

Hydrologic and Hydraulics Report

Taylor Run Stream Stabilization

Design

City of Alexandria, Virginia

Client Project Reference: Task Order #07
Description: 60% Design
AECOM Project Number: 60742359

May 2026

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1 Executive Summary

The City of Alexandria (City) has tasked AECOM to use “minimal stabilization” approach to provide stream stabilization in four areas on Taylor Run. The objective of the Hydrology and Hydraulics (H&H) tasks were to update the previously completed one-dimensional HEC-RAS model to model existing hydraulics using the updated topographic survey data and to develop a proposed conditions model concurrently with the 60% design submission. The existing and proposed conditions models were run for the 10-, 50-, and 100 -year, 24-hour storm events.

The Hydrologic Engineering Center – River Analysis System (HEC-RAS) existing and proposed conditions models were run for the 10-, 50-, and 100 -year, 24-hour storm events. Comparison between existing and proposed conditions results in an average reduction in velocity across the project reach for all storm events. A water surface elevation rise is noted at all storm events, with an average rise of 0.7 feet across the project reach during the 100-year storm. This rise is located entirely on City of Alexandria property and does not affect adjoining properties. Hydraulic conditions downstream of the project area remain the same in the existing and proposed conditions.

2 Introduction

The City of Alexandria (City) has tasked AECOM to use “minimal stabilization” approach to provide stream stabilization in four areas on Taylor Run. The objective of the Hydrology and Hydraulics (H&H) tasks were to update the previously completed one-dimensional HEC-RAS model to model existing hydraulics using the updated topographic survey data and to develop a proposed conditions model concurrently with the 60% design submission. The existing and proposed conditions models were run for the 2-, 10-, and 100-, -year, 24-hour storm events.

2.1 Project Location

Taylor Run begins at a 72-inch outfall to the east of Chinguapin Park Recreation Center and Aquatics Facility in the City. The stream runs parallel to Kings Street for approximately 700 linear feet before turning south and flowing onto the First Baptist Church of Alexandria property. The extent of the study limits is shown in Figure 1.

Taylor Run is within the Mid Atlantic Region within the Middle Potomac-Anacostia-Occoquan (HUC8:02070010), Cameron Run-Potomac River (HUC10:0207001003), and Cameron Run (HUC12:020700100302) watersheds. The Taylor Run watershed consists of approximately 333 acres of densely developed urban land. The total watershed imperviousness is estimated to be approximately 38%.

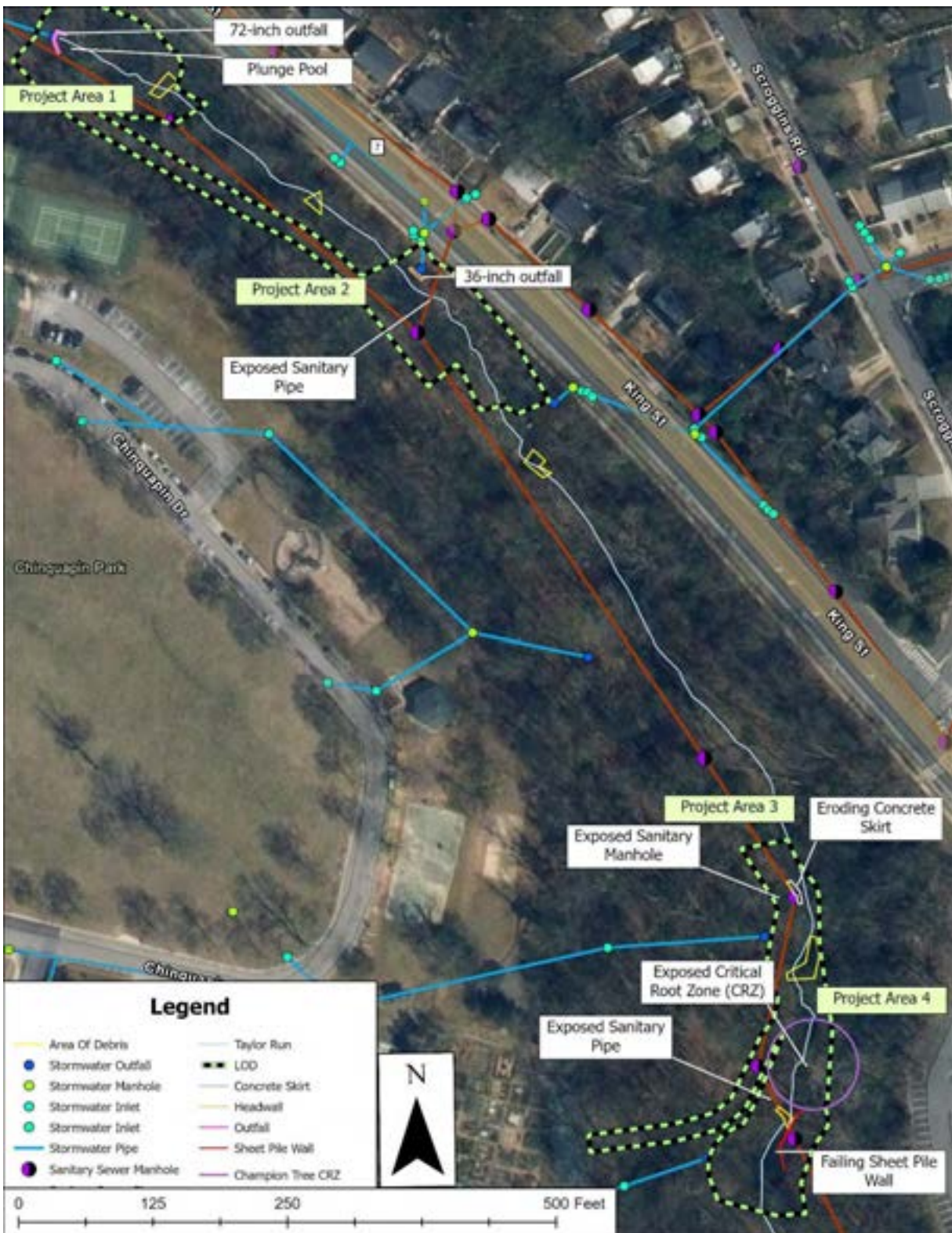


Figure 1: Taylor Run Infrastructure Stabilization Project Location Map

2.2 FEMA Effective Data

Taylor Run is a regulatory Zone AE stream and was originally studied as part of the Cameron Run watershed analysis (USACE 2007). The most recent Federal Emergency Management Agency (FEMA) Flood Insurance Study (FIS) was published January 11, 2024. The hydrologic assessment was completed using HEC-HM 3.1.1 and the hydraulic analysis was completed using HEC-RAS 3.1.1. Flood hazards were re-delineated in 2020 as part of the revised 2024 FIS. The effective Flood Insurance Risk Map with the Taylor Run floodplain is shown in Figure 2.

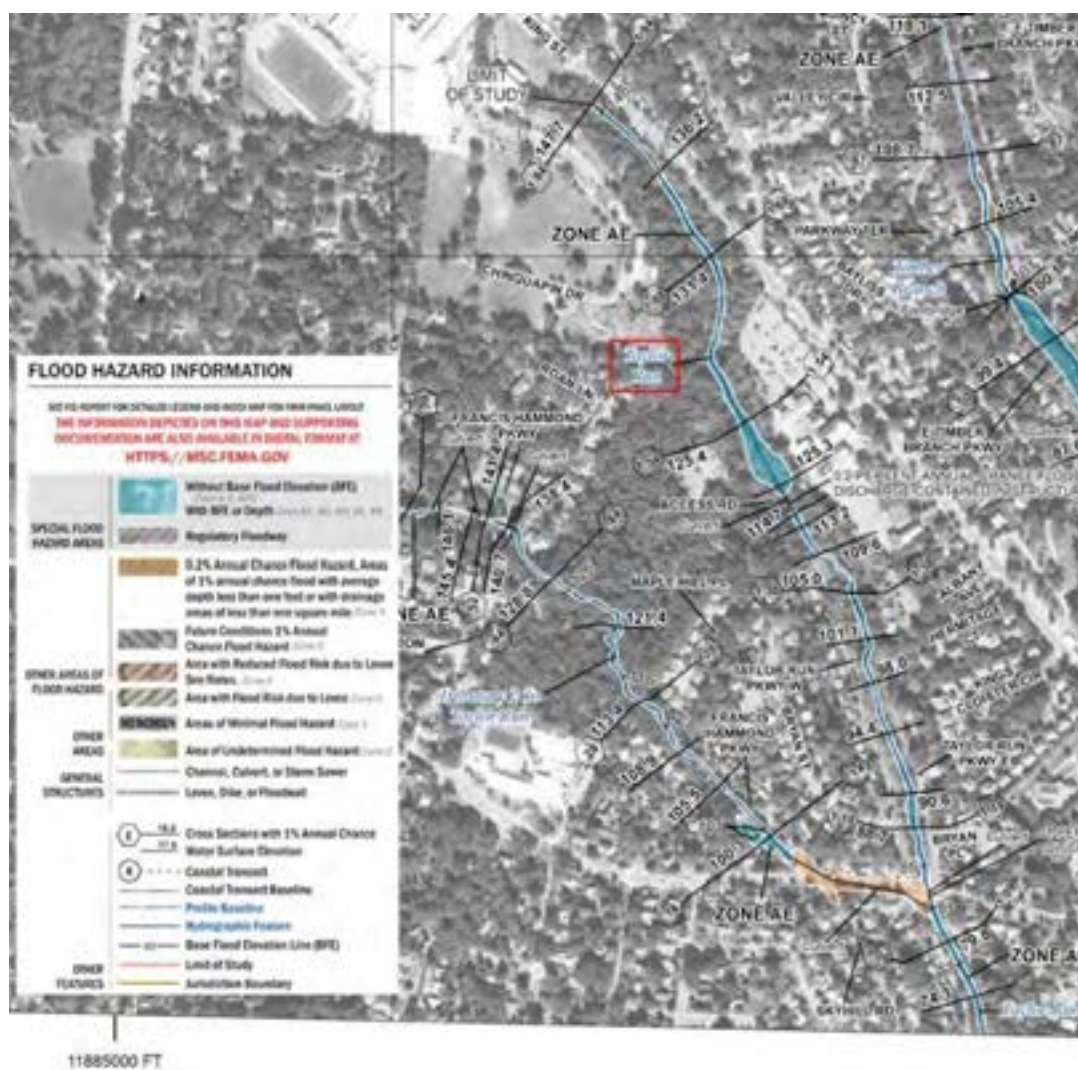


Figure 2: Taylor Run Effective FIRM

3 Hydrology

AECOM was originally scoped to perform a hydrologic assessment of Taylor Run using a runoff model such as HEC-HMS or equivalent. On September 23, 2025, during a bi-weekly meeting, AECOM and the City agreed that the FEMA effective flows at Janneys Lane would be utilized.

Flows to be applied are provided in Table 1.

Table 1: Existing Conditions Peak Discharge at Outlet Point of Project Area

Scenario	Peak Discharge (cfs)
10-year	343
50-year	538
100-year	672

4 Hydraulics

A hydraulic analysis was conducted using HEC River Analysis System (RAS) version 6.5 to evaluate changes in water surface elevations, lateral floodplain boundaries, and shear stresses between existing and proposed conditions for the 2-, 10-, and 100-year storms. One-dimensional steady-state models were developed to compare water surface elevations along each stream channel.

Taylor Run has a FEMA designated Zone AE floodplain, necessitating that proposed solutions do not result in adverse impacts, such as increases downstream water surface elevations.

4.1 Existing Conditions

A previously completed one-dimensional Hydrologic Engineering Center River Analysis System (HEC-RAS) model from Task Order No 22 was reviewed and updated with recent survey data. The existing conditions hydraulic analysis was performed to analyze changes in water surface elevations and shear stresses for the 2-, 10-, and 100-year storms using HEC River Analysis System (RAS) version 6.5. One-dimensional steady-state models were developed. The existing conditions model was run with using a subcritical flow regime.

The HEC-RAS model includes areas outside of our Project. Stations 2304-1805 encompass the upstream portion of study (Project Area 1 and Project Area 2) and stations 1209-925 encompass the downstream portion of our study (Project Area 3 and Project Area 4). Observed shear stresses were taken into consideration for substrate design, but limitations of the model were also factored in. Detailed outputs from the existing conditions HEC-RAS simulation for the 2-, 10-, and 100-year storms can be found in Appendix B.

4.2 Proposed Conditions

The terrain for the proposed conditions hydraulic model was developed using a topographic surface which combined the proposed design surface with the 2019 survey, 2025 survey, and available LiDAR data. Similar Manning's n values were used for the proposed conditions model, with 0.1 applied for overbank areas, 0.04 applied for the existing channel, and 0.051 applied for placed riprap within the channel. Computational parameters and cross section locations were selected similarly to existing

conditions parameters, with additional cross sections being placed at areas of instability or abrupt grade change. The proposed conditions model was run using a mixed flow regime.

4.3 Results

The comparison of water surface elevations and shear stresses for existing and proposed conditions informed design parameters and provided a general understanding of the Project impact. Comparison between existing and proposed conditions results in an average reduction in velocity across the project reach for all storm events. Localized increases can be noted in the proposed boulder cascades. A water surface elevation rise is noted at all storm events, with an average rise of 0.7 feet across the project reach during the 100-year storm. A maximum rise of 2.85 feet was noted at proposed cross section 1073, located directly upstream of design area 4, due to backwater conditions. This rise is located entirely on City of Alexandria property and does not affect adjoining properties. Hydraulic conditions downstream of the project area remain the same in the existing and proposed conditions.

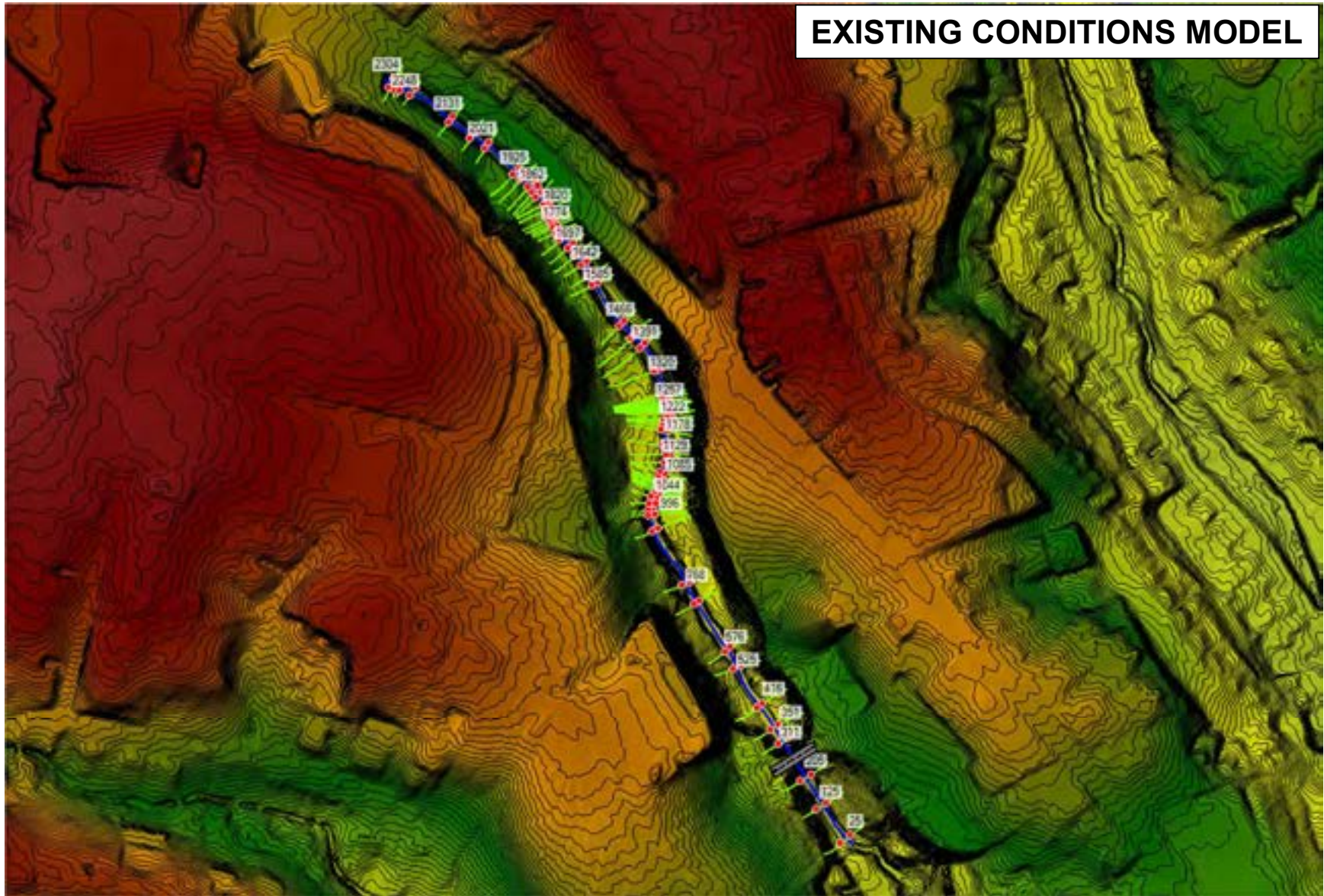
5 References

City of Alexandria, Virginia. Open Data. Accessed at: City of Alexandria Open Data (<https://www.alexandriava.gov/gis/open-data>).

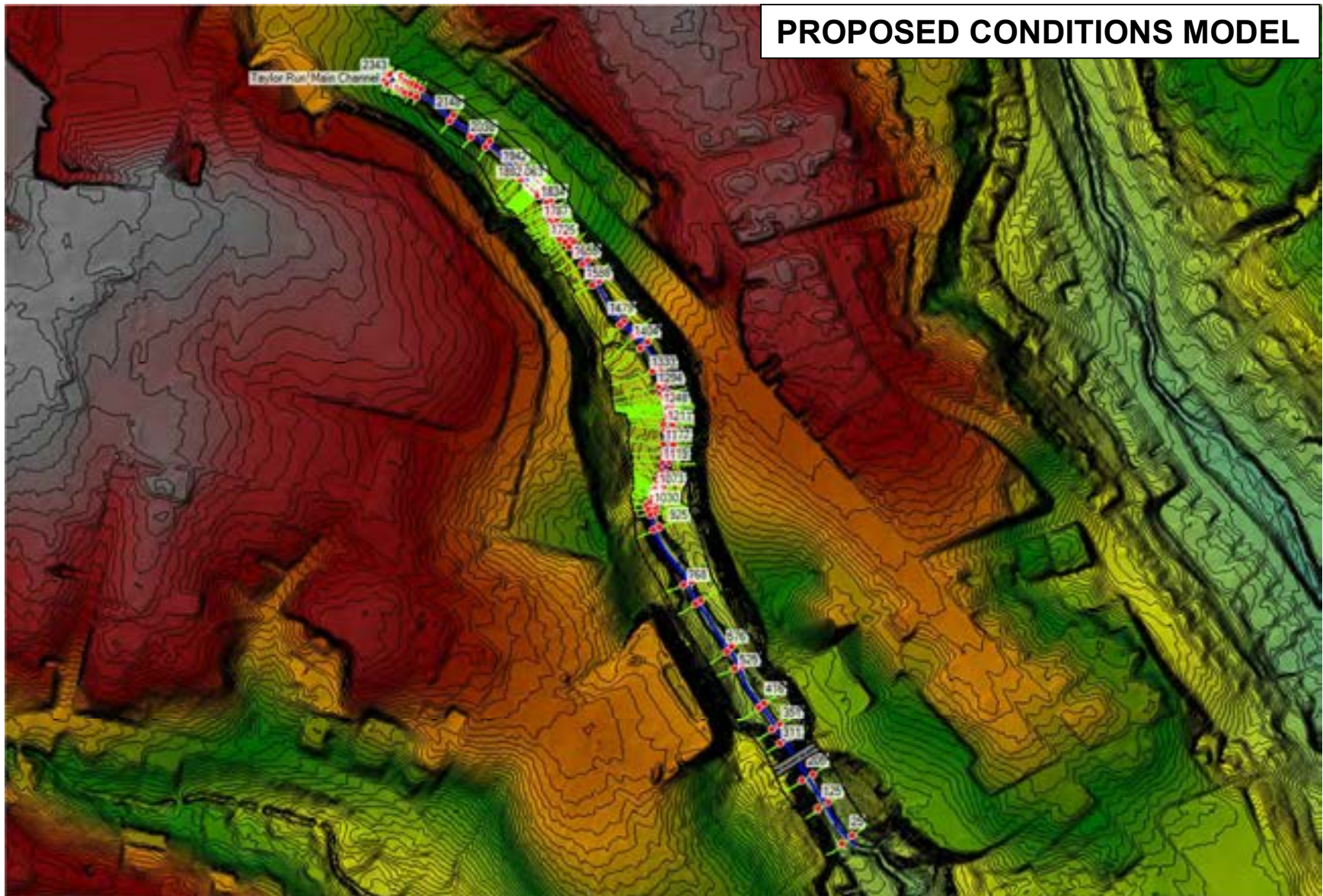
Guide for Selecting Manning's Roughness Coefficients for Natural Channels and Flood Plains, United States Geological Survey Water-Supply Paper 2339. Accessed at: <https://pubs.usgs.gov/wsp/2339/report.pdf>

Appendix A: HEC-RAS Results

EXISTING CONDITIONS MODEL

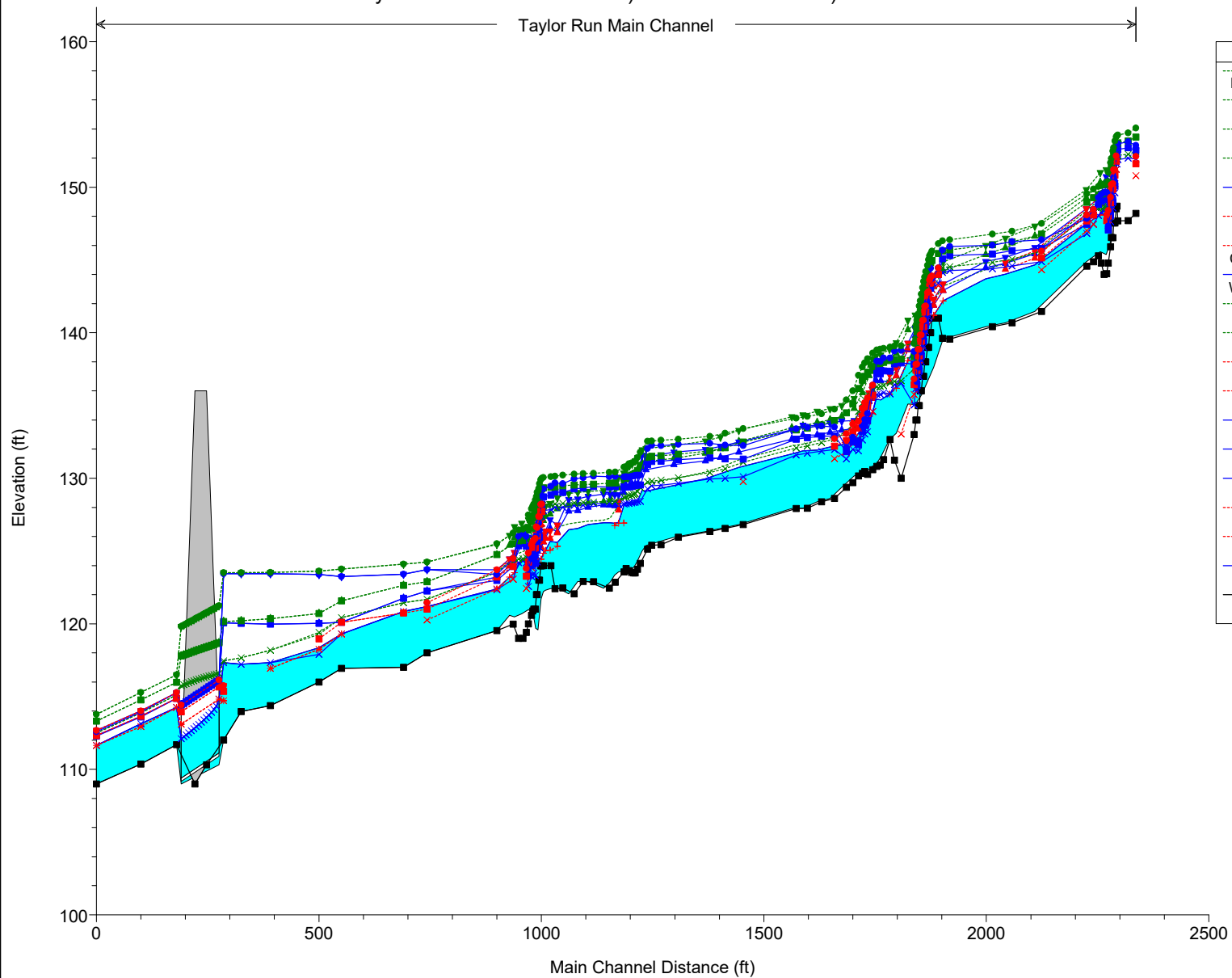


PROPOSED CONDITIONS MODEL



TaylorRun2025 Plan: 1) EX 5/12/2026 2) 60% PR 5/12/2026

Taylor Run Main Channel



Reach	River Sta		Profile	Plan	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Crit W.S. (ft)	E.G. Elev (ft)	E.G. Slope (ft/ft)	Vel Chnl (ft/s)	Flow Area (sq ft)	Top Width (ft)	Froude #	Chl	Shear Total (lb/sq ft)	Shear Chan (lb/sq ft)
Main Channel		2343	10 YR	60% PR	343	148.2	151.93	150.79	152.44	0.00771	5.79	63.18	20.59		0.55	1.28	1.64
Main Channel		2343	50 YR	60% PR	538	148.2	152.54	151.61	153.44	0.010948	7.69	76.1	21.78		0.67	2.04	2.74
Main Channel		2343	100 YR	60% PR	672	148.2	152.87	152.11	154.06	0.013103	8.86	83.38	22.37		0.74	2.58	3.54
Main Channel	2333.581	10+27.24	10 YR	60% PR	343	147.7	151.99		152.27	0.00411	4.24	83.45	25.15		0.4	0.73	0.88
Main Channel	2333.581	10+27.24	50 YR	60% PR	538	147.7	152.71		153.18	0.005403	5.51	101.58	25.54		0.47	1.11	1.39
Main Channel	2333.581	10+27.24	100 YR	60% PR	672	147.7	153.13		153.73	0.006127	6.25	112.32	25.77		0.51	1.35	1.74
Main Channel		2331.964	10 YR	60% PR	343	147.69	151.9		152.17	0.004421	4.24	83.76	26.61		0.41	0.76	0.89
Main Channel		2331.964	50 YR	60% PR	538	147.69	152.58		153.05	0.00578	5.5	102.17	27.03		0.49	1.16	1.41
Main Channel		2331.964	100 YR	60% PR	672	147.69	152.99		153.58	0.006532	6.23	113.1	27.23		0.52	1.41	1.76
Main Channel		2316.598	10 YR	60% PR	343	148.7	151.59		152.13	0.016757	5.9	58.59	29.98		0.74	1.89	2.05
Main Channel		2316.598	50 YR	60% PR	538	148.7	152.26		153	0.015644	6.92	78.69	30.27		0.75	2.27	2.56
Main Channel		2316.598	100 YR	60% PR	672	148.7	152.67		153.54	0.015144	7.49	91.05	30.44		0.76	2.48	2.86
Main Channel		2313.904	10 YR	60% PR	343	148.52	151.22	151.22	152.06	0.033136	7.33	47.11	29.29		1.01	3.18	3.36
Main Channel		2313.904	50 YR	60% PR	538	148.52	151.8	151.8	152.92	0.029991	8.52	64.05	29.69		1.01	3.76	4.11
Main Channel		2313.904	100 YR	60% PR	672	148.52	152.15	152.15	153.45	0.028552	9.17	74.57	29.85		1.01	4.07	4.53
Main Channel		2313.068	10 YR	60% PR	343	147.55	149.62	150.25	151.77	0.14551	11.77	29.3	28.04		1.98	9.35	9.9
Main Channel		2313.068	50 YR	60% PR	538	147.55	150.09	150.83	152.65	0.108746	12.88	43	29.89		1.81	9.5	10.53
Main Channel		2313.068	100 YR	60% PR	672	147.55	150.38	151.19	153.18	0.095392	13.51	51.72	30.07		1.75	9.83	10.95
Main Channel		2309.556	10 YR	60% PR	343	147.55	149.93	150.25	151.22	0.061981	9.12	38.69	30.39		1.35	4.8	5.45
Main Channel		2309.556	50 YR	60% PR	538	147.55	150.38	150.83	152.16	0.060406	10.79	52.28	30.64		1.39	6.13	6.97
Main Channel		2309.556	100 YR	60% PR	672	147.55	150.67	151.2	152.72	0.057625	11.6	61.2	30.76		1.39	6.72	7.68
Main Channel		2307.988	10 YR	60% PR	343	146.53	148.57	149.26	150.96	0.172113	12.41	27.68	26.79		2.13	10.89	11.18
Main Channel		2307.988	50 YR	60% PR	538	146.53	149.01	149.87	151.92	0.131733	13.7	39.73	28		1.98	11.28	12.13
Main Channel		2307.988	100 YR	60% PR	672	146.53	149.29	150.24	152.49	0.115417	14.38	47.68	28.88		1.9	11.4	12.62
Main Channel		2304.475	10 YR	60% PR	343	146.55	148.84	149.24	150.3	0.082453	9.7	35.73	30.14		1.52	5.99	6.43
Main Channel		2304.475	50 YR	60% PR	538	146.55	149.21	149.83	151.33	0.085269	11.72	46.97	30.44		1.62	7.93	8.6
Main Channel		2304.475	100 YR	60% PR	672	146.55	149.44	150.16	151.96	0.085015	12.78	54.07	30.61		1.65	8.96	9.8
Main Channel	2304	10+27.24	10 YR	EX	343	146.45	149.3	149.3	150.18	0.019567	7.52	46.63	29.3		0.99	1.88	2.13
Main Channel	2304	10+27.24	50 YR	EX	538	146.45	149.92	149.92	151.08	0.017662	8.71	65.16	30.99		0.99	2.22	2.58
Main Channel	2304	10+27.24	100 YR	EX	672	146.45	150.44	150.31	151.64	0.014111	8.87	81.75	32.6		0.91	2.1	2.51
Main Channel		2292.245	10 YR	60% PR	343	145.91	147.62	148.32	150	0.141409	12.38	28.45	27.65		1.98	8.98	10.61
Main Channel		2292.245	50 YR	60% PR	538	145.91	148.06	148.93	151.04	0.1197	14	41.47	30.54		1.92	9.93	12.23
Main Channel		2292.245	100 YR	60% PR	672	145.91	148.32	149.31	151.68	0.11214	14.93	49.44	30.75		1.9	10.89	13.26
Main Channel		2292	10 YR	EX	343	145.38	149.04		149.36	0.003691	4.55	77.65	27.91		0.46	0.59	0.68
Main Channel		2292	50 YR	EX	538	145.38	150.08		150.51	0.00332	5.27	107.81	29.98		0.46	0.67	0.82
Main Channel		2292	100 YR	EX	672	145.38	150.72		151.21	0.003168	5.67	127.2	31.46		0.46	0.72	0.91
Main Channel		2290	10 YR	60% PR	343	144.79	148.36	147.39	148.72	0.007254	4.89	74.81	30.2		0.52	1.04	1.25
Main Channel		2290	50 YR	60% PR	538	144.79	147.07	148.03	150.35	0.147293	14.56	37.39	26.43		2.09	12.63	13.66
Main Channel		2290	100 YR	60% PR	672	144.79	147.32	148.4	151.03	0.135106	15.49	44.31	27.47		2.06	13.1	14.67
Main Channel		2288	10 YR	60% PR	343	144.05	148.39		148.68	0.004904	4.4	84.27	30.17		0.43	0.78	0.97
Main Channel		2288	50 YR	60% PR	538	144.05	149.17	147.7	149.62	0.005714	5.49	108.01	30.57		0.48	1.12	1.4
Main Channel		2288	100 YR	60% PR	672	144.05	149.64	148.1	150.19	0.00609	6.1	122.46	30.81		0.51	1.31	1.67
Main Channel		2286.217	10 YR	60% PR	343	144	148.38		148.65	0.004206	4.2	87.46	29.58		0.4	0.72	0.87
Main Channel		2286.217	50 YR	60% PR	538	144	149.16		149.58	0.00511	5.31	110.6	30		0.46	1.05	1.3
Main Channel		2286.217	100 YR	60% PR	672	144	149.62		150.15	0.005548	5.94	124.7	30.28		0.49	1.25	1.57
Main Channel		2280	10 YR	60% PR	343	144.78	148.28		148.61	0.006304	4.64	77.32	29.72		0.48	0.96	1.12
Main Channel		2280	50 YR	60% PR	538	144.78	149.04		149.54	0.007006	5.71	100.09	30.17		0.53	1.32	1.57
Main Channel		2280	100 YR	60% PR	672	144.78	149.5		150.1	0.007296	6.31	114.07	30.45		0.55	1.52	1.84
Main Channel		2279	10 YR	EX	343	145.56	148.09	148.09	149.19	0.019094	8.48	42.87	21.39		0.99	2.24	2.66
Main Channel		2279	50 YR	EX	538	145.56	148.87	148.87	150.32	0.017145	9.78	60.35	23.26		0.99	2.55	3.21
Main Channel		2279	100 YR	EX	672	145.56	149.36	149.36	151.01	0.01612	10.47	71.96	24.41		0.98	2.7	3.5
Main Channel		2275	10 YR	60% PR	343	145.28	148.06		148.55	0.008507	5.63	61.82	30.04		0.67	1.02	1.12
Main Channel		2275	50 YR	60% PR	538	145.28	148.81		149.47	0.007721	6.53	85	30.93		0.67	1.21	1.37
Main Channel		2275	100 YR	60% PR	672	145.28	149.28		150.04	0.007348	7.03	99.58	31.31		0.67	1.31	1.51
Main Channel		2264.664	10 YR	60% PR	343	144.88	147.46	147.46	148.36	0.019172	7.68	47.45	28.57		0.99	1.91	2.18
Main Channel		2264.664	50 YR	60% PR	538	144.88	148.09	148.09	149.29	0.01751	8.91	65.75	29.78		1	2.28	2.67
Main Channel		2264.664	100 YR	60% PR	672	144.88	148.47	148.47	149.86	0.016674	9.58	77.43	30.51		1	2.47	2.94
Main Channel		2249.758	10 YR	60% PR	343	144.58	146.82	147.02	148	0.027688	8.74	40.54	25.84		1.18	2.61	2.91
Main Channel		2249.758	50 YR	60% PR	538	144.58	147.46	147.68	148.96	0.023334	9.91	57.64	27.76		1.14	2.88	3.36

Main Channel			2249.758	100 YR	60% PR	672	144.58	147.85	148.1	149.55	0.021547	10.56	68.76	28.94	1.12	3.03	3.62
Main Channel			2248	10 YR	EX	343	144.88	147.49	147.49	148.38	0.020392	7.65	48.38	30.85	0.99	1.93	2.34
Main Channel			2248	50 YR	EX	538	144.88	148.14	148.14	149.29	0.017963	8.75	69.76	34.94	0.97	2.16	2.78
Main Channel			2248	100 YR	EX	672	144.88	148.52	148.52	149.83	0.017093	9.38	83.45	36.59	0.97	2.34	3.05
Main Channel	2148	11+94.00		10 YR	60% PR	343	141.46	144.88	144.33	145.6	0.009309	6.82	51.48	20.37	0.72	1.34	1.53
Main Channel	2148	11+94.00		50 YR	60% PR	538	141.46	145.81	145.13	146.78	0.008609	7.96	71.42	22.51	0.73	1.53	1.88
Main Channel	2148	11+94.00		100 YR	60% PR	672	141.46	146.38	145.61	147.5	0.00823	8.56	84.7	23.8	0.73	1.62	2.08
Main Channel	2131	11+94.00		10 YR	EX	343	141.46	144.67		145.51	0.011668	7.41	47.32	19.96	0.81	1.59	1.83
Main Channel	2131	11+94.00		50 YR	EX	538	141.46	145.42	145.13	146.64	0.012131	8.94	62.88	21.59	0.86	1.99	2.45
Main Channel	2131	11+94.00		100 YR	EX	672	141.46	145.86	145.62	147.32	0.01247	9.83	72.51	22.62	0.89	2.23	2.84
Main Channel	2082	12+60.00		10 YR	60% PR	343	140.68	144.59		145.05	0.005504	5.46	63.66	23.05	0.56	0.86	0.96
Main Channel	2082	12+60.00		50 YR	60% PR	538	140.68	145.63		146.25	0.004953	6.32	89.09	25.61	0.55	0.96	1.16
Main Channel	2082	12+60.00		100 YR	60% PR	672	140.68	146.27		146.98	0.004727	6.8	105.84	27.78	0.55	1	1.28
Main Channel	2065	12+60.00		10 YR	EX	343	140.68	144.02		144.77	0.010168	6.95	50.89	21.62	0.75	1.37	1.6
Main Channel	2065	12+60.00		50 YR	EX	538	140.68	144.76	144.37	145.84	0.010781	8.43	67.51	23.44	0.81	1.75	2.17
Main Channel	2065	12+60.00		100 YR	EX	672	140.68	145.18	144.82	146.49	0.011253	9.31	77.57	24.48	0.84	2	2.55
Main Channel	2038	13+04.00		10 YR	60% PR	343	140.42	144.4		144.84	0.003973	5.43	71.46	24.6	0.5	0.66	0.88
Main Channel	2038	13+04.00		50 YR	60% PR	538	140.42	145.41		146.05	0.00419	6.56	98.1	28.31	0.54	0.83	1.18
Main Channel	2038	13+04.00		100 YR	60% PR	672	140.42	146.01		146.77	0.00426	7.18	116.02	31	0.55	0.91	1.35
Main Channel	2021	13+04.00		10 YR	EX	343	140.42	143.71		144.34	0.007778	6.46	55.22	22.49	0.67	1.11	1.35
Main Channel	2021	13+04.00		50 YR	EX	538	140.42	144.46		145.38	0.008387	7.83	73.04	24.79	0.72	1.42	1.83
Main Channel	2021	13+04.00		100 YR	EX	672	140.42	144.9		145.99	0.008706	8.61	84.25	26.28	0.75	1.59	2.13
Main Channel	1942	14+00.00		10 YR	60% PR	343	139.56	144.27		144.53	0.001939	4.19	96.85	29	0.36	0.37	0.5
Main Channel	1942	14+00.00		50 YR	60% PR	538	139.56	145.29		145.69	0.002235	5.2	133.66	39.83	0.4	0.43	0.71
Main Channel	1942	14+00.00		100 YR	60% PR	672	139.56	145.93		146.39	0.0023	5.69	160.31	44.99	0.41	0.48	0.82
Main Channel			1925.537	10 YR	60% PR	343	139.62	144.14		144.48	0.004092	4.73	82.1	24.21	0.41	0.74	1.03
Main Channel			1925.537	50 YR	60% PR	538	139.62	145.1		145.62	0.004957	5.97	107.62	30.17	0.46	0.95	1.54
Main Channel			1925.537	100 YR	60% PR	672	139.62	145.68		146.32	0.005292	6.62	126.66	35.8	0.49	1.01	1.83
Main Channel	1925	14+00.00		10 YR	EX	343	139.56	142.2	142.2	143.2	0.018696	8.06	43.42	22.96	0.99	2.08	2.33
Main Channel	1925	14+00.00		50 YR	EX	538	139.56	142.91	142.91	144.23	0.016779	9.3	60.37	24.83	0.98	2.37	2.81
Main Channel	1925	14+00.00		100 YR	EX	672	139.56	143.35	143.35	144.85	0.015709	9.94	71.7	26.06	0.98	2.49	3.06
Main Channel			1916.562	10 YR	60% PR	343	141	143.41	143.24	144.34	0.024226	7.8	46.19	21.47	0.89	2.88	3.41
Main Channel			1916.562	50 YR	60% PR	538	141	144.01	144.01	145.44	0.027867	9.71	59.41	22.7	0.99	3.95	4.91
Main Channel			1916.562	100 YR	60% PR	672	141	144.45	144.45	146.12	0.027242	10.52	69.64	23.95	1	4.26	5.5
Main Channel			1904	10 YR	EX	343	137.65	141.2	141.2	142.17	0.025181	7.9	43.51	23.12	1	2.71	2.82
Main Channel			1904	50 YR	EX	538	137.65	141.89	141.89	143.18	0.022414	9.13	60.03	24.87	0.99	3.06	3.4
Main Channel			1904	100 YR	EX	672	137.65	142.29	142.29	143.79	0.021586	9.86	70.31	25.92	1	3.29	3.78
Main Channel			1901.692	10 YR	60% PR	343	141	142.97	142.97	143.93	0.032122	7.9	44.71	24.42	0.99	3.33	3.73
Main Channel			1901.692	50 YR	60% PR	538	141	143.44	143.65	144.96	0.038302	9.95	56.35	25.24	1.13	4.76	5.51
Main Channel			1901.692	100 YR	60% PR	672	141	143.71	143.9	145.61	0.041519	11.13	63.37	25.72	1.19	5.63	6.65
Main Channel			1899.055	10 YR	60% PR	343	140	143.08	142.76	143.78	0.018913	6.76	52.89	25.61	0.79	2.25	2.59
Main Channel			1899.055	50 YR	60% PR	538	140	143.06	143.44	144.82	0.048022	10.71	52.35	25.57	1.26	5.67	6.51
Main Channel			1899.055	100 YR	60% PR	672	140	144.43	143.81	145.41	0.014547	8.1	96.93	43.45	0.75	1.87	3.18
Main Channel			1896.671	10 YR	60% PR	343	140	142.76	142.76	143.7	0.030948	7.83	45.65	26.11	0.99	3.18	3.65
Main Channel			1896.671	50 YR	60% PR	538	140	143.13	143.4	144.73	0.041898	10.24	55.47	26.95	1.19	5	5.88
Main Channel			1896.671	100 YR	60% PR	672	140	143.62	143.62	145.29	0.03385	10.47	69.26	29.64	1.1	4.54	5.77
Main Channel			1894.245	10 YR	60% PR	343	139	141.06	141.75	143.42	0.148019	12.31	27.87	23.67	2	10.5	10.64
Main Channel			1894.245	50 YR	60% PR	538	139	141.55	142.41	144.44	0.114997	13.65	39.67	24.8	1.87	10.87	11.66
Main Channel			1894.245	100 YR	60% PR	672	139	141.88	142.82	145.01	0.098055	14.21	47.94	25.55	1.78	10.75	11.9
Main Channel			1891.769	10 YR	60% PR	343	139	141.29	141.76	142.95	0.079379	10.36	33.81	25.41	1.51	6.35	7.02
Main Channel			1891.769	50 YR	60% PR	538	139	141.77	142.42	144.03	0.074134	12.11	46.28	26.45	1.53	7.65	8.73
Main Channel			1891.769	100 YR	60% PR	672	139	142.1	142.75	144.63	0.067843	12.86	55.07	27.15	1.51	8.02	9.34
Main Channel	1888.732	14+54.00		10 YR	60% PR	343	138	140.05	140.76	142.45	0.145919	12.43	27.7	23.67	1.99	10.31	10.75
Main Channel	1888.732	14+54.00		50 YR	60% PR	538	138	140.52	141.43	143.56	0.119427	14	39.09	24.84	1.9	11.14	12.22
Main Channel	1888.732	14+54.00		100 YR	60% PR	672	138	140.83	141.84	144.19	0.106696	14.77	46.71	25.59	1.85	11.42	12.88
Main Channel			1886.455	10 YR	60% PR	343	138	140.25	140.74	141.99	0.092798	10.59	32.5	24.64	1.6	7.33	7.55
Main Channel			1886.455	50 YR	60% PR	538	138	140.66	141.41	143.16	0.093559	12.7	42.91	25.67	1.68	9.22	9.94
Main Channel			1886.455	100 YR	60% PR	672	138	140.94	141.79	143.83	0.089026	13.66	50.2	26.37	1.68	9.89	10.95
Main Channel			1884.334	10 YR	60% PR	343	137	139	139.76	141.63	0.168162	13.02	26.41	23.16	2.13	11.62	11.94
Main Channel			1884.334	50 YR	60% PR	538	137	139.45	140.43	142.83	0.140707	14.76	36.82	23.79	2.05	12.9	13.79

Main Channel				1884.334	100 YR	60% PR	672	137	139.73	140.86	143.52	0.126903	15.63	43.68	24.2	2	13.38	14.65	
Main Channel				1882.063	10 YR	60% PR	343	137	139.19	139.75	141.12	0.103657	11.17	30.86	24.03	1.71	8	8.41	
Main Channel				1882.063	50 YR	60% PR	538	137	139.59	140.41	142.37	0.104515	13.39	40.72	24.62	1.79	10.19	11.06	
Main Channel				1882.063	100 YR	60% PR	672	137	139.86	140.83	143.1	0.101022	14.48	47.31	25.01	1.81	11.13	12.33	
Main Channel				1878.929	10 YR	60% PR	343	136	138	138.75	140.64	0.172328	13.05	26.29	23.03	2.15	11.88	12.06	
Main Channel				1878.929	50 YR	60% PR	538	136	138.42	139.43	141.91	0.150163	15	36.01	23.42	2.11	13.61	14.35	
Main Channel				1878.929	100 YR	60% PR	672	136	138.68	139.85	142.66	0.138934	16.01	42.27	23.77	2.08	14.38	15.52	
Main Channel				1877	10 YR	EX	343	135.75	139.56	139.56	140.47	0.07327	7.66	44.84	25.36	1	7.47	7.66	
Main Channel				1877	50 YR	EX	538	135.75	140.21	140.21	141.41	0.064033	8.79	62.03	27.16	0.99	8.34	9.11	
Main Channel				1877	100 YR	EX	672	135.75	140.59	140.59	141.98	0.061767	9.49	72.45	28.25	0.99	8.98	10.13	
Main Channel				1876.626	10 YR	60% PR	343	136	138.18	138.76	140.14	0.104599	11.21	30.61	23.06	1.71	8.25	8.48	
Main Channel				1876.626	50 YR	60% PR	538	136	138.59	139.43	141.42	0.107038	13.52	40.02	23.88	1.81	10.48	11.28	
Main Channel				1876.626	100 YR	60% PR	672	136	138.84	139.85	142.19	0.105462	14.7	46.2	24.46	1.84	11.53	12.75	
Main Channel				1874.49	10 YR	60% PR	343	135	136.97	137.75	139.76	0.189521	13.42	25.57	22.98	2.24	12.72	12.88	
Main Channel				1874.49	50 YR	60% PR	538	135	137.37	138.42	141.06	0.164714	15.4	35.02	23.23	2.2	14.6	15.29	
Main Channel				1874.49	100 YR	60% PR	672	135	137.63	138.85	141.84	0.152757	16.46	41.02	23.39	2.17	15.5	16.57	
Main Channel				1871.866	10 YR	60% PR	343	135	137.17	137.75	139.17	0.107919	11.33	30.31	23.07	1.74	8.43	8.68	
Main Channel				1871.866	50 YR	60% PR	538	135	137.56	138.42	140.48	0.112133	13.72	39.35	23.33	1.85	10.98	11.67	
Main Channel				1871.866	100 YR	60% PR	672	135	137.81	138.85	141.28	0.111168	14.95	45.18	23.51	1.88	12.23	13.26	
Main Channel				1869.26	10 YR	60% PR	343	134	135.97	136.75	138.72	0.183724	13.3	25.79	22.94	2.21	12.46	12.61	
Main Channel				1869.26	50 YR	60% PR	538	134	136.37	137.42	140.06	0.164013	15.39	34.99	23.07	2.2	14.6	15.26	
Main Channel				1869.26	100 YR	60% PR	672	134	136.63	137.84	140.86	0.154188	16.52	40.78	23.16	2.18	15.66	16.7	
Main Channel				1866.814	10 YR	60% PR	343	134	136.17	136.74	138.15	0.110903	11.29	30.37	23.03	1.73	8.67	8.69	
Main Channel				1866.814	50 YR	60% PR	538	134	136.55	137.42	139.5	0.12108	13.8	39.06	23.33	1.87	11.76	12	
Main Channel				1866.814	100 YR	60% PR	672	134	136.79	137.83	140.32	0.122832	15.08	44.7	23.52	1.91	13.36	13.77	
Main Channel				1862.54	10 YR	60% PR	343	133	135.03	135.76	137.53	0.161585	12.68	27.05	23	2.06	11.36	11.36	
Main Channel				1862.54	50 YR	60% PR	538	133	137.83	136.42	138.36	0.007645	5.85	94.2	25.87	0.52	1.45	1.66	
Main Channel				1862.54	100 YR	60% PR	672	133	138.72	136.82	139.26	0.006033	5.94	117.95	27.69	0.48	1.31	1.6	
Main Channel				1862	10 YR	EX	343	135.07	138.97		139.49	0.010958	5.78	60.34	21.93	0.58	1.69	1.91	
Main Channel				1862	50 YR	EX	538	135.07	139.8		140.57	0.011875	7.07	79.59	24.2	0.63	2.16	2.64	
Main Channel				1862	100 YR	EX	672	135.07	140.29		141.22	0.01234	7.8	91.77	25.69	0.66	2.43	3.08	
Main Channel				1846	10 YR	EX	343	135.1	138.08	138.08	139.13	0.037802	8.22	41.92	21.17	1	4.37	4.63	
Main Channel				1846	50 YR	EX	538	135.1	138.83	138.83	140.21	0.033201	9.45	58.52	23.32	0.99	4.79	5.53	
Main Channel				1846	100 YR	EX	672	135.1	139.28	139.28	140.86	0.031164	10.11	69.45	24.64	0.98	5.01	6.02	
Main Channel				1834	10 YR	60% PR	343	130	136.53	133.04	136.7	0.001374	3.52	130.08	26.35	0.25	0.34	0.5	
Main Channel				1834	50 YR	60% PR	538	130	137.93		138.19	0.001641	4.42	168.21	28.18	0.29	0.47	0.74	
Main Channel				1834	100 YR	60% PR	672	130	138.79		139.11	0.001746	4.9	192.81	29.01	0.3	0.54	0.88	
Main Channel				1820	10 YR	EX	343	133.09	136.31	136.18	137.38	0.023733	8.31	42.92	19.24	0.91	3.06	3.63	
Main Channel				1820	50 YR	EX	538	133.09	137.04	137.04	138.58	0.024942	10.06	57.59	21.17	0.98	3.86	4.89	
Main Channel				1820	100 YR	EX	672	133.09	137.56	137.56	139.31	0.023274	10.73	69.15	22.57	0.97	4.02	5.3	
Main Channel				1818	15+20.00	10 YR	60% PR	343	131.25	136.44		136.67	0.002313	3.82	96.67	25.47	0.31	0.47	0.65
Main Channel				1818	15+20.00	50 YR	60% PR	538	131.25	137.86		138.16	0.002062	4.31	133.86	26.83	0.31	0.52	0.76
Main Channel				1818	15+20.00	100 YR	60% PR	672	131.25	138.74		139.08	0.001926	4.56	157.8	27.63	0.31	0.54	0.81
Main Channel				1808.69	10 YR	60% PR	343	132.66	135.79		136.56	0.016511	7.25	54.93	23	0.77	2.19	2.78	
Main Channel				1808.69	50 YR	60% PR	538	132.66	137.36		138.08	0.008606	7.08	92.75	25.16	0.6	1.66	2.28	
Main Channel				1808.69	100 YR	60% PR	672	132.66	138.26		139	0.006991	7.24	115.82	26.14	0.56	1.57	2.23	
Main Channel				1805	15+20.00	10 YR	EX	343	132.66	135.78	135.78	136.94	0.037167	8.65	40.39	18.72	0.99	4.62	5.21
Main Channel				1805	15+20.00	50 YR	EX	538	132.66	136.62	136.62	138.13	0.032739	9.92	57.05	20.88	0.97	5.07	6.21
Main Channel				1805	15+20.00	100 YR	EX	672	132.66	137.32	137.12	138.86	0.02607	10.09	72.17	22.59	0.9	4.65	6.01
Main Channel				1795	10 YR	60% PR	343	131.28	135.89		136.37	0.004347	5.58	64.15	19.66	0.51	0.77	0.93	
Main Channel				1795	50 YR	60% PR	538	131.28	137.38		137.97	0.003438	6.19	95.79	22.66	0.48	0.76	1.03	
Main Channel				1795	100 YR	60% PR	672	131.28	138.26		138.91	0.003156	6.57	116.49	24.5	0.47	0.78	1.1	
Main Channel				1787	10 YR	60% PR	343	130.9	135.77		136.33	0.004145	6.03	63.27	18.02	0.51	0.75	1.04	
Main Channel				1787	50 YR	60% PR	538	130.9	137.18		137.92	0.003845	7.01	90.46	20.55	0.52	0.85	1.28	
Main Channel				1787	100 YR	60% PR	672	130.9	138.01		138.87	0.00375	7.58	108.18	22.24	0.52	0.91	1.42	
Main Channel				1785	10 YR	EX	343	131.45	135.38		136.18	0.009913	7.17	48.84	18.38	0.74	1.46	1.67	
Main Channel				1785	50 YR	EX	538	131.45	136.7		137.61	0.006969	7.69	75.03	21.26	0.66	1.33	1.7	
Main Channel				1785	100 YR	EX	672	131.45	137.48		138.47	0.006112	8.06	92.33	22.97	0.63	1.31	1.76	
Main Channel				1779	15+59.00	10 YR	60% PR	343	130.81	135.76		136.29	0.004527	5.87	62.17	18.68	0.52	0.8	1.02
Main Channel				1779	15+59.00	50 YR	60% PR	538	130.81	137.2		137.87	0.003879	6.66	91.36	21.72	0.5	0.85	1.18

Main Channel	1779	15+59.00	100 YR	60% PR	672	130.81	138.05		138.81	0.003667	7.13	110.58	23.71	0.5	0.88	1.29
Main Channel			1774	10 YR	EX	343	130.96	135.44	136.04	0.005223	6.22	58.58	17.72	0.56	0.9	1.15
Main Channel			1774	50 YR	EX	538	130.96	136.71	137.52	0.004912	7.27	82.39	19.89	0.56	1.03	1.43
Main Channel			1774	100 YR	EX	672	130.96	137.46	138.4	0.004791	7.87	97.88	21.22	0.57	1.1	1.6
Main Channel			1770	10 YR	60% PR	343	130.59	134.58	134.58	0.015375	10.56	45.49	17.33	0.98	2.23	3.33
Main Channel			1770	50 YR	60% PR	538	130.59	135.7	135.7	0.014228	12.18	66.38	19.96	0.99	2.56	4.05
Main Channel			1770	100 YR	60% PR	672	130.59	136.4	136.4	0.013459	12.99	80.86	21.64	0.99	2.69	4.4
Main Channel	1766	15+59.00	10 YR	EX	343	130.81	134.44	134.44	135.88	0.020669	9.76	39.36	15.85	0.98	2.81	3.78
Main Channel	1766	15+59.00	50 YR	EX	538	130.81	135.5	135.5	137.34	0.018221	11.16	57.37	18.14	0.97	3.08	4.48
Main Channel	1766	15+59.00	100 YR	EX	672	130.81	136.11	136.11	138.21	0.017524	11.99	68.86	19.42	0.97	3.28	4.94
Main Channel			1759	10 YR	EX	343	130.6	134.27	134.27	0.01738	9.48	39.01	16.44	0.98	2.29	2.92
Main Channel			1759	50 YR	EX	538	130.6	135.28	135.28	0.015254	10.85	56.75	18.77	0.97	2.51	3.46
Main Channel			1759	100 YR	EX	672	130.6	135.86	135.86	0.014644	11.66	68.09	20.1	0.97	2.67	3.82
Main Channel			1758	10 YR	60% PR	343	130.27	133.2	133.92	0.039691	13.38	33.39	17.98	1.5	4.31	6.02
Main Channel			1758	50 YR	60% PR	538	130.27	133.96	134.94	0.037499	15.55	47.68	19.51	1.52	5.22	7.44
Main Channel			1758	100 YR	60% PR	672	130.27	134.44	135.52	0.03592	16.67	57.19	20.46	1.52	5.63	8.17
Main Channel			1751	10 YR	60% PR	343	130.46	133.04	133.72	0.04155	12.89	34.53	20.19	1.52	4.22	5.76
Main Channel			1751	50 YR	60% PR	538	130.46	133.62	134.62	0.044981	15.64	46.59	21.41	1.64	5.71	7.85
Main Channel			1751	100 YR	60% PR	672	130.46	134.01	135.19	0.044337	16.92	55.06	22.19	1.66	6.34	8.8
Main Channel			1746	10 YR	60% PR	343	130.34	132.64	133.37	0.049283	13.32	33.17	20.03	1.63	4.86	6.32
Main Channel			1746	50 YR	60% PR	538	130.34	133.22	134.27	0.050898	15.96	45.13	21.25	1.73	6.32	8.35
Main Channel			1746	100 YR	60% PR	672	130.34	133.6	134.8	0.049297	17.2	53.46	22	1.74	6.92	9.27
Main Channel			1744	10 YR	EX	343	130.36	133.5	133.5	0.017611	8.72	41.42	19.39	0.99	2.18	2.58
Main Channel			1744	50 YR	EX	538	130.36	134.34	134.34	0.015882	10.08	58.3	21.01	0.98	2.49	3.13
Main Channel			1744	100 YR	EX	672	130.36	134.84	134.84	0.015283	10.86	68.98	22	0.99	2.67	3.47
Main Channel	1738	16+00.00	10 YR	60% PR	343	130.16	131.89	132.68	134.59	0.084217	13.2	26.22	19.77	1.98	6.71	7.12
Main Channel	1738	16+00.00	50 YR	60% PR	538	130.16	132.32	133.44	136.16	0.083516	15.75	34.91	20.62	2.06	8.36	9.26
Main Channel	1738	16+00.00	100 YR	60% PR	672	130.16	132.6	133.92	137.08	0.080828	17.03	40.69	21.17	2.08	9.1	10.34
Main Channel	1725	16+00.00	10 YR	EX	343	130.16	132.67	132.67	133.72	0.026993	8.24	42.21	21.31	1	3.12	3.43
Main Channel	1725	16+00.00	10 YR	60% PR	343	129.69	132	132.37	133.67	0.031081	10.49	35.37	19.22	1.29	3.31	3.93
Main Channel	1725	16+00.00	50 YR	EX	538	130.16	133.41	133.41	134.81	0.024118	9.52	58.54	22.8	0.99	3.54	4.14
Main Channel	1725	16+00.00	50 YR	60% PR	538	129.69	132.49	133.2	135.12	0.036701	13.17	45.08	19.95	1.46	4.7	5.77
Main Channel	1725	16+00.00	100 YR	EX	672	130.16	133.96	133.86	135.47	0.02071	9.92	71.37	23.9	0.95	3.48	4.24
Main Channel	1725	16+00.00	100 YR	60% PR	672	129.69	132.82	133.71	136.01	0.03818	14.54	51.6	20.4	1.51	5.4	6.76
Main Channel			1710	10 YR	60% PR	343	129.37	131.33	131.8	0.044159	10.75	31.93	18.43	1.43	4.4	4.45
Main Channel			1710	50 YR	60% PR	538	129.37	131.82	132.58	0.047229	13.13	41.26	19.3	1.55	5.71	6.11
Main Channel			1710	100 YR	60% PR	672	129.37	132.11	133.06	0.049156	14.51	46.89	19.8	1.61	6.51	7.18
Main Channel			1697	10 YR	EX	343	129.38	132.29	133.03	0.010159	6.9	50.55	20.15	0.74	1.42	1.59
Main Channel			1697	50 YR	EX	538	129.38	133.3	134.25	0.008648	7.85	71.66	21.95	0.72	1.53	1.85
Main Channel			1697	100 YR	EX	672	129.38	133.92	135	0.007953	8.36	85.77	23.08	0.71	1.58	1.99
Main Channel			1684	10 YR	60% PR	343	128.62	131.97	131.34	0.008472	7.02	52.42	19.76	0.7	1.25	1.56
Main Channel			1684	50 YR	60% PR	538	128.62	132.9	132.2	0.00852	8.39	71.58	21.51	0.74	1.53	2.03
Main Channel			1684	100 YR	60% PR	672	128.62	133.52	132.72	0.008106	9	85.38	22.7	0.74	1.63	2.24
Main Channel			1671	10 YR	EX	343	128.62	132.16	132.78	0.006911	6.33	56.25	20.08	0.63	1.07	1.27
Main Channel			1671	50 YR	EX	538	128.62	133.17	134.02	0.006673	7.48	77.44	22	0.65	1.26	1.61
Main Channel			1671	100 YR	EX	672	128.62	133.79	134.79	0.006471	8.08	91.56	23.2	0.65	1.35	1.8
Main Channel	1655	16+83.00	10 YR	60% PR	343	128.38	131.87		132.45	0.007246	6.1	57.09	21.39	0.63	1.09	1.21
Main Channel	1655	16+83.00	50 YR	60% PR	538	128.38	132.9		133.66	0.006357	7.01	80.27	23.47	0.62	1.19	1.44
Main Channel	1655	16+83.00	100 YR	60% PR	672	128.38	133.59		134.43	0.005732	7.41	96.89	24.89	0.61	1.21	1.53
Main Channel	1642	16+83.00	10 YR	EX	343	128.38	131.94		132.58	0.00669	6.49	58.56	21.53	0.64	1.02	1.3
Main Channel	1642	16+83.00	50 YR	EX	538	128.38	132.97		133.84	0.006277	7.59	81.91	23.61	0.65	1.19	1.62
Main Channel	1642	16+83.00	100 YR	EX	672	128.38	133.61		134.6	0.006022	8.17	97.43	24.94	0.65	1.28	1.79
Main Channel			1623	10 YR	60% PR	343	127.94	131.73	132.22	0.005416	5.69	63.9	22.86	0.56	0.84	1.01
Main Channel			1623	50 YR	60% PR	538	127.94	132.79	133.45	0.004981	6.61	89.23	24.91	0.57	0.97	1.25
Main Channel			1623	100 YR	60% PR	672	127.94	133.49	134.24	0.004581	7.03	107.35	26.43	0.56	1	1.34
Main Channel			1610	10 YR	EX	343	127.94	131.89	132.35	0.004585	5.46	67.65	23.14	0.53	0.74	0.91
Main Channel			1610	50 YR	EX	538	127.94	132.98	133.6	0.004328	6.4	93.91	25.34	0.54	0.87	1.14
Main Channel			1610	100 YR	EX	672	127.94	133.65	134.36	0.004168	6.9	111.36	26.81	0.54	0.93	1.27
Main Channel	1598	17+40.00	10 YR	60% PR	343	127.92	131.6		132.08	0.005705	5.59	62.04	21.5	0.56	0.91	1
Main Channel	1598	17+40.00	50 YR	60% PR	538	127.92	132.68		133.32	0.00511	6.46	86.36	23.54	0.56	1.01	1.21
Main Channel	1598	17+40.00	100 YR	60% PR	672	127.92	133.4		134.12	0.004644	6.85	103.85	25.02	0.55	1.03	1.29

Main Channel	1585	17+40.00	10 YR	EX	343	127.92	131.67	129.77	132.22	0.005185	6.01	63.66	21.64	0.57	0.84	1.1
Main Channel	1585	17+40.00	50 YR	EX	538	127.92	132.69		133.46	0.005234	7.19	86.71	23.57	0.6	1.04	1.43
Main Channel	1585	17+40.00	100 YR	EX	672	127.92	133.32		134.23	0.005173	7.81	102	24.87	0.61	1.13	1.62
Main Channel	1479	18+59.00	10 YR	60% PR	343	126.81	130.11	129.77	131.1	0.011291	8.13	48.29	19.54	0.82	1.58	2.08
Main Channel	1479	18+59.00	50 YR	60% PR	538	126.81	131.32		132.49	0.008692	8.92	73.84	22.66	0.76	1.57	2.24
Main Channel	1479	18+59.00	100 YR	60% PR	672	126.81	132.23		133.41	0.006845	9.01	95.69	25.09	0.7	1.43	2.15
Main Channel	1466	18+59.00	10 YR	EX	343	126.81	130.74		131.27	0.013458	5.88	61.07	21.16	0.56	2.18	2.66
Main Channel	1466	18+59.00	50 YR	EX	538	126.81	131.8		132.52	0.01294	6.9	84.9	23.96	0.58	2.53	3.35
Main Channel	1466	18+59.00	100 YR	EX	672	126.81	132.49		133.3	0.01213	7.36	102.11	25.72	0.57	2.64	3.63
Main Channel	1438	19+00.00	10 YR	60% PR	343	126.56	129.99		130.65	0.006711	6.6	58.25	21.29	0.65	1.03	1.34
Main Channel	1438	19+00.00	50 YR	60% PR	538	126.56	131.33		132.1	0.005034	7.19	88.69	24.13	0.59	1.01	1.42
Main Channel	1438	19+00.00	100 YR	60% PR	672	126.56	132.27		133.08	0.004155	7.4	113.39	29.94	0.56	0.86	1.41
Main Channel	1425	19+00.00	10 YR	EX	343	126.56	130.31		130.76	0.010595	5.34	65.18	21.96	0.52	1.75	1.96
Main Channel	1425	19+00.00	50 YR	EX	538	126.56	131.44		132.02	0.009462	6.16	91.32	24.41	0.52	1.92	2.36
Main Channel	1425	19+00.00	100 YR	EX	672	126.56	132.18		132.83	0.008668	6.54	110.57	29.17	0.51	1.8	2.52
Main Channel	1404	19+34.13	10 YR	60% PR	343	126.34	129.95		130.39	0.005023	5.32	67.49	25.57	0.54	0.76	0.9
Main Channel	1404	19+34.13	50 YR	60% PR	538	126.34	131.4		131.88	0.003283	5.57	108.58	31.93	0.46	0.64	0.87
Main Channel	1404	19+34.13	100 YR	60% PR	672	126.34	132.41		132.87	0.002533	5.59	144.14	37.76	0.42	0.55	0.82
Main Channel	1391	19+34.13	10 YR	EX	343	126.34	129.97		130.42	0.009103	5.46	67.95	25.63	0.53	1.39	1.75
Main Channel	1391	19+34.13	50 YR	EX	538	126.34	131.18		131.73	0.007398	6.07	101.72	30.23	0.51	1.42	1.95
Main Channel	1391	19+34.13	100 YR	EX	672	126.34	131.97		132.56	0.006484	6.33	128.18	36.18	0.49	1.32	2.01
Main Channel	1333	20+05.00	10 YR	60% PR	343	125.94	129.66		130.03	0.004464	4.94	71.45	27.05	0.51	0.69	0.78
Main Channel	1333	20+05.00	50 YR	60% PR	538	125.94	131.27		131.64	0.002475	4.93	119.39	33.62	0.41	0.51	0.67
Main Channel	1333	20+05.00	100 YR	60% PR	672	125.94	132.32		132.69	0.001876	4.93	159.01	41.28	0.37	0.42	0.63
Main Channel	1320	20+05.00	10 YR	EX	343	125.94	129.51		129.96	0.004857	5.91	67.55	26.67	0.56	0.72	1.05
Main Channel	1320	20+05.00	50 YR	EX	538	125.94	130.94		131.37	0.003088	5.93	108.49	31.46	0.47	0.61	0.94
Main Channel	1320	20+05.00	100 YR	EX	672	125.94	131.8		132.24	0.002571	6.02	138.27	37.92	0.44	0.54	0.92
Main Channel		1294	10 YR	60% PR	343	125.44	129.52		129.88	0.0033	4.8	77.17	26.54	0.45	0.56	0.69
Main Channel		1294	50 YR	60% PR	538	125.44	131.18		131.55	0.002123	4.99	126.21	32.85	0.39	0.47	0.66
Main Channel		1294	100 YR	60% PR	672	125.44	132.24		132.62	0.00169	5.05	176.81	76.58	0.36	0.23	0.63
Main Channel		1273	10 YR	60% PR	343	125.39	129.48		129.8	0.002989	4.58	79.7	27.04	0.43	0.5	0.63
Main Channel		1273	50 YR	60% PR	538	125.39	131.16		131.5	0.001899	4.74	132.42	45.13	0.37	0.32	0.59
Main Channel		1273	100 YR	60% PR	672	125.39	132.25		132.57	0.00144	4.69	208.32	93.68	0.33	0.19	0.55
Main Channel		1264	10 YR	60% PR	343	125.13	129.28		129.75	0.004066	5.61	67.76	22.01	0.51	0.67	0.92
Main Channel		1264	50 YR	60% PR	538	125.13	130.94		131.46	0.0028	5.95	109.99	29.43	0.45	0.55	0.92
Main Channel		1264	100 YR	60% PR	672	125.13	132.05		132.54	0.002116	5.86	180.71	88.99	0.41	0.25	0.84
Main Channel		1257	10 YR	EX	343	125.38	129.1		129.63	0.005282	6.16	74.47	28.43	0.58	0.82	1.14
Main Channel		1257	50 YR	EX	538	125.38	130.59		131.15	0.003638	6.48	121.91	35.58	0.51	0.73	1.12
Main Channel		1257	100 YR	EX	672	125.38	131.45		132.04	0.003151	6.71	155.14	40.7	0.49	0.7	1.14
Main Channel		1249	10 YR	EX	343	125.01	129.18		129.55	0.003467	5.42	76.25	27.69	0.48	0.56	0.84
Main Channel		1249	50 YR	EX	538	125.01	130.7		131.06	0.00242	5.63	124.04	36	0.43	0.49	0.82
Main Channel		1249	100 YR	EX	672	125.01	131.58		131.96	0.002126	5.83	158.62	44.71	0.41	0.44	0.83
Main Channel		1248	10 YR	60% PR	343	124.15	128.43		129.37	0.013089	7.9	47.91	14.4	0.7	2.05	2.98
Main Channel		1248	50 YR	60% PR	538	124.15	129.54		130.89	0.01362	9.51	64.75	15.76	0.74	2.51	3.98
Main Channel		1248	100 YR	60% PR	672	124.15	130.21		131.8	0.013789	10.39	75.6	16.65	0.76	2.75	4.56
Main Channel		1241	10 YR	60% PR	343	123.75	128.4		129.09	0.010205	6.72	53.79	15.55	0.59	1.67	2.2
Main Channel		1241	50 YR	60% PR	538	123.75	129.53		130.53	0.010745	8.13	72.3	17.2	0.63	2.06	2.96
Main Channel		1241	100 YR	60% PR	672	123.75	130.21		131.42	0.011037	8.94	84.45	20.2	0.65	2.13	3.44
Main Channel		1240	10 YR	EX	343	124.37	128.45		129.24	0.006932	7.42	59.75	22.26	0.67	1.06	1.61
Main Channel		1240	50 YR	EX	538	124.37	129.59		130.62	0.006581	8.62	86.63	24.91	0.69	1.28	1.99
Main Channel		1240	100 YR	EX	672	124.37	130.2		131.42	0.006711	9.41	102.29	26.28	0.71	1.44	2.28
Main Channel		1236	10 YR	60% PR	343	123.49	128.37		128.95	0.010259	6.48	63.47	17.86	0.55	1.8	2.08
Main Channel		1236	50 YR	60% PR	538	123.49	129.51		130.34	0.012014	7.8	84.74	19.57	0.59	2.48	2.86
Main Channel		1236	100 YR	60% PR	672	123.49	130.19		131.17	0.012952	8.52	99.02	21.61	0.61	2.81	3.33
Main Channel		1235	10 YR	EX	343	124.02	128.45		129.05	0.004808	6.39	62.42	20.67	0.56	0.79	1.17
Main Channel		1235	50 YR	EX	538	124.02	129.59		130.42	0.004864	7.6	87.59	23.41	0.59	0.98	1.53
Main Channel		1235	100 YR	EX	672	124.02	130.21		131.2	0.005079	8.37	102.44	25.04	0.62	1.11	1.78
Main Channel		1233	10 YR	60% PR	343	123.49	128.34		128.9	0.009481	6.23	64.16	18.55	0.54	1.65	1.93
Main Channel		1233	50 YR	60% PR	538	123.49	129.48		130.26	0.010666	7.47	86.27	20.23	0.57	2.2	2.61
Main Channel		1233	100 YR	60% PR	672	123.49	130.16		131.08	0.010783	8.15	100.41	21.04	0.59	2.43	2.98

Main Channel			1228	10 YR	EX	343	123.74	128.46		128.89	0.003414	5.45	69.92	21.4	0.48	0.61	0.85
Main Channel			1228	10 YR	60% PR	343	123.53	128.31		128.85	0.006763	6.07	65.01	19.22	0.53	1.16	1.7
Main Channel			1228	50 YR	EX	538	123.74	129.61		130.22	0.00352	6.53	96.3	24.39	0.5	0.75	1.12
Main Channel			1228	50 YR	60% PR	538	123.53	129.44		130.22	0.007142	7.33	87.77	20.92	0.56	1.46	2.29
Main Channel			1228	100 YR	EX	672	123.74	130.23		130.98	0.00372	7.24	112.2	28.32	0.53	0.8	1.33
Main Channel			1228	100 YR	60% PR	672	123.53	130.12		131.04	0.007255	8.01	102.84	26.13	0.58	1.42	2.63
Main Channel			1222	10 YR	EX	343	123.47	128.33		128.83	0.003827	5.99	76.85	23.93	0.51	0.69	1
Main Channel			1222	10 YR	60% PR	343	123.65	128.28		128.82	0.00434	6.17	73.34	23.91	0.53	0.74	1.08
Main Channel			1222	50 YR	EX	538	123.47	129.37		130.12	0.004344	7.37	103.22	26.66	0.56	0.93	1.42
Main Channel			1222	50 YR	60% PR	538	123.65	129.41		130.17	0.004503	7.38	102.34	26.7	0.57	0.94	1.43
Main Channel			1222	100 YR	EX	672	123.47	129.92		130.85	0.004752	8.24	118.48	28.17	0.6	1.1	1.71
Main Channel			1222	100 YR	60% PR	672	123.65	130.09		131	0.004641	8.13	121.16	31.1	0.59	0.98	1.67
Main Channel			1215	10 YR	60% PR	343	123.8	128.26		128.74	0.004217	5.67	73.57	28.47	0.51	0.63	0.95
Main Channel			1215	50 YR	60% PR	538	123.8	129.41		130.02	0.004008	6.57	111.3	35.98	0.51	0.72	1.17
Main Channel			1215	100 YR	60% PR	672	123.8	130.11		130.79	0.003872	7.03	138.04	41.13	0.52	0.76	1.28
Main Channel			1214	10 YR	EX	343	123.53	128.33		128.69	0.00302	5.22	75.55	24.5	0.45	0.53	0.77
Main Channel			1214	50 YR	EX	538	123.53	129.39		129.89	0.003188	6.24	103.25	27.54	0.48	0.67	1.02
Main Channel			1214	100 YR	EX	672	123.53	129.96		130.56	0.003386	6.88	119.35	29.01	0.5	0.78	1.2
Main Channel			1211	10 YR	60% PR	343	123.57	128.25		128.71	0.003865	5.63	77.38	30.74	0.49	0.57	0.92
Main Channel			1211	50 YR	60% PR	538	123.57	129.4		129.99	0.003736	6.53	117.45	37.92	0.5	0.68	1.14
Main Channel			1211	100 YR	60% PR	672	123.57	130.1		130.76	0.003631	7	145.47	42.85	0.51	0.72	1.25
Main Channel	1209	21+16.00		10 YR	EX	343	123.65	128.12	126.93	128.6	0.004296	6.01	70.34	24.77	0.53	0.7	1.04
Main Channel	1209	21+16.00		50 YR	EX	538	123.65	129.04		129.74	0.004927	7.39	94.94	28.41	0.59	0.94	1.47
Main Channel	1209	21+16.00		100 YR	EX	672	123.65	129.48		130.36	0.005601	8.34	107.64	29.68	0.63	1.15	1.82
Main Channel			1198	10 YR	EX	343	123.57	126.97	126.91	128.12	0.013816	8.91	44.35	22.06	0.9	1.62	2.52
Main Channel			1198	50 YR	EX	538	123.57	128.12	127.82	129.35	0.01032	9.52	73.45	29.38	0.82	1.51	2.58
Main Channel			1198	100 YR	EX	672	123.57	128.86	128.39	130.08	0.00861	9.69	97.45	35.05	0.77	1.4	2.53
Main Channel			1191	10 YR	60% PR	343	122.86	128.27		128.44	0.001032	3.36	124.62	37.35	0.27	0.2	0.3
Main Channel			1191	50 YR	60% PR	538	122.86	129.43		129.68	0.001175	4.14	171.89	43.91	0.3	0.26	0.43
Main Channel			1191	100 YR	60% PR	672	122.86	130.13		130.43	0.001239	4.57	205.19	57.68	0.31	0.28	0.51
Main Channel			1189	10 YR	EX	343	123.36	126.91	126.75	127.75	0.015939	7.38	46.58	22.98	0.9	1.88	1.96
Main Channel			1189	50 YR	EX	538	123.36	128.12		128.93	0.008418	7.27	79.3	31.91	0.7	1.23	1.64
Main Channel			1189	100 YR	EX	672	123.36	128.88		129.68	0.006419	7.27	105.68	37.74	0.63	1.06	1.53
Main Channel			1178	10 YR	EX	343	122.85	126.95		127.26	0.002967	4.88	81.66	27.24	0.44	0.5	0.69
Main Channel			1178	50 YR	EX	538	122.85	128.16		128.54	0.002688	5.59	120.17	36.54	0.44	0.5	0.83
Main Channel			1178	100 YR	EX	672	122.85	128.91		129.32	0.002484	5.89	149.5	41.19	0.43	0.51	0.88
Main Channel	1177	21+61.00		10 YR	60% PR	343	122.44	128.24		128.42	0.001073	3.54	125.99	41.56	0.28	0.19	0.33
Main Channel	1177	21+61.00		50 YR	60% PR	538	122.44	129.39		129.66	0.001226	4.34	179.62	52.03	0.31	0.25	0.47
Main Channel	1177	21+61.00		100 YR	60% PR	672	122.44	130.11		130.41	0.001254	4.72	217.97	78.64	0.32	0.29	0.53
Main Channel	1164	21+61.00		10 YR	EX	343	122.44	126.95		127.12	0.001426	3.64	106.09	31.92	0.31	0.27	0.37
Main Channel	1164	21+61.00		50 YR	EX	538	122.44	128.16		128.39	0.001377	4.23	149.16	43.2	0.32	0.27	0.46
Main Channel	1164	21+61.00		100 YR	EX	672	122.44	128.92		129.16	0.001312	4.51	183.53	48.1	0.32	0.29	0.5
Main Channel			1142	10 YR	60% PR	343	122.89	128.25		128.37	0.000712	2.82	144.56	46.59	0.23	0.13	0.21
Main Channel			1142	50 YR	60% PR	538	122.89	129.42		129.6	0.000798	3.45	203.48	72.74	0.25	0.17	0.3
Main Channel			1142	100 YR	60% PR	672	122.89	130.14		130.34	0.000814	3.75	242.91	105.27	0.26	0.21	0.34
Main Channel			1129	10 YR	EX	343	122.89	126.81		127.05	0.002296	4.01	90.37	30.1	0.38	0.4	0.48
Main Channel			1129	50 YR	EX	538	122.89	128.01		128.32	0.00199	4.56	133.45	44.69	0.37	0.35	0.57
Main Channel			1129	100 YR	EX	672	122.89	128.76		129.1	0.001802	4.8	168.3	47.92	0.37	0.37	0.6
Main Channel	1119	22+19.00		10 YR	60% PR	343	122.9	128.16		128.34	0.001184	3.52	121.07	48.39	0.29	0.18	0.34
Main Channel	1119	22+19.00		50 YR	60% PR	538	122.9	129.32		129.57	0.001253	4.2	179.82	86.07	0.31	0.25	0.45
Main Channel	1119	22+19.00		100 YR	60% PR	672	122.9	130.03		130.31	0.001243	4.52	218.14	110.32	0.31	0.29	0.5
Main Channel	1106	22+19.00		10 YR	EX	343	122.9	126.55		126.96	0.004933	5.66	69.42	26.38	0.55	0.74	0.98
Main Channel	1106	22+19.00		50 YR	EX	538	122.9	127.78		128.24	0.003777	6.12	105.49	34.63	0.51	0.66	1.04
Main Channel	1106	22+19.00		100 YR	EX	672	122.9	128.57		129.03	0.00327	6.34	142.72	60.05	0.49	0.46	1.05
Main Channel			1099	10 YR	60% PR	343	122.05	128.14		128.32	0.001175	3.6	130.19	41.32	0.28	0.23	0.35
Main Channel			1099	50 YR	60% PR	538	122.05	129.27		129.54	0.00135	4.42	174.11	66.87	0.31	0.34	0.49
Main Channel			1099	100 YR	60% PR	672	122.05	129.97		130.28	0.00141	4.85	201.48	98.16	0.33	0.41	0.57
Main Channel			1085	10 YR	EX	343	122.05	126.46		126.87	0.00436	5.69	71.3	31.59	0.51	0.56	0.96
Main Channel			1085	50 YR	EX	538	122.05	127.74		128.16	0.003228	5.94	115.44	37.68	0.46	0.56	0.95
Main Channel			1085	100 YR	EX	672	122.05	128.54		128.95	0.002783	6.08	148.52	45.38	0.44	0.52	0.95
Main Channel	1073	22+65.00		10 YR	60% PR	343	122.47	128		128.28	0.001524	4.42	106.5	27.7	0.33	0.32	0.51

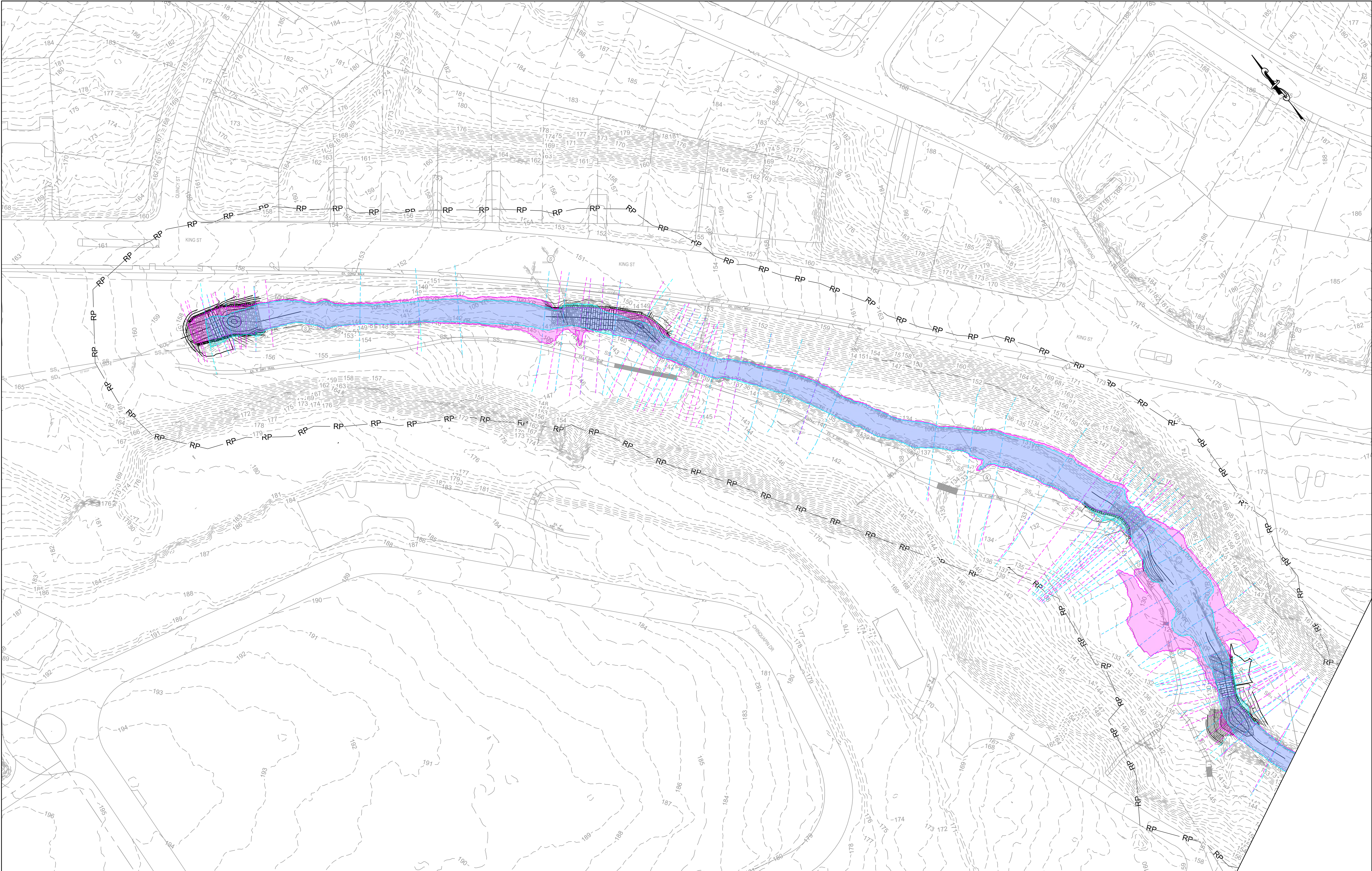
Main Channel	1073	22+65.00	50 YR	60% PR	538	122.47	129.03		129.48	0.00201	5.7	136.77	41.84	0.4	0.48	0.79	
Main Channel	1073	22+65.00	100 YR	60% PR	672	122.47	129.63		130.21	0.002323	6.5	157.62	67.75	0.43	0.53	1	
Main Channel	1060	22+65.00	10 YR	EX	343	122.47	125.59	125.32	126.63	0.011963	8.39	48.97	20.54	0.85	1.6	2.22	
Main Channel	1060	22+65.00	50 YR	EX	538	122.47	126.32	126.25	127.9	0.013779	10.4	64.81	22.56	0.95	2.19	3.17	
Main Channel	1060	22+65.00	100 YR	EX	672	122.47	126.78	126.78	128.67	0.014322	11.45	75.48	23.82	0.98	2.5	3.7	
Main Channel			1056	10 YR	60% PR	343	122.41	128.02		128.24	0.001211	3.96	117.15	30	0.3	0.27	0.41
Main Channel			1056	50 YR	60% PR	538	122.41	129.06		129.42	0.001586	5.09	150.32	33.46	0.35	0.4	0.63
Main Channel			1056	100 YR	60% PR	672	122.41	129.68		130.14	0.001788	5.75	171.97	52.19	0.38	0.46	0.78
Main Channel		1046.031	10 YR	60% PR	343	124	127.86		128.21	0.001287	4.8	78.41	24.15	0.43	0.22	0.31	
Main Channel		1046.031	50 YR	60% PR	538	124	128.85		129.39	0.001454	5.95	103.49	26.51	0.48	0.29	0.43	
Main Channel		1046.031	100 YR	60% PR	672	124	129.44		130.1	0.001528	6.59	119.66	27.97	0.5	0.33	0.51	
Main Channel		1044	10 YR	EX	343	122.42	125.66	125.05	126.36	0.008337	6.81	54.84	22.41	0.7	1.17	1.48	
Main Channel		1044	50 YR	EX	538	122.42	126.57	125.87	127.54	0.00812	8.04	76.67	25.33	0.72	1.4	1.89	
Main Channel		1044	100 YR	EX	672	122.42	127.13	126.37	128.26	0.007931	8.69	91.31	27.11	0.73	1.51	2.11	
Main Channel		1033.5	10 YR	EX	343	122.31	125.04	125.04	126.2	0.017505	8.7	42.82	21.19	0.98	2.07	2.58	
Main Channel		1033.5	50 YR	EX	538	122.31	125.88	125.88	127.38	0.015617	10	61.68	24.07	0.98	2.31	3.08	
Main Channel		1033.5	100 YR	EX	672	122.31	126.38	126.38	128.09	0.014769	10.71	74.28	25.8	0.97	2.44	3.37	
Main Channel		1030	10 YR	60% PR	343	124	127.77		128.18	0.001569	5.17	70.97	22.29	0.47	0.25	0.36	
Main Channel		1030	50 YR	60% PR	538	124	128.71		129.35	0.001809	6.44	93.23	24.94	0.52	0.33	0.52	
Main Channel		1030	100 YR	60% PR	672	124	129.28		130.06	0.001918	7.15	107.76	26.52	0.55	0.38	0.61	
Main Channel		1028.25	10 YR	EX	343	122.21	124.85	124.85	125.96	0.018178	8.49	42.35	20.74	1	2.14	2.5	
Main Channel		1028.25	50 YR	EX	538	122.21	125.64	125.64	127.1	0.016249	9.8	59.35	22.75	0.99	2.39	3.02	
Main Channel		1028.25	100 YR	EX	672	122.21	126.12	126.12	127.8	0.015286	10.49	70.75	24.22	0.99	2.5	3.3	
Main Channel		1026.224	10 YR	60% PR	343	124	127.34	126.93	128.13	0.017715	7.18	49.26	20.44	0.78	2.3	2.79	
Main Channel		1026.224	50 YR	60% PR	538	124	128.22	127.72	129.29	0.016375	8.36	68.4	22.73	0.78	2.59	3.43	
Main Channel		1026.224	100 YR	60% PR	672	124	128.79	128.23	130	0.015398	8.95	81.64	24.33	0.78	2.68	3.74	
Main Channel		1023.528	10 YR	60% PR	343	123.98	126.91	126.91	128.04	0.030621	8.53	41.06	19.44	0.99	3.5	4.14	
Main Channel		1023.528	50 YR	60% PR	538	123.98	127.71	127.71	129.2	0.027245	9.83	57.35	21.18	0.99	3.88	4.97	
Main Channel		1023.528	100 YR	60% PR	672	123.98	128.21	128.21	129.9	0.025476	10.5	68.19	22.27	0.98	4.04	5.4	
Main Channel		1023	10 YR	EX	343	121.7	124.44	124.44	125.6	0.017649	8.88	44.89	20.86	1	2.12	2.66	
Main Channel		1023	50 YR	EX	538	121.7	125.25	125.25	126.81	0.016255	10.32	62.21	21.73	1.01	2.5	3.27	
Main Channel		1023	100 YR	EX	672	121.7	125.84	125.75	127.55	0.014367	10.85	75.24	22.45	0.98	2.53	3.41	
Main Channel		1020.646	10 YR	60% PR	343	123	125.23	125.97	127.75	0.112892	12.72	26.99	16.67	1.75	10.14	10.44	
Main Channel		1020.646	50 YR	60% PR	538	123	125.96	126.82	128.92	0.081786	13.82	39.2	17.32	1.59	9.78	10.91	
Main Channel		1020.646	100 YR	60% PR	672	123	126.42	127.35	129.63	0.069452	14.38	47.54	18.29	1.51	9.36	11.11	
Main Channel		1018.817	10 YR	60% PR	343	123	125.46	125.98	127.44	0.066572	11.3	30.83	16.74	1.44	6.62	7.66	
Main Channel		1018.817	50 YR	60% PR	538	123	126.29	126.85	128.63	0.048752	12.3	45.09	17.9	1.31	6.34	8.05	
Main Channel		1018.817	100 YR	60% PR	672	123	126.93	127.38	129.29	0.037204	12.38	57.07	19.27	1.19	5.57	7.59	
Main Channel		1016.78	10 YR	EX	343	119.58	124.55		125.28	0.005957	7.63	72.83	20.67	0.63	1.07	1.61	
Main Channel		1016.78	50 YR	EX	538	119.58	125.41		126.6	0.007901	9.86	90.82	21.29	0.75	1.65	2.54	
Main Channel		1016.78	100 YR	EX	672	119.58	125.9		127.42	0.009083	11.2	101.36	21.82	0.81	2.03	3.19	
Main Channel		1015.576	10 YR	60% PR	343	122	124.26	125.1	127.08	0.105811	13.48	25.72	14.95	1.78	9.93	11.21	
Main Channel		1015.576	50 YR	60% PR	538	122	125.06	126.02	128.34	0.075604	14.57	37.94	15.8	1.6	9.4	11.58	
Main Channel		1015.576	100 YR	60% PR	672	122	125.62	126.61	129.04	0.060671	14.89	47.04	16.51	1.48	8.69	11.32	
Main Channel		1013.799	10 YR	60% PR	343	122	124.52	125.14	126.77	0.068233	12.07	29.22	15.26	1.48	6.98	8.5	
Main Channel		1013.799	50 YR	60% PR	538	122	125.39	126.07	128.05	0.050824	13.18	43.19	16.79	1.36	6.71	9.02	
Main Channel		1013.799	100 YR	60% PR	672	122	126.06	126.65	128.74	0.039152	13.27	54.89	17.99	1.23	5.97	8.54	
Main Channel		1012.33	10 YR	EX	343	119.7	124.54		125.24	0.005242	7.56	74.3	19.85	0.61	0.97	1.54	
Main Channel		1012.33	50 YR	EX	538	119.7	125.38		126.56	0.007264	9.9	91.22	20.58	0.74	1.53	2.51	
Main Channel		1012.33	100 YR	EX	672	119.7	125.85		127.38	0.008501	11.31	101.12	21.08	0.81	1.91	3.18	
Main Channel		1011.329	10 YR	60% PR	343	121	123.32	124.26	126.47	0.105458	14.29	24.93	14.24	1.82	9.99	12.22	
Main Channel		1011.329	50 YR	60% PR	538	121	124.15	125.24	127.79	0.076303	15.45	37.39	15.7	1.64	9.42	12.68	
Main Channel		1011.329	100 YR	60% PR	672	121	124.73	125.85	128.5	0.061887	15.8	46.76	16.71	1.53	8.75	12.44	
Main Channel		1008.253	10 YR	60% PR	343	121	123.47	124.21	126.01	0.078559	12.87	28.05	15.03	1.57	7.83	9.7	
Main Channel		1008.253	50 YR	60% PR	538	121	124.24	125.16	127.44	0.065963	14.55	40.1	16.26	1.52	8.35	11.17	
Main Channel		1008.253	100 YR	60% PR	672	121	124.78	125.76	128.23	0.056989	15.17	49.02	17.11	1.45	8.19	11.46	
Main Channel		1007	10 YR	EX	343	120.72	124.44		125.2	0.0072	7.19	57.58	18.78	0.67	1.13	1.55	
Main Channel		1007	50 YR	EX	538	120.72	125.36		126.5	0.008032	8.87	75.22	19.67	0.74	1.51	2.18	
Main Channel		1007	100 YR	EX	672	120.72	125.89		127.29	0.008567	9.86	85.75	20.46	0.78	1.74	2.6	
Main Channel		1006	10 YR	60% PR	343	120.88	123.39	124.08	125.8	0.072615	12.52	28.55	14.97	1.52	7.46	9.13	

Main Channel			1006	50 YR	60% PR	538	120.88	124.13	125.03	127.28	0.064172	14.39	40.05	16.12	1.5	8.25	10.9
Main Channel			1006	100 YR	60% PR	672	120.88	124.66	125.63	128.08	0.056199	15.07	48.7	16.97	1.45	8.15	11.3
Main Channel			1003	10 YR	60% PR	343	120.58	123.26	123.88	125.53	0.064632	12.19	29.61	15.07	1.45	6.83	8.52
Main Channel			1003	50 YR	60% PR	538	120.58	123.99	124.84	127.03	0.059279	14.16	41.18	16.24	1.46	7.78	10.43
Main Channel			1003	100 YR	60% PR	672	120.58	124.48	125.44	127.9	0.054835	15.07	49.21	17.01	1.44	8.03	11.24
Main Channel			996	10 YR	EX	343	120.97	124.36		125.11	0.009206	6.95	51.08	18.94	0.7	1.32	1.57
Main Channel			996	10 YR	60% PR	343	120	122.57	123.28	125.06	0.073804	12.75	28.51	15.13	1.53	7.53	9.41
Main Channel			996	50 YR	EX	538	120.97	125.36		126.37	0.00866	8.14	70.76	20.66	0.72	1.52	1.95
Main Channel			996	50 YR	60% PR	538	120	123.29	124.24	126.59	0.067307	14.77	39.98	16.53	1.53	8.55	11.47
Main Channel			996	100 YR	EX	672	120.97	125.95		127.13	0.008463	8.82	83.29	21.79	0.72	1.64	2.19
Main Channel			996	100 YR	60% PR	672	120	123.76	124.86	127.47	0.062382	15.72	47.95	17.43	1.51	8.86	12.37
Main Channel	990.8881	23+44.00		10 YR	60% PR	343	119.4	124.2	122.43	124.56	0.00444	4.96	78.44	22.87	0.43	0.8	1.13
Main Channel	990.8881	23+44.00		50 YR	60% PR	538	119.4	125.33	123.27	125.86	0.004765	6.01	105.76	25.42	0.46	1.02	1.54
Main Channel	990.8881	23+44.00		100 YR	60% PR	672	119.4	125.99	123.8	126.63	0.004914	6.61	123.17	26.75	0.47	1.14	1.78
Main Channel		983.4701	10 YR	60% PR	343	119	124.34			124.48	0.001439	3.03	120.75	29.41	0.25	0.32	0.41
Main Channel		983.4701	50 YR	60% PR	538	119	125.53			125.74	0.001627	3.75	156.91	31.26	0.27	0.43	0.58
Main Channel		983.4701	100 YR	60% PR	672	119	126.23			126.49	0.001719	4.15	179.3	32.37	0.29	0.49	0.68
Main Channel	981	23+44.00		10 YR	EX	343	120.69	124.42		124.93	0.005705	5.78	65.67	25.2	0.58	0.85	1.05
Main Channel	981	23+44.00		50 YR	EX	538	120.69	125.51		126.17	0.004976	6.61	94.11	26.99	0.57	0.96	1.24
Main Channel	981	23+44.00		100 YR	EX	672	120.69	126.16		126.91	0.004722	7.09	112.04	28.06	0.57	1.02	1.36
Main Channel		974	10 YR	60% PR	343	119	124.21			124.45	0.002621	3.93	95.91	25.49	0.32	0.53	0.7
Main Channel		974	50 YR	60% PR	538	119	125.35			125.71	0.002977	4.87	126.29	27.88	0.36	0.71	1
Main Channel		974	100 YR	60% PR	672	119	126.02			126.45	0.003149	5.39	145.42	29.19	0.38	0.82	1.18
Main Channel		964	10 YR	EX	343	120.47	123.51	123.51	124.71	0.01749		9.24	47.97	22.52	1	2.17	2.82
Main Channel		964	50 YR	EX	538	120.47	124.37	124.37	125.94	0.01606		10.68	68.28	24.78	1.01	2.53	3.43
Main Channel		964	100 YR	EX	672	120.47	124.9	124.9	126.68	0.015244		11.44	81.84	26.21	1	2.7	3.75
Main Channel		962	10 YR	60% PR	343	119.97	123.07	123.07	124.28	0.02745		9.29	45.95	21.25	0.99	3.42	4.57
Main Channel		962	50 YR	60% PR	538	119.97	123.95	123.95	125.51	0.025167		10.69	65.75	23.79	0.99	3.95	5.53
Main Channel		962	100 YR	60% PR	672	119.97	124.49	124.49	126.24	0.023761		11.41	79.19	25.45	0.98	4.17	6.01
Main Channel		953	10 YR	EX	343	120.58	123.22	123.22	124.29	0.017815		8.42	44.53	23.07	0.99	2.03	2.46
Main Channel		953	50 YR	EX	538	120.58	123.98	123.98	125.4	0.016074		9.73	63.01	25.21	0.99	2.34	2.98
Main Channel		953	100 YR	EX	672	120.58	124.45	124.45	126.07	0.015268		10.43	75.1	26.51	0.99	2.5	3.27
Main Channel	925	24+00.00		10 YR	EX	343	119.53	122.4	122.4	123.55	0.013834	8.64	42.42	20.5	0.99	1.65	1.97
Main Channel	925	24+00.00		10 YR	60% PR	343	119.53	122.34	122.4	123.55	0.015085	8.87	41.21	20.37	1.03	1.77	2.09
Main Channel	925	24+00.00		50 YR	EX	538	119.53	123.21	123.21	124.73	0.01247	9.99	59.73	22.34	0.99	1.89	2.38
Main Channel	925	24+00.00		50 YR	60% PR	538	119.53	122.98	123.21	124.76	0.016121	10.8	54.67	21.81	1.11	2.3	2.86
Main Channel	925	24+00.00		100 YR	EX	672	119.53	123.7	123.7	125.44	0.011839	10.73	71.06	23.46	0.99	2.01	2.62
Main Channel	925	24+00.00		100 YR	60% PR	672	119.53	123.39	123.7	125.5	0.016066	11.77	63.84	22.75	1.14	2.54	3.25
Main Channel	768	25+57.00		10 YR	EX	343	118	121.19		121.69	0.004378	5.67	62.87	23.5	0.58	0.67	0.78
Main Channel	768	25+57.00		10 YR	60% PR	343	118	121.19	120.27	121.69	0.004378	5.67	62.87	23.5	0.58	0.67	0.78
Main Channel	768	25+57.00		50 YR	EX	538	118	122.24		122.9	0.003912	6.54	89.68	28.5	0.57	0.7	0.94
Main Channel	768	25+57.00		50 YR	60% PR	538	118	122.24	121	122.9	0.003912	6.54	89.68	28.5	0.57	0.7	0.94
Main Channel	768	25+57.00		100 YR	EX	672	118	123.72		124.24	0.002071	5.85	139.33	38.19	0.44	0.43	0.68
Main Channel	768	25+57.00		100 YR	60% PR	672	118	123.72	121.46	124.24	0.002071	5.85	139.33	38.19	0.44	0.43	0.68
Main Channel	715	26+10.00		10 YR	EX	343	117	120.85		121.45	0.004246	6.3	63.13	21.89	0.6	0.69	0.91
Main Channel	715	26+10.00		10 YR	60% PR	343	117	120.85		121.45	0.004246	6.3	63.13	21.89	0.6	0.69	0.91
Main Channel	715	26+10.00		50 YR	EX	538	117	121.75	120.73	122.64	0.004766	7.77	83.5	23.79	0.66	0.93	1.28
Main Channel	715	26+10.00		50 YR	60% PR	538	117	121.75	120.73	122.64	0.004766	7.77	83.5	23.79	0.66	0.93	1.28
Main Channel	715	26+10.00		100 YR	EX	672	117	123.4		124.1	0.002439	6.89	125.89	27.3	0.5	0.6	0.91
Main Channel	715	26+10.00		100 YR	60% PR	672	117	123.4		124.1	0.002439	6.89	125.89	27.3	0.5	0.6	0.91
Main Channel	576	27+49.00		10 YR	EX	343	116.94	119.3	119.3	120.42	0.01371	8.54	42.84	21.15	0.99	1.6	1.93
Main Channel	576	27+49.00		10 YR	60% PR	343	116.94	119.3	119.3	120.42	0.01371	8.54	42.84	21.15	0.99	1.6	1.93
Main Channel	576	27+49.00		50 YR	EX	538	116.94	120.1	120.1	121.58	0.01232	9.86	60.39	23.07	0.99	1.82	2.33
Main Channel	576	27+49.00		50 YR	60% PR	538	116.94	120.1	120.1	121.58	0.01232	9.86	60.39	23.07	0.99	1.82	2.33
Main Channel	576	27+49.00		100 YR	EX	672	116.94	123.25		123.76	0.00172	5.89	149.66	38.97	0.42	0.37	0.66
Main Channel	576	27+49.00		100 YR	60% PR	672	116.94	123.25		123.76	0.00172	5.89	149.66	38.97	0.42	0.37	0.66
Main Channel	525	28+00.00		10 YR	EX	343	116	118.36	118.26	119.27	0.012454	7.68	45.87	23.27	0.93	1.43	1.6
Main Channel	525	28+00.00		10 YR	60% PR	343	116	117.9	118.26	119.4	0.028495	9.85	35.27	22.38	1.35	2.66	2.87
Main Channel	525	28+00.00		50 YR	EX	538	116	120.03		120.71	0.004327	6.67	87.5	26.87	0.6	0.79	1
Main Channel	525	28+00.00		50 YR	60% PR	538	116	120.03	118.97	120.71	0.004327	6.67	87.5	26.87	0.6	0.79	1
Main Channel	525	28+00.00		100 YR	EX	672	116	123.39		123.63	0.000696	4.08	250.87	73.07	0.27	0.14	0.3
Main Channel	525	28+00.00		100 YR	60% PR	672	116	123.39		123.63	0.000696	4.08	250.87	73.07	0.27	0.14	0.3
Main Channel	416	29+09.00		10 YR	EX	343	114.37	117.34	116.93	118.18	0.007978	7.42	50.88	24.95	0.79	0.94	1.36
Main Channel	416	29+09.00		10 YR	60% PR	343	114.37	117.34	116.93	118.18	0.007978	7.42	50.88	24.95	0.79	0.94	1.36
Main Channel	416	29+09.00		50 YR	EX	538	114.37	119.97		120.35	0.001652	5.28	175.32	73.58	0.4	0.24	0.55

Main Channel	416	29+09.00	50 YR	60% PR	538	114.37	119.97		120.35	0.001652	5.28	175.32	73.58	0.4	0.24	0.55
Main Channel	416	29+09.00	100 YR	EX	672	114.37	123.44		123.54	0.000279	3.02	539.43	125.73	0.18	0.07	0.15
Main Channel	416	29+09.00	100 YR	60% PR	672	114.37	123.44		123.54	0.000279	3.02	539.43	125.73	0.18	0.07	0.15
Main Channel	351	29+75.01	10 YR	EX	343	113.97	117.23		117.67	0.00455	5.36	67.22	32.08	0.56	0.55	0.73
Main Channel	351	29+75.01	10 YR	60% PR	343	113.97	117.23		117.67	0.00455	5.36	67.22	32.08	0.56	0.55	0.73
Main Channel	351	29+75.01	50 YR	EX	538	113.97	120.04		120.21	0.000818	3.61	239.49	73.99	0.27	0.16	0.26
Main Channel	351	29+75.01	50 YR	60% PR	538	113.97	120.04		120.21	0.000818	3.61	239.49	73.99	0.27	0.16	0.26
Main Channel	351	29+75.01	100 YR	EX	672	113.97	123.45		123.51	0.000195	2.41	519.48	90.02	0.14	0.07	0.1
Main Channel	351	29+75.01	100 YR	60% PR	672	113.97	123.45		123.51	0.000195	2.41	519.48	90.02	0.14	0.07	0.1
Main Channel	311	30+13.88	10 YR	EX	343	112.01	117.33	114.71	117.45	0.000694	2.78	128.42	37.31	0.24	0.14	0.17
Main Channel	311	30+13.88	10 YR	60% PR	343	112.01	117.33	114.71	117.45	0.000694	2.78	128.42	37.31	0.24	0.14	0.17
Main Channel	311	30+13.88	50 YR	EX	538	112.01	120.06	115.36	120.16	0.000294	2.55	247.17	50.01	0.17	0.09	0.12
Main Channel	311	30+13.88	50 YR	60% PR	538	112.01	120.06	115.36	120.16	0.000294	2.55	247.17	50.01	0.17	0.09	0.12
Main Channel	311	30+13.88	100 YR	EX	672	112.01	123.44	115.74	123.5	0.000109	2.03	444.88	66.36	0.11	0.04	0.07
Main Channel	311	30+13.88	100 YR	60% PR	672	112.01	123.44	115.74	123.5	0.000109	2.03	444.88	66.36	0.11	0.04	0.07
Main Channel			261		Culvert											
Main Channel	205	31+20.09	10 YR	EX	343	111.7	114.25	114.25	115.1	0.015778	7.42	46.24	27.45	1.01	1.62	1.62
Main Channel	205	31+20.09	10 YR	60% PR	343	111.7	114.25	114.25	115.1	0.015778	7.42	46.24	27.45	1.01	1.62	1.62
Main Channel	205	31+20.09	50 YR	EX	538	111.7	114.87	114.87	115.97	0.014359	8.41	64.43	30.91	1	1.81	1.9
Main Channel	205	31+20.09	50 YR	60% PR	538	111.7	114.87	114.87	115.97	0.014359	8.41	64.43	30.91	1	1.81	1.9
Main Channel	205	31+20.09	100 YR	EX	672	111.7	115.26	115.26	116.48	0.013537	8.88	76.87	33.04	0.99	1.9	2.04
Main Channel	205	31+20.09	100 YR	60% PR	672	111.7	115.26	115.26	116.48	0.013537	8.88	76.87	33.04	0.99	1.9	2.04
Main Channel	125	32+00.00	10 YR	EX	343	110.36	113.14	112.94	113.88	0.011447	6.89	49.78	25.67	0.87	1.34	1.34
Main Channel	125	32+00.00	10 YR	60% PR	343	110.36	113.14	112.94	113.88	0.011441	6.89	49.79	25.67	0.87	1.33	1.33
Main Channel	125	32+00.00	50 YR	EX	538	110.36	113.64	113.64	114.76	0.014543	8.49	63.36	28.5	1	1.94	1.94
Main Channel	125	32+00.00	50 YR	60% PR	538	110.36	113.59	113.64	114.76	0.015494	8.69	61.92	28.23	1.03	2.04	2.04
Main Channel	125	32+00.00	100 YR	EX	672	110.36	114.02	114.02	115.29	0.013816	9.05	74.44	30.63	1	2.01	2.11
Main Channel	125	32+00.00	100 YR	60% PR	672	110.36	113.94	114.01	115.29	0.015492	9.34	72	30.16	1.05	2.21	2.27
Main Channel	25	33+00.00	10 YR	EX	343	109	111.64	111.64	112.5	0.015923	7.43	46.17	27.47	1.01	1.62	1.62
Main Channel	25	33+00.00	10 YR	60% PR	343	109	111.64	111.64	112.5	0.01593	7.43	46.16	27.47	1.01	1.62	1.62
Main Channel	25	33+00.00	50 YR	EX	538	109	112.32	112.32	113.31	0.01301	8.02	72.85	47.01	0.97	1.23	1.68
Main Channel	25	33+00.00	50 YR	60% PR	538	109	112.28	112.32	113.31	0.014581	8.21	70.68	46.46	1	1.36	1.84
Main Channel	25	33+00.00	100 YR	EX	672	109	112.67	112.67	113.77	0.012218	8.52	89.73	51.65	0.96	1.3	1.83
Main Channel	25	33+00.00	100 YR	60% PR	672	109	112.59	112.67	113.77	0.013946	8.81	85.88	50.71	1	1.45	2.03

Appendix B: Floodplain Exhibits

C:\Users\Barnes\OneDrive - AECOM\Taylor Run Stream Stabilization - General\600 CAD\10 CAD\20 - SHEETS\60742358-SHT-20-C-019_FLOODPLAIN EXHIBITS.dwg Plotted: 5/13/2026 4:44 PM by Barnesel Seal



- LEGEND
- EXISTING CROSS SECTION

EXISTING 100-YEAR WATER SURFACE ELEVATION

PROPOSED CROSS SECTION

PROPOSED 100-YEAR WATER SURFACE ELEVATION

SOURCE DATA INFORMATION
H.D. = VCS NAD 83
V.D. = NAVD88
GIS INFO = CITY & WSSI DIG. DATA

0

50'

100'

Scale 1"=50'

NOT FOR CONSTRUCTION



CITY OF ALEXANDRIA, VIRGINIA

DEPARTMENT OF PROJECT IMPLEMENTATION

301 KING STREET, ROOM 4100

ALEXANDRIA, VIRGINIA 22314

REVISIONS	
DATE	DESCRIPTION

SEAL:

100-YEAR FLOODPLAIN EXHIBITS

12420 MILESTONE CENTER DRIVE, SUITE 150
GERMANTOWN, MD 20876
(301) 250-2934

DRAWING:

FP-01

SCALE:

1:50

SHEET:

55 OF 55

ALEXANDRIA PROJECT NO.:

23086

DATE OF PLAN ISSUANCE:

60742359

CONSULTANT PROJECT ID.:

10/2023

DESIGNED BY:

SB, TN DATE: 10/2023

DRAWN BY:

SB, TN DATE: 10/2023

CHECKED BY:

BA DATE: 10/2023

APPROVED BY:

BA DATE: 10/2023

AECOM
12420 Milestone Center Drive
Suite 150
Germantown, Maryland 20876
aecom.com