181.43		181.44	0.000578	0.73	50.58	64.18	0.25
Main	10700	5 year	16.90	179.94	181.31		181.32	0.000527	0.64	43.65	60.33	0.23
Main	10700	2 year	10.20	179.94	181.12		181.12	0.000464	0.49	32.62	52.32	0.21
Main	10600	Existing	113.14	179.61	182.26		182.34	0.001220	1.87	140.61	198.52	0.41
Main	10600	Future	122.72	179.61	182.26		182.35	0.001445	2.03	140.07	196.87	0.45
Main	10600	100 year	39.80	179.61	181.58		181.62	0.000974	1.28	66.56	84.21	0.34

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	10600	50 year	34.10	179.61	181.52		181.56	0.000888	1.19	61.65	83.79	0.33
Main	10600	20 year	27.00	179.61	181.43		181.46	0.000776	1.06	54.45	81.90	0.30
Main	10600	10 year	21.90	179.61	181.34		181.37	0.000754	1.00	46.94	79.70	0.29
Main	10600	5 year	16.90	179.61	181.23		181.26	0.000750	0.93	38.39	77.11	0.29
Main	10600	2 year	10.20	179.61	181.03		181.06	0.000807	0.87	23.52	72.20	0.29
Main	10500	Existing	150.82	179.45	182.13		182.21	0.001407	2.07	180.06	193.43	0.45
Main	10500	Future	150.82	179.45	182.13		182.21	0.001407	2.07	180.06	193.43	0.45
Main	10500	100 year	49.10	179.45	181.52		181.54	0.000581	1.07	102.16	109.51	0.27
Main	10500	50 year	42.40	179.45	181.47		181.49	0.000506	0.97	96.58	107.82	0.25
Main	10500	20 year	33.80	179.45	181.39		181.41	0.000412	0.85	88.28	105.25	0.23
Main	10500	10 year	27.50	179.45	181.30		181.31	0.000369	0.77	79.04	102.31	0.21
Main	10500	5 year	21.30	179.45	181.20		181.21	0.000328	0.69	68.46	98.97	0.20
Main	10500	2 year	12.70	179.45	181.00		181.01	0.000271	0.56	50.01	93.24	0.17
Main	10355.95	Existing	150.82	179.19	181.93		182.00	0.001456	2.02	236.60	335.88	0.45
Main	10355.95	Future	150.82	179.19	181.93		182.00	0.001456	2.02	236.60	335.88	0.45
Main	10355.95	100 year	49.10	179.19	181.39		181.44	0.000986	1.36	91.13	190.23	0.35
Main	10355.95	50 year	42.40	179.19	181.36		181.40	0.000822	1.23	85.37	177.81	0.32
Main	10355.95	20 year	33.80	179.19	181.30		181.33	0.000634	1.05	76.48	150.55	0.28
Main	10355.95	10 year	27.50	179.19	181.22		181.25	0.000556	0.95	66.25	119.15	0.26
Main	10355.95	5 year	21.30	179.19	181.13		181.15	0.000464	0.83	55.91	101.87	0.23
Main	10355.95	2 year	12.70	179.19	180.95		180.97	0.000348	0.65	39.87	83.20	0.20
Main	10343.83	Existing	150.82	179.21	181.94	181.41	181.98	0.000596	1.59	322.03	381.09	0.31
Main	10343.83	Future	150.82	179.21	181.94	181.41	181.98	0.000596	1.59	322.03	381.09	0.31
Main	10343.83	100 year	49.10	179.21	181.37	180.56	181.43	0.000570	1.33	95.33	256.54	0.29
Main	10343.83	50 year	42.40	179.21	181.34	180.44	181.39	0.000465	1.19	91.11	249.15	0.26
Main	10343.83	20 year	33.80	179.21	181.29	180.26	181.33	0.000350	1.02	83.74	240.99	0.22
Main	10343.83	10 year	27.50	179.21	181.22	180.13	181.24	0.000260	0.86	74.12	213.87	0.19
Main	10343.83	5 year	21.30	179.21	181.13	179.99	181.15	0.000201	0.73	64.50	171.07	0.17
Main	10343.83	2 year	12.70	179.21	180.95	179.76	180.96	0.000117	0.52	49.71	124.55	0.13
Main	10335.83		Culvert									
Main	10327.82	Existing	150.82	179.19	181.93	181.43	181.98	0.000655	1.67	313.08	360.54	0.32
Main	10327.82	Future	150.82	179.19	181.93	181.43	181.98	0.000655	1.67	313.08	360.54	0.32
Main	10327.82	100 year	49.10	179.19	181.36	180.57	181.39	0.000411	1.13	137.60	247.74	0.25
Main	10327.82	50 year	42.40	179.19	181.29	180.44	181.33	0.000403	1.10	121.10	236.43	0.24
Main	10327.82	20 year	33.80	179.19	181.20	180.26	181.23	0.000381	1.04	99.40	226.16	0.23

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	10327.82	10 year	27.50	179.19	181.09	180.13	181.16	0.000669	1.32	37.86	197.35	0.31
Main	10327.82	5 year	21.30	179.19	180.98	179.98	181.06	0.000628	1.23	17.30	167.01	0.29
Main	10327.82	2 year	12.70	179.19	180.79	179.75	180.82	0.000324	0.82	15.47	88.46	0.21
Main	10315.78	Existing	150.82	179.19	181.92		181.97	0.000901	1.59	282.57	357.03	0.35
Main	10315.78	Future	150.82	179.19	181.92		181.97	0.000901	1.59	282.57	357.03	0.35
Main	10315.78	100 year	49.10	179.19	181.35		181.39	0.000780	1.19	111.99	243.21	0.31
Main	10315.78	50 year	42.40	179.19	181.27		181.32	0.000833	1.19	94.89	233.47	0.32
Main	10315.78	20 year	33.80	179.19	181.18		181.22	0.000887	1.17	72.84	209.49	0.33
Main	10315.78	10 year	27.50	179.19	181.09		181.14	0.000891	1.12	55.76	186.76	0.32
Main	10315.78	5 year	21.30	179.19	180.99		181.03	0.000794	1.00	39.69	110.50	0.30
Main	10315.78	2 year	12.70	179.19	180.79		180.82	0.000676	0.81	23.65	61.73	0.27
Main	10200	Existing	150.82	179.19	181.60		181.76	0.003345	2.87	159.15	254.04	0.67
Main	10200	Future	150.82	179.19	181.60		181.76	0.003345	2.87	159.15	254.04	0.67
Main	10200	100 year	49.10	179.19	181.11		181.22	0.002390	1.98	59.23	119.61	0.54
Main	10200	50 year	42.40	179.19	181.05	180.89	181.15	0.002253	1.86	52.37	107.15	0.52
Main	10200	20 year	33.80	179.19	180.96	180.81	181.06	0.002076	1.71	43.99	96.40	0.49
Main	10200	10 year	27.50	179.19	180.88	180.75	180.98	0.002020	1.61	36.68	90.33	0.48
Main	10200	5 year	21.30	179.19	180.79	180.65	180.88	0.002017	1.52	28.35	83.10	0.47
Main	10200	2 year	12.70	179.19	180.56	180.27	180.67	0.002607	1.47	11.34	47.85	0.52
Main	10100	Existing	150.82	179.08	181.34		181.45	0.002526	2.51	193.08	311.70	0.59
Main	10100	Future	150.82	179.08	181.34		181.45	0.002526	2.51	193.08	311.70	0.59
Main	10100	100 year	49.10	179.08	180.74	180.70	180.92	0.003730	2.35	49.28	107.10	0.67
Main	10100	50 year	42.40	179.08	180.66	180.62	180.85	0.004007	2.33	41.08	97.40	0.69
Main	10100	20 year	33.80	179.08	180.54	180.54	180.74	0.004683	2.34	29.89	83.24	0.73
Main	10100	10 year	27.50	179.08	180.45	180.45	180.66	0.004848	2.25	23.28	74.60	0.73
Main	10100	5 year	21.30	179.08	180.35	180.35	180.56	0.005059	2.14	16.44	62.09	0.73
Main	10100	2 year	12.70	179.08	180.15	180.04	180.31	0.005134	1.80	8.56	22.03	0.71
Main	10000	Existing	150.82	178.73	181.11		181.23	0.001937	2.19	185.10	270.84	0.52
Main	10000	Future	150.82	178.73	181.11		181.23	0.001937	2.19	185.10	270.84	0.52
Main	10000	100 year	49.10	178.73	180.55		180.65	0.001680	1.61	62.62	142.42	0.45
Main	10000	50 year	42.40	178.73	180.50		180.58	0.001531	1.49	54.77	117.99	0.43
Main	10000	20 year	33.80	178.73	180.41		180.48	0.001305	1.31	45.71	91.60	0.39
Main	10000	10 year	27.50	178.73	180.33		180.39	0.001165	1.18	39.12	80.44	0.36
Main	10000	5 year	21.30	178.73	180.24		180.29	0.001019	1.04	32.44	72.18	0.34
Main	10000	2 year	12.70	178.73	180.06		180.10	0.000866	0.84	20.73	57.50	0.30

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	9900	Existing	150.82	178.73	180.99		181.04	0.001371	1.88	229.72	267.01	0.44
Main	9900	Future	150.82	178.73	180.99		181.04	0.001371	1.88	229.72	267.01	0.44
Main	9900	100 year	49.10	178.73	180.44		180.49	0.001306	1.46	98.35	205.38	0.40
Main	9900	50 year	42.40	178.73	180.38		180.43	0.001286	1.41	86.75	192.09	0.40
Main	9900	20 year	33.80	178.73	180.29		180.34	0.001283	1.34	70.44	172.10	0.39
Main	9900	10 year	27.50	178.73	180.21		180.26	0.001297	1.29	57.73	156.48	0.39
Main	9900	5 year	21.30	178.73	180.12		180.17	0.001336	1.24	44.44	140.46	0.39
Main	9900	2 year	12.70	178.73	179.95		179.99	0.001175	1.03	26.16	85.81	0.35
Main	9800	Existing	150.82	178.73	180.88		180.94	0.001236	1.52	210.71	266.94	0.40
Main	9800	Future	150.82	178.73	180.88		180.94	0.001235	1.52	210.72	266.94	0.40
Main	9800	100 year	49.10	178.73	180.28		180.36	0.001776	1.30	60.75	174.07	0.44
Main	9800	50 year	42.40	178.73	180.23		180.30	0.001761	1.24	52.29	136.35	0.43
Main	9800	20 year	33.80	178.73	180.14		180.20	0.001848	1.18	40.61	119.90	0.43
Main	9800	10 year	27.50	178.73	180.06		180.12	0.001875	1.11	32.30	101.96	0.43
Main	9800	5 year	21.30	178.73	179.98		180.03	0.001901	1.02	24.67	77.70	0.42
Main	9800	2 year	12.70	178.73	179.81		179.85	0.002052	0.87	14.69	39.35	0.42
Main	9700	Existing	150.82	178.39	180.79		180.84	0.000984	1.62	242.69	278.10	0.37
Main	9700	Future	150.82	178.39	180.79		180.84	0.000984	1.62	242.71	278.10	0.37
Main	9700	100 year	49.10	178.39	180.18		180.23	0.000991	1.26	99.19	199.92	0.35
Main	9700	50 year	42.40	178.39	180.12		180.17	0.000993	1.22	87.54	197.26	0.35
Main	9700	20 year	33.80	178.39	180.03		180.07	0.000942	1.13	70.06	175.34	0.33
Main	9700	10 year	27.50	178.39	179.96		179.99	0.000906	1.06	57.58	153.28	0.32
Main	9700	5 year	21.30	178.39	179.87		179.90	0.000866	0.98	44.85	130.71	0.31
Main	9700	2 year	12.70	178.39	179.71		179.73	0.000744	0.81	27.58	91.66	0.28
Main	9588.291	Existing	150.82	178.40	180.69		180.74	0.001321	1.71	232.29	297.33	0.42
Main	9588.291	Future	150.82	178.40	180.69		180.74	0.001321	1.71	232.32	297.35	0.42
Main	9588.291	100 year	49.10	178.40	180.07		180.11	0.001456	1.33	88.54	162.83	0.41
Main	9588.291	50 year	42.40	178.40	180.01		180.05	0.001464	1.29	78.96	158.05	0.40
Main	9588.291	20 year	33.80	178.40	179.92		179.96	0.001446	1.20	65.21	150.26	0.40
Main	9588.291	10 year	27.50	178.40	179.85		179.88	0.001393	1.12	55.07	132.22	0.38
Main	9588.291	5 year	21.30	178.40	179.76		179.79	0.001381	1.04	44.32	117.44	0.38
Main	9588.291	2 year	12.70	178.40	179.61		179.63	0.001368	0.89	28.18	87.34	0.36
Main	9400	Existing	150.82	178.37	180.46		180.54	0.001416	1.78	178.58	177.53	0.44
Main	9400	Future	150.82	178.37	180.46		180.54	0.001415	1.78	178.61	177.54	0.44
Main	9400	100 year	49.10	178.37	179.84		179.89	0.001257	1.24	78.17	144.74	0.38
Main	9400	50 year	42.40	178.37	179.79		179.83	0.001231	1.18	69.79	139.96	0.37

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	9400	20 year	33.80	178.37	179.70		179.74	0.001196	1.10	58.25	132.72	0.36
Main	9400	10 year	27.50	178.37	179.64		179.67	0.001133	1.02	49.76	127.61	0.35
Main	9400	5 year	21.30	178.37	179.55		179.59	0.001077	0.93	39.84	116.12	0.33
Main	9400	2 year	12.70	178.37	179.40		179.43	0.001012	0.78	24.21	86.70	0.31
Main	9300	Existing	150.82	178.25	180.27		180.36	0.002476	2.33	174.43	242.55	0.57
Main	9300	Future	150.82	178.25	180.27		180.36	0.002473	2.33	174.52	242.60	0.57
Main	9300	100 year	49.10	178.25	179.56		179.68	0.004619	2.21	53.31	113.91	0.72
Main	9300	50 year	42.40	178.25	179.49		179.61	0.004853	2.16	46.31	107.09	0.73
Main	9300	20 year	33.80	178.25	179.41		179.53	0.005061	2.07	37.81	99.64	0.73
Main	9300	10 year	27.50	178.25	179.35		179.46	0.005038	1.96	31.76	93.01	0.72
Main	9300	5 year	21.30	178.25	179.28		179.39	0.004783	1.80	25.93	85.37	0.69
Main	9300	2 year	12.70	178.25	179.18		179.25	0.003871	1.45	17.61	69.16	0.60
Main	9200	Existing	150.82	177.89	180.16		180.21	0.001337	1.87	235.09	275.47	0.43
Main	9200	Future	150.82	177.89	180.16		180.22	0.001335	1.87	235.23	275.57	0.43
Main	9200	100 year	49.10	177.89	179.39		179.44	0.001661	1.49	79.70	129.62	0.44
Main	9200	50 year	42.40	177.89	179.32		179.36	0.001775	1.47	69.73	125.31	0.45
Main	9200	20 year	33.80	177.89	179.21		179.26	0.001959	1.44	56.77	120.22	0.47
Main	9200	10 year	27.50	177.89	179.13		179.18	0.002083	1.41	47.36	116.39	0.47
Main	9200	5 year	21.30	177.89	179.04		179.10	0.002296	1.38	37.19	112.11	0.49
Main	9200	2 year	12.70	177.89	178.90		178.96	0.002613	1.30	22.02	103.92	0.50
Main	9100	Existing	150.82	177.76	179.97		180.08	0.002252	2.45	176.33	216.56	0.56
Main	9100	Future	150.82	177.76	179.97		180.09	0.002245	2.44	176.57	216.70	0.56
Main	9100	100 year	49.10	177.76	179.21		179.29	0.002329	1.78	58.30	81.57	0.52
Main	9100	50 year	42.40	177.76	179.14		179.21	0.002190	1.66	52.83	76.11	0.50
Main	9100	20 year	33.80	177.76	179.04		179.10	0.002102	1.52	45.42	72.88	0.49
Main	9100	10 year	27.50	177.76	178.96		179.01	0.002084	1.43	39.42	71.82	0.48
Main	9100	5 year	21.30	177.76	178.86		178.92	0.002072	1.33	32.89	70.66	0.47
Main	9100	2 year	12.70	177.76	178.70		178.75	0.002227	1.19	21.60	68.60	0.47
Main	9000	Existing	150.82	177.53	179.72		179.90	0.002313	2.41	137.53	163.92	0.56
Main	9000	Future	150.82	177.53	179.73		179.90	0.002308	2.41	137.78	164.67	0.56
Main	9000	100 year	49.10	177.53	179.03		179.12	0.001821	1.56	55.42	85.39	0.46
Main	9000	50 year	42.40	177.53	178.97		179.05	0.001709	1.46	50.37	83.19	0.45
Main	9000	20 year	33.80	177.53	178.88		178.95	0.001532	1.31	43.49	79.13	0.42
Main	9000	10 year	27.50	177.53	178.82		178.87	0.001374	1.18	38.10	75.72	0.39
Main	9000	5 year	21.30	177.53	178.74		178.78	0.001183	1.04	32.39	71.81	0.36
Main	9000	2 year	12.70	177.53	178.60		178.63	0.000853	0.79	23.06	65.07	0.29

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	8900	Existing	150.82	177.46	179.56		179.68	0.002885	2.49	142.02	240.92	0.62
Main	8900	Future	150.82	177.46	179.56		179.69	0.002853	2.48	142.86	240.94	0.61
Main	8900	100 year	49.10	177.46	178.84		178.92	0.003480	1.87	54.95	91.89	0.62
Main	8900	50 year	42.40	177.46	178.78		178.85	0.003394	1.77	50.04	90.12	0.60
Main	8900	20 year	33.80	177.46	178.71		178.77	0.003209	1.63	43.55	87.72	0.58
Main	8900	10 year	27.50	177.46	178.65		178.71	0.002996	1.50	38.58	85.84	0.55
Main	8900	5 year	21.30	177.46	178.59		178.64	0.002709	1.34	33.36	82.13	0.52
Main	8900	2 year	12.70	177.46	178.48		178.51	0.002344	1.11	24.26	78.84	0.47
Main	8800	Existing	150.82	177.35	179.44		179.51	0.001491	1.64	174.02	223.81	0.44
Main	8800	Future	150.82	177.35	179.44		179.52	0.001479	1.64	175.04	226.37	0.43
Main	8800	100 year	49.10	177.35	178.63		178.68	0.002443	1.22	64.84	112.75	0.49
Main	8800	50 year	42.40	177.35	178.57		178.61	0.002649	1.19	57.56	111.81	0.50
Main	8800	20 year	33.80	177.35	178.48		178.52	0.002993	1.15	47.91	110.56	0.52
Main	8800	10 year	27.50	177.35	178.41		178.45	0.003319	1.10	40.62	109.60	0.53
Main	8800	5 year	21.30	177.35	178.35		178.39	0.003401	1.02	34.19	108.71	0.53
Main	8800	2 year	12.70	177.35	178.29	178.18	178.31	0.002469	0.77	27.09	107.31	0.44
Main	8700	Existing	150.82	177.17	179.39		179.42	0.000649	1.19	262.91	302.58	0.29
Main	8700	Future	150.82	177.17	179.39		179.42	0.000647	1.19	264.34	306.52	0.29
Main	8700	100 year	49.10	177.17	178.50		178.53	0.001165	0.97	84.18	142.27	0.35
Main	8700	50 year	42.40	177.17	178.42		178.45	0.001267	0.94	73.35	133.24	0.36
Main	8700	20 year	33.80	177.17	178.31		178.34	0.001485	0.91	59.45	108.15	0.38
Main	8700	10 year	27.50	177.17	178.21		178.24	0.001838	0.90	48.93	106.75	0.41
Main	8700	5 year	21.30	177.17	178.10		178.13	0.002632	0.92	37.24	105.21	0.47
Main	8700	2 year	12.70	177.17	177.95		177.98	0.005588	0.98	21.08	103.13	0.63
Main	8604.916	Existing	150.82	176.94	179.34		179.38	0.000478	1.15	276.36	235.17	0.26
Main	8604.916	Future	150.82	176.94	179.35		179.38	0.000473	1.15	277.60	236.05	0.26
Main	8604.916	100 year	49.10	176.94	178.45		178.47	0.000495	0.79	108.71	149.58	0.24
Main	8604.916	50 year	42.40	176.94	178.37		178.39	0.000499	0.76	96.89	143.04	0.24
Main	8604.916	20 year	33.80	176.94	178.25		178.27	0.000514	0.71	80.54	131.50	0.24
Main	8604.916	10 year	27.50	176.94	178.15		178.16	0.000546	0.67	67.36	120.35	0.24
Main	8604.916	5 year	21.30	176.94	178.02		178.04	0.000633	0.64	52.64	110.50	0.25
Main	8604.916	2 year	12.70	176.94	177.80		177.81	0.001022	0.63	30.37	85.77	0.30
Main	8500	Existing	150.82	176.61	179.17		179.30	0.001627	2.40	156.77	142.05	0.49
Main	8500	Future	150.82	176.61	179.18		179.31	0.001608	2.39	157.77	142.96	0.49
Main	8500	100 year	49.10	176.61	178.31		178.40	0.001484	1.71	62.22	83.84	0.44

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	8500	50 year	42.40	176.61	178.23		178.31	0.001412	1.61	56.10	79.80	0.42
Main	8500	20 year	33.80	176.61	178.12		178.19	0.001322	1.48	47.53	73.70	0.40
Main	8500	10 year	27.50	176.61	178.02		178.08	0.001262	1.38	40.35	67.61	0.39
Main	8500	5 year	21.30	176.61	177.89		177.95	0.001264	1.28	31.94	60.09	0.38
Main	8500	2 year	12.70	176.61	177.65		177.70	0.001213	1.07	19.61	40.71	0.36
Main	8400	Existing	150.82	176.32	179.09		179.19	0.001295	2.17	168.57	136.00	0.44
Main	8400	Future	150.82	176.32	179.10		179.20	0.001279	2.16	169.67	137.25	0.43
Main	8400	100 year	49.10	176.32	178.25		178.30	0.000840	1.33	80.90	89.36	0.33
Main	8400	50 year	42.40	176.32	178.18		178.22	0.000777	1.24	74.56	87.53	0.31
Main	8400	20 year	33.80	176.32	178.07		178.11	0.000700	1.13	65.23	84.76	0.29
Main	8400	10 year	27.50	176.32	177.97		178.00	0.000661	1.04	56.75	82.00	0.28
Main	8400	5 year	21.30	176.32	177.83		177.87	0.000676	0.98	45.79	78.43	0.28
Main	8400	2 year	12.70	176.32	177.57		177.61	0.000811	0.92	26.34	70.50	0.30
Main	8300	Existing	150.82	176.32	178.90		179.04	0.001801	2.48	153.55	140.13	0.51
Main	8300	Future	150.82	176.32	178.92		179.05	0.001741	2.44	155.62	140.81	0.51
Main	8300	100 year	49.10	176.32	177.92	177.89	178.13	0.003668	2.46	42.42	86.42	0.67
Main	8300	50 year	42.40	176.32	177.83	177.81	178.06	0.003927	2.44	35.26	82.47	0.69
Main	8300	20 year	33.80	176.32	177.71	177.70	177.95	0.004337	2.39	25.59	72.08	0.71
Main	8300	10 year	27.50	176.32	177.60	177.46	177.85	0.004604	2.32	18.58	61.62	0.72
Main	8300	5 year	21.30	176.32	177.51	177.31	177.71	0.004186	2.07	13.26	41.43	0.68
Main	8300	2 year	12.70	176.32	177.36		177.47	0.002725	1.49	9.88	17.74	0.53
Main	8248.055	Existing	150.82	176.30	178.91		178.95	0.000651	1.45	250.69	206.59	0.31
Main	8248.055	Future	150.82	176.30	178.92		178.96	0.000633	1.43	253.68	207.63	0.30
Main	8248.055	100 year	49.10	176.30	177.90		177.97	0.001567	1.52	68.34	152.05	0.43
Main	8248.055	50 year	42.40	176.30	177.81		177.89	0.001700	1.51	55.58	145.06	0.44
Main	8248.055	20 year	33.80	176.30	177.69		177.76	0.001816	1.45	40.04	89.59	0.45
Main	8248.055	10 year	27.50	176.30	177.59		177.65	0.001860	1.37	33.57	54.89	0.45
Main	8248.055	5 year	21.30	176.30	177.47		177.54	0.001874	1.29	27.42	53.49	0.44
Main	8248.055	2 year	12.70	176.30	177.28		177.34	0.001942	1.14	17.32	51.09	0.44
Main	8172.005	Existing	150.82	176.30	178.83		178.89	0.000996	1.79	195.56	140.45	0.38
Main	8172.005	Future	150.82	176.30	178.85		178.91	0.000965	1.77	197.90	141.06	0.37
Main	8172.005	100 year	49.10	176.30	177.77		177.85	0.002077	1.72	61.18	111.08	0.49
Main	8172.005	50 year	42.40	176.30	177.68		177.76	0.002161	1.67	51.52	104.99	0.49
Main	8172.005	20 year	33.80	176.30	177.55		177.63	0.002216	1.57	39.43	83.19	0.49
Main	8172.005	10 year	27.50	176.30	177.45		177.51	0.002210	1.46	33.38	51.90	0.48
Main	8172.005	5 year	21.30	176.30	177.34		177.39	0.002234	1.35	27.63	48.31	0.47

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	8172.005	2 year	12.70	176.30	177.13		177.18	0.002280	1.20	18.65	41.75	0.46
Main	8100	Existing	150.82	176.12	178.53		178.77	0.001905	2.27	87.52	69.19	0.52
Main	8100	Future	150.82	176.12	178.56		178.79	0.001800	2.23	89.57	69.91	0.50
Main	8100	100 year	49.10	176.12	177.43		177.62	0.003973	1.89	26.61	42.44	0.65
Main	8100	50 year	42.40	176.12	177.34		177.51	0.004331	1.83	23.22	31.28	0.67
Main	8100	20 year	33.80	176.12	177.21		177.37	0.004743	1.75	19.34	29.22	0.68
Main	8100	10 year	27.50	176.12	177.11		177.25	0.005158	1.68	16.34	27.63	0.70
Main	8100	5 year	21.30	176.12	177.00		177.13	0.005428	1.60	13.34	25.38	0.70
Main	8100	2 year	12.70	176.12	176.82		176.92	0.005464	1.38	9.20	21.90	0.68
Main	8000	Existing	150.82	175.68	178.49		178.61	0.000881	1.78	130.97	91.90	0.37
Main	8000	Future	150.82	175.68	178.52		178.64	0.000834	1.75	134.06	92.65	0.36
Main	8000	100 year	49.10	175.68	177.32		177.40	0.001137	1.31	46.72	50.20	0.37
Main	8000	50 year	42.40	175.68	177.21		177.29	0.001160	1.25	41.61	48.93	0.37
Main	8000	20 year	33.80	175.68	177.07		177.13	0.001193	1.16	34.75	46.54	0.37
Main	8000	10 year	27.50	175.68	176.95		177.00	0.001261	1.09	29.16	43.97	0.37
Main	8000	5 year	21.30	175.68	176.81		176.86	0.001352	1.02	23.49	41.18	0.37
Main	8000	2 year	12.70	175.68	176.59		176.63	0.001575	0.88	14.96	34.77	0.38
Main	7900	Existing	150.82	175.48	178.29		178.50	0.001353	2.20	95.11	65.77	0.45
Main	7900	Future	150.82	175.48	178.33		178.54	0.001251	2.14	98.25	66.13	0.44
Main	7900	100 year	49.10	175.48	177.15		177.26	0.001481	1.51	35.32	32.41	0.43
Main	7900	50 year	42.40	175.48	177.06		177.15	0.001441	1.41	32.26	31.72	0.41
Main	7900	20 year	33.80	175.48	176.92		177.00	0.001380	1.28	28.10	30.76	0.40
Main	7900	10 year	27.50	175.48	176.80		176.87	0.001393	1.18	24.40	29.79	0.39
Main	7900	5 year	21.30	175.48	176.67		176.72	0.001422	1.07	20.47	28.70	0.38
Main	7900	2 year	12.70	175.48	176.43		176.47	0.001657	0.92	13.94	26.76	0.39
Main	7800	Existing	150.82	175.17	178.04		178.33	0.002268	3.08	107.83	88.01	0.60
Main	7800	Future	150.82	175.17	178.14		178.38	0.001893	2.89	117.02	96.35	0.55
Main	7800	100 year	49.10	175.17	176.90		177.08	0.002318	2.17	38.71	45.01	0.55
Main	7800	50 year	42.40	175.17	176.82		176.98	0.002204	2.04	34.91	44.25	0.53
Main	7800	20 year	33.80	175.17	176.71		176.84	0.001938	1.82	30.20	42.31	0.49
Main	7800	10 year	27.50	175.17	176.60		176.71	0.001820	1.67	25.71	38.01	0.47
Main	7800	5 year	21.30	175.17	176.48		176.57	0.001603	1.47	21.60	33.14	0.44
Main	7800	2 year	12.70	175.17	176.28		176.33	0.001216	1.13	15.71	26.17	0.37
Main	7700	Existing	150.82	174.70	178.18		178.19	0.000230	1.00	392.49	248.23	0.19
Main	7700	Future	150.82	174.70	178.26		178.27	0.000199	0.95	412.24	250.23	0.18

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	7700	100 year	49.10	174.70	176.86		176.90	0.000939	1.35	98.02	174.56	0.34
Main	7700	50 year	42.40	174.70	176.75		176.80	0.001060	1.37	80.10	151.59	0.36
Main	7700	20 year	33.80	174.70	176.59		176.66	0.001396	1.46	57.47	141.74	0.41
Main	7700	10 year	27.50	174.70	176.48		176.54	0.001372	1.37	43.15	105.83	0.40
Main	7700	5 year	21.30	174.70	176.34		176.41	0.001586	1.36	31.75	73.36	0.42
Main	7700	2 year	12.70	174.70	176.10		176.18	0.002027	1.30	16.15	54.00	0.45
Main	7670.765	Existing	150.82	174.69	178.16		178.19	0.000256	1.12	336.54	192.90	0.20
Main	7670.765	Future	150.82	174.69	178.24		178.26	0.000225	1.07	352.18	194.39	0.19
Main	7670.765	100 year	49.10	174.69	176.84		176.88	0.000606	1.20	104.26	146.76	0.28
Main	7670.765	50 year	42.40	174.69	176.73		176.77	0.000673	1.22	88.37	144.77	0.29
Main	7670.765	20 year	33.80	174.69	176.58		176.62	0.000742	1.21	67.18	131.31	0.30
Main	7670.765	10 year	27.50	174.69	176.46		176.51	0.000816	1.20	51.56	124.37	0.31
Main	7670.765	5 year	21.30	174.69	176.32		176.37	0.000891	1.17	35.72	95.28	0.32
Main	7670.765	2 year	12.70	174.69	176.09		176.13	0.000800	0.98	20.05	51.82	0.30
Main	7656.964	Existing	150.82	174.69	178.16		178.18	0.000266	1.10	326.24	179.82	0.20
Main	7656.964	Future	150.82	174.69	178.24		178.26	0.000234	1.05	340.89	181.39	0.19
Main	7656.964	100 year	49.10	174.69	176.84		176.86	0.000535	1.08	113.30	139.43	0.26
Main	7656.964	50 year	42.40	174.69	176.73		176.76	0.000582	1.08	98.36	136.80	0.27
Main	7656.964	20 year	33.80	174.69	176.58		176.61	0.000647	1.06	78.20	126.68	0.28
Main	7656.964	10 year	27.50	174.69	176.46		176.49	0.000729	1.07	62.96	122.29	0.29
Main	7656.964	5 year	21.30	174.69	176.31		176.35	0.000859	1.07	46.14	111.04	0.31
Main	7656.964	2 year	12.70	174.69	176.07		176.12	0.001152	1.07	21.93	81.19	0.35
Main	7630.803	Existing	150.82	174.69	178.15		178.17	0.000292	1.19	291.16	147.62	0.21
Main	7630.803	Future	150.82	174.69	178.23		178.25	0.000260	1.14	303.38	150.77	0.20
Main	7630.803	100 year	49.10	174.69	176.82		176.85	0.000529	1.12	107.47	130.38	0.26
Main	7630.803	50 year	42.40	174.69	176.71		176.74	0.000536	1.09	93.96	120.90	0.26
Main	7630.803	20 year	33.80	174.69	176.56		176.59	0.000577	1.06	76.07	116.04	0.27
Main	7630.803	10 year	27.50	174.69	176.44		176.47	0.000622	1.05	61.96	112.93	0.27
Main	7630.803	5 year	21.30	174.69	176.29		176.33	0.000701	1.04	46.12	106.22	0.28
Main	7630.803	2 year	12.70	174.69	176.05		176.09	0.000838	1.00	21.98	86.16	0.30
Main	7591.012	Existing	209.51	174.59	178.07		178.15	0.000876	2.01	241.50	141.51	0.37
Main	7591.012	Future	222.34	174.59	178.15		178.23	0.000872	2.04	253.36	155.88	0.37
Main	7591.012	100 year	62.90	174.59	176.73		176.82	0.001431	1.73	78.30	99.10	0.43
Main	7591.012	50 year	54.70	174.59	176.62		176.71	0.001547	1.72	67.39	95.59	0.44
Main	7591.012	20 year	44.00	174.59	176.47		176.55	0.001682	1.67	53.27	85.87	0.45
Main	7591.012	10 year	36.10	174.59	176.34		176.43	0.001761	1.61	43.40	75.42	0.46

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	7591.012	5 year	28.10	174.59	176.20		176.28	0.001868	1.53	33.45	64.46	0.46
Main	7591.012	2 year	16.90	174.59	175.97		176.04	0.002006	1.35	20.81	46.99	0.46
Main	7566.177	Existing	209.51	174.59	178.02		178.13	0.000854	2.04	224.77	134.39	0.37
Main	7566.177	Future	222.34	174.59	178.10		178.21	0.000859	2.08	235.97	138.37	0.37
Main	7566.177	100 year	62.90	174.59	176.72		176.78	0.000839	1.42	84.70	81.15	0.33
Main	7566.177	50 year	54.70	174.59	176.61		176.67	0.000837	1.36	75.97	78.68	0.33
Main	7566.177	20 year	44.00	174.59	176.46		176.51	0.000819	1.27	64.44	75.45	0.32
Main	7566.177	10 year	36.10	174.59	176.34		176.39	0.000792	1.18	55.56	72.48	0.31
Main	7566.177	5 year	28.10	174.59	176.20		176.24	0.000755	1.08	45.79	67.40	0.30
Main	7566.177	2 year	16.90	174.59	175.97		176.00	0.000659	0.89	30.98	59.49	0.27
Main	7500	Existing	209.51	174.45	178.01		178.07	0.000631	1.76	275.03	149.30	0.31
Main	7500	Future	222.34	174.45	178.09		178.15	0.000630	1.79	287.54	151.55	0.32
Main	7500	100 year	62.90	174.45	176.68		176.73	0.000720	1.31	106.13	105.97	0.31
Main	7500	50 year	54.70	174.45	176.57		176.61	0.000726	1.27	94.67	101.08	0.31
Main	7500	20 year	44.00	174.45	176.42		176.46	0.000712	1.18	80.07	93.97	0.30
Main	7500	10 year	36.10	174.45	176.30		176.34	0.000687	1.10	69.20	88.25	0.29
Main	7500	5 year	28.10	174.45	176.17		176.19	0.000665	1.01	57.24	83.10	0.28
Main	7500	2 year	16.90	174.45	175.93		175.96	0.000597	0.85	38.89	75.26	0.26
Main	7403.514	Existing	209.51	174.45	177.96		178.01	0.000543	1.71	286.07	140.24	0.30
Main	7403.514	Future	222.34	174.45	178.04		178.10	0.000544	1.74	297.77	141.27	0.30
Main	7403.514	100 year	62.90	174.45	176.61		176.66	0.000733	1.40	109.34	120.03	0.32
Main	7403.514	50 year	54.70	174.45	176.49		176.54	0.000797	1.40	95.17	117.71	0.33
Main	7403.514	20 year	44.00	174.45	176.33		176.38	0.000890	1.39	76.35	112.88	0.34
Main	7403.514	10 year	36.10	174.45	176.20		176.26	0.000990	1.39	61.66	109.06	0.36
Main	7403.514	5 year	28.10	174.45	176.05		176.11	0.001050	1.34	46.36	96.89	0.36
Main	7403.514	2 year	16.90	174.45	175.81		175.87	0.001136	1.23	25.22	77.32	0.36
Main	7300	Existing	209.51	174.36	177.85		177.95	0.000910	2.16	226.12	124.57	0.38
Main	7300	Future	222.34	174.36	177.93		178.03	0.000905	2.19	236.55	125.80	0.38
Main	7300	100 year	62.90	174.36	176.50		176.57	0.001067	1.64	82.73	83.74	0.38
Main	7300	50 year	54.70	174.36	176.38		176.45	0.001100	1.60	72.92	79.73	0.38
Main	7300	20 year	44.00	174.36	176.21		176.29	0.001146	1.53	60.16	75.58	0.38
Main	7300	10 year	36.10	174.36	176.08		176.15	0.001184	1.47	50.32	72.21	0.38
Main	7300	5 year	28.10	174.36	175.93		176.00	0.001231	1.40	39.77	68.61	0.38
Main	7300	2 year	16.90	174.36	175.69		175.75	0.001214	1.22	24.06	62.27	0.37
Main	7200	Existing	209.51	174.30	177.74		177.87	0.001252	2.41	183.10	92.70	0.44

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	7200	Future	222.34	174.30	177.82		177.95	0.001263	2.46	190.57	93.93	0.45
Main	7200	100 year	62.90	174.30	176.40		176.48	0.001365	1.71	73.70	69.68	0.42
Main	7200	50 year	54.70	174.30	176.28		176.36	0.001436	1.66	65.20	67.12	0.42
Main	7200	20 year	44.00	174.30	176.11		176.18	0.001533	1.59	54.13	63.57	0.43
Main	7200	10 year	36.10	174.30	175.97		176.04	0.001637	1.54	45.51	60.42	0.44
Main	7200	5 year	28.10	174.30	175.81		175.88	0.001823	1.49	35.98	56.81	0.45
Main	7200	2 year	16.90	174.30	175.52		175.60	0.002487	1.50	20.50	50.41	0.51
Main	7100	Existing	209.51	174.14	177.18		177.65	0.003470	3.94	106.18	81.20	0.74
Main	7100	Future	222.34	174.14	177.23	176.89	177.72	0.003588	4.06	110.76	84.05	0.76
Main	7100	100 year	62.90	174.14	176.07		176.29	0.002540	2.44	45.44	44.92	0.59
Main	7100	50 year	54.70	174.14	175.96		176.16	0.002521	2.32	40.48	42.17	0.58
Main	7100	20 year	44.00	174.14	175.81		175.99	0.002449	2.15	34.28	39.73	0.56
Main	7100	10 year	36.10	174.14	175.68		175.84	0.002430	2.01	29.18	37.60	0.55
Main	7100	5 year	28.10	174.14	175.53		175.67	0.002401	1.85	23.68	34.48	0.54
Main	7100	2 year	16.90	174.14	175.26		175.37	0.002308	1.54	15.47	27.82	0.50
Main	7000	Existing	209.51	173.86	176.86		177.29	0.003703	3.90	118.90	89.51	0.76
Main	7000	Future	222.34	173.86	176.91		177.36	0.003821	4.01	123.22	90.63	0.77
Main	7000	100 year	62.90	173.86	175.78		176.02	0.003129	2.56	41.58	41.82	0.64
Main	7000	50 year	54.70	173.86	175.56		175.84	0.004267	2.72	32.72	38.67	0.73
Main	7000	20 year	44.00	173.86	175.35	175.23	175.64	0.005171	2.69	25.18	34.22	0.78
Main	7000	10 year	36.10	173.86	175.24	175.11	175.50	0.005138	2.51	21.41	31.68	0.76
Main	7000	5 year	28.10	173.86	175.11		175.33	0.005005	2.29	17.58	28.87	0.74
Main	7000	2 year	16.90	173.86	174.92		175.06	0.004246	1.81	12.38	24.30	0.66
Main	6900	Existing	209.51	173.76	176.97		177.07	0.000603	1.67	218.40	112.80	0.31
Main	6900	Future	222.34	173.76	177.02		177.12	0.000634	1.73	224.19	114.38	0.32
Main	6900	100 year	62.90	173.76	175.82		175.86	0.000469	1.05	95.87	99.08	0.25
Main	6900	50 year	54.70	173.76	175.58		175.63	0.000685	1.15	72.10	96.72	0.30
Main	6900	20 year	44.00	173.76	175.32		175.39	0.000961	1.20	48.73	79.24	0.34
Main	6900	10 year	36.10	173.76	175.18		175.24	0.001033	1.15	38.34	66.19	0.35
Main	6900	5 year	28.10	173.76	175.04		175.09	0.000983	1.03	30.98	44.96	0.33
Main	6900	2 year	16.90	173.76	174.84		174.88	0.000782	0.79	22.81	37.90	0.29
Main	6695.694	Existing	209.51	173.78	176.92		176.97	0.000407	1.37	289.18	143.27	0.26
Main	6695.694	Future	222.34	173.78	176.97		177.03	0.000429	1.42	296.19	144.29	0.26
Main	6695.694	100 year	62.90	173.78	175.77		175.80	0.000278	0.81	139.16	117.89	0.19
Main	6695.694	50 year	54.70	173.78	175.51		175.53	0.000413	0.89	108.44	110.16	0.23
Main	6695.694	20 year	44.00	173.78	175.20		175.23	0.000672	0.97	76.62	99.39	0.28

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	6695.694	10 year	36.10	173.78	175.02		175.06	0.000913	1.01	58.80	94.88	0.32
Main	6695.694	5 year	28.10	173.78	174.83		174.88	0.001292	1.05	41.88	87.96	0.37
Main	6695.694	2 year	16.90	173.78	174.55		174.61	0.002543	1.12	19.97	67.68	0.48
Main	6580.334	Existing	209.51	173.24	176.82		176.91	0.000744	2.08	241.55	130.67	0.36
Main	6580.334	Future	222.34	173.24	176.86		176.96	0.000833	2.22	246.25	135.36	0.38
Main	6580.334	100 year	62.90	173.24	175.73		175.76	0.000357	1.12	125.40	94.95	0.23
Main	6580.334	50 year	54.70	173.24	175.45		175.49	0.000478	1.19	99.73	85.19	0.26
Main	6580.334	20 year	44.00	173.24	175.12		175.16	0.000666	1.26	73.26	73.77	0.30
Main	6580.334	10 year	36.10	173.24	174.92		174.97	0.000777	1.25	59.00	68.54	0.32
Main	6580.334	5 year	28.10	173.24	174.72		174.76	0.000875	1.21	45.89	62.19	0.33
Main	6580.334	2 year	16.90	173.24	174.39		174.43	0.001076	1.12	27.32	48.95	0.35
Main	6570.020	Existing	209.51	173.14	176.84	175.65	176.90	0.000449	1.67	298.91	142.08	0.28
Main	6570.020	Future	222.34	173.14	176.88	175.69	176.94	0.000480	1.74	304.69	142.96	0.29
Main	6570.020	100 year	62.90	173.14	175.71	174.64	175.76	0.000400	1.24	112.20	120.51	0.25
Main	6570.020	50 year	54.70	173.14	175.16	174.51	175.45	0.002208	2.46	23.66	99.49	0.56
Main	6570.020	20 year	44.00	173.14	174.87	174.33	175.13	0.002427	2.32	20.16	72.46	0.57
Main	6570.020	10 year	36.10	173.14	174.72	174.20	174.94	0.002189	2.08	18.46	68.45	0.53
Main	6570.020	5 year	28.10	173.14	174.59	174.04	174.74	0.001816	1.78	16.78	64.11	0.48
Main	6570.020	2 year	16.90	173.14	174.33	173.80	174.42	0.001287	1.31	13.69	55.98	0.39
Main	6559.697		Bridge									
Main	6549.568	Existing	209.51	173.12	175.63	175.57	176.11	0.005041	4.22	108.83	110.64	0.87
Main	6549.568	Future	222.34	173.12	175.68	175.60	176.18	0.005135	4.31	113.17	111.88	0.88
Main	6549.568	100 year	62.90	173.12	174.71	174.71	175.44	0.008315	3.91	17.54	67.48	1.03
Main	6549.568	50 year	54.70	173.12	174.58	174.58	175.25	0.008558	3.73	15.98	63.43	1.03
Main	6549.568	20 year	44.00	173.12	174.57	174.41	175.01	0.005776	3.04	15.78	62.90	0.85
Main	6549.568	10 year	36.10	173.12	174.54	174.27	174.85	0.004191	2.55	15.43	61.99	0.72
Main	6549.568	5 year	28.10	173.12	174.47	174.11	174.68	0.002999	2.09	14.67	59.90	0.60
Main	6549.568	2 year	16.90	173.12	174.27	173.86	174.38	0.001999	1.51	12.20	50.65	0.48
Main	6539.356	Existing	209.51	173.19	175.70		175.95	0.003116	3.29	140.44	100.57	0.68
Main	6539.356	Future	222.34	173.19	175.75		176.01	0.003165	3.37	145.80	101.44	0.69
Main	6539.356	100 year	62.90	173.19	174.89		175.00	0.001824	1.91	67.06	72.94	0.49
Main	6539.356	50 year	54.70	173.19	174.82		174.91	0.001681	1.77	62.00	70.34	0.47
Main	6539.356	20 year	44.00	173.19	174.72		174.79	0.001474	1.58	54.97	66.63	0.43
Main	6539.356	10 year	36.10	173.19	174.64		174.70	0.001275	1.42	49.69	63.27	0.40
Main	6539.356	5 year	28.10	173.19	174.54		174.58	0.001083	1.23	43.44	59.26	0.36

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	6539.356	2 year	16.90	173.19	174.29		174.33	0.001004	1.02	29.99	50.76	0.33
Main	6409.803	Existing	209.51	172.74	175.45		175.63	0.002308	2.54	159.76	120.72	0.57
Main	6409.803	Future	222.34	172.74	175.50		175.69	0.002322	2.59	166.17	121.37	0.57
Main	6409.803	100 year	62.90	172.74	174.61		174.74	0.002594	1.88	62.43	110.43	0.55
Main	6409.803	50 year	54.70	172.74	174.54		174.66	0.002630	1.82	54.74	105.22	0.55
Main	6409.803	20 year	44.00	172.74	174.46		174.57	0.002447	1.67	46.37	100.27	0.52
Main	6409.803	10 year	36.10	172.74	174.31	174.23	174.45	0.003467	1.79	32.01	92.97	0.61
Main	6409.803	5 year	28.10	172.74	174.18	173.98	174.34	0.004235	1.81	20.40	84.92	0.66
Main	6409.803	2 year	16.90	172.74	173.97		174.09	0.004090	1.53	11.04	17.89	0.62
Main	6300	Existing	209.51	172.62	175.47		175.50	0.000492	1.28	368.53	236.93	0.27
Main	6300	Future	222.34	172.62	175.53		175.56	0.000497	1.31	381.76	237.59	0.27
Main	6300	100 year	62.90	172.62	174.59		174.61	0.000490	0.93	164.83	224.92	0.25
Main	6300	50 year	54.70	172.62	174.51		174.53	0.000511	0.92	147.16	223.69	0.25
Main	6300	20 year	44.00	172.62	174.42		174.44	0.000487	0.86	127.74	221.48	0.24
Main	6300	10 year	36.10	172.62	174.26		174.28	0.000621	0.88	93.58	183.86	0.27
Main	6300	5 year	28.10	172.62	174.08		174.11	0.000891	0.94	62.17	164.71	0.31
Main	6300	2 year	16.90	172.62	173.80		173.83	0.001264	0.94	32.76	74.19	0.35
Main	6200	Existing	209.51	172.25	174.87	174.87	175.34	0.005332	4.25	120.32	117.99	0.89
Main	6200	Future	222.34	172.25	174.92	174.92	175.40	0.005351	4.32	126.17	119.90	0.89
Main	6200	100 year	62.90	172.25	174.17	174.17	174.47	0.003793	2.83	46.71	89.32	0.71
Main	6200	50 year	54.70	172.25	174.10	174.10	174.39	0.003712	2.72	40.49	85.73	0.69
Main	6200	20 year	44.00	172.25	173.80	173.80	174.28	0.006647	3.17	19.87	43.30	0.90
Main	6200	10 year	36.10	172.25	173.68	173.58	174.10	0.006604	2.95	15.64	26.96	0.88
Main	6200	5 year	28.10	172.25	173.65	173.46	173.92	0.004390	2.36	14.87	24.04	0.71
Main	6200	2 year	16.90	172.25	173.53		173.65	0.002330	1.59	12.51	17.81	0.51
Main	6100	Existing	209.51	172.08	174.87		174.93	0.000944	1.70	291.19	261.00	0.37
Main	6100	Future	222.34	172.08	174.94		175.01	0.000892	1.69	310.98	264.68	0.36
Main	6100	100 year	62.90	172.08	173.86		173.94	0.001789	1.56	77.19	134.32	0.46
Main	6100	50 year	54.70	172.08	173.80		173.88	0.001751	1.49	69.02	130.74	0.45
Main	6100	20 year	44.00	172.08	173.72		173.79	0.001610	1.36	58.90	125.67	0.42
Main	6100	10 year	36.10	172.08	173.67		173.73	0.001338	1.21	53.22	111.89	0.38
Main	6100	5 year	28.10	172.08	173.62		173.66	0.001045	1.03	47.16	105.03	0.34
Main	6100	2 year	16.90	172.08	173.47		173.50	0.000772	0.80	33.14	85.32	0.28
Main	6000	Existing	209.51	171.93	174.85		174.87	0.000427	1.25	443.95	316.25	0.25
Main	6000	Future	222.34	171.93	174.92		174.94	0.000408	1.24	468.25	317.69	0.25

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	6000	100 year	62.90	171.93	173.74		173.79	0.001345	1.51	123.26	241.41	0.40
Main	6000	50 year	54.70	171.93	173.66		173.71	0.001558	1.56	103.87	232.45	0.43
Main	6000	20 year	44.00	171.93	173.54		173.62	0.002030	1.68	77.14	220.88	0.48
Main	6000	10 year	36.10	171.93	173.44	173.40	173.55	0.002713	1.84	55.41	210.70	0.55
Main	6000	5 year	28.10	171.93	173.34	173.34	173.48	0.003503	1.95	34.77	166.42	0.62
Main	6000	2 year	16.90	171.93	172.97	172.94	173.29	0.008932	2.50	6.81	9.77	0.93
Main	5900	Existing	209.51	171.61	174.81		174.84	0.000364	1.26	407.11	269.66	0.24
Main	5900	Future	222.34	171.61	174.89		174.92	0.000355	1.26	428.11	271.58	0.24
Main	5900	100 year	62.90	171.61	173.65		173.70	0.000784	1.29	111.34	217.15	0.32
Main	5900	50 year	54.70	171.61	173.55		173.61	0.000852	1.30	91.69	207.90	0.33
Main	5900	20 year	44.00	171.61	173.43		173.50	0.000858	1.24	67.86	185.27	0.33
Main	5900	10 year	36.10	171.61	173.34		173.40	0.000823	1.16	53.64	122.96	0.32
Main	5900	5 year	28.10	171.61	173.24		173.29	0.000746	1.05	41.28	113.06	0.30
Main	5900	2 year	16.90	171.61	173.01		173.05	0.000627	0.84	23.64	60.03	0.26
Main	5797.390	Existing	209.51	171.44	174.77		174.81	0.000459	1.40	328.16	176.66	0.27
Main	5797.390	Future	222.34	171.44	174.85		174.89	0.000458	1.42	341.78	177.50	0.27
Main	5797.390	100 year	62.90	171.44	173.61		173.64	0.000617	1.14	129.14	164.26	0.28
Main	5797.390	50 year	54.70	171.44	173.51		173.54	0.000659	1.13	113.38	162.99	0.29
Main	5797.390	20 year	44.00	171.44	173.39		173.42	0.000698	1.10	93.33	161.34	0.29
Main	5797.390	10 year	36.10	171.44	173.29		173.32	0.000732	1.08	77.39	159.62	0.30
Main	5797.390	5 year	28.10	171.44	173.17		173.21	0.000775	1.04	59.58	157.87	0.30
Main	5797.390	2 year	16.90	171.44	172.93		172.98	0.000836	1.01	25.39	95.44	0.31
Main	5700	Existing	209.51	171.41	174.73		174.77	0.000476	1.39	323.36	173.62	0.27
Main	5700	Future	222.34	171.41	174.81		174.85	0.000474	1.41	336.75	174.59	0.27
Main	5700	100 year	62.90	171.41	173.55		173.58	0.000676	1.13	126.22	159.74	0.29
Main	5700	50 year	54.70	171.41	173.45		173.48	0.000746	1.13	109.97	158.54	0.30
Main	5700	20 year	44.00	171.41	173.31		173.35	0.000837	1.13	89.24	157.20	0.31
Main	5700	10 year	36.10	171.41	173.20		173.25	0.000951	1.13	72.13	156.08	0.33
Main	5700	5 year	28.10	171.41	173.07		173.12	0.001223	1.19	51.10	154.69	0.37
Main	5700	2 year	16.90	171.41	172.80		172.87	0.001501	1.21	19.69	59.63	0.40
Main	5647.025	Existing	209.51	171.42	174.59		174.71	0.001114	2.19	207.00	141.16	0.41
Main	5647.025	Future	222.34	171.42	174.66		174.79	0.001100	2.21	217.98	143.64	0.41
Main	5647.025	100 year	62.90	171.42	173.41		173.52	0.001324	1.67	68.76	84.81	0.41
Main	5647.025	50 year	54.70	171.42	173.31		173.41	0.001370	1.63	60.09	83.85	0.42
Main	5647.025	20 year	44.00	171.42	173.19		173.28	0.001324	1.52	49.97	82.72	0.40
Main	5647.025	10 year	36.10	171.42	173.09		173.18	0.001261	1.41	41.93	81.81	0.39

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	5647.025	5 year	28.10	171.42	172.97		173.05	0.001189	1.29	32.43	80.72	0.37
Main	5647.025	2 year	16.90	171.42	172.75		172.80	0.000984	1.03	18.98	33.47	0.33
Main	5477.549	Existing	209.51	171.28	174.55		174.60	0.000523	1.52	308.24	192.55	0.29
Main	5477.549	Future	222.34	171.28	174.62		174.68	0.000524	1.55	323.43	197.52	0.29
Main	5477.549	100 year	62.90	171.28	173.33		173.37	0.000632	1.16	110.55	135.93	0.29
Main	5477.549	50 year	54.70	171.28	173.22		173.26	0.000673	1.14	95.63	129.47	0.29
Main	5477.549	20 year	44.00	171.28	173.09		173.13	0.000664	1.07	79.74	123.12	0.29
Main	5477.549	10 year	36.10	171.28	172.99		173.03	0.000643	1.00	67.78	117.91	0.28
Main	5477.549	5 year	28.10	171.28	172.87		172.91	0.000631	0.93	53.93	110.72	0.27
Main	5477.549	2 year	16.90	171.28	172.63		172.66	0.000691	0.84	28.97	87.03	0.27
Main	5400	Existing	209.51	171.25	174.46		174.57	0.001056	2.11	236.70	169.10	0.41
Main	5400	Future	222.34	171.25	174.55		174.65	0.001007	2.10	250.82	169.22	0.40
Main	5400	100 year	62.90	171.25	173.18		173.31	0.002017	1.92	65.49	98.05	0.50
Main	5400	50 year	54.70	171.25	173.03		173.18	0.002616	2.04	51.12	89.40	0.56
Main	5400	20 year	44.00	171.25	172.87	172.75	173.04	0.003153	2.06	37.75	80.51	0.61
Main	5400	10 year	36.10	171.25	172.76	172.64	172.94	0.003364	1.99	29.50	73.13	0.62
Main	5400	5 year	28.10	171.25	172.65	172.49	172.81	0.003425	1.86	21.72	61.78	0.61
Main	5400	2 year	16.90	171.25	172.41		172.55	0.003792	1.62	10.55	23.28	0.61
Main	5300	Existing	209.51	170.86	174.36		174.48	0.000876	1.94	211.86	131.73	0.37
Main	5300	Future	222.34	170.86	174.44		174.56	0.000874	1.97	222.43	134.64	0.37
Main	5300	100 year	62.90	170.86	173.07		173.15	0.001112	1.45	71.23	84.26	0.38
Main	5300	50 year	54.70	170.86	172.88		172.98	0.001473	1.53	56.02	76.60	0.42
Main	5300	20 year	44.00	170.86	172.68		172.79	0.001899	1.55	41.40	69.07	0.47
Main	5300	10 year	36.10	170.86	172.55		172.66	0.002152	1.52	32.57	63.73	0.49
Main	5300	5 year	28.10	170.86	172.42		172.52	0.002260	1.43	24.64	58.53	0.49
Main	5300	2 year	16.90	170.86	172.16		172.24	0.002257	1.26	13.46	19.31	0.47
Main	5200	Existing	209.51	170.65	174.27		174.39	0.000875	2.04	207.95	111.37	0.37
Main	5200	Future	222.34	170.65	174.35		174.47	0.000886	2.09	216.71	113.40	0.37
Main	5200	100 year	62.90	170.65	173.00		173.06	0.000702	1.29	88.29	76.56	0.30
Main	5200	50 year	54.70	170.65	172.79		172.85	0.000885	1.33	72.71	72.27	0.33
Main	5200	20 year	44.00	170.65	172.57		172.63	0.001096	1.34	56.84	68.44	0.36
Main	5200	10 year	36.10	170.65	172.42		172.48	0.001227	1.32	46.67	66.38	0.38
Main	5200	5 year	28.10	170.65	172.28		172.34	0.001251	1.23	37.78	64.25	0.37
Main	5200	2 year	16.90	170.65	172.01		172.07	0.001321	1.14	21.70	53.15	0.37
Main	5000	Existing	209.51	170.37	174.22		174.27	0.000434	1.52	284.26	125.40	0.26

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	5000	Future	222.34	170.37	174.30		174.36	0.000442	1.56	294.06	125.97	0.27
Main	5000	100 year	62.90	170.37	172.94		172.97	0.000377	1.03	128.93	113.82	0.23
Main	5000	50 year	54.70	170.37	172.70		172.74	0.000515	1.11	102.51	107.46	0.26
Main	5000	20 year	44.00	170.37	172.42		172.47	0.000752	1.21	73.92	100.24	0.31
Main	5000	10 year	36.10	170.37	172.20		172.27	0.001185	1.36	51.32	98.16	0.38
Main	5000	5 year	28.10	170.37	171.97		172.07	0.001734	1.49	30.95	76.06	0.44
Main	5000	2 year	16.90	170.37	171.65		171.75	0.002030	1.40	13.70	31.69	0.46
Main	4869.277	Existing	209.51	170.10	174.16		174.23	0.000333	1.36	232.23	83.95	0.24
Main	4869.277	Future	222.34	170.10	174.24		174.31	0.000346	1.40	238.47	84.28	0.24
Main	4869.277	100 year	62.90	170.10	172.92		172.93	0.000167	0.70	131.02	78.59	0.15
Main	4869.277	50 year	54.70	170.10	172.67		172.69	0.000200	0.71	112.11	77.56	0.17
Main	4869.277	20 year	44.00	170.10	172.39		172.41	0.000239	0.70	90.67	76.32	0.18
Main	4869.277	10 year	36.10	170.10	172.16		172.18	0.000296	0.70	73.18	75.26	0.19
Main	4869.277	5 year	28.10	170.10	171.93		171.95	0.000375	0.70	55.82	74.25	0.21
Main	4869.277	2 year	16.90	170.10	171.57		171.60	0.000603	0.70	29.47	70.75	0.25
Main	4854.202	Existing	209.51	170.10	174.16	172.53	174.22	0.000301	1.33	261.19	104.38	0.23
Main	4854.202	Future	222.34	170.10	174.24	172.53	174.30	0.000312	1.37	269.00	105.03	0.23
Main	4854.202	100 year	62.90	170.10	172.91	171.78	172.93	0.000211	0.82	119.45	90.44	0.18
Main	4854.202	50 year	54.70	170.10	172.40	171.66	172.66	0.001804	2.27	24.15	80.86	0.51
Main	4854.202	20 year	44.00	170.10	172.17	171.48	172.39	0.001737	2.05	21.43	78.01	0.49
Main	4854.202	10 year	36.10	170.10	171.98	171.35	172.16	0.001712	1.89	19.12	76.24	0.48
Main	4854.202	5 year	28.10	170.10	171.79	171.20	171.93	0.001571	1.66	16.88	71.39	0.45
Main	4854.202	2 year	16.90	170.10	171.50	170.96	171.58	0.001228	1.26	13.40	60.17	0.38
Main	4844.123		Bridge									
Main	4834.085	Existing	209.51	170.06	173.21	172.54	173.41	0.001567	2.40	141.20	91.72	0.49
Main	4834.085	Future	222.34	170.06	173.29	172.59	173.50	0.001553	2.44	147.59	92.15	0.49
Main	4834.085	100 year	62.90	170.06	171.97	171.97	172.67	0.007857	3.72	17.02	79.99	0.99
Main	4834.085	50 year	54.70	170.06	171.84	171.84	172.48	0.008241	3.57	15.42	71.82	1.00
Main	4834.085	20 year	44.00	170.06	171.67	171.67	172.22	0.008456	3.29	13.41	51.05	0.99
Main	4834.085	10 year	36.10	170.06	171.59	171.53	172.02	0.007378	2.92	12.39	39.67	0.91
Main	4834.085	5 year	28.10	170.06	171.53	171.37	171.82	0.005476	2.42	11.65	30.47	0.78
Main	4834.085	2 year	16.90	170.06	171.36	171.10	171.51	0.003661	1.76	9.60	20.05	0.62
Main	4818.028	Existing	209.51	170.06	173.22		173.36	0.001201	2.17	172.80	91.62	0.43
Main	4818.028	Future	222.34	170.06	173.30		173.44	0.001198	2.21	180.08	92.03	0.43
Main	4818.028	100 year	62.90	170.06	172.05		172.14	0.001407	1.57	69.46	84.57	0.42

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	4818.028	50 year	54.70	170.06	171.95		172.04	0.001451	1.53	61.55	84.01	0.42
Main	4818.028	20 year	44.00	170.06	171.82		171.91	0.001511	1.46	50.64	83.22	0.42
Main	4818.028	10 year	36.10	170.06	171.71		171.80	0.001578	1.40	41.70	82.57	0.43
Main	4818.028	5 year	28.10	170.06	171.59		171.67	0.001686	1.33	31.42	81.90	0.43
Main	4818.028	2 year	16.90	170.06	171.36		171.43	0.001793	1.16	15.72	50.04	0.43
Main	4699.593	Existing	209.51	170.00	172.63		173.09	0.004052	3.53	97.70	68.68	0.76
Main	4699.593	Future	222.34	170.00	172.69		173.17	0.004151	3.63	101.55	70.25	0.77
Main	4699.593	100 year	62.90	170.00	171.74		171.91	0.002622	2.01	45.86	50.05	0.56
Main	4699.593	50 year	54.70	170.00	171.66		171.81	0.002537	1.89	41.94	49.38	0.55
Main	4699.593	20 year	44.00	170.00	171.55		171.68	0.002373	1.72	36.62	48.47	0.52
Main	4699.593	10 year	36.10	170.00	171.46		171.57	0.002237	1.58	32.28	47.71	0.50
Main	4699.593	5 year	28.10	170.00	171.36		171.45	0.002039	1.42	27.30	46.58	0.47
Main	4699.593	2 year	16.90	170.00	171.17		171.23	0.001570	1.13	19.15	37.24	0.40
Main	4600	Existing	209.51	170.01	172.55		172.76	0.002091	2.56	153.89	117.82	0.55
Main	4600	Future	222.34	170.01	172.62		172.84	0.002046	2.59	162.60	120.19	0.55
Main	4600	100 year	62.90	170.01	171.49		171.65	0.002921	1.94	50.54	73.99	0.58
Main	4600	50 year	54.70	170.01	171.41		171.55	0.003020	1.87	44.43	70.03	0.59
Main	4600	20 year	44.00	170.01	171.29		171.42	0.003212	1.78	36.18	64.44	0.59
Main	4600	10 year	36.10	170.01	171.18		171.31	0.003439	1.70	29.82	59.55	0.60
Main	4600	5 year	28.10	170.01	171.07		171.19	0.003822	1.61	23.13	54.73	0.62
Main	4600	2 year	16.90	170.01	170.86		170.97	0.005043	1.51	12.94	40.90	0.67
Main	4400	Existing	209.51	169.49	171.82		172.24	0.004044	3.28	90.35	66.43	0.75
Main	4400	Future	222.34	169.49	171.87		172.32	0.004179	3.39	93.53	68.46	0.77
Main	4400	100 year	62.90	169.49	171.14		171.24	0.001575	1.54	55.22	48.71	0.44
Main	4400	50 year	54.70	169.49	171.08		171.16	0.001437	1.41	51.97	48.25	0.41
Main	4400	20 year	44.00	169.49	170.98		171.04	0.001253	1.25	47.21	47.57	0.38
Main	4400	10 year	36.10	169.49	170.89		170.94	0.001115	1.11	43.18	46.99	0.35
Main	4400	5 year	28.10	169.49	170.80		170.84	0.000935	0.96	38.92	46.37	0.32
Main	4400	2 year	16.90	169.49	170.61		170.63	0.000751	0.73	30.24	45.07	0.28
Main	4282.520	Existing	209.51	169.39	171.46		171.79	0.005435	3.51	116.67	107.06	0.85
Main	4282.520	Future	222.34	169.39	171.56		171.87	0.004863	3.44	126.94	110.19	0.81
Main	4282.520	100 year	62.90	169.39	170.69	170.69	170.94	0.007077	2.71	43.93	84.20	0.88
Main	4282.520	50 year	54.70	169.39	170.64	170.64	170.88	0.006916	2.59	39.79	83.86	0.86
Main	4282.520	20 year	44.00	169.39	170.58	170.58	170.79	0.006575	2.39	34.08	83.37	0.83
Main	4282.520	10 year	36.10	169.39	170.53	170.53	170.71	0.005974	2.20	30.01	83.01	0.78
Main	4282.520	5 year	28.10	169.39	170.41	170.41	170.61	0.007147	2.19	20.95	71.51	0.84

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	4282.520	2 year	16.90	169.39	170.25	170.25	170.43	0.007535	1.94	11.62	46.78	0.83
Main	4229.059	Existing	209.51	169.26	171.58		171.64	0.001025	1.77	261.86	190.87	0.39
Main	4229.059	Future	222.34	169.26	171.67		171.73	0.000968	1.76	278.94	194.77	0.38
Main	4229.059	100 year	62.90	169.26	170.54		170.61	0.002094	1.62	85.33	152.41	0.49
Main	4229.059	50 year	54.70	169.26	170.48		170.54	0.002143	1.57	75.91	150.16	0.49
Main	4229.059	20 year	44.00	169.26	170.40		170.46	0.002131	1.49	63.88	147.24	0.49
Main	4229.059	10 year	36.10	169.26	170.33		170.39	0.002050	1.39	54.89	145.01	0.47
Main	4229.059	5 year	28.10	169.26	170.26		170.31	0.001897	1.27	45.09	126.22	0.45
Main	4229.059	2 year	16.90	169.26	170.13		170.16	0.001617	1.04	30.00	90.23	0.40
Main	4151.902	Existing	209.51	169.26	171.57		171.59	0.000435	1.14	384.88	262.34	0.25
Main	4151.902	Future	222.34	169.26	171.66		171.68	0.000408	1.13	408.66	263.41	0.24
Main	4151.902	100 year	62.90	169.26	170.44		170.49	0.001491	1.27	101.56	215.62	0.41
Main	4151.902	50 year	54.70	169.26	170.37		170.42	0.001702	1.28	85.49	198.44	0.43
Main	4151.902	20 year	44.00	169.26	170.26		170.32	0.002053	1.30	66.10	183.32	0.46
Main	4151.902	10 year	36.10	169.26	170.18		170.25	0.002345	1.29	51.92	172.74	0.49
Main	4151.902	5 year	28.10	169.26	170.10		170.17	0.002524	1.24	38.42	154.55	0.50
Main	4151.902	2 year	16.90	169.26	169.97		170.02	0.002612	1.07	21.10	100.30	0.48
Main	4057.514	Existing	209.51	168.90	171.54		171.56	0.000331	1.12	434.89	247.61	0.23
Main	4057.514	Future	222.34	168.90	171.63		171.65	0.000317	1.12	457.60	248.13	0.22
Main	4057.514	100 year	62.90	168.90	170.39		170.41	0.000698	1.07	154.20	231.02	0.29
Main	4057.514	50 year	54.70	168.90	170.30		170.32	0.000775	1.08	134.65	228.04	0.31
Main	4057.514	20 year	44.00	168.90	170.18		170.21	0.000926	1.10	107.63	223.87	0.33
Main	4057.514	10 year	36.10	168.90	170.09		170.11	0.001069	1.12	86.78	213.91	0.35
Main	4057.514	5 year	28.10	168.90	169.98		170.01	0.001312	1.15	64.28	203.90	0.38
Main	4057.514	2 year	16.90	168.90	169.79		169.83	0.001789	1.16	32.90	130.19	0.43
Main	4000	Existing	209.51	168.68	171.49		171.53	0.000526	1.44	315.58	163.55	0.29
Main	4000	Future	222.34	168.68	171.58		171.62	0.000519	1.46	330.66	166.62	0.28
Main	4000	100 year	62.90	168.68	170.34		170.36	0.000641	1.07	135.22	149.79	0.29
Main	4000	50 year	54.70	168.68	170.25		170.27	0.000653	1.04	122.52	148.89	0.28
Main	4000	20 year	44.00	168.68	170.13		170.15	0.000677	0.99	104.64	147.61	0.29
Main	4000	10 year	36.10	168.68	170.04		170.05	0.000698	0.96	90.56	146.60	0.29
Main	4000	5 year	28.10	168.68	169.93		169.95	0.000728	0.91	74.92	145.47	0.29
Main	4000	2 year	16.90	168.68	169.74		169.76	0.000790	0.83	48.01	134.25	0.29
Main	3900	Existing	209.51	168.69	171.29		171.42	0.001243	2.12	179.95	112.07	0.43
Main	3900	Future	222.34	168.69	171.38		171.52	0.001197	2.14	190.59	113.65	0.43

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	3900	100 year	62.90	168.69	170.13		170.23	0.001691	1.62	62.54	88.16	0.45
Main	3900	50 year	54.70	168.69	170.06		170.15	0.001660	1.54	56.03	80.31	0.45
Main	3900	20 year	44.00	168.69	169.95		170.03	0.001586	1.42	48.16	70.00	0.43
Main	3900	10 year	36.10	168.69	169.87		169.94	0.001480	1.30	42.43	69.56	0.41
Main	3900	5 year	28.10	168.69	169.77		169.83	0.001354	1.17	35.93	69.05	0.39
Main	3900	2 year	16.90	168.69	169.61		169.65	0.001112	0.93	24.77	68.17	0.34
Main	3800	Existing	209.51	168.69	171.26		171.34	0.000739	1.55	263.01	158.53	0.33
Main	3800	Future	222.34	168.69	171.36		171.44	0.000704	1.56	278.56	159.12	0.32
Main	3800	100 year	62.90	168.69	170.00		170.08	0.001746	1.39	75.53	130.46	0.44
Main	3800	50 year	54.70	168.69	169.91		169.99	0.001975	1.38	63.34	124.96	0.46
Main	3800	20 year	44.00	168.69	169.77		169.86	0.002386	1.37	47.43	112.92	0.50
Main	3800	10 year	36.10	168.69	169.66		169.75	0.002859	1.36	35.79	103.02	0.53
Main	3800	5 year	28.10	168.69	169.53		169.63	0.004032	1.40	22.72	76.86	0.61
Main	3800	2 year	16.90	168.69	169.29		169.41	0.009216	1.50	11.24	34.70	0.84
Main	3691.523	Existing	209.51	168.17	171.22		171.29	0.000486	1.44	310.34	183.42	0.28
Main	3691.523	Future	222.34	168.17	171.32		171.39	0.000470	1.45	328.77	185.04	0.27
Main	3691.523	100 year	62.90	168.17	169.92		169.98	0.000694	1.12	92.47	131.71	0.30
Main	3691.523	50 year	54.70	168.17	169.82		169.87	0.000703	1.08	79.88	122.54	0.30
Main	3691.523	20 year	44.00	168.17	169.68		169.73	0.000711	1.01	63.26	113.63	0.29
Main	3691.523	10 year	36.10	168.17	169.56		169.61	0.000712	0.94	50.56	107.86	0.29
Main	3691.523	5 year	28.10	168.17	169.41		169.45	0.000775	0.89	34.69	88.57	0.29
Main	3691.523	2 year	16.90	168.17	169.12		169.15	0.000921	0.77	22.05	35.02	0.30
Main	3600	Existing	209.51	168.17	171.22		171.25	0.000477	1.51	390.60	177.12	0.28
Main	3600	Future	222.34	168.17	171.32		171.35	0.000467	1.53	408.42	177.68	0.28
Main	3600	100 year	62.90	168.17	169.90		169.92	0.000626	1.17	162.67	168.35	0.29
Main	3600	50 year	54.70	168.17	169.79		169.82	0.000661	1.16	145.15	167.29	0.29
Main	3600	20 year	44.00	168.17	169.64		169.67	0.000735	1.14	120.17	165.76	0.30
Main	3600	10 year	36.10	168.17	169.52		169.55	0.000819	1.13	99.82	161.91	0.32
Main	3600	5 year	28.10	168.17	169.35		169.38	0.000995	1.14	73.96	138.80	0.34
Main	3600	2 year	16.90	168.17	169.05		169.07	0.001139	0.99	42.37	82.36	0.35
Main	3500	Existing	209.51	167.87	171.13		171.21	0.000606	1.68	284.13	130.37	0.31
Main	3500	Future	222.34	167.87	171.23		171.31	0.000598	1.71	297.21	130.93	0.31
Main	3500	100 year	62.90	167.87	169.83		169.87	0.000653	1.19	118.67	122.62	0.29
Main	3500	50 year	54.70	167.87	169.72		169.76	0.000667	1.15	105.84	121.86	0.29
Main	3500	20 year	44.00	167.87	169.57		169.61	0.000700	1.10	87.32	120.76	0.30
Main	3500	10 year	36.10	167.87	169.44		169.48	0.000744	1.06	71.94	119.84	0.30

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	3500	5 year	28.10	167.87	169.24		169.29	0.001017	1.11	48.53	112.42	0.34
Main	3500	2 year	16.90	167.87	168.89		168.95	0.001438	1.12	18.96	53.16	0.39
Main	3400	Existing	209.51	167.36	170.66		171.06	0.002912	3.65	133.62	78.66	0.68
Main	3400	Future	222.34	167.36	170.77		171.17	0.002793	3.66	142.26	80.00	0.67
Main	3400	100 year	62.90	167.36	169.29	169.29	169.70	0.004696	3.06	38.15	61.20	0.78
Main	3400	50 year	54.70	167.36	169.21	169.21	169.59	0.004619	2.92	32.96	60.22	0.76
Main	3400	20 year	44.00	167.36	169.07	169.07	169.43	0.004695	2.76	24.72	58.62	0.76
Main	3400	10 year	36.10	167.36	168.75	168.75	169.26	0.008788	3.16	11.81	13.05	0.99
Main	3400	5 year	28.10	167.36	168.60	168.59	169.02	0.008999	2.88	9.91	12.25	0.98
Main	3400	2 year	16.90	167.36	168.41		168.66	0.007148	2.20	7.72	11.25	0.84
Main	3300	Existing	209.51	166.83	170.61		170.85	0.001367	2.70	152.94	61.21	0.47
Main	3300	Future	222.34	166.83	170.71		170.96	0.001370	2.76	159.26	61.53	0.48
Main	3300	100 year	62.90	166.83	169.00		169.15	0.001783	1.98	58.23	56.12	0.48
Main	3300	50 year	54.70	166.83	168.89		169.03	0.001793	1.90	52.01	55.75	0.48
Main	3300	20 year	44.00	166.83	168.68		168.83	0.002093	1.87	40.64	55.11	0.51
Main	3300	10 year	36.10	166.83	168.53		168.68	0.002287	1.81	32.56	54.65	0.52
Main	3300	5 year	28.10	166.83	168.38		168.52	0.002427	1.71	24.33	54.19	0.52
Main	3300	2 year	16.90	166.83	168.11		168.22	0.002493	1.47	11.73	21.81	0.51
Main	3200	Existing	209.51	166.11	170.40		170.70	0.001596	2.85	127.33	50.07	0.50
Main	3200	Future	222.34	166.11	170.50		170.81	0.001617	2.93	132.15	50.43	0.51
Main	3200	100 year	62.90	166.11	168.83		168.98	0.001643	1.88	53.68	44.07	0.46
Main	3200	50 year	54.70	166.11	168.73		168.86	0.001584	1.77	49.09	43.67	0.45
Main	3200	20 year	44.00	166.11	168.50		168.63	0.001881	1.73	39.05	42.78	0.47
Main	3200	10 year	36.10	166.11	168.33		168.46	0.002111	1.68	31.94	42.14	0.49
Main	3200	5 year	28.10	166.11	168.16		168.28	0.002361	1.61	24.70	41.48	0.51
Main	3200	2 year	16.90	166.11	167.83		167.95	0.003071	1.54	12.04	27.28	0.55
Main	3100	Existing	209.51	166.09	169.50	169.50	170.38	0.005077	4.89	86.09	50.93	0.90
Main	3100	Future	222.34	166.09	169.57	169.57	170.49	0.005145	5.01	89.90	51.29	0.90
Main	3100	100 year	62.90	166.09	168.40		168.75	0.003022	2.80	36.05	36.18	0.64
Main	3100	50 year	54.70	166.09	168.40		168.66	0.002278	2.43	36.11	36.21	0.56
Main	3100	20 year	44.00	166.09	168.15		168.40	0.002548	2.35	27.59	31.28	0.58
Main	3100	10 year	36.10	166.09	168.01		168.23	0.002359	2.14	23.57	28.52	0.55
Main	3100	5 year	28.10	166.09	167.91		168.07	0.001846	1.81	20.78	26.51	0.48
Main	3100	2 year	16.90	166.09	167.64		167.74	0.001411	1.38	14.42	20.65	0.40
Main	3000	Existing	209.51	166.15	169.61		169.90	0.001753	2.64	114.30	51.49	0.52

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	3000	Future	222.34	166.15	169.67		169.99	0.001823	2.74	117.41	51.64	0.53
Main	3000	100 year	62.90	166.15	168.34		168.46	0.001654	1.66	50.94	48.37	0.45
Main	3000	50 year	54.70	166.15	168.36		168.45	0.001170	1.41	52.16	48.43	0.38
Main	3000	20 year	44.00	166.15	168.00		168.13	0.002253	1.60	34.92	47.55	0.50
Main	3000	10 year	36.10	166.15	167.74		167.91	0.004279	1.84	22.73	41.27	0.66
Main	3000	5 year	28.10	166.15	167.46	167.43	167.71	0.009039	2.22	13.41	26.99	0.92
Main	3000	2 year	16.90	166.15	167.29	167.19	167.46	0.007297	1.84	9.30	19.85	0.81
Main	2900	Existing	233.18	165.92	169.52		169.75	0.001071	2.35	149.66	66.61	0.42
Main	2900	Future	246.58	165.92	169.57		169.83	0.001120	2.43	153.52	67.04	0.43
Main	2900	100 year	66.60	165.92	168.30		168.36	0.000522	1.19	74.75	54.72	0.27
Main	2900	50 year	58.10	165.92	168.33		168.38	0.000371	1.01	76.84	55.28	0.23
Main	2900	20 year	47.00	165.92	167.96		168.01	0.000511	1.03	57.30	49.76	0.26
Main	2900	10 year	38.60	165.92	167.68		167.74	0.000676	1.05	44.05	44.99	0.29
Main	2900	5 year	30.10	165.92	167.36		167.42	0.001086	1.10	30.45	38.97	0.35
Main	2900	2 year	18.20	165.92	166.89		166.97	0.003241	1.27	14.47	28.64	0.55
Main	2800	Existing	233.18	165.47	169.46		169.65	0.000814	2.16	186.34	78.67	0.37
Main	2800	Future	246.58	165.47	169.52		169.72	0.000855	2.24	190.74	78.90	0.38
Main	2800	100 year	66.60	165.47	168.26		168.31	0.000362	1.09	94.49	74.17	0.23
Main	2800	50 year	58.10	165.47	168.31		168.35	0.000253	0.92	98.11	74.34	0.19
Main	2800	20 year	47.00	165.47	167.93		167.97	0.000344	0.96	69.78	72.97	0.22
Main	2800	10 year	38.60	165.47	167.64		167.68	0.000422	0.95	51.24	56.02	0.24
Main	2800	5 year	30.10	165.47	167.29		167.34	0.000593	0.97	34.57	40.64	0.27
Main	2800	2 year	18.20	165.47	166.69		166.75	0.001522	1.08	16.87	21.95	0.39
Main	2700	Existing	233.18	165.01	169.37		169.57	0.000998	2.27	189.30	86.69	0.40
Main	2700	Future	246.58	165.01	169.43		169.63	0.001050	2.36	193.75	87.11	0.41
Main	2700	100 year	66.60	165.01	168.21		168.28	0.000465	1.18	92.98	79.49	0.25
Main	2700	50 year	58.10	165.01	168.28		168.32	0.000315	0.99	98.16	79.88	0.21
Main	2700	20 year	47.00	165.01	167.88		167.93	0.000444	1.06	66.93	74.11	0.24
Main	2700	10 year	38.60	165.01	167.58		167.63	0.000561	1.08	46.42	53.32	0.27
Main	2700	5 year	30.10	165.01	167.20		167.27	0.000805	1.11	30.34	36.70	0.31
Main	2700	2 year	18.20	165.01	166.42		166.54	0.003035	1.52	11.98	15.42	0.55
Main	2582.754	Existing	233.18	164.34	169.37		169.46	0.000392	1.71	288.34	102.10	0.26
Main	2582.754	Future	246.58	164.34	169.42		169.52	0.000418	1.78	293.54	102.46	0.27
Main	2582.754	100 year	66.60	164.34	168.22		168.24	0.000120	0.77	174.91	94.69	0.14
Main	2582.754	50 year	58.10	164.34	168.28		168.30	0.000084	0.65	180.99	95.09	0.12
Main	2582.754	20 year	47.00	164.34	167.88		167.90	0.000098	0.64	143.60	92.56	0.12

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	2582.754	10 year	38.60	164.34	167.58		167.59	0.000109	0.63	115.94	89.53	0.13
Main	2582.754	5 year	30.10	164.34	167.20		167.22	0.000136	0.63	83.42	83.96	0.14
Main	2582.754	2 year	18.20	164.34	166.39		166.42	0.000355	0.73	27.06	36.52	0.21
Main	2554.451	Existing	233.18	164.16	169.27	168.21	169.44	0.000782	2.55	266.09	130.39	0.38
Main	2554.451	Future	246.58	164.16	169.31	168.23	169.50	0.000837	2.65	271.78	132.25	0.39
Main	2554.451	100 year	66.60	164.16	168.15	167.09	168.23	0.000420	1.56	103.94	78.38	0.26
Main	2554.451	50 year	58.10	164.16	168.24	166.85	168.29	0.000285	1.30	108.97	79.25	0.22
Main	2554.451	20 year	47.00	164.16	167.83	166.51	167.89	0.000333	1.30	85.50	75.87	0.23
Main	2554.451	10 year	38.60	164.16	167.52	166.23	167.59	0.000372	1.29	68.22	73.51	0.24
Main	2554.451	5 year	30.10	164.16	166.83	165.93	167.18	0.001783	2.62	11.50	64.33	0.52
Main	2554.451	2 year	18.20	164.16	166.13	165.46	166.38	0.001875	2.17	8.38	26.83	0.51
Main	2524.843		Culvert									
Main	2500.957	Existing	233.18	164.23	167.07	167.07	167.53	0.004602	4.41	170.61	154.54	0.85
Main	2500.957	Future	246.58	164.23	167.11	167.11	167.58	0.004792	4.53	175.23	155.21	0.87
Main	2500.957	100 year	66.60	164.23	167.06	167.06	167.10	0.000386	1.27	168.86	154.28	0.25
Main	2500.957	50 year	58.10	164.23	166.79	166.79	168.09	0.006574	5.05	11.50	147.53	1.01
Main	2500.957	20 year	47.00	164.23	166.45	166.45	167.58	0.006841	4.70	10.01	104.34	1.01
Main	2500.957	10 year	38.60	164.23	166.19	166.19	167.17	0.007059	4.38	8.81	90.45	1.00
Main	2500.957	5 year	30.10	164.23	165.89	165.89	166.72	0.007464	4.03	7.46	78.38	1.00
Main	2500.957	2 year	18.20	164.23	165.42	165.42	166.01	0.008300	3.41	5.34	42.84	1.00
Main	2476.151	Existing	233.18	164.13	166.50		166.63	0.001886	2.40	241.24	170.37	0.52
Main	2476.151	Future	246.58	164.13	166.57		166.71	0.001831	2.42	253.54	171.08	0.52
Main	2476.151	100 year	66.60	164.13	165.25	165.18	165.48	0.006698	2.54	57.14	114.58	0.85
Main	2476.151	50 year	58.10	164.13	165.17	165.14	165.39	0.007649	2.54	47.68	102.52	0.90
Main	2476.151	20 year	47.00	164.13	165.05	165.05	165.29	0.009164	2.51	36.65	88.96	0.96
Main	2476.151	10 year	38.60	164.13	165.00	165.00	165.20	0.008480	2.30	32.19	86.35	0.91
Main	2476.151	5 year	30.10	164.13	164.92	164.92	165.10	0.008827	2.15	25.52	78.59	0.91
Main	2476.151	2 year	18.20	164.13	164.78	164.76	164.94	0.009218	1.89	15.37	62.24	0.89
Main	2315.475	Existing	233.18	162.90	165.96		166.29	0.002362	2.84	132.89	86.44	0.58
Main	2315.475	Future	246.58	162.90	166.02		166.36	0.002398	2.91	138.13	87.40	0.59
Main	2315.475	100 year	66.60	162.90	164.73		164.90	0.002176	1.88	42.96	50.53	0.51
Main	2315.475	50 year	58.10	162.90	164.61		164.77	0.002265	1.81	37.26	44.98	0.51
Main	2315.475	20 year	47.00	162.90	164.44		164.59	0.002421	1.71	30.20	38.81	0.52
Main	2315.475	10 year	38.60	162.90	164.30		164.44	0.002592	1.63	25.04	34.33	0.53
Main	2315.475	5 year	30.10	162.90	164.13		164.25	0.003066	1.56	19.65	27.20	0.56

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	2315.475	2 year	18.20	162.90	163.85		163.95	0.004329	1.45	12.59	23.02	0.62
Main	2261.837	Existing	233.18	162.33	165.46	165.46	166.09	0.004803	4.12	117.34	99.97	0.84
Main	2261.837	Future	246.58	162.33	165.51	165.51	166.16	0.004873	4.21	122.56	100.36	0.85
Main	2261.837	100 year	66.60	162.33	164.16	164.16	164.67	0.007375	3.27	25.76	33.42	0.93
Main	2261.837	50 year	58.10	162.33	164.05	164.05	164.54	0.007632	3.16	22.28	30.36	0.94
Main	2261.837	20 year	47.00	162.33	163.89	163.89	164.34	0.008151	3.01	17.78	26.40	0.95
Main	2261.837	10 year	38.60	162.33	163.75	163.75	164.17	0.008838	2.89	14.39	22.58	0.97
Main	2261.837	5 year	30.10	162.33	163.66	163.60	163.98	0.007613	2.52	12.44	19.88	0.89
Main	2261.837	2 year	18.20	162.33	163.49	163.35	163.68	0.005760	1.92	9.50	14.95	0.75
Main	2200	Existing	233.18	162.13	165.17		165.57	0.002659	3.19	132.02	86.37	0.63
Main	2200	Future	246.58	162.13	165.26		165.66	0.002568	3.21	140.05	86.92	0.63
Main	2200	100 year	66.60	162.13	163.70	163.57	164.03	0.005491	2.63	30.82	39.49	0.79
Main	2200	50 year	58.10	162.13	163.59	163.48	163.91	0.005856	2.55	26.91	36.89	0.80
Main	2200	20 year	47.00	162.13	163.44	163.38	163.74	0.006634	2.45	21.67	33.96	0.83
Main	2200	10 year	38.60	162.13	163.32	163.27	163.60	0.007643	2.38	17.45	32.64	0.87
Main	2200	5 year	30.10	162.13	163.17	163.14	163.45	0.009375	2.31	13.12	23.41	0.94
Main	2200	2 year	18.20	162.13	162.94	162.94	163.18	0.011636	2.19	8.32	17.21	1.00
Main	2100	Existing	233.18	161.48	164.85	164.23	165.32	0.002680	3.48	126.03	72.31	0.64
Main	2100	Future	246.58	161.48	164.92	164.32	165.41	0.002753	3.58	130.80	73.74	0.65
Main	2100	100 year	66.60	161.48	163.47		163.67	0.002264	2.13	46.51	43.95	0.53
Main	2100	50 year	58.10	161.48	163.36		163.54	0.002212	2.02	41.93	42.22	0.52
Main	2100	20 year	47.00	161.48	163.20		163.36	0.002132	1.86	35.56	39.56	0.50
Main	2100	10 year	38.60	161.48	163.08		163.21	0.002021	1.71	30.71	37.02	0.48
Main	2100	5 year	30.10	161.48	162.93		163.04	0.001895	1.53	25.51	34.08	0.46
Main	2100	2 year	18.20	161.48	162.68		162.75	0.001669	1.23	17.58	28.78	0.42
Main	2000	Existing	233.18	161.34	164.08	164.08	164.90	0.005950	4.18	77.30	72.77	0.91
Main	2000	Future	246.58	161.34	164.17	164.17	164.99	0.005733	4.21	83.78	78.35	0.90
Main	2000	100 year	66.60	161.34	162.77	162.77	163.24	0.008897	3.08	23.36	27.54	0.98
Main	2000	50 year	58.10	161.34	162.68	162.68	163.12	0.009165	2.95	21.00	27.10	0.98
Main	2000	20 year	47.00	161.34	162.56	162.56	162.95	0.009417	2.75	17.91	26.52	0.98
Main	2000	10 year	38.60	161.34	162.46	162.46	162.80	0.010103	2.61	15.17	25.71	0.99
Main	2000	5 year	30.10	161.34	162.35	162.35	162.65	0.010956	2.43	12.41	21.90	1.01
Main	2000	2 year	18.20	161.34	162.14	162.14	162.38	0.011960	2.17	8.39	17.92	1.01
Main	1900.000	Existing	233.18	160.30	163.91		164.13	0.001361	2.42	154.60	68.26	0.45
Main	1900.000	Future	246.58	160.30	164.02		164.26	0.001357	2.48	162.40	71.54	0.45

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	1900.000	100 year	66.60	160.30	162.13		162.28	0.001984	1.87	51.28	52.83	0.49
Main	1900.000	50 year	58.10	160.30	162.00		162.15	0.002086	1.81	44.83	50.54	0.50
Main	1900.000	20 year	47.00	160.30	161.83		161.97	0.002238	1.73	36.44	47.50	0.51
Main	1900.000	10 year	38.60	160.30	161.69		161.82	0.002379	1.65	30.01	45.02	0.51
Main	1900.000	5 year	30.10	160.30	161.54		161.65	0.002547	1.54	23.41	39.81	0.52
Main	1900.000	2 year	18.20	160.30	161.27		161.36	0.003095	1.36	14.27	29.33	0.54
Main	1800	Existing	233.18	159.96	162.73	162.73	163.79	0.007315	5.55	79.45	38.77	1.07
Main	1800	Future	246.58	159.96	162.81	162.81	163.91	0.007353	5.67	82.50	39.06	1.08
Main	1800	100 year	66.60	159.96	161.68		162.00	0.003780	2.89	41.05	34.83	0.71
Main	1800	50 year	58.10	159.96	161.56		161.86	0.003866	2.78	36.83	34.37	0.71
Main	1800	20 year	47.00	159.96	161.40		161.67	0.003907	2.59	31.31	33.75	0.70
Main	1800	10 year	38.60	159.96	161.29		161.52	0.003662	2.38	27.61	33.35	0.67
Main	1800	5 year	30.10	159.96	161.16		161.35	0.003428	2.14	23.30	32.88	0.64
Main	1800	2 year	18.20	159.96	160.91		161.04	0.003215	1.76	15.63	27.57	0.59
Main	1700	Existing	233.18	159.49	161.99	161.95	162.49	0.005852	4.48	147.35	121.03	0.93
Main	1700	Future	246.58	159.49	162.14		162.56	0.004784	4.23	166.12	124.18	0.85
Main	1700	100 year	66.60	159.49	160.95	160.92	161.45	0.008334	3.64	36.34	56.23	1.01
Main	1700	50 year	58.10	159.49	160.90	160.90	161.33	0.007505	3.36	33.74	48.02	0.95
Main	1700	20 year	47.00	159.49	160.82	160.82	161.17	0.006445	2.99	30.03	46.74	0.87
Main	1700	10 year	38.60	159.49	160.72	160.72	161.04	0.006453	2.81	25.23	45.01	0.86
Main	1700	5 year	30.10	159.49	160.60	160.60	160.89	0.006327	2.59	20.21	43.23	0.83
Main	1700	2 year	18.20	159.49	160.42	160.35	160.62	0.005557	2.10	12.73	34.82	0.76
Main	1600	Existing	233.18	158.87	161.56		162.03	0.004562	3.84	134.93	97.14	0.81
Main	1600	Future	246.58	158.87	161.47	161.47	162.07	0.006153	4.34	125.83	96.65	0.93
Main	1600	100 year	66.60	158.87	160.55		160.82	0.004525	2.60	45.65	62.25	0.73
Main	1600	50 year	58.10	158.87	160.45	160.33	160.72	0.004785	2.53	39.54	59.16	0.74
Main	1600	20 year	47.00	158.87	160.33	160.22	160.57	0.004753	2.35	32.85	54.68	0.73
Main	1600	10 year	38.60	158.87	160.23	160.11	160.45	0.004814	2.21	27.38	50.93	0.72
Main	1600	5 year	30.10	158.87	160.12		160.30	0.004807	2.03	21.80	45.90	0.70
Main	1600	2 year	18.20	158.87	159.87	159.79	160.04	0.006098	1.86	11.93	33.97	0.75
Main	1507.903	Existing	233.18	158.21	161.46		161.67	0.002057	3.08	215.95	132.51	0.57
Main	1507.903	Future	246.58	158.21	161.22		161.55	0.003438	3.77	184.82	126.14	0.72
Main	1507.903	100 year	66.60	158.21	159.92	159.92	160.32	0.006048	3.27	45.31	77.90	0.86
Main	1507.903	50 year	58.10	158.21	159.85	159.85	160.22	0.005711	3.08	40.24	71.23	0.83
Main	1507.903	20 year	47.00	158.21	159.71	159.71	160.07	0.005937	2.93	31.26	60.45	0.83
Main	1507.903	10 year	38.60	158.21	159.60	159.60	159.94	0.006056	2.78	24.88	53.00	0.83

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	1507.903	5 year	30.10	158.21	159.45	159.45	159.77	0.006628	2.65	17.92	40.03	0.85
Main	1507.903	2 year	18.20	158.21	159.26	159.20	159.49	0.005686	2.13	11.09	32.61	0.76
Main	1400	Existing	233.18	157.33	159.86	159.86	161.10	0.012765	6.27	83.73	80.19	1.35
Main	1400	Future	246.58	157.33	160.47	160.47	161.07	0.005056	4.65	143.51	105.26	0.89
Main	1400	100 year	66.60	157.33	158.93	158.93	159.40	0.008905	3.62	33.95	41.85	1.03
Main	1400	50 year	58.10	157.33	158.84	158.84	159.28	0.008984	3.46	30.30	40.17	1.02
Main	1400	20 year	47.00	157.33	158.71	158.71	159.10	0.009018	3.22	25.47	37.83	1.01
Main	1400	10 year	38.60	157.33	158.59	158.59	158.96	0.009746	3.08	20.99	34.77	1.02
Main	1400	5 year	30.10	157.33	158.46	158.46	158.79	0.010364	2.88	16.75	30.89	1.03
Main	1400	2 year	18.20	157.33	158.19	158.14	158.48	0.015535	2.67	9.84	20.15	1.18
Main	1300.037	Existing	233.18	156.34	159.72		159.88	0.001338	2.47	249.23	145.39	0.46
Main	1300.037	Future	246.58	156.34	159.78		159.93	0.001380	2.54	256.77	146.21	0.47
Main	1300.037	100 year	66.60	156.34	158.98		159.02	0.000449	1.18	145.65	133.66	0.25
Main	1300.037	50 year	58.10	156.34	158.80		158.84	0.000540	1.21	121.08	131.01	0.28
Main	1300.037	20 year	47.00	156.34	158.45		158.51	0.000822	1.32	78.17	104.03	0.33
Main	1300.037	10 year	38.60	156.34	158.18		158.26	0.001232	1.43	54.09	81.99	0.39
Main	1300.037	5 year	30.10	156.34	157.90		158.01	0.002082	1.60	32.86	68.62	0.49
Main	1300.037	2 year	18.20	156.34	157.50	157.34	157.67	0.004846	1.80	10.22	16.69	0.69
Main	1243.336	Existing	233.18	156.03	159.72		159.81	0.000800	2.09	337.14	194.99	0.36
Main	1243.336	Future	246.58	156.03	159.77		159.87	0.000822	2.14	347.48	195.26	0.37
Main	1243.336	100 year	66.60	156.03	158.98		159.00	0.000243	0.97	194.38	187.00	0.19
Main	1243.336	50 year	58.10	156.03	158.79		158.82	0.000264	0.97	161.89	161.64	0.20
Main	1243.336	20 year	47.00	156.03	158.44		158.48	0.000378	1.05	113.41	123.71	0.23
Main	1243.336	10 year	38.60	156.03	158.17		158.22	0.000531	1.13	80.97	112.73	0.27
Main	1243.336	5 year	30.10	156.03	157.87		157.94	0.000814	1.24	49.86	92.20	0.32
Main	1243.336	2 year	18.20	156.03	157.43		157.51	0.001401	1.29	16.11	29.61	0.40
Main	1226.202	Existing	233.18	156.03	159.71	158.80	159.79	0.000800	1.99	336.84	190.48	0.36
Main	1226.202	Future	246.58	156.03	159.76	158.80	159.85	0.000831	2.05	346.73	192.77	0.36
Main	1226.202	100 year	66.60	156.03	158.98	157.91	159.00	0.000221	0.88	206.78	155.63	0.18
Main	1226.202	50 year	58.10	156.03	158.44	157.78	158.78	0.002277	2.57	22.58	136.99	0.57
Main	1226.202	20 year	47.00	156.03	158.14	157.58	158.44	0.002492	2.43	19.35	126.12	0.58
Main	1226.202	10 year	38.60	156.03	157.91	157.43	158.17	0.002643	2.28	16.89	112.22	0.58
Main	1226.202	5 year	30.10	156.03	157.67	157.26	157.90	0.002774	2.10	14.34	81.86	0.58
Main	1226.202	2 year	18.20	156.03	157.32	157.00	157.47	0.002800	1.72	10.57	39.83	0.55
Main	1215.250		Culvert									

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	1206.031	Existing	233.18	156.01	158.80	158.80	159.08	0.004336	3.34	188.33	176.35	0.76
Main	1206.031	Future	246.58	156.01	158.80	158.80	159.11	0.004848	3.54	188.33	176.35	0.80
Main	1206.031	100 year	66.60	156.01	158.04	158.04	158.83	0.008384	3.94	16.91	117.75	1.00
Main	1206.031	50 year	58.10	156.01	157.90	157.90	158.62	0.008703	3.77	15.41	111.22	1.00
Main	1206.031	20 year	47.00	156.01	157.72	157.72	158.34	0.008949	3.49	13.45	100.35	1.00
Main	1206.031	10 year	38.60	156.01	157.56	157.56	158.11	0.009391	3.29	11.74	70.14	1.00
Main	1206.031	5 year	30.10	156.01	157.39	157.39	157.85	0.009732	3.03	9.94	42.78	1.00
Main	1206.031	2 year	18.20	156.01	157.11	157.11	157.45	0.010642	2.57	7.07	15.35	1.00
Main	1184.150	Existing	233.18	156.01	158.59		158.72	0.002814	2.66	214.07	137.48	0.61
Main	1184.150	Future	246.58	156.01	158.66		158.79	0.002766	2.70	223.57	138.81	0.61
Main	1184.150	100 year	66.60	156.01	157.64		157.71	0.002969	1.75	92.26	122.56	0.56
Main	1184.150	50 year	58.10	156.01	157.58		157.64	0.002997	1.68	84.09	121.78	0.56
Main	1184.150	20 year	47.00	156.01	157.45		157.53	0.003171	1.79	69.29	117.81	0.58
Main	1184.150	10 year	38.60	156.01	157.41		157.46	0.002719	1.62	63.55	116.03	0.53
Main	1184.150	5 year	30.10	156.01	157.27		157.34	0.003615	1.70	47.67	110.94	0.60
Main	1184.150	2 year	18.20	156.01	157.09		157.14	0.002903	1.41	30.09	66.03	0.53
Main	1042.480	Existing	233.18	155.33	158.17		158.40	0.002904	3.10	187.75	132.78	0.64
Main	1042.480	Future	246.58	155.33	158.26		158.49	0.002756	3.09	200.15	148.59	0.63
Main	1042.480	100 year	66.60	155.33	157.16		157.34	0.003301	2.31	68.05	108.50	0.63
Main	1042.480	50 year	58.10	155.33	157.07		157.26	0.003463	2.28	58.75	106.58	0.64
Main	1042.480	20 year	47.00	155.33	157.00		157.16	0.003031	2.07	50.90	103.61	0.59
Main	1042.480	10 year	38.60	155.33	156.82	156.61	157.05	0.004453	2.29	32.84	98.33	0.70
Main	1042.480	5 year	30.10	155.33	156.68		156.86	0.004050	2.03	23.39	41.16	0.66
Main	1042.480	2 year	18.20	155.33	156.28	156.27	156.53	0.009318	2.26	10.29	25.86	0.93
Main	1000.000	Existing	233.18	154.89	157.72	157.64	158.23	0.005207	4.42	154.86	158.10	0.88
Main	1000.000	Future	246.58	154.89	158.04	157.65	158.37	0.003136	3.71	209.96	184.72	0.70
Main	1000.000	100 year	66.60	154.89	156.86	156.86	157.18	0.003903	2.91	54.78	97.18	0.71
Main	1000.000	50 year	58.10	154.89	156.78	156.78	157.09	0.003847	2.80	47.43	95.45	0.70
Main	1000.000	20 year	47.00	154.89	156.53	156.53	156.97	0.005751	3.07	25.60	67.18	0.84
Main	1000.000	10 year	38.60	154.89	156.39	156.39	156.81	0.006116	2.94	18.51	41.18	0.85
Main	1000.000	5 year	30.10	154.89	156.16	156.16	156.60	0.008233	2.96	10.99	22.04	0.95
Main	1000.000	2 year	18.20	154.89	156.03		156.24	0.004804	2.07	9.13	11.87	0.71
Main	900	Existing	233.18	154.61	156.98	156.98	157.63	0.008191	4.40	104.63	90.96	1.03
Main	900	Future	246.58	154.61	157.13	157.03	157.88	0.008284	4.65	120.58	128.79	1.05
Main	900	100 year	66.60	154.61	156.35		156.52	0.003337	2.13	54.81	65.43	0.61

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	900	50 year	58.10	154.61	156.28		156.43	0.003251	2.01	49.93	62.43	0.60
Main	900	20 year	47.00	154.61	156.16		156.29	0.003252	1.87	42.70	57.69	0.59
Main	900	10 year	38.60	154.61	156.03		156.17	0.003094	1.85	35.83	52.80	0.57
Main	900	5 year	30.10	154.61	155.92		156.04	0.002982	1.69	29.73	52.07	0.56
Main	900	2 year	18.20	154.61	155.65	155.51	155.78	0.004173	1.63	16.08	50.39	0.63
Main	830.0900	Existing	233.18	154.02	157.06		157.38	0.003110	3.12	174.56	151.80	0.67
Main	830.0900	Future	246.58	154.02	157.14		157.45	0.002956	3.12	186.75	154.64	0.66
Main	830.0900	100 year	66.60	154.02	155.83	155.83	156.19	0.007470	2.82	35.37	63.07	0.91
Main	830.0900	50 year	58.10	154.02	155.75	155.75	156.10	0.007733	2.73	30.77	59.32	0.91
Main	830.0900	20 year	47.00	154.02	155.65	155.65	155.96	0.007654	2.55	25.09	53.13	0.89
Main	830.0900	10 year	38.60	154.02	155.54	155.54	155.84	0.007425	2.48	19.70	46.46	0.87
Main	830.0900	5 year	30.10	154.02	155.33	155.33	155.68	0.009764	2.62	12.07	26.57	0.98
Main	830.0900	2 year	18.20	154.02	154.98	154.98	155.32	0.010727	2.57	7.08	10.70	1.01
Main	749.5588	Existing	233.18	153.66	157.05		157.21	0.001351	2.68	246.10	136.45	0.47
Main	749.5588	Future	246.58	153.66	157.12		157.29	0.001355	2.73	256.29	138.60	0.48
Main	749.5588	100 year	66.60	153.66	155.55		155.75	0.002426	2.39	62.50	75.04	0.57
Main	749.5588	50 year	58.10	153.66	155.38		155.60	0.002863	2.43	50.61	67.19	0.61
Main	749.5588	20 year	47.00	153.66	155.17		155.36	0.002900	2.23	37.70	46.93	0.60
Main	749.5588	10 year	38.60	153.66	154.99		155.18	0.003318	2.18	30.56	37.48	0.63
Main	749.5588	5 year	30.10	153.66	154.80		154.98	0.003891	2.11	23.73	34.35	0.66
Main	749.5588	2 year	18.20	153.66	154.49		154.67	0.005517	1.98	13.86	29.70	0.74
Main	682.6990	Existing	233.18	152.97	156.35	156.35	157.05	0.004226	4.32	123.92	106.30	0.81
Main	682.6990	Future	246.58	152.97	156.41	156.41	157.12	0.004278	4.41	130.26	108.41	0.82
Main	682.6990	100 year	66.60	152.97	154.89	154.82	155.48	0.006688	3.41	20.95	21.27	0.91
Main	682.6990	50 year	58.10	152.97	154.81	154.69	155.32	0.006280	3.17	19.21	19.28	0.87
Main	682.6990	20 year	47.00	152.97	154.68		155.09	0.005697	2.83	16.99	16.39	0.82
Main	682.6990	10 year	38.60	152.97	154.56		154.90	0.005380	2.58	15.18	14.89	0.78
Main	682.6990	5 year	30.10	152.97	154.42		154.69	0.005142	2.31	13.09	14.00	0.75
Main	682.6990	2 year	18.20	152.97	154.19		154.36	0.004195	1.82	9.99	12.55	0.65
Main	600	Existing	233.18	152.61	155.76		156.22	0.003660	3.76	139.05	96.98	0.74
Main	600	Future	246.58	152.61	155.84		156.30	0.003578	3.79	146.72	100.15	0.73
Main	600	100 year	66.60	152.61	154.55	154.39	154.96	0.004961	2.93	33.46	68.50	0.77
Main	600	50 year	58.10	152.61	154.43	154.31	154.82	0.005156	2.82	27.12	39.91	0.78
Main	600	20 year	47.00	152.61	154.29	154.13	154.62	0.005181	2.62	21.90	32.66	0.77
Main	600	10 year	38.60	152.61	154.18	154.00	154.47	0.004837	2.38	18.75	28.66	0.73
Main	600	5 year	30.10	152.61	154.10		154.30	0.003949	2.03	16.41	25.18	0.65

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	600	2 year	18.20	152.61	154.01		154.11	0.001953	1.35	14.44	22.34	0.45
Main	499.9999	Existing	233.18	152.35	155.19	155.19	155.80	0.004993	4.61	135.71	108.68	0.89
Main	499.9999	Future	246.58	152.35	155.22	155.22	155.87	0.005221	4.75	139.70	109.50	0.91
Main	499.9999	100 year	66.60	152.35	154.02	153.97	154.46	0.005292	3.28	37.62	55.70	0.83
Main	499.9999	50 year	58.10	152.35	154.00	153.83	154.35	0.004291	2.93	36.32	53.76	0.75
Main	499.9999	20 year	47.00	152.35	153.98		154.22	0.002930	2.40	35.47	52.41	0.62
Main	499.9999	10 year	38.60	152.35	153.98		154.14	0.002006	1.98	35.19	51.95	0.51
Main	499.9999	5 year	30.10	152.35	153.97		154.07	0.001232	1.55	35.00	51.64	0.40
Main	499.9999	2 year	18.20	152.35	153.97		154.01	0.000453	0.94	34.88	51.44	0.24
Main	399.9999	Existing	233.18	151.78	154.37	154.37	155.10	0.007344	5.13	136.18	156.93	1.05
Main	399.9999	Future	246.58	151.78	154.66	154.66	155.13	0.004476	4.32	187.32	181.92	0.84
Main	399.9999	100 year	66.60	151.78	153.94		154.10	0.001752	2.20	81.39	111.36	0.50
Main	399.9999	50 year	58.10	151.78	153.95		154.07	0.001299	1.90	82.47	111.97	0.43
Main	399.9999	20 year	47.00	151.78	153.96		154.03	0.000828	1.52	83.53	112.56	0.34
Main	399.9999	10 year	38.60	151.78	153.96		154.01	0.000550	1.24	84.19	112.92	0.28
Main	399.9999	5 year	30.10	151.78	153.96		154.00	0.000331	0.96	84.60	113.15	0.22
Main	399.9999	2 year	18.20	151.78	153.97		153.98	0.000120	0.58	84.99	113.37	0.13
Main	300.0000	Existing	233.18	151.15	154.03		154.24	0.003558	3.30	233.18	224.32	0.68
Main	300.0000	Future	246.58	151.15	154.04		154.26	0.003882	3.46	235.29	224.53	0.71
Main	300.0000	100 year	66.60	151.15	153.97		153.99	0.000335	1.00	221.26	223.12	0.21
Main	300.0000	50 year	58.10	151.15	153.97		153.99	0.000255	0.87	221.07	223.10	0.18
Main	300.0000	20 year	47.00	151.15	153.97		153.98	0.000167	0.71	220.87	223.08	0.15
Main	300.0000	10 year	38.60	151.15	153.97		153.98	0.000113	0.58	220.75	223.07	0.12
Main	300.0000	5 year	30.10	151.15	153.97		153.97	0.000069	0.45	220.66	223.06	0.09
Main	300.0000	2 year	18.20	151.15	153.97		153.97	0.000025	0.27	220.56	223.05	0.06
Main	200	Existing	233.18	150.44	153.96		154.04	0.000822	2.11	346.43	188.58	0.37
Main	200	Future	246.58	150.44	153.96		154.05	0.000921	2.23	346.25	188.58	0.39
Main	200	100 year	66.60	150.44	153.97		153.98	0.000066	0.60	347.67	188.62	0.10
Main	200	50 year	58.10	150.44	153.97		153.97	0.000050	0.52	347.69	188.62	0.09
Main	200	20 year	47.00	150.44	153.97		153.97	0.000033	0.42	347.71	188.62	0.07
Main	200	10 year	38.60	150.44	153.97		153.97	0.000022	0.35	347.73	188.62	0.06
Main	200	5 year	30.10	150.44	153.97		153.97	0.000014	0.27	347.75	188.62	0.05
Main	200	2 year	18.20	150.44	153.97		153.97	0.000005	0.16	347.76	188.62	0.03
Main	104.8181	Existing	233.18	150.30	153.97		153.99	0.000199	1.07	730.23	355.41	0.18
Main	104.8181	Future	246.58	150.30	153.97		153.99	0.000223	1.14	730.40	355.41	0.19

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main (Continued)

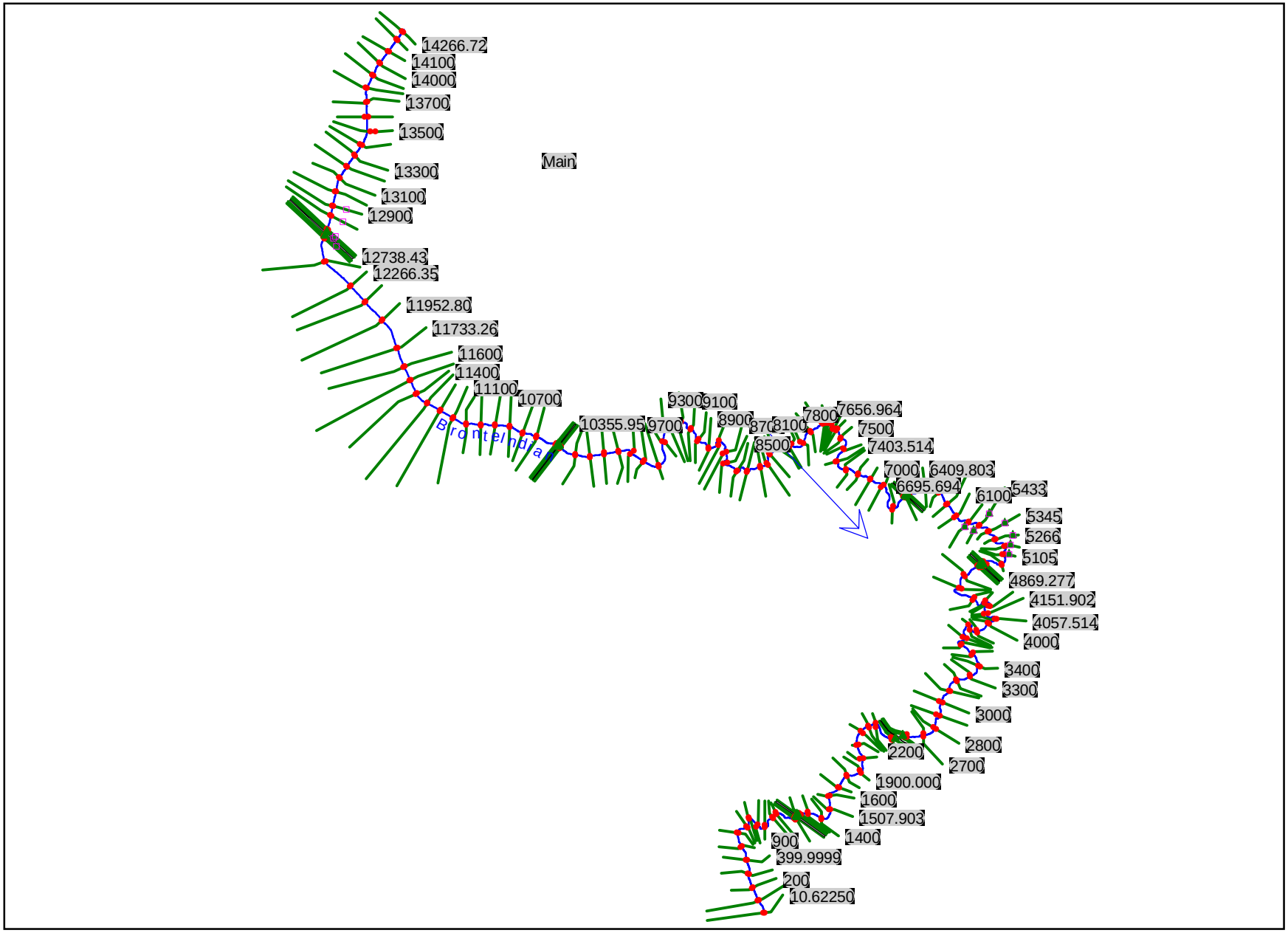
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	104.8181	100 year	66.60	150.30	153.97		153.97	0.000016	0.31	728.88	355.39	0.05
Main	104.8181	50 year	58.10	150.30	153.97		153.97	0.000012	0.27	728.86	355.39	0.05
Main	104.8181	20 year	47.00	150.30	153.97		153.97	0.000008	0.22	728.82	355.39	0.04
Main	104.8181	10 year	38.60	150.30	153.97		153.97	0.000005	0.18	728.80	355.39	0.03
Main	104.8181	5 year	30.10	150.30	153.97		153.97	0.000003	0.14	728.79	355.39	0.02
Main	104.8181	2 year	18.20	150.30	153.97		153.97	0.000001	0.08	728.77	355.39	0.01
Main	10.62250	Existing	233.18	149.94	153.97	151.42	153.97	0.000071	0.70	1085.66	425.52	0.11
Main	10.62250	Future	246.58	149.94	153.97	151.44	153.98	0.000080	0.74	1085.66	425.52	0.12
Main	10.62250	100 year	66.60	149.94	153.97	150.70	153.97	0.000006	0.20	1085.66	425.52	0.03
Main	10.62250	50 year	58.10	149.94	153.97	150.65	153.97	0.000004	0.17	1085.66	425.52	0.03
Main	10.62250	20 year	47.00	149.94	153.97	150.59	153.97	0.000003	0.14	1085.66	425.52	0.02
Main	10.62250	10 year	38.60	149.94	153.97	150.53	153.97	0.000002	0.12	1085.66	425.52	0.02
Main	10.62250	5 year	30.10	149.94	153.97	150.47	153.97	0.000001	0.09	1085.66	425.52	0.01
Main	10.62250	2 year	18.20	149.94	153.97	150.32	153.97	0.000000	0.05	1085.66	425.52	0.01

HEC-RAS Plan: All Flows River: BronteIndian Reach: Main

Reach	River Sta	Profile	E.G. US.	W.S. US.	E.G. IC	E.G. OC	Min El Weir Flow	Q Culv Group	Q Weir	Delta WS	Culv Vel US	Culv Vel DS
			(m)	(m)	(m)	(m)	(m)	(m3/s)	(m3/s)	(m)	(m/s)	(m/s)
Main	12704.46 Culvert #1	Existing	184.44	184.40	184.43	184.44	183.59	5.22	110.10	0.02	0.56	0.56
Main	12704.46 Culvert #1	Future	184.49	184.44	184.47	184.49	183.59	6.30	116.42	0.01	0.67	0.67
Main	12704.46 Culvert #1	100 year	184.01	183.99	183.95	184.01	183.59	8.52	31.28	0.05	0.91	0.91
Main	12704.46 Culvert #1	50 year	183.96	183.94	183.89	183.96	183.59	9.74	24.36	0.06	1.04	1.04
Main	12704.46 Culvert #1	20 year	183.91	183.89	183.81	183.91	183.59	11.45	15.55	0.10	1.22	1.22
Main	12704.46 Culvert #1	10 year	183.84	183.83	183.71	183.84	183.59	12.03	9.87	0.11	1.28	1.28
Main	12704.46 Culvert #1	5 year	183.77	183.76	183.43	183.77	183.59	12.62	4.28	0.13	1.34	1.34
Main	12704.46 Culvert #1	2 year	183.55	183.44	183.00	183.55	183.59	10.20		0.11	1.09	1.13
Main	10335.83 Culvert #1	Existing	181.98	181.94	181.98	181.98	181.37	2.99	147.83	0.01	0.35	0.35
Main	10335.83 Culvert #1	Future	181.98	181.94	181.98	181.98	181.37	2.99	147.83	0.01	0.35	0.35
Main	10335.83 Culvert #1	100 year	181.43	181.37	181.40	181.43	181.37	7.94	41.16	0.01	0.92	0.92
Main	10335.83 Culvert #1	50 year	181.39	181.34	181.33	181.39	181.37	9.47	36.87	0.05	1.10	1.10
Main	10335.83 Culvert #1	20 year	181.33	181.29	181.24	181.33	181.37	10.87	22.93	0.09	1.26	1.26
Main	10335.83 Culvert #1	10 year	181.24	181.22	181.16	181.24	181.37	12.14	15.36	0.14	1.41	1.41
Main	10335.83 Culvert #1	5 year	181.15	181.13	180.75	181.15	181.37	12.44	8.86	0.15	1.45	1.45
Main	10335.83 Culvert #1	2 year	180.96	180.95	180.20	180.96	181.37	12.70		0.16	1.48	1.48
Main	2524.843 Culvert #1	Existing	169.44	169.27	169.45	169.44	167.26	62.21	170.97	2.19	5.53	5.53
Main	2524.843 Culvert #1	Future	169.50	169.31	169.52	169.50	167.26	62.53	184.05	2.20	5.56	5.56
Main	2524.843 Culvert #1	100 year	168.23	168.15	168.22	168.23	167.26	43.66	22.94	1.09	3.88	3.88
Main	2524.843 Culvert #1	50 year	168.29	168.24	168.10	168.29	167.26	31.15	26.95	1.45	2.77	2.77
Main	2524.843 Culvert #1	20 year	167.89	167.83	167.87	167.89	167.26	38.59	8.41	1.38	3.43	3.43
Main	2524.843 Culvert #1	10 year	167.58	167.52	167.58	167.56	167.26	36.82	1.78	1.34	3.96	3.57
Main	2524.843 Culvert #1	5 year	167.18	166.83	167.04	167.18	167.26	30.10		0.94	4.03	4.52
Main	2524.843 Culvert #1	2 year	166.38	166.13	166.25	166.38	167.26	18.20		0.72	3.41	3.90
Main	1215.250 Culvert #1	Existing	159.79	159.71	159.68	159.79	158.80	92.17	141.01	0.91	3.45	3.45
Main	1215.250 Culvert #1	Future	159.85	159.76	159.74	159.85	158.80	94.75	151.83	0.96	3.55	3.55
Main	1215.250 Culvert #1	100 year	158.99	158.98	157.77	158.99	158.80	59.99	6.61	0.94	2.25	2.25
Main	1215.250 Culvert #1	50 year	158.78	158.44	157.53	158.78	158.80	58.10		0.54	2.17	2.17
Main	1215.250 Culvert #1	20 year	158.44	158.14	157.22	158.44	158.80	47.00		0.42	1.76	1.76
Main	1215.250 Culvert #1	10 year	158.18	157.91	156.96	158.18	158.80	38.60		0.35	1.44	1.44
Main	1215.250 Culvert #1	5 year	157.90	157.67	156.68	157.90	158.80	30.10		0.28	1.13	1.13
Main	1215.250 Culvert #1	2 year	157.47	157.32	156.25	157.47	158.80	18.20		0.20	0.77	0.80

Milton Logistics Hub 2020 HEC-RAS Model Output

Indian Creek Proposed Conditions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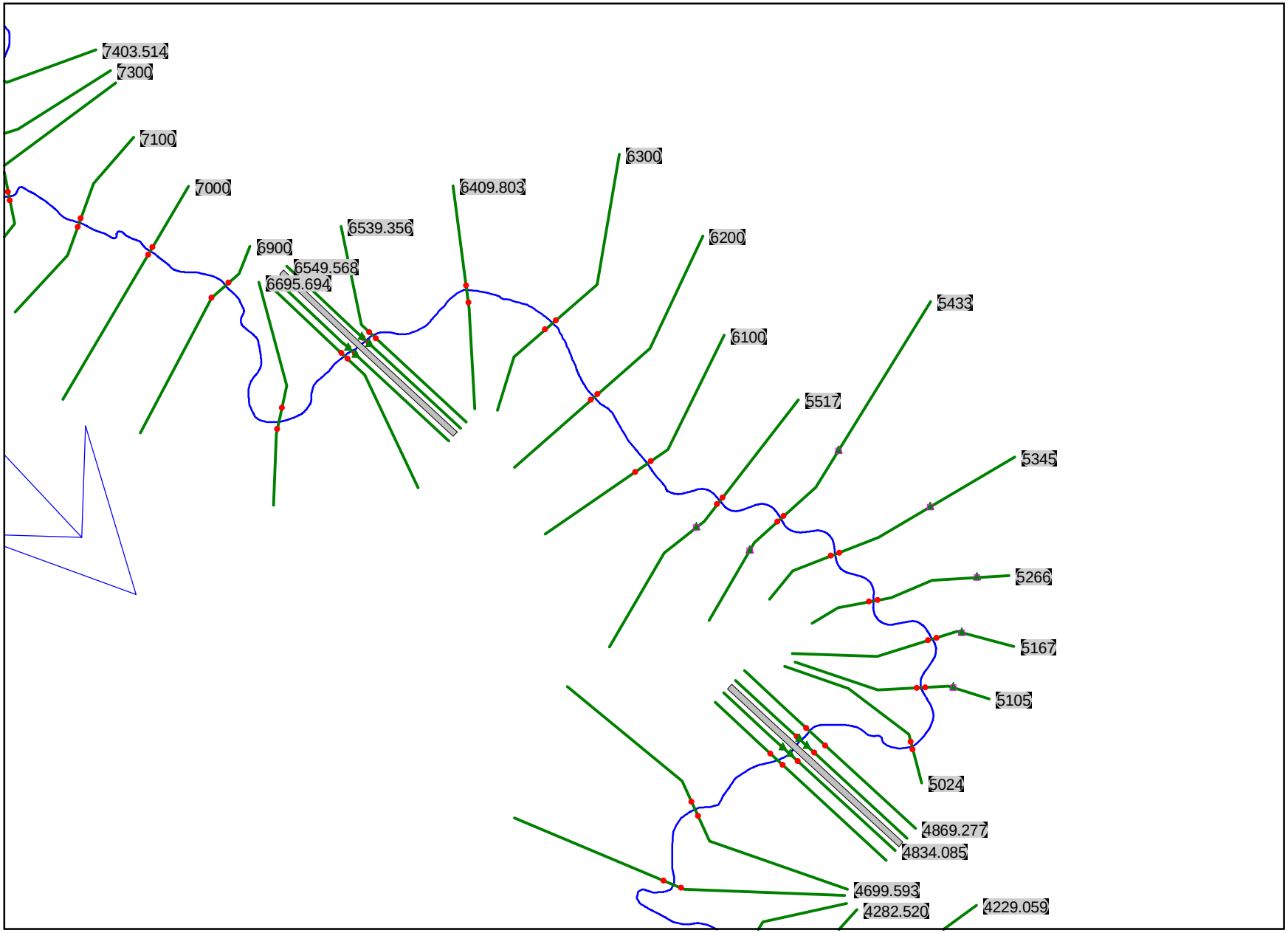
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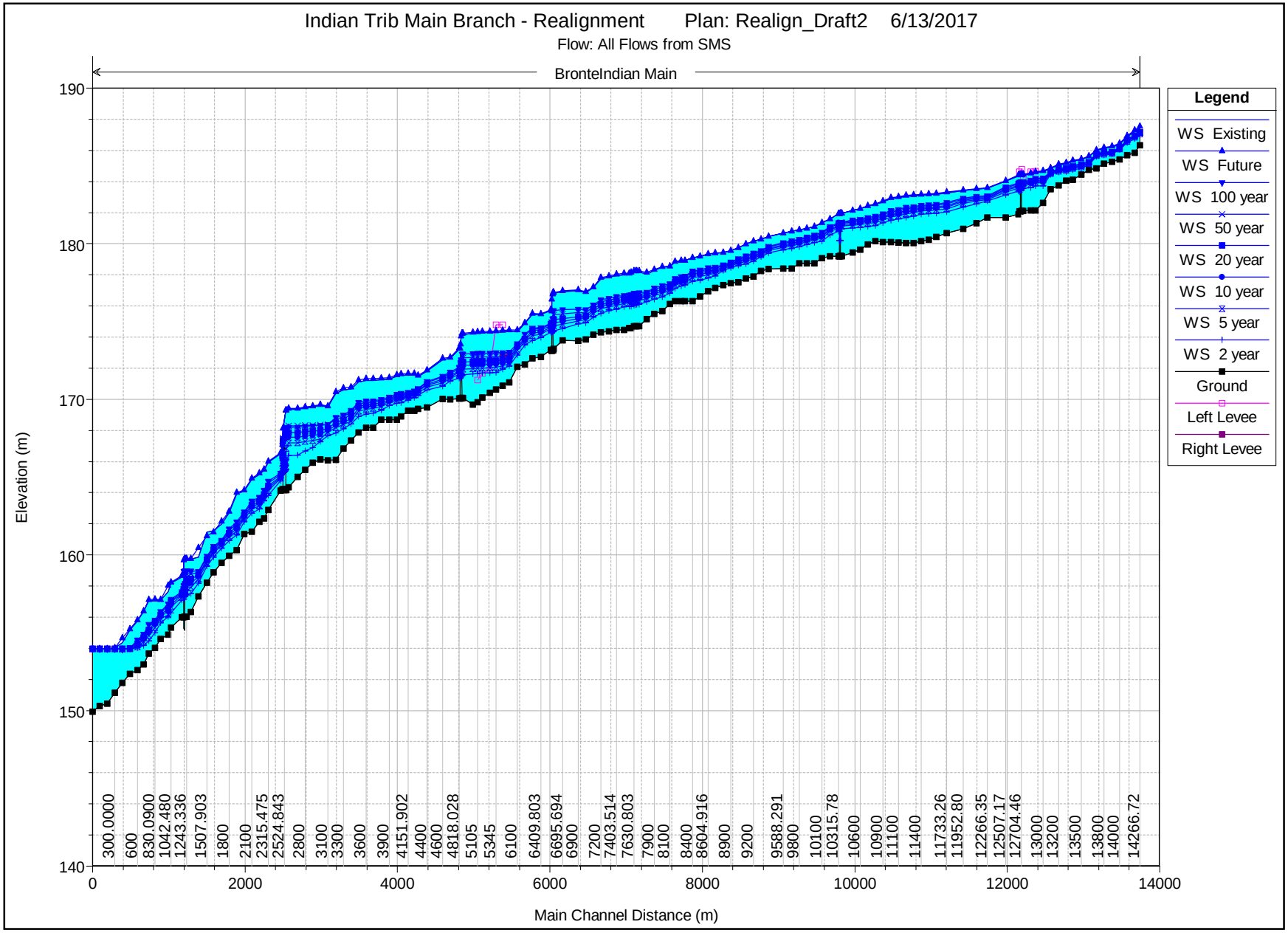
Indian Trib Main Branch - Realignment Plan: Realign_Draft2 6/13/2017
Flow: All Flows from SMS
BronteIndian Main
Elevation (m)
Main Channel Distance (m)
190
180
170
160
150
140
0
2000
4000
6000
8000
10000
12000
14000
300.0000
600
830.0900
1042.480
1243.336
1507.903
1800
2100
2315.475
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2800
3100
3300
3600
3900
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5105
5345
6100
6409.803
6695.694
6900
7200
7403.514
7630.803
7900
8100
8400
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8900
9200
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9800
10100
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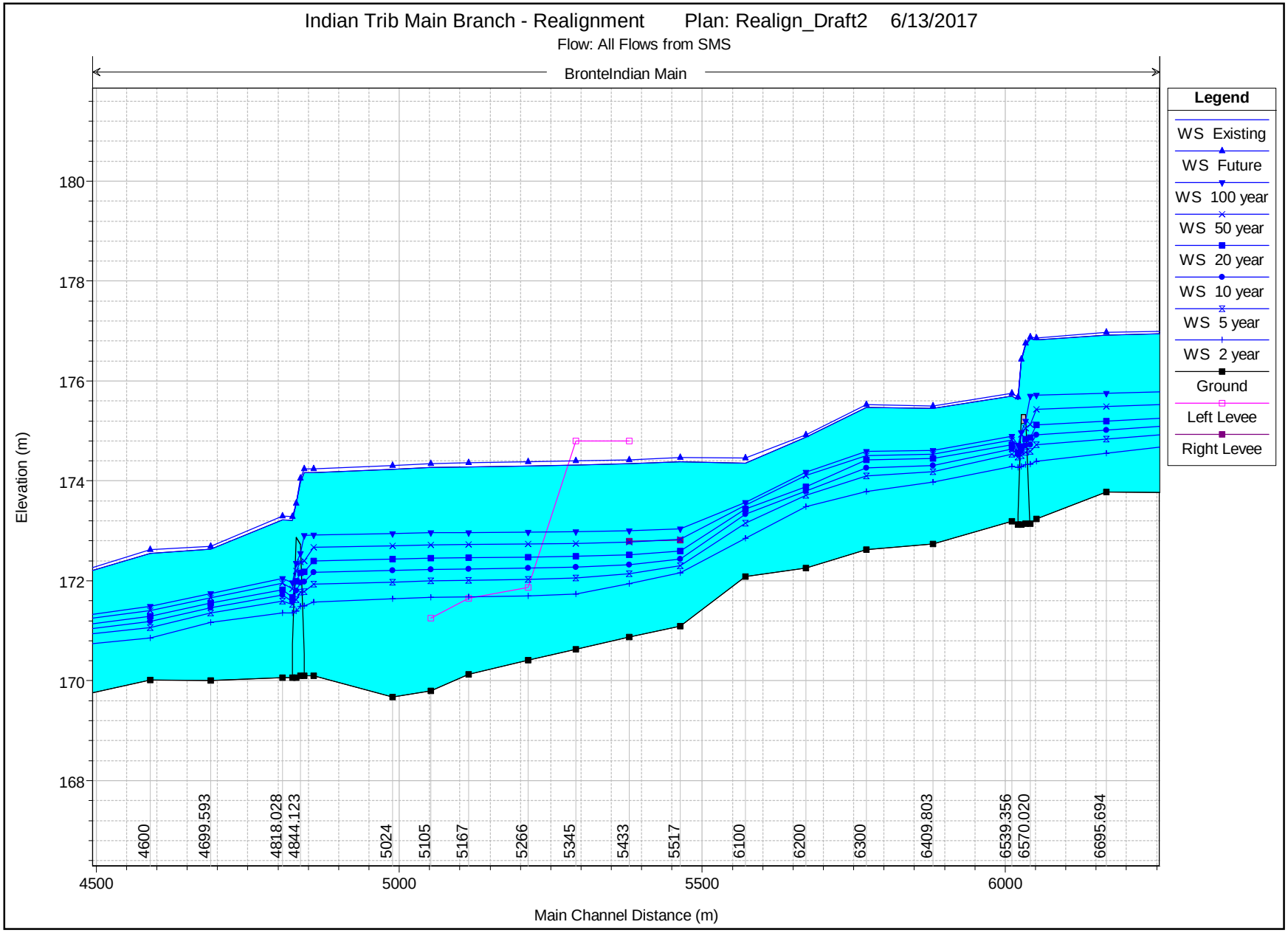
10600
10900
11100
11400
11733.26
11952.80
12266.35
12507.17
12704.46
13000
13200
13500
13800
14000
14266.72
Legend
WS Existing
WS Future
WS 100 year
WS 50 year
WS 20 year
WS 10 year
WS 5 year
WS 2 year
Ground
Left Levee
Right Levee


Indian Trib Main Branch - Realignment Plan: Realign_Draft2 6/13/2017
Flow: All Flows from SMS
BronteIndian Main
Legend
WS Existing
WS Future
WS 100 year
WS 50 year
WS 20 year
WS 10 year
WS 5 year
WS 2 year
Ground
Left Levee
Right Levee
Elevation (m)
180
178
176
174
172
170
168
4600
4699.593
4818.028
4844.123
5024
5105
5167
5266
5345
5433
5517
6100
6200
6300
6409.803
6539.356
6570.020
6695.694
4500
5000
5500
6000
Main Channel Distance (m)

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	14266.72	Existing	40.88	186.32	187.46		187.53	0.003481	1.73	62.79	183.36	0.61
Main	14266.72	Future	53.58	186.32	187.54		187.61	0.003562	1.85	76.46	196.95	0.62
Main	14266.72	100 year	13.60	186.32	187.20	187.15	187.28	0.004367	1.49	19.85	118.00	0.64
Main	14266.72	50 year	12.40	186.32	187.18	187.13	187.26	0.004416	1.47	17.72	112.33	0.64
Main	14266.72	20 year	10.50	186.32	187.15	187.10	187.22	0.004225	1.38	14.47	85.84	0.62
Main	14266.72	10 year	8.89	186.32	187.11	187.07	187.19	0.004135	1.31	11.94	72.41	0.60
Main	14266.72	5 year	6.97	186.32	187.07	186.99	187.13	0.004024	1.21	9.00	60.19	0.59
Main	14266.72	2 year	3.97	186.32	186.98		187.02	0.003593	0.97	4.47	30.59	0.53
Main	14200	Existing	40.88	185.84	187.22		187.29	0.003992	1.84	63.23	201.27	0.64
Main	14200	Future	53.58	185.84	187.28		187.36	0.004095	1.96	77.14	208.54	0.66
Main	14200	100 year	13.60	185.84	186.98		187.03	0.003162	1.30	25.62	122.31	0.54
Main	14200	50 year	12.40	185.84	186.96		187.01	0.003112	1.27	23.55	116.57	0.53
Main	14200	20 year	10.50	185.84	186.93		186.98	0.003095	1.22	20.00	107.41	0.53
Main	14200	10 year	8.89	185.84	186.90		186.94	0.003039	1.16	16.94	97.61	0.52
Main	14200	5 year	6.97	185.84	186.85		186.90	0.003049	1.09	12.92	82.99	0.51
Main	14200	2 year	3.97	185.84	186.75		186.79	0.003305	0.97	6.16	49.18	0.51
Main	14100	Existing	40.88	185.70	186.87	186.79	186.91	0.003285	1.53	79.91	271.54	0.57
Main	14100	Future	53.58	185.70	186.92	186.82	186.97	0.003465	1.65	95.09	277.58	0.60
Main	14100	100 year	13.60	185.70	186.70	186.63	186.74	0.002494	1.12	36.92	251.87	0.48
Main	14100	50 year	12.40	185.70	186.69	186.62	186.72	0.002424	1.09	34.16	249.40	0.47
Main	14100	20 year	10.50	185.70	186.65	186.60	186.68	0.002546	1.06	25.44	181.49	0.48
Main	14100	10 year	8.89	185.70	186.61	186.55	186.65	0.002671	1.17	18.45	138.37	0.49
Main	14100	5 year	6.97	185.70	186.56	186.44	186.61	0.002679	1.12	13.71	79.10	0.49
Main	14100	2 year	3.97	185.70	186.47	186.29	186.51	0.002432	0.97	6.95	51.77	0.46
Main	14000	Existing	40.88	185.43	186.37		186.42	0.007491	1.76	60.98	255.05	0.81
Main	14000	Future	53.58	185.43	186.45		186.49	0.006463	1.79	81.34	306.97	0.77
Main	14000	100 year	13.60	185.43	186.15	186.15	186.24	0.013602	1.93	18.65	144.49	1.03
Main	14000	50 year	12.40	185.43	186.14	186.14	186.23	0.014421	1.94	16.51	127.82	1.06
Main	14000	20 year	10.50	185.43	186.13	186.13	186.20	0.011862	1.73	15.38	114.39	0.96
Main	14000	10 year	8.89	185.43	186.12	186.12	186.18	0.010334	1.59	14.13	104.46	0.89
Main	14000	5 year	6.97	185.43	186.09	186.09	186.15	0.009149	1.44	12.03	97.64	0.83
Main	14000	2 year	3.97	185.43	186.04	186.04	186.09	0.008428	1.25	7.33	78.34	0.77
Main	13900	Existing	40.88	185.25	186.20		186.21	0.001132	0.76	119.30	285.85	0.32
Main	13900	Future	53.58	185.25	186.26		186.27	0.001286	0.87	136.61	294.97	0.35
Main	13900	100 year	13.60	185.25	185.94		185.94	0.001173	0.51	53.94	209.94	0.30
Main	13900	50 year	12.40	185.25	185.91		185.92	0.001254	0.51	49.26	202.82	0.30

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	13900	20 year	10.50	185.25	185.88		185.88	0.001379	0.50	42.27	190.93	0.31
Main	13900	10 year	8.89	185.25	185.85		185.85	0.001481	0.48	36.65	180.99	0.32
Main	13900	5 year	6.97	185.25	185.81		185.81	0.001623	0.46	30.01	163.92	0.33
Main	13900	2 year	3.97	185.25	185.74		185.74	0.001834	0.58	18.87	142.30	0.36
Main	13800	Existing	40.88	185.15	186.14		186.14	0.000872	0.67	131.73	318.57	0.28
Main	13800	Future	53.58	185.15	186.18		186.19	0.001093	0.79	147.44	347.59	0.32
Main	13800	100 year	13.60	185.15	185.89		185.90	0.000507	0.35	70.51	215.83	0.20
Main	13800	50 year	12.40	185.15	185.87		185.87	0.000537	0.34	65.08	211.95	0.20
Main	13800	20 year	10.50	185.15	185.83		185.83	0.000552	0.39	57.16	196.20	0.21
Main	13800	10 year	8.89	185.15	185.80		185.80	0.000570	0.38	50.90	189.73	0.21
Main	13800	5 year	6.97	185.15	185.76		185.76	0.000520	0.35	44.03	178.41	0.20
Main	13800	2 year	3.97	185.15	185.69		185.69	0.000433	0.29	31.97	165.04	0.18
Main	13700	Existing	68.16	184.84	185.98	185.82	186.02	0.003402	1.63	112.53	307.47	0.59
Main	13700	Future	78.27	184.84	186.02	185.84	186.06	0.003358	1.67	125.46	340.84	0.59
Main	13700	100 year	26.50	184.84	185.79	185.69	185.81	0.002694	1.19	61.09	229.40	0.50
Main	13700	50 year	22.60	184.84	185.77	185.67	185.79	0.002397	1.10	56.88	226.32	0.47
Main	13700	20 year	17.80	184.84	185.73	185.64	185.75	0.002261	1.02	48.95	219.44	0.45
Main	13700	10 year	14.30	184.84	185.70	185.62	185.72	0.002353	1.00	41.17	211.91	0.45
Main	13700	5 year	11.00	184.84	185.67	185.59	185.69	0.002003	0.89	35.89	206.16	0.41
Main	13700	2 year	6.50	184.84	185.60	185.55	185.62	0.002116	0.85	21.79	173.23	0.42
Main	13600	Existing	68.16	184.74	185.59		185.64	0.003334	1.48	99.64	250.01	0.58
Main	13600	Future	78.27	184.74	185.63		185.69	0.003258	1.53	111.37	257.79	0.58
Main	13600	100 year	26.50	184.74	185.31		185.37	0.006152	1.41	37.19	184.21	0.72
Main	13600	50 year	22.60	184.74	185.26	185.24	185.33	0.008310	1.50	29.19	151.77	0.81
Main	13600	20 year	17.80	184.74	185.21	185.21	185.29	0.009644	1.48	22.86	144.51	0.86
Main	13600	10 year	14.30	184.74	185.19	185.19	185.26	0.008803	1.35	19.87	142.10	0.81
Main	13600	5 year	11.00	184.74	185.13	185.13	185.22	0.014414	1.46	12.14	95.40	0.99
Main	13600	2 year	6.50	184.74	185.07	185.07	185.14	0.014678	1.27	7.38	61.58	0.96
Main	13500	Existing	68.16	184.43	185.41		185.45	0.001223	1.12	134.07	305.01	0.37
Main	13500	Future	78.27	184.43	185.45		185.49	0.001237	1.17	148.47	307.08	0.37
Main	13500	100 year	26.50	184.43	185.13		185.15	0.000996	0.80	59.00	177.54	0.31
Main	13500	50 year	22.60	184.43	185.09		185.11	0.000899	0.73	52.30	152.00	0.30
Main	13500	20 year	17.80	184.43	185.03		185.05	0.000770	0.63	44.22	122.69	0.27
Main	13500	10 year	14.30	184.43	184.98		185.00	0.000675	0.56	38.80	107.74	0.25
Main	13500	5 year	11.00	184.43	184.93		184.94	0.000576	0.48	33.66	97.85	0.23
Main	13500	2 year	6.50	184.43	184.84		184.84	0.000464	0.37	24.76	88.16	0.19

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	13388.83	Existing	68.16	184.12	185.30		185.31	0.001291	0.98	158.35	314.10	0.36
Main	13388.83	Future	78.27	184.12	185.34		185.36	0.001284	1.01	173.27	315.48	0.37
Main	13388.83	100 year	26.50	184.12	185.02		185.03	0.001353	0.73	76.16	248.87	0.34
Main	13388.83	50 year	22.60	184.12	184.98		184.99	0.001356	0.69	67.41	235.36	0.34
Main	13388.83	20 year	17.80	184.12	184.93		184.94	0.001448	0.65	55.37	210.60	0.34
Main	13388.83	10 year	14.30	184.12	184.89		184.89	0.001526	0.62	46.60	200.16	0.34
Main	13388.83	5 year	11.00	184.12	184.84		184.85	0.001632	0.58	37.87	187.06	0.35
Main	13388.83	2 year	6.50	184.12	184.76		184.76	0.001667	0.47	24.51	130.46	0.33
Main	13300	Existing	68.16	184.04	185.16		185.17	0.001149	0.87	172.45	321.11	0.34
Main	13300	Future	78.27	184.04	185.20		185.21	0.001155	0.91	187.68	323.07	0.34
Main	13300	100 year	26.50	184.04	184.91		184.91	0.000742	0.51	100.41	250.48	0.25
Main	13300	50 year	22.60	184.04	184.87		184.88	0.000700	0.47	92.24	246.55	0.24
Main	13300	20 year	17.80	184.04	184.81		184.81	0.000746	0.47	76.84	237.04	0.24
Main	13300	10 year	14.30	184.04	184.76		184.76	0.000771	0.45	65.53	229.00	0.24
Main	13300	5 year	11.00	184.04	184.71		184.71	0.000757	0.41	54.72	216.47	0.24
Main	13300	2 year	6.50	184.04	184.63		184.63	0.000717	0.33	37.60	183.47	0.22
Main	13200	Existing	68.16	183.74	185.06		185.07	0.001145	0.96	169.78	337.03	0.34
Main	13200	Future	78.27	183.74	185.11		185.12	0.001154	1.00	185.68	343.31	0.35
Main	13200	100 year	26.50	183.74	184.84		184.85	0.000902	0.68	97.96	299.75	0.29
Main	13200	50 year	22.60	183.74	184.81		184.81	0.000876	0.65	89.04	291.40	0.28
Main	13200	20 year	17.80	183.74	184.75		184.76	0.000716	0.54	74.46	218.17	0.25
Main	13200	10 year	14.30	183.74	184.71		184.71	0.000629	0.49	65.12	197.33	0.23
Main	13200	5 year	11.00	183.74	184.66		184.66	0.000540	0.45	56.73	186.79	0.21
Main	13200	2 year	6.50	183.74	184.59		184.59	0.000408	0.38	43.00	172.66	0.18
Main	13100	Existing	68.16	183.51	184.83		184.85	0.004601	1.43	106.12	277.70	0.56
Main	13100	Future	78.27	183.51	184.88		184.90	0.004263	1.41	119.77	293.74	0.55
Main	13100	100 year	26.50	183.51	184.61	184.53	184.63	0.007094	1.57	50.39	238.25	0.68
Main	13100	50 year	22.60	183.51	184.59	184.52	184.61	0.006775	1.52	45.76	232.95	0.66
Main	13100	20 year	17.80	183.51	184.57	184.50	184.58	0.005524	1.35	41.07	225.39	0.59
Main	13100	10 year	14.30	183.51	184.54	184.49	184.56	0.005252	1.30	35.24	210.25	0.58
Main	13100	5 year	11.00	183.51	184.50	184.47	184.52	0.005952	1.35	27.72	200.26	0.61
Main	13100	2 year	6.50	183.51	184.46		184.48	0.005520	1.25	18.40	172.37	0.58
Main	13000	Existing	68.16	182.62	184.62		184.65	0.001287	1.30	154.43	335.44	0.38
Main	13000	Future	78.27	182.62	184.68		184.71	0.001243	1.32	175.66	380.73	0.38
Main	13000	100 year	26.50	182.62	184.24		184.28	0.002296	1.34	53.68	186.70	0.48

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	13000	50 year	22.60	182.62	184.18		184.23	0.002664	1.38	43.75	173.67	0.51
Main	13000	20 year	17.80	182.62	184.09		184.16	0.003719	1.49	29.11	143.43	0.59
Main	13000	10 year	14.30	182.62	184.00	183.93	184.10	0.004455	1.69	17.45	84.67	0.65
Main	13000	5 year	11.00	182.62	183.91	183.87	184.02	0.004924	1.65	12.30	50.89	0.67
Main	13000	2 year	6.50	182.62	183.72	183.72	183.87	0.007912	1.73	4.90	28.27	0.81
Main	12900	Existing	68.16	182.13	184.57	183.88	184.58	0.000396	0.84	215.58	276.35	0.22
Main	12900	Future	78.27	182.13	184.62	183.92	184.64	0.000441	0.91	230.89	288.39	0.23
Main	12900	100 year	26.50	182.13	184.21	183.67	184.21	0.000237	0.54	127.19	218.45	0.16
Main	12900	50 year	22.60	182.13	184.16	183.65	184.17	0.000217	0.50	116.69	211.52	0.15
Main	12900	20 year	17.80	182.13	184.08	183.59	184.09	0.000197	0.46	100.78	200.29	0.14
Main	12900	10 year	14.30	182.13	184.02	183.55	184.02	0.000185	0.42	87.41	191.10	0.14
Main	12900	5 year	11.00	182.13	183.93	183.50	183.93	0.000183	0.40	71.74	179.54	0.14
Main	12900	2 year	6.50	182.13	183.71	183.20	183.72	0.000300	0.46	36.58	134.77	0.17
Main	12834.18	Existing	68.16	182.13	184.49	184.27	184.53	0.001505	1.55	133.74	274.83	0.42
Main	12834.18	Future	78.27	182.13	184.54	184.31	184.59	0.001544	1.61	148.02	285.64	0.43
Main	12834.18	100 year	26.50	182.13	184.09	184.00	184.17	0.002516	1.60	42.27	187.57	0.51
Main	12834.18	50 year	22.60	182.13	184.04	183.95	184.12	0.002588	1.57	33.65	149.59	0.52
Main	12834.18	20 year	17.80	182.13	183.96	183.87	184.05	0.002786	1.53	23.26	100.14	0.53
Main	12834.18	10 year	14.30	182.13	183.89	183.57	183.98	0.002566	1.48	17.52	71.15	0.50
Main	12834.18	5 year	11.00	182.13	183.81	183.42	183.90	0.002454	1.37	12.25	62.38	0.49
Main	12834.18	2 year	6.50	182.13	183.60	183.18	183.67	0.001980	1.15	5.63	7.64	0.43
Main	12738.43	Existing	113.14	182.12	184.43	184.10	184.45	0.000631	1.22	311.09	487.27	0.29
Main	12738.43	Future	122.72	182.12	184.48	184.11	184.50	0.000584	1.20	338.43	492.48	0.28
Main	12738.43	100 year	39.80	182.12	183.99	183.67	184.03	0.001059	1.31	87.23	222.35	0.36
Main	12738.43	50 year	34.10	182.12	183.94	183.34	183.99	0.001009	1.25	77.34	217.77	0.35
Main	12738.43	20 year	27.00	182.12	183.88	183.34	183.92	0.000862	1.12	63.87	199.38	0.32
Main	12738.43	10 year	21.90	182.12	183.82	183.24	183.86	0.000776	1.03	53.58	170.27	0.30
Main	12738.43	5 year	16.90	182.12	183.75	183.12	183.78	0.000697	0.94	41.93	150.30	0.28
Main	12738.43	2 year	10.20	182.12	183.55	182.90	183.58	0.000590	0.76	22.14	66.08	0.25
Main	12718.60	Existing	113.14	182.12	184.39	183.79	184.43	0.001080	1.57	205.67	271.96	0.38
Main	12718.60	Future	122.72	182.12	184.44	183.98	184.48	0.001049	1.58	220.95	277.58	0.38
Main	12718.60	100 year	39.80	182.12	183.99	183.63	184.01	0.000575	0.97	112.22	201.80	0.27
Main	12718.60	50 year	34.10	182.12	183.94	183.59	183.97	0.000657	1.01	91.78	197.73	0.28
Main	12718.60	20 year	27.00	182.12	183.88	183.55	183.90	0.000559	0.90	81.02	188.68	0.26
Main	12718.60	10 year	21.90	182.12	183.83	183.40	183.84	0.000467	0.80	72.55	175.00	0.23
Main	12718.60	5 year	16.90	182.12	183.76	183.23	183.77	0.000385	0.70	62.26	155.48	0.21

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	12718.60	2 year	10.20	182.12	183.44	182.97	183.55	0.001711	1.48	6.89	115.00	0.44
Main	12704.46		Culvert									
Main	12690.09	Existing	113.14	182.09	184.41	183.59	184.42	0.000236	0.73	405.69	413.47	0.18
Main	12690.09	Future	122.72	182.09	184.45	183.60	184.46	0.000250	0.76	421.20	417.08	0.18
Main	12690.09	100 year	39.80	182.09	183.95	183.59	183.95	0.000210	0.56	209.52	368.84	0.16
Main	12690.09	50 year	34.10	182.09	183.88	183.59	183.88	0.000189	0.51	188.21	352.63	0.15
Main	12690.09	20 year	27.00	182.09	183.79	183.59	183.79	0.000194	0.49	158.53	334.16	0.15
Main	12690.09	10 year	21.90	182.09	183.71	183.56	183.71	0.000193	0.46	135.82	299.58	0.15
Main	12690.09	5 year	16.90	182.09	183.63	183.38	183.63	0.000186	0.43	112.51	288.63	0.14
Main	12690.09	2 year	10.20	182.09	183.33	183.12	183.52	0.004170	1.92	5.31	189.70	0.66
Main	12673.19	Existing	113.14	181.90	184.36		184.40	0.001122	1.59	225.11	401.93	0.38
Main	12673.19	Future	122.72	181.90	184.40		184.44	0.001118	1.61	240.62	411.80	0.38
Main	12673.19	100 year	39.80	181.90	183.90		183.93	0.000946	1.19	89.64	184.55	0.33
Main	12673.19	50 year	34.10	181.90	183.84		183.87	0.000952	1.15	78.15	173.83	0.33
Main	12673.19	20 year	27.00	181.90	183.74		183.78	0.000983	1.11	62.62	159.30	0.33
Main	12673.19	10 year	21.90	181.90	183.66		183.70	0.001033	1.08	50.38	147.63	0.34
Main	12673.19	5 year	16.90	181.90	183.57		183.61	0.001096	1.05	37.77	134.99	0.34
Main	12673.19	2 year	10.20	181.90	183.37		183.41	0.001192	1.00	16.91	65.09	0.35
Main	12507.17	Existing	113.14	181.68	184.03	183.81	184.10	0.001859	2.00	168.56	314.05	0.49
Main	12507.17	Future	122.72	181.68	184.05	183.85	184.13	0.001983	2.09	175.87	317.36	0.51
Main	12507.17	100 year	39.80	181.68	183.66	183.41	183.71	0.001280	1.41	74.40	177.34	0.39
Main	12507.17	50 year	34.10	181.68	183.60	183.37	183.65	0.001223	1.34	65.30	152.54	0.38
Main	12507.17	20 year	27.00	181.68	183.51	183.32	183.56	0.001180	1.25	52.99	132.72	0.37
Main	12507.17	10 year	21.90	181.68	183.43	182.98	183.48	0.001212	1.21	42.52	121.77	0.37
Main	12507.17	5 year	16.90	181.68	183.33	182.87	183.39	0.001265	1.18	31.16	112.94	0.37
Main	12507.17	2 year	10.20	181.68	183.13		183.19	0.001322	1.12	12.08	58.84	0.37
Main	12266.35	Existing	113.14	181.68	183.56		183.61	0.001894	1.88	226.41	532.06	0.49
Main	12266.35	Future	122.72	181.68	183.61		183.65	0.001621	1.78	255.39	544.60	0.46
Main	12266.35	100 year	39.80	181.68	183.08		183.18	0.003314	1.92	57.63	213.50	0.61
Main	12266.35	50 year	34.10	181.68	183.02	182.93	183.13	0.003438	1.89	47.14	179.13	0.61
Main	12266.35	20 year	27.00	181.68	182.95	182.86	183.05	0.003464	1.80	35.55	130.91	0.61
Main	12266.35	10 year	21.90	181.68	182.90		182.99	0.003154	1.65	29.72	97.94	0.58
Main	12266.35	5 year	16.90	181.68	182.84		182.91	0.002784	1.47	24.16	86.05	0.53
Main	12266.35	2 year	10.20	181.68	182.76		182.80	0.001739	1.08	17.99	66.68	0.41

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	12122.54	Existing	113.14	181.32	183.49		183.50	0.000335	0.84	400.79	590.26	0.21
Main	12122.54	Future	122.72	181.32	183.54		183.55	0.000367	0.90	428.02	596.92	0.22
Main	12122.54	100 year	39.80	181.32	183.05		183.05	0.000284	0.63	194.57	390.18	0.18
Main	12122.54	50 year	34.10	181.32	182.99		183.00	0.000284	0.61	174.93	375.03	0.18
Main	12122.54	20 year	27.00	181.32	182.91		182.92	0.000307	0.61	144.84	368.08	0.19
Main	12122.54	10 year	21.90	181.32	182.85		182.85	0.000331	0.61	121.42	362.58	0.19
Main	12122.54	5 year	16.90	181.32	182.76		182.77	0.000433	0.65	89.10	336.87	0.22
Main	12122.54	2 year	10.20	181.32	182.57		182.60	0.001147	0.91	31.24	264.32	0.34
Main	11952.80	Existing	113.14	180.94	183.41		183.43	0.000513	1.18	368.48	654.47	0.27
Main	11952.80	Future	122.72	180.94	183.46		183.47	0.000495	1.18	398.21	674.72	0.26
Main	11952.80	100 year	39.80	180.94	182.93		182.97	0.000857	1.27	116.22	393.90	0.33
Main	11952.80	50 year	34.10	180.94	182.87		182.92	0.000895	1.27	94.99	348.03	0.33
Main	11952.80	20 year	27.00	180.94	182.79		182.83	0.000864	1.20	69.81	262.34	0.33
Main	11952.80	10 year	21.90	180.94	182.72	182.20	182.76	0.000880	1.17	52.52	221.30	0.33
Main	11952.80	5 year	16.90	180.94	182.59		182.65	0.001057	1.19	29.55	138.80	0.35
Main	11952.80	2 year	10.20	180.94	182.34		182.40	0.001159	1.07	11.47	35.20	0.35
Main	11733.26	Existing	113.14	180.67	183.26		183.30	0.000805	1.52	290.18	571.71	0.34
Main	11733.26	Future	122.72	180.67	183.32		183.35	0.000741	1.49	323.69	637.01	0.32
Main	11733.26	100 year	39.80	180.67	182.64		182.73	0.001548	1.67	67.81	193.00	0.44
Main	11733.26	50 year	34.10	180.67	182.57		182.66	0.001649	1.66	54.15	168.68	0.45
Main	11733.26	20 year	27.00	180.67	182.44	182.14	182.56	0.001934	1.70	35.59	135.95	0.48
Main	11733.26	10 year	21.90	180.67	182.34	181.98	182.47	0.002165	1.69	22.83	110.99	0.50
Main	11733.26	5 year	16.90	180.67	182.24		182.34	0.001908	1.50	15.32	49.80	0.46
Main	11733.26	2 year	10.20	180.67	182.04		182.11	0.001485	1.15	9.69	17.96	0.40
Main	11600	Existing	113.14	180.45	183.18		183.21	0.000537	1.32	325.44	616.22	0.28
Main	11600	Future	122.72	180.45	183.24		183.26	0.000531	1.34	363.27	702.57	0.28
Main	11600	100 year	39.80	180.45	182.54		182.58	0.000676	1.20	98.35	202.39	0.30
Main	11600	50 year	34.10	180.45	182.47		182.51	0.000655	1.14	84.84	181.69	0.29
Main	11600	20 year	27.00	180.45	182.37		182.40	0.000578	1.03	68.53	142.53	0.27
Main	11600	10 year	21.90	180.45	182.29		182.32	0.000508	0.93	57.65	117.91	0.25
Main	11600	5 year	16.90	180.45	182.18		182.21	0.000474	0.85	45.87	103.82	0.24
Main	11600	2 year	10.20	180.45	181.97		181.99	0.000492	0.77	25.79	83.42	0.24
Main	11500	Existing	113.14	180.25	183.16		183.17	0.000220	0.86	488.56	802.54	0.18
Main	11500	Future	122.72	180.25	183.21		183.22	0.000219	0.87	535.86	861.71	0.18
Main	11500	100 year	39.80	180.25	182.51		182.52	0.000352	0.87	155.35	351.44	0.21
Main	11500	50 year	34.10	180.25	182.43		182.45	0.000389	0.89	130.48	325.67	0.22

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	11500	20 year	27.00	180.25	182.33		182.35	0.000395	0.86	98.54	294.63	0.22
Main	11500	10 year	21.90	180.25	182.25		182.27	0.000397	0.83	76.06	228.84	0.22
Main	11500	5 year	16.90	180.25	182.14		182.16	0.000396	0.78	56.01	154.45	0.22
Main	11500	2 year	10.20	180.25	181.93		181.95	0.000397	0.70	30.16	87.38	0.21
Main	11400	Existing	113.14	180.15	183.12		183.14	0.000408	1.16	360.20	625.29	0.24
Main	11400	Future	122.72	180.15	183.17		183.19	0.000408	1.18	397.81	695.09	0.24
Main	11400	100 year	39.80	180.15	182.47		182.49	0.000349	0.87	125.78	229.93	0.21
Main	11400	50 year	34.10	180.15	182.40		182.42	0.000341	0.83	109.80	203.85	0.21
Main	11400	20 year	27.00	180.15	182.30		182.32	0.000322	0.78	91.61	167.10	0.20
Main	11400	10 year	21.90	180.15	182.22		182.23	0.000308	0.73	77.72	162.53	0.19
Main	11400	5 year	16.90	180.15	182.11		182.12	0.000294	0.68	61.30	144.22	0.19
Main	11400	2 year	10.20	180.15	181.90		181.91	0.000295	0.60	35.81	96.29	0.18
Main	11300	Existing	113.14	180.03	183.07		183.09	0.000406	1.07	391.36	621.34	0.23
Main	11300	Future	122.72	180.03	183.13		183.15	0.000377	1.05	428.59	639.39	0.23
Main	11300	100 year	39.80	180.03	182.38		182.43	0.001022	1.31	96.81	281.78	0.35
Main	11300	50 year	34.10	180.03	182.30		182.35	0.001121	1.32	75.51	240.54	0.36
Main	11300	20 year	27.00	180.03	182.19		182.25	0.001293	1.34	52.38	185.58	0.38
Main	11300	10 year	21.90	180.03	182.10		182.17	0.001408	1.33	37.25	143.06	0.39
Main	11300	5 year	16.90	180.03	182.00		182.06	0.001437	1.26	25.37	91.34	0.39
Main	11300	2 year	10.20	180.03	181.79		181.85	0.001551	1.13	12.33	45.67	0.39
Main	11200	Existing	113.14	180.04	183.05		183.06	0.000180	0.78	502.33	628.93	0.16
Main	11200	Future	122.72	180.04	183.11		183.12	0.000175	0.78	541.14	666.75	0.16
Main	11200	100 year	39.80	180.04	182.35		182.36	0.000344	0.85	161.34	374.14	0.21
Main	11200	50 year	34.10	180.04	182.26		182.28	0.000389	0.88	131.11	342.24	0.22
Main	11200	20 year	27.00	180.04	182.14		182.16	0.000482	0.93	92.61	277.56	0.24
Main	11200	10 year	21.90	180.04	182.04		182.07	0.000587	0.97	66.50	233.13	0.27
Main	11200	5 year	16.90	180.04	181.92		181.96	0.000717	1.01	40.76	183.00	0.29
Main	11200	2 year	10.20	180.04	181.69		181.73	0.000803	0.94	15.32	62.05	0.30
Main	11100	Existing	113.14	180.07	182.96		183.02	0.000824	1.66	215.07	288.10	0.35
Main	11100	Future	122.72	180.07	183.03		183.08	0.000803	1.67	233.22	296.45	0.34
Main	11100	100 year	39.80	180.07	182.20		182.29	0.001309	1.61	56.60	107.26	0.41
Main	11100	50 year	34.10	180.07	182.12		182.20	0.001309	1.56	47.90	96.27	0.41
Main	11100	20 year	27.00	180.07	182.00		182.08	0.001284	1.46	37.35	81.58	0.40
Main	11100	10 year	21.90	180.07	181.90		181.98	0.001246	1.37	29.88	70.61	0.39
Main	11100	5 year	16.90	180.07	181.79		181.86	0.001162	1.25	22.75	61.11	0.37
Main	11100	2 year	10.20	180.07	181.59		181.64	0.000990	1.02	12.27	39.66	0.33

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	11000	Existing	113.14	180.09	182.89		182.93	0.000687	1.48	213.20	246.49	0.31
Main	11000	Future	122.72	180.09	182.96		183.00	0.000692	1.52	228.63	252.38	0.32
Main	11000	100 year	39.80	180.09	182.13		182.17	0.000775	1.20	77.50	105.88	0.31
Main	11000	50 year	34.10	180.09	182.04		182.08	0.000791	1.16	68.41	103.90	0.31
Main	11000	20 year	27.00	180.09	181.92		181.96	0.000825	1.12	55.97	100.74	0.31
Main	11000	10 year	21.90	180.09	181.82		181.86	0.000880	1.09	45.68	98.13	0.32
Main	11000	5 year	16.90	180.09	181.70		181.74	0.000979	1.08	34.28	96.16	0.33
Main	11000	2 year	10.20	180.09	181.50		181.54	0.001064	0.97	17.79	62.70	0.33
Main	10900	Existing	113.14	180.09	182.69		182.82	0.001752	2.30	131.44	158.04	0.50
Main	10900	Future	122.72	180.09	182.73		182.87	0.001913	2.43	138.45	169.48	0.52
Main	10900	100 year	39.80	180.09	181.92		182.04	0.002025	1.84	44.66	73.11	0.50
Main	10900	50 year	34.10	180.09	181.85		181.95	0.001955	1.74	39.20	67.69	0.49
Main	10900	20 year	27.00	180.09	181.74		181.83	0.001863	1.60	32.14	60.81	0.47
Main	10900	10 year	21.90	180.09	181.64		181.73	0.001788	1.48	26.74	54.66	0.45
Main	10900	5 year	16.90	180.09	181.54		181.61	0.001677	1.34	21.37	48.12	0.43
Main	10900	2 year	10.20	180.09	181.36		181.41	0.001455	1.10	13.73	36.85	0.39
Main	10800	Existing	113.14	180.15	182.53		182.64	0.001662	2.21	140.95	189.66	0.49
Main	10800	Future	122.72	180.15	182.57		182.68	0.001748	2.29	147.93	193.36	0.50
Main	10800	100 year	39.80	180.15	181.76		181.84	0.001724	1.65	51.03	76.83	0.46
Main	10800	50 year	34.10	180.15	181.69		181.76	0.001679	1.57	45.45	73.64	0.45
Main	10800	20 year	27.00	180.15	181.58		181.65	0.001659	1.47	37.69	69.72	0.44
Main	10800	10 year	21.90	180.15	181.48		181.55	0.001758	1.42	30.77	66.39	0.45
Main	10800	5 year	16.90	180.15	181.36		181.43	0.001937	1.38	23.24	62.56	0.46
Main	10800	2 year	10.20	180.15	181.16		181.23	0.002291	1.27	12.11	44.65	0.48
Main	10700	Existing	113.14	179.94	182.41		182.48	0.001406	1.87	158.49	203.29	0.44
Main	10700	Future	122.72	179.94	182.44		182.51	0.001552	1.98	163.35	208.52	0.46
Main	10700	100 year	39.80	179.94	181.69		181.71	0.000808	1.02	68.69	73.66	0.30
Main	10700	50 year	34.10	179.94	181.62		181.64	0.000725	0.93	63.86	70.99	0.29
Main	10700	20 year	27.00	179.94	181.52		181.54	0.000627	0.81	56.94	67.53	0.26
Main	10700	10 year	21.90	179.94	181.42		181.44	0.000578	0.73	50.56	64.17	0.25
Main	10700	5 year	16.90	179.94	181.31		181.32	0.000527	0.64	43.64	60.33	0.23
Main	10700	2 year	10.20	179.94	181.12		181.12	0.000464	0.49	32.62	52.32	0.21
Main	10600	Existing	113.14	179.61	182.27		182.34	0.001197	1.85	142.25	203.37	0.41
Main	10600	Future	122.72	179.61	182.27		182.35	0.001417	2.02	141.72	201.79	0.44
Main	10600	100 year	39.80	179.61	181.57		181.62	0.000980	1.28	66.42	84.20	0.35

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	10600	50 year	34.10	179.61	181.52		181.56	0.000885	1.19	61.70	83.80	0.33
Main	10600	20 year	27.00	179.61	181.43		181.46	0.000776	1.06	54.46	81.90	0.30
Main	10600	10 year	21.90	179.61	181.34		181.37	0.000755	1.00	46.90	79.69	0.29
Main	10600	5 year	16.90	179.61	181.23		181.26	0.000750	0.93	38.38	77.11	0.29
Main	10600	2 year	10.20	179.61	181.03		181.06	0.000807	0.87	23.51	72.20	0.29
Main	10500	Existing	150.82	179.45	182.14		182.22	0.001393	2.06	181.89	199.96	0.45
Main	10500	Future	150.82	179.45	182.14		182.22	0.001393	2.06	181.89	199.96	0.45
Main	10500	100 year	49.10	179.45	181.52		181.54	0.000584	1.07	101.95	109.45	0.27
Main	10500	50 year	42.40	179.45	181.47		181.49	0.000504	0.97	96.67	107.84	0.25
Main	10500	20 year	33.80	179.45	181.39		181.41	0.000411	0.85	88.30	105.25	0.23
Main	10500	10 year	27.50	179.45	181.30		181.31	0.000370	0.77	78.99	102.29	0.21
Main	10500	5 year	21.30	179.45	181.20		181.21	0.000328	0.69	68.45	98.97	0.20
Main	10500	2 year	12.70	179.45	181.00		181.01	0.000271	0.56	50.01	93.24	0.17
Main	10355.95	Existing	150.82	179.19	181.95		182.02	0.001345	1.96	243.93	338.81	0.43
Main	10355.95	Future	150.82	179.19	181.95		182.02	0.001345	1.96	243.93	338.81	0.43
Main	10355.95	100 year	49.10	179.19	181.39		181.43	0.000997	1.37	90.52	188.96	0.35
Main	10355.95	50 year	42.40	179.19	181.36		181.40	0.000818	1.22	85.58	178.29	0.32
Main	10355.95	20 year	33.80	179.19	181.30		181.33	0.000633	1.05	76.51	150.63	0.28
Main	10355.95	10 year	27.50	179.19	181.22		181.25	0.000557	0.95	66.18	119.05	0.26
Main	10355.95	5 year	21.30	179.19	181.13		181.15	0.000464	0.83	55.89	101.85	0.23
Main	10355.95	2 year	12.70	179.19	180.95		180.97	0.000348	0.65	39.86	83.20	0.20
Main	10343.83	Existing	150.82	179.21	181.96	181.41	182.00	0.000562	1.55	330.25	386.79	0.30
Main	10343.83	Future	150.82	179.21	181.96	181.41	182.00	0.000562	1.55	330.25	386.79	0.30
Main	10343.83	100 year	49.10	179.21	181.37	180.56	181.42	0.000580	1.34	94.52	255.06	0.29
Main	10343.83	50 year	42.40	179.21	181.35	180.43	181.39	0.000465	1.19	91.21	249.28	0.26
Main	10343.83	20 year	33.80	179.21	181.29	180.26	181.33	0.000350	1.02	83.74	240.98	0.22
Main	10343.83	10 year	27.50	179.21	181.22	180.12	181.24	0.000260	0.86	74.05	213.65	0.19
Main	10343.83	5 year	21.30	179.21	181.13	179.98	181.15	0.000201	0.73	64.49	171.04	0.17
Main	10343.83	2 year	12.70	179.21	180.95	179.76	180.96	0.000117	0.52	49.71	124.55	0.13
Main	10335.83		Culvert									
Main	10327.82	Existing	150.82	179.19	181.93	181.43	181.98	0.000657	1.67	312.66	360.36	0.32
Main	10327.82	Future	150.82	179.19	181.93	181.43	181.98	0.000657	1.67	312.66	360.36	0.32
Main	10327.82	100 year	49.10	179.19	181.36	180.57	181.39	0.000411	1.13	137.60	247.74	0.25
Main	10327.82	50 year	42.40	179.19	181.29	180.44	181.33	0.000403	1.10	121.11	236.44	0.24
Main	10327.82	20 year	33.80	179.19	181.20	180.27	181.23	0.000377	1.03	99.88	226.33	0.23

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	10327.82	10 year	27.50	179.19	181.08	180.13	181.16	0.000671	1.32	37.77	197.04	0.31
Main	10327.82	5 year	21.30	179.19	180.98	179.98	181.06	0.000628	1.23	17.30	166.95	0.29
Main	10327.82	2 year	12.70	179.19	180.79	179.75	180.82	0.000324	0.82	15.47	88.45	0.21
Main	10315.78	Existing	150.82	179.19	181.92		181.97	0.000901	1.59	282.57	357.03	0.35
Main	10315.78	Future	150.82	179.19	181.92		181.97	0.000901	1.59	282.57	357.03	0.35
Main	10315.78	100 year	49.10	179.19	181.35		181.39	0.000780	1.19	111.99	243.21	0.31
Main	10315.78	50 year	42.40	179.19	181.27		181.32	0.000832	1.19	94.90	233.47	0.32
Main	10315.78	20 year	33.80	179.19	181.18		181.22	0.000886	1.17	72.92	209.64	0.33
Main	10315.78	10 year	27.50	179.19	181.09		181.14	0.000893	1.12	55.68	186.59	0.32
Main	10315.78	5 year	21.30	179.19	180.99		181.03	0.000793	1.00	39.71	110.58	0.30
Main	10315.78	2 year	12.70	179.19	180.79		180.82	0.000676	0.81	23.66	61.73	0.27
Main	10200	Existing	150.82	179.19	181.60		181.76	0.003353	2.87	158.99	253.94	0.67
Main	10200	Future	150.82	179.19	181.60		181.76	0.003353	2.87	158.99	253.94	0.67
Main	10200	100 year	49.10	179.19	181.11		181.22	0.002390	1.98	59.24	119.63	0.54
Main	10200	50 year	42.40	179.19	181.05	180.90	181.15	0.002251	1.86	52.39	107.18	0.52
Main	10200	20 year	33.80	179.19	180.96	180.81	181.06	0.002059	1.71	44.15	96.60	0.49
Main	10200	10 year	27.50	179.19	180.88	180.75	180.97	0.002052	1.62	36.40	90.13	0.49
Main	10200	5 year	21.30	179.19	180.79	180.66	180.88	0.002005	1.52	28.44	83.17	0.47
Main	10200	2 year	12.70	179.19	180.56	180.27	180.67	0.002604	1.47	11.35	48.21	0.52
Main	10100	Existing	150.82	179.08	181.34		181.45	0.002526	2.51	193.08	311.70	0.59
Main	10100	Future	150.82	179.08	181.34		181.45	0.002526	2.51	193.08	311.70	0.59
Main	10100	100 year	49.10	179.08	180.74	180.69	180.92	0.003734	2.35	49.25	107.08	0.67
Main	10100	50 year	42.40	179.08	180.66	180.61	180.85	0.004017	2.34	41.03	97.33	0.69
Main	10100	20 year	33.80	179.08	180.54	180.54	180.74	0.004761	2.36	29.63	82.92	0.73
Main	10100	10 year	27.50	179.08	180.46	180.46	180.66	0.004689	2.23	23.73	75.23	0.72
Main	10100	5 year	21.30	179.08	180.35	180.35	180.56	0.005115	2.15	16.32	61.83	0.74
Main	10100	2 year	12.70	179.08	180.15	180.05	180.31	0.005156	1.81	8.54	21.99	0.71
Main	10000	Existing	150.82	178.73	181.11		181.23	0.001938	2.19	185.08	270.83	0.52
Main	10000	Future	150.82	178.73	181.11		181.23	0.001938	2.19	185.08	270.83	0.52
Main	10000	100 year	49.10	178.73	180.55		180.65	0.001679	1.61	62.65	142.46	0.45
Main	10000	50 year	42.40	178.73	180.50		180.58	0.001529	1.49	54.84	118.37	0.43
Main	10000	20 year	33.80	178.73	180.41		180.48	0.001301	1.31	45.77	91.71	0.39
Main	10000	10 year	27.50	178.73	180.33		180.39	0.001162	1.18	39.18	80.53	0.36
Main	10000	5 year	21.30	178.73	180.24		180.29	0.001016	1.04	32.49	72.24	0.34
Main	10000	2 year	12.70	178.73	180.06		180.10	0.000865	0.84	20.73	57.50	0.30

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	9900	Existing	150.82	178.73	180.99		181.04	0.001371	1.88	229.72	267.01	0.44
Main	9900	Future	150.82	178.73	180.99		181.04	0.001371	1.88	229.73	267.01	0.44
Main	9900	100 year	49.10	178.73	180.44		180.49	0.001308	1.46	98.29	205.31	0.40
Main	9900	50 year	42.40	178.73	180.38		180.43	0.001288	1.41	86.68	192.02	0.40
Main	9900	20 year	33.80	178.73	180.29		180.34	0.001285	1.34	70.37	172.02	0.39
Main	9900	10 year	27.50	178.73	180.21		180.26	0.001302	1.29	57.63	156.37	0.39
Main	9900	5 year	21.30	178.73	180.12		180.17	0.001339	1.24	44.39	140.42	0.39
Main	9900	2 year	12.70	178.73	179.95		179.99	0.001175	1.03	26.17	85.82	0.35
Main	9800	Existing	150.82	178.73	180.88		180.94	0.001235	1.52	210.72	266.94	0.40
Main	9800	Future	150.82	178.73	180.88		180.94	0.001235	1.52	210.73	266.94	0.40
Main	9800	100 year	49.10	178.73	180.28		180.36	0.001771	1.30	60.85	174.88	0.44
Main	9800	50 year	42.40	178.73	180.23		180.30	0.001756	1.24	52.36	136.67	0.43
Main	9800	20 year	33.80	178.73	180.14		180.20	0.001838	1.18	40.73	120.15	0.43
Main	9800	10 year	27.50	178.73	180.06		180.12	0.001870	1.10	32.35	102.05	0.43
Main	9800	5 year	21.30	178.73	179.98		180.03	0.001897	1.01	24.70	77.76	0.42
Main	9800	2 year	12.70	178.73	179.81		179.85	0.002050	0.87	14.70	39.41	0.42
Main	9700	Existing	150.82	178.39	180.79		180.84	0.000984	1.62	242.70	278.10	0.37
Main	9700	Future	150.82	178.39	180.79		180.84	0.000984	1.62	242.71	278.11	0.37
Main	9700	100 year	49.10	178.39	180.18		180.23	0.000985	1.26	99.44	199.98	0.35
Main	9700	50 year	42.40	178.39	180.13		180.17	0.000987	1.22	87.77	197.31	0.35
Main	9700	20 year	33.80	178.39	180.04		180.08	0.000933	1.13	70.40	176.01	0.33
Main	9700	10 year	27.50	178.39	179.96		180.00	0.000901	1.06	57.71	153.46	0.32
Main	9700	5 year	21.30	178.39	179.87		179.90	0.000862	0.98	44.96	130.97	0.31
Main	9700	2 year	12.70	178.39	179.71		179.73	0.000742	0.81	27.62	91.72	0.28
Main	9588.291	Existing	150.82	178.40	180.69		180.74	0.001321	1.71	232.31	297.34	0.42
Main	9588.291	Future	150.82	178.40	180.69		180.74	0.001321	1.71	232.33	297.35	0.42
Main	9588.291	100 year	49.10	178.40	180.07		180.11	0.001456	1.33	88.54	162.83	0.41
Main	9588.291	50 year	42.40	178.40	180.01		180.05	0.001464	1.29	78.96	158.05	0.40
Main	9588.291	20 year	33.80	178.40	179.92		179.96	0.001435	1.20	65.45	150.71	0.39
Main	9588.291	10 year	27.50	178.40	179.85		179.88	0.001394	1.12	55.05	132.19	0.38
Main	9588.291	5 year	21.30	178.40	179.76		179.79	0.001383	1.04	44.29	117.40	0.38
Main	9588.291	2 year	12.70	178.40	179.60		179.63	0.001381	0.90	28.06	87.03	0.36
Main	9400	Existing	150.82	178.37	180.46		180.54	0.001415	1.78	178.59	177.53	0.44
Main	9400	Future	150.82	178.37	180.46		180.54	0.001415	1.78	178.62	177.54	0.44
Main	9400	100 year	49.10	178.37	179.84		179.89	0.001257	1.24	78.17	144.74	0.38
Main	9400	50 year	42.40	178.37	179.79		179.83	0.001232	1.18	69.79	139.96	0.37

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	9400	20 year	33.80	178.37	179.70		179.75	0.001175	1.09	58.71	132.99	0.36
Main	9400	10 year	27.50	178.37	179.63		179.67	0.001141	1.02	49.59	127.51	0.35
Main	9400	5 year	21.30	178.37	179.55		179.59	0.001089	0.94	39.61	115.78	0.34
Main	9400	2 year	12.70	178.37	179.40		179.43	0.001011	0.78	24.22	86.70	0.31
Main	9300	Existing	150.82	178.25	180.27		180.36	0.002475	2.33	174.45	242.56	0.57
Main	9300	Future	150.82	178.25	180.27		180.36	0.002471	2.33	174.55	242.62	0.57
Main	9300	100 year	49.10	178.25	179.56		179.68	0.004615	2.21	53.33	113.93	0.72
Main	9300	50 year	42.40	178.25	179.49		179.61	0.004851	2.16	46.31	107.09	0.73
Main	9300	20 year	33.80	178.25	179.41		179.53	0.005063	2.07	37.80	99.64	0.73
Main	9300	10 year	27.50	178.25	179.35		179.46	0.005029	1.96	31.78	93.03	0.72
Main	9300	5 year	21.30	178.25	179.29		179.39	0.004754	1.80	26.00	85.48	0.69
Main	9300	2 year	12.70	178.25	179.18		179.25	0.003896	1.45	17.56	69.06	0.60
Main	9200	Existing	150.82	177.89	180.16		180.21	0.001337	1.87	235.12	275.50	0.43
Main	9200	Future	150.82	177.89	180.16		180.22	0.001335	1.87	235.29	275.61	0.43
Main	9200	100 year	49.10	177.89	179.39		179.44	0.001657	1.49	79.78	129.66	0.44
Main	9200	50 year	42.40	177.89	179.32		179.36	0.001771	1.47	69.79	125.33	0.45
Main	9200	20 year	33.80	177.89	179.21		179.26	0.001948	1.44	56.89	120.27	0.46
Main	9200	10 year	27.50	177.89	179.13		179.18	0.002098	1.41	47.24	116.34	0.47
Main	9200	5 year	21.30	177.89	179.04		179.10	0.002296	1.38	37.19	112.11	0.49
Main	9200	2 year	12.70	177.89	178.90		178.96	0.002578	1.29	22.17	104.03	0.50
Main	9100	Existing	150.82	177.76	179.97		180.08	0.002251	2.45	176.38	216.59	0.56
Main	9100	Future	150.82	177.76	179.97		180.09	0.002242	2.44	176.66	216.76	0.56
Main	9100	100 year	49.10	177.76	179.21		179.29	0.002330	1.78	58.29	81.57	0.52
Main	9100	50 year	42.40	177.76	179.14		179.21	0.002190	1.66	52.83	76.11	0.50
Main	9100	20 year	33.80	177.76	179.04		179.10	0.002102	1.52	45.42	72.88	0.49
Main	9100	10 year	27.50	177.76	178.96		179.01	0.002082	1.43	39.43	71.83	0.48
Main	9100	5 year	21.30	177.76	178.86		178.92	0.002073	1.33	32.88	70.66	0.47
Main	9100	2 year	12.70	177.76	178.70		178.75	0.002226	1.19	21.60	68.60	0.47
Main	9000	Existing	150.82	177.53	179.72		179.90	0.002310	2.41	137.65	164.27	0.56
Main	9000	Future	150.82	177.53	179.73		179.90	0.002304	2.41	137.93	165.14	0.56
Main	9000	100 year	49.10	177.53	179.03		179.12	0.001823	1.56	55.40	85.38	0.46
Main	9000	50 year	42.40	177.53	178.97		179.05	0.001709	1.46	50.37	83.20	0.45
Main	9000	20 year	33.80	177.53	178.88		178.95	0.001532	1.31	43.50	79.13	0.42
Main	9000	10 year	27.50	177.53	178.82		178.87	0.001371	1.18	38.13	75.74	0.39
Main	9000	5 year	21.30	177.53	178.74		178.78	0.001184	1.04	32.38	71.81	0.36
Main	9000	2 year	12.70	177.53	178.60		178.63	0.000853	0.79	23.06	65.07	0.29

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	8900	Existing	150.82	177.46	179.56		179.68	0.002886	2.49	142.02	240.92	0.62
Main	8900	Future	150.82	177.46	179.56		179.69	0.002848	2.48	143.00	240.94	0.61
Main	8900	100 year	49.10	177.46	178.83		178.91	0.003494	1.87	54.87	91.86	0.62
Main	8900	50 year	42.40	177.46	178.78		178.85	0.003392	1.77	50.05	90.12	0.60
Main	8900	20 year	33.80	177.46	178.71		178.77	0.003210	1.63	43.55	87.72	0.58
Main	8900	10 year	27.50	177.46	178.65		178.71	0.002968	1.49	38.71	85.89	0.55
Main	8900	5 year	21.30	177.46	178.59		178.64	0.002719	1.35	33.31	82.11	0.52
Main	8900	2 year	12.70	177.46	178.48		178.51	0.002339	1.11	24.28	78.84	0.47
Main	8800	Existing	150.82	177.35	179.44		179.51	0.001492	1.64	173.98	223.71	0.44
Main	8800	Future	150.82	177.35	179.44		179.52	0.001478	1.64	175.10	226.53	0.43
Main	8800	100 year	49.10	177.35	178.63		178.68	0.002421	1.22	65.02	112.77	0.48
Main	8800	50 year	42.40	177.35	178.57		178.61	0.002629	1.19	57.69	111.83	0.50
Main	8800	20 year	33.80	177.35	178.48		178.52	0.002993	1.15	47.91	110.56	0.52
Main	8800	10 year	27.50	177.35	178.42		178.45	0.003264	1.10	40.84	109.63	0.53
Main	8800	5 year	21.30	177.35	178.36		178.39	0.003278	1.01	34.60	108.79	0.52
Main	8800	2 year	12.70	177.35	178.29	178.19	178.31	0.002519	0.77	26.91	107.27	0.44
Main	8700	Existing	150.82	177.17	179.38		179.42	0.000649	1.19	262.86	302.42	0.29
Main	8700	Future	150.82	177.17	179.39		179.42	0.000647	1.19	264.43	306.77	0.29
Main	8700	100 year	49.10	177.17	178.50		178.53	0.001165	0.97	84.18	142.27	0.35
Main	8700	50 year	42.40	177.17	178.42		178.45	0.001265	0.94	73.37	133.27	0.36
Main	8700	20 year	33.80	177.17	178.31		178.34	0.001484	0.91	59.46	108.15	0.38
Main	8700	10 year	27.50	177.17	178.21		178.24	0.001836	0.90	48.95	106.76	0.41
Main	8700	5 year	21.30	177.17	178.10		178.13	0.002640	0.92	37.20	105.20	0.47
Main	8700	2 year	12.70	177.17	177.95		177.98	0.005753	0.99	20.88	103.11	0.64
Main	8604.916	Existing	150.82	176.94	179.34		179.38	0.000478	1.15	276.31	235.14	0.26
Main	8604.916	Future	150.82	176.94	179.35		179.38	0.000473	1.15	277.68	236.11	0.26
Main	8604.916	100 year	49.10	176.94	178.45		178.47	0.000495	0.79	108.71	149.58	0.24
Main	8604.916	50 year	42.40	176.94	178.37		178.39	0.000499	0.76	96.92	143.05	0.24
Main	8604.916	20 year	33.80	176.94	178.25		178.27	0.000514	0.71	80.55	131.51	0.24
Main	8604.916	10 year	27.50	176.94	178.15		178.16	0.000545	0.67	67.39	120.36	0.24
Main	8604.916	5 year	21.30	176.94	178.02		178.04	0.000635	0.65	52.58	110.45	0.25
Main	8604.916	2 year	12.70	176.94	177.79		177.81	0.001033	0.63	30.26	85.67	0.30
Main	8500	Existing	150.82	176.61	179.17		179.30	0.001628	2.40	156.73	142.01	0.49
Main	8500	Future	150.82	176.61	179.18		179.31	0.001606	2.39	157.84	143.02	0.49
Main	8500	100 year	49.10	176.61	178.31		178.40	0.001484	1.71	62.22	83.84	0.44

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	8500	50 year	42.40	176.61	178.23		178.31	0.001411	1.61	56.13	79.82	0.42
Main	8500	20 year	33.80	176.61	178.12		178.19	0.001321	1.48	47.54	73.71	0.40
Main	8500	10 year	27.50	176.61	178.02		178.08	0.001261	1.37	40.37	67.63	0.39
Main	8500	5 year	21.30	176.61	177.89		177.95	0.001269	1.28	31.88	60.02	0.38
Main	8500	2 year	12.70	176.61	177.65		177.70	0.001213	1.07	19.61	40.71	0.36
Main	8400	Existing	150.82	176.32	179.09		179.19	0.001295	2.17	168.53	135.96	0.44
Main	8400	Future	150.82	176.32	179.10		179.20	0.001278	2.16	169.74	137.34	0.43
Main	8400	100 year	49.10	176.32	178.25		178.30	0.000840	1.33	80.90	89.36	0.33
Main	8400	50 year	42.40	176.32	178.18		178.22	0.000776	1.24	74.60	87.54	0.31
Main	8400	20 year	33.80	176.32	178.07		178.11	0.000700	1.13	65.24	84.77	0.29
Main	8400	10 year	27.50	176.32	177.97		178.00	0.000660	1.04	56.79	82.02	0.28
Main	8400	5 year	21.30	176.32	177.83		177.86	0.000680	0.99	45.68	78.39	0.28
Main	8400	2 year	12.70	176.32	177.57		177.61	0.000810	0.92	26.35	70.50	0.30
Main	8300	Existing	150.82	176.32	178.90		179.04	0.001803	2.48	153.47	140.10	0.51
Main	8300	Future	150.82	176.32	178.92		179.05	0.001737	2.44	155.76	140.86	0.51
Main	8300	100 year	49.10	176.32	177.92	177.88	178.13	0.003668	2.46	42.42	86.42	0.67
Main	8300	50 year	42.40	176.32	177.83	177.81	178.06	0.003971	2.45	35.04	82.28	0.69
Main	8300	20 year	33.80	176.32	177.71	177.70	177.95	0.004348	2.40	25.55	72.02	0.71
Main	8300	10 year	27.50	176.32	177.60	177.47	177.85	0.004658	2.33	18.43	61.36	0.72
Main	8300	5 year	21.30	176.32	177.51	177.30	177.71	0.004186	2.07	13.26	41.43	0.68
Main	8300	2 year	12.70	176.32	177.36		177.47	0.002723	1.49	9.88	17.75	0.53
Main	8248.055	Existing	150.82	176.30	178.91		178.95	0.000652	1.45	250.57	206.55	0.31
Main	8248.055	Future	150.82	176.30	178.92		178.96	0.000631	1.43	253.88	207.70	0.30
Main	8248.055	100 year	49.10	176.30	177.90		177.97	0.001567	1.52	68.34	152.05	0.43
Main	8248.055	50 year	42.40	176.30	177.81		177.89	0.001700	1.51	55.57	145.06	0.44
Main	8248.055	20 year	33.80	176.30	177.69		177.76	0.001824	1.45	39.94	88.68	0.45
Main	8248.055	10 year	27.50	176.30	177.59		177.65	0.001860	1.37	33.57	54.89	0.45
Main	8248.055	5 year	21.30	176.30	177.47		177.54	0.001875	1.29	27.42	53.49	0.44
Main	8248.055	2 year	12.70	176.30	177.28		177.34	0.001941	1.14	17.32	51.09	0.44
Main	8172.005	Existing	150.82	176.30	178.83		178.89	0.000997	1.79	195.49	140.44	0.38
Main	8172.005	Future	150.82	176.30	178.85		178.91	0.000962	1.77	198.08	141.11	0.37
Main	8172.005	100 year	49.10	176.30	177.77		177.85	0.002077	1.72	61.18	111.08	0.49
Main	8172.005	50 year	42.40	176.30	177.68		177.76	0.002161	1.67	51.52	104.99	0.49
Main	8172.005	20 year	33.80	176.30	177.55		177.62	0.002235	1.58	39.26	82.73	0.49
Main	8172.005	10 year	27.50	176.30	177.45		177.51	0.002210	1.46	33.38	51.90	0.48
Main	8172.005	5 year	21.30	176.30	177.34		177.39	0.002235	1.35	27.63	48.30	0.47

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	8172.005	2 year	12.70	176.30	177.13		177.18	0.002279	1.20	18.65	41.75	0.46
Main	8100	Existing	150.82	176.12	178.53		178.77	0.001908	2.27	87.46	69.17	0.52
Main	8100	Future	150.82	176.12	178.56		178.79	0.001792	2.22	89.73	69.97	0.50
Main	8100	100 year	49.10	176.12	177.43		177.62	0.003978	1.89	26.60	42.44	0.65
Main	8100	50 year	42.40	176.12	177.34		177.51	0.004335	1.83	23.21	31.26	0.67
Main	8100	20 year	33.80	176.12	177.21		177.37	0.004746	1.75	19.33	29.22	0.68
Main	8100	10 year	27.50	176.12	177.11		177.25	0.005159	1.68	16.34	27.63	0.70
Main	8100	5 year	21.30	176.12	177.00		177.13	0.005418	1.60	13.35	25.39	0.70
Main	8100	2 year	12.70	176.12	176.82		176.92	0.005469	1.38	9.20	21.90	0.68
Main	8000	Existing	150.82	175.68	178.49		178.61	0.000881	1.78	130.96	91.89	0.37
Main	8000	Future	150.82	175.68	178.52		178.65	0.000829	1.75	134.36	92.72	0.35
Main	8000	100 year	49.10	175.68	177.32		177.40	0.001138	1.31	46.72	50.20	0.37
Main	8000	50 year	42.40	175.68	177.21		177.29	0.001161	1.25	41.60	48.92	0.37
Main	8000	20 year	33.80	175.68	177.07		177.13	0.001194	1.16	34.75	46.54	0.37
Main	8000	10 year	27.50	175.68	176.95		177.00	0.001262	1.10	29.16	43.96	0.37
Main	8000	5 year	21.30	175.68	176.81		176.86	0.001354	1.02	23.47	41.18	0.37
Main	8000	2 year	12.70	175.68	176.60		176.63	0.001567	0.88	14.98	34.82	0.38
Main	7900	Existing	150.82	175.48	178.29		178.50	0.001354	2.20	95.10	65.77	0.45
Main	7900	Future	150.82	175.48	178.34		178.54	0.001241	2.14	98.59	66.17	0.43
Main	7900	100 year	49.10	175.48	177.15		177.26	0.001483	1.51	35.30	32.41	0.43
Main	7900	50 year	42.40	175.48	177.06		177.15	0.001443	1.41	32.25	31.72	0.41
Main	7900	20 year	33.80	175.48	176.92		177.00	0.001381	1.28	28.09	30.76	0.40
Main	7900	10 year	27.50	175.48	176.80		176.87	0.001396	1.18	24.39	29.78	0.39
Main	7900	5 year	21.30	175.48	176.67		176.72	0.001426	1.08	20.45	28.69	0.39
Main	7900	2 year	12.70	175.48	176.43		176.47	0.001661	0.92	13.93	26.76	0.39
Main	7800	Existing	150.82	175.17	178.04		178.33	0.002269	3.08	107.81	88.00	0.60
Main	7800	Future	150.82	175.17	178.15		178.39	0.001861	2.87	117.94	96.81	0.54
Main	7800	100 year	49.10	175.17	176.90		177.08	0.002329	2.18	38.63	45.00	0.55
Main	7800	50 year	42.40	175.17	176.81		176.97	0.002212	2.05	34.85	44.23	0.53
Main	7800	20 year	33.80	175.17	176.71		176.84	0.001943	1.82	30.16	42.28	0.49
Main	7800	10 year	27.50	175.17	176.59		176.71	0.001827	1.67	25.66	37.97	0.47
Main	7800	5 year	21.30	175.17	176.48		176.57	0.001612	1.47	21.54	33.05	0.44
Main	7800	2 year	12.70	175.17	176.27		176.33	0.001220	1.13	15.68	26.16	0.37
Main	7700	Existing	150.82	174.70	178.18		178.19	0.000230	1.00	392.44	248.23	0.19
Main	7700	Future	150.82	174.70	178.27		178.28	0.000196	0.94	414.18	250.42	0.17

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	7700	100 year	49.10	174.70	176.85		176.90	0.000943	1.36	97.84	174.52	0.34
Main	7700	50 year	42.40	174.70	176.75		176.80	0.001066	1.38	79.90	151.44	0.36
Main	7700	20 year	33.80	174.70	176.59		176.66	0.001415	1.47	57.09	141.58	0.41
Main	7700	10 year	27.50	174.70	176.48		176.54	0.001388	1.37	42.88	104.79	0.40
Main	7700	5 year	21.30	174.70	176.34		176.40	0.001615	1.37	31.48	73.26	0.42
Main	7700	2 year	12.70	174.70	176.10		176.17	0.002052	1.30	16.04	53.84	0.45
Main	7670.765	Existing	150.82	174.69	178.16		178.18	0.000257	1.12	336.48	192.90	0.20
Main	7670.765	Future	150.82	174.69	178.25		178.27	0.000222	1.06	353.72	194.53	0.19
Main	7670.765	100 year	49.10	174.69	176.84		176.88	0.000608	1.21	104.10	146.74	0.28
Main	7670.765	50 year	42.40	174.69	176.73		176.77	0.000676	1.22	88.17	144.74	0.29
Main	7670.765	20 year	33.80	174.69	176.58		176.62	0.000748	1.21	66.93	131.20	0.31
Main	7670.765	10 year	27.50	174.69	176.45		176.51	0.000826	1.20	51.20	124.21	0.32
Main	7670.765	5 year	21.30	174.69	176.31		176.37	0.000907	1.18	35.33	94.62	0.33
Main	7670.765	2 year	12.70	174.69	176.09		176.13	0.000803	0.98	20.00	51.74	0.30
Main	7656.964	Existing	150.82	174.69	178.16		178.18	0.000266	1.10	326.19	179.81	0.20
Main	7656.964	Future	150.82	174.69	178.25		178.27	0.000231	1.05	342.33	181.55	0.19
Main	7656.964	100 year	49.10	174.69	176.84		176.86	0.000536	1.08	113.20	139.41	0.26
Main	7656.964	50 year	42.40	174.69	176.73		176.76	0.000584	1.08	98.24	136.78	0.27
Main	7656.964	20 year	33.80	174.69	176.58		176.61	0.000649	1.06	78.09	126.64	0.28
Main	7656.964	10 year	27.50	174.69	176.46		176.49	0.000734	1.07	62.77	122.23	0.29
Main	7656.964	5 year	21.30	174.69	176.31		176.35	0.000872	1.08	45.82	110.72	0.31
Main	7656.964	2 year	12.70	174.69	176.07		176.12	0.001164	1.08	21.78	80.89	0.35
Main	7630.803	Existing	150.82	174.69	178.15		178.17	0.000293	1.19	291.11	147.61	0.21
Main	7630.803	Future	150.82	174.69	178.24		178.26	0.000257	1.14	304.59	152.08	0.20
Main	7630.803	100 year	49.10	174.69	176.82		176.85	0.000530	1.12	107.38	130.37	0.26
Main	7630.803	50 year	42.40	174.69	176.71		176.74	0.000537	1.09	93.89	120.87	0.26
Main	7630.803	20 year	33.80	174.69	176.56		176.59	0.000578	1.06	76.01	116.03	0.27
Main	7630.803	10 year	27.50	174.69	176.44		176.47	0.000625	1.05	61.84	112.90	0.27
Main	7630.803	5 year	21.30	174.69	176.29		176.33	0.000706	1.04	45.95	106.14	0.29
Main	7630.803	2 year	12.70	174.69	176.05		176.09	0.000845	1.00	21.85	86.06	0.30
Main	7591.012	Existing	209.51	174.59	178.07		178.15	0.000876	2.01	241.47	141.45	0.37
Main	7591.012	Future	222.34	174.59	178.15		178.24	0.000914	2.09	253.67	156.05	0.38
Main	7591.012	100 year	62.90	174.59	176.73		176.82	0.001433	1.73	78.24	99.08	0.43
Main	7591.012	50 year	54.70	174.59	176.62		176.71	0.001549	1.72	67.34	95.58	0.44
Main	7591.012	20 year	44.00	174.59	176.47		176.55	0.001685	1.67	53.23	85.83	0.45
Main	7591.012	10 year	36.10	174.59	176.34		176.43	0.001768	1.61	43.32	75.34	0.46

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	7591.012	5 year	28.10	174.59	176.20		176.28	0.001878	1.53	33.37	64.37	0.46
Main	7591.012	2 year	16.90	174.59	175.96		176.04	0.002021	1.36	20.74	46.95	0.46
Main	7566.177	Existing	209.51	174.59	178.02		178.13	0.000854	2.04	224.75	134.38	0.37
Main	7566.177	Future	222.34	174.59	178.10		178.21	0.000859	2.08	235.94	138.35	0.37
Main	7566.177	100 year	62.90	174.59	176.72		176.78	0.000840	1.42	84.68	81.15	0.33
Main	7566.177	50 year	54.70	174.59	176.61		176.67	0.000836	1.36	75.98	78.68	0.33
Main	7566.177	20 year	44.00	174.59	176.46		176.51	0.000819	1.27	64.46	75.46	0.32
Main	7566.177	10 year	36.10	174.59	176.34		176.39	0.000793	1.18	55.54	72.48	0.31
Main	7566.177	5 year	28.10	174.59	176.20		176.24	0.000756	1.08	45.78	67.39	0.30
Main	7566.177	2 year	16.90	174.59	175.97		176.00	0.000659	0.89	30.96	59.49	0.27
Main	7500	Existing	209.51	174.45	178.01		178.07	0.000631	1.76	275.00	149.29	0.31
Main	7500	Future	222.34	174.45	178.09		178.15	0.000630	1.79	287.50	151.55	0.32
Main	7500	100 year	62.90	174.45	176.68		176.73	0.000720	1.31	106.10	105.96	0.31
Main	7500	50 year	54.70	174.45	176.57		176.61	0.000726	1.27	94.68	101.09	0.31
Main	7500	20 year	44.00	174.45	176.42		176.46	0.000711	1.18	80.10	93.98	0.30
Main	7500	10 year	36.10	174.45	176.30		176.34	0.000688	1.10	69.17	88.24	0.29
Main	7500	5 year	28.10	174.45	176.16		176.19	0.000666	1.01	57.22	83.09	0.28
Main	7500	2 year	16.90	174.45	175.93		175.96	0.000598	0.85	38.87	75.25	0.26
Main	7403.514	Existing	209.51	174.45	177.96		178.01	0.000544	1.71	286.05	140.23	0.30
Main	7403.514	Future	222.34	174.45	178.04		178.10	0.000545	1.74	297.74	141.26	0.30
Main	7403.514	100 year	62.90	174.45	176.61		176.66	0.000733	1.40	109.30	120.02	0.32
Main	7403.514	50 year	54.70	174.45	176.49		176.54	0.000796	1.40	95.18	117.72	0.33
Main	7403.514	20 year	44.00	174.45	176.33		176.38	0.000889	1.39	76.40	112.89	0.34
Main	7403.514	10 year	36.10	174.45	176.20		176.26	0.000991	1.39	61.62	109.05	0.36
Main	7403.514	5 year	28.10	174.45	176.05		176.11	0.001050	1.34	46.36	96.89	0.36
Main	7403.514	2 year	16.90	174.45	175.81		175.87	0.001135	1.23	25.23	77.33	0.36
Main	7300	Existing	209.51	174.36	177.85		177.95	0.000911	2.16	226.09	124.56	0.38
Main	7300	Future	222.34	174.36	177.93		178.03	0.000905	2.19	236.52	125.80	0.38
Main	7300	100 year	62.90	174.36	176.50		176.57	0.001068	1.65	82.69	83.72	0.38
Main	7300	50 year	54.70	174.36	176.38		176.45	0.001099	1.60	72.95	79.74	0.38
Main	7300	20 year	44.00	174.36	176.21		176.29	0.001143	1.53	60.22	75.60	0.38
Main	7300	10 year	36.10	174.36	176.08		176.15	0.001184	1.47	50.32	72.21	0.38
Main	7300	5 year	28.10	174.36	175.93		176.00	0.001231	1.40	39.77	68.61	0.38
Main	7300	2 year	16.90	174.36	175.69		175.75	0.001213	1.22	24.07	62.29	0.37
Main	7200	Existing	209.51	174.30	177.74		177.87	0.001253	2.41	183.07	92.69	0.44

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	7200	Future	222.34	174.30	177.82		177.95	0.001264	2.46	190.54	93.92	0.45
Main	7200	100 year	62.90	174.30	176.40		176.48	0.001367	1.71	73.66	69.67	0.42
Main	7200	50 year	54.70	174.30	176.28		176.36	0.001435	1.66	65.23	67.13	0.42
Main	7200	20 year	44.00	174.30	176.11		176.18	0.001527	1.59	54.20	63.59	0.43
Main	7200	10 year	36.10	174.30	175.97		176.04	0.001637	1.54	45.51	60.42	0.44
Main	7200	5 year	28.10	174.30	175.81		175.88	0.001823	1.49	35.98	56.81	0.45
Main	7200	2 year	16.90	174.30	175.52		175.61	0.002470	1.50	20.57	50.44	0.51
Main	7100	Existing	209.51	174.14	177.18		177.65	0.003477	3.95	106.09	81.13	0.74
Main	7100	Future	222.34	174.14	177.23	176.88	177.72	0.003595	4.07	110.65	83.99	0.76
Main	7100	100 year	62.90	174.14	176.07		176.29	0.002550	2.44	45.36	44.89	0.59
Main	7100	50 year	54.70	174.14	175.96		176.16	0.002518	2.32	40.50	42.18	0.58
Main	7100	20 year	44.00	174.14	175.81		175.99	0.002448	2.15	34.28	39.73	0.56
Main	7100	10 year	36.10	174.14	175.68		175.84	0.002430	2.01	29.18	37.60	0.55
Main	7100	5 year	28.10	174.14	175.53		175.67	0.002401	1.85	23.68	34.48	0.54
Main	7100	2 year	16.90	174.14	175.26		175.37	0.002306	1.54	15.48	27.83	0.50
Main	7000	Existing	209.51	173.86	176.86		177.29	0.003738	3.92	118.45	89.40	0.76
Main	7000	Future	222.34	173.86	176.90		177.35	0.003863	4.03	122.68	90.49	0.77
Main	7000	100 year	62.90	173.86	175.77		176.01	0.003229	2.59	41.06	41.70	0.65
Main	7000	50 year	54.70	173.86	175.55		175.83	0.004401	2.74	32.30	38.46	0.74
Main	7000	20 year	44.00	173.86	175.35	175.23	175.64	0.005173	2.69	25.18	34.22	0.78
Main	7000	10 year	36.10	173.86	175.24	175.12	175.50	0.005135	2.51	21.42	31.68	0.76
Main	7000	5 year	28.10	173.86	175.11		175.33	0.005000	2.28	17.59	28.88	0.74
Main	7000	2 year	16.90	173.86	174.92		175.06	0.004276	1.82	12.34	24.25	0.66
Main	6900	Existing	209.51	173.76	176.97		177.07	0.000603	1.67	218.39	112.80	0.31
Main	6900	Future	222.34	173.76	177.02		177.12	0.000634	1.73	224.14	114.37	0.32
Main	6900	100 year	62.90	173.76	175.80		175.85	0.000487	1.06	94.35	98.93	0.26
Main	6900	50 year	54.70	173.76	175.56		175.62	0.000707	1.16	70.97	96.48	0.30
Main	6900	20 year	44.00	173.76	175.32		175.39	0.000961	1.20	48.71	79.23	0.34
Main	6900	10 year	36.10	173.76	175.18		175.24	0.001032	1.15	38.36	66.21	0.35
Main	6900	5 year	28.10	173.76	175.04		175.09	0.000981	1.03	31.01	44.98	0.33
Main	6900	2 year	16.90	173.76	174.84		174.87	0.000792	0.80	22.70	37.80	0.29
Main	6695.694	Existing	209.51	173.78	176.92		176.97	0.000407	1.37	289.17	143.27	0.26
Main	6695.694	Future	222.34	173.78	176.97		177.03	0.000429	1.42	296.11	144.28	0.26
Main	6695.694	100 year	62.90	173.78	175.76		175.78	0.000290	0.82	137.11	117.47	0.20
Main	6695.694	50 year	54.70	173.78	175.49		175.52	0.000430	0.90	106.81	109.56	0.24
Main	6695.694	20 year	44.00	173.78	175.20		175.23	0.000674	0.97	76.53	99.36	0.28

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	6695.694	10 year	36.10	173.78	175.02		175.06	0.000911	1.01	58.85	94.89	0.32
Main	6695.694	5 year	28.10	173.78	174.84		174.88	0.001282	1.05	42.02	88.10	0.37
Main	6695.694	2 year	16.90	173.78	174.55		174.61	0.002529	1.12	20.02	67.73	0.48
Main	6580.334	Existing	209.51	173.24	176.82		176.91	0.000744	2.08	241.54	130.64	0.36
Main	6580.334	Future	222.34	173.24	176.86		176.96	0.000834	2.22	246.17	135.34	0.38
Main	6580.334	100 year	62.90	173.24	175.71		175.74	0.000371	1.14	123.58	94.60	0.24
Main	6580.334	50 year	54.70	173.24	175.43		175.47	0.000496	1.21	98.29	84.62	0.27
Main	6580.334	20 year	44.00	173.24	175.12		175.16	0.000668	1.26	73.17	73.75	0.30
Main	6580.334	10 year	36.10	173.24	174.92		174.97	0.000775	1.25	59.05	68.56	0.32
Main	6580.334	5 year	28.10	173.24	174.72		174.77	0.000866	1.21	46.08	62.29	0.33
Main	6580.334	2 year	16.90	173.24	174.39		174.43	0.001067	1.11	27.42	49.04	0.35
Main	6570.020	Existing	209.51	173.14	176.84	175.64	176.90	0.000449	1.67	298.98	142.09	0.28
Main	6570.020	Future	222.34	173.14	176.88	175.70	176.94	0.000480	1.74	304.60	142.94	0.29
Main	6570.020	100 year	62.90	173.14	175.69	174.64	175.74	0.000417	1.26	110.39	119.90	0.25
Main	6570.020	50 year	54.70	173.14	175.13	174.51	175.43	0.002302	2.49	23.37	97.39	0.57
Main	6570.020	20 year	44.00	173.14	174.86	174.33	175.13	0.002435	2.33	20.14	72.41	0.57
Main	6570.020	10 year	36.10	173.14	174.73	174.19	174.94	0.002185	2.08	18.47	68.48	0.53
Main	6570.020	5 year	28.10	173.14	174.59	174.04	174.74	0.001801	1.78	16.82	64.25	0.48
Main	6570.020	2 year	16.90	173.14	174.33	173.80	174.42	0.001279	1.31	13.71	56.04	0.39
Main	6559.697		Bridge									
Main	6549.568	Existing	209.51	173.12	175.63	175.57	176.11	0.005041	4.22	108.83	110.64	0.87
Main	6549.568	Future	222.34	173.12	175.68	175.60	176.18	0.005140	4.32	113.13	111.87	0.88
Main	6549.568	100 year	62.90	173.12	174.71	174.71	175.44	0.008274	3.91	17.57	67.55	1.03
Main	6549.568	50 year	54.70	173.12	174.58	174.58	175.25	0.008547	3.73	15.99	63.44	1.03
Main	6549.568	20 year	44.00	173.12	174.56	174.40	175.01	0.005803	3.05	15.76	62.85	0.85
Main	6549.568	10 year	36.10	173.12	174.54	174.27	174.85	0.004190	2.55	15.43	61.99	0.72
Main	6549.568	5 year	28.10	173.12	174.47	174.11	174.68	0.002998	2.09	14.68	59.90	0.60
Main	6549.568	2 year	16.90	173.12	174.27	173.87	174.38	0.001999	1.51	12.20	50.64	0.48
Main	6539.356	Existing	209.51	173.19	175.70		175.95	0.003116	3.29	140.43	100.57	0.68
Main	6539.356	Future	222.34	173.19	175.75		176.01	0.003167	3.37	145.76	101.43	0.69
Main	6539.356	100 year	62.90	173.19	174.89		175.00	0.001824	1.91	67.05	72.93	0.49
Main	6539.356	50 year	54.70	173.19	174.82		174.91	0.001681	1.77	61.99	70.34	0.47
Main	6539.356	20 year	44.00	173.19	174.72		174.79	0.001474	1.58	54.97	66.62	0.43
Main	6539.356	10 year	36.10	173.19	174.64		174.70	0.001275	1.42	49.69	63.28	0.40
Main	6539.356	5 year	28.10	173.19	174.54		174.58	0.001082	1.23	43.44	59.27	0.36

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	6539.356	2 year	16.90	173.19	174.29		174.33	0.001004	1.02	29.99	50.76	0.33
Main	6409.803	Existing	209.51	172.74	175.45		175.63	0.002308	2.54	159.75	120.72	0.57
Main	6409.803	Future	222.34	172.74	175.50		175.69	0.002326	2.59	166.06	121.35	0.57
Main	6409.803	100 year	62.90	172.74	174.61		174.74	0.002614	1.89	62.21	110.23	0.55
Main	6409.803	50 year	54.70	172.74	174.53		174.66	0.002658	1.82	54.48	105.06	0.55
Main	6409.803	20 year	44.00	172.74	174.45		174.56	0.002520	1.68	45.74	99.99	0.53
Main	6409.803	10 year	36.10	172.74	174.31	174.23	174.45	0.003475	1.79	31.97	92.94	0.61
Main	6409.803	5 year	28.10	172.74	174.18	173.99	174.34	0.004124	1.79	20.82	85.20	0.65
Main	6409.803	2 year	16.90	172.74	173.97		174.09	0.004104	1.53	11.02	17.88	0.62
Main	6300	Existing	209.51	172.62	175.47		175.50	0.000492	1.28	368.51	236.93	0.27
Main	6300	Future	222.34	172.62	175.53		175.56	0.000498	1.31	381.55	237.58	0.27
Main	6300	100 year	62.90	172.62	174.59		174.61	0.000495	0.94	164.30	224.89	0.25
Main	6300	50 year	54.70	172.62	174.51		174.53	0.000518	0.92	146.44	223.64	0.25
Main	6300	20 year	44.00	172.62	174.42		174.43	0.000506	0.87	125.89	221.02	0.25
Main	6300	10 year	36.10	172.62	174.26		174.28	0.000619	0.88	93.73	183.92	0.27
Main	6300	5 year	28.10	172.62	174.10		174.12	0.000837	0.92	64.32	169.98	0.30
Main	6300	2 year	16.90	172.62	173.79		173.82	0.001343	0.96	31.91	73.28	0.36
Main	6200	Existing	209.51	172.25	174.87	174.87	175.34	0.005332	4.25	120.32	117.99	0.89
Main	6200	Future	222.34	172.25	174.92	174.92	175.40	0.005284	4.30	126.81	120.11	0.89
Main	6200	100 year	62.90	172.25	174.17	174.17	174.47	0.003731	2.81	47.13	89.56	0.70
Main	6200	50 year	54.70	172.25	174.11	174.11	174.39	0.003572	2.68	41.38	86.26	0.68
Main	6200	20 year	44.00	172.25	173.88	173.81	174.28	0.005282	2.94	23.94	65.90	0.81
Main	6200	10 year	36.10	172.25	173.80	173.58	174.12	0.004592	2.62	19.50	41.42	0.74
Main	6200	5 year	28.10	172.25	173.71	173.46	173.95	0.003614	2.22	16.56	30.10	0.65
Main	6200	2 year	16.90	172.25	173.49		173.62	0.002721	1.67	11.77	17.29	0.55
Main	6100	Existing	209.51	172.08	174.35		174.59	0.003997	2.93	164.02	222.16	0.72
Main	6100	Future	222.34	172.08	174.45		174.66	0.003249	2.75	187.43	230.45	0.66
Main	6100	100 year	62.90	172.08	173.57	173.57	173.82	0.006426	2.49	42.70	100.58	0.83
Main	6100	50 year	54.70	172.08	173.51	173.51	173.76	0.006696	2.43	36.44	91.22	0.84
Main	6100	20 year	44.00	172.08	173.44	173.44	173.65	0.006155	2.23	30.25	79.87	0.79
Main	6100	10 year	36.10	172.08	173.34	173.34	173.57	0.006039	2.22	22.92	66.41	0.79
Main	6100	5 year	28.10	172.08	173.15	173.15	173.43	0.007738	2.37	13.32	40.62	0.88
Main	6100	2 year	16.90	172.08	172.85	172.85	173.12	0.011182	2.32	7.29	13.45	1.01
Main	5517	Existing	209.51	171.09	174.38	172.92	174.42	0.000477	1.48	304.03	242.48	0.27
Main	5517	Future	222.34	171.09	174.46	172.95	174.50	0.000481	1.51	315.28	243.51	0.28

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	5517	100 year	62.90	171.09	173.04	172.42	173.07	0.000645	1.15	124.57	214.34	0.29
Main	5517	50 year	54.70	171.09	172.83	172.38	172.86	0.000953	1.28	98.56	178.42	0.34
Main	5517	20 year	44.00	171.09	172.60	172.33	172.64	0.001492	1.42	72.02	112.54	0.42
Main	5517	10 year	36.10	171.09	172.44	172.28	172.50	0.002213	1.57	54.08	108.54	0.49
Main	5517	5 year	28.10	171.09	172.30	172.23	172.38	0.002976	1.66	39.90	105.39	0.56
Main	5517	2 year	16.90	171.09	172.16	172.13	172.24	0.003240	1.54	24.87	102.94	0.57
Main	5433	Existing	209.51	170.87	174.34	172.68	174.38	0.000434	1.47	284.88	367.41	0.26
Main	5433	Future	222.34	170.87	174.42	172.75	174.47	0.000443	1.51	293.62	368.45	0.27
Main	5433	100 year	62.90	170.87	173.01	172.17	173.02	0.000403	0.98	137.92	348.21	0.23
Main	5433	50 year	54.70	170.87	172.78	172.13	172.80	0.000571	1.07	112.82	162.24	0.27
Main	5433	20 year	44.00	170.87	172.52	172.07	172.55	0.000816	1.14	85.69	104.00	0.31
Main	5433	10 year	36.10	170.87	172.32	172.02	172.36	0.001221	1.25	65.12	101.12	0.37
Main	5433	5 year	28.10	170.87	172.14	171.97	172.18	0.001843	1.36	46.81	96.44	0.45
Main	5433	2 year	16.90	170.87	171.94	171.87	172.00	0.002553	1.37	27.94	95.22	0.50
Main	5345	Existing	209.51	170.63	174.32	172.42	174.35	0.000317	1.31	329.14	274.40	0.23
Main	5345	Future	222.34	170.63	174.40	172.46	174.43	0.000326	1.35	338.94	274.83	0.23
Main	5345	100 year	62.90	170.63	172.99	171.95	173.00	0.000224	0.79	169.57	115.58	0.18
Main	5345	50 year	54.70	170.63	172.75	171.91	172.76	0.000289	0.83	142.57	114.16	0.20
Main	5345	20 year	44.00	170.63	172.49	171.86	172.50	0.000385	0.86	112.76	112.57	0.22
Main	5345	10 year	36.10	170.63	172.27	171.81	172.29	0.000538	0.92	88.53	111.27	0.25
Main	5345	5 year	28.10	170.63	172.05	171.76	172.08	0.000831	1.01	64.36	109.94	0.31
Main	5345	2 year	16.90	170.63	171.73	171.67	171.79	0.002271	1.33	29.57	108.00	0.48
Main	5266	Existing	209.51	170.41	174.30	172.13	174.33	0.000249	1.21	346.34	186.85	0.20
Main	5266	Future	222.34	170.41	174.38	172.17	174.41	0.000258	1.25	355.50	187.15	0.21
Main	5266	100 year	62.90	170.41	172.98	171.66	172.98	0.000140	0.66	194.60	181.84	0.14
Main	5266	50 year	54.70	170.41	172.74	171.62	172.75	0.000169	0.68	168.01	180.67	0.15
Main	5266	20 year	44.00	170.41	172.47	171.57	172.48	0.000200	0.67	138.48	110.40	0.16
Main	5266	10 year	36.10	170.41	172.25	171.52	172.26	0.000244	0.68	114.30	108.94	0.18
Main	5266	5 year	28.10	170.41	172.03	171.47	172.04	0.000307	0.68	90.03	107.35	0.19
Main	5266	2 year	16.90	170.41	171.70	171.38	171.71	0.000477	0.70	55.07	104.96	0.23
Main	5167	Existing	209.51	170.13	174.28	171.93	174.31	0.000222	1.20	351.58	147.39	0.20
Main	5167	Future	222.34	170.13	174.36	171.97	174.39	0.000232	1.24	360.38	148.21	0.20
Main	5167	100 year	62.90	170.13	172.97	171.44	172.97	0.000101	0.61	208.75	136.97	0.12
Main	5167	50 year	54.70	170.13	172.73	171.40	172.73	0.000115	0.61	183.60	135.85	0.13
Main	5167	20 year	44.00	170.13	172.46	171.34	172.47	0.000125	0.58	155.69	134.61	0.13
Main	5167	10 year	36.10	170.13	172.24	171.29	172.24	0.000139	0.57	132.64	133.65	0.14

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	5167	5 year	28.10	170.13	172.01	171.24	172.02	0.000154	0.55	109.31	132.64	0.14
Main	5167	2 year	16.90	170.13	171.68	171.14	171.68	0.000173	0.49	75.30	131.20	0.14
Main	5105	Existing	209.51	169.80	174.27	171.88	174.30	0.000211	1.21	360.79	133.75	0.19
Main	5105	Future	222.34	169.80	174.35	171.92	174.38	0.000220	1.25	369.98	134.37	0.20
Main	5105	100 year	62.90	169.80	172.96	171.34	172.97	0.000095	0.63	211.10	121.62	0.12
Main	5105	50 year	54.70	169.80	172.72	171.29	172.73	0.000106	0.62	185.36	118.89	0.12
Main	5105	20 year	44.00	169.80	172.45	171.23	172.46	0.000112	0.59	157.32	115.85	0.13
Main	5105	10 year	36.10	169.80	172.23	171.17	172.24	0.000119	0.57	134.62	112.71	0.13
Main	5105	5 year	28.10	169.80	172.00	171.11	172.01	0.000123	0.54	112.11	109.70	0.13
Main	5105	2 year	16.90	169.80	171.67	170.95	171.68	0.000115	0.46	80.51	103.80	0.12
Main	5024	Existing	209.51	169.67	174.23		174.28	0.000334	1.50	305.16	112.92	0.24
Main	5024	Future	222.34	169.67	174.31		174.35	0.000347	1.55	313.71	113.63	0.24
Main	5024	100 year	62.90	169.67	172.94		172.96	0.000173	0.84	166.99	101.23	0.16
Main	5024	50 year	54.70	169.67	172.70		172.72	0.000205	0.86	142.70	99.06	0.17
Main	5024	20 year	44.00	169.67	172.43		172.45	0.000234	0.86	116.36	95.85	0.18
Main	5024	10 year	36.10	169.67	172.20		172.22	0.000272	0.86	95.09	92.61	0.19
Main	5024	5 year	28.10	169.67	171.97		172.00	0.000316	0.86	74.15	89.47	0.20
Main	5024	2 year	16.90	169.67	171.64		171.66	0.000390	0.83	44.21	87.38	0.22
Main	4869.277	Existing	209.51	170.10	174.16		174.23	0.000332	1.35	232.52	83.97	0.24
Main	4869.277	Future	222.34	170.10	174.24		174.31	0.000346	1.40	238.53	84.28	0.24
Main	4869.277	100 year	62.90	170.10	172.92		172.94	0.000166	0.70	131.14	78.59	0.15
Main	4869.277	50 year	54.70	170.10	172.67		172.69	0.000201	0.71	111.92	77.55	0.17
Main	4869.277	20 year	44.00	170.10	172.40		172.42	0.000237	0.70	90.92	76.33	0.18
Main	4869.277	10 year	36.10	170.10	172.17		172.19	0.000293	0.70	73.41	75.27	0.19
Main	4869.277	5 year	28.10	170.10	171.93		171.95	0.000378	0.70	55.66	74.24	0.21
Main	4869.277	2 year	16.90	170.10	171.57		171.60	0.000594	0.69	29.68	70.85	0.25
Main	4854.202	Existing	209.51	170.10	174.16	172.53	174.22	0.000300	1.32	261.57	104.41	0.23
Main	4854.202	Future	222.34	170.10	174.24	172.53	174.30	0.000312	1.37	269.09	105.04	0.23
Main	4854.202	100 year	62.90	170.10	172.91	171.79	172.93	0.000210	0.82	119.56	90.47	0.18
Main	4854.202	50 year	54.70	170.10	172.40	171.66	172.66	0.001814	2.27	24.11	80.79	0.51
Main	4854.202	20 year	44.00	170.10	172.18	171.49	172.39	0.001723	2.05	21.49	78.06	0.49
Main	4854.202	10 year	36.10	170.10	171.98	171.35	172.16	0.001698	1.88	19.16	76.27	0.47
Main	4854.202	5 year	28.10	170.10	171.79	171.20	171.93	0.001581	1.67	16.85	71.31	0.45
Main	4854.202	2 year	16.90	170.10	171.50	170.96	171.58	0.001216	1.26	13.44	60.37	0.38
Main	4844.123		Bridge									

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	4834.085	Existing	209.51	170.06	173.21	172.54	173.41	0.001568	2.40	141.18	91.72	0.49
Main	4834.085	Future	222.34	170.06	173.29	172.59	173.50	0.001553	2.44	147.59	92.15	0.49
Main	4834.085	100 year	62.90	170.06	171.97	171.97	172.67	0.007931	3.73	16.97	79.95	1.00
Main	4834.085	50 year	54.70	170.06	171.84	171.84	172.48	0.008165	3.56	15.46	72.28	1.00
Main	4834.085	20 year	44.00	170.06	171.67	171.67	172.22	0.008558	3.31	13.36	50.46	1.00
Main	4834.085	10 year	36.10	170.06	171.58	171.53	172.02	0.007442	2.93	12.36	39.37	0.92
Main	4834.085	5 year	28.10	170.06	171.53	171.38	171.82	0.005476	2.42	11.65	30.47	0.78
Main	4834.085	2 year	16.90	170.06	171.36	171.09	171.51	0.003662	1.76	9.60	20.05	0.62
Main	4818.028	Existing	209.51	170.06	173.22		173.36	0.001202	2.17	172.79	91.62	0.43
Main	4818.028	Future	222.34	170.06	173.30		173.44	0.001198	2.21	180.08	92.03	0.43
Main	4818.028	100 year	62.90	170.06	172.05		172.14	0.001405	1.57	69.48	84.57	0.42
Main	4818.028	50 year	54.70	170.06	171.95		172.04	0.001445	1.53	61.64	84.01	0.42
Main	4818.028	20 year	44.00	170.06	171.82		171.91	0.001511	1.46	50.64	83.22	0.42
Main	4818.028	10 year	36.10	170.06	171.71		171.80	0.001578	1.40	41.70	82.57	0.43
Main	4818.028	5 year	28.10	170.06	171.59		171.67	0.001686	1.33	31.42	81.90	0.43
Main	4818.028	2 year	16.90	170.06	171.36		171.43	0.001793	1.16	15.72	50.01	0.43
Main	4699.593	Existing	209.51	170.00	172.63		173.08	0.004060	3.53	97.63	68.66	0.76
Main	4699.593	Future	222.34	170.00	172.69		173.17	0.004151	3.63	101.55	70.25	0.77
Main	4699.593	100 year	62.90	170.00	171.74		171.90	0.002632	2.01	45.80	50.04	0.56
Main	4699.593	50 year	54.70	170.00	171.66		171.81	0.002539	1.89	41.93	49.38	0.55
Main	4699.593	20 year	44.00	170.00	171.55		171.68	0.002373	1.72	36.62	48.47	0.52
Main	4699.593	10 year	36.10	170.00	171.46		171.57	0.002237	1.58	32.28	47.71	0.50
Main	4699.593	5 year	28.10	170.00	171.36		171.45	0.002038	1.42	27.30	46.58	0.47
Main	4699.593	2 year	16.90	170.00	171.17		171.23	0.001571	1.13	19.14	37.23	0.40
Main	4600	Existing	209.51	170.01	172.55		172.76	0.002091	2.56	153.89	117.82	0.55
Main	4600	Future	222.34	170.01	172.62		172.84	0.002046	2.59	162.60	120.19	0.55
Main	4600	100 year	62.90	170.01	171.49		171.65	0.002927	1.94	50.50	73.97	0.59
Main	4600	50 year	54.70	170.01	171.41		171.55	0.003030	1.88	44.37	69.99	0.59
Main	4600	20 year	44.00	170.01	171.29		171.42	0.003223	1.78	36.13	64.41	0.59
Main	4600	10 year	36.10	170.01	171.18		171.31	0.003439	1.70	29.82	59.55	0.60
Main	4600	5 year	28.10	170.01	171.07		171.19	0.003830	1.62	23.11	54.71	0.62
Main	4600	2 year	16.90	170.01	170.86		170.97	0.005009	1.50	12.99	40.98	0.67
Main	4400	Existing	209.51	169.49	171.82		172.24	0.004045	3.28	90.34	66.42	0.75
Main	4400	Future	222.34	169.49	171.87		172.32	0.004184	3.39	93.49	68.44	0.77
Main	4400	100 year	62.90	169.49	171.14		171.24	0.001585	1.54	55.10	48.69	0.44

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	4400	50 year	54.70	169.49	171.07		171.15	0.001456	1.42	51.75	48.22	0.42
Main	4400	20 year	44.00	169.49	170.97		171.04	0.001272	1.25	46.98	47.54	0.38
Main	4400	10 year	36.10	169.49	170.89		170.94	0.001115	1.11	43.18	46.99	0.35
Main	4400	5 year	28.10	169.49	170.80		170.84	0.000949	0.96	38.75	46.34	0.32
Main	4400	2 year	16.90	169.49	170.61		170.63	0.000757	0.74	30.16	45.06	0.28
Main	4282.520	Existing	209.51	169.39	171.46		171.79	0.005514	3.53	116.05	106.87	0.85
Main	4282.520	Future	222.34	169.39	171.55		171.87	0.004917	3.45	126.44	110.04	0.81
Main	4282.520	100 year	62.90	169.39	170.70	170.70	170.94	0.006903	2.68	44.35	84.24	0.87
Main	4282.520	50 year	54.70	169.39	170.65	170.65	170.88	0.006563	2.54	40.61	83.93	0.84
Main	4282.520	20 year	44.00	169.39	170.59	170.59	170.79	0.006125	2.33	35.09	83.46	0.80
Main	4282.520	10 year	36.10	169.39	170.53	170.53	170.71	0.005974	2.20	30.01	83.01	0.78
Main	4282.520	5 year	28.10	169.39	170.42	170.42	170.61	0.006783	2.15	21.55	72.76	0.82
Main	4282.520	2 year	16.90	169.39	170.25	170.25	170.43	0.007535	1.94	11.62	46.78	0.83
Main	4229.059	Existing	209.51	169.26	171.58		171.64	0.001026	1.77	261.79	190.85	0.39
Main	4229.059	Future	222.34	169.26	171.66		171.73	0.000969	1.76	278.79	194.74	0.38
Main	4229.059	100 year	62.90	169.26	170.54		170.61	0.002101	1.62	85.22	152.38	0.49
Main	4229.059	50 year	54.70	169.26	170.48		170.54	0.002150	1.58	75.81	150.14	0.50
Main	4229.059	20 year	44.00	169.26	170.39		170.46	0.002142	1.49	63.74	147.20	0.49
Main	4229.059	10 year	36.10	169.26	170.33		170.39	0.002057	1.40	54.80	144.99	0.47
Main	4229.059	5 year	28.10	169.26	170.26		170.31	0.001907	1.27	44.99	125.94	0.45
Main	4229.059	2 year	16.90	169.26	170.13		170.16	0.001598	1.03	30.15	90.98	0.40
Main	4151.902	Existing	209.51	169.26	171.57		171.59	0.000436	1.14	384.83	262.33	0.25
Main	4151.902	Future	222.34	169.26	171.66		171.68	0.000409	1.13	408.51	263.41	0.24
Main	4151.902	100 year	62.90	169.26	170.44		170.49	0.001498	1.27	101.36	215.39	0.41
Main	4151.902	50 year	54.70	169.26	170.37		170.42	0.001705	1.28	85.41	198.19	0.43
Main	4151.902	20 year	44.00	169.26	170.26		170.32	0.002053	1.30	66.10	183.32	0.46
Main	4151.902	10 year	36.10	169.26	170.18		170.25	0.002339	1.29	51.98	172.75	0.49
Main	4151.902	5 year	28.10	169.26	170.10		170.17	0.002535	1.24	38.33	154.36	0.50
Main	4151.902	2 year	16.90	169.26	169.97		170.02	0.002664	1.08	20.87	99.29	0.49
Main	4057.514	Existing	209.51	168.90	171.54		171.56	0.000331	1.12	434.84	247.61	0.23
Main	4057.514	Future	222.34	168.90	171.63		171.65	0.000318	1.12	457.46	248.13	0.22
Main	4057.514	100 year	62.90	168.90	170.38		170.41	0.000702	1.07	153.91	230.97	0.30
Main	4057.514	50 year	54.70	168.90	170.30		170.32	0.000777	1.08	134.52	228.02	0.31
Main	4057.514	20 year	44.00	168.90	170.18		170.21	0.000926	1.10	107.63	223.87	0.33
Main	4057.514	10 year	36.10	168.90	170.09		170.11	0.001063	1.12	86.97	213.96	0.35
Main	4057.514	5 year	28.10	168.90	169.98		170.01	0.001312	1.15	64.28	203.90	0.38

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	4057.514	2 year	16.90	168.90	169.79		169.83	0.001789	1.16	32.90	130.19	0.43
Main	4000	Existing	209.51	168.68	171.49		171.53	0.000527	1.44	315.54	163.55	0.29
Main	4000	Future	222.34	168.68	171.58		171.62	0.000519	1.46	330.55	166.61	0.28
Main	4000	100 year	62.90	168.68	170.34		170.36	0.000644	1.07	135.00	149.77	0.29
Main	4000	50 year	54.70	168.68	170.25		170.27	0.000655	1.04	122.41	148.88	0.29
Main	4000	20 year	44.00	168.68	170.13		170.15	0.000677	0.99	104.64	147.61	0.29
Main	4000	10 year	36.10	168.68	170.04		170.06	0.000694	0.95	90.72	146.61	0.29
Main	4000	5 year	28.10	168.68	169.93		169.95	0.000728	0.91	74.92	145.47	0.29
Main	4000	2 year	16.90	168.68	169.74		169.76	0.000790	0.83	48.01	134.25	0.29
Main	3900	Existing	209.51	168.69	171.28		171.42	0.001244	2.12	179.91	112.06	0.43
Main	3900	Future	222.34	168.69	171.38		171.52	0.001198	2.14	190.49	113.63	0.43
Main	3900	100 year	62.90	168.69	170.13		170.23	0.001698	1.62	62.43	88.09	0.46
Main	3900	50 year	54.70	168.69	170.06		170.15	0.001669	1.54	55.91	80.16	0.45
Main	3900	20 year	44.00	168.69	169.95		170.03	0.001586	1.42	48.16	70.00	0.43
Main	3900	10 year	36.10	168.69	169.87		169.94	0.001480	1.30	42.44	69.56	0.41
Main	3900	5 year	28.10	168.69	169.77		169.83	0.001354	1.17	35.93	69.05	0.39
Main	3900	2 year	16.90	168.69	169.61		169.65	0.001112	0.93	24.77	68.17	0.34
Main	3800	Existing	209.51	168.69	171.26		171.34	0.000740	1.55	262.96	158.53	0.33
Main	3800	Future	222.34	168.69	171.35		171.43	0.000706	1.56	278.42	159.11	0.32
Main	3800	100 year	62.90	168.69	170.00		170.08	0.001756	1.39	75.34	130.40	0.44
Main	3800	50 year	54.70	168.69	169.91		169.99	0.001983	1.38	63.22	124.87	0.46
Main	3800	20 year	44.00	168.69	169.77		169.86	0.002386	1.37	47.43	112.92	0.50
Main	3800	10 year	36.10	168.69	169.67		169.75	0.002845	1.36	35.88	103.07	0.53
Main	3800	5 year	28.10	168.69	169.53		169.63	0.004034	1.40	22.72	76.82	0.61
Main	3800	2 year	16.90	168.69	169.29		169.41	0.009221	1.50	11.23	34.70	0.84
Main	3691.523	Existing	209.51	168.17	171.22		171.29	0.000486	1.44	310.28	183.42	0.28
Main	3691.523	Future	222.34	168.17	171.32		171.39	0.000471	1.45	328.59	185.02	0.27
Main	3691.523	100 year	62.90	168.17	169.92		169.97	0.000698	1.13	92.20	131.33	0.30
Main	3691.523	50 year	54.70	168.17	169.82		169.87	0.000706	1.08	79.71	122.48	0.30
Main	3691.523	20 year	44.00	168.17	169.68		169.73	0.000711	1.01	63.26	113.63	0.29
Main	3691.523	10 year	36.10	168.17	169.57		169.61	0.000708	0.94	50.73	107.93	0.29
Main	3691.523	5 year	28.10	168.17	169.41		169.45	0.000775	0.89	34.69	88.58	0.29
Main	3691.523	2 year	16.90	168.17	169.12		169.15	0.000923	0.77	22.03	35.01	0.30
Main	3600	Existing	209.51	168.17	171.22		171.25	0.000477	1.51	390.54	177.12	0.28
Main	3600	Future	222.34	168.17	171.32		171.35	0.000468	1.53	408.25	177.67	0.28

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	3600	100 year	62.90	168.17	169.90		169.92	0.000630	1.18	162.29	168.33	0.29
Main	3600	50 year	54.70	168.17	169.79		169.82	0.000664	1.16	144.88	167.28	0.29
Main	3600	20 year	44.00	168.17	169.64		169.67	0.000735	1.14	120.17	165.76	0.30
Main	3600	10 year	36.10	168.17	169.52		169.55	0.000812	1.13	100.13	162.04	0.32
Main	3600	5 year	28.10	168.17	169.35		169.38	0.000994	1.14	73.98	138.81	0.34
Main	3600	2 year	16.90	168.17	169.05		169.07	0.001143	0.99	42.31	82.30	0.35
Main	3500	Existing	209.51	167.87	171.13		171.21	0.000607	1.68	284.08	130.37	0.31
Main	3500	Future	222.34	167.87	171.23		171.31	0.000598	1.71	297.07	130.93	0.31
Main	3500	100 year	62.90	167.87	169.82		169.87	0.000658	1.19	118.33	122.60	0.30
Main	3500	50 year	54.70	167.87	169.72		169.76	0.000671	1.15	105.59	121.85	0.29
Main	3500	20 year	44.00	167.87	169.57		169.61	0.000700	1.10	87.32	120.76	0.30
Main	3500	10 year	36.10	167.87	169.44		169.48	0.000737	1.06	72.27	119.85	0.30
Main	3500	5 year	28.10	167.87	169.24		169.29	0.001016	1.11	48.56	112.43	0.34
Main	3500	2 year	16.90	167.87	168.89		168.95	0.001448	1.13	18.88	52.94	0.39
Main	3400	Existing	209.51	167.36	170.66		171.06	0.002915	3.65	133.56	78.65	0.68
Main	3400	Future	222.34	167.36	170.77		171.17	0.002803	3.67	142.07	79.97	0.67
Main	3400	100 year	62.90	167.36	169.30	169.30	169.70	0.004543	3.02	38.83	61.33	0.76
Main	3400	50 year	54.70	167.36	169.21	169.21	169.59	0.004527	2.90	33.35	60.29	0.76
Main	3400	20 year	44.00	167.36	169.07	169.07	169.43	0.004695	2.76	24.72	58.62	0.76
Main	3400	10 year	36.10	167.36	168.75	168.75	169.26	0.008863	3.17	11.77	13.04	0.99
Main	3400	5 year	28.10	167.36	168.60	168.59	169.02	0.009045	2.89	9.89	12.24	0.98
Main	3400	2 year	16.90	167.36	168.41		168.66	0.007145	2.20	7.73	11.25	0.84
Main	3300	Existing	209.51	166.83	170.61		170.85	0.001369	2.70	152.89	61.20	0.47
Main	3300	Future	222.34	166.83	170.71		170.96	0.001374	2.76	159.11	61.52	0.48
Main	3300	100 year	62.90	166.83	169.00		169.15	0.001785	1.98	58.21	56.12	0.48
Main	3300	50 year	54.70	166.83	168.89		169.03	0.001794	1.90	52.00	55.75	0.48
Main	3300	20 year	44.00	166.83	168.68		168.83	0.002092	1.87	40.65	55.11	0.51
Main	3300	10 year	36.10	166.83	168.53		168.68	0.002285	1.81	32.58	54.65	0.52
Main	3300	5 year	28.10	166.83	168.38		168.52	0.002425	1.71	24.34	54.19	0.52
Main	3300	2 year	16.90	166.83	168.11		168.22	0.002505	1.47	11.70	21.62	0.51
Main	3200	Existing	209.51	166.11	170.40		170.70	0.001596	2.85	127.33	50.07	0.50
Main	3200	Future	222.34	166.11	170.49		170.81	0.001621	2.93	132.04	50.42	0.51
Main	3200	100 year	62.90	166.11	168.83		168.98	0.001646	1.88	53.64	44.07	0.46
Main	3200	50 year	54.70	166.11	168.73		168.86	0.001586	1.77	49.08	43.67	0.45
Main	3200	20 year	44.00	166.11	168.50		168.63	0.001881	1.73	39.05	42.78	0.47
Main	3200	10 year	36.10	166.11	168.33		168.46	0.002113	1.69	31.92	42.14	0.49

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	3200	5 year	28.10	166.11	168.16		168.28	0.002356	1.61	24.72	41.48	0.50
Main	3200	2 year	16.90	166.11	167.83		167.95	0.003073	1.54	12.04	27.26	0.55
Main	3100	Existing	209.51	166.09	169.50	169.50	170.38	0.005077	4.89	86.09	50.93	0.90
Main	3100	Future	222.34	166.09	169.58	169.58	170.49	0.005086	4.99	90.32	51.33	0.90
Main	3100	100 year	62.90	166.09	168.39		168.74	0.003045	2.81	35.92	36.11	0.64
Main	3100	50 year	54.70	166.09	168.40		168.66	0.002282	2.43	36.08	36.19	0.56
Main	3100	20 year	44.00	166.09	168.15		168.40	0.002548	2.35	27.59	31.28	0.58
Main	3100	10 year	36.10	166.09	168.01		168.23	0.002360	2.14	23.57	28.52	0.55
Main	3100	5 year	28.10	166.09	167.91		168.07	0.001839	1.80	20.82	26.54	0.48
Main	3100	2 year	16.90	166.09	167.64		167.74	0.001412	1.38	14.41	20.64	0.40
Main	3000	Existing	209.51	166.15	169.60		169.90	0.001768	2.65	113.98	51.48	0.52
Main	3000	Future	222.34	166.15	169.66		169.98	0.001830	2.74	117.27	51.63	0.53
Main	3000	100 year	62.90	166.15	168.33		168.46	0.001665	1.66	50.81	48.36	0.45
Main	3000	50 year	54.70	166.15	168.36		168.45	0.001168	1.41	52.19	48.43	0.38
Main	3000	20 year	44.00	166.15	168.00		168.13	0.002254	1.60	34.91	47.55	0.50
Main	3000	10 year	36.10	166.15	167.74		167.90	0.004313	1.85	22.66	41.17	0.67
Main	3000	5 year	28.10	166.15	167.46	167.43	167.71	0.009198	2.23	13.31	26.83	0.93
Main	3000	2 year	16.90	166.15	167.29	167.19	167.46	0.007172	1.83	9.37	20.00	0.80
Main	2900	Existing	233.18	165.92	169.51		169.75	0.001080	2.35	149.18	66.55	0.42
Main	2900	Future	246.58	165.92	169.57		169.83	0.001124	2.43	153.31	67.02	0.43
Main	2900	100 year	66.60	165.92	168.29		168.36	0.000525	1.19	74.59	54.67	0.27
Main	2900	50 year	58.10	165.92	168.33		168.38	0.000370	1.01	76.87	55.29	0.23
Main	2900	20 year	47.00	165.92	167.96		168.01	0.000512	1.03	57.29	49.76	0.26
Main	2900	10 year	38.60	165.92	167.68		167.74	0.000678	1.05	44.00	44.97	0.29
Main	2900	5 year	30.10	165.92	167.36		167.42	0.001086	1.10	30.44	38.96	0.35
Main	2900	2 year	18.20	165.92	166.89		166.97	0.003287	1.27	14.40	28.57	0.55
Main	2800	Existing	233.18	165.47	169.46		169.64	0.000821	2.17	185.72	78.64	0.37
Main	2800	Future	246.58	165.47	169.52		169.71	0.000858	2.25	190.47	78.89	0.38
Main	2800	100 year	66.60	165.47	168.26		168.31	0.000364	1.09	94.25	74.16	0.23
Main	2800	50 year	58.10	165.47	168.31		168.35	0.000252	0.92	98.15	74.34	0.19
Main	2800	20 year	47.00	165.47	167.93		167.97	0.000344	0.96	69.77	72.97	0.22
Main	2800	10 year	38.60	165.47	167.64		167.68	0.000423	0.95	51.17	55.96	0.24
Main	2800	5 year	30.10	165.47	167.29		167.34	0.000594	0.97	34.56	40.63	0.27
Main	2800	2 year	18.20	165.47	166.69		166.75	0.001522	1.08	16.87	21.95	0.39
Main	2700	Existing	233.18	165.01	169.37		169.56	0.001008	2.28	188.55	86.63	0.40

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	2700	Future	246.58	165.01	169.42		169.63	0.001054	2.36	193.45	87.08	0.41
Main	2700	100 year	66.60	165.01	168.21		168.27	0.000468	1.19	92.71	79.47	0.25
Main	2700	50 year	58.10	165.01	168.28		168.32	0.000315	0.99	98.21	79.89	0.21
Main	2700	20 year	47.00	165.01	167.88		167.93	0.000444	1.06	66.91	74.11	0.24
Main	2700	10 year	38.60	165.01	167.57		167.63	0.000562	1.08	46.34	53.20	0.27
Main	2700	5 year	30.10	165.01	167.20		167.27	0.000805	1.11	30.33	36.69	0.31
Main	2700	2 year	18.20	165.01	166.42		166.54	0.003034	1.52	11.98	15.42	0.55
Main	2582.754	Existing	233.18	164.34	169.36		169.46	0.000395	1.71	287.51	102.04	0.26
Main	2582.754	Future	246.58	164.34	169.42		169.52	0.000419	1.78	293.25	102.44	0.27
Main	2582.754	100 year	66.60	164.34	168.21		168.23	0.000120	0.77	174.61	94.67	0.14
Main	2582.754	50 year	58.10	164.34	168.28		168.30	0.000084	0.65	181.05	95.09	0.12
Main	2582.754	20 year	47.00	164.34	167.88		167.90	0.000098	0.64	143.60	92.56	0.12
Main	2582.754	10 year	38.60	164.34	167.58		167.59	0.000109	0.63	115.83	89.51	0.13
Main	2582.754	5 year	30.10	164.34	167.20		167.22	0.000136	0.63	83.42	83.96	0.14
Main	2582.754	2 year	18.20	164.34	166.39		166.42	0.000355	0.73	27.06	36.52	0.21
Main	2554.451	Existing	233.18	164.16	169.26	168.22	169.43	0.000790	2.56	264.89	129.99	0.38
Main	2554.451	Future	246.58	164.16	169.31	168.23	169.50	0.000840	2.66	271.34	132.11	0.39
Main	2554.451	100 year	66.60	164.16	168.15	167.09	168.22	0.000422	1.56	103.74	78.35	0.26
Main	2554.451	50 year	58.10	164.16	168.24	166.84	168.29	0.000285	1.30	109.02	79.27	0.22
Main	2554.451	20 year	47.00	164.16	167.83	166.51	167.89	0.000333	1.30	85.50	75.87	0.23
Main	2554.451	10 year	38.60	164.16	167.52	166.23	167.58	0.000373	1.29	68.14	73.50	0.24
Main	2554.451	5 year	30.10	164.16	166.83	165.93	167.18	0.001783	2.62	11.50	64.33	0.52
Main	2554.451	2 year	18.20	164.16	166.13	165.46	166.38	0.001875	2.17	8.38	26.83	0.51
Main	2524.843		Culvert									
Main	2500.957	Existing	233.18	164.23	167.07	167.07	167.53	0.004618	4.41	170.40	154.51	0.85
Main	2500.957	Future	246.58	164.23	167.11	167.11	167.58	0.004775	4.52	175.47	155.25	0.86
Main	2500.957	100 year	66.60	164.23	167.06	167.06	167.10	0.000388	1.27	168.53	154.23	0.25
Main	2500.957	50 year	58.10	164.23	166.80	166.80	168.09	0.006469	5.03	11.56	147.97	1.00
Main	2500.957	20 year	47.00	164.23	166.45	166.45	167.58	0.006844	4.70	10.01	104.33	1.01
Main	2500.957	10 year	38.60	164.23	166.19	166.19	167.17	0.007026	4.38	8.82	90.61	1.00
Main	2500.957	5 year	30.10	164.23	165.89	165.89	166.72	0.007465	4.03	7.46	78.38	1.00
Main	2500.957	2 year	18.20	164.23	165.42	165.42	166.01	0.008300	3.41	5.34	42.84	1.00
Main	2476.151	Existing	233.18	164.13	166.50		166.63	0.001886	2.40	241.25	170.37	0.52
Main	2476.151	Future	246.58	164.13	166.57		166.71	0.001830	2.42	253.56	171.08	0.52
Main	2476.151	100 year	66.60	164.13	165.25	165.19	165.48	0.006694	2.54	57.16	114.60	0.85

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	2476.151	50 year	58.10	164.13	165.17	165.14	165.39	0.007649	2.54	47.68	102.52	0.90
Main	2476.151	20 year	47.00	164.13	165.05	165.05	165.29	0.009124	2.51	36.72	89.01	0.95
Main	2476.151	10 year	38.60	164.13	165.00	165.00	165.20	0.008797	2.33	31.69	85.79	0.92
Main	2476.151	5 year	30.10	164.13	164.92	164.92	165.10	0.008959	2.16	25.36	78.41	0.91
Main	2476.151	2 year	18.20	164.13	164.78	164.76	164.94	0.009150	1.89	15.45	63.32	0.89
Main	2315.475	Existing	233.18	162.90	165.96		166.29	0.002356	2.84	133.03	86.46	0.58
Main	2315.475	Future	246.58	162.90	166.02		166.36	0.002392	2.90	138.27	87.43	0.59
Main	2315.475	100 year	66.60	162.90	164.73		164.90	0.002186	1.88	42.87	50.45	0.51
Main	2315.475	50 year	58.10	162.90	164.61		164.77	0.002264	1.81	37.26	44.99	0.51
Main	2315.475	20 year	47.00	162.90	164.44		164.59	0.002435	1.72	30.12	38.75	0.52
Main	2315.475	10 year	38.60	162.90	164.30		164.44	0.002586	1.63	25.06	34.35	0.53
Main	2315.475	5 year	30.10	162.90	164.12		164.25	0.003067	1.56	19.64	27.20	0.56
Main	2315.475	2 year	18.20	162.90	163.85		163.95	0.004329	1.45	12.59	23.02	0.62
Main	2261.837	Existing	233.18	162.33	165.45	165.45	166.09	0.004848	4.14	116.85	99.94	0.84
Main	2261.837	Future	246.58	162.33	165.51	165.51	166.16	0.004917	4.23	122.07	100.33	0.85
Main	2261.837	100 year	66.60	162.33	164.16	164.16	164.67	0.007254	3.25	25.96	33.59	0.92
Main	2261.837	50 year	58.10	162.33	164.05	164.05	164.54	0.007632	3.16	22.28	30.36	0.94
Main	2261.837	20 year	47.00	162.33	163.90	163.90	164.34	0.007962	2.99	17.97	26.57	0.94
Main	2261.837	10 year	38.60	162.33	163.75	163.75	164.17	0.008838	2.89	14.39	22.58	0.97
Main	2261.837	5 year	30.10	162.33	163.66	163.60	163.98	0.007602	2.52	12.44	19.89	0.89
Main	2261.837	2 year	18.20	162.33	163.49	163.35	163.68	0.005759	1.92	9.50	14.95	0.75
Main	2200	Existing	233.18	162.13	165.16		165.57	0.002669	3.20	131.82	86.35	0.63
Main	2200	Future	246.58	162.13	165.25		165.66	0.002593	3.22	139.51	86.88	0.63
Main	2200	100 year	66.60	162.13	163.70	163.57	164.03	0.005504	2.63	30.79	39.47	0.79
Main	2200	50 year	58.10	162.13	163.59	163.49	163.91	0.005882	2.55	26.86	36.86	0.81
Main	2200	20 year	47.00	162.13	163.44	163.37	163.74	0.006638	2.45	21.67	33.96	0.83
Main	2200	10 year	38.60	162.13	163.32	163.27	163.60	0.007668	2.39	17.43	32.63	0.88
Main	2200	5 year	30.10	162.13	163.17	163.15	163.45	0.009381	2.31	13.12	23.40	0.94
Main	2200	2 year	18.20	162.13	162.94	162.94	163.18	0.011636	2.19	8.32	17.21	1.00
Main	2100	Existing	233.18	161.48	164.85	164.24	165.32	0.002695	3.49	125.71	72.21	0.64
Main	2100	Future	246.58	161.48	164.92	164.32	165.41	0.002765	3.59	130.55	73.67	0.65
Main	2100	100 year	66.60	161.48	163.46		163.67	0.002276	2.14	46.41	43.91	0.53
Main	2100	50 year	58.10	161.48	163.36		163.54	0.002235	2.02	41.75	42.15	0.52
Main	2100	20 year	47.00	161.48	163.20		163.36	0.002132	1.86	35.56	39.56	0.50
Main	2100	10 year	38.60	161.48	163.07		163.21	0.002035	1.71	30.62	36.97	0.48
Main	2100	5 year	30.10	161.48	162.93		163.04	0.001890	1.53	25.54	34.10	0.46

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	2100	2 year	18.20	161.48	162.68		162.75	0.001678	1.23	17.54	28.75	0.42
Main	2000	Existing	233.18	161.34	164.10	164.10	164.90	0.005834	4.15	78.12	73.42	0.90
Main	2000	Future	246.58	161.34	164.18	164.18	164.99	0.005638	4.19	84.55	79.02	0.89
Main	2000	100 year	66.60	161.34	162.77	162.77	163.24	0.008746	3.06	23.50	27.56	0.98
Main	2000	50 year	58.10	161.34	162.69	162.69	163.12	0.008922	2.93	21.20	27.14	0.97
Main	2000	20 year	47.00	161.34	162.56	162.56	162.95	0.009513	2.76	17.84	26.51	0.98
Main	2000	10 year	38.60	161.34	162.46	162.46	162.80	0.009858	2.59	15.31	25.79	0.98
Main	2000	5 year	30.10	161.34	162.34	162.34	162.65	0.011060	2.43	12.37	21.80	1.01
Main	2000	2 year	18.20	161.34	162.14	162.14	162.38	0.011960	2.17	8.39	17.92	1.01
Main	1900.000	Existing	233.18	160.30	163.91		164.13	0.001360	2.42	154.66	68.29	0.45
Main	1900.000	Future	246.58	160.30	164.02		164.26	0.001359	2.48	162.31	71.53	0.45
Main	1900.000	100 year	66.60	160.30	162.13		162.28	0.001982	1.87	51.29	52.83	0.49
Main	1900.000	50 year	58.10	160.30	162.00		162.15	0.002086	1.81	44.83	50.54	0.50
Main	1900.000	20 year	47.00	160.30	161.83		161.97	0.002238	1.73	36.44	47.50	0.51
Main	1900.000	10 year	38.60	160.30	161.69		161.82	0.002379	1.65	30.01	45.02	0.51
Main	1900.000	5 year	30.10	160.30	161.54		161.65	0.002545	1.54	23.42	39.81	0.52
Main	1900.000	2 year	18.20	160.30	161.27		161.36	0.003105	1.36	14.25	29.31	0.54
Main	1800	Existing	233.18	159.96	162.72	162.72	163.79	0.007359	5.56	79.28	38.75	1.08
Main	1800	Future	246.58	159.96	162.81	162.81	163.91	0.007296	5.65	82.73	39.08	1.08
Main	1800	100 year	66.60	159.96	161.69		162.00	0.003768	2.88	41.10	34.84	0.71
Main	1800	50 year	58.10	159.96	161.56		161.86	0.003866	2.78	36.83	34.37	0.71
Main	1800	20 year	47.00	159.96	161.40		161.67	0.003917	2.60	31.28	33.75	0.70
Main	1800	10 year	38.60	159.96	161.29		161.52	0.003662	2.38	27.61	33.35	0.67
Main	1800	5 year	30.10	159.96	161.15		161.35	0.003504	2.16	23.09	32.86	0.64
Main	1800	2 year	18.20	159.96	160.90		161.04	0.003266	1.77	15.53	27.49	0.60
Main	1700	Existing	233.18	159.49	161.99	161.94	162.49	0.005852	4.48	147.35	121.03	0.93
Main	1700	Future	246.58	159.49	162.15		162.57	0.004750	4.21	166.56	124.22	0.85
Main	1700	100 year	66.60	159.49	160.95	160.92	161.45	0.008323	3.64	36.42	57.48	1.01
Main	1700	50 year	58.10	159.49	160.90	160.90	161.33	0.007505	3.36	33.74	48.02	0.95
Main	1700	20 year	47.00	159.49	160.82	160.82	161.17	0.006445	2.99	30.03	46.74	0.87
Main	1700	10 year	38.60	159.49	160.72	160.72	161.04	0.006453	2.81	25.23	45.01	0.86
Main	1700	5 year	30.10	159.49	160.61	160.61	160.89	0.006185	2.57	20.43	43.32	0.83
Main	1700	2 year	18.20	159.49	160.42	160.35	160.62	0.005504	2.10	12.80	34.94	0.75
Main	1600	Existing	233.18	158.87	161.56		162.03	0.004562	3.84	134.93	97.14	0.81
Main	1600	Future	246.58	158.87	161.46	161.46	162.07	0.006205	4.35	125.44	96.63	0.94

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	1600	100 year	66.60	158.87	160.55	160.41	160.82	0.004578	2.61	45.43	62.21	0.74
Main	1600	50 year	58.10	158.87	160.45	160.33	160.72	0.004785	2.53	39.54	59.16	0.74
Main	1600	20 year	47.00	158.87	160.34	160.22	160.57	0.004730	2.35	32.93	54.73	0.73
Main	1600	10 year	38.60	158.87	160.23	160.12	160.45	0.004795	2.21	27.43	50.96	0.72
Main	1600	5 year	30.10	158.87	160.11		160.30	0.004883	2.04	21.64	45.75	0.71
Main	1600	2 year	18.20	158.87	159.87	159.78	160.04	0.006218	1.87	11.82	33.79	0.76
Main	1507.903	Existing	233.18	158.21	161.46		161.67	0.002057	3.08	215.95	132.51	0.57
Main	1507.903	Future	246.58	158.21	161.22		161.55	0.003437	3.77	184.83	126.14	0.72
Main	1507.903	100 year	66.60	158.21	159.92	159.92	160.32	0.005955	3.25	45.69	78.18	0.86
Main	1507.903	50 year	58.10	158.21	159.85	159.85	160.22	0.005711	3.08	40.24	71.23	0.83
Main	1507.903	20 year	47.00	158.21	159.71	159.71	160.07	0.005937	2.93	31.26	60.45	0.83
Main	1507.903	10 year	38.60	158.21	159.60	159.60	159.94	0.006056	2.78	24.88	53.00	0.83
Main	1507.903	5 year	30.10	158.21	159.46	159.46	159.77	0.006496	2.63	18.12	40.22	0.84
Main	1507.903	2 year	18.20	158.21	159.26	159.20	159.49	0.005683	2.13	11.10	32.62	0.76
Main	1400	Existing	233.18	157.33	159.86	159.86	161.10	0.012765	6.27	83.73	80.19	1.35
Main	1400	Future	246.58	157.33	160.47	160.47	161.07	0.005074	4.66	143.30	105.24	0.89
Main	1400	100 year	66.60	157.33	158.94	158.94	159.40	0.008617	3.58	34.40	42.06	1.02
Main	1400	50 year	58.10	157.33	158.85	158.85	159.28	0.008717	3.43	30.67	40.34	1.01
Main	1400	20 year	47.00	157.33	158.71	158.71	159.10	0.009187	3.24	25.27	37.74	1.01
Main	1400	10 year	38.60	157.33	158.60	158.60	158.96	0.009500	3.06	21.21	34.95	1.01
Main	1400	5 year	30.10	157.33	158.47	158.47	158.79	0.010040	2.85	16.97	31.11	1.01
Main	1400	2 year	18.20	157.33	158.19	158.14	158.48	0.015739	2.68	9.77	19.84	1.18
Main	1300.037	Existing	233.18	156.34	159.73		159.88	0.001328	2.46	249.92	145.47	0.46
Main	1300.037	Future	246.58	156.34	159.77		159.93	0.001396	2.55	255.66	146.09	0.47
Main	1300.037	100 year	66.60	156.34	158.98		159.02	0.000449	1.17	145.72	133.67	0.25
Main	1300.037	50 year	58.10	156.34	158.80		158.84	0.000540	1.21	121.07	131.01	0.28
Main	1300.037	20 year	47.00	156.34	158.45		158.51	0.000821	1.32	78.19	104.07	0.33
Main	1300.037	10 year	38.60	156.34	158.18		158.26	0.001234	1.44	54.05	81.97	0.39
Main	1300.037	5 year	30.10	156.34	157.90		158.01	0.002082	1.60	32.86	68.62	0.49
Main	1300.037	2 year	18.20	156.34	157.50	157.34	157.67	0.004825	1.80	10.24	16.70	0.69
Main	1243.336	Existing	233.18	156.03	159.72		159.81	0.000794	2.08	338.10	195.02	0.36
Main	1243.336	Future	246.58	156.03	159.76		159.86	0.000833	2.15	345.93	195.22	0.37
Main	1243.336	100 year	66.60	156.03	158.98		159.00	0.000243	0.97	194.48	187.06	0.19
Main	1243.336	50 year	58.10	156.03	158.79		158.82	0.000264	0.97	161.89	161.63	0.20
Main	1243.336	20 year	47.00	156.03	158.44		158.48	0.000378	1.05	113.41	123.70	0.23
Main	1243.336	10 year	38.60	156.03	158.17		158.22	0.000531	1.13	80.92	112.71	0.27

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	1243.336	5 year	30.10	156.03	157.87		157.94	0.000814	1.24	49.87	92.20	0.32
Main	1243.336	2 year	18.20	156.03	157.43		157.51	0.001395	1.29	16.15	29.70	0.40
Main	1226.202	Existing	233.18	156.03	159.71	158.80	159.80	0.000794	1.98	337.78	190.60	0.36
Main	1226.202	Future	246.58	156.03	159.75	158.80	159.84	0.000840	2.06	345.21	192.40	0.37
Main	1226.202	100 year	66.60	156.03	158.98	157.91	159.00	0.000220	0.87	206.85	155.65	0.18
Main	1226.202	50 year	58.10	156.03	158.44	157.78	158.78	0.002277	2.57	22.58	136.99	0.57
Main	1226.202	20 year	47.00	156.03	158.14	157.58	158.44	0.002492	2.43	19.35	126.11	0.58
Main	1226.202	10 year	38.60	156.03	157.91	157.43	158.17	0.002642	2.28	16.89	112.22	0.58
Main	1226.202	5 year	30.10	156.03	157.67	157.26	157.90	0.002774	2.10	14.34	81.86	0.58
Main	1226.202	2 year	18.20	156.03	157.32	157.00	157.47	0.002799	1.72	10.58	39.84	0.55
Main	1215.250		Culvert									
Main	1206.031	Existing	233.18	156.01	158.80	158.80	159.08	0.004360	3.35	187.93	176.28	0.76
Main	1206.031	Future	246.58	156.01	158.80	158.80	159.11	0.004875	3.54	187.93	176.28	0.80
Main	1206.031	100 year	66.60	156.01	158.04	158.04	158.83	0.008335	3.93	16.94	117.91	1.00
Main	1206.031	50 year	58.10	156.01	157.90	157.90	158.62	0.008611	3.76	15.46	111.39	1.00
Main	1206.031	20 year	47.00	156.01	157.72	157.72	158.34	0.009006	3.50	13.43	100.16	1.00
Main	1206.031	10 year	38.60	156.01	157.55	157.55	158.11	0.009537	3.30	11.68	68.90	1.01
Main	1206.031	5 year	30.10	156.01	157.39	157.39	157.85	0.009752	3.03	9.93	42.74	1.00
Main	1206.031	2 year	18.20	156.01	157.11	157.11	157.45	0.010642	2.57	7.07	15.35	1.00
Main	1184.150	Existing	233.18	156.01	158.59		158.72	0.002810	2.66	214.17	137.49	0.61
Main	1184.150	Future	246.58	156.01	158.66		158.79	0.002769	2.70	223.48	138.79	0.61
Main	1184.150	100 year	66.60	156.01	157.64		157.70	0.002995	1.75	91.99	122.53	0.56
Main	1184.150	50 year	58.10	156.01	157.58		157.64	0.002953	1.67	84.50	121.82	0.55
Main	1184.150	20 year	47.00	156.01	157.45		157.53	0.003177	1.80	69.24	117.79	0.58
Main	1184.150	10 year	38.60	156.01	157.42		157.47	0.002553	1.58	65.02	116.48	0.52
Main	1184.150	5 year	30.10	156.01	157.26		157.34	0.003699	1.72	47.26	110.85	0.61
Main	1184.150	2 year	18.20	156.01	157.08		157.14	0.002918	1.41	30.01	65.84	0.53
Main	1042.480	Existing	233.18	155.33	158.17		158.41	0.002890	3.10	188.09	133.15	0.64
Main	1042.480	Future	246.58	155.33	158.25		158.49	0.002765	3.10	199.87	148.21	0.63
Main	1042.480	100 year	66.60	155.33	157.15		157.34	0.003319	2.32	67.89	108.46	0.63
Main	1042.480	50 year	58.10	155.33	157.06	156.97	157.26	0.003624	2.33	57.49	106.24	0.65
Main	1042.480	20 year	47.00	155.33	157.00		157.16	0.003019	2.06	51.00	103.63	0.59
Main	1042.480	10 year	38.60	155.33	156.80	156.62	157.05	0.004856	2.37	31.01	97.78	0.73
Main	1042.480	5 year	30.10	155.33	156.68		156.86	0.004050	2.03	23.39	41.16	0.66
Main	1042.480	2 year	18.20	155.33	156.28	156.28	156.53	0.009320	2.26	10.29	25.86	0.93

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	1000.000	Existing	233.18	154.89	157.65	157.65	158.22	0.005930	4.63	143.68	151.31	0.94
Main	1000.000	Future	246.58	154.89	158.04	157.66	158.37	0.003142	3.72	209.80	184.67	0.70
Main	1000.000	100 year	66.60	154.89	156.85	156.85	157.18	0.003950	2.92	54.43	97.11	0.72
Main	1000.000	50 year	58.10	154.89	156.79	156.79	157.09	0.003736	2.77	48.25	95.76	0.69
Main	1000.000	20 year	47.00	154.89	156.54	156.54	156.97	0.005665	3.05	25.92	68.02	0.83
Main	1000.000	10 year	38.60	154.89	156.40	156.40	156.81	0.005911	2.91	18.95	41.90	0.83
Main	1000.000	5 year	30.10	154.89	156.16	156.16	156.60	0.008233	2.96	10.99	22.04	0.95
Main	1000.000	2 year	18.20	154.89	156.03		156.24	0.004847	2.07	9.11	11.86	0.71
Main	900	Existing	233.18	154.61	157.09	156.99	157.63	0.006457	4.06	116.50	125.09	0.93
Main	900	Future	246.58	154.61	157.13	157.03	157.88	0.008248	4.65	120.84	128.96	1.05
Main	900	100 year	66.60	154.61	156.35		156.52	0.003317	2.13	54.94	65.50	0.61
Main	900	50 year	58.10	154.61	156.27		156.43	0.003295	2.02	49.68	62.27	0.60
Main	900	20 year	47.00	154.61	156.16		156.29	0.003224	1.87	42.84	57.75	0.59
Main	900	10 year	38.60	154.61	156.03		156.17	0.003101	1.85	35.72	52.71	0.58
Main	900	5 year	30.10	154.61	155.91		156.03	0.002999	1.70	29.66	52.06	0.56
Main	900	2 year	18.20	154.61	155.65	155.52	155.78	0.004208	1.63	16.01	50.38	0.63
Main	830.0900	Existing	233.18	154.02	157.06		157.38	0.003115	3.12	174.42	151.69	0.67
Main	830.0900	Future	246.58	154.02	157.14		157.45	0.002940	3.11	187.16	154.80	0.65
Main	830.0900	100 year	66.60	154.02	155.83	155.83	156.19	0.007577	2.84	35.15	62.88	0.91
Main	830.0900	50 year	58.10	154.02	155.76	155.76	156.10	0.007496	2.70	31.21	59.68	0.90
Main	830.0900	20 year	47.00	154.02	155.65	155.65	155.96	0.007654	2.55	25.09	53.13	0.89
Main	830.0900	10 year	38.60	154.02	155.54	155.54	155.84	0.007478	2.48	19.61	46.36	0.88
Main	830.0900	5 year	30.10	154.02	155.34	155.34	155.68	0.009359	2.58	12.32	27.36	0.96
Main	830.0900	2 year	18.20	154.02	154.99	154.99	155.32	0.010531	2.55	7.13	10.73	1.00
Main	749.5588	Existing	233.18	153.66	157.05		157.21	0.001353	2.69	245.97	136.42	0.47
Main	749.5588	Future	246.58	153.66	157.13		157.29	0.001350	2.73	256.64	138.68	0.47
Main	749.5588	100 year	66.60	153.66	155.55		155.75	0.002425	2.39	62.51	75.05	0.57
Main	749.5588	50 year	58.10	153.66	155.38		155.60	0.002863	2.43	50.61	67.19	0.61
Main	749.5588	20 year	47.00	153.66	155.17		155.36	0.002899	2.23	37.71	46.94	0.60
Main	749.5588	10 year	38.60	153.66	154.99		155.18	0.003317	2.18	30.56	37.48	0.63
Main	749.5588	5 year	30.10	153.66	154.80		154.98	0.003891	2.11	23.73	34.35	0.66
Main	749.5588	2 year	18.20	153.66	154.49		154.67	0.005517	1.98	13.86	29.70	0.74
Main	682.6990	Existing	233.18	152.97	156.36	156.36	157.05	0.004152	4.29	125.03	106.70	0.80
Main	682.6990	Future	246.58	152.97	156.41	156.41	157.12	0.004313	4.42	129.74	108.27	0.82
Main	682.6990	100 year	66.60	152.97	154.89	154.83	155.48	0.006698	3.41	20.93	21.26	0.91

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	682.6990	50 year	58.10	152.97	154.81	154.70	155.32	0.006282	3.17	19.21	19.28	0.87
Main	682.6990	20 year	47.00	152.97	154.68	154.53	155.09	0.005712	2.84	16.97	16.36	0.82
Main	682.6990	10 year	38.60	152.97	154.56		154.90	0.005390	2.58	15.17	14.89	0.78
Main	682.6990	5 year	30.10	152.97	154.42		154.69	0.005125	2.31	13.10	14.01	0.74
Main	682.6990	2 year	18.20	152.97	154.19		154.36	0.004195	1.82	9.99	12.55	0.65
Main	600	Existing	233.18	152.61	155.76		156.22	0.003646	3.75	139.25	97.06	0.73
Main	600	Future	246.58	152.61	155.83		156.30	0.003636	3.81	145.78	99.68	0.74
Main	600	100 year	66.60	152.61	154.56	154.39	154.96	0.004928	2.92	33.63	69.18	0.77
Main	600	50 year	58.10	152.61	154.43	154.32	154.82	0.005151	2.82	27.13	39.96	0.78
Main	600	20 year	47.00	152.61	154.29	154.14	154.62	0.005181	2.62	21.90	32.66	0.77
Main	600	10 year	38.60	152.61	154.18	154.00	154.47	0.004839	2.38	18.75	28.66	0.73
Main	600	5 year	30.10	152.61	154.10		154.30	0.003951	2.03	16.41	25.17	0.65
Main	600	2 year	18.20	152.61	154.01		154.11	0.001953	1.35	14.44	22.34	0.45
Main	499.9999	Existing	233.18	152.35	155.18	155.18	155.80	0.005021	4.62	135.37	108.61	0.89
Main	499.9999	Future	246.58	152.35	155.23	155.23	155.87	0.005139	4.73	140.66	109.69	0.90
Main	499.9999	100 year	66.60	152.35	154.02	153.97	154.46	0.005323	3.29	37.50	55.58	0.83
Main	499.9999	50 year	58.10	152.35	154.00	153.83	154.35	0.004291	2.93	36.32	53.76	0.75
Main	499.9999	20 year	47.00	152.35	153.98		154.22	0.002930	2.40	35.47	52.41	0.62
Main	499.9999	10 year	38.60	152.35	153.98		154.14	0.002009	1.98	35.16	51.90	0.51
Main	499.9999	5 year	30.10	152.35	153.97		154.07	0.001233	1.55	34.99	51.62	0.40
Main	499.9999	2 year	18.20	152.35	153.97		154.01	0.000453	0.94	34.87	51.43	0.24
Main	399.9999	Existing	233.18	151.78	154.37	154.37	155.10	0.007344	5.13	136.18	156.93	1.05
Main	399.9999	Future	246.58	151.78	154.66	154.66	155.13	0.004476	4.32	187.32	181.92	0.84
Main	399.9999	100 year	66.60	151.78	153.94		154.10	0.001752	2.20	81.39	111.36	0.50
Main	399.9999	50 year	58.10	151.78	153.95		154.07	0.001299	1.90	82.47	111.97	0.43
Main	399.9999	20 year	47.00	151.78	153.96		154.03	0.000828	1.52	83.53	112.56	0.34
Main	399.9999	10 year	38.60	151.78	153.96		154.01	0.000551	1.24	84.12	112.89	0.28
Main	399.9999	5 year	30.10	151.78	153.96		154.00	0.000331	0.96	84.57	113.13	0.22
Main	399.9999	2 year	18.20	151.78	153.97		153.98	0.000120	0.58	84.99	113.37	0.13
Main	300.0000	Existing	233.18	151.15	154.03		154.24	0.003558	3.30	233.18	224.32	0.68
Main	300.0000	Future	246.58	151.15	154.04		154.26	0.003882	3.46	235.29	224.53	0.71
Main	300.0000	100 year	66.60	151.15	153.97		153.99	0.000335	1.00	221.26	223.12	0.21
Main	300.0000	50 year	58.10	151.15	153.97		153.99	0.000255	0.87	221.07	223.10	0.18
Main	300.0000	20 year	47.00	151.15	153.97		153.98	0.000167	0.71	220.87	223.08	0.15
Main	300.0000	10 year	38.60	151.15	153.97		153.98	0.000113	0.58	220.75	223.07	0.12
Main	300.0000	5 year	30.10	151.15	153.97		153.97	0.000069	0.45	220.66	223.06	0.09

HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Main	300.0000	2 year	18.20	151.15	153.97		153.97	0.000025	0.27	220.56	223.05	0.06
Main	200	Existing	233.18	150.44	153.96		154.04	0.000822	2.11	346.43	188.58	0.37
Main	200	Future	246.58	150.44	153.96		154.05	0.000921	2.23	346.25	188.58	0.39
Main	200	100 year	66.60	150.44	153.97		153.98	0.000066	0.60	347.67	188.62	0.10
Main	200	50 year	58.10	150.44	153.97		153.97	0.000050	0.52	347.69	188.62	0.09
Main	200	20 year	47.00	150.44	153.97		153.97	0.000033	0.42	347.71	188.62	0.07
Main	200	10 year	38.60	150.44	153.97		153.97	0.000022	0.35	347.73	188.62	0.06
Main	200	5 year	30.10	150.44	153.97		153.97	0.000014	0.27	347.75	188.62	0.05
Main	200	2 year	18.20	150.44	153.97		153.97	0.000005	0.16	347.76	188.62	0.03
Main	104.8181	Existing	233.18	150.30	153.97		153.99	0.000199	1.07	730.23	355.41	0.18
Main	104.8181	Future	246.58	150.30	153.97		153.99	0.000223	1.14	730.40	355.41	0.19
Main	104.8181	100 year	66.60	150.30	153.97		153.97	0.000016	0.31	728.88	355.39	0.05
Main	104.8181	50 year	58.10	150.30	153.97		153.97	0.000012	0.27	728.86	355.39	0.05
Main	104.8181	20 year	47.00	150.30	153.97		153.97	0.000008	0.22	728.82	355.39	0.04
Main	104.8181	10 year	38.60	150.30	153.97		153.97	0.000005	0.18	728.80	355.39	0.03
Main	104.8181	5 year	30.10	150.30	153.97		153.97	0.000003	0.14	728.79	355.39	0.02
Main	104.8181	2 year	18.20	150.30	153.97		153.97	0.000001	0.08	728.77	355.39	0.01
Main	10.62250	Existing	233.18	149.94	153.97	151.43	153.97	0.000071	0.70	1085.66	425.52	0.11
Main	10.62250	Future	246.58	149.94	153.97	151.44	153.98	0.000080	0.74	1085.66	425.52	0.12
Main	10.62250	100 year	66.60	149.94	153.97	150.70	153.97	0.000006	0.20	1085.66	425.52	0.03
Main	10.62250	50 year	58.10	149.94	153.97	150.65	153.97	0.000004	0.17	1085.66	425.52	0.03
Main	10.62250	20 year	47.00	149.94	153.97	150.58	153.97	0.000003	0.14	1085.66	425.52	0.02
Main	10.62250	10 year	38.60	149.94	153.97	150.53	153.97	0.000002	0.12	1085.66	425.52	0.02
Main	10.62250	5 year	30.10	149.94	153.97	150.47	153.97	0.000001	0.09	1085.66	425.52	0.01
Main	10.62250	2 year	18.20	149.94	153.97	150.32	153.97	0.000000	0.05	1085.66	425.52	0.01

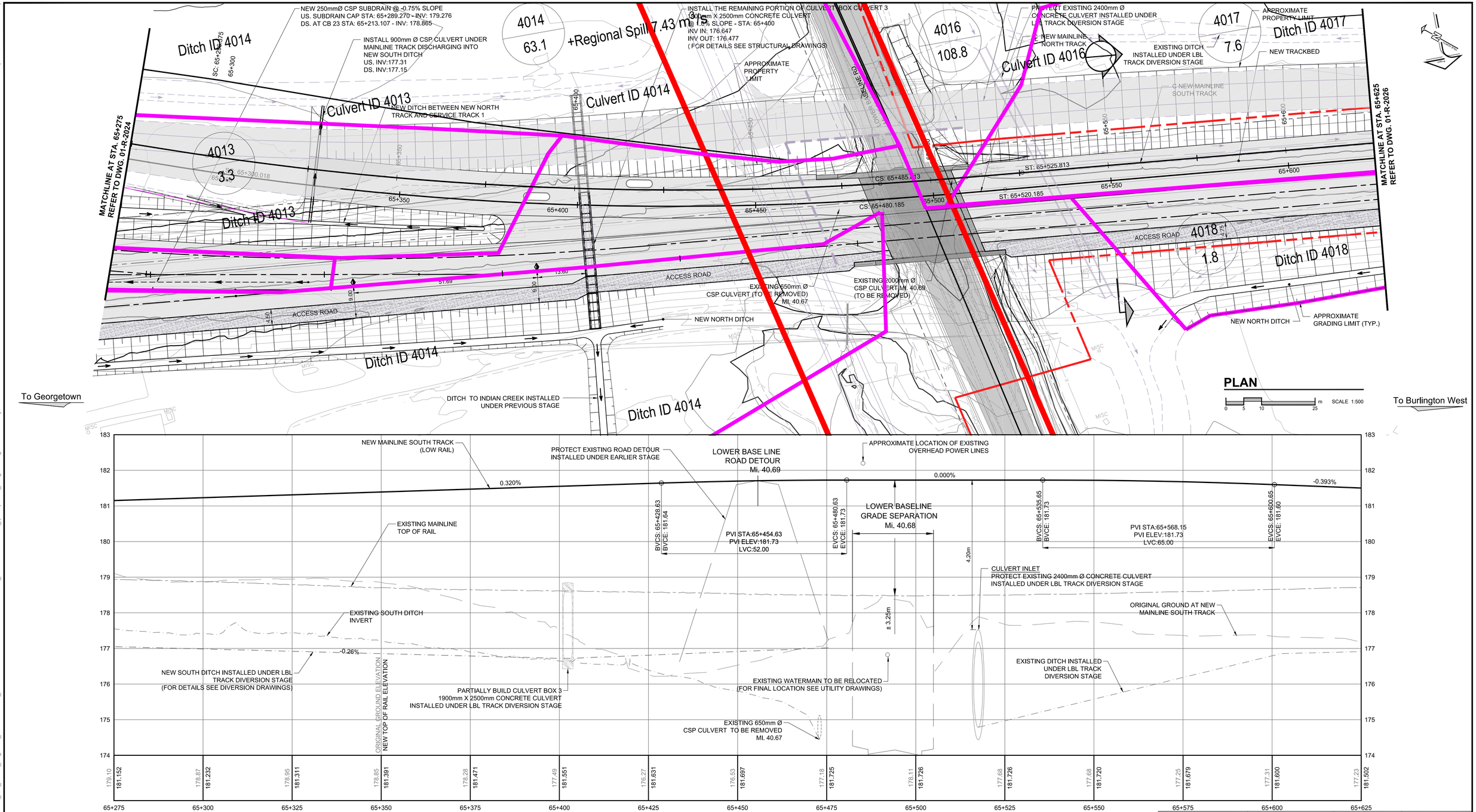
HEC-RAS Plan: Draft1 River: BronteIndian Reach: Main

Reach	River Sta	Profile	E.G. US.	W.S. US.	E.G. IC	E.G. OC	Min El Weir Flow	Q Culv Group	Q Weir	Delta WS	Culv Vel US	Culv Vel DS
			(m)	(m)	(m)	(m)	(m)	(m3/s)	(m3/s)	(m)	(m/s)	(m/s)
Main	12704.46 Culvert #1	Existing	184.43	184.39	184.43	184.43	183.59	4.13	109.01	0.03	0.44	0.44
Main	12704.46 Culvert #1	Future	184.49	184.44	184.47	184.49	183.59	6.09	116.63	0.01	0.65	0.65
Main	12704.46 Culvert #1	100 year	184.01	183.99	183.95	184.01	183.59	8.40	31.40	0.05	0.89	0.89
Main	12704.46 Culvert #1	50 year	183.97	183.94	183.89	183.97	183.59	9.74	24.36	0.06	1.04	1.04
Main	12704.46 Culvert #1	20 year	183.90	183.88	183.78	183.90	183.59	11.03	15.97	0.09	1.17	1.17
Main	12704.46 Culvert #1	10 year	183.84	183.83	183.71	183.84	183.59	12.04	9.86	0.11	1.28	1.28
Main	12704.46 Culvert #1	5 year	183.77	183.76	183.43	183.77	183.59	12.51	4.39	0.13	1.33	1.33
Main	12704.46 Culvert #1	2 year	183.55	183.44	183.00	183.55	183.59	10.20		0.11	1.09	1.13
Main	10335.83 Culvert #1	Existing	182.00	181.96	181.98	182.00	181.37	7.71	143.11	0.03	0.90	0.90
Main	10335.83 Culvert #1	Future	182.00	181.96	181.98	182.00	181.37	7.71	143.11	0.03	0.90	0.90
Main	10335.83 Culvert #1	100 year	181.43	181.37	181.40	181.43	181.37	7.74	41.36	0.01	0.90	0.90
Main	10335.83 Culvert #1	50 year	181.39	181.35	181.33	181.39	181.37	9.47	30.02	0.05	1.10	1.10
Main	10335.83 Culvert #1	20 year	181.33	181.29	181.24	181.33	181.37	10.77	23.03	0.09	1.25	1.25
Main	10335.83 Culvert #1	10 year	181.24	181.22	181.16	181.24	181.37	12.16	15.34	0.14	1.41	1.41
Main	10335.83 Culvert #1	5 year	181.15	181.13	180.75	181.15	181.37	12.44	8.86	0.15	1.45	1.45
Main	10335.83 Culvert #1	2 year	180.96	180.95	180.20	180.96	181.37	12.70		0.16	1.48	1.48
Main	2524.843 Culvert #1	Existing	169.43	169.26	169.47	169.43	167.26	62.13	171.05	2.18	5.52	5.52
Main	2524.843 Culvert #1	Future	169.49	169.31	169.51	169.49	167.26	62.48	184.10	2.20	5.55	5.55
Main	2524.843 Culvert #1	100 year	168.22	168.15	168.22	168.22	167.26	43.65	22.95	1.09	3.88	3.88
Main	2524.843 Culvert #1	50 year	168.29	168.24	168.09	168.29	167.26	31.21	26.89	1.44	2.77	2.77
Main	2524.843 Culvert #1	20 year	167.89	167.83	167.87	167.89	167.26	38.59	8.41	1.38	3.43	3.43
Main	2524.843 Culvert #1	10 year	167.58	167.52	167.58	167.56	167.26	36.81	1.79	1.33	3.98	3.58
Main	2524.843 Culvert #1	5 year	167.18	166.83	167.04	167.18	167.26	30.10		0.94	4.03	4.52
Main	2524.843 Culvert #1	2 year	166.38	166.13	166.25	166.38	167.26	18.20		0.72	3.41	3.90
Main	1215.250 Culvert #1	Existing	159.80	159.71	159.68	159.80	158.80	92.48	140.70	0.91	3.46	3.46
Main	1215.250 Culvert #1	Future	159.84	159.75	159.74	159.84	158.80	94.53	152.05	0.95	3.54	3.54
Main	1215.250 Culvert #1	100 year	158.99	158.98	157.77	158.99	158.80	60.07	6.53	0.93	2.25	2.25
Main	1215.250 Culvert #1	50 year	158.78	158.44	157.53	158.78	158.80	58.10		0.53	2.17	2.17
Main	1215.250 Culvert #1	20 year	158.44	158.14	157.22	158.44	158.80	47.00		0.42	1.76	1.76
Main	1215.250 Culvert #1	10 year	158.18	157.91	156.96	158.18	158.80	38.60		0.36	1.44	1.44
Main	1215.250 Culvert #1	5 year	157.90	157.67	156.68	157.90	158.80	30.10		0.28	1.13	1.13
Main	1215.250 Culvert #1	2 year	157.47	157.32	156.25	157.47	158.80	18.20		0.20	0.77	0.80

Milton Logistics Hub 2020 HEC-RAS Model Output

Culvert C7 Existing Conditions

D SIZE 22" x 34" (558.8mm x 863.6mm)



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NOTE
- FOR NEW MAINLINE NORTH TRACK PROFILE SEE DWG. R-2036
- FOR NEW SERVICE TRACK-1 PROFILE SEE DWG. R-3038
- FOR NEW SERVICE TRACK-2 PROFILE SEE DWG. R-3019

REGION	SUBDIVISION	MILE
-	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

PROFESSIONAL SEALS

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
B	19/10/23	ISSUED FOR 60% SUBMISSION	JR/LP	AS	JR/LP	LB		
A	19/04/29	ISSUED FOR 30% SUBMISSION	JR	AS	JR	LB		

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AECOM

CN
MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27
NEW MAINLINE TRACKS
PLAN & SOUTH TRACK PROFILE
STA. 65+275 to 65+625 (Mi. 40.56 to 40.78)

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-2025	B

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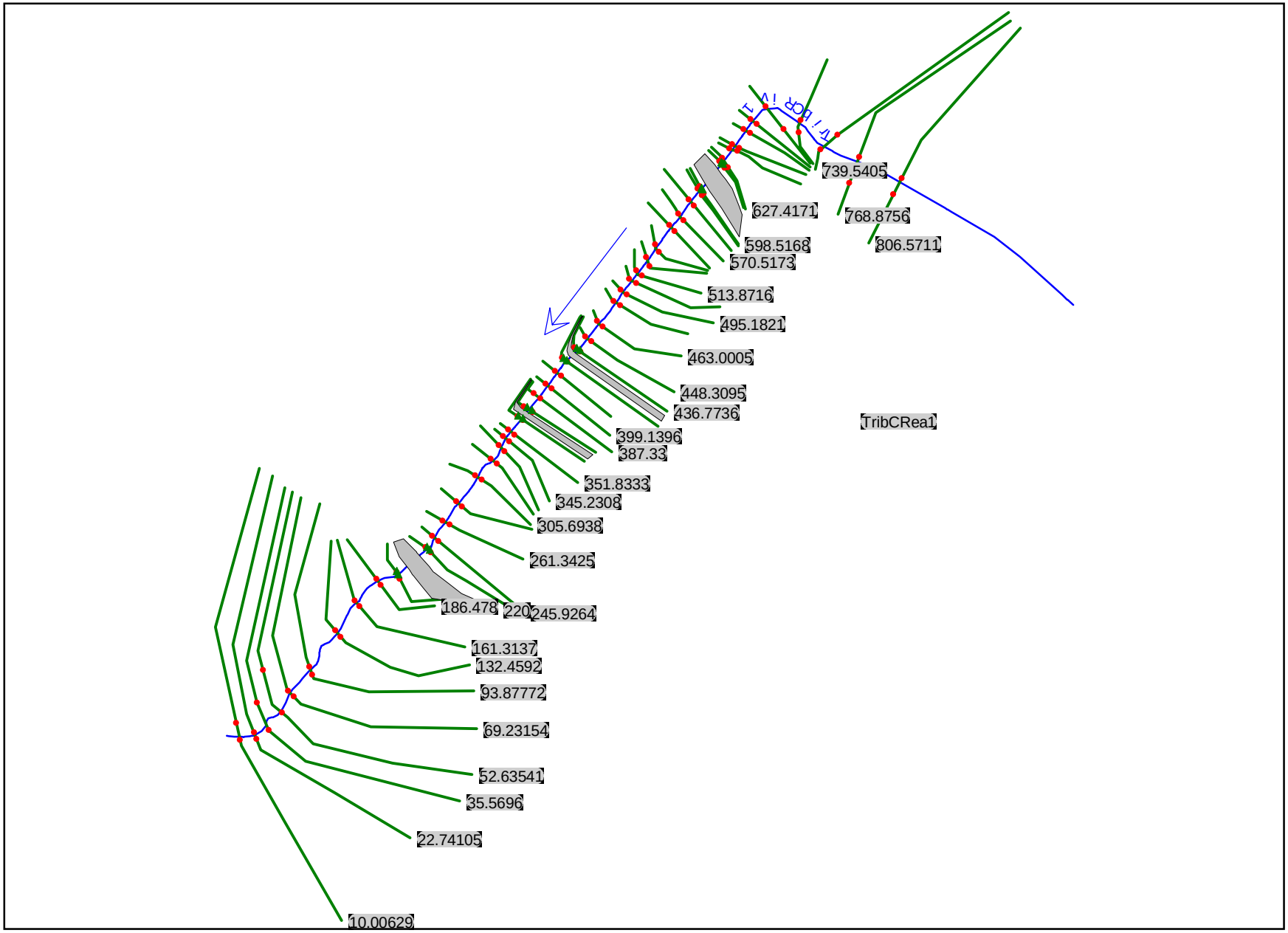
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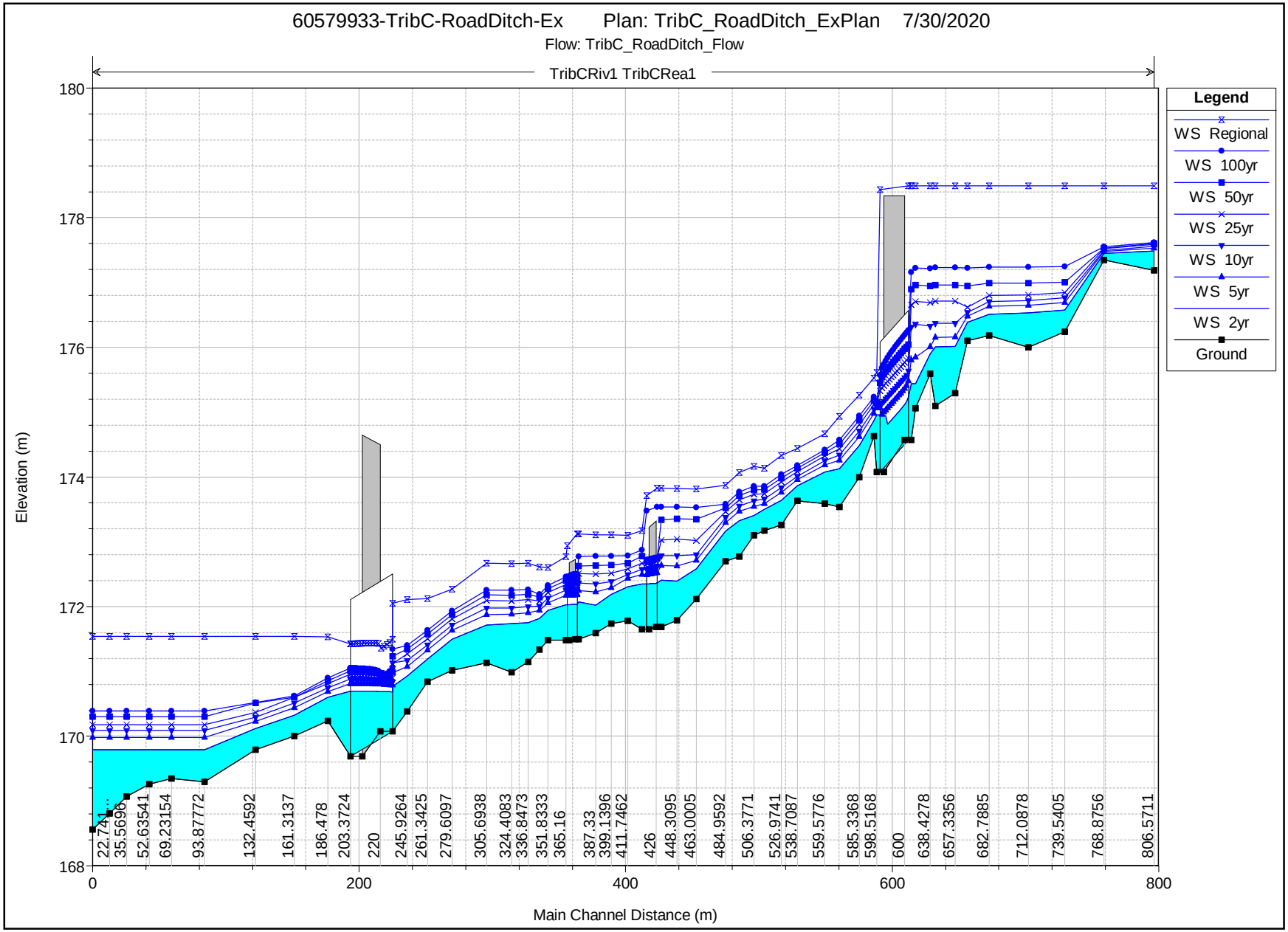
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WS 100yr
WS 50yr
WS 25yr
WS 10yr
WS 5yr
WS 2yr
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Elevation (m)
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HEC-RAS Plan: TribCRDExP River: TribCRiv1 Reach: TribCRea1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	806.5711	2yr	0.99	177.19	177.49		177.49	0.000080	0.13	14.09	85.93	0.08
TribCRea1	806.5711	5yr	1.82	177.19	177.53		177.53	0.000138	0.18	17.99	91.61	0.10
TribCRea1	806.5711	10yr	2.45	177.19	177.56		177.56	0.000177	0.22	20.39	94.95	0.12
TribCRea1	806.5711	25yr	3.32	177.19	177.59		177.59	0.000224	0.26	23.35	98.89	0.14
TribCRea1	806.5711	50yr	4.03	177.19	177.61		177.61	0.000268	0.29	25.18	101.25	0.15
TribCRea1	806.5711	100yr	4.72	177.19	177.62		177.62	0.000311	0.32	26.76	103.26	0.16
TribCRea1	806.5711	Regional	9.50	177.19	178.50		178.50	0.000009	0.12	166.91	211.54	0.03
TribCRea1	768.8756	2yr	0.99	177.35	177.45	177.45	177.47	0.020302	0.74	1.44	30.28	0.95
TribCRea1	768.8756	5yr	1.82	177.35	177.48	177.48	177.51	0.016792	0.86	2.52	44.16	0.92
TribCRea1	768.8756	10yr	2.45	177.35	177.50	177.50	177.53	0.014702	0.91	3.44	55.09	0.89
TribCRea1	768.8756	25yr	3.32	177.35	177.52	177.52	177.56	0.011458	0.93	5.35	92.01	0.81
TribCRea1	768.8756	50yr	4.03	177.35	177.53	177.53	177.57	0.011501	0.99	6.51	104.76	0.83
TribCRea1	768.8756	100yr	4.72	177.35	177.55	177.55	177.59	0.009736	0.97	8.29	120.99	0.77
TribCRea1	768.8756	Regional	9.50	177.35	178.49		178.50	0.000008	0.10	171.05	216.15	0.03
TribCRea1	739.5405	2yr	0.99	176.24	176.57		176.60	0.005721	0.76	1.30	7.85	0.59
TribCRea1	739.5405	5yr	1.82	176.24	176.69		176.72	0.003828	0.75	2.43	11.01	0.51
TribCRea1	739.5405	10yr	2.45	176.24	176.77		176.79	0.003092	0.75	3.29	12.82	0.47
TribCRea1	739.5405	25yr	3.32	176.24	176.85		176.88	0.002545	0.75	4.44	14.91	0.44
TribCRea1	739.5405	50yr	4.03	176.24	177.01		177.03	0.000976	0.56	7.16	18.93	0.28
TribCRea1	739.5405	100yr	4.72	176.24	177.25		177.25	0.000274	0.41	12.36	24.83	0.16
TribCRea1	739.5405	Regional	9.50	176.24	178.49		178.49	0.000005	0.11	180.11	197.80	0.03
TribCRea1	712.0878	2yr	0.99	176.00	176.53		176.54	0.000953	0.44	2.35	9.26	0.27
TribCRea1	712.0878	5yr	1.82	176.00	176.65		176.67	0.001134	0.55	3.55	11.57	0.30
TribCRea1	712.0878	10yr	2.45	176.00	176.72		176.74	0.001163	0.60	4.45	13.03	0.31
TribCRea1	712.0878	25yr	3.32	176.00	176.81		176.83	0.001062	0.66	5.67	14.77	0.30
TribCRea1	712.0878	50yr	4.03	176.00	176.99		177.01	0.000493	0.55	8.67	18.38	0.22
TribCRea1	712.0878	100yr	4.72	176.00	177.24		177.25	0.000205	0.44	13.83	23.32	0.15
TribCRea1	712.0878	Regional	9.50	176.00	178.49		178.49	0.000013	0.20	96.41	91.15	0.04
TribCRea1	682.7885	2yr	0.99	176.18	176.51		176.52	0.000774	0.32	3.10	15.65	0.23
TribCRea1	682.7885	5yr	1.82	176.18	176.63		176.64	0.000602	0.36	5.17	18.85	0.21
TribCRea1	682.7885	10yr	2.45	176.18	176.71		176.72	0.000535	0.38	6.68	20.88	0.21
TribCRea1	682.7885	25yr	3.32	176.18	176.80		176.81	0.000478	0.40	8.69	23.31	0.20
TribCRea1	682.7885	50yr	4.03	176.18	176.99		176.99	0.000202	0.31	13.61	28.39	0.14
TribCRea1	682.7885	100yr	4.72	176.18	177.24		177.24	0.000074	0.24	21.57	35.09	0.09
TribCRea1	682.7885	Regional	9.50	176.18	178.49		178.49	0.000008	0.15	96.05	78.00	0.03

HEC-RAS Plan: TribCRDExP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	666.617	2yr	0.99	176.10	176.39	176.39	176.48	0.016563	1.31	0.75	4.39	1.01
TribCRea1	666.617	5yr	1.82	176.10	176.48	176.48	176.60	0.014556	1.54	1.18	4.93	1.00
TribCRea1	666.617	10yr	2.45	176.10	176.54	176.54	176.68	0.013980	1.67	1.47	5.27	1.01
TribCRea1	666.617	25yr	3.32	176.10	176.62	176.60	176.77	0.011178	1.73	1.94	6.13	0.93
TribCRea1	666.617	50yr	4.03	176.10	176.95		176.98	0.001473	0.91	5.92	18.01	0.37
TribCRea1	666.617	100yr	4.72	176.10	177.22		177.24	0.000407	0.62	12.11	25.74	0.21
TribCRea1	666.617	Regional	9.50	176.10	178.49		178.49	0.000025	0.28	73.84	71.33	0.06
TribCRea1	657.3356	2yr	0.99	175.29	176.01		176.02	0.000327	0.36	2.82	6.41	0.17
TribCRea1	657.3356	5yr	1.82	175.29	176.16		176.17	0.000474	0.49	3.82	7.32	0.21
TribCRea1	657.3356	10yr	2.45	175.29	176.37		176.38	0.000289	0.48	5.53	8.64	0.17
TribCRea1	657.3356	25yr	3.32	175.29	176.71		176.72	0.000149	0.43	9.04	13.31	0.13
TribCRea1	657.3356	50yr	4.03	175.29	176.96		176.97	0.000101	0.41	13.10	19.00	0.11
TribCRea1	657.3356	100yr	4.72	175.29	177.23		177.24	0.000066	0.37	18.92	24.94	0.09
TribCRea1	657.3356	Regional	9.50	175.29	178.49		178.49	0.000018	0.28	73.77	69.48	0.05
TribCRea1	642.2469	2yr	0.99	175.10	176.01		176.01	0.000248	0.33	3.02	6.03	0.15
TribCRea1	642.2469	5yr	1.82	175.10	176.15		176.16	0.000399	0.48	3.93	6.62	0.19
TribCRea1	642.2469	10yr	2.45	175.10	176.37		176.38	0.000282	0.47	5.46	7.53	0.17
TribCRea1	642.2469	25yr	3.32	175.10	176.71		176.72	0.000153	0.44	8.27	8.96	0.13
TribCRea1	642.2469	50yr	4.03	175.10	176.96		176.97	0.000110	0.42	11.67	19.89	0.11
TribCRea1	642.2469	100yr	4.72	175.10	177.23		177.23	0.000071	0.38	18.82	34.10	0.09
TribCRea1	642.2469	Regional	9.50	175.10	178.49		178.49	0.000016	0.26	80.55	75.01	0.05
TribCRea1	638.4278	2yr	0.99	175.59	175.90	175.90	176.00	0.015864	1.42	0.70	3.48	1.01
TribCRea1	638.4278	5yr	1.82	175.59	176.01	176.01	176.15	0.014419	1.65	1.10	4.01	1.01
TribCRea1	638.4278	10yr	2.45	175.59	176.33		176.37	0.002181	0.92	2.65	5.53	0.43
TribCRea1	638.4278	25yr	3.32	175.59	176.69		176.72	0.000665	0.68	4.96	7.11	0.25
TribCRea1	638.4278	50yr	4.03	175.59	176.95		176.97	0.000357	0.60	6.91	8.12	0.19
TribCRea1	638.4278	100yr	4.72	175.59	177.22		177.23	0.000208	0.54	10.24	18.93	0.15
TribCRea1	638.4278	Regional	9.50	175.59	178.49		178.49	0.000023	0.29	72.28	73.79	0.06
TribCRea1	627.4171	2yr	0.99	175.06	175.44		175.47	0.003654	0.71	1.39	6.59	0.49
TribCRea1	627.4171	5yr	1.82	175.06	175.85		175.85	0.000362	0.41	4.47	8.60	0.18
TribCRea1	627.4171	10yr	2.45	175.06	176.36		176.36	0.000064	0.27	10.59	20.41	0.08
TribCRea1	627.4171	25yr	3.32	175.06	176.71		176.71	0.000033	0.23	21.03	34.18	0.06
TribCRea1	627.4171	50yr	4.03	175.06	176.96		176.96	0.000022	0.21	30.40	38.42	0.05
TribCRea1	627.4171	100yr	4.72	175.06	177.23		177.23	0.000015	0.19	40.97	41.07	0.04
TribCRea1	627.4171	Regional	9.50	175.06	178.49		178.49	0.000006	0.17	101.29	57.56	0.03

HEC-RAS Plan: TribCRDExP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	624.4071	2yr	0.99	174.57	175.44	174.91	175.46	0.000593	0.72	1.38	6.91	0.25
TribCRea1	624.4071	5yr	1.82	174.57	175.81	175.08	175.85	0.000614	0.92	1.97	17.10	0.27
TribCRea1	624.4071	10yr	2.45	174.57	176.32	175.20	176.36	0.000350	0.88	2.79	25.14	0.21
TribCRea1	624.4071	25yr	3.32	174.57	176.65	175.34	176.71	0.000355	1.00	3.33	29.04	0.22
TribCRea1	624.4071	50yr	4.03	174.57	176.90	175.44	176.96	0.000362	1.08	3.72	32.06	0.23
TribCRea1	624.4071	100yr	4.72	174.57	177.16	175.54	177.22	0.000350	1.14	4.13	34.70	0.23
TribCRea1	624.4071	Regional	9.50	174.57	178.49	176.11	178.49	0.000006	0.17	101.15	54.56	0.03
TribCRea1	600		Culvert									
TribCRea1	598.5168	2yr	0.99	174.08	174.96	174.42	174.98	0.000529	0.70	1.41	4.49	0.24
TribCRea1	598.5168	5yr	1.82	174.08	175.06	174.59	175.13	0.001228	1.16	1.57	4.75	0.37
TribCRea1	598.5168	10yr	2.45	174.08	175.11	174.70	175.22	0.001903	1.48	1.65	4.87	0.47
TribCRea1	598.5168	25yr	3.32	174.08	175.13	174.84	175.33	0.003246	1.97	1.69	4.93	0.61
TribCRea1	598.5168	50yr	4.03	174.08	175.15	174.95	175.43	0.004524	2.35	1.72	4.97	0.72
TribCRea1	598.5168	100yr	4.72	174.08	175.14	175.04	175.54	0.006363	2.77	1.70	4.95	0.86
TribCRea1	598.5168	Regional	9.50	174.08	175.61	175.61	176.38	0.007625	3.87	2.45	6.12	1.00
TribCRea1	596.2651	2yr	0.99	174.63	174.87	174.87	174.97	0.016135	1.40	0.71	3.58	1.01
TribCRea1	596.2651	5yr	1.82	174.63	174.98	174.98	175.12	0.014449	1.67	1.09	3.89	1.01
TribCRea1	596.2651	10yr	2.45	174.63	175.04	175.04	175.21	0.013808	1.81	1.35	4.09	1.01
TribCRea1	596.2651	25yr	3.32	174.63	175.12	175.12	175.32	0.013258	1.97	1.69	4.33	1.01
TribCRea1	596.2651	50yr	4.03	174.63	175.18	175.18	175.40	0.012907	2.07	1.94	4.51	1.01
TribCRea1	596.2651	100yr	4.72	174.63	175.23	175.23	175.47	0.012597	2.16	2.19	4.67	1.01
TribCRea1	596.2651	Regional	9.50	174.63	175.53	175.53	175.86	0.011491	2.56	3.71	5.65	1.01
TribCRea1	585.3368	2yr	0.99	174.00	174.49	174.49	174.62	0.015902	1.60	0.62	2.43	1.01
TribCRea1	585.3368	5yr	1.82	174.00	174.63	174.63	174.80	0.014624	1.84	0.99	2.95	1.01
TribCRea1	585.3368	10yr	2.45	174.00	174.71	174.71	174.91	0.014071	1.96	1.25	3.27	1.01
TribCRea1	585.3368	25yr	3.32	174.00	174.81	174.81	175.03	0.013527	2.09	1.59	3.64	1.01
TribCRea1	585.3368	50yr	4.03	174.00	174.88	174.88	175.12	0.012858	2.16	1.86	3.92	1.00
TribCRea1	585.3368	100yr	4.72	174.00	174.94	174.94	175.20	0.012603	2.24	2.11	4.13	1.00
TribCRea1	585.3368	Regional	9.50	174.00	175.27	175.27	175.62	0.011605	2.61	3.63	5.23	1.00
TribCRea1	570.5173	2yr	0.99	173.54	174.13		174.16	0.002200	0.77	1.28	3.40	0.40
TribCRea1	570.5173	5yr	1.82	173.54	174.26		174.31	0.003016	1.03	1.77	3.83	0.48
TribCRea1	570.5173	10yr	2.45	173.54	174.34		174.41	0.003442	1.17	2.09	4.09	0.52
TribCRea1	570.5173	25yr	3.32	173.54	174.44		174.53	0.003871	1.33	2.50	4.40	0.56
TribCRea1	570.5173	50yr	4.03	173.54	174.51		174.61	0.004109	1.43	2.82	4.62	0.59
TribCRea1	570.5173	100yr	4.72	173.54	174.57		174.69	0.004285	1.51	3.12	4.84	0.60

HEC-RAS Plan: TribCRDExP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	570.5173	Regional	9.50	173.54	174.93		175.11	0.004329	1.88	5.09	6.08	0.64
TribCRea1	559.5776	2yr	0.99	173.59	174.07		174.12	0.004467	0.95	1.04	3.50	0.56
TribCRea1	559.5776	5yr	1.82	173.59	174.19		174.27	0.005678	1.25	1.45	3.81	0.65
TribCRea1	559.5776	10yr	2.45	173.59	174.25		174.36	0.006452	1.44	1.70	3.99	0.70
TribCRea1	559.5776	25yr	3.32	173.59	174.33	174.23	174.47	0.007410	1.65	2.01	4.19	0.76
TribCRea1	559.5776	50yr	4.03	173.59	174.38	174.30	174.54	0.008178	1.81	2.22	4.33	0.81
TribCRea1	559.5776	100yr	4.72	173.59	174.42	174.35	174.61	0.008936	1.96	2.41	4.45	0.85
TribCRea1	559.5776	Regional	9.50	173.59	174.67	174.67	175.02	0.011729	2.64	3.60	5.13	1.01
TribCRea1	538.7087	2yr	0.99	173.63	173.87	173.87	173.96	0.016562	1.31	0.76	4.44	1.01
TribCRea1	538.7087	5yr	1.82	173.63	173.96	173.96	174.08	0.014857	1.56	1.16	4.75	1.01
TribCRea1	538.7087	10yr	2.45	173.63	174.01	174.01	174.16	0.014100	1.70	1.44	4.95	1.01
TribCRea1	538.7087	25yr	3.32	173.63	174.08	174.08	174.26	0.013438	1.85	1.79	5.20	1.01
TribCRea1	538.7087	50yr	4.03	173.63	174.13	174.13	174.33	0.013021	1.95	2.06	5.38	1.01
TribCRea1	538.7087	100yr	4.72	173.63	174.18	174.18	174.39	0.012705	2.04	2.31	5.55	1.01
TribCRea1	538.7087	Regional	9.50	173.63	174.44	174.44	174.75	0.011385	2.45	3.87	6.49	1.01
TribCRea1	526.9741	2yr	0.99	173.26	173.64		173.68	0.005601	0.94	1.06	4.48	0.62
TribCRea1	526.9741	5yr	1.82	173.26	173.76		173.82	0.004979	1.09	1.66	5.10	0.61
TribCRea1	526.9741	10yr	2.45	173.26	173.84		173.91	0.004944	1.19	2.05	5.45	0.62
TribCRea1	526.9741	25yr	3.32	173.26	173.92		174.01	0.004954	1.31	2.54	5.87	0.64
TribCRea1	526.9741	50yr	4.03	173.26	173.98		174.08	0.004964	1.39	2.91	6.16	0.64
TribCRea1	526.9741	100yr	4.72	173.26	174.04		174.15	0.004949	1.45	3.26	6.43	0.65
TribCRea1	526.9741	Regional	9.50	173.26	174.33		174.50	0.004783	1.78	5.37	7.87	0.67
TribCRea1	513.8716	2yr	0.99	173.17	173.50	173.47	173.58	0.010687	1.24	0.80	3.64	0.84
TribCRea1	513.8716	5yr	1.82	173.17	173.59	173.58	173.72	0.012949	1.58	1.15	4.18	0.96
TribCRea1	513.8716	10yr	2.45	173.17	173.66	173.65	173.80	0.012398	1.69	1.45	4.54	0.96
TribCRea1	513.8716	25yr	3.32	173.17	173.74	173.72	173.91	0.011414	1.80	1.85	4.96	0.94
TribCRea1	513.8716	50yr	4.03	173.17	173.80	173.78	173.98	0.010860	1.87	2.16	5.26	0.93
TribCRea1	513.8716	100yr	4.72	173.17	173.85	173.83	174.05	0.010625	1.94	2.44	5.52	0.93
TribCRea1	513.8716	Regional	9.50	173.17	174.14	174.10	174.40	0.009322	2.28	4.19	6.97	0.92
TribCRea1	506.3771	2yr	0.99	173.10	173.41	173.40	173.49	0.013933	1.27	0.78	4.19	0.94
TribCRea1	506.3771	5yr	1.82	173.10	173.55		173.63	0.008083	1.28	1.42	4.97	0.76
TribCRea1	506.3771	10yr	2.45	173.10	173.63		173.72	0.006635	1.31	1.88	5.45	0.71
TribCRea1	506.3771	25yr	3.32	173.10	173.73		173.83	0.005715	1.36	2.45	6.01	0.68
TribCRea1	506.3771	50yr	4.03	173.10	173.80		173.90	0.005204	1.40	2.88	6.39	0.66
TribCRea1	506.3771	100yr	4.72	173.10	173.86		173.97	0.004939	1.45	3.27	6.72	0.65

HEC-RAS Plan: TribCRDExP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	506.3771	Regional	9.50	173.10	174.16		174.32	0.004128	1.79	5.59	9.23	0.64
TribCRea1	495.1821	2yr	0.99	172.77	173.33		173.39	0.005630	1.05	0.94	3.24	0.63
TribCRea1	495.1821	5yr	1.82	172.77	173.47		173.55	0.005871	1.25	1.46	4.02	0.66
TribCRea1	495.1821	10yr	2.45	172.77	173.55		173.65	0.006028	1.36	1.81	4.48	0.68
TribCRea1	495.1821	25yr	3.32	172.77	173.64		173.76	0.006300	1.48	2.24	5.03	0.71
TribCRea1	495.1821	50yr	4.03	172.77	173.71	173.59	173.84	0.006271	1.55	2.59	5.42	0.72
TribCRea1	495.1821	100yr	4.72	172.77	173.77	173.65	173.90	0.006357	1.62	2.90	5.73	0.73
TribCRea1	495.1821	Regional	9.50	172.77	174.07	173.93	174.27	0.005695	1.99	4.88	7.61	0.74
TribCRea1	484.9592	2yr	0.99	172.70	173.17	173.17	173.29	0.015685	1.55	0.64	2.65	1.01
TribCRea1	484.9592	5yr	1.82	172.70	173.30	173.30	173.45	0.014569	1.74	1.05	3.47	1.01
TribCRea1	484.9592	10yr	2.45	172.70	173.38	173.38	173.55	0.014130	1.85	1.33	3.93	1.01
TribCRea1	484.9592	25yr	3.32	172.70	173.47	173.47	173.66	0.013212	1.94	1.71	4.49	1.00
TribCRea1	484.9592	50yr	4.03	172.70	173.52	173.52	173.74	0.013032	2.06	1.96	4.82	1.01
TribCRea1	484.9592	100yr	4.72	172.70	173.58	173.58	173.81	0.012149	2.12	2.25	5.17	0.99
TribCRea1	484.9592	Regional	9.50	172.70	173.87	173.87	174.18	0.010331	2.48	4.03	6.97	0.97
TribCRea1	463.0005	2yr	0.99	172.12	172.58	172.58	172.71	0.015747	1.57	0.63	2.58	1.01
TribCRea1	463.0005	5yr	1.82	172.12	172.72	172.72	172.88	0.014513	1.77	1.03	3.29	1.01
TribCRea1	463.0005	10yr	2.45	172.12	172.80	172.80	172.98	0.013777	1.87	1.31	3.71	1.01
TribCRea1	463.0005	25yr	3.32	172.12	173.02		173.13	0.005763	1.46	2.28	4.90	0.68
TribCRea1	463.0005	50yr	4.03	172.12	173.35		173.40	0.001555	1.00	4.16	6.58	0.38
TribCRea1	463.0005	100yr	4.72	172.12	173.53		173.57	0.001040	0.91	5.45	7.48	0.32
TribCRea1	463.0005	Regional	9.50	172.12	173.81		173.90	0.001680	1.33	7.72	8.86	0.42
TribCRea1	448.3095	2yr	0.99	171.79	172.40		172.45	0.004192	1.00	0.99	2.82	0.54
TribCRea1	448.3095	5yr	1.82	171.79	172.62		172.68	0.003375	1.03	1.76	4.15	0.51
TribCRea1	448.3095	10yr	2.45	171.79	172.78		172.83	0.002232	1.00	2.51	5.28	0.43
TribCRea1	448.3095	25yr	3.32	171.79	173.04		173.08	0.001176	0.88	4.07	6.78	0.33
TribCRea1	448.3095	50yr	4.03	171.79	173.36		173.38	0.000540	0.71	6.46	8.40	0.23
TribCRea1	448.3095	100yr	4.72	171.79	173.54		173.56	0.000426	0.68	8.08	9.41	0.21
TribCRea1	448.3095	Regional	9.50	171.79	173.82		173.87	0.000860	1.06	10.97	13.26	0.30
TribCRea1	436.7736	2yr	0.99	171.69	172.41	171.96	172.42	0.000510	0.50	1.98	4.19	0.20
TribCRea1	436.7736	5yr	1.82	171.69	172.63	172.07	172.65	0.000694	0.68	2.67	5.04	0.24
TribCRea1	436.7736	10yr	2.45	171.69	172.78	172.15	172.81	0.000721	0.78	3.15	5.64	0.25
TribCRea1	436.7736	25yr	3.32	171.69	173.03	172.24	173.07	0.000633	0.84	3.93	7.00	0.24
TribCRea1	436.7736	50yr	4.03	171.69	173.34	172.31	173.37	0.000447	0.82	4.90	8.74	0.21
TribCRea1	436.7736	100yr	4.72	171.69	173.54	172.38	173.55	0.000193	0.54	10.52	16.94	0.14

HEC-RAS Plan: TribCRDExP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	436.7736	Regional	9.50	171.69	173.83	172.75	173.86	0.000353	0.82	17.28	28.84	0.20
TribCRea1	426		Culvert									
TribCRea1	422.3931	2yr	0.99	171.65	172.35	171.89	172.36	0.000328	0.46	2.14	4.21	0.18
TribCRea1	422.3931	5yr	1.82	171.65	172.50	171.99	172.52	0.000577	0.70	2.61	4.48	0.25
TribCRea1	422.3931	10yr	2.45	171.65	172.57	172.07	172.61	0.000778	0.86	2.85	4.61	0.29
TribCRea1	422.3931	25yr	3.32	171.65	172.67	172.15	172.72	0.001028	1.06	3.14	4.78	0.34
TribCRea1	422.3931	50yr	4.03	171.65	172.78	172.22	172.82	0.001202	0.92	4.40	4.99	0.31
TribCRea1	422.3931	100yr	4.72	171.65	172.88	172.28	172.92	0.001226	0.96	4.90	5.16	0.32
TribCRea1	422.3931	Regional	9.50	171.65	173.17	172.65	173.28	0.002083	1.47	6.56	6.26	0.42
TribCRea1	411.7462	2yr	0.99	171.78	172.31		172.35	0.003955	0.92	1.08	3.54	0.53
TribCRea1	411.7462	5yr	1.82	171.78	172.44		172.50	0.004633	1.15	1.58	4.18	0.60
TribCRea1	411.7462	10yr	2.45	171.78	172.50		172.59	0.005228	1.33	1.85	4.49	0.64
TribCRea1	411.7462	25yr	3.32	171.78	172.58		172.70	0.005556	1.51	2.24	4.90	0.68
TribCRea1	411.7462	50yr	4.03	171.78	172.67		172.79	0.004849	1.54	2.70	5.35	0.65
TribCRea1	411.7462	100yr	4.72	171.78	172.79		172.90	0.003707	1.48	3.39	6.86	0.58
TribCRea1	411.7462	Regional	9.50	171.78	173.10	172.91	173.25	0.003825	1.82	7.12	17.73	0.61
TribCRea1	399.1396	2yr	0.99	171.74	172.19		172.27	0.010733	1.25	0.79	3.53	0.84
TribCRea1	399.1396	5yr	1.82	171.74	172.29	172.27	172.41	0.012225	1.53	1.19	4.33	0.93
TribCRea1	399.1396	10yr	2.45	171.74	172.38		172.50	0.009636	1.50	1.63	5.06	0.85
TribCRea1	399.1396	25yr	3.32	171.74	172.52		172.62	0.005922	1.40	2.39	6.13	0.69
TribCRea1	399.1396	50yr	4.03	171.74	172.64		172.73	0.003990	1.30	3.19	7.09	0.59
TribCRea1	399.1396	100yr	4.72	171.74	172.78		172.85	0.002401	1.17	4.31	9.96	0.47
TribCRea1	399.1396	Regional	9.50	171.74	173.11		173.20	0.001979	1.41	8.92	17.04	0.46
TribCRea1	387.33	2yr	0.99	171.59	172.02	172.01	172.12	0.014192	1.40	0.71	3.28	0.96
TribCRea1	387.33	5yr	1.82	171.59	172.22		172.30	0.005995	1.19	1.53	4.82	0.67
TribCRea1	387.33	10yr	2.45	171.59	172.35		172.41	0.003997	1.14	2.19	5.95	0.57
TribCRea1	387.33	25yr	3.32	171.59	172.50		172.56	0.002686	1.09	3.20	7.08	0.48
TribCRea1	387.33	50yr	4.03	171.59	172.63		172.68	0.001990	1.04	4.17	8.00	0.43
TribCRea1	387.33	100yr	4.72	171.59	172.78		172.82	0.001284	0.95	5.69	12.87	0.35
TribCRea1	387.33	Regional	9.50	171.59	173.11		173.17	0.001203	1.18	11.41	20.40	0.37
TribCRea1	374.7503	2yr	0.99	171.50	172.07	171.69	172.08	0.000344	0.42	2.37	6.30	0.18
TribCRea1	374.7503	5yr	1.82	171.50	172.25	171.78	172.27	0.000463	0.58	3.13	6.83	0.22
TribCRea1	374.7503	10yr	2.45	171.50	172.36	171.84	172.39	0.000520	0.68	3.61	7.17	0.24
TribCRea1	374.7503	25yr	3.32	171.50	172.51	171.91	172.54	0.000563	0.79	4.23	7.61	0.25

HEC-RAS Plan: TribCRDExP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	374.7503	50yr	4.03	171.50	172.63	171.96	172.67	0.000566	0.85	4.74	7.98	0.26
TribCRea1	374.7503	100yr	4.72	171.50	172.77	172.01	172.81	0.000524	0.89	5.33	12.49	0.25
TribCRea1	374.7503	Regional	9.50	171.50	173.12	172.31	173.15	0.000429	0.76	17.70	36.12	0.21
TribCRea1	370		Culvert									
TribCRea1	365.16	2yr	0.99	171.48	172.03	171.66	172.04	0.000360	0.42	2.33	4.91	0.18
TribCRea1	365.16	5yr	1.82	171.48	172.17	171.75	172.19	0.000562	0.62	2.94	4.94	0.24
TribCRea1	365.16	10yr	2.45	171.48	172.25	171.80	172.28	0.000703	0.75	3.29	4.96	0.27
TribCRea1	365.16	25yr	3.32	171.48	172.34	171.88	172.39	0.000896	0.91	3.67	4.98	0.31
TribCRea1	365.16	50yr	4.03	171.48	172.40	171.93	172.46	0.001056	1.03	3.92	5.01	0.34
TribCRea1	365.16	100yr	4.72	171.48	172.46	171.98	172.52	0.001211	1.14	4.14	5.20	0.37
TribCRea1	365.16	Regional	9.50	171.48	172.77	172.28	172.88	0.002069	1.47	7.19	16.99	0.42
TribCRea1	351.8333	2yr	0.99	171.48	171.94		172.02	0.010209	1.24	0.80	3.47	0.82
TribCRea1	351.8333	5yr	1.82	171.48	172.06	172.02	172.16	0.010131	1.44	1.27	4.37	0.85
TribCRea1	351.8333	10yr	2.45	171.48	172.13	172.09	172.25	0.009943	1.53	1.61	5.00	0.86
TribCRea1	351.8333	25yr	3.32	171.48	172.22		172.35	0.009310	1.59	2.08	5.79	0.85
TribCRea1	351.8333	50yr	4.03	171.48	172.28		172.42	0.008762	1.65	2.44	6.20	0.84
TribCRea1	351.8333	100yr	4.72	171.48	172.33		172.48	0.008315	1.72	2.75	6.53	0.83
TribCRea1	351.8333	Regional	9.50	171.48	172.60	172.51	172.82	0.006499	2.09	4.85	9.99	0.79
TribCRea1	345.2308	2yr	0.99	171.34	171.82	171.82	171.93	0.016275	1.47	0.67	3.15	1.02
TribCRea1	345.2308	5yr	1.82	171.34	171.94	171.94	172.08	0.014905	1.67	1.09	3.96	1.02
TribCRea1	345.2308	10yr	2.45	171.34	172.01	172.01	172.17	0.014344	1.78	1.38	4.43	1.02
TribCRea1	345.2308	25yr	3.32	171.34	172.09	172.09	172.27	0.013666	1.89	1.76	4.98	1.01
TribCRea1	345.2308	50yr	4.03	171.34	172.15	172.15	172.34	0.013249	1.96	2.06	5.38	1.01
TribCRea1	345.2308	100yr	4.72	171.34	172.19	172.19	172.40	0.012928	2.05	2.31	5.69	1.01
TribCRea1	345.2308	Regional	9.50	171.34	172.62	172.49	172.77	0.004473	1.81	6.66	17.60	0.66
TribCRea1	336.8473	2yr	0.99	171.15	171.75		171.78	0.002569	0.75	1.31	4.23	0.43
TribCRea1	336.8473	5yr	1.82	171.15	171.90		171.95	0.002712	0.90	2.02	5.16	0.46
TribCRea1	336.8473	10yr	2.45	171.15	172.00		172.05	0.002652	0.97	2.54	5.75	0.46
TribCRea1	336.8473	25yr	3.32	171.15	172.11		172.17	0.002642	1.03	3.23	7.18	0.47
TribCRea1	336.8473	50yr	4.03	171.15	172.19		172.25	0.002317	1.07	3.93	10.09	0.45
TribCRea1	336.8473	100yr	4.72	171.15	172.26		172.32	0.002093	1.10	4.66	10.88	0.44
TribCRea1	336.8473	Regional	9.50	171.15	172.67		172.72	0.001142	1.13	12.97	32.60	0.35
TribCRea1	324.4083	2yr	0.99	170.99	171.74		171.76	0.001247	0.63	1.60	4.20	0.31
TribCRea1	324.4083	5yr	1.82	170.99	171.88		171.92	0.001659	0.83	2.26	4.97	0.37

HEC-RAS Plan: TribCRDExP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	324.4083	10yr	2.45	170.99	171.98		172.02	0.001899	0.93	2.87	9.38	0.40
TribCRea1	324.4083	25yr	3.32	170.99	172.09		172.14	0.001944	0.97	4.19	12.57	0.41
TribCRea1	324.4083	50yr	4.03	170.99	172.18		172.22	0.001808	0.96	5.36	14.31	0.40
TribCRea1	324.4083	100yr	4.72	170.99	172.25		172.29	0.001538	0.96	6.49	15.25	0.38
TribCRea1	324.4083	Regional	9.50	170.99	172.67		172.71	0.000898	1.01	14.12	26.19	0.31
TribCRea1	305.6938	2yr	0.99	171.13	171.72		171.73	0.001560	0.59	2.67	13.21	0.33
TribCRea1	305.6938	5yr	1.82	171.13	171.88		171.89	0.001032	0.56	4.89	14.96	0.28
TribCRea1	305.6938	10yr	2.45	171.13	171.98		171.99	0.000870	0.55	6.42	16.06	0.26
TribCRea1	305.6938	25yr	3.32	171.13	172.09		172.10	0.000747	0.56	8.39	17.37	0.25
TribCRea1	305.6938	50yr	4.03	171.13	172.18		172.19	0.000678	0.56	9.94	18.34	0.24
TribCRea1	305.6938	100yr	4.72	171.13	172.26		172.27	0.000626	0.57	11.39	19.20	0.23
TribCRea1	305.6938	Regional	9.50	171.13	172.67		172.69	0.000453	0.65	20.99	34.76	0.21
TribCRea1	279.6097	2yr	0.99	171.02	171.49	171.49	171.62	0.015786	1.60	0.62	2.42	1.01
TribCRea1	279.6097	5yr	1.82	171.02	171.64	171.64	171.80	0.014342	1.81	1.00	3.03	1.00
TribCRea1	279.6097	10yr	2.45	171.02	171.72	171.72	171.91	0.013940	1.93	1.27	3.38	1.01
TribCRea1	279.6097	25yr	3.32	171.02	171.81	171.81	172.03	0.012842	2.07	1.61	3.79	1.00
TribCRea1	279.6097	50yr	4.03	171.02	171.88	171.88	172.12	0.012445	2.18	1.87	4.07	1.00
TribCRea1	279.6097	100yr	4.72	171.02	171.94	171.94	172.20	0.012153	2.27	2.11	4.33	1.00
TribCRea1	279.6097	Regional	9.50	171.02	172.27	172.27	172.62	0.010501	2.66	3.78	5.75	0.98
TribCRea1	261.3425	2yr	0.99	170.84	171.19	171.17	171.29	0.012174	1.38	0.72	3.01	0.90
TribCRea1	261.3425	5yr	1.82	170.84	171.33	171.29	171.45	0.010316	1.55	1.17	3.57	0.87
TribCRea1	261.3425	10yr	2.45	170.84	171.41		171.55	0.009554	1.64	1.49	3.91	0.85
TribCRea1	261.3425	25yr	3.32	170.84	171.51		171.67	0.009175	1.77	1.88	4.27	0.85
TribCRea1	261.3425	50yr	4.03	170.84	171.58		171.75	0.008916	1.85	2.18	4.51	0.85
TribCRea1	261.3425	100yr	4.72	170.84	171.64		171.82	0.008783	1.92	2.45	4.71	0.85
TribCRea1	261.3425	Regional	9.50	170.84	172.12		172.30	0.004229	1.88	5.16	6.39	0.64
TribCRea1	245.9264	2yr	0.99	170.38	170.93	170.93	171.07	0.016295	1.66	0.60	2.19	1.02
TribCRea1	245.9264	5yr	1.82	170.38	171.08	171.08	171.26	0.014936	1.87	0.97	2.80	1.01
TribCRea1	245.9264	10yr	2.45	170.38	171.17	171.17	171.37	0.014378	1.98	1.24	3.18	1.01
TribCRea1	245.9264	25yr	3.32	170.38	171.27	171.27	171.49	0.013425	2.07	1.60	3.67	1.00
TribCRea1	245.9264	50yr	4.03	170.38	171.34	171.34	171.58	0.013089	2.15	1.88	3.99	1.00
TribCRea1	245.9264	100yr	4.72	170.38	171.41	171.41	171.66	0.012824	2.21	2.13	4.28	1.00
TribCRea1	245.9264	Regional	9.50	170.38	172.11		172.24	0.002720	1.58	6.28	7.49	0.52
TribCRea1	235.0288	2yr	0.99	170.08	170.77	170.39	170.79	0.001006	0.61	1.61	2.67	0.25
TribCRea1	235.0288	5yr	1.82	170.08	170.98	170.52	171.02	0.001439	0.83	2.20	2.96	0.31

HEC-RAS Plan: TribCRDExP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	235.0288	10yr	2.45	170.08	171.14	170.60	171.18	0.001407	0.92	2.67	3.21	0.31
TribCRea1	235.0288	25yr	3.32	170.08	171.12	170.71	171.20	0.002777	1.27	2.61	3.18	0.44
TribCRea1	235.0288	50yr	4.03	170.08	171.24	170.78	171.33	0.002659	1.36	2.97	3.37	0.44
TribCRea1	235.0288	100yr	4.72	170.08	171.35	170.86	171.45	0.002561	1.43	3.31	3.55	0.44
TribCRea1	235.0288	Regional	9.50	170.08	172.05	171.26	172.21	0.001983	1.75	5.43	5.41	0.42
TribCRea1	220		Culvert									
TribCRea1	203.3724	2yr	0.99	169.69	170.70	169.98	170.70	0.000160	0.36	2.74	4.63	0.12
TribCRea1	203.3724	5yr	1.82	169.69	170.82	170.11	170.83	0.000360	0.59	3.10	6.89	0.19
TribCRea1	203.3724	10yr	2.45	169.69	170.88	170.19	170.91	0.000524	0.74	3.30	8.65	0.23
TribCRea1	203.3724	25yr	3.32	169.69	170.96	170.29	171.01	0.000769	0.94	3.53	10.62	0.28
TribCRea1	203.3724	50yr	4.03	169.69	171.01	170.36	171.07	0.000983	1.09	3.69	11.93	0.32
TribCRea1	203.3724	100yr	4.72	169.69	171.05	170.42	171.13	0.001209	1.24	3.81	12.98	0.35
TribCRea1	203.3724	Regional	9.50	169.69	171.42	170.80	171.61	0.002071	1.93	4.93	40.73	0.48
TribCRea1	186.478	2yr	0.99	170.24	170.60	170.60	170.69	0.016658	1.32	0.75	4.36	1.01
TribCRea1	186.478	5yr	1.82	170.24	170.69	170.69	170.80	0.015034	1.51	1.22	5.80	1.01
TribCRea1	186.478	10yr	2.45	170.24	170.74	170.74	170.88	0.013432	1.62	1.56	6.69	0.98
TribCRea1	186.478	25yr	3.32	170.24	170.81	170.81	170.96	0.012193	1.74	2.04	7.75	0.96
TribCRea1	186.478	50yr	4.03	170.24	170.86	170.86	171.02	0.011678	1.83	2.41	8.49	0.96
TribCRea1	186.478	100yr	4.72	170.24	170.90	170.90	171.08	0.010786	1.89	2.80	9.19	0.94
TribCRea1	186.478	Regional	9.50	170.24	171.53		171.55	0.000419	0.69	28.41	59.62	0.22
TribCRea1	161.3137	2yr	0.99	170.00	170.32		170.33	0.001485	0.50	2.97	18.15	0.32
TribCRea1	161.3137	5yr	1.82	170.00	170.44		170.45	0.001066	0.53	5.47	24.73	0.29
TribCRea1	161.3137	10yr	2.45	170.00	170.51		170.52	0.000895	0.55	7.41	28.83	0.27
TribCRea1	161.3137	25yr	3.32	170.00	170.60		170.61	0.000767	0.58	10.30	36.52	0.26
TribCRea1	161.3137	50yr	4.03	170.00	170.60		170.62	0.001111	0.70	10.37	36.70	0.32
TribCRea1	161.3137	100yr	4.72	170.00	170.62		170.64	0.001303	0.78	11.10	38.38	0.34
TribCRea1	161.3137	Regional	9.50	170.00	171.54		171.54	0.000036	0.25	77.40	89.05	0.07
TribCRea1	132.4592	2yr	0.99	169.79	170.12	170.12	170.22	0.015856	1.41	0.70	3.51	1.01
TribCRea1	132.4592	5yr	1.82	169.79	170.23	170.23	170.36	0.014641	1.60	1.14	4.44	1.01
TribCRea1	132.4592	10yr	2.45	169.79	170.30	170.30	170.44	0.014097	1.70	1.44	4.98	1.01
TribCRea1	132.4592	25yr	3.32	169.79	170.37	170.37	170.54	0.013622	1.83	1.82	5.59	1.02
TribCRea1	132.4592	50yr	4.03	169.79	170.51	170.51	170.56	0.003910	1.14	7.90	97.09	0.57
TribCRea1	132.4592	100yr	4.72	169.79	170.52	170.52	170.58	0.004248	1.21	9.06	98.54	0.59
TribCRea1	132.4592	Regional	9.50	169.79	171.54		171.54	0.000012	0.14	133.12	137.69	0.04

HEC-RAS Plan: TribCRDExP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	93.87772	2yr	0.99	169.30	169.79		169.81	0.001624	0.59	2.19	17.12	0.35
TribCRea1	93.87772	5yr	1.82	169.30	169.98		169.99	0.000575	0.45	7.01	31.73	0.22
TribCRea1	93.87772	10yr	2.45	169.30	170.09		170.10	0.000375	0.40	10.74	37.04	0.18
TribCRea1	93.87772	25yr	3.32	169.30	170.18		170.19	0.000338	0.41	14.31	48.68	0.18
TribCRea1	93.87772	50yr	4.03	169.30	170.30		170.30	0.000180	0.34	27.54	145.16	0.13
TribCRea1	93.87772	100yr	4.72	169.30	170.39		170.39	0.000108	0.29	41.18	153.85	0.10
TribCRea1	93.87772	Regional	9.50	169.30	171.54		171.54	0.000003	0.08	240.52	189.94	0.02
TribCRea1	69.23154	2yr	0.99	169.35	169.79		169.79	0.000252	0.24	6.59	26.23	0.14
TribCRea1	69.23154	5yr	1.82	169.35	169.98		169.98	0.000142	0.22	16.03	110.93	0.11
TribCRea1	69.23154	10yr	2.45	169.35	170.09		170.09	0.000079	0.19	30.56	152.66	0.08
TribCRea1	69.23154	25yr	3.32	169.35	170.18		170.18	0.000060	0.18	45.79	179.04	0.08
TribCRea1	69.23154	50yr	4.03	169.35	170.30		170.30	0.000029	0.15	68.42	195.23	0.05
TribCRea1	69.23154	100yr	4.72	169.35	170.39		170.39	0.000020	0.13	86.11	198.35	0.05
TribCRea1	69.23154	Regional	9.50	169.35	171.54		171.54	0.000001	0.06	335.34	232.71	0.01
TribCRea1	52.63541	2yr	0.99	169.26	169.79		169.79	0.000063	0.11	10.47	67.52	0.07
TribCRea1	52.63541	5yr	1.82	169.26	169.98		169.98	0.000027	0.09	27.24	108.80	0.05
TribCRea1	52.63541	10yr	2.45	169.26	170.09		170.09	0.000018	0.09	41.08	142.08	0.04
TribCRea1	52.63541	25yr	3.32	169.26	170.18		170.18	0.000017	0.10	55.03	168.17	0.04
TribCRea1	52.63541	50yr	4.03	169.26	170.30		170.30	0.000011	0.09	77.40	197.47	0.03
TribCRea1	52.63541	100yr	4.72	169.26	170.39		170.39	0.000009	0.09	96.45	226.22	0.03
TribCRea1	52.63541	Regional	9.50	169.26	171.54		171.54	0.000001	0.04	375.51	258.20	0.01
TribCRea1	35.5696	2yr	0.99	169.07	169.79		169.79	0.000015	0.07	24.92	133.15	0.04
TribCRea1	35.5696	5yr	1.82	169.07	169.98		169.98	0.000007	0.06	53.02	166.81	0.03
TribCRea1	35.5696	10yr	2.45	169.07	170.09		170.09	0.000006	0.06	72.42	185.75	0.02
TribCRea1	35.5696	25yr	3.32	169.07	170.18		170.18	0.000006	0.07	89.82	201.22	0.03
TribCRea1	35.5696	50yr	4.03	169.07	170.30		170.30	0.000004	0.07	114.73	210.66	0.02
TribCRea1	35.5696	100yr	4.72	169.07	170.39		170.39	0.000004	0.07	133.86	215.31	0.02
TribCRea1	35.5696	Regional	9.50	169.07	171.54		171.54	0.000001	0.04	423.76	270.28	0.01
TribCRea1	22.74105	2yr	0.99	168.81	169.79		169.79	0.000004	0.06	44.23	149.59	0.02
TribCRea1	22.74105	5yr	1.82	168.81	169.98		169.98	0.000004	0.06	76.66	190.75	0.02
TribCRea1	22.74105	10yr	2.45	168.81	170.09		170.09	0.000003	0.06	98.63	208.78	0.02
TribCRea1	22.74105	25yr	3.32	168.81	170.18		170.18	0.000004	0.07	118.05	221.32	0.02
TribCRea1	22.74105	50yr	4.03	168.81	170.30		170.30	0.000003	0.07	144.89	225.56	0.02
TribCRea1	22.74105	100yr	4.72	168.81	170.39		170.39	0.000003	0.07	165.31	228.73	0.02
TribCRea1	22.74105	Regional	9.50	168.81	171.54		171.54	0.000001	0.04	446.89	260.02	0.01

HEC-RAS Plan: TribCRDExP River: TribCRiv1 Reach: TribCRea1 (Continued)

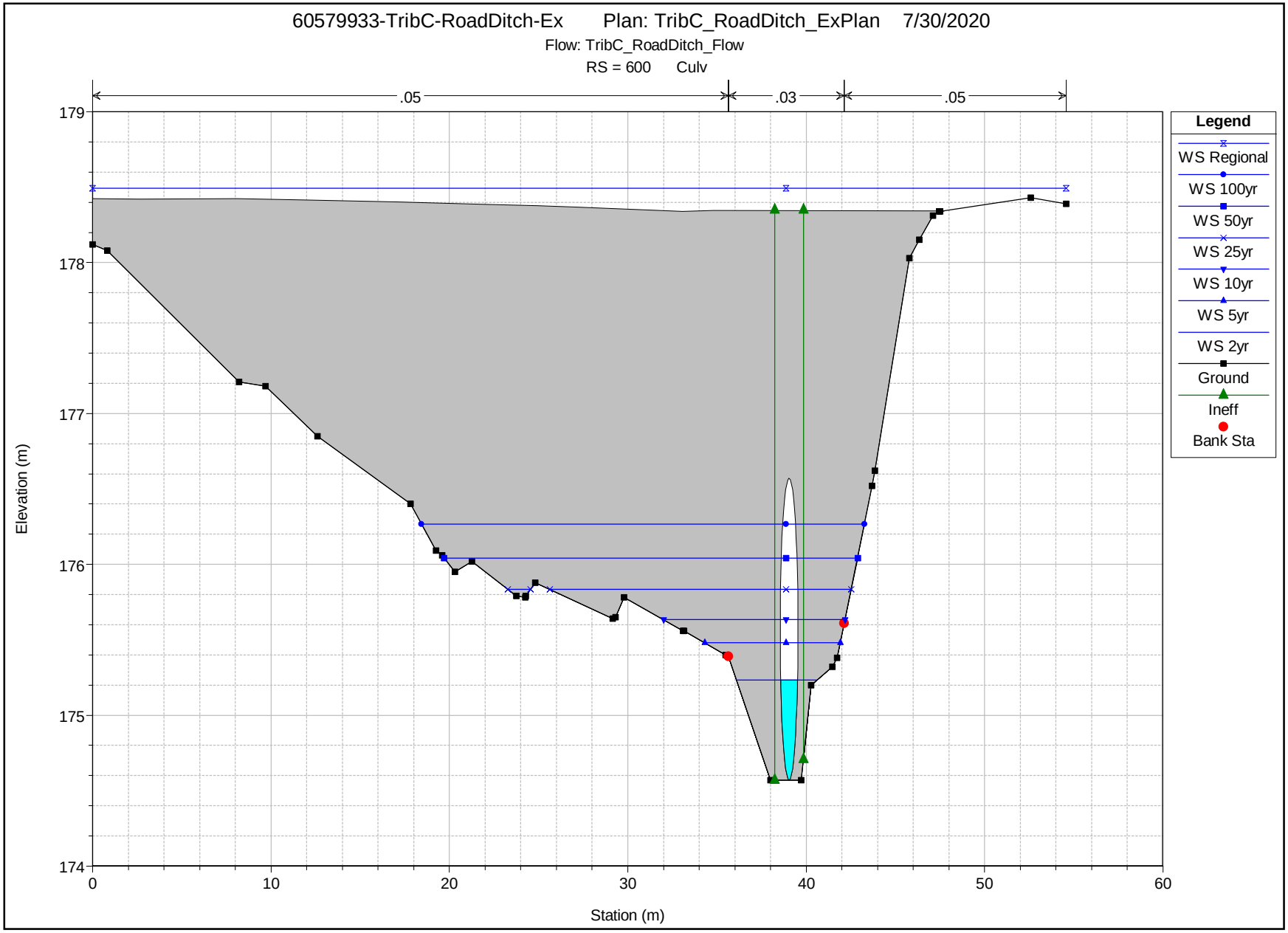
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	10.00629	2yr	0.99	168.56	169.79	168.83	169.79	0.000002	0.04	51.09	135.18	0.01
TribCRea1	10.00629	5yr	1.82	168.56	169.98	168.91	169.98	0.000002	0.05	82.15	190.85	0.02
TribCRea1	10.00629	10yr	2.45	168.56	170.09	168.97	170.09	0.000002	0.05	104.18	208.94	0.02
TribCRea1	10.00629	25yr	3.32	168.56	170.18	169.02	170.18	0.000002	0.06	123.09	211.54	0.02
TribCRea1	10.00629	50yr	4.03	168.56	170.30	169.07	170.30	0.000002	0.06	148.68	214.72	0.02
TribCRea1	10.00629	100yr	4.72	168.56	170.39	169.10	170.39	0.000002	0.06	168.09	217.09	0.02
TribCRea1	10.00629	Regional	9.50	168.56	171.54	169.38	171.54	0.000000	0.04	435.23	247.49	0.01

HEC-RAS Plan: TribCRDExP River: TribCRiv1 Reach: TribCRea1

Reach	River Sta		Profile	E.G. US.	W.S. US.	E.G. IC	E.G. OC	Min El Weir Flow	Q Culv Group	Q Weir	Delta WS	Culv Vel US	Culv Vel DS
				(m)	(m)	(m)	(m)	(m)	(m3/s)	(m3/s)	(m)	(m/s)	(m/s)
TribCRea1	600	Culvert #1	2yr	175.46	175.44	175.46	175.64	178.35	0.99		0.48	2.18	1.49
TribCRea1	600	Culvert #1	5yr	175.85	175.81	175.85	176.07	178.35	1.82		0.74	2.62	2.36
TribCRea1	600	Culvert #1	10yr	176.36	176.32	176.11	176.36	178.35	2.45		1.20	2.89	3.02
TribCRea1	600	Culvert #1	25yr	176.71	176.65	176.47	176.71	178.35	3.32		1.52	3.17	3.23
TribCRea1	600	Culvert #1	50yr	176.96	176.90	176.76	176.96	178.35	4.03		1.75	3.25	3.49
TribCRea1	600	Culvert #1	100yr	177.22	177.16	177.06	177.22	178.35	4.72		2.01	3.32	3.76
TribCRea1	600	Culvert #1	Regional	178.49	178.49	178.48	178.49	178.35	6.64	2.88	2.88	4.23	4.58
TribCRea1	426	Culvert #1	2yr	172.42	172.41	172.23	172.42	173.42	0.50		0.06	0.84	0.80
TribCRea1	426	Culvert #2	2yr	172.42	172.41	172.23	172.42	173.42	0.50		0.06	0.84	0.80
TribCRea1	426	Culvert #1	5yr	172.65	172.63	172.47	172.65	173.42	0.91		0.13	1.22	1.20
TribCRea1	426	Culvert #2	5yr	172.65	172.63	172.47	172.65	173.42	0.91		0.13	1.22	1.20
TribCRea1	426	Culvert #1	10yr	172.81	172.78	172.64	172.81	173.42	1.23		0.21	1.49	1.50
TribCRea1	426	Culvert #2	10yr	172.81	172.78	172.64	172.81	173.42	1.23		0.21	1.49	1.50
TribCRea1	426	Culvert #1	25yr	173.07	173.03	172.87	173.07	173.42	1.66		0.36	1.88	1.91
TribCRea1	426	Culvert #2	25yr	173.07	173.03	172.87	173.07	173.42	1.66		0.36	1.88	1.91
TribCRea1	426	Culvert #1	50yr	173.37	173.34	173.08	173.37	173.42	2.02		0.56	2.28	2.28
TribCRea1	426	Culvert #2	50yr	173.37	173.34	173.08	173.37	173.42	2.02		0.56	2.28	2.28
TribCRea1	426	Culvert #1	100yr	173.55	173.54	173.17	173.55	173.42	2.15	0.42	0.66	2.44	2.44
TribCRea1	426	Culvert #2	100yr	173.55	173.54	173.17	173.55	173.42	2.15	0.42	0.66	2.44	2.44
TribCRea1	426	Culvert #1	Regional	173.86	173.83	173.18	173.86	173.42	2.17	5.17	0.65	2.45	2.45
TribCRea1	426	Culvert #2	Regional	173.86	173.83	173.18	173.86	173.42	2.17	5.17	0.65	2.45	2.45
TribCRea1	370	Culvert #1	2yr	172.08	172.07	171.92	172.08	173.10	0.50		0.04	0.70	0.68
TribCRea1	370	Culvert #2	2yr	172.08	172.07	171.92	172.08	173.10	0.50		0.04	0.70	0.68
TribCRea1	370	Culvert #1	5yr	172.27	172.25	172.09	172.27	173.10	0.91		0.08	0.96	0.95
TribCRea1	370	Culvert #2	5yr	172.27	172.25	172.09	172.27	173.10	0.91		0.08	0.96	0.95
TribCRea1	370	Culvert #1	10yr	172.39	172.36	172.21	172.39	173.10	1.23		0.11	1.14	1.14
TribCRea1	370	Culvert #2	10yr	172.39	172.36	172.21	172.39	173.10	1.23		0.11	1.14	1.14
TribCRea1	370	Culvert #1	25yr	172.54	172.51	172.36	172.54	173.10	1.66		0.16	1.38	1.39
TribCRea1	370	Culvert #2	25yr	172.54	172.51	172.36	172.54	173.10	1.66		0.16	1.38	1.39
TribCRea1	370	Culvert #1	50yr	172.67	172.63	172.49	172.67	173.10	2.02		0.23	1.59	1.61
TribCRea1	370	Culvert #2	50yr	172.67	172.63	172.49	172.67	173.10	2.02		0.23	1.59	1.61
TribCRea1	370	Culvert #1	100yr	172.81	172.77	172.61	172.81	173.10	2.36		0.31	1.82	1.83
TribCRea1	370	Culvert #2	100yr	172.81	172.77	172.61	172.81	173.10	2.36		0.31	1.82	1.83
TribCRea1	370	Culvert #1	Regional	173.15	173.12	172.63	173.15	173.10	2.42	4.65	0.35	1.87	1.87
TribCRea1	370	Culvert #2	Regional	173.15	173.12	172.63	173.15	173.10	2.42	4.65	0.35	1.87	1.87
TribCRea1	220	Culvert #1	2yr	170.79	170.77	170.66	170.79	174.65	0.99		0.07	1.10	0.55
TribCRea1	220	Culvert #1	5yr	171.02	170.98	170.88	171.02	174.65	1.82		0.17	1.62	0.87
TribCRea1	220	Culvert #1	10yr	171.18	171.14	171.03	171.18	174.65	2.45		0.25	1.99	1.08
TribCRea1	220	Culvert #1	25yr	171.20	171.12	171.20	171.41	174.65	3.32		0.16	2.42	1.36

HEC-RAS Plan: TribCRDExP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	E.G. US.	W.S. US.	E.G. IC	E.G. OC	Min El Weir Flow	Q Culv Group	Q Weir	Delta WS	Culv Vel US	Culv Vel DS
			(m)	(m)	(m)	(m)	(m)	(m3/s)	(m3/s)	(m)	(m/s)	(m/s)
TribCRea1	220 Culvert #1	50yr	171.33	171.24	171.33	171.56	174.65	4.03		0.23	2.56	1.57
TribCRea1	220 Culvert #1	100yr	171.45	171.35	171.45	171.69	174.65	4.72		0.29	2.69	1.77
TribCRea1	220 Culvert #1	Regional	172.21	172.05	172.21	172.50	174.65	9.50		0.63	3.39	2.69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.03
.05
Legend
WS Regional
WS 100yr
WS 50yr
WS 25yr
WS 10yr
WS 5yr
WS 2yr
Ground
Ineff
Bank Sta
Elevation (m)
179
178
177
176
175
174
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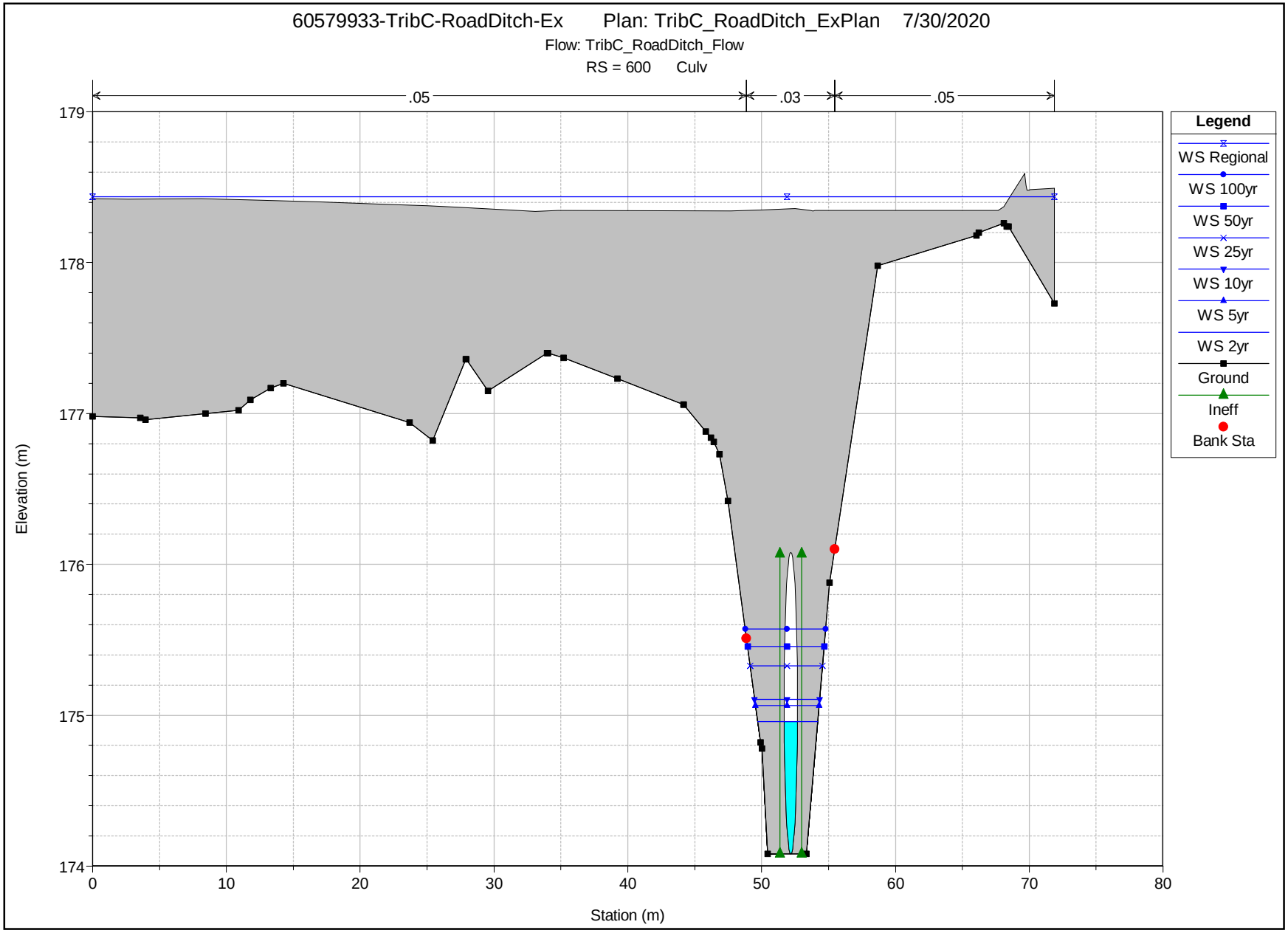
10
20
30
40
50
60
Station (m)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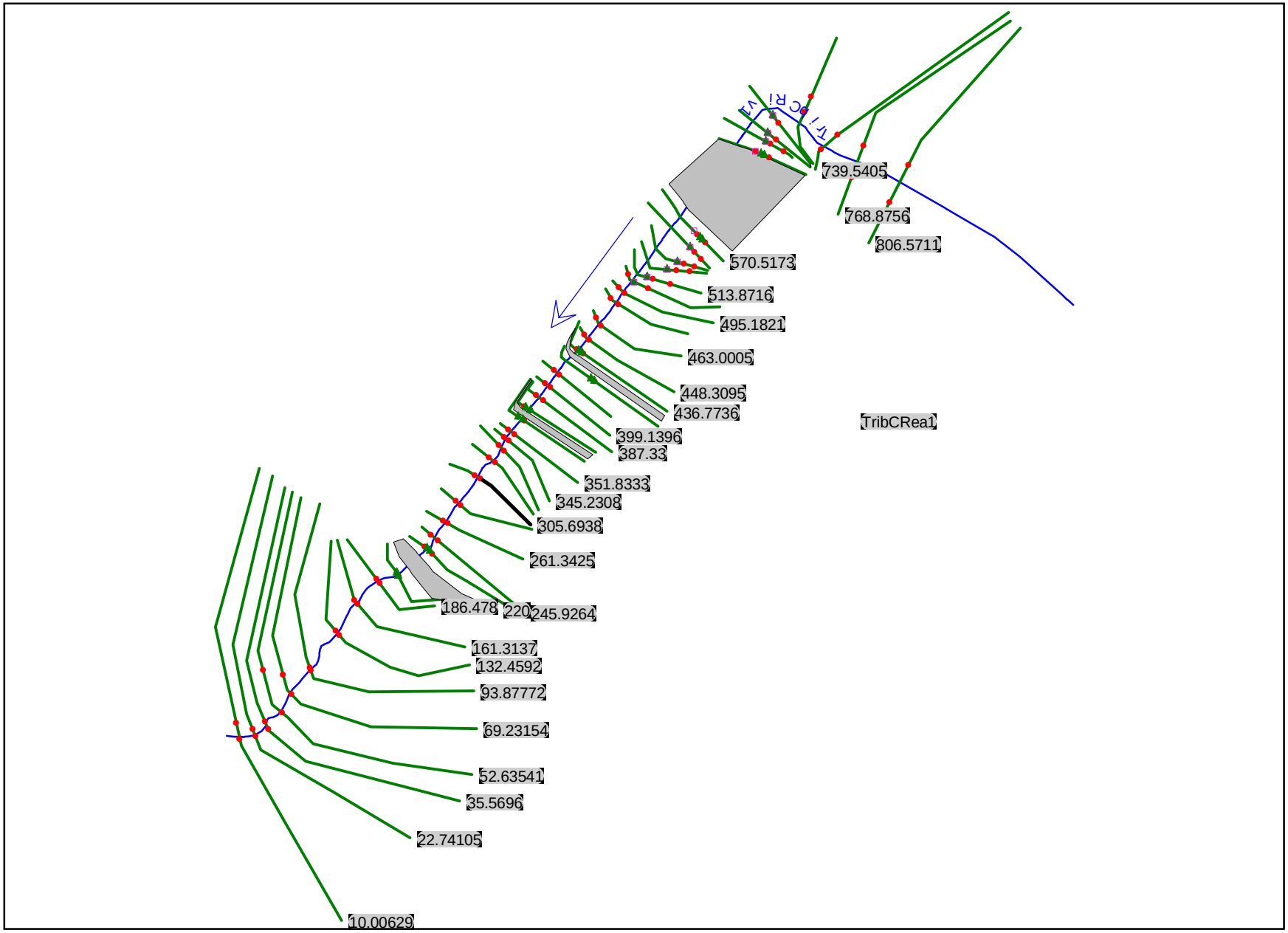
.05
.03
.05
Legend
WS Regional
WS 100yr
WS 50yr
WS 25yr
WS 10yr
WS 5yr
WS 2yr
Ground
Ineff
Bank Sta
Elevation (m)
Station (m)
179
178
177
176
175
174
0
10
20
30
40
50
60
70
80

Milton Logistics Hub 2020 HEC-RAS Model Output

Culvert C7 Proposed Conditions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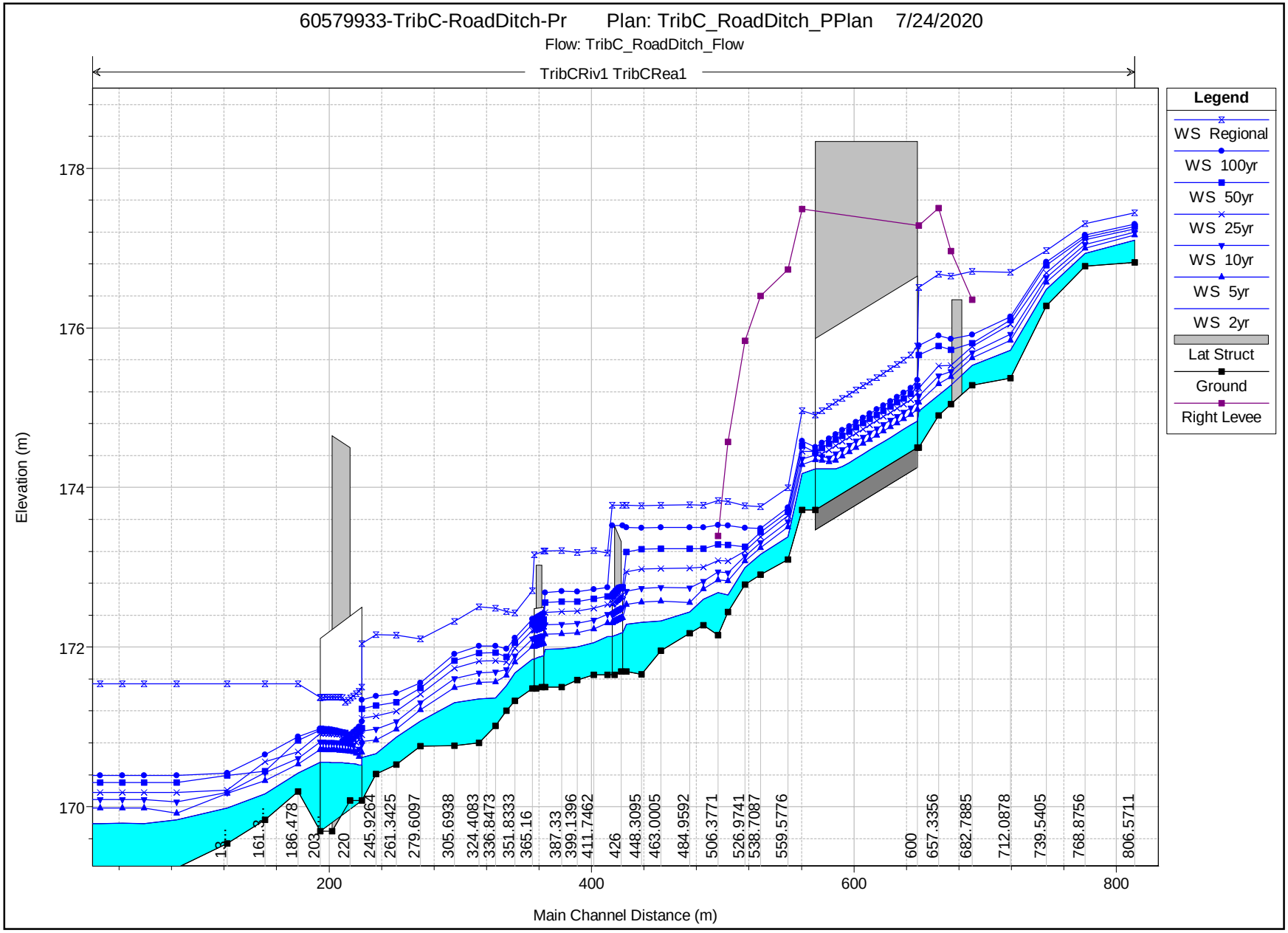
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TribCRiv1 TribCRea1
Legend
WS Regional
WS 100yr
WS 50yr
WS 25yr
WS 10yr
WS 5yr
WS 2yr
Lat Struct
Ground
Right Levee
Elevation (m)
178
176
174
172
170
200
400
600
800
Main Channel Distance (m)
186.478
203...
220
245.9264
261.3425
279.6097
305.6938
324.4083
336.8473
351.8333
365.16
387.33
399.1396
411.7462
426
448.3095
463.0005
484.9592
506.3771
526.9741
538.7087
559.5776
600
657.3356
682.7885
712.0878
739.5405
768.8756
806.5711

HEC-RAS Plan: TribCRDPrP River: TribCRiv1 Reach: TribCRea1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	806.5711	2yr	0.99	176.82	177.10		177.10	0.001736	0.35	2.83	22.43	0.31
TribCRea1	806.5711	5yr	1.82	176.82	177.16		177.17	0.001654	0.40	4.61	30.98	0.32
TribCRea1	806.5711	10yr	2.45	176.82	177.20		177.21	0.001594	0.44	5.73	33.58	0.32
TribCRea1	806.5711	25yr	3.32	176.82	177.24		177.25	0.001501	0.48	7.25	36.68	0.32
TribCRea1	806.5711	50yr	4.03	176.82	177.27		177.28	0.001470	0.51	8.40	38.85	0.32
TribCRea1	806.5711	100yr	4.72	176.82	177.30		177.31	0.001451	0.53	9.50	42.83	0.33
TribCRea1	806.5711	Regional	9.50	176.82	177.44		177.46	0.001282	0.65	17.02	60.74	0.33
TribCRea1	768.8756	2yr	0.99	176.77	176.93		176.97	0.011163	0.82	1.21	10.77	0.78
TribCRea1	768.8756	5yr	1.82	176.77	177.00		177.04	0.009402	0.92	1.98	13.08	0.75
TribCRea1	768.8756	10yr	2.45	176.77	177.04		177.09	0.008320	0.93	2.64	15.62	0.72
TribCRea1	768.8756	25yr	3.32	176.77	177.10		177.14	0.006668	0.91	3.65	18.94	0.66
TribCRea1	768.8756	50yr	4.03	176.77	177.14		177.18	0.006236	0.93	4.34	20.69	0.65
TribCRea1	768.8756	100yr	4.72	176.77	177.16		177.21	0.006099	0.97	4.88	21.56	0.65
TribCRea1	768.8756	Regional	9.50	176.77	177.31		177.37	0.005309	1.14	8.47	33.36	0.64
TribCRea1	739.5405	2yr	0.99	176.28	176.48	176.48	176.57	0.016413	1.31	0.76	4.37	1.01
TribCRea1	739.5405	5yr	1.82	176.28	176.57	176.57	176.69	0.014811	1.52	1.20	5.10	1.00
TribCRea1	739.5405	10yr	2.45	176.28	176.63	176.63	176.77	0.014263	1.64	1.50	5.54	1.01
TribCRea1	739.5405	25yr	3.32	176.28	176.69	176.69	176.86	0.014385	1.80	1.84	6.01	1.03
TribCRea1	739.5405	50yr	4.03	176.28	176.79	176.79	176.90	0.014757	1.52	2.66	11.61	1.01
TribCRea1	739.5405	100yr	4.72	176.28	176.82	176.82	176.94	0.014447	1.51	3.14	13.58	1.00
TribCRea1	739.5405	Regional	9.50	176.28	176.97	176.97	177.13	0.013410	1.79	5.38	17.19	1.01
TribCRea1	712.0878	2yr	0.99	175.37	175.72		175.75	0.003182	0.79	1.26	4.53	0.48
TribCRea1	712.0878	5yr	1.82	175.37	175.85		175.89	0.003728	0.98	1.86	5.38	0.53
TribCRea1	712.0878	10yr	2.45	175.37	175.92		175.98	0.004044	1.06	2.30	6.22	0.56
TribCRea1	712.0878	25yr	3.32	175.37	176.05		176.10	0.004969	0.97	3.41	12.46	0.60
TribCRea1	712.0878	50yr	4.03	175.37	176.10		176.15	0.004234	0.99	4.07	12.85	0.56
TribCRea1	712.0878	100yr	4.72	175.37	176.14		176.19	0.003960	1.03	4.58	13.00	0.55
TribCRea1	712.0878	Regional	9.50	175.37	176.70		176.73	0.000658	0.77	13.21	23.86	0.26
TribCRea1	682.7885	2yr	0.99	175.28	175.53	175.50	175.59	0.010700	1.14	0.87	4.47	0.83
TribCRea1	682.7885	5yr	1.82	175.28	175.62	175.59	175.72	0.010138	1.37	1.33	5.00	0.85
TribCRea1	682.7885	10yr	2.45	175.28	175.69	175.65	175.80	0.009461	1.47	1.67	5.36	0.84
TribCRea1	682.7885	25yr	3.32	175.28	175.77	175.72	175.89	0.009029	1.58	2.10	5.77	0.84
TribCRea1	682.7885	50yr	4.03	175.28	175.81	175.77	175.96	0.009567	1.71	2.35	6.01	0.87
TribCRea1	682.7885	100yr	4.72	175.28	175.91	175.82	176.04	0.006596	1.57	3.00	6.56	0.74
TribCRea1	682.7885	Regional	9.50	175.28	176.71	176.06	176.71	0.000080	0.33	44.37	39.40	0.10

HEC-RAS Plan: TribCRDPrP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	682.7		Lat Struct									
TribCRea1	666.617	2yr	0.99	175.05	175.28	175.28	175.38	0.015914	1.39	0.71	3.62	1.01
TribCRea1	666.617	5yr	1.82	175.05	175.39	175.39	175.52	0.014189	1.63	1.11	4.07	1.00
TribCRea1	666.617	10yr	2.45	175.05	175.45	175.45	175.61	0.013835	1.78	1.38	4.34	1.01
TribCRea1	666.617	25yr	3.32	175.05	175.53	175.53	175.72	0.012905	1.90	1.75	4.69	1.00
TribCRea1	666.617	50yr	4.03	175.05	175.72	175.59	175.83	0.005426	1.48	2.72	5.52	0.67
TribCRea1	666.617	100yr	4.72	175.05	175.86	175.64	175.95	0.003641	1.34	3.52	6.11	0.56
TribCRea1	666.617	Regional	9.50	175.05	176.65	175.92	176.70	0.000844	1.02	9.70	9.51	0.30
TribCRea1	657.3356	2yr	0.99	174.90	175.16	175.08	175.19	0.003941	0.74	1.34	6.32	0.51
TribCRea1	657.3356	5yr	1.82	174.90	175.30	175.15	175.33	0.002671	0.79	2.30	7.29	0.45
TribCRea1	657.3356	10yr	2.45	174.90	175.40	175.20	175.43	0.002134	0.80	3.05	7.97	0.41
TribCRea1	657.3356	25yr	3.32	174.90	175.53	175.26	175.56	0.001653	0.80	4.13	8.85	0.38
TribCRea1	657.3356	50yr	4.03	174.90	175.77	175.30	175.79	0.000652	0.62	6.52	10.41	0.25
TribCRea1	657.3356	100yr	4.72	174.90	175.90	175.34	175.92	0.000502	0.60	7.88	11.08	0.22
TribCRea1	657.3356	Regional	9.50	174.90	176.67	175.55	176.69	0.000177	0.57	18.01	15.13	0.15
TribCRea1	642.2469	2yr	0.99	174.50	174.96	174.96	175.07	0.018079	1.48	0.67	3.29	0.99
TribCRea1	642.2469	5yr	1.82	174.50	175.07	175.07	175.24	0.016215	1.82	1.00	3.74	1.01
TribCRea1	642.2469	10yr	2.45	174.50	175.14	175.14	175.35	0.014792	2.00	1.23	4.05	0.99
TribCRea1	642.2469	25yr	3.32	174.50	175.25	175.24	175.49	0.012779	2.16	1.54	4.48	0.96
TribCRea1	642.2469	50yr	4.03	174.50	175.66	175.30	175.77	0.002660	1.46	2.77	6.16	0.48
TribCRea1	642.2469	100yr	4.72	174.50	175.78	175.37	175.90	0.002430	1.51	3.13	6.65	0.47
TribCRea1	642.2469	Regional	9.50	174.50	176.50	175.75	176.67	0.001699	1.79	5.30	9.62	0.43
TribCRea1	600		Culvert									
TribCRea1	570.5173	2yr	0.99	173.72	174.17	174.17	174.29	0.018578	1.49	0.66	3.24	1.00
TribCRea1	570.5173	5yr	1.82	173.72	174.29	174.29	174.45	0.016170	1.82	1.00	3.62	1.00
TribCRea1	570.5173	10yr	2.45	173.72	174.36	174.36	174.56	0.015264	2.01	1.22	3.92	1.00
TribCRea1	570.5173	25yr	3.32	173.72	174.45	174.45	174.70	0.014125	2.22	1.50	4.31	1.00
TribCRea1	570.5173	50yr	4.03	173.72	174.52	174.52	174.81	0.013445	2.36	1.71	4.60	1.00
TribCRea1	570.5173	100yr	4.72	173.72	174.58	174.58	174.90	0.013035	2.49	1.89	4.86	1.00
TribCRea1	570.5173	Regional	9.50	173.72	174.96	174.96	175.47	0.011126	3.14	3.02	6.42	1.00
TribCRea1	559.5776	2yr	0.99	173.10	173.38	173.34	173.45	0.008524	1.15	0.86	3.62	0.76
TribCRea1	559.5776	5yr	1.82	173.10	173.50	173.45	173.60	0.008040	1.37	1.33	4.12	0.77
TribCRea1	559.5776	10yr	2.45	173.10	173.57	173.51	173.69	0.008518	1.52	1.61	4.39	0.80
TribCRea1	559.5776	25yr	3.32	173.10	173.65	173.59	173.79	0.008991	1.70	1.95	4.70	0.84

HEC-RAS Plan: TribCRDPrP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	559.5776	50yr	4.03	173.10	173.70	173.65	173.87	0.009444	1.83	2.20	4.92	0.87
TribCRea1	559.5776	100yr	4.72	173.10	173.75	173.70	173.94	0.009625	1.93	2.45	5.12	0.89
TribCRea1	559.5776	Regional	9.50	173.10	173.99	173.99	174.31	0.011209	2.47	3.84	6.14	1.00
TribCRea1	538.7087	2yr	0.99	172.91	173.16	173.14	173.24	0.011923	1.25	0.79	3.85	0.88
TribCRea1	538.7087	5yr	1.82	172.91	173.24	173.24	173.38	0.014205	1.61	1.13	4.23	1.00
TribCRea1	538.7087	10yr	2.45	172.91	173.31	173.31	173.46	0.013557	1.74	1.41	4.52	1.00
TribCRea1	538.7087	25yr	3.32	172.91	173.38	173.38	173.56	0.013089	1.89	1.76	4.87	1.00
TribCRea1	538.7087	50yr	4.03	172.91	173.44	173.44	173.64	0.012602	1.97	2.04	5.13	1.00
TribCRea1	538.7087	100yr	4.72	172.91	173.49	173.49	173.70	0.012631	2.07	2.28	5.34	1.01
TribCRea1	538.7087	Regional	9.50	172.91	173.76	173.76	174.06	0.011233	2.42	3.93	6.61	1.00
TribCRea1	526.9741	2yr	0.99	172.78	172.99	172.99	173.08	0.016343	1.29	0.77	4.59	1.00
TribCRea1	526.9741	5yr	1.82	172.78	173.08	173.08	173.20	0.014921	1.53	1.19	5.11	1.01
TribCRea1	526.9741	10yr	2.45	172.78	173.14	173.14	173.28	0.013928	1.64	1.50	5.45	1.00
TribCRea1	526.9741	25yr	3.32	172.78	173.21	173.21	173.37	0.013281	1.77	1.87	5.85	1.00
TribCRea1	526.9741	50yr	4.03	172.78	173.26	173.26	173.43	0.012812	1.86	2.17	6.15	1.00
TribCRea1	526.9741	100yr	4.72	172.78	173.49	173.30	173.57	0.003637	1.24	3.79	7.57	0.56
TribCRea1	526.9741	Regional	9.50	172.78	173.77	173.54	173.89	0.003842	1.54	6.17	9.27	0.60
TribCRea1	513.8716	2yr	0.99	172.44	172.65	172.63	172.71	0.011428	1.05	0.94	5.85	0.83
TribCRea1	513.8716	5yr	1.82	172.44	172.83	172.71	172.87	0.003644	0.87	2.09	7.26	0.52
TribCRea1	513.8716	10yr	2.45	172.44	172.93	172.76	172.97	0.002688	0.86	2.85	8.02	0.46
TribCRea1	513.8716	25yr	3.32	172.44	173.08	172.82	173.11	0.001713	0.80	4.14	9.16	0.38
TribCRea1	513.8716	50yr	4.03	172.44	173.28	172.86	173.30	0.000836	0.66	6.14	10.70	0.28
TribCRea1	513.8716	100yr	4.72	172.44	173.52	172.89	173.54	0.000401	0.52	9.00	12.64	0.20
TribCRea1	513.8716	Regional	9.50	172.44	173.82	173.11	173.85	0.000544	0.73	13.13	15.01	0.24
TribCRea1	506.3771	2yr	0.99	172.15	172.68	172.35	172.69	0.000351	0.33	3.03	7.86	0.17
TribCRea1	506.3771	5yr	1.82	172.15	172.84	172.43	172.85	0.000415	0.41	4.39	9.02	0.19
TribCRea1	506.3771	10yr	2.45	172.15	172.94	172.48	172.95	0.000442	0.46	5.31	9.72	0.20
TribCRea1	506.3771	25yr	3.32	172.15	173.09	172.54	173.10	0.000407	0.49	6.81	10.77	0.20
TribCRea1	506.3771	50yr	4.03	172.15	173.28	172.58	173.29	0.000267	0.44	9.07	12.18	0.16
TribCRea1	506.3771	100yr	4.72	172.15	173.53	172.62	173.53	0.000070	0.25	19.02	26.90	0.09
TribCRea1	506.3771	Regional	9.50	172.15	173.84	172.84	173.84	0.000101	0.37	27.89	29.71	0.11
TribCRea1	495.1821	2yr	0.99	172.28	172.60	172.54	172.67	0.007967	1.17	0.85	3.24	0.73
TribCRea1	495.1821	5yr	1.82	172.28	172.73	172.66	172.83	0.007883	1.39	1.31	3.75	0.75
TribCRea1	495.1821	10yr	2.45	172.28	172.82		172.93	0.008227	1.44	1.70	4.86	0.78
TribCRea1	495.1821	25yr	3.32	172.28	173.00		173.08	0.004345	1.26	2.64	5.72	0.59

HEC-RAS Plan: TribCRDPrP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	495.1821	50yr	4.03	172.28	173.24		173.28	0.001789	0.98	4.12	6.87	0.40
TribCRea1	495.1821	100yr	4.72	172.28	173.50		173.53	0.000740	0.80	6.45	14.61	0.27
TribCRea1	495.1821	Regional	9.50	172.28	173.78		173.84	0.001017	1.12	10.60	15.19	0.33
TribCRea1	484.9592	2yr	0.99	172.17	172.44	172.44	172.55	0.016090	1.49	0.66	2.92	1.00
TribCRea1	484.9592	5yr	1.82	172.17	172.56	172.56	172.72	0.015025	1.76	1.04	3.34	1.01
TribCRea1	484.9592	10yr	2.45	172.17	172.74		172.84	0.008846	1.37	1.79	5.71	0.78
TribCRea1	484.9592	25yr	3.32	172.17	172.99		173.04	0.002630	1.00	3.32	6.83	0.46
TribCRea1	484.9592	50yr	4.03	172.17	173.23		173.27	0.001038	0.79	5.15	7.98	0.30
TribCRea1	484.9592	100yr	4.72	172.17	173.50		173.52	0.000483	0.65	8.18	16.28	0.22
TribCRea1	484.9592	Regional	9.50	172.17	173.78		173.82	0.000674	0.91	12.84	16.74	0.27
TribCRea1	463.0005	2yr	0.99	171.96	172.33		172.36	0.002839	0.75	1.32	4.60	0.45
TribCRea1	463.0005	5yr	1.82	171.96	172.58		172.60	0.001366	0.70	2.60	5.72	0.33
TribCRea1	463.0005	10yr	2.45	171.96	172.75		172.77	0.000962	0.67	3.64	6.49	0.29
TribCRea1	463.0005	25yr	3.32	171.96	172.98		173.00	0.000608	0.62	5.32	7.58	0.24
TribCRea1	463.0005	50yr	4.03	171.96	173.23		173.25	0.000334	0.56	7.34	8.82	0.18
TribCRea1	463.0005	100yr	4.72	171.96	173.50		173.51	0.000187	0.49	10.81	14.06	0.14
TribCRea1	463.0005	Regional	9.50	171.96	173.78		173.81	0.000344	0.77	14.78	14.30	0.20
TribCRea1	448.3095	2yr	0.99	171.66	172.31		172.33	0.001103	0.58	1.71	4.17	0.29
TribCRea1	448.3095	5yr	1.82	171.66	172.56		172.58	0.000888	0.63	2.89	5.23	0.27
TribCRea1	448.3095	10yr	2.45	171.66	172.74		172.76	0.000685	0.64	3.86	5.99	0.25
TribCRea1	448.3095	25yr	3.32	171.66	172.98		173.00	0.000453	0.63	5.43	7.06	0.21
TribCRea1	448.3095	50yr	4.03	171.66	173.23		173.24	0.000293	0.60	7.49	11.92	0.18
TribCRea1	448.3095	100yr	4.72	171.66	173.50		173.51	0.000178	0.53	11.05	13.43	0.14
TribCRea1	448.3095	Regional	9.50	171.66	173.77		173.80	0.000355	0.85	14.80	14.01	0.21
TribCRea1	436.7736	2yr	0.99	171.69	172.29	172.02	172.31	0.001494	0.72	1.38	3.68	0.35
TribCRea1	436.7736	5yr	1.82	171.69	172.53	172.15	172.57	0.001135	0.84	2.16	4.66	0.32
TribCRea1	436.7736	10yr	2.45	171.69	172.70	172.24	172.74	0.000986	0.91	2.70	5.34	0.31
TribCRea1	436.7736	25yr	3.32	171.69	172.94	172.33	172.99	0.000798	0.96	3.45	6.29	0.29
TribCRea1	436.7736	50yr	4.03	171.69	173.19	172.40	173.24	0.000591	0.95	4.24	19.74	0.26
TribCRea1	436.7736	100yr	4.72	171.69	173.50	172.46	173.51	0.000147	0.45	17.13	34.11	0.13
TribCRea1	436.7736	Regional	9.50	171.69	173.78	172.82	173.79	0.000207	0.61	26.87	34.76	0.15
TribCRea1	426		Culvert									
TribCRea1	422.3931	2yr	0.99	171.65	172.13	171.89	172.16	0.001964	0.75	1.31	2.87	0.36
TribCRea1	422.3931	5yr	1.82	171.65	172.30	172.01	172.36	0.002538	1.00	1.82	2.97	0.41

HEC-RAS Plan: TribCRDPrP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	422.3931	10yr	2.45	171.65	172.41	172.09	172.48	0.002919	1.15	2.14	3.09	0.44
TribCRea1	422.3931	25yr	3.32	171.65	172.53	172.19	172.62	0.003183	1.31	2.53	3.24	0.47
TribCRea1	422.3931	50yr	4.03	171.65	172.64	172.26	172.74	0.003166	1.41	2.85	3.38	0.48
TribCRea1	422.3931	100yr	4.72	171.65	172.75	172.33	172.85	0.003277	1.45	3.26	3.66	0.48
TribCRea1	422.3931	Regional	9.50	171.65	173.18	172.73	173.37	0.003991	1.95	5.11	5.25	0.55
TribCRea1	411.7462	2yr	0.99	171.65	172.06		172.12	0.005950	1.13	0.88	2.78	0.64
TribCRea1	411.7462	5yr	1.82	171.65	172.23		172.31	0.005575	1.29	1.41	3.42	0.64
TribCRea1	411.7462	10yr	2.45	171.65	172.34		172.43	0.005092	1.35	1.81	3.84	0.63
TribCRea1	411.7462	25yr	3.32	171.65	172.49		172.58	0.004336	1.37	2.41	4.39	0.59
TribCRea1	411.7462	50yr	4.03	171.65	172.60		172.70	0.003705	1.36	2.96	4.84	0.56
TribCRea1	411.7462	100yr	4.72	171.65	172.72		172.81	0.003073	1.32	3.57	5.38	0.51
TribCRea1	411.7462	Regional	9.50	171.65	173.21		173.32	0.001942	1.46	7.36	11.72	0.44
TribCRea1	399.1396	2yr	0.99	171.59	172.00		172.05	0.004366	0.99	1.00	3.02	0.55
TribCRea1	399.1396	5yr	1.82	171.59	172.18		172.25	0.004019	1.15	1.58	3.53	0.55
TribCRea1	399.1396	10yr	2.45	171.59	172.30		172.37	0.003721	1.22	2.01	3.87	0.54
TribCRea1	399.1396	25yr	3.32	171.59	172.45		172.53	0.003247	1.26	2.63	4.28	0.51
TribCRea1	399.1396	50yr	4.03	171.59	172.57		172.65	0.002846	1.27	3.17	4.60	0.49
TribCRea1	399.1396	100yr	4.72	171.59	172.70		172.78	0.002436	1.25	3.77	4.92	0.46
TribCRea1	399.1396	Regional	9.50	171.59	173.19		173.29	0.001794	1.46	7.68	16.38	0.42
TribCRea1	387.33	2yr	0.99	171.50	171.98		172.01	0.002447	0.78	1.28	3.75	0.42
TribCRea1	387.33	5yr	1.82	171.50	172.17		172.21	0.002217	0.89	2.04	4.46	0.42
TribCRea1	387.33	10yr	2.45	171.50	172.29		172.33	0.002026	0.94	2.61	4.92	0.41
TribCRea1	387.33	25yr	3.32	171.50	172.44		172.49	0.001804	0.96	3.44	5.69	0.40
TribCRea1	387.33	50yr	4.03	171.50	172.57		172.62	0.001588	0.96	4.21	6.39	0.38
TribCRea1	387.33	100yr	4.72	171.50	172.70		172.75	0.001283	0.93	5.08	7.11	0.35
TribCRea1	387.33	Regional	9.50	171.50	173.21		173.26	0.000814	1.05	11.41	24.29	0.30
TribCRea1	374.7503	2yr	0.99	171.50	171.97	171.70	171.99	0.000887	0.53	1.85	4.31	0.25
TribCRea1	374.7503	5yr	1.82	171.50	172.16	171.79	172.18	0.000995	0.69	2.62	4.60	0.28
TribCRea1	374.7503	10yr	2.45	171.50	172.28	171.85	172.31	0.001043	0.79	3.12	4.79	0.29
TribCRea1	374.7503	25yr	3.32	171.50	172.43	171.93	172.47	0.001071	0.88	3.76	5.03	0.30
TribCRea1	374.7503	50yr	4.03	171.50	172.56	171.98	172.60	0.001076	0.94	4.27	5.49	0.30
TribCRea1	374.7503	100yr	4.72	171.50	172.68	172.04	172.73	0.001001	0.98	4.80	6.46	0.29
TribCRea1	374.7503	Regional	9.50	171.50	173.20	172.34	173.25	0.000765	1.05	13.43	35.74	0.27
TribCRea1	370		Culvert									

HEC-RAS Plan: TribCRDPrP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	365.16	2yr	0.99	171.48	171.85	171.69	171.88	0.002490	0.76	1.30	3.87	0.42
TribCRea1	365.16	5yr	1.82	171.48	172.01	171.79	172.05	0.002486	0.93	1.95	4.22	0.43
TribCRea1	365.16	10yr	2.45	171.48	172.10	171.86	172.16	0.002533	1.05	2.34	4.43	0.45
TribCRea1	365.16	25yr	3.32	171.48	172.21	171.94	172.28	0.002669	1.19	2.79	4.66	0.47
TribCRea1	365.16	50yr	4.03	171.48	172.29	172.00	172.37	0.002802	1.30	3.11	4.83	0.48
TribCRea1	365.16	100yr	4.72	171.48	172.35	172.05	172.45	0.002918	1.40	3.37	4.97	0.50
TribCRea1	365.16	Regional	9.50	171.48	172.71	172.35	172.86	0.003814	1.75	5.43	5.76	0.58
TribCRea1	351.8333	2yr	0.99	171.33	171.68	171.68	171.80	0.015550	1.57	0.63	2.55	1.01
TribCRea1	351.8333	5yr	1.82	171.33	171.81	171.81	171.98	0.014383	1.80	1.01	3.10	1.01
TribCRea1	351.8333	10yr	2.45	171.33	171.89	171.89	172.08	0.013865	1.92	1.27	3.43	1.01
TribCRea1	351.8333	25yr	3.32	171.33	171.99	171.99	172.20	0.013362	2.05	1.62	3.82	1.01
TribCRea1	351.8333	50yr	4.03	171.33	172.05	172.05	172.29	0.013049	2.14	1.88	4.09	1.01
TribCRea1	351.8333	100yr	4.72	171.33	172.11	172.11	172.36	0.012786	2.21	2.13	4.34	1.01
TribCRea1	351.8333	Regional	9.50	171.33	172.43	172.43	172.76	0.011664	2.56	3.71	5.64	1.01
TribCRea1	345.2308	2yr	0.99	171.20	171.52	171.52	171.64	0.015619	1.52	0.65	2.77	1.00
TribCRea1	345.2308	5yr	1.82	171.20	171.64	171.64	171.80	0.014371	1.75	1.04	3.33	1.00
TribCRea1	345.2308	10yr	2.45	171.20	171.72	171.72	171.90	0.013966	1.88	1.30	3.66	1.01
TribCRea1	345.2308	25yr	3.32	171.20	171.81	171.81	172.02	0.013460	2.01	1.65	4.05	1.01
TribCRea1	345.2308	50yr	4.03	171.20	171.88	171.87	172.10	0.012871	2.09	1.93	4.35	1.00
TribCRea1	345.2308	100yr	4.72	171.20	171.98	171.93	172.18	0.009560	1.98	2.39	4.76	0.88
TribCRea1	345.2308	Regional	9.50	171.20	172.45	172.23	172.65	0.004216	2.02	5.51	12.30	0.65
TribCRea1	336.8473	2yr	0.99	171.01	171.36		171.42	0.006374	1.09	0.91	3.27	0.66
TribCRea1	336.8473	5yr	1.82	171.01	171.56		171.63	0.003934	1.12	1.63	3.80	0.55
TribCRea1	336.8473	10yr	2.45	171.01	171.69		171.75	0.003400	1.16	2.11	4.11	0.52
TribCRea1	336.8473	25yr	3.32	171.01	171.83		171.90	0.003038	1.22	2.72	4.47	0.50
TribCRea1	336.8473	50yr	4.03	171.01	171.93		172.01	0.002880	1.27	3.18	4.72	0.49
TribCRea1	336.8473	100yr	4.72	171.01	172.02		172.10	0.002787	1.31	3.60	4.93	0.49
TribCRea1	336.8473	Regional	9.50	171.01	172.49		172.59	0.002224	1.46	8.32	26.10	0.46
TribCRea1	324.4083	2yr	0.99	170.80	171.35		171.38	0.001574	0.68	1.45	3.58	0.34
TribCRea1	324.4083	5yr	1.82	170.80	171.56		171.59	0.001577	0.81	2.25	4.27	0.36
TribCRea1	324.4083	10yr	2.45	170.80	171.68		171.72	0.001569	0.88	2.80	4.69	0.36
TribCRea1	324.4083	25yr	3.32	170.80	171.82		171.87	0.001557	0.95	3.51	5.18	0.37
TribCRea1	324.4083	50yr	4.03	170.80	171.92		171.97	0.001527	0.99	4.05	5.52	0.37
TribCRea1	324.4083	100yr	4.72	170.80	172.01		172.07	0.001484	1.04	4.56	5.82	0.37
TribCRea1	324.4083	Regional	9.50	170.80	172.50		172.56	0.000995	1.11	11.85	21.76	0.32

HEC-RAS Plan: TribCRDPrP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	305.6938	2yr	0.99	170.77	171.30		171.34	0.002257	0.82	1.20	2.73	0.40
TribCRea1	305.6938	5yr	1.82	170.77	171.49		171.55	0.002658	1.04	1.75	3.07	0.44
TribCRea1	305.6938	10yr	2.45	170.77	171.61		171.68	0.002876	1.16	2.11	3.28	0.46
TribCRea1	305.6938	25yr	3.32	170.77	171.74		171.82	0.003123	1.30	2.55	3.52	0.49
TribCRea1	305.6938	50yr	4.03	170.77	171.83		171.93	0.003294	1.40	2.89	3.69	0.50
TribCRea1	305.6938	100yr	4.72	170.77	171.91		172.02	0.003443	1.48	3.19	3.83	0.52
TribCRea1	305.6938	Regional	9.50	170.77	172.32		172.51	0.004324	1.93	4.92	4.61	0.59
TribCRea1	279.6097	2yr	0.99	170.76	171.07	171.07	171.21	0.016067	1.62	0.61	2.28	1.00
TribCRea1	279.6097	5yr	1.82	170.76	171.21	171.21	171.40	0.015200	1.92	0.95	2.58	1.01
TribCRea1	279.6097	10yr	2.45	170.76	171.30	171.30	171.52	0.014637	2.06	1.19	2.79	1.01
TribCRea1	279.6097	25yr	3.32	170.76	171.41	171.41	171.66	0.014154	2.21	1.50	3.05	1.01
TribCRea1	279.6097	50yr	4.03	170.76	171.48	171.48	171.76	0.013830	2.31	1.74	3.23	1.01
TribCRea1	279.6097	100yr	4.72	170.76	171.55	171.55	171.85	0.013556	2.40	1.97	3.39	1.00
TribCRea1	279.6097	Regional	9.50	170.76	172.10		172.37	0.006649	2.27	4.20	4.67	0.75
TribCRea1	261.3425	2yr	0.99	170.53	170.87	170.79	170.93	0.006597	1.13	0.87	2.97	0.67
TribCRea1	261.3425	5yr	1.82	170.53	170.97		171.09	0.008759	1.52	1.20	3.22	0.79
TribCRea1	261.3425	10yr	2.45	170.53	171.06		171.20	0.008332	1.63	1.50	3.44	0.79
TribCRea1	261.3425	25yr	3.32	170.53	171.20		171.34	0.006978	1.68	1.98	3.76	0.74
TribCRea1	261.3425	50yr	4.03	170.53	171.31		171.45	0.005930	1.67	2.41	4.03	0.69
TribCRea1	261.3425	100yr	4.72	170.53	171.42		171.56	0.004946	1.64	2.87	4.29	0.64
TribCRea1	261.3425	Regional	9.50	170.53	172.15		172.27	0.001651	1.54	6.65	6.04	0.42
TribCRea1	245.9264	2yr	0.99	170.41	170.66	170.66	170.78	0.015839	1.50	0.66	2.91	1.01
TribCRea1	245.9264	5yr	1.82	170.41	170.84		170.95	0.008982	1.51	1.21	3.35	0.80
TribCRea1	245.9264	10yr	2.45	170.41	170.97		171.08	0.006246	1.46	1.68	3.69	0.69
TribCRea1	245.9264	25yr	3.32	170.41	171.14		171.24	0.004553	1.43	2.33	4.11	0.60
TribCRea1	245.9264	50yr	4.03	170.41	171.27		171.37	0.003751	1.41	2.87	4.43	0.56
TribCRea1	245.9264	100yr	4.72	170.41	171.39		171.48	0.003142	1.38	3.43	4.73	0.52
TribCRea1	245.9264	Regional	9.50	170.41	172.16		172.23	0.001349	1.22	7.80	6.63	0.36
TribCRea1	235.0288	2yr	0.99	170.08	170.61	170.40	170.66	0.002871	0.91	1.09	2.46	0.44
TribCRea1	235.0288	5yr	1.82	170.08	170.82	170.55	170.88	0.003156	1.12	1.63	2.82	0.47
TribCRea1	235.0288	10yr	2.45	170.08	170.95	170.64	171.03	0.003078	1.22	2.00	3.04	0.47
TribCRea1	235.0288	25yr	3.32	170.08	171.11	170.75	171.20	0.002986	1.34	2.47	3.32	0.47
TribCRea1	235.0288	50yr	4.03	170.08	171.23	170.83	171.33	0.002799	1.42	2.83	3.52	0.47
TribCRea1	235.0288	100yr	4.72	170.08	171.34	170.90	171.45	0.002650	1.49	3.17	3.74	0.47
TribCRea1	235.0288	Regional	9.50	170.08	172.04	171.29	172.21	0.001933	1.79	5.29	5.61	0.43

HEC-RAS Plan: TribCRDPrP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	220		Culvert									
TribCRea1	203.3724	2yr	0.99	169.69	170.56	169.99	170.57	0.000672	0.54	1.84	2.51	0.20
TribCRea1	203.3724	5yr	1.82	169.69	170.72	170.14	170.75	0.001294	0.80	2.27	2.82	0.28
TribCRea1	203.3724	10yr	2.45	169.69	170.81	170.23	170.86	0.001688	0.97	2.52	3.00	0.32
TribCRea1	203.3724	25yr	3.32	169.69	170.92	170.35	170.99	0.002145	1.18	2.83	3.40	0.37
TribCRea1	203.3724	50yr	4.03	169.69	170.96	170.44	171.05	0.002777	1.37	2.95	3.92	0.43
TribCRea1	203.3724	100yr	4.72	169.69	170.98	170.53	171.10	0.003581	1.58	3.01	4.19	0.48
TribCRea1	203.3724	Regional	9.50	169.69	171.37	170.97	171.64	0.005100	2.31	4.19	34.58	0.61
TribCRea1	186.478	2yr	0.99	170.19	170.42	170.42	170.53	0.015980	1.45	0.69	3.25	1.00
TribCRea1	186.478	5yr	1.82	170.19	170.53	170.53	170.68	0.014560	1.72	1.06	3.52	1.01
TribCRea1	186.478	10yr	2.45	170.19	170.60	170.60	170.78	0.013917	1.87	1.31	3.70	1.00
TribCRea1	186.478	25yr	3.32	170.19	170.68	170.68	170.90	0.013750	2.05	1.62	3.90	1.02
TribCRea1	186.478	50yr	4.03	170.19	170.83	170.83	170.98	0.007536	1.75	2.87	15.39	0.78
TribCRea1	186.478	100yr	4.72	170.19	170.88	170.88	171.02	0.006821	1.77	3.72	17.93	0.75
TribCRea1	186.478	Regional	9.50	170.19	171.54		171.55	0.000319	0.64	32.59	60.68	0.18
TribCRea1	161.3137	2yr	0.99	169.83	170.16		170.22	0.006139	1.09	0.91	3.04	0.64
TribCRea1	161.3137	5yr	1.82	169.83	170.32		170.41	0.005480	1.28	1.42	3.31	0.63
TribCRea1	161.3137	10yr	2.45	169.83	170.43		170.52	0.005257	1.39	1.76	3.46	0.62
TribCRea1	161.3137	25yr	3.32	169.83	170.57	170.36	170.67	0.004563	1.44	2.66	17.29	0.59
TribCRea1	161.3137	50yr	4.03	169.83	170.44	170.43	170.69	0.012862	2.21	1.83	3.49	0.97
TribCRea1	161.3137	100yr	4.72	169.83	170.65	170.65	170.76	0.004934	1.59	4.81	29.50	0.62
TribCRea1	161.3137	Regional	9.50	169.83	171.54		171.54	0.000055	0.29	69.85	90.00	0.07
TribCRea1	132.4592	2yr	0.99	169.54	169.98		170.05	0.005949	1.14	0.87	2.64	0.64
TribCRea1	132.4592	5yr	1.82	169.54	170.17		170.25	0.005242	1.29	1.41	3.18	0.62
TribCRea1	132.4592	10yr	2.45	169.54	170.18	170.11	170.33	0.008820	1.69	1.45	3.21	0.81
TribCRea1	132.4592	25yr	3.32	169.54	170.21	170.21	170.45	0.013696	2.16	1.54	3.29	1.01
TribCRea1	132.4592	50yr	4.03	169.54	170.39	170.39	170.45	0.003765	1.29	7.91	90.73	0.54
TribCRea1	132.4592	100yr	4.72	169.54	170.42	170.42	170.47	0.003335	1.23	10.44	94.89	0.51
TribCRea1	132.4592	Regional	9.50	169.54	171.54		171.54	0.000009	0.13	146.70	139.10	0.03
TribCRea1	93.87772	2yr	0.99	169.23	169.84		169.88	0.003038	0.94	1.06	2.23	0.43
TribCRea1	93.87772	5yr	1.82	169.23	169.92	169.76	170.03	0.006495	1.46	1.34	10.47	0.64
TribCRea1	93.87772	10yr	2.45	169.23	170.06	169.86	170.11	0.003077	1.14	4.36	38.09	0.45
TribCRea1	93.87772	25yr	3.32	169.23	170.18		170.19	0.000949	0.69	15.98	138.07	0.25
TribCRea1	93.87772	50yr	4.03	169.23	170.30		170.30	0.000204	0.35	33.86	149.79	0.12
TribCRea1	93.87772	100yr	4.72	169.23	170.39		170.39	0.000105	0.27	47.70	157.81	0.09

HEC-RAS Plan: TribCRDPrP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	93.87772	Regional	9.50	169.23	171.54		171.54	0.000002	0.07	251.60	190.17	0.01
TribCRea1	69.23154	2yr	0.99	169.23	169.79		169.80	0.002845	0.45	2.22	20.11	0.40
TribCRea1	69.23154	5yr	1.82	169.23	169.98		169.98	0.000164	0.20	18.62	141.79	0.11
TribCRea1	69.23154	10yr	2.45	169.23	170.09		170.09	0.000058	0.14	35.75	169.78	0.07
TribCRea1	69.23154	25yr	3.32	169.23	170.18		170.18	0.000038	0.13	51.88	187.19	0.06
TribCRea1	69.23154	50yr	4.03	169.23	170.30		170.30	0.000019	0.11	74.98	197.39	0.04
TribCRea1	69.23154	100yr	4.72	169.23	170.39		170.39	0.000014	0.10	93.05	203.49	0.04
TribCRea1	69.23154	Regional	9.50	169.23	171.54		171.54	0.000001	0.05	346.31	234.66	0.01
TribCRea1	52.63541	2yr	0.99	169.05	169.79		169.79	0.000103	0.13	11.60	81.75	0.08
TribCRea1	52.63541	5yr	1.82	169.05	169.98		169.98	0.000032	0.08	30.30	114.73	0.05
TribCRea1	52.63541	10yr	2.45	169.05	170.09		170.09	0.000020	0.08	43.91	132.86	0.04
TribCRea1	52.63541	25yr	3.32	169.05	170.18		170.18	0.000018	0.09	57.57	172.56	0.04
TribCRea1	52.63541	50yr	4.03	169.05	170.30		170.30	0.000013	0.09	81.13	220.06	0.03
TribCRea1	52.63541	100yr	4.72	169.05	170.39		170.39	0.000009	0.08	101.26	227.34	0.03
TribCRea1	52.63541	Regional	9.50	169.05	171.54		171.54	0.000001	0.04	382.83	260.55	0.01
TribCRea1	35.5696	2yr	0.99	168.87	169.79		169.79	0.000042	0.14	18.75	121.72	0.06
TribCRea1	35.5696	5yr	1.82	168.87	169.98		169.98	0.000015	0.10	43.94	140.06	0.04
TribCRea1	35.5696	10yr	2.45	168.87	170.09		170.09	0.000011	0.10	59.78	148.23	0.03
TribCRea1	35.5696	25yr	3.32	168.87	170.18		170.18	0.000013	0.11	74.51	195.75	0.04
TribCRea1	35.5696	50yr	4.03	168.87	170.30		170.30	0.000009	0.10	98.54	204.26	0.03
TribCRea1	35.5696	100yr	4.72	168.87	170.39		170.39	0.000007	0.09	117.25	211.81	0.03
TribCRea1	35.5696	Regional	9.50	168.87	171.54		171.54	0.000001	0.05	408.21	271.39	0.01
TribCRea1	22.74105	2yr	0.99	168.69	169.79		169.79	0.000013	0.09	28.51	137.07	0.03
TribCRea1	22.74105	5yr	1.82	168.69	169.98		169.98	0.000007	0.08	56.29	155.42	0.03
TribCRea1	22.74105	10yr	2.45	168.69	170.09		170.09	0.000006	0.08	74.04	170.49	0.02
TribCRea1	22.74105	25yr	3.32	168.69	170.18		170.18	0.000007	0.09	91.25	215.31	0.03
TribCRea1	22.74105	50yr	4.03	168.69	170.30		170.30	0.000005	0.08	117.69	223.79	0.02
TribCRea1	22.74105	100yr	4.72	168.69	170.39		170.39	0.000005	0.08	138.05	228.79	0.02
TribCRea1	22.74105	Regional	9.50	168.69	171.54		171.54	0.000001	0.04	419.53	259.62	0.01
TribCRea1	10.00629	2yr	0.99	168.50	169.79	168.83	169.79	0.000004	0.06	38.41	138.83	0.02
TribCRea1	10.00629	5yr	1.82	168.50	169.98	169.03	169.98	0.000003	0.06	65.71	147.44	0.02
TribCRea1	10.00629	10yr	2.45	168.50	170.09	169.07	170.09	0.000003	0.06	82.49	169.29	0.02
TribCRea1	10.00629	25yr	3.32	168.50	170.18	169.11	170.18	0.000004	0.07	99.38	201.45	0.02
TribCRea1	10.00629	50yr	4.03	168.50	170.30	169.14	170.30	0.000003	0.07	124.99	219.22	0.02
TribCRea1	10.00629	100yr	4.72	168.50	170.39	169.16	170.39	0.000003	0.07	144.89	223.35	0.02

HEC-RAS Plan: TribCRDPrP River: TribCRiv1 Reach: TribCRea1 (Continued)

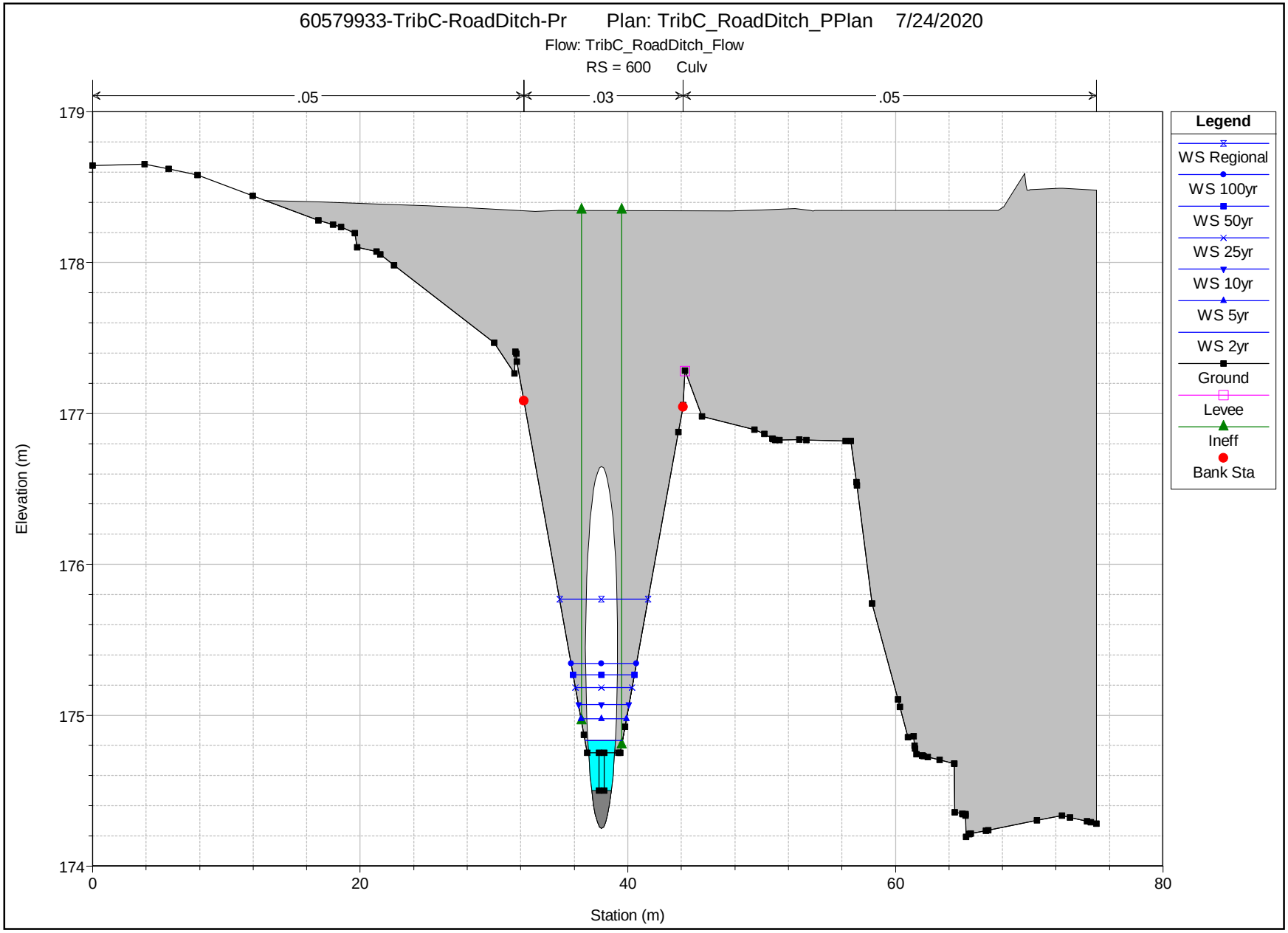
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
TribCRea1	10.00629	Regional	9.50	168.50	171.54	169.31	171.54	0.000001	0.05	416.91	248.16	0.01

HEC-RAS Plan: TribCRDPrP River: TribCRiv1 Reach: TribCRea1

Reach	River Sta		Profile	E.G. US.	W.S. US.	E.G. IC	E.G. OC	Min El Weir Flow	Q Culv Group	Q Weir	Delta WS	Culv Vel US	Culv Vel DS
				(m)	(m)	(m)	(m)	(m)	(m3/s)	(m3/s)	(m)	(m/s)	(m/s)
TribCRea1	600	Culvert #1	2yr	175.04	174.96	174.96	175.04	178.35	0.99		0.79	1.65	1.00
TribCRea1	600	Culvert #1	5yr	175.18	175.07	175.18	175.28	178.35	1.82		0.78	2.01	1.46
TribCRea1	600	Culvert #1	10yr	175.32	175.14	175.32	175.44	178.35	2.45		0.79	2.19	1.77
TribCRea1	600	Culvert #1	25yr	175.49	175.25	175.49	175.63	178.35	3.32		0.80	2.40	2.23
TribCRea1	600	Culvert #1	50yr	175.77	175.66	175.62	175.77	178.35	4.03		1.14	2.55	2.74
TribCRea1	600	Culvert #1	100yr	175.90	175.78	175.74	175.90	178.35	4.72		1.19	2.69	2.90
TribCRea1	600	Culvert #1	Regional	176.67	176.50	176.52	176.67	178.35	9.50		1.54	3.43	3.68
TribCRea1	426	Culvert #1	2yr	172.31	172.29	172.23	172.31	173.52	0.50		0.16	1.24	1.27
TribCRea1	426	Culvert #2	2yr	172.31	172.29	172.23	172.31	173.52	0.50		0.16	1.24	1.27
TribCRea1	426	Culvert #1	5yr	172.57	172.53	172.47	172.57	173.52	0.91		0.23	1.52	1.59
TribCRea1	426	Culvert #2	5yr	172.57	172.53	172.47	172.57	173.52	0.91		0.23	1.52	1.59
TribCRea1	426	Culvert #1	10yr	172.75	172.70	172.64	172.75	173.52	1.23		0.29	1.71	1.81
TribCRea1	426	Culvert #2	10yr	172.75	172.70	172.64	172.75	173.52	1.23		0.29	1.71	1.81
TribCRea1	426	Culvert #1	25yr	172.99	172.94	172.87	172.99	173.52	1.66		0.40	1.97	2.11
TribCRea1	426	Culvert #2	25yr	172.99	172.94	172.87	172.99	173.52	1.66		0.40	1.97	2.11
TribCRea1	426	Culvert #1	50yr	173.24	173.19	173.08	173.24	173.52	2.02		0.56	2.28	2.36
TribCRea1	426	Culvert #2	50yr	173.24	173.19	173.08	173.24	173.52	2.02		0.56	2.28	2.36
TribCRea1	426	Culvert #1	100yr	173.51	173.50	173.27	173.51	173.52	2.28	0.30	0.75	2.58	2.58
TribCRea1	426	Culvert #2	100yr	173.51	173.50	173.27	173.51	173.52	2.28	0.30	0.75	2.58	2.58
TribCRea1	426	Culvert #1	Regional	173.79	173.78	173.10	173.79	173.52	2.05	5.40	0.60	2.32	2.32
TribCRea1	426	Culvert #2	Regional	173.79	173.78	173.10	173.79	173.52	2.05	5.40	0.60	2.32	2.32
TribCRea1	370	Culvert #1	2yr	171.99	171.97	171.92	171.99	173.07	0.50		0.12	1.05	1.14
TribCRea1	370	Culvert #2	2yr	171.99	171.97	171.92	171.99	173.07	0.50		0.12	1.05	1.14
TribCRea1	370	Culvert #1	5yr	172.18	172.16	172.09	172.18	173.07	0.91		0.15	1.25	1.30
TribCRea1	370	Culvert #2	5yr	172.18	172.16	172.09	172.18	173.07	0.91		0.15	1.25	1.30
TribCRea1	370	Culvert #1	10yr	172.31	172.28	172.21	172.31	173.07	1.23		0.18	1.39	1.44
TribCRea1	370	Culvert #2	10yr	172.31	172.28	172.21	172.31	173.07	1.23		0.18	1.39	1.44
TribCRea1	370	Culvert #1	25yr	172.47	172.43	172.36	172.47	173.07	1.66		0.22	1.57	1.64
TribCRea1	370	Culvert #2	25yr	172.47	172.43	172.36	172.47	173.07	1.66		0.22	1.57	1.64
TribCRea1	370	Culvert #1	50yr	172.60	172.56	172.49	172.60	173.07	2.02		0.27	1.73	1.80
TribCRea1	370	Culvert #2	50yr	172.60	172.56	172.49	172.60	173.07	2.02		0.27	1.73	1.80
TribCRea1	370	Culvert #1	100yr	172.73	172.68	172.61	172.73	173.07	2.36		0.33	1.89	1.97
TribCRea1	370	Culvert #2	100yr	172.73	172.68	172.61	172.73	173.07	2.36		0.33	1.89	1.97
TribCRea1	370	Culvert #1	Regional	173.26	173.20	172.84	173.26	173.07	2.93	3.64	0.50	2.26	2.26
TribCRea1	370	Culvert #2	Regional	173.26	173.20	172.84	173.26	173.07	2.93	3.64	0.50	2.26	2.26
TribCRea1	220	Culvert #1	2yr	170.66	170.61	170.66	170.78	174.65	0.99		0.06	1.73	0.67
TribCRea1	220	Culvert #1	5yr	170.88	170.82	170.88	171.04	174.65	1.82		0.10	2.04	0.98
TribCRea1	220	Culvert #1	10yr	171.03	170.95	171.03	171.21	174.65	2.45		0.14	2.22	1.18
TribCRea1	220	Culvert #1	25yr	171.20	171.11	171.20	171.41	174.65	3.32		0.19	2.42	1.42

HEC-RAS Plan: TribCRDPrP River: TribCRiv1 Reach: TribCRea1 (Continued)

Reach	River Sta	Profile	E.G. US.	W.S. US.	E.G. IC	E.G. OC	Min El Weir Flow	Q Culv Group	Q Weir	Delta WS	Culv Vel US	Culv Vel DS
			(m)	(m)	(m)	(m)	(m)	(m3/s)	(m3/s)	(m)	(m/s)	(m/s)
TribCRea1	220 Culvert #1	50yr	171.33	171.23	171.33	171.56	174.65	4.03		0.27	2.56	1.65
TribCRea1	220 Culvert #1	100yr	171.45	171.34	171.45	171.69	174.65	4.72		0.36	2.69	1.90
TribCRea1	220 Culvert #1	Regional	172.21	172.04	172.21	172.50	174.65	9.50		0.67	3.39	2.79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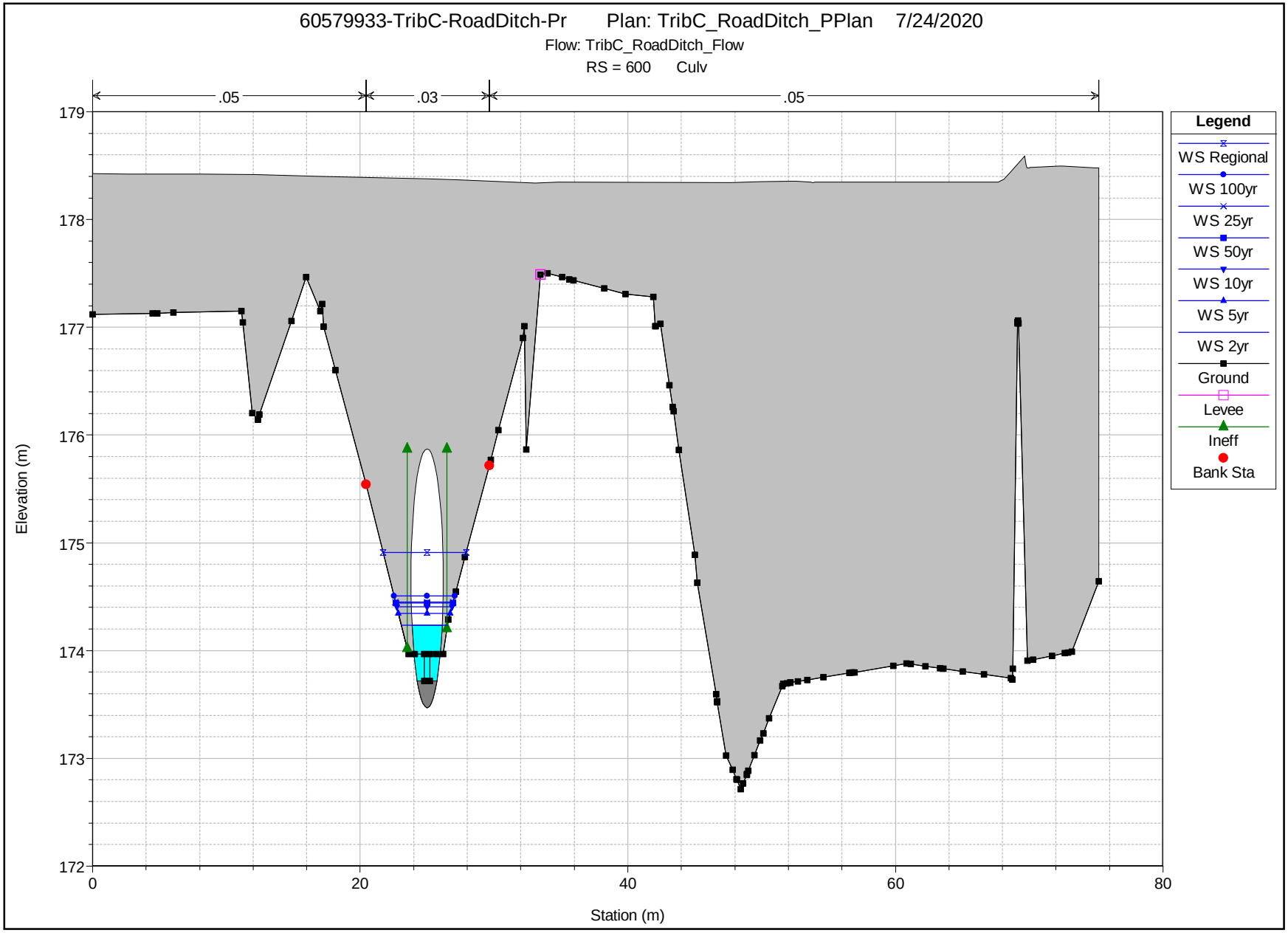
Flow: TribC_RoadDitch_Flow
RS = 600 Culv
.05
.03
.05
Legend
WS Regional
WS 100yr
WS 50yr
WS 25yr
WS 10yr
WS 5yr
WS 2yr
Ground
Levee
Ineff
Bank Sta
Elevation (m)
179
178
177
176
175
174
0
20
40
60
80
Station (m)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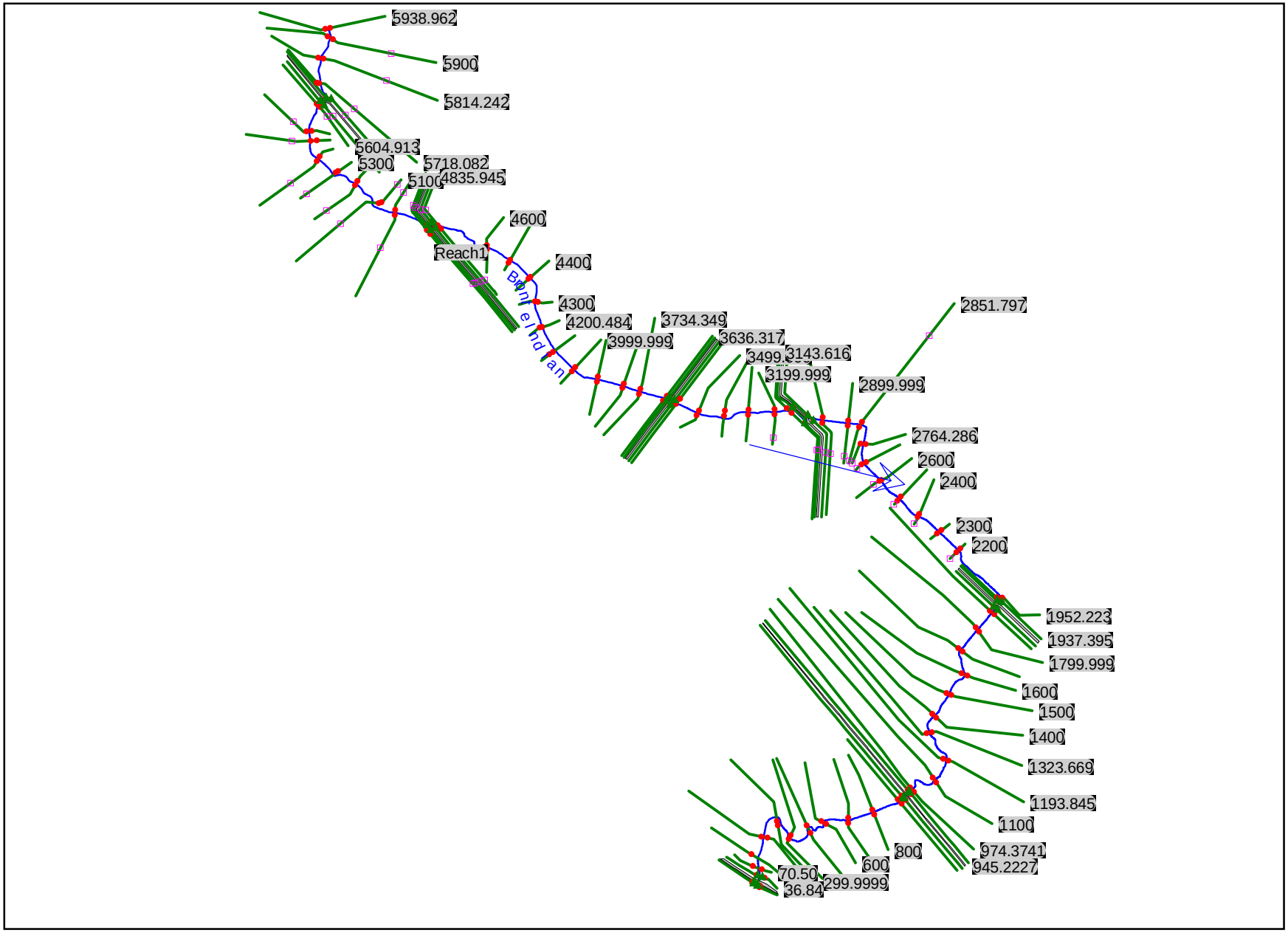
Flow: TribC_RoadDitch_Flow
RS = 600 Culv
.05
.03
.05
Legend
WS Regional
WS 100yr
WS 25yr
WS 50yr
WS 10yr
WS 5yr
WS 2yr
Ground
Levee
Ineff
Bank Sta
Elevation (m)
179
178
177
176
175
174
173
172
0
20
40
60
80
Station (m)

Milton Logistics Hub 2020 HEC-RAS Model Output

Culvert C1 Existing Conditions


5938.962
5900
5814.242
5604.913
5300
5718.082
5100
4835.945
4600
Reach1
4400
4300
4200.484
3734.349
3999.999
3636.317
3499.
3143.616
3199.999
2851.797
2899.999
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2400
2300
2200
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600
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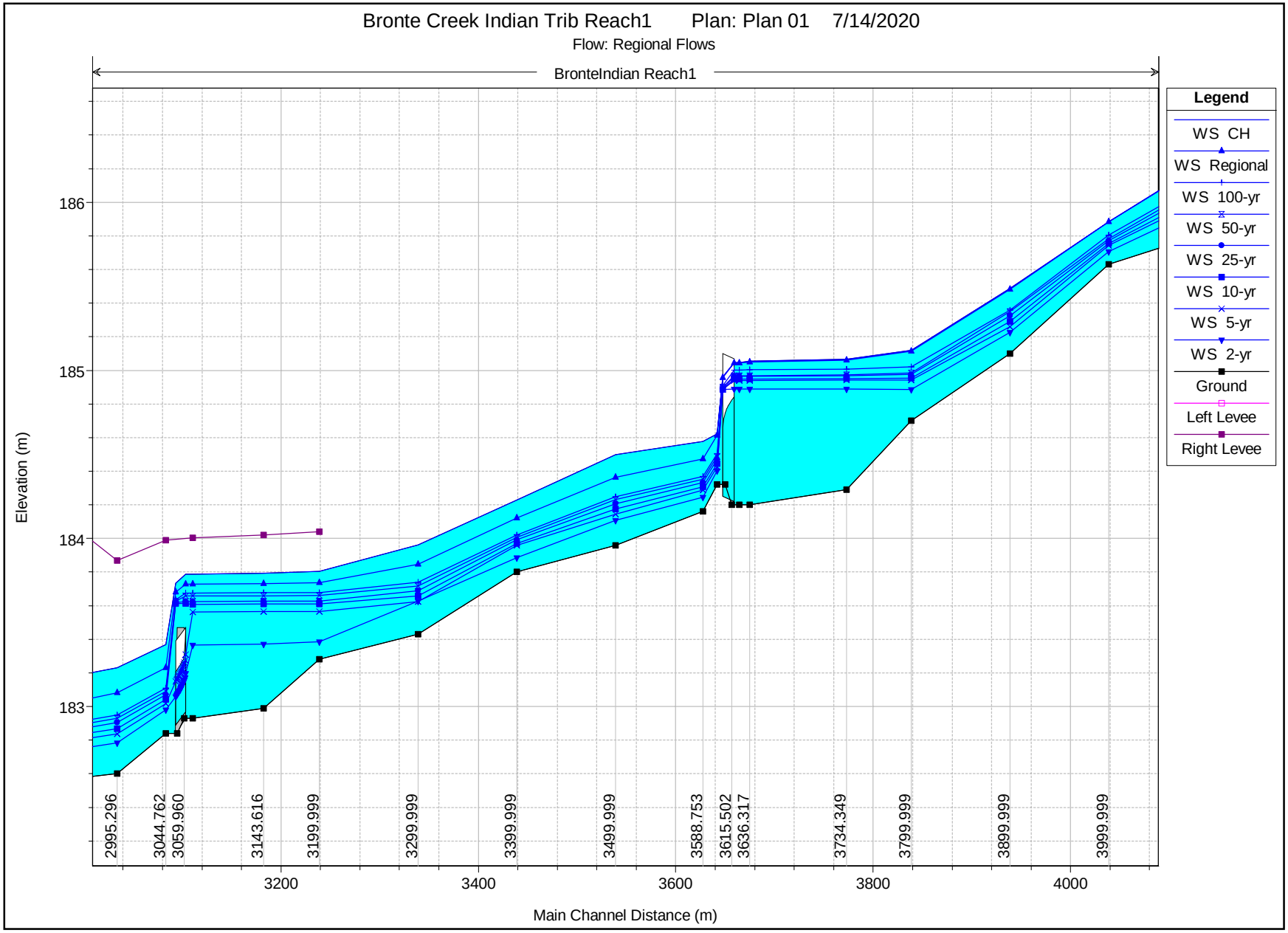
36.84


Bronte Creek Indian Trib Reach1 Plan: Plan 01 7/14/2020
Flow: Regional Flows
BronteIndian Reach1
Legend
WS CH
WS Regional
WS 100-yr
WS 50-yr
WS 25-yr
WS 10-yr
WS 5-yr
WS 2-yr
Ground
Left Levee
Right Levee
Elevation (m)
186
185
184
183
2995.296
3044.762
3059.960
3143.616
3199.999
3299.999
3399.999
3499.999
3588.753
3615.502
3636.317
3734.349
3799.999
3899.999
3999.999
3200
3400
3600
3800
4000
Main Channel Distance (m)

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	5938.962	CH	0.89	194.83	195.07	194.97	195.07	0.001069	0.31	3.20	30.42	0.26
Reach1	5938.962	Regional	1.02	194.83	195.08	194.98	195.08	0.001123	0.34	3.51	31.50	0.26
Reach1	5938.962	2-yr	0.28	194.83	195.00	194.92	195.00	0.000781	0.18	1.54	19.08	0.20
Reach1	5938.962	5-yr	0.36	194.83	195.01	194.93	195.01	0.000837	0.21	1.78	20.24	0.21
Reach1	5938.962	10-yr	0.41	194.83	195.02	194.94	195.02	0.000878	0.22	1.91	21.40	0.22
Reach1	5938.962	25-yr	0.52	194.83	195.03	194.95	195.03	0.000925	0.25	2.23	23.91	0.23
Reach1	5938.962	50-yr	0.63	194.83	195.04	194.96	195.05	0.000984	0.27	2.51	26.01	0.24
Reach1	5938.962	100-yr	0.74	194.83	195.05	194.97	195.06	0.001014	0.29	2.82	28.05	0.24
Reach1	5900	CH	0.89	194.83	194.93	194.93	194.96	0.024026	0.75	1.19	22.05	1.02
Reach1	5900	Regional	1.02	194.83	194.93	194.93	194.96	0.021799	0.76	1.34	22.90	0.99
Reach1	5900	2-yr	0.28	194.83	194.89	194.89	194.91	0.029442	0.57	0.49	15.63	1.03
Reach1	5900	5-yr	0.36	194.83	194.90	194.90	194.92	0.027363	0.60	0.60	16.91	1.01
Reach1	5900	10-yr	0.41	194.83	194.90	194.90	194.92	0.025102	0.60	0.68	17.77	0.98
Reach1	5900	25-yr	0.52	194.83	194.91	194.91	194.93	0.026218	0.65	0.80	18.94	1.02
Reach1	5900	50-yr	0.63	194.83	194.92	194.92	194.94	0.023999	0.67	0.94	20.35	0.99
Reach1	5900	100-yr	0.74	194.83	194.92	194.92	194.95	0.025355	0.71	1.04	21.19	1.03
Reach1	5814.242	CH	0.89	194.07	194.57	194.19	194.57	0.000022	0.09	15.17	78.78	0.04
Reach1	5814.242	Regional	1.02	194.07	194.57	194.20	194.57	0.000029	0.10	15.17	78.77	0.05
Reach1	5814.242	2-yr	0.28	194.07	194.57	194.15	194.57	0.000002	0.03	15.19	78.82	0.01
Reach1	5814.242	5-yr	0.36	194.07	194.57	194.15	194.57	0.000004	0.04	15.19	78.82	0.02
Reach1	5814.242	10-yr	0.41	194.07	194.57	194.16	194.57	0.000005	0.04	15.19	78.82	0.02
Reach1	5814.242	25-yr	0.52	194.07	194.57	194.17	194.57	0.000007	0.05	15.18	78.81	0.03
Reach1	5814.242	50-yr	0.63	194.07	194.57	194.18	194.57	0.000011	0.06	15.18	78.81	0.03
Reach1	5814.242	100-yr	0.74	194.07	194.57	194.19	194.57	0.000015	0.07	15.18	78.79	0.04
Reach1	5718.082	CH	0.89	193.47	194.57	193.57	194.57	0.000000	0.02	163.27	330.95	0.00
Reach1	5718.082	Regional	1.02	193.47	194.57	193.58	194.57	0.000000	0.02	163.28	330.95	0.01
Reach1	5718.082	2-yr	0.28	193.47	194.57	193.53	194.57	0.000000	0.00	163.27	330.95	0.00
Reach1	5718.082	5-yr	0.36	193.47	194.57	193.54	194.57	0.000000	0.01	163.27	330.95	0.00
Reach1	5718.082	10-yr	0.41	193.47	194.57	193.54	194.57	0.000000	0.01	163.27	330.95	0.00
Reach1	5718.082	25-yr	0.52	193.47	194.57	193.55	194.57	0.000000	0.01	163.27	330.95	0.00
Reach1	5718.082	50-yr	0.63	193.47	194.57	193.56	194.57	0.000000	0.01	163.27	330.95	0.00
Reach1	5718.082	100-yr	0.74	193.47	194.57	193.57	194.57	0.000000	0.01	163.28	330.95	0.00
Reach1	5652.039	CH	0.89	193.11	194.57	193.25	194.57	0.000000	0.00	411.18	481.08	0.00
Reach1	5652.039	Regional	1.02	193.11	194.57	193.26	194.57	0.000000	0.01	411.18	481.09	0.00
Reach1	5652.039	2-yr	0.28	193.11	194.57	193.19	194.57	0.000000	0.00	411.18	481.08	0.00
Reach1	5652.039	5-yr	0.36	193.11	194.57	193.20	194.57	0.000000	0.00	411.18	481.08	0.00

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	5652.039	10-yr	0.41	193.11	194.57	193.21	194.57	0.000000	0.00	411.18	481.08	0.00
Reach1	5652.039	25-yr	0.52	193.11	194.57	193.22	194.57	0.000000	0.00	411.18	481.08	0.00
Reach1	5652.039	50-yr	0.63	193.11	194.57	193.23	194.57	0.000000	0.00	411.18	481.08	0.00
Reach1	5652.039	100-yr	0.74	193.11	194.57	193.24	194.57	0.000000	0.00	411.18	481.09	0.00
Reach1	5639.221		Culvert									
Reach1	5620.962	CH	0.89	192.84	192.95	192.93	192.97	0.014426	0.76	1.66	40.52	0.84
Reach1	5620.962	Regional	1.02	192.84	192.95	192.93	192.97	0.018050	0.86	1.69	40.65	0.95
Reach1	5620.962	2-yr	0.28	192.84	192.90	192.89	192.91	0.023583	0.56	0.71	32.06	0.94
Reach1	5620.962	5-yr	0.36	192.84	192.91	192.90	192.92	0.021703	0.60	0.85	33.76	0.93
Reach1	5620.962	10-yr	0.41	192.84	192.91	192.90	192.92	0.022347	0.63	0.92	34.52	0.95
Reach1	5620.962	25-yr	0.52	192.84	192.93	192.91	192.94	0.011804	0.58	1.28	38.24	0.73
Reach1	5620.962	50-yr	0.63	192.84	192.93	192.91	192.95	0.012898	0.64	1.40	39.09	0.77
Reach1	5620.962	100-yr	0.74	192.84	192.94	192.92	192.96	0.013745	0.70	1.51	39.78	0.81
Reach1	5604.913	CH	0.89	192.68	192.80	192.77	192.81	0.006768	0.57	1.72	21.17	0.59
Reach1	5604.913	Regional	1.02	192.68	192.81	192.78	192.83	0.004926	0.55	2.10	22.31	0.52
Reach1	5604.913	2-yr	0.28	192.68	192.75	192.73	192.76	0.004836	0.33	0.89	18.47	0.45
Reach1	5604.913	5-yr	0.36	192.68	192.76	192.74	192.77	0.004873	0.36	1.05	18.98	0.47
Reach1	5604.913	10-yr	0.41	192.68	192.77	192.74	192.78	0.004660	0.38	1.16	19.36	0.46
Reach1	5604.913	25-yr	0.52	192.68	192.77	192.75	192.78	0.008160	0.49	1.13	19.25	0.61
Reach1	5604.913	50-yr	0.63	192.68	192.78	192.76	192.79	0.007401	0.51	1.32	19.91	0.60
Reach1	5604.913	100-yr	0.74	192.68	192.79	192.76	192.80	0.007122	0.54	1.49	20.46	0.59
Reach1	5499.999	CH	0.89	191.76	191.86	191.85	191.88	0.011970	0.64	1.58	27.41	0.75
Reach1	5499.999	Regional	1.02	191.76	191.85	191.85	191.88	0.020509	0.81	1.42	24.99	0.98
Reach1	5499.999	2-yr	0.28	191.76	191.81	191.81	191.82	0.021437	0.54	0.55	15.93	0.90
Reach1	5499.999	5-yr	0.36	191.76	191.82	191.81	191.83	0.020830	0.58	0.66	16.75	0.91
Reach1	5499.999	10-yr	0.41	191.76	191.82	191.82	191.84	0.023164	0.63	0.70	17.02	0.96
Reach1	5499.999	25-yr	0.52	191.76	191.84	191.82	191.85	0.009476	0.50	1.13	20.14	0.65
Reach1	5499.999	50-yr	0.63	191.76	191.85	191.83	191.86	0.010613	0.56	1.25	22.35	0.70
Reach1	5499.999	100-yr	0.74	191.76	191.85	191.84	191.87	0.011187	0.59	1.40	24.67	0.72
Reach1	5463.964	CH	0.89	191.52	191.64	191.60	191.64	0.003915	0.41	2.51	40.29	0.44
Reach1	5463.964	Regional	1.02	191.52	191.65	191.61	191.66	0.002734	0.39	3.23	44.66	0.38
Reach1	5463.964	2-yr	0.28	191.52	191.60	191.57	191.60	0.002813	0.24	1.21	28.14	0.34
Reach1	5463.964	5-yr	0.36	191.52	191.61	191.58	191.61	0.002841	0.26	1.44	30.47	0.35
Reach1	5463.964	10-yr	0.41	191.52	191.61	191.58	191.61	0.002735	0.28	1.60	32.15	0.35
Reach1	5463.964	25-yr	0.52	191.52	191.61	191.58	191.62	0.004840	0.36	1.55	31.60	0.46

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	5463.964	50-yr	0.63	191.52	191.62	191.59	191.62	0.004446	0.38	1.84	34.45	0.46
Reach1	5463.964	100-yr	0.74	191.52	191.63	191.59	191.63	0.004225	0.39	2.12	36.97	0.45
Reach1	5382.460	CH	0.89	190.97	191.15	191.13	191.17	0.009310	0.66	1.36	14.72	0.69
Reach1	5382.460	Regional	1.02	190.97	191.14	191.14	191.18	0.020621	0.91	1.12	13.37	1.01
Reach1	5382.460	2-yr	0.28	190.97	191.07	191.07	191.09	0.023320	0.69	0.41	8.13	0.99
Reach1	5382.460	5-yr	0.36	190.97	191.08	191.08	191.11	0.022009	0.72	0.50	9.00	0.98
Reach1	5382.460	10-yr	0.41	190.97	191.08	191.08	191.11	0.023620	0.76	0.54	9.32	1.02
Reach1	5382.460	25-yr	0.52	190.97	191.13	191.10	191.14	0.007195	0.52	1.00	12.66	0.59
Reach1	5382.460	50-yr	0.63	190.97	191.13	191.11	191.15	0.007904	0.57	1.11	13.35	0.63
Reach1	5382.460	100-yr	0.74	190.97	191.14	191.12	191.16	0.008267	0.60	1.24	14.06	0.65
Reach1	5300	CH	0.89	190.54	190.66	190.62	190.67	0.004383	0.49	3.09	39.07	0.48
Reach1	5300	Regional	1.02	190.54	190.68	190.62	190.69	0.002485	0.43	4.14	41.75	0.38
Reach1	5300	2-yr	0.28	190.54	190.63	190.59	190.64	0.001172	0.21	2.19	36.32	0.24
Reach1	5300	5-yr	0.36	190.54	190.65	190.59	190.65	0.001163	0.23	2.62	37.76	0.24
Reach1	5300	10-yr	0.41	190.54	190.64	190.60	190.65	0.001680	0.27	2.52	37.47	0.29
Reach1	5300	25-yr	0.52	190.54	190.63	190.60	190.63	0.005329	0.43	1.99	35.55	0.50
Reach1	5300	50-yr	0.63	190.54	190.64	190.61	190.64	0.004950	0.45	2.33	36.86	0.50
Reach1	5300	100-yr	0.74	190.54	190.65	190.61	190.65	0.004819	0.47	2.64	37.81	0.50
Reach1	5200	CH	0.89	190.22	190.41	190.34	190.41	0.001638	0.35	3.17	45.31	0.31
Reach1	5200	Regional	1.02	190.22	190.39	190.35	190.40	0.003412	0.46	2.54	35.58	0.43
Reach1	5200	2-yr	0.28	190.22	190.30	190.30	190.32	0.026428	0.60	0.46	12.42	1.00
Reach1	5200	5-yr	0.36	190.22	190.30	190.30	190.33	0.027996	0.65	0.55	13.76	1.04
Reach1	5200	10-yr	0.41	190.22	190.33	190.31	190.34	0.007605	0.43	0.97	18.58	0.57
Reach1	5200	25-yr	0.52	190.22	190.38	190.32	190.38	0.001519	0.28	2.05	25.59	0.28
Reach1	5200	50-yr	0.63	190.22	190.39	190.32	190.39	0.001582	0.30	2.34	30.90	0.29
Reach1	5200	100-yr	0.74	190.22	190.40	190.33	190.40	0.001576	0.32	2.70	39.63	0.30
Reach1	5100	CH	0.89	189.90	190.00	190.00	190.03	0.019164	0.81	1.47	29.77	0.95
Reach1	5100	Regional	1.02	189.90	190.04	190.01	190.05	0.003833	0.50	3.28	49.05	0.46
Reach1	5100	2-yr	0.28	189.90	190.01	189.96	190.01	0.000952	0.20	1.96	36.19	0.22
Reach1	5100	5-yr	0.36	189.90	190.02	189.97	190.03	0.000988	0.22	2.39	40.72	0.23
Reach1	5100	10-yr	0.41	189.90	190.02	189.97	190.02	0.001777	0.28	2.08	37.46	0.30
Reach1	5100	25-yr	0.52	189.90	189.98	189.98	190.00	0.023194	0.70	0.91	23.55	0.99
Reach1	5100	50-yr	0.63	189.90	189.98	189.98	190.01	0.021080	0.73	1.09	25.38	0.96
Reach1	5100	100-yr	0.74	189.90	189.99	189.99	190.02	0.021784	0.79	1.21	26.60	0.99
Reach1	4999.999	CH	0.89	189.67	189.99	189.75	189.99	0.000042	0.09	16.13	85.56	0.06

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	4999.999	Regional	1.02	189.67	190.04	189.76	190.04	0.000028	0.09	21.46	108.95	0.05
Reach1	4999.999	2-yr	0.28	189.67	189.72	189.72	189.73	0.029976	0.55	0.54	19.75	1.02
Reach1	4999.999	5-yr	0.36	189.67	189.72	189.72	189.74	0.025468	0.55	0.69	22.16	0.96
Reach1	4999.999	10-yr	0.41	189.67	189.75	189.73	189.76	0.003886	0.32	1.52	40.28	0.42
Reach1	4999.999	25-yr	0.52	189.67	189.82	189.73	189.82	0.000426	0.17	4.45	53.86	0.15
Reach1	4999.999	50-yr	0.63	189.67	189.87	189.74	189.87	0.000148	0.13	7.64	62.04	0.10
Reach1	4999.999	100-yr	0.74	189.67	189.92	189.74	189.92	0.000076	0.11	11.07	71.53	0.07
Reach1	4900.587	CH	0.89	189.36	189.99	189.15	189.99	0.000000	0.01	169.65	350.52	0.00
Reach1	4900.587	Regional	1.02	189.36	190.04	189.16	190.04	0.000000	0.01	188.77	355.40	0.00
Reach1	4900.587	2-yr	0.28	189.36	189.68	189.11	189.68	0.000000	0.01	64.96	325.97	0.01
Reach1	4900.587	5-yr	0.36	189.36	189.73	189.12	189.73	0.000000	0.01	81.57	329.37	0.01
Reach1	4900.587	10-yr	0.41	189.36	189.76	189.13	189.76	0.000000	0.01	91.23	331.33	0.01
Reach1	4900.587	25-yr	0.52	189.36	189.82	189.13	189.82	0.000000	0.01	111.07	335.31	0.01
Reach1	4900.587	50-yr	0.63	189.36	189.87	189.14	189.87	0.000000	0.01	129.53	340.12	0.00
Reach1	4900.587	100-yr	0.74	189.36	189.92	189.14	189.92	0.000000	0.01	147.04	344.63	0.00
Reach1	4856.577	CH	0.89	189.31	189.99	189.38	189.99	0.000006	0.06	13.92	335.41	0.03
Reach1	4856.577	Regional	1.02	189.31	190.04	189.39	190.04	0.000006	0.07	15.05	353.57	0.03
Reach1	4856.577	2-yr	0.28	189.31	189.68	189.35	189.68	0.000005	0.04	7.42	253.45	0.02
Reach1	4856.577	5-yr	0.36	189.31	189.73	189.35	189.73	0.000005	0.04	8.48	262.72	0.02
Reach1	4856.577	10-yr	0.41	189.31	189.76	189.36	189.76	0.000006	0.05	9.09	271.00	0.02
Reach1	4856.577	25-yr	0.52	189.31	189.82	189.36	189.82	0.000006	0.05	10.34	285.61	0.02
Reach1	4856.577	50-yr	0.63	189.31	189.87	189.37	189.87	0.000006	0.05	11.48	299.35	0.02
Reach1	4856.577	100-yr	0.74	189.31	189.92	189.37	189.92	0.000006	0.06	12.55	322.08	0.02
Reach1	4846.378		Culvert									
Reach1	4835.945	CH	0.89	189.02	189.13	189.08	189.14	0.002947	0.38	2.31	170.74	0.39
Reach1	4835.945	Regional	1.02	189.02	189.14	189.09	189.15	0.002907	0.40	2.53	172.81	0.40
Reach1	4835.945	2-yr	0.28	189.02	189.08	189.05	189.09	0.002360	0.23	1.22	154.46	0.32
Reach1	4835.945	5-yr	0.36	189.02	189.09	189.06	189.10	0.002230	0.25	1.45	157.90	0.32
Reach1	4835.945	10-yr	0.41	189.02	189.10	189.06	189.10	0.002360	0.27	1.54	159.20	0.33
Reach1	4835.945	25-yr	0.52	189.02	189.11	189.07	189.11	0.002451	0.30	1.76	162.44	0.34
Reach1	4835.945	50-yr	0.63	189.02	189.11	189.07	189.12	0.002812	0.33	1.90	164.52	0.37
Reach1	4835.945	100-yr	0.74	189.02	189.12	189.08	189.13	0.002737	0.35	2.11	167.76	0.37
Reach1	4816.446	CH	0.89	188.90	189.00	189.00	189.02	0.015766	0.68	1.80	49.18	0.85
Reach1	4816.446	Regional	1.02	188.90	189.00	189.00	189.02	0.017482	0.73	1.95	50.83	0.90
Reach1	4816.446	2-yr	0.28	188.90	188.96	188.96	188.98	0.025638	0.55	0.52	17.54	0.96

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	4816.446	5-yr	0.36	188.90	188.97	188.97	188.98	0.026461	0.59	0.64	22.26	0.99
Reach1	4816.446	10-yr	0.41	188.90	188.97	188.97	188.99	0.022028	0.57	0.78	27.42	0.92
Reach1	4816.446	25-yr	0.52	188.90	188.98	188.98	189.00	0.021872	0.62	0.95	32.46	0.94
Reach1	4816.446	50-yr	0.63	188.90	188.99	188.99	189.00	0.016830	0.61	1.28	42.29	0.85
Reach1	4816.446	100-yr	0.74	188.90	188.99	188.99	189.01	0.019016	0.68	1.40	44.00	0.91
Reach1	4600	CH	0.89	187.56	187.83	187.72	187.83	0.001184	0.35	2.76	20.98	0.27
Reach1	4600	Regional	1.02	187.56	187.84	187.73	187.84	0.001219	0.37	3.02	21.89	0.28
Reach1	4600	2-yr	0.28	187.56	187.74	187.66	187.74	0.001133	0.23	1.23	13.94	0.24
Reach1	4600	5-yr	0.36	187.56	187.76	187.67	187.76	0.000960	0.23	1.58	15.93	0.23
Reach1	4600	10-yr	0.41	187.56	187.77	187.68	187.77	0.001008	0.24	1.72	16.63	0.23
Reach1	4600	25-yr	0.52	187.56	187.79	187.69	187.79	0.001038	0.27	1.98	17.90	0.24
Reach1	4600	50-yr	0.63	187.56	187.80	187.70	187.80	0.001091	0.29	2.22	18.97	0.25
Reach1	4600	100-yr	0.74	187.56	187.81	187.71	187.82	0.001118	0.32	2.47	19.92	0.26
Reach1	4500	CH	0.89	187.38	187.55	187.53	187.57	0.009351	0.71	1.36	16.62	0.71
Reach1	4500	Regional	1.02	187.38	187.56	187.54	187.58	0.008850	0.74	1.54	17.60	0.70
Reach1	4500	2-yr	0.28	187.38	187.50	187.48	187.51	0.007782	0.45	0.63	11.34	0.59
Reach1	4500	5-yr	0.36	187.38	187.49	187.48	187.51	0.017437	0.64	0.57	10.77	0.87
Reach1	4500	10-yr	0.41	187.38	187.50	187.49	187.52	0.015304	0.64	0.65	11.51	0.83
Reach1	4500	25-yr	0.52	187.38	187.51	187.50	187.53	0.014172	0.67	0.80	12.81	0.81
Reach1	4500	50-yr	0.63	187.38	187.52	187.51	187.55	0.011470	0.67	0.99	14.34	0.75
Reach1	4500	100-yr	0.74	187.38	187.53	187.52	187.56	0.010471	0.69	1.14	15.33	0.73
Reach1	4400	CH	0.89	186.93	187.22	187.12	187.23	0.001715	0.46	2.14	14.88	0.34
Reach1	4400	Regional	1.02	186.93	187.23	187.13	187.25	0.001747	0.49	2.36	15.61	0.34
Reach1	4400	2-yr	0.28	186.93	187.12		187.12	0.002269	0.32	0.87	9.62	0.34
Reach1	4400	5-yr	0.36	186.93	187.15	187.06	187.15	0.001469	0.31	1.18	11.14	0.29
Reach1	4400	10-yr	0.41	186.93	187.15	187.07	187.16	0.001531	0.33	1.27	11.55	0.30
Reach1	4400	25-yr	0.52	186.93	187.17	187.09	187.18	0.001531	0.36	1.50	12.51	0.30
Reach1	4400	50-yr	0.63	186.93	187.19	187.10	187.20	0.001627	0.40	1.69	13.25	0.32
Reach1	4400	100-yr	0.74	186.93	187.20	187.11	187.21	0.001667	0.43	1.88	13.98	0.32
Reach1	4300	CH	0.89	186.67	186.77	186.77	186.80	0.020728	0.87	1.28	19.53	1.00
Reach1	4300	Regional	1.02	186.67	186.78	186.78	186.81	0.020729	0.92	1.40	19.84	1.01
Reach1	4300	2-yr	0.28	186.67	186.75	186.73	186.76	0.006572	0.39	0.87	18.48	0.53
Reach1	4300	5-yr	0.36	186.67	186.74	186.74	186.76	0.026727	0.67	0.64	17.86	1.03
Reach1	4300	10-yr	0.41	186.67	186.74	186.74	186.76	0.022878	0.67	0.74	18.12	0.97
Reach1	4300	25-yr	0.52	186.67	186.75	186.75	186.77	0.025482	0.76	0.83	18.39	1.04
Reach1	4300	50-yr	0.63	186.67	186.76	186.76	186.78	0.021672	0.77	1.00	18.83	0.99

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	4300	100-yr	0.74	186.67	186.76	186.76	186.79	0.021263	0.82	1.12	19.14	0.99
Reach1	4200.484	CH	0.89	186.13	186.51	186.24	186.51	0.000084	0.13	12.22	54.89	0.08
Reach1	4200.484	Regional	1.02	186.13	186.51	186.24	186.51	0.000109	0.15	12.29	54.99	0.09
Reach1	4200.484	2-yr	0.28	186.13	186.24		186.24	0.004272	0.32	1.33	20.92	0.43
Reach1	4200.484	5-yr	0.36	186.13	186.29	186.20	186.29	0.001197	0.21	2.54	28.79	0.24
Reach1	4200.484	10-yr	0.41	186.13	186.31	186.20	186.31	0.000829	0.20	3.20	32.68	0.21
Reach1	4200.484	25-yr	0.52	186.13	186.34	186.21	186.34	0.000581	0.19	4.36	38.72	0.18
Reach1	4200.484	50-yr	0.63	186.13	186.36	186.22	186.36	0.000492	0.20	5.24	41.10	0.17
Reach1	4200.484	100-yr	0.74	186.13	186.39	186.23	186.39	0.000384	0.19	6.38	44.36	0.15
Reach1	4100	CH	9.86	185.82	186.25		186.27	0.002119	0.86	20.69	75.82	0.42
Reach1	4100	Regional	9.74	185.82	186.24		186.27	0.002152	0.86	20.37	75.35	0.43
Reach1	4100	2-yr	1.02	185.82	185.99		185.99	0.000995	0.31	4.90	43.96	0.25
Reach1	4100	5-yr	1.85	185.82	186.03		186.04	0.001279	0.41	7.01	50.72	0.29
Reach1	4100	10-yr	2.46	185.82	186.06		186.07	0.001282	0.45	8.70	54.78	0.30
Reach1	4100	25-yr	3.30	185.82	186.10		186.11	0.001370	0.51	10.58	58.35	0.32
Reach1	4100	50-yr	3.98	185.82	186.12		186.13	0.001405	0.55	12.07	61.02	0.32
Reach1	4100	100-yr	4.63	185.82	186.14		186.15	0.001579	0.60	12.95	62.62	0.35
Reach1	3999.999	CH	9.86	185.63	185.89		185.92	0.006819	1.06	17.54	109.35	0.69
Reach1	3999.999	Regional	9.74	185.63	185.88		185.92	0.006742	1.05	17.46	109.28	0.69
Reach1	3999.999	2-yr	1.02	185.63	185.71	185.70	185.73	0.019165	0.70	1.99	46.12	0.92
Reach1	3999.999	5-yr	1.85	185.63	185.74	185.73	185.76	0.009657	0.70	4.19	66.97	0.71
Reach1	3999.999	10-yr	2.46	185.63	185.75	185.74	185.78	0.011891	0.82	4.84	70.96	0.80
Reach1	3999.999	25-yr	3.30	185.63	185.77	185.76	185.80	0.011773	0.90	6.12	77.56	0.82
Reach1	3999.999	50-yr	3.98	185.63	185.78	185.77	185.82	0.011986	0.97	7.07	83.92	0.84
Reach1	3999.999	100-yr	4.63	185.63	185.81	185.78	185.84	0.008762	0.92	9.21	101.89	0.73
Reach1	3899.999	CH	9.86	185.10	185.49		185.51	0.002661	0.88	18.09	69.27	0.46
Reach1	3899.999	Regional	9.74	185.10	185.48		185.51	0.002717	0.89	17.77	68.79	0.47
Reach1	3899.999	2-yr	1.02	185.10	185.23		185.23	0.002220	0.36	3.82	39.95	0.35
Reach1	3899.999	5-yr	1.85	185.10	185.26		185.27	0.003014	0.49	5.17	44.13	0.42
Reach1	3899.999	10-yr	2.46	185.10	185.29		185.30	0.002552	0.52	6.68	47.85	0.40
Reach1	3899.999	25-yr	3.30	185.10	185.33		185.34	0.002448	0.58	8.35	51.52	0.41
Reach1	3899.999	50-yr	3.98	185.10	185.35		185.37	0.002337	0.61	9.70	54.21	0.40
Reach1	3899.999	100-yr	4.63	185.10	185.36		185.38	0.002795	0.68	10.15	55.06	0.44
Reach1	3799.999	CH	10.18	184.70	185.12		185.16	0.004757	1.10	16.26	77.98	0.61
Reach1	3799.999	Regional	9.74	184.70	185.11		185.15	0.004826	1.09	15.62	76.77	0.61

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	3799.999	2-yr	1.02	184.70	184.89		184.90	0.005505	0.52	2.54	35.58	0.54
Reach1	3799.999	5-yr	1.85	184.70	184.94		184.96	0.003271	0.55	4.81	43.49	0.45
Reach1	3799.999	10-yr	2.46	184.70	184.95		184.97	0.004481	0.67	5.32	53.57	0.53
Reach1	3799.999	25-yr	3.30	184.70	184.98		185.00	0.004856	0.76	6.58	57.57	0.56
Reach1	3799.999	50-yr	3.98	184.70	184.99		185.01	0.005802	0.86	7.13	58.76	0.62
Reach1	3799.999	100-yr	4.63	184.70	185.02		185.05	0.003966	0.79	9.37	63.32	0.53
Reach1	3734.349	CH	10.18	184.29	185.07		185.08	0.000529	0.53	34.42	96.02	0.22
Reach1	3734.349	Regional	9.74	184.29	185.06		185.07	0.000505	0.52	33.85	95.42	0.22
Reach1	3734.349	2-yr	1.02	184.29	184.89		184.89	0.000023	0.09	19.08	75.82	0.04
Reach1	3734.349	5-yr	1.85	184.29	184.94		184.94	0.000047	0.14	23.20	82.45	0.06
Reach1	3734.349	10-yr	2.46	184.29	184.95		184.95	0.000077	0.18	23.90	83.40	0.08
Reach1	3734.349	25-yr	3.30	184.29	184.97		184.97	0.000119	0.22	25.44	85.41	0.10
Reach1	3734.349	50-yr	3.98	184.29	184.97		184.98	0.000167	0.27	25.84	85.94	0.12
Reach1	3734.349	100-yr	4.63	184.29	185.01		185.01	0.000171	0.28	28.86	89.74	0.12
Reach1	3636.317	CH	10.18	184.20	185.05		185.06	0.000088	0.26	91.87	247.94	0.10
Reach1	3636.317	Regional	9.74	184.20	185.05		185.05	0.000083	0.25	90.54	246.64	0.09
Reach1	3636.317	2-yr	1.02	184.20	184.89		184.89	0.000003	0.04	54.52	198.87	0.02
Reach1	3636.317	5-yr	1.85	184.20	184.94		184.94	0.000006	0.06	65.31	217.50	0.02
Reach1	3636.317	10-yr	2.46	184.20	184.95		184.95	0.000011	0.08	67.03	218.89	0.03
Reach1	3636.317	25-yr	3.30	184.20	184.97		184.97	0.000017	0.11	70.85	222.88	0.04
Reach1	3636.317	50-yr	3.98	184.20	184.97		184.97	0.000024	0.13	71.68	224.03	0.05
Reach1	3636.317	100-yr	4.63	184.20	185.00		185.00	0.000025	0.14	79.49	234.56	0.05
Reach1	3625.504	CH	10.18	184.20	185.05	184.74	185.05	0.000296	0.41	50.35	157.92	0.17
Reach1	3625.504	Regional	9.74	184.20	185.04	184.73	185.05	0.000281	0.40	49.56	156.49	0.16
Reach1	3625.504	2-yr	1.02	184.20	184.89	184.42	184.89	0.000030	0.11	11.60	109.87	0.05
Reach1	3625.504	5-yr	1.85	184.20	184.94	184.48	184.94	0.000022	0.10	35.57	121.12	0.04
Reach1	3625.504	10-yr	2.46	184.20	184.95	184.52	184.95	0.000037	0.13	36.50	122.49	0.06
Reach1	3625.504	25-yr	3.30	184.20	184.96	184.57	184.97	0.000058	0.16	38.59	125.53	0.07
Reach1	3625.504	50-yr	3.98	184.20	184.97	184.59	184.97	0.000082	0.20	39.00	126.11	0.09
Reach1	3625.504	100-yr	4.63	184.20	185.00	184.61	185.00	0.000085	0.21	43.43	137.61	0.09
Reach1	3615.502		Culvert									
Reach1	3602.958	CH	10.18	184.32	184.62	184.62	184.76	0.013190	1.66	6.13	149.50	0.99
Reach1	3602.958	Regional	9.74	184.32	184.61	184.61	184.75	0.013372	1.64	5.94	148.43	0.99
Reach1	3602.958	2-yr	1.02	184.32	184.40	184.40	184.43	0.015115	0.69	1.48	86.39	0.84
Reach1	3602.958	5-yr	1.85	184.32	184.43	184.43	184.47	0.020018	0.95	1.94	99.67	1.01

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	3602.958	10-yr	2.46	184.32	184.45	184.45	184.50	0.018285	1.04	2.37	110.68	1.00
Reach1	3602.958	25-yr	3.30	184.32	184.47	184.47	184.54	0.017243	1.15	2.88	117.83	1.00
Reach1	3602.958	50-yr	3.98	184.32	184.49	184.49	184.56	0.016830	1.23	3.24	125.11	1.01
Reach1	3602.958	100-yr	4.63	184.32	184.50	184.50	184.59	0.015979	1.28	3.61	128.96	1.00
Reach1	3588.753	CH	10.18	184.16	184.58	184.36	184.58	0.000584	0.44	46.74	178.82	0.22
Reach1	3588.753	Regional	9.74	184.16	184.47	184.35	184.48	0.001903	0.64	29.33	154.72	0.38
Reach1	3588.753	2-yr	1.02	184.16	184.25		184.26	0.008904	0.52	2.68	60.83	0.64
Reach1	3588.753	5-yr	1.85	184.16	184.29	184.25	184.30	0.004314	0.50	6.00	101.44	0.48
Reach1	3588.753	10-yr	2.46	184.16	184.31	184.27	184.32	0.003634	0.51	8.11	106.36	0.46
Reach1	3588.753	25-yr	3.30	184.16	184.33	184.29	184.34	0.003089	0.53	10.83	112.21	0.43
Reach1	3588.753	50-yr	3.98	184.16	184.35	184.30	184.36	0.002806	0.55	12.92	116.81	0.42
Reach1	3588.753	100-yr	4.63	184.16	184.37	184.30	184.38	0.002623	0.56	14.90	122.62	0.41
Reach1	3499.999	CH	17.44	183.96	184.50		184.51	0.001078	0.72	59.30	239.59	0.31
Reach1	3499.999	Regional	9.74	183.96	184.36		184.37	0.001002	0.57	34.29	135.66	0.29
Reach1	3499.999	2-yr	1.02	183.96	184.11		184.11	0.000679	0.24	6.94	68.80	0.20
Reach1	3499.999	5-yr	1.85	183.96	184.14		184.15	0.000951	0.33	9.57	80.97	0.25
Reach1	3499.999	10-yr	2.46	183.96	184.18		184.18	0.000924	0.36	12.39	95.43	0.25
Reach1	3499.999	25-yr	3.30	183.96	184.21		184.21	0.000930	0.39	15.55	103.65	0.26
Reach1	3499.999	50-yr	3.98	183.96	184.23		184.24	0.000927	0.42	17.96	108.59	0.26
Reach1	3499.999	100-yr	4.63	183.96	184.25		184.25	0.000946	0.44	19.96	111.54	0.27
Reach1	3399.999	CH	17.44	183.80	184.23		184.29	0.005606	1.38	25.28	134.25	0.69
Reach1	3399.999	Regional	9.74	183.80	184.12		184.17	0.005668	1.13	14.65	74.49	0.66
Reach1	3399.999	2-yr	1.02	183.80	183.89	183.89	183.91	0.018831	0.76	1.59	33.60	0.93
Reach1	3399.999	5-yr	1.85	183.80	183.96		183.97	0.004130	0.58	4.61	48.34	0.49
Reach1	3399.999	10-yr	2.46	183.80	183.97		183.99	0.005195	0.69	5.25	50.42	0.56
Reach1	3399.999	25-yr	3.30	183.80	183.99		184.02	0.005452	0.77	6.45	54.11	0.59
Reach1	3399.999	50-yr	3.98	183.80	184.01		184.03	0.006081	0.85	7.14	56.12	0.63
Reach1	3399.999	100-yr	4.63	183.80	184.02		184.05	0.006187	0.90	7.96	58.44	0.64
Reach1	3299.999	CH	17.81	183.43	183.96		183.98	0.001991	0.90	38.36	121.98	0.42
Reach1	3299.999	Regional	9.74	183.43	183.85		183.86	0.001954	0.74	25.02	110.50	0.40
Reach1	3299.999	2-yr	1.02	183.43	183.63	183.54	183.63	0.000827	0.25	6.10	59.01	0.22
Reach1	3299.999	5-yr	1.85	183.43	183.62		183.63	0.003015	0.47	5.87	58.00	0.42
Reach1	3299.999	10-yr	2.46	183.43	183.66		183.67	0.002316	0.48	8.03	67.04	0.38
Reach1	3299.999	25-yr	3.30	183.43	183.69		183.70	0.002198	0.53	10.24	74.69	0.38
Reach1	3299.999	50-yr	3.98	183.43	183.72		183.73	0.001936	0.54	12.43	81.49	0.37
Reach1	3299.999	100-yr	4.63	183.43	183.74		183.75	0.001867	0.56	14.18	86.84	0.36

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	3199.999	CH	17.81	183.28	183.81	183.60	183.82	0.001511	0.80	46.03	151.19	0.37
Reach1	3199.999	Regional	9.74	183.28	183.74	183.54	183.75	0.000847	0.54	36.24	137.48	0.27
Reach1	3199.999	2-yr	1.02	183.28	183.39	183.39	183.41	0.017494	0.73	1.70	45.58	0.90
Reach1	3199.999	5-yr	1.85	183.28	183.56	183.41	183.57	0.000287	0.22	15.48	102.69	0.14
Reach1	3199.999	10-yr	2.46	183.28	183.61	183.43	183.61	0.000246	0.23	20.37	111.34	0.14
Reach1	3199.999	25-yr	3.30	183.28	183.63	183.44	183.63	0.000348	0.28	22.33	115.09	0.16
Reach1	3199.999	50-yr	3.98	183.28	183.66	183.46	183.66	0.000332	0.30	26.22	122.20	0.16
Reach1	3199.999	100-yr	4.63	183.28	183.68	183.47	183.68	0.000361	0.32	28.48	125.80	0.17
Reach1	3143.616	CH	17.81	182.99	183.79	183.36	183.80	0.000152	0.34	112.44	229.88	0.12
Reach1	3143.616	Regional	9.74	182.99	183.73	183.29	183.73	0.000067	0.21	98.56	224.54	0.08
Reach1	3143.616	2-yr	1.02	182.99	183.37	183.10	183.37	0.000026	0.08	26.23	168.78	0.04
Reach1	3143.616	5-yr	1.85	182.99	183.56	183.14	183.56	0.000009	0.06	61.60	207.48	0.03
Reach1	3143.616	10-yr	2.46	182.99	183.61	183.16	183.61	0.000011	0.07	71.39	217.66	0.03
Reach1	3143.616	25-yr	3.30	182.99	183.63	183.18	183.63	0.000017	0.09	75.06	218.60	0.04
Reach1	3143.616	50-yr	3.98	182.99	183.66	183.19	183.66	0.000019	0.10	82.22	220.43	0.04
Reach1	3143.616	100-yr	4.63	182.99	183.68	183.22	183.68	0.000022	0.11	86.18	221.43	0.05
Reach1	3071.819	CH	18.21	182.93	183.79	183.57	183.79	0.000269	0.28	96.36	247.60	0.15
Reach1	3071.819	Regional	9.74	182.93	183.73	183.33	183.73	0.000129	0.17	82.24	243.39	0.10
Reach1	3071.819	2-yr	1.02	182.93	183.37	183.06	183.37	0.000097	0.16	6.31	84.28	0.09
Reach1	3071.819	5-yr	1.85	182.93	183.56	183.10	183.56	0.000157	0.16	12.14	188.54	0.10
Reach1	3071.819	10-yr	2.46	182.93	183.61	183.12	183.61	0.000042	0.08	41.64	206.68	0.05
Reach1	3071.819	25-yr	3.30	182.93	183.63	183.15	183.63	0.000065	0.09	44.26	216.32	0.07
Reach1	3071.819	50-yr	3.98	182.93	183.66	183.18	183.66	0.000066	0.10	49.62	221.94	0.07
Reach1	3071.819	100-yr	4.63	182.93	183.68	183.20	183.68	0.000073	0.11	52.56	224.70	0.07
Reach1	3059.960		Culvert									
Reach1	3044.762	CH	18.21	182.84	183.37	183.24	183.46	0.004279	1.30	14.02	187.05	0.61
Reach1	3044.762	Regional	9.74	182.84	183.23	183.13	183.28	0.003990	0.99	9.83	162.40	0.56
Reach1	3044.762	2-yr	1.02	182.84	182.98	182.95	182.99	0.005686	0.46	2.22	57.62	0.52
Reach1	3044.762	5-yr	1.85	182.84	183.02	182.98	183.03	0.005333	0.56	3.33	68.94	0.54
Reach1	3044.762	10-yr	2.46	182.84	183.04	183.00	183.06	0.004784	0.60	4.08	79.95	0.53
Reach1	3044.762	25-yr	3.30	182.84	183.07	183.02	183.09	0.004686	0.67	4.90	105.55	0.54
Reach1	3044.762	50-yr	3.98	182.84	183.09	183.03	183.12	0.004546	0.72	5.53	118.34	0.54
Reach1	3044.762	100-yr	4.63	182.84	183.11	183.04	183.14	0.004395	0.76	6.11	129.41	0.54
Reach1	2995.296	CH	18.21	182.60	183.23	182.98	183.25	0.001389	0.82	43.47	140.26	0.36

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	2995.296	Regional	9.74	182.60	183.08	182.88	183.10	0.001516	0.69	24.66	103.58	0.35
Reach1	2995.296	2-yr	1.02	182.60	182.78	182.72	182.79	0.001939	0.35	4.36	45.62	0.33
Reach1	2995.296	5-yr	1.85	182.60	182.84	182.75	182.84	0.001745	0.40	7.01	53.68	0.33
Reach1	2995.296	10-yr	2.46	182.60	182.87	182.76	182.88	0.001689	0.43	8.74	58.16	0.33
Reach1	2995.296	25-yr	3.30	182.60	182.90	182.78	182.91	0.001628	0.47	10.87	63.69	0.33
Reach1	2995.296	50-yr	3.98	182.60	182.93	182.80	182.94	0.001586	0.51	12.51	66.99	0.33
Reach1	2995.296	100-yr	4.63	182.60	182.95	182.81	182.96	0.001566	0.53	13.99	69.85	0.34
Reach1	2899.999	CH	18.21	182.54	183.12	182.81	183.14	0.001078	0.72	46.30	112.04	0.31
Reach1	2899.999	Regional	9.74	182.54	182.97	182.71	182.98	0.001044	0.56	30.18	99.50	0.29
Reach1	2899.999	2-yr	1.02	182.54	182.70	182.57	182.70	0.000639	0.19	7.58	62.09	0.19
Reach1	2899.999	5-yr	1.85	182.54	182.75	182.60	182.75	0.000692	0.26	11.03	71.09	0.21
Reach1	2899.999	10-yr	2.46	182.54	182.78	182.61	182.78	0.000748	0.30	13.01	75.26	0.22
Reach1	2899.999	25-yr	3.30	182.54	182.81	182.63	182.81	0.000802	0.34	15.52	80.11	0.23
Reach1	2899.999	50-yr	3.98	182.54	182.83	182.64	182.83	0.000837	0.37	17.42	83.54	0.24
Reach1	2899.999	100-yr	4.63	182.54	182.85	182.65	182.85	0.000879	0.40	19.02	85.85	0.25
Reach1	2851.797	CH	19.32	182.48	182.85	182.85	182.98	0.019171	1.95	15.25	65.03	1.19
Reach1	2851.797	Regional	9.74	182.48	182.74	182.74	182.83	0.023928	1.58	8.89	56.32	1.22
Reach1	2851.797	2-yr	1.02	182.48	182.56	182.56	182.60	0.046224	0.98	1.29	18.06	1.39
Reach1	2851.797	5-yr	1.85	182.48	182.60	182.60	182.65	0.039518	1.08	2.09	28.47	1.35
Reach1	2851.797	10-yr	2.46	182.48	182.63	182.63	182.67	0.036513	0.94	3.01	44.11	1.26
Reach1	2851.797	25-yr	3.30	182.48	182.64	182.64	182.69	0.036420	1.09	3.72	47.17	1.31
Reach1	2851.797	50-yr	3.98	182.48	182.66	182.66	182.71	0.035234	1.18	4.29	48.87	1.32
Reach1	2851.797	100-yr	4.63	182.48	182.67	182.67	182.73	0.030571	1.22	4.99	50.34	1.26
Reach1	2764.286	CH	19.32	181.04	182.38	181.57	182.39	0.000130	0.44	75.94	83.33	0.13
Reach1	2764.286	Regional	9.74	181.04	182.02	181.42	182.02	0.000137	0.35	46.34	78.98	0.12
Reach1	2764.286	2-yr	1.02	181.04	181.39	181.16	181.39	0.000220	0.19	6.42	33.13	0.12
Reach1	2764.286	5-yr	1.85	181.04	181.51	181.21	181.51	0.000179	0.22	10.84	45.72	0.12
Reach1	2764.286	10-yr	2.46	181.04	181.57	181.23	181.58	0.000165	0.24	14.24	55.75	0.12
Reach1	2764.286	25-yr	3.30	181.04	181.65	181.27	181.66	0.000159	0.26	19.06	67.04	0.12
Reach1	2764.286	50-yr	3.98	181.04	181.71	181.29	181.71	0.000147	0.27	22.90	69.86	0.12
Reach1	2764.286	100-yr	4.63	181.04	181.75	181.31	181.76	0.000144	0.28	26.05	72.09	0.12
Reach1	2689.225	CH	19.32	180.88	182.32	181.76	182.37	0.000750	0.92	22.11	24.96	0.29
Reach1	2689.225	Regional	9.74	180.88	181.97	181.55	182.00	0.000791	0.72	13.84	22.35	0.28
Reach1	2689.225	2-yr	1.02	180.88	181.36	181.15	181.36	0.000826	0.37	2.74	11.22	0.24
Reach1	2689.225	5-yr	1.85	180.88	181.47	181.22	181.48	0.000872	0.44	4.20	13.94	0.26
Reach1	2689.225	10-yr	2.46	180.88	181.54	181.26	181.55	0.000880	0.47	5.19	15.56	0.26

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	2689.225	25-yr	3.30	180.88	181.62	181.31	181.63	0.000898	0.51	6.46	17.62	0.27
Reach1	2689.225	50-yr	3.98	180.88	181.67	181.34	181.69	0.000888	0.53	7.50	19.14	0.27
Reach1	2689.225	100-yr	4.63	180.88	181.72	181.38	181.73	0.000894	0.55	8.36	20.09	0.27
Reach1	2600	CH	20.08	180.84	182.20	181.75	182.27	0.001426	1.42	22.06	25.29	0.41
Reach1	2600	Regional	9.74	180.84	181.87	181.51	181.92	0.001115	1.02	14.27	22.99	0.35
Reach1	2600	2-yr	1.02	180.84	181.28	181.10	181.29	0.000824	0.42	2.72	12.80	0.25
Reach1	2600	5-yr	1.85	180.84	181.39	181.17	181.41	0.000839	0.52	4.34	16.12	0.26
Reach1	2600	10-yr	2.46	180.84	181.46	181.21	181.47	0.000852	0.58	5.45	18.21	0.27
Reach1	2600	25-yr	3.30	180.84	181.53	181.25	181.55	0.000874	0.65	6.85	19.65	0.28
Reach1	2600	50-yr	3.98	180.84	181.59	181.29	181.61	0.000866	0.69	7.98	20.62	0.29
Reach1	2600	100-yr	4.63	180.84	181.63	181.32	181.65	0.000913	0.74	8.81	21.33	0.30
Reach1	2500	CH	20.08	180.72	182.02		182.10	0.002067	1.28	15.82	21.42	0.46
Reach1	2500	Regional	9.74	180.72	181.71		181.77	0.002132	1.00	9.69	18.25	0.44
Reach1	2500	2-yr	1.02	180.72	181.15		181.16	0.002230	0.56	1.82	8.48	0.39
Reach1	2500	5-yr	1.85	180.72	181.26		181.28	0.002140	0.64	2.88	10.69	0.39
Reach1	2500	10-yr	2.46	180.72	181.32		181.35	0.002118	0.68	3.59	11.98	0.40
Reach1	2500	25-yr	3.30	180.72	181.40		181.42	0.002072	0.73	4.54	13.66	0.40
Reach1	2500	50-yr	3.98	180.72	181.46		181.49	0.001834	0.73	5.48	15.03	0.38
Reach1	2500	100-yr	4.63	180.72	181.49		181.52	0.001934	0.78	5.97	15.44	0.40
Reach1	2400	CH	20.08	180.52	181.68	181.48	181.83	0.003539	1.77	13.41	20.76	0.61
Reach1	2400	Regional	9.74	180.52	181.49	181.23	181.55	0.002096	1.14	9.59	18.76	0.45
Reach1	2400	2-yr	1.02	180.52	180.99	180.81	181.00	0.001242	0.45	2.26	9.64	0.29
Reach1	2400	5-yr	1.85	180.52	181.09	180.89	181.10	0.001460	0.57	3.30	11.67	0.33
Reach1	2400	10-yr	2.46	180.52	181.14	180.93	181.16	0.001564	0.63	3.99	12.84	0.35
Reach1	2400	25-yr	3.30	180.52	181.24	180.98	181.26	0.001228	0.64	5.39	14.92	0.32
Reach1	2400	50-yr	3.98	180.52	181.35	181.02	181.37	0.000806	0.60	7.09	17.13	0.27
Reach1	2400	100-yr	4.63	180.52	181.36	181.05	181.39	0.001008	0.69	7.30	17.37	0.30
Reach1	2300	CH	20.22	180.49	181.53		181.58	0.001520	1.09	26.37	52.57	0.40
Reach1	2300	Regional	9.74	180.49	181.40		181.42	0.000732	0.67	19.76	51.36	0.27
Reach1	2300	2-yr	1.02	180.49	180.82		180.84	0.002228	0.48	2.13	12.65	0.37
Reach1	2300	5-yr	1.85	180.49	180.90		180.92	0.002343	0.57	3.23	15.23	0.40
Reach1	2300	10-yr	2.46	180.49	181.01		181.02	0.001241	0.49	5.01	19.26	0.30
Reach1	2300	25-yr	3.30	180.49	181.19		181.20	0.000397	0.38	9.97	35.79	0.18
Reach1	2300	50-yr	3.98	180.49	181.32		181.33	0.000210	0.33	15.64	48.62	0.14
Reach1	2300	100-yr	4.63	180.49	181.33		181.33	0.000277	0.38	15.80	49.02	0.16

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	2200	CH	20.22	180.42	181.46	180.86	181.48	0.000621	0.67	43.60	57.31	0.25
Reach1	2200	Regional	9.74	180.42	181.38	180.72	181.38	0.000194	0.35	38.99	53.54	0.14
Reach1	2200	2-yr	1.02	180.42	180.64	180.50	180.65	0.001570	0.31	4.67	29.23	0.29
Reach1	2200	5-yr	1.85	180.42	180.83	180.54	180.83	0.000402	0.19	11.37	43.58	0.16
Reach1	2200	10-yr	2.46	180.42	180.98	180.57	180.98	0.000150	0.17	18.47	48.78	0.10
Reach1	2200	25-yr	3.30	180.42	181.18	180.59	181.18	0.000064	0.16	28.40	51.81	0.07
Reach1	2200	50-yr	3.98	180.42	181.32	180.61	181.32	0.000044	0.15	35.60	52.99	0.06
Reach1	2200	100-yr	4.63	180.42	181.32	180.62	181.32	0.000059	0.18	35.68	53.01	0.07
Reach1	1952.223	CH	20.34	179.87	181.40		181.40	0.000180	0.45	103.92	279.32	0.14
Reach1	1952.223	Regional	9.74	179.87	181.36		181.36	0.000050	0.23	94.15	265.93	0.07
Reach1	1952.223	2-yr	1.02	179.87	180.55		180.56	0.000177	0.21	5.87	39.80	0.12
Reach1	1952.223	5-yr	1.85	179.87	180.81		180.81	0.000049	0.15	20.25	64.56	0.07
Reach1	1952.223	10-yr	2.46	179.87	180.97		180.97	0.000030	0.13	31.16	78.12	0.05
Reach1	1952.223	25-yr	3.30	179.87	181.17		181.17	0.000016	0.11	53.86	152.72	0.04
Reach1	1952.223	50-yr	3.98	179.87	181.31		181.31	0.000011	0.10	81.62	244.26	0.03
Reach1	1952.223	100-yr	4.63	179.87	181.31		181.31	0.000015	0.12	81.62	244.26	0.04
Reach1	1937.395	CH	20.34	179.87	181.40	180.90	181.40	0.000017	0.12	269.61	286.13	0.04
Reach1	1937.395	Regional	9.74	179.87	181.36	180.65	181.36	0.000004	0.06	259.31	283.87	0.02
Reach1	1937.395	2-yr	1.02	179.87	180.55	180.25	180.55	0.000327	0.27	3.75	197.24	0.16
Reach1	1937.395	5-yr	1.85	179.87	180.80	180.34	180.81	0.000159	0.26	7.21	201.37	0.12
Reach1	1937.395	10-yr	2.46	179.87	180.97	180.37	180.97	0.000118	0.25	9.79	226.99	0.11
Reach1	1937.395	25-yr	3.30	179.87	181.17	180.42	181.17	0.000090	0.24	13.51	269.77	0.09
Reach1	1937.395	50-yr	3.98	179.87	181.31	180.45	181.31	0.000001	0.03	226.09	280.81	0.01
Reach1	1937.395	100-yr	4.63	179.87	181.31	180.48	181.31	0.000001	0.03	226.10	280.81	0.01
Reach1	1921.497		Culvert									
Reach1	1906.334	CH	20.34	179.74	181.36	180.85	181.36	0.000019	0.14	274.65	323.81	0.05
Reach1	1906.334	Regional	9.74	179.74	181.35	180.66	181.35	0.000004	0.07	273.21	323.35	0.02
Reach1	1906.334	2-yr	1.02	179.74	180.01	180.11	180.36	0.091609	2.61	0.39	16.98	2.28
Reach1	1906.334	5-yr	1.85	179.74	180.07	180.21	180.56	0.095728	3.08	0.60	42.94	2.41
Reach1	1906.334	10-yr	2.46	179.74	180.27	180.27	180.40	0.013715	1.60	1.54	96.02	0.99
Reach1	1906.334	25-yr	3.30	179.74	180.34	180.34	180.49	0.013576	1.71	1.93	111.38	1.00
Reach1	1906.334	50-yr	3.98	179.74	180.46	180.38	180.56	0.007050	1.40	2.84	147.60	0.75
Reach1	1906.334	100-yr	4.63	179.74	181.19	180.42	181.19	0.000094	0.28	16.56	284.10	0.10
Reach1	1885.931	CH	20.34	179.74	181.36		181.36	0.000009	0.11	447.70	585.84	0.03
Reach1	1885.931	Regional	9.74	179.74	181.35		181.35	0.000002	0.05	445.19	585.38	0.02

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	1885.931	2-yr	1.02	179.74	180.04	179.97	180.04	0.004209	0.60	3.60	38.39	0.50
Reach1	1885.931	5-yr	1.85	179.74	180.11	180.00	180.12	0.003131	0.60	7.62	76.93	0.45
Reach1	1885.931	10-yr	2.46	179.74	180.16	180.04	180.16	0.001933	0.50	11.39	87.96	0.36
Reach1	1885.931	25-yr	3.30	179.74	180.21	180.06	180.21	0.001448	0.43	15.80	98.30	0.31
Reach1	1885.931	50-yr	3.98	179.74	180.48		180.48	0.000065	0.13	62.47	255.86	0.07
Reach1	1885.931	100-yr	4.63	179.74	181.19		181.19	0.000001	0.03	352.65	533.75	0.01
Reach1	1799.999	CH	20.83	179.48	181.36		181.36	0.000005	0.09	597.42	707.95	0.02
Reach1	1799.999	Regional	9.74	179.48	181.35		181.35	0.000001	0.04	594.67	707.42	0.01
Reach1	1799.999	2-yr	1.02	179.48	179.99		179.99	0.000226	0.20	12.53	92.07	0.13
Reach1	1799.999	5-yr	1.85	179.48	180.07		180.07	0.000190	0.21	21.26	112.53	0.12
Reach1	1799.999	10-yr	2.46	179.48	180.12		180.12	0.000189	0.18	27.08	125.78	0.11
Reach1	1799.999	25-yr	3.30	179.48	180.17		180.17	0.000206	0.16	33.36	144.51	0.12
Reach1	1799.999	50-yr	3.98	179.48	180.48		180.48	0.000016	0.07	113.06	372.78	0.04
Reach1	1799.999	100-yr	4.63	179.48	181.19		181.19	0.000000	0.02	485.26	649.75	0.01
Reach1	1699.999	CH	20.83	179.32	181.35		181.35	0.000016	0.17	499.78	664.39	0.05
Reach1	1699.999	Regional	9.74	179.32	181.35		181.35	0.000004	0.08	497.78	664.11	0.02
Reach1	1699.999	2-yr	1.02	179.32	179.93		179.94	0.001695	0.41	3.79	48.28	0.32
Reach1	1699.999	5-yr	1.85	179.32	180.03		180.04	0.000921	0.41	9.44	68.38	0.26
Reach1	1699.999	10-yr	2.46	179.32	180.08		180.09	0.000789	0.42	13.25	80.10	0.24
Reach1	1699.999	25-yr	3.30	179.32	180.13		180.13	0.000838	0.47	16.89	91.40	0.26
Reach1	1699.999	50-yr	3.98	179.32	180.47		180.47	0.000052	0.16	70.81	197.31	0.07
Reach1	1699.999	100-yr	4.63	179.32	181.19		181.19	0.000002	0.05	391.65	649.09	0.01
Reach1	1600	CH	22.58	179.20	181.35		181.35	0.000019	0.18	457.03	562.04	0.05
Reach1	1600	Regional	9.74	179.20	181.35		181.35	0.000003	0.08	456.08	561.75	0.02
Reach1	1600	2-yr	1.02	179.20	179.86	179.63	179.87	0.000475	0.33	9.89	65.24	0.19
Reach1	1600	5-yr	1.85	179.20	179.98		179.98	0.000436	0.24	18.93	87.13	0.17
Reach1	1600	10-yr	2.46	179.20	180.04		180.04	0.000414	0.21	24.38	105.03	0.16
Reach1	1600	25-yr	3.30	179.20	180.08		180.08	0.000457	0.23	28.68	112.74	0.17
Reach1	1600	50-yr	3.98	179.20	180.47		180.47	0.000024	0.11	95.62	241.56	0.05
Reach1	1600	100-yr	4.63	179.20	181.19		181.19	0.000001	0.04	372.38	499.77	0.01
Reach1	1500	CH	22.58	179.24	181.35		181.35	0.000012	0.15	595.72	666.81	0.04
Reach1	1500	Regional	9.74	179.24	181.35		181.35	0.000002	0.07	595.20	666.74	0.02
Reach1	1500	2-yr	1.02	179.24	179.63	179.63	179.72	0.016032	1.38	0.74	3.84	1.01
Reach1	1500	5-yr	1.85	179.24	179.74	179.74	179.85	0.015335	1.48	1.25	5.75	1.01
Reach1	1500	10-yr	2.46	179.24	179.79	179.79	179.91	0.015736	1.53	1.61	7.11	1.03
Reach1	1500	25-yr	3.30	179.24	179.92	179.92	179.96	0.010605	0.96	6.46	88.11	0.79

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	1500	50-yr	3.98	179.24	180.47		180.47	0.000016	0.10	127.49	318.06	0.04
Reach1	1500	100-yr	4.63	179.24	181.19		181.19	0.000001	0.04	488.79	652.10	0.01
Reach1	1400	CH	22.58	179.13	181.35		181.35	0.000005	0.12	803.24	720.74	0.03
Reach1	1400	Regional	9.74	179.13	181.35		181.35	0.000001	0.05	803.06	720.63	0.01
Reach1	1400	2-yr	1.02	179.13	179.56	179.28	179.56	0.000069	0.13	12.03	57.28	0.07
Reach1	1400	5-yr	1.85	179.13	179.63	179.32	179.63	0.000121	0.20	15.78	64.40	0.10
Reach1	1400	10-yr	2.46	179.13	179.84	179.34	179.84	0.000041	0.15	42.66	227.14	0.06
Reach1	1400	25-yr	3.30	179.13	179.86	179.37	179.86	0.000064	0.20	46.62	233.33	0.08
Reach1	1400	50-yr	3.98	179.13	180.47		180.47	0.000002	0.06	269.12	465.66	0.02
Reach1	1400	100-yr	4.63	179.13	181.19		181.19	0.000000	0.03	690.60	686.11	0.01
Reach1	1323.669	CH	22.58	179.01	181.35		181.35	0.000004	0.10	931.09	879.14	0.02
Reach1	1323.669	Regional	9.74	179.01	181.35		181.35	0.000001	0.04	931.04	879.13	0.01
Reach1	1323.669	2-yr	1.02	179.01	179.55		179.55	0.000386	0.23	6.41	89.14	0.16
Reach1	1323.669	5-yr	1.85	179.01	179.61		179.61	0.000471	0.29	13.56	140.07	0.18
Reach1	1323.669	10-yr	2.46	179.01	179.84		179.84	0.000041	0.13	55.46	205.79	0.06
Reach1	1323.669	25-yr	3.30	179.01	179.85		179.85	0.000064	0.17	58.74	208.32	0.08
Reach1	1323.669	50-yr	3.98	179.01	180.47		180.47	0.000002	0.05	302.03	587.08	0.02
Reach1	1323.669	100-yr	4.63	179.01	181.19		181.19	0.000000	0.02	795.01	801.28	0.01
Reach1	1193.845	CH	23.66	178.85	181.35		181.35	0.000004	0.10	1039.86	1015.37	0.02
Reach1	1193.845	Regional	23.66	178.85	181.35		181.35	0.000004	0.10	1039.86	1015.37	0.02
Reach1	1193.845	2-yr	2.01	178.85	179.20	179.20	179.29	0.016405	1.32	1.52	8.78	1.02
Reach1	1193.845	5-yr	3.73	178.85	179.51		179.52	0.000909	0.47	14.57	80.34	0.26
Reach1	1193.845	10-yr	5.03	178.85	179.83		179.83	0.000097	0.24	57.52	179.31	0.10
Reach1	1193.845	25-yr	6.84	178.85	179.84		179.84	0.000168	0.32	59.21	180.52	0.13
Reach1	1193.845	50-yr	8.34	178.85	180.47		180.47	0.000010	0.12	287.83	662.60	0.03
Reach1	1193.845	100-yr	9.79	178.85	181.19		181.19	0.000001	0.05	877.85	995.72	0.01
Reach1	1100	CH	23.66	178.25	181.35		181.35	0.000001	0.05	1295.30	1114.48	0.01
Reach1	1100	Regional	23.66	178.25	181.35		181.35	0.000001	0.05	1295.30	1114.48	0.01
Reach1	1100	2-yr	2.01	178.25	179.09	178.57	179.09	0.000073	0.17	20.01	102.58	0.08
Reach1	1100	5-yr	3.73	178.25	179.52		179.52	0.000008	0.09	102.63	254.06	0.03
Reach1	1100	10-yr	5.03	178.25	179.83		179.83	0.000003	0.07	189.31	326.90	0.02
Reach1	1100	25-yr	6.84	178.25	179.84		179.84	0.000006	0.09	192.51	340.19	0.03
Reach1	1100	50-yr	8.34	178.25	180.47		180.47	0.000001	0.05	471.65	574.92	0.01
Reach1	1100	100-yr	9.79	178.25	181.19		181.19	0.000000	0.03	1118.76	1080.94	0.01
Reach1	974.3741	CH	23.66	178.28	181.35		181.35	0.000002	0.09	940.96	978.97	0.02

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	974.3741	Regional	23.66	178.28	181.35		181.35	0.000002	0.09	940.96	978.97	0.02
Reach1	974.3741	2-yr	2.01	178.28	179.08		179.08	0.000014	0.08	43.21	119.02	0.03
Reach1	974.3741	5-yr	3.73	178.28	179.52		179.52	0.000005	0.07	110.01	176.96	0.02
Reach1	974.3741	10-yr	5.03	178.28	179.83		179.83	0.000003	0.06	166.90	189.27	0.02
Reach1	974.3741	25-yr	6.84	178.28	179.84		179.84	0.000005	0.08	168.68	190.34	0.02
Reach1	974.3741	50-yr	8.34	178.28	180.47		180.47	0.000001	0.06	312.03	318.15	0.01
Reach1	974.3741	100-yr	9.79	178.28	181.19		181.19	0.000000	0.04	786.85	928.94	0.01
Reach1	960.8255	CH	23.66	178.28	181.35	179.64	181.35	0.000005	0.14	433.90	1129.82	0.03
Reach1	960.8255	Regional	23.66	178.28	181.35	179.64	181.35	0.000005	0.14	433.90	1129.82	0.03
Reach1	960.8255	2-yr	2.01	178.28	179.06	178.63	179.07	0.000470	0.55	3.63	154.12	0.22
Reach1	960.8255	5-yr	3.73	178.28	179.48	178.75	179.50	0.000317	0.63	5.92	199.97	0.19
Reach1	960.8255	10-yr	5.03	178.28	179.79	178.83	179.81	0.000253	0.66	7.58	248.81	0.18
Reach1	960.8255	25-yr	6.84	178.28	179.77	178.93	179.81	0.000494	0.92	7.45	244.41	0.25
Reach1	960.8255	50-yr	8.34	178.28	180.42	179.01	180.45	0.000203	0.76	10.95	447.04	0.17
Reach1	960.8255	100-yr	9.79	178.28	181.15	179.08	181.18	0.000100	0.66	14.90	1020.33	0.13
Reach1	945.2227		Culvert									
Reach1	929.6181	CH	23.66	177.14	178.76	178.76	179.42	0.008395	3.61	6.55	97.84	1.00
Reach1	929.6181	Regional	23.66	177.14	178.76	178.76	179.42	0.008395	3.61	6.55	97.84	1.00
Reach1	929.6181	2-yr	2.01	177.14	178.37	177.66	178.38	0.000194	0.43	4.62	28.33	0.14
Reach1	929.6181	5-yr	3.73	177.14	178.47	177.81	178.50	0.000471	0.73	5.13	45.54	0.23
Reach1	929.6181	10-yr	5.03	177.14	178.52	177.90	178.56	0.000736	0.94	5.37	71.37	0.29
Reach1	929.6181	25-yr	6.84	177.14	178.57	178.01	178.64	0.001171	1.22	5.62	79.45	0.36
Reach1	929.6181	50-yr	8.34	177.14	178.60	178.09	178.71	0.001589	1.44	5.78	82.06	0.43
Reach1	929.6181	100-yr	9.79	177.14	178.63	178.17	178.77	0.002030	1.66	5.91	84.14	0.48
Reach1	908.9127	CH	23.66	177.14	178.84	178.58	178.85	0.001140	0.83	60.30	167.88	0.33
Reach1	908.9127	Regional	23.66	177.14	178.84	178.58	178.85	0.001140	0.83	60.30	167.88	0.33
Reach1	908.9127	2-yr	2.01	177.14	178.36		178.37	0.000998	0.47	4.88	37.17	0.27
Reach1	908.9127	5-yr	3.73	177.14	178.46		178.47	0.001213	0.54	11.29	88.82	0.30
Reach1	908.9127	10-yr	5.03	177.14	178.50		178.52	0.001250	0.56	15.77	99.76	0.31
Reach1	908.9127	25-yr	6.84	177.14	178.56		178.57	0.001231	0.59	21.18	111.02	0.31
Reach1	908.9127	50-yr	8.34	177.14	178.59		178.60	0.001233	0.63	25.04	118.98	0.32
Reach1	908.9127	100-yr	9.79	177.14	178.62		178.63	0.001213	0.66	28.72	124.44	0.32
Reach1	800	CH	23.66	177.14	178.71		178.73	0.001286	0.82	60.60	169.63	0.34
Reach1	800	Regional	23.66	177.14	178.71		178.73	0.001286	0.82	60.60	169.63	0.34
Reach1	800	2-yr	2.01	177.14	178.09		178.13	0.007313	0.88	2.32	15.31	0.67

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	800	5-yr	3.73	177.14	178.22		178.26	0.003315	0.85	5.87	46.54	0.49
Reach1	800	10-yr	5.03	177.14	178.28		178.32	0.002886	0.88	8.97	61.03	0.47
Reach1	800	25-yr	6.84	177.14	178.35		178.38	0.002446	0.91	13.75	81.16	0.45
Reach1	800	50-yr	8.34	177.14	178.40		178.43	0.002148	0.91	18.13	96.43	0.42
Reach1	800	100-yr	9.79	177.14	178.45		178.48	0.001767	0.87	23.57	113.13	0.39
Reach1	699.9999	CH	23.66	177.14	178.54		178.59	0.001514	1.10	43.75	160.57	0.40
Reach1	699.9999	Regional	23.66	177.14	178.54		178.59	0.001514	1.10	43.75	160.57	0.40
Reach1	699.9999	2-yr	2.01	177.14	177.82		177.84	0.001508	0.63	3.17	9.12	0.34
Reach1	699.9999	5-yr	3.73	177.14	177.98		178.00	0.002029	0.72	5.32	19.46	0.40
Reach1	699.9999	10-yr	5.03	177.14	178.04		178.07	0.002053	0.80	6.70	22.81	0.41
Reach1	699.9999	25-yr	6.84	177.14	178.12		178.16	0.002088	0.89	8.58	26.73	0.42
Reach1	699.9999	50-yr	8.34	177.14	178.17		178.22	0.002130	0.96	10.07	29.47	0.43
Reach1	699.9999	100-yr	9.79	177.14	178.23		178.27	0.002383	0.98	11.90	35.20	0.46
Reach1	600	CH	23.66	177.14	178.37		178.44	0.001527	1.19	29.63	103.00	0.41
Reach1	600	Regional	23.66	177.14	178.37		178.44	0.001527	1.19	29.63	103.00	0.41
Reach1	600	2-yr	2.01	177.14	177.55		177.59	0.004981	0.82	2.46	11.93	0.58
Reach1	600	5-yr	3.73	177.14	177.66		177.71	0.004604	0.94	3.98	14.85	0.58
Reach1	600	10-yr	5.03	177.14	177.73		177.78	0.004372	1.00	5.05	16.61	0.58
Reach1	600	25-yr	6.84	177.14	177.82		177.87	0.004126	1.05	6.50	18.81	0.57
Reach1	600	50-yr	8.34	177.14	177.88		177.94	0.003940	1.08	7.71	21.41	0.57
Reach1	600	100-yr	9.79	177.14	177.93		177.99	0.003555	1.12	8.84	23.50	0.55
Reach1	509.8065	CH	23.66	176.97	178.32		178.35	0.000597	0.84	34.46	66.20	0.26
Reach1	509.8065	Regional	23.66	176.97	178.32		178.35	0.000597	0.84	34.46	66.20	0.26
Reach1	509.8065	2-yr	2.01	176.97	177.45		177.46	0.000592	0.34	5.97	22.26	0.21
Reach1	509.8065	5-yr	3.73	176.97	177.57		177.58	0.000643	0.44	8.58	23.68	0.23
Reach1	509.8065	10-yr	5.03	176.97	177.63		177.65	0.000674	0.50	10.22	24.49	0.24
Reach1	509.8065	25-yr	6.84	176.97	177.71		177.73	0.000719	0.57	12.20	25.39	0.25
Reach1	509.8065	50-yr	8.34	176.97	177.77		177.79	0.000751	0.62	13.69	25.90	0.26
Reach1	509.8065	100-yr	9.79	176.97	177.83		177.85	0.000771	0.67	15.07	26.37	0.27
Reach1	399.9999	CH	23.66	176.91	178.22		178.27	0.000961	1.09	30.99	51.42	0.33
Reach1	399.9999	Regional	23.66	176.91	178.22		178.27	0.000961	1.09	30.99	51.42	0.33
Reach1	399.9999	2-yr	2.01	176.91	177.32		177.34	0.002658	0.60	3.34	16.11	0.42
Reach1	399.9999	5-yr	3.73	176.91	177.43		177.45	0.002397	0.72	5.25	19.83	0.42
Reach1	399.9999	10-yr	5.03	176.91	177.49		177.52	0.002297	0.80	6.54	21.86	0.43
Reach1	399.9999	25-yr	6.84	176.91	177.56		177.60	0.002249	0.90	8.21	24.25	0.44
Reach1	399.9999	50-yr	8.34	176.91	177.61		177.66	0.002251	0.97	9.51	26.10	0.45

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	399.9999	100-yr	9.79	176.91	177.66		177.71	0.002176	1.02	10.88	27.77	0.45
Reach1	299.9999	CH	23.66	176.86	178.18		178.20	0.000440	0.74	51.05	60.72	0.23
Reach1	299.9999	Regional	23.66	176.86	178.18		178.20	0.000440	0.74	51.05	60.72	0.23
Reach1	299.9999	2-yr	2.01	176.86	177.20		177.20	0.000808	0.36	8.08	31.58	0.24
Reach1	299.9999	5-yr	3.73	176.86	177.29		177.30	0.001025	0.48	11.15	33.57	0.28
Reach1	299.9999	10-yr	5.03	176.86	177.35		177.36	0.001144	0.55	13.07	34.76	0.30
Reach1	299.9999	25-yr	6.84	176.86	177.42		177.43	0.001276	0.63	15.44	36.22	0.32
Reach1	299.9999	50-yr	8.34	176.86	177.47		177.48	0.001352	0.68	17.29	37.38	0.34
Reach1	299.9999	100-yr	9.79	176.86	177.52		177.54	0.001316	0.70	19.45	38.80	0.34
Reach1	199.9999	CH	23.66	176.86	178.14		178.16	0.000251	0.61	53.52	75.03	0.18
Reach1	199.9999	Regional	23.66	176.86	178.14		178.16	0.000251	0.61	53.52	75.03	0.18
Reach1	199.9999	2-yr	2.01	176.86	177.10	176.98	177.11	0.000866	0.35	6.92	37.08	0.24
Reach1	199.9999	5-yr	3.73	176.86	177.17	177.02	177.18	0.001129	0.48	9.45	37.70	0.29
Reach1	199.9999	10-yr	5.03	176.86	177.21	177.05	177.22	0.001329	0.56	10.85	38.04	0.32
Reach1	199.9999	25-yr	6.84	176.86	177.25	177.08	177.27	0.001553	0.66	12.56	38.45	0.35
Reach1	199.9999	50-yr	8.34	176.86	177.22	177.10	177.26	0.003060	0.88	11.48	38.19	0.49
Reach1	199.9999	100-yr	9.79	176.86	177.17	177.12	177.24	0.007468	1.23	9.57	37.73	0.74
Reach1	117.8047	CH	23.66	176.86	178.15		178.15	0.000010	0.12	195.51	155.66	0.03
Reach1	117.8047	Regional	23.66	176.86	178.15		178.15	0.000010	0.12	195.51	155.66	0.03
Reach1	117.8047	2-yr	2.01	176.86	176.89	176.89	176.90	0.030265	0.52	3.89	146.00	1.01
Reach1	117.8047	5-yr	3.73	176.86	176.90	176.90	176.92	0.028322	0.65	5.75	146.17	1.04
Reach1	117.8047	10-yr	5.03	176.86	176.91	176.91	176.93	0.024210	0.70	7.21	146.31	1.00
Reach1	117.8047	25-yr	6.84	176.86	176.92	176.92	176.95	0.022695	0.77	8.85	146.46	1.00
Reach1	117.8047	50-yr	8.34	176.86	176.98		176.99	0.003275	0.47	17.83	147.17	0.43
Reach1	117.8047	100-yr	9.79	176.86	177.06		177.06	0.000880	0.34	29.18	148.08	0.24
Reach1	70.50	CH	23.66	175.45	178.15		178.15	0.000008	0.16	242.05	141.10	0.03
Reach1	70.50	Regional	23.66	175.45	178.15		178.15	0.000008	0.16	242.05	141.10	0.03
Reach1	70.50	2-yr	2.01	175.45	176.08	175.74	176.08	0.000259	0.23	8.89	32.48	0.14
Reach1	70.50	5-yr	3.73	175.45	176.40	175.83	176.40	0.000061	0.18	23.57	65.20	0.08
Reach1	70.50	10-yr	5.03	175.45	176.64	175.87	176.65	0.000027	0.15	48.21	116.79	0.05
Reach1	70.50	25-yr	6.84	175.45	176.86	175.93	176.86	0.000018	0.14	73.73	120.39	0.05
Reach1	70.50	50-yr	8.34	175.45	176.98		176.98	0.000017	0.15	88.82	121.82	0.04
Reach1	70.50	100-yr	9.79	175.45	177.06		177.06	0.000018	0.16	97.82	122.75	0.05
Reach1	36.84	CH	23.66	174.49	178.15	175.24	178.15	0.000003	0.12	403.89	208.27	0.02
Reach1	36.84	Regional	23.66	174.49	178.15	175.24	178.15	0.000003	0.12	403.89	208.27	0.02

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

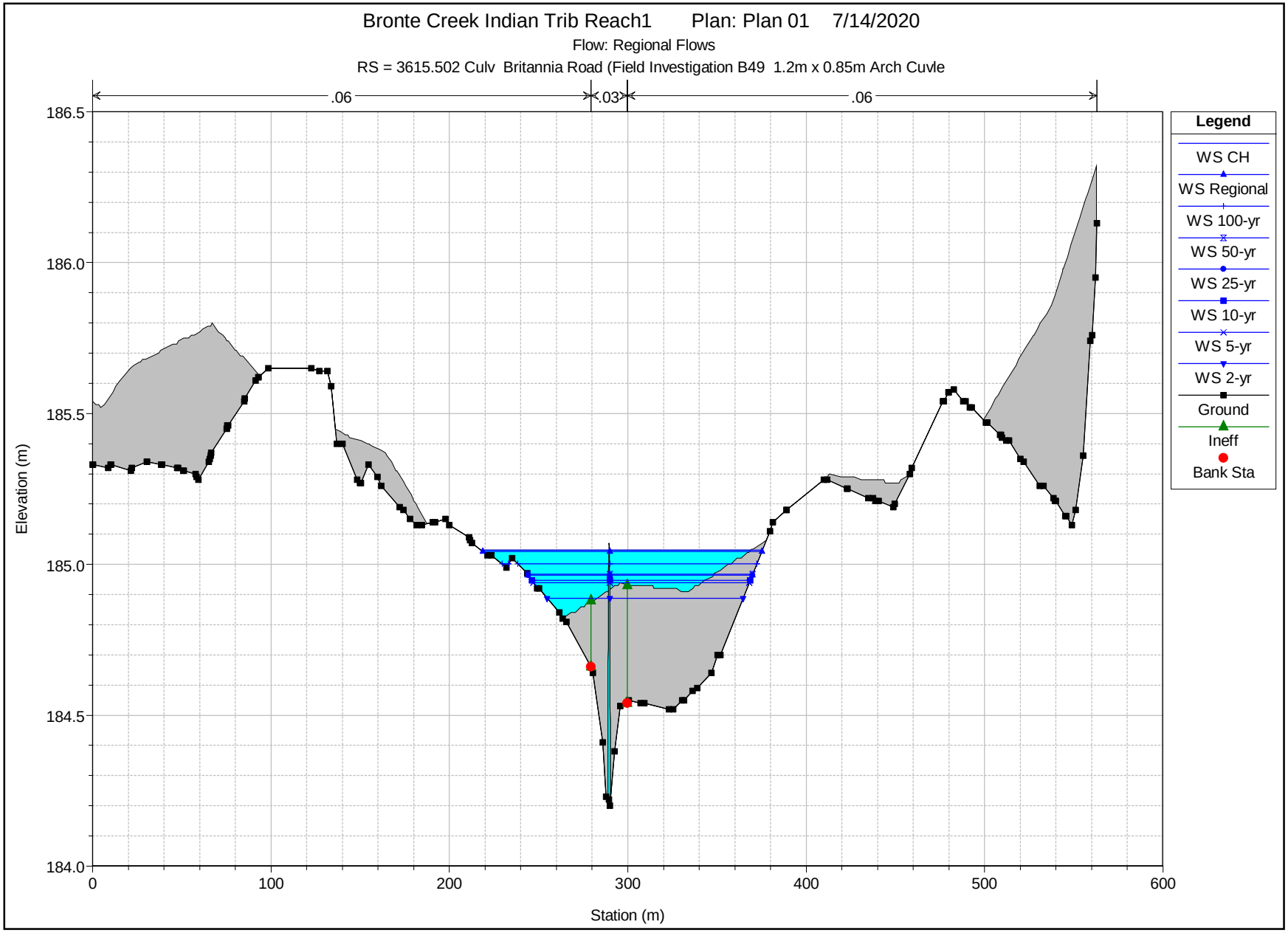
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	36.84	2-yr	2.01	174.49	176.08	174.72	176.08	0.000003	0.08	26.54	67.71	0.02
Reach1	36.84	5-yr	3.73	174.49	176.40	174.79	176.40	0.000006	0.11	32.74	147.20	0.03
Reach1	36.84	10-yr	5.03	174.49	176.64	174.84	176.65	0.000007	0.13	37.43	174.51	0.03
Reach1	36.84	25-yr	6.84	174.49	176.86	174.90	176.86	0.000005	0.11	112.80	182.94	0.03
Reach1	36.84	50-yr	8.34	174.49	176.98	174.94	176.98	0.000005	0.12	129.85	186.01	0.03
Reach1	36.84	100-yr	9.79	174.49	177.06	174.98	177.06	0.000006	0.13	139.98	187.26	0.03
Reach1	14.37		Culvert									
Reach1	4.840	CH	23.66	174.41	178.15	175.25	178.15	0.000004	0.13	367.04	230.02	0.02
Reach1	4.840	Regional	23.66	174.41	178.15	175.25	178.15	0.000004	0.13	367.04	230.02	0.02
Reach1	4.840	2-yr	2.01	174.41	176.05	174.64	176.05	0.000005	0.09	22.68	79.32	0.02
Reach1	4.840	5-yr	3.73	174.41	176.29	174.73	176.29	0.000009	0.14	26.57	86.91	0.04
Reach1	4.840	10-yr	5.03	174.41	176.44	174.79	176.44	0.000013	0.17	29.00	91.65	0.04
Reach1	4.840	25-yr	6.84	174.41	176.56	174.86	176.56	0.000019	0.22	30.95	95.45	0.05
Reach1	4.840	50-yr	8.34	174.41	176.71	174.92	176.71	0.000014	0.19	58.37	99.69	0.04
Reach1	4.840	100-yr	9.79	174.41	176.82	174.96	176.82	0.000016	0.21	63.94	107.91	0.05
Reach1	0	CH	23.66	174.40	178.15	175.25	178.15	0.000012	0.20	248.26	232.48	0.04
Reach1	0	Regional	23.66	174.40	178.15	175.25	178.15	0.000012	0.20	248.26	232.48	0.04
Reach1	0	2-yr	2.01	174.40	176.05	174.62	176.05	0.000005	0.09	22.21	79.91	0.02
Reach1	0	5-yr	3.73	174.40	176.29	174.72	176.29	0.000010	0.14	25.98	86.98	0.04
Reach1	0	10-yr	5.03	174.40	176.44	174.78	176.44	0.000013	0.18	28.34	91.59	0.04
Reach1	0	25-yr	6.84	174.40	176.56	174.86	176.56	0.000019	0.23	30.23	95.30	0.05
Reach1	0	50-yr	8.34	174.40	176.71	174.91	176.71	0.000030	0.26	33.18	99.38	0.06
Reach1	0	100-yr	9.79	174.40	176.82	174.95	176.82	0.000033	0.28	38.35	102.31	0.07

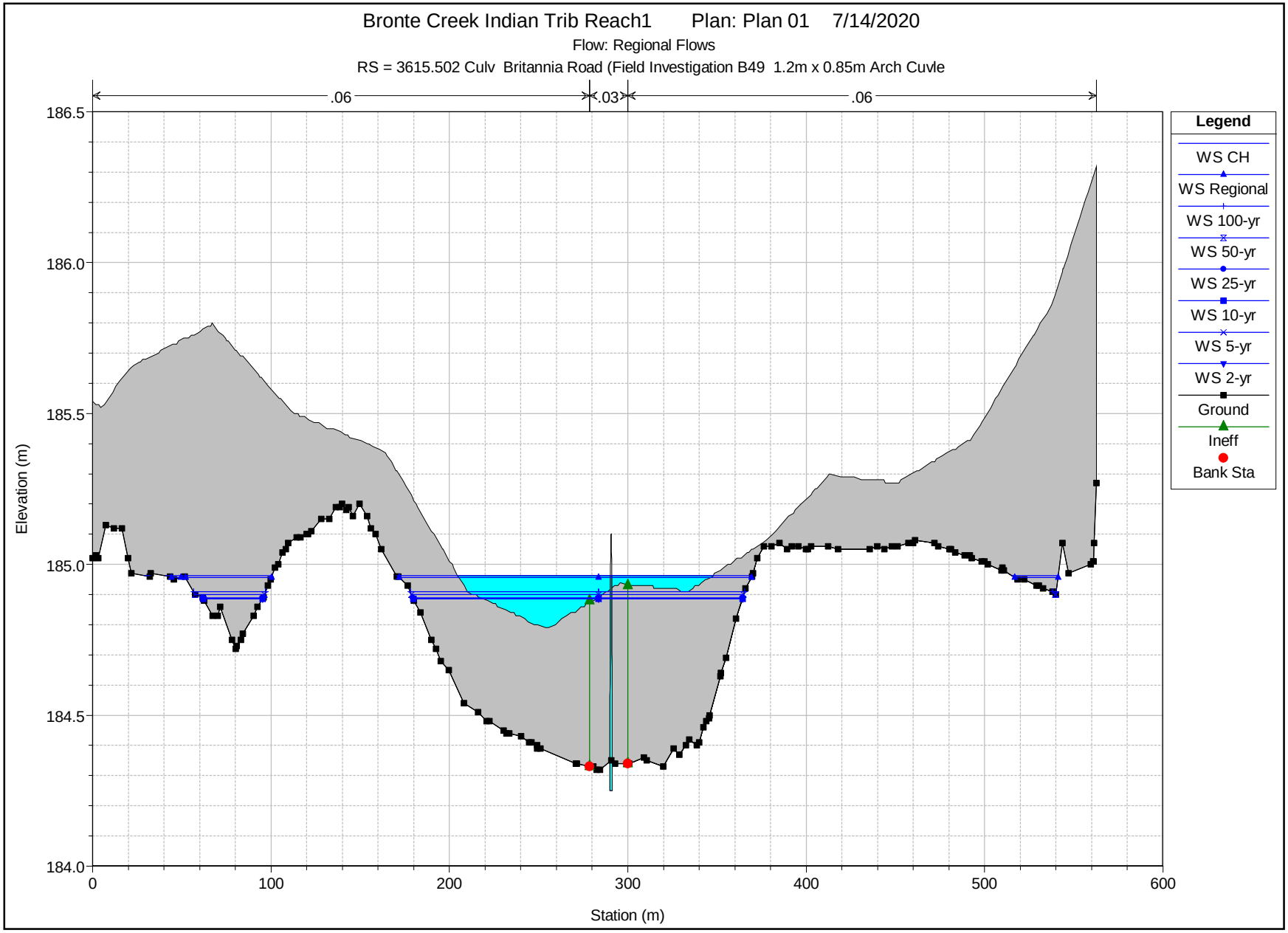
HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1

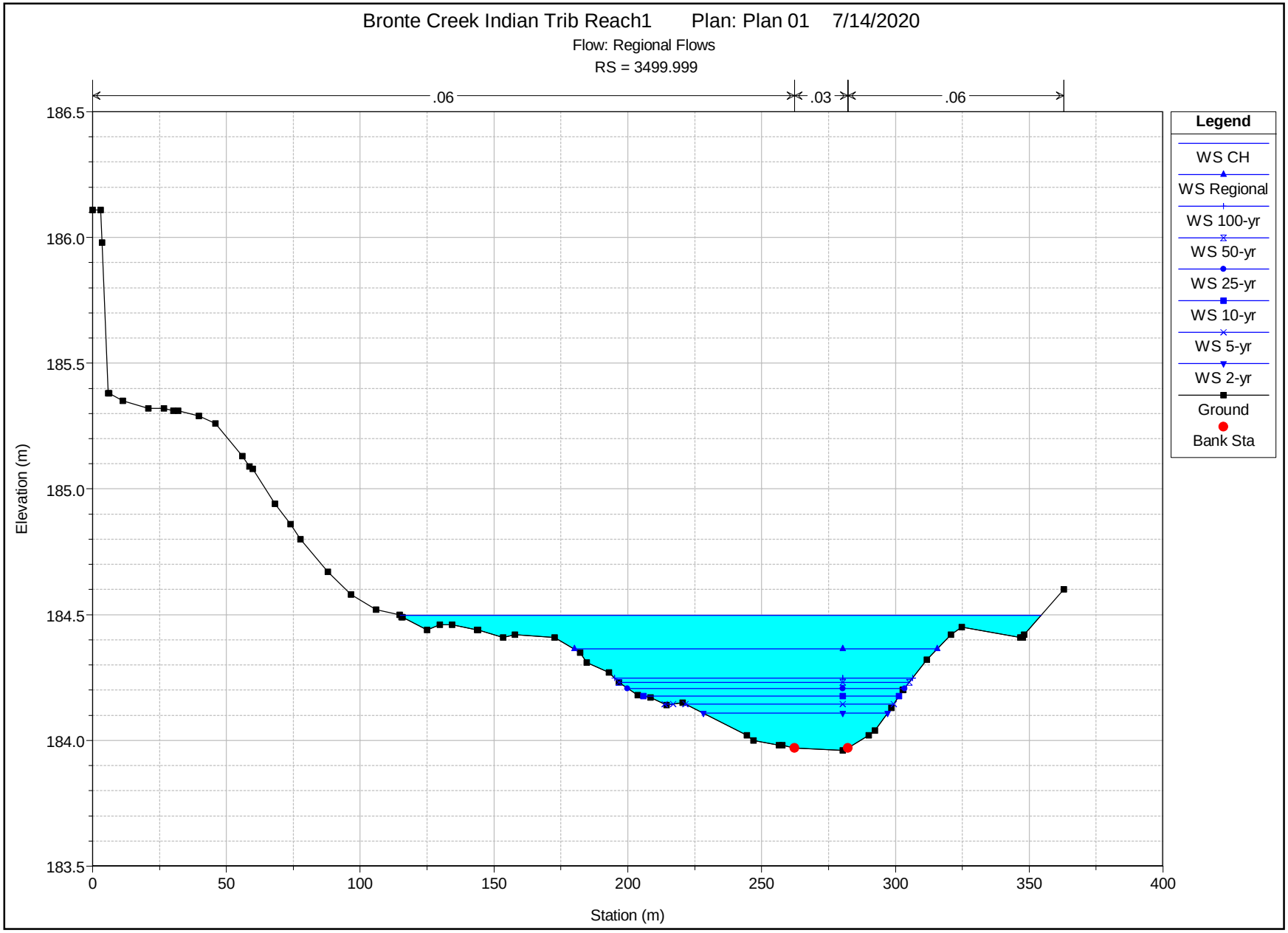
Reach	River Sta	Profile	E.G. US.	W.S. US.	E.G. IC	E.G. OC	Min El Weir Flow	Q Culv Group	Q Weir	Delta WS	Culv Vel US	Culv Vel DS
			(m)	(m)	(m)	(m)	(m)	(m3/s)	(m3/s)	(m)	(m/s)	(m/s)
Reach1	5639.221 Culvert #1	CH	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.63	2.37	2.37
Reach1	5639.221 Culvert #1	Regional	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.62	2.37	2.37
Reach1	5639.221 Culvert #1	2-yr	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.67	2.37	2.37
Reach1	5639.221 Culvert #1	5-yr	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.67	2.37	2.37
Reach1	5639.221 Culvert #1	10-yr	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.66	2.37	2.37
Reach1	5639.221 Culvert #1	25-yr	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.64	2.37	2.37
Reach1	5639.221 Culvert #1	50-yr	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.64	2.37	2.37
Reach1	5639.221 Culvert #1	100-yr	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.63	2.37	2.37
Reach1	4846.378 Culvert #1	CH	189.99	189.99	189.89	189.99	191.09	0.44		0.86	1.70	2.02
Reach1	4846.378 Culvert #2	CH	189.99	189.99	189.89	189.99	191.09	0.44		0.86	1.70	2.02
Reach1	4846.378 Culvert #1	Regional	190.04	190.04	189.94	190.04	191.09	0.51		0.90	1.77	2.09
Reach1	4846.378 Culvert #2	Regional	190.04	190.04	189.94	190.04	191.09	0.51		0.90	1.77	2.09
Reach1	4846.378 Culvert #1	2-yr	189.68	189.68	189.61	189.68	191.09	0.14		0.59	1.22	1.44
Reach1	4846.378 Culvert #2	2-yr	189.68	189.68	189.61	189.68	191.09	0.14		0.59	1.22	1.44
Reach1	4846.378 Culvert #1	5-yr	189.73	189.73	189.65	189.73	191.09	0.18		0.63	1.30	1.56
Reach1	4846.378 Culvert #2	5-yr	189.73	189.73	189.65	189.73	191.09	0.18		0.63	1.30	1.56
Reach1	4846.378 Culvert #1	10-yr	189.76	189.76	189.68	189.76	191.09	0.20		0.66	1.35	1.61
Reach1	4846.378 Culvert #2	10-yr	189.76	189.76	189.68	189.76	191.09	0.20		0.66	1.35	1.61
Reach1	4846.378 Culvert #1	25-yr	189.82	189.82	189.73	189.82	191.09	0.26		0.71	1.45	1.74
Reach1	4846.378 Culvert #2	25-yr	189.82	189.82	189.73	189.82	191.09	0.26		0.71	1.45	1.74
Reach1	4846.378 Culvert #1	50-yr	189.87	189.87	189.78	189.87	191.09	0.32		0.76	1.53	1.83
Reach1	4846.378 Culvert #2	50-yr	189.87	189.87	189.78	189.87	191.09	0.32		0.76	1.53	1.83
Reach1	4846.378 Culvert #1	100-yr	189.92	189.92	189.83	189.92	191.09	0.37		0.80	1.60	1.91
Reach1	4846.378 Culvert #2	100-yr	189.92	189.92	189.83	189.92	191.09	0.37		0.80	1.60	1.91
Reach1	3615.502 Culvert #1	CH	185.05	185.05	185.06	185.05	184.88	0.99	9.26	0.43	1.47	2.10
Reach1	3615.502 Culvert #1	Regional	185.05	185.04	185.05	185.05	184.88	0.98	8.70	0.43	1.47	2.10
Reach1	3615.502 Culvert #1	2-yr	184.89	184.89	184.88	184.89	184.88	0.73	0.29	0.48	1.25	1.86
Reach1	3615.502 Culvert #1	5-yr	184.94	184.94	184.92	184.94	184.88	0.81	1.04	0.51	1.33	1.94
Reach1	3615.502 Culvert #1	10-yr	184.95	184.95	184.94	184.95	184.88	0.82	1.59	0.50	1.34	1.95
Reach1	3615.502 Culvert #1	25-yr	184.97	184.96	184.96	184.97	184.88	0.85	2.45	0.50	1.36	1.98
Reach1	3615.502 Culvert #1	50-yr	184.97	184.97	184.97	184.97	184.88	0.86	3.12	0.48	1.36	1.98
Reach1	3615.502 Culvert #1	100-yr	185.00	185.00	184.98	185.00	184.88	0.91	3.72	0.50	1.41	2.03
Reach1	3059.960 Culvert #1	CH	183.79	183.79	183.79	183.75	183.61	2.79	15.42	0.42	1.86	2.92
Reach1	3059.960 Culvert #1	Regional	183.73	183.73	183.73	183.71	183.61	2.58	7.16	0.50	1.72	2.81
Reach1	3059.960 Culvert #1	2-yr	183.37	183.37	183.34	183.37	183.61	1.02		0.38	1.49	2.00
Reach1	3059.960 Culvert #1	5-yr	183.56	183.56	183.52	183.56	183.61	1.85		0.54	1.82	2.37
Reach1	3059.960 Culvert #1	10-yr	183.61	183.61	183.57	183.61	183.61	2.07	0.39	0.57	1.89	2.45
Reach1	3059.960 Culvert #1	25-yr	183.63	183.63	183.60	183.63	183.61	2.15	1.15	0.56	1.92	2.48
Reach1	3059.960 Culvert #1	50-yr	183.66	183.66	183.65	183.66	183.61	2.32	1.66	0.57	1.96	2.53
Reach1	3059.960 Culvert #1	100-yr	183.68	183.68	183.68	183.67	183.61	2.38	2.25	0.57	1.98	2.55

HEC-RAS Plan: Plan 01 River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	E.G. US.	W.S. US.	E.G. IC	E.G. OC	Min El Weir Flow	Q Culv Group	Q Weir	Delta WS	Culv Vel US	Culv Vel DS
			(m)	(m)	(m)	(m)	(m)	(m3/s)	(m3/s)	(m)	(m/s)	(m/s)
Reach1	1921.497 Culvert #1	CH	181.40	181.40	181.39	181.40	181.32	1.44	18.90	0.04	0.72	0.72
Reach1	1921.497 Culvert #1	Regional	181.36	181.36	181.35	181.36	181.32	0.72	9.02	0.01	0.36	0.36
Reach1	1921.497 Culvert #1	2-yr	180.55	180.55	180.52	180.55	181.32	1.02		0.40	1.71	2.41
Reach1	1921.497 Culvert #1	5-yr	180.81	180.80	180.76	180.81	181.32	1.85		0.59	2.09	2.82
Reach1	1921.497 Culvert #1	10-yr	180.97	180.97	180.91	180.97	181.32	2.46		0.69	2.29	3.04
Reach1	1921.497 Culvert #1	25-yr	181.17	181.17	181.10	181.17	181.32	3.30		0.83	2.53	3.28
Reach1	1921.497 Culvert #1	50-yr	181.31	181.31	181.24	181.31	181.32	3.93	6.13	0.85	2.68	3.43
Reach1	1921.497 Culvert #1	100-yr	181.31	181.31	181.31	181.31	181.32	2.45	6.07	0.12	1.22	1.22
Reach1	945.2227 Culvert #1	CH	181.35	181.35	182.24	181.35	181.18	9.87	13.67	2.59	4.36	4.36
Reach1	945.2227 Culvert #1	Regional	181.35	181.35	182.24	181.35	181.18	9.87	13.67	2.59	4.36	4.36
Reach1	945.2227 Culvert #1	2-yr	179.07	179.06	179.07	179.22	181.18	2.01		0.69	2.02	0.89
Reach1	945.2227 Culvert #1	5-yr	179.50	179.48	179.50	179.64	181.18	3.73		1.01	2.51	1.65
Reach1	945.2227 Culvert #1	10-yr	179.81	179.79	179.81	179.94	181.18	5.03		1.27	2.85	2.22
Reach1	945.2227 Culvert #1	25-yr	179.81	179.77	180.56	179.81	181.18	6.84		1.20	3.02	3.02
Reach1	945.2227 Culvert #1	50-yr	180.45	180.42	181.36	180.45	181.18	8.34		1.82	3.69	3.69
Reach1	945.2227 Culvert #1	100-yr	181.18	181.15	182.30	181.18	181.18	9.79		2.53	4.33	4.33
Reach1	14.37 Culvert #3	CH	178.15	178.15	174.73	178.15	176.71	0.09	23.27	0.00	0.09	0.09
Reach1	14.37 Culvert #2	CH	178.15	178.15	174.73	178.15	176.71	0.09	23.27	0.00	0.09	0.09
Reach1	14.37 Culvert #1	CH	178.15	178.15	174.81	178.15	176.71	0.20	23.27	0.00	0.09	0.09
Reach1	14.37 Culvert #3	Regional	178.15	178.15	174.73	178.15	176.71	0.09	23.27	0.00	0.09	0.09
Reach1	14.37 Culvert #2	Regional	178.15	178.15	174.73	178.15	176.71	0.09	23.27	0.00	0.09	0.09
Reach1	14.37 Culvert #1	Regional	178.15	178.15	174.81	178.15	176.71	0.20	23.27	0.00	0.09	0.09
Reach1	14.37 Culvert #3	2-yr	176.08	176.08	174.97	176.08	176.71	0.43		0.03	0.43	0.43
Reach1	14.37 Culvert #2	2-yr	176.08	176.08	174.97	176.08	176.71	0.43		0.03	0.43	0.43
Reach1	14.37 Culvert #1	2-yr	176.08	176.08	175.20	176.08	176.71	1.16		0.03	0.49	0.49
Reach1	14.37 Culvert #3	5-yr	176.40	176.40	175.15	176.40	176.71	0.80		0.11	0.80	0.80
Reach1	14.37 Culvert #2	5-yr	176.40	176.40	175.15	176.40	176.71	0.80		0.11	0.80	0.80
Reach1	14.37 Culvert #1	5-yr	176.40	176.40	175.47	176.40	176.71	2.14		0.11	0.91	0.91
Reach1	14.37 Culvert #3	10-yr	176.65	176.64	175.27	176.64	176.71	1.08		0.20	1.09	1.09
Reach1	14.37 Culvert #2	10-yr	176.65	176.64	175.27	176.64	176.71	1.08		0.20	1.09	1.09
Reach1	14.37 Culvert #1	10-yr	176.65	176.64	175.65	176.65	176.71	2.88		0.20	1.22	1.22
Reach1	14.37 Culvert #3	25-yr	176.86	176.86	175.37	176.86	176.71	1.30	0.77	0.30	1.31	1.31
Reach1	14.37 Culvert #2	25-yr	176.86	176.86	175.37	176.86	176.71	1.30	0.77	0.30	1.31	1.31
Reach1	14.37 Culvert #1	25-yr	176.86	176.86	175.79	176.86	176.71	3.47	0.77	0.30	1.47	1.47
Reach1	14.37 Culvert #3	50-yr	176.98	176.98	175.34	176.98	176.71	1.24	2.55	0.27	1.25	1.25
Reach1	14.37 Culvert #2	50-yr	176.98	176.98	175.34	176.98	176.71	1.24	2.55	0.27	1.25	1.25
Reach1	14.37 Culvert #1	50-yr	176.98	176.98	175.75	176.99	176.71	3.31	2.55	0.27	1.41	1.41
Reach1	14.37 Culvert #3	100-yr	177.06	177.06	175.30	177.06	176.71	1.15	4.40	0.23	1.16	1.16
Reach1	14.37 Culvert #2	100-yr	177.06	177.06	175.30	177.06	176.71	1.15	4.40	0.23	1.16	1.16
Reach1	14.37 Culvert #1	100-yr	177.06	177.06	175.70	177.06	176.71	3.08	4.40	0.23	1.31	1.31


Bronte Creek Indian Trib Reach1 Plan: Plan 01 7/14/2020
Flow: Regional Flows
RS = 3615.502 Culv Britannia Road (Field Investigation B49 1.2m x 0.85m Arch Culvle
.06
.03
.06
Legend
WS CH
WS Regional
WS 100-yr
WS 50-yr
WS 25-yr
WS 10-yr
WS 5-yr
WS 2-yr
Ground
Ineff
Bank Sta
Elevation (m)
186.5
186.0
185.5
185.0
184.5
184.0
0
100
200
300
400
500
600
Station (m)


Bronte Creek Indian Trib Reach1 Plan: Plan 01 7/14/2020
Flow: Regional Flows
RS = 3615.502 Culv Britannia Road (Field Investigation B49 1.2m x 0.85m Arch Culvle
.06
.03
.06
186.5
186.0
185.5
185.0
184.5
184.0
Elevation (m)
0
100
200
300
400
500
600
Station (m)
Legend
WS CH
WS Regional
WS 100-yr
WS 50-yr
WS 25-yr
WS 10-yr
WS 5-yr
WS 2-yr
Ground
Ineff
Bank Sta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Flow: Regional Flows
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.03
.06
Legend
WS CH
WS Regional
WS 100-yr
WS 50-yr
WS 25-yr
WS 10-yr
WS 5-yr
WS 2-yr
Ground
Bank Sta
Elevation (m)
186.5
186.0
185.5
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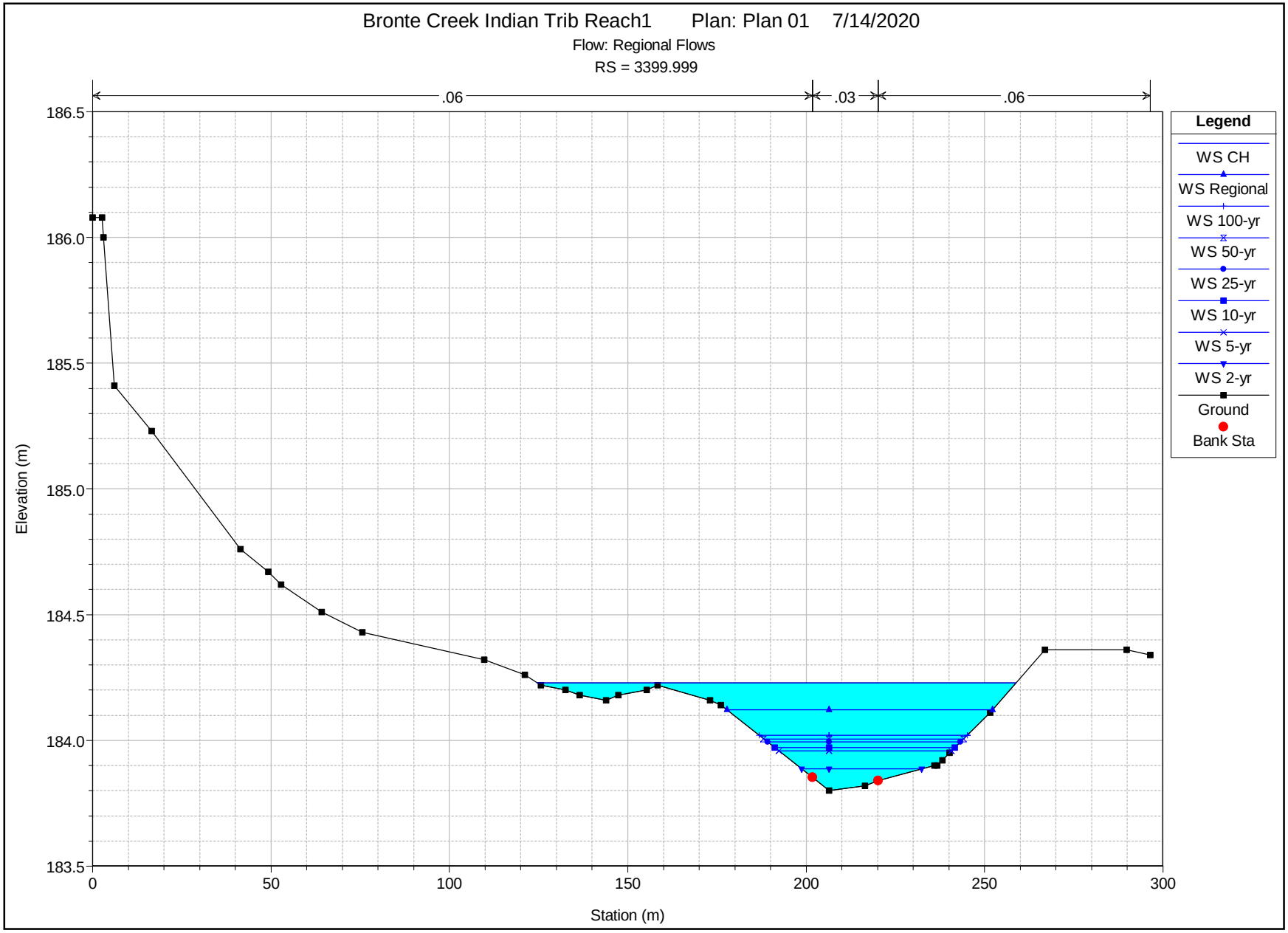
184.5
184.0
183.5
0
50
100
150
200
250
300
350
400
Station (m)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Flow: Regional Flows
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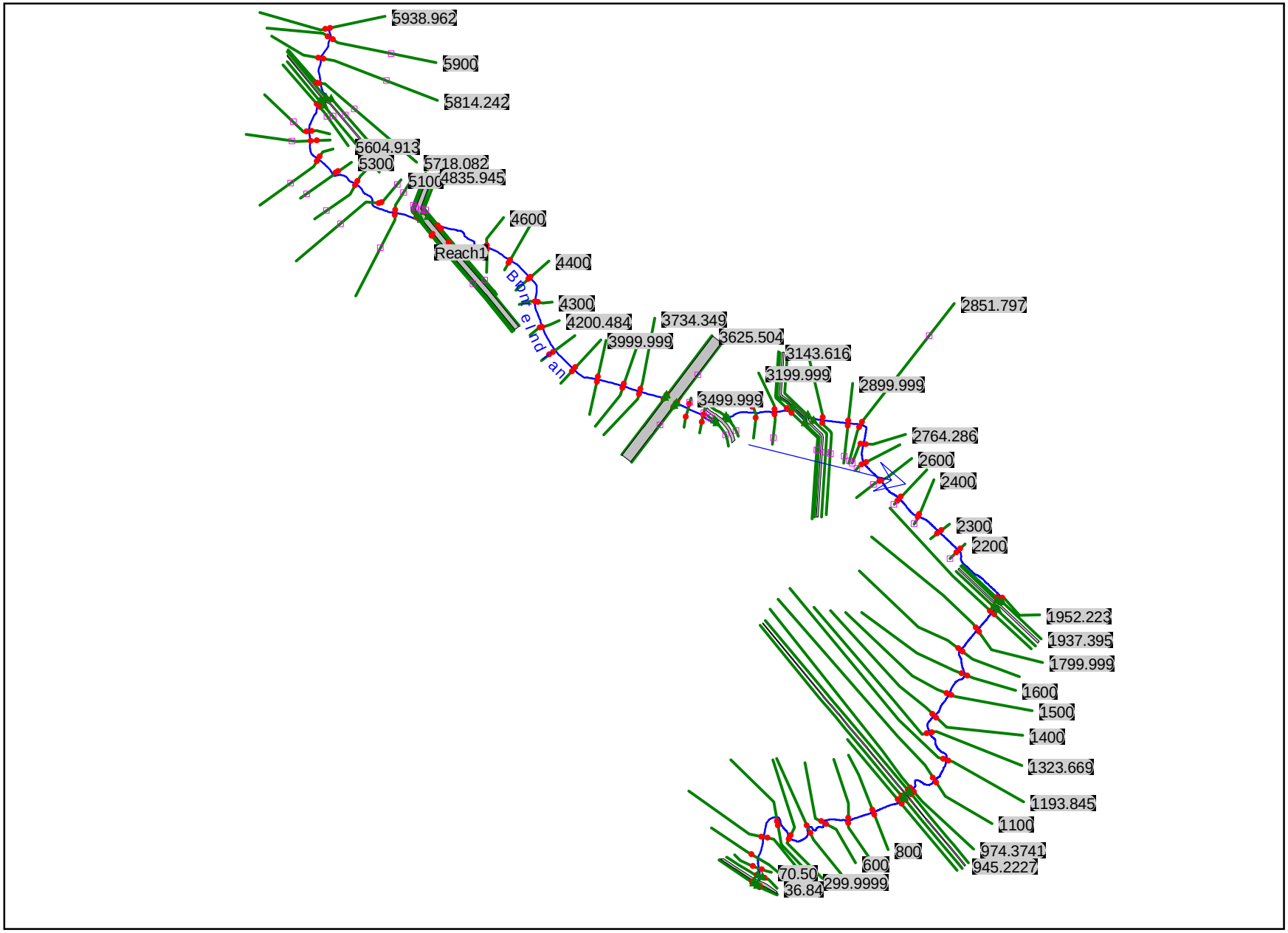
.06
.03
.06
Legend
WS CH
WS Regional
WS 100-yr
WS 50-yr
WS 25-yr
WS 10-yr
WS 5-yr
WS 2-yr
Ground
Bank Sta
Elevation (m)
186.5
186.0
185.5
185.0
184.5
184.0
183.5
0
50
100
150
200
250
300
Station (m)

Milton Logistics Hub 2020 HEC-RAS Model Output

Culvert C1 Proposed Conditions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Reach1
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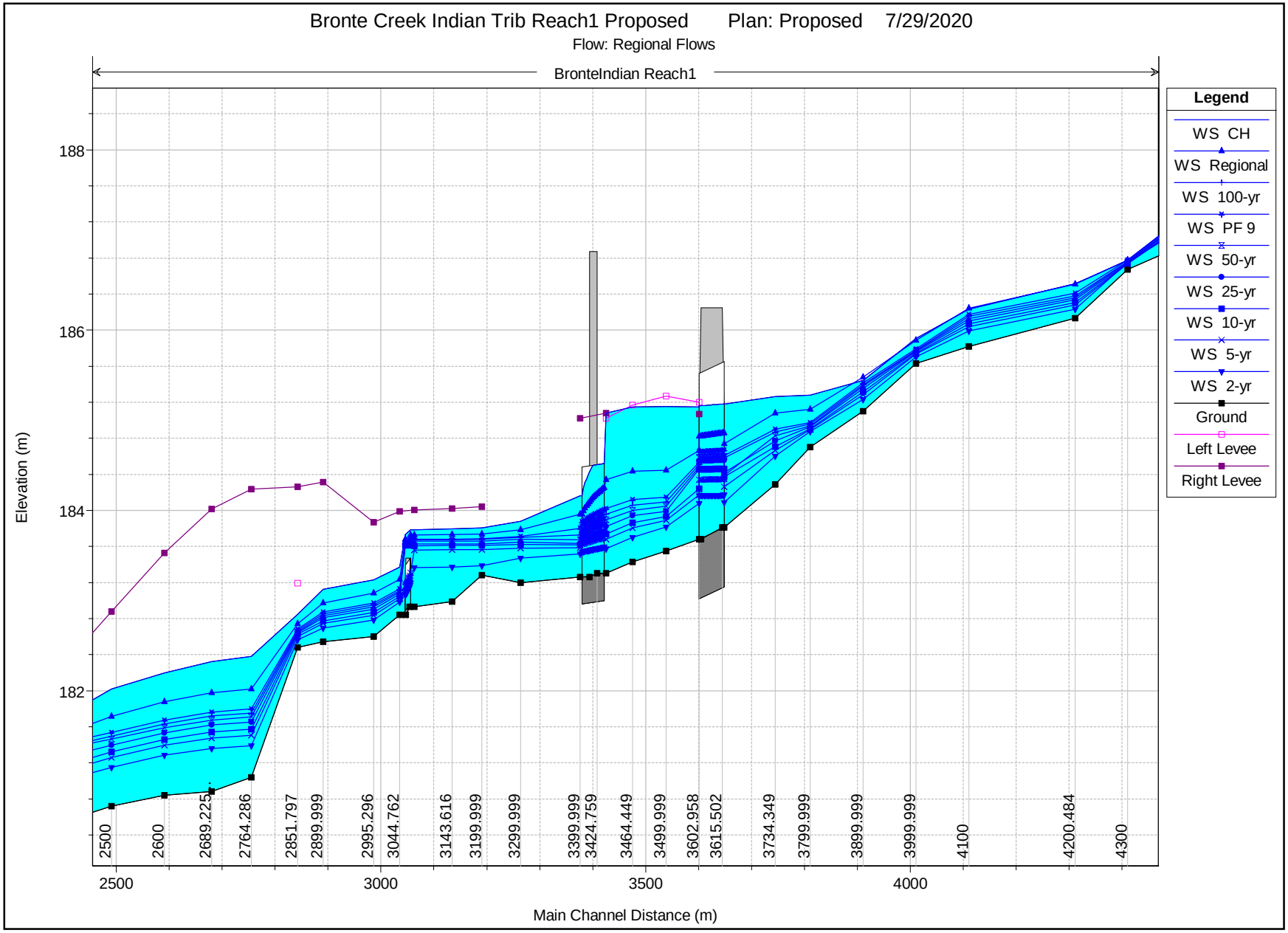
Bronte Creek Indian Trib Reach1 Proposed Plan: Proposed 7/29/2020
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BronteIndian Reach1
Legend
WS CH
WS Regional
WS 100-yr
WS PF 9
WS 50-yr
WS 25-yr
WS 10-yr
WS 5-yr
WS 2-yr
Ground
Left Levee
Right Levee
Elevation (m)
188
186
184
182
2500
2600
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2899.999
2995.296
3044.762
3143.616
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4100
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2500
3000
3500
4000
Main Channel Distance (m)

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	5938.962	CH	0.89	194.83	195.07	194.97	195.07	0.001069	0.31	3.20	30.42	0.26
Reach1	5938.962	Regional	1.02	194.83	195.08	194.98	195.08	0.001123	0.34	3.51	31.50	0.26
Reach1	5938.962	2-yr	0.28	194.83	195.00	194.92	195.00	0.000781	0.18	1.54	19.08	0.20
Reach1	5938.962	5-yr	0.36	194.83	195.01	194.93	195.01	0.000837	0.21	1.78	20.24	0.21
Reach1	5938.962	10-yr	0.41	194.83	195.02	194.94	195.02	0.000878	0.22	1.91	21.40	0.22
Reach1	5938.962	25-yr	0.52	194.83	195.03	194.95	195.03	0.000925	0.25	2.23	23.91	0.23
Reach1	5938.962	50-yr	0.63	194.83	195.04	194.96	195.05	0.000984	0.27	2.51	26.01	0.24
Reach1	5938.962	100-yr	0.74	194.83	195.05	194.97	195.06	0.001014	0.29	2.82	28.05	0.24
Reach1	5938.962	PF 9	1.02	194.83	195.08	194.98	195.08	0.001123	0.34	3.51	31.50	0.26
Reach1	5900	CH	0.89	194.83	194.93	194.93	194.96	0.024026	0.75	1.19	22.05	1.02
Reach1	5900	Regional	1.02	194.83	194.93	194.93	194.96	0.021799	0.76	1.34	22.90	0.99
Reach1	5900	2-yr	0.28	194.83	194.89	194.89	194.91	0.029442	0.57	0.49	15.63	1.03
Reach1	5900	5-yr	0.36	194.83	194.90	194.90	194.92	0.027363	0.60	0.60	16.91	1.01
Reach1	5900	10-yr	0.41	194.83	194.90	194.90	194.92	0.025102	0.60	0.68	17.77	0.98
Reach1	5900	25-yr	0.52	194.83	194.91	194.91	194.93	0.026218	0.65	0.80	18.94	1.02
Reach1	5900	50-yr	0.63	194.83	194.92	194.92	194.94	0.023999	0.67	0.94	20.35	0.99
Reach1	5900	100-yr	0.74	194.83	194.92	194.92	194.95	0.025355	0.71	1.04	21.19	1.03
Reach1	5900	PF 9	1.02	194.83	194.93	194.93	194.96	0.021799	0.76	1.34	22.90	0.99
Reach1	5814.242	CH	0.89	194.07	194.57	194.19	194.57	0.000022	0.09	15.17	78.78	0.04
Reach1	5814.242	Regional	1.02	194.07	194.57	194.20	194.57	0.000029	0.10	15.17	78.76	0.05
Reach1	5814.242	2-yr	0.28	194.07	194.57	194.15	194.57	0.000002	0.03	15.19	78.82	0.01
Reach1	5814.242	5-yr	0.36	194.07	194.57	194.15	194.57	0.000004	0.04	15.19	78.82	0.02
Reach1	5814.242	10-yr	0.41	194.07	194.57	194.16	194.57	0.000005	0.04	15.19	78.82	0.02
Reach1	5814.242	25-yr	0.52	194.07	194.57	194.17	194.57	0.000007	0.05	15.18	78.81	0.03
Reach1	5814.242	50-yr	0.63	194.07	194.57	194.18	194.57	0.000011	0.06	15.18	78.81	0.03
Reach1	5814.242	100-yr	0.74	194.07	194.57	194.19	194.57	0.000015	0.07	15.18	78.79	0.04
Reach1	5814.242	PF 9	1.02	194.07	194.57	194.20	194.57	0.000029	0.10	15.17	78.76	0.05
Reach1	5718.082	CH	0.89	193.47	194.57	193.57	194.57	0.000000	0.02	163.27	330.95	0.00
Reach1	5718.082	Regional	1.02	193.47	194.57	193.58	194.57	0.000000	0.02	163.27	330.95	0.01
Reach1	5718.082	2-yr	0.28	193.47	194.57	193.53	194.57	0.000000	0.00	163.27	330.95	0.00
Reach1	5718.082	5-yr	0.36	193.47	194.57	193.54	194.57	0.000000	0.01	163.27	330.95	0.00
Reach1	5718.082	10-yr	0.41	193.47	194.57	193.54	194.57	0.000000	0.01	163.27	330.95	0.00
Reach1	5718.082	25-yr	0.52	193.47	194.57	193.55	194.57	0.000000	0.01	163.27	330.95	0.00
Reach1	5718.082	50-yr	0.63	193.47	194.57	193.56	194.57	0.000000	0.01	163.27	330.95	0.00
Reach1	5718.082	100-yr	0.74	193.47	194.57	193.57	194.57	0.000000	0.01	163.28	330.95	0.00
Reach1	5718.082	PF 9	1.02	193.47	194.57	193.58	194.57	0.000000	0.02	163.27	330.95	0.01

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	5652.039	CH	0.89	193.11	194.57	193.25	194.57	0.000000	0.00	411.18	481.08	0.00
Reach1	5652.039	Regional	1.02	193.11	194.57	193.26	194.57	0.000000	0.01	411.18	481.08	0.00
Reach1	5652.039	2-yr	0.28	193.11	194.57	193.19	194.57	0.000000	0.00	411.18	481.08	0.00
Reach1	5652.039	5-yr	0.36	193.11	194.57	193.20	194.57	0.000000	0.00	411.18	481.08	0.00
Reach1	5652.039	10-yr	0.41	193.11	194.57	193.21	194.57	0.000000	0.00	411.18	481.08	0.00
Reach1	5652.039	25-yr	0.52	193.11	194.57	193.22	194.57	0.000000	0.00	411.18	481.08	0.00
Reach1	5652.039	50-yr	0.63	193.11	194.57	193.23	194.57	0.000000	0.00	411.18	481.08	0.00
Reach1	5652.039	100-yr	0.74	193.11	194.57	193.24	194.57	0.000000	0.00	411.18	481.09	0.00
Reach1	5652.039	PF 9	1.02	193.11	194.57	193.26	194.57	0.000000	0.01	411.18	481.08	0.00
Reach1	5639.221		Culvert									
Reach1	5620.962	CH	0.89	192.84	192.95	192.93	192.97	0.014426	0.76	1.66	40.52	0.84
Reach1	5620.962	Regional	1.02	192.84	192.95	192.93	192.98	0.014811	0.81	1.79	41.15	0.87
Reach1	5620.962	2-yr	0.28	192.84	192.90	192.89	192.91	0.023583	0.56	0.71	32.06	0.94
Reach1	5620.962	5-yr	0.36	192.84	192.91	192.90	192.92	0.021703	0.60	0.85	33.76	0.93
Reach1	5620.962	10-yr	0.41	192.84	192.91	192.90	192.92	0.022347	0.63	0.92	34.52	0.95
Reach1	5620.962	25-yr	0.52	192.84	192.92	192.91	192.93	0.021494	0.69	1.07	36.08	0.96
Reach1	5620.962	50-yr	0.63	192.84	192.93	192.91	192.94	0.020506	0.73	1.21	37.59	0.95
Reach1	5620.962	100-yr	0.74	192.84	192.93	192.92	192.95	0.019402	0.77	1.36	38.87	0.95
Reach1	5620.962	PF 9	1.02	192.84	192.95	192.93	192.98	0.014811	0.81	1.79	41.15	0.87
Reach1	5604.913	CH	0.89	192.68	192.80	192.77	192.81	0.006768	0.57	1.72	21.17	0.59
Reach1	5604.913	Regional	1.02	192.68	192.81	192.78	192.82	0.006389	0.59	1.92	21.80	0.58
Reach1	5604.913	2-yr	0.28	192.68	192.75	192.73	192.76	0.004836	0.33	0.89	18.47	0.45
Reach1	5604.913	5-yr	0.36	192.68	192.76	192.74	192.77	0.004873	0.36	1.05	18.98	0.47
Reach1	5604.913	10-yr	0.41	192.68	192.77	192.74	192.78	0.004660	0.38	1.16	19.36	0.46
Reach1	5604.913	25-yr	0.52	192.68	192.78	192.75	192.79	0.004690	0.41	1.35	20.01	0.48
Reach1	5604.913	50-yr	0.63	192.68	192.79	192.76	192.80	0.004743	0.45	1.53	20.60	0.49
Reach1	5604.913	100-yr	0.74	192.68	192.80	192.76	192.81	0.004851	0.48	1.70	21.11	0.50
Reach1	5604.913	PF 9	1.02	192.68	192.81	192.78	192.82	0.006389	0.59	1.92	21.80	0.58
Reach1	5499.999	CH	0.89	191.76	191.86	191.85	191.88	0.011970	0.64	1.58	27.41	0.75
Reach1	5499.999	Regional	1.02	191.76	191.86	191.85	191.89	0.013092	0.69	1.72	30.52	0.79
Reach1	5499.999	2-yr	0.28	191.76	191.81	191.81	191.82	0.021437	0.54	0.55	15.93	0.90
Reach1	5499.999	5-yr	0.36	191.76	191.82	191.81	191.83	0.020830	0.58	0.66	16.75	0.91
Reach1	5499.999	10-yr	0.41	191.76	191.82	191.82	191.84	0.023164	0.63	0.70	17.02	0.96
Reach1	5499.999	25-yr	0.52	191.76	191.82	191.82	191.85	0.022779	0.68	0.83	17.93	0.97
Reach1	5499.999	50-yr	0.63	191.76	191.83	191.83	191.86	0.022149	0.71	0.96	18.79	0.98
Reach1	5499.999	100-yr	0.74	191.76	191.84	191.84	191.87	0.021110	0.74	1.10	19.64	0.97

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	5499.999	PF 9	1.02	191.76	191.86	191.85	191.89	0.013092	0.69	1.72	30.52	0.79
Reach1	5463.964	CH	0.89	191.52	191.64	191.60	191.64	0.003915	0.41	2.51	40.29	0.44
Reach1	5463.964	Regional	1.02	191.52	191.64	191.61	191.65	0.003727	0.43	2.86	42.58	0.44
Reach1	5463.964	2-yr	0.28	191.52	191.60	191.57	191.60	0.002813	0.24	1.21	28.14	0.34
Reach1	5463.964	5-yr	0.36	191.52	191.61	191.58	191.61	0.002841	0.26	1.44	30.47	0.35
Reach1	5463.964	10-yr	0.41	191.52	191.61	191.58	191.61	0.002735	0.28	1.60	32.15	0.35
Reach1	5463.964	25-yr	0.52	191.52	191.62	191.58	191.62	0.002748	0.30	1.91	35.08	0.36
Reach1	5463.964	50-yr	0.63	191.52	191.63	191.59	191.63	0.002797	0.33	2.19	37.62	0.37
Reach1	5463.964	100-yr	0.74	191.52	191.63	191.59	191.64	0.002827	0.35	2.47	39.97	0.38
Reach1	5463.964	PF 9	1.02	191.52	191.64	191.61	191.65	0.003727	0.43	2.86	42.58	0.44
Reach1	5382.460	CH	0.89	190.97	191.15	191.13	191.17	0.009310	0.66	1.36	14.72	0.69
Reach1	5382.460	Regional	1.02	190.97	191.16	191.14	191.18	0.009986	0.70	1.46	15.29	0.72
Reach1	5382.460	2-yr	0.28	190.97	191.07	191.07	191.09	0.023320	0.69	0.41	8.13	0.99
Reach1	5382.460	5-yr	0.36	190.97	191.08	191.08	191.11	0.022009	0.72	0.50	9.00	0.98
Reach1	5382.460	10-yr	0.41	190.97	191.08	191.08	191.11	0.023620	0.76	0.54	9.32	1.02
Reach1	5382.460	25-yr	0.52	190.97	191.10	191.10	191.13	0.022890	0.80	0.65	10.22	1.02
Reach1	5382.460	50-yr	0.63	190.97	191.11	191.11	191.14	0.021047	0.82	0.77	11.14	0.99
Reach1	5382.460	100-yr	0.74	190.97	191.12	191.12	191.15	0.019670	0.83	0.89	11.97	0.97
Reach1	5382.460	PF 9	1.02	190.97	191.16	191.14	191.18	0.009986	0.70	1.46	15.29	0.72
Reach1	5300	CH	0.89	190.54	190.66	190.62	190.67	0.004383	0.49	3.09	39.07	0.48
Reach1	5300	Regional	1.02	190.54	190.67	190.62	190.67	0.004224	0.51	3.45	39.99	0.48
Reach1	5300	2-yr	0.28	190.54	190.63	190.59	190.64	0.001172	0.21	2.19	36.32	0.24
Reach1	5300	5-yr	0.36	190.54	190.65	190.59	190.65	0.001163	0.23	2.62	37.76	0.24
Reach1	5300	10-yr	0.41	190.54	190.65	190.60	190.65	0.001209	0.24	2.83	38.37	0.25
Reach1	5300	25-yr	0.52	190.54	190.66	190.60	190.67	0.001210	0.27	3.33	39.70	0.26
Reach1	5300	50-yr	0.63	190.54	190.67	190.61	190.67	0.001443	0.30	3.58	40.34	0.28
Reach1	5300	100-yr	0.74	190.54	190.66	190.61	190.67	0.002767	0.39	3.20	39.34	0.39
Reach1	5300	PF 9	1.02	190.54	190.67	190.62	190.67	0.004224	0.51	3.45	39.99	0.48
Reach1	5200	CH	0.89	190.22	190.41	190.34	190.41	0.001638	0.35	3.17	45.31	0.31
Reach1	5200	Regional	1.02	190.22	190.42	190.35	190.42	0.001731	0.37	3.53	48.04	0.32
Reach1	5200	2-yr	0.28	190.22	190.30	190.30	190.32	0.026428	0.60	0.46	12.42	1.00
Reach1	5200	5-yr	0.36	190.22	190.30	190.30	190.33	0.027996	0.65	0.55	13.76	1.04
Reach1	5200	10-yr	0.41	190.22	190.31	190.31	190.33	0.023942	0.63	0.65	15.08	0.97
Reach1	5200	25-yr	0.52	190.22	190.32	190.32	190.34	0.026012	0.69	0.75	16.42	1.03
Reach1	5200	50-yr	0.63	190.22	190.34	190.32	190.35	0.012586	0.59	1.09	19.67	0.75
Reach1	5200	100-yr	0.74	190.22	190.38	190.33	190.39	0.002898	0.39	2.09	25.78	0.39

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	5200	PF 9	1.02	190.22	190.42	190.35	190.42	0.001731	0.37	3.53	48.04	0.32
Reach1	5100	CH	0.89	189.90	190.00	190.00	190.03	0.019164	0.81	1.47	29.77	0.95
Reach1	5100	Regional	1.02	189.90	190.01	190.01	190.03	0.016024	0.80	1.77	33.51	0.89
Reach1	5100	2-yr	0.28	189.90	190.01	189.96	190.01	0.000952	0.20	1.96	36.19	0.22
Reach1	5100	5-yr	0.36	189.90	190.02	189.97	190.03	0.000988	0.22	2.39	40.72	0.23
Reach1	5100	10-yr	0.41	189.90	190.03	189.97	190.03	0.001002	0.24	2.66	43.40	0.23
Reach1	5100	25-yr	0.52	189.90	190.04	189.98	190.05	0.001039	0.26	3.22	48.54	0.24
Reach1	5100	50-yr	0.63	189.90	190.05	189.98	190.05	0.001367	0.30	3.38	49.89	0.28
Reach1	5100	100-yr	0.74	189.90	190.02	189.99	190.03	0.004773	0.48	2.26	39.31	0.50
Reach1	5100	PF 9	1.02	189.90	190.01	190.01	190.03	0.016024	0.80	1.77	33.51	0.89
Reach1	4999.999	CH	0.89	189.67	189.86	189.75	189.86	0.000364	0.19	7.05	60.59	0.15
Reach1	4999.999	Regional	1.02	189.67	189.91	189.76	189.91	0.000183	0.16	10.13	69.04	0.11
Reach1	4999.999	2-yr	0.28	189.67	189.72	189.72	189.73	0.029976	0.55	0.54	19.75	1.02
Reach1	4999.999	5-yr	0.36	189.67	189.72	189.72	189.74	0.025468	0.55	0.69	22.16	0.96
Reach1	4999.999	10-yr	0.41	189.67	189.73	189.73	189.74	0.026992	0.59	0.74	22.94	1.00
Reach1	4999.999	25-yr	0.52	189.67	189.73	189.73	189.75	0.023523	0.61	0.92	24.74	0.96
Reach1	4999.999	50-yr	0.63	189.67	189.76	189.74	189.77	0.007959	0.47	1.62	40.78	0.60
Reach1	4999.999	100-yr	0.74	189.67	189.80	189.74	189.81	0.001266	0.27	3.84	52.17	0.26
Reach1	4999.999	PF 9	1.02	189.67	189.91	189.76	189.91	0.000183	0.16	10.13	69.04	0.11
Reach1	4900.587	CH	0.89	189.36	189.86	189.42	189.86	0.000001	0.02	68.19	223.25	0.01
Reach1	4900.587	Regional	1.02	189.36	189.91	189.42	189.91	0.000001	0.02	79.03	238.77	0.01
Reach1	4900.587	2-yr	0.28	189.36	189.60	189.39	189.60	0.000003	0.02	19.11	153.87	0.01
Reach1	4900.587	5-yr	0.36	189.36	189.64	189.40	189.64	0.000002	0.02	25.87	173.97	0.01
Reach1	4900.587	10-yr	0.41	189.36	189.67	189.40	189.67	0.000002	0.02	30.18	180.62	0.01
Reach1	4900.587	25-yr	0.52	189.36	189.72	189.41	189.72	0.000002	0.02	39.21	184.92	0.01
Reach1	4900.587	50-yr	0.63	189.36	189.76	189.41	189.76	0.000001	0.02	47.80	192.56	0.01
Reach1	4900.587	100-yr	0.74	189.36	189.81	189.41	189.81	0.000001	0.02	56.35	202.92	0.01
Reach1	4900.587	PF 9	1.02	189.36	189.91	189.42	189.91	0.000001	0.02	79.03	238.77	0.01
Reach1	4856.577	CH	0.89	189.31	189.86	189.38	189.86	0.000013	0.08	11.20	147.92	0.03
Reach1	4856.577	Regional	1.02	189.31	189.91	189.39	189.91	0.000013	0.08	12.19	150.69	0.04
Reach1	4856.577	2-yr	0.28	189.31	189.60	189.35	189.60	0.000012	0.05	5.76	119.32	0.03
Reach1	4856.577	5-yr	0.36	189.31	189.64	189.35	189.64	0.000012	0.05	6.63	125.12	0.03
Reach1	4856.577	10-yr	0.41	189.31	189.67	189.36	189.67	0.000012	0.06	7.14	126.73	0.03
Reach1	4856.577	25-yr	0.52	189.31	189.72	189.36	189.72	0.000013	0.06	8.17	132.15	0.03
Reach1	4856.577	50-yr	0.63	189.31	189.76	189.37	189.76	0.000013	0.07	9.13	134.21	0.03
Reach1	4856.577	100-yr	0.74	189.31	189.80	189.37	189.81	0.000013	0.07	10.04	138.39	0.03

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	4856.577	PF 9	1.02	189.31	189.91	189.39	189.91	0.000013	0.08	12.19	150.69	0.04
Reach1	4846.378		Culvert									
Reach1	4835.945	CH	0.89	189.09	189.18	189.15	189.19	0.005165	0.45	2.04	119.04	0.50
Reach1	4835.945	Regional	1.02	189.09	189.18	189.15	189.20	0.004971	0.47	2.24	121.61	0.50
Reach1	4835.945	2-yr	0.28	189.09	189.14	189.12	189.14	0.004142	0.27	1.07	106.93	0.41
Reach1	4835.945	5-yr	0.36	189.09	189.15	189.12	189.15	0.003987	0.29	1.27	109.37	0.41
Reach1	4835.945	10-yr	0.41	189.09	189.15	189.13	189.15	0.004220	0.31	1.35	110.40	0.43
Reach1	4835.945	25-yr	0.52	189.09	189.16	189.13	189.16	0.004285	0.34	1.55	112.97	0.44
Reach1	4835.945	50-yr	0.63	189.09	189.16	189.14	189.17	0.004820	0.39	1.69	114.63	0.47
Reach1	4835.945	100-yr	0.74	189.09	189.17	189.14	189.18	0.004547	0.40	1.89	117.24	0.47
Reach1	4835.945	PF 9	1.02	189.09	189.18	189.15	189.20	0.004971	0.47	2.24	121.61	0.50
Reach1	4816.446	CH	0.89	188.90	189.00	189.00	189.02	0.015766	0.68	1.80	49.18	0.85
Reach1	4816.446	Regional	1.02	188.90	189.00	189.00	189.02	0.017482	0.73	1.95	50.83	0.90
Reach1	4816.446	2-yr	0.28	188.90	188.96	188.96	188.98	0.025638	0.55	0.52	17.54	0.96
Reach1	4816.446	5-yr	0.36	188.90	188.97	188.97	188.98	0.026461	0.59	0.64	22.26	0.99
Reach1	4816.446	10-yr	0.41	188.90	188.97	188.97	188.99	0.022028	0.57	0.78	27.42	0.92
Reach1	4816.446	25-yr	0.52	188.90	188.98	188.98	189.00	0.021872	0.62	0.95	32.46	0.94
Reach1	4816.446	50-yr	0.63	188.90	188.99	188.99	189.00	0.016830	0.61	1.28	42.29	0.85
Reach1	4816.446	100-yr	0.74	188.90	188.99	188.99	189.01	0.019016	0.68	1.40	44.00	0.91
Reach1	4816.446	PF 9	1.02	188.90	189.00	189.00	189.02	0.017482	0.73	1.95	50.83	0.90
Reach1	4600	CH	0.89	187.56	187.83		187.83	0.001184	0.35	2.76	20.98	0.27
Reach1	4600	Regional	1.02	187.56	187.84		187.84	0.001219	0.37	3.02	21.89	0.28
Reach1	4600	2-yr	0.28	187.56	187.74		187.74	0.001175	0.23	1.22	13.84	0.24
Reach1	4600	5-yr	0.36	187.56	187.76		187.76	0.000959	0.23	1.58	15.94	0.23
Reach1	4600	10-yr	0.41	187.56	187.77		187.77	0.001008	0.24	1.72	16.63	0.23
Reach1	4600	25-yr	0.52	187.56	187.79		187.79	0.001038	0.27	1.98	17.90	0.24
Reach1	4600	50-yr	0.63	187.56	187.80		187.80	0.001091	0.29	2.22	18.97	0.25
Reach1	4600	100-yr	0.74	187.56	187.81		187.82	0.001118	0.32	2.47	19.92	0.26
Reach1	4600	PF 9	1.02	187.56	187.84		187.84	0.001219	0.37	3.02	21.89	0.28
Reach1	4500	CH	0.89	187.38	187.55	187.53	187.57	0.009351	0.71	1.36	16.62	0.71
Reach1	4500	Regional	1.02	187.38	187.56	187.54	187.58	0.008850	0.74	1.54	17.60	0.70
Reach1	4500	2-yr	0.28	187.38	187.50	187.48	187.51	0.006797	0.43	0.66	11.61	0.55
Reach1	4500	5-yr	0.36	187.38	187.49	187.48	187.51	0.017708	0.64	0.56	10.74	0.87
Reach1	4500	10-yr	0.41	187.38	187.50	187.49	187.52	0.015304	0.64	0.65	11.51	0.83
Reach1	4500	25-yr	0.52	187.38	187.51	187.50	187.53	0.014172	0.67	0.80	12.81	0.81

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	4500	50-yr	0.63	187.38	187.52	187.51	187.55	0.011470	0.67	0.99	14.34	0.75
Reach1	4500	100-yr	0.74	187.38	187.53	187.52	187.56	0.010471	0.69	1.14	15.33	0.73
Reach1	4500	PF 9	1.02	187.38	187.56	187.54	187.58	0.008850	0.74	1.54	17.60	0.70
Reach1	4400	CH	0.89	186.93	187.22	187.12	187.23	0.001715	0.46	2.14	14.88	0.34
Reach1	4400	Regional	1.02	186.93	187.23	187.13	187.25	0.001747	0.49	2.36	15.61	0.34
Reach1	4400	2-yr	0.28	186.93	187.11		187.12	0.002485	0.33	0.84	9.46	0.35
Reach1	4400	5-yr	0.36	186.93	187.15		187.15	0.001462	0.31	1.18	11.15	0.29
Reach1	4400	10-yr	0.41	186.93	187.15	187.07	187.16	0.001531	0.33	1.27	11.55	0.30
Reach1	4400	25-yr	0.52	186.93	187.17	187.09	187.18	0.001531	0.36	1.50	12.51	0.30
Reach1	4400	50-yr	0.63	186.93	187.19	187.10	187.20	0.001627	0.40	1.69	13.25	0.32
Reach1	4400	100-yr	0.74	186.93	187.20	187.11	187.21	0.001667	0.43	1.88	13.98	0.32
Reach1	4400	PF 9	1.02	186.93	187.23	187.13	187.25	0.001747	0.49	2.36	15.61	0.34
Reach1	4300	CH	0.89	186.67	186.77	186.77	186.80	0.020728	0.87	1.28	19.53	1.00
Reach1	4300	Regional	1.02	186.67	186.78	186.78	186.81	0.020729	0.92	1.40	19.84	1.01
Reach1	4300	2-yr	0.28	186.67	186.75	186.73	186.76	0.005455	0.37	0.92	18.63	0.49
Reach1	4300	5-yr	0.36	186.67	186.74	186.74	186.76	0.026727	0.67	0.64	17.86	1.03
Reach1	4300	10-yr	0.41	186.67	186.74	186.74	186.76	0.022878	0.67	0.74	18.12	0.97
Reach1	4300	25-yr	0.52	186.67	186.75	186.75	186.77	0.025482	0.76	0.83	18.39	1.04
Reach1	4300	50-yr	0.63	186.67	186.76	186.76	186.78	0.021672	0.77	1.00	18.83	0.99
Reach1	4300	100-yr	0.74	186.67	186.76	186.76	186.79	0.021263	0.82	1.12	19.14	0.99
Reach1	4300	PF 9	1.02	186.67	186.78	186.78	186.81	0.020729	0.92	1.40	19.84	1.01
Reach1	4200.484	CH	0.89	186.13	186.51		186.51	0.000078	0.13	12.53	55.30	0.08
Reach1	4200.484	Regional	1.02	186.13	186.51		186.51	0.000108	0.15	12.31	55.01	0.09
Reach1	4200.484	2-yr	0.28	186.13	186.23		186.24	0.005131	0.34	1.24	20.24	0.47
Reach1	4200.484	5-yr	0.36	186.13	186.28		186.28	0.001614	0.24	2.27	27.14	0.28
Reach1	4200.484	10-yr	0.41	186.13	186.30		186.30	0.000963	0.21	3.03	31.70	0.22
Reach1	4200.484	25-yr	0.52	186.13	186.34		186.34	0.000657	0.20	4.16	37.69	0.19
Reach1	4200.484	50-yr	0.63	186.13	186.36		186.36	0.000536	0.20	5.09	40.65	0.18
Reach1	4200.484	100-yr	0.74	186.13	186.38		186.38	0.000479	0.21	5.91	43.04	0.17
Reach1	4200.484	PF 9	1.02	186.13	186.41		186.41	0.000504	0.24	7.23	46.11	0.18
Reach1	4100	CH	9.86	185.82	186.23		186.26	0.002434	0.90	19.62	74.22	0.45
Reach1	4100	Regional	9.74	185.82	186.24		186.27	0.002171	0.86	20.30	75.24	0.43
Reach1	4100	2-yr	1.02	185.82	185.99		185.99	0.000957	0.30	4.97	44.22	0.24
Reach1	4100	5-yr	1.85	185.82	186.04		186.04	0.001125	0.39	7.36	51.70	0.27
Reach1	4100	10-yr	2.46	185.82	186.07		186.08	0.001176	0.44	8.98	55.34	0.29
Reach1	4100	25-yr	3.30	185.82	186.10		186.11	0.001264	0.50	10.91	58.94	0.30

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	4100	50-yr	3.98	185.82	186.13		186.14	0.001314	0.54	12.38	61.56	0.32
Reach1	4100	100-yr	4.63	185.82	186.15		186.16	0.001316	0.57	13.89	64.38	0.32
Reach1	4100	PF 9	5.40	185.82	186.17		186.19	0.001393	0.61	15.31	67.22	0.33
Reach1	3999.999	CH	9.86	185.63	185.91		185.93	0.004572	0.92	20.17	111.60	0.58
Reach1	3999.999	Regional	9.74	185.63	185.89		185.92	0.006418	1.03	17.76	109.54	0.67
Reach1	3999.999	2-yr	1.02	185.63	185.70	185.70	185.73	0.021959	0.73	1.89	45.20	0.98
Reach1	3999.999	5-yr	1.85	185.63	185.73	185.73	185.76	0.016685	0.83	3.36	59.77	0.91
Reach1	3999.999	10-yr	2.46	185.63	185.74	185.74	185.78	0.017448	0.93	4.15	66.72	0.95
Reach1	3999.999	25-yr	3.30	185.63	185.76	185.76	185.80	0.016712	1.02	5.33	73.57	0.96
Reach1	3999.999	50-yr	3.98	185.63	185.77	185.77	185.81	0.016156	1.07	6.26	78.26	0.96
Reach1	3999.999	100-yr	4.63	185.63	185.78	185.78	185.83	0.019261	1.19	6.58	79.81	1.05
Reach1	3999.999	PF 9	5.40	185.63	185.79	185.79	185.84	0.017056	1.21	7.89	91.07	1.01
Reach1	3899.999	CH	9.86	185.10	185.44		185.48	0.004496	1.05	14.86	63.89	0.59
Reach1	3899.999	Regional	9.74	185.10	185.48		185.51	0.002881	0.90	17.39	68.18	0.48
Reach1	3899.999	2-yr	1.02	185.10	185.23		185.24	0.001813	0.34	4.09	40.86	0.32
Reach1	3899.999	5-yr	1.85	185.10	185.28		185.29	0.001714	0.42	6.29	46.92	0.33
Reach1	3899.999	10-yr	2.46	185.10	185.32		185.32	0.001617	0.45	7.85	50.50	0.33
Reach1	3899.999	25-yr	3.30	185.10	185.35		185.36	0.001628	0.51	9.66	54.12	0.34
Reach1	3899.999	50-yr	3.98	185.10	185.38		185.39	0.001616	0.54	11.09	56.87	0.34
Reach1	3899.999	100-yr	4.63	185.10	185.39		185.41	0.001706	0.58	12.15	58.92	0.35
Reach1	3899.999	PF 9	5.40	185.10	185.42		185.43	0.001753	0.62	13.47	61.40	0.36
Reach1	3799.999	CH	10.18	184.70	185.28		185.29	0.000965	0.64	30.59	103.32	0.29
Reach1	3799.999	Regional	9.74	184.70	185.12		185.16	0.004233	1.04	16.45	78.32	0.58
Reach1	3799.999	2-yr	1.02	184.70	184.87	184.85	184.89	0.009197	0.62	2.06	31.96	0.68
Reach1	3799.999	5-yr	1.85	184.70	184.90	184.89	184.93	0.012094	0.83	2.97	38.48	0.81
Reach1	3799.999	10-yr	2.46	184.70	184.91	184.91	184.95	0.015197	0.99	3.38	39.72	0.92
Reach1	3799.999	25-yr	3.30	184.70	184.93	184.93	184.98	0.016295	1.13	4.08	41.57	0.97
Reach1	3799.999	50-yr	3.98	184.70	184.94	184.94	185.00	0.017513	1.23	4.56	42.84	1.02
Reach1	3799.999	100-yr	4.63	184.70	184.96	184.96	185.02	0.014966	1.23	5.45	54.06	0.97
Reach1	3799.999	PF 9	5.40	184.70	184.97	184.97	185.04	0.014320	1.28	6.32	57.01	0.96
Reach1	3734.349	CH	10.18	184.29	185.26		185.27	0.000170	0.37	56.83	137.48	0.13
Reach1	3734.349	Regional	9.74	184.29	185.08		185.09	0.000447	0.50	35.51	97.16	0.21
Reach1	3734.349	2-yr	1.02	184.29	184.60		184.61	0.002412	0.42	2.94	37.18	0.37
Reach1	3734.349	5-yr	1.85	184.29	184.66		184.67	0.001857	0.45	5.48	45.05	0.34
Reach1	3734.349	10-yr	2.46	184.29	184.71		184.72	0.001365	0.45	7.66	50.71	0.31
Reach1	3734.349	25-yr	3.30	184.29	184.77		184.78	0.000944	0.44	11.12	59.44	0.27

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	3734.349	50-yr	3.98	184.29	184.83		184.83	0.000697	0.43	14.56	67.01	0.23
Reach1	3734.349	100-yr	4.63	184.29	184.87		184.87	0.000602	0.43	17.42	72.71	0.22
Reach1	3734.349	PF 9	5.40	184.29	184.90		184.91	0.000574	0.44	20.11	77.69	0.22
Reach1	3625.504	CH	10.18	183.81	185.18	184.75	185.23	0.001217	1.01	10.07	220.95	0.35
Reach1	3625.504	Regional	9.74	183.81	184.74	184.74	184.94	0.012689	2.01	4.86	82.26	1.00
Reach1	3625.504	2-yr	1.02	183.81	184.09	184.06	184.17	0.010779	1.31	0.78	3.11	0.84
Reach1	3625.504	5-yr	1.85	183.81	184.26	184.17	184.36	0.006901	1.38	1.34	3.49	0.71
Reach1	3625.504	10-yr	2.46	183.81	184.37	184.24	184.47	0.005720	1.41	1.74	3.73	0.66
Reach1	3625.504	25-yr	3.30	183.81	184.42	184.33	184.57	0.007662	1.71	1.93	3.84	0.77
Reach1	3625.504	50-yr	3.98	183.81	184.39	184.39	184.63	0.013240	2.19	1.82	3.78	1.01
Reach1	3625.504	100-yr	4.63	183.81	184.58	184.58	184.70	0.014721	1.56	2.97	53.68	1.00
Reach1	3625.504	PF 9	5.40	183.81	184.61	184.61	184.74	0.014271	1.64	3.29	59.87	1.00
Reach1	3615.502		Culvert									
Reach1	3602.958	CH	10.18	183.68	185.15	184.68	185.19	0.000993	0.94	10.84	407.14	0.32
Reach1	3602.958	Regional	9.74	183.68	184.66	184.66	184.86	0.012667	1.98	4.92	156.04	1.00
Reach1	3602.958	2-yr	1.02	183.68	184.08	184.01	184.17	0.008437	1.33	0.77	2.37	0.75
Reach1	3602.958	5-yr	1.85	183.68	184.17	184.15	184.35	0.012670	1.83	1.01	2.59	0.93
Reach1	3602.958	10-yr	2.46	183.68	184.24	184.24	184.46	0.014208	2.07	1.19	2.74	1.00
Reach1	3602.958	25-yr	3.30	183.68	184.46	184.46	184.56	0.016117	1.38	2.39	114.16	1.00
Reach1	3602.958	50-yr	3.98	183.68	184.48	184.48	184.59	0.015942	1.48	2.68	123.79	1.01
Reach1	3602.958	100-yr	4.63	183.68	184.51	184.51	184.63	0.015099	1.55	2.99	129.68	1.00
Reach1	3602.958	PF 9	5.40	183.68	184.53	184.53	184.67	0.014480	1.63	3.32	137.52	1.00
Reach1	3499.999	CH	17.44	183.55	185.15	184.11	185.15	0.000032	0.22	103.60	95.28	0.06
Reach1	3499.999	Regional	9.74	183.55	184.45	184.03	184.45	0.000198	0.32	37.29	93.02	0.14
Reach1	3499.999	2-yr	1.02	183.55	183.81	183.72	183.83	0.002713	0.48	2.13	14.66	0.40
Reach1	3499.999	5-yr	1.85	183.55	183.89	183.77	183.90	0.002728	0.52	3.59	23.62	0.41
Reach1	3499.999	10-yr	2.46	183.55	183.93	183.81	183.95	0.002348	0.54	4.66	26.30	0.39
Reach1	3499.999	25-yr	3.30	183.55	183.99	183.85	184.01	0.001870	0.55	6.29	29.93	0.36
Reach1	3499.999	50-yr	3.98	183.55	184.05	183.88	184.06	0.002022	0.46	9.00	54.71	0.36
Reach1	3499.999	100-yr	4.63	183.55	184.09	183.89	184.10	0.001239	0.42	11.54	56.50	0.29
Reach1	3499.999	PF 9	5.40	183.55	184.15	183.91	184.15	0.000813	0.40	14.60	59.45	0.24
Reach1	3464.449	CH	17.44	183.43	185.15	183.96	185.15	0.000038	0.27	95.91	76.62	0.07
Reach1	3464.449	Regional	9.74	183.43	184.43	183.84	184.44	0.000130	0.33	42.20	74.25	0.12
Reach1	3464.449	2-yr	1.02	183.43	183.70	183.59	183.71	0.001327	0.34	3.02	20.57	0.28
Reach1	3464.449	5-yr	1.85	183.43	183.80	183.63	183.81	0.000883	0.34	5.41	26.73	0.24

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	3464.449	10-yr	2.46	183.43	183.86	183.66	183.87	0.000676	0.34	7.29	33.31	0.22
Reach1	3464.449	25-yr	3.30	183.43	183.94	183.69	183.95	0.000486	0.35	10.13	40.04	0.19
Reach1	3464.449	50-yr	3.98	183.43	184.00	183.71	184.01	0.000392	0.35	12.63	43.89	0.18
Reach1	3464.449	100-yr	4.63	183.43	184.06	183.73	184.06	0.000328	0.35	15.30	53.63	0.17
Reach1	3464.449	PF 9	5.40	183.43	184.12	183.75	184.12	0.000282	0.35	18.88	69.30	0.16
Reach1	3428.899	CH	17.44	183.30	185.08	184.22	185.14	0.000649	1.16	19.06	101.40	0.29
Reach1	3428.899	Regional	9.74	183.30	184.34	184.00	184.42	0.001745	1.27	9.27	33.99	0.43
Reach1	3428.899	2-yr	1.02	183.30	183.58	183.47	183.61	0.003334	0.75	1.36	5.48	0.48
Reach1	3428.899	5-yr	1.85	183.30	183.68	183.55	183.73	0.003736	0.95	1.94	5.89	0.53
Reach1	3428.899	10-yr	2.46	183.30	183.74	183.60	183.80	0.003941	1.07	2.31	6.14	0.56
Reach1	3428.899	25-yr	3.30	183.30	183.82	183.67	183.89	0.004420	1.14	3.01	32.16	0.59
Reach1	3428.899	50-yr	3.98	183.30	183.89	183.71	183.96	0.003450	1.13	3.85	32.42	0.54
Reach1	3428.899	100-yr	4.63	183.30	183.96	183.75	184.02	0.002894	1.13	4.60	32.64	0.50
Reach1	3428.899	PF 9	5.40	183.30	184.02	183.82	184.09	0.002615	1.16	5.34	32.86	0.49
Reach1	3424.759		Culvert									
Reach1	3399.999	CH	17.44	183.26	184.16	184.16	184.47	0.009516	2.58	8.07	25.90	0.97
Reach1	3399.999	Regional	9.74	183.26	183.96	183.96	184.17	0.009931	2.11	5.35	22.41	0.94
Reach1	3399.999	2-yr	1.02	183.26	183.52	183.43	183.55	0.004285	0.81	1.25	5.36	0.54
Reach1	3399.999	5-yr	1.85	183.26	183.59	183.51	183.65	0.006473	1.15	1.62	5.64	0.68
Reach1	3399.999	10-yr	2.46	183.26	183.62	183.57	183.71	0.008211	1.36	1.80	5.78	0.78
Reach1	3399.999	25-yr	3.30	183.26	183.63	183.63	183.79	0.013092	1.76	1.88	5.83	0.99
Reach1	3399.999	50-yr	3.98	183.26	183.68	183.68	183.85	0.012924	1.86	2.14	6.02	1.00
Reach1	3399.999	100-yr	4.63	183.26	183.73	183.73	183.91	0.012822	1.88	2.47	6.82	1.00
Reach1	3399.999	PF 9	5.40	183.26	183.80	183.80	183.96	0.011049	1.75	3.29	20.81	0.93
Reach1	3299.999	CH	17.81	183.20	183.88		183.90	0.000640	0.58	43.79	123.01	0.24
Reach1	3299.999	Regional	9.74	183.20	183.78		183.79	0.000400	0.40	32.39	106.15	0.19
Reach1	3299.999	2-yr	1.02	183.20	183.47		183.47	0.000227	0.14	7.48	55.75	0.12
Reach1	3299.999	5-yr	1.85	183.20	183.58		183.58	0.000115	0.15	14.31	68.68	0.09
Reach1	3299.999	10-yr	2.46	183.20	183.62		183.62	0.000117	0.16	17.53	76.18	0.09
Reach1	3299.999	25-yr	3.30	183.20	183.65		183.65	0.000165	0.20	19.30	81.96	0.11
Reach1	3299.999	50-yr	3.98	183.20	183.68		183.68	0.000171	0.22	22.15	90.71	0.12
Reach1	3299.999	100-yr	4.63	183.20	183.70		183.70	0.000190	0.24	24.00	94.07	0.12
Reach1	3299.999	PF 9	5.40	183.20	183.71		183.71	0.000234	0.27	24.99	95.94	0.14
Reach1	3199.999	CH	17.81	183.28	183.81	183.60	183.82	0.001511	0.80	46.03	151.19	0.37
Reach1	3199.999	Regional	9.74	183.28	183.74	183.54	183.75	0.000847	0.54	36.24	137.48	0.27

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	3199.999	2-yr	1.02	183.28	183.39	183.39	183.41	0.017494	0.73	1.70	45.58	0.90
Reach1	3199.999	5-yr	1.85	183.28	183.56	183.41	183.57	0.000287	0.22	15.48	102.69	0.14
Reach1	3199.999	10-yr	2.46	183.28	183.61	183.43	183.61	0.000246	0.23	20.37	111.34	0.14
Reach1	3199.999	25-yr	3.30	183.28	183.63	183.44	183.63	0.000348	0.28	22.33	115.09	0.16
Reach1	3199.999	50-yr	3.98	183.28	183.66	183.46	183.66	0.000332	0.30	26.22	122.20	0.16
Reach1	3199.999	100-yr	4.63	183.28	183.68	183.47	183.68	0.000361	0.32	28.48	125.80	0.17
Reach1	3199.999	PF 9	5.40	183.28	183.68	183.48	183.69	0.000461	0.37	29.17	126.75	0.19
Reach1	3143.616	CH	17.81	182.99	183.79	183.36	183.80	0.000152	0.34	112.44	229.88	0.12
Reach1	3143.616	Regional	9.74	182.99	183.73	183.29	183.73	0.000067	0.21	98.56	224.54	0.08
Reach1	3143.616	2-yr	1.02	182.99	183.37	183.10	183.37	0.000026	0.08	26.23	168.78	0.04
Reach1	3143.616	5-yr	1.85	182.99	183.56	183.14	183.56	0.000009	0.06	61.60	207.48	0.03
Reach1	3143.616	10-yr	2.46	182.99	183.61	183.16	183.61	0.000011	0.07	71.39	217.66	0.03
Reach1	3143.616	25-yr	3.30	182.99	183.63	183.18	183.63	0.000017	0.09	75.06	218.60	0.04
Reach1	3143.616	50-yr	3.98	182.99	183.66	183.19	183.66	0.000019	0.10	82.22	220.43	0.04
Reach1	3143.616	100-yr	4.63	182.99	183.68	183.22	183.68	0.000022	0.11	86.18	221.43	0.05
Reach1	3143.616	PF 9	5.40	182.99	183.68	183.23	183.68	0.000029	0.13	87.27	221.71	0.05
Reach1	3071.819	CH	18.21	182.93	183.79	183.57	183.79	0.000269	0.28	96.36	247.60	0.15
Reach1	3071.819	Regional	9.74	182.93	183.73	183.33	183.73	0.000129	0.17	82.24	243.39	0.10
Reach1	3071.819	2-yr	1.02	182.93	183.37	183.06	183.37	0.000097	0.16	6.31	84.28	0.09
Reach1	3071.819	5-yr	1.85	182.93	183.56	183.10	183.56	0.000157	0.16	12.14	188.54	0.10
Reach1	3071.819	10-yr	2.46	182.93	183.61	183.12	183.61	0.000042	0.08	41.64	206.68	0.05
Reach1	3071.819	25-yr	3.30	182.93	183.63	183.15	183.63	0.000065	0.09	44.26	216.32	0.07
Reach1	3071.819	50-yr	3.98	182.93	183.66	183.18	183.66	0.000066	0.10	49.62	221.94	0.07
Reach1	3071.819	100-yr	4.63	182.93	183.68	183.20	183.68	0.000073	0.11	52.56	224.70	0.07
Reach1	3071.819	PF 9	5.40	182.93	183.68	183.22	183.68	0.000094	0.13	53.29	225.44	0.08
Reach1	3059.960		Culvert									
Reach1	3044.762	CH	18.21	182.84	183.37	183.24	183.46	0.004279	1.30	14.02	187.05	0.61
Reach1	3044.762	Regional	9.74	182.84	183.23	183.13	183.28	0.003990	0.99	9.83	162.40	0.56
Reach1	3044.762	2-yr	1.02	182.84	182.98	182.95	182.99	0.005686	0.46	2.22	57.62	0.52
Reach1	3044.762	5-yr	1.85	182.84	183.02	182.98	183.03	0.005333	0.56	3.33	68.94	0.54
Reach1	3044.762	10-yr	2.46	182.84	183.04	183.00	183.06	0.004784	0.60	4.08	79.95	0.53
Reach1	3044.762	25-yr	3.30	182.84	183.07	183.02	183.09	0.004686	0.67	4.90	105.55	0.54
Reach1	3044.762	50-yr	3.98	182.84	183.09	183.03	183.12	0.004546	0.72	5.53	118.34	0.54
Reach1	3044.762	100-yr	4.63	182.84	183.11	183.04	183.14	0.004395	0.76	6.11	129.41	0.54
Reach1	3044.762	PF 9	5.40	182.84	183.13	183.06	183.16	0.004248	0.80	6.77	134.93	0.54

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	2995.296	CH	18.21	182.60	183.23	182.98	183.25	0.001389	0.82	43.47	140.26	0.36
Reach1	2995.296	Regional	9.74	182.60	183.08	182.88	183.10	0.001516	0.69	24.66	103.58	0.35
Reach1	2995.296	2-yr	1.02	182.60	182.78	182.72	182.79	0.001939	0.35	4.36	45.62	0.33
Reach1	2995.296	5-yr	1.85	182.60	182.84	182.75	182.84	0.001745	0.40	7.01	53.68	0.33
Reach1	2995.296	10-yr	2.46	182.60	182.87	182.76	182.88	0.001689	0.43	8.74	58.16	0.33
Reach1	2995.296	25-yr	3.30	182.60	182.90	182.78	182.91	0.001628	0.47	10.87	63.69	0.33
Reach1	2995.296	50-yr	3.98	182.60	182.93	182.80	182.94	0.001586	0.51	12.51	66.99	0.33
Reach1	2995.296	100-yr	4.63	182.60	182.95	182.81	182.96	0.001566	0.53	13.99	69.85	0.34
Reach1	2995.296	PF 9	5.40	182.60	182.97	182.82	182.98	0.001551	0.56	15.68	72.96	0.34
Reach1	2899.999	CH	18.21	182.54	183.12	182.81	183.14	0.001078	0.72	46.30	112.04	0.31
Reach1	2899.999	Regional	9.74	182.54	182.97	182.71	182.98	0.001044	0.56	30.18	99.50	0.29
Reach1	2899.999	2-yr	1.02	182.54	182.70	182.57	182.70	0.000639	0.19	7.58	62.09	0.19
Reach1	2899.999	5-yr	1.85	182.54	182.75	182.60	182.75	0.000692	0.26	11.03	71.09	0.21
Reach1	2899.999	10-yr	2.46	182.54	182.78	182.61	182.78	0.000748	0.30	13.01	75.26	0.22
Reach1	2899.999	25-yr	3.30	182.54	182.81	182.63	182.81	0.000802	0.34	15.52	80.11	0.23
Reach1	2899.999	50-yr	3.98	182.54	182.83	182.64	182.83	0.000837	0.37	17.42	83.54	0.24
Reach1	2899.999	100-yr	4.63	182.54	182.85	182.65	182.85	0.000879	0.40	19.02	85.85	0.25
Reach1	2899.999	PF 9	5.40	182.54	182.87	182.66	182.88	0.000915	0.43	20.87	88.27	0.26
Reach1	2851.797	CH	19.32	182.48	182.85	182.85	182.98	0.019171	1.95	15.25	65.03	1.19
Reach1	2851.797	Regional	9.74	182.48	182.74	182.74	182.83	0.023928	1.58	8.89	56.32	1.22
Reach1	2851.797	2-yr	1.02	182.48	182.56	182.56	182.60	0.046224	0.98	1.29	18.06	1.39
Reach1	2851.797	5-yr	1.85	182.48	182.60	182.60	182.65	0.039518	1.08	2.09	28.47	1.35
Reach1	2851.797	10-yr	2.46	182.48	182.63	182.63	182.67	0.036513	0.94	3.01	44.11	1.26
Reach1	2851.797	25-yr	3.30	182.48	182.64	182.64	182.69	0.036420	1.09	3.72	47.17	1.31
Reach1	2851.797	50-yr	3.98	182.48	182.66	182.66	182.71	0.035234	1.18	4.29	48.87	1.32
Reach1	2851.797	100-yr	4.63	182.48	182.67	182.67	182.73	0.030571	1.22	4.99	50.34	1.26
Reach1	2851.797	PF 9	5.40	182.48	182.68	182.68	182.74	0.028462	1.29	5.66	51.42	1.24
Reach1	2764.286	CH	19.32	181.04	182.38	181.57	182.39	0.000130	0.44	75.94	83.33	0.13
Reach1	2764.286	Regional	9.74	181.04	182.02	181.42	182.02	0.000137	0.35	46.34	78.98	0.12
Reach1	2764.286	2-yr	1.02	181.04	181.39	181.16	181.39	0.000220	0.19	6.42	33.13	0.12
Reach1	2764.286	5-yr	1.85	181.04	181.51	181.21	181.51	0.000179	0.22	10.84	45.72	0.12
Reach1	2764.286	10-yr	2.46	181.04	181.57	181.23	181.58	0.000165	0.24	14.24	55.75	0.12
Reach1	2764.286	25-yr	3.30	181.04	181.65	181.27	181.66	0.000159	0.26	19.06	67.04	0.12
Reach1	2764.286	50-yr	3.98	181.04	181.71	181.29	181.71	0.000147	0.27	22.90	69.86	0.12
Reach1	2764.286	100-yr	4.63	181.04	181.75	181.31	181.76	0.000144	0.28	26.05	72.09	0.12
Reach1	2764.286	PF 9	5.40	181.04	181.80	181.33	181.80	0.000143	0.30	29.53	74.47	0.12

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	2689.225	CH	19.32	180.88	182.32	181.76	182.37	0.000750	0.92	22.11	24.96	0.29
Reach1	2689.225	Regional	9.74	180.88	181.97	181.55	182.00	0.000791	0.72	13.84	22.35	0.28
Reach1	2689.225	2-yr	1.02	180.88	181.36	181.15	181.36	0.000826	0.37	2.74	11.22	0.24
Reach1	2689.225	5-yr	1.85	180.88	181.47	181.22	181.48	0.000872	0.44	4.20	13.94	0.26
Reach1	2689.225	10-yr	2.46	180.88	181.54	181.26	181.55	0.000880	0.47	5.19	15.56	0.26
Reach1	2689.225	25-yr	3.30	180.88	181.62	181.31	181.63	0.000898	0.51	6.46	17.62	0.27
Reach1	2689.225	50-yr	3.98	180.88	181.67	181.34	181.69	0.000888	0.53	7.50	19.14	0.27
Reach1	2689.225	100-yr	4.63	180.88	181.72	181.38	181.73	0.000894	0.55	8.36	20.09	0.27
Reach1	2689.225	PF 9	5.40	180.88	181.76	181.41	181.78	0.000858	0.58	9.31	20.80	0.27
Reach1	2600	CH	20.08	180.84	182.20	181.75	182.27	0.001426	1.42	22.06	25.29	0.41
Reach1	2600	Regional	9.74	180.84	181.87	181.51	181.92	0.001115	1.02	14.27	22.99	0.35
Reach1	2600	2-yr	1.02	180.84	181.28	181.10	181.29	0.000824	0.42	2.72	12.80	0.25
Reach1	2600	5-yr	1.85	180.84	181.39	181.17	181.41	0.000839	0.52	4.34	16.12	0.26
Reach1	2600	10-yr	2.46	180.84	181.46	181.21	181.47	0.000852	0.58	5.45	18.21	0.27
Reach1	2600	25-yr	3.30	180.84	181.53	181.25	181.55	0.000874	0.65	6.85	19.65	0.28
Reach1	2600	50-yr	3.98	180.84	181.59	181.29	181.61	0.000866	0.69	7.98	20.62	0.29
Reach1	2600	100-yr	4.63	180.84	181.63	181.32	181.65	0.000913	0.74	8.81	21.33	0.30
Reach1	2600	PF 9	5.40	180.84	181.67	181.35	181.70	0.000944	0.79	9.79	21.66	0.31
Reach1	2500	CH	20.08	180.72	182.02		182.10	0.002067	1.28	15.82	21.42	0.46
Reach1	2500	Regional	9.74	180.72	181.71		181.77	0.002132	1.00	9.69	18.25	0.44
Reach1	2500	2-yr	1.02	180.72	181.15		181.16	0.002230	0.56	1.82	8.48	0.39
Reach1	2500	5-yr	1.85	180.72	181.26		181.28	0.002140	0.64	2.88	10.69	0.39
Reach1	2500	10-yr	2.46	180.72	181.32		181.35	0.002118	0.68	3.59	11.98	0.40
Reach1	2500	25-yr	3.30	180.72	181.40		181.42	0.002072	0.73	4.54	13.66	0.40
Reach1	2500	50-yr	3.98	180.72	181.46		181.49	0.001834	0.73	5.48	15.03	0.38
Reach1	2500	100-yr	4.63	180.72	181.49		181.52	0.001934	0.78	5.97	15.44	0.40
Reach1	2500	PF 9	5.40	180.72	181.54		181.57	0.001913	0.81	6.66	16.00	0.40
Reach1	2400	CH	20.08	180.52	181.68	181.48	181.83	0.003539	1.77	13.41	20.76	0.61
Reach1	2400	Regional	9.74	180.52	181.49	181.23	181.55	0.002096	1.14	9.59	18.76	0.45
Reach1	2400	2-yr	1.02	180.52	180.99	180.81	181.00	0.001242	0.45	2.26	9.64	0.29
Reach1	2400	5-yr	1.85	180.52	181.09	180.89	181.10	0.001460	0.57	3.30	11.67	0.33
Reach1	2400	10-yr	2.46	180.52	181.14	180.93	181.16	0.001564	0.63	3.99	12.84	0.35
Reach1	2400	25-yr	3.30	180.52	181.24	180.98	181.26	0.001228	0.64	5.39	14.92	0.32
Reach1	2400	50-yr	3.98	180.52	181.35	181.02	181.37	0.000806	0.60	7.09	17.13	0.27
Reach1	2400	100-yr	4.63	180.52	181.36	181.05	181.39	0.001008	0.69	7.30	17.37	0.30
Reach1	2400	PF 9	5.40	180.52	181.40	181.08	181.43	0.001060	0.74	8.01	17.88	0.31

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	2300	CH	20.22	180.49	181.53		181.58	0.001520	1.09	26.37	52.57	0.40
Reach1	2300	Regional	9.74	180.49	181.40		181.42	0.000732	0.67	19.76	51.36	0.27
Reach1	2300	2-yr	1.02	180.49	180.82		180.84	0.002228	0.48	2.13	12.65	0.37
Reach1	2300	5-yr	1.85	180.49	180.90		180.92	0.002343	0.57	3.23	15.23	0.40
Reach1	2300	10-yr	2.46	180.49	181.01		181.02	0.001241	0.49	5.01	19.26	0.30
Reach1	2300	25-yr	3.30	180.49	181.19		181.20	0.000397	0.38	9.97	35.79	0.18
Reach1	2300	50-yr	3.98	180.49	181.32		181.33	0.000210	0.33	15.64	48.62	0.14
Reach1	2300	100-yr	4.63	180.49	181.33		181.33	0.000277	0.38	15.80	49.02	0.16
Reach1	2300	PF 9	5.40	180.49	181.37		181.37	0.000287	0.40	17.84	51.01	0.17
Reach1	2200	CH	20.22	180.42	181.46	180.86	181.48	0.000621	0.67	43.60	57.31	0.25
Reach1	2200	Regional	9.74	180.42	181.38	180.72	181.38	0.000194	0.35	38.99	53.54	0.14
Reach1	2200	2-yr	1.02	180.42	180.64	180.50	180.65	0.001570	0.31	4.67	29.23	0.29
Reach1	2200	5-yr	1.85	180.42	180.83	180.54	180.83	0.000402	0.19	11.37	43.58	0.16
Reach1	2200	10-yr	2.46	180.42	180.98	180.57	180.98	0.000150	0.17	18.47	48.78	0.10
Reach1	2200	25-yr	3.30	180.42	181.18	180.59	181.18	0.000064	0.16	28.40	51.81	0.07
Reach1	2200	50-yr	3.98	180.42	181.32	180.61	181.32	0.000044	0.15	35.60	52.99	0.06
Reach1	2200	100-yr	4.63	180.42	181.32	180.62	181.32	0.000059	0.18	35.68	53.01	0.07
Reach1	2200	PF 9	5.40	180.42	181.36	180.64	181.36	0.000066	0.20	37.79	53.35	0.08
Reach1	1952.223	CH	20.34	179.87	181.40		181.40	0.000180	0.45	103.92	279.32	0.14
Reach1	1952.223	Regional	9.74	179.87	181.36		181.36	0.000050	0.23	94.15	265.93	0.07
Reach1	1952.223	2-yr	1.02	179.87	180.55		180.56	0.000177	0.21	5.87	39.80	0.12
Reach1	1952.223	5-yr	1.85	179.87	180.81		180.81	0.000049	0.15	20.25	64.56	0.07
Reach1	1952.223	10-yr	2.46	179.87	180.97		180.97	0.000030	0.13	31.16	78.12	0.05
Reach1	1952.223	25-yr	3.30	179.87	181.17		181.17	0.000016	0.11	53.86	152.72	0.04
Reach1	1952.223	50-yr	3.98	179.87	181.31		181.31	0.000011	0.10	81.62	244.26	0.03
Reach1	1952.223	100-yr	4.63	179.87	181.31		181.31	0.000015	0.12	81.62	244.26	0.04
Reach1	1952.223	PF 9	5.40	179.87	181.35		181.35	0.000016	0.13	91.52	262.46	0.04
Reach1	1937.395	CH	20.34	179.87	181.40	180.90	181.40	0.000017	0.12	269.61	286.13	0.04
Reach1	1937.395	Regional	9.74	179.87	181.36	180.65	181.36	0.000004	0.06	259.31	283.87	0.02
Reach1	1937.395	2-yr	1.02	179.87	180.55	180.25	180.55	0.000327	0.27	3.75	197.24	0.16
Reach1	1937.395	5-yr	1.85	179.87	180.80	180.34	180.81	0.000159	0.26	7.21	201.37	0.12
Reach1	1937.395	10-yr	2.46	179.87	180.97	180.37	180.97	0.000118	0.25	9.79	226.99	0.11
Reach1	1937.395	25-yr	3.30	179.87	181.17	180.42	181.17	0.000090	0.24	13.51	269.77	0.09
Reach1	1937.395	50-yr	3.98	179.87	181.31	180.45	181.31	0.000001	0.03	226.09	280.81	0.01
Reach1	1937.395	100-yr	4.63	179.87	181.31	180.48	181.31	0.000001	0.03	226.10	280.81	0.01
Reach1	1937.395	PF 9	5.40	179.87	181.35	180.51	181.35	0.000001	0.03	256.48	283.25	0.01

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	1921.497		Culvert									
Reach1	1906.334	CH	20.34	179.74	181.36	180.85	181.36	0.000019	0.14	274.65	323.81	0.05
Reach1	1906.334	Regional	9.74	179.74	181.35	180.66	181.35	0.000004	0.07	273.21	323.35	0.02
Reach1	1906.334	2-yr	1.02	179.74	180.15	180.11	180.21	0.009715	1.13	0.91	64.93	0.80
Reach1	1906.334	5-yr	1.85	179.74	180.21	180.21	180.33	0.014663	1.52	1.21	84.35	1.00
Reach1	1906.334	10-yr	2.46	179.74	180.27	180.27	180.40	0.013715	1.60	1.54	96.02	0.99
Reach1	1906.334	25-yr	3.30	179.74	180.34	180.34	180.49	0.013576	1.71	1.93	111.38	1.00
Reach1	1906.334	50-yr	3.98	179.74	180.46	180.38	180.56	0.007050	1.40	2.84	147.60	0.75
Reach1	1906.334	100-yr	4.63	179.74	181.19	180.42	181.19	0.000094	0.28	16.56	284.10	0.10
Reach1	1906.334	PF 9	5.40	179.74	181.35	180.47	181.35	0.000001	0.04	272.95	323.26	0.01
Reach1	1885.931	CH	20.34	179.74	181.36		181.36	0.000009	0.11	447.70	585.84	0.03
Reach1	1885.931	Regional	9.74	179.74	181.35		181.35	0.000002	0.05	445.19	585.38	0.02
Reach1	1885.931	2-yr	1.02	179.74	180.04		180.04	0.004209	0.60	3.60	38.39	0.50
Reach1	1885.931	5-yr	1.85	179.74	180.11		180.12	0.003131	0.60	7.62	76.93	0.45
Reach1	1885.931	10-yr	2.46	179.74	180.16		180.16	0.001933	0.50	11.39	87.96	0.36
Reach1	1885.931	25-yr	3.30	179.74	180.21		180.21	0.001448	0.43	15.80	98.30	0.31
Reach1	1885.931	50-yr	3.98	179.74	180.48		180.48	0.000065	0.13	62.47	255.86	0.07
Reach1	1885.931	100-yr	4.63	179.74	181.19		181.19	0.000001	0.03	352.65	533.75	0.01
Reach1	1885.931	PF 9	5.40	179.74	181.35		181.35	0.000001	0.03	444.73	585.30	0.01
Reach1	1799.999	CH	20.83	179.48	181.36		181.36	0.000005	0.09	597.42	707.95	0.02
Reach1	1799.999	Regional	9.74	179.48	181.35		181.35	0.000001	0.04	594.67	707.42	0.01
Reach1	1799.999	2-yr	1.02	179.48	179.99		179.99	0.000226	0.20	12.53	92.07	0.13
Reach1	1799.999	5-yr	1.85	179.48	180.07		180.07	0.000190	0.21	21.26	112.53	0.12
Reach1	1799.999	10-yr	2.46	179.48	180.12		180.12	0.000189	0.18	27.08	125.78	0.11
Reach1	1799.999	25-yr	3.30	179.48	180.17		180.17	0.000206	0.16	33.36	144.51	0.12
Reach1	1799.999	50-yr	3.98	179.48	180.48		180.48	0.000016	0.07	113.06	372.78	0.04
Reach1	1799.999	100-yr	4.63	179.48	181.19		181.19	0.000000	0.02	485.26	649.75	0.01
Reach1	1799.999	PF 9	5.40	179.48	181.35		181.35	0.000000	0.02	594.18	707.32	0.01
Reach1	1699.999	CH	20.83	179.32	181.35		181.35	0.000016	0.17	499.78	664.39	0.05
Reach1	1699.999	Regional	9.74	179.32	181.35		181.35	0.000004	0.08	497.78	664.11	0.02
Reach1	1699.999	2-yr	1.02	179.32	179.93		179.94	0.001695	0.41	3.79	48.28	0.32
Reach1	1699.999	5-yr	1.85	179.32	180.03		180.04	0.000921	0.41	9.44	68.38	0.26
Reach1	1699.999	10-yr	2.46	179.32	180.08		180.09	0.000789	0.42	13.25	80.10	0.24
Reach1	1699.999	25-yr	3.30	179.32	180.13		180.13	0.000838	0.47	16.89	91.40	0.26
Reach1	1699.999	50-yr	3.98	179.32	180.47		180.47	0.000052	0.16	70.81	197.31	0.07
Reach1	1699.999	100-yr	4.63	179.32	181.19		181.19	0.000002	0.05	391.65	649.09	0.01

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	1699.999	PF 9	5.40	179.32	181.35		181.35	0.000001	0.04	497.45	664.06	0.01
Reach1	1600	CH	22.58	179.20	181.35		181.35	0.000019	0.18	457.03	562.04	0.05
Reach1	1600	Regional	9.74	179.20	181.35		181.35	0.000003	0.08	456.08	561.75	0.02
Reach1	1600	2-yr	1.02	179.20	179.86	179.63	179.87	0.000475	0.33	9.89	65.24	0.19
Reach1	1600	5-yr	1.85	179.20	179.98		179.98	0.000436	0.24	18.93	87.13	0.17
Reach1	1600	10-yr	2.46	179.20	180.04		180.04	0.000414	0.21	24.38	105.03	0.16
Reach1	1600	25-yr	3.30	179.20	180.08		180.08	0.000457	0.23	28.68	112.74	0.17
Reach1	1600	50-yr	3.98	179.20	180.47		180.47	0.000024	0.11	95.62	241.56	0.05
Reach1	1600	100-yr	4.63	179.20	181.19		181.19	0.000001	0.04	372.38	499.77	0.01
Reach1	1600	PF 9	5.40	179.20	181.35		181.35	0.000001	0.04	455.90	561.69	0.01
Reach1	1500	CH	22.58	179.24	181.35		181.35	0.000012	0.15	595.72	666.81	0.04
Reach1	1500	Regional	9.74	179.24	181.35		181.35	0.000002	0.07	595.20	666.74	0.02
Reach1	1500	2-yr	1.02	179.24	179.63	179.63	179.72	0.016032	1.38	0.74	3.84	1.01
Reach1	1500	5-yr	1.85	179.24	179.74	179.74	179.85	0.015335	1.48	1.25	5.75	1.01
Reach1	1500	10-yr	2.46	179.24	179.79	179.79	179.91	0.015736	1.53	1.61	7.11	1.03
Reach1	1500	25-yr	3.30	179.24	179.92	179.92	179.96	0.010605	0.96	6.46	88.11	0.79
Reach1	1500	50-yr	3.98	179.24	180.47		180.47	0.000016	0.10	127.49	318.06	0.04
Reach1	1500	100-yr	4.63	179.24	181.19		181.19	0.000001	0.04	488.79	652.10	0.01
Reach1	1500	PF 9	5.40	179.24	181.35		181.35	0.000001	0.04	595.10	666.73	0.01
Reach1	1400	CH	22.58	179.13	181.35		181.35	0.000005	0.12	803.24	720.74	0.03
Reach1	1400	Regional	9.74	179.13	181.35		181.35	0.000001	0.05	803.06	720.63	0.01
Reach1	1400	2-yr	1.02	179.13	179.56		179.56	0.000069	0.13	12.03	57.28	0.07
Reach1	1400	5-yr	1.85	179.13	179.63		179.63	0.000121	0.20	15.78	64.40	0.10
Reach1	1400	10-yr	2.46	179.13	179.84		179.84	0.000041	0.15	42.66	227.14	0.06
Reach1	1400	25-yr	3.30	179.13	179.86		179.86	0.000064	0.20	46.62	233.33	0.08
Reach1	1400	50-yr	3.98	179.13	180.47		180.47	0.000002	0.06	269.12	465.66	0.02
Reach1	1400	100-yr	4.63	179.13	181.19		181.19	0.000000	0.03	690.60	686.11	0.01
Reach1	1400	PF 9	5.40	179.13	181.35		181.35	0.000000	0.03	803.00	720.60	0.01
Reach1	1323.669	CH	22.58	179.01	181.35		181.35	0.000004	0.10	931.09	879.14	0.02
Reach1	1323.669	Regional	9.74	179.01	181.35		181.35	0.000001	0.04	931.04	879.13	0.01
Reach1	1323.669	2-yr	1.02	179.01	179.55		179.55	0.000386	0.23	6.41	89.14	0.16
Reach1	1323.669	5-yr	1.85	179.01	179.61		179.61	0.000471	0.29	13.56	140.07	0.18
Reach1	1323.669	10-yr	2.46	179.01	179.84		179.84	0.000041	0.13	55.46	205.79	0.06
Reach1	1323.669	25-yr	3.30	179.01	179.85		179.85	0.000064	0.17	58.74	208.32	0.08
Reach1	1323.669	50-yr	3.98	179.01	180.47		180.47	0.000002	0.05	302.03	587.08	0.02
Reach1	1323.669	100-yr	4.63	179.01	181.19		181.19	0.000000	0.02	795.01	801.28	0.01

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	1323.669	PF 9	5.40	179.01	181.35		181.35	0.000000	0.02	931.01	879.13	0.01
Reach1	1193.845	CH	23.66	178.85	181.35		181.35	0.000004	0.10	1039.86	1015.37	0.02
Reach1	1193.845	Regional	23.66	178.85	181.35		181.35	0.000004	0.10	1039.86	1015.37	0.02
Reach1	1193.845	2-yr	2.01	178.85	179.20	179.20	179.29	0.016405	1.32	1.52	8.78	1.02
Reach1	1193.845	5-yr	3.73	178.85	179.51		179.52	0.000909	0.47	14.57	80.34	0.26
Reach1	1193.845	10-yr	5.03	178.85	179.83		179.83	0.000097	0.24	57.52	179.31	0.10
Reach1	1193.845	25-yr	6.84	178.85	179.84		179.84	0.000168	0.32	59.21	180.52	0.13
Reach1	1193.845	50-yr	8.34	178.85	180.47		180.47	0.000010	0.12	287.83	662.60	0.03
Reach1	1193.845	100-yr	9.79	178.85	181.19		181.19	0.000001	0.05	877.85	995.72	0.01
Reach1	1193.845	PF 9	23.66	178.85	181.35		181.35	0.000004	0.10	1039.86	1015.37	0.02
Reach1	1100	CH	23.66	178.25	181.35		181.35	0.000001	0.05	1295.30	1114.48	0.01
Reach1	1100	Regional	23.66	178.25	181.35		181.35	0.000001	0.05	1295.30	1114.48	0.01
Reach1	1100	2-yr	2.01	178.25	179.09		179.09	0.000073	0.17	20.01	102.58	0.08
Reach1	1100	5-yr	3.73	178.25	179.52		179.52	0.000008	0.09	102.63	254.06	0.03
Reach1	1100	10-yr	5.03	178.25	179.83		179.83	0.000003	0.07	189.31	326.90	0.02
Reach1	1100	25-yr	6.84	178.25	179.84		179.84	0.000006	0.09	192.51	340.19	0.03
Reach1	1100	50-yr	8.34	178.25	180.47		180.47	0.000001	0.05	471.65	574.92	0.01
Reach1	1100	100-yr	9.79	178.25	181.19		181.19	0.000000	0.03	1118.76	1080.94	0.01
Reach1	1100	PF 9	23.66	178.25	181.35		181.35	0.000001	0.05	1295.30	1114.48	0.01
Reach1	974.3741	CH	23.66	178.28	181.35		181.35	0.000002	0.09	940.96	978.97	0.02
Reach1	974.3741	Regional	23.66	178.28	181.35		181.35	0.000002	0.09	940.96	978.97	0.02
Reach1	974.3741	2-yr	2.01	178.28	179.08		179.08	0.000014	0.08	43.21	119.02	0.03
Reach1	974.3741	5-yr	3.73	178.28	179.52		179.52	0.000005	0.07	110.01	176.96	0.02
Reach1	974.3741	10-yr	5.03	178.28	179.83		179.83	0.000003	0.06	166.90	189.27	0.02
Reach1	974.3741	25-yr	6.84	178.28	179.84		179.84	0.000005	0.08	168.68	190.34	0.02
Reach1	974.3741	50-yr	8.34	178.28	180.47		180.47	0.000001	0.06	312.03	318.15	0.01
Reach1	974.3741	100-yr	9.79	178.28	181.19		181.19	0.000000	0.04	786.85	928.94	0.01
Reach1	974.3741	PF 9	23.66	178.28	181.35		181.35	0.000002	0.09	940.96	978.97	0.02
Reach1	960.8255	CH	23.66	178.28	181.35	179.64	181.35	0.000005	0.14	433.90	1129.82	0.03
Reach1	960.8255	Regional	23.66	178.28	181.35	179.64	181.35	0.000005	0.14	433.90	1129.82	0.03
Reach1	960.8255	2-yr	2.01	178.28	179.06	178.63	179.07	0.000470	0.55	3.63	154.12	0.22
Reach1	960.8255	5-yr	3.73	178.28	179.48	178.75	179.50	0.000317	0.63	5.92	199.97	0.19
Reach1	960.8255	10-yr	5.03	178.28	179.79	178.83	179.81	0.000253	0.66	7.58	248.81	0.18
Reach1	960.8255	25-yr	6.84	178.28	179.77	178.93	179.81	0.000494	0.92	7.45	244.41	0.25
Reach1	960.8255	50-yr	8.34	178.28	180.42	179.01	180.45	0.000203	0.76	10.95	447.04	0.17
Reach1	960.8255	100-yr	9.79	178.28	181.15	179.08	181.18	0.000100	0.66	14.90	1020.33	0.13

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	960.8255	PF 9	23.66	178.28	181.35	179.64	181.35	0.000005	0.14	433.90	1129.82	0.03
Reach1	945.2227		Culvert									
Reach1	929.6181	CH	23.66	177.14	178.76	178.76	179.42	0.008395	3.61	6.55	97.84	1.00
Reach1	929.6181	Regional	23.66	177.14	178.76	178.76	179.42	0.008395	3.61	6.55	97.84	1.00
Reach1	929.6181	2-yr	2.01	177.14	178.37	177.66	178.38	0.000194	0.43	4.62	28.33	0.14
Reach1	929.6181	5-yr	3.73	177.14	178.47	177.81	178.50	0.000471	0.73	5.13	45.54	0.23
Reach1	929.6181	10-yr	5.03	177.14	178.52	177.90	178.56	0.000736	0.94	5.37	71.37	0.29
Reach1	929.6181	25-yr	6.84	177.14	178.57	178.01	178.64	0.001171	1.22	5.62	79.45	0.36
Reach1	929.6181	50-yr	8.34	177.14	178.60	178.09	178.71	0.001589	1.44	5.78	82.06	0.43
Reach1	929.6181	100-yr	9.79	177.14	178.63	178.17	178.77	0.002030	1.66	5.91	84.14	0.48
Reach1	929.6181	PF 9	23.66	177.14	178.76	178.76	179.42	0.008395	3.61	6.55	97.84	1.00
Reach1	908.9127	CH	23.66	177.14	178.84		178.85	0.001140	0.83	60.30	167.88	0.33
Reach1	908.9127	Regional	23.66	177.14	178.84		178.85	0.001140	0.83	60.30	167.88	0.33
Reach1	908.9127	2-yr	2.01	177.14	178.36		178.37	0.000998	0.47	4.88	37.17	0.27
Reach1	908.9127	5-yr	3.73	177.14	178.46		178.47	0.001213	0.54	11.29	88.82	0.30
Reach1	908.9127	10-yr	5.03	177.14	178.50		178.52	0.001250	0.56	15.77	99.76	0.31
Reach1	908.9127	25-yr	6.84	177.14	178.56		178.57	0.001231	0.59	21.18	111.02	0.31
Reach1	908.9127	50-yr	8.34	177.14	178.59		178.60	0.001233	0.63	25.04	118.98	0.32
Reach1	908.9127	100-yr	9.79	177.14	178.62		178.63	0.001213	0.66	28.72	124.44	0.32
Reach1	908.9127	PF 9	23.66	177.14	178.83		178.85	0.001144	0.83	60.21	167.80	0.33
Reach1	800	CH	23.66	177.14	178.71		178.73	0.001287	0.82	60.60	169.63	0.34
Reach1	800	Regional	23.66	177.14	178.71		178.73	0.001287	0.82	60.60	169.63	0.34
Reach1	800	2-yr	2.01	177.14	178.09		178.13	0.007313	0.88	2.32	15.31	0.67
Reach1	800	5-yr	3.73	177.14	178.22		178.26	0.003315	0.85	5.87	46.54	0.49
Reach1	800	10-yr	5.03	177.14	178.28		178.32	0.002886	0.88	8.97	61.03	0.47
Reach1	800	25-yr	6.84	177.14	178.35		178.38	0.002446	0.91	13.75	81.16	0.45
Reach1	800	50-yr	8.34	177.14	178.40		178.43	0.002148	0.91	18.13	96.42	0.42
Reach1	800	100-yr	9.79	177.14	178.45		178.48	0.001767	0.87	23.57	113.13	0.39
Reach1	800	PF 9	23.66	177.14	178.71		178.72	0.001316	0.83	60.08	169.00	0.35
Reach1	699.9999	CH	23.66	177.14	178.54		178.59	0.001515	1.10	43.74	160.56	0.40
Reach1	699.9999	Regional	23.66	177.14	178.54		178.59	0.001515	1.10	43.74	160.56	0.40
Reach1	699.9999	2-yr	2.01	177.14	177.82		177.84	0.001508	0.63	3.17	9.12	0.34
Reach1	699.9999	5-yr	3.73	177.14	177.98		178.00	0.002029	0.72	5.32	19.46	0.40
Reach1	699.9999	10-yr	5.03	177.14	178.04		178.07	0.002053	0.80	6.70	22.81	0.41
Reach1	699.9999	25-yr	6.84	177.14	178.12		178.16	0.002088	0.89	8.58	26.73	0.42

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	699.9999	50-yr	8.34	177.14	178.17		178.22	0.002130	0.96	10.07	29.47	0.43
Reach1	699.9999	100-yr	9.79	177.14	178.23		178.27	0.002383	0.98	11.90	35.20	0.46
Reach1	699.9999	PF 9	23.66	177.14	178.52	178.29	178.58	0.001741	1.16	40.48	154.49	0.42
Reach1	600	CH	23.66	177.14	178.37		178.44	0.001528	1.19	29.62	102.94	0.41
Reach1	600	Regional	23.66	177.14	178.37		178.44	0.001528	1.19	29.62	102.94	0.41
Reach1	600	2-yr	2.01	177.14	177.55		177.59	0.004981	0.82	2.46	11.93	0.58
Reach1	600	5-yr	3.73	177.14	177.66		177.71	0.004604	0.94	3.98	14.85	0.58
Reach1	600	10-yr	5.03	177.14	177.73		177.78	0.004372	1.00	5.05	16.61	0.58
Reach1	600	25-yr	6.84	177.14	177.82		177.87	0.004126	1.05	6.50	18.81	0.57
Reach1	600	50-yr	8.34	177.14	177.88		177.94	0.003941	1.08	7.71	21.41	0.57
Reach1	600	100-yr	9.79	177.14	177.93		177.99	0.003555	1.12	8.84	23.50	0.55
Reach1	600	PF 9	23.66	177.14	178.28		178.37	0.002380	1.38	22.25	60.34	0.50
Reach1	509.8065	CH	23.66	176.97	178.32		178.35	0.000597	0.84	34.45	66.15	0.26
Reach1	509.8065	Regional	23.66	176.97	178.32		178.35	0.000597	0.84	34.45	66.15	0.26
Reach1	509.8065	2-yr	2.01	176.97	177.45		177.46	0.000592	0.34	5.97	22.26	0.21
Reach1	509.8065	5-yr	3.73	176.97	177.57		177.58	0.000643	0.44	8.58	23.68	0.23
Reach1	509.8065	10-yr	5.03	176.97	177.63		177.65	0.000674	0.50	10.22	24.49	0.24
Reach1	509.8065	25-yr	6.84	176.97	177.71		177.73	0.000719	0.57	12.20	25.39	0.25
Reach1	509.8065	50-yr	8.34	176.97	177.77		177.79	0.000751	0.62	13.69	25.90	0.26
Reach1	509.8065	100-yr	9.79	176.97	177.82		177.85	0.000772	0.67	15.07	26.37	0.27
Reach1	509.8065	PF 9	23.66	176.97	178.19		178.23	0.000942	0.97	27.81	45.48	0.32
Reach1	399.9999	CH	23.66	176.91	178.22		178.27	0.000962	1.09	30.98	51.40	0.33
Reach1	399.9999	Regional	23.66	176.91	178.22		178.27	0.000962	1.09	30.98	51.40	0.33
Reach1	399.9999	2-yr	2.01	176.91	177.32		177.34	0.002658	0.60	3.34	16.11	0.42
Reach1	399.9999	5-yr	3.73	176.91	177.43		177.45	0.002397	0.72	5.25	19.83	0.42
Reach1	399.9999	10-yr	5.03	176.91	177.49		177.52	0.002297	0.80	6.54	21.86	0.43
Reach1	399.9999	25-yr	6.84	176.91	177.56		177.60	0.002249	0.90	8.21	24.25	0.44
Reach1	399.9999	50-yr	8.34	176.91	177.61		177.66	0.002256	0.97	9.50	26.09	0.45
Reach1	399.9999	100-yr	9.79	176.91	177.66		177.71	0.002179	1.02	10.87	27.76	0.45
Reach1	399.9999	PF 9	23.66	176.91	177.98		178.07	0.002414	1.46	20.57	36.28	0.51
Reach1	299.9999	CH	23.66	176.86	178.18		178.20	0.000441	0.74	51.03	60.71	0.23
Reach1	299.9999	Regional	23.66	176.86	178.18		178.20	0.000441	0.74	51.03	60.71	0.23
Reach1	299.9999	2-yr	2.01	176.86	177.20		177.20	0.000808	0.36	8.08	31.58	0.24
Reach1	299.9999	5-yr	3.73	176.86	177.29		177.30	0.001025	0.48	11.15	33.57	0.28
Reach1	299.9999	10-yr	5.03	176.86	177.35		177.36	0.001144	0.55	13.07	34.76	0.30
Reach1	299.9999	25-yr	6.84	176.86	177.42		177.43	0.001276	0.63	15.44	36.22	0.32

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	299.9999	50-yr	8.34	176.86	177.46		177.48	0.001365	0.68	17.23	37.34	0.34
Reach1	299.9999	100-yr	9.79	176.86	177.52		177.54	0.001321	0.70	19.43	38.78	0.34
Reach1	299.9999	PF 9	23.66	176.86	177.83		177.87	0.001534	1.06	32.74	46.74	0.39
Reach1	199.9999	CH	23.66	176.86	178.14		178.16	0.000251	0.61	53.49	74.97	0.18
Reach1	199.9999	Regional	23.66	176.86	178.14		178.16	0.000251	0.61	53.49	74.97	0.18
Reach1	199.9999	2-yr	2.01	176.86	177.10	176.98	177.11	0.000866	0.35	6.92	37.08	0.24
Reach1	199.9999	5-yr	3.73	176.86	177.17	177.02	177.18	0.001129	0.48	9.45	37.70	0.29
Reach1	199.9999	10-yr	5.03	176.86	177.21	177.05	177.22	0.001329	0.56	10.85	38.04	0.32
Reach1	199.9999	25-yr	6.84	176.86	177.25	177.08	177.27	0.001553	0.66	12.56	38.45	0.35
Reach1	199.9999	50-yr	8.34	176.86	177.23	177.10	177.26	0.002960	0.87	11.60	38.22	0.48
Reach1	199.9999	100-yr	9.79	176.86	177.18	177.12	177.24	0.007275	1.22	9.65	37.75	0.74
Reach1	199.9999	PF 9	23.66	176.86	177.29	177.29	177.48	0.012983	2.06	14.07	38.81	1.04
Reach1	117.8047	CH	23.66	176.86	178.15		178.15	0.000010	0.12	195.46	155.66	0.03
Reach1	117.8047	Regional	23.66	176.86	178.15		178.15	0.000010	0.12	195.46	155.66	0.03
Reach1	117.8047	2-yr	2.01	176.86	176.89	176.89	176.90	0.030265	0.52	3.89	146.00	1.01
Reach1	117.8047	5-yr	3.73	176.86	176.90	176.90	176.92	0.028322	0.65	5.75	146.17	1.04
Reach1	117.8047	10-yr	5.03	176.86	176.91	176.91	176.93	0.024210	0.70	7.21	146.31	1.00
Reach1	117.8047	25-yr	6.84	176.86	176.92	176.92	176.95	0.022695	0.77	8.85	146.46	1.00
Reach1	117.8047	50-yr	8.34	176.86	176.98		176.99	0.003529	0.48	17.44	147.14	0.44
Reach1	117.8047	100-yr	9.79	176.86	177.06		177.06	0.000916	0.34	28.84	148.05	0.25
Reach1	117.8047	PF 9	23.66	176.86	177.25		177.26	0.000524	0.41	58.20	149.81	0.21
Reach1	70.50	CH	23.66	175.45	178.15		178.15	0.000008	0.16	242.05	141.10	0.03
Reach1	70.50	Regional	23.66	175.45	178.15		178.15	0.000008	0.16	242.05	141.10	0.03
Reach1	70.50	2-yr	2.01	175.45	176.08		176.08	0.000259	0.23	8.89	32.48	0.14
Reach1	70.50	5-yr	3.73	175.45	176.40		176.40	0.000061	0.18	23.57	65.20	0.08
Reach1	70.50	10-yr	5.03	175.45	176.64		176.65	0.000027	0.15	48.21	116.79	0.05
Reach1	70.50	25-yr	6.84	175.45	176.86		176.86	0.000018	0.14	73.73	120.39	0.05
Reach1	70.50	50-yr	8.34	175.45	176.98		176.98	0.000017	0.15	88.82	121.82	0.04
Reach1	70.50	100-yr	9.79	175.45	177.06		177.06	0.000018	0.16	97.82	122.75	0.05
Reach1	70.50	PF 9	23.66	175.45	177.25		177.25	0.000056	0.31	121.82	125.10	0.08
Reach1	36.84	CH	23.66	174.49	178.15	175.24	178.15	0.000003	0.12	403.89	208.27	0.02
Reach1	36.84	Regional	23.66	174.49	178.15	175.24	178.15	0.000003	0.12	403.89	208.27	0.02
Reach1	36.84	2-yr	2.01	174.49	176.08	174.72	176.08	0.000003	0.08	26.54	67.71	0.02
Reach1	36.84	5-yr	3.73	174.49	176.40	174.79	176.40	0.000006	0.11	32.74	147.20	0.03
Reach1	36.84	10-yr	5.03	174.49	176.64	174.84	176.65	0.000007	0.13	37.43	174.51	0.03
Reach1	36.84	25-yr	6.84	174.49	176.86	174.90	176.86	0.000005	0.11	112.80	182.94	0.03

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(m3/s)	(m)	(m)	(m)	(m)	(m/m)	(m/s)	(m2)	(m)	
Reach1	36.84	50-yr	8.34	174.49	176.98	174.94	176.98	0.000005	0.12	129.85	186.01	0.03
Reach1	36.84	100-yr	9.79	174.49	177.06	174.98	177.06	0.000006	0.13	139.98	187.26	0.03
Reach1	36.84	PF 9	23.66	174.49	177.25	175.24	177.25	0.000022	0.28	166.78	190.53	0.06
Reach1	14.34		Culvert									
Reach1	4.840	CH	23.66	174.41	178.15	175.25	178.15	0.000004	0.13	367.04	230.02	0.02
Reach1	4.840	Regional	23.66	174.41	178.15	175.25	178.15	0.000004	0.13	367.04	230.02	0.02
Reach1	4.840	2-yr	2.01	174.41	176.05	174.64	176.05	0.000005	0.09	22.68	79.32	0.02
Reach1	4.840	5-yr	3.73	174.41	176.29	174.73	176.29	0.000009	0.14	26.57	86.91	0.04
Reach1	4.840	10-yr	5.03	174.41	176.44	174.79	176.44	0.000013	0.17	29.00	91.65	0.04
Reach1	4.840	25-yr	6.84	174.41	176.56	174.86	176.56	0.000019	0.22	30.95	95.45	0.05
Reach1	4.840	50-yr	8.34	174.41	176.71	174.92	176.71	0.000014	0.19	58.37	99.69	0.04
Reach1	4.840	100-yr	9.79	174.41	176.82	174.96	176.82	0.000016	0.21	63.94	107.91	0.05
Reach1	4.840	PF 9	23.66	174.41	176.84	175.25	176.85	0.000089	0.51	64.63	108.17	0.11
Reach1	0	CH	23.66	174.40	178.15	175.25	178.15	0.000012	0.20	248.26	232.48	0.04
Reach1	0	Regional	23.66	174.40	178.15	175.25	178.15	0.000012	0.20	248.26	232.48	0.04
Reach1	0	2-yr	2.01	174.40	176.05	174.63	176.05	0.000005	0.09	22.21	79.91	0.02
Reach1	0	5-yr	3.73	174.40	176.29	174.72	176.29	0.000010	0.14	25.98	86.98	0.04
Reach1	0	10-yr	5.03	174.40	176.44	174.78	176.44	0.000013	0.18	28.34	91.59	0.04
Reach1	0	25-yr	6.84	174.40	176.56	174.86	176.56	0.000019	0.23	30.23	95.30	0.05
Reach1	0	50-yr	8.34	174.40	176.71	174.91	176.71	0.000030	0.26	33.18	99.38	0.06
Reach1	0	100-yr	9.79	174.40	176.82	174.95	176.82	0.000033	0.28	38.35	102.31	0.07
Reach1	0	PF 9	23.66	174.40	176.82	175.25	176.84	0.000194	0.67	38.35	102.31	0.16

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1

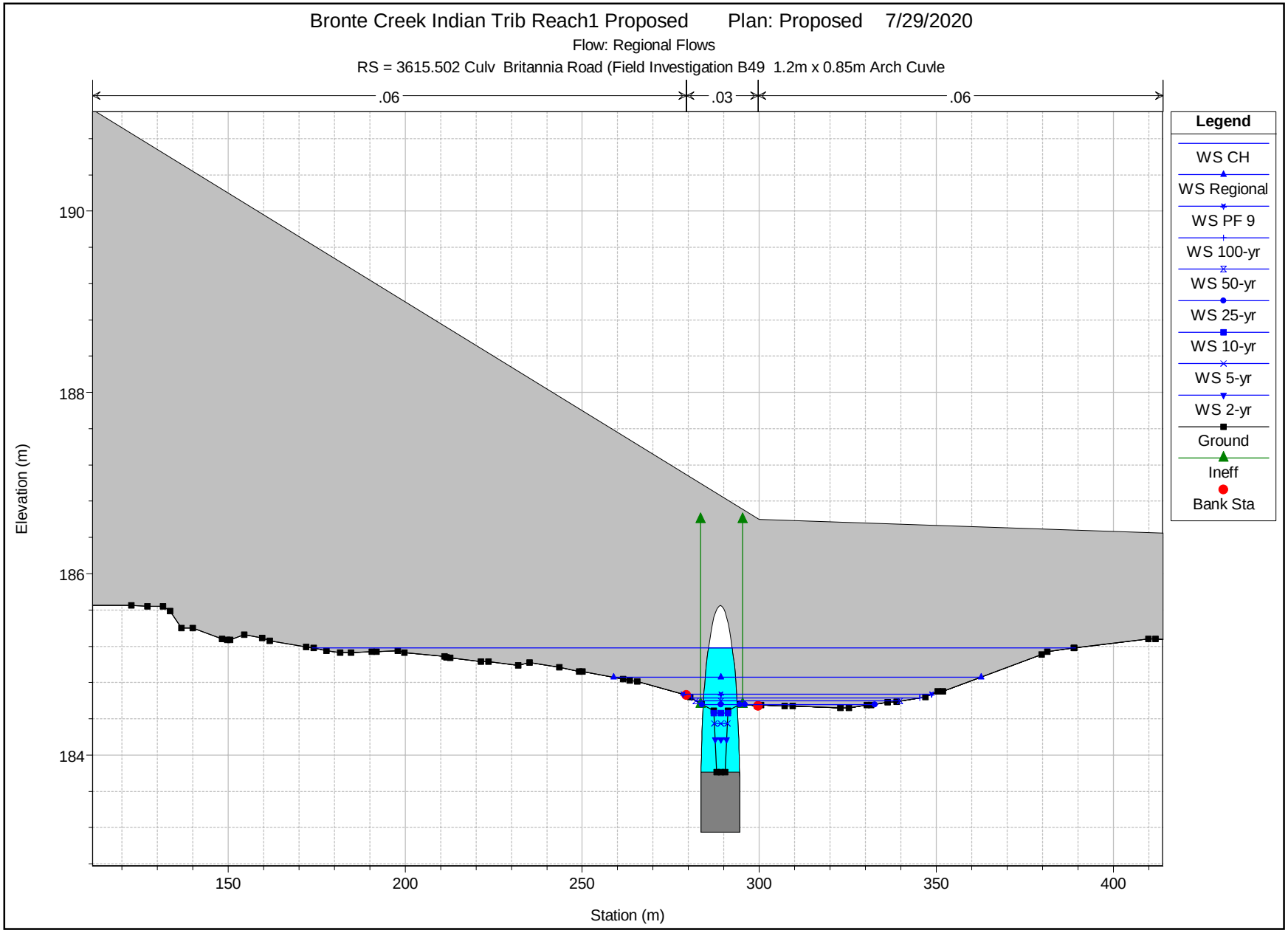
Reach	River Sta	Profile	E.G. US.	W.S. US.	E.G. IC	E.G. OC	Min El Weir Flow	Q Culv Group	Q Weir	Delta WS	Culv Vel US	Culv Vel DS
			(m)	(m)	(m)	(m)	(m)	(m3/s)	(m3/s)	(m)	(m/s)	(m/s)
Reach1	5639.221 Culvert #1	CH	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.63	2.37	2.37
Reach1	5639.221 Culvert #1	Regional	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.62	2.37	2.37
Reach1	5639.221 Culvert #1	2-yr	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.67	2.37	2.37
Reach1	5639.221 Culvert #1	5-yr	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.67	2.37	2.37
Reach1	5639.221 Culvert #1	10-yr	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.66	2.37	2.37
Reach1	5639.221 Culvert #1	25-yr	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.66	2.37	2.37
Reach1	5639.221 Culvert #1	50-yr	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.65	2.37	2.37
Reach1	5639.221 Culvert #1	100-yr	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.64	2.37	2.37
Reach1	5639.221 Culvert #1	PF 9	194.57	194.57	194.57	194.57	194.57	0.17	434.56	1.62	2.37	2.37
Reach1	4846.378 Culvert #1	CH	189.86	189.86	189.86	189.95	191.57	0.44		0.68	1.43	1.70
Reach1	4846.378 Culvert #2	CH	189.86	189.86	189.86	189.95	191.57	0.44		0.68	1.43	1.70
Reach1	4846.378 Culvert #1	Regional	189.91	189.91	189.91	190.01	191.57	0.51		0.72	1.48	1.77
Reach1	4846.378 Culvert #2	Regional	189.91	189.91	189.91	190.01	191.57	0.51		0.72	1.48	1.77
Reach1	4846.378 Culvert #1	2-yr	189.60	189.60	189.60	189.66	191.57	0.14		0.46	1.04	1.22
Reach1	4846.378 Culvert #2	2-yr	189.60	189.60	189.60	189.66	191.57	0.14		0.46	1.04	1.22
Reach1	4846.378 Culvert #1	5-yr	189.64	189.64	189.64	189.71	191.57	0.18		0.50	1.11	1.30
Reach1	4846.378 Culvert #2	5-yr	189.64	189.64	189.64	189.71	191.57	0.18		0.50	1.11	1.30
Reach1	4846.378 Culvert #1	10-yr	189.67	189.67	189.67	189.73	191.57	0.20		0.52	1.16	1.35
Reach1	4846.378 Culvert #2	10-yr	189.67	189.67	189.67	189.73	191.57	0.20		0.52	1.16	1.35
Reach1	4846.378 Culvert #1	25-yr	189.72	189.72	189.72	189.79	191.57	0.26		0.56	1.24	1.45
Reach1	4846.378 Culvert #2	25-yr	189.72	189.72	189.72	189.79	191.57	0.26		0.56	1.24	1.45
Reach1	4846.378 Culvert #1	50-yr	189.76	189.76	189.76	189.84	191.57	0.32		0.60	1.30	1.53
Reach1	4846.378 Culvert #2	50-yr	189.76	189.76	189.76	189.84	191.57	0.32		0.60	1.30	1.53
Reach1	4846.378 Culvert #1	100-yr	189.81	189.80	189.81	189.89	191.57	0.37		0.63	1.35	1.60
Reach1	4846.378 Culvert #2	100-yr	189.81	189.80	189.81	189.89	191.57	0.37		0.63	1.35	1.60
Reach1	4846.378 Culvert #1	PF 9	189.91	189.91	189.91	190.01	191.57	0.51		0.72	1.48	1.77
Reach1	4846.378 Culvert #2	PF 9	189.91	189.91	189.91	190.01	191.57	0.51		0.72	1.48	1.77
Reach1	3615.502 Culvert #1	CH	185.23	185.18	184.60	185.23	186.60	10.18		0.03	0.82	0.78
Reach1	3615.502 Culvert #1	Regional	184.93	184.74	184.58	184.93	186.60	9.74		0.07	0.97	0.90
Reach1	3615.502 Culvert #1	2-yr	184.18	184.09	183.98	184.18	186.60	1.02		0.01	0.27	0.21
Reach1	3615.502 Culvert #1	5-yr	184.36	184.26	184.06	184.36	186.60	1.85		0.08	0.34	0.28
Reach1	3615.502 Culvert #1	10-yr	184.47	184.37	184.12	184.47	186.60	2.46		0.13	0.37	0.32
Reach1	3615.502 Culvert #1	25-yr	184.57	184.42	184.18	184.57	186.60	3.30		0.04	0.44	0.39
Reach1	3615.502 Culvert #1	50-yr	184.61	184.39	184.23	184.61	186.60	3.98		0.09	0.51	0.45
Reach1	3615.502 Culvert #1	100-yr	184.65	184.58	184.28	184.65	186.60	4.63		0.07	0.57	0.51
Reach1	3615.502 Culvert #1	PF 9	184.70	184.61	184.33	184.70	186.60	5.40		0.07	0.64	0.57
Reach1	3424.759 Culvert #1	CH	185.14	185.08	184.72	185.14	186.88	17.44		0.92	2.60	3.04
Reach1	3424.759 Culvert #1	Regional	184.42	184.34	184.27	184.42	186.88	9.74		0.39	1.63	2.07
Reach1	3424.759 Culvert #1	2-yr	183.61	183.58	183.52	183.61	186.88	1.02		0.06	0.48	0.50
Reach1	3424.759 Culvert #1	5-yr	183.73	183.68	183.62	183.73	186.88	1.85		0.09	0.65	0.70
Reach1	3424.759 Culvert #1	10-yr	183.80	183.74	183.69	183.80	186.88	2.46		0.12	0.75	0.82

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	E.G. US.	W.S. US.	E.G. IC	E.G. OC	Min El Weir Flow	Q Culv Group	Q Weir	Delta WS	Culv Vel US	Culv Vel DS
			(m)	(m)	(m)	(m)	(m)	(m3/s)	(m3/s)	(m)	(m/s)	(m/s)
Reach1	3424.759 Culvert #1	25-yr	183.89	183.82	183.77	183.89	186.88	3.30		0.19	0.87	0.97
Reach1	3424.759 Culvert #1	50-yr	183.96	183.89	183.83	183.96	186.88	3.98		0.22	0.96	1.07
Reach1	3424.759 Culvert #1	100-yr	184.02	183.96	183.89	184.02	186.88	4.63		0.23	1.03	1.15
Reach1	3424.759 Culvert #1	PF 9	184.09	184.02	183.96	184.09	186.88	5.40		0.22	1.13	1.28
Reach1	3059.960 Culvert #1	CH	183.79	183.79	183.79	183.75	183.61	2.79	15.42	0.42	1.86	2.92
Reach1	3059.960 Culvert #1	Regional	183.73	183.73	183.73	183.71	183.61	2.58	7.16	0.50	1.72	2.81
Reach1	3059.960 Culvert #1	2-yr	183.37	183.37	183.34	183.37	183.61	1.02		0.38	1.49	2.00
Reach1	3059.960 Culvert #1	5-yr	183.56	183.56	183.52	183.56	183.61	1.85		0.54	1.82	2.37
Reach1	3059.960 Culvert #1	10-yr	183.61	183.61	183.57	183.61	183.61	2.07	0.39	0.57	1.89	2.45
Reach1	3059.960 Culvert #1	25-yr	183.63	183.63	183.60	183.63	183.61	2.15	1.15	0.56	1.92	2.48
Reach1	3059.960 Culvert #1	50-yr	183.66	183.66	183.65	183.66	183.61	2.32	1.66	0.57	1.96	2.53
Reach1	3059.960 Culvert #1	100-yr	183.68	183.68	183.68	183.67	183.61	2.38	2.25	0.57	1.98	2.55
Reach1	3059.960 Culvert #1	PF 9	183.68	183.68	183.68	183.67	183.61	2.40	3.00	0.55	1.99	2.55
Reach1	1921.497 Culvert #1	CH	181.40	181.40	181.39	181.40	181.32	1.44	18.90	0.04	0.72	0.72
Reach1	1921.497 Culvert #1	Regional	181.36	181.36	181.35	181.36	181.32	0.72	9.02	0.01	0.36	0.36
Reach1	1921.497 Culvert #1	2-yr	180.55	180.55	180.52	180.55	181.32	1.02		0.40	1.71	2.41
Reach1	1921.497 Culvert #1	5-yr	180.81	180.80	180.76	180.81	181.32	1.85		0.59	2.09	2.82
Reach1	1921.497 Culvert #1	10-yr	180.97	180.97	180.91	180.97	181.32	2.46		0.69	2.29	3.04
Reach1	1921.497 Culvert #1	25-yr	181.17	181.17	181.10	181.17	181.32	3.30		0.83	2.53	3.28
Reach1	1921.497 Culvert #1	50-yr	181.31	181.31	181.24	181.31	181.32	3.93	6.13	0.85	2.68	3.43
Reach1	1921.497 Culvert #1	100-yr	181.31	181.31	181.31	181.31	181.32	2.45	6.07	0.12	1.22	1.22
Reach1	1921.497 Culvert #1	PF 9	181.35	181.35	181.35	181.35	181.32	0.28	5.12	0.00	0.14	0.14
Reach1	945.2227 Culvert #1	CH	181.35	181.35	182.24	181.35	181.18	9.87	13.67	2.59	4.36	4.36
Reach1	945.2227 Culvert #1	Regional	181.35	181.35	182.24	181.35	181.18	9.87	13.67	2.59	4.36	4.36
Reach1	945.2227 Culvert #1	2-yr	179.07	179.06	179.07	179.22	181.18	2.01		0.69	2.02	0.89
Reach1	945.2227 Culvert #1	5-yr	179.50	179.48	179.50	179.64	181.18	3.73		1.01	2.51	1.65
Reach1	945.2227 Culvert #1	10-yr	179.81	179.79	179.81	179.94	181.18	5.03		1.27	2.85	2.22
Reach1	945.2227 Culvert #1	25-yr	179.81	179.77	180.56	179.81	181.18	6.84		1.20	3.02	3.02
Reach1	945.2227 Culvert #1	50-yr	180.45	180.42	181.36	180.45	181.18	8.34		1.82	3.69	3.69
Reach1	945.2227 Culvert #1	100-yr	181.18	181.15	182.30	181.18	181.18	9.79		2.53	4.33	4.33
Reach1	945.2227 Culvert #1	PF 9	181.35	181.35	182.24	181.35	181.18	9.87	13.67	2.59	4.36	4.36
Reach1	14.34 Culvert #3	CH	178.15	178.15	174.73	178.15	176.71	0.09	23.27	0.00	0.09	0.09
Reach1	14.34 Culvert #2	CH	178.15	178.15	174.73	178.15	176.71	0.09	23.27	0.00	0.09	0.09
Reach1	14.34 Culvert #1	CH	178.15	178.15	174.81	178.15	176.71	0.20	23.27	0.00	0.09	0.09
Reach1	14.34 Culvert #3	Regional	178.15	178.15	174.73	178.15	176.71	0.09	23.27	0.00	0.09	0.09
Reach1	14.34 Culvert #2	Regional	178.15	178.15	174.73	178.15	176.71	0.09	23.27	0.00	0.09	0.09
Reach1	14.34 Culvert #1	Regional	178.15	178.15	174.81	178.15	176.71	0.20	23.27	0.00	0.09	0.09
Reach1	14.34 Culvert #3	2-yr	176.08	176.08	174.97	176.08	176.71	0.43		0.03	0.43	0.43
Reach1	14.34 Culvert #2	2-yr	176.08	176.08	174.97	176.08	176.71	0.43		0.03	0.43	0.43
Reach1	14.34 Culvert #1	2-yr	176.08	176.08	175.20	176.08	176.71	1.16		0.03	0.49	0.49

HEC-RAS Plan: Proposed River: BronteIndian Reach: Reach1 (Continued)

Reach	River Sta	Profile	E.G. US.	W.S. US.	E.G. IC	E.G. OC	Min El Weir Flow	Q Culv Group	Q Weir	Delta WS	Culv Vel US	Culv Vel DS
			(m)	(m)	(m)	(m)	(m)	(m3/s)	(m3/s)	(m)	(m/s)	(m/s)
Reach1	14.34 Culvert #3	5-yr	176.40	176.40	175.15	176.40	176.71	0.80		0.11	0.80	0.80
Reach1	14.34 Culvert #2	5-yr	176.40	176.40	175.15	176.40	176.71	0.80		0.11	0.80	0.80
Reach1	14.34 Culvert #1	5-yr	176.40	176.40	175.47	176.40	176.71	2.14		0.11	0.91	0.91
Reach1	14.34 Culvert #3	10-yr	176.65	176.64	175.27	176.64	176.71	1.08		0.20	1.09	1.09
Reach1	14.34 Culvert #2	10-yr	176.65	176.64	175.27	176.64	176.71	1.08		0.20	1.09	1.09
Reach1	14.34 Culvert #1	10-yr	176.65	176.64	175.65	176.65	176.71	2.88		0.20	1.22	1.22
Reach1	14.34 Culvert #3	25-yr	176.86	176.86	175.37	176.86	176.71	1.30	0.77	0.30	1.31	1.31
Reach1	14.34 Culvert #2	25-yr	176.86	176.86	175.37	176.86	176.71	1.30	0.77	0.30	1.31	1.31
Reach1	14.34 Culvert #1	25-yr	176.86	176.86	175.79	176.86	176.71	3.47	0.77	0.30	1.47	1.47
Reach1	14.34 Culvert #3	50-yr	176.98	176.98	175.34	176.98	176.71	1.24	2.55	0.27	1.25	1.25
Reach1	14.34 Culvert #2	50-yr	176.98	176.98	175.34	176.98	176.71	1.24	2.55	0.27	1.25	1.25
Reach1	14.34 Culvert #1	50-yr	176.98	176.98	175.75	176.99	176.71	3.31	2.55	0.27	1.41	1.41
Reach1	14.34 Culvert #3	100-yr	177.06	177.06	175.30	177.06	176.71	1.15	4.40	0.23	1.16	1.16
Reach1	14.34 Culvert #2	100-yr	177.06	177.06	175.30	177.06	176.71	1.15	4.40	0.23	1.16	1.16
Reach1	14.34 Culvert #1	100-yr	177.06	177.06	175.70	177.06	176.71	3.08	4.40	0.23	1.31	1.31
Reach1	14.34 Culvert #3	PF 9	177.25	177.25	175.47	177.25	176.71	1.54	16.48	0.42	1.55	1.55
Reach1	14.34 Culvert #2	PF 9	177.25	177.25	175.47	177.25	176.71	1.54	16.48	0.42	1.55	1.55
Reach1	14.34 Culvert #1	PF 9	177.25	177.25	175.94	177.25	176.71	4.10	16.48	0.42	1.74	1.74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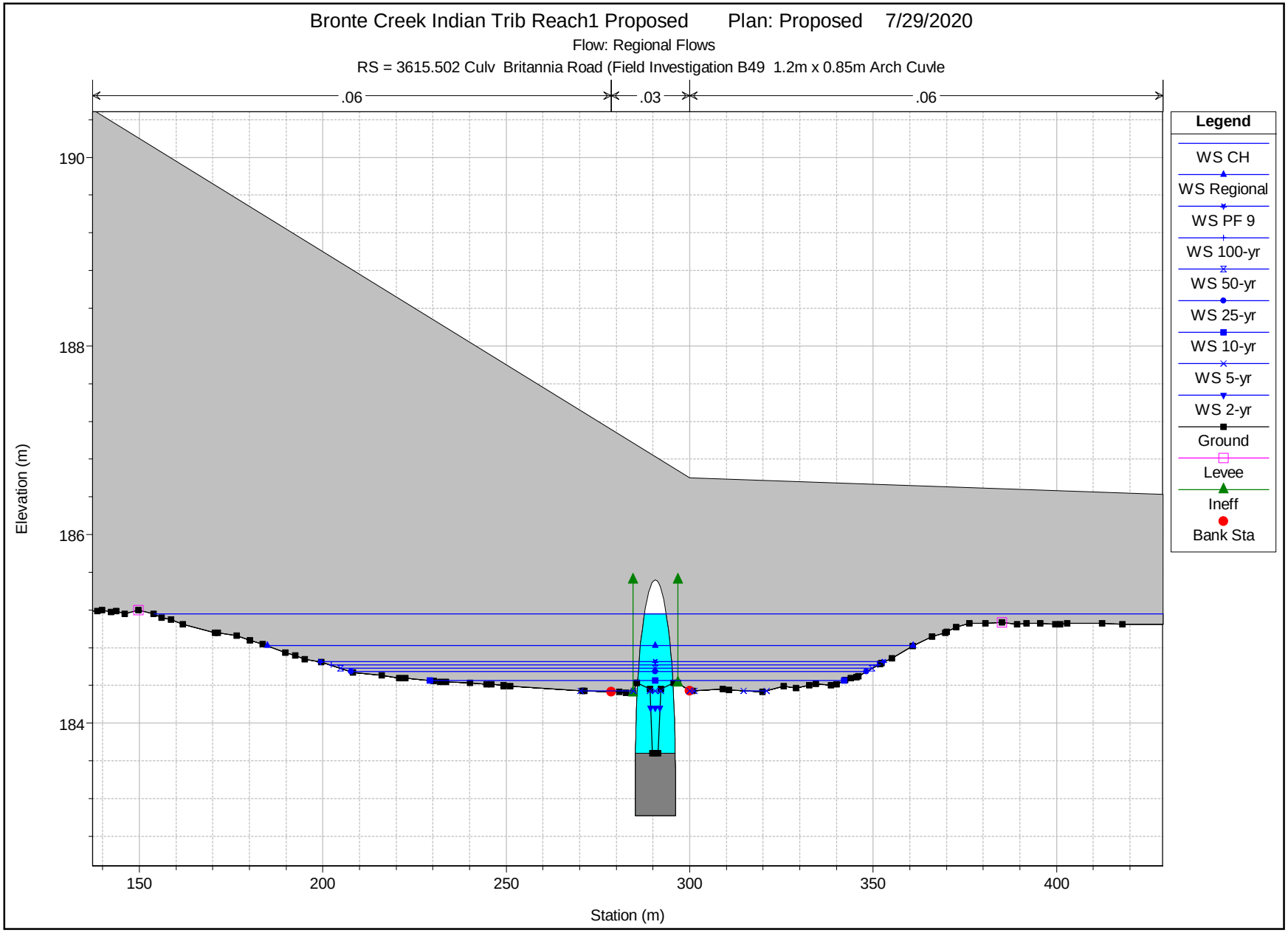
.06
.03
.06
Legend
WS CH
WS Regional
WS PF 9
WS 100-yr
WS 50-yr
WS 25-yr
WS 10-yr
WS 5-yr
WS 2-yr
Ground
Ineff
Bank Sta
Elevation (m)
190
188
186
184
150
200
250
300
350
400
Station (m)


Bronte Creek Indian Trib Reach1 Proposed Plan: Proposed 7/29/2020
Flow: Regional Flows
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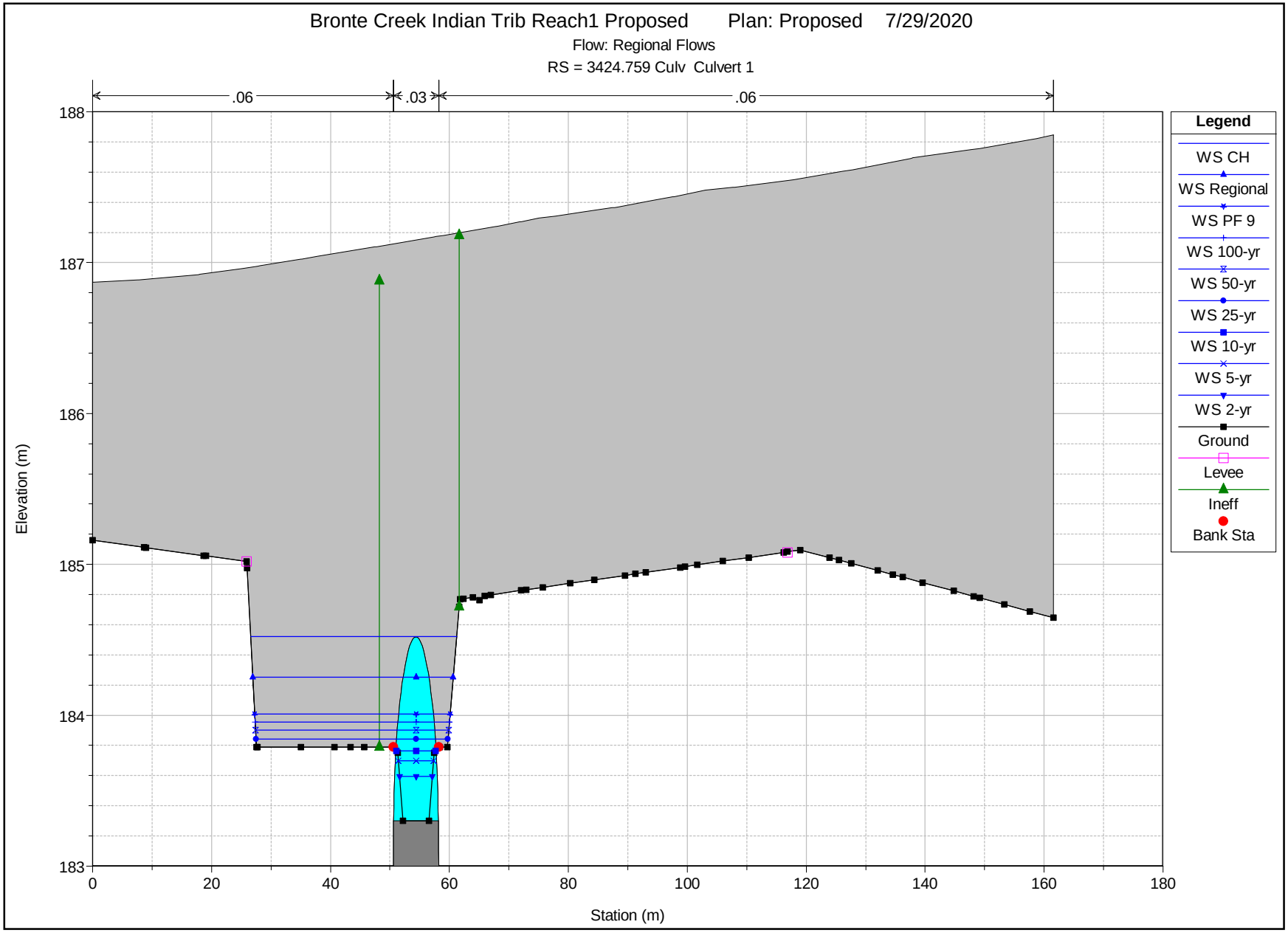
.03
.06
Legend
WS CH
WS Regional
WS PF 9
WS 100-yr
WS 50-yr
WS 25-yr
WS 10-yr
WS 5-yr
WS 2-yr
Ground
Levee
Ineff
Bank Sta
Elevation (m)
190
188
186
184
150
200
250
300
350
400
Station (m)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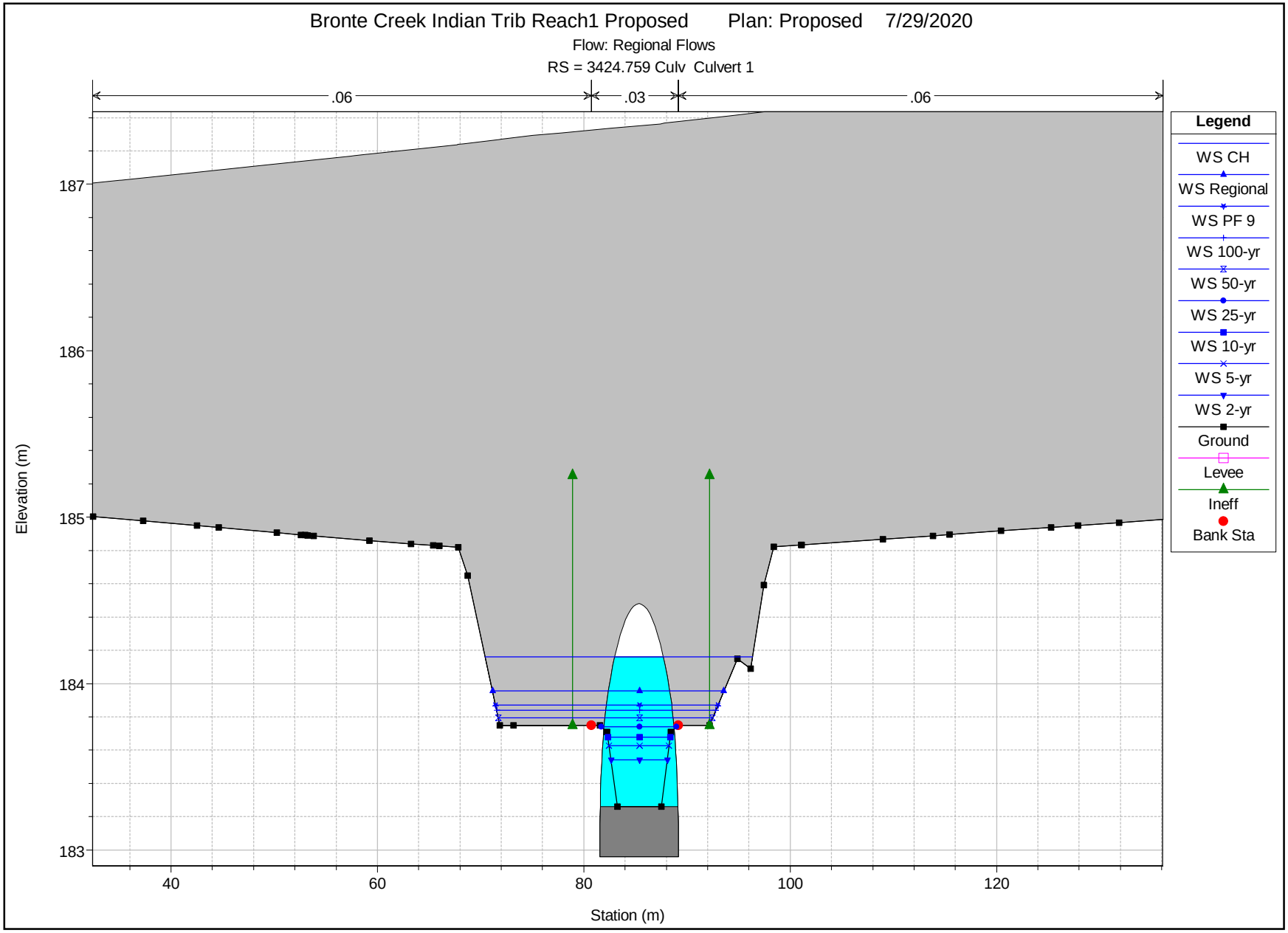
.06
.03
.06
Legend
WS CH
WS Regional
WS PF 9
WS 100-yr
WS 50-yr
WS 25-yr
WS 10-yr
WS 5-yr
WS 2-yr
Ground
Levee
Ineff
Bank Sta
Elevation (m)
Station (m)
188
187
186
185
184
183
0
20
40
60
80
100
120
140
160
180


Bronte Creek Indian Trib Reach1 Proposed Plan: Proposed 7/29/2020
Flow: Regional Flows
RS = 3424.759 Culv Culvert 1
.06
.03
.06
Legend
WS CH
WS Regional
WS PF 9
WS 100-yr
WS 50-yr
WS 25-yr
WS 10-yr
WS 5-yr
WS 2-yr
Ground
Levee
Ineff
Bank Sta
Elevation (m)
187
186
185
184
183
40
60
80
100
120
Station (m)

Appendix D

FINAL DRAINAGE REPORT

Milton Logistic Hub

- Additional Assessments
    - Ditch Conveyance Assessment
    - Lower Baseline Regional Spill Assessment
    - Lower Baseline Spread Calculations
    - Storm Sewer Network Assessment
    - Subdrain Assessment
    - Yard CB Bypass Flow Assessment

Stage 1

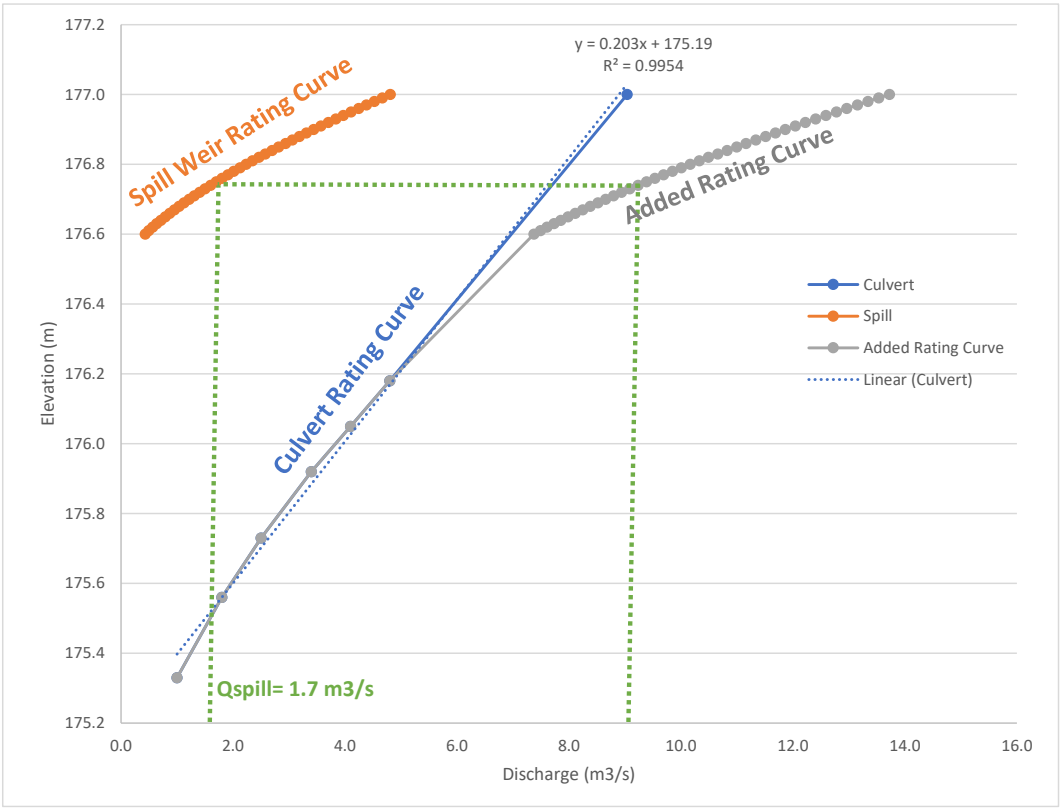
														Trapezoidal Channel Findings								
Location	Ditch ID	Drainage ID	From Station	To Station	Side	Area (ha)	Longitudinal Slope (%)	Shape	Side Stope	Size Stope	Bed Width	Manning Roughness	Design Flow (Regional or 100 yr)	Computed Discharge (m^3/s)	Depth (m)	Channel Area (m^2)	Wetted Perimeter P (m)	Hydraulic Radius (m)	Channel Slope (m/m)	Velocity (m/s)	Channel Depth with 0.3 m Freeboard (m)	Top Width with 0.3 m buffer on each side
Between Louis Saint Laurent Ave and Derry Road West	4001	4001	59+505.3	59+556.8	South (R)	1.7	0.3	Trapezoidal	2:1	2	3	0.03	0.21	0.21	0.14	0.46	3.62	0.13	0.003	0.46	0.44	5.36
	4002	4002	59+660.6	60+147.4	South (R)	3.1	0.2	Trapezoidal	2:1	2	1	0.03	0.35	0.35	0.36	0.62	2.60	0.24	0.002	0.57	0.66	4.23
	4003	4003	60+168.7	60+725.6	South (R)	0.8	0.28	Trapezoidal	2:1	2	1	0.03	0.09	0.09	0.16	0.21	1.71	0.12	0.003	0.43	0.46	3.43
Between Britannia Road and Louis Saint	4005	4005	60+780	61+315	South (R)	0.4	0.3	Trapezoidal	2:1	2	1	0.03	0.05	0.05	0.11	0.14	1.50	0.09	0.003	0.37	0.41	3.24
	4006	4006	61+315	61+425	South (R)	0.4	0.7	Trapezoidal	2:1	2	1	0.03	0.05	0.05	0.09	0.10	1.39	0.07	0.007	0.49	0.39	3.15
Between Lower Baseline and Britannia Road	4010	4010	62+373.3	62+650	South (R)	2.5	0.19	Trapezoidal	2:1	2	5	0.03	0.17	0.17	0.10	0.54	5.47	0.10	0.002	0.31	0.40	7.22
	4011	4011	62+650	63+550	South (R)	54.6	0.22	Trapezoidal	2:1	2	5	0.03	1.74	1.74	0.40	2.29	6.77	0.34	0.002	0.76	0.70	8.38
	4012	4012	63+960.8	64+560	South (R)	only regional (366.8)	0.26	Trapezoidal	2:1	2	3	0.03	9.34	9.34	1.20	6.51	8.38	0.78	0.003	1.44	1.50	9.61
	4013	4013	64+560	65+320	North (L)	3.3	0.26	Trapezoidal	2:1	2	3	0.03	0.25	0.25	0.16	0.54	3.72	0.14	0.003	0.47	0.46	5.44
	4014	4014	64+900	64+424	South (R)	63.1 + regional from 4012	0.5	Trapezoidal	2:1	2	3	0.03	14.97	14.97	1.29	7.23	8.79	0.82	0.005	2.07	1.59	9.98
	4015	4015	65+150	64+424	South (R)	2.1	0.55	Trapezoidal	2:1	2	2	0.03	0.19	0.19	0.14	0.32	2.62	0.12	0.006	0.60	0.44	4.35
Between Tremaine Road Mi 41.63 to Lower Baseline	4017	4017	65+550	66+077.9	South (R)	7.6	0.76	Trapezoidal	2:1	2	2	0.03	0.56	0.56	0.24	0.58	3.05	0.19	0.008	0.96	0.54	4.74
	4018	4018	65+550	66+200	North (L)	1.8	0.36	Trapezoidal	2:1	2	2	0.03	0.19	0.19	0.16	0.36	2.70	0.13	0.004	0.52	0.46	4.43
	4019	4019	66+200	66+322	North (L)	2.4	0.58	Trapezoidal	2:1	2	2	0.03	0.25	0.25	0.16	0.37	2.72	0.14	0.006	0.67	0.46	4.44

Stage 2

														Trapezoidal Channel Findings								
Location	Ditch ID	Drainage ID	From Station	To Station	Side	Area (ha)	Longitudinal Slope (%)	Shape	Side Stop	Size Stope	Bed Width	Manning Roughness	Design Flow (Regional or	Computed Discharge	Depth (m)	Channel Area (m^2)	Wetted Perimeter	Hydraulic Radius	Channel Slope	Velocity (m/s)	Channel Depth with 0.3 m	Top Width with 0.3 m buffer on
Between Lower Baseline and Britannia Road	6002	6002	62+375	62+675	North (L)	5.5	0.3	Trapezoidal	2:1	2	1	0.03	0.41	0.41	0.35	0.59	2.56	0.23	0.003	0.69	0.65	4.20
	6003	6003	62+760	63+025	North (L)	0.7	0.28	Trapezoidal	2:1	2	1	0.03	0.09	0.09	0.16	0.21	1.71	0.12	0.003	0.43	0.46	3.43
	6004	6004	63+025	63+430	North (L)	1	0.25	Trapezoidal	2:1	2	1	0.03	0.09	0.09	0.16	0.22	1.73	0.13	0.003	0.42	0.46	3.45
	6005	6005	63+430	63+975	North (L)	1.4	0.26	Trapezoidal	2:1	2	1	0.03	0.13	0.13	0.20	0.28	1.88	0.15	0.003	0.47	0.50	3.59
	6006	6006	63+975	64+230	North (L)	0.5	0.23	Trapezoidal	2:1	2	1	0.03	0.06	0.06	0.13	0.17	1.60	0.11	0.002	0.36	0.43	3.33
	6007	6007	64+230	64+625	North (L)	0.5	0.29	Trapezoidal	2:1	2	1	0.03	0.05	0.05	0.11	0.14	1.50	0.09	0.003	0.37	0.41	3.25

Lower Baseline Regional Spill Assessment

Q	Elev	Min invert	Depth	Spill weir width	spill elev	Spill H	Spill El	Weir	add Q
1.0	175.3	174.8	0.54	8	176.5	0	176.5	0	1.0
1.8	175.6	174.8	0.77	8	176.5	0	176.5	0	1.8
2.5	175.7	174.8	0.94	8	176.5	0	176.5	0	2.5
3.4	175.9	174.8	1.13	8	176.5	0	176.5	0	3.4
4.1	176.1	174.8	1.26	8	176.5	0	176.5	0	4.1
4.8	176.2	174.8	1.39	8	176.5	0	176.5	0	4.8
9.0	177.0	174.8	2.2	8	176.5	0.5	177	4.8	13.8



weir height (m)	weir elevation (m)	Weir Flow m3/s	Culvert Flow (m3/s)	Added Flow
0	175.3	0	0	1.0
0	175.6	0	0	1.8
0	175.7	0	0	2.5
0	175.9	0	0	3.4
0	176.1	0	0	4.1
0	176.2	0	0	4.8
0.1	176.6	0.43	6.95	7.38
0.11	176.61	0.50	7.00	7.49
0.12	176.62	0.57	7.04	7.61
0.13	176.63	0.64	7.09	7.73
0.14	176.64	0.71	7.14	7.86
0.15	176.65	0.79	7.19	7.98
0.16	176.66	0.87	7.24	8.11
0.17	176.67	0.95	7.29	8.24
0.18	176.68	1.04	7.34	8.38
0.19	176.69	1.13	7.39	8.52
0.2	176.7	1.22	7.44	8.65
0.21	176.71	1.31	7.49	8.80
0.22	176.72	1.40	7.54	8.94
0.23	176.73	1.50	7.59	9.09
0.24	176.74	1.60	7.64	9.23
0.25	176.75	1.70	7.68	9.38
0.26	176.76	1.80	7.73	9.54
0.27	176.77	1.91	7.78	9.69
0.28	176.78	2.02	7.83	9.85
0.29	176.79	2.12	7.88	10.01
0.3	176.8	2.23	7.93	10.17
0.31	176.81	2.35	7.98	10.33
0.32	176.82	2.46	8.03	10.49
0.33	176.83	2.58	8.08	10.66
0.34	176.84	2.70	8.13	10.82
0.35	176.85	2.82	8.18	10.99
0.36	176.86	2.94	8.23	11.16
0.37	176.87	3.06	8.28	11.34
0.38	176.88	3.19	8.33	11.51
0.39	176.89	3.31	8.37	11.69
0.4	176.9	3.44	8.42	11.86
0.41	176.91	3.57	8.47	12.04
0.42	176.92	3.70	8.52	12.22
0.43	176.93	3.83	8.57	12.41
0.44	176.94	3.97	8.62	12.59
0.45	176.95	4.11	8.67	12.78
0.46	176.96	4.24	8.72	12.96
0.47	176.97	4.38	8.77	13.15
0.48	176.98	4.52	8.82	13.34
0.49	176.99	4.66	8.87	13.53
0.5	177	4.81	8.92	13.72

AECOM

PN: 60579933

APPENDIX: Drainage Calculations

PROJECT: 60579933 CN Milton - Lower baseline

December 9, 2019

Station 12+945
Single Inlet Catchbasin

> Design Criteria: 100 year return period
> Gutter flow not to encroach more than 1.25 m onto the travel lane
> Maximum depth at the edge of the travel lane = 25 mm
> Major System: 100-year, Maximum spread = 3.5 to provide 3.45 m clear lane

Bridge Parameters

Distance from CL to Gutter, Wa =	6.95	m	Travelled Lane =	3.50
Curb Heightl, Wb =	0.30	m	Shoulder =	0.10
Cross-Fall, Sx =	2.0%			
Centreline Grade, So =	0.5%			
Drainage Length, L =	40.0	m (from east end of the approach slab to the crest)		

Storm Intensity Parameters

	Minor System		Major System	
Location =	LBL		LBL	
Return Period =	10	years	100	years
Duration =	5	minutes	5	minutes
A=	1118.71		1442.57	
B=	6.02		5.26	
C=	0.80		0.78	
Intensity =	164.1	mm/hr	236.8	mm/hr

Rational Method Calculations for Peak Flow

Q = CiA

Allowable Spread, Td =	3.45		3.45	
Depth of Flow at Curb, d = Td Sx =	0.069		0.069	
Runoff Coefficient, C =	1.0		1.0	
Drainage Area, A = (Wa + Wb) x L =	290.00	m^2	290.00	m^2
Q = CiA =	**0.013**	**m^3/s**	**0.019**	**m^3/s**

Shallow Gutter Flow Formula for Triangular Channels

$$Q = \frac{0.375 S_O^{0.5} d^{2.667}}{nSx}$$

mannings n =	0.015		0.015	
Width of Inlet Capacity OPSD 400.03 , B =	0.6		0.6	
Gutter Discharge Capacity, Q =	0.013	m^3/s	0.019	m^3/s
calculated depth of flow, d =	0.037	m	0.042	m
Depressed CB depth =	0.030	m	0.030	m
Total ponding head (m)	0.067	m	0.072	m
calculated spread, Td = d / Sx =	1.84	m	2.12	m
Flow Spread from Curb =	1.84	m	2.12	m
Preferred Standard =	1.00	m		
Minimum Standard =	2.25	m	3.50	m
Flow Depth at Edge of Travel Lane =	35	mm		

Inlet Capacity Design Chart 4.19 for Single and Twin Catchbasin(s) OPSD 400.01

Inlet Capacity for single CB, Qi =	0.014	m^3/s	0.018	m^3/s
Required Single Catchbasin (OPSD 400.01)	1		1	

Inlet Capacity Design for different Catchbasin opening

Inlet Capacity 0.6x 0.6m CB, Qi =	0.018	m^3/s	0.020	m^3/s
Required 0.6 x 0.6m Catchbasin	1		1	

AECOM

PN: 60579933

APPENDIX: Drainage Calculations

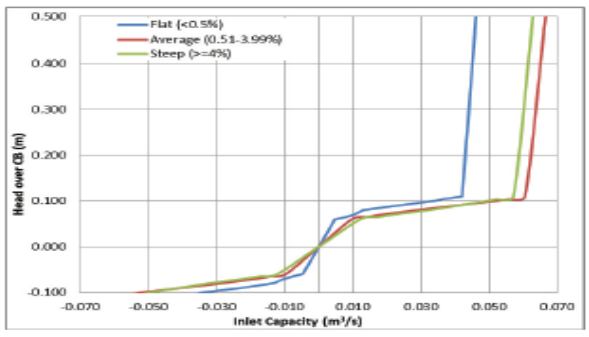
PROJECT: 60579933 CN Milton - Lower baseline

December 9, 2019

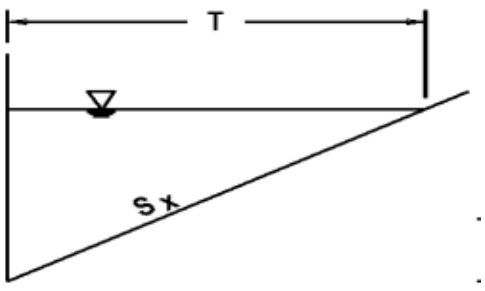
Lookup Table for 1CB Slope =0.5%

Inlet Head (m)	Discharge
0	0
0.06	0.01
0.065	0.014
0.07	0.018
0.08	0.029
0.09	0.04
0.1	0.052
0.104	0.056
0.11	0.061
0.2	0.062
0.3	0.063
0.4	0.064
0.5	0.067

Single Catchbasin -Horizontal Bars/Fishbone



Head (m)	Discharge (m³/s) per Longitudinal Road Profile Slope		
	<=0.5%	0.5-3.99%	>=4%
-0.500	-0.500	-0.500	-0.500
-0.110	-0.042	-0.061	-0.057
-0.104	-0.036	-0.056	-0.052
-0.100	-0.034	-0.052	-0.049
-0.090	-0.023	-0.040	-0.041
-0.080	-0.013	-0.029	-0.032
-0.070	-0.010	-0.018	-0.022
-0.065	-0.008	-0.014	-0.017
-0.060	-0.005	-0.010	-0.012
0.000	0	0	0
0.060	0.005	0.010	0.012
0.065	0.008	0.014	0.017
0.070	0.010	0.018	0.022
0.080	0.013	0.029	0.032
0.090	0.023	0.040	0.041
0.100	0.034	0.052	0.049
0.104	0.036	0.056	0.052
0.110	0.042	0.061	0.057
0.500	0.046	0.067	0.063



1. Uniform Section

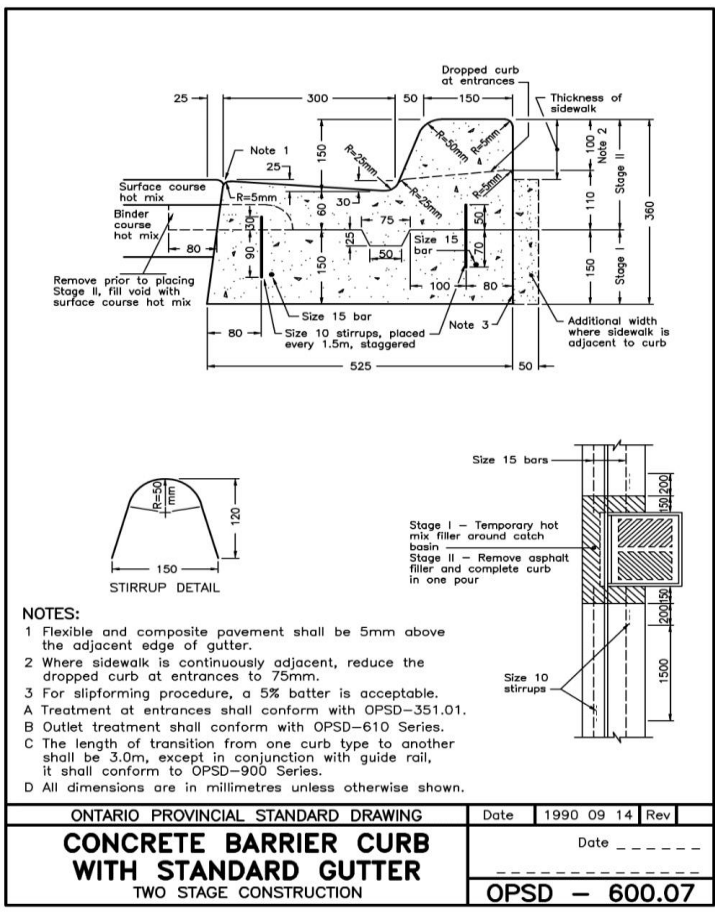
35-6.03 Broad-Crested Weir

The equation used for the broad-crested weir is as follows (Brater and King, 1976):

$$Q = CLH^{1.5}$$

Where:
- Q = discharge, m^3/s
- C = broad-crested weir coefficient
- L = broad-crested weir length, m
- H = head above weir crest, m

If the upstream edge of a broad-crested weir is so rounded as to prevent contraction, and if the slope of the crest is as great as the loss of head due to friction, flow will pass through critical depth at the weir crest. This yields the maximum C value of 1.704. For sharp corners on the broad-crested weir, a minimum C value of 1.435 should be used. Additional information on C value as a function of weir-crest breadth and head is shown in Figure 35-6D.



NOTES:
1. Flexible and composite pavement shall be 5mm above the adjacent edge of gutter.
2. Where sidewalk is continuously adjacent, reduce the dropped curb at entrances to 75mm.
3. For slipforming procedure, a 5% batter is acceptable.

A Treatment at entrances shall conform with OPSD–351.01.
B Outlet treatment shall conform with OPSD–610 Series.
C The length of transition from one curb type to another shall be 3.0m, except in conjunction with guide rail, it shall conform to OPSD–900 Series.
D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Date 1990 09 14	Rev
CONCRETE BARRIER CURB WITH STANDARD GUTTER TWO STAGE CONSTRUCTION	Date _____	
		OPSD – 600.07

Stage 2

Location	Station Extent	Drainage ID	From CB	To CB	Invert U/S	Invert D/S	Area (ha)	Longitudinal Slope (%)	Pipe Size (mm)	Pipe Type	Pipe Length (m)
Between Britannia Road and Louis Saint Laurent Ave	61+300 to 61+400	9001-1	29	30	188.09	187.56	0.04	0.531	300	CONC	100
	61+400 to 61+500	9002-1	30	31	187.56	187.02	0.04	0.54	300	CONC	100
	61+500 to 61+600	9003-1	31	32	187.02	186.48	0.04	0.54	300	CONC	100
	61+600 to 61+700	9004-1	32	33	186.48	185.94	0.04	0.54	375	CONC	100
	61+700 to 61+800	9005-1	33	34	185.94	185.40	0.04	0.54	375	CONC	100
	61+800 to 61+900	9006-1	34	35	185.40	184.86	0.04	0.54	375	CONC	100
	61+900 to 62+000	9007-1	35	36	184.86	184.32	0.04	0.54	450	CONC	100
	62+000 to 62+100	9008-1	36	37	184.32	183.78	0.04	0.54	450	CONC	100
	62+100 to 62+200	9009-1	37	38	183.78	183.24	0.04	0.54	450	CONC	100
	62+200 to 62+300	9010-1	38	39	183.24	182.70	0.04	0.54	450	CONC	100
	62+300 to 62+372	9011-1	39	outlet	182.70	182.23	0.03	0.54	450	CONC	87.2

Stage 2 North of Yard

Location	Station Extent	Drainage ID	From CB	To CB	Invert U/S	Invert D/S	Area (ha)	Longitudinal Slope (%)	Pipe Size (mm)	Pipe Type	Pipe Length (m)
Between Lower Baseline and Britannia Road	62+724 to 62+824	9012	4	5	181.16	180.88	0.12	0.3	300	CONC	92.128
	62+824 to 62+915	9013	5	6	180.56	180.30	0.11	0.3	375	CONC	88.74
	62+915 to 62+995	9014	7	8	180.81	180.58	0.10	0.3	300	CONC	75.689
	62+995 to 63+100	9015	8	9	180.52	180.21	0.13	0.3	375	CONC	103.6
	63+100 to 63+195	9016	9	10	180.15	179.87	0.12	0.3	375	CONC	93.7
	63+325 to 63+435	9018	11	12	180.01	179.68	0.14	0.3	375	CONC	108.901
	63+533 to 63+634	9020	13	14	179.98	179.68	0.13	0.3	375	CONC	100.03
	63+634 to 63+731	9021	15	16	179.93	179.65	0.12	0.3	300	CONC	92.788
	63+731 to 63+832	9022	16	17	179.55	179.25	0.13	0.3	375	CONC	100.03
	63+965 to 64+072	9024	18	19	179.37	179.04	0.14	0.3	375	CONC	108.549
	64+300 to 64+393	9027	21	22	178.92	178.65	0.12	0.3	375	CONC	92.325
	64+515 to 64+393	9028	23	22	179.01	178.66	0.15	0.29	375	CONC	118.524
	64+725 to 64+635	9030	25	24	178.77	178.55	0.11	0.25	400	CONC	88.237
	64+825 to 64+725	9031	26	25	179.05	178.76	0.13	0.3	375	CONC	98.759
	64+906 to 64+825	9032	27	26	179.29	179.09	0.10	0.25	375	CONC	79.922
	64+975 to 64+906	9033	28	27	179.55	179.38	0.09	0.25	250	CONC	67.623

Lower Baseline Storm Sewer Network

from CB	to CB	US	DS	L	Slope	Inlet CB ID	rim	size	cover	MH invert
6	outlet	172.74	172.70	22	0.2	6	173.85	0.45	0.66	172.44
3	6	172.77	172.74	13.5	0.2	3	173.85	0.45	0.63	172.47
2	3	172.85	172.77	37.4	0.2	2	174.04	0.375	0.82	-
1	2	172.93	172.85	40	0.2	1	174.47	0.375	1.17	-
5	6	172.82	172.74	37.4	0.2	5	174.04	0.375	0.85	-
4	5	172.90	172.82	40	0.2	4	174.47	0.375	1.20	-

AECOM CANADA INC.

DESIGN STORM : 100 YEAR RETURN for Climate Change Manning's 'n' Conc. 0.013

I (10-YEAR): $I = A*T^B$ A= 50.300

Tc (start) (min): 5 B= -0.690

PREPARED BY: Aws Nabeel

CHECKED BY: Brian Richert

DATE: 10-Dec-19

CN

STORM SEWER CAPACITY ASSESSMENT- LOWER BASELINE NETWORK

STREET / Station	MANHOLE U/S ID	MANHOLE U/S INV	MANHOLE D/S ID	MANHOLE D/S INV	AREA (ha)	Cumulative Total Area (ha)	AREA*RUNOFF COEFFICIENT A of C 0.30	A of C 0.60	A of C 0.90	Cumulative AxC	I (mm/hr)	q (100-YR) (m3/s)	STORM SEWER DESIGN INFORMATION SIZE (mm)	SLOPE (%)	LENGTH (m)	Q full (m3/s)	V full (m/s)	TIME SECT. (min.)	TIME CUM. (min.)	CAPACITY CHECK FOR SURCHARGE
																			5.00	
1	1	172.93	2	172.85	0.0469	0.05			0.05	0.04	279.4	0.033	375	0.20%	40	0.078	0.71	0.94	5.94	42%
2	2	172.85	3	172.77	0.0469	0.09			0.05	0.08	248.1	0.058	375	0.20%	37	0.078	0.71	0.88	6.82	74%
3	3	172.77	6	172.74	0.0000	0.09			0.00	0.08	225.6	0.053	450	0.20%	14	0.128	0.80	0.28	7.10	41%
																			5.00	
4	4	172.90	5	172.82	0.0469	0.05			0.05	0.04	279.4	0.033	375	0.20%	40	0.078	0.71	0.94	5.94	42%
5	5	172.82	6	172.74	0.0469	0.09			0.05	0.08	248.1	0.058	375	0.20%	37	0.078	0.71	0.88	6.82	74%
																			5.00	
6	6	172.74	outlet	172.70	0.0000	0.19			0.00	0.17	219.4	0.103	450	0.20%	22	0.128	0.80	0.46	7.56	81%

AECOM CANADA INC.

DESIGN STORM : 100 YEAR RETURN for Pearson Airport Manning's 'n' Conc. 0.012

I (10-YEAR): $I = A/(T+B)^c$ A= 1442.574 smooth HDPE pipe n 0.01

Tc (start) (min): 5 B= 5.262 C= 0.776

PREPARED BY: Aws Nabeel

CHECKED BY: Brian Richert

DATE: 8-Apr-19

CN

STORM SEWER CAPACITY ASSESSMENT FOR NORTH YARD- PROPOSED CONDITIONS

	STREET / Station	MANHOLE U/S ID	MANHOLE U/S INV	MANHOLE D/S ID	MANHOLE D/S INV	AREA (ha)	Cumulative Total Area (ha)	AREA*RUNOFF COEFFICIENT A of C 0.30	A of C 0.60	A of C 0.90	Cumulative AxC	I (mm/hr)	q (100-YR) (m3/s)	North yard Pipe (m3/s)	Total Q (m3/s)	STORM SEWER DESIGN INFORMATION SIZE (mm)	SLOPE (%)	LENGTH (m)	Q full (m3/s)	V full (m/s)	TIME SECT. (min.)	TIME CUM. (min.)	CAPACITY CHECK FOR SURCHARGE	Comment
	SEE MAP TAB FOR REFERENCE																							
																						5.00		
Outlet 1 Alignment - (MLH SWM 2019_WIP) - (2)	**Pipe - (333)**	Structure - (284)	180.06	Structure - (302)	179.88	0.043	0.04			0.04	0.04	236.8	0.026		0.026	450	0.30%	60	0.169	1.06	0.94	5.94	15%	Good
	Pipe - (333) (2)	Structure - (302)	179.80	Structure - (301)	179.68	0.088	0.13			0.09	0.12	221.3	0.073		0.073	450	0.30%	40	0.169	1.06	0.63	6.57	43%	Good
	Pipe - (333) (1)	Structure - (301)	179.61	Structure - (285)	179.49	0.107	0.24			0.11	0.21	212.1	0.126		0.126	450	0.30%	40	0.170	1.07	0.63	7.19	74%	Good
	Pipe - (334)	Structure - (285)	179.44	Structure - (286)	179.33	0.120	0.36			0.12	0.32	203.8	0.182	0.148	0.330	600	0.30%	36	0.364	1.29	0.46	7.66	91%	Good
																						5.00		
	Pipe - (348)	Structure - (303)	180.26	Structure - (286)	180.05	0.191	0.19			0.19	0.17	236.8	0.113		0.113	450	0.50%	40	0.218	1.37	0.49	5.49	52%	Good
																						5.00		
	Pipe - (335)	Structure - (286)	179.28	Structure - (287)	179.19	0.097	0.65			0.10	0.58	198.1	0.320	0.148	0.468	750	0.30%	31	0.658	1.49	0.35	8.00	71%	Good
																						5.00		
	Pipe - (345)	Structure - (296)	180.55	Structure - (304)	180.03	0.205	0.20			0.20	0.18	236.8	0.121		0.121	450	1.50%	35	0.378	2.38	0.25	5.25	32%	Good
	Pipe - (345) (1)	Structure - (304)	179.98	Structure - (297)	179.77	0.128	0.33			0.13	0.30	232.5	0.193		0.193	450	0.50%	41	0.219	1.37	0.50	5.74	88%	Good
	Pipe - (346)	Structure - (297)	179.72	Structure - (287)	179.52	0.165	0.50			0.17	0.45	224.3	0.279		0.279	600	0.50%	40	0.471	1.66	0.40	6.15	59%	Good
																						5.00		
	Pipe - (336)	Structure - (287)	179.14	Structure - (288)	178.99	0.150	1.29			0.15	1.16	194.1	0.628	0.148	0.776	825	0.30%	51	0.853	1.60	0.53	8.53	91%	Good
																						5.00		
	Pipe - (340)	Structure - (291)	180.92	Structure - (298)	180.63	0.006	0.01			0.01	0.01	236.8	0.004		0.004	450	0.50%	60	0.218	1.37	0.73	5.73	2%	Good
	Pipe - (340) (1)	Structure - (298)	180.58	Structure - (292)	180.36	0.029	0.03			0.03	0.03	224.6	0.020		0.020	450	0.50%	44	0.218	1.37	0.53	6.26	9%	Good
	Pipe - (341)	Structure - (292)	180.31	Structure - (293)	180.13	0.100	0.14			0.10	0.12	216.5	0.073		0.073	450	0.50%	35	0.218	1.37	0.42	6.68	34%	Good
	Pipe - (342)	Structure - (293)	180.08	Structure - (294)	180.00	0.117	0.25			0.12	0.23	210.5	0.133		0.133	450	0.50%	16	0.219	1.38	0.20	6.88	61%	Good
	Pipe - (343)	Structure - (294)	179.95	Structure - (295)	179.83	0.065	0.32			0.07	0.29	207.8	0.165		0.165	450	0.50%	24	0.218	1.37	0.30	7.18	75%	Good
	Pipe - (344)	Structure - (295)	179.78	Structure - (288)	179.58	0.105	0.42			0.10	0.38	204.0	0.215		0.215	600	0.50%	40	0.469	1.66	0.41	7.58	46%	Good
																						5.00		
	Pipe - (337)	Structure - (288)	178.94	**Outlet 1**	178.89	0.122	1.84			0.12	1.65	188.3	0.865	0.148	1.013	1050	0.30%	14	1.625	1.88	0.13	8.65	62%	Good
																						5.00		
Outlet 2 Alignment - (MLH SWM 2019_WIP) - (3)	**Pipe - (325)**	Structure - (278)	179.78	Structure - (305)	179.66	0.118	0.12			0.12	0.11	236.8	0.070		0.070	450	0.30%	40	0.169	1.06	0.63	5.63	41%	Good
	Pipe - (325) (1)	Structure - (305)	179.59	Structure - (279)	179.47	0.118	0.24			0.12	0.21	226.2	0.133		0.133	450	0.30%	40	0.169	1.06	0.63	6.25	79%	Good
	Pipe - (326)	Structure - (279)	179.42	Structure - (306)	179.30	0.118	0.35			0.12	0.32	216.6	0.191		0.191	600	0.30%	40	0.364	1.29	0.52	6.77	52%	Good
	Pipe - (326) (1)	Structure - (306)	179.22	Structure - (280)	179.10	0.118	0.47			0.12	0.42	209.3	0.246		0.246	600	0.30%	40	0.364	1.29	0.52	7.29	68%	Good
	Pipe - (327)	Structure - (280)	179.05	Structure - (307)	178.93	0.118	0.59			0.12	0.53	202.6	0.298		0.298	600	0.30%	40	0.364	1.29	0.52	7.80	82%	Good
	Pipe - (327) (1)	Structure - (307)	178.86	Structure - (281)	178.74	0.118	0.71			0.12	0.64	196.3	0.347		0.347	750	0.30%	40	0.662	1.50	0.45	8.25	52%	Good
	Pipe - (328)	Structure - (281)	178.69	Structure - (129)	178.58	0.118	0.82			0.12	0.74	191.3	0.394	0.080	0.474	750	0.30%	37	0.659	1.49	0.42	8.67	72%	Good
																						5.00		
	Pipe - (114)	Structure - (118)	179.78	Structure - (120)	179.66	0.125	0.13			0.13	0.11	236.8	0.074		0.074	450	0.30%	40	0.169	1.06	0.63	5.63	44%	Good
	Pipe - (116)	Structure - (120)	179.61	Structure - (122)	179.49	0.118	0.24			0.12	0.22	226.2	0.137		0.137	450	0.30%	40	0.169	1.06	0.63	6.25	81%	Good
	Pipe - (117)	Structure - (122)	179.43	Structure - (123)	179.31	0.118	0.36			0.12	0.32	216.6	0.195		0.195	600	0.30%	40	0.364	1.29	0.52	6.77	54%	Good
	Pipe - (121)	Structure - (123)	179.26	Structure - (127)	179.14	0.118	0.48			0.12	0.43	209.3	0.250		0.250	600	0.30%	40	0.364	1.29	0.52	7.29	69%	Good
	Pipe - (122)	Structure - (127)	179.09	Structure - (128)	178.97	0.118	0.60			0.12	0.54	202.6	0.302		0.302	600	0.30%	40	0.364	1.29	0.52	7.81	83%	Good
	Pipe - (123)	Structure - (128)	178.92	Structure - (129)	178.80	0.118	0.71			0.12	0.64	196.3	0.350		0.350	750	0.30%	40	0.661	1.50	0.45	8.25	53%	Good
																						5.00		
	Pipe - (329)	Structure - (129)	178.53	Structure - (283)	178.44	0.118	1.66			0.12	1.49	186.8	0.773	0.080	0.853	900	0.30%	31	1.074	1.69	0.30	8.97	79%	Good
																						5.00		
	Pipe - (79)	Structure - (81)	179.78	Structure - (308)	179.66	0.145	0.15			0.15	0.13	236.8	0.086		0.086	450	0.30%	40	0.169	1.06	0.63	5.63	51%	Good
	Pipe - (79) (1)	Structure - (308)	179.61	Structure - (82)	179.49	0.140	0.29			0.14	0.26	226.2	0.161		0.161	600	0.30%	40	0.364	1.29	0.52	6.14	44%	Good
	Pipe - (80)	Structure - (82)	179.44	Structure - (83)	179.32	0.140	0.43			0.14	0.38	218.2	0.232		0.232	600	0.30%	40	0.364	1.29	0.52	6.66	64%	Good
	Pipe - (81)	Structure - (83)	179.27	Structure - (84)	179.15	0.140	0.57			0.14	0.51	210.8	0.298		0.298	750	0.30%	40	0.661	1.50	0.45	7.11	45%	Good
	Pipe - (82)	Structure - (84)	179.10	Structure - (117)	178.98	0.140	0.71			0.14	0.63	204.9	0.361		0.361	750	0.30%	40	0.661	1.50	0.45	7.55	55%	Good
	Pipe - (332)	Structure - (117)	178.93	Structure - (283)	178.81	0.140	0.85			0.14	0.76	199.3	0.421		0.421	750	0.30%	40	0.661	1.50	0.45	8.00	64%	Good
																						5.00		
	Pipe - (329) (1)	Structure - (283)	178.39	Structure - (12)	178.23	0.140	2.64			0.14	2.38	183.7	1.213	0.080	1.293	1050	0.30%	50	1.620	1.87	0.45	9.42	80%	Good
																						5.00		
	Pipe - (1)	Structure - (2)	179.78	Structure - (3)	179.66	0.144	0.14			0.14	0.13	236.8	0.085		0.085	450	0.30%	40	0.169	1.06	0.63	5.63	51%	Good
	Pipe - (2)	Structure - (3)	179.61	Structure - (5)	179.49	0.148	0.29			0.15	0.26	226.2	0.166		0.166	600	0.30%	40	0.364	1.29	0.52	6.14	45%	Good
	Pipe - (4)	Structure - (5)	179.44	Structure - (6)	179.32	0.147	0.44			0.15	0.40	218.2	0.240		0.240	600	0.30%	40	0.364	1.29	0.52	6.66	66%	Good
	Pipe - (5)	Structure - (6)	179.27	Structure - (7)	179.15	0.159	0.60			0.16	0.54	210.8	0.315		0.315	600	0.30%	40	0.364	1.29	0.52	7.18	86%	Good
	Pipe - (9)	Structure - (7)	179.10	Structure - (11)	178.98	0.141	0.74			0.14	0.66	204.0	0.377		0.377	750	0.30%	40	0.661	1.50	0.45	7.62	57%	Good
	Pipe - (10)	Structure - (11)	178.93	Structure - (12)	178.81	0.144	0.88			0.14	0.79	198.5	0.438		0.438	750	0.30%	40	0.661	1.50	0.45	8.07	66%	Good
																						5.00		
	Pipe - (330)	Structure - (12)	178.18	**Outlet 2**	178.15	0.127	3.65			0.13	3.29	179.4	1.637	0.080	1.717	1200	0.30%	12	2.316	2.05	0.10	9.52	74%	Good
																						5.00		
	Pipe - (317)	Structure - (273)	179.50	Structure - (309)	179.38	0.118	0.12			0.12	0.11	236.8	0.070		0.070	450	0.30%	40	0.169	1.06	0.63	5.63	41%	Good
	Pipe - (317) (1)	Structure - (309)	179.31	Structure - (274)	179.19	0.118	0.24			0.12	0.21	226.2	0.133		0.133	450	0.30%	40	0.169	1.06	0.63	6.25	79%	Good
	Pipe - (318)	Structure - (274)	179.14	Structure - (310)	179.02	0.118	0.35			0.12	0.32	216.6	0.191		0.191	600	0.30%	40	0.364	1.29	0.52	6.77	52%	Good
	Pipe - (318) (1)	Structure - (310)	178.94	Structure - (311)	178.82	0.118	0.47			0.12	0.42	209.3	0.246		0.246	600	0.30%	40	0.364	1.29	0.52	7.29	68%	Good
	Pipe - (318) (1) (1)	Structure - (311)	178.75	Structure - (275)	178.63	0.118	0.59			0.12	0.53	202.6	0.298		0.298	750	0.30%	40	0.661	1.50	0.45	7.73	45%	Good
	Pipe - (319)	Structure - (275)	178.58	Structure - (138)	178.47	0.118	0.71			0.12	0.64	197.2	0.348	0.120	0.468	750	0.30%	37	0.659	1.49	0.42	8.15	71%	Good
																						5.00		
	Pipe - (124)	Structure - (130)	179.50	Structure - (131)	179.38	0.118	0.12			0.12	0.11	236.8	0.070		0.070	450	0.30%	40	0.169	1.06	0.63	5.63	41%	Good
	Pipe - (126)	Structure - (131)	179.33	Structure - (133)	179.21	0.118	0.24			0.12	0.21	226.2	0.133		0.133	600	0.30%	40	0.364	1.29	0.52	6.14	37%	Good
	Pipe - (127)	Structure - (133)	179.16	Structure - (136)	179.04	0.118	0.35			0.12	0.32	218.2	0.193		0.193	600	0.30%	40	0.364	1.29	0.52	6.66	53%	Good
	Pipe - (130)	Structure - (136)	178.99	Structure - (137)	178.87	0.118	0.47			0.12	0.42	210.8	0.248		0.248	600	0.30%	40	0.364	1.29	0.52	7.18	68%	Good

AECOM CANADA INC.

DESIGN STORM : 100 YEAR RETURN for Pearson Airport Manning's 'n' Conc. 0.012

I (10-YEAR): $I = A/(T+B)^c$ A= 1442.574 smooth HDPE pipe I 0.01

Tc (start) (min): 5 B= 5.262 C= 0.776

PREPARED BY: Aws Nabeel

CHECKED BY: Brian Richert

DATE: 8-Apr-19

CN

STORM SEWER CAPACITY ASSESSMENT FOR NORTH YARD- PROPOSED CONDITIONS

	STREET / Station	MANHOLE U/S ID	MANHOLE U/S INV	MANHOLE D/S ID	MANHOLE D/S INV	AREA (ha)	Cumulative Total Area (ha)	AREA*RUNOFF COEFFICIENT A of C 0.30	A of C 0.60	A of C 0.90	Cumulative AxC	I (mm/hr)	q (100-YR) (m3/s)	North yard Pipe (m3/s)	Total Q (m3/s)	STORM SEWER DESIGN INFORMATION SIZE (mm)	SLOPE (%)	LENGTH (m)	Q full (m3/s)	V full (m/s)	TIME SECT. (min.)	TIME CUM. (min.)	CAPACITY CHECK FOR SURCHARGE	Comment
Outlet 3 Alignment - (MLH SWM 2019_WIP) - (4)	**Pipe - (131)**	Structure - (137)	178.82	Structure - (138)	178.70	0.118	0.59			0.12	0.53	204.0	0.300		0.300	600	0.30%	40	0.364	1.29	0.52	7.70	82%	Good
																						5.00		
	Pipe - (320)	Structure - (138)	178.42	Structure - (276)	178.32	0.118	1.41			0.12	1.27	192.4	0.680	0.120	0.800	825	0.30%	31	0.852	1.59	0.32	8.05	94%	Good
																						5.00		
	Pipe - (83)	Structure - (85)	179.50	Structure - (86)	179.38	0.140	0.14			0.14	0.13	236.8	0.083		0.083	450	0.30%	40	0.169	1.06	0.63	5.63	49%	Good
	Pipe - (84)	Structure - (86)	179.33	Structure - (87)	179.21	0.140	0.28			0.14	0.25	226.2	0.158		0.158	600	0.30%	40	0.364	1.29	0.52	6.14	43%	Good
	Pipe - (85)	Structure - (87)	179.16	Structure - (88)	179.04	0.140	0.42			0.14	0.38	218.2	0.229		0.229	600	0.30%	40	0.364	1.29	0.52	6.66	63%	Good
	Pipe - (324)	Structure - (88)	178.99	Structure - (276)	178.87	0.140	0.56			0.14	0.50	210.8	0.295		0.295	600	0.30%	40	0.364	1.29	0.52	7.18	81%	Good
	C2	Structure - (312)	179.87	Structure - (276)	178.75	0.140	0.70			0.14	0.63	204.0	0.357		0.357	600	2.80%	40	1.113	3.94	0.17	7.35	32%	Good
																						5.00		
	Pipe - (321)	Structure - (276)	178.27	Structure - (21)	178.12	0.140	2.25			0.14	2.03	193.5	1.090	0.120	1.210	1050	0.30%	50	1.620	1.87	0.45	7.80	75%	Good
																						5.00		
	Pipe - (13)	Structure - (14)	179.50	Structure - (15)	179.38	0.163	0.16			0.16	0.15	236.8	0.097		0.097	450	0.30%	40	0.169	1.06	0.63	5.63	57%	Good
	Pipe - (14)	Structure - (15)	179.33	Structure - (16)	179.21	0.146	0.31			0.15	0.28	226.2	0.175		0.175	600	0.30%	40	0.364	1.29	0.52	6.14	48%	Good
	Pipe - (15)	Structure - (16)	179.16	Structure - (17)	179.04	0.147	0.46			0.15	0.41	218.2	0.249		0.249	600	0.30%	40	0.364	1.29	0.52	6.66	68%	Good
	Pipe - (16)	Structure - (17)	178.99	Structure - (18)	178.87	0.147	0.60			0.15	0.54	210.8	0.318		0.318	600	0.30%	40	0.364	1.29	0.52	7.18	87%	Good
	Pipe - (349)	Structure - (18)	178.82	Structure - (21)	178.70	0.147	0.75			0.15	0.68	204.0	0.383		0.383	750	0.30%	40	0.661	1.50	0.45	7.62	58%	Good
																						5.00		
	Pipe - (322)	Structure - (21)	178.07	**Outlet 3**	178.04	0.146	3.15			0.15	2.83	196.4	1.547	0.120	1.667	1200	0.30%	12	2.328	2.06	0.10	7.72	72%	Good
																						5.00		
Outlet 4 Alignment - (MLH SWM 2019_WIP) - (5)	**Pipe - (307)**	Structure - (266)	179.26	Structure - (314)	179.14	0.118	0.12			0.12	0.11	236.8	0.070		0.070	450	0.30%	40	0.169	1.06	0.63	5.63	41%	Good
	C1	Structure - (313)	179.14	Structure - (314)	179.02	0.118	0.24			0.12	0.21	226.2	0.133		0.133	450	0.30%	40	0.169	1.06	0.63	6.25	79%	Good
	Pipe - (307) (1)	Structure - (314)	178.95	Structure - (267)	178.83	0.118	0.35			0.12	0.32	216.6	0.191		0.191	600	0.30%	40	0.364	1.29	0.52	6.77	52%	Good
	Pipe - (308)	Structure - (267)	178.78	Structure - (268)	178.66	0.107	0.46			0.11	0.41	209.3	0.241		0.241	600	0.30%	40	0.364	1.29	0.52	7.29	66%	Good
	Pipe - (309)	Structure - (268)	178.61	Structure - (147)	178.50	0.120	0.58			0.12	0.52	202.6	0.294	0.038	0.332	600	0.30%	37	0.365	1.29	0.48	7.77	91%	Good
																						5.00		
	Pipe - (139)	Structure - (146)	179.11	Structure - (316)	178.99	0.118	0.12			0.12	0.11	236.8	0.070		0.070	600	0.30%	40	0.364	1.29	0.52	5.52	19%	Good
	Pipe - (139) (1)	Structure - (316)	178.94	Structure - (317)	178.82	0.118	0.24			0.12	0.21	228.0	0.134		0.134	600	0.30%	40	0.364	1.29	0.52	6.03	37%	Good
	Pipe - (139) (1) (1)	Structure - (317)	178.77	Structure - (319)	178.65	0.118	0.35			0.12	0.32	219.8	0.194		0.194	600	0.30%	40	0.365	1.29	0.52	6.55	53%	Good
	Pipe - (139) (1) (1) (1)	Structure - (319)	178.60	Structure - (147)	178.48	0.113	0.47			0.11	0.42	212.3	0.247		0.247	600	0.30%	41	0.364	1.29	0.53	7.09	68%	Good
																						5.00		
	Pipe - (310)	Structure - (147)	178.43	Structure - (93)	178.34	0.121	1.17			0.12	1.05	196.8	0.574	0.038	0.612	750	0.30%	31	0.661	1.50	0.34	8.11	93%	Good
																						5.00		
	Pipe - (87)	Structure - (89)	179.26	Structure - (90)	179.24	0.125	0.12			0.12	0.11	236.8	0.074		0.074	450	0.30%	7	0.169	1.06	0.11	5.11	44%	Good
	Pipe - (88)	Structure - (90)	179.19	Structure - (320)	179.09	0.027	0.15			0.03	0.14	234.9	0.089		0.089	450	0.30%	33	0.169	1.06	0.52	5.63	53%	Good
	Pipe - (88) (1)	Structure - (320)	179.04	Structure - (91)	178.92	0.128	0.28			0.13	0.25	226.2	0.158		0.158	600	0.30%	40	0.364	1.29	0.52	6.14	43%	Good
	Pipe - (89)	Structure - (91)	178.87	Structure - (92)	178.75	0.140	0.42			0.14	0.38	218.2	0.229		0.229	600	0.30%	40	0.364	1.29	0.52	6.67	63%	Good
	Pipe - (90)	Structure - (92)	178.70	Structure - (93)	178.57	0.136	0.56			0.14	0.50	210.7	0.293		0.293	600	0.30%	42	0.365	1.29	0.54	7.21	80%	Good
																						5.00		
	Pipe - (311)	Structure - (93)	178.29	Structure - (269)	178.14	0.149	1.87			0.15	1.68	192.8	0.902	0.038	0.940	900	0.30%	50	1.074	1.69	0.50	8.61	88%	Good
																						5.00		
	Pipe - (23)	Structure - (24)	179.26	Structure - (25)	179.14	0.145	0.15			0.15	0.13	236.8	0.086		0.086	450	0.30%	40	0.169	1.06	0.63	5.63	51%	Good
	Pipe - (24)	Structure - (25)	179.09	Structure - (26)	178.97	0.142	0.29			0.14	0.26	226.2	0.162		0.162	600	0.30%	40	0.364	1.29	0.52	6.14	45%	Good
	Pipe - (25)	Structure - (26)	178.92	Structure - (29)	178.80	0.141	0.43			0.14	0.39	218.2	0.233		0.233	600	0.30%	41	0.364	1.29	0.53	6.67	64%	Good
	Pipe - (28)	Structure - (29)	178.75	Structure - (269)	178.62	0.130	0.56			0.13	0.50	210.6	0.294		0.294	600	0.30%	43	0.364	1.29	0.56	7.23	81%	Good
																						5.00		
	Pipe - (312)	Structure - (269)	178.03	**Outlet 4**	177.99	0.153	2.58			0.15	2.32	187.5	1.210	0.038	1.248	1050	0.30%	14	1.613	1.86	0.12	8.73	77%	Good
																						5.00		
Outlet 5 Alignment - (MLH SWM 2019_WIP) - (6)	**Pipe - (305)**	Structure - (264)	179.06	Structure - (324)	178.94	0.119	0.12			0.12	0.11	236.8	0.071		0.071	450	0.30%	40	0.169	1.06	0.63	5.63	42%	Good
	Pipe - (305) (1)	Structure - (324)	178.87	Structure - (265)	178.75	0.119	0.24			0.12	0.21	226.2	0.135		0.135	450	0.30%	40	0.169	1.06	0.63	6.25	80%	Good
	Pipe - (306)	Structure - (265)	178.70	Structure - (325)	178.58	0.234	0.47			0.23	0.43	216.6	0.256		0.256	600	0.30%	40	0.364	1.29	0.52	6.77	70%	Good
	Pipe - (306) (1)	Structure - (325)	178.50	Structure - (263)	178.38	0.120	0.59			0.12	0.53	209.3	0.310		0.310	600	0.30%	40	0.364	1.29	0.52	7.29	85%	Good
																						5.00		
	Pipe - (302)	Structure - (261)	178.94	Structure - (326)	178.82	0.118	0.12			0.12	0.11	236.8	0.070		0.070	450	0.30%	40	0.169	1.06	0.63	5.63	41%	Good
	Pipe - (302) (1)	Structure - (326)	178.74	Structure - (262)	178.62	0.118	0.24			0.12	0.21	226.2	0.133		0.133	450	0.30%	40	0.169	1.06	0.63	6.25	79%	Good
	Pipe - (303)	Structure - (262)	178.57	Structure - (263)	178.45	0.118	0.35			0.12	0.32	216.6	0.191		0.191	600	0.30%	40	0.364	1.29	0.52	6.77	52%	Good
																						5.00		
	Pipe - (304)	Structure - (263)	178.33	Structure - (155)	178.22	0.118	1.06			0.12	0.96	202.6	0.539	0.191	0.730	825	0.30%	37	0.854	1.60	0.39	7.68	85%	Good
																						5.00		
	Pipe - (140)	Structure - (148)	179.06	Structure - (149)	178.94	0.114	0.11			0.11	0.10	236.8	0.068		0.068	450	0.30%	41	0.169	1.06	0.64	5.64	40%	Good
	Pipe - (141)	Structure - (149)	178.89	Structure - (152)	178.77	0.118	0.23			0.12	0.21	225.9	0.131		0.131	450	0.30%	41	0.169	1.07	0.64	6.28	77%	Good
	Pipe - (144)	Structure - (152)	178.72	Structure - (153)	178.60	0.237	0.47			0.24	0.42	216.1	0.254		0.254	600	0.30%	40	0.364	1.29	0.52	6.80	70%	Good
	Pipe - (145)	Structure - (153)	178.55	Structure - (155)	178.43	0.117	0.59			0.12	0.53	208.9	0.306		0.306	600	0.30%	40	0.364	1.29	0.52	7.32	84%	Good
																						5.00		
	Pipe - (155)	Structure - (300)	178.94	Structure - (166)	178.82	0.103	0.10			0.10	0.09	236.8	0.061		0.061	450	0.30%	40	0.169	1.06	0.63	5.63	36%	Good
	Pipe - (156)	Structure - (166)	178.77	Structure - (167)	178.65	0.132	0.24			0.13	0.21	226.2	0.133		0.133	450	0.30%	40	0.169	1.06	0.63	6.25	79%	Good
	Pipe - (157)	Structure - (167)	178.60	Structure - (155)	178.48	0.118	0.35			0.12	0.32	216.6	0.191		0.191	600	0.30%	40	0.364	1.29	0.52	6.77	52%	Good
																						5.00		
	Pipe - (159)	Structure - (155)	178.17	Structure - (97)	178.08	0.103	2.11			0.10	1.90	197.8	1.042	0.191	1.233	1050	0.30%	31	1.620	1.87	0.27	7.95	76%	Good
																						5.00		
	Pipe - (92)	Structure - (94)	179.06	Structure - (323)	178.93	0.141	0.14			0.14	0.13	236.8	0.084		0.084	450	0.30%	42	0.169	1.06	0.66	5.66	50%	Good
	Pipe - (92) (1)	Structure - (323)	178.88	Structure - (95)	178.76	0.149	0.29			0.15	0.26	225.7	0.164		0.164	600	0.30%	42	0.365	1.29	0.54	6.20	45%	Good
	Pipe - (93)	Structure - (95)	178.71	Structure - (96)	178.59	0.287	0.58			0.29	0.52	217.4	0.314		0.314	750	0.30%	40	0.661	1.50	0.45	6.64	47%	Good
	Pipe - (94)	Structure - (96)	178.54	Structure - (97)	178.42	0.140	0.72			0.14	0.65	211.1	0.378		0.378	750	0.30%	40	0.661	1.50	0.45	7.09	57%	Good

AECOM CANADA INC.

DESIGN STORM : 100 YEAR RETURN for Pearson Airport Manning's 'n' Conc. 0.012

I (10-YEAR): $I = A/(T+B)^c$ A= 1442.574 smooth HDPE pipe n 0.01

Tc (start) (min): 5 B= 5.262 C= 0.776

CN

STORM SEWER CAPACITY ASSESSMENT FOR NORTH YARD- PROPOSED CONDITIONS

PREPARED BY: Aws Nabeel

CHECKED BY: Brian Richert

DATE: 8-Apr-19

STREET / Station	MANHOLE U/S ID	MANHOLE U/S INV	MANHOLE D/S ID	MANHOLE D/S INV	AREA (ha)	Cumulative Total Area (ha)	AREA*RUNOFF COEFFICIENT A of C 0.30	A of C 0.60	A of C 0.90	Cumulative AxC	I (mm/hr)	q (100-YR) (m3/s)	North yard Pipe (m3/s)	Total Q (m3/s)	STORM SEWER DESIGN INFORMATION SIZE (mm)	SLOPE (%)	LENGTH (m)	Q full (m3/s)	V full (m/s)	TIME SECT. (min.)	TIME CUM. (min.)	CAPACITY CHECK FOR SURCHARGE	Comment
																					5.00		
Pipe - (296)	Structure - (258)	178.95	Structure - (98)	178.83	0.140	0.14			0.14	0.13	236.8	0.083		0.083	450	0.30%	40	0.169	1.06	0.63	5.63	49%	Good
Pipe - (297)	Structure - (98)	178.78	Structure - (327)	178.66	0.140	0.28			0.14	0.25	226.2	0.158		0.158	600	0.30%	40	0.364	1.29	0.52	6.14	43%	Good
Pipe - (297) (1)	Structure - (327)	178.61	Structure - (97)	178.49	0.140	0.42			0.14	0.38	218.2	0.229		0.229	600	0.30%	40	0.364	1.29	0.52	6.66	63%	Good
																					5.00		
Pipe - (301)	Structure - (97)	178.03	Structure - (39)	177.88	0.140	3.38			0.14	3.05	194.7	1.647	0.191	1.838	1200	0.30%	50	2.313	2.04	0.41	8.36	79%	Good
																					5.00		
Pipe - (31)	Structure - (32)	179.06	Structure - (33)	178.93	0.153	0.15			0.15	0.14	236.8	0.090		0.090	450	0.30%	43	0.169	1.06	0.68	5.68	53%	Good
Pipe - (32)	Structure - (33)	178.88	Structure - (36)	178.75	0.153	0.31			0.15	0.28	225.3	0.172		0.172	600	0.30%	43	0.364	1.29	0.55	6.23	47%	Good
Pipe - (35)	Structure - (36)	178.70	Structure - (38)	178.58	0.291	0.60			0.29	0.54	216.9	0.323		0.323	600	0.30%	40	0.364	1.29	0.52	6.75	89%	Good
Pipe - (298)	Structure - (38)	178.53	Structure - (39)	178.41	0.141	0.74			0.14	0.66	209.6	0.386		0.386	750	0.30%	40	0.661	1.50	0.45	7.20	58%	Good
																					5.00		
Pipe - (294)	Structure - (42)	178.80	Structure - (322)	178.68	0.141	0.14			0.14	0.13	236.8	0.083		0.083	600	0.30%	40	0.364	1.29	0.52	5.52	23%	Good
Pipe - (294) (1)	Structure - (322)	178.63	Structure - (40)	178.51	0.141	0.28			0.14	0.25	228.0	0.160		0.160	600	0.30%	40	0.364	1.29	0.52	6.03	44%	Good
Pipe - (295)	Structure - (40)	178.46	Structure - (39)	178.34	0.141	0.42			0.14	0.38	219.8	0.232		0.232	600	0.30%	40	0.364	1.29	0.52	6.55	64%	Good
																					5.00		
Pipe - (299)	Structure - (39)	177.61	**Outlet 5**	177.56	0.141	4.68			0.14	4.21	190.1	2.225	0.191	2.416	1350	0.30%	18	3.160	2.21	0.13	8.49	76%	Good
																					5.00		
Pipe - (291)	Structure - (257)	178.94	Structure - (328)	178.82	0.118	0.12			0.12	0.11	236.8	0.070		0.070	450	0.30%	40	0.169	1.06	0.63	5.63	41%	Good
Pipe - (291) (1)	Structure - (328)	178.74	Structure - (238)	178.62	0.118	0.24			0.12	0.21	226.2	0.133		0.133	450	0.30%	40	0.169	1.06	0.63	6.25	79%	Good
																					5.00		
Pipe - (225)	Structure - (237)	178.94	Structure - (330)	178.82	0.118	0.12			0.12	0.11	236.8	0.070		0.070	450	0.30%	40	0.169	1.06	0.63	5.63	41%	Good
Pipe - (225) (1)	Structure - (330)	178.74	Structure - (238)	178.62	0.118	0.24			0.12	0.21	226.2	0.133		0.133	450	0.30%	40	0.169	1.06	0.63	6.25	79%	Good
																					5.00		
Pipe - (226)	Structure - (238)	178.57	Structure - (161)	178.46	0.118	0.59			0.12	0.53	216.6	0.319	0.040	0.359	600	0.30%	37	0.365	1.29	0.48	6.73	98%	Good
																					5.00		
Pipe - (285)	Structure - (255)	178.79	Structure - (256)	178.67	0.118	0.12			0.12	0.11	236.8	0.070		0.070	600	0.30%	40	0.364	1.29	0.52	5.52	19%	Good
Pipe - (286)	Structure - (256)	178.62	Structure - (161)	178.50	0.118	0.24			0.12	0.21	228.0	0.134		0.134	600	0.30%	40	0.364	1.29	0.52	6.03	37%	Good
																					5.00		
Pipe - (149)	Structure - (158)	178.94	Structure - (159)	178.82	0.118	0.12			0.12	0.11	236.8	0.070		0.070	450	0.30%	40	0.169	1.06	0.63	5.63	41%	Good
Pipe - (150)	Structure - (159)	178.77	Structure - (161)	178.65	0.118	0.24			0.12	0.21	226.2	0.133		0.133	600	0.30%	40	0.364	1.29	0.52	6.14	37%	Good
																					5.00		
Pipe - (227)	Structure - (161)	178.41	Structure - (101)	178.32	0.132	1.19			0.13	1.07	209.8	0.625	0.040	0.665	825	0.30%	31	0.852	1.59	0.32	7.05	78%	Good
																					5.00		
Pipe - (287)	Structure - (329)	178.95	Structure - (100)	178.83	0.140	0.14			0.14	0.13	236.8	0.083		0.083	450	0.30%	40	0.169	1.06	0.63	5.63	49%	Good
Pipe - (288)	Structure - (100)	178.78	Structure - (101)	178.66	0.140	0.28			0.14	0.25	226.2	0.158		0.158	600	0.30%	40	0.364	1.29	0.52	6.14	43%	Good
																					5.00		
Pipe - (289)	Structure - (103)	178.95	Structure - (102)	178.83	0.140	0.14			0.14	0.13	236.8	0.083		0.083	450	0.30%	40	0.169	1.06	0.63	5.63	49%	Good
Pipe - (290)	Structure - (102)	178.78	Structure - (101)	178.66	0.140	0.28			0.14	0.25	226.2	0.158		0.158	600	0.30%	40	0.364	1.29	0.52	6.14	43%	Good
																					5.00		
Pipe - (228)	Structure - (101)	178.27	Structure - (48)	178.12	0.140	1.89			0.14	1.70	205.6	0.972	0.040	1.012	900	0.30%	50	1.074	1.69	0.50	7.55	94%	Good
																					5.00		
Pipe - (45)	Structure - (46)	178.95	Structure - (47)	178.83	0.142	0.14			0.14	0.13	236.8	0.084		0.084	450	0.30%	40	0.169	1.06	0.63	5.63	50%	Good
Pipe - (46)	Structure - (47)	178.78	Structure - (48)	178.66	0.145	0.29			0.14	0.26	226.2	0.162		0.162	600	0.30%	40	0.364	1.29	0.52	6.14	44%	Good
																					5.00		
Pipe - (275)	Structure - (52)	178.95	Structure - (49)	178.83	0.152	0.15			0.15	0.14	236.8	0.090		0.090	450	0.30%	40	0.169	1.06	0.63	5.63	53%	Good
Pipe - (278)	Structure - (49)	178.78	Structure - (48)	178.66	0.172	0.32			0.17	0.29	226.2	0.183		0.183	600	0.30%	40	0.364	1.29	0.52	6.14	50%	Good
																					5.00		
Pipe - (229)	Structure - (48)	178.07	**Outlet 6**	178.03	0.132	2.63			0.13	2.37	199.3	1.313	0.040	1.353	1050	0.30%	13	1.625	1.88	0.11	7.67	83%	Good
																					5.00		
Pipe - (219)	Structure - (231)	178.94	Structure - (332)	178.82	0.128	0.13			0.13	0.12	236.8	0.076		0.076	450	0.30%	40	0.169	1.06	0.63	5.63	45%	Good
Pipe - (219) (2)	Structure - (332)	178.74	Structure - (331)	178.62	0.118	0.25			0.12	0.22	226.2	0.139		0.139	450	0.30%	40	0.169	1.06	0.63	6.25	82%	Good
Pipe - (219) (1)	Structure - (331)	178.55	Structure - (232)	178.43	0.118	0.36			0.12	0.33	216.6	0.197		0.197	600	0.30%	40	0.364	1.29	0.52	6.77	54%	Good
Pipe - (220)	Structure - (232)	178.38	Structure - (233)	178.26	0.103	0.47			0.10	0.42	209.3	0.244		0.244	600	0.30%	40	0.364	1.29	0.52	7.29	67%	Good
Pipe - (221)	Structure - (233)	178.21	Structure - (234)	178.10	0.118	0.58			0.12	0.53	202.6	0.296	0.070	0.366	**750**	0.30%	37	0.662	1.50	0.41	7.70	55%	Good
																					5.00		
Pipe - (231)	Structure - (299)	178.94	Structure - (240)	178.82	0.126	0.13			0.13	0.11	236.8	0.075		0.075	450	0.30%	40	0.169	1.06	0.63	5.63	44%	Good
Pipe - (232)	Structure - (240)	178.77	Structure - (241)	178.65	0.118	0.24			0.12	0.22	226.2	0.138		0.138	450	0.30%	40	0.169	1.06	0.63	6.25	81%	Good
Pipe - (236)	Structure - (241)	178.60	Structure - (245)	178.48	0.103	0.35			0.10	0.31	216.6	0.188		0.188	600	0.30%	40	0.364	1.29	0.52	6.77	52%	Good
Pipe - (237)	Structure - (245)	178.43	Structure - (234)	178.31	0.118	0.46			0.12	0.42	209.3	0.243		0.243	600	0.30%	40	0.364	1.29	0.52	7.29	67%	Good
																					5.00		
Pipe - (222)	Structure - (234)	178.05	Structure - (235)	177.95	0.118	1.17			0.12	1.05	197.5	0.576	0.070	0.646	750	0.30%	31	0.661	1.50	0.34	8.04	98%	Good
																					5.00		
Pipe - (271)	Structure - (107)	178.95	Structure - (106)	178.83	0.128	0.13			0.13	0.11	236.8	0.076		0.076	450	0.30%	40	0.169	1.06	0.63	5.63	45%	Good
Pipe - (272)	Structure - (106)	178.78	Structure - (105)	178.66	0.140	0.27			0.14	0.24	226.2	0.151		0.151	450	0.30%	40	0.169	1.06	0.63	6.25	89%	Good
Pipe - (273)	Structure - (105)	178.61	Structure - (104)	178.49	0.140	0.41			0.14	0.37	216.6	0.221		0.221	600	0.30%	40	0.364	1.29	0.52	6.77	61%	Good
Pipe - (274)	Structure - (104)	178.44	Structure - (235)	178.32	0.140	0.55			0.14	0.49	209.3	0.287		0.287	600	0.30%	40	0.364	1.29	0.52	7.29	79%	Good
																					5.00		
Pipe - (223)	Structure - (235)	177.90	Structure - (53)	177.75	0.140	1.85			0.14	1.67	193.6	0.897	0.070	0.967	900	0.30%	50	1.074	1.69	0.50	8.54	90%	Good
																					5.00		
Pipe - (267)	Structure - (57)	178.80	Structure - (56)	178.68	0.132	0.13			0.13	0.12	236.8	0.078		0.078	600	0.30%	40	0.364	1.29	0.52	5.52	21%	Good
Pipe - (268)	Structure - (56)	178.63	Structure - (55)	178.51	0.141	0.27			0.14	0.25	228.0	0.155		0.155	600	0.30%	40	0.364	1.29	0.52	6.03	43%	Good
Pipe - (269)	Structure - (55)	178.46	Structure - (54)	178.34	0.144	0.42			0.14	0.37	219.8	0.229		0.229	600	0.30%	40	0.364	1.29	0.52	6.55	63%	Good
Pipe - (270)	Structure - (54)	178.29	Structure - (53)	178.17	0.149	0.57			0.15	0.51	212.3	0.300		0.300	600	0.30%	40	0.364	1.29	0.52	7.07	82%	Good

Outlet 6 Alignment - (MLH SWM 2019_WIP) - (7)

Outlet 7 Alignment - (MLH SWM 2019_WIP) - (8)

AECOM CANADA INC.

DESIGN STORM : 100 YEAR RETURN for Pearson Airport Manning's 'n' Conc. 0.012

I (10-YEAR): $I = A/(T+B)^c$ A= 1442.574 smooth HDPE pipe r 0.01

Tc (start) (min): 5 B= 5.262 C= 0.776

CN

STORM SEWER CAPACITY ASSESSMENT FOR NORTH YARD- PROPOSED CONDITIONS

PREPARED BY: Aws Nabeel

CHECKED BY: Brian Richert

DATE: 8-Apr-19

	STREET / Station	MANHOLE U/S ID	MANHOLE U/S INV	MANHOLE D/S ID	MANHOLE D/S INV	AREA (ha)	Cumulative Total Area (ha)	AREA*RUNOFF COEFFICIENT A of C 0.30	A of C 0.60	A of C 0.90	Cumulative AxC	I (mm/hr)	q (100-YR) (m3/s)	North yard Pipe (m3/s)	Total Q (m3/s)	STORM SEWER DESIGN INFORMATION SIZE (mm)	SLOPE (%)	LENGTH (m)	Q full (m3/s)	V full (m/s)	TIME SECT. (min.)	TIME CUM. (min.)	CAPACITY CHECK FOR SURCHARGE	Comment
																						5.00		
	Pipe - (224)	Structure - (53)	177.70	**Outlet 7**	177.66	0.152	2.57			0.15	2.31	188.2	1.210	0.070	1.280	1050	0.30%	14	1.627	1.88	0.13	8.67	79%	Good
																						5.00		
Outlet 8 Alignment - (MLH SWM 2019_WIP) - (9)	**Pipe - (216)**	Structure - (228)	178.94	Structure - (336)	178.82	0.118	0.12			0.12	0.11	236.8	0.070		0.070	450	0.30%	40	0.169	1.06	0.63	5.63	41%	Good
	Pipe - (216) (1)	Structure - (336)	178.74	Structure - (229)	178.62	0.118	0.24			0.12	0.21	226.2	0.133		0.133	450	0.30%	40	0.169	1.06	0.63	6.25	79%	Good
	Pipe - (217)	Structure - (229)	178.57	Structure - (335)	178.45	0.119	0.35			0.12	0.32	216.6	0.192		0.192	600	0.30%	40	0.364	1.29	0.52	6.77	53%	Good
	Pipe - (217) (2)	Structure - (335)	178.38	Structure - (333)	178.26	0.111	0.47			0.11	0.42	209.3	0.244		0.244	600	0.30%	40	0.364	1.29	0.52	7.29	67%	Good
	Pipe - (217) (1)	Structure - (333)	178.18	Structure - (230)	178.06	0.122	0.59			0.12	0.53	202.6	0.298		0.298	600	0.30%	40	0.364	1.29	0.52	7.81	82%	Good
	Pipe - (218)	Structure - (230)	178.01	Structure - (197)	177.90	0.116	0.70			0.12	0.63	196.3	0.346	0.122	0.468	675	0.30%	37	0.500	1.40	0.44	8.25	94%	Good
																						5.00		
	Pipe - (178)	Structure - (189)	178.94	Structure - (190)	178.82	0.118	0.12			0.12	0.11	236.8	0.070		0.070	450	0.30%	40	0.169	1.06	0.63	5.63	41%	Good
	Pipe - (179)	Structure - (190)	178.77	Structure - (193)	178.65	0.118	0.24			0.12	0.21	226.2	0.133		0.133	450	0.30%	39	0.170	1.07	0.61	6.24	78%	Good
	Pipe - (182)	Structure - (193)	178.60	Structure - (195)	178.48	0.112	0.35			0.11	0.31	216.8	0.188		0.188	600	0.30%	39	0.365	1.29	0.50	6.74	52%	Good
	Pipe - (184)	Structure - (195)	178.43	Structure - (196)	178.32	0.114	0.46			0.11	0.41	209.7	0.242		0.242	600	0.30%	39	0.363	1.28	0.51	7.25	67%	Good
	Pipe - (185)	Structure - (196)	178.27	Structure - (197)	178.15	0.120	0.58			0.12	0.52	203.1	0.295		0.295	600	0.30%	39	0.365	1.29	0.50	7.75	81%	Good
																						5.00		
	Pipe - (186)	Structure - (197)	177.85	Structure - (198)	177.76	0.114	1.40			0.11	1.26	191.3	0.669	0.122	0.791	825	0.30%	31	0.852	1.59	0.32	8.57	93%	Good
																						5.00		
	Pipe - (252)	Structure - (111)	178.95	Structure - (110)	178.83	0.140	0.14			0.14	0.13	236.8	0.083		0.083	450	0.30%	40	0.169	1.06	0.63	5.63	49%	Good
	Pipe - (253)	Structure - (110)	178.78	Structure - (109)	178.66	0.140	0.28			0.14	0.25	226.2	0.158		0.158	600	0.30%	38	0.364	1.29	0.50	6.12	44%	Good
	Pipe - (254)	Structure - (109)	178.61	Structure - (337)	178.50	0.128	0.41			0.13	0.37	218.5	0.223		0.223	600	0.30%	38	0.364	1.29	0.49	6.62	61%	Good
	Pipe - (254) (1)	Structure - (337)	178.42	Structure - (108)	178.31	0.128	0.54			0.13	0.48	211.4	0.283		0.283	600	0.30%	38	0.366	1.29	0.49	7.11	77%	Good
	Pipe - (255)	Structure - (108)	178.26	Structure - (198)	178.14	0.136	0.67			0.14	0.61	204.9	0.344		0.344	750	0.30%	38	0.660	1.49	0.42	7.53	52%	Good
																						5.00		
	Pipe - (187)	Structure - (198)	177.71	Structure - (199)	177.56	0.130	2.20			0.13	1.98	187.9	1.034	0.122	1.156	1000	0.30%	50	1.422	1.81	0.46	9.03	81%	Good
																						5.00		
	Pipe - (256)	Structure - (69)	178.95	Structure - (68)	178.83	0.141	0.14			0.14	0.13	236.8	0.083		0.083	450	0.30%	40	0.169	1.06	0.63	5.63	49%	Good
	Pipe - (257)	Structure - (68)	178.78	Structure - (67)	178.67	0.141	0.28			0.14	0.25	226.2	0.159		0.159	600	0.30%	37	0.365	1.29	0.48	6.11	44%	Good
	Pipe - (260)	Structure - (67)	178.62	Structure - (64)	178.51	0.127	0.41			0.13	0.37	218.7	0.223		0.223	600	0.30%	37	0.365	1.29	0.47	6.58	61%	Good
	Pipe - (261)	Structure - (64)	178.46	Structure - (63)	178.35	0.128	0.54			0.13	0.48	211.9	0.284		0.284	600	0.30%	37	0.363	1.28	0.47	7.05	78%	Good
	Pipe - (262)	Structure - (63)	178.30	Structure - (199)	178.19	0.128	0.66			0.13	0.60	205.6	0.341		0.341	750	0.30%	37	0.662	1.50	0.41	7.46	52%	Good
																						5.00		
	Pipe - (188)	Structure - (199)	177.51	Outlet 8	177.45	0.128	2.99			0.13	2.69	183.1	1.370	0.122	1.492	1050	0.30%	18	1.622	1.87	0.16	9.20	92%	Good
																						5.00		
Outlet 9 Alignment - (MLH SWM 2019_WIP) - (10)	**Pipe - (209)**	Structure - (221)	178.94	Structure - (222)	178.82	0.146	0.15			0.15	0.13	236.8	0.087		0.087	450	0.30%	40	0.169	1.06	0.63	5.63	51%	Good
	Pipe - (210)	Structure - (222)	178.77	Structure - (223)	178.65	0.119	0.27			0.12	0.24	226.2	0.150		0.150	600	0.30%	40	0.364	1.29	0.52	6.14	41%	Good
	Pipe - (211)	Structure - (223)	178.60	Structure - (224)	178.48	0.113	0.38			0.11	0.34	218.2	0.206		0.206	600	0.30%	40	0.364	1.29	0.52	6.66	57%	Good
	Pipe - (212)	Structure - (224)	178.43	Structure - (345)	178.31	0.113	0.49			0.11	0.44	210.8	0.259		0.259	600	0.30%	40	0.364	1.29	0.52	7.18	71%	Good
	Pipe - (213)	Structure - (345)	178.23	Structure - (344)	178.11	0.118	0.61			0.12	0.55	204.0	0.310		0.310	600	0.30%	40	0.364	1.29	0.52	7.70	85%	Good
	Pipe - (213) (3)	Structure - (344)	178.04	Structure - (343)	177.92	0.118	0.73			0.12	0.65	197.6	0.359		0.359	750	0.30%	40	0.660	1.49	0.45	8.14	54%	Good
	Pipe - (213) (2)	Structure - (343)	177.84	Structure - (342)	177.72	0.118	0.84			0.12	0.76	192.5	0.406		0.406	750	0.30%	40	0.661	1.50	0.45	8.59	61%	Good
	Pipe - (213) (1)	Structure - (342)	177.65	Structure - (226)	177.53	0.118	0.96			0.12	0.87	187.7	0.451		0.451	750	0.30%	40	0.661	1.50	0.45	9.03	68%	Good
	Pipe - (214)	Structure - (226)	177.48	Structure - (227)	177.36	0.118	1.08			0.12	0.97	183.1	0.494		0.494	750	0.30%	40	0.661	1.50	0.45	9.48	75%	Good
	Pipe - (215)	Structure - (227)	177.31	Structure - (185)	177.20	0.118	1.20			0.12	1.08	178.8	0.535	0.093	0.628	750	0.30%	37	0.662	1.50	0.41	9.89	95%	Good
																						5.00		
	Pipe - (161)	Structure - (171)	178.94	Structure - (174)	178.83	0.064	0.06			0.06	0.06	236.8	0.038		0.038	450	0.30%	37	0.169	1.06	0.58	5.58	22%	Good
	Pipe - (164)	Structure - (174)	178.78	Structure - (175)	178.67	0.097	0.16			0.10	0.14	226.9	0.091		0.091	450	0.30%	36	0.169	1.07	0.57	6.15	54%	Good
	Pipe - (165)	Structure - (175)	178.62	Structure - (177)	178.50	0.098	0.26			0.10	0.23	218.1	0.141		0.141	450	0.30%	40	0.169	1.06	0.62	6.77	83%	Good
	Pipe - (167)	Structure - (177)	178.45	Structure - (178)	178.33	0.117	0.38			0.12	0.34	209.3	0.197		0.197	600	0.30%	40	0.364	1.29	0.52	7.29	54%	Good
	Pipe - (168)	Structure - (178)	178.28	Structure - (179)	178.16	0.118	0.49			0.12	0.44	202.6	0.250		0.250	600	0.30%	40	0.364	1.29	0.52	7.80	69%	Good
	Pipe - (169)	Structure - (179)	178.11	Structure - (180)	177.99	0.118	0.61			0.12	0.55	196.3	0.300		0.300	600	0.30%	40	0.364	1.29	0.52	8.32	82%	Good
	Pipe - (173)	Structure - (180)	177.94	Structure - (184)	177.82	0.118	0.73			0.12	0.66	190.5	0.347		0.347	750	0.30%	40	0.661	1.50	0.45	8.77	53%	Good
	Pipe - (174)	Structure - (184)	177.77	Structure - (185)	177.65	0.118	0.85			0.12	0.76	185.8	0.393		0.393	750	0.30%	40	0.661	1.50	0.45	9.21	60%	Good
																						5.00		
	Pipe - (175)	Structure - (185)	177.15	Structure - (186)	177.05	0.118	2.16			0.12	1.95	175.0	0.946	0.093	1.039	900	0.30%	31	1.074	1.69	0.30	10.19	97%	Good
																						5.00		
	Pipe - (202)	Structure - (214)	178.99	Structure - (215)	178.87	0.003	0.00			0.00	0.00	236.8	0.002		0.002	450	0.30%	39	0.169	1.07	0.61	5.61	1%	Good
	Pipe - (203)	Structure - (215)	178.82	Structure - (216)	178.70	0.065	0.07			0.06	0.06	226.4	0.039		0.039	450	0.30%	41	0.169	1.06	0.64	6.25	23%	Good
	Pipe - (204)	Structure - (216)	178.65	Structure - (218)	178.50	0.052	0.12			0.05	0.11	216.6	0.065		0.065	600	0.30%	50	0.364	1.29	0.64	6.89	18%	Good
	Pipe - (206)	Structure - (218)	178.45	Structure - (207)	178.36	0.074	0.19			0.07	0.17	207.7	0.101		0.101	600	0.30%	31	0.364	1.29	0.40	7.29	28%	Good
																						5.00		
	Pipe - (192)	Structure - (204)	178.95	Structure - (205)	178.83	0.015	0.02			0.02	0.01	236.8	0.009		0.009	450	0.30%	39	0.169	1.06	0.61	5.61	5%	Good
	Pipe - (193)	Structure - (205)	178.78	Structure - (206)	178.64	0.141	0.16			0.14	0.14	226.4	0.088		0.088	450	0.30%	45	0.169	1.07	0.71	6.32	52%	Good
	Pipe - (194)	Structure - (206)	178.59	Structure - (207)	178.47	0.163	0.32			0.16	0.29	215.6	0.172		0.172	600	0.30%	41	0.364	1.29	0.53	6.85	47%	Good
																						5.00		
	Pipe - (195)	Structure - (207)	178.31	Structure - (341)	178.20	0.133	0.65			0.13	0.58	202.6	0.327		0.327	600	0.30%	35	0.364	1.29	0.46	7.75	90%	Good
	Pipe - (195) (2)	Structure - (341)	178.12	Structure - (339)	178.02	0.127	0.77			0.13	0.70	197.0	0.381		0.381	750	0.30%	34	0.660	1.50	0.38	8.12	58%	Good
	Pipe - (195) (1)	Structure - (339)	177.95	Structure - (116)	177.85	0.121	0.89			0.12	0.80	192.7	0.430		0.430	750	0.30%	33	0.661	1.50	0.37	8.49	65%	Good
	Pipe - (113)	Structure - (116)	177.80	Structure - (340)	177.68	0.116	1.01			0.12	0.91	188.7	0.476		0.476	750	0.30%	40	0.662	1.50	0.44	8.93	72%	Good
	Pipe - (113) (1)	Structure - (340)	177.61	Structure - (115)	177.49	0.139	1.15			0.14	1.03	184.2	0.529		0.529	750	0.30%	40	0.660	1.49	0.45	9.37	80%	Good
	Pipe - (248)	Structure - (115)	177.44	Structure - (114)	177.32	0.140	1.29			0.14	1.16	179.8	0.579		0.579	750	0.30%	40	0.661	1.50	0.45	9.82	88%	Good
	Pipe - (249)	Structure - (114)	177.27	Structure - (113)	177.15	0.140	1.43			0.14	1.29	175.7	0.627		0.627	800	0.30%	40	0.785	1.56	0.43	10.25	80%	Good
	Pipe - (250)	Structure - (113)	177.10	Structure - (112)	176.98	0.140	1.57			0.14	1.41	171.9	0.674		0.674	800	0.30%	40	0.785	1.56	0.43	10.67	86%	Good
	Pipe - (251)	Structure - (112)	176.93	Structure - (186)	176.81	0.140	1.71			0.14	1.54	168.3	0.719		0.719	900	0.30%	40	1.074	1.69	0.39	11.07	67%	Good

AECOM CANADA INC.

PREPARED BY: Aws Nabeel

DESIGN STORM : 100 YEAR RETURN for Pearson Airport Manning's 'n' Conc. 0.012

CN

CHECKED BY: Brian Richert

I (10-YEAR): $I = A/(T+B)^c$ A= 1442.574 smooth HDPE pipe n 0.01

STORM SEWER CAPACITY ASSESSMENT FOR NORTH YARD- PROPOSED CONDITIONS

DATE: 8-Apr-19

Tc (start) (min): 5 B= 5.262

C= 0.776

STREET / Station	MANHOLE				AREA	Cumulative	AREA*RUNOFF COEFFICIENT			Cumulative	I	q	North yard Pipe	Total Q	STORM SEWER DESIGN INFORMATION					TIME		CAPACITY	Comment
	U/S		D/S			Total Area	A of C	A of C	A of C	AxC	(mm/hr)	(100-YR)	Pipe		SIZE	SLOPE	LENGTH	Q full	V full	SECT.	CUM.	CHECK FOR	
	ID	INV	ID	INV	(ha)	(ha)	0.30	0.60	0.90			(m3/s)	(m3/s)	(m3/s)	(mm)	(%)	(m)	(m3/s)	(m/s)	(min.)	(min.)	SURCHARGE	
																					5.00		
Pipe - (176)	Structure - (186)	176.76	Structure - (187)	176.60	0.140	4.01			0.14	3.61	165.1	1.656	0.093	1.749	1200	0.30%	50	2.313	2.04	0.41	11.48	76%	Good
																					5.00		
Pipe - (196)	Structure - (208)	178.89	Structure - (338)	178.76	0.018	0.02			0.02	0.02	236.8	0.011		0.011	600	0.30%	45	0.364	1.29	0.58	5.58	3%	Good
Pipe - (196) (1)	Structure - (338)	178.69	Structure - (209)	178.53	0.125	0.14			0.13	0.13	226.9	0.081		0.081	600	0.30%	52	0.364	1.29	0.67	6.25	22%	Good
Pipe - (197)	Structure - (209)	178.48	Structure - (210)	178.35	0.177	0.32			0.18	0.29	216.6	0.173		0.173	600	0.30%	42	0.365	1.29	0.54	6.79	47%	Good
Pipe - (198)	Structure - (210)	178.30	Structure - (211)	178.21	0.127	0.45			0.13	0.40	209.0	0.234		0.234	600	0.30%	30	0.364	1.29	0.39	7.19	64%	Good
Pipe - (199)	Structure - (211)	178.16	Structure - (212)	178.08	0.116	0.56			0.12	0.51	203.9	0.287		0.287	600	0.30%	28	0.363	1.28	0.37	7.55	79%	Good
Pipe - (200)	Structure - (212)	178.03	Structure - (213)	177.95	0.089	0.65			0.09	0.59	199.3	0.325		0.325	600	0.30%	28	0.365	1.29	0.36	7.91	89%	Good
Pipe - (201)	Structure - (213)	177.90	Structure - (80)	177.78	0.101	0.75			0.10	0.68	195.1	0.367		0.367	750	0.30%	39	0.659	1.49	0.44	8.35	56%	Good
Pipe - (238)	Structure - (80)	177.73	Structure - (79)	177.61	0.140	0.89			0.14	0.80	190.3	0.425		0.425	750	0.30%	40	0.661	1.50	0.45	8.79	64%	Good
Pipe - (239)	Structure - (79)	177.56	Structure - (78)	177.44	0.141	1.03			0.14	0.93	185.6	0.479		0.479	750	0.30%	40	0.661	1.50	0.45	9.24	73%	Good
Pipe - (240)	Structure - (78)	177.39	Structure - (77)	177.27	0.141	1.17			0.14	1.06	181.1	0.531		0.531	750	0.30%	40	0.661	1.50	0.45	9.68	80%	Good
Pipe - (350)	Structure - (77)	177.22	Structure - (74)	177.10	0.141	1.31			0.14	1.18	176.9	0.581		0.581	900	0.30%	40	1.074	1.69	0.39	10.08	54%	Good
Pipe - (244)	Structure - (74)	177.05	Structure - (187)	176.93	0.141	1.45			0.14	1.31	173.4	0.630		0.630	900	0.30%	40	1.074	1.69	0.39	10.47	59%	Good
																					5.00		
Pipe - (177)	Structure - (187)	176.62	**Outlet 9**	176.55	0.141	5.61			0.14	5.04	162.0	2.270	0.093	2.363	1300	0.30%	22	2.865	2.16	0.17	11.65	82%	Good
																					5.00		

AECOM CANADA INC.

DESIGN STORM : 100 YEAR RETURN for Climate Change Manning's 'n' Conc. 0.013

I (10-YEAR): $I = A*T^B$ A= 50.300

Tc (start) (min): 5 B= -0.690

CN

STORM SEWER CAPACITY ASSESSMENT- STAGE 2

PREPARED BY: Aws Nabeel

CHECKED BY: Brian Richert

DATE: 27-Nov-19

STREET / Station	MANHOLE U/S ID	MANHOLE U/S INV	MANHOLE D/S ID	MANHOLE D/S INV	AREA (ha)	Cumulative Total Area (ha)	AREA*RUNOFF COEFFICIENT A of C 0.30	A of C 0.60	A of C 0.90	Cumulative AxC	I (mm/hr)	q (100-YR) (m3/s)	q from Sub-Drain (m3/s)	Total Q from Pavement + Sub-Drain (m3/s)	STORM SEWER DESIGN INFORMATION SIZE (mm)	SLOPE (%)	LENGTH (m)	Q full (m3/s)	V full (m/s)	TIME SECT. (min.)	TIME CUM. (min.)	CAPACITY CHECK FOR SURCHARGE	Comment
																					5		
Between Britannia Road and Louis Saint Laurent Ave	29	188.09	30	187.56	0.0376	0.04			0.04	0.03	275.6	0.026	0.016	0.042	300	0.53%	100	0.070	1.00	1.67	6.77	59%	Good
	30	187.56	31	187.02	0.0376	0.08			0.04	0.07	226.6	0.043	0.016	0.059	300	0.54%	100	0.071	1.01	1.66	8.43	82%	Good
	31	187.02	32	186.48	0.0376	0.11			0.04	0.10	194.8	0.055	0.016	0.071	300	0.54%	100	0.071	1.01	1.66	10.09	100%	Good
	32	186.48	33	185.94	0.0376	0.15			0.04	0.14	172.1	0.065	0.016	0.081	375	0.54%	100	0.129	1.17	1.43	11.52	63%	Good
	33	185.94	34	185.40	0.0376	0.19			0.04	0.17	157.1	0.074	0.016	0.090	375	0.54%	100	0.129	1.17	1.43	12.95	70%	Good
	34	185.40	35	184.86	0.0376	0.23			0.04	0.20	144.9	0.082	0.016	0.098	375	0.54%	100	0.129	1.17	1.43	14.37	76%	Good
	35	184.86	36	184.32	0.0376	0.26			0.04	0.24	134.8	0.089	0.016	0.105	450	0.54%	100	0.210	1.32	1.27	15.64	50%	Good
	36	184.32	37	183.78	0.0376	0.30			0.04	0.27	127.2	0.096	0.016	0.112	450	0.54%	100	0.210	1.32	1.27	16.90	53%	Good
	37	183.78	38	183.24	0.0376	0.34			0.04	0.30	120.6	0.102	0.016	0.118	450	0.54%	100	0.210	1.32	1.27	18.17	56%	Good
	38	183.24	39	182.70	0.0376	0.38			0.04	0.34	114.7	0.108	0.016	0.124	450	0.54%	100	0.210	1.32	1.27	19.43	59%	Good
	39	182.70	outlet	182.23	0.0328	0.41			0.03	0.37	109.5	0.112	0.020	0.132	450	0.54%	87	0.210	1.32	1.10	20.54	63%	Good

AECOM CANADA INC.

DESIGN STORM : 100 YEAR RETURN for Climate Change Manning's 'n' Conc. 0.013

I (10-YEAR): $I = A*T^B$ A= 50.300

Tc (start) (min): 30 B= -0.690

CN

STORM SEWER CAPACITY ASSESSMENT- STAGE 2 North of Yard

PREPARED BY: Aws Nabeel

CHECKED BY: Brian Richert

DATE: 6-Dec-19

STREET / Station	MANHOLE U/S ID	MANHOLE U/S INV	MANHOLE D/S ID	MANHOLE D/S INV	AREA (ha)	Cumulative Total Area (ha)	AREA*RUNOFF COEFFICIENT A of C 0.30	A of C 0.60	A of C 1.00	Cumulative AxC	I (mm/hr)	q (100-YR) (m3/s)	q from Sub-Drain (m3/s)	q from Ditch to outlet (m3/s)	Total Q from ballast + ditch + Sub-Drain (m3/s)	STORM SEWER DESIGN INFORMATION SIZE (mm)	SLOPE (%)	LENGTH (m)	Q full (m3/s)	V full (m/s)	TIME SECT. (min.)	TIME CUM. (min.)	CAPACITY CHECK FOR SURCHARGE	Comment
																						30.00		
Between Lower Baseline and Britannia Road	4	181.16	5	180.56	0.1179	0.12			0.12	0.12	81.1	0.027	0.010		0.037	300	0.30%	92	0.053	0.75	2.05	32.05	69%	Good
	5	180.56	6	180.30	0.1136	0.23			0.11	0.23	77.5	0.050	0.010		0.060	375	0.30%	89	0.096	0.87	1.70	33.75	62%	Good
	6	180.30	outlet						0.00	0.23	74.8	0.048	0.010	0.090	0.148	600	0.30%	36	0.336	1.19	0.50	34.25	44%	Good
															0.000							30.00		
	7	180.81	8	180.52	0.0969	0.10			0.10	0.10	81.1	0.022	0.010		0.032	300	0.30%	76	0.053	0.75	1.68	31.68	60%	Good
	8	180.52	9	180.15	0.1326	0.23			0.13	0.23	78.1	0.050	0.010		0.060	375	0.30%	104	0.096	0.87	1.99	33.67	62%	Good
	9	180.15	10	179.87	0.1199	0.35			0.12	0.35	74.9	0.073	0.010		0.083	375	0.30%	94	0.096	0.87	1.80	35.47	86%	Good
	10	179.87	outlet						0.00	0.35	72.3	0.070	0.010	0.000	0.080	600	0.30%	36	0.336	1.19	0.50	35.97	24%	Good
															0.000							30.00		
	11	180.01	12	179.68	0.1394	0.14			0.14	0.14	81.1	0.031	0.010		0.041	375	0.30%	109	0.096	0.87	2.09	32.09	43%	Good
	12	179.68	outlet						0.00	0.14	77.5	0.030	0.010	0.080	0.120	600	0.30%	36	0.336	1.19	0.50	32.59	36%	Good
															0.000							30.00		
	13	179.98	14	179.68	0.1280	0.13			0.13	0.13	81.1	0.029	0.010		0.039	375	0.30%	100	0.096	0.87	1.92	31.92	40%	Good
	14	179.68	outlet						0.00	0.13	77.8	0.028	0.010	0.000	0.038	600	0.30%	36	0.336	1.19	0.50	32.42	11%	Good
															0.000							30.00		
	15	179.93	16	179.55	0.1188	0.12			0.12	0.12	81.1	0.027	0.010		0.037	300	0.30%	93	0.053	0.75	2.06	32.06	69%	Good
	16	179.55	17	179.25	0.1280	0.25			0.13	0.25	77.5	0.053	0.010		0.063	375	0.30%	100	0.096	0.87	1.92	33.98	66%	Good
	17	179.25	outlet						0.00	0.25	74.5	0.051	0.010	0.130	0.191	600	0.30%	36	0.336	1.19	0.50	34.49	57%	Good
															0.000							30.00		
	18	179.37	19	179.04	0.1389	0.14			0.14	0.14	81.1	0.031	0.010		0.041	375	0.30%	109	0.096	0.87	2.08	32.08	43%	Good
	19	179.04	outlet						0.00	0.14	77.5	0.030	0.010	0.000	0.040	600	0.30%	36	0.336	1.19	0.50	32.59	12%	Good
																						30.00		
	20		outlet						0.00	0.00	81.1	0.000	0.010	0.060	0.070	600	0.30%	36	0.336	1.19	0.50	30.50	21%	Good
															0.000							30.00		
	21	178.92	22	178.65	0.1182	0.12			0.12	0.12	81.1	0.027	0.010		0.037	375	0.30%	92	0.096	0.87	1.77	31.77	38%	Good
															0.000							30.00		
	23	179.01	22	178.65	0.1182	0.12			0.12	0.12	81.1	0.027	0.010		0.037	375	0.30%	92	0.096	0.87	1.77	31.77	38%	Good
	22	178.65	outlet						0.00	0.12	78.0	0.026	0.010	0.050	0.122	600	0.30%	36	0.336	1.19	0.50	32.27	36%	Good
															0.000							30.00		
	28	179.55	27	179.29	0.0866	0.09			0.09	0.09	81.1	0.020	0.010		0.030	250	0.25%	68	0.030	0.61	1.86	31.86	99%	Good
	27	179.29	26	179.05	0.1023	0.19			0.10	0.19	77.8	0.041	0.010		0.051	375	0.25%	80	0.088	0.79	1.68	33.54	58%	Good
	26	179.05	25	178.77	0.1264	0.32			0.13	0.32	75.1	0.066	0.010		0.076	375	0.30%	99	0.096	0.87	1.89	35.43	79%	Good
	25	178.77	24	178.55	0.1129	0.43			0.11	0.43	72.3	0.086	0.010		0.096	400	0.25%	88	0.104	0.83	1.77	37.21	92%	Good
	24	178.55	outlet						0.00	0.43	69.9	0.083	0.010	0.000	0.093	600	0.30%	36	0.336	1.19	0.50	37.71	28%	Good

Stage 1 Sub-drains

Location	Station Extent	Subdrain ID	Drainage ID	Area (ha)	Longitudinal Slope	Pipe Size (mm)	Pipe Type	Pipe Length
Between Britannia Road and Louis Saint Laurent Ave	60+710 to 60+8010	8001	8001	0.08	0.59	150	HDPE	99.1
	61+425 to 61+545	8002	8002	0.123	0.59	150	HDPE	107.9
	61+545 to 61+650	8003	8003	0.11	0.59	150	HDPE	102.7
	61+650 to 61+750	8004	8004	0.11	0.59	150	HDPE	97.6
	62+110 to 62+225	8005	8005	0.41	0.37	150	HDPE	111.2
	62+225 to 62+375	8006	8006	0.3	0.37	150	HDPE	146.7
Between Lower Baseline and Britannia Road	65+145 to 65+212	8007	8007	0.17	0.75	250	HDPE	65
	65+289 to 65+212	8008	8008	0.14	0.75	250	HDPE	107
	65+212 to outlet	8009	8009	0.31	0.75	250	HDPE	26

Stage 2 Sub-drains

Location	Station Extent	Subdrain ID	Drainage ID	Area (ha)	Longitudinal Slope	Pipe Size (mm)	Pipe Type	Pipe Length	From CB	To CB
Between Britannia Road and Louis Saint Laurent Ave	61+300 to 41+400	9001-1	9001-1	0.12	0.59	150	HDPE	99.4	-	30
	61+300 to 41+400	9001-2	9001-2	0.06	0.59	150	HDPE	98	-	30
	41+400 to 61+500	9002-1	9002-1	0.12	0.59	150	HDPE	99.4	30	31
	41+400 to 61+500	9002-2	9002-2	0.06	0.59	150	HDPE	98	30	31
	61+500 to 61+600	9003-1	9003-1	0.12	0.59	150	HDPE	99.4	31	32
	61+500 to 61+600	9003-2	9003-2	0.06	0.59	150	HDPE	98	31	32
	61+600 to 61+700	9004-1	9004-1	0.03	0.59	150	HDPE	110	32	33
	61+600 to 61+700	9004-2	9004-2	0.09	0.59	150	HDPE	99.4	32	33
	61+600 to 61+700	9004-3	9004-3	0.06	0.59	150	HDPE	98	32	33
	61+700 to 61+800	9005-1	9005-1	0.03	0.59	150	HDPE	110	33	34
	61+700 to 61+800	9005-2	9005-2	0.09	0.59	150	HDPE	99.4	33	34
	61+700 to 61+800	9005-3	9005-3	0.06	0.59	150	HDPE	98	33	34
	61+800 to 61+900	9006-1	9006-1	0.03	0.59	150	HDPE	110	34	35
	61+800 to 61+900	9006-2	9006-2	0.09	0.59	150	HDPE	99.4	34	35
	61+800 to 61+900	9006-3	9006-3	0.06	0.59	150	HDPE	98	34	35
	61+900 to 62+000	9007-1	9007-1	0.03	0.59	150	HDPE	110	35	36
	61+900 to 62+000	9007-2	9007-2	0.09	0.59	150	HDPE	99.4	35	36
	61+900 to 62+000	9007-3	9007-3	0.06	0.59	150	HDPE	98	35	36
	62+000 to 62+100	9008-1	9008-1	0.03	0.59	150	HDPE	110	36	37
	62+000 to 62+100	9008-2	9008-2	0.09	0.59	150	HDPE	99.4	36	37
	62+000 to 62+100	9008-3	9008-3	0.06	0.59	150	HDPE	98	36	37
	62+100 to 62+200	9009-1	9009-1	0.03	0.59	150	HDPE	110	37	38
	62+100 to 62+200	9009-2	9009-2	0.09	0.59	150	HDPE	99.4	37	38
	62+100 to 62+200	9009-3	9009-3	0.06	0.59	150	HDPE	98	37	38
	62+200 to 62+300	9010-1	9010-1	0.03	0.59	150	HDPE	110	38	39
	62+200 to 62+300	9010-2	9010-2	0.09	0.59	150	HDPE	99.4	38	39
	62+200 to 62+300	9010-3	9010-3	0.06	0.59	150	HDPE	98	38	39
	62+300 to 62+372	9011-1	9011-1	0.03	0.59	150	HDPE	110	39	outlet
	62+300 to 62+372	9011-2	9011-2	0.09	0.59	150	HDPE	99.4	39	outlet
	62+300 to 62+372	9011-3	9011-3	0.11	0.59	150	HDPE	98	39	outlet

Stage 2 Above Terminal Yard Sub-drains

Location	Station Extent	Subdrain ID	Drainage ID	Area (ha)	Longitudinal Slope	Pipe Size (mm)	Pipe Type	Pipe Length	From CB	To CB
Between Lower Baseline and Britannia Road	62+724 to 62+824	9012	9012	0.11	0.25	150	HDPE	91.7	-	5
	62+824 to 62+915	9013	9013	0.13	0.3	150	HDPE	88.4	-	6
	62+915 to 62+995	9014	9014	0.1	0.3	150	HDPE	75	-	8
	62+995 to 63+100	9015	9015	0.13	0.3	150	HDPE	103.2	-	9
	63+100 to 63+195	9016	9016	0.14	0.3	150	HDPE	93.3	-	10
	63+195 to 63+325	9017	9017	0.16	0.3	150	HDPE	128.1	-	11
	63+325 to 63+435	9018	9018	0.15	0.3	150	HDPE	108	-	12
	63+435 to 63+533	9019	9019	0.12	0.3	150	HDPE	96.2	-	13
	63+533 to 63+634	9020	9020	0.14	0.3	150	HDPE	99.4	-	14
	63+634 to 63+731	9021	9021	0.12	0.3	150	HDPE	92.4	-	16
	63+731 to 63+832	9022	9022	0.14	0.3	150	HDPE	99.6	-	17
	63+950 to 63+832	9023	9023	0.16	0.3	150	HDPE	115.9	-	17
	63+965 to 64+072	9024	9024	0.15	0.3	150	HDPE	112.2	-	19
	64+072 to 64+192	9025	9025	0.15	0.3	150	HDPE	117.8	-	20
	64+192 to 64+300	9026	9026	0.14	0.3	150	HDPE	105.1	-	21
	64+300 to 64+393	9027	9027	0.12	0.3	150	HDPE	91.9	-	22
	64+515 to 64+393	9028	9028	0.16	0.29	150	HDPE	117.6	-	22
	64+515 to 64+635	9029	9029	0.16	0.25	150	HDPE	120.3	-	24
	64+725 to 64+635	9030	9030	0.12	0.25	150	HDPE	88	-	24
	64+825 to 64+725	9031	9031	0.18	0.25	150	HDPE	99.5	-	25
	64+906 to 64+825	9032	9032	0.11	0.25	150	HDPE	79.6	-	26
	64+975 to 64+906	9033	9033	0.12	0.25	150	HDPE	92.1	-	27

AECOM CANADA INC.

DESIGN STORM : 100 YEAR RETURN for Climate Change Manning's 'n' HDPE 0.010

I (10-YEAR): $I = A*T^B$ A= 50.300

Tc (start) (min): 120 B= -0.690

Assumed

PREPARED BY: Aws Nabeel

CHECKED BY: Brian Richert

DATE: 20-Nov-19

CN

SUBDRAIN CAPACITY ASSESSMENT - STAGE 1

Drainage ID	MANHOLE U/S ID	MANHOLE U/S INV	MANHOLE D/S ID	MANHOLE D/S INV	AREA (ha)	Cumulative Total Area (ha)	AREA*RUNOFF COEFFICIENT A of C 0.30	A of C 0.60	A of C 1.00	Cumulative AxC	I (mm/hr)	q (100-YR) (m3/s)	STORM SEWER DESIGN INFORMATION SIZE (mm)	SLOPE (%)	LENGTH (m)	Q full (m3/s)	V full (m/s)	TIME SECT. (min.)	TIME CUM. (min.)	CAPACITY CHECK FOR SURCHARGE	Comment
60+710 to 60+8010																			120.00		
8001	8001-1	-	8001-1	-	0.0800	0.08			0.08	0.08	31.2	0.007	150	0.59%	99	0.015	0.86	1.92	121.92	46%	Good
61+425 to 61+545																			120.00		
8002	8002-1	-	8002-1	-	0.1200	0.12			0.12	0.12	31.2	0.010	150	0.59%	108	0.015	0.86	2.09	122.09	68%	Good
61+545 to 61+650																			120.00		
8003	8003-1	-	8003-1	-	0.1100	0.11			0.11	0.11	31.2	0.010	150	0.59%	103	0.015	0.86	1.99	121.99	63%	Good
61+650 to 61+750																			120.00		
8004	8004-1	-	8004-1	-	0.1100	0.11			0.11	0.11	31.2	0.010	150	0.59%	98	0.015	0.86	1.89	121.89	63%	Good
62+110 to 62+225																			120.00		
8005	8005-1	-	8005-1	-	0.4100	0.41			0.41	0.41	31.2	0.036	250	0.37%	111	0.047	0.96	1.93	121.93	76%	Good
62+225 to 62+375																			120.00		
8006	8006-1	-	8006-1	-	0.3000	0.30			0.30	0.30	31.2	0.026	300	0.37%	147	0.076	1.08	2.26	122.26	34%	Good
65+145 to 65+212																			120.00		
8007	8007	-	8007	-	0.1700	0.17			0.17	0.17	31.2	0.015	250	0.75%	65	0.067	1.36	0.79	120.79	22%	Good
65+289 to 65+212																			120.00		
8008	8008	-	8008	-	0.1400	0.14			0.14	0.14	31.2	0.012	250	0.75%	107	0.067	1.36	1.31	121.31	18%	Good
65+212 to outlet																			120.00		
8009	8009	-	8009	-	0.3100	0.31			0.31	0.31	31.2	0.027	250	3.98%	26	0.154	3.14	0.14	120.14	17%	Good

AECOM CANADA INC.

DESIGN STORM : 100 YEAR RETURN for Climate Change Manning's 'n' HDPE 0.010

I (10-YEAR): $I = A*T^B$ A= 50.300

Tc (start) (min): 120 B= -0.690

Assumed

CN

SUBDRAIN CAPACITY ASSESSMENT - STAGE 2

PREPARED BY: Aws Nabeel

CHECKED BY: Brian Richert

DATE: 27-Nov-19

Drainage ID	MANHOLE U/S ID	MANHOLE U/S INV	MANHOLE D/S ID	MANHOLE D/S INV	AREA (ha)	Cumulative Total Area (ha)	AREA*RUNOFF COEFFICIENT A of C 0.30	A of C 0.60	A of C 1.00	Cumulative AxC	I (mm/hr)	q (100-YR) (m3/s)	STORM SEWER DESIGN INFORMATION SIZE (mm)	SLOPE (%)	LENGTH (m)	Q full (m3/s)	V full (m/s)	TIME SECT. (min.)	TIME CUM. (min.)	CAPACITY CHECK FOR SURCHARGE	Comment
61+300 to 61+400																			120.00		
9001-1	9001-1	-	9001-1	-	0.1200	0.12			0.12	0.12	31.2	0.010	150	0.59%	99	0.015	0.86	1.93	121.93	68%	Good
61+300 to 61+400																			120.00		
9001-2	9001-2	-	9001-2	-	0.0600	0.06			0.06	0.06	31.2	0.005	150	0.59%	98	0.015	0.86	1.90	121.90	34%	Good
41+400 to 61+500																			120.00		
9002-1	9002-1	-	9002-1	-	0.1200	0.12			0.12	0.12	31.2	0.010	150	0.59%	99	0.015	0.86	1.93	121.93	68%	Good
41+400 to 61+500																			120.00		
9002-2	9002-2	-	9002-2	-	0.0600	0.06			0.06	0.06	31.2	0.005	150	0.59%	98	0.015	0.86	1.90	121.90	34%	Good
61+500 to 61+600																			120.00		
9003-1	9003-1	-	9003-1	-	0.1200	0.12			0.12	0.12	31.2	0.010	150	0.59%	99	0.015	0.86	1.93	121.93	68%	Good
61+500 to 61+600																			120.00		
9003-2	9003-2	-	9003-2	-	0.0600	0.06			0.06	0.06	31.2	0.005	150	0.59%	98	0.015	0.86	1.90	121.90	34%	Good
61+600 to 61+700																			120.00		
9004-1	9004-1	-	9004-1	-	0.0300	0.03			0.03	0.03	31.2	0.003	150	0.59%	110	0.015	0.86	2.13	122.13	17%	Good
61+600 to 61+700																			120.00		
9004-2	9004-2	-	9004-2	-	0.0900	0.09			0.09	0.09	31.2	0.008	150	0.59%	99	0.015	0.86	1.93	121.93	51%	Good
61+600 to 61+700																			120.00		
9004-3	9004-3	-	9004-3	-	0.0600	0.06			0.06	0.06	31.2	0.005	150	0.59%	98	0.015	0.86	1.90	121.90	34%	Good
61+700 to 61+800																			120.00		
9005-1	9005-1	-	9005-1	-	0.0300	0.03			0.03	0.03	31.2	0.003	150	0.59%	110	0.015	0.86	2.13	122.13	17%	Good
61+700 to 61+800																			120.00		
9005-2	9005-2	-	9005-2	-	0.0900	0.09			0.09	0.09	31.2	0.008	150	0.59%	99	0.015	0.86	1.93	121.93	51%	Good
61+700 to 61+800																			120.00		
9005-3	9005-3	-	9005-3	-	0.0600	0.06			0.06	0.06	31.2	0.005	150	0.59%	98	0.015	0.86	1.90	121.90	34%	Good
61+800 to 61+900																			120.00		
9006-1	9006-1	-	9006-1	-	0.0300	0.03			0.03	0.03	31.2	0.003	150	0.59%	110	0.015	0.86	2.13	122.13	17%	Good
61+800 to 61+900																			120.00		
9006-2	9006-2	-	9006-2	-	0.0900	0.09			0.09	0.09	31.2	0.008	150	0.59%	99	0.015	0.86	1.93	121.93	51%	Good
61+800 to 61+900																			120.00		
9006-3	9006-3	-	9006-3	-	0.0600	0.06			0.06	0.06	31.2	0.005	150	0.59%	98	0.015	0.86	1.90	121.90	34%	Good
61+900 to 62+000																			120.00		
9007-1	9007-1	-	9007-1	-	0.0300	0.03			0.03	0.03	31.2	0.003	150	0.59%	110	0.015	0.86	2.13	122.13	17%	Good
61+900 to 62+000																			120.00		
9007-2	9007-2	-	9007-2	-	0.0900	0.09			0.09	0.09	31.2	0.008	150	0.59%	99	0.015	0.86	1.93	121.93	51%	Good
61+900 to 62+000																			120.00		
9007-3	9007-3	-	9007-3	-	0.0600	0.06			0.06	0.06	31.2	0.005	150	0.59%	98	0.015	0.86	1.90	121.90	34%	Good
62+000 to 62+100																			120.00		
9008-1	9008-1	-	9008-1	-	0.0300	0.03			0.03	0.03	31.2	0.003	150	0.59%	110	0.015	0.86	2.13	122.13	17%	Good
62+000 to 62+100																			120.00		
9008-2	9008-2	-	9008-2	-	0.0900	0.09			0.09	0.09	31.2	0.008	150	0.59%	99	0.015	0.86	1.93	121.93	51%	Good
62+000 to 62+100																			120.00		
9008-3	9008-3	-	9008-3	-	0.0600	0.06			0.06	0.06	31.2	0.005	150	0.59%	98	0.015	0.86	1.90	121.90	34%	Good
62+100 to 62+200																			120.00		
9009-1	9009-1	-	9009-1	-	0.0300	0.03			0.03	0.03	31.2	0.003	150	0.59%	110	0.015	0.86	2.13	122.13	17%	Good
62+100 to 62+200																			120.00		
9009-2	9009-2	-	9009-2	-	0.0900	0.09			0.09	0.09	31.2	0.008	150	0.59%	99	0.015	0.86	1.93	121.93	51%	Good
62+100 to 62+200																			120.00		
9009-3	9009-3	-	9009-3	-	0.0600	0.06			0.06	0.06	31.2	0.005	150	0.59%	98	0.015	0.86	1.90	121.90	34%	Good
62+200 to 62+300																			120.00		
9010-1	9010-1	-	9010-1	-	0.0300	0.03			0.03	0.03	31.2	0.003	150	0.59%	110	0.015	0.86	2.13	122.13	17%	Good
62+200 to 62+300																			120.00		
9010-2	9010-2	-	9010-2	-	0.0900	0.09			0.09	0.09	31.2	0.008	150	0.59%	99	0.015	0.86	1.93	121.93	51%	Good
62+200 to 62+300																			120.00		
9010-3	9010-3	-	9010-3	-	0.0600	0.06			0.06	0.06	31.2	0.005	150	0.59%	98	0.015	0.86	1.90	121.90	34%	Good
62+300 to 62+372																			120.00		
9011-1	9011-1	-	9011-1	-	0.0300	0.03			0.03	0.03	31.2	0.003	150	0.59%	110	0.015	0.86	2.13	122.13	17%	Good
62+300 to 62+372																			120.00		
9011-2	9011-2	-	9011-2	-	0.0900	0.09			0.09	0.09	31.2	0.008	150	0.59%	99	0.015	0.86	1.93	121.93	51%	Good
62+300 to 62+372																			120.00		
9011-3	9011-3	-	9011-3	-	0.1100	0.11			0.11	0.11	31.2	0.010	150	0.59%	98	0.015	0.86	1.90	121.90	63%	Good

AECOM CANADA INC.

DESIGN STORM : 100 YEAR RETURN for Climate Change Manning's 'n' HDPE 0.010

I (10-YEAR): $I = A*T^B$ A= 50.300

Tc (start) (min): 120 B= -0.690

Assumed

PREPARED BY: Aws Nabeel

CHECKED BY: Brian Richert

DATE: 6-Dec-19

CN

SUBDRAIN CAPACITY ASSESSMENT - STAGE 2 North of Yard

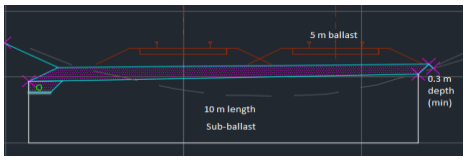
Drainage ID	MANHOLE U/S ID	MANHOLE U/S INV	MANHOLE D/S ID	MANHOLE D/S INV	AREA (ha)	Cumulative Total Area (ha)	AREA*RUNOFF COEFFICIENT A of C 0.30	A of C 0.60	A of C 1.00	Cumulative AxC	I (mm/hr)	q (100-YR) (m3/s)	STORM SEWER DESIGN INFORMATION SIZE (mm)	SLOPE (%)	LENGTH (m)	Q full (m3/s)	V full (m/s)	TIME SECT. (min.)	TIME CUM. (min.)	CAPACITY CHECK FOR SURCHARGE	Comment
62+724 to 62+824																			120.00		
9012	9012	-	9012	-	0.1100	0.11			0.11	0.11	31.2	0.010	150	0.25%	92	0.010	0.56	2.73	122.73	96%	Good
62+824 to 62+915																			120.00		
9013	9013	-	9013	-	0.1300	0.13			0.13	0.13	31.2	0.011	200	0.30%	88	0.023	0.74	1.98	121.98	48%	Good
62+915 to 62+995																			120.00		
9014	9014	-	9014	-	0.1000	0.10			0.10	0.10	31.2	0.009	150	0.30%	75	0.011	0.61	2.04	122.04	80%	Good
62+995 to 63+100																			120.00		
9015	9015	-	9015	-	0.1300	0.13			0.13	0.13	31.2	0.011	200	0.30%	103	0.023	0.74	2.31	122.31	48%	Good
63+100 to 63+195																			120.00		
9016	9016	-	9016	-	0.1400	0.14			0.14	0.14	31.2	0.012	200	0.30%	93	0.023	0.74	2.09	122.09	52%	Good
63+195 to 63+325																			120.00		
9017	9017	-	9017	-	0.1600	0.16			0.16	0.16	31.2	0.014	200	0.30%	128	0.023	0.74	2.87	122.87	59%	Good
63+325 to 63+435																			120.00		
9018	9018	-	9018	-	0.1500	0.15			0.15	0.15	31.2	0.013	200	0.30%	108	0.023	0.74	2.42	122.42	56%	Good
63+435 to 63+533																			120.00		
9019	9019	-	9019	-	0.1200	0.12			0.12	0.12	31.2	0.010	150	0.30%	96	0.011	0.61	2.61	122.61	96%	Good
63+533 to 63+634																			120.00		
9020	9020	-	9020	-	0.1400	0.14			0.14	0.14	31.2	0.012	200	0.30%	99	0.023	0.74	2.23	122.23	52%	Good
63+634 to 63+731																			120.00		
9021	9021	-	9021	-	0.1200	0.12			0.12	0.12	31.2	0.010	150	0.30%	92	0.011	0.61	2.51	122.51	96%	Good
63+731 to 63+832																			120.00		
9022	9022	-	9022	-	0.1400	0.14			0.14	0.14	31.2	0.012	200	0.30%	100	0.023	0.74	2.23	122.23	52%	Good
63+950 to 63+832																			120.00		
9023	9023	-	9023	-	0.1600	0.16			0.16	0.16	31.2	0.014	200	0.30%	116	0.023	0.74	2.60	122.60	59%	Good
63+965 to 64+072																			120.00		
9024	9024	-	9024	-	0.1500	0.15			0.15	0.15	31.2	0.013	200	0.30%	112	0.023	0.74	2.52	122.52	56%	Good
64+072 to 64+192																			120.00		
9025	9025	-	9025	-	0.1500	0.15			0.15	0.15	31.2	0.013	200	0.30%	118	0.023	0.74	2.64	122.64	56%	Good
64+192 to 64+300																			120.00		
9026	9026	-	9026	-	0.1400	0.14			0.14	0.14	31.2	0.012	200	0.30%	105	0.023	0.74	2.36	122.36	52%	Good
64+300 to 64+393																			120.00		
9027	9027	-	9027	-	0.1200	0.12			0.12	0.12	31.2	0.010	150	0.30%	92	0.011	0.61	2.50	122.50	96%	Good
64+515 to 64+393																			120.00		
9028	9028	-	9028	-	0.1600	0.16			0.16	0.16	31.2	0.014	200	0.29%	118	0.023	0.73	2.68	122.68	60%	Good
64+515 to 64+635																			120.00		
9029	9029	-	9029	-	0.1600	0.16			0.16	0.16	31.2	0.014	200	0.25%	120	0.021	0.68	2.95	122.95	65%	Good
64+725 to 64+635																			120.00		
9030	9030	-	9030	-	0.1200	0.12			0.12	0.12	31.2	0.010	200	0.25%	88	0.021	0.68	2.16	122.16	49%	Good
64+825 to 64+725																			120.00		
9031	9031	-	9031	-	0.1800	0.18			0.18	0.18	31.2	0.016	200	0.25%	100	0.021	0.68	2.44	122.44	73%	Good
64+906 to 64+825																			120.00		
9032	9032	-	9032	-	0.1100	0.11			0.11	0.11	31.2	0.010	150	0.25%	80	0.010	0.56	2.37	122.37	96%	Good
64+975 to 64+906																			120.00		
9033	9033	-	9033	-	0.1200	0.12			0.12	0.12	31.2	0.010	200	0.25%	92	0.021	0.68	2.26	122.26	49%	Good

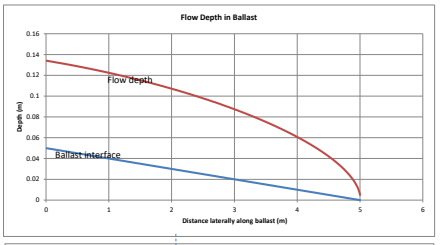
Tc Calculations for Ballast Material using A, B and C IDF Parameters

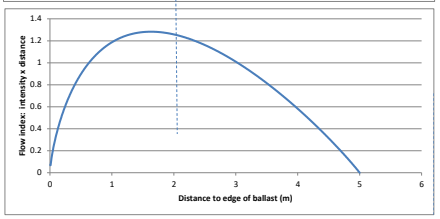
		1000	0.005							100yr	A	988.958				
Width of flow path (m) =		5									B	1.5				
Total time of concentraion (min) =											C	0.714				
Critical time of concentration (min) =		11.2	0.2 hrs													
Percent of ballast section contributing to flow for critical Tc =				67%												

Calculation note: iterate rainfall intensity (red text) until equal to value in row above

Hydraulic Conductivity (m/s)	Distance (m)	Rainfall Intensity (mm/hr)	Flow (m2/s)	Subgrade slope	HGL * (m)	Ballast Invert *	Depth (m)	Hydraulic Slope	Velocity (m/s)	Travel time (min)	Travel time (hr)	100-yr peak flow	Total travel time (hr)	100-yr rainfall intensity (mm/hr)	distance (m)
Clean Ballast		380.6													
0.37600000	0.005	380.6	5.286E-07	1.0%	0.134	0.04995	0.084	0.0017%	0.0000			0.068593	82.0	13.7	0.005
0.37600000	0.01	380.6	1.057E-06	1.0%	0.134	0.0499	0.084	0.0033%	0.0000	397.9	6.6	0.068525	82.0	13.7	0.01
0.37600000	0.015	380.6	1.586E-06	1.0%	0.134	0.04985	0.084	0.0050%	0.0000	265.3	4.4	0.091319	75.3	18.3	0.015
0.37600000	0.02	380.6	2.114E-06	1.0%	0.134	0.0498	0.084	0.0067%	0.0000	199.0	3.3	0.11188	70.9	22.5	0.02
0.37600000	0.025	380.6	2.643E-06	1.0%	0.134	0.04975	0.084	0.0084%	0.0000	159.2	2.7	0.130897	67.6	26.3	0.025
0.37600000	0.03	380.6	3.172E-06	1.0%	0.134	0.0497	0.084	0.0100%	0.0000	132.6	2.2	0.148748	65.0	29.9	0.03
0.37600000	0.035	380.6	3.700E-06	1.0%	0.134	0.04965	0.084	0.0117%	0.0000	113.7	1.9	0.165669	62.7	33.4	0.035
0.37600000	0.04	380.6	4.229E-06	1.0%	0.134	0.0496	0.084	0.0134%	0.0001	99.5	1.7	0.181817	60.9	36.7	0.04
0.37600000	0.045	380.6	4.758E-06	1.0%	0.134	0.04955	0.084	0.0150%	0.0001	88.4	1.5	0.197309	59.2	39.8	0.045
0.37600000	0.05	380.6	5.286E-06	1.0%	0.134	0.0495	0.084	0.0167%	0.0001	79.6	1.3	0.212231	57.7	42.9	0.05
0.37600000	0.055	380.6	5.815E-06	1.0%	0.134	0.04945	0.084	0.0184%	0.0001	72.3	1.2	0.226649	56.4	45.8	0.055
0.37600000	0.06	380.6	6.343E-06	1.0%	0.134	0.0494	0.084	0.0201%	0.0001	66.3	1.1	0.240618	55.2	48.7	0.06
0.37600000	0.065	380.6	6.872E-06	1.0%	0.133	0.04935	0.084	0.0217%	0.0001	61.2	1.0	0.25418	54.1	51.5	0.065
0.37600000	0.07	380.6	7.401E-06	1.0%	0.133	0.0493	0.084	0.0234%	0.0001	56.8	0.9	0.267371	53.1	54.2	0.07
0.37600000	0.075	380.6	7.929E-06	1.0%	0.133	0.04925	0.084	0.0251%	0.0001	53.1	0.9	0.280223	52.1	56.9	0.075
0.37600000	0.08	380.6	8.458E-06	1.0%	0.133	0.0492	0.084	0.0267%	0.0001	49.7	0.8	0.29276	51.2	59.5	0.08
0.37600000	0.085	380.6	8.986E-06	1.0%	0.133	0.04915	0.084	0.0284%	0.0001	46.8	0.8	0.305005	50.4	62.1	0.085
0.37600000	0.09	380.6	9.515E-06	1.0%	0.133	0.0491	0.084	0.0301%	0.0001	44.2	0.7	0.316978	49.6	64.6	0.09
0.37600000	0.095	380.6	1.004E-05	1.0%	0.133	0.04905	0.084	0.0318%	0.0001	41.9	0.7	0.328694	48.9	67.0	0.095
0.37600000	0.1	380.6	1.057E-05	1.0%	0.133	0.049	0.084	0.0334%	0.0001	39.8	0.7	0.340171	48.2	69.4	0.1
0.37600000	0.105	380.6	1.110E-05	1.0%	0.133	0.04895	0.084	0.0351%	0.0001	37.9	0.6	0.35142	47.5	71.8	0.105
0.37600000	0.11	380.6	1.163E-05	1.0%	0.133	0.0489	0.084	0.0368%	0.0001	36.2	0.6	0.362453	46.9	74.1	0.11
0.37600000	0.115	380.6	1.216E-05	1.0%	0.133	0.04885	0.084	0.0384%	0.0001	34.6	0.6	0.373283	46.3	76.4	0.115
0.37600000	0.12	380.6	1.269E-05	1.0%	0.133	0.0488	0.084	0.0401%	0.0002	33.2	0.6	0.383917	45.7	78.7	0.12
0.37600000	0.125	380.6	1.322E-05	1.0%	0.133	0.04875	0.084	0.0418%	0.0002	31.8	0.5	0.394366	45.2	80.9	0.125
0.37600000	0.13	380.6	1.374E-05	1.0%	0.133	0.0487	0.084	0.0435%	0.0002	30.6	0.5	0.404637	44.6	83.1	0.13
0.37600000	0.135	380.6	1.427E-05	1.0%	0.133	0.04865	0.084	0.0451%	0.0002	29.5	0.5	0.414737	44.1	85.2	0.135
0.37600000	0.14	380.6	1.480E-05	1.0%	0.133	0.0486	0.084	0.0468%	0.0002	28.4	0.5	0.424674	43.6	87.4	0.14
0.37600000	0.145	380.6	1.533E-05	1.0%	0.133	0.04855	0.084	0.0485%	0.0002	27.4	0.5	0.434454	43.2	89.5	0.145
0.37600000	0.15	380.6	1.586E-05	1.0%	0.133	0.0485	0.084	0.0501%	0.0002	26.5	0.4	0.444082	42.7	91.6	0.15
0.37600000	0.155	380.6	1.639E-05	1.0%	0.133	0.04845	0.084	0.0518%	0.0002	25.7	0.4	0.453565	42.3	93.6	0.155
0.37600000	0.16	380.6	1.692E-05	1.0%	0.132	0.0484	0.084	0.0535%	0.0002	24.9	0.4	0.462906	41.8	95.6	0.16
0.37600000	0.165	380.6	1.744E-05	1.0%	0.132	0.04835	0.084	0.0552%	0.0002	24.1	0.4	0.472112	41.4	97.6	0.165
0.37600000	0.17	380.6	1.797E-05	1.0%	0.132	0.0483	0.084	0.0568%	0.0002	23.4	0.4	0.481185	41.0	99.6	0.17
0.37600000	0.175	380.6	1.850E-05	1.0%	0.132	0.04825	0.084	0.0585%	0.0002	22.7	0.4	0.490131	40.6	101.6	0.175
0.37600000	0.18	380.6	1.903E-05	1.0%	0.132	0.0482	0.084	0.0602%	0.0002	22.1	0.4	0.498953	40.2	103.5	0.18
0.37600000	0.185	380.6	1.956E-05	1.0%	0.132	0.04815	0.084	0.0619%	0.0002	21.5	0.4	0.507655	39.9	105.4	0.185
0.37600000	0.19	380.6	2.009E-05	1.0%	0.132	0.0481	0.084	0.0635%	0.0002	20.9	0.3	0.516239	39.5	107.3	0.19
0.37600000	0.195	380.6	2.062E-05	1.0%	0.132	0.04805	0.084	0.0652%	0.0002	20.4	0.3	0.524711	39.2	109.2	0.195
0.37600000	0.2	380.6	2.114E-05	1.0%	0.132	0.048	0.084	0.0669%	0.0003	19.9	0.3	0.533072	38.8	111.1	0.2
0.37600000	0.205	380.6	2.167E-05	1.0%	0.132	0.04795	0.084	0.0686%	0.0003	19.4	0.3	0.541325	38.5	112.9	0.205
0.37600000	0.21	380.6	2.220E-05	1.0%	0.132	0.0479	0.084	0.0702%	0.0003	18.9	0.3	0.549474	38.2	114.7	0.21
0.37600000	0.215	380.6	2.273E-05	1.0%	0.132	0.04785	0.084	0.0719%	0.0003	18.5	0.3	0.55752	37.9	116.5	0.215
0.37600000	0.22	380.6	2.326E-05	1.0%	0.132	0.0478	0.084	0.0736%	0.0003	18.1	0.3	0.565467	37.6	118.3	0.22
0.37600000	0.225	380.6	2.379E-05	1.0%	0.132	0.04775	0.084	0.0753%	0.0003	17.7	0.3	0.573317	37.2	120.1	0.225
0.37600000	0.23	380.6	2.432E-05	1.0%	0.132	0.0477	0.084	0.0769%	0.0003	17.3	0.3	0.581071	37.0	121.8	0.23
0.37600000	0.235	380.6	2.484E-05	1.0%	0.132	0.04765	0.084	0.0786%	0.0003	16.9	0.3	0.588732	36.7	123.6	0.235
0.37600000	0.24	380.6	2.537E-05	1.0%	0.132	0.0476	0.084	0.0803%	0.0003	16.6	0.3	0.596303	36.4	125.3	0.24
0.37600000	0.245	380.6	2.590E-05	1.0%	0.132	0.04755	0.084	0.0820%	0.0003	16.2	0.3	0.603785	36.1	127.0	0.245
0.37600000	0.25	380.6	2.643E-05	1.0%	0.132	0.0475	0.084	0.0836%	0.0003	15.9	0.3	0.611179	35.8	128.7	0.25
0.37600000	0.255	380.6	2.696E-05	1.0%	0.131	0.04745	0.084	0.0853%	0.0003	15.6	0.3	0.618489	35.6	130.3	0.255
0.37600000	0.26	380.6	2.749E-05	1.0%	0.131	0.0474	0.084	0.0870%	0.0003	15.3	0.3	0.625715	35.3	132.0	0.26
0.37600000	0.265	380.6	2.802E-05	1.0%	0.131	0.04735	0.084	0.0887%	0.0003	15.0	0.2	0.632859	35.1	133.7	0.265
0.37600000	0.27	380.6	2.855E-05	1.0%	0.131	0.0473	0.084	0.0904%	0.0003	14.7	0.2	0.639924	34.8	135.3	0.27
0.37600000	0.275	380.6	2.907E-05	1.0%	0.131	0.04725	0.084	0.0920%	0.0003	14.4	0.2	0.646909	34.6	136.9	0.275
0.37600000	0.28	380.6	2.960E-05	1.0%	0.131	0.0472	0.084	0.0937%	0.0004	14.2	0.2	0.653817	34.3	138.5	0.28
0.37600000	0.285	380.6	3.013E-05	1.0%	0.131	0.04715	0.084	0.0954%	0.0004	13.9	0.2	0.66065	34.1	140.1	0.285
0.37600000	0.29	380.6	3.066E-05	1.0%	0.131	0.0471	0.084	0.0971%	0.0004	13.7	0.2	0.667409	33.9	141.7	0.29
0.37600000	0.295	380.6	3.119E-05	1.0%	0.131	0.04705	0.084	0.0988%	0.0004	13.5	0.2	0.674094	33.6	143.3	0.295
0.37600000	0.3	380.6	3.172E-05	1.0%	0.131	0.047	0.084	0.1004%	0.0004	13.2	0.2	0.680708	33.4	144.8	0.3
0.37600000	0.305	380.6	3.225E-05	1.0%	0.131	0.04695	0.084	0.1021%	0.0004	13.0	0.2	0.687251	33.2	146.4	0.305
0.37600000	0.31	380.6	3.277E-05	1.0%	0.131	0.0469	0.084	0.1038%	0.0004	12.8	0.2	0.693725	33.0	147.9	0.31
0.37600000	0.315	380.6	3.330E-05	1.0%	0.131	0.04685	0.084	0.1055%	0.0004	12.6	0.2	0.700131	32.8	149.4	0.315
0.37600000	0.32	380.6	3.383E-05	1.0%	0.131	0.0468	0.084	0.1072%	0.0004	12.4	0.2	0.70647	32.5	151.0	0.32
0.37600000	0.325	380.6	3.436E-05	1.0%	0.131	0.04675	0.084	0.1088%	0.0004	12.2	0.2	0.712743	32.3	152.5	0.325
0.37600000	0.33	380.6	3.489E-05	1.0%	0.131	0.0467	0.084	0.1105%	0.0004	12.0	0.2	0.718951	32.1	154.0	0.33
0.37600000	0.335	380.6	3.542E-05	1.0%	0.131	0.04665	0.084	0.1122%	0.0004	11.9	0.2	0.725095	31.9	155.4	0.335
0.37600000	0.34	380.6	3.595E-05	1.0%	0.131	0.0466	0.084	0.1139%	0.0004	11.7	0.2	0.731177	31.7	156.9	0.34
0.37600000	0.345	380.6	3.647E-05	1.0%	0.130	0.04655	0.084	0.1156%	0.0004	11.5	0.2	0.737197	31.5	158.4	0.345
0.37600000	0.35	380.6	3.700E-05	1.0%	0.130	0.0465	0.084	0.1172%	0.0004	11.3	0.2	0.743155	31.3	159.8	0.35
0.37600000	0.355	380.6	3.753E-05	1.0%	0.130	0.04645	0.084	0.1189%	0.0004	11.2	0.2	0.749054	31.2	161.3	0.355
0.37600000	0.36	380.6	3.806E-05	1.0%	0.130	0.0464	0.084	0.1206%	0.0005	11.0	0.2	0.754894	31.0	162.7	0.36
0.37600000	0.365	380.6	3.859E-05	1.0%	0.130	0.04635	0.084	0.1223%	0.0005	10.9	0.2	0.760675	30.8	164.1	0.365
0.37600000	0.37	380.6	3.912E-05	1.0%	0.130	0.0463	0.084	0.1240%	0.0005	10.7	0.2	0.766399	30.6	165.5	0.37
0.37600000	0.375	380.6	3.965E-05	1.0%	0.130	0.04625	0.084	0.1257%	0.0005	10.6	0.2	0.772066	30.4	166.9	0.375
0.37600000	0.38	380.6	4.017E-05	1.0%	0.130	0.0462	0.084	0.1274%	0.0005	10.4	0.2	0.777678	30.3	168.3	0.38
0.37600000	0.385	380.6	4.070E-05	1.0%	0.130	0.04615	0.084	0.1290%	0.0005	10.3	0.2	0.783234	30.1	169.7	0.385
0.37600000	0.39	380.6	4.123E-05	1.0%	0.130	0.0461	0.084	0.1307%	0.0005	10.2	0.2	0.788736	29.9	171.1	0.39
0.37600000	0.395	380.6	4.176E-05	1.0%	0.130	0.04605	0.084	0.1324%	0.0005	10.0	0.2	0.794185	29.7	172.5	0.395
0.37600000	0.4	380.6	4.229E-05	1.0%	0.130	0.046	0.084	0.1341%	0.0005	9.9	0.2	0.79958	29.6	173.8	0.4
0.37600000	0.405	380.6	4.282E-05	1.0%	0.130	0.04595	0.084	0.1358%	0.0005	9.8	0.2	0.804924	29.4	175.2	0.405
0.37600000	0.41	380.6	4.335E-05	1.0%	0.130	0.0459	0.084	0.1375%	0.0005	9.7	0.2	0.810216	29.2	176.5	0.41
0.37600000	0.415	380.6	4.387E-05	1.0%	0.130	0.04585	0.084	0.1392%	0.0005	9.6	0.2	0.815457	29.1	177.9	0.415
0.37600000	0.42	380.6	4.440E-05	1.0%	0.130	0.0458	0.084	0.1409%	0.0005	9.4	0.2	0.820648	28.9	179.2	0.42
0.37600000	0.425	380.6	4.493E-05	1.0%	0.130	0.04575	0.084	0.1425%	0.0005	9.3	0.2	0.825789	28.8	180.5	0.425
0.37600000	0.43	380.6	4.546E-05	1.0%	0.130	0.0457	0.084	0.1442%	0.0005	9.2	0.2	0.830881	28.6	181.8	0.43
0.37600000	0.435	380.6	4.599E-05	1.0%	0.129	0.04565	0.084	0.1459%	0.0005	9.1	0.2	0.835925	28.5	183.1	0.435
0.37600000	0.44	380.6	4.652E-05	1.0%	0.129	0.0456	0.084	0.1476%	0.0006	9.0	0.2	0.840922	28.3	184.4	0.44
0.37600000	0.445	380.6	4.705E-05	1.0%	0.129	0.04555	0.084	0.1493%	0.0006	8.9	0.1	0.845871	28.1	185.7	0.445
0.37600000	0.45	380.6	4.758E-05	1.0%	0.129	0.0455	0.084	0.1510%	0.0006	8.8	0.1	0.850773	28.0	187.0	0.45
0.37600000	0.455	380.6	4.810E-05	1.0%	0.129	0.04545	0.084	0.1527%	0.0006	8.7	0.1	0.85563	27.9	188.3	0.455
0.37600000	0.46	380.6	4.863E-05	1.0%	0.129	0.0454	0.084	0.1544%	0.0006	8.6	0.1	0.86044	27.7	189.5	0.46
0.37600000	0.465	380.6	4.916E-05	1.0%	0.129	0.04535	0.084	0.1561%	0.0006	8.5	0.1	0.865206	27.6	190.8	0.465
0.37600000	0.47	380.6	4.969E-05	1.0%	0.129	0.0453	0.084	0.1578%	0.0006	8.4	0.1	0.869927	27.4	192.0	0.47
0.37600000	0.475	380.6	5.022E-05	1.0%	0.129	0.04525	0.084	0.1595%	0.0006	8.3	0.1	0.874605	27.3	193.3	0.475
0.37600000	0.48	380.6	5.075E-05	1.0%	0.129	0.0452	0.084	0.1611%	0.0006	8.3	0.1	0.879239	27.1	194.5	0.48
0.37600000	0.485	380.6	5.128E-05	1.0%	0.129	0.04515	0.084	0.1628%	0.0006	8.2	0.1	0.883829	27.0	195.8	0.485
0.37600000	0.49	380.6	5.180E-05	1.0%	0.129	0.0451	0.084	0.1645%	0.0006	8.1	0.1	0.888378	26.9	197.0	0.49
0.37600000	0.495	380.6	5.233E-05	1.0%	0.129	0.04505	0.084	0.1662%	0.0006	8.0	0.1	0.892884	26.7	198.2	0.495
0.37600000	0.5	380.6	5.286E-05	1.0%	0.129	0.045	0.084	0.1679%	0.0006	7.9	0.1	0.897349	26.6	199.4	0.5
0.37600000	0.505	380.6	5.339E-05	1.0%	0.129	0.04495	0.084	0.1696%	0.0006	7.8	0.1	0.901772	26.5	200.6	0.505
0.37600000	0.51	380.6	5.392E-05	1.0%	0.129	0.0449	0.084	0.1713%	0.0006	7.8	0.1	0.906155	26.3	201.8	0.51
0.37600000	0.515	380.6	5.445E-05	1.0%	0.129	0.04485	0.084	0.1730%	0.0007	7.7	0.1	0.910497	26.2	203.0	0.515
0.37600000	0.52	380.6	5.498E-05	1.0%	0.128	0.0448	0.084	0.1747%	0.0007	7.6	0.1	0.9148	26.1	204.2	0.52
0.37600000	0.525	380.6	5.550E-05	1.0%	0.128	0.04475	0.084	0.1764%	0.0007	7.5	0.1	0.919063	26.0	205.4	0.525
0.37600000	0.53	380.6	5.603E-05	1.0%	0.128	0.0447	0.084	0.1781%	0.0007	7.5	0.1	0.923287	25.8	206.6	0.53
0.37600000	0.535	380.6	5.656E-05	1.0%	0.128	0.04465	0.084	0.1798%	0.0007	7.4	0.1	0.927472	25.7	207.7	0.535
0.37600000	0.54	380.6	5.709E-05	1.0%	0.128	0.0446	0.084	0.1815%	0.0007	7.3	0.1	0.931619	25.6	208.9	0.54
0.37600000	0.545	380.6	5.762E-05	1.0%	0.128	0.04455	0.084	0.1832%	0.0007	7.3	0.1	0.935728	25.5	210.0	0.545
0.37600000	0.55	380.6	5.815E-05	1.0%	0.128	0.0445	0.084	0.1849%	0.0007	7.2	0.1	0.9398	25.3	211.2	0.55
0.37600000	0.555	380.6	5.868E-05	1.0%	0.128	0.04445	0.084	0.1866%	0.0007	7.1	0.1	0.943834	25.2	212.3	0.555
0.37600000	0.56	380.6	5.920E-05	1.0%	0.128	0.0444	0.084	0.1883%	0.0007	7.1	0.1	0.947832	25.1	213.5	0.56
0.37600000	0.565	380.6	5.973E-05	1.0%	0.128	0.04435	0.084	0.1900%	0.0007	7.0	0.1	0.951794	25.0	214.6	0.565
0.37600000	0.57	380.6	6.026E-05	1.0%	0.128	0.0443	0.084	0.1917%	0.0007	6.9	0.1	0.955719	24.9	215.7	0.57
0.37600000	0.575	380.6	6.079E-05	1.0%	0.128	0.04425	0.084	0.1934%	0.0007	6.9	0.1	0.959608	24.8	216.9	0.575
0.37600000	0.58	380.6	6.132E-05	1.0%	0.128	0.0442	0.084	0.1951%	0.0007	6.8	0.1	0.963463	24.6	218.0	0.58
0.37600000	0.585	380.6	6.185E-05	1.0%	0.128	0.04415	0.084	0.1968%	0.0007	6.8	0.1	0.967282	24.5	219.1	0.585
0.37600000	0.59	380.6	6.238E-05	1.0%	0.128	0.0441	0.084	0.1986%	0.0007	6.7	0.1	0.971066	24.4	220.2	0.59
0.37600000	0.595	380.6	6.290E-05	1.0%	0.128	0.04405	0.084	0.2003%	0.0008	6.6	0.1	0.974816	24.3	221.3	0.595
0.37600000	0.6	380.6	6.343E-05	1.0%	0.128	0.044	0.084	0.2020%	0.0008	6.6	0.1	0.978532	24.2	222.4	0.6
0.37600000	0.605	380.6	6.396E-05	1.0%	0.127	0.04395	0.084	0.2037%	0.0008	6.5	0.1	0.982215	24.1	223.5	0.605
0.37600000	0.61	380.6	6.449E-05	1.0%	0.127	0.0439	0.084	0.2054%	0.0008	6.5	0.1	0.985863	24.0	224.6	0.61
0.37600000	0.615	380.6	6.502E-05	1.0%	0.127	0.04385	0.084	0.2071%	0.0008	6.4	0.1	0.989479	23.9	225.7	0.615
0.37600000	0.62	380.6	6.555E-05	1.0%	0.127	0.0438	0.083	0.2088%	0.0008	6.4	0.1	0.993062	23.8	226.7	0.62
0.37600000	0.625	380.6	6.608E-05	1.0%	0.127	0.04375	0.083	0.2105%	0.0008	6.3	0.1	0.996612	23.6	227.8	0.625
0.37600000	0.63	380.6	6.661E-05	1.0%	0.127	0.0437	0.083	0.2122%	0.0008	6.3	0.1	1.00013	23.5	228.9	0.63
0.37600000	0.635	380.6	6.713E-05	1.0%	0.127	0.04365	0.083	0.2139%	0.0008	6.2	0.1	1.003616	23.4	229.9	0.635







0.37600000	0.64	380.6	6.766E-05	1.0%	0.127	0.0436	0.083	0.2156%	0.0008	6.2	0.1	1.007071	23.3	231.0	0.64
0.37600000	0.645	380.6	6.819E-05	1.0%	0.127	0.04355	0.083	0.2174%	0.0008	6.1	0.1	1.010494	23.2	232.0	0.645
0.37600000	0.65	380.6	6.872E-05	1.0%	0.127	0.0435	0.083	0.2191%	0.0008	6.1	0.1	1.013885	23.1	233.1	0.65
0.37600000	0.655	380.6	6.925E-05	1.0%	0.127	0.04345	0.083	0.2208%	0.0008	6.0	0.1	1.017246	23.0	234.1	0.655
0.37600000	0.66	380.6	6.978E-05	1.0%	0.127	0.0434	0.083	0.2225%	0.0008	6.0	0.1	1.020577	22.9	235.2	0.66
0.37600000	0.665	380.6	7.031E-05	1.0%	0.127	0.04335	0.083	0.2242%	0.0008	5.9	0.1	1.023876	22.8	236.2	0.665
0.37600000	0.67	380.6	7.083E-05	1.0%	0.127	0.0433	0.083	0.2259%	0.0008	5.9	0.1	1.027146	22.7	237.2	0.67
0.37600000	0.675	380.6	7.136E-05	1.0%	0.127	0.04325	0.083	0.2277%	0.0009	5.8	0.1	1.030386	22.6	238.2	0.675
0.37600000	0.68	380.6	7.189E-05	1.0%	0.127	0.0432	0.083	0.2294%	0.0009	5.8	0.1	1.033597	22.5	239.3	0.68
0.37600000	0.685	380.6	7.242E-05	1.0%	0.126	0.04315	0.083	0.2311%	0.0009	5.8	0.1	1.036778	22.4	240.3	0.685
0.37600000	0.69	380.6	7.295E-05	1.0%	0.126	0.0431	0.083	0.2328%	0.0009	5.7	0.1	1.03993	22.3	241.3	0.69
0.37600000	0.695	380.6	7.348E-05	1.0%	0.126	0.04305	0.083	0.2345%	0.0009	5.7	0.1	1.043053	22.2	242.3	0.695
0.37600000	0.7	380.6	7.401E-05	1.0%	0.126	0.043	0.083	0.2362%	0.0009	5.6	0.1	1.046147	22.2	243.3	0.7
0.37600000	0.705	380.6	7.453E-05	1.0%	0.126	0.04295	0.083	0.2380%	0.0009	5.6	0.1	1.049213	22.1	244.3	0.705
0.37600000	0.71	380.6	7.506E-05	1.0%	0.126	0.0429	0.083	0.2397%	0.0009	5.5	0.1	1.052251	22.0	245.3	0.71
0.37600000	0.715	380.6	7.559E-05	1.0%	0.126	0.04285	0.083	0.2414%	0.0009	5.5	0.1	1.055261	21.9	246.3	0.715
0.37600000	0.72	380.6	7.612E-05	1.0%	0.126	0.0428	0.083	0.2431%	0.0009	5.5	0.1	1.058243	21.8	247.3	0.72
0.37600000	0.725	380.6	7.665E-05	1.0%	0.126	0.04275	0.083	0.2449%	0.0009	5.4	0.1	1.061198	21.7	248.2	0.725
0.37600000	0.73	380.6	7.718E-05	1.0%	0.126	0.0427	0.083	0.2466%	0.0009	5.4	0.1	1.064125	21.6	249.2	0.73
0.37600000	0.735	380.6	7.771E-05	1.0%	0.126	0.04265	0.083	0.2483%	0.0009	5.4	0.1	1.067026	21.5	250.2	0.735
0.37600000	0.74	380.6	7.823E-05	1.0%	0.126	0.0426	0.083	0.2500%	0.0009	5.3	0.1	1.069899	21.4	251.2	0.74
0.37600000	0.745	380.6	7.876E-05	1.0%	0.126	0.04255	0.083	0.2518%	0.0009	5.3	0.1	1.072746	21.3	252.1	0.745
0.37600000	0.75	380.6	7.929E-05	1.0%	0.126	0.0425	0.083	0.2535%	0.0010	5.2	0.1	1.075566	21.2	253.1	0.75
0.37600000	0.755	380.6	7.982E-05	1.0%	0.126	0.04245	0.083	0.2552%	0.0010	5.2	0.1	1.07836	21.2	254.0	0.755
0.37600000	0.76	380.6	8.035E-05	1.0%	0.126	0.0424	0.083	0.2570%	0.0010	5.2	0.1	1.081128	21.1	255.0	0.76
0.37600000	0.765	380.6	8.088E-05	1.0%	0.126	0.04235	0.083	0.2587%	0.0010	5.1	0.1	1.083871	21.0	255.9	0.765
0.37600000	0.77	380.6	8.141E-05	1.0%	0.125	0.0423	0.083	0.2604%	0.0010	5.1	0.1	1.086587	20.9	256.9	0.77
0.37600000	0.775	380.6	8.193E-05	1.0%	0.125	0.04225	0.083	0.2621%	0.0010	5.1	0.1	1.089278	20.8	257.8	0.775
0.37600000	0.78	380.6	8.246E-05	1.0%	0.125	0.0422	0.083	0.2639%	0.0010	5.0	0.1	1.091944	20.7	258.8	0.78
0.37600000	0.785	380.6	8.299E-05	1.0%	0.125	0.04215	0.083	0.2656%	0.0010	5.0	0.1	1.094585	20.6	259.7	0.785
0.37600000	0.79	380.6	8.352E-05	1.0%	0.125	0.0421	0.083	0.2674%	0.0010	5.0	0.1	1.097201	20.6	260.6	0.79
0.37600000	0.795	380.6	8.405E-05	1.0%	0.125	0.04205	0.083	0.2691%	0.0010	4.9	0.1	1.099792	20.5	261.5	0.795
0.37600000	0.8	380.6	8.458E-05	1.0%	0.125	0.042	0.083	0.2708%	0.0010	4.9	0.1	1.102359	20.4	262.5	0.8
0.37600000	0.805	380.6	8.511E-05	1.0%	0.125	0.04195	0.083	0.2726%	0.0010	4.9	0.1	1.104901	20.3	263.4	0.805
0.37600000	0.81	380.6	8.564E-05	1.0%	0.125	0.0419	0.083	0.2743%	0.0010	4.8	0.1	1.107419	20.2	264.3	0.81
0.37600000	0.815	380.6	8.616E-05	1.0%	0.125	0.04185	0.083	0.2760%	0.0010	4.8	0.1	1.109913	20.2	265.2	0.815
0.37600000	0.82	380.6	8.669E-05	1.0%	0.125	0.0418	0.083	0.2778%	0.0010	4.8	0.1	1.112383	20.1	266.1	0.82
0.37600000	0.825	380.6	8.722E-05	1.0%	0.125	0.04175	0.083	0.2795%	0.0011	4.8	0.1	1.11483	20.0	267.0	0.825
0.37600000	0.83	380.6	8.775E-05	1.0%	0.125	0.0417	0.083	0.2813%	0.0011	4.7	0.1	1.117253	19.9	267.9	0.83
0.37600000	0.835	380.6	8.828E-05	1.0%	0.125	0.04165	0.083	0.2830%	0.0011	4.7	0.1	1.119653	19.8	268.8	0.835
0.37600000	0.84	380.6	8.881E-05	1.0%	0.125	0.0416	0.083	0.2847%	0.0011	4.7	0.1	1.12203	19.8	269.7	0.84
0.37600000	0.845	380.6	8.934E-05	1.0%	0.124	0.04155	0.083	0.2865%	0.0011	4.6	0.1	1.124383	19.7	270.6	0.845
0.37600000	0.85	380.6	8.986E-05	1.0%	0.124	0.0415	0.083	0.2882%	0.0011	4.6	0.1	1.126714	19.6	271.5	0.85
0.37600000	0.855	380.6	9.039E-05	1.0%	0.124	0.04145	0.083	0.2900%	0.0011	4.6	0.1	1.129022	19.5	272.4	0.855
0.37600000	0.86	380.6	9.092E-05	1.0%	0.124	0.0414	0.083	0.2917%	0.0011	4.6	0.1	1.131308	19.4	273.3	0.86
0.37600000	0.865	380.6	9.145E-05	1.0%	0.124	0.04135	0.083	0.2935%	0.0011	4.5	0.1	1.133571	19.4	274.1	0.865
0.37600000	0.87	380.6	9.198E-05	1.0%	0.124	0.0413	0.083	0.2952%	0.0011	4.5	0.1	1.135812	19.3	275.0	0.87
0.37600000	0.875	380.6	9.251E-05	1.0%	0.124	0.04125	0.083	0.2970%	0.0011	4.5	0.1	1.138031	19.2	275.9	0.875
0.37600000	0.88	380.6	9.304E-05	1.0%	0.124	0.0412	0.083	0.2987%	0.0011	4.5	0.1	1.140228	19.1	276.8	0.88
0.37600000	0.885	380.6	9.356E-05	1.0%	0.124	0.04115	0.083	0.3005%	0.0011	4.4	0.1	1.142404	19.1	277.6	0.885
0.37600000	0.89	380.6	9.409E-05	1.0%	0.124	0.0411	0.083	0.3022%	0.0011	4.4	0.1	1.144557	19.0	278.5	0.89
0.37600000	0.895	380.6	9.462E-05	1.0%	0.124	0.04105	0.083	0.3040%	0.0011	4.4	0.1	1.14669	18.9	279.3	0.895
0.37600000	0.9	380.6	9.515E-05	1.0%	0.124	0.041	0.083	0.3057%	0.0011	4.3	0.1	1.148801	18.9	280.2	0.9
0.37600000	0.905	380.6	9.568E-05	1.0%	0.124	0.04095	0.083	0.3075%	0.0012	4.3	0.1	1.15089	18.8	281.0	0.905
0.37600000	0.91	380.6	9.621E-05	1.0%	0.124	0.0409	0.083	0.3093%	0.0012	4.3	0.1	1.152959	18.7	281.9	0.91
0.37600000	0.915	380.6	9.674E-05	1.0%	0.124	0.04085	0.083	0.3110%	0.0012	4.3	0.1	1.155007	18.6	282.7	0.915
0.37600000	0.92	380.6	9.726E-05	1.0%	0.124	0.0408	0.083	0.3128%	0.0012	4.3	0.1	1.157034	18.6	283.6	0.92
0.37600000	0.925	380.6	9.779E-05	1.0%	0.123	0.04075	0.083	0.3145%	0.0012	4.2	0.1	1.15904	18.5	284.4	0.925
0.37600000	0.93	380.6	9.832E-05	1.0%	0.123	0.0407	0.083	0.3163%	0.0012	4.2	0.1	1.161026	18.4	285.3	0.93
0.37600000	0.935	380.6	9.885E-05	1.0%	0.123	0.04065	0.083	0.3181%	0.0012	4.2	0.1	1.162992	18.4	286.1	0.935
0.37600000	0.94	380.6	9.938E-05	1.0%	0.123	0.0406	0.083	0.3198%	0.0012	4.2	0.1	1.164937	18.3	286.9	0.94
0.37600000	0.945	380.6	9.991E-05	1.0%	0.123	0.04055	0.083	0.3216%	0.0012	4.1	0.1	1.166863	18.2	287.8	0.945
0.37600000	0.95	380.6	1.004E-04	1.0%	0.123	0.0405	0.083	0.3233%	0.0012	4.1	0.1	1.168768	18.1	288.6	0.95
0.37600000	0.955	380.6	1.010E-04	1.0%	0.123	0.04045	0.083	0.3251%	0.0012	4.1	0.1	1.170653	18.1	289.4	0.955
0.37600000	0.96	380.6	1.015E-04	1.0%	0.123	0.0404	0.083	0.3269%	0.0012	4.1	0.1	1.172519	18.0	290.2	0.96
0.37600000	0.965	380.6	1.020E-04	1.0%	0.123	0.04035	0.083	0.3286%	0.0012	4.0	0.1	1.174365	17.9	291.0	0.965
0.37600000	0.97	380.6	1.026E-04	1.0%	0.123	0.0403	0.083	0.3304%	0.0012	4.0	0.1	1.176192	17.9	291.9	0.97
0.37600000	0.975	380.6	1.031E-04	1.0%	0.123	0.04025	0.083	0.3322%	0.0012	4.0	0.1	1.177999	17.8	292.7	0.975
0.37600000	0.98	380.6	1.036E-04	1.0%	0.123	0.0402	0.083	0.3340%	0.0013	4.0	0.1	1.179788	17.7	293.5	0.98
0.37600000	0.985	380.6	1.041E-04	1.0%	0.123	0.04015	0.082	0.3357%	0.0013	4.0	0.1	1.181557	17.7	294.3	0.985
0.37600000	0.99	380.6	1.047E-04	1.0%	0.123	0.0401	0.082	0.3375%	0.0013	3.9	0.1	1.183307	17.6	295.1	0.99
0.37600000	0.995	380.6	1.052E-04	1.0%	0.123	0.04005	0.082	0.3393%	0.0013	3.9	0.1	1.185038	17.5	295.9	0.995
0.37600000	1	380.6	1.057E-04	1.0%	0.122	0.04	0.082	0.3410%	0.0013	3.9	0.1	1.18675	17.5	296.7	1
0.37600000	1.005	380.6	1.063E-04	1.0%	0.122	0.03995	0.082	0.3428%	0.0013	3.9	0.1	1.188444	17.4	297.5	1.005
0.37600000	1.01	380.6	1.068E-04	1.0%	0.122	0.0399	0.082	0.3446%	0.0013	3.9	0.1	1.190119	17.3	298.3	1.01
0.37600000	1.015	380.6	1.073E-04	1.0%	0.122	0.03985	0.082	0.3464%	0.0013	3.8	0.1	1.191776	17.3	299.1	1.015
0.37600000	1.02	380.6	1.078E-04	1.0%	0.122	0.0398	0.082	0.3482%	0.0013	3.8	0.1	1.193415	17.2	299.9	1.02
0.37600000	1.025	380.6	1.084E-04	1.0%	0.122	0.03975	0.082	0.3499%	0.0013	3.8	0.1	1.195035	17.2	300.6	1.025
0.37600000	1.03	380.6	1.089E-04	1.0%	0.122	0.0397	0.082	0.3517%	0.0013	3.8	0.1	1.196638	17.1	301.4	1.03
0.37600000	1.035	380.6	1.094E-04	1.0%	0.122	0.03965	0.082	0.3535%	0.0013	3.8	0.1	1.198222	17.0	302.2	1.035
0.37600000	1.04	380.6	1.100E-04	1.0%	0.122	0.0396	0.082	0.3553%	0.0013	3.7	0.1	1.199788	17.0	303.0	1.04
0.37600000	1.045	380.6	1.105E-04	1.0%	0.122	0.03955	0.082	0.3571%	0.0013	3.7	0.1	1.201337	16.9	303.8	1.045
0.37600000	1.05	380.6	1.110E-04	1.0%	0.122	0.0395	0.082	0.3589%	0.0013	3.7	0.1	1.202868	16.8	304.5	1.05
0.37600000	1.055	380.6	1.115E-04	1.0%	0.122	0.03945	0.082	0.3607%	0.0014	3.7	0.1	1.204382	16.8	305.3	1.055
0.37600000	1.06	380.6	1.121E-04	1.0%	0.122	0.0394	0.082	0.3624%	0.0014	3.7	0.1	1.205878	16.7	306.1	1.06
0.37600000	1.065	380.6	1.126E-04	1.0%	0.122	0.03935	0.082	0.3642%	0.0014	3.7	0.1	1.207357	16.7	306.8	1.065
0.37600000	1.07	380.6	1.131E-04	1.0%	0.121	0.0393	0.082	0.3660%	0.0014	3.6	0.1	1.208818	16.6	307.6	1.07
0.37600000	1.075	380.6	1.137E-04	1.0%	0.121	0.03925	0.082	0.3678%	0.0014	3.6	0.1	1.210263	16.5	308.3	1.075
0.37600000	1.08	380.6	1.142E-04	1.0%	0.121	0.0392	0.082	0.3696%	0.0014	3.6	0.1	1.21169	16.5	309.1	1.08
0.37600000	1.085	380.6	1.147E-04	1.0%	0.121	0.03915	0.082	0.3714%	0.0014	3.6	0.1	1.213101	16.4	309.9	1.085
0.37600000	1.09	380.6	1.152E-04	1.0%	0.121	0.0391	0.082	0.3732%	0.0014	3.6	0.1	1.214494	16.4	310.6	1.09
0.37600000	1.095	380.6	1.158E-04	1.0%	0.121	0.03905	0.082	0.3750%	0.0014	3.5	0.1	1.215871	16.3	311.4	1.095
0.37600000	1.1	380.6	1.163E-04	1.0%	0.121	0.039	0.082	0.3768%	0.0014	3.5	0.1	1.217232	16.2	312.1	1.1
0.37600000	1.105	380.6	1.168E-04	1.0%	0.121	0.03895	0.082	0.3786%	0.0014	3.5	0.1	1.218575	16.2	312.9	1.105
0.37600000	1.11	380.6	1.174E-04	1.0%	0.121	0.0389	0.082	0.3804%	0.0014	3.5	0.1	1.219903	16.1	313.6	1.11
0.37600000	1.115	380.6	1.179E-04	1.0%	0.121	0.03885	0.082	0.3822%	0.0014	3.5	0.1	1.221213	16.1	314.3	1.115
0.37600000	1.12	380.6	1.184E-04	1.0%	0.121	0.0388	0.082	0.3840%	0.0014	3.5	0.1	1.222508	16.0	315.1	1.12
0.37600000	1.125	380.6	1.189E-04	1.0%	0.121	0.03875	0.082	0.3858%	0.0015	3.4	0.1	1.223787	15.9	315.8	1.125
0.37600000	1.13	380.6	1.195E-04	1.0%	0.121	0.0387	0.082	0.3876%	0.0015	3.4	0.1	1.225049	15.9	316.6	1.13
0.37600000	1.135	380.6	1.200E-04	1.0%	0.121	0.03865	0.082	0.3894%	0.0015	3.4	0.1	1.226295	15.8	317.3	1.135
0.37600000	1.14	380.6	1.205E-04	1.0%	0.121	0.0386	0.082	0.3912%	0.0015	3.4	0.1	1.227526	15.8	318.0	1.14
0.37600000	1.145	380.6	1.211E-04	1.0%	0.120	0.03855	0.082	0.3930%	0.0015	3.4	0.1	1.22874	15.7	318.7	1.145
0.37600000	1.15	380.6	1.216E-04	1.0%	0.120	0.0385	0.082	0.3949%	0.0015	3.4	0.1	1.229939	15.7	319.5	1.15
0.37600000	1.155	380.6	1.221E-04	1.0%	0.120	0.03845	0.082	0.3967%	0.0015	3.4	0.1	1.231123	15.6	320.2	1.155
0.37600000	1.16	380.6	1.226E-04	1.0%	0.120	0.0384	0.082	0.3985%	0.0015	3.3	0.1	1.23229	15.5	320.9	1.16
0.37600000	1.165	380.6	1.232E-04	1.0%	0.120	0.03835	0.082	0.4003%	0.0015	3.3	0.1	1.233443	15.5	321.6	1.165
0.37600000	1.17	380.6	1.237E-04	1.0%	0.120	0.0383	0.082	0.4021%	0.0015	3.3	0.1	1.234579	15.4	322.3	1.17
0.37600000	1.175	380.6	1.242E-04	1.0%	0.120	0.03825	0.082	0.4039%	0.0015	3.3	0.1	1.235701	15.4	323.1	1.175
0.37600000	1.18	380.6	1.248E-04	1.0%	0.120	0.0382	0.082	0.4058%	0.0015	3.3	0.1	1.236807	15.3	323.8	1.18
0.37600000	1.185	380.6	1.253E-04	1.0%	0.120	0.03815	0.082	0.4076%	0.0015	3.3	0.1	1.237899	15.3	324.5	1.185
0.37600000	1.19	380.6	1.258E-04	1.0%	0.120	0.0381	0.082	0.4094%	0.0015	3.2	0.1	1.238975	15.2	325.2	1.19
0.37600000	1.195	380.6	1.263E-04	1.0%	0.120	0.03805	0.082	0.4112%	0.0015	3.2	0.1	1.240036	15.2	325.9	1.195
0.37600000	1.2	380.6	1.269E-04	1.0%	0.120	0.038	0.082	0.4130%	0.0016	3.2	0.1	1.241082	15.1	326.6	1.2
0.37600000	1.205	380.6	1.274E-04	1.0%	0.120	0.03795	0.082	0.4149%	0.0016	3.2	0.1	1.242114	15.1	327.3	1.205
0.37600000	1.21	380.6	1.279E-04	1.0%	0.120	0.0379	0.082	0.4167%	0.0016	3.2	0.1	1.24313	15.0	328.0	1.21
0.37600000	1.215	380.6	1.285E-04	1.0%	0.119	0.03785	0.082	0.4185%	0.0016	3.2	0.1	1.244133	14.9	328.7	1.215
0.37600000	1.22	380.6	1.290E-04	1.0%	0.119	0.0378	0.082	0.4204%	0.0016	3.2	0.1	1.24512	14.9	329.4	1.22
0.37600000	1.225	380.6	1.295E-04	1.0%	0.119	0.03775	0.082	0.4222%	0.0016	3.1	0.1	1.246093	14.8	330.1	1.225
0.37600000	1.23	380.6	1.300E-04	1.0%	0.119	0.0377	0.082	0.4240%	0.0016	3.1	0.1	1.247052	14.8	330.8	1.23
0.37600000	1.235	380.6	1.306E-04	1.0%	0.119	0.03765	0.082	0.4259%	0.0016	3.1	0.1	1.247996	14.7	331.5	1.235
0.37600000	1.24	380.6	1.311E-04	1.0%	0.119	0.0376	0.082	0.4277%	0.0016	3.1	0.1	1.248926	14.7	332.2	1.24
0.37600000	1.245	380.6	1.316E-04	1.0%	0.119	0.03755	0.081	0.4295%	0.0016	3.1	0.1	1.249842	14.6	332.8	1.245
0.37600000	1.25	380.6	1.322E-04	1.0%	0.119	0.0375	0.081	0.4314%	0.0016	3.1	0.1	1.250743	14.6	333.5	1.25
0.37600000	1.255	380.6	1.327E-04	1.0%	0.119	0.03745	0.081	0.4332%	0.0016	3.1	0.1	1.251631	14.5	334.2	1.255
0.37600000	1.26	380.6	1.332E-04	1.0%	0.119	0.0374	0.081	0.4351%	0.0016	3.1	0.1	1.252504	14.5	334.9	1.26
0.37600000	1.265	380.6	1.337E-04	1.0%	0.119	0.03735	0.081	0.4369%	0.0016	3.0	0.1	1.253364	14.4	335.6	1.265
0.37600000	1.27	380.6	1.343E-04	1.0%	0.119	0.0373	0.081	0.4387%	0.0016	3.0	0.1	1.25421	14.4	336.2	1.27
0.37600000	1.275	380.6	1.348E-04	1.0%	0.119	0.03725	0.081	0.4406%	0.0017	3.0	0.1	1.255042	14.3	336.9	1.275
0.37600000	1.28	380.6	1.353E-04	1.0%	0.119	0.0372	0.081	0.4424%	0.0017	3.0	0.1	1.255861	14.3	337.6	1.28
0.37600000	1.285	380.6	1.359E-04	1.0%	0.118	0.03715	0.081	0.4443%	0.0017	3.0	0.0	1.256665	14.2	338.3	1.285
0.37600000	1.29	380.6	1.364E-04	1.0%	0.118	0.0371	0.081	0.4461%	0.0017	3.0	0.0	1.257457	14.2	338.9	1.29
0.37600000	1.295	380.6	1.369E-04	1.0%	0.118	0.03705	0.081	0.4480%	0.0017	3.0	0.0	1.258234	14.1	339.6	1.295
0.37600000	1.3	380.6	1.374E-04	1.0%	0.118	0.037	0.081	0.4498%	0.0017	3.0	0.0	1.258999	14.1	340.3	1.3
0.37600000	1.305	380.6	1.380E-04	1.0%	0.118	0.03695	0.081	0.4517%	0.0017	2.9	0.0	1.25975	14.0	340.9	1.305
0.37600000	1.31	380.6	1.385E-04	1.0%	0.118	0.0369	0.081	0.4536%	0.0017	2.9	0.0	1.260487	14.0	341.6	1.31
0.37600000	1.315	380.6	1.390E-04	1.0%	0.118	0.03685	0.081	0.4554%	0.0017	2.9	0.0	1.261212	13.9	342.3	1.315
0.37600000	1.32	380.6	1.396E-04	1.0%	0.118	0.0368	0.081	0.4573%	0.0017	2.9	0.0	1.261923	13.9	342.9	1.32
0.37600000	1.325	380.6	1.401E-04	1.0%	0.118	0.03675	0.081	0.4591%	0.0017	2.9	0.0	1.262621	13.8	343.6	1.325

0.37600000	1.33	380.6	1.406E-04	1.0%	0.118	0.0367	0.081	0.4610%	0.0017	2.9	0.0	1.263307	13.8	344.2	1.33	
0.37600000	1.335	380.6	1.411E-04	1.0%	0.118	0.03665	0.081	0.4629%	0.0017	2.9	0.0	1.263979	13.7	344.9	1.335	
0.37600000	1.34	380.6	1.417E-04	1.0%	0.118	0.0366	0.081	0.4647%	0.0017	2.9	0.0	1.264638	13.7	345.5	1.34	
0.37600000	1.345	380.6	1.422E-04	1.0%	0.118	0.03655	0.081	0.4666%	0.0018	2.8	0.0	1.265285	13.6	346.2	1.345	
0.37600000	1.35	380.6	1.427E-04	1.0%	0.118	0.0365	0.081	0.4685%	0.0018	2.8	0.0	1.265919	13.6	346.8	1.35	
0.37600000	1.355	380.6	1.433E-04	1.0%	0.117	0.03645	0.081	0.4703%	0.0018	2.8	0.0	1.26654	13.5	347.5	1.355	
0.37600000	1.36	380.6	1.438E-04	1.0%	0.117	0.0364	0.081	0.4722%	0.0018	2.8	0.0	1.267148	13.5	348.1	1.36	
0.37600000	1.365	380.6	1.443E-04	1.0%	0.117	0.03635	0.081	0.4741%	0.0018	2.8	0.0	1.267744	13.5	348.8	1.365	
0.37600000	1.37	380.6	1.448E-04	1.0%	0.117	0.0363	0.081	0.4760%	0.0018	2.8	0.0	1.268327	13.4	349.4	1.37	critical TC
0.37600000	1.375	380.6	1.454E-04	1.0%	0.117	0.03625	0.081	0.4778%	0.0018	2.8	0.0	1.268898	13.4	350.0	1.375	
0.37600000	1.38	380.6	1.459E-04	1.0%	0.117	0.0362	0.081	0.4797%	0.0018	2.8	0.0	1.269457	13.3	350.7	1.38	
0.37600000	1.385	380.6	1.464E-04	1.0%	0.117	0.03615	0.081	0.4816%	0.0018	2.8	0.0	1.270003	13.3	351.3	1.385	
0.37600000	1.39	380.6	1.470E-04	1.0%	0.117	0.0361	0.081	0.4835%	0.0018	2.8	0.0	1.270536	13.2	351.9	1.39	
0.37600000	1.395	380.6	1.475E-04	1.0%	0.117	0.03605	0.081	0.4854%	0.0018	2.7	0.0	1.271058	13.2	352.6	1.395	
0.37600000	1.4	380.6	1.480E-04	1.0%	0.117	0.036	0.081	0.4873%	0.0018	2.7	0.0	1.271568	13.1	353.2	1.4	
0.37600000	1.405	380.6	1.485E-04	1.0%	0.117	0.03595	0.081	0.4892%	0.0018	2.7	0.0	1.272065	13.1	353.8	1.405	
0.37600000	1.41	380.6	1.491E-04	1.0%	0.117	0.0359	0.081	0.4910%	0.0018	2.7	0.0	1.27255	13.0	354.5	1.41	
0.37600000	1.415	380.6	1.496E-04	1.0%	0.117	0.03585	0.081	0.4929%	0.0019	2.7	0.0	1.273024	13.0	355.1	1.415	
0.37600000	1.42	380.6	1.501E-04	1.0%	0.116	0.0358	0.081	0.4948%	0.0019	2.7	0.0	1.273485	13.0	355.7	1.42	
0.37600000	1.425	380.6	1.507E-04	1.0%	0.116	0.03575	0.081	0.4967%	0.0019	2.7	0.0	1.273934	12.9	356.3	1.425	
0.37600000	1.43	380.6	1.512E-04	1.0%	0.116	0.0357	0.081	0.4986%	0.0019	2.7	0.0	1.274372	12.9	357.0	1.43	
0.37600000	1.435	380.6	1.517E-04	1.0%	0.116	0.03565	0.081	0.5005%	0.0019	2.7	0.0	1.274798	12.8	357.6	1.435	
0.37600000	1.44	380.6	1.522E-04	1.0%	0.116	0.0356	0.081	0.5024%	0.0019	2.6	0.0	1.275212	12.8	358.2	1.44	
0.37600000	1.445	380.6	1.528E-04	1.0%	0.116	0.03555	0.081	0.5043%	0.0019	2.6	0.0	1.275615	12.7	358.8	1.445	
0.37600000	1.45	380.6	1.533E-04	1.0%	0.116	0.0355	0.081	0.5062%	0.0019	2.6	0.0	1.276006	12.7	359.4	1.45	
0.37600000	1.455	380.6	1.538E-04	1.0%	0.116	0.03545	0.081	0.5081%	0.0019	2.6	0.0	1.276385	12.6	360.1	1.455	
0.37600000	1.46	380.6	1.544E-04	1.0%	0.116	0.0354	0.080	0.5100%	0.0019	2.6	0.0	1.276753	12.6	360.7	1.46	
0.37600000	1.465	380.6	1.549E-04	1.0%	0.116	0.03535	0.080	0.5119%	0.0019	2.6	0.0	1.277109	12.6	361.3	1.465	
0.37600000	1.47	380.6	1.554E-04	1.0%	0.116	0.0353	0.080	0.5139%	0.0019	2.6	0.0	1.277454	12.5	361.9	1.47	
0.37600000	1.475	380.6	1.559E-04	1.0%	0.116	0.03525	0.080	0.5158%	0.0019	2.6	0.0	1.277788	12.5	362.5	1.475	
0.37600000	1.48	380.6	1.565E-04	1.0%	0.116	0.0352	0.080	0.5177%	0.0019	2.6	0.0	1.27811	12.4	363.1	1.48	
0.37600000	1.485	380.6	1.570E-04	1.0%	0.116	0.03515	0.080	0.5196%	0.0020	2.6	0.0	1.278422	12.4	363.7	1.485	
0.37600000	1.49	380.6	1.575E-04	1.0%	0.115	0.0351	0.080	0.5215%	0.0020	2.5	0.0	1.278721	12.3	364.3	1.49	
0.37600000	1.495	380.6	1.581E-04	1.0%	0.115	0.03505	0.080	0.5234%	0.0020	2.5	0.0	1.27901	12.3	364.9	1.495	
0.37600000	1.5	380.6	1.586E-04	1.0%	0.115	0.035	0.080	0.5254%	0.0020	2.5	0.0	1.279288	12.3	365.5	1.5	
0.37600000	1.505	380.6	1.591E-04	1.0%	0.115	0.03495	0.080	0.5273%	0.0020	2.5	0.0	1.279555	12.2	366.1	1.505	
0.37600000	1.51	380.6	1.596E-04	1.0%	0.115	0.0349	0.080	0.5292%	0.0020	2.5	0.0	1.27981	12.2	366.7	1.51	
0.37600000	1.515	380.6	1.602E-04	1.0%	0.115	0.03485	0.080	0.5311%	0.0020	2.5	0.0	1.280055	12.1	367.3	1.515	
0.37600000	1.52	380.6	1.607E-04	1.0%	0.115	0.0348	0.080	0.5331%	0.0020	2.5	0.0	1.280289	12.1	367.9	1.52	
0.37600000	1.525	380.6	1.612E-04	1.0%	0.115	0.03475	0.080	0.5350%	0.0020	2.5	0.0	1.280512	12.0	368.5	1.525	
0.37600000	1.53	380.6	1.618E-04	1.0%	0.115	0.0347	0.080	0.5369%	0.0020	2.5	0.0	1.280724	12.0	369.1	1.53	
0.37600000	1.535	380.6	1.623E-04	1.0%	0.115	0.03465	0.080	0.5389%	0.0020	2.5	0.0	1.280926	12.0	369.7	1.535	
0.37600000	1.54	380.6	1.628E-04	1.0%	0.115	0.0346	0.080	0.5408%	0.0020	2.5	0.0	1.281117	11.9	370.3	1.54	
0.37600000	1.545	380.6	1.633E-04	1.0%	0.115	0.03455	0.080	0.5428%	0.0020	2.5	0.0	1.281297	11.9	370.9	1.545	
0.37600000	1.55	380.6	1.639E-04	1.0%	0.115	0.0345	0.080	0.5447%	0.0020	2.4	0.0	1.281467	11.8	371.4	1.55	
0.37600000	1.555	380.6	1.644E-04	1.0%	0.114	0.03445	0.080	0.5466%	0.0021	2.4	0.0	1.281626	11.8	372.0	1.555	
0.37600000	1.56	380.6	1.649E-04	1.0%	0.114	0.0344	0.080	0.5486%	0.0021	2.4	0.0	1.281774	11.8	372.6	1.56	
0.37600000	1.565	380.6	1.655E-04	1.0%	0.114	0.03435	0.080	0.5505%	0.0021	2.4	0.0	1.281912	11.7	373.2	1.565	
0.37600000	1.57	380.6	1.660E-04	1.0%	0.114	0.0343	0.080	0.5525%	0.0021	2.4	0.0	1.28204	11.7	373.8	1.57	
0.37600000	1.575	380.6	1.665E-04	1.0%	0.114	0.03425	0.080	0.5544%	0.0021	2.4	0.0	1.282157	11.6	374.4	1.575	
0.37600000	1.58	380.6	1.670E-04	1.0%	0.114	0.0342	0.080	0.5564%	0.0021	2.4	0.0	1.282264	11.6	374.9	1.58	
0.37600000	1.585	380.6	1.676E-04	1.0%	0.114	0.03415	0.080	0.5583%	0.0021	2.4	0.0	1.28236	11.6	375.5	1.585	
0.37600000	1.59	380.6	1.681E-04	1.0%	0.114	0.0341	0.080	0.5603%	0.0021	2.4	0.0	1.282447	11.5	376.1	1.59	
0.37600000	1.595	380.6	1.686E-04	1.0%	0.114	0.03405	0.080	0.5623%	0.0021	2.4	0.0	1.282523	11.5	376.7	1.595	
0.37600000	1.6	380.6	1.692E-04	1.0%	0.114	0.034	0.080	0.5642%	0.0021	2.4	0.0	1.282589	11.4	377.2	1.6	
0.37600000	1.605	380.6	1.697E-04	1.0%	0.114	0.03395	0.080	0.5662%	0.0021	2.3	0.0	1.282645	11.4	377.8	1.605	
0.37600000	1.61	380.6	1.702E-04	1.0%	0.114	0.0339	0.080	0.5682%	0.0021	2.3	0.0	1.282691	11.4	378.4	1.61	
0.37600000	1.615	380.6	1.707E-04	1.0%	0.113	0.03385	0.080	0.5701%	0.0021	2.3	0.0	1.282727	11.3	378.9	1.615	
0.37600000	1.62	380.6	1.713E-04	1.0%	0.113	0.0338	0.080	0.5721%	0.0022	2.3	0.0	1.282752	11.3	379.5	1.62	
0.37600000	1.625	380.6	1.718E-04	1.0%	0.113	0.03375	0.080	0.5741%	0.0022	2.3	0.0	1.282768	11.2	380.1	1.625	
0.37600000	1.63	380.6	1.723E-04	1.0%	0.113	0.0337	0.080	0.5760%	0.0022	2.3	0.0	1.282774	11.2	380.6	1.63	
0.37600000	1.635	380.6	1.729E-04	1.0%	0.113	0.03365	0.080	0.5780%	0.0022	2.3	0.0	1.28277	11.2	381.2	1.635	
0.37600000	1.64	380.6	1.734E-04	1.0%	0.113	0.0336	0.080	0.5800%	0.0022	2.3	0.0	1.282757	11.1	381.8	1.64	
0.37600000	1.645	380.6	1.739E-04	1.0%	0.113	0.03355	0.079	0.5820%	0.0022	2.3	0.0	1.282733	11.1	382.3	1.645	
0.37600000	1.65	380.6	1.744E-04	1.0%	0.113	0.0335	0.079	0.5840%	0.0022	2.3	0.0	1.2827	11.1	382.9	1.65	
0.37600000	1.655	380.6	1.750E-04	1.0%	0.113	0.03345	0.079	0.5859%	0.0022	2.3	0.0	1.282657	11.0	383.5	1.655	
0.37600000	1.66	380.6	1.755E-04	1.0%	0.113	0.0334	0.079	0.5879%	0.0022	2.3	0.0	1.282605	11.0	384.0	1.66	
0.37600000	1.665	380.6	1.760E-04	1.0%	0.113	0.03335	0.079	0.5899%	0.0022	2.3	0.0	1.282543	10.9	384.6	1.665	
0.37600000	1.67	380.6	1.766E-04	1.0%	0.113	0.0333	0.079	0.5919%	0.0022	2.2	0.0	1.282471	10.9	385.1	1.67	
0.37600000	1.675	380.6	1.771E-04	1.0%	0.113	0.03325	0.079	0.5939%	0.0022	2.2	0.0	1.28239	10.9	385.7	1.675	
0.37600000	1.68	380.6	1.776E-04	1.0%	0.112	0.0332	0.079	0.5959%	0.0022	2.2	0.0	1.282299	10.8	386.2	1.68	
0.37600000	1.685	380.6	1.781E-04	1.0%	0.112	0.03315	0.079	0.5979%	0.0022	2.2	0.0	1.282199	10.8	386.8	1.685	
0.37600000	1.69	380.6	1.787E-04	1.0%	0.112	0.0331	0.079	0.5999%	0.0023	2.2	0.0	1.282089	10.8	387.3	1.69	
0.37600000	1.695	380.6	1.792E-04	1.0%	0.112	0.03305	0.079	0.6019%	0.0023	2.2	0.0	1.28197	10.7	387.9	1.695	
0.37600000	1.7	380.6	1.797E-04	1.0%	0.112	0.033	0.079	0.6039%	0.0023	2.2	0.0	1.281842	10.7	388.4	1.7	
0.37600000	1.705	380.6	1.803E-04	1.0%	0.112	0.03295	0.079	0.6059%	0.0023	2.2	0.0	1.281704	10.6	389.0	1.705	
0.37600000	1.71	380.6	1.808E-04	1.0%	0.112	0.0329	0.079	0.6079%	0.0023	2.2	0.0	1.281557	10.6	389.5	1.71	
0.37600000	1.715	380.6	1.813E-04	1.0%	0.112	0.03285	0.079	0.6100%	0.0023	2.2	0.0	1.281401	10.6	390.1	1.715	
0.37600000	1.72	380.6	1.818E-04	1.0%	0.112	0.0328	0.079	0.6120%	0.0023	2.2	0.0	1.281235	10.5	390.6	1.72	
0.37600000	1.725	380.6	1.824E-04	1.0%	0.112	0.03275	0.079	0.6140%	0.0023	2.2	0.0	1.281061	10.5	391.2	1.725	
0.37600000	1.73	380.6	1.829E-04	1.0%	0.112	0.0327	0.079	0.6160%	0.0023	2.2	0.0	1.280877	10.5	391.7	1.73	
0.37600000	1.735	380.6	1.834E-04	1.0%	0.112	0.03265	0.079	0.6180%	0.0023	2.2	0.0	1.280685	10.4	392.2	1.735	
0.37600000	1.74	380.6	1.840E-04	1.0%	0.112	0.0326	0.079	0.6201%	0.0023	2.1	0.0	1.280483	10.4	392.8	1.74	
0.37600000	1.745	380.6	1.845E-04	1.0%	0.111	0.03255	0.079	0.6221%	0.0023	2.1	0.0	1.280272	10.4	393.3	1.745	
0.37600000	1.75	380.6	1.850E-04	1.0%	0.111	0.0325	0.079	0.6241%	0.0023	2.1	0.0	1.280052	10.3	393.9	1.75	
0.37600000	1.755	380.6	1.855E-04	1.0%	0.111	0.03245	0.079	0.6261%	0.0024	2.1	0.0	1.279824	10.3	394.4	1.755	
0.37600000	1.76	380.6	1.861E-04	1.0%	0.111	0.0324	0.079	0.6282%	0.0024	2.1	0.0	1.279586	10.2	394.9	1.76	
0.37600000	1.765	380.6	1.866E-04	1.0%	0.111	0.03235	0.079	0.6302%	0.0024	2.1	0.0	1.27934	10.2	395.5	1.765	
0.37600000	1.77	380.6	1.871E-04	1.0%	0.111	0.0323	0.079	0.6322%	0.0024	2.1	0.0	1.279084	10.2	396.0	1.77	
0.37600000	1.775	380.6	1.877E-04	1.0%	0.111	0.03225	0.079	0.6343%	0.0024	2.1	0.0	1.27882	10.1	396.5	1.775	
0.37600000	1.78	380.6	1.882E-04	1.0%	0.111	0.0322	0.079	0.6363%	0.0024	2.1	0.0	1.278547	10.1	397.1	1.78	
0.37600000	1.785	380.6	1.887E-04	1.0%	0.111	0.03215	0.079	0.6384%	0.0024	2.1	0.0	1.278266	10.1	397.6	1.785	
0.37600000	1.79	380.6	1.892E-04	1.0%	0.111	0.0321	0.079	0.6404%	0.0024	2.1	0.0	1.277976	10.0	398.1	1.79	
0.37600000	1.795	380.6	1.898E-04	1.0%	0.111	0.03205	0.079	0.6425%	0.0024	2.1	0.0	1.277677	10.0	398.7	1.795	
0.37600000	1.8	380.6	1.903E-04	1.0%	0.111	0.032	0.079	0.6445%	0.0024	2.1	0.0	1.277369	10.0	399.2	1.8	
0.37600000	1.805	380.6	1.908E-04	1.0%	0.110	0.03195	0.078	0.6466%	0.0024	2.1	0.0	1.277053	9.9	399.7	1.805	
0.37600000	1.81	380.6	1.914E-04	1.0%	0.110	0.0319	0.078	0.6487%	0.0024	2.1	0.0	1.276728	9.9	400.2	1.81	
0.37600000	1.815	380.6	1.919E-04	1.0%	0.110	0.03185	0.078	0.6507%	0.0024	2.0	0.0	1.276395	9.9	400.8	1.815	
0.37600000	1.82	380.6	1.924E-04	1.0%	0.110	0.0318	0.078	0.6528%	0.0025	2.0	0.0	1.276053	9.8	401.3	1.82	
0.37600000	1.825	380.6	1.929E-04	1.0%	0.110	0.03175	0.078	0.6548%	0.0025	2.0	0.0	1.275703	9.8	401.8	1.825	
0.37600000	1.83	380.6	1.935E-04	1.0%	0.110	0.0317	0.078	0.6569%	0.0025	2.0	0.0	1.275344	9.8	402.3	1.83	
0.37600000	1.835	380.6	1.940E-04	1.0%	0.110	0.03165	0.078	0.6590%	0.0025	2.0	0.0	1.274977	9.7	402.8	1.835	
0.37600000	1.84	380.6	1.945E-04	1.0%	0.110	0.0316	0.078	0.6611%	0.0025	2.0	0.0	1.274602	9.7	403.4	1.84	
0.37600000	1.845	380.6	1.951E-04	1.0%	0.110	0.03155	0.078	0.6631%	0.0025	2.0	0.0	1.274218	9.7	403.9	1.845	
0.37600000	1.85	380.6	1.956E-04	1.0%	0.110	0.0315	0.078	0.6652%	0.0025	2.0	0.0	1.273826	9.6	404.4	1.85	
0.37600000	1.855	380.6	1.961E-04	1.0%	0.110	0.03145	0.078	0.6673%	0.0025	2.0	0.0	1.273426	9.6	404.9	1.855	
0.37600000	1.86	380.6	1.966E-04	1.0%	0.110	0.0314	0.078	0.6694%	0.0025	2.0	0.0	1.273017	9.6	405.4	1.86	
0.37600000	1.865	380.6	1.972E-04	1.0%	0.109	0.03135	0.078	0.6715%	0.0025	2.0	0.0	1.2726	9.5	405.9	1.865	
0.37600000	1.87	380.6	1.977E-04	1.0%	0.109	0.0313	0.078	0.6736%	0.0025	2.0	0.0	1.272175	9.5	406.4	1.87	
0.37600000	1.875	380.6	1.982E-04	1.0%	0.109	0.03125	0.078	0.6757%	0.0025	2.0	0.0	1.271742	9.5	407.0	1.875	
0.37600000	1.88	380.6	1.988E-04	1.0%	0.109	0.0312	0.078	0.6778%	0.0025	2.0	0.0	1.271301	9.4	407.5	1.88	
0.37600000	1.885	380.6	1.993E-04	1.0%	0.109	0.03115	0.078	0.6799%	0.0026	2.0	0.0	1.270851	9.4	408.0	1.885	
0.37600000	1.89	380.6	1.998E-04	1.0%	0.109	0.0311	0.078	0.6820%	0.0026	1.9	0.0	1.270394	9.4	408.5	1.89	
0.37600000	1.895	380.6	2.003E-04	1.0%	0.109	0.03105	0.078	0.6841%	0.0026	1.9	0.0	1.269928	9.3	409.0	1.895	
0.37600000	1.9	380.6	2.009E-04	1.0%	0.109	0.031	0.078	0.6862%	0.0026	1.9	0.0	1.269455	9.3	409.5	1.9	
0.37600000	1.905	380.6	2.014E-04	1.0%	0.109	0.03095	0.078	0.6883%	0.0026	1.9	0.0	1.268974	9.3	410.0	1.905	
0.37600000	1.91	380.6	2.019E-04	1.0%	0.109	0.0309	0.078	0.6904%	0.0026	1.9	0.0	1.268484	9.2	410.5	1.91	
0.37600000	1.915	380.6	2.025E-04	1.0%	0.109	0.03085	0.078	0.6925%	0.0026	1.9	0.0	1.267987	9.2	411.0	1.915	
0.37600000	1.92	380.6	2.030E-04	1.0%	0.109	0.0308	0.078	0.6946%	0.0026	1.9	0.0	1.267482	9.2	411.5	1.92	
0.37600000	1.925	380.6	2.035E-04	1.0%	0.108	0.03075	0.078	0.6967%	0.0026	1.9	0.0	1.266969	9.1	412.0	1.925	
0.37600000	1.93	380.6	2.040E-04	1.0%	0.108	0.0307	0.078	0.6989%	0.0026	1.9	0.0	1.266448	9.1	412.5	1.93	
0.37600000	1.935	380.6	2.046E-04	1.0%	0.108	0.03065	0.078	0.7010%	0.0026	1.9	0.0	1.265919	9.1	413.0	1.935	
0.37600000	1.94	380.6	2.051E-04	1.0%	0.108	0.0306	0.078	0.7031%	0.0026	1.9	0.0	1.265383	9.0	413.5	1.94	
0.37600000	1.945	380.6	2.056E-04	1.0%	0.108	0.03055	0.078	0.7053%	0.0027	1.9	0.0	1.264838	9.0	414.0	1.945	
0.37600000	1.95	380.6	2.062E-04	1.0%	0.108	0.0305	0.078	0.7074%	0.0027	1.9	0.0	1.264286	9.0	414.5	1.95	
0.37600000	1.955	380.6	2.067E-04	1.0%	0.108	0.03045	0.077	0.7095%	0.0027	1.9	0.0	1.263727	8.9	415.0	1.955	
0.37600000	1.96	380.6	2.072E-04	1.0%	0.108	0.0304	0.077	0.7117%	0.0027	1.9	0.0	1.26316	8.9	415.5	1.96	
0.37600000	1.965	380.6	2.077E-04	1.0%	0.108	0.03035	0.077	0.7138%	0.0027	1.9	0.0	1.262585	8.9	416.0	1.965	
0.37600000	1.97	380.6	2.083E-04	1.0%	0.108	0.0303	0.077	0.7160%	0.0027	1.9	0.0	1.262002	8.9	416.5	1.97	
0.37600000	1.975	380.6	2.088E-04	1.0%	0.108	0.03025	0.077	0.7181%	0.0027	1.9	0.0	1.261412	8.8	417.0	1.975	
0.37600000	1.98	380.6	2.093E-04	1.0%	0.107	0.0302	0.077	0.7203%	0.0027	1.8	0.0	1.260814	8.8	417.5	1.98	
0.37600000	1.985	380.6	2.099E-04	1.0%	0.107	0.03015	0.077	0.7224%	0.0027	1.8	0.0	1.260209	8.8	418.0	1.985	
0.37600000	1.99	380.6	2.104E-04	1.0%	0.107	0.0301	0.077	0.7246%	0.0027	1.8	0.0	1.259597	8.7	418.5	1.99	
0.37600000	1.995	380.6	2.109E-04	1.0%	0.107	0.03005	0.077	0.7267%	0.0027	1.8	0.0	1.258976	8.7	419.0	1.995	
0.37600000	2	380.6	2.114E-04	1.0%	0.107	0.03	0.077	0.7289%	0.0027	1.8	0.0	1.258349	8.7	419.4	2	
0.37600000	2.005	380.6	2.120E-04	1.0%	0.107	0.02995	0.077	0.7311%	0.0027	1.8	0.0	1.257714	8.6	419.9	2.005	
0.37600000	2.01	380.6	2.125E-04	1.0%	0.107	0.0299	0.077	0.7333%	0.0028	1.8	0.0	1.257071	8.6	420.4	2.01	
0.37600000	2.015	380.6	2.130E-04	1.0%	0.107	0.02985	0.077	0.7354%	0.0028	1.8	0.0	1.256421	8.6	420.9	2.015	

0.37600000	2.02	380.6	2.136E-04	1.0%	0.107	0.0298	0.077	0.7376%	0.0028	1.8	0.0	1.255764	8.5	421.4	2.02
0.37600000	2.025	380.6	2.141E-04	1.0%	0.107	0.02975	0.077	0.7398%	0.0028	1.8	0.0	1.2551	8.5	421.9	2.025
0.37600000	2.03	380.6	2.146E-04	1.0%	0.107	0.0297	0.077	0.7420%	0.0028	1.8	0.0	1.254428	8.5	422.4	2.03
0.37600000	2.035	380.6	2.151E-04	1.0%	0.107	0.02965	0.077	0.7442%	0.0028	1.8	0.0	1.253749	8.5	422.8	2.035
0.37600000	2.04	380.6	2.157E-04	1.0%	0.106	0.0296	0.077	0.7463%	0.0028	1.8	0.0	1.253063	8.4	423.3	2.04
0.37600000	2.045	380.6	2.162E-04	1.0%	0.106	0.02955	0.077	0.7485%	0.0028	1.8	0.0	1.252369	8.4	423.8	2.045
0.37600000	2.05	380.6	2.167E-04	1.0%	0.106	0.0295	0.077	0.7507%	0.0028	1.8	0.0	1.251669	8.4	424.3	2.05
0.37600000	2.055	380.6	2.173E-04	1.0%	0.106	0.02945	0.077	0.7529%	0.0028	1.8	0.0	1.250961	8.3	424.8	2.055
0.37600000	2.06	380.6	2.178E-04	1.0%	0.106	0.0294	0.077	0.7551%	0.0028	1.8	0.0	1.250246	8.3	425.3	2.06
0.37600000	2.065	380.6	2.183E-04	1.0%	0.106	0.02935	0.077	0.7574%	0.0028	1.8	0.0	1.249523	8.3	425.7	2.065
0.37600000	2.07	380.6	2.188E-04	1.0%	0.106	0.0293	0.077	0.7596%	0.0029	1.8	0.0	1.248794	8.3	426.2	2.07
0.37600000	2.075	380.6	2.194E-04	1.0%	0.106	0.02925	0.077	0.7618%	0.0029	1.7	0.0	1.248058	8.2	426.7	2.075
0.37600000	2.08	380.6	2.199E-04	1.0%	0.106	0.0292	0.077	0.7640%	0.0029	1.7	0.0	1.247315	8.2	427.2	2.08
0.37600000	2.085	380.6	2.204E-04	1.0%	0.106	0.02915	0.077	0.7662%	0.0029	1.7	0.0	1.246564	8.2	427.6	2.085
0.37600000	2.09	380.6	2.210E-04	1.0%	0.106	0.0291	0.076	0.7684%	0.0029	1.7	0.0	1.245807	8.1	428.1	2.09
0.37600000	2.095	380.6	2.215E-04	1.0%	0.105	0.02905	0.076	0.7707%	0.0029	1.7	0.0	1.245042	8.1	428.6	2.095
0.37600000	2.1	380.6	2.220E-04	1.0%	0.105	0.029	0.076	0.7729%	0.0029	1.7	0.0	1.244271	8.1	429.1	2.1
0.37600000	2.105	380.6	2.225E-04	1.0%	0.105	0.02895	0.076	0.7751%	0.0029	1.7	0.0	1.243493	8.1	429.5	2.105
0.37600000	2.11	380.6	2.231E-04	1.0%	0.105	0.0289	0.076	0.7774%	0.0029	1.7	0.0	1.242708	8.0	430.0	2.11
0.37600000	2.115	380.6	2.236E-04	1.0%	0.105	0.02885	0.076	0.7796%	0.0029	1.7	0.0	1.241915	8.0	430.5	2.115
0.37600000	2.12	380.6	2.241E-04	1.0%	0.105	0.0288	0.076	0.7818%	0.0029	1.7	0.0	1.241117	8.0	430.9	2.12
0.37600000	2.125	380.6	2.247E-04	1.0%	0.105	0.02875	0.076	0.7841%	0.0029	1.7	0.0	1.240311	7.9	431.4	2.125
0.37600000	2.13	380.6	2.252E-04	1.0%	0.105	0.0287	0.076	0.7863%	0.0030	1.7	0.0	1.239498	7.9	431.9	2.13
0.37600000	2.135	380.6	2.257E-04	1.0%	0.105	0.02865	0.076	0.7886%	0.0030	1.7	0.0	1.238679	7.9	432.3	2.135
0.37600000	2.14	380.6	2.262E-04	1.0%	0.105	0.0286	0.076	0.7909%	0.0030	1.7	0.0	1.237853	7.9	432.8	2.14
0.37600000	2.145	380.6	2.268E-04	1.0%	0.105	0.02855	0.076	0.7931%	0.0030	1.7	0.0	1.23702	7.8	433.3	2.145
0.37600000	2.15	380.6	2.273E-04	1.0%	0.105	0.0285	0.076	0.7954%	0.0030	1.7	0.0	1.23618	7.8	433.7	2.15
0.37600000	2.155	380.6	2.278E-04	1.0%	0.104	0.02845	0.076	0.7976%	0.0030	1.7	0.0	1.235334	7.8	434.2	2.155
0.37600000	2.16	380.6	2.284E-04	1.0%	0.104	0.0284	0.076	0.7999%	0.0030	1.7	0.0	1.234481	7.7	434.7	2.16
0.37600000	2.165	380.6	2.289E-04	1.0%	0.104	0.02835	0.076	0.8022%	0.0030	1.7	0.0	1.233621	7.7	435.1	2.165
0.37600000	2.17	380.6	2.294E-04	1.0%	0.104	0.0283	0.076	0.8045%	0.0030	1.7	0.0	1.232754	7.7	435.6	2.17
0.37600000	2.175	380.6	2.299E-04	1.0%	0.104	0.02825	0.076	0.8068%	0.0030	1.6	0.0	1.231881	7.7	436.1	2.175
0.37600000	2.18	380.6	2.305E-04	1.0%	0.104	0.0282	0.076	0.8090%	0.0030	1.6	0.0	1.231002	7.6	436.5	2.18
0.37600000	2.185	380.6	2.310E-04	1.0%	0.104	0.02815	0.076	0.8113%	0.0031	1.6	0.0	1.230116	7.6	437.0	2.185
0.37600000	2.19	380.6	2.315E-04	1.0%	0.104	0.0281	0.076	0.8136%	0.0031	1.6	0.0	1.229223	7.6	437.4	2.19
0.37600000	2.195	380.6	2.321E-04	1.0%	0.104	0.02805	0.076	0.8159%	0.0031	1.6	0.0	1.228324	7.5	437.9	2.195
0.37600000	2.2	380.6	2.326E-04	1.0%	0.104	0.028	0.076	0.8182%	0.0031	1.6	0.0	1.227418	7.5	438.4	2.2
0.37600000	2.205	380.6	2.331E-04	1.0%	0.104	0.02795	0.076	0.8205%	0.0031	1.6	0.0	1.226505	7.5	438.8	2.205
0.37600000	2.21	380.6	2.336E-04	1.0%	0.103	0.0279	0.076	0.8228%	0.0031	1.6	0.0	1.225587	7.5	439.3	2.21
0.37600000	2.215	380.6	2.342E-04	1.0%	0.103	0.02785	0.075	0.8252%	0.0031	1.6	0.0	1.224661	7.4	439.7	2.215
0.37600000	2.22	380.6	2.347E-04	1.0%	0.103	0.0278	0.075	0.8275%	0.0031	1.6	0.0	1.22373	7.4	440.2	2.22
0.37600000	2.225	380.6	2.352E-04	1.0%	0.103	0.02775	0.075	0.8298%	0.0031	1.6	0.0	1.222792	7.4	440.6	2.225
0.37600000	2.23	380.6	2.358E-04	1.0%	0.103	0.0277	0.075	0.8321%	0.0031	1.6	0.0	1.221847	7.4	441.1	2.23
0.37600000	2.235	380.6	2.363E-04	1.0%	0.103	0.02765	0.075	0.8344%	0.0031	1.6	0.0	1.220896	7.3	441.6	2.235
0.37600000	2.24	380.6	2.368E-04	1.0%	0.103	0.0276	0.075	0.8368%	0.0031	1.6	0.0	1.219939	7.3	442.0	2.24
0.37600000	2.245	380.6	2.373E-04	1.0%	0.103	0.02755	0.075	0.8391%	0.0032	1.6	0.0	1.218975	7.3	442.5	2.245
0.37600000	2.25	380.6	2.379E-04	1.0%	0.103	0.0275	0.075	0.8414%	0.0032	1.6	0.0	1.218006	7.3	442.9	2.25
0.37600000	2.255	380.6	2.384E-04	1.0%	0.103	0.02745	0.075	0.8438%	0.0032	1.6	0.0	1.217029	7.2	443.4	2.255
0.37600000	2.26	380.6	2.389E-04	1.0%	0.103	0.0274	0.075	0.8461%	0.0032	1.6	0.0	1.216047	7.2	443.8	2.26
0.37600000	2.265	380.6	2.395E-04	1.0%	0.102	0.02735	0.075	0.8485%	0.0032	1.6	0.0	1.215058	7.2	444.3	2.265
0.37600000	2.27	380.6	2.400E-04	1.0%	0.102	0.0273	0.075	0.8508%	0.0032	1.6	0.0	1.214063	7.1	444.7	2.27
0.37600000	2.275	380.6	2.405E-04	1.0%	0.102	0.02725	0.075	0.8532%	0.0032	1.6	0.0	1.213062	7.1	445.2	2.275
0.37600000	2.28	380.6	2.410E-04	1.0%	0.102	0.0272	0.075	0.8556%	0.0032	1.6	0.0	1.212055	7.1	445.6	2.28
0.37600000	2.285	380.6	2.416E-04	1.0%	0.102	0.02715	0.075	0.8579%	0.0032	1.5	0.0	1.211041	7.1	446.1	2.285
0.37600000	2.29	380.6	2.421E-04	1.0%	0.102	0.0271	0.075	0.8603%	0.0032	1.5	0.0	1.210021	7.0	446.5	2.29
0.37600000	2.295	380.6	2.426E-04	1.0%	0.102	0.02705	0.075	0.8627%	0.0032	1.5	0.0	1.208995	7.0	446.9	2.295
0.37600000	2.3	380.6	2.432E-04	1.0%	0.102	0.027	0.075	0.8651%	0.0033	1.5	0.0	1.207963	7.0	447.4	2.3
0.37600000	2.305	380.6	2.437E-04	1.0%	0.102	0.02695	0.075	0.8674%	0.0033	1.5	0.0	1.206925	7.0	447.8	2.305
0.37600000	2.31	380.6	2.442E-04	1.0%	0.102	0.0269	0.075	0.8698%	0.0033	1.5	0.0	1.205881	6.9	448.3	2.31
0.37600000	2.315	380.6	2.447E-04	1.0%	0.101	0.02685	0.075	0.8722%	0.0033	1.5	0.0	1.204831	6.9	448.7	2.315
0.37600000	2.32	380.6	2.453E-04	1.0%	0.101	0.0268	0.075	0.8746%	0.0033	1.5	0.0	1.203774	6.9	449.2	2.32
0.37600000	2.325	380.6	2.458E-04	1.0%	0.101	0.02675	0.075	0.8770%	0.0033	1.5	0.0	1.202712	6.9	449.6	2.325
0.37600000	2.33	380.6	2.463E-04	1.0%	0.101	0.0267	0.074	0.8794%	0.0033	1.5	0.0	1.201643	6.8	450.1	2.33
0.37600000	2.335	380.6	2.469E-04	1.0%	0.101	0.02665	0.074	0.8818%	0.0033	1.5	0.0	1.200569	6.8	450.5	2.335
0.37600000	2.34	380.6	2.474E-04	1.0%	0.101	0.0266	0.074	0.8842%	0.0033	1.5	0.0	1.199489	6.8	450.9	2.34
0.37600000	2.345	380.6	2.479E-04	1.0%	0.101	0.02655	0.074	0.8867%	0.0033	1.5	0.0	1.198402	6.8	451.4	2.345
0.37600000	2.35	380.6	2.484E-04	1.0%	0.101	0.0265	0.074	0.8891%	0.0033	1.5	0.0	1.19731	6.7	451.8	2.35
0.37600000	2.355	380.6	2.490E-04	1.0%	0.101	0.02645	0.074	0.8915%	0.0034	1.5	0.0	1.196212	6.7	452.3	2.355
0.37600000	2.36	380.6	2.495E-04	1.0%	0.101	0.0264	0.074	0.8939%	0.0034	1.5	0.0	1.195108	6.7	452.7	2.36
0.37600000	2.365	380.6	2.500E-04	1.0%	0.101	0.02635	0.074	0.8964%	0.0034	1.5	0.0	1.193997	6.7	453.1	2.365
0.37600000	2.37	380.6	2.506E-04	1.0%	0.100	0.0263	0.074	0.8988%	0.0034	1.5	0.0	1.192881	6.6	453.6	2.37
0.37600000	2.375	380.6	2.511E-04	1.0%	0.100	0.02625	0.074	0.9013%	0.0034	1.5	0.0	1.19176	6.6	454.0	2.375
0.37600000	2.38	380.6	2.516E-04	1.0%	0.100	0.0262	0.074	0.9037%	0.0034	1.5	0.0	1.190632	6.6	454.4	2.38
0.37600000	2.385	380.6	2.521E-04	1.0%	0.100	0.02615	0.074	0.9062%	0.0034	1.5	0.0	1.189499	6.6	454.9	2.385
0.37600000	2.39	380.6	2.527E-04	1.0%	0.100	0.0261	0.074	0.9086%	0.0034	1.5	0.0	1.188359	6.5	455.3	2.39
0.37600000	2.395	380.6	2.532E-04	1.0%	0.100	0.02605	0.074	0.9111%	0.0034	1.5	0.0	1.187214	6.5	455.7	2.395
0.37600000	2.4	380.6	2.537E-04	1.0%	0.100	0.026	0.074	0.9136%	0.0034	1.5	0.0	1.186063	6.5	456.2	2.4
0.37600000	2.405	380.6	2.543E-04	1.0%	0.100	0.02595	0.074	0.9160%	0.0034	1.5	0.0	1.184907	6.5	456.6	2.405
0.37600000	2.41	380.6	2.548E-04	1.0%	0.100	0.0259	0.074	0.9185%	0.0035	1.4	0.0	1.183744	6.4	457.0	2.41
0.37600000	2.415	380.6	2.553E-04	1.0%	0.100	0.02585	0.074	0.9210%	0.0035	1.4	0.0	1.182576	6.4	457.5	2.415
0.37600000	2.42	380.6	2.558E-04	1.0%	0.099	0.0258	0.074	0.9235%	0.0035	1.4	0.0	1.181402	6.4	457.9	2.42
0.37600000	2.425	380.6	2.564E-04	1.0%	0.099	0.02575	0.074	0.9260%	0.0035	1.4	0.0	1.180223	6.4	458.3	2.425
0.37600000	2.43	380.6	2.569E-04	1.0%	0.099	0.0257	0.074	0.9284%	0.0035	1.4	0.0	1.179038	6.3	458.8	2.43
0.37600000	2.435	380.6	2.574E-04	1.0%	0.099	0.02565	0.074	0.9309%	0.0035	1.4	0.0	1.177847	6.3	459.2	2.435
0.37600000	2.44	380.6	2.580E-04	1.0%	0.099	0.0256	0.073	0.9335%	0.0035	1.4	0.0	1.17665	6.3	459.6	2.44
0.37600000	2.445	380.6	2.585E-04	1.0%	0.099	0.02555	0.073	0.9360%	0.0035	1.4	0.0	1.175448	6.3	460.1	2.445
0.37600000	2.45	380.6	2.590E-04	1.0%	0.099	0.0255	0.073	0.9385%	0.0035	1.4	0.0	1.17424	6.3	460.5	2.45
0.37600000	2.455	380.6	2.595E-04	1.0%	0.099	0.02545	0.073	0.9410%	0.0035	1.4	0.0	1.173027	6.2	460.9	2.455
0.37600000	2.46	380.6	2.601E-04	1.0%	0.099	0.0254	0.073	0.9435%	0.0035	1.4	0.0	1.171808	6.2	461.3	2.46
0.37600000	2.465	380.6	2.606E-04	1.0%	0.099	0.02535	0.073	0.9460%	0.0036	1.4	0.0	1.170584	6.2	461.8	2.465
0.37600000	2.47	380.6	2.611E-04	1.0%	0.099	0.0253	0.073	0.9486%	0.0036	1.4	0.0	1.169353	6.2	462.2	2.47
0.37600000	2.475	380.6	2.617E-04	1.0%	0.098	0.02525	0.073	0.9511%	0.0036	1.4	0.0	1.168118	6.1	462.6	2.475
0.37600000	2.48	380.6	2.622E-04	1.0%	0.098	0.0252	0.073	0.9537%	0.0036	1.4	0.0	1.166877	6.1	463.0	2.48
0.37600000	2.485	380.6	2.627E-04	1.0%	0.098	0.02515	0.073	0.9562%	0.0036	1.4	0.0	1.16563	6.1	463.5	2.485
0.37600000	2.49	380.6	2.632E-04	1.0%	0.098	0.0251	0.073	0.9588%	0.0036	1.4	0.0	1.164378	6.1	463.9	2.49
0.37600000	2.495	380.6	2.638E-04	1.0%	0.098	0.02505	0.073	0.9613%	0.0036	1.4	0.0	1.16312	6.0	464.3	2.495
0.37600000	2.5	380.6	2.643E-04	1.0%	0.098	0.025	0.073	0.9639%	0.0036	1.4	0.0	1.161857	6.0	464.7	2.5
0.37600000	2.505	380.6	2.648E-04	1.0%	0.098	0.02495	0.073	0.9664%	0.0036	1.4	0.0	1.160589	6.0	465.2	2.505
0.37600000	2.51	380.6	2.654E-04	1.0%	0.098	0.0249	0.073	0.9690%	0.0036	1.4	0.0	1.159315	6.0	465.6	2.51
0.37600000	2.515	380.6	2.659E-04	1.0%	0.098	0.02485	0.073	0.9716%	0.0037	1.4	0.0	1.158035	6.0	466.0	2.515
0.37600000	2.52	380.6	2.664E-04	1.0%	0.098	0.0248	0.073	0.9742%	0.0037	1.4	0.0	1.15675	5.9	466.4	2.52
0.37600000	2.525	380.6	2.669E-04	1.0%	0.097	0.02475	0.073	0.9768%	0.0037	1.4	0.0	1.15546	5.9	466.9	2.525
0.37600000	2.53	380.6	2.675E-04	1.0%	0.097	0.0247	0.073	0.9794%	0.0037	1.4	0.0	1.154165	5.9	467.3	2.53
0.37600000	2.535	380.6	2.680E-04	1.0%	0.097	0.02465	0.073	0.9820%	0.0037	1.4	0.0	1.152864	5.9	467.7	2.535
0.37600000	2.54	380.6	2.685E-04	1.0%	0.097	0.0246	0.073	0.9846%	0.0037	1.4	0.0	1.151557	5.8	468.1	2.54
0.37600000	2.545	380.6	2.691E-04	1.0%	0.097	0.02455	0.072	0.9872%	0.0037	1.3	0.0	1.150246	5.8	468.5	2.545
0.37600000	2.55	380.6	2.696E-04	1.0%	0.097	0.0245	0.072	0.9898%	0.0037	1.3	0.0	1.148929	5.8	469.0	2.55
0.37600000	2.555	380.6	2.701E-04	1.0%	0.097	0.02445	0.072	0.9924%	0.0037	1.3	0.0	1.147606	5.8	469.4	2.555
0.37600000	2.56	380.6	2.706E-04	1.0%	0.097	0.0244	0.072	0.9950%	0.0037	1.3	0.0	1.146279	5.7	469.8	2.56
0.37600000	2.565	380.6	2.712E-04	1.0%	0.097	0.02435	0.072	0.9977%	0.0038	1.3	0.0	1.144946	5.7	470.2	2.565
0.37600000	2.57	380.6	2.717E-04	1.0%	0.097	0.0243	0.072	1.0003%	0.0038	1.3	0.0	1.143608	5.7	470.6	2.57
0.37600000	2.575	380.6	2.722E-04	1.0%	0.096	0.02425	0.072	1.0030%	0.0038	1.3	0.0	1.142265	5.7	471.0	2.575
0.37600000	2.58	380.6	2.728E-04	1.0%	0.096	0.0242	0.072	1.0056%	0.0038	1.3	0.0	1.140916	5.7	471.5	2.58
0.37600000	2.585	380.6	2.733E-04	1.0%	0.096	0.02415	0.072	1.0083%	0.0038	1.3	0.0	1.139562	5.6	471.9	2.585
0.37600000	2.59	380.6	2.738E-04	1.0%	0.096	0.0241	0.072	1.0109%	0.0038	1.3	0.0	1.138203	5.6	472.3	2.59
0.37600000	2.595	380.6	2.743E-04	1.0%	0.096	0.02405	0.072	1.0136%	0.0038	1.3	0.0	1.136839	5.6	472.7	2.595
0.37600000	2.6	380.6	2.749E-04	1.0%	0.096	0.024	0.072	1.0162%	0.0038	1.3	0.0	1.135469	5.6	473.1	2.6
0.37600000	2.605	380.6	2.754E-04	1.0%	0.096	0.02395	0.072	1.0189%	0.0038	1.3	0.0	1.134095	5.6	473.5	2.605
0.37600000	2.61	380.6	2.759E-04	1.0%	0.096	0.0239	0.072	1.0216%	0.0038	1.3	0.0	1.132715	5.5	473.9	2.61
0.37600000	2.615	380.6	2.765E-04	1.0%	0.096	0.02385	0.072	1.0243%	0.0039	1.3	0.0	1.13133	5.5	474.4	2.615
0.37600000	2.62	380.6	2.770E-04	1.0%	0.096	0.0238	0.072	1.0270%	0.0039	1.3	0.0	1.12994	5.5	474.8	2.62
0.37600000	2.625	380.6	2.775E-04	1.0%	0.095	0.02375	0.072	1.0297%	0.0039	1.3	0.0	1.128545	5.5	475.2	2.625
0.37600000	2.63	380.6	2.780E-04	1.0%	0.095	0.0237	0.072	1.0324%	0.0039	1.3	0.0	1.127145	5.4	475.6	2.63
0.37600000	2.635	380.6	2.786E-04	1.0%	0.095	0.02365	0.072	1.0351%	0.0039	1.3	0.0	1.125739	5.4	476.0	2.635
0.37600000	2.64	380.6	2.791E-04	1.0%	0.095	0.0236	0.072	1.0378%	0.0039	1.3	0.0	1.124329	5.4	476.4	2.64
0.37600000	2.645	380.6	2.796E-04	1.0%	0.095	0.02355	0.071	1.0405%	0.0039	1.3	0.0	1.122913	5.4	476.8	2.645
0.37600000	2.65	380.6	2.802E-04	1.0%	0.095	0.0235	0.071	1.0433%	0.0039	1.3	0.0	1.121493	5.4	477.2	2.65
0.37600000	2.655	380.6	2.807E-04	1.0%	0.095	0.02345	0.071	1.0460%	0.0039	1.3	0.0	1.120067	5.3	477.6	2.655
0.37600000	2.66	380.6	2.812E-04	1.0%	0.095	0.0234	0.071	1.0487%	0.0039	1.3	0.0	1.118637	5.3	478.0	2.66
0.37600000	2.665	380.6	2.817E-04	1.0%	0.095	0.02335	0.071	1.0515%	0.0040	1.3	0.0	1.117201	5.3	478.5	2.665
0.37600000	2.67	380.6	2.823E-04	1.0%	0.095	0.0233	0.071	1.0542%	0.0040	1.3	0.0	1.11576	5.3	478.9	2.67
0.37600000	2.675	380.6	2.828E-04	1.0%	0.094	0.02325	0.071	1.0570%	0.0040	1.3	0.0	1.114315	5.3	479.3	2.675
0.37600000	2.68	380.6	2.833E-04	1.0%	0.094	0.0232	0.071	1.0598%	0.0040	1.3	0.0	1.112864	5.2	479.7	2.68
0.37600000	2.685	380.6	2.839E-04	1.0%	0.094	0.02315	0.071	1.0625%	0.0040	1.3	0.0	1.111409	5.2	480.1	2.685
0.37600000	2.69	380.6	2.844E-04	1.0%	0.094	0.0231	0.071	1.0653%	0.0040	1.2	0.0	1.109948	5.2	480.5	2.69
0.37600000	2.695	380.6	2.849E-04	1.0%	0.094	0.02305	0.071	1.0681%	0.0040	1.2	0.0	1.108483	5.2	480.9	2.695
0.37600000	2.7	380.6	2.854E-04	1.0%	0.094	0.023	0.071	1.0709%	0.0040	1.2	0.0	1.107012	5.1	481.3	2.7
0.37600000	2.705	380.6	2.860E-04	1.0%	0.094	0.02295	0.071	1.0737%	0.0040	1.2	0.0	1.105537	5.1	481.7	2.705

0.37600000	2.71	380.6	2.865E-04	1.0%	0.094	0.0229	0.071	1.0765%	0.0040	1.2	0.0	1.104056	5.1	482.1	2.71
0.37600000	2.715	380.6	2.870E-04	1.0%	0.094	0.02285	0.071	1.0793%	0.0041	1.2	0.0	1.102571	5.1	482.5	2.715
0.37600000	2.72	380.6	2.876E-04	1.0%	0.093	0.0228	0.071	1.0821%	0.0041	1.2	0.0	1.101081	5.1	482.9	2.72
0.37600000	2.725	380.6	2.881E-04	1.0%	0.093	0.02275	0.071	1.0849%	0.0041	1.2	0.0	1.099586	5.0	483.3	2.725
0.37600000	2.73	380.6	2.886E-04	1.0%	0.093	0.0227	0.071	1.0878%	0.0041	1.2	0.0	1.098087	5.0	483.7	2.73
0.37600000	2.735	380.6	2.892E-04	1.0%	0.093	0.02265	0.071	1.0906%	0.0041	1.2	0.0	1.096582	5.0	484.1	2.735
0.37600000	2.74	380.6	2.897E-04	1.0%	0.093	0.0226	0.070	1.0934%	0.0041	1.2	0.0	1.095073	5.0	484.5	2.74
0.37600000	2.745	380.6	2.902E-04	1.0%	0.093	0.02255	0.070	1.0963%	0.0041	1.2	0.0	1.093558	5.0	484.9	2.745
0.37600000	2.75	380.6	2.907E-04	1.0%	0.093	0.0225	0.070	1.0991%	0.0041	1.2	0.0	1.092039	4.9	485.4	2.75
0.37600000	2.755	380.6	2.913E-04	1.0%	0.093	0.02245	0.070	1.1020%	0.0041	1.2	0.0	1.090515	4.9	485.8	2.755
0.37600000	2.76	380.6	2.918E-04	1.0%	0.093	0.0224	0.070	1.1049%	0.0042	1.2	0.0	1.088986	4.9	486.2	2.76
0.37600000	2.765	380.6	2.923E-04	1.0%	0.093	0.02235	0.070	1.1077%	0.0042	1.2	0.0	1.087453	4.9	486.6	2.765
0.37600000	2.77	380.6	2.929E-04	1.0%	0.092	0.0223	0.070	1.1106%	0.0042	1.2	0.0	1.085915	4.9	487.0	2.77
0.37600000	2.775	380.6	2.934E-04	1.0%	0.092	0.02225	0.070	1.1135%	0.0042	1.2	0.0	1.084372	4.8	487.4	2.775
0.37600000	2.78	380.6	2.939E-04	1.0%	0.092	0.0222	0.070	1.1164%	0.0042	1.2	0.0	1.082824	4.8	487.8	2.78
0.37600000	2.785	380.6	2.944E-04	1.0%	0.092	0.02215	0.070	1.1193%	0.0042	1.2	0.0	1.081271	4.8	488.2	2.785
0.37600000	2.79	380.6	2.950E-04	1.0%	0.092	0.0221	0.070	1.1222%	0.0042	1.2	0.0	1.079714	4.8	488.6	2.79
0.37600000	2.795	380.6	2.955E-04	1.0%	0.092	0.02205	0.070	1.1251%	0.0042	1.2	0.0	1.078152	4.8	489.0	2.795
0.37600000	2.8	380.6	2.960E-04	1.0%	0.092	0.022	0.070	1.1281%	0.0042	1.2	0.0	1.076585	4.7	489.4	2.8
0.37600000	2.805	380.6	2.966E-04	1.0%	0.092	0.02195	0.070	1.1310%	0.0043	1.2	0.0	1.075014	4.7	489.8	2.805
0.37600000	2.81	380.6	2.971E-04	1.0%	0.092	0.0219	0.070	1.1339%	0.0043	1.2	0.0	1.073438	4.7	490.2	2.81
0.37600000	2.815	380.6	2.976E-04	1.0%	0.091	0.02185	0.070	1.1369%	0.0043	1.2	0.0	1.071857	4.7	490.6	2.815
0.37600000	2.82	380.6	2.981E-04	1.0%	0.091	0.0218	0.070	1.1398%	0.0043	1.2	0.0	1.070272	4.7	491.0	2.82
0.37600000	2.825	380.6	2.987E-04	1.0%	0.091	0.02175	0.070	1.1428%	0.0043	1.2	0.0	1.068682	4.6	491.3	2.825
0.37600000	2.83	380.6	2.992E-04	1.0%	0.091	0.0217	0.069	1.1458%	0.0043	1.2	0.0	1.067087	4.6	491.7	2.83
0.37600000	2.835	380.6	2.997E-04	1.0%	0.091	0.02165	0.069	1.1487%	0.0043	1.2	0.0	1.065488	4.6	492.1	2.835
0.37600000	2.84	380.6	3.003E-04	1.0%	0.091	0.0216	0.069	1.1517%	0.0043	1.2	0.0	1.063884	4.6	492.5	2.84
0.37600000	2.845	380.6	3.008E-04	1.0%	0.091	0.02155	0.069	1.1547%	0.0043	1.2	0.0	1.062275	4.6	492.9	2.845
0.37600000	2.85	380.6	3.013E-04	1.0%	0.091	0.0215	0.069	1.1577%	0.0044	1.1	0.0	1.060662	4.5	493.3	2.85
0.37600000	2.855	380.6	3.018E-04	1.0%	0.091	0.02145	0.069	1.1607%	0.0044	1.1	0.0	1.059044	4.5	493.7	2.855
0.37600000	2.86	380.6	3.024E-04	1.0%	0.091	0.0214	0.069	1.1637%	0.0044	1.1	0.0	1.057422	4.5	494.1	2.86
0.37600000	2.865	380.6	3.029E-04	1.0%	0.090	0.02135	0.069	1.1667%	0.0044	1.1	0.0	1.055795	4.5	494.5	2.865
0.37600000	2.87	380.6	3.034E-04	1.0%	0.090	0.0213	0.069	1.1698%	0.0044	1.1	0.0	1.054164	4.5	494.9	2.87
0.37600000	2.875	380.6	3.040E-04	1.0%	0.090	0.02125	0.069	1.1728%	0.0044	1.1	0.0	1.052528	4.5	495.3	2.875
0.37600000	2.88	380.6	3.045E-04	1.0%	0.090	0.0212	0.069	1.1758%	0.0044	1.1	0.0	1.050887	4.4	495.7	2.88
0.37600000	2.885	380.6	3.050E-04	1.0%	0.090	0.02115	0.069	1.1789%	0.0044	1.1	0.0	1.049242	4.4	496.1	2.885
0.37600000	2.89	380.6	3.055E-04	1.0%	0.090	0.0211	0.069	1.1819%	0.0044	1.1	0.0	1.047592	4.4	496.5	2.89
0.37600000	2.895	380.6	3.061E-04	1.0%	0.090	0.02105	0.069	1.1850%	0.0045	1.1	0.0	1.045938	4.4	496.9	2.895
0.37600000	2.9	380.6	3.066E-04	1.0%	0.090	0.021	0.069	1.1881%	0.0045	1.1	0.0	1.04428	4.4	497.3	2.9
0.37600000	2.905	380.6	3.071E-04	1.0%	0.090	0.02095	0.069	1.1912%	0.0045	1.1	0.0	1.042616	4.3	497.7	2.905
0.37600000	2.91	380.6	3.077E-04	1.0%	0.089	0.0209	0.069	1.1943%	0.0045	1.1	0.0	1.040949	4.3	498.1	2.91
0.37600000	2.915	380.6	3.082E-04	1.0%	0.089	0.02085	0.068	1.1974%	0.0045	1.1	0.0	1.039277	4.3	498.5	2.915
0.37600000	2.92	380.6	3.087E-04	1.0%	0.089	0.0208	0.068	1.2005%	0.0045	1.1	0.0	1.0376	4.3	498.8	2.92
0.37600000	2.925	380.6	3.092E-04	1.0%	0.089	0.02075	0.068	1.2036%	0.0045	1.1	0.0	1.035919	4.3	499.2	2.925
0.37600000	2.93	380.6	3.098E-04	1.0%	0.089	0.0207	0.068	1.2067%	0.0045	1.1	0.0	1.034234	4.2	499.6	2.93
0.37600000	2.935	380.6	3.103E-04	1.0%	0.089	0.02065	0.068	1.2098%	0.0045	1.1	0.0	1.032544	4.2	500.0	2.935
0.37600000	2.94	380.6	3.108E-04	1.0%	0.089	0.0206	0.068	1.2130%	0.0046	1.1	0.0	1.030849	4.2	500.4	2.94
0.37600000	2.945	380.6	3.114E-04	1.0%	0.089	0.02055	0.068	1.2161%	0.0046	1.1	0.0	1.02915	4.2	500.8	2.945
0.37600000	2.95	380.6	3.119E-04	1.0%	0.089	0.0205	0.068	1.2193%	0.0046	1.1	0.0	1.027447	4.2	501.2	2.95
0.37600000	2.955	380.6	3.124E-04	1.0%	0.088	0.02045	0.068	1.2224%	0.0046	1.1	0.0	1.02574	4.2	501.6	2.955
0.37600000	2.96	380.6	3.129E-04	1.0%	0.088	0.0204	0.068	1.2256%	0.0046	1.1	0.0	1.024028	4.1	502.0	2.96
0.37600000	2.965	380.6	3.135E-04	1.0%	0.088	0.02035	0.068	1.2288%	0.0046	1.1	0.0	1.022311	4.1	502.4	2.965
0.37600000	2.97	380.6	3.140E-04	1.0%	0.088	0.0203	0.068	1.2320%	0.0046	1.1	0.0	1.020591	4.1	502.8	2.97
0.37600000	2.975	380.6	3.145E-04	1.0%	0.088	0.02025	0.068	1.2352%	0.0046	1.1	0.0	1.018865	4.1	503.1	2.975
0.37600000	2.98	380.6	3.151E-04	1.0%	0.088	0.0202	0.068	1.2384%	0.0047	1.1	0.0	1.017136	4.1	503.5	2.98
0.37600000	2.985	380.6	3.156E-04	1.0%	0.088	0.02015	0.068	1.2416%	0.0047	1.1	0.0	1.015402	4.0	503.9	2.985
0.37600000	2.99	380.6	3.161E-04	1.0%	0.088	0.0201	0.068	1.2448%	0.0047	1.1	0.0	1.013664	4.0	504.3	2.99
0.37600000	2.995	380.6	3.166E-04	1.0%	0.088	0.02005	0.067	1.2481%	0.0047	1.1	0.0	1.011921	4.0	504.7	2.995
0.37600000	3	380.6	3.172E-04	1.0%	0.087	0.02	0.067	1.2513%	0.0047	1.1	0.0	1.010175	4.0	505.1	3
0.37600000	3.005	380.6	3.177E-04	1.0%	0.087	0.01995	0.067	1.2546%	0.0047	1.1	0.0	1.008423	4.0	505.5	3.005
0.37600000	3.01	380.6	3.182E-04	1.0%	0.087	0.0199	0.067	1.2578%	0.0047	1.1	0.0	1.006668	4.0	505.9	3.01
0.37600000	3.015	380.6	3.188E-04	1.0%	0.087	0.01985	0.067	1.2611%	0.0047	1.1	0.0	1.004908	3.9	506.3	3.015
0.37600000	3.02	380.6	3.193E-04	1.0%	0.087	0.0198	0.067	1.2644%	0.0048	1.1	0.0	1.003144	3.9	506.6	3.02
0.37600000	3.025	380.6	3.198E-04	1.0%	0.087	0.01975	0.067	1.2677%	0.0048	1.0	0.0	1.001376	3.9	507.0	3.025
0.37600000	3.03	380.6	3.203E-04	1.0%	0.087	0.0197	0.067	1.2710%	0.0048	1.0	0.0	0.999603	3.9	507.4	3.03
0.37600000	3.035	380.6	3.209E-04	1.0%	0.087	0.01965	0.067	1.2743%	0.0048	1.0	0.0	0.997826	3.9	507.8	3.035
0.37600000	3.04	380.6	3.214E-04	1.0%	0.087	0.0196	0.067	1.2776%	0.0048	1.0	0.0	0.996045	3.9	508.2	3.04
0.37600000	3.045	380.6	3.219E-04	1.0%	0.086	0.01955	0.067	1.2809%	0.0048	1.0	0.0	0.99426	3.8	508.6	3.045
0.37600000	3.05	380.6	3.225E-04	1.0%	0.086	0.0195	0.067	1.2843%	0.0048	1.0	0.0	0.99247	3.8	509.0	3.05
0.37600000	3.055	380.6	3.230E-04	1.0%	0.086	0.01945	0.067	1.2876%	0.0048	1.0	0.0	0.990676	3.8	509.3	3.055
0.37600000	3.06	380.6	3.235E-04	1.0%	0.086	0.0194	0.067	1.2910%	0.0049	1.0	0.0	0.988878	3.8	509.7	3.06
0.37600000	3.065	380.6	3.240E-04	1.0%	0.086	0.01935	0.067	1.2943%	0.0049	1.0	0.0	0.987076	3.8	510.1	3.065
0.37600000	3.07	380.6	3.246E-04	1.0%	0.086	0.0193	0.067	1.2977%	0.0049	1.0	0.0	0.98527	3.8	510.5	3.07
0.37600000	3.075	380.6	3.251E-04	1.0%	0.086	0.01925	0.066	1.3011%	0.0049	1.0	0.0	0.983459	3.7	510.9	3.075
0.37600000	3.08	380.6	3.256E-04	1.0%	0.086	0.0192	0.066	1.3045%	0.0049	1.0	0.0	0.981644	3.7	511.3	3.08
0.37600000	3.085	380.6	3.262E-04	1.0%	0.085	0.01915	0.066	1.3079%	0.0049	1.0	0.0	0.979825	3.7	511.7	3.085
0.37600000	3.09	380.6	3.267E-04	1.0%	0.085	0.0191	0.066	1.3113%	0.0049	1.0	0.0	0.978002	3.7	512.0	3.09
0.37600000	3.095	380.6	3.272E-04	1.0%	0.085	0.01905	0.066	1.3147%	0.0049	1.0	0.0	0.976174	3.7	512.4	3.095
0.37600000	3.1	380.6	3.277E-04	1.0%	0.085	0.019	0.066	1.3182%	0.0050	1.0	0.0	0.974343	3.6	512.8	3.1
0.37600000	3.105	380.6	3.283E-04	1.0%	0.085	0.01895	0.066	1.3216%	0.0050	1.0	0.0	0.972507	3.6	513.2	3.105
0.37600000	3.11	380.6	3.288E-04	1.0%	0.085	0.0189	0.066	1.3251%	0.0050	1.0	0.0	0.970667	3.6	513.6	3.11
0.37600000	3.115	380.6	3.293E-04	1.0%	0.085	0.01885	0.066	1.3285%	0.0050	1.0	0.0	0.968823	3.6	514.0	3.115
0.37600000	3.12	380.6	3.299E-04	1.0%	0.085	0.0188	0.066	1.3320%	0.0050	1.0	0.0	0.966975	3.6	514.3	3.12
0.37600000	3.125	380.6	3.304E-04	1.0%	0.085	0.01875	0.066	1.3355%	0.0050	1.0	0.0	0.965122	3.6	514.7	3.125
0.37600000	3.13	380.6	3.309E-04	1.0%	0.084	0.0187	0.066	1.3390%	0.0050	1.0	0.0	0.963266	3.5	515.1	3.13
0.37600000	3.135	380.6	3.314E-04	1.0%	0.084	0.01865	0.066	1.3425%	0.0050	1.0	0.0	0.961405	3.5	515.5	3.135
0.37600000	3.14	380.6	3.320E-04	1.0%	0.084	0.0186	0.066	1.3460%	0.0051	1.0	0.0	0.959541	3.5	515.9	3.14
0.37600000	3.145	380.6	3.325E-04	1.0%	0.084	0.01855	0.066	1.3496%	0.0051	1.0	0.0	0.957672	3.5	516.3	3.145
0.37600000	3.15	380.6	3.330E-04	1.0%	0.084	0.0185	0.065	1.3531%	0.0051	1.0	0.0	0.955799	3.5	516.6	3.15
0.37600000	3.155	380.6	3.336E-04	1.0%	0.084	0.01845	0.065	1.3567%	0.0051	1.0	0.0	0.953922	3.5	517.0	3.155
0.37600000	3.16	380.6	3.341E-04	1.0%	0.084	0.0184	0.065	1.3602%	0.0051	1.0	0.0	0.952041	3.5	517.4	3.16
0.37600000	3.165	380.6	3.346E-04	1.0%	0.084	0.01835	0.065	1.3638%	0.0051	1.0	0.0	0.950156	3.4	517.8	3.165
0.37600000	3.17	380.6	3.351E-04	1.0%	0.083	0.0183	0.065	1.3674%	0.0051	1.0	0.0	0.948267	3.4	518.2	3.17
0.37600000	3.175	380.6	3.357E-04	1.0%	0.083	0.01825	0.065	1.3710%	0.0052	1.0	0.0	0.946374	3.4	518.6	3.175
0.37600000	3.18	380.6	3.362E-04	1.0%	0.083	0.0182	0.065	1.3746%	0.0052	1.0	0.0	0.944477	3.4	518.9	3.18
0.37600000	3.185	380.6	3.367E-04	1.0%	0.083	0.01815	0.065	1.3782%	0.0052	1.0	0.0	0.942575	3.4	519.3	3.185
0.37600000	3.19	380.6	3.373E-04	1.0%	0.083	0.0181	0.065	1.3819%	0.0052	1.0	0.0	0.94067	3.4	519.7	3.19
0.37600000	3.195	380.6	3.378E-04	1.0%	0.083	0.01805	0.065	1.3855%	0.0052	1.0	0.0	0.938761	3.3	520.1	3.195
0.37600000	3.2	380.6	3.383E-04	1.0%	0.083	0.018	0.065	1.3892%	0.0052	1.0	0.0	0.936847	3.3	520.5	3.2
0.37600000	3.205	380.6	3.388E-04	1.0%	0.083	0.01795	0.065	1.3928%	0.0052	1.0	0.0	0.93493	3.3	520.9	3.205
0.37600000	3.21	380.6	3.394E-04	1.0%	0.083	0.0179	0.065	1.3965%	0.0053	1.0	0.0	0.933009	3.3	521.2	3.21
0.37600000	3.215	380.6	3.399E-04	1.0%	0.082	0.01785	0.065	1.4002%	0.0053	0.9	0.0	0.931083	3.3	521.6	3.215
0.37600000	3.22	380.6	3.404E-04	1.0%	0.082	0.0178	0.064	1.4039%	0.0053	0.9	0.0	0.929154	3.3	522.0	3.22
0.37600000	3.225	380.6	3.410E-04	1.0%	0.082	0.01775	0.064	1.4076%	0.0053	0.9	0.0	0.92722	3.2	522.4	3.225
0.37600000	3.23	380.6	3.415E-04	1.0%	0.082	0.0177	0.064	1.4114%	0.0053	0.9	0.0	0.925283	3.2	522.8	3.23
0.37600000	3.235	380.6	3.420E-04	1.0%	0.082	0.01765	0.064	1.4151%	0.0053	0.9	0.0	0.923342	3.2	523.1	3.235
0.37600000	3.24	380.6	3.425E-04	1.0%	0.082	0.0176	0.064	1.4188%	0.0053	0.9	0.0	0.921396	3.2	523.5	3.24
0.37600000	3.245	380.6	3.431E-04	1.0%	0.082	0.01755	0.064	1.4226%	0.0053	0.9	0.0	0.919447	3.2	523.9	3.245
0.37600000	3.25	380.6	3.436E-04	1.0%	0.082	0.0175	0.064	1.4264%	0.0054	0.9	0.0	0.917494	3.2	524.3	3.25
0.37600000	3.255	380.6	3.441E-04	1.0%	0.081	0.01745	0.064	1.4302%	0.0054	0.9	0.0	0.915537	3.1	524.7	3.255
0.37600000	3.26	380.6	3.447E-04	1.0%	0.081	0.0174	0.064	1.4340%	0.0054	0.9	0.0	0.913575	3.1	525.0	3.26
0.37600000	3.265	380.6	3.452E-04	1.0%	0.081	0.01735	0.064	1.4378%	0.0054	0.9	0.0	0.91161	3.1	525.4	3.265
0.37600000	3.27	380.6	3.457E-04	1.0%	0.081	0.0173	0.064	1.4416%	0.0054	0.9	0.0	0.909641	3.1	525.8	3.27
0.37600000	3.275	380.6	3.462E-04	1.0%	0.081	0.01725	0.064	1.4455%	0.0054	0.9	0.0	0.907668	3.1	526.2	3.275
0.37600000	3.28	380.6	3.468E-04	1.0%	0.081	0.0172	0.064	1.4493%	0.0054	0.9	0.0	0.905691	3.1	526.6	3.28
0.37600000	3.285	380.6	3.473E-04	1.0%	0.081	0.01715	0.064	1.4532%	0.0055	0.9	0.0	0.903711	3.1	526.9	3.285
0.37600000	3.29	380.6	3.478E-04	1.0%	0.081	0.0171	0.063	1.4571%	0.0055	0.9	0.0	0.901726	3.0	527.3	3.29
0.37600000	3.295	380.6	3.484E-04	1.0%	0.080	0.01705	0.063	1.4610%	0.0055	0.9	0.0	0.899737	3.0	527.7	3.295
0.37600000	3.3	380.6	3.489E-04	1.0%	0.080	0.017	0.063	1.4649%	0.0055	0.9	0.0	0.897745	3.0	528.1	3.3
0.37600000	3.305	380.6	3.494E-04	1.0%	0.080	0.01695	0.063	1.4688%	0.0055	0.9	0.0	0.895749	3.0	528.5	3.305
0.37600000	3.31	380.6	3.499E-04	1.0%	0.080	0.0169	0.063	1.4727%	0.0055	0.9	0.0	0.893748	3.0	528.8	3.31
0.37600000	3.315	380.6	3.505E-04	1.0%	0.080	0.01685	0.063	1.4767%	0.0056	0.9	0.0	0.891744	3.0	529.2	3.315
0.37600000	3.32	380.6	3.510E-04	1.0%	0.080	0.0168	0.063	1.4807%	0.0056	0.9	0.0	0.889736	3.0	529.6	3.32
0.37600000	3.325	380.6	3.515E-04	1.0%	0.080	0.01675	0.063	1.4846%	0.0056	0.9	0.0	0.887724	2.9	530.0	3.325
0.37600000	3.33	380.6	3.521E-04	1.0%	0.080	0.0167	0.063	1.4886%	0.0056	0.9	0.0	0.885708	2.9	530.4	3.33
0.37600000	3.335	380.6	3.526E-04	1.0%	0.079	0.01665	0.063	1.4926%	0.0056	0.9	0.0	0.883689	2.9	530.7	3.335
0.37600000	3.34	380.6	3.531E-04	1.0%	0.079	0.0166	0.063	1.4967%	0.0056	0.9	0.0	0.881665	2.9	531.1	3.34
0.37600000	3.345	380.6	3.536E-04	1.0%	0.079	0.01655	0.063	1.5007%	0.0056	0.9	0.0	0.879638	2.9	531.5	3.345
0.37600000	3.35	380.6	3.542E-04	1.0%	0.079	0.0165	0.063	1.5047%	0.0057	0.9	0.0	0.877607	2.9	531.9	3.35
0.37600000	3.355	380.6	3.547E-04	1.0%	0.079	0.01645	0.063	1.5088%	0.0057	0.9	0.0	0.875572	2.8	532.3	3.355
0.37600000	3.36	380.6	3.552E-04	1.0%	0.079	0.0164	0.062	1.5129%	0.0057	0.9	0.0	0.873533	2.8	532.6	3.36
0.37600000	3.365	380.6	3.558E-04	1.0%	0.079	0.01635	0.062	1.5170%	0.0057	0.9	0.0	0.87149	2.8	533.0	3.365
0.37600000	3.37	380.6	3.563E-04	1.0%	0.079	0.0163	0.062	1.5211%	0.0057	0.9	0.0	0.869444	2.8	533.4	3.37
0.37600000	3.375	380.6	3.568E-04	1.0%	0.078	0.01625	0.062	1.5252%	0.0057	0.9	0.0	0.867393	2.8	533.8	3.375
0.37600000	3.38	380.6	3.573E-04	1.0%	0.078	0.0162	0.062	1.5293%	0.0058	0.9	0.0	0.865339	2.8	534.2	3.38
0.37600000	3.385	380.6	3.579E-04	1.0%	0.078	0.01615	0.062	1.5335%	0.0058	0.9	0.0	0.863281	2.8	534.5	3.385
0.37600000	3.39	380.6	3.584E-04	1.0%	0.078	0.0161	0.062	1.5377%	0.0058	0.9	0.0	0.86122	2.7	534.9	3.39
0.37600000	3.395	380.6	3.589E-04	1.0%	0.078	0.01605	0.062	1.5419%	0.0058	0.9	0.0	0.859154	2.7	535.3	3.395

0.37600000	3.4	380.6	3.595E-04	1.0%	0.078	0.016	0.062	1.5461%	0.0058	0.9	0.0	0.857085	2.7	535.7	3.4
0.37600000	3.405	380.6	3.600E-04	1.0%	0.078	0.01595	0.062	1.5503%	0.0058	0.9	0.0	0.855012	2.7	536.1	3.405
0.37600000	3.41	380.6	3.605E-04	1.0%	0.078	0.0159	0.062	1.5545%	0.0058	0.9	0.0	0.852935	2.7	536.4	3.41
0.37600000	3.415	380.6	3.610E-04	1.0%	0.077	0.01585	0.062	1.5588%	0.0059	0.9	0.0	0.850854	2.7	536.8	3.415
0.37600000	3.42	380.6	3.616E-04	1.0%	0.077	0.0158	0.062	1.5630%	0.0059	0.9	0.0	0.848769	2.7	537.2	3.42
0.37600000	3.425	380.6	3.621E-04	1.0%	0.077	0.01575	0.061	1.5673%	0.0059	0.8	0.0	0.846681	2.6	537.6	3.425
0.37600000	3.43	380.6	3.626E-04	1.0%	0.077	0.0157	0.061	1.5716%	0.0059	0.8	0.0	0.844589	2.6	538.0	3.43
0.37600000	3.435	380.6	3.632E-04	1.0%	0.077	0.01565	0.061	1.5759%	0.0059	0.8	0.0	0.842494	2.6	538.3	3.435
0.37600000	3.44	380.6	3.637E-04	1.0%	0.077	0.0156	0.061	1.5802%	0.0059	0.8	0.0	0.840394	2.6	538.7	3.44
0.37600000	3.445	380.6	3.642E-04	1.0%	0.077	0.01555	0.061	1.5846%	0.0060	0.8	0.0	0.838291	2.6	539.1	3.445
0.37600000	3.45	380.6	3.647E-04	1.0%	0.077	0.0155	0.061	1.5890%	0.0060	0.8	0.0	0.836184	2.6	539.5	3.45
0.37600000	3.455	380.6	3.653E-04	1.0%	0.076	0.01545	0.061	1.5933%	0.0060	0.8	0.0	0.834073	2.6	539.9	3.455
0.37600000	3.46	380.6	3.658E-04	1.0%	0.076	0.0154	0.061	1.5977%	0.0060	0.8	0.0	0.831959	2.5	540.2	3.46
0.37600000	3.465	380.6	3.663E-04	1.0%	0.076	0.01535	0.061	1.6022%	0.0060	0.8	0.0	0.82984	2.5	540.6	3.465
0.37600000	3.47	380.6	3.669E-04	1.0%	0.076	0.0153	0.061	1.6066%	0.0060	0.8	0.0	0.827718	2.5	541.0	3.47
0.37600000	3.475	380.6	3.674E-04	1.0%	0.076	0.01525	0.061	1.6110%	0.0061	0.8	0.0	0.825593	2.5	541.4	3.475
0.37600000	3.48	380.6	3.679E-04	1.0%	0.076	0.0152	0.061	1.6155%	0.0061	0.8	0.0	0.823463	2.5	541.8	3.48
0.37600000	3.485	380.6	3.684E-04	1.0%	0.076	0.01515	0.060	1.6200%	0.0061	0.8	0.0	0.82133	2.5	542.1	3.485
0.37600000	3.49	380.6	3.690E-04	1.0%	0.076	0.0151	0.060	1.6245%	0.0061	0.8	0.0	0.819194	2.5	542.5	3.49
0.37600000	3.495	380.6	3.695E-04	1.0%	0.075	0.01505	0.060	1.6290%	0.0061	0.8	0.0	0.817053	2.4	542.9	3.495
0.37600000	3.5	380.6	3.700E-04	1.0%	0.075	0.015	0.060	1.6336%	0.0061	0.8	0.0	0.814909	2.4	543.3	3.5
0.37600000	3.505	380.6	3.706E-04	1.0%	0.075	0.01495	0.060	1.6381%	0.0062	0.8	0.0	0.812761	2.4	543.7	3.505
0.37600000	3.51	380.6	3.711E-04	1.0%	0.075	0.0149	0.060	1.6427%	0.0062	0.8	0.0	0.810609	2.4	544.0	3.51
0.37600000	3.515	380.6	3.716E-04	1.0%	0.075	0.01485	0.060	1.6473%	0.0062	0.8	0.0	0.808454	2.4	544.4	3.515
0.37600000	3.52	380.6	3.721E-04	1.0%	0.075	0.0148	0.060	1.6519%	0.0062	0.8	0.0	0.806295	2.4	544.8	3.52
0.37600000	3.525	380.6	3.727E-04	1.0%	0.075	0.01475	0.060	1.6566%	0.0062	0.8	0.0	0.804132	2.4	545.2	3.525
0.37600000	3.53	380.6	3.732E-04	1.0%	0.074	0.0147	0.060	1.6612%	0.0062	0.8	0.0	0.801966	2.4	545.6	3.53
0.37600000	3.535	380.6	3.737E-04	1.0%	0.074	0.01465	0.060	1.6659%	0.0063	0.8	0.0	0.799796	2.3	545.9	3.535
0.37600000	3.54	380.6	3.743E-04	1.0%	0.074	0.0146	0.060	1.6706%	0.0063	0.8	0.0	0.797622	2.3	546.3	3.54
0.37600000	3.545	380.6	3.748E-04	1.0%	0.074	0.01455	0.059	1.6753%	0.0063	0.8	0.0	0.795445	2.3	546.7	3.545
0.37600000	3.55	380.6	3.753E-04	1.0%	0.074	0.0145	0.059	1.6800%	0.0063	0.8	0.0	0.793264	2.3	547.1	3.55
0.37600000	3.555	380.6	3.758E-04	1.0%	0.074	0.01445	0.059	1.6848%	0.0063	0.8	0.0	0.791079	2.3	547.5	3.555
0.37600000	3.56	380.6	3.764E-04	1.0%	0.074	0.0144	0.059	1.6896%	0.0064	0.8	0.0	0.788891	2.3	547.8	3.56
0.37600000	3.565	380.6	3.769E-04	1.0%	0.074	0.01435	0.059	1.6944%	0.0064	0.8	0.0	0.786699	2.3	548.2	3.565
0.37600000	3.57	380.6	3.774E-04	1.0%	0.073	0.0143	0.059	1.6992%	0.0064	0.8	0.0	0.784503	2.2	548.6	3.57
0.37600000	3.575	380.6	3.780E-04	1.0%	0.073	0.01425	0.059	1.7040%	0.0064	0.8	0.0	0.782304	2.2	549.0	3.575
0.37600000	3.58	380.6	3.785E-04	1.0%	0.073	0.0142	0.059	1.7089%	0.0064	0.8	0.0	0.780101	2.2	549.4	3.58
0.37600000	3.585	380.6	3.790E-04	1.0%	0.073	0.01415	0.059	1.7138%	0.0064	0.8	0.0	0.777894	2.2	549.7	3.585
0.37600000	3.59	380.6	3.795E-04	1.0%	0.073	0.0141	0.059	1.7187%	0.0065	0.8	0.0	0.775684	2.2	550.1	3.59
0.37600000	3.595	380.6	3.801E-04	1.0%	0.073	0.01405	0.059	1.7236%	0.0065	0.8	0.0	0.77347	2.2	550.5	3.595
0.37600000	3.6	380.6	3.806E-04	1.0%	0.073	0.014	0.059	1.7285%	0.0065	0.8	0.0	0.771253	2.2	550.9	3.6
0.37600000	3.605	380.6	3.811E-04	1.0%	0.072	0.01395	0.058	1.7335%	0.0065	0.8	0.0	0.769032	2.2	551.3	3.605
0.37600000	3.61	380.6	3.817E-04	1.0%	0.072	0.0139	0.058	1.7385%	0.0065	0.8	0.0	0.766807	2.1	551.7	3.61
0.37600000	3.615	380.6	3.822E-04	1.0%	0.072	0.01385	0.058	1.7435%	0.0066	0.8	0.0	0.764579	2.1	552.0	3.615
0.37600000	3.62	380.6	3.827E-04	1.0%	0.072	0.0138	0.058	1.7485%	0.0066	0.8	0.0	0.762347	2.1	552.4	3.62
0.37600000	3.625	380.6	3.832E-04	1.0%	0.072	0.01375	0.058	1.7536%	0.0066	0.8	0.0	0.760111	2.1	552.8	3.625
0.37600000	3.63	380.6	3.838E-04	1.0%	0.072	0.0137	0.058	1.7587%	0.0066	0.8	0.0	0.757872	2.1	553.2	3.63
0.37600000	3.635	380.6	3.843E-04	1.0%	0.072	0.01365	0.058	1.7638%	0.0066	0.8	0.0	0.755629	2.1	553.6	3.635
0.37600000	3.64	380.6	3.848E-04	1.0%	0.071	0.0136	0.058	1.7689%	0.0067	0.8	0.0	0.753383	2.1	554.0	3.64
0.37600000	3.645	380.6	3.854E-04	1.0%	0.071	0.01355	0.058	1.7740%	0.0067	0.7	0.0	0.751133	2.1	554.3	3.645
0.37600000	3.65	380.6	3.859E-04	1.0%	0.071	0.0135	0.058	1.7792%	0.0067	0.7	0.0	0.748879	2.0	554.7	3.65
0.37600000	3.655	380.6	3.864E-04	1.0%	0.071	0.01345	0.058	1.7844%	0.0067	0.7	0.0	0.746622	2.0	555.1	3.655
0.37600000	3.66	380.6	3.869E-04	1.0%	0.071	0.0134	0.058	1.7896%	0.0067	0.7	0.0	0.744361	2.0	555.5	3.66
0.37600000	3.665	380.6	3.875E-04	1.0%	0.071	0.01335	0.057	1.7949%	0.0067	0.7	0.0	0.742097	2.0	555.9	3.665
0.37600000	3.67	380.6	3.880E-04	1.0%	0.071	0.0133	0.057	1.8002%	0.0068	0.7	0.0	0.739829	2.0	556.3	3.67
0.37600000	3.675	380.6	3.885E-04	1.0%	0.070	0.01325	0.057	1.8054%	0.0068	0.7	0.0	0.737558	2.0	556.6	3.675
0.37600000	3.68	380.6	3.891E-04	1.0%	0.070	0.0132	0.057	1.8108%	0.0068	0.7	0.0	0.735282	2.0	557.0	3.68
0.37600000	3.685	380.6	3.896E-04	1.0%	0.070	0.01315	0.057	1.8161%	0.0068	0.7	0.0	0.733004	2.0	557.4	3.685
0.37600000	3.69	380.6	3.901E-04	1.0%	0.070	0.0131	0.057	1.8215%	0.0068	0.7	0.0	0.730721	1.9	557.8	3.69
0.37600000	3.695	380.6	3.906E-04	1.0%	0.070	0.01305	0.057	1.8269%	0.0069	0.7	0.0	0.728436	1.9	558.2	3.695
0.37600000	3.7	380.6	3.912E-04	1.0%	0.070	0.013	0.057	1.8323%	0.0069	0.7	0.0	0.726146	1.9	558.6	3.7
0.37600000	3.705	380.6	3.917E-04	1.0%	0.070	0.01295	0.057	1.8378%	0.0069	0.7	0.0	0.723853	1.9	559.0	3.705
0.37600000	3.71	380.6	3.922E-04	1.0%	0.069	0.0129	0.057	1.8432%	0.0069	0.7	0.0	0.721556	1.9	559.3	3.71
0.37600000	3.715	380.6	3.928E-04	1.0%	0.069	0.01285	0.057	1.8487%	0.0070	0.7	0.0	0.719256	1.9	559.7	3.715
0.37600000	3.72	380.6	3.933E-04	1.0%	0.069	0.0128	0.056	1.8543%	0.0070	0.7	0.0	0.716953	1.9	560.1	3.72
0.37600000	3.725	380.6	3.938E-04	1.0%	0.069	0.01275	0.056	1.8598%	0.0070	0.7	0.0	0.714645	1.9	560.5	3.725
0.37600000	3.73	380.6	3.943E-04	1.0%	0.069	0.0127	0.056	1.8654%	0.0070	0.7	0.0	0.712335	1.9	560.9	3.73
0.37600000	3.735	380.6	3.949E-04	1.0%	0.069	0.01265	0.056	1.8710%	0.0070	0.7	0.0	0.71002	1.8	561.3	3.735
0.37600000	3.74	380.6	3.954E-04	1.0%	0.069	0.0126	0.056	1.8767%	0.0071	0.7	0.0	0.707702	1.8	561.7	3.74
0.37600000	3.745	380.6	3.959E-04	1.0%	0.068	0.01255	0.056	1.8823%	0.0071	0.7	0.0	0.705381	1.8	562.1	3.745
0.37600000	3.75	380.6	3.965E-04	1.0%	0.068	0.0125	0.056	1.8880%	0.0071	0.7	0.0	0.703056	1.8	562.4	3.75
0.37600000	3.755	380.6	3.970E-04	1.0%	0.068	0.01245	0.056	1.8938%	0.0071	0.7	0.0	0.700727	1.8	562.8	3.755
0.37600000	3.76	380.6	3.975E-04	1.0%	0.068	0.0124	0.056	1.8995%	0.0071	0.7	0.0	0.698395	1.8	563.2	3.76
0.37600000	3.765	380.6	3.980E-04	1.0%	0.068	0.01235	0.056	1.9053%	0.0072	0.7	0.0	0.696059	1.8	563.6	3.765
0.37600000	3.77	380.6	3.986E-04	1.0%	0.068	0.0123	0.055	1.9111%	0.0072	0.7	0.0	0.69372	1.8	564.0	3.77
0.37600000	3.775	380.6	3.991E-04	1.0%	0.068	0.01225	0.055	1.9170%	0.0072	0.7	0.0	0.691377	1.7	564.4	3.775
0.37600000	3.78	380.6	3.996E-04	1.0%	0.067	0.0122	0.055	1.9229%	0.0072	0.7	0.0	0.689031	1.7	564.8	3.78
0.37600000	3.785	380.6	4.002E-04	1.0%	0.067	0.01215	0.055	1.9288%	0.0073	0.7	0.0	0.686681	1.7	565.2	3.785
0.37600000	3.79	380.6	4.007E-04	1.0%	0.067	0.0121	0.055	1.9347%	0.0073	0.7	0.0	0.684327	1.7	565.6	3.79
0.37600000	3.795	380.6	4.012E-04	1.0%	0.067	0.01205	0.055	1.9407%	0.0073	0.7	0.0	0.681971	1.7	566.0	3.795
0.37600000	3.8	380.6	4.017E-04	1.0%	0.067	0.012	0.055	1.9467%	0.0073	0.7	0.0	0.67961	1.7	566.3	3.8
0.37600000	3.805	380.6	4.023E-04	1.0%	0.067	0.01195	0.055	1.9527%	0.0073	0.7	0.0	0.677246	1.7	566.7	3.805
0.37600000	3.81	380.6	4.028E-04	1.0%	0.067	0.0119	0.055	1.9588%	0.0074	0.7	0.0	0.674878	1.7	567.1	3.81
0.37600000	3.815	380.6	4.033E-04	1.0%	0.066	0.01185	0.055	1.9649%	0.0074	0.7	0.0	0.672507	1.7	567.5	3.815
0.37600000	3.82	380.6	4.039E-04	1.0%	0.066	0.0118	0.054	1.9710%	0.0074	0.7	0.0	0.670133	1.6	567.9	3.82
0.37600000	3.825	380.6	4.044E-04	1.0%	0.066	0.01175	0.054	1.9772%	0.0074	0.7	0.0	0.667755	1.6	568.3	3.825
0.37600000	3.83	380.6	4.049E-04	1.0%	0.066	0.0117	0.054	1.9834%	0.0075	0.7	0.0	0.665373	1.6	568.7	3.83
0.37600000	3.835	380.6	4.054E-04	1.0%	0.066	0.01165	0.054	1.9896%	0.0075	0.7	0.0	0.662988	1.6	569.1	3.835
0.37600000	3.84	380.6	4.060E-04	1.0%	0.066	0.0116	0.054	1.9959%	0.0075	0.7	0.0	0.660599	1.6	569.5	3.84
0.37600000	3.845	380.6	4.065E-04	1.0%	0.066	0.01155	0.054	2.0022%	0.0075	0.7	0.0	0.658207	1.6	569.9	3.845
0.37600000	3.85	380.6	4.070E-04	1.0%	0.065	0.0115	0.054	2.0085%	0.0076	0.7	0.0	0.655811	1.6	570.3	3.85
0.37600000	3.855	380.6	4.076E-04	1.0%	0.065	0.01145	0.054	2.0149%	0.0076	0.7	0.0	0.653412	1.6	570.7	3.855
0.37600000	3.86	380.6	4.081E-04	1.0%	0.065	0.0114	0.054	2.0213%	0.0076	0.7	0.0	0.651009	1.6	571.1	3.86
0.37600000	3.865	380.6	4.086E-04	1.0%	0.065	0.01135	0.054	2.0278%	0.0076	0.7	0.0	0.648603	1.5	571.5	3.865
0.37600000	3.87	380.6	4.091E-04	1.0%	0.065	0.0113	0.053	2.0342%	0.0076	0.7	0.0	0.646193	1.5	571.9	3.87
0.37600000	3.875	380.6	4.097E-04	1.0%	0.065	0.01125	0.053	2.0408%	0.0077	0.7	0.0	0.643779	1.5	572.2	3.875
0.37600000	3.88	380.6	4.102E-04	1.0%	0.064	0.0112	0.053	2.0473%	0.0077	0.6	0.0	0.641362	1.5	572.6	3.88
0.37600000	3.885	380.6	4.107E-04	1.0%	0.064	0.01115	0.053	2.0539%	0.0077	0.6	0.0	0.638942	1.5	573.0	3.885
0.37600000	3.89	380.6	4.113E-04	1.0%	0.064	0.0111	0.053	2.0606%	0.0077	0.6	0.0	0.636518	1.5	573.4	3.89
0.37600000	3.895	380.6	4.118E-04	1.0%	0.064	0.01105	0.053	2.0672%	0.0078	0.6	0.0	0.634091	1.5	573.8	3.895
0.37600000	3.9	380.6	4.123E-04	1.0%	0.064	0.011	0.053	2.0739%	0.0078	0.6	0.0	0.63166	1.5	574.2	3.9
0.37600000	3.905	380.6	4.128E-04	1.0%	0.064	0.01095	0.053	2.0807%	0.0078	0.6	0.0	0.629225	1.5	574.6	3.905
0.37600000	3.91	380.6	4.134E-04	1.0%	0.064	0.0109	0.053	2.0875%	0.0078	0.6	0.0	0.626787	1.4	575.0	3.91
0.37600000	3.915	380.6	4.139E-04	1.0%	0.063	0.01085	0.053	2.0943%	0.0079	0.6	0.0	0.624346	1.4	575.4	3.915
0.37600000	3.92	380.6	4.144E-04	1.0%	0.063	0.0108	0.052	2.1012%	0.0079	0.6	0.0	0.621901	1.4	575.8	3.92
0.37600000	3.925	380.6	4.150E-04	1.0%	0.063	0.01075	0.052	2.1081%	0.0079	0.6	0.0	0.619452	1.4	576.2	3.925
0.37600000	3.93	380.6	4.155E-04	1.0%	0.063	0.0107	0.052	2.1151%	0.0080	0.6	0.0	0.617	1.4	576.6	3.93
0.37600000	3.935	380.6	4.160E-04	1.0%	0.063	0.01065	0.052	2.1221%	0.0080	0.6	0.0	0.614544	1.4	577.0	3.935
0.37600000	3.94	380.6	4.165E-04	1.0%	0.063	0.0106	0.052	2.1291%	0.0080	0.6	0.0	0.612085	1.4	577.4	3.94
0.37600000	3.945	380.6	4.171E-04	1.0%	0.062	0.01055	0.052	2.1362%	0.0080	0.6	0.0	0.609623	1.4	577.8	3.945
0.37600000	3.95	380.6	4.176E-04	1.0%	0.062	0.0105	0.052	2.1433%	0.0081	0.6	0.0	0.607157	1.4	578.2	3.95
0.37600000	3.955	380.6	4.181E-04	1.0%	0.062	0.01045	0.052	2.1505%	0.0081	0.6	0.0	0.604687	1.4	578.6	3.955
0.37600000	3.96	380.6	4.187E-04	1.0%	0.062	0.0104	0.052	2.1577%	0.0081	0.6	0.0	0.602214	1.3	579.1	3.96
0.37600000	3.965	380.6	4.192E-04	1.0%	0.062	0.01035	0.051	2.1650%	0.0081	0.6	0.0	0.599737	1.3	579.5	3.965
0.37600000	3.97	380.6	4.197E-04	1.0%	0.062	0.0103	0.051	2.1723%	0.0082	0.6	0.0	0.597257	1.3	579.9	3.97
0.37600000	3.975	380.6	4.202E-04	1.0%	0.062	0.01025	0.051	2.1797%	0.0082	0.6	0.0	0.594773	1.3	580.3	3.975
0.37600000	3.98	380.6	4.208E-04	1.0%	0.061	0.0102	0.051	2.1871%	0.0082	0.6	0.0	0.592286	1.3	580.7	3.98
0.37600000	3.985	380.6	4.213E-04	1.0%	0.061	0.01015	0.051	2.1945%	0.0083	0.6	0.0	0.589795	1.3	581.1	3.985
0.37600000	3.99	380.6	4.218E-04	1.0%	0.061	0.0101	0.051	2.2020%	0.0083	0.6	0.0	0.587301	1.3	581.5	3.99
0.37600000	3.995	380.6	4.224E-04	1.0%	0.061	0.01005	0.051	2.2096%	0.0083	0.6	0.0	0.584803	1.3	581.9	3.995
0.37600000	4	380.6	4.229E-04	1.0%	0.061	0.01	0.051	2.2172%	0.0083	0.6	0.0	0.582302	1.3	582.3	4
0.37600000	4.005	380.6	4.234E-04	1.0%	0.061	0.00995	0.051	2.2248%	0.0084	0.6	0.0	0.579797	1.2	582.7	4.005
0.37600000	4.01	380.6	4.239E-04	1.0%	0.060	0.0099	0.051	2.2325%	0.0084	0.6	0.0	0.577288	1.2	583.1	4.01
0.37600000	4.015	380.6	4.245E-04	1.0%	0.060	0.00985	0.050	2.2403%	0.0084	0.6	0.0	0.574777	1.2	583.5	4.015
0.37600000	4.02	380.6	4.250E-04	1.0%	0.060	0.0098	0.050	2.2481%	0.0085	0.6	0.0	0.572261	1.2	583.9	4.02
0.37600000	4.025	380.6	4.255E-04	1.0%	0.060	0.00975	0.050	2.2559%	0.0085	0.6	0.0	0.569742	1.2	584.4	4.025
0.37600000	4.03	380.6	4.261E-04	1.0%	0.060	0.0097	0.050	2.2639%	0.0085	0.6	0.0	0.56722	1.2	584.8	4.03
0.37600000	4.035	380.6	4.266E-04	1.0%	0.060	0.00965	0.050	2.2718%	0.0085	0.6	0.0	0.564694	1.2	585.2	4.035
0.37600000	4.04	380.6	4.271E-04	1.0%	0.059	0.0096	0.050	2.2798%	0.0086	0.6	0.0	0.562164	1.2	585.6	4.04
0.37600000	4.045	380.6	4.276E-04	1.0%	0.059	0.00955	0.050	2.2879%	0.0086	0.6	0.0	0.559631	1.2	586.0	4.045
0.37600000	4.05	380.6	4.282E-04	1.0%	0.059	0.0095	0.050	2.2960%	0.0086	0.6	0.0	0.557095	1.2	586.4	4.05
0.37600000	4.055	380.6	4.287E-04	1.0%	0.059	0.00945	0.049	2.3042%	0.0087	0.6	0.0	0.554554	1.2	586.8	4.055
0.37600000	4.06	380.6	4.292E-04	1.0%	0.059	0.0094	0.049	2.3125%	0.0087	0.6	0.0	0.552011	1.1	587.2	4.06
0.37600000	4.065	380.6	4.298E-04	1.0%	0.059	0.00935	0.049	2.3208%	0.0087	0.6	0.0	0.549464	1.1	587.7	4.065
0.37600000	4.07	380.6	4.303E-04	1.0%	0.058	0.0093	0.049	2.3291%	0.0088	0.6	0.0	0.546913	1.1	588.1	4.07
0.37600000	4.075	380.6	4.308E-04	1.0%	0.058	0.00925	0.049	2.3376%	0.0088	0.6	0.0	0.544359	1.1	588.5	4.075
0.37600000	4.08	380.6	4.313E-04	1.0%	0.058	0.0092	0.049	2.3460%	0.0088	0.6	0.0	0.541801	1.1	588.9	4.08
0.37600000	4.085	380.6	4.319E-04	1.0%	0.058	0.00915	0.049	2.3546%	0.0089	0.6	0.0	0.539239	1.1	589.3	4.085

0.37600000	4.09	380.6	4.324E-04	1.0%	0.058	0.0091	0.049	2.3632%	0.0089	0.6	0.0	0.536674	1.1	589.8	4.09
0.37600000	4.095	380.6	4.329E-04	1.0%	0.058	0.00905	0.049	2.3719%	0.0089	0.6	0.0	0.534106	1.1	590.2	4.095
0.37600000	4.1	380.6	4.335E-04	1.0%	0.057	0.009	0.048	2.3806%	0.0090	0.6	0.0	0.531534	1.1	590.6	4.1
0.37600000	4.105	380.6	4.340E-04	1.0%	0.057	0.00895	0.048	2.3894%	0.0090	0.6	0.0	0.528958	1.1	591.0	4.105
0.37600000	4.11	380.6	4.345E-04	1.0%	0.057	0.0089	0.048	2.3983%	0.0090	0.6	0.0	0.526379	1.0	591.4	4.11
0.37600000	4.115	380.6	4.350E-04	1.0%	0.057	0.00885	0.048	2.4072%	0.0091	0.6	0.0	0.523797	1.0	591.9	4.115
0.37600000	4.12	380.6	4.356E-04	1.0%	0.057	0.0088	0.048	2.4162%	0.0091	0.6	0.0	0.52121	1.0	592.3	4.12
0.37600000	4.125	380.6	4.361E-04	1.0%	0.057	0.00875	0.048	2.4253%	0.0091	0.5	0.0	0.518621	1.0	592.7	4.125
0.37600000	4.13	380.6	4.366E-04	1.0%	0.056	0.0087	0.048	2.4344%	0.0092	0.5	0.0	0.516027	1.0	593.1	4.13
0.37600000	4.135	380.6	4.372E-04	1.0%	0.056	0.00865	0.048	2.4436%	0.0092	0.5	0.0	0.51343	1.0	593.6	4.135
0.37600000	4.14	380.6	4.377E-04	1.0%	0.056	0.0086	0.047	2.4529%	0.0092	0.5	0.0	0.51083	1.0	594.0	4.14
0.37600000	4.145	380.6	4.382E-04	1.0%	0.056	0.00855	0.047	2.4622%	0.0093	0.5	0.0	0.508226	1.0	594.4	4.145
0.37600000	4.15	380.6	4.387E-04	1.0%	0.056	0.0085	0.047	2.4716%	0.0093	0.5	0.0	0.505618	1.0	594.8	4.15
0.37600000	4.155	380.6	4.393E-04	1.0%	0.056	0.00845	0.047	2.4811%	0.0093	0.5	0.0	0.503007	1.0	595.3	4.155
0.37600000	4.16	380.6	4.398E-04	1.0%	0.055	0.0084	0.047	2.4907%	0.0094	0.5	0.0	0.500392	1.0	595.7	4.16
0.37600000	4.165	380.6	4.403E-04	1.0%	0.055	0.00835	0.047	2.5004%	0.0094	0.5	0.0	0.497774	0.9	596.1	4.165
0.37600000	4.17	380.6	4.409E-04	1.0%	0.055	0.0083	0.047	2.5101%	0.0094	0.5	0.0	0.495152	0.9	596.6	4.17
0.37600000	4.175	380.6	4.414E-04	1.0%	0.055	0.00825	0.047	2.5199%	0.0095	0.5	0.0	0.492526	0.9	597.0	4.175
0.37600000	4.18	380.6	4.419E-04	1.0%	0.055	0.0082	0.046	2.5298%	0.0095	0.5	0.0	0.489897	0.9	597.4	4.18
0.37600000	4.185	380.6	4.424E-04	1.0%	0.054	0.00815	0.046	2.5398%	0.0095	0.5	0.0	0.487264	0.9	597.9	4.185
0.37600000	4.19	380.6	4.430E-04	1.0%	0.054	0.0081	0.046	2.5498%	0.0096	0.5	0.0	0.484628	0.9	598.3	4.19
0.37600000	4.195	380.6	4.435E-04	1.0%	0.054	0.00805	0.046	2.5599%	0.0096	0.5	0.0	0.481988	0.9	598.7	4.195
0.37600000	4.2	380.6	4.440E-04	1.0%	0.054	0.008	0.046	2.5702%	0.0097	0.5	0.0	0.479344	0.9	599.2	4.2
0.37600000	4.205	380.6	4.446E-04	1.0%	0.054	0.00795	0.046	2.5805%	0.0097	0.5	0.0	0.476697	0.9	599.6	4.205
0.37600000	4.21	380.6	4.451E-04	1.0%	0.054	0.0079	0.046	2.5909%	0.0097	0.5	0.0	0.474046	0.9	600.1	4.21
0.37600000	4.215	380.6	4.456E-04	1.0%	0.053	0.00785	0.046	2.6013%	0.0098	0.5	0.0	0.471391	0.9	600.5	4.215
0.37600000	4.22	380.6	4.461E-04	1.0%	0.053	0.0078	0.045	2.6119%	0.0098	0.5	0.0	0.468733	0.9	600.9	4.22
0.37600000	4.225	380.6	4.467E-04	1.0%	0.053	0.00775	0.045	2.6226%	0.0099	0.5	0.0	0.466072	0.8	601.4	4.225
0.37600000	4.23	380.6	4.472E-04	1.0%	0.053	0.0077	0.045	2.6333%	0.0099	0.5	0.0	0.463406	0.8	601.8	4.23
0.37600000	4.235	380.6	4.477E-04	1.0%	0.053	0.00765	0.045	2.6442%	0.0099	0.5	0.0	0.460737	0.8	602.3	4.235
0.37600000	4.24	380.6	4.483E-04	1.0%	0.053	0.0076	0.045	2.6551%	0.0100	0.5	0.0	0.458065	0.8	602.7	4.24
0.37600000	4.245	380.6	4.488E-04	1.0%	0.052	0.00755	0.045	2.6662%	0.0100	0.5	0.0	0.455388	0.8	603.2	4.245
0.37600000	4.25	380.6	4.493E-04	1.0%	0.052	0.0075	0.045	2.6773%	0.0101	0.5	0.0	0.452708	0.8	603.6	4.25
0.37600000	4.255	380.6	4.498E-04	1.0%	0.052	0.00745	0.044	2.6886%	0.0101	0.5	0.0	0.450025	0.8	604.1	4.255
0.37600000	4.26	380.6	4.504E-04	1.0%	0.052	0.0074	0.044	2.6999%	0.0102	0.5	0.0	0.447337	0.8	604.5	4.26
0.37600000	4.265	380.6	4.509E-04	1.0%	0.052	0.00735	0.044	2.7114%	0.0102	0.5	0.0	0.444646	0.8	605.0	4.265
0.37600000	4.27	380.6	4.514E-04	1.0%	0.051	0.0073	0.044	2.7229%	0.0102	0.5	0.0	0.441952	0.8	605.4	4.27
0.37600000	4.275	380.6	4.520E-04	1.0%	0.051	0.00725	0.044	2.7346%	0.0103	0.5	0.0	0.439253	0.8	605.9	4.275
0.37600000	4.28	380.6	4.525E-04	1.0%	0.051	0.0072	0.044	2.7464%	0.0103	0.5	0.0	0.436551	0.8	606.3	4.28
0.37600000	4.285	380.6	4.530E-04	1.0%	0.051	0.00715	0.044	2.7583%	0.0104	0.5	0.0	0.433846	0.7	606.8	4.285
0.37600000	4.29	380.6	4.535E-04	1.0%	0.051	0.0071	0.044	2.7703%	0.0104	0.5	0.0	0.431136	0.7	607.2	4.29
0.37600000	4.295	380.6	4.541E-04	1.0%	0.050	0.00705	0.043	2.7824%	0.0105	0.5	0.0	0.428423	0.7	607.7	4.295
0.37600000	4.3	380.6	4.546E-04	1.0%	0.050	0.007	0.043	2.7946%	0.0105	0.5	0.0	0.425706	0.7	608.2	4.3
0.37600000	4.305	380.6	4.551E-04	1.0%	0.050	0.00695	0.043	2.8070%	0.0106	0.5	0.0	0.422986	0.7	608.6	4.305
0.37600000	4.31	380.6	4.557E-04	1.0%	0.050	0.0069	0.043	2.8195%	0.0106	0.5	0.0	0.420261	0.7	609.1	4.31
0.37600000	4.315	380.6	4.562E-04	1.0%	0.050	0.00685	0.043	2.8321%	0.0106	0.5	0.0	0.417533	0.7	609.5	4.315
0.37600000	4.32	380.6	4.567E-04	1.0%	0.049	0.0068	0.043	2.8448%	0.0107	0.5	0.0	0.414802	0.7	610.0	4.32
0.37600000	4.325	380.6	4.572E-04	1.0%	0.049	0.00675	0.043	2.8577%	0.0107	0.5	0.0	0.412066	0.7	610.5	4.325
0.37600000	4.33	380.6	4.578E-04	1.0%	0.049	0.0067	0.042	2.8706%	0.0108	0.5	0.0	0.409327	0.7	610.9	4.33
0.37600000	4.335	380.6	4.583E-04	1.0%	0.049	0.00665	0.042	2.8838%	0.0108	0.5	0.0	0.406584	0.7	611.4	4.335
0.37600000	4.34	380.6	4.588E-04	1.0%	0.049	0.0066	0.042	2.8970%	0.0109	0.5	0.0	0.403837	0.7	611.9	4.34
0.37600000	4.345	380.6	4.594E-04	1.0%	0.049	0.00655	0.042	2.9104%	0.0109	0.5	0.0	0.401086	0.7	612.3	4.345
0.37600000	4.35	380.6	4.599E-04	1.0%	0.048	0.0065	0.042	2.9239%	0.0110	0.5	0.0	0.398332	0.6	612.8	4.35
0.37600000	4.355	380.6	4.604E-04	1.0%	0.048	0.00645	0.042	2.9376%	0.0110	0.5	0.0	0.395574	0.6	613.3	4.355
0.37600000	4.36	380.6	4.609E-04	1.0%	0.048	0.0064	0.042	2.9514%	0.0111	0.5	0.0	0.392812	0.6	613.8	4.36
0.37600000	4.365	380.6	4.615E-04	1.0%	0.048	0.00635	0.041	2.9654%	0.0111	0.4	0.0	0.390046	0.6	614.2	4.365
0.37600000	4.37	380.6	4.620E-04	1.0%	0.048	0.0063	0.041	2.9795%	0.0112	0.4	0.0	0.387277	0.6	614.7	4.37
0.37600000	4.375	380.6	4.625E-04	1.0%	0.047	0.00625	0.041	2.9938%	0.0113	0.4	0.0	0.384503	0.6	615.2	4.375
0.37600000	4.38	380.6	4.631E-04	1.0%	0.047	0.0062	0.041	3.0082%	0.0113	0.4	0.0	0.381726	0.6	615.7	4.38
0.37600000	4.385	380.6	4.636E-04	1.0%	0.047	0.00615	0.041	3.0228%	0.0114	0.4	0.0	0.378945	0.6	616.2	4.385
0.37600000	4.39	380.6	4.641E-04	1.0%	0.047	0.0061	0.041	3.0376%	0.0114	0.4	0.0	0.37616	0.6	616.7	4.39
0.37600000	4.395	380.6	4.646E-04	1.0%	0.047	0.00605	0.040	3.0525%	0.0115	0.4	0.0	0.373371	0.6	617.1	4.395
0.37600000	4.4	380.6	4.652E-04	1.0%	0.046	0.006	0.040	3.0676%	0.0115	0.4	0.0	0.370579	0.6	617.6	4.4
0.37600000	4.405	380.6	4.657E-04	1.0%	0.046	0.00595	0.040	3.0829%	0.0116	0.4	0.0	0.367782	0.6	618.1	4.405
0.37600000	4.41	380.6	4.662E-04	1.0%	0.046	0.0059	0.040	3.0983%	0.0116	0.4	0.0	0.364982	0.6	618.6	4.41
0.37600000	4.415	380.6	4.668E-04	1.0%	0.046	0.00585	0.040	3.1140%	0.0117	0.4	0.0	0.362178	0.5	619.1	4.415
0.37600000	4.42	380.6	4.673E-04	1.0%	0.046	0.0058	0.040	3.1298%	0.0118	0.4	0.0	0.359369	0.5	619.6	4.42
0.37600000	4.425	380.6	4.678E-04	1.0%	0.045	0.00575	0.040	3.1458%	0.0118	0.4	0.0	0.356557	0.5	620.1	4.425
0.37600000	4.43	380.6	4.683E-04	1.0%	0.045	0.0057	0.039	3.1620%	0.0119	0.4	0.0	0.353741	0.5	620.6	4.43
0.37600000	4.435	380.6	4.689E-04	1.0%	0.045	0.00565	0.039	3.1784%	0.0120	0.4	0.0	0.350921	0.5	621.1	4.435
0.37600000	4.44	380.6	4.694E-04	1.0%	0.045	0.0056	0.039	3.1949%	0.0120	0.4	0.0	0.348097	0.5	621.6	4.44
0.37600000	4.445	380.6	4.699E-04	1.0%	0.044	0.00555	0.039	3.2117%	0.0121	0.4	0.0	0.345269	0.5	622.1	4.445
0.37600000	4.45	380.6	4.705E-04	1.0%	0.044	0.0055	0.039	3.2287%	0.0121	0.4	0.0	0.342437	0.5	622.6	4.45
0.37600000	4.455	380.6	4.710E-04	1.0%	0.044	0.00545	0.039	3.2460%	0.0122	0.4	0.0	0.339601	0.5	623.1	4.455
0.37600000	4.46	380.6	4.715E-04	1.0%	0.044	0.0054	0.038	3.2634%	0.0123	0.4	0.0	0.336762	0.5	623.6	4.46
0.37600000	4.465	380.6	4.720E-04	1.0%	0.044	0.00535	0.038	3.2811%	0.0123	0.4	0.0	0.333918	0.5	624.1	4.465
0.37600000	4.47	380.6	4.726E-04	1.0%	0.043	0.0053	0.038	3.2990%	0.0124	0.4	0.0	0.33107	0.5	624.7	4.47
0.37600000	4.475	380.6	4.731E-04	1.0%	0.043	0.00525	0.038	3.3171%	0.0125	0.4	0.0	0.328218	0.5	625.2	4.475
0.37600000	4.48	380.6	4.736E-04	1.0%	0.043	0.0052	0.038	3.3355%	0.0125	0.4	0.0	0.325362	0.5	625.7	4.48
0.37600000	4.485	380.6	4.742E-04	1.0%	0.043	0.00515	0.038	3.3541%	0.0126	0.4	0.0	0.322502	0.5	626.2	4.485
0.37600000	4.49	380.6	4.747E-04	1.0%	0.043	0.0051	0.037	3.3730%	0.0127	0.4	0.0	0.319638	0.4	626.7	4.49
0.37600000	4.495	380.6	4.752E-04	1.0%	0.042	0.00505	0.037	3.3921%	0.0128	0.4	0.0	0.316769	0.4	627.3	4.495
0.37600000	4.5	380.6	4.757E-04	1.0%	0.042	0.005	0.037	3.4115%	0.0128	0.4	0.0	0.313897	0.4	627.8	4.5
0.37600000	4.505	380.6	4.763E-04	1.0%	0.042	0.00495	0.037	3.4311%	0.0129	0.4	0.0	0.311021	0.4	628.3	4.505
0.37600000	4.51	380.6	4.768E-04	1.0%	0.042	0.0049	0.037	3.4511%	0.0130	0.4	0.0	0.30814	0.4	628.9	4.51
0.37600000	4.515	380.6	4.773E-04	1.0%	0.041	0.00485	0.037	3.4713%	0.0131	0.4	0.0	0.305255	0.4	629.4	4.515
0.37600000	4.52	380.6	4.779E-04	1.0%	0.041	0.0048	0.036	3.4918%	0.0131	0.4	0.0	0.302366	0.4	629.9	4.52
0.37600000	4.525	380.6	4.784E-04	1.0%	0.041	0.00475	0.036	3.5126%	0.0132	0.4	0.0	0.299473	0.4	630.5	4.525
0.37600000	4.53	380.6	4.789E-04	1.0%	0.041	0.0047	0.036	3.5337%	0.0133	0.4	0.0	0.296576	0.4	631.0	4.53
0.37600000	4.535	380.6	4.795E-04	1.0%	0.041	0.00465	0.036	3.5552%	0.0134	0.4	0.0	0.293675	0.4	631.6	4.535
0.37600000	4.54	380.6	4.800E-04	1.0%	0.040	0.0046	0.036	3.5769%	0.0134	0.4	0.0	0.290769	0.4	632.1	4.54
0.37600000	4.545	380.6	4.805E-04	1.0%	0.040	0.00455	0.036	3.5990%	0.0135	0.4	0.0	0.287859	0.4	632.7	4.545
0.37600000	4.55	380.6	4.810E-04	1.0%	0.040	0.0045	0.035	3.6214%	0.0136	0.4	0.0	0.284945	0.4	633.2	4.55
0.37600000	4.555	380.6	4.816E-04	1.0%	0.040	0.00445	0.035	3.6442%	0.0137	0.4	0.0	0.282026	0.4	633.8	4.555
0.37600000	4.56	380.6	4.821E-04	1.0%	0.039	0.0044	0.035	3.6674%	0.0138	0.4	0.0	0.279103	0.4	634.3	4.56
0.37600000	4.565	380.6	4.826E-04	1.0%	0.039	0.00435	0.035	3.6909%	0.0139	0.4	0.0	0.276176	0.3	634.9	4.565
0.37600000	4.57	380.6	4.832E-04	1.0%	0.039	0.0043	0.035	3.7147%	0.0140	0.4	0.0	0.273245	0.3	635.5	4.57
0.37600000	4.575	380.6	4.837E-04	1.0%	0.039	0.00425	0.034	3.7390%	0.0141	0.4	0.0	0.270309	0.3	636.0	4.575
0.37600000	4.58	380.6	4.842E-04	1.0%	0.038	0.0042	0.034	3.7637%	0.0142	0.4	0.0	0.267369	0.3	636.6	4.58
0.37600000	4.585	380.6	4.847E-04	1.0%	0.038	0.00415	0.034	3.7888%	0.0142	0.4	0.0	0.264424	0.3	637.2	4.585
0.37600000	4.59	380.6	4.853E-04	1.0%	0.038	0.0041	0.034	3.8143%	0.0143	0.3	0.0	0.261475	0.3	637.7	4.59
0.37600000	4.595	380.6	4.858E-04	1.0%	0.038	0.00405	0.034	3.8402%	0.0144	0.3	0.0	0.258522	0.3	638.3	4.595
0.37600000	4.6	380.6	4.863E-04	1.0%	0.037	0.004	0.033	3.8666%	0.0145	0.3	0.0	0.255564	0.3	638.9	4.6
0.37600000	4.605	380.6	4.869E-04	1.0%	0.037	0.00395	0.033	3.8935%	0.0146	0.3	0.0	0.252601	0.3	639.5	4.605
0.37600000	4.61	380.6	4.874E-04	1.0%	0.037	0.0039	0.033	3.9208%	0.0147	0.3	0.0	0.249634	0.3	640.1	4.61
0.37600000	4.615	380.6	4.879E-04	1.0%	0.037	0.00385	0.033	3.9487%	0.0148	0.3	0.0	0.246663	0.3	640.7	4.615
0.37600000	4.62	380.6	4.884E-04	1.0%	0.036	0.0038	0.033	3.9770%	0.0150	0.3	0.0	0.243687	0.3	641.3	4.62
0.37600000	4.625	380.6	4.890E-04	1.0%	0.036	0.00375	0.032	4.0059%	0.0151	0.3	0.0	0.240706	0.3	641.9	4.625
0.37600000	4.63	380.6	4.895E-04	1.0%	0.036	0.0037	0.032	4.0353%	0.0152	0.3	0.0	0.237721	0.3	642.5	4.63
0.37600000	4.635	380.6	4.900E-04	1.0%	0.036	0.00365	0.032	4.0653%	0.0153	0.3	0.0	0.234731	0.3	643.1	4.635
0.37600000	4.64	380.6	4.906E-04	1.0%	0.035	0.0036	0.032	4.0958%	0.0154	0.3	0.0	0.231737	0.3	643.7	4.64
0.37600000	4.645	380.6	4.911E-04	1.0%	0.035	0.00355	0.032	4.1270%	0.0155	0.3	0.0	0.228737	0.3	644.3	4.645
0.37600000	4.65	380.6	4.916E-04	1.0%	0.035	0.0035	0.031	4.1587%	0.0156	0.3	0.0	0.225734	0.3	645.0	4.65
0.37600000	4.655	380.6	4.921E-04	1.0%	0.035	0.00345	0.031	4.1911%	0.0158	0.3	0.0	0.222725	0.2	645.6	4.655
0.37600000	4.66	380.6	4.927E-04	1.0%	0.034	0.0034	0.031	4.2242%	0.0159	0.3	0.0	0.219711	0.2	646.2	4.66
0.37600000	4.665	380.6	4.932E-04	1.0%	0.034	0.00335	0.031	4.2580%	0.0160	0.3	0.0	0.216693	0.2	646.8	4.665
0.37600000	4.67	380.6	4.937E-04	1.0%	0.034	0.0033	0.031	4.2924%	0.0161	0.3	0.0	0.21367	0.2	647.5	4.67
0.37600000	4.675	380.6	4.943E-04	1.0%	0.034	0.00325	0.030	4.3276%	0.0163	0.3	0.0	0.210642	0.2	648.1	4.675
0.37600000	4.68	380.6	4.948E-04	1.0%	0.033	0.0032	0.030	4.3636%	0.0164	0.3	0.0	0.207609	0.2	648.8	4.68
0.37600000	4.685	380.6	4.953E-04	1.0%	0.033	0.00315	0.030	4.4004%	0.0165	0.3	0.0	0.204572	0.2	649.4	4.685
0.37600000	4.69	380.6	4.958E-04	1.0%	0.033	0.0031	0.030	4.4380%	0.0167	0.3	0.0	0.201529	0.2	650.1	4.69
0.37600000	4.695	380.6	4.964E-04	1.0%	0.033	0.00305	0.029	4.4764%	0.0168	0.3	0.0	0.198481	0.2	650.8	4.695
0.37600000	4.7	380.6	4.969E-04	1.0%	0.032	0.003	0.029	4.5158%	0.0170	0.3	0.0	0.195428	0.2	651.4	4.7
0.37600000	4.705	380.6	4.974E-04	1.0%	0.032	0.00295	0.029	4.5560%	0.0171	0.3	0.0	0.19237	0.2	652.1	4.705
0.37600000	4.71	380.6	4.980E-04	1.0%	0.032	0.0029	0.029	4.5973%	0.0173	0.3	0.0	0.189307	0.2	652.8	4.71
0.37600000	4.715	380.6	4.985E-04	1.0%	0.031	0.00285	0.029	4.6395%	0.0174	0.3	0.0	0.186239	0.2	653.5	4.715
0.37600000	4.72	380.6	4.990E-04	1.0%	0.031	0.0028	0.028	4.6828%	0.0176	0.3	0.0	0.183166	0.2	654.2	4.72
0.37600000	4.725	380.6	4.995E-04	1.0%	0.031	0.00275	0.028	4.7272%	0.0178	0.3	0.0	0.180087	0.2	654.9	4.725
0.37600000	4.73	380.6	5.001E-04	1.0%	0.031	0.0027	0.028	4.7727%	0.0179	0.3	0.0	0.177003	0.2	655.6	4.73
0.37600000	4.735	380.6	5.006E-04	1.0%	0.030	0.00265	0.028	4.8194%	0.0181	0.3	0.0	0.173914	0.2	656.3	4.735
0.37600000	4.74	380.6	5.011E-04	1.0%	0.030	0.0026	0.027	4.8674%	0.0183	0.3	0.0	0.17082	0.2	657.0	4.74
0.37600000	4.745	380.6	5.017E-04	1.0%	0.030	0.00255	0.027	4.9167%	0.0185	0.3	0.0	0.16772	0.2	657.7	4.745
0.37600000	4.75	380.6	5.022E-04	1.0%	0.029	0.0025	0.027	4.9673%	0.0187	0.3	0.0	0.164614	0.2	658.5	4.75
0.37600000	4.755	380.6	5.027E-04	1.0%	0.029	0.00245	0.027	5.0194%	0.0189	0.3	0.0	0.161503	0.1	659.2	4.755
0.37600000	4.76	380.6	5.032E-04	1.0%	0.029	0.0024	0.026	5.0730%	0.0191	0.3	0.0	0.158386	0.1	659.9	4.76
0.37600000	4.765	380.6	5.038E-04	1.0%	0.028	0.00235	0.026	5.1282%	0.0193	0.3	0.0	0.155264	0.1	660.7	4.765
0.37600000	4.77	380.6	5.043E-04	1.0%	0.028	0.0023	0.026	5.1850%	0.0195	0.3	0.0	0.152136	0.1	661.5	4.77
0.37600000	4.775	380.6	5.048E-04	1.0%	0.028	0.00225	0.026	5.2436%	0.0197	0.3	0.0	0.149002	0.1	662.2	4.775

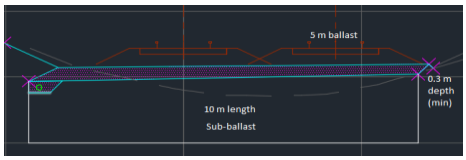
0.37600000	4.78	380.6	5.054E-04	1.0%	0.028	0.0022	0.025	5.3040%	0.0199	0.3	0.0	0.145863	0.1	663.0	4.78
0.37600000	4.785	380.6	5.059E-04	1.0%	0.027	0.00215	0.025	5.3664%	0.0202	0.2	0.0	0.142717	0.1	663.8	4.785
0.37600000	4.79	380.6	5.064E-04	1.0%	0.027	0.0021	0.025	5.4308%	0.0204	0.2	0.0	0.139566	0.1	664.6	4.79
0.37600000	4.795	380.6	5.069E-04	1.0%	0.027	0.00205	0.025	5.4974%	0.0207	0.2	0.0	0.136409	0.1	665.4	4.795
0.37600000	4.8	380.6	5.075E-04	1.0%	0.026	0.002	0.024	5.5663%	0.0209	0.2	0.0	0.133245	0.1	666.2	4.8
0.37600000	4.805	380.6	5.080E-04	1.0%	0.026	0.00195	0.024	5.6376%	0.0212	0.2	0.0	0.130076	0.1	667.1	4.805
0.37600000	4.81	380.6	5.085E-04	1.0%	0.026	0.0019	0.024	5.7116%	0.0215	0.2	0.0	0.1269	0.1	667.9	4.81
0.37600000	4.815	380.6	5.091E-04	1.0%	0.025	0.00185	0.023	5.7882%	0.0218	0.2	0.0	0.123718	0.1	668.7	4.815
0.37600000	4.82	380.6	5.096E-04	1.0%	0.025	0.0018	0.023	5.8678%	0.0221	0.2	0.0	0.120529	0.1	669.6	4.82
0.37600000	4.825	380.6	5.101E-04	1.0%	0.025	0.00175	0.023	5.9506%	0.0224	0.2	0.0	0.117334	0.1	670.5	4.825
0.37600000	4.83	380.6	5.106E-04	1.0%	0.024	0.0017	0.022	6.0367%	0.0227	0.2	0.0	0.114132	0.1	671.4	4.83
0.37600000	4.835	380.6	5.112E-04	1.0%	0.024	0.00165	0.022	6.1263%	0.0230	0.2	0.0	0.110924	0.1	672.3	4.835
0.37600000	4.84	380.6	5.117E-04	1.0%	0.023	0.0016	0.022	6.2198%	0.0234	0.2	0.0	0.107709	0.1	673.2	4.84
0.37600000	4.845	380.6	5.122E-04	1.0%	0.023	0.00155	0.022	6.3175%	0.0238	0.2	0.0	0.104487	0.1	674.1	4.845
0.37600000	4.85	380.6	5.128E-04	1.0%	0.023	0.0015	0.021	6.4195%	0.0241	0.2	0.0	0.101258	0.1	675.1	4.85
0.37600000	4.855	380.6	5.133E-04	1.0%	0.022	0.00145	0.021	6.5264%	0.0245	0.2	0.0	0.098021	0.1	676.0	4.855
0.37600000	4.86	380.6	5.138E-04	1.0%	0.022	0.0014	0.021	6.6385%	0.0250	0.2	0.0	0.094778	0.1	677.0	4.86
0.37600000	4.865	380.6	5.143E-04	1.0%	0.022	0.00135	0.020	6.7562%	0.0254	0.2	0.0	0.091527	0.1	678.0	4.865
0.37600000	4.87	380.6	5.149E-04	1.0%	0.021	0.0013	0.020	6.8800%	0.0259	0.2	0.0	0.088269	0.1	679.0	4.87
0.37600000	4.875	380.6	5.154E-04	1.0%	0.021	0.00125	0.020	7.0106%	0.0264	0.2	0.0	0.085003	0.1	680.0	4.875
0.37600000	4.88	380.6	5.159E-04	1.0%	0.020	0.0012	0.019	7.1484%	0.0269	0.2	0.0	0.081729	0.1	681.1	4.88
0.37600000	4.885	380.6	5.165E-04	1.0%	0.020	0.00115	0.019	7.2943%	0.0274	0.2	0.0	0.078448	0.1	682.2	4.885
0.37600000	4.89	380.6	5.170E-04	1.0%	0.020	0.0011	0.018	7.4491%	0.0280	0.2	0.0	0.075158	0.0	683.3	4.89
0.37600000	4.895	380.6	5.175E-04	1.0%	0.019	0.00105	0.018	7.6138%	0.0286	0.2	0.0	0.07186	0.0	684.4	4.895
0.37600000	4.9	380.6	5.180E-04	1.0%	0.019	0.001	0.018	7.7894%	0.0293	0.2	0.0	0.068553	0.0	685.5	4.9
0.37600000	4.905	380.6	5.186E-04	1.0%	0.018	0.00095	0.017	7.9772%	0.0300	0.2	0.0	0.065237	0.0	686.7	4.905
0.37600000	4.91	380.6	5.191E-04	1.0%	0.018	0.0009	0.017	8.1788%	0.0308	0.2	0.0	0.061913	0.0	687.9	4.91
0.37600000	4.915	380.6	5.196E-04	1.0%	0.017	0.00085	0.016	8.3960%	0.0316	0.2	0.0	0.058579	0.0	689.2	4.915
0.37600000	4.92	380.6	5.202E-04	1.0%	0.017	0.0008	0.016	8.6308%	0.0325	0.2	0.0	0.055236	0.0	690.4	4.92
0.37600000	4.925	380.6	5.207E-04	1.0%	0.016	0.00075	0.016	8.8859%	0.0334	0.1	0.0	0.051883	0.0	691.8	4.925
0.37600000	4.93	380.6	5.212E-04	1.0%	0.016	0.0007	0.015	9.1643%	0.0345	0.1	0.0	0.048519	0.0	693.1	4.93
0.37600000	4.935	380.6	5.217E-04	1.0%	0.015	0.00065	0.015	9.4701%	0.0356	0.1	0.0	0.045145	0.0	694.5	4.935
0.37600000	4.94	380.6	5.223E-04	1.0%	0.015	0.0006	0.014	9.8079%	0.0369	0.1	0.0	0.041761	0.0	696.0	4.94
0.37600000	4.945	380.6	5.228E-04	1.0%	0.014	0.00055	0.014	10.1840%	0.0383	0.1	0.0	0.038364	0.0	697.5	4.945
0.37600000	4.95	380.6	5.233E-04	1.0%	0.014	0.0005	0.013	10.6063%	0.0399	0.1	0.0	0.034956	0.0	699.1	4.95
0.37600000	4.955	380.6	5.239E-04	1.0%	0.013	0.00045	0.013	11.0852%	0.0417	0.1	0.0	0.031536	0.0	700.8	4.955
0.37600000	4.96	380.6	5.244E-04	1.0%	0.012	0.0004	0.012	11.6349%	0.0437	0.1	0.0	0.028102	0.0	702.6	4.96
0.37600000	4.965	380.6	5.249E-04	1.0%	0.012	0.00035	0.011	12.2752%	0.0462	0.1	0.0	0.024654	0.0	704.4	4.965
0.37600000	4.97	380.6	5.254E-04	1.0%	0.011	0.0003	0.011	13.0345%	0.0490	0.1	0.0	0.021192	0.0	706.4	4.97
0.37600000	4.975	380.6	5.260E-04	1.0%	0.010	0.00025	0.010	13.9560%	0.0525	0.1	0.0	0.017713	0.0	708.5	4.975
0.37600000	4.98	380.6	5.265E-04	1.0%	0.009	0.0002	0.009	15.1087%	0.0568	0.1	0.0	0.014217	0.0	710.8	4.98
0.37600000	4.985	380.6	5.270E-04	1.0%	0.009	0.00015	0.008	16.6128%	0.0625	0.1	0.0	0.010701	0.0	713.4	4.985
0.37600000	4.99	380.6	5.276E-04	1.0%	0.008	1E-04	0.008	18.7023%	0.0703	0.1	0.0	0.007163	0.0	716.3	4.99
0.37600000	4.995	380.6	5.281E-04	1.0%	0.006	5E-05	0.006	21.9248%	0.0824	0.1	0.0	0.003599	0.0	719.7	4.995
0.37600000	5	380.6	5.286E-04	1.0%	0.005	0	0.005	28.1176%	0.1057	0.0	0.0	0	0.0	724.1	5

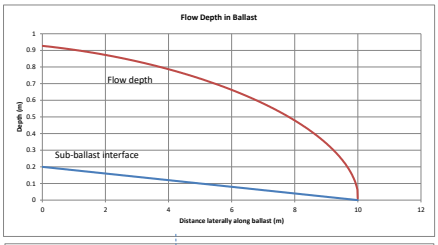
Tc Calculations for Ballast Material using A, B and C IDF Parameters

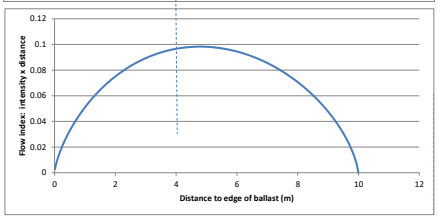
	1000	0.01		100yr	A	988.958	
Width of flow path (m) =	9.995				B	1.5	
Total time of concentraion (min) =					C	0.714	
Critical time of concentration (min) =	**1137.0**	**19 hrs**					
Percent of ballast section contributing to flow for critical Tc =			52%				

Calculation note: iterate rainfall intensity (red text) until equal to value in row above

Hydraulic Conductivity (m/s)	Distance (m)	Rainfall Intensity (mm/hr)	Flow (m2/s)	Subgrade slope	HGL * (m)	Ballast Invert *	Depth (m)	Hydraulic Slope	Velocity (m/s)	Travel time (min)	Travel time (hr)	100-yr peak flow	Total travel time (hr)	100-yr rainfall intensity (mm/hr)	distance (m)
		18.9													
0.00100000	0.005	18.9	2.625E-08	2.0%	0.927	0.1998	0.727	0.0036%	0.0000			0.002814	15162.7	0.3	0.005
0.00100000	0.015	18.9	7.875E-08	2.0%	0.927	0.1996	0.727	0.0108%	0.0000	92358.7	1539.3	0.002812	15162.7	0.3	0.015
0.00100000	0.025	18.9	1.313E-07	2.0%	0.927	0.1994	0.727	0.0180%	0.0000	55415.1	923.6	0.004045	13623.4	0.4	0.025
0.00100000	0.035	18.9	1.838E-07	2.0%	0.927	0.1992	0.727	0.0253%	0.0000	39582.1	659.7	0.005138	12699.8	0.5	0.035
0.00100000	0.045	18.9	2.363E-07	2.0%	0.926	0.199	0.727	0.0325%	0.0000	30785.9	513.1	0.006142	12040.1	0.6	0.045
0.00100000	0.055	18.9	2.888E-07	2.0%	0.926	0.1988	0.727	0.0397%	0.0000	25188.3	419.8	0.007081	11527.0	0.7	0.055
0.00100000	0.065	18.9	3.413E-07	2.0%	0.926	0.1986	0.727	0.0469%	0.0000	21313.1	355.2	0.00797	11107.2	0.8	0.065
0.00100000	0.075	18.9	3.938E-07	2.0%	0.926	0.1984	0.727	0.0541%	0.0000	18471.2	307.9	0.008818	10752.0	0.9	0.075
0.00100000	0.085	18.9	4.463E-07	2.0%	0.925	0.1982	0.727	0.0614%	0.0000	16298.0	271.6	0.009633	10444.1	1.0	0.085
0.00100000	0.095	18.9	4.988E-07	2.0%	0.925	0.198	0.727	0.0686%	0.0000	14582.3	243.0	0.010419	10172.5	1.1	0.095
0.00100000	0.105	18.9	5.513E-07	2.0%	0.925	0.1978	0.727	0.0758%	0.0000	13193.3	219.9	0.011179	9929.5	1.1	0.105
0.00100000	0.115	18.9	6.038E-07	2.0%	0.925	0.1976	0.727	0.0830%	0.0000	12046.0	200.8	0.011917	9709.6	1.2	0.115
0.00100000	0.125	18.9	6.563E-07	2.0%	0.925	0.1974	0.727	0.0902%	0.0000	11082.1	184.7	0.012635	9508.8	1.3	0.125
0.00100000	0.135	18.9	7.088E-07	2.0%	0.924	0.1972	0.727	0.0975%	0.0000	10261.1	171.0	0.013336	9324.1	1.4	0.135
0.00100000	0.145	18.9	7.613E-07	2.0%	0.924	0.197	0.727	0.1047%	0.0000	9553.3	159.2	0.01402	9153.1	1.4	0.145
0.00100000	0.155	18.9	8.138E-07	2.0%	0.924	0.1968	0.727	0.1119%	0.0000	8936.8	148.9	0.014688	8993.9	1.5	0.155
0.00100000	0.165	18.9	8.663E-07	2.0%	0.924	0.1966	0.727	0.1191%	0.0000	8395.1	139.9	0.015343	8844.9	1.6	0.165
0.00100000	0.175	18.9	9.188E-07	2.0%	0.924	0.1964	0.727	0.1263%	0.0000	7915.2	131.9	0.015986	8705.0	1.6	0.175
0.00100000	0.185	18.9	9.713E-07	2.0%	0.923	0.1962	0.727	0.1336%	0.0000	7487.2	124.8	0.016616	8573.1	1.7	0.185
0.00100000	0.195	18.9	1.024E-06	2.0%	0.923	0.196	0.727	0.1408%	0.0000	7103.1	118.4	0.017235	8448.3	1.8	0.195
0.00100000	0.205	18.9	1.076E-06	2.0%	0.923	0.1958	0.727	0.1480%	0.0000	6756.5	112.6	0.017843	8329.9	1.8	0.205
0.00100000	0.215	18.9	1.129E-06	2.0%	0.923	0.1956	0.727	0.1552%	0.0000	6442.1	107.4	0.018442	8217.3	1.9	0.215
0.00100000	0.225	18.9	1.181E-06	2.0%	0.923	0.1954	0.727	0.1625%	0.0000	6155.6	102.6	0.019031	8109.9	1.9	0.225
0.00100000	0.235	18.9	1.234E-06	2.0%	0.922	0.1952	0.727	0.1697%	0.0000	5893.6	98.2	0.019611	8007.3	2.0	0.235
0.00100000	0.245	18.9	1.286E-06	2.0%	0.922	0.195	0.727	0.1769%	0.0000	5652.9	94.2	0.020183	7909.1	2.1	0.245
0.00100000	0.255	18.9	1.339E-06	2.0%	0.922	0.1948	0.727	0.1841%	0.0000	5431.1	90.5	0.020746	7814.9	2.1	0.255
0.00100000	0.265	18.9	1.391E-06	2.0%	0.922	0.1946	0.727	0.1914%	0.0000	5226.0	87.1	0.021302	7724.4	2.2	0.265
0.00100000	0.275	18.9	1.444E-06	2.0%	0.921	0.1944	0.727	0.1986%	0.0000	5035.8	83.9	0.021851	7637.3	2.2	0.275
0.00100000	0.285	18.9	1.496E-06	2.0%	0.921	0.1942	0.727	0.2058%	0.0000	4859.0	81.0	0.022393	7553.4	2.3	0.285
0.00100000	0.295	18.9	1.549E-06	2.0%	0.921	0.194	0.727	0.2130%	0.0000	4694.1	78.2	0.022928	7472.4	2.4	0.295
0.00100000	0.305	18.9	1.601E-06	2.0%	0.921	0.1938	0.727	0.2203%	0.0000	4540.1	75.7	0.023456	7394.1	2.4	0.305
0.00100000	0.315	18.9	1.654E-06	2.0%	0.921	0.1936	0.727	0.2275%	0.0000	4395.8	73.3	0.023978	7318.5	2.5	0.315
0.00100000	0.325	18.9	1.706E-06	2.0%	0.920	0.1934	0.727	0.2347%	0.0000	4260.4	71.0	0.024494	7245.2	2.5	0.325
0.00100000	0.335	18.9	1.759E-06	2.0%	0.920	0.1932	0.727	0.2419%	0.0000	4133.1	68.9	0.025005	7174.2	2.6	0.335
0.00100000	0.345	18.9	1.811E-06	2.0%	0.920	0.193	0.727	0.2492%	0.0000	4013.2	66.9	0.025509	7105.3	2.6	0.345
0.00100000	0.355	18.9	1.864E-06	2.0%	0.920	0.1928	0.727	0.2564%	0.0000	3900.0	65.0	0.026009	7038.4	2.7	0.355
0.00100000	0.365	18.9	1.916E-06	2.0%	0.919	0.1926	0.727	0.2636%	0.0000	3793.0	63.2	0.026503	6973.4	2.8	0.365
0.00100000	0.375	18.9	1.969E-06	2.0%	0.919	0.1924	0.727	0.2709%	0.0000	3691.7	61.5	0.026991	6910.2	2.8	0.375
0.00100000	0.385	18.9	2.021E-06	2.0%	0.919	0.1922	0.727	0.2781%	0.0000	3595.7	59.9	0.027475	6848.7	2.9	0.385
0.00100000	0.395	18.9	2.074E-06	2.0%	0.919	0.192	0.727	0.2853%	0.0000	3504.5	58.4	0.027955	6788.8	2.9	0.395
0.00100000	0.405	18.9	2.126E-06	2.0%	0.919	0.1918	0.727	0.2926%	0.0000	3417.8	57.0	0.028429	6730.3	3.0	0.405
0.00100000	0.415	18.9	2.179E-06	2.0%	0.918	0.1916	0.727	0.2998%	0.0000	3335.4	55.6	0.028899	6673.4	3.0	0.415
0.00100000	0.425	18.9	2.231E-06	2.0%	0.918	0.1914	0.727	0.3071%	0.0000	3256.7	54.3	0.029364	6617.8	3.1	0.425
0.00100000	0.435	18.9	2.284E-06	2.0%	0.918	0.1912	0.727	0.3143%	0.0000	3181.7	53.0	0.029826	6563.5	3.1	0.435
0.00100000	0.445	18.9	2.336E-06	2.0%	0.918	0.191	0.727	0.3215%	0.0000	3110.1	51.8	0.030282	6510.5	3.2	0.445
0.00100000	0.455	18.9	2.389E-06	2.0%	0.917	0.1908	0.727	0.3288%	0.0000	3041.6	50.7	0.030735	6458.6	3.2	0.455
0.00100000	0.465	18.9	2.441E-06	2.0%	0.917	0.1906	0.727	0.3360%	0.0000	2976.1	49.6	0.031184	6408.0	3.3	0.465
0.00100000	0.475	18.9	2.494E-06	2.0%	0.917	0.1904	0.726	0.3433%	0.0000	2913.3	48.6	0.031629	6358.4	3.3	0.475
0.00100000	0.485	18.9	2.546E-06	2.0%	0.917	0.1902	0.726	0.3505%	0.0000	2853.1	47.6	0.03207	6309.8	3.4	0.485
0.00100000	0.495	18.9	2.599E-06	2.0%	0.916	0.19	0.726	0.3577%	0.0000	2795.3	46.6	0.032508	6262.3	3.4	0.495
0.00100000	0.505	18.9	2.651E-06	2.0%	0.916	0.1898	0.726	0.3650%	0.0000	2739.8	45.7	0.032942	6215.7	3.5	0.505
0.00100000	0.515	18.9	2.704E-06	2.0%	0.916	0.1896	0.726	0.3722%	0.0000	2686.5	44.8	0.033372	6170.0	3.5	0.515
0.00100000	0.525	18.9	2.756E-06	2.0%	0.916	0.1894	0.726	0.3795%	0.0000	2635.1	43.9	0.033798	6125.2	3.6	0.525
0.00100000	0.535	18.9	2.809E-06	2.0%	0.915	0.1892	0.726	0.3867%	0.0000	2585.8	43.1	0.034222	6081.3	3.6	0.535
0.00100000	0.545	18.9	2.861E-06	2.0%	0.915	0.189	0.726	0.3940%	0.0000	2538.2	42.3	0.034642	6038.2	3.7	0.545
0.00100000	0.555	18.9	2.914E-06	2.0%	0.915	0.1888	0.726	0.4012%	0.0000	2492.3	41.5	0.035058	5995.9	3.7	0.555
0.00100000	0.565	18.9	2.966E-06	2.0%	0.915	0.1886	0.726	0.4085%	0.0000	2448.1	40.8	0.035472	5954.4	3.8	0.565
0.00100000	0.575	18.9	3.019E-06	2.0%	0.915	0.1884	0.726	0.4157%	0.0000	2405.3	40.1	0.035882	5913.6	3.8	0.575
0.00100000	0.585	18.9	3.071E-06	2.0%	0.914	0.1882	0.726	0.4230%	0.0000	2364.1	39.4	0.036289	5873.5	3.9	0.585
0.00100000	0.595	18.9	3.124E-06	2.0%	0.914	0.188	0.726	0.4303%	0.0000	2324.2	38.7	0.036693	5834.1	3.9	0.595
0.00100000	0.605	18.9	3.176E-06	2.0%	0.914	0.1878	0.726	0.4375%	0.0000	2285.7	38.1	0.037094	5795.3	4.0	0.605
0.00100000	0.615	18.9	3.229E-06	2.0%	0.914	0.1876	0.726	0.4448%	0.0000	2248.4	37.5	0.037492	5757.2	4.0	0.615
0.00100000	0.625	18.9	3.281E-06	2.0%	0.913	0.1874	0.726	0.4520%	0.0000	2212.2	36.9	0.037888	5719.8	4.0	0.625
0.00100000	0.635	18.9	3.334E-06	2.0%	0.913	0.1872	0.726	0.4593%	0.0000	2177.3	36.3	0.03828	5682.9	4.1	0.635
0.00100000	0.645	18.9	3.386E-06	2.0%	0.913	0.187	0.726	0.4666%	0.0000	2143.4	35.7	0.03867	5646.6	4.1	0.645
0.00100000	0.655	18.9	3.439E-06	2.0%	0.913	0.1868	0.726	0.4738%	0.0000	2110.5	35.2	0.039056	5610.9	4.2	0.655
0.00100000	0.665	18.9	3.491E-06	2.0%	0.912	0.1866	0.726	0.4811%	0.0000	2078.6	34.6	0.03944	5575.7	4.2	0.665
0.00100000	0.675	18.9	3.544E-06	2.0%	0.912	0.1864	0.726	0.4884%	0.0000	2047.7	34.1	0.039822	5541.1	4.3	0.675
0.00100000	0.685	18.9	3.596E-06	2.0%	0.912	0.1862	0.726	0.4956%	0.0000	2017.7	33.6	0.040201	5506.9	4.3	0.685
0.00100000	0.695	18.9	3.649E-06	2.0%	0.912	0.186	0.726	0.5029%	0.0000	1988.5	33.1	0.040577	5473.3	4.4	0.695
0.00100000	0.705	18.9	3.701E-06	2.0%	0.911	0.1858	0.726	0.5102%	0.0000	1960.2	32.7	0.040951	5440.2	4.4	0.705
0.00100000	0.715	18.9	3.754E-06	2.0%	0.911	0.1856	0.725	0.5174%	0.0000	1932.6	32.2	0.041322	5407.5	4.5	0.715
0.00100000	0.725	18.9	3.806E-06	2.0%	0.911	0.1854	0.725	0.5247%	0.0000	1905.8	31.8	0.04169	5375.3	4.5	0.725
0.00100000	0.735	18.9	3.859E-06	2.0%	0.911	0.1852	0.725	0.5320%	0.0000	1879.7	31.3	0.042057	5343.5	4.5	0.735
0.00100000	0.745	18.9	3.911E-06	2.0%	0.910	0.185	0.725	0.5393%	0.0000	1854.4	30.9	0.04242	5312.2	4.6	0.745
0.00100000	0.755	18.9	3.964E-06	2.0%	0.910	0.1848	0.725	0.5465%	0.0000	1829.7	30.5	0.042782	5281.3	4.6	0.755
0.00100000	0.765	18.9	4.016E-06	2.0%	0.910	0.1846	0.725	0.5538%	0.0000	1805.6	30.1	0.043141	5250.8	4.7	0.765
0.00100000	0.775	18.9	4.069E-06	2.0%	0.910	0.1844	0.725	0.5611%	0.0000	1782.2	29.7	0.043498	5220.7	4.7	0.775
0.00100000	0.785	18.9	4.121E-06	2.0%	0.909	0.1842	0.725	0.5684%	0.0000	1759.3	29.3	0.043852	5191.0	4.8	0.785
0.00100000	0.795	18.9	4.174E-06	2.0%	0.909	0.184	0.725	0.5757%	0.0000	1737.1	29.0	0.044205	5161.7	4.8	0.795
0.00100000	0.805	18.9	4.226E-06	2.0%	0.909	0.1838	0.725	0.5830%	0.0000	1715.4	28.6	0.044555	5132.7	4.8	0.805
0.00100000	0.815	18.9	4.279E-06	2.0%	0.908	0.1836	0.725	0.5903%	0.0000	1694.2	28.2	0.044902	5104.1	4.9	0.815
0.00100000	0.825	18.9	4.331E-06	2.0%	0.908	0.1834	0.725	0.5975%	0.0000	1673.5	27.9	0.045248	5075.9	4.9	0.825
0.00100000	0.835	18.9	4.384E-06	2.0%	0.908	0.1832	0.725	0.6048%	0.0000	1653.3	27.6	0.045592	5048.0	5.0	0.835
0.00100000	0.845	18.9	4.436E-06	2.0%	0.908	0.183	0.725	0.6121%	0.0000	1633.6	27.2	0.045933	5020.5	5.0	0.845
0.00100000	0.855	18.9	4.489E-06	2.0%	0.907	0.1828	0.725	0.6194%	0.0000	1614.4	26.9	0.046272	4993.2	5.1	0.855
0.00100000	0.865	18.9	4.541E-06	2.0%	0.907	0.1826	0.725	0.6267%	0.0000	1595.6	26.6	0.04661	4966.3	5.1	0.865
0.00100000	0.875	18.9	4.594E-06	2.0%	0.907	0.1824	0.725	0.6340%	0.0000	1577.2	26.3	0.046945	4939.7	5.1	0.875
0.00100000	0.885	18.9	4.646E-06	2.0%	0.907	0.1822	0.724	0.6413%	0.0000	1559.2	26.0	0.047278	4913.4	5.2	0.885
0.00100000	0.895	18.9	4.699E-06	2.0%	0.906	0.182	0.724	0.6486%	0.0000	1541.7	25.7	0.047609	4887.5	5.2	0.895
0.00100000	0.905	18.9	4.751E-06	2.0%	0.906	0.1818	0.724	0.6559%	0.0000	1524.5	25.4	0.047938	4861.8	5.3	0.905
0.00100000	0.915	18.9	4.804E-06	2.0%	0.906	0.1816	0.724	0.6633%	0.0000	1507.7	25.1	0.048266	4836.4	5.3	0.915
0.00100000	0.925	18.9	4.856E-06	2.0%	0.906	0.1814	0.724	0.6706%	0.0000	1491.3	24.9	0.048591	4811.2	5.4	0.925
0.00100000	0.935	18.9	4.909E-06	2.0%	0.905	0.1812	0.724	0.6779%	0.0000	1475.2	24.6	0.048914	4786.4	5.4	0.935
0.00100000	0.945	18.9	4.961E-06	2.0%	0.905	0.181	0.724	0.6852%	0.0000	1459.4	24.3	0.049236	4761.8	5.4	0.945
0.00100000	0.955	18.9	5.014E-06	2.0%	0.905	0.1808	0.724	0.6925%	0.0000	1444.0	24.1	0.049555	4737.5	5.5	0.955
0.00100000	0.965	18.9	5.066E-06	2.0%	0.905	0.1806	0.724	0.6998%	0.0000	1428.9	23.8	0.049873	4713.4	5.5	0.965
0.00100000	0.975	18.9	5.119E-06	2.0%	0.904	0.1804	0.724	0.7072%	0.0000	1414.1	23.6	0.050189	4689.6	5.6	0.975
0.00100000	0.985	18.9	5.171E-06	2.0%	0.904	0.1802	0.724	0.7145%	0.0000	1399.6	23.3	0.050503	4666.0	5.6	0.985
0.00100000	0.995	18.9	5.224E-06	2.0%	0.904	0.18	0.724	0.7218%	0.0000	1385.4	23.1	0.050815	4642.7	5.6	0.995
0.00100000	1.005	18.9	5.276E-06	2.0%	0.903	0.1798	0.724	0.7291%	0.0000	1371.5	22.9	0.051126	4619.6	5.7	1.005
0.00100000	1.015	18.9	5.329E-06	2.0%	0.903	0.1796	0.724	0.7365%	0.0000	1357.8	22.6	0.051435	4596.7	5.7	1.015
0.00100000	1.025	18.9	5.381E-06	2.0%	0.903	0.1794	0.723	0.7438%	0.0000	1344.5	22.4	0.051742	4574.1	5.8	1.025
0.00100000	1.035	18.9	5.434E-06	2.0%	0.903	0.1792	0.723	0.7511%	0.0000	1331.3	22.2	0.052047	4551.7	5.8	1.035
0.00100000	1.045	18.9	5.486E-06	2.0%	0.902	0.179	0.723	0.7585%	0.0000	1318.5	22.0	0.052351	4529.5	5.8	1.045
0.00100000	1.055	18.9	5.539E-06	2.0%	0.902	0.1788	0.723	0.7658%	0.0000	1305.8	21.8	0.052653	4507.5	5.9	1.055
0.00100000	1.065	18.9	5.591E-06	2.0%	0.902	0.1786	0.723	0.7731%	0.0000	1293.4	21.6	0.052953	4485.8	5.9	1.065
0.00100000	1.075	18.9	5.644E-06	2.0%	0.902	0.1784	0.723	0.7805%	0.0000	1281.2	21.4	0.053251	4464.2	6.0	1.075
0.00100000	1.085	18.9	5.696E-06	2.0%	0.901	0.1782	0.723	0.7878%	0.0000	1269.3	21.2	0.053548	4442.9	6.0	1.085
0.00100000	1.095	18.9	5.749E-06	2.0%	0.901	0.178	0.723	0.7952%	0.0000	1257.6	21.0	0.053843	4421.7	6.0	1.095
0.00100000	1.105	18.9	5.801E-06	2.0%	0.901	0.1778	0.723	0.8025%	0.0000	1246.1	20.8	0.054137	4400.7	6.1	1.105
0.00100000	1.115	18.9	5.854E-06	2.0%	0.900	0.1776	0.723	0.8099%	0.0000	1234.7	20.6	0.054429	4380.0	6.1	1.115
0.00100000	1.125	18.9	5.906E-06	2.0%	0.900	0.1774	0.723	0.8172%	0.0000	1223.6	20.4	0.054719	4359.4	6.2	1.125
0.00100000	1.135	18.9	5.959E-06	2.0%	0.900	0.1772	0.723	0.8246%	0.0000	1212.7	20.2	0.055008	4339.0	6.2	1.135
0.00100000	1.145	18.9	6.011E-06	2.0%	0.900	0.177	0.723	0.8320%	0.0000	1202.0	20.0	0.055295	4318.8	6.2	1.145
0.00100000	1.155	18.9	6.064E-06	2.0%	0.899	0.1768	0.722	0.8393%	0.0000	1191.4	19.9	0.055581	4298.8	6.3	1.155
0.00100000	1.165	18.9	6.116E-06	2.0%	0.899	0.1766	0.722	0.8467%	0.0000	1181.1	19.7	0.055865	4278.9	6.3	1.165
0.00100000	1.175	18.9	6.169E-06	2.0%	0.899	0.1764	0.722	0.8541%	0.0000	1170.9	19.5	0.056148	4259.2	6.4	1.175
0.00100000	1.185	18.9	6.221E-06	2.0%	0.898	0.1762	0.722	0.8614%	0.0000	1160.9	19.3	0.056429	4239.7	6.4	1.185
0.00100000	1.195	18.9	6.274E-06	2.0%	0.898	0.176	0.722	0.8688%	0.0000	1151.0	19.2	0.056708	4220.4	6.4	1.195
0.00100000	1.205	18.9	6.326E-06	2.0%	0.898	0.1758	0.722	0.8762%	0.0000	1141.3	19.0	0.056987	4201.2	6.5	1.205
0.00100000	1.215	18.9	6.379E-06	2.0%	0.898	0.1756	0.722	0.8836%	0.0000	1131.8	18.9	0.057263	4182.2	6.5	1.215
0.00100000	1.225	18.9	6.431E-06	2.0%	0.897	0.1754	0.722	0.8909%	0.0000	1122.4	18.7	0.057538	4163.3	6.6	1.225
0.00100000	1.235	18.9	6.484E-06	2.0%	0.897	0.1752	0.722	0.8983%	0.0000	1113.2	18.6	0.057812	4144.6	6.6	1.235
0.00100000	1.245	18.9	6.536E-06	2.0%	0.897	0.175	0.722	0.9057%	0.0000	1104.1	18.4	0.058084	4126.0	6.6	1.245
0.00100000	1.255	18.9	6.589E-06	2.0%	0.896	0.1748	0.722	0.9131%	0.0000	1095.2	18.3	0.058355	4107.6	6.7	1.255
0.00100000	1.265	18.9	6.641E-06	2.0%	0.896	0.1746	0.721	0.9205%	0.0000	1086.4	18.1	0.058624	4089.4	6.7	1.265







0.00100000	1.275	18.9	6.694E-06	2.0%	0.896	0.1744	0.721	0.9279%	0.0000	1077.7	18.0	0.058892	4071.3	6.8	1.275
0.00100000	1.285	18.9	6.746E-06	2.0%	0.895	0.1742	0.721	0.9353%	0.0000	1069.2	17.8	0.059159	4053.3	6.8	1.285
0.00100000	1.295	18.9	6.799E-06	2.0%	0.895	0.174	0.721	0.9427%	0.0000	1060.8	17.7	0.059424	4035.5	6.8	1.295
0.00100000	1.305	18.9	6.851E-06	2.0%	0.895	0.1738	0.721	0.9501%	0.0000	1052.5	17.5	0.059688	4017.8	6.9	1.305
0.00100000	1.315	18.9	6.904E-06	2.0%	0.895	0.1736	0.721	0.9575%	0.0000	1044.4	17.4	0.05995	4000.3	6.9	1.315
0.00100000	1.325	18.9	6.956E-06	2.0%	0.894	0.1734	0.721	0.9649%	0.0000	1036.4	17.3	0.060211	3982.9	6.9	1.325
0.00100000	1.335	18.9	7.009E-06	2.0%	0.894	0.1732	0.721	0.9723%	0.0000	1028.5	17.1	0.060471	3965.6	7.0	1.335
0.00100000	1.345	18.9	7.061E-06	2.0%	0.894	0.173	0.721	0.9798%	0.0000	1020.7	17.0	0.060729	3948.4	7.0	1.345
0.00100000	1.355	18.9	7.114E-06	2.0%	0.893	0.1728	0.721	0.9872%	0.0000	1013.0	16.9	0.060986	3931.4	7.1	1.355
0.00100000	1.365	18.9	7.166E-06	2.0%	0.893	0.1726	0.721	0.9946%	0.0000	1005.4	16.8	0.061241	3914.6	7.1	1.365
0.00100000	1.375	18.9	7.219E-06	2.0%	0.893	0.1724	0.720	1.0020%	0.0000	998.0	16.6	0.061496	3897.8	7.1	1.375
0.00100000	1.385	18.9	7.271E-06	2.0%	0.893	0.1722	0.720	1.0094%	0.0000	990.6	16.5	0.061749	3881.2	7.2	1.385
0.00100000	1.395	18.9	7.324E-06	2.0%	0.892	0.172	0.720	1.0169%	0.0000	983.4	16.4	0.062	3864.7	7.2	1.395
0.00100000	1.405	18.9	7.376E-06	2.0%	0.892	0.1718	0.720	1.0243%	0.0000	976.3	16.3	0.062251	3848.3	7.2	1.405
0.00100000	1.415	18.9	7.429E-06	2.0%	0.892	0.1716	0.720	1.0318%	0.0000	969.2	16.2	0.0625	3832.0	7.3	1.415
0.00100000	1.425	18.9	7.481E-06	2.0%	0.891	0.1714	0.720	1.0392%	0.0000	962.3	16.0	0.062748	3815.8	7.3	1.425
0.00100000	1.435	18.9	7.534E-06	2.0%	0.891	0.1712	0.720	1.0466%	0.0000	955.4	15.9	0.062994	3799.8	7.4	1.435
0.00100000	1.445	18.9	7.586E-06	2.0%	0.891	0.171	0.720	1.0541%	0.0000	948.7	15.8	0.063239	3783.9	7.4	1.445
0.00100000	1.455	18.9	7.639E-06	2.0%	0.890	0.1708	0.720	1.0615%	0.0000	942.0	15.7	0.063483	3768.1	7.4	1.455
0.00100000	1.465	18.9	7.691E-06	2.0%	0.890	0.1706	0.719	1.0690%	0.0000	935.5	15.6	0.063726	3752.4	7.5	1.465
0.00100000	1.475	18.9	7.744E-06	2.0%	0.890	0.1704	0.719	1.0765%	0.0000	929.0	15.5	0.063968	3736.8	7.5	1.475
0.00100000	1.485	18.9	7.796E-06	2.0%	0.889	0.1702	0.719	1.0839%	0.0000	922.6	15.4	0.064208	3721.3	7.5	1.485
0.00100000	1.495	18.9	7.849E-06	2.0%	0.889	0.17	0.719	1.0914%	0.0000	916.3	15.3	0.064447	3705.9	7.6	1.495
0.00100000	1.505	18.9	7.901E-06	2.0%	0.889	0.1698	0.719	1.0988%	0.0000	910.0	15.2	0.064685	3690.6	7.6	1.505
0.00100000	1.515	18.9	7.954E-06	2.0%	0.889	0.1696	0.719	1.1063%	0.0000	903.9	15.1	0.064922	3675.5	7.7	1.515
0.00100000	1.525	18.9	8.006E-06	2.0%	0.888	0.1694	0.719	1.1138%	0.0000	897.8	15.0	0.065157	3660.4	7.7	1.525
0.00100000	1.535	18.9	8.059E-06	2.0%	0.888	0.1692	0.719	1.1213%	0.0000	891.8	14.9	0.065391	3645.4	7.7	1.535
0.00100000	1.545	18.9	8.111E-06	2.0%	0.888	0.169	0.719	1.1288%	0.0000	885.9	14.8	0.065624	3630.6	7.8	1.545
0.00100000	1.555	18.9	8.164E-06	2.0%	0.887	0.1688	0.718	1.1362%	0.0000	880.1	14.7	0.065856	3615.8	7.8	1.555
0.00100000	1.565	18.9	8.216E-06	2.0%	0.887	0.1686	0.718	1.1437%	0.0000	874.3	14.6	0.066087	3601.1	7.8	1.565
0.00100000	1.575	18.9	8.269E-06	2.0%	0.887	0.1684	0.718	1.1512%	0.0000	868.6	14.5	0.066317	3586.6	7.9	1.575
0.00100000	1.585	18.9	8.321E-06	2.0%	0.886	0.1682	0.718	1.1587%	0.0000	863.0	14.4	0.066545	3572.1	7.9	1.585
0.00100000	1.595	18.9	8.374E-06	2.0%	0.886	0.168	0.718	1.1662%	0.0000	857.5	14.3	0.066772	3557.7	7.9	1.595
0.00100000	1.605	18.9	8.426E-06	2.0%	0.886	0.1678	0.718	1.1737%	0.0000	852.0	14.2	0.066998	3543.4	8.0	1.605
0.00100000	1.615	18.9	8.479E-06	2.0%	0.885	0.1676	0.718	1.1812%	0.0000	846.6	14.1	0.067223	3529.2	8.0	1.615
0.00100000	1.625	18.9	8.531E-06	2.0%	0.885	0.1674	0.718	1.1887%	0.0000	841.2	14.0	0.067447	3515.1	8.1	1.625
0.00100000	1.635	18.9	8.584E-06	2.0%	0.885	0.1672	0.718	1.1963%	0.0000	835.9	13.9	0.06767	3501.1	8.1	1.635
0.00100000	1.645	18.9	8.636E-06	2.0%	0.884	0.167	0.717	1.2038%	0.0000	830.7	13.8	0.067891	3487.2	8.1	1.645
0.00100000	1.655	18.9	8.689E-06	2.0%	0.884	0.1668	0.717	1.2113%	0.0000	825.6	13.8	0.068112	3473.3	8.2	1.655
0.00100000	1.665	18.9	8.741E-06	2.0%	0.884	0.1666	0.717	1.2188%	0.0000	820.5	13.7	0.068331	3459.6	8.2	1.665
0.00100000	1.675	18.9	8.794E-06	2.0%	0.883	0.1664	0.717	1.2263%	0.0000	815.4	13.6	0.068549	3445.9	8.2	1.675
0.00100000	1.685	18.9	8.846E-06	2.0%	0.883	0.1662	0.717	1.2339%	0.0000	810.4	13.5	0.068766	3432.3	8.3	1.685
0.00100000	1.695	18.9	8.899E-06	2.0%	0.883	0.166	0.717	1.2414%	0.0000	805.5	13.4	0.068982	3418.8	8.3	1.695
0.00100000	1.705	18.9	8.951E-06	2.0%	0.882	0.1658	0.717	1.2490%	0.0000	800.7	13.3	0.069197	3405.4	8.3	1.705
0.00100000	1.715	18.9	9.004E-06	2.0%	0.882	0.1656	0.717	1.2565%	0.0000	795.9	13.3	0.069411	3392.0	8.4	1.715
0.00100000	1.725	18.9	9.056E-06	2.0%	0.882	0.1654	0.716	1.2641%	0.0000	791.1	13.2	0.069624	3378.7	8.4	1.725
0.00100000	1.735	18.9	9.109E-06	2.0%	0.882	0.1652	0.716	1.2716%	0.0000	786.4	13.1	0.069835	3365.6	8.5	1.735
0.00100000	1.745	18.9	9.161E-06	2.0%	0.881	0.165	0.716	1.2792%	0.0000	781.8	13.0	0.070046	3352.5	8.5	1.745
0.00100000	1.755	18.9	9.214E-06	2.0%	0.881	0.1648	0.716	1.2867%	0.0000	777.2	13.0	0.070256	3339.4	8.5	1.755
0.00100000	1.765	18.9	9.266E-06	2.0%	0.881	0.1646	0.716	1.2943%	0.0000	772.6	12.9	0.070464	3326.5	8.6	1.765
0.00100000	1.775	18.9	9.319E-06	2.0%	0.880	0.1644	0.716	1.3019%	0.0000	768.1	12.8	0.070672	3313.6	8.6	1.775
0.00100000	1.785	18.9	9.371E-06	2.0%	0.880	0.1642	0.716	1.3094%	0.0000	763.7	12.7	0.070878	3300.8	8.6	1.785
0.00100000	1.795	18.9	9.424E-06	2.0%	0.880	0.164	0.716	1.3170%	0.0000	759.3	12.7	0.071083	3288.1	8.7	1.795
0.00100000	1.805	18.9	9.476E-06	2.0%	0.879	0.1638	0.715	1.3246%	0.0000	754.9	12.6	0.071288	3275.4	8.7	1.805
0.00100000	1.815	18.9	9.529E-06	2.0%	0.879	0.1636	0.715	1.3322%	0.0000	750.6	12.5	0.071491	3262.8	8.7	1.815
0.00100000	1.825	18.9	9.581E-06	2.0%	0.879	0.1634	0.715	1.3398%	0.0000	746.4	12.4	0.071693	3250.3	8.8	1.825
0.00100000	1.835	18.9	9.634E-06	2.0%	0.878	0.1632	0.715	1.3474%	0.0000	742.2	12.4	0.071895	3237.9	8.8	1.835
0.00100000	1.845	18.9	9.686E-06	2.0%	0.878	0.163	0.715	1.3550%	0.0000	738.0	12.3	0.072095	3225.5	8.8	1.845
0.00100000	1.855	18.9	9.739E-06	2.0%	0.878	0.1628	0.715	1.3626%	0.0000	733.9	12.2	0.072294	3213.2	8.9	1.855
0.00100000	1.865	18.9	9.791E-06	2.0%	0.877	0.1626	0.715	1.3702%	0.0000	729.8	12.2	0.072492	3201.0	8.9	1.865
0.00100000	1.875	18.9	9.844E-06	2.0%	0.877	0.1624	0.714	1.3778%	0.0000	725.8	12.1	0.07269	3188.8	9.0	1.875
0.00100000	1.885	18.9	9.896E-06	2.0%	0.877	0.1622	0.714	1.3854%	0.0000	721.8	12.0	0.072886	3176.7	9.0	1.885
0.00100000	1.895	18.9	9.949E-06	2.0%	0.876	0.162	0.714	1.3930%	0.0000	717.9	12.0	0.073081	3164.7	9.0	1.895
0.00100000	1.905	18.9	1.000E-05	2.0%	0.876	0.1618	0.714	1.4007%	0.0000	713.9	11.9	0.073275	3152.7	9.1	1.905
0.00100000	1.915	18.9	1.005E-05	2.0%	0.875	0.1616	0.714	1.4083%	0.0000	710.1	11.8	0.073469	3140.8	9.1	1.915
0.00100000	1.925	18.9	1.011E-05	2.0%	0.875	0.1614	0.714	1.4159%	0.0000	706.3	11.8	0.073661	3129.0	9.1	1.925
0.00100000	1.935	18.9	1.016E-05	2.0%	0.875	0.1612	0.714	1.4236%	0.0000	702.5	11.7	0.073852	3117.2	9.2	1.935
0.00100000	1.945	18.9	1.021E-05	2.0%	0.874	0.161	0.713	1.4312%	0.0000	698.7	11.6	0.074042	3105.5	9.2	1.945
0.00100000	1.955	18.9	1.026E-05	2.0%	0.874	0.1608	0.713	1.4389%	0.0000	695.0	11.6	0.074232	3093.9	9.2	1.955
0.00100000	1.965	18.9	1.032E-05	2.0%	0.874	0.1606	0.713	1.4465%	0.0000	691.3	11.5	0.07442	3082.3	9.3	1.965
0.00100000	1.975	18.9	1.037E-05	2.0%	0.873	0.1604	0.713	1.4542%	0.0000	687.7	11.5	0.074608	3070.8	9.3	1.975
0.00100000	1.985	18.9	1.042E-05	2.0%	0.873	0.1602	0.713	1.4618%	0.0000	684.1	11.4	0.074794	3059.3	9.3	1.985
0.00100000	1.995	18.9	1.047E-05	2.0%	0.873	0.16	0.713	1.4695%	0.0000	680.5	11.3	0.07498	3047.9	9.4	1.995
0.00100000	2.005	18.9	1.053E-05	2.0%	0.872	0.1598	0.713	1.4772%	0.0000	677.0	11.3	0.075164	3036.6	9.4	2.005
0.00100000	2.015	18.9	1.058E-05	2.0%	0.872	0.1596	0.712	1.4848%	0.0000	673.5	11.2	0.075348	3025.3	9.4	2.015
0.00100000	2.025	18.9	1.063E-05	2.0%	0.872	0.1594	0.712	1.4925%	0.0000	670.0	11.2	0.075531	3014.0	9.5	2.025
0.00100000	2.035	18.9	1.068E-05	2.0%	0.871	0.1592	0.712	1.5002%	0.0000	666.6	11.1	0.075713	3002.9	9.5	2.035
0.00100000	2.045	18.9	1.074E-05	2.0%	0.871	0.159	0.712	1.5079%	0.0000	663.2	11.1	0.075893	2991.8	9.5	2.045
0.00100000	2.055	18.9	1.079E-05	2.0%	0.871	0.1588	0.712	1.5156%	0.0000	659.8	11.0	0.076073	2980.7	9.6	2.055
0.00100000	2.065	18.9	1.084E-05	2.0%	0.870	0.1586	0.712	1.5233%	0.0000	656.5	10.9	0.076252	2969.7	9.6	2.065
0.00100000	2.075	18.9	1.089E-05	2.0%	0.870	0.1584	0.712	1.5310%	0.0000	653.2	10.9	0.07643	2958.8	9.7	2.075
0.00100000	2.085	18.9	1.095E-05	2.0%	0.870	0.1582	0.711	1.5387%	0.0000	649.9	10.8	0.076608	2947.9	9.7	2.085
0.00100000	2.095	18.9	1.100E-05	2.0%	0.869	0.158	0.711	1.5464%	0.0000	646.6	10.8	0.076784	2937.1	9.7	2.095
0.00100000	2.105	18.9	1.105E-05	2.0%	0.869	0.1578	0.711	1.5542%	0.0000	643.4	10.7	0.076959	2926.3	9.8	2.105
0.00100000	2.115	18.9	1.110E-05	2.0%	0.869	0.1576	0.711	1.5619%	0.0000	640.3	10.7	0.077134	2915.6	9.8	2.115
0.00100000	2.125	18.9	1.116E-05	2.0%	0.868	0.1574	0.711	1.5696%	0.0000	637.1	10.6	0.077307	2904.9	9.8	2.125
0.00100000	2.135	18.9	1.121E-05	2.0%	0.868	0.1572	0.711	1.5774%	0.0000	634.0	10.6	0.07748	2894.3	9.9	2.135
0.00100000	2.145	18.9	1.126E-05	2.0%	0.867	0.157	0.710	1.5851%	0.0000	630.9	10.5	0.077652	2883.7	9.9	2.145
0.00100000	2.155	18.9	1.131E-05	2.0%	0.867	0.1568	0.710	1.5928%	0.0000	627.8	10.5	0.077823	2873.2	9.9	2.155
0.00100000	2.165	18.9	1.137E-05	2.0%	0.867	0.1566	0.710	1.6006%	0.0000	624.8	10.4	0.077993	2862.7	10.0	2.165
0.00100000	2.175	18.9	1.142E-05	2.0%	0.866	0.1564	0.710	1.6084%	0.0000	621.8	10.4	0.078162	2852.3	10.0	2.175
0.00100000	2.185	18.9	1.147E-05	2.0%	0.866	0.1562	0.710	1.6161%	0.0000	618.8	10.3	0.07833	2842.0	10.0	2.185
0.00100000	2.195	18.9	1.152E-05	2.0%	0.866	0.156	0.710	1.6239%	0.0000	615.8	10.3	0.078497	2831.6	10.1	2.195
0.00100000	2.205	18.9	1.158E-05	2.0%	0.865	0.1558	0.709	1.6317%	0.0000	612.9	10.2	0.078664	2821.4	10.1	2.205
0.00100000	2.215	18.9	1.163E-05	2.0%	0.865	0.1556	0.709	1.6394%	0.0000	610.0	10.2	0.078829	2811.2	10.1	2.215
0.00100000	2.225	18.9	1.168E-05	2.0%	0.865	0.1554	0.709	1.6472%	0.0000	607.1	10.1	0.078994	2801.0	10.2	2.225
0.00100000	2.235	18.9	1.173E-05	2.0%	0.864	0.1552	0.709	1.6550%	0.0000	604.2	10.1	0.079158	2790.9	10.2	2.235
0.00100000	2.245	18.9	1.179E-05	2.0%	0.864	0.155	0.709	1.6628%	0.0000	601.4	10.0	0.079321	2780.8	10.2	2.245
0.00100000	2.255	18.9	1.184E-05	2.0%	0.863	0.1548	0.709	1.6706%	0.0000	598.6	10.0	0.079483	2770.8	10.3	2.255
0.00100000	2.265	18.9	1.189E-05	2.0%	0.863	0.1546	0.708	1.6784%	0.0000	595.8	9.9	0.079644	2760.8	10.3	2.265
0.00100000	2.275	18.9	1.194E-05	2.0%	0.863	0.1544	0.708	1.6862%	0.0000	593.0	9.9	0.079805	2750.9	10.3	2.275
0.00100000	2.285	18.9	1.200E-05	2.0%	0.862	0.1542	0.708	1.6940%	0.0000	590.3	9.8	0.079964	2741.0	10.4	2.285
0.00100000	2.295	18.9	1.205E-05	2.0%	0.862	0.154	0.708	1.7019%	0.0000	587.6	9.8	0.080123	2731.2	10.4	2.295
0.00100000	2.305	18.9	1.210E-05	2.0%	0.862	0.1538	0.708	1.7097%	0.0000	584.9	9.7	0.080281	2721.4	10.4	2.305
0.00100000	2.315	18.9	1.215E-05	2.0%	0.861	0.1536	0.708	1.7175%	0.0000	582.2	9.7	0.080438	2711.6	10.5	2.315
0.00100000	2.325	18.9	1.221E-05	2.0%	0.861	0.1534	0.707	1.7254%	0.0000	579.6	9.7	0.080594	2701.9	10.5	2.325
0.00100000	2.335	18.9	1.226E-05	2.0%	0.860	0.1532	0.707	1.7332%	0.0000	577.0	9.6	0.08075	2692.3	10.5	2.335
0.00100000	2.345	18.9	1.231E-05	2.0%	0.860	0.153	0.707	1.7411%	0.0000	574.4	9.6	0.080904	2682.6	10.6	2.345
0.00100000	2.355	18.9	1.236E-05	2.0%	0.860	0.1528	0.707	1.7489%	0.0000	571.8	9.5	0.081058	2673.1	10.6	2.355
0.00100000	2.365	18.9	1.242E-05	2.0%	0.859	0.1526	0.707	1.7568%	0.0000	569.2	9.5	0.081211	2663.5	10.6	2.365
0.00100000	2.375	18.9	1.247E-05	2.0%	0.859	0.1524	0.707	1.7646%	0.0000	566.7	9.4	0.081363	2654.0	10.7	2.375
0.00100000	2.385	18.9	1.252E-05	2.0%	0.859	0.1522	0.706	1.7725%	0.0000	564.2	9.4	0.081514	2644.6	10.7	2.385
0.00100000	2.395	18.9	1.257E-05	2.0%	0.858	0.152	0.706	1.7804%	0.0000	561.7	9.4	0.081665	2635.2	10.7	2.395
0.00100000	2.405	18.9	1.263E-05	2.0%	0.858	0.1518	0.706	1.7883%	0.0000	559.2	9.3	0.081814	2625.8	10.8	2.405
0.00100000	2.415	18.9	1.268E-05	2.0%	0.857	0.1516	0.706	1.7962%	0.0000	556.7	9.3	0.081963	2616.5	10.8	2.415
0.00100000	2.425	18.9	1.273E-05	2.0%	0.857	0.1514	0.706	1.8041%	0.0000	554.3	9.2	0.082111	2607.2	10.8	2.425
0.00100000	2.435	18.9	1.278E-05	2.0%	0.857	0.1512	0.706	1.8120%	0.0000	551.9	9.2	0.082258	2598.0	10.9	2.435
0.00100000	2.445	18.9	1.284E-05	2.0%	0.856	0.151	0.705	1.8199%	0.0000	549.5	9.2	0.082405	2588.8	10.9	2.445
0.00100000	2.455	18.9	1.289E-05	2.0%	0.856	0.1508	0.705	1.8278%	0.0000	547.1	9.1	0.08255	2579.6	10.9	2.455
0.00100000	2.465	18.9	1.294E-05	2.0%	0.856	0.1506	0.705	1.8357%	0.0000	544.7	9.1	0.082695	2570.5	11.0	2.465
0.00100000	2.475	18.9	1.299E-05	2.0%	0.855	0.1504	0.705	1.8437%	0.0000	542.4	9.0	0.082839	2561.4	11.0	2.475
0.00100000	2.485	18.9	1.305E-05	2.0%	0.855	0.1502	0.705	1.8516%	0.0000	540.1	9.0	0.082983	2552.4	11.0	2.485
0.00100000	2.495	18.9	1.310E-05	2.0%	0.854	0.15	0.704	1.8595%	0.0000	537.8	9.0	0.083125	2543.4	11.1	2.495
0.00100000	2.505	18.9	1.315E-05	2.0%	0.854	0.1498	0.704	1.8675%	0.0000	535.5	8.9	0.083267	2534.4	11.1	2.505
0.00100000	2.515	18.9	1.320E-05	2.0%	0.854	0.1496	0.704	1.8754%	0.0000	533.2	8.9	0.083408	2525.5	11.2	2.515
0.00100000	2.525	18.9	1.326E-05	2.0%	0.853	0.1494	0.704	1.8834%	0.0000	531.0	8.8	0.083548	2516.6	11.2	2.525
0.00100000	2.535	18.9	1.331E-05	2.0%	0.853	0.1492	0.704	1.8914%	0.0000	528.7	8.8	0.083687	2507.8	11.2	2.535
0.00100000	2.545	18.9	1.336E-05	2.0%	0.852	0.149	0.703	1.8993%	0.0000	526.5	8.8	0.083825	2499.0	11.3	2.545
0.00100000	2.555	18.9	1.341E-05	2.0%	0.852	0.1488	0.703	1.9073%	0.0000	524.3	8.7	0.083963	2490.2	11.3	2.555
0.00100000	2.565	18.9	1.347E-05	2.0%	0.852	0.1486	0.703	1.9153%	0.0000	522.1	8.7	0.0841	2481.5	11.3	2.565
0.00100000	2.575	18.9	1.352E-05	2.0%	0.851	0.1484	0.703	1.9233%	0.0000	519.9	8.7	0.084236	2472.8	11.4	2.575
0.00100000	2.585	18.9	1.357E-05	2.0%	0.851	0.1482	0.703	1.9313%	0.0000	517.8	8.6	0.084372	2464.1	11.4	2.585
0.00100000	2.595	18.9	1.362E-05	2.0%	0.851	0.148	0.703	1.9393%	0.0000	515.6	8.6	0.084506	2455.5	11.4	2.595
0.00100000	2.605	18.9	1.368E-05	2.0%	0.850	0.1478	0.702	1.9473%	0.0000	513.5	8.6	0.08464	2446.9	11.5	2.605
0.00100000	2.615	18.9	1.373E-05	2.0%	0.850	0.1476	0.702	1.9553%	0.0000	511.4	8.5	0.084773	2438.3	11.5	2.615
0.00100000	2.625	18.9	1.378E-05	2.0%	0.849	0.1474	0.702	1.9634%	0.0000	509.3	8.5	0.084906	2429.8	11.5	2.625
0.00100000	2.635	18.9	1.383E-05	2.0%	0.849	0.1472	0.702	1.9714%	0.0000	507.3	8.5	0.085037	2421.3	11.6	2.635
0.00100000	2.645	18.9	1.389E-05	2.0%	0.849	0.147	0.702	1.9794%	0.0000	505.2	8.4	0.085168	2412.8	11.6	2.645

0.00100000	2.655	18.9	1.394E-05	2.0%	0.848	0.1468	0.701	1.9875%	0.0000	503.1	8.4	0.085298	2404.4	11.6	2.655	
0.00100000	2.665	18.9	1.399E-05	2.0%	0.848	0.1466	0.701	1.9955%	0.0000	501.1	8.4	0.085428	2396.0	11.7	2.665	
0.00100000	2.675	18.9	1.404E-05	2.0%	0.847	0.1464	0.701	2.0036%	0.0000	499.1	8.3	0.085556	2387.7	11.7	2.675	
0.00100000	2.685	18.9	1.410E-05	2.0%	0.847	0.1462	0.701	2.0117%	0.0000	497.1	8.3	0.085684	2379.4	11.7	2.685	
0.00100000	2.695	18.9	1.415E-05	2.0%	0.847	0.146	0.701	2.0198%	0.0000	495.1	8.3	0.085811	2371.1	11.8	2.695	
0.00100000	2.705	18.9	1.420E-05	2.0%	0.846	0.1458	0.700	2.0278%	0.0000	493.1	8.2	0.085938	2362.8	11.8	2.705	
0.00100000	2.715	18.9	1.425E-05	2.0%	0.846	0.1456	0.700	2.0359%	0.0000	491.2	8.2	0.086063	2354.6	11.8	2.715	
0.00100000	2.725	18.9	1.431E-05	2.0%	0.845	0.1454	0.700	2.0440%	0.0000	489.2	8.2	0.086188	2346.4	11.9	2.725	
0.00100000	2.735	18.9	1.436E-05	2.0%	0.845	0.1452	0.700	2.0521%	0.0000	487.3	8.1	0.086313	2338.3	11.9	2.735	critical TC
0.00100000	2.745	18.9	1.441E-05	2.0%	0.844	0.145	0.699	2.0602%	0.0000	485.4	8.1	0.086436	2330.1	11.9	2.745	
0.00100000	2.755	18.9	1.446E-05	2.0%	0.844	0.1448	0.699	2.0683%	0.0000	483.5	8.1	0.086559	2322.1	12.0	2.755	
0.00100000	2.765	18.9	1.452E-05	2.0%	0.844	0.1446	0.699	2.0765%	0.0000	481.6	8.0	0.086681	2314.0	12.0	2.765	
0.00100000	2.775	18.9	1.457E-05	2.0%	0.843	0.1444	0.699	2.0846%	0.0000	479.7	8.0	0.086802	2306.0	12.0	2.775	
0.00100000	2.785	18.9	1.462E-05	2.0%	0.843	0.1442	0.699	2.0927%	0.0000	477.8	8.0	0.086922	2298.0	12.1	2.785	
0.00100000	2.795	18.9	1.467E-05	2.0%	0.842	0.144	0.698	2.1009%	0.0000	476.0	7.9	0.087042	2290.0	12.1	2.795	
0.00100000	2.805	18.9	1.473E-05	2.0%	0.842	0.1438	0.698	2.1090%	0.0000	474.1	7.9	0.087161	2282.1	12.1	2.805	
0.00100000	2.815	18.9	1.478E-05	2.0%	0.842	0.1436	0.698	2.1172%	0.0000	472.3	7.9	0.08728	2274.2	12.2	2.815	
0.00100000	2.825	18.9	1.483E-05	2.0%	0.841	0.1434	0.698	2.1254%	0.0000	470.5	7.8	0.087397	2266.3	12.2	2.825	
0.00100000	2.835	18.9	1.488E-05	2.0%	0.841	0.1432	0.698	2.1335%	0.0000	468.7	7.8	0.087514	2258.5	12.2	2.835	
0.00100000	2.845	18.9	1.494E-05	2.0%	0.840	0.143	0.697	2.1417%	0.0000	466.9	7.8	0.08763	2250.7	12.3	2.845	
0.00100000	2.855	18.9	1.499E-05	2.0%	0.840	0.1428	0.697	2.1499%	0.0000	465.1	7.8	0.087746	2242.9	12.3	2.855	
0.00100000	2.865	18.9	1.504E-05	2.0%	0.840	0.1426	0.697	2.1581%	0.0000	463.4	7.7	0.087861	2235.1	12.3	2.865	
0.00100000	2.875	18.9	1.509E-05	2.0%	0.839	0.1424	0.697	2.1663%	0.0000	461.6	7.7	0.087975	2227.4	12.4	2.875	
0.00100000	2.885	18.9	1.515E-05	2.0%	0.839	0.1422	0.697	2.1745%	0.0000	459.9	7.7	0.088088	2219.7	12.4	2.885	
0.00100000	2.895	18.9	1.520E-05	2.0%	0.838	0.142	0.696	2.1828%	0.0000	458.1	7.6	0.088201	2212.0	12.4	2.895	
0.00100000	2.905	18.9	1.525E-05	2.0%	0.838	0.1418	0.696	2.1910%	0.0000	456.4	7.6	0.088313	2204.4	12.5	2.905	
0.00100000	2.915	18.9	1.530E-05	2.0%	0.837	0.1416	0.696	2.1992%	0.0000	454.7	7.6	0.088424	2196.8	12.5	2.915	
0.00100000	2.925	18.9	1.536E-05	2.0%	0.837	0.1414	0.696	2.2075%	0.0000	453.0	7.6	0.088535	2189.2	12.5	2.925	
0.00100000	2.935	18.9	1.541E-05	2.0%	0.837	0.1412	0.695	2.2157%	0.0000	451.3	7.5	0.088644	2181.7	12.6	2.935	
0.00100000	2.945	18.9	1.546E-05	2.0%	0.836	0.141	0.695	2.2240%	0.0000	449.6	7.5	0.088754	2174.1	12.6	2.945	
0.00100000	2.955	18.9	1.551E-05	2.0%	0.836	0.1408	0.695	2.2323%	0.0000	448.0	7.5	0.088862	2166.6	12.6	2.955	
0.00100000	2.965	18.9	1.557E-05	2.0%	0.835	0.1406	0.695	2.2405%	0.0000	446.3	7.4	0.08897	2159.2	12.7	2.965	
0.00100000	2.975	18.9	1.562E-05	2.0%	0.835	0.1404	0.695	2.2488%	0.0000	444.7	7.4	0.089077	2151.7	12.7	2.975	
0.00100000	2.985	18.9	1.567E-05	2.0%	0.835	0.1402	0.694	2.2571%	0.0000	443.0	7.4	0.089183	2144.3	12.7	2.985	
0.00100000	2.995	18.9	1.572E-05	2.0%	0.834	0.14	0.694	2.2654%	0.0000	441.4	7.4	0.089289	2136.9	12.8	2.995	
0.00100000	3.005	18.9	1.578E-05	2.0%	0.834	0.1398	0.694	2.2737%	0.0000	439.8	7.3	0.089394	2129.6	12.8	3.005	
0.00100000	3.015	18.9	1.583E-05	2.0%	0.833	0.1396	0.694	2.2820%	0.0000	438.2	7.3	0.089498	2122.3	12.8	3.015	
0.00100000	3.025	18.9	1.588E-05	2.0%	0.833	0.1394	0.693	2.2904%	0.0000	436.6	7.3	0.089602	2115.0	12.9	3.025	
0.00100000	3.035	18.9	1.593E-05	2.0%	0.832	0.1392	0.693	2.2987%	0.0000	435.0	7.3	0.089705	2107.7	12.9	3.035	
0.00100000	3.045	18.9	1.599E-05	2.0%	0.832	0.139	0.693	2.3070%	0.0000	433.5	7.2	0.089807	2100.4	12.9	3.045	
0.00100000	3.055	18.9	1.604E-05	2.0%	0.832	0.1388	0.693	2.3154%	0.0000	431.9	7.2	0.089909	2093.2	13.0	3.055	
0.00100000	3.065	18.9	1.609E-05	2.0%	0.831	0.1386	0.692	2.3237%	0.0000	430.3	7.2	0.09001	2086.0	13.0	3.065	
0.00100000	3.075	18.9	1.614E-05	2.0%	0.831	0.1384	0.692	2.3321%	0.0000	428.8	7.1	0.09011	2078.8	13.0	3.075	
0.00100000	3.085	18.9	1.620E-05	2.0%	0.830	0.1382	0.692	2.3405%	0.0000	427.3	7.1	0.09021	2071.7	13.1	3.085	
0.00100000	3.095	18.9	1.625E-05	2.0%	0.830	0.138	0.692	2.3489%	0.0000	425.7	7.1	0.090309	2064.6	13.1	3.095	
0.00100000	3.105	18.9	1.630E-05	2.0%	0.829	0.1378	0.692	2.3573%	0.0000	424.2	7.1	0.090407	2057.5	13.1	3.105	
0.00100000	3.115	18.9	1.635E-05	2.0%	0.829	0.1376	0.691	2.3657%	0.0000	422.7	7.0	0.090504	2050.4	13.2	3.115	
0.00100000	3.125	18.9	1.641E-05	2.0%	0.828	0.1374	0.691	2.3741%	0.0000	421.2	7.0	0.090601	2043.4	13.2	3.125	
0.00100000	3.135	18.9	1.646E-05	2.0%	0.828	0.1372	0.691	2.3825%	0.0000	419.7	7.0	0.090698	2036.3	13.2	3.135	
0.00100000	3.145	18.9	1.651E-05	2.0%	0.828	0.137	0.691	2.3909%	0.0000	418.2	7.0	0.090793	2029.3	13.3	3.145	
0.00100000	3.155	18.9	1.656E-05	2.0%	0.827	0.1368	0.690	2.3994%	0.0000	416.8	6.9	0.090888	2022.4	13.3	3.155	
0.00100000	3.165	18.9	1.662E-05	2.0%	0.827	0.1366	0.690	2.4078%	0.0000	415.3	6.9	0.090982	2015.4	13.3	3.165	
0.00100000	3.175	18.9	1.667E-05	2.0%	0.826	0.1364	0.690	2.4162%	0.0000	413.9	6.9	0.091076	2008.5	13.4	3.175	
0.00100000	3.185	18.9	1.672E-05	2.0%	0.826	0.1362	0.690	2.4247%	0.0000	412.4	6.9	0.091169	2001.6	13.4	3.185	
0.00100000	3.195	18.9	1.677E-05	2.0%	0.825	0.136	0.689	2.4332%	0.0000	411.0	6.8	0.091261	1994.7	13.4	3.195	
0.00100000	3.205	18.9	1.683E-05	2.0%	0.825	0.1358	0.689	2.4417%	0.0000	409.6	6.8	0.091353	1987.9	13.5	3.205	
0.00100000	3.215	18.9	1.688E-05	2.0%	0.824	0.1356	0.689	2.4502%	0.0000	408.1	6.8	0.091444	1981.1	13.5	3.215	
0.00100000	3.225	18.9	1.693E-05	2.0%	0.824	0.1354	0.689	2.4587%	0.0000	406.7	6.8	0.091534	1974.3	13.5	3.225	
0.00100000	3.235	18.9	1.698E-05	2.0%	0.824	0.1352	0.688	2.4672%	0.0000	405.3	6.8	0.091624	1967.5	13.6	3.235	
0.00100000	3.245	18.9	1.704E-05	2.0%	0.823	0.135	0.688	2.4757%	0.0000	403.9	6.7	0.091713	1960.7	13.6	3.245	
0.00100000	3.255	18.9	1.709E-05	2.0%	0.823	0.1348	0.688	2.4842%	0.0000	402.5	6.7	0.091801	1954.0	13.6	3.255	
0.00100000	3.265	18.9	1.714E-05	2.0%	0.822	0.1346	0.688	2.4927%	0.0000	401.2	6.7	0.091889	1947.3	13.7	3.265	
0.00100000	3.275	18.9	1.719E-05	2.0%	0.822	0.1344	0.687	2.5013%	0.0000	399.8	6.7	0.091976	1940.6	13.7	3.275	
0.00100000	3.285	18.9	1.725E-05	2.0%	0.821	0.1342	0.687	2.5098%	0.0000	398.4	6.6	0.092062	1933.9	13.7	3.285	
0.00100000	3.295	18.9	1.730E-05	2.0%	0.821	0.134	0.687	2.5184%	0.0000	397.1	6.6	0.092148	1927.3	13.8	3.295	
0.00100000	3.305	18.9	1.735E-05	2.0%	0.820	0.1338	0.687	2.5270%	0.0000	395.7	6.6	0.092233	1920.7	13.8	3.305	
0.00100000	3.315	18.9	1.740E-05	2.0%	0.820	0.1336	0.686	2.5356%	0.0000	394.4	6.6	0.092318	1914.1	13.8	3.315	
0.00100000	3.325	18.9	1.746E-05	2.0%	0.820	0.1334	0.686	2.5441%	0.0000	393.1	6.6	0.092402	1907.5	13.9	3.325	
0.00100000	3.335	18.9	1.751E-05	2.0%	0.819	0.1332	0.686	2.5527%	0.0000	391.7	6.5	0.092485	1900.9	13.9	3.335	
0.00100000	3.345	18.9	1.756E-05	2.0%	0.819	0.133	0.686	2.5614%	0.0000	390.4	6.5	0.092567	1894.4	13.9	3.345	
0.00100000	3.355	18.9	1.761E-05	2.0%	0.818	0.1328	0.685	2.5700%	0.0000	389.1	6.5	0.092649	1887.9	14.0	3.355	
0.00100000	3.365	18.9	1.767E-05	2.0%	0.818	0.1326	0.685	2.5786%	0.0000	387.8	6.5	0.092731	1881.4	14.0	3.365	
0.00100000	3.375	18.9	1.772E-05	2.0%	0.817	0.1324	0.685	2.5872%	0.0000	386.5	6.4	0.092811	1875.0	14.0	3.375	
0.00100000	3.385	18.9	1.777E-05	2.0%	0.817	0.1322	0.685	2.5959%	0.0000	385.2	6.4	0.092891	1868.5	14.1	3.385	
0.00100000	3.395	18.9	1.782E-05	2.0%	0.816	0.132	0.684	2.6046%	0.0000	383.9	6.4	0.092971	1862.1	14.1	3.395	
0.00100000	3.405	18.9	1.788E-05	2.0%	0.816	0.1318	0.684	2.6132%	0.0000	382.7	6.4	0.09305	1855.7	14.1	3.405	
0.00100000	3.415	18.9	1.793E-05	2.0%	0.815	0.1316	0.684	2.6219%	0.0000	381.4	6.4	0.093128	1849.3	14.2	3.415	
0.00100000	3.425	18.9	1.798E-05	2.0%	0.815	0.1314	0.684	2.6306%	0.0000	380.1	6.3	0.093205	1843.0	14.2	3.425	
0.00100000	3.435	18.9	1.803E-05	2.0%	0.814	0.1312	0.683	2.6393%	0.0000	378.9	6.3	0.093282	1836.6	14.2	3.435	
0.00100000	3.445	18.9	1.809E-05	2.0%	0.814	0.131	0.683	2.6480%	0.0000	377.6	6.3	0.093359	1830.3	14.3	3.445	
0.00100000	3.455	18.9	1.814E-05	2.0%	0.814	0.1308	0.683	2.6567%	0.0000	376.4	6.3	0.093434	1824.0	14.3	3.455	
0.00100000	3.465	18.9	1.819E-05	2.0%	0.813	0.1306	0.682	2.6655%	0.0000	375.2	6.3	0.093509	1817.8	14.3	3.465	
0.00100000	3.475	18.9	1.824E-05	2.0%	0.813	0.1304	0.682	2.6742%	0.0000	373.9	6.2	0.093584	1811.5	14.4	3.475	
0.00100000	3.485	18.9	1.830E-05	2.0%	0.812	0.1302	0.682	2.6829%	0.0000	372.7	6.2	0.093657	1805.3	14.4	3.485	
0.00100000	3.495	18.9	1.835E-05	2.0%	0.812	0.13	0.682	2.6917%	0.0000	371.5	6.2	0.093731	1799.1	14.4	3.495	
0.00100000	3.505	18.9	1.840E-05	2.0%	0.811	0.1298	0.681	2.7005%	0.0000	370.3	6.2	0.093803	1792.9	14.5	3.505	
0.00100000	3.515	18.9	1.845E-05	2.0%	0.811	0.1296	0.681	2.7093%	0.0000	369.1	6.2	0.093875	1786.7	14.5	3.515	
0.00100000	3.525	18.9	1.851E-05	2.0%	0.810	0.1294	0.681	2.7181%	0.0000	367.9	6.1	0.093947	1780.5	14.5	3.525	
0.00100000	3.535	18.9	1.856E-05	2.0%	0.810	0.1292	0.681	2.7269%	0.0000	366.7	6.1	0.094017	1774.4	14.6	3.535	
0.00100000	3.545	18.9	1.861E-05	2.0%	0.809	0.129	0.680	2.7357%	0.0000	365.5	6.1	0.094087	1768.3	14.6	3.545	
0.00100000	3.555	18.9	1.866E-05	2.0%	0.809	0.1288	0.680	2.7445%	0.0000	364.4	6.1	0.094157	1762.2	14.6	3.555	
0.00100000	3.565	18.9	1.872E-05	2.0%	0.808	0.1286	0.680	2.7533%	0.0000	363.2	6.1	0.094226	1756.1	14.7	3.565	
0.00100000	3.575	18.9	1.877E-05	2.0%	0.808	0.1284	0.679	2.7622%	0.0000	362.0	6.0	0.094294	1750.1	14.7	3.575	
0.00100000	3.585	18.9	1.882E-05	2.0%	0.807	0.1282	0.679	2.7710%	0.0000	360.9	6.0	0.094362	1744.0	14.7	3.585	
0.00100000	3.595	18.9	1.887E-05	2.0%	0.807	0.128	0.679	2.7799%	0.0000	359.7	6.0	0.094429	1738.0	14.8	3.595	
0.00100000	3.605	18.9	1.893E-05	2.0%	0.806	0.1278	0.679	2.7888%	0.0000	358.6	6.0	0.094495	1732.0	14.8	3.605	
0.00100000	3.615	18.9	1.898E-05	2.0%	0.806	0.1276	0.678	2.7977%	0.0000	357.4	6.0	0.094561	1726.1	14.8	3.615	
0.00100000	3.625	18.9	1.903E-05	2.0%	0.805	0.1274	0.678	2.8066%	0.0000	356.3	5.9	0.094626	1720.1	14.9	3.625	
0.00100000	3.635	18.9	1.908E-05	2.0%	0.805	0.1272	0.678	2.8155%	0.0000	355.2	5.9	0.094691	1714.2	14.9	3.635	
0.00100000	3.645	18.9	1.914E-05	2.0%	0.805	0.127	0.678	2.8244%	0.0000	354.1	5.9	0.094755	1708.2	14.9	3.645	
0.00100000	3.655	18.9	1.919E-05	2.0%	0.804	0.1268	0.677	2.8333%	0.0000	352.9	5.9	0.094818	1702.3	15.0	3.655	
0.00100000	3.665	18.9	1.924E-05	2.0%	0.804	0.1266	0.677	2.8423%	0.0000	351.8	5.9	0.094881	1696.5	15.0	3.665	
0.00100000	3.675	18.9	1.929E-05	2.0%	0.803	0.1264	0.677	2.8512%	0.0000	350.7	5.8	0.094943	1690.6	15.0	3.675	
0.00100000	3.685	18.9	1.935E-05	2.0%	0.803	0.1262	0.676	2.8602%	0.0000	349.6	5.8	0.095005	1684.7	15.1	3.685	
0.00100000	3.695	18.9	1.940E-05	2.0%	0.802	0.126	0.676	2.8692%	0.0000	348.5	5.8	0.095066	1678.9	15.1	3.695	
0.00100000	3.705	18.9	1.945E-05	2.0%	0.802	0.1258	0.676	2.8782%	0.0000	347.4	5.8	0.095127	1673.1	15.1	3.705	
0.00100000	3.715	18.9	1.950E-05	2.0%	0.801	0.1256	0.676	2.8872%	0.0000	346.4	5.8	0.095186	1667.3	15.2	3.715	
0.00100000	3.725	18.9	1.956E-05	2.0%	0.801	0.1254	0.675	2.8962%	0.0000	345.3	5.8	0.095246	1661.5	15.2	3.725	
0.00100000	3.735	18.9	1.961E-05	2.0%	0.800	0.1252	0.675	2.9052%	0.0000	344.2	5.7	0.095304	1655.8	15.2	3.735	
0.00100000	3.745	18.9	1.966E-05	2.0%	0.800	0.125	0.675	2.9142%	0.0000	343.1	5.7	0.095362	1650.1	15.3	3.745	
0.00100000	3.755	18.9	1.971E-05	2.0%	0.799	0.1248	0.674	2.9233%	0.0000	342.1	5.7	0.09542	1644.3	15.3	3.755	
0.00100000	3.765	18.9	1.977E-05	2.0%	0.799	0.1246	0.674	2.9324%	0.0000	341.0	5.7	0.095477	1638.6	15.3	3.765	
0.00100000	3.775	18.9	1.982E-05	2.0%	0.798	0.1244	0.674	2.9414%	0.0000	340.0	5.7	0.095533	1633.0	15.4	3.775	
0.00100000	3.785	18.9	1.987E-05	2.0%	0.798	0.1242	0.673	2.9505%	0.0000	338.9	5.6	0.095589	1627.3	15.4	3.785	
0.00100000	3.795	18.9	1.992E-05	2.0%	0.797	0.124	0.673	2.9596%	0.0000	337.9	5.6	0.095644	1621.6	15.4	3.795	
0.00100000	3.805	18.9	1.998E-05	2.0%	0.797	0.1238	0.673	2.9687%	0.0000	336.8	5.6	0.095698	1616.0	15.5	3.805	
0.00100000	3.815	18.9	2.003E-05	2.0%	0.796	0.1236	0.673	2.9778%	0.0000	335.8	5.6	0.095752	1610.4	15.5	3.815	
0.00100000	3.825	18.9	2.008E-05	2.0%	0.796	0.1234	0.672	2.9870%	0.0000	334.8	5.6	0.095806	1604.8	15.5	3.825	
0.00100000	3.835	18.9	2.013E-05	2.0%	0.795	0.1232	0.672	2.9961%	0.0000	333.8	5.6	0.095858	1599.2	15.6	3.835	
0.00100000	3.845	18.9	2.019E-05	2.0%	0.795	0.123	0.672	3.0053%	0.0000	332.7	5.5	0.095911	1593.7	15.6	3.845	
0.00100000	3.855	18.9	2.024E-05	2.0%	0.794	0.1228	0.671	3.0144%	0.0000	331.7	5.5	0.095962	1588.1	15.6	3.855	
0.00100000	3.865	18.9	2.029E-05	2.0%	0.794	0.1226	0.671	3.0236%	0.0000	330.7	5.5	0.096013	1582.6	15.7	3.865	
0.00100000	3.875	18.9	2.034E-05	2.0%	0.793	0.1224	0.671	3.0328%	0.0000	329.7	5.5	0.096064	1577.1	15.7	3.875	
0.00100000	3.885	18.9	2.040E-05	2.0%	0.793	0.1222	0.670	3.0420%	0.0000	328.7	5.5	0.096114	1571.6	15.7	3.885	
0.00100000	3.895	18.9	2.045E-05	2.0%	0.792	0.122	0.670	3.0512%	0.0000	327.7	5.5	0.096163	1566.1	15.8	3.895	
0.00100000	3.905	18.9	2.050E-05	2.0%	0.792	0.1218	0.670	3.0605%	0.0000	326.7	5.4	0.096212	1560.6	15.8	3.905	
0.00100000	3.915	18.9	2.055E-05	2.0%	0.791	0.1216	0.670	3.0697%	0.0000	325.8	5.4	0.09626	1555.2	15.8	3.915	
0.00100000	3.925	18.9	2.061E-05	2.0%	0.791	0.1214	0.669	3.0790%	0.0000	324.8	5.4	0.096307	1549.8	15.9	3.925	
0.00100000	3.935	18.9	2.066E-05	2.0%	0.790	0.1212	0.669	3.0882%	0.0000	323.8	5.4	0.096354	1544.3	15.9	3.935	
0.00100000	3.945	18.9	2.071E-05	2.0%	0.790	0.121	0.669	3.0975%	0.0000	322.8	5.4	0.096401	1538.9	15.9	3.945	
0.00100000	3.955	18.9	2.076E-05	2.0%	0.789	0.1208	0.668	3.1068%	0.0000	321.9	5.4	0.096446	1533.6	16.0	3.955	
0.00100000	3.965	18.9	2.082E-05	2.0%	0.789	0.1206	0.668	3.1161%	0.0000	320.9	5.3	0.096492	1528.2	16.0	3.965	
0.00100000	3.975	18.9	2.087E-05	2.0%	0.788	0.1204	0.668	3.1254%	0.0000	320.0	5.3	0.096536	1522.9	16.0	3.975	
0.00100000	3.985	18.9	2.092E-05	2.0%	0.788	0.1202	0.667	3.1348%	0.0000	319.0	5.3	0.096581	1517.5	16.1	3.985	
0.00100000	3.995	18.9	2.097E-05	2.0%	0.787	0.12	0.667	3.1441%	0.0000	318.1	5.3	0.096624	1512.2	16.1	3.995	
0.00100000	4.005	18.9	2.103E-05	2.0%	0.787	0.1198	0.667	3.1535%	0.0000	317.1	5.3	0.096667	1506.9	16.1	4.005	
0.00100000	4.015	18.9	2.108E-05	2.0%	0.786	0.1196	0.666	3.1629%	0.0000	316.2	5.3	0.096709	1501.6	16.2	4.015	
0.00100000	4.025	18.9	2.113E-05	2.0%	0.786	0.1194	0.666	3.1723%	0.0000	315.2	5.3	0.096751	1496.3	16.2	4.025	

0.00100000	4.035	18.9	2.118E-05	2.0%	0.785	0.1192	0.666	3.1817%	0.0000	314.3	5.2	0.096793	1491.1	16.2	4.035
0.00100000	4.045	18.9	2.124E-05	2.0%	0.784	0.119	0.665	3.1911%	0.0000	313.4	5.2	0.096833	1485.9	16.3	4.045
0.00100000	4.055	18.9	2.129E-05	2.0%	0.784	0.1188	0.665	3.2005%	0.0000	312.5	5.2	0.096873	1480.6	16.3	4.055
0.00100000	4.065	18.9	2.134E-05	2.0%	0.783	0.1186	0.665	3.2099%	0.0000	311.5	5.2	0.096913	1475.4	16.3	4.065
0.00100000	4.075	18.9	2.139E-05	2.0%	0.783	0.1184	0.665	3.2194%	0.0000	310.6	5.2	0.096952	1470.2	16.4	4.075
0.00100000	4.085	18.9	2.145E-05	2.0%	0.782	0.1182	0.664	3.2289%	0.0000	309.7	5.2	0.09699	1465.1	16.4	4.085
0.00100000	4.095	18.9	2.150E-05	2.0%	0.782	0.118	0.664	3.2383%	0.0000	308.8	5.1	0.097028	1459.9	16.4	4.095
0.00100000	4.105	18.9	2.155E-05	2.0%	0.781	0.1178	0.664	3.2478%	0.0000	307.9	5.1	0.097065	1454.7	16.5	4.105
0.00100000	4.115	18.9	2.160E-05	2.0%	0.781	0.1176	0.663	3.2574%	0.0000	307.0	5.1	0.097102	1449.6	16.5	4.115
0.00100000	4.125	18.9	2.166E-05	2.0%	0.780	0.1174	0.663	3.2669%	0.0000	306.1	5.1	0.097138	1444.5	16.5	4.125
0.00100000	4.135	18.9	2.171E-05	2.0%	0.780	0.1172	0.663	3.2764%	0.0000	305.2	5.1	0.097174	1439.4	16.6	4.135
0.00100000	4.145	18.9	2.176E-05	2.0%	0.779	0.117	0.662	3.2860%	0.0000	304.3	5.1	0.097209	1434.3	16.6	4.145
0.00100000	4.155	18.9	2.181E-05	2.0%	0.779	0.1168	0.662	3.2955%	0.0000	303.4	5.1	0.097244	1429.2	16.7	4.155
0.00100000	4.165	18.9	2.187E-05	2.0%	0.778	0.1166	0.662	3.3051%	0.0000	302.6	5.0	0.097278	1424.2	16.7	4.165
0.00100000	4.175	18.9	2.192E-05	2.0%	0.778	0.1164	0.661	3.3147%	0.0000	301.7	5.0	0.097311	1419.1	16.7	4.175
0.00100000	4.185	18.9	2.197E-05	2.0%	0.777	0.1162	0.661	3.3243%	0.0000	300.8	5.0	0.097344	1414.1	16.8	4.185
0.00100000	4.195	18.9	2.202E-05	2.0%	0.777	0.116	0.661	3.3340%	0.0000	299.9	5.0	0.097376	1409.1	16.8	4.195
0.00100000	4.205	18.9	2.208E-05	2.0%	0.776	0.1158	0.660	3.3436%	0.0000	299.1	5.0	0.097408	1404.1	16.8	4.205
0.00100000	4.215	18.9	2.213E-05	2.0%	0.776	0.1156	0.660	3.3532%	0.0000	298.2	5.0	0.097439	1399.1	16.9	4.215
0.00100000	4.225	18.9	2.218E-05	2.0%	0.775	0.1154	0.660	3.3629%	0.0000	297.4	5.0	0.097469	1394.1	16.9	4.225
0.00100000	4.235	18.9	2.223E-05	2.0%	0.774	0.1152	0.659	3.3726%	0.0000	296.5	4.9	0.097499	1389.2	16.9	4.235
0.00100000	4.245	18.9	2.229E-05	2.0%	0.774	0.115	0.659	3.3823%	0.0000	295.7	4.9	0.097529	1384.2	17.0	4.245
0.00100000	4.255	18.9	2.234E-05	2.0%	0.773	0.1148	0.659	3.3920%	0.0000	294.8	4.9	0.097558	1379.3	17.0	4.255
0.00100000	4.265	18.9	2.239E-05	2.0%	0.773	0.1146	0.658	3.4017%	0.0000	294.0	4.9	0.097586	1374.4	17.0	4.265
0.00100000	4.275	18.9	2.244E-05	2.0%	0.772	0.1144	0.658	3.4115%	0.0000	293.1	4.9	0.097614	1369.5	17.1	4.275
0.00100000	4.285	18.9	2.250E-05	2.0%	0.772	0.1142	0.658	3.4212%	0.0000	292.3	4.9	0.097641	1364.6	17.1	4.285
0.00100000	4.295	18.9	2.255E-05	2.0%	0.771	0.114	0.657	3.4310%	0.0000	291.5	4.9	0.097668	1359.7	17.1	4.295
0.00100000	4.305	18.9	2.260E-05	2.0%	0.771	0.1138	0.657	3.4408%	0.0000	290.6	4.8	0.097694	1354.9	17.2	4.305
0.00100000	4.315	18.9	2.265E-05	2.0%	0.770	0.1136	0.657	3.4506%	0.0000	289.8	4.8	0.09772	1350.0	17.2	4.315
0.00100000	4.325	18.9	2.271E-05	2.0%	0.770	0.1134	0.656	3.4604%	0.0000	289.0	4.8	0.097745	1345.2	17.2	4.325
0.00100000	4.335	18.9	2.276E-05	2.0%	0.769	0.1132	0.656	3.4703%	0.0000	288.2	4.8	0.09777	1340.4	17.3	4.335
0.00100000	4.345	18.9	2.281E-05	2.0%	0.768	0.113	0.655	3.4801%	0.0000	287.3	4.8	0.097794	1335.6	17.3	4.345
0.00100000	4.355	18.9	2.286E-05	2.0%	0.768	0.1128	0.655	3.4900%	0.0000	286.5	4.8	0.097817	1330.8	17.3	4.355
0.00100000	4.365	18.9	2.292E-05	2.0%	0.767	0.1126	0.655	3.4999%	0.0000	285.7	4.8	0.09784	1326.0	17.4	4.365
0.00100000	4.375	18.9	2.297E-05	2.0%	0.767	0.1124	0.654	3.5098%	0.0000	284.9	4.7	0.097862	1321.3	17.4	4.375
0.00100000	4.385	18.9	2.302E-05	2.0%	0.766	0.1122	0.654	3.5197%	0.0000	284.1	4.7	0.097884	1316.5	17.4	4.385
0.00100000	4.395	18.9	2.307E-05	2.0%	0.766	0.112	0.654	3.5296%	0.0000	283.3	4.7	0.097905	1311.8	17.5	4.395
0.00100000	4.405	18.9	2.313E-05	2.0%	0.765	0.1118	0.653	3.5396%	0.0000	282.5	4.7	0.097926	1307.1	17.5	4.405
0.00100000	4.415	18.9	2.318E-05	2.0%	0.765	0.1116	0.653	3.5495%	0.0000	281.7	4.7	0.097946	1302.4	17.6	4.415
0.00100000	4.425	18.9	2.323E-05	2.0%	0.764	0.1114	0.653	3.5595%	0.0000	280.9	4.7	0.097966	1297.7	17.6	4.425
0.00100000	4.435	18.9	2.328E-05	2.0%	0.763	0.1112	0.652	3.5695%	0.0000	280.2	4.7	0.097985	1293.0	17.6	4.435
0.00100000	4.445	18.9	2.334E-05	2.0%	0.763	0.111	0.652	3.5795%	0.0000	279.4	4.7	0.098003	1288.3	17.7	4.445
0.00100000	4.455	18.9	2.339E-05	2.0%	0.762	0.1108	0.652	3.5895%	0.0000	278.6	4.6	0.098021	1283.7	17.7	4.455
0.00100000	4.465	18.9	2.344E-05	2.0%	0.762	0.1106	0.651	3.5996%	0.0000	277.8	4.6	0.098039	1279.0	17.7	4.465
0.00100000	4.475	18.9	2.349E-05	2.0%	0.761	0.1104	0.651	3.6097%	0.0000	277.0	4.6	0.098056	1274.4	17.8	4.475
0.00100000	4.485	18.9	2.355E-05	2.0%	0.761	0.1102	0.650	3.6197%	0.0000	276.3	4.6	0.098072	1269.8	17.8	4.485
0.00100000	4.495	18.9	2.360E-05	2.0%	0.760	0.11	0.650	3.6298%	0.0000	275.5	4.6	0.098088	1265.2	17.8	4.495
0.00100000	4.505	18.9	2.365E-05	2.0%	0.760	0.1098	0.650	3.6399%	0.0000	274.7	4.6	0.098103	1260.6	17.9	4.505
0.00100000	4.515	18.9	2.370E-05	2.0%	0.759	0.1096	0.649	3.6501%	0.0000	274.0	4.6	0.098118	1256.0	17.9	4.515
0.00100000	4.525	18.9	2.376E-05	2.0%	0.758	0.1094	0.649	3.6602%	0.0000	273.2	4.6	0.098132	1251.4	17.9	4.525
0.00100000	4.535	18.9	2.381E-05	2.0%	0.758	0.1092	0.649	3.6704%	0.0000	272.5	4.5	0.098146	1246.9	18.0	4.535
0.00100000	4.545	18.9	2.386E-05	2.0%	0.757	0.109	0.648	3.6806%	0.0000	271.7	4.5	0.098159	1242.3	18.0	4.545
0.00100000	4.555	18.9	2.391E-05	2.0%	0.757	0.1088	0.648	3.6908%	0.0000	270.9	4.5	0.098172	1237.8	18.0	4.555
0.00100000	4.565	18.9	2.397E-05	2.0%	0.756	0.1086	0.648	3.7010%	0.0000	270.2	4.5	0.098184	1233.3	18.1	4.565
0.00100000	4.575	18.9	2.402E-05	2.0%	0.756	0.1084	0.647	3.7112%	0.0000	269.5	4.5	0.098195	1228.8	18.1	4.575
0.00100000	4.585	18.9	2.407E-05	2.0%	0.755	0.1082	0.647	3.7215%	0.0000	268.7	4.5	0.098206	1224.3	18.2	4.585
0.00100000	4.595	18.9	2.412E-05	2.0%	0.754	0.108	0.646	3.7317%	0.0000	268.0	4.5	0.098217	1219.8	18.2	4.595
0.00100000	4.605	18.9	2.418E-05	2.0%	0.754	0.1078	0.646	3.7420%	0.0000	267.2	4.5	0.098227	1215.3	18.2	4.605
0.00100000	4.615	18.9	2.423E-05	2.0%	0.753	0.1076	0.646	3.7523%	0.0000	266.5	4.4	0.098236	1210.9	18.3	4.615
0.00100000	4.625	18.9	2.428E-05	2.0%	0.753	0.1074	0.645	3.7627%	0.0000	265.8	4.4	0.098245	1206.4	18.3	4.625
0.00100000	4.635	18.9	2.433E-05	2.0%	0.752	0.1072	0.645	3.7730%	0.0000	265.0	4.4	0.098253	1202.0	18.3	4.635
0.00100000	4.645	18.9	2.439E-05	2.0%	0.752	0.107	0.645	3.7834%	0.0000	264.3	4.4	0.098261	1197.6	18.4	4.645
0.00100000	4.655	18.9	2.444E-05	2.0%	0.751	0.1068	0.644	3.7937%	0.0000	263.6	4.4	0.098268	1193.2	18.4	4.655
0.00100000	4.665	18.9	2.449E-05	2.0%	0.750	0.1066	0.644	3.8041%	0.0000	262.9	4.4	0.098275	1188.8	18.4	4.665
0.00100000	4.675	18.9	2.454E-05	2.0%	0.750	0.1064	0.643	3.8145%	0.0000	262.2	4.4	0.098281	1184.4	18.5	4.675
0.00100000	4.685	18.9	2.460E-05	2.0%	0.749	0.1062	0.643	3.8250%	0.0000	261.4	4.4	0.098287	1180.1	18.5	4.685
0.00100000	4.695	18.9	2.465E-05	2.0%	0.749	0.106	0.643	3.8354%	0.0000	260.7	4.3	0.098292	1175.7	18.5	4.695
0.00100000	4.705	18.9	2.470E-05	2.0%	0.748	0.1058	0.642	3.8459%	0.0000	260.0	4.3	0.098297	1171.3	18.6	4.705
0.00100000	4.715	18.9	2.475E-05	2.0%	0.747	0.1056	0.642	3.8564%	0.0000	259.3	4.3	0.098301	1167.0	18.6	4.715
0.00100000	4.725	18.9	2.481E-05	2.0%	0.747	0.1054	0.642	3.8669%	0.0000	258.6	4.3	0.098304	1162.7	18.7	4.725
0.00100000	4.735	18.9	2.486E-05	2.0%	0.746	0.1052	0.641	3.8774%	0.0000	257.9	4.3	0.098307	1158.4	18.7	4.735
0.00100000	4.745	18.9	2.491E-05	2.0%	0.746	0.105	0.641	3.8880%	0.0000	257.2	4.3	0.09831	1154.1	18.7	4.745
0.00100000	4.755	18.9	2.496E-05	2.0%	0.745	0.1048	0.640	3.8985%	0.0000	256.5	4.3	0.098312	1149.8	18.8	4.755
0.00100000	4.765	18.9	2.502E-05	2.0%	0.745	0.1046	0.640	3.9091%	0.0000	255.8	4.3	0.098313	1145.5	18.8	4.765
0.00100000	4.775	18.9	2.507E-05	2.0%	0.744	0.1044	0.640	3.9197%	0.0000	255.1	4.3	0.098314	1141.3	18.8	4.775
0.00100000	4.785	18.9	2.512E-05	2.0%	0.743	0.1042	0.639	3.9304%	0.0000	254.4	4.2	0.098314	1137.0	18.9	4.785
0.00100000	4.795	18.9	2.517E-05	2.0%	0.743	0.104	0.639	3.9410%	0.0000	253.7	4.2	0.098314	1132.8	18.9	4.795
0.00100000	4.805	18.9	2.523E-05	2.0%	0.742	0.1038	0.638	3.9517%	0.0000	253.1	4.2	0.098314	1128.5	18.9	4.805
0.00100000	4.815	18.9	2.528E-05	2.0%	0.742	0.1036	0.638	3.9623%	0.0000	252.4	4.2	0.098312	1124.3	19.0	4.815
0.00100000	4.825	18.9	2.533E-05	2.0%	0.741	0.1034	0.638	3.9731%	0.0000	251.7	4.2	0.098311	1120.1	19.0	4.825
0.00100000	4.835	18.9	2.538E-05	2.0%	0.740	0.1032	0.637	3.9838%	0.0000	251.0	4.2	0.098308	1115.9	19.1	4.835
0.00100000	4.845	18.9	2.544E-05	2.0%	0.740	0.103	0.637	3.9945%	0.0000	250.3	4.2	0.098306	1111.7	19.1	4.845
0.00100000	4.855	18.9	2.549E-05	2.0%	0.739	0.1028	0.636	4.0053%	0.0000	249.7	4.2	0.098302	1107.6	19.1	4.855
0.00100000	4.865	18.9	2.554E-05	2.0%	0.739	0.1026	0.636	4.0161%	0.0000	249.0	4.1	0.098298	1103.4	19.2	4.865
0.00100000	4.875	18.9	2.559E-05	2.0%	0.738	0.1024	0.636	4.0269%	0.0000	248.3	4.1	0.098294	1099.3	19.2	4.875
0.00100000	4.885	18.9	2.565E-05	2.0%	0.737	0.1022	0.635	4.0377%	0.0000	247.7	4.1	0.098289	1095.1	19.2	4.885
0.00100000	4.895	18.9	2.570E-05	2.0%	0.737	0.102	0.635	4.0485%	0.0000	247.0	4.1	0.098284	1091.0	19.3	4.895
0.00100000	4.905	18.9	2.575E-05	2.0%	0.736	0.1018	0.634	4.0594%	0.0000	246.3	4.1	0.098278	1086.9	19.3	4.905
0.00100000	4.915	18.9	2.580E-05	2.0%	0.736	0.1016	0.634	4.0703%	0.0000	245.7	4.1	0.098271	1082.8	19.3	4.915
0.00100000	4.925	18.9	2.586E-05	2.0%	0.735	0.1014	0.634	4.0812%	0.0000	245.0	4.1	0.098264	1078.7	19.4	4.925
0.00100000	4.935	18.9	2.591E-05	2.0%	0.734	0.1012	0.633	4.0921%	0.0000	244.4	4.1	0.098257	1074.6	19.4	4.935
0.00100000	4.945	18.9	2.596E-05	2.0%	0.734	0.101	0.633	4.1031%	0.0000	243.7	4.1	0.098249	1070.5	19.5	4.945
0.00100000	4.955	18.9	2.601E-05	2.0%	0.733	0.1008	0.632	4.1141%	0.0000	243.1	4.1	0.09824	1066.4	19.5	4.955
0.00100000	4.965	18.9	2.607E-05	2.0%	0.733	0.1006	0.632	4.1251%	0.0000	242.4	4.0	0.098231	1062.4	19.5	4.965
0.00100000	4.975	18.9	2.612E-05	2.0%	0.732	0.1004	0.631	4.1361%	0.0000	241.8	4.0	0.098222	1058.4	19.6	4.975
0.00100000	4.985	18.9	2.617E-05	2.0%	0.731	0.1002	0.631	4.1471%	0.0000	241.1	4.0	0.098212	1054.3	19.6	4.985
0.00100000	4.995	18.9	2.622E-05	2.0%	0.731	0.1	0.631	4.1582%	0.0000	240.5	4.0	0.098201	1050.3	19.6	4.995
0.00100000	5.005	18.9	2.628E-05	2.0%	0.730	0.0998	0.630	4.1692%	0.0000	239.9	4.0	0.09819	1046.3	19.7	5.005
0.00100000	5.015	18.9	2.633E-05	2.0%	0.729	0.0996	0.630	4.1803%	0.0000	239.2	4.0	0.098178	1042.3	19.7	5.015
0.00100000	5.025	18.9	2.638E-05	2.0%	0.729	0.0994	0.629	4.1915%	0.0000	238.6	4.0	0.098166	1038.3	19.8	5.025
0.00100000	5.035	18.9	2.643E-05	2.0%	0.728	0.0992	0.629	4.2026%	0.0000	237.9	4.0	0.098153	1034.3	19.8	5.035
0.00100000	5.045	18.9	2.649E-05	2.0%	0.728	0.099	0.629	4.2138%	0.0000	237.3	4.0	0.09814	1030.4	19.8	5.045
0.00100000	5.055	18.9	2.654E-05	2.0%	0.727	0.0988	0.628	4.2250%	0.0000	236.7	3.9	0.098126	1026.4	19.9	5.055
0.00100000	5.065	18.9	2.659E-05	2.0%	0.726	0.0986	0.628	4.2362%	0.0000	236.1	3.9	0.098112	1022.5	19.9	5.065
0.00100000	5.075	18.9	2.664E-05	2.0%	0.726	0.0984	0.627	4.2474%	0.0000	235.4	3.9	0.098097	1018.5	19.9	5.075
0.00100000	5.085	18.9	2.670E-05	2.0%	0.725	0.0982	0.627	4.2587%	0.0000	234.8	3.9	0.098082	1014.6	20.0	5.085
0.00100000	5.095	18.9	2.675E-05	2.0%	0.724	0.098	0.626	4.2700%	0.0000	234.2	3.9	0.098066	1010.7	20.0	5.095
0.00100000	5.105	18.9	2.680E-05	2.0%	0.724	0.0978	0.626	4.2813%	0.0000	233.6	3.9	0.09805	1006.8	20.1	5.105
0.00100000	5.115	18.9	2.685E-05	2.0%	0.723	0.0976	0.626	4.2926%	0.0000	233.0	3.9	0.098033	1002.9	20.1	5.115
0.00100000	5.125	18.9	2.691E-05	2.0%	0.723	0.0974	0.625	4.3040%	0.0000	232.3	3.9	0.098015	999.0	20.1	5.125
0.00100000	5.135	18.9	2.696E-05	2.0%	0.722	0.0972	0.625	4.3153%	0.0000	231.7	3.9	0.097997	995.2	20.2	5.135
0.00100000	5.145	18.9	2.701E-05	2.0%	0.721	0.097	0.624	4.3267%	0.0000	231.1	3.9	0.097979	991.3	20.2	5.145
0.00100000	5.155	18.9	2.706E-05	2.0%	0.721	0.0968	0.624	4.3382%	0.0000	230.5	3.8	0.09796	987.4	20.2	5.155
0.00100000	5.165	18.9	2.712E-05	2.0%	0.720	0.0966	0.623	4.3496%	0.0000	229.9	3.8	0.097941	983.6	20.3	5.165
0.00100000	5.175	18.9	2.717E-05	2.0%	0.719	0.0964	0.623	4.3611%	0.0000	229.3	3.8	0.097921	979.8	20.3	5.175
0.00100000	5.185	18.9	2.722E-05	2.0%	0.719	0.0962	0.623	4.3726%	0.0000	228.7	3.8	0.0979	975.9	20.4	5.185
0.00100000	5.195	18.9	2.727E-05	2.0%	0.718	0.096	0.622	4.3841%	0.0000	228.1	3.8	0.097879	972.1	20.4	5.195
0.00100000	5.205	18.9	2.733E-05	2.0%	0.717	0.0958	0.622	4.3957%	0.0000	227.5	3.8	0.097858	968.3	20.4	5.205
0.00100000	5.215	18.9	2.738E-05	2.0%	0.717	0.0956	0.621	4.4072%	0.0000	226.9	3.8	0.097835	964.5	20.5	5.215
0.00100000	5.225	18.9	2.743E-05	2.0%	0.716	0.0954	0.621	4.4188%	0.0000	226.3	3.8	0.097813	960.8	20.5	5.225
0.00100000	5.235	18.9	2.748E-05	2.0%	0.716	0.0952	0.620	4.4304%	0.0000	225.7	3.8	0.09779	957.0	20.5	5.235
0.00100000	5.245	18.9	2.754E-05	2.0%	0.715	0.095	0.620	4.4421%	0.0000	225.1	3.8	0.097766	953.2	20.6	5.245
0.00100000	5.255	18.9	2.759E-05	2.0%	0.714	0.0948	0.619	4.4537%	0.0000	224.5	3.7	0.097742	949.5	20.6	5.255
0.00100000	5.265	18.9	2.764E-05	2.0%	0.714	0.0946	0.619	4.4654%	0.0000	223.9	3.7	0.097717	945.7	20.7	5.265
0.00100000	5.275	18.9	2.769E-05	2.0%	0.713	0.0944	0.619	4.4772%	0.0000	223.4	3.7	0.097692	942.0	20.7	5.275
0.00100000	5.285	18.9	2.775E-05	2.0%	0.712	0.0942	0.618	4.4889%	0.0000	222.8	3.7	0.097667	938.3	20.7	5.285
0.00100000	5.295	18.9	2.780E-05	2.0%	0.712	0.094	0.618	4.5007%	0.0000	222.2	3.7	0.09764	934.6	20.8	5.295
0.00100000	5.305	18.9	2.785E-05	2.0%	0.711	0.0938	0.617	4.5125%	0.0000	221.6	3.7	0.097614	930.9	20.8	5.305
0.00100000	5.315	18.9	2.790E-05	2.0%	0.710	0.0936	0.617	4.5243%	0.0000	221.0	3.7	0.097587	927.2	20.9	5.315
0.00100000	5.325	18.9	2.796E-05	2.0%	0.710	0.0934	0.616	4.5361%	0.0000	220.5	3.7	0.097559	923.5	20.9	5.325
0.00100000	5.335	18.9	2.801E-05	2.0%	0.709	0.0932	0.616	4.5480%	0.0000	219.9	3.7	0.097531	919.8	20.9	5.335
0.00100000	5.345	18.9	2.806E-05	2.0%	0.708	0.093	0.615	4.5599%	0.0000	219.3	3.7	0.097502	916.1	21.0	5.345
0.00100000	5.355	18.9	2.811E-05	2.0%	0.708	0.0928	0.615	4.5719%	0.0000	218.7	3.6	0.097473	912.5	21.0	5.355
0.00100000	5.365	18.9	2.817E-05	2.0%	0.707	0.0926	0.614	4.5838%	0.0000	218.2	3.6	0.097443	908.8	21.0	5.365
0.00100000	5.375	18.9	2.822E-05	2.0%	0.706	0.0924	0.614	4.5958%	0.0000	217.6	3.6	0.097412	905.2	21.1	5.375
0.00100000	5.385	18.9	2.827E-05	2.0%	0.706	0.0922	0.614	4.6078%	0.0000	217.0	3.6	0.097382	901.6	21.1	5.385
0.00100000	5.395	18.9	2.832E-05	2.0%	0.705	0.092	0.613	4.6198%	0.0000	216.5	3.6	0.09735	898.0	21.2	5.395
0.00100000	5.405	18.9	2.838E-05	2.0%	0.704	0.0918	0.613	4.6319%	0.0000	215.9	3.6	0.097318	894.4	21.2	5.405

0.00100000	5.415	18.9	2.843E-05	2.0%	0.704	0.0916	0.612	4.6440%	0.0000	215.3	3.6	0.097286	890.8	21.2	5.415
0.00100000	5.425	18.9	2.848E-05	2.0%	0.703	0.0914	0.612	4.6561%	0.0000	214.8	3.6	0.097253	887.2	21.3	5.425
0.00100000	5.435	18.9	2.853E-05	2.0%	0.702	0.0912	0.611	4.6682%	0.0000	214.2	3.6	0.09722	883.6	21.3	5.435
0.00100000	5.445	18.9	2.859E-05	2.0%	0.702	0.091	0.611	4.6804%	0.0000	213.7	3.6	0.097186	880.0	21.4	5.445
0.00100000	5.455	18.9	2.864E-05	2.0%	0.701	0.0908	0.610	4.6926%	0.0000	213.1	3.6	0.097151	876.5	21.4	5.455
0.00100000	5.465	18.9	2.869E-05	2.0%	0.700	0.0906	0.610	4.7048%	0.0000	212.5	3.5	0.097116	872.9	21.4	5.465
0.00100000	5.475	18.9	2.874E-05	2.0%	0.700	0.0904	0.609	4.7171%	0.0000	212.0	3.5	0.097081	869.4	21.5	5.475
0.00100000	5.485	18.9	2.880E-05	2.0%	0.699	0.0902	0.609	4.7294%	0.0000	211.4	3.5	0.097045	865.8	21.5	5.485
0.00100000	5.495	18.9	2.885E-05	2.0%	0.698	0.09	0.608	4.7417%	0.0000	210.9	3.5	0.097009	862.3	21.6	5.495
0.00100000	5.505	18.9	2.890E-05	2.0%	0.698	0.0898	0.608	4.7541%	0.0000	210.3	3.5	0.096972	858.8	21.6	5.505
0.00100000	5.515	18.9	2.895E-05	2.0%	0.697	0.0896	0.607	4.7664%	0.0000	209.8	3.5	0.096934	855.3	21.6	5.515
0.00100000	5.525	18.9	2.901E-05	2.0%	0.696	0.0894	0.607	4.7788%	0.0000	209.3	3.5	0.096896	851.8	21.7	5.525
0.00100000	5.535	18.9	2.906E-05	2.0%	0.696	0.0892	0.606	4.7913%	0.0000	208.7	3.5	0.096857	848.3	21.7	5.535
0.00100000	5.545	18.9	2.911E-05	2.0%	0.695	0.089	0.606	4.8037%	0.0000	208.2	3.5	0.096818	844.8	21.8	5.545
0.00100000	5.555	18.9	2.916E-05	2.0%	0.694	0.0888	0.606	4.8162%	0.0000	207.6	3.5	0.096779	841.4	21.8	5.555
0.00100000	5.565	18.9	2.922E-05	2.0%	0.694	0.0886	0.605	4.8287%	0.0000	207.1	3.5	0.096739	837.9	21.8	5.565
0.00100000	5.575	18.9	2.927E-05	2.0%	0.693	0.0884	0.605	4.8413%	0.0000	206.6	3.4	0.096698	834.4	21.9	5.575
0.00100000	5.585	18.9	2.932E-05	2.0%	0.692	0.0882	0.604	4.8539%	0.0000	206.0	3.4	0.096657	831.0	21.9	5.585
0.00100000	5.595	18.9	2.937E-05	2.0%	0.692	0.088	0.604	4.8665%	0.0000	205.5	3.4	0.096615	827.6	22.0	5.595
0.00100000	5.605	18.9	2.943E-05	2.0%	0.691	0.0878	0.603	4.8791%	0.0000	205.0	3.4	0.096573	824.1	22.0	5.605
0.00100000	5.615	18.9	2.948E-05	2.0%	0.690	0.0876	0.603	4.8918%	0.0000	204.4	3.4	0.096531	820.7	22.0	5.615
0.00100000	5.625	18.9	2.953E-05	2.0%	0.690	0.0874	0.602	4.9045%	0.0000	203.9	3.4	0.096487	817.3	22.1	5.625
0.00100000	5.635	18.9	2.958E-05	2.0%	0.689	0.0872	0.602	4.9172%	0.0000	203.4	3.4	0.096444	813.9	22.1	5.635
0.00100000	5.645	18.9	2.964E-05	2.0%	0.688	0.087	0.601	4.9300%	0.0000	202.8	3.4	0.096399	810.5	22.2	5.645
0.00100000	5.655	18.9	2.969E-05	2.0%	0.687	0.0868	0.601	4.9428%	0.0000	202.3	3.4	0.096355	807.1	22.2	5.655
0.00100000	5.665	18.9	2.974E-05	2.0%	0.687	0.0866	0.600	4.9556%	0.0000	201.8	3.4	0.09631	803.8	22.2	5.665
0.00100000	5.675	18.9	2.979E-05	2.0%	0.686	0.0864	0.600	4.9685%	0.0000	201.3	3.4	0.096264	800.4	22.3	5.675
0.00100000	5.685	18.9	2.985E-05	2.0%	0.685	0.0862	0.599	4.9814%	0.0000	200.7	3.3	0.096217	797.1	22.3	5.685
0.00100000	5.695	18.9	2.990E-05	2.0%	0.685	0.086	0.599	4.9943%	0.0000	200.2	3.3	0.096171	793.7	22.4	5.695
0.00100000	5.705	18.9	2.995E-05	2.0%	0.684	0.0858	0.598	5.0073%	0.0001	199.7	3.3	0.096123	790.4	22.4	5.705
0.00100000	5.715	18.9	3.000E-05	2.0%	0.683	0.0856	0.598	5.0202%	0.0001	199.2	3.3	0.096076	787.0	22.4	5.715
0.00100000	5.725	18.9	3.006E-05	2.0%	0.683	0.0854	0.597	5.0333%	0.0001	198.7	3.3	0.096027	783.7	22.5	5.725
0.00100000	5.735	18.9	3.011E-05	2.0%	0.682	0.0852	0.597	5.0463%	0.0001	198.2	3.3	0.095978	780.4	22.5	5.735
0.00100000	5.745	18.9	3.016E-05	2.0%	0.681	0.085	0.596	5.0594%	0.0001	197.7	3.3	0.095929	777.1	22.6	5.745
0.00100000	5.755	18.9	3.021E-05	2.0%	0.680	0.0848	0.596	5.0725%	0.0001	197.1	3.3	0.095879	773.8	22.6	5.755
0.00100000	5.765	18.9	3.027E-05	2.0%	0.680	0.0846	0.595	5.0857%	0.0001	196.6	3.3	0.095829	770.5	22.7	5.765
0.00100000	5.775	18.9	3.032E-05	2.0%	0.679	0.0844	0.595	5.0989%	0.0001	196.1	3.3	0.095778	767.3	22.7	5.775
0.00100000	5.785	18.9	3.037E-05	2.0%	0.678	0.0842	0.594	5.1121%	0.0001	195.6	3.3	0.095726	764.0	22.7	5.785
0.00100000	5.795	18.9	3.042E-05	2.0%	0.678	0.084	0.594	5.1254%	0.0001	195.1	3.3	0.095674	760.7	22.8	5.795
0.00100000	5.805	18.9	3.048E-05	2.0%	0.677	0.0838	0.593	5.1387%	0.0001	194.6	3.2	0.095622	757.5	22.8	5.805
0.00100000	5.815	18.9	3.053E-05	2.0%	0.676	0.0836	0.593	5.1520%	0.0001	194.1	3.2	0.095569	754.2	22.9	5.815
0.00100000	5.825	18.9	3.058E-05	2.0%	0.675	0.0834	0.592	5.1654%	0.0001	193.6	3.2	0.095516	751.0	22.9	5.825
0.00100000	5.835	18.9	3.063E-05	2.0%	0.675	0.0832	0.592	5.1787%	0.0001	193.1	3.2	0.095462	747.8	22.9	5.835
0.00100000	5.845	18.9	3.069E-05	2.0%	0.674	0.083	0.591	5.1922%	0.0001	192.6	3.2	0.095407	744.6	23.0	5.845
0.00100000	5.855	18.9	3.074E-05	2.0%	0.673	0.0828	0.590	5.2057%	0.0001	192.1	3.2	0.095352	741.3	23.0	5.855
0.00100000	5.865	18.9	3.079E-05	2.0%	0.673	0.0826	0.590	5.2192%	0.0001	191.6	3.2	0.095296	738.1	23.1	5.865
0.00100000	5.875	18.9	3.084E-05	2.0%	0.672	0.0824	0.589	5.2327%	0.0001	191.1	3.2	0.09524	734.9	23.1	5.875
0.00100000	5.885	18.9	3.090E-05	2.0%	0.671	0.0822	0.589	5.2463%	0.0001	190.6	3.2	0.095184	731.8	23.2	5.885
0.00100000	5.895	18.9	3.095E-05	2.0%	0.670	0.082	0.588	5.2599%	0.0001	190.1	3.2	0.095127	728.6	23.2	5.895
0.00100000	5.905	18.9	3.100E-05	2.0%	0.670	0.0818	0.588	5.2735%	0.0001	189.6	3.2	0.095069	725.4	23.2	5.905
0.00100000	5.915	18.9	3.105E-05	2.0%	0.669	0.0816	0.587	5.2872%	0.0001	189.1	3.2	0.095011	722.3	23.3	5.915
0.00100000	5.925	18.9	3.111E-05	2.0%	0.668	0.0814	0.587	5.3009%	0.0001	188.6	3.1	0.094952	719.1	23.3	5.925
0.00100000	5.935	18.9	3.116E-05	2.0%	0.667	0.0812	0.586	5.3147%	0.0001	188.2	3.1	0.094893	716.0	23.4	5.935
0.00100000	5.945	18.9	3.121E-05	2.0%	0.667	0.081	0.586	5.3285%	0.0001	187.7	3.1	0.094833	712.8	23.4	5.945
0.00100000	5.955	18.9	3.126E-05	2.0%	0.666	0.0808	0.585	5.3423%	0.0001	187.2	3.1	0.094773	709.7	23.5	5.955
0.00100000	5.965	18.9	3.132E-05	2.0%	0.665	0.0806	0.585	5.3562%	0.0001	186.7	3.1	0.094712	706.6	23.5	5.965
0.00100000	5.975	18.9	3.137E-05	2.0%	0.665	0.0804	0.584	5.3701%	0.0001	186.2	3.1	0.094651	703.5	23.5	5.975
0.00100000	5.985	18.9	3.142E-05	2.0%	0.664	0.0802	0.584	5.3841%	0.0001	185.7	3.1	0.094589	700.4	23.6	5.985
0.00100000	5.995	18.9	3.147E-05	2.0%	0.663	0.08	0.583	5.3981%	0.0001	185.3	3.1	0.094527	697.3	23.6	5.995
0.00100000	6.005	18.9	3.153E-05	2.0%	0.662	0.0798	0.583	5.4121%	0.0001	184.8	3.1	0.094464	694.2	23.7	6.005
0.00100000	6.015	18.9	3.158E-05	2.0%	0.662	0.0796	0.582	5.4262%	0.0001	184.3	3.1	0.094401	691.1	23.7	6.015
0.00100000	6.025	18.9	3.163E-05	2.0%	0.661	0.0794	0.581	5.4403%	0.0001	183.8	3.1	0.094337	688.0	23.8	6.025
0.00100000	6.035	18.9	3.168E-05	2.0%	0.660	0.0792	0.581	5.4544%	0.0001	183.3	3.1	0.094272	685.0	23.8	6.035
0.00100000	6.045	18.9	3.174E-05	2.0%	0.659	0.079	0.580	5.4686%	0.0001	182.9	3.0	0.094207	681.9	23.8	6.045
0.00100000	6.055	18.9	3.179E-05	2.0%	0.659	0.0788	0.580	5.4828%	0.0001	182.4	3.0	0.094142	678.9	23.9	6.055
0.00100000	6.065	18.9	3.184E-05	2.0%	0.658	0.0786	0.579	5.4971%	0.0001	181.9	3.0	0.094076	675.8	23.9	6.065
0.00100000	6.075	18.9	3.189E-05	2.0%	0.657	0.0784	0.579	5.5114%	0.0001	181.4	3.0	0.094009	672.8	24.0	6.075
0.00100000	6.085	18.9	3.195E-05	2.0%	0.656	0.0782	0.578	5.5257%	0.0001	181.0	3.0	0.093942	669.8	24.0	6.085
0.00100000	6.095	18.9	3.200E-05	2.0%	0.656	0.078	0.578	5.5401%	0.0001	180.5	3.0	0.093875	666.7	24.1	6.095
0.00100000	6.105	18.9	3.205E-05	2.0%	0.655	0.0778	0.577	5.5546%	0.0001	180.0	3.0	0.093807	663.7	24.1	6.105
0.00100000	6.115	18.9	3.210E-05	2.0%	0.654	0.0776	0.576	5.5690%	0.0001	179.6	3.0	0.093738	660.7	24.2	6.115
0.00100000	6.125	18.9	3.216E-05	2.0%	0.653	0.0774	0.576	5.5836%	0.0001	179.1	3.0	0.093669	657.7	24.2	6.125
0.00100000	6.135	18.9	3.221E-05	2.0%	0.653	0.0772	0.575	5.5981%	0.0001	178.6	3.0	0.0936	654.8	24.2	6.135
0.00100000	6.145	18.9	3.226E-05	2.0%	0.652	0.077	0.575	5.6127%	0.0001	178.2	3.0	0.093529	651.8	24.3	6.145
0.00100000	6.155	18.9	3.231E-05	2.0%	0.651	0.0768	0.574	5.6274%	0.0001	177.7	3.0	0.093459	648.8	24.3	6.155
0.00100000	6.165	18.9	3.237E-05	2.0%	0.650	0.0766	0.574	5.6420%	0.0001	177.2	3.0	0.093388	645.9	24.4	6.165
0.00100000	6.175	18.9	3.242E-05	2.0%	0.649	0.0764	0.573	5.6568%	0.0001	176.8	2.9	0.093316	642.9	24.4	6.175
0.00100000	6.185	18.9	3.247E-05	2.0%	0.649	0.0762	0.573	5.6715%	0.0001	176.3	2.9	0.093244	640.0	24.5	6.185
0.00100000	6.195	18.9	3.252E-05	2.0%	0.648	0.076	0.572	5.6864%	0.0001	175.9	2.9	0.093171	637.0	24.5	6.195
0.00100000	6.205	18.9	3.258E-05	2.0%	0.647	0.0758	0.571	5.7012%	0.0001	175.4	2.9	0.093097	634.1	24.6	6.205
0.00100000	6.215	18.9	3.263E-05	2.0%	0.646	0.0756	0.571	5.7161%	0.0001	174.9	2.9	0.093024	631.2	24.6	6.215
0.00100000	6.225	18.9	3.268E-05	2.0%	0.646	0.0754	0.570	5.7311%	0.0001	174.5	2.9	0.092949	628.2	24.7	6.225
0.00100000	6.235	18.9	3.273E-05	2.0%	0.645	0.0752	0.570	5.7461%	0.0001	174.0	2.9	0.092874	625.3	24.7	6.235
0.00100000	6.245	18.9	3.279E-05	2.0%	0.644	0.075	0.569	5.7611%	0.0001	173.6	2.9	0.092799	622.4	24.7	6.245
0.00100000	6.255	18.9	3.284E-05	2.0%	0.643	0.0748	0.569	5.7762%	0.0001	173.1	2.9	0.092723	619.5	24.8	6.255
0.00100000	6.265	18.9	3.289E-05	2.0%	0.643	0.0746	0.568	5.7913%	0.0001	172.7	2.9	0.092646	616.7	24.8	6.265
0.00100000	6.275	18.9	3.294E-05	2.0%	0.642	0.0744	0.567	5.8065%	0.0001	172.2	2.9	0.092569	613.8	24.9	6.275
0.00100000	6.285	18.9	3.300E-05	2.0%	0.641	0.0742	0.567	5.8217%	0.0001	171.8	2.9	0.092492	610.9	24.9	6.285
0.00100000	6.295	18.9	3.305E-05	2.0%	0.640	0.074	0.566	5.8370%	0.0001	171.3	2.9	0.092414	608.0	25.0	6.295
0.00100000	6.305	18.9	3.310E-05	2.0%	0.639	0.0738	0.566	5.8523%	0.0001	170.9	2.8	0.092335	605.2	25.0	6.305
0.00100000	6.315	18.9	3.315E-05	2.0%	0.639	0.0736	0.565	5.8677%	0.0001	170.4	2.8	0.092256	602.3	25.1	6.315
0.00100000	6.325	18.9	3.321E-05	2.0%	0.638	0.0734	0.564	5.8831%	0.0001	170.0	2.8	0.092176	599.5	25.1	6.325
0.00100000	6.335	18.9	3.326E-05	2.0%	0.637	0.0732	0.564	5.8986%	0.0001	169.5	2.8	0.092096	596.7	25.2	6.335
0.00100000	6.345	18.9	3.331E-05	2.0%	0.636	0.073	0.563	5.9141%	0.0001	169.1	2.8	0.092016	593.8	25.2	6.345
0.00100000	6.355	18.9	3.336E-05	2.0%	0.635	0.0728	0.563	5.9297%	0.0001	168.6	2.8	0.091934	591.0	25.3	6.355
0.00100000	6.365	18.9	3.342E-05	2.0%	0.635	0.0726	0.562	5.9453%	0.0001	168.2	2.8	0.091852	588.2	25.3	6.365
0.00100000	6.375	18.9	3.347E-05	2.0%	0.634	0.0724	0.561	5.9610%	0.0001	167.8	2.8	0.09177	585.4	25.4	6.375
0.00100000	6.385	18.9	3.352E-05	2.0%	0.633	0.0722	0.561	5.9767%	0.0001	167.3	2.8	0.091687	582.6	25.4	6.385
0.00100000	6.395	18.9	3.357E-05	2.0%	0.632	0.072	0.560	5.9924%	0.0001	166.9	2.8	0.091604	579.8	25.4	6.395
0.00100000	6.405	18.9	3.363E-05	2.0%	0.631	0.0718	0.560	6.0082%	0.0001	166.4	2.8	0.09152	577.0	25.5	6.405
0.00100000	6.415	18.9	3.368E-05	2.0%	0.631	0.0716	0.559	6.0241%	0.0001	166.0	2.8	0.091435	574.3	25.5	6.415
0.00100000	6.425	18.9	3.373E-05	2.0%	0.630	0.0714	0.558	6.0400%	0.0001	165.6	2.8	0.09135	571.5	25.6	6.425
0.00100000	6.435	18.9	3.378E-05	2.0%	0.629	0.0712	0.558	6.0560%	0.0001	165.1	2.8	0.091265	568.7	25.6	6.435
0.00100000	6.445	18.9	3.384E-05	2.0%	0.628	0.071	0.557	6.0720%	0.0001	164.7	2.7	0.091179	566.0	25.7	6.445
0.00100000	6.455	18.9	3.389E-05	2.0%	0.627	0.0708	0.557	6.0881%	0.0001	164.3	2.7	0.091092	563.2	25.7	6.455
0.00100000	6.465	18.9	3.394E-05	2.0%	0.627	0.0706	0.556	6.1042%	0.0001	163.8	2.7	0.091005	560.5	25.8	6.465
0.00100000	6.475	18.9	3.399E-05	2.0%	0.626	0.0704	0.555	6.1204%	0.0001	163.4	2.7	0.090917	557.8	25.8	6.475
0.00100000	6.485	18.9	3.405E-05	2.0%	0.625	0.0702	0.555	6.1366%	0.0001	163.0	2.7	0.090829	555.1	25.9	6.485
0.00100000	6.495	18.9	3.410E-05	2.0%	0.624	0.07	0.554	6.1529%	0.0001	162.5	2.7	0.09074	552.3	25.9	6.495
0.00100000	6.505	18.9	3.415E-05	2.0%	0.623	0.0698	0.554	6.1692%	0.0001	162.1	2.7	0.090651	549.6	26.0	6.505
0.00100000	6.515	18.9	3.420E-05	2.0%	0.623	0.0696	0.553	6.1856%	0.0001	161.7	2.7	0.090561	546.9	26.0	6.515
0.00100000	6.525	18.9	3.426E-05	2.0%	0.622	0.0694	0.552	6.2021%	0.0001	161.2	2.7	0.090471	544.2	26.1	6.525
0.00100000	6.535	18.9	3.431E-05	2.0%	0.621	0.0692	0.552	6.2186%	0.0001	160.8	2.7	0.09038	541.5	26.1	6.535
0.00100000	6.545	18.9	3.436E-05	2.0%	0.620	0.069	0.551	6.2352%	0.0001	160.4	2.7	0.090288	538.9	26.2	6.545
0.00100000	6.555	18.9	3.441E-05	2.0%	0.619	0.0688	0.550	6.2518%	0.0001	160.0	2.7	0.090196	536.2	26.2	6.555
0.00100000	6.565	18.9	3.447E-05	2.0%	0.618	0.0686	0.550	6.2685%	0.0001	159.5	2.7	0.090104	533.5	26.3	6.565
0.00100000	6.575	18.9	3.452E-05	2.0%	0.618	0.0684	0.549	6.2852%	0.0001	159.1	2.7	0.090011	530.9	26.3	6.575
0.00100000	6.585	18.9	3.457E-05	2.0%	0.617	0.0682	0.549	6.3020%	0.0001	158.7	2.6	0.089917	528.2	26.4	6.585
0.00100000	6.595	18.9	3.462E-05	2.0%	0.616	0.068	0.548	6.3188%	0.0001	158.3	2.6	0.089823	525.6	26.4	6.595
0.00100000	6.605	18.9	3.468E-05	2.0%	0.615	0.0678	0.547	6.3357%	0.0001	157.8	2.6	0.089728	522.9	26.5	6.605
0.00100000	6.615	18.9	3.473E-05	2.0%	0.614	0.0676	0.547	6.3527%	0.0001	157.4	2.6	0.089633	520.3	26.5	6.615
0.00100000	6.625	18.9	3.478E-05	2.0%	0.613	0.0674	0.546	6.3697%	0.0001	157.0	2.6	0.089537	517.7	26.6	6.625
0.00100000	6.635	18.9	3.483E-05	2.0%	0.613	0.0672	0.545	6.3868%	0.0001	156.6	2.6	0.08944	515.1	26.6	6.635
0.00100000	6.645	18.9	3.489E-05	2.0%	0.612	0.067	0.545	6.4040%	0.0001	156.2	2.6	0.089343	512.5	26.7	6.645
0.00100000	6.655	18.9	3.494E-05	2.0%	0.611	0.0668	0.544	6.4212%	0.0001	155.7	2.6	0.089246	509.9	26.7	6.655
0.00100000	6.665	18.9	3.499E-05	2.0%	0.610	0.0666	0.543	6.4384%	0.0001	155.3	2.6	0.089148	507.3	26.8	6.665
0.00100000	6.675	18.9	3.504E-05	2.0%	0.609	0.0664	0.543	6.4558%	0.0001	154.9	2.6	0.089049	504.7	26.8	6.675
0.00100000	6.685	18.9	3.510E-05	2.0%	0.608	0.0662	0.542	6.4731%	0.0001	154.5	2.6	0.08895	502.1	26.9	6.685
0.00100000	6.695	18.9	3.515E-05	2.0%	0.608	0.066	0.542	6.4906%	0.0001	154.1	2.6	0.08885	499.5	26.9	6.695
0.00100000	6.705	18.9	3.520E-05	2.0%	0.607	0.0658	0.541	6.5081%	0.0001	153.7	2.6	0.08875	496.9	27.0	6.705
0.00100000	6.715	18.9	3.525E-05	2.0%	0.606	0.0656	0.540	6.5257%	0.0001	153.2	2.6	0.088649	494.4	27.0	6.715
0.00100000	6.725	18.9	3.531E-05	2.0%	0.605	0.0654	0.540	6.5433%	0.0001	152.8	2.5	0.088548	491.8	27.1	6.725
0.00100000	6.735	18.9	3.536E-05	2.0%	0.604	0.0652	0.539	6.5610%	0.0001	152.4	2.5	0.088446	489.3	27.1	6.735
0.00100000	6.745	18.9	3.541E-05	2.0%	0.603	0.065	0.538	6.5788%	0.0001	152.0	2.5	0.088343	486.7	27.2	6.745
0.00100000	6.755	18.9	3.546E-05	2.0%	0.602	0.0648	0.538	6.5967%	0.0001	151.6	2.5	0.08824	484.2	27.2	6.755
0.00100000	6.765	18.9	3.552E-05	2.0%	0.602	0.0646	0.537	6.6146%	0.0001	151.2	2.5	0.088137	481.7	27.3	6.765
0.00100000	6.775	18.9	3.557E-05	2.0%	0.601	0.0644	0.536	6.6325%	0.0001	150.8	2.5	0.088033	479.2	27.3	6.775
0.00100000	6.785	18.9	3.562E-05	2.0%	0.600	0.0642	0.536	6.6506%	0.0001	150.4	2.5	0.087928	476.7	27.4	6.785

0.00100000	6.795	18.9	3.567E-05	2.0%	0.599	0.064	0.535	6.6687%	0.0001	150.0	2.5	0.087822	474.1	27.4	6.795
0.00100000	6.805	18.9	3.573E-05	2.0%	0.598	0.0638	0.534	6.6868%	0.0001	149.5	2.5	0.087717	471.6	27.5	6.805
0.00100000	6.815	18.9	3.578E-05	2.0%	0.597	0.0636	0.534	6.7051%	0.0001	149.1	2.5	0.08761	469.2	27.6	6.815
0.00100000	6.825	18.9	3.583E-05	2.0%	0.596	0.0634	0.533	6.7234%	0.0001	148.7	2.5	0.087503	466.7	27.6	6.825
0.00100000	6.835	18.9	3.588E-05	2.0%	0.595	0.0632	0.532	6.7418%	0.0001	148.3	2.5	0.087396	464.2	27.7	6.835
0.00100000	6.845	18.9	3.594E-05	2.0%	0.595	0.063	0.532	6.7602%	0.0001	147.9	2.5	0.087288	461.7	27.7	6.845
0.00100000	6.855	18.9	3.599E-05	2.0%	0.594	0.0628	0.531	6.7787%	0.0001	147.5	2.5	0.087179	459.3	27.8	6.855
0.00100000	6.865	18.9	3.604E-05	2.0%	0.593	0.0626	0.530	6.7973%	0.0001	147.1	2.5	0.08707	456.8	27.8	6.865
0.00100000	6.875	18.9	3.609E-05	2.0%	0.592	0.0624	0.530	6.8160%	0.0001	146.7	2.4	0.08696	454.3	27.9	6.875
0.00100000	6.885	18.9	3.615E-05	2.0%	0.591	0.0622	0.529	6.8347%	0.0001	146.3	2.4	0.086849	451.9	27.9	6.885
0.00100000	6.895	18.9	3.620E-05	2.0%	0.590	0.062	0.528	6.8535%	0.0001	145.9	2.4	0.086738	449.5	28.0	6.895
0.00100000	6.905	18.9	3.625E-05	2.0%	0.589	0.0618	0.527	6.8724%	0.0001	145.5	2.4	0.086627	447.0	28.0	6.905
0.00100000	6.915	18.9	3.630E-05	2.0%	0.588	0.0616	0.527	6.8914%	0.0001	145.1	2.4	0.086515	444.6	28.1	6.915
0.00100000	6.925	18.9	3.636E-05	2.0%	0.588	0.0614	0.526	6.9104%	0.0001	144.7	2.4	0.086402	442.2	28.1	6.925
0.00100000	6.935	18.9	3.641E-05	2.0%	0.587	0.0612	0.525	6.9295%	0.0001	144.3	2.4	0.086289	439.8	28.2	6.935
0.00100000	6.945	18.9	3.646E-05	2.0%	0.586	0.061	0.525	6.9487%	0.0001	143.9	2.4	0.086175	437.4	28.3	6.945
0.00100000	6.955	18.9	3.651E-05	2.0%	0.585	0.0608	0.524	6.9680%	0.0001	143.5	2.4	0.086061	435.0	28.3	6.955
0.00100000	6.965	18.9	3.657E-05	2.0%	0.584	0.0606	0.523	6.9873%	0.0001	143.1	2.4	0.085946	432.6	28.4	6.965
0.00100000	6.975	18.9	3.662E-05	2.0%	0.583	0.0604	0.523	7.0067%	0.0001	142.7	2.4	0.08583	430.2	28.4	6.975
0.00100000	6.985	18.9	3.667E-05	2.0%	0.582	0.0602	0.522	7.0262%	0.0001	142.3	2.4	0.085714	427.8	28.5	6.985
0.00100000	6.995	18.9	3.672E-05	2.0%	0.581	0.06	0.521	7.0458%	0.0001	141.9	2.4	0.085597	425.4	28.5	6.995
0.00100000	7.005	18.9	3.678E-05	2.0%	0.580	0.0598	0.521	7.0654%	0.0001	141.5	2.4	0.08548	423.1	28.6	7.005
0.00100000	7.015	18.9	3.683E-05	2.0%	0.579	0.0596	0.520	7.0852%	0.0001	141.1	2.4	0.085362	420.7	28.6	7.015
0.00100000	7.025	18.9	3.688E-05	2.0%	0.578	0.0594	0.519	7.1050%	0.0001	140.7	2.3	0.085244	418.4	28.7	7.025
0.00100000	7.035	18.9	3.693E-05	2.0%	0.578	0.0592	0.518	7.1249%	0.0001	140.4	2.3	0.085125	416.0	28.8	7.035
0.00100000	7.045	18.9	3.699E-05	2.0%	0.577	0.059	0.518	7.1448%	0.0001	140.0	2.3	0.085005	413.7	28.8	7.045
0.00100000	7.055	18.9	3.704E-05	2.0%	0.576	0.0588	0.517	7.1649%	0.0001	139.6	2.3	0.084885	411.3	28.9	7.055
0.00100000	7.065	18.9	3.709E-05	2.0%	0.575	0.0586	0.516	7.1850%	0.0001	139.2	2.3	0.084764	409.0	28.9	7.065
0.00100000	7.075	18.9	3.714E-05	2.0%	0.574	0.0584	0.516	7.2053%	0.0001	138.8	2.3	0.084643	406.7	29.0	7.075
0.00100000	7.085	18.9	3.720E-05	2.0%	0.573	0.0582	0.515	7.2256%	0.0001	138.4	2.3	0.084521	404.4	29.0	7.085
0.00100000	7.095	18.9	3.725E-05	2.0%	0.572	0.058	0.514	7.2460%	0.0001	138.0	2.3	0.084398	402.1	29.1	7.095
0.00100000	7.105	18.9	3.730E-05	2.0%	0.571	0.0578	0.513	7.2665%	0.0001	137.6	2.3	0.084275	399.8	29.2	7.105
0.00100000	7.115	18.9	3.735E-05	2.0%	0.570	0.0576	0.513	7.2870%	0.0001	137.2	2.3	0.084151	397.5	29.2	7.115
0.00100000	7.125	18.9	3.741E-05	2.0%	0.569	0.0574	0.512	7.3077%	0.0001	136.8	2.3	0.084027	395.2	29.3	7.125
0.00100000	7.135	18.9	3.746E-05	2.0%	0.568	0.0572	0.511	7.3284%	0.0001	136.5	2.3	0.083902	392.9	29.3	7.135
0.00100000	7.145	18.9	3.751E-05	2.0%	0.567	0.057	0.510	7.3493%	0.0001	136.1	2.3	0.083776	390.6	29.4	7.145
0.00100000	7.155	18.9	3.756E-05	2.0%	0.566	0.0568	0.510	7.3702%	0.0001	135.7	2.3	0.08365	388.4	29.5	7.155
0.00100000	7.165	18.9	3.762E-05	2.0%	0.566	0.0566	0.509	7.3912%	0.0001	135.3	2.3	0.083524	386.1	29.5	7.165
0.00100000	7.175	18.9	3.767E-05	2.0%	0.565	0.0564	0.508	7.4123%	0.0001	134.9	2.2	0.083396	383.9	29.6	7.175
0.00100000	7.185	18.9	3.772E-05	2.0%	0.564	0.0562	0.507	7.4335%	0.0001	134.5	2.2	0.083268	381.6	29.6	7.185
0.00100000	7.195	18.9	3.777E-05	2.0%	0.563	0.056	0.507	7.4548%	0.0001	134.1	2.2	0.08314	379.4	29.7	7.195
0.00100000	7.205	18.9	3.783E-05	2.0%	0.562	0.0558	0.506	7.4762%	0.0001	133.8	2.2	0.083011	377.1	29.8	7.205
0.00100000	7.215	18.9	3.788E-05	2.0%	0.561	0.0556	0.505	7.4977%	0.0001	133.4	2.2	0.082881	374.9	29.8	7.215
0.00100000	7.225	18.9	3.793E-05	2.0%	0.560	0.0554	0.504	7.5193%	0.0001	133.0	2.2	0.08275	372.7	29.9	7.225
0.00100000	7.235	18.9	3.798E-05	2.0%	0.559	0.0552	0.504	7.5410%	0.0001	132.6	2.2	0.082619	370.5	29.9	7.235
0.00100000	7.245	18.9	3.804E-05	2.0%	0.558	0.055	0.503	7.5628%	0.0001	132.2	2.2	0.082488	368.3	30.0	7.245
0.00100000	7.255	18.9	3.809E-05	2.0%	0.557	0.0548	0.502	7.5846%	0.0001	131.8	2.2	0.082356	366.0	30.1	7.255
0.00100000	7.265	18.9	3.814E-05	2.0%	0.556	0.0546	0.501	7.6066%	0.0001	131.5	2.2	0.082223	363.9	30.1	7.265
0.00100000	7.275	18.9	3.819E-05	2.0%	0.555	0.0544	0.501	7.6287%	0.0001	131.1	2.2	0.08209	361.7	30.2	7.275
0.00100000	7.285	18.9	3.825E-05	2.0%	0.554	0.0542	0.500	7.6509%	0.0001	130.7	2.2	0.081955	359.5	30.2	7.285
0.00100000	7.295	18.9	3.830E-05	2.0%	0.553	0.054	0.499	7.6731%	0.0001	130.3	2.2	0.081821	357.3	30.3	7.295
0.00100000	7.305	18.9	3.835E-05	2.0%	0.552	0.0538	0.498	7.6955%	0.0001	129.9	2.2	0.081686	355.1	30.4	7.305
0.00100000	7.315	18.9	3.840E-05	2.0%	0.551	0.0536	0.498	7.7180%	0.0001	129.6	2.2	0.08155	353.0	30.4	7.315
0.00100000	7.325	18.9	3.846E-05	2.0%	0.550	0.0534	0.497	7.7406%	0.0001	129.2	2.2	0.081413	350.8	30.5	7.325
0.00100000	7.335	18.9	3.851E-05	2.0%	0.549	0.0532	0.496	7.7633%	0.0001	128.8	2.1	0.081276	348.6	30.6	7.335
0.00100000	7.345	18.9	3.856E-05	2.0%	0.548	0.053	0.495	7.7861%	0.0001	128.4	2.1	0.081138	346.5	30.6	7.345
0.00100000	7.355	18.9	3.861E-05	2.0%	0.547	0.0528	0.494	7.8090%	0.0001	128.1	2.1	0.081	344.4	30.7	7.355
0.00100000	7.365	18.9	3.867E-05	2.0%	0.546	0.0526	0.494	7.8320%	0.0001	127.7	2.1	0.080861	342.2	30.7	7.365
0.00100000	7.375	18.9	3.872E-05	2.0%	0.545	0.0524	0.493	7.8552%	0.0001	127.3	2.1	0.080721	340.1	30.8	7.375
0.00100000	7.385	18.9	3.877E-05	2.0%	0.544	0.0522	0.492	7.8784%	0.0001	126.9	2.1	0.080581	338.0	30.9	7.385
0.00100000	7.395	18.9	3.882E-05	2.0%	0.543	0.052	0.491	7.9018%	0.0001	126.6	2.1	0.08044	335.9	30.9	7.395
0.00100000	7.405	18.9	3.888E-05	2.0%	0.542	0.0518	0.491	7.9252%	0.0001	126.2	2.1	0.080299	333.7	31.0	7.405
0.00100000	7.415	18.9	3.893E-05	2.0%	0.541	0.0516	0.490	7.9488%	0.0001	125.8	2.1	0.080156	331.6	31.1	7.415
0.00100000	7.425	18.9	3.898E-05	2.0%	0.540	0.0514	0.489	7.9725%	0.0001	125.4	2.1	0.080014	329.6	31.1	7.425
0.00100000	7.435	18.9	3.903E-05	2.0%	0.539	0.0512	0.488	7.9963%	0.0001	125.1	2.1	0.07987	327.5	31.2	7.435
0.00100000	7.445	18.9	3.909E-05	2.0%	0.538	0.051	0.487	8.0203%	0.0001	124.7	2.1	0.079726	325.4	31.3	7.445
0.00100000	7.455	18.9	3.914E-05	2.0%	0.537	0.0508	0.487	8.0443%	0.0001	124.3	2.1	0.079581	323.3	31.3	7.455
0.00100000	7.465	18.9	3.919E-05	2.0%	0.536	0.0506	0.486	8.0685%	0.0001	123.9	2.1	0.079436	321.2	31.4	7.465
0.00100000	7.475	18.9	3.924E-05	2.0%	0.535	0.0504	0.485	8.0928%	0.0001	123.6	2.1	0.07929	319.2	31.5	7.475
0.00100000	7.485	18.9	3.930E-05	2.0%	0.534	0.0502	0.484	8.1172%	0.0001	123.2	2.1	0.079143	317.1	31.5	7.485
0.00100000	7.495	18.9	3.935E-05	2.0%	0.533	0.05	0.483	8.1417%	0.0001	122.8	2.0	0.078996	315.0	31.6	7.495
0.00100000	7.505	18.9	3.940E-05	2.0%	0.532	0.0498	0.482	8.1664%	0.0001	122.5	2.0	0.078848	313.0	31.7	7.505
0.00100000	7.515	18.9	3.945E-05	2.0%	0.531	0.0496	0.482	8.1912%	0.0001	122.1	2.0	0.0787	311.0	31.7	7.515
0.00100000	7.525	18.9	3.951E-05	2.0%	0.530	0.0494	0.481	8.2161%	0.0001	121.7	2.0	0.07855	308.9	31.8	7.525
0.00100000	7.535	18.9	3.956E-05	2.0%	0.529	0.0492	0.480	8.2411%	0.0001	121.3	2.0	0.0784	306.9	31.9	7.535
0.00100000	7.545	18.9	3.961E-05	2.0%	0.528	0.049	0.479	8.2663%	0.0001	121.0	2.0	0.07825	304.9	31.9	7.545
0.00100000	7.555	18.9	3.966E-05	2.0%	0.527	0.0488	0.478	8.2916%	0.0001	120.6	2.0	0.078099	302.9	32.0	7.555
0.00100000	7.565	18.9	3.972E-05	2.0%	0.526	0.0486	0.478	8.3171%	0.0001	120.2	2.0	0.077947	300.8	32.1	7.565
0.00100000	7.575	18.9	3.977E-05	2.0%	0.525	0.0484	0.477	8.3426%	0.0001	119.9	2.0	0.077794	298.8	32.1	7.575
0.00100000	7.585	18.9	3.982E-05	2.0%	0.524	0.0482	0.476	8.3683%	0.0001	119.5	2.0	0.077641	296.8	32.2	7.585
0.00100000	7.595	18.9	3.987E-05	2.0%	0.523	0.048	0.475	8.3942%	0.0001	119.1	2.0	0.077487	294.9	32.3	7.595
0.00100000	7.605	18.9	3.993E-05	2.0%	0.522	0.0478	0.474	8.4202%	0.0001	118.8	2.0	0.077333	292.9	32.4	7.605
0.00100000	7.615	18.9	3.998E-05	2.0%	0.521	0.0476	0.473	8.4463%	0.0001	118.4	2.0	0.077177	290.9	32.4	7.615
0.00100000	7.625	18.9	4.003E-05	2.0%	0.520	0.0474	0.472	8.4725%	0.0001	118.0	2.0	0.077021	288.9	32.5	7.625
0.00100000	7.635	18.9	4.008E-05	2.0%	0.519	0.0472	0.472	8.4989%	0.0001	117.7	2.0	0.076865	286.9	32.6	7.635
0.00100000	7.645	18.9	4.014E-05	2.0%	0.518	0.047	0.471	8.5255%	0.0001	117.3	2.0	0.076708	285.0	32.6	7.645
0.00100000	7.655	18.9	4.019E-05	2.0%	0.517	0.0468	0.470	8.5522%	0.0001	116.9	1.9	0.07655	283.0	32.7	7.655
0.00100000	7.665	18.9	4.024E-05	2.0%	0.516	0.0466	0.469	8.5790%	0.0001	116.6	1.9	0.076391	281.1	32.8	7.665
0.00100000	7.675	18.9	4.029E-05	2.0%	0.515	0.0464	0.468	8.6060%	0.0001	116.2	1.9	0.076232	279.1	32.9	7.675
0.00100000	7.685	18.9	4.035E-05	2.0%	0.514	0.0462	0.467	8.6331%	0.0001	115.8	1.9	0.076072	277.2	32.9	7.685
0.00100000	7.695	18.9	4.040E-05	2.0%	0.512	0.046	0.466	8.6604%	0.0001	115.5	1.9	0.075911	275.3	33.0	7.695
0.00100000	7.705	18.9	4.045E-05	2.0%	0.511	0.0458	0.466	8.6878%	0.0001	115.1	1.9	0.07575	273.3	33.1	7.705
0.00100000	7.715	18.9	4.050E-05	2.0%	0.510	0.0456	0.465	8.7154%	0.0001	114.7	1.9	0.075588	271.4	33.2	7.715
0.00100000	7.725	18.9	4.056E-05	2.0%	0.509	0.0454	0.464	8.7432%	0.0001	114.4	1.9	0.075425	269.5	33.2	7.725
0.00100000	7.735	18.9	4.061E-05	2.0%	0.508	0.0452	0.463	8.7711%	0.0001	114.0	1.9	0.075261	267.6	33.3	7.735
0.00100000	7.745	18.9	4.066E-05	2.0%	0.507	0.045	0.462	8.7991%	0.0001	113.6	1.9	0.075097	265.7	33.4	7.745
0.00100000	7.755	18.9	4.071E-05	2.0%	0.506	0.0448	0.461	8.8273%	0.0001	113.3	1.9	0.074932	263.8	33.5	7.755
0.00100000	7.765	18.9	4.077E-05	2.0%	0.505	0.0446	0.460	8.8557%	0.0001	112.9	1.9	0.074767	261.9	33.5	7.765
0.00100000	7.775	18.9	4.082E-05	2.0%	0.504	0.0444	0.459	8.8843%	0.0001	112.6	1.9	0.074601	260.0	33.6	7.775
0.00100000	7.785	18.9	4.087E-05	2.0%	0.503	0.0442	0.459	8.9130%	0.0001	112.2	1.9	0.074434	258.2	33.7	7.785
0.00100000	7.795	18.9	4.092E-05	2.0%	0.502	0.044	0.458	8.9419%	0.0001	111.8	1.9	0.074266	256.3	33.8	7.795
0.00100000	7.805	18.9	4.098E-05	2.0%	0.501	0.0438	0.457	8.9709%	0.0001	111.5	1.9	0.074097	254.4	33.8	7.805
0.00100000	7.815	18.9	4.103E-05	2.0%	0.499	0.0436	0.456	9.0002%	0.0001	111.1	1.9	0.073928	252.6	33.9	7.815
0.00100000	7.825	18.9	4.108E-05	2.0%	0.498	0.0434	0.455	9.0296%	0.0001	110.7	1.8	0.073758	250.7	34.0	7.825
0.00100000	7.835	18.9	4.113E-05	2.0%	0.497	0.0432	0.454	9.0591%	0.0001	110.4	1.8	0.073588	248.9	34.1	7.835
0.00100000	7.845	18.9	4.119E-05	2.0%	0.496	0.043	0.453	9.0889%	0.0001	110.0	1.8	0.073417	247.0	34.1	7.845
0.00100000	7.855	18.9	4.124E-05	2.0%	0.495	0.0428	0.452	9.1188%	0.0001	109.7	1.8	0.073245	245.2	34.2	7.855
0.00100000	7.865	18.9	4.129E-05	2.0%	0.494	0.0426	0.451	9.1490%	0.0001	109.3	1.8	0.073072	243.4	34.3	7.865
0.00100000	7.875	18.9	4.134E-05	2.0%	0.493	0.0424	0.450	9.1793%	0.0001	108.9	1.8	0.072898	241.6	34.4	7.875
0.00100000	7.885	18.9	4.140E-05	2.0%	0.492	0.0422	0.449	9.2097%	0.0001	108.6	1.8	0.072724	239.7	34.5	7.885
0.00100000	7.895	18.9	4.145E-05	2.0%	0.491	0.042	0.449	9.2404%	0.0001	108.2	1.8	0.072549	237.9	34.5	7.895
0.00100000	7.905	18.9	4.150E-05	2.0%	0.489	0.0418	0.448	9.2713%	0.0001	107.9	1.8	0.072373	236.1	34.6	7.905
0.00100000	7.915	18.9	4.155E-05	2.0%	0.488	0.0416	0.447	9.3023%	0.0001	107.5	1.8	0.072197	234.3	34.7	7.915
0.00100000	7.925	18.9	4.161E-05	2.0%	0.487	0.0414	0.446	9.3336%	0.0001	107.1	1.8	0.07202	232.5	34.8	7.925
0.00100000	7.935	18.9	4.166E-05	2.0%	0.486	0.0412	0.445	9.3651%	0.0001	106.8	1.8	0.071842	230.8	34.9	7.935
0.00100000	7.945	18.9	4.171E-05	2.0%	0.485	0.041	0.444	9.3967%	0.0001	106.4	1.8	0.071663	229.0	35.0	7.945
0.00100000	7.955	18.9	4.176E-05	2.0%	0.484	0.0408	0.443	9.4286%	0.0001	106.1	1.8	0.071484	227.2	35.0	7.955
0.00100000	7.965	18.9	4.182E-05	2.0%	0.483	0.0406	0.442	9.4606%	0.0001	105.7	1.8	0.071304	225.4	35.1	7.965
0.00100000	7.975	18.9	4.187E-05	2.0%	0.481	0.0404	0.441	9.4929%	0.0001	105.3	1.8	0.071123	223.7	35.2	7.975
0.00100000	7.985	18.9	4.192E-05	2.0%	0.480	0.0402	0.440	9.5254%	0.0001	105.0	1.7	0.070941	221.9	35.3	7.985
0.00100000	7.995	18.9	4.197E-05	2.0%	0.479	0.04	0.439	9.5580%	0.0001	104.6	1.7	0.070758	220.2	35.4	7.995
0.00100000	8.005	18.9	4.203E-05	2.0%	0.478	0.0398	0.438	9.5909%	0.0001	104.3	1.7	0.070575	218.4	35.5	8.005
0.00100000	8.015	18.9	4.208E-05	2.0%	0.477	0.0396	0.437	9.6241%	0.0001	103.9	1.7	0.070391	216.7	35.6	8.015
0.00100000	8.025	18.9	4.213E-05	2.0%	0.476	0.0394	0.436	9.6574%	0.0001	103.5	1.7	0.070206	215.0	35.6	8.025
0.00100000	8.035	18.9	4.218E-05	2.0%	0.474	0.0392	0.435	9.6910%	0.0001	103.2	1.7	0.07002	213.2	35.7	8.035
0.00100000	8.045	18.9	4.224E-05	2.0%	0.473	0.039	0.434	9.7248%	0.0001	102.8	1.7	0.069834	211.5	35.8	8.045
0.00100000	8.055	18.9	4.229E-05	2.0%	0.472	0.0388	0.433	9.7588%	0.0001	102.5	1.7	0.069647	209.8	35.9	8.055
0.00100000	8.065	18.9	4.234E-05	2.0%	0.471	0.0386	0.432	9.7930%	0.0001	102.1	1.7	0.069459	208.1	36.0	8.065
0.00100000	8.075	18.9	4.239E-05	2.0%	0.470	0.0384	0.431	9.8275%	0.0001	101.8	1.7	0.06927	206.4	36.1	8.075
0.00100000	8.085	18.9	4.245E-05	2.0%	0.469	0.0382	0.430	9.8622%	0.0001	101.4	1.7	0.06908	204.7	36.2	8.085
0.00100000	8.095	18.9	4.250E-05	2.0%	0.467	0.038	0.429	9.8972%	0.0001	101.0	1.7	0.06889	203.0	36.3	8.095
0.00100000	8.105	18.9	4.255E-05	2.0%	0.466	0.0378	0.428	9.9324%	0.0001	100.7	1.7	0.068699	201.3	36.3	8.105
0.00100000	8.115	18.9	4.260E-05	2.0%	0.465	0.0376	0.427	9.9678%	0.0001	100.3	1.7	0.068507	199.6	36.4	8.115
0.00100000	8.125	18.9	4.266E-05	2.0%	0.464	0.0374	0.426	10.0035%	0.0001	100.0	1.7	0.068314	198.0	36.5	8.125
0.00100000	8.135	18.9	4.271E-05	2.0%	0.463	0.0372	0.425	10.0395%	0.0001	99.6	1.7	0.06812	196.3	36.6	8.135
0.00100000	8.145	18.9	4.276E-05	2.0%	0.461	0.037	0.424	10.0757%	0.0001	99.2	1.7	0.067926	194.6	36.7	8.145
0.00100000	8.155	18.9	4.281E-05	2.0%	0.460	0.0368	0.423	10.1121%	0.0001	98.9	1.6	0.067731	193.0	36.8	8.155
0.00100000	8.165	18.9	4.287E-05	2.0%	0.459	0.0366	0.422	10.1489%	0.0001	98.5	1.6	0.067535	191.3	36.9	8.165

0.00100000	8.175	18.9	4.292E-05	2.0%	0.458	0.0364	0.421	10.1859%	0.0001	98.2	1.6	0.067338	189.7	37.0	8.175
0.00100000	8.185	18.9	4.297E-05	2.0%	0.457	0.0362	0.420	10.2231%	0.0001	97.8	1.6	0.06714	188.1	37.1	8.185
0.00100000	8.195	18.9	4.302E-05	2.0%	0.455	0.036	0.419	10.2607%	0.0001	97.5	1.6	0.066941	186.4	37.2	8.195
0.00100000	8.205	18.9	4.308E-05	2.0%	0.454	0.0358	0.418	10.2985%	0.0001	97.1	1.6	0.066742	184.8	37.3	8.205
0.00100000	8.215	18.9	4.313E-05	2.0%	0.453	0.0356	0.417	10.3366%	0.0001	96.7	1.6	0.066541	183.2	37.4	8.215
0.00100000	8.225	18.9	4.318E-05	2.0%	0.452	0.0354	0.416	10.3749%	0.0001	96.4	1.6	0.06634	181.6	37.5	8.225
0.00100000	8.235	18.9	4.323E-05	2.0%	0.450	0.0352	0.415	10.4136%	0.0001	96.0	1.6	0.066138	180.0	37.6	8.235
0.00100000	8.245	18.9	4.329E-05	2.0%	0.449	0.035	0.414	10.4526%	0.0001	95.7	1.6	0.065935	178.4	37.7	8.245
0.00100000	8.255	18.9	4.334E-05	2.0%	0.448	0.0348	0.413	10.4918%	0.0001	95.3	1.6	0.065731	176.8	37.8	8.255
0.00100000	8.265	18.9	4.339E-05	2.0%	0.447	0.0346	0.412	10.5314%	0.0001	95.0	1.6	0.065527	175.2	37.9	8.265
0.00100000	8.275	18.9	4.344E-05	2.0%	0.445	0.0344	0.411	10.5713%	0.0001	94.6	1.6	0.065321	173.6	38.0	8.275
0.00100000	8.285	18.9	4.350E-05	2.0%	0.444	0.0342	0.410	10.6114%	0.0001	94.2	1.6	0.065115	172.0	38.1	8.285
0.00100000	8.295	18.9	4.355E-05	2.0%	0.443	0.034	0.409	10.6519%	0.0001	93.9	1.6	0.064908	170.5	38.2	8.295
0.00100000	8.305	18.9	4.360E-05	2.0%	0.442	0.0338	0.408	10.6927%	0.0001	93.5	1.6	0.064699	168.9	38.3	8.305
0.00100000	8.315	18.9	4.365E-05	2.0%	0.440	0.0336	0.407	10.7339%	0.0001	93.2	1.6	0.06449	167.3	38.4	8.315
0.00100000	8.325	18.9	4.371E-05	2.0%	0.439	0.0334	0.406	10.7753%	0.0001	92.8	1.5	0.06428	165.8	38.5	8.325
0.00100000	8.335	18.9	4.376E-05	2.0%	0.438	0.0332	0.405	10.8171%	0.0001	92.4	1.5	0.064069	164.2	38.6	8.335
0.00100000	8.345	18.9	4.381E-05	2.0%	0.436	0.033	0.403	10.8592%	0.0001	92.1	1.5	0.063858	162.7	38.7	8.345
0.00100000	8.355	18.9	4.386E-05	2.0%	0.435	0.0328	0.402	10.9017%	0.0001	91.7	1.5	0.063645	161.2	38.8	8.355
0.00100000	8.365	18.9	4.392E-05	2.0%	0.434	0.0326	0.401	10.9445%	0.0001	91.4	1.5	0.063431	159.6	38.9	8.365
0.00100000	8.375	18.9	4.397E-05	2.0%	0.433	0.0324	0.400	10.9877%	0.0001	91.0	1.5	0.063217	158.1	39.0	8.375
0.00100000	8.385	18.9	4.402E-05	2.0%	0.431	0.0322	0.399	11.0312%	0.0001	90.7	1.5	0.063001	156.6	39.1	8.385
0.00100000	8.395	18.9	4.407E-05	2.0%	0.430	0.032	0.398	11.0751%	0.0001	90.3	1.5	0.062785	155.1	39.2	8.395
0.00100000	8.405	18.9	4.413E-05	2.0%	0.429	0.0318	0.397	11.1194%	0.0001	89.9	1.5	0.062567	153.6	39.4	8.405
0.00100000	8.415	18.9	4.418E-05	2.0%	0.427	0.0316	0.396	11.1640%	0.0001	89.6	1.5	0.062349	152.1	39.5	8.415
0.00100000	8.425	18.9	4.423E-05	2.0%	0.426	0.0314	0.395	11.2090%	0.0001	89.2	1.5	0.06213	150.6	39.6	8.425
0.00100000	8.435	18.9	4.428E-05	2.0%	0.425	0.0312	0.393	11.2544%	0.0001	88.9	1.5	0.061909	149.1	39.7	8.435
0.00100000	8.445	18.9	4.434E-05	2.0%	0.423	0.031	0.392	11.3002%	0.0001	88.5	1.5	0.061688	147.6	39.8	8.445
0.00100000	8.455	18.9	4.439E-05	2.0%	0.422	0.0308	0.391	11.3464%	0.0001	88.1	1.5	0.061466	146.1	39.9	8.455
0.00100000	8.465	18.9	4.444E-05	2.0%	0.421	0.0306	0.390	11.3930%	0.0001	87.8	1.5	0.061243	144.7	40.0	8.465
0.00100000	8.475	18.9	4.449E-05	2.0%	0.419	0.0304	0.389	11.4400%	0.0001	87.4	1.5	0.061019	143.2	40.1	8.475
0.00100000	8.485	18.9	4.455E-05	2.0%	0.418	0.0302	0.388	11.4875%	0.0001	87.1	1.5	0.060794	141.7	40.3	8.485
0.00100000	8.495	18.9	4.460E-05	2.0%	0.417	0.03	0.387	11.5353%	0.0001	86.7	1.4	0.060567	140.3	40.4	8.495
0.00100000	8.505	18.9	4.465E-05	2.0%	0.415	0.0298	0.385	11.5836%	0.0001	86.3	1.4	0.06034	138.9	40.5	8.505
0.00100000	8.515	18.9	4.470E-05	2.0%	0.414	0.0296	0.384	11.6323%	0.0001	86.0	1.4	0.060112	137.4	40.6	8.515
0.00100000	8.525	18.9	4.476E-05	2.0%	0.413	0.0294	0.383	11.6815%	0.0001	85.6	1.4	0.059883	136.0	40.7	8.525
0.00100000	8.535	18.9	4.481E-05	2.0%	0.411	0.0292	0.382	11.7311%	0.0001	85.2	1.4	0.059653	134.6	40.9	8.535
0.00100000	8.545	18.9	4.486E-05	2.0%	0.410	0.029	0.381	11.7812%	0.0001	84.9	1.4	0.059421	133.1	41.0	8.545
0.00100000	8.555	18.9	4.491E-05	2.0%	0.408	0.0288	0.380	11.8317%	0.0001	84.5	1.4	0.059189	131.7	41.1	8.555
0.00100000	8.565	18.9	4.497E-05	2.0%	0.407	0.0286	0.378	11.8828%	0.0001	84.2	1.4	0.058956	130.3	41.2	8.565
0.00100000	8.575	18.9	4.502E-05	2.0%	0.406	0.0284	0.377	11.9343%	0.0001	83.8	1.4	0.058721	128.9	41.4	8.575
0.00100000	8.585	18.9	4.507E-05	2.0%	0.404	0.0282	0.376	11.9863%	0.0001	83.4	1.4	0.058486	127.5	41.5	8.585
0.00100000	8.595	18.9	4.512E-05	2.0%	0.403	0.028	0.375	12.0388%	0.0001	83.1	1.4	0.05825	126.1	41.6	8.595
0.00100000	8.605	18.9	4.518E-05	2.0%	0.401	0.0278	0.374	12.0918%	0.0001	82.7	1.4	0.058012	124.7	41.7	8.605
0.00100000	8.615	18.9	4.523E-05	2.0%	0.400	0.0276	0.372	12.1453%	0.0001	82.3	1.4	0.057773	123.4	41.9	8.615
0.00100000	8.625	18.9	4.528E-05	2.0%	0.399	0.0274	0.371	12.1994%	0.0001	82.0	1.4	0.057534	122.0	42.0	8.625
0.00100000	8.635	18.9	4.533E-05	2.0%	0.397	0.0272	0.370	12.2540%	0.0001	81.6	1.4	0.057293	120.6	42.1	8.635
0.00100000	8.645	18.9	4.539E-05	2.0%	0.396	0.027	0.369	12.3092%	0.0001	81.2	1.4	0.057051	119.3	42.3	8.645
0.00100000	8.655	18.9	4.544E-05	2.0%	0.394	0.0268	0.367	12.3649%	0.0001	80.9	1.3	0.056808	117.9	42.4	8.655
0.00100000	8.665	18.9	4.549E-05	2.0%	0.393	0.0266	0.366	12.4211%	0.0001	80.5	1.3	0.056563	116.6	42.5	8.665
0.00100000	8.675	18.9	4.554E-05	2.0%	0.391	0.0264	0.365	12.4780%	0.0001	80.1	1.3	0.056318	115.2	42.7	8.675
0.00100000	8.685	18.9	4.560E-05	2.0%	0.390	0.0262	0.364	12.5354%	0.0001	79.8	1.3	0.056072	113.9	42.8	8.685
0.00100000	8.695	18.9	4.565E-05	2.0%	0.388	0.026	0.362	12.5934%	0.0001	79.4	1.3	0.055824	112.5	42.9	8.695
0.00100000	8.705	18.9	4.570E-05	2.0%	0.387	0.0258	0.361	12.6521%	0.0001	79.0	1.3	0.055575	111.2	43.1	8.705
0.00100000	8.715	18.9	4.575E-05	2.0%	0.386	0.0256	0.360	12.7114%	0.0001	78.7	1.3	0.055325	109.9	43.2	8.715
0.00100000	8.725	18.9	4.581E-05	2.0%	0.384	0.0254	0.359	12.7713%	0.0001	78.3	1.3	0.055074	108.6	43.4	8.725
0.00100000	8.735	18.9	4.586E-05	2.0%	0.383	0.0252	0.357	12.8318%	0.0001	77.9	1.3	0.054822	107.3	43.5	8.735
0.00100000	8.745	18.9	4.591E-05	2.0%	0.381	0.025	0.356	12.8930%	0.0001	77.6	1.3	0.054568	106.0	43.7	8.745
0.00100000	8.755	18.9	4.596E-05	2.0%	0.380	0.0248	0.355	12.9549%	0.0001	77.2	1.3	0.054314	104.7	43.8	8.755
0.00100000	8.765	18.9	4.602E-05	2.0%	0.378	0.0246	0.353	13.0174%	0.0001	76.8	1.3	0.054058	103.4	43.9	8.765
0.00100000	8.775	18.9	4.607E-05	2.0%	0.377	0.0244	0.352	13.0807%	0.0001	76.4	1.3	0.053801	102.1	44.1	8.775
0.00100000	8.785	18.9	4.612E-05	2.0%	0.375	0.0242	0.351	13.1447%	0.0001	76.1	1.3	0.053542	100.9	44.2	8.785
0.00100000	8.795	18.9	4.617E-05	2.0%	0.374	0.024	0.350	13.2093%	0.0001	75.7	1.3	0.053282	99.6	44.4	8.795
0.00100000	8.805	18.9	4.623E-05	2.0%	0.372	0.0238	0.348	13.2748%	0.0001	75.3	1.3	0.053022	98.3	44.6	8.805
0.00100000	8.815	18.9	4.628E-05	2.0%	0.370	0.0236	0.347	13.3410%	0.0001	75.0	1.2	0.052759	97.1	44.7	8.815
0.00100000	8.825	18.9	4.633E-05	2.0%	0.369	0.0234	0.346	13.4079%	0.0001	74.6	1.2	0.052496	95.8	44.9	8.825
0.00100000	8.835	18.9	4.638E-05	2.0%	0.367	0.0232	0.344	13.4757%	0.0001	74.2	1.2	0.052231	94.6	45.0	8.835
0.00100000	8.845	18.9	4.644E-05	2.0%	0.366	0.023	0.343	13.5442%	0.0001	73.8	1.2	0.051965	93.3	45.2	8.845
0.00100000	8.855	18.9	4.649E-05	2.0%	0.364	0.0228	0.341	13.6136%	0.0001	73.5	1.2	0.051698	92.1	45.3	8.855
0.00100000	8.865	18.9	4.654E-05	2.0%	0.363	0.0226	0.340	13.6838%	0.0001	73.1	1.2	0.051429	90.9	45.5	8.865
0.00100000	8.875	18.9	4.659E-05	2.0%	0.361	0.0224	0.339	13.7549%	0.0001	72.7	1.2	0.051159	89.7	45.7	8.875
0.00100000	8.885	18.9	4.665E-05	2.0%	0.360	0.0222	0.337	13.8268%	0.0001	72.3	1.2	0.050887	88.5	45.8	8.885
0.00100000	8.895	18.9	4.670E-05	2.0%	0.358	0.022	0.336	13.8996%	0.0001	71.9	1.2	0.050615	87.3	46.0	8.895
0.00100000	8.905	18.9	4.675E-05	2.0%	0.356	0.0218	0.335	13.9734%	0.0001	71.6	1.2	0.05034	86.1	46.2	8.905
0.00100000	8.915	18.9	4.680E-05	2.0%	0.355	0.0216	0.333	14.0480%	0.0001	71.2	1.2	0.050065	84.9	46.4	8.915
0.00100000	8.925	18.9	4.686E-05	2.0%	0.353	0.0214	0.332	14.1237%	0.0001	70.8	1.2	0.049788	83.7	46.5	8.925
0.00100000	8.935	18.9	4.691E-05	2.0%	0.352	0.0212	0.330	14.2003%	0.0001	70.4	1.2	0.049509	82.5	46.7	8.935
0.00100000	8.945	18.9	4.696E-05	2.0%	0.350	0.021	0.329	14.2779%	0.0001	70.0	1.2	0.04923	81.3	46.9	8.945
0.00100000	8.955	18.9	4.701E-05	2.0%	0.348	0.0208	0.327	14.3565%	0.0001	69.7	1.2	0.048948	80.2	47.1	8.955
0.00100000	8.965	18.9	4.707E-05	2.0%	0.347	0.0206	0.326	14.4362%	0.0001	69.3	1.2	0.048665	79.0	47.2	8.965
0.00100000	8.975	18.9	4.712E-05	2.0%	0.345	0.0204	0.325	14.5169%	0.0001	68.9	1.1	0.048381	77.8	47.4	8.975
0.00100000	8.985	18.9	4.717E-05	2.0%	0.343	0.0202	0.323	14.5988%	0.0001	68.5	1.1	0.048095	76.7	47.6	8.985
0.00100000	8.995	18.9	4.722E-05	2.0%	0.342	0.02	0.322	14.6817%	0.0001	68.1	1.1	0.047808	75.6	47.8	8.995
0.00100000	9.005	18.9	4.728E-05	2.0%	0.340	0.0198	0.320	14.7658%	0.0001	67.7	1.1	0.047519	74.4	48.0	9.005
0.00100000	9.015	18.9	4.733E-05	2.0%	0.338	0.0196	0.319	14.8511%	0.0001	67.3	1.1	0.047229	73.3	48.2	9.015
0.00100000	9.025	18.9	4.738E-05	2.0%	0.337	0.0194	0.317	14.9376%	0.0001	66.9	1.1	0.046937	72.2	48.4	9.025
0.00100000	9.035	18.9	4.743E-05	2.0%	0.335	0.0192	0.316	15.0253%	0.0002	66.6	1.1	0.046643	71.0	48.6	9.035
0.00100000	9.045	18.9	4.749E-05	2.0%	0.333	0.019	0.314	15.1143%	0.0002	66.2	1.1	0.046348	69.9	48.8	9.045
0.00100000	9.055	18.9	4.754E-05	2.0%	0.331	0.0188	0.313	15.2046%	0.0002	65.8	1.1	0.046051	68.8	49.0	9.055
0.00100000	9.065	18.9	4.759E-05	2.0%	0.330	0.0186	0.311	15.2962%	0.0002	65.4	1.1	0.045753	67.7	49.2	9.065
0.00100000	9.075	18.9	4.764E-05	2.0%	0.328	0.0184	0.310	15.3892%	0.0002	65.0	1.1	0.045453	66.7	49.4	9.075
0.00100000	9.085	18.9	4.770E-05	2.0%	0.326	0.0182	0.308	15.4836%	0.0002	64.6	1.1	0.045151	65.6	49.6	9.085
0.00100000	9.095	18.9	4.775E-05	2.0%	0.324	0.018	0.306	15.5795%	0.0002	64.2	1.1	0.044848	64.5	49.8	9.095
0.00100000	9.105	18.9	4.780E-05	2.0%	0.323	0.0178	0.305	15.6768%	0.0002	63.8	1.1	0.044542	63.4	50.0	9.105
0.00100000	9.115	18.9	4.785E-05	2.0%	0.321	0.0176	0.303	15.7756%	0.0002	63.4	1.1	0.044235	62.4	50.3	9.115
0.00100000	9.125	18.9	4.791E-05	2.0%	0.319	0.0174	0.302	15.8760%	0.0002	63.0	1.0	0.043927	61.3	50.5	9.125
0.00100000	9.135	18.9	4.796E-05	2.0%	0.317	0.0172	0.300	15.9780%	0.0002	62.6	1.0	0.043616	60.3	50.7	9.135
0.00100000	9.145	18.9	4.801E-05	2.0%	0.316	0.017	0.299	16.0817%	0.0002	62.2	1.0	0.043304	59.2	50.9	9.145
0.00100000	9.155	18.9	4.806E-05	2.0%	0.314	0.0168	0.297	16.1870%	0.0002	61.8	1.0	0.04299	58.2	51.2	9.155
0.00100000	9.165	18.9	4.812E-05	2.0%	0.312	0.0166	0.295	16.2941%	0.0002	61.4	1.0	0.042673	57.1	51.4	9.165
0.00100000	9.175	18.9	4.817E-05	2.0%	0.310	0.0164	0.294	16.4030%	0.0002	61.0	1.0	0.042356	56.1	51.7	9.175
0.00100000	9.185	18.9	4.822E-05	2.0%	0.308	0.0162	0.292	16.5137%	0.0002	60.6	1.0	0.042036	55.1	51.9	9.185
0.00100000	9.195	18.9	4.827E-05	2.0%	0.306	0.016	0.290	16.6264%	0.0002	60.1	1.0	0.041714	54.1	52.1	9.195
0.00100000	9.205	18.9	4.833E-05	2.0%	0.304	0.0158	0.289	16.7410%	0.0002	59.7	1.0	0.04139	53.1	52.4	9.205
0.00100000	9.215	18.9	4.838E-05	2.0%	0.303	0.0156	0.287	16.8576%	0.0002	59.3	1.0	0.041064	52.1	52.6	9.215
0.00100000	9.225	18.9	4.843E-05	2.0%	0.301	0.0154	0.285	16.9764%	0.0002	58.9	1.0	0.040736	51.1	52.9	9.225
0.00100000	9.235	18.9	4.848E-05	2.0%	0.299	0.0152	0.284	17.0972%	0.0002	58.5	1.0	0.040406	50.1	53.2	9.235
0.00100000	9.245	18.9	4.854E-05	2.0%	0.297	0.015	0.282	17.2203%	0.0002	58.1	1.0	0.040074	49.2	53.4	9.245
0.00100000	9.255	18.9	4.859E-05	2.0%	0.295	0.0148	0.280	17.3457%	0.0002	57.7	1.0	0.03974	48.2	53.7	9.255
0.00100000	9.265	18.9	4.864E-05	2.0%	0.293	0.0146	0.278	17.4734%	0.0002	57.2	1.0	0.039404	47.2	54.0	9.265
0.00100000	9.275	18.9	4.869E-05	2.0%	0.291	0.0144	0.277	17.6036%	0.0002	56.8	0.9	0.039065	46.3	54.3	9.275
0.00100000	9.285	18.9	4.875E-05	2.0%	0.289	0.0142	0.275	17.7363%	0.0002	56.4	0.9	0.038724	45.3	54.5	9.285
0.00100000	9.295	18.9	4.880E-05	2.0%	0.287	0.014	0.273	17.8716%	0.0002	56.0	0.9	0.038381	44.4	54.8	9.295
0.00100000	9.305	18.9	4.885E-05	2.0%	0.285	0.0138	0.271	18.0096%	0.0002	55.5	0.9	0.038036	43.5	55.1	9.305
0.00100000	9.315	18.9	4.890E-05	2.0%	0.283	0.0136	0.269	18.1504%	0.0002	55.1	0.9	0.037688	42.5	55.4	9.315
0.00100000	9.325	18.9	4.896E-05	2.0%	0.281	0.0134	0.268	18.2941%	0.0002	54.7	0.9	0.037338	41.6	55.7	9.325
0.00100000	9.335	18.9	4.901E-05	2.0%	0.279	0.0132	0.266	18.4408%	0.0002	54.2	0.9	0.036985	40.7	56.0	9.335
0.00100000	9.345	18.9	4.906E-05	2.0%	0.277	0.013	0.264	18.5906%	0.0002	53.8	0.9	0.03663	39.8	56.4	9.345
0.00100000	9.355	18.9	4.911E-05	2.0%	0.275	0.0128	0.262	18.7436%	0.0002	53.4	0.9	0.036273	38.9	56.7	9.355
0.00100000	9.365	18.9	4.917E-05	2.0%	0.273	0.0126	0.260	18.9000%	0.0002	52.9	0.9	0.035912	38.0	57.0	9.365
0.00100000	9.375	18.9	4.922E-05	2.0%	0.271	0.0124	0.258	19.0598%	0.0002	52.5	0.9	0.03555	37.1	57.3	9.375
0.00100000	9.385	18.9	4.927E-05	2.0%	0.269	0.0122	0.256	19.2233%	0.0002	52.0	0.9	0.035184	36.3	57.7	9.385
0.00100000	9.395	18.9	4.932E-05	2.0%	0.266	0.012	0.254	19.3904%	0.0002	51.6	0.9	0.034816	35.4	58.0	9.395
0.00100000	9.405	18.9	4.938E-05	2.0%	0.264	0.0118	0.252	19.5615%	0.0002	51.1	0.9	0.034445	34.5	58.4	9.405
0.00100000	9.415	18.9	4.943E-05	2.0%	0.262	0.0116	0.250	19.7366%	0.0002	50.7	0.8	0.034071	33.7	58.7	9.415
0.00100000	9.425	18.9	4.948E-05	2.0%	0.260	0.0114	0.248	19.9160%	0.0002	50.2	0.8	0.033694	32.8	59.1	9.425
0.00100000	9.435	18.9	4.953E-05	2.0%	0.258	0.0112	0.246	20.0997%	0.0002	49.8	0.8	0.033314	32.0	59.5	9.435
0.00100000	9.445	18.9	4.959E-05	2.0%	0.255	0.011	0.244	20.2880%	0.0002	49.3	0.8	0.032932	31.2	59.9	9.445
0.00100000	9.455	18.9	4.964E-05	2.0%	0.253	0.0108	0.242	20.4811%	0.0002	48.8	0.8	0.032546	30.3	60.3	9.455
0.00100000	9.465	18.9	4.969E-05	2.0%	0.251	0.0106	0.240	20.6793%	0.0002	48.4	0.8	0.032157	29.5	60.7	9.465
0.00100000	9.475	18.9	4.974E-05	2.0%	0.249	0.0104	0.238	20.8826%	0.0002	47.9	0.8	0.031765	28.7	61.1	9.475
0.00100000	9.485	18.9	4.980E-05	2.0%	0.246	0.0102	0.236	21.0914%	0.0002	47.4	0.8	0.031369	27.9	61.5	9.485
0.00100000	9.495	18.9	4.985E-05	2.0%	0.244	0.01	0.234	21.3059%	0.0002	46.9	0.8	0.03097	27.1	61.9	9.495
0.00100000	9.505	18.9	4.990E-05	2.0%	0.242	0.0098	0.232	21.5264%	0.0002	46.5	0.8	0.030568	26.3	62.4	9.505
0.00100000	9.515	18.9	4.995E-05	2.0%	0.239	0.0096	0.230	21.7531%	0.0002	46.0	0.8	0.030162	25.6	62.8	9.515
0.00100000	9.525	18.9	5.001E-05	2.0%	0.237	0.0094	0.227	21.9865%	0.0002	45.5	0.8	0.029752	24.8	63.3	9.525
0.00100000	9.535	18.9	5.006E-05	2.0%	0.234	0.0092	0.225	22.2268%	0.0002	45.0	0.7	0.029338	24.1	63.8	9.535
0.00100000	9.545	18.9	5.011E-05	2.0%	0.232	0.009	0.223	22.4744%	0.0002	44.5	0.7	0.028921	23.3	64.3	9.545

0.00100000	9.555	18.9	5.016E-05	2.0%	0.229	0.0088	0.221	22.7296%	0.0002	44.0	0.7	0.0285	22.6	64.8	9.555
0.00100000	9.565	18.9	5.022E-05	2.0%	0.227	0.0086	0.218	22.9930%	0.0002	43.5	0.7	0.028074	21.8	65.3	9.565
0.00100000	9.575	18.9	5.027E-05	2.0%	0.224	0.0084	0.216	23.2648%	0.0002	43.0	0.7	0.027645	21.1	65.8	9.575
0.00100000	9.585	18.9	5.032E-05	2.0%	0.222	0.0082	0.214	23.5457%	0.0002	42.5	0.7	0.027211	20.4	66.4	9.585
0.00100000	9.595	18.9	5.037E-05	2.0%	0.219	0.008	0.211	23.8361%	0.0002	42.0	0.7	0.026773	19.7	66.9	9.595
0.00100000	9.605	18.9	5.043E-05	2.0%	0.217	0.0078	0.209	24.1366%	0.0002	41.4	0.7	0.02633	19.0	67.5	9.605
0.00100000	9.615	18.9	5.048E-05	2.0%	0.214	0.0076	0.206	24.4479%	0.0002	40.9	0.7	0.025882	18.3	68.1	9.615
0.00100000	9.625	18.9	5.053E-05	2.0%	0.211	0.0074	0.204	24.7705%	0.0002	40.4	0.7	0.025429	17.6	68.7	9.625
0.00100000	9.635	18.9	5.058E-05	2.0%	0.209	0.0072	0.201	25.1051%	0.0003	39.8	0.7	0.024972	16.9	69.4	9.635
0.00100000	9.645	18.9	5.064E-05	2.0%	0.206	0.007	0.199	25.4527%	0.0003	39.3	0.7	0.024509	16.3	70.0	9.645
0.00100000	9.655	18.9	5.069E-05	2.0%	0.203	0.0068	0.196	25.8141%	0.0003	38.7	0.6	0.02404	15.6	70.7	9.655
0.00100000	9.665	18.9	5.074E-05	2.0%	0.200	0.0066	0.194	26.1901%	0.0003	38.2	0.6	0.023566	15.0	71.4	9.665
0.00100000	9.675	18.9	5.079E-05	2.0%	0.197	0.0064	0.191	26.5819%	0.0003	37.6	0.6	0.023087	14.3	72.1	9.675
0.00100000	9.685	18.9	5.085E-05	2.0%	0.195	0.0062	0.188	26.9907%	0.0003	37.0	0.6	0.022601	13.7	72.9	9.685
0.00100000	9.695	18.9	5.090E-05	2.0%	0.192	0.006	0.186	27.4176%	0.0003	36.5	0.6	0.022108	13.1	73.7	9.695
0.00100000	9.705	18.9	5.095E-05	2.0%	0.189	0.0058	0.183	27.8641%	0.0003	35.9	0.6	0.021609	12.5	74.5	9.705
0.00100000	9.715	18.9	5.100E-05	2.0%	0.186	0.0056	0.180	28.3318%	0.0003	35.3	0.6	0.021103	11.9	75.4	9.715
0.00100000	9.725	18.9	5.106E-05	2.0%	0.183	0.0054	0.177	28.8224%	0.0003	34.7	0.6	0.02059	11.3	76.3	9.725
0.00100000	9.735	18.9	5.111E-05	2.0%	0.179	0.0052	0.174	29.3379%	0.0003	34.1	0.6	0.02007	10.7	77.2	9.735
0.00100000	9.745	18.9	5.116E-05	2.0%	0.176	0.005	0.171	29.8806%	0.0003	33.5	0.6	0.019541	10.1	78.2	9.745
0.00100000	9.755	18.9	5.121E-05	2.0%	0.173	0.0048	0.168	30.4529%	0.0003	32.8	0.5	0.019004	9.6	79.2	9.755
0.00100000	9.765	18.9	5.127E-05	2.0%	0.170	0.0046	0.165	31.0576%	0.0003	32.2	0.5	0.018458	9.0	80.3	9.765
0.00100000	9.775	18.9	5.132E-05	2.0%	0.166	0.0044	0.162	31.6981%	0.0003	31.5	0.5	0.017903	8.5	81.4	9.775
0.00100000	9.785	18.9	5.137E-05	2.0%	0.163	0.0042	0.159	32.3781%	0.0003	30.9	0.5	0.017338	8.0	82.6	9.785
0.00100000	9.795	18.9	5.142E-05	2.0%	0.159	0.004	0.155	33.1018%	0.0003	30.2	0.5	0.016763	7.5	83.8	9.795
0.00100000	9.805	18.9	5.148E-05	2.0%	0.156	0.0038	0.152	33.8742%	0.0003	29.5	0.5	0.016177	7.0	85.1	9.805
0.00100000	9.815	18.9	5.153E-05	2.0%	0.152	0.0036	0.148	34.7012%	0.0003	28.8	0.5	0.015578	6.5	86.5	9.815
0.00100000	9.825	18.9	5.158E-05	2.0%	0.148	0.0034	0.145	35.5895%	0.0004	28.1	0.5	0.014967	6.0	88.0	9.825
0.00100000	9.835	18.9	5.163E-05	2.0%	0.144	0.0032	0.141	36.5473%	0.0004	27.4	0.5	0.014343	5.5	89.6	9.835
0.00100000	9.845	18.9	5.169E-05	2.0%	0.141	0.003	0.138	37.5844%	0.0004	26.6	0.4	0.013703	5.1	91.4	9.845
0.00100000	9.855	18.9	5.174E-05	2.0%	0.136	0.0028	0.134	38.7123%	0.0004	25.8	0.4	0.013047	4.6	93.2	9.855
0.00100000	9.865	18.9	5.179E-05	2.0%	0.132	0.0026	0.130	39.9455%	0.0004	25.0	0.4	0.012374	4.2	95.2	9.865
0.00100000	9.875	18.9	5.184E-05	2.0%	0.128	0.0024	0.126	41.3016%	0.0004	24.2	0.4	0.011682	3.8	97.4	9.875
0.00100000	9.885	18.9	5.190E-05	2.0%	0.123	0.0022	0.121	42.8030%	0.0004	23.4	0.4	0.010968	3.4	99.7	9.885
0.00100000	9.895	18.9	5.195E-05	2.0%	0.119	0.002	0.117	44.4780%	0.0004	22.5	0.4	0.010231	3.0	102.3	9.895
0.00100000	9.905	18.9	5.200E-05	2.0%	0.114	0.0018	0.112	46.3633%	0.0005	21.6	0.4	0.009467	2.6	105.2	9.905
0.00100000	9.915	18.9	5.205E-05	2.0%	0.109	0.0016	0.107	48.5081%	0.0005	20.6	0.3	0.008673	2.2	108.4	9.915
0.00100000	9.925	18.9	5.211E-05	2.0%	0.104	0.0014	0.102	50.9788%	0.0005	19.6	0.3	0.007843	1.9	112.0	9.925
0.00100000	9.935	18.9	5.216E-05	2.0%	0.098	0.0012	0.097	53.8693%	0.0005	18.6	0.3	0.006973	1.6	116.2	9.935
0.00100000	9.945	18.9	5.221E-05	2.0%	0.092	0.001	0.091	57.3164%	0.0006	17.4	0.3	0.006053	1.3	121.1	9.945
0.00100000	9.955	18.9	5.226E-05	2.0%	0.086	0.0008	0.085	61.5302%	0.0006	16.3	0.3	0.005073	1.0	126.8	9.955
0.00100000	9.965	18.9	5.232E-05	2.0%	0.079	0.0006	0.078	66.8539%	0.0007	15.0	0.2	0.004016	0.7	133.9	9.965
0.00100000	9.975	18.9	5.237E-05	2.0%	0.071	0.0004	0.071	73.8997%	0.0007	13.5	0.2	0.002856	0.5	142.8	9.975
0.00100000	9.985	18.9	5.242E-05	2.0%	0.063	0.0002	0.062	83.9092%	0.0008	11.9	0.2	0.001549	0.2	154.9	9.985
0.00100000	9.995	18.9	5.247E-05	2.0%	0.010	0	0.010	524.7375%	0.0052	1.9	0.0	0	0.0	412.3	9.995

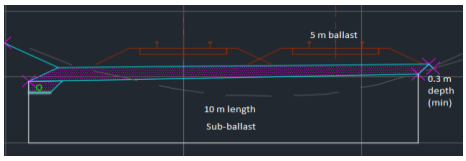
* Relative to bottom of ballast at outside edge of ballast

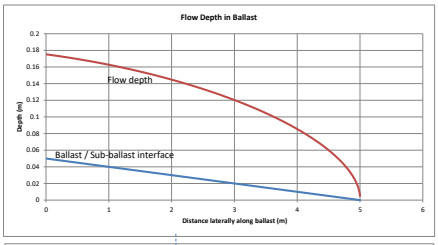
Tc Calculations for Ballast Material using A and B IDF Parameters

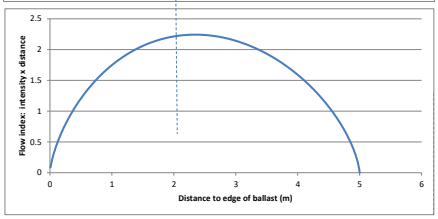
		1000	0.005							100yr	A	50.3				
Width of flow path (m) =		5									B	-0.69				
Total time of concentraion (min) =																
Critical time of concentration (min) =		4.5	0.1 hrs													
Percent of ballast section contributing to flow for critical Tc =				53%												

Calculation note: iterate rainfall intensity (red text) until equal to value in row above

Hydraulic Conductivity (m/s)	Distance (m)	Rainfall Intensity (mm/hr)	Flow (m2/s)	Subgrade slope	HGL * (m)	Ballast Invert *	Depth (m)	Hydraulic Slope	Velocity (m/s)	Travel time (min)	Travel time (hr)	100-yr peak flow	Total travel time (hr)	100-yr rainfall intensity (mm/hr)	distance (m)
Clean Ballast		844.8													
0.37600000	0.005	844.8	1.173E-06	1.0%	0.175	0.04995	0.125	0.0025%	0.0000			0.08971	55.0	18.0	0.005
0.37600000	0.01	844.8	2.347E-06	1.0%	0.175	0.0499	0.125	0.0050%	0.0000	266.9	4.4	0.08962	55.0	18.0	0.01
0.37600000	0.015	844.8	3.520E-06	1.0%	0.175	0.04985	0.125	0.0075%	0.0000	177.9	3.0	0.118433	50.5	23.8	0.015
0.37600000	0.02	844.8	4.693E-06	1.0%	0.175	0.0498	0.125	0.0100%	0.0000	133.5	2.2	0.144294	47.6	29.0	0.02
0.37600000	0.025	844.8	5.867E-06	1.0%	0.175	0.04975	0.125	0.0125%	0.0000	106.8	1.8	0.168143	45.3	33.8	0.025
0.37600000	0.03	844.8	7.040E-06	1.0%	0.175	0.0497	0.125	0.0149%	0.0001	89.0	1.5	0.190493	43.6	38.3	0.03
0.37600000	0.035	844.8	8.213E-06	1.0%	0.175	0.04965	0.125	0.0174%	0.0001	76.3	1.3	0.21166	42.1	42.6	0.035
0.37600000	0.04	844.8	9.387E-06	1.0%	0.175	0.0496	0.125	0.0199%	0.0001	66.7	1.1	0.231856	40.8	46.7	0.04
0.37600000	0.045	844.8	1.056E-05	1.0%	0.175	0.04955	0.125	0.0224%	0.0001	59.3	1.0	0.251233	39.7	50.7	0.045
0.37600000	0.05	844.8	1.173E-05	1.0%	0.175	0.0495	0.125	0.0249%	0.0001	53.4	0.9	0.269907	38.7	54.5	0.05
0.37600000	0.055	844.8	1.291E-05	1.0%	0.175	0.04945	0.125	0.0274%	0.0001	48.5	0.8	0.287965	37.8	58.2	0.055
0.37600000	0.06	844.8	1.408E-05	1.0%	0.175	0.0494	0.125	0.0299%	0.0001	44.5	0.7	0.305477	37.0	61.8	0.06
0.37600000	0.065	844.8	1.525E-05	1.0%	0.175	0.04935	0.125	0.0324%	0.0001	41.1	0.7	0.322499	36.3	65.3	0.065
0.37600000	0.07	844.8	1.643E-05	1.0%	0.175	0.0493	0.125	0.0349%	0.0001	38.1	0.6	0.339078	35.6	68.8	0.07
0.37600000	0.075	844.8	1.760E-05	1.0%	0.175	0.04925	0.125	0.0374%	0.0001	35.6	0.6	0.355253	34.9	72.1	0.075
0.37600000	0.08	844.8	1.877E-05	1.0%	0.174	0.0492	0.125	0.0399%	0.0001	33.4	0.6	0.371058	34.4	75.4	0.08
0.37600000	0.085	844.8	1.995E-05	1.0%	0.174	0.04915	0.125	0.0424%	0.0002	31.4	0.5	0.38652	33.8	78.6	0.085
0.37600000	0.09	844.8	2.112E-05	1.0%	0.174	0.0491	0.125	0.0448%	0.0002	29.7	0.5	0.401665	33.3	81.8	0.09
0.37600000	0.095	844.8	2.229E-05	1.0%	0.174	0.04905	0.125	0.0473%	0.0002	28.1	0.5	0.416513	32.8	84.9	0.095
0.37600000	0.1	844.8	2.347E-05	1.0%	0.174	0.049	0.125	0.0498%	0.0002	26.7	0.4	0.431085	32.3	88.0	0.1
0.37600000	0.105	844.8	2.464E-05	1.0%	0.174	0.04895	0.125	0.0523%	0.0002	25.4	0.4	0.445396	31.9	91.0	0.105
0.37600000	0.11	844.8	2.581E-05	1.0%	0.174	0.0489	0.125	0.0548%	0.0002	24.3	0.4	0.459461	31.4	94.0	0.11
0.37600000	0.115	844.8	2.699E-05	1.0%	0.174	0.04885	0.125	0.0573%	0.0002	23.2	0.4	0.473295	31.0	96.9	0.115
0.37600000	0.12	844.8	2.816E-05	1.0%	0.174	0.0488	0.125	0.0598%	0.0002	22.2	0.4	0.486909	30.7	99.8	0.12
0.37600000	0.125	844.8	2.933E-05	1.0%	0.174	0.04875	0.125	0.0623%	0.0002	21.3	0.4	0.500315	30.3	102.6	0.125
0.37600000	0.13	844.8	3.051E-05	1.0%	0.174	0.0487	0.125	0.0648%	0.0002	20.5	0.3	0.513521	29.9	105.4	0.13
0.37600000	0.135	844.8	3.168E-05	1.0%	0.174	0.04865	0.125	0.0673%	0.0003	19.8	0.3	0.526538	29.6	108.2	0.135
0.37600000	0.14	844.8	3.285E-05	1.0%	0.174	0.0486	0.125	0.0698%	0.0003	19.1	0.3	0.539373	29.3	111.0	0.14
0.37600000	0.145	844.8	3.403E-05	1.0%	0.174	0.04855	0.125	0.0723%	0.0003	18.4	0.3	0.552035	28.9	113.7	0.145
0.37600000	0.15	844.8	3.520E-05	1.0%	0.174	0.0485	0.125	0.0748%	0.0003	17.8	0.3	0.56453	28.6	116.4	0.15
0.37600000	0.155	844.8	3.637E-05	1.0%	0.174	0.04845	0.125	0.0773%	0.0003	17.2	0.3	0.576865	28.3	119.1	0.155
0.37600000	0.16	844.8	3.755E-05	1.0%	0.174	0.0484	0.125	0.0798%	0.0003	16.7	0.3	0.589046	28.0	121.7	0.16
0.37600000	0.165	844.8	3.872E-05	1.0%	0.174	0.04835	0.125	0.0823%	0.0003	16.2	0.3	0.601079	27.8	124.3	0.165
0.37600000	0.17	844.8	3.989E-05	1.0%	0.173	0.0483	0.125	0.0847%	0.0003	15.7	0.3	0.612968	27.5	126.9	0.17
0.37600000	0.175	844.8	4.107E-05	1.0%	0.173	0.04825	0.125	0.0872%	0.0003	15.2	0.3	0.62472	27.2	129.5	0.175
0.37600000	0.18	844.8	4.224E-05	1.0%	0.173	0.0482	0.125	0.0897%	0.0003	14.8	0.2	0.636337	27.0	132.0	0.18
0.37600000	0.185	844.8	4.341E-05	1.0%	0.173	0.04815	0.125	0.0922%	0.0003	14.4	0.2	0.647826	26.7	134.5	0.185
0.37600000	0.19	844.8	4.459E-05	1.0%	0.173	0.0481	0.125	0.0947%	0.0004	14.0	0.2	0.659189	26.5	137.0	0.19
0.37600000	0.195	844.8	4.576E-05	1.0%	0.173	0.04805	0.125	0.0972%	0.0004	13.7	0.2	0.67043	26.3	139.5	0.195
0.37600000	0.2	844.8	4.693E-05	1.0%	0.173	0.048	0.125	0.0997%	0.0004	13.3	0.2	0.681554	26.0	142.0	0.2
0.37600000	0.205	844.8	4.811E-05	1.0%	0.173	0.04795	0.125	0.1022%	0.0004	13.0	0.2	0.692563	25.8	144.4	0.205
0.37600000	0.21	844.8	4.928E-05	1.0%	0.173	0.0479	0.125	0.1047%	0.0004	12.7	0.2	0.703461	25.6	146.9	0.21
0.37600000	0.215	844.8	5.045E-05	1.0%	0.173	0.04785	0.125	0.1072%	0.0004	12.4	0.2	0.71425	25.4	149.3	0.215
0.37600000	0.22	844.8	5.163E-05	1.0%	0.173	0.0478	0.125	0.1097%	0.0004	12.1	0.2	0.724934	25.2	151.7	0.22
0.37600000	0.225	844.8	5.280E-05	1.0%	0.173	0.04775	0.125	0.1122%	0.0004	11.9	0.2	0.735515	25.0	154.0	0.225
0.37600000	0.23	844.8	5.397E-05	1.0%	0.173	0.0477	0.125	0.1147%	0.0004	11.6	0.2	0.745997	24.8	156.4	0.23
0.37600000	0.235	844.8	5.515E-05	1.0%	0.173	0.04765	0.125	0.1172%	0.0004	11.3	0.2	0.75638	24.6	158.7	0.235
0.37600000	0.24	844.8	5.632E-05	1.0%	0.173	0.0476	0.125	0.1197%	0.0005	11.1	0.2	0.766668	24.4	161.1	0.24
0.37600000	0.245	844.8	5.749E-05	1.0%	0.173	0.04755	0.125	0.1222%	0.0005	10.9	0.2	0.776863	24.2	163.4	0.245
0.37600000	0.25	844.8	5.867E-05	1.0%	0.173	0.0475	0.125	0.1247%	0.0005	10.7	0.2	0.786967	24.0	165.7	0.25
0.37600000	0.255	844.8	5.984E-05	1.0%	0.173	0.04745	0.125	0.1272%	0.0005	10.5	0.2	0.796982	23.9	168.0	0.255
0.37600000	0.26	844.8	6.101E-05	1.0%	0.172	0.0474	0.125	0.1297%	0.0005	10.3	0.2	0.80691	23.7	170.2	0.26
0.37600000	0.265	844.8	6.219E-05	1.0%	0.172	0.04735	0.125	0.1322%	0.0005	10.1	0.2	0.816752	23.5	172.5	0.265
0.37600000	0.27	844.8	6.336E-05	1.0%	0.172	0.0473	0.125	0.1347%	0.0005	9.9	0.2	0.826512	23.3	174.7	0.27
0.37600000	0.275	844.8	6.453E-05	1.0%	0.172	0.04725	0.125	0.1372%	0.0005	9.7	0.2	0.83619	23.2	177.0	0.275
0.37600000	0.28	844.8	6.571E-05	1.0%	0.172	0.0472	0.125	0.1397%	0.0005	9.5	0.2	0.845787	23.0	179.2	0.28
0.37600000	0.285	844.8	6.688E-05	1.0%	0.172	0.04715	0.125	0.1422%	0.0005	9.3	0.2	0.855306	22.9	181.4	0.285
0.37600000	0.29	844.8	6.805E-05	1.0%	0.172	0.0471	0.125	0.1447%	0.0005	9.2	0.2	0.864749	22.7	183.6	0.29
0.37600000	0.295	844.8	6.923E-05	1.0%	0.172	0.04705	0.125	0.1472%	0.0006	9.0	0.2	0.874116	22.5	185.8	0.295
0.37600000	0.3	844.8	7.040E-05	1.0%	0.172	0.047	0.125	0.1497%	0.0006	8.9	0.1	0.883408	22.4	188.0	0.3
0.37600000	0.305	844.8	7.157E-05	1.0%	0.172	0.04695	0.125	0.1522%	0.0006	8.7	0.1	0.892629	22.2	190.1	0.305
0.37600000	0.31	844.8	7.275E-05	1.0%	0.172	0.0469	0.125	0.1547%	0.0006	8.6	0.1	0.901777	22.1	192.3	0.31
0.37600000	0.315	844.8	7.392E-05	1.0%	0.172	0.04685	0.125	0.1573%	0.0006	8.5	0.1	0.910856	22.0	194.4	0.315
0.37600000	0.32	844.8	7.509E-05	1.0%	0.172	0.0468	0.125	0.1598%	0.0006	8.3	0.1	0.919865	21.8	196.6	0.32
0.37600000	0.325	844.8	7.627E-05	1.0%	0.172	0.04675	0.125	0.1623%	0.0006	8.2	0.1	0.928807	21.7	198.7	0.325
0.37600000	0.33	844.8	7.744E-05	1.0%	0.172	0.0467	0.125	0.1648%	0.0006	8.1	0.1	0.937682	21.5	200.8	0.33
0.37600000	0.335	844.8	7.861E-05	1.0%	0.172	0.04665	0.125	0.1673%	0.0006	7.9	0.1	0.946491	21.4	202.9	0.335
0.37600000	0.34	844.8	7.979E-05	1.0%	0.172	0.0466	0.125	0.1698%	0.0006	7.8	0.1	0.955236	21.3	205.0	0.34
0.37600000	0.345	844.8	8.096E-05	1.0%	0.172	0.04655	0.125	0.1723%	0.0006	7.7	0.1	0.963918	21.1	207.1	0.345
0.37600000	0.35	844.8	8.213E-05	1.0%	0.171	0.0465	0.125	0.1748%	0.0007	7.6	0.1	0.972537	21.0	209.1	0.35
0.37600000	0.355	844.8	8.331E-05	1.0%	0.171	0.04645	0.125	0.1773%	0.0007	7.5	0.1	0.981094	20.9	211.2	0.355
0.37600000	0.36	844.8	8.448E-05	1.0%	0.171	0.0464	0.125	0.1798%	0.0007	7.4	0.1	0.989591	20.8	213.3	0.36
0.37600000	0.365	844.8	8.565E-05	1.0%	0.171	0.04635	0.125	0.1823%	0.0007	7.3	0.1	0.998028	20.6	215.3	0.365
0.37600000	0.37	844.8	8.683E-05	1.0%	0.171	0.0463	0.125	0.1849%	0.0007	7.2	0.1	1.006406	20.5	217.4	0.37
0.37600000	0.375	844.8	8.800E-05	1.0%	0.171	0.04625	0.125	0.1874%	0.0007	7.1	0.1	1.014726	20.4	219.4	0.375
0.37600000	0.38	844.8	8.917E-05	1.0%	0.171	0.0462	0.125	0.1899%	0.0007	7.0	0.1	1.022989	20.3	221.4	0.38
0.37600000	0.385	844.8	9.035E-05	1.0%	0.171	0.04615	0.125	0.1924%	0.0007	6.9	0.1	1.031195	20.2	223.4	0.385
0.37600000	0.39	844.8	9.152E-05	1.0%	0.171	0.0461	0.125	0.1949%	0.0007	6.8	0.1	1.039346	20.1	225.5	0.39
0.37600000	0.395	844.8	9.269E-05	1.0%	0.171	0.04605	0.125	0.1974%	0.0007	6.7	0.1	1.047442	19.9	227.5	0.395
0.37600000	0.4	844.8	9.387E-05	1.0%	0.171	0.046	0.125	0.1999%	0.0008	6.7	0.1	1.055484	19.8	229.5	0.4
0.37600000	0.405	844.8	9.504E-05	1.0%	0.171	0.04595	0.125	0.2024%	0.0008	6.6	0.1	1.063472	19.7	231.4	0.405
0.37600000	0.41	844.8	9.621E-05	1.0%	0.171	0.0459	0.125	0.2050%	0.0008	6.5	0.1	1.071408	19.6	233.4	0.41
0.37600000	0.415	844.8	9.739E-05	1.0%	0.171	0.04585	0.125	0.2075%	0.0008	6.4	0.1	1.079291	19.5	235.4	0.415
0.37600000	0.42	844.8	9.856E-05	1.0%	0.171	0.0458	0.125	0.2100%	0.0008	6.3	0.1	1.087123	19.4	237.4	0.42
0.37600000	0.425	844.8	9.973E-05	1.0%	0.171	0.04575	0.125	0.2125%	0.0008	6.3	0.1	1.094905	19.3	239.3	0.425
0.37600000	0.43	844.8	1.009E-04	1.0%	0.171	0.0457	0.125	0.2150%	0.0008	6.2	0.1	1.102636	19.2	241.3	0.43
0.37600000	0.435	844.8	1.021E-04	1.0%	0.170	0.04565	0.125	0.2176%	0.0008	6.1	0.1	1.110317	19.1	243.2	0.435
0.37600000	0.44	844.8	1.033E-04	1.0%	0.170	0.0456	0.125	0.2201%	0.0008	6.0	0.1	1.11795	19.0	245.2	0.44
0.37600000	0.445	844.8	1.044E-04	1.0%	0.170	0.04555	0.125	0.2226%	0.0008	6.0	0.1	1.125534	18.9	247.1	0.445
0.37600000	0.45	844.8	1.056E-04	1.0%	0.170	0.0455	0.125	0.2251%	0.0008	5.9	0.1	1.133071	18.8	249.0	0.45
0.37600000	0.455	844.8	1.068E-04	1.0%	0.170	0.04545	0.125	0.2276%	0.0009	5.8	0.1	1.14056	18.7	250.9	0.455
0.37600000	0.46	844.8	1.079E-04	1.0%	0.170	0.0454	0.125	0.2302%	0.0009	5.8	0.1	1.148002	18.6	252.9	0.46
0.37600000	0.465	844.8	1.091E-04	1.0%	0.170	0.04535	0.125	0.2327%	0.0009	5.7	0.1	1.155398	18.5	254.8	0.465
0.37600000	0.47	844.8	1.103E-04	1.0%	0.170	0.0453	0.125	0.2352%	0.0009	5.7	0.1	1.162749	18.4	256.7	0.47
0.37600000	0.475	844.8	1.115E-04	1.0%	0.170	0.04525	0.125	0.2377%	0.0009	5.6	0.1	1.170054	18.3	258.6	0.475
0.37600000	0.48	844.8	1.126E-04	1.0%	0.170	0.0452	0.125	0.2403%	0.0009	5.5	0.1	1.177314	18.2	260.5	0.48
0.37600000	0.485	844.8	1.138E-04	1.0%	0.170	0.04515	0.125	0.2428%	0.0009	5.5	0.1	1.184531	18.1	262.4	0.485
0.37600000	0.49	844.8	1.150E-04	1.0%	0.170	0.0451	0.125	0.2453%	0.0009	5.4	0.1	1.191703	18.0	264.2	0.49
0.37600000	0.495	844.8	1.162E-04	1.0%	0.170	0.04505	0.125	0.2478%	0.0009	5.4	0.1	1.198832	17.9	266.1	0.495
0.37600000	0.5	844.8	1.173E-04	1.0%	0.170	0.045	0.125	0.2504%	0.0009	5.3	0.1	1.205918	17.8	268.0	0.5
0.37600000	0.505	844.8	1.185E-04	1.0%	0.170	0.04495	0.125	0.2529%	0.0010	5.3	0.1	1.212962	17.7	269.8	0.505
0.37600000	0.51	844.8	1.197E-04	1.0%	0.170	0.0449	0.125	0.2554%	0.0010	5.2	0.1	1.219964	17.7	271.7	0.51
0.37600000	0.515	844.8	1.209E-04	1.0%	0.169	0.04485	0.125	0.2580%	0.0010	5.2	0.1	1.226924	17.6	273.6	0.515
0.37600000	0.52	844.8	1.220E-04	1.0%	0.169	0.0448	0.125	0.2605%	0.0010	5.1	0.1	1.23843	17.5	275.4	0.52
0.37600000	0.525	844.8	1.232E-04	1.0%	0.169	0.04475	0.125	0.2630%	0.0010	5.1	0.1	1.240721	17.4	277.3	0.525
0.37600000	0.53	844.8	1.244E-04	1.0%	0.169	0.0447	0.125	0.2656%	0.0010	5.0	0.1	1.247559	17.3	279.1	0.53
0.37600000	0.535	844.8	1.255E-04	1.0%	0.169	0.04465	0.125	0.2681%	0.0010	5.0	0.1	1.254356	17.2	280.9	0.535
0.37600000	0.54	844.8	1.267E-04	1.0%	0.169	0.0446	0.125	0.2706%	0.0010	4.9	0.1	1.261114	17.2	282.8	0.54
0.37600000	0.545	844.8	1.279E-04	1.0%	0.169	0.04455	0.125	0.2732%	0.0010	4.9	0.1	1.267833	17.1	284.6	0.545
0.37600000	0.55	844.8	1.291E-04	1.0%	0.169	0.0445	0.125	0.2757%	0.0010	4.8	0.1	1.274513	17.0	286.4	0.55
0.37600000	0.555	844.8	1.302E-04	1.0%	0.169	0.04445	0.124	0.2782%	0.0010	4.8	0.1	1.281154	16.9	288.2	0.555
0.37600000	0.56	844.8	1.314E-04	1.0%	0.169	0.0444	0.124	0.2808%	0.0011	4.7	0.1	1.287757	16.8	290.0	0.56
0.37600000	0.565	844.8	1.326E-04	1.0%	0.169	0.04435	0.124	0.2833%	0.0011	4.7	0.1	1.294322	16.8	291.8	0.565
0.37600000	0.57	844.8	1.338E-04	1.0%	0.169	0.0443	0.124	0.2859%	0.0011	4.7	0.1	1.30085	16.7	293.6	0.57
0.37600000	0.575	844.8	1.349E-04	1.0%	0.169	0.04425	0.124	0.2884%	0.0011	4.6	0.1	1.30734	16.6	295.4	0.575
0.37600000	0.58	844.8	1.361E-04	1.0%	0.169	0.0442	0.124	0.2909%	0.0011	4.6	0.1	1.313794	16.5	297.2	0.58
0.37600000	0.585	844.8	1.373E-04	1.0%	0.169	0.04415	0.124	0.2935%	0.0011	4.5	0.1	1.32021	16.4	299.0	0.585
0.37600000	0.59	844.8	1.385E-04	1.0%	0.168	0.0441	0.124	0.2960%	0.0011	4.5	0.1	1.326591	16.4	300.8	0.59
0.37600000	0.595	844.8	1.396E-04	1.0%	0.168	0.04405	0.124	0.2986%	0.0011	4.5	0.1	1.332936	16.3	302.6	0.595
0.37600000	0.6	844.8	1.408E-04	1.0%	0.168	0.044	0.124	0.3011%	0.0011	4.4	0.1	1.339244	16.2	304.4	0.6
0.37600000	0.605	844.8	1.420E-04	1.0%	0.168	0.04395	0.124	0.3037%	0.0011	4.4	0.1	1.345518	16.1	306.1	0.605
0.37600000	0.61	844.8	1.431E-04	1.0%	0.168	0.0439	0.124	0.3062%	0.0012	4.3	0.1	1.351756	16.1	307.9	0.61
0.37600000	0.615	844.8	1.443E-04	1.0%	0.168	0.04385	0.124	0.3088%	0.0012	4.3	0.1	1.35796	16.0	309.7	0.615
0.37600000	0.62	844.8	1.455E-04	1.0%	0.168	0.0438	0.124	0.3113%	0.0012	4.3	0.1	1.364129	15.9	311.4	0.62
0.37600000	0.625	844.8	1.467E-04	1.0%	0.168	0.04375	0.124	0.3139%	0.0012	4.2	0.1	1.370264	15.9	313.2	0.625
0.37600000	0.63	844.8	1.478E-04	1.0%	0.168	0.0437	0.124	0.3164%	0.0012	4.2	0.1	1.376364	15.8	315.0	0.63
0.37600000	0.635	844.8	1.490E-04	1.0%	0.168	0.04365	0.124	0.3190%	0.0012	4.2	0.1	1.382431	15.7	316.7	0.635







0.37600000	0.64	844.8	1.502E-04	1.0%	0.168	0.0436	0.124	0.3215%	0.0012	4.1	0.1	1.388465	15.6	318.5	0.64
0.37600000	0.645	844.8	1.514E-04	1.0%	0.168	0.04355	0.124	0.3241%	0.0012	4.1	0.1	1.394465	15.6	320.2	0.645
0.37600000	0.65	844.8	1.525E-04	1.0%	0.168	0.0435	0.124	0.3266%	0.0012	4.1	0.1	1.400433	15.5	321.9	0.65
0.37600000	0.655	844.8	1.537E-04	1.0%	0.168	0.04345	0.124	0.3292%	0.0012	4.0	0.1	1.406367	15.4	323.7	0.655
0.37600000	0.66	844.8	1.549E-04	1.0%	0.168	0.0434	0.124	0.3317%	0.0012	4.0	0.1	1.412269	15.4	325.4	0.66
0.37600000	0.665	844.8	1.561E-04	1.0%	0.168	0.04335	0.124	0.3343%	0.0013	4.0	0.1	1.418139	15.3	327.1	0.665
0.37600000	0.67	844.8	1.572E-04	1.0%	0.167	0.0433	0.124	0.3369%	0.0013	3.9	0.1	1.423977	15.2	328.9	0.67
0.37600000	0.675	844.8	1.584E-04	1.0%	0.167	0.04325	0.124	0.3394%	0.0013	3.9	0.1	1.429783	15.2	330.6	0.675
0.37600000	0.68	844.8	1.596E-04	1.0%	0.167	0.0432	0.124	0.3420%	0.0013	3.9	0.1	1.435558	15.1	332.3	0.68
0.37600000	0.685	844.8	1.607E-04	1.0%	0.167	0.04315	0.124	0.3445%	0.0013	3.9	0.1	1.441301	15.0	334.0	0.685
0.37600000	0.69	844.8	1.619E-04	1.0%	0.167	0.0431	0.124	0.3471%	0.0013	3.8	0.1	1.447013	15.0	335.7	0.69
0.37600000	0.695	844.8	1.631E-04	1.0%	0.167	0.04305	0.124	0.3497%	0.0013	3.8	0.1	1.452694	14.9	337.4	0.695
0.37600000	0.7	844.8	1.643E-04	1.0%	0.167	0.043	0.124	0.3522%	0.0013	3.8	0.1	1.458344	14.9	339.1	0.7
0.37600000	0.705	844.8	1.654E-04	1.0%	0.167	0.04295	0.124	0.3548%	0.0013	3.7	0.1	1.463964	14.8	340.9	0.705
0.37600000	0.71	844.8	1.666E-04	1.0%	0.167	0.0429	0.124	0.3574%	0.0013	3.7	0.1	1.469554	14.7	342.6	0.71
0.37600000	0.715	844.8	1.678E-04	1.0%	0.167	0.04285	0.124	0.3599%	0.0014	3.7	0.1	1.475114	14.7	344.3	0.715
0.37600000	0.72	844.8	1.690E-04	1.0%	0.167	0.0428	0.124	0.3625%	0.0014	3.7	0.1	1.480644	14.6	345.9	0.72
0.37600000	0.725	844.8	1.701E-04	1.0%	0.167	0.04275	0.124	0.3651%	0.0014	3.6	0.1	1.486144	14.5	347.6	0.725
0.37600000	0.73	844.8	1.713E-04	1.0%	0.167	0.0427	0.124	0.3676%	0.0014	3.6	0.1	1.491614	14.5	349.3	0.73
0.37600000	0.735	844.8	1.725E-04	1.0%	0.167	0.04265	0.124	0.3702%	0.0014	3.6	0.1	1.497056	14.4	351.0	0.735
0.37600000	0.74	844.8	1.737E-04	1.0%	0.166	0.0426	0.124	0.3728%	0.0014	3.6	0.1	1.502468	14.4	352.7	0.74
0.37600000	0.745	844.8	1.748E-04	1.0%	0.166	0.04255	0.124	0.3754%	0.0014	3.5	0.1	1.507851	14.3	354.4	0.745
0.37600000	0.75	844.8	1.760E-04	1.0%	0.166	0.0425	0.124	0.3779%	0.0014	3.5	0.1	1.513206	14.2	356.0	0.75
0.37600000	0.755	844.8	1.772E-04	1.0%	0.166	0.04245	0.124	0.3805%	0.0014	3.5	0.1	1.518532	14.2	357.7	0.755
0.37600000	0.76	844.8	1.783E-04	1.0%	0.166	0.0424	0.124	0.3831%	0.0014	3.5	0.1	1.52383	14.1	359.4	0.76
0.37600000	0.765	844.8	1.795E-04	1.0%	0.166	0.04235	0.124	0.3857%	0.0015	3.4	0.1	1.5291	14.1	361.1	0.765
0.37600000	0.77	844.8	1.807E-04	1.0%	0.166	0.0423	0.124	0.3883%	0.0015	3.4	0.1	1.534341	14.0	362.7	0.77
0.37600000	0.775	844.8	1.819E-04	1.0%	0.166	0.04225	0.124	0.3908%	0.0015	3.4	0.1	1.539555	14.0	364.4	0.775
0.37600000	0.78	844.8	1.830E-04	1.0%	0.166	0.0422	0.124	0.3934%	0.0015	3.4	0.1	1.544741	13.9	366.1	0.78
0.37600000	0.785	844.8	1.842E-04	1.0%	0.166	0.04215	0.124	0.3960%	0.0015	3.4	0.1	1.549899	13.8	367.7	0.785
0.37600000	0.79	844.8	1.854E-04	1.0%	0.166	0.0421	0.124	0.3986%	0.0015	3.3	0.1	1.555031	13.8	369.4	0.79
0.37600000	0.795	844.8	1.866E-04	1.0%	0.166	0.04205	0.124	0.4012%	0.0015	3.3	0.1	1.560135	13.7	371.0	0.795
0.37600000	0.8	844.8	1.877E-04	1.0%	0.166	0.042	0.124	0.4038%	0.0015	3.3	0.1	1.565212	13.7	372.7	0.8
0.37600000	0.805	844.8	1.889E-04	1.0%	0.166	0.04195	0.124	0.4064%	0.0015	3.3	0.1	1.570262	13.6	374.3	0.805
0.37600000	0.81	844.8	1.901E-04	1.0%	0.166	0.0419	0.124	0.4090%	0.0015	3.3	0.1	1.575285	13.6	376.0	0.81
0.37600000	0.815	844.8	1.913E-04	1.0%	0.165	0.04185	0.124	0.4116%	0.0015	3.2	0.1	1.580282	13.5	377.6	0.815
0.37600000	0.82	844.8	1.924E-04	1.0%	0.165	0.0418	0.124	0.4142%	0.0016	3.2	0.1	1.585252	13.5	379.2	0.82
0.37600000	0.825	844.8	1.936E-04	1.0%	0.165	0.04175	0.124	0.4167%	0.0016	3.2	0.1	1.590197	13.4	380.9	0.825
0.37600000	0.83	844.8	1.948E-04	1.0%	0.165	0.0417	0.124	0.4193%	0.0016	3.2	0.1	1.595115	13.3	382.5	0.83
0.37600000	0.835	844.8	1.959E-04	1.0%	0.165	0.04165	0.124	0.4219%	0.0016	3.2	0.1	1.600007	13.3	384.2	0.835
0.37600000	0.84	844.8	1.971E-04	1.0%	0.165	0.0416	0.123	0.4245%	0.0016	3.1	0.1	1.604873	13.2	385.8	0.84
0.37600000	0.845	844.8	1.983E-04	1.0%	0.165	0.04155	0.123	0.4271%	0.0016	3.1	0.1	1.609714	13.2	387.4	0.845
0.37600000	0.85	844.8	1.995E-04	1.0%	0.165	0.0415	0.123	0.4297%	0.0016	3.1	0.1	1.614529	13.1	389.0	0.85
0.37600000	0.855	844.8	2.006E-04	1.0%	0.165	0.04145	0.123	0.4323%	0.0016	3.1	0.1	1.619319	13.1	390.7	0.855
0.37600000	0.86	844.8	2.018E-04	1.0%	0.165	0.0414	0.123	0.4350%	0.0016	3.1	0.1	1.624083	13.0	392.3	0.86
0.37600000	0.865	844.8	2.030E-04	1.0%	0.165	0.04135	0.123	0.4376%	0.0016	3.0	0.1	1.628822	13.0	393.9	0.865
0.37600000	0.87	844.8	2.042E-04	1.0%	0.165	0.0413	0.123	0.4402%	0.0017	3.0	0.1	1.633537	12.9	395.5	0.87
0.37600000	0.875	844.8	2.053E-04	1.0%	0.165	0.04125	0.123	0.4428%	0.0017	3.0	0.1	1.638226	12.9	397.1	0.875
0.37600000	0.88	844.8	2.065E-04	1.0%	0.165	0.0412	0.123	0.4454%	0.0017	3.0	0.0	1.642891	12.8	398.8	0.88
0.37600000	0.885	844.8	2.077E-04	1.0%	0.164	0.04115	0.123	0.4480%	0.0017	3.0	0.0	1.647531	12.8	400.4	0.885
0.37600000	0.89	844.8	2.089E-04	1.0%	0.164	0.0411	0.123	0.4506%	0.0017	3.0	0.0	1.652147	12.7	402.0	0.89
0.37600000	0.895	844.8	2.100E-04	1.0%	0.164	0.04105	0.123	0.4532%	0.0017	2.9	0.0	1.656738	12.7	403.6	0.895
0.37600000	0.9	844.8	2.112E-04	1.0%	0.164	0.041	0.123	0.4558%	0.0017	2.9	0.0	1.661305	12.6	405.2	0.9
0.37600000	0.905	844.8	2.124E-04	1.0%	0.164	0.04095	0.123	0.4585%	0.0017	2.9	0.0	1.665848	12.6	406.8	0.905
0.37600000	0.91	844.8	2.135E-04	1.0%	0.164	0.0409	0.123	0.4611%	0.0017	2.9	0.0	1.670367	12.5	408.4	0.91
0.37600000	0.915	844.8	2.147E-04	1.0%	0.164	0.04085	0.123	0.4637%	0.0017	2.9	0.0	1.674862	12.5	410.0	0.915
0.37600000	0.92	844.8	2.159E-04	1.0%	0.164	0.0408	0.123	0.4663%	0.0018	2.9	0.0	1.679333	12.4	411.6	0.92
0.37600000	0.925	844.8	2.171E-04	1.0%	0.164	0.04075	0.123	0.4689%	0.0018	2.8	0.0	1.683781	12.4	413.2	0.925
0.37600000	0.93	844.8	2.182E-04	1.0%	0.164	0.0407	0.123	0.4716%	0.0018	2.8	0.0	1.688205	12.4	414.8	0.93
0.37600000	0.935	844.8	2.194E-04	1.0%	0.164	0.04065	0.123	0.4742%	0.0018	2.8	0.0	1.692606	12.3	416.4	0.935
0.37600000	0.94	844.8	2.206E-04	1.0%	0.164	0.0406	0.123	0.4768%	0.0018	2.8	0.0	1.696984	12.3	418.0	0.94
0.37600000	0.945	844.8	2.218E-04	1.0%	0.164	0.04055	0.123	0.4795%	0.0018	2.8	0.0	1.701338	12.2	419.6	0.945
0.37600000	0.95	844.8	2.229E-04	1.0%	0.163	0.0405	0.123	0.4821%	0.0018	2.8	0.0	1.705669	12.2	421.2	0.95
0.37600000	0.955	844.8	2.241E-04	1.0%	0.163	0.04045	0.123	0.4847%	0.0018	2.7	0.0	1.709978	12.1	422.7	0.955
0.37600000	0.96	844.8	2.253E-04	1.0%	0.163	0.0404	0.123	0.4874%	0.0018	2.7	0.0	1.714263	12.1	424.3	0.96
0.37600000	0.965	844.8	2.265E-04	1.0%	0.163	0.04035	0.123	0.4900%	0.0018	2.7	0.0	1.718526	12.0	425.9	0.965
0.37600000	0.97	844.8	2.276E-04	1.0%	0.163	0.0403	0.123	0.4926%	0.0019	2.7	0.0	1.722766	12.0	427.5	0.97
0.37600000	0.975	844.8	2.288E-04	1.0%	0.163	0.04025	0.123	0.4953%	0.0019	2.7	0.0	1.726984	11.9	429.1	0.975
0.37600000	0.98	844.8	2.300E-04	1.0%	0.163	0.0402	0.123	0.4979%	0.0019	2.7	0.0	1.731179	11.9	430.6	0.98
0.37600000	0.985	844.8	2.311E-04	1.0%	0.163	0.04015	0.123	0.5006%	0.0019	2.7	0.0	1.735352	11.8	432.2	0.985
0.37600000	0.99	844.8	2.323E-04	1.0%	0.163	0.0401	0.123	0.5032%	0.0019	2.6	0.0	1.739502	11.8	433.8	0.99
0.37600000	0.995	844.8	2.335E-04	1.0%	0.163	0.04005	0.123	0.5058%	0.0019	2.6	0.0	1.743631	11.8	435.4	0.995
0.37600000	1	844.8	2.347E-04	1.0%	0.163	0.04	0.123	0.5085%	0.0019	2.6	0.0	1.747737	11.7	436.9	1
0.37600000	1.005	844.8	2.358E-04	1.0%	0.163	0.03995	0.123	0.5111%	0.0019	2.6	0.0	1.751822	11.7	438.5	1.005
0.37600000	1.01	844.8	2.370E-04	1.0%	0.163	0.0399	0.123	0.5138%	0.0019	2.6	0.0	1.755884	11.6	440.1	1.01
0.37600000	1.015	844.8	2.382E-04	1.0%	0.163	0.03985	0.123	0.5164%	0.0019	2.6	0.0	1.759925	11.6	441.6	1.015
0.37600000	1.02	844.8	2.394E-04	1.0%	0.162	0.0398	0.123	0.5191%	0.0020	2.6	0.0	1.763945	11.5	443.2	1.02
0.37600000	1.025	844.8	2.405E-04	1.0%	0.162	0.03975	0.123	0.5217%	0.0020	2.5	0.0	1.767942	11.5	444.8	1.025
0.37600000	1.03	844.8	2.417E-04	1.0%	0.162	0.0397	0.123	0.5244%	0.0020	2.5	0.0	1.771919	11.5	446.3	1.03
0.37600000	1.035	844.8	2.429E-04	1.0%	0.162	0.03965	0.123	0.5271%	0.0020	2.5	0.0	1.775874	11.4	447.9	1.035
0.37600000	1.04	844.8	2.441E-04	1.0%	0.162	0.0396	0.123	0.5297%	0.0020	2.5	0.0	1.779807	11.4	449.4	1.04
0.37600000	1.045	844.8	2.452E-04	1.0%	0.162	0.03955	0.123	0.5324%	0.0020	2.5	0.0	1.78372	11.3	451.0	1.045
0.37600000	1.05	844.8	2.464E-04	1.0%	0.162	0.0395	0.122	0.5351%	0.0020	2.5	0.0	1.787611	11.3	452.6	1.05
0.37600000	1.055	844.8	2.476E-04	1.0%	0.162	0.03945	0.122	0.5377%	0.0020	2.5	0.0	1.791482	11.2	454.1	1.055
0.37600000	1.06	844.8	2.487E-04	1.0%	0.162	0.0394	0.122	0.5404%	0.0020	2.5	0.0	1.795331	11.2	455.7	1.06
0.37600000	1.065	844.8	2.499E-04	1.0%	0.162	0.03935	0.122	0.5431%	0.0020	2.4	0.0	1.79916	11.2	457.2	1.065
0.37600000	1.07	844.8	2.511E-04	1.0%	0.162	0.0393	0.122	0.5457%	0.0021	2.4	0.0	1.802968	11.1	458.8	1.07
0.37600000	1.075	844.8	2.523E-04	1.0%	0.162	0.03925	0.122	0.5484%	0.0021	2.4	0.0	1.806755	11.1	460.3	1.075
0.37600000	1.08	844.8	2.534E-04	1.0%	0.162	0.0392	0.122	0.5511%	0.0021	2.4	0.0	1.810521	11.0	461.9	1.08
0.37600000	1.085	844.8	2.546E-04	1.0%	0.161	0.03915	0.122	0.5538%	0.0021	2.4	0.0	1.814268	11.0	463.4	1.085
0.37600000	1.09	844.8	2.558E-04	1.0%	0.161	0.0391	0.122	0.5564%	0.0021	2.4	0.0	1.817993	11.0	465.0	1.09
0.37600000	1.095	844.8	2.570E-04	1.0%	0.161	0.03905	0.122	0.5591%	0.0021	2.4	0.0	1.821699	10.9	466.5	1.095
0.37600000	1.1	844.8	2.581E-04	1.0%	0.161	0.039	0.122	0.5618%	0.0021	2.4	0.0	1.825384	10.9	468.0	1.1
0.37600000	1.105	844.8	2.593E-04	1.0%	0.161	0.03895	0.122	0.5645%	0.0021	2.4	0.0	1.829049	10.8	469.6	1.105
0.37600000	1.11	844.8	2.605E-04	1.0%	0.161	0.0389	0.122	0.5672%	0.0021	2.3	0.0	1.832694	10.8	471.1	1.11
0.37600000	1.115	844.8	2.617E-04	1.0%	0.161	0.03885	0.122	0.5698%	0.0021	2.3	0.0	1.836318	10.8	472.7	1.115
0.37600000	1.12	844.8	2.628E-04	1.0%	0.161	0.0388	0.122	0.5725%	0.0022	2.3	0.0	1.839923	10.7	474.2	1.12
0.37600000	1.125	844.8	2.640E-04	1.0%	0.161	0.03875	0.122	0.5752%	0.0022	2.3	0.0	1.843508	10.7	475.7	1.125
0.37600000	1.13	844.8	2.652E-04	1.0%	0.161	0.0387	0.122	0.5779%	0.0022	2.3	0.0	1.847074	10.7	477.3	1.13
0.37600000	1.135	844.8	2.663E-04	1.0%	0.161	0.03865	0.122	0.5806%	0.0022	2.3	0.0	1.850619	10.6	478.8	1.135
0.37600000	1.14	844.8	2.675E-04	1.0%	0.161	0.0386	0.122	0.5833%	0.0022	2.3	0.0	1.854145	10.6	480.3	1.14
0.37600000	1.145	844.8	2.687E-04	1.0%	0.160	0.03855	0.122	0.5860%	0.0022	2.3	0.0	1.857651	10.5	481.9	1.145
0.37600000	1.15	844.8	2.699E-04	1.0%	0.160	0.0385	0.122	0.5887%	0.0022	2.3	0.0	1.861138	10.5	483.4	1.15
0.37600000	1.155	844.8	2.710E-04	1.0%	0.160	0.03845	0.122	0.5914%	0.0022	2.2	0.0	1.864606	10.5	484.9	1.155
0.37600000	1.16	844.8	2.722E-04	1.0%	0.160	0.0384	0.122	0.5941%	0.0022	2.2	0.0	1.868054	10.4	486.5	1.16
0.37600000	1.165	844.8	2.734E-04	1.0%	0.160	0.03835	0.122	0.5968%	0.0022	2.2	0.0	1.871483	10.4	488.0	1.165
0.37600000	1.17	844.8	2.746E-04	1.0%	0.160	0.0383	0.122	0.5995%	0.0023	2.2	0.0	1.874892	10.3	489.5	1.17
0.37600000	1.175	844.8	2.757E-04	1.0%	0.160	0.03825	0.122	0.6023%	0.0023	2.2	0.0	1.878283	10.3	491.1	1.175
0.37600000	1.18	844.8	2.769E-04	1.0%	0.160	0.0382	0.122	0.6050%	0.0023	2.2	0.0	1.881654	10.3	492.6	1.18
0.37600000	1.185	844.8	2.781E-04	1.0%	0.160	0.03815	0.122	0.6077%	0.0023	2.2	0.0	1.885006	10.2	494.1	1.185
0.37600000	1.19	844.8	2.793E-04	1.0%	0.160	0.0381	0.122	0.6104%	0.0023	2.2	0.0	1.88834	10.2	495.6	1.19
0.37600000	1.195	844.8	2.804E-04	1.0%	0.160	0.03805	0.122	0.6131%	0.0023	2.2	0.0	1.891654	10.2	497.1	1.195
0.37600000	1.2	844.8	2.816E-04	1.0%	0.160	0.038	0.122	0.6158%	0.0023	2.2	0.0	1.89495	10.1	498.7	1.2
0.37600000	1.205	844.8	2.828E-04	1.0%	0.160	0.03795	0.122	0.6186%	0.0023	2.1	0.0	1.898227	10.1	500.2	1.205
0.37600000	1.21	844.8	2.839E-04	1.0%	0.159	0.0379	0.122	0.6213%	0.0023	2.1	0.0	1.901486	10.1	501.7	1.21
0.37600000	1.215	844.8	2.851E-04	1.0%	0.159	0.03785	0.122	0.6240%	0.0023	2.1	0.0	1.904726	10.0	503.2	1.215
0.37600000	1.22	844.8	2.863E-04	1.0%	0.159	0.0378	0.121	0.6267%	0.0024	2.1	0.0	1.907947	10.0	504.7	1.22
0.37600000	1.225	844.8	2.875E-04	1.0%	0.159	0.03775	0.121	0.6295%	0.0024	2.1	0.0	1.91115	10.0	506.3	1.225
0.37600000	1.23	844.8	2.886E-04	1.0%	0.159	0.0377	0.121	0.6322%	0.0024	2.1	0.0	1.914334	9.9	507.8	1.23
0.37600000	1.235	844.8	2.898E-04	1.0%	0.159	0.03765	0.121	0.6349%	0.0024	2.1	0.0	1.9175	9.9	509.3	1.235
0.37600000	1.24	844.8	2.910E-04	1.0%	0.159	0.0376	0.121	0.6377%	0.0024	2.1	0.0	1.920648	9.8	510.8	1.24
0.37600000	1.245	844.8	2.922E-04	1.0%	0.159	0.03755	0.121	0.6404%	0.0024	2.1	0.0	1.923777	9.8	512.3	1.245
0.37600000	1.25	844.8	2.933E-04	1.0%	0.159	0.0375	0.121	0.6432%	0.0024	2.1	0.0	1.926888	9.8	513.8	1.25
0.37600000	1.255	844.8	2.945E-04	1.0%	0.159	0.03745	0.121	0.6459%	0.0024	2.1	0.0	1.929982	9.7	515.3	1.255
0.37600000	1.26	844.8	2.957E-04	1.0%	0.159	0.0374	0.121	0.6487%	0.0024	2.1	0.0	1.933057	9.7	516.9	1.26
0.37600000	1.265	844.8	2.969E-04	1.0%	0.159	0.03735	0.121	0.6514%	0.0024	2.0	0.0	1.936114	9.7	518.4	1.265
0.37600000	1.27	844.8	2.980E-04	1.0%	0.158	0.0373	0.121	0.6542%	0.0025	2.0	0.0	1.939153	9.6	519.9	1.27
0.37600000	1.275	844.8	2.992E-04	1.0%	0.158	0.03725	0.121	0.6569%	0.0025	2.0	0.0	1.942175	9.6	521.4	1.275
0.37600000	1.28	844.8	3.004E-04	1.0%	0.158	0.0372	0.121	0.6597%	0.0025	2.0	0.0	1.945178	9.6	522.9	1.28
0.37600000	1.285	844.8	3.015E-04	1.0%	0.158	0.03715	0.121	0.6624%	0.0025	2.0	0.0	1.948164	9.5	524.4	1.285
0.37600000	1.29	844.8	3.027E-04	1.0%	0.158	0.0371	0.121	0.6652%	0.0025	2.0	0.0	1.951132	9.5	525.9	1.29
0.37600000	1.295	844.8	3.039E-04	1.0%	0.158	0.03705	0.121	0.6679%	0.0025	2.0	0.0	1.954083	9.5	527.4	1.295
0.37600000	1.3	844.8	3.051E-04	1.0%	0.158	0.037	0.121	0.6707%	0.0025	2.0	0.0	1.957016	9.4	528.9	1.3
0.37600000	1.305	844.8	3.062E-04	1.0%	0.158	0.03695	0.121	0.6735%	0.0025	2.0	0.0	1.959931	9.4	530.4	1.305
0.37600000	1.31	844.8	3.074E-04	1.0%	0.158	0.0369	0.121	0.6762%	0.0025	2.0	0.0	1.962829	9.4	531.9	1.31
0.37600000	1.315	844.8	3.086E-04	1.0%	0.158	0.03685	0.121	0.6790%	0.0026	2.0	0.0	1.965709	9.3	533.4	1.315
0.37600000	1.32	844.8	3.098E-04	1.0%	0.158	0.0368	0.121	0.6818%	0.0026	2.0	0.0	1.968573	9.3	534.9	1.32
0.37600000	1.325	844.8	3.109E-04	1.0%	0.158	0.03675	0.121	0.6846%	0.0026	1.9	0.0	1.971418	9.3	536.4	1.325

0.37600000	1.33	844.8	3.121E-04	1.0%	0.157	0.0367	0.121	0.6873%	0.0026	1.9	0.0	1.974247	9.2	537.9	1.33	
0.37600000	1.335	844.8	3.133E-04	1.0%	0.157	0.03665	0.121	0.6901%	0.0026	1.9	0.0	1.977058	9.2	539.4	1.335	
0.37600000	1.34	844.8	3.145E-04	1.0%	0.157	0.0366	0.121	0.6929%	0.0026	1.9	0.0	1.979852	9.2	540.9	1.34	
0.37600000	1.345	844.8	3.156E-04	1.0%	0.157	0.03655	0.121	0.6957%	0.0026	1.9	0.0	1.982629	9.1	542.4	1.345	
0.37600000	1.35	844.8	3.168E-04	1.0%	0.157	0.0365	0.121	0.6985%	0.0026	1.9	0.0	1.985389	9.1	543.9	1.35	
0.37600000	1.355	844.8	3.180E-04	1.0%	0.157	0.03645	0.121	0.7013%	0.0026	1.9	0.0	1.988132	9.1	545.4	1.355	
0.37600000	1.36	844.8	3.191E-04	1.0%	0.157	0.0364	0.121	0.7041%	0.0026	1.9	0.0	1.990858	9.0	546.9	1.36	
0.37600000	1.365	844.8	3.203E-04	1.0%	0.157	0.03635	0.121	0.7069%	0.0027	1.9	0.0	1.993567	9.0	548.4	1.365	
0.37600000	1.37	844.8	3.215E-04	1.0%	0.157	0.0363	0.120	0.7097%	0.0027	1.9	0.0	1.99626	9.0	549.9	1.37	critical TC
0.37600000	1.375	844.8	3.227E-04	1.0%	0.157	0.03625	0.120	0.7125%	0.0027	1.9	0.0	1.998935	9.0	551.4	1.375	
0.37600000	1.38	844.8	3.238E-04	1.0%	0.157	0.0362	0.120	0.7153%	0.0027	1.9	0.0	2.001594	8.9	552.9	1.38	
0.37600000	1.385	844.8	3.250E-04	1.0%	0.157	0.03615	0.120	0.7181%	0.0027	1.9	0.0	2.004236	8.9	554.4	1.385	
0.37600000	1.39	844.8	3.262E-04	1.0%	0.156	0.0361	0.120	0.7209%	0.0027	1.8	0.0	2.006861	8.9	555.9	1.39	
0.37600000	1.395	844.8	3.274E-04	1.0%	0.156	0.03605	0.120	0.7237%	0.0027	1.8	0.0	2.00947	8.8	557.4	1.395	
0.37600000	1.4	844.8	3.285E-04	1.0%	0.156	0.036	0.120	0.7265%	0.0027	1.8	0.0	2.012062	8.8	558.9	1.4	
0.37600000	1.405	844.8	3.297E-04	1.0%	0.156	0.03595	0.120	0.7293%	0.0027	1.8	0.0	2.014638	8.8	560.4	1.405	
0.37600000	1.41	844.8	3.309E-04	1.0%	0.156	0.0359	0.120	0.7321%	0.0028	1.8	0.0	2.017197	8.7	561.9	1.41	
0.37600000	1.415	844.8	3.321E-04	1.0%	0.156	0.03585	0.120	0.7350%	0.0028	1.8	0.0	2.01974	8.7	563.4	1.415	
0.37600000	1.42	844.8	3.332E-04	1.0%	0.156	0.0358	0.120	0.7378%	0.0028	1.8	0.0	2.022266	8.7	564.9	1.42	
0.37600000	1.425	844.8	3.344E-04	1.0%	0.156	0.03575	0.120	0.7406%	0.0028	1.8	0.0	2.024776	8.7	566.4	1.425	
0.37600000	1.43	844.8	3.356E-04	1.0%	0.156	0.0357	0.120	0.7434%	0.0028	1.8	0.0	2.02727	8.6	567.9	1.43	
0.37600000	1.435	844.8	3.367E-04	1.0%	0.156	0.03565	0.120	0.7463%	0.0028	1.8	0.0	2.029747	8.6	569.4	1.435	
0.37600000	1.44	844.8	3.379E-04	1.0%	0.156	0.0356	0.120	0.7491%	0.0028	1.8	0.0	2.032209	8.6	570.8	1.44	
0.37600000	1.445	844.8	3.391E-04	1.0%	0.155	0.03555	0.120	0.7519%	0.0028	1.8	0.0	2.034654	8.5	572.3	1.445	
0.37600000	1.45	844.8	3.403E-04	1.0%	0.155	0.0355	0.120	0.7548%	0.0028	1.8	0.0	2.037083	8.5	573.8	1.45	
0.37600000	1.455	844.8	3.414E-04	1.0%	0.155	0.03545	0.120	0.7576%	0.0028	1.8	0.0	2.039496	8.5	575.3	1.455	
0.37600000	1.46	844.8	3.426E-04	1.0%	0.155	0.0354	0.120	0.7605%	0.0029	1.7	0.0	2.041893	8.4	576.8	1.46	
0.37600000	1.465	844.8	3.438E-04	1.0%	0.155	0.03535	0.120	0.7633%	0.0029	1.7	0.0	2.044274	8.4	578.3	1.465	
0.37600000	1.47	844.8	3.450E-04	1.0%	0.155	0.0353	0.120	0.7662%	0.0029	1.7	0.0	2.046639	8.4	579.8	1.47	
0.37600000	1.475	844.8	3.461E-04	1.0%	0.155	0.03525	0.120	0.7690%	0.0029	1.7	0.0	2.048988	8.4	581.3	1.475	
0.37600000	1.48	844.8	3.473E-04	1.0%	0.155	0.0352	0.120	0.7719%	0.0029	1.7	0.0	2.051321	8.3	582.8	1.48	
0.37600000	1.485	844.8	3.485E-04	1.0%	0.155	0.03515	0.120	0.7747%	0.0029	1.7	0.0	2.053638	8.3	584.2	1.485	
0.37600000	1.49	844.8	3.497E-04	1.0%	0.155	0.0351	0.120	0.7776%	0.0029	1.7	0.0	2.05594	8.3	585.7	1.49	
0.37600000	1.495	844.8	3.508E-04	1.0%	0.155	0.03505	0.120	0.7805%	0.0029	1.7	0.0	2.058226	8.2	587.2	1.495	
0.37600000	1.5	844.8	3.520E-04	1.0%	0.155	0.035	0.120	0.7833%	0.0029	1.7	0.0	2.060496	8.2	588.7	1.5	
0.37600000	1.505	844.8	3.532E-04	1.0%	0.154	0.03495	0.119	0.7862%	0.0030	1.7	0.0	2.062751	8.2	590.2	1.505	
0.37600000	1.51	844.8	3.543E-04	1.0%	0.154	0.0349	0.119	0.7891%	0.0030	1.7	0.0	2.06499	8.2	591.7	1.51	
0.37600000	1.515	844.8	3.555E-04	1.0%	0.154	0.03485	0.119	0.7919%	0.0030	1.7	0.0	2.067213	8.1	593.2	1.515	
0.37600000	1.52	844.8	3.567E-04	1.0%	0.154	0.0348	0.119	0.7948%	0.0030	1.7	0.0	2.069421	8.1	594.7	1.52	
0.37600000	1.525	844.8	3.579E-04	1.0%	0.154	0.03475	0.119	0.7977%	0.0030	1.7	0.0	2.071613	8.1	596.1	1.525	
0.37600000	1.53	844.8	3.590E-04	1.0%	0.154	0.0347	0.119	0.8006%	0.0030	1.7	0.0	2.07379	8.0	597.6	1.53	
0.37600000	1.535	844.8	3.602E-04	1.0%	0.154	0.03465	0.119	0.8035%	0.0030	1.7	0.0	2.075951	8.0	599.1	1.535	
0.37600000	1.54	844.8	3.614E-04	1.0%	0.154	0.0346	0.119	0.8064%	0.0030	1.6	0.0	2.078097	8.0	600.6	1.54	
0.37600000	1.545	844.8	3.626E-04	1.0%	0.154	0.03455	0.119	0.8093%	0.0030	1.6	0.0	2.080228	8.0	602.1	1.545	
0.37600000	1.55	844.8	3.637E-04	1.0%	0.154	0.0345	0.119	0.8122%	0.0031	1.6	0.0	2.082343	7.9	603.6	1.55	
0.37600000	1.555	844.8	3.649E-04	1.0%	0.154	0.03445	0.119	0.8151%	0.0031	1.6	0.0	2.084443	7.9	605.1	1.555	
0.37600000	1.56	844.8	3.661E-04	1.0%	0.153	0.0344	0.119	0.8180%	0.0031	1.6	0.0	2.086528	7.9	606.5	1.56	
0.37600000	1.565	844.8	3.673E-04	1.0%	0.153	0.03435	0.119	0.8209%	0.0031	1.6	0.0	2.088598	7.9	608.0	1.565	
0.37600000	1.57	844.8	3.684E-04	1.0%	0.153	0.0343	0.119	0.8238%	0.0031	1.6	0.0	2.090652	7.8	609.5	1.57	
0.37600000	1.575	844.8	3.696E-04	1.0%	0.153	0.03425	0.119	0.8267%	0.0031	1.6	0.0	2.092692	7.8	611.0	1.575	
0.37600000	1.58	844.8	3.708E-04	1.0%	0.153	0.0342	0.119	0.8296%	0.0031	1.6	0.0	2.094716	7.8	612.5	1.58	
0.37600000	1.585	844.8	3.719E-04	1.0%	0.153	0.03415	0.119	0.8325%	0.0031	1.6	0.0	2.096725	7.7	614.0	1.585	
0.37600000	1.59	844.8	3.731E-04	1.0%	0.153	0.0341	0.119	0.8354%	0.0031	1.6	0.0	2.098719	7.7	615.5	1.59	
0.37600000	1.595	844.8	3.743E-04	1.0%	0.153	0.03405	0.119	0.8384%	0.0032	1.6	0.0	2.100699	7.7	616.9	1.595	
0.37600000	1.6	844.8	3.755E-04	1.0%	0.153	0.034	0.119	0.8413%	0.0032	1.6	0.0	2.102663	7.7	618.4	1.6	
0.37600000	1.605	844.8	3.766E-04	1.0%	0.153	0.03395	0.119	0.8442%	0.0032	1.6	0.0	2.104612	7.6	619.9	1.605	
0.37600000	1.61	844.8	3.778E-04	1.0%	0.153	0.0339	0.119	0.8471%	0.0032	1.6	0.0	2.106546	7.6	621.4	1.61	
0.37600000	1.615	844.8	3.790E-04	1.0%	0.152	0.03385	0.119	0.8501%	0.0032	1.6	0.0	2.108466	7.6	622.9	1.615	
0.37600000	1.62	844.8	3.802E-04	1.0%	0.152	0.0338	0.119	0.8530%	0.0032	1.6	0.0	2.110371	7.6	624.4	1.62	
0.37600000	1.625	844.8	3.813E-04	1.0%	0.152	0.03375	0.118	0.8560%	0.0032	1.6	0.0	2.112261	7.5	625.9	1.625	
0.37600000	1.63	844.8	3.825E-04	1.0%	0.152	0.0337	0.118	0.8589%	0.0032	1.5	0.0	2.114136	7.5	627.3	1.63	
0.37600000	1.635	844.8	3.837E-04	1.0%	0.152	0.03365	0.118	0.8618%	0.0032	1.5	0.0	2.115996	7.5	628.8	1.635	
0.37600000	1.64	844.8	3.849E-04	1.0%	0.152	0.0336	0.118	0.8648%	0.0033	1.5	0.0	2.117842	7.5	630.3	1.64	
0.37600000	1.645	844.8	3.860E-04	1.0%	0.152	0.03355	0.118	0.8678%	0.0033	1.5	0.0	2.119673	7.4	631.8	1.645	
0.37600000	1.65	844.8	3.872E-04	1.0%	0.152	0.0335	0.118	0.8707%	0.0033	1.5	0.0	2.12149	7.4	633.3	1.65	
0.37600000	1.655	844.8	3.884E-04	1.0%	0.152	0.03345	0.118	0.8737%	0.0033	1.5	0.0	2.123292	7.4	634.8	1.655	
0.37600000	1.66	844.8	3.895E-04	1.0%	0.152	0.0334	0.118	0.8766%	0.0033	1.5	0.0	2.125079	7.4	636.3	1.66	
0.37600000	1.665	844.8	3.907E-04	1.0%	0.151	0.03335	0.118	0.8796%	0.0033	1.5	0.0	2.126852	7.3	637.7	1.665	
0.37600000	1.67	844.8	3.919E-04	1.0%	0.151	0.0333	0.118	0.8826%	0.0033	1.5	0.0	2.12861	7.3	639.2	1.67	
0.37600000	1.675	844.8	3.931E-04	1.0%	0.151	0.03325	0.118	0.8856%	0.0033	1.5	0.0	2.130354	7.3	640.7	1.675	
0.37600000	1.68	844.8	3.942E-04	1.0%	0.151	0.0332	0.118	0.8885%	0.0033	1.5	0.0	2.132083	7.3	642.2	1.68	
0.37600000	1.685	844.8	3.954E-04	1.0%	0.151	0.03315	0.118	0.8915%	0.0034	1.5	0.0	2.133798	7.2	643.7	1.685	
0.37600000	1.69	844.8	3.966E-04	1.0%	0.151	0.0331	0.118	0.8945%	0.0034	1.5	0.0	2.135499	7.2	645.2	1.69	
0.37600000	1.695	844.8	3.978E-04	1.0%	0.151	0.03305	0.118	0.8975%	0.0034	1.5	0.0	2.137185	7.2	646.7	1.695	
0.37600000	1.7	844.8	3.989E-04	1.0%	0.151	0.033	0.118	0.9005%	0.0034	1.5	0.0	2.138857	7.2	648.1	1.7	
0.37600000	1.705	844.8	4.001E-04	1.0%	0.151	0.03295	0.118	0.9035%	0.0034	1.5	0.0	2.140515	7.1	649.6	1.705	
0.37600000	1.71	844.8	4.013E-04	1.0%	0.151	0.0329	0.118	0.9065%	0.0034	1.5	0.0	2.142158	7.1	651.1	1.71	
0.37600000	1.715	844.8	4.025E-04	1.0%	0.151	0.03285	0.118	0.9095%	0.0034	1.5	0.0	2.143788	7.1	652.6	1.715	
0.37600000	1.72	844.8	4.036E-04	1.0%	0.150	0.0328	0.118	0.9125%	0.0034	1.5	0.0	2.145402	7.1	654.1	1.72	
0.37600000	1.725	844.8	4.048E-04	1.0%	0.150	0.03275	0.118	0.9155%	0.0034	1.5	0.0	2.147003	7.0	655.6	1.725	
0.37600000	1.73	844.8	4.060E-04	1.0%	0.150	0.0327	0.118	0.9185%	0.0035	1.4	0.0	2.14859	7.0	657.1	1.73	
0.37600000	1.735	844.8	4.071E-04	1.0%	0.150	0.03265	0.118	0.9215%	0.0035	1.4	0.0	2.150162	7.0	658.5	1.735	
0.37600000	1.74	844.8	4.083E-04	1.0%	0.150	0.0326	0.117	0.9245%	0.0035	1.4	0.0	2.151721	7.0	660.0	1.74	
0.37600000	1.745	844.8	4.095E-04	1.0%	0.150	0.03255	0.117	0.9276%	0.0035	1.4	0.0	2.153265	6.9	661.5	1.745	
0.37600000	1.75	844.8	4.107E-04	1.0%	0.150	0.0325	0.117	0.9306%	0.0035	1.4	0.0	2.154796	6.9	663.0	1.75	
0.37600000	1.755	844.8	4.118E-04	1.0%	0.150	0.03245	0.117	0.9336%	0.0035	1.4	0.0	2.156312	6.9	664.5	1.755	
0.37600000	1.76	844.8	4.130E-04	1.0%	0.150	0.0324	0.117	0.9366%	0.0035	1.4	0.0	2.157814	6.9	666.0	1.76	
0.37600000	1.765	844.8	4.142E-04	1.0%	0.150	0.03235	0.117	0.9397%	0.0035	1.4	0.0	2.159303	6.8	667.5	1.765	
0.37600000	1.77	844.8	4.154E-04	1.0%	0.149	0.0323	0.117	0.9427%	0.0035	1.4	0.0	2.160777	6.8	669.0	1.77	
0.37600000	1.775	844.8	4.165E-04	1.0%	0.149	0.03225	0.117	0.9458%	0.0036	1.4	0.0	2.162238	6.8	670.5	1.775	
0.37600000	1.78	844.8	4.177E-04	1.0%	0.149	0.0322	0.117	0.9488%	0.0036	1.4	0.0	2.163685	6.8	672.0	1.78	
0.37600000	1.785	844.8	4.189E-04	1.0%	0.149	0.03215	0.117	0.9519%	0.0036	1.4	0.0	2.165117	6.7	673.4	1.785	
0.37600000	1.79	844.8	4.201E-04	1.0%	0.149	0.0321	0.117	0.9549%	0.0036	1.4	0.0	2.166536	6.7	674.9	1.79	
0.37600000	1.795	844.8	4.212E-04	1.0%	0.149	0.03205	0.117	0.9580%	0.0036	1.4	0.0	2.167942	6.7	676.4	1.795	
0.37600000	1.8	844.8	4.224E-04	1.0%	0.149	0.032	0.117	0.9610%	0.0036	1.4	0.0	2.169333	6.7	677.9	1.8	
0.37600000	1.805	844.8	4.236E-04	1.0%	0.149	0.03195	0.117	0.9641%	0.0036	1.4	0.0	2.170711	6.7	679.4	1.805	
0.37600000	1.81	844.8	4.247E-04	1.0%	0.149	0.0319	0.117	0.9672%	0.0036	1.4	0.0	2.172075	6.6	680.9	1.81	
0.37600000	1.815	844.8	4.259E-04	1.0%	0.149	0.03185	0.117	0.9703%	0.0036	1.4	0.0	2.173425	6.6	682.4	1.815	
0.37600000	1.82	844.8	4.271E-04	1.0%	0.149	0.0318	0.117	0.9733%	0.0037	1.4	0.0	2.174762	6.6	683.9	1.82	
0.37600000	1.825	844.8	4.283E-04	1.0%	0.148	0.03175	0.117	0.9764%	0.0037	1.4	0.0	2.176085	6.6	685.4	1.825	
0.37600000	1.83	844.8	4.294E-04	1.0%	0.148	0.0317	0.117	0.9795%	0.0037	1.4	0.0	2.177394	6.5	686.9	1.83	
0.37600000	1.835	844.8	4.306E-04	1.0%	0.148	0.03165	0.117	0.9826%	0.0037	1.4	0.0	2.17869	6.5	688.4	1.835	
0.37600000	1.84	844.8	4.318E-04	1.0%	0.148	0.0316	0.117	0.9857%	0.0037	1.3	0.0	2.179972	6.5	689.9	1.84	
0.37600000	1.845	844.8	4.330E-04	1.0%	0.148	0.03155	0.116	0.9888%	0.0037	1.3	0.0	2.181241	6.5	691.4	1.845	
0.37600000	1.85	844.8	4.341E-04	1.0%	0.148	0.0315	0.116	0.9919%	0.0037	1.3	0.0	2.182496	6.5	692.9	1.85	
0.37600000	1.855	844.8	4.353E-04	1.0%	0.148	0.03145	0.116	0.9950%	0.0037	1.3	0.0	2.183738	6.4	694.4	1.855	
0.37600000	1.86	844.8	4.365E-04	1.0%	0.148	0.0314	0.116	0.9981%	0.0038	1.3	0.0	2.184966	6.4	695.8	1.86	
0.37600000	1.865	844.8	4.377E-04	1.0%	0.148	0.03135	0.116	1.0012%	0.0038	1.3	0.0	2.186181	6.4	697.3	1.865	
0.37600000	1.87	844.8	4.388E-04	1.0%	0.148	0.0313	0.116	1.0043%	0.0038	1.3	0.0	2.187382	6.4	698.8	1.87	
0.37600000	1.875	844.8	4.400E-04	1.0%	0.147	0.03125	0.116	1.0075%	0.0038	1.3	0.0	2.18857	6.3	700.3	1.875	
0.37600000	1.88	844.8	4.412E-04	1.0%	0.147	0.0312	0.116	1.0106%	0.0038	1.3	0.0	2.189744	6.3	701.8	1.88	
0.37600000	1.885	844.8	4.423E-04	1.0%	0.147	0.03115	0.116	1.0137%	0.0038	1.3	0.0	2.190905	6.3	703.3	1.885	
0.37600000	1.89	844.8	4.435E-04	1.0%	0.147	0.0311	0.116	1.0169%	0.0038	1.3	0.0	2.192053	6.3	704.8	1.89	
0.37600000	1.895	844.8	4.447E-04	1.0%	0.147	0.03105	0.116	1.0200%	0.0038	1.3	0.0	2.193188	6.3	706.3	1.895	
0.37600000	1.9	844.8	4.459E-04	1.0%	0.147	0.031	0.116	1.0231%	0.0038	1.3	0.0	2.194309	6.2	707.8	1.9	
0.37600000	1.905	844.8	4.470E-04	1.0%	0.147	0.03095	0.116	1.0263%	0.0039	1.3	0.0	2.195417	6.2	709.3	1.905	
0.37600000	1.91	844.8	4.482E-04	1.0%	0.147	0.0309	0.116	1.0294%	0.0039	1.3	0.0	2.196511	6.2	710.8	1.91	
0.37600000	1.915	844.8	4.494E-04	1.0%	0.147	0.03085	0.116	1.0326%	0.0039	1.3	0.0	2.197593	6.2	712.3	1.915	
0.37600000	1.92	844.8	4.506E-04	1.0%	0.146	0.0308	0.116	1.0357%	0.0039	1.3	0.0	2.198661	6.1	713.9	1.92	
0.37600000	1.925	844.8	4.517E-04	1.0%	0.146	0.03075	0.116	1.0389%	0.0039	1.3	0.0	2.199716	6.1	715.4	1.925	
0.37600000	1.93	844.8	4.529E-04	1.0%	0.146	0.0307	0.116	1.0421%	0.0039	1.3	0.0	2.200758	6.1	716.9	1.93	
0.37600000	1.935	844.8	4.541E-04	1.0%	0.146	0.03065	0.116	1.0453%	0.0039	1.3	0.0	2.201786	6.1	718.4	1.935	
0.37600000	1.94	844.8	4.553E-04	1.0%	0.146	0.0306	0.115	1.0484%	0.0039	1.3	0.0	2.202802	6.1	719.9	1.94	
0.37600000	1.945	844.8	4.564E-04	1.0%	0.146	0.03055	0.115	1.0516%	0.0040	1.3	0.0	2.203804	6.0	721.4	1.945	
0.37600000	1.95	844.8	4.576E-04	1.0%	0.146	0.0305	0.115	1.0548%	0.0040	1.3	0.0	2.204794	6.0	722.9	1.95	
0.37600000	1.955	844.8	4.588E-04	1.0%	0.146	0.03045	0.115	1.0580%	0.0040	1.3	0.0	2.20577	6.0	724.4	1.955	
0.37600000	1.96	844.8	4.599E-04	1.0%	0.146	0.0304	0.115	1.0612%	0.0040	1.3	0.0	2.206733	6.0	725.9	1.96	
0.37600000	1.965	844.8	4.611E-04	1.0%	0.146	0.03035	0.115	1.0644%	0.0040	1.2	0.0	2.207683	6.0	727.4	1.965	
0.37600000	1.97	844.8	4.623E-04	1.0%	0.145	0.0303	0.115	1.0676%	0.0040	1.2	0.0	2.20862	5.9	728.9	1.97	
0.37600000	1.975	844.8	4.635E-04	1.0%	0.145	0.03025	0.115	1.0708%	0.0040	1.2	0.0	2.209545	5.9	730.4	1.975	
0.37600000	1.98	844.8	4.646E-04	1.0%	0.145	0.0302	0.115	1.0740%	0.0040	1.2	0.0	2.210456	5.9	731.9	1.98	
0.37600000	1.985	844.8	4.658E-04	1.0%	0.145	0.03015	0.115	1.0772%	0.0041	1.2	0.0	2.211354	5.9	733.5	1.985	
0.37600000	1.99	844.8	4.670E-04	1.0%	0.145	0.0301	0.115	1.0804%	0.0041	1.2	0.0	2.21224	5.9	735.0	1.99	
0.37600000	1.995	844.8	4.682E-04	1.0%	0.145	0.03005	0.115	1.0837%	0.0041	1.2	0.0	2.213112	5.8	736.5	1.995	
0.37600000	2	844.8	4.693E-04	1.0%	0.145	0.03	0.115	1.0869%	0.0041	1.2	0.0	2.213972	5.8	738.0	2	
0.37600000	2.005	844.8	4.705E-04	1.0%	0.145	0.02995	0.115	1.0901%	0.0041	1.2	0.0	2.214818	5.8	739.5	2.005	
0.37600000	2.01	844.8	4.717E-04	1.0%	0.145	0.0299	0.115	1.0934%	0.0041	1.2	0.0	2.215652	5.8	741.0	2.01	
0.37600000	2.015	844.8	4.729E-04	1.0%	0.145	0.02985	0.115	1.0966%	0.0041	1.2	0.0	2.216473	5.7	742.5	2.015	

0.37600000	2.02	844.8	4.740E-04	1.0%	0.144	0.0298	0.115	1.0999%	0.0041	1.2	0.0	2.217281	5.7	744.1	2.02
0.37600000	2.025	844.8	4.752E-04	1.0%	0.144	0.02975	0.115	1.1031%	0.0041	1.2	0.0	2.218077	5.7	745.6	2.025
0.37600000	2.03	844.8	4.764E-04	1.0%	0.144	0.0297	0.115	1.1064%	0.0042	1.2	0.0	2.218859	5.7	747.1	2.03
0.37600000	2.035	844.8	4.775E-04	1.0%	0.144	0.02965	0.114	1.1096%	0.0042	1.2	0.0	2.219629	5.7	748.6	2.035
0.37600000	2.04	844.8	4.787E-04	1.0%	0.144	0.0296	0.114	1.1129%	0.0042	1.2	0.0	2.220386	5.6	750.1	2.04
0.37600000	2.045	844.8	4.799E-04	1.0%	0.144	0.02955	0.114	1.1162%	0.0042	1.2	0.0	2.22113	5.6	751.7	2.045
0.37600000	2.05	844.8	4.811E-04	1.0%	0.144	0.0295	0.114	1.1194%	0.0042	1.2	0.0	2.221862	5.6	753.2	2.05
0.37600000	2.055	844.8	4.822E-04	1.0%	0.144	0.02945	0.114	1.1227%	0.0042	1.2	0.0	2.222581	5.6	754.7	2.055
0.37600000	2.06	844.8	4.834E-04	1.0%	0.144	0.0294	0.114	1.1260%	0.0042	1.2	0.0	2.223287	5.6	756.2	2.06
0.37600000	2.065	844.8	4.846E-04	1.0%	0.143	0.02935	0.114	1.1293%	0.0042	1.2	0.0	2.223981	5.5	757.7	2.065
0.37600000	2.07	844.8	4.858E-04	1.0%	0.143	0.0293	0.114	1.1326%	0.0043	1.2	0.0	2.224662	5.5	759.3	2.07
0.37600000	2.075	844.8	4.869E-04	1.0%	0.143	0.02925	0.114	1.1359%	0.0043	1.2	0.0	2.22533	5.5	760.8	2.075
0.37600000	2.08	844.8	4.881E-04	1.0%	0.143	0.0292	0.114	1.1392%	0.0043	1.2	0.0	2.225986	5.5	762.3	2.08
0.37600000	2.085	844.8	4.893E-04	1.0%	0.143	0.02915	0.114	1.1425%	0.0043	1.2	0.0	2.226629	5.5	763.9	2.085
0.37600000	2.09	844.8	4.905E-04	1.0%	0.143	0.0291	0.114	1.1458%	0.0043	1.2	0.0	2.227259	5.5	765.4	2.09
0.37600000	2.095	844.8	4.916E-04	1.0%	0.143	0.02905	0.114	1.1492%	0.0043	1.2	0.0	2.227877	5.4	766.9	2.095
0.37600000	2.1	844.8	4.928E-04	1.0%	0.143	0.029	0.114	1.1525%	0.0043	1.2	0.0	2.228483	5.4	768.4	2.1
0.37600000	2.105	844.8	4.940E-04	1.0%	0.143	0.02895	0.114	1.1558%	0.0043	1.2	0.0	2.229075	5.4	770.0	2.105
0.37600000	2.11	844.8	4.951E-04	1.0%	0.143	0.0289	0.114	1.1592%	0.0044	1.1	0.0	2.229656	5.4	771.5	2.11
0.37600000	2.115	844.8	4.963E-04	1.0%	0.142	0.02885	0.114	1.1625%	0.0044	1.1	0.0	2.230224	5.4	773.0	2.115
0.37600000	2.12	844.8	4.975E-04	1.0%	0.142	0.0288	0.113	1.1658%	0.0044	1.1	0.0	2.230779	5.3	774.6	2.12
0.37600000	2.125	844.8	4.987E-04	1.0%	0.142	0.02875	0.113	1.1692%	0.0044	1.1	0.0	2.231322	5.3	776.1	2.125
0.37600000	2.13	844.8	4.998E-04	1.0%	0.142	0.0287	0.113	1.1726%	0.0044	1.1	0.0	2.231852	5.3	777.6	2.13
0.37600000	2.135	844.8	5.010E-04	1.0%	0.142	0.02865	0.113	1.1759%	0.0044	1.1	0.0	2.23237	5.3	779.2	2.135
0.37600000	2.14	844.8	5.022E-04	1.0%	0.142	0.0286	0.113	1.1793%	0.0044	1.1	0.0	2.232876	5.3	780.7	2.14
0.37600000	2.145	844.8	5.034E-04	1.0%	0.142	0.02855	0.113	1.1827%	0.0044	1.1	0.0	2.233369	5.2	782.3	2.145
0.37600000	2.15	844.8	5.045E-04	1.0%	0.142	0.0285	0.113	1.1860%	0.0045	1.1	0.0	2.23385	5.2	783.8	2.15
0.37600000	2.155	844.8	5.057E-04	1.0%	0.142	0.02845	0.113	1.1894%	0.0045	1.1	0.0	2.234318	5.2	785.3	2.155
0.37600000	2.16	844.8	5.069E-04	1.0%	0.141	0.0284	0.113	1.1928%	0.0045	1.1	0.0	2.234774	5.2	786.9	2.16
0.37600000	2.165	844.8	5.081E-04	1.0%	0.141	0.02835	0.113	1.1962%	0.0045	1.1	0.0	2.235218	5.2	788.4	2.165
0.37600000	2.17	844.8	5.092E-04	1.0%	0.141	0.0283	0.113	1.1996%	0.0045	1.1	0.0	2.235649	5.1	790.0	2.17
0.37600000	2.175	844.8	5.104E-04	1.0%	0.141	0.02825	0.113	1.2030%	0.0045	1.1	0.0	2.236068	5.1	791.5	2.175
0.37600000	2.18	844.8	5.116E-04	1.0%	0.141	0.0282	0.113	1.2064%	0.0045	1.1	0.0	2.236475	5.1	793.1	2.18
0.37600000	2.185	844.8	5.127E-04	1.0%	0.141	0.02815	0.113	1.2098%	0.0045	1.1	0.0	2.236869	5.1	794.6	2.185
0.37600000	2.19	844.8	5.139E-04	1.0%	0.141	0.0281	0.113	1.2133%	0.0046	1.1	0.0	2.237252	5.1	796.2	2.19
0.37600000	2.195	844.8	5.151E-04	1.0%	0.141	0.02805	0.113	1.2167%	0.0046	1.1	0.0	2.237621	5.1	797.7	2.195
0.37600000	2.2	844.8	5.163E-04	1.0%	0.141	0.028	0.113	1.2201%	0.0046	1.1	0.0	2.237979	5.0	799.3	2.2
0.37600000	2.205	844.8	5.174E-04	1.0%	0.140	0.02795	0.112	1.2235%	0.0046	1.1	0.0	2.238324	5.0	800.8	2.205
0.37600000	2.21	844.8	5.186E-04	1.0%	0.140	0.0279	0.112	1.2270%	0.0046	1.1	0.0	2.238657	5.0	802.4	2.21
0.37600000	2.215	844.8	5.198E-04	1.0%	0.140	0.02785	0.112	1.2304%	0.0046	1.1	0.0	2.238978	5.0	803.9	2.215
0.37600000	2.22	844.8	5.210E-04	1.0%	0.140	0.0278	0.112	1.2339%	0.0046	1.1	0.0	2.239287	5.0	805.5	2.22
0.37600000	2.225	844.8	5.221E-04	1.0%	0.140	0.02775	0.112	1.2374%	0.0047	1.1	0.0	2.239584	4.9	807.1	2.225
0.37600000	2.23	844.8	5.233E-04	1.0%	0.140	0.0277	0.112	1.2408%	0.0047	1.1	0.0	2.239868	4.9	808.6	2.23
0.37600000	2.235	844.8	5.245E-04	1.0%	0.140	0.02765	0.112	1.2443%	0.0047	1.1	0.0	2.24014	4.9	810.2	2.235
0.37600000	2.24	844.8	5.257E-04	1.0%	0.140	0.0276	0.112	1.2478%	0.0047	1.1	0.0	2.2404	4.9	811.7	2.24
0.37600000	2.245	844.8	5.268E-04	1.0%	0.140	0.02755	0.112	1.2513%	0.0047	1.1	0.0	2.240648	4.9	813.3	2.245
0.37600000	2.25	844.8	5.280E-04	1.0%	0.139	0.0275	0.112	1.2547%	0.0047	1.1	0.0	2.240884	4.9	814.9	2.25
0.37600000	2.255	844.8	5.292E-04	1.0%	0.139	0.02745	0.112	1.2582%	0.0047	1.1	0.0	2.241107	4.8	816.4	2.255
0.37600000	2.26	844.8	5.303E-04	1.0%	0.139	0.0274	0.112	1.2617%	0.0047	1.1	0.0	2.241319	4.8	818.0	2.26
0.37600000	2.265	844.8	5.315E-04	1.0%	0.139	0.02735	0.112	1.2653%	0.0048	1.1	0.0	2.241518	4.8	819.6	2.265
0.37600000	2.27	844.8	5.327E-04	1.0%	0.139	0.0273	0.112	1.2688%	0.0048	1.0	0.0	2.241705	4.8	821.1	2.27
0.37600000	2.275	844.8	5.339E-04	1.0%	0.139	0.02725	0.112	1.2723%	0.0048	1.0	0.0	2.241881	4.8	822.7	2.275
0.37600000	2.28	844.8	5.350E-04	1.0%	0.139	0.0272	0.112	1.2758%	0.0048	1.0	0.0	2.242044	4.8	824.3	2.28
0.37600000	2.285	844.8	5.362E-04	1.0%	0.139	0.02715	0.111	1.2793%	0.0048	1.0	0.0	2.242195	4.7	825.9	2.285
0.37600000	2.29	844.8	5.374E-04	1.0%	0.139	0.0271	0.111	1.2829%	0.0048	1.0	0.0	2.242334	4.7	827.4	2.29
0.37600000	2.295	844.8	5.386E-04	1.0%	0.138	0.02705	0.111	1.2864%	0.0048	1.0	0.0	2.242461	4.7	829.0	2.295
0.37600000	2.3	844.8	5.397E-04	1.0%	0.138	0.027	0.111	1.2900%	0.0049	1.0	0.0	2.242576	4.7	830.6	2.3
0.37600000	2.305	844.8	5.409E-04	1.0%	0.138	0.02695	0.111	1.2935%	0.0049	1.0	0.0	2.242679	4.7	832.2	2.305
0.37600000	2.31	844.8	5.421E-04	1.0%	0.138	0.0269	0.111	1.2971%	0.0049	1.0	0.0	2.24277	4.7	833.7	2.31
0.37600000	2.315	844.8	5.433E-04	1.0%	0.138	0.02685	0.111	1.3007%	0.0049	1.0	0.0	2.24285	4.6	835.3	2.315
0.37600000	2.32	844.8	5.444E-04	1.0%	0.138	0.0268	0.111	1.3042%	0.0049	1.0	0.0	2.242917	4.6	836.9	2.32
0.37600000	2.325	844.8	5.456E-04	1.0%	0.138	0.02675	0.111	1.3078%	0.0049	1.0	0.0	2.242972	4.6	838.5	2.325
0.37600000	2.33	844.8	5.468E-04	1.0%	0.138	0.0267	0.111	1.3114%	0.0049	1.0	0.0	2.243015	4.6	840.1	2.33
0.37600000	2.335	844.8	5.479E-04	1.0%	0.137	0.02665	0.111	1.3150%	0.0049	1.0	0.0	2.243046	4.6	841.7	2.335
0.37600000	2.34	844.8	5.491E-04	1.0%	0.137	0.0266	0.111	1.3186%	0.0050	1.0	0.0	2.243066	4.5	843.3	2.34
0.37600000	2.345	844.8	5.503E-04	1.0%	0.137	0.02655	0.111	1.3222%	0.0050	1.0	0.0	2.243073	4.5	844.8	2.345
0.37600000	2.35	844.8	5.515E-04	1.0%	0.137	0.0265	0.111	1.3258%	0.0050	1.0	0.0	2.243068	4.5	846.4	2.35
0.37600000	2.355	844.8	5.526E-04	1.0%	0.137	0.02645	0.111	1.3294%	0.0050	1.0	0.0	2.243052	4.5	848.0	2.355
0.37600000	2.36	844.8	5.538E-04	1.0%	0.137	0.0264	0.110	1.3331%	0.0050	1.0	0.0	2.243024	4.5	849.6	2.36
0.37600000	2.365	844.8	5.550E-04	1.0%	0.137	0.02635	0.110	1.3367%	0.0050	1.0	0.0	2.242984	4.5	851.2	2.365
0.37600000	2.37	844.8	5.562E-04	1.0%	0.137	0.0263	0.110	1.3403%	0.0050	1.0	0.0	2.242932	4.4	852.8	2.37
0.37600000	2.375	844.8	5.573E-04	1.0%	0.137	0.02625	0.110	1.3440%	0.0051	1.0	0.0	2.242868	4.4	854.4	2.375
0.37600000	2.38	844.8	5.585E-04	1.0%	0.136	0.0262	0.110	1.3476%	0.0051	1.0	0.0	2.242792	4.4	856.0	2.38
0.37600000	2.385	844.8	5.597E-04	1.0%	0.136	0.02615	0.110	1.3513%	0.0051	1.0	0.0	2.242704	4.4	857.6	2.385
0.37600000	2.39	844.8	5.609E-04	1.0%	0.136	0.0261	0.110	1.3550%	0.0051	1.0	0.0	2.242605	4.4	859.2	2.39
0.37600000	2.395	844.8	5.620E-04	1.0%	0.136	0.02605	0.110	1.3586%	0.0051	1.0	0.0	2.242493	4.4	860.8	2.395
0.37600000	2.4	844.8	5.632E-04	1.0%	0.136	0.026	0.110	1.3623%	0.0051	1.0	0.0	2.24237	4.4	862.5	2.4
0.37600000	2.405	844.8	5.644E-04	1.0%	0.136	0.02595	0.110	1.3660%	0.0051	1.0	0.0	2.242235	4.3	864.1	2.405
0.37600000	2.41	844.8	5.655E-04	1.0%	0.136	0.0259	0.110	1.3697%	0.0052	1.0	0.0	2.242089	4.3	865.7	2.41
0.37600000	2.415	844.8	5.667E-04	1.0%	0.136	0.02585	0.110	1.3734%	0.0052	1.0	0.0	2.24193	4.3	867.3	2.415
0.37600000	2.42	844.8	5.679E-04	1.0%	0.135	0.0258	0.110	1.3771%	0.0052	1.0	0.0	2.24176	4.3	868.9	2.42
0.37600000	2.425	844.8	5.691E-04	1.0%	0.135	0.02575	0.110	1.3808%	0.0052	1.0	0.0	2.241578	4.3	870.5	2.425
0.37600000	2.43	844.8	5.702E-04	1.0%	0.135	0.0257	0.110	1.3845%	0.0052	1.0	0.0	2.241384	4.3	872.1	2.43
0.37600000	2.435	844.8	5.714E-04	1.0%	0.135	0.02565	0.109	1.3883%	0.0052	1.0	0.0	2.241178	4.2	873.8	2.435
0.37600000	2.44	844.8	5.726E-04	1.0%	0.135	0.0256	0.109	1.3920%	0.0052	1.0	0.0	2.240961	4.2	875.4	2.44
0.37600000	2.445	844.8	5.738E-04	1.0%	0.135	0.02555	0.109	1.3957%	0.0052	1.0	0.0	2.240732	4.2	877.0	2.445
0.37600000	2.45	844.8	5.749E-04	1.0%	0.135	0.0255	0.109	1.3995%	0.0053	1.0	0.0	2.240491	4.2	878.6	2.45
0.37600000	2.455	844.8	5.761E-04	1.0%	0.135	0.02545	0.109	1.4033%	0.0053	0.9	0.0	2.240238	4.2	880.3	2.455
0.37600000	2.46	844.8	5.773E-04	1.0%	0.135	0.0254	0.109	1.4070%	0.0053	0.9	0.0	2.239974	4.2	881.9	2.46
0.37600000	2.465	844.8	5.785E-04	1.0%	0.134	0.02535	0.109	1.4108%	0.0053	0.9	0.0	2.239698	4.1	883.5	2.465
0.37600000	2.47	844.8	5.796E-04	1.0%	0.134	0.0253	0.109	1.4146%	0.0053	0.9	0.0	2.23941	4.1	885.1	2.47
0.37600000	2.475	844.8	5.808E-04	1.0%	0.134	0.02525	0.109	1.4184%	0.0053	0.9	0.0	2.239111	4.1	886.8	2.475
0.37600000	2.48	844.8	5.820E-04	1.0%	0.134	0.0252	0.109	1.4221%	0.0053	0.9	0.0	2.2388	4.1	888.4	2.48
0.37600000	2.485	844.8	5.831E-04	1.0%	0.134	0.02515	0.109	1.4260%	0.0054	0.9	0.0	2.238477	4.1	890.1	2.485
0.37600000	2.49	844.8	5.843E-04	1.0%	0.134	0.0251	0.109	1.4298%	0.0054	0.9	0.0	2.238142	4.1	891.7	2.49
0.37600000	2.495	844.8	5.855E-04	1.0%	0.134	0.02505	0.109	1.4336%	0.0054	0.9	0.0	2.237796	4.0	893.3	2.495
0.37600000	2.5	844.8	5.867E-04	1.0%	0.134	0.025	0.109	1.4374%	0.0054	0.9	0.0	2.237438	4.0	895.0	2.5
0.37600000	2.505	844.8	5.878E-04	1.0%	0.133	0.02495	0.108	1.4412%	0.0054	0.9	0.0	2.237069	4.0	896.6	2.505
0.37600000	2.51	844.8	5.890E-04	1.0%	0.133	0.0249	0.108	1.4451%	0.0054	0.9	0.0	2.236688	4.0	898.3	2.51
0.37600000	2.515	844.8	5.902E-04	1.0%	0.133	0.02485	0.108	1.4489%	0.0054	0.9	0.0	2.236295	4.0	899.9	2.515
0.37600000	2.52	844.8	5.914E-04	1.0%	0.133	0.0248	0.108	1.4528%	0.0055	0.9	0.0	2.23589	4.0	901.6	2.52
0.37600000	2.525	844.8	5.925E-04	1.0%	0.133	0.02475	0.108	1.4566%	0.0055	0.9	0.0	2.235474	4.0	903.2	2.525
0.37600000	2.53	844.8	5.937E-04	1.0%	0.133	0.0247	0.108	1.4605%	0.0055	0.9	0.0	2.235047	3.9	904.9	2.53
0.37600000	2.535	844.8	5.949E-04	1.0%	0.133	0.02465	0.108	1.4644%	0.0055	0.9	0.0	2.234607	3.9	906.5	2.535
0.37600000	2.54	844.8	5.961E-04	1.0%	0.133	0.0246	0.108	1.4683%	0.0055	0.9	0.0	2.234156	3.9	908.2	2.54
0.37600000	2.545	844.8	5.972E-04	1.0%	0.132	0.02455	0.108	1.4722%	0.0055	0.9	0.0	2.233694	3.9	909.9	2.545
0.37600000	2.55	844.8	5.984E-04	1.0%	0.132	0.0245	0.108	1.4761%	0.0056	0.9	0.0	2.233219	3.9	911.5	2.55
0.37600000	2.555	844.8	5.996E-04	1.0%	0.132	0.02445	0.108	1.4800%	0.0056	0.9	0.0	2.232734	3.9	913.2	2.555
0.37600000	2.56	844.8	6.007E-04	1.0%	0.132	0.0244	0.108	1.4839%	0.0056	0.9	0.0	2.232236	3.9	914.9	2.56
0.37600000	2.565	844.8	6.019E-04	1.0%	0.132	0.02435	0.108	1.4878%	0.0056	0.9	0.0	2.231727	3.8	916.5	2.565
0.37600000	2.57	844.8	6.031E-04	1.0%	0.132	0.0243	0.108	1.4918%	0.0056	0.9	0.0	2.231207	3.8	918.2	2.57
0.37600000	2.575	844.8	6.043E-04	1.0%	0.132	0.02425	0.107	1.4957%	0.0056	0.9	0.0	2.230674	3.8	919.9	2.575
0.37600000	2.58	844.8	6.054E-04	1.0%	0.132	0.0242	0.107	1.4996%	0.0056	0.9	0.0	2.230131	3.8	921.5	2.58
0.37600000	2.585	844.8	6.066E-04	1.0%	0.131	0.02415	0.107	1.5036%	0.0057	0.9	0.0	2.229575	3.8	923.2	2.585
0.37600000	2.59	844.8	6.078E-04	1.0%	0.131	0.0241	0.107	1.5076%	0.0057	0.9	0.0	2.229008	3.8	924.9	2.59
0.37600000	2.595	844.8	6.090E-04	1.0%	0.131	0.02405	0.107	1.5115%	0.0057	0.9	0.0	2.22843	3.7	926.6	2.595
0.37600000	2.6	844.8	6.101E-04	1.0%	0.131	0.024	0.107	1.5155%	0.0057	0.9	0.0	2.22784	3.7	928.3	2.6
0.37600000	2.605	844.8	6.113E-04	1.0%	0.131	0.02395	0.107	1.5195%	0.0057	0.9	0.0	2.227238	3.7	930.0	2.605
0.37600000	2.61	844.8	6.125E-04	1.0%	0.131	0.0239	0.107	1.5235%	0.0057	0.9	0.0	2.226625	3.7	931.6	2.61
0.37600000	2.615	844.8	6.137E-04	1.0%	0.131	0.02385	0.107	1.5275%	0.0057	0.9	0.0	2.226001	3.7	933.3	2.615
0.37600000	2.62	844.8	6.148E-04	1.0%	0.131	0.0238	0.107	1.5316%	0.0058	0.9	0.0	2.225364	3.7	935.0	2.62
0.37600000	2.625	844.8	6.160E-04	1.0%	0.130	0.02375	0.107	1.5356%	0.0058	0.9	0.0	2.224717	3.7	936.7	2.625
0.37600000	2.63	844.8	6.172E-04	1.0%	0.130	0.0237	0.107	1.5396%	0.0058	0.9	0.0	2.224057	3.6	938.4	2.63
0.37600000	2.635	844.8	6.183E-04	1.0%	0.130	0.02365	0.107	1.5437%	0.0058	0.9	0.0	2.223386	3.6	940.1	2.635
0.37600000	2.64	844.8	6.195E-04	1.0%	0.130	0.0236	0.106	1.5477%	0.0058	0.9	0.0	2.222704	3.6	941.8	2.64
0.37600000	2.645	844.8	6.207E-04	1.0%	0.130	0.02355	0.106	1.5518%	0.0058	0.9	0.0	2.22201	3.6	943.5	2.645
0.37600000	2.65	844.8	6.219E-04	1.0%	0.130	0.0235	0.106	1.5558%	0.0058	0.9	0.0	2.221305	3.6	945.2	2.65
0.37600000	2.655	844.8	6.230E-04	1.0%	0.130	0.02345	0.106	1.5599%	0.0059	0.9	0.0	2.220588	3.6	946.9	2.655
0.37600000	2.66	844.8	6.242E-04	1.0%	0.130	0.0234	0.106	1.5640%	0.0059	0.9	0.0	2.219859	3.6	948.7	2.66
0.37600000	2.665	844.8	6.254E-04	1.0%	0.129	0.02335	0.106	1.5681%	0.0059	0.8	0.0	2.219119	3.5	950.4	2.665
0.37600000	2.67	844.8	6.266E-04	1.0%	0.129	0.0233	0.106	1.5722%	0.0059	0.8	0.0	2.218368	3.5	952.1	2.67
0.37600000	2.675	844.8	6.277E-04	1.0%	0.129	0.02325	0.106	1.5763%	0.0059	0.8	0.0	2.217605	3.5	953.8	2.675
0.37600000	2.68	844.8	6.289E-04	1.0%	0.129	0.0232	0.106	1.5805%	0.0059	0.8	0.0	2.21683	3.5	955.5	2.68
0.37600000	2.685	844.8	6.301E-04	1.0%	0.129	0.02315	0.106	1.5846%	0.0060	0.8	0.0	2.216044	3.5	957.3	2.685
0.37600000	2.69	844.8	6.313E-04	1.0%	0.129	0.0231	0.106	1.5887%	0.0060	0.8	0.0	2.215247	3.5	959.0	2.69
0.37600000	2.695	844.8	6.324E-04	1.0%	0.129	0.02305	0.106	1.5929%	0.0060	0.8	0.0	2.214438	3.5	960.7	2.695
0.37600000	2.7	844.8	6.336E-04	1.0%	0.129	0.023	0.106	1.5971%	0.0060	0.8	0.0	2.213617	3.4	962.4	2.7
0.37600000	2.705	844.8	6.348E-04	1.0%	0.128	0.02295	0.105	1.6012%	0.0060	0.8	0.0	2.212785	3.4	964.2	2.705

0.37600000	2.71	844.8	6.359E-04	1.0%	0.128	0.0229	0.105	1.6054%	0.0060	0.8	0.0	2.211942	3.4	965.9	2.71
0.37600000	2.715	844.8	6.371E-04	1.0%	0.128	0.02285	0.105	1.6096%	0.0061	0.8	0.0	2.211087	3.4	967.7	2.715
0.37600000	2.72	844.8	6.383E-04	1.0%	0.128	0.0228	0.105	1.6138%	0.0061	0.8	0.0	2.21022	3.4	969.4	2.72
0.37600000	2.725	844.8	6.395E-04	1.0%	0.128	0.02275	0.105	1.6180%	0.0061	0.8	0.0	2.209342	3.4	971.1	2.725
0.37600000	2.73	844.8	6.406E-04	1.0%	0.128	0.0227	0.105	1.6222%	0.0061	0.8	0.0	2.208453	3.4	972.9	2.73
0.37600000	2.735	844.8	6.418E-04	1.0%	0.128	0.02265	0.105	1.6265%	0.0061	0.8	0.0	2.207552	3.4	974.6	2.735
0.37600000	2.74	844.8	6.430E-04	1.0%	0.127	0.0226	0.105	1.6307%	0.0061	0.8	0.0	2.20664	3.3	976.4	2.74
0.37600000	2.745	844.8	6.442E-04	1.0%	0.127	0.02255	0.105	1.6350%	0.0061	0.8	0.0	2.205716	3.3	978.1	2.745
0.37600000	2.75	844.8	6.453E-04	1.0%	0.127	0.0225	0.105	1.6392%	0.0062	0.8	0.0	2.20478	3.3	979.9	2.75
0.37600000	2.755	844.8	6.465E-04	1.0%	0.127	0.02245	0.105	1.6435%	0.0062	0.8	0.0	2.203834	3.3	981.7	2.755
0.37600000	2.76	844.8	6.477E-04	1.0%	0.127	0.0224	0.105	1.6478%	0.0062	0.8	0.0	2.202875	3.3	983.4	2.76
0.37600000	2.765	844.8	6.489E-04	1.0%	0.127	0.02235	0.104	1.6521%	0.0062	0.8	0.0	2.201906	3.3	985.2	2.765
0.37600000	2.77	844.8	6.500E-04	1.0%	0.127	0.0223	0.104	1.6564%	0.0062	0.8	0.0	2.200924	3.3	987.0	2.77
0.37600000	2.775	844.8	6.512E-04	1.0%	0.127	0.02225	0.104	1.6607%	0.0062	0.8	0.0	2.199932	3.2	988.7	2.775
0.37600000	2.78	844.8	6.524E-04	1.0%	0.126	0.0222	0.104	1.6650%	0.0063	0.8	0.0	2.198927	3.2	990.5	2.78
0.37600000	2.785	844.8	6.535E-04	1.0%	0.126	0.02215	0.104	1.6693%	0.0063	0.8	0.0	2.197912	3.2	992.3	2.785
0.37600000	2.79	844.8	6.547E-04	1.0%	0.126	0.0221	0.104	1.6737%	0.0063	0.8	0.0	2.196884	3.2	994.1	2.79
0.37600000	2.795	844.8	6.559E-04	1.0%	0.126	0.02205	0.104	1.6780%	0.0063	0.8	0.0	2.195846	3.2	995.8	2.795
0.37600000	2.8	844.8	6.571E-04	1.0%	0.126	0.022	0.104	1.6824%	0.0063	0.8	0.0	2.194796	3.2	997.6	2.8
0.37600000	2.805	844.8	6.582E-04	1.0%	0.126	0.02195	0.104	1.6868%	0.0063	0.8	0.0	2.193734	3.2	999.4	2.805
0.37600000	2.81	844.8	6.594E-04	1.0%	0.126	0.0219	0.104	1.6911%	0.0064	0.8	0.0	2.192661	3.1	1001.2	2.81
0.37600000	2.815	844.8	6.606E-04	1.0%	0.125	0.02185	0.104	1.6955%	0.0064	0.8	0.0	2.191577	3.1	1003.0	2.815
0.37600000	2.82	844.8	6.618E-04	1.0%	0.125	0.0218	0.104	1.6999%	0.0064	0.8	0.0	2.190481	3.1	1004.8	2.82
0.37600000	2.825	844.8	6.629E-04	1.0%	0.125	0.02175	0.103	1.7044%	0.0064	0.8	0.0	2.189373	3.1	1006.6	2.825
0.37600000	2.83	844.8	6.641E-04	1.0%	0.125	0.0217	0.103	1.7088%	0.0064	0.8	0.0	2.188254	3.1	1008.4	2.83
0.37600000	2.835	844.8	6.653E-04	1.0%	0.125	0.02165	0.103	1.7132%	0.0064	0.8	0.0	2.187124	3.1	1010.2	2.835
0.37600000	2.84	844.8	6.665E-04	1.0%	0.125	0.0216	0.103	1.7177%	0.0065	0.8	0.0	2.185982	3.1	1012.0	2.84
0.37600000	2.845	844.8	6.676E-04	1.0%	0.125	0.02155	0.103	1.7221%	0.0065	0.8	0.0	2.184828	3.1	1013.8	2.845
0.37600000	2.85	844.8	6.688E-04	1.0%	0.125	0.0215	0.103	1.7266%	0.0065	0.8	0.0	2.183663	3.0	1015.7	2.85
0.37600000	2.855	844.8	6.700E-04	1.0%	0.124	0.02145	0.103	1.7311%	0.0065	0.8	0.0	2.182487	3.0	1017.5	2.855
0.37600000	2.86	844.8	6.711E-04	1.0%	0.124	0.0214	0.103	1.7356%	0.0065	0.8	0.0	2.181299	3.0	1019.3	2.86
0.37600000	2.865	844.8	6.723E-04	1.0%	0.124	0.02135	0.103	1.7401%	0.0065	0.8	0.0	2.1801	3.0	1021.1	2.865
0.37600000	2.87	844.8	6.735E-04	1.0%	0.124	0.0213	0.103	1.7446%	0.0066	0.8	0.0	2.178889	3.0	1023.0	2.87
0.37600000	2.875	844.8	6.747E-04	1.0%	0.124	0.02125	0.103	1.7491%	0.0066	0.8	0.0	2.177667	3.0	1024.8	2.875
0.37600000	2.88	844.8	6.758E-04	1.0%	0.124	0.0212	0.102	1.7537%	0.0066	0.8	0.0	2.176433	3.0	1026.6	2.88
0.37600000	2.885	844.8	6.770E-04	1.0%	0.124	0.02115	0.102	1.7582%	0.0066	0.8	0.0	2.175188	3.0	1028.5	2.885
0.37600000	2.89	844.8	6.782E-04	1.0%	0.123	0.0211	0.102	1.7628%	0.0066	0.8	0.0	2.173931	2.9	1030.3	2.89
0.37600000	2.895	844.8	6.794E-04	1.0%	0.123	0.02105	0.102	1.7674%	0.0066	0.8	0.0	2.172663	2.9	1032.1	2.895
0.37600000	2.9	844.8	6.805E-04	1.0%	0.123	0.021	0.102	1.7720%	0.0067	0.8	0.0	2.171383	2.9	1034.0	2.9
0.37600000	2.905	844.8	6.817E-04	1.0%	0.123	0.02095	0.102	1.7766%	0.0067	0.7	0.0	2.170092	2.9	1035.8	2.905
0.37600000	2.91	844.8	6.829E-04	1.0%	0.123	0.0209	0.102	1.7812%	0.0067	0.7	0.0	2.168789	2.9	1037.7	2.91
0.37600000	2.915	844.8	6.841E-04	1.0%	0.123	0.02085	0.102	1.7858%	0.0067	0.7	0.0	2.167475	2.9	1039.6	2.915
0.37600000	2.92	844.8	6.852E-04	1.0%	0.123	0.0208	0.102	1.7904%	0.0067	0.7	0.0	2.166149	2.9	1041.4	2.92
0.37600000	2.925	844.8	6.864E-04	1.0%	0.122	0.02075	0.102	1.7951%	0.0067	0.7	0.0	2.164812	2.9	1043.3	2.925
0.37600000	2.93	844.8	6.876E-04	1.0%	0.122	0.0207	0.102	1.7998%	0.0068	0.7	0.0	2.163463	2.8	1045.2	2.93
0.37600000	2.935	844.8	6.887E-04	1.0%	0.122	0.02065	0.102	1.8044%	0.0068	0.7	0.0	2.162103	2.8	1047.0	2.935
0.37600000	2.94	844.8	6.899E-04	1.0%	0.122	0.0206	0.101	1.8091%	0.0068	0.7	0.0	2.160731	2.8	1048.9	2.94
0.37600000	2.945	844.8	6.911E-04	1.0%	0.122	0.02055	0.101	1.8138%	0.0068	0.7	0.0	2.159348	2.8	1050.8	2.945
0.37600000	2.95	844.8	6.923E-04	1.0%	0.122	0.0205	0.101	1.8185%	0.0068	0.7	0.0	2.157953	2.8	1052.7	2.95
0.37600000	2.955	844.8	6.934E-04	1.0%	0.122	0.02045	0.101	1.8232%	0.0069	0.7	0.0	2.156547	2.8	1054.5	2.955
0.37600000	2.96	844.8	6.946E-04	1.0%	0.121	0.0204	0.101	1.8280%	0.0069	0.7	0.0	2.155129	2.8	1056.4	2.96
0.37600000	2.965	844.8	6.958E-04	1.0%	0.121	0.02035	0.101	1.8327%	0.0069	0.7	0.0	2.153699	2.8	1058.3	2.965
0.37600000	2.97	844.8	6.970E-04	1.0%	0.121	0.0203	0.101	1.8375%	0.0069	0.7	0.0	2.152258	2.7	1060.2	2.97
0.37600000	2.975	844.8	6.981E-04	1.0%	0.121	0.02025	0.101	1.8423%	0.0069	0.7	0.0	2.150806	2.7	1062.1	2.975
0.37600000	2.98	844.8	6.993E-04	1.0%	0.121	0.0202	0.101	1.8471%	0.0069	0.7	0.0	2.149342	2.7	1064.0	2.98
0.37600000	2.985	844.8	7.005E-04	1.0%	0.121	0.02015	0.101	1.8519%	0.0070	0.7	0.0	2.147866	2.7	1065.9	2.985
0.37600000	2.99	844.8	7.017E-04	1.0%	0.121	0.0201	0.101	1.8567%	0.0070	0.7	0.0	2.146379	2.7	1067.9	2.99
0.37600000	2.995	844.8	7.028E-04	1.0%	0.120	0.02005	0.100	1.8615%	0.0070	0.7	0.0	2.14488	2.7	1069.8	2.995
0.37600000	3	844.8	7.040E-04	1.0%	0.120	0.02	0.100	1.8663%	0.0070	0.7	0.0	2.14337	2.7	1071.7	3
0.37600000	3.005	844.8	7.052E-04	1.0%	0.120	0.01995	0.100	1.8712%	0.0070	0.7	0.0	2.141848	2.7	1073.6	3.005
0.37600000	3.01	844.8	7.063E-04	1.0%	0.120	0.0199	0.100	1.8761%	0.0071	0.7	0.0	2.140314	2.7	1075.5	3.01
0.37600000	3.015	844.8	7.075E-04	1.0%	0.120	0.01985	0.100	1.8810%	0.0071	0.7	0.0	2.138769	2.6	1077.5	3.015
0.37600000	3.02	844.8	7.087E-04	1.0%	0.120	0.0198	0.100	1.8858%	0.0071	0.7	0.0	2.137213	2.6	1079.4	3.02
0.37600000	3.025	844.8	7.099E-04	1.0%	0.120	0.01975	0.100	1.8908%	0.0071	0.7	0.0	2.135645	2.6	1081.3	3.025
0.37600000	3.03	844.8	7.110E-04	1.0%	0.119	0.0197	0.100	1.8957%	0.0071	0.7	0.0	2.134065	2.6	1083.3	3.03
0.37600000	3.035	844.8	7.122E-04	1.0%	0.119	0.01965	0.100	1.9006%	0.0071	0.7	0.0	2.132473	2.6	1085.2	3.035
0.37600000	3.04	844.8	7.134E-04	1.0%	0.119	0.0196	0.100	1.9056%	0.0072	0.7	0.0	2.13087	2.6	1087.2	3.04
0.37600000	3.045	844.8	7.146E-04	1.0%	0.119	0.01955	0.099	1.9105%	0.0072	0.7	0.0	2.129256	2.6	1089.1	3.045
0.37600000	3.05	844.8	7.157E-04	1.0%	0.119	0.0195	0.099	1.9155%	0.0072	0.7	0.0	2.12763	2.6	1091.1	3.05
0.37600000	3.055	844.8	7.169E-04	1.0%	0.119	0.01945	0.099	1.9205%	0.0072	0.7	0.0	2.125992	2.5	1093.1	3.055
0.37600000	3.06	844.8	7.181E-04	1.0%	0.119	0.0194	0.099	1.9255%	0.0072	0.7	0.0	2.124342	2.5	1095.0	3.06
0.37600000	3.065	844.8	7.193E-04	1.0%	0.118	0.01935	0.099	1.9306%	0.0073	0.7	0.0	2.122681	2.5	1097.0	3.065
0.37600000	3.07	844.8	7.204E-04	1.0%	0.118	0.0193	0.099	1.9356%	0.0073	0.7	0.0	2.121008	2.5	1099.0	3.07
0.37600000	3.075	844.8	7.216E-04	1.0%	0.118	0.01925	0.099	1.9407%	0.0073	0.7	0.0	2.119324	2.5	1100.9	3.075
0.37600000	3.08	844.8	7.228E-04	1.0%	0.118	0.0192	0.099	1.9457%	0.0073	0.7	0.0	2.117628	2.5	1102.9	3.08
0.37600000	3.085	844.8	7.239E-04	1.0%	0.118	0.01915	0.099	1.9508%	0.0073	0.7	0.0	2.11592	2.5	1104.9	3.085
0.37600000	3.09	844.8	7.251E-04	1.0%	0.118	0.0191	0.099	1.9559%	0.0074	0.7	0.0	2.114201	2.5	1106.9	3.09
0.37600000	3.095	844.8	7.263E-04	1.0%	0.118	0.01905	0.099	1.9610%	0.0074	0.7	0.0	2.11247	2.5	1108.9	3.095
0.37600000	3.1	844.8	7.275E-04	1.0%	0.117	0.019	0.098	1.9662%	0.0074	0.7	0.0	2.110727	2.4	1110.9	3.1
0.37600000	3.105	844.8	7.286E-04	1.0%	0.117	0.01895	0.098	1.9713%	0.0074	0.7	0.0	2.108972	2.4	1112.9	3.105
0.37600000	3.11	844.8	7.298E-04	1.0%	0.117	0.0189	0.098	1.9765%	0.0074	0.7	0.0	2.107206	2.4	1114.9	3.11
0.37600000	3.115	844.8	7.310E-04	1.0%	0.117	0.01885	0.098	1.9816%	0.0075	0.7	0.0	2.105428	2.4	1116.9	3.115
0.37600000	3.12	844.8	7.322E-04	1.0%	0.117	0.0188	0.098	1.9868%	0.0075	0.7	0.0	2.103639	2.4	1119.0	3.12
0.37600000	3.125	844.8	7.333E-04	1.0%	0.117	0.01875	0.098	1.9920%	0.0075	0.7	0.0	2.101837	2.4	1121.0	3.125
0.37600000	3.13	844.8	7.345E-04	1.0%	0.117	0.0187	0.098	1.9973%	0.0075	0.7	0.0	2.100024	2.4	1123.0	3.13
0.37600000	3.135	844.8	7.357E-04	1.0%	0.116	0.01865	0.098	2.0025%	0.0075	0.7	0.0	2.0982	2.4	1125.0	3.135
0.37600000	3.14	844.8	7.369E-04	1.0%	0.116	0.0186	0.098	2.0078%	0.0075	0.7	0.0	2.096363	2.4	1127.1	3.14
0.37600000	3.145	844.8	7.380E-04	1.0%	0.116	0.01855	0.098	2.0130%	0.0076	0.7	0.0	2.094515	2.3	1129.1	3.145
0.37600000	3.15	844.8	7.392E-04	1.0%	0.116	0.0185	0.097	2.0183%	0.0076	0.7	0.0	2.092655	2.3	1131.2	3.15
0.37600000	3.155	844.8	7.404E-04	1.0%	0.116	0.01845	0.097	2.0236%	0.0076	0.7	0.0	2.090783	2.3	1133.2	3.155
0.37600000	3.16	844.8	7.415E-04	1.0%	0.116	0.0184	0.097	2.0289%	0.0076	0.7	0.0	2.088899	2.3	1135.3	3.16
0.37600000	3.165	844.8	7.427E-04	1.0%	0.115	0.01835	0.097	2.0343%	0.0076	0.7	0.0	2.087004	2.3	1137.3	3.165
0.37600000	3.17	844.8	7.439E-04	1.0%	0.115	0.0183	0.097	2.0396%	0.0077	0.7	0.0	2.085097	2.3	1139.4	3.17
0.37600000	3.175	844.8	7.451E-04	1.0%	0.115	0.01825	0.097	2.0450%	0.0077	0.7	0.0	2.083178	2.3	1141.5	3.175
0.37600000	3.18	844.8	7.462E-04	1.0%	0.115	0.0182	0.097	2.0504%	0.0077	0.6	0.0	2.081247	2.3	1143.5	3.18
0.37600000	3.185	844.8	7.474E-04	1.0%	0.115	0.01815	0.097	2.0558%	0.0077	0.6	0.0	2.079304	2.3	1145.6	3.185
0.37600000	3.19	844.8	7.486E-04	1.0%	0.115	0.0181	0.097	2.0612%	0.0078	0.6	0.0	2.07735	2.2	1147.7	3.19
0.37600000	3.195	844.8	7.498E-04	1.0%	0.115	0.01805	0.096	2.0667%	0.0078	0.6	0.0	2.075383	2.2	1149.8	3.195
0.37600000	3.2	844.8	7.509E-04	1.0%	0.114	0.018	0.096	2.0721%	0.0078	0.6	0.0	2.073405	2.2	1151.9	3.2
0.37600000	3.205	844.8	7.521E-04	1.0%	0.114	0.01795	0.096	2.0776%	0.0078	0.6	0.0	2.071415	2.2	1154.0	3.205
0.37600000	3.21	844.8	7.533E-04	1.0%	0.114	0.0179	0.096	2.0831%	0.0078	0.6	0.0	2.069413	2.2	1156.1	3.21
0.37600000	3.215	844.8	7.545E-04	1.0%	0.114	0.01785	0.096	2.0886%	0.0079	0.6	0.0	2.067399	2.2	1158.2	3.215
0.37600000	3.22	844.8	7.556E-04	1.0%	0.114	0.0178	0.096	2.0942%	0.0079	0.6	0.0	2.065373	2.2	1160.3	3.22
0.37600000	3.225	844.8	7.568E-04	1.0%	0.114	0.01775	0.096	2.0997%	0.0079	0.6	0.0	2.063336	2.2	1162.4	3.225
0.37600000	3.23	844.8	7.580E-04	1.0%	0.113	0.0177	0.096	2.1053%	0.0079	0.6	0.0	2.061286	2.2	1164.6	3.23
0.37600000	3.235	844.8	7.591E-04	1.0%	0.113	0.01765	0.096	2.1109%	0.0079	0.6	0.0	2.059225	2.1	1166.7	3.235
0.37600000	3.24	844.8	7.603E-04	1.0%	0.113	0.0176	0.096	2.1165%	0.0080	0.6	0.0	2.057151	2.1	1168.8	3.24
0.37600000	3.245	844.8	7.615E-04	1.0%	0.113	0.01755	0.095	2.1221%	0.0080	0.6	0.0	2.055066	2.1	1171.0	3.245
0.37600000	3.25	844.8	7.627E-04	1.0%	0.113	0.0175	0.095	2.1277%	0.0080	0.6	0.0	2.052968	2.1	1173.1	3.25
0.37600000	3.255	844.8	7.638E-04	1.0%	0.113	0.01745	0.095	2.1334%	0.0080	0.6	0.0	2.050859	2.1	1175.3	3.255
0.37600000	3.26	844.8	7.650E-04	1.0%	0.113	0.0174	0.095	2.1391%	0.0080	0.6	0.0	2.048738	2.1	1177.4	3.26
0.37600000	3.265	844.8	7.662E-04	1.0%	0.112	0.01735	0.095	2.1448%	0.0081	0.6	0.0	2.046604	2.1	1179.6	3.265
0.37600000	3.27	844.8	7.674E-04	1.0%	0.112	0.0173	0.095	2.1505%	0.0081	0.6	0.0	2.044459	2.1	1181.8	3.27
0.37600000	3.275	844.8	7.685E-04	1.0%	0.112	0.01725	0.095	2.1562%	0.0081	0.6	0.0	2.042301	2.1	1183.9	3.275
0.37600000	3.28	844.8	7.697E-04	1.0%	0.112	0.0172	0.095	2.1620%	0.0081	0.6	0.0	2.040132	2.1	1186.1	3.28
0.37600000	3.285	844.8	7.709E-04	1.0%	0.112	0.01715	0.095	2.1678%	0.0082	0.6	0.0	2.03795	2.0	1188.3	3.285
0.37600000	3.29	844.8	7.721E-04	1.0%	0.112	0.0171	0.094	2.1736%	0.0082	0.6	0.0	2.035757	2.0	1190.5	3.29
0.37600000	3.295	844.8	7.732E-04	1.0%	0.111	0.01705	0.094	2.1794%	0.0082	0.6	0.0	2.033551	2.0	1192.7	3.295
0.37600000	3.3	844.8	7.744E-04	1.0%	0.111	0.017	0.094	2.1852%	0.0082	0.6	0.0	2.031333	2.0	1194.9	3.3
0.37600000	3.305	844.8	7.756E-04	1.0%	0.111	0.01695	0.094	2.1911%	0.0082	0.6	0.0	2.029103	2.0	1197.1	3.305
0.37600000	3.31	844.8	7.767E-04	1.0%	0.111	0.0169	0.094	2.1969%	0.0083	0.6	0.0	2.026861	2.0	1199.3	3.31
0.37600000	3.315	844.8	7.779E-04	1.0%	0.111	0.01685	0.094	2.2028%	0.0083	0.6	0.0	2.024607	2.0	1201.5	3.315
0.37600000	3.32	844.8	7.791E-04	1.0%	0.111	0.0168	0.094	2.2088%	0.0083	0.6	0.0	2.022341	2.0	1203.8	3.32
0.37600000	3.325	844.8	7.803E-04	1.0%	0.110	0.01675	0.094	2.2147%	0.0083	0.6	0.0	2.020062	2.0	1206.0	3.325
0.37600000	3.33	844.8	7.814E-04	1.0%	0.110	0.0167	0.094	2.2207%	0.0083	0.6	0.0	2.017772	2.0	1208.2	3.33
0.37600000	3.335	844.8	7.826E-04	1.0%	0.110	0.01665	0.093	2.2266%	0.0084	0.6	0.0	2.015469	1.9	1210.5	3.335
0.37600000	3.34	844.8	7.838E-04	1.0%	0.110	0.0166	0.093	2.2326%	0.0084	0.6	0.0	2.013154	1.9	1212.7	3.34
0.37600000	3.345	844.8	7.850E-04	1.0%	0.110	0.01655	0.093	2.2387%	0.0084	0.6	0.0	2.010827	1.9	1215.0	3.345
0.37600000	3.35	844.8	7.861E-04	1.0%	0.110	0.0165	0.093	2.2447%	0.0084	0.6	0.0	2.008487	1.9	1217.3	3.35
0.37600000	3.355	844.8	7.873E-04	1.0%	0.109	0.01645	0.093	2.2508%	0.0085	0.6	0.0	2.006135	1.9	1219.5	3.355
0.37600000	3.36	844.8	7.885E-04	1.0%	0.109	0.0164	0.093	2.2569%	0.0085	0.6	0.0	2.003771	1.9	1221.8	3.36
0.37600000	3.365	844.8	7.897E-04	1.0%	0.109	0.01635	0.093	2.2630%	0.0085	0.6	0.0	2.001395	1.9	1224.1	3.365
0.37600000	3.37	844.8	7.908E-04	1.0%	0.109	0.0163	0.093	2.2691%	0.0085	0.6	0.0	1.999006	1.9	1226.4	3.37
0.37600000	3.375	844.8	7.920E-04	1.0%	0.109	0.01625	0.093	2.2753%	0.0086	0.6	0.0	1.996605	1.9	1228.7	3.375
0.37600000	3.38	844.8	7.932E-04	1.0%	0.109	0.0162	0.092	2.2815%	0.0086	0.6	0.0	1.994192	1.9	1231.0	3.38
0.37600000	3.385	844.8	7.943E-04	1.0%	0.108	0.01615	0.092	2.2877%	0.0086	0.6	0.0	1.991766	1.8	1233.3	3.385
0.37600000	3.39	844.8	7.955E-04	1.0%	0.108	0.0161	0.092	2.2939%	0.0086	0.6	0.0	1.989328	1.8	1235.6	3.39
0.37600000	3.395	844.8	7.967E-04	1.0%	0.108	0.01605	0.092	2.3002%	0.0086	0.6	0.0	1.986878	1.8	1237.9	3.395

0.37600000	3.4	844.8	7.979E-04	1.0%	0.108	0.016	0.092	2.3064%	0.0087	0.6	0.0	1.984415	1.8	1240.3	3.4
0.37600000	3.405	844.8	7.990E-04	1.0%	0.108	0.01595	0.092	2.3127%	0.0087	0.6	0.0	1.981939	1.8	1242.6	3.405
0.37600000	3.41	844.8	8.002E-04	1.0%	0.108	0.0159	0.092	2.3191%	0.0087	0.6	0.0	1.979452	1.8	1244.9	3.41
0.37600000	3.415	844.8	8.014E-04	1.0%	0.108	0.01585	0.092	2.3254%	0.0087	0.6	0.0	1.976952	1.8	1247.3	3.415
0.37600000	3.42	844.8	8.026E-04	1.0%	0.107	0.0158	0.092	2.3318%	0.0088	0.6	0.0	1.974439	1.8	1249.6	3.42
0.37600000	3.425	844.8	8.037E-04	1.0%	0.107	0.01575	0.091	2.3382%	0.0088	0.6	0.0	1.971914	1.8	1252.0	3.425
0.37600000	3.43	844.8	8.049E-04	1.0%	0.107	0.0157	0.091	2.3446%	0.0088	0.6	0.0	1.969376	1.8	1254.4	3.43
0.37600000	3.435	844.8	8.061E-04	1.0%	0.107	0.01565	0.091	2.3510%	0.0088	0.6	0.0	1.966826	1.8	1256.8	3.435
0.37600000	3.44	844.8	8.073E-04	1.0%	0.107	0.0156	0.091	2.3575%	0.0089	0.6	0.0	1.964263	1.7	1259.1	3.44
0.37600000	3.445	844.8	8.084E-04	1.0%	0.107	0.01555	0.091	2.3640%	0.0089	0.6	0.0	1.961688	1.7	1261.5	3.445
0.37600000	3.45	844.8	8.096E-04	1.0%	0.106	0.0155	0.091	2.3705%	0.0089	0.6	0.0	1.9591	1.7	1263.9	3.45
0.37600000	3.455	844.8	8.108E-04	1.0%	0.106	0.01545	0.091	2.3771%	0.0089	0.6	0.0	1.956499	1.7	1266.3	3.455
0.37600000	3.46	844.8	8.119E-04	1.0%	0.106	0.0154	0.091	2.3836%	0.0090	0.6	0.0	1.953886	1.7	1268.8	3.46
0.37600000	3.465	844.8	8.131E-04	1.0%	0.106	0.01535	0.090	2.3902%	0.0090	0.6	0.0	1.95126	1.7	1271.2	3.465
0.37600000	3.47	844.8	8.143E-04	1.0%	0.106	0.0153	0.090	2.3969%	0.0090	0.6	0.0	1.948622	1.7	1273.6	3.47
0.37600000	3.475	844.8	8.155E-04	1.0%	0.105	0.01525	0.090	2.4035%	0.0090	0.6	0.0	1.945971	1.7	1276.0	3.475
0.37600000	3.48	844.8	8.166E-04	1.0%	0.105	0.0152	0.090	2.4102%	0.0091	0.6	0.0	1.943307	1.7	1278.5	3.48
0.37600000	3.485	844.8	8.178E-04	1.0%	0.105	0.01515	0.090	2.4169%	0.0091	0.6	0.0	1.94063	1.7	1280.9	3.485
0.37600000	3.49	844.8	8.190E-04	1.0%	0.105	0.0151	0.090	2.4236%	0.0091	0.5	0.0	1.937941	1.6	1283.4	3.49
0.37600000	3.495	844.8	8.202E-04	1.0%	0.105	0.01505	0.090	2.4304%	0.0091	0.5	0.0	1.935239	1.6	1285.9	3.495
0.37600000	3.5	844.8	8.213E-04	1.0%	0.105	0.015	0.090	2.4372%	0.0092	0.5	0.0	1.932524	1.6	1288.3	3.5
0.37600000	3.505	844.8	8.225E-04	1.0%	0.104	0.01495	0.090	2.4440%	0.0092	0.5	0.0	1.929796	1.6	1290.8	3.505
0.37600000	3.51	844.8	8.237E-04	1.0%	0.104	0.0149	0.089	2.4508%	0.0092	0.5	0.0	1.927055	1.6	1293.3	3.51
0.37600000	3.515	844.8	8.249E-04	1.0%	0.104	0.01485	0.089	2.4577%	0.0092	0.5	0.0	1.924302	1.6	1295.8	3.515
0.37600000	3.52	844.8	8.260E-04	1.0%	0.104	0.0148	0.089	2.4646%	0.0093	0.5	0.0	1.921536	1.6	1298.3	3.52
0.37600000	3.525	844.8	8.272E-04	1.0%	0.104	0.01475	0.089	2.4715%	0.0093	0.5	0.0	1.918756	1.6	1300.9	3.525
0.37600000	3.53	844.8	8.284E-04	1.0%	0.104	0.0147	0.089	2.4785%	0.0093	0.5	0.0	1.915964	1.6	1303.4	3.53
0.37600000	3.535	844.8	8.295E-04	1.0%	0.103	0.01465	0.089	2.4855%	0.0093	0.5	0.0	1.913159	1.6	1305.9	3.535
0.37600000	3.54	844.8	8.307E-04	1.0%	0.103	0.0146	0.089	2.4925%	0.0094	0.5	0.0	1.910341	1.6	1308.5	3.54
0.37600000	3.545	844.8	8.319E-04	1.0%	0.103	0.01455	0.089	2.4995%	0.0094	0.5	0.0	1.90751	1.5	1311.0	3.545
0.37600000	3.55	844.8	8.331E-04	1.0%	0.103	0.0145	0.088	2.5066%	0.0094	0.5	0.0	1.904665	1.5	1313.6	3.55
0.37600000	3.555	844.8	8.342E-04	1.0%	0.103	0.01445	0.088	2.5137%	0.0095	0.5	0.0	1.901808	1.5	1316.1	3.555
0.37600000	3.56	844.8	8.354E-04	1.0%	0.103	0.0144	0.088	2.5208%	0.0095	0.5	0.0	1.898938	1.5	1318.7	3.56
0.37600000	3.565	844.8	8.366E-04	1.0%	0.102	0.01435	0.088	2.5280%	0.0095	0.5	0.0	1.896054	1.5	1321.3	3.565
0.37600000	3.57	844.8	8.378E-04	1.0%	0.102	0.0143	0.088	2.5352%	0.0095	0.5	0.0	1.893158	1.5	1323.9	3.57
0.37600000	3.575	844.8	8.389E-04	1.0%	0.102	0.01425	0.088	2.5424%	0.0096	0.5	0.0	1.890248	1.5	1326.5	3.575
0.37600000	3.58	844.8	8.401E-04	1.0%	0.102	0.0142	0.088	2.5497%	0.0096	0.5	0.0	1.887325	1.5	1329.1	3.58
0.37600000	3.585	844.8	8.413E-04	1.0%	0.102	0.01415	0.088	2.5570%	0.0096	0.5	0.0	1.884389	1.5	1331.7	3.585
0.37600000	3.59	844.8	8.425E-04	1.0%	0.101	0.0141	0.087	2.5643%	0.0096	0.5	0.0	1.88144	1.5	1334.4	3.59
0.37600000	3.595	844.8	8.436E-04	1.0%	0.101	0.01405	0.087	2.5717%	0.0097	0.5	0.0	1.878477	1.5	1337.0	3.595
0.37600000	3.6	844.8	8.448E-04	1.0%	0.101	0.014	0.087	2.5790%	0.0097	0.5	0.0	1.875501	1.5	1339.6	3.6
0.37600000	3.605	844.8	8.460E-04	1.0%	0.101	0.01395	0.087	2.5865%	0.0097	0.5	0.0	1.872512	1.4	1342.3	3.605
0.37600000	3.61	844.8	8.471E-04	1.0%	0.101	0.0139	0.087	2.5939%	0.0098	0.5	0.0	1.869509	1.4	1345.0	3.61
0.37600000	3.615	844.8	8.483E-04	1.0%	0.101	0.01385	0.087	2.6014%	0.0098	0.5	0.0	1.866493	1.4	1347.6	3.615
0.37600000	3.62	844.8	8.495E-04	1.0%	0.100	0.0138	0.087	2.6089%	0.0098	0.5	0.0	1.863464	1.4	1350.3	3.62
0.37600000	3.625	844.8	8.507E-04	1.0%	0.100	0.01375	0.086	2.6165%	0.0098	0.5	0.0	1.860421	1.4	1353.0	3.625
0.37600000	3.63	844.8	8.518E-04	1.0%	0.100	0.0137	0.086	2.6241%	0.0099	0.5	0.0	1.857365	1.4	1355.7	3.63
0.37600000	3.635	844.8	8.530E-04	1.0%	0.100	0.01365	0.086	2.6317%	0.0099	0.5	0.0	1.854295	1.4	1358.5	3.635
0.37600000	3.64	844.8	8.542E-04	1.0%	0.100	0.0136	0.086	2.6394%	0.0099	0.5	0.0	1.851212	1.4	1361.2	3.64
0.37600000	3.645	844.8	8.554E-04	1.0%	0.099	0.01355	0.086	2.6471%	0.0100	0.5	0.0	1.848115	1.4	1363.9	3.645
0.37600000	3.65	844.8	8.565E-04	1.0%	0.099	0.0135	0.086	2.6548%	0.0100	0.5	0.0	1.845004	1.4	1366.7	3.65
0.37600000	3.655	844.8	8.577E-04	1.0%	0.099	0.01345	0.086	2.6626%	0.0100	0.5	0.0	1.84188	1.4	1369.4	3.655
0.37600000	3.66	844.8	8.589E-04	1.0%	0.099	0.0134	0.086	2.6704%	0.0100	0.5	0.0	1.838743	1.4	1372.2	3.66
0.37600000	3.665	844.8	8.601E-04	1.0%	0.099	0.01335	0.085	2.6782%	0.0101	0.5	0.0	1.835591	1.3	1375.0	3.665
0.37600000	3.67	844.8	8.612E-04	1.0%	0.099	0.0133	0.085	2.6861%	0.0101	0.5	0.0	1.832426	1.3	1377.8	3.67
0.37600000	3.675	844.8	8.624E-04	1.0%	0.098	0.01325	0.085	2.6940%	0.0101	0.5	0.0	1.829247	1.3	1380.6	3.675
0.37600000	3.68	844.8	8.636E-04	1.0%	0.098	0.0132	0.085	2.7019%	0.0102	0.5	0.0	1.826055	1.3	1383.4	3.68
0.37600000	3.685	844.8	8.647E-04	1.0%	0.098	0.01315	0.085	2.7099%	0.0102	0.5	0.0	1.822848	1.3	1386.2	3.685
0.37600000	3.69	844.8	8.659E-04	1.0%	0.098	0.0131	0.085	2.7180%	0.0102	0.5	0.0	1.819628	1.3	1389.0	3.69
0.37600000	3.695	844.8	8.671E-04	1.0%	0.098	0.01305	0.085	2.7260%	0.0102	0.5	0.0	1.816394	1.3	1391.9	3.695
0.37600000	3.7	844.8	8.683E-04	1.0%	0.097	0.013	0.084	2.7341%	0.0103	0.5	0.0	1.813146	1.3	1394.7	3.7
0.37600000	3.705	844.8	8.694E-04	1.0%	0.097	0.01295	0.084	2.7423%	0.0103	0.5	0.0	1.809884	1.3	1397.6	3.705
0.37600000	3.71	844.8	8.706E-04	1.0%	0.097	0.0129	0.084	2.7505%	0.0103	0.5	0.0	1.806608	1.3	1400.5	3.71
0.37600000	3.715	844.8	8.718E-04	1.0%	0.097	0.01285	0.084	2.7587%	0.0104	0.5	0.0	1.803318	1.3	1403.4	3.715
0.37600000	3.72	844.8	8.730E-04	1.0%	0.097	0.0128	0.084	2.7670%	0.0104	0.5	0.0	1.800014	1.3	1406.3	3.72
0.37600000	3.725	844.8	8.741E-04	1.0%	0.097	0.01275	0.084	2.7753%	0.0104	0.5	0.0	1.796696	1.2	1409.2	3.725
0.37600000	3.73	844.8	8.753E-04	1.0%	0.096	0.0127	0.084	2.7836%	0.0105	0.5	0.0	1.793364	1.2	1412.1	3.73
0.37600000	3.735	844.8	8.765E-04	1.0%	0.096	0.01265	0.083	2.7920%	0.0105	0.5	0.0	1.790018	1.2	1415.0	3.735
0.37600000	3.74	844.8	8.777E-04	1.0%	0.096	0.0126	0.083	2.8005%	0.0105	0.5	0.0	1.786657	1.2	1418.0	3.74
0.37600000	3.745	844.8	8.788E-04	1.0%	0.096	0.01255	0.083	2.8089%	0.0106	0.5	0.0	1.783282	1.2	1420.9	3.745
0.37600000	3.75	844.8	8.800E-04	1.0%	0.096	0.0125	0.083	2.8175%	0.0106	0.5	0.0	1.779893	1.2	1423.9	3.75
0.37600000	3.755	844.8	8.812E-04	1.0%	0.095	0.01245	0.083	2.8260%	0.0106	0.5	0.0	1.77649	1.2	1426.9	3.755
0.37600000	3.76	844.8	8.823E-04	1.0%	0.095	0.0124	0.083	2.8346%	0.0107	0.5	0.0	1.773072	1.2	1429.9	3.76
0.37600000	3.765	844.8	8.835E-04	1.0%	0.095	0.01235	0.083	2.8433%	0.0107	0.5	0.0	1.76964	1.2	1432.9	3.765
0.37600000	3.77	844.8	8.847E-04	1.0%	0.095	0.0123	0.083	2.8520%	0.0107	0.5	0.0	1.766194	1.2	1435.9	3.77
0.37600000	3.775	844.8	8.859E-04	1.0%	0.095	0.01225	0.082	2.8607%	0.0108	0.5	0.0	1.762733	1.2	1439.0	3.775
0.37600000	3.78	844.8	8.870E-04	1.0%	0.094	0.0122	0.082	2.8695%	0.0108	0.5	0.0	1.759257	1.2	1442.0	3.78
0.37600000	3.785	844.8	8.882E-04	1.0%	0.094	0.01215	0.082	2.8783%	0.0108	0.5	0.0	1.755767	1.2	1445.1	3.785
0.37600000	3.79	844.8	8.894E-04	1.0%	0.094	0.0121	0.082	2.8872%	0.0109	0.5	0.0	1.752263	1.1	1448.2	3.79
0.37600000	3.795	844.8	8.906E-04	1.0%	0.094	0.01205	0.082	2.8961%	0.0109	0.5	0.0	1.748743	1.1	1451.2	3.795
0.37600000	3.8	844.8	8.917E-04	1.0%	0.094	0.012	0.082	2.9051%	0.0109	0.5	0.0	1.745209	1.1	1454.3	3.8
0.37600000	3.805	844.8	8.929E-04	1.0%	0.093	0.01195	0.081	2.9141%	0.0110	0.5	0.0	1.741661	1.1	1457.5	3.805
0.37600000	3.81	844.8	8.941E-04	1.0%	0.093	0.0119	0.081	2.9232%	0.0110	0.5	0.0	1.738097	1.1	1460.6	3.81
0.37600000	3.815	844.8	8.953E-04	1.0%	0.093	0.01185	0.081	2.9323%	0.0110	0.5	0.0	1.734519	1.1	1463.7	3.815
0.37600000	3.82	844.8	8.964E-04	1.0%	0.093	0.0118	0.081	2.9415%	0.0111	0.5	0.0	1.730926	1.1	1466.9	3.82
0.37600000	3.825	844.8	8.976E-04	1.0%	0.093	0.01175	0.081	2.9507%	0.0111	0.5	0.0	1.727318	1.1	1470.1	3.825
0.37600000	3.83	844.8	8.988E-04	1.0%	0.092	0.0117	0.081	2.9600%	0.0111	0.4	0.0	1.723695	1.1	1473.2	3.83
0.37600000	3.835	844.8	8.999E-04	1.0%	0.092	0.01165	0.081	2.9693%	0.0112	0.4	0.0	1.720057	1.1	1476.4	3.835
0.37600000	3.84	844.8	9.011E-04	1.0%	0.092	0.0116	0.080	2.9787%	0.0112	0.4	0.0	1.716404	1.1	1479.7	3.84
0.37600000	3.845	844.8	9.023E-04	1.0%	0.092	0.01155	0.080	2.9881%	0.0112	0.4	0.0	1.712736	1.1	1482.9	3.845
0.37600000	3.85	844.8	9.035E-04	1.0%	0.092	0.0115	0.080	2.9976%	0.0113	0.4	0.0	1.709053	1.1	1486.1	3.85
0.37600000	3.855	844.8	9.046E-04	1.0%	0.091	0.01145	0.080	3.0071%	0.0113	0.4	0.0	1.705355	1.0	1489.4	3.855
0.37600000	3.86	844.8	9.058E-04	1.0%	0.091	0.0114	0.080	3.0167%	0.0113	0.4	0.0	1.701641	1.0	1492.7	3.86
0.37600000	3.865	844.8	9.070E-04	1.0%	0.091	0.01135	0.080	3.0264%	0.0114	0.4	0.0	1.697913	1.0	1496.0	3.865
0.37600000	3.87	844.8	9.082E-04	1.0%	0.091	0.0113	0.080	3.0361%	0.0114	0.4	0.0	1.694169	1.0	1499.3	3.87
0.37600000	3.875	844.8	9.093E-04	1.0%	0.091	0.01125	0.079	3.0458%	0.0115	0.4	0.0	1.690409	1.0	1502.6	3.875
0.37600000	3.88	844.8	9.105E-04	1.0%	0.090	0.0112	0.079	3.0556%	0.0115	0.4	0.0	1.686634	1.0	1505.9	3.88
0.37600000	3.885	844.8	9.117E-04	1.0%	0.090	0.01115	0.079	3.0655%	0.0115	0.4	0.0	1.682844	1.0	1509.3	3.885
0.37600000	3.89	844.8	9.129E-04	1.0%	0.090	0.0111	0.079	3.0754%	0.0116	0.4	0.0	1.679038	1.0	1512.6	3.89
0.37600000	3.895	844.8	9.140E-04	1.0%	0.090	0.01105	0.079	3.0854%	0.0116	0.4	0.0	1.675216	1.0	1516.0	3.895
0.37600000	3.9	844.8	9.152E-04	1.0%	0.090	0.011	0.079	3.0955%	0.0116	0.4	0.0	1.671379	1.0	1519.4	3.9
0.37600000	3.905	844.8	9.164E-04	1.0%	0.089	0.01095	0.078	3.1056%	0.0117	0.4	0.0	1.667526	1.0	1522.9	3.905
0.37600000	3.91	844.8	9.175E-04	1.0%	0.089	0.0109	0.078	3.1157%	0.0117	0.4	0.0	1.663657	1.0	1526.3	3.91
0.37600000	3.915	844.8	9.187E-04	1.0%	0.089	0.01085	0.078	3.1259%	0.0118	0.4	0.0	1.659773	1.0	1529.7	3.915
0.37600000	3.92	844.8	9.199E-04	1.0%	0.089	0.0108	0.078	3.1362%	0.0118	0.4	0.0	1.655873	1.0	1533.2	3.92
0.37600000	3.925	844.8	9.211E-04	1.0%	0.089	0.01075	0.078	3.1466%	0.0118	0.4	0.0	1.651957	0.9	1536.7	3.925
0.37600000	3.93	844.8	9.222E-04	1.0%	0.088	0.0107	0.078	3.1570%	0.0119	0.4	0.0	1.648024	0.9	1540.2	3.93
0.37600000	3.935	844.8	9.234E-04	1.0%	0.088	0.01065	0.078	3.1674%	0.0119	0.4	0.0	1.644076	0.9	1543.7	3.935
0.37600000	3.94	844.8	9.246E-04	1.0%	0.088	0.0106	0.077	3.1780%	0.0119	0.4	0.0	1.640112	0.9	1547.3	3.94
0.37600000	3.945	844.8	9.258E-04	1.0%	0.088	0.01055	0.077	3.1886%	0.0120	0.4	0.0	1.636131	0.9	1550.8	3.945
0.37600000	3.95	844.8	9.269E-04	1.0%	0.088	0.0105	0.077	3.1993%	0.0120	0.4	0.0	1.632135	0.9	1554.4	3.95
0.37600000	3.955	844.8	9.281E-04	1.0%	0.087	0.01045	0.077	3.2100%	0.0121	0.4	0.0	1.628122	0.9	1558.0	3.955
0.37600000	3.96	844.8	9.293E-04	1.0%	0.087	0.0104	0.077	3.2208%	0.0121	0.4	0.0	1.624093	0.9	1561.6	3.96
0.37600000	3.965	844.8	9.305E-04	1.0%	0.087	0.01035	0.077	3.2317%	0.0122	0.4	0.0	1.620047	0.9	1565.3	3.965
0.37600000	3.97	844.8	9.316E-04	1.0%	0.087	0.0103	0.076	3.2426%	0.0122	0.4	0.0	1.615985	0.9	1568.9	3.97
0.37600000	3.975	844.8	9.328E-04	1.0%	0.086	0.01025	0.076	3.2536%	0.0122	0.4	0.0	1.611906	0.9	1572.6	3.975
0.37600000	3.98	844.8	9.340E-04	1.0%	0.086	0.0102	0.076	3.2647%	0.0123	0.4	0.0	1.607811	0.9	1576.3	3.98
0.37600000	3.985	844.8	9.351E-04	1.0%	0.086	0.01015	0.076	3.2759%	0.0123	0.4	0.0	1.603699	0.9	1580.0	3.985
0.37600000	3.99	844.8	9.363E-04	1.0%	0.086	0.0101	0.076	3.2871%	0.0124	0.4	0.0	1.59957	0.9	1583.7	3.99
0.37600000	3.995	844.8	9.375E-04	1.0%	0.086	0.01005	0.076	3.2984%	0.0124	0.4	0.0	1.595425	0.8	1587.5	3.995
0.37600000	4	844.8	9.387E-04	1.0%	0.085	0.01	0.075	3.3098%	0.0124	0.4	0.0	1.591263	0.8	1591.3	4
0.37600000	4.005	844.8	9.398E-04	1.0%	0.085	0.00995	0.075	3.3212%	0.0125	0.4	0.0	1.587083	0.8	1595.1	4.005
0.37600000	4.01	844.8	9.410E-04	1.0%	0.085	0.0099	0.075	3.3327%	0.0125	0.4	0.0	1.582887	0.8	1598.9	4.01
0.37600000	4.015	844.8	9.422E-04	1.0%	0.085	0.00985	0.075	3.3443%	0.0126	0.4	0.0	1.578674	0.8	1602.7	4.015
0.37600000	4.02	844.8	9.434E-04	1.0%	0.085	0.0098	0.075	3.3560%	0.0126	0.4	0.0	1.574444	0.8	1606.6	4.02
0.37600000	4.025	844.8	9.445E-04	1.0%	0.084	0.00975	0.075	3.3678%	0.0127	0.4	0.0	1.570196	0.8	1610.5	4.025
0.37600000	4.03	844.8	9.457E-04	1.0%	0.084	0.0097	0.074	3.3796%	0.0127	0.4	0.0	1.565931	0.8	1614.4	4.03
0.37600000	4.035	844.8	9.469E-04	1.0%	0.084	0.00965	0.074	3.3915%	0.0128	0.4	0.0	1.561649	0.8	1618.3	4.035
0.37600000	4.04	844.8	9.481E-04	1.0%	0.084	0.0096	0.074	3.4035%	0.0128	0.4	0.0	1.557349	0.8	1622.2	4.04
0.37600000	4.045	844.8	9.492E-04	1.0%	0.083	0.00955	0.074	3.4156%	0.0128	0.4	0.0	1.553032	0.8	1626.2	4.045
0.37600000	4.05	844.8	9.504E-04	1.0%	0.083	0.0095	0.074	3.4278%	0.0129	0.4	0.0	1.548697	0.8	1630.2	4.05
0.37600000	4.055	844.8	9.516E-04	1.0%	0.083	0.00945	0.074	3.4400%	0.0129	0.4	0.0	1.544344	0.8	1634.2	4.055
0.37600000	4.06	844.8	9.527E-04	1.0%	0.083	0.0094	0.073	3.4524%	0.0130	0.4	0.0	1.539974	0.8	1638.3	4.06
0.37600000	4.065	844.8	9.539E-04	1.0%	0.083	0.00935	0.073	3.4648%	0.0130	0.4	0.0	1.535586	0.8	1642.3	4.065
0.37600000	4.07	844.8	9.551E-04	1.0%	0.082	0.0093	0.073	3.4773%	0.0131	0.4	0.0	1.53118	0.7	1646.4	4.07
0.37600000	4.075	844.8	9.563E-04	1.0%	0.082	0.00925	0.073	3.4899%	0.0131	0.4	0.0	1.526756	0.7	1650.5	4.075
0.37600000	4.08	844.8	9.574E-04	1.0%	0.082	0.0092	0.073	3.5026%	0.0132	0.4	0.0	1.522314	0.7	1654.7	4.08
0.37600000	4.085	844.8	9.586E-04	1.0%	0.082	0.00915	0.073	3.5154%	0.0132	0.4	0.0	1.517854	0.7	1658.9	4.085

0.37600000	4.09	844.8	9.598E-04	1.0%	0.081	0.0091	0.072	3.5283%	0.0133	0.4	0.0	1.513375	0.7	1663.0	4.09
0.37600000	4.095	844.8	9.610E-04	1.0%	0.081	0.00905	0.072	3.5413%	0.0133	0.4	0.0	1.508878	0.7	1667.3	4.095
0.37600000	4.1	844.8	9.621E-04	1.0%	0.081	0.009	0.072	3.5544%	0.0134	0.4	0.0	1.504363	0.7	1671.5	4.1
0.37600000	4.105	844.8	9.633E-04	1.0%	0.081	0.00895	0.072	3.5676%	0.0134	0.4	0.0	1.499829	0.7	1675.8	4.105
0.37600000	4.11	844.8	9.645E-04	1.0%	0.081	0.0089	0.072	3.5808%	0.0135	0.4	0.0	1.495277	0.7	1680.1	4.11
0.37600000	4.115	844.8	9.657E-04	1.0%	0.080	0.00885	0.071	3.5942%	0.0135	0.4	0.0	1.490706	0.7	1684.4	4.115
0.37600000	4.12	844.8	9.668E-04	1.0%	0.080	0.0088	0.071	3.6077%	0.0136	0.4	0.0	1.486116	0.7	1688.8	4.12
0.37600000	4.125	844.8	9.680E-04	1.0%	0.080	0.00875	0.071	3.6213%	0.0136	0.4	0.0	1.481507	0.7	1693.2	4.125
0.37600000	4.13	844.8	9.692E-04	1.0%	0.080	0.0087	0.071	3.6349%	0.0137	0.4	0.0	1.476879	0.7	1697.6	4.13
0.37600000	4.135	844.8	9.703E-04	1.0%	0.079	0.00865	0.071	3.6487%	0.0137	0.4	0.0	1.472232	0.7	1702.0	4.135
0.37600000	4.14	844.8	9.715E-04	1.0%	0.079	0.0086	0.071	3.6626%	0.0138	0.4	0.0	1.467566	0.7	1706.5	4.14
0.37600000	4.145	844.8	9.727E-04	1.0%	0.079	0.00855	0.070	3.6766%	0.0138	0.4	0.0	1.462881	0.7	1711.0	4.145
0.37600000	4.15	844.8	9.739E-04	1.0%	0.079	0.0085	0.070	3.6907%	0.0139	0.4	0.0	1.458176	0.7	1715.5	4.15
0.37600000	4.155	844.8	9.750E-04	1.0%	0.078	0.00845	0.070	3.7050%	0.0139	0.4	0.0	1.453452	0.6	1720.1	4.155
0.37600000	4.16	844.8	9.762E-04	1.0%	0.078	0.0084	0.070	3.7193%	0.0140	0.4	0.0	1.448708	0.6	1724.7	4.16
0.37600000	4.165	844.8	9.774E-04	1.0%	0.078	0.00835	0.070	3.7338%	0.0140	0.4	0.0	1.443944	0.6	1729.3	4.165
0.37600000	4.17	844.8	9.786E-04	1.0%	0.078	0.0083	0.069	3.7483%	0.0141	0.4	0.0	1.439161	0.6	1733.9	4.17
0.37600000	4.175	844.8	9.797E-04	1.0%	0.077	0.00825	0.069	3.7630%	0.0141	0.4	0.0	1.434358	0.6	1738.6	4.175
0.37600000	4.18	844.8	9.809E-04	1.0%	0.077	0.0082	0.069	3.7778%	0.0142	0.4	0.0	1.429534	0.6	1743.3	4.18
0.37600000	4.185	844.8	9.821E-04	1.0%	0.077	0.00815	0.069	3.7928%	0.0143	0.4	0.0	1.424691	0.6	1748.1	4.185
0.37600000	4.19	844.8	9.833E-04	1.0%	0.077	0.0081	0.069	3.8078%	0.0143	0.3	0.0	1.419827	0.6	1752.9	4.19
0.37600000	4.195	844.8	9.844E-04	1.0%	0.077	0.00805	0.068	3.8230%	0.0144	0.3	0.0	1.414943	0.6	1757.7	4.195
0.37600000	4.2	844.8	9.856E-04	1.0%	0.076	0.008	0.068	3.8383%	0.0144	0.3	0.0	1.410039	0.6	1762.5	4.2
0.37600000	4.205	844.8	9.868E-04	1.0%	0.076	0.00795	0.068	3.8538%	0.0145	0.3	0.0	1.405113	0.6	1767.4	4.205
0.37600000	4.21	844.8	9.879E-04	1.0%	0.076	0.0079	0.068	3.8694%	0.0145	0.3	0.0	1.400168	0.6	1772.4	4.21
0.37600000	4.215	844.8	9.891E-04	1.0%	0.076	0.00785	0.068	3.8851%	0.0146	0.3	0.0	1.395201	0.6	1777.3	4.215
0.37600000	4.22	844.8	9.903E-04	1.0%	0.075	0.0078	0.068	3.9009%	0.0147	0.3	0.0	1.390213	0.6	1782.3	4.22
0.37600000	4.225	844.8	9.915E-04	1.0%	0.075	0.00775	0.067	3.9169%	0.0147	0.3	0.0	1.385204	0.6	1787.4	4.225
0.37600000	4.23	844.8	9.926E-04	1.0%	0.075	0.0077	0.067	3.9330%	0.0148	0.3	0.0	1.380174	0.6	1792.4	4.23
0.37600000	4.235	844.8	9.938E-04	1.0%	0.075	0.00765	0.067	3.9493%	0.0148	0.3	0.0	1.375123	0.6	1797.5	4.235
0.37600000	4.24	844.8	9.950E-04	1.0%	0.074	0.0076	0.067	3.9657%	0.0149	0.3	0.0	1.37005	0.5	1802.7	4.24
0.37600000	4.245	844.8	9.962E-04	1.0%	0.074	0.00755	0.067	3.9823%	0.0150	0.3	0.0	1.364955	0.5	1807.9	4.245
0.37600000	4.25	844.8	9.973E-04	1.0%	0.074	0.0075	0.066	3.9990%	0.0150	0.3	0.0	1.359839	0.5	1813.1	4.25
0.37600000	4.255	844.8	9.985E-04	1.0%	0.074	0.00745	0.066	4.0158%	0.0151	0.3	0.0	1.3547	0.5	1818.4	4.255
0.37600000	4.26	844.8	9.997E-04	1.0%	0.073	0.0074	0.066	4.0328%	0.0152	0.3	0.0	1.34954	0.5	1823.7	4.26
0.37600000	4.265	844.8	1.001E-03	1.0%	0.073	0.00735	0.066	4.0500%	0.0152	0.3	0.0	1.344357	0.5	1829.1	4.265
0.37600000	4.27	844.8	1.002E-03	1.0%	0.073	0.0073	0.066	4.0673%	0.0153	0.3	0.0	1.339152	0.5	1834.5	4.27
0.37600000	4.275	844.8	1.003E-03	1.0%	0.073	0.00725	0.065	4.0848%	0.0154	0.3	0.0	1.333925	0.5	1839.9	4.275
0.37600000	4.28	844.8	1.004E-03	1.0%	0.072	0.0072	0.065	4.1025%	0.0154	0.3	0.0	1.328675	0.5	1845.4	4.28
0.37600000	4.285	844.8	1.006E-03	1.0%	0.072	0.00715	0.065	4.1203%	0.0155	0.3	0.0	1.323402	0.5	1850.9	4.285
0.37600000	4.29	844.8	1.007E-03	1.0%	0.072	0.0071	0.065	4.1383%	0.0156	0.3	0.0	1.318106	0.5	1856.5	4.29
0.37600000	4.295	844.8	1.008E-03	1.0%	0.072	0.00705	0.064	4.1565%	0.0156	0.3	0.0	1.312787	0.5	1862.1	4.295
0.37600000	4.3	844.8	1.009E-03	1.0%	0.071	0.007	0.064	4.1749%	0.0157	0.3	0.0	1.307445	0.5	1867.8	4.3
0.37600000	4.305	844.8	1.010E-03	1.0%	0.071	0.00695	0.064	4.1934%	0.0158	0.3	0.0	1.302079	0.5	1873.5	4.305
0.37600000	4.31	844.8	1.011E-03	1.0%	0.071	0.0069	0.064	4.2121%	0.0158	0.3	0.0	1.29669	0.5	1879.3	4.31
0.37600000	4.315	844.8	1.013E-03	1.0%	0.071	0.00685	0.064	4.2310%	0.0159	0.3	0.0	1.291277	0.5	1885.1	4.315
0.37600000	4.32	844.8	1.014E-03	1.0%	0.070	0.0068	0.063	4.2501%	0.0160	0.3	0.0	1.28584	0.5	1890.9	4.32
0.37600000	4.325	844.8	1.015E-03	1.0%	0.070	0.00675	0.063	4.2694%	0.0161	0.3	0.0	1.280379	0.5	1896.9	4.325
0.37600000	4.33	844.8	1.016E-03	1.0%	0.070	0.0067	0.063	4.2889%	0.0161	0.3	0.0	1.274893	0.4	1902.8	4.33
0.37600000	4.335	844.8	1.017E-03	1.0%	0.069	0.00665	0.063	4.3086%	0.0162	0.3	0.0	1.269384	0.4	1908.8	4.335
0.37600000	4.34	844.8	1.018E-03	1.0%	0.069	0.0066	0.063	4.3284%	0.0163	0.3	0.0	1.263849	0.4	1914.9	4.34
0.37600000	4.345	844.8	1.020E-03	1.0%	0.069	0.00655	0.062	4.3485%	0.0164	0.3	0.0	1.258289	0.4	1921.1	4.345
0.37600000	4.35	844.8	1.021E-03	1.0%	0.069	0.0065	0.062	4.3688%	0.0164	0.3	0.0	1.252705	0.4	1927.2	4.35
0.37600000	4.355	844.8	1.022E-03	1.0%	0.068	0.00645	0.062	4.3894%	0.0165	0.3	0.0	1.247095	0.4	1933.5	4.355
0.37600000	4.36	844.8	1.023E-03	1.0%	0.068	0.0064	0.062	4.4101%	0.0166	0.3	0.0	1.24146	0.4	1939.8	4.36
0.37600000	4.365	844.8	1.024E-03	1.0%	0.068	0.00635	0.061	4.4311%	0.0167	0.3	0.0	1.235799	0.4	1946.1	4.365
0.37600000	4.37	844.8	1.025E-03	1.0%	0.068	0.0063	0.061	4.4523%	0.0167	0.3	0.0	1.230112	0.4	1952.6	4.37
0.37600000	4.375	844.8	1.027E-03	1.0%	0.067	0.00625	0.061	4.4737%	0.0168	0.3	0.0	1.224399	0.4	1959.0	4.375
0.37600000	4.38	844.8	1.028E-03	1.0%	0.067	0.0062	0.061	4.4954%	0.0169	0.3	0.0	1.21866	0.4	1965.6	4.38
0.37600000	4.385	844.8	1.029E-03	1.0%	0.067	0.00615	0.061	4.5173%	0.0170	0.3	0.0	1.212895	0.4	1972.2	4.385
0.37600000	4.39	844.8	1.030E-03	1.0%	0.066	0.0061	0.060	4.5394%	0.0171	0.3	0.0	1.207102	0.4	1978.9	4.39
0.37600000	4.395	844.8	1.031E-03	1.0%	0.066	0.00605	0.060	4.5618%	0.0172	0.3	0.0	1.201283	0.4	1985.6	4.395
0.37600000	4.4	844.8	1.033E-03	1.0%	0.066	0.006	0.060	4.5845%	0.0172	0.3	0.0	1.195436	0.4	1992.4	4.4
0.37600000	4.405	844.8	1.034E-03	1.0%	0.066	0.00595	0.060	4.6074%	0.0173	0.3	0.0	1.189562	0.4	1999.3	4.405
0.37600000	4.41	844.8	1.035E-03	1.0%	0.065	0.0059	0.059	4.6306%	0.0174	0.3	0.0	1.183661	0.4	2006.2	4.41
0.37600000	4.415	844.8	1.036E-03	1.0%	0.065	0.00585	0.059	4.6541%	0.0175	0.3	0.0	1.177731	0.4	2013.2	4.415
0.37600000	4.42	844.8	1.037E-03	1.0%	0.065	0.0058	0.059	4.6779%	0.0176	0.3	0.0	1.171773	0.4	2020.3	4.42
0.37600000	4.425	844.8	1.038E-03	1.0%	0.064	0.00575	0.059	4.7019%	0.0177	0.3	0.0	1.165787	0.4	2027.5	4.425
0.37600000	4.43	844.8	1.040E-03	1.0%	0.064	0.0057	0.058	4.7262%	0.0178	0.3	0.0	1.159773	0.3	2034.7	4.43
0.37600000	4.435	844.8	1.041E-03	1.0%	0.064	0.00565	0.058	4.7509%	0.0179	0.3	0.0	1.153729	0.3	2042.0	4.435
0.37600000	4.44	844.8	1.042E-03	1.0%	0.064	0.0056	0.058	4.7758%	0.0180	0.3	0.0	1.147656	0.3	2049.4	4.44
0.37600000	4.445	844.8	1.043E-03	1.0%	0.063	0.00555	0.058	4.8010%	0.0181	0.3	0.0	1.141553	0.3	2056.9	4.445
0.37600000	4.45	844.8	1.044E-03	1.0%	0.063	0.0055	0.058	4.8266%	0.0181	0.3	0.0	1.135421	0.3	2064.4	4.45
0.37600000	4.455	844.8	1.045E-03	1.0%	0.063	0.00545	0.057	4.8525%	0.0182	0.3	0.0	1.129259	0.3	2072.0	4.455
0.37600000	4.46	844.8	1.047E-03	1.0%	0.062	0.0054	0.057	4.8787%	0.0183	0.3	0.0	1.123066	0.3	2079.8	4.46
0.37600000	4.465	844.8	1.048E-03	1.0%	0.062	0.00535	0.057	4.9052%	0.0184	0.3	0.0	1.116843	0.3	2087.6	4.465
0.37600000	4.47	844.8	1.049E-03	1.0%	0.062	0.0053	0.057	4.9321%	0.0185	0.3	0.0	1.110588	0.3	2095.4	4.47
0.37600000	4.475	844.8	1.050E-03	1.0%	0.062	0.00525	0.056	4.9594%	0.0186	0.3	0.0	1.104303	0.3	2103.4	4.475
0.37600000	4.48	844.8	1.051E-03	1.0%	0.061	0.0052	0.056	4.9870%	0.0188	0.3	0.0	1.097986	0.3	2111.5	4.48
0.37600000	4.485	844.8	1.052E-03	1.0%	0.061	0.00515	0.056	5.0150%	0.0189	0.3	0.0	1.091636	0.3	2119.7	4.485
0.37600000	4.49	844.8	1.054E-03	1.0%	0.061	0.0051	0.056	5.0434%	0.0190	0.3	0.0	1.085255	0.3	2128.0	4.49
0.37600000	4.495	844.8	1.055E-03	1.0%	0.060	0.00505	0.055	5.0722%	0.0191	0.3	0.0	1.078841	0.3	2136.3	4.495
0.37600000	4.5	844.8	1.056E-03	1.0%	0.060	0.005	0.055	5.1013%	0.0192	0.3	0.0	1.072394	0.3	2144.8	4.5
0.37600000	4.505	844.8	1.057E-03	1.0%	0.060	0.00495	0.055	5.1309%	0.0193	0.3	0.0	1.065913	0.3	2153.4	4.505
0.37600000	4.51	844.8	1.058E-03	1.0%	0.059	0.0049	0.055	5.1609%	0.0194	0.3	0.0	1.059399	0.3	2162.0	4.51
0.37600000	4.515	844.8	1.060E-03	1.0%	0.059	0.00485	0.054	5.1913%	0.0195	0.3	0.0	1.052851	0.3	2170.8	4.515
0.37600000	4.52	844.8	1.061E-03	1.0%	0.059	0.0048	0.054	5.2222%	0.0196	0.3	0.0	1.046268	0.3	2179.7	4.52
0.37600000	4.525	844.8	1.062E-03	1.0%	0.059	0.00475	0.054	5.2535%	0.0198	0.3	0.0	1.039651	0.3	2188.7	4.525
0.37600000	4.53	844.8	1.063E-03	1.0%	0.058	0.0047	0.053	5.2853%	0.0199	0.3	0.0	1.032998	0.3	2197.9	4.53
0.37600000	4.535	844.8	1.064E-03	1.0%	0.058	0.00465	0.053	5.3176%	0.0200	0.3	0.0	1.026309	0.3	2207.1	4.535
0.37600000	4.54	844.8	1.065E-03	1.0%	0.058	0.0046	0.053	5.3503%	0.0201	0.2	0.0	1.019585	0.3	2216.5	4.54
0.37600000	4.545	844.8	1.067E-03	1.0%	0.057	0.00455	0.053	5.3836%	0.0202	0.2	0.0	1.012823	0.2	2226.0	4.545
0.37600000	4.55	844.8	1.068E-03	1.0%	0.057	0.0045	0.052	5.4174%	0.0204	0.2	0.0	1.006025	0.2	2235.6	4.55
0.37600000	4.555	844.8	1.069E-03	1.0%	0.057	0.00445	0.052	5.4517%	0.0205	0.2	0.0	0.999189	0.2	2245.4	4.555
0.37600000	4.56	844.8	1.070E-03	1.0%	0.056	0.0044	0.052	5.4865%	0.0206	0.2	0.0	0.992315	0.2	2255.3	4.56
0.37600000	4.565	844.8	1.071E-03	1.0%	0.056	0.00435	0.052	5.5219%	0.0208	0.2	0.0	0.985403	0.2	2265.3	4.565
0.37600000	4.57	844.8	1.072E-03	1.0%	0.056	0.0043	0.051	5.5579%	0.0209	0.2	0.0	0.978452	0.2	2275.5	4.57
0.37600000	4.575	844.8	1.074E-03	1.0%	0.055	0.00425	0.051	5.5945%	0.0210	0.2	0.0	0.971461	0.2	2285.8	4.575
0.37600000	4.58	844.8	1.075E-03	1.0%	0.055	0.0042	0.051	5.6317%	0.0212	0.2	0.0	0.964431	0.2	2296.3	4.58
0.37600000	4.585	844.8	1.076E-03	1.0%	0.055	0.00415	0.050	5.6695%	0.0213	0.2	0.0	0.95736	0.2	2306.9	4.585
0.37600000	4.59	844.8	1.077E-03	1.0%	0.054	0.0041	0.050	5.7079%	0.0215	0.2	0.0	0.950248	0.2	2317.7	4.59
0.37600000	4.595	844.8	1.078E-03	1.0%	0.054	0.00405	0.050	5.7471%	0.0216	0.2	0.0	0.943094	0.2	2328.6	4.595
0.37600000	4.6	844.8	1.079E-03	1.0%	0.054	0.004	0.050	5.7869%	0.0218	0.2	0.0	0.935898	0.2	2339.7	4.6
0.37600000	4.605	844.8	1.081E-03	1.0%	0.053	0.00395	0.049	5.8274%	0.0219	0.2	0.0	0.928659	0.2	2351.0	4.605
0.37600000	4.61	844.8	1.082E-03	1.0%	0.053	0.0039	0.049	5.8686%	0.0221	0.2	0.0	0.921376	0.2	2362.5	4.61
0.37600000	4.615	844.8	1.083E-03	1.0%	0.053	0.00385	0.049	5.9106%	0.0222	0.2	0.0	0.91405	0.2	2374.2	4.615
0.37600000	4.62	844.8	1.084E-03	1.0%	0.052	0.0038	0.048	5.9534%	0.0224	0.2	0.0	0.906678	0.2	2386.0	4.62
0.37600000	4.625	844.8	1.085E-03	1.0%	0.052	0.00375	0.048	5.9970%	0.0225	0.2	0.0	0.899262	0.2	2398.0	4.625
0.37600000	4.63	844.8	1.087E-03	1.0%	0.052	0.0037	0.048	6.0413%	0.0227	0.2	0.0	0.891799	0.2	2410.3	4.63
0.37600000	4.635	844.8	1.088E-03	1.0%	0.051	0.00365	0.048	6.0866%	0.0229	0.2	0.0	0.884289	0.2	2422.7	4.635
0.37600000	4.64	844.8	1.089E-03	1.0%	0.051	0.0036	0.047	6.1327%	0.0231	0.2	0.0	0.876731	0.2	2435.4	4.64
0.37600000	4.645	844.8	1.090E-03	1.0%	0.050	0.00355	0.047	6.1798%	0.0232	0.2	0.0	0.869125	0.2	2448.2	4.645
0.37600000	4.65	844.8	1.091E-03	1.0%	0.050	0.0035	0.047	6.2278%	0.0234	0.2	0.0	0.86147	0.2	2461.3	4.65
0.37600000	4.655	844.8	1.092E-03	1.0%	0.050	0.00345	0.046	6.2767%	0.0236	0.2	0.0	0.853765	0.2	2474.7	4.655
0.37600000	4.66	844.8	1.094E-03	1.0%	0.049	0.0034	0.046	6.3267%	0.0238	0.2	0.0	0.846009	0.2	2488.3	4.66
0.37600000	4.665	844.8	1.095E-03	1.0%	0.049	0.00335	0.046	6.3778%	0.0240	0.2	0.0	0.838201	0.2	2502.1	4.665
0.37600000	4.67	844.8	1.096E-03	1.0%	0.049	0.0033	0.045	6.4299%	0.0242	0.2	0.0	0.83034	0.2	2516.2	4.67
0.37600000	4.675	844.8	1.097E-03	1.0%	0.048	0.00325	0.045	6.4831%	0.0244	0.2	0.0	0.822426	0.1	2530.5	4.675
0.37600000	4.68	844.8	1.098E-03	1.0%	0.048	0.0032	0.045	6.5375%	0.0246	0.2	0.0	0.814457	0.1	2545.2	4.68
0.37600000	4.685	844.8	1.099E-03	1.0%	0.047	0.00315	0.044	6.5932%	0.0248	0.2	0.0	0.806432	0.1	2560.1	4.685
0.37600000	4.69	844.8	1.101E-03	1.0%	0.047	0.0031	0.044	6.6501%	0.0250	0.2	0.0	0.798351	0.1	2575.3	4.69
0.37600000	4.695	844.8	1.102E-03	1.0%	0.047	0.00305	0.044	6.7083%	0.0252	0.2	0.0	0.790212	0.1	2590.9	4.695
0.37600000	4.7	844.8	1.103E-03	1.0%	0.046	0.003	0.043	6.7678%	0.0254	0.2	0.0	0.782014	0.1	2606.7	4.7
0.37600000	4.705	844.8	1.104E-03	1.0%	0.046	0.00295	0.043	6.8288%	0.0257	0.2	0.0	0.773756	0.1	2622.9	4.705
0.37600000	4.71	844.8	1.105E-03	1.0%	0.046	0.0029	0.043	6.8913%	0.0259	0.2	0.0	0.765436	0.1	2639.4	4.71
0.37600000	4.715	844.8	1.106E-03	1.0%	0.045	0.00285	0.042	6.9553%	0.0262	0.2	0.0	0.757054	0.1	2656.3	4.715
0.37600000	4.72	844.8	1.108E-03	1.0%	0.045	0.0028	0.042	7.0210%	0.0264	0.2	0.0	0.748608	0.1	2673.6	4.72
0.37600000	4.725	844.8	1.109E-03	1.0%	0.044	0.00275	0.042	7.0883%	0.0267	0.2	0.0	0.740097	0.1	2691.3	4.725
0.37600000	4.73	844.8	1.110E-03	1.0%	0.044	0.0027	0.041	7.1573%	0.0269	0.2	0.0	0.731519	0.1	2709.3	4.73
0.37600000	4.735	844.8	1.111E-03	1.0%	0.044	0.00265	0.041	7.2283%	0.0272	0.2	0.0	0.722872	0.1	2727.8	4.735
0.37600000	4.74	844.8	1.112E-03	1.0%	0.043	0.0026	0.041	7.3011%	0.0275	0.2	0.0	0.714156	0.1	2746.8	4.74
0.37600000	4.745	844.8	1.113E-03	1.0%	0.043	0.00255	0.040	7.3759%	0.0277	0.2	0.0	0.705368	0.1	2766.1	4.745
0.37600000	4.75	844.8	1.115E-03	1.0%	0.042	0.0025	0.040	7.4529%	0.0280	0.2	0.0	0.696507	0.1	2786.0	4.75
0.37600000	4.755	844.8	1.116E-03	1.0%	0.042	0.00245	0.039	7.5320%	0.0283	0.2	0.0	0.687571	0.1	2806.4	4.755
0.37600000	4.76	844.8	1.117E-03	1.0%	0.041	0.0024	0.039	7.6135%	0.0286	0.2	0.0	0.678558	0.1	2827.3	4.76
0.37600000	4.765	844.8	1.118E-03	1.0%	0.041	0.00235	0.039	7.6974%	0.0289	0.2	0.0	0.669466	0.1	2848.8	4.765
0.37600000	4.77	844.8	1.119E-03	1.0%	0.041	0.0023	0.038	7.7839%	0.0293	0.2	0.0	0.660293	0.1	2870.8	4.77
0.37600000	4.775	844.8	1.121E-03	1.0%	0.040	0.00225	0.038	7.8731%	0.0296	0.2	0.0	0.651037	0.1	2893.5	4.775

0.37600000	4.78	844.8	1.122E-03	1.0%	0.040	0.0022	0.037	7.9651%	0.0299	0.2	0.0	0.641695	0.1	2916.8	4.78
0.37600000	4.785	844.8	1.123E-03	1.0%	0.039	0.00215	0.037	8.0602%	0.0303	0.2	0.0	0.632266	0.1	2940.8	4.785
0.37600000	4.79	844.8	1.124E-03	1.0%	0.039	0.0021	0.037	8.1584%	0.0307	0.2	0.0	0.622746	0.1	2965.5	4.79
0.37600000	4.795	844.8	1.125E-03	1.0%	0.038	0.00205	0.036	8.2601%	0.0311	0.2	0.0	0.613134	0.1	2990.9	4.795
0.37600000	4.8	844.8	1.126E-03	1.0%	0.038	0.002	0.036	8.3653%	0.0315	0.2	0.0	0.603425	0.1	3017.1	4.8
0.37600000	4.805	844.8	1.128E-03	1.0%	0.037	0.00195	0.035	8.4742%	0.0319	0.2	0.0	0.593617	0.1	3044.2	4.805
0.37600000	4.81	844.8	1.129E-03	1.0%	0.037	0.0019	0.035	8.5872%	0.0323	0.2	0.0	0.583707	0.1	3072.1	4.81
0.37600000	4.815	844.8	1.130E-03	1.0%	0.036	0.00185	0.035	8.7045%	0.0327	0.2	0.0	0.573692	0.1	3101.0	4.815
0.37600000	4.82	844.8	1.131E-03	1.0%	0.036	0.0018	0.034	8.8264%	0.0332	0.2	0.0	0.563567	0.1	3130.9	4.82
0.37600000	4.825	844.8	1.132E-03	1.0%	0.035	0.00175	0.034	8.9532%	0.0337	0.1	0.0	0.55333	0.1	3161.9	4.825
0.37600000	4.83	844.8	1.133E-03	1.0%	0.035	0.0017	0.033	9.0851%	0.0342	0.1	0.0	0.542975	0.1	3194.0	4.83
0.37600000	4.835	844.8	1.135E-03	1.0%	0.034	0.00165	0.033	9.2227%	0.0347	0.1	0.0	0.532499	0.1	3227.3	4.835
0.37600000	4.84	844.8	1.136E-03	1.0%	0.034	0.0016	0.032	9.3663%	0.0352	0.1	0.0	0.521897	0.1	3261.9	4.84
0.37600000	4.845	844.8	1.137E-03	1.0%	0.033	0.00155	0.032	9.5164%	0.0358	0.1	0.0	0.511164	0.1	3297.8	4.845
0.37600000	4.85	844.8	1.138E-03	1.0%	0.033	0.0015	0.031	9.6735%	0.0364	0.1	0.0	0.500294	0.0	3335.3	4.85
0.37600000	4.855	844.8	1.139E-03	1.0%	0.032	0.00145	0.031	9.8381%	0.0370	0.1	0.0	0.489282	0.0	3374.4	4.855
0.37600000	4.86	844.8	1.140E-03	1.0%	0.032	0.0014	0.030	10.0109%	0.0376	0.1	0.0	0.478121	0.0	3415.1	4.86
0.37600000	4.865	844.8	1.142E-03	1.0%	0.031	0.00135	0.030	10.1927%	0.0383	0.1	0.0	0.466804	0.0	3457.8	4.865
0.37600000	4.87	844.8	1.143E-03	1.0%	0.031	0.0013	0.029	10.3841%	0.0390	0.1	0.0	0.455325	0.0	3502.5	4.87
0.37600000	4.875	844.8	1.144E-03	1.0%	0.030	0.00125	0.029	10.5862%	0.0398	0.1	0.0	0.443674	0.0	3549.4	4.875
0.37600000	4.88	844.8	1.145E-03	1.0%	0.029	0.0012	0.028	10.8000%	0.0406	0.1	0.0	0.431843	0.0	3598.7	4.88
0.37600000	4.885	844.8	1.146E-03	1.0%	0.029	0.00115	0.028	11.0266%	0.0415	0.1	0.0	0.419823	0.0	3650.6	4.885
0.37600000	4.89	844.8	1.148E-03	1.0%	0.028	0.0011	0.027	11.2675%	0.0424	0.1	0.0	0.407602	0.0	3705.5	4.89
0.37600000	4.895	844.8	1.149E-03	1.0%	0.028	0.00105	0.027	11.5242%	0.0433	0.1	0.0	0.395169	0.0	3763.5	4.895
0.37600000	4.9	844.8	1.150E-03	1.0%	0.027	0.001	0.026	11.7985%	0.0444	0.1	0.0	0.382511	0.0	3825.1	4.9
0.37600000	4.905	844.8	1.151E-03	1.0%	0.026	0.00095	0.025	12.0926%	0.0455	0.1	0.0	0.369612	0.0	3890.6	4.905
0.37600000	4.91	844.8	1.152E-03	1.0%	0.026	0.0009	0.025	12.4091%	0.0467	0.1	0.0	0.356456	0.0	3960.6	4.91
0.37600000	4.915	844.8	1.153E-03	1.0%	0.025	0.00085	0.024	12.7509%	0.0479	0.1	0.0	0.343025	0.0	4035.6	4.915
0.37600000	4.92	844.8	1.155E-03	1.0%	0.024	0.0008	0.023	13.1218%	0.0493	0.1	0.0	0.329296	0.0	4116.2	4.92
0.37600000	4.925	844.8	1.156E-03	1.0%	0.023	0.00075	0.023	13.5260%	0.0509	0.1	0.0	0.315247	0.0	4203.3	4.925
0.37600000	4.93	844.8	1.157E-03	1.0%	0.023	0.0007	0.022	13.9691%	0.0525	0.1	0.0	0.300847	0.0	4297.8	4.93
0.37600000	4.935	844.8	1.158E-03	1.0%	0.022	0.00065	0.021	14.4577%	0.0544	0.1	0.0	0.286065	0.0	4401.0	4.935
0.37600000	4.94	844.8	1.159E-03	1.0%	0.021	0.0006	0.021	15.0005%	0.0564	0.1	0.0	0.270861	0.0	4514.4	4.94
0.37600000	4.945	844.8	1.160E-03	1.0%	0.020	0.00055	0.020	15.6083%	0.0587	0.1	0.0	0.255189	0.0	4639.8	4.945
0.37600000	4.95	844.8	1.162E-03	1.0%	0.019	0.0005	0.019	16.2956%	0.0613	0.1	0.0	0.238991	0.0	4779.8	4.95
0.37600000	4.955	844.8	1.163E-03	1.0%	0.019	0.00045	0.018	17.0816%	0.0642	0.1	0.0	0.222198	0.0	4937.7	4.955
0.37600000	4.96	844.8	1.164E-03	1.0%	0.018	0.0004	0.017	17.9929%	0.0677	0.1	0.0	0.204721	0.0	5118.0	4.96
0.37600000	4.965	844.8	1.165E-03	1.0%	0.017	0.00035	0.016	19.0677%	0.0717	0.1	0.0	0.186448	0.0	5327.1	4.965
0.37600000	4.97	844.8	1.166E-03	1.0%	0.016	0.0003	0.015	20.3626%	0.0766	0.1	0.0	0.167224	0.0	5574.1	4.97
0.37600000	4.975	844.8	1.167E-03	1.0%	0.014	0.00025	0.014	21.9670%	0.0826	0.1	0.0	0.14684	0.0	5873.6	4.975
0.37600000	4.98	844.8	1.169E-03	1.0%	0.013	0.0002	0.013	24.0321%	0.0904	0.1	0.0	0.124985	0.0	6249.3	4.98
0.37600000	4.985	844.8	1.170E-03	1.0%	0.012	0.00015	0.012	26.8416%	0.1009	0.0	0.0	0.10117	0.0	6744.7	4.985
0.37600000	4.99	844.8	1.171E-03	1.0%	0.010	1E-04	0.010	31.0191%	0.1166	0.0	0.0	0.074526	0.0	7452.6	4.99
0.37600000	4.995	844.8	1.172E-03	1.0%	0.008	5E-05	0.008	38.3895%	0.1443	0.0	0.0	0.043168	0.0	8633.5	4.995
0.37600000	5	844.8	1.173E-03	1.0%	0.005	0	0.005	62.4113%	0.2347	0.0	0.0	0	0.0	12073.0	5

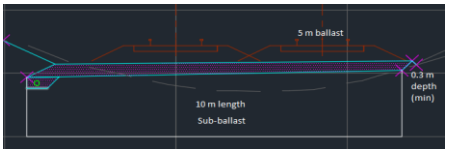
* Relative to bottom of ballast at outside edge of ballast

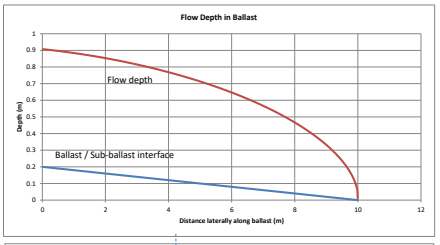
Tc Calculations for Ballast Material using A and B IDF Parameters

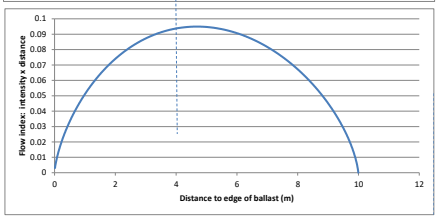
	1000	0.01			100yr	A	50.3
Width of flow path (m) =	10					B	-0.69
Total time of concentraion (min) =							
Critical time of concentration (min) =	**1212.2**	**20.3 hrs**					
Percent of ballast section contributing to flow for critical Tc =			53%				

Calculation note: iterate rainfall intensity (red text) until equal to value in row above

Hydraulic Conductivity (m/s)	Distance (m)	Rainfall Intensity (mm/hr)	Flow (m2/s)	Subgrade slope	HGL * (m)	Ballast Invert *	Depth (m)	Hydraulic Slope	Velocity (m/s)	Travel time (min)	Travel time (hr)	100-yr peak flow	Total travel time (hr)	100-yr rainfall intensity (mm/hr)	distance (m)
		17.9													
0.00100000	0.005	17.9	2.486E-08	2.0%	0.908	0.1998	0.708	0.0035%	0.0000			0.003117	15578.3	0.3	0.005
0.00100000	0.015	17.9	7.458E-08	2.0%	0.907	0.1996	0.708	0.0105%	0.0000	94891.9	1581.5	0.003114	15578.3	0.3	0.015
0.00100000	0.025	17.9	1.243E-07	2.0%	0.907	0.1994	0.708	0.0176%	0.0000	56935.0	948.9	0.004426	13996.8	0.4	0.025
0.00100000	0.035	17.9	1.740E-07	2.0%	0.907	0.1992	0.708	0.0246%	0.0000	40667.7	677.8	0.005577	13047.9	0.6	0.035
0.00100000	0.045	17.9	2.238E-07	2.0%	0.907	0.199	0.708	0.0316%	0.0000	31630.3	527.2	0.006626	12370.1	0.7	0.045
0.00100000	0.055	17.9	2.735E-07	2.0%	0.907	0.1988	0.708	0.0386%	0.0000	25879.2	431.3	0.007602	11842.9	0.8	0.055
0.00100000	0.065	17.9	3.232E-07	2.0%	0.906	0.1986	0.708	0.0457%	0.0000	21897.6	365.0	0.008523	11411.6	0.9	0.065
0.00100000	0.075	17.9	3.729E-07	2.0%	0.906	0.1984	0.708	0.0527%	0.0000	18977.8	316.3	0.009398	11046.6	0.9	0.075
0.00100000	0.085	17.9	4.226E-07	2.0%	0.906	0.1982	0.708	0.0597%	0.0000	16745.0	279.1	0.010235	10730.3	1.0	0.085
0.00100000	0.095	17.9	4.724E-07	2.0%	0.906	0.198	0.708	0.0667%	0.0000	14982.2	249.7	0.01104	10451.2	1.1	0.095
0.00100000	0.105	17.9	5.221E-07	2.0%	0.905	0.1978	0.708	0.0738%	0.0000	13555.2	225.9	0.011818	10201.5	1.2	0.105
0.00100000	0.115	17.9	5.718E-07	2.0%	0.905	0.1976	0.708	0.0808%	0.0000	12376.3	206.3	0.012571	9975.6	1.3	0.115
0.00100000	0.125	17.9	6.215E-07	2.0%	0.905	0.1974	0.708	0.0878%	0.0000	11386.1	189.8	0.013302	9769.3	1.3	0.125
0.00100000	0.135	17.9	6.713E-07	2.0%	0.905	0.1972	0.708	0.0949%	0.0000	10542.5	175.7	0.014013	9579.6	1.4	0.135
0.00100000	0.145	17.9	7.210E-07	2.0%	0.905	0.197	0.708	0.1019%	0.0000	9815.3	163.6	0.014707	9403.9	1.5	0.145
0.00100000	0.155	17.9	7.707E-07	2.0%	0.904	0.1968	0.708	0.1089%	0.0000	9181.9	153.0	0.015384	9240.3	1.6	0.155
0.00100000	0.165	17.9	8.204E-07	2.0%	0.904	0.1966	0.708	0.1159%	0.0000	8625.3	143.8	0.016046	9087.2	1.6	0.165
0.00100000	0.175	17.9	8.701E-07	2.0%	0.904	0.1964	0.708	0.1230%	0.0000	8132.3	135.5	0.016694	8943.5	1.7	0.175
0.00100000	0.185	17.9	9.199E-07	2.0%	0.904	0.1962	0.708	0.1300%	0.0000	7692.6	128.2	0.017329	8808.0	1.8	0.185
0.00100000	0.195	17.9	9.696E-07	2.0%	0.904	0.196	0.708	0.1370%	0.0000	7297.9	121.6	0.017952	8679.7	1.8	0.195
0.00100000	0.205	17.9	1.019E-06	2.0%	0.903	0.1958	0.708	0.1441%	0.0000	6941.8	115.7	0.018563	8558.1	1.9	0.205
0.00100000	0.215	17.9	1.069E-06	2.0%	0.903	0.1956	0.708	0.1511%	0.0000	6618.8	110.3	0.019164	8442.4	2.0	0.215
0.00100000	0.225	17.9	1.119E-06	2.0%	0.903	0.1954	0.708	0.1581%	0.0000	6324.5	105.4	0.019755	8332.1	2.0	0.225
0.00100000	0.235	17.9	1.168E-06	2.0%	0.903	0.1952	0.708	0.1651%	0.0000	6055.2	100.9	0.020336	8226.7	2.1	0.235
0.00100000	0.245	17.9	1.218E-06	2.0%	0.903	0.195	0.708	0.1722%	0.0000	5807.9	96.8	0.020909	8125.8	2.1	0.245
0.00100000	0.255	17.9	1.268E-06	2.0%	0.902	0.1948	0.707	0.1792%	0.0000	5580.0	93.0	0.021472	8029.0	2.2	0.255
0.00100000	0.265	17.9	1.318E-06	2.0%	0.902	0.1946	0.707	0.1862%	0.0000	5369.3	89.5	0.022027	7936.0	2.3	0.265
0.00100000	0.275	17.9	1.367E-06	2.0%	0.902	0.1944	0.707	0.1933%	0.0000	5173.9	86.2	0.022575	7846.5	2.3	0.275
0.00100000	0.285	17.9	1.417E-06	2.0%	0.902	0.1942	0.707	0.2003%	0.0000	4992.2	83.2	0.023115	7760.3	2.4	0.285
0.00100000	0.295	17.9	1.467E-06	2.0%	0.901	0.194	0.707	0.2073%	0.0000	4822.9	80.4	0.023647	7677.0	2.4	0.295
0.00100000	0.305	17.9	1.517E-06	2.0%	0.901	0.1938	0.707	0.2144%	0.0000	4664.6	77.7	0.024173	7596.7	2.5	0.305
0.00100000	0.315	17.9	1.566E-06	2.0%	0.901	0.1936	0.707	0.2214%	0.0000	4516.4	75.3	0.024692	7518.9	2.6	0.315
0.00100000	0.325	17.9	1.616E-06	2.0%	0.901	0.1934	0.707	0.2285%	0.0000	4377.3	73.0	0.025205	7443.7	2.6	0.325
0.00100000	0.335	17.9	1.666E-06	2.0%	0.901	0.1932	0.707	0.2355%	0.0000	4246.5	70.8	0.025712	7370.7	2.7	0.335
0.00100000	0.345	17.9	1.715E-06	2.0%	0.900	0.193	0.707	0.2425%	0.0000	4123.2	68.7	0.026212	7299.9	2.7	0.345
0.00100000	0.355	17.9	1.765E-06	2.0%	0.900	0.1928	0.707	0.2496%	0.0000	4006.9	66.8	0.026707	7231.2	2.8	0.355
0.00100000	0.365	17.9	1.815E-06	2.0%	0.900	0.1926	0.707	0.2566%	0.0000	3897.0	65.0	0.027196	7164.4	2.8	0.365
0.00100000	0.375	17.9	1.865E-06	2.0%	0.900	0.1924	0.707	0.2636%	0.0000	3793.0	63.2	0.02768	7099.5	2.9	0.375
0.00100000	0.385	17.9	1.914E-06	2.0%	0.899	0.1922	0.707	0.2707%	0.0000	3694.3	61.6	0.028159	7036.3	2.9	0.385
0.00100000	0.395	17.9	1.964E-06	2.0%	0.899	0.192	0.707	0.2777%	0.0000	3600.6	60.0	0.028633	6974.7	3.0	0.395
0.00100000	0.405	17.9	2.014E-06	2.0%	0.899	0.1918	0.707	0.2848%	0.0000	3511.6	58.5	0.029101	6914.7	3.0	0.405
0.00100000	0.415	17.9	2.063E-06	2.0%	0.899	0.1916	0.707	0.2918%	0.0000	3426.8	57.1	0.029565	6856.1	3.1	0.415
0.00100000	0.425	17.9	2.113E-06	2.0%	0.898	0.1914	0.707	0.2989%	0.0000	3346.1	55.8	0.030025	6799.0	3.1	0.425
0.00100000	0.435	17.9	2.163E-06	2.0%	0.898	0.1912	0.707	0.3059%	0.0000	3269.0	54.5	0.030479	6743.3	3.2	0.435
0.00100000	0.445	17.9	2.213E-06	2.0%	0.898	0.191	0.707	0.3130%	0.0000	3195.4	53.3	0.03093	6688.8	3.2	0.445
0.00100000	0.455	17.9	2.262E-06	2.0%	0.898	0.1908	0.707	0.3200%	0.0000	3125.0	52.1	0.031376	6635.5	3.3	0.455
0.00100000	0.465	17.9	2.312E-06	2.0%	0.898	0.1906	0.707	0.3270%	0.0000	3057.7	51.0	0.031817	6583.4	3.3	0.465
0.00100000	0.475	17.9	2.362E-06	2.0%	0.897	0.1904	0.707	0.3341%	0.0000	2993.2	49.9	0.032255	6532.5	3.4	0.475
0.00100000	0.485	17.9	2.412E-06	2.0%	0.897	0.1902	0.707	0.3411%	0.0000	2931.3	48.9	0.032689	6482.6	3.4	0.485
0.00100000	0.495	17.9	2.461E-06	2.0%	0.897	0.19	0.707	0.3482%	0.0000	2871.9	47.9	0.033119	6433.7	3.5	0.495
0.00100000	0.505	17.9	2.511E-06	2.0%	0.897	0.1898	0.707	0.3552%	0.0000	2814.9	46.9	0.033545	6385.9	3.5	0.505
0.00100000	0.515	17.9	2.561E-06	2.0%	0.896	0.1896	0.707	0.3623%	0.0000	2760.1	46.0	0.033967	6339.0	3.6	0.515
0.00100000	0.525	17.9	2.610E-06	2.0%	0.896	0.1894	0.707	0.3694%	0.0000	2707.4	45.1	0.034386	6293.0	3.6	0.525
0.00100000	0.535	17.9	2.660E-06	2.0%	0.896	0.1892	0.707	0.3764%	0.0000	2656.7	44.3	0.034801	6247.8	3.7	0.535
0.00100000	0.545	17.9	2.710E-06	2.0%	0.896	0.189	0.707	0.3835%	0.0000	2607.8	43.5	0.035212	6203.6	3.7	0.545
0.00100000	0.555	17.9	2.760E-06	2.0%	0.895	0.1888	0.707	0.3905%	0.0000	2560.7	42.7	0.035621	6160.1	3.8	0.555
0.00100000	0.565	17.9	2.809E-06	2.0%	0.895	0.1886	0.707	0.3976%	0.0000	2515.2	41.9	0.036025	6117.4	3.8	0.565
0.00100000	0.575	17.9	2.859E-06	2.0%	0.895	0.1884	0.707	0.4046%	0.0000	2471.3	41.2	0.036427	6075.5	3.9	0.575
0.00100000	0.585	17.9	2.909E-06	2.0%	0.895	0.1882	0.707	0.4117%	0.0000	2428.9	40.5	0.036825	6034.3	3.9	0.585
0.00100000	0.595	17.9	2.958E-06	2.0%	0.894	0.188	0.706	0.4188%	0.0000	2388.0	39.8	0.03722	5993.8	4.0	0.595
0.00100000	0.605	17.9	3.008E-06	2.0%	0.894	0.1878	0.706	0.4258%	0.0000	2348.3	39.1	0.037612	5954.0	4.0	0.605
0.00100000	0.615	17.9	3.058E-06	2.0%	0.894	0.1876	0.706	0.4329%	0.0000	2310.0	38.5	0.038001	5914.9	4.1	0.615
0.00100000	0.625	17.9	3.108E-06	2.0%	0.894	0.1874	0.706	0.4400%	0.0000	2272.9	37.9	0.038387	5876.4	4.1	0.625
0.00100000	0.635	17.9	3.157E-06	2.0%	0.893	0.1872	0.706	0.4470%	0.0000	2237.0	37.3	0.03877	5838.5	4.1	0.635
0.00100000	0.645	17.9	3.207E-06	2.0%	0.893	0.187	0.706	0.4541%	0.0000	2202.2	36.7	0.039151	5801.2	4.2	0.645
0.00100000	0.655	17.9	3.257E-06	2.0%	0.893	0.1868	0.706	0.4612%	0.0000	2168.4	36.1	0.039528	5764.5	4.2	0.655
0.00100000	0.665	17.9	3.307E-06	2.0%	0.893	0.1866	0.706	0.4682%	0.0000	2135.6	35.6	0.039902	5728.4	4.3	0.665
0.00100000	0.675	17.9	3.356E-06	2.0%	0.893	0.1864	0.706	0.4753%	0.0000	2103.9	35.1	0.040274	5692.8	4.3	0.675
0.00100000	0.685	17.9	3.406E-06	2.0%	0.892	0.1862	0.706	0.4824%	0.0000	2073.0	34.6	0.040643	5657.7	4.4	0.685
0.00100000	0.695	17.9	3.456E-06	2.0%	0.892	0.186	0.706	0.4895%	0.0000	2043.0	34.1	0.041009	5623.2	4.4	0.695
0.00100000	0.705	17.9	3.505E-06	2.0%	0.892	0.1858	0.706	0.4965%	0.0000	2013.9	33.6	0.041373	5589.1	4.5	0.705
0.00100000	0.715	17.9	3.555E-06	2.0%	0.892	0.1856	0.706	0.5036%	0.0000	1985.6	33.1	0.041734	5555.6	4.5	0.715
0.00100000	0.725	17.9	3.605E-06	2.0%	0.891	0.1854	0.706	0.5107%	0.0000	1958.1	32.6	0.042093	5522.5	4.5	0.725
0.00100000	0.735	17.9	3.655E-06	2.0%	0.891	0.1852	0.706	0.5178%	0.0000	1931.3	32.2	0.042449	5489.8	4.6	0.735
0.00100000	0.745	17.9	3.704E-06	2.0%	0.891	0.185	0.706	0.5249%	0.0000	1905.2	31.8	0.042803	5457.6	4.6	0.745
0.00100000	0.755	17.9	3.754E-06	2.0%	0.891	0.1848	0.706	0.5320%	0.0000	1879.9	31.3	0.043154	5425.9	4.7	0.755
0.00100000	0.765	17.9	3.804E-06	2.0%	0.890	0.1846	0.706	0.5390%	0.0000	1855.1	30.9	0.043502	5394.5	4.7	0.765
0.00100000	0.775	17.9	3.853E-06	2.0%	0.890	0.1844	0.706	0.5461%	0.0000	1831.1	30.5	0.043849	5363.6	4.8	0.775
0.00100000	0.785	17.9	3.903E-06	2.0%	0.890	0.1842	0.706	0.5532%	0.0000	1807.6	30.1	0.044193	5333.1	4.8	0.785
0.00100000	0.795	17.9	3.953E-06	2.0%	0.889	0.184	0.705	0.5603%	0.0000	1784.7	29.7	0.044535	5303.0	4.8	0.795
0.00100000	0.805	17.9	4.003E-06	2.0%	0.889	0.1838	0.705	0.5674%	0.0000	1762.4	29.4	0.044874	5273.2	4.9	0.805
0.00100000	0.815	17.9	4.052E-06	2.0%	0.889	0.1836	0.705	0.5745%	0.0000	1740.6	29.0	0.045211	5243.9	4.9	0.815
0.00100000	0.825	17.9	4.102E-06	2.0%	0.889	0.1834	0.705	0.5816%	0.0000	1719.4	28.7	0.045546	5214.9	5.0	0.825
0.00100000	0.835	17.9	4.152E-06	2.0%	0.888	0.1832	0.705	0.5887%	0.0000	1698.7	28.3	0.045879	5186.2	5.0	0.835
0.00100000	0.845	17.9	4.202E-06	2.0%	0.888	0.183	0.705	0.5958%	0.0000	1678.4	28.0	0.04621	5157.9	5.1	0.845
0.00100000	0.855	17.9	4.251E-06	2.0%	0.888	0.1828	0.705	0.6029%	0.0000	1658.7	27.6	0.046538	5129.9	5.1	0.855
0.00100000	0.865	17.9	4.301E-06	2.0%	0.888	0.1826	0.705	0.6100%	0.0000	1639.3	27.3	0.046864	5102.3	5.1	0.865
0.00100000	0.875	17.9	4.351E-06	2.0%	0.887	0.1824	0.705	0.6171%	0.0000	1620.5	27.0	0.047189	5074.9	5.2	0.875
0.00100000	0.885	17.9	4.400E-06	2.0%	0.887	0.1822	0.705	0.6242%	0.0000	1602.0	26.7	0.047511	5047.9	5.2	0.885
0.00100000	0.895	17.9	4.450E-06	2.0%	0.887	0.182	0.705	0.6313%	0.0000	1584.0	26.4	0.047831	5021.2	5.3	0.895
0.00100000	0.905	17.9	4.500E-06	2.0%	0.887	0.1818	0.705	0.6384%	0.0000	1566.3	26.1	0.048149	4994.8	5.3	0.905
0.00100000	0.915	17.9	4.550E-06	2.0%	0.886	0.1816	0.705	0.6456%	0.0000	1549.1	25.8	0.048465	4968.7	5.3	0.915
0.00100000	0.925	17.9	4.599E-06	2.0%	0.886	0.1814	0.705	0.6527%	0.0000	1532.2	25.5	0.04878	4942.9	5.4	0.925
0.00100000	0.935	17.9	4.649E-06	2.0%	0.886	0.1812	0.705	0.6598%	0.0000	1515.6	25.3	0.049092	4917.4	5.4	0.935
0.00100000	0.945	17.9	4.699E-06	2.0%	0.886	0.181	0.705	0.6669%	0.0000	1499.5	25.0	0.049402	4892.1	5.5	0.945
0.00100000	0.955	17.9	4.748E-06	2.0%	0.885	0.1808	0.704	0.6740%	0.0000	1483.6	24.7	0.049711	4867.1	5.5	0.955
0.00100000	0.965	17.9	4.798E-06	2.0%	0.885	0.1806	0.704	0.6812%	0.0000	1468.1	24.5	0.050017	4842.4	5.5	0.965
0.00100000	0.975	17.9	4.848E-06	2.0%	0.885	0.1804	0.704	0.6883%	0.0000	1452.9	24.2	0.050322	4817.9	5.6	0.975
0.00100000	0.985	17.9	4.898E-06	2.0%	0.884	0.1802	0.704	0.6954%	0.0000	1438.0	24.0	0.050625	4793.7	5.6	0.985
0.00100000	0.995	17.9	4.947E-06	2.0%	0.884	0.18	0.704	0.7025%	0.0000	1423.4	23.7	0.050926	4769.8	5.7	0.995
0.00100000	1.005	17.9	4.997E-06	2.0%	0.884	0.1798	0.704	0.7097%	0.0000	1409.1	23.5	0.051225	4746.0	5.7	1.005
0.00100000	1.015	17.9	5.047E-06	2.0%	0.884	0.1796	0.704	0.7168%	0.0000	1395.1	23.3	0.051522	4722.5	5.7	1.015
0.00100000	1.025	17.9	5.097E-06	2.0%	0.883	0.1794	0.704	0.7239%	0.0000	1381.3	23.0	0.051818	4699.3	5.8	1.025
0.00100000	1.035	17.9	5.146E-06	2.0%	0.883	0.1792	0.704	0.7311%	0.0000	1367.8	22.8	0.052112	4676.3	5.8	1.035
0.00100000	1.045	17.9	5.196E-06	2.0%	0.883	0.179	0.704	0.7382%	0.0000	1354.6	22.6	0.052404	4653.5	5.9	1.045
0.00100000	1.055	17.9	5.246E-06	2.0%	0.883	0.1788	0.704	0.7454%	0.0000	1341.6	22.4	0.052694	4630.9	5.9	1.055
0.00100000	1.065	17.9	5.295E-06	2.0%	0.882	0.1786	0.704	0.7525%	0.0000	1328.9	22.1	0.052983	4608.5	5.9	1.065
0.00100000	1.075	17.9	5.345E-06	2.0%	0.882	0.1784	0.704	0.7597%	0.0000	1316.4	21.9	0.05327	4586.4	6.0	1.075
0.00100000	1.085	17.9	5.395E-06	2.0%	0.882	0.1782	0.704	0.7668%	0.0000	1304.1	21.7	0.053555	4564.4	6.0	1.085
0.00100000	1.095	17.9	5.445E-06	2.0%	0.881	0.178	0.703	0.7740%	0.0000	1292.1	21.5	0.053839	4542.7	6.0	1.095
0.00100000	1.105	17.9	5.494E-06	2.0%	0.881	0.1778	0.703	0.7811%	0.0000	1280.2	21.3	0.054121	4521.2	6.1	1.105
0.00100000	1.115	17.9	5.544E-06	2.0%	0.881	0.1776	0.703	0.7883%	0.0000	1268.6	21.1	0.054402	4499.8	6.1	1.115
0.00100000	1.125	17.9	5.594E-06	2.0%	0.881	0.1774	0.703	0.7954%	0.0000	1257.2	21.0	0.05468	4478.7	6.2	1.125
0.00100000	1.135	17.9	5.643E-06	2.0%	0.880	0.1772	0.703	0.8026%	0.0000	1246.0	20.8	0.054958	4457.7	6.2	1.135
0.00100000	1.145	17.9	5.693E-06	2.0%	0.880	0.177	0.703	0.8098%	0.0000	1234.9	20.6	0.055233	4437.0	6.2	1.145
0.00100000	1.155	17.9	5.743E-06	2.0%	0.880	0.1768	0.703	0.8169%	0.0000	1224.1	20.4	0.055507	4416.4	6.3	1.155
0.00100000	1.165	17.9	5.793E-06	2.0%	0.880	0.1766	0.703	0.8241%	0.0000	1213.5	20.2	0.05578	4396.0	6.3	1.165
0.00100000	1.175	17.9	5.842E-06	2.0%	0.879	0.1764	0.703	0.8313%	0.0000	1203.0	20.0	0.056051	4375.8	6.4	1.175
0.00100000	1.185	17.9	5.892E-06	2.0%	0.879	0.1762	0.703	0.8384%	0.0000	1192.7	19.9	0.05632	4355.7	6.4	1.185
0.00100000	1.195	17.9	5.942E-06	2.0%	0.879	0.176	0.703	0.8456%	0.0000	1182.6	19.7	0.056588	4335.8	6.4	1.195
0.00100000	1.205	17.9	5.992E-06	2.0%	0.878	0.1758	0.703	0.8528%	0.0000	1172.6	19.5	0.056854	4316.1	6.5	1.205
0.00100000	1.215	17.9	6.041E-06	2.0%	0.878	0.1756	0.702	0.8600%	0.0000	1162.8	19.4	0.057119	4296.6	6.5	1.215
0.00100000	1.225	17.9	6.091E-06	2.0%	0.878	0.1754	0.702	0.8672%	0.0000	1153.2	19.2	0.057383	4277.2	6.5	1.225
0.00100000	1.235	17.9	6.141E-06	2.0%	0.878	0.1752	0.702	0.8744%	0.0000	1143.7	19.1	0.057645	4258.0	6.6	1.235
0.00100000	1.245	17.9	6.190E-06	2.0%	0.877	0.175	0.702	0.8815%	0.0000	1134.4	18.9	0.057905	4238.9	6.6	1.245
0.00100000	1.255	17.9	6.240E-06	2.0%	0.877	0.1748	0.702	0.8887%	0.0000	1125.2	18.8	0.058164	4220.0	6.7	1.255
0.00100000	1.265	17.9	6.290E-06	2.0%	0.877	0.1746	0.702	0.8959%	0.0000	1116.2	18.6	0.058422	4201.3	6.7	1.265







0.00100000	1.275	17.9	6.340E-06	2.0%	0.876	0.1744	0.702	0.9031%	0.0000	1107.3	18.5	0.058678	4182.7	6.7	1.275
0.00100000	1.285	17.9	6.389E-06	2.0%	0.876	0.1742	0.702	0.9103%	0.0000	1098.5	18.3	0.058933	4164.2	6.8	1.285
0.00100000	1.295	17.9	6.439E-06	2.0%	0.876	0.174	0.702	0.9175%	0.0000	1089.9	18.2	0.059186	4145.9	6.8	1.295
0.00100000	1.305	17.9	6.489E-06	2.0%	0.875	0.1738	0.702	0.9247%	0.0000	1081.4	18.0	0.059438	4127.7	6.8	1.305
0.00100000	1.315	17.9	6.538E-06	2.0%	0.875	0.1736	0.702	0.9320%	0.0000	1073.0	17.9	0.059689	4109.7	6.9	1.315
0.00100000	1.325	17.9	6.588E-06	2.0%	0.875	0.1734	0.701	0.9392%	0.0000	1064.8	17.7	0.059938	4091.8	6.9	1.325
0.00100000	1.335	17.9	6.638E-06	2.0%	0.875	0.1732	0.701	0.9464%	0.0000	1056.7	17.6	0.060186	4074.1	6.9	1.335
0.00100000	1.345	17.9	6.688E-06	2.0%	0.874	0.173	0.701	0.9536%	0.0000	1048.7	17.5	0.060433	4056.5	7.0	1.345
0.00100000	1.355	17.9	6.737E-06	2.0%	0.874	0.1728	0.701	0.9608%	0.0000	1040.8	17.3	0.060678	4039.0	7.0	1.355
0.00100000	1.365	17.9	6.787E-06	2.0%	0.874	0.1726	0.701	0.9680%	0.0000	1033.0	17.2	0.060922	4021.7	7.1	1.365
0.00100000	1.375	17.9	6.837E-06	2.0%	0.873	0.1724	0.701	0.9753%	0.0000	1025.4	17.1	0.061164	4004.4	7.1	1.375
0.00100000	1.385	17.9	6.887E-06	2.0%	0.873	0.1722	0.701	0.9825%	0.0000	1017.8	17.0	0.061405	3987.3	7.1	1.385
0.00100000	1.395	17.9	6.936E-06	2.0%	0.873	0.172	0.701	0.9897%	0.0000	1010.4	16.8	0.061645	3970.4	7.2	1.395
0.00100000	1.405	17.9	6.986E-06	2.0%	0.873	0.1718	0.701	0.9970%	0.0000	1003.0	16.7	0.061884	3953.5	7.2	1.405
0.00100000	1.415	17.9	7.036E-06	2.0%	0.872	0.1716	0.701	1.0042%	0.0000	995.8	16.6	0.062121	3936.8	7.2	1.415
0.00100000	1.425	17.9	7.085E-06	2.0%	0.872	0.1714	0.701	1.0115%	0.0000	988.7	16.5	0.062357	3920.2	7.3	1.425
0.00100000	1.435	17.9	7.135E-06	2.0%	0.872	0.1712	0.700	1.0187%	0.0000	981.6	16.4	0.062592	3903.7	7.3	1.435
0.00100000	1.445	17.9	7.185E-06	2.0%	0.871	0.171	0.700	1.0260%	0.0000	974.7	16.2	0.062826	3887.4	7.3	1.445
0.00100000	1.455	17.9	7.235E-06	2.0%	0.871	0.1708	0.700	1.0332%	0.0000	967.9	16.1	0.063058	3871.1	7.4	1.455
0.00100000	1.465	17.9	7.284E-06	2.0%	0.871	0.1706	0.700	1.0405%	0.0000	961.1	16.0	0.063289	3855.0	7.4	1.465
0.00100000	1.475	17.9	7.334E-06	2.0%	0.870	0.1704	0.700	1.0477%	0.0000	954.5	15.9	0.063519	3839.0	7.5	1.475
0.00100000	1.485	17.9	7.384E-06	2.0%	0.870	0.1702	0.700	1.0550%	0.0000	947.9	15.8	0.063747	3823.1	7.5	1.485
0.00100000	1.495	17.9	7.433E-06	2.0%	0.870	0.17	0.700	1.0622%	0.0000	941.4	15.7	0.063974	3807.3	7.5	1.495
0.00100000	1.505	17.9	7.483E-06	2.0%	0.869	0.1698	0.700	1.0695%	0.0000	935.0	15.6	0.064201	3791.6	7.6	1.505
0.00100000	1.515	17.9	7.533E-06	2.0%	0.869	0.1696	0.700	1.0768%	0.0000	928.7	15.5	0.064426	3776.0	7.6	1.515
0.00100000	1.525	17.9	7.583E-06	2.0%	0.869	0.1694	0.699	1.0841%	0.0000	922.5	15.4	0.064649	3760.5	7.6	1.525
0.00100000	1.535	17.9	7.632E-06	2.0%	0.869	0.1692	0.699	1.0913%	0.0000	916.3	15.3	0.064872	3745.2	7.7	1.535
0.00100000	1.545	17.9	7.682E-06	2.0%	0.868	0.169	0.699	1.0986%	0.0000	910.2	15.2	0.065093	3729.9	7.7	1.545
0.00100000	1.555	17.9	7.732E-06	2.0%	0.868	0.1688	0.699	1.1059%	0.0000	904.2	15.1	0.065313	3714.7	7.7	1.555
0.00100000	1.565	17.9	7.782E-06	2.0%	0.868	0.1686	0.699	1.1132%	0.0000	898.3	15.0	0.065532	3699.7	7.8	1.565
0.00100000	1.575	17.9	7.831E-06	2.0%	0.867	0.1684	0.699	1.1205%	0.0000	892.5	14.9	0.06575	3684.7	7.8	1.575
0.00100000	1.585	17.9	7.881E-06	2.0%	0.867	0.1682	0.699	1.1278%	0.0000	886.7	14.8	0.065967	3669.8	7.8	1.585
0.00100000	1.595	17.9	7.931E-06	2.0%	0.867	0.168	0.699	1.1351%	0.0000	881.0	14.7	0.066182	3655.0	7.9	1.595
0.00100000	1.605	17.9	7.980E-06	2.0%	0.866	0.1678	0.699	1.1424%	0.0000	875.4	14.6	0.066397	3640.3	7.9	1.605
0.00100000	1.615	17.9	8.030E-06	2.0%	0.866	0.1676	0.698	1.1497%	0.0000	869.8	14.5	0.06661	3625.8	7.9	1.615
0.00100000	1.625	17.9	8.080E-06	2.0%	0.866	0.1674	0.698	1.1570%	0.0000	864.3	14.4	0.066822	3611.3	8.0	1.625
0.00100000	1.635	17.9	8.130E-06	2.0%	0.865	0.1672	0.698	1.1643%	0.0000	858.9	14.3	0.067033	3596.9	8.0	1.635
0.00100000	1.645	17.9	8.179E-06	2.0%	0.865	0.167	0.698	1.1716%	0.0000	853.5	14.2	0.067243	3582.5	8.1	1.645
0.00100000	1.655	17.9	8.229E-06	2.0%	0.865	0.1668	0.698	1.1790%	0.0000	848.2	14.1	0.067452	3568.3	8.1	1.655
0.00100000	1.665	17.9	8.279E-06	2.0%	0.864	0.1666	0.698	1.1863%	0.0000	843.0	14.0	0.067659	3554.2	8.1	1.665
0.00100000	1.675	17.9	8.328E-06	2.0%	0.864	0.1664	0.698	1.1936%	0.0000	837.8	14.0	0.067866	3540.1	8.2	1.675
0.00100000	1.685	17.9	8.378E-06	2.0%	0.864	0.1662	0.698	1.2009%	0.0000	832.7	13.9	0.068072	3526.2	8.2	1.685
0.00100000	1.695	17.9	8.428E-06	2.0%	0.864	0.166	0.698	1.2083%	0.0000	827.6	13.8	0.068276	3512.3	8.2	1.695
0.00100000	1.705	17.9	8.478E-06	2.0%	0.863	0.1658	0.697	1.2156%	0.0000	822.6	13.7	0.068479	3498.5	8.3	1.705
0.00100000	1.715	17.9	8.527E-06	2.0%	0.863	0.1656	0.697	1.2230%	0.0000	817.7	13.6	0.068681	3484.8	8.3	1.715
0.00100000	1.725	17.9	8.577E-06	2.0%	0.863	0.1654	0.697	1.2303%	0.0000	812.8	13.5	0.068883	3471.2	8.3	1.725
0.00100000	1.735	17.9	8.627E-06	2.0%	0.862	0.1652	0.697	1.2377%	0.0000	808.0	13.5	0.069083	3457.6	8.4	1.735
0.00100000	1.745	17.9	8.677E-06	2.0%	0.862	0.165	0.697	1.2450%	0.0000	803.2	13.4	0.069282	3444.1	8.4	1.745
0.00100000	1.755	17.9	8.726E-06	2.0%	0.862	0.1648	0.697	1.2524%	0.0000	798.5	13.3	0.06948	3430.8	8.4	1.755
0.00100000	1.765	17.9	8.776E-06	2.0%	0.861	0.1646	0.697	1.2598%	0.0000	793.8	13.2	0.069677	3417.4	8.5	1.765
0.00100000	1.775	17.9	8.826E-06	2.0%	0.861	0.1644	0.697	1.2671%	0.0000	789.2	13.2	0.069873	3404.2	8.5	1.775
0.00100000	1.785	17.9	8.875E-06	2.0%	0.861	0.1642	0.696	1.2745%	0.0000	784.6	13.1	0.070068	3391.1	8.5	1.785
0.00100000	1.795	17.9	8.925E-06	2.0%	0.860	0.164	0.696	1.2819%	0.0000	780.1	13.0	0.070262	3378.0	8.6	1.795
0.00100000	1.805	17.9	8.975E-06	2.0%	0.860	0.1638	0.696	1.2892%	0.0000	775.6	12.9	0.070454	3365.0	8.6	1.805
0.00100000	1.815	17.9	9.025E-06	2.0%	0.860	0.1636	0.696	1.2966%	0.0000	771.2	12.9	0.070646	3352.1	8.6	1.815
0.00100000	1.825	17.9	9.074E-06	2.0%	0.859	0.1634	0.696	1.3040%	0.0000	766.9	12.8	0.070837	3339.2	8.7	1.825
0.00100000	1.835	17.9	9.124E-06	2.0%	0.859	0.1632	0.696	1.3114%	0.0000	762.5	12.7	0.071027	3326.4	8.7	1.835
0.00100000	1.845	17.9	9.174E-06	2.0%	0.859	0.163	0.696	1.3188%	0.0000	758.3	12.6	0.071216	3313.7	8.7	1.845
0.00100000	1.855	17.9	9.223E-06	2.0%	0.858	0.1628	0.695	1.3262%	0.0000	754.0	12.6	0.071403	3301.1	8.8	1.855
0.00100000	1.865	17.9	9.273E-06	2.0%	0.858	0.1626	0.695	1.3336%	0.0000	749.8	12.5	0.07159	3288.5	8.8	1.865
0.00100000	1.875	17.9	9.323E-06	2.0%	0.858	0.1624	0.695	1.3410%	0.0000	745.7	12.4	0.071776	3276.0	8.8	1.875
0.00100000	1.885	17.9	9.373E-06	2.0%	0.857	0.1622	0.695	1.3484%	0.0000	741.6	12.4	0.071961	3263.6	8.9	1.885
0.00100000	1.895	17.9	9.422E-06	2.0%	0.857	0.162	0.695	1.3559%	0.0000	737.5	12.3	0.072145	3251.2	8.9	1.895
0.00100000	1.905	17.9	9.472E-06	2.0%	0.857	0.1618	0.695	1.3633%	0.0000	733.5	12.2	0.072328	3238.9	8.9	1.905
0.00100000	1.915	17.9	9.522E-06	2.0%	0.856	0.1616	0.695	1.3707%	0.0000	729.6	12.2	0.072509	3226.7	9.0	1.915
0.00100000	1.925	17.9	9.572E-06	2.0%	0.856	0.1614	0.695	1.3781%	0.0000	725.6	12.1	0.07269	3214.5	9.0	1.925
0.00100000	1.935	17.9	9.621E-06	2.0%	0.856	0.1612	0.694	1.3856%	0.0000	721.7	12.0	0.07287	3202.5	9.0	1.935
0.00100000	1.945	17.9	9.671E-06	2.0%	0.855	0.161	0.694	1.3930%	0.0000	717.9	12.0	0.073049	3190.4	9.1	1.945
0.00100000	1.955	17.9	9.721E-06	2.0%	0.855	0.1608	0.694	1.4005%	0.0000	714.1	11.9	0.073227	3178.5	9.1	1.955
0.00100000	1.965	17.9	9.770E-06	2.0%	0.855	0.1606	0.694	1.4079%	0.0000	710.3	11.8	0.073405	3166.6	9.1	1.965
0.00100000	1.975	17.9	9.820E-06	2.0%	0.854	0.1604	0.694	1.4154%	0.0000	706.5	11.8	0.073581	3154.7	9.2	1.975
0.00100000	1.985	17.9	9.870E-06	2.0%	0.854	0.1602	0.694	1.4228%	0.0000	702.8	11.7	0.073756	3142.9	9.2	1.985
0.00100000	1.995	17.9	9.920E-06	2.0%	0.854	0.16	0.694	1.4303%	0.0000	699.2	11.7	0.07393	3131.2	9.2	1.995
0.00100000	2.005	17.9	9.969E-06	2.0%	0.853	0.1598	0.693	1.4377%	0.0000	695.5	11.6	0.074104	3119.6	9.3	2.005
0.00100000	2.015	17.9	1.002E-05	2.0%	0.853	0.1596	0.693	1.4452%	0.0000	691.9	11.5	0.074276	3108.0	9.3	2.015
0.00100000	2.025	17.9	1.007E-05	2.0%	0.853	0.1594	0.693	1.4527%	0.0000	688.4	11.5	0.074448	3096.5	9.3	2.025
0.00100000	2.035	17.9	1.012E-05	2.0%	0.852	0.1592	0.693	1.4602%	0.0000	684.8	11.4	0.074618	3085.0	9.4	2.035
0.00100000	2.045	17.9	1.017E-05	2.0%	0.852	0.159	0.693	1.4677%	0.0000	681.4	11.4	0.074788	3073.6	9.4	2.045
0.00100000	2.055	17.9	1.022E-05	2.0%	0.851	0.1588	0.693	1.4752%	0.0000	677.9	11.3	0.074957	3062.2	9.4	2.055
0.00100000	2.065	17.9	1.027E-05	2.0%	0.851	0.1586	0.693	1.4826%	0.0000	674.5	11.2	0.075125	3050.9	9.5	2.065
0.00100000	2.075	17.9	1.032E-05	2.0%	0.851	0.1584	0.692	1.4901%	0.0000	671.1	11.2	0.075292	3039.7	9.5	2.075
0.00100000	2.085	17.9	1.037E-05	2.0%	0.850	0.1582	0.692	1.4977%	0.0000	667.7	11.1	0.075458	3028.5	9.5	2.085
0.00100000	2.095	17.9	1.042E-05	2.0%	0.850	0.158	0.692	1.5052%	0.0000	664.4	11.1	0.075623	3017.4	9.6	2.095
0.00100000	2.105	17.9	1.047E-05	2.0%	0.850	0.1578	0.692	1.5127%	0.0000	661.1	11.0	0.075787	3006.3	9.6	2.105
0.00100000	2.115	17.9	1.052E-05	2.0%	0.849	0.1576	0.692	1.5202%	0.0000	657.8	11.0	0.07595	2995.3	9.6	2.115
0.00100000	2.125	17.9	1.057E-05	2.0%	0.849	0.1574	0.692	1.5277%	0.0000	654.6	10.9	0.076113	2984.3	9.7	2.125
0.00100000	2.135	17.9	1.062E-05	2.0%	0.849	0.1572	0.691	1.5353%	0.0000	651.4	10.9	0.076275	2973.4	9.7	2.135
0.00100000	2.145	17.9	1.067E-05	2.0%	0.848	0.157	0.691	1.5428%	0.0000	648.2	10.8	0.076435	2962.5	9.7	2.145
0.00100000	2.155	17.9	1.072E-05	2.0%	0.848	0.1568	0.691	1.5503%	0.0000	645.0	10.8	0.076595	2951.7	9.8	2.155
0.00100000	2.165	17.9	1.076E-05	2.0%	0.848	0.1566	0.691	1.5579%	0.0000	641.9	10.7	0.076754	2941.0	9.8	2.165
0.00100000	2.175	17.9	1.081E-05	2.0%	0.847	0.1564	0.691	1.5654%	0.0000	638.8	10.6	0.076912	2930.3	9.8	2.175
0.00100000	2.185	17.9	1.086E-05	2.0%	0.847	0.1562	0.691	1.5730%	0.0000	635.7	10.6	0.07707	2919.6	9.9	2.185
0.00100000	2.195	17.9	1.091E-05	2.0%	0.847	0.156	0.691	1.5805%	0.0000	632.7	10.5	0.077226	2909.0	9.9	2.195
0.00100000	2.205	17.9	1.096E-05	2.0%	0.846	0.1558	0.690	1.5881%	0.0000	629.7	10.5	0.077381	2898.5	9.9	2.205
0.00100000	2.215	17.9	1.101E-05	2.0%	0.846	0.1556	0.690	1.5957%	0.0000	626.7	10.4	0.077536	2888.0	10.0	2.215
0.00100000	2.225	17.9	1.106E-05	2.0%	0.845	0.1554	0.690	1.6033%	0.0000	623.7	10.4	0.07769	2877.6	10.0	2.225
0.00100000	2.235	17.9	1.111E-05	2.0%	0.845	0.1552	0.690	1.6108%	0.0000	620.8	10.3	0.077843	2867.2	10.0	2.235
0.00100000	2.245	17.9	1.116E-05	2.0%	0.845	0.155	0.690	1.6184%	0.0000	617.9	10.3	0.077995	2856.8	10.1	2.245
0.00100000	2.255	17.9	1.121E-05	2.0%	0.844	0.1548	0.690	1.6260%	0.0000	615.0	10.2	0.078147	2846.5	10.1	2.255
0.00100000	2.265	17.9	1.126E-05	2.0%	0.844	0.1546	0.689	1.6336%	0.0000	612.1	10.2	0.078297	2836.3	10.1	2.265
0.00100000	2.275	17.9	1.131E-05	2.0%	0.844	0.1544	0.689	1.6412%	0.0000	609.3	10.2	0.078447	2826.1	10.2	2.275
0.00100000	2.285	17.9	1.136E-05	2.0%	0.843	0.1542	0.689	1.6488%	0.0000	606.5	10.1	0.078595	2815.9	10.2	2.285
0.00100000	2.295	17.9	1.141E-05	2.0%	0.843	0.154	0.689	1.6564%	0.0000	603.7	10.1	0.078743	2805.8	10.2	2.295
0.00100000	2.305	17.9	1.146E-05	2.0%	0.843	0.1538	0.689	1.6641%	0.0000	600.9	10.0	0.078891	2795.7	10.3	2.305
0.00100000	2.315	17.9	1.151E-05	2.0%	0.842	0.1536	0.689	1.6717%	0.0000	598.2	10.0	0.079037	2785.7	10.3	2.315
0.00100000	2.325	17.9	1.156E-05	2.0%	0.842	0.1534	0.688	1.6793%	0.0000	595.5	9.9	0.079182	2775.8	10.3	2.325
0.00100000	2.335	17.9	1.161E-05	2.0%	0.841	0.1532	0.688	1.6870%	0.0000	592.8	9.9	0.079327	2765.8	10.4	2.335
0.00100000	2.345	17.9	1.166E-05	2.0%	0.841	0.153	0.688	1.6946%	0.0000	590.1	9.8	0.079471	2756.0	10.4	2.345
0.00100000	2.355	17.9	1.171E-05	2.0%	0.841	0.1528	0.688	1.7022%	0.0000	587.5	9.8	0.079614	2746.1	10.4	2.355
0.00100000	2.365	17.9	1.176E-05	2.0%	0.840	0.1526	0.688	1.7099%	0.0000	584.8	9.7	0.079756	2736.3	10.5	2.365
0.00100000	2.375	17.9	1.181E-05	2.0%	0.840	0.1524	0.688	1.7176%	0.0000	582.2	9.7	0.079898	2726.6	10.5	2.375
0.00100000	2.385	17.9	1.186E-05	2.0%	0.840	0.1522	0.687	1.7252%	0.0000	579.6	9.7	0.080039	2716.9	10.5	2.385
0.00100000	2.395	17.9	1.191E-05	2.0%	0.839	0.152	0.687	1.7329%	0.0000	577.1	9.6	0.080178	2707.2	10.5	2.395
0.00100000	2.405	17.9	1.196E-05	2.0%	0.839	0.1518	0.687	1.7406%	0.0000	574.5	9.6	0.080318	2697.6	10.6	2.405
0.00100000	2.415	17.9	1.201E-05	2.0%	0.838	0.1516	0.687	1.7482%	0.0000	572.0	9.5	0.080456	2688.0	10.6	2.415
0.00100000	2.425	17.9	1.206E-05	2.0%	0.838	0.1514	0.687	1.7559%	0.0000	569.5	9.5	0.080593	2678.5	10.6	2.425
0.00100000	2.435	17.9	1.211E-05	2.0%	0.838	0.1512	0.687	1.7636%	0.0000	567.0	9.5	0.08073	2669.0	10.7	2.435
0.00100000	2.445	17.9	1.216E-05	2.0%	0.837	0.151	0.686	1.7713%	0.0000	564.5	9.4	0.080866	2659.5	10.7	2.445
0.00100000	2.455	17.9	1.221E-05	2.0%	0.837	0.1508	0.686	1.7790%	0.0000	562.1	9.4	0.081001	2650.1	10.7	2.455
0.00100000	2.465	17.9	1.226E-05	2.0%	0.837	0.1506	0.686	1.7867%	0.0000	559.7	9.3	0.081135	2640.8	10.8	2.465
0.00100000	2.475	17.9	1.231E-05	2.0%	0.836	0.1504	0.686	1.7945%	0.0000	557.3	9.3	0.081269	2631.4	10.8	2.475
0.00100000	2.485	17.9	1.236E-05	2.0%	0.836	0.1502	0.686	1.8022%	0.0000	554.9	9.2	0.081402	2622.2	10.8	2.485
0.00100000	2.495	17.9	1.241E-05	2.0%	0.835	0.15	0.685	1.8099%	0.0000	552.5	9.2	0.081534	2612.9	10.9	2.495
0.00100000	2.505	17.9	1.246E-05	2.0%	0.835	0.1498	0.685	1.8177%	0.0000	550.2	9.2	0.081665	2603.7	10.9	2.505
0.00100000	2.515	17.9	1.251E-05	2.0%	0.835	0.1496	0.685	1.8254%	0.0000	547.8	9.1	0.081796	2594.5	10.9	2.515
0.00100000	2.525	17.9	1.255E-05	2.0%	0.834	0.1494	0.685	1.8331%	0.0000	545.5	9.1	0.081925	2585.4	11.0	2.525
0.00100000	2.535	17.9	1.260E-05	2.0%	0.834	0.1492	0.685	1.8409%	0.0000	543.2	9.1	0.082054	2576.3	11.0	2.535
0.00100000	2.545	17.9	1.265E-05	2.0%	0.834	0.149	0.685	1.8487%	0.0000	540.9	9.0	0.082183	2567.2	11.0	2.545
0.00100000	2.555	17.9	1.270E-05	2.0%	0.833	0.1488	0.684	1.8564%	0.0000	538.7	9.0	0.08231	2558.2	11.1	2.555
0.00100000	2.565	17.9	1.275E-05	2.0%	0.833	0.1486	0.684	1.8642%	0.0000	536.4	8.9	0.082437	2549.3	11.1	2.565
0.00100000	2.575	17.9	1.280E-05	2.0%	0.832	0.1484	0.684	1.8720%	0.0000	534.2	8.9	0.082563	2540.3	11.1	2.575
0.00100000	2.585	17.9	1.285E-05	2.0%	0.832	0.1482	0.684	1.8798%	0.0000	532.0	8.9	0.082688	2531.4	11.2	2.585
0.00100000	2.595	17.9	1.290E-05	2.0%	0.832	0.148	0.684	1.8876%	0.0000	529.8	8.8	0.082813	2522.5	11.2	2.595
0.00100000	2.605	17.9	1.295E-05	2.0%	0.831	0.1478	0.683	1.8954%	0.0000	527.6	8.8	0.082936	2513.7	11.2	2.605
0.00100000	2.615	17.9	1.300E-05	2.0%	0.831	0.1476	0.683	1.9032%	0.0000	525.4	8.8	0.083059	2504.9	11.3	2.615
0.00100000	2.625	17.9	1.305E-05	2.0%	0.830	0.1474	0.683	1.9110%	0.0000	523.3	8.7	0.083181	2496.2	11.3	2.625
0.00100000	2.635	17.9	1.310E-05	2.0%	0.830	0.1472	0.683	1.9188%	0.0000	521.2	8.7	0.083303	2487.4	11.3	2.635
0.00100000	2.645	17.9	1.315E-05	2.0%	0.830	0.147	0.683	1.9266%	0.0000	519.0	8.7	0.083424	2478.8	11.4	2.645

0.00100000	2.655	17.9	1.320E-05	2.0%	0.829	0.1468	0.682	1.9345%	0.0000	516.9	8.6	0.083544	2470.1	11.4	2.655		
0.00100000	2.665	17.9	1.325E-05	2.0%	0.829	0.1466	0.682	1.9423%	0.0000	514.9	8.6	0.083663	2461.5	11.4	2.665		
0.00100000	2.675	17.9	1.330E-05	2.0%	0.828	0.1464	0.682	1.9501%	0.0000	512.8	8.5	0.083782	2452.9	11.4	2.675		
0.00100000	2.685	17.9	1.335E-05	2.0%	0.828	0.1462	0.682	1.9580%	0.0000	510.7	8.5	0.0839	2444.4	11.5	2.685		
0.00100000	2.695	17.9	1.340E-05	2.0%	0.828	0.146	0.682	1.9659%	0.0000	508.7	8.5	0.084017	2435.9	11.5	2.695		
0.00100000	2.705	17.9	1.345E-05	2.0%	0.827	0.1458	0.681	1.9737%	0.0000	506.7	8.4	0.084133	2427.4	11.5	2.705		
0.00100000	2.715	17.9	1.350E-05	2.0%	0.827	0.1456	0.681	1.9816%	0.0000	504.6	8.4	0.084249	2418.9	11.6	2.715		
0.00100000	2.725	17.9	1.355E-05	2.0%	0.826	0.1454	0.681	1.9895%	0.0000	502.6	8.4	0.084364	2410.5	11.6	2.725		
0.00100000	2.735	17.9	1.360E-05	2.0%	0.826	0.1452	0.681	1.9974%	0.0000	500.7	8.3	0.084478	2402.1	11.6	2.735	critical TC	
0.00100000	2.745	17.9	1.365E-05	2.0%	0.826	0.145	0.681	2.0053%	0.0000	498.7	8.3	0.084592	2393.8	11.7	2.745		
0.00100000	2.755	17.9	1.370E-05	2.0%	0.825	0.1448	0.680	2.0132%	0.0000	496.7	8.3	0.084704	2385.5	11.7	2.755		
0.00100000	2.765	17.9	1.375E-05	2.0%	0.825	0.1446	0.680	2.0211%	0.0000	494.8	8.2	0.084816	2377.2	11.7	2.765		
0.00100000	2.775	17.9	1.380E-05	2.0%	0.824	0.1444	0.680	2.0290%	0.0000	492.9	8.2	0.084928	2369.0	11.8	2.775		
0.00100000	2.785	17.9	1.385E-05	2.0%	0.824	0.1442	0.680	2.0369%	0.0000	490.9	8.2	0.085039	2360.7	11.8	2.785		
0.00100000	2.795	17.9	1.390E-05	2.0%	0.824	0.144	0.680	2.0448%	0.0000	489.0	8.2	0.085149	2352.6	11.8	2.795		
0.00100000	2.805	17.9	1.395E-05	2.0%	0.823	0.1438	0.679	2.0528%	0.0000	487.1	8.1	0.085258	2344.4	11.9	2.805		
0.00100000	2.815	17.9	1.400E-05	2.0%	0.823	0.1436	0.679	2.0607%	0.0000	485.3	8.1	0.085367	2336.3	11.9	2.815		
0.00100000	2.825	17.9	1.405E-05	2.0%	0.822	0.1434	0.679	2.0687%	0.0000	483.4	8.1	0.085474	2328.2	11.9	2.825		
0.00100000	2.835	17.9	1.410E-05	2.0%	0.822	0.1432	0.679	2.0766%	0.0000	481.6	8.0	0.085582	2320.1	12.0	2.835		
0.00100000	2.845	17.9	1.415E-05	2.0%	0.822	0.143	0.679	2.0846%	0.0000	479.7	8.0	0.085688	2312.1	12.0	2.845		
0.00100000	2.855	17.9	1.420E-05	2.0%	0.821	0.1428	0.678	2.0925%	0.0000	477.9	8.0	0.085794	2304.1	12.0	2.855		
0.00100000	2.865	17.9	1.425E-05	2.0%	0.821	0.1426	0.678	2.1005%	0.0000	476.1	7.9	0.085899	2296.2	12.0	2.865		
0.00100000	2.875	17.9	1.430E-05	2.0%	0.820	0.1424	0.678	2.1085%	0.0000	474.3	7.9	0.086004	2288.2	12.1	2.875		
0.00100000	2.885	17.9	1.434E-05	2.0%	0.820	0.1422	0.678	2.1165%	0.0000	472.5	7.9	0.086107	2280.3	12.1	2.885		
0.00100000	2.895	17.9	1.439E-05	2.0%	0.820	0.142	0.678	2.1245%	0.0000	470.7	7.8	0.08621	2272.5	12.1	2.895		
0.00100000	2.905	17.9	1.444E-05	2.0%	0.819	0.1418	0.677	2.1325%	0.0000	468.9	7.8	0.086313	2264.6	12.2	2.905		
0.00100000	2.915	17.9	1.449E-05	2.0%	0.819	0.1416	0.677	2.1405%	0.0000	467.2	7.8	0.086415	2256.8	12.2	2.915		
0.00100000	2.925	17.9	1.454E-05	2.0%	0.818	0.1414	0.677	2.1486%	0.0000	465.4	7.8	0.086516	2249.0	12.2	2.925		
0.00100000	2.935	17.9	1.459E-05	2.0%	0.818	0.1412	0.677	2.1566%	0.0000	463.7	7.7	0.086616	2241.2	12.3	2.935		
0.00100000	2.945	17.9	1.464E-05	2.0%	0.817	0.141	0.676	2.1646%	0.0000	462.0	7.7	0.086716	2233.5	12.3	2.945		
0.00100000	2.955	17.9	1.469E-05	2.0%	0.817	0.1408	0.676	2.1727%	0.0000	460.3	7.7	0.086815	2225.8	12.3	2.955		
0.00100000	2.965	17.9	1.474E-05	2.0%	0.817	0.1406	0.676	2.1807%	0.0000	458.6	7.6	0.086913	2218.1	12.4	2.965		
0.00100000	2.975	17.9	1.479E-05	2.0%	0.816	0.1404	0.676	2.1888%	0.0000	456.9	7.6	0.087011	2210.5	12.4	2.975		
0.00100000	2.985	17.9	1.484E-05	2.0%	0.816	0.1402	0.676	2.1969%	0.0000	455.2	7.6	0.087108	2202.9	12.4	2.985		
0.00100000	2.995	17.9	1.489E-05	2.0%	0.815	0.14	0.675	2.2050%	0.0000	453.5	7.6	0.087204	2195.3	12.5	2.995		
0.00100000	3.005	17.9	1.494E-05	2.0%	0.815	0.1398	0.675	2.2130%	0.0000	451.9	7.5	0.0873	2187.7	12.5	3.005		
0.00100000	3.015	17.9	1.499E-05	2.0%	0.815	0.1396	0.675	2.2211%	0.0000	450.2	7.5	0.087395	2180.2	12.5	3.015		
0.00100000	3.025	17.9	1.504E-05	2.0%	0.814	0.1394	0.675	2.2292%	0.0000	448.6	7.5	0.087489	2172.7	12.6	3.025		
0.00100000	3.035	17.9	1.509E-05	2.0%	0.814	0.1392	0.674	2.2374%	0.0000	447.0	7.4	0.087583	2165.2	12.6	3.035		
0.00100000	3.045	17.9	1.514E-05	2.0%	0.813	0.139	0.674	2.2455%	0.0000	445.3	7.4	0.087676	2157.8	12.6	3.045		
0.00100000	3.055	17.9	1.519E-05	2.0%	0.813	0.1388	0.674	2.2536%	0.0000	443.7	7.4	0.087768	2150.4	12.6	3.055		
0.00100000	3.065	17.9	1.524E-05	2.0%	0.812	0.1386	0.674	2.2617%	0.0000	442.1	7.4	0.08786	2143.0	12.7	3.065		
0.00100000	3.075	17.9	1.529E-05	2.0%	0.812	0.1384	0.674	2.2699%	0.0000	440.6	7.3	0.087951	2135.6	12.7	3.075		
0.00100000	3.085	17.9	1.534E-05	2.0%	0.812	0.1382	0.673	2.2780%	0.0000	439.0	7.3	0.088041	2128.3	12.7	3.085		
0.00100000	3.095	17.9	1.539E-05	2.0%	0.811	0.138	0.673	2.2862%	0.0000	437.4	7.3	0.088131	2120.9	12.8	3.095		
0.00100000	3.105	17.9	1.544E-05	2.0%	0.811	0.1378	0.673	2.2944%	0.0000	435.9	7.3	0.08822	2113.6	12.8	3.105		
0.00100000	3.115	17.9	1.549E-05	2.0%	0.810	0.1376	0.673	2.3025%	0.0000	434.3	7.2	0.088309	2106.4	12.8	3.115		
0.00100000	3.125	17.9	1.554E-05	2.0%	0.810	0.1374	0.672	2.3107%	0.0000	432.8	7.2	0.088397	2099.1	12.9	3.125		
0.00100000	3.135	17.9	1.559E-05	2.0%	0.809	0.1372	0.672	2.3189%	0.0000	431.2	7.2	0.088484	2091.9	12.9	3.135		
0.00100000	3.145	17.9	1.564E-05	2.0%	0.809	0.137	0.672	2.3271%	0.0000	429.7	7.2	0.08857	2084.7	12.9	3.145		
0.00100000	3.155	17.9	1.569E-05	2.0%	0.809	0.1368	0.672	2.3353%	0.0000	428.2	7.1	0.088656	2077.6	13.0	3.155		
0.00100000	3.165	17.9	1.574E-05	2.0%	0.808	0.1366	0.672	2.3436%	0.0000	426.7	7.1	0.088741	2070.4	13.0	3.165		
0.00100000	3.175	17.9	1.579E-05	2.0%	0.808	0.1364	0.671	2.3518%	0.0000	425.2	7.1	0.088826	2063.3	13.0	3.175		
0.00100000	3.185	17.9	1.584E-05	2.0%	0.807	0.1362	0.671	2.3600%	0.0000	423.7	7.1	0.08891	2056.2	13.1	3.185		
0.00100000	3.195	17.9	1.589E-05	2.0%	0.807	0.136	0.671	2.3683%	0.0000	422.3	7.0	0.088993	2049.2	13.1	3.195		
0.00100000	3.205	17.9	1.594E-05	2.0%	0.806	0.1358	0.671	2.3765%	0.0000	420.8	7.0	0.089076	2042.1	13.1	3.205		
0.00100000	3.215	17.9	1.599E-05	2.0%	0.806	0.1356	0.670	2.3848%	0.0000	419.3	7.0	0.089158	2035.1	13.2	3.215		
0.00100000	3.225	17.9	1.604E-05	2.0%	0.805	0.1354	0.670	2.3931%	0.0000	417.9	7.0	0.08924	2028.1	13.2	3.225		
0.00100000	3.235	17.9	1.609E-05	2.0%	0.805	0.1352	0.670	2.4013%	0.0000	416.4	6.9	0.08932	2021.2	13.2	3.235		
0.00100000	3.245	17.9	1.613E-05	2.0%	0.805	0.135	0.670	2.4096%	0.0000	415.0	6.9	0.089401	2014.2	13.2	3.245		
0.00100000	3.255	17.9	1.618E-05	2.0%	0.804	0.1348	0.669	2.4179%	0.0000	413.6	6.9	0.08948	2007.3	13.3	3.255		
0.00100000	3.265	17.9	1.623E-05	2.0%	0.804	0.1346	0.669	2.4262%	0.0000	412.2	6.9	0.089559	2000.4	13.3	3.265		
0.00100000	3.275	17.9	1.628E-05	2.0%	0.803	0.1344	0.669	2.4345%	0.0000	410.8	6.8	0.089638	1993.6	13.3	3.275		
0.00100000	3.285	17.9	1.633E-05	2.0%	0.803	0.1342	0.669	2.4429%	0.0000	409.4	6.8	0.089715	1986.7	13.4	3.285		
0.00100000	3.295	17.9	1.638E-05	2.0%	0.802	0.134	0.668	2.4512%	0.0000	408.0	6.8	0.089792	1979.9	13.4	3.295		
0.00100000	3.305	17.9	1.643E-05	2.0%	0.802	0.1338	0.668	2.4596%	0.0000	406.6	6.8	0.089869	1973.1	13.4	3.305		
0.00100000	3.315	17.9	1.648E-05	2.0%	0.801	0.1336	0.668	2.4679%	0.0000	405.2	6.8	0.089945	1966.3	13.5	3.315		
0.00100000	3.325	17.9	1.653E-05	2.0%	0.801	0.1334	0.668	2.4763%	0.0000	403.8	6.7	0.09002	1959.6	13.5	3.325		
0.00100000	3.335	17.9	1.658E-05	2.0%	0.801	0.1332	0.667	2.4846%	0.0000	402.5	6.7	0.090094	1952.8	13.5	3.335		
0.00100000	3.345	17.9	1.663E-05	2.0%	0.800	0.133	0.667	2.4930%	0.0000	401.1	6.7	0.090168	1946.1	13.6	3.345		
0.00100000	3.355	17.9	1.668E-05	2.0%	0.800	0.1328	0.667	2.5014%	0.0000	399.8	6.7	0.090242	1939.4	13.6	3.355		
0.00100000	3.365	17.9	1.673E-05	2.0%	0.799	0.1326	0.667	2.5098%	0.0000	398.4	6.6	0.090315	1932.8	13.6	3.365		
0.00100000	3.375	17.9	1.678E-05	2.0%	0.799	0.1324	0.666	2.5182%	0.0000	397.1	6.6	0.090387	1926.1	13.7	3.375		
0.00100000	3.385	17.9	1.683E-05	2.0%	0.798	0.1322	0.666	2.5266%	0.0000	395.8	6.6	0.090458	1919.5	13.7	3.385		
0.00100000	3.395	17.9	1.688E-05	2.0%	0.798	0.132	0.666	2.5351%	0.0000	394.5	6.6	0.090529	1912.9	13.7	3.395		
0.00100000	3.405	17.9	1.693E-05	2.0%	0.797	0.1318	0.666	2.5435%	0.0000	393.2	6.6	0.0906	1906.3	13.7	3.405		
0.00100000	3.415	17.9	1.698E-05	2.0%	0.797	0.1316	0.665	2.5520%	0.0000	391.9	6.5	0.090669	1899.8	13.8	3.415		
0.00100000	3.425	17.9	1.703E-05	2.0%	0.797	0.1314	0.665	2.5604%	0.0000	390.6	6.5	0.090739	1893.3	13.8	3.425		
0.00100000	3.435	17.9	1.708E-05	2.0%	0.796	0.1312	0.665	2.5689%	0.0000	389.3	6.5	0.090807	1886.8	13.8	3.435		
0.00100000	3.445	17.9	1.713E-05	2.0%	0.796	0.131	0.665	2.5774%	0.0000	388.0	6.5	0.090875	1880.3	13.9	3.445		
0.00100000	3.455	17.9	1.718E-05	2.0%	0.795	0.1308	0.664	2.5858%	0.0000	386.7	6.4	0.090942	1873.8	13.9	3.455		
0.00100000	3.465	17.9	1.723E-05	2.0%	0.795	0.1306	0.664	2.5943%	0.0000	385.5	6.4	0.091009	1867.4	13.9	3.465		
0.00100000	3.475	17.9	1.728E-05	2.0%	0.794	0.1304	0.664	2.6029%	0.0000	384.2	6.4	0.091075	1860.9	14.0	3.475		
0.00100000	3.485	17.9	1.733E-05	2.0%	0.794	0.1302	0.664	2.6114%	0.0000	382.9	6.4	0.091141	1854.5	14.0	3.485		
0.00100000	3.495	17.9	1.738E-05	2.0%	0.793	0.13	0.663	2.6199%	0.0000	381.7	6.4	0.091206	1848.1	14.0	3.495		
0.00100000	3.505	17.9	1.743E-05	2.0%	0.793	0.1298	0.663	2.6284%	0.0000	380.5	6.3	0.09127	1841.8	14.1	3.505		
0.00100000	3.515	17.9	1.748E-05	2.0%	0.792	0.1296	0.663	2.6370%	0.0000	379.2	6.3	0.091334	1835.4	14.1	3.515		
0.00100000	3.525	17.9	1.753E-05	2.0%	0.792	0.1294	0.663	2.6455%	0.0000	378.0	6.3	0.091397	1829.1	14.1	3.525		
0.00100000	3.535	17.9	1.758E-05	2.0%	0.791	0.1292	0.662	2.6541%	0.0000	376.8	6.3	0.09146	1822.8	14.2	3.535		
0.00100000	3.545	17.9	1.763E-05	2.0%	0.791	0.129	0.662	2.6627%	0.0000	375.6	6.3	0.091522	1816.5	14.2	3.545		
0.00100000	3.555	17.9	1.768E-05	2.0%	0.791	0.1288	0.662	2.6713%	0.0000	374.4	6.2	0.091583	1810.3	14.2	3.555		
0.00100000	3.565	17.9	1.773E-05	2.0%	0.790	0.1286	0.661	2.6799%	0.0000	373.2	6.2	0.091644	1804.0	14.3	3.565		
0.00100000	3.575	17.9	1.778E-05	2.0%	0.790	0.1284	0.661	2.6885%	0.0000	372.0	6.2	0.091704	1797.8	14.3	3.575		
0.00100000	3.585	17.9	1.783E-05	2.0%	0.789	0.1282	0.661	2.6971%	0.0000	370.8	6.2	0.091764	1791.6	14.3	3.585		
0.00100000	3.595	17.9	1.788E-05	2.0%	0.789	0.128	0.661	2.7057%	0.0000	369.6	6.2	0.091823	1785.4	14.3	3.595		
0.00100000	3.605	17.9	1.792E-05	2.0%	0.788	0.1278	0.660	2.7144%	0.0000	368.4	6.1	0.091881	1779.3	14.4	3.605		
0.00100000	3.615	17.9	1.797E-05	2.0%	0.788	0.1276	0.660	2.7230%	0.0000	367.2	6.1	0.091939	1773.1	14.4	3.615		
0.00100000	3.625	17.9	1.802E-05	2.0%	0.787	0.1274	0.660	2.7317%	0.0000	366.1	6.1	0.091996	1767.0	14.4	3.625		
0.00100000	3.635	17.9	1.807E-05	2.0%	0.787	0.1272	0.660	2.7404%	0.0000	364.9	6.1	0.092053	1760.9	14.5	3.635		
0.00100000	3.645	17.9	1.812E-05	2.0%	0.786	0.127	0.659	2.7491%	0.0000	363.8	6.1	0.092109	1754.8	14.5	3.645		
0.00100000	3.655	17.9	1.817E-05	2.0%	0.786	0.1268	0.659	2.7577%	0.0000	362.6	6.0	0.092165	1748.8	14.5	3.655		
0.00100000	3.665	17.9	1.822E-05	2.0%	0.785	0.1266	0.659	2.7665%	0.0000	361.5	6.0	0.09222	1742.7	14.6	3.665		
0.00100000	3.675	17.9	1.827E-05	2.0%	0.785	0.1264	0.658	2.7752%	0.0000	360.3	6.0	0.092274	1736.7	14.6	3.675		
0.00100000	3.685	17.9	1.832E-05	2.0%	0.784	0.1262	0.658	2.7839%	0.0000	359.2	6.0	0.092328	1730.7	14.6	3.685		
0.00100000	3.695	17.9	1.837E-05	2.0%	0.784	0.126	0.658	2.7926%	0.0000	358.1	6.0	0.092381	1724.7	14.7	3.695		
0.00100000	3.705	17.9	1.842E-05	2.0%	0.783	0.1258	0.658	2.8014%	0.0000	357.0	5.9	0.092434	1718.8	14.7	3.705		
0.00100000	3.715	17.9	1.847E-05	2.0%	0.783	0.1256	0.657	2.8102%	0.0000	355.9	5.9	0.092486	1712.8	14.7	3.715		
0.00100000	3.725	17.9	1.852E-05	2.0%	0.782	0.1254	0.657	2.8189%	0.0000	354.7	5.9	0.092538	1706.9	14.8	3.725		
0.00100000	3.735	17.9	1.857E-05	2.0%	0.782	0.1252	0.657	2.8277%	0.0000	353.6	5.9	0.092588	1701.0	14.8	3.735		
0.00100000	3.745	17.9	1.862E-05	2.0%	0.781	0.125	0.656	2.8365%	0.0000	352.5	5.9	0.092639	1695.1	14.8	3.745		
0.00100000	3.755	17.9	1.867E-05	2.0%	0.781	0.1248	0.656	2.8453%	0.0000	351.5	5.9	0.092689	1689.2	14.9	3.755		
0.00100000	3.765	17.9	1.872E-05	2.0%	0.781	0.1246	0.656	2.8541%	0.0000	350.4	5.8	0.092738	1683.3	14.9	3.765		
0.00100000	3.775	17.9	1.877E-05	2.0%	0.780	0.1244	0.656	2.8630%	0.0000	349.3	5.8	0.092787	1677.5	14.9	3.775		
0.00100000	3.785	17.9	1.882E-05	2.0%	0.780	0.1242	0.655	2.8718%	0.0000	348.2	5.8	0.092835	1671.7	14.9	3.785		
0.00100000	3.795	17.9	1.887E-05	2.0%	0.779	0.124	0.655	2.8807%	0.0000	347.1	5.8	0.092882	1665.9	15.0	3.795		
0.00100000	3.805	17.9	1.892E-05	2.0%	0.779	0.1238	0.655	2.8895%	0.0000	346.1	5.8	0.092929	1660.1	15.0	3.805		
0.00100000	3.815	17.9	1.897E-05	2.0%	0.778	0.1236	0.654	2.8984%	0.0000	345.0	5.8	0.092976	1654.3	15.0	3.815		
0.00100000	3.825	17.9	1.902E-05	2.0%	0.778	0.1234	0.654	2.9073%	0.0000	344.0	5.7	0.093022	1648.6	15.1	3.825		
0.00100000	3.835	17.9	1.907E-05	2.0%	0.777	0.1232	0.654	2.9162%	0.0000	342.9	5.7	0.093067	1642.8	15.1	3.835		
0.00100000	3.845	17.9	1.912E-05	2.0%	0.777	0.123	0.654	2.9251%	0.0000	341.9	5.7	0.093112	1637.1	15.1	3.845		
0.00100000	3.855	17.9	1.917E-05	2.0%	0.776	0.1228	0.653	2.9340%	0.0000	340.8	5.7	0.093156	1631.4	15.2	3.855		
0.00100000	3.865	17.9	1.922E-05	2.0%	0.776	0.1226	0.653	2.9430%	0.0000	339.8	5.7	0.0932	1625.7	15.2	3.865		
0.00100000	3.875	17.9	1.927E-05	2.0%	0.775	0.1224	0.653	2.9519%	0.0000	338.8	5.6	0.093243	1620.1	15.2	3.875		
0.00100000	3.885	17.9	1.932E-05	2.0%	0.775	0.1222	0.652	2.9609%	0.0000	337.7	5.6	0.093285	1614.4	15.3	3.885		
0.00100000	3.895	17.9	1.937E-05	2.0%	0.774	0.122	0.652	2.9698%	0.0000	336.7	5.6	0.093327	1608.8	15.3	3.895		
0.00100000	3.905	17.9	1.942E-05	2.0%	0.774	0.1218	0.652	2.9788%	0.0000	335.7	5.6	0.093369	1603.2	15.3	3.905		
0.00100000	3.915	17.9	1.947E-05	2.0%	0.773	0.1216	0.652	2.9878%	0.0000	334.7	5.6	0.09341	1597.6	15.4	3.915		
0.00100000	3.925	17.9	1.952E-05	2.0%	0.773	0.1214	0.651	2.9968%	0.0000	333.7	5.6	0.09345	1592.0	15.4	3.925		
0.00100000	3.935	17.9	1.957E-05	2.0%	0.772	0.1212	0.651	3.0059%	0.0000	332.7	5.5	0.09349	1586.5	15.4	3.935		
0.00100000	3.945	17.9	1.962E-05	2.0%	0.772	0.121	0.651	3.0149%	0.0000	331.7	5.5	0.093529	1580.9	15.5	3.945		
0.00100000	3.955	17.9	1.967E-05	2.0%	0.771	0.1208	0.650	3.0239%	0.0000	330.7	5.5	0.093568	1575.4	15.5	3.955		
0.00100000	3.965	17.9	1.971E-05	2.0%	0.771	0.1206	0.650	3.0330%	0.0000	329.7	5.5	0.093606	1569.9	15.5	3.965		
0.00100000	3.975	17.9	1.976E-05	2.0%	0.770	0.1204	0.650	3.0421%	0.0000	328.7	5.5	0.093643	1564.4	15.6	3.975		
0.00100000	3.985	17.9	1.981E-05	2.0%	0.770	0.1202	0.649	3.0512%	0.0000	327.7	5.5	0.09368	1558.9	15.6	3.985		
0.00100000	3.995	17.9	1.986E-05	2.0%	0.769	0.12	0.649	3.0603%	0.0000	326.8	5.4	0.093717	1553.4	15.6	3.995		
0.00100000	4.005	17.9	1.991E-05	2.0%	0.769	0.1198	0.649	3.0694%	0.0000	325.8	5.4	0.093753	1548.0	15.7	4.005		
0.00100000	4.015	17.9	1.996E-05	2.0%	0.768	0.1196	0.648	3.0785%	0.0000	324.8	5.4	0.093788	1542.6	15.7	4.015		
0.00100000	4.025	17.9	2.001E-05	2.0%	0.768	0.1194	0.648	3.0876%	0.0000	323.9	5.4	0.093823	1537.1	15.7	4.025		

0.00100000	4.035	17.9	2.006E-05	2.0%	0.767	0.1192	0.648	3.0968%	0.0000	322.9	5.4	0.093857	1531.7	15.7	4.035
0.00100000	4.045	17.9	2.011E-05	2.0%	0.767	0.119	0.648	3.1060%	0.0000	322.0	5.4	0.093891	1526.4	15.8	4.045
0.00100000	4.055	17.9	2.016E-05	2.0%	0.766	0.1188	0.647	3.1151%	0.0000	321.0	5.4	0.093924	1521.0	15.8	4.055
0.00100000	4.065	17.9	2.021E-05	2.0%	0.766	0.1186	0.647	3.1243%	0.0000	320.1	5.3	0.093957	1515.6	15.8	4.065
0.00100000	4.075	17.9	2.026E-05	2.0%	0.765	0.1184	0.647	3.1335%	0.0000	319.1	5.3	0.093989	1510.3	15.9	4.075
0.00100000	4.085	17.9	2.031E-05	2.0%	0.764	0.1182	0.646	3.1427%	0.0000	318.2	5.3	0.094021	1505.0	15.9	4.085
0.00100000	4.095	17.9	2.036E-05	2.0%	0.764	0.118	0.646	3.1520%	0.0000	317.3	5.3	0.094052	1499.7	15.9	4.095
0.00100000	4.105	17.9	2.041E-05	2.0%	0.763	0.1178	0.646	3.1612%	0.0000	316.3	5.3	0.094082	1494.4	16.0	4.105
0.00100000	4.115	17.9	2.046E-05	2.0%	0.763	0.1176	0.645	3.1705%	0.0000	315.4	5.3	0.094112	1489.1	16.0	4.115
0.00100000	4.125	17.9	2.051E-05	2.0%	0.762	0.1174	0.645	3.1797%	0.0000	314.5	5.2	0.094142	1483.9	16.0	4.125
0.00100000	4.135	17.9	2.056E-05	2.0%	0.762	0.1172	0.645	3.1890%	0.0000	313.6	5.2	0.09417	1478.6	16.1	4.135
0.00100000	4.145	17.9	2.061E-05	2.0%	0.761	0.117	0.644	3.1983%	0.0000	312.7	5.2	0.094199	1473.4	16.1	4.145
0.00100000	4.155	17.9	2.066E-05	2.0%	0.761	0.1168	0.644	3.2076%	0.0000	311.8	5.2	0.094227	1468.2	16.1	4.155
0.00100000	4.165	17.9	2.071E-05	2.0%	0.760	0.1166	0.644	3.2170%	0.0000	310.9	5.2	0.094254	1463.0	16.2	4.165
0.00100000	4.175	17.9	2.076E-05	2.0%	0.760	0.1164	0.643	3.2263%	0.0000	310.0	5.2	0.094281	1457.8	16.2	4.175
0.00100000	4.185	17.9	2.081E-05	2.0%	0.759	0.1162	0.643	3.2357%	0.0000	309.1	5.2	0.094307	1452.7	16.2	4.185
0.00100000	4.195	17.9	2.086E-05	2.0%	0.759	0.116	0.643	3.2450%	0.0000	308.2	5.1	0.094333	1447.5	16.3	4.195
0.00100000	4.205	17.9	2.091E-05	2.0%	0.758	0.1158	0.642	3.2544%	0.0000	307.3	5.1	0.094358	1442.4	16.3	4.205
0.00100000	4.215	17.9	2.096E-05	2.0%	0.758	0.1156	0.642	3.2638%	0.0000	306.4	5.1	0.094382	1437.2	16.3	4.215
0.00100000	4.225	17.9	2.101E-05	2.0%	0.757	0.1154	0.642	3.2732%	0.0000	305.5	5.1	0.094406	1432.1	16.4	4.225
0.00100000	4.235	17.9	2.106E-05	2.0%	0.757	0.1152	0.641	3.2827%	0.0000	304.6	5.1	0.09443	1427.0	16.4	4.235
0.00100000	4.245	17.9	2.111E-05	2.0%	0.756	0.115	0.641	3.2921%	0.0000	303.8	5.1	0.094453	1422.0	16.4	4.245
0.00100000	4.255	17.9	2.116E-05	2.0%	0.756	0.1148	0.641	3.3016%	0.0000	302.9	5.0	0.094476	1416.9	16.5	4.255
0.00100000	4.265	17.9	2.121E-05	2.0%	0.755	0.1146	0.640	3.3110%	0.0000	302.0	5.0	0.094498	1411.9	16.5	4.265
0.00100000	4.275	17.9	2.126E-05	2.0%	0.755	0.1144	0.640	3.3205%	0.0000	301.2	5.0	0.094519	1406.8	16.5	4.275
0.00100000	4.285	17.9	2.131E-05	2.0%	0.754	0.1142	0.640	3.3300%	0.0000	300.3	5.0	0.09454	1401.8	16.6	4.285
0.00100000	4.295	17.9	2.136E-05	2.0%	0.753	0.114	0.639	3.3395%	0.0000	299.4	5.0	0.09456	1396.8	16.6	4.295
0.00100000	4.305	17.9	2.141E-05	2.0%	0.753	0.1138	0.639	3.3490%	0.0000	298.6	5.0	0.09458	1391.8	16.6	4.305
0.00100000	4.315	17.9	2.146E-05	2.0%	0.752	0.1136	0.639	3.3586%	0.0000	297.7	5.0	0.0946	1386.8	16.7	4.315
0.00100000	4.325	17.9	2.150E-05	2.0%	0.752	0.1134	0.638	3.3682%	0.0000	296.9	4.9	0.094618	1381.9	16.7	4.325
0.00100000	4.335	17.9	2.155E-05	2.0%	0.751	0.1132	0.638	3.3777%	0.0000	296.1	4.9	0.094637	1376.9	16.7	4.335
0.00100000	4.345	17.9	2.160E-05	2.0%	0.751	0.113	0.638	3.3873%	0.0000	295.2	4.9	0.094655	1372.0	16.8	4.345
0.00100000	4.355	17.9	2.165E-05	2.0%	0.750	0.1128	0.637	3.3969%	0.0000	294.4	4.9	0.094672	1367.1	16.8	4.355
0.00100000	4.365	17.9	2.170E-05	2.0%	0.750	0.1126	0.637	3.4065%	0.0000	293.6	4.9	0.094689	1362.2	16.8	4.365
0.00100000	4.375	17.9	2.175E-05	2.0%	0.749	0.1124	0.637	3.4162%	0.0000	292.7	4.9	0.094705	1357.3	16.9	4.375
0.00100000	4.385	17.9	2.180E-05	2.0%	0.749	0.1122	0.636	3.4258%	0.0000	291.9	4.9	0.09472	1352.4	16.9	4.385
0.00100000	4.395	17.9	2.185E-05	2.0%	0.748	0.112	0.636	3.4355%	0.0000	291.1	4.9	0.094736	1347.5	16.9	4.395
0.00100000	4.405	17.9	2.190E-05	2.0%	0.748	0.1118	0.636	3.4452%	0.0000	290.3	4.8	0.09475	1342.7	16.9	4.405
0.00100000	4.415	17.9	2.195E-05	2.0%	0.747	0.1116	0.635	3.4549%	0.0000	289.4	4.8	0.094764	1337.8	17.0	4.415
0.00100000	4.425	17.9	2.200E-05	2.0%	0.746	0.1114	0.635	3.4646%	0.0000	288.6	4.8	0.094778	1333.0	17.0	4.425
0.00100000	4.435	17.9	2.205E-05	2.0%	0.746	0.1112	0.635	3.4743%	0.0000	287.8	4.8	0.094791	1328.2	17.0	4.435
0.00100000	4.445	17.9	2.210E-05	2.0%	0.745	0.111	0.634	3.4841%	0.0000	287.0	4.8	0.094804	1323.4	17.1	4.445
0.00100000	4.455	17.9	2.215E-05	2.0%	0.745	0.1108	0.634	3.4938%	0.0000	286.2	4.8	0.094816	1318.6	17.1	4.455
0.00100000	4.465	17.9	2.220E-05	2.0%	0.744	0.1106	0.634	3.5036%	0.0000	285.4	4.8	0.094827	1313.9	17.1	4.465
0.00100000	4.475	17.9	2.225E-05	2.0%	0.744	0.1104	0.633	3.5134%	0.0000	284.6	4.7	0.094838	1309.1	17.2	4.475
0.00100000	4.485	17.9	2.230E-05	2.0%	0.743	0.1102	0.633	3.5232%	0.0000	283.8	4.7	0.094849	1304.3	17.2	4.485
0.00100000	4.495	17.9	2.235E-05	2.0%	0.743	0.11	0.633	3.5330%	0.0000	283.0	4.7	0.094859	1299.6	17.2	4.495
0.00100000	4.505	17.9	2.240E-05	2.0%	0.742	0.1098	0.632	3.5429%	0.0000	282.3	4.7	0.094868	1294.9	17.3	4.505
0.00100000	4.515	17.9	2.245E-05	2.0%	0.741	0.1096	0.632	3.5527%	0.0000	281.5	4.7	0.094877	1290.2	17.3	4.515
0.00100000	4.525	17.9	2.250E-05	2.0%	0.741	0.1094	0.632	3.5626%	0.0000	280.7	4.7	0.094886	1285.5	17.3	4.525
0.00100000	4.535	17.9	2.255E-05	2.0%	0.740	0.1092	0.631	3.5725%	0.0000	279.9	4.7	0.094894	1280.8	17.4	4.535
0.00100000	4.545	17.9	2.260E-05	2.0%	0.740	0.109	0.631	3.5824%	0.0000	279.1	4.7	0.094901	1276.2	17.4	4.545
0.00100000	4.555	17.9	2.265E-05	2.0%	0.739	0.1088	0.630	3.5924%	0.0000	278.4	4.6	0.094908	1271.5	17.4	4.555
0.00100000	4.565	17.9	2.270E-05	2.0%	0.739	0.1086	0.630	3.6023%	0.0000	277.6	4.6	0.094915	1266.9	17.5	4.565
0.00100000	4.575	17.9	2.275E-05	2.0%	0.738	0.1084	0.630	3.6123%	0.0000	276.8	4.6	0.09492	1262.2	17.5	4.575
0.00100000	4.585	17.9	2.280E-05	2.0%	0.738	0.1082	0.629	3.6222%	0.0000	276.1	4.6	0.094926	1257.6	17.5	4.585
0.00100000	4.595	17.9	2.285E-05	2.0%	0.737	0.108	0.629	3.6322%	0.0000	275.3	4.6	0.094931	1253.0	17.6	4.595
0.00100000	4.605	17.9	2.290E-05	2.0%	0.736	0.1078	0.629	3.6423%	0.0000	274.6	4.6	0.094935	1248.4	17.6	4.605
0.00100000	4.615	17.9	2.295E-05	2.0%	0.736	0.1076	0.628	3.6523%	0.0000	273.8	4.6	0.094939	1243.9	17.6	4.615
0.00100000	4.625	17.9	2.300E-05	2.0%	0.735	0.1074	0.628	3.6623%	0.0000	273.0	4.6	0.094942	1239.3	17.7	4.625
0.00100000	4.635	17.9	2.305E-05	2.0%	0.735	0.1072	0.628	3.6724%	0.0000	272.3	4.5	0.094945	1234.8	17.7	4.635
0.00100000	4.645	17.9	2.310E-05	2.0%	0.734	0.107	0.627	3.6825%	0.0000	271.6	4.5	0.094947	1230.2	17.7	4.645
0.00100000	4.655	17.9	2.315E-05	2.0%	0.734	0.1068	0.627	3.6926%	0.0000	270.8	4.5	0.094949	1225.7	17.8	4.655
0.00100000	4.665	17.9	2.320E-05	2.0%	0.733	0.1066	0.626	3.7027%	0.0000	270.1	4.5	0.094951	1221.2	17.8	4.665
0.00100000	4.675	17.9	2.325E-05	2.0%	0.732	0.1064	0.626	3.7128%	0.0000	269.3	4.5	0.094951	1216.7	17.8	4.675
0.00100000	4.685	17.9	2.329E-05	2.0%	0.732	0.1062	0.626	3.7230%	0.0000	268.6	4.5	0.094952	1212.2	17.9	4.685
0.00100000	4.695	17.9	2.334E-05	2.0%	0.731	0.106	0.625	3.7332%	0.0000	267.9	4.5	0.094952	1207.7	17.9	4.695
0.00100000	4.705	17.9	2.339E-05	2.0%	0.731	0.1058	0.625	3.7434%	0.0000	267.1	4.5	0.094951	1203.2	17.9	4.705
0.00100000	4.715	17.9	2.344E-05	2.0%	0.730	0.1056	0.625	3.7536%	0.0000	266.4	4.4	0.09495	1198.8	18.0	4.715
0.00100000	4.725	17.9	2.349E-05	2.0%	0.730	0.1054	0.624	3.7638%	0.0000	265.7	4.4	0.094948	1194.3	18.0	4.725
0.00100000	4.735	17.9	2.354E-05	2.0%	0.729	0.1052	0.624	3.7741%	0.0000	265.0	4.4	0.094946	1189.9	18.1	4.735
0.00100000	4.745	17.9	2.359E-05	2.0%	0.728	0.105	0.623	3.7843%	0.0000	264.2	4.4	0.094943	1185.5	18.1	4.745
0.00100000	4.755	17.9	2.364E-05	2.0%	0.728	0.1048	0.623	3.7946%	0.0000	263.5	4.4	0.09494	1181.1	18.1	4.755
0.00100000	4.765	17.9	2.369E-05	2.0%	0.727	0.1046	0.623	3.8049%	0.0000	262.8	4.4	0.094936	1176.7	18.2	4.765
0.00100000	4.775	17.9	2.374E-05	2.0%	0.727	0.1044	0.622	3.8152%	0.0000	262.1	4.4	0.094932	1172.3	18.2	4.775
0.00100000	4.785	17.9	2.379E-05	2.0%	0.726	0.1042	0.622	3.8256%	0.0000	261.4	4.4	0.094927	1168.0	18.2	4.785
0.00100000	4.795	17.9	2.384E-05	2.0%	0.726	0.104	0.622	3.8359%	0.0000	260.7	4.3	0.094922	1163.6	18.3	4.795
0.00100000	4.805	17.9	2.389E-05	2.0%	0.725	0.1038	0.621	3.8463%	0.0000	260.0	4.3	0.094916	1159.3	18.3	4.805
0.00100000	4.815	17.9	2.394E-05	2.0%	0.724	0.1036	0.621	3.8567%	0.0000	259.3	4.3	0.09491	1154.9	18.3	4.815
0.00100000	4.825	17.9	2.399E-05	2.0%	0.724	0.1034	0.620	3.8671%	0.0000	258.6	4.3	0.094903	1150.6	18.4	4.825
0.00100000	4.835	17.9	2.404E-05	2.0%	0.723	0.1032	0.620	3.8776%	0.0000	257.9	4.3	0.094896	1146.3	18.4	4.835
0.00100000	4.845	17.9	2.409E-05	2.0%	0.723	0.103	0.620	3.8880%	0.0000	257.2	4.3	0.094888	1142.0	18.4	4.845
0.00100000	4.855	17.9	2.414E-05	2.0%	0.722	0.1028	0.619	3.8985%	0.0000	256.5	4.3	0.09488	1137.7	18.5	4.855
0.00100000	4.865	17.9	2.419E-05	2.0%	0.721	0.1026	0.619	3.9090%	0.0000	255.8	4.3	0.094871	1133.4	18.5	4.865
0.00100000	4.875	17.9	2.424E-05	2.0%	0.721	0.1024	0.618	3.9195%	0.0000	255.1	4.3	0.094862	1129.2	18.5	4.875
0.00100000	4.885	17.9	2.429E-05	2.0%	0.720	0.1022	0.618	3.9301%	0.0000	254.4	4.2	0.094852	1124.9	18.6	4.885
0.00100000	4.895	17.9	2.434E-05	2.0%	0.720	0.102	0.618	3.9406%	0.0000	253.8	4.2	0.094842	1120.7	18.6	4.895
0.00100000	4.905	17.9	2.439E-05	2.0%	0.719	0.1018	0.617	3.9512%	0.0000	253.1	4.2	0.094832	1116.4	18.6	4.905
0.00100000	4.915	17.9	2.444E-05	2.0%	0.718	0.1016	0.617	3.9618%	0.0000	252.4	4.2	0.09482	1112.2	18.7	4.915
0.00100000	4.925	17.9	2.449E-05	2.0%	0.718	0.1014	0.616	3.9724%	0.0000	251.7	4.2	0.094809	1108.0	18.7	4.925
0.00100000	4.935	17.9	2.454E-05	2.0%	0.717	0.1012	0.616	3.9831%	0.0000	251.1	4.2	0.094796	1103.8	18.7	4.935
0.00100000	4.945	17.9	2.459E-05	2.0%	0.717	0.101	0.616	3.9937%	0.0000	250.4	4.2	0.094784	1099.6	18.8	4.945
0.00100000	4.955	17.9	2.464E-05	2.0%	0.716	0.1008	0.615	4.0044%	0.0000	249.7	4.2	0.094771	1095.5	18.8	4.955
0.00100000	4.965	17.9	2.469E-05	2.0%	0.715	0.1006	0.615	4.0151%	0.0000	249.1	4.2	0.094757	1091.3	18.8	4.965
0.00100000	4.975	17.9	2.474E-05	2.0%	0.715	0.1004	0.614	4.0258%	0.0000	248.4	4.1	0.094743	1087.2	18.9	4.975
0.00100000	4.985	17.9	2.479E-05	2.0%	0.714	0.1002	0.614	4.0366%	0.0000	247.7	4.1	0.094728	1083.0	18.9	4.985
0.00100000	4.995	17.9	2.484E-05	2.0%	0.714	0.1	0.614	4.0473%	0.0000	247.1	4.1	0.094713	1078.9	18.9	4.995
0.00100000	5.005	17.9	2.489E-05	2.0%	0.713	0.0998	0.613	4.0581%	0.0000	246.4	4.1	0.094697	1074.8	19.0	5.005
0.00100000	5.015	17.9	2.494E-05	2.0%	0.712	0.0996	0.613	4.0689%	0.0000	245.8	4.1	0.094681	1070.7	19.0	5.015
0.00100000	5.025	17.9	2.499E-05	2.0%	0.712	0.0994	0.612	4.0798%	0.0000	245.1	4.1	0.094664	1066.6	19.0	5.025
0.00100000	5.035	17.9	2.504E-05	2.0%	0.711	0.0992	0.612	4.0906%	0.0000	244.5	4.1	0.094647	1062.5	19.1	5.035
0.00100000	5.045	17.9	2.508E-05	2.0%	0.711	0.099	0.612	4.1015%	0.0000	243.8	4.1	0.094629	1058.4	19.1	5.045
0.00100000	5.055	17.9	2.513E-05	2.0%	0.710	0.0988	0.611	4.1124%	0.0000	243.2	4.1	0.094611	1054.3	19.2	5.055
0.00100000	5.065	17.9	2.518E-05	2.0%	0.709	0.0986	0.611	4.1233%	0.0000	242.5	4.0	0.094593	1050.3	19.2	5.065
0.00100000	5.075	17.9	2.523E-05	2.0%	0.709	0.0984	0.610	4.1342%	0.0000	241.9	4.0	0.094573	1046.2	19.2	5.075
0.00100000	5.085	17.9	2.528E-05	2.0%	0.708	0.0982	0.610	4.1452%	0.0000	241.2	4.0	0.094554	1042.2	19.3	5.085
0.00100000	5.095	17.9	2.533E-05	2.0%	0.708	0.098	0.610	4.1562%	0.0000	240.6	4.0	0.094534	1038.2	19.3	5.095
0.00100000	5.105	17.9	2.538E-05	2.0%	0.707	0.0978	0.609	4.1672%	0.0000	240.0	4.0	0.094513	1034.2	19.3	5.105
0.00100000	5.115	17.9	2.543E-05	2.0%	0.706	0.0976	0.609	4.1782%	0.0000	239.3	4.0	0.094492	1030.2	19.4	5.115
0.00100000	5.125	17.9	2.548E-05	2.0%	0.706	0.0974	0.608	4.1893%	0.0000	238.7	4.0	0.09447	1026.2	19.4	5.125
0.00100000	5.135	17.9	2.553E-05	2.0%	0.705	0.0972	0.608	4.2003%	0.0000	238.1	4.0	0.094448	1022.2	19.4	5.135
0.00100000	5.145	17.9	2.558E-05	2.0%	0.704	0.097	0.607	4.2114%	0.0000	237.4	4.0	0.094426	1018.3	19.5	5.145
0.00100000	5.155	17.9	2.563E-05	2.0%	0.704	0.0968	0.607	4.2226%	0.0000	236.8	3.9	0.094403	1014.3	19.5	5.155
0.00100000	5.165	17.9	2.568E-05	2.0%	0.703	0.0966	0.607	4.2337%	0.0000	236.2	3.9	0.094379	1010.3	19.5	5.165
0.00100000	5.175	17.9	2.573E-05	2.0%	0.703	0.0964	0.606	4.2449%	0.0000	235.6	3.9	0.094355	1006.4	19.6	5.175
0.00100000	5.185	17.9	2.578E-05	2.0%	0.702	0.0962	0.606	4.2561%	0.0000	235.0	3.9	0.094331	1002.5	19.6	5.185
0.00100000	5.195	17.9	2.583E-05	2.0%	0.701	0.096	0.605	4.2673%	0.0000	234.3	3.9	0.094305	998.6	19.6	5.195
0.00100000	5.205	17.9	2.588E-05	2.0%	0.701	0.0958	0.605	4.2785%	0.0000	233.7	3.9	0.09428	994.7	19.7	5.205
0.00100000	5.215	17.9	2.593E-05	2.0%	0.700	0.0956	0.604	4.2898%	0.0000	233.1	3.9	0.094254	990.8	19.7	5.215
0.00100000	5.225	17.9	2.598E-05	2.0%	0.699	0.0954	0.604	4.3011%	0.0000	232.5	3.9	0.094227	986.9	19.8	5.225
0.00100000	5.235	17.9	2.603E-05	2.0%	0.699	0.0952	0.604	4.3124%	0.0000	231.9	3.9	0.0942	983.0	19.8	5.235
0.00100000	5.245	17.9	2.608E-05	2.0%	0.698	0.095	0.603	4.3237%	0.0000	231.3	3.9	0.094173	979.1	19.8	5.245
0.00100000	5.255	17.9	2.613E-05	2.0%	0.698	0.0948	0.603	4.3351%	0.0000	230.7	3.8	0.094145	975.3	19.9	5.255
0.00100000	5.265	17.9	2.618E-05	2.0%	0.697	0.0946	0.602	4.3464%	0.0000	230.1	3.8	0.094117	971.4	19.9	5.265
0.00100000	5.275	17.9	2.623E-05	2.0%	0.696	0.0944	0.602	4.3579%	0.0000	229.5	3.8	0.094088	967.6	19.9	5.275
0.00100000	5.285	17.9	2.628E-05	2.0%	0.696	0.0942	0.601	4.3693%	0.0000	228.9	3.8	0.094058	963.8	20.0	5.285
0.00100000	5.295	17.9	2.633E-05	2.0%	0.695	0.094	0.601	4.3807%	0.0000	228.3	3.8	0.094028	960.0	20.0	5.295
0.00100000	5.305	17.9	2.638E-05	2.0%	0.694	0.0938	0.601	4.3922%	0.0000	227.7	3.8	0.093998	956.2	20.0	5.305
0.00100000	5.315	17.9	2.643E-05	2.0%	0.694	0.0936	0.600	4.4037%	0.0000	227.1	3.8	0.093967	952.4	20.1	5.315
0.00100000	5.325	17.9	2.648E-05	2.0%	0.693	0.0934	0.600	4.4153%	0.0000	226.5	3.8	0.093935	948.6	20.1	5.325
0.00100000	5.335	17.9	2.653E-05	2.0%	0.692	0.0932	0.599	4.4268%	0.0000	225.9	3.8	0.093904	944.8	20.2	5.335
0.00100000	5.345	17.9	2.658E-05	2.0%	0.692	0.093	0.599	4.4384%	0.0000	225.3	3.8	0.093871	941.0	20.2	5.345
0.00100000	5.355	17.9	2.663E-05	2.0%	0.691	0.0928	0.598	4.4500%	0.0000	224.7	3.7	0.093838	937.3	20.2	5.355
0.00100000	5.365	17.9	2.668E-05	2.0%	0.690	0.0926	0.598	4.4617%	0.0000	224.1	3.7	0.093805	933.5	20.3	5.365
0.00100000	5.375	17.9	2.673E-05	2.0%	0.690	0.0924	0.597	4.4733%	0.0000	223.5	3.7	0.093771	929.8	20.3	5.375
0.00100000	5.385	17.9	2.678E-05	2.0%	0.689	0.0922	0.597	4.4850%	0.0000	223.0	3.7	0.093737	926.1	20.3	5.385
0.00100000	5.395	17.9	2.683E-05	2.0%	0.689	0.092	0.597	4.4967%	0.0000	222.4	3.7	0.093702	922.4	20.4	5.395
0.00100000	5.405	17.9	2.687E-05	2.0%	0.688	0.0918	0.596	4.5085%	0.0000	221.8	3.7	0.093667	918.7	20.4	5.405

0.00100000	5.415	17.9	2.692E-05	2.0%	0.687	0.0916	0.596	4.5202%	0.0000	221.2	3.7	0.093631	915.0	20.4	5.415
0.00100000	5.425	17.9	2.697E-05	2.0%	0.687	0.0914	0.595	4.5320%	0.0000	220.7	3.7	0.093595	911.3	20.5	5.425
0.00100000	5.435	17.9	2.702E-05	2.0%	0.686	0.0912	0.595	4.5439%	0.0000	220.1	3.7	0.093558	907.6	20.5	5.435
0.00100000	5.445	17.9	2.707E-05	2.0%	0.685	0.091	0.594	4.5557%	0.0000	219.5	3.7	0.093521	903.9	20.6	5.445
0.00100000	5.455	17.9	2.712E-05	2.0%	0.685	0.0908	0.594	4.5676%	0.0000	218.9	3.6	0.093483	900.3	20.6	5.455
0.00100000	5.465	17.9	2.717E-05	2.0%	0.684	0.0906	0.593	4.5795%	0.0000	218.4	3.6	0.093445	896.6	20.6	5.465
0.00100000	5.475	17.9	2.722E-05	2.0%	0.683	0.0904	0.593	4.5914%	0.0000	217.8	3.6	0.093406	893.0	20.7	5.475
0.00100000	5.485	17.9	2.727E-05	2.0%	0.683	0.0902	0.592	4.6034%	0.0000	217.2	3.6	0.093367	889.4	20.7	5.485
0.00100000	5.495	17.9	2.732E-05	2.0%	0.682	0.09	0.592	4.6154%	0.0000	216.7	3.6	0.093327	885.7	20.7	5.495
0.00100000	5.505	17.9	2.737E-05	2.0%	0.681	0.0898	0.592	4.6274%	0.0000	216.1	3.6	0.093287	882.1	20.8	5.505
0.00100000	5.515	17.9	2.742E-05	2.0%	0.681	0.0896	0.591	4.6394%	0.0000	215.5	3.6	0.093246	878.5	20.8	5.515
0.00100000	5.525	17.9	2.747E-05	2.0%	0.680	0.0894	0.591	4.6515%	0.0000	215.0	3.6	0.093205	874.9	20.9	5.525
0.00100000	5.535	17.9	2.752E-05	2.0%	0.679	0.0892	0.590	4.6636%	0.0000	214.4	3.6	0.093163	871.3	20.9	5.535
0.00100000	5.545	17.9	2.757E-05	2.0%	0.679	0.089	0.590	4.6757%	0.0000	213.9	3.6	0.093121	867.8	20.9	5.545
0.00100000	5.555	17.9	2.762E-05	2.0%	0.678	0.0888	0.589	4.6879%	0.0000	213.3	3.6	0.093079	864.2	21.0	5.555
0.00100000	5.565	17.9	2.767E-05	2.0%	0.677	0.0886	0.589	4.7001%	0.0000	212.8	3.5	0.093036	860.7	21.0	5.565
0.00100000	5.575	17.9	2.772E-05	2.0%	0.677	0.0884	0.588	4.7123%	0.0000	212.2	3.5	0.092992	857.1	21.0	5.575
0.00100000	5.585	17.9	2.777E-05	2.0%	0.676	0.0882	0.588	4.7246%	0.0000	211.7	3.5	0.092948	853.6	21.1	5.585
0.00100000	5.595	17.9	2.782E-05	2.0%	0.675	0.088	0.587	4.7368%	0.0000	211.1	3.5	0.092903	850.0	21.1	5.595
0.00100000	5.605	17.9	2.787E-05	2.0%	0.675	0.0878	0.587	4.7491%	0.0000	210.6	3.5	0.092858	846.5	21.2	5.605
0.00100000	5.615	17.9	2.792E-05	2.0%	0.674	0.0876	0.586	4.7615%	0.0000	210.0	3.5	0.092813	843.0	21.2	5.615
0.00100000	5.625	17.9	2.797E-05	2.0%	0.673	0.0874	0.586	4.7738%	0.0000	209.5	3.5	0.092767	839.5	21.2	5.625
0.00100000	5.635	17.9	2.802E-05	2.0%	0.673	0.0872	0.585	4.7862%	0.0000	208.9	3.5	0.09272	836.0	21.3	5.635
0.00100000	5.645	17.9	2.807E-05	2.0%	0.672	0.087	0.585	4.7987%	0.0000	208.4	3.5	0.092673	832.5	21.3	5.645
0.00100000	5.655	17.9	2.812E-05	2.0%	0.671	0.0868	0.584	4.8111%	0.0000	207.9	3.5	0.092626	829.1	21.3	5.655
0.00100000	5.665	17.9	2.817E-05	2.0%	0.671	0.0866	0.584	4.8236%	0.0000	207.3	3.5	0.092578	825.6	21.4	5.665
0.00100000	5.675	17.9	2.822E-05	2.0%	0.670	0.0864	0.583	4.8361%	0.0000	206.8	3.4	0.092529	822.1	21.4	5.675
0.00100000	5.685	17.9	2.827E-05	2.0%	0.669	0.0862	0.583	4.8487%	0.0000	206.2	3.4	0.09248	818.7	21.5	5.685
0.00100000	5.695	17.9	2.832E-05	2.0%	0.668	0.086	0.582	4.8613%	0.0000	205.7	3.4	0.092431	815.3	21.5	5.695
0.00100000	5.705	17.9	2.837E-05	2.0%	0.668	0.0858	0.582	4.8739%	0.0000	205.2	3.4	0.092381	811.8	21.5	5.705
0.00100000	5.715	17.9	2.842E-05	2.0%	0.667	0.0856	0.582	4.8865%	0.0000	204.6	3.4	0.092331	808.4	21.6	5.715
0.00100000	5.725	17.9	2.847E-05	2.0%	0.666	0.0854	0.581	4.8992%	0.0000	204.1	3.4	0.09228	805.0	21.6	5.725
0.00100000	5.735	17.9	2.852E-05	2.0%	0.666	0.0852	0.581	4.9119%	0.0000	203.6	3.4	0.092228	801.6	21.6	5.735
0.00100000	5.745	17.9	2.857E-05	2.0%	0.665	0.085	0.580	4.9247%	0.0000	203.1	3.4	0.092177	798.2	21.7	5.745
0.00100000	5.755	17.9	2.862E-05	2.0%	0.664	0.0848	0.580	4.9374%	0.0000	202.5	3.4	0.092124	794.8	21.7	5.755
0.00100000	5.765	17.9	2.866E-05	2.0%	0.664	0.0846	0.579	4.9502%	0.0000	202.0	3.4	0.092071	791.4	21.8	5.765
0.00100000	5.775	17.9	2.871E-05	2.0%	0.663	0.0844	0.579	4.9631%	0.0000	201.5	3.4	0.092018	788.1	21.8	5.775
0.00100000	5.785	17.9	2.876E-05	2.0%	0.662	0.0842	0.578	4.9759%	0.0000	201.0	3.3	0.091964	784.7	21.8	5.785
0.00100000	5.795	17.9	2.881E-05	2.0%	0.662	0.084	0.578	4.9889%	0.0000	200.4	3.3	0.09191	781.4	21.9	5.795
0.00100000	5.805	17.9	2.886E-05	2.0%	0.661	0.0838	0.577	5.0018%	0.0001	199.9	3.3	0.091855	778.0	21.9	5.805
0.00100000	5.815	17.9	2.891E-05	2.0%	0.660	0.0836	0.577	5.0148%	0.0001	199.4	3.3	0.0918	774.7	22.0	5.815
0.00100000	5.825	17.9	2.896E-05	2.0%	0.659	0.0834	0.576	5.0278%	0.0001	198.9	3.3	0.091744	771.4	22.0	5.825
0.00100000	5.835	17.9	2.901E-05	2.0%	0.659	0.0832	0.576	5.0408%	0.0001	198.4	3.3	0.091688	768.1	22.0	5.835
0.00100000	5.845	17.9	2.906E-05	2.0%	0.658	0.083	0.575	5.0539%	0.0001	197.9	3.3	0.091631	764.8	22.1	5.845
0.00100000	5.855	17.9	2.911E-05	2.0%	0.657	0.0828	0.575	5.0670%	0.0001	197.4	3.3	0.091574	761.5	22.1	5.855
0.00100000	5.865	17.9	2.916E-05	2.0%	0.657	0.0826	0.574	5.0802%	0.0001	196.8	3.3	0.091516	758.2	22.2	5.865
0.00100000	5.875	17.9	2.921E-05	2.0%	0.656	0.0824	0.574	5.0933%	0.0001	196.3	3.3	0.091458	754.9	22.2	5.875
0.00100000	5.885	17.9	2.926E-05	2.0%	0.655	0.0822	0.573	5.1066%	0.0001	195.8	3.3	0.091399	751.6	22.2	5.885
0.00100000	5.895	17.9	2.931E-05	2.0%	0.655	0.082	0.573	5.1198%	0.0001	195.3	3.3	0.09134	748.4	22.3	5.895
0.00100000	5.905	17.9	2.936E-05	2.0%	0.654	0.0818	0.572	5.1331%	0.0001	194.8	3.2	0.09128	745.1	22.3	5.905
0.00100000	5.915	17.9	2.941E-05	2.0%	0.653	0.0816	0.571	5.1464%	0.0001	194.3	3.2	0.09122	741.9	22.4	5.915
0.00100000	5.925	17.9	2.946E-05	2.0%	0.652	0.0814	0.571	5.1598%	0.0001	193.8	3.2	0.091159	738.6	22.4	5.925
0.00100000	5.935	17.9	2.951E-05	2.0%	0.652	0.0812	0.570	5.1732%	0.0001	193.3	3.2	0.091098	735.4	22.4	5.935
0.00100000	5.945	17.9	2.956E-05	2.0%	0.651	0.081	0.570	5.1866%	0.0001	192.8	3.2	0.091037	732.2	22.5	5.945
0.00100000	5.955	17.9	2.961E-05	2.0%	0.650	0.0808	0.569	5.2001%	0.0001	192.3	3.2	0.090975	728.9	22.5	5.955
0.00100000	5.965	17.9	2.966E-05	2.0%	0.649	0.0806	0.569	5.2136%	0.0001	191.8	3.2	0.090912	725.7	22.6	5.965
0.00100000	5.975	17.9	2.971E-05	2.0%	0.649	0.0804	0.568	5.2271%	0.0001	191.3	3.2	0.090849	722.5	22.6	5.975
0.00100000	5.985	17.9	2.976E-05	2.0%	0.648	0.0802	0.568	5.2407%	0.0001	190.8	3.2	0.090785	719.4	22.6	5.985
0.00100000	5.995	17.9	2.981E-05	2.0%	0.647	0.08	0.567	5.2543%	0.0001	190.3	3.2	0.090721	716.2	22.7	5.995
0.00100000	6.005	17.9	2.986E-05	2.0%	0.647	0.0798	0.567	5.2680%	0.0001	189.8	3.2	0.090657	713.0	22.7	6.005
0.00100000	6.015	17.9	2.991E-05	2.0%	0.646	0.0796	0.566	5.2817%	0.0001	189.3	3.2	0.090592	709.8	22.8	6.015
0.00100000	6.025	17.9	2.996E-05	2.0%	0.645	0.0794	0.566	5.2954%	0.0001	188.8	3.1	0.090526	706.7	22.8	6.025
0.00100000	6.035	17.9	3.001E-05	2.0%	0.644	0.0792	0.565	5.3092%	0.0001	188.4	3.1	0.09046	703.5	22.8	6.035
0.00100000	6.045	17.9	3.006E-05	2.0%	0.644	0.079	0.565	5.3230%	0.0001	187.9	3.1	0.090393	700.4	22.9	6.045
0.00100000	6.055	17.9	3.011E-05	2.0%	0.643	0.0788	0.564	5.3368%	0.0001	187.4	3.1	0.090326	697.3	22.9	6.055
0.00100000	6.065	17.9	3.016E-05	2.0%	0.642	0.0786	0.564	5.3507%	0.0001	186.9	3.1	0.090259	694.1	23.0	6.065
0.00100000	6.075	17.9	3.021E-05	2.0%	0.641	0.0784	0.563	5.3646%	0.0001	186.4	3.1	0.090191	691.0	23.0	6.075
0.00100000	6.085	17.9	3.026E-05	2.0%	0.641	0.0782	0.563	5.3786%	0.0001	185.9	3.1	0.090122	687.9	23.0	6.085
0.00100000	6.095	17.9	3.031E-05	2.0%	0.640	0.078	0.562	5.3926%	0.0001	185.4	3.1	0.090053	684.8	23.1	6.095
0.00100000	6.105	17.9	3.036E-05	2.0%	0.639	0.0778	0.561	5.4067%	0.0001	185.0	3.1	0.089984	681.7	23.1	6.105
0.00100000	6.115	17.9	3.041E-05	2.0%	0.639	0.0776	0.561	5.4208%	0.0001	184.5	3.1	0.089914	678.7	23.2	6.115
0.00100000	6.125	17.9	3.045E-05	2.0%	0.638	0.0774	0.560	5.4349%	0.0001	184.0	3.1	0.089843	675.6	23.2	6.125
0.00100000	6.135	17.9	3.050E-05	2.0%	0.637	0.0772	0.560	5.4491%	0.0001	183.5	3.1	0.089772	672.5	23.3	6.135
0.00100000	6.145	17.9	3.055E-05	2.0%	0.636	0.077	0.559	5.4633%	0.0001	183.0	3.1	0.089701	669.5	23.3	6.145
0.00100000	6.155	17.9	3.060E-05	2.0%	0.636	0.0768	0.559	5.4775%	0.0001	182.6	3.0	0.089629	666.4	23.3	6.155
0.00100000	6.165	17.9	3.065E-05	2.0%	0.635	0.0766	0.558	5.4918%	0.0001	182.1	3.0	0.089556	663.4	23.4	6.165
0.00100000	6.175	17.9	3.070E-05	2.0%	0.634	0.0764	0.558	5.5062%	0.0001	181.6	3.0	0.089483	660.3	23.4	6.175
0.00100000	6.185	17.9	3.075E-05	2.0%	0.633	0.0762	0.557	5.5206%	0.0001	181.1	3.0	0.08941	657.3	23.5	6.185
0.00100000	6.195	17.9	3.080E-05	2.0%	0.633	0.076	0.557	5.5350%	0.0001	180.7	3.0	0.089336	654.3	23.5	6.195
0.00100000	6.205	17.9	3.085E-05	2.0%	0.632	0.0758	0.556	5.5495%	0.0001	180.2	3.0	0.089261	651.3	23.6	6.205
0.00100000	6.215	17.9	3.090E-05	2.0%	0.631	0.0756	0.555	5.5640%	0.0001	179.7	3.0	0.089187	648.3	23.6	6.215
0.00100000	6.225	17.9	3.095E-05	2.0%	0.630	0.0754	0.555	5.5785%	0.0001	179.3	3.0	0.089111	645.3	23.6	6.225
0.00100000	6.235	17.9	3.100E-05	2.0%	0.629	0.0752	0.554	5.5931%	0.0001	178.8	3.0	0.089035	642.3	23.7	6.235
0.00100000	6.245	17.9	3.105E-05	2.0%	0.629	0.075	0.554	5.6078%	0.0001	178.3	3.0	0.088959	639.3	23.7	6.245
0.00100000	6.255	17.9	3.110E-05	2.0%	0.628	0.0748	0.553	5.6225%	0.0001	177.9	3.0	0.088882	636.3	23.8	6.255
0.00100000	6.265	17.9	3.115E-05	2.0%	0.627	0.0746	0.553	5.6372%	0.0001	177.4	3.0	0.088804	633.4	23.8	6.265
0.00100000	6.275	17.9	3.120E-05	2.0%	0.626	0.0744	0.552	5.6520%	0.0001	176.9	2.9	0.088726	630.4	23.9	6.275
0.00100000	6.285	17.9	3.125E-05	2.0%	0.626	0.0742	0.551	5.6668%	0.0001	176.5	2.9	0.088648	627.5	23.9	6.285
0.00100000	6.295	17.9	3.130E-05	2.0%	0.625	0.074	0.551	5.6817%	0.0001	176.0	2.9	0.088569	624.5	23.9	6.295
0.00100000	6.305	17.9	3.135E-05	2.0%	0.624	0.0738	0.550	5.6966%	0.0001	175.5	2.9	0.08849	621.6	24.0	6.305
0.00100000	6.315	17.9	3.140E-05	2.0%	0.623	0.0736	0.550	5.7115%	0.0001	175.1	2.9	0.08841	618.7	24.0	6.315
0.00100000	6.325	17.9	3.145E-05	2.0%	0.623	0.0734	0.549	5.7265%	0.0001	174.6	2.9	0.088329	615.7	24.1	6.325
0.00100000	6.335	17.9	3.150E-05	2.0%	0.622	0.0732	0.549	5.7416%	0.0001	174.2	2.9	0.088248	612.8	24.1	6.335
0.00100000	6.345	17.9	3.155E-05	2.0%	0.621	0.073	0.548	5.7567%	0.0001	173.7	2.9	0.088167	609.9	24.2	6.345
0.00100000	6.355	17.9	3.160E-05	2.0%	0.620	0.0728	0.547	5.7719%	0.0001	173.3	2.9	0.088085	607.0	24.2	6.355
0.00100000	6.365	17.9	3.165E-05	2.0%	0.619	0.0726	0.547	5.7871%	0.0001	172.8	2.9	0.088002	604.1	24.2	6.365
0.00100000	6.375	17.9	3.170E-05	2.0%	0.619	0.0724	0.546	5.8023%	0.0001	172.3	2.9	0.08792	601.3	24.3	6.375
0.00100000	6.385	17.9	3.175E-05	2.0%	0.618	0.0722	0.546	5.8176%	0.0001	171.9	2.9	0.087836	598.4	24.3	6.385
0.00100000	6.395	17.9	3.180E-05	2.0%	0.617	0.072	0.545	5.8329%	0.0001	171.4	2.9	0.087752	595.5	24.4	6.395
0.00100000	6.405	17.9	3.185E-05	2.0%	0.616	0.0718	0.545	5.8483%	0.0001	171.0	2.8	0.087668	592.7	24.4	6.405
0.00100000	6.415	17.9	3.190E-05	2.0%	0.616	0.0716	0.544	5.8638%	0.0001	170.5	2.8	0.087583	589.8	24.5	6.415
0.00100000	6.425	17.9	3.195E-05	2.0%	0.615	0.0714	0.543	5.8793%	0.0001	170.1	2.8	0.087497	587.0	24.5	6.425
0.00100000	6.435	17.9	3.200E-05	2.0%	0.614	0.0712	0.543	5.8948%	0.0001	169.6	2.8	0.087411	584.1	24.6	6.435
0.00100000	6.445	17.9	3.205E-05	2.0%	0.613	0.071	0.542	5.9104%	0.0001	169.2	2.8	0.087325	581.3	24.6	6.445
0.00100000	6.455	17.9	3.210E-05	2.0%	0.612	0.0708	0.542	5.9261%	0.0001	168.7	2.8	0.087238	578.5	24.6	6.455
0.00100000	6.465	17.9	3.215E-05	2.0%	0.612	0.0706	0.541	5.9418%	0.0001	168.3	2.8	0.08715	575.7	24.7	6.465
0.00100000	6.475	17.9	3.220E-05	2.0%	0.611	0.0704	0.540	5.9575%	0.0001	167.9	2.8	0.087062	572.9	24.7	6.475
0.00100000	6.485	17.9	3.224E-05	2.0%	0.610	0.0702	0.540	5.9733%	0.0001	167.4	2.8	0.086974	570.1	24.8	6.485
0.00100000	6.495	17.9	3.229E-05	2.0%	0.609	0.07	0.539	5.9892%	0.0001	167.0	2.8	0.086885	567.3	24.8	6.495
0.00100000	6.505	17.9	3.234E-05	2.0%	0.608	0.0698	0.539	6.0051%	0.0001	166.5	2.8	0.086795	564.5	24.9	6.505
0.00100000	6.515	17.9	3.239E-05	2.0%	0.608	0.0696	0.538	6.0211%	0.0001	166.1	2.8	0.086705	561.7	24.9	6.515
0.00100000	6.525	17.9	3.244E-05	2.0%	0.607	0.0694	0.537	6.0371%	0.0001	165.6	2.8	0.086615	559.0	25.0	6.525
0.00100000	6.535	17.9	3.249E-05	2.0%	0.606	0.0692	0.537	6.0531%	0.0001	165.2	2.8	0.086524	556.2	25.0	6.535
0.00100000	6.545	17.9	3.254E-05	2.0%	0.605	0.069	0.536	6.0693%	0.0001	164.8	2.7	0.086432	553.5	25.1	6.545
0.00100000	6.555	17.9	3.259E-05	2.0%	0.604	0.0688	0.536	6.0854%	0.0001	164.3	2.7	0.08634	550.7	25.1	6.555
0.00100000	6.565	17.9	3.264E-05	2.0%	0.604	0.0686	0.535	6.1017%	0.0001	163.9	2.7	0.086248	548.0	25.1	6.565
0.00100000	6.575	17.9	3.269E-05	2.0%	0.603	0.0684	0.534	6.1180%	0.0001	163.5	2.7	0.086154	545.2	25.2	6.575
0.00100000	6.585	17.9	3.274E-05	2.0%	0.602	0.0682	0.534	6.1343%	0.0001	163.0	2.7	0.086061	542.5	25.2	6.585
0.00100000	6.595	17.9	3.279E-05	2.0%	0.601	0.068	0.533	6.1507%	0.0001	162.6	2.7	0.085967	539.8	25.3	6.595
0.00100000	6.605	17.9	3.284E-05	2.0%	0.600	0.0678	0.533	6.1672%	0.0001	162.1	2.7	0.085872	537.1	25.3	6.605
0.00100000	6.615	17.9	3.289E-05	2.0%	0.600	0.0676	0.532	6.1837%	0.0001	161.7	2.7	0.085777	534.4	25.4	6.615
0.00100000	6.625	17.9	3.294E-05	2.0%	0.599	0.0674	0.531	6.2003%	0.0001	161.3	2.7	0.085681	531.7	25.4	6.625
0.00100000	6.635	17.9	3.299E-05	2.0%	0.598	0.0672	0.531	6.2169%	0.0001	160.9	2.7	0.085585	529.0	25.5	6.635
0.00100000	6.645	17.9	3.304E-05	2.0%	0.597	0.067	0.530	6.2336%	0.0001	160.4	2.7	0.085488	526.3	25.5	6.645
0.00100000	6.655	17.9	3.309E-05	2.0%	0.596	0.0668	0.529	6.2504%	0.0001	160.0	2.7	0.085391	523.6	25.6	6.655
0.00100000	6.665	17.9	3.314E-05	2.0%	0.595	0.0666	0.529	6.2672%	0.0001	159.6	2.7	0.085293	521.0	25.6	6.665
0.00100000	6.675	17.9	3.319E-05	2.0%	0.595	0.0664	0.528	6.2840%	0.0001	159.1	2.7	0.085195	518.3	25.7	6.675
0.00100000	6.685	17.9	3.324E-05	2.0%	0.594	0.0662	0.528	6.3010%	0.0001	158.7	2.6	0.085096	515.7	25.7	6.685
0.00100000	6.695	17.9	3.329E-05	2.0%	0.593	0.066	0.527	6.3180%	0.0001	158.3	2.6	0.084997	513.0	25.8	6.695
0.00100000	6.705	17.9	3.334E-05	2.0%	0.592	0.0658	0.526	6.3350%	0.0001	157.9	2.6	0.084897	510.4	25.8	6.705
0.00100000	6.715	17.9	3.339E-05	2.0%	0.591	0.0656	0.526	6.3521%	0.0001	157.4	2.6	0.084797	507.8	25.9	6.715
0.00100000	6.725	17.9	3.344E-05	2.0%	0.590	0.0654	0.525	6.3693%	0.0001	157.0	2.6	0.084696	505.1	25.9	6.725
0.00100000	6.735	17.9	3.349E-05	2.0%	0.590	0.0652	0.524	6.3865%	0.0001	156.6	2.6	0.084595	502.5	25.9	6.735
0.00100000	6.745	17.9	3.354E-05	2.0%	0.589	0.065	0.524	6.4038%	0.0001	156.2	2.6	0.084493	499.9	26.0	6.745
0.00100000	6.755	17.9	3.359E-05	2.0%	0.588	0.0648	0.523	6.4212%	0.0001	155.7	2.6	0.08439	497.3	26.0	6.755
0.00100000	6.765	17.9	3.364E-05	2.0%	0.587	0.0646	0.522	6.4386%	0.0001	155.3	2.6	0.084288	494.7	26.1	6.765
0.00100000	6.775	17.9	3.369E-05	2.0%	0.586	0.0644	0.522	6.4561%	0.0001	154.9	2.6	0.084184	492.1	26.1	6.775
0.00100000	6.785	17.9	3.374E-05	2.0%	0.585	0.0642	0.521	6.4737%	0.0001	154.5	2.6	0.08408	489.5	26.2	6.785

0.00100000	6.795	17.9	3.379E-05	2.0%	0.584	0.064	0.520	6.4913%	0.0001	154.1	2.6	0.083976	487.0	26.2	6.795
0.00100000	6.805	17.9	3.384E-05	2.0%	0.584	0.0638	0.520	6.5090%	0.0001	153.6	2.6	0.08387	484.4	26.3	6.805
0.00100000	6.815	17.9	3.389E-05	2.0%	0.583	0.0636	0.519	6.5268%	0.0001	153.2	2.6	0.083765	481.8	26.3	6.815
0.00100000	6.825	17.9	3.394E-05	2.0%	0.582	0.0634	0.519	6.5446%	0.0001	152.8	2.5	0.083659	479.3	26.4	6.825
0.00100000	6.835	17.9	3.399E-05	2.0%	0.581	0.0632	0.518	6.5625%	0.0001	152.4	2.5	0.083552	476.7	26.4	6.835
0.00100000	6.845	17.9	3.403E-05	2.0%	0.580	0.063	0.517	6.5805%	0.0001	152.0	2.5	0.083445	474.2	26.5	6.845
0.00100000	6.855	17.9	3.408E-05	2.0%	0.579	0.0628	0.517	6.5985%	0.0001	151.5	2.5	0.083337	471.7	26.5	6.855
0.00100000	6.865	17.9	3.413E-05	2.0%	0.578	0.0626	0.516	6.6166%	0.0001	151.1	2.5	0.083229	469.1	26.6	6.865
0.00100000	6.875	17.9	3.418E-05	2.0%	0.578	0.0624	0.515	6.6348%	0.0001	150.7	2.5	0.08312	466.6	26.6	6.875
0.00100000	6.885	17.9	3.423E-05	2.0%	0.577	0.0622	0.515	6.6530%	0.0001	150.3	2.5	0.083011	464.1	26.7	6.885
0.00100000	6.895	17.9	3.428E-05	2.0%	0.576	0.062	0.514	6.6713%	0.0001	149.9	2.5	0.082901	461.6	26.7	6.895
0.00100000	6.905	17.9	3.433E-05	2.0%	0.575	0.0618	0.513	6.6897%	0.0001	149.5	2.5	0.082791	459.1	26.8	6.905
0.00100000	6.915	17.9	3.438E-05	2.0%	0.574	0.0616	0.513	6.7082%	0.0001	149.1	2.5	0.08268	456.6	26.8	6.915
0.00100000	6.925	17.9	3.443E-05	2.0%	0.573	0.0614	0.512	6.7267%	0.0001	148.7	2.5	0.082568	454.1	26.9	6.925
0.00100000	6.935	17.9	3.448E-05	2.0%	0.572	0.0612	0.511	6.7453%	0.0001	148.3	2.5	0.082456	451.6	26.9	6.935
0.00100000	6.945	17.9	3.453E-05	2.0%	0.572	0.061	0.511	6.7640%	0.0001	147.8	2.5	0.082344	449.2	27.0	6.945
0.00100000	6.955	17.9	3.458E-05	2.0%	0.571	0.0608	0.510	6.7827%	0.0001	147.4	2.5	0.082231	446.7	27.0	6.955
0.00100000	6.965	17.9	3.463E-05	2.0%	0.570	0.0606	0.509	6.8016%	0.0001	147.0	2.5	0.082117	444.3	27.1	6.965
0.00100000	6.975	17.9	3.468E-05	2.0%	0.569	0.0604	0.508	6.8205%	0.0001	146.6	2.4	0.082003	441.8	27.2	6.975
0.00100000	6.985	17.9	3.473E-05	2.0%	0.568	0.0602	0.508	6.8394%	0.0001	146.2	2.4	0.081888	439.4	27.2	6.985
0.00100000	6.995	17.9	3.478E-05	2.0%	0.567	0.06	0.507	6.8585%	0.0001	145.8	2.4	0.081773	436.9	27.3	6.995
0.00100000	7.005	17.9	3.483E-05	2.0%	0.566	0.0598	0.506	6.8776%	0.0001	145.4	2.4	0.081657	434.5	27.3	7.005
0.00100000	7.015	17.9	3.488E-05	2.0%	0.565	0.0596	0.506	6.8968%	0.0001	145.0	2.4	0.081541	432.1	27.4	7.015
0.00100000	7.025	17.9	3.493E-05	2.0%	0.564	0.0594	0.505	6.9161%	0.0001	144.6	2.4	0.081424	429.7	27.4	7.025
0.00100000	7.035	17.9	3.498E-05	2.0%	0.564	0.0592	0.504	6.9355%	0.0001	144.2	2.4	0.081307	427.2	27.5	7.035
0.00100000	7.045	17.9	3.503E-05	2.0%	0.563	0.059	0.504	6.9549%	0.0001	143.8	2.4	0.081189	424.8	27.5	7.045
0.00100000	7.055	17.9	3.508E-05	2.0%	0.562	0.0588	0.503	6.9745%	0.0001	143.4	2.4	0.08107	422.4	27.6	7.055
0.00100000	7.065	17.9	3.513E-05	2.0%	0.561	0.0586	0.502	6.9941%	0.0001	143.0	2.4	0.080951	420.1	27.6	7.065
0.00100000	7.075	17.9	3.518E-05	2.0%	0.560	0.0584	0.502	7.0138%	0.0001	142.6	2.4	0.080832	417.7	27.7	7.075
0.00100000	7.085	17.9	3.523E-05	2.0%	0.559	0.0582	0.501	7.0336%	0.0001	142.2	2.4	0.080712	415.3	27.7	7.085
0.00100000	7.095	17.9	3.528E-05	2.0%	0.558	0.058	0.500	7.0534%	0.0001	141.8	2.4	0.080591	412.9	27.8	7.095
0.00100000	7.105	17.9	3.533E-05	2.0%	0.557	0.0578	0.499	7.0734%	0.0001	141.4	2.4	0.08047	410.6	27.8	7.105
0.00100000	7.115	17.9	3.538E-05	2.0%	0.556	0.0576	0.499	7.0934%	0.0001	141.0	2.3	0.080348	408.2	27.9	7.115
0.00100000	7.125	17.9	3.543E-05	2.0%	0.555	0.0574	0.498	7.1135%	0.0001	140.6	2.3	0.080225	405.9	28.0	7.125
0.00100000	7.135	17.9	3.548E-05	2.0%	0.555	0.0572	0.497	7.1337%	0.0001	140.2	2.3	0.080102	403.5	28.0	7.135
0.00100000	7.145	17.9	3.553E-05	2.0%	0.554	0.057	0.497	7.1540%	0.0001	139.8	2.3	0.079979	401.2	28.1	7.145
0.00100000	7.155	17.9	3.558E-05	2.0%	0.553	0.0568	0.496	7.1744%	0.0001	139.4	2.3	0.079855	398.8	28.1	7.155
0.00100000	7.165	17.9	3.563E-05	2.0%	0.552	0.0566	0.495	7.1948%	0.0001	139.0	2.3	0.07973	396.5	28.2	7.165
0.00100000	7.175	17.9	3.568E-05	2.0%	0.551	0.0564	0.494	7.2154%	0.0001	138.6	2.3	0.079605	394.2	28.2	7.175
0.00100000	7.185	17.9	3.573E-05	2.0%	0.550	0.0562	0.494	7.2360%	0.0001	138.2	2.3	0.079479	391.9	28.3	7.185
0.00100000	7.195	17.9	3.578E-05	2.0%	0.549	0.056	0.493	7.2568%	0.0001	137.8	2.3	0.079353	389.6	28.3	7.195
0.00100000	7.205	17.9	3.582E-05	2.0%	0.548	0.0558	0.492	7.2776%	0.0001	137.4	2.3	0.079226	387.3	28.4	7.205
0.00100000	7.215	17.9	3.587E-05	2.0%	0.547	0.0556	0.492	7.2985%	0.0001	137.0	2.3	0.079099	385.0	28.5	7.215
0.00100000	7.225	17.9	3.592E-05	2.0%	0.546	0.0554	0.491	7.3195%	0.0001	136.6	2.3	0.078971	382.7	28.5	7.225
0.00100000	7.235	17.9	3.597E-05	2.0%	0.545	0.0552	0.490	7.3407%	0.0001	136.2	2.3	0.078842	380.4	28.6	7.235
0.00100000	7.245	17.9	3.602E-05	2.0%	0.544	0.055	0.489	7.3619%	0.0001	135.8	2.3	0.078713	378.2	28.6	7.245
0.00100000	7.255	17.9	3.607E-05	2.0%	0.543	0.0548	0.489	7.3832%	0.0001	135.4	2.3	0.078583	375.9	28.7	7.255
0.00100000	7.265	17.9	3.612E-05	2.0%	0.542	0.0546	0.488	7.4046%	0.0001	135.1	2.3	0.078453	373.7	28.7	7.265
0.00100000	7.275	17.9	3.617E-05	2.0%	0.542	0.0544	0.487	7.4261%	0.0001	134.7	2.2	0.078322	371.4	28.8	7.275
0.00100000	7.285	17.9	3.622E-05	2.0%	0.541	0.0542	0.486	7.4476%	0.0001	134.3	2.2	0.078191	369.2	28.9	7.285
0.00100000	7.295	17.9	3.627E-05	2.0%	0.540	0.054	0.486	7.4693%	0.0001	133.9	2.2	0.078059	366.9	28.9	7.295
0.00100000	7.305	17.9	3.632E-05	2.0%	0.539	0.0538	0.485	7.4911%	0.0001	133.5	2.2	0.077926	364.7	29.0	7.305
0.00100000	7.315	17.9	3.637E-05	2.0%	0.538	0.0536	0.484	7.5130%	0.0001	133.1	2.2	0.077793	362.5	29.0	7.315
0.00100000	7.325	17.9	3.642E-05	2.0%	0.537	0.0534	0.483	7.5350%	0.0001	132.7	2.2	0.077659	360.2	29.1	7.325
0.00100000	7.335	17.9	3.647E-05	2.0%	0.536	0.0532	0.483	7.5571%	0.0001	132.3	2.2	0.077525	358.0	29.1	7.335
0.00100000	7.345	17.9	3.652E-05	2.0%	0.535	0.053	0.482	7.5793%	0.0001	131.9	2.2	0.07739	355.8	29.2	7.345
0.00100000	7.355	17.9	3.657E-05	2.0%	0.534	0.0528	0.481	7.6017%	0.0001	131.6	2.2	0.077254	353.6	29.3	7.355
0.00100000	7.365	17.9	3.662E-05	2.0%	0.533	0.0526	0.480	7.6241%	0.0001	131.2	2.2	0.077118	351.4	29.3	7.365
0.00100000	7.375	17.9	3.667E-05	2.0%	0.532	0.0524	0.480	7.6466%	0.0001	130.8	2.2	0.076982	349.3	29.4	7.375
0.00100000	7.385	17.9	3.672E-05	2.0%	0.531	0.0522	0.479	7.6692%	0.0001	130.4	2.2	0.076844	347.1	29.4	7.385
0.00100000	7.395	17.9	3.677E-05	2.0%	0.530	0.052	0.478	7.6920%	0.0001	130.0	2.2	0.076706	344.9	29.5	7.395
0.00100000	7.405	17.9	3.682E-05	2.0%	0.529	0.0518	0.477	7.7148%	0.0001	129.6	2.2	0.076568	342.7	29.6	7.405
0.00100000	7.415	17.9	3.687E-05	2.0%	0.528	0.0516	0.476	7.7378%	0.0001	129.2	2.2	0.076429	340.6	29.6	7.415
0.00100000	7.425	17.9	3.692E-05	2.0%	0.527	0.0514	0.476	7.7609%	0.0001	128.9	2.1	0.076289	338.4	29.7	7.425
0.00100000	7.435	17.9	3.697E-05	2.0%	0.526	0.0512	0.475	7.7841%	0.0001	128.5	2.1	0.076149	336.3	29.7	7.435
0.00100000	7.445	17.9	3.702E-05	2.0%	0.525	0.051	0.474	7.8074%	0.0001	128.1	2.1	0.076008	334.1	29.8	7.445
0.00100000	7.455	17.9	3.707E-05	2.0%	0.524	0.0508	0.473	7.8308%	0.0001	127.7	2.1	0.075867	332.0	29.9	7.455
0.00100000	7.465	17.9	3.712E-05	2.0%	0.523	0.0506	0.473	7.8543%	0.0001	127.3	2.1	0.075725	329.9	29.9	7.465
0.00100000	7.475	17.9	3.717E-05	2.0%	0.522	0.0504	0.472	7.8780%	0.0001	126.9	2.1	0.075582	327.7	30.0	7.475
0.00100000	7.485	17.9	3.722E-05	2.0%	0.521	0.0502	0.471	7.9017%	0.0001	126.6	2.1	0.075439	325.6	30.1	7.485
0.00100000	7.495	17.9	3.727E-05	2.0%	0.520	0.05	0.470	7.9256%	0.0001	126.2	2.1	0.075295	323.5	30.1	7.495
0.00100000	7.505	17.9	3.732E-05	2.0%	0.519	0.0498	0.469	7.9496%	0.0001	125.8	2.1	0.07515	321.4	30.2	7.505
0.00100000	7.515	17.9	3.737E-05	2.0%	0.518	0.0496	0.469	7.9738%	0.0001	125.4	2.1	0.075005	319.3	30.2	7.515
0.00100000	7.525	17.9	3.742E-05	2.0%	0.517	0.0494	0.468	7.9980%	0.0001	125.0	2.1	0.07486	317.2	30.3	7.525
0.00100000	7.535	17.9	3.747E-05	2.0%	0.516	0.0492	0.467	8.0224%	0.0001	124.7	2.1	0.074713	315.1	30.4	7.535
0.00100000	7.545	17.9	3.752E-05	2.0%	0.515	0.049	0.466	8.0469%	0.0001	124.3	2.1	0.074567	313.1	30.4	7.545
0.00100000	7.555	17.9	3.757E-05	2.0%	0.514	0.0488	0.465	8.0716%	0.0001	123.9	2.1	0.074419	311.0	30.5	7.555
0.00100000	7.565	17.9	3.761E-05	2.0%	0.513	0.0486	0.465	8.0964%	0.0001	123.5	2.1	0.074271	308.9	30.6	7.565
0.00100000	7.575	17.9	3.766E-05	2.0%	0.512	0.0484	0.464	8.1213%	0.0001	123.1	2.1	0.074122	306.9	30.6	7.575
0.00100000	7.585	17.9	3.771E-05	2.0%	0.511	0.0482	0.463	8.1463%	0.0001	122.8	2.0	0.073973	304.8	30.7	7.585
0.00100000	7.595	17.9	3.776E-05	2.0%	0.510	0.048	0.462	8.1714%	0.0001	122.4	2.0	0.073823	302.8	30.8	7.595
0.00100000	7.605	17.9	3.781E-05	2.0%	0.509	0.0478	0.461	8.1967%	0.0001	122.0	2.0	0.073672	300.7	30.8	7.605
0.00100000	7.615	17.9	3.786E-05	2.0%	0.508	0.0476	0.461	8.2222%	0.0001	121.6	2.0	0.073521	298.7	30.9	7.615
0.00100000	7.625	17.9	3.791E-05	2.0%	0.507	0.0474	0.460	8.2477%	0.0001	121.2	2.0	0.073369	296.7	31.0	7.625
0.00100000	7.635	17.9	3.796E-05	2.0%	0.506	0.0472	0.459	8.2734%	0.0001	120.9	2.0	0.073216	294.7	31.0	7.635
0.00100000	7.645	17.9	3.801E-05	2.0%	0.505	0.047	0.458	8.2993%	0.0001	120.5	2.0	0.073063	292.6	31.1	7.645
0.00100000	7.655	17.9	3.806E-05	2.0%	0.504	0.0468	0.457	8.3253%	0.0001	120.1	2.0	0.072909	290.6	31.2	7.655
0.00100000	7.665	17.9	3.811E-05	2.0%	0.503	0.0466	0.456	8.3514%	0.0001	119.7	2.0	0.072755	288.6	31.2	7.665
0.00100000	7.675	17.9	3.816E-05	2.0%	0.502	0.0464	0.456	8.3777%	0.0001	119.4	2.0	0.0726	286.6	31.3	7.675
0.00100000	7.685	17.9	3.821E-05	2.0%	0.501	0.0462	0.455	8.4041%	0.0001	119.0	2.0	0.072444	284.6	31.4	7.685
0.00100000	7.695	17.9	3.826E-05	2.0%	0.500	0.046	0.454	8.4307%	0.0001	118.6	2.0	0.072288	282.7	31.4	7.695
0.00100000	7.705	17.9	3.831E-05	2.0%	0.499	0.0458	0.453	8.4574%	0.0001	118.2	2.0	0.072131	280.7	31.5	7.705
0.00100000	7.715	17.9	3.836E-05	2.0%	0.498	0.0456	0.452	8.4843%	0.0001	117.9	2.0	0.071973	278.7	31.6	7.715
0.00100000	7.725	17.9	3.841E-05	2.0%	0.497	0.0454	0.451	8.5113%	0.0001	117.5	2.0	0.071815	276.7	31.6	7.725
0.00100000	7.735	17.9	3.846E-05	2.0%	0.496	0.0452	0.450	8.5385%	0.0001	117.1	2.0	0.071656	274.8	31.7	7.735
0.00100000	7.745	17.9	3.851E-05	2.0%	0.495	0.045	0.450	8.5658%	0.0001	116.7	1.9	0.071496	272.8	31.8	7.745
0.00100000	7.755	17.9	3.856E-05	2.0%	0.494	0.0448	0.449	8.5933%	0.0001	116.4	1.9	0.071336	270.9	31.8	7.755
0.00100000	7.765	17.9	3.861E-05	2.0%	0.492	0.0446	0.448	8.6209%	0.0001	116.0	1.9	0.071175	269.0	31.9	7.765
0.00100000	7.775	17.9	3.866E-05	2.0%	0.491	0.0444	0.447	8.6487%	0.0001	115.6	1.9	0.071014	267.0	32.0	7.775
0.00100000	7.785	17.9	3.871E-05	2.0%	0.490	0.0442	0.446	8.6767%	0.0001	115.3	1.9	0.070851	265.1	32.1	7.785
0.00100000	7.795	17.9	3.876E-05	2.0%	0.489	0.044	0.445	8.7048%	0.0001	114.9	1.9	0.070689	263.2	32.1	7.795
0.00100000	7.805	17.9	3.881E-05	2.0%	0.488	0.0438	0.444	8.7331%	0.0001	114.5	1.9	0.070525	261.3	32.2	7.805
0.00100000	7.815	17.9	3.886E-05	2.0%	0.487	0.0436	0.444	8.7616%	0.0001	114.1	1.9	0.070361	259.3	32.3	7.815
0.00100000	7.825	17.9	3.891E-05	2.0%	0.486	0.0434	0.443	8.7902%	0.0001	113.8	1.9	0.070196	257.4	32.3	7.825
0.00100000	7.835	17.9	3.896E-05	2.0%	0.485	0.0432	0.442	8.8190%	0.0001	113.4	1.9	0.07003	255.6	32.4	7.835
0.00100000	7.845	17.9	3.901E-05	2.0%	0.484	0.043	0.441	8.8480%	0.0001	113.0	1.9	0.069864	253.7	32.5	7.845
0.00100000	7.855	17.9	3.906E-05	2.0%	0.483	0.0428	0.440	8.8771%	0.0001	112.6	1.9	0.069697	251.8	32.6	7.855
0.00100000	7.865	17.9	3.911E-05	2.0%	0.482	0.0426	0.439	8.9065%	0.0001	112.3	1.9	0.069529	249.9	32.6	7.865
0.00100000	7.875	17.9	3.916E-05	2.0%	0.481	0.0424	0.438	8.9360%	0.0001	111.9	1.9	0.069361	248.0	32.7	7.875
0.00100000	7.885	17.9	3.921E-05	2.0%	0.479	0.0422	0.437	8.9657%	0.0001	111.5	1.9	0.069192	246.2	32.8	7.885
0.00100000	7.895	17.9	3.926E-05	2.0%	0.478	0.042	0.436	8.9956%	0.0001	111.2	1.9	0.069023	244.3	32.9	7.895
0.00100000	7.905	17.9	3.931E-05	2.0%	0.477	0.0418	0.435	9.0256%	0.0001	110.8	1.8	0.068852	242.5	32.9	7.905
0.00100000	7.915	17.9	3.936E-05	2.0%	0.476	0.0416	0.435	9.0559%	0.0001	110.4	1.8	0.068681	240.6	33.0	7.915
0.00100000	7.925	17.9	3.940E-05	2.0%	0.475	0.0414	0.434	9.0863%	0.0001	110.1	1.8	0.068509	238.8	33.1	7.925
0.00100000	7.935	17.9	3.945E-05	2.0%	0.474	0.0412	0.433	9.1169%	0.0001	109.7	1.8	0.068337	236.9	33.2	7.935
0.00100000	7.945	17.9	3.950E-05	2.0%	0.473	0.041	0.432	9.1478%	0.0001	109.3	1.8	0.068164	235.1	33.3	7.945
0.00100000	7.955	17.9	3.955E-05	2.0%	0.472	0.0408	0.431	9.1788%	0.0001	108.9	1.8	0.06799	233.3	33.3	7.955
0.00100000	7.965	17.9	3.960E-05	2.0%	0.471	0.0406	0.430	9.2100%	0.0001	108.6	1.8	0.067815	231.5	33.4	7.965
0.00100000	7.975	17.9	3.965E-05	2.0%	0.469	0.0404	0.429	9.2414%	0.0001	108.2	1.8	0.06764	229.7	33.5	7.975
0.00100000	7.985	17.9	3.970E-05	2.0%	0.468	0.0402	0.428	9.2731%	0.0001	107.8	1.8	0.067464	227.9	33.6	7.985
0.00100000	7.995	17.9	3.975E-05	2.0%	0.467	0.04	0.427	9.3049%	0.0001	107.5	1.8	0.067287	226.1	33.6	7.995
0.00100000	8.005	17.9	3.980E-05	2.0%	0.466	0.0398	0.426	9.3369%	0.0001	107.1	1.8	0.06711	224.3	33.7	8.005
0.00100000	8.015	17.9	3.985E-05	2.0%	0.465	0.0396	0.425	9.3692%	0.0001	106.7	1.8	0.066932	222.5	33.8	8.015
0.00100000	8.025	17.9	3.990E-05	2.0%	0.464	0.0394	0.424	9.4017%	0.0001	106.4	1.8	0.066753	220.7	33.9	8.025
0.00100000	8.035	17.9	3.995E-05	2.0%	0.463	0.0392	0.423	9.4343%	0.0001	106.0	1.8	0.066573	218.9	34.0	8.035
0.00100000	8.045	17.9	4.000E-05	2.0%	0.462	0.039	0.423	9.4673%	0.0001	105.6	1.8	0.066393	217.2	34.0	8.045
0.00100000	8.055	17.9	4.005E-05	2.0%	0.460	0.0388	0.422	9.5004%	0.0001	105.3	1.8	0.066212	215.4	34.1	8.055
0.00100000	8.065	17.9	4.010E-05	2.0%	0.459	0.0386	0.421	9.5337%	0.0001	104.9	1.7	0.06603	213.6	34.2	8.065
0.00100000	8.075	17.9	4.015E-05	2.0%	0.458	0.0384	0.420	9.5673%	0.0001	104.5	1.7	0.065847	211.9	34.3	8.075
0.00100000	8.085	17.9	4.020E-05	2.0%	0.457	0.0382	0.419	9.6011%	0.0001	104.2	1.7	0.065664	210.2	34.4	8.085
0.00100000	8.095	17.9	4.025E-05	2.0%	0.456	0.038	0.418	9.6352%	0.0001	103.8	1.7	0.06548	208.4	34.5	8.095
0.00100000	8.105	17.9	4.030E-05	2.0%	0.455	0.0378	0.417	9.6695%	0.0001	103.4	1.7	0.065295	206.7	34.5	8.105
0.00100000	8.115	17.9	4.035E-05	2.0%	0.453	0.0376	0.416	9.7040%	0.0001	103.1	1.7	0.06511	205.0	34.6	8.115
0.00100000	8.125	17.9	4.040E-05	2.0%	0.452	0.0374	0.415	9.7388%	0.0001	102.7	1.7	0.064923	203.2	34.7	8.125
0.00100000	8.135	17.9	4.045E-05	2.0%	0.451	0.0372	0.414	9.7738%	0.0001	102.3	1.7	0.064736	201.5	34.8	8.135
0.00100000	8.145	17.9	4.050E-05	2.0%	0.450	0.037	0.413	9.8090%	0.0001	101.9	1.7	0.064549	199.8	34.9	8.145
0.00100000	8.155	17.9	4.055E-05	2.0%	0.449	0.0368	0.412	9.8446%	0.0001	101.6	1.7	0.06436	198.1	35.0	8.155
0.00100000	8.165	17.9	4.060E-05	2.0%	0.447	0.0366	0.411	9.8803%	0.0001	101.2	1.7	0.064171	196.4	35.1	8.165

0.00100000	8.175	17.9	4.065E-05	2.0%	0.446	0.0364	0.410	9.9164%	0.0001	100.8	1.7	0.06398	194.8	35.2	8.175
0.00100000	8.185	17.9	4.070E-05	2.0%	0.445	0.0362	0.409	9.9527%	0.0001	100.5	1.7	0.063789	193.1	35.2	8.185
0.00100000	8.195	17.9	4.075E-05	2.0%	0.444	0.036	0.408	9.9892%	0.0001	100.1	1.7	0.063598	191.4	35.3	8.195
0.00100000	8.205	17.9	4.080E-05	2.0%	0.443	0.0358	0.407	10.0260%	0.0001	99.7	1.7	0.063405	189.7	35.4	8.205
0.00100000	8.215	17.9	4.085E-05	2.0%	0.442	0.0356	0.406	10.0632%	0.0001	99.4	1.7	0.063212	188.1	35.5	8.215
0.00100000	8.225	17.9	4.090E-05	2.0%	0.440	0.0354	0.405	10.1005%	0.0001	99.0	1.7	0.063018	186.4	35.6	8.225
0.00100000	8.235	17.9	4.095E-05	2.0%	0.439	0.0352	0.404	10.1382%	0.0001	98.6	1.6	0.062823	184.8	35.7	8.235
0.00100000	8.245	17.9	4.100E-05	2.0%	0.438	0.035	0.403	10.1762%	0.0001	98.3	1.6	0.062627	183.1	35.8	8.245
0.00100000	8.255	17.9	4.105E-05	2.0%	0.437	0.0348	0.402	10.2144%	0.0001	97.9	1.6	0.062431	181.5	35.9	8.255
0.00100000	8.265	17.9	4.110E-05	2.0%	0.435	0.0346	0.401	10.2529%	0.0001	97.5	1.6	0.062233	179.8	36.0	8.265
0.00100000	8.275	17.9	4.115E-05	2.0%	0.434	0.0344	0.400	10.2918%	0.0001	97.2	1.6	0.062035	178.2	36.1	8.275
0.00100000	8.285	17.9	4.119E-05	2.0%	0.433	0.0342	0.399	10.3309%	0.0001	96.8	1.6	0.061836	176.6	36.2	8.285
0.00100000	8.295	17.9	4.124E-05	2.0%	0.432	0.034	0.398	10.3703%	0.0001	96.4	1.6	0.061637	175.0	36.3	8.295
0.00100000	8.305	17.9	4.129E-05	2.0%	0.430	0.0338	0.397	10.4101%	0.0001	96.1	1.6	0.061436	173.4	36.4	8.305
0.00100000	8.315	17.9	4.134E-05	2.0%	0.429	0.0336	0.396	10.4501%	0.0001	95.7	1.6	0.061234	171.8	36.4	8.315
0.00100000	8.325	17.9	4.139E-05	2.0%	0.428	0.0334	0.395	10.4905%	0.0001	95.3	1.6	0.061032	170.2	36.5	8.325
0.00100000	8.335	17.9	4.144E-05	2.0%	0.427	0.0332	0.394	10.5312%	0.0001	95.0	1.6	0.060829	168.6	36.6	8.335
0.00100000	8.345	17.9	4.149E-05	2.0%	0.425	0.033	0.392	10.5723%	0.0001	94.6	1.6	0.060625	167.0	36.7	8.345
0.00100000	8.355	17.9	4.154E-05	2.0%	0.424	0.0328	0.391	10.6137%	0.0001	94.2	1.6	0.06042	165.4	36.8	8.355
0.00100000	8.365	17.9	4.159E-05	2.0%	0.423	0.0326	0.390	10.6554%	0.0001	93.8	1.6	0.060215	163.9	36.9	8.365
0.00100000	8.375	17.9	4.164E-05	2.0%	0.422	0.0324	0.389	10.6974%	0.0001	93.5	1.6	0.060008	162.3	37.0	8.375
0.00100000	8.385	17.9	4.169E-05	2.0%	0.420	0.0322	0.388	10.7398%	0.0001	93.1	1.6	0.059801	160.7	37.1	8.385
0.00100000	8.395	17.9	4.174E-05	2.0%	0.419	0.032	0.387	10.7826%	0.0001	92.7	1.5	0.059592	159.2	37.2	8.395
0.00100000	8.405	17.9	4.179E-05	2.0%	0.418	0.0318	0.386	10.8257%	0.0001	92.4	1.5	0.059383	157.6	37.3	8.405
0.00100000	8.415	17.9	4.184E-05	2.0%	0.417	0.0316	0.385	10.8692%	0.0001	92.0	1.5	0.059173	156.1	37.5	8.415
0.00100000	8.425	17.9	4.189E-05	2.0%	0.415	0.0314	0.384	10.9130%	0.0001	91.6	1.5	0.058962	154.6	37.6	8.425
0.00100000	8.435	17.9	4.194E-05	2.0%	0.414	0.0312	0.383	10.9573%	0.0001	91.3	1.5	0.05875	153.0	37.7	8.435
0.00100000	8.445	17.9	4.199E-05	2.0%	0.413	0.031	0.382	11.0019%	0.0001	90.9	1.5	0.058538	151.5	37.8	8.445
0.00100000	8.455	17.9	4.204E-05	2.0%	0.411	0.0308	0.381	11.0469%	0.0001	90.5	1.5	0.058324	150.0	37.9	8.455
0.00100000	8.465	17.9	4.209E-05	2.0%	0.410	0.0306	0.379	11.0923%	0.0001	90.2	1.5	0.05811	148.5	38.0	8.465
0.00100000	8.475	17.9	4.214E-05	2.0%	0.409	0.0304	0.378	11.1381%	0.0001	89.8	1.5	0.057894	147.0	38.1	8.475
0.00100000	8.485	17.9	4.219E-05	2.0%	0.407	0.0302	0.377	11.1843%	0.0001	89.4	1.5	0.057678	145.5	38.2	8.485
0.00100000	8.495	17.9	4.224E-05	2.0%	0.406	0.03	0.376	11.2309%	0.0001	89.0	1.5	0.057461	144.0	38.3	8.495
0.00100000	8.505	17.9	4.229E-05	2.0%	0.405	0.0298	0.375	11.2779%	0.0001	88.7	1.5	0.057242	142.5	38.4	8.505
0.00100000	8.515	17.9	4.234E-05	2.0%	0.403	0.0296	0.374	11.3254%	0.0001	88.3	1.5	0.057023	141.1	38.5	8.515
0.00100000	8.525	17.9	4.239E-05	2.0%	0.402	0.0294	0.373	11.3733%	0.0001	87.9	1.5	0.056803	139.6	38.6	8.525
0.00100000	8.535	17.9	4.244E-05	2.0%	0.401	0.0292	0.372	11.4216%	0.0001	87.6	1.5	0.056582	138.1	38.8	8.535
0.00100000	8.545	17.9	4.249E-05	2.0%	0.399	0.029	0.370	11.4704%	0.0001	87.2	1.5	0.05636	136.7	38.9	8.545
0.00100000	8.555	17.9	4.254E-05	2.0%	0.398	0.0288	0.369	11.5197%	0.0001	86.8	1.4	0.056137	135.2	39.0	8.555
0.00100000	8.565	17.9	4.259E-05	2.0%	0.397	0.0286	0.368	11.5694%	0.0001	86.4	1.4	0.055913	133.8	39.1	8.565
0.00100000	8.575	17.9	4.264E-05	2.0%	0.395	0.0284	0.367	11.6196%	0.0001	86.1	1.4	0.055688	132.3	39.2	8.575
0.00100000	8.585	17.9	4.269E-05	2.0%	0.394	0.0282	0.366	11.6703%	0.0001	85.7	1.4	0.055462	130.9	39.3	8.585
0.00100000	8.595	17.9	4.274E-05	2.0%	0.393	0.028	0.365	11.7214%	0.0001	85.3	1.4	0.055235	129.5	39.5	8.595
0.00100000	8.605	17.9	4.279E-05	2.0%	0.391	0.0278	0.363	11.7731%	0.0001	84.9	1.4	0.055007	128.0	39.6	8.605
0.00100000	8.615	17.9	4.284E-05	2.0%	0.390	0.0276	0.362	11.8252%	0.0001	84.6	1.4	0.054778	126.6	39.7	8.615
0.00100000	8.625	17.9	4.289E-05	2.0%	0.388	0.0274	0.361	11.8779%	0.0001	84.2	1.4	0.054549	125.2	39.8	8.625
0.00100000	8.635	17.9	4.294E-05	2.0%	0.387	0.0272	0.360	11.9311%	0.0001	83.8	1.4	0.054318	123.8	39.9	8.635
0.00100000	8.645	17.9	4.298E-05	2.0%	0.386	0.027	0.359	11.9848%	0.0001	83.4	1.4	0.054086	122.4	40.1	8.645
0.00100000	8.655	17.9	4.303E-05	2.0%	0.384	0.0268	0.357	12.0391%	0.0001	83.1	1.4	0.053853	121.0	40.2	8.655
0.00100000	8.665	17.9	4.308E-05	2.0%	0.383	0.0266	0.356	12.0939%	0.0001	82.7	1.4	0.053619	119.6	40.3	8.665
0.00100000	8.675	17.9	4.313E-05	2.0%	0.381	0.0264	0.355	12.1493%	0.0001	82.3	1.4	0.053384	118.3	40.4	8.675
0.00100000	8.685	17.9	4.318E-05	2.0%	0.380	0.0262	0.354	12.2053%	0.0001	81.9	1.4	0.053147	116.9	40.6	8.685
0.00100000	8.695	17.9	4.323E-05	2.0%	0.379	0.026	0.353	12.2618%	0.0001	81.6	1.4	0.05291	115.5	40.7	8.695
0.00100000	8.705	17.9	4.328E-05	2.0%	0.377	0.0258	0.351	12.3190%	0.0001	81.2	1.4	0.052672	114.2	40.8	8.705
0.00100000	8.715	17.9	4.333E-05	2.0%	0.376	0.0256	0.350	12.3767%	0.0001	80.8	1.3	0.052432	112.8	41.0	8.715
0.00100000	8.725	17.9	4.338E-05	2.0%	0.374	0.0254	0.349	12.4351%	0.0001	80.4	1.3	0.052192	111.5	41.1	8.725
0.00100000	8.735	17.9	4.343E-05	2.0%	0.373	0.0252	0.348	12.4941%	0.0001	80.0	1.3	0.05195	110.1	41.2	8.735
0.00100000	8.745	17.9	4.348E-05	2.0%	0.371	0.025	0.346	12.5537%	0.0001	79.7	1.3	0.051708	108.8	41.4	8.745
0.00100000	8.755	17.9	4.353E-05	2.0%	0.370	0.0248	0.345	12.6140%	0.0001	79.3	1.3	0.051464	107.5	41.5	8.755
0.00100000	8.765	17.9	4.358E-05	2.0%	0.368	0.0246	0.344	12.6750%	0.0001	78.9	1.3	0.051219	106.1	41.6	8.765
0.00100000	8.775	17.9	4.363E-05	2.0%	0.367	0.0244	0.343	12.7366%	0.0001	78.5	1.3	0.050973	104.8	41.8	8.775
0.00100000	8.785	17.9	4.368E-05	2.0%	0.365	0.0242	0.341	12.7990%	0.0001	78.1	1.3	0.050726	103.5	41.9	8.785
0.00100000	8.795	17.9	4.373E-05	2.0%	0.364	0.024	0.340	12.8620%	0.0001	77.7	1.3	0.050477	102.2	42.1	8.795
0.00100000	8.805	17.9	4.378E-05	2.0%	0.363	0.0238	0.339	12.9258%	0.0001	77.4	1.3	0.050228	100.9	42.2	8.805
0.00100000	8.815	17.9	4.383E-05	2.0%	0.361	0.0236	0.337	12.9903%	0.0001	77.0	1.3	0.049977	99.6	42.4	8.815
0.00100000	8.825	17.9	4.388E-05	2.0%	0.360	0.0234	0.336	13.0555%	0.0001	76.6	1.3	0.049725	98.3	42.5	8.825
0.00100000	8.835	17.9	4.393E-05	2.0%	0.358	0.0232	0.335	13.1215%	0.0001	76.2	1.3	0.049472	97.1	42.6	8.835
0.00100000	8.845	17.9	4.398E-05	2.0%	0.356	0.023	0.333	13.1883%	0.0001	75.8	1.3	0.049218	95.8	42.8	8.845
0.00100000	8.855	17.9	4.403E-05	2.0%	0.355	0.0228	0.332	13.2559%	0.0001	75.4	1.3	0.048962	94.5	42.9	8.855
0.00100000	8.865	17.9	4.408E-05	2.0%	0.353	0.0226	0.331	13.3244%	0.0001	75.1	1.3	0.048705	93.3	43.1	8.865
0.00100000	8.875	17.9	4.413E-05	2.0%	0.352	0.0224	0.329	13.3936%	0.0001	74.7	1.2	0.048447	92.0	43.3	8.875
0.00100000	8.885	17.9	4.418E-05	2.0%	0.350	0.0222	0.328	13.4637%	0.0001	74.3	1.2	0.048188	90.8	43.4	8.885
0.00100000	8.895	17.9	4.423E-05	2.0%	0.349	0.022	0.327	13.5347%	0.0001	73.9	1.2	0.047928	89.5	43.6	8.895
0.00100000	8.905	17.9	4.428E-05	2.0%	0.347	0.0218	0.325	13.6066%	0.0001	73.5	1.2	0.047666	88.3	43.7	8.905
0.00100000	8.915	17.9	4.433E-05	2.0%	0.346	0.0216	0.324	13.6794%	0.0001	73.1	1.2	0.047403	87.1	43.9	8.915
0.00100000	8.925	17.9	4.438E-05	2.0%	0.344	0.0214	0.323	13.7531%	0.0001	72.7	1.2	0.047138	85.9	44.1	8.925
0.00100000	8.935	17.9	4.443E-05	2.0%	0.342	0.0212	0.321	13.8278%	0.0001	72.3	1.2	0.046872	84.7	44.2	8.935
0.00100000	8.945	17.9	4.448E-05	2.0%	0.341	0.021	0.320	13.9034%	0.0001	71.9	1.2	0.046605	83.4	44.4	8.945
0.00100000	8.955	17.9	4.453E-05	2.0%	0.339	0.0208	0.318	13.9800%	0.0001	71.5	1.2	0.046337	82.2	44.6	8.955
0.00100000	8.965	17.9	4.458E-05	2.0%	0.338	0.0206	0.317	14.0577%	0.0001	71.1	1.2	0.046067	81.1	44.7	8.965
0.00100000	8.975	17.9	4.463E-05	2.0%	0.336	0.0204	0.316	14.1364%	0.0001	70.7	1.2	0.045796	79.9	44.9	8.975
0.00100000	8.985	17.9	4.468E-05	2.0%	0.334	0.0202	0.314	14.2162%	0.0001	70.3	1.2	0.045523	78.7	45.1	8.985
0.00100000	8.995	17.9	4.473E-05	2.0%	0.333	0.02	0.313	14.2970%	0.0001	69.9	1.2	0.045249	77.5	45.2	8.995
0.00100000	9.005	17.9	4.477E-05	2.0%	0.331	0.0198	0.311	14.3790%	0.0001	69.5	1.2	0.044974	76.4	45.4	9.005
0.00100000	9.015	17.9	4.482E-05	2.0%	0.330	0.0196	0.310	14.4622%	0.0001	69.1	1.2	0.044697	75.2	45.6	9.015
0.00100000	9.025	17.9	4.487E-05	2.0%	0.328	0.0194	0.308	14.5465%	0.0001	68.7	1.1	0.044419	74.0	45.8	9.025
0.00100000	9.035	17.9	4.492E-05	2.0%	0.326	0.0192	0.307	14.6320%	0.0001	68.3	1.1	0.044139	72.9	46.0	9.035
0.00100000	9.045	17.9	4.497E-05	2.0%	0.325	0.019	0.306	14.7187%	0.0001	67.9	1.1	0.043858	71.8	46.2	9.045
0.00100000	9.055	17.9	4.502E-05	2.0%	0.323	0.0188	0.304	14.8068%	0.0001	67.5	1.1	0.043575	70.6	46.4	9.055
0.00100000	9.065	17.9	4.507E-05	2.0%	0.321	0.0186	0.303	14.8961%	0.0001	67.1	1.1	0.043291	69.5	46.5	9.065
0.00100000	9.075	17.9	4.512E-05	2.0%	0.319	0.0184	0.301	14.9868%	0.0001	66.7	1.1	0.043005	68.4	46.7	9.075
0.00100000	9.085	17.9	4.517E-05	2.0%	0.318	0.0182	0.300	15.0788%	0.0002	66.3	1.1	0.042718	67.3	46.9	9.085
0.00100000	9.095	17.9	4.522E-05	2.0%	0.316	0.018	0.298	15.1722%	0.0002	65.9	1.1	0.042429	66.2	47.1	9.095
0.00100000	9.105	17.9	4.527E-05	2.0%	0.314	0.0178	0.297	15.2671%	0.0002	65.5	1.1	0.042138	65.1	47.3	9.105
0.00100000	9.115	17.9	4.532E-05	2.0%	0.313	0.0176	0.295	15.3635%	0.0002	65.1	1.1	0.041846	64.0	47.6	9.115
0.00100000	9.125	17.9	4.537E-05	2.0%	0.311	0.0174	0.293	15.4614%	0.0002	64.7	1.1	0.041552	62.9	47.8	9.125
0.00100000	9.135	17.9	4.542E-05	2.0%	0.309	0.0172	0.292	15.5608%	0.0002	64.3	1.1	0.041257	61.8	48.0	9.135
0.00100000	9.145	17.9	4.547E-05	2.0%	0.307	0.017	0.290	15.6619%	0.0002	63.8	1.1	0.040959	60.7	48.2	9.145
0.00100000	9.155	17.9	4.552E-05	2.0%	0.306	0.0168	0.289	15.7646%	0.0002	63.4	1.1	0.040661	59.7	48.4	9.155
0.00100000	9.165	17.9	4.557E-05	2.0%	0.304	0.0166	0.287	15.8691%	0.0002	63.0	1.1	0.04036	58.6	48.6	9.165
0.00100000	9.175	17.9	4.562E-05	2.0%	0.302	0.0164	0.286	15.9752%	0.0002	62.6	1.0	0.040058	57.6	48.9	9.175
0.00100000	9.185	17.9	4.567E-05	2.0%	0.300	0.0162	0.284	16.0832%	0.0002	62.2	1.0	0.039753	56.5	49.1	9.185
0.00100000	9.195	17.9	4.572E-05	2.0%	0.298	0.016	0.282	16.1931%	0.0002	61.8	1.0	0.039448	55.5	49.3	9.195
0.00100000	9.205	17.9	4.577E-05	2.0%	0.297	0.0158	0.281	16.3049%	0.0002	61.3	1.0	0.03914	54.5	49.5	9.205
0.00100000	9.215	17.9	4.582E-05	2.0%	0.295	0.0156	0.279	16.4186%	0.0002	60.9	1.0	0.03883	53.4	49.8	9.215
0.00100000	9.225	17.9	4.587E-05	2.0%	0.293	0.0154	0.277	16.5344%	0.0002	60.5	1.0	0.038519	52.4	50.0	9.225
0.00100000	9.235	17.9	4.592E-05	2.0%	0.291	0.0152	0.276	16.6523%	0.0002	60.1	1.0	0.038205	51.4	50.3	9.235
0.00100000	9.245	17.9	4.597E-05	2.0%	0.289	0.015	0.274	16.7723%	0.0002	59.6	1.0	0.03789	50.4	50.5	9.245
0.00100000	9.255	17.9	4.602E-05	2.0%	0.287	0.0148	0.272	16.8946%	0.0002	59.2	1.0	0.037572	49.4	50.8	9.255
0.00100000	9.265	17.9	4.607E-05	2.0%	0.285	0.0146	0.271	17.0192%	0.0002	58.8	1.0	0.037253	48.4	51.0	9.265
0.00100000	9.275	17.9	4.612E-05	2.0%	0.283	0.0144	0.269	17.1462%	0.0002	58.3	1.0	0.036932	47.5	51.3	9.275
0.00100000	9.285	17.9	4.617E-05	2.0%	0.281	0.0142	0.267	17.2756%	0.0002	57.9	1.0	0.036608	46.5	51.6	9.285
0.00100000	9.295	17.9	4.622E-05	2.0%	0.279	0.014	0.265	17.4076%	0.0002	57.4	1.0	0.036283	45.5	51.8	9.295
0.00100000	9.305	17.9	4.627E-05	2.0%	0.278	0.0138	0.264	17.5422%	0.0002	57.0	1.0	0.035955	44.6	52.1	9.305
0.00100000	9.315	17.9	4.632E-05	2.0%	0.276	0.0136	0.262	17.6796%	0.0002	56.6	0.9	0.035625	43.6	52.4	9.315
0.00100000	9.325	17.9	4.637E-05	2.0%	0.274	0.0134	0.260	17.8198%	0.0002	56.1	0.9	0.035293	42.7	52.7	9.325
0.00100000	9.335	17.9	4.642E-05	2.0%	0.272	0.0132	0.258	17.9629%	0.0002	55.7	0.9	0.034959	41.7	53.0	9.335
0.00100000	9.345	17.9	4.647E-05	2.0%	0.270	0.013	0.257	18.1091%	0.0002	55.2	0.9	0.034622	40.8	53.3	9.345
0.00100000	9.355	17.9	4.652E-05	2.0%	0.268	0.0128	0.255	18.2584%	0.0002	54.8	0.9	0.034283	39.9	53.6	9.355
0.00100000	9.365	17.9	4.656E-05	2.0%	0.266	0.0126	0.253	18.4110%	0.0002	54.3	0.9	0.033942	39.0	53.9	9.365
0.00100000	9.375	17.9	4.661E-05	2.0%	0.263	0.0124	0.251	18.5669%	0.0002	53.9	0.9	0.033598	38.1	54.2	9.375
0.00100000	9.385	17.9	4.666E-05	2.0%	0.261	0.0122	0.249	18.7264%	0.0002	53.4	0.9	0.033252	37.2	54.5	9.385
0.00100000	9.395	17.9	4.671E-05	2.0%	0.259	0.012	0.247	18.8895%	0.0002	52.9	0.9	0.032903	36.3	54.8	9.395
0.00100000	9.405	17.9	4.676E-05	2.0%	0.257	0.0118	0.245	19.0565%	0.0002	52.5	0.9	0.032552	35.4	55.2	9.405
0.00100000	9.415	17.9	4.681E-05	2.0%	0.255	0.0116	0.243	19.2274%	0.0002	52.0	0.9	0.032198	34.5	55.5	9.415
0.00100000	9.425	17.9	4.686E-05	2.0%	0.253	0.0114	0.242	19.4024%	0.0002	51.5	0.9	0.031841	33.7	55.9	9.425
0.00100000	9.435	17.9	4.691E-05	2.0%	0.251	0.0112	0.240	19.5818%	0.0002	51.1	0.9	0.031482	32.8	56.2	9.435
0.00100000	9.445	17.9	4.696E-05	2.0%	0.249	0.011	0.238	19.7656%	0.0002	50.6	0.8	0.03112	31.9	56.6	9.445
0.00100000	9.455	17.9	4.701E-05	2.0%	0.246	0.0108	0.236	19.9541%	0.0002	50.1	0.8	0.030754	31.1	57.0	9.455
0.00100000	9.465	17.9	4.706E-05	2.0%	0.244	0.0106	0.234	20.1475%	0.0002	49.6	0.8	0.030387	30.3	57.3	9.465
0.00100000	9.475	17.9	4.711E-05	2.0%	0.242	0.0104	0.232	20.3460%	0.0002	49.1	0.8	0.030016	29.4	57.7	9.475
0.00100000	9.485	17.9	4.716E-05	2.0%	0.240	0.0102	0.229	20.5499%	0.0002	48.7	0.8	0.029642	28.6	58.1	9.485
0.00100000	9.495	17.9	4.721E-05	2.0%	0.237	0.01	0.227	20.7593%	0.0002	48.2	0.8	0.029264	27.8	58.5	9.495
0.00100000	9.505	17.9	4.726E-05	2.0%	0.235	0.0098	0.225	20.9746%	0.0002	47.7	0.8	0.028884	27.0	58.9	9.505
0.00100000	9.515	17.9	4.731E-05	2.0%	0.233	0.0096	0.223	21.1961%	0.0002	47.2	0.8	0.0285	26.2	59.4	9.515
0.00100000	9.525	17.9	4.736E-05	2.0%	0.230	0.0094	0.221	21.4240%	0.0002	46.7	0.8	0.028113	25.4	59.8	9.525
0.00100000	9.535	17.9	4.741E-05	2.0%	0.228	0.0092	0.219	21.6587%	0.0002	46.2	0.8	0.027723	24.6	60.3	9.535
0.00100000	9.545	17.9	4.746E-05	2.0%	0.226	0.009	0.217	21.9005%	0.0002	45.7	0.8	0.027329	23.9	60.7	9.545

0.00100000	9.555	17.9	4.751E-05	2.0%	0.223	0.0088	0.214	22.1499%	0.0002	45.1	0.8	0.026931	23.1	61.2	9.555
0.00100000	9.565	17.9	4.756E-05	2.0%	0.221	0.0086	0.212	22.4071%	0.0002	44.6	0.7	0.026529	22.4	61.7	9.565
0.00100000	9.575	17.9	4.761E-05	2.0%	0.218	0.0084	0.210	22.6727%	0.0002	44.1	0.7	0.026124	21.6	62.2	9.575
0.00100000	9.585	17.9	4.766E-05	2.0%	0.216	0.0082	0.208	22.9472%	0.0002	43.6	0.7	0.025715	20.9	62.7	9.585
0.00100000	9.595	17.9	4.771E-05	2.0%	0.213	0.008	0.205	23.2310%	0.0002	43.0	0.7	0.025301	20.2	63.3	9.595
0.00100000	9.605	17.9	4.776E-05	2.0%	0.211	0.0078	0.203	23.5247%	0.0002	42.5	0.7	0.024883	19.4	63.8	9.605
0.00100000	9.615	17.9	4.781E-05	2.0%	0.208	0.0076	0.201	23.8288%	0.0002	42.0	0.7	0.024461	18.7	64.4	9.615
0.00100000	9.625	17.9	4.786E-05	2.0%	0.206	0.0074	0.198	24.1442%	0.0002	41.4	0.7	0.024034	18.0	65.0	9.625
0.00100000	9.635	17.9	4.791E-05	2.0%	0.203	0.0072	0.196	24.4714%	0.0002	40.9	0.7	0.023603	17.3	65.6	9.635
0.00100000	9.645	17.9	4.796E-05	2.0%	0.200	0.007	0.193	24.8112%	0.0002	40.3	0.7	0.023167	16.7	66.2	9.645
0.00100000	9.655	17.9	4.801E-05	2.0%	0.198	0.0068	0.191	25.1646%	0.0003	39.7	0.7	0.022726	16.0	66.8	9.655
0.00100000	9.665	17.9	4.806E-05	2.0%	0.195	0.0066	0.188	25.5324%	0.0003	39.2	0.7	0.022279	15.3	67.5	9.665
0.00100000	9.675	17.9	4.811E-05	2.0%	0.192	0.0064	0.186	25.9156%	0.0003	38.6	0.6	0.021827	14.7	68.2	9.675
0.00100000	9.685	17.9	4.816E-05	2.0%	0.189	0.0062	0.183	26.3155%	0.0003	38.0	0.6	0.02137	14.0	68.9	9.685
0.00100000	9.695	17.9	4.821E-05	2.0%	0.186	0.006	0.180	26.7332%	0.0003	37.4	0.6	0.020906	13.4	69.7	9.695
0.00100000	9.705	17.9	4.826E-05	2.0%	0.183	0.0058	0.178	27.1701%	0.0003	36.8	0.6	0.020437	12.8	70.5	9.705
0.00100000	9.715	17.9	4.831E-05	2.0%	0.180	0.0056	0.175	27.6279%	0.0003	36.2	0.6	0.019961	12.2	71.3	9.715
0.00100000	9.725	17.9	4.835E-05	2.0%	0.177	0.0054	0.172	28.1082%	0.0003	35.6	0.6	0.019478	11.6	72.1	9.725
0.00100000	9.735	17.9	4.840E-05	2.0%	0.174	0.0052	0.169	28.6130%	0.0003	34.9	0.6	0.018989	11.0	73.0	9.735
0.00100000	9.745	17.9	4.845E-05	2.0%	0.171	0.005	0.166	29.1445%	0.0003	34.3	0.6	0.018492	10.4	74.0	9.745
0.00100000	9.755	17.9	4.850E-05	2.0%	0.168	0.0048	0.163	29.7052%	0.0003	33.7	0.6	0.017987	9.8	74.9	9.755
0.00100000	9.765	17.9	4.855E-05	2.0%	0.165	0.0046	0.160	30.2978%	0.0003	33.0	0.6	0.017474	9.2	76.0	9.765
0.00100000	9.775	17.9	4.860E-05	2.0%	0.162	0.0044	0.157	30.9256%	0.0003	32.3	0.5	0.016953	8.7	77.1	9.775
0.00100000	9.785	17.9	4.865E-05	2.0%	0.158	0.0042	0.154	31.5923%	0.0003	31.7	0.5	0.016422	8.2	78.2	9.785
0.00100000	9.795	17.9	4.870E-05	2.0%	0.155	0.004	0.151	32.3022%	0.0003	31.0	0.5	0.015882	7.6	79.4	9.795
0.00100000	9.805	17.9	4.875E-05	2.0%	0.151	0.0038	0.147	33.0600%	0.0003	30.2	0.5	0.015331	7.1	80.7	9.805
0.00100000	9.815	17.9	4.880E-05	2.0%	0.148	0.0036	0.144	33.8718%	0.0003	29.5	0.5	0.014769	6.6	82.1	9.815
0.00100000	9.825	17.9	4.885E-05	2.0%	0.144	0.0034	0.141	34.7441%	0.0003	28.8	0.5	0.014195	6.1	83.5	9.825
0.00100000	9.835	17.9	4.890E-05	2.0%	0.140	0.0032	0.137	35.6851%	0.0004	28.0	0.5	0.013609	5.6	85.1	9.835
0.00100000	9.845	17.9	4.895E-05	2.0%	0.136	0.003	0.133	36.7045%	0.0004	27.2	0.5	0.013009	5.2	86.7	9.845
0.00100000	9.855	17.9	4.900E-05	2.0%	0.132	0.0028	0.130	37.8140%	0.0004	26.4	0.4	0.012394	4.7	88.5	9.855
0.00100000	9.865	17.9	4.905E-05	2.0%	0.128	0.0026	0.126	39.0278%	0.0004	25.6	0.4	0.011762	4.3	90.5	9.865
0.00100000	9.875	17.9	4.910E-05	2.0%	0.124	0.0024	0.122	40.3636%	0.0004	24.8	0.4	0.011112	3.9	92.6	9.875
0.00100000	9.885	17.9	4.915E-05	2.0%	0.120	0.0022	0.117	41.8439%	0.0004	23.9	0.4	0.010443	3.4	94.9	9.885
0.00100000	9.895	17.9	4.920E-05	2.0%	0.115	0.002	0.113	43.4969%	0.0004	23.0	0.4	0.009751	3.0	97.5	9.895
0.00100000	9.905	17.9	4.925E-05	2.0%	0.110	0.0018	0.109	45.3599%	0.0005	22.0	0.4	0.009033	2.7	100.4	9.905
0.00100000	9.915	17.9	4.930E-05	2.0%	0.105	0.0016	0.104	47.4822%	0.0005	21.1	0.4	0.008287	2.3	103.6	9.915
0.00100000	9.925	17.9	4.935E-05	2.0%	0.100	0.0014	0.099	49.9313%	0.0005	20.0	0.3	0.007507	1.9	107.2	9.925
0.00100000	9.935	17.9	4.940E-05	2.0%	0.095	0.0012	0.094	52.8026%	0.0005	18.9	0.3	0.006688	1.6	111.5	9.935
0.00100000	9.945	17.9	4.945E-05	2.0%	0.089	0.001	0.088	56.2361%	0.0006	17.8	0.3	0.005821	1.3	116.4	9.945
0.00100000	9.955	17.9	4.950E-05	2.0%	0.083	0.0008	0.082	60.4482%	0.0006	16.5	0.3	0.004894	1.0	122.4	9.955
0.00100000	9.965	17.9	4.955E-05	2.0%	0.076	0.0006	0.075	65.7956%	0.0007	15.2	0.3	0.003892	0.7	129.7	9.965
0.00100000	9.975	17.9	4.960E-05	2.0%	0.068	0.0004	0.068	72.9232%	0.0007	13.7	0.2	0.002785	0.5	139.3	9.975
0.00100000	9.985	17.9	4.965E-05	2.0%	0.060	0.0002	0.060	83.1656%	0.0008	12.0	0.2	0.001525	0.2	152.5	9.985
0.00100000	9.995	17.9	4.970E-05	2.0%	0.010	0	0.010	496.9736%	0.0050	2.0	0.0	0	0.0	523.6	9.995

* Relative to bottom of ballast at outside edge of ballast

CN Milton Intermodal Bypass Flow Calculations

side slopes 1.2%		0.012	
side slopes 1.0%		0.01	
67800		0.001	
spill depth		0.110	m
top		22.06283902	m
area		1.216922164	m2
P		22.1	
R		0.05515434	
n		0.013	
v		0.35	
q		0.429745683	m3/s

area	1400	m2
tc	5	min
I 100	237	mm/hr
depth 100	19.7	mm
Q100	0.09	m3/s
area	1400	m2
tc	5	min
I 5	142	mm/hr
depth 5	11.8	mm
Q5	0.06	m3/s

Q100

DOUBLE INLET FISHBONE CBS assume standard cross section at all locations, 1.2% cross fall, .1 % long grade

	Station	distance	local catchment area	local Q (m3/s)	total Q	goal seek depth	inlet Q	Q match	bypass	total inlet Q
Longitudinal Slope = 0.5%	62+740	40	1400	0.09	0.09	0.066	0.009	0.09	0.08	0.09
	62+780	80	1400	0.09	0.18	0.085	0.016	0.18	0.16	0.11
	62+820	120	1400	0.09	0.25	0.097	0.026	0.25	0.23	0.13
	62+860	160	1400	0.09	0.32	0.105	0.045	0.32	0.27	0.18
Longitudinal Slope = 0.1% (assumed sag)	62+900	200	1400	0.09	0.36	0.111	0.108	0.36	0.26	0.29
	62+940	240	1400	0.09	0.35	0.109	0.091	0.35	0.26	0.38
	62+980	280	1400	0.09	0.35	0.109	0.091	0.35	0.26	0.47
	63+020	320	1400	0.09	0.35	0.110	0.091	0.35	0.26	0.56
	63+060	360	1400	0.09	0.35	0.110	0.091	0.35	0.26	0.65
	63+100	400	1400	0.09	0.35	0.110	0.091	0.35	0.26	0.74
	63+140	440	1400	0.09	0.35	0.110	0.091	0.36	0.26	0.83
	63+180	480	1400	0.09	0.36	0.110	0.091	0.36	0.26	0.92
	63+220	520	1400	0.09	0.36	0.110	0.108	0.36	0.25	1.03
	63+260	560	1400	0.09	0.34	0.108	0.091	0.34	0.25	1.12
	63+300	600	1400	0.09	0.34	0.108	0.091	0.34	0.25	1.21
	63+340	640	1400	0.09	0.34	0.109	0.091	0.34	0.25	1.31
	63+380	680	1400	0.09	0.34	0.109	0.091	0.34	0.25	1.40
	63+420	720	1400	0.09	0.34	0.109	0.091	0.35	0.25	1.49
	63+460	760	1400	0.09	0.35	0.109	0.091	0.35	0.25	1.58
	63+500	800	1400	0.09	0.35	0.109	0.091	0.35	0.26	1.67
	63+540	840	1400	0.09	0.35	0.109	0.091	0.35	0.26	1.76

	63+580	880	1400	0.09	0.35	0.109	0.091	0.35	0.26	1.85
	63+620	920	1400	0.09	0.35	0.109	0.091	0.35	0.26	1.94
	63+660	960	1400	0.09	0.35	0.110	0.091	0.35	0.26	2.03
	63+700	1000	1400	0.09	0.35	0.110	0.091	0.35	0.26	2.12
	63+740	1040	1400	0.09	0.35	0.110	0.091	0.35	0.26	2.22
	63+780	1080	1400	0.09	0.35	0.110	0.091	0.35	0.26	2.31
	63+820	1120	1400	0.09	0.36	0.110	0.108	0.36	0.25	2.41
	63+860	1160	1400	0.09	0.34	0.108	0.091	0.34	0.25	2.51
	63+900	1200	1400	0.09	0.34	0.108	0.091	0.34	0.25	2.60
	63+940	1240	1400	0.09	0.34	0.108	0.091	0.34	0.25	2.69
	63+980	1280	1400	0.09	0.34	0.109	0.091	0.34	0.25	2.78
	64+020	1320	1400	0.09	0.34	0.109	0.091	0.34	0.25	2.87
	64+060	1360	1400	0.09	0.35	0.109	0.091	0.35	0.25	2.96
	64+100	1400	1400	0.09	0.35	0.109	0.091	0.35	0.26	3.05
	64+140	1440	1400	0.09	0.35	0.109	0.091	0.35	0.26	3.14
	64+180	1480	1400	0.09	0.35	0.109	0.091	0.35	0.26	3.23
	64+220	1520	1400	0.09	0.35	0.109	0.091	0.35	0.26	3.32
	64+260	1560	1400	0.09	0.35	0.109	0.091	0.35	0.26	3.42
	64+300	1600	1400	0.09	0.35	0.110	0.091	0.35	0.26	3.51
	64+340	1640	1400	0.09	0.35	0.110	0.091	0.35	0.26	3.60
	64+380	1680	1400	0.09	0.35	0.110	0.091	0.35	0.26	3.69
	64+420	1720	1400	0.09	0.36	0.110	0.108	0.36	0.25	3.80
Longitudinal	64+460	1760	1400	0.09	0.34	0.108	0.091	0.34	0.25	3.89
Slope = 0.0%	64+500	1800	1400	0.09	0.34	0.108	0.091	0.34	0.25	3.98
(assumed sag)	64+540	1840	1400	0.09	0.34	0.108	0.091	0.34	0.25	4.07
	64+580	1880	1400	0.09	0.34	0.109	0.091	0.34	0.25	4.16
	64+620	1920	1400	0.09	0.34	0.109	0.091	0.34	0.25	4.25
	64+660	1960	1400	0.09	0.34	0.109	0.091	0.34	0.25	4.34
	64+700	2000	1400	0.09	0.35	0.109	0.091	0.35	0.25	4.43
	64+740	2040	1400	0.09	0.35	0.109	0.091	0.35	0.26	4.52
	64+780	2080	1400	0.09	0.35	0.109	0.091	0.35	0.26	4.62
	64+820	2120	1400	0.09	0.35	0.109	0.091	0.35	0.26	4.71
	64+860	2160	1400	0.09	0.35	0.109	0.091	0.35	0.26	4.80
	64+900	2200	1400	0.09	0.35	0.110	0.091	0.35	0.26	4.89
	64+940	2240	1400	0.09	0.35	0.110	0.091	0.35	0.26	4.98
	64+980	2280	1400	0.09	0.35	0.110	0.091	0.35	0.26	5.07
	65+020	2320	1400	0.09	0.35	0.110	0.091	0.35	0.26	5.16
	65+060	2360	1400	0.09	0.36	0.110	0.108	0.36	0.25	5.27
	65+100	2400	1400	0.09	0.34	0.108	0.091	0.34	0.25	5.36
	65+140	2440	1400	0.09	0.34	0.108	0.091	0.34	0.25	5.45

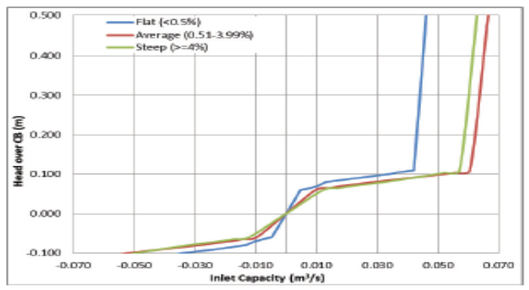
IDF Curves from:	City of Toronto					
	2-yr	5-yr	10-yr	25-yr	50-yr	**100-yr**
a	782.321	981.889	1118.709	1284.677	1405.132	**1442.574**
b	6.100	6.026	6.018	6.006	6.006	**5.262**
c	0.821	0.806	0.800	0.793	0.788	**0.776**

Lookup Table for 1CB Slope <=0.5%	
Inlet Depth	**Discharge**
0	0
0.06	0.005
0.065	0.008
0.07	0.01
0.08	0.013
0.09	0.023
0.1	0.034
0.104	0.036
0.11	0.042
0.2	0.043
0.3	0.044
0.4	0.045
0.5	0.046

Lookup Table for 2CB	
Inlet Depth	**Discharge**
0	0
0.04	0.004
0.05	0.005
0.06	0.006
0.065	0.009
0.07	0.012
0.08	0.016
0.09	0.026
0.1	0.042
0.104	0.045
0.11	0.051
0.2	0.052
0.3	0.053
0.4	0.054
0.5	0.056

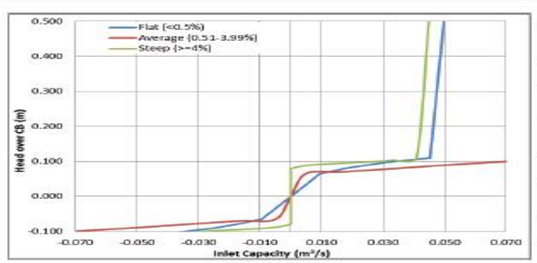
Lookup Table Honeycomb	
Inlet Depth	**Discharge**
0	0
0.065	0.01
0.07	0.012
0.08	0.018
0.09	0.025
0.1	0.034
0.104	0.038
0.11	0.045
0.21	0.046
0.31	0.047
0.41	0.048
0.5	0.05

Single Catchbasin -Horizontal Bars/Fishbone

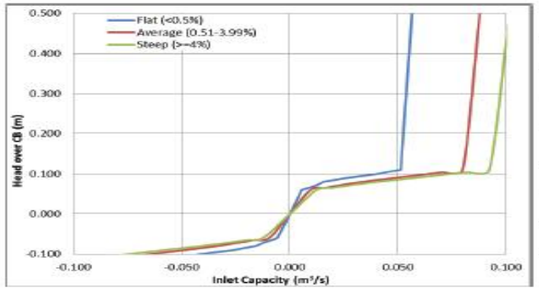


Head (m)	Discharge (m^3/s) per Longitudinal Road Profile Slope		
	<=0.5%	0.5-3.99%	>=4%
-0.500	-0.500	-0.500	-0.500
-0.110	-0.042	-0.061	-0.057
-0.104	-0.036	-0.056	-0.052
-0.100	-0.034	-0.052	-0.049
-0.090	-0.023	-0.040	-0.041
-0.080	-0.013	-0.029	-0.032
-0.070	-0.010	-0.018	-0.022
-0.065	-0.008	-0.014	-0.017
-0.060	-0.005	-0.010	-0.012
0.000	0	0	0
0.060	0.005	0.010	0.012
0.065	0.008	0.014	0.017
0.070	0.010	0.018	0.022
0.080	0.013	0.029	0.032
0.090	0.023	0.040	0.041
0.100	0.034	0.052	0.049
0.104	0.036	0.056	0.052
0.110	0.042	0.061	0.057
0.500	0.046	0.067	0.063

Twin Catchbasin - Honeycomb



Head (m)	Discharge (m^3/s) per Longitudinal Road Profile Slope		
	<=0.5%	0.5-3.99%	>=4%
-0.500	-0.500	-0.500	-0.500
-0.110	-0.045	-0.093	-0.041
-0.104	-0.038	-0.079	-0.033
-0.100	-0.034	-0.071	-0.029
-0.090	-0.025	-0.051	-0.007
-0.080	-0.018	-0.034	0.000
-0.070	-0.012	-0.017	0.000
-0.065	-0.010	-0.005	0.000
0.000	0	0.0	0.000
0.065	0.010	0.005	0.000
0.070	0.012	0.017	0.000
0.080	0.018	0.034	0.000
0.090	0.025	0.051	0.007
0.100	0.034	0.071	0.029
0.104	0.038	0.079	0.033
0.110	0.045	0.093	0.041
0.500	0.050	0.103	0.045

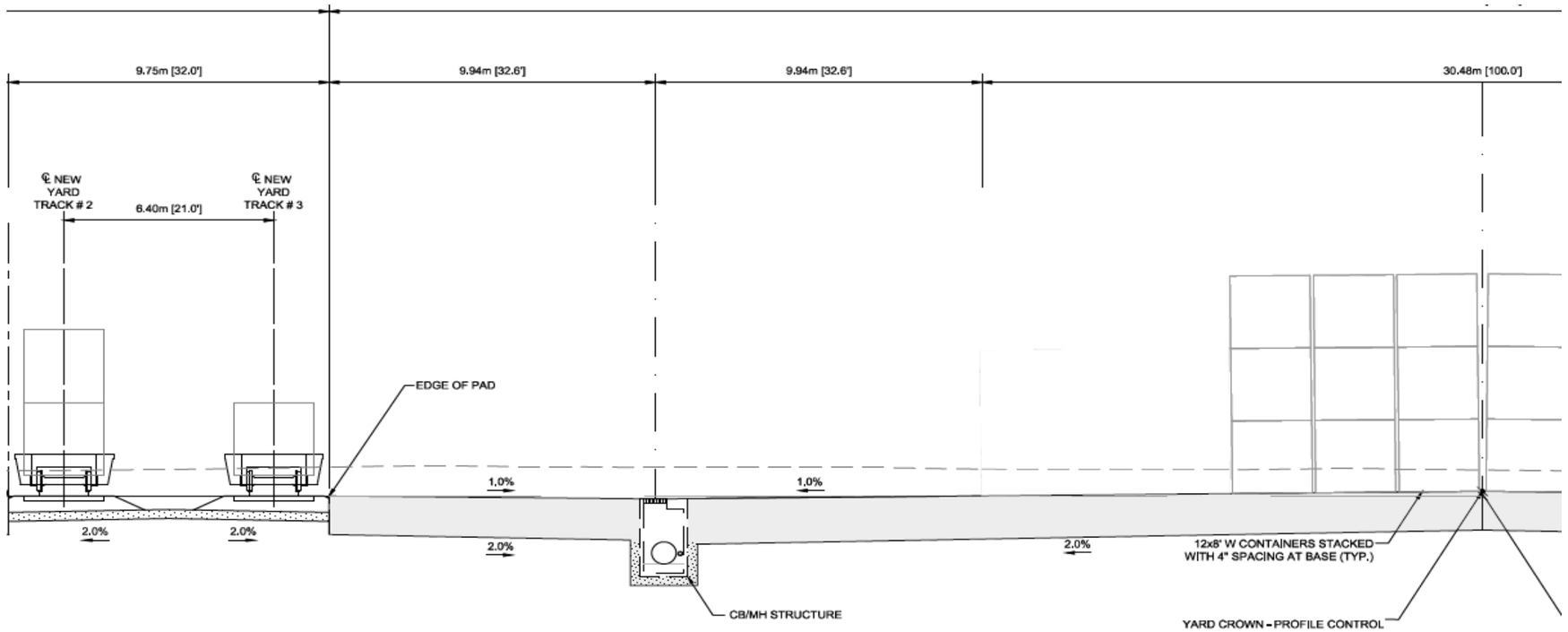
Twin Catchbasin -Horizontal Bars/Fishbone	Head (m)	Discharge (m^3/s) per Longitudinal Road Profile Slope		
		<=0.5%	0.5-3.99%	>=4%
	-0.500	-0.500	-0.500	-0.500
	-0.110	-0.051	-0.080	-0.092
	-0.104	-0.045	-0.070	-0.082
	-0.100	-0.042	-0.065	-0.075
	-0.090	-0.026	-0.049	-0.058
	-0.080	-0.016	-0.033	-0.041
	-0.070	-0.012	-0.022	-0.026
	-0.065	-0.009	-0.017	-0.020
	-0.060	-0.006	-0.010	-0.012
	0.000	0	0	0
	0.060	0.006	0.010	0.012
	0.065	0.009	0.017	0.020
	0.070	0.012	0.022	0.026
	0.080	0.016	0.033	0.041
	0.090	0.026	0.049	0.058
	0.100	0.042	0.065	0.075
	0.104	0.045	0.070	0.082
	0.110	0.051	0.080	0.092
	0.500	0.056	0.088	0.101

Catchbasins in Sag for Twin honeycomb	
Head (m)	Inlet Capacity m3/s
0	0
0.01	0.011
0.02	0.017
0.03	0.023
0.04	0.04
0.05	0.058
0.06	0.079
0.07	0.097
0.08	0.124
0.09	0.148
0.1	0.172
0.11	0.195
0.12	0.22
0.13	0.245
0.14	0.269
0.15	0.296
0.2	0.499

Catchbasins in Sag for Single Horizontal Bar	
Head (m)	Inlet Capacity m3/s
0	0
0.01	0
0.02	0.002
0.03	0.004
0.04	0.007
0.05	0.011
0.06	0.017
0.07	0.025
0.08	0.035
0.09	0.046
0.1	0.06
0.11	0.073
0.12	0.085
0.13	0.097
0.14	0.108
0.15	0.118
0.2	0.157

Catchbasins in Sag for Single Horizontal Bar	
Head (m)	Inlet Capacity m3/s
0	0
0.01	0.001
0.02	0.003
0.03	0.005
0.04	0.01
0.05	0.016
0.06	0.026
0.07	0.037
0.08	0.053
0.09	0.071
0.1	0.091
0.11	0.108
0.12	0.126
0.13	0.142
0.14	0.155
0.15	0.168
0.2	0.244

Catchbasins in Sags (Low Points)						
Head (m)	Inlet Capacity (m^3/s)					
	Horizontal Bar	Honeycomb	Grid	Twin Horizontal	Twin Honeycomb	Twin Grid
-0.30	-0.203	-0.484	-0.234	-0.405	-0.967	-0.468
-0.08	-0.035	-0.081	-0.035	-0.053	-0.124	-0.053
-0.07	-0.025	-0.066	-0.025	-0.037	-0.097	-0.037
-0.06	-0.017	-0.053	-0.017	-0.026	-0.079	-0.026
-0.05	-0.011	-0.040	-0.011	-0.016	-0.058	-0.016
-0.04	-0.007	-0.029	-0.007	-0.010	-0.040	-0.010
-0.03	-0.004	-0.019	-0.004	-0.005	-0.023	-0.005
-0.02	-0.002	-0.010	-0.002	-0.003	-0.017	-0.003
-0.01	0.000	-0.004	0.000	-0.001	-0.011	-0.001
0.00	0.000	0.000	0.000	0.000	0.000	0.000
0.01	0.000	0.004	0.000	0.001	0.011	0.001
0.02	0.002	0.010	0.002	0.003	0.017	0.003
0.03	0.004	0.019	0.004	0.005	0.023	0.005
0.04	0.007	0.029	0.007	0.010	0.040	0.010
0.50	0.011	0.040	0.011	0.016	0.058	0.016
0.06	0.017	0.053	0.017	0.026	0.079	0.026
0.07	0.025	0.066	0.025	0.037	0.097	0.037
0.08	0.035	0.081	0.035	0.053	0.124	0.053
0.09	0.046	0.097	0.046	0.071	0.148	0.071
0.10	0.060	0.113	0.060	0.091	0.172	0.091
0.11	0.073	0.131	0.073	0.108	0.195	0.108
0.12	0.085	0.149	0.086	0.126	0.220	0.126
0.13	0.097	0.168	0.098	0.142	0.245	0.142
0.14	0.108	0.188	0.109	0.155	0.269	0.156
0.15	0.118	0.208	0.122	0.168	0.296	0.173
0.20	0.157	0.321	0.173	0.244	0.499	0.268


9.75m [32.0']
9.94m [32.6']
9.94m [32.6']
30.48m [100.0']
℄ NEW YARD TRACK # 2
6.40m [21.0']
℄ NEW YARD TRACK # 3
EDGE OF PAD
1.0%
1.0%
2.0%
2.0%
2.0%
2.0%
12x8' W CONTAINERS STACKED WITH 4" SPACING AT BASE (TYP.)
CB/MH STRUCTURE
YARD CROWN - PROFILE CONTROL

PLACE TWIN Horizontal Bar from station 63+800 to 65+140

Number of CB	52	
top area at slope 0 before flooding tracks	67800	m2
tc	5	min
I 100	237	mm/hr
rainfall depth	20	mm
Q	4.46	m3/s
Q bypass from previous areas	0.25	m3/s
1 Horizontal Bar CB total intake flow before flooding track	**0.126**	m3/s
52 CB total take flow	6.55	m3/s
bypass	-1.84	m3/s
Total incoming Volume	406,761	m3
Total Intake Volume by CB	566,093	m3
Total bypass Volume	-159,332	m3
	Good	

Catchbasins in Sag for Twin honeycomb	
Head (m)	Inlet Capacity m3/s
0	0
0.01	0.011
0.02	0.017
0.03	0.023
0.04	0.04
0.05	0.058
0.06	0.079
0.07	0.097
0.08	0.124
0.09	0.148
0.1	0.172
0.11	0.195
0.12	**0.22**
0.13	0.245
0.14	0.269
0.15	0.296
0.2	0.499

Catchbasins in Sag for Single Horizontal Bar	
Head (m)	Inlet Capacity m3/s
0	0
0.01	0
0.02	0.002
0.03	0.004
0.04	0.007
0.05	0.011
0.06	0.017
0.07	0.025
0.08	0.035
0.09	0.046
0.1	0.06
0.11	0.073
0.12	**0.085**
0.13	0.097
0.14	0.108
0.15	0.118
0.2	0.157

Catchbasins in Sags (Low Points)

Head (m)	Inlet Capacity (m³/s)					
	Horizontal Bar	Honeycomb	Grid	Twin Horizontal	Twin Honeycomb	Twin Grid
-0.30	-0.203	-0.484	-0.234	-0.405	-0.967	-0.468
-0.08	-0.035	-0.081	-0.035	-0.053	-0.124	-0.053
-0.07	-0.025	-0.066	-0.025	-0.037	-0.097	-0.037
-0.06	-0.017	-0.053	-0.017	-0.026	-0.079	-0.026
-0.05	-0.011	-0.040	-0.011	-0.016	-0.058	-0.016
-0.04	-0.007	-0.029	-0.007	-0.010	-0.040	-0.010
-0.03	-0.004	-0.019	-0.004	-0.005	-0.023	-0.005
-0.02	-0.002	-0.010	-0.002	-0.003	-0.017	-0.003
-0.01	0.000	-0.004	0.000	-0.001	-0.011	-0.001
0.00	0.000	0.000	0.000	0.000	0.000	0.000
0.01	0.000	0.004	0.000	0.001	0.011	0.001
0.02	0.002	0.010	0.002	0.003	0.017	0.003
0.03	0.004	0.019	0.004	0.005	0.023	0.005
0.04	0.007	0.029	0.007	0.010	0.040	0.010
0.50	0.011	0.040	0.011	0.016	0.058	0.016
0.06	0.017	0.053	0.017	0.026	0.079	0.026
0.07	0.025	0.066	0.025	0.037	0.097	0.037
0.08	0.035	0.081	0.035	0.053	0.124	0.053
0.09	0.046	0.097	0.046	0.071	0.148	0.071
0.10	0.060	0.113	0.060	0.091	0.172	0.091
0.11	0.073	0.131	0.073	0.108	0.195	0.108
0.12	0.085	0.149	0.086	0.126	0.220	0.126
0.13	0.097	0.168	0.098	0.142	0.245	0.142
0.14	0.108	0.188	0.109	0.155	0.269	0.156
0.15	0.118	0.208	0.122	0.168	0.296	0.173
0.20	0.157	0.321	0.173	0.244	0.499	0.268

Appendix E

FINAL DRAINAGE REPORT

Milton Logistic Hub

- SWM Design Drawings
- Treatment Measures
    - ECHELON Environmental OGS
    - Stormceptor Design

Engineer:	AECOM London
Contact:	Aws Nabeel, P.Eng.
Project:	CN Milton Yard
Date:	17-Dec-19

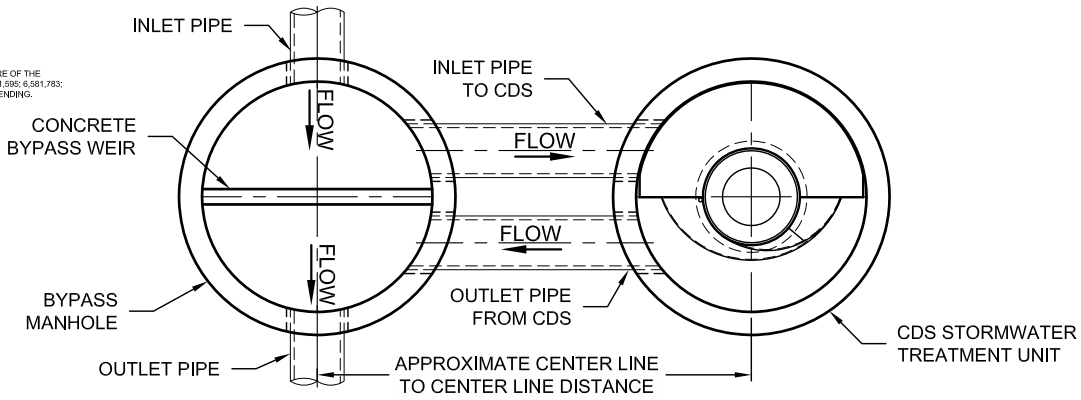
Location	Area (ha)	Pipes are designed for 100yr (m^3/s)	Impreviousness (%)	PSD	Inlet Pipe (mm)	Outlet	Treatment Level	OGS Unit	Mahole Size (feet)	Total Holding Volume (L)	Sediment Capacity (L)	Oil Capacity (L)	Budgetary Price** OGS ONLY	Comments
Outlet 1	1.84	1.01	90%	FINE	1050	to swale/dich	Level 1 “Enhanced” (80%) TSS removal	PMSU 3025	6'	4,916	2,402	795	$ 34,500	Inline
Outlet 2	3.65	1.72	90%	FINE	1200	to swale/dich	Level 1 “Enhanced” (80%) TSS removal	PMSU 4030	8'	9,425	4,270	1,612	$ 58,000	Offline
Outlet 3	3.15	1.67	90%	FINE	1050	to swale/dich	Level 1 “Enhanced” (80%) TSS removal	PMSU 3035	6'	5,718	2,402	994	$ 48,000	Offline
Outlet 4	2.58	1.25	90%	FINE	1050	to swale/dich	Level 1 “Enhanced” (80%) TSS removal	PMSU 3030	6'	5,284	2,402	895	$ 39,000	Offline
Outlet 5	4.68	2.42	90%	FINE	1350	to swale/dich	Level 1 “Enhanced” (80%) TSS removal	PMSU 4040	8'	10,915	4,270	1,970	$ 70,000	Offline
Outlet 6	2.63	1.35	90%	FINE	1050	to swale/dich	Level 1 “Enhanced” (80%) TSS removal	PMSU 3030	6'	5,284	2,402	895	$ 39,000	Offline
Outlet 7	2.57	1.28	90%	FINE	1050	to swale/dich	Level 1 “Enhanced” (80%) TSS removal	PMSU 3030	6'	5,284	2,402	895	$ 39,000	Offline
Outlet 8	2.99	1.49	90%	FINE	1050	to swale/dich	Level 1 “Enhanced” (80%) TSS removal	PMSU 3035	6'	5,718	2,402	994	$ 48,000	Offline
Outlet 9	5.61	2.36	90%	FINE	1300	to swale/dich	Level 1 “Enhanced” (80%) TSS removal	PMSU 4045	8'	11,508	4,270	2,149	$ 78,000	Offline
												Subtotal	$ 453,500	

Notes / Assumptions

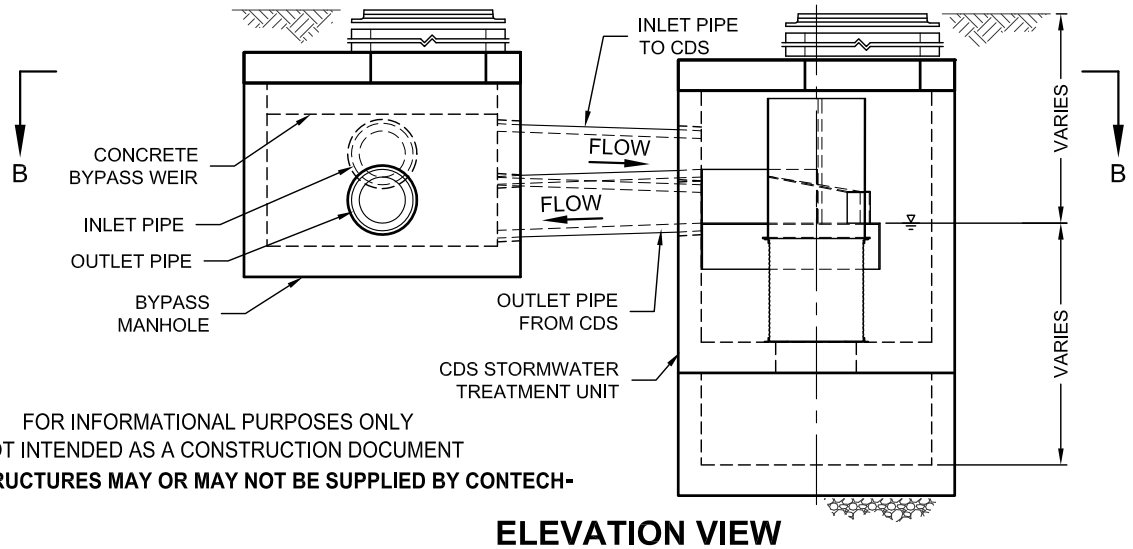
**** The prices noted are only for the OGS units only, for an assumed depth of 2m from T/G to invert elevations. The diversion structure costs are not included.**

1) All manholes are based on the assumption of straight through pipes. In other cases the size of the manhole may need to be increased.

THIS PRODUCT MAY BE PROTECTED BY ONE OR MORE OF THE FOLLOWING U.S. PATENTS: 5,788,848; 6,641,720; 6,511,595; 6,581,783; RELATED FOREIGN PATENTS, OR OTHER PATENTS PENDING.



PLAN VIEW B-B
N.T.S.



FOR INFORMATIONAL PURPOSES ONLY
NOT INTENDED AS A CONSTRUCTION DOCUMENT
- BYPASS STRUCTURES MAY OR MAY NOT BE SUPPLIED BY CONTECH-

ELEVATION VIEW
N.T.S.

NOTE: BYPASS AND JUNCTION MANHOLE DIAMETERS ARE ASSUMED BASED ON THE TREATMENT CAPACITY OF THE CDS SYSTEM. THESE DIAMETERS MAY CHANGE DEPENDING ON SPECIFIC SITE CONDITIONS. CONTACT YOUR CONTECH ENGINEERED SOLUTIONS DESIGN ENGINEER.

CDS CONCENTRIC OFFLINE SPECIFICATIONS

CDS MODEL	CDS INSIDE DIAMETER (ft/mm)	RECOMMENDED PIPE SIZE (in/mm)	TYPICAL BYPASS MANHOLE INSIDE DIAMETER (ft/mm)	APPROXIMATE CENTER LINE TO CENTER LINE DISTANCE (ft/mm)
2015-4-C	4/1219	10/250	4/1219	9/2743
2015-5-C	5/1524	10/250	5/1524	9.5/2896
2020-5-C	5/1524	12/300	5/1524	10/3048
2025-5-C	5/1524	12/300	5/1524	10/3048
3020-6-C	6/1829	15/375	6/1829	11/3353
3025-6-C	6/1829	15/375	6/1829	11/3353
3030-6-C	6/1829	18/450	6/1829	11/3353
3035-6-C	6/1829	18/450	6/1829	11/3353
4030-8-C	8/2438	24/600	8/2438	13/3962
4040-8-C	8/2438	24/600	8/2438	13/3962
4045-8-C	8/2438	24/600	8/2438	13/3962
5640-10-C	10/3048	30/750	10/3048	15/4572
5653-10-C	10/3048	30/750	10/3048	15/4572
5668-10-C	10/3048	30/750	10/3048	15/4572
5678-10-C	10/3048	30/750	10/3048	15/4572

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com
200 Enterprise Drive, Scarborough, ME 04074
877-907-8676 207-885-9830 207-885-9825 FAX

CDS STORMWATER TREATMENT SYSTEM
TYPICAL OFFLINE LAYOUT
WITH BYPASS MANHOLE STRUCTURE

DATE: 3/4/14	SCALE: NONE	FILE NAME: TYPTBLCDSBPR-M	DRAWN: DWB	CHECKED:

C:\USERS\BLANKENSHIPD\DESKTOP\TEMP\1 - ECHELON\OFFLINE CDS-C LAYOUT BYPASS MANHOLE STRUCTURE-C.DWG 3/4/2014 1:47 PM

CDS ESTIMATED NET ANNUAL SOLIDS LOAD REDUCTION
BASED ON THE RATIONAL RAINFALL METHOD
BASED ON A FINE PARTICLE SIZE DISTRIBUTION

Project Name: CN Milton Yard
Location: Milton
OGS #: OGS 2

Engineer: AECOM
Contact: Aws Nabeel, P.Eng
Report Date: 12/17/2019

Area	3.65	ha	**Rainfall Station #**	204	
Weighted C	0.84		**Particle Size Distribution**	FINE	
CDS Model	4030		**CDS Treatment Capacity**	127	l/s

Rainfall Intensity[1] (mm/hr)	Percent Rainfall Volume[1]	Cumulative Rainfall Volume	Total Flowrate (l/s)	Treated Flowrate (l/s)	Operating Rate (%)	Removal Efficiency (%)	Incremental Removal (%)
1.0	11.0%	20.4%	8.5	8.5	6.6	97.0	10.6
1.5	10.1%	30.5%	12.7	12.7	10.0	96.0	9.7
2.0	9.6%	40.1%	16.9	16.9	13.3	95.0	9.1
2.5	7.9%	48.0%	21.2	21.2	16.6	94.1	7.5
3.0	6.4%	54.4%	25.4	25.4	19.9	93.1	5.9
3.5	4.4%	58.8%	29.7	29.7	23.3	92.2	4.0
4.0	4.2%	63.0%	33.9	33.9	26.6	91.2	3.9
4.5	3.7%	66.7%	38.1	38.1	29.9	90.3	3.4
5.0	3.3%	70.0%	42.4	42.4	33.2	89.3	3.0
6.0	5.6%	75.6%	50.8	50.8	39.9	87.4	4.9
7.0	4.0%	79.6%	59.3	59.3	46.5	85.5	3.5
8.0	3.5%	83.1%	67.8	67.8	53.2	83.6	2.9
9.0	2.2%	85.3%	76.3	76.3	59.8	81.7	1.8
10.0	1.7%	87.0%	84.7	84.7	66.5	79.8	1.3
15.0	6.3%	93.3%	127.1	127.1	99.7	70.3	4.4
20.0	2.3%	95.6%	169.5	127.4	100.0	52.8	1.2
25.0	1.8%	97.3%	211.8	127.4	100.0	42.2	0.8
30.0	0.8%	98.2%	254.2	127.4	100.0	35.2	0.3
35.0	0.9%	99.0%	296.5	127.4	100.0	30.2	0.3
40.0	0.3%	99.3%	338.9	127.4	100.0	26.4	0.1
45.0	0.5%	99.8%	381.3	127.4	100.0	23.5	0.1
50.0	0.2%	100.0%	423.6	127.4	100.0	21.1	0.0
							87.8

Removal Efficiency Adjustment[2] = 6.5%

Predicted Net Annual Load Removal Efficiency = 81.3%

Predicted Annual Rainfall Treated = 96.5%

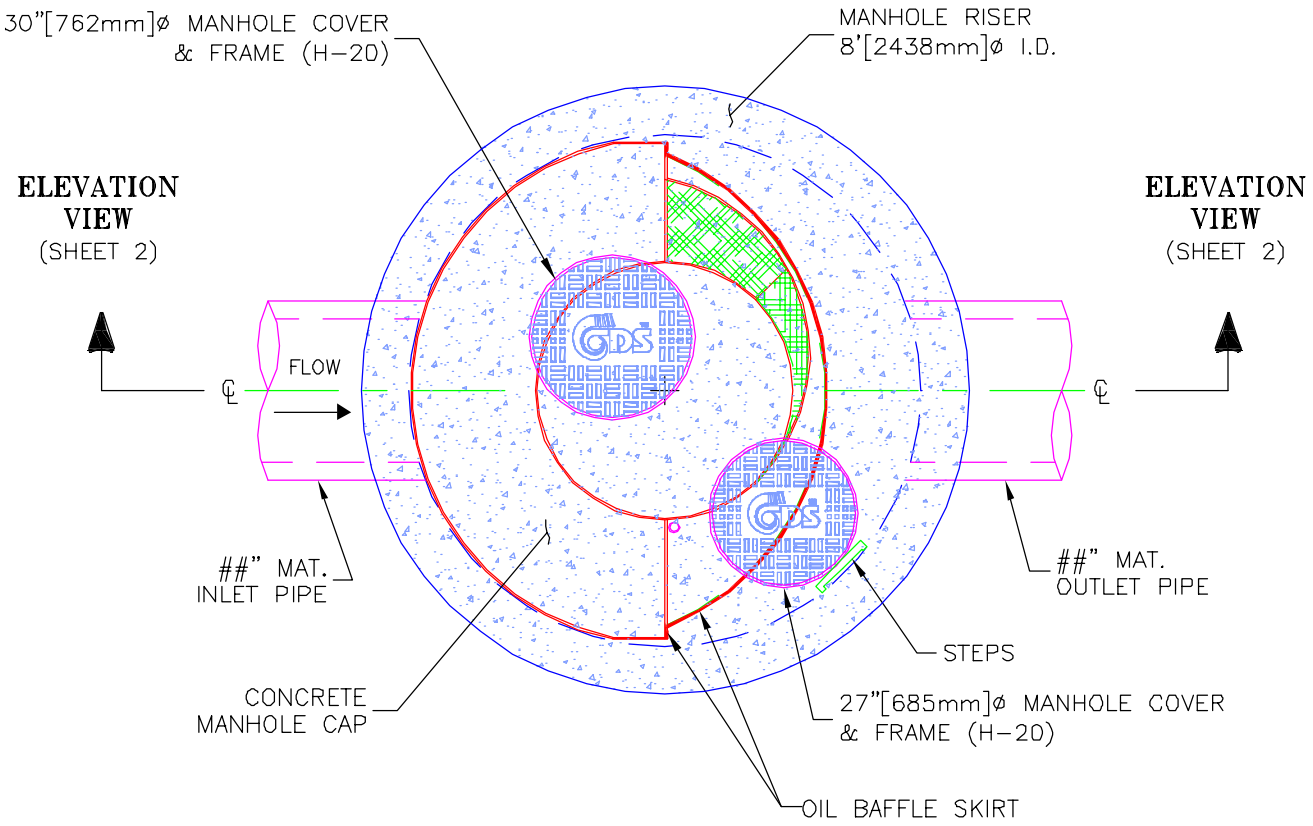
1 - Based on 44 years of hourly rainfall data from Canadian Station 6158733, Toronto ON (Airport)

2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.

3 - CDS Efficiency based on testing conducted at the University of Central Florida

4 - CDS design flowrate and scaling based on standard manufacturer model & product specifications

PLAN VIEW

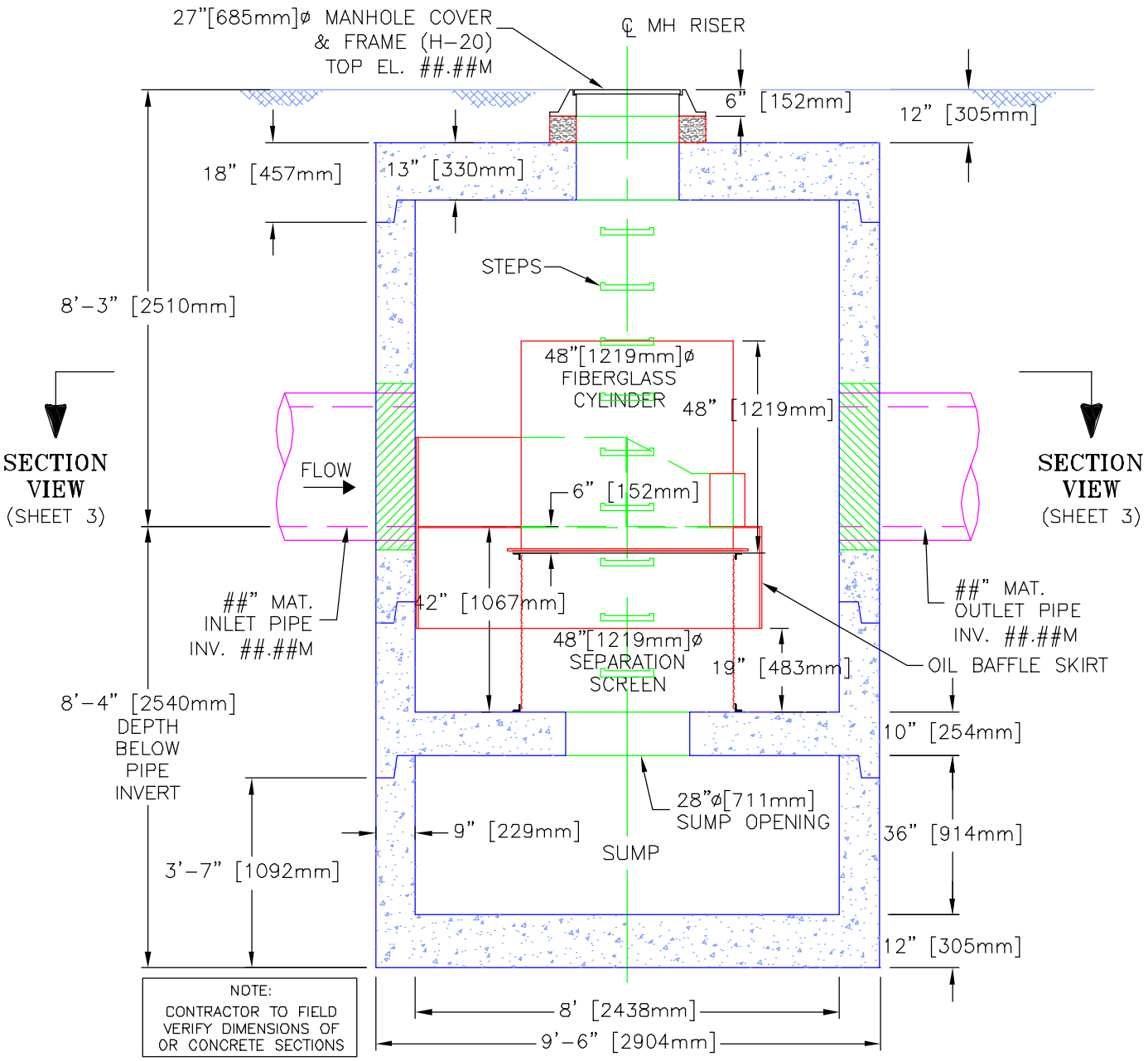


CDS MODEL PMSU40_30m, 4.5 CFS TREATMENT CAPACITY STORM WATER TREATMENT UNIT

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# XX-##-###	SCALE 1" = 3'
		DATE ##/##/##	SHEET 1
		DRAWN INITIALS	
		APPROV.	

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 948-0577
CONTECH Stormwater Solutions Inc. 930 Woodcock Road, Suite 101, Orlando, Florida 32803 Tel: (800) 848-9955

ELEVATION VIEW



CDS MODEL PMSU40_30m, 4.5 CFS TREATMENT CAPACITY STORM WATER TREATMENT UNIT

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# XX-##-###	SCALE 1" = 3'
		DATE ##/##/##	SHEET 2
		DRAWN INITIALS	
		APPROV.	

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 948-0577
CONTECH Stormwater Solutions Inc. 930 Woodcock Road, Suite 101, Orlando, Florida 32803 Tel: (800) 848-9955

CDS ESTIMATED NET ANNUAL SOLIDS LOAD REDUCTION
BASED ON THE RATIONAL RAINFALL METHOD
BASED ON A FINE PARTICLE SIZE DISTRIBUTION

Project Name: CN Milton Yard
Location: Milton
OGS #: OGS 3

Engineer: AECOM
Contact: Aws Nabeel, P.Eng
Report Date: 12/17/2019

Area	3.150	ha	**Rainfall Station #**	204	
Weighted C	0.84		**Particle Size Distribution**	FINE	
CDS Model	3035		**CDS Treatment Capacity**	108	l/s

Rainfall Intensity[1] (mm/hr)	Percent Rainfall Volume[1]	Cumulative Rainfall Volume	Total Flowrate (l/s)	Treated Flowrate (l/s)	Operating Rate (%)	Removal Efficiency (%)	Incremental Removal (%)
1.0	11.0%	20.4%	7.3	7.3	6.8	96.9	10.6
1.5	10.1%	30.5%	11.0	11.0	10.2	95.9	9.7
2.0	9.6%	40.1%	14.6	14.6	13.6	95.0	9.1
2.5	7.9%	48.0%	18.3	18.3	17.0	94.0	7.5
3.0	6.4%	54.4%	21.9	21.9	20.4	93.0	5.9
3.5	4.4%	58.8%	25.6	25.6	23.8	92.0	4.0
4.0	4.2%	63.0%	29.2	29.2	27.2	91.1	3.9
4.5	3.7%	66.7%	32.9	32.9	30.6	90.1	3.4
5.0	3.3%	70.0%	36.6	36.6	34.0	89.1	3.0
6.0	5.6%	75.6%	43.9	43.9	40.8	87.2	4.8
7.0	4.0%	79.6%	51.2	51.2	47.6	85.2	3.4
8.0	3.5%	83.1%	58.5	58.5	54.4	83.3	2.9
9.0	2.2%	85.3%	65.8	65.8	61.2	81.3	1.8
10.0	1.7%	87.0%	73.1	73.1	67.9	79.4	1.3
15.0	6.3%	93.3%	109.7	107.6	100.0	68.9	4.3
20.0	2.3%	95.6%	146.2	107.6	100.0	51.7	1.2
25.0	1.8%	97.3%	182.8	107.6	100.0	41.3	0.7
30.0	0.8%	98.2%	219.4	107.6	100.0	34.4	0.3
35.0	0.9%	99.0%	255.9	107.6	100.0	29.5	0.3
40.0	0.3%	99.3%	292.5	107.6	100.0	25.8	0.1
45.0	0.5%	99.8%	329.0	107.6	100.0	23.0	0.1
50.0	0.2%	100.0%	365.6	107.6	100.0	20.7	0.0
							87.5

Removal Efficiency Adjustment[2] = 6.5%

Predicted Net Annual Load Removal Efficiency = 81.0%

Predicted Annual Rainfall Treated = 96.3%

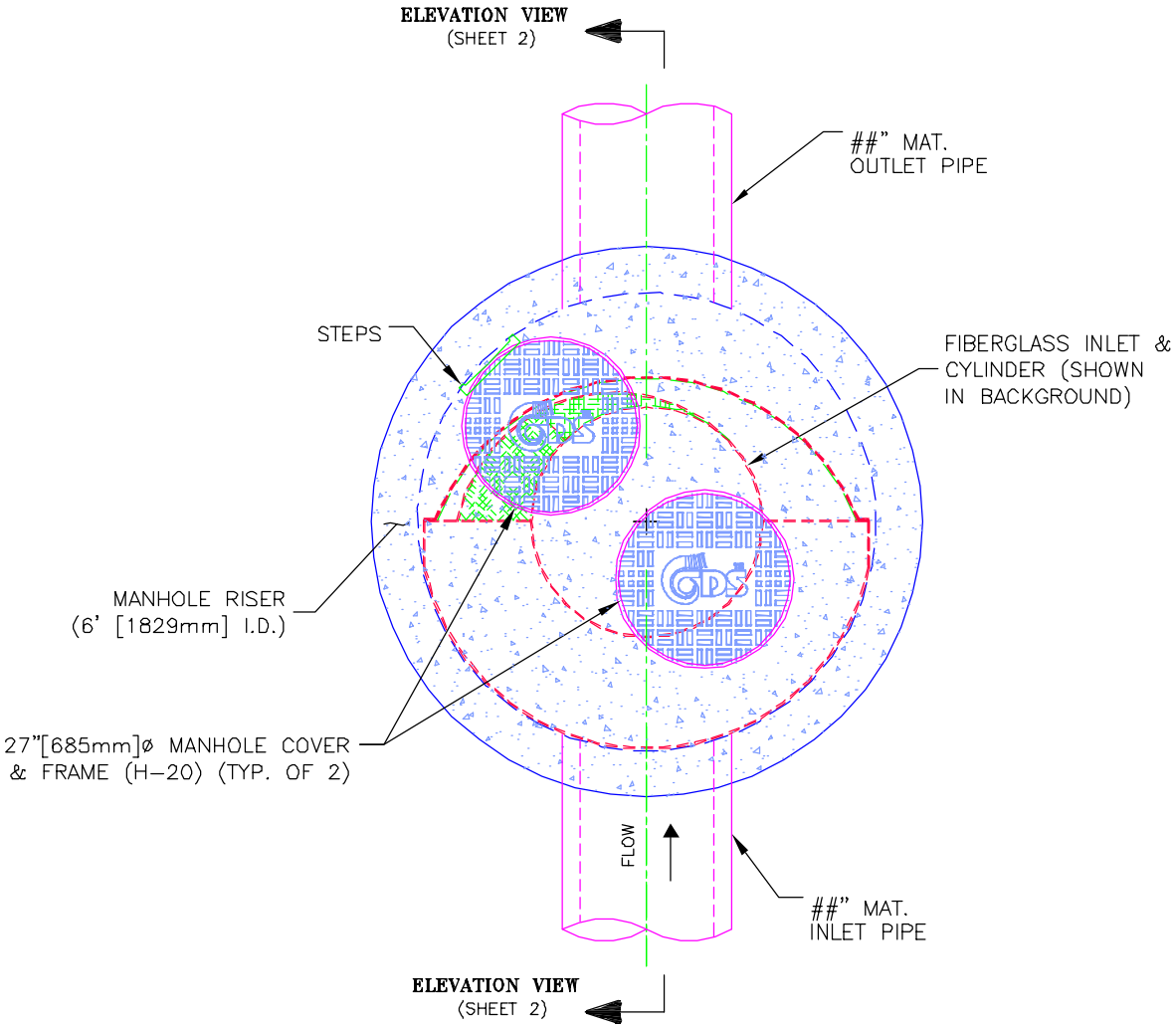
1 - Based on 44 years of hourly rainfall data from Canadian Station 6158733, Toronto ON (Airport)

2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.

3 - CDS Efficiency based on testing conducted at the University of Central Florida

4 - CDS design flowrate and scaling based on standard manufacturer model & product specifications

PLAN VIEW

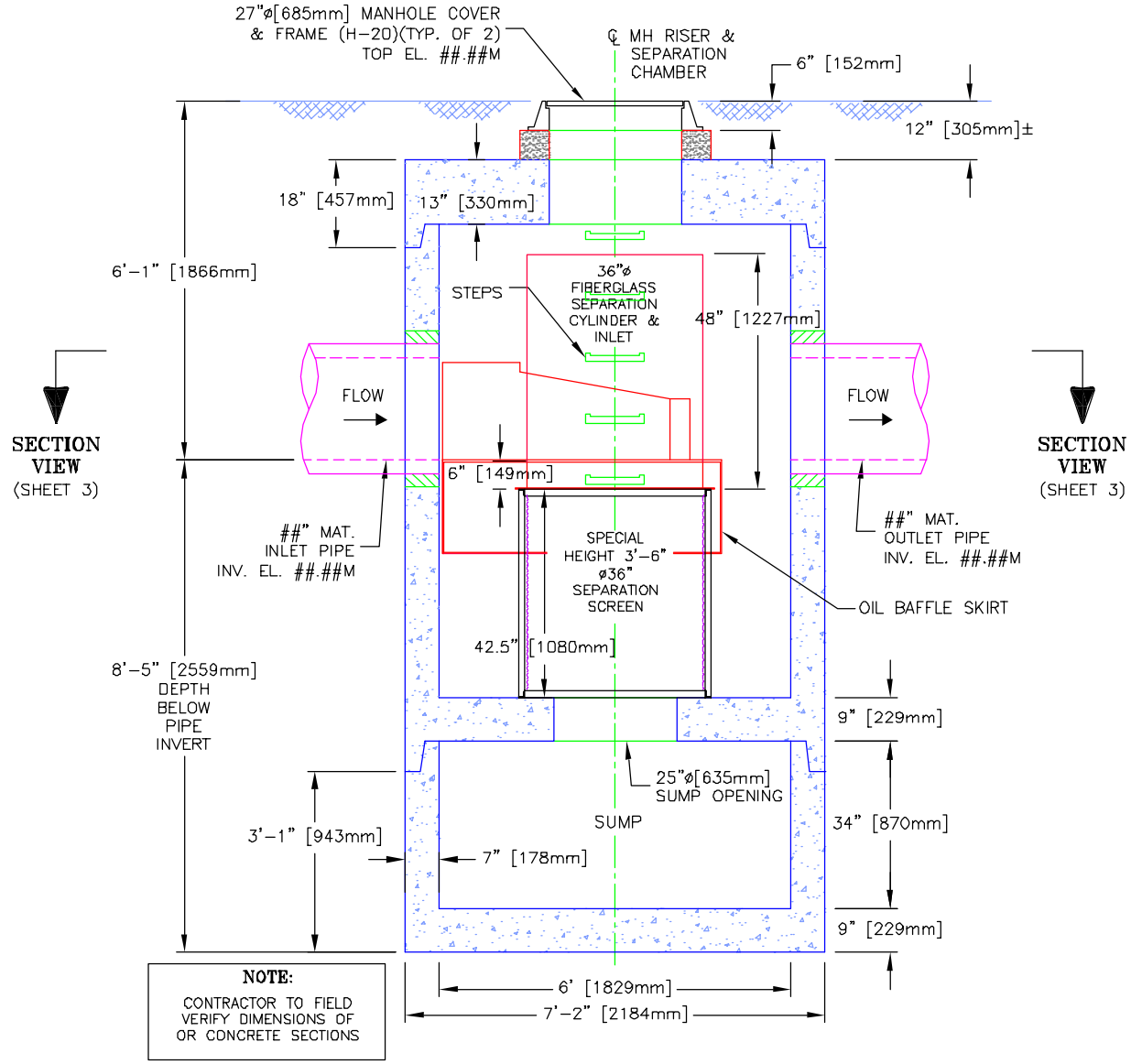


CDS MODEL PMSU30_35m
STORM WATER TREATMENT UNIT
FLOW RATE 106 L/S

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# CAN-##-###	SCALE 1" = 2.5'
		DATE ##/##/##	SHEET
		DRAWN INITIALS	1
		APPROV.	

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 948-0577

ELEVATION VIEW



CDS MODEL PMSU30_35m
STORM WATER TREATMENT UNIT
FLOW RATE 106 L/S

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# CAN-##-###	SCALE 1" = 3'
		DATE ##/##/##	SHEET 2
		DRAWN INITIALS	
		APPROV.	

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 948-0577

CDS ESTIMATED NET ANNUAL SOLIDS LOAD REDUCTION
BASED ON THE RATIONAL RAINFALL METHOD
BASED ON A FINE PARTICLE SIZE DISTRIBUTION

Project Name: CN Milton Yard
Location: Milton
OGS #: OGS 4

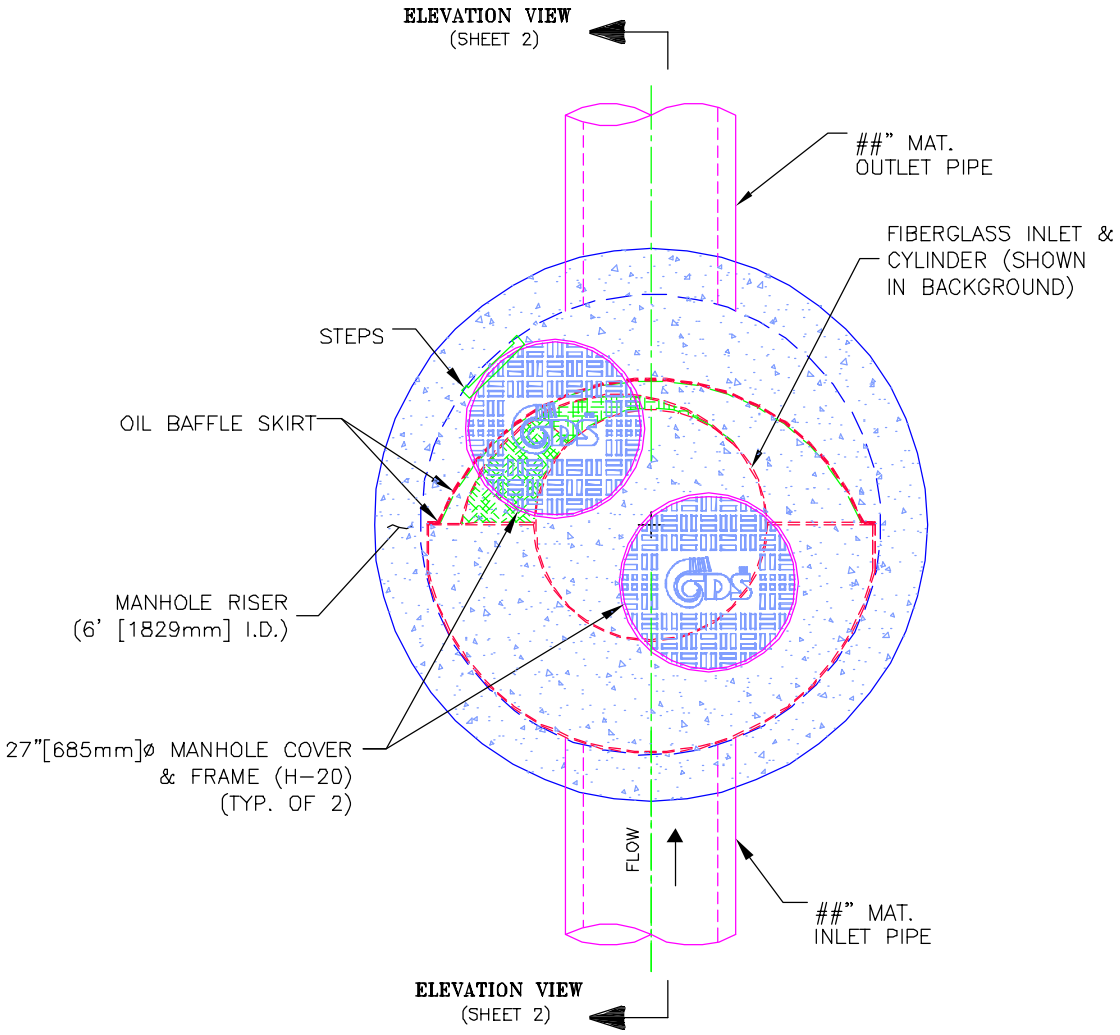
Engineer: **AECOM**
Contact: Aws Nabeel, P.Eng
Report Date: 12/17/2019

Area	2.58	ha	**Rainfall Station #**	204	
Weighted C	0.84		**Particle Size Distribution**	FINE	
CDS Model	3030		**CDS Treatment Capacity**	85	l/s

Rainfall Intensity[1] (mm/hr)	Percent Rainfall Volume[1]	Cumulative Rainfall Volume	Total Flowrate (l/s)	Treated Flowrate (l/s)	Operating Rate (%)	Removal Efficiency (%)	Incremental Removal (%)
1.0	11.0%	20.4%	6.0	6.0	7.0	96.8	10.6
1.5	10.1%	30.5%	9.0	9.0	10.6	95.8	9.7
2.0	9.6%	40.1%	12.0	12.0	14.1	94.8	9.1
2.5	7.9%	48.0%	15.0	15.0	17.6	93.8	7.5
3.0	6.4%	54.4%	18.0	18.0	21.1	92.8	5.9
3.5	4.4%	58.8%	21.0	21.0	24.7	91.8	4.0
4.0	4.2%	63.0%	24.0	24.0	28.2	90.8	3.8
4.5	3.7%	66.7%	27.0	27.0	31.7	89.8	3.3
5.0	3.3%	70.0%	29.9	29.9	35.2	88.8	2.9
6.0	5.6%	75.6%	35.9	35.9	42.3	86.7	4.8
7.0	4.0%	79.6%	41.9	41.9	49.3	84.7	3.4
8.0	3.5%	83.1%	47.9	47.9	56.4	82.7	2.9
9.0	2.2%	85.3%	53.9	53.9	63.4	80.7	1.8
10.0	1.7%	87.0%	59.9	59.9	70.5	78.7	1.3
15.0	6.3%	93.3%	89.8	85.0	100.0	66.4	4.2
20.0	2.3%	95.6%	119.8	85.0	100.0	49.8	1.1
25.0	1.8%	97.3%	149.7	85.0	100.0	39.8	0.7
30.0	0.8%	98.2%	179.7	85.0	100.0	33.2	0.3
35.0	0.9%	99.0%	209.6	85.0	100.0	28.5	0.2
40.0	0.3%	99.3%	239.6	85.0	100.0	24.9	0.1
45.0	0.5%	99.8%	269.5	85.0	100.0	22.1	0.1
50.0	0.2%	100.0%	299.4	85.0	100.0	19.9	0.0
							87.1
						Removal Efficiency Adjustment[2] =	6.5%
						Predicted Net Annual Load Removal Efficiency =	**80.6%**
						Predicted Annual Rainfall Treated =	**96.0%**

1 - Based on 44 years of hourly rainfall data from Canadian Station 6158733, Toronto ON (Airport)
2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.
3 - CDS Efficiency based on testing conducted at the University of Central Florida
4 - CDS design flowrate and scaling based on standard manufacturer model & product specifications

PLAN VIEW

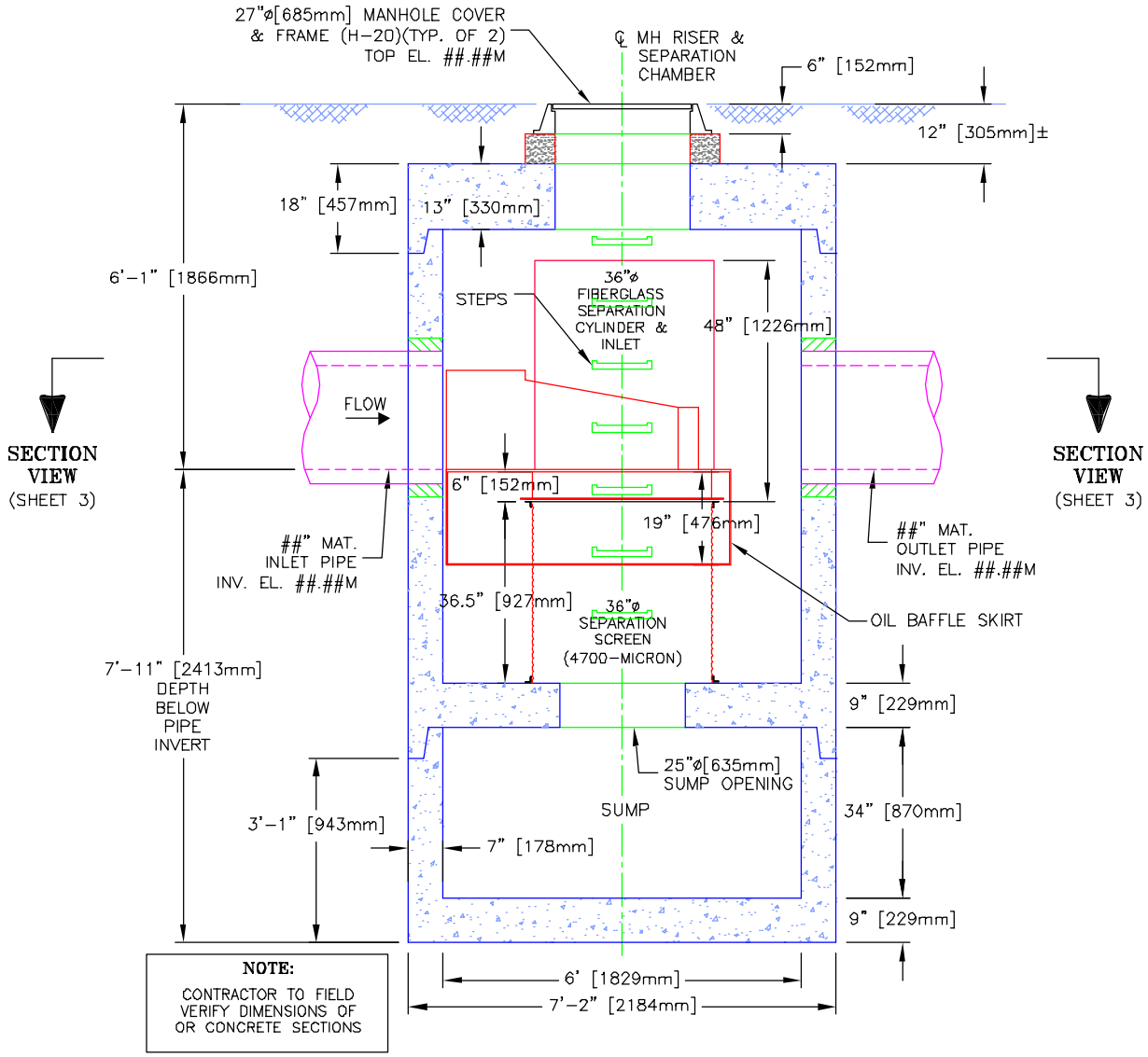


CDS MODEL PMSU30_30m, 3.0 CFS TREATMENT CAPACITY STORM WATER TREATMENT UNIT

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# CAN-##-###	SCALE 1" = 2.5'
		DATE ##/##/##	SHEET 1
		DRAWN INITIALS	
		APPROV.	

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 948-0577
CONTECH Stormwater Solutions Inc. 930 Woodcock Road, Suite 101, Orlando, Florida 32803 Tel: (800) 848-9955

ELEVATION VIEW



CDS MODEL PMSU30_30m, 3.0 CFS TREATMENT CAPACITY STORM WATER TREATMENT UNIT

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# CAN-##-###	SCALE 1" = 3'
		DATE ##/##/##	SHEET 2
		DRAWN INITIALS	
		APPROV.	

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 948-0577
CONTECH Stormwater Solutions Inc. 930 Woodcock Road, Suite 101, Orlando, Florida 32803 Tel: (800) 848-9955

CDS ESTIMATED NET ANNUAL SOLIDS LOAD REDUCTION
BASED ON THE RATIONAL RAINFALL METHOD
BASED ON A FINE PARTICLE SIZE DISTRIBUTION

Project Name: CN MiltonYard
Location: Milton
OGS #: OGS 5

Engineer: AECOM
Contact: Aws Nabeel, P.Eng
Report Date: 12/17/2019

Area	4.68	ha	**Rainfall Station #**	204	
Weighted C	0.84		**Particle Size Distribution**	FINE	
CDS Model	4040		**CDS Treatment Capacity**	170	l/s

Rainfall Intensity[1] (mm/hr)	Percent Rainfall Volume[1]	Cumulative Rainfall Volume	Total Flowrate (l/s)	Treated Flowrate (l/s)	Operating Rate (%)	Removal Efficiency (%)	Incremental Removal (%)
1.0	11.0%	20.4%	10.9	10.9	6.4	97.0	10.6
1.5	10.1%	30.5%	16.3	16.3	9.6	96.1	9.7
2.0	9.6%	40.1%	21.7	21.7	12.8	95.2	9.2
2.5	7.9%	48.0%	27.2	27.2	16.0	94.3	7.5
3.0	6.4%	54.4%	32.6	32.6	19.2	93.4	6.0
3.5	4.4%	58.8%	38.0	38.0	22.4	92.4	4.0
4.0	4.2%	63.0%	43.5	43.5	25.6	91.5	3.9
4.5	3.7%	66.7%	48.9	48.9	28.8	90.6	3.4
5.0	3.3%	70.0%	54.3	54.3	32.0	89.7	3.0
6.0	5.6%	75.6%	65.2	65.2	38.4	87.9	4.9
7.0	4.0%	79.6%	76.0	76.0	44.8	86.0	3.5
8.0	3.5%	83.1%	86.9	86.9	51.1	84.2	2.9
9.0	2.2%	85.3%	97.8	97.8	57.5	82.4	1.8
10.0	1.7%	87.0%	108.6	108.6	63.9	80.5	1.3
15.0	6.3%	93.3%	163.0	163.0	95.9	71.4	4.5
20.0	2.3%	95.6%	217.3	169.9	100.0	54.9	1.3
25.0	1.8%	97.3%	271.6	169.9	100.0	43.9	0.8
30.0	0.8%	98.2%	325.9	169.9	100.0	36.6	0.3
35.0	0.9%	99.0%	380.2	169.9	100.0	31.4	0.3
40.0	0.3%	99.3%	434.5	169.9	100.0	27.4	0.1
45.0	0.5%	99.8%	488.9	169.9	100.0	24.4	0.1
50.0	0.2%	100.0%	543.2	169.9	100.0	22.0	0.0
							88.2

Removal Efficiency Adjustment[2] = 6.5%

Predicted Net Annual Load Removal Efficiency = 81.7%

Predicted Annual Rainfall Treated = 96.6%

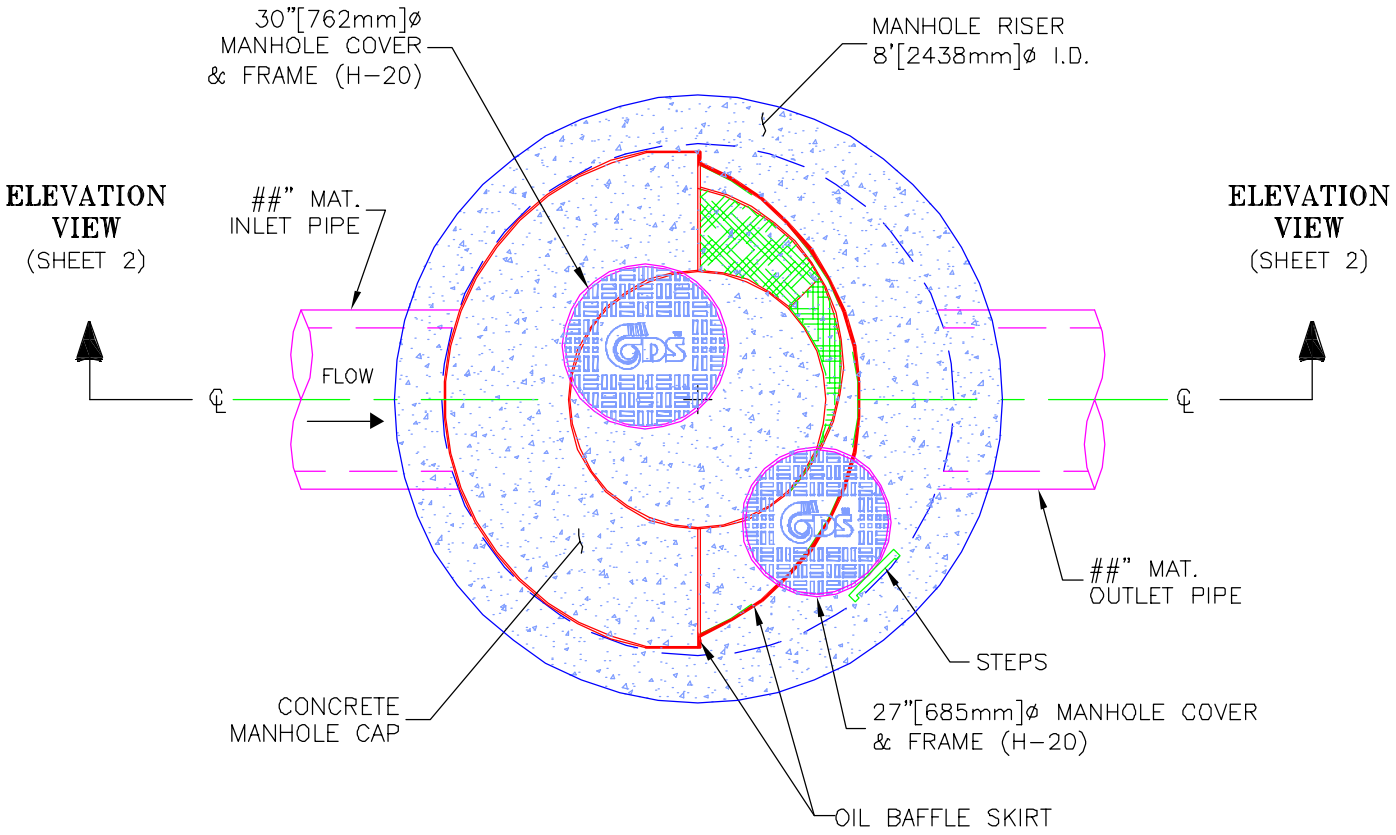
1 - Based on 44 years of hourly rainfall data from Canadian Station 6158733, Toronto ON (Airport)

2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.

3 - CDS Efficiency based on testing conducted at the University of Central Florida

4 - CDS design flowrate and scaling based on standard manufacturer model & product specifications

PLAN VIEW

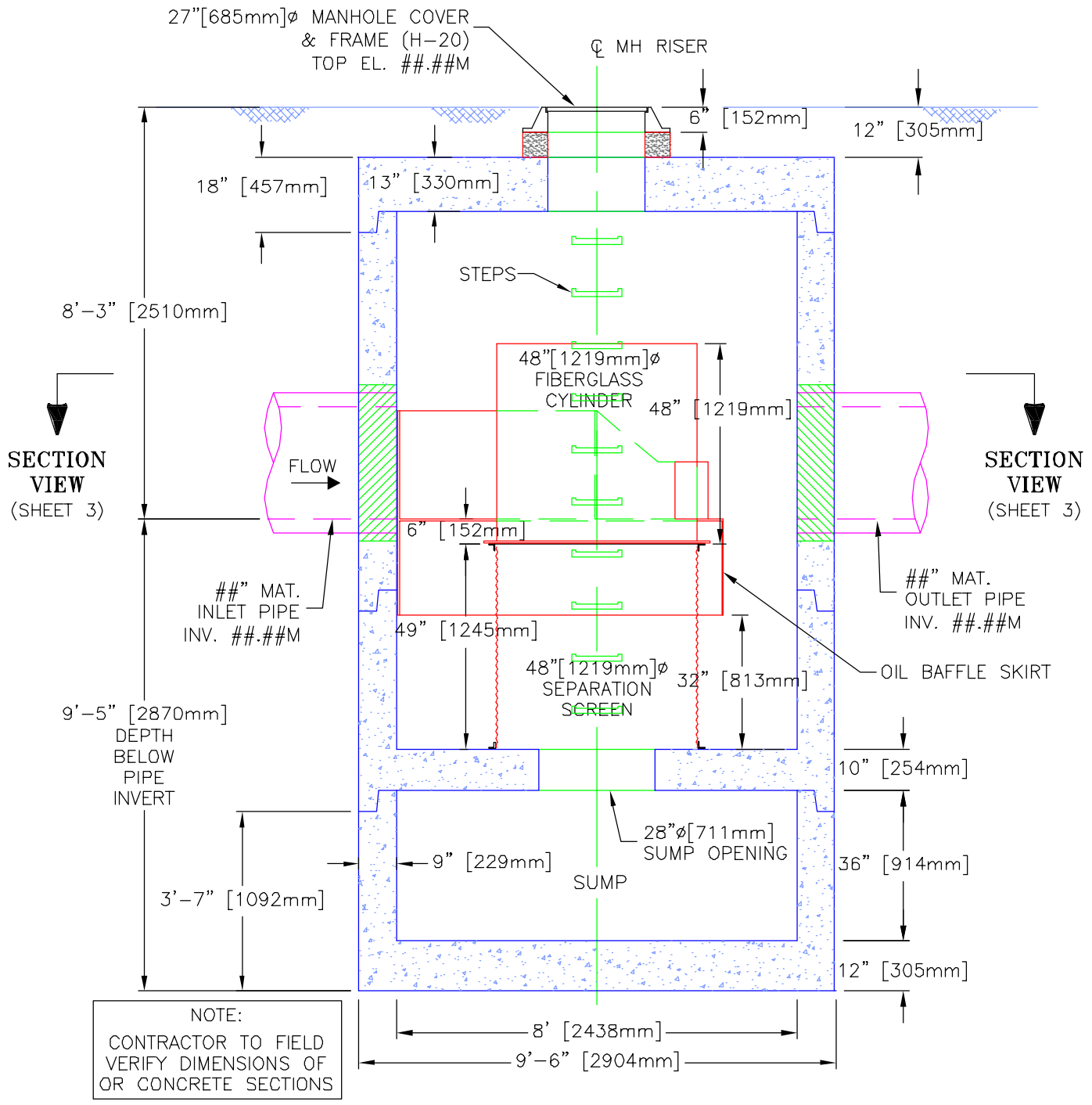


CDS MODEL PMSU40_40m, 6.0 CFS TREATMENT CAPACITY STORM WATER TREATMENT UNIT

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# XX-##-###	SCALE 1" = 3'
		DATE ##/##/##	SHEET 1
		DRAWN INITIALS	
		APPROV.	

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 948-0577
CONTECH Stormwater Solutions Inc. 930 Woodcock Road, Suite 101, Orlando, Florida 32803 Tel: (800) 848-9955

ELEVATION VIEW



NOTE:
CONTRACTOR TO FIELD VERIFY DIMENSIONS OF OR CONCRETE SECTIONS

CDS MODEL PMSU40_40m, 6.0 CFS TREATMENT CAPACITY STORM WATER TREATMENT UNIT

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# XX-##-###	SCALE 1" = 3'
		DATE ##/##/##	SHEET 2
		DRAWN INITIALS	
		APPROV.	

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 948-0577
CONTECH Stormwater Solutions Inc. 930 Woodcock Road, Suite 101, Orlando, Florida 32803 Tel: (800) 848-9955

CDS ESTIMATED NET ANNUAL SOLIDS LOAD REDUCTION
BASED ON THE RATIONAL RAINFALL METHOD
BASED ON A FINE PARTICLE SIZE DISTRIBUTION

Project Name: CN Milton Yard
Location: Milton
OGS #: OGS 6

Engineer: **AECOM**
Contact: Aws Nabeel, P.Eng
Report Date: 12/17/2019

Area	2.63	ha	**Rainfall Station #**	204	
Weighted C	0.84		**Particle Size Distribution**	FINE	
CDS Model	3030		**CDS Treatment Capacity**	85	l/s

Rainfall Intensity[1] (mm/hr)	Percent Rainfall Volume[1]	Cumulative Rainfall Volume	Total Flowrate (l/s)	Treated Flowrate (l/s)	Operating Rate (%)	Removal Efficiency (%)	Incremental Removal (%)
1.0	11.0%	20.4%	6.1	6.1	7.2	96.8	10.6
1.5	10.1%	30.5%	9.2	9.2	10.8	95.8	9.7
2.0	9.6%	40.1%	12.2	12.2	14.4	94.7	9.1
2.5	7.9%	48.0%	15.3	15.3	18.0	93.7	7.4
3.0	6.4%	54.4%	18.3	18.3	21.6	92.7	5.9
3.5	4.4%	58.8%	21.4	21.4	25.2	91.6	4.0
4.0	4.2%	63.0%	24.4	24.4	28.7	90.6	3.8
4.5	3.7%	66.7%	27.5	27.5	32.3	89.6	3.3
5.0	3.3%	70.0%	30.5	30.5	35.9	88.6	2.9
6.0	5.6%	75.6%	36.6	36.6	43.1	86.5	4.8
7.0	4.0%	79.6%	42.7	42.7	50.3	84.4	3.4
8.0	3.5%	83.1%	48.8	48.8	57.5	82.4	2.9
9.0	2.2%	85.3%	54.9	54.9	64.7	80.3	1.8
10.0	1.7%	87.0%	61.1	61.1	71.9	78.3	1.3
15.0	6.3%	93.3%	91.6	85.0	100.0	65.1	4.1
20.0	2.3%	95.6%	122.1	85.0	100.0	48.8	1.1
25.0	1.8%	97.3%	152.6	85.0	100.0	39.1	0.7
30.0	0.8%	98.2%	183.2	85.0	100.0	32.6	0.3
35.0	0.9%	99.0%	213.7	85.0	100.0	27.9	0.2
40.0	0.3%	99.3%	244.2	85.0	100.0	24.4	0.1
45.0	0.5%	99.8%	274.7	85.0	100.0	21.7	0.1
50.0	0.2%	100.0%	305.3	85.0	100.0	19.5	0.0
							86.8

Removal Efficiency Adjustment[2] = 6.5%

Predicted Net Annual Load Removal Efficiency = 80.3%

Predicted Annual Rainfall Treated = 95.8%

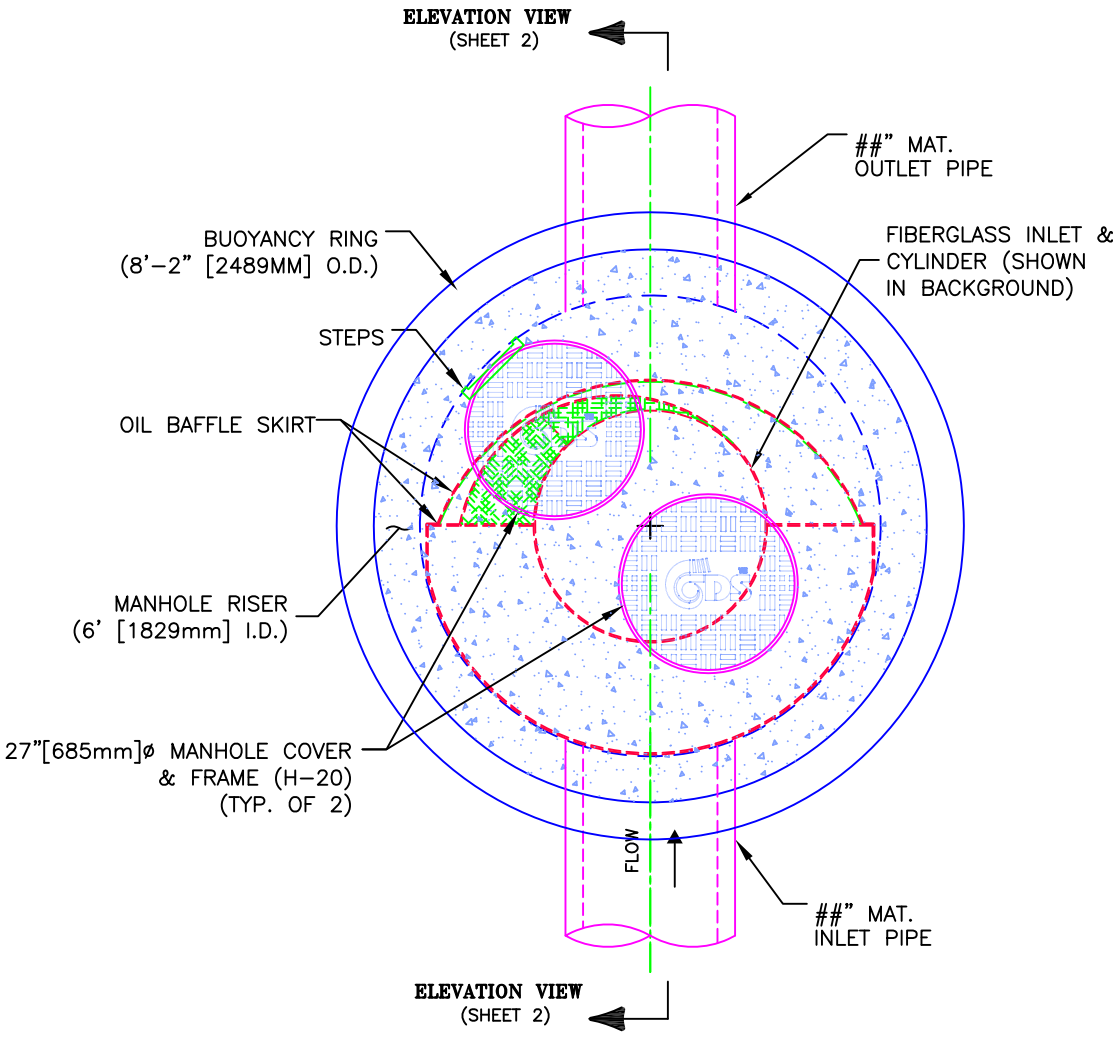
1 - Based on 44 years of hourly rainfall data from Canadian Station 6158733, Toronto ON (Airport)

2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.

3 - CDS Efficiency based on testing conducted at the University of Central Florida

4 - CDS design flowrate and scaling based on standard manufacturer model & product specifications

PLAN VIEW

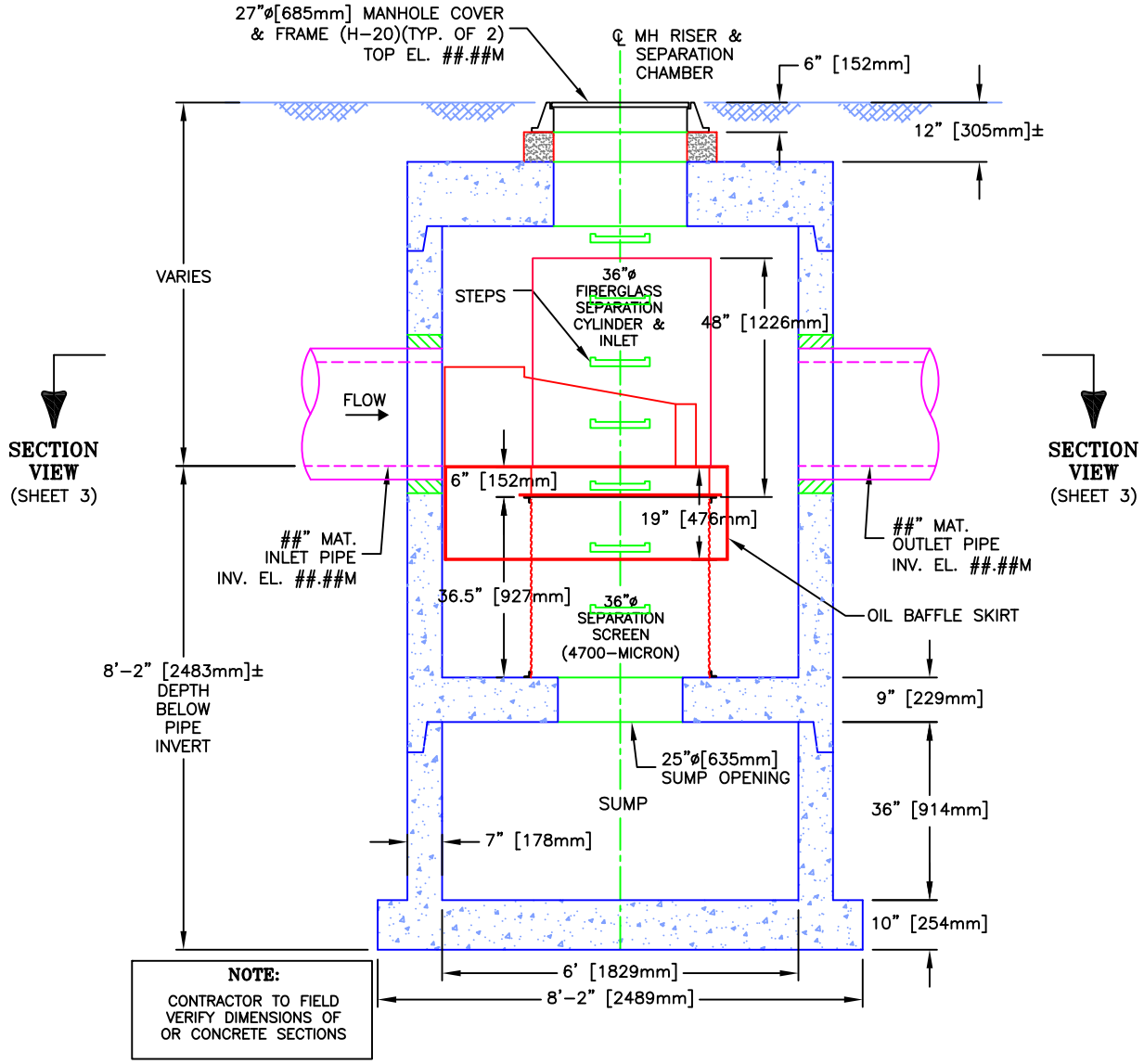


CDS MODEL PMSU30_30m, 85 L/s TREATMENT CAPACITY STORM WATER TREATMENT UNIT

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# CAN–##–###	SCALE 1" = 3'
		DATE ##/##/##	SHEET
		DRAWN INITIALS	1
		APPROV.	

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948–0000 Fax: (905) 948–0577
CONTECH Stormwater Solutions Inc. 930 Woodcock Road, Suite 101, Orlando, Florida 32803 Tel: (800) 848–9955

ELEVATION VIEW



CDS MODEL PMSU30_30m, 85 L/s TREATMENT CAPACITY STORM WATER TREATMENT UNIT

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# CAN-##-###	SCALE 1" = 3'
		DATE ##/##/##	SHEET 2
		DRAWN INITIALS	
		APPROV.	

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 948-0577
CONTECH Stormwater Solutions Inc. 930 Woodcock Road, Suite 101, Orlando, Florida 32803 Tel: (800) 848-9955

CDS ESTIMATED NET ANNUAL SOLIDS LOAD REDUCTION
BASED ON THE RATIONAL RAINFALL METHOD
BASED ON A FINE PARTICLE SIZE DISTRIBUTION

Project Name: CN Milton Yard
Location: Milton
OGS #: OGS 7

Engineer: **AECOM**
Contact: Aws Nabeel, P.Eng
Report Date: 12/17/19

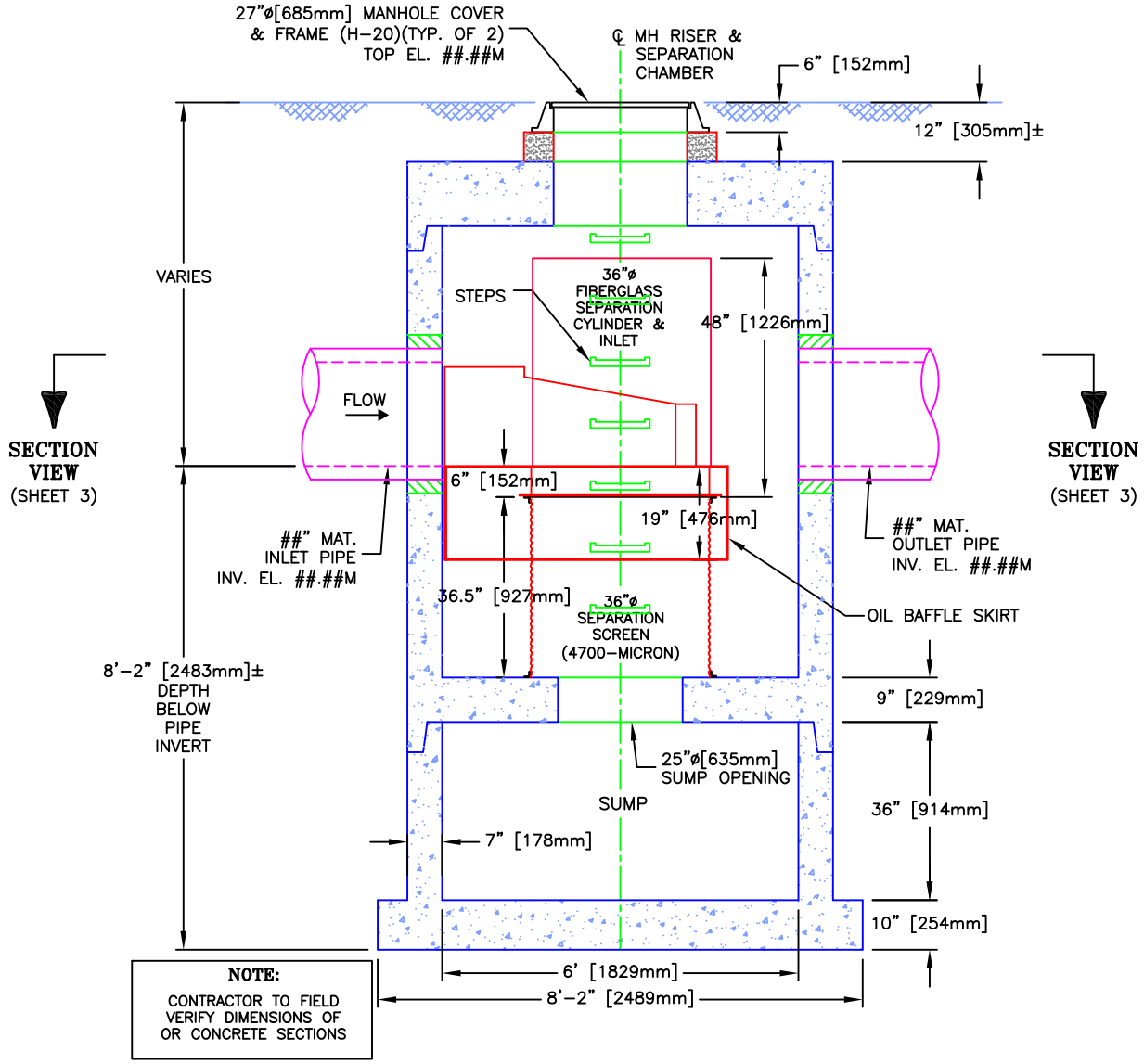
Area	2.57	ha	**Rainfall Station #**	204	
Weighted C	0.84		**Particle Size Distribution**	FINE	
CDS Model	3030		**CDS Treatment Capacity**	85	l/s

Rainfall Intensity[1] (mm/hr)	Percent Rainfall Volume[1]	Cumulative Rainfall Volume	Total Flowrate (l/s)	Treated Flowrate (l/s)	Operating Rate (%)	Removal Efficiency (%)	Incremental Removal (%)
1.0	11.0%	20.4%	6.0	6.0	7.0	96.8	10.6
1.5	10.1%	30.5%	8.9	8.9	10.5	95.8	9.7
2.0	9.6%	40.1%	11.9	11.9	14.0	94.8	9.1
2.5	7.9%	48.0%	14.9	14.9	17.6	93.8	7.5
3.0	6.4%	54.4%	17.9	17.9	21.1	92.8	5.9
3.5	4.4%	58.8%	20.9	20.9	24.6	91.8	4.0
4.0	4.2%	63.0%	23.9	23.9	28.1	90.8	3.8
4.5	3.7%	66.7%	26.8	26.8	31.6	89.8	3.3
5.0	3.3%	70.0%	29.8	29.8	35.1	88.8	2.9
6.0	5.6%	75.6%	35.8	35.8	42.1	86.8	4.8
7.0	4.0%	79.6%	41.8	41.8	49.2	84.8	3.4
8.0	3.5%	83.1%	47.7	47.7	56.2	82.8	2.9
9.0	2.2%	85.3%	53.7	53.7	63.2	80.7	1.8
10.0	1.7%	87.0%	59.7	59.7	70.2	78.7	1.3
15.0	6.3%	93.3%	89.5	85.0	100.0	66.6	4.2
20.0	2.3%	95.6%	119.3	85.0	100.0	50.0	1.1
25.0	1.8%	97.3%	149.1	85.0	100.0	40.0	0.7
30.0	0.8%	98.2%	179.0	85.0	100.0	33.3	0.3
35.0	0.9%	99.0%	208.8	85.0	100.0	28.6	0.2
40.0	0.3%	99.3%	238.6	85.0	100.0	25.0	0.1
45.0	0.5%	99.8%	268.5	85.0	100.0	22.2	0.1
50.0	0.2%	100.0%	298.3	85.0	100.0	20.0	0.0
							87.1

Removal Efficiency Adjustment[2] = 6.5%
Predicted Net Annual Load Removal Efficiency = 80.6%
Predicted Annual Rainfall Treated = 96.0%

1 - Based on 44 years of hourly rainfall data from Canadian Station 6158733, Toronto ON (Airport)
2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.
3 - CDS Efficiency based on testing conducted at the University of Central Florida
4 - CDS design flowrate and scaling based on standard manufacturer model & product specifications

ELEVATION VIEW



CDS MODEL PMSU30_30m, 85 L/s TREATMENT CAPACITY STORM WATER TREATMENT UNIT

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# CAN-##-###	SCALE 1" = 3'
		DATE ##/##/##	SHEET 2
		DRAWN INITIALS	
		APPROV.	

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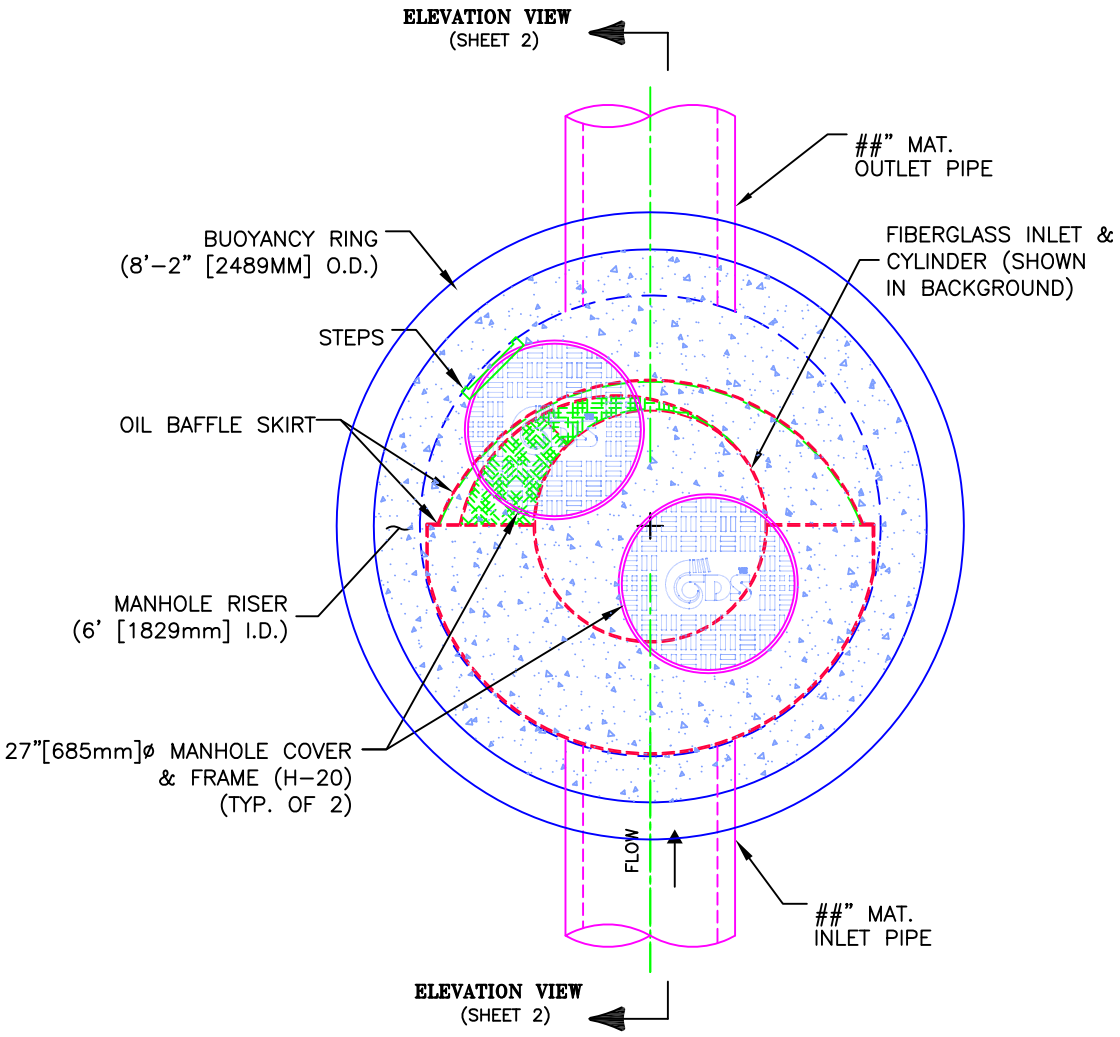
CONTECH Stormwater Solutions Inc. 930 Woodcock Road, Suite 101, Orlando, Florida 32803 Tel: (800) 848-9955

PLAN VIEW



CDS MODEL PMSU30_30m, 85 L/s TREATMENT CAPACITY STORM WATER TREATMENT UNIT

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# CAN–##–###	SCALE 1" = 3'
		DATE ##/##/##	SHEET
		DRAWN INITIALS	1
		APPROV.	

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948–0000 Fax: (905) 948–0577
CONTECH Stormwater Solutions Inc. 930 Woodcock Road, Suite 101, Orlando, Florida 32803 Tel: (800) 848–9955

CDS ESTIMATED NET ANNUAL SOLIDS LOAD REDUCTION
BASED ON THE RATIONAL RAINFALL METHOD
BASED ON A Fine PARTICLE SIZE DISTRIBUTION

Project Name: CN Milton Yard
Location: Milton
OGS #: OGS 8

Engineer: **AECOM**
Contact: Aws Nabeel, P.Eng
Report Date: 12/17/2019

Area	2.99	ha	**Rainfall Station #**	204	
Weighted C	0.84		**Particle Size Distribution**	Fine	
CDS Model	3035		**CDS Treatment Capacity**	108	l/s

Rainfall Intensity[1] (mm/hr)	Percent Rainfall Volume[1]	Cumulative Rainfall Volume	Total Flowrate (l/s)	Treated Flowrate (l/s)	Operating Rate (%)	Removal Efficiency (%)	Incremental Removal (%)
1.0	11.0%	20.4%	6.9	6.9	6.4	97.0	10.6
1.5	10.1%	30.5%	10.4	10.4	9.7	96.1	9.7
2.0	9.6%	40.1%	13.9	13.9	12.9	95.2	9.2
2.5	7.9%	48.0%	17.4	17.4	16.1	94.2	7.5
3.0	6.4%	54.4%	20.8	20.8	19.3	93.3	5.9
3.5	4.4%	58.8%	24.3	24.3	22.6	92.4	4.0
4.0	4.2%	63.0%	27.8	27.8	25.8	91.5	3.9
4.5	3.7%	66.7%	31.2	31.2	29.0	90.5	3.4
5.0	3.3%	70.0%	34.7	34.7	32.2	89.6	3.0
6.0	5.6%	75.6%	41.6	41.6	38.7	87.8	4.9
7.0	4.0%	79.6%	48.6	48.6	45.1	85.9	3.5
8.0	3.5%	83.1%	55.5	55.5	51.6	84.1	2.9
9.0	2.2%	85.3%	62.5	62.5	58.0	82.2	1.8
10.0	1.7%	87.0%	69.4	69.4	64.5	80.4	1.3
15.0	6.3%	93.3%	104.1	104.1	96.7	71.1	4.5
20.0	2.3%	95.6%	138.8	107.6	100.0	54.4	1.2
25.0	1.8%	97.3%	173.5	107.6	100.0	43.5	0.8
30.0	0.8%	98.2%	208.2	107.6	100.0	36.3	0.3
35.0	0.9%	99.0%	242.9	107.6	100.0	31.1	0.3
40.0	0.3%	99.3%	277.6	107.6	100.0	27.2	0.1
45.0	0.5%	99.8%	312.3	107.6	100.0	24.2	0.1
50.0	0.2%	100.0%	347.0	107.6	100.0	21.8	0.0
							88.1

Removal Efficiency Adjustment[2] = 6.5%

Predicted Net Annual Load Removal Efficiency = 81.6%

Predicted Annual Rainfall Treated = 96.6%

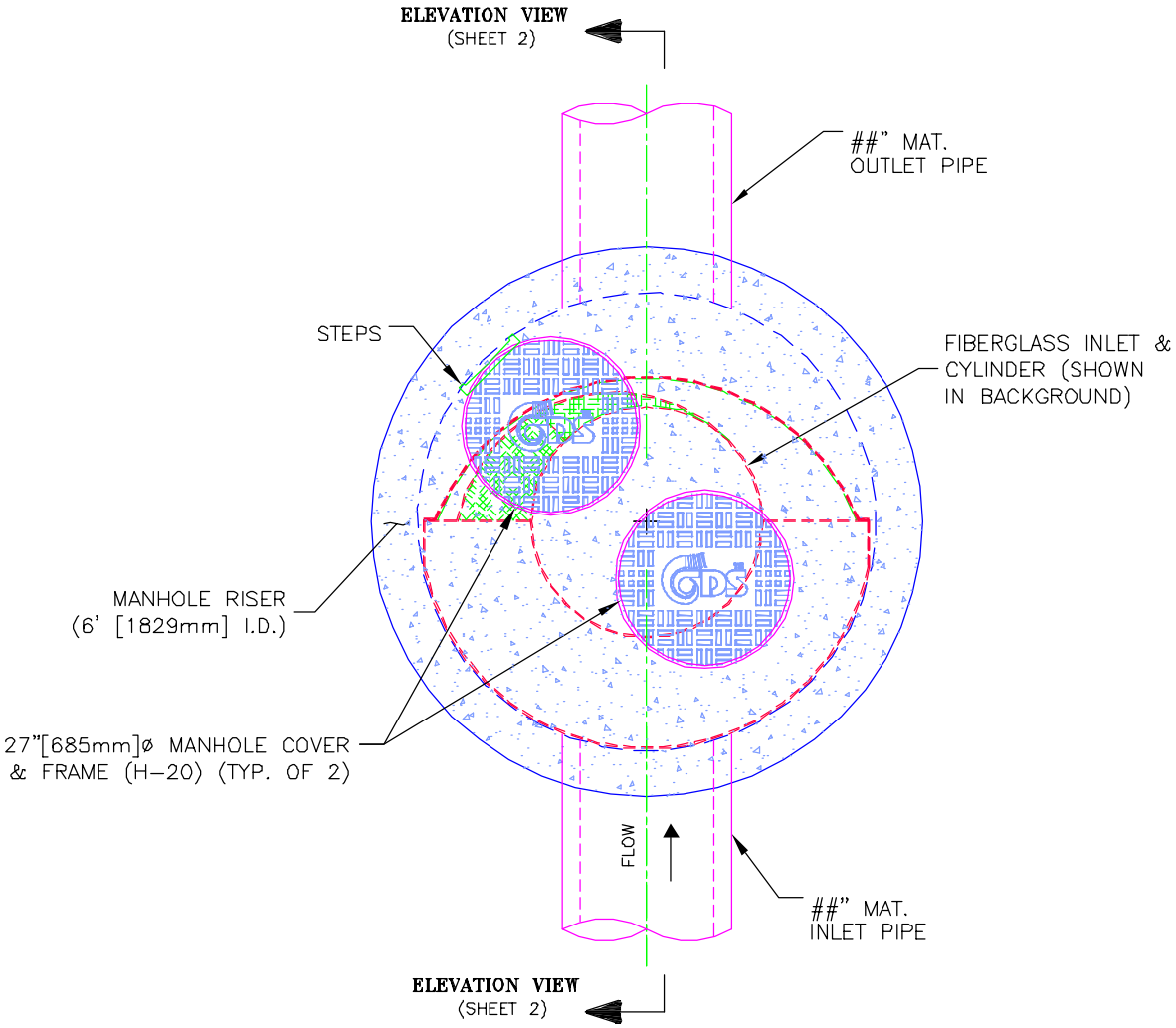
1 - Based on 44 years of hourly rainfall data from Canadian Station 6158733, Toronto ON (Airport)

2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.

3 - CDS Efficiency based on testing conducted at the University of Central Florida

4 - CDS design flowrate and scaling based on standard manufacturer model & product specifications

PLAN VIEW



CDS MODEL PMSU30_35m
STORM WATER TREATMENT UNIT
FLOW RATE 106 L/S

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# CAN-##-###	SCALE 1" = 2.5'
		DATE ##/##/##	SHEET
		DRAWN INITIALS	1
		APPROV.	

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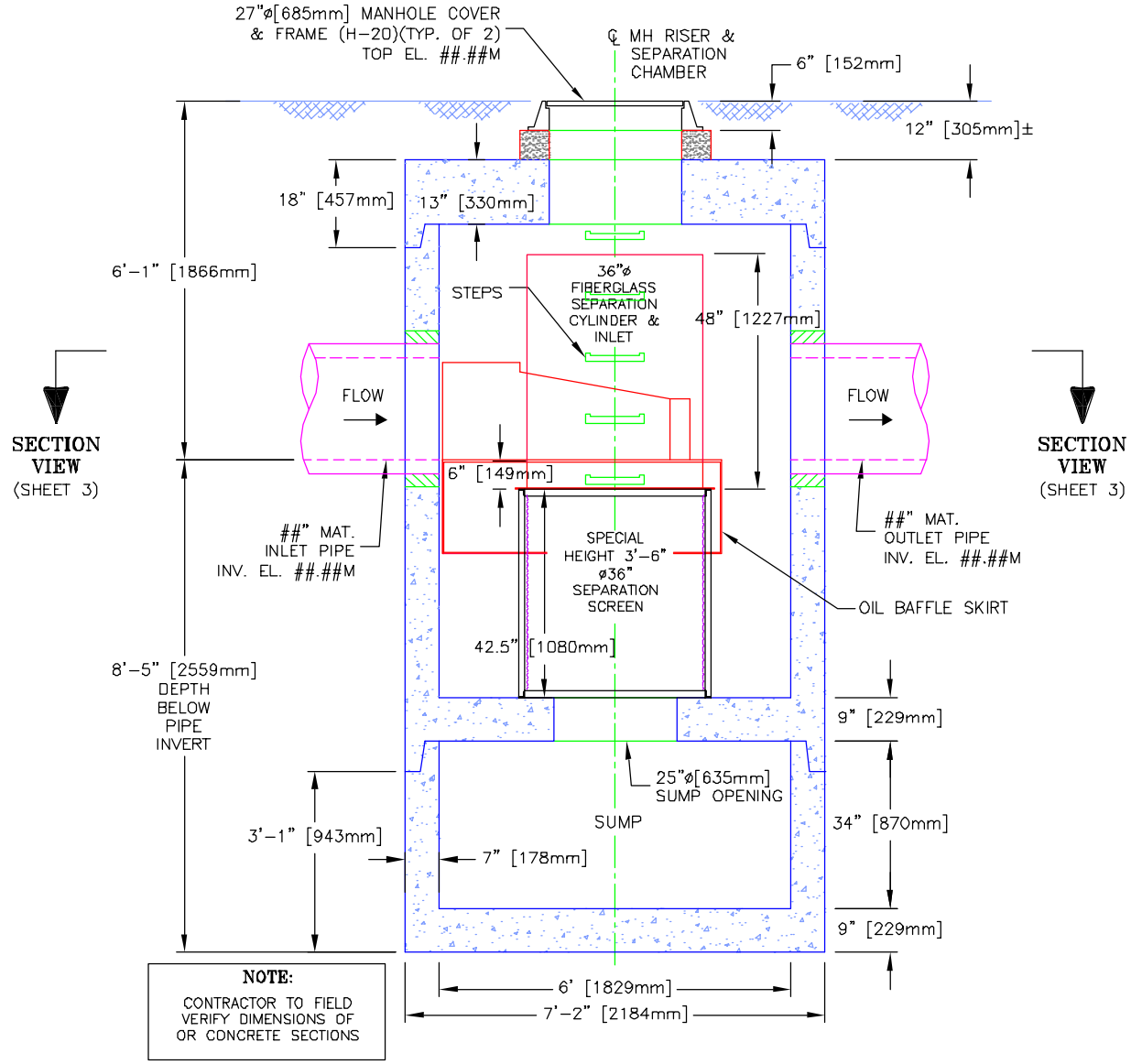
ELEVATION VIEW



CDS MODEL PMSU30_35m
STORM WATER TREATMENT UNIT
FLOW RATE 106 L/S

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# CAN-##-###	SCALE 1" = 3'
		DATE ##/##/##	SHEET 2
		DRAWN INITIALS	
		APPROV.	

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 948-0577

CDS ESTIMATED NET ANNUAL SOLIDS LOAD REDUCTION
BASED ON THE RATIONAL RAINFALL METHOD
BASED ON A Fine PARTICLE SIZE DISTRIBUTION

Project Name: CN Milton Yard
Location: Milton
OGS #: OGS 9

Engineer: **AECOM**
Contact: Aws Nabeel, P.Eng
Report Date: 12/17/2019

Area	5.61	ha	**Rainfall Station #**	204	
Weighted C	0.84		**Particle Size Distribution**	Fine	
CDS Model	4045		**CDS Treatment Capacity**	212	l/s

Rainfall Intensity[1] (mm/hr)	Percent Rainfall Volume[1]	Cumulative Rainfall Volume	Total Flowrate (l/s)	Treated Flowrate (l/s)	Operating Rate (%)	Removal Efficiency (%)	Incremental Removal (%)
1.0	11.0%	20.4%	13.0	13.0	6.1	97.1	10.6
1.5	10.1%	30.5%	19.5	19.5	9.2	96.2	9.7
2.0	9.6%	40.1%	26.0	26.0	12.3	95.3	9.2
2.5	7.9%	48.0%	32.6	32.6	15.3	94.5	7.5
3.0	6.4%	54.4%	39.1	39.1	18.4	93.6	6.0
3.5	4.4%	58.8%	45.6	45.6	21.5	92.7	4.0
4.0	4.2%	63.0%	52.1	52.1	24.5	91.8	3.9
4.5	3.7%	66.7%	58.6	58.6	27.6	90.9	3.4
5.0	3.3%	70.0%	65.1	65.1	30.7	90.1	3.0
6.0	5.6%	75.6%	78.1	78.1	36.8	88.3	4.9
7.0	4.0%	79.6%	91.2	91.2	42.9	86.6	3.5
8.0	3.5%	83.1%	104.2	104.2	49.0	84.8	3.0
9.0	2.2%	85.3%	117.2	117.2	55.2	83.0	1.8
10.0	1.7%	87.0%	130.2	130.2	61.3	81.3	1.3
15.0	6.3%	93.3%	195.3	195.3	92.0	72.5	4.6
20.0	2.3%	95.6%	260.4	212.4	100.0	57.2	1.3
25.0	1.8%	97.3%	325.6	212.4	100.0	45.8	0.8
30.0	0.8%	98.2%	390.7	212.4	100.0	38.2	0.3
35.0	0.9%	99.0%	455.8	212.4	100.0	32.7	0.3
40.0	0.3%	99.3%	520.9	212.4	100.0	28.6	0.1
45.0	0.5%	99.8%	586.0	212.4	100.0	25.4	0.1
50.0	0.2%	100.0%	651.1	212.4	100.0	22.9	0.0
							88.6

Removal Efficiency Adjustment[2] = 6.5%

Predicted Net Annual Load Removal Efficiency = 82.1%

Predicted Annual Rainfall Treated = 96.8%

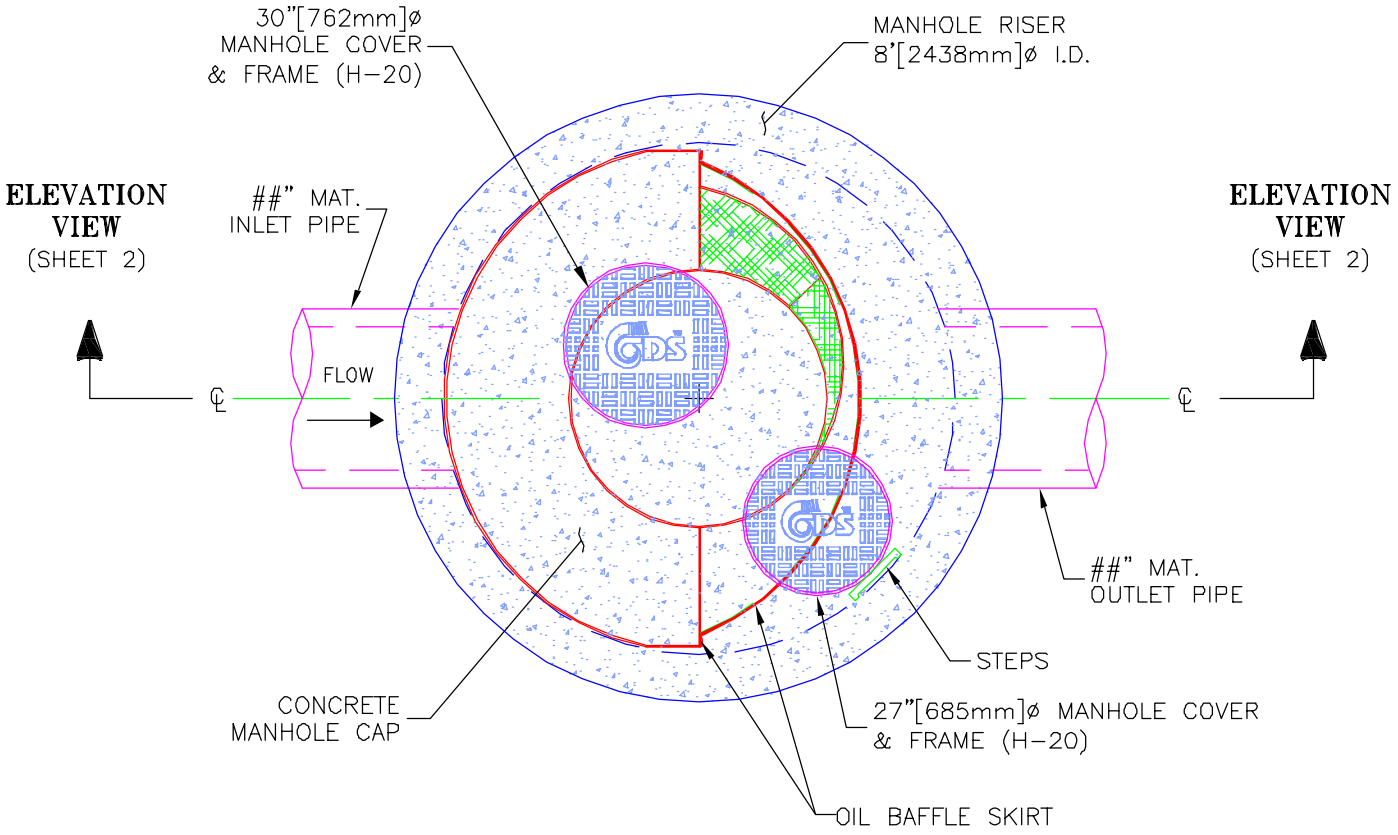
1 - Based on 44 years of hourly rainfall data from Canadian Station 6158733, Toronto ON (Airport)

2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.

3 - CDS Efficiency based on testing conducted at the University of Central Florida

4 - CDS design flowrate and scaling based on standard manufacturer model & product specifications

PLAN VIEW

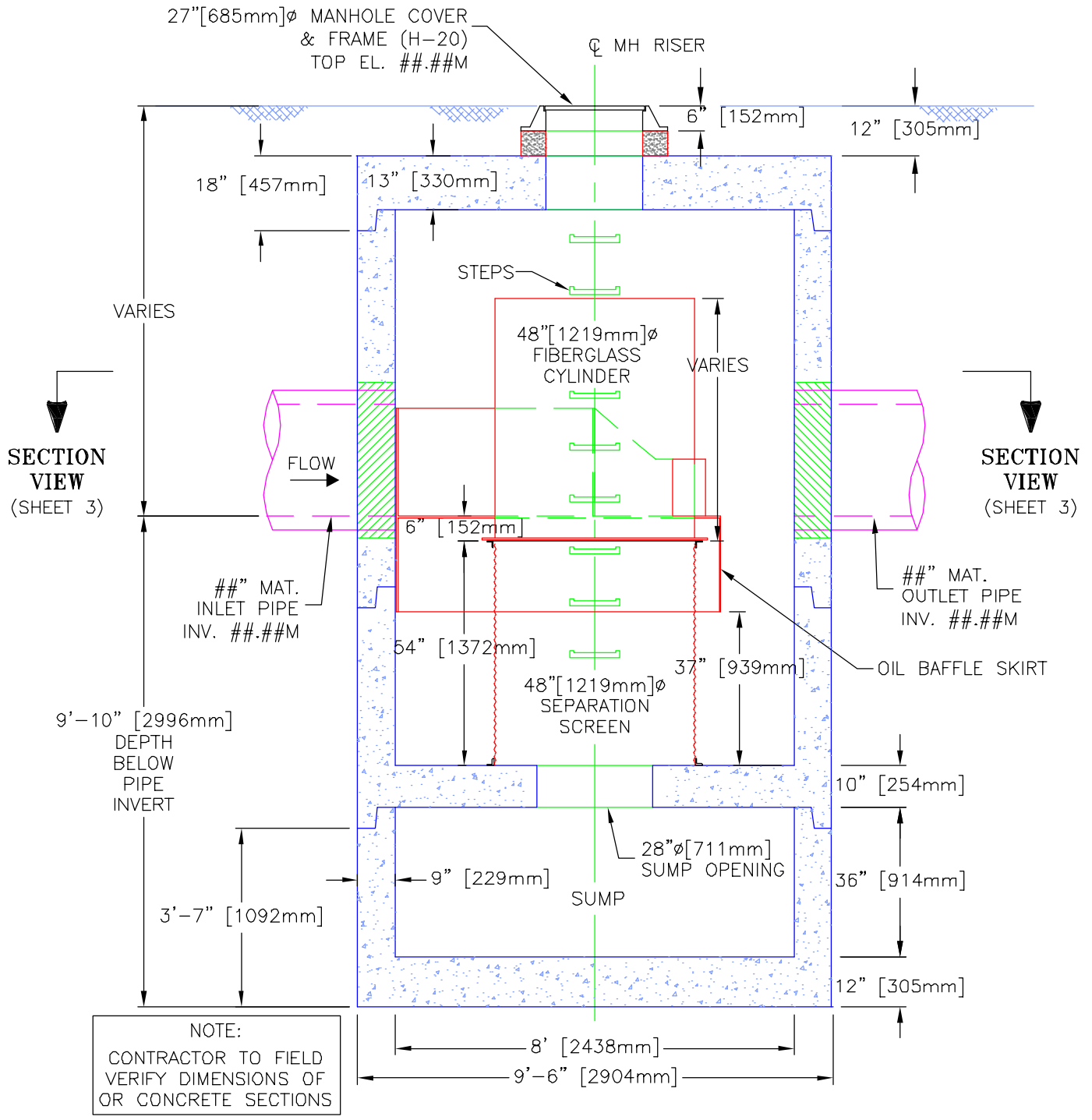


CDS MODEL PMSU40_45m, 7.5 CFS TREATMENT CAPACITY STORM WATER TREATMENT UNIT

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# XX-##-###	SCALE 1" = 3'
		DATE ##/##/##	SHEET
		DRAWN INITIALS	1
		APPROV.	

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 948-0577

ELEVATION VIEW



NOTE:
CONTRACTOR TO FIELD VERIFY DIMENSIONS OF OR CONCRETE SECTIONS

CDS MODEL PMSU40_45m, 7.5 CFS TREATMENT CAPACITY STORM WATER TREATMENT UNIT

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# XX-##-###	SCALE 1" = 3'
		DATE ##/##/##	SHEET 2
		DRAWN INITIALS	
		APPROV.	

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 948-0577

CDS ESTIMATED NET ANNUAL SOLIDS LOAD REDUCTION
BASED ON THE RATIONAL RAINFALL METHOD
BASED ON A FINE PARTICLE SIZE DISTRIBUTION

Project Name: CN Milton Yard
Location: Milton
OGS #: OGS 1

Engineer: **AECOM**
Contact: Aws Nabeel, P.Eng
Report Date: 12/17/2019

Area	1.840	ha	**Rainfall Station #**	204	
Weighted C	0.84		**Particle Size Distribution**	FINE	
CDS Model	3025		**CDS Treatment Capacity**	68	l/s

Rainfall Intensity[1] (mm/hr)	Percent Rainfall Volume[1]	Cumulative Rainfall Volume	Total Flowrate (l/s)	Treated Flowrate (l/s)	Operating Rate (%)	Removal Efficiency (%)	Incremental Removal (%)
1.0	11.0%	20.4%	4.3	4.3	6.3	97.1	10.6
1.5	10.1%	30.5%	6.4	6.4	9.4	96.2	9.7
2.0	9.6%	40.1%	8.5	8.5	12.6	95.3	9.2
2.5	7.9%	48.0%	10.7	10.7	15.7	94.4	7.5
3.0	6.4%	54.4%	12.8	12.8	18.9	93.5	6.0
3.5	4.4%	58.8%	14.9	14.9	22.0	92.6	4.0
4.0	4.2%	63.0%	17.1	17.1	25.1	91.7	3.9
4.5	3.7%	66.7%	19.2	19.2	28.3	90.8	3.4
5.0	3.3%	70.0%	21.4	21.4	31.4	89.9	3.0
6.0	5.6%	75.6%	25.6	25.6	37.7	88.0	4.9
7.0	4.0%	79.6%	29.9	29.9	44.0	86.2	3.5
8.0	3.5%	83.1%	34.2	34.2	50.3	84.4	2.9
9.0	2.2%	85.3%	38.4	38.4	56.6	82.6	1.8
10.0	1.7%	87.0%	42.7	42.7	62.8	80.8	1.3
15.0	6.3%	93.3%	64.1	64.1	94.3	71.8	4.5
20.0	2.3%	95.6%	85.4	68.0	100.0	55.8	1.3
25.0	1.8%	97.3%	106.8	68.0	100.0	44.7	0.8
30.0	0.8%	98.2%	128.1	68.0	100.0	37.2	0.3
35.0	0.9%	99.0%	149.5	68.0	100.0	31.9	0.3
40.0	0.3%	99.3%	170.8	68.0	100.0	27.9	0.1
45.0	0.5%	99.8%	192.2	68.0	100.0	24.8	0.1
50.0	0.2%	100.0%	213.6	68.0	100.0	22.3	0.0
							88.4

Removal Efficiency Adjustment[2] = 6.5%

Predicted Net Annual Load Removal Efficiency = 81.9%

Predicted Annual Rainfall Treated = 96.7%

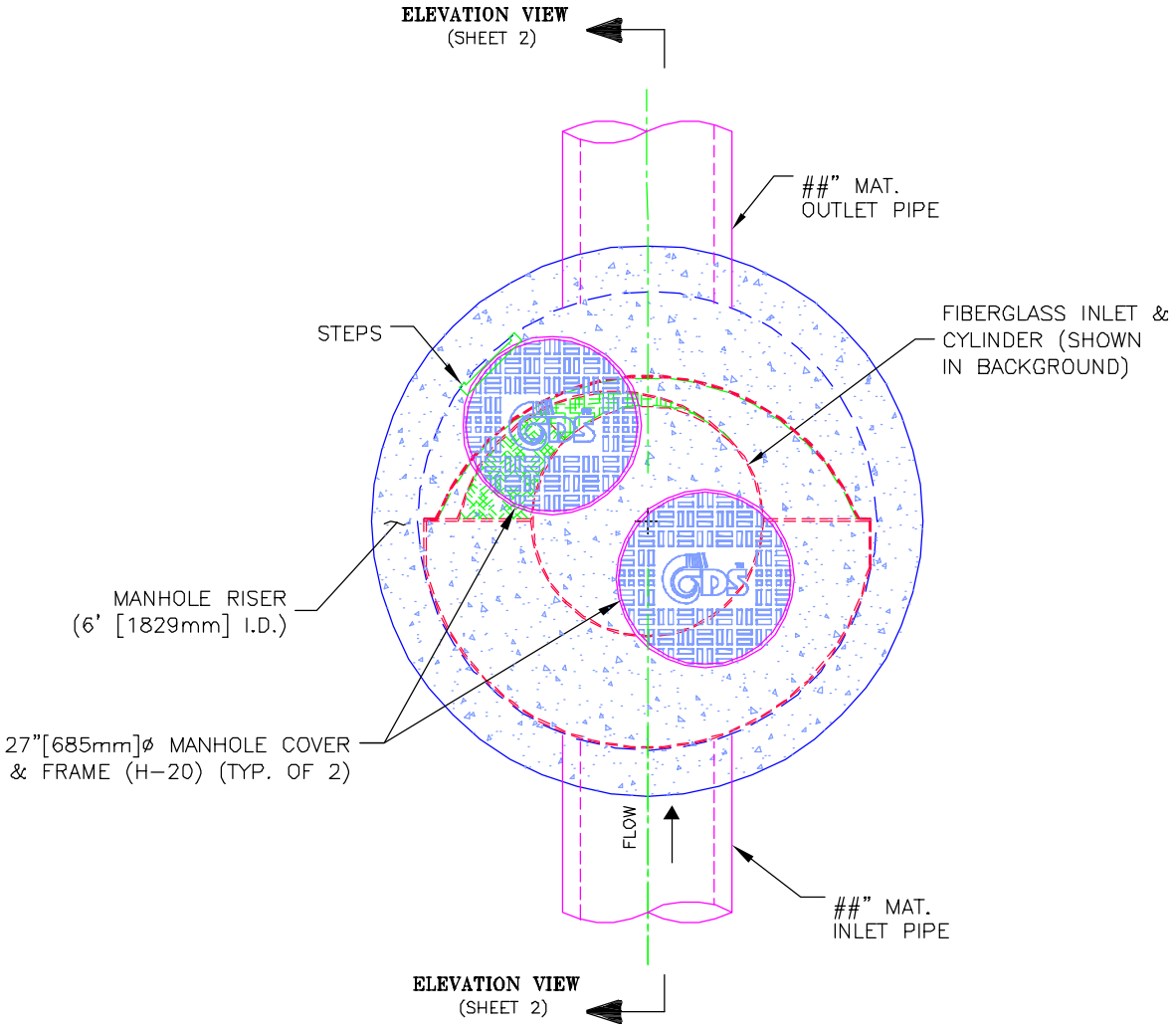
1 - Based on 44 years of hourly rainfall data from Canadian Station 6158733, Toronto ON (Airport)

2 - Reduction due to use of 60-minute data for a site that has a time of concentration less than 30-minutes.

3 - CDS Efficiency based on testing conducted at the University of Central Florida

4 - CDS design flowrate and scaling based on standard manufacturer model & product specifications

PLAN VIEW



MODEL CDS30_25m, 68 L/S TREATMENT CAPACITY
STORM WATER TREATMENT UNIT

CONTECH STORMWATER SOLUTIONS	PROJECT NAME CITY, STATE	JOB# CAN-##-###	SCALE 1" = 2.5'
		DATE ##/##/##	SHEET
		DRAWN INITIALS	1
		APPROV.	

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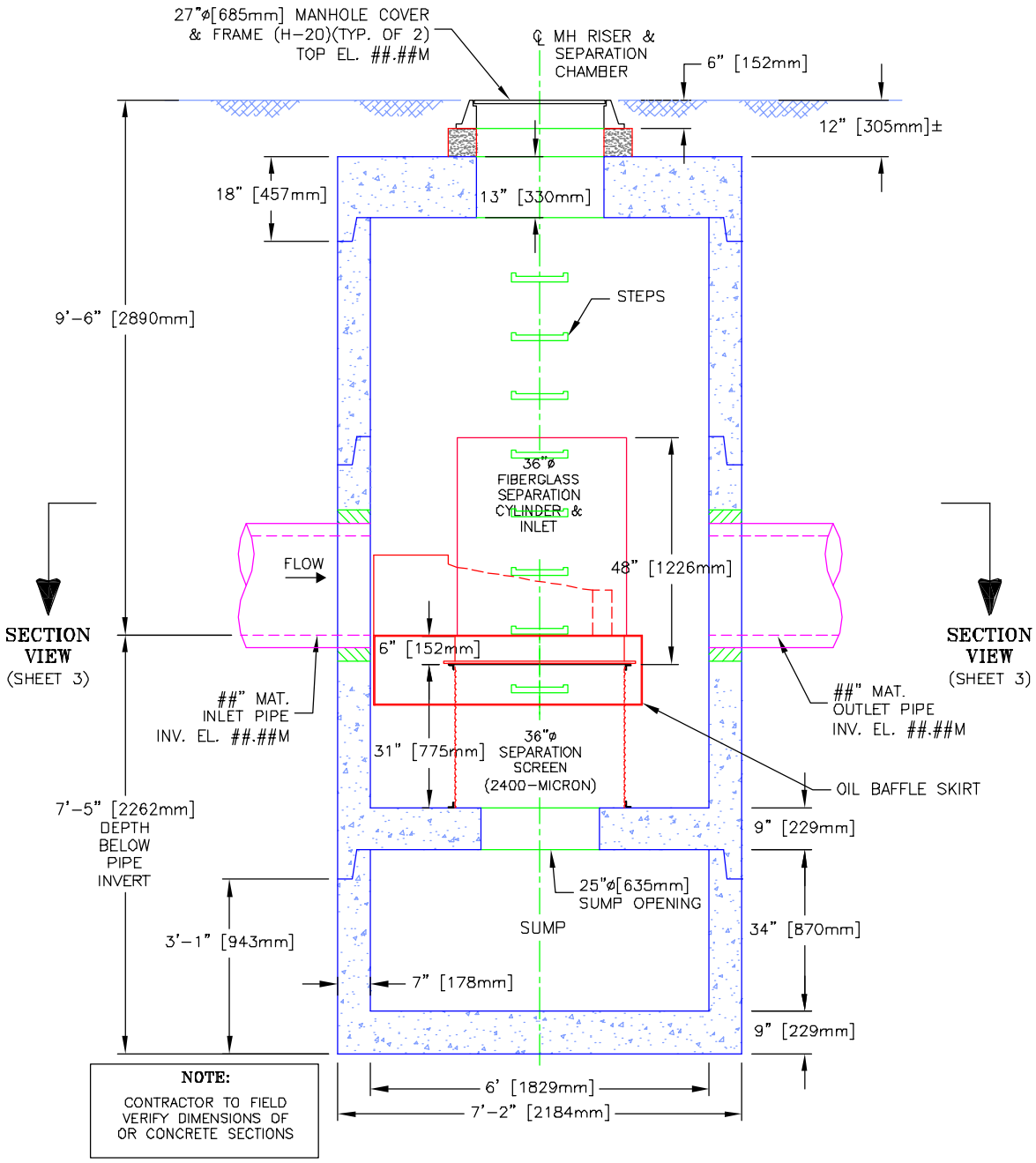
ELEVATION VIEW



NOTE:
CONTRACTOR TO FIELD VERIFY DIMENSIONS OF OR CONCRETE SECTIONS

MODEL CDS30_25m, 68 L/S TREATMENT CAPACITY STORM WATER TREATMENT UNIT

CONTECH STORMWATER SOLUTIONS

PROJECT NAME
CITY, STATE

JOB#	CAN-##-###	SCALE 1" = 3'
DATE	##/##/##	SHEET 2
DRAWN	INITIALS	
APPROV.		

Echelon Environmental 505 Hood Road, Unit 26, Markham, Ontario L3R 5V6 Tel: (905) 948-0000 Fax: (905) 948-0577

Stormceptor Design Summary

PCSWMM for Stormceptor

Project Information

Date	6/8/2015
Project Name	Milton Logistic Terminal - Gate Area 1
Project Number	60313271
Location	Milton, Ontario

Designer Information

Company	AECOM
Contact	Javeed Khan

Notes

Gate Area 1

Drainage Area

Total Area (ha)	3.7
Imperviousness (%)	100

The Stormceptor System model STC 14000 achieves the water quality objective removing 81% TSS for a Fine (organics, silts and sand) particle size distribution.

Rainfall

Name	TORONTO CENTRAL
State	ON
ID	100
Years of Records	1982 to 1999
Latitude	45°30'N
Longitude	90°30'W

Water Quality Objective

TSS Removal (%)	80

Upstream Storage

Storage (ha-m)	Discharge (L/s)
0	0

Stormceptor Sizing Summary

Stormceptor Model	TSS Removal %
STC 300	41
STC 750	54
STC 1000	54
STC 1500	55
STC 2000	62
STC 3000	63
STC 4000	69
STC 5000	69
STC 6000	73
STC 9000	78
STC 10000	78
STC 14000	**81**

Particle Size Distribution

Removing silt particles from runoff ensures that the majority of the pollutants, such as hydrocarbons and heavy metals that adhere to fine particles, are not discharged into our natural water courses. The table below lists the particle size distribution used to define the annual TSS removal.

Fine (organics, silts and sand)

Particle Size µm	Distribution %	Specific Gravity	Settling Velocity m/s		Particle Size µm	Distribution %	Specific Gravity	Settling Velocity m/s
20	20	1.3	0.0004					
60	20	1.8	0.0016					
150	20	2.2	0.0108					
400	20	2.65	0.0647					
2000	20	2.65	0.2870					

Stormceptor Design Notes

- Stormceptor performance estimates are based on simulations using PCSWMM for Stormceptor version 1.0
- Design estimates listed are only representative of specific project requirements based on total suspended solids (TSS) removal.
- Only the STC 300 is adaptable to function with a catch basin inlet and/or inline pipes.
- Only the Stormceptor models STC 750 to STC 6000 may accommodate multiple inlet pipes.
- Inlet and outlet invert elevation differences are as follows:

Inlet and Outlet Pipe Invert Elevations Differences

Inlet Pipe Configuration	STC 300	STC 750 to STC 6000	STC 9000 to STC 14000
Single inlet pipe	75 mm	25 mm	75 mm
Multiple inlet pipes	75 mm	75 mm	Only one inlet pipe.

- Design estimates are based on stable site conditions only, after construction is completed.
- Design estimates assume that the storm drain is not submerged during zero flows. For submerged applications, please contact your local Stormceptor representative.
- Design estimates may be modified for specific spills controls. Please contact your local Stormceptor representative for further assistance.
- For pricing inquiries or assistance, please contact Imbrium Systems Inc., 1-800-565-4801.

Stormceptor Design Summary

PCSWMM for Stormceptor

Project Information

Date	6/8/2015
Project Name	Milton Logistic Terminal - Gate Area 2
Project Number	60313271
Location	Milton, Ontario

Designer Information

Company	AECOM
Contact	Javeed Khan

Notes

Gate Area 2 - Administration building area is e□cluded

Drainage Area

Total Area (ha)	3.3
Imperviousness (%)	100

The Stormceptor System model STC 14000 achieves the water quality objective removing 82% TSS for a Fine (organics, silts and sand) particle size distribution.

Rainfall

Name	TORONTO CENTRAL
State	ON
ID	100
Years of Records	1982 to 1999
Latitude	45°30'N
Longitude	90°30'W

Water Quality Objective

TSS Removal (%)	80

Upstream Storage

Storage (ha-m)	Discharge (L/s)
0	0

Stormceptor Sizing Summary

Stormceptor Model	TSS Removal %
STC 300	43
STC 750	55
STC 1000	56
STC 1500	57
STC 2000	64
STC 3000	65
STC 4000	70
STC 5000	71
STC 6000	74
STC 9000	79
STC 10000	79
STC 14000	**8□**

Particle Size Distribution

Removing silt particles from runoff ensures that the majority of the pollutants, such as hydrocarbons and heavy metals that adhere to fine particles, are not discharged into our natural water courses. The table below lists the particle size distribution used to define the annual TSS removal.

Fine (organics, silts and sand)

Particle Size µm	Distribution %	Specific Gravity	Settling Velocity m/s		Particle Size µm	Distribution %	Specific Gravity	Settling Velocity m/s
20	20	1.3	0.0004					
60	20	1.8	0.0016					
150	20	2.2	0.0108					
400	20	2.65	0.0647					
2000	20	2.65	0.2870					

Stormceptor Design Notes

- Stormceptor performance estimates are based on simulations using PCSWMM for Stormceptor version 1.0
- Design estimates listed are only representative of specific project requirements based on total suspended solids (TSS) removal.
- Only the STC 300 is adaptable to function with a catch basin inlet and/or inline pipes.
- Only the Stormceptor models STC 750 to STC 6000 may accommodate multiple inlet pipes.
- Inlet and outlet invert elevation differences are as follows:

Inlet and Outlet Pipe Invert Elevations Differences

Inlet Pipe Configuration	STC 300	STC 750 to STC 6000	STC 9000 to STC 14000
Single inlet pipe	75 mm	25 mm	75 mm
Multiple inlet pipes	75 mm	75 mm	Only one inlet pipe.

- Design estimates are based on stable site conditions only, after construction is completed.
- Design estimates assume that the storm drain is not submerged during zero flows. For submerged applications, please contact your local Stormceptor representative.
- Design estimates may be modified for specific spills controls. Please contact your local Stormceptor representative for further assistance.
- For pricing inquiries or assistance, please contact Imbrium Systems Inc., 1-800-565-4801.

Appendix F

FINAL DRAINAGE REPORT

Milton Logistic Hub

- SWM Facility – Pond Review Form 1
- Maintenance Log Form 2
- Sediment Removal Form 3

Milton Logistics Hub SWM FACILITY - POND REVIEW FORM 1

Review Date:_____ By:

of:_____

Reason for Review (check one): Semi-Annual ☐ Other ☐ _____

If other, provide brief description of reason for review: _____

_____

ITEMS OF REVIEW

Provide description of condition of each component. Take photographs. Note any erosion, litter, washouts, undermining, sedimentation, debris accumulation, obstructions, displaced erosion control material, corrosion, etc.

SWM Wet Pond

1. Pond: **Comments**

Stability of side slopes (check one): Good ☐ Adequate ☐ Poor ☐ _____

Erosion (check one, if yes indication size): Yes ☐ No ☐ _____

Sheen on water (check one): Yes ☐ No ☐ _____

Algae growth (check one): Yes ☐ No ☐ If yes, indicate % of permanent

_____

_____

_____

Number of photographs taken: _____

2. Ground Cover Condition:

Vegetation condition (check one): Good ☐ Adequate ☐ Poor ☐ _____

If poor: (check one):

Lack of irrigation (check one): Yes ☐ No ☐ _____

Needs Thinning (check one): Yes ☐ No ☐ _____

Needs Plantings (check one): Yes ☐ No ☐ _____

Number of photographs taken: _____

3. Structures:

Inlet to forebay condition (check one): Good ☐ Adequate ☐ Poor ☐ _____

Outlet Control Orifice Plates clear (check one): Good ☐ Adequate ☐ Poor ☐ _____

Outlet Control Structure Clear of Debris (check one): Good ☐ Adequate ☐ Poor ☐ _____

Maintenance Structure Knife Gate Exercised (check one): Good ☐ Adequate ☐ Poor ☐ _____

Maintenance Structure Clear of Debris (check one): Good ☐ Adequate ☐ Poor ☐ _____

Number of photographs taken: _____

4. Sediment Survey:

Date: _____

Forebay Volume (m^3): _____

Average Depth of Sediment in Forebay (m): _____

Main Cell Volume (m^3): _____

Milton Logistics Hub
FACILITY MAINTENANCE LOG
FORM 2

FROM:.....
TO: .....

	Litter Removed	Channel Cleaning	Concrete Repairs	Grate/Rails Repairs	Other Repairs	Sediment Removed**
Date:						
Initial:						
Date:						
Initial:						
Date:						
Initial:						
Date:						
Initial:						
Date:						
Initial:						
Date:						
Initial:						
Date:						
Initial:						
Date:						
Initial:						

* Complete Pond Report Form 1

** Complete Sediment Removal Form 3

NOTES: _____

_____

_____

_____

_____

Milton Logistics Hub SWM FACILITY
SEDIMENT REMOVAL FORM 3

Date:_____ Removed By: _____

Description of precautions taken to prevent effluent fouling during removal of sedimentation:

_____

_____

_____

_____

Volume of sediment removed:_____m^3

Samples taken (check one): Yes ☐ No ☐

Sampling method (check one) Grab ☐ Composite ☐

Analyzed by: _____

Results: _____

Sediment disposed at: _____

_____

_____

Comments: _____

_____

_____

Appendix G

FINAL DRAINAGE REPORT

Milton Logistic Hub

- AMEC 2015 Study – Drawings and Tables

DERRY ROAD

TREMAINE ROAD

BRONTE STREET

REGIONAL ROAD 25

THOMPSON ROAD

FOURTH LINE

JAMES SNOW PARKWAY

LOUIS ST. LAURENT AVENUE

BRITANNIA ROAD

0 150 300 600

LEGEND

- BOYNE SURVEY BOUNDARY
- WATERCOURSE
- NATURAL HERITAGE SYSTEM
- DISTRICT PARK AREA
- NEIGHBOURHOOD CENTRE
- INSTITUTIONAL AREA
- RESIDENTIAL/OFFICE AREA
- RESIDENTIAL AREA
- SECONDARY MIXED USE NODE AREA
- MAJOR SUB-NODE AREA
- MAJOR NODE AREA
- GATEWAY
- OMAGH STUDY AREA

NOTE:
WATERCOURSES AND ASSOCIATED CORRIDOR ALIGNMENTS AND DIMENSIONS SHOWN ARE CONCEPTUAL AND ARE TO BE DETERMINED AS PART OF THE APPROVED SIS's. WATERCOURSES AND ASSOCIATED CORRIDOR ALIGNMENTS AND DIMENSIONS MAY BE ALTERED IN ACCORDANCE WITH POLICIES C.10.5.8.5, C.10.5.8.6a AND C.10.5.8.7b OF THE BOYNE SURVEY SECONDARY PLAN

BOYNE SURVEY
FUNCTIONAL STORMWATER & ENVIRONMENTAL MANAGEMENT STRATEGY
TOWN OF MILTON

FUTURE LAND USE PLAN

amec

Scale 1:18000

Consultant File No. TP108159

Drawing No. 3

G:\Work\108159\water\DWG\REPORT\13-02-21-FSEMS\DWG-3 Future Landuse.dwg

Mar 21/13 – richard.bartolo

LEGEND

- BOYNE SURVEY BOUNDARY
- WATERCOURSE
- SUBCATCHMENT BOUNDARY
- SUBCATCHMENT NUMBER
- DRAINAGE AREA (ha)
- FLOW NODE LOCATION AND REFERENCE NUMBER
- DIVERSION AREA
- POTENTIAL DIVERSION AREA
- CONVENTIONAL DRAINING AREA

NOTE:
SUBCATCHMENT BOUNDARIES SHOWN ARE PRELIMINARY AND ARE TO BE REFINED AS PART OF THE APPLICABLE SIS's. DIVERSION AREAS AND CONVENTIONAL DRAINING AREAS TO THE OMAGH TRIBUTARY ARE CONCEPTUAL TO ILLUSTRATE THE PRINCIPLE AND ARE SUBJECT TO CHANGE AS PART OF THE SIS's AND DETAIL DESIGN.

BOYNE SURVEY
FUNCTIONAL STORMWATER & ENVIRONMENTAL MANAGEMENT STRATEGY
TOWN OF MILTON

FUTURE CONDITION
SUBCATCHMENT BOUNDARY
PLAN

amec

Scale 1:18000
Consultant File No. TP108159
Drawing No. 5

G:\Work\108159\water\DWG\REPORT\13-02-21-FSEMS\DWG-5 Futcatchment.dwg

Mar 21/13 – richard.bartolo

DERRY ROAD

TREMAINE ROAD

BRONTE STREET

REGIONAL ROAD 25

THOMPSON ROAD

FOURTH LINE

JAMES SNOW PARKWAY

LOUIS ST. LAURENT AVENUE

BRITANNIA ROAD

0 150 300 600

REACH WITH DRAINAGE AREA LESS THAN 50ha

REACH WITH DRAINAGE AREA GREATER THAN 50ha

SPILL

SPILL

LEGEND

- BOYNE SURVEY BOUNDARY
- WATERCOURSE
- REGULATORY FLOODPLAIN (AMEC)
- 16 MILE CREEK MAIN BRANCH REGULATORY FLOODPLAIN (CH)
- 3.074 HEC-RAS CROSS-SECTION & REFERENCE NUMBER

BOYNE SURVEY
FUNCTIONAL STORMWATER & ENVIRONMENTAL MANAGEMENT STRATEGY
TOWN OF MILTON

REGULATORY FLOODLINE MAPPING

amec

Scale 1:18000

Consultant File No. TP108159

Drawing No. 7

Mar 21/13 – richard.bartolo

G:\Work\108159\water\DWG\REPORT\13-02-21-FSEMS\DWG-7 REGULATORY FLOODLINE.dwg

The results in Table 4.2.2 indicate that, in the absence of stormwater quality controls, mass loadings of fecal coliforms and copper would be anticipated to increase as a result of the conversion of agricultural land use to prominently urban residential, whereas the remaining parameters would be reduced as a result of the conversion of land use. The results further indicate that under future land use conditions with stormwater quality controls to an *Enhanced* standard of treatment, the mass loadings of all contaminants, with the exception of copper, would be further reduced compared to future uncontrolled conditions and would be below the mass loadings under existing land use conditions. While the mass loadings would remain above existing levels under future land use conditions with stormwater management, the application of stormwater quality controls to an *Enhanced* standard of treatment would afford a reduction to the mass loadings compared to future uncontrolled land use conditions.

Flow Rate Assessment - Proposed Development without SWM Controls

Hydrologic analyses for the future development within the Boyne Survey Area have been completed previously as part of the Sixteen Mile Creek Areas 2 & 7 Subwatershed Planning Study (Philips Planning and Engineering Limited, January 2000) in order to characterize the hydrologic impacts associated with the future development within the area. The hydrologic analyses completed as part of that study were predicated upon more generic and conceptual land use information within the area, and thus represented a higher level hydrologic assessment for the area. Nevertheless, the results of the analyses indicated that storm event peak flows would be anticipated to increase within the downstream reaches as a result of the future urban development within the Boyne Survey Area, thus demonstrating that the flood risk and erosion potential within the downstream reaches would be anticipated to increase as a result of the future development.

The hydrologic effects of the currently proposed development of the Boyne Survey Area on peak flow rates have been analyzed through hydrologic simulation and frequency analysis. The subcatchment discretization through the Boyne Survey Area has been revised based upon anticipated drainage boundaries at key features (i.e. roads and lot boundaries), although it has been assumed that contributing drainage areas to the various watercourses would be comparable to the existing conditions; the subcatchment boundary plan for future land use conditions is presented in Drawing 5. The impervious coverage for the future land use conditions would be anticipated to range from 0 % (+/-) for the undeveloped lands, 50 % (+/-) for the low density residential areas, 10 % (+/-) for the community and district parks, and 70 % (+/-) mixed use areas. The HSP-F hydrologic model for the existing land use conditions have been revised in order to simulate the future land use conditions within the Boyne Survey Area. Consistent with the methodology which has been applied for the hydrologic analysis of the existing land use conditions, the model has been executed for a 42 year continuous simulation, and frequency analyses have been completed using the simulated annual maximum flows and applying the Log Pearson Type III Distribution. In addition, the Regional Storm (Hurricane Hazel) event has been simulated as a discrete storm event, and the simulated peak flow has been obtained. The results of this assessment are presented in Table 4.2.3.

Table 4.2.3: Proposed Land Use without SWM Frequency Flows (m^3/s)									
Node	Location/Description	Frequency (years)							
		1.25	2	5	10	20	50	100	Regional
8.530	West Indian Creek Outlet	2.26	3.13	4.27	4.98	5.64	6.46	7.05	16.90
9.120	East Indian Creek Outlet	2.38	3.29	4.46	5.18	5.84	6.65	7.23	16.10
2.402		0.25	0.37	0.52	0.61	0.69	0.79	0.86	1.43
2.509	West 16MC Outlet	2.13	3.36	5.12	6.30	7.43	8.89	9.97	17.30
2.514	West Central 16MC Outlet	2.35	3.70	5.64	6.94	8.18	9.77	11.00	19.80
2.802	East Central 16MC Outlet	3.35	4.99	7.04	8.27	9.35	10.60	11.50	19.10
2.009		0.82	1.26	1.83	2.17	2.48	2.86	3.11	5.14
2.100	16 Mile Creek Main Branch	18.30	27.20	40.70	50.50	60.50	74.40	85.40	378.00
7.302	Omagh Tributary Outlet	2.48	3.62	5.00	5.90	6.75	7.76	8.47	19.40
7.111		1.01	1.64	2.71	3.54	4.43	5.72	6.79	31.90

The results indicate that typically, without stormwater management, flow rates within the Boyne Survey development area would increase significantly for all storm events under conventionally draining conditions (i.e. all runoff from all storms would be directed to the same outlet from the development area to the receiving watercourses, predicated upon maintaining existing drainage areas post-development). The results also indicate that, in the absence of stormwater management, flow rates along the Sixteen Mile Creek Main Branch would remain at approximately existing levels.

Additional analyses have been completed in order to evaluate the increased erosion potential to the receiving watercourses under the future land use scenario. For this assessment duration analyses have been completed for the existing and future uncontrolled land use condition in order to determine the total duration (in hours) if flows in excess of the critical erosive flow within the receiving watercourse. The results of this assessment are presented in Table 4.2.4.

Table 4.2.4: Duration Analysis Summary for Erosive Flows (Hours)				
Node	(m^3/s)	Duration of Erosive Flows		% Increase
		Existing	Future Uncontrolled	
8.530	0.47	1,163	2,751	137%
9.120	0.46	1,088	3,297	203%
2.402	0.05	2,602	637	76%
2.509	0.06	27,549	22,529	-18%
2.514	0.10	28,845	21,497	-25%
2.802	0.31	2,511	6,928	175%
2.009	0.11	2,338	4,423	89%
7.302	0.03	61,611	62,695	2%

The results indicate that under future uncontrolled land use conditions within the Boyne Survey Area, the erosion potential within the downstream receiving watercourses would be anticipated to increase compared to existing conditions.

Current approaches for stormwater management in the Province of Ontario include the need for efforts to promote surface water recharge to the groundwater, in order to work towards maintaining the overall water balance following development. The HSP-F hydrologic model for the study area has been used in order to assess the groundwater recharge under existing and proposed land use conditions within the Boyne Survey Area, to determine the anticipated average reduction in groundwater recharge associated with the proposed development and thereby offer information on the potential impact and the need for compensating management. For this assessment, the model has been modified in order to report the simulated groundwater recharge to the Watershed Data Management (WDM) file for the 42 year continuous simulation, and the average recharge, in millimetres, has been determined for existing and proposed land use conditions. The results of this assessment indicate that the average annual groundwater recharge would be anticipated to be reduced from 202.5 mm per year to 72.6 mm per year (i.e. reduced by 64%) as a result of the proposed development. The results are consistent with findings in other jurisdictions for similar soil conditions which exhibit a low recharge potential.

4.2.3 Water Quality Diversion Area

Initial analyses of the servicing requirements for the Boyne Survey Area were completed by the Development Proponents in 2007. The results of these analyses identified that conventional storm servicing of these lands would require the importation of substantial amounts of fill, particularly within the portion of the Boyne Survey lands draining toward the Omagh Tributary. The volume of fill material required was considered to be cost and functionality prohibitive, hence alternatives were advanced by the Development Proponents in order to address the grading constraints and storm servicing requirements of these lands.

The first alternative advanced consisted of off-site lowering of the receiving watercourses. While initial assessments of the grading requirements indicated that this alternative may be functionally feasible, the unknowns and specific requirements for the implementation of this alternative were considered too constraining (i.e. lack of 4 season data, non-motivated landowners, uncertain future land use), and hence was considered incompatible with the practical schedule for the implementation of the Secondary Plan for Boyne Survey.

Consequently, an alternative strategy was advanced by Development Proponents, for consideration in this study, whereby the extended detention component of specific stormwater management facilities within the Boyne Survey lands would be diverted toward the deeper Sixteen Mile Creek Main Branch via a dedicated trunk sewer, with the flood storage component (i.e. the portion above the extended detention cell) continuing to discharge to the Omagh Tributary. Hydrologic, hydraulic, and scoped environmental assessments have been completed in order to assess and refine the spatial extent of this diversion scenario, and consultation with representatives from the various stakeholders on the Steering Committee for this study was held at key points in the process (ref. Appendix ‘A’). Through this process of incrementally evaluating the hydrologic impacts associated with the implementation of a partial diversion concept, the limits of the area in which water quality diversions could be applied has been refined; ultimately, only the drainage area to the Omagh Tributary has been advanced as the

Appendix H

FINAL DRAINAGE REPORT

Milton Logistic Hub

- Rainwater Harvesting Design Calculations

Rainwater Collection Summary		
General Catchment Data		
Roof Top Area	0.19	ha
Roof Top Area	1,900	m^2
Rainfall Data (Georgetown Climatic Station)		
Year Range	1984 - 2013	
Number of Years	30	years
Month Range	April 1 - Oct 31	
Number of Days per TP	214	days/TP
Total Number of Days per TP over year range	6420	days
Average Rainfall Depth per TP	475	mm
Storage Tank		
Rainwater Tank and Internal Reuse		
Rainwater Tank Volume	**20**	m^3
Initial Rainwater Tank Volume	**0**	m^3
Estimated Daily Demand (Summer)	428	gallon/day
Estimated Daily Demand (Summer)	1.6	m^3/day
Total Estimated Demand (April 1 - Oct 31)	347	m^3
Results (April 1 - Oct 31)		
Total Number of Days in which Tank Overflow Occurs over 30 TP	435	days
Average Number of Days in which Tank Overflow Occurs per TP	15	days/TP
Total Overflow Volume over 30 TP	8,535	m^3
Average Overflow Volume per TP	285	m^3/TP
Number of Days Potable Water is Required over 30 TP	545	days
Average Number of Days in which Potable Water is Required over TP	18	days/TP
Total Volume of Potable Water Required over 30 TP	783	m^3
Average Volume of Potable Water Required per TP	26	m^3/TP
Average Demand Reduction per TP	92%	
Total Roof Runoff Volume over 30 TP	27,055	m^3
Average Roof Runoff Volume per TP	902	m^3/TP
Total Volume of Rainwater Harvested over 30 TP	9,618	m^3
Average Volume of Rainwater Harvested per TP	321	m^3/TP
Percentage of Rainfall Volume Harvested per TP	36%	

Notes:

1. TP = Time Period = April 1 - Oct 31
2. Washdown requirement = 570 L/week/machine = 11, 400 L/week
3. Other non-drinking water uses would be irrigation of landscaped areas and grey water systems (listed as water uses, but not calculated.

Storage Sensitivity				
Storage Tank Volume	**Potable Water Required**	**Rainwater Harvested**	**Overflow Volume**	**Demand Reduction**
m^3	**m^3/TP**	**m^3/TP**	**m^3/TP**	
0	347	0	902	0%
5	142	205	701	59%
10	75	272	510	78%
20	26	321	285	92%
40	6	341	93	98%
50	3	343	56	99%
73	2	345	19	100%

Appendix I

FINAL DRAINAGE REPORT

Milton Logistic Hub

- Pond Design Calculations
- OGS Calculations by Crozier & Associates
- Parking lot and Gate Area Storm Sewer Design Sheet by Crozier & Associates
- Tree Planting Plan by Crozier & Associates

Pond 1

Flow Calculations Through Orifice , Weir & Emergency Spillway

			Orifice*	Weir**		Emerg Spillway	Total Flow
Orifice dia (mm)/Weir Length (m):			200.000	0.400	1.000	14.000	
Invert Levels:			176.85	177.85	178.55	178.90	
Orifice/Weir Coefficient:			0.630	1.650	1.650	1.650	
Description	Elevation	Active Volume					
	m	m^3	m^3/s	m^3/s		m^3/s	m3/s
Pond Bottom	175.35	0	0.000	0.000	0.000	0.000	-
		0	0.000	0.000	0.000	0.000	-
		0	0.000	0.000	0.000	0.000	-
		0	0.000	0.000	0.000	0.000	-
		0	0.000	0.000	0.000	0.000	-
Permanent Pool	176.85	0.000	0.000	0.000	0.000	0.000	-
	176.95	1,043	0.000	0.000	0.000	0.000	-
	177.05	2,121	0.028	0.000	0.000	0.000	0.03
	177.15	3,236	0.039	0.000	0.000	0.000	0.04
	177.25	4,387	0.048	0.000	0.000	0.000	0.05
	177.35	5,575	0.055	0.000	0.000	0.000	0.06
	177.45	6,800	0.062	0.000	0.000	0.000	0.06
	177.55	8,063	0.068	0.000	0.000	0.000	0.07
	177.65	9,363	0.073	0.000	0.000	0.000	0.07
	177.75	10,703	0.078	0.000	0.000	0.000	0.08
Quality Control	177.85	12,081	0.083	0.000	0.000	0.000	0.08
	177.95	13,498	0.088	0.021	0.000	0.000	0.11
	178.05	14,955	0.092	0.059	0.000	0.000	0.15
	178.15	16,451	0.096	0.108	0.000	0.000	0.20
	178.25	17,989	0.100	0.167	0.000	0.000	0.27
	178.35	19,566	0.104	0.233	0.000	0.000	0.34
	178.45	21,186	0.107	0.307	0.000	0.000	0.41
	178.55	22,846	0.111	0.387	0.000	0.000	0.50
25 yr	178.65	24,549	0.114	0.472	0.052	0.000	0.64
	178.75	26,294	0.118	0.564	0.148	0.000	0.83
	178.85	28,081	0.121	0.660	0.271	0.000	1.05
100 yr	178.90	28,997	0.122	0.710	0.342	0.000	1.17
	178.95	29,912	0.124	0.761	0.417	0.258	1.56
	179.05	31,786	0.127	0.868	0.583	1.342	2.92
	179.15	33,705	0.130	0.978	0.767	2.887	4.76
Regional	179.25	35,667	0.133	1.093	0.966	4.783	6.98
	179.35	37,674	0.136	1.212	1.181	6.973	9.50
	179.45	39,726	0.139	1.336	1.409	9.422	12.31
Embankment Top	179.50	40,770	0.140	1.399	1.528	10.736	13.80

*-Orifice Equation: $Q=0.63\ A\ (2gh)^{1/2}$

**-Weir Equation:$Q=1.65\ L\ H^{1.5}$

Pond 1
Detention Time for Low Flow Orifice

The drawdown time in the pond can be estimated using the classic falling head equation:

$$t = \frac{2A_p}{CA_0(2g)^{0.5}}(h_1^{0.5} - h_2^{0.5})$$ (Equation 4.10, MOE SWMP Manual)

Where t is the drawdown time in seconds, A_p is the surface area of the pond (m^2), C is the discharge coefficient (0.63), A_0 is the cross-sectional area of the orifice, h_1 is the starting water elevation above the orifice and h_2 is the ending water elevation above the orifice (m).

Flow Through Orifice

Orifice Diameter: 200 mm
Orifice Area (A_0): 0.0314 m^2

	Stage	Surface Area	Surface Area (Ap)	Head Range			Depth	Q	t
	m	m^2	m^2	m			m	m^3/s	hours
Quality Detention	177.85	13,780							
	177.75	13,392	13,586	1.00	-	0.90	1.00	0.083	4
	177.65	13,008	13,200	0.90	-	0.80	0.90	0.078	5
	177.55	12,627	12,818	0.80	-	0.70	0.80	0.073	5
	177.45	12,251	12,439	0.70	-	0.60	0.70	0.068	5
	177.35	11,879	12,065	0.60	-	0.50	0.60	0.062	5
	177.25	11,510	11,695	0.50	-	0.40	0.50	0.055	6
	177.15	11,146	11,328	0.40	-	0.30	0.40	0.048	6
	177.05	10,785	10,965	0.30	-	0.20	0.30	0.039	7
	176.95	10,428	10,607	0.20	-	0.10	0.20	0.028	9
Permanent Pool	176.85	10,176	10,302	0.10	-	0.00	0.10	0.000	21
								Total detention Time (hours)	72
								Total detention Time (days)	3.0

Pond 1 - Sediment Forebay Calculations

Drainage Area (ha):	52.8	
Imperviousness (%)	50	
Permanent Pool Volume (m^3)	9,462	
Permanent Pool Surface Area (m^2)	6,328	
Side Slope 1:	3	
Maximum allowable surface area (% of PP):	33	(Table 4.6 SWMP Manual)
Maximum allowable volume (% of PP):	20	(Table 4.6 SWMP Manual)

Settling Length

The distance or length required to settle down certain size of sediments in the forebay, defined by the following equation:

$$Dist = \sqrt{\frac{r\,Q_p}{V_s}}$$ (Equation 4.5, SWMP Manual)

r=	2		length-to-width ratio of forebay
Q_p=	0.01	m^3/s	peak flow rate from the pond during design quality storm
V_s	0.0003	m/s	settling velocity (dependent on desired particle size to settle),
Dist=	8	m	forebay length

Dispersion Length

The distance or length required to slow a jet discharge, defined by the following equation:

$$Dist = \frac{8Q}{dV_r}$$ (Equation 4.6, SWMP Manual)

Q=	6.2	m^3/s	inlet flow rate (10 year return period)
d=	1.5	m	depth of permanent pool in the forebay
V_r=	0.5	m/s	desired velocity in the forebay, a fluid jet will disperse to a velocity of ≤ 0.5 m/s
Dist=	66		length of dispersion in the forebay

Forebay Bottom Width

The minimum bottom width of deep zone in forebay is defined by the following equation:

$$Width = \frac{Dist}{8}$$ (Equation 4.7, SWMP Manual)

Dist=	66	forebay length
Width=	8	minimum bottom width

Forebay Size

	Calculated		Recommended		Provided			
					Top	Bottom	Average	
Length (m)	66		50		**55**	**46**	50	
Width (m)	33		25		**30**	**21**	25	
Surface Area (m^2)	2,187		1250		1,608	933	1,270	
Volume	3,280		1,875				1,905	
% of PP Surface Area	35	Revise	20	OK			20	OK
% of PP Volume	35	Revise	20	OK			20	Revise

Pond 2

Flow Calculations Through Orifice , Weir & Emergency Spillway

			Orifice*	Weir**		Emerg Spillway	Total Flow
Orifice dia (mm)/Weir Length (m):			200.000	0.360	0.700	14.000	
Invert Levels:			175.50	176.50	177.20	177.60	
Orifice/Weir Coefficient:			0.630	1.650	1.650	1.650	
Description	Elevation	Active Volume					
	m	m^3	m^3/s	m^3/s		m^3/s	m^3/s
Pond Bottom	174.00	0	0.000	0.000	0.000	0.000	0.00
		0	0.000	0.000	0.000	0.000	0.00
		0	0.000	0.000	0.000	0.000	0.00
		0	0.000	0.000	0.000	0.000	0.00
		0	0.000	0.000	0.000	0.000	0.00
Permanent Pool	175.50	-	0.000	0.000	0.000	0.000	0.00
	175.60	1,049	0.000	0.000	0.000	0.000	0.00
	175.70	2,132	0.028	0.000	0.000	0.000	0.03
	175.80	3,250	0.039	0.000	0.000	0.000	0.04
	175.90	4,404	0.048	0.000	0.000	0.000	0.05
	176.00	5,594	0.055	0.000	0.000	0.000	0.06
	176.10	6,820	0.062	0.000	0.000	0.000	0.06
	176.20	8,083	0.068	0.000	0.000	0.000	0.07
	176.30	9,383	0.073	0.000	0.000	0.000	0.07
	176.40	10,720	0.078	0.000	0.000	0.000	0.08
Quality Control	176.50	12,095	0.083	0.000	0.000	0.000	0.08
	176.60	13,508	0.088	0.019	0.000	0.000	0.11
	176.70	14,960	0.092	0.053	0.000	0.000	0.15
	176.80	16,451	0.096	0.098	0.000	0.000	0.19
	176.90	17,981	0.100	0.150	0.000	0.000	0.25
	177.00	19,551	0.104	0.210	0.000	0.000	0.31
	177.10	21,161	0.107	0.276	0.000	0.000	0.38
25 yr	177.20	22,812	0.111	0.348	0.000	0.000	0.46
	177.30	24,503	0.114	0.425	0.037	0.000	0.58
	177.40	26,236	0.118	0.507	0.103	0.000	0.73
	177.50	28,011	0.121	0.594	0.190	0.000	0.90
100 yr	177.60	29,828	0.124	0.685	0.292	0.000	1.10
	177.70	31,688	0.127	0.781	0.408	0.730	2.05
	177.80	33,590	0.130	0.880	0.537	2.066	3.61
	177.90	35,536	0.133	0.984	0.676	3.796	5.59
Regional	178.00	37,525	0.136	1.091	0.826	5.844	7.90
	178.10	39,559	0.139	1.202	0.986	8.167	10.49
	178.20	41,637	0.141	1.317	1.155	10.736	13.35
Embankment Top	178.30	43,760	0.144	1.434	1.333	13.529	16.44

*-Orifice Equation: $Q=0.63\ A\ (2gh)^{1/2}$

**-Weir Equation:$Q=1.65\ L\ H^{1.5}$

Pond 2
Detention Time for Low Flow Orifice

The drawdown time in the pond can be estimated using the classic falling head equation:

$$t = \frac{2A_p}{CA_0(2g)^{0.5}}(h_1^{0.5} - h_2^{0.5})$$ (Equation 4.10, MOE SWMP Manual)

Where t is the drawdown time in seconds, A_p is the surface area of the pond (m^2), C is the discharge coefficient (0.63), A_0 is the cross-sectional area of the orifice, h_1 is the starting water elevation above the orifice and h_2 is the ending water elevation above the orifice (m).

Flow Through Orifice

Orifice Diameter: 200 mm
Orifice Area (A_0): 0.0314 m^2

	Stage	Surface Area	Surface Area (Ap)	Head Range	Depth	Q	t
	m	m^2	m^2	m	m	m^3/s	hours
Quality Detention	176.50	13,750					
	176.40	13,372	13,561	1.00 - 0.90	1.00	0.083	4
	176.30	12,997	13,184	0.90 - 0.80	0.90	0.078	5
	176.20	12,627	12,812	0.80 - 0.70	0.80	0.073	5
	176.10	12,260	12,444	0.70 - 0.60	0.70	0.068	5
	176.00	11,898	12,079	0.60 - 0.50	0.60	0.062	5
	175.90	11,539	11,718	0.50 - 0.40	0.50	0.055	6
	175.80	11,184	11,362	0.40 - 0.30	0.40	0.048	6
	175.70	10,833	11,009	0.30 - 0.20	0.30	0.039	7
	175.60	10,486	10,660	0.20 - 0.10	0.20	0.028	9
Permanent Pool	175.50	10,241	10,364	0.10 - 0.00	0.10	0.000	21
						Total detention Time (hours)	72
						Total detention Time (days)	3.0

Pond 2 - Sediment Forebay Calculations

Drainage Area (ha):	49.8	
Imperviousness (%)	50	
Permanent Pool Volume (m^3)	8,924	
Permanent Pool Surface Area (m^2)	5,970	
Side Slope 1:	3	
Maximum allowable surface area (% of PP):	33	(Table 4.6 SWMP Manual)
Maximum allowable surface area (% of PP):	20	(Table 4.6 SWMP Manual)

Settling Length

The distance or length required to settle down certain size of sediments in the forebay, defined by the following equation:

$$Dist = \sqrt{\frac{r\,Q_p}{V_s}}$$ (Equation 4.5, SWMP Manual)

r=	2		length-to-width ratio of forebay
Q_p=	0.01	m^3/s	peak flow rate from the pond during design quality storm
V_s	0.0003	m/s	settling velocity (dependent on desired particle size to settle),
Dist=	8	m	forebay length

Dispersion Length

The distance or length required to slow a jet discharge, defined by the following equation:

$$Dist = \frac{8Q}{dV_r}$$ (Equation 4.6, SWMP Manual)

Q=	5.86	m^3/s	inlet flow rate (10 year return period)
d=	1.5	m	depth of permanent pool in the forebay
V_r=	0.5	m/s	desired velocity in the forebay, a fluid jet will disperse to a velocity of ≤ 0.5 m/s
Dist=	63		length of dispersion in the forebay

Forebay Bottom Width

The minimum bottom width of deep zone in forebay is defined by the following equation:

$$Width = \frac{Dist}{8}$$ (Equation 4.7, SWMP Manual)

Dist=	63	forebay length
Width=	8	minimum bottom width

Forebay Size

	Calculated		Recommended		Provided			
					Top	Bottom	Average	
Length (m)	63		48		**53**	**44**	48	
Width (m)	31		24		**29**	**20**	24	
Surface Area (m^2)	1,954		1152		1,496	848	1,172	
Volume	2,930		1,728				1,758	
% of PP Surface Area	33	OK	19	OK			20	OK
% of PP Volume	33	Revise	19	OK			20	OK

CROZIER
CONSULTING ENGINEERS

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Suite 100, Milton, ON | F. 905.875.4915
L9T 6P4 | cfcrozier.ca

Request for Information

Project Number: 1065-4067	**Request Number:** 1
Date: February 25, 2019	**From:** Anindita Datta
Signature of Requester:	

Response Requested From

Name: Ayhem Sadie	**Email:** ayhem.sadie@aecom.com
Response Required By: March 11, 2019	**Priority:** Normal
Signature of Requestee:	

Distribution

Company	Name	Email	Phone Number
AECOM	Ayhem Sadie	ayhem.sadie@aecom.com	905-206-8128
AECOM	Manan Raval	Manan.raval@aecom.com	905-206-8567

Information Required

For design of SWM Pond 1 and 2, we have prepared stage-storage spreadsheets outlining the permanent pool, extended detention, 100 year and regional storm elevations. Kindly review the stage-storage tables for SWM Ponds 1 and 2 and incorporate into your OTTHYMO model. Kindly confirm the storm elevations for each pond and if the previously designed outlet structures are appropriately sized.

CROZIER CONSULTING ENGINEERS

Stage Storage Volume - SWM POND 1

Project: 1065-4067
Prepared By: AM
Reviewed By: AD
Date: 2019.02.14

SWM POND 1

Minimum Elevation	Cumulative Volume (m3)	Level	CROZIER DESIGN	FSR VOLUME VALUES
175.75	0			
175.85	95.89			
175.95	199.12			
176.05	309.84			
176.15	871.45			
176.25	1459.05			
176.35	2072.8			
176.45	2712.86			
176.55	3379.38			
176.65	4076.89			
176.75	4809.82			
176.85	5578.16			
176.95	6392.67			
177.05	7246.77			
177.15	**8139.19**	**PERM**	**8139**	**7350**
177.25	9073.55			
177.35	10053.7			
177.45	11079.05			
177.55	12148.99			
177.65	13262.92			
177.75	14420.23			
177.85	15614.94			
177.95	16841.5			
178.05	18099.98			
178.15	19390.43			
178.25	**20712.91**	**EXT. DET.**	**12573**	**12081**
178.35	22067.48			
178.45	23454.2			
178.55	24873.14			
178.65	26324.35			
178.75	27807.89			
178.85	29323.82			
178.95	30872.2			
179.05	32453.09			
179.15	34086.69			
179.25	35769.66			
179.35	**37492.85**	**100YR**	**29353**	**28997**
179.45	39254.17			
179.55	41048.77			
179.65	42872.98			
179.75	44726.5			
179.85	46609.67			
179.95	**48522.69**	**REGIONAL**	**40413**	**40770**
180.05	50465.04			
180.15	52437.22			
180.25	54439.58	FREEBOARD		

CROZIER
CONSULTING ENGINEERS

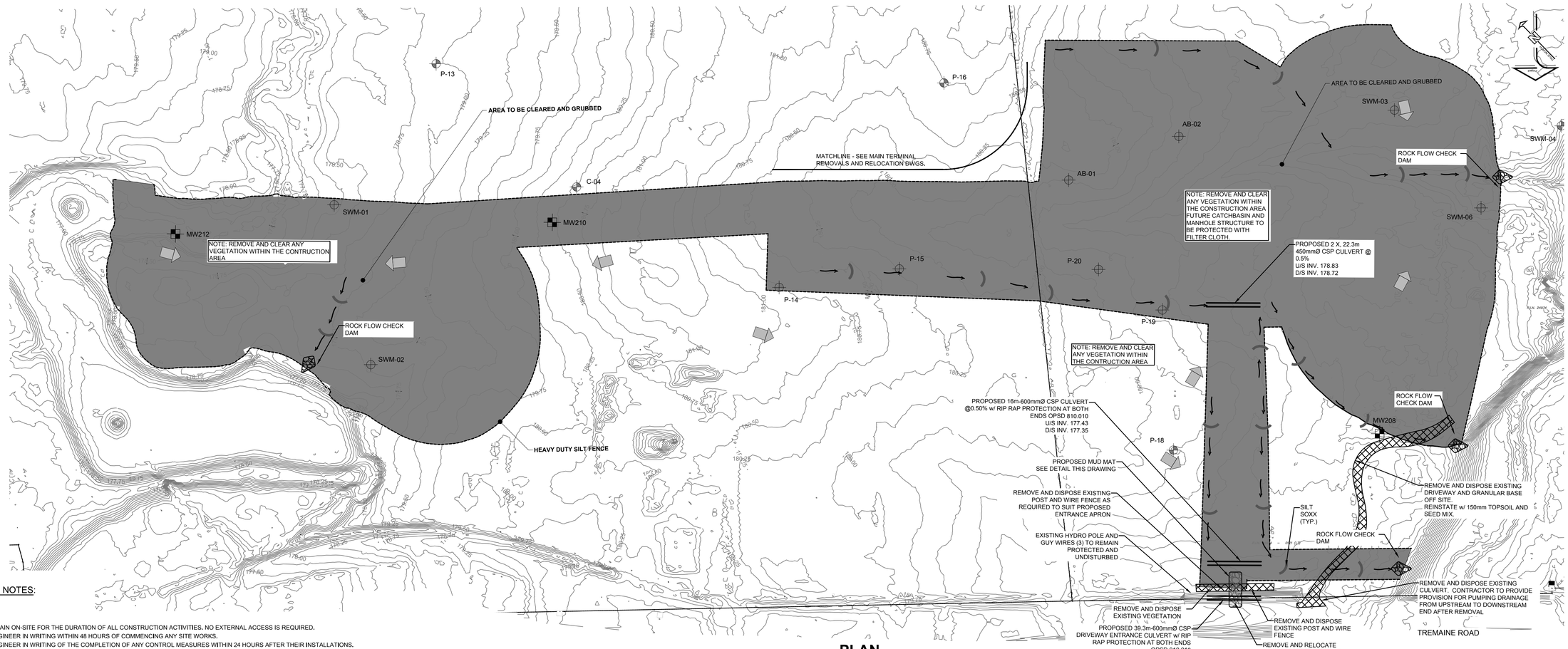
Project: 1065-4067
Prepared By: AM
Reviewed By: AD
Date: 2019.02.14

Stage Storage Volume - SWM POND 2

SWM Pond 2

Minimum Elevation	Cumulative Volume (m3)	Level	CROZIER DESIGN	FSR VOLUME VALUES
174.00	0			
174.10	59.54			
174.20	125.68			
174.30	198.58			
174.40	278.38			
174.50	377.92			
174.60	1020.67			
174.70	1693			
174.80	2393.82			
174.90	3121.48			
175.00	3881.24			
175.10	4679.39			
175.20	5515.32			
175.30	6399.32			
175.40	7321.98			
175.50	**8281.63**	**PERM**	**8281.63**	**6933**
175.60	9283.63			
175.70	10334.37			
175.80	11433.91			
175.90	12582.3			
176.00	13779.58			
176.10	15025.81			
176.20	16317.31			
176.30	17650.02			
176.40	19023.4			
176.50	**20436.91**	**EXT DET.**	**12155.28**	**12095**
176.60	21887.45			
176.70	23372.41			
176.80	24891.98			
176.90	26449.38			
177.00	28039.15			
177.10	29659.76			
177.20	31309.65			
177.30	32987.28			
177.40	34715.38			
177.50	36473.46			
177.60	**38259.72**	**100yr.**	**29978.09**	**29828**
177.70	40080.46			
177.80	41931.14			
177.90	43833.62			
178.00	**45766.3**	**REGIONAL**	**37484.67**	**37525**
178.10	47728.71			
178.20	49716.29			
178.30	51724.53			

D SIZE 22" x 34" (558.8mm x 863.6mm)



PLAN

0 25 50 75 m SCALE 1:1250

EROSION & SEDIMENT CONTROL NOTES:

1.0 GENERAL NOTES

1.1 ALL CONSTRUCTION EQUIPMENT TO REMAIN ON-SITE FOR THE DURATION OF ALL CONSTRUCTION ACTIVITIES. NO EXTERNAL ACCESS IS REQUIRED.
1.2 CONTRACTOR SHALL NOTIFY CN AND ENGINEER IN WRITING WITHIN 48 HOURS OF COMMENCING ANY SITE WORKS.
1.3 CONTRACTOR SHALL NOTIFY CN AND ENGINEER IN WRITING OF THE COMPLETION OF ANY CONTROL MEASURES WITHIN 24 HOURS AFTER THEIR INSTALLATIONS.
1.4 CONTRACTOR SHALL OBTAIN PERMISSION FROM THE CONTRACT ADMINISTRATOR PRIOR TO MODIFYING THE CONTROL PLAN.
1.5 CONTRACTOR SHALL MAINTAIN ALL ROAD DRAINAGE SYSTEMS, STORMWATER DRAINAGE SYSTEMS, AND CONTROL MEASURES IDENTIFIED IN THIS GRADING PLAN.
1.6 CONTRACTOR SHALL IMMEDIATELY REPAIR ANY SILTATION OR EROSION DAMAGE TO ADJOINING SURFACES AND DRAINAGE-WAYS RESULTING FROM LAND DEVELOPING OR DISTURBING ACTIVITIES.
1.7 CONTRACTOR SHALL INSPECT THE CONSTRUCTION CONTROL MEASURES AT LEAST ONCE PER WEEK AND AFTER EACH RAINFALL OF AT LEAST 10mm AND MAKE NEEDED REPAIRS.
1.8 CONTRACTOR MUST MAINTAIN A COPY OF THIS PLAN ON THE SITE.
1.9 CONTRACTOR TO REVIEW CONDITIONS OF ALL APPROVALS PRIOR TO CONSTRUCTION.
1.10 ALL STOCKPILE SIDE SLOPES TO BE 4:1 MAX. ANY STOCKPILES LEFT UNDISTURBED FOR 30 DAYS ARE TO BE SEEDED WITH NATIVE GRASS.
1.11 CONTRACTOR TO INSTALL ROCK CHECK DAMS, SILT FENCE, AND STRAW BALE SEDIMENT CONTROLS AS PER DRAWINGS AND ELSEWHERE AS NOTED BY THE ENGINEER.

2.0 MAINTENANCE & OPERATION OF SEDIMENT CONTROLS

2.1 SILT FENCE TO BE INSTALLED IN LOCATIONS SHOWN ON PLAN AND AS DIRECTED BY CN AND ENGINEER.
2.2 SILT FENCE MUST BE INSPECTED WEEKLY FOR RIPS OR TEARS, BROKEN STAKES, BLOW-OUTS AND ACCUMULATION OF SEDIMENT.
2.3 SILT FENCE MUST BE INSPECTED FOLLOWING ALL 10mm OR GREATER RAIN STORM EVENT OR AS DIRECTED BY ENGINEER.
2.4 SEDIMENT MUST BE REMOVED FROM SILT FENCE WHEN ACCUMULATION REACHES 50% OF THE HEIGHT OF FENCE.
2.5 ALL SILT FENCES MUST BE REMOVED ONLY WHEN THE ENTIRE SITE IS STABILIZED AND AS DIRECTED BY THE SITE ENGINEER.
2.6 REMOVE ACCUMULATED SEDIMENT UPSTREAM OF ROCK CHECK DAM IF GREATER THAN ONE HALF OF DAM HEIGHT.
2.7 SILT REMOVAL FROM ROCK CHECK DAMS MUST BE UNDERTAKEN WITH CARE TO MINIMIZE DOWNSTREAM SEDIMENTATION IN SWALE OR DITCH.
2.8 EXISTING STREET AND PROPOSED CATCHBASINS AT CONSTRUCTION ENTRANCES TO BE WRAPPED WITH FILTER CLOTH AND INSPECTED FOLLOWING ALL 10mm OR GREATER RAIN STORM EVENTS, OR AS DIRECTED BY ENGINEER.
2.10 UPON INSTALLATION OF ALL FUTURE CATCHBASINS, CATCHBASIN MANHOLES AND DOUBLE CATCHBASIN MANHOLES, GRATES TO BE WRAPPED WITH FILTER CLOTH AND INSPECTED FOLLOWING ALL 10mm OR GREATER RAIN STORM EVENTS, OR AS DIRECTED BY ENGINEER.

FILTREXX SILTSOXX DETAIL

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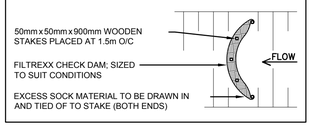

MUD-MAT DETAIL

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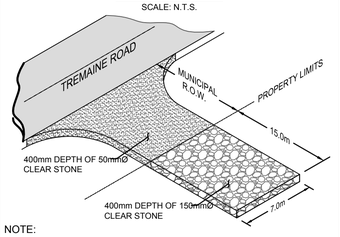
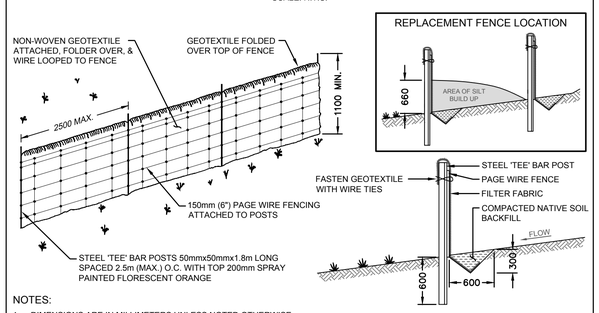


NOTE:
GEOTEXTILE (TERRAFIX 270R OR APPROVED EQUAL) TO BE PLACED AS SEPARATION BARRIER BETWEEN EXISTING GROUND AND CLEAR STONE.

TYPICAL HEAVY DUTY SILT FENCE

SCALE: N.T.S.



NOTES:
1. DIMENSIONS ARE IN MILLIMETERS UNLESS NOTED OTHERWISE.
2. SILT CONTROL FENCE SHOULD BE ALIGNED WITH CONTOURS FOR SHEET OVERLAND FLOW.
3. SILT CONTROL FENCE IS TO BE LOCATED IN AREAS OF LOW SEDIMENT YIELD ON SLOPES THAT CONFORM TO MTO DRAINAGE MANUAL VOLUME 2 "CHART F4-3C TOPOGRAPHIC FACTOR IS BASED ON SLOPE LENGTH AND GRADIENT."
4. SILT CONTROL FENCE TO BE INSTALLED WITH FILTER MEDIA FABRIC TOED INTO THE SOIL A MIN. OF 300mm BY EITHER STATIC SLICING OR TRENCH METHODS WITH COMPACTION OF TRENCH MATERIAL MEETING 95% INSITU SOIL STRENGTH.
5. STEEL 'TEE' BAR POSTS ARE TO BE SPACED MAX. 2.5m ON CENTER WITH A MIN. HEIGHT OF 1.1m.
6. FROZEN GROUND CONDITIONS REQUIRE FILTER FABRIC TO BE BACKFILLED IN TRENCH WITH CLEAR STONE
7. GEOTEXTILE FABRIC TO BE COMPRISED OF NON-WOVEN U.V. STABILIZED MATERIAL. FABRIC TO BE FOLDED OVER TOP OF FENCE MIN. 300mm AND WIRE FASTENED.

LEGEND

- PROPERTY LINE
- EXISTING OVERLAND FLOW DIRECTION

PROPOSED FEATURES

- MUD-MAT; SEE DETAIL
- SILT FENCE; SEE DETAIL
- FILTREXX SILTSOXX; SEE DETAIL
- TEMPORARY SWALE
- ROCK FLOW CHECK DAM; OPSD 219.210
- REMOVALS
- CLEARING AND GRUBBING
- MW210 MONITORING WELL
- SWM-01 BOREHOLE LOCATION (PREPARED BY AECOM CANADA LTD., DATED APRIL 2019, PROJECT No.: 60579933)

REGION	SUBDIVISION	MILE
HALTON	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

PROFESSIONAL SEALS

DO NOT SCALE THIS DOCUMENT. ALL MEASUREMENTS MUST BE OBTAINED FROM STATED DIMENSIONS.

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I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
B	19/10/25	ISSUED FOR 60% SUBMISSION	XX	XX	XX	XX		
A	19/03/22	ISSUED FOR 30% SUBMISSION	XX	XX	XX	XX		

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CN
MILTON LOGISTIC HUB
HALTON SUBDIVISION - Mile 36.79 to 41.27
TRAILER PARKING LOT, STORAGE PAD, EMPLOYEE PARKING LOTS AND PONDS
EROSION SEDIMENT CONTROL AND REMOVALS

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-ESC-1000	C

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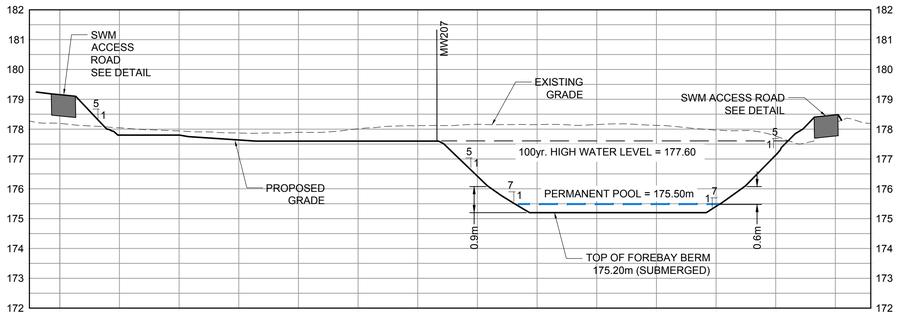
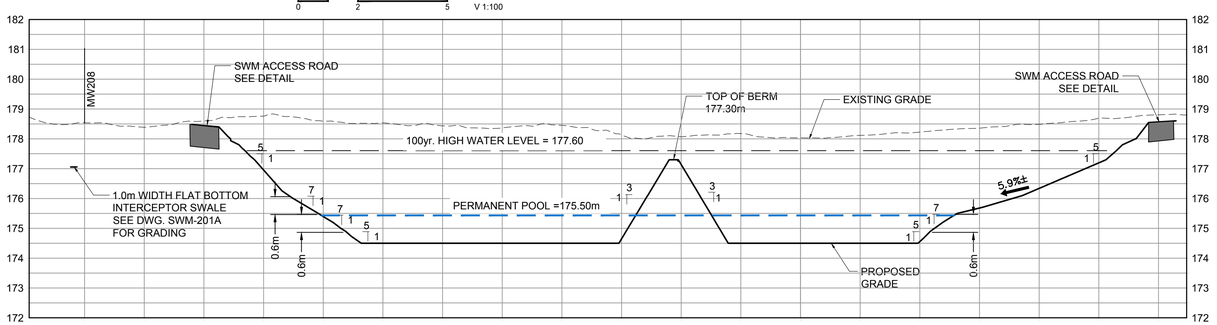


CROSS SECTION 2



CROSS SECTION 3

EMERGENCY SPILLWAY

NOTE:
REFER TO 01-C-2007 FOR DRAINAGE STRUCTURE DETAILS.

SHOP DRAWING RESPONSIBILITIES

AS PART OF THEIR FIELD SERVICES, THE ENGINEER MAY REVIEW SHOP DRAWINGS PERTAINING TO WORK SHOWN ON THE ENGINEER'S DRAWINGS BY MEANS OF APPROPRIATE RATIONAL SAMPLING PROCEDURES AND COMMENT ON THE ACCURACY WITH WHICH THE CONTRACTOR PREPARED THE DRAWINGS. REVIEW OF SHOP DRAWINGS IS FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT AND IS NOT AN APPROVAL OF THE DETAIL DESIGN INHERENT IN THE SHOP DRAWINGS. RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR SUBMITTING THEM. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS OR FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INFORMATION PERTAINING TO THE FABRICATION PROCESS TECHNIQUES OF CONSTRUCTION AND INSTALLATION, AND FOR CO-ORDINATION OF THE WORK OF ALL SUB-TRADES.

1. MANUFACTURERS OF ALL STRUCTURAL ELEMENTS SHALL SUBMIT COMPLETE SHOP DRAWINGS. SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN ONTARIO TO THE CONSULTANT FOR REVIEW PRIOR TO THE FABRICATION (3 SETS OR PDF). SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH SPECIFICATIONS AND ALLOW A MINIMUM OF TWO(2) WEEKS FOR REVIEW. THE SUBMISSION NOR THE REVIEW SHALL RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING PROPER ENGINEERING DESIGN, METHODS, EQUIPMENT, WORKMANSHIP AND SAFETY PROCEDURES.

2. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR THE FOLLOWING:

   i. CONCRETE REINFORCING BAR
   ii. CONCRETE MIX DESIGN
   ij. CONCRETE PARTITION WALL
   ik. KNOCK HOLES AND CUT OUT
   il. PRECAST BOX OUTLET STRUCTURE

SWM-P2 OUTLET STRUCTURE CROSS SECTION Z-Z

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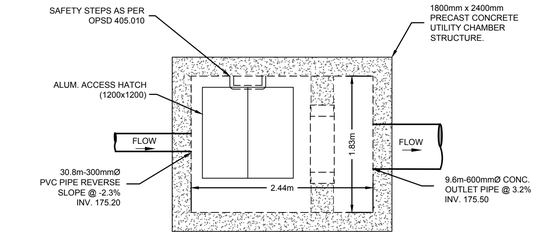
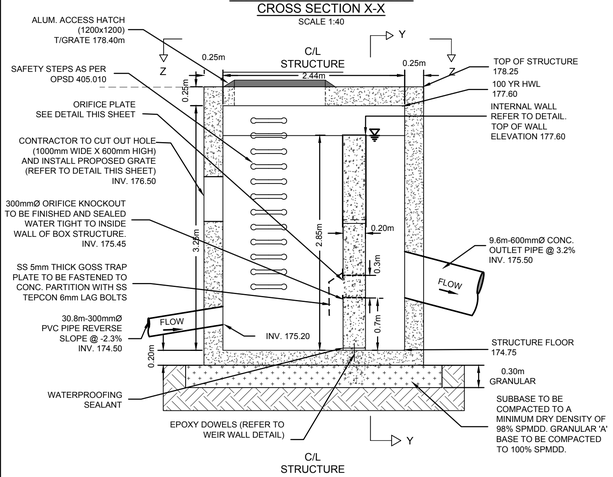


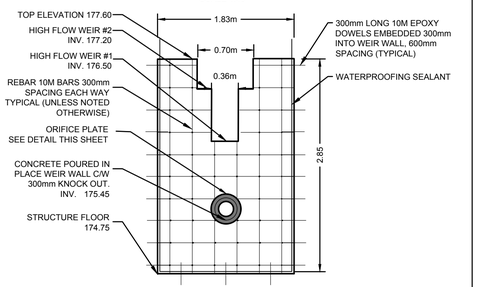
SWM-P2 OUTLET STRUCTURE CROSS SECTION X-X

SCALE 1:40



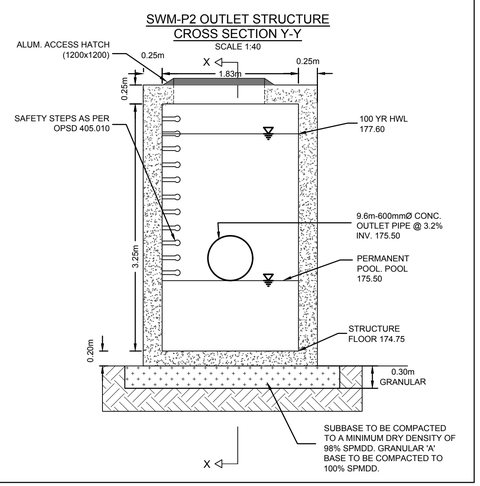
TYPICAL CONCRETE WEIR WALL DETAIL

SCALE 1:40



SWM-P2 OUTLET STRUCTURE CROSS SECTION Y-Y

SCALE 1:40



TYPICAL GRASSED SWALE DETAIL

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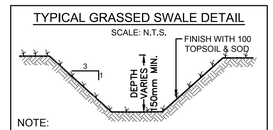

NOTE:
ALL DIMENSIONS ARE IN MILLIMETERS.

OUTLET STRUCTURE CUT OUT

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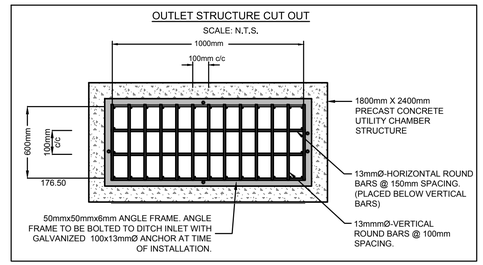
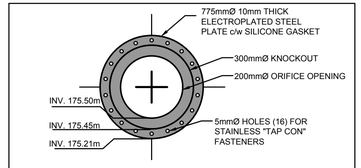


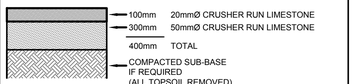
TYPICAL ORIFICE PLATE

SCALE: N.T.S.



4.0m WIDE ACCESS ROAD STRUCTURE DETAIL

SCALE: N.T.S.



NOTE:
REFER TO CONSTRUCTION NOTES FOR DETAILS ON PLACEMENT OF MATERIALS.

REGION	SUBDIVISION	MILE
HALTON	HALTON	36.79- 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

PROFESSIONAL SEALS

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
C	20/05/13	ISSUED FOR 90% SUBMISSION	YL	DG	AD	RM		
B	19/10/25	ISSUED FOR 60% SUBMISSION	XX	XX	XX	XX		
A	19/03/22	ISSUED FOR 30% SUBMISSION	XX	XX	XX	XX		

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CN
MILTON LOGISTIC HUB
HALTON SUBDIVISION - Mile 36.79 to 41.27
STORMWATER MANAGEMENT POND # 2
CROSS-SECTIONS AND DETAILS

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-SWM-2001	C

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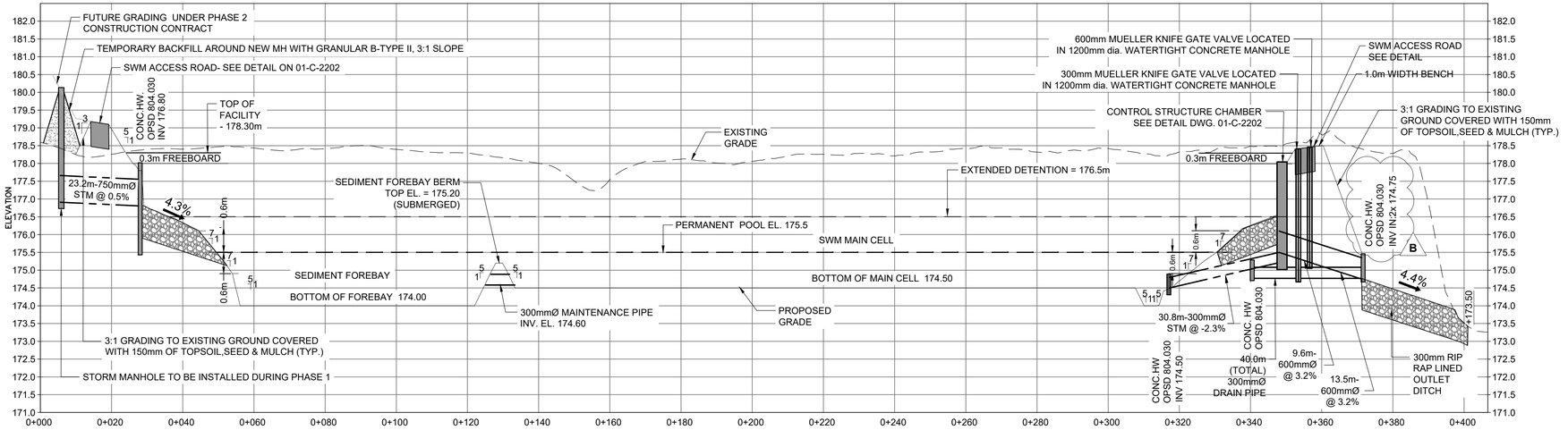

CROSS SECTION 1

0 15 40 m H 1:750
0 1.5 4 V 1:75

REGION	SUBDIVISION	MILE
HALTON	HALTON	38.72 - 40.98
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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PROFESSIONAL SEALS

LICENSED PROFESSIONAL ENGINEER K. J. FIRTH 07/29/2021 PROVINCE OF ONTARIO

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
0	21/08/01	ISSUED FOR CONSTRUCTION	MVR	SA	AD	KJF		

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MILTON LOGISTICS HUB - HALTON SUBDIVISION - PHASE 1
STORMWATER MANAGEMENT POND # 2
CROSS SECTION 1

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
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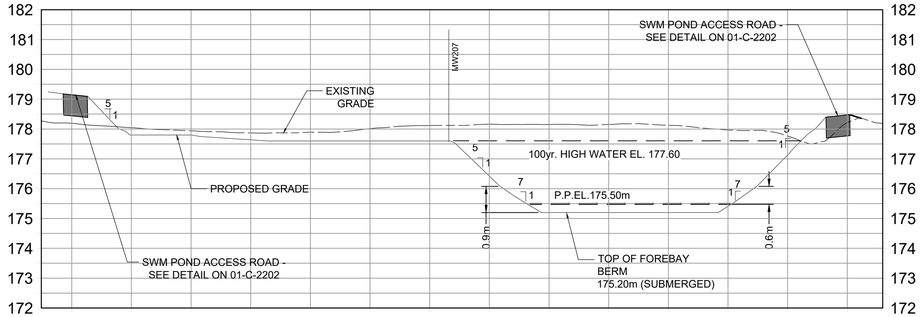

CROSS SECTION 2

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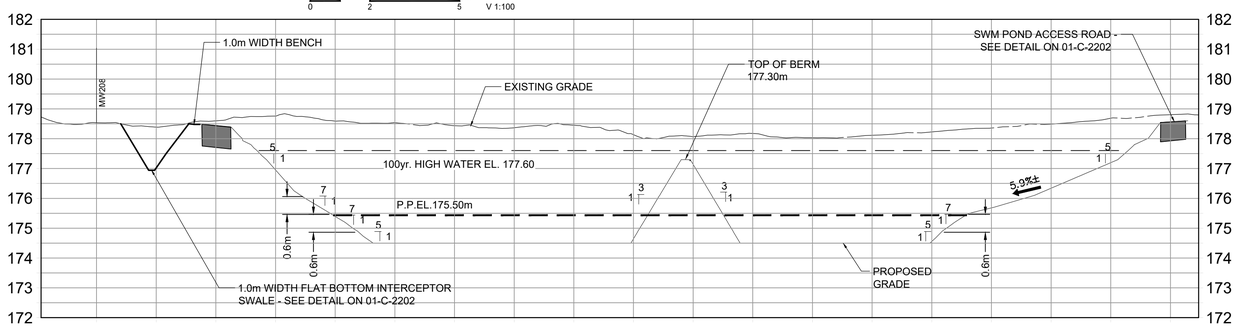

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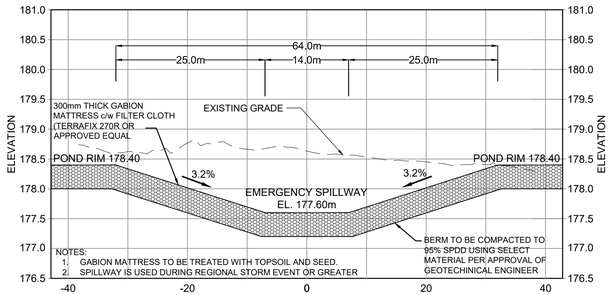

EMERGENCY SPILLWAY

0 10 25 m H 1:500
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SHOP DRAWING RESPONSIBILITIES AND SUBMISSIONS

THE ENGINEER SHALL REVIEW SHOP DRAWINGS PERTAINING TO WORK SHOWN ON THE ENGINEER'S DRAWINGS BY MEANS OF APPROPRIATE RATIONAL SAMPLING PROCEDURES AND COMMENT ON THE ACCURACY WITH WHICH THE CONTRACTOR PREPARED THE DRAWINGS. REVIEW OF SHOP DRAWINGS IS FOR THE SOLE PURPOSE OF ASCERTAINING CONFORMANCE WITH THE GENERAL DESIGN CONCEPT AND IS NOT AN APPROVAL OF THE DETAIL DESIGN INHERENT IN THE SHOP DRAWINGS. RESPONSIBILITY FOR WHICH SHALL REMAIN WITH THE CONTRACTOR SUBMITTING THEM. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR ERRORS AND OMISSIONS IN THE SHOP DRAWINGS OR FOR MEETING ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS.

THE CONTRACTOR IS SOLELY RESPONSIBLE FOR INFORMATION PERTAINING TO THE FABRICATION PROCESS TECHNIQUES OF CONSTRUCTION AND INSTALLATION, AND FOR CO-ORDINATION OF THE WORK OF ALL SUB-TRADES.

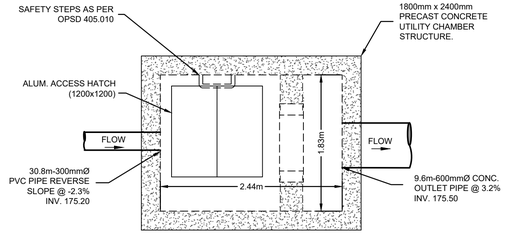
1. MANUFACTURERS OF ALL STRUCTURAL ELEMENTS SHALL SUBMIT COMPLETE SHOP DRAWINGS. SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN ONTARIO TO THE CONSULTANT FOR REVIEW PRIOR TO THE FABRICATION (3 SETS OR PDF). SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH SPECIFICATIONS AND ALLOW A MINIMUM OF TWO(2) WEEKS FOR REVIEW. THE SUBMISSION NOR THE REVIEW SHALL RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY FOR PROVIDING PROPER ENGINEERING DESIGN, METHODS, EQUIPMENT, WORKMANSHIP AND SAFETY PROCEDURES.

2. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR THE FOLLOWING:

   a. CONCRETE REINFORCING BAR
   b. CONCRETE MIX DESIGN
   c. CONCRETE PARTITION WALL
   d. KNOCK HOLES AND CUT OUT
   e. PRECAST BOX OUTLET STRUCTURE

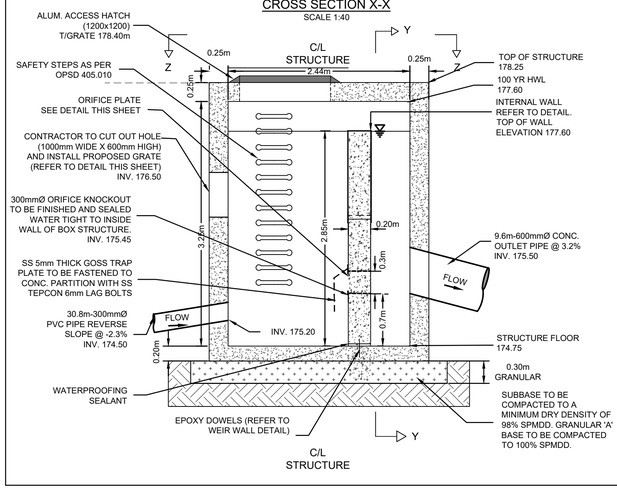
SWM-P2 OUTLET STRUCTURE CROSS SECTION Z-Z

SCALE 1:40



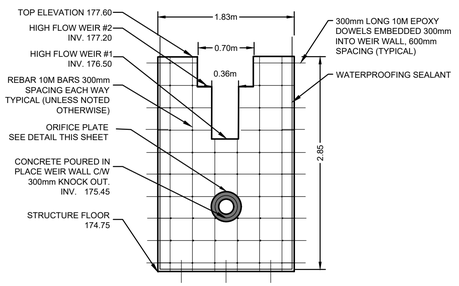
SWM-P2 OUTLET STRUCTURE CROSS SECTION X-X

SCALE 1:40



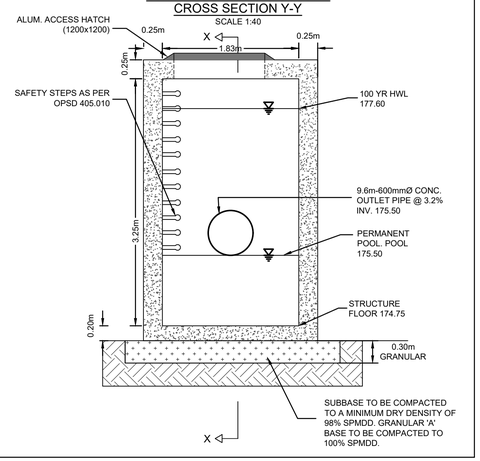
TYPICAL CONCRETE WEIR WALL DETAIL

SCALE 1:40



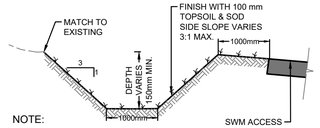
SWM-P2 OUTLET STRUCTURE CROSS SECTION Y-Y

SCALE 1:40



TYPICAL GRASSED SWALE DETAIL

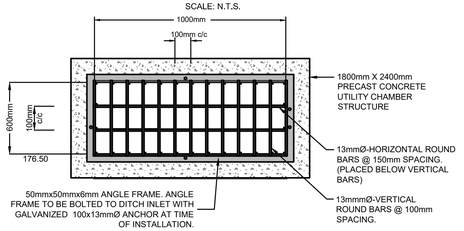
SCALE: N.T.S.

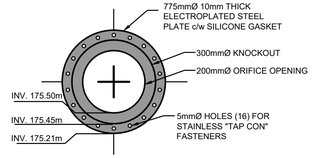


NOTE:
ALL DIMENSIONS ARE IN MILLIMETERS.

OUTLET STRUCTURE CUT OUT

SCALE: N.T.S.



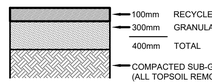


TYPICAL ORIFICE PLATE

SCALE: N.T.S.

4.0m WIDE ACCESS ROAD STRUCTURE DETAIL

SCALE: N.T.S.



NOTE:
REFER TO CONSTRUCTION NOTES FOR DETAILS ON PLACEMENT OF MATERIALS.
REFER TO DWG. 01-C-1065 FOR PAVEMENT TRANSITION DETAILS

	REGION	SUBDIVISION	MILE
CN	HALTON	HALTON	36.79- 41.27
	CN PROJECT NO.	CN DRAWING NO.	
	-	-	

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PROFESSIONAL SEALS

LICENSED PROFESSIONAL ENGINEER
K. J. FIRTH
07/29/2021
PROVINCE OF ONTARIO

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
0	21/08/01	ISSUED FOR CONSTRUCTION	MVR	SA	AD	KJF		

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CN
MILTON LOGISTICS HUB - HALTON SUBDIVISION - PHASE 1

STORMWATER MANAGEMENT POND # 2

CROSS SECTIONS 2& 3 AND DETAILS

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
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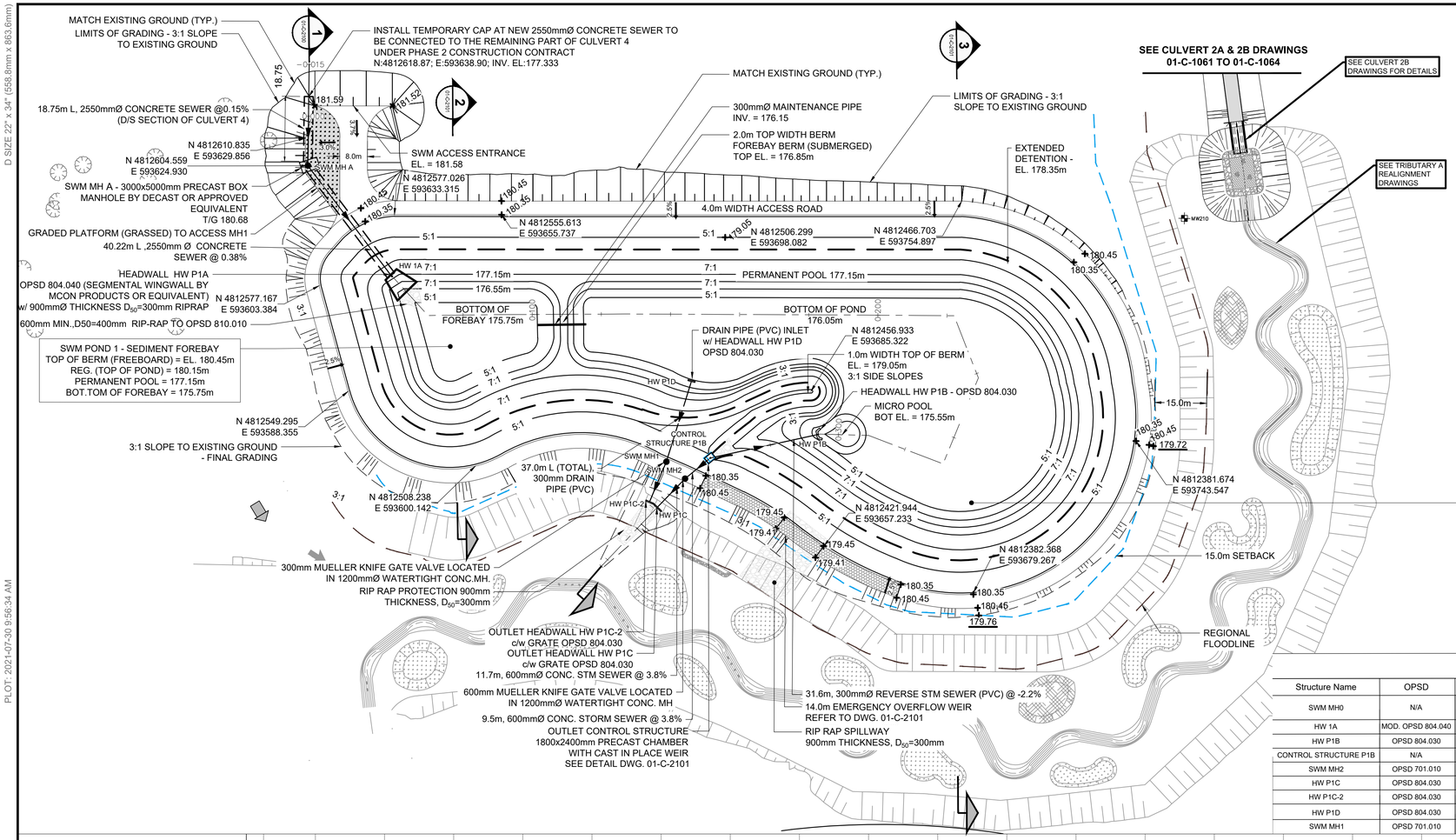


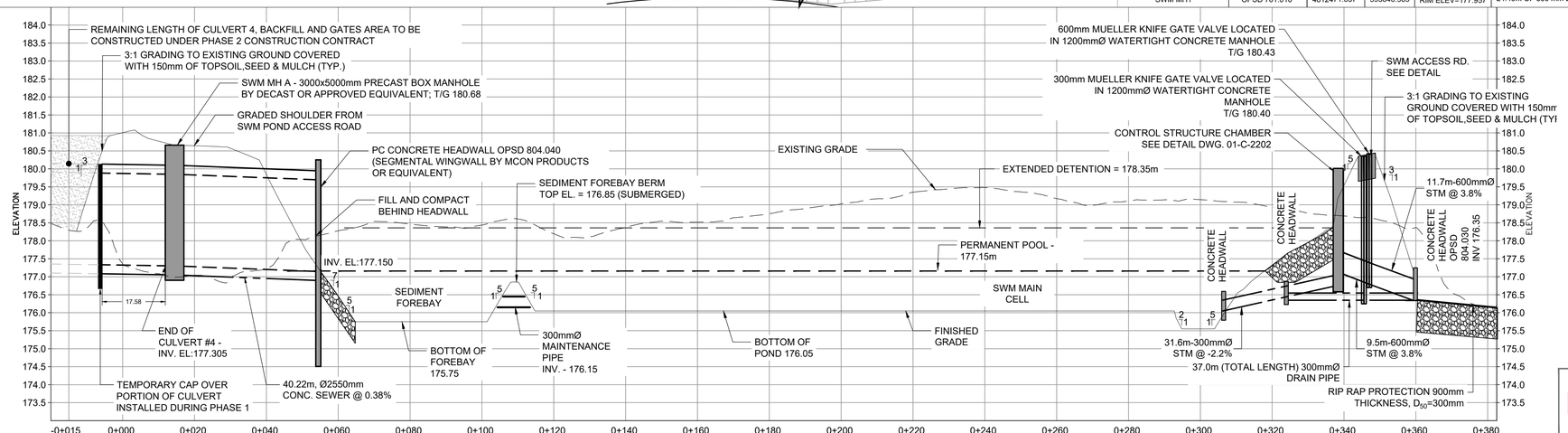
NOTE:
CONSTRUCTION OF POND 1 SHALL COMMENCE ONCE TRIBUTARY A REALIGNMENT WORKS HAVE BEEN FINALIZED AND FLOW HAS BEEN REDIRECTED TO THE NEW ALIGNMENT

PLAN

15 0m 15 30 45 SCALE 1:750

STRUCTURE TABLE - SWM POND #1

Structure Name	OPSD	NORTHING	EASTING	DETAILS:	PIPES IN	PIPES OUT	DIA.(mm)	FRAME /GRATE
SWM MH0	N/A	4812604.324	593625.427	RIM ELEV=180.681	19.83m OF 2550 mm Ø CONC. @ 0.38% INV IN =177.305	39.60m OF 2550 mm Ø CONC. @ 0.38% INV OUT =177.303	RECT. 3000x5000	OPSD 401.030
HW 1A	MOD. OPSD 804.040	4812565.035	593620.471		39.60m OF 2550 mm Ø CONC. @ 0.38% INV IN =177.150			
HW P1B	OPSD 804.030	4812446.693	593677.905			31.55m OF 300 mm Ø PVC @ -2.22% INV OUT =176.050		
CONTROL STRUCTURE P1B	N/A	4812463.077	593650.938	RIM ELEV=178.075	31.55m OF 300 mm Ø PVC @ -2.22% INV IN =176.750	9.46m OF 600 mm Ø CONC. @ 3.81% INV OUT =177.150	1800x2400	OPSD 401.030
SWM MH2	OPSD 701.010	4812463.777	593641.508	RIM ELEV=181.815	9.46m OF 600 mm Ø CONC. @ 3.81% INV IN =176.790	11.66m OF 600 mm Ø CONC. @ 3.77% INV OUT =176.790	1200	OPSD 401.030
HW P1C	OPSD 804.030	4812463.298	593630.012		11.66m OF 600 mm Ø CONC. @ 3.77% INV IN =176.350			OPSD 804.050
HW P1C-2	OPSD 804.030	4812466.012	593629.435		12.60m OF 300 mm Ø PVC @ 0.00% INV IN =176.350			OPSD 804.050
HW P1D	OPSD 804.030	4812482.935	593662.389			24.49m OF 300 mm Ø PVC @ 0.00% INV OUT =176.350		
SWM MH1	OPSD 701.010	4812471.037	593640.989	RIM ELEV=177.957	24.49m OF 300 mm Ø PVC @ 0.00% INV IN =176.350	12.60m OF 300 mm Ø PVC @ 0.00% INV OUT =176.350	1200	OPSD 401.030



CROSS SECTION 1

15 0m 15 30 45 H 1:750
1.5 0m 1.5 3.5 V 1:75

REGION	SUBDIVISION	MILE
HALTON	HALTON	38.72 - 40.98
CN PROJECT NO. -	CN DRAWING NO. -	

PROFESSIONAL SEALS

<Original signed by>
K. J. FIRTH
07/29/2021

0	21/08/01	ISSUED FOR CONSTRUCTION	MVR	SA	AD	KJF		
I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP

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MILTON LOGISTICS HUB - HALTON SUBDIVISION - PHASE 1
STORMWATER MANAGEMENT FACILITY POND # 1
PLAN AND CROSS SECTION 1

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-C-2100	0

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PLOT: 2021-07-30 9:56:34 AM
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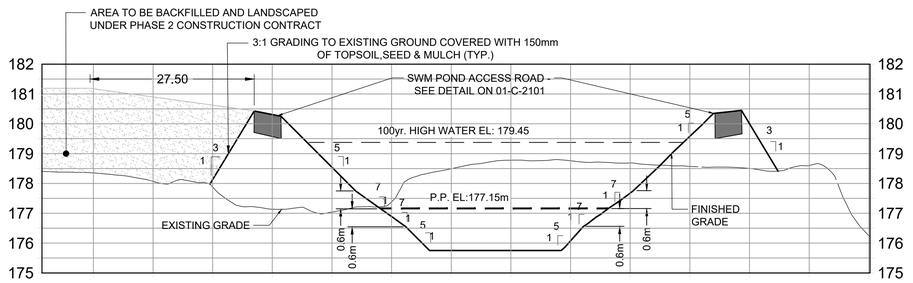
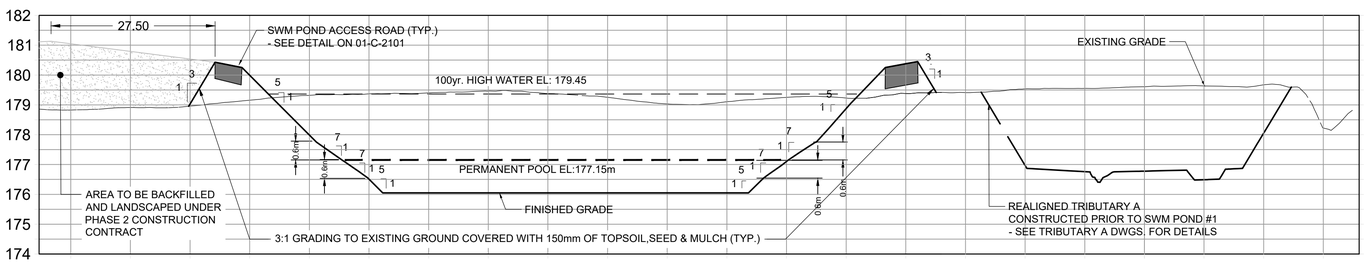


CROSS SECTION 2

0 10 25 H 1:500
m
0 2 5 V 1:100



CROSS SECTION 3

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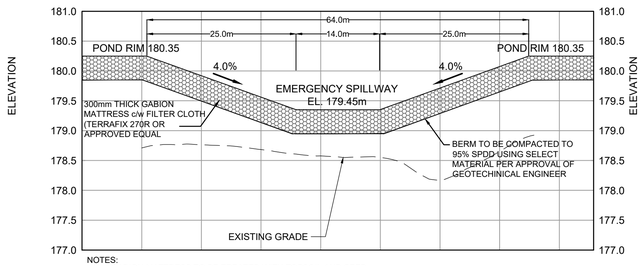
m
0 2 5 V 1:100



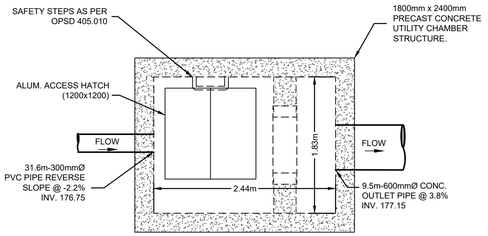
NOTES:
1. GABION MATTRESS TO BE TREATED WITH TOPSOIL AND SEED.
2. SPILLWAY IS USED DURING REGIONAL STORM EVENT OR GREATER

TYPICAL SECTION EMERGENCY SPILLWAY

0 10 25 H 1:500
m
0 1 2.5 V 1:50

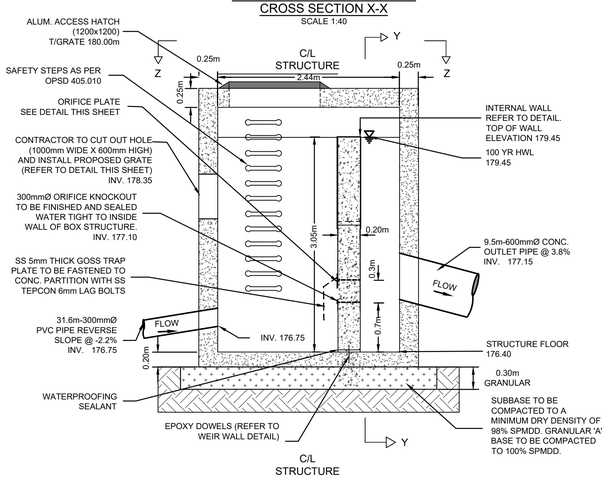
SWM-P1 OUTLET STRUCTURE CROSS SECTION Z-Z

SCALE 1:40



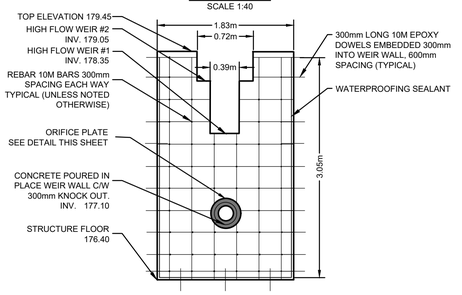
SWM-P1 OUTLET STRUCTURE CROSS SECTION X-X

SCALE 1:40



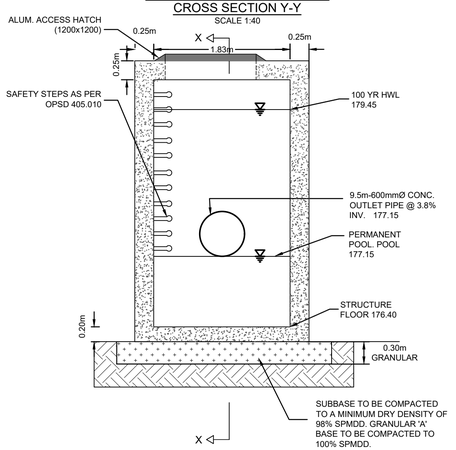
TYPICAL CONCRETE WEIR WALL DETAIL

SCALE 1:40



SWM-P1 OUTLET STRUCTURE CROSS SECTION Y-Y

SCALE 1:40

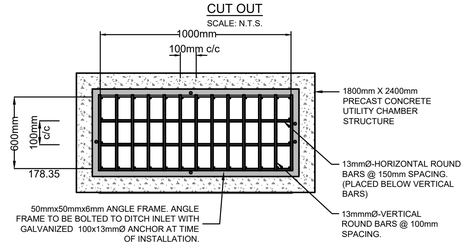


DETAILS

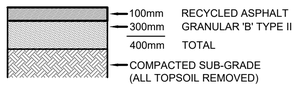
N.T.S.

CUT OUT

SCALE: N.T.S.

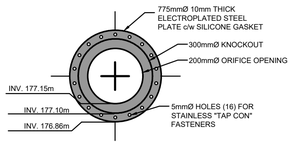


4.0m WIDE ACCESS ROAD STRUCTURE DETAIL



NOTES:

REFER TO THE SPECIFICATIONS FOR DETAILS ON PLACEMENT OF MATERIALS. REFER TO DWG. 01-C-1065 FOR PAVEMENT TRANSITION DETAILS TO ADJACENT PLATFORM



TYPICAL ORIFICE PLATE

DETAILS

N.T.S.

REGION	SUBDIVISION	MILE
HALTON	HALTON	38.72 - 40.98
CN PROJECT NO. –	CN DRAWING NO. –	

PROFESSIONAL SEALS

<Original signed by>
K. J. FIRTH
LICENSED PROFESSIONAL ENGINEER
07/29/2021
PROVINCE OF ONTARIO

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I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
0	21/08/01	ISSUED FOR CONSTRUCTION	MVR	SA	AD	KJF		

AECOM
CROZIER CONSULTING ENGINEERS
2800 High Point Drive
Suite 100
Milton, ON L9T 6P4
905-875-0026 T
905-875-4915 F
www.cfcrozier.ca

CN
MILTON LOGISTICS HUB - HALTON SUBDIVISION - PHASE 1
STORMWATER MANAGEMENT POND # 1
CROSS SECTIONS 2 & 3 AND DETAILS

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-C-2101	0

D SIZE 22" x 34" (558.8mm x 863.6mm)
PLOT: 2021-07-30 9:55:42 AM
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Saved By: schristie
AECOM FILE NAME: 60579933_01-C-2100,2101,2200,2201-SWM Ponds - IFC.dwg

D SIZE 22" x 34" (558.8mm x 863.6mm)
PLOT: 2021-07-30 9:54:22 AM
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DWG To PDF.pc3, ANSI full bleed D (34.00 x 22.00 Inches), 1:25/4, FILE PATH, FILE PATH
Saved By: schristie
AECOM FILE NAME: 60579933_01-C-2100,2101,2200,2201-SWM Ponds - IFC.dwg

SWM POND 2 - MAIN CELL
TOP OF BERM (FREEBOARD) = 178.30m
100yr. (TOP OF POND) = 178.005m
PERMANENT POOL = 175.50m
BOTTOM OF POND - 174.50m

MANHOLE TO BE CONSTRUCTED TO FUTURE (PHASE 2 CONTRACT)
FINISHED GRADE ELEVATIONS AS SHOWN AND TEMPORARILY
BACKFILLED WITH GRANULAR B - TYPE II

PRECAST CONCRETE CULVERT OUTLET HEADWALL HW P2B
AS PER OPSD 804.040 BY MCON OR AP.EQ.
N 4812168.725; E 594173.546; INV EL. 176.273

750mmØ CONC. STORM @ 0.5%

HEADWALL HW P2A OPSD 804.040

RIP-RAP PROTECTION
900mm THICKNESS, D_{50}=300mm

24.5m L; Ø2400mm CONCRETE CULVERT
@ 0.20% SLOPE TO SWM POND 2

8.0x6.0m RIP-RAP INLET PROTECTION
600mm THICKNESS, D_{50}=400mm

MATCH EXISTING GROUND (TYP.)

N 4812153.447
E 594121.259

MH14

N 4812216.071
E 594180.362

N 4812209.675
E 594179.508

3:1 GRADING TO EXISTING GROUND w/
150mm TOPSOIL, SEED & MULCH (TYP.)

PORTION OF DITCH TO BE CONNECTED TO SWALES FROM THE TERMINAL AT
FUTURE STAGES.
PHASE 1 CONSTRUCTION TO INCLUDE THIS FINAL PORTION OF THE 1.0m FLAT
BOTTOM, 3:1 SLOPED DITCH AS WELL AS THE INSTALLATION OF THE CULVERT AND
TEMPORARY GRADING TO THE EXISTING GROUND

N 4812205.537
E 594178.840

PRECAST CONCRETE CULVERT INLET HEADWALL
AS PER OPSD 840.040 BY MCON OR AP.EQ.;
N 4812193.000; E 594177.080; INV EL. 176.322

3:1 GRADING TO EXISTING GROUND COVERED
WITH 150mm TOPSOIL, SEED & MULCH (TYP.)

MATCH EXISTING GROUND (TYP.)

MATCH EXISTING
GROUND (TYP.)

N 4812068.438
E 594030.754

N 4812090.750
E 594082.703

4.0m WIDTH ACCESS ROAD

N 4812104.646
E 594094.494

N 4812160.919
E 594143.412

HW P2A

1.0m FLAT BOTTOM INTERCEPTOR SWALE w/ 3:1 SIDE SLOPES
SEE DETAIL ON DWG. 01-C-2202

1.0m WIDTH BENCH @ 2.0% TOWARDS SWM ACCESS ROAD

EXTENDED DETENTION - 176.50m

MATCH EXISTING GROUND (TYP.)

600mm MIN.
D_{50}=300mm
RIP-RAP
PROTECTION

PERMANENT POOL 175.50m

BOTTOM OF POND 174.50m

N 4812056.330
E 594117.319

N 4812119.249
E 594184.861

N 4812165.487
E 594200.711

SEDIMENT
DRYING AREA

TURFSTONE PAVERS
OR APPROVED EQUIVALENT

MATCH EXISTING
GROUND (TYP.)

1.5m TOP WIDTH
BERM
TOP EL. = 177.60m

DRAIN PIPE (PVC) INLET w/
HEADWALL HW P2E OPSD 804.030

HW P2E

1.5m TOP WIDTH BERM
3:1 SIDE SLOPES
TOP EL. = 177.30m

MICRO POOL
BOT EL.=174.00m

40.0m (TOTAL LENGTH), 300mm DRAIN PIPE PVC

CONC. HW P2C
OPSD 804.030

300mm MUELLER KNIFE GATE VALVE LOCATED
IN 1200mm Ø WATERTIGHT CONC. MH

SWM MH3

CONTROL
STRUCTURE P2B

SWM MH4

N 4812042.360
E 594175.581

HW P2C

OUTLET HEADWALL HW P2D-2
OPSD 804.030 /w GRATE
DRAIN PIPE INV. = 174.75

HW P2D-2

HW P2D

N 4812073.316
E 594227.635

SWM POND 2 - SEDIMENT FOREBAY
TOP OF BERM (FREEBOARD) = 178.30m
100yr. (TOP OF POND) = 178.00m
PERMANENT POOL = 175.50m
BOTTOM OF FOREBAY = 174.00m

N 4812135.505
E 594232.832

EXTENDED DETENTION - 176.50m

MATCH EXISTING
GROUND (TYP.)

2.0m TOP WIDTH FOREBAY BERM (SUBMERGED)
TOP EL. = 175.20m

300mmØ MAINTENANCE PIPE

REGIONAL FLOODLINE

TERMINATE CHANNEL TO MATCH
TO EXISTING ELEVATION = 173.50

N 4812010.192
E 594168.060

30.8m, 300mmØ REVERSE
STM SEWER (PVC) @ -2.3%

OUTLET CONTROL STRUCTURE
1800x2400mm PRECAST CHAMBER WITH CAST-IN-PLACE
WEIR - SEE DWG. 01-C-2202

4.0m WIDTH
ACCESS ROAD

14.0m EMERGENCY OVERFLOW WEIR
EL. 177.60m

RIP RAP SPILLWAY 900mm
THICKNESS, D_{50}=300mm

9.6m, 600mmØ CONC. STORM SEWER @ 3.2%

600mm MUELLER KNIFE GATE VALVE LOCATED IN
1200mmØ WATERTIGHT CONC. MH

13.5m, 600mmØ CONC. STM SEWER @ 3.2%

15.0m SETBACK

TYPICAL 1.0m FLAT BOTTOM
OUTLET CHANNEL @ 4.4%
w/ 3:1 SIDE SLOPES AND LINED
WITH RIP RAP PROTECTION
900mm THICKNESS, D_{50}=300mm

INDIAN CREEK

OUTLET HEADWALL HW P2D
OPSD 804.030 /w GRATE
OUTLET INV. = 174.75

PLAN

0 10 25 H 1:500
0 m

STRUCTURE TABLE - SWM POND #2

Structure Name	OPSD	NORTHING	EASTING	DETAILS:	PIPES IN	PIPES OUT	DIA.(mm)	FRAME /GRATE
MH14	OPSD 701.011	4812153.447	594121.309	RIM ELEV=178.010		23.18m OF 750 mm Ø CONC. @ 0.47% INV OUT =176.910	1500	OPSD 401.030
HW P2A	OPSD 804.040	4812150.743	594144.335		23.18m OF 750 mm Ø CONC. @ 0.47% INV IN =176.800			
HW P2B	MOD. OPSD 804.040	4812168.978	594173.582		24.50m OF 2400 mm Ø CONC. @ 0.20% INV IN =176.273			
HW P2E	OPSD 804.030	4812015.314	594106.196			24.02m OF 300 mm Ø PVC @ 0.00% INV OUT =174.750		
SWM MH3	OPSD 701.010	4811991.393	594103.982	RIM ELEV=178.432	24.02m OF 300 mm Ø PVC @ 0.00% INV IN =174.750	16.00m OF 300 mm Ø PVC @ 0.00% INV OUT =174.750	1200	OPSD 401.030
HW P2D	OPSD 804.030	4811975.367	594105.426		13.52m OF 600 mm Ø CONC. @ 3.22% INV IN =174.750			OPSD 804.050
HW P2D-2	OPSD 804.030	4811975.462	594102.508		16.00m OF 300 mm Ø PVC @ 0.00% INV IN =174.750			OPSD 804.050
HW P2C	OPSD 804.030	4812015.882	594135.463			30.79m OF 300 mm Ø PVC @ -2.27% INV OUT =174.500		
CONTROL STRUCTURE P2B	N/A	4811995.267	594112.596	RIM ELEV=175.507	30.79m OF 300 mm Ø PVC @ -2.27% INV IN =175.200	9.61m OF 600 mm Ø CONC. @ 3.23% INV OUT =175.500	1800X2400	OPSD 401.030
SWM MH4	OPSD 701.010	4811988.867	594105.429	RIM ELEV=178.476	9.61m OF 600 mm Ø CONC. @ 3.23% INV IN =175.190	13.52m OF 600 mm Ø CONC. @ 3.22% INV OUT =175.185	1200	OPSD 401.030

REGION	SUBDIVISION	MILE
HALTON	HALTON	38.72 - 40.98
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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PROFESSIONAL SEALS

<Original signed by>
K. J. FIRTH
07/29/2021
LICENCE
PROVINCE OF ONTARIO
ENGINEER

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
0	21/08/01	ISSUED FOR CONSTRUCTION	MVR	SA	AD	KJF		

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CN
MILTON LOGISTICS HUB - HALTON SUBDIVISION - PHASE 1

STORMWATER MANAGEMENT POND # 2

PLAN

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-C-2200	0

CN MILTON LOGISTICS HUB
STORM SEWER DESIGN SHEET

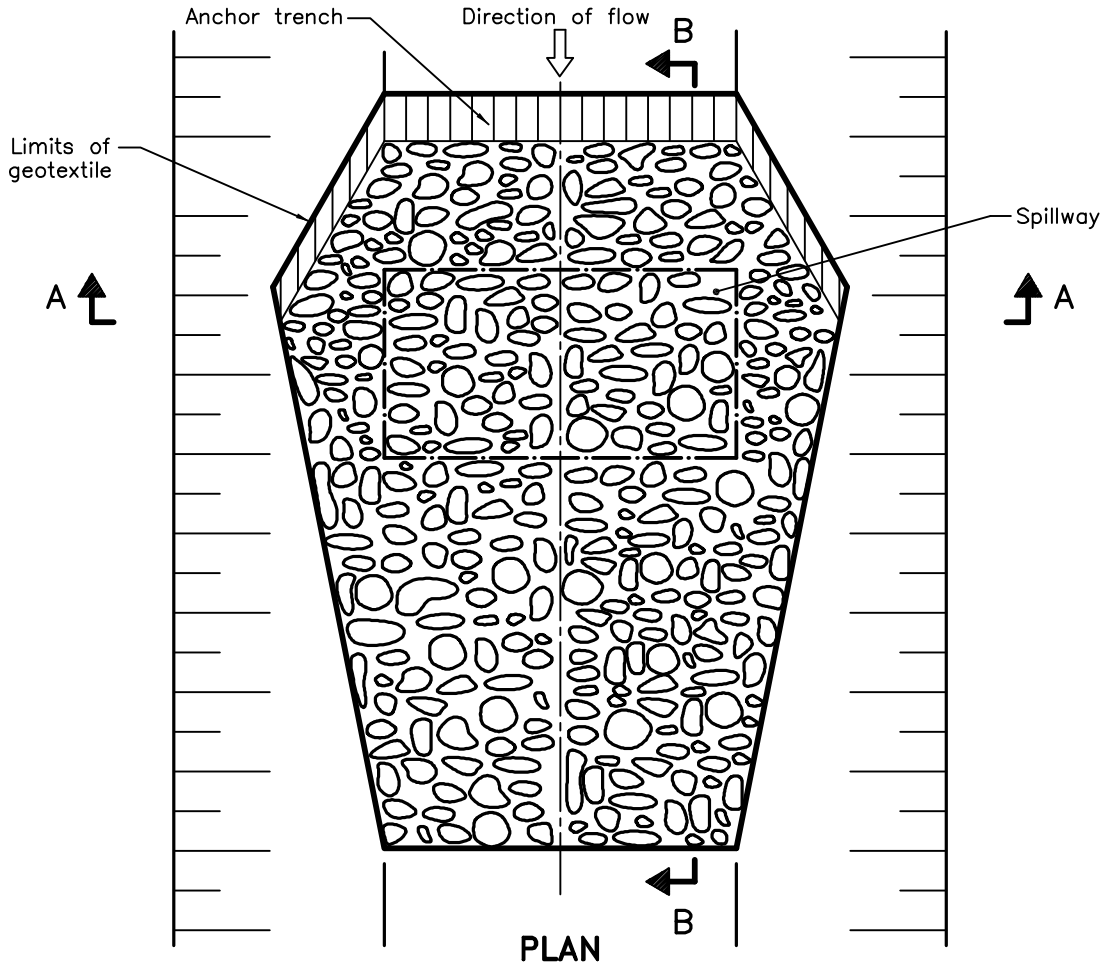
TOWN OF MILTON IDF

A **B** **C**

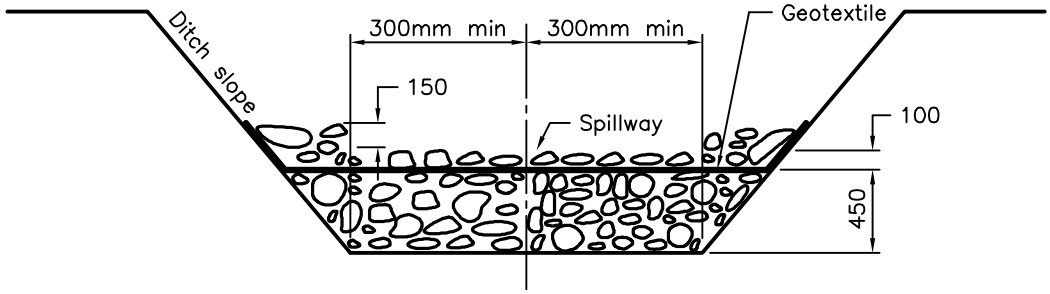
PROJECT: CN Milton Logistics Hub
PROJECT No.: 1065-4067
FILE: Storm Sewer Design
DATE: 2019-09-27
Revised: July 21, 2020
Design: HJ
Updated By: SA

INITIAL TIME OF CONCENTRATION 10.00 min MANNINGS "n" 0.013

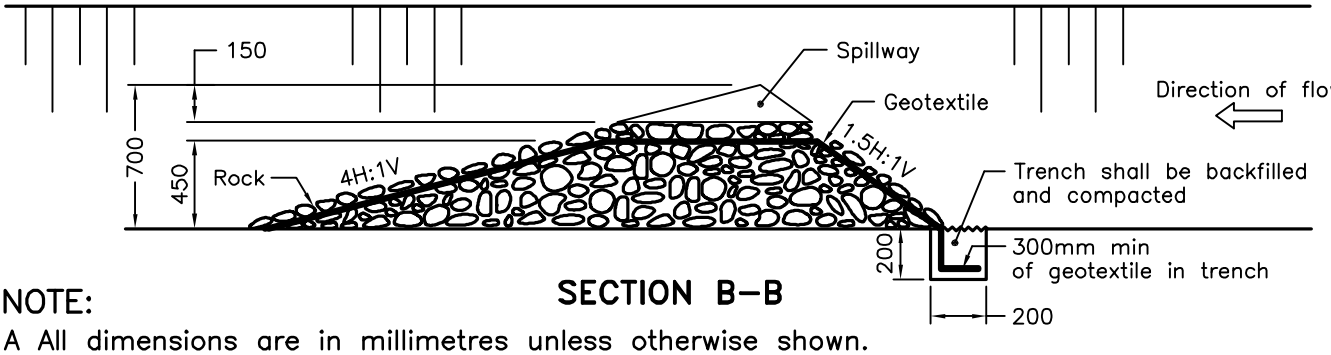
Drainage Area ID / Description	FR MH NO	TO MH NO	AREA (A) Ha	RUN-OFF COEFF	A x C	Cummul. A x C	TIME OF CONC. min	I mm/hr	Q l/sec	SLOPE %	PIPE DIA. mm	Area m2	VEL. m/sec	Q/A m/s	LENGTH m	TIME OF FLOW min	CAPACITY l/sec	% capacity
113	DCB12	DCBMH16	0.28	0.90	0.25	0.25	10.00	0.00	**0.00**	1.00	525	0.22	1.99	0.00	53.1	0.45	**430.06**	0
114	DCBMH16	Outfall	0.37	0.90	0.33	0.59	10.45	0.00	**0.00**	0.50	525	0.22	1.40	0.00	32.1	0.38	**304.10**	0
100	DBCB1	CBMH2	0.17	0.90	0.15	0.15	10.00	0.00	**0.00**	0.50	375	0.11	1.12	0.00	50.1	0.74	**123.98**	0
101	CBMH2	CBMH3	0.18	0.90	0.162	0.32	10.74	0.00	**0.00**	0.50	450	0.16	1.27	0.00	49.9	0.66	**201.60**	0
102	CBMH3	CBMH4	0.16	0.90	0.144	0.46	11.40	0.00	**0.00**	0.50	600	0.28	1.54	0.00	50.0	0.54	**434.17**	0
103	CBMH4	MH5	0.18	0.90	0.162	0.62	11.94	0.00	**0.00**	0.50	675	0.36	1.66	0.00	66.8	0.67	**594.39**	0
104	CB6	Blind Connection	0.02	0.90	0.014	0.01	10.00	0.00	**0.00**	0.40	300	0.07	0.87	0.00	4.0	0.08	**61.16**	0
105	CB7	MH5	0.02	0.90	0.0153	0.02	10.00	0.00	**0.00**	0.80	300	0.07	1.22	0.00	7.3	0.10	**86.49**	0
107	CB19	CBMH18	0.03	0.90	0.03	0.03	10.00	0.00	**0.00**	1.00	300	0.07	1.37	0.00	9.0	0.11	**96.70**	0
106	CBMH18	MH5	0.02	0.90	0.02	0.05	10.11	0.00	**0.00**	0.60	300	0.07	1.06	0.00	39.9	0.63	**74.90**	0
107	MH5	CBMH8	0.03	0.00	0.00	0.70	12.61	0.00	**0.00**	0.50	675	0.36	1.66	0.00	39.7	0.40	**594.39**	0
111	CBMH8	CBMH9	0.20	0.45	0.09	0.79	13.01	0.00	**0.00**	0.30	675	0.36	1.29	0.00	35.3	0.46	**460.41**	0
108	DBCB17	CBMH15	0.07	0.90	0.06	0.06	10.00	0.00	**0.00**	1.00	300	0.07	1.37	0.00	12.5	0.15	**96.70**	0
110	DBCB16	CBMH15	0.02	0.90	0.02	0.02	10.00	0.00	**0.00**	1.10	300	0.07	1.43	0.00	18.9	0.22	**101.42**	0
109	CBMH15	CBMH9	0.17	0.35	0.0595	0.13	10.22	0.00	**0.00**	0.50	300	0.07	0.97	0.00	60.9	1.05	**68.38**	0
112	CBMH9	CBMH10	0.11	0.90	0.099	1.02	13.47	0.00	**0.00**	0.60	675	0.36	1.82	0.00	21.8	0.20	**651.12**	0
115	CB11	CBMH10	0.14	0.73	0.10	0.10	10.00	0.00	**0.00**	1.00	250	0.05	1.21	0.00	35.3	0.49	**59.47**	0
116	CBMH10	MH12	0.09	0.90	0.08	1.20	13.67	0.00	**0.00**	0.50	750	0.44	1.78	0.00	20.8	0.19	**787.21**	0
117	CB13	MH12	0.04	0.67	0.02	0.02	10.00	0.00	**0.00**	1.00	300	0.07	1.37	0.00	5.8	0.07	**96.70**	0
117	MH12	OGS1	0.04	0.00	0.00	1.23	13.86	0.00	**0.00**	0.50	750	0.44	1.78	0.00	6.3	0.06	**787.21**	0
	OGS1	MH14	0.00	0.00	0.00	1.23	13.92	0.00	**0.00**	0.50	750	0.44	1.78	0.00	11.7	0.11	**787.21**	0
	MH14	Outfall	0.00	0.00	0.00	1.23	14.03	0.00	**0.00**	0.50	750	0.44	1.78	0.00	23.2	0.22	**787.21**	0



PLAN
SPILLWAY



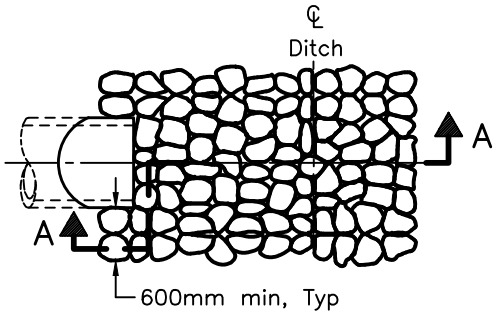
SECTION A–A



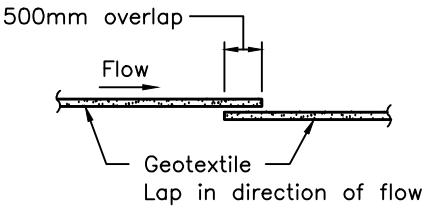
SECTION B–B

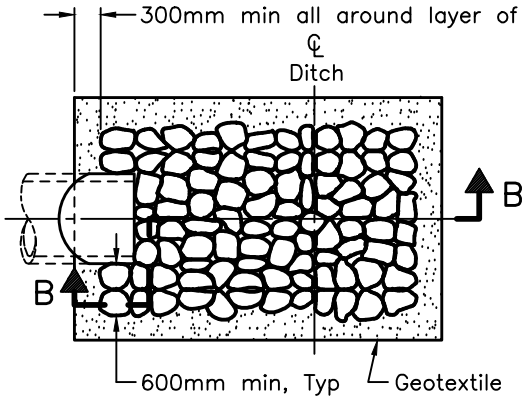
NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2015	Rev	2
TEMPORARY ROCK FLOW CHECK DAM FLAT BOTTOM DITCH			
			OPSD 219.211

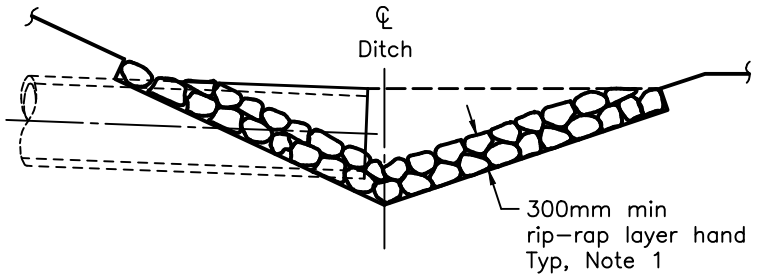


PLAN
CUT OR FILL

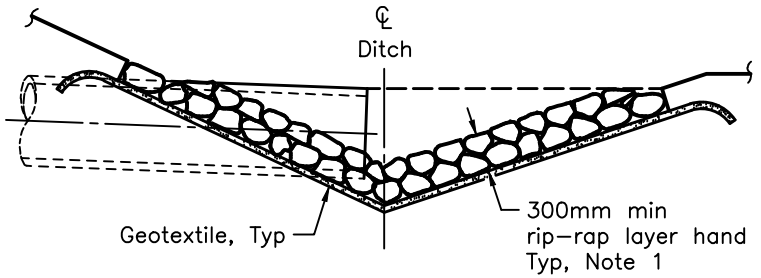




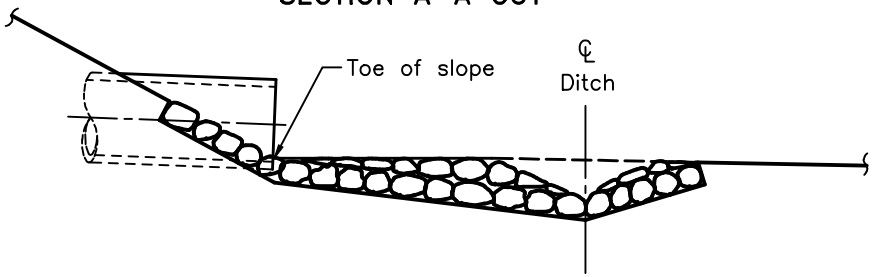
PLAN
CUT OR FILL



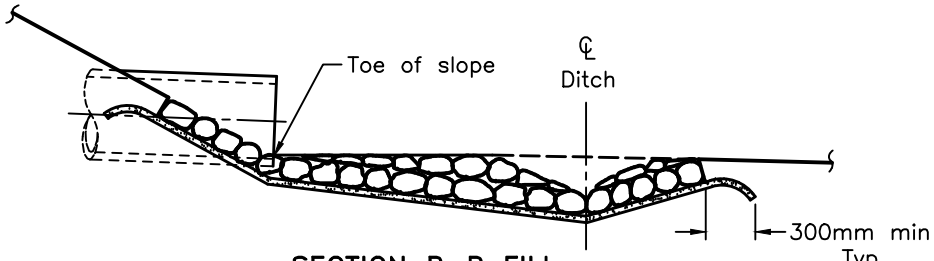
SECTION A–A CUT



SECTION B–B CUT



SECTION A–A FILL



SECTION B–B FILL

TYPE A – WITHOUT GEOTEXTILE

TYPE B – WITH GEOTEXTILE

NOTES:

1 The thickness of the rip–rap layer shall be at least 1.5 times the rip–rap mean diameter.

A All dimensions are in millimetres unless otherwise shown.

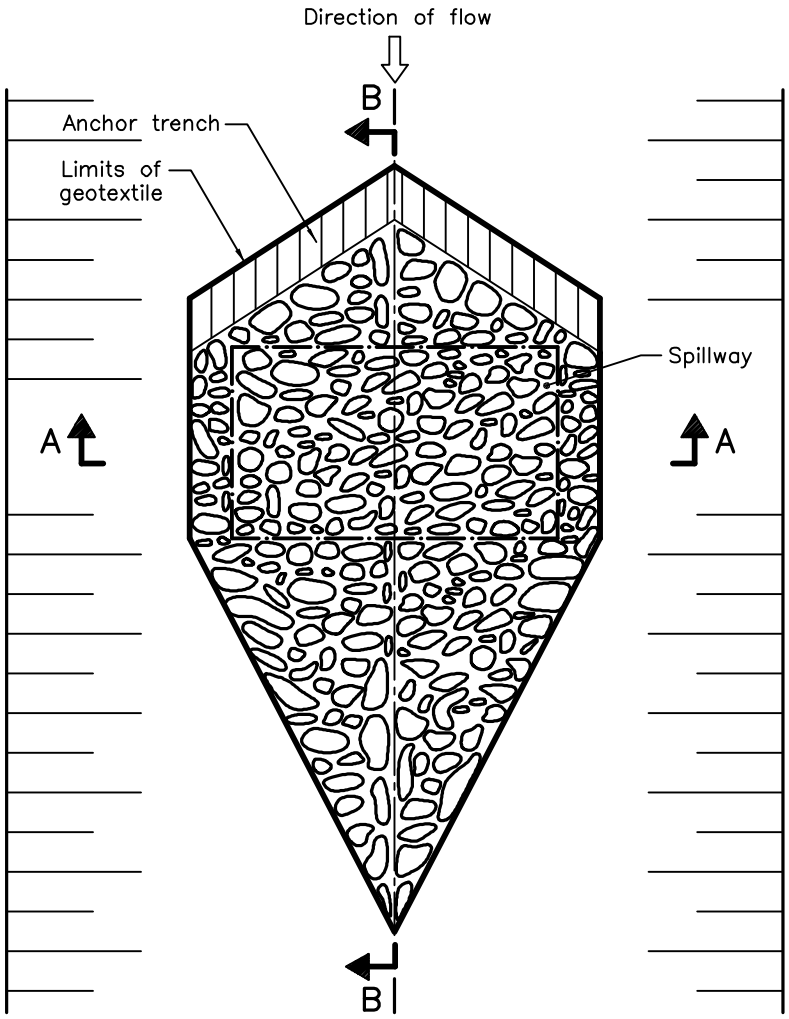
ONTARIO PROVINCIAL STANDARD DRAWING

GENERAL RIP–RAP LAYOUT FOR SEWER AND CULVERT OUTLETS

Nov 2018 | Rev 3

ONTARIO STANDARDS • MUNICIPAL – PROVINCIAL •

OPSD 810.010



PLAN
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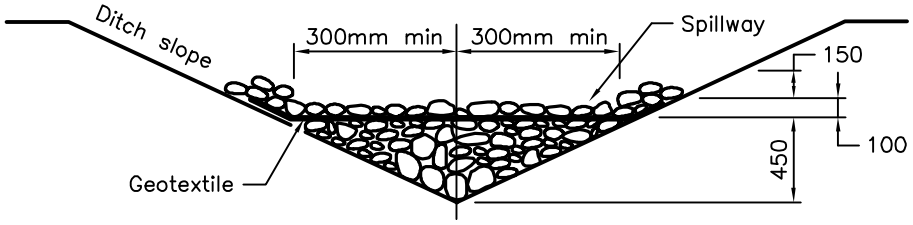
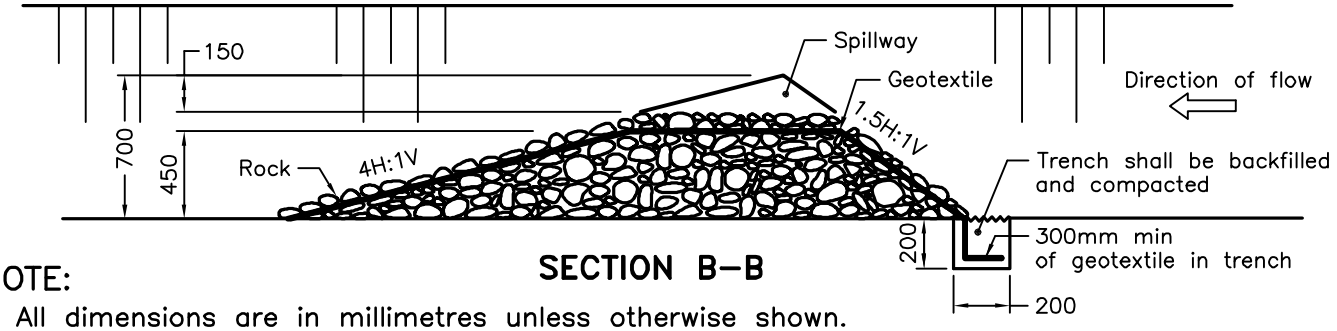


SECTION A–A



SECTION B–B

NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2015	Rev	2
TEMPORARY ROCK FLOW CHECK DAM V–DITCH			
			OPSD 219.210

D SIZE 22" x 34" (558.8mm x 863.6mm)
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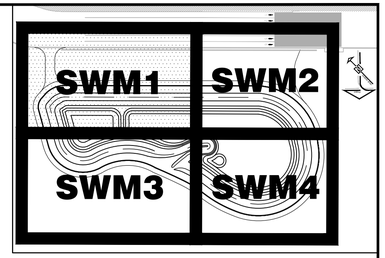
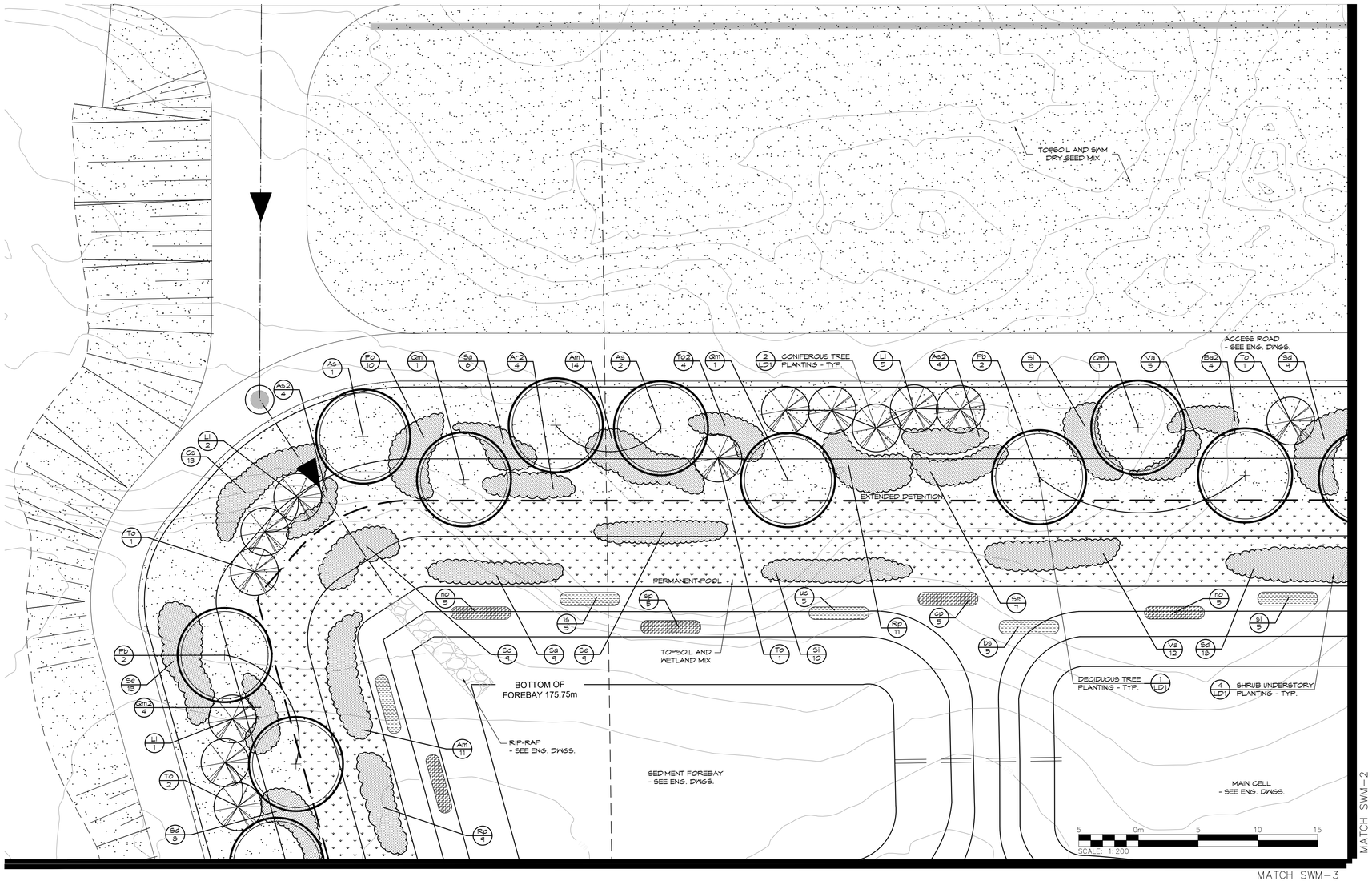
LEGEND

- UNDERGROUND SERVICES - SEE ENG. DWGS.
- MANHOLE -SEE ENG. DWGS.
- PROPOSED CONTOUR
- EXTENDED DETENTION
- RIP RAP - SEE ENG. DWGS.
- DECIDUOUS TREE
- CONIFEROUS TREE
- MASS PLANTING
- AQUATICS
- SP / QTY — SPECIES / QUANTITY — PLANT REFERENCE
- TOPSOIL AND SWM POND DRY SEED MIX
- TOPSOIL AND SWM POND WET SEED MIX

NOTES:
1. FOR PLANTING NOTES REFER TO DRAWING LD1.



SITE KEY PLAN (NTS)
TOWN OF MILTON



PLANT LIST

KEY	BOTANICAL NAME	COMMON NAME	SIZE	COND.	SPACING	QTY
DECIDUOUS TREES						
Ar	Acer rubrum	Red maple	40mm cal.	W.B.		10
Ar2	Acer rubrum	Red maple	100cm	Whip		12
As	Acer saccharinum	Silver maple	40mm cal.	W.B.		9
As2	Acer saccharinum	Silver maple	100cm	Whip		16
Ba	Betula alleghaniensis	Yellow Birch	40mm cal.	W.B.		6
Ba2	Betula alleghaniensis	Yellow Birch	100cm	Whip		16
Cc	Carya cordiformis	Bitternut hickory	40mm cal.	W.B.		6
Cc2	Carya cordiformis	Bitternut hickory	100cm	Whip		12
Qm	Quercus macrocarpa	Bur oak	40mm cal.	W.B.		9
Qm2	Quercus macrocarpa	Bur oak	100cm	Whip		12
Pb	Populus balsamifera	Balsam poplar	40mm cal.	W.B.		10
Pb2	Populus balsamifera	Balsam poplar	100cm	Whip		4
CONIFEROUS TREES						
Ll	Larix laricina	American Larch	150cm	B.B.		28
Ll2	Larix laricina	American Larch	100cm	Whip		12
To	Thuja occidentalis	Eastern white cedar	150cm	B.B.		21
To2	Thuja occidentalis	Eastern white cedar	100cm	Whip		16
DECIDUOUS SHRUBS						
Am	Aronia melanocarpa	Black chokberry	50cm	3 gal.	1.5m o.c.	91
Cs	Cornus stolinifera	Red osier dogwood	50cm	3 gal.	1.5m o.c.	94
Po	Physocarpus opulifolius	Common ninebark	50cm	3 gal.	1.5m o.c.	98
Rp	Rosa palustris	Swamp rose	50cm	3 gal.	1.5m o.c.	103
Sa	Salix amygdaloides	Peach-leared willow	50cm	3 gal.	1.5m o.c.	72
Sd	Salix discolor	Pussy willow	50cm	3 gal.	1.5m o.c.	96
Se	Salix eriocephala	Heart-leaved willow	50cm	3 gal.	1.5m o.c.	104
Si	Salix interior	Sandbar willow	50cm	3 gal.	1.5m o.c.	44
Sc	Shepherdia canadensis	Canada Buffalo-berry	50cm	3 gal.	1.5m o.c.	98
Va	Viburnum acerifolium	Maple leaved viburnum	50cm	3 gal.	1.5m o.c.	78
AQUATICS						
ap	Alisma plantago-aquatica	Common water plantain		Plugs	1.0m o.c.	15
bs	Brasenia schreberi	Water shield		S.B.	1.0m o.c.	40
cp	Caltha palustris	Marsh marigold		Plugs	1.0m o.c.	15
cg	Chelone glabra	White turtlehead		Plugs	1.0m o.c.	15
iv	Iris versocolor	Northern blue flag iris		Plugs	1.0m o.c.	15
no	Nymphaea odorata	White water lily		S.B.	1.0m o.c.	35
sl	Sagittaria latifolia	Broad-leaved arrowhead		Plugs	1.0m o.c.	15
sp	Sparganium emersum	Common Burreed		S.B.	1.0m o.c.	35
uc	Utricularia cornuta	Horned bladderwort		S.B.	1.0m o.c.	35

SEED MIX

KEY	BOTANICAL NAME	COMMON NAME	%
MESIC MEADOW SEED MIX			
	Aster novae-angliae	New England Aster	2%
	Desmodium canadense	Showy Tick Trefoil	3%
	Elymus canadensis	Canada Wild Rye	24%
	Elymus virginicus	Virginia Wild Rye	22%
	Eupatorium perfoliatum	Boneset	1%
	Liatris spicata	Dense Blazing Star	1%
	Monarda Fistulosa	Wild Bergamot	1%
	Penstemon digitalis	Foxglove	2%
	Rudbeckia hirta	Black Eyed Susan	2%
	Schizachyrium scorparium	Little Bluestem	20%
	Sorghastrum nutans	Indiangrass	20%
	Verbena hastata	Blue Vervain	2%

Cover crop to be Annual Oats.

SEED MIX

KEY	BOTANICAL NAME	COMMON NAME	%
WET MEADOW SEED MIX			
	Asclepias incarnata	Swamp Milkweed	1%
	Aster puniceus	Purple Stemmed Aster	1%
	Bidens cerulna	Nodding Bur Marigold	1%
	Carex crinata	Fringed Sedge	5%
	Carex lurida	Lurid Sedge	20%
	Carex stipata	Awl Sedge	2%
	Carex vulpinoidea	Fox Sedge	40%
	Elymus virginicus	Virginia Wild Rye	18%
	Eupatorium maculatum	Spotted Joe Pye Weed	1%
	Eupatorium perfoliatum	Boneset	1%
	Glyceria grandis	Tall Mannagrass	1%
	Juncus effusus	Soft Rush	1%
	Leersia oryzoides	Rice Cutgrass	6%
	Scirpus acutus	Hard Stemmed Bulrush	1%
	Scirpus atrovirens	Green Bullrush	1%

Cover crop to be Annual Oats.

REGION	SUBDIVISION	MILE
HALTON	HALTON	36.79 - 41.27
CN PROJECT NO. -	CN DRAWING NO. -	

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CN
MILTON LOGISTIC HUB
HALTON SUBDIVISION - Mile 36.79 to 41.27
STORMWATER MANAGEMENT FACILITY POND # 1
PLANTING PLAN

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	SWM-1	A

D SIZE 22" x 34" (558.8mm x 863.6mm)
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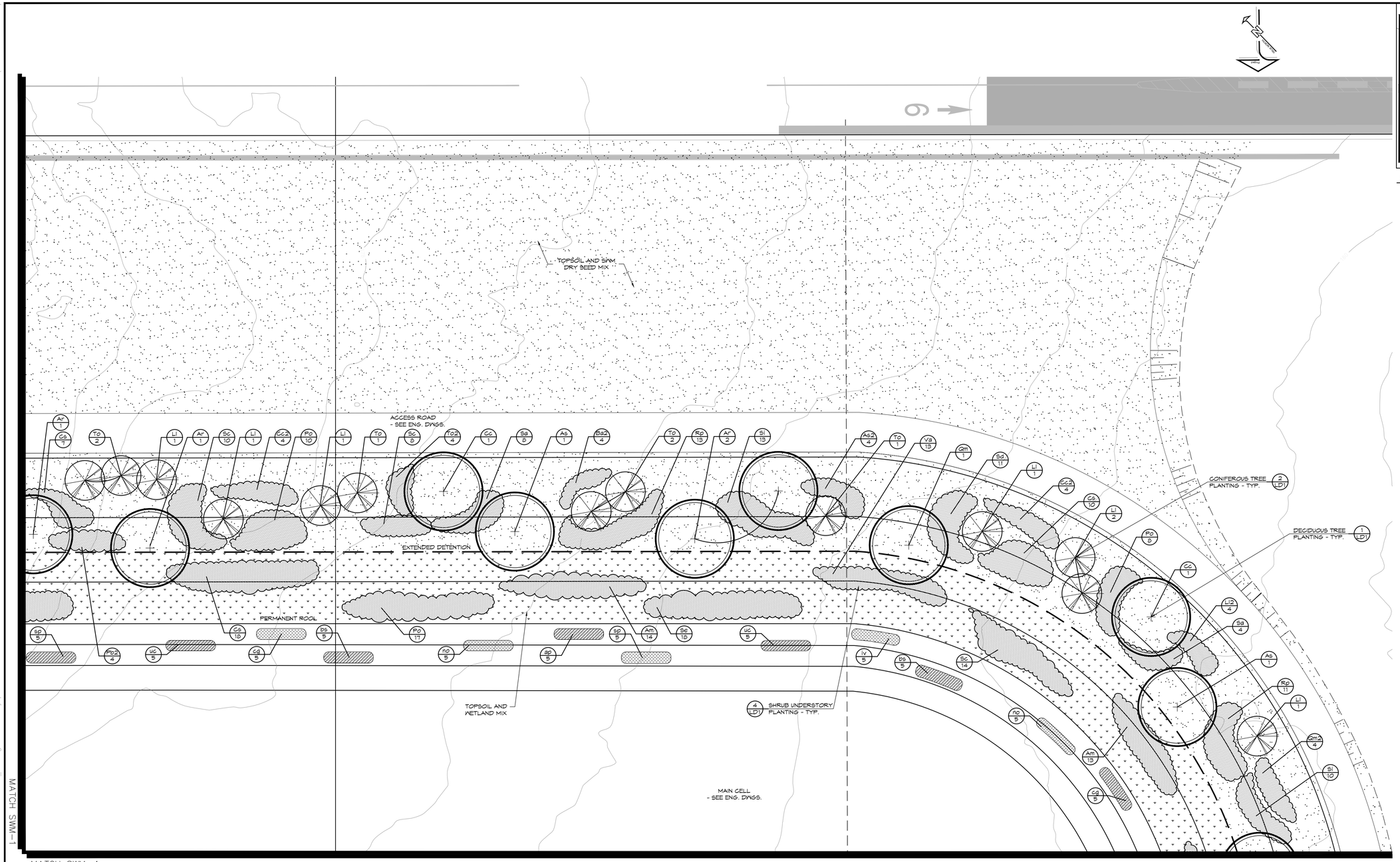

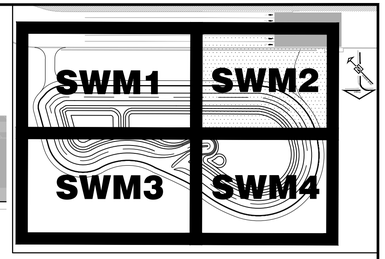

SITE KEY PLAN (NTS)
TOWN OF MILTON

LEGEND

- UNDERGROUND SERVICES - SEE ENG. DWGS.
- MANHOLE -SEE ENG. DWGS.
- PROPOSED CONTOUR
- EXTENDED DETENTION
- RIP RAP - SEE ENG. DWGS.
- DECIDUOUS TREE
- CONIFEROUS TREE
- MASS PLANTING
- AQUATICS
- SP / QTY — SPECIES / QUANTITY — PLANT REFERENCE
- TOPSOIL AND SWM POND DRY SEED MIX
- TOPSOIL AND SWM POND WET SEED MIX

NOTES:
1. FOR PLANTING NOTES REFER TO DRAWING LD1.
2. FOR PLANT LIST REFER TO DRAWING SWM-1.
3. FOR SEED MIX REFER TO DRAWING SWM-1.

SCALE: 1:200

REGION	SUBDIVISION	MILE
HALTON	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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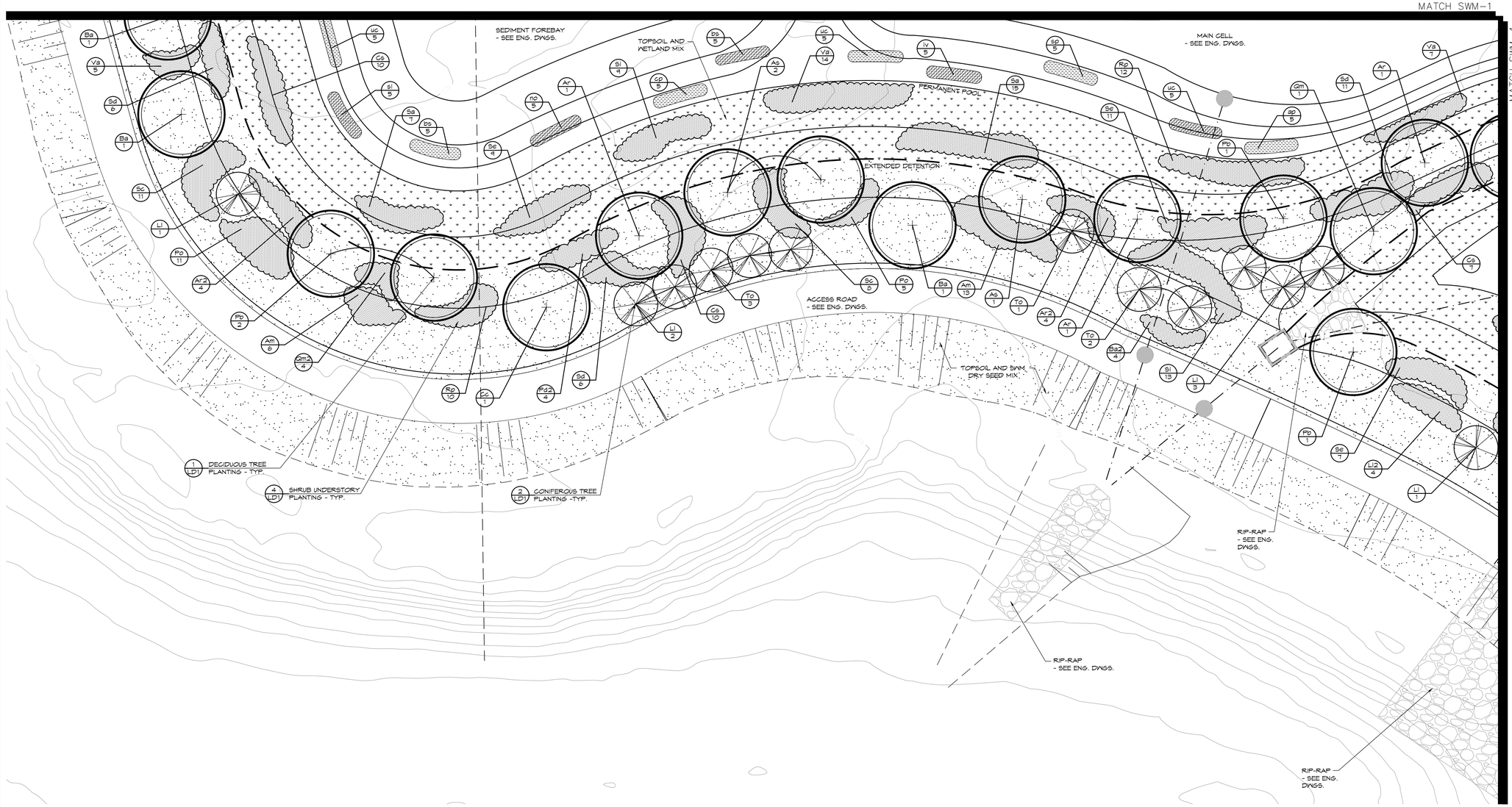
CN
MILTON LOGISTIC HUB
HALTON SUBDIVISION - Mile 36.79 to 41.27
STORMWATER MANAGEMENT FACILITY POND # 1
PLANTING PLAN

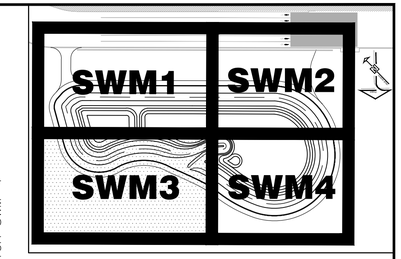
PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	SWM-2	A

D SIZE 22" x 34" (558.8mm x 863.6mm)

MATCH SWM-1

MATCH SWM-4





SITE KEY PLAN (NTS)
TOWN OF MILTON

LEGEND

- UNDERGROUND SERVICES - SEE ENG. DWGS.
- MANHOLE -SEE ENG. DWGS.
- PROPOSED CONTOUR
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3. FOR SEED MIX REFER TO DRAWING SWM-1.

SCALE: 1:200

REGION	SUBDIVISION	MILE
HALTON	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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MILTON LOGISTIC HUB
HALTON SUBDIVISION - Mile 36.79 to 41.27
STORMWATER MANAGEMENT FACILITY POND # 1
PLANTING PLAN

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	SWM-3	A

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MATCH SWM-2

MATCH SWM-3

MAIN CELL
- SEE ENG. DWGS.

MICRO POOL
- SEE ENG. DWGS.

TOPSOIL AND WETLAND MIX

TOPSOIL AND SWM DRY SEED MIX

RIP-RAP
- SEE ENG. DWGS.

ACCESS ROAD
- SEE ENG. DWGS.

PERMANENT POOL

EXTENDED DETENTION

DECIDUOUS TREE PLANTING - TYP. 1 LD1

SHRUB UNDERSTORY PLANTING - TYP. 4 LD1

CONIFEROUS TREE PLANTING - TYP. 2 LD1

SWM1 SWM2 SWM3 SWM4

SITE KEY PLAN (NTS)
TOWN OF MILTON

LEGEND

- UNDERGROUND SERVICES - SEE ENG. DWGS.
- MANHOLE -SEE ENG. DWGS.
- PROPOSED CONTOUR
- EXTENDED DETENTION
- RIP RAP - SEE ENG. DWGS.
- DECIDUOUS TREE
- CONIFEROUS TREE
- MASS PLANTING
- AQUATICS
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5 0m 5 10 15
SCALE: 1:200

REGION	SUBDIVISION	MILE
HALTON	HALTON	36.79 - 41.27
CN PROJECT NO. –	CN DRAWING NO. –	

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STORMWATER MANAGEMENT FACILITY POND # 1
PLANTING PLAN

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	SWM-4	A

D SIZE 22" x 34" (558.8mm x 863.6mm)

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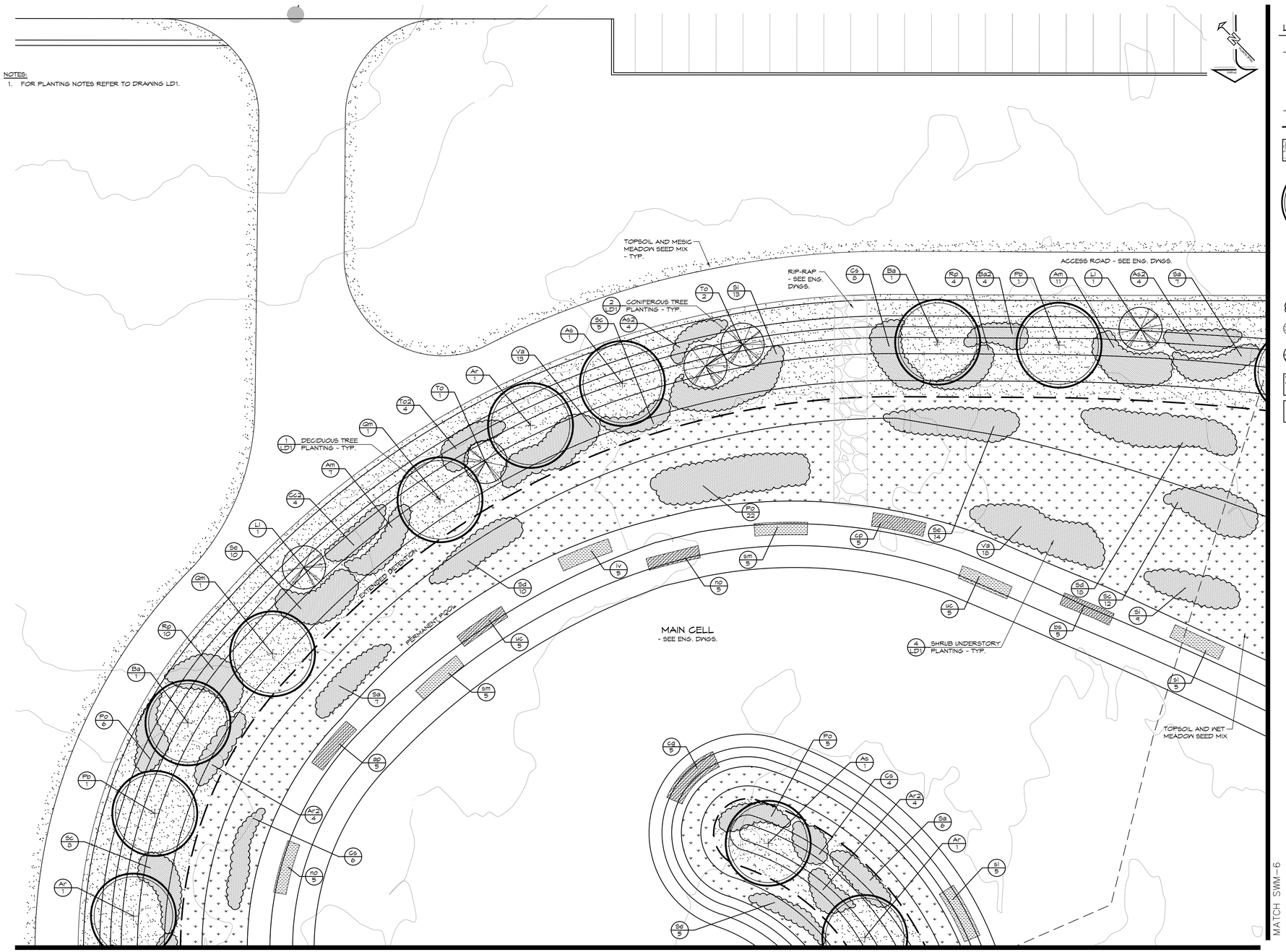

LEGEND

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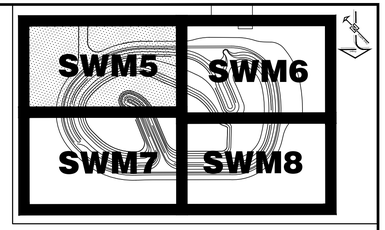

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TOWN OF MILTON

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SEED MIX — MESIC MEADOW SEED MIX

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	Liatris spicata	Dense Blazing Star	1%
	Monarda fistulosa	Wild Bergamot	1%
	Penstemon digitalis	Foxglove	2%
	Rudbeckia hirta	Black Eyed Susan	2%
	Schizachyrium scorparium	Little Bluestem	20%
	Sorghastrum nutans	Indiangrass	20%
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Cover crop to be Annual Oats.

SEED MIX — WET MEADOW SEED MIX

KEY	BOTANICAL NAME	COMMON NAME	%
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	Aster puniceus	Purple Stemmed Aster	1%
	Bidens cerua	Nodding Bur Marigold	1%
	Carex crinata	Fringed Sedge	5%
	Carex lurida	Lurid Sedge	20%
	Carex stipata	Awl Sedge	2%
	Carex vulpinoidea	Fox Sedge	40%
	Elymus virginicus	Virginia Wild Rye	18%
	Eupatorium maculatum	Spotted Joe Pye Weed	1%
	Eupatorium perfoliatum	Boneset	1%
	Glyceria grandis	Tall Mannagrass	1%
	Juncus effusus	Soft Rush	1%
	Leersia oryzoides	Rice Cutgrass	6%
	Scirpus acutus	Hard Stemmed Bulrush	1%
	Scirpus atrovirens	Green Bulrush	1%

Cover crop to be Annual Oats.

REGION	SUBDIVISION	MILE
HALTON	HALTON	36.79 - 41.27
CN PROJECT NO. –	CN DRAWING NO. –	

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CN
MILTON LOGISTIC HUB
HALTON SUBDIVISION - Mile 36.79 to 41.27
STORMWATER MANAGEMENT FACILITY POND # 2
LANDSCAPE PLAN

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	SWM-5	A

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PLOT: 2020-08-10 6:52:16 PM

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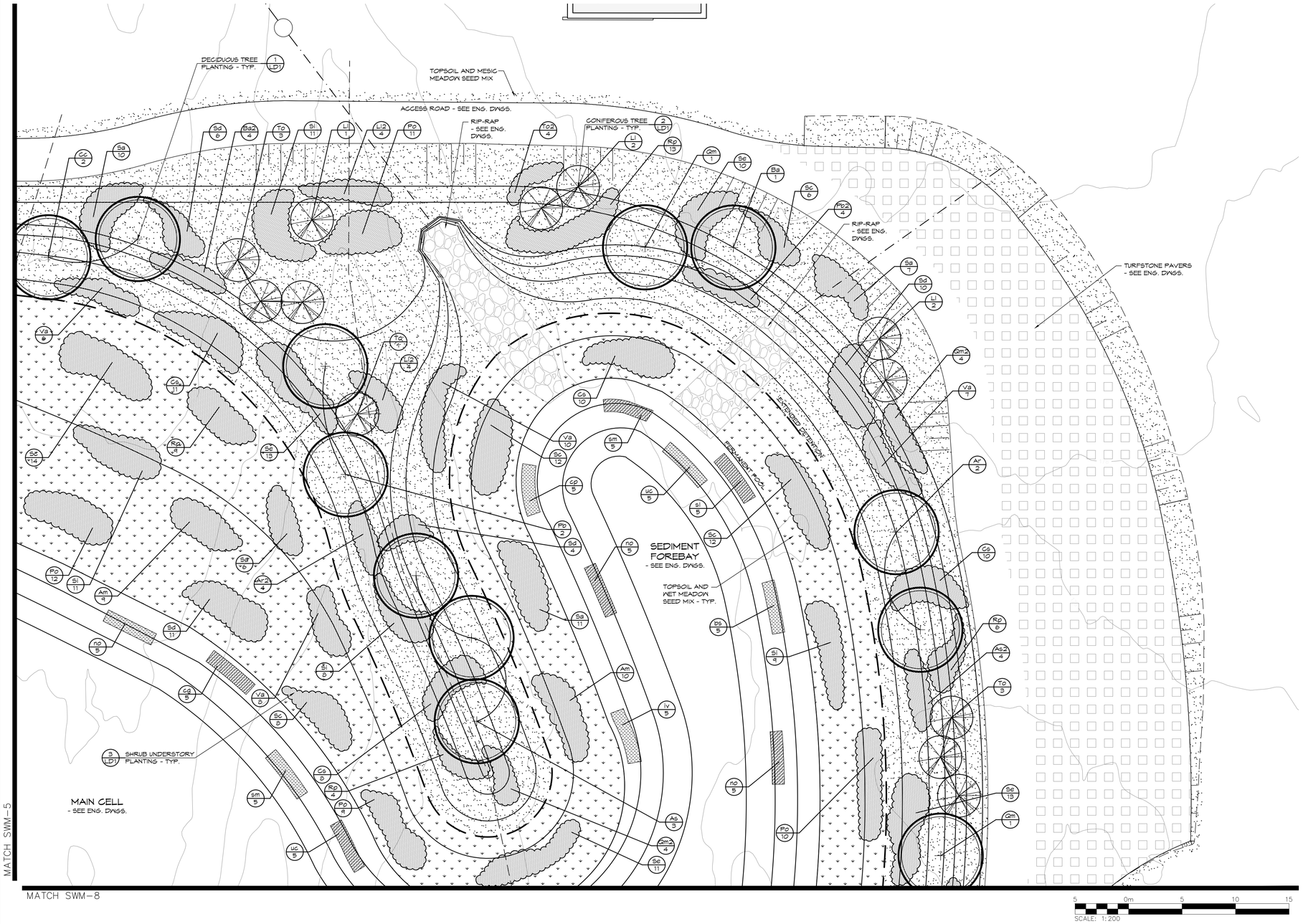

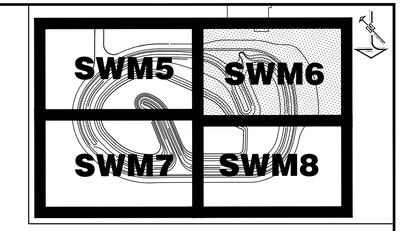

SITE KEY PLAN (NTS)
TOWN OF MILTON

LEGEND

- UNDERGROUND SERVICES - SEE ENG. DWGS.
- MANHOLE -SEE ENG. DWGS.
- PROPOSED CONTOUR
- EXTENDED DETENTION
- RIP RAP - SEE ENG. DWGS
- DECIDUOUS TREE
- CONIFEROUS TREE
- MASS PLANTING
- AQUATICS
- SP 2TY — SPECIES / QUANTITY — PLANT REFERENCE
- TOPSOIL AND MESIC MEADOW SEED MIX
- TOPSOIL AND WET MEADOW SEED MIX

NOTES:
1. FOR PLANTING NOTES REFER TO DRAWING LD1.
2. FOR PLANT LIST REFER TO DRAWING SWM-5.
3. FOR SEED MIX REFER TO DRAWING SWM-5.

REGION	SUBDIVISION	MILE
HALTON	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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HALTON SUBDIVISION - Mile 36.79 to 41.27
STORMWATER MANAGEMENT FACILITY POND # 2
LANDSCAPE PLAN

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	SWM-6	A

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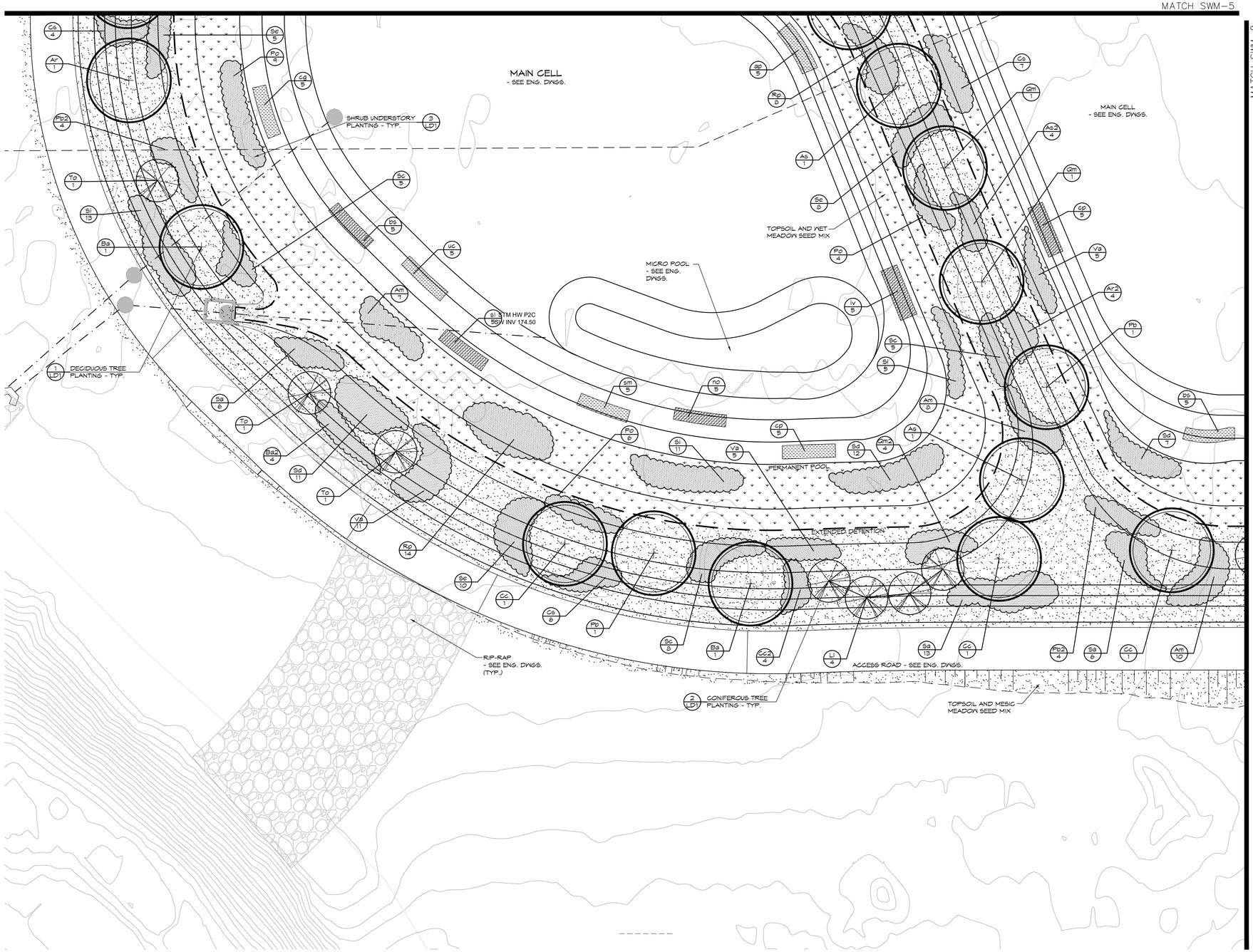

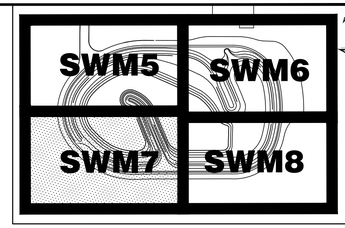

SITE KEY PLAN (NTS)
TOWN OF MILTON

LEGEND

- UNDERGROUND SERVICES - SEE ENG. DWGS.
- MANHOLE -SEE ENG. DWGS.
- PROPOSED CONTOUR
- EXTENDED DETENTION
- RIP RAP - SEE ENG. DWGS
- DECIDUOUS TREE
- CONIFEROUS TREE
- MASS PLANTING
- AQUATICS
- SP / QTY — SPECIES / QUANTITY — PLANT REFERENCE
- TOPSOIL AND MESIC MEADOW SEED MIX
- TOPSOIL AND WET MEADOW SEED MIX

NOTES:
1. FOR PLANTING NOTES REFER TO DRAWING LD1.
2. FOR PLANT LIST REFER TO DRAWING SWM-5.
3. FOR SEED MIX REFER TO DRAWING SWM-5.

REGION	SUBDIVISION	MILE
HALTON	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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STORMWATER MANAGEMENT FACILITY POND # 2
LANDSCAPE PLAN

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	SWM-7	A

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AECOM FILE NAME: I:\10001\065 - AECOM\4067 - CN Milton Logistics Hub\CAD\LA\4067SWM_5-8.dwg

MATCH SWM-6

MATCH SWM-7

MAIN CELL
- SEE ENG. DWGS.

SEDIMENT FOREBAY
- SEE ENG. DWGS.

TOPSOIL AND WET MEADOW SEED MIX

* PERMANENT POOL

EXTENDED DETENTION

ACCESS ROAD - SEE ENG. DWGS.

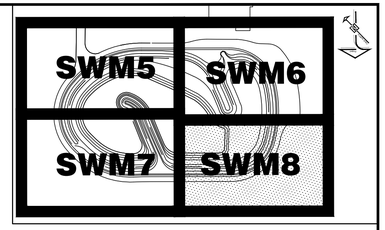
TOPSOIL AND MESIC MEADOW SEED MIX

DECIDUOUS TREE PLANTING - TYP. (1 LD1)

CONIFEROUS TREE PLANTING - TYP. (2 LD1)

SHRUB UNDERSTORY PLANTING - TYP. (3 LD1)

SCALE: 1:200



SITE KEY PLAN (NTS)
TOWN OF MILTON

LEGEND

- UNDERGROUND SERVICES - SEE ENG. DWGS.
- MANHOLE -SEE ENG. DWGS.
- PROPOSED CONTOUR
- EXTENDED DETENTION
- RIP RAP - SEE ENG. DWGS
- DECIDUOUS TREE
- CONIFEROUS TREE
- MASS PLANTING
- AQUATICS
- SP / QTY — SPECIES / QUANTITY — PLANT REFERENCE
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- TOPSOIL AND WET MEADOW SEED MIX

NOTES:
1. FOR PLANTING NOTES REFER TO DRAWING LD1.
2. FOR PLANT LIST REFER TO DRAWING SWM-5.
3. FOR SEED MIX REFER TO DRAWING SWM-5.

REGION	SUBDIVISION	MILE
HALTON	HALTON	36.79 - 41.27
CN PROJECT NO. --	CN DRAWING NO. -	

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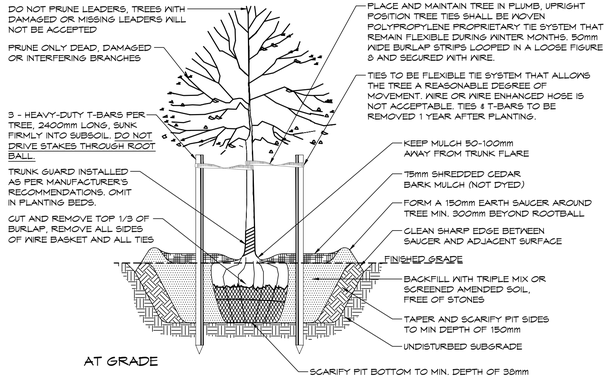
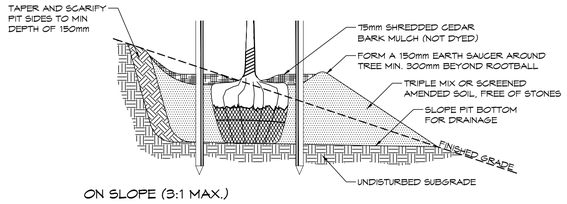
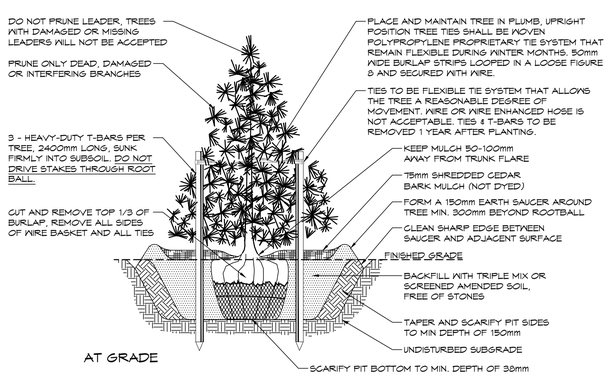
STORMWATER MANAGEMENT FACILITY POND # 2
LANDSCAPE PLAN

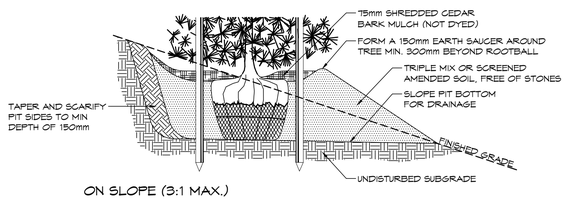
PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	SWM-8	A



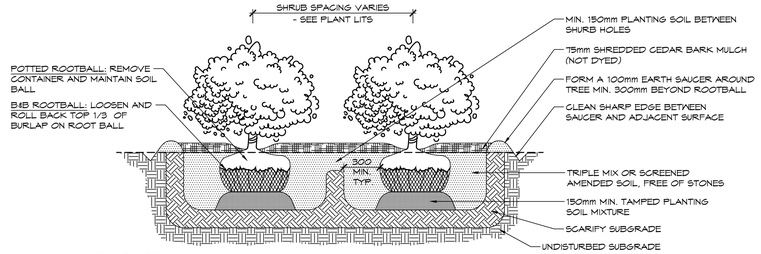


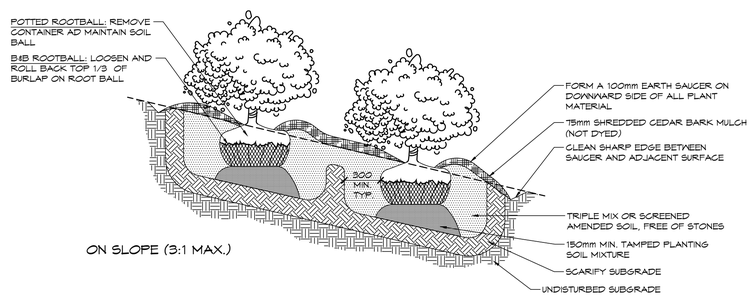
1 LD1 **DECIDUOUS TREE PLANTING** NTS





2 LD1 **DECIDUOUS TREE PLANTING** NTS





3 LD1 **SHRUB UNDERSTORY PLANTING** NTS

PLANTING NOTES:

1. ALL WORKMANSHIP TO THE STANDARDS OF THE LANDSCAPE ONTARIO HORTICULTURAL TRADES ASSOCIATION AND THE CANADIAN LANDSCAPE STANDARDS.
2. TREE LOCATIONS SHALL BE STAKED ON SITE BY THE LANDSCAPE CONTRACTOR AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING.
3. BACKFILL IS TO CONSIST OF SOIL NATIVE TO THE SITE OR GENERAL SOIL TYPE/CLASS NATIVE TO THE SITE. SOIL AMENDMENT MAY BE REQUIRED BASED ON SOURCE OF IMPORTED OR EXISTING SITE QUALITY OF TOPSOIL. PROVIDE NUTRIENT ANALYSIS OF TOPSOIL TO BE USED FOR LANDSCAPE PURPOSES IN ORDER TO DETERMINE SOIL AMENDMENT REQUIREMENTS.
4. REPORT ALL DISCREPANCIES IN WRITING TO THE LANDSCAPE ARCHITECT.
5. CONTRACTOR SHALL MAINTAIN ALL LANDSCAPE AREAS UNTIL OWNER'S ACCEPTANCE OF PROJECT.
6. UNLESS OTHERWISE STATED, ALL WORK SHALL CONFORM TO THE LANDSCAPE ONTARIO SPECIFICATION STANDARDS.
7. CONTRACTOR TO LOCATE ALL UNDERGROUND UTILITIES.
8. TREE PITS OR PLANTING BEDS LOCATED WITHIN 1 METER OF UNDERGROUND UTILITIES ARE TO BE HAND DUG.
9. SUBMIT WRITTEN GUARANTEE TO THE EFFECT THAT ALL PLANTS ACCEPTED DURING THE PERIOD OF JANUARY 1st TO JULY 15th SHALL BE GUARANTEED UNTIL JULY 15th THE SECOND FOLLOWING YEAR. PLANTS ACCEPTED DURING THE PERIOD OF JULY 15th TO DECEMBER 31st SHALL BE GUARANTEED FOR TWO YEARS FROM THE DATE OF ACCEPTANCE. THE GUARANTEE PERIOD LISTED ABOVE SHALL APPLY TO ALL "NURSERY GROWN" PLANTS.
10. ALL MATERIAL SHALL BE APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
11. FINAL INSPECTION AND ACCEPTANCE OF PLANTING WORK SHALL COINCIDE WITH THE FINAL INSPECTION AND ACCEPTANCE OF ALL WORK INCLUDED IN THE CONTRACT.
12. AT THE TIME OF FINAL INSPECTION, ALL PLANTS SHALL BE IN A HEALTHY, VIGOROUS GROWING CONDITION AND PLANTED IN FULL ACCORDANCE WITH DRAWINGS AND CONDITIONS.

REGION	SUBDIVISION	MILE
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CN PROJECT NO. –	CN DRAWING NO. –	

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HALTON SUBDIVISION - Mile 36.79 to 41.27
STORMWATER MANAGEMENT FACILITY
LANDSCAPE DETAILS

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	LD1	A

D SIZE 22" x 34" (558.8mm x 863.6mm)
PLOT: 2020-08-10 5:51:12 PM
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LANDSCAPE (GRASS)

LANDSCAPE (GRASS)

R16.0m

10.0m

R5.0m R5.0m

R20.0m

R8.0m

.17ha

.18ha

.16ha

.18ha

9.2m

9.00m

3.0m

TRACTOR TRAILER PARKING

33.45m

DCB1
T/G=180.81
SE INV 179.45

DCB1
T/G=180.81

CBMH2
T/G=180.75
NW INV 179.20
SE INV 179.00

CBMH2
T/G=180.75

CBMH3
T/G=180.60

CBMH3
T/G=180.60
NW INV 178.75
SE INV 178.60

CBMH4
T/G=180.46

CBMH4
T/G=180.46
NW INV 178.36
SE INV 178.28

1
26
27
59
60
125

.37ha

.28ha

.017ha

.015ha

.024ha

.030ha

.066ha

.019ha

.017ha

.14ha

.089ha

.20ha

.11ha

GENERAL ASPHALT STORAGE PAD

ADMIN/GENERAL BUILDING BY OTHERS

.035ha

LANDSCAPE (GRASS)

EMPLOYEE PARKING

32.1m-525mmØ CONC. STM@ 0.5%

OGS 2
T/G=179.67
SW INV 177.84
NE INV 177.74

OGS 2
T/G=179.67

MH18
179.79

DCBMH18
T/G=179.79
SW INV 177.97
NE INV 177.87

53.1m-525mmØ CONC. STM @ 0.5%

DCB12
T/G=179.87

DCB12
T/G=179.87
NE INV 178.23

10.0m

CB7
T/G=180.64

MH5
T/G=180.51

R10.0m

CB6
T/G=180.

39.7m-675mmØ CONC. STM@ 0.5%

CBMH8
T/G=179.80

CBMH8
T/G=179.80
NW INV 177.72
SE INV 177.69

35.3m-675mmØ CONC. STM@ 0.3%

CBMH9
T/G=179.86
NW INV 177.60
NE INV 177.42
SW INV 177.64

CB11
T/G=179.70

CB11
T/G=179.70
SE INV 178.15

35.3m-750mmØ CONC. STM @ 1.0%

CBMH10
T/G=178.91
SW INV 177.30
CBMH10
T/G=178.91
NW INV 177.22
SW INV 177.80

MH12
T/G=178.02
SW INV 177.12
SE INV 177.06
NW INV 178.24

OGS 1
T/G=177.93
NW INV 177.03
E INV 177.00

6.0m-1200mmØ CONC. S
T/G=178.62

IGS 1

MH14
T/G=177.84
W INV 176.94
E INV 176.91

HW P2B
T/G=178.79
N INV 176.26
INLET HEADWALL

HW P2B
T/G=178.79

HW P2A
T/G=177.70
W INV 176.80

CBMH15
T/G=180.01
SW INV 177.97
NE INV 177.94
SE INV 178.00

CB19
T/G=178.82

DCB16
T/G=178.52
NW INV 178.20

R25.0m

R30.0m

2.5m

5.5m

7.5m

REMAINE ACCESS ROAD

D SIZE 22" x 34" (558.8mm x 863.6mm)
PLOT: 8/10/2020 12:01:03 PM
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AECOM FILE NAME: I:\1000\1065 - AECOM\4067 - CN Milton Logistics Hub\CAD\C3D\SHEETS\1000-1065-C102.dwg, 01-C-2000, 8/10/2020 12:00:50 PM, dgauer

PROPOSED 28.0m, 600mmØ CSP CULVERT @ 0.5% w/ RIP RAP PROTECTION AT BOTH ENDS OPSD 810.010 U/S INV. 179.14 D/S INV. 178.50

PROPOSED 38.0m, 600mmØ CSP CULVERT @ 0.5% w/ RIP RAP PROTECTION AT BOTH ENDS OPSD 810.010 U/S INV. 180.20 D/S INV. 180.00

Culvert A

Culvert B

Swale Section 1

MATCHLINE REFER TO GATES PLATFORM DWGS.

SEE GATES PLATFORM DRAWINGS MATCHLINE

SEE GATES PLATFORM DRAWINGS MATCHLINE

CURB TERMINUS TAPER CURB END

CURB TERMINUS TAPER CURB END

CURB TERMINUS TAPER CURB END

CURB TERMINUS TAPER CURB END

CURB TERMINUS TAPER CURB END

CURB TERMINUS TAPER CURB END

TYPICAL GRASSED SWALE SEE DETAIL 01-C-1000

TOE OF SLOPE

TOE OF SLOPE

TOE OF SLOPE

TOE OF SLOPE

SLOPE 3:1 MAX.

SLOPE 3:1 MAX.

SLOPE 3:1 MAX.

LANDSCAPE (GRASS) (TOPSOIL, SEED & MULCH)

LANDSCAPE (GRASS) (TOPSOIL, SEED & MULCH)

LANDSCAPE (GRASS) (TOPSOIL, SEED & MULCH)

LANDSCAPE (GRASS) (TOPSOIL, SEED & MULCH)

LANDSCAPE (GRASS) (TOPSOIL, SEED & MULCH)

GRADE GRASSED LANDSCAPE AREA FROM EDGE OF STORAGE PAD TO TOP OF DITCH SLOPE

INTERCEPTOR DITCH CARRYING WATER FROM TERMINAL

BLEND TO DITCH TOP OF SLOPE

OPSD 810.0.010

1.5m LENGTH CURB DEPRESSION ASPHALT TO BE FLUSH WITH DEPRESSED CURB

1.5m LENGTH CURB DEPRESSION ASPHALT TO BE FLUSH WITH DEPRESSED CURB

GENERAL ASPHALT STORAGE PAD

ADMIN/GENERAL BUILDING BY OTHERS

CONCRETE BARRIER CURB w/WIDE GUTTER OPSD 600.010

CONCRETE BARRIER CURB w/WIDE GUTTER OPSD 600.010

CONCRETE BARRIER CURB w/WIDE GUTTER OPSD 600.010

CONCRETE BARRIER CURB w/WIDE GUTTER OPSD 600.010

CONCRETE BARRIER CURB w/WIDE GUTTER OPSD 600.010

CONCRETE BARRIER CURB - OPSD 600.110

CONCRETE BARRIER CURB w/WIDE GUTTER-OPSD 600.110

CURB TERMINUS TAPER CURB END

CURB TERMINUS TAPER CURB END

CURB TERMINUS TAPER CURB END

CONCRETE BARRIER CURB w/WIDE GUTTER OPSD 600.010

1.0m WIDTH LANDSCAPE STRIP

1.0mWIDTH LANDSCAPE STRIP

MATCH TO EXISTING ELEVATIONS

MATCH TO EXISTING ELEVATIONS

TRANSITION FROM CURB & GUTTER TO BARRIER CURB

TRACTOR TRAILER PARKING

EMPLOYEE PARKING

TOPSOIL, SEED & MULCH

(TOPSOIL, SEED & MULCH)

(TOPSOIL, SEED & MULCH)

(TOPSOIL, SEED & MULCH)

SLOPE 3:1 MAX.

2.0%

2.5m BENCH @ 2.0%

4.0m WIDTH ACCESS ROAD

3:1 LANDSCAPE SLOPE (TOPSOIL, SEED & MULCH)

ACCESS ROAD

MATCHLINE REFER TO 01-SWM-2000

SEE DRAWING 01-SWM-2000 STORMWATER MANAGEMENT FACILITY POND 2

HW P2B T/G=178.79

HW P2A T/G=177.70

MH14 T/G=177.84

MH12 T/G=178.02

OGS 1 T/G=177.93

CB13 T/G=178.62

CB11 T/G=179.70

CBMH10 T/G=178.12

CBMH8 T/G=179.80

CBMH9 T/G=179.80

OGS 2 T/G=179.67

DCBMH18 T/G=179.79

DCB12 T/G=179.87

DCB1 T/G=180.81

CBMH2 T/G=180.75

CBMH3 T/G=180.60

CBMH4 T/G=180.46

MH5 T/G=180.51

AB–01

P–14

P–15

P–16

P–19

P–20

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N 4812334.720 E 593834.608

N 4812354.999 E 593941.815

N 4812327.167 E 593945.559

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N 4812331.920 E 593980.115

N 4812296.660 E 593930.313

N 4812289.591 E 593930.485

N 4812329.417 E 593961.512

N 4812280.831 E 594047.517

N 4812267.268 E 594053.266

N 4812273.305 E 594072.822

N 4812235.494 E 594112.522

N 4812159.443 E 594110.754

N 4812190.720 E 594073.565

N 4812189.100 E 594079.617

N 4812153.478 E 594112.668

N 4812187.652 E 594020.958

N 4812177.307 E 594031.820

N 4812164.720 E 594045.036

N 4812218.210 E 594005.431

N 4812209.378 E 593997.856

N 4812202.553 E 593990.519

N 4812209.378 E 593997.856

N 4812183.711 E 594010.301

N 4812169.573 E 594010.645

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N 4812144.576 E 594000.647

N 4812116.300 E 594001.336

N 4812095.910 E 594057.839

N 4812094.011 E 594038.084

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N 4812076.177 E 594042.532

N 4812115.218 E 594037.567

N 4812109.059 E 593994.439

N 4812093.898 E 594010.357

N 4812068.978 E 594025.309

1 01-C-2001

2 01-C-2001

3 01-C-2001

4 01-C-2001

R15.0m

R20.0m

R8.0m

R10.0m

R5.0m

R25.0m

R30.0m

10.0m

33.2m

3.0m

9.2m

PLAN

0 10 25 SCALE 1:500

NOTE:
1. REFER TO 01-C-2007 FOR DRAINAGE STRUCTURE DETAILS.
2. ALL GRADES SHOWN ALONG CURB DENOTE "BOTTOM OF CURB" GRADES.

MATCHLINE REFER TO 01-C-2003

REGION	SUBDIVISION	MILE
HALTON	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

PROFESSIONAL SEALS

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I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
C	19/12/20	ISSUED FOR 90% SUBMISSION	YL	DG	AD	RM		
B	19/10/25	ISSUED FOR 60% SUBMISSION	XX	XX	XX	XX		
A	19/03/22	ISSUED FOR 30% SUBMISSION	XX	XX	XX	XX		

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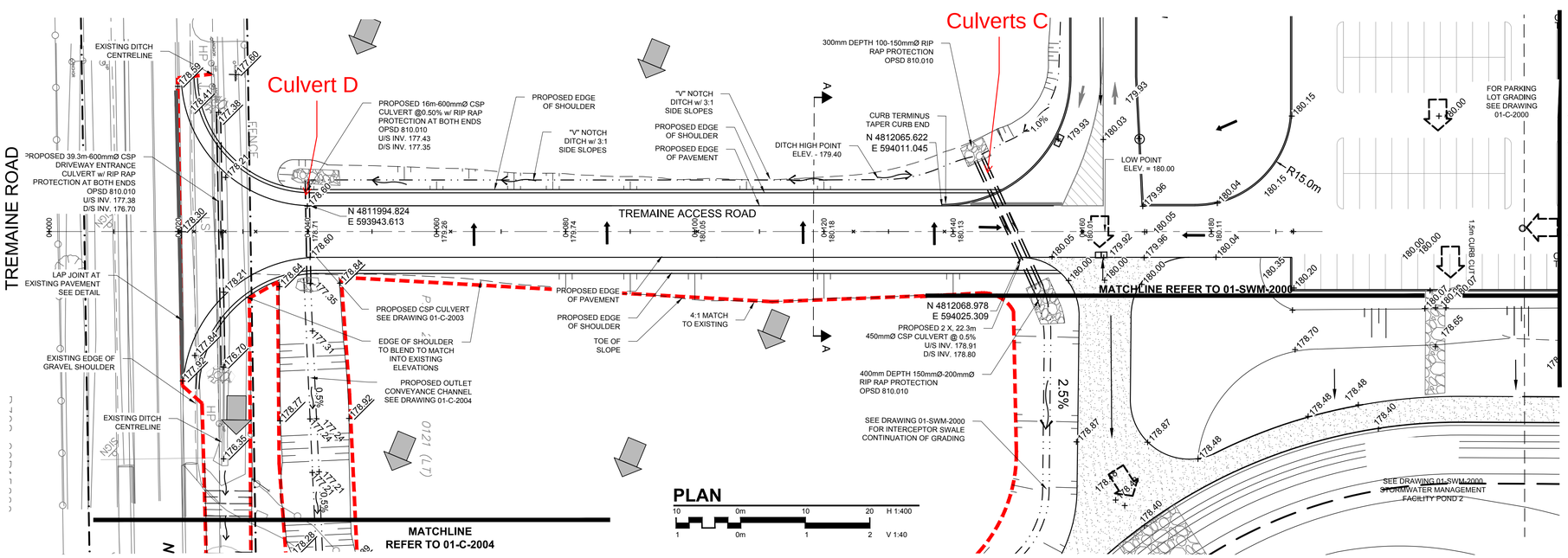
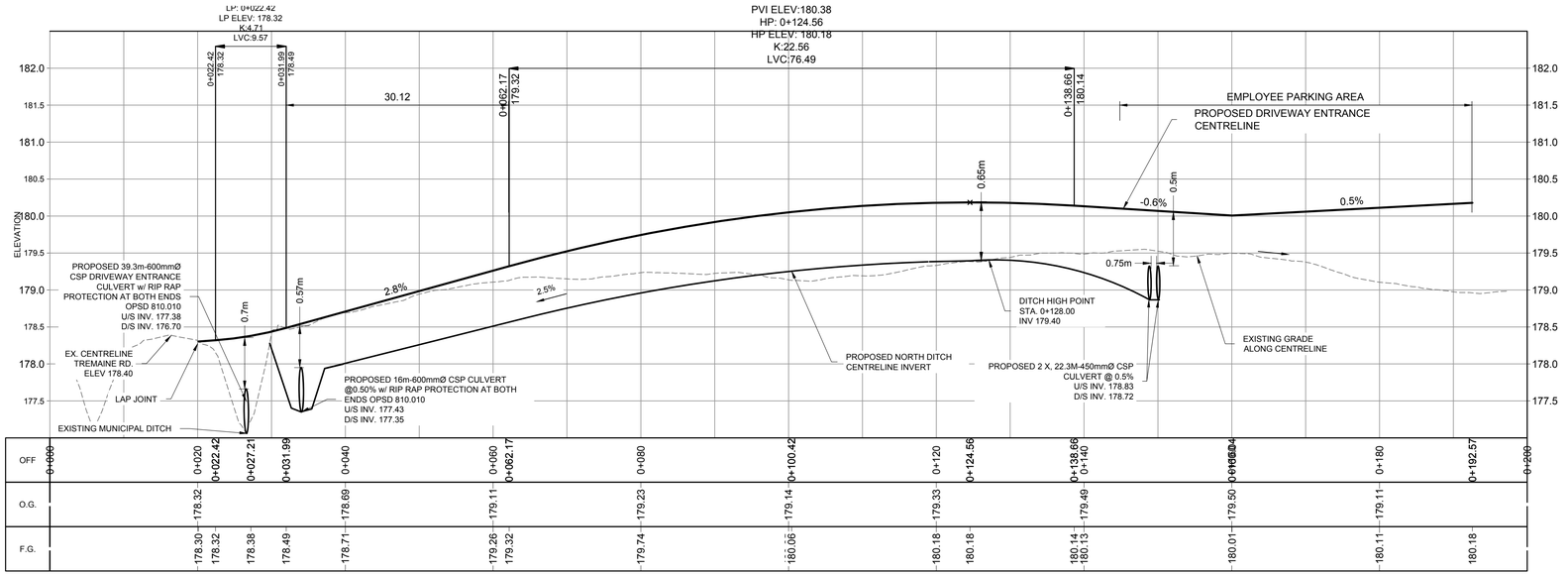
CN
MILTON LOGISTIC HUB
HALTON SUBDIVISION - Mile 36.79 to 41.27
SITE GRADING

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-C-2000	C

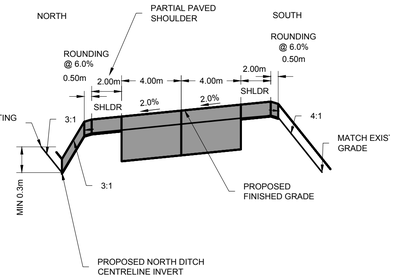




ACCESS ROAD FROM TREMAINE ROAD

PROFILE

10 0m 10 20 H 1:400
1 0m 1 2 V 1:40



ACCESS ROAD FROM TREMAINE ROAD

TYPICAL ROAD SECTION

5 0m 5 10 H 1:200
1 0m 1 2 V 1:40

NOTE:
REFER TO 01-C-2007 FOR DRAINAGE STRUCTURE DETAILS.

REGION	SUBDIVISION	MILE
HALTON	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

PROFESSIONAL SEALS

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
C	19/12/20	ISSUED FOR 90% SUBMISSION	YL	DG	AD	RM		
B	19/10/25	ISSUED FOR 60% SUBMISSION	XX	XX	XX	XX		
A	19/03/22	ISSUED FOR 30% SUBMISSION	XX	XX	XX	XX		

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CN
MILTON LOGISTIC HUB
HALTON SUBDIVISION - Mile 36.79 to 41.27
TREMAINE ACCESS ROAD
PLAN, PROFILE AND TYPICAL ROAD SECTION

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-C-2003	C

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PLOT: 8/10/2020 12:01:53 PM

Saved By: amiszczak

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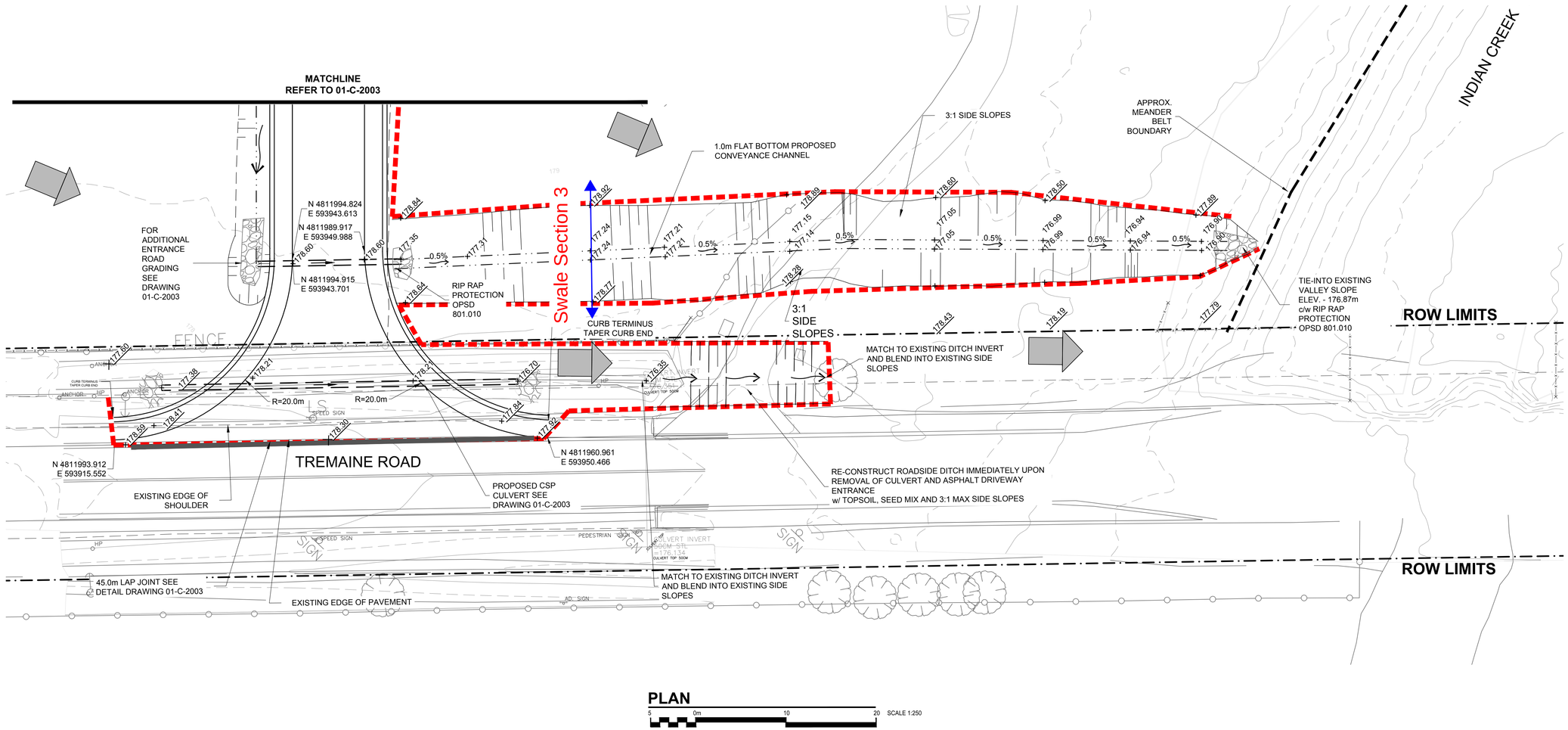

PLAN

5 0m 10 20 SCALE 1:250

NOTE:
REFER TO 01-C-2007 FOR DRAINAGE STRUCTURE DETAILS.

REGION	SUBDIVISION	MILE
HALTON	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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PROFESSIONAL SEALS

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
C	19/12/20	ISSUED FOR 90% SUBMISSION	YL	DG	AD	RM		
B	19/10/25	ISSUED FOR 60% SUBMISSION	XX	XX	XX	XX		
A	19/03/22	ISSUED FOR 30% SUBMISSION	XX	XX	XX	XX		

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CN
MILTON LOGISTIC HUB
HALTON SUBDIVISION - Mile 36.79 to 41.27
TREMAINE ACCESS ROAD
ENTRANCE & DRAINAGE

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-C-2004	C

D SIZE 22" x 34" (558.8mm x 863.6mm)
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TREMAINE ACCESS ROAD

MATCHLINE REFER TO TREMAINE ACCESS DRAWINGS

MATCHLINE REFER TO 01-C-2001

MATCHLINE REFER TO TERMINAL GATES DRAWINGS

INLET STORM SEWER

CBMH9 T/G=179.80

CBMH10 T/G=178.12

OGS 1 T/G=177.93

8.0m

4.0m WIDTH ACCESS ROAD

SWM POND 2 - MAIN CELL
TOP OF BERM (FREEBOARD) = 178.30m
100yr. (TOP OF POND) = 178.005m
PERMANENT POOL = 175.50m
BOTTOM OF POND - 174.50m

1.0m FLAT BOTTOM INTERCEPTOR SWALE w/ 3:1 SIDE SLOPES REFER TO DETAIL DRAWING 01-SWM-2001

EXTENDED DETENTION - 176.50m

Swale Section 2

OUTLET CONTROL STRUCTURE SEE DRAWING 01-SWM-2001

300mm MUELLER KNIFE GATE VALVE LOCATED IN 1200mm dia. WATERTIGHT CONCRETE MANHOLE

600mm MUELLER KNIF GATE VALVE LOCATED IN 1200mm dia. WATERTIGHT CONCRETE MANHOLE

15.0m SETBACK

REGIONAL FLOODLINE

TYPICAL 1.0m FLAT BOTTOM OUTLET CHANNEL @ 4.4% w/ 3:1 SIDE SLOPES AND LINED WITH RIP RAP PROTECTION 900mm THICKNESS, D50=300mm

TERMINATE CHANNEL TO MATCH TO EXISTING ELEVATION ELEV. = 173.50

OUTLET HEADWALL HW P2D c/w GRATE
OUTLET INV. = 174.75
DRAIN PIPE INV. = 174.75
OPSD 804.040

13.5m, 600mmØ CONC. STORM SEWER @ 3.2%

9.6m, 600mmØ CONC. STORM SEWER @ 3.2%

CONCRETE HEADWALL HW P2C OPSD 804.030

30.8m, 300mmØ REVERSE STORM SEWER (PVC) @ -2.3%

40.0m (TOTAL LENGTH), 300mm DRAIN PIPE PVC

DRAIN PIPE (PVC) INLET w/ HEADWALL HW P2E OPSD 804.030

MICRO POOL BOT ELEV. = 174.00m

1.5m TOP WIDTH BERM 3:1 SIDE SLOPES TOP ELEV. = 177.30m

2.0m TOP WIDTH BERM FOREBAY BERM (SUBMERGED) TOP ELEV. = 175.20m

14.0m EMERGENCY OVERFLOW WEIR ELEV. 177.60m

RIP RAP SPILLWAY 900mm THICKNESS, D50=300mm

INDIAN CREEK

INDIAN CREEK

750mmØ CONC. STORM @ 0.5%

HW P2B T/G=178.20

HEADWALL HW P2B OPSD 804.040

HEADWALL HW P2A OPSD 804.030

HW P2B T/G=178.79

RIP RAP SPILLWAY 900mm THICKNESS, D50=300mm

PERMANENT POOL 175.50m

BOTTOM OF POND 174.50m

1.5m TOP WIDTH BERM
TOP ELEV. = 177.60m

TURFSTONE PAVERS OR APPROVED EQUIVALENT

SEDIMENT DRYING AREA

SWM POND 2 - SEDIMENT FOREBAY
TOP OF BERM (FREEBOARD) = 178.30m
100yr. (TOP OF POND) = 178.00m
PERMANENT POOL = 175.50m
BOT.TOM OF FOREBAY = 174.00m

EXTENDED DETENTION - 176.50m

300mmØ MAINTENANCE PIPE

4.0m WIDTH ACCESS ROAD

N 4812160.919
E 594143.412

N 4812165.439
E 594200.799

N 4812135.505
E 594232.832

N 4812119.249
E 594184.861

N 4812104.646
E 594094.494

N 4812090.750
E 594082.703

N 4812056.330
E 594117.319

N 4812042.360
E 594175.581

N 4812075.971
E 594230.160

N 4812010.192
E 594168.060

PLAN

0 10 25 m H 1:500

NOTE:
REFER TO 01-C-2007 FOR DRAINAGE STRUCTURE DETAILS.

REGION	SUBDIVISION	MILE
HALTON	HALTON	36.79 - 41.27
CN PROJECT NO. –	CN DRAWING NO. –	

PROFESSIONAL SEALS

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
C	20/05/13	ISSUED FOR 90% SUBMISSION	YL	DG	AD	RM		
B	19/10/25	ISSUED FOR 60% SUBMISSION	XX	XX	XX	XX		
A	19/03/22	ISSUED FOR 30% SUBMISSION	XX	XX	XX	XX		

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CN
MILTON LOGISTIC HUB
HALTON SUBDIVISION - Mile 36.79 to 41.27
STORMWATER MANAGEMENT FACILITY POND # 2
PLAN

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-SWM-2000	C

Swale Section 1 Capacity

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.030	
Channel Slope	0.01250	m/m
Normal Depth	0.15	m
Left Side Slope	3.00	m/m (H:V)
Right Side Slope	3.00	m/m (H:V)

Results

Discharge	43.19	L/s
Flow Area	0.07	m²
Wetted Perimeter	0.95	m
Hydraulic Radius	0.07	m
Top Width	0.90	m
Critical Depth	0.13	m
Critical Slope	0.02335	m/m
Velocity	0.64	m/s
Velocity Head	0.02	m
Specific Energy	0.17	m
Froude Number	0.75	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	m
Length	0.00	m
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	m
Profile Description		
Profile Headloss	0.00	m
Downstream Velocity	Infinity	m/s
Upstream Velocity	Infinity	m/s
Normal Depth	0.15	m
Critical Depth	0.13	m
Channel Slope	0.01250	m/m
Critical Slope	0.02335	m/m

Swale Section 2 Capacity

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.030	
Channel Slope	0.01000	m/m
Normal Depth	1.00	m
Left Side Slope	3.00	m/m (H:V)
Right Side Slope	3.00	m/m (H:V)
Bottom Width	1.00	m

Results

Discharge	8908.23	L/s
Flow Area	4.00	m²
Wetted Perimeter	7.32	m
Hydraulic Radius	0.55	m
Top Width	7.00	m
Critical Depth	0.97	m
Critical Slope	0.01139	m/m
Velocity	2.23	m/s
Velocity Head	0.25	m
Specific Energy	1.25	m
Froude Number	0.94	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	m
Length	0.00	m
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	m
Profile Description		
Profile Headloss	0.00	m
Downstream Velocity	Infinity	m/s
Upstream Velocity	Infinity	m/s
Normal Depth	1.00	m
Critical Depth	0.97	m
Channel Slope	0.01000	m/m

Swale Section 2 Capacity

GVF Output Data

Critical Slope	0.01139	m/m

Swale Section 3 Capacity

Project Description

Friction Method	Manning Formula
Solve For	Discharge

Input Data

Roughness Coefficient	0.030	
Channel Slope	0.00500	m/m
Normal Depth	1.50	m
Left Side Slope	3.00	m/m (H:V)
Right Side Slope	3.00	m/m (H:V)
Bottom Width	1.00	m

Results

Discharge	16571.34	L/s
Flow Area	8.25	m²
Wetted Perimeter	10.49	m
Hydraulic Radius	0.79	m
Top Width	10.00	m
Critical Depth	1.29	m
Critical Slope	0.01050	m/m
Velocity	2.01	m/s
Velocity Head	0.21	m
Specific Energy	1.71	m
Froude Number	0.71	
Flow Type	Subcritical	

GVF Input Data

Downstream Depth	0.00	m
Length	0.00	m
Number Of Steps	0	

GVF Output Data

Upstream Depth	0.00	m
Profile Description		
Profile Headloss	0.00	m
Downstream Velocity	Infinity	m/s
Upstream Velocity	Infinity	m/s
Normal Depth	1.50	m
Critical Depth	1.29	m
Channel Slope	0.00500	m/m

Swale Section 3 Capacity

GVF Output Data

Critical Slope	0.01050	m/m

Culvert Calculator Report
Culvert A

Solve For: Discharge

Culvert Summary					
Allowable HW Elevation	181.58	m	Headwater Depth/Height	2.26	
Computed Headwater Eleva	181.58	m	Discharge	0.4948	m³/s
Inlet Control HW Elev.	181.05	m	Tailwater Elevation	180.00	m
Outlet Control HW Elev.	181.58	m	Control Type	Outlet Control	

Grades					
Upstream Invert	180.20	m	Downstream Invert	180.00	m
Length	38.00	m	Constructed Slope	0.005263	m/m

Hydraulic Profile					
Profile	CompositeM2PressureProfile		Depth, Downstream	0.46	m
Slope Type	Mild		Normal Depth	N/A	m
Flow Regime	Subcritical		Critical Depth	0.46	m
Velocity Downstream	2.10	m/s	Critical Slope	0.024205	m/m

Section					
Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	CMP		Span	0.61	m
Section Size	600 mm		Rise	0.61	m
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	181.58	m	Upstream Velocity Head	0.15	m
Ke	0.90		Entrance Loss	0.13	m

Inlet Control Properties					
Inlet Control HW Elev.	181.05	m	Flow Control	Transition	
Inlet Type	Projecting		Area Full	0.3	m²
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

Culvert Calculator Report
Culvert B

Solve For: Discharge

Culvert Summary					
Allowable HW Elevation	180.65	m	Headwater Depth/Height	2.97	
Computed Headwater Eleva	180.65	m	Discharge	0.6324	m³/s
Inlet Control HW Elev.	180.02	m	Tailwater Elevation	178.70	m
Outlet Control HW Elev.	180.65	m	Control Type	Outlet Control	

Grades					
Upstream Invert	178.84	m	Downstream Invert	178.70	m
Length	28.00	m	Constructed Slope	0.005000	m/m

Hydraulic Profile					
Profile	CompositeM2PressureProfile		Depth, Downstream	0.51	m
Slope Type	Mild		Normal Depth	N/A	m
Flow Regime	Subcritical		Critical Depth	0.51	m
Velocity Downstream	2.41	m/s	Critical Slope	0.031686	m/m

Section					
Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	CMP		Span	0.61	m
Section Size	600 mm		Rise	0.61	m
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	180.65	m	Upstream Velocity Head	0.24	m
Ke	0.90		Entrance Loss	0.22	m

Inlet Control Properties					
Inlet Control HW Elev.	180.02	m	Flow Control	Submerged	
Inlet Type	Projecting		Area Full	0.3	m²
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

Culvert Calculator Report
Culverts C

Solve For: Discharge

Culvert Summary					
Allowable HW Elevation	180.35	m	Headwater Depth/Height	3.15	
Computed Headwater Eleva	180.35	m	Discharge	0.6083	m³/s
Inlet Control HW Elev.	179.78	m	Tailwater Elevation	178.80	m
Outlet Control HW Elev.	180.35	m	Control Type	Outlet Control	

Grades					
Upstream Invert	178.91	m	Downstream Invert	178.80	m
Length	22.30	m	Constructed Slope	0.004933	m/m

Hydraulic Profile					
Profile	CompositeM2PressureProfile		Depth, Downstream	0.38	m
Slope Type	Mild		Normal Depth	N/A	m
Flow Regime	Subcritical		Critical Depth	0.38	m
Velocity Downstream	2.07	m/s	Critical Slope	0.034287	m/m

Section					
Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	CMP		Span	0.46	m
Section Size	450 mm		Rise	0.46	m
Number Sections	2				

Outlet Control Properties					
Outlet Control HW Elev.	180.35	m	Upstream Velocity Head	0.18	m
Ke	0.90		Entrance Loss	0.16	m

Inlet Control Properties					
Inlet Control HW Elev.	179.78	m	Flow Control	Submerged	
Inlet Type	Projecting		Area Full	0.3	m²
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

Culvert Calculator Report
Culvert D

Solve For: Discharge

Culvert Summary					
Allowable HW Elevation	178.90	m	Headwater Depth/Height	2.41	
Computed Headwater Eleva	178.90	m	Discharge	0.6320	m³/s
Inlet Control HW Elev.	178.61	m	Tailwater Elevation	177.35	m
Outlet Control HW Elev.	178.90	m	Control Type	Outlet Control	

Grades					
Upstream Invert	177.43	m	Downstream Invert	177.35	m
Length	16.00	m	Constructed Slope	0.005000	m/m

Hydraulic Profile					
Profile	CompositeM2PressureProfile		Depth, Downstream	0.51	m
Slope Type	Mild		Normal Depth	N/A	m
Flow Regime	Subcritical		Critical Depth	0.51	m
Velocity Downstream	2.41	m/s	Critical Slope	0.031658	m/m

Section					
Section Shape	Circular		Mannings Coefficient	0.024	
Section Material	CMP		Span	0.61	m
Section Size	600 mm		Rise	0.61	m
Number Sections	1				

Outlet Control Properties					
Outlet Control HW Elev.	178.90	m	Upstream Velocity Head	0.24	m
Ke	0.90		Entrance Loss	0.22	m

Inlet Control Properties					
Inlet Control HW Elev.	178.61	m	Flow Control	Submerged	
Inlet Type	Projecting		Area Full	0.3	m²
K	0.03400		HDS 5 Chart	2	
M	1.50000		HDS 5 Scale	3	
C	0.05530		Equation Form	1	
Y	0.54000				

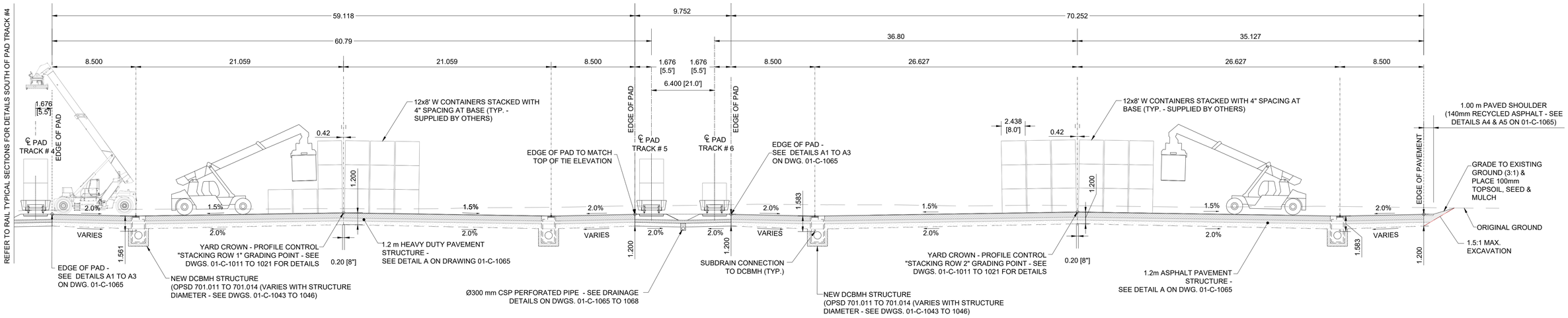
Appendix J

FINAL DRAINAGE REPORT

Milton Logistic Hub

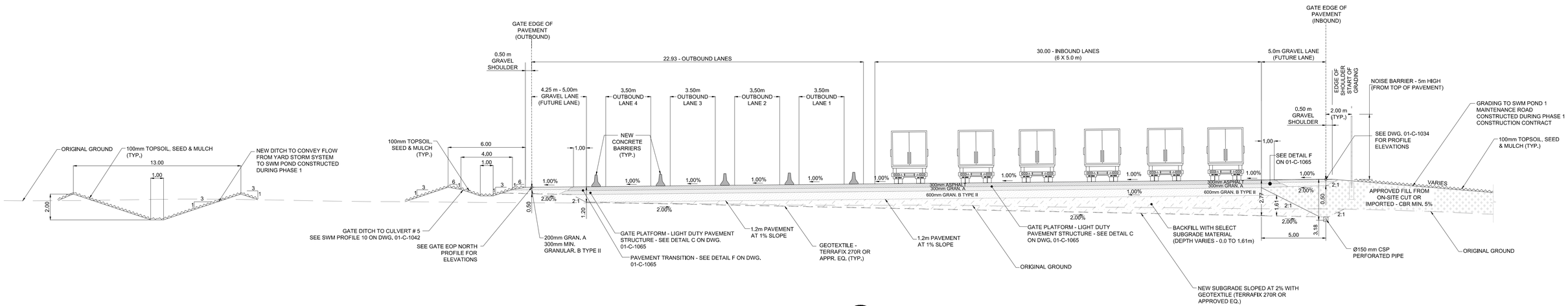
- Typical Cross Sections

D SIZE 22" x 34" (558.8mm x 863.6mm)



TYPICAL SECTION A

0 2 4 6 m 1:200



TYPICAL SECTION B

0 1.5 3 4.5 m SCALE= 1:150

REGION	SUBDIVISION	MILE
-	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

PROFESSIONAL SEALS

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I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
A	21/09/30	ISSUED FOR REVIEW	JOM	AS	JOM	LB		

AECOM

CN
MILTON LOGISTICS HUB - HALTON SUBDIVISION - PHASE 2
MAIN TERMINAL
TYPICAL SECTION
SHEET 1 OF 2

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-C-1059	A

PLOT: 8/31/2021 8:46:37 AM
Saved By: olmomartosj
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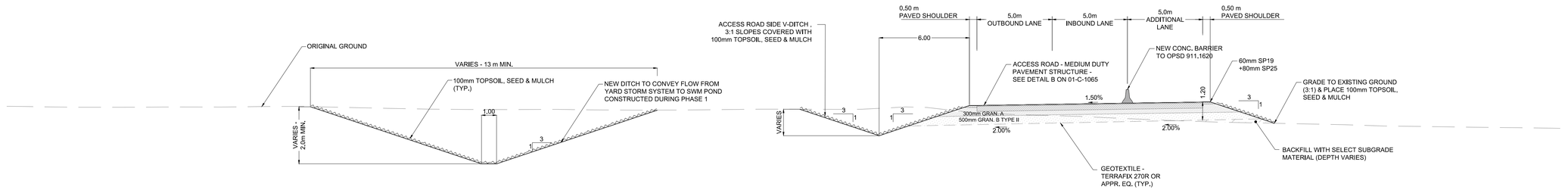
D SIZE 22" x 34" (558.8mm x 863.6mm)



TYPICAL SECTION C

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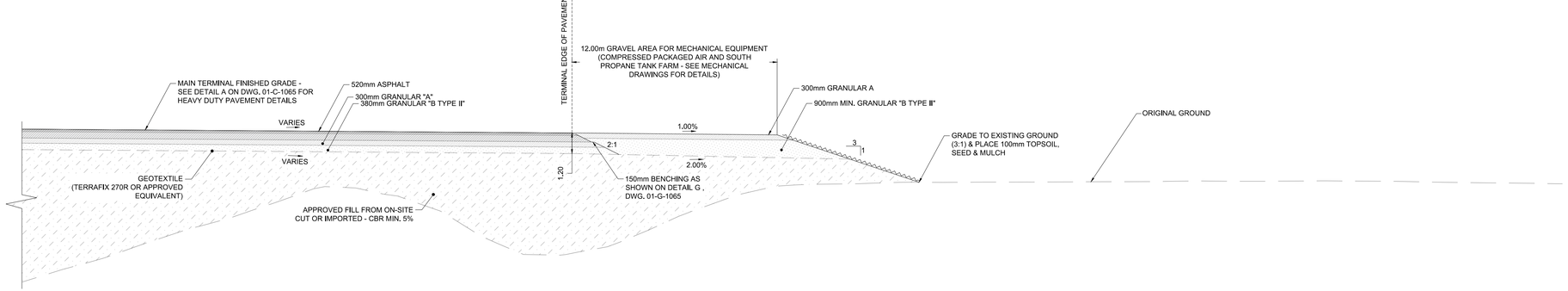

TYPICAL SECTION D

0 1.5 3 4.5 m SCALE= 1:150

CN	REGION: -	SUBDIVISION: HALTON	MILE: 36.79 - 41.27					
	CN PROJECT NO.: -	CN DRAWING NO.: -						

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PROFESSIONAL SEALS

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
A	21/09/30	ISSUED FOR REVIEW	JOM	AS	JOM	LB		

AECOM

CN
MILTON LOGISTICS HUB - HALTON SUBDIVISION - PHASE 2
GATES AND ACCESS ROAD TO MAIN TERMINAL
TYPICAL SECTIONS
SHEET 2 OF 2

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-C-1060	A

PLOT: 8/30/2021 12:08:13 PM
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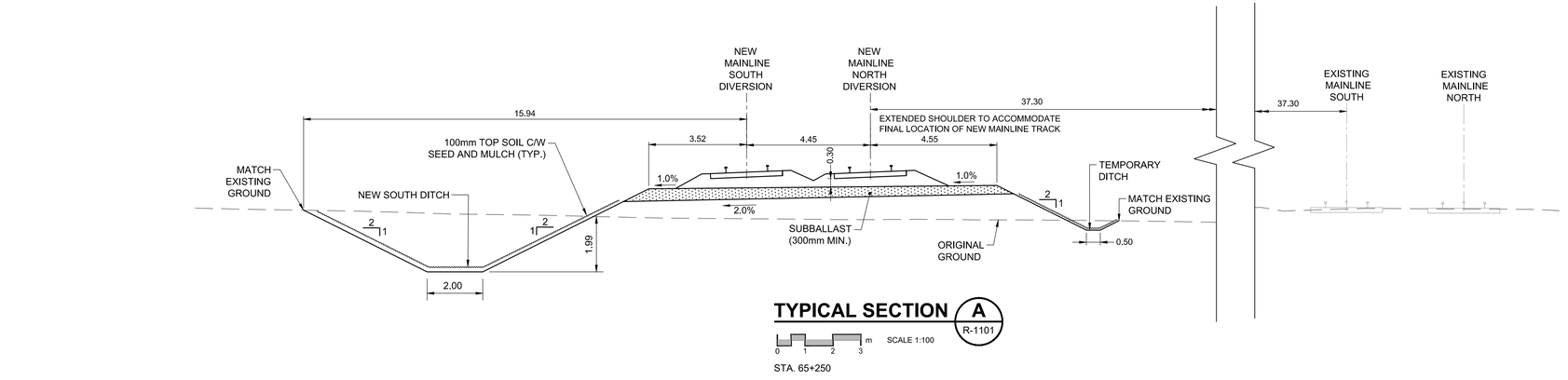
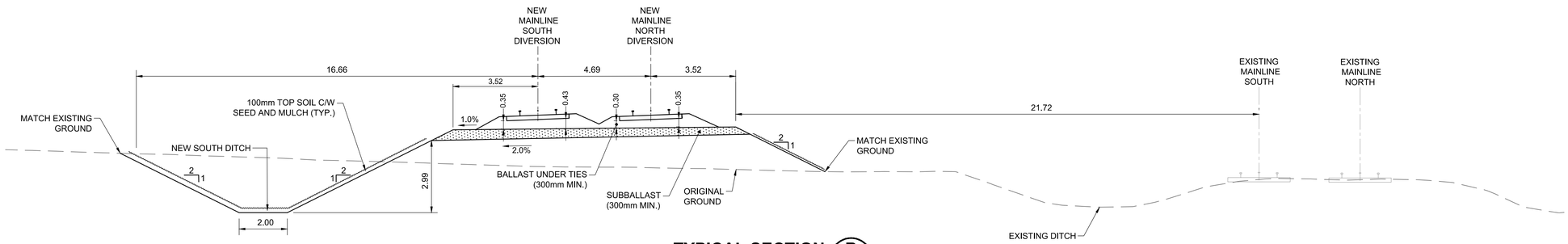


TYPICAL SECTION A
R-1101

SCALE 1:100

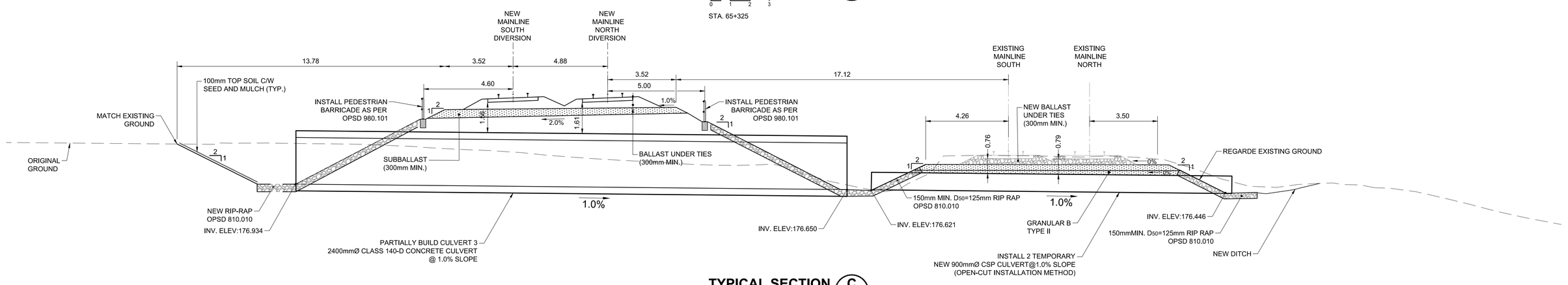
STA. 65+250



TYPICAL SECTION B
R-1101

SCALE 1:100

STA. 65+325



TYPICAL SECTION C
R-1102

SCALE 1:100

STA. 65+400

REGION	SUBDIVISION	MILE
-	HALTON	38.72 - 40.98
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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PROFESSIONAL SEALS

LICENSED PROFESSIONAL ENGINEER
L. M. BANCU
100140418
AUG 23 2021
PROVINCE OF ONTARIO

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
0	21/08/01	ISSUED FOR CONSTRUCTION	OP/LP	AS	OP/LP	LB		

AECOM

CN
MILTON LOGISTICS HUB - HALTON SUBDIVISION - PHASE 1
LOWER BASE LINE - TRACKS DIVERSION
TYPICAL SECTIONS
SHEET 1 OF 4

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-1501	0

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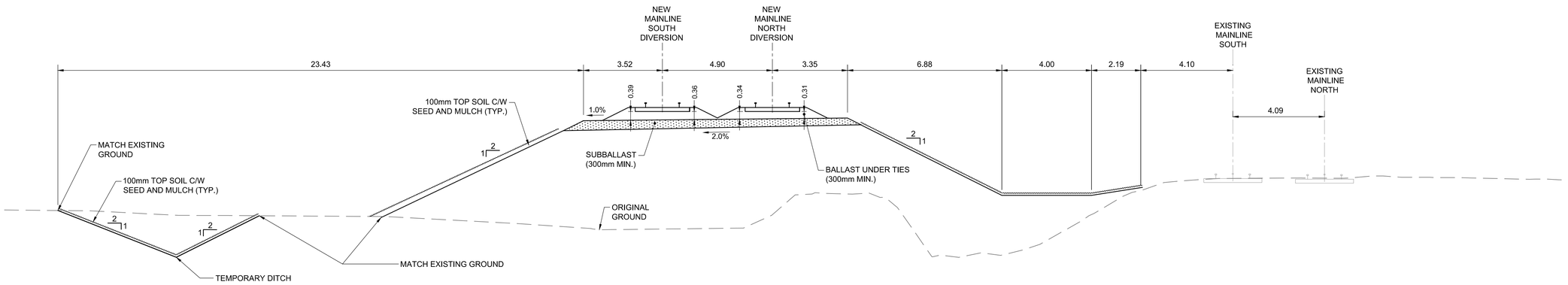
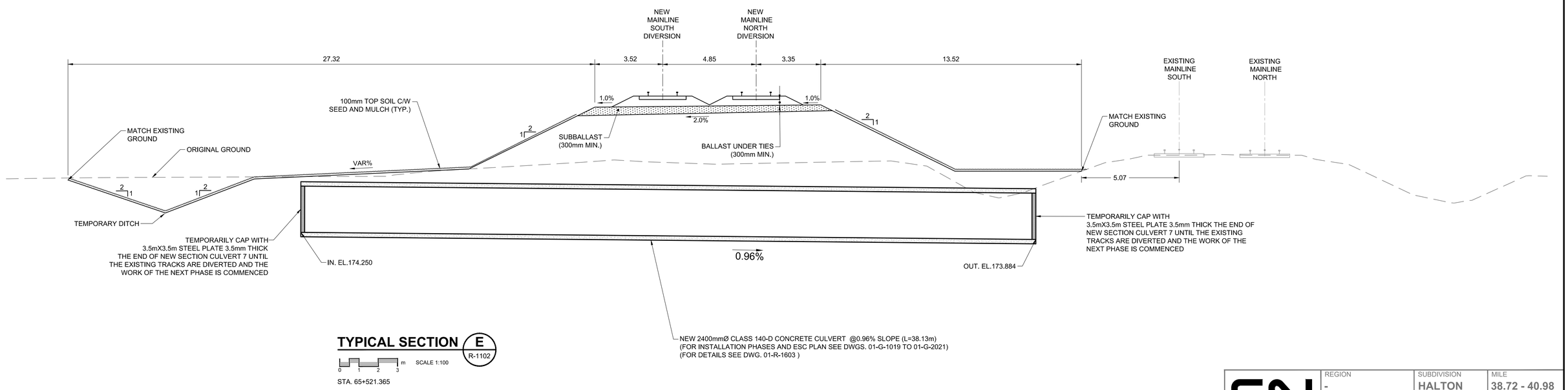


TYPICAL SECTION D

R-1102

0 1 2 3 m SCALE 1:100

STA. 65+500



TYPICAL SECTION E

R-1102

0 1 2 3 m SCALE 1:100

STA. 65+521.365

REGION	SUBDIVISION	MILE
-	HALTON	38.72 - 40.98
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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PROFESSIONAL SEALS

LICENSED PROFESSIONAL ENGINEER
L. M. BANCU
100140418
AUG 31 2021
PROVINCE OF ONTARIO

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
0	21/08/01	ISSUED FOR CONSTRUCTION	OP/LP	AS	OP/LP	LB		

AECOM

CN

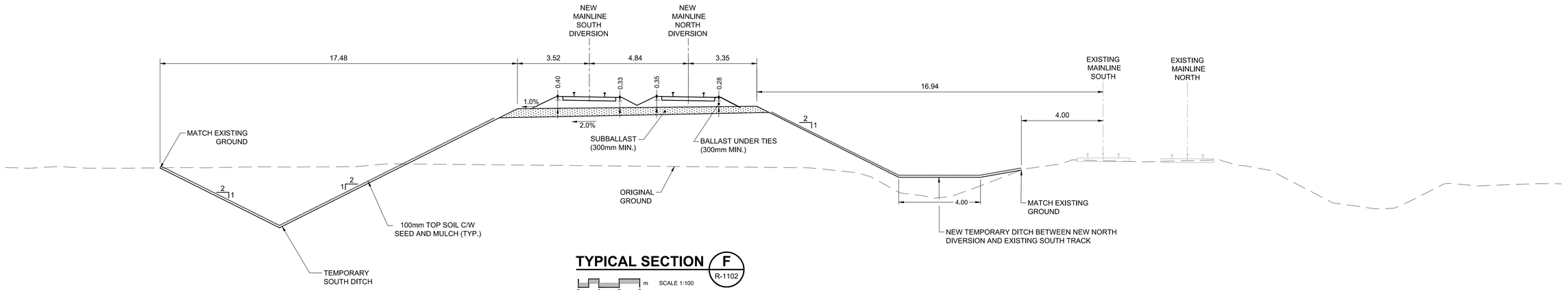
MILTON LOGISTICS HUB - HALTON SUBDIVISION - PHASE 1

LOWER BASE LINE - TRACKS DIVERSION

TYPICAL SECTIONS

SHEET 2 OF 4

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-1502	0

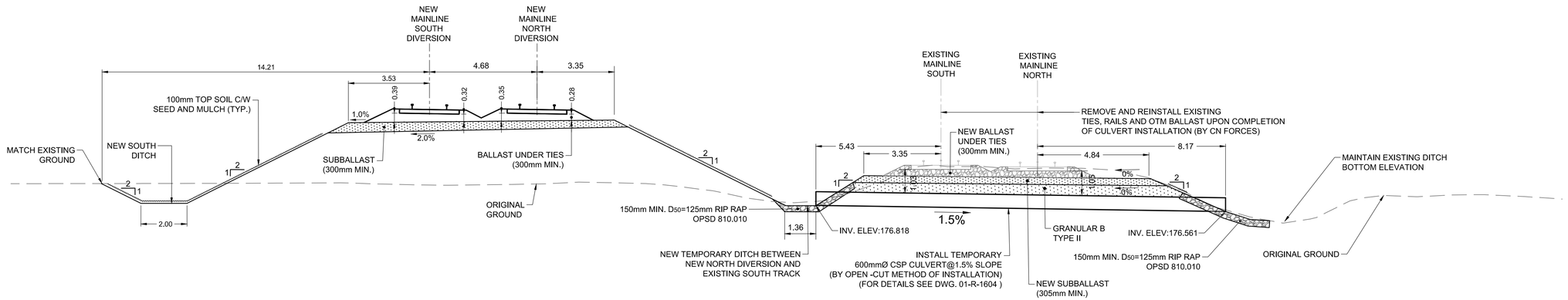


TYPICAL SECTION F

R-1102

0 1 2 3 m SCALE 1:100

STA. 65+400



TYPICAL SECTION G

R-1102

0 1 2 3 m SCALE 1:100

STA. 65+625

0	21/08/01	ISSUED FOR CONSTRUCTION	OP/LP	AS	OP/LP	LB			
I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP	

CN	REGION: -	SUBDIVISION: HALTON	MILE: 38.72 - 40.98
	CN PROJECT NO.: -	CN DRAWING NO.: -	

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PROFESSIONAL SEALS

LICENSED PROFESSIONAL ENGINEER L. M. BANCU 100140418 PROVINCE OF ONTARIO 2021/03/09

AECOM

CN

MILTON LOGISTICS HUB - HALTON SUBDIVISION - PHASE 1

LOWER BASE LINE - TRACKS DIVERSION

TYPICAL SECTIONS

SHEET 3 OF 4

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
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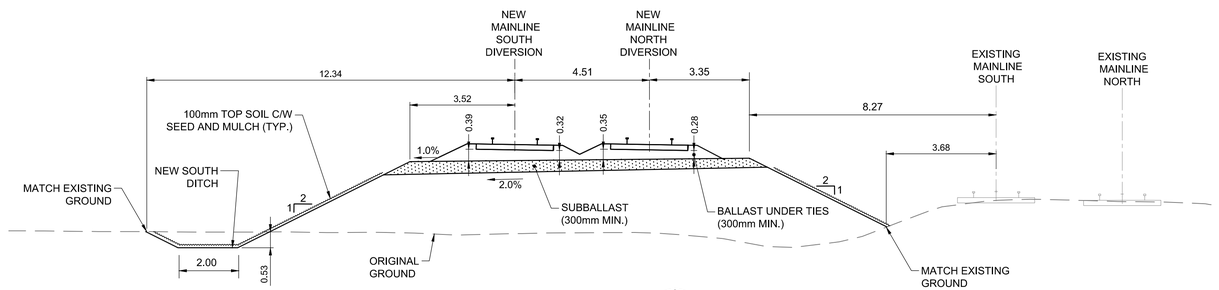
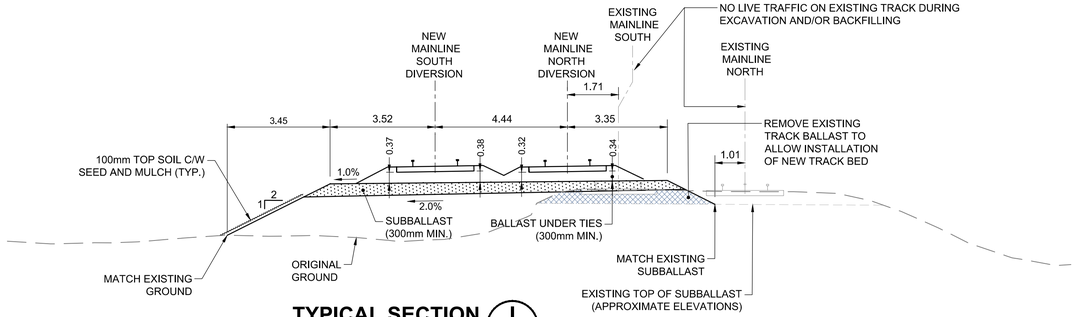


TYPICAL SECTION H
R-1103

0 1 2 3 m SCALE 1:100

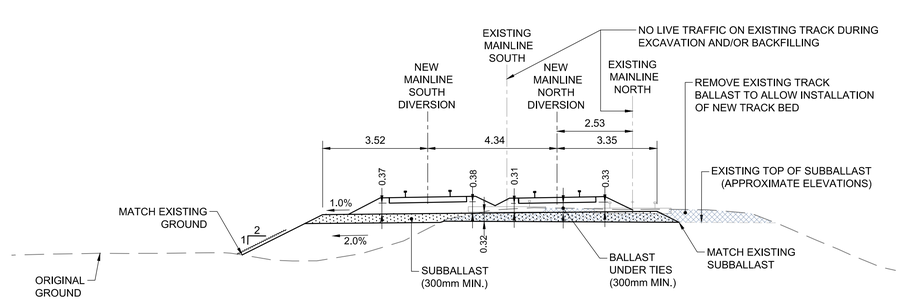
STA. 65+700



TYPICAL SECTION I
R-1103

0 1 2 3 m SCALE 1:100

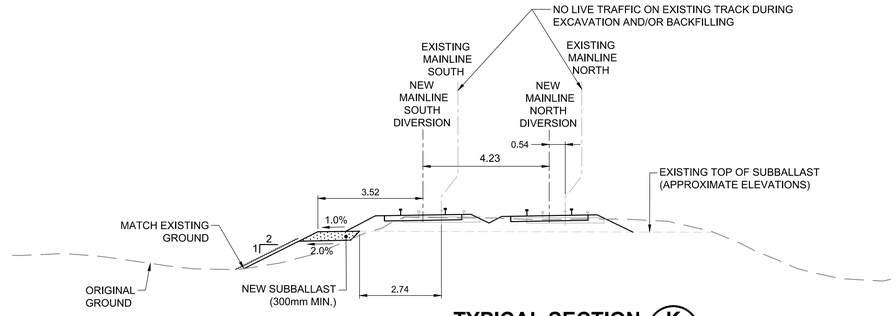
STA. 65+800



TYPICAL SECTION J
R-1103

0 1 2 3 m SCALE 1:100

STA. 65+850



TYPICAL SECTION K
R-1103

0 1 2 3 m SCALE 1:100

STA. 65+850

CN	REGION: -	SUBDIVISION: HALTON	MILE: 38.72 - 40.98
	CN PROJECT NO.: -	CN DRAWING NO.: -	

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PROFESSIONAL SEALS

LICENSED PROFESSIONAL ENGINEER L. M. BANCU 100140418 PROVINCE OF ONTARIO 19.03.2021

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
0	21/08/01	ISSUED FOR CONSTRUCTION	OP/LP	AS	OP/LP	LB		

AECOM

CN
MILTON LOGISTICS HUB - HALTON SUBDIVISION - PHASE 1
LOWER BASE LINE - TRACKS DIVERSION
TYPICAL SECTIONS
SHEET 4 OF 4

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-1504	0

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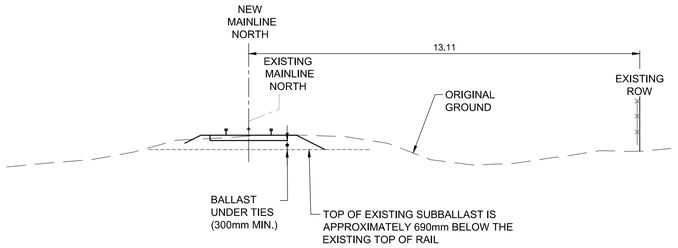
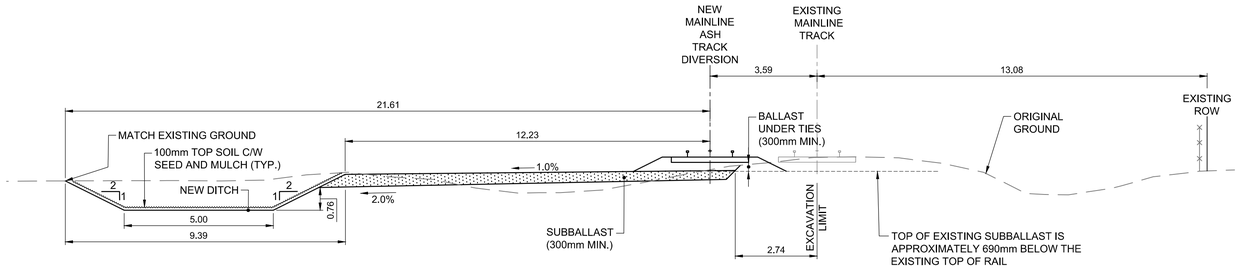


TYPICAL SECTION A
R-2101

0 1 2 3 m SCALE 1:100

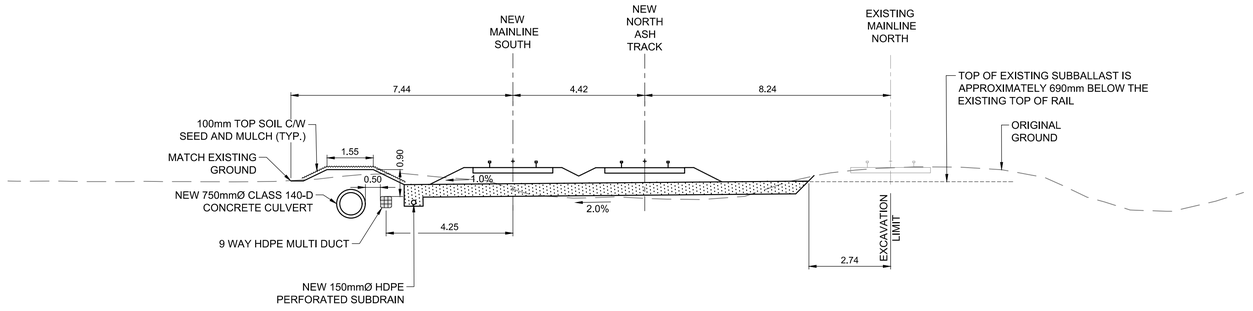
STA. 62+350



TYPICAL SECTION B
R-2101

0 1 2 3 m SCALE 1:100

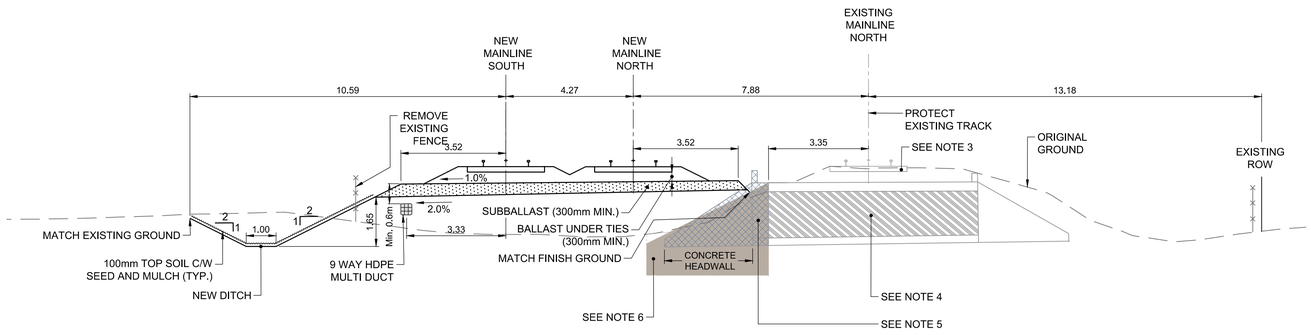
STA. 62+450



TYPICAL SECTION C
R-2102

0 1 2 3 m SCALE 1:100

STA. 62+663.50



TYPICAL SECTION D
R-2103

0 1 2 3 m SCALE 1:100

STA. 63+125

SUGGESTED CONSTRUCTION STAGING FOR HEADWALL REMOVAL

NOTES

1. THE CONTRACTOR SHALL NOTIFY CN RAIL AND OBTAIN APPROVAL PRIOR PROCEED WITH REMOVAL OF THE EXISTING HEADWALL.
2. THE EXISTING TRACK SHALL BE OUT OF SERVICE DURING THE PROCESS OF REMOVAL OF THE EXISTING HEADWALL.
3. PLACE TRACK MONITORING PRIOR TO PROCEEDING WITH HEADWALL REMOVAL.
4. UNDER EXISTING TRACK BED, PLUG PORTION OF THE EXISTING CULVERT WITH NON-SHRINKAGE GROUT (U-FILL)
5. REMOVE PORTION OF EXISTING CULVERT AND SOUTH CONCRETE HEADWALL
6. PLACE GRANULAR B TYPE II , 300 mm THICK LAYER COMPACTED UP TO 98% OF SPMDD
7. GEOTECHNICAL ENGINEER SHALL PROVIDE CONFIRMATION REGARDING THE TRACK STABILITY PRIOR TO ADVISING CN TO OPEN THE RAILWAY TRAFFIC.

REGION	SUBDIVISION	MILE
-	HALTON	38.72 - 40.98
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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PROFESSIONAL SEALS

LICENSED PROFESSIONAL ENGINEER L. M. BANCU 100140418 PROVINCE OF ONTARIO

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
0	21/08/01	ISSUED FOR CONSTRUCTION	OP/LP	AS	LP	LB		

AECOM

CN
MILTON LOGISTICS HUB - HALTON SUBDIVISION - PHASE 1
NEW MAINLINE TRACKS
TYPICAL SECTIONS
SHEET 1 OF 3

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-2501	0

AECOM FILE NAME: Z:\Mississauga-CATRT1\Legacy\CATRT1FP001\Data\Projects\60579933_CN_Milton_Logistics_Hub\900-CAD_GIS\910-CAD\20-SHEETS\R100_Issued for Construction\01-R-2501-R-2503-Typical Section.dwg
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Saved: 2021-08-19 4:17:34 PM
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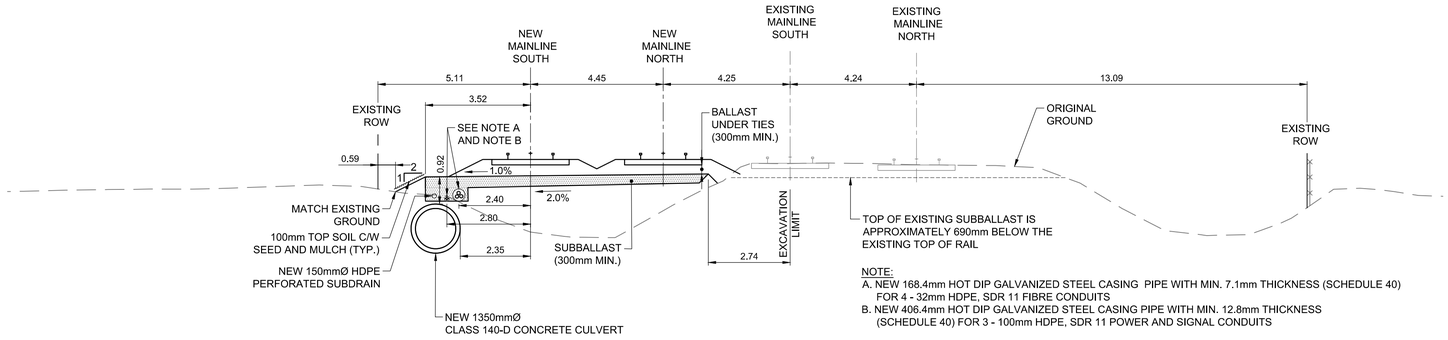
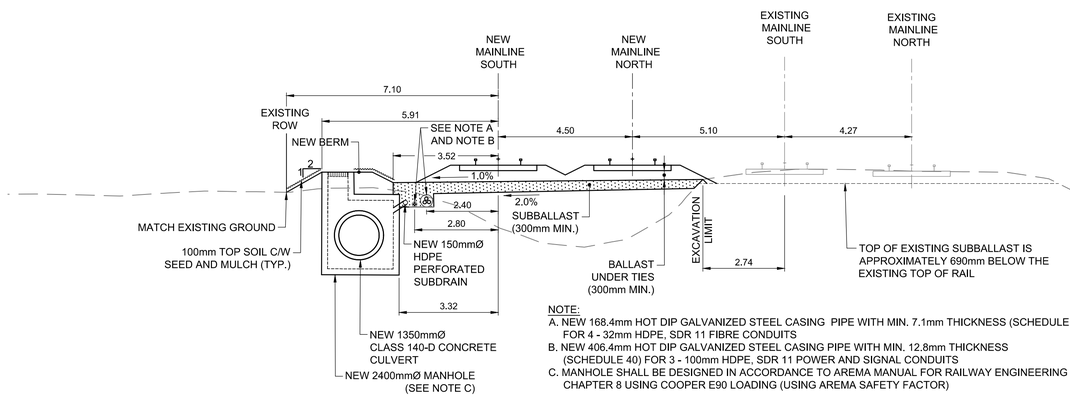


NOTE:
A. NEW 168.4mm HOT DIP GALVANIZED STEEL CASING PIPE WITH MIN. 7.1mm THICKNESS (SCHEDULE 40) FOR 4 - 32mm HDPE, SDR 11 FIBRE CONDUITS
B. NEW 406.4mm HOT DIP GALVANIZED STEEL CASING PIPE WITH MIN. 12.8mm THICKNESS (SCHEDULE 40) FOR 3 - 100mm HDPE, SDR 11 POWER AND SIGNAL CONDUITS

TYPICAL SECTION E
R-2105

0 1 2 3 m SCALE 1:100

STA. 63+650

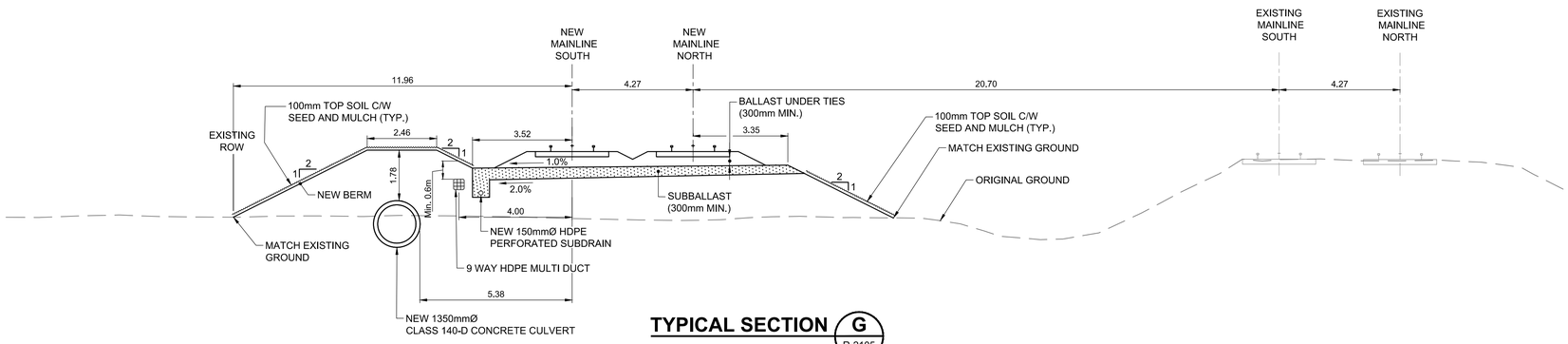


NOTE:
A. NEW 168.4mm HOT DIP GALVANIZED STEEL CASING PIPE WITH MIN. 7.1mm THICKNESS (SCHEDULE 40) FOR 4 - 32mm HDPE, SDR 11 FIBRE CONDUITS
B. NEW 406.4mm HOT DIP GALVANIZED STEEL CASING PIPE WITH MIN. 12.8mm THICKNESS (SCHEDULE 40) FOR 3 - 100mm HDPE, SDR 11 POWER AND SIGNAL CONDUITS
C. MANHOLE SHALL BE DESIGNED IN ACCORDANCE TO AREMA MANUAL FOR RAILWAY ENGINEERING CHAPTER 8 USING COOPER E90 LOADING (USING AREMA SAFETY FACTOR)

TYPICAL SECTION F
R-2105

0 1 2 3 m SCALE 1:100

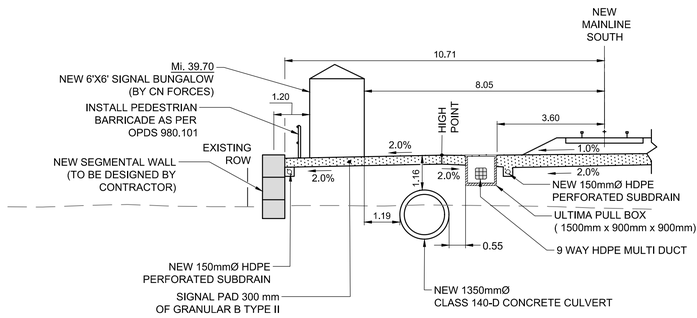
STA. 63+675



TYPICAL SECTION G
R-2105

0 1 2 3 m SCALE 1:100

STA. 63+850



TYPICAL SECTION H
R-2106

0 1 2 3 m SCALE 1:100

STA. 63+896.43

0	21/08/01	ISSUED FOR CONSTRUCTION	OP/LP	AS	LP	LB			
I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP	

	REGION	SUBDIVISION	MILE
CN	-	HALTON	38.72 - 40.98
	CN PROJECT NO.	CN DRAWING NO.	
	-	-	

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PROFESSIONAL SEALS

LICENSED PROFESSIONAL ENGINEER
L. M. BANCU
100140418
2021-03-26
PROVINCE OF ONTARIO

AECOM

CN
MILTON LOGISTICS HUB - HALTON SUBDIVISION - PHASE 1
NEW MAINLINE TRACKS
TYPICAL SECTIONS
SHEET 2 OF 3

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-2502	0

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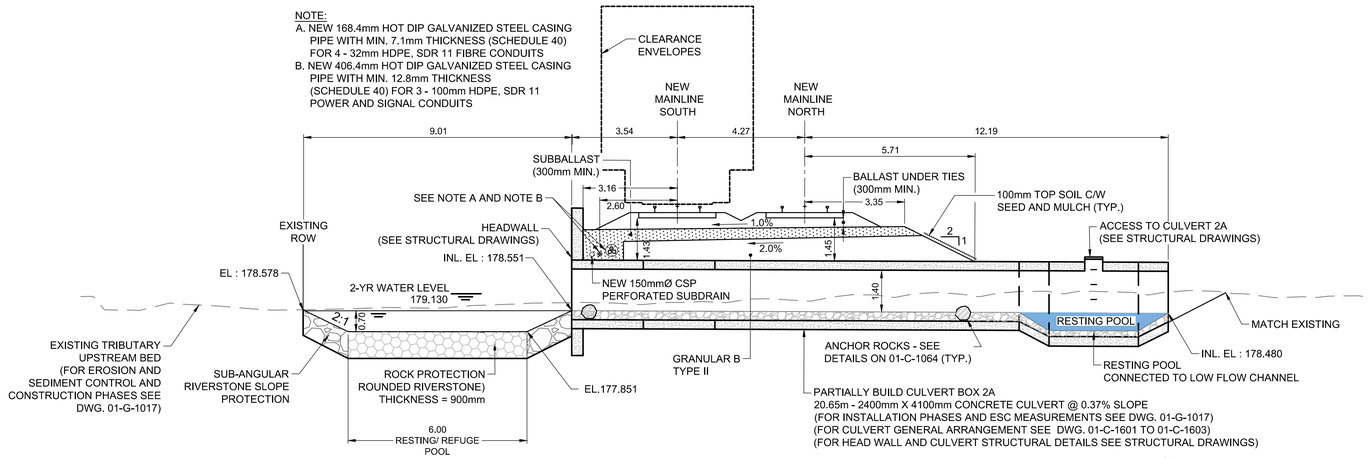
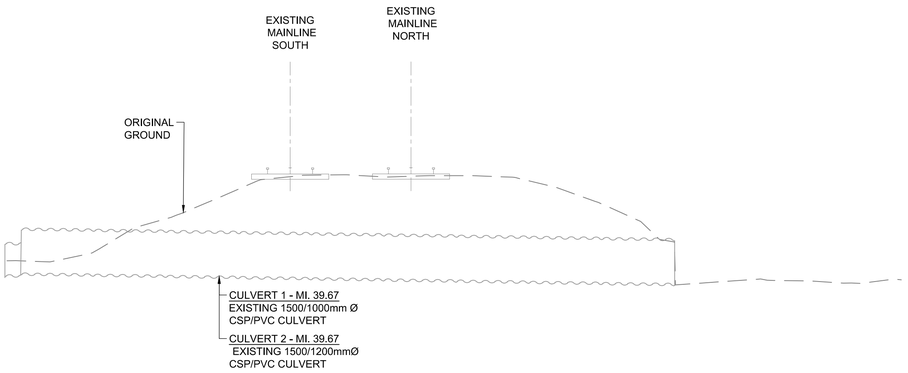
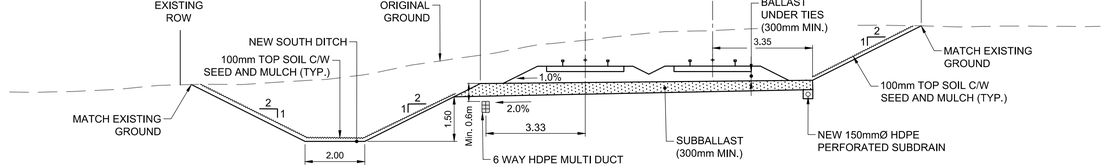
NOTE:
A. NEW 168.4mm HOT DIP GALVANIZED STEEL CASING PIPE WITH MIN. 7.1mm THICKNESS (SCHEDULE 40) FOR 4 - 32mm HDPE, SDR 11 FIBRE CONDUITS
B. NEW 406.4mm HOT DIP GALVANIZED STEEL CASING PIPE WITH MIN. 12.8mm THICKNESS (SCHEDULE 40) FOR 3 - 100mm HDPE, SDR 11 POWER AND SIGNAL CONDUITS



TYPICAL SECTION I
R-2106
0 1 2 3 m SCALE 1:100

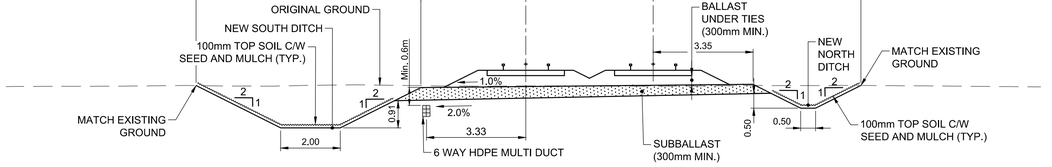
STA. 63+954.983





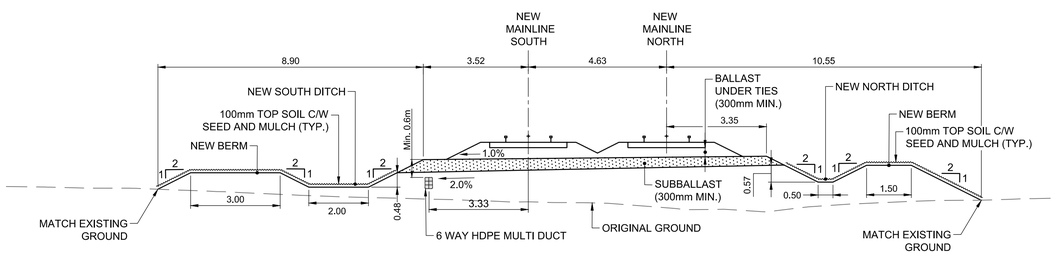
TYPICAL SECTION J
R-2106
0 1 2 3 m SCALE 1:100

STA. 64+150



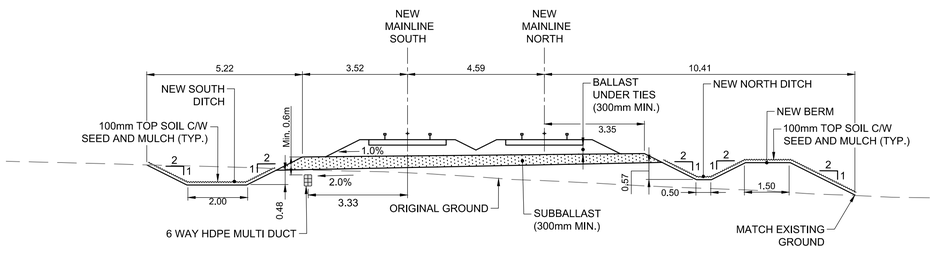
TYPICAL SECTION K
R-2107
0 1 2 3 m SCALE 1:100

STA. 64+300



TYPICAL SECTION L
R-2107
0 1 2 3 m SCALE 1:100

STA. 64+525



TYPICAL SECTION M
R-2107
0 1 2 3 m SCALE 1:100

STA. 64+550

REGION	SUBDIVISION	MILE
-	HALTON	38.72 - 40.98
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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PROFESSIONAL SEALS

LICENSED PROFESSIONAL ENGINEER
L. M. BANCU
100140418
2021-08-20
PROVINCE OF ONTARIO

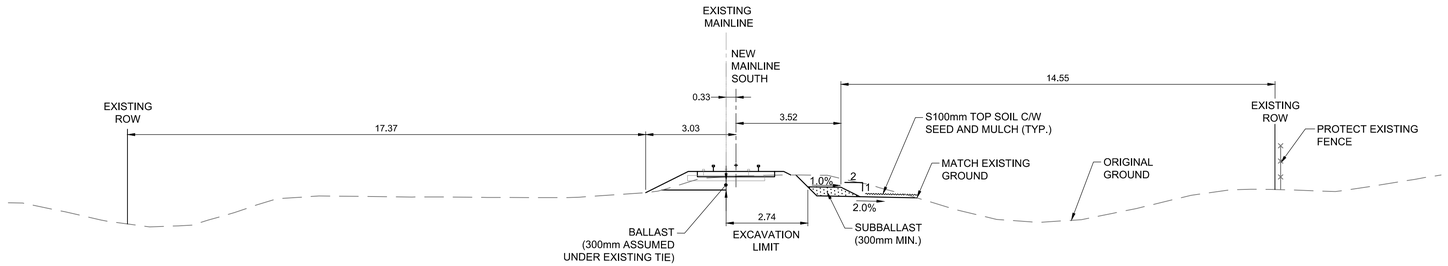
I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
0	21/08/01	ISSUED FOR CONSTRUCTION	0P/LP	AS	LP	LB		

AECOM

CN
MILTON LOGISTICS HUB - HALTON SUBDIVISION - PHASE 1
NEW MAINLINE TRACKS
TYPICAL SECTIONS
SHEET 3 OF 3

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-2503	0

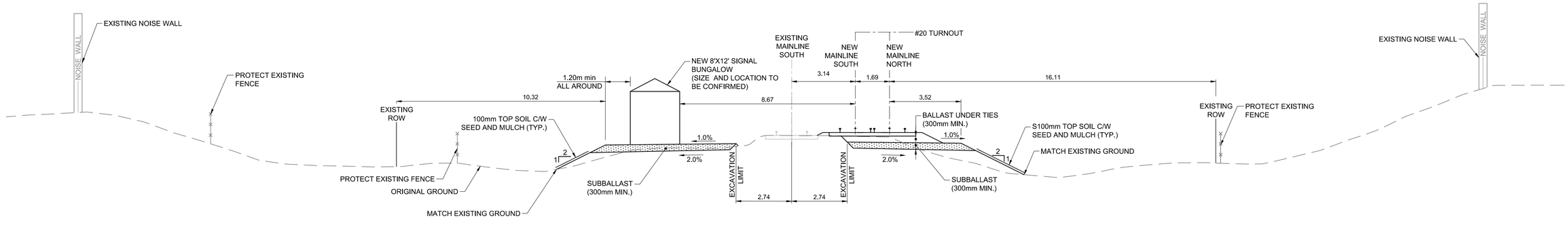
D SIZE 22" x 34" (558.8mm x 863.6mm)
Saved By: popovicl
AECOM FILE NAME: C:\Users\popovicl\Desktop\Corona Quarantine\milton\Coronavirus quarantine\2. Sheets\3.MAINLINE (2000)\5. TYPICAL SECTIONS\60579933_01-R-2501TR-230207.dwg



TYPICAL SECTION A
R-2101

SCALE 1:100 (0 2 4 6 m)

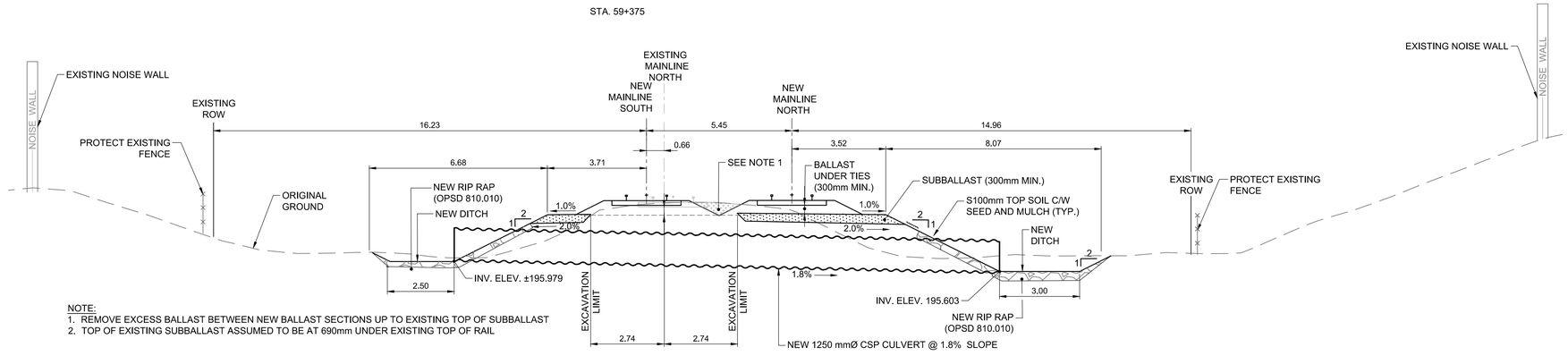
STA. 59+275



TYPICAL SECTION B
R-2101

SCALE 1:100 (0 2 4 6 m)

STA. 59+375



NOTE:
1. REMOVE EXCESS BALLAST BETWEEN NEW BALLAST SECTIONS UP TO EXISTING TOP OF SUBBALLAST
2. TOP OF EXISTING SUBBALLAST ASSUMED TO BE AT 690mm UNDER EXISTING TOP OF RAIL

TYPICAL SECTION C
R-2101

SCALE 1:100 (0 2 4 6 m)

STA. 59+543.831

REGION: -	SUBDIVISION: HALTON	MILE: 36.79 - 41.27						
CN PROJECT NO.: -	CN DRAWING NO.: -							

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PROFESSIONAL SEALS

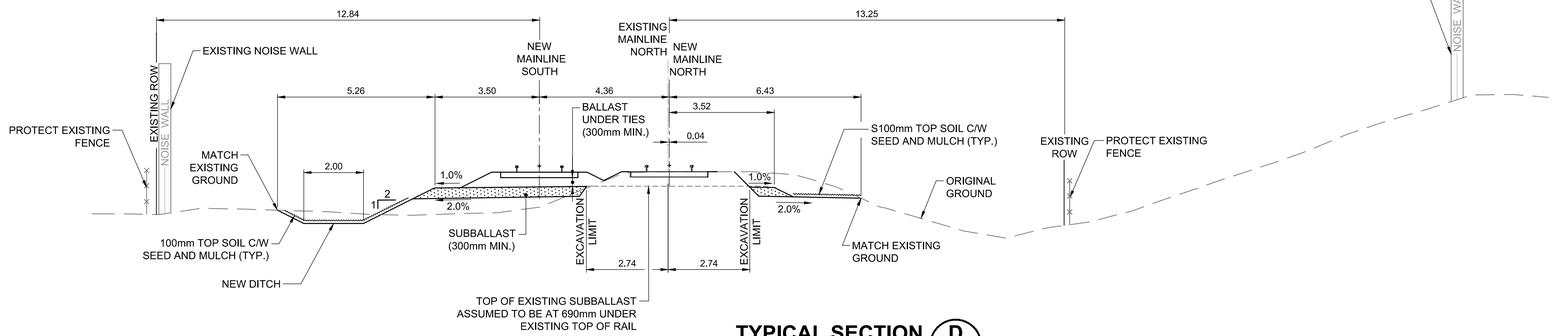
I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
C	20/07/01	ISSUED FOR 90% SUBMISSION	OP/LP	AS	LP	LB		
B	19/10/23	ISSUED FOR 60% SUBMISSION	IS	AS	JR	LB		
A	19/04/29	ISSUED FOR 30% SUBMISSION	IS	AS	JR	LB		

AECOM

CN
MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27
NEW MAINLINE TRACKS
TYPICAL SECTIONS
SEET 1 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-2501	C

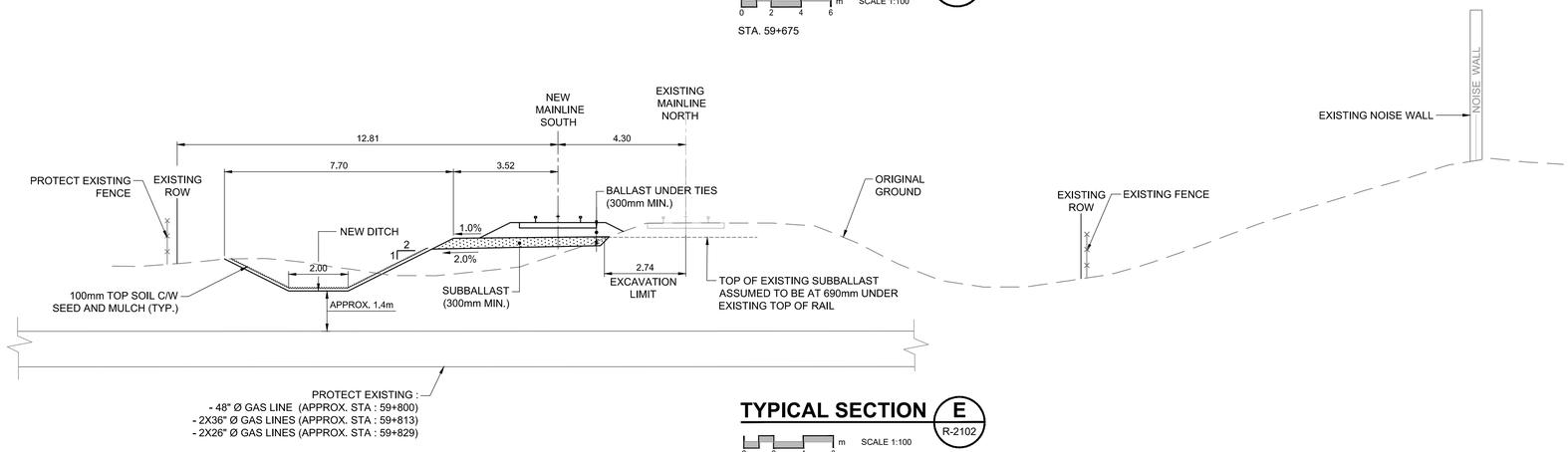
D SIZE 22" x 34" (558.8mm x 863.6mm)
AECOM FILE NAME: C:\Users\popovicl\Desktop\Corona Quarantine\milton\Coronavirus quarantine\2. Sheets\3.MAINLINE (2000)\5. TYPICAL SECTIONS\60579933_01-R-2502.dwg Saved By: popovicl



TYPICAL SECTION D
R-2102

0 2 4 6 m SCALE 1:100

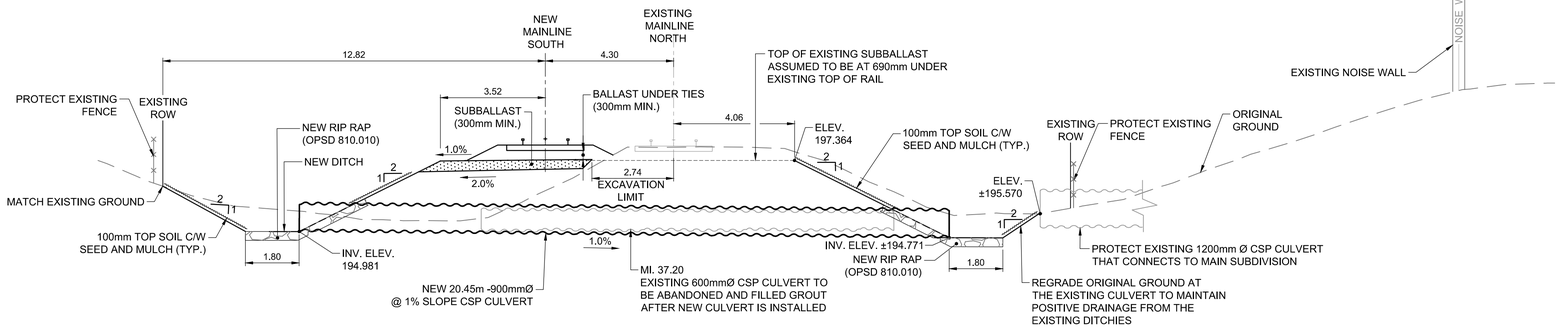
STA. 59+675



TYPICAL SECTION E
R-2102

0 2 4 6 m SCALE 1:100

STA. 59+800



TYPICAL SECTION F
R-2102

0 2 4 6 m SCALE 1:100

STA. 59+869.900

C	20/07/01	ISSUED FOR 90% SUBMISSION	OP/LP	AS	LP	LB		
B	19/10/23	ISSUED FOR 60% SUBMISSION	IS	AS	JR	LB		
A	19/04/29	ISSUED FOR 30% SUBMISSION	IS	AS	JR	LB		
I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP

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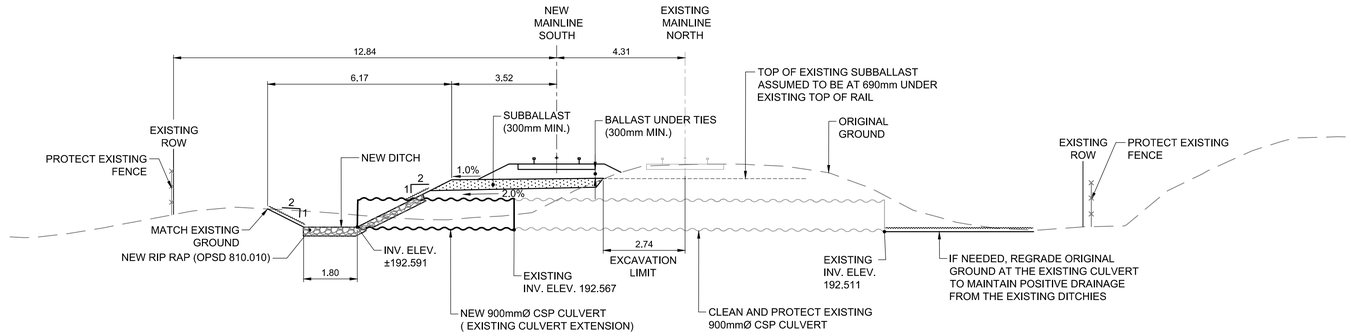
PROFESSIONAL SEALS

AECOM

REGION	SUBDIVISION	MILE
-	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

CN
MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27
NEW MAINLINE TRACKS
TYPICAL SECTIONS
SEET 2 OF 10

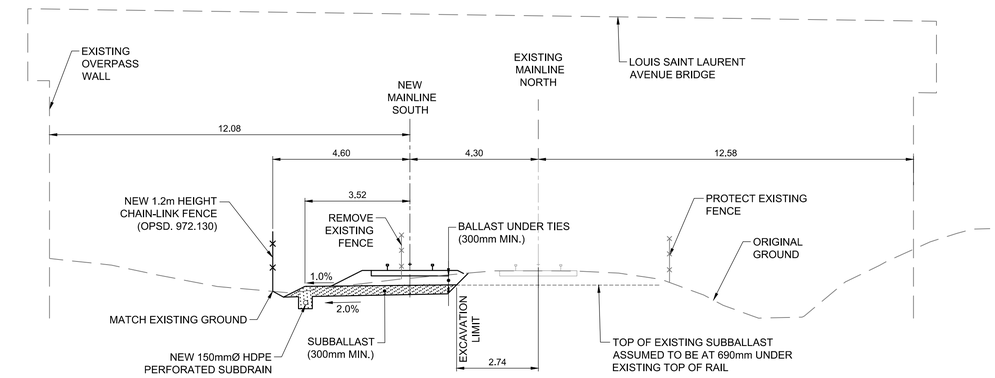
PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-2502	C



TYPICAL SECTION G
R-2104

0 2 4 6 m SCALE 1:100

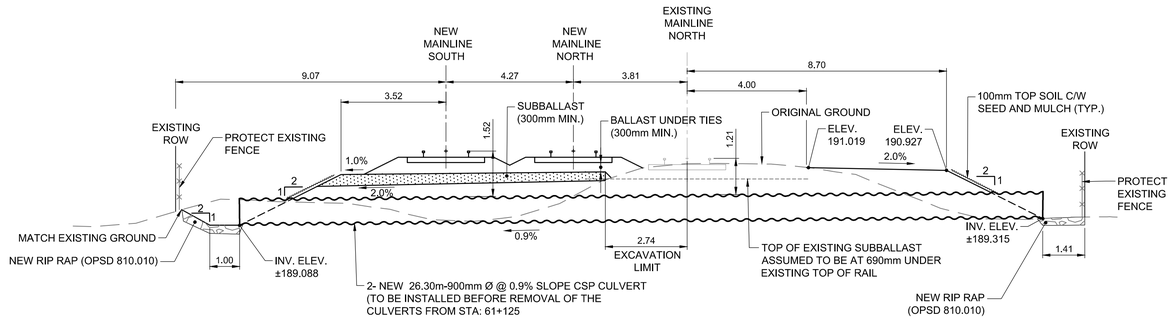
STA. 60+567.109



TYPICAL SECTION H
R-2105

0 2 4 6 m SCALE 1:100

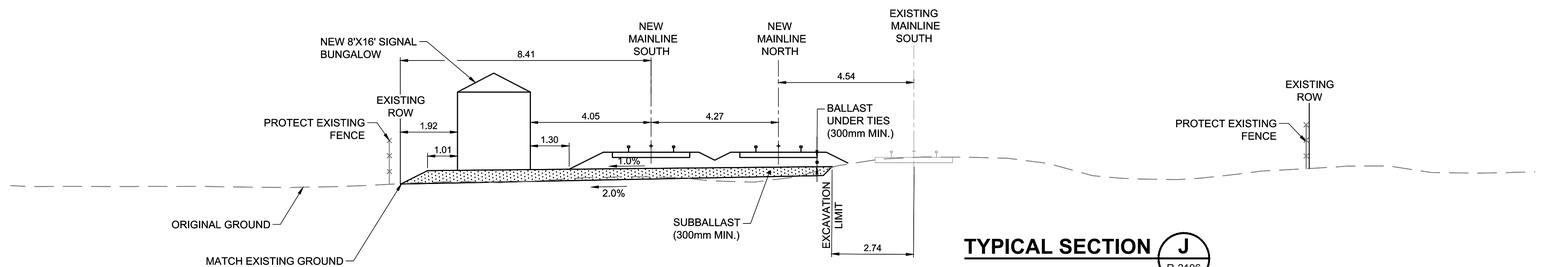
STA. 60+750



TYPICAL SECTION I
R-2106

0 2 4 6 m SCALE 1:100

STA. 61+125



TYPICAL SECTION J
R-2106

0 2 4 6 m SCALE 1:100

STA. 61+309.988

CN	REGION: -	SUBDIVISION: HALTON	MILE: 36.79 - 41.27
	CN PROJECT NO.: -	CN DRAWING NO.: -	

PROFESSIONAL SEALS

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
C	20/07/01	ISSUED FOR 90% SUBMISSION	OP/LP	AS	LP	LB		
B	19/10/23	ISSUED FOR 60% SUBMISSION	IS	AS	JR	LB		
A	19/04/29	ISSUED FOR 30% SUBMISSION	IS	AS	JR	LB		

AECOM

CN
MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27
NEW MAINLINE TRACKS
TYPICAL SECTIONS
SEET 3 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-2503	C

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D SIZE 22" x 34" (558.8mm x 863.6mm)
Saved By: popovicl
AECOM FILE NAME: C:\Users\popovicl\Desktop\Corona Quarantine\milton\Coronavirus quarantine\2. Sheets\3.MAINLINE (2000)\5. TYPICAL SECTIONS\060579933_01-R-2503.dwg

D SIZE 22" x 34" (558.8mm x 863.6mm)

Saved By: popovicl

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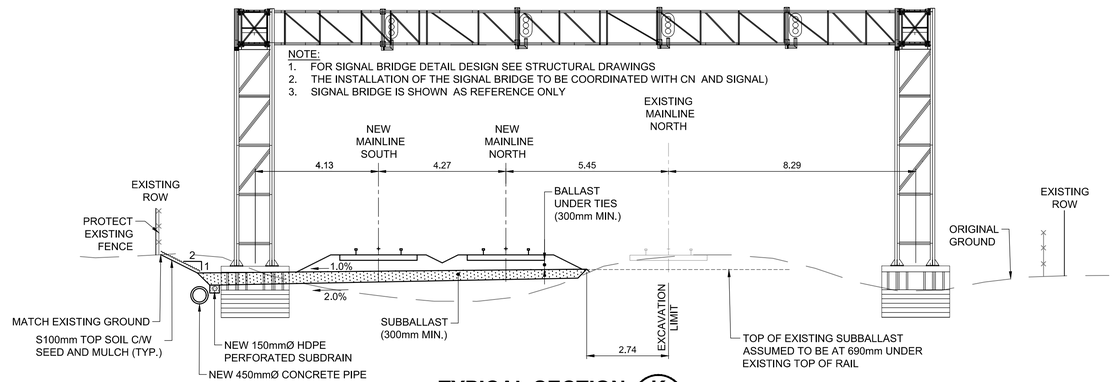
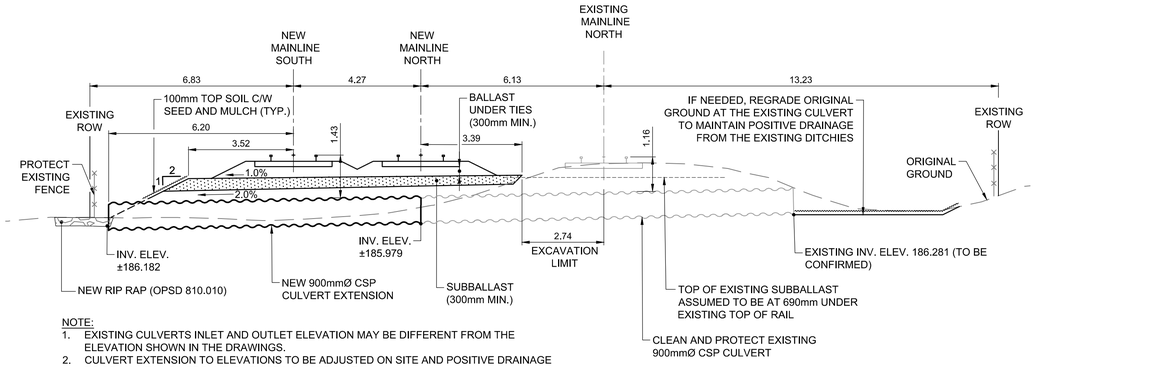


TYPICAL SECTION K
R-2107

0 2 4 6 m SCALE 1:100

STA. 61+580.20

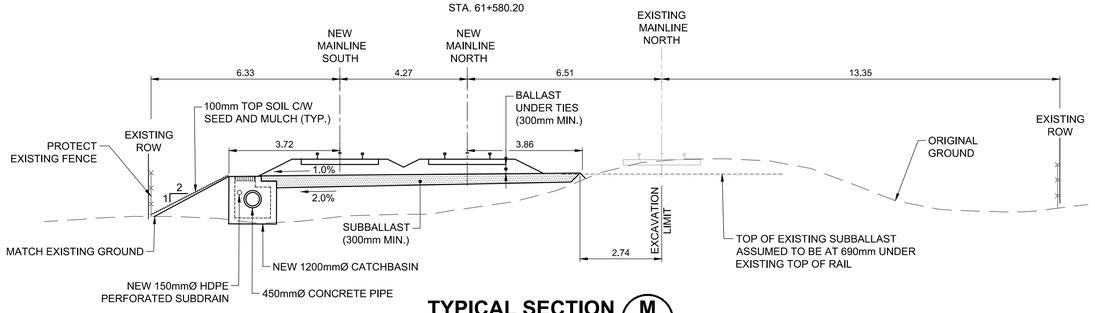


NOTE:
1. EXISTING CULVERTS INLET AND OUTLET ELEVATION MAY BE DIFFERENT FROM THE ELEVATION SHOWN IN THE DRAWINGS.
2. CULVERT EXTENSION TO ELEVATIONS TO BE ADJUSTED ON SITE AND POSITIVE DRAINAGE TO BE MAINTAINED FROM THE EXISTING NORTH DITCH

TYPICAL SECTION L
R-2107

0 2 4 6 m SCALE 1:100

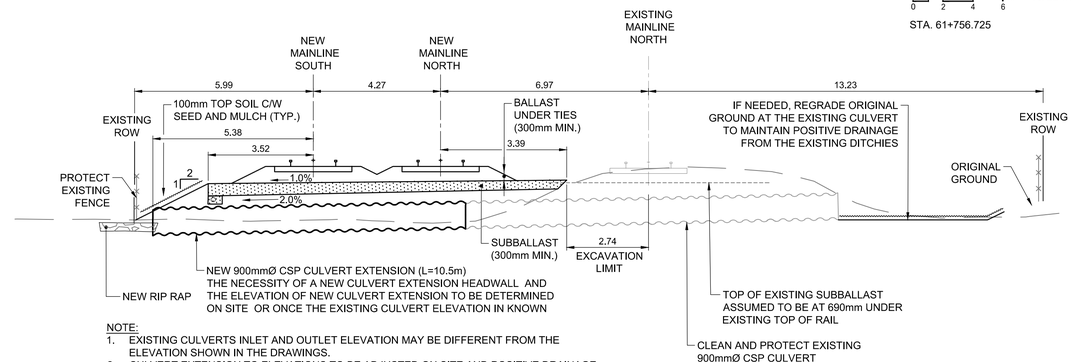
STA. 61+756.725



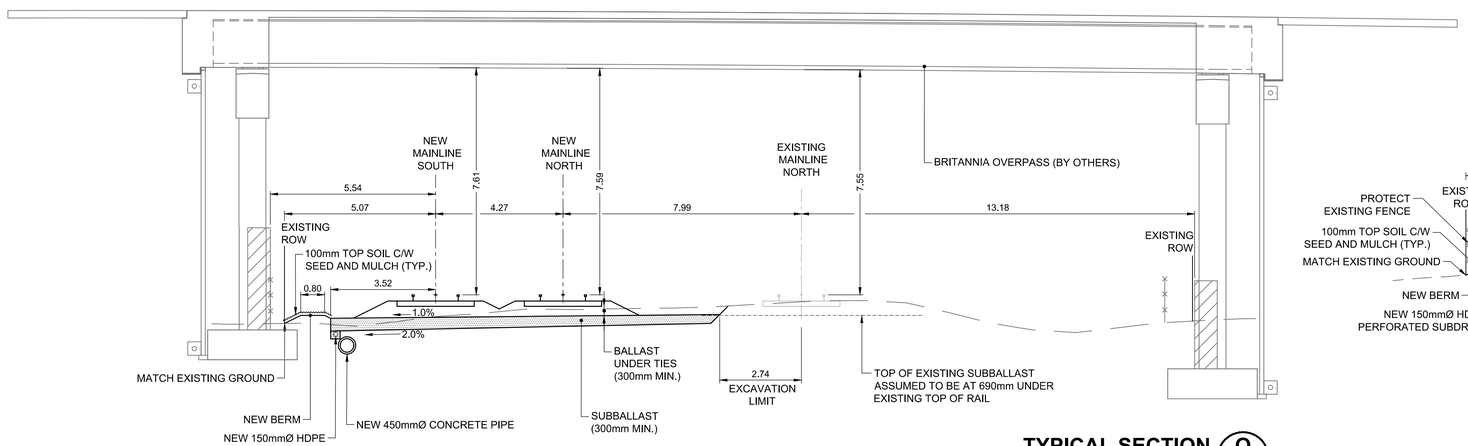
TYPICAL SECTION M
R-2108

0 2 4 6 m SCALE 1:100

STA. 61+875



NOTE:
1. EXISTING CULVERTS INLET AND OUTLET ELEVATION MAY BE DIFFERENT FROM THE ELEVATION SHOWN IN THE DRAWINGS.
2. CULVERT EXTENSION TO ELEVATIONS TO BE ADJUSTED ON SITE AND POSITIVE DRAINAGE TO BE MAINTAINED FROM THE EXISTING NORTH DITCH



NOTE:
BRIDGE ENVELOPE IS SHOWN IN THIS SECTION AS REFERENCE ONLY, THE ACTUAL VERTICAL AND LATERAL CLEARANCES FROM THE NEW AND EXISTING CN TRACKS MAY DIFFER.
THE CONTRACTOR TO VERIFY AND CONFIRM IF THE CLEARANCES ARE IN CONFORMITY WITH CN TRACK STANDARDS.

TYPICAL SECTION O
R-2109

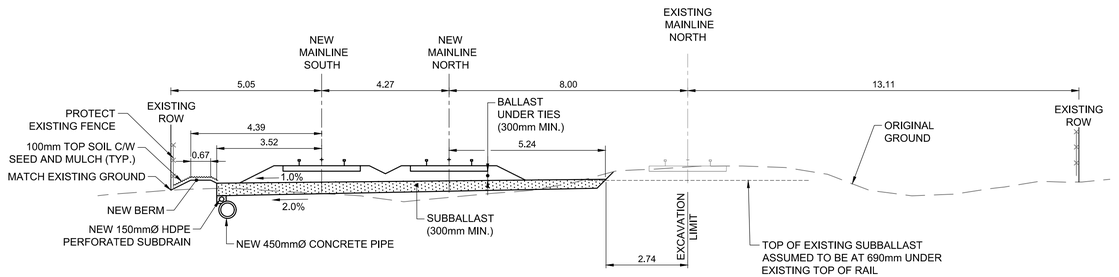
0 2 4 6 m SCALE 1:100

STA. 62+300

TYPICAL SECTION N
R-2108

0 2 4 6 m SCALE 1:100

STA. 62+000



TYPICAL SECTION P
R-2109

0 2 4 6 m SCALE 1:100

STA. 62+350

REGION	SUBDIVISION	MILE
-	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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PROFESSIONAL SEALS

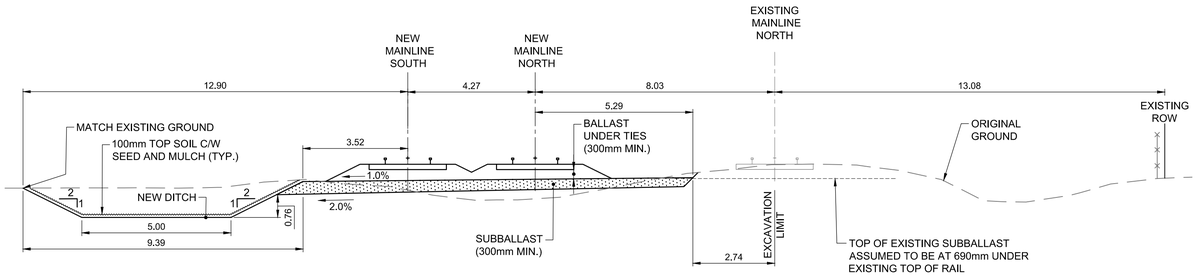
I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
C	20/07/01	ISSUED FOR 90% SUBMISSION	OP/LP	AS	LP	LB		
B	19/10/23	ISSUED FOR 60% SUBMISSION	IS	AS	JR	LB		
A	19/04/29	ISSUED FOR 30% SUBMISSION	IS	AS	JR	LB		

AECOM

CN
MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27
NEW MAINLINE TRACKS
TYPICAL SECTIONS
SEET 4 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-2504	C

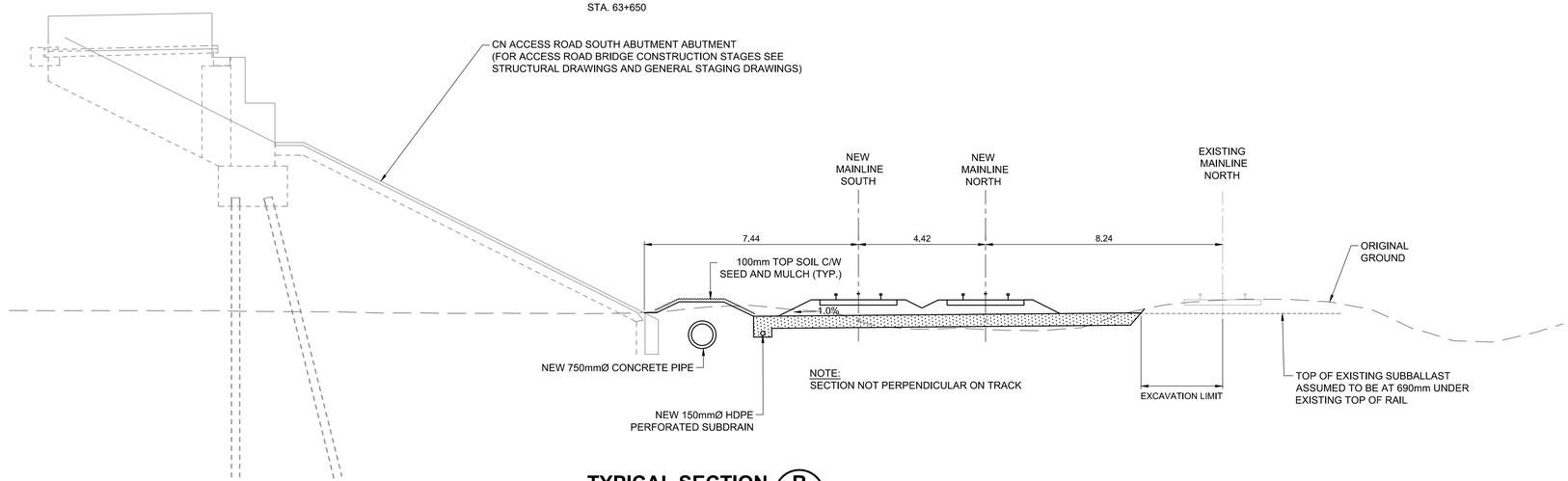
D SIZE 22" x 34" (558.8mm x 863.6mm)
Saved By: popovicil
AECOM FILE NAME: C:\Users\popovicil\Desktop\Corona Quarantine\milton\Coronavirus quarantine\2. Sheets\3 MAINLINE (2000)\5. TYPICAL SECTIONS\60579933_01-R-2505.dwg



TYPICAL SECTION Q
R-2109

0 2 4 6 m SCALE 1:100

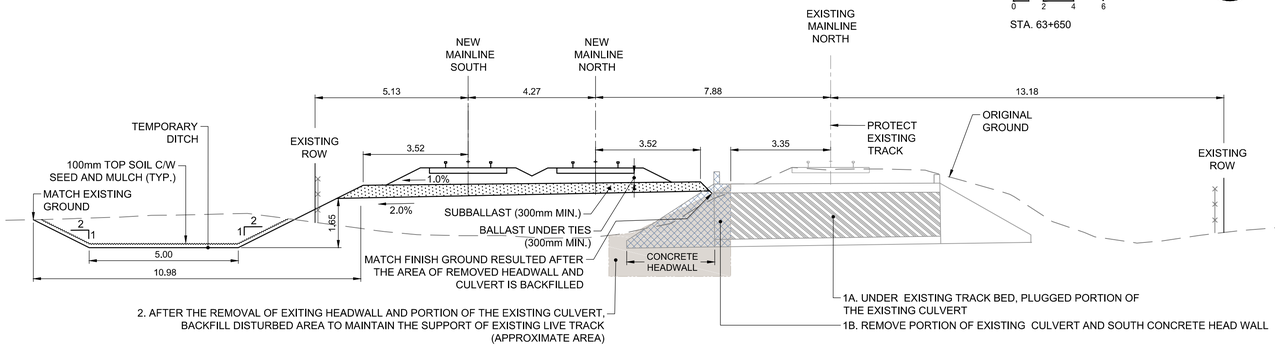
STA. 63+650



TYPICAL SECTION R
R-2110

0 2 4 6 m SCALE 1:100

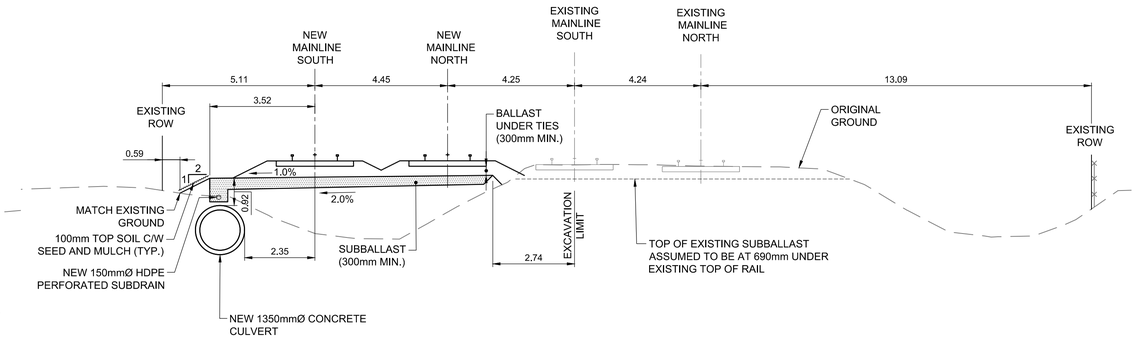
STA. 63+650



TYPICAL SECTION S
R-2111

0 2 4 6 m SCALE 1:100

STA. 63+125



TYPICAL SECTION T
R-2113

0 2 4 6 m SCALE 1:100

STA. 63+650

REGION	SUBDIVISION	MILE
-	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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PROFESSIONAL SEALS

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
C	20/07/01	ISSUED FOR 90% SUBMISSION	OP/LP	AS	LP	LB		
B	19/10/23	ISSUED FOR 60% SUBMISSION	IS	AS	JR	LB		
A	19/04/29	ISSUED FOR 30% SUBMISSION	IS	AS	JR	LB		

AECOM

CN
MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27
NEW MAINLINE TRACKS
TYPICAL SECTIONS
SEET 5 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-2505	C

D SIZE 22" x 34" (558.8mm x 863.6mm)
Saved By: popovicl
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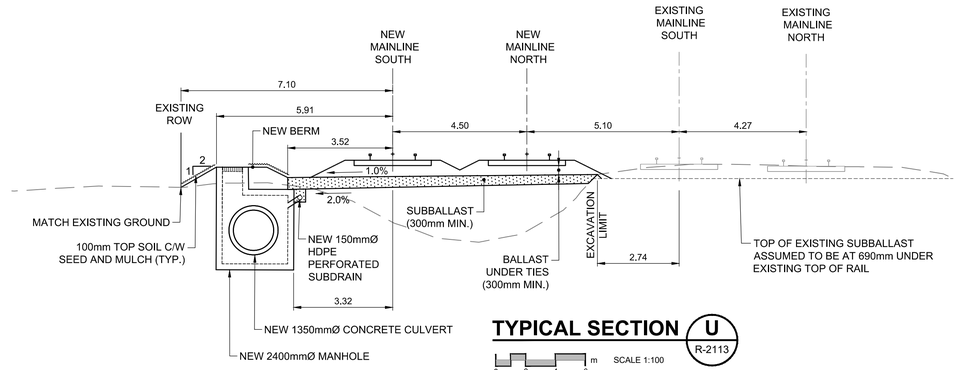
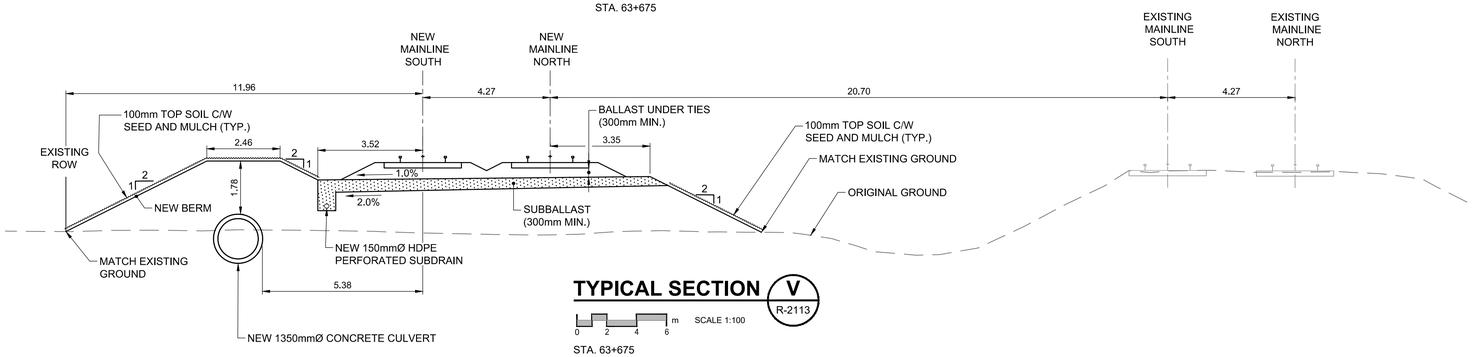


TYPICAL SECTION U
R-2113

0 2 4 6 m SCALE 1:100

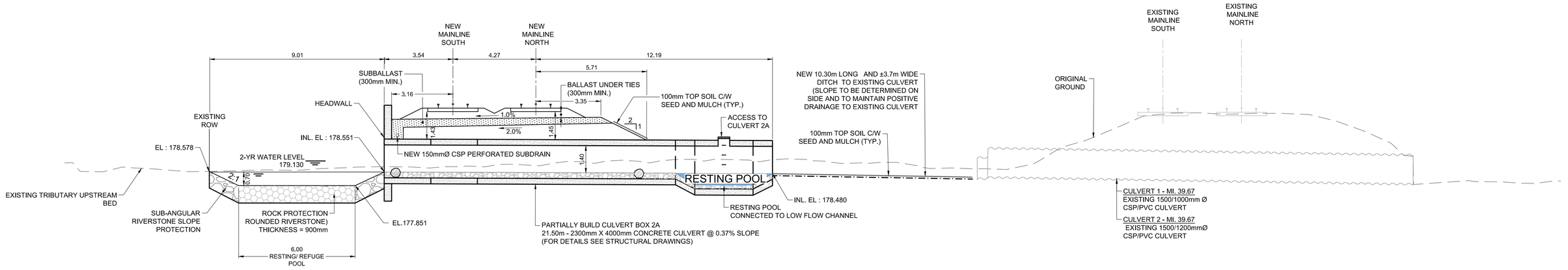
STA. 63+675



TYPICAL SECTION V
R-2113

0 2 4 6 m SCALE 1:100

STA. 63+675



TYPICAL SECTION W
R-2114

0 2 4 6 m SCALE 1:100

STA. 63+954.983

REGION	SUBDIVISION	MILE
-	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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PROFESSIONAL SEALS

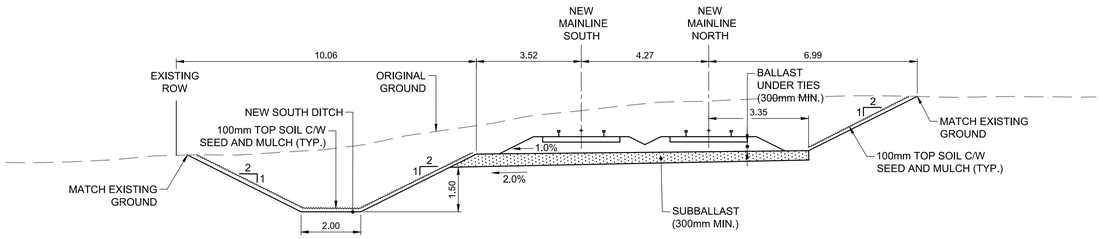
I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
C	20/07/01	ISSUED FOR 90% SUBMISSION	OP/LP	AS	LP	LB		
B	19/10/23	ISSUED FOR 60% SUBMISSION	IS	AS	JR	LB		
A	19/04/29	ISSUED FOR 30% SUBMISSION	IS	AS	JR	LB		

AECOM

CN
MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27
NEW MAINLINE TRACKS
TYPICAL SECTIONS
SEET 6 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-2506	C

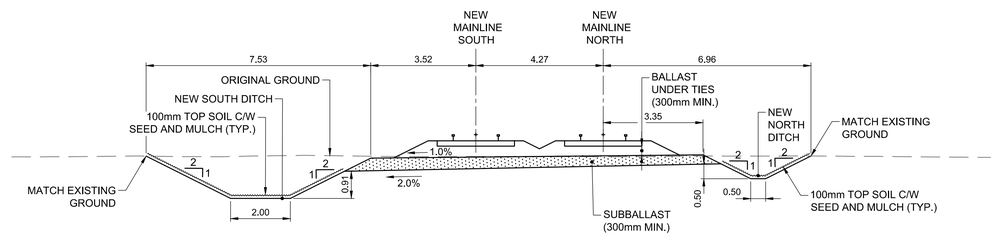
D SIZE 22" x 34" (558.8mm x 863.6mm)



TYPICAL SECTION X
R-2114

0 2 4 6 m SCALE 1:100

STA. 64+150



TYPICAL SECTION Y
R-2115

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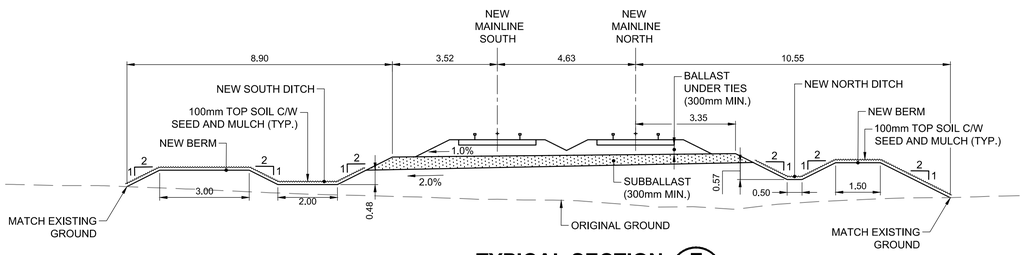
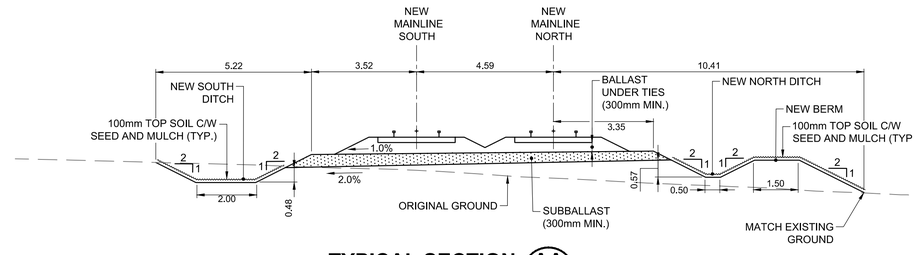
STA. 64+300



TYPICAL SECTION Z
R-2115

0 2 4 6 m SCALE 1:100

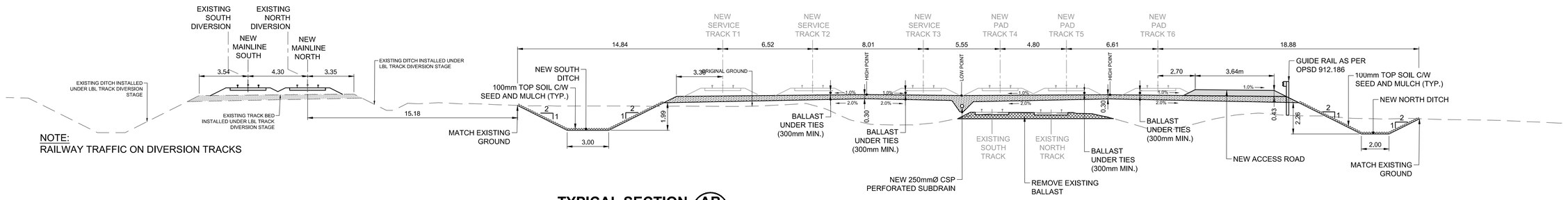
STA. 64+525



TYPICAL SECTION AA
R-2115

0 2 4 6 m SCALE 1:100

STA. 64+550



NOTE:
RAILWAY TRAFFIC ON DIVERSION TRACKS

TYPICAL SECTION AB
R-2117

0 2 4 6 m SCALE 1:150

STA. 64+550

REGION	SUBDIVISION	MILE
-	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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PROFESSIONAL SEALS

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
C	20/07/01	ISSUED FOR 90% SUBMISSION	OP/LP	AS	LP	LB		
B	19/10/23	ISSUED FOR 60% SUBMISSION	IS	AS	JR	LB		
A	19/04/29	ISSUED FOR 30% SUBMISSION	IS	AS	JR	LB		

AECOM

CN
MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27
NEW MAINLINE TRACKS
TYPICAL SECTIONS
SEET 7 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-2507	C

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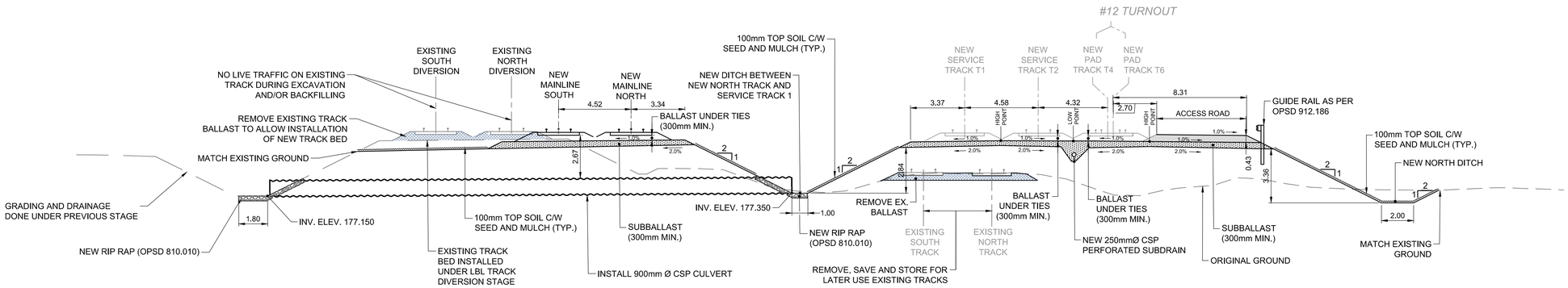
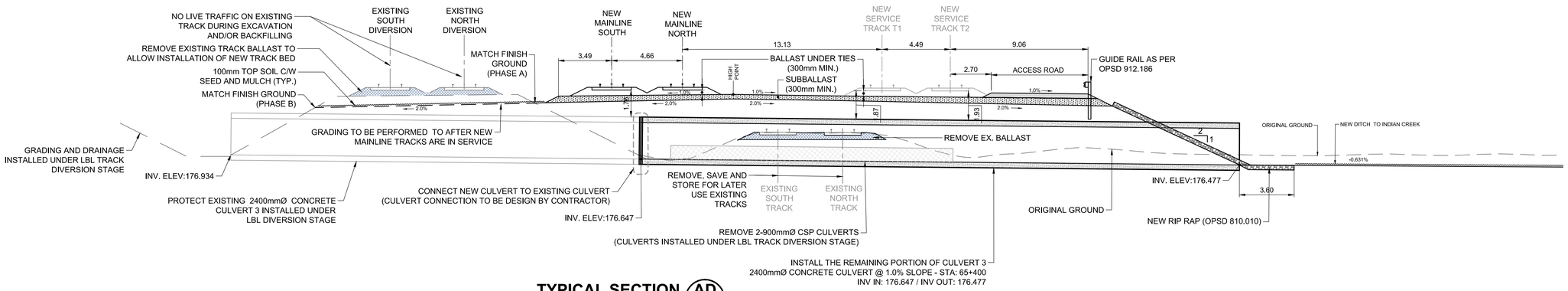
D SIZE 22" x 34" (558.8mm x 863.6mm)
Saved By: popovicl
AECOM FILE NAME: C:\Users\popovicl\Desktop\Corona Quarantine\milton\Coronavirus quarantine\2. Sheets\3.MAINLINE (2000)\5. TYPICAL SECTIONS\060579933_01-R-2508-0000.dwg



TYPICAL SECTION AC
R-2118

0 2 4 6 m SCALE 1:150

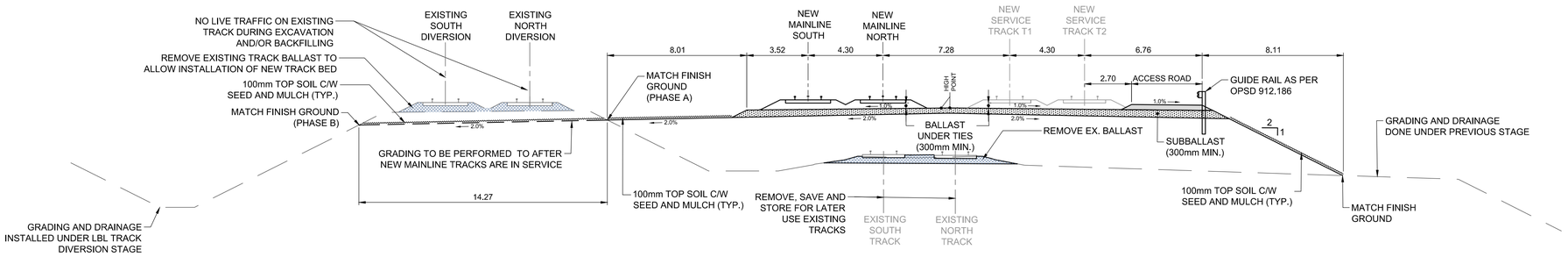
STA. 65+325



TYPICAL SECTION AD
R-2118

0 2 4 6 m SCALE 1:150

STA. 65+402



TYPICAL SECTION AE
R-2118

0 2 4 6 m SCALE 1:150

STA. 65+550

C	20/07/01	ISSUED FOR 90% SUBMISSION	OP/LP	AS	LP	LB		
B	19/10/23	ISSUED FOR 60% SUBMISSION	IS	AS	JR	LB		
A	19/04/29	ISSUED FOR 30% SUBMISSION	IS	AS	JR	LB		
I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP

REGION: -	SUBDIVISION: HALTON	MILE: 36.79 - 41.27	
CN PROJECT NO.: -	CN DRAWING NO.: -		

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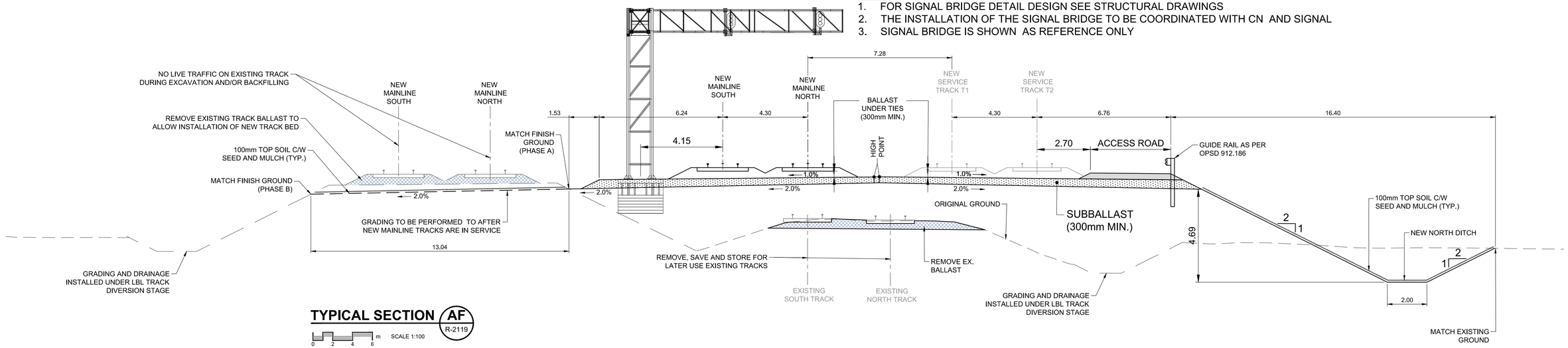
CN
MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27
NEW MAINLINE TRACKS
TYPICAL SECTIONS
SEET 8 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-2508	A

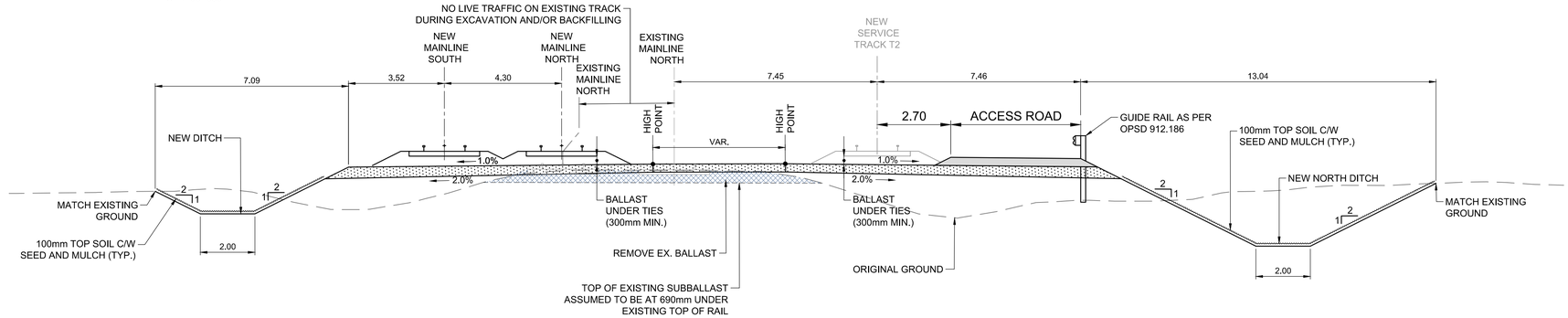
NOTE:
1. FOR SIGNAL BRIDGE DETAIL DESIGN SEE STRUCTURAL DRAWINGS
2. THE INSTALLATION OF THE SIGNAL BRIDGE TO BE COORDINATED WITH CN AND SIGNAL
3. SIGNAL BRIDGE IS SHOWN AS REFERENCE ONLY



TYPICAL SECTION AF
R-2119

SCALE 1:100

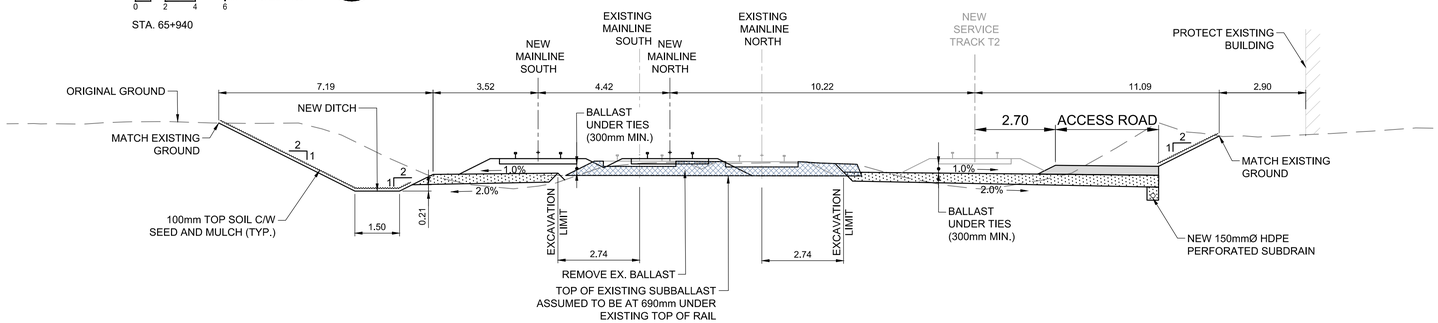
STA. 65+659



TYPICAL SECTION AG
R-2119

SCALE 1:100

STA. 65+940



TYPICAL SECTION AH
R-2120

SCALE 1:100

STA. 66+100

C	20/07/01	ISSUED FOR 90% SUBMISSION	OP/LP	AS	LP	LB		
B	19/10/23	ISSUED FOR 60% SUBMISSION	IS	AS	JR	LB		
A	19/04/29	ISSUED FOR 30% SUBMISSION	IS	AS	JR	LB		
I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP

PROFESSIONAL SEALS

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AECOM

REGION	SUBDIVISION	MILE
-	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

CN

MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27

NEW MAINLINE TRACKS

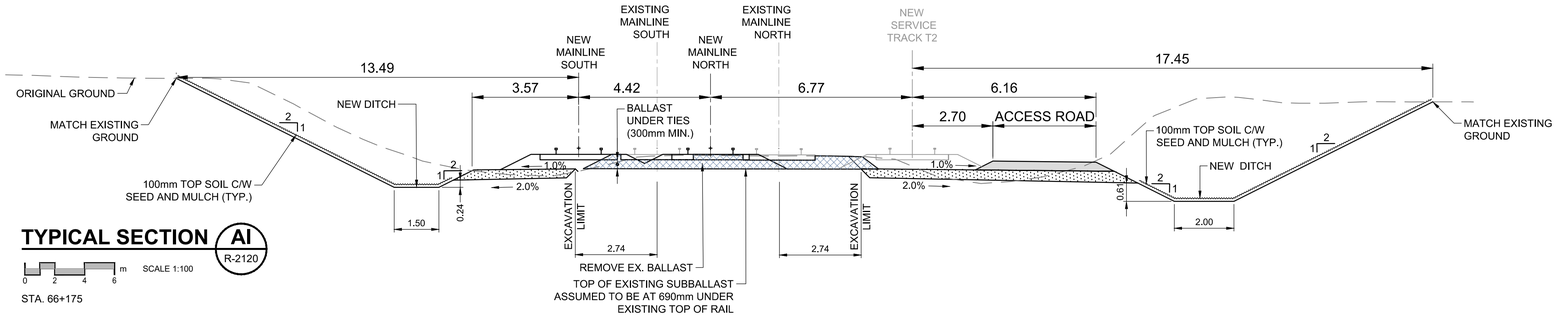
TYPICAL SECTIONS

SEET 9 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-2509	A

D SIZE 22" x 34" (558.8mm x 863.6mm)
Saved By: popovicil
AECOM FILE NAME: C:\Users\popovicil\Desktop\Corona Quarantine\milton\Coronavirus quarantine\2. Sheets\3.MAINLINE (2000)\5. TYPICAL SECTIONS\60579933_01-R-2509-2000.dwg

D SIZE 22" x 34" (558.8mm x 863.6mm)
Saved By: popovicl
AECOM FILE NAME: C:\Users\popovicl\Desktop\Corona Quarantine\milton\Coronavirus quarantine\2. Sheets\3.MAINLINE (2000)\5. TYPICAL SECTIONS\060579933_01-R-2510

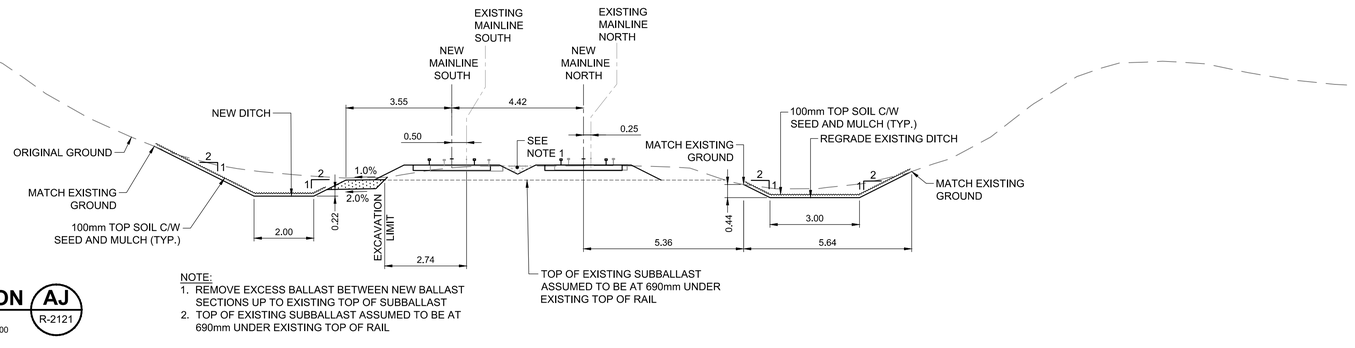


TYPICAL SECTION AI

R-2120

SCALE 1:100

STA. 66+175



NOTE:
1. REMOVE EXCESS BALLAST BETWEEN NEW BALLAST SECTIONS UP TO EXISTING TOP OF SUBBALLAST
2. TOP OF EXISTING SUBBALLAST ASSUMED TO BE AT 690mm UNDER EXISTING TOP OF RAIL

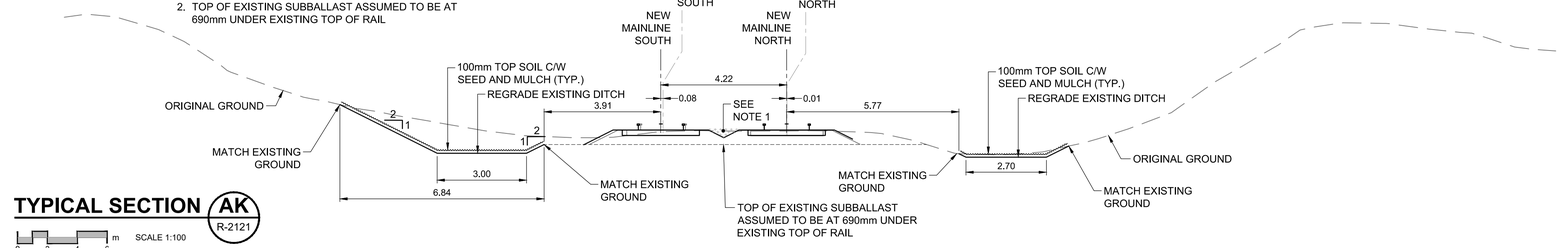
TYPICAL SECTION AJ

R-2121

SCALE 1:100

STA. 66+375

NOTE:
1. REMOVE EXCESS BALLAST BETWEEN NEW BALLAST SECTIONS UP TO EXISTING TOP OF SUBBALLAST
2. TOP OF EXISTING SUBBALLAST ASSUMED TO BE AT 690mm UNDER EXISTING TOP OF RAIL



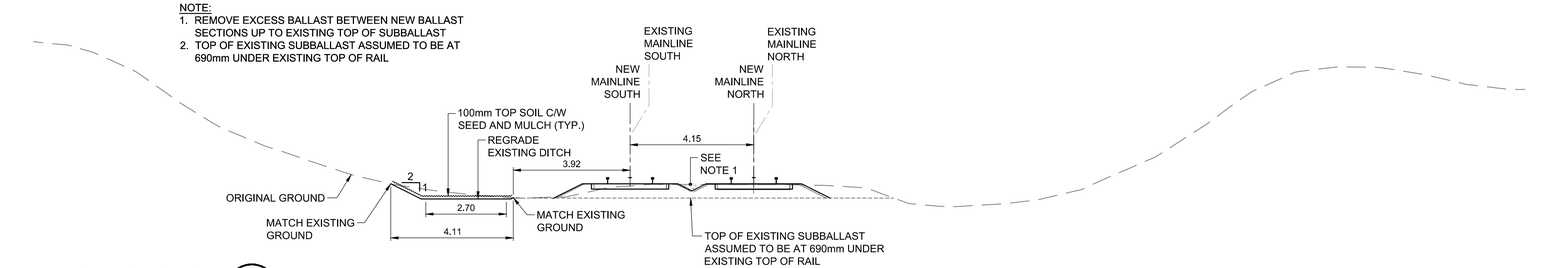
TYPICAL SECTION AK

R-2121

SCALE 1:100

STA. 66+425

NOTE:
1. REMOVE EXCESS BALLAST BETWEEN NEW BALLAST SECTIONS UP TO EXISTING TOP OF SUBBALLAST
2. TOP OF EXISTING SUBBALLAST ASSUMED TO BE AT 690mm UNDER EXISTING TOP OF RAIL



TYPICAL SECTION AL

R-2121

SCALE 1:100

STA. 66+475

REGION	SUBDIVISION	MILE
-	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

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PROFESSIONAL SEALS

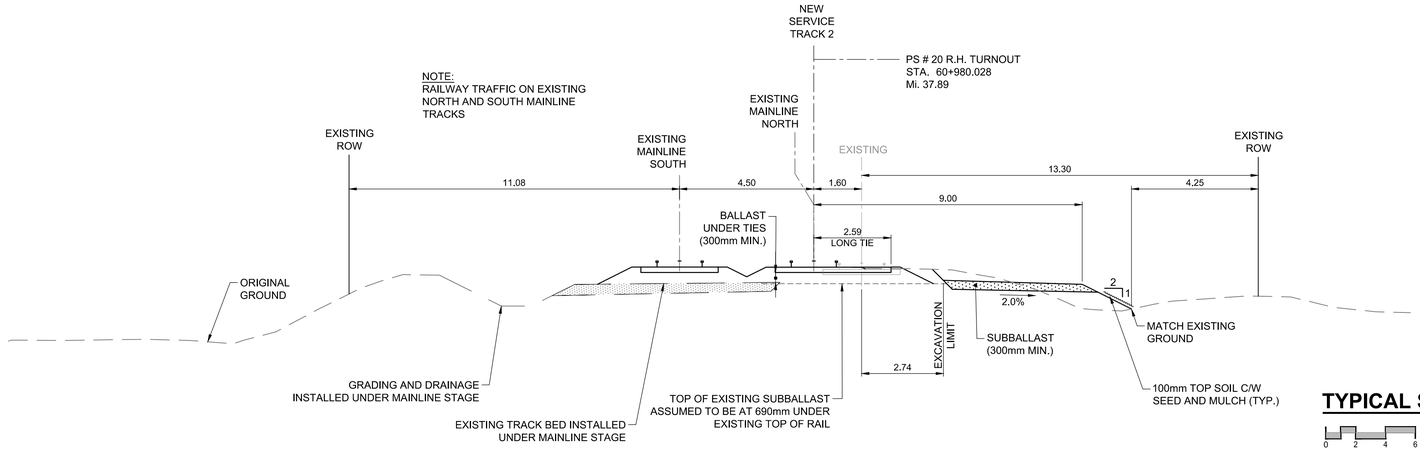
I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
C	20/07/01	ISSUED FOR 90% SUBMISSION	OP/LP	AS	LP	LB		
B	19/10/23	ISSUED FOR 60% SUBMISSION	IS	AS	JR	LB		
A	19/04/29	ISSUED FOR 30% SUBMISSION	IS	AS	JR	LB		

AECOM

CN
MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27
NEW MAINLINE TRACKS
TYPICAL SECTIONS
SEET 10 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-2510	A

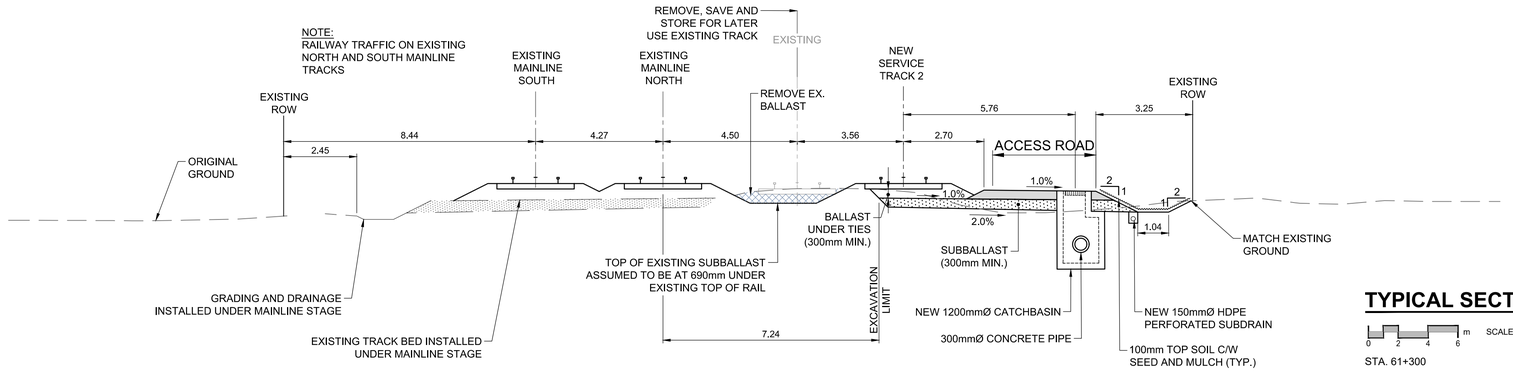
D SIZE 22" x 34" (558.8mm x 863.6mm)
Saved By: popovicil
AECOM FILE NAME: C:\Users\popovicil\Desktop\Corona Quarantine\milton\Coronavirus quarantine\2. Sheets\4 SERVICE AND PAD TRACKS (3000)\5. TYPICAL SECTIONS\60579933_Typical Section.dwg



TYPICAL SECTION BA
R-3101

0 2 4 6 m SCALE 1:100

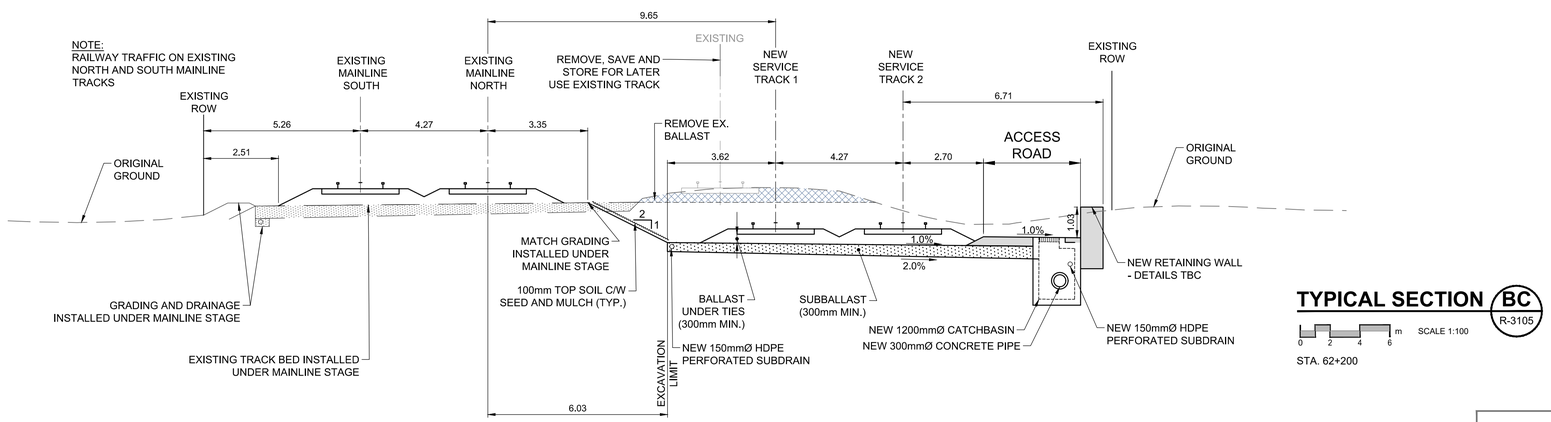
STA. 50+980.028



TYPICAL SECTION BB
R-3102

0 2 4 6 m SCALE 1:100

STA. 61+300



TYPICAL SECTION BC
R-3105

0 2 4 6 m SCALE 1:100

STA. 62+200

REGION	SUBDIVISION	MILE
-	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

PROFESSIONAL SEALS

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
B	20/07/01	ISSUED FOR 90% SUBMISSION	LP	AS	JR	LB		
A	19/10/23	ISSUED FOR 60% SUBMISSION	LP/JO	AS	LP	LB		

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CN

MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27

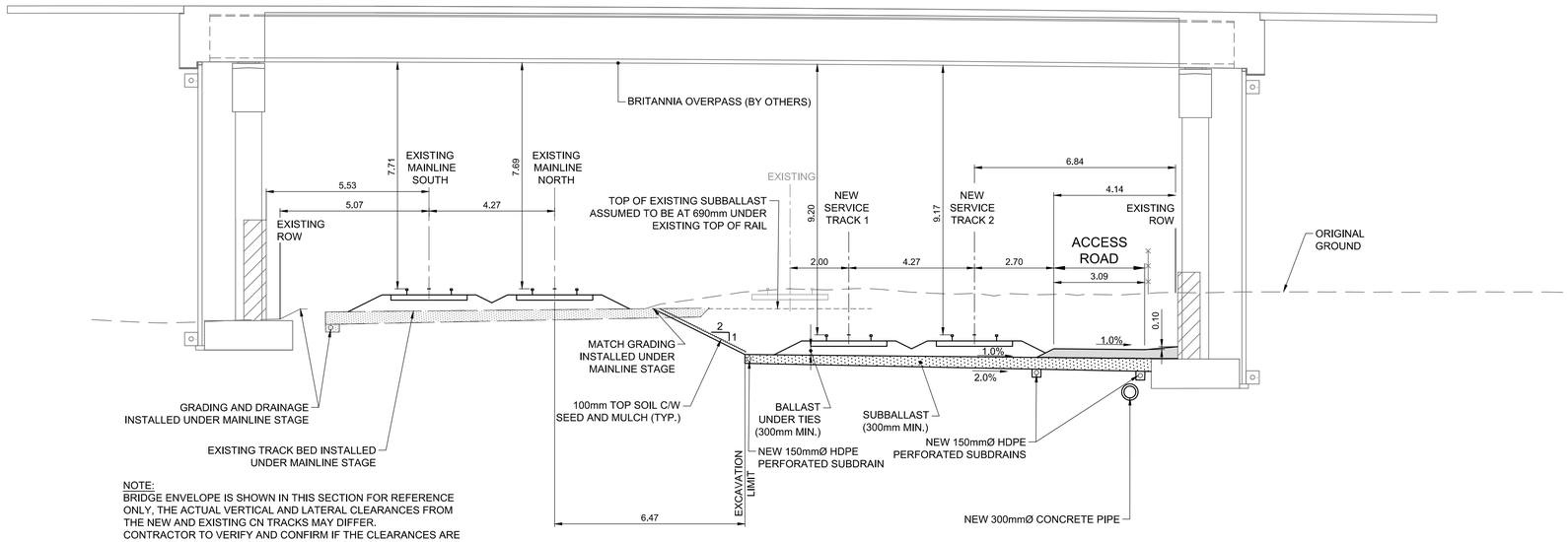
NEW SERVICE AND PAD TRACKS

TYPICAL SECTIONS

SEET 1 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-3501	B

D SIZE 22" x 34" (558.8mm x 863.6mm)
Saved By: popovicil
AECOM FILE NAME: C:\Users\popovicil\Desktop\Corona Quarantine\milton\Coronavirus quarantine\2. Sheets\4.SERVICE AND PAD TRACKS (3000)\5. TYPICAL SECTIONS\60579933_01-R-3610_Typical Section.dwg



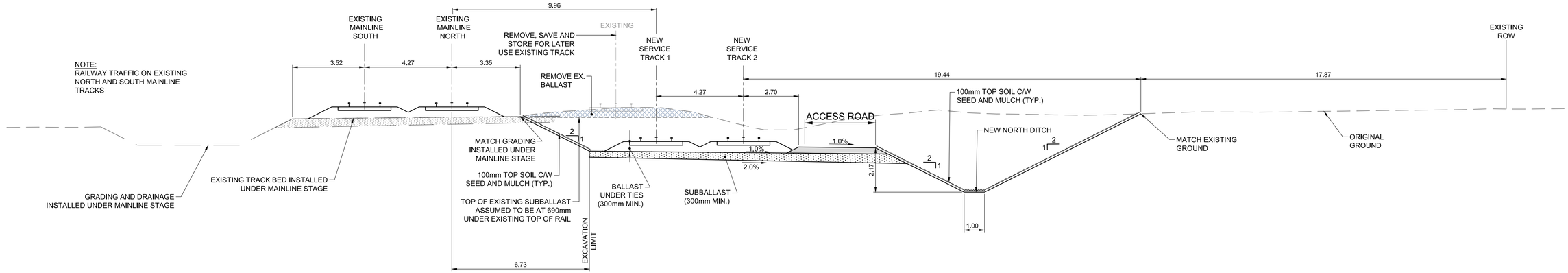
NOTE:
BRIDGE ENVELOPE IS SHOWN IN THIS SECTION FOR REFERENCE ONLY, THE ACTUAL VERTICAL AND LATERAL CLEARANCES FROM THE NEW AND EXISTING CN TRACKS MAY DIFFER. CONTRACTOR TO VERIFY AND CONFIRM IF THE CLEARANCES ARE IN CONFORMITY WITH CN TRACK STANDARDS.

NOTE:
RAILWAY TRAFFIC ON EXISTING NORTH AND SOUTH MAINLINE TRACKS

TYPICAL SECTION BD
R-3105

0 2 4 6 m SCALE 1:100

STA. 62+325



TYPICAL SECTION BE
R-3105

0 2 4 6 m SCALE 1:100

STA. 62+400

B	20/07/01	ISSUED FOR 90% SUBMISSION	LP	AS	JR	LB		
A	19/10/23	ISSUED FOR 60% SUBMISSION	LP/JO	AS	LP	LB		
I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP

PROFESSIONAL SEALS

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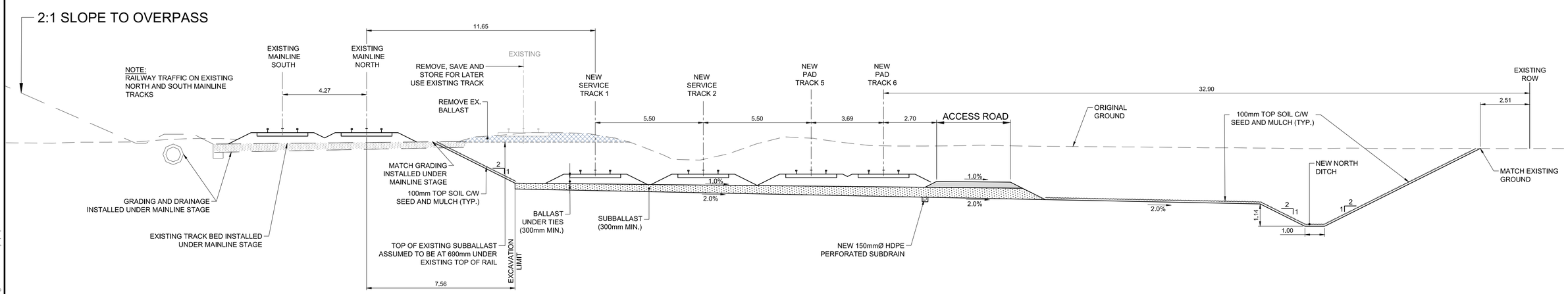
REGION	SUBDIVISION	MILE
-	HALTON	36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.	
-	-	

CN
MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27
NEW SERVICE AND PAD TRACKS
TYPICAL SECTIONS
SEET 2 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-3502	B

D SIZE 22" x 34" (558.8mm x 863.6mm)

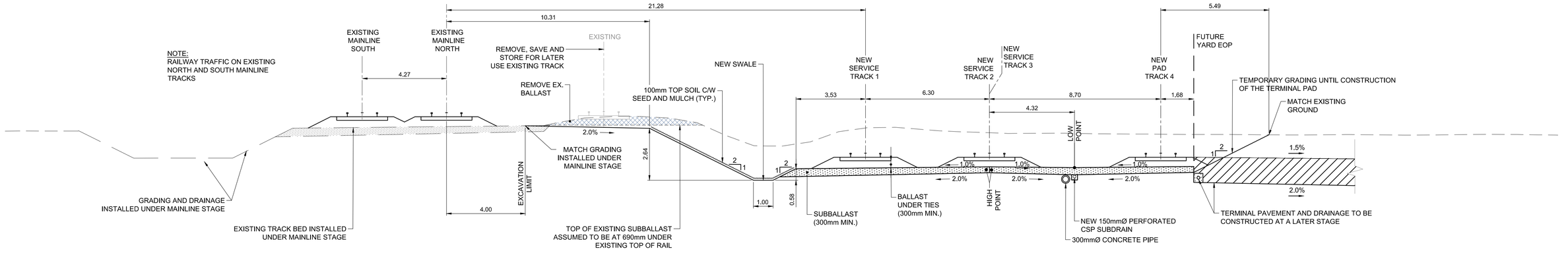


TYPICAL SECTION BF

R-3106

0 2 4 6 m SCALE 1:100

STA. 62+650



TYPICAL SECTION BG

R-3106

0 2 4 6 m SCALE 1:100

STA. 62+775

REGION	SUBDIVISION / MILE
-	HALTON / 36.79 - 41.27
CN PROJECT NO.	CN DRAWING NO.
-	-

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PROFESSIONAL SEALS

I/R	YY/MM/DD	ISSUE/REVISION DESCRIPTION	DRN	CHK	DES	ENG	IDR	APP
B	20/07/01	ISSUED FOR 90% SUBMISSION	LP	AS	JR	LB		
A	19/10/23	ISSUED FOR 60% SUBMISSION	LP/JO	AS	LP	LB		

AECOM

CN

MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27

NEW SERVICE AND PAD TRACKS

TYPICAL SECTIONS

SEET 3 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-3503	B

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D SIZE 22" x 34" (558.8mm x 863.6mm)
Saved By: popovicil
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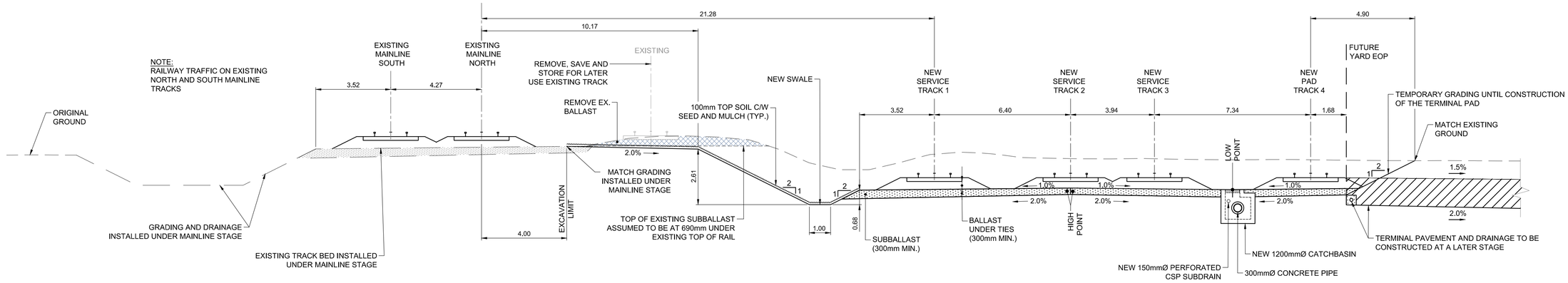

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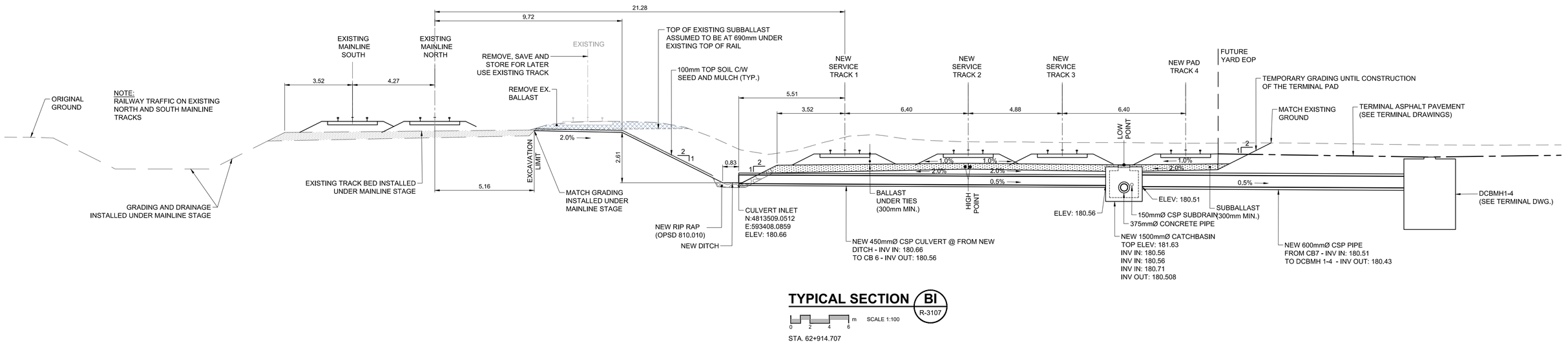
STA. 62+825



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STA. 62+914.707

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CN PROJECT NO.	CN DRAWING NO.	
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CN

MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27

NEW SERVICE AND PAD TRACKS

TYPICAL SECTIONS

SEET 4 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
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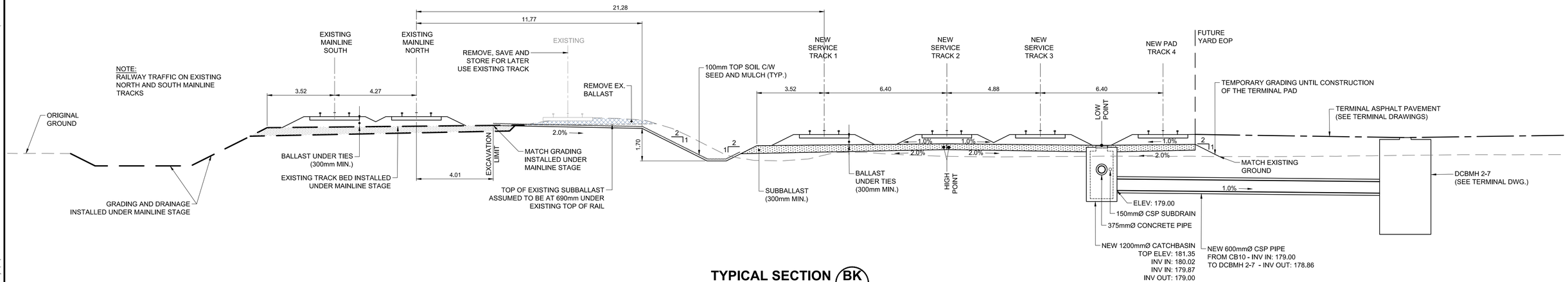

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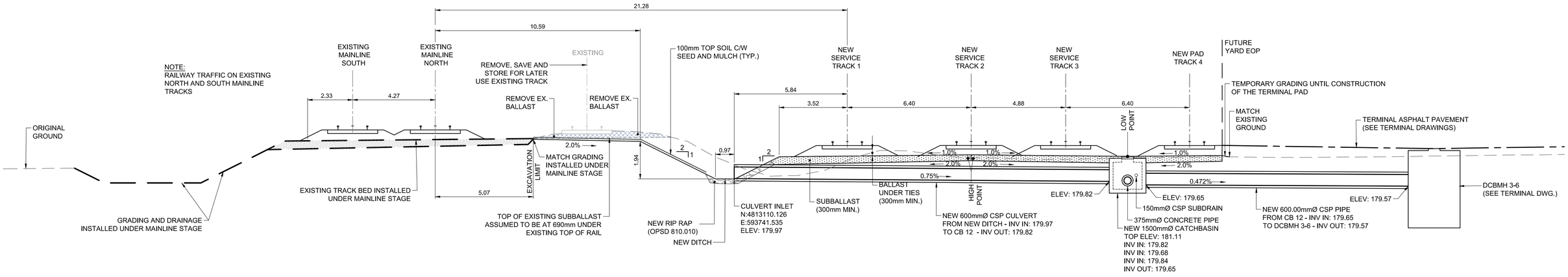

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STA. 63+434.71

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CN PROJECT NO.: -	CN DRAWING NO.: -							

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NEW SERVICE AND PAD TRACKS
TYPICAL SECTIONS
SEET 5 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
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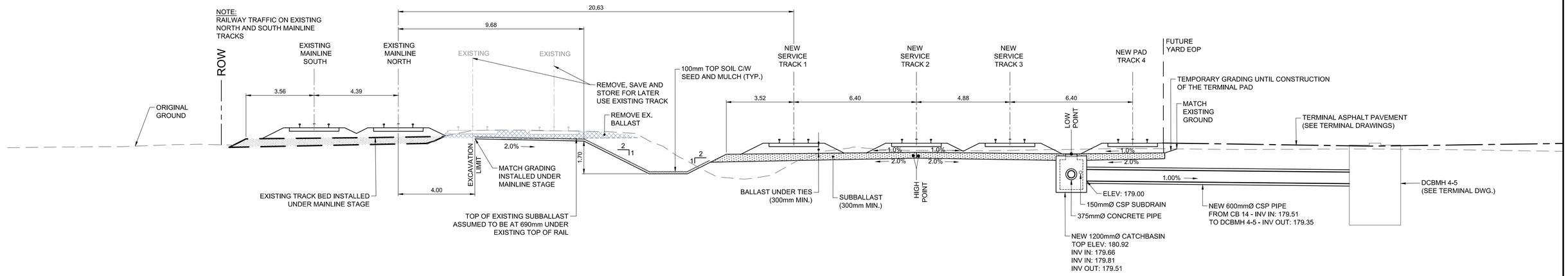

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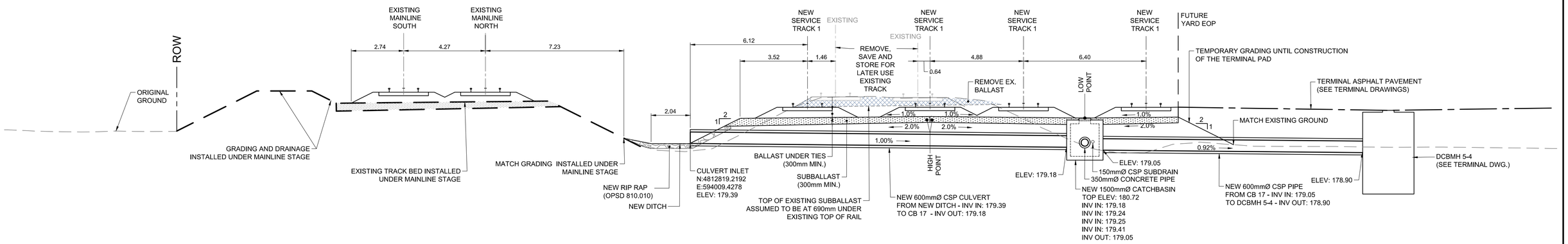

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REGION: -	SUBDIVISION: HALTON	MILE: 36.79 - 41.27						
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NEW SERVICE AND PAD TRACKS
TYPICAL SECTIONS
SEET 6 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
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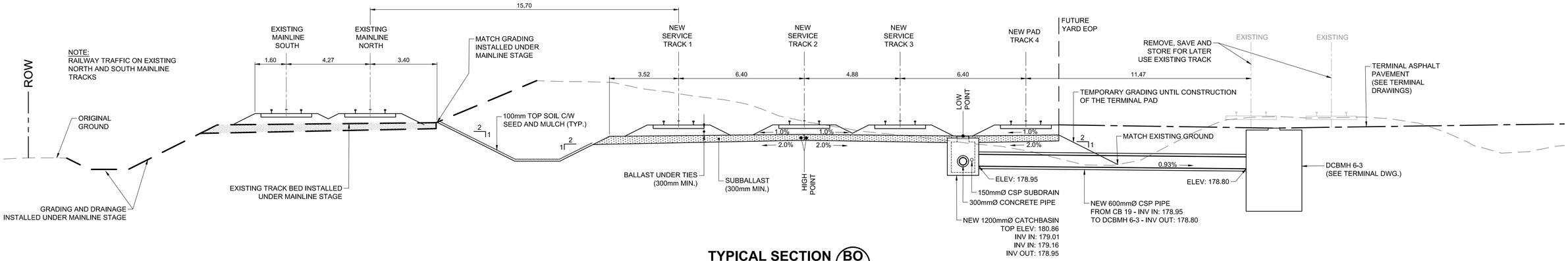

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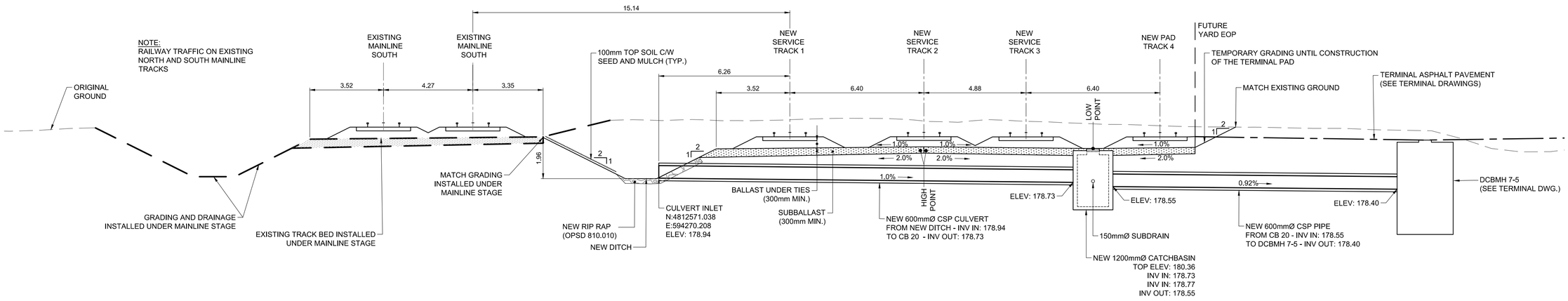
STA. 64+071.91



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A	19/10/23	ISSUED FOR 60% SUBMISSION	LP/JO	AS	LP	LB		

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MILTON LOGISTIC HUB - HALTON SUBDIVISION - Mile 36.79 to 41.27

NEW SERVICE AND PAD TRACKS

TYPICAL SECTIONS

SEET 7 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
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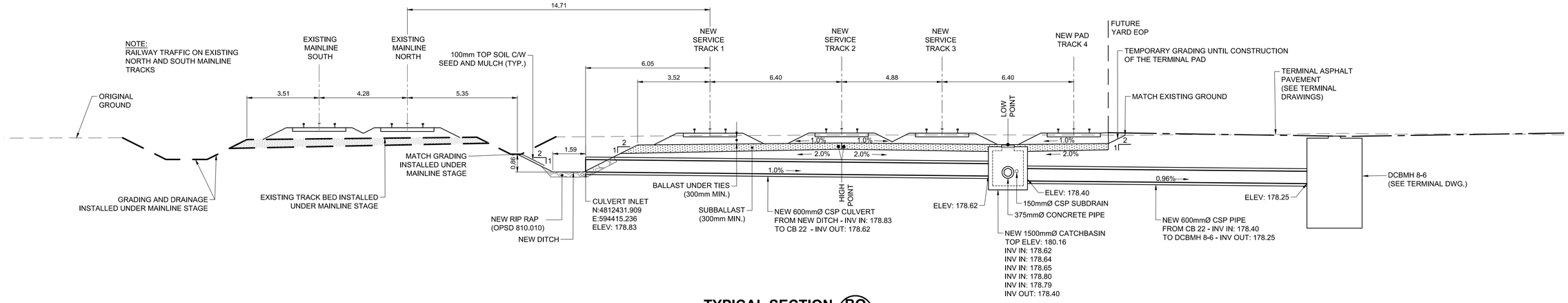

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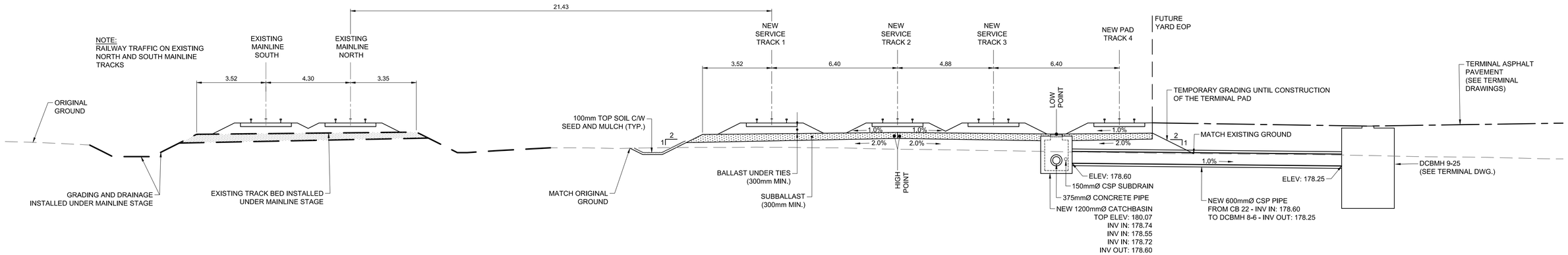
STA. 64+392.62



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NEW SERVICE AND PAD TRACKS

TYPICAL SECTIONS

SEET 8 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
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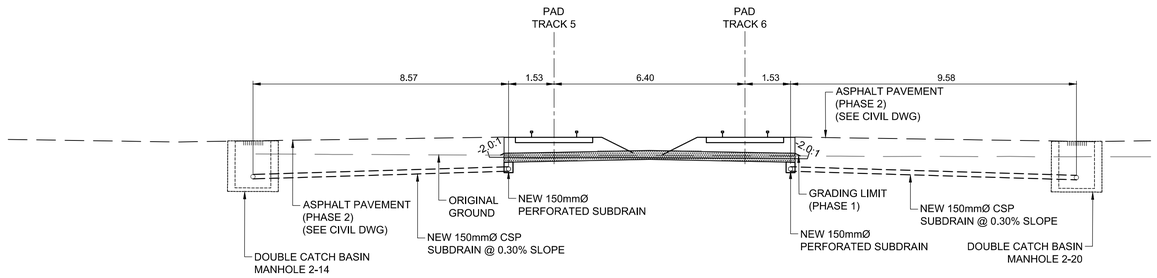

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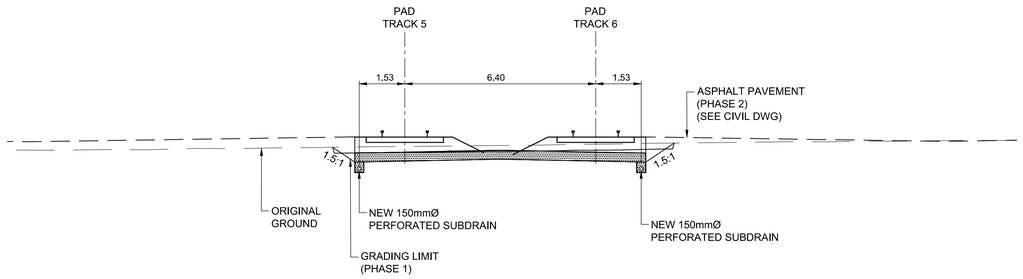

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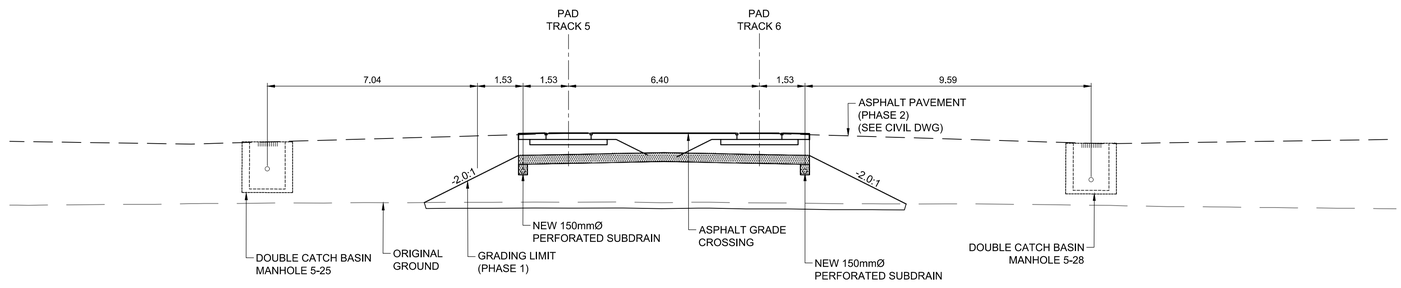

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STA. 63+933

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NEW SERVICE AND PAD TRACKS

TYPICAL SECTIONS

SEET 9 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
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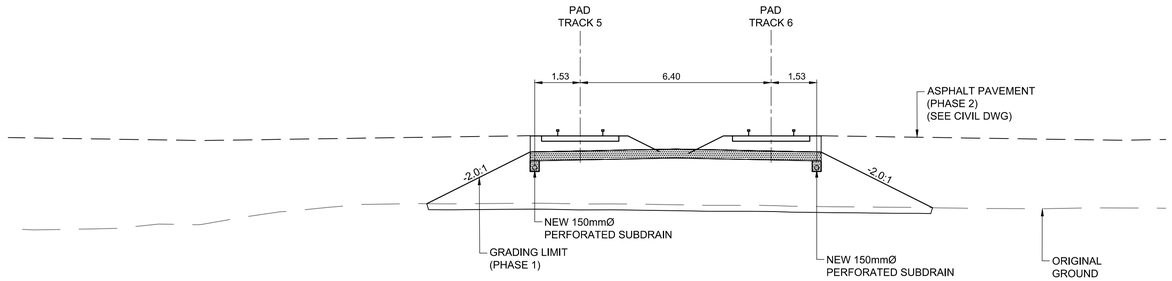

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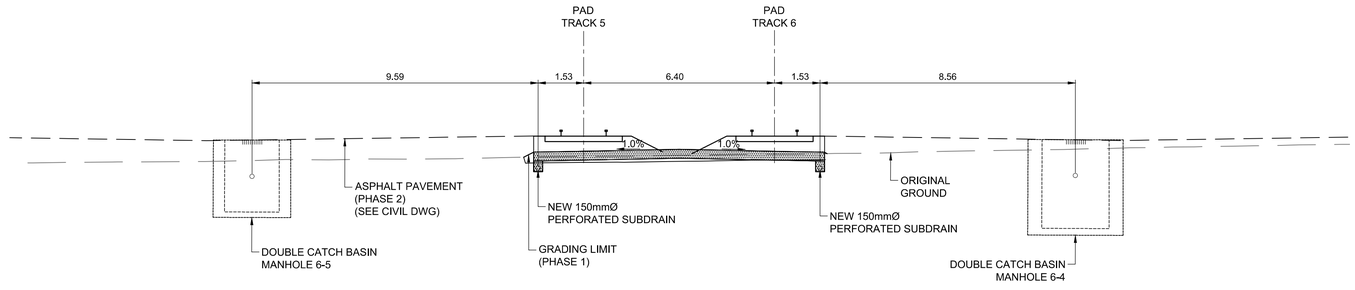

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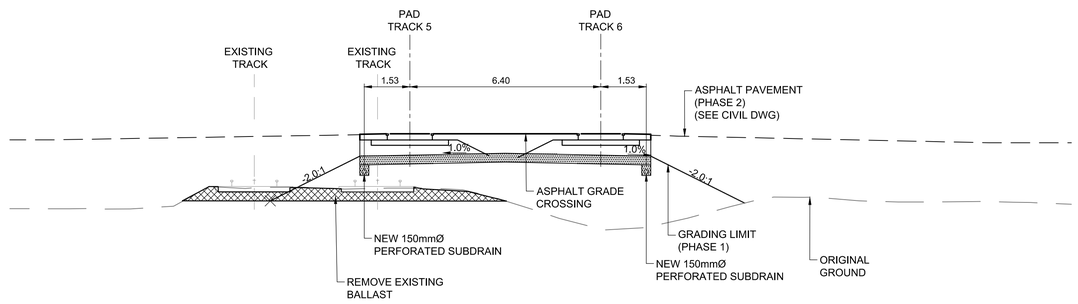

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STA. 65+125

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NEW SERVICE AND PAD TRACKS
TYPICAL SECTIONS
SEET 10 OF 10

PROJECT NUMBER	DRAWING NUMBER	ISSUE/REVISION
60579933	01-R-3510	A

Appendix K

FINAL DRAINAGE REPORT

Milton Logistic Hub

- Panel Recommendation Responses Memo

AECOM Imagine it. Delivered.

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Canada

T: 905.215.1400
aecom.com

Project name:
CN Milton Logistics Hub

Project ref:
60579933

To:
Martita L. Mullen, PE
CN Senior Manager Design & Construction – Southern Region

CC:
Manan Raval, Project Manager, Transit & Rail, AECOM
Ayhem Sadie, P. Eng.
Associate Vice President, Transit & Rail, AECOM
Brian Richert, P. Eng., Senior Water Resource Engineer, AECOM
Darren Reynolds, Director, CN Rail

From:
Aws Nabeel, P. Eng., Water Resource Engineer

From:
Brian Richert, P. Eng., Senior Water Resource Engineer

Date:
April 09, 2020

Re: CN Milton Logistics Hub – Storm Water Management – Panel Recommendations

1. Background information

As part of AECOM services for CN Milton Logistics Hub project, Canadian National Railway (CN Rail) requested AECOM to prepare a technical memorandum to address panel recommendations/comments regarding Stormwater Management and drainage. AECOM reviewed the panel recommendations/comments received on February 05th, 2020. This technical memorandum addresses the recommendations/comments from panel.

2. Responses to Panel Recommendations

a. ***Comment #7.1:*** *The Panel recommends that CN ensure floodplain storage and flood conveyance within the Project Development Area function in a manner that, in accordance with its EIS conclusions and June 27, 2019 presentation to the Panel, the Project has no effect on streamflow's, floodline elevations, or the Indian Creek watershed as demonstrated by matching the hydrographs in the area for maximum and minimum flows, as well as the timing of those. The Panel further recommends CN should ensure that flows leaving the Project Development Area into any tributary or Indian Creek match existing hydrographs and floodlines and that CN use the stormwater management ponds, balanced with appropriate conveyance, to reduce peak discharge rates and not worsen floodlines.*

Response: The Project has no effect on streamflow's or floodline elevations in the Indian Creek watershed. The SWM Strategy report by AECOM dated June 2015 documents that there is no increase in peak flow to Indian Creek from the Project Development Area for the 2-year to 100-year storm events. There is a small increase in Regional peak flow from the Project Development Area, but it does not result in an increase in peak flow to Indian Creek from the tributaries in the study area. The modeling of Regional flows in the Project Development Area and tributaries discharging to Indian Creek demonstrate that additional detention of the Regional storm on site would not reduce flows to Indian Creek **(can be observed in Figure 5).** A comparison of hydrographs from the entire project development area to Indian Creek under existing and proposed conditions for the Regional storm and 100-year storm is provided below. In addition, the panel comment also references a requirement for matching hydrographs "in the area" for "maximum flows". AECOM does not currently have access to a full watershed hydrology model for Indian Creek and hence are not able to provide hydrographs for Indian Creek. However, we interpret matching hydrographs "in the area" to mean matching the hydrographs for runoff from the Project Development Area to Indian Creek for existing and proposed conditions. These are demonstrated by comparing the hydrographs discharging

from the Project Development Area to Indian Creek for existing and proposed conditions and confirming that there is no increase in maximum flows during a range of design flows (2-year through 100-year return periods), as well as Regulatory flows.

A panel comment references a requirement for matching hydrographs for “minimum flows” in Indian Creek. Since there is no discharge from the Project Development Area for dry conditions under either proposed or existing conditions, there is no change to minimum flows in Indian Creek. The SWM Strategy report by AECOM dated June 2015 also demonstrated that there was no increase in flow to Indian Creek from the Project Development Area for a moderately low flow condition, consisting of a 25 mm storm event.

A panel comment references a requirement for matching hydrographs for “timing” of maximum and minimum flows in Indian Creek. Due to the large size of the Indian Creek watershed relative to the Project Development Area, the peak flow in Indian Creek occurs much later than the peak flow from the Project Development Area to the Creek. As a result, timing that the peak flow occurs in Indian Creek is the same under both existing and proposed conditions for all the above design flow events.

Taken in a whole, the panel comment to require “matching the hydrographs in the area for maximum and minimum flows, as well as the timing of those” may be interpreted as a requirement to match the entire shape and volume of the Regional storm hydrograph from the Project Development Area to Indian Creek. AECOM notes that, to our knowledge, that these criteria have never been applied to a development site anywhere in Ontario, and it is almost certainly not possible to achieve.

The panel comment recommends that CN use the stormwater management ponds, balanced with appropriate conveyance, to reduce peak discharge rates and not worsen floodlines. This is achieved with the proposed design.

The following Table considers flows from the “development area” to Indian Creek. The “development area” is the CN property generally defined as the area bounded by Britannia Road, the rail line, Lower Baseline Road, and Tremaine Road. The “development area and upstream lands” discharging at Node E or 5 to the Creek represent all flows from north of Tremaine Road discharging to Indian Creek from the various tributaries.

Table 1: Storm Event Peak Flow Rates to Indian Creek based on Existing, Proposed Uncontrolled and Proposed Controlled with Ponds

Design	Peak Discharge (m^3/s)							
	Development Area - Pond 1 and 2 Control				Development Area and upstream lands – Node E or 5 Discharging to Indian Creek			
	Low Flow 25mm Storm Flow m^3/s	High Flow 50yr Storm Flow m^3/s	Spillway 100yr 100yr Storm Flow m^3/s	Spillway Regional Regional Storm Flow m^3/s	Low Flow 25mm Storm Flow m^3/s	High Flow 50yr Storm Flow m^3/s	Spillway 100yr 100yr Storm Flow m^3/s	Spillway Regional Regional Storm Flow m^3/s
Existing Conditions	0.6	6.4	7.5	19.0	2.0	21.7	25.5	72.6
Proposed Uncontrolled	3.4	19.5	22.2	21.8	3.4	21.4	25.1	68.2
Proposed Controlled	0.3	4.8	6.0	21.5	1.8	21.0	49.9	69.7
Percent Change in Peak Flow	-50 %	-25 %	-20 %	+13 %	-8	-3 %	-2 %	-4 %

Figure 1 shows the development drainage area for existing and proposed. **Figure 2 and 3** show the 100-yr and Regional hydrographs for the development drainage catchment, for existing (pre-development) and post-development (with and without SWM ponds 1 and 2 active). The post-development hydrographs mimic closely the existing condition's peak or lower for the 100-yr event (decreased by 20%). As for the Regional storm event, the peak for the proposed controlled conditions have increased by 13%. **Figure 4 and 5** show the 100-yr and Regional hydrographs for the overall catchment at node "E or 5" outletting to Indian Creek for both existing and proposed conditions. It shows that the proposed controlled peak is lower than existing condition.

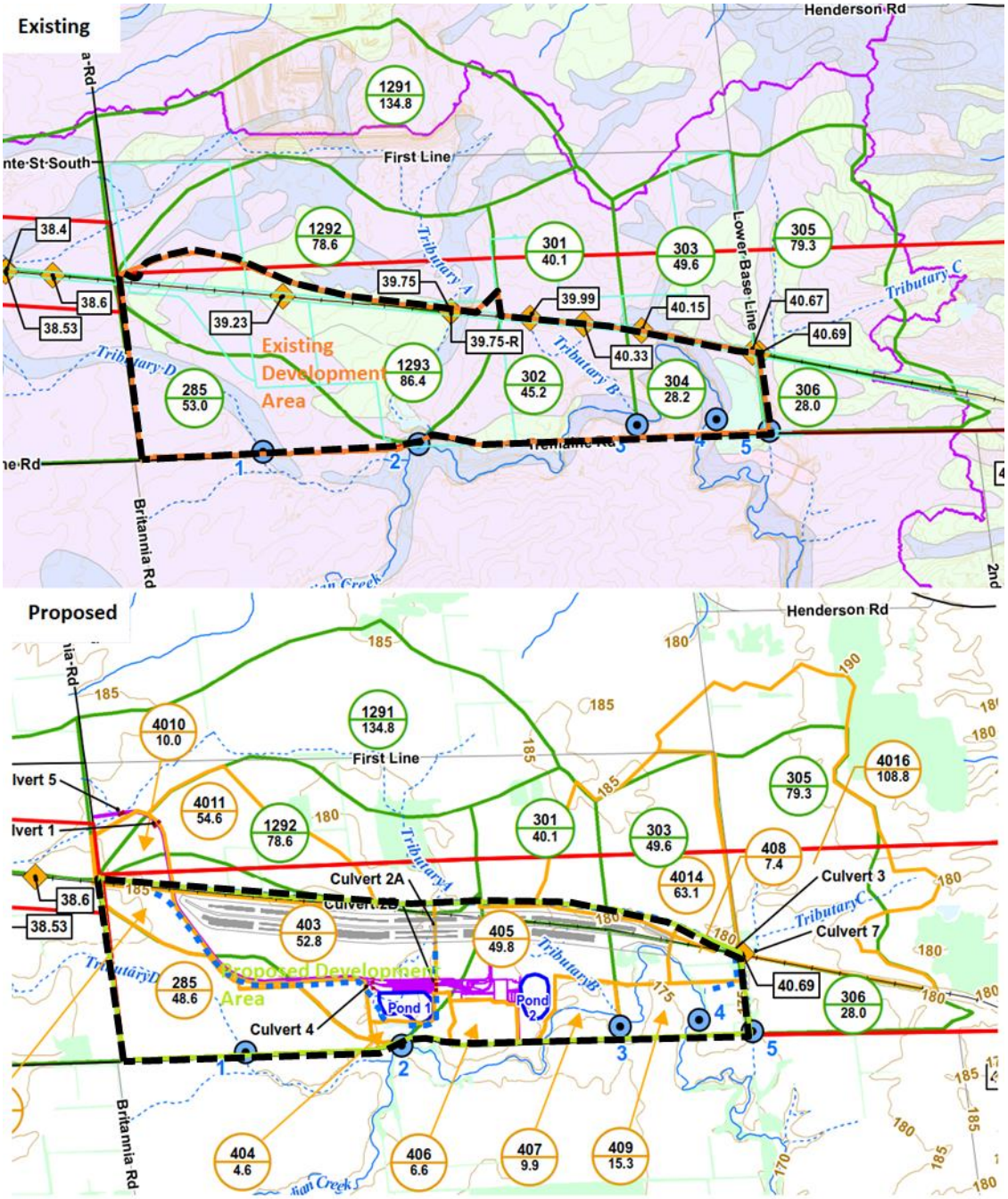

Figure 1: Drainage of Development Area for Existing and Proposed Conditions

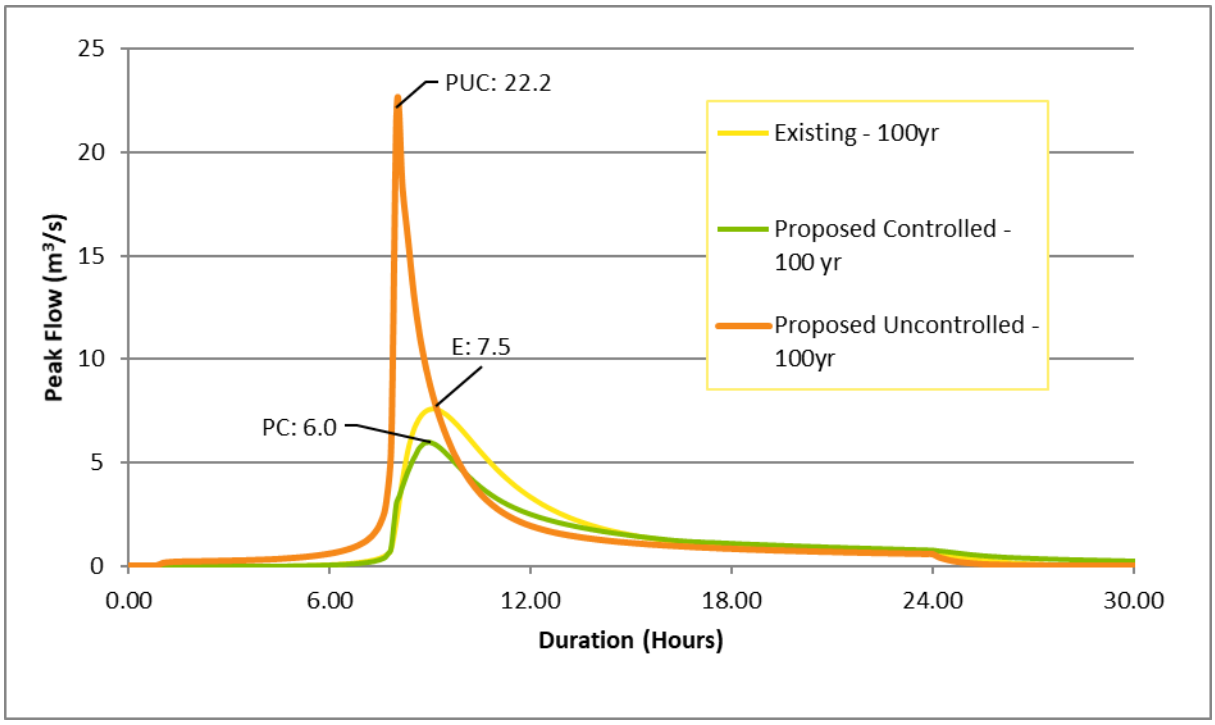

Figure 2: 100-yr Storm Event – Development Area (Existing, Proposed with and without ponds)

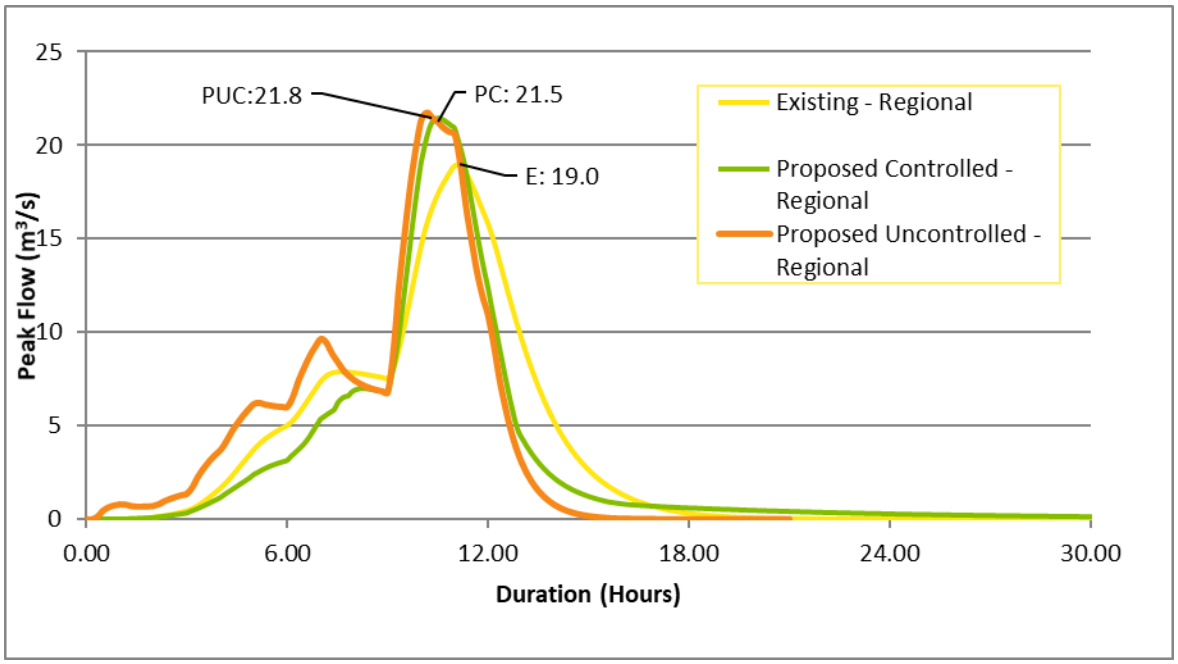

Figure 3: Regional Storm Event – Development Area (Existing, Proposed with and without ponds)

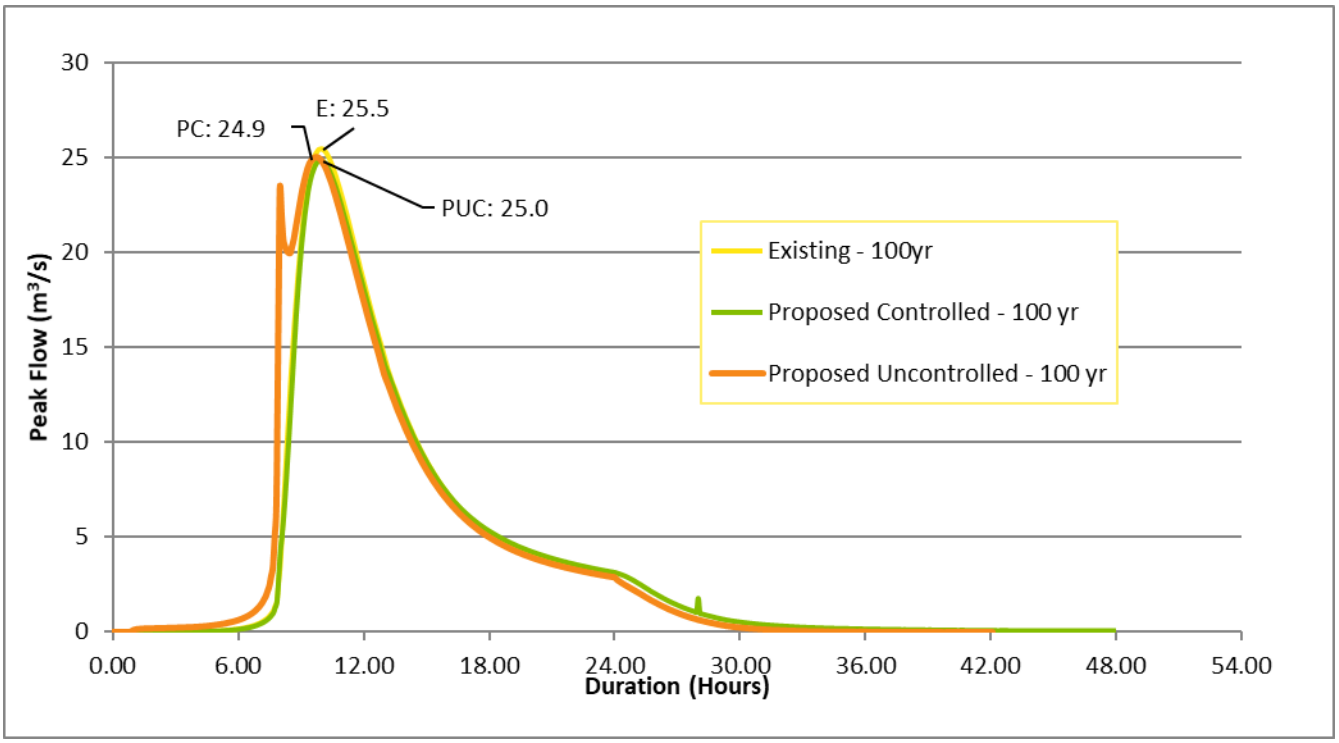

Figure 4: 100-yr Storm Event – Node E or 5 (Existing, Proposed with and without ponds)

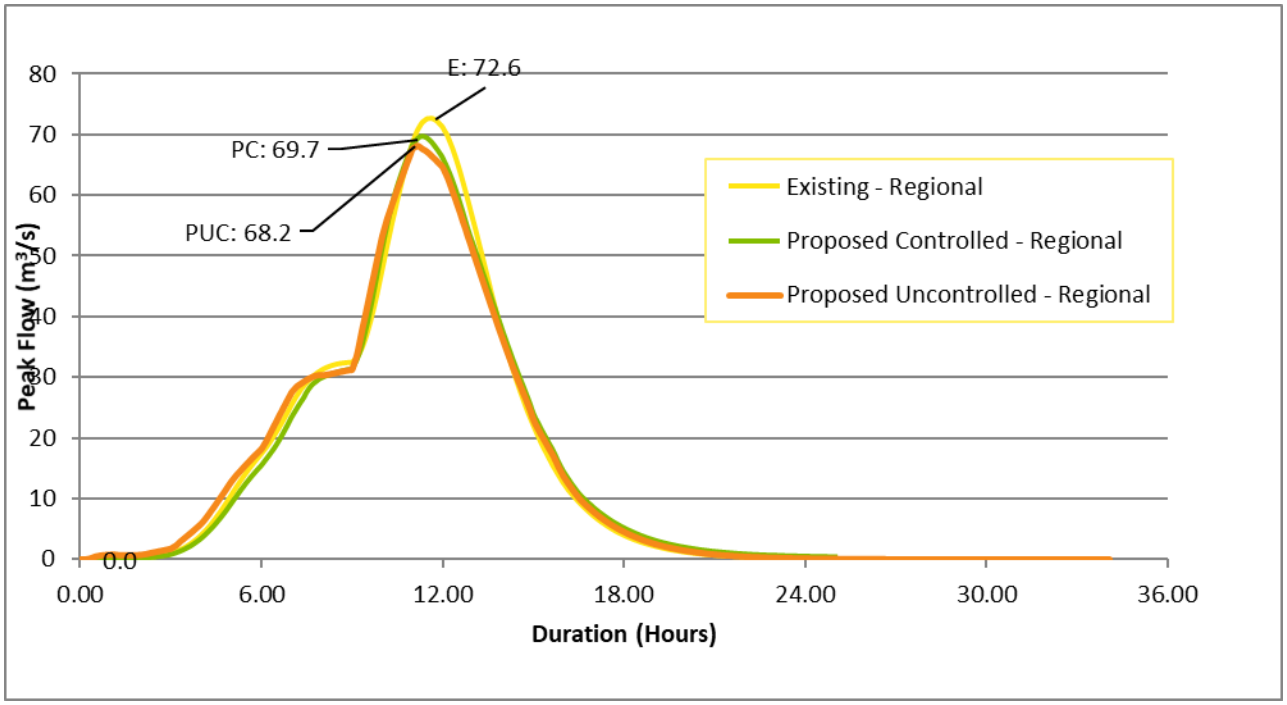

Figure 5: Regional Storm Event – Node E or 5 (Existing, Proposed with and without ponds)

b. ***Comment # 7.3:*** *The Project's water conveyance and storage infrastructure has sufficient capacity to adequately manage the range of climate conditions that could reasonably be expected during the Project's lifetime. In doing so, CN should work with Conservation Halton, the Town of Milton, Environment and Climate Change Canada, and Fisheries and Oceans Canada during the detailed design stage to determine appropriate design specifications.*

Response: Hydrologic assessment of the study area is completed in accordance with current climate (rainfall) design specifications prescribed by the Town of Milton, Ministry of Environment, Conservation and Parks (formerly MOE), and Conservation Halton.

Presently, the hydrologic assessment uses the same design rainfall for existing and proposed future conditions. A hydrological model of the study area was prepared using Visual OTTHYMO (VO3) to estimate peak runoff rates and volumes from the catchment areas. 24-hour Chicago design storm events were created using Intensity-Duration-Frequency (IDF) values derived from the rainfall data taken from the AES Toronto Pearson International Airport climatic station. CN will work with Conservation Halton, the Town of Milton, Environment and Climate Change Canada, and Fisheries and Oceans Canada during the detailed design stage to determine appropriate rainfall design specifications for the range of climate conditions that could reasonably be expected during the Project's lifetime.

c. ***Comment # 7.4:*** *The Project Development Area and surrounding CN-owned lands, if necessary, have sufficient capacity to safely accommodate and convey at least the Regional Storm into the foreseeable future in a manner that ensures no downstream effects on neighbouring properties, downstream fish habitat, or downstream wetlands. In doing so, CN should work with Environment and Climate Change Canada, Fisheries and Oceans Canada, Conservation Halton, Halton Municipalities and others as appropriate to modify the design of the stormwater management system and other aspects such as cut-fill strategies.*

Response: The proposed drainage works within the Project Development Area and surrounding CN-owned lands have sufficient capacity to safely accommodate and convey the Regional Storm into the foreseeable future with no increase in peak flow, and in doing so has no downstream effects on neighbouring properties, downstream fish habitat, or downstream wetlands. There is no increase in peak flow in Indian Creek for flows up to and including the Regional Storm, and no increase in flood elevations upstream or downstream of the Project Development Area and surrounding CN-owned lands.

d. ***Comment # 7.5:*** *CN ensure that downstream hydrographs and floodlines are unaltered unless otherwise directed or advised by Environment and Climate Change Canada in consultation with Conservation Halton.*

Response: The downstream hydrographs of Indian Creek demonstrate no increase in peak flow resulting from the proposed works within the Project Development Area, and its corresponding floodlines are unaltered. Refer to the details provided in response to Comment # 7.1.

Yours sincerely,

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Appendix L

FINAL DRAINAGE REPORT

Milton Logistic Hub

- Final Decision Statement

Decision Statement

Issued under Section 54 of the *Canadian Environmental Assessment Act, 2012*

to
Canadian National Railway Company
c/o Sean Finn, Executive Vice-President, Corporate Services and Chief Legal Officer

16th Floor, 935 de La Gauchetière Street West
Montreal, Quebec
H3B 2M9

for the
Milton Logistics Hub Project

Description of the Designated Project

The Canadian National Railway Company (the Proponent) is proposing the construction and operation of an intermodal logistics hub designed to transfer containers between trucks and railcars in an area of rapid urban growth. The Project would include a railway yard with more than 20 kilometres of track and be located in Milton, Ontario, about 50 kilometres west of Toronto.

Conduct of the environmental assessment

The former Minister of the Environment referred the Milton Logistics Hub Project to a review panel on July 20, 2015. The Review Panel was established on December 6, 2016. The Review Panel conducted its review in a manner that met the requirements of the *Canadian Environmental Assessment Act, 2012* and submitted its report to me in my capacity as Minister of Environment and Climate Change on January 27, 2020.

Decision on environmental effects referred to in subsection 5(1) of the *Canadian Environmental Assessment Act, 2012*

In accordance with paragraph 52(1)(a) of the *Canadian Environmental Assessment Act, 2012*, after considering the report of the Joint Review Panel on the Designated Project and the implementation of mitigation measures that I consider appropriate, I have determined that the Designated Project is not likely to cause significant adverse environmental effects referred to in subsection 5(1) of the *Canadian Environmental Assessment Act, 2012*.

In accordance with subsection 53(1) of the *Canadian Environmental Assessment Act, 2012*, I have established the conditions below in relation to the environmental effects referred to in subsection 5(1) of the *Canadian Environmental Assessment Act, 2012*, with which the Proponent must comply.

Decision on environmental effects referred to in subsection 5(2) of the *Canadian Environmental Assessment Act, 2012*

The carrying out of the Designated Project may require the following federal authorities to exercise a power or perform a duty or function conferred on them under an Act of Parliament other than the *Canadian Environmental Assessment Act, 2012*:

- The Canadian Transportation Agency may approve the construction of a railway line under section 98(1) of the *Canada Transportation Act*;
- The Minister of Fisheries and Oceans may issue authorization(s) under paragraph 35(2)(b) of the *Fisheries Act* that was in force as of August 27, 2019; and
- The Minister of Industry may approve a communication system under subsection 5(1)(f) of the *Radiocommunication Act*.

In accordance with paragraph 52(1)(b) of the *Canadian Environmental Assessment Act, 2012*, after considering the report of the Joint Review Panel on the Designated Project and the implementation of mitigation measures that I consider appropriate, I have determined that the Designated Project is likely to cause significant adverse environmental effects referred to in subsection 5(2) of the *Canadian Environmental Assessment Act, 2012*.

In accordance with subsection 52(2) of the *Canadian Environmental Assessment Act, 2012*, I referred to the Governor in Council the matter of whether those significant adverse environmental effects were justified in the circumstances.

In accordance with paragraph 52(4)(a) of the *Canadian Environmental Assessment Act, 2012*, the Governor in Council decided that the significant adverse environmental effects that the Designated Project is likely to cause are justified in the circumstances.

In accordance with subsection 53(2) of the *Canadian Environmental Assessment Act, 2012*, I have established the conditions below in relation to the environmental effects referred to in subsection 5(2) of the *Canadian Environmental Assessment Act, 2012*, with which the Proponent must comply.

Decision Statement under the Impact Assessment Act

Pursuant to section 184 of the *Impact Assessment Act*, a Decision Statement issued by me under subsection 54(1) of the *Canadian Environmental Assessment Act, 2012* is deemed to be a Decision Statement issued under subsection 65(1) of the *Impact Assessment Act*, other than for the purposes of section 70.

Consultation with Indigenous groups

In establishing the conditions below in relation to the environmental effects referred to in subsections 5(1) and 5(2) of the *Canadian Environmental Assessment Act, 2012*, I took into account the concerns and interests identified in the consultation processes with Indigenous groups. I also considered the measures to address these concerns and interests that have been identified in the environmental assessment and consultation processes. I am satisfied that the consultation processes undertaken are consistent with

the honour of the Crown and that the concerns and interests of Indigenous groups are appropriately accommodated for the purpose of issuing this Decision Statement.

1 Definitions

1.1 *Adaptive management* means a planned and systematic process for continuously improving environmental management practices by learning about their outcomes.

1.2 *Agency* means the Impact Assessment Agency of Canada.

1.3 *Baseline* means the environmental conditions prior to initiating construction of the Designated Project.

1.4 *Canadian Transportation Agency* means the Canadian Transportation Agency as established under section 6 of the *Canada Transportation Act*.

1.5 *Construction* means the phase of the Designated Project during which the Proponent undertakes the site preparation, building or installation of any component of the Designated Project, including periods during which these activities may temporarily cease.

1.6 *Day* means calendar day.

1.7 *Daytime* means from 7:00 am to 10:00 pm.

1.8 *Designated Project* means the Milton Logistic Hub Project as described in sections 3.3 and 3.4 of the environmental impact statement, the revised conceptual design of the Lower Base Line Grade Separation, as described by the Proponent in response to IR3.45 (Canadian Impact Assessment Registry Reference Number 80100, Document Number 613), and the implementation of conditions 5.1, 5.2, 6.1, 6.2, 7.3, 8.3, 8.5 and 8.31.

1.9 *Designated Project Development Area* means the immediate area in which Designated Project activities and components may occur and within which direct physical disturbance, temporary or permanent, may occur because of the Designated Project, defined as the "Project Development Area" in figure 1-2 of the Joint Review Panel Report (Canadian Impact Assessment Registry Reference Number 80100, Document Number 985).

1.10 *Ecopassage* means a series of infrastructures (that may include guidewalls, fencing and tunnels) that allow wildlife to cross linear features.

1.11 *Environment and Climate Change Canada* means the Department of the Environment as established under subsection 2(1) of the *Department of the Environment Act*.

1.12 *Environmental assessment* means "environmental assessment" as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.

1.13 *Environmental effects* means "environmental effects" as described in section 5 of the *Canadian Environmental Assessment Act, 2012*.

1.14 *Environmental impact statement* means the December 2015 document entitled *Environmental Impact Statement – Milton Logistic Hub* (Canadian Impact Assessment Registry Reference Number 80100, Document Number 57).

1.15 *Fish* means "fish" as defined in subsection 2(1) of the *Fisheries Act*.

1.16 *Fish habitat* means "fish habitat" as defined in subsection 2(1) of the *Fisheries Act*.

1.17 *Fisheries and Oceans Canada* means the Department of Fisheries and Oceans as established under subsection 2(1) of the *Department of Fisheries and Oceans Act*.

1.18 *Follow-up program* means "follow-up program" as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.

1.19 *Full operational capacity* means the planned maximum capacity of containers that the Designated Project is designed to handle.

1.20 *Heritage value* means the aesthetic, historic, scientific, cultural, social or spiritual importance or significance for past, present or future generations.

1.21 *Joint Review Panel Report* means the report submitted on January 27, 2020 by the Joint Review Panel established by the Federal Minister of Environment and Climate Change and the Chair of the Canadian Transportation Agency (Canadian Impact Assessment Registry Reference Number 80100, Document Number 985).

1.22 *Listed species at risk* means a species that is listed on the List of Wildlife Species at Risk set out in Schedule 1 of the *Species at Risk Act*.

1.23 *Migratory bird* means "migratory bird" as defined in subsection 2(1) of the *Migratory Birds Convention Act, 1994*.

1.24 *Mitigation measures* means "mitigation measures" as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.

1.25 *Offsetting plan* means "offsetting plan" as defined in section 1 of the *Applications for Authorization under Paragraph 35(2)(b) of the Fisheries Act Regulations*.

1.26 *Operation* means the phase of the Designated Project starting when the Designated Project begins receiving containerized goods for handling by truck and train, including periods during which these activities may temporarily cease.

1.27 *Potentially affected party* means a party that is identified as such by the Proponent pursuant to condition 3.1.

1.28 *Progressive reclamation* means reclamation that is carried out by the Proponent concurrently with all phases of the Designated Project to return progressively any physically disturbed area not intended for planned future use to a state as close to the baseline of the surrounding undisturbed landscape as possible, as soon after the disturbance as practical.

1.29 *Proponent* means Canadian National Railway Company and its successors or assigns.

1.30 *Qualified individual* means someone who, through education, experience and knowledge relevant to a particular matter, provides the Proponent with advice within their area of expertise. Knowledge relevant to a particular matter may include community and Indigenous knowledge.

1.31 *Record* means "record" as defined in subsection 2(1) of the *Canadian Environmental Assessment Act, 2012*.

1.32 *Regulatory storm* means the greater of the 100-year and regional storm (the historical Hurricane Hazel storm event) that defines the extent of a riverine flood hazard in a given area.

1.33 *Relevant authorities* means federal and/or provincial authorities and/or municipal authorities that are in possession of specialist or expert information or knowledge, or that have a responsibility for the administration of a law or regulation, with respect to the subject matter of a condition set out in this Decision Statement.

1.34 *Reporting year* means January 1 of a calendar year through December 31 of the same calendar year.

1.35 *Stormwater management system* means a surface drainage collection system that consists of storm sewers, culverts, drainage ditches and stormwater management ponds and that temporarily detains stormwater and releases it gradually to manage the quality and quantity of stormwater run-off. A stormwater management pond is not a wetland or a waterbody for the purpose of the conditions set out in this Decision Statement.

1.36 *Structure, site or thing of historical, archaeological, paleontological or architectural significance* means a structure, site or thing that is determined by a qualified individual, on the basis of heritage value, to be associated with an aspect of the history or culture of the people of Canada, including Indigenous groups.

1.37 *Wetland* means land that is saturated with water long enough to promote wetland or aquatic processes as indicated by poorly drained soils, hydrophytic vegetation and various kinds of biological activity which are adapted to a wet environment and as further defined in the Canadian Wetland Classification System.

1.38 *Wetland functions* means the natural processes and derivation of benefits and values associated with wetland ecosystems, including economic production, fish and wildlife habitat, organic carbon storage, water supply and purification (e.g. groundwater recharge, flood control, maintenance of flow regimes, shoreline erosion buffering), and soil and water conservation, as well as tourism, heritage, recreational, educational, scientific, and aesthetic opportunities.

Conditions

These conditions are established for the sole purpose of the Decision Statement issued under the *Canadian Environmental Assessment Act, 2012*. They do not relieve the Proponent from any obligation to comply with other legislative or other legal requirements of the federal, provincial, or local governments. Nothing in this Decision Statement shall be construed as reducing, increasing, or

activity, including dewatering, during construction and operation. These measures shall include the installation of erosion and sedimentation control devices and vegetation planting. The Proponent shall submit these measures to the Agency prior to implementing them.

5.5 The Proponent shall undertake equipment fuelling and maintenance, store substances with the potential to cause harmful effects to the receiving environment and deposit water removed during dewatering at least 30 metres from any wetland or waterbody.

5.6 The Proponent shall implement measures to prevent wet concrete or cement-laden water, including high pH run-off occurring during concrete work, from entering any wetland or waterbody during construction.

5.7 The Proponent shall collect and treat all wastewaters and wash waters, taking into account the Canadian Council of Ministers of the Environment's *Canadian Water Quality Guidelines for the Protection of Aquatic Life*, before discharging them in any wetland or waterbody.

5.8 The Proponent shall develop, in consultation with Conservation Halton and other relevant authorities, and implement measures to mitigate the mobilization and transport of potential residual agricultural contaminants within the Designated Project Development Area towards waterbodies during all phases of the Designated Project, including measures to allow time for increased die-off of pathogenic organisms and volatilization of agricultural contaminants prior to soil disturbance and removal of nutrient compounds through plant harvesting.

5.9 The Proponent shall develop, prior to construction and in consultation with Environment and Climate Change Canada, Fisheries and Oceans Canada, the Town of Milton, Conservation Halton and other relevant authorities, and implement a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to the stormwater management system. As part of the implementation of the follow-up program, the Proponent shall:

5.9.1 review, every five years following the end of construction, the performance of the stormwater management system in light of the most current climate change projections, including through the review of downstream hydrographs and floodlines; and

5.9.2 develop and implement modified or additional mitigation measures if any review conducted pursuant to condition 5.9.1 demonstrates that modified or additional mitigation measures are required to maintain downstream hydrographs and floodlines unaltered, unless otherwise directed or advised by Environment and Climate Change Canada in consultation with Conservation Halton.

5.10 The Proponent shall develop, in consultation with Environment and Climate Change Canada, Conservation Halton and other relevant authorities, and implement a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse changes to surface water quality and quantity attributed to the Designated Project. As part of the development of the follow-up program, the Proponent shall determine the water quality parameters to be monitored in order to support the comparison of measured parameters to the levels predicted during the environmental assessment. The water quality parameter shall include the effluent contaminants of concern identified by the Proponent in table 7.4-1 submitted in response to Information Request 7.4 (Canadian Impact Assessment

Registry Reference Number 80100, Document Number 680). As part of the implementation of the follow-up program, the Proponent shall:

5.10.1 monitor surface water quantity continuously during construction and for at least five years following the end of construction;

5.10.2 monitor surface water quality, during construction and for at least five years following the end of construction, at least monthly and during high flows and upset conditions;

5.10.3 conduct the monitoring referred to in conditions 5.10.1 and 5.10.2 both at locations where water flows towards the Designated Project Development Area and at locations where water flows away from the Designated Project Development Area, including the effluent of the stormwater management ponds;

5.10.4 develop and implement modified or additional mitigation measures if the results of the monitoring referred to in condition 5.10.1 or 5.10.2 demonstrate that modified or additional mitigation measures are required to mitigate adverse changes to surface water quality and quantity attributed to the Designated Project, including so that water discharged from the stormwater management system meets applicable water quality standards; and

5.10.5 determine, in consultation with Environment and Climate Change Canada, Conservation Halton and other relevant authorities and based on the results of the monitoring referred to in conditions 5.10.1 and 5.10.2, if additional monitoring is required after the first five years following the end of construction.

Groundwater

5.11 The Proponent shall develop, in consultation with Conservation Halton and other relevant authorities, and implement measures to maintain baseline groundwater flow and prevent the preferential movement of groundwater along servicing alignments.

5.12 The Proponent shall estimate, prior to construction, the dewatering requirements of the Designated Project and shall provide that information to the Agency prior to construction. In the event that the Proponent determines that construction of the Designated Project requires dewatering in excess of 50,000 litres/day, the Proponent shall implement a dewatering system to dissipate the energy and reduce the sediment content of discharging water during construction.

5.13 The Proponent shall develop, prior to construction and in consultation with Natural Resources Canada, Conservation Halton and other relevant authorities, and implement a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse changes to groundwater quality and quantity attributed to the Designated Project. As part of the implementation of the follow-up program, the Proponent shall:

5.13.1 monitor, during construction and for a minimum of one year following the end of construction, groundwater levels and quality within the Designated Project Development Area and at private wells to which the Proponent is granted access located within the Local Assessment Area defined by the Proponent on figure 6 of the document entitled *Technical Data Report Hydrogeology (Appendix E.6)* (Canadian Impact Assessment Registry Reference Number 80100, Document Number 57). In the event that the

Proponent determines that construction dewatering is required pursuant to condition 5.12, the Proponent shall also monitor wells located within the projected dewatering cone of depression and to which the Proponent is granted access to determine the potential for drawdown interference; and

5.13.2 develop and implement modified or additional mitigation measures if the results of the monitoring referred to in condition 5.13.1 demonstrate that modified or additional measures are required to maintain groundwater quantity and quality as predicted by the Proponent as part of the environmental assessment in the document entitled *Technical Data Report Hydrogeology (Appendix E.6)* (Canadian Impact Assessment Registry Reference Number 80100, Document Number 57).

6 Terrestrial environment

6.1 The Proponent shall design, prior to construction and in consultation with Environment and Climate Change Canada, Conservation Halton, other relevant authorities, the Mississaugas of the Credit First Nation and the Six Nations of the Grand River, and maintain, throughout operation, 7.1 hectares of replacement online and offline wetlands within the Designated Project Development Area in a manner that supports the maintenance of ecological functions in the Bronte Creek watershed and that enhances wetland habitat for turtle and breeding opportunities for wetland-dependant birds. In doing so, the Proponent shall establish the constructed riparian wetlands with locally-occurring native emergent and riparian vegetation. The Proponent shall construct the replacement wetlands before removing the existing wetlands, unless not technically feasible.

6.1.1 If it is not technically feasible to construct the replacement wetlands before removing the existing wetlands, the Proponent shall provide a rationale for that determination and shall construct the replacement wetlands within three years of the start of construction.

6.2 The Proponent shall design, in consultation with Conservation Halton, and maintain, throughout operation, drainage features around Designated Project components, including culverts beneath the mainline, to maintain baseline drainage and inflows and outflows to and from any pre-existing wetland that are retained within the Designated Project Development Area following construction. In doing so, the Proponent shall:

6.2.1 conduct, prior to construction and in consultation with Conservation Halton, a feature-based water balance analysis for all wetlands with drainage areas that may be affected by the Designated Project to understand the hydrological impacts of site alteration (including water inflows and outflows) on all wetlands located within the Designated Project Development Area and to mitigate the adverse changes to wetlands and wetland functions attributed to the Designated Project. As part of the consultation, the Proponent shall consult Conservation Halton regarding about the types, frequency and timing of measurements used when conducting the analysis;

6.2.2 take into account the results of the feature-based water balance analysis conducted pursuant to condition 6.2.1 to inform the design and maintenance of the replacement wetlands referred to in condition 6.1;

6.6 The Proponent shall minimize soil disturbance and shall retain vegetation, including wildlife trees, within and around the Designated Project Development Area, to the extent that it is technically feasible or unless required to meet engineering requirements for safe railway and facility operation.

6.7 The Proponent shall handle and store soils during construction in a manner that protects soil quality for re-use. In the event that the Proponent encounters contaminated soils during construction, the Proponent shall determine the suitability of re-using that soil before re-using it. The Proponent shall dispose of any soil not suitable for re-use according to proper screening and disposal requirements, taking into account Ontario's *Management of Excess Soil – A Guide for Best Management Practices*.

6.8 The Proponent shall implement measures, during construction, to avoid the introduction or spread of invasive vegetation within the Designated Project Development Area, including from equipment brought on-site from other worksites and from imported fill. In doing so, the Proponent shall take into account Ontario Invasive Plant Council's *Clean Equipment Protocol for Industry*.

6.9 The Proponent shall conduct progressive reclamation of areas disturbed by the Designated Project. The Proponent shall use native Ontario groundcover species and nurse crops when conducting progressive reclamation.

6.10 The Proponent shall develop, prior to construction and in consultation with Conservation Halton and other relevant authorities, and implement a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to progressive reclamation of the Designated Project Development Area conducted pursuant to condition 6.9, including the establishment of native Ontario groundcover species and nurse crops. As part of the development of the follow-up program, the Proponent shall identify objectives that shall be used by the Proponent to evaluate the effectiveness of the progressive reclamation. The Proponent shall implement the follow-up program once progressive reclamation is completed and shall continue to implement the follow-up program until the Proponent has determined, in consultation with Conservation Halton and other relevant authorities, that the objectives have been met.

7 Fish and fish habitat

7.1 The Proponent shall develop, prior to construction and in consultation with the Mississaugas of the Credit First Nation, the Six Nations of the Grand River, Conservation Halton and other relevant authorities, and implement, during all phases of the Designated Project, measures to protect fish and fish habitat when conducting any Designated Project activity in or near water not already approved under the *Fisheries Act* and its regulations, taking into account Fisheries and Oceans Canada's *Measures to protect fish and fish habitat*.

7.2 The Proponent shall have a qualified individual, who is an aquatic biologist, salvage and relocate fish prior to conducting any Designated Project activity requiring the removal of fish habitat, including dewatering, culvert installations, channel realignment or any construction work undertaken by a contractor associated with the Designated Project, in a manner that is consistent

with any authorization issued under the *Fisheries Act* and its regulations. In doing so, the Proponent shall:

7.2.1 salvage and relocate fish to the satisfaction of Fisheries and Oceans Canada;

7.2.2 give preference to relocating fish within the same waterbody, outside of the work area; and

7.2.3 if relocating fish within the same waterbody is not technically feasible, relocate fish within the same watershed where suitable habitat exists, outside of the work area.

7.3 The Proponent shall design, install and operate the water and pump intake structures located in fish-bearing water within the Designated Project Development Area in a manner that mitigates the incidental capture of fish by entrainment and impingement and is consistent with the *Fisheries Act* and its regulations. In doing so, the Proponent shall use an appropriately sized fish screen, taking into account Fisheries and Oceans Canada's *Freshwater Intake End-of-Pipe Fish Screen Guideline* and *Interim code of practice: end-of-pipe fish protection screens for small intakes in freshwater*, and shall not disturb the bed of the waterbody.

7.4 The Proponent shall conduct any in-water construction activity, including any activity associated with the realignment of Indian Creek and Tributary A, outside of restricted activity timing windows for fish species defined for the Southern Region by Ontario Ministry of Natural Resources and Forestry, unless otherwise permitted by relevant authorities.

7.4.1 If the Proponent must conduct any in-water construction activity during the restricted activity timing windows, the Proponent shall develop and implement additional mitigation measures, in consultation with Fisheries and Oceans Canada, Conservation Halton and other relevant authorities, to protect fish during sensitive life stages, including migration and spawning. The Proponent shall submit these measures to the Agency prior to implementing them.

7.5 The Proponent shall develop, to the satisfaction of Fisheries and Oceans Canada and in consultation with the Mississaugas of the Credit First Nation, the Six Nations of the Grand River and Conservation Halton, and implement an offsetting plan in relation to fish and fish habitat. The Proponent shall submit the approved offsetting plan to the Agency prior to implementation. As part of the development of the offsetting plan, the Proponent shall:

7.5.1 delineate existing and future fish habitat, including riparian buffers; and

7.5.2 describe how created habitat will meet the requirements of life stages for fish species likely to be affected by the Designated Project.

7.6 The Proponent shall advise the Mississaugas of the Credit First Nation, the Six Nations of the Grand River and Conservation Halton on how the views and information they provided to the Proponent as part of the development of the offsetting plan referred to in condition 7.5 have been considered by the Proponent, including a rationale for why the views and information have, or have not, been integrated, prior to submitting the final offsetting plan to Fisheries and Oceans Canada for approval. The Proponent shall submit that rationale to the Agency prior to implementing the approved offsetting plan.

7.7 The Proponent shall, for any fish habitat offsetting measure proposed in the approved offsetting plan referred to in condition 7.5 that may cause adverse environmental effects not considered in

the environmental assessment, develop and implement, following consultation with the Mississaugas of the Credit First Nation, the Six Nations of the Grand River, Conservation Halton and other relevant authorities, measures to mitigate those effects. The Proponent shall submit these measures to the Agency prior to implementing them.

7.8 The Proponent shall fell trees away from waterbodies and shall immediately remove trees, debris or soils inadvertently deposited in any location within the Designated Project Development Area that may cause a loss of flood storage.

7.9 The Proponent shall apply, in consultation with Conservation Halton, natural channel design principles when realigning Indian Creek and Tributary A. In doing so, the Proponent shall incorporate natural bed morphology and planform geometry to the realigned channels in a manner that promotes natural sediment transport processes and such that the realigned channels:

7.9.1 do not excessively aggrade or degrade;

7.9.2 convey baseline flow levels;

7.9.3 maintain baseline bankfull frequency;

7.9.4 do not alter downstream channel morphology; and

7.9.5 provide fish habitat features and allow for fish migration and passage.

7.10 The Proponent shall realign Indian Creek and Tributary A in a manner that minimizes the extent and duration of flow diversions in existing channels, including by:

7.10.1 constructing the realigned channels offline;

7.10.2 siting the realigned channels predominantly outside of the existing channels;

7.10.3 not commissioning each realigned channel or channel segment until such time that all realignment works in that channel or channel segment are completed; and

7.10.4 leaving earthen plugs in the connection points with the existing channels until such time that the realigned channels are vegetated and the Proponent commissions the realigned channels or channel segments pursuant to condition 7.10.3.

7.11 The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada and Conservation Halton, and implement, during operation, measures to mitigate increased temperature in water discharged from the stormwater management system such that collected overland runoff flows at a temperature no higher than baseline conditions, taking into account Ontario's *Stormwater Management Planning and Design Manual*. As part of these measures, the Proponent shall:

7.11.1 maintain vegetated edges and berms around the wet ponds and along the outlet channel;

7.11.2 maintain grassed swales; and

7.11.3 install below-grade pipes and bottom draw outlet pipes.

7.12 The Proponent shall develop, prior to construction and in consultation with Fisheries and Oceans Canada, Conservation Halton, the Mississaugas of the Credit First Nation and the Six Nations of

the Grand River, and implement a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of mitigation measures as it pertains to adverse environmental effects on fish and fish habitat attributed to the Designated Project. The Proponent shall implement the follow-up program at least until the end of the fifth year of operation. As part of the implementation of the follow-up program, the Proponent shall:

7.12.1 monitor the effectiveness of the offsetting measures implemented as part of the approved offsetting plan(s) referred to in condition 7.5;

7.12.2 monitor channel stability throughout the Designated Project Development Area, including channel cross-sections, bed substrate, bed morphology and detailed longitudinal profiles, to track channel migration. In doing so, the Proponent shall:

7.12.2.1 conduct spring monitoring of in-stream structures through visual assessment and photo documentation; and

7.12.2.2 conduct fall monitoring of stream characteristics (including profile, pattern, dimensions and pebble counts);

7.12.3 monitor water temperature of the overland runoff flows from the stormwater management system;

7.12.4 develop and implement modified or additional mitigation measures if the results of the monitoring referred to in condition 7.12.1, 7.12.2 or 7.12.3 demonstrate that modified or additional mitigation measures are required to mitigate adverse environmental effects on fish and fish habitat attributed to the Designated Project, including fish and fish habitat downstream of the Local Assessment Area, defined by the Proponent in section 3.2 of the document entitled *Technical Data Report Fish and Fish Habitat (Appendix E.4)* (Canadian Impact Assessment Registry Reference Number 80100, Document Number 57); and

7.12.5 before the end of the fifth year of operation, determine, in consultation with Fisheries and Oceans Canada and Conservation Halton and based on the results of the monitoring referred to in conditions 7.12.1, 7.12.2 and 7.12.3, if additional monitoring is required. If additional monitoring is required, the Proponent shall update the follow-up program pursuant to condition 2.7 and shall implement the additional follow-up requirements.

8 Wildlife

Migratory birds

8.1 The Proponent shall carry out the Designated Project in a manner that protects migratory birds and avoids harming, killing or disturbing migratory birds or destroying, disturbing or taking their nests or eggs. In this regard, the Proponent shall take into account Environment and Climate Change Canada's *Avoidance Guidelines* to reduce risk to migratory birds. The Proponent's actions when carrying out the Designated Project shall be in compliance with the *Migratory Birds Convention Act, 1994*, the *Migratory Birds Regulations* and with the *Species at Risk Act*.

8.2 The Proponent shall ensure that vegetation in migratory bird habitat located within the Designated Project Development Area remains undisturbed during the breeding season for migratory birds. In doing so, the Proponent shall:

12.1.1 monitor meteorological conditions, including by receiving advanced notice of flood-producing severe rainfall events;

12.1.2 regularly inspect all erosion and sediment control devices installed within the Designated Project Development Area, including following rainfall events, and repair any defective or damaged device in a timely manner;

12.1.3 report, as part of the annual report referred to in condition 2.11, on any major repair done pursuant to the implementation of the plan, including any major repair done pursuant to condition 12.1.2; and

12.1.4 backfill all open excavations in a timely manner during construction, unless not technically feasible.

13 Independent Environmental Monitor

13.1 The Proponent shall retain, prior to construction, the services of a third-party independent environmental monitor, who is a qualified individual as it pertains to environmental monitoring in Ontario, to independently observe and record on the implementation of the conditions set out in this Decision Statement during construction and to report findings to the Proponent and the Agency.

13.2 The Proponent shall require the independent environmental monitor to report to the Proponent, in writing, about the implementation of any condition set out in this Decision Statement during construction. The Proponent shall also require the independent environmental monitor to recommend to the Proponent, in writing, which action(s) in their view should be taken by the Proponent in respect to the implementation of condition set out in this Decision Statement during construction.

13.3 The Proponent shall require the independent environmental monitor to provide to the Agency, at a frequency to be determined in consultation with the Agency, the information reported to the Proponent pursuant to condition 13.2 at the same time that the Proponent receives that information.

13.4 The Proponent shall require the independent environmental monitor to retain the information reported to the Proponent pursuant to condition 13.2 for five years following submission to the Agency pursuant to condition 13.3.

14 Accidents and malfunctions

14.1 The Proponent shall take all reasonable measures to prevent accidents and malfunctions that may result in adverse environmental effects and mitigate any adverse environmental effect from accidents and malfunctions that does occur. In doing so, the Proponent shall:

14.1.1 store hazardous materials in designated areas with proper primary and secondary containment and in accordance with appropriate federal, provincial and municipal safety procedures and requirements;

14.1.2 store bulk quantities of combustible and flammable materials in designated areas at least six metres away from the Designated Project's property line;

14.1.3 provide information to shippers regarding safe loading practices; and

14.1.4 place spill containment kits in designated locations within the Designated Project Development Area where there is a higher risk of spills.

14.2 The Proponent shall consult, prior to construction, with the Mississaugas of the Credit First Nation, the Six Nations of the Grand River, the Town of Milton, Halton Region and other relevant authorities on the measures to be implemented to prevent accidents and malfunctions, including the measures referred to in condition 14.1.

14.3 The Proponent shall develop, prior to each applicable phase of the Designated Project and in consultation with the Mississaugas of the Credit First Nation, the Six Nations of the Grand River, the Town of Milton, Halton Region and other relevant authorities, an accident and malfunction response plan in relation to each phase of the Designated Project. The accident and malfunction plan shall include:

14.3.1 a description of the types of accidents and malfunctions that may cause adverse environmental effects during any phase of the Designated Project, including accidents and malfunctions considered in section 13 of the Joint Review Panel Report (Canadian Impact Assessment Registry Reference Number 80100, Document Number 985) and accidents and malfunctions within the Designated Project Development Area which may adversely affect area(s) outside of the Designated Project Development Area;

14.3.2 the measures, including management and organizational procedures, under the care and control of the Proponent to be implemented by the Proponent in response to each type of accident and malfunction referred to in condition 14.3.1 to mitigate any adverse environmental effect caused by the accident or malfunction. These measures shall include:

14.3.2.1 measures to prevent or minimize containerized material spills from spreading over land surfaces and measures to recover spilled materials from waterbodies, as required;

14.3.2.2 measures to manage the stormwater management system to prevent contaminated water from flowing downstream in case of a spill and, if a spill adversely affects a stormwater management pond, measures to deter birds from using the pond until water quality is restored;

14.3.2.3 measures to identify any sensitive habitats where response efforts shall be prioritized; and

14.3.2.4 measures to reduce fire hazard and enhance fire preparedness;

14.3.3 the locations of spill containment kits within the Designated Project Development Area; and

14.3.4 a description of how the Proponent will evacuate its property and participate in coordinated evacuation procedures with relevant authorities in the case of an accident or malfunction requiring evacuation.

14.4 The Proponent shall maintain the accident and malfunction response plan referred to in condition 14.3 up-to-date during all phases of the Designated Project so that it remains consistent with the Proponent's Network Operations Emergency Response Plan. The Proponent shall submit any

updated accident and malfunction response plan to the Agency and to relevant authorities involved in its implementation within 30 days of the plan being updated.

14.5 In the event of an accident or malfunction with the potential to cause adverse environmental effects, including an accident or malfunction referred to in 14.3.1, the Proponent shall immediately implement the measures appropriate to the accident or malfunction, including any appropriate measure referred to in condition 14.3.2, and shall:

14.5.1 implement the communication plan referred to in condition 14.6 as it relates to accidents and malfunctions;

14.5.2 notify, as soon as possible and pursuant to the communication plan referred to in condition 14.6, the Mississaugas of the Credit First Nation, the Six Nations of the Grand River and potentially affected parties of the accident or malfunction, and notify the Agency in writing no later than 24 hours following the accident or malfunction. When notifying the Mississaugas of the Credit First Nation, the Six Nations of the Grand River, potentially affected parties and the Agency, the Proponent shall specify:

14.5.2.1 the date when and location where the accident or malfunction occurred;

14.5.2.2 a summary description of the accident or malfunction; and

14.5.2.3 a list of any substance potentially released into the environment as a result of the accident or malfunction.

14.5.3 notify the Town of Milton, Halton Region and other relevant authorities with responsibilities related to emergency response (including environmental emergencies) in accordance with applicable legislated and regulatory requirements and existing protocols;

14.5.4 submit a written report to the Agency no later than 30 days after the day on which the accident or malfunction occurred. The written report shall include:

14.5.4.1 a detailed description of the accident or malfunction and of its adverse environmental effects;

14.5.4.2 a description of the measures that were taken by the Proponent to mitigate the adverse environmental effects caused by the accident or malfunction;

14.5.4.3 any view from the Mississaugas of the Credit First Nation, the Six Nations of the Grand River and potentially affected parties and advice from relevant authorities received with respect to the accident or malfunction, its adverse environmental effects and the measures taken by the Proponent to mitigate these adverse environmental effects;

14.5.4.4 a description of any residual adverse environmental effect and any modified or additional measure required by the Proponent to mitigate residual adverse environmental effects; and

14.5.4.5 details concerning the implementation of the accident or malfunction response plan referred to in condition 14.3.

14.5.5 submit a written report to the Agency no later than 90 days after the day on which the accident or malfunction occurred that includes a description of the changes made to avoid a subsequent occurrence of the accident or malfunction and of the modified or additional measure(s) implemented by the Proponent to mitigate and monitor residual

adverse environmental effects and to carry out any required progressive reclamation, taking into account the information submitted in the written report pursuant to condition 14.5.4. The report shall include all additional views from the Mississaugas of the Credit First Nation, the Six Nations of the Grand River and potentially affected parties and advice from relevant authorities received by the Proponent since the views and advice referred to in condition 14.5.4.3 were received by the Proponent.

14.6 The Proponent shall develop, in consultation with the Mississaugas of the Credit First Nation, the Six Nations of the Grand River and potentially affected parties, a communication plan for accidents and malfunctions occurring in relation to the Designated Project, including accidents and malfunctions occurring within the Designated Project Development Area which may affect area(s) outside of the Designated Project Development Area. The Proponent shall develop the communication plan prior to construction and shall implement and keep it up-to-date during all phases of the Designated Project. The plan shall include:

14.6.1 the types of accidents and malfunctions requiring the Proponent to notify the parties referred to in condition 14.6;

14.6.2 the manner by which the parties referred to in condition 14.6 shall be notified by the Proponent of an accident or malfunction and of any opportunity to assist in the response to the accident or malfunction; and

14.6.3 the contact information of the representatives of the Proponent that the parties referred to in condition 14.6 may contact and of the representatives of the respective parties referred to in condition 14.6 to which the Proponent shall provide notification.

15 Schedules

15.1 The Proponent shall submit to the Agency a schedule for all conditions set out in this Decision Statement no later than 60 days prior to the start of construction. This schedule shall detail all activities planned to fulfill each condition set out in this Decision Statement and the commencement and estimated completion month(s) and year(s) for each of these activities.

15.2 The Proponent shall submit to the Agency a schedule outlining all activities required to carry out all phases of the Designated Project no later than 60 days prior to the start of construction. The schedule shall indicate the commencement and estimated completion month(s) and year(s) and duration of each of these activities, including the commencement and estimated completion of each construction phase, the commencement of the operation phase and the commencement of the operation phase at which the Designated Project operates at its full operational capacity.

15.3 The Proponent shall submit to the Agency in writing an update to schedules referred to in conditions 15.1 and 15.2 every year no later than March 31.

15.4 The Proponent shall provide the Mississaugas of the Credit First Nation, the Six Nations of the Grand River, the Huron-Wendat Nation, potentially affected parties, the Town of Milton, Halton Region and Conservation Halton with the schedules referred to in conditions 15.1 and 15.2 and any update to the initial schedule made pursuant to condition 15.3 at the same time the Proponent provides these documents to the Agency.

16 Record keeping

16.1 The Proponent shall maintain all records relevant to the implementation of the conditions set out in this Decision Statement. The Proponent shall provide the aforementioned records to the Agency upon demand within a timeframe specified by the Agency.

16.2 The Proponent shall retain all records referred to in condition 16.1 at a facility in Canada and shall provide the address of the facility to the Agency. The Proponent shall notify the Agency at least 30 days prior to any change to the physical location of the facility where the records are retained, and shall provide to the Agency the address of the new location.

16.3 The Proponent shall notify the Agency of any change to the contact information of the Proponent included in the Decision Statement.

Issuance

This Decision Statement is issued in Ottawa, Ontario by:

<Original signed by> January 21, 2021

_____ Date _____

The Honourable Jonathan Wilkinson
Minister of the Environment

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