

## HYDROLOGY REPORT

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Design discharges for the  $Q_{1.005}$ ,  $Q_{1.01}$ ,  $Q_{1.053}$ ,  $Q_{1.111}$ ,  $Q_{1.25}$ ,  $Q_{1.5}$ ,  $Q_2$ ,  $Q_{2.33}$ ,  $Q_5$ ,  $Q_{10}$ ,  $Q_{25}$ ,  $Q_{50}$ ,  $Q_{100}$ ,  $Q_{200}$  and  $Q_{500}$  discharges (derived using Swift River USGS gage data) were provided by the Hydraulics Section of the Maine DOT (August 1, 2017):

SUMMARY		
Drainage Area	~124	mi <sup>2</sup>
Q1.005	1,879	ft <sup>3</sup> /s
Q1.01	2,148	ft <sup>3</sup> /s
Q1.053	3,099	ft <sup>3</sup> /s
Q1.111	3,771	ft <sup>3</sup> /s
Q1.25	4,781	ft <sup>3</sup> /s
Q1.5	5,973	ft <sup>3</sup> /s
Q2	7,545	ft <sup>3</sup> /s
Q2.33	8,311	ft <sup>3</sup> /s
Q5	11,924	ft <sup>3</sup> /s
Q10	15,173	ft <sup>3</sup> /s
Q25	19,633	ft <sup>3</sup> /s
Q50	23,203	ft <sup>3</sup> /s
Q100	26,991	ft <sup>3</sup> /s
Q200	30,979	ft <sup>3</sup> /s
Q500	36,665	ft <sup>3</sup> /s

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Reported by: RMH  
Date: September, 2017

MaineDOT provided discharges were compared to the discharges included in the 1980 and updated countywide July 2009 FEMA Flood Insurance Study (FEMA-FIS):

FEMA-FIS Summary		
Drainage Area	124	mi <sup>2</sup>
Q10	14,600	ft <sup>3</sup> /s
Q50	24,400	ft <sup>3</sup> /s
Q100	29,500	ft <sup>3</sup> /s
Q500	43,800	ft <sup>3</sup> /s

The FEMA-FIS reported discharges are reported at the confluence with the Androscoggin River, which is approximately 550 feet downstream of the bridge. The MaineDOT provided discharges vary from the FEMA-FIS discharges by +4%, -5%, -9%, and -17% for the Q10, Q50, regulatory Q100, and Q500 discharges, respectively. These differences are not anticipated to significantly influence the results of the hydraulic analysis and the MaineDOT provided discharges are used for the hydraulic analysis in this study.

Note: All elevations based on North American Vertical Datum (NAVD) of 1988.

## HYDRAULIC REPORT

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### **Existing Conditions:**

T.Y. Lin International conducted site visits on November 17, 2016 and August 12, 2017 to note site conditions and observe channel flow characteristics. The Red Bridge crosses the Swift River approximately 550 feet upstream of the confluence with the Androscoggin River. Water surface elevations at Red Bridge are heavily influenced by the Androscoggin River. All flood stages on the Androscoggin River produce backwater influences at Red Bridge. The watershed area of the Swift River is 124 square miles, and is mostly steep gradient, rural, and mostly forested. The watershed area of the Androscoggin River above the confluence with the Swift River is 124 square miles, and is mountainous, mostly rural, and mostly forested. Several large lakes are located at the headwaters of the Androscoggin River drainage. The channel bed through the reach of interest is generally sand. The banks are generally steep, the channel is incised, and overbanks are mostly developed with some narrow bands of tree growth along the immediate banks. The west (Rumford) overbank is mostly maintained grassed local recreational areas both upstream and downstream of the crossing. The east (Mexico) overbank is a heavily developed, mixed residential and commercial area within the floodplain. The heavily forested watershed and upstream flood plain offers abundant material for floating debris. The crossing is on a slight bend in the river that extends from the confluence with the Androscoggin River to upstream of the bridge about 300 feet. The bed slope through the reach of interest is highly variable. The average bed slope through the reach of interest is approximately 0.007 ft./ft. The bed generally dips upstream and through the existing bridge and rises immediately downstream of the existing bridge. The bed slope immediately upstream of the bridge is approximately 0.024 ft/ft and the bed slope immediately downstream is flat.

The existing bridge is a two-span steel through-girder bridge supported on an intermediate concrete mass pier supported on a timber pile foundation located near the east edge of the channel. The pier is skewed 15° and is not well aligned with the channel flow. The abutments are normal to the roadway and generally parallel to the channel. The west full height abutment is located near the bottom of the channel bank slope. The east abutment is set back behind the top of the channel bank approximately 35 feet and within the floodplain. The central portion of both abutments are granite masonry and both abutments are widened with mass concrete gravity walls supported on steel h-pile foundations. The channel thalweg runs along the bottom of the westerly channel bank.

The 1980 and updated countywide July 2009 FEMA Flood Insurance Study (FEMA-FIS) indicates flooding in the overbank areas near the bridge occur and are a result of Androscoggin River flooding. The FEMA-FIS also reports the Flood of Record for the Androscoggin River to

have occurred in March 1936 with an estimated recurrence interval of 400 years. Other major floods and recurrence intervals reported were May 1893 (12-year event), April 1895 (90-year), March 1896 (13-year), November 1927 (13-year), March 1953 (70-year), and October 1959 (15-year).

A review of the USGS Open-File Report 92-141 "Flood of April 1987 in Maine" indicates the 1987 Flood had an estimated discharge of 63,900 cfs at the gaging station located 1000 feet above the mouth of the Swift River and an estimated exceedance probability of less than 0.010 (estimated recurrence interval greater than 100 years). The FEMA-FIS reported discharges for a 100-year event is 62,500 cfs and for a 500-year event is 80,000 cfs. The reported 1987 flood-crest stage elevation for the gage station is reported to be 442.7 ft (NAVD 88). This elevation is consistent with the water surface elevations reported in the FEMA-FIS of approximately 440.6 (100-year) and 445.0 (500-year) for the same location.

### **Proposed Conditions:**

Two proposed bridge opening configurations are considered in the hydraulic analysis study. The proposed replacement bridge configurations follow the same horizontal alignment as the existing bridge and are slightly higher than the existing roadway profile at the bridge location. The proposed bridge is similar in overall width to the existing structure. Bridge replacement Alternative 1 will utilize a 153 ft. single-span bridge with vertical wall abutments. Bridge replacement Alternative 2 will utilize a 198 ft. two-span bridge supported on an intermediate pier and integral abutments set near the top of 1.75H:1V sloped and riprapped roadway approach embankments. The proposed openings do not restrict the bank full width (approximately 125 ft.) of the Swift River and provide a bridge opening width equal to or greater than 1.2 times bank full width.

### **Hydraulic Modeling:**

The U.S. Army Corps of Engineers HEC-RAS River Analysis System computer program (ver. 4.1) was used to perform all of the hydraulic backwater calculations. All site survey and hydraulic model elevations are based on the vertical datum NAVD 1988. Model geometric data in the hydraulic model is based upon river channel cross sections extracted from the base plan survey. The modeled discharges included in this study are the Q10, Q50, Q100, and Q500.

The modeled reach of the Swift River extends upstream of the crossing 210 ft and downstream 370 ft. These limits are established to capture the influences of contraction and expansion of flow through the bridge opening for discharges up to the 500-year event. The FEMA-FIS for Rumford includes modeled water surface elevations for the Swift River for the 10-year, 50-year, 100-year, and 500-year events and includes the backwater influences of the Androscoggin River. To evaluate bridge clearance and high water surface elevations, boundary

conditions at the downstream limit are set to match the FEMA-FIS profile (including the influence of Androscoggin River backwater elevations) and the analysis is conducted for a subcritical flow regime. To evaluate maximum velocities through the bridge opening for the evaluation of scour, boundary conditions at the downstream limit are set to a normal low flow elevation (water elevation at the time of the project survey, which did not include significant Androscoggin River backwater influences) and the analysis is conducted for a subcritical flow regime.

The existing conditions model (ECM) was compared to the FEMA-FIS flood profiles for the Q10, Q50, Q100 and Q500 events. Elevations for the FEMA-FIS were scaled from the water surface profile plots (scale: 1" = 20 ft) included in the FEMA-FIS and are considered accurate to the nearest 0.5 ft. In addition to the starting water surface elevation at the downstream limit of the modeled reach, comparative water surface elevations were scaled from the FEMA-FIS profiles at the immediate upstream cross section (River Station 1040) and at the fully expanded flow cross section located at the upstream limit of the modeled reach (RS 1210). Water surface elevations for all modeled discharges and at both upstream locations matched the FEMA-FIS elevations within the measurable accuracy of the measured FEMA-FIS plots (+/- 0.5 ft), except the 10-year event discharge at RS 1210 (difference of 0.7 ft). The modeled river section captures greater detail of the stream section within the area of the bridge than the FEMA-FIS. This is evident by comparing the FEMA-FIS river channel bottom profile to the modeled river channel profile. The results of the ECM are in good agreement with the FEMA-FIS and the model is considered to be well-calibrated. See the Existing Conditions Model Table for a comparison of results.

Existing Conditions Model Table – Water Surface Elevations (WSE) in feet

<b>Q10</b>		
River Station	<b>FEMA – FIS*</b>	<b>ECM</b>
1210 U/S Limit	434.3	435.0
1040 U/S Bridge	434.3	434.4
630 D/S Limit	434.3	434.3
<b>Q50</b>		
River Station	<b>FEMA - FIS</b>	<b>ECM</b>
1210 U/S Limit	439.0	439.2
1040 U/S Bridge	438.8	438.7
630 D/S Limit	438.3	438.3
<b>Q100</b>		
River Station	<b>FEMA - FIS</b>	<b>ECM</b>
1210 U/S Limit	440.0	440.4
1040 U/S Bridge	439.8	440.1
630 D/S Limit	439.7	439.7
<b>Q500</b>		
River Station	<b>FEMA - FIS</b>	<b>ECM</b>
1210 U/S Limit	443.7	444.1
1040 U/S Bridge	443.7	444.0
630 D/S Limit	443.7	443.7

\*Elevations scaled from FEMA-FIS water surface profile plot with 1" = 20' vertical grid.

Elevations in *Italic* taken from FEMA-FIS profile and used for model downstream boundary condition starting WSE.

Initial runs showed that the flow regime through the entire modeled reach are governed by subcritical flow. As a result, the starting tailwater conditions highly influence the resulting profile. The existing conditions model also showed that there is significant flooding of the west (Rumford) overbank at discharges below the 10-year event, the Rumford roadway approach is overtopped by the an event less than a 50-year event, and the roadway freeboard for the 10-year event is 1.0 ft. Flooding in the east (Mexico) channel overbank is less extensive, but also occurs at discharges below the 10-year event. The Mexico approach roadway is also overtopped by an event less than a 50-year event and roadway freeboard for the 10-year event is 1.9 ft.

Proposed conditions hydraulic models were developed for two alternative proposed replacement bridge configurations to compare hydraulic performance in terms of upstream

headwater influence and freeboard through the bridge. The water surface profile elevations for the 100-Year flood event at River Station 1040 (R 1040) immediately upstream of the crossing and at the upstream modeled reach limit (RS1210) are compared against the existing conditions. Results, as seen within the Proposed Alternatives Table below, indicated that the proposed bridge replacement configurations are not expected to negatively impact the upstream floodplain. Estimated water surface profiles in the proposed condition are equal to or lower than the profile in the existing condition, indicating that the proposed bridge span is not expected to further constrict flows or raise the upstream flood limits.

Proposed Alternatives Table –WSE in feet

<b>Q10</b>			
River Station	<b>ECM</b>	<b>198' Two Span</b>	<b>155' Span</b>
1210 U/S Limit	435.0	435.0	435.0
1040 U/S Bridge	434.4	434.4	434.4
630 D/S Limit	434.3	434.3	434.3
<b>Q50</b>			
River Station	<b>ECM</b>	<b>198' Two Span</b>	<b>155' Span</b>
1210 U/S Limit	439.2	439.1	439.1
1040 U/S Bridge	438.7	438.6	438.7
630 D/S Limit	438.3	438.3	438.3
<b>Q100</b>			
River Station	<b>ECM</b>	<b>198' Two Span</b>	<b>155' Span</b>
1210 U/S Limit	440.4	440.4	440.4
1040 U/S Bridge	440.1	440.1	440.1
630 D/S Limit	439.7	439.7	439.7
<b>Q500</b>			
River Station	<b>ECM</b>	<b>198' Two Span</b>	<b>155' Span</b>
1210 U/S Limit	444.1	444.1	444.1
1040 U/S Bridge	444.0	444.0	444.0
630 D/S Limit	443.7	443.7	443.7

Through iteration of the model, it was determined that a slightly shorter simple span alternative with vertical wall abutments would provide an adequate waterway opening that would not impact the upstream existing conditions WSE. The 1.2 times bank full width of the main river channel is estimated to be 150 ft. Bank full width of the Swift River in the area of the bridge was derived considering the limitation of the terrestrial vegetation line that occurs near

elevation 425 throughout the survey limits (approximately 300 ft upstream and downstream). Sections were measured at approximate 100 ft spaces and averaged 125 ft. This dimension was compared to scaled satellite images over this same range and extending further upstream (to 800 ft upstream) with similar results. Sections located further upstream away from the influence of the backwater of the Androscoggin River scaled slightly shorter (bank full width of 120 ft). Reducing the span below 155 ft was not further pursued because it would require moving the west abutment from its current location further into the channel in order to maintain the trail pathway in front of the proposed east abutment.

The hydraulic performance of the replacement bridge configurations were analyzed and compared to the existing bridge crossing. The existing and proposed bridges would be perched above the approach roadways. The proposed bridges were modeled to maintain the existing bridge low chord (El. 439.2) which provides clearance above the 50-year event. Providing additional clearance is not considered beneficial or required for the perched bridge configuration. Raising the grades to provide additional clearance would require extensive approach roadway reconstruction and would result in significant right-of-way impacts to the adjacent properties, roadways, and utilities. The existing and proposed bridges provide adequate waterway openings and hydraulic design clearance. The proposed bridges will provide a bridge opening slightly larger than the existing bridge opening, and will have no adverse influence on water surface elevations or velocities up to the 500-year event. River flow conditions for the proposed bridges are not significantly different than the existing conditions. The recommended bridge replacement configuration, Alternative 1 (155 ft Single Span), closely maintains the existing conditions flow profiles due to the limited changes to the channel section at the bridge crossing. Water surface elevations and other hydraulic flow data for the existing and proposed condition are provided in Appendix E.

The recommended bridge span configuration, Alternative 1 (155 ft Single Span), provides 0.8 feet of freeboard clearance between the proposed bridge lowest low chord and the 50-Year flood water surface elevation of 438.4 and provides adequate vertical clearances below the proposed bridge. Results of hydraulic analysis computations are included in Appendix E.

### **Scour Analysis:**

Scour analysis prepared for the replacement of Red Bridge includes the following scour analysis computations for the  $Q_{100}$  and  $Q_{500}$  year events:

- Contraction Scour
- Abutment Scour

The replacement bridge will be founded on steel H-piles to bedrock or practical refusal with estimated embedment lengths of 26' and 27' respectively for the west and east abutments. Abutment slopes will be protected using heavy riprap.

The existing riverbed material consists primarily of a deep layer of highly scourable alluvium sand with little gravel and silt. Computed contraction scour for the replacement bridge is 7.9 ft and 18.1 ft respectively for the  $Q_{100}$  and  $Q_{500}$  events. Computed combined local abutment and contraction scour for the replacement bridge is 19.7 ft and to bedrock respectively for the  $Q_{100}$  and  $Q_{500}$  events. Properly designed heavy riprap should be considered adequate protection for local abutment and contraction scour for the pile supported abutments.

**Recommendations:**

Heavy riprap revetment protection should extend to 2 ft. above the  $Q_{50}$  water surface elevation to elevation 440.7 on all new fill slopes at the bridge abutments. The revetment should extend a minimum of 25 ft horizontally from the proposed abutment and approach slope toe points in accordance with HEC-23 recommendations and should extend on the downstream side a minimum of 25 ft. along the roadway approach embankment. Geotextile fabric shall be placed underneath the heavy riprap revetment.

### SUMMARY

		Existing Structure	Recommended Structure	198', 2-Span Continuous Steel
		165.5' Span through Girder	155' Single Span Steel	
Total Area of Waterway Opening	ft <sup>2</sup>	2685	2826	2927
Headwater elevation @ Q <sub>10</sub>	ft	434.4	434.4	434.4
Headwater elevation @ Q <sub>50</sub>	ft	438.7	438.7	438.6
Headwater elevation @ Q <sub>100</sub>	ft	440.1	440.1	440.1
Headwater elevation @ Q <sub>500</sub>	ft	444.0	444.0	444.0
Freeboard @ Q <sub>50</sub>	ft	0.5	0.5	0.5
Freeboard @ Q <sub>100</sub>	ft	n/a	n/a	n/a
Flood Of Record (March 1936) Estimated Q <sub>400</sub> , Elevation Unknown				
Outlet Velocity @ Q <sub>1.1</sub>	ft/s	7.3	5.6	8.0
Outlet Velocity @ Q <sub>10</sub>	ft/s	11.6	9.5	11.5
Outlet Velocity @ Q <sub>50</sub>	ft/s	13.9	11.7	13.3
Outlet Velocity @ Q <sub>100</sub>	ft/s	15.4	12.9	14.5
Outlet Velocity @ Q <sub>500</sub>	ft/s	18.4	15.8	16.7

Reported by: Rick Hebert  
Date: September 13, 2017

Note: All elevations based on North American Vertical Datum (NAVD) of 1988.

# Appendix E

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## Hydraulics Data

Existing 165' Span - High Tailwater

HEC-RAS Plan: Exist-High River: Stream Reach: Reach

Reach	River Sta	Profile	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
Reach	1210.000	Q10	15173.00	419.22	434.95	427.24	435.48	0.000493	6.00	3056.12	1043.10	0.29
Reach	1210.000	Q50	23203.00	419.22	439.18	429.39	439.37	0.000181	4.36	8893.49	1405.71	0.18
Reach	1210.000	Q100	26991.00	419.22	440.40	430.32	440.58	0.000158	4.26	10684.74	1496.77	0.17
Reach	1210.000	Q500	36665.00	419.22	444.09	433.03	444.21	0.000093	3.69	16421.66	1613.70	0.14
Reach	1120.000	Q10	15173.00	418.07	434.60	427.52	435.40	0.000728	7.36	2331.80	830.23	0.35
Reach	1120.000	Q50	23203.00	418.07	439.08	430.24	439.34	0.000241	5.10	7507.10	1258.37	0.21
Reach	1120.000	Q100	26991.00	418.07	440.32	431.34	440.55	0.000210	4.97	9154.76	1393.75	0.20
Reach	1120.000	Q500	36665.00	418.07	444.05	434.41	444.20	0.000114	4.11	14645.89	1529.86	0.15
Reach	1040.000	Q10	15173.00	416.11	434.36	427.89	435.33	0.000869	8.18	2146.90	442.38	0.38
Reach	1040.000	Q50	23203.00	416.11	438.73	430.96	439.29	0.000470	7.16	5819.75	1535.57	0.29
Reach	1040.000	Q100	26991.00	416.11	440.14	432.02	440.52	0.000334	6.33	8190.25	1798.08	0.25
Reach	1040.000	Q500	36665.00	416.11	444.04	434.43	444.19	0.000127	4.39	15409.38	1874.51	0.16
Reach	1000		Bridge									
Reach	955.0000	Q10	15173.00	417.88	434.34	427.28	435.20	0.000760	7.60	2199.96	741.63	0.36
Reach	955.0000	Q50	23203.00	417.88	438.79	430.24	439.00	0.000200	4.69	8178.48	1493.40	0.19
Reach	955.0000	Q100	26991.00	417.88	440.20	431.37	440.37	0.000163	4.45	10519.70	1802.42	0.18
Reach	955.0000	Q500	36665.00	417.88	444.05	433.73	444.15	0.000080	3.50	17658.81	1874.62	0.13
Reach	880.0000	Q10	15173.00	418.01	434.38	427.48	435.11	0.000661	7.00	2563.50	859.93	0.34
Reach	880.0000	Q50	23203.00	418.01	438.80	429.91	438.98	0.000160	4.18	8482.14	992.63	0.18
Reach	880.0000	Q100	26991.00	418.01	440.20	430.94	440.36	0.000140	4.11	10446.66	1923.58	0.17
Reach	880.0000	Q500	36665.00	418.01	444.05	433.29	444.15	0.000077	3.44	17946.88	1973.99	0.13
Reach	780.0000	Q10	15173.00	416.31	434.34	427.42	435.03	0.000610	7.05	3105.94	880.85	0.33
Reach	780.0000	Q50	23203.00	416.31	438.77	429.82	438.96	0.000174	4.50	9561.02	1619.46	0.18
Reach	780.0000	Q100	26991.00	416.31	440.19	431.00	440.34	0.000144	4.30	12163.82	2018.37	0.17
Reach	780.0000	Q500	36665.00	416.31	444.05	433.79	444.13	0.000075	3.49	20052.14	2067.79	0.13
Reach	630.0000	Q10	15173.00	415.15	434.30	427.20	434.93	0.000562	6.93	4044.85	755.79	0.32
Reach	630.0000	Q50	23203.00	415.15	438.30	430.35	438.88	0.000440	7.17	9011.40	1459.28	0.29
Reach	630.0000	Q100	26991.00	415.15	439.70	431.62	440.26	0.000416	7.31	11271.60	1769.52	0.29
Reach	630.0000	Q500	36665.00	415.15	443.70	433.52	444.08	0.000274	6.69	18790.10	1935.72	0.24

Existing 165' Span - High Tailwater

HEC-RAS Plan: Exist-High River: Stream Reach: Reach

Reach	River Sta	Profile	E.G. Elev (ft)	W.S. Elev (ft)	Vel Head (ft)	Frctn Loss (ft)	C & E Loss (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)
Reach	1210.000	Q10	435.48	434.95	0.53	0.05	0.03	691.33	14388.21	93.46	1043.10
Reach	1210.000	Q50	439.37	439.18	0.19	0.02	0.01	2562.44	13773.06	6867.51	1405.71
Reach	1210.000	Q100	440.58	440.40	0.17	0.02	0.01	3642.22	14391.68	8957.10	1496.77
Reach	1210.000	Q500	444.21	444.09	0.12	0.01	0.00	7428.57	14886.36	14350.07	1613.70
Reach	1120.000	Q10	435.40	434.60	0.81	0.06	0.02	675.55	14497.42	0.03	830.23
Reach	1120.000	Q50	439.34	439.08	0.26	0.03	0.03	2488.98	13321.59	7392.43	1258.37
Reach	1120.000	Q100	440.55	440.32	0.23	0.02	0.01	3644.83	13861.11	9485.06	1393.75
Reach	1120.000	Q500	444.20	444.05	0.14	0.01	0.00	7609.41	13644.49	15411.10	1529.86
Reach	1040.000	Q10	435.33	434.36	0.96	0.02	0.00	1314.26	13858.13	0.61	442.38
Reach	1040.000	Q50	439.29	438.73	0.56	0.01	0.03	3280.03	15747.39	4175.58	1535.57
Reach	1040.000	Q100	440.52	440.14	0.38	0.01	0.01	4935.91	14974.78	7080.31	1798.08
Reach	1040.000	Q500	444.19	444.04	0.14	0.00	0.00	10876.63	12357.30	13431.06	1874.51
Reach	1000	Bridge									
Reach	955.0000	Q10	435.20	434.34	0.86	0.05	0.04	719.18	14450.14	3.68	741.63
Reach	955.0000	Q50	439.00	438.79	0.21	0.01	0.01	1671.89	11766.94	9764.17	1493.40
Reach	955.0000	Q100	440.37	440.20	0.18	0.01	0.00	2850.69	12020.31	12120.00	1802.42
Reach	955.0000	Q500	444.15	444.05	0.10	0.01	0.00	7830.88	11300.07	17534.05	1874.62
Reach	880.0000	Q10	435.11	434.38	0.73	0.06	0.01	468.27	14563.33	141.39	859.93
Reach	880.0000	Q50	438.98	438.80	0.17	0.02	0.00	589.53	11605.05	11008.43	992.63
Reach	880.0000	Q100	440.36	440.20	0.16	0.02	0.00	837.98	12312.16	13840.87	1923.58
Reach	880.0000	Q500	444.15	444.05	0.10	0.01	0.00	4824.83	12376.31	19463.86	1973.99
Reach	780.0000	Q10	435.03	434.34	0.69	0.09	0.02	964.62	13549.89	658.49	880.85
Reach	780.0000	Q50	438.96	438.77	0.18	0.04	0.04	1651.11	11324.58	10227.31	1619.46
Reach	780.0000	Q100	440.34	440.19	0.16	0.04	0.04	2670.71	11633.90	12686.39	2018.37
Reach	780.0000	Q500	444.13	444.05	0.09	0.02	0.03	7337.29	11226.69	18101.02	2067.79
Reach	630.0000	Q10	434.93	434.30	0.63			919.26	12668.45	1585.29	755.79
Reach	630.0000	Q50	438.88	438.30	0.58			1526.91	16609.65	5066.44	1459.28
Reach	630.0000	Q100	440.26	439.70	0.56			2413.55	18172.32	6405.13	1769.52
Reach	630.0000	Q500	444.08	443.70	0.38			6943.62	19880.78	9840.60	1935.72

## Existing 165' Span - High Tailwater

Plan: Exist-High Stream Reach RS: 1210.000 Profile: Q10

E.G. Elev (ft)	435.48	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.53	Wt. n-Val.	0.048	0.030	0.080
W.S. Elev (ft)	434.95	Reach Len. (ft)	80.00	90.00	100.00
Crit W.S. (ft)	427.24	Flow Area (sq ft)	472.82	2397.22	186.08
E.G. Slope (ft/ft)	0.000493	Area (sq ft)	472.82	2397.22	913.64
Q Total (cfs)	15173.00	Flow (cfs)	691.33	14388.21	93.46
Top Width (ft)	1043.10	Top Width (ft)	198.57	179.64	664.89
Vel Total (ft/s)	4.96	Avg. Vel. (ft/s)	1.46	6.00	0.50
Max Chl Dpth (ft)	15.73	Hydr. Depth (ft)	2.38	13.34	1.33
Conv. Total (cfs)	683078.8	Conv. (cfs)	31123.1	647747.9	4207.7
Length Wtd. (ft)	89.58	Wetted Per. (ft)	198.78	188.14	140.19
Min Ch El (ft)	419.22	Shear (lb/sq ft)	0.07	0.39	0.04
Alpha	1.39	Stream Power (lb/ft s)	1190.00	0.00	0.00
Frctn Loss (ft)	0.05	Cum Volume (acre-ft)	5.70	26.05	19.16
C & E Loss (ft)	0.03	Cum SA (acres)	1.26	1.88	7.19

Plan: Exist-High Stream Reach RS: 1210.000 Profile: Q50

E.G. Elev (ft)	439.37	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.19	Wt. n-Val.	0.042	0.030	0.034
W.S. Elev (ft)	439.18	Reach Len. (ft)	80.00	90.00	100.00
Crit W.S. (ft)	429.39	Flow Area (sq ft)	1971.56	3155.84	3766.08
E.G. Slope (ft/ft)	0.000181	Area (sq ft)	1971.56	3155.84	3766.08
Q Total (cfs)	23203.00	Flow (cfs)	2562.44	13773.06	6867.51
Top Width (ft)	1405.71	Top Width (ft)	540.07	179.64	686.01
Vel Total (ft/s)	2.61	Avg. Vel. (ft/s)	1.30	4.36	1.82
Max Chl Dpth (ft)	19.96	Hydr. Depth (ft)	3.65	17.57	5.49
Conv. Total (cfs)	1725570.0	Conv. (cfs)	190564.2	1024280.0	510725.5
Length Wtd. (ft)	91.98	Wetted Per. (ft)	540.30	188.14	687.34
Min Ch El (ft)	419.22	Shear (lb/sq ft)	0.04	0.19	0.06
Alpha	1.83	Stream Power (lb/ft s)	1190.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	17.97	34.20	57.92
C & E Loss (ft)	0.01	Cum SA (acres)	6.15	1.88	10.19

Plan: Exist-High Stream Reach RS: 1210.000 Profile: Q100

E.G. Elev (ft)	440.58	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.17	Wt. n-Val.	0.041	0.030	0.034
W.S. Elev (ft)	440.40	Reach Len. (ft)	80.00	90.00	100.00
Crit W.S. (ft)	430.32	Flow Area (sq ft)	2697.00	3376.27	4611.47
E.G. Slope (ft/ft)	0.000158	Area (sq ft)	2697.00	3376.27	4611.47
Q Total (cfs)	26991.00	Flow (cfs)	3642.22	14391.68	8957.10
Top Width (ft)	1496.77	Top Width (ft)	625.69	179.64	691.44
Vel Total (ft/s)	2.53	Avg. Vel. (ft/s)	1.35	4.26	1.94
Max Chl Dpth (ft)	21.18	Hydr. Depth (ft)	4.31	18.79	6.67
Conv. Total (cfs)	2149789.0	Conv. (cfs)	290096.5	1146274.0	713418.3
Length Wtd. (ft)	92.07	Wetted Per. (ft)	625.94	188.14	692.91
Min Ch El (ft)	419.22	Shear (lb/sq ft)	0.04	0.18	0.07
Alpha	1.75	Stream Power (lb/ft s)	1190.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	29.43	36.65	72.66
C & E Loss (ft)	0.01	Cum SA (acres)	10.12	1.66	10.93

Plan: Exist-High Stream Reach RS: 1210.000 Profile: Q500

E.G. Elev (ft)	444.21	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.12	Wt. n-Val.	0.039	0.030	0.034
W.S. Elev (ft)	444.09	Reach Len. (ft)	80.00	90.00	100.00
Crit W.S. (ft)	433.03	Flow Area (sq ft)	5198.59	4038.92	7184.15
E.G. Slope (ft/ft)	0.000093	Area (sq ft)	5198.59	4038.92	7184.15
Q Total (cfs)	36665.00	Flow (cfs)	7428.57	14886.36	14350.07
Top Width (ft)	1613.70	Top Width (ft)	730.63	179.64	703.43
Vel Total (ft/s)	2.23	Avg. Vel. (ft/s)	1.43	3.69	2.00

## Existing 165' Span - High Tailwater

Plan: Exist-High Stream Reach RS: 1210.000 Profile: Q500 (Continued)

Max Chl Dpth (ft)	24.87	Hydr. Depth (ft)	7.12	22.48	10.21
Conv. Total (cfs)	3805975.0	Conv. (cfs)	771115.9	1545264.0	1489595.0
Length Wtd. (ft)	92.01	Wetted Per. (ft)	730.95	188.14	705.46
Min Ch El (ft)	419.22	Shear (lb/sq ft)	0.04	0.12	0.06
Alpha	1.50	Stream Power (lb/ft s)	1190.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	70.31	43.07	116.38
C & E Loss (ft)	0.00	Cum SA (acres)	10.82	1.69	11.63

Plan: Exist-High Stream Reach RS: 1120.000 Profile: Q10

E.G. Elev (ft)	435.40	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.81	Wt. n-Val.	0.045	0.030	0.030
W.S. Elev (ft)	434.60	Reach Len. (ft)	75.00	80.00	80.00
Crit W.S. (ft)	427.52	Flow Area (sq ft)	360.53	1971.03	0.23
E.G. Slope (ft/ft)	0.000728	Area (sq ft)	360.53	1971.03	596.26
Q Total (cfs)	15173.00	Flow (cfs)	675.55	14497.42	0.03
Top Width (ft)	830.23	Top Width (ft)	131.42	142.52	556.29
Vel Total (ft/s)	6.51	Avg. Vel. (ft/s)	1.87	7.36	0.12
Max Chl Dpth (ft)	16.53	Hydr. Depth (ft)	2.74	13.83	4.10
Conv. Total (cfs)	562159.7	Conv. (cfs)	25029.2	537129.4	1.0
Length Wtd. (ft)	79.67	Wetted Per. (ft)	132.29	152.73	8.21
Min Ch El (ft)	418.07	Shear (lb/sq ft)	0.12	0.59	0.00
Alpha	1.22	Stream Power (lb/ft s)	1080.00	0.00	0.00
Frctn Loss (ft)	0.06	Cum Volume (acre-ft)	4.93	21.54	17.43
C & E Loss (ft)	0.02	Cum SA (acres)	0.96	1.55	5.79

Plan: Exist-High Stream Reach RS: 1120.000 Profile: Q50

E.G. Elev (ft)	439.34	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.26	Wt. n-Val.	0.041	0.030	0.030
W.S. Elev (ft)	439.08	Reach Len. (ft)	75.00	80.00	80.00
Crit W.S. (ft)	430.24	Flow Area (sq ft)	1705.93	2609.81	3191.36
E.G. Slope (ft/ft)	0.000241	Area (sq ft)	1705.93	2609.81	3191.36
Q Total (cfs)	23203.00	Flow (cfs)	2488.98	13321.59	7392.43
Top Width (ft)	1258.37	Top Width (ft)	506.11	142.52	609.73
Vel Total (ft/s)	3.09	Avg. Vel. (ft/s)	1.46	5.10	2.32
Max Chl Dpth (ft)	21.01	Hydr. Depth (ft)	3.37	18.31	5.23
Conv. Total (cfs)	1493684.0	Conv. (cfs)	160227.3	857572.2	475885.0
Length Wtd. (ft)	79.38	Wetted Per. (ft)	508.16	152.73	623.37
Min Ch El (ft)	418.07	Shear (lb/sq ft)	0.05	0.26	0.08
Alpha	1.77	Stream Power (lb/ft s)	1080.00	0.00	0.00
Frctn Loss (ft)	0.03	Cum Volume (acre-ft)	14.59	28.25	49.93
C & E Loss (ft)	0.03	Cum SA (acres)	5.19	1.55	8.71

Plan: Exist-High Stream Reach RS: 1120.000 Profile: Q100

E.G. Elev (ft)	440.55	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.23	Wt. n-Val.	0.040	0.030	0.030
W.S. Elev (ft)	440.32	Reach Len. (ft)	75.00	80.00	80.00
Crit W.S. (ft)	431.34	Flow Area (sq ft)	2399.48	2786.46	3968.83
E.G. Slope (ft/ft)	0.000210	Area (sq ft)	2399.48	2786.46	3968.83
Q Total (cfs)	26991.00	Flow (cfs)	3644.83	13861.11	9485.06
Top Width (ft)	1393.75	Top Width (ft)	598.11	142.52	653.12
Vel Total (ft/s)	2.95	Avg. Vel. (ft/s)	1.52	4.97	2.39
Max Chl Dpth (ft)	22.25	Hydr. Depth (ft)	4.01	19.55	6.08
Conv. Total (cfs)	1862502.0	Conv. (cfs)	251510.1	956480.2	654512.1
Length Wtd. (ft)	79.21	Wetted Per. (ft)	600.17	152.73	668.26
Min Ch El (ft)	418.07	Shear (lb/sq ft)	0.05	0.24	0.08
Alpha	1.73	Stream Power (lb/ft s)	1080.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	24.75	30.28	62.81
C & E Loss (ft)	0.01	Cum SA (acres)	8.99	1.33	9.39

## Existing 165' Span - High Tailwater

Plan: Exist-High Stream Reach RS: 1120.000 Profile: Q500

E.G. Elev (ft)	444.20	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.14	Wt. n-Val.	0.038	0.030	0.030
W.S. Elev (ft)	444.05	Reach Len. (ft)	75.00	80.00	80.00
Crit W.S. (ft)	434.41	Flow Area (sq ft)	4825.36	3318.51	6502.03
E.G. Slope (ft/ft)	0.000114	Area (sq ft)	4825.36	3318.51	6502.03
Q Total (cfs)	36665.00	Flow (cfs)	7609.41	13644.49	15411.10
Top Width (ft)	1529.86	Top Width (ft)	701.52	142.52	685.81
Vel Total (ft/s)	2.50	Avg. Vel. (ft/s)	1.58	4.11	2.37
Max Chl Dpth (ft)	25.98	Hydr. Depth (ft)	6.88	23.28	9.48
Conv. Total (cfs)	3439182.0	Conv. (cfs)	713763.4	1279855.0	1445563.0
Length Wtd. (ft)	78.74	Wetted Per. (ft)	703.64	152.73	708.83
Min Ch El (ft)	418.07	Shear (lb/sq ft)	0.05	0.15	0.07
Alpha	1.46	Stream Power (lb/ft s)	1080.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	61.10	35.47	100.67
C & E Loss (ft)	0.00	Cum SA (acres)	9.50	1.36	10.04

Plan: Exist-High Stream Reach RS: 1040.000 Profile: Q10

E.G. Elev (ft)	435.33	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.96	Wt. n-Val.	0.049	0.030	0.030
W.S. Elev (ft)	434.36	Reach Len. (ft)	19.40	19.40	19.40
Crit W.S. (ft)	427.89	Flow Area (sq ft)	451.92	1694.15	0.84
E.G. Slope (ft/ft)	0.000869	Area (sq ft)	452.25	1694.15	208.57
Q Total (cfs)	15173.00	Flow (cfs)	1314.26	13858.13	0.61
Top Width (ft)	442.38	Top Width (ft)	82.89	116.08	243.40
Vel Total (ft/s)	7.07	Avg. Vel. (ft/s)	2.91	8.18	0.73
Max Chl Dpth (ft)	18.25	Hydr. Depth (ft)	5.54	14.59	0.39
Conv. Total (cfs)	514771.7	Conv. (cfs)	44588.6	470162.3	20.8
Length Wtd. (ft)	19.40	Wetted Per. (ft)	82.49	127.74	2.34
Min Ch El (ft)	416.11	Shear (lb/sq ft)	0.30	0.72	0.02
Alpha	1.24	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	4.23	18.18	16.69
C & E Loss (ft)	0.00	Cum SA (acres)	0.78	1.31	5.06

Plan: Exist-High Stream Reach RS: 1040.000 Profile: Q50

E.G. Elev (ft)	439.29	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.56	Wt. n-Val.	0.045	0.030	0.030
W.S. Elev (ft)	438.73	Reach Len. (ft)	19.40	19.40	19.40
Crit W.S. (ft)	430.96	Flow Area (sq ft)	1611.92	2200.51	2007.32
E.G. Slope (ft/ft)	0.000470	Area (sq ft)	1611.92	2200.51	3169.23
Q Total (cfs)	23203.00	Flow (cfs)	3280.03	15747.39	4175.58
Top Width (ft)	1535.57	Top Width (ft)	676.77	116.09	742.71
Vel Total (ft/s)	3.99	Avg. Vel. (ft/s)	2.03	7.16	2.08
Max Chl Dpth (ft)	22.62	Hydr. Depth (ft)	2.38	18.96	2.70
Conv. Total (cfs)	1070828.0	Conv. (cfs)	151375.0	726748.8	192704.6
Length Wtd. (ft)	19.40	Wetted Per. (ft)	678.56	127.80	743.90
Min Ch El (ft)	416.11	Shear (lb/sq ft)	0.07	0.50	0.08
Alpha	2.27	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	11.74	23.83	44.09
C & E Loss (ft)	0.03	Cum SA (acres)	4.17	1.31	7.46

Plan: Exist-High Stream Reach RS: 1040.000 Profile: Q100

E.G. Elev (ft)	440.52	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.38	Wt. n-Val.	0.042	0.030	0.030
W.S. Elev (ft)	440.14	Reach Len. (ft)	19.40	19.40	19.40
Crit W.S. (ft)	432.02	Flow Area (sq ft)	2760.43	2364.88	3064.94
E.G. Slope (ft/ft)	0.000334	Area (sq ft)	2760.43	2364.88	4226.84
Q Total (cfs)	26991.00	Flow (cfs)	4935.91	14974.78	7080.31
Top Width (ft)	1798.08	Top Width (ft)	930.74	116.09	751.25
Vel Total (ft/s)	3.30	Avg. Vel. (ft/s)	1.79	6.33	2.31

## Existing 165' Span - High Tailwater

Plan: Exist-High Stream Reach RS: 1040.000 Profile: Q100 (Continued)

Max Chl Dpth (ft)	24.03	Hydr. Depth (ft)	2.97	20.37	4.08
Conv. Total (cfs)	1477020.0	Conv. (cfs)	270106.4	819460.1	387453.2
Length Wtd. (ft)	19.40	Wetted Per. (ft)	933.44	127.80	752.56
Min Ch El (ft)	416.11	Shear (lb/sq ft)	0.06	0.39	0.08
Alpha	2.23	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	20.31	25.55	55.29
C & E Loss (ft)	0.01	Cum SA (acres)	7.68	1.09	8.10

Plan: Exist-High Stream Reach RS: 1040.000 Profile: Q500

E.G. Elev (ft)	444.19	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.14	Wt. n-Val.	0.038	0.030	0.030
W.S. Elev (ft)	444.04	Reach Len. (ft)	19.40	19.40	19.40
Crit W.S. (ft)	434.43	Flow Area (sq ft)	6546.69	2817.88	6044.82
E.G. Slope (ft/ft)	0.000127	Area (sq ft)	6546.69	2817.88	7206.72
Q Total (cfs)	36665.00	Flow (cfs)	10876.63	12357.30	13431.06
Top Width (ft)	1874.51	Top Width (ft)	982.39	116.09	776.03
Vel Total (ft/s)	2.38	Avg. Vel. (ft/s)	1.66	4.39	2.22
Max Chl Dpth (ft)	27.93	Hydr. Depth (ft)	6.66	24.27	7.79
Conv. Total (cfs)	3256214.0	Conv. (cfs)	965952.5	1097451.0	1192811.0
Length Wtd. (ft)	19.40	Wetted Per. (ft)	985.51	127.80	777.65
Min Ch El (ft)	416.11	Shear (lb/sq ft)	0.05	0.17	0.06
Alpha	1.61	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	51.31	29.84	88.08
C & E Loss (ft)	0.00	Cum SA (acres)	8.05	1.12	8.69

Plan: Exist-High Stream Reach RS: 1000 BR U Profile: Q10

E.G. Elev (ft)	435.31	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.96	Wt. n-Val.	0.030	0.030	
W.S. Elev (ft)	434.34	Reach Len. (ft)	41.20	41.20	41.20
Crit W.S. (ft)	428.42	Flow Area (sq ft)	3.30	1926.37	
E.G. Slope (ft/ft)	0.001192	Area (sq ft)	3.30	1926.37	
Q Total (cfs)	15173.00	Flow (cfs)	3.75	15169.25	
Top Width (ft)	153.48	Top Width (ft)	0.81	152.67	
Vel Total (ft/s)	7.86	Avg. Vel. (ft/s)	1.14	7.87	
Max Chl Dpth (ft)	17.84	Hydr. Depth (ft)	4.08	12.62	
Conv. Total (cfs)	439431.5	Conv. (cfs)	108.7	439322.8	
Length Wtd. (ft)	41.20	Wetted Per. (ft)	14.53	194.98	
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.02	0.74	
Alpha	1.00	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.05	Cum Volume (acre-ft)	4.13	17.37	16.64
C & E Loss (ft)	0.00	Cum SA (acres)	0.76	1.25	5.00

Plan: Exist-High Stream Reach RS: 1000 BR U Profile: Q50

E.G. Elev (ft)	439.24	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.86	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	438.38	Reach Len. (ft)	41.20	41.20	41.20
Crit W.S. (ft)	430.65	Flow Area (sq ft)	436.73	2545.42	1052.43
E.G. Slope (ft/ft)	0.000904	Area (sq ft)	436.73	2545.42	1180.43
Q Total (cfs)	23203.00	Flow (cfs)	566.27	20190.06	2446.67
Top Width (ft)	1113.20	Top Width (ft)	419.91	153.60	539.69
Vel Total (ft/s)	5.75	Avg. Vel. (ft/s)	1.30	7.93	2.32
Max Chl Dpth (ft)	21.88	Hydr. Depth (ft)	1.04	16.57	1.95
Conv. Total (cfs)	771554.8	Conv. (cfs)	18829.8	671367.4	81357.6
Length Wtd. (ft)	41.20	Wetted Per. (ft)	445.41	207.14	539.76
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.06	0.69	0.11
Alpha	1.67	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	11.28	22.77	43.12
C & E Loss (ft)	0.02	Cum SA (acres)	3.93	1.25	7.18

## Existing 165' Span - High Tailwater

Plan: Exist-High Stream Reach RS: 1000 BR U Profile: Q100

E.G. Elev (ft)	440.50	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.43	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	440.07	Reach Len. (ft)	41.20	41.20	41.20
Crit W.S. (ft)	431.60	Flow Area (sq ft)	1436.24	2676.85	2068.95
E.G. Slope (ft/ft)	0.001099	Area (sq ft)	1436.24	2676.85	2196.95
Q Total (cfs)	26991.00	Flow (cfs)	3082.54	16640.09	7268.37
Top Width (ft)	1425.47	Top Width (ft)	763.83		661.65
Vel Total (ft/s)	4.37	Avg. Vel. (ft/s)	2.15	6.22	3.51
Max Chl Dpth (ft)	23.57	Hydr. Depth (ft)	1.88		3.13
Conv. Total (cfs)	814012.2	Conv. (cfs)	92965.1	501842.8	219204.3
Length Wtd. (ft)	41.20	Wetted Per. (ft)	794.29	363.51	661.77
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.12	0.51	0.21
Alpha	1.45	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	19.37	24.43	53.86
C & E Loss (ft)	0.01	Cum SA (acres)	7.30	1.07	7.79

Plan: Exist-High Stream Reach RS: 1000 BR U Profile: Q500

E.G. Elev (ft)	444.18	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.14	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	444.04	Reach Len. (ft)	41.20	41.20	41.20
Crit W.S. (ft)	433.87	Flow Area (sq ft)	4892.73	2703.70	4925.91
E.G. Slope (ft/ft)	0.000339	Area (sq ft)	4892.73	2703.70	5053.91
Q Total (cfs)	36665.00	Flow (cfs)	11688.72	9073.94	15902.35
Top Width (ft)	1686.25	Top Width (ft)	912.40	18.04	755.80
Vel Total (ft/s)	2.93	Avg. Vel. (ft/s)	2.39	3.36	3.23
Max Chl Dpth (ft)	27.54	Hydr. Depth (ft)	5.36	149.84	6.52
Conv. Total (cfs)	1991620.0	Conv. (cfs)	634923.6	492890.5	863805.3
Length Wtd. (ft)	41.20	Wetted Per. (ft)	944.67	382.89	756.28
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.11	0.15	0.14
Alpha	1.06	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	48.76	28.61	85.35
C & E Loss (ft)	0.00	Cum SA (acres)	7.63	1.09	8.35

Plan: Exist-High Stream Reach RS: 1000 BR D Profile: Q10

E.G. Elev (ft)	435.26	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.97	Wt. n-Val.	0.035	0.030	
W.S. Elev (ft)	434.29	Reach Len. (ft)	24.40	24.40	24.40
Crit W.S. (ft)	428.42	Flow Area (sq ft)	3.31	1918.90	
E.G. Slope (ft/ft)	0.001207	Area (sq ft)	3.31	1918.90	
Q Total (cfs)	15173.00	Flow (cfs)	3.25	15169.75	
Top Width (ft)	153.49	Top Width (ft)	0.80	152.69	
Vel Total (ft/s)	7.89	Avg. Vel. (ft/s)	0.98	7.91	
Max Chl Dpth (ft)	17.79	Hydr. Depth (ft)	4.12	12.57	
Conv. Total (cfs)	436710.0	Conv. (cfs)	93.4	436616.5	
Length Wtd. (ft)	24.40	Wetted Per. (ft)	16.54	194.89	
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.02	0.74	
Alpha	1.00	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	4.13	15.55	16.64
C & E Loss (ft)	0.03	Cum SA (acres)	0.76	1.11	5.00

Plan: Exist-High Stream Reach RS: 1000 BR D Profile: Q50

E.G. Elev (ft)	439.19	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.79	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	438.39	Reach Len. (ft)	24.40	24.40	24.40
Crit W.S. (ft)	430.65	Flow Area (sq ft)	503.66	2547.88	1209.05
E.G. Slope (ft/ft)	0.000854	Area (sq ft)	503.66	2547.88	1209.05
Q Total (cfs)	23203.00	Flow (cfs)	637.82	19644.35	2920.83
Top Width (ft)	1194.42	Top Width (ft)	480.15	153.61	560.67
Vel Total (ft/s)	5.45	Avg. Vel. (ft/s)	1.27	7.71	2.42

## Existing 165' Span - High Tailwater

Plan: Exist-High Stream Reach RS: 1000 BR D Profile: Q50 (Continued)

Max Chl Dpth (ft)	21.89	Hydr. Depth (ft)	1.05	16.59	2.16
Conv. Total (cfs)	793994.4	Conv. (cfs)	21825.9	672219.4	99949.2
Length Wtd. (ft)	24.40	Wetted Per. (ft)	507.91	207.25	560.73
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.05	0.66	0.11
Alpha	1.72	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	10.84	20.36	41.99
C & E Loss (ft)	0.18	Cum SA (acres)	3.50	1.11	6.66

Plan: Exist-High Stream Reach RS: 1000 BR D Profile: Q100

E.G. Elev (ft)	440.44	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.38	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	440.06	Reach Len. (ft)	24.40	24.40	24.40
Crit W.S. (ft)	431.60	Flow Area (sq ft)	1616.10	2678.12	2261.33
E.G. Slope (ft/ft)	0.000995	Area (sq ft)	1616.10	2678.12	2261.33
Q Total (cfs)	26991.00	Flow (cfs)	3389.91	15843.29	7757.80
Top Width (ft)	1512.68	Top Width (ft)	817.20		695.49
Vel Total (ft/s)	4.12	Avg. Vel. (ft/s)	2.10	5.92	3.43
Max Chl Dpth (ft)	23.56	Hydr. Depth (ft)	1.98		3.25
Conv. Total (cfs)	855494.4	Conv. (cfs)	107444.9	502161.8	245887.7
Length Wtd. (ft)	24.40	Wetted Per. (ft)	849.83	363.60	695.61
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.12	0.46	0.20
Alpha	1.44	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	17.93	21.89	51.75
C & E Loss (ft)	0.06	Cum SA (acres)	6.55	1.07	7.14

Plan: Exist-High Stream Reach RS: 1000 BR D Profile: Q500

E.G. Elev (ft)	444.17	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.13	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	444.04	Reach Len. (ft)	24.40	24.40	24.40
Crit W.S. (ft)	433.86	Flow Area (sq ft)	5113.49	2712.69	5248.94
E.G. Slope (ft/ft)	0.000302	Area (sq ft)	5113.49	2712.69	5248.94
Q Total (cfs)	36665.00	Flow (cfs)	11809.18	8545.51	16310.30
Top Width (ft)	1726.60	Top Width (ft)	918.48	22.56	785.56
Vel Total (ft/s)	2.80	Avg. Vel. (ft/s)	2.31	3.15	3.11
Max Chl Dpth (ft)	27.54	Hydr. Depth (ft)	5.57	120.22	6.68
Conv. Total (cfs)	2109641.0	Conv. (cfs)	679480.1	491694.2	938466.6
Length Wtd. (ft)	24.40	Wetted Per. (ft)	952.87	387.50	786.03
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.10	0.13	0.13
Alpha	1.06	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	44.03	26.05	80.48
C & E Loss (ft)	0.01	Cum SA (acres)	6.76	1.07	7.62

Plan: Exist-High Stream Reach RS: 955.0000 Profile: Q10

E.G. Elev (ft)	435.20	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.86	Wt. n-Val.	0.049	0.030	0.100
W.S. Elev (ft)	434.34	Reach Len. (ft)	70.00	75.00	80.00
Crit W.S. (ft)	427.28	Flow Area (sq ft)	293.03	1902.05	4.88
E.G. Slope (ft/ft)	0.000760	Area (sq ft)	303.83	1902.05	1486.73
Q Total (cfs)	15173.00	Flow (cfs)	719.18	14450.14	3.68
Top Width (ft)	741.63	Top Width (ft)	64.99	136.78	539.85
Vel Total (ft/s)	6.90	Avg. Vel. (ft/s)	2.45	7.60	0.75
Max Chl Dpth (ft)	16.46	Hydr. Depth (ft)	5.11	13.91	2.53
Conv. Total (cfs)	550219.1	Conv. (cfs)	26079.7	524006.1	133.4
Length Wtd. (ft)	74.83	Wetted Per. (ft)	57.78	145.00	1.95
Min Ch El (ft)	417.88	Shear (lb/sq ft)	0.24	0.62	0.12
Alpha	1.16	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.05	Cum Volume (acre-ft)	4.04	14.48	16.23
C & E Loss (ft)	0.04	Cum SA (acres)	0.74	1.03	4.85

## Existing 165' Span - High Tailwater

Plan: Exist-High Stream Reach RS: 955.0000 Profile: Q50

E.G. Elev (ft)	439.00	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.21	Wt. n-Val.	0.044	0.030	0.030
W.S. Elev (ft)	438.79	Reach Len. (ft)	70.00	75.00	80.00
Crit W.S. (ft)	430.24	Flow Area (sq ft)	1432.23	2510.88	4235.38
E.G. Slope (ft/ft)	0.000200	Area (sq ft)	1432.23	2510.88	4235.38
Q Total (cfs)	23203.00	Flow (cfs)	1671.89	11766.94	9764.17
Top Width (ft)	1493.40	Top Width (ft)	659.76	136.78	696.86
Vel Total (ft/s)	2.84	Avg. Vel. (ft/s)	1.17	4.69	2.31
Max Chl Dpth (ft)	20.91	Hydr. Depth (ft)	2.17	18.36	6.08
Conv. Total (cfs)	1641438.0	Conv. (cfs)	118273.8	832422.5	690741.2
Length Wtd. (ft)	76.99	Wetted Per. (ft)	661.74	145.00	697.14
Min Ch El (ft)	417.88	Shear (lb/sq ft)	0.03	0.22	0.08
Alpha	1.67	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	10.29	18.95	40.47
C & E Loss (ft)	0.01	Cum SA (acres)	3.18	1.03	6.31

Plan: Exist-High Stream Reach RS: 955.0000 Profile: Q100

E.G. Elev (ft)	440.37	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.18	Wt. n-Val.	0.041	0.030	0.030
W.S. Elev (ft)	440.20	Reach Len. (ft)	70.00	75.00	80.00
Crit W.S. (ft)	431.37	Flow Area (sq ft)	2566.54	2703.21	5249.95
E.G. Slope (ft/ft)	0.000163	Area (sq ft)	2566.54	2703.21	5249.95
Q Total (cfs)	26991.00	Flow (cfs)	2850.69	12020.31	12120.00
Top Width (ft)	1802.42	Top Width (ft)	924.46	136.78	741.18
Vel Total (ft/s)	2.57	Avg. Vel. (ft/s)	1.11	4.45	2.31
Max Chl Dpth (ft)	22.32	Hydr. Depth (ft)	2.78	19.76	7.08
Conv. Total (cfs)	2113837.0	Conv. (cfs)	223255.7	941386.7	949194.5
Length Wtd. (ft)	77.06	Wetted Per. (ft)	926.66	145.00	741.49
Min Ch El (ft)	417.88	Shear (lb/sq ft)	0.03	0.19	0.07
Alpha	1.72	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	16.76	20.39	49.65
C & E Loss (ft)	0.00	Cum SA (acres)	6.06	1.03	6.74

Plan: Exist-High Stream Reach RS: 955.0000 Profile: Q500

E.G. Elev (ft)	444.15	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.10	Wt. n-Val.	0.038	0.030	0.030
W.S. Elev (ft)	444.05	Reach Len. (ft)	70.00	75.00	80.00
Crit W.S. (ft)	433.73	Flow Area (sq ft)	6273.65	3230.60	8154.56
E.G. Slope (ft/ft)	0.000080	Area (sq ft)	6273.65	3230.60	8154.56
Q Total (cfs)	36665.00	Flow (cfs)	7830.88	11300.07	17534.05
Top Width (ft)	1874.62	Top Width (ft)	972.37	136.78	765.47
Vel Total (ft/s)	2.08	Avg. Vel. (ft/s)	1.25	3.50	2.15
Max Chl Dpth (ft)	26.17	Hydr. Depth (ft)	6.45	23.62	10.65
Conv. Total (cfs)	4110959.0	Conv. (cfs)	878015.8	1266988.0	1965955.0
Length Wtd. (ft)	76.66	Wetted Per. (ft)	974.94	145.00	766.08
Min Ch El (ft)	417.88	Shear (lb/sq ft)	0.03	0.11	0.05
Alpha	1.46	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	40.84	24.38	76.73
C & E Loss (ft)	0.00	Cum SA (acres)	6.23	1.03	7.19

Plan: Exist-High Stream Reach RS: 880.0000 Profile: Q10

E.G. Elev (ft)	435.11	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.73	Wt. n-Val.	0.100	0.030	0.048
W.S. Elev (ft)	434.38	Reach Len. (ft)	80.00	100.00	115.00
Crit W.S. (ft)	427.48	Flow Area (sq ft)	394.57	2081.46	87.47
E.G. Slope (ft/ft)	0.000661	Area (sq ft)	394.57	2081.46	1905.42
Q Total (cfs)	15173.00	Flow (cfs)	468.27	14563.33	141.39
Top Width (ft)	859.93	Top Width (ft)	71.10	157.36	631.47
Vel Total (ft/s)	5.92	Avg. Vel. (ft/s)	1.19	7.00	1.62

## Existing 165' Span - High Tailwater

Plan: Exist-High Stream Reach RS: 880.0000 Profile: Q10 (Continued)

Max Chl Dpth (ft)	16.37	Hydr. Depth (ft)	5.55	13.23	2.87
Conv. Total (cfs)	590025.3	Conv. (cfs)	18209.5	566317.4	5498.4
Length Wtd. (ft)	99.45	Wetted Per. (ft)	72.08	161.67	30.53
Min Ch El (ft)	418.01	Shear (lb/sq ft)	0.23	0.53	0.12
Alpha	1.34	Stream Power (lb/ft s)	1303.00	0.00	0.00
Frctn Loss (ft)	0.06	Cum Volume (acre-ft)	3.48	11.05	13.11
C & E Loss (ft)	0.01	Cum SA (acres)	0.63	0.77	3.77

Plan: Exist-High Stream Reach RS: 880.0000 Profile: Q50

E.G. Elev (ft)	438.98	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.17	Wt. n-Val.	0.100	0.030	0.031
W.S. Elev (ft)	438.80	Reach Len. (ft)	80.00	100.00	115.00
Crit W.S. (ft)	429.91	Flow Area (sq ft)	727.59	2778.10	4976.44
E.G. Slope (ft/ft)	0.000160	Area (sq ft)	727.59	2778.10	4976.44
Q Total (cfs)	23203.00	Flow (cfs)	589.53	11605.05	11008.43
Top Width (ft)	992.63	Top Width (ft)	79.35	157.36	755.92
Vel Total (ft/s)	2.74	Avg. Vel. (ft/s)	0.81	4.18	2.21
Max Chl Dpth (ft)	20.79	Hydr. Depth (ft)	9.17	17.65	6.58
Conv. Total (cfs)	1831996.0	Conv. (cfs)	46546.2	916277.9	869171.6
Length Wtd. (ft)	105.90	Wetted Per. (ft)	81.45	161.67	756.06
Min Ch El (ft)	418.01	Shear (lb/sq ft)	0.09	0.17	0.07
Alpha	1.48	Stream Power (lb/ft s)	1303.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	8.56	14.39	32.01
C & E Loss (ft)	0.00	Cum SA (acres)	2.59	0.77	4.97

Plan: Exist-High Stream Reach RS: 880.0000 Profile: Q100

E.G. Elev (ft)	440.36	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.16	Wt. n-Val.	0.085	0.030	0.031
W.S. Elev (ft)	440.20	Reach Len. (ft)	80.00	100.00	115.00
Crit W.S. (ft)	430.94	Flow Area (sq ft)	1393.60	2997.21	6055.86
E.G. Slope (ft/ft)	0.000140	Area (sq ft)	1393.60	2997.21	6055.86
Q Total (cfs)	26991.00	Flow (cfs)	837.98	12312.16	13840.87
Top Width (ft)	1923.58	Top Width (ft)	974.72	157.36	791.50
Vel Total (ft/s)	2.58	Avg. Vel. (ft/s)	0.60	4.11	2.29
Max Chl Dpth (ft)	22.19	Hydr. Depth (ft)	1.43	19.05	7.65
Conv. Total (cfs)	2279602.0	Conv. (cfs)	70773.6	1039858.0	1168970.0
Length Wtd. (ft)	106.07	Wetted Per. (ft)	977.11	161.67	791.67
Min Ch El (ft)	418.01	Shear (lb/sq ft)	0.01	0.16	0.07
Alpha	1.56	Stream Power (lb/ft s)	1303.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	13.57	15.48	39.26
C & E Loss (ft)	0.00	Cum SA (acres)	4.54	0.77	5.33

Plan: Exist-High Stream Reach RS: 880.0000 Profile: Q500

E.G. Elev (ft)	444.15	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.10	Wt. n-Val.	0.046	0.030	0.031
W.S. Elev (ft)	444.05	Reach Len. (ft)	80.00	100.00	115.00
Crit W.S. (ft)	433.29	Flow Area (sq ft)	5167.93	3602.83	9176.12
E.G. Slope (ft/ft)	0.000077	Area (sq ft)	5167.93	3602.83	9176.12
Q Total (cfs)	36665.00	Flow (cfs)	4824.83	12376.31	19463.86
Top Width (ft)	1973.99	Top Width (ft)	986.65	157.36	829.98
Vel Total (ft/s)	2.04	Avg. Vel. (ft/s)	0.93	3.44	2.12
Max Chl Dpth (ft)	26.04	Hydr. Depth (ft)	5.24	22.90	11.06
Conv. Total (cfs)	4186460.0	Conv. (cfs)	550905.9	1413144.0	2222410.0
Length Wtd. (ft)	104.37	Wetted Per. (ft)	989.65	161.67	830.35
Min Ch El (ft)	418.01	Shear (lb/sq ft)	0.03	0.11	0.05
Alpha	1.55	Stream Power (lb/ft s)	1303.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	31.65	18.50	60.81
C & E Loss (ft)	0.00	Cum SA (acres)	4.66	0.77	5.72

## Existing 165' Span - High Tailwater

Plan: Exist-High Stream Reach RS: 780.0000 Profile: Q10

E.G. Elev (ft)	435.03	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.69	Wt. n-Val.	0.100	0.030	0.057
W.S. Elev (ft)	434.34	Reach Len. (ft)	120.00	150.00	175.00
Crit W.S. (ft)	427.42	Flow Area (sq ft)	772.54	1921.34	412.07
E.G. Slope (ft/ft)	0.000610	Area (sq ft)	862.93	1921.34	1857.34
Q Total (cfs)	15173.00	Flow (cfs)	964.62	13549.89	658.49
Top Width (ft)	880.85	Top Width (ft)	157.65	133.93	589.27
Vel Total (ft/s)	4.89	Avg. Vel. (ft/s)	1.25	7.05	1.60
Max Chl Dpth (ft)	18.03	Hydr. Depth (ft)	6.30	14.35	3.85
Conv. Total (cfs)	614545.1	Conv. (cfs)	39069.7	548805.0	26670.4
Length Wtd. (ft)	149.99	Wetted Per. (ft)	123.04	138.74	107.29
Min Ch El (ft)	416.31	Shear (lb/sq ft)	0.24	0.53	0.15
Alpha	1.87	Stream Power (lb/ft s)	1412.00	0.00	0.00
Frctn Loss (ft)	0.09	Cum Volume (acre-ft)	2.33	6.46	8.15
C & E Loss (ft)	0.02	Cum SA (acres)	0.42	0.44	2.16

Plan: Exist-High Stream Reach RS: 780.0000 Profile: Q50

E.G. Elev (ft)	438.96	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.18	Wt. n-Val.	0.090	0.030	0.034
W.S. Elev (ft)	438.77	Reach Len. (ft)	120.00	150.00	175.00
Crit W.S. (ft)	429.82	Flow Area (sq ft)	2082.81	2515.07	4963.15
E.G. Slope (ft/ft)	0.000174	Area (sq ft)	2082.81	2515.07	4963.15
Q Total (cfs)	23203.00	Flow (cfs)	1651.11	11324.58	10227.31
Top Width (ft)	1619.46	Top Width (ft)	673.61	133.93	811.91
Vel Total (ft/s)	2.43	Avg. Vel. (ft/s)	0.79	4.50	2.06
Max Chl Dpth (ft)	22.46	Hydr. Depth (ft)	3.09	18.78	6.11
Conv. Total (cfs)	1761362.0	Conv. (cfs)	125337.2	859659.7	776364.6
Length Wtd. (ft)	156.18	Wetted Per. (ft)	674.67	138.74	812.29
Min Ch El (ft)	416.31	Shear (lb/sq ft)	0.03	0.20	0.07
Alpha	2.01	Stream Power (lb/ft s)	1412.00	0.00	0.00
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	5.98	8.32	18.89
C & E Loss (ft)	0.04	Cum SA (acres)	1.90	0.44	2.90

Plan: Exist-High Stream Reach RS: 780.0000 Profile: Q100

E.G. Elev (ft)	440.34	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.16	Wt. n-Val.	0.074	0.030	0.034
W.S. Elev (ft)	440.19	Reach Len. (ft)	120.00	150.00	175.00
Crit W.S. (ft)	431.00	Flow Area (sq ft)	3301.13	2704.12	6158.57
E.G. Slope (ft/ft)	0.000144	Area (sq ft)	3301.13	2704.12	6158.57
Q Total (cfs)	26991.00	Flow (cfs)	2670.71	11633.90	12686.39
Top Width (ft)	2018.37	Top Width (ft)	1009.00	133.93	875.45
Vel Total (ft/s)	2.22	Avg. Vel. (ft/s)	0.81	4.30	2.06
Max Chl Dpth (ft)	23.88	Hydr. Depth (ft)	3.27	20.19	7.03
Conv. Total (cfs)	2250507.0	Conv. (cfs)	222683.4	970033.2	1057790.0
Length Wtd. (ft)	156.02	Wetted Per. (ft)	1010.09	138.74	875.84
Min Ch El (ft)	416.31	Shear (lb/sq ft)	0.03	0.18	0.06
Alpha	2.04	Stream Power (lb/ft s)	1412.00	0.00	0.00
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	9.26	8.94	23.14
C & E Loss (ft)	0.04	Cum SA (acres)	2.72	0.44	3.13

Plan: Exist-High Stream Reach RS: 780.0000 Profile: Q500

E.G. Elev (ft)	444.13	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.09	Wt. n-Val.	0.052	0.030	0.034
W.S. Elev (ft)	444.05	Reach Len. (ft)	120.00	150.00	175.00
Crit W.S. (ft)	433.79	Flow Area (sq ft)	7214.00	3221.22	9616.92
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	7214.00	3221.22	9616.92
Q Total (cfs)	36665.00	Flow (cfs)	7337.29	11226.69	18101.02
Top Width (ft)	2067.79	Top Width (ft)	1017.88	133.93	915.99
Vel Total (ft/s)	1.83	Avg. Vel. (ft/s)	1.02	3.49	1.88

## Existing 165' Span - High Tailwater

Plan: Exist-High Stream Reach RS: 780.0000 Profile: Q500 (Continued)

Max Chl Dpth (ft)	27.74	Hydr. Depth (ft)	7.09	24.05	10.50
Conv. Total (cfs)	4240771.0	Conv. (cfs)	848649.9	1298509.0	2093612.0
Length Wtd. (ft)	153.68	Wetted Per. (ft)	1019.78	138.74	916.57
Min Ch El (ft)	416.31	Shear (lb/sq ft)	0.03	0.11	0.05
Alpha	1.70	Stream Power (lb/ft s)	1412.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	20.28	10.66	36.01
C & E Loss (ft)	0.03	Cum SA (acres)	2.82	0.44	3.42

Plan: Exist-High Stream Reach RS: 630.0000 Profile: Q10

E.G. Elev (ft)	434.93	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.63	Wt. n-Val.	0.100	0.030	0.100
W.S. Elev (ft)	434.30	Reach Len. (ft)			
Crit W.S. (ft)	427.20	Flow Area (sq ft)	827.15	1828.51	1389.19
E.G. Slope (ft/ft)	0.000562	Area (sq ft)	827.15	1828.51	2197.99
Q Total (cfs)	15173.00	Flow (cfs)	919.26	12668.45	1585.29
Top Width (ft)	755.79	Top Width (ft)	146.64	121.74	487.41
Vel Total (ft/s)	3.75	Avg. Vel. (ft/s)	1.11	6.93	1.14
Max Chl Dpth (ft)	19.15	Hydr. Depth (ft)	5.64	15.02	5.83
Conv. Total (cfs)	639935.4	Conv. (cfs)	38770.6	534303.7	66861.2
Length Wtd. (ft)		Wetted Per. (ft)	147.64	127.61	238.31
Min Ch El (ft)	415.15	Shear (lb/sq ft)	0.20	0.50	0.20
Alpha	2.86	Stream Power (lb/ft s)	1491.00	0.00	0.00
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

Plan: Exist-High Stream Reach RS: 630.0000 Profile: Q50

E.G. Elev (ft)	438.88	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.58	Wt. n-Val.	0.100	0.030	0.100
W.S. Elev (ft)	438.30	Reach Len. (ft)			
Crit W.S. (ft)	430.35	Flow Area (sq ft)	2256.67	2315.47	4439.26
E.G. Slope (ft/ft)	0.000440	Area (sq ft)	2256.67	2315.47	4439.26
Q Total (cfs)	23203.00	Flow (cfs)	1526.91	16609.65	5066.44
Top Width (ft)	1459.28	Top Width (ft)	704.31	121.74	633.23
Vel Total (ft/s)	2.57	Avg. Vel. (ft/s)	0.68	7.17	1.14
Max Chl Dpth (ft)	23.15	Hydr. Depth (ft)	3.20	19.02	7.01
Conv. Total (cfs)	1106305.0	Conv. (cfs)	72802.1	791938.2	241564.5
Length Wtd. (ft)		Wetted Per. (ft)	705.42	127.61	633.46
Min Ch El (ft)	415.15	Shear (lb/sq ft)	0.09	0.50	0.19
Alpha	5.60	Stream Power (lb/ft s)	1491.00	0.00	0.00
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

Plan: Exist-High Stream Reach RS: 630.0000 Profile: Q100

E.G. Elev (ft)	440.26	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.56	Wt. n-Val.	0.100	0.030	0.100
W.S. Elev (ft)	439.70	Reach Len. (ft)			
Crit W.S. (ft)	431.62	Flow Area (sq ft)	3424.17	2485.91	5361.52
E.G. Slope (ft/ft)	0.000416	Area (sq ft)	3424.17	2485.91	5361.52
Q Total (cfs)	26991.00	Flow (cfs)	2413.55	18172.32	6405.13
Top Width (ft)	1769.52	Top Width (ft)	963.52	121.74	684.26
Vel Total (ft/s)	2.39	Avg. Vel. (ft/s)	0.70	7.31	1.19
Max Chl Dpth (ft)	24.55	Hydr. Depth (ft)	3.55	20.42	7.84
Conv. Total (cfs)	1324067.0	Conv. (cfs)	118399.0	891459.1	314209.2
Length Wtd. (ft)		Wetted Per. (ft)	964.62	127.61	684.52
Min Ch El (ft)	415.15	Shear (lb/sq ft)	0.09	0.51	0.20
Alpha	6.34	Stream Power (lb/ft s)	1491.00	0.00	0.00
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

## Existing 165' Span - High Tailwater

Plan: Exist-High Stream Reach RS: 630.0000 Profile: Q500

E.G. Elev (ft)	444.08	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.38	Wt. n-Val.	0.100	0.030	0.100
W.S. Elev (ft)	443.70	Reach Len. (ft)			
Crit W.S. (ft)	433.52	Flow Area (sq ft)	7508.85	2972.87	8308.38
E.G. Slope (ft/ft)	0.000274	Area (sq ft)	7508.85	2972.87	8308.38
Q Total (cfs)	36665.00	Flow (cfs)	6943.62	19880.78	9840.60
Top Width (ft)	1935.72	Top Width (ft)	1028.13	121.74	785.85
Vel Total (ft/s)	1.95	Avg. Vel. (ft/s)	0.92	6.69	1.18
Max Chl Dpth (ft)	28.55	Hydr. Depth (ft)	7.30	24.42	10.57
Conv. Total (cfs)	2215154.0	Conv. (cfs)	419505.8	1201118.0	594529.9
Length Wtd. (ft)		Wetted Per. (ft)	1029.96	127.61	786.18
Min Ch El (ft)	415.15	Shear (lb/sq ft)	0.12	0.40	0.18
Alpha	6.51	Stream Power (lb/ft s)	1491.00	0.00	0.00
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

## Existing 165' Span - High Tailwater

Plan: Exist-High Stream Reach RS: 1000 Profile: Q10

E.G. US. (ft)	435.33	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	434.36	E.G. Elev (ft)	435.31	435.26
Q Total (cfs)	15173.00	W.S. Elev (ft)	434.34	434.29
Q Bridge (cfs)	15173.00	Crit W.S. (ft)	428.42	428.42
Q Weir (cfs)		Max Chl Dpth (ft)	17.84	17.79
Weir Sta Lft (ft)		Vel Total (ft/s)	7.86	7.89
Weir Sta Rgt (ft)		Flow Area (sq ft)	1929.67	1922.22
Weir Submerg		Froude # Chl	0.33	0.33
Weir Max Depth (ft)		Specif Force (cu ft)	17177.92	17095.13
Min El Weir Flow (ft)	436.01	Hydr Depth (ft)	12.57	12.52
Min El Prs (ft)	439.24	W.P. Total (ft)	209.50	211.43
Delta EG (ft)	0.13	Conv. Total (cfs)	439431.5	436710.0
Delta WS (ft)	0.02	Top Width (ft)	153.48	153.49
BR Open Area (sq ft)	2685.07	Frctn Loss (ft)	0.05	0.02
BR Open Vel (ft/s)	7.89	C & E Loss (ft)	0.00	0.03
Coef of Q		Shear Total (lb/sq ft)	0.69	0.69
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

Plan: Exist-High Stream Reach RS: 1000 Profile: Q50

E.G. US. (ft)	439.29	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	438.73	E.G. Elev (ft)	439.24	439.19
Q Total (cfs)	23203.00	W.S. Elev (ft)	438.38	438.39
Q Bridge (cfs)	20198.64	Crit W.S. (ft)	430.65	430.65
Q Weir (cfs)		Max Chl Dpth (ft)	21.88	21.89
Weir Sta Lft (ft)		Vel Total (ft/s)	5.75	5.45
Weir Sta Rgt (ft)		Flow Area (sq ft)	4034.58	4260.60
Weir Submerg		Froude # Chl	0.28	0.27
Weir Max Depth (ft)		Specif Force (cu ft)	29145.26	29370.18
Min El Weir Flow (ft)	436.01	Hydr Depth (ft)	3.62	3.57
Min El Prs (ft)	439.24	W.P. Total (ft)	1192.31	1275.89
Delta EG (ft)	0.29	Conv. Total (cfs)	771554.8	793994.4
Delta WS (ft)	-0.07	Top Width (ft)	1113.20	1194.42
BR Open Area (sq ft)	2685.07	Frctn Loss (ft)	0.04	0.01
BR Open Vel (ft/s)	7.91	C & E Loss (ft)	0.02	0.18
Coef of Q		Shear Total (lb/sq ft)	0.19	0.18
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

Plan: Exist-High Stream Reach RS: 1000 Profile: Q100

E.G. US. (ft)	440.52	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	440.14	E.G. Elev (ft)	440.50	440.44
Q Total (cfs)	26991.00	W.S. Elev (ft)	440.07	440.06
Q Bridge (cfs)	16650.47	Crit W.S. (ft)	431.60	431.60
Q Weir (cfs)		Max Chl Dpth (ft)	23.57	23.56
Weir Sta Lft (ft)		Vel Total (ft/s)	4.37	4.12
Weir Sta Rgt (ft)		Flow Area (sq ft)	6182.04	6555.55
Weir Submerg		Froude # Chl	0.19	0.18
Weir Max Depth (ft)		Specif Force (cu ft)	36748.56	37357.03
Min El Weir Flow (ft)	436.01	Hydr Depth (ft)	4.34	4.33
Min El Prs (ft)	439.24	W.P. Total (ft)	1819.57	1909.03
Delta EG (ft)	0.14	Conv. Total (cfs)	814012.2	855494.4
Delta WS (ft)	-0.06	Top Width (ft)	1425.47	1512.68
BR Open Area (sq ft)	2685.07	Frctn Loss (ft)	0.04	0.01
BR Open Vel (ft/s)	6.20	C & E Loss (ft)	0.01	0.06
Coef of Q		Shear Total (lb/sq ft)	0.23	0.21
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

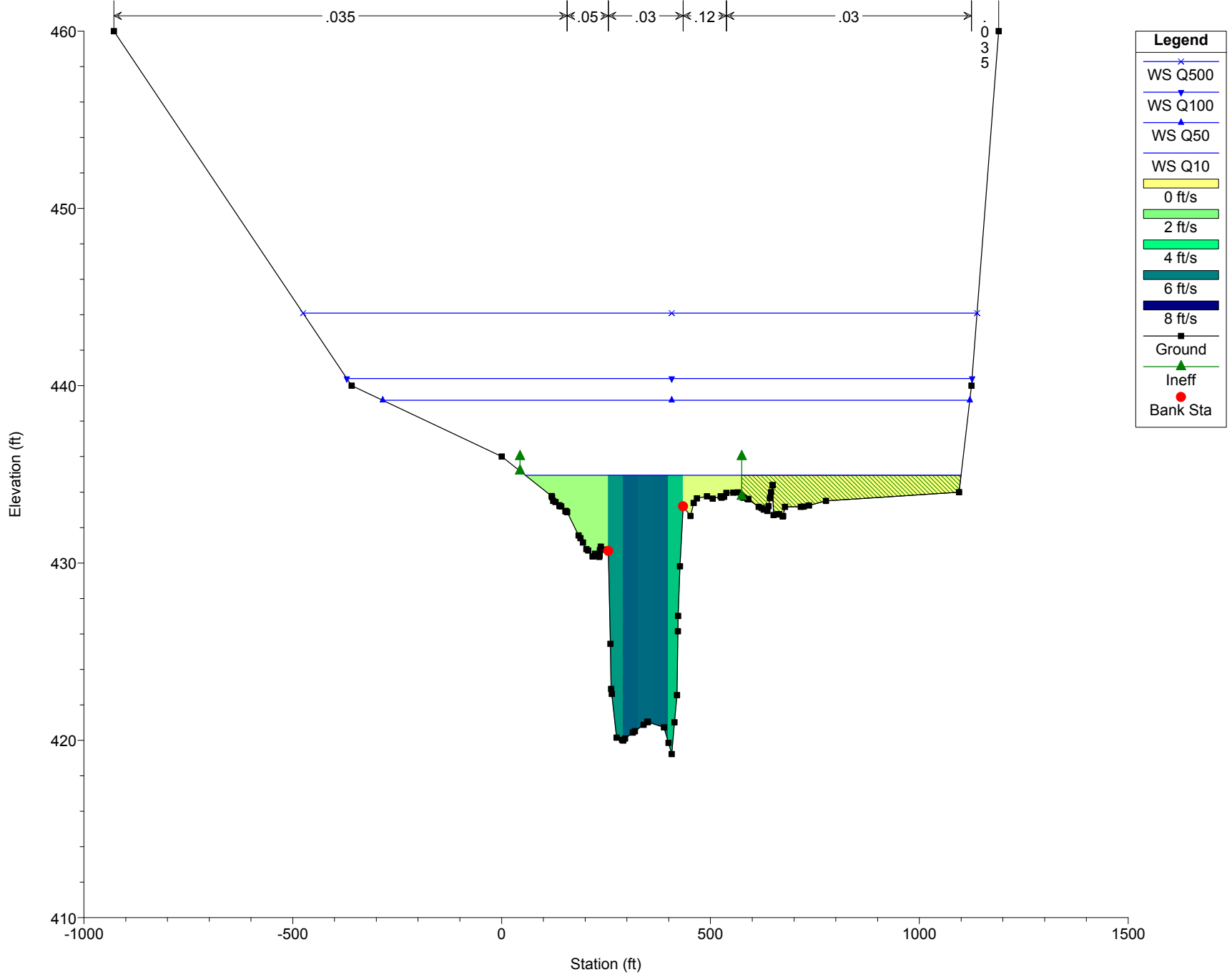
## Existing 165' Span - High Tailwater

Plan: Exist-High Stream Reach RS: 1000 Profile: Q500

E.G. US. (ft)	444.19	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	444.04	E.G. Elev (ft)	444.18	444.17
Q Total (cfs)	36665.00	W.S. Elev (ft)	444.04	444.04
Q Bridge (cfs)	9195.55	Crit W.S. (ft)	433.87	433.86
Q Weir (cfs)		Max Chl Dpth (ft)	27.54	27.54
Weir Sta Lft (ft)		Vel Total (ft/s)	2.93	2.80
Weir Sta Rgt (ft)		Flow Area (sq ft)	12522.34	13075.12
Weir Submerg		Froude # Chl	0.10	0.10
Weir Max Depth (ft)		Specif Force (cu ft)	72709.34	75325.37
Min El Weir Flow (ft)	436.01	Hydr Depth (ft)	7.43	7.57
Min El Prs (ft)	439.24	W.P. Total (ft)	2083.85	2126.40
Delta EG (ft)	0.03	Conv. Total (cfs)	1991620.0	2109641.0
Delta WS (ft)	-0.01	Top Width (ft)	1686.25	1726.60
BR Open Area (sq ft)	2685.07	Frctn Loss (ft)	0.01	0.00
BR Open Vel (ft/s)	3.42	C & E Loss (ft)	0.00	0.01
Coef of Q		Shear Total (lb/sq ft)	0.13	0.12
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

Existing 165' Span - High Tailwater

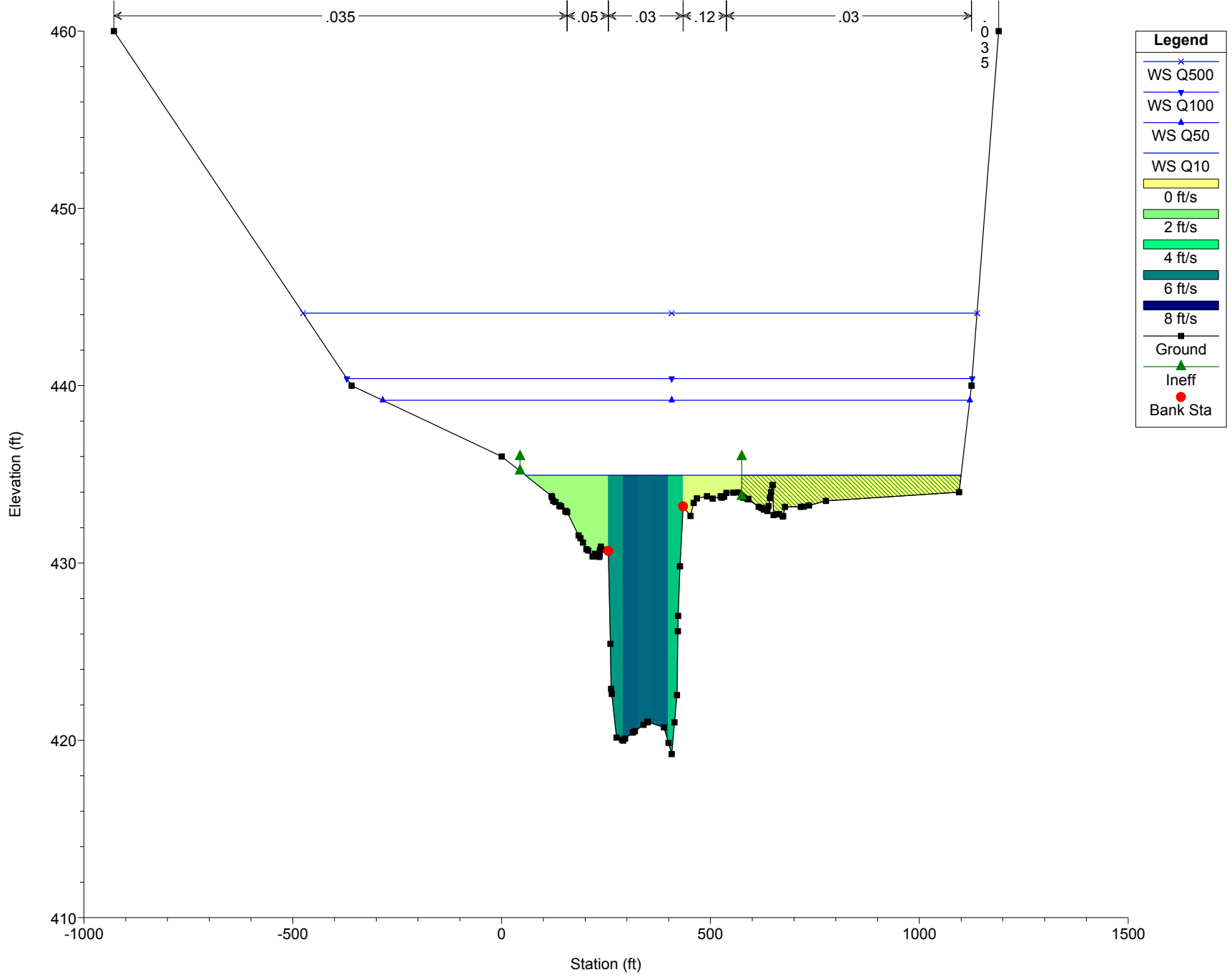
Rumford-Mexico Plan: Red Br Existing Cond High Andro 12/15/2017  
 RS1210 Upstream Limit



Legend	
WS Q500	Blue line with 'x' marker
WS Q100	Blue line with inverted triangle marker
WS Q50	Blue line with triangle marker
WS Q10	Blue line with square marker
0 ft/s	Yellow fill
2 ft/s	Light green fill
4 ft/s	Medium green fill
6 ft/s	Dark green fill
8 ft/s	Dark blue fill
Ground	Black line with square markers
Ineff	Green line with triangle markers
Bank Sta	Red dot

Existing 165' Span - High Tailwater

Rumford-Mexico Plan: Red Br Existing Cond High Andro 12/15/2017  
 RS1210 Upstream Limit

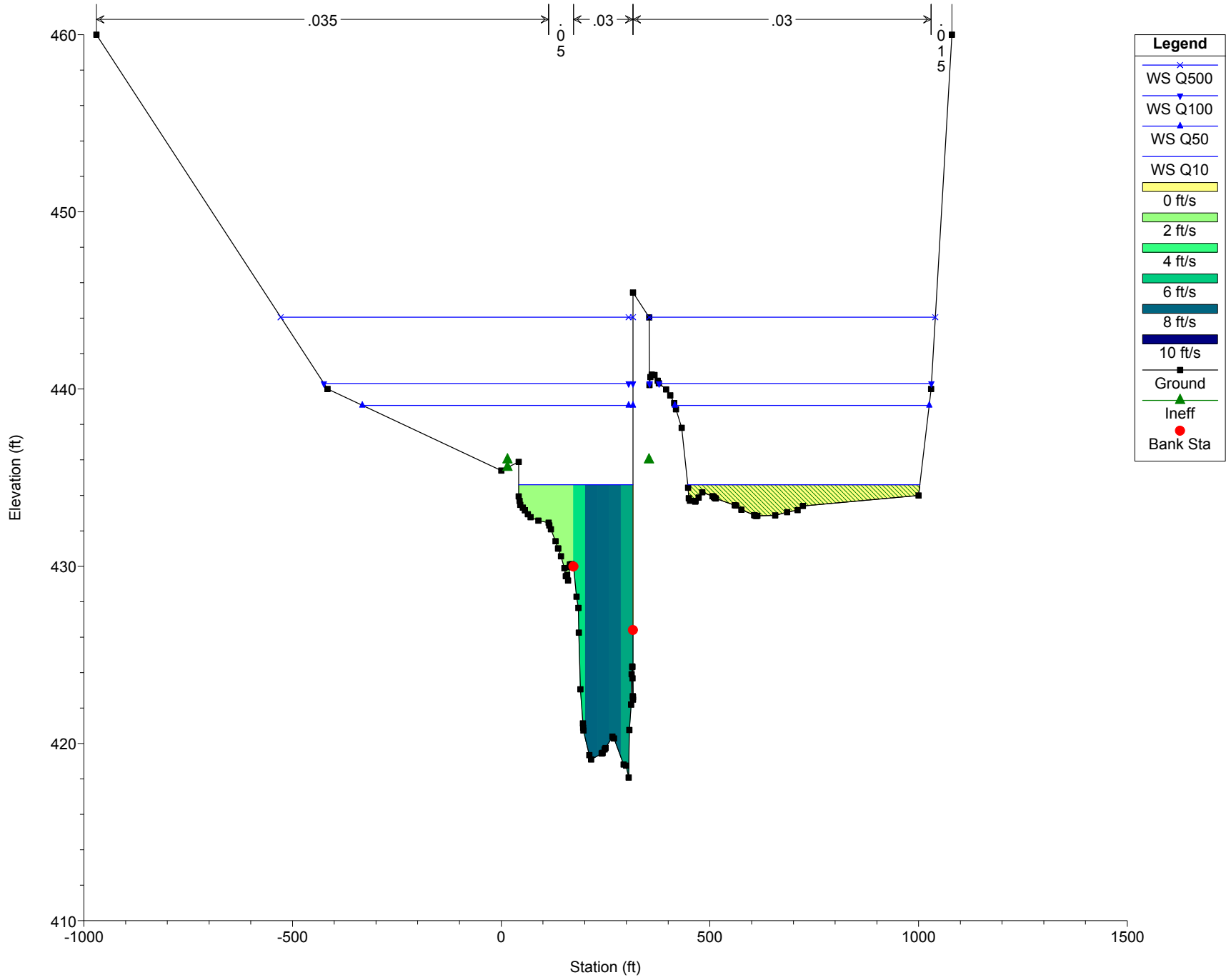


Legend	
WS Q500	Blue line with 'x' marker
WS Q100	Blue line with inverted triangle marker
WS Q50	Blue line with triangle marker
WS Q10	Blue line with inverted triangle marker
0 ft/s	Yellow fill
2 ft/s	Light Green fill
4 ft/s	Medium Green fill
6 ft/s	Dark Green fill
8 ft/s	Dark Blue fill
Ground	Black line with square marker
Ineff	Green triangle marker
Bank Sta	Red circle marker

Existing 165' Span - High Tailwater

Rumford-Mexico Plan: Red Br Existing Cond High Andro 12/15/2017

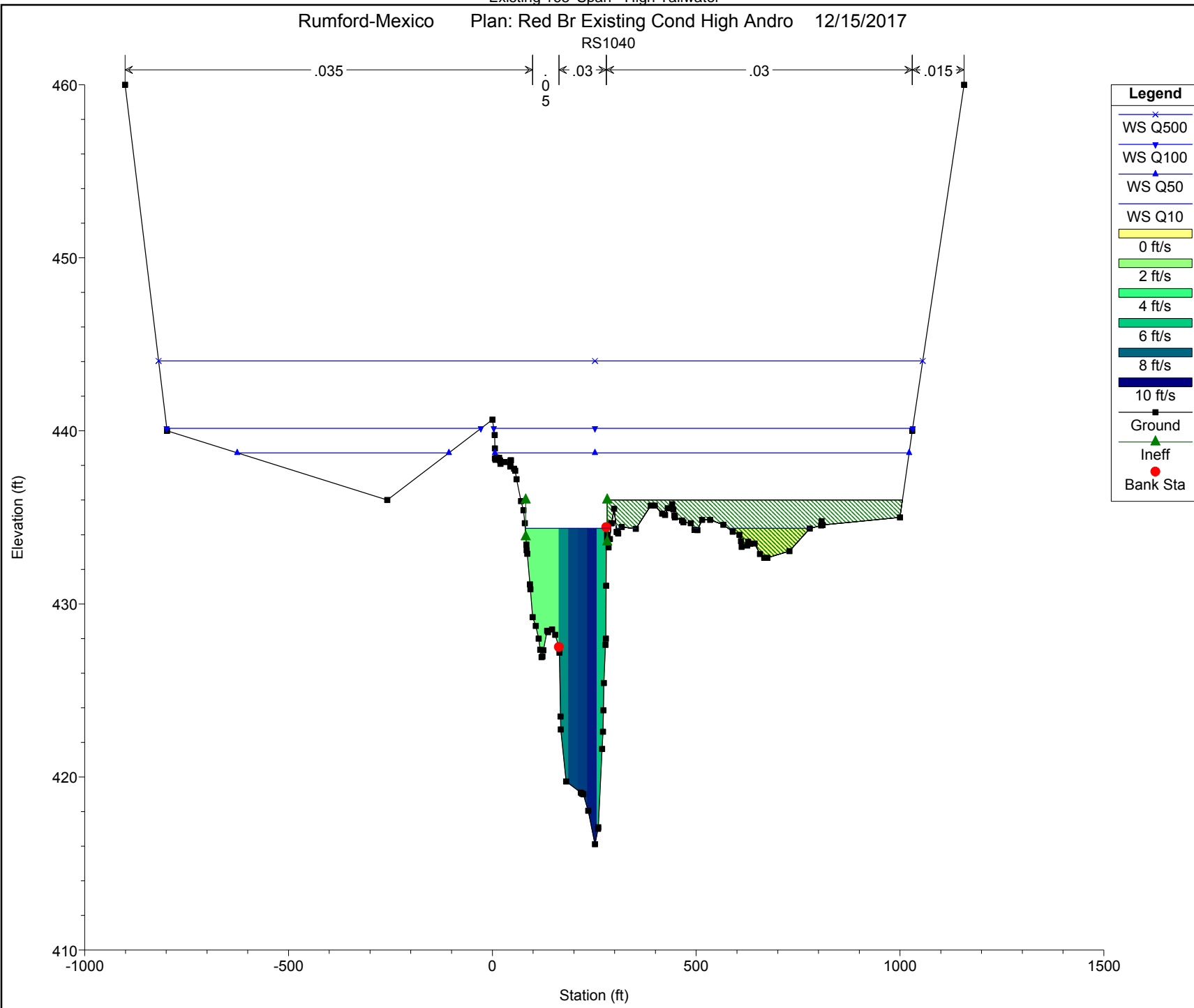
RS1120



Existing 165' Span - High Tailwater

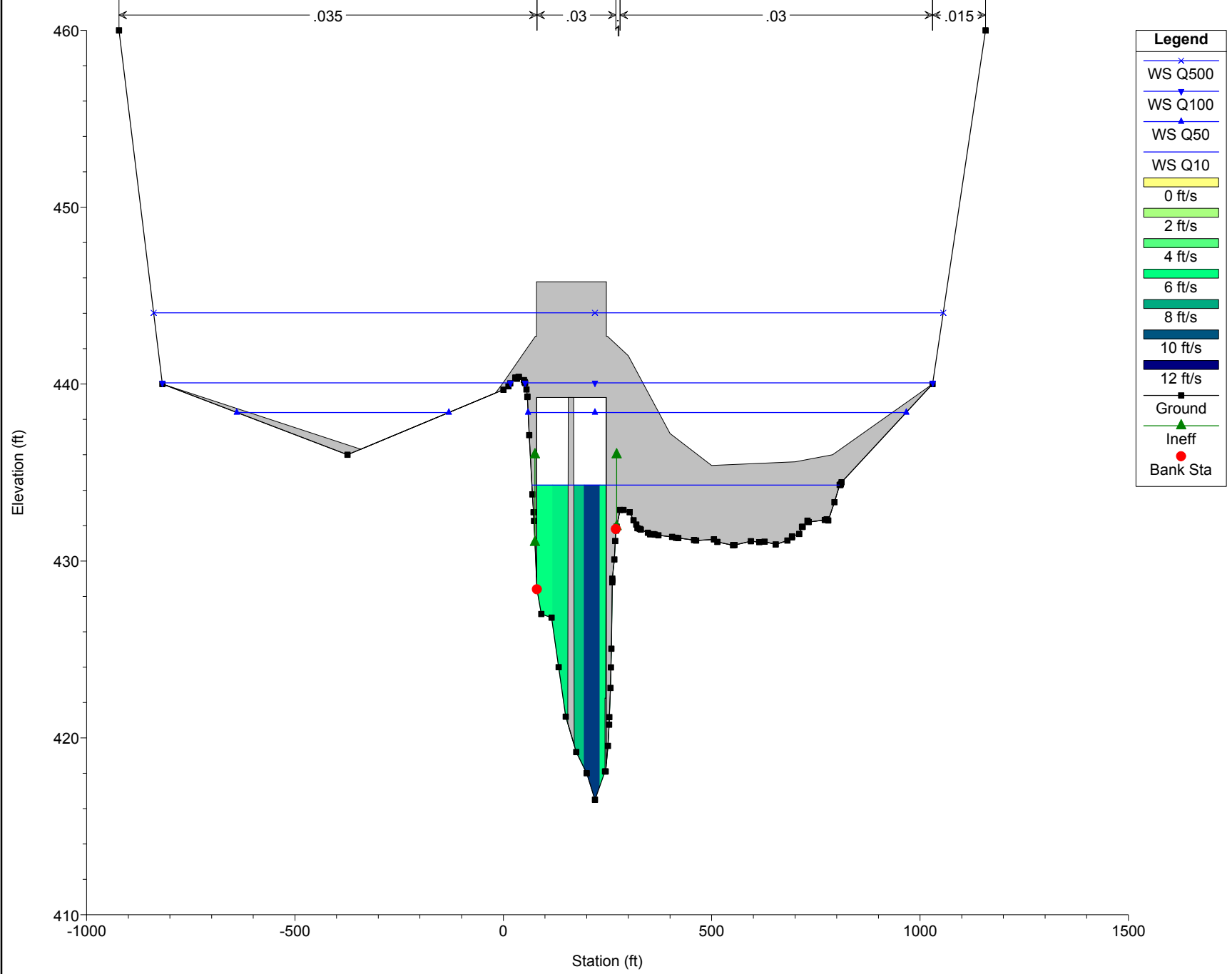
Rumford-Mexico Plan: Red Br Existing Cond High Andro 12/15/2017

RS1040



Existing 165' Span - High Tailwater

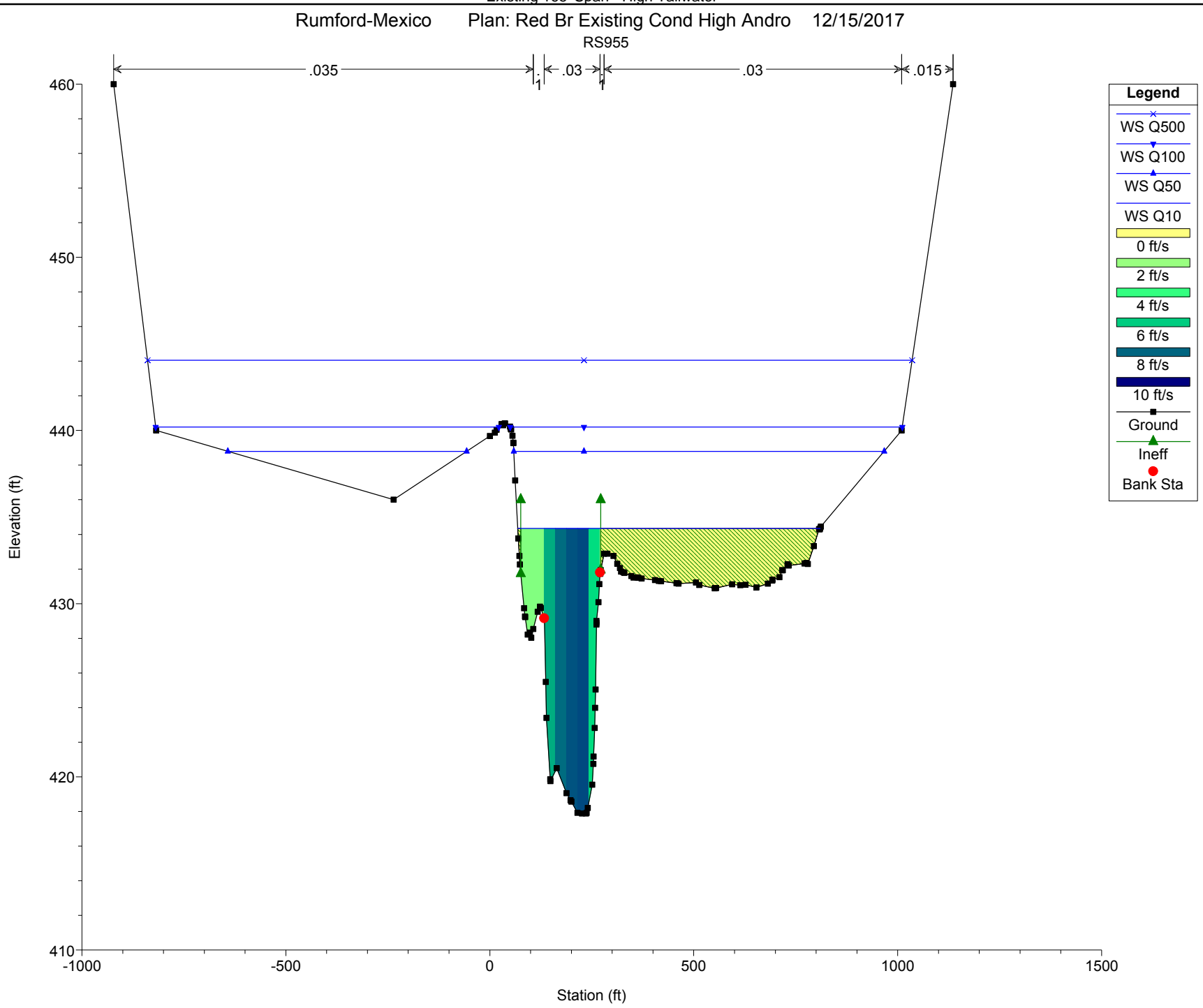
Rumford-Mexico Plan: Red Br Existing Cond High Andro 12/15/2017  
Existing Bridge



Existing 165' Span - High Tailwater

Rumford-Mexico Plan: Red Br Existing Cond High Andro 12/15/2017

RS955

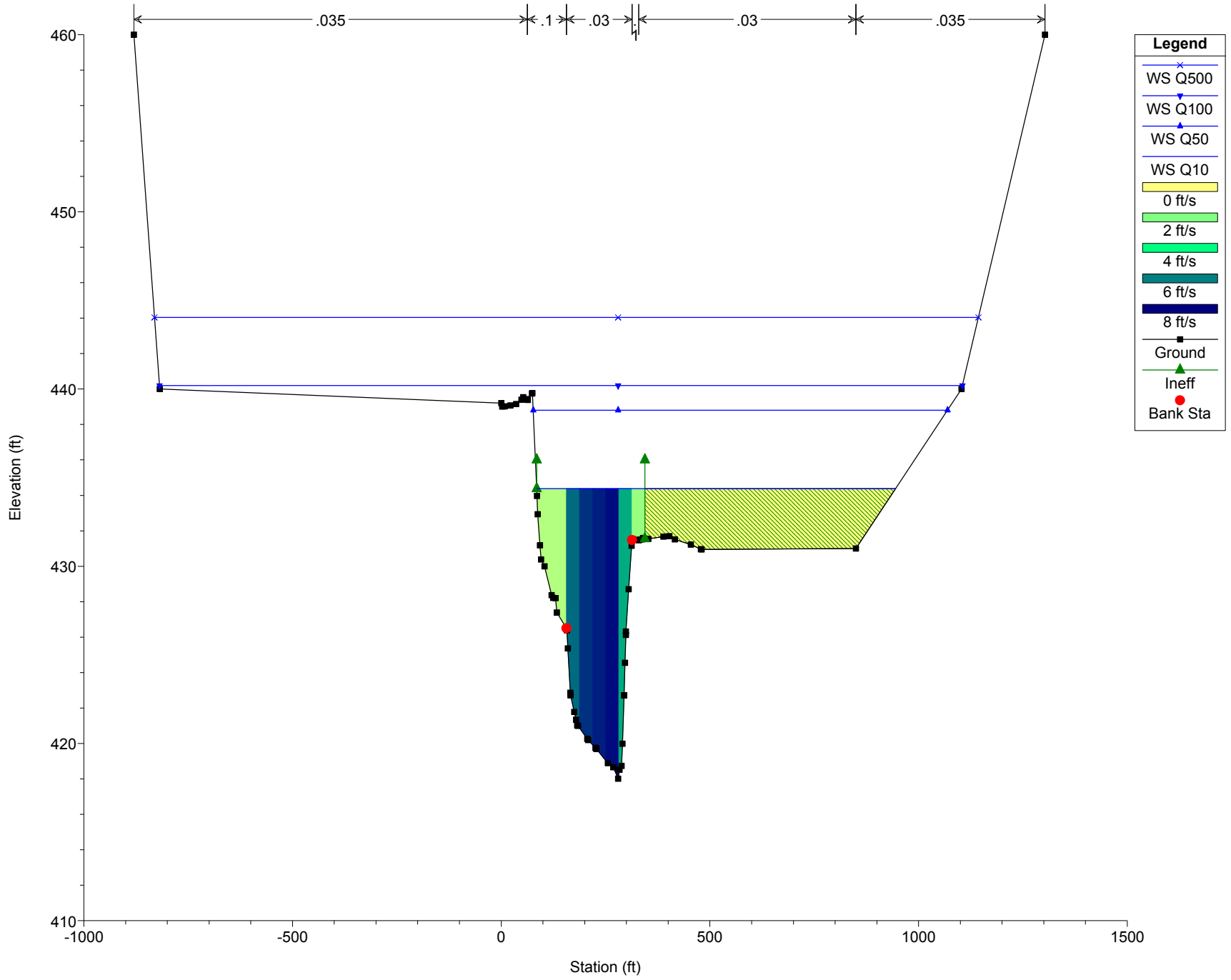


Legend	
WS Q500	x
WS Q100	v
WS Q50	^
WS Q10	^
0 ft/s	Yellow
2 ft/s	Light Green
4 ft/s	Medium Green
6 ft/s	Dark Green
8 ft/s	Dark Teal
10 ft/s	Dark Blue
Ground	Black Square
Ineff	Green Triangle
Bank Sta	Red Circle

Existing 165' Span - High Tailwater

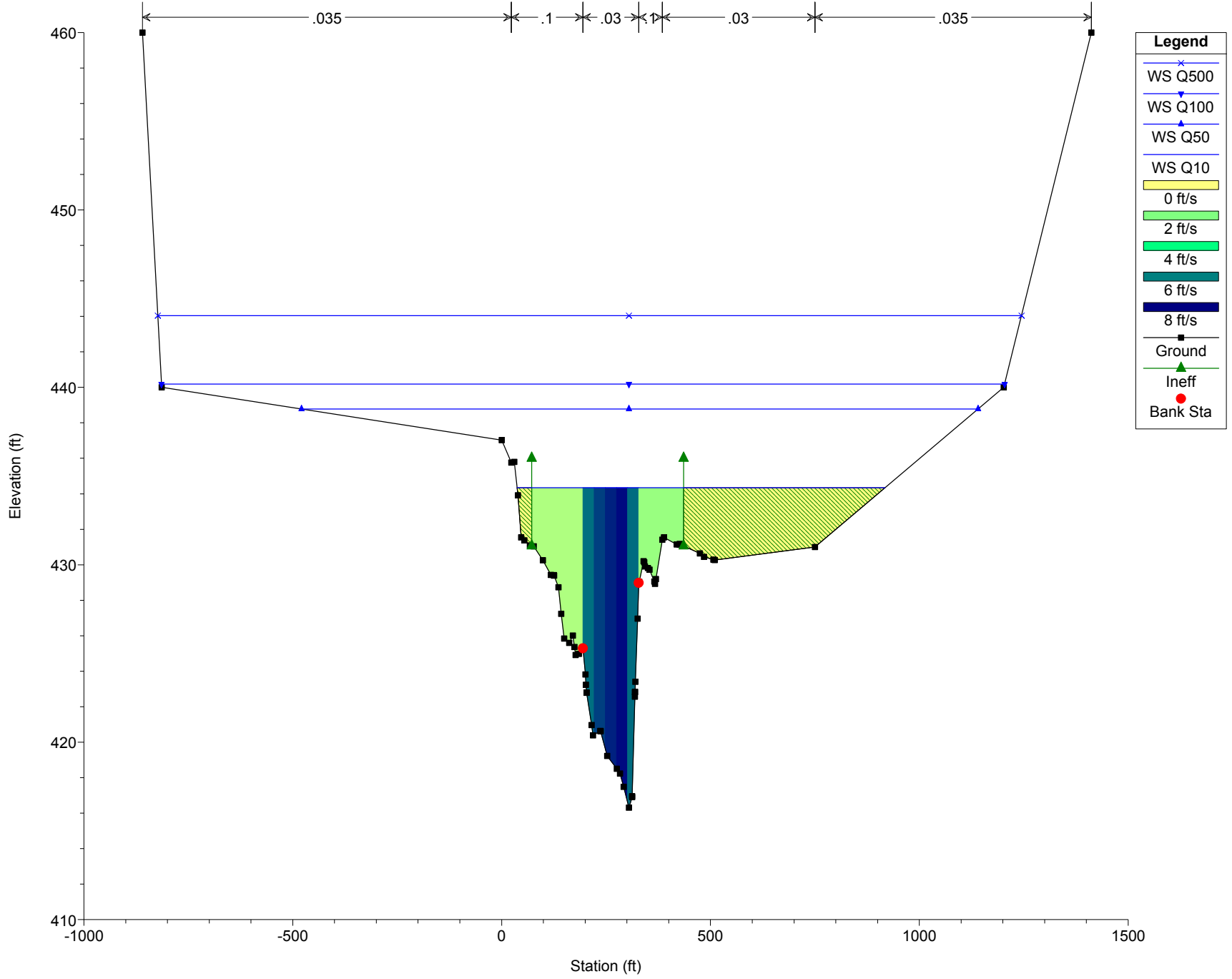
Rumford-Mexico Plan: Red Br Existing Cond High Andro 12/15/2017

RS880



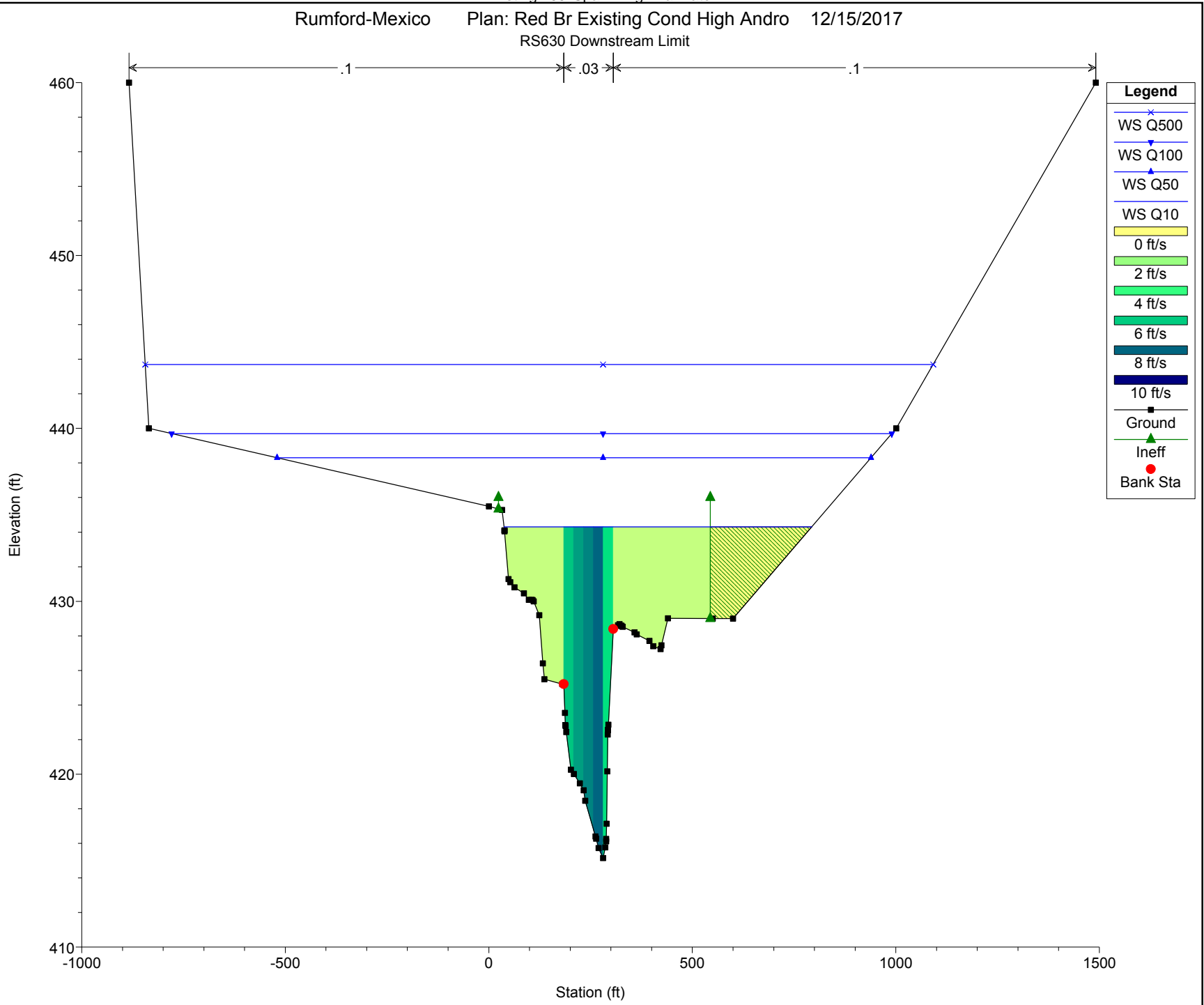
Existing 165' Span - High Tailwater

Rumford-Mexico Plan: Red Br Existing Cond High Andro 12/15/2017  
RS780



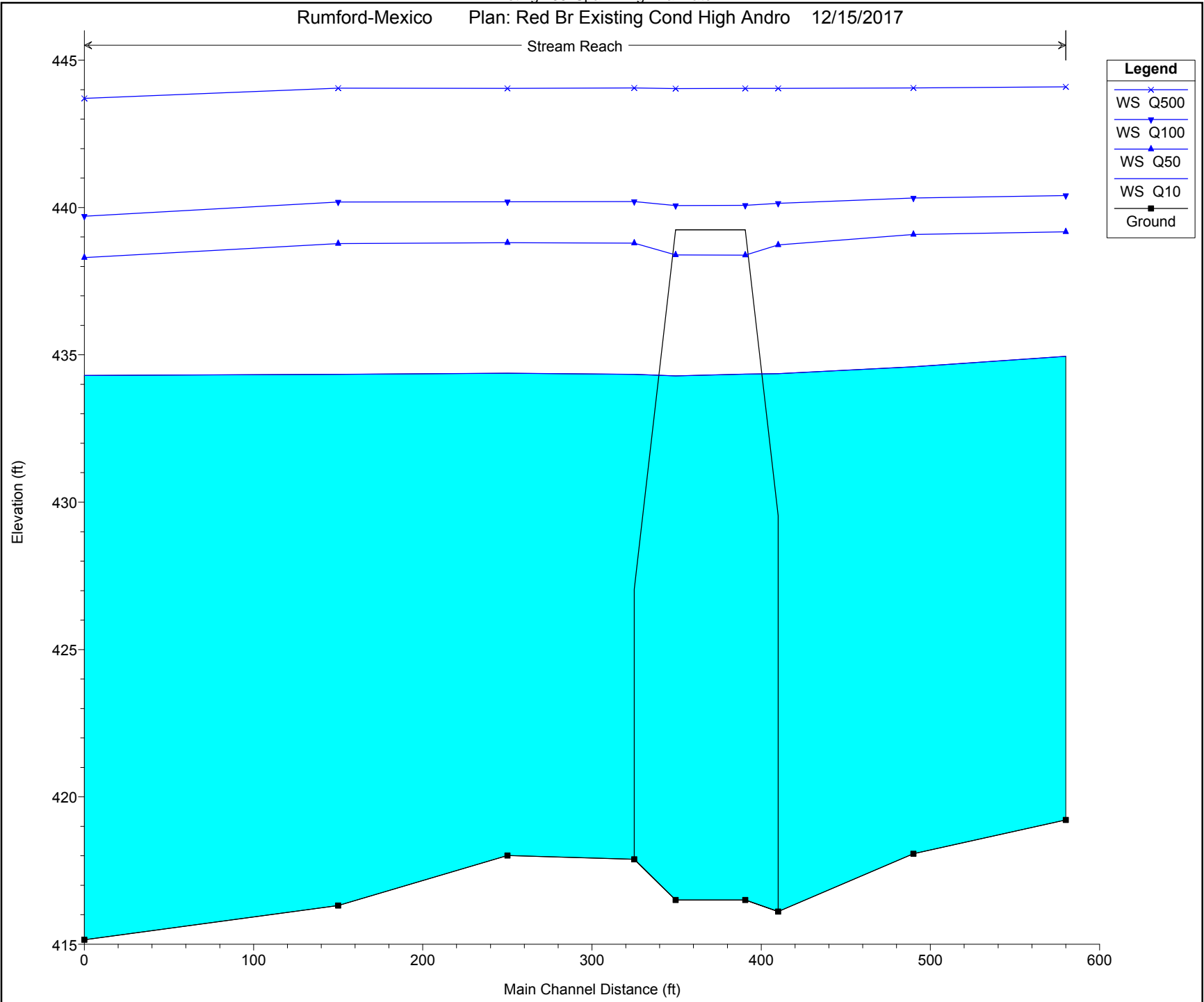
Existing 165' Span - High Tailwater

Rumford-Mexico Plan: Red Br Existing Cond High Andro 12/15/2017  
RS630 Downstream Limit



Existing 165' Span - High Tailwater

Rumford-Mexico Plan: Red Br Existing Cond High Andro 12/15/2017



Legend	
WS Q500	×
WS Q100	▼
WS Q50	▲
WS Q10	■
Ground	■

155' Span - High Tailwater

HEC-RAS Plan: Prop 153 ft River: Stream Reach: Reach

Reach	River Sta	Profile	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
Reach	1210.000	Q10	15173.00	419.22	434.95	427.24	435.48	0.000494	6.01	3053.62	1042.82	0.29
Reach	1210.000	Q50	23203.00	419.22	439.14	429.39	439.34	0.000183	4.39	8841.77	1402.22	0.18
Reach	1210.000	Q100	26991.00	419.22	440.40	430.32	440.57	0.000158	4.26	10680.81	1496.69	0.17
Reach	1210.000	Q500	36665.00	419.22	444.09	433.03	444.21	0.000093	3.69	16421.86	1613.71	0.14
Reach	1120.000	Q10	15173.00	418.07	434.59	427.52	435.40	0.000730	7.36	2330.38	830.18	0.35
Reach	1120.000	Q50	23203.00	418.07	439.04	430.24	439.31	0.000245	5.13	7458.87	1254.18	0.21
Reach	1120.000	Q100	26991.00	418.07	440.32	431.34	440.55	0.000210	4.98	9150.98	1393.52	0.20
Reach	1120.000	Q500	36665.00	418.07	444.05	434.41	444.20	0.000114	4.11	14646.08	1529.86	0.15
Reach	1040.000	Q10	15173.00	416.11	434.36	427.89	435.32	0.000870	8.18	2145.84	438.97	0.38
Reach	1040.000	Q50	23203.00	416.11	438.68	430.96	439.25	0.000481	7.23	5741.93	1525.57	0.29
Reach	1040.000	Q100	26991.00	416.11	440.14	432.02	440.52	0.000334	6.34	8184.54	1797.85	0.25
Reach	1040.000	Q500	36665.00	416.11	444.04	434.43	444.19	0.000127	4.39	15409.61	1874.51	0.16
Reach	1000		Bridge									
Reach	955.0000	Q10	15173.00	417.88	434.34	427.28	435.20	0.000760	7.60	2199.96	741.63	0.36
Reach	955.0000	Q50	23203.00	417.88	438.79	430.24	439.00	0.000200	4.69	8178.48	1493.40	0.19
Reach	955.0000	Q100	26991.00	417.88	440.20	431.37	440.37	0.000163	4.45	10519.70	1802.42	0.18
Reach	955.0000	Q500	36665.00	417.88	444.05	433.73	444.15	0.000080	3.50	17658.81	1874.62	0.13
Reach	880.0000	Q10	15173.00	418.01	434.38	427.48	435.11	0.000661	7.00	2563.50	859.93	0.34
Reach	880.0000	Q50	23203.00	418.01	438.80	429.91	438.98	0.000160	4.18	8482.14	992.63	0.18
Reach	880.0000	Q100	26991.00	418.01	440.20	430.94	440.36	0.000140	4.11	10446.66	1923.58	0.17
Reach	880.0000	Q500	36665.00	418.01	444.05	433.29	444.15	0.000077	3.44	17946.88	1973.99	0.13
Reach	780.0000	Q10	15173.00	416.31	434.34	427.42	435.03	0.000610	7.05	3105.94	880.85	0.33
Reach	780.0000	Q50	23203.00	416.31	438.77	429.82	438.96	0.000174	4.50	9561.02	1619.46	0.18
Reach	780.0000	Q100	26991.00	416.31	440.19	431.00	440.34	0.000144	4.30	12163.82	2018.37	0.17
Reach	780.0000	Q500	36665.00	416.31	444.05	433.79	444.13	0.000075	3.49	20052.14	2067.79	0.13
Reach	630.0000	Q10	15173.00	415.15	434.30	427.20	434.93	0.000562	6.93	4044.85	755.79	0.32
Reach	630.0000	Q50	23203.00	415.15	438.30	430.35	438.88	0.000440	7.17	9011.40	1459.28	0.29
Reach	630.0000	Q100	26991.00	415.15	439.70	431.62	440.26	0.000416	7.31	11271.60	1769.52	0.29
Reach	630.0000	Q500	36665.00	415.15	443.70	433.52	444.08	0.000274	6.69	18790.10	1935.72	0.24

155' Span - High Tailwater

HEC-RAS Plan: Prop 153 ft River: Stream Reach: Reach

Reach	River Sta	Profile	E.G. Elev (ft)	W.S. Elev (ft)	Vel Head (ft)	Frctn Loss (ft)	C & E Loss (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)
Reach	1210.000	Q10	435.48	434.95	0.53	0.05	0.03	689.97	14390.11	92.91	1042.82
Reach	1210.000	Q50	439.34	439.14	0.20	0.02	0.01	2546.77	13818.14	6838.09	1402.22
Reach	1210.000	Q100	440.57	440.40	0.17	0.02	0.01	3640.63	14395.01	8955.37	1496.69
Reach	1210.000	Q500	444.21	444.09	0.12	0.01	0.00	7428.64	14886.24	14350.12	1613.71
Reach	1120.000	Q10	435.40	434.59	0.81	0.06	0.02	674.00	14498.97	0.03	830.18
Reach	1120.000	Q50	439.31	439.04	0.27	0.03	0.03	2471.14	13370.97	7360.88	1254.18
Reach	1120.000	Q100	440.55	440.32	0.23	0.02	0.01	3642.87	13864.39	9483.74	1393.52
Reach	1120.000	Q500	444.20	444.05	0.14	0.01	0.00	7609.49	13644.38	15411.13	1529.86
Reach	1040.000	Q10	435.32	434.36	0.96	0.02	0.05	1313.07	13859.33	0.60	438.97
Reach	1040.000	Q50	439.25	438.68	0.58	0.01	0.02	3248.98	15860.13	4093.89	1525.57
Reach	1040.000	Q100	440.52	440.14	0.38	0.01	0.01	4932.86	14981.84	7076.31	1797.85
Reach	1040.000	Q500	444.19	444.04	0.14	0.00	0.00	10876.72	12357.15	13431.13	1874.51
Reach	1000	Bridge									
Reach	955.0000	Q10	435.20	434.34	0.86	0.05	0.04	719.18	14450.14	3.68	741.63
Reach	955.0000	Q50	439.00	438.79	0.21	0.01	0.01	1671.89	11766.94	9764.17	1493.40
Reach	955.0000	Q100	440.37	440.20	0.18	0.01	0.00	2850.69	12020.31	12120.00	1802.42
Reach	955.0000	Q500	444.15	444.05	0.10	0.01	0.00	7830.88	11300.07	17534.05	1874.62
Reach	880.0000	Q10	435.11	434.38	0.73	0.06	0.01	468.27	14563.33	141.39	859.93
Reach	880.0000	Q50	438.98	438.80	0.17	0.02	0.00	589.53	11605.05	11008.43	992.63
Reach	880.0000	Q100	440.36	440.20	0.16	0.02	0.00	837.98	12312.16	13840.87	1923.58
Reach	880.0000	Q500	444.15	444.05	0.10	0.01	0.00	4824.83	12376.31	19463.86	1973.99
Reach	780.0000	Q10	435.03	434.34	0.69	0.09	0.02	964.62	13549.89	658.49	880.85
Reach	780.0000	Q50	438.96	438.77	0.18	0.04	0.04	1651.11	11324.58	10227.31	1619.46
Reach	780.0000	Q100	440.34	440.19	0.16	0.04	0.04	2670.71	11633.90	12686.39	2018.37
Reach	780.0000	Q500	444.13	444.05	0.09	0.02	0.03	7337.29	11226.69	18101.02	2067.79
Reach	630.0000	Q10	434.93	434.30	0.63			919.26	12668.45	1585.29	755.79
Reach	630.0000	Q50	438.88	438.30	0.58			1526.91	16609.65	5066.44	1459.28
Reach	630.0000	Q100	440.26	439.70	0.56			2413.55	18172.32	6405.13	1769.52
Reach	630.0000	Q500	444.08	443.70	0.38			6943.62	19880.78	9840.60	1935.72

155' Span - High Tailwater

Plan: Prop 153 ft Stream Reach RS: 1210.000 Profile: Q10

E.G. Elev (ft)	435.48	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.53	Wt. n-Val.	0.048	0.030	0.080
W.S. Elev (ft)	434.95	Reach Len. (ft)	80.00	90.00	100.00
Crit W.S. (ft)	427.24	Flow Area (sq ft)	471.87	2396.35	185.41
E.G. Slope (ft/ft)	0.000494	Area (sq ft)	471.87	2396.35	910.43
Q Total (cfs)	15173.00	Flow (cfs)	689.97	14390.11	92.91
Top Width (ft)	1042.82	Top Width (ft)	198.31	179.64	664.87
Vel Total (ft/s)	4.97	Avg. Vel. (ft/s)	1.46	6.01	0.50
Max Chl Dpth (ft)	15.73	Hydr. Depth (ft)	2.38	13.34	1.32
Conv. Total (cfs)	682577.2	Conv. (cfs)	31039.3	647358.0	4179.9
Length Wtd. (ft)	89.58	Wetted Per. (ft)	198.52	188.14	140.19
Min Ch El (ft)	419.22	Shear (lb/sq ft)	0.07	0.39	0.04
Alpha	1.39	Stream Power (lb/ft s)	1190.00	0.00	0.00
Frctn Loss (ft)	0.05	Cum Volume (acre-ft)	5.69	26.34	19.15
C & E Loss (ft)	0.03	Cum SA (acres)	1.26	1.88	7.19

Plan: Prop 153 ft Stream Reach RS: 1210.000 Profile: Q50

E.G. Elev (ft)	439.34	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.20	Wt. n-Val.	0.042	0.030	0.034
W.S. Elev (ft)	439.14	Reach Len. (ft)	80.00	90.00	100.00
Crit W.S. (ft)	429.39	Flow Area (sq ft)	1951.73	3149.23	3740.82
E.G. Slope (ft/ft)	0.000183	Area (sq ft)	1951.73	3149.23	3740.82
Q Total (cfs)	23203.00	Flow (cfs)	2546.77	13818.14	6838.09
Top Width (ft)	1402.22	Top Width (ft)	536.75	179.64	685.82
Vel Total (ft/s)	2.62	Avg. Vel. (ft/s)	1.30	4.39	1.83
Max Chl Dpth (ft)	19.92	Hydr. Depth (ft)	3.64	17.53	5.45
Conv. Total (cfs)	1713934.0	Conv. (cfs)	188122.2	1020704.0	505108.6
Length Wtd. (ft)	91.98	Wetted Per. (ft)	536.99	188.14	687.15
Min Ch El (ft)	419.22	Shear (lb/sq ft)	0.04	0.19	0.06
Alpha	1.84	Stream Power (lb/ft s)	1190.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	17.89	34.42	57.81
C & E Loss (ft)	0.01	Cum SA (acres)	6.14	1.88	10.19

Plan: Prop 153 ft Stream Reach RS: 1210.000 Profile: Q100

E.G. Elev (ft)	440.57	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.17	Wt. n-Val.	0.041	0.030	0.034
W.S. Elev (ft)	440.40	Reach Len. (ft)	80.00	90.00	100.00
Crit W.S. (ft)	430.32	Flow Area (sq ft)	2695.35	3375.80	4609.66
E.G. Slope (ft/ft)	0.000158	Area (sq ft)	2695.35	3375.80	4609.66
Q Total (cfs)	26991.00	Flow (cfs)	3640.63	14395.01	8955.37
Top Width (ft)	1496.69	Top Width (ft)	625.61	179.64	691.43
Vel Total (ft/s)	2.53	Avg. Vel. (ft/s)	1.35	4.26	1.94
Max Chl Dpth (ft)	21.18	Hydr. Depth (ft)	4.31	18.79	6.67
Conv. Total (cfs)	2148793.0	Conv. (cfs)	289835.5	1146008.0	712949.6
Length Wtd. (ft)	92.07	Wetted Per. (ft)	625.86	188.14	692.91
Min Ch El (ft)	419.22	Shear (lb/sq ft)	0.04	0.18	0.07
Alpha	1.75	Stream Power (lb/ft s)	1190.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	29.39	36.88	72.64
C & E Loss (ft)	0.01	Cum SA (acres)	10.11	1.66	10.93

Plan: Prop 153 ft Stream Reach RS: 1210.000 Profile: Q500

E.G. Elev (ft)	444.21	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.12	Wt. n-Val.	0.039	0.030	0.034
W.S. Elev (ft)	444.09	Reach Len. (ft)	80.00	90.00	100.00
Crit W.S. (ft)	433.03	Flow Area (sq ft)	5198.68	4038.94	7184.24
E.G. Slope (ft/ft)	0.000093	Area (sq ft)	5198.68	4038.94	7184.24
Q Total (cfs)	36665.00	Flow (cfs)	7428.64	14886.24	14350.12
Top Width (ft)	1613.71	Top Width (ft)	730.64	179.64	703.43
Vel Total (ft/s)	2.23	Avg. Vel. (ft/s)	1.43	3.69	2.00

155' Span - High Tailwater

Plan: Prop 153 ft Stream Reach RS: 1210.000 Profile: Q500 (Continued)

Max Chl Dpth (ft)	24.87	Hydr. Depth (ft)	7.12	22.48	10.21
Conv. Total (cfs)	3806039.0	Conv. (cfs)	771135.8	1545278.0	1489625.0
Length Wtd. (ft)	92.01	Wetted Per. (ft)	730.95	188.14	705.46
Min Ch El (ft)	419.22	Shear (lb/sq ft)	0.04	0.12	0.06
Alpha	1.50	Stream Power (lb/ft s)	1190.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	70.30	43.45	116.37
C & E Loss (ft)	0.00	Cum SA (acres)	10.82	1.93	11.63

Plan: Prop 153 ft Stream Reach RS: 1120.000 Profile: Q10

E.G. Elev (ft)	435.40	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.81	Wt. n-Val.	0.045	0.030	0.030
W.S. Elev (ft)	434.59	Reach Len. (ft)	75.00	80.00	80.00
Crit W.S. (ft)	427.52	Flow Area (sq ft)	359.85	1970.30	0.23
E.G. Slope (ft/ft)	0.000730	Area (sq ft)	359.85	1970.30	593.37
Q Total (cfs)	15173.00	Flow (cfs)	674.00	14498.97	0.03
Top Width (ft)	830.18	Top Width (ft)	131.42	142.52	556.24
Vel Total (ft/s)	6.51	Avg. Vel. (ft/s)	1.87	7.36	0.12
Max Chl Dpth (ft)	16.52	Hydr. Depth (ft)	2.74	13.82	4.10
Conv. Total (cfs)	561747.9	Conv. (cfs)	24953.4	536793.5	1.0
Length Wtd. (ft)	79.67	Wetted Per. (ft)	132.29	152.73	8.21
Min Ch El (ft)	418.07	Shear (lb/sq ft)	0.12	0.59	0.00
Alpha	1.22	Stream Power (lb/ft s)	1080.00	0.00	0.00
Frctn Loss (ft)	0.06	Cum Volume (acre-ft)	4.93	21.83	17.43
C & E Loss (ft)	0.02	Cum SA (acres)	0.96	1.55	5.79

Plan: Prop 153 ft Stream Reach RS: 1120.000 Profile: Q50

E.G. Elev (ft)	439.31	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.27	Wt. n-Val.	0.041	0.030	0.030
W.S. Elev (ft)	439.04	Reach Len. (ft)	75.00	80.00	80.00
Crit W.S. (ft)	430.24	Flow Area (sq ft)	1686.57	2604.34	3167.96
E.G. Slope (ft/ft)	0.000245	Area (sq ft)	1686.57	2604.34	3167.96
Q Total (cfs)	23203.00	Flow (cfs)	2471.14	13370.97	7360.88
Top Width (ft)	1254.18	Top Width (ft)	502.64	142.52	609.02
Vel Total (ft/s)	3.11	Avg. Vel. (ft/s)	1.47	5.13	2.32
Max Chl Dpth (ft)	20.97	Hydr. Depth (ft)	3.36	18.27	5.20
Conv. Total (cfs)	1482971.0	Conv. (cfs)	157938.0	854578.0	470455.3
Length Wtd. (ft)	79.38	Wetted Per. (ft)	504.69	152.73	622.61
Min Ch El (ft)	418.07	Shear (lb/sq ft)	0.05	0.26	0.08
Alpha	1.77	Stream Power (lb/ft s)	1080.00	0.00	0.00
Frctn Loss (ft)	0.03	Cum Volume (acre-ft)	14.54	28.48	49.88
C & E Loss (ft)	0.03	Cum SA (acres)	5.18	1.55	8.71

Plan: Prop 153 ft Stream Reach RS: 1120.000 Profile: Q100

E.G. Elev (ft)	440.55	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.23	Wt. n-Val.	0.040	0.030	0.030
W.S. Elev (ft)	440.32	Reach Len. (ft)	75.00	80.00	80.00
Crit W.S. (ft)	431.34	Flow Area (sq ft)	2397.85	2786.07	3967.06
E.G. Slope (ft/ft)	0.000210	Area (sq ft)	2397.85	2786.07	3967.06
Q Total (cfs)	26991.00	Flow (cfs)	3642.87	13864.39	9483.74
Top Width (ft)	1393.52	Top Width (ft)	598.04	142.52	652.97
Vel Total (ft/s)	2.95	Avg. Vel. (ft/s)	1.52	4.98	2.39
Max Chl Dpth (ft)	22.25	Hydr. Depth (ft)	4.01	19.55	6.08
Conv. Total (cfs)	1861631.0	Conv. (cfs)	251257.2	956258.7	654115.3
Length Wtd. (ft)	79.21	Wetted Per. (ft)	600.09	152.73	668.10
Min Ch El (ft)	418.07	Shear (lb/sq ft)	0.05	0.24	0.08
Alpha	1.73	Stream Power (lb/ft s)	1080.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	24.72	30.51	62.80
C & E Loss (ft)	0.01	Cum SA (acres)	8.99	1.33	9.39

155' Span - High Tailwater

Plan: Prop 153 ft Stream Reach RS: 1120.000 Profile: Q500

E.G. Elev (ft)	444.20	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.14	Wt. n-Val.	0.038	0.030	0.030
W.S. Elev (ft)	444.05	Reach Len. (ft)	75.00	80.00	80.00
Crit W.S. (ft)	434.41	Flow Area (sq ft)	4825.44	3318.53	6502.11
E.G. Slope (ft/ft)	0.000114	Area (sq ft)	4825.44	3318.53	6502.11
Q Total (cfs)	36665.00	Flow (cfs)	7609.49	13644.38	15411.13
Top Width (ft)	1529.86	Top Width (ft)	701.52	142.52	685.82
Vel Total (ft/s)	2.50	Avg. Vel. (ft/s)	1.58	4.11	2.37
Max Chl Dpth (ft)	25.98	Hydr. Depth (ft)	6.88	23.28	9.48
Conv. Total (cfs)	3439238.0	Conv. (cfs)	713782.4	1279866.0	1445590.0
Length Wtd. (ft)	78.74	Wetted Per. (ft)	703.65	152.73	708.83
Min Ch El (ft)	418.07	Shear (lb/sq ft)	0.05	0.15	0.07
Alpha	1.46	Stream Power (lb/ft s)	1080.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	61.10	35.85	100.66
C & E Loss (ft)	0.00	Cum SA (acres)	9.50	1.60	10.04

Plan: Prop 153 ft Stream Reach RS: 1040.000 Profile: Q10

E.G. Elev (ft)	435.32	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.96	Wt. n-Val.	0.049	0.030	0.030
W.S. Elev (ft)	434.36	Reach Len. (ft)	19.40	19.40	19.40
Crit W.S. (ft)	427.89	Flow Area (sq ft)	451.49	1693.53	0.82
E.G. Slope (ft/ft)	0.000870	Area (sq ft)	451.80	1693.53	207.28
Q Total (cfs)	15173.00	Flow (cfs)	1313.07	13859.33	0.60
Top Width (ft)	438.97	Top Width (ft)	82.88	116.08	240.01
Vel Total (ft/s)	7.07	Avg. Vel. (ft/s)	2.91	8.18	0.73
Max Chl Dpth (ft)	18.25	Hydr. Depth (ft)	5.54	14.59	0.39
Conv. Total (cfs)	514427.1	Conv. (cfs)	44518.3	469888.3	20.4
Length Wtd. (ft)	19.40	Wetted Per. (ft)	82.49	127.73	2.32
Min Ch El (ft)	416.11	Shear (lb/sq ft)	0.30	0.72	0.02
Alpha	1.24	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	4.23	18.47	16.69
C & E Loss (ft)	0.05	Cum SA (acres)	0.78	1.31	5.05

Plan: Prop 153 ft Stream Reach RS: 1040.000 Profile: Q50

E.G. Elev (ft)	439.25	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.58	Wt. n-Val.	0.045	0.030	0.030
W.S. Elev (ft)	438.68	Reach Len. (ft)	19.40	19.40	19.40
Crit W.S. (ft)	430.96	Flow Area (sq ft)	1577.76	2194.60	1969.57
E.G. Slope (ft/ft)	0.000481	Area (sq ft)	1577.76	2194.60	3131.47
Q Total (cfs)	23203.00	Flow (cfs)	3248.98	15860.13	4093.89
Top Width (ft)	1525.57	Top Width (ft)	667.08	116.09	742.40
Vel Total (ft/s)	4.04	Avg. Vel. (ft/s)	2.06	7.23	2.08
Max Chl Dpth (ft)	22.57	Hydr. Depth (ft)	2.37	18.90	2.65
Conv. Total (cfs)	1058468.0	Conv. (cfs)	148211.0	723502.9	186753.7
Length Wtd. (ft)	19.40	Wetted Per. (ft)	668.82	127.80	743.59
Min Ch El (ft)	416.11	Shear (lb/sq ft)	0.07	0.52	0.08
Alpha	2.27	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	11.73	24.07	44.10
C & E Loss (ft)	0.02	Cum SA (acres)	4.18	1.31	7.47

Plan: Prop 153 ft Stream Reach RS: 1040.000 Profile: Q100

E.G. Elev (ft)	440.52	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.38	Wt. n-Val.	0.042	0.030	0.030
W.S. Elev (ft)	440.14	Reach Len. (ft)	19.40	19.40	19.40
Crit W.S. (ft)	432.02	Flow Area (sq ft)	2757.48	2364.51	3062.55
E.G. Slope (ft/ft)	0.000334	Area (sq ft)	2757.48	2364.51	4224.46
Q Total (cfs)	26991.00	Flow (cfs)	4932.86	14981.84	7076.31
Top Width (ft)	1797.85	Top Width (ft)	930.52	116.09	751.23
Vel Total (ft/s)	3.30	Avg. Vel. (ft/s)	1.79	6.34	2.31

155' Span - High Tailwater

Plan: Prop 153 ft Stream Reach RS: 1040.000 Profile: Q100 (Continued)

Max Chl Dpth (ft)	24.03	Hydr. Depth (ft)	2.96	20.37	4.08
Conv. Total (cfs)	1475941.0	Conv. (cfs)	269741.9	819247.2	386951.5
Length Wtd. (ft)	19.40	Wetted Per. (ft)	933.23	127.80	752.54
Min Ch El (ft)	416.11	Shear (lb/sq ft)	0.06	0.39	0.08
Alpha	2.23	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	20.28	25.78	55.27
C & E Loss (ft)	0.01	Cum SA (acres)	7.68	1.09	8.10

Plan: Prop 153 ft Stream Reach RS: 1040.000 Profile: Q500

E.G. Elev (ft)	444.19	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.14	Wt. n-Val.	0.038	0.030	0.030
W.S. Elev (ft)	444.04	Reach Len. (ft)	19.40	19.40	19.40
Crit W.S. (ft)	434.43	Flow Area (sq ft)	6546.81	2817.90	6044.91
E.G. Slope (ft/ft)	0.000127	Area (sq ft)	6546.81	2817.90	7206.82
Q Total (cfs)	36665.00	Flow (cfs)	10876.72	12357.15	13431.13
Top Width (ft)	1874.51	Top Width (ft)	982.39	116.09	776.03
Vel Total (ft/s)	2.38	Avg. Vel. (ft/s)	1.66	4.39	2.22
Max Chl Dpth (ft)	27.93	Hydr. Depth (ft)	6.66	24.27	7.79
Conv. Total (cfs)	3256283.0	Conv. (cfs)	965980.8	1097460.0	1192842.0
Length Wtd. (ft)	19.40	Wetted Per. (ft)	985.51	127.80	777.65
Min Ch El (ft)	416.11	Shear (lb/sq ft)	0.05	0.17	0.06
Alpha	1.61	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	51.31	30.21	88.07
C & E Loss (ft)	0.00	Cum SA (acres)	8.05	1.36	8.69

Plan: Prop 153 ft Stream Reach RS: 1000 BR U Profile: Q10

E.G. Elev (ft)	435.26	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.80	Wt. n-Val.		0.030	
W.S. Elev (ft)	434.46	Reach Len. (ft)	41.20	41.20	41.20
Crit W.S. (ft)	427.07	Flow Area (sq ft)		2118.23	
E.G. Slope (ft/ft)	0.000711	Area (sq ft)		2118.23	
Q Total (cfs)	15173.00	Flow (cfs)		15173.00	
Top Width (ft)	148.24	Top Width (ft)		148.24	
Vel Total (ft/s)	7.16	Avg. Vel. (ft/s)		7.16	
Max Chl Dpth (ft)	17.96	Hydr. Depth (ft)		14.29	
Conv. Total (cfs)	568905.6	Conv. (cfs)		568905.6	
Length Wtd. (ft)	41.20	Wetted Per. (ft)		167.76	
Min Ch El (ft)	416.50	Shear (lb/sq ft)		0.56	
Alpha	1.00	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.03	Cum Volume (acre-ft)	4.13	17.62	16.64
C & E Loss (ft)	0.00	Cum SA (acres)	0.76	1.25	5.00

Plan: Prop 153 ft Stream Reach RS: 1000 BR U Profile: Q50

E.G. Elev (ft)	439.22	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.82	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	438.40	Reach Len. (ft)	41.20	41.20	41.20
Crit W.S. (ft)	429.30	Flow Area (sq ft)	436.21	2702.10	1061.04
E.G. Slope (ft/ft)	0.000624	Area (sq ft)	436.21	2702.10	1189.04
Q Total (cfs)	23203.00	Flow (cfs)	472.75	20673.83	2056.43
Top Width (ft)	1110.93	Top Width (ft)	422.03	148.03	540.87
Vel Total (ft/s)	5.53	Avg. Vel. (ft/s)	1.08	7.65	1.94
Max Chl Dpth (ft)	21.90	Hydr. Depth (ft)	1.03	18.25	1.96
Conv. Total (cfs)	929161.1	Conv. (cfs)	18931.1	827880.8	82349.3
Length Wtd. (ft)	41.20	Wetted Per. (ft)	422.05	175.64	540.94
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.04	0.60	0.08
Alpha	1.72	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	11.29	22.98	43.14
C & E Loss (ft)	0.02	Cum SA (acres)	3.93	1.25	7.18

155' Span - High Tailwater

Plan: Prop 153 ft Stream Reach RS: 1000 BR U Profile: Q100

E.G. Elev (ft)	440.50	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.45	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	440.05	Reach Len. (ft)	41.20	41.20	41.20
Crit W.S. (ft)	430.27	Flow Area (sq ft)	1413.03	2826.31	2055.95
E.G. Slope (ft/ft)	0.000900	Area (sq ft)	1413.03	2826.31	2183.95
Q Total (cfs)	26991.00	Flow (cfs)	2735.12	17746.28	6509.61
Top Width (ft)	1422.56	Top Width (ft)	761.48		661.08
Vel Total (ft/s)	4.29	Avg. Vel. (ft/s)	1.94	6.28	3.17
Max Chl Dpth (ft)	23.55	Hydr. Depth (ft)	1.86		3.11
Conv. Total (cfs)	899807.8	Conv. (cfs)	91181.4	591613.4	217012.9
Length Wtd. (ft)	41.20	Wetted Per. (ft)	761.55	325.32	661.20
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.10	0.49	0.17
Alpha	1.56	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	19.35	24.63	53.85
C & E Loss (ft)	0.02	Cum SA (acres)	7.30	1.07	7.78

Plan: Prop 153 ft Stream Reach RS: 1000 BR U Profile: Q500

E.G. Elev (ft)	444.18	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.13	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	444.05	Reach Len. (ft)	41.20	41.20	41.20
Crit W.S. (ft)	432.57	Flow Area (sq ft)	4890.10	2951.94	4915.82
E.G. Slope (ft/ft)	0.000347	Area (sq ft)	4890.10	2951.94	5043.82
Q Total (cfs)	36665.00	Flow (cfs)	11844.44	8780.71	16039.85
Top Width (ft)	1854.32	Top Width (ft)	913.63	184.85	755.84
Vel Total (ft/s)	2.87	Avg. Vel. (ft/s)	2.42	2.97	3.26
Max Chl Dpth (ft)	27.55	Hydr. Depth (ft)	5.35	15.97	6.50
Conv. Total (cfs)	1967726.0	Conv. (cfs)	635663.9	471240.3	860821.5
Length Wtd. (ft)	41.20	Wetted Per. (ft)	914.19	510.17	756.34
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.12	0.13	0.14
Alpha	1.05	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	48.76	28.93	85.34
C & E Loss (ft)	0.00	Cum SA (acres)	7.63	1.30	8.35

Plan: Prop 153 ft Stream Reach RS: 1000 BR D Profile: Q10

E.G. Elev (ft)	435.22	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.79	Wt. n-Val.		0.030	
W.S. Elev (ft)	434.44	Reach Len. (ft)	24.40	24.40	24.40
Crit W.S. (ft)	427.06	Flow Area (sq ft)		2129.24	
E.G. Slope (ft/ft)	0.000705	Area (sq ft)		2129.24	
Q Total (cfs)	15173.00	Flow (cfs)		15173.00	
Top Width (ft)	149.99	Top Width (ft)		149.99	
Vel Total (ft/s)	7.13	Avg. Vel. (ft/s)		7.13	
Max Chl Dpth (ft)	17.94	Hydr. Depth (ft)		14.20	
Conv. Total (cfs)	571516.2	Conv. (cfs)		571516.2	
Length Wtd. (ft)	24.40	Wetted Per. (ft)		168.78	
Min Ch El (ft)	416.50	Shear (lb/sq ft)		0.56	
Alpha	1.00	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	4.13	15.61	16.64
C & E Loss (ft)	0.01	Cum SA (acres)	0.76	1.11	5.00

Plan: Prop 153 ft Stream Reach RS: 1000 BR D Profile: Q50

E.G. Elev (ft)	439.17	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.75	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	438.42	Reach Len. (ft)	24.40	24.40	24.40
Crit W.S. (ft)	429.31	Flow Area (sq ft)	510.82	2727.29	1225.87
E.G. Slope (ft/ft)	0.000582	Area (sq ft)	510.82	2727.29	1225.87
Q Total (cfs)	23203.00	Flow (cfs)	541.01	20201.24	2460.74
Top Width (ft)	1199.07	Top Width (ft)	485.94	149.99	563.14
Vel Total (ft/s)	5.20	Avg. Vel. (ft/s)	1.06	7.41	2.01

155' Span - High Tailwater

Plan: Prop 153 ft Stream Reach RS: 1000 BR D Profile: Q50 (Continued)

Max Chl Dpth (ft)	21.92	Hydr. Depth (ft)	1.05	18.18	2.18
Conv. Total (cfs)	961572.3	Conv. (cfs)	22420.4	837174.3	101977.5
Length Wtd. (ft)	24.40	Wetted Per. (ft)	485.96	176.77	563.21
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.04	0.56	0.08
Alpha	1.78	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	10.84	20.41	42.00
C & E Loss (ft)	0.16	Cum SA (acres)	3.50	1.11	6.66

Plan: Prop 153 ft Stream Reach RS: 1000 BR D Profile: Q100

E.G. Elev (ft)	440.45	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.39	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	440.06	Reach Len. (ft)	24.40	24.40	24.40
Crit W.S. (ft)	430.25	Flow Area (sq ft)	1600.82	2849.88	2255.36
E.G. Slope (ft/ft)	0.000812	Area (sq ft)	1600.82	2849.88	2255.36
Q Total (cfs)	26991.00	Flow (cfs)	3032.12	16982.80	6976.08
Top Width (ft)	1512.12	Top Width (ft)	816.88		695.24
Vel Total (ft/s)	4.02	Avg. Vel. (ft/s)	1.89	5.96	3.09
Max Chl Dpth (ft)	23.56	Hydr. Depth (ft)	1.96		3.24
Conv. Total (cfs)	947360.8	Conv. (cfs)	106424.7	596081.8	244854.4
Length Wtd. (ft)	24.40	Wetted Per. (ft)	816.93	328.41	695.36
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.10	0.44	0.16
Alpha	1.56	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	17.92	21.94	51.75
C & E Loss (ft)	0.06	Cum SA (acres)	6.55	1.07	7.14

Plan: Prop 153 ft Stream Reach RS: 1000 BR D Profile: Q500

E.G. Elev (ft)	444.16	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.12	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	444.04	Reach Len. (ft)	24.40	24.40	24.40
Crit W.S. (ft)	432.54	Flow Area (sq ft)	5110.72	2983.21	5241.71
E.G. Slope (ft/ft)	0.000307	Area (sq ft)	5110.72	2983.21	5241.71
Q Total (cfs)	36665.00	Flow (cfs)	11919.63	8318.00	16427.37
Top Width (ft)	1894.66	Top Width (ft)	919.71	189.37	785.58
Vel Total (ft/s)	2.75	Avg. Vel. (ft/s)	2.33	2.79	3.13
Max Chl Dpth (ft)	27.54	Hydr. Depth (ft)	5.56	15.75	6.67
Conv. Total (cfs)	2093172.0	Conv. (cfs)	680480.9	474867.1	937823.4
Length Wtd. (ft)	24.40	Wetted Per. (ft)	920.18	517.80	786.08
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.11	0.11	0.13
Alpha	1.05	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	44.03	26.12	80.48
C & E Loss (ft)	0.01	Cum SA (acres)	6.76	1.12	7.62

Plan: Prop 153 ft Stream Reach RS: 955.0000 Profile: Q10

E.G. Elev (ft)	435.20	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.86	Wt. n-Val.	0.049	0.030	0.100
W.S. Elev (ft)	434.34	Reach Len. (ft)	70.00	75.00	80.00
Crit W.S. (ft)	427.28	Flow Area (sq ft)	293.03	1902.05	4.88
E.G. Slope (ft/ft)	0.000760	Area (sq ft)	303.83	1902.05	1486.73
Q Total (cfs)	15173.00	Flow (cfs)	719.18	14450.14	3.68
Top Width (ft)	741.63	Top Width (ft)	64.99	136.78	539.85
Vel Total (ft/s)	6.90	Avg. Vel. (ft/s)	2.45	7.60	0.75
Max Chl Dpth (ft)	16.46	Hydr. Depth (ft)	5.11	13.91	2.53
Conv. Total (cfs)	550219.1	Conv. (cfs)	26079.7	524006.1	133.4
Length Wtd. (ft)	74.83	Wetted Per. (ft)	57.78	145.00	1.95
Min Ch El (ft)	417.88	Shear (lb/sq ft)	0.24	0.62	0.12
Alpha	1.16	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.05	Cum Volume (acre-ft)	4.04	14.48	16.23
C & E Loss (ft)	0.04	Cum SA (acres)	0.74	1.03	4.85

## 155' Span - High Tailwater

Plan: Prop 153 ft Stream Reach RS: 955.0000 Profile: Q50

E.G. Elev (ft)	439.00	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.21	Wt. n-Val.	0.044	0.030	0.030
W.S. Elev (ft)	438.79	Reach Len. (ft)	70.00	75.00	80.00
Crit W.S. (ft)	430.24	Flow Area (sq ft)	1432.23	2510.88	4235.38
E.G. Slope (ft/ft)	0.000200	Area (sq ft)	1432.23	2510.88	4235.38
Q Total (cfs)	23203.00	Flow (cfs)	1671.89	11766.94	9764.17
Top Width (ft)	1493.40	Top Width (ft)	659.76	136.78	696.86
Vel Total (ft/s)	2.84	Avg. Vel. (ft/s)	1.17	4.69	2.31
Max Chl Dpth (ft)	20.91	Hydr. Depth (ft)	2.17	18.36	6.08
Conv. Total (cfs)	1641438.0	Conv. (cfs)	118273.8	832422.5	690741.2
Length Wtd. (ft)	76.99	Wetted Per. (ft)	661.74	145.00	697.14
Min Ch El (ft)	417.88	Shear (lb/sq ft)	0.03	0.22	0.08
Alpha	1.67	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	10.29	18.95	40.47
C & E Loss (ft)	0.01	Cum SA (acres)	3.18	1.03	6.31

Plan: Prop 153 ft Stream Reach RS: 955.0000 Profile: Q100

E.G. Elev (ft)	440.37	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.18	Wt. n-Val.	0.041	0.030	0.030
W.S. Elev (ft)	440.20	Reach Len. (ft)	70.00	75.00	80.00
Crit W.S. (ft)	431.37	Flow Area (sq ft)	2566.54	2703.21	5249.95
E.G. Slope (ft/ft)	0.000163	Area (sq ft)	2566.54	2703.21	5249.95
Q Total (cfs)	26991.00	Flow (cfs)	2850.69	12020.31	12120.00
Top Width (ft)	1802.42	Top Width (ft)	924.46	136.78	741.18
Vel Total (ft/s)	2.57	Avg. Vel. (ft/s)	1.11	4.45	2.31
Max Chl Dpth (ft)	22.32	Hydr. Depth (ft)	2.78	19.76	7.08
Conv. Total (cfs)	2113837.0	Conv. (cfs)	223255.7	941386.7	949194.5
Length Wtd. (ft)	77.06	Wetted Per. (ft)	926.66	145.00	741.49
Min Ch El (ft)	417.88	Shear (lb/sq ft)	0.03	0.19	0.07
Alpha	1.72	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	16.76	20.39	49.65
C & E Loss (ft)	0.00	Cum SA (acres)	6.06	1.03	6.74

Plan: Prop 153 ft Stream Reach RS: 955.0000 Profile: Q500

E.G. Elev (ft)	444.15	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.10	Wt. n-Val.	0.038	0.030	0.030
W.S. Elev (ft)	444.05	Reach Len. (ft)	70.00	75.00	80.00
Crit W.S. (ft)	433.73	Flow Area (sq ft)	6273.65	3230.60	8154.56
E.G. Slope (ft/ft)	0.000080	Area (sq ft)	6273.65	3230.60	8154.56
Q Total (cfs)	36665.00	Flow (cfs)	7830.88	11300.07	17534.05
Top Width (ft)	1874.62	Top Width (ft)	972.37	136.78	765.47
Vel Total (ft/s)	2.08	Avg. Vel. (ft/s)	1.25	3.50	2.15
Max Chl Dpth (ft)	26.17	Hydr. Depth (ft)	6.45	23.62	10.65
Conv. Total (cfs)	4110959.0	Conv. (cfs)	878015.8	1266988.0	1965955.0
Length Wtd. (ft)	76.66	Wetted Per. (ft)	974.94	145.00	766.08
Min Ch El (ft)	417.88	Shear (lb/sq ft)	0.03	0.11	0.05
Alpha	1.46	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	40.84	24.38	76.73
C & E Loss (ft)	0.00	Cum SA (acres)	6.23	1.03	7.19

Plan: Prop 153 ft Stream Reach RS: 880.0000 Profile: Q10

E.G. Elev (ft)	435.11	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.73	Wt. n-Val.	0.100	0.030	0.048
W.S. Elev (ft)	434.38	Reach Len. (ft)	80.00	100.00	115.00
Crit W.S. (ft)	427.48	Flow Area (sq ft)	394.57	2081.46	87.47
E.G. Slope (ft/ft)	0.000661	Area (sq ft)	394.57	2081.46	1905.42
Q Total (cfs)	15173.00	Flow (cfs)	468.27	14563.33	141.39
Top Width (ft)	859.93	Top Width (ft)	71.10	157.36	631.47
Vel Total (ft/s)	5.92	Avg. Vel. (ft/s)	1.19	7.00	1.62

155' Span - High Tailwater

Plan: Prop 153 ft Stream Reach RS: 880.0000 Profile: Q10 (Continued)

Max Chl Dpth (ft)	16.37	Hydr. Depth (ft)	5.55	13.23	2.87
Conv. Total (cfs)	590025.3	Conv. (cfs)	18209.5	566317.4	5498.4
Length Wtd. (ft)	99.45	Wetted Per. (ft)	72.08	161.67	30.53
Min Ch El (ft)	418.01	Shear (lb/sq ft)	0.23	0.53	0.12
Alpha	1.34	Stream Power (lb/ft s)	1303.00	0.00	0.00
Frctn Loss (ft)	0.06	Cum Volume (acre-ft)	3.48	11.05	13.11
C & E Loss (ft)	0.01	Cum SA (acres)	0.63	0.77	3.77

Plan: Prop 153 ft Stream Reach RS: 880.0000 Profile: Q50

E.G. Elev (ft)	438.98	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.17	Wt. n-Val.	0.100	0.030	0.031
W.S. Elev (ft)	438.80	Reach Len. (ft)	80.00	100.00	115.00
Crit W.S. (ft)	429.91	Flow Area (sq ft)	727.59	2778.10	4976.44
E.G. Slope (ft/ft)	0.000160	Area (sq ft)	727.59	2778.10	4976.44
Q Total (cfs)	23203.00	Flow (cfs)	589.53	11605.05	11008.43
Top Width (ft)	992.63	Top Width (ft)	79.35	157.36	755.92
Vel Total (ft/s)	2.74	Avg. Vel. (ft/s)	0.81	4.18	2.21
Max Chl Dpth (ft)	20.79	Hydr. Depth (ft)	9.17	17.65	6.58
Conv. Total (cfs)	1831996.0	Conv. (cfs)	46546.2	916277.9	869171.6
Length Wtd. (ft)	105.90	Wetted Per. (ft)	81.45	161.67	756.06
Min Ch El (ft)	418.01	Shear (lb/sq ft)	0.09	0.17	0.07
Alpha	1.48	Stream Power (lb/ft s)	1303.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	8.56	14.39	32.01
C & E Loss (ft)	0.00	Cum SA (acres)	2.59	0.77	4.97

Plan: Prop 153 ft Stream Reach RS: 880.0000 Profile: Q100

E.G. Elev (ft)	440.36	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.16	Wt. n-Val.	0.085	0.030	0.031
W.S. Elev (ft)	440.20	Reach Len. (ft)	80.00	100.00	115.00
Crit W.S. (ft)	430.94	Flow Area (sq ft)	1393.60	2997.21	6055.86
E.G. Slope (ft/ft)	0.000140	Area (sq ft)	1393.60	2997.21	6055.86
Q Total (cfs)	26991.00	Flow (cfs)	837.98	12312.16	13840.87
Top Width (ft)	1923.58	Top Width (ft)	974.72	157.36	791.50
Vel Total (ft/s)	2.58	Avg. Vel. (ft/s)	0.60	4.11	2.29
Max Chl Dpth (ft)	22.19	Hydr. Depth (ft)	1.43	19.05	7.65
Conv. Total (cfs)	2279602.0	Conv. (cfs)	70773.6	1039858.0	1168970.0
Length Wtd. (ft)	106.07	Wetted Per. (ft)	977.11	161.67	791.67
Min Ch El (ft)	418.01	Shear (lb/sq ft)	0.01	0.16	0.07
Alpha	1.56	Stream Power (lb/ft s)	1303.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	13.57	15.48	39.26
C & E Loss (ft)	0.00	Cum SA (acres)	4.54	0.77	5.33

Plan: Prop 153 ft Stream Reach RS: 880.0000 Profile: Q500

E.G. Elev (ft)	444.15	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.10	Wt. n-Val.	0.046	0.030	0.031
W.S. Elev (ft)	444.05	Reach Len. (ft)	80.00	100.00	115.00
Crit W.S. (ft)	433.29	Flow Area (sq ft)	5167.93	3602.83	9176.12
E.G. Slope (ft/ft)	0.000077	Area (sq ft)	5167.93	3602.83	9176.12
Q Total (cfs)	36665.00	Flow (cfs)	4824.83	12376.31	19463.86
Top Width (ft)	1973.99	Top Width (ft)	986.65	157.36	829.98
Vel Total (ft/s)	2.04	Avg. Vel. (ft/s)	0.93	3.44	2.12
Max Chl Dpth (ft)	26.04	Hydr. Depth (ft)	5.24	22.90	11.06
Conv. Total (cfs)	4186460.0	Conv. (cfs)	550905.9	1413144.0	2222410.0
Length Wtd. (ft)	104.37	Wetted Per. (ft)	989.65	161.67	830.35
Min Ch El (ft)	418.01	Shear (lb/sq ft)	0.03	0.11	0.05
Alpha	1.55	Stream Power (lb/ft s)	1303.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	31.65	18.50	60.81
C & E Loss (ft)	0.00	Cum SA (acres)	4.66	0.77	5.72

155' Span - High Tailwater

Plan: Prop 153 ft Stream Reach RS: 780.0000 Profile: Q10

E.G. Elev (ft)	435.03	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.69	Wt. n-Val.	0.100	0.030	0.057
W.S. Elev (ft)	434.34	Reach Len. (ft)	120.00	150.00	175.00
Crit W.S. (ft)	427.42	Flow Area (sq ft)	772.54	1921.34	412.07
E.G. Slope (ft/ft)	0.000610	Area (sq ft)	862.93	1921.34	1857.34
Q Total (cfs)	15173.00	Flow (cfs)	964.62	13549.89	658.49
Top Width (ft)	880.85	Top Width (ft)	157.65	133.93	589.27
Vel Total (ft/s)	4.89	Avg. Vel. (ft/s)	1.25	7.05	1.60
Max Chl Dpth (ft)	18.03	Hydr. Depth (ft)	6.30	14.35	3.85
Conv. Total (cfs)	614545.1	Conv. (cfs)	39069.7	548805.0	26670.4
Length Wtd. (ft)	149.99	Wetted Per. (ft)	123.04	138.74	107.29
Min Ch El (ft)	416.31	Shear (lb/sq ft)	0.24	0.53	0.15
Alpha	1.87	Stream Power (lb/ft s)	1412.00	0.00	0.00
Frctn Loss (ft)	0.09	Cum Volume (acre-ft)	2.33	6.46	8.15
C & E Loss (ft)	0.02	Cum SA (acres)	0.42	0.44	2.16

Plan: Prop 153 ft Stream Reach RS: 780.0000 Profile: Q50

E.G. Elev (ft)	438.96	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.18	Wt. n-Val.	0.090	0.030	0.034
W.S. Elev (ft)	438.77	Reach Len. (ft)	120.00	150.00	175.00
Crit W.S. (ft)	429.82	Flow Area (sq ft)	2082.81	2515.07	4963.15
E.G. Slope (ft/ft)	0.000174	Area (sq ft)	2082.81	2515.07	4963.15
Q Total (cfs)	23203.00	Flow (cfs)	1651.11	11324.58	10227.31
Top Width (ft)	1619.46	Top Width (ft)	673.61	133.93	811.91
Vel Total (ft/s)	2.43	Avg. Vel. (ft/s)	0.79	4.50	2.06
Max Chl Dpth (ft)	22.46	Hydr. Depth (ft)	3.09	18.78	6.11
Conv. Total (cfs)	1761362.0	Conv. (cfs)	125337.2	859659.7	776364.6
Length Wtd. (ft)	156.18	Wetted Per. (ft)	674.67	138.74	812.29
Min Ch El (ft)	416.31	Shear (lb/sq ft)	0.03	0.20	0.07
Alpha	2.01	Stream Power (lb/ft s)	1412.00	0.00	0.00
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	5.98	8.32	18.89
C & E Loss (ft)	0.04	Cum SA (acres)	1.90	0.44	2.90

Plan: Prop 153 ft Stream Reach RS: 780.0000 Profile: Q100

E.G. Elev (ft)	440.34	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.16	Wt. n-Val.	0.074	0.030	0.034
W.S. Elev (ft)	440.19	Reach Len. (ft)	120.00	150.00	175.00
Crit W.S. (ft)	431.00	Flow Area (sq ft)	3301.13	2704.12	6158.57
E.G. Slope (ft/ft)	0.000144	Area (sq ft)	3301.13	2704.12	6158.57
Q Total (cfs)	26991.00	Flow (cfs)	2670.71	11633.90	12686.39
Top Width (ft)	2018.37	Top Width (ft)	1009.00	133.93	875.45
Vel Total (ft/s)	2.22	Avg. Vel. (ft/s)	0.81	4.30	2.06
Max Chl Dpth (ft)	23.88	Hydr. Depth (ft)	3.27	20.19	7.03
Conv. Total (cfs)	2250507.0	Conv. (cfs)	222683.4	970033.2	1057790.0
Length Wtd. (ft)	156.02	Wetted Per. (ft)	1010.09	138.74	875.84
Min Ch El (ft)	416.31	Shear (lb/sq ft)	0.03	0.18	0.06
Alpha	2.04	Stream Power (lb/ft s)	1412.00	0.00	0.00
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	9.26	8.94	23.14
C & E Loss (ft)	0.04	Cum SA (acres)	2.72	0.44	3.13

Plan: Prop 153 ft Stream Reach RS: 780.0000 Profile: Q500

E.G. Elev (ft)	444.13	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.09	Wt. n-Val.	0.052	0.030	0.034
W.S. Elev (ft)	444.05	Reach Len. (ft)	120.00	150.00	175.00
Crit W.S. (ft)	433.79	Flow Area (sq ft)	7214.00	3221.22	9616.92
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	7214.00	3221.22	9616.92
Q Total (cfs)	36665.00	Flow (cfs)	7337.29	11226.69	18101.02
Top Width (ft)	2067.79	Top Width (ft)	1017.88	133.93	915.99
Vel Total (ft/s)	1.83	Avg. Vel. (ft/s)	1.02	3.49	1.88

155' Span - High Tailwater

Plan: Prop 153 ft Stream Reach RS: 780.0000 Profile: Q500 (Continued)

Max Chl Dpth (ft)	27.74	Hydr. Depth (ft)	7.09	24.05	10.50
Conv. Total (cfs)	4240771.0	Conv. (cfs)	848649.9	1298509.0	2093612.0
Length Wtd. (ft)	153.68	Wetted Per. (ft)	1019.78	138.74	916.57
Min Ch El (ft)	416.31	Shear (lb/sq ft)	0.03	0.11	0.05
Alpha	1.70	Stream Power (lb/ft s)	1412.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	20.28	10.66	36.01
C & E Loss (ft)	0.03	Cum SA (acres)	2.82	0.44	3.42

Plan: Prop 153 ft Stream Reach RS: 630.0000 Profile: Q10

E.G. Elev (ft)	434.93	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.63	Wt. n-Val.	0.100	0.030	0.100
W.S. Elev (ft)	434.30	Reach Len. (ft)			
Crit W.S. (ft)	427.20	Flow Area (sq ft)	827.15	1828.51	1389.19
E.G. Slope (ft/ft)	0.000562	Area (sq ft)	827.15	1828.51	2197.99
Q Total (cfs)	15173.00	Flow (cfs)	919.26	12668.45	1585.29
Top Width (ft)	755.79	Top Width (ft)	146.64	121.74	487.41
Vel Total (ft/s)	3.75	Avg. Vel. (ft/s)	1.11	6.93	1.14
Max Chl Dpth (ft)	19.15	Hydr. Depth (ft)	5.64	15.02	5.83
Conv. Total (cfs)	639935.4	Conv. (cfs)	38770.6	534303.7	66861.2
Length Wtd. (ft)		Wetted Per. (ft)	147.64	127.61	238.31
Min Ch El (ft)	415.15	Shear (lb/sq ft)	0.20	0.50	0.20
Alpha	2.86	Stream Power (lb/ft s)	1491.00	0.00	0.00
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

Plan: Prop 153 ft Stream Reach RS: 630.0000 Profile: Q50

E.G. Elev (ft)	438.88	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.58	Wt. n-Val.	0.100	0.030	0.100
W.S. Elev (ft)	438.30	Reach Len. (ft)			
Crit W.S. (ft)	430.35	Flow Area (sq ft)	2256.67	2315.47	4439.26
E.G. Slope (ft/ft)	0.000440	Area (sq ft)	2256.67	2315.47	4439.26
Q Total (cfs)	23203.00	Flow (cfs)	1526.91	16609.65	5066.44
Top Width (ft)	1459.28	Top Width (ft)	704.31	121.74	633.23
Vel Total (ft/s)	2.57	Avg. Vel. (ft/s)	0.68	7.17	1.14
Max Chl Dpth (ft)	23.15	Hydr. Depth (ft)	3.20	19.02	7.01
Conv. Total (cfs)	1106305.0	Conv. (cfs)	72802.1	791938.2	241564.5
Length Wtd. (ft)		Wetted Per. (ft)	705.42	127.61	633.46
Min Ch El (ft)	415.15	Shear (lb/sq ft)	0.09	0.50	0.19
Alpha	5.60	Stream Power (lb/ft s)	1491.00	0.00	0.00
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

Plan: Prop 153 ft Stream Reach RS: 630.0000 Profile: Q100

E.G. Elev (ft)	440.26	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.56	Wt. n-Val.	0.100	0.030	0.100
W.S. Elev (ft)	439.70	Reach Len. (ft)			
Crit W.S. (ft)	431.62	Flow Area (sq ft)	3424.17	2485.91	5361.52
E.G. Slope (ft/ft)	0.000416	Area (sq ft)	3424.17	2485.91	5361.52
Q Total (cfs)	26991.00	Flow (cfs)	2413.55	18172.32	6405.13
Top Width (ft)	1769.52	Top Width (ft)	963.52	121.74	684.26
Vel Total (ft/s)	2.39	Avg. Vel. (ft/s)	0.70	7.31	1.19
Max Chl Dpth (ft)	24.55	Hydr. Depth (ft)	3.55	20.42	7.84
Conv. Total (cfs)	1324067.0	Conv. (cfs)	118399.0	891459.1	314209.2
Length Wtd. (ft)		Wetted Per. (ft)	964.62	127.61	684.52
Min Ch El (ft)	415.15	Shear (lb/sq ft)	0.09	0.51	0.20
Alpha	6.34	Stream Power (lb/ft s)	1491.00	0.00	0.00
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

155' Span - High Tailwater

Plan: Prop 153 ft Stream Reach RS: 630.0000 Profile: Q500

E.G. Elev (ft)	444.08	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.38	Wt. n-Val.	0.100	0.030	0.100
W.S. Elev (ft)	443.70	Reach Len. (ft)			
Crit W.S. (ft)	433.52	Flow Area (sq ft)	7508.85	2972.87	8308.38
E.G. Slope (ft/ft)	0.000274	Area (sq ft)	7508.85	2972.87	8308.38
Q Total (cfs)	36665.00	Flow (cfs)	6943.62	19880.78	9840.60
Top Width (ft)	1935.72	Top Width (ft)	1028.13	121.74	785.85
Vel Total (ft/s)	1.95	Avg. Vel. (ft/s)	0.92	6.69	1.18
Max Chl Dpth (ft)	28.55	Hydr. Depth (ft)	7.30	24.42	10.57
Conv. Total (cfs)	2215154.0	Conv. (cfs)	419505.8	1201118.0	594529.9
Length Wtd. (ft)		Wetted Per. (ft)	1029.96	127.61	786.18
Min Ch El (ft)	415.15	Shear (lb/sq ft)	0.12	0.40	0.18
Alpha	6.51	Stream Power (lb/ft s)	1491.00	0.00	0.00
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

155' Span - High Tailwater

Plan: Prop 153 ft Stream Reach RS: 1000 Profile: Q10

E.G. US. (ft)	435.32	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	434.36	E.G. Elev (ft)	435.26	435.22
Q Total (cfs)	15173.00	W.S. Elev (ft)	434.46	434.44
Q Bridge (cfs)	15173.00	Crit W.S. (ft)	427.07	427.06
Q Weir (cfs)		Max Chl Dpth (ft)	17.96	17.94
Weir Sta Lft (ft)		Vel Total (ft/s)	7.16	7.13
Weir Sta Rgt (ft)		Flow Area (sq ft)	2118.23	2129.24
Weir Submerg		Froude # Chl	0.30	0.30
Weir Max Depth (ft)		Specif Force (cu ft)	19144.04	19161.68
Min EI Weir Flow (ft)	436.01	Hydr Depth (ft)	14.29	14.20
Min EI Prs (ft)	439.24	W.P. Total (ft)	167.76	168.78
Delta EG (ft)	0.12	Conv. Total (cfs)	568905.6	571516.2
Delta WS (ft)	0.02	Top Width (ft)	148.24	149.99
BR Open Area (sq ft)	2826.32	Frctn Loss (ft)	0.03	0.02
BR Open Vel (ft/s)	7.16	C & E Loss (ft)	0.00	0.01
Coef of Q		Shear Total (lb/sq ft)	0.56	0.56
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

Plan: Prop 153 ft Stream Reach RS: 1000 Profile: Q50

E.G. US. (ft)	439.25	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	438.68	E.G. Elev (ft)	439.22	439.17
Q Total (cfs)	23203.00	W.S. Elev (ft)	438.40	438.42
Q Bridge (cfs)	20673.83	Crit W.S. (ft)	429.30	429.31
Q Weir (cfs)		Max Chl Dpth (ft)	21.90	21.92
Weir Sta Lft (ft)		Vel Total (ft/s)	5.53	5.20
Weir Sta Rgt (ft)		Flow Area (sq ft)	4199.35	4463.98
Weir Submerg		Froude # Chl	0.27	0.26
Weir Max Depth (ft)		Specif Force (cu ft)	31790.39	32214.45
Min EI Weir Flow (ft)	436.01	Hydr Depth (ft)	3.78	3.72
Min EI Prs (ft)	439.24	W.P. Total (ft)	1138.63	1225.93
Delta EG (ft)	0.25	Conv. Total (cfs)	929161.1	961572.3
Delta WS (ft)	-0.12	Top Width (ft)	1110.93	1199.07
BR Open Area (sq ft)	2826.32	Frctn Loss (ft)	0.02	0.01
BR Open Vel (ft/s)	7.65	C & E Loss (ft)	0.02	0.16
Coef of Q		Shear Total (lb/sq ft)	0.14	0.13
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

Plan: Prop 153 ft Stream Reach RS: 1000 Profile: Q100

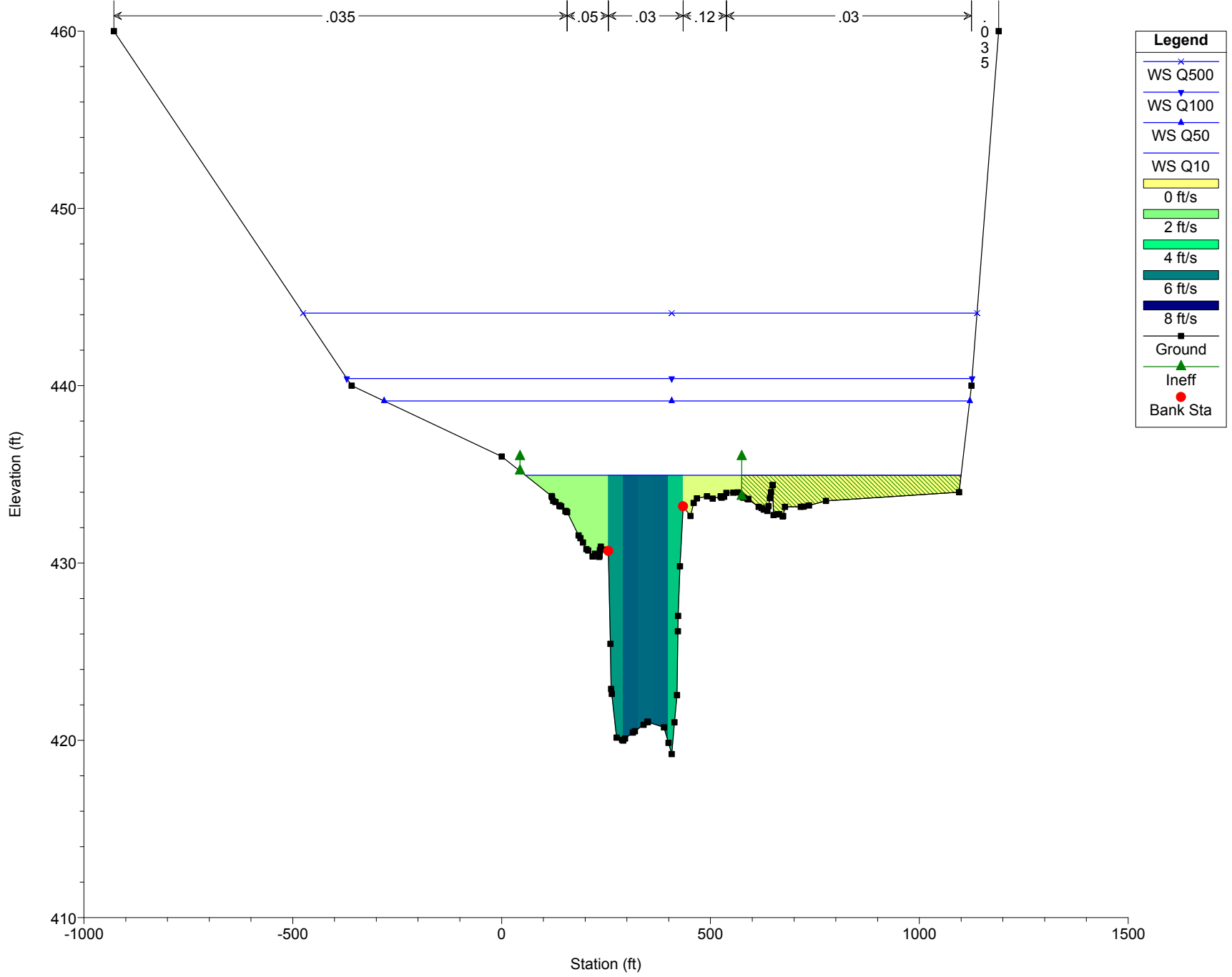
E.G. US. (ft)	440.52	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	440.14	E.G. Elev (ft)	440.50	440.45
Q Total (cfs)	26991.00	W.S. Elev (ft)	440.05	440.06
Q Bridge (cfs)	17746.28	Crit W.S. (ft)	430.27	430.25
Q Weir (cfs)		Max Chl Dpth (ft)	23.55	23.56
Weir Sta Lft (ft)		Vel Total (ft/s)	4.29	4.02
Weir Sta Rgt (ft)		Flow Area (sq ft)	6295.30	6706.07
Weir Submerg		Froude # Chl	0.19	0.18
Weir Max Depth (ft)		Specif Force (cu ft)	39618.95	40448.66
Min EI Weir Flow (ft)	436.01	Hydr Depth (ft)	4.43	4.43
Min EI Prs (ft)	439.24	W.P. Total (ft)	1748.06	1840.70
Delta EG (ft)	0.14	Conv. Total (cfs)	899807.8	947360.8
Delta WS (ft)	-0.06	Top Width (ft)	1422.56	1512.12
BR Open Area (sq ft)	2826.32	Frctn Loss (ft)	0.04	0.01
BR Open Vel (ft/s)	6.28	C & E Loss (ft)	0.02	0.06
Coef of Q		Shear Total (lb/sq ft)	0.20	0.18
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

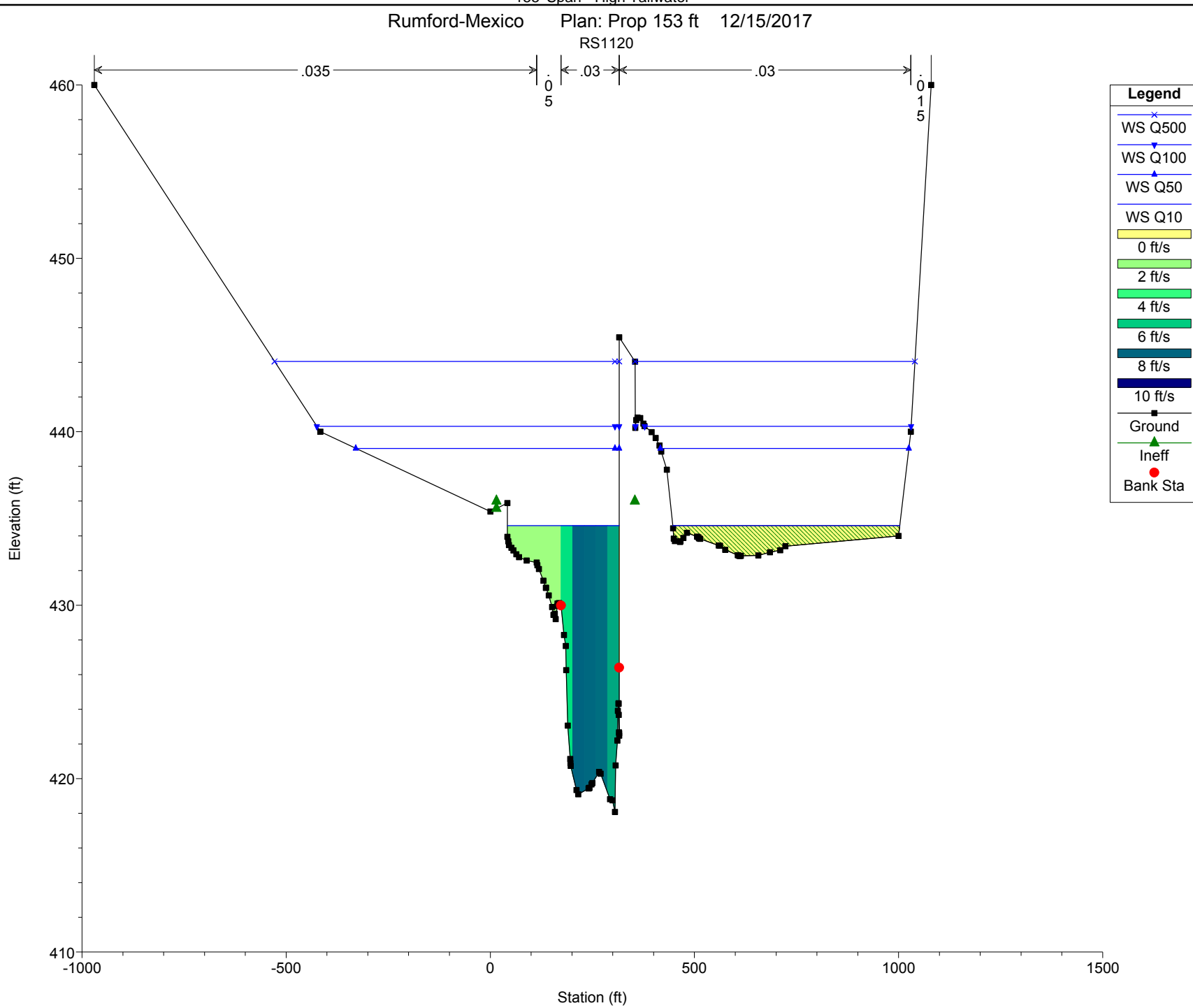
155' Span - High Tailwater

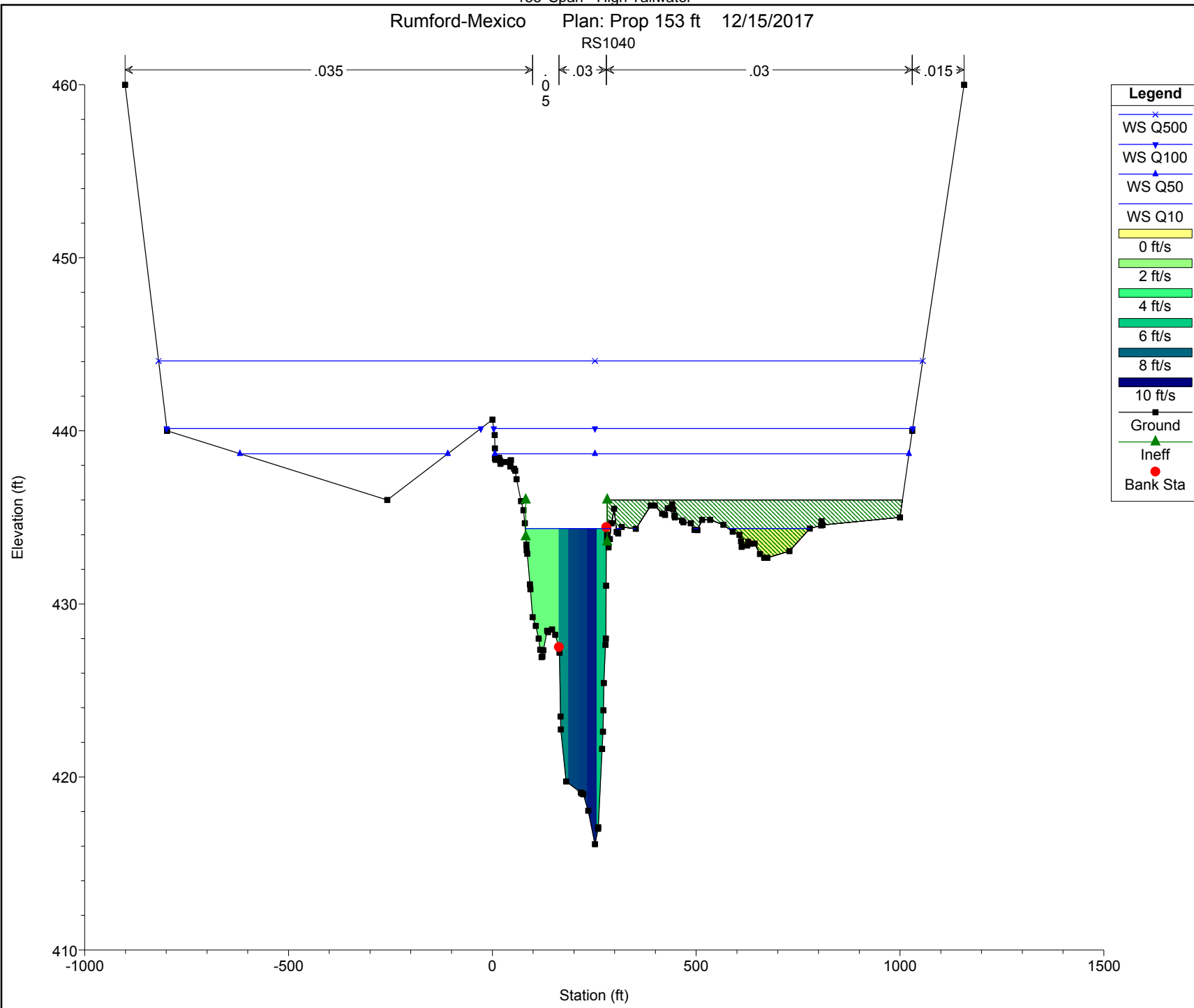
Plan: Prop 153 ft Stream Reach RS: 1000 Profile: Q500

E.G. US. (ft)	444.19	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	444.04	E.G. Elev (ft)	444.18	444.16
Q Total (cfs)	36665.00	W.S. Elev (ft)	444.05	444.04
Q Bridge (cfs)	10364.29	Crit W.S. (ft)	432.57	432.54
Q Weir (cfs)		Max Chl Dpth (ft)	27.55	27.54
Weir Sta Lft (ft)		Vel Total (ft/s)	2.87	2.75
Weir Sta Rgt (ft)		Flow Area (sq ft)	12757.86	13335.64
Weir Submerg		Froude # Chl	0.10	0.09
Weir Max Depth (ft)		Specif Force (cu ft)	76195.45	79077.02
Min El Weir Flow (ft)	436.01	Hydr Depth (ft)	6.88	7.04
Min El Prs (ft)	439.24	W.P. Total (ft)	2180.71	2224.06
Delta EG (ft)	0.03	Conv. Total (cfs)	1967726.0	2093172.0
Delta WS (ft)	-0.01	Top Width (ft)	1854.32	1894.66
BR Open Area (sq ft)	2826.32	Frctn Loss (ft)	0.01	0.00
BR Open Vel (ft/s)	3.67	C & E Loss (ft)	0.00	0.01
Coef of Q		Shear Total (lb/sq ft)	0.13	0.11
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

155' Span - High Tailwater  
 Rumford-Mexico Plan: Prop 153 ft 12/15/2017  
 RS1210 Upstream Limit





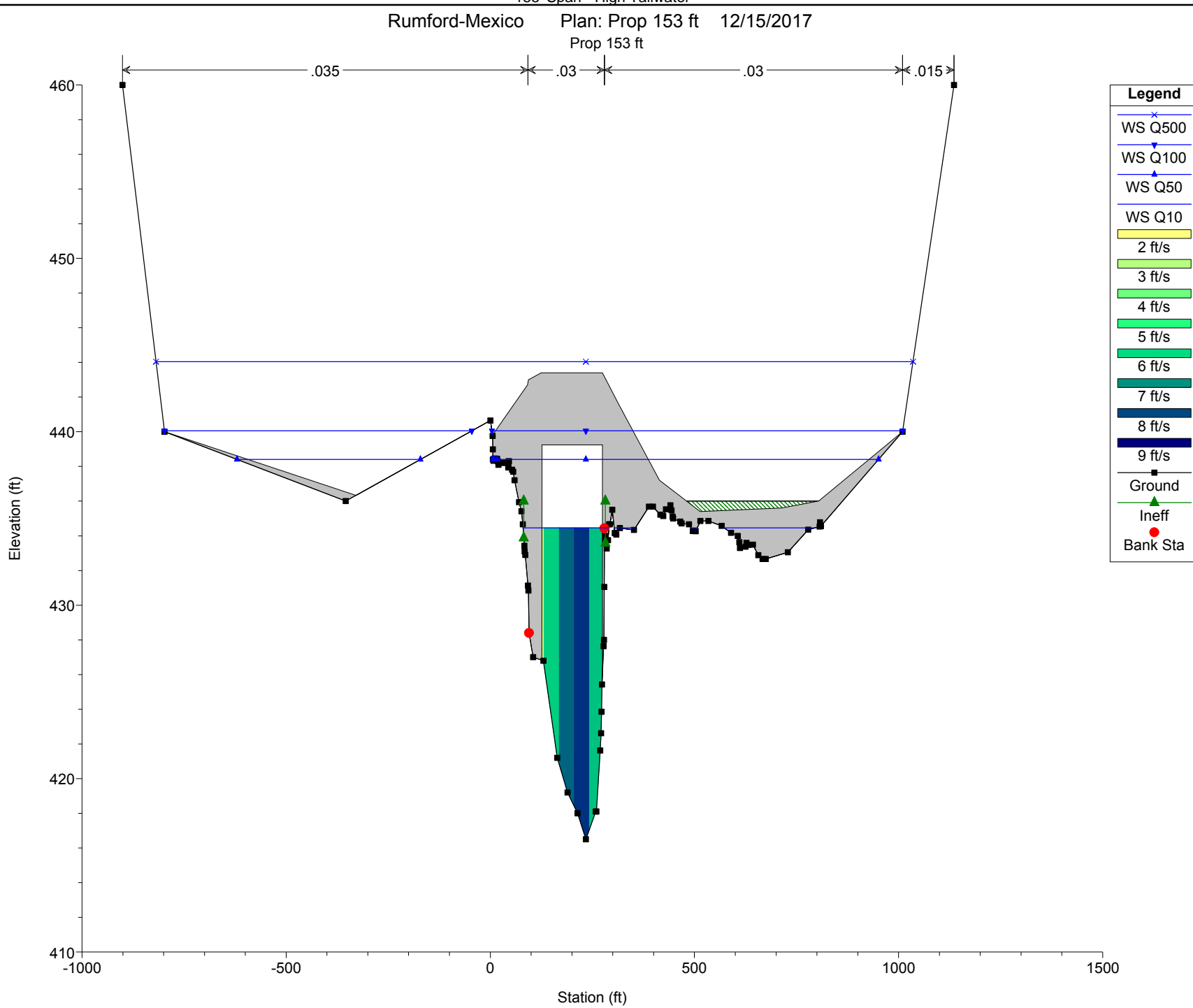


Legend	
WS Q500	✕
WS Q100	▼
WS Q50	▲
WS Q10	■
0 ft/s	Yellow
2 ft/s	Light Green
4 ft/s	Medium Green
6 ft/s	Dark Green
8 ft/s	Teal
10 ft/s	Dark Blue
Ground	Black line with squares
Ineff	Green line with triangles
Bank Sta	Red dot

155' Span - High Tailwater

Rumford-Mexico Plan: Prop 153 ft 12/15/2017

Prop 153 ft

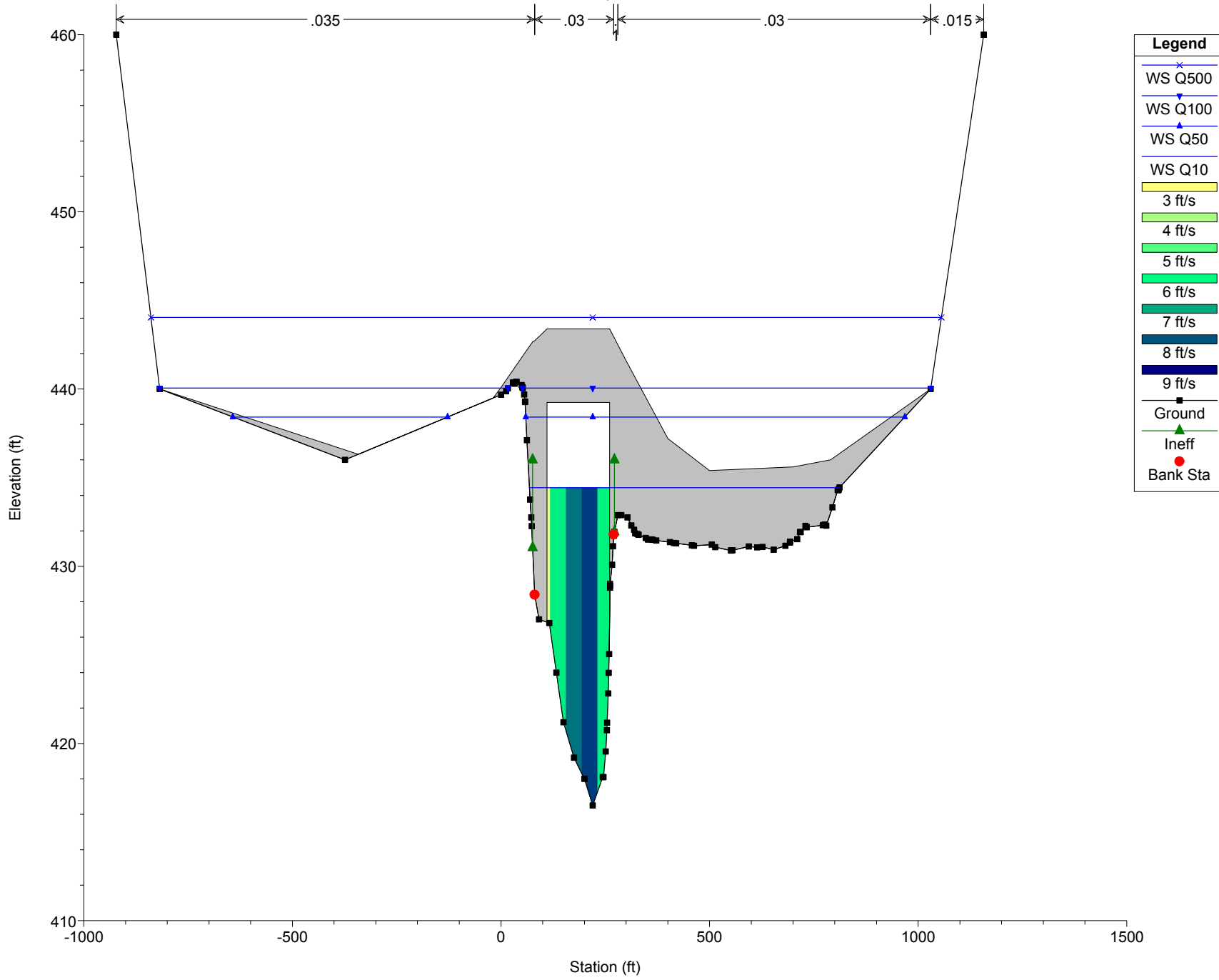


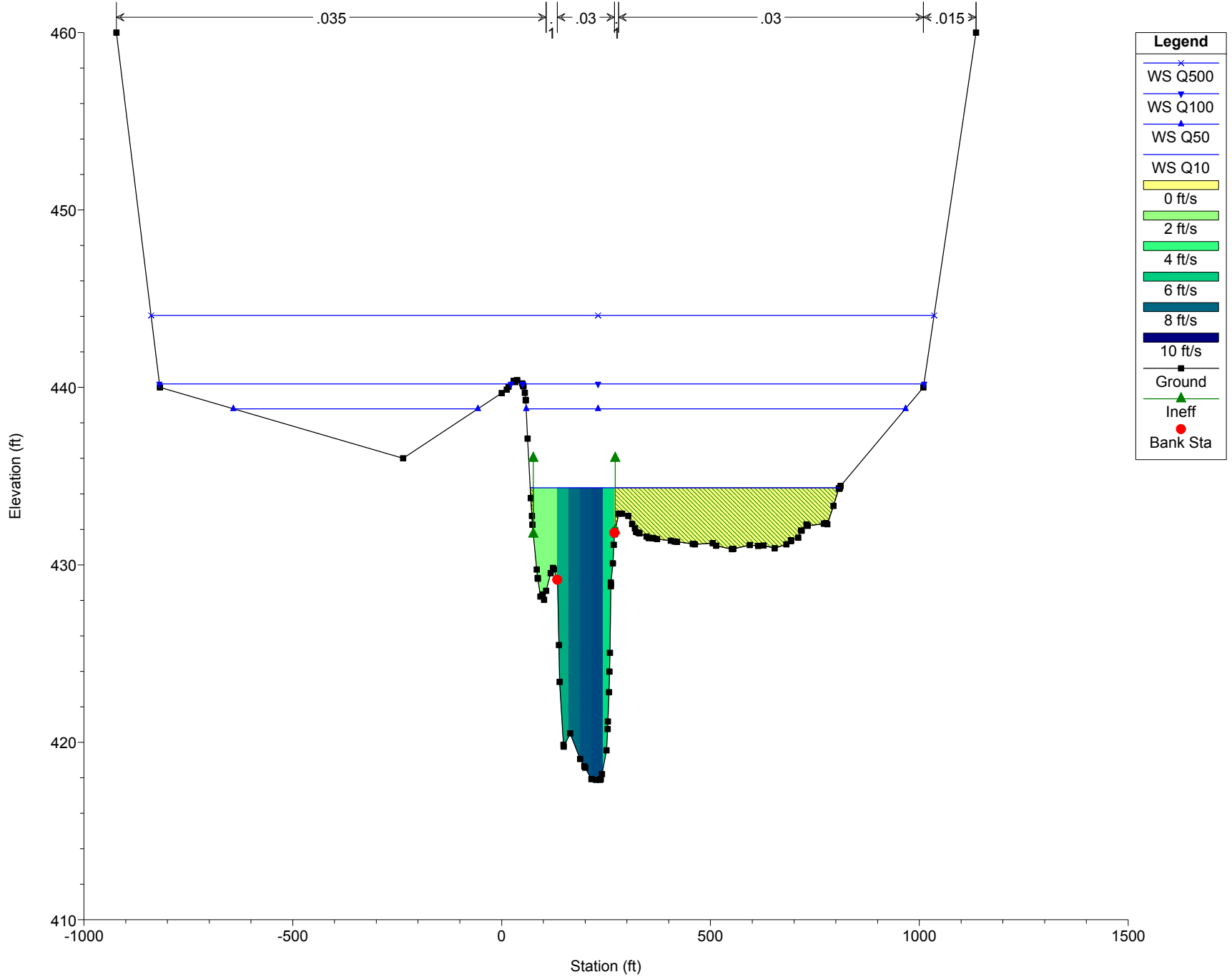
Legend	
WS Q500	Blue line with 'x' marker
WS Q100	Blue line with downward triangle marker
WS Q50	Blue line with upward triangle marker
WS Q10	Blue line with square marker
2 ft/s	Yellow horizontal bar
3 ft/s	Light green horizontal bar
4 ft/s	Light blue horizontal bar
5 ft/s	Medium blue horizontal bar
6 ft/s	Dark blue horizontal bar
7 ft/s	Very dark blue horizontal bar
8 ft/s	Black horizontal bar
9 ft/s	Dark grey horizontal bar
Ground	Black line with square marker
Ineff	Green line with upward triangle marker
Bank Sta	Red circle marker

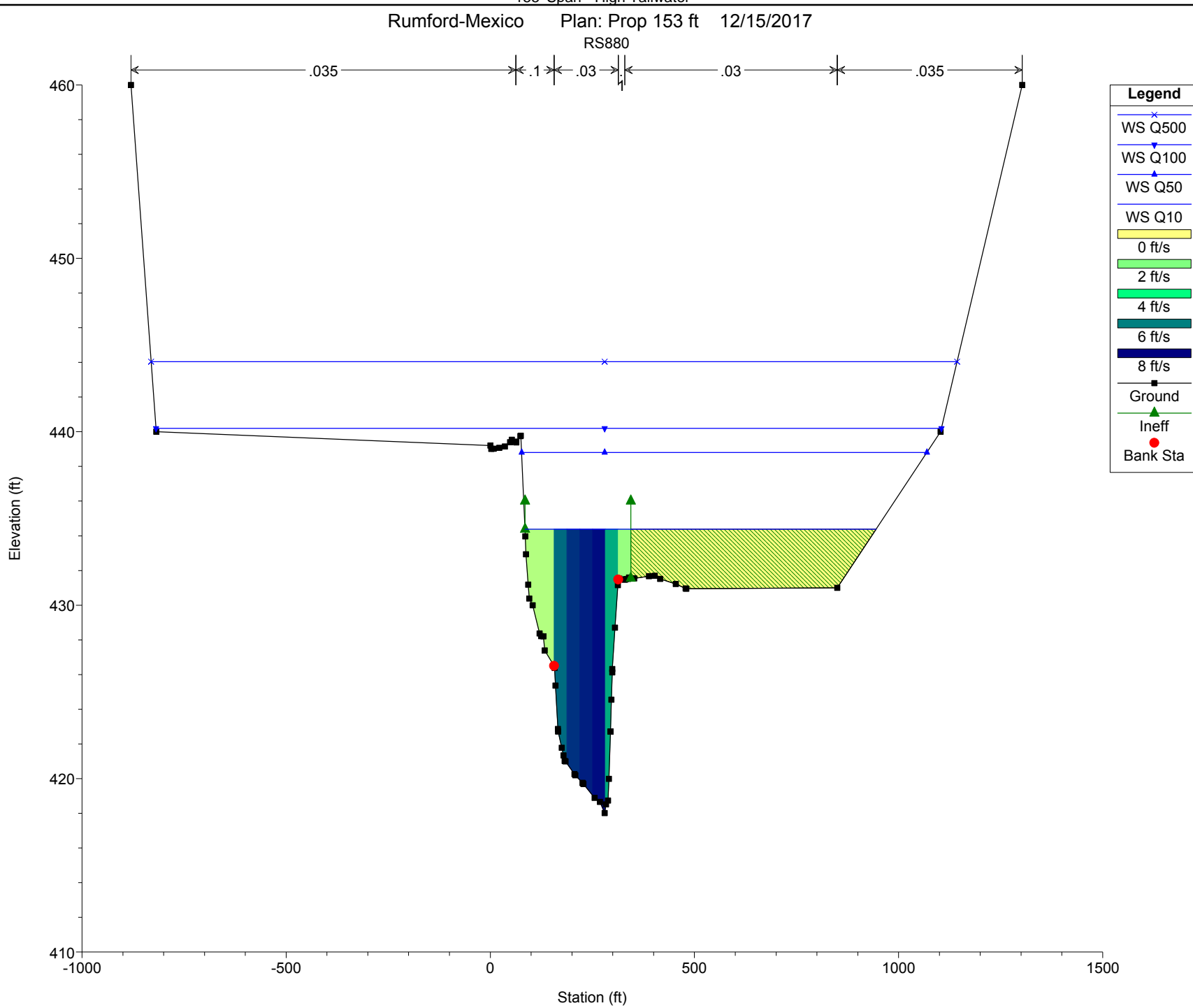
155' Span - High Tailwater

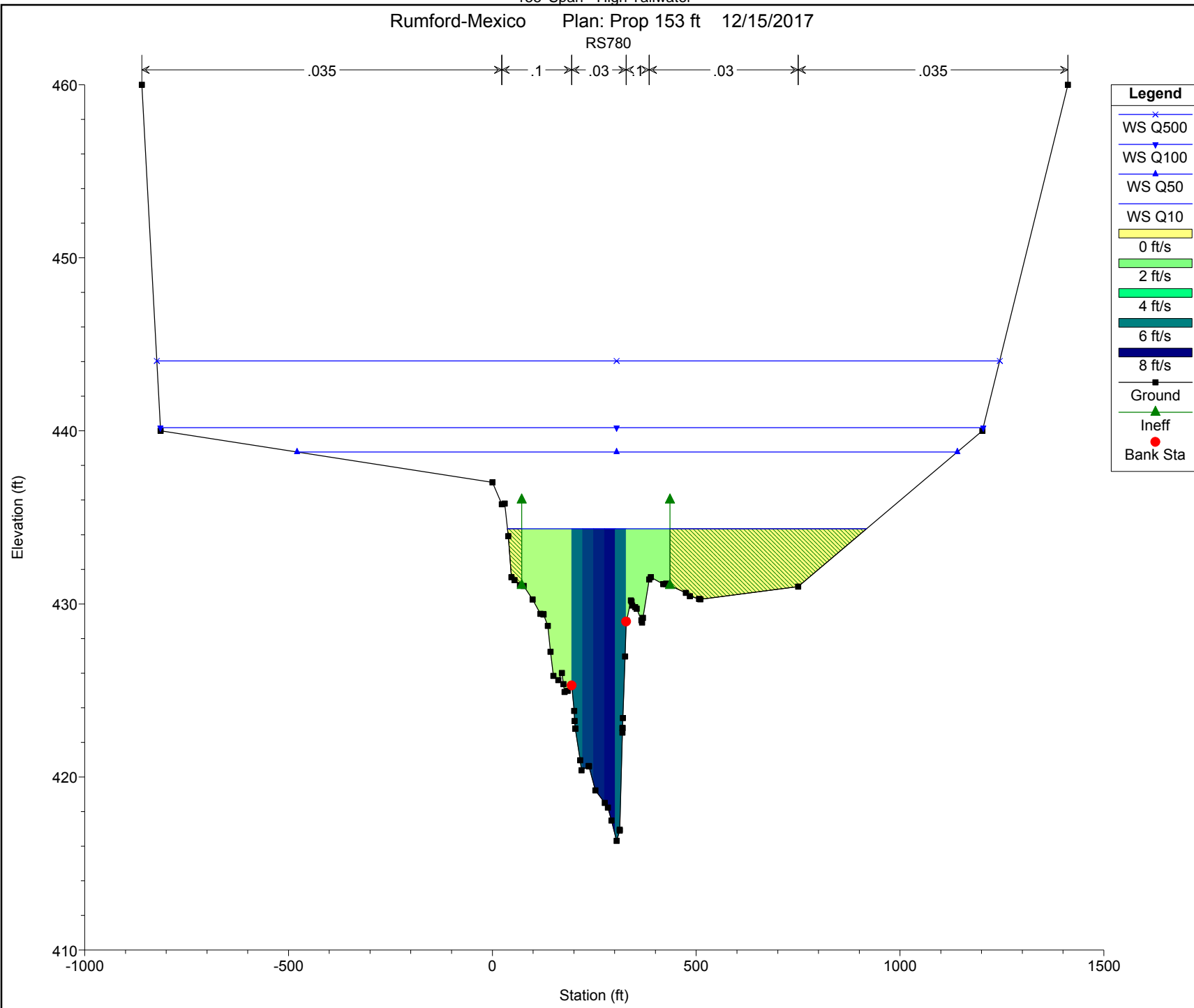
Rumford-Mexico Plan: Prop 153 ft 12/15/2017

Prop 153 ft

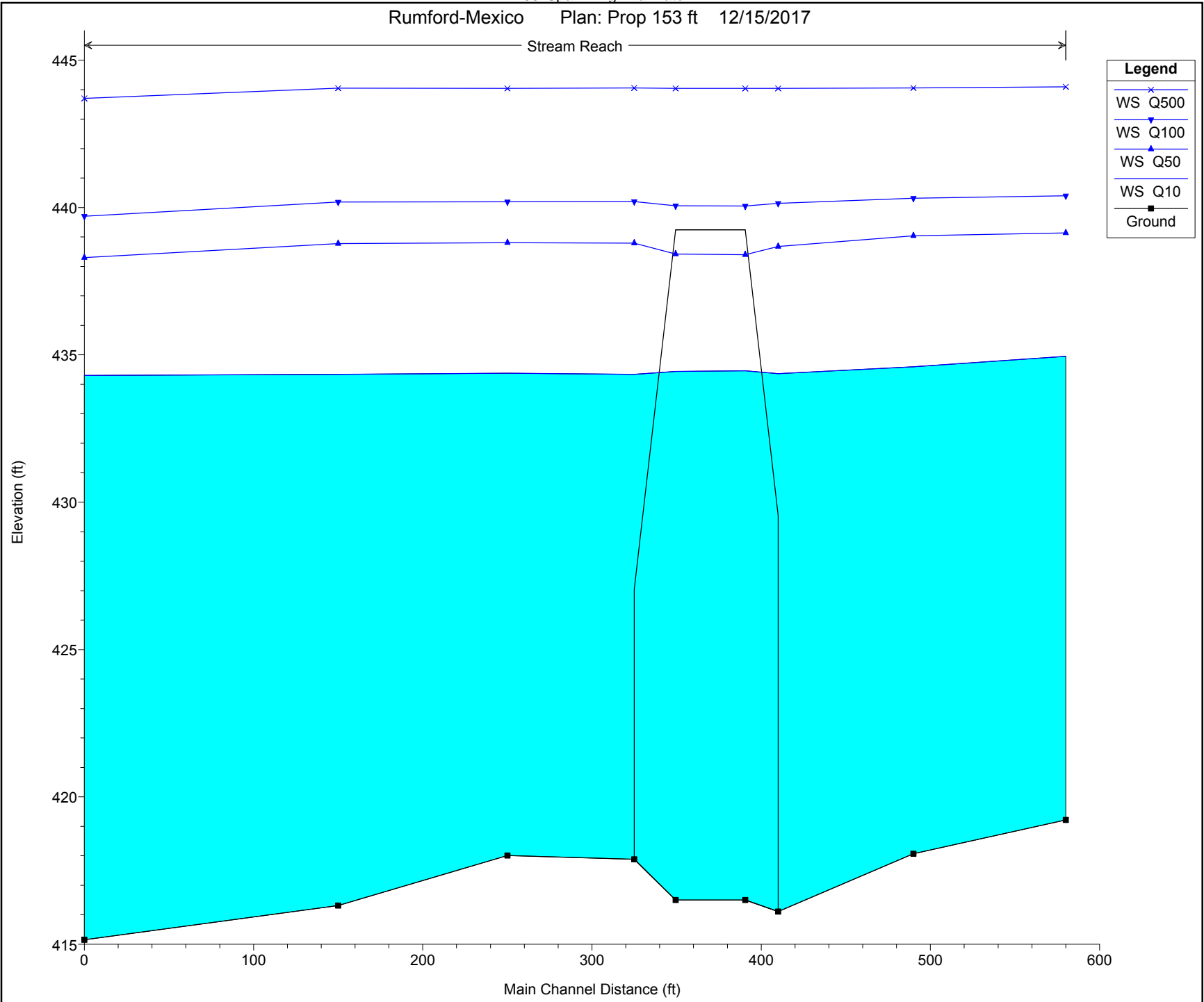












Legend	
WS Q500	✕
WS Q100	▼
WS Q50	▲
WS Q10	■
Ground	■

155' Span - Low Tailwater

HEC-RAS Plan: Prop 153 ft -Low River: Stream Reach: Reach

Reach	River Sta	Profile	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
Reach	1210.000	Q10	15173.00	419.22	432.07	427.24	433.06	0.001189	8.01	1976.83	258.82	0.43
Reach	1210.000	Q50	23203.00	419.22	435.25	429.39	436.41	0.001054	8.90	3212.14	1060.48	0.42
Reach	1210.000	Q100	26991.00	419.22	437.05	430.32	437.63	0.000561	7.05	6117.84	1203.66	0.32
Reach	1210.000	Q500	36665.00	419.22	440.27	433.03	440.61	0.000304	5.90	10492.56	1492.69	0.24
Reach	1210.000	Over Road	32800.00	419.22	439.03	431.98	439.44	0.000381	6.30	8690.80	1391.95	0.27
Reach	1210.000	Q1.1	3771.00	419.22	425.05	423.24	425.50	0.001705	5.38	700.50	160.63	0.45
Reach	1120.000	Q10	15173.00	418.07	431.30	427.52	432.87	0.001961	10.06	1547.94	184.12	0.55
Reach	1120.000	Q50	23203.00	418.07	434.11	430.24	436.19	0.001961	11.78	2197.01	815.89	0.57
Reach	1120.000	Q100	26991.00	418.07	436.58	431.34	437.53	0.000892	8.90	4694.08	997.53	0.39
Reach	1120.000	Q500	36665.00	418.07	440.10	434.41	440.56	0.000418	6.97	8848.46	1375.68	0.28
Reach	1120.000	Over Road	32800.00	418.07	438.80	433.31	439.38	0.000537	7.53	7154.61	1227.46	0.31
Reach	1120.000	Q1.1	3771.00	418.07	424.73	422.84	425.31	0.002042	6.14	613.96	128.13	0.49
Reach	1040.000	Q10	15173.00	416.11	430.53	427.89	432.63	0.002596	11.79	1410.56	184.91	0.63
Reach	1040.000	Q50	23203.00	416.11	433.04	430.96	435.92	0.002872	14.06	1885.03	268.73	0.68
Reach	1040.000	Q100	26991.00	416.11	433.76	432.02	437.16	0.003208	15.33	2026.57	351.37	0.72
Reach	1040.000	Q500	36665.00	416.11	435.27	434.43	440.05	0.004035	18.35	2328.68	865.41	0.82
Reach	1040.000	Over Road	32800.00	416.11	434.69	433.51	438.92	0.003740	17.21	2211.23	613.49	0.79
Reach	1040.000	Q1.1	3771.00	416.11	424.46	422.40	425.14	0.001989	6.62	569.86	106.39	0.50
Reach	1000		Bridge									
Reach	955.0000	Q10	15173.00	417.88	430.30	427.28	432.20	0.002496	11.13	1416.65	185.18	0.62
Reach	955.0000	Q50	23203.00	417.88	432.79	430.24	435.45	0.002724	13.29	1895.71	694.23	0.67
Reach	955.0000	Q100	26991.00	417.88	433.47	431.37	436.64	0.003040	14.55	2028.86	725.65	0.71
Reach	955.0000	Q500	36665.00	417.88	437.89	433.73	438.60	0.000693	8.44	6930.58	1270.19	0.36
Reach	955.0000	Over Road	32800.00	417.88	436.87	432.87	437.68	0.000809	8.76	5767.38	1018.91	0.38
Reach	955.0000	Q1.1	3771.00	417.88	424.33	422.37	424.94	0.001938	6.27	601.29	120.42	0.49
Reach	880.0000	Q10	15173.00	418.01	430.27	427.48	431.95	0.002346	10.45	1559.68	212.00	0.60
Reach	880.0000	Q50	23203.00	418.01	432.87	429.91	435.14	0.002377	12.24	2176.09	815.03	0.63
Reach	880.0000	Q100	26991.00	418.01	433.61	430.94	436.27	0.002586	13.30	2366.57	837.15	0.66
Reach	880.0000	Q500	36665.00	418.01	437.96	433.29	438.50	0.000530	7.35	7655.01	967.33	0.32
Reach	880.0000	Over Road	32800.00	418.01	436.97	432.44	437.56	0.000603	7.53	6714.40	937.73	0.33
Reach	880.0000	Q1.1	3771.00	418.01	423.92	422.86	424.73	0.003471	7.21	523.04	132.58	0.64
Reach	780.0000	Q10	15173.00	416.31	429.71	427.42	431.68	0.002666	11.38	1547.54	243.10	0.64
Reach	780.0000	Q50	23203.00	416.31	432.28	429.82	434.86	0.002653	13.27	2357.45	769.97	0.67
Reach	780.0000	Q100	26991.00	416.31	433.10	431.00	435.98	0.002779	14.18	2654.64	813.80	0.69
Reach	780.0000	Q500	36665.00	416.31	437.81	433.79	438.43	0.000605	8.12	8150.89	1307.92	0.34
Reach	780.0000	Over Road	32800.00	416.31	436.78	432.99	437.48	0.000697	8.37	6970.24	1035.99	0.36
Reach	780.0000	Q1.1	3771.00	416.31	423.44	422.38	424.36	0.003764	7.69	490.19	118.84	0.67
Reach	630.0000	Q10	15173.00	415.15	427.20	427.20	430.91	0.006422	15.54	1060.07	172.84	0.96
Reach	630.0000	Q50	23203.00	415.15	430.35	430.35	434.22	0.004637	16.24	2088.48	559.79	0.86
Reach	630.0000	Q100	26991.00	415.15	431.62	431.62	435.39	0.004053	16.32	2702.95	648.68	0.82
Reach	630.0000	Q500	36665.00	415.15	433.52	433.52	437.87	0.004103	18.06	3651.86	724.35	0.84
Reach	630.0000	Over Road	32800.00	415.15	432.82	432.82	436.93	0.004062	17.38	3298.64	696.30	0.83
Reach	630.0000	Q1.1	3771.00	415.15	422.70	421.64	423.75	0.004047	8.24	457.63	104.22	0.69

155' Span - Low Tailwater

HEC-RAS Plan: Prop 153 ft -Low River: Stream Reach: Reach

Reach	River Sta	Profile	E.G. Elev (ft)	W.S. Elev (ft)	Vel Head (ft)	Frctn Loss (ft)	C & E Loss (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)
Reach	1210.000	Q10	433.06	432.07	0.99	0.14	0.06	108.87	15064.13		258.82
Reach	1210.000	Q50	436.41	435.25	1.16	0.13	0.09	1191.58	21814.63	196.79	1060.48
Reach	1210.000	Q100	437.63	437.05	0.58	0.06	0.04	1988.85	19566.69	5435.46	1203.66
Reach	1210.000	Q500	440.61	440.27	0.33	0.03	0.01	4841.19	19773.70	12050.12	1492.69
Reach	1210.000	Over Road	439.44	439.03	0.41	0.04	0.02	3535.35	19722.48	9542.17	1391.95
Reach	1210.000	Q1.1	425.50	425.05	0.45	0.17	0.01		3771.00		160.63
Reach	1120.000	Q10	432.87	431.30	1.57	0.18	0.05	66.45	15106.53	0.01	184.12
Reach	1120.000	Q50	436.19	434.11	2.08	0.19	0.08	811.09	22391.87	0.04	815.89
Reach	1120.000	Q100	437.53	436.58	0.95	0.12	0.25	1679.14	20049.33	5262.53	997.53
Reach	1120.000	Q500	440.56	440.10	0.46	0.08	0.43	4731.56	19196.99	12736.46	1375.68
Reach	1120.000	Over Road	439.38	438.80	0.58	0.09	0.37	3333.25	19356.95	10109.80	1227.46
Reach	1120.000	Q1.1	425.31	424.73	0.59	0.16	0.01		3771.00		128.13
Reach	1040.000	Q10	432.63	430.53	2.10	0.04	0.21	432.53	14740.47		184.91
Reach	1040.000	Q50	435.92	433.04	2.88	0.05	0.22	1551.99	21651.02		268.73
Reach	1040.000	Q100	437.16	433.76	3.40	0.05	0.24	2094.67	24896.26	0.06	351.37
Reach	1040.000	Q500	440.05	435.27	4.78	0.07	0.27	3635.67	33019.07	10.26	865.41
Reach	1040.000	Over Road	438.92	434.69	4.24	0.06	0.27	2990.83	29805.70	3.48	613.49
Reach	1040.000	Q1.1	425.14	424.46	0.68	0.03	0.06		3771.00		106.39
Reach	1000		Bridge								
Reach	955.0000	Q10	432.20	430.30	1.91	0.18	0.07	136.63	15036.37		185.18
Reach	955.0000	Q50	435.45	432.79	2.66	0.19	0.12	750.98	22450.60	1.42	694.23
Reach	955.0000	Q100	436.64	433.47	3.17	0.21	0.15	1056.63	25930.74	3.63	725.65
Reach	955.0000	Q500	438.60	437.89	0.71	0.05	0.05	2055.05	20152.78	14457.17	1270.19
Reach	955.0000	Over Road	437.68	436.87	0.81	0.05	0.07	1485.73	19698.09	11616.18	1018.91
Reach	955.0000	Q1.1	424.94	424.33	0.61	0.19	0.02		3771.00		120.42
Reach	880.0000	Q10	431.95	430.27	1.68	0.25	0.03	143.71	15029.29		212.00
Reach	880.0000	Q50	435.14	432.87	2.27	0.25	0.03	545.77	22580.99	77.14	815.03
Reach	880.0000	Q100	436.27	433.61	2.66	0.27	0.02	736.33	26088.01	166.66	837.15
Reach	880.0000	Q500	438.50	437.96	0.54	0.06	0.01	927.23	19436.76	16301.01	967.33
Reach	880.0000	Over Road	437.56	436.97	0.59	0.07	0.01	821.57	18741.65	13236.77	937.73
Reach	880.0000	Q1.1	424.73	423.92	0.81	0.36	0.01		3771.00		132.58
Reach	780.0000	Q10	431.68	429.71	1.96	0.59	0.17	360.07	14808.76	4.17	243.10
Reach	780.0000	Q50	434.86	432.28	2.58	0.51	0.13	1040.86	21834.26	327.89	769.97
Reach	780.0000	Q100	435.98	433.10	2.88	0.50	0.09	1428.81	24878.43	683.76	813.80
Reach	780.0000	Q500	438.43	437.81	0.62	0.20	0.37	2251.60	19370.41	15042.99	1307.92
Reach	780.0000	Over Road	437.48	436.78	0.70	0.21	0.34	1885.43	18828.66	12085.90	1035.99
Reach	780.0000	Q1.1	424.36	423.44	0.92	0.59	0.01		3771.00		118.84
Reach	630.0000	Q10	430.91	427.20	3.71			162.04	15010.96		172.84
Reach	630.0000	Q50	434.22	430.35	3.87			623.32	21887.10	692.58	559.79
Reach	630.0000	Q100	435.39	431.62	3.77			931.11	24529.59	1530.31	648.68
Reach	630.0000	Q500	437.87	433.52	4.35			1973.10	31318.84	3373.06	724.35
Reach	630.0000	Over Road	436.93	432.82	4.11			1544.46	28640.91	2614.63	696.30
Reach	630.0000	Q1.1	423.75	422.70	1.05				3771.00		104.22

155' Span - Low Tailwater

Plan: Prop 153 ft -Low Stream Reach RS: 1210.000 Profile: Q10

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	44.00	255.23	108.87	95.73	81.92	0.72	1.17	1.14	0.09	0.10
2	Chan	255.23	291.16	2675.84	363.19	39.72	17.64	10.11	7.37	0.68	5.00
3	Chan	291.16	327.09	3667.35	421.59	35.93	24.17	11.73	8.70	0.87	7.58
4	Chan	327.09	363.01	3378.56	401.34	35.93	22.27	11.17	8.42	0.83	6.98
5	Chan	363.01	398.94	3485.89	409.07	35.96	22.97	11.39	8.52	0.84	7.20
6	Chan	398.94	434.87	1856.49	285.90	37.78	12.24	8.57	6.49	0.56	3.65

Plan: Prop 153 ft -Low Stream Reach RS: 1210.000 Profile: Q50

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-442.00	44.00	0.00	0.10	3.23	0.00	0.03	0.00	0.00	0.00
2	LOB	44.00	255.23	1191.58	533.98	211.44	5.14	2.53	2.23	0.17	0.37
3	Chan	255.23	291.16	3976.67	477.36	39.72	17.14	13.29	8.33	0.79	6.59
4	Chan	291.16	327.09	5152.58	535.76	35.93	22.21	14.91	9.62	0.98	9.44
5	Chan	327.09	363.01	4832.23	515.51	35.93	20.83	14.35	9.37	0.94	8.85
6	Chan	363.01	398.94	4950.98	523.24	35.96	21.34	14.56	9.46	0.96	9.06
7	Chan	398.94	434.87	2902.16	398.63	40.59	12.51	11.10	7.28	0.65	4.70
8	ROB	434.87	575.00	196.79	227.65	140.19	0.85	1.62	0.86	0.11	0.09
9	ROB	575.00	882.50	0.00	579.35	308.26	0.00	1.88	0.00	0.12	0.00
10	ROB	882.50	1190.00	0.00	304.09	218.87	0.00	1.39	0.00	0.09	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 1210.000 Profile: Q100

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-442.00	44.00	92.48	112.24	137.43	0.34	0.82	0.82	0.03	0.02
2	LOB	44.00	255.23	1896.37	913.98	211.44	7.03	4.33	2.07	0.15	0.31
3	Chan	255.23	291.16	3592.11	542.00	39.72	13.31	15.09	6.63	0.48	3.17
4	Chan	291.16	327.09	4553.91	600.40	35.93	16.87	16.71	7.58	0.59	4.44
5	Chan	327.09	363.01	4300.92	580.14	35.93	15.93	16.15	7.41	0.57	4.19
6	Chan	363.01	398.94	4394.53	587.88	35.96	16.28	16.36	7.48	0.57	4.28
7	Chan	398.94	434.87	2725.22	463.26	40.59	10.10	12.89	5.88	0.40	2.35
8	ROB	434.87	575.00	531.99	479.74	140.19	1.97	3.42	1.11	0.12	0.13
9	ROB	575.00	882.50	3151.82	1132.52	308.26	11.68	3.68	2.78	0.13	0.36
10	ROB	882.50	1190.00	1751.66	705.70	228.04	6.49	3.10	2.48	0.11	0.27

Plan: Prop 153 ft -Low Stream Reach RS: 1210.000 Profile: Q500

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-442.00	44.00	1302.83	1021.40	410.84	3.55	2.49	1.28	0.05	0.06
2	LOB	44.00	255.23	3538.35	1595.39	211.44	9.65	7.55	2.22	0.14	0.32
3	Chan	255.23	291.16	3662.86	657.90	39.72	9.99	18.31	5.57	0.31	1.75
4	Chan	291.16	327.09	4511.74	716.30	35.93	12.31	19.94	6.30	0.38	2.39
5	Chan	327.09	363.01	4301.29	696.04	35.93	11.73	19.37	6.18	0.37	2.28
6	Chan	363.01	398.94	4378.87	703.78	35.96	11.94	19.59	6.22	0.37	2.31
7	Chan	398.94	434.87	2918.95	579.16	40.59	7.96	16.12	5.04	0.27	1.37
8	ROB	434.87	575.00	1225.48	931.78	140.19	3.34	6.65	1.32	0.13	0.17
9	ROB	575.00	882.50	6635.03	2124.50	308.26	18.10	6.91	3.12	0.13	0.41
10	ROB	882.50	1190.00	4189.61	1466.32	244.03	11.43	6.02	2.86	0.11	0.33

Plan: Prop 153 ft -Low Stream Reach RS: 1210.000 Profile: Over Road

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-442.00	44.00	635.09	561.50	315.82	1.94	1.78	1.13	0.04	0.05
2	LOB	44.00	255.23	2900.26	1332.75	211.44	8.84	6.31	2.18	0.15	0.33
3	Chan	255.23	291.16	3642.30	613.22	39.72	11.10	17.07	5.94	0.37	2.18
4	Chan	291.16	327.09	4530.91	671.62	35.93	13.81	18.69	6.75	0.44	3.00
5	Chan	327.09	363.01	4305.64	651.37	35.93	13.13	18.13	6.61	0.43	2.85
6	Chan	363.01	398.94	4388.81	659.10	35.96	13.38	18.35	6.66	0.44	2.90
7	Chan	398.94	434.87	2854.82	534.49	40.59	8.70	14.88	5.34	0.31	1.67
8	ROB	434.87	575.00	963.09	757.55	140.19	2.94	5.41	1.27	0.13	0.16
9	ROB	575.00	882.50	5331.54	1742.16	308.26	16.25	5.67	3.06	0.13	0.41
10	ROB	882.50	1190.00	3247.55	1167.03	238.15	9.90	4.91	2.78	0.12	0.32

155' Span - Low Tailwater

Plan: Prop 153 ft -Low Stream Reach RS: 1210.000 Profile: Q1.1

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	255.23	291.16	645.17	126.29	31.90	17.11	4.14	5.11	0.42	2.15
2	Chan	291.16	327.09	969.97	169.18	35.93	25.72	4.71	5.73	0.50	2.87
3	Chan	327.09	363.01	784.29	148.92	35.93	20.80	4.15	5.27	0.44	2.32
4	Chan	363.01	398.94	852.88	156.66	35.96	22.62	4.36	5.44	0.46	2.53
5	Chan	398.94	434.87	518.70	99.45	24.35	13.75	4.45	5.22	0.43	2.27

Plan: Prop 153 ft -Low Stream Reach RS: 1120.000 Profile: Q10

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	15.00	173.24	66.45	46.80	41.76	0.44	1.13	1.42	0.14	0.19
2	Chan	173.24	201.74	1239.70	180.77	31.21	8.17	6.34	6.86	0.71	4.86
3	Chan	201.74	230.25	3757.18	339.33	28.55	24.76	11.90	11.07	1.45	16.11
4	Chan	230.25	258.75	3655.48	333.61	28.52	24.09	11.70	10.96	1.43	15.69
5	Chan	258.75	287.26	3474.56	323.74	28.55	22.90	11.36	10.73	1.39	14.90
6	Chan	287.26	315.76	2979.60	323.60	35.91	19.64	11.35	9.21	1.10	10.16
7	ROB	315.76	354.00	0.01	0.08	4.91	0.00	2.45	0.14	0.00	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 1120.000 Profile: Q50

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	15.00	173.24	811.09	295.89	131.80	3.50	2.25	2.74	0.27	0.75
2	Chan	173.24	201.74	2304.17	260.74	31.21	9.93	9.15	8.84	1.02	9.04
3	Chan	201.74	230.25	5396.20	419.31	28.55	23.26	14.71	12.87	1.80	23.13
4	Chan	230.25	258.75	5278.77	413.59	28.52	22.75	14.51	12.76	1.78	22.66
5	Chan	258.75	287.26	5066.96	403.71	28.55	21.84	14.16	12.55	1.73	21.73
6	Chan	287.26	315.76	4345.77	403.57	35.91	18.73	14.16	10.77	1.38	14.82
7	ROB	315.76	354.00	0.04	0.20	7.72	0.00	3.86	0.19	0.00	0.00
8	ROB	354.00	596.00	0.00	67.90	137.47	0.00	0.49	0.00	0.06	0.00
9	ROB	596.00	838.00	0.00	210.22	242.00	0.00	0.87	0.00	0.11	0.00
10	ROB	838.00	1080.00	0.00	45.72	162.55	0.00	0.28	0.00	0.03	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 1120.000 Profile: Q100

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-313.33	15.00	68.87	79.43	121.79	0.26	0.65	0.87	0.04	0.03
2	LOB	15.00	173.24	1610.27	643.81	160.26	5.97	4.07	2.50	0.22	0.56
3	Chan	173.24	201.74	2325.98	331.26	31.21	8.62	11.62	7.02	0.59	4.15
4	Chan	201.74	230.25	4736.23	489.82	28.55	17.55	17.18	9.67	0.95	9.23
5	Chan	230.25	258.75	4648.54	484.10	28.52	17.22	16.98	9.60	0.94	9.07
6	Chan	258.75	287.26	4488.55	474.23	28.55	16.63	16.64	9.46	0.92	8.75
7	Chan	287.26	315.76	3850.01	474.09	35.91	14.26	16.63	8.12	0.73	5.97
8	ROB	315.76	354.00	0.06	0.35	10.19	0.00	5.09	0.16	0.00	0.00
9	ROB	354.00	596.00	1302.41	444.95	158.36	4.83	2.82	2.93	0.16	0.46
10	ROB	596.00	838.00	2658.34	808.91	242.00	9.85	3.34	3.29	0.19	0.61
11	ROB	838.00	1080.00	1301.73	463.12	175.16	4.82	2.65	2.81	0.15	0.41

Plan: Prop 153 ft -Low Stream Reach RS: 1120.000 Profile: Q500

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-641.67	-313.33	40.00	68.58	105.42	0.11	0.65	0.58	0.02	0.01
2	LOB	-313.33	15.00	1628.76	998.72	328.35	4.44	3.04	1.63	0.08	0.13
3	LOB	15.00	173.24	3062.79	1200.54	160.26	8.35	7.59	2.55	0.20	0.50
4	Chan	173.24	201.74	2485.40	431.55	31.21	6.78	15.14	5.76	0.36	2.08
5	Chan	201.74	230.25	4442.37	590.11	28.55	12.12	20.70	7.53	0.54	4.06
6	Chan	230.25	258.75	4374.72	584.39	28.52	11.93	20.50	7.49	0.54	4.01
7	Chan	258.75	287.26	4249.35	574.51	28.55	11.59	20.16	7.40	0.53	3.89
8	Chan	287.26	315.76	3645.15	574.37	35.91	9.94	20.15	6.35	0.42	2.65
9	ROB	315.76	354.00	0.08	0.64	13.71	0.00	6.85	0.13	0.00	0.00
10	ROB	354.00	596.00	3135.51	1055.31	207.38	8.55	5.10	2.97	0.13	0.39
11	ROB	596.00	838.00	6020.62	1660.34	242.00	16.42	6.86	3.63	0.18	0.65
12	ROB	838.00	1080.00	3580.26	1109.41	192.86	9.76	5.77	3.23	0.15	0.48

155' Span - Low Tailwater

Plan: Prop 153 ft -Low Stream Reach RS: 1120.000 Profile: Over Road

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-313.33	15.00	751.99	571.49	322.25	2.29	1.77	1.32	0.06	0.08
2	LOB	15.00	173.24	2581.26	994.54	160.26	7.87	6.29	2.60	0.21	0.54
3	Chan	173.24	201.74	2420.38	394.44	31.21	7.38	13.84	6.14	0.42	2.60
4	Chan	201.74	230.25	4509.96	553.00	28.55	13.75	19.40	8.16	0.65	5.29
5	Chan	230.25	258.75	4436.42	547.28	28.52	13.53	19.20	8.11	0.64	5.21
6	Chan	258.75	287.26	4300.91	537.40	28.55	13.11	18.85	8.00	0.63	5.05
7	Chan	287.26	315.76	3689.28	537.27	35.91	11.25	18.85	6.87	0.50	3.44
8	ROB	315.76	354.00	0.07	0.52	12.41	0.00	6.20	0.14	0.00	0.00
9	ROB	354.00	596.00	2551.80	810.30	176.92	7.78	4.59	3.15	0.15	0.48
10	ROB	596.00	838.00	4820.70	1345.30	242.00	14.70	5.56	3.58	0.19	0.67
11	ROB	838.00	1080.00	2737.23	863.07	186.46	8.35	4.64	3.17	0.16	0.49

Plan: Prop 153 ft -Low Stream Reach RS: 1120.000 Profile: Q1.1

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	173.24	201.74	188.79	42.95	15.21	5.01	3.03	4.40	0.36	1.58
2	Chan	201.74	230.25	1019.70	152.00	28.55	27.04	5.33	6.71	0.68	4.55
3	Chan	230.25	258.75	957.41	146.28	28.52	25.39	5.13	6.55	0.65	4.28
4	Chan	258.75	287.26	851.54	136.40	28.55	22.58	4.79	6.24	0.61	3.80
5	Chan	287.26	315.76	753.56	136.33	34.24	19.98	4.80	5.53	0.51	2.81

Plan: Prop 153 ft -Low Stream Reach RS: 1040.000 Profile: Q10

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	82.00	163.56	432.53	160.02	69.81	2.85	2.31	2.70	0.37	1.00
2	Chan	163.56	186.78	2020.99	206.62	25.89	13.32	8.90	9.78	1.29	12.65
3	Chan	186.78	210.00	3143.63	257.89	23.22	20.72	11.11	12.19	1.80	21.94
4	Chan	210.00	233.21	3399.44	270.42	23.25	22.40	11.65	12.57	1.88	23.69
5	Chan	233.21	256.43	4332.69	313.42	23.37	28.56	13.50	13.82	2.17	30.04
6	Chan	256.43	279.65	1843.72	202.19	28.14	12.15	8.91	9.12	1.16	10.62

Plan: Prop 153 ft -Low Stream Reach RS: 1040.000 Profile: Q50

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	82.00	163.56	1551.99	344.73	79.72	6.69	4.37	4.50	0.78	3.49
2	Chan	163.56	186.78	3217.01	264.75	25.89	13.86	11.40	12.15	1.83	22.28
3	Chan	186.78	210.00	4645.37	316.01	23.22	20.02	13.61	14.70	2.44	35.87
4	Chan	210.00	233.21	4952.23	328.54	23.25	21.34	14.15	15.07	2.53	38.19
5	Chan	233.21	256.43	6058.49	371.55	23.37	26.11	16.00	16.31	2.85	46.48
6	Chan	256.43	279.65	2777.92	259.45	30.67	11.97	11.26	10.71	1.52	16.24
7	ROB	279.65	282.00							0.00	0.00
8	ROB	282.00	573.67							0.00	0.00
9	ROB	573.67	865.33	0.00	15.48	73.91	0.00	0.21	0.00	0.04	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 1040.000 Profile: Q100

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	82.00	163.56	2094.67	402.57	82.15	7.76	4.96	5.20	0.98	5.11
2	Chan	163.56	186.78	3765.32	281.49	25.89	13.95	12.12	13.38	2.18	29.14
3	Chan	186.78	210.00	5349.98	332.75	23.22	19.82	14.33	16.08	2.87	46.15
4	Chan	210.00	233.21	5685.15	345.28	23.25	21.06	14.87	16.47	2.97	48.98
5	Chan	233.21	256.43	6890.21	388.29	23.37	25.53	16.72	17.75	3.33	59.06
6	Chan	256.43	279.65	3205.60	276.10	31.40	11.88	11.94	11.61	1.76	20.45
7	ROB	279.65	282.00	0.06	0.09	0.73	0.00	0.13	0.69	0.02	0.02
8	ROB	282.00	573.67	0.00	1.83	6.34	0.00	0.29	0.00	0.06	0.00
9	ROB	573.67	865.33	0.00	95.53	147.25	0.00	0.65	0.00	0.13	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 1040.000 Profile: Q500

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-245.67	82.00	0.00	2.95	4.99	0.00	0.62	0.00	0.15	0.00
2	LOB	82.00	163.56	3635.67	526.05	82.49	9.92	6.45	6.91	1.61	11.10
3	Chan	163.56	186.78	5143.84	316.65	25.89	14.03	13.64	16.24	3.08	50.06
4	Chan	186.78	210.00	7101.48	367.91	23.22	19.37	15.85	19.30	3.99	77.04
5	Chan	210.00	233.21	7502.81	380.44	23.25	20.46	16.39	19.72	4.12	81.29
6	Chan	233.21	256.43	8938.58	423.44	23.37	24.38	18.24	21.11	4.56	96.36

155' Span - Low Tailwater

Plan: Prop 153 ft -Low Stream Reach RS: 1040.000 Profile: Q500 (Continued)

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
7	Chan	256.43	279.65	4332.35	311.22	32.07	11.82	13.40	13.92	2.44	34.03
8	ROB	279.65	282.00	10.26	2.96	2.57	0.03	1.26	3.46	0.29	1.01
9	ROB	282.00	573.67	0.00	149.08	233.08	0.00	0.64	0.00	0.16	0.00
10	ROB	573.67	865.33	0.00	446.02	291.82	0.00	1.53	0.00	0.39	0.00
11	ROB	865.33	1157.00	0.00	58.02	136.33	0.00	0.43	0.00	0.11	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 1040.000 Profile: Over Road

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-245.67	82.00	0.00	0.89	2.37	0.00	0.40	0.00	0.09	0.00
2	LOB	82.00	163.56	2990.83	478.16	82.49	9.12	5.86	6.25	1.35	8.47
3	Chan	163.56	186.78	4596.88	303.01	25.89	14.01	13.05	15.17	2.73	41.46
4	Chan	186.78	210.00	6412.83	354.27	23.22	19.55	15.26	18.10	3.56	64.47
5	Chan	210.00	233.21	6789.56	366.81	23.25	20.70	15.80	18.51	3.68	68.18
6	Chan	233.21	256.43	8139.80	409.81	23.37	24.82	17.65	19.86	4.09	81.32
7	Chan	256.43	279.65	3866.63	297.59	32.07	11.79	12.82	12.99	2.17	28.15
8	ROB	279.65	282.00	3.48	1.58	2.57	0.01	0.67	2.19	0.14	0.32
9	ROB	282.00	573.67	0.00	35.93	122.13	0.00	0.29	0.00	0.07	0.00
10	ROB	573.67	865.33	0.00	274.79	289.55	0.00	0.95	0.00	0.22	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 1040.000 Profile: Q1.1

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	163.56	186.78	337.49	71.29	21.47	8.95	3.52	4.73	0.41	1.95
2	Chan	186.78	210.00	730.57	116.93	23.22	19.37	5.04	6.25	0.63	3.91
3	Chan	210.00	233.21	864.94	129.46	23.25	22.94	5.58	6.68	0.69	4.62
4	Chan	233.21	256.43	1390.34	172.46	23.37	36.87	7.43	8.06	0.92	7.39
5	Chan	256.43	279.65	447.66	79.73	18.59	11.87	4.84	5.61	0.53	2.99

Plan: Prop 153 ft -Low Stream Reach RS: 1000 BR U Profile: Q10

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	94.80	131.77	83.73	24.00	9.98	0.55	4.14	3.49	0.26	0.89
2	Chan	131.77	168.74	2041.33	276.68	37.42	13.45	7.48	7.38	0.78	5.79
3	Chan	168.74	205.71	4216.33	425.88	37.05	27.79	11.52	9.90	1.22	12.08
4	Chan	205.71	242.68	5581.30	503.93	37.05	36.78	13.63	11.08	1.44	15.99
5	Chan	242.68	279.65	3250.31	373.01	39.30	21.42	11.68	8.71	1.01	8.78

Plan: Prop 153 ft -Low Stream Reach RS: 1000 BR U Profile: Q50

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	94.80	131.77	170.13	37.92	12.51	0.73	6.54	4.49	0.39	1.75
2	Chan	131.77	168.74	3649.99	369.94	37.42	15.73	10.01	9.87	1.27	12.54
3	Chan	168.74	205.71	6462.34	519.14	37.05	27.85	14.04	12.45	1.80	22.43
4	Chan	205.71	242.68	8161.43	597.19	37.05	35.17	16.15	13.67	2.07	28.32
5	Chan	242.68	279.65	4759.11	453.53	41.83	20.51	14.21	10.49	1.39	14.63

Plan: Prop 153 ft -Low Stream Reach RS: 1000 BR U Profile: Q100

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	94.80	131.77	207.17	42.03	13.26	0.77	7.25	4.93	0.46	2.29
2	Chan	131.77	168.74	4396.34	397.96	37.42	16.29	10.76	11.05	1.56	17.21
3	Chan	168.74	205.71	7523.03	547.16	37.05	27.87	14.80	13.75	2.16	29.74
4	Chan	205.71	242.68	9395.26	625.21	37.05	34.81	16.91	15.03	2.47	37.14
5	Chan	242.68	279.65	5469.21	477.73	42.58	20.26	14.96	11.45	1.64	18.82

Plan: Prop 153 ft -Low Stream Reach RS: 1000 BR U Profile: Q500

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	94.80	131.77	300.04	50.50	14.84	0.82	8.71	5.94	0.66	3.94
2	Chan	131.77	168.74	6346.39	456.20	37.42	17.31	12.34	13.91	2.37	33.02
3	Chan	168.74	205.71	10237.26	605.39	37.05	27.92	16.38	16.91	3.18	53.79
4	Chan	205.71	242.68	12530.08	683.44	37.05	34.17	18.49	18.33	3.59	65.84
5	Chan	242.68	279.65	7251.23	528.01	44.16	19.78	16.54	13.73	2.33	31.97

155' Span - Low Tailwater

Plan: Prop 153 ft -Low Stream Reach RS: 1000 BR U Profile: Over Road

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	94.80	131.77	263.03	47.31	14.24	0.80	8.16	5.56	0.58	3.24
2	Chan	131.77	168.74	5556.98	434.15	37.42	16.94	11.74	12.80	2.04	26.08
3	Chan	168.74	205.71	9151.60	583.35	37.05	27.90	15.78	15.69	2.77	43.38
4	Chan	205.71	242.68	11281.96	661.40	37.05	34.40	17.89	17.06	3.14	53.48
5	Chan	242.68	279.65	6546.43	508.98	43.55	19.96	15.94	12.86	2.05	26.40

Plan: Prop 153 ft -Low Stream Reach RS: 1000 BR U Profile: Q1.1

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	131.77	168.74	142.32	50.94	25.38	3.77	2.03	2.79	0.18	0.50
2	Chan	168.74	205.71	979.26	188.52	37.05	25.97	5.10	5.19	0.45	2.36
3	Chan	205.71	242.68	1744.44	266.57	37.05	46.26	7.21	6.54	0.64	4.21
4	Chan	242.68	279.65	904.99	169.72	32.08	24.00	5.61	5.33	0.47	2.52

Plan: Prop 153 ft -Low Stream Reach RS: 1000 BR D Profile: Q10

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	80.70	118.57	128.92	33.59	12.18	0.85	4.16	3.84	0.30	1.14
2	Chan	118.57	156.45	2157.93	288.13	38.32	14.22	7.61	7.49	0.81	6.06
3	Chan	156.45	194.32	4376.76	438.74	37.96	28.85	11.58	9.98	1.24	12.41
4	Chan	194.32	232.20	5744.82	516.56	37.96	37.86	13.64	11.12	1.46	16.29
5	Chan	232.20	270.07	2764.57	323.60	35.32	18.22	11.43	8.54	0.99	8.42

Plan: Prop 153 ft -Low Stream Reach RS: 1000 BR D Profile: Q50

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	80.70	118.57	275.01	53.84	14.68	1.19	6.67	5.11	0.48	2.43
2	Chan	118.57	156.45	3821.16	383.25	38.32	16.47	10.12	9.97	1.30	12.93
3	Chan	156.45	194.32	6681.23	533.86	37.96	28.79	14.10	12.52	1.82	22.82
4	Chan	194.32	232.20	8380.83	611.67	37.96	36.12	16.15	13.70	2.09	28.62
5	Chan	232.20	270.07	4044.79	394.69	37.87	17.43	13.94	10.25	1.35	13.85

Plan: Prop 153 ft -Low Stream Reach RS: 1000 BR D Profile: Q100

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	80.70	118.57	338.81	59.84	15.42	1.26	7.42	5.66	0.57	3.25
2	Chan	118.57	156.45	4590.82	411.41	38.32	17.01	10.86	11.16	1.59	17.71
3	Chan	156.45	194.32	7770.22	562.02	37.96	28.79	14.84	13.83	2.19	30.26
4	Chan	194.32	232.20	9643.48	639.84	37.96	35.73	16.89	15.07	2.49	37.55
5	Chan	232.20	270.07	4647.68	415.74	38.61	17.22	14.69	11.18	1.59	17.79

Plan: Prop 153 ft -Low Stream Reach RS: 1000 BR D Profile: Q500

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	80.70	118.57	501.63	72.23	16.96	1.37	8.95	6.94	0.84	5.83
2	Chan	118.57	156.45	6596.76	469.58	38.32	17.99	12.40	14.05	2.42	33.94
3	Chan	156.45	194.32	10554.58	620.19	37.96	28.79	16.38	17.02	3.22	54.83
4	Chan	194.32	232.20	12851.03	698.01	37.96	35.05	18.43	18.41	3.63	66.74
5	Chan	232.20	270.07	6161.01	459.21	40.15	16.80	16.22	13.42	2.26	30.26

Plan: Prop 153 ft -Low Stream Reach RS: 1000 BR D Profile: Over Road

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	80.70	118.57	435.98	67.57	16.40	1.33	8.38	6.45	0.73	4.72
2	Chan	118.57	156.45	5786.26	447.71	38.32	17.64	11.82	12.92	2.07	26.81
3	Chan	156.45	194.32	9441.52	598.32	37.96	28.79	15.80	15.78	2.80	44.16
4	Chan	194.32	232.20	11573.97	676.14	37.96	35.29	17.85	17.12	3.16	54.13
5	Chan	232.20	270.07	5562.27	442.87	39.56	16.96	15.65	12.56	1.99	24.96

Plan: Prop 153 ft -Low Stream Reach RS: 1000 BR D Profile: Q1.1

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	118.57	156.45	162.56	55.97	26.77	4.31	2.11	2.90	0.19	0.56
2	Chan	156.45	194.32	1039.03	195.89	37.96	27.55	5.17	5.30	0.47	2.51
3	Chan	194.32	232.20	1814.25	273.70	37.96	48.11	7.23	6.63	0.66	4.38
4	Chan	232.20	270.07	755.16	143.96	28.36	20.03	5.42	5.25	0.47	2.44

155' Span - Low Tailwater

Plan: Prop 153 ft -Low Stream Reach RS: 955.0000 Profile: Q10

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	76.00	133.29	136.63	65.58	51.71	0.90	1.28	2.08	0.20	0.41
2	Chan	133.29	160.65	2094.16	229.42	30.67	13.80	8.39	9.13	1.17	10.64
3	Chan	160.65	188.00	3251.50	285.58	27.40	21.43	10.44	11.39	1.62	18.49
4	Chan	188.00	215.36	3995.84	323.07	27.38	26.34	11.81	12.37	1.84	22.74
5	Chan	215.36	242.71	4300.64	337.69	27.39	28.34	12.34	12.74	1.92	24.47
6	Chan	242.71	270.07	1394.25	175.30	28.81	9.19	7.19	7.95	0.95	7.54

Plan: Prop 153 ft -Low Stream Reach RS: 955.0000 Profile: Q50

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-256.67	76.00	0.00	1.99	3.50	0.00	0.60	0.00	0.10	0.00
2	LOB	76.00	133.29	750.98	204.10	57.78	3.24	3.56	3.68	0.60	2.21
3	Chan	133.29	160.65	3385.89	297.60	30.67	14.59	10.88	11.38	1.65	18.77
4	Chan	160.65	188.00	4868.31	353.76	27.40	20.98	12.93	13.76	2.20	30.21
5	Chan	188.00	215.36	5761.45	391.25	27.38	24.83	14.30	14.73	2.43	35.78
6	Chan	215.36	242.71	6123.14	405.87	27.39	26.39	14.84	15.09	2.52	38.01
7	Chan	242.71	270.07	2311.81	241.24	32.16	9.96	8.82	9.58	1.28	12.22
8	ROB	270.07	272.00	1.42	1.88	1.95	0.01	0.98	0.76	0.16	0.12
9	ROB	272.00	560.00	0.00	371.38	268.19	0.00	1.39	0.00	0.24	0.00
10	ROB	560.00	848.00	0.00	296.34	226.84	0.00	1.31	0.00	0.22	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 955.0000 Profile: Q100

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-256.67	76.00	0.00	4.97	5.75	0.00	0.91	0.00	0.16	0.00
2	LOB	76.00	133.29	1056.63	243.02	57.78	3.91	4.24	4.35	0.80	3.47
3	Chan	133.29	160.65	3966.56	316.19	30.67	14.70	11.56	12.55	1.96	24.54
4	Chan	160.65	188.00	5614.80	372.35	27.40	20.80	13.61	15.08	2.58	38.88
5	Chan	188.00	215.36	6592.03	409.83	27.38	24.42	14.98	16.08	2.84	45.69
6	Chan	215.36	242.71	6986.79	424.46	27.39	25.89	15.52	16.46	2.94	48.40
7	Chan	242.71	270.07	2770.56	259.82	32.16	10.26	9.50	10.66	1.53	16.35
8	ROB	270.07	272.00	3.63	3.19	1.95	0.01	1.65	1.14	0.31	0.35
9	ROB	272.00	560.00	0.00	565.61	288.08	0.00	1.96	0.00	0.37	0.00
10	ROB	560.00	848.00	0.00	453.65	236.25	0.00	1.92	0.00	0.36	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 955.0000 Profile: Q500

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-589.33	-256.67	218.13	222.07	254.22	0.59	0.87	0.98	0.04	0.04
2	LOB	-256.67	76.00	260.03	204.27	158.49	0.71	1.30	1.27	0.06	0.07
3	LOB	76.00	133.29	1576.89	496.30	57.78	4.30	8.66	3.18	0.37	1.18
4	Chan	133.29	160.65	3283.36	437.13	30.67	8.96	15.98	7.51	0.62	4.64
5	Chan	160.65	188.00	4328.97	493.29	27.40	11.81	18.03	8.78	0.78	6.84
6	Chan	188.00	215.36	4893.86	530.78	27.38	13.35	19.40	9.22	0.84	7.74
7	Chan	215.36	242.71	5119.25	545.40	27.39	13.96	19.94	9.39	0.86	8.09
8	Chan	242.71	270.07	2527.34	380.76	32.16	6.89	13.92	6.64	0.51	3.40
9	ROB	270.07	272.00	14.32	11.73	1.95	0.04	6.08	1.22	0.26	0.32
10	ROB	272.00	560.00	7687.18	1838.86	288.08	20.97	6.38	4.18	0.28	1.16
11	ROB	560.00	848.00	6607.59	1664.54	288.12	18.02	5.78	3.97	0.25	0.99
12	ROB	848.00	1136.00	148.07	105.45	86.76	0.40	1.22	1.40	0.05	0.07

Plan: Prop 153 ft -Low Stream Reach RS: 955.0000 Profile: Over Road

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-589.33	-256.67	22.98	38.86	106.35	0.07	0.37	0.59	0.02	0.01
2	LOB	-256.67	76.00	82.35	78.56	91.07	0.25	0.87	1.05	0.04	0.05
3	LOB	76.00	133.29	1380.40	438.08	57.78	4.21	7.65	3.15	0.38	1.21
4	Chan	133.29	160.65	3173.47	409.33	30.67	9.68	14.96	7.75	0.67	5.23
5	Chan	160.65	188.00	4238.15	465.49	27.40	12.92	17.02	9.10	0.86	7.81
6	Chan	188.00	215.36	4824.92	502.98	27.38	14.71	18.39	9.59	0.93	8.90
7	Chan	215.36	242.71	5059.60	517.60	27.39	15.43	18.92	9.78	0.95	9.33
8	Chan	242.71	270.07	2401.95	352.96	32.16	7.32	12.90	6.81	0.55	3.77
9	ROB	270.07	272.00	11.57	9.77	1.95	0.04	5.06	1.19	0.25	0.30
10	ROB	272.00	560.00	6318.41	1546.18	288.08	19.26	5.37	4.09	0.27	1.11
11	ROB	560.00	848.00	5247.86	1371.86	288.12	16.00	4.76	3.83	0.24	0.92
12	ROB	848.00	1136.00	38.35	35.73	50.50	0.12	0.71	1.07	0.04	0.04

155' Span - Low Tailwater

Plan: Prop 153 ft -Low Stream Reach RS: 955.0000 Profile: Q1.1

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	133.29	160.65	376.57	79.51	23.70	9.99	3.53	4.74	0.41	1.92
2	Chan	160.65	188.00	700.66	122.31	27.40	18.58	4.47	5.73	0.54	3.09
3	Chan	188.00	215.36	1094.65	159.80	27.38	29.03	5.84	6.85	0.71	4.84
4	Chan	215.36	242.71	1266.30	174.42	27.39	33.58	6.38	7.26	0.77	5.59
5	Chan	242.71	270.07	332.81	65.26	17.41	8.83	4.12	5.10	0.45	2.31

Plan: Prop 153 ft -Low Stream Reach RS: 880.0000 Profile: Q10

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	85.00	156.11	143.71	122.01	58.27	0.95	2.10	1.18	0.31	0.36
2	Chan	156.11	187.58	2135.91	240.93	32.32	14.08	7.66	8.87	1.09	9.68
3	Chan	187.58	219.05	3337.34	311.64	31.49	22.00	9.90	10.71	1.45	15.52
4	Chan	219.05	250.53	3845.94	339.32	31.48	25.35	10.78	11.33	1.58	17.89
5	Chan	250.53	282.00	4382.83	367.15	31.52	28.89	11.67	11.94	1.71	20.36
6	Chan	282.00	313.47	1327.27	178.64	31.23	8.75	6.37	7.43	0.84	6.22

Plan: Prop 153 ft -Low Stream Reach RS: 880.0000 Profile: Q50

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	85.00	156.11	545.77	289.65	69.05	2.35	4.23	1.88	0.62	1.17
2	Chan	156.11	187.58	3517.30	322.78	32.32	15.16	10.26	10.90	1.48	16.15
3	Chan	187.58	219.05	4978.87	393.50	31.49	21.46	12.50	12.65	1.85	23.46
4	Chan	219.05	250.53	5576.32	421.17	31.48	24.03	13.38	13.24	1.98	26.28
5	Chan	250.53	282.00	6199.51	449.00	31.52	26.72	14.27	13.81	2.11	29.19
6	Chan	282.00	313.47	2308.09	258.43	34.87	9.95	8.21	8.93	1.10	9.82
7	ROB	313.47	344.00	77.14	41.57	30.53	0.33	1.36	1.86	0.20	0.37
8	ROB	344.00	663.67	0.00	545.38	319.67	0.00	1.71	0.00	0.25	0.00
9	ROB	663.67	983.33	0.00	400.84	239.04	0.00	1.68	0.00	0.25	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 880.0000 Profile: Q100

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	85.00	156.11	736.33	340.89	70.54	2.73	4.89	2.16	0.78	1.69
2	Chan	156.11	187.58	4132.40	346.10	32.32	15.31	11.00	11.94	1.73	20.65
3	Chan	187.58	219.05	5731.98	416.82	31.49	21.24	13.24	13.75	2.14	29.40
4	Chan	219.05	250.53	6380.50	444.49	31.48	23.64	14.12	14.35	2.28	32.72
5	Chan	250.53	282.00	7055.15	472.32	31.52	26.14	15.01	14.94	2.42	36.15
6	Chan	282.00	313.47	2787.98	281.75	34.87	10.33	8.95	9.90	1.30	12.91
7	ROB	313.47	344.00	166.66	64.19	30.53	0.62	2.10	2.60	0.34	0.88
8	ROB	344.00	663.67	0.00	782.27	319.67	0.00	2.45	0.00	0.40	0.00
9	ROB	663.67	983.33	0.00	585.68	259.89	0.00	2.25	0.00	0.36	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 880.0000 Profile: Q500

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-236.67	85.00	5.30	11.92	7.57	0.01	1.79	0.44	0.05	0.02
2	LOB	85.00	156.11	921.93	649.36	72.10	2.51	9.13	1.42	0.30	0.42
3	Chan	156.11	187.58	3288.66	482.86	32.32	8.97	15.34	6.81	0.49	3.37
4	Chan	187.58	219.05	4202.22	553.58	31.49	11.46	17.59	7.59	0.58	4.41
5	Chan	219.05	250.53	4558.36	581.25	31.48	12.43	18.47	7.84	0.61	4.79
6	Chan	250.53	282.00	4924.42	609.08	31.52	13.43	19.35	8.08	0.64	5.17
7	Chan	282.00	313.47	2463.10	418.51	34.87	6.72	13.30	5.89	0.40	2.34
8	ROB	313.47	344.00	484.71	196.86	30.53	1.32	6.45	2.46	0.21	0.53
9	ROB	344.00	663.67	8772.56	2171.37	319.67	23.93	6.79	4.04	0.22	0.91
10	ROB	663.67	983.33	6972.32	1911.12	319.75	19.02	5.98	3.65	0.20	0.72
11	ROB	983.33	1303.00	71.43	69.10	62.37	0.19	1.11	1.03	0.04	0.04

Plan: Prop 153 ft -Low Stream Reach RS: 880.0000 Profile: Over Road

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-236.67	85.00	2.41	6.25	5.48	0.01	1.29	0.39	0.04	0.02
2	LOB	85.00	156.11	819.16	579.14	72.10	2.50	8.14	1.41	0.30	0.43
3	Chan	156.11	187.58	3134.79	451.79	32.32	9.56	14.36	6.94	0.53	3.65
4	Chan	187.58	219.05	4064.44	522.50	31.49	12.39	16.60	7.78	0.62	4.86
5	Chan	219.05	250.53	4429.74	550.18	31.48	13.51	17.48	8.05	0.66	5.29
6	Chan	250.53	282.00	4806.07	578.01	31.52	14.65	18.37	8.31	0.69	5.74

155' Span - Low Tailwater

Plan: Prop 153 ft -Low Stream Reach RS: 880.0000 Profile: Over Road (Continued)

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
7	Chan	282.00	313.47	2306.61	387.43	34.87	7.03	12.31	5.95	0.42	2.49
8	ROB	313.47	344.00	393.19	166.71	30.53	1.20	5.46	2.36	0.21	0.48
9	ROB	344.00	663.67	7228.33	1855.70	319.67	22.04	5.81	3.90	0.22	0.85
10	ROB	663.67	983.33	5599.38	1595.45	319.75	17.07	4.99	3.51	0.19	0.66
11	ROB	983.33	1303.00	15.88	21.26	34.59	0.05	0.61	0.75	0.02	0.02

Plan: Prop 153 ft -Low Stream Reach RS: 880.0000 Profile: Q1.1

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	156.11	187.58	227.82	50.78	24.92	6.04	2.06	4.49	0.44	1.98
2	Chan	187.58	219.05	725.61	111.74	31.49	19.24	3.55	6.49	0.77	4.99
3	Chan	219.05	250.53	1049.28	139.42	31.48	27.82	4.43	7.53	0.96	7.22
4	Chan	250.53	282.00	1420.12	167.25	31.52	37.66	5.31	8.49	1.15	9.76
5	Chan	282.00	313.47	348.17	53.85	15.27	9.23	3.97	6.47	0.76	4.94

Plan: Prop 153 ft -Low Stream Reach RS: 780.0000 Profile: Q10

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	72.00	194.57	360.07	235.64	83.83	2.37	2.83	1.53	0.47	0.71
2	Chan	194.57	221.36	1858.76	197.90	27.34	12.25	7.39	9.39	1.20	11.32
3	Chan	221.36	248.14	2791.88	250.73	26.83	18.40	9.36	11.13	1.56	17.32
4	Chan	248.14	274.93	3513.57	287.75	26.81	23.16	10.74	12.21	1.79	21.81
5	Chan	274.93	301.71	4206.65	320.81	26.86	27.72	11.98	13.11	1.99	26.06
6	Chan	301.71	328.50	2437.90	244.55	30.89	16.07	9.13	9.97	1.32	13.13
7	ROB	328.50	435.50	4.17	10.15	25.90	0.03	0.39	0.41	0.07	0.03

Plan: Prop 153 ft -Low Stream Reach RS: 780.0000 Profile: Q50

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-238.67	72.00	0.00	26.26	27.72	0.00	0.95	0.00	0.16	0.00
2	LOB	72.00	194.57	1040.86	520.15	123.04	4.49	4.24	2.00	0.70	1.40
3	Chan	194.57	221.36	3066.29	266.67	27.34	13.22	9.96	11.50	1.62	18.58
4	Chan	221.36	248.14	4196.16	319.50	26.83	18.08	11.93	13.13	1.97	25.90
5	Chan	248.14	274.93	5039.42	356.51	26.81	21.72	13.31	14.14	2.20	31.13
6	Chan	274.93	301.71	5834.98	389.57	26.86	25.15	14.54	14.98	2.40	35.98
7	Chan	301.71	328.50	3697.41	313.32	30.89	15.94	11.70	11.80	1.68	19.82
8	ROB	328.50	435.50	327.89	191.74	107.29	1.41	1.79	1.71	0.30	0.51
9	ROB	435.50	761.00	0.00	530.33	325.51	0.00	1.63	0.00	0.27	0.00
10	ROB	761.00	1086.50	0.00	28.35	53.37	0.00	0.53	0.00	0.09	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 780.0000 Profile: Q100

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-238.67	72.00	0.00	49.96	30.61	0.00	1.64	0.00	0.28	0.00
2	LOB	72.00	194.57	1428.81	620.36	123.04	5.29	5.06	2.30	0.87	2.01
3	Chan	194.57	221.36	3583.63	288.57	27.34	13.28	10.77	12.42	1.83	22.74
4	Chan	221.36	248.14	4802.00	341.40	26.83	17.79	12.75	14.07	2.21	31.05
5	Chan	248.14	274.93	5703.13	378.41	26.81	21.13	14.13	15.07	2.45	36.90
6	Chan	274.93	301.71	6549.50	411.47	26.86	24.27	15.36	15.92	2.66	42.30
7	Chan	301.71	328.50	4240.16	335.22	30.89	15.71	12.51	12.65	1.88	23.81
8	ROB	328.50	435.50	683.76	279.22	107.29	2.53	2.61	2.45	0.45	1.11
9	ROB	435.50	761.00	0.00	796.46	325.51	0.00	2.45	0.00	0.42	0.00
10	ROB	761.00	1086.50	0.00	88.76	94.44	0.00	0.94	0.00	0.16	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 780.0000 Profile: Q500

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-238.67	72.00	325.67	362.79	288.47	0.89	1.26	0.90	0.05	0.04
2	LOB	72.00	194.57	1925.93	1197.82	123.04	5.25	9.77	1.61	0.37	0.59
3	Chan	194.57	221.36	3074.12	414.76	27.34	8.38	15.48	7.41	0.57	4.25
4	Chan	221.36	248.14	3801.12	467.59	26.83	10.37	17.46	8.13	0.66	5.35
5	Chan	248.14	274.93	4317.53	504.61	26.81	11.78	18.84	8.56	0.71	6.08
6	Chan	274.93	301.71	4793.37	537.66	26.86	13.07	20.07	8.92	0.76	6.74
7	Chan	301.71	328.50	3384.27	461.41	30.89	9.23	17.23	7.33	0.56	4.14
8	ROB	328.50	435.50	2060.20	783.32	107.29	5.62	7.32	2.63	0.28	0.73
9	ROB	435.50	761.00	10445.59	2329.97	325.51	28.49	7.16	4.48	0.27	1.21
10	ROB	761.00	1086.50	2537.15	1090.66	325.56	6.92	3.35	2.33	0.13	0.29

155' Span - Low Tailwater

Plan: Prop 153 ft -Low Stream Reach RS: 780.0000 Profile: Q500 (Continued)

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
11	ROB	1086.50	1412.00	0.05	0.30	5.53	0.00	0.06	0.15	0.00	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 780.0000 Profile: Over Road

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	-238.67	72.00	188.35	204.00	68.16	0.57	3.02	0.92	0.13	0.12
2	LOB	72.00	194.57	1697.08	1071.84	123.04	5.17	8.74	1.58	0.38	0.60
3	Chan	194.57	221.36	2940.53	387.23	27.34	8.97	14.46	7.59	0.62	4.68
4	Chan	221.36	248.14	3684.74	440.06	26.83	11.23	16.43	8.37	0.71	5.98
5	Chan	248.14	274.93	4217.40	477.08	26.81	12.86	17.81	8.84	0.77	6.84
6	Chan	274.93	301.71	4709.93	510.13	26.86	14.36	19.04	9.23	0.83	7.63
7	Chan	301.71	328.50	3276.07	433.88	30.89	9.99	16.20	7.55	0.61	4.61
8	ROB	328.50	435.50	1695.95	673.35	107.29	5.17	6.29	2.52	0.27	0.69
9	ROB	435.50	761.00	8673.12	1995.42	325.51	26.44	6.13	4.35	0.27	1.16
10	ROB	761.00	1086.50	1716.84	777.25	279.47	5.23	2.78	2.21	0.12	0.27

Plan: Prop 153 ft -Low Stream Reach RS: 780.0000 Profile: Q1.1

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	194.57	221.36	156.13	36.62	20.16	4.14	1.84	4.26	0.43	1.82
2	Chan	221.36	248.14	500.41	82.56	26.83	13.27	3.08	6.06	0.72	4.38
3	Chan	248.14	274.93	928.16	119.58	26.81	24.61	4.46	7.76	1.05	8.13
4	Chan	274.93	301.71	1392.37	152.64	26.86	36.92	5.70	9.12	1.34	12.18
5	Chan	301.71	328.50	793.94	98.80	21.03	21.05	5.31	8.04	1.10	8.87

Plan: Prop 153 ft -Low Stream Reach RS: 630.0000 Profile: Q10

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	24.00	184.06	162.04	93.99	53.95	1.07	1.75	1.72	0.70	1.20
2	Chan	184.06	208.41	1601.96	137.06	25.24	10.56	5.63	11.69	2.18	25.44
3	Chan	208.41	232.76	2725.53	185.89	24.37	17.96	7.63	14.66	3.06	44.84
4	Chan	232.76	257.10	3826.96	228.22	24.46	25.22	9.37	16.77	3.74	62.72
5	Chan	257.10	281.45	5260.11	276.01	24.42	34.67	11.34	19.06	4.53	86.37
6	Chan	281.45	305.80	1596.40	138.91	26.24	10.52	6.39	11.49	2.12	24.39

Plan: Prop 153 ft -Low Stream Reach RS: 630.0000 Profile: Q50

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	24.00	184.06	623.32	291.78	95.12	2.69	3.09	2.14	0.89	1.90
2	Chan	184.06	208.41	2896.65	213.73	25.24	12.48	8.78	13.55	2.45	33.22
3	Chan	208.41	232.76	4178.88	262.56	24.37	18.01	10.78	15.92	3.12	49.65
4	Chan	232.76	257.10	5347.49	304.90	24.46	23.05	12.52	17.54	3.61	63.29
5	Chan	257.10	281.45	6824.49	352.68	24.42	29.41	14.49	19.35	4.18	80.92
6	Chan	281.45	305.80	2639.58	214.03	29.12	11.38	8.79	12.33	2.13	26.24
7	ROB	305.80	544.00	692.58	448.80	238.31	2.98	1.88	1.54	0.55	0.84
8	ROB	544.00	1017.50	0.00	109.04	105.31	0.00	1.04	0.00	0.30	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 630.0000 Profile: Q100

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	24.00	184.06	931.11	448.15	137.68	3.45	3.27	2.08	0.82	1.71
2	Chan	184.06	208.41	3410.71	244.72	25.24	12.64	10.05	13.94	2.45	34.19
3	Chan	208.41	232.76	4728.89	293.55	24.37	17.52	12.06	16.11	3.05	49.10
4	Chan	232.76	257.10	5904.21	335.88	24.46	21.87	13.80	17.58	3.47	61.07
5	Chan	257.10	281.45	7378.65	383.67	24.42	27.34	15.76	19.23	3.98	76.46
6	Chan	281.45	305.80	3107.12	245.01	29.12	11.51	10.06	12.68	2.13	27.00
7	ROB	305.80	544.00	1530.31	751.96	238.31	5.67	3.16	2.04	0.80	1.62
8	ROB	544.00	1017.50	0.00	272.57	151.72	0.00	1.80	0.00	0.45	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 630.0000 Profile: Q500

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	24.00	184.06	1973.10	714.31	144.47	5.38	4.98	2.76	1.27	3.50
2	Chan	184.06	208.41	4602.10	290.91	25.24	12.55	11.95	15.82	2.95	46.69
3	Chan	208.41	232.76	6102.40	339.73	24.37	16.64	13.95	17.96	3.57	64.14
4	Chan	232.76	257.10	7402.74	382.07	24.46	20.19	15.69	19.38	4.00	77.51

155' Span - Low Tailwater

Plan: Prop 153 ft -Low Stream Reach RS: 630.0000 Profile: Q500 (Continued)

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
5	Chan	257.10	281.45	9020.44	429.85	24.42	24.60	17.65	20.98	4.51	94.63
6	Chan	281.45	305.80	4191.16	291.20	29.12	11.43	11.96	14.39	2.56	36.87
7	ROB	305.80	544.00	3373.06	1203.79	238.31	9.20	5.05	2.80	1.29	3.63
8	ROB	544.00	1017.50	0.00	625.88	220.90	0.00	2.83	0.00	0.73	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 630.0000 Profile: Over Road

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	LOB	24.00	184.06	1544.46	614.20	141.95	4.71	4.35	2.51	1.10	2.76
2	Chan	184.06	208.41	4131.68	273.78	25.24	12.60	11.24	15.09	2.75	41.50
3	Chan	208.41	232.76	5560.93	322.61	24.37	16.95	13.25	17.24	3.36	57.87
4	Chan	232.76	257.10	6812.13	364.95	24.46	20.77	14.99	18.67	3.78	70.62
5	Chan	257.10	281.45	8373.05	412.73	24.42	25.53	16.95	20.29	4.29	86.96
6	Chan	281.45	305.80	3763.13	274.08	29.12	11.47	11.26	13.73	2.39	32.77
7	ROB	305.80	544.00	2614.63	1036.29	238.31	7.97	4.35	2.52	1.10	2.78
8	ROB	544.00	1017.50	0.00	479.60	195.25	0.00	2.46	0.00	0.62	0.00

Plan: Prop 153 ft -Low Stream Reach RS: 630.0000 Profile: Q1.1

	Pos	Left Sta	Right Sta	Flow	Area	W.P.	Percent	Hydr	Velocity	Shear	Power
		(ft)	(ft)	(cfs)	(sq ft)	(ft)	Conv	Depth(ft)	(ft/s)	(lb/sq ft)	(lb/ft s)
1	Chan	184.06	208.41	133.31	32.94	19.73	3.54	1.69	4.05	0.42	1.71
2	Chan	208.41	232.76	469.01	76.25	24.37	12.44	3.13	6.15	0.79	4.86
3	Chan	232.76	257.10	976.64	118.58	24.46	25.90	4.87	8.24	1.22	10.09
4	Chan	257.10	281.45	1719.29	166.37	24.42	45.59	6.83	10.33	1.72	17.79
5	Chan	281.45	305.80	472.75	63.49	15.24	12.54	5.43	7.45	1.05	7.84

155' Span - Low Tailwater

Plan: Prop 153 ft -Low Stream Reach RS: 1000 Profile: Q10

E.G. US. (ft)	432.63	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	430.53	E.G. Elev (ft)	432.38	432.31
Q Total (cfs)	15173.00	W.S. Elev (ft)	430.99	430.91
Q Bridge (cfs)	15173.00	Crit W.S. (ft)	427.07	427.06
Q Weir (cfs)		Max Chl Dpth (ft)	14.49	14.41
Weir Sta Lft (ft)		Vel Total (ft/s)	9.46	9.48
Weir Sta Rgt (ft)		Flow Area (sq ft)	1603.50	1600.62
Weir Submerg		Froude # Chl	0.44	0.44
Weir Max Depth (ft)		Specif Force (cu ft)	13769.63	13698.09
Min EI Weir Flow (ft)	436.01	Hydr Depth (ft)	10.80	10.67
Min EI Prs (ft)	439.24	W.P. Total (ft)	160.81	161.74
Delta EG (ft)	0.43	Conv. Total (cfs)	367938.3	365437.8
Delta WS (ft)	0.24	Top Width (ft)	148.41	149.99
BR Open Area (sq ft)	2826.32	Frctn Loss (ft)	0.07	0.05
BR Open Vel (ft/s)	9.48	C & E Loss (ft)	0.00	0.05
Coef of Q		Shear Total (lb/sq ft)	1.06	1.07
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

Plan: Prop 153 ft -Low Stream Reach RS: 1000 Profile: Q50

E.G. US. (ft)	435.92	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	433.04	E.G. Elev (ft)	435.65	435.56
Q Total (cfs)	23203.00	W.S. Elev (ft)	433.51	433.42
Q Bridge (cfs)	23203.00	Crit W.S. (ft)	429.30	429.31
Q Weir (cfs)		Max Chl Dpth (ft)	17.01	16.92
Weir Sta Lft (ft)		Vel Total (ft/s)	11.73	11.73
Weir Sta Rgt (ft)		Flow Area (sq ft)	1977.72	1977.31
Weir Submerg		Froude # Chl	0.50	0.50
Weir Max Depth (ft)		Specif Force (cu ft)	22281.88	22179.90
Min EI Weir Flow (ft)	436.01	Hydr Depth (ft)	13.34	13.18
Min EI Prs (ft)	439.24	W.P. Total (ft)	165.86	166.79
Delta EG (ft)	0.47	Conv. Total (cfs)	511270.0	509193.3
Delta WS (ft)	0.25	Top Width (ft)	148.28	149.99
BR Open Area (sq ft)	2826.32	Frctn Loss (ft)	0.09	0.06
BR Open Vel (ft/s)	11.73	C & E Loss (ft)	0.00	0.05
Coef of Q		Shear Total (lb/sq ft)	1.53	1.54
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

Plan: Prop 153 ft -Low Stream Reach RS: 1000 Profile: Q100

E.G. US. (ft)	437.16	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	433.76	E.G. Elev (ft)	436.86	436.76
Q Total (cfs)	26991.00	W.S. Elev (ft)	434.27	434.17
Q Bridge (cfs)	26991.00	Crit W.S. (ft)	430.27	430.25
Q Weir (cfs)		Max Chl Dpth (ft)	17.77	17.67
Weir Sta Lft (ft)		Vel Total (ft/s)	12.91	12.92
Weir Sta Rgt (ft)		Flow Area (sq ft)	2090.08	2088.87
Weir Submerg		Froude # Chl	0.54	0.54
Weir Max Depth (ft)		Specif Force (cu ft)	26193.96	26067.21
Min EI Weir Flow (ft)	436.01	Hydr Depth (ft)	14.10	13.93
Min EI Prs (ft)	439.24	W.P. Total (ft)	167.37	168.27
Delta EG (ft)	0.52	Conv. Total (cfs)	557212.5	554687.8
Delta WS (ft)	0.29	Top Width (ft)	148.25	149.99
BR Open Area (sq ft)	2826.32	Frctn Loss (ft)	0.10	0.07
BR Open Vel (ft/s)	12.92	C & E Loss (ft)	0.00	0.06
Coef of Q		Shear Total (lb/sq ft)	1.83	1.83
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

155' Span - Low Tailwater

Plan: Prop 153 ft -Low Stream Reach RS: 1000 Profile: Q500

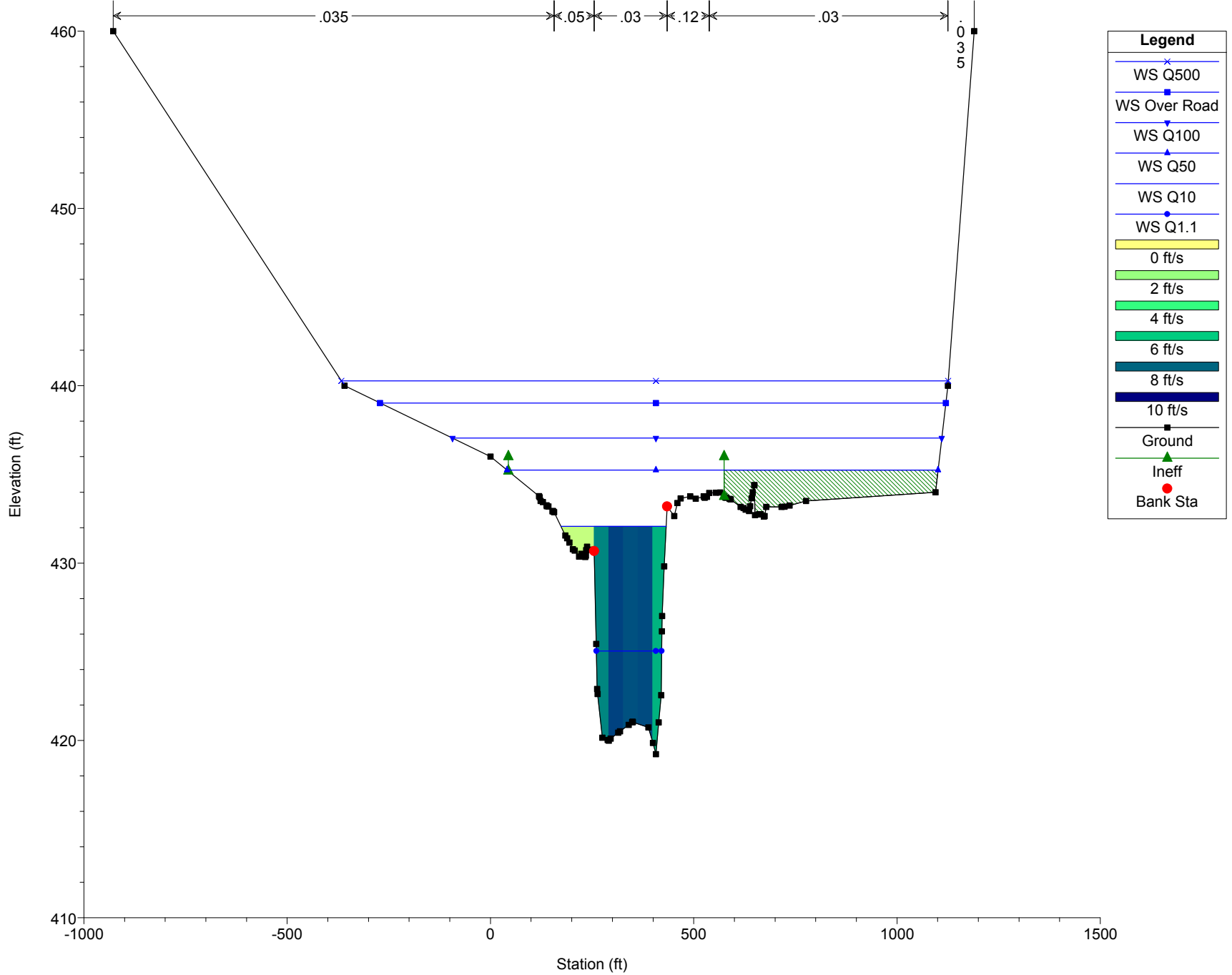
E.G. US. (ft)	440.05	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	435.27	E.G. Elev (ft)	439.71	439.58
Q Total (cfs)	36665.00	W.S. Elev (ft)	435.84	435.70
Q Bridge (cfs)	36665.00	Crit W.S. (ft)	432.57	432.54
Q Weir (cfs)		Max Chl Dpth (ft)	19.34	19.20
Weir Sta Lft (ft)		Vel Total (ft/s)	15.78	15.81
Weir Sta Rgt (ft)		Flow Area (sq ft)	2323.54	2319.21
Weir Submerg		Froude # Chl	0.63	0.64
Weir Max Depth (ft)		Specif Force (cu ft)	36813.38	36622.34
Min El Weir Flow (ft)	436.01	Hydr Depth (ft)	15.68	15.46
Min El Prs (ft)	439.24	W.P. Total (ft)	170.53	171.34
Delta EG (ft)	1.46	Conv. Total (cfs)	656538.6	652422.8
Delta WS (ft)	-2.62	Top Width (ft)	148.16	149.99
BR Open Area (sq ft)	2826.32	Frctn Loss (ft)	0.13	0.03
BR Open Vel (ft/s)	15.81	C & E Loss (ft)	0.00	0.95
Coef of Q		Shear Total (lb/sq ft)	2.65	2.67
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

Plan: Prop 153 ft -Low Stream Reach RS: 1000 Profile: Over Road

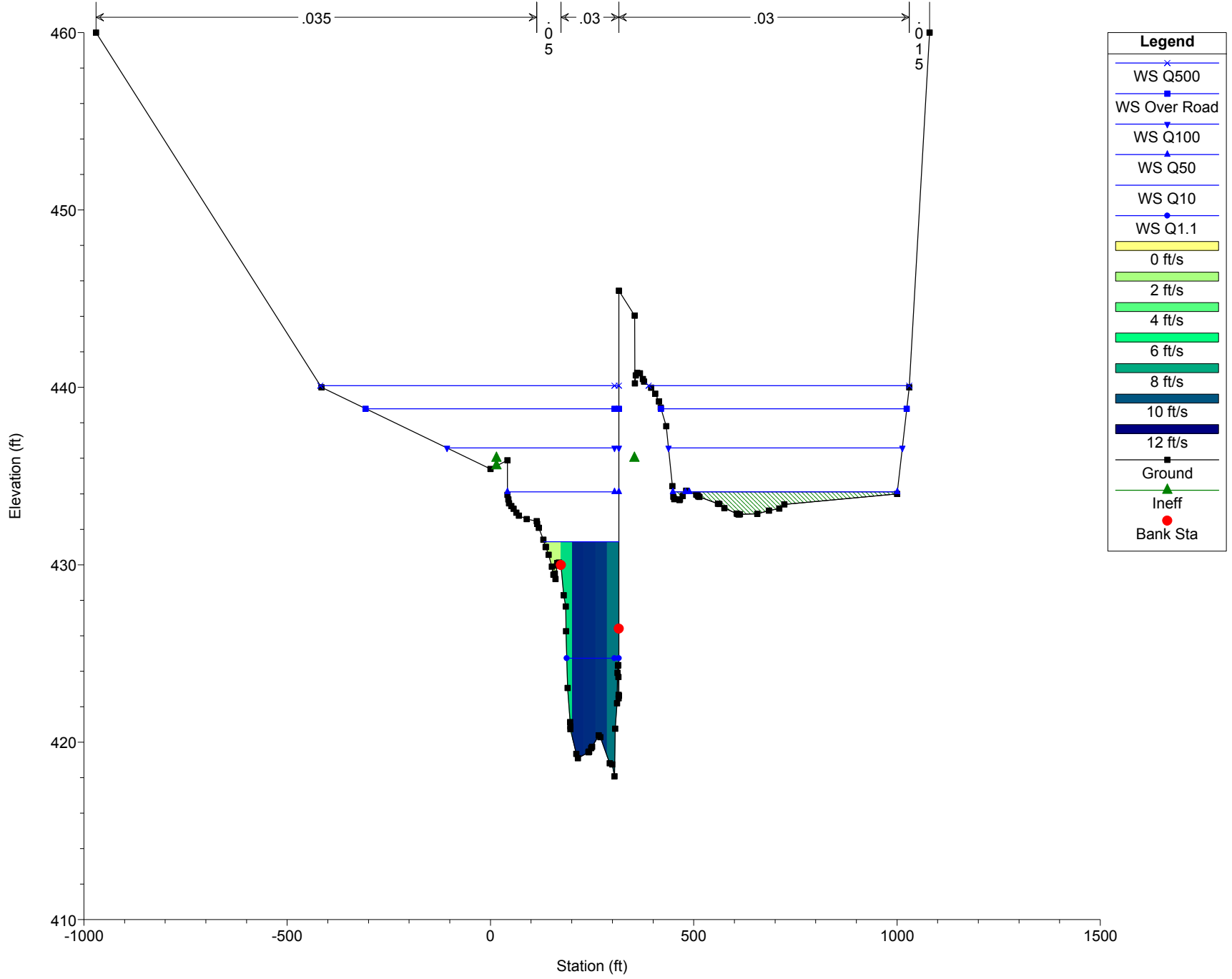
E.G. US. (ft)	438.92	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	434.69	E.G. Elev (ft)	438.59	438.48
Q Total (cfs)	32800.00	W.S. Elev (ft)	435.25	435.12
Q Bridge (cfs)	32800.00	Crit W.S. (ft)	431.68	431.66
Q Weir (cfs)		Max Chl Dpth (ft)	18.75	18.62
Weir Sta Lft (ft)		Vel Total (ft/s)	14.67	14.69
Weir Sta Rgt (ft)		Flow Area (sq ft)	2235.19	2232.61
Weir Submerg		Froude # Chl	0.60	0.60
Weir Max Depth (ft)		Specif Force (cu ft)	32434.18	32271.98
Min El Weir Flow (ft)	436.01	Hydr Depth (ft)	15.08	14.88
Min El Prs (ft)	439.24	W.P. Total (ft)	169.32	170.20
Delta EG (ft)	1.24	Conv. Total (cfs)	618371.4	615073.4
Delta WS (ft)	-2.19	Top Width (ft)	148.20	149.99
BR Open Area (sq ft)	2826.32	Frctn Loss (ft)	0.12	0.03
BR Open Vel (ft/s)	14.69	C & E Loss (ft)	0.00	0.76
Coef of Q		Shear Total (lb/sq ft)	2.32	2.33
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

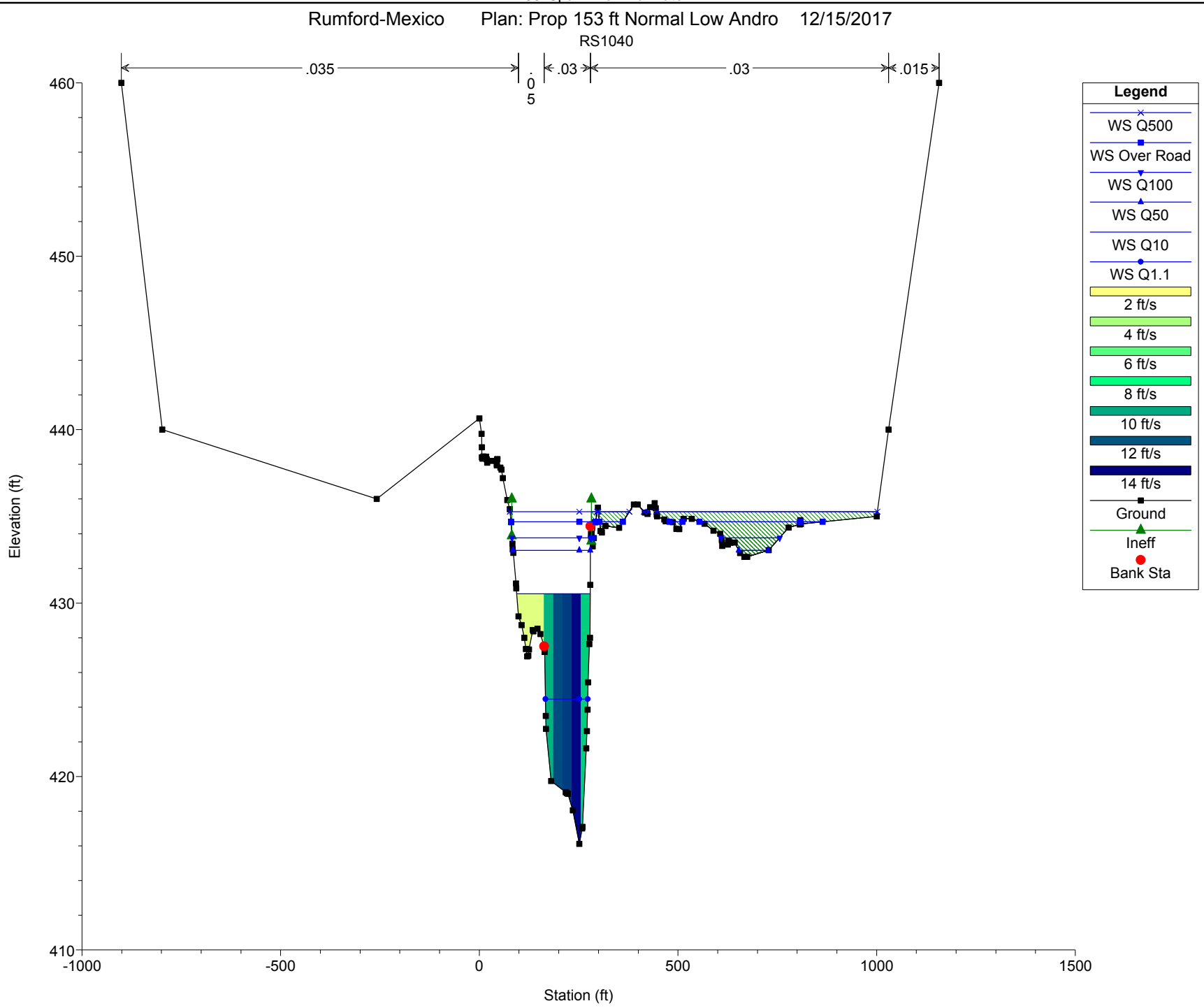
Plan: Prop 153 ft -Low Stream Reach RS: 1000 Profile: Q1.1

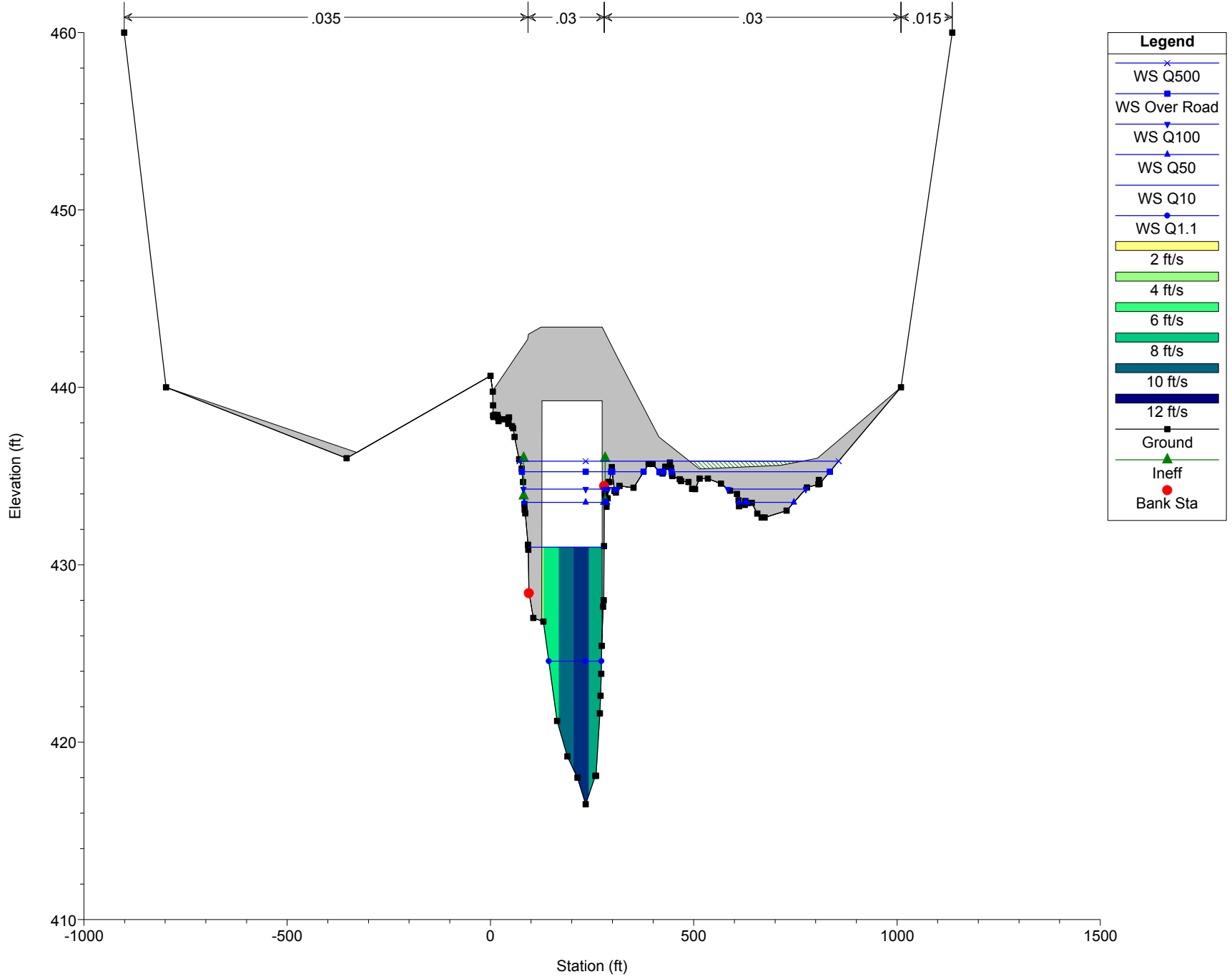
E.G. US. (ft)	425.14	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	424.46	E.G. Elev (ft)	425.05	424.99
Q Total (cfs)	3771.00	W.S. Elev (ft)	424.57	424.50
Q Bridge (cfs)	3771.00	Crit W.S. (ft)	421.99	421.96
Q Weir (cfs)		Max Chl Dpth (ft)	8.07	8.00
Weir Sta Lft (ft)		Vel Total (ft/s)	5.58	5.63
Weir Sta Rgt (ft)		Flow Area (sq ft)	675.75	669.52
Weir Submerg		Froude # Chl	0.43	0.44
Weir Max Depth (ft)		Specif Force (cu ft)	2707.73	2682.32
Min El Weir Flow (ft)	436.01	Hydr Depth (ft)	5.23	5.20
Min El Prs (ft)	439.24	W.P. Total (ft)	131.57	131.05
Delta EG (ft)	0.20	Conv. Total (cfs)	99635.0	98368.4
Delta WS (ft)	0.14	Top Width (ft)	129.30	128.79
BR Open Area (sq ft)	2826.32	Frctn Loss (ft)	0.06	0.04
BR Open Vel (ft/s)	5.63	C & E Loss (ft)	0.00	0.01
Coef of Q		Shear Total (lb/sq ft)	0.46	0.47
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

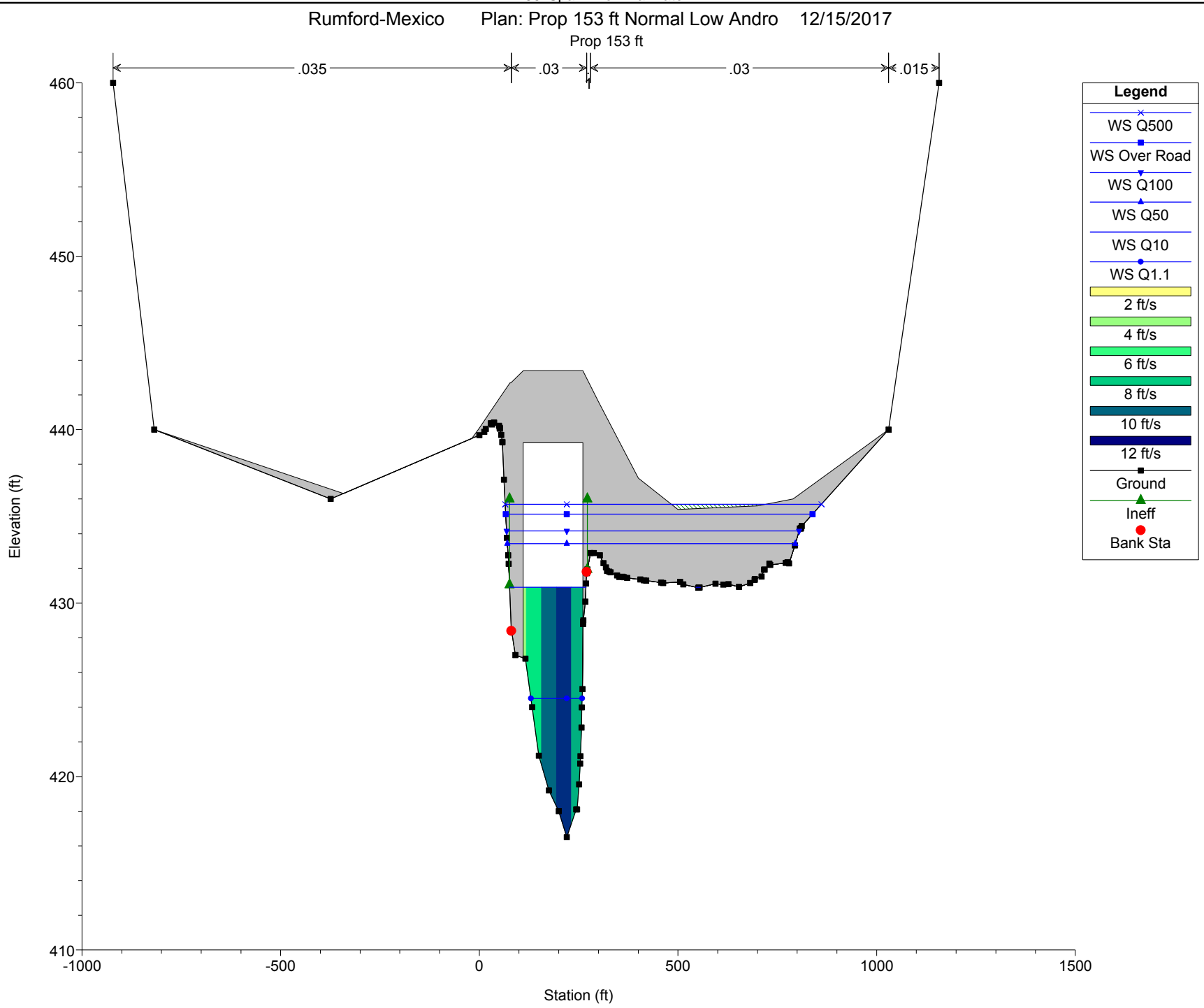


Legend	
WS Q500	— x —
WS Over Road	— ■ —
WS Q100	— ▾ —
WS Q50	— ▲ —
WS Q10	— ● —
WS Q1.1	— ◆ —
0 ft/s	— [yellow bar] —
2 ft/s	— [light green bar] —
4 ft/s	— [medium green bar] —
6 ft/s	— [dark green bar] —
8 ft/s	— [teal bar] —
10 ft/s	— [dark blue bar] —
Ground	— ■ —
Ineff	— ▲ —
Bank Sta	— ● —

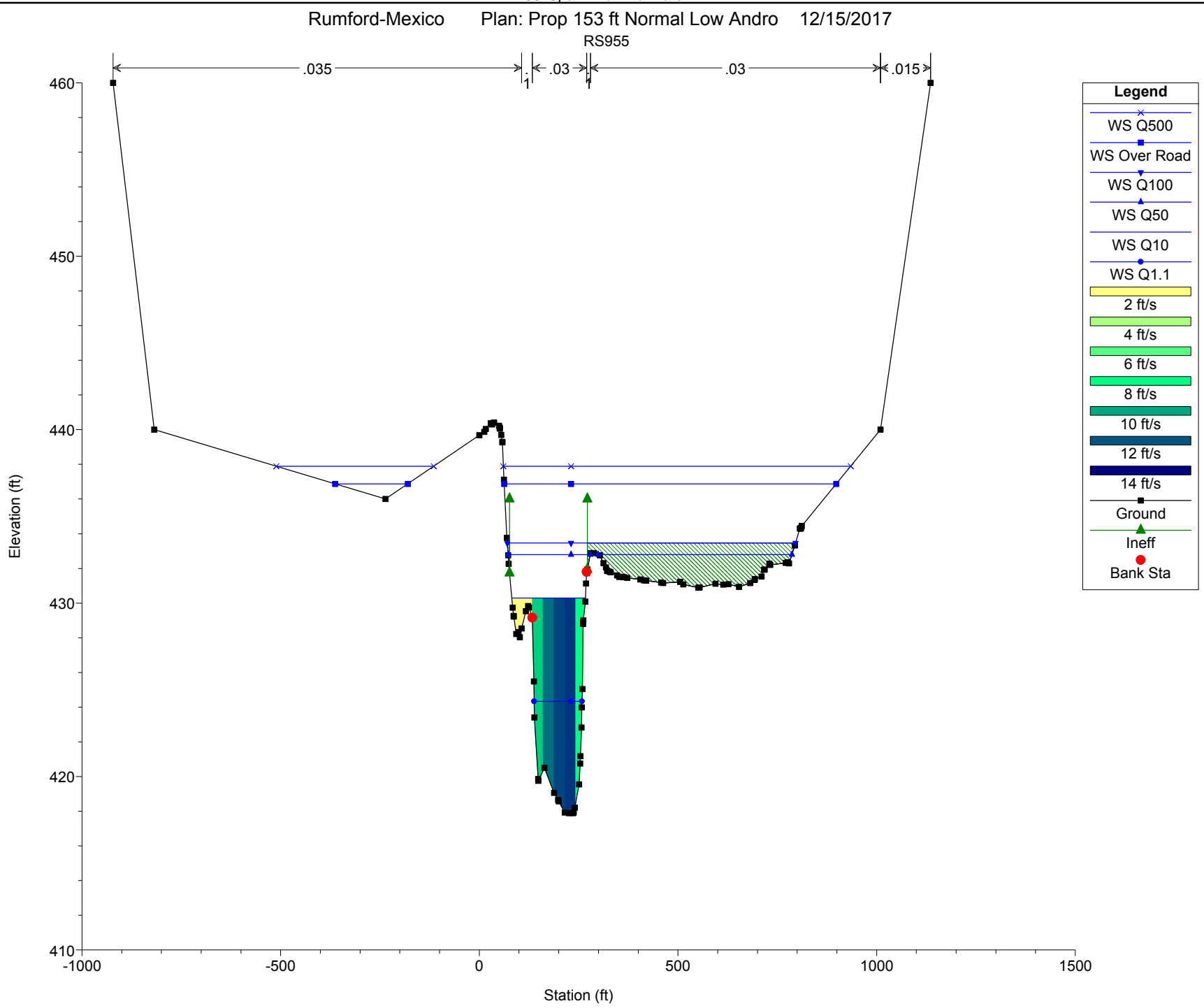




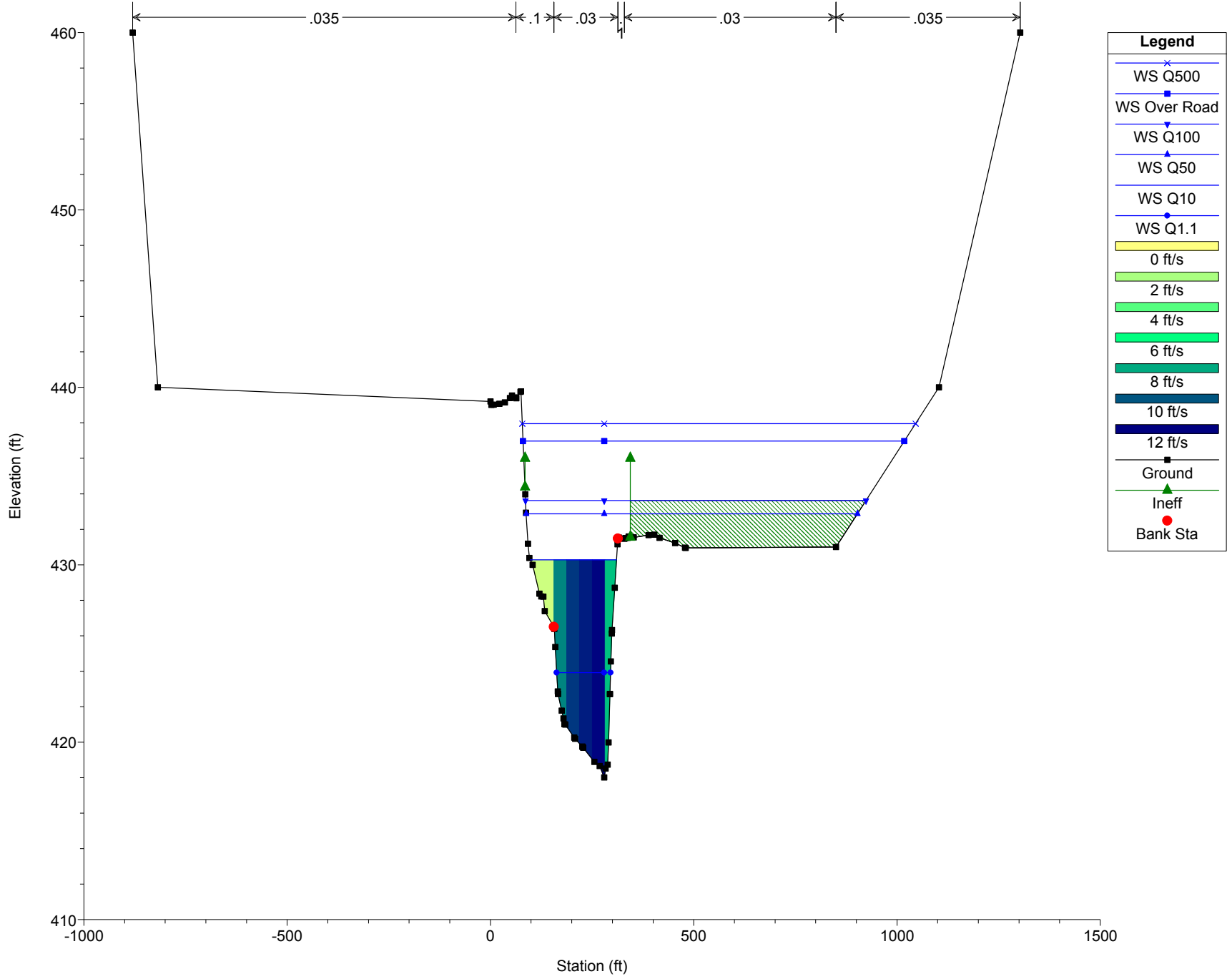


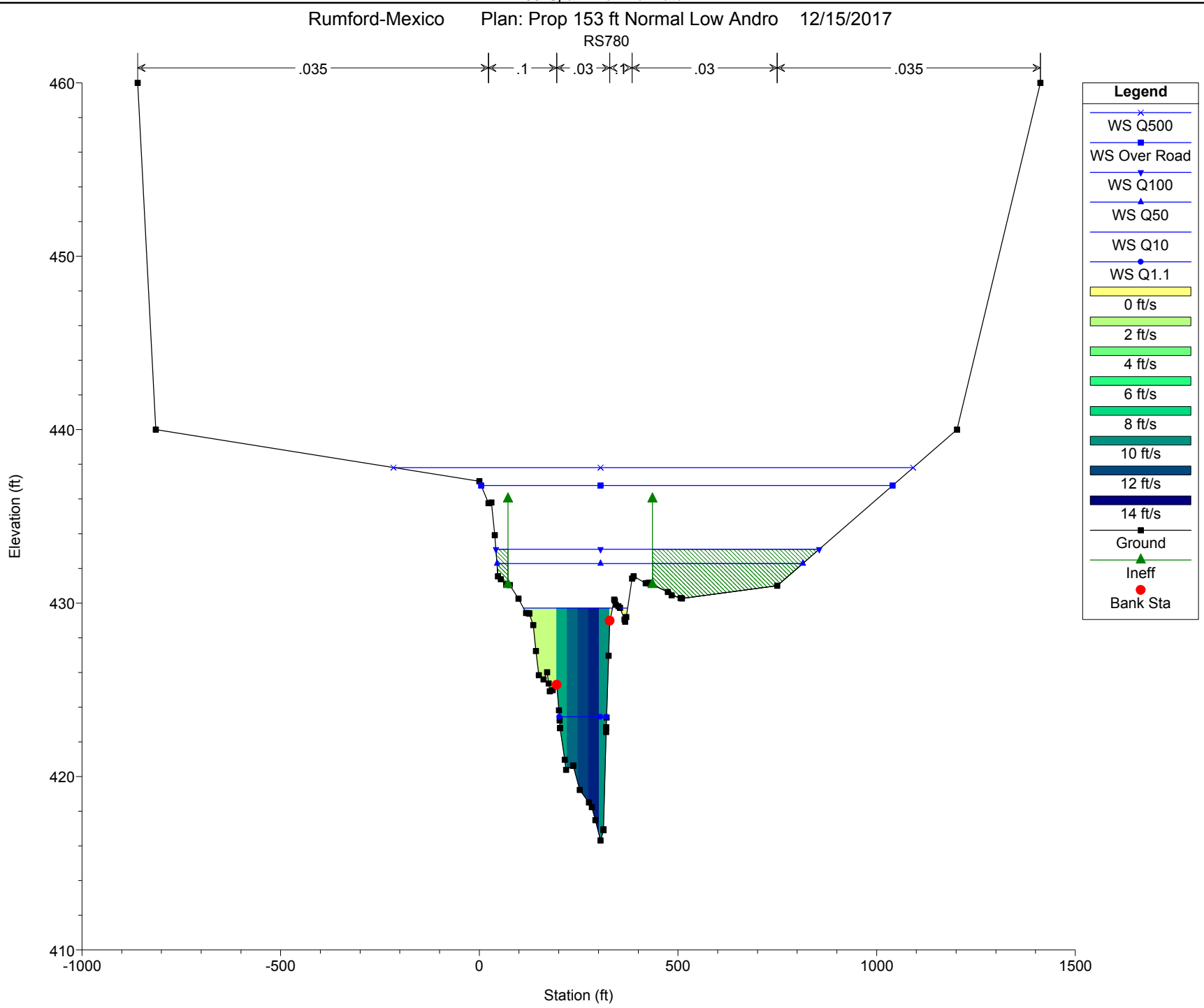


Legend	
WS Q500	x
WS Over Road	■
WS Q100	▼
WS Q50	▲
WS Q10	●
WS Q1.1	●
2 ft/s	Yellow bar
4 ft/s	Light Green bar
6 ft/s	Green bar
8 ft/s	Dark Green bar
10 ft/s	Blue bar
12 ft/s	Dark Blue bar
Ground	Black line with square markers
Ineff	Green line with triangle markers
Bank Sta	Red dot

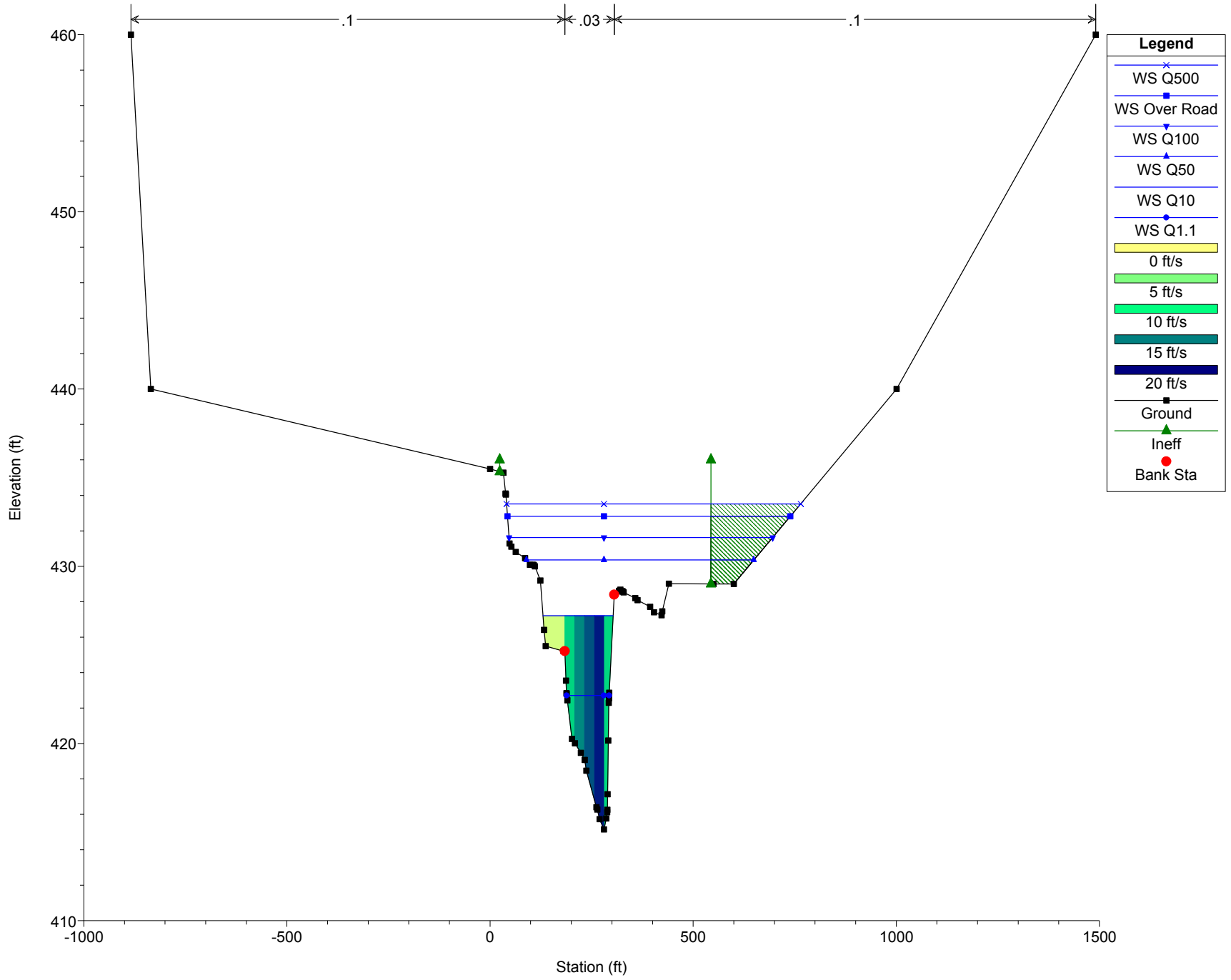


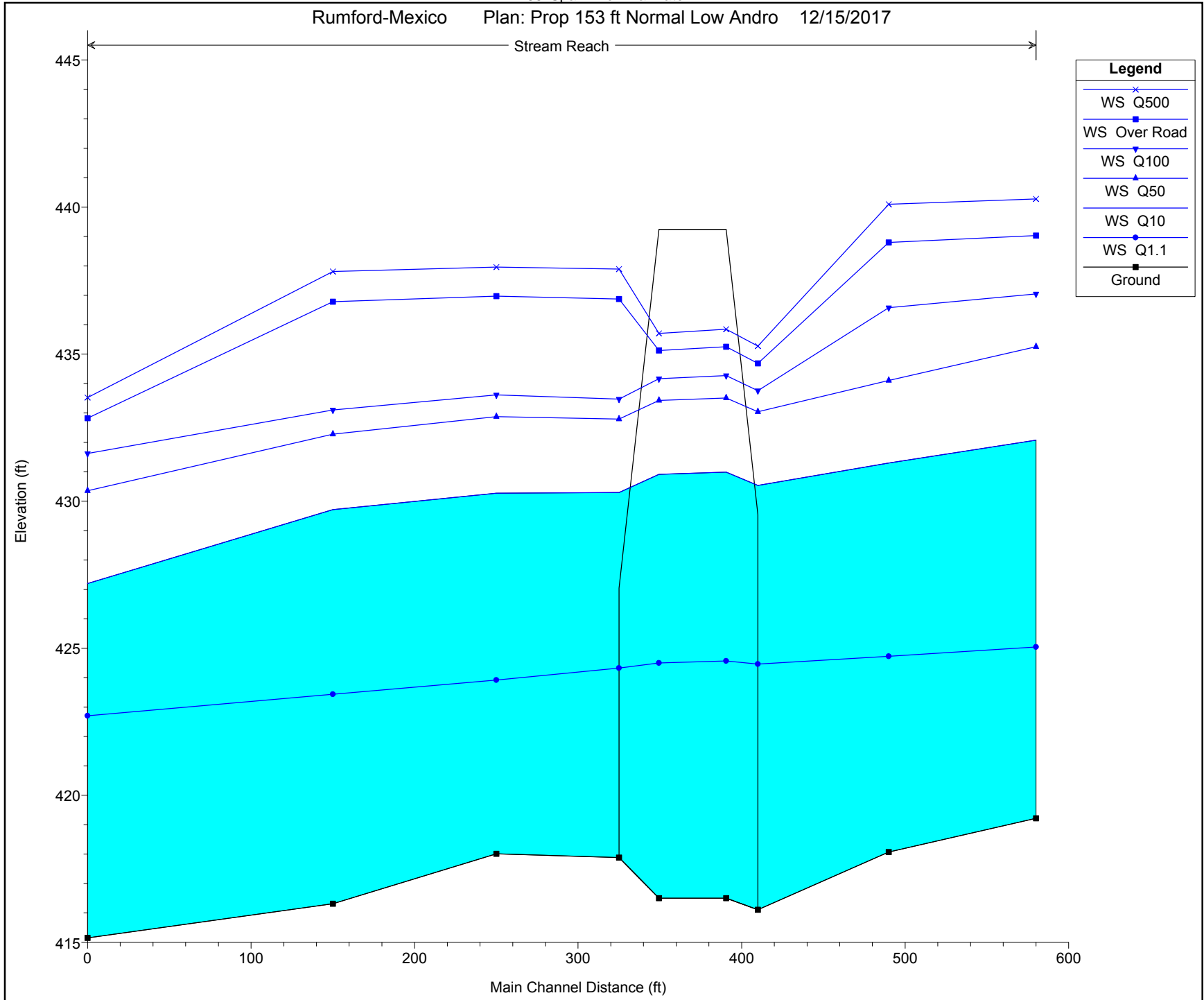
Legend	
WS Q500	(Blue line with 'x' markers)
WS Over Road	(Blue line with square markers)
WS Q100	(Blue line with downward triangle markers)
WS Q50	(Blue line with upward triangle markers)
WS Q10	(Blue line with diamond markers)
WS Q1.1	(Blue line with diamond markers)
2 ft/s	(Yellow bar)
4 ft/s	(Light green bar)
6 ft/s	(Medium green bar)
8 ft/s	(Dark green bar)
10 ft/s	(Teal bar)
12 ft/s	(Dark teal bar)
14 ft/s	(Dark blue bar)
Ground	(Black square)
Ineff	(Green triangle)
Bank Sta	(Red circle)





Legend	
WS Q500	Blue line with 'x' marker
WS Over Road	Blue line with square marker
WS Q100	Blue line with downward triangle marker
WS Q50	Blue line with upward triangle marker
WS Q10	Blue line with diamond marker
WS Q1.1	Blue line with circle marker
0 ft/s	Lightest green bar
2 ft/s	Light green bar
4 ft/s	Medium green bar
6 ft/s	Dark green bar
8 ft/s	Green bar
10 ft/s	Dark green bar
12 ft/s	Dark blue bar
14 ft/s	Darkest blue bar
Ground	Black square marker
Ineff	Green upward triangle marker
Bank Sta	Red circle marker





198' Two Span - High Tailwater

HEC-RAS Plan: 2 Span 198 River: Stream Reach: Reach

Reach	River Sta	Profile	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
Reach	1210.000	Q10	15173.00	419.22	434.95	427.24	435.48	0.000494	6.00	3053.78	1042.84	0.29
Reach	1210.000	Q50	23203.00	419.22	439.11	429.39	439.31	0.000185	4.40	8808.12	1399.94	0.19
Reach	1210.000	Q100	26991.00	419.22	440.38	430.32	440.55	0.000159	4.28	10650.49	1496.04	0.17
Reach	1210.000	Q500	36665.00	419.22	444.09	433.03	444.21	0.000093	3.69	16421.76	1613.70	0.14
Reach	1120.000	Q10	15173.00	418.07	434.59	427.52	435.40	0.000729	7.36	2330.47	830.19	0.35
Reach	1120.000	Q50	23203.00	418.07	439.02	430.24	439.29	0.000247	5.15	7427.56	1251.45	0.21
Reach	1120.000	Q100	26991.00	418.07	440.30	431.34	440.53	0.000212	4.99	9121.95	1391.76	0.20
Reach	1120.000	Q500	36665.00	418.07	444.05	434.41	444.20	0.000114	4.11	14645.99	1529.86	0.15
Reach	1040.000	Q10	15173.00	416.11	434.36	427.89	435.32	0.000870	8.18	2145.90	439.19	0.38
Reach	1040.000	Q50	23203.00	416.11	438.64	430.96	439.23	0.000488	7.27	5691.11	1519.01	0.30
Reach	1040.000	Q100	26991.00	416.11	440.11	432.02	440.50	0.000338	6.37	8140.89	1796.06	0.25
Reach	1040.000	Q500	36665.00	416.11	444.04	434.43	444.19	0.000127	4.39	15409.50	1874.51	0.16
Reach	1000		Bridge									
Reach	955.0000	Q10	15173.00	417.88	434.34	427.28	435.20	0.000760	7.60	2199.96	741.63	0.36
Reach	955.0000	Q50	23203.00	417.88	438.79	430.24	439.00	0.000200	4.69	8178.48	1493.40	0.19
Reach	955.0000	Q100	26991.00	417.88	440.20	431.37	440.37	0.000163	4.45	10519.70	1802.42	0.18
Reach	955.0000	Q500	36665.00	417.88	444.05	433.73	444.15	0.000080	3.50	17658.81	1874.62	0.13
Reach	880.0000	Q10	15173.00	418.01	434.38	427.48	435.11	0.000661	7.00	2563.50	859.93	0.34
Reach	880.0000	Q50	23203.00	418.01	438.80	429.91	438.98	0.000160	4.18	8482.14	992.63	0.18
Reach	880.0000	Q100	26991.00	418.01	440.20	430.94	440.36	0.000140	4.11	10446.66	1923.58	0.17
Reach	880.0000	Q500	36665.00	418.01	444.05	433.29	444.15	0.000077	3.44	17946.88	1973.99	0.13
Reach	780.0000	Q10	15173.00	416.31	434.34	427.42	435.03	0.000610	7.05	3105.94	880.85	0.33
Reach	780.0000	Q50	23203.00	416.31	438.77	429.82	438.96	0.000174	4.50	9561.02	1619.46	0.18
Reach	780.0000	Q100	26991.00	416.31	440.19	431.00	440.34	0.000144	4.30	12163.82	2018.37	0.17
Reach	780.0000	Q500	36665.00	416.31	444.05	433.79	444.13	0.000075	3.49	20052.14	2067.79	0.13
Reach	630.0000	Q10	15173.00	415.15	434.30	427.20	434.93	0.000562	6.93	4044.85	755.79	0.32
Reach	630.0000	Q50	23203.00	415.15	438.30	430.35	438.88	0.000440	7.17	9011.40	1459.28	0.29
Reach	630.0000	Q100	26991.00	415.15	439.70	431.62	440.26	0.000416	7.31	11271.60	1769.52	0.29
Reach	630.0000	Q500	36665.00	415.15	443.70	433.52	444.08	0.000274	6.69	18790.10	1935.72	0.24

198' Two Span - High Tailwater

HEC-RAS Plan: 2 Span 198 River: Stream Reach: Reach

Reach	River Sta	Profile	E.G. Elev (ft)	W.S. Elev (ft)	Vel Head (ft)	Frctn Loss (ft)	C & E Loss (ft)	Q Left (cfs)	Q Channel (cfs)	Q Right (cfs)	Top Width (ft)
Reach	1210.000	Q10	435.48	434.95	0.53	0.05	0.03	690.06	14389.99	92.95	1042.84
Reach	1210.000	Q50	439.31	439.11	0.20	0.02	0.01	2536.57	13847.67	6818.76	1399.94
Reach	1210.000	Q100	440.55	440.38	0.18	0.02	0.01	3628.34	14420.73	8941.93	1496.04
Reach	1210.000	Q500	444.21	444.09	0.12	0.01	0.00	7428.61	14886.30	14350.09	1613.70
Reach	1120.000	Q10	435.40	434.59	0.81	0.06	0.02	674.10	14498.87	0.03	830.19
Reach	1120.000	Q50	439.29	439.02	0.27	0.03	0.03	2459.55	13403.28	7340.17	1251.45
Reach	1120.000	Q100	440.53	440.30	0.24	0.02	0.01	3627.80	13889.57	9473.64	1391.76
Reach	1120.000	Q500	444.20	444.05	0.14	0.01	0.00	7609.45	13644.44	15411.12	1529.86
Reach	1040.000	Q10	435.32	434.36	0.96	0.02	0.02	1313.14	13859.26	0.60	439.19
Reach	1040.000	Q50	439.23	438.64	0.59	0.01	0.01	3228.75	15934.46	4039.79	1519.01
Reach	1040.000	Q100	440.50	440.11	0.38	0.01	0.00	4909.43	15036.00	7045.57	1796.06
Reach	1040.000	Q500	444.19	444.04	0.14	0.00	0.00	10876.68	12357.22	13431.10	1874.51
Reach	1000	Bridge									
Reach	955.0000	Q10	435.20	434.34	0.86	0.05	0.04	719.18	14450.14	3.68	741.63
Reach	955.0000	Q50	439.00	438.79	0.21	0.01	0.01	1671.89	11766.94	9764.17	1493.40
Reach	955.0000	Q100	440.37	440.20	0.18	0.01	0.00	2850.69	12020.31	12120.00	1802.42
Reach	955.0000	Q500	444.15	444.05	0.10	0.01	0.00	7830.88	11300.07	17534.05	1874.62
Reach	880.0000	Q10	435.11	434.38	0.73	0.06	0.01	468.27	14563.33	141.39	859.93
Reach	880.0000	Q50	438.98	438.80	0.17	0.02	0.00	589.53	11605.05	11008.43	992.63
Reach	880.0000	Q100	440.36	440.20	0.16	0.02	0.00	837.98	12312.16	13840.87	1923.58
Reach	880.0000	Q500	444.15	444.05	0.10	0.01	0.00	4824.83	12376.31	19463.86	1973.99
Reach	780.0000	Q10	435.03	434.34	0.69	0.09	0.02	964.62	13549.89	658.49	880.85
Reach	780.0000	Q50	438.96	438.77	0.18	0.04	0.04	1651.11	11324.58	10227.31	1619.46
Reach	780.0000	Q100	440.34	440.19	0.16	0.04	0.04	2670.71	11633.90	12686.39	2018.37
Reach	780.0000	Q500	444.13	444.05	0.09	0.02	0.03	7337.29	11226.69	18101.02	2067.79
Reach	630.0000	Q10	434.93	434.30	0.63			919.26	12668.45	1585.29	755.79
Reach	630.0000	Q50	438.88	438.30	0.58			1526.91	16609.65	5066.44	1459.28
Reach	630.0000	Q100	440.26	439.70	0.56			2413.55	18172.32	6405.13	1769.52
Reach	630.0000	Q500	444.08	443.70	0.38			6943.62	19880.78	9840.60	1935.72

198' Two Span - High Tailwater

Plan: 2 Span 198 Stream Reach RS: 1210.000 Profile: Q10

E.G. Elev (ft)	435.48	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.53	Wt. n-Val.	0.048	0.030	0.080
W.S. Elev (ft)	434.95	Reach Len. (ft)	80.00	90.00	100.00
Crit W.S. (ft)	427.24	Flow Area (sq ft)	471.93	2396.41	185.45
E.G. Slope (ft/ft)	0.000494	Area (sq ft)	471.93	2396.41	910.63
Q Total (cfs)	15173.00	Flow (cfs)	690.06	14389.99	92.95
Top Width (ft)	1042.84	Top Width (ft)	198.32	179.64	664.87
Vel Total (ft/s)	4.97	Avg. Vel. (ft/s)	1.46	6.00	0.50
Max Chl Dpth (ft)	15.73	Hydr. Depth (ft)	2.38	13.34	1.32
Conv. Total (cfs)	682609.0	Conv. (cfs)	31044.6	647382.7	4181.7
Length Wtd. (ft)	89.58	Wetted Per. (ft)	198.53	188.14	140.19
Min Ch El (ft)	419.22	Shear (lb/sq ft)	0.07	0.39	0.04
Alpha	1.39	Stream Power (lb/ft s)	1190.00	0.00	0.00
Frctn Loss (ft)	0.05	Cum Volume (acre-ft)	5.71	26.18	19.15
C & E Loss (ft)	0.03	Cum SA (acres)	1.27	1.91	7.19

Plan: 2 Span 198 Stream Reach RS: 1210.000 Profile: Q50

E.G. Elev (ft)	439.31	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.20	Wt. n-Val.	0.042	0.030	0.034
W.S. Elev (ft)	439.11	Reach Len. (ft)	80.00	90.00	100.00
Crit W.S. (ft)	429.39	Flow Area (sq ft)	1938.87	3144.91	3724.35
E.G. Slope (ft/ft)	0.000185	Area (sq ft)	1938.87	3144.91	3724.35
Q Total (cfs)	23203.00	Flow (cfs)	2536.57	13847.67	6818.76
Top Width (ft)	1399.94	Top Width (ft)	534.59	179.64	685.70
Vel Total (ft/s)	2.63	Avg. Vel. (ft/s)	1.31	4.40	1.83
Max Chl Dpth (ft)	19.89	Hydr. Depth (ft)	3.63	17.51	5.43
Conv. Total (cfs)	1706376.0	Conv. (cfs)	186542.3	1018374.0	501459.9
Length Wtd. (ft)	91.97	Wetted Per. (ft)	534.83	188.14	687.03
Min Ch El (ft)	419.22	Shear (lb/sq ft)	0.04	0.19	0.06
Alpha	1.84	Stream Power (lb/ft s)	1190.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	17.94	34.43	57.78
C & E Loss (ft)	0.01	Cum SA (acres)	6.16	1.92	10.20

Plan: 2 Span 198 Stream Reach RS: 1210.000 Profile: Q100

E.G. Elev (ft)	440.55	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.18	Wt. n-Val.	0.041	0.030	0.034
W.S. Elev (ft)	440.38	Reach Len. (ft)	80.00	90.00	100.00
Crit W.S. (ft)	430.32	Flow Area (sq ft)	2682.68	3372.16	4595.65
E.G. Slope (ft/ft)	0.000159	Area (sq ft)	2682.68	3372.16	4595.65
Q Total (cfs)	26991.00	Flow (cfs)	3628.34	14420.73	8941.93
Top Width (ft)	1496.04	Top Width (ft)	625.04	179.64	691.36
Vel Total (ft/s)	2.53	Avg. Vel. (ft/s)	1.35	4.28	1.95
Max Chl Dpth (ft)	21.16	Hydr. Depth (ft)	4.29	18.77	6.65
Conv. Total (cfs)	2141107.0	Conv. (cfs)	287824.4	1143949.0	709333.4
Length Wtd. (ft)	92.07	Wetted Per. (ft)	625.29	188.14	692.84
Min Ch El (ft)	419.22	Shear (lb/sq ft)	0.04	0.18	0.07
Alpha	1.75	Stream Power (lb/ft s)	1190.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	29.47	36.91	72.62
C & E Loss (ft)	0.01	Cum SA (acres)	10.12	1.66	10.93

Plan: 2 Span 198 Stream Reach RS: 1210.000 Profile: Q500

E.G. Elev (ft)	444.21	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.12	Wt. n-Val.	0.039	0.030	0.034
W.S. Elev (ft)	444.09	Reach Len. (ft)	80.00	90.00	100.00
Crit W.S. (ft)	433.03	Flow Area (sq ft)	5198.63	4038.93	7184.19
E.G. Slope (ft/ft)	0.000093	Area (sq ft)	5198.63	4038.93	7184.19
Q Total (cfs)	36665.00	Flow (cfs)	7428.61	14886.30	14350.09
Top Width (ft)	1613.70	Top Width (ft)	730.64	179.64	703.43
Vel Total (ft/s)	2.23	Avg. Vel. (ft/s)	1.43	3.69	2.00

198' Two Span - High Tailwater

Plan: 2 Span 198 Stream Reach RS: 1210.000 Profile: Q500 (Continued)

Max Chl Dpth (ft)	24.87	Hydr. Depth (ft)	7.12	22.48	10.21
Conv. Total (cfs)	3806007.0	Conv. (cfs)	771125.9	1545271.0	1489610.0
Length Wtd. (ft)	92.01	Wetted Per. (ft)	730.95	188.14	705.46
Min Ch El (ft)	419.22	Shear (lb/sq ft)	0.04	0.12	0.06
Alpha	1.50	Stream Power (lb/ft s)	1190.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	70.39	43.67	116.39
C & E Loss (ft)	0.00	Cum SA (acres)	10.82	1.93	11.63

Plan: 2 Span 198 Stream Reach RS: 1120.000 Profile: Q10

E.G. Elev (ft)	435.40	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.81	Wt. n-Val.	0.045	0.030	0.030
W.S. Elev (ft)	434.59	Reach Len. (ft)	75.00	80.00	80.00
Crit W.S. (ft)	427.52	Flow Area (sq ft)	359.89	1970.34	0.23
E.G. Slope (ft/ft)	0.000729	Area (sq ft)	359.89	1970.34	593.56
Q Total (cfs)	15173.00	Flow (cfs)	674.10	14498.87	0.03
Top Width (ft)	830.19	Top Width (ft)	131.42	142.52	556.24
Vel Total (ft/s)	6.51	Avg. Vel. (ft/s)	1.87	7.36	0.12
Max Chl Dpth (ft)	16.52	Hydr. Depth (ft)	2.74	13.83	4.10
Conv. Total (cfs)	561774.6	Conv. (cfs)	24958.3	536815.3	1.0
Length Wtd. (ft)	79.67	Wetted Per. (ft)	132.29	152.73	8.21
Min Ch El (ft)	418.07	Shear (lb/sq ft)	0.12	0.59	0.00
Alpha	1.22	Stream Power (lb/ft s)	1080.00	0.00	0.00
Frctn Loss (ft)	0.06	Cum Volume (acre-ft)	4.94	21.66	17.43
C & E Loss (ft)	0.02	Cum SA (acres)	0.97	1.58	5.79

Plan: 2 Span 198 Stream Reach RS: 1120.000 Profile: Q50

E.G. Elev (ft)	439.29	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.27	Wt. n-Val.	0.041	0.030	0.030
W.S. Elev (ft)	439.02	Reach Len. (ft)	75.00	80.00	80.00
Crit W.S. (ft)	430.24	Flow Area (sq ft)	1674.03	2600.78	3152.75
E.G. Slope (ft/ft)	0.000247	Area (sq ft)	1674.03	2600.78	3152.75
Q Total (cfs)	23203.00	Flow (cfs)	2459.55	13403.28	7340.17
Top Width (ft)	1251.45	Top Width (ft)	500.38	142.52	608.55
Vel Total (ft/s)	3.12	Avg. Vel. (ft/s)	1.47	5.15	2.33
Max Chl Dpth (ft)	20.95	Hydr. Depth (ft)	3.35	18.25	5.18
Conv. Total (cfs)	1476026.0	Conv. (cfs)	156460.6	852630.7	466934.6
Length Wtd. (ft)	79.39	Wetted Per. (ft)	502.43	152.73	622.12
Min Ch El (ft)	418.07	Shear (lb/sq ft)	0.05	0.26	0.08
Alpha	1.77	Stream Power (lb/ft s)	1080.00	0.00	0.00
Frctn Loss (ft)	0.03	Cum Volume (acre-ft)	14.62	28.49	49.89
C & E Loss (ft)	0.03	Cum SA (acres)	5.21	1.59	8.71

Plan: 2 Span 198 Stream Reach RS: 1120.000 Profile: Q100

E.G. Elev (ft)	440.53	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.24	Wt. n-Val.	0.040	0.030	0.030
W.S. Elev (ft)	440.30	Reach Len. (ft)	75.00	80.00	80.00
Crit W.S. (ft)	431.34	Flow Area (sq ft)	2385.39	2783.10	3953.46
E.G. Slope (ft/ft)	0.000212	Area (sq ft)	2385.39	2783.10	3953.46
Q Total (cfs)	26991.00	Flow (cfs)	3627.80	13889.57	9473.64
Top Width (ft)	1391.76	Top Width (ft)	597.46	142.52	651.78
Vel Total (ft/s)	2.96	Avg. Vel. (ft/s)	1.52	4.99	2.40
Max Chl Dpth (ft)	22.23	Hydr. Depth (ft)	3.99	19.53	6.07
Conv. Total (cfs)	1854956.0	Conv. (cfs)	249320.4	954560.2	651075.5
Length Wtd. (ft)	79.21	Wetted Per. (ft)	599.51	152.73	666.87
Min Ch El (ft)	418.07	Shear (lb/sq ft)	0.05	0.24	0.08
Alpha	1.73	Stream Power (lb/ft s)	1080.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	24.81	30.55	62.81
C & E Loss (ft)	0.01	Cum SA (acres)	8.99	1.33	9.39

198' Two Span - High Tailwater

Plan: 2 Span 198 Stream Reach RS: 1120.000 Profile: Q500

E.G. Elev (ft)	444.20	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.14	Wt. n-Val.	0.038	0.030	0.030
W.S. Elev (ft)	444.05	Reach Len. (ft)	75.00	80.00	80.00
Crit W.S. (ft)	434.41	Flow Area (sq ft)	4825.40	3318.52	6502.07
E.G. Slope (ft/ft)	0.000114	Area (sq ft)	4825.40	3318.52	6502.07
Q Total (cfs)	36665.00	Flow (cfs)	7609.45	13644.44	15411.12
Top Width (ft)	1529.86	Top Width (ft)	701.52	142.52	685.82
Vel Total (ft/s)	2.50	Avg. Vel. (ft/s)	1.58	4.11	2.37
Max Chl Dpth (ft)	25.98	Hydr. Depth (ft)	6.88	23.28	9.48
Conv. Total (cfs)	3439210.0	Conv. (cfs)	713772.9	1279861.0	1445577.0
Length Wtd. (ft)	78.74	Wetted Per. (ft)	703.65	152.73	708.83
Min Ch El (ft)	418.07	Shear (lb/sq ft)	0.05	0.15	0.07
Alpha	1.46	Stream Power (lb/ft s)	1080.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	61.18	36.07	100.68
C & E Loss (ft)	0.00	Cum SA (acres)	9.50	1.60	10.04

Plan: 2 Span 198 Stream Reach RS: 1040.000 Profile: Q10

E.G. Elev (ft)	435.32	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.96	Wt. n-Val.	0.049	0.030	0.030
W.S. Elev (ft)	434.36	Reach Len. (ft)	19.40	19.40	19.40
Crit W.S. (ft)	427.89	Flow Area (sq ft)	451.51	1693.57	0.82
E.G. Slope (ft/ft)	0.000870	Area (sq ft)	451.83	1693.57	207.36
Q Total (cfs)	15173.00	Flow (cfs)	1313.14	13859.26	0.60
Top Width (ft)	439.19	Top Width (ft)	82.88	116.08	240.23
Vel Total (ft/s)	7.07	Avg. Vel. (ft/s)	2.91	8.18	0.73
Max Chl Dpth (ft)	18.25	Hydr. Depth (ft)	5.54	14.59	0.39
Conv. Total (cfs)	514449.0	Conv. (cfs)	44522.8	469905.8	20.5
Length Wtd. (ft)	19.40	Wetted Per. (ft)	82.49	127.73	2.32
Min Ch El (ft)	416.11	Shear (lb/sq ft)	0.30	0.72	0.02
Alpha	1.24	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	4.24	18.30	16.69
C & E Loss (ft)	0.02	Cum SA (acres)	0.78	1.34	5.05

Plan: 2 Span 198 Stream Reach RS: 1040.000 Profile: Q50

E.G. Elev (ft)	439.23	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.59	Wt. n-Val.	0.045	0.030	0.030
W.S. Elev (ft)	438.64	Reach Len. (ft)	19.40	19.40	19.40
Crit W.S. (ft)	430.96	Flow Area (sq ft)	1555.59	2190.73	1944.79
E.G. Slope (ft/ft)	0.000488	Area (sq ft)	1555.59	2190.73	3106.69
Q Total (cfs)	23203.00	Flow (cfs)	3228.75	15934.46	4039.79
Top Width (ft)	1519.01	Top Width (ft)	660.72	116.09	742.20
Vel Total (ft/s)	4.08	Avg. Vel. (ft/s)	2.08	7.27	2.08
Max Chl Dpth (ft)	22.53	Hydr. Depth (ft)	2.35	18.87	2.62
Conv. Total (cfs)	1050431.0	Conv. (cfs)	146169.8	721374.6	182887.0
Length Wtd. (ft)	19.40	Wetted Per. (ft)	662.43	127.80	743.39
Min Ch El (ft)	416.11	Shear (lb/sq ft)	0.07	0.52	0.08
Alpha	2.27	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	11.84	24.09	44.14
C & E Loss (ft)	0.01	Cum SA (acres)	4.21	1.35	7.47

Plan: 2 Span 198 Stream Reach RS: 1040.000 Profile: Q100

E.G. Elev (ft)	440.50	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.38	Wt. n-Val.	0.042	0.030	0.030
W.S. Elev (ft)	440.11	Reach Len. (ft)	19.40	19.40	19.40
Crit W.S. (ft)	432.02	Flow Area (sq ft)	2734.90	2361.69	3044.31
E.G. Slope (ft/ft)	0.000338	Area (sq ft)	2734.90	2361.69	4206.21
Q Total (cfs)	26991.00	Flow (cfs)	4909.43	15036.00	7045.57
Top Width (ft)	1796.06	Top Width (ft)	928.89	116.09	751.08
Vel Total (ft/s)	3.32	Avg. Vel. (ft/s)	1.80	6.37	2.31

198' Two Span - High Tailwater

Plan: 2 Span 198 Stream Reach RS: 1040.000 Profile: Q100 (Continued)

Max Chl Dpth (ft)	24.00	Hydr. Depth (ft)	2.94	20.34	4.05
Conv. Total (cfs)	1467702.0	Conv. (cfs)	266962.3	817619.5	383120.3
Length Wtd. (ft)	19.40	Wetted Per. (ft)	931.59	127.80	752.39
Min Ch El (ft)	416.11	Shear (lb/sq ft)	0.06	0.39	0.09
Alpha	2.23	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	20.41	25.83	55.31
C & E Loss (ft)	0.00	Cum SA (acres)	7.68	1.09	8.10

Plan: 2 Span 198 Stream Reach RS: 1040.000 Profile: Q500

E.G. Elev (ft)	444.19	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.14	Wt. n-Val.	0.038	0.030	0.030
W.S. Elev (ft)	444.04	Reach Len. (ft)	19.40	19.40	19.40
Crit W.S. (ft)	434.43	Flow Area (sq ft)	6546.75	2817.89	6044.87
E.G. Slope (ft/ft)	0.000127	Area (sq ft)	6546.75	2817.89	7206.77
Q Total (cfs)	36665.00	Flow (cfs)	10876.68	12357.22	13431.10
Top Width (ft)	1874.51	Top Width (ft)	982.39	116.09	776.03
Vel Total (ft/s)	2.38	Avg. Vel. (ft/s)	1.66	4.39	2.22
Max Chl Dpth (ft)	27.93	Hydr. Depth (ft)	6.66	24.27	7.79
Conv. Total (cfs)	3256249.0	Conv. (cfs)	965966.8	1097455.0	1192827.0
Length Wtd. (ft)	19.40	Wetted Per. (ft)	985.51	127.80	777.65
Min Ch El (ft)	416.11	Shear (lb/sq ft)	0.05	0.17	0.06
Alpha	1.61	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	51.39	30.43	88.09
C & E Loss (ft)	0.00	Cum SA (acres)	8.05	1.36	8.69

Plan: 2 Span 198 Stream Reach RS: 1000 BR U Profile: Q10

E.G. Elev (ft)	435.28	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.88	Wt. n-Val.	0.031	0.030	
W.S. Elev (ft)	434.40	Reach Len. (ft)	41.20	41.20	41.20
Crit W.S. (ft)	428.55	Flow Area (sq ft)	9.70	2013.39	
E.G. Slope (ft/ft)	0.001114	Area (sq ft)	9.70	2013.39	
Q Total (cfs)	15173.00	Flow (cfs)	22.48	15150.52	
Top Width (ft)	178.06	Top Width (ft)	5.83	172.23	
Vel Total (ft/s)	7.50	Avg. Vel. (ft/s)	2.32	7.52	
Max Chl Dpth (ft)	17.90	Hydr. Depth (ft)	1.67	11.69	
Conv. Total (cfs)	454575.0	Conv. (cfs)	673.5	453901.4	
Length Wtd. (ft)	41.20	Wetted Per. (ft)	6.71	207.34	
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.10	0.68	
Alpha	1.01	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.05	Cum Volume (acre-ft)	4.14	17.47	16.64
C & E Loss (ft)	0.00	Cum SA (acres)	0.76	1.28	5.00

Plan: 2 Span 198 Stream Reach RS: 1000 BR U Profile: Q50

E.G. Elev (ft)	439.20	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.73	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	438.47	Reach Len. (ft)	41.20	41.20	41.20
Crit W.S. (ft)	430.79	Flow Area (sq ft)	513.71	2729.68	1097.12
E.G. Slope (ft/ft)	0.000786	Area (sq ft)	513.71	2729.68	1225.12
Q Total (cfs)	23203.00	Flow (cfs)	722.90	20053.18	2426.92
Top Width (ft)	1173.37	Top Width (ft)	448.38	179.19	545.80
Vel Total (ft/s)	5.35	Avg. Vel. (ft/s)	1.41	7.35	2.21
Max Chl Dpth (ft)	21.97	Hydr. Depth (ft)	1.15	15.23	2.01
Conv. Total (cfs)	827419.3	Conv. (cfs)	25778.7	715096.5	86544.1
Length Wtd. (ft)	41.20	Wetted Per. (ft)	460.44	224.41	545.87
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.05	0.60	0.10
Alpha	1.65	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.03	Cum Volume (acre-ft)	11.38	23.00	43.18
C & E Loss (ft)	0.02	Cum SA (acres)	3.96	1.29	7.19

198' Two Span - High Tailwater

Plan: 2 Span 198 Stream Reach RS: 1000 BR U Profile: Q100

E.G. Elev (ft)	440.48	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.38	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	440.10	Reach Len. (ft)	41.20	41.20	41.20
Crit W.S. (ft)	431.73	Flow Area (sq ft)	1509.93	2868.16	2088.83
E.G. Slope (ft/ft)	0.001020	Area (sq ft)	1509.93	2868.16	2216.83
Q Total (cfs)	26991.00	Flow (cfs)	3175.72	16706.74	7108.54
Top Width (ft)	1429.92	Top Width (ft)	767.40		662.52
Vel Total (ft/s)	4.17	Avg. Vel. (ft/s)	2.10	5.82	3.40
Max Chl Dpth (ft)	23.60	Hydr. Depth (ft)	1.97		3.15
Conv. Total (cfs)	845095.9	Conv. (cfs)	99432.7	523092.8	222570.4
Length Wtd. (ft)	41.20	Wetted Per. (ft)	807.42	405.93	662.65
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.12	0.45	0.20
Alpha	1.41	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	19.46	24.66	53.88
C & E Loss (ft)	0.01	Cum SA (acres)	7.30	1.07	7.79

Plan: 2 Span 198 Stream Reach RS: 1000 BR U Profile: Q500

E.G. Elev (ft)	444.18	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.13	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	444.05	Reach Len. (ft)	41.20	41.20	41.20
Crit W.S. (ft)	433.92	Flow Area (sq ft)	4948.53	3117.56	4927.65
E.G. Slope (ft/ft)	0.000345	Area (sq ft)	4948.53	3117.56	5055.65
Q Total (cfs)	36665.00	Flow (cfs)	11927.21	8690.22	16047.58
Top Width (ft)	1854.36	Top Width (ft)	913.65	184.85	755.86
Vel Total (ft/s)	2.82	Avg. Vel. (ft/s)	2.41	2.79	3.26
Max Chl Dpth (ft)	27.55	Hydr. Depth (ft)	5.42	16.87	6.52
Conv. Total (cfs)	1974703.0	Conv. (cfs)	642375.4	468037.4	864290.0
Length Wtd. (ft)	41.20	Wetted Per. (ft)	954.15	590.78	756.34
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.11	0.11	0.14
Alpha	1.05	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	48.83	29.11	85.36
C & E Loss (ft)	0.00	Cum SA (acres)	7.63	1.30	8.35

Plan: 2 Span 198 Stream Reach RS: 1000 BR D Profile: Q10

E.G. Elev (ft)	435.23	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.89	Wt. n-Val.	0.035	0.030	
W.S. Elev (ft)	434.34	Reach Len. (ft)	24.40	24.40	24.40
Crit W.S. (ft)	428.55	Flow Area (sq ft)	9.08	2003.90	
E.G. Slope (ft/ft)	0.001131	Area (sq ft)	9.39	2003.90	
Q Total (cfs)	15173.00	Flow (cfs)	18.31	15154.69	
Top Width (ft)	177.86	Top Width (ft)	5.73	172.13	
Vel Total (ft/s)	7.54	Avg. Vel. (ft/s)	2.02	7.56	
Max Chl Dpth (ft)	17.84	Hydr. Depth (ft)	1.93	11.64	
Conv. Total (cfs)	451206.5	Conv. (cfs)	544.4	450662.1	
Length Wtd. (ft)	24.40	Wetted Per. (ft)	5.41	207.12	
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.12	0.68	
Alpha	1.01	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	4.13	15.57	16.64
C & E Loss (ft)	0.01	Cum SA (acres)	0.76	1.11	5.00

Plan: 2 Span 198 Stream Reach RS: 1000 BR D Profile: Q50

E.G. Elev (ft)	439.15	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.68	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	438.47	Reach Len. (ft)	24.40	24.40	24.40
Crit W.S. (ft)	430.80	Flow Area (sq ft)	583.09	2730.16	1252.57
E.G. Slope (ft/ft)	0.000747	Area (sq ft)	583.09	2730.16	1252.57
Q Total (cfs)	23203.00	Flow (cfs)	772.28	19554.20	2876.53
Top Width (ft)	1255.89	Top Width (ft)	509.65	179.19	567.05
Vel Total (ft/s)	5.08	Avg. Vel. (ft/s)	1.32	7.16	2.30

198' Two Span - High Tailwater

Plan: 2 Span 198 Stream Reach RS: 1000 BR D Profile: Q50 (Continued)

Max Chl Dpth (ft)	21.97	Hydr. Depth (ft)	1.14	15.24	2.21
Conv. Total (cfs)	848732.6	Conv. (cfs)	28248.7	715264.6	105219.2
Length Wtd. (ft)	24.40	Wetted Per. (ft)	520.42	224.43	567.12
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.05	0.57	0.10
Alpha	1.70	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	10.86	20.41	42.00
C & E Loss (ft)	0.14	Cum SA (acres)	3.51	1.12	6.66

Plan: 2 Span 198 Stream Reach RS: 1000 BR D Profile: Q100

E.G. Elev (ft)	440.43	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.34	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	440.09	Reach Len. (ft)	24.40	24.40	24.40
Crit W.S. (ft)	431.74	Flow Area (sq ft)	1689.63	2868.16	2280.80
E.G. Slope (ft/ft)	0.000928	Area (sq ft)	1689.63	2868.16	2280.80
Q Total (cfs)	26991.00	Flow (cfs)	3461.62	15935.53	7593.86
Top Width (ft)	1514.52	Top Width (ft)	818.22		696.30
Vel Total (ft/s)	3.95	Avg. Vel. (ft/s)	2.05	5.56	3.33
Max Chl Dpth (ft)	23.59	Hydr. Depth (ft)	2.07		3.28
Conv. Total (cfs)	885995.0	Conv. (cfs)	113629.6	523092.8	249272.7
Length Wtd. (ft)	24.40	Wetted Per. (ft)	856.93	405.93	696.42
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.11	0.41	0.19
Alpha	1.40	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	17.95	21.95	51.75
C & E Loss (ft)	0.05	Cum SA (acres)	6.55	1.07	7.14

Plan: 2 Span 198 Stream Reach RS: 1000 BR D Profile: Q500

E.G. Elev (ft)	444.16	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.12	Wt. n-Val.	0.035	0.030	0.030
W.S. Elev (ft)	444.04	Reach Len. (ft)	24.40	24.40	24.40
Crit W.S. (ft)	433.95	Flow Area (sq ft)	5167.71	3123.14	5250.69
E.G. Slope (ft/ft)	0.000307	Area (sq ft)	5167.71	3123.14	5250.69
Q Total (cfs)	36665.00	Flow (cfs)	12036.38	8178.34	16450.29
Top Width (ft)	1894.69	Top Width (ft)	919.72	189.37	785.60
Vel Total (ft/s)	2.71	Avg. Vel. (ft/s)	2.33	2.62	3.13
Max Chl Dpth (ft)	27.54	Hydr. Depth (ft)	5.62	16.49	6.68
Conv. Total (cfs)	2093891.0	Conv. (cfs)	687381.8	467054.4	939454.5
Length Wtd. (ft)	24.40	Wetted Per. (ft)	958.86	595.30	786.08
Min Ch El (ft)	416.50	Shear (lb/sq ft)	0.10	0.10	0.13
Alpha	1.05	Stream Power (lb/ft s)	1157.00	0.00	0.00
Frctn Loss (ft)	0.00	Cum Volume (acre-ft)	44.05	26.16	80.48
C & E Loss (ft)	0.01	Cum SA (acres)	6.76	1.12	7.62

Plan: 2 Span 198 Stream Reach RS: 955.0000 Profile: Q10

E.G. Elev (ft)	435.20	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.86	Wt. n-Val.	0.049	0.030	0.100
W.S. Elev (ft)	434.34	Reach Len. (ft)	70.00	75.00	80.00
Crit W.S. (ft)	427.28	Flow Area (sq ft)	293.03	1902.05	4.88
E.G. Slope (ft/ft)	0.000760	Area (sq ft)	303.83	1902.05	1486.73
Q Total (cfs)	15173.00	Flow (cfs)	719.18	14450.14	3.68
Top Width (ft)	741.63	Top Width (ft)	64.99	136.78	539.85
Vel Total (ft/s)	6.90	Avg. Vel. (ft/s)	2.45	7.60	0.75
Max Chl Dpth (ft)	16.46	Hydr. Depth (ft)	5.11	13.91	2.53
Conv. Total (cfs)	550219.1	Conv. (cfs)	26079.7	524006.1	133.4
Length Wtd. (ft)	74.83	Wetted Per. (ft)	57.78	145.00	1.95
Min Ch El (ft)	417.88	Shear (lb/sq ft)	0.24	0.62	0.12
Alpha	1.16	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.05	Cum Volume (acre-ft)	4.04	14.48	16.23
C & E Loss (ft)	0.04	Cum SA (acres)	0.74	1.03	4.85

198' Two Span - High Tailwater

Plan: 2 Span 198 Stream Reach RS: 955.0000 Profile: Q50

E.G. Elev (ft)	439.00	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.21	Wt. n-Val.	0.044	0.030	0.030
W.S. Elev (ft)	438.79	Reach Len. (ft)	70.00	75.00	80.00
Crit W.S. (ft)	430.24	Flow Area (sq ft)	1432.23	2510.88	4235.38
E.G. Slope (ft/ft)	0.000200	Area (sq ft)	1432.23	2510.88	4235.38
Q Total (cfs)	23203.00	Flow (cfs)	1671.89	11766.94	9764.17
Top Width (ft)	1493.40	Top Width (ft)	659.76	136.78	696.86
Vel Total (ft/s)	2.84	Avg. Vel. (ft/s)	1.17	4.69	2.31
Max Chl Dpth (ft)	20.91	Hydr. Depth (ft)	2.17	18.36	6.08
Conv. Total (cfs)	1641438.0	Conv. (cfs)	118273.8	832422.5	690741.2
Length Wtd. (ft)	76.99	Wetted Per. (ft)	661.74	145.00	697.14
Min Ch El (ft)	417.88	Shear (lb/sq ft)	0.03	0.22	0.08
Alpha	1.67	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	10.29	18.95	40.47
C & E Loss (ft)	0.01	Cum SA (acres)	3.18	1.03	6.31

Plan: 2 Span 198 Stream Reach RS: 955.0000 Profile: Q100

E.G. Elev (ft)	440.37	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.18	Wt. n-Val.	0.041	0.030	0.030
W.S. Elev (ft)	440.20	Reach Len. (ft)	70.00	75.00	80.00
Crit W.S. (ft)	431.37	Flow Area (sq ft)	2566.54	2703.21	5249.95
E.G. Slope (ft/ft)	0.000163	Area (sq ft)	2566.54	2703.21	5249.95
Q Total (cfs)	26991.00	Flow (cfs)	2850.69	12020.31	12120.00
Top Width (ft)	1802.42	Top Width (ft)	924.46	136.78	741.18
Vel Total (ft/s)	2.57	Avg. Vel. (ft/s)	1.11	4.45	2.31
Max Chl Dpth (ft)	22.32	Hydr. Depth (ft)	2.78	19.76	7.08
Conv. Total (cfs)	2113837.0	Conv. (cfs)	223255.7	941386.7	949194.5
Length Wtd. (ft)	77.06	Wetted Per. (ft)	926.66	145.00	741.49
Min Ch El (ft)	417.88	Shear (lb/sq ft)	0.03	0.19	0.07
Alpha	1.72	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	16.76	20.39	49.65
C & E Loss (ft)	0.00	Cum SA (acres)	6.06	1.03	6.74

Plan: 2 Span 198 Stream Reach RS: 955.0000 Profile: Q500

E.G. Elev (ft)	444.15	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.10	Wt. n-Val.	0.038	0.030	0.030
W.S. Elev (ft)	444.05	Reach Len. (ft)	70.00	75.00	80.00
Crit W.S. (ft)	433.73	Flow Area (sq ft)	6273.65	3230.60	8154.56
E.G. Slope (ft/ft)	0.000080	Area (sq ft)	6273.65	3230.60	8154.56
Q Total (cfs)	36665.00	Flow (cfs)	7830.88	11300.07	17534.05
Top Width (ft)	1874.62	Top Width (ft)	972.37	136.78	765.47
Vel Total (ft/s)	2.08	Avg. Vel. (ft/s)	1.25	3.50	2.15
Max Chl Dpth (ft)	26.17	Hydr. Depth (ft)	6.45	23.62	10.65
Conv. Total (cfs)	4110959.0	Conv. (cfs)	878015.8	1266988.0	1965955.0
Length Wtd. (ft)	76.66	Wetted Per. (ft)	974.94	145.00	766.08
Min Ch El (ft)	417.88	Shear (lb/sq ft)	0.03	0.11	0.05
Alpha	1.46	Stream Power (lb/ft s)	1136.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	40.84	24.38	76.73
C & E Loss (ft)	0.00	Cum SA (acres)	6.23	1.03	7.19

Plan: 2 Span 198 Stream Reach RS: 880.0000 Profile: Q10

E.G. Elev (ft)	435.11	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.73	Wt. n-Val.	0.100	0.030	0.048
W.S. Elev (ft)	434.38	Reach Len. (ft)	80.00	100.00	115.00
Crit W.S. (ft)	427.48	Flow Area (sq ft)	394.57	2081.46	87.47
E.G. Slope (ft/ft)	0.000661	Area (sq ft)	394.57	2081.46	1905.42
Q Total (cfs)	15173.00	Flow (cfs)	468.27	14563.33	141.39
Top Width (ft)	859.93	Top Width (ft)	71.10	157.36	631.47
Vel Total (ft/s)	5.92	Avg. Vel. (ft/s)	1.19	7.00	1.62

198' Two Span - High Tailwater

Plan: 2 Span 198 Stream Reach RS: 880.0000 Profile: Q10 (Continued)

Max Chl Dpth (ft)	16.37	Hydr. Depth (ft)	5.55	13.23	2.87
Conv. Total (cfs)	590025.3	Conv. (cfs)	18209.5	566317.4	5498.4
Length Wtd. (ft)	99.45	Wetted Per. (ft)	72.08	161.67	30.53
Min Ch El (ft)	418.01	Shear (lb/sq ft)	0.23	0.53	0.12
Alpha	1.34	Stream Power (lb/ft s)	1303.00	0.00	0.00
Frctn Loss (ft)	0.06	Cum Volume (acre-ft)	3.48	11.05	13.11
C & E Loss (ft)	0.01	Cum SA (acres)	0.63	0.77	3.77

Plan: 2 Span 198 Stream Reach RS: 880.0000 Profile: Q50

E.G. Elev (ft)	438.98	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.17	Wt. n-Val.	0.100	0.030	0.031
W.S. Elev (ft)	438.80	Reach Len. (ft)	80.00	100.00	115.00
Crit W.S. (ft)	429.91	Flow Area (sq ft)	727.59	2778.10	4976.44
E.G. Slope (ft/ft)	0.000160	Area (sq ft)	727.59	2778.10	4976.44
Q Total (cfs)	23203.00	Flow (cfs)	589.53	11605.05	11008.43
Top Width (ft)	992.63	Top Width (ft)	79.35	157.36	755.92
Vel Total (ft/s)	2.74	Avg. Vel. (ft/s)	0.81	4.18	2.21
Max Chl Dpth (ft)	20.79	Hydr. Depth (ft)	9.17	17.65	6.58
Conv. Total (cfs)	1831996.0	Conv. (cfs)	46546.2	916277.9	869171.6
Length Wtd. (ft)	105.90	Wetted Per. (ft)	81.45	161.67	756.06
Min Ch El (ft)	418.01	Shear (lb/sq ft)	0.09	0.17	0.07
Alpha	1.48	Stream Power (lb/ft s)	1303.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	8.56	14.39	32.01
C & E Loss (ft)	0.00	Cum SA (acres)	2.59	0.77	4.97

Plan: 2 Span 198 Stream Reach RS: 880.0000 Profile: Q100

E.G. Elev (ft)	440.36	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.16	Wt. n-Val.	0.085	0.030	0.031
W.S. Elev (ft)	440.20	Reach Len. (ft)	80.00	100.00	115.00
Crit W.S. (ft)	430.94	Flow Area (sq ft)	1393.60	2997.21	6055.86
E.G. Slope (ft/ft)	0.000140	Area (sq ft)	1393.60	2997.21	6055.86
Q Total (cfs)	26991.00	Flow (cfs)	837.98	12312.16	13840.87
Top Width (ft)	1923.58	Top Width (ft)	974.72	157.36	791.50
Vel Total (ft/s)	2.58	Avg. Vel. (ft/s)	0.60	4.11	2.29
Max Chl Dpth (ft)	22.19	Hydr. Depth (ft)	1.43	19.05	7.65
Conv. Total (cfs)	2279602.0	Conv. (cfs)	70773.6	1039858.0	1168970.0
Length Wtd. (ft)	106.07	Wetted Per. (ft)	977.11	161.67	791.67
Min Ch El (ft)	418.01	Shear (lb/sq ft)	0.01	0.16	0.07
Alpha	1.56	Stream Power (lb/ft s)	1303.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	13.57	15.48	39.26
C & E Loss (ft)	0.00	Cum SA (acres)	4.54	0.77	5.33

Plan: 2 Span 198 Stream Reach RS: 880.0000 Profile: Q500

E.G. Elev (ft)	444.15	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.10	Wt. n-Val.	0.046	0.030	0.031
W.S. Elev (ft)	444.05	Reach Len. (ft)	80.00	100.00	115.00
Crit W.S. (ft)	433.29	Flow Area (sq ft)	5167.93	3602.83	9176.12
E.G. Slope (ft/ft)	0.000077	Area (sq ft)	5167.93	3602.83	9176.12
Q Total (cfs)	36665.00	Flow (cfs)	4824.83	12376.31	19463.86
Top Width (ft)	1973.99	Top Width (ft)	986.65	157.36	829.98
Vel Total (ft/s)	2.04	Avg. Vel. (ft/s)	0.93	3.44	2.12
Max Chl Dpth (ft)	26.04	Hydr. Depth (ft)	5.24	22.90	11.06
Conv. Total (cfs)	4186460.0	Conv. (cfs)	550905.9	1413144.0	2222410.0
Length Wtd. (ft)	104.37	Wetted Per. (ft)	989.65	161.67	830.35
Min Ch El (ft)	418.01	Shear (lb/sq ft)	0.03	0.11	0.05
Alpha	1.55	Stream Power (lb/ft s)	1303.00	0.00	0.00
Frctn Loss (ft)	0.01	Cum Volume (acre-ft)	31.65	18.50	60.81
C & E Loss (ft)	0.00	Cum SA (acres)	4.66	0.77	5.72

## 198' Two Span - High Tailwater

Plan: 2 Span 198 Stream Reach RS: 780.0000 Profile: Q10

E.G. Elev (ft)	435.03	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.69	Wt. n-Val.	0.100	0.030	0.057
W.S. Elev (ft)	434.34	Reach Len. (ft)	120.00	150.00	175.00
Crit W.S. (ft)	427.42	Flow Area (sq ft)	772.54	1921.34	412.07
E.G. Slope (ft/ft)	0.000610	Area (sq ft)	862.93	1921.34	1857.34
Q Total (cfs)	15173.00	Flow (cfs)	964.62	13549.89	658.49
Top Width (ft)	880.85	Top Width (ft)	157.65	133.93	589.27
Vel Total (ft/s)	4.89	Avg. Vel. (ft/s)	1.25	7.05	1.60
Max Chl Dpth (ft)	18.03	Hydr. Depth (ft)	6.30	14.35	3.85
Conv. Total (cfs)	614545.1	Conv. (cfs)	39069.7	548805.0	26670.4
Length Wtd. (ft)	149.99	Wetted Per. (ft)	123.04	138.74	107.29
Min Ch El (ft)	416.31	Shear (lb/sq ft)	0.24	0.53	0.15
Alpha	1.87	Stream Power (lb/ft s)	1412.00	0.00	0.00
Frctn Loss (ft)	0.09	Cum Volume (acre-ft)	2.33	6.46	8.15
C & E Loss (ft)	0.02	Cum SA (acres)	0.42	0.44	2.16

Plan: 2 Span 198 Stream Reach RS: 780.0000 Profile: Q50

E.G. Elev (ft)	438.96	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.18	Wt. n-Val.	0.090	0.030	0.034
W.S. Elev (ft)	438.77	Reach Len. (ft)	120.00	150.00	175.00
Crit W.S. (ft)	429.82	Flow Area (sq ft)	2082.81	2515.07	4963.15
E.G. Slope (ft/ft)	0.000174	Area (sq ft)	2082.81	2515.07	4963.15
Q Total (cfs)	23203.00	Flow (cfs)	1651.11	11324.58	10227.31
Top Width (ft)	1619.46	Top Width (ft)	673.61	133.93	811.91
Vel Total (ft/s)	2.43	Avg. Vel. (ft/s)	0.79	4.50	2.06
Max Chl Dpth (ft)	22.46	Hydr. Depth (ft)	3.09	18.78	6.11
Conv. Total (cfs)	1761362.0	Conv. (cfs)	125337.2	859659.7	776364.6
Length Wtd. (ft)	156.18	Wetted Per. (ft)	674.67	138.74	812.29
Min Ch El (ft)	416.31	Shear (lb/sq ft)	0.03	0.20	0.07
Alpha	2.01	Stream Power (lb/ft s)	1412.00	0.00	0.00
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	5.98	8.32	18.89
C & E Loss (ft)	0.04	Cum SA (acres)	1.90	0.44	2.90

Plan: 2 Span 198 Stream Reach RS: 780.0000 Profile: Q100

E.G. Elev (ft)	440.34	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.16	Wt. n-Val.	0.074	0.030	0.034
W.S. Elev (ft)	440.19	Reach Len. (ft)	120.00	150.00	175.00
Crit W.S. (ft)	431.00	Flow Area (sq ft)	3301.13	2704.12	6158.57
E.G. Slope (ft/ft)	0.000144	Area (sq ft)	3301.13	2704.12	6158.57
Q Total (cfs)	26991.00	Flow (cfs)	2670.71	11633.90	12686.39
Top Width (ft)	2018.37	Top Width (ft)	1009.00	133.93	875.45
Vel Total (ft/s)	2.22	Avg. Vel. (ft/s)	0.81	4.30	2.06
Max Chl Dpth (ft)	23.88	Hydr. Depth (ft)	3.27	20.19	7.03
Conv. Total (cfs)	2250507.0	Conv. (cfs)	222683.4	970033.2	1057790.0
Length Wtd. (ft)	156.02	Wetted Per. (ft)	1010.09	138.74	875.84
Min Ch El (ft)	416.31	Shear (lb/sq ft)	0.03	0.18	0.06
Alpha	2.04	Stream Power (lb/ft s)	1412.00	0.00	0.00
Frctn Loss (ft)	0.04	Cum Volume (acre-ft)	9.26	8.94	23.14
C & E Loss (ft)	0.04	Cum SA (acres)	2.72	0.44	3.13

Plan: 2 Span 198 Stream Reach RS: 780.0000 Profile: Q500

E.G. Elev (ft)	444.13	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.09	Wt. n-Val.	0.052	0.030	0.034
W.S. Elev (ft)	444.05	Reach Len. (ft)	120.00	150.00	175.00
Crit W.S. (ft)	433.79	Flow Area (sq ft)	7214.00	3221.22	9616.92
E.G. Slope (ft/ft)	0.000075	Area (sq ft)	7214.00	3221.22	9616.92
Q Total (cfs)	36665.00	Flow (cfs)	7337.29	11226.69	18101.02
Top Width (ft)	2067.79	Top Width (ft)	1017.88	133.93	915.99
Vel Total (ft/s)	1.83	Avg. Vel. (ft/s)	1.02	3.49	1.88

198' Two Span - High Tailwater

Plan: 2 Span 198 Stream Reach RS: 780.0000 Profile: Q500 (Continued)

Max Chl Dpth (ft)	27.74	Hydr. Depth (ft)	7.09	24.05	10.50
Conv. Total (cfs)	4240771.0	Conv. (cfs)	848649.9	1298509.0	2093612.0
Length Wtd. (ft)	153.68	Wetted Per. (ft)	1019.78	138.74	916.57
Min Ch El (ft)	416.31	Shear (lb/sq ft)	0.03	0.11	0.05
Alpha	1.70	Stream Power (lb/ft s)	1412.00	0.00	0.00
Frctn Loss (ft)	0.02	Cum Volume (acre-ft)	20.28	10.66	36.01
C & E Loss (ft)	0.03	Cum SA (acres)	2.82	0.44	3.42

Plan: 2 Span 198 Stream Reach RS: 630.0000 Profile: Q10

E.G. Elev (ft)	434.93	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.63	Wt. n-Val.	0.100	0.030	0.100
W.S. Elev (ft)	434.30	Reach Len. (ft)			
Crit W.S. (ft)	427.20	Flow Area (sq ft)	827.15	1828.51	1389.19
E.G. Slope (ft/ft)	0.000562	Area (sq ft)	827.15	1828.51	2197.99
Q Total (cfs)	15173.00	Flow (cfs)	919.26	12668.45	1585.29
Top Width (ft)	755.79	Top Width (ft)	146.64	121.74	487.41
Vel Total (ft/s)	3.75	Avg. Vel. (ft/s)	1.11	6.93	1.14
Max Chl Dpth (ft)	19.15	Hydr. Depth (ft)	5.64	15.02	5.83
Conv. Total (cfs)	639935.4	Conv. (cfs)	38770.6	534303.7	66861.2
Length Wtd. (ft)		Wetted Per. (ft)	147.64	127.61	238.31
Min Ch El (ft)	415.15	Shear (lb/sq ft)	0.20	0.50	0.20
Alpha	2.86	Stream Power (lb/ft s)	1491.00	0.00	0.00
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

Plan: 2 Span 198 Stream Reach RS: 630.0000 Profile: Q50

E.G. Elev (ft)	438.88	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.58	Wt. n-Val.	0.100	0.030	0.100
W.S. Elev (ft)	438.30	Reach Len. (ft)			
Crit W.S. (ft)	430.35	Flow Area (sq ft)	2256.67	2315.47	4439.26
E.G. Slope (ft/ft)	0.000440	Area (sq ft)	2256.67	2315.47	4439.26
Q Total (cfs)	23203.00	Flow (cfs)	1526.91	16609.65	5066.44
Top Width (ft)	1459.28	Top Width (ft)	704.31	121.74	633.23
Vel Total (ft/s)	2.57	Avg. Vel. (ft/s)	0.68	7.17	1.14
Max Chl Dpth (ft)	23.15	Hydr. Depth (ft)	3.20	19.02	7.01
Conv. Total (cfs)	1106305.0	Conv. (cfs)	72802.1	791938.2	241564.5
Length Wtd. (ft)		Wetted Per. (ft)	705.42	127.61	633.46
Min Ch El (ft)	415.15	Shear (lb/sq ft)	0.09	0.50	0.19
Alpha	5.60	Stream Power (lb/ft s)	1491.00	0.00	0.00
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

Plan: 2 Span 198 Stream Reach RS: 630.0000 Profile: Q100

E.G. Elev (ft)	440.26	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.56	Wt. n-Val.	0.100	0.030	0.100
W.S. Elev (ft)	439.70	Reach Len. (ft)			
Crit W.S. (ft)	431.62	Flow Area (sq ft)	3424.17	2485.91	5361.52
E.G. Slope (ft/ft)	0.000416	Area (sq ft)	3424.17	2485.91	5361.52
Q Total (cfs)	26991.00	Flow (cfs)	2413.55	18172.32	6405.13
Top Width (ft)	1769.52	Top Width (ft)	963.52	121.74	684.26
Vel Total (ft/s)	2.39	Avg. Vel. (ft/s)	0.70	7.31	1.19
Max Chl Dpth (ft)	24.55	Hydr. Depth (ft)	3.55	20.42	7.84
Conv. Total (cfs)	1324067.0	Conv. (cfs)	118399.0	891459.1	314209.2
Length Wtd. (ft)		Wetted Per. (ft)	964.62	127.61	684.52
Min Ch El (ft)	415.15	Shear (lb/sq ft)	0.09	0.51	0.20
Alpha	6.34	Stream Power (lb/ft s)	1491.00	0.00	0.00
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

198' Two Span - High Tailwater

Plan: 2 Span 198 Stream Reach RS: 630.0000 Profile: Q500

E.G. Elev (ft)	444.08	Element	Left OB	Channel	Right OB
Vel Head (ft)	0.38	Wt. n-Val.	0.100	0.030	0.100
W.S. Elev (ft)	443.70	Reach Len. (ft)			
Crit W.S. (ft)	433.52	Flow Area (sq ft)	7508.85	2972.87	8308.38
E.G. Slope (ft/ft)	0.000274	Area (sq ft)	7508.85	2972.87	8308.38
Q Total (cfs)	36665.00	Flow (cfs)	6943.62	19880.78	9840.60
Top Width (ft)	1935.72	Top Width (ft)	1028.13	121.74	785.85
Vel Total (ft/s)	1.95	Avg. Vel. (ft/s)	0.92	6.69	1.18
Max Chl Dpth (ft)	28.55	Hydr. Depth (ft)	7.30	24.42	10.57
Conv. Total (cfs)	2215154.0	Conv. (cfs)	419505.8	1201118.0	594529.9
Length Wtd. (ft)		Wetted Per. (ft)	1029.96	127.61	786.18
Min Ch El (ft)	415.15	Shear (lb/sq ft)	0.12	0.40	0.18
Alpha	6.51	Stream Power (lb/ft s)	1491.00	0.00	0.00
Frctn Loss (ft)		Cum Volume (acre-ft)			
C & E Loss (ft)		Cum SA (acres)			

## 198' Two Span - High Tailwater

Plan: 2 Span 198 Stream Reach RS: 1000 Profile: Q10

E.G. US. (ft)	435.32	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	434.36	E.G. Elev (ft)	435.28	435.23
Q Total (cfs)	15173.00	W.S. Elev (ft)	434.40	434.34
Q Bridge (cfs)	15173.00	Crit W.S. (ft)	428.55	428.55
Q Weir (cfs)		Max Chl Dpth (ft)	17.90	17.84
Weir Sta Lft (ft)		Vel Total (ft/s)	7.50	7.54
Weir Sta Rgt (ft)		Flow Area (sq ft)	2023.09	2012.98
Weir Submerg		Froude # Chl	0.39	0.39
Weir Max Depth (ft)		Specif Force (cu ft)	16998.24	16905.20
Min EI Weir Flow (ft)	436.01	Hydr Depth (ft)	11.36	11.38
Min EI Prs (ft)	439.24	W.P. Total (ft)	214.05	212.53
Delta EG (ft)	0.12	Conv. Total (cfs)	454575.0	451206.5
Delta WS (ft)	0.02	Top Width (ft)	178.06	177.86
BR Open Area (sq ft)	2927.08	Frctn Loss (ft)	0.05	0.02
BR Open Vel (ft/s)	7.54	C & E Loss (ft)	0.00	0.01
Coef of Q		Shear Total (lb/sq ft)	0.66	0.67
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

Plan: 2 Span 198 Stream Reach RS: 1000 Profile: Q50

E.G. US. (ft)	439.23	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	438.64	E.G. Elev (ft)	439.20	439.15
Q Total (cfs)	23203.00	W.S. Elev (ft)	438.47	438.47
Q Bridge (cfs)	20198.50	Crit W.S. (ft)	430.79	430.80
Q Weir (cfs)		Max Chl Dpth (ft)	21.97	21.97
Weir Sta Lft (ft)		Vel Total (ft/s)	5.35	5.08
Weir Sta Rgt (ft)		Flow Area (sq ft)	4340.51	4565.82
Weir Submerg		Froude # Chl	0.26	0.25
Weir Max Depth (ft)		Specif Force (cu ft)	29546.26	29789.01
Min EI Weir Flow (ft)	436.01	Hydr Depth (ft)	3.70	3.64
Min EI Prs (ft)	439.24	W.P. Total (ft)	1230.72	1311.96
Delta EG (ft)	0.23	Conv. Total (cfs)	827419.3	848732.6
Delta WS (ft)	-0.15	Top Width (ft)	1173.37	1255.89
BR Open Area (sq ft)	2927.08	Frctn Loss (ft)	0.03	0.01
BR Open Vel (ft/s)	7.27	C & E Loss (ft)	0.02	0.14
Coef of Q		Shear Total (lb/sq ft)	0.17	0.16
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

Plan: 2 Span 198 Stream Reach RS: 1000 Profile: Q100

E.G. US. (ft)	440.50	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	440.11	E.G. Elev (ft)	440.48	440.43
Q Total (cfs)	26991.00	W.S. Elev (ft)	440.10	440.09
Q Bridge (cfs)	16850.86	Crit W.S. (ft)	431.73	431.74
Q Weir (cfs)		Max Chl Dpth (ft)	23.60	23.59
Weir Sta Lft (ft)		Vel Total (ft/s)	4.17	3.95
Weir Sta Rgt (ft)		Flow Area (sq ft)	6466.92	6838.59
Weir Submerg		Froude # Chl	0.18	0.17
Weir Max Depth (ft)		Specif Force (cu ft)	37554.19	38165.35
Min EI Weir Flow (ft)	436.01	Hydr Depth (ft)	4.52	4.52
Min EI Prs (ft)	439.24	W.P. Total (ft)	1876.00	1959.28
Delta EG (ft)	0.12	Conv. Total (cfs)	845095.9	885995.0
Delta WS (ft)	-0.08	Top Width (ft)	1429.92	1514.52
BR Open Area (sq ft)	2927.08	Frctn Loss (ft)	0.04	0.01
BR Open Vel (ft/s)	5.76	C & E Loss (ft)	0.01	0.05
Coef of Q		Shear Total (lb/sq ft)	0.22	0.20
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

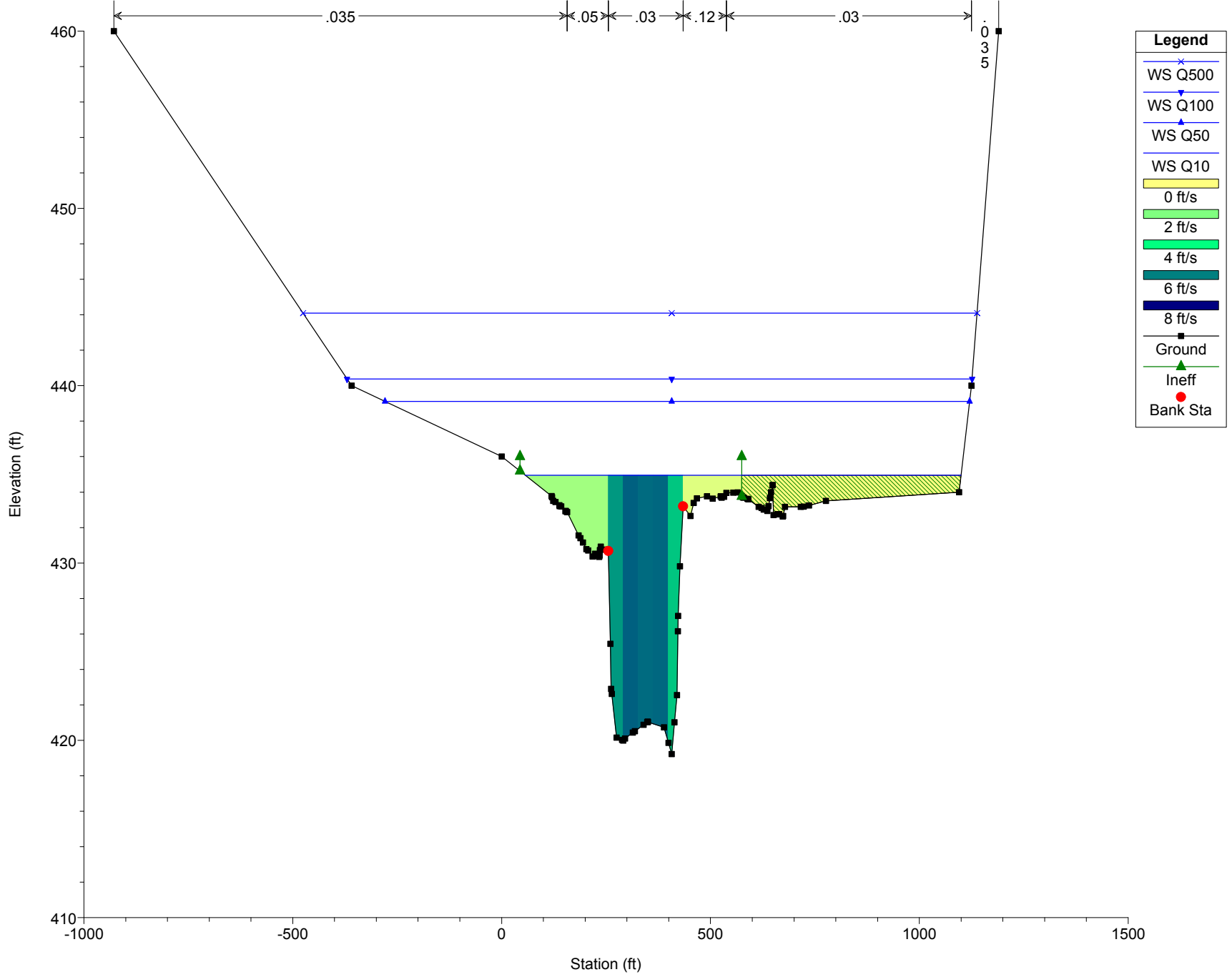
198' Two Span - High Tailwater

Plan: 2 Span 198 Stream Reach RS: 1000 Profile: Q500

E.G. US. (ft)	444.19	Element	Inside BR US	Inside BR DS
W.S. US. (ft)	444.04	E.G. Elev (ft)	444.18	444.16
Q Total (cfs)	36665.00	W.S. Elev (ft)	444.05	444.04
Q Bridge (cfs)	9471.29	Crit W.S. (ft)	433.92	433.95
Q Weir (cfs)		Max Chl Dpth (ft)	27.55	27.54
Weir Sta Lft (ft)		Vel Total (ft/s)	2.82	2.71
Weir Sta Rgt (ft)		Flow Area (sq ft)	12993.74	13541.54
Weir Submerg		Froude # Chl	0.10	0.09
Weir Max Depth (ft)		Specif Force (cu ft)	74612.23	77201.66
Min El Weir Flow (ft)	436.01	Hydr Depth (ft)	7.01	7.15
Min El Prs (ft)	439.24	W.P. Total (ft)	2301.27	2340.24
Delta EG (ft)	0.03	Conv. Total (cfs)	1974703.0	2093891.0
Delta WS (ft)	-0.01	Top Width (ft)	1854.36	1894.69
BR Open Area (sq ft)	2927.08	Frctn Loss (ft)	0.01	0.00
BR Open Vel (ft/s)	3.24	C & E Loss (ft)	0.00	0.01
Coef of Q		Shear Total (lb/sq ft)	0.12	0.11
Br Sel Method	Energy only	Power Total (lb/ft s)	-901.00	-922.00

198' Two Span - High Tailwater

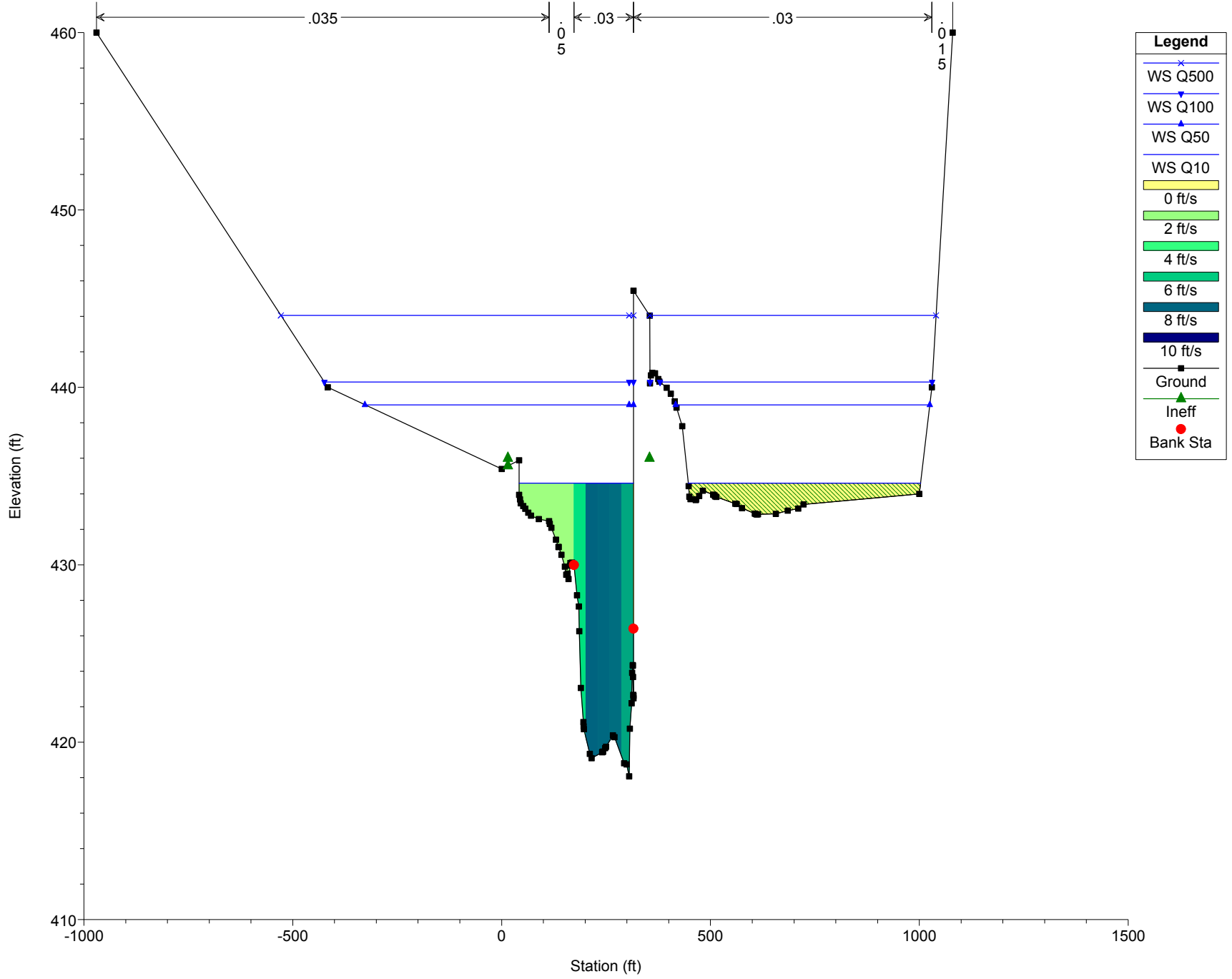
Rumford-Mexico Plan: Prop 2 Span 198 ft 12/15/2017  
 RS1210 Upstream Limit



Legend	
WS Q500	x
WS Q100	▼
WS Q50	▲
WS Q10	■
0 ft/s	Yellow
2 ft/s	Light Green
4 ft/s	Medium Green
6 ft/s	Dark Green
8 ft/s	Dark Blue
Ground	Black Square
Ineff	Green Triangle
Bank Sta	Red Circle

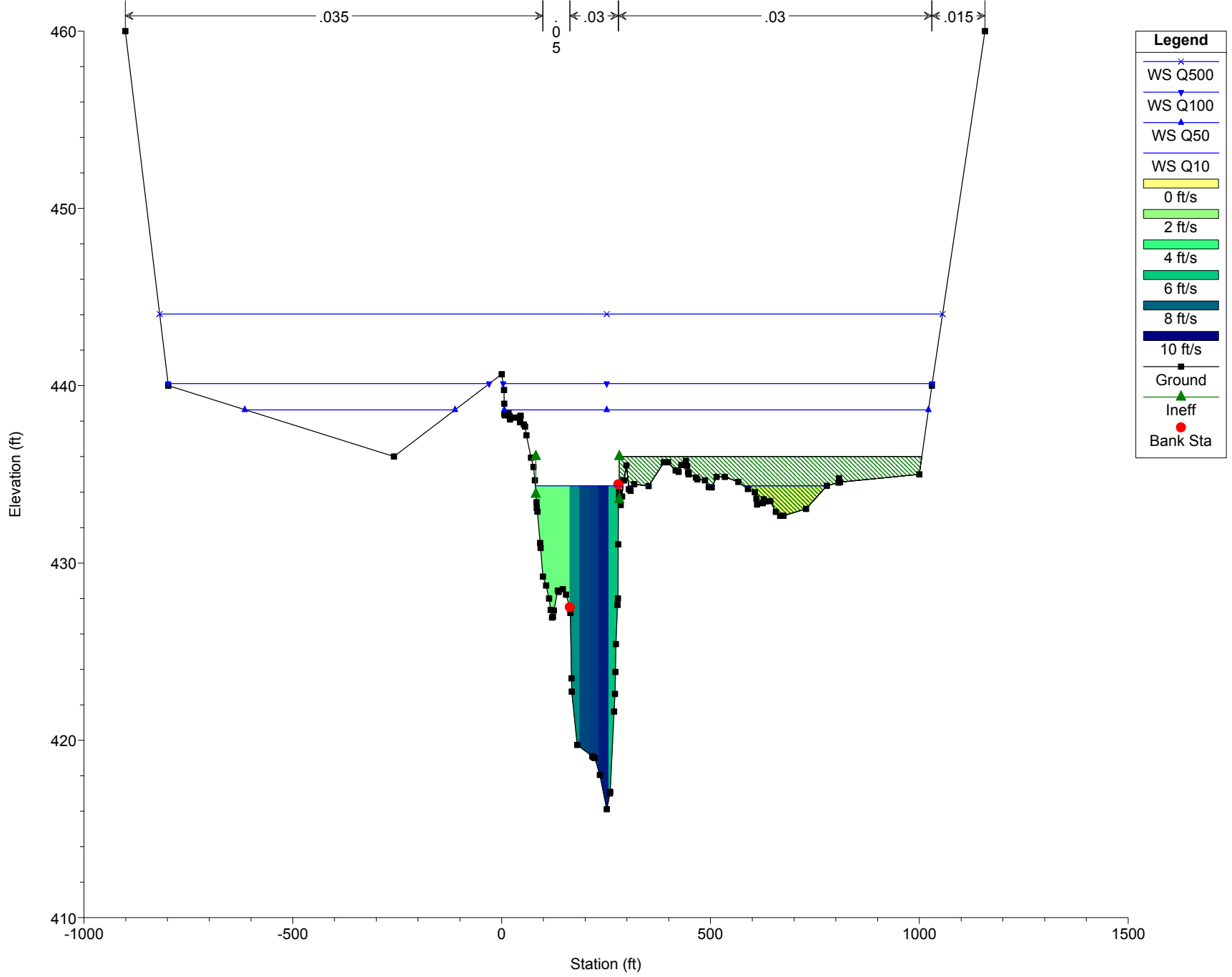
198' Two Span - High Tailwater

Rumford-Mexico Plan: Prop 2 Span 198 ft 12/15/2017  
RS1120



198' Two Span - High Tailwater

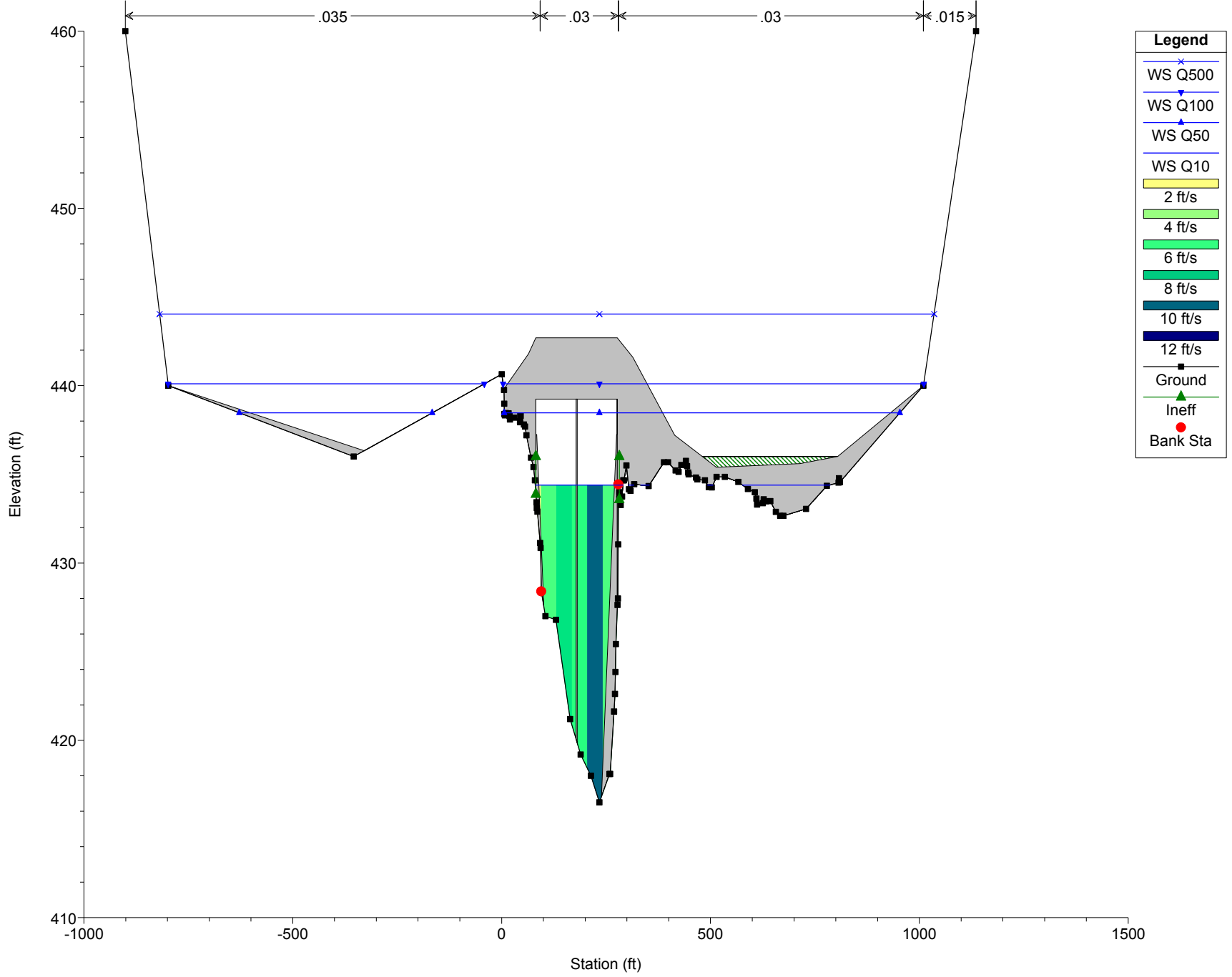
Rumford-Mexico Plan: Prop 2 Span 198 ft 12/15/2017  
RS1040



198' Two Span - High Tailwater

Rumford-Mexico Plan: Prop 2 Span 198 ft 12/15/2017

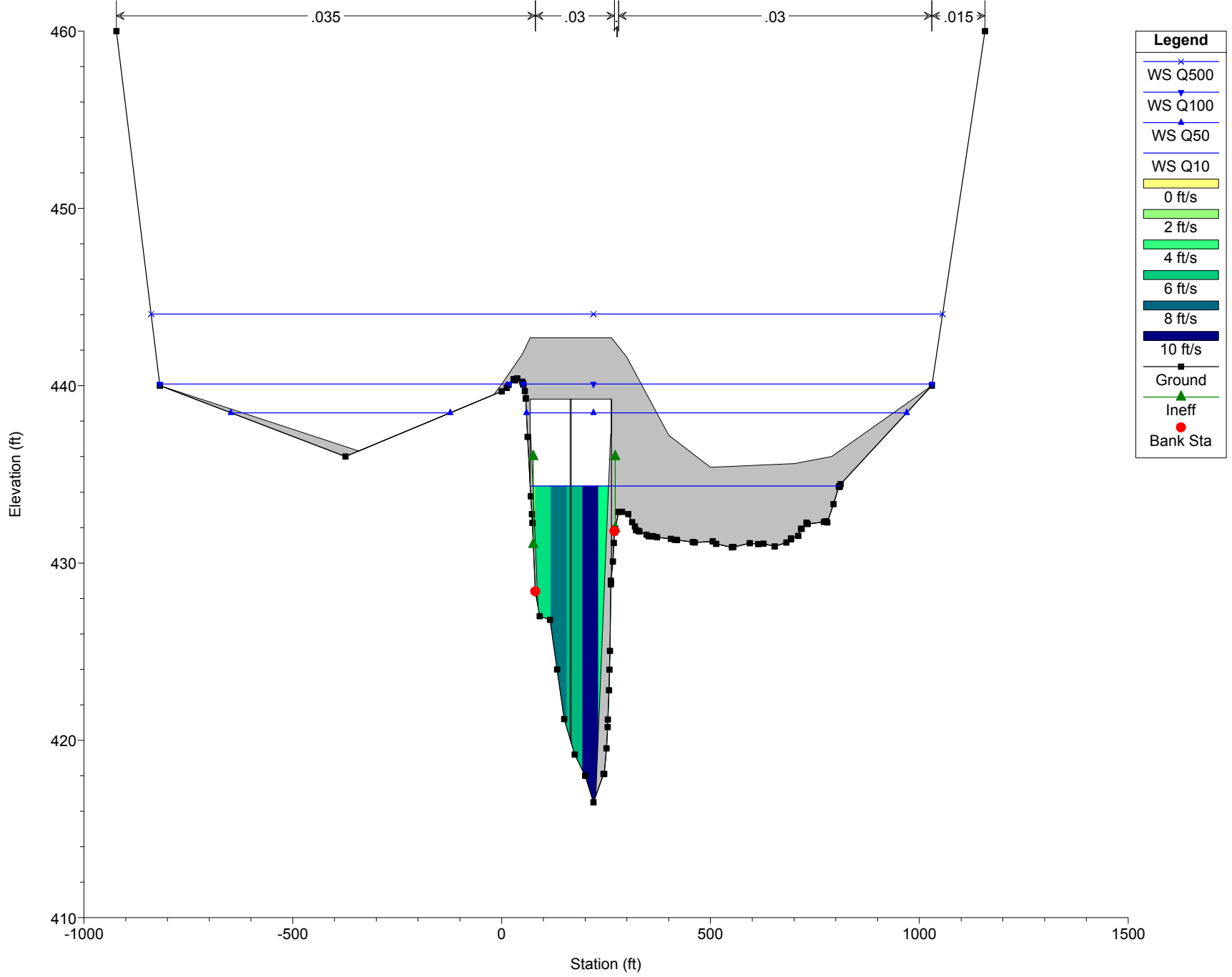
Existing Bridge



198' Two Span - High Tailwater

Rumford-Mexico Plan: Prop 2 Span 198 ft 12/15/2017

Existing Bridge

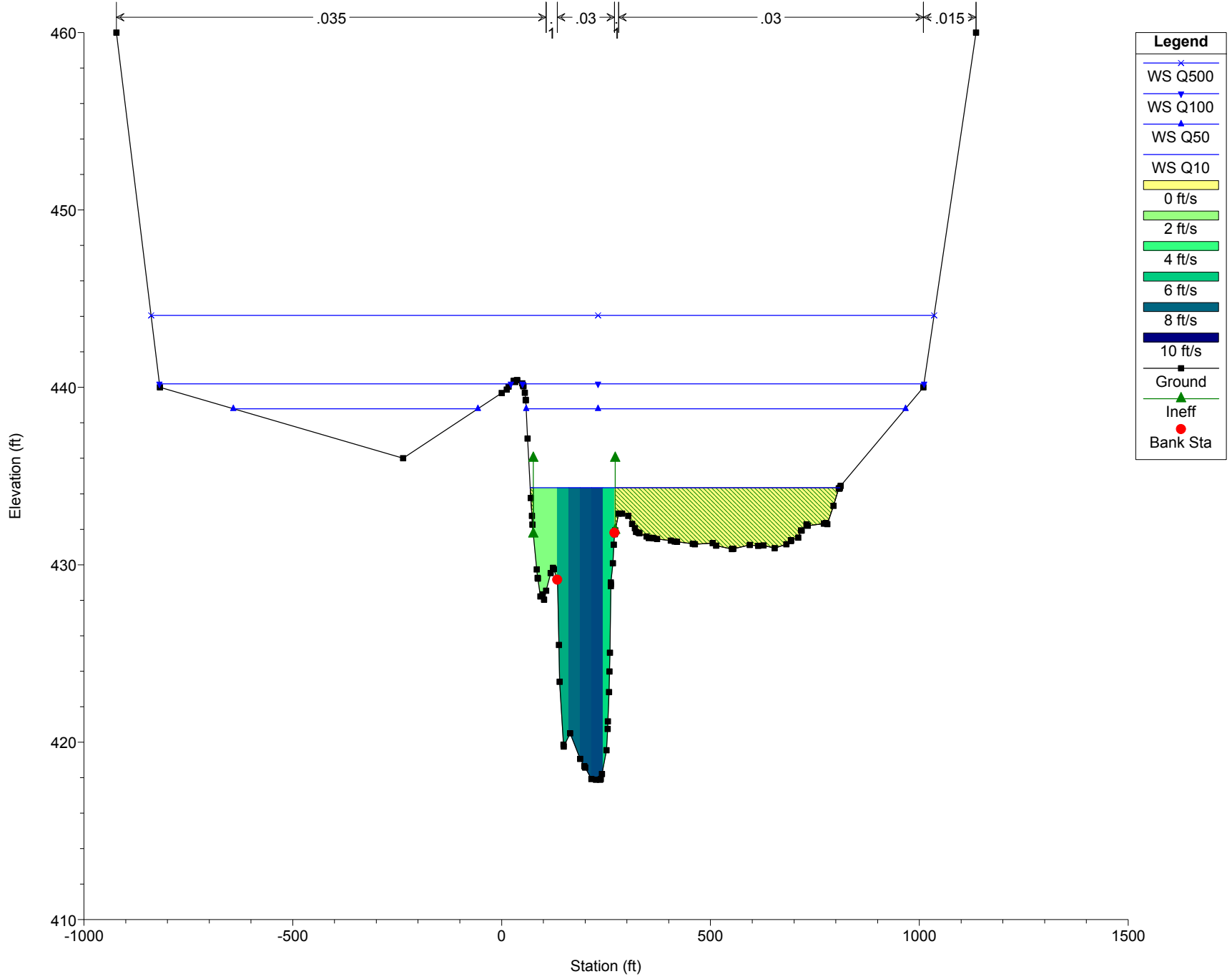


Legend	
WS Q500	x
WS Q100	▼
WS Q50	▲
WS Q10	■
0 ft/s	Yellow bar
2 ft/s	Light Green bar
4 ft/s	Medium Green bar
6 ft/s	Dark Green bar
8 ft/s	Teal bar
10 ft/s	Dark Blue bar
Ground	Black square
Ineff	Green triangle
Bank Sta	Red circle

198' Two Span - High Tailwater

Rumford-Mexico Plan: Prop 2 Span 198 ft 12/15/2017

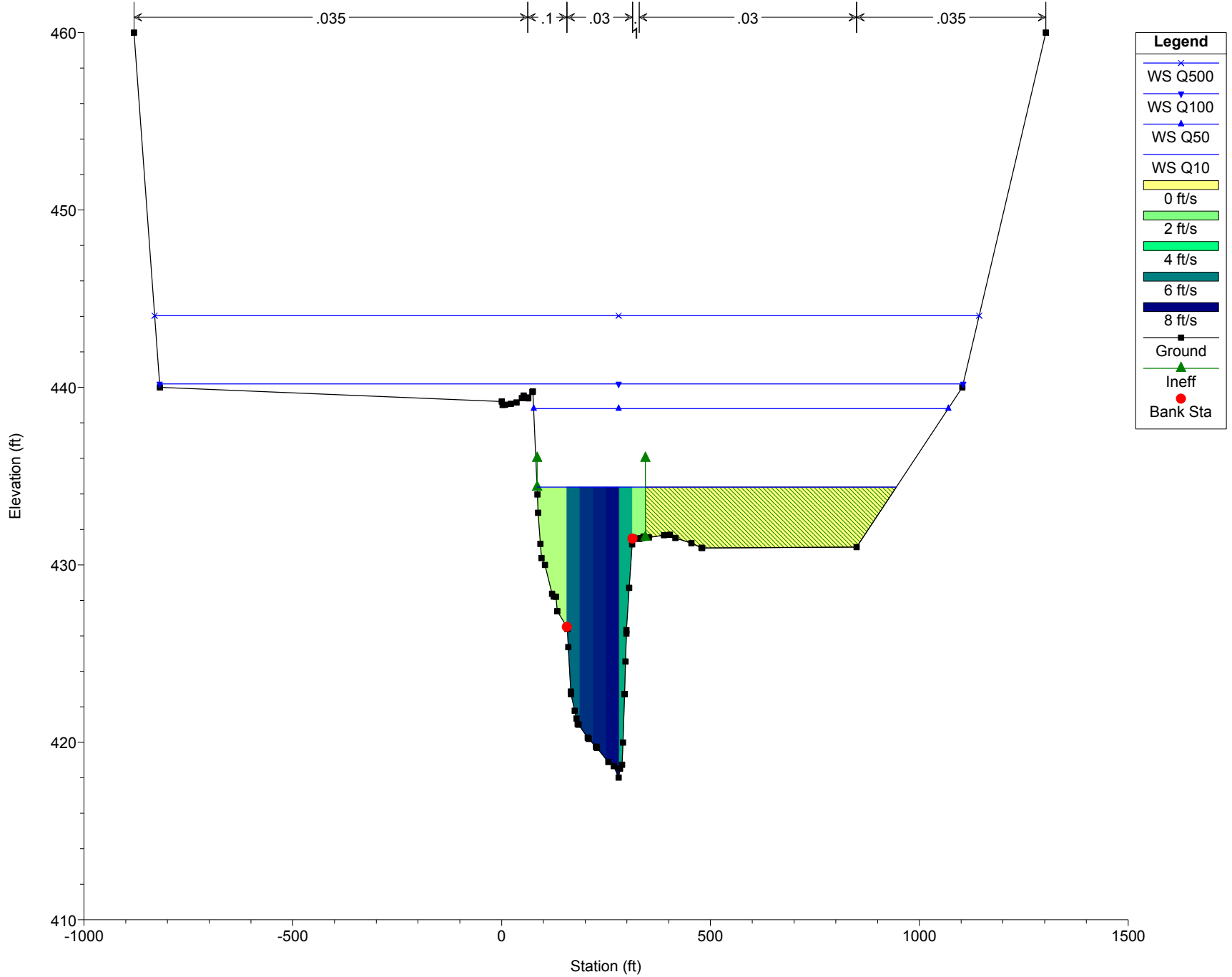
RS955



198' Two Span - High Tailwater

Rumford-Mexico Plan: Prop 2 Span 198 ft 12/15/2017

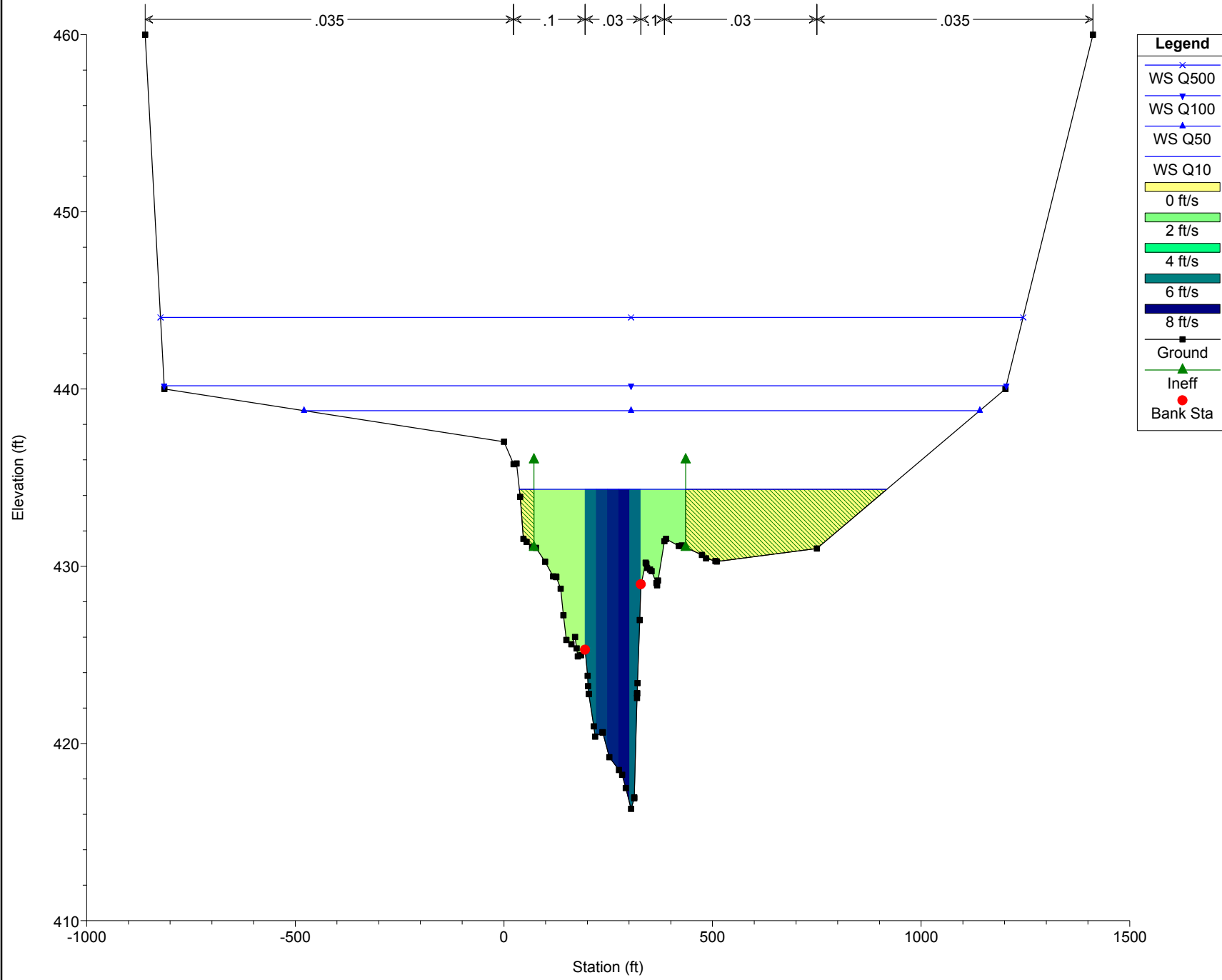
RS880



198' Two Span - High Tailwater

Rumford-Mexico Plan: Prop 2 Span 198 ft 12/15/2017

RS780

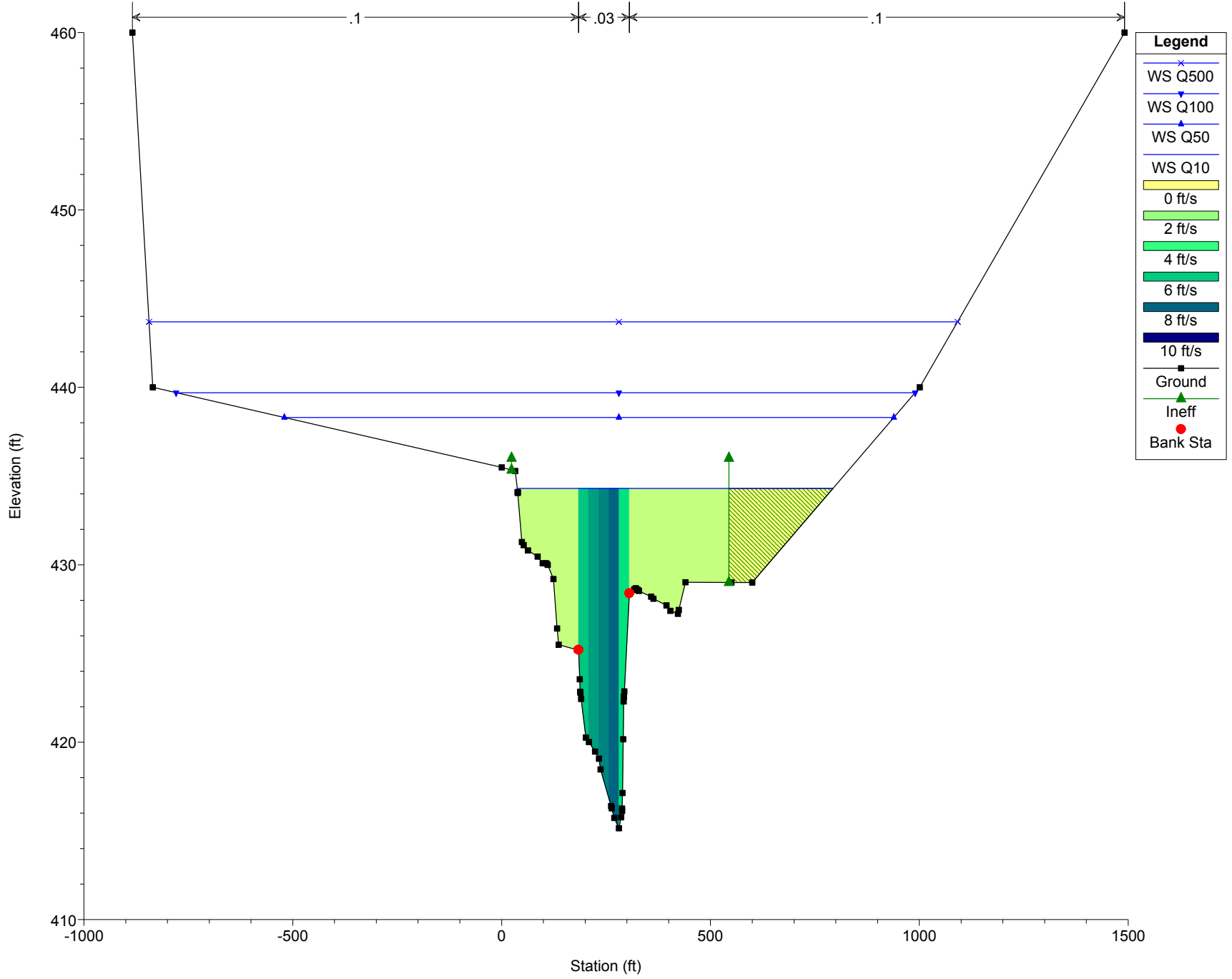


Legend	
WS Q500	Blue line with 'x' marker
WS Q100	Blue line with inverted triangle marker
WS Q50	Blue line with triangle marker
WS Q10	Blue line with inverted triangle marker
0 ft/s	Yellow bar
2 ft/s	Light green bar
4 ft/s	Medium green bar
6 ft/s	Dark green bar
8 ft/s	Dark blue bar
Ground	Black line with square marker
Ineff	Green line with triangle marker
Bank Sta	Red dot

198' Two Span - High Tailwater

Rumford-Mexico Plan: Prop 2 Span 198 ft 12/15/2017

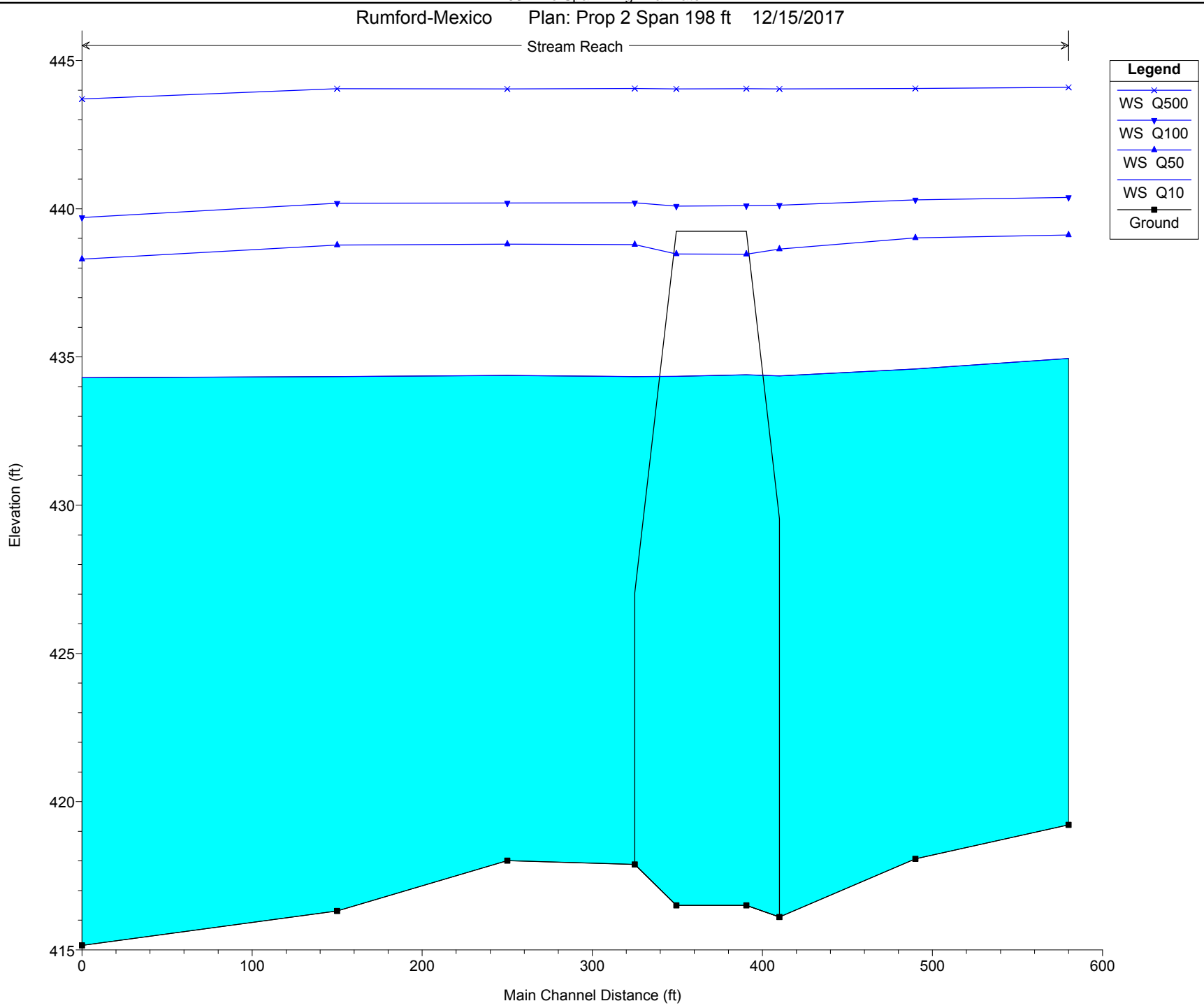
RS630 Downstream Limit



198' Two Span - High Tailwater

Rumford-Mexico Plan: Prop 2 Span 198 ft 12/15/2017

Stream Reach



Legend	
WS Q500	x
WS Q100	▼
WS Q50	▲
WS Q10	■
Ground	■

# Appendix F

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## Miscellaneous Information