HARMONY GROVE VILLAGE SOUTH

APPENDIX M-4

HYDRAULIC (FLOODPLAIN) ANALYSES FOR HGV SOUTH

for the

DRAFT FINAL ENVIRONMENTAL IMPACT REPORT

PDS2015-GPA-15-002
PDS2015-SP-15-002
PDS-REZ-15-003
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Prepared for:
COUNTY OF SAN DIEGO
PLANNING & DEVELOPMENT SERVICES
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HYDRAULIC ANALYSES
FOR
HARMONY GROVE VILLAGE SOUTH

(PDS 2008-2700-15498 & PDS 2008-2140-5394-1)

April 11, 2017

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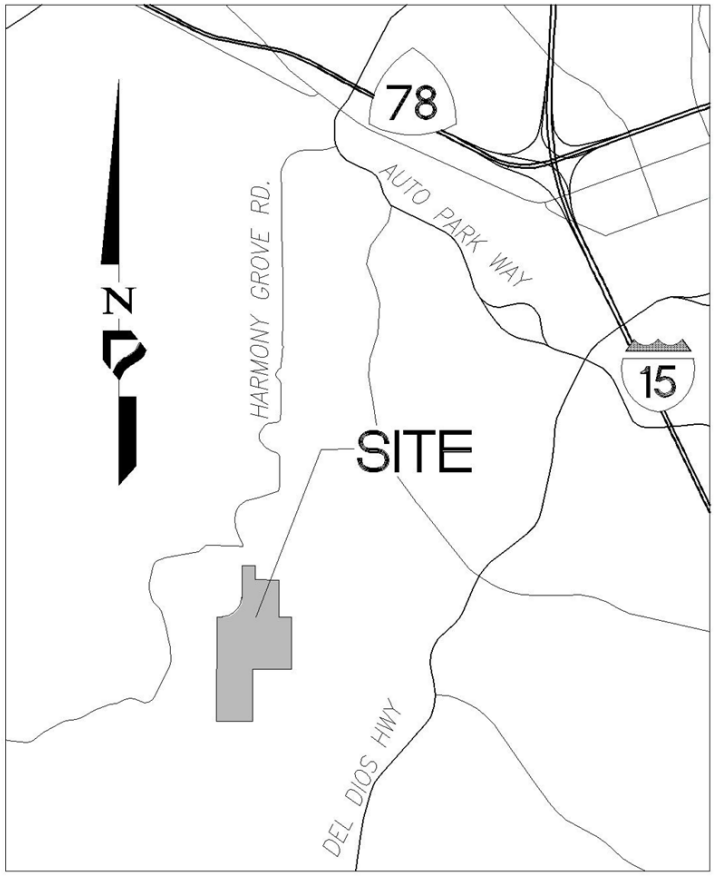
- NV5 approved September 2014, *Escondido Creek at Country Club Drive Hydrology Study*
- PDC Grading Plan near Bridge
- Existing and Proposed Condition HEC-RAS Files

INTRODUCTION

The Harmony Grove Village South (HGVS) project covers approximately 111 acres. The project proposes a maximum of 453 dwelling units and a commercial/civic area consisting of a clubhouse building that may accommodate such uses as food/beverage services, limited overnight accommodations, a gym, an event lawn, an equestrian hitching post, electric vehicle charging stations, and possibly a pool. HGVS also reserves space for wastewater treatment uses that may be needed in support of the project. The project is being designed by Project Design Consultants. The site is west of Interstate 15 and south of State Route 78. Specifically, the project is south of the intersection of Country Club Drive and Harmony Grove Road (see the Vicinity Map), and is bounded by Escondido Creek to the north, Country Club Drive to the west, and the Del Dios Highland Preserve to the South. The project is located to the south of the Harmony Grove Village development, which is currently under construction north of Escondido Creek by others.



Vicinity Map

Escondido Creek flows in a westerly direction along the northerly portion of the site and south of Harmony Grove Road. Vehicular access to the site is provided by Country Club Drive, which crosses Escondido Creek just south of the intersection with Harmony Grove Road. The existing Country Club Drive contains an Arizona crossing over the creek. Six circular culverts (over 1.5 to under 3 feet in diameter) currently convey creeks flows under the roadway. Overtopping

occurs during moderate to high flow events. The Harmony Grove Village South project proposes to replace the Arizona crossing with a 250-foot long bridge in order to provide year-round access to the project.

The *Flood Insurance Rate Map* (FIRM) covering the proposed bridge location is Map Number 06073C1057G dated May 16, 2012 (see the map pocket). The FIRM delineates a Zone AE floodplain and floodway within Escondido Creek. Rick Engineering prepared a March 23, 2013, *Request for A Conditional Letter of Map Revision for a Portion of Escondido Creek Adjacent to Harmony Grove Village in the County of San Diego, CA, VTM No. 5365* (the CLOMR is included on the CD in the map pocket and Annotated FIRM is in the map pocket). The CLOMR has been approved by the County and FEMA, and, according to the client's environmental consultant, Helix Environmental Planning, the creek improvements have been constructed. Consequently, the CLOMR's proposed condition analyses were used as a basis for the hydraulic modeling in this report.

The CLOMR proposes revisions to the FEMA floodplain and floodway at the bridge location. The proposed bridge will encroach into the revised floodway in order to achieve the desired span. Consequently, adjacent channel grading is proposed so that the floodway encroachment will not cause a rise in the 100-year (base flood) elevations. This report contains hydraulic analyses for the proposed bridge and channel grading. The analyses demonstrate that the no-rise requirement is met. The current report is for entitlement purposes and at a CEQA-level. More detailed hydraulic analyses will be performed during final engineering. PDC's grading plan sheets covering the proposed bridge are included on the CD in the map pocket along with preliminary bridge design information.

HYDRAULIC ANALYSES

Rick Engineering's approved CLOMR report and analyses were obtained from the County of San Diego and are included on the attached CD. Since the CLOMR has been approved, channel improvements are complete, and the proposed bridge will not be constructed for some time, the proposed condition CLOMR analysis represents the baseline existing conditions for this report. It is likely that the proposed condition analysis will be the effective analysis by the time the bridge is permitted and constructed.

	Peak Discharge, cfs			
Location	**10-Year**	**50-Year**	**100-Year**	**500-Year**
Harmony Grove Road	2,800	13,000	19,000	35,000
Cross-Section AD	2,600	12,000	18,000	32,000

Table 1. FEMA Flow Rates

The following summarizes the HEC-RAS input parameters for the proposed condition CLOMR model (existing conditions for this report). More details are provided in the report on the CD. The effective flow rates are summarized on Table 1. The roughness coefficients range from 0.013 to 0.10 and reflect both existing conditions and the proposed development. The cross-

sections were based on 2010 topographic mapping with modifications representing the proposed grading and improvements. However, since PDC provided an updated February 8, 2016 field survey (NGVD 29) along cross-sections 2820.4824 and 3008.3184 on each side of the proposed bridge, these two cross-sections were revised based on PDC's survey data. This will allow a more accurate comparison with the proposed condition results. Under existing conditions, these two cross-sections bound a low flow crossing and the contraction/expansion coefficients are a carryover from the effective model. The CLOMR improvements include widening of Harmony Grove Road, construction of an equestrian park area west of Country Club Drive, construction of wetland mitigation habitat within the creek west of County Club Drive, construction of a stabilized channel outlet for drainage improvements associated with the Harmony Grove Village project, and the construction of a new bridge crossing at Village Road. These improvements were observed during a site visit. Blocked obstructions were used to reflect existing buildings and areas of ineffective flow in the conveyance shadow of existing buildings or obstructions, as well as areas of flow expansion or contraction. The CLOMR proposed condition results are included in Appendix A and are labeled as existing conditions for the purposes of this report. This model is referred to as the existing condition model in the remainder of this report.

The existing condition model was modified to reflect the proposed 250-foot long bridge and channel grading. The bridge and grading are along cross-sections 2920.4824 and 3008.3184. The bridge is cross-section 2960. These two cross-sections were altered to reflect the bridge and grading. None of the other existing condition cross-sections were changed. Project Design Consultants performed the aforementioned February 8, 2016 field survey at the bridge location and generated contours from the field survey. The existing channel geometry beyond the bridge and grading footprint was based on the field survey data. The roughness coefficients and encroachments from the existing condition model were generally maintained. Since the cross-sections bounding the proposed bridge, 2920.4824 and 3008.3184, are close to the bridge and vegetation will not grow under a bridge, a low roughness coefficient was used along portions of these cross-sections. Contraction and expansions were assigned to the north ends of the cross-sections 2784.6746 and 3093.1829 near the bridge. A 1:1 contraction was modeled at cross-section 3093.1829 for the flow approaching the bridge (based on typical standards and feedback from prior County projects). A 1.3:1 expansion was modeled at cross-section 2784.6746 for flow passing the bridge based on Table 6-1 from the HEC-RAS *User's Manual* (included in Appendix A). The expansion-contraction lines are shown on the work map.

Moffat and Nichol provided design parameters for the 250-foot long bridge (see the CD). These include two piers spaced 100 feet apart. If the bridge is ultimately designed with pier walls, the width was estimated at 3 feet. If circular columns with a deep shaft foundation are selected, the maximum width will be 6 feet. The piers have been modeled with the maximum 6 feet width.

The proposed condition results are included in Appendix A. Review of the existing and proposed condition results reveals that the 100-year water surface elevations are identical except at the two cross-sections bounding the bridge. A comparison of the existing and proposed condition results at these two cross-sections is included in Table 2. The results show that the bridge and grading will not raise the 100-year water surface elevations. Therefore, the County's no-rise policy is met. The floodway in the proposed condition model was revised so that the floodway width at the bridge matches the bridge opening. The surcharge at the upstream and downstream cross-

sections are 0.07 and 0.07 feet, respectively, which is within the allowable increase of 1 foot. It is noted that the Rick CLOMR acknowledged negative surcharges at some cross-sections. The HEC-RAS Work Map in the map pocket contains the cross-sections near the bridge as well as the existing and proposed condition floodplains and floodways.

Cross-Section	100-Year Water Surface Elevations, ft	
	Existing Conditions	Proposed Conditions
2920.4824 (d/s bridge)	569.03	569.03
3008.3184 (u/s bridge)	570.51	570.03

Table 2. Comparison of 100-Year Results at Proposed Bridge

The bridge design must also consider the *Hydraulic Design Manual* freeboard requirements, which are either 1 foot from the soffit during a 100-year flood or 1-foot below the roadway crest if the bridge has been designed to withstand hydraulic forces of floodwaters and impact from large floating debris. The 100-year flow rate should be based on existing development conditions in the watershed. NV5 prepared an approved September 2014, *Escondido Creek at Country Club Drive Hydrology Study* (included on CD), which determined that the 100-year flow rate at Country Club Drive is 26,031 cfs. The report was reviewed and accepted by Chang Consultants for use in assessing freeboard. The results are included in Appendix A and show that the water surface is 570.82 feet, while the soffit under the preliminary bridge design is 570.15 feet. The freeboard to the soffit is less than 1 foot, but to the deck is greater than one foot. This meets the County criteria, but the bridge will need to be designed to withstand the hydraulic and impact forces. Alternatively, during final engineering consideration can be given to providing 1 foot of freeboard from the soffit.

CONCLUSION

The proposed condition hydraulic analyses from a recent Escondido Creek CLOMR will likely establish the existing conditions for the Country Club Drive Bridge since the channel improvements associated with the CLOMR will exist prior to bridge construction (this is subject to LOMR approval). The bridge will encroach within the CLOMR floodway, but the proposed condition 100-year hydraulic analyses prepared for this report demonstrate that the proposed bridge and associated channel grading will not cause a rise in the 100-year water surface elevations. In addition, the revised floodway will be within the allowable base flood elevation increase of 1 foot. Therefore, the floodway encroachment meets the required regulations.

The topographic mapping indicates that there is an approximately 6 foot drop in elevation along the Escondido Creek channel bed from the current upstream to downstream side of Country Club Drive. This is due to the Arizona crossing acting as a grade control. When the crossing is removed for the proposed bridge, the natural channel bed can adjust resulting in upstream scour and downstream deposition. The adjustment can be countered, if needed, by installing a grade control spanning the channel under the bridge. The location under the bridge will minimize impacts to habitat since habitat will not establish under the bridge. Such grade controls are typically constructed with riprap, which may need to be grouted depending on the flow velocities

and stresses. The decision to use and final design of the grade control will be determined during final engineering.

NO-RISE CERTIFICATION AND DECLARATION OF RESPONSIBLE CHARGE

No-Rise Certification

Hydraulic analyses have been performed for the proposed Harmony Grove Village South project along Escondido Creek in the county of San Diego, California. This report includes the existing and proposed condition 100-year HEC-RAS hydraulic analyses for the proposed project.

This is to certify that I am a duly qualified registered professional engineer licensed to practice in the State of California.

It is further to certify that the attached technical data supports the fact that proposed development (as defined in County of San Diego Ordinance Section 811.201(i)) associated with County of San Diego Project No.'s PDS 2008-2700-15498 and PDS 2008-2140-5394-1 within the designated floodway delineated on the County of San Diego Floodplain Maps will not result in any increase in flood levels or the volume or velocity of flood flows during the occurrence of the base flood discharge within the Escondido Creek in compliance with County of San Diego Ordinance Section 811.506.

Name of Report: *Hydraulic Analyses for Harmony Grove Village South*

Date of Report: April 11, 2017

Declaration of Responsible Charge

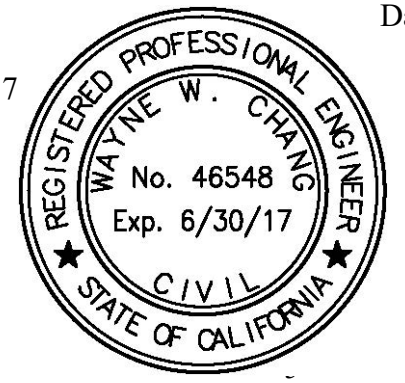
I hereby declare that I am the civil engineer of work for this project for hydraulic analyses of the Escondido Creek, that I have exercised responsible charge over the design of the project as defined in Section 6703 of the Business and Professions Code, and that the design is consistent with current design.

I understand that the check of project drawings and specifications by the County of San Diego is confined to a review only and does not relieve me, as engineer of work, of my responsibilities for project design.

April 11, 2017

Wayne W. Chang
RCE 46548
Exp. June 30, 2017

Date



APPENDIX A

HEC-RAS ANALYSES

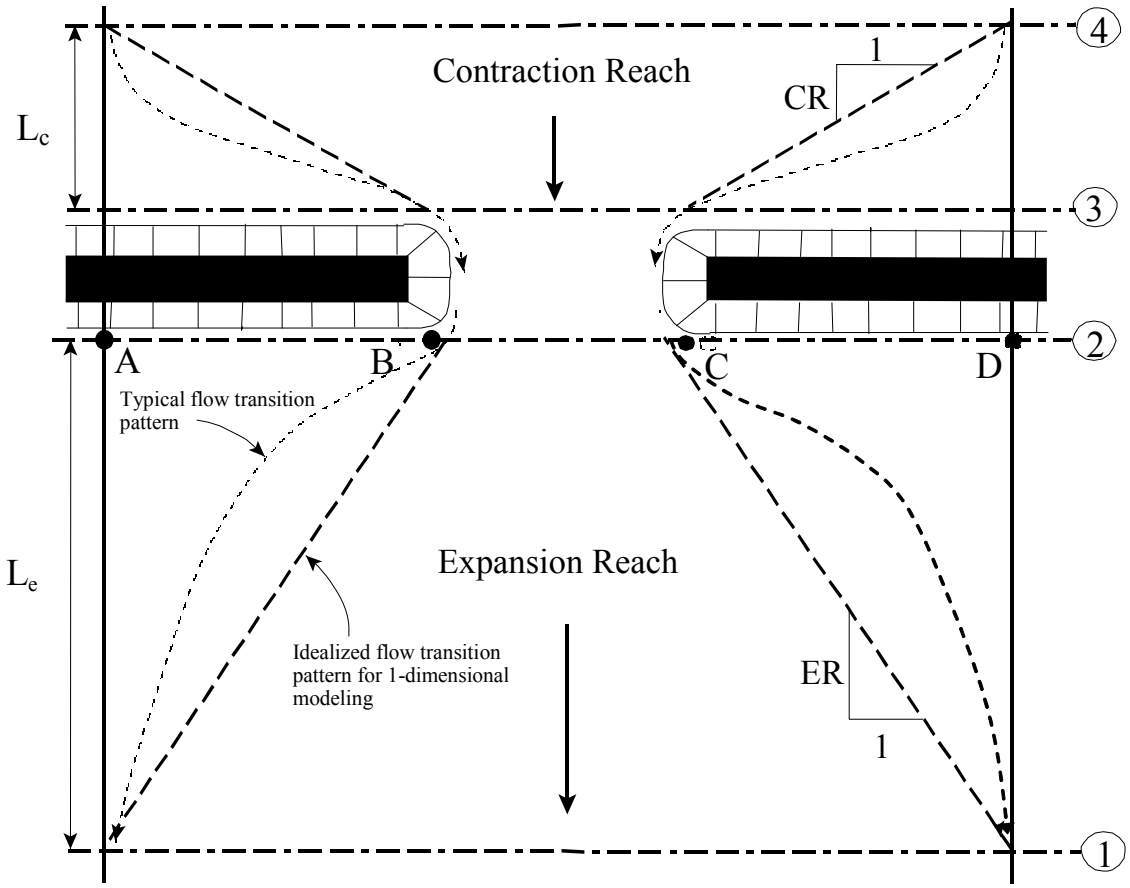


Figure 6-11 Cross Section Locations at a Bridge or Culvert

The average obstruction length is half of the total reduction in floodplain width caused by the two bridge approach embankments. In Table 6-1, b/B is the ratio of the bridge opening width to the total floodplain width, nob is the average Manning n value for the overbanks, nc is the n value for the main channel, and S is the average longitudinal bed slope through the bridge reach. The values in the interior of the table are the ranges of the expansion ratio. For each range, the higher value is typically associated with a higher discharge.

Table 6-1 Ranges of Expansion Ratios

		nob / nc = 1	nob / nc = 2	nob / nc = 4
b/B = 0.10	S = 1 ft/mile	1.4 – 3.6	1.3 – 3.0	1.2 – 2.1
	5 ft/mile	1.0 – 2.5	0.8 – 2.0	0.8 – 2.0
	10 ft/mile	1.0 – 2.2	0.8 – 2.0	0.8 – 2.0
b/B = 0.25	S = 1 ft/mile	1.6 – 3.0	1.4 – 2.5	1.2 – 2.0
	5 ft/mile	1.5 – 2.5	1.3 – 2.0	1.3 – 2.0
	10 ft/mile	1.5 – 2.0	1.3 – 2.0	1.3 – 2.0
b/B = 0.50	S = 1 ft/mile	1.4 – 2.6	1.3 – 1.9	1.2 – 1.4
	5 ft/mile	1.3 – 2.1	1.2 – 1.6	1.0 – 1.4
	10 ft/mile	1.3 – 2.0	1.2 – 1.5	1.0 – 1.4

A detailed study of flow contraction and expansions at bridges was undertaken by the Hydrologic Engineering Center. The results of this study have been published as a research document entitled "Flow Transitions in Bridge Backwater Analysis" (RD-42 HEC, 1995). The purpose of this study was to provide better guidance to hydraulic engineers performing water surface profile computations through bridges. Specifically the study focused on determining the expansion reach length, L_e; the contraction reach length, L_c; the expansion energy loss coefficient, Ce; and the contraction energy loss coefficient, Cc. A summary of this research, and the final recommendations, can be found in Appendix B of the HEC-RAS Hydraulic Reference manual.

The user should not allow the distance between cross section 1 and 2 to become so great that friction losses will not be adequately modeled. If the modeler feels that the expansion reach will require a long distance, then intermediate cross sections should be placed within the expansion reach in order to adequately model friction losses. The user will need to estimate ineffective flow areas for these intermediate cross sections.

Cross section 2 is located a short distance downstream from the bridge or culvert. This cross section should represent the natural ground (main channel and floodplain) just downstream of the bridge or culvert. This section is normally located near the toe of the downstream road embankment. This cross section should **Not** be placed immediately downstream of the face of the bridge deck or the culvert opening (for example some people wrongly place this cross section 1.0 foot downstream of the bridge deck or culvert opening). Even if the bridge has no embankment, this cross section should be placed far enough from the downstream face of the bridge to allow enough distance for some flow expansion due to piers, or pressurized

Expansion ratio downstream of bridge at north end of cross-section 2784.6746. Use low end of range (1.3:1) since slope is steeper than 10 ft/mile.

EXISTING CONDITION ANALYSIS (CLOMR PROPOSED CONDITION ANALYSIS WITH BRIDGE CROSS-SECTIONS BASED ON PDC TOPO)

HEC-RAS Plan: Exist Cond PDC River: Escondido Creek Reach: Main Reach

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main Reach	8939.253	100-YR FP	18000.00	595.00	611.82		612.54	0.002189	11.12	2954.03	346.42	0.48
Main Reach	8939.253	100-YR FW	18000.00	595.00	611.71		612.70	0.002659	12.20	2460.97	240.00	0.53
Main Reach	8691.329	100-YR FP	19000.00	592.83	611.52		612.23	0.000956	7.21	3194.56	311.16	0.32
Main Reach	8691.329	100-YR FW	19000.00	592.83	611.55		612.28	0.000957	7.22	3054.10	253.00	0.32
Main Reach	8447.902	100-YR FP	19000.00	591.67	611.63	601.49	611.97	0.000417	4.96	4619.48	567.26	0.21
Main Reach	8447.902	100-YR FW	19000.00	591.67	611.68	601.49	612.02	0.000411	4.94	4640.83	415.78	0.21
Main Reach	8231.876	100-YR FP	19000.00	590.12	611.17		611.82	0.000752	6.96	3377.42	388.92	0.29
Main Reach	8231.876	100-YR FW	19000.00	590.12	611.22		611.87	0.000743	6.94	3399.30	393.21	0.29
Main Reach	7937.141	100-YR FP	19000.00	589.14	610.36		611.49	0.001176	8.89	2437.83	172.52	0.36
Main Reach	7937.141	100-YR FW	19000.00	589.14	610.43		611.54	0.001161	8.86	2448.74	172.82	0.36
Main Reach	7728.097	100-YR FP	19000.00	588.81	610.41	601.65	611.17	0.000856	7.71	3143.64	255.77	0.31
Main Reach	7728.097	100-YR FW	19000.00	588.81	610.48	601.65	611.23	0.000843	7.67	3160.34	255.91	0.31
Main Reach	7567.263	100-YR FP	19000.00	589.73	610.37	604.51	610.98	0.000954	7.80	3571.80	322.45	0.32
Main Reach	7567.263	100-YR FW	19000.00	589.73	610.44	604.51	611.04	0.000938	7.75	3593.50	322.85	0.32
Main Reach	7398.386	100-YR FP	19000.00	589.73	609.94		610.77	0.001142	8.51	3023.62	266.79	0.35
Main Reach	7398.386	100-YR FW	19000.00	589.73	610.01		610.84	0.001114	8.43	3025.11	257.28	0.35
Main Reach	7209.008	100-YR FP	19000.00	589.70	610.00	601.09	610.53	0.000648	6.44	3716.75	305.67	0.27
Main Reach	7209.008	100-YR FW	19000.00	589.70	610.07	601.09	610.59	0.000633	6.39	3731.42	298.00	0.26
Main Reach	7021.154	100-YR FP	19000.00	590.07	610.02		610.36	0.000486	5.32	4614.20	397.10	0.23
Main Reach	7021.154	100-YR FW	19000.00	590.07	610.10		610.44	0.000477	5.29	4644.70	397.37	0.23
Main Reach	6849.903	100-YR FP	19000.00	589.34	610.08		610.27	0.000227	3.68	5992.73	555.23	0.16
Main Reach	6849.903	100-YR FW	19000.00	589.34	610.16		610.34	0.000223	3.66	6025.81	555.00	0.16
Main Reach	6725.722	100-YR FP	19000.00	589.11	609.66		610.19	0.000808	7.06	3786.19	333.89	0.29
Main Reach	6725.722	100-YR FW	19000.00	589.11	609.75		610.27	0.000789	7.00	3814.21	333.00	0.29
Main Reach	6498.638	100-YR FP	19000.00	588.76	609.70	599.31	610.00	0.000303	4.42	4418.30	321.31	0.18
Main Reach	6498.638	100-YR FW	19000.00	588.76	609.79	599.31	610.08	0.000297	4.39	4444.66	320.00	0.18

HEC-RAS Plan: Exist Cond PDC River: Escondido Creek Reach: Main Reach (Continued)

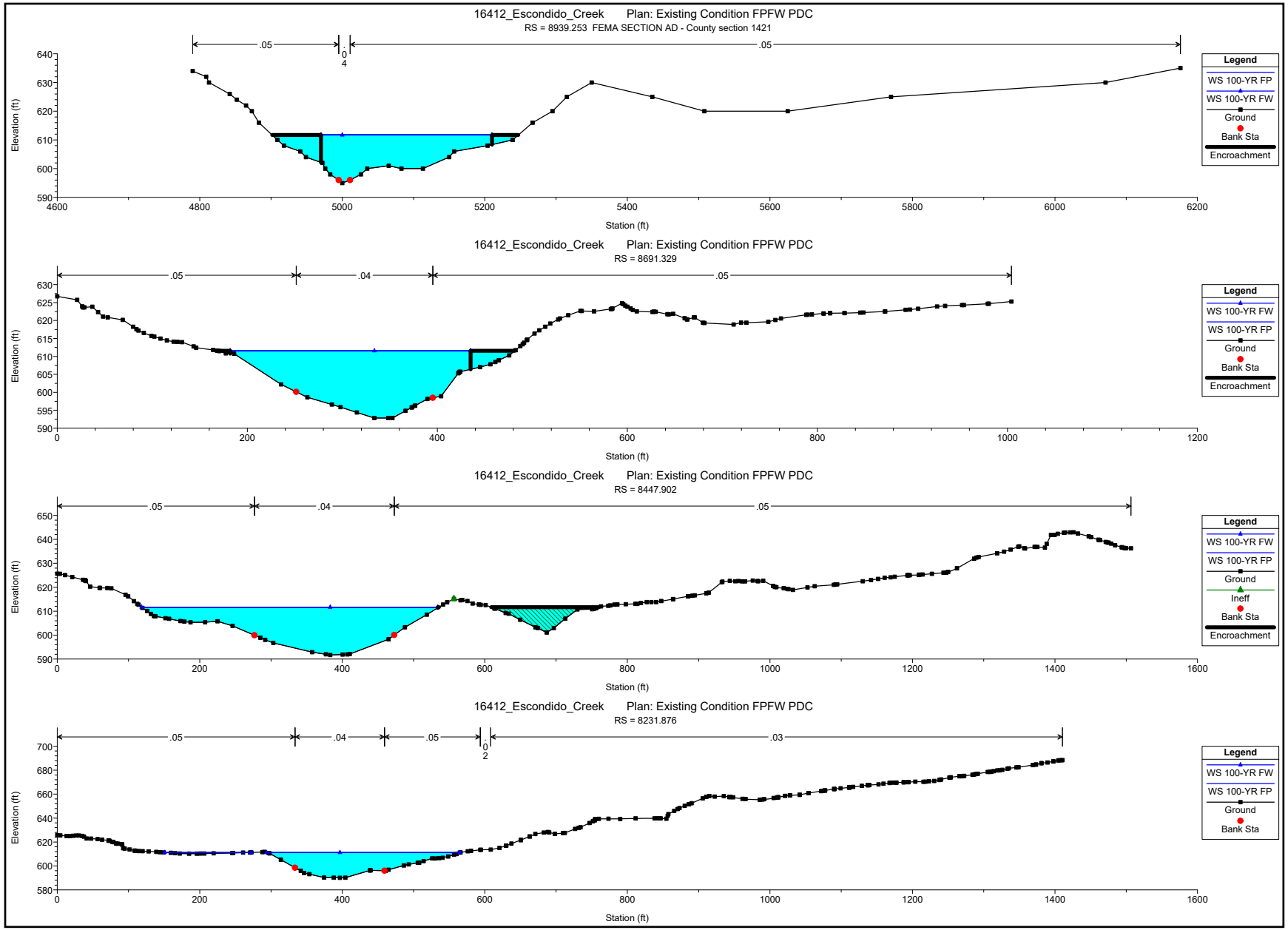
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main Reach	6450		Bridge									
Main Reach	6405.532	100-YR FP	19000.00	588.20	609.68		609.97	0.000179	3.53	4891.53	346.85	0.14
Main Reach	6405.532	100-YR FW	19000.00	588.20	609.76		610.05	0.000175	3.51	4920.41	346.70	0.14
Main Reach	6330.518	100-YR FP	19000.00	587.17	609.69	599.60	609.95	0.000086	3.04	5559.59	397.60	0.12
Main Reach	6330.518	100-YR FW	19000.00	587.17	609.78	599.60	610.03	0.000085	3.02	5591.64	397.20	0.12
Main Reach	6300		Culvert									
Main Reach	6291.376	100-YR FP	19000.00	584.95	609.59		609.87	0.000184	3.91	4540.42	399.10	0.15
Main Reach	6291.376	100-YR FW	19000.00	584.95	609.67		609.94	0.000181	3.88	4566.35	398.90	0.15
Main Reach	6198.205	100-YR FP	19000.00	584.95	609.38		609.84	0.000394	5.24	3665.75	401.72	0.20
Main Reach	6198.205	100-YR FW	19000.00	584.95	609.46		609.91	0.000386	5.20	3690.55	401.00	0.20
Main Reach	6011.941	100-YR FP	19000.00	585.37	607.42		609.53	0.002443	12.21	1671.15	152.95	0.50
Main Reach	6011.941	100-YR FW	19000.00	585.37	607.52		609.60	0.002392	12.13	1682.80	150.72	0.49
Main Reach	5878.831	100-YR FP	19000.00	584.48	607.70		609.06	0.001428	9.70	2132.87	245.36	0.39
Main Reach	5878.831	100-YR FW	19000.00	584.48	607.81		609.14	0.001392	9.61	2150.83	231.37	0.38
Main Reach	5723.492	100-YR FP	19000.00	584.16	607.85		608.74	0.000952	8.25	2866.84	345.16	0.32
Main Reach	5723.492	100-YR FW	19000.00	584.16	607.97		608.82	0.000907	8.08	2864.61	296.00	0.32
Main Reach	5573.125	100-YR FP	19000.00	584.75	607.79		608.57	0.000905	7.59	2843.57	407.05	0.30
Main Reach	5573.125	100-YR FW	19000.00	584.75	607.91		608.66	0.000871	7.47	2881.85	353.00	0.30
Main Reach	5433.669	100-YR FP	19000.00	584.41	603.68	603.68	607.93	0.006796	17.61	1260.93	230.01	0.79
Main Reach	5433.669	100-YR FW	19000.00	584.41	603.62	603.62	608.02	0.007009	17.84	1234.06	197.00	0.81
Main Reach	5279.805	100-YR FP	19000.00	582.48	599.57	599.57	605.20	0.009448	19.34	1056.06	102.41	0.93
Main Reach	5279.805	100-YR FW	19000.00	582.48	599.45	599.45	605.31	0.009907	19.68	1024.99	94.10	0.95
Main Reach	5085.005	100-YR FP	19000.00	577.88	594.51	594.51	599.61	0.009508	18.26	1094.12	121.65	0.93
Main Reach	5085.005	100-YR FW	19000.00	577.88	594.52	594.52	599.61	0.009484	18.25	1095.11	121.68	0.93
Main Reach	4830.943	100-YR FP	19000.00	574.37	589.77	589.77	594.27	0.009271	17.41	1192.58	143.33	0.92
Main Reach	4830.943	100-YR FW	19000.00	574.37	589.77	589.77	594.27	0.009263	17.40	1191.26	140.98	0.92

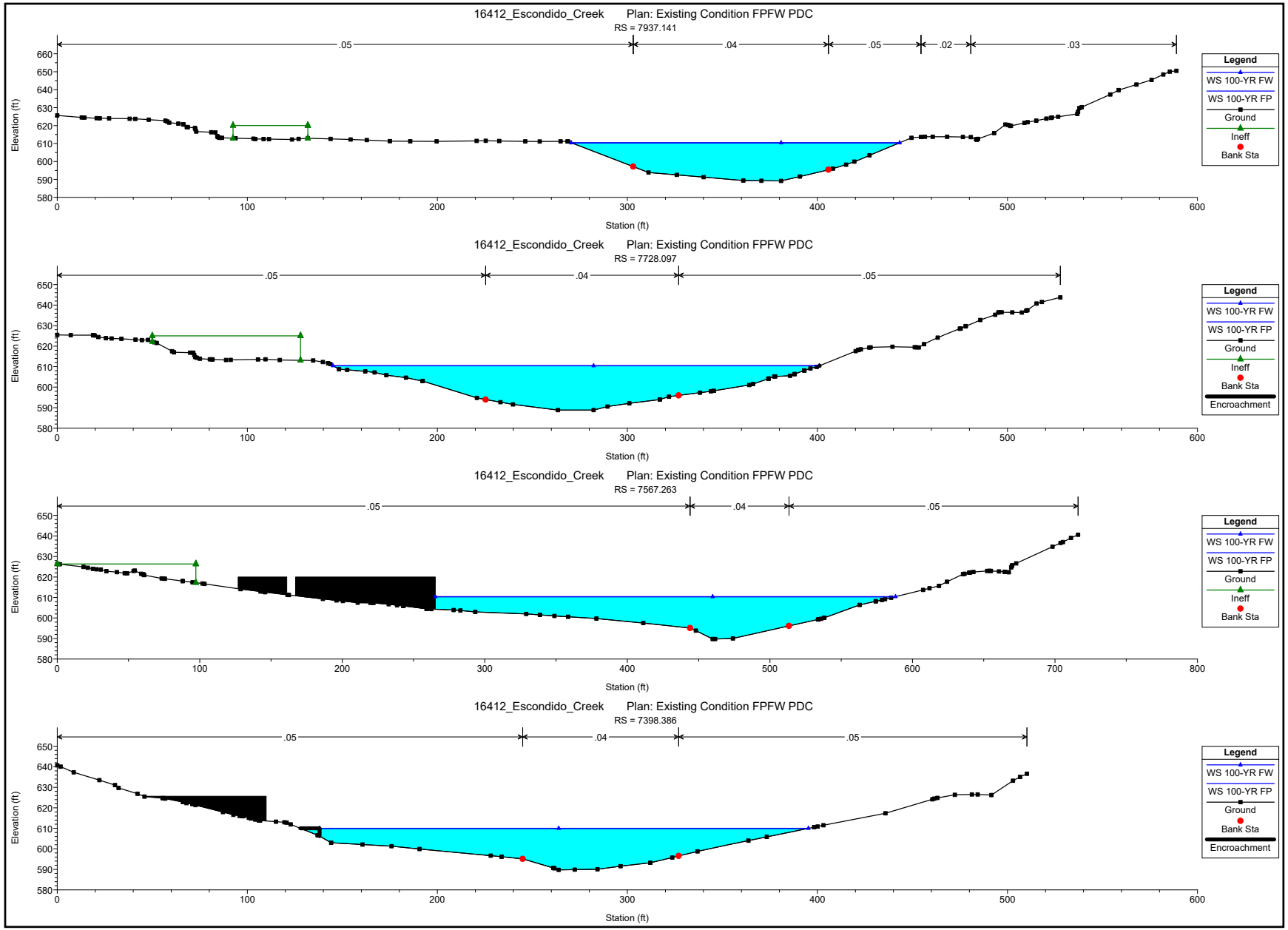
HEC-RAS Plan: Exist Cond PDC River: Escondido Creek Reach: Main Reach (Continued)

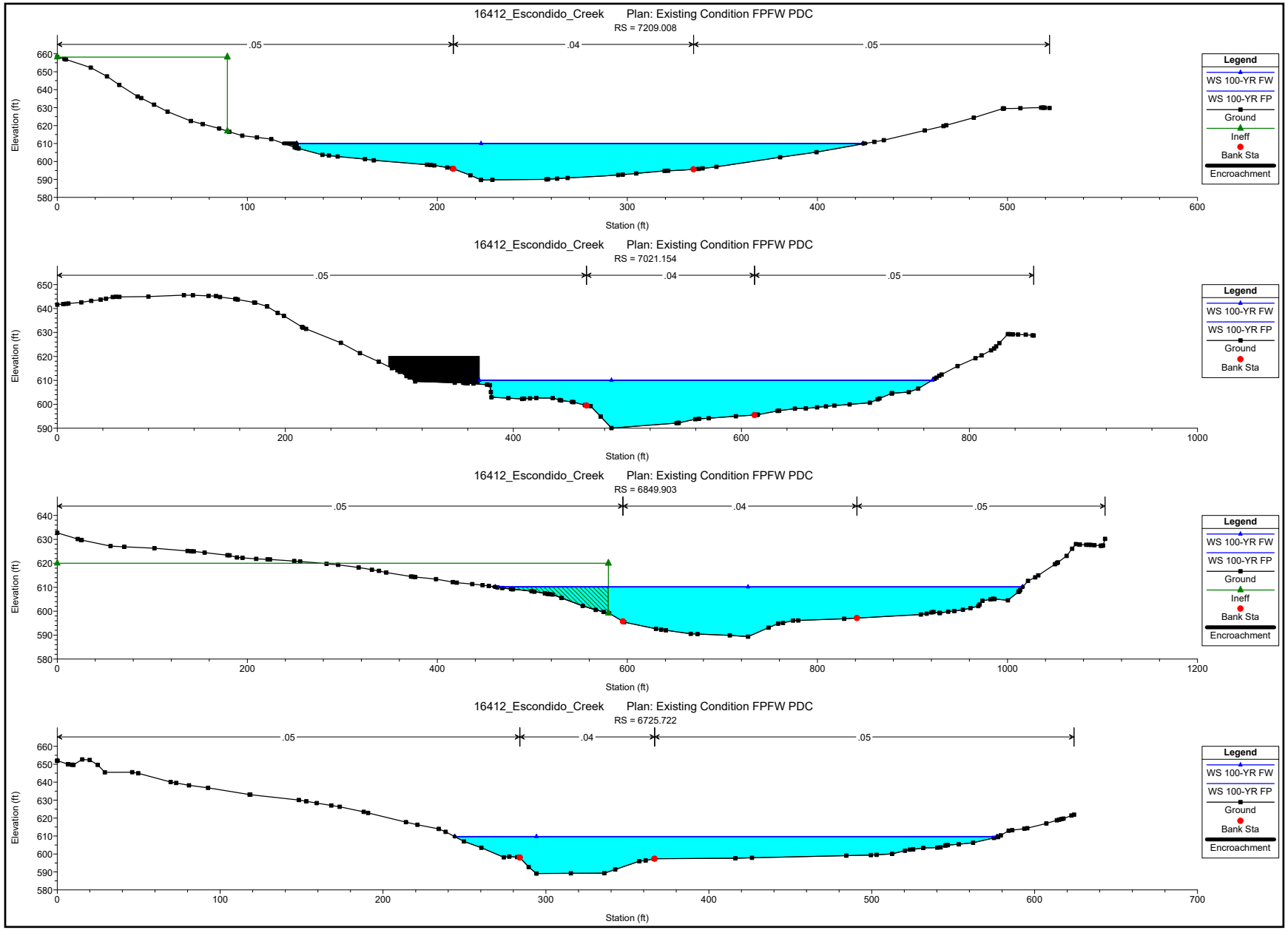
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main Reach	4629.579	100-YR FP	19000.00	571.59	585.96	585.96	590.74	0.010838	17.62	1103.23	125.41	0.98
Main Reach	4629.579	100-YR FW	19000.00	571.59	585.96	585.96	590.74	0.010838	17.62	1103.23	125.41	0.98
Main Reach	4388.312	100-YR FP	19000.00	570.84	583.76		586.10	0.005491	12.37	1599.24	191.89	0.70
Main Reach	4388.312	100-YR FW	19000.00	570.84	583.76		586.10	0.005491	12.37	1599.24	191.89	0.70
Main Reach	4145.791	100-YR FP	19000.00	568.57	583.42		584.96	0.002683	10.59	2028.08	203.86	0.52
Main Reach	4145.791	100-YR FW	19000.00	568.57	583.42		584.96	0.002683	10.59	2028.08	203.86	0.52
Main Reach	3841.946	100-YR FP	19000.00	564.49	583.05		584.24	0.001813	10.39	2349.81	185.59	0.44
Main Reach	3841.946	100-YR FW	19000.00	564.49	583.05		584.24	0.001813	10.39	2349.81	185.59	0.44
Main Reach	3656.395	100-YR FP	19000.00	564.06	578.99	578.99	583.31	0.009364	18.43	1275.41	148.48	0.94
Main Reach	3656.395	100-YR FW	19000.00	564.06	578.99	578.99	583.31	0.009364	18.43	1275.41	148.48	0.94
Main Reach	3505.716	100-YR FP	19000.00	559.66	576.20		578.39	0.003615	13.25	1775.01	185.98	0.60
Main Reach	3505.716	100-YR FW	19000.00	559.66	576.20		578.39	0.003615	13.25	1775.01	185.98	0.60
Main Reach	3241.734	100-YR FP	19000.00	559.40	573.99	573.99	577.02	0.007518	16.37	1642.30	392.60	0.82
Main Reach	3241.734	100-YR FW	19000.00	559.40	573.99	573.99	577.02	0.007518	16.37	1642.30	390.61	0.82
Main Reach	3093.182	100-YR FP	19000.00	559.68	571.44	571.44	573.94	0.006880	14.28	1837.79	484.58	0.79
Main Reach	3093.182	100-YR FW	19000.00	559.68	571.44	571.44	573.94	0.006880	14.28	1837.79	450.49	0.79
Main Reach	3008.318	100-YR FP	19000.00	559.33	570.51	570.51	572.97	0.008032	13.23	1739.72	378.31	0.83
Main Reach	3008.318	100-YR FW	19000.00	559.33	570.50	570.50	572.97	0.008073	13.25	1735.44	369.49	0.83
Main Reach	2960		Culvert									
Main Reach	2920.482	100-YR FP	19000.00	552.78	569.03		570.50	0.002572	10.33	2491.96	373.94	0.50
Main Reach	2920.482	100-YR FW	19000.00	552.78	569.25		570.64	0.002395	10.07	2560.63	364.00	0.48
Main Reach	2784.674	100-YR FP	19000.00	552.18	568.07	567.48	569.94	0.004027	12.87	2297.11	406.45	0.62
Main Reach	2784.674	100-YR FW	19000.00	552.18	567.85	567.35	569.98	0.004572	13.56	2132.96	351.08	0.66
Main Reach	2576.711	100-YR FP	19000.00	552.16	566.15	565.34	568.68	0.008331	13.74	1746.68	455.41	0.71
Main Reach	2576.711	100-YR FW	19000.00	552.16	566.46	565.34	568.76	0.007228	13.03	1838.11	331.80	0.67

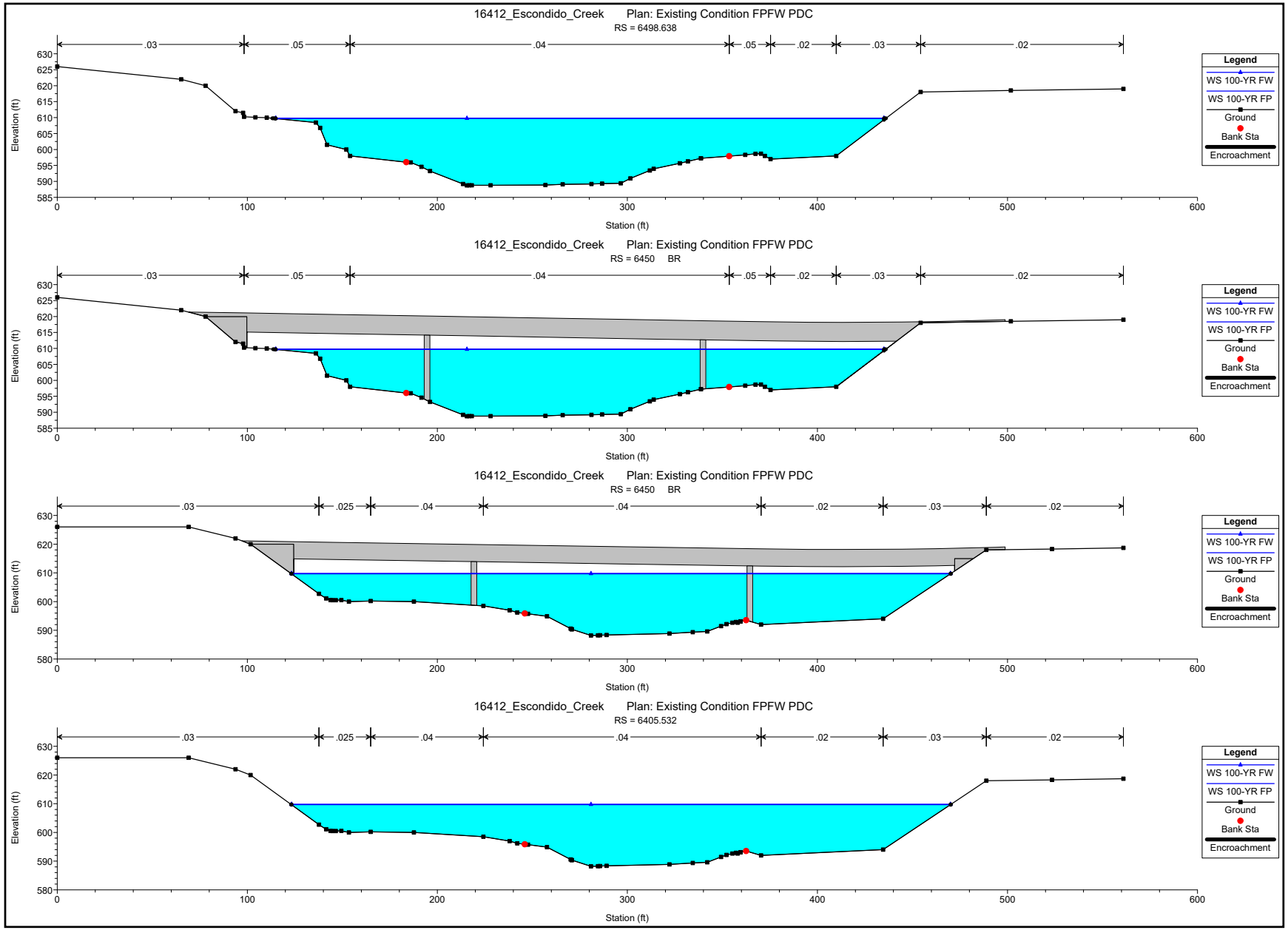
HEC-RAS Plan: Exist Cond PDC River: Escondido Creek Reach: Main Reach (Continued)

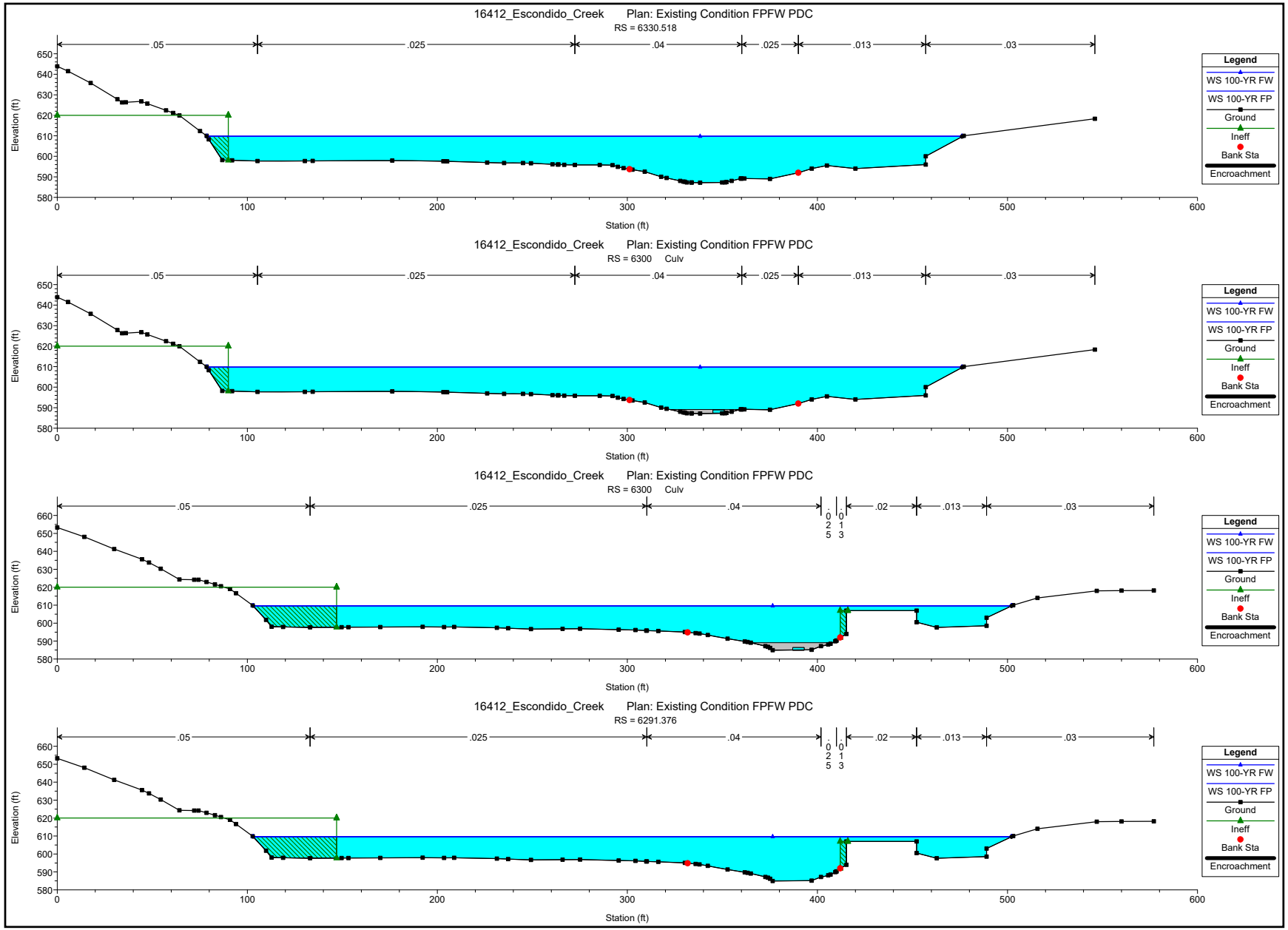
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main Reach	2153.799	100-YR FP	19000.00	549.98	566.03		566.89	0.001649	8.37	3014.94	577.45	0.40
Main Reach	2153.799	100-YR FW	19000.00	549.98	566.20		567.10	0.001656	8.46	2962.65	385.85	0.40
Main Reach	1955.801	100-YR FP	19000.00	549.58	565.75		566.59	0.001577	8.23	3377.30	524.51	0.39
Main Reach	1955.801	100-YR FW	19000.00	549.58	565.91		566.80	0.001602	8.36	3189.76	364.28	0.40
Main Reach	1657.338	100-YR FP	19000.00	549.26	565.32		566.16	0.001379	8.16	3096.34	483.76	0.37
Main Reach	1657.338	100-YR FW	19000.00	549.26	565.55		566.36	0.001292	7.98	3079.65	358.00	0.36
Main Reach	1296.548	100-YR FP	19000.00	549.05	564.88		565.60	0.001603	8.30	3691.88	631.81	0.40
Main Reach	1296.548	100-YR FW	19000.00	549.05	564.83		565.79	0.001947	9.13	2984.32	405.00	0.44
Main Reach	1072.523	100-YR FP	19000.00	549.00	564.57		565.22	0.001767	8.24	3518.58	503.35	0.41
Main Reach	1072.523	100-YR FW	19000.00	549.00	564.50		565.29	0.002277	8.96	3025.09	382.00	0.43
Main Reach	819.4155	100-YR FP	19000.00	548.80	561.57	561.57	564.24	0.007491	14.95	1782.77	325.02	0.82
Main Reach	819.4155	100-YR FW	19000.00	548.80	561.21	561.21	564.12	0.008414	15.48	1618.70	258.56	0.86
Main Reach	674.1666	100-YR FP	19000.00	544.37	560.40		562.20	0.003987	13.34	2230.25	326.61	0.62
Main Reach	674.1666	100-YR FW	19000.00	544.37	560.55		562.16	0.003503	12.59	2214.03	261.00	0.58
Main Reach	502.4229	100-YR FP	19000.00	544.70	559.39		561.44	0.005521	14.34	1916.86	252.25	0.71
Main Reach	502.4229	100-YR FW	19000.00	544.70	559.42		561.44	0.005414	14.22	1921.07	248.27	0.71
Main Reach	329.0702	100-YR FP	19000.00	541.82	559.71		560.69	0.002138	10.03	2705.68	280.91	0.46
Main Reach	329.0702	100-YR FW	19000.00	541.82	559.61		560.72	0.002375	10.52	2529.90	252.00	0.48
Main Reach	173.2091	100-YR FP	19000.00	541.59	558.48		560.22	0.003676	12.36	2147.10	283.88	0.59
Main Reach	173.2091	100-YR FW	19000.00	541.59	558.49		560.24	0.003681	12.37	2114.96	264.17	0.59
Main Reach	5.534686	100-YR FP	19000.00	545.00	557.76	555.81	559.25	0.009071	16.58	2158.26	319.68	0.83
Main Reach	5.534686	100-YR FW	19000.00	545.00	557.85	555.81	559.28	0.008223	15.87	2164.79	295.00	0.80

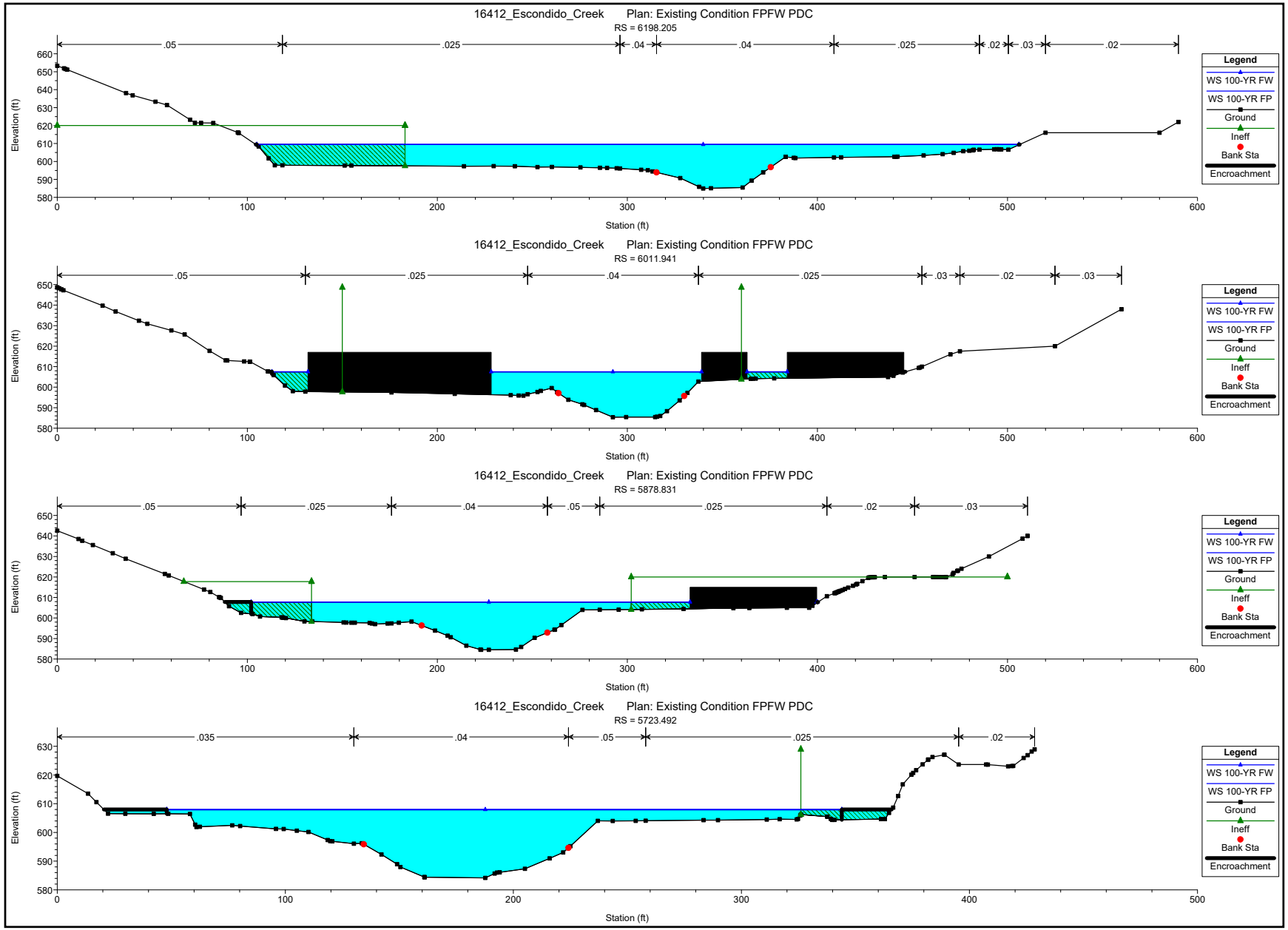

16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 8939.253 FEMA SECTION AD - County section 1421
.05
.05
0.4
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 8691.329
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 8447.902
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 8231.876
.05
.04
.05
0.2
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta

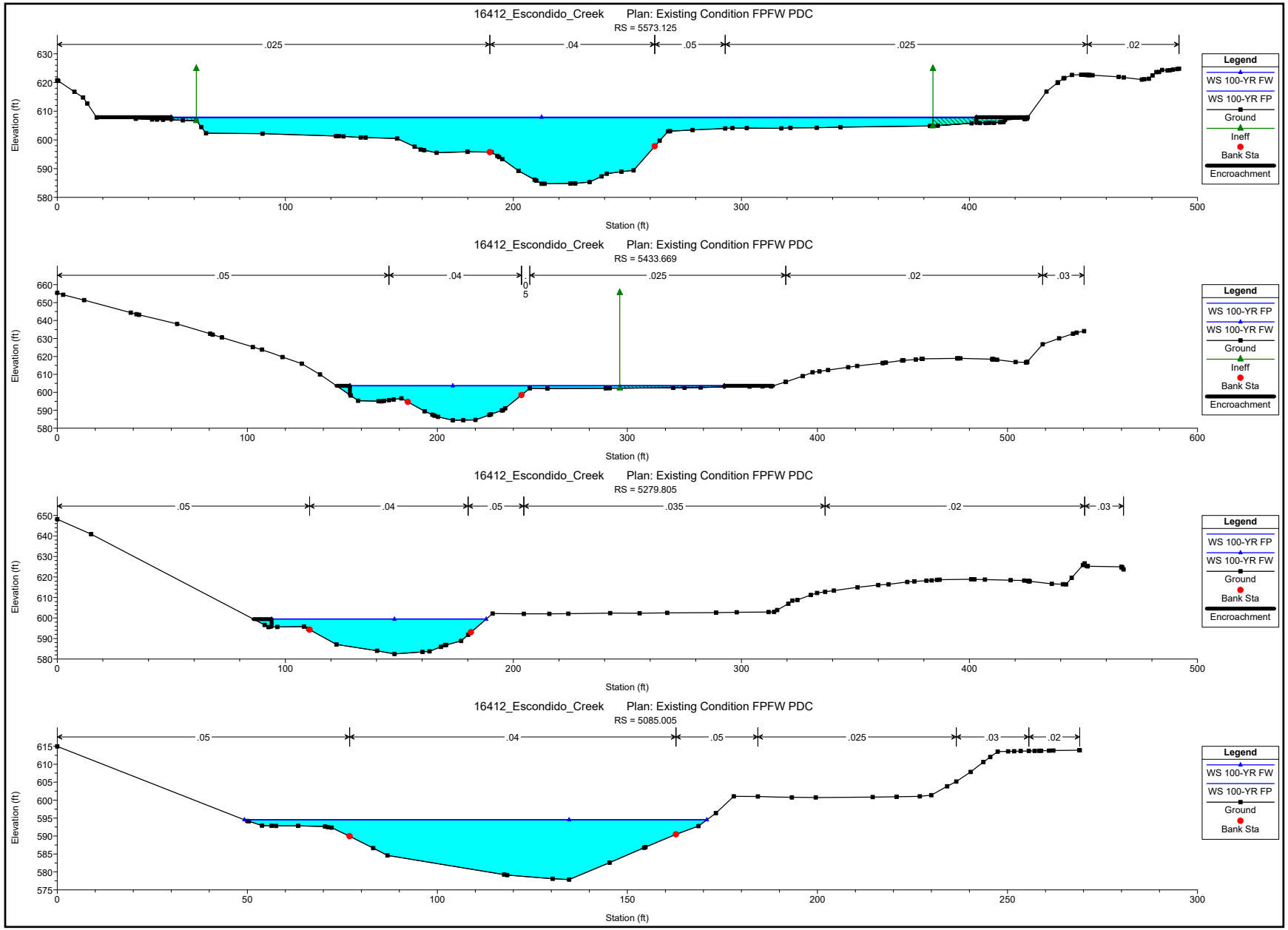

16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 7937.141
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 7728.097
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 7567.263
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 7398.386
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment

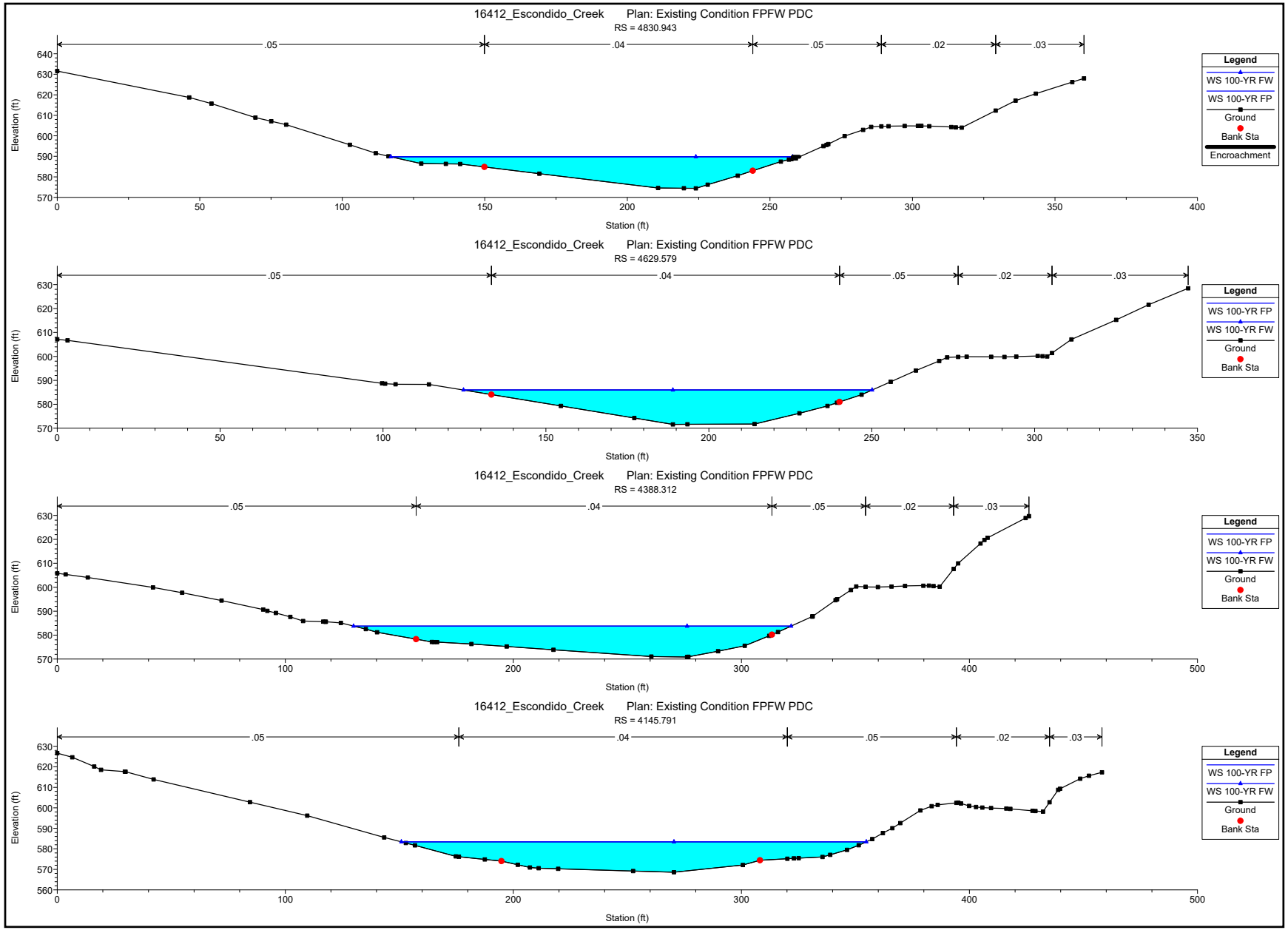

16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 7209.008
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 7021.154
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 6849.903
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 6725.722
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment

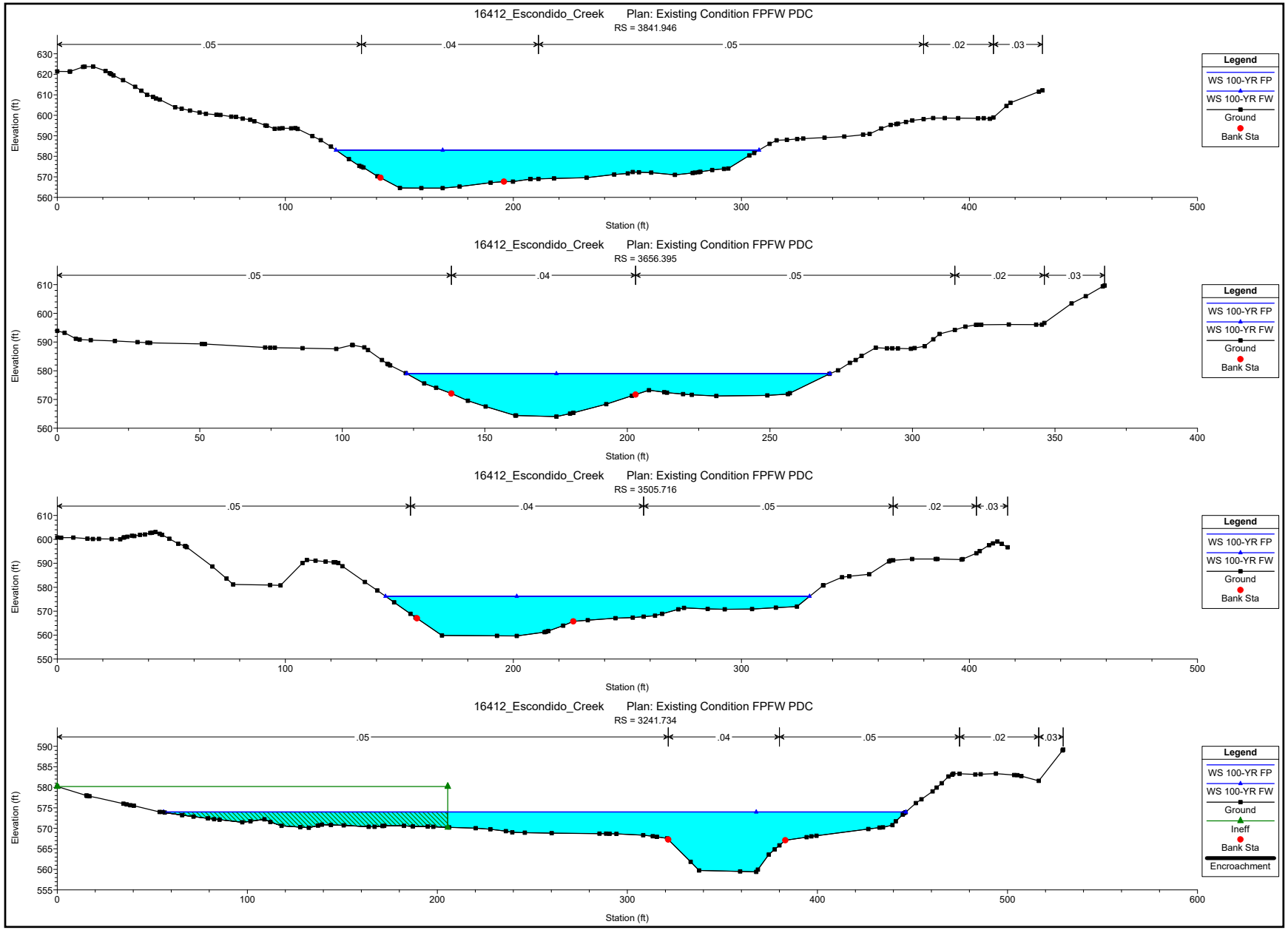

16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 6498.638
.03
.05
.04
.05
.02
.03
.02
Elevation (ft)
630
625
620
615
610
605
600
595
590
585
0
100
200
300
400
500
600
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 6450 BR
.03
.05
.04
.05
.02
.03
.02
Elevation (ft)
630
625
620
615
610
605
600
595
590
585
0
100
200
300
400
500
600
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 6450 BR
.03
.025
.04
.04
.02
.03
.02
Elevation (ft)
630
620
610
600
590
580
0
100
200
300
400
500
600
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 6405.532
.03
.025
.04
.04
.02
.03
.02
Elevation (ft)
630
620
610
600
590
580
0
100
200
300
400
500
600
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment

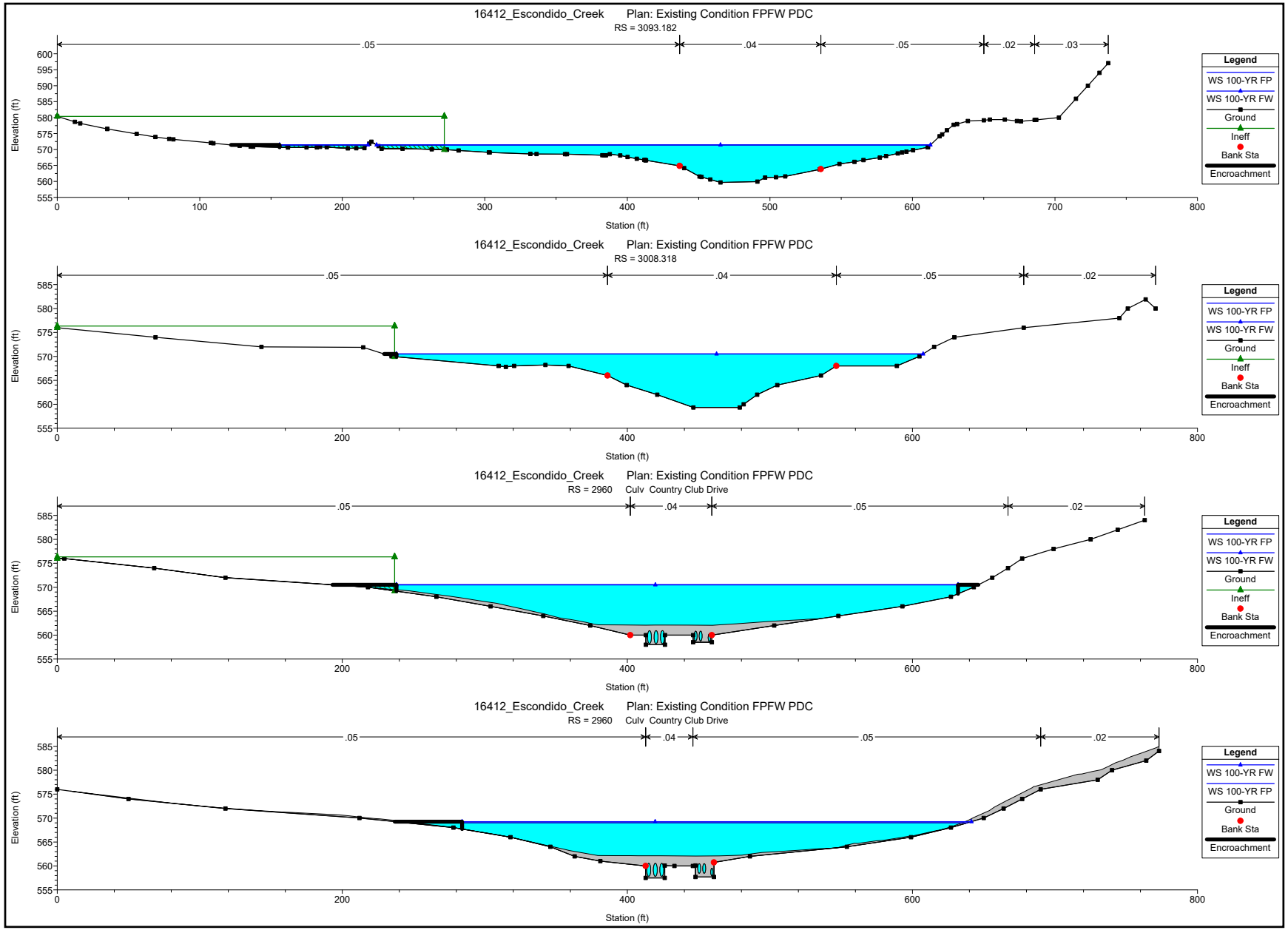

16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 6330.518
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 6300 Culv
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 6300 Culv
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 6291.376
.05
.025
.04
.025
.013
.03
.02
.025
.013
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment

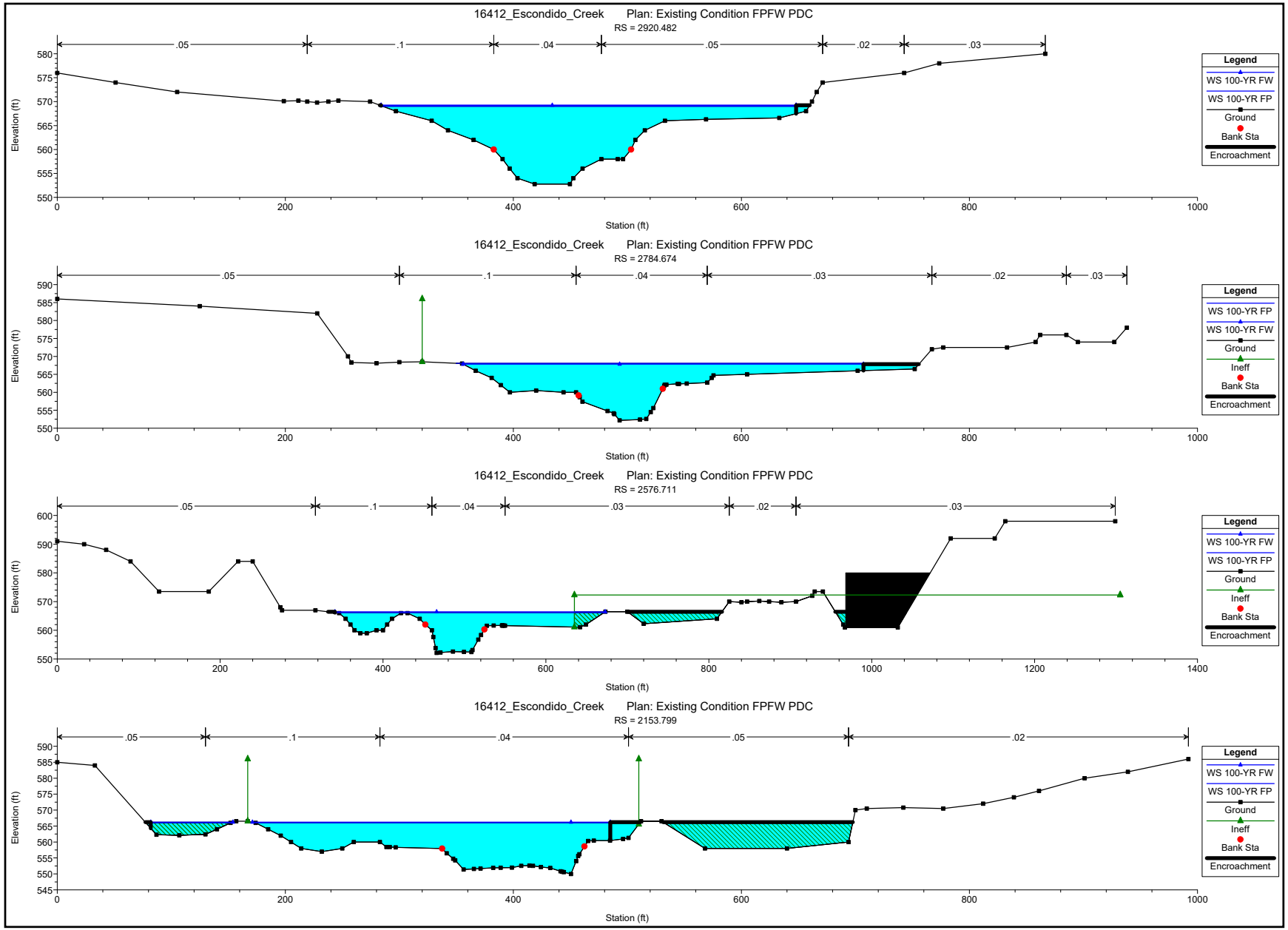

16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 6198.205
.05
.025
.04
.04
.025
.02
.03
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 6011.941
.05
.025
.04
.025
.03
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 5878.831
.05
.025
.04
.05
.025
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 5723.492
.035
.04
.05
.025
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment


16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 5573.125
.025
.04
.05
.025
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 5433.669
.05
.04
0
5
.025
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 5279.805
.05
.04
.05
.035
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 5085.005
.05
.04
.05
.025
.03
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta


16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 4830.943
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 4629.579
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 4388.312
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 4145.791
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta


16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 3841.946
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 3656.395
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 3505.716
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 3241.734
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Ineff
Bank Sta
Encroachment


16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 3093.182
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 3008.318
.05
.04
.05
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 2960 Culv Country Club Drive
.05
.04
.05
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 2960 Culv Country Club Drive
.05
.04
.05
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment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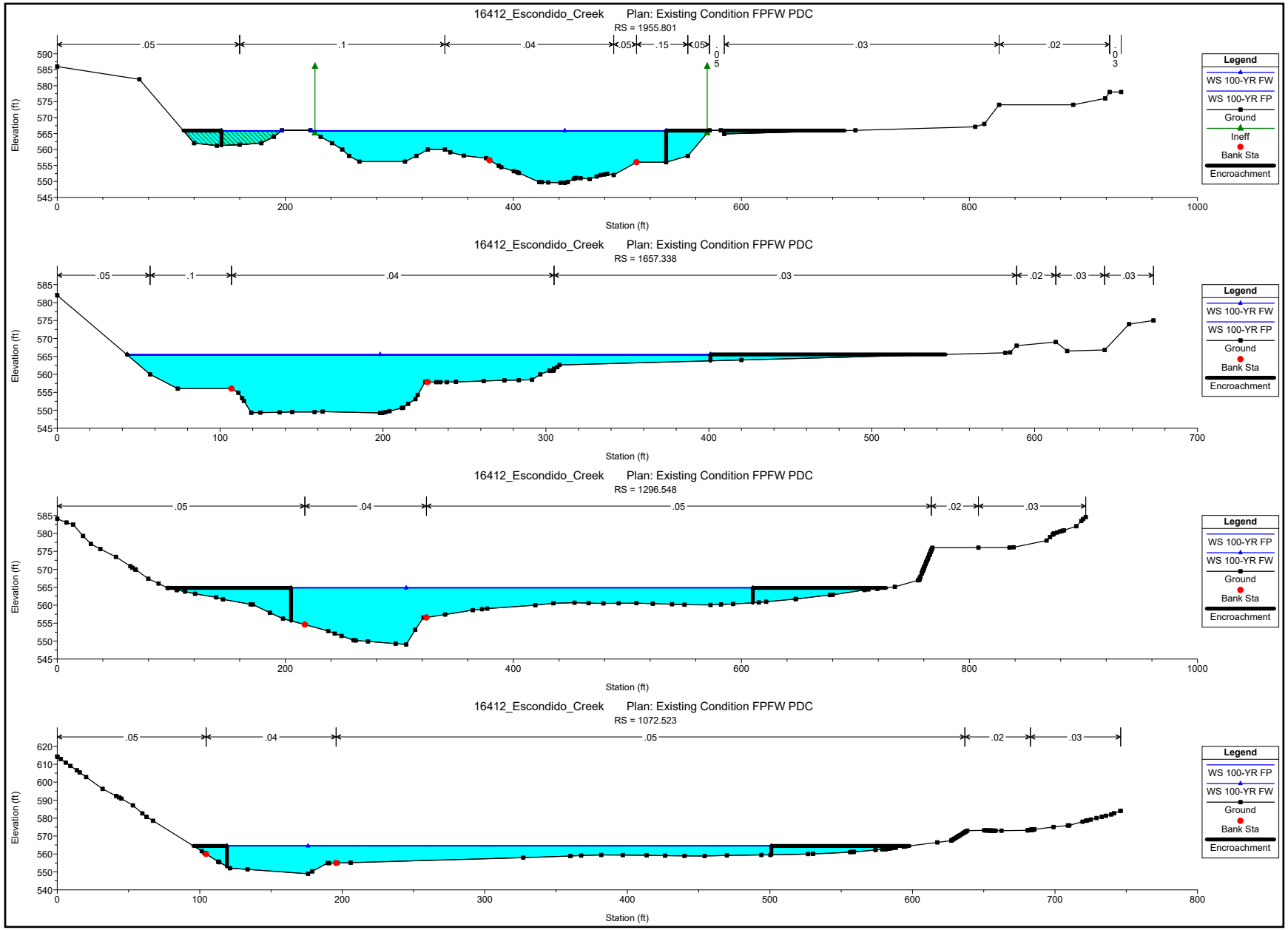
RS = 2920.482
.05
.1
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 2784.674
.05
.1
.04
.03
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 2576.711
.05
.1
.04
.03
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 2153.799
.05
.1
.04
.05
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment


16412_Escondido_Creek Plan: Existing Condition FPFW PDC
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.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 1657.338
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.03
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.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 1296.548
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 1072.523
.05
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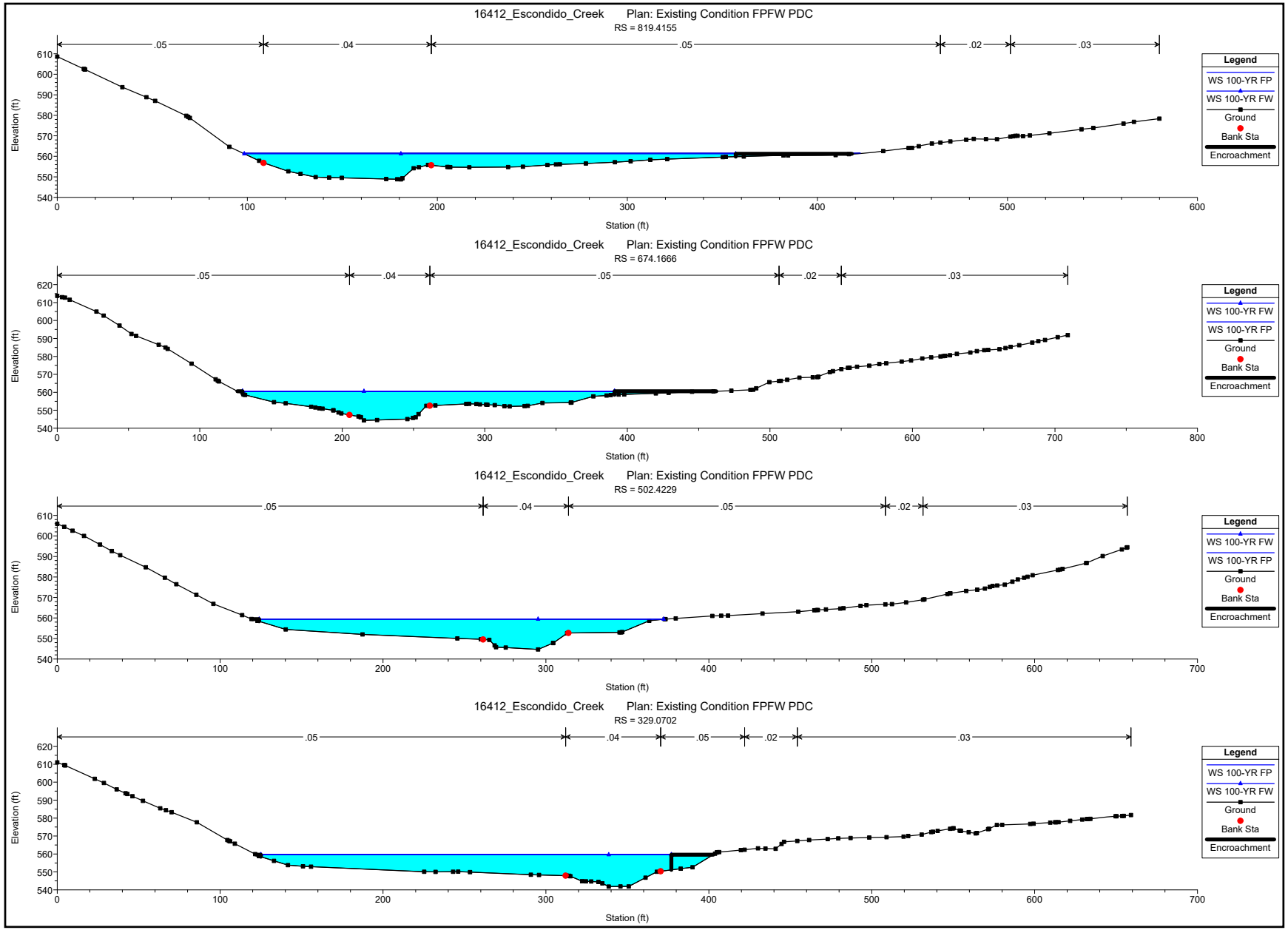
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
Encroachment


16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 819.4155
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.04
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.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 674.1666
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.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 502.4229
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.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 329.0702
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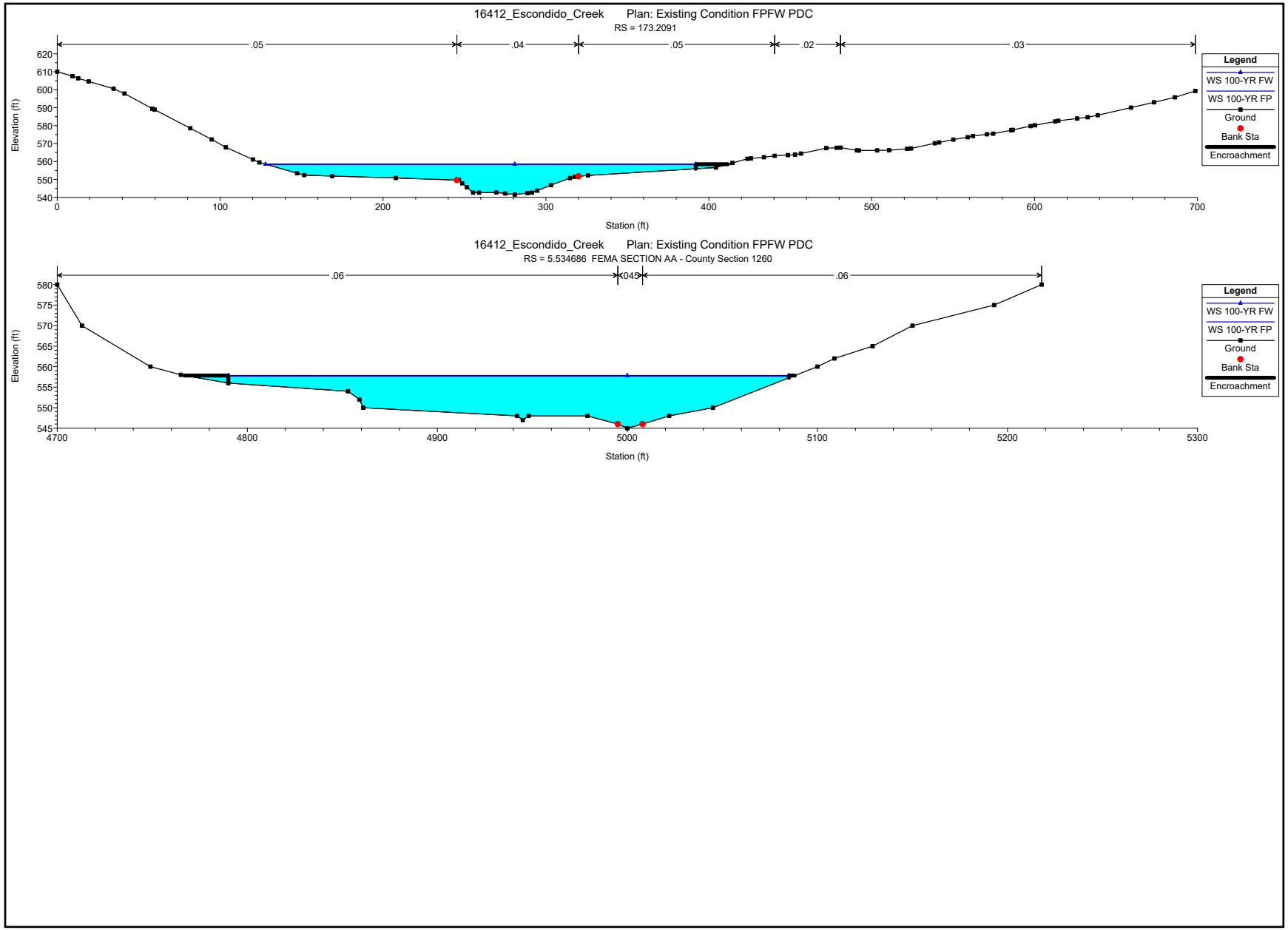
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
Encroachment


16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 173.2091
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Elevation (ft)
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610
600
590
580
570
560
550
540
0
100
200
300
400
500
600
700
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Existing Condition FPFW PDC
RS = 5.534686 FEMA SECTION AA - County Section 1260
.06
.045
.06
Elevation (ft)
580
575
570
565
560
555
550
545
4700
4800
4900
5000
5100
5200
5300
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment

PROPOSED CONDITION ANALYSIS

HEC-RAS Plan: Prop FPFW River: Escondido Creek Reach: Main Reach

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main Reach	8939.253	100-YR FP	18000.00	595.00	611.82		612.54	0.002189	11.12	2954.03	346.42	0.48
Main Reach	8939.253	100-YR FW	18000.00	595.00	611.70		612.69	0.002666	12.21	2458.93	240.00	0.53
Main Reach	8691.329	100-YR FP	19000.00	592.83	611.52		612.23	0.000956	7.21	3194.56	311.16	0.32
Main Reach	8691.329	100-YR FW	19000.00	592.83	611.55		612.27	0.000959	7.23	3051.90	253.00	0.32
Main Reach	8447.902	100-YR FP	19000.00	591.67	611.63	601.49	611.97	0.000417	4.96	4619.48	567.26	0.21
Main Reach	8447.902	100-YR FW	19000.00	591.67	611.67	601.49	612.01	0.000412	4.95	4637.30	417.28	0.21
Main Reach	8231.876	100-YR FP	19000.00	590.12	611.17		611.82	0.000752	6.96	3377.42	388.92	0.29
Main Reach	8231.876	100-YR FW	19000.00	590.12	611.22		611.86	0.000744	6.94	3395.63	392.44	0.29
Main Reach	7937.141	100-YR FP	19000.00	589.14	610.36		611.49	0.001176	8.89	2437.83	172.52	0.36
Main Reach	7937.141	100-YR FW	19000.00	589.14	610.42		611.53	0.001164	8.86	2446.90	172.77	0.36
Main Reach	7728.097	100-YR FP	19000.00	588.81	610.41	601.65	611.17	0.000856	7.71	3143.64	255.77	0.31
Main Reach	7728.097	100-YR FW	19000.00	588.81	610.46	601.65	611.22	0.000846	7.67	3157.53	255.89	0.31
Main Reach	7567.263	100-YR FP	19000.00	589.73	610.37	604.51	610.98	0.000954	7.80	3571.80	322.45	0.32
Main Reach	7567.263	100-YR FW	19000.00	589.73	610.43	604.51	611.03	0.000940	7.76	3589.85	322.79	0.32
Main Reach	7398.386	100-YR FP	19000.00	589.73	609.94		610.77	0.001142	8.51	3023.62	266.79	0.35
Main Reach	7398.386	100-YR FW	19000.00	589.73	610.00		610.83	0.001118	8.44	3021.94	257.22	0.35
Main Reach	7209.008	100-YR FP	19000.00	589.70	610.00	601.09	610.53	0.000648	6.44	3716.75	305.67	0.27
Main Reach	7209.008	100-YR FW	19000.00	589.70	610.06	601.09	610.58	0.000635	6.39	3727.75	298.00	0.27
Main Reach	7021.154	100-YR FP	19000.00	590.07	610.02		610.36	0.000486	5.32	4614.20	397.10	0.23
Main Reach	7021.154	100-YR FW	19000.00	590.07	610.09		610.43	0.000478	5.29	4639.75	397.32	0.23
Main Reach	6849.903	100-YR FP	19000.00	589.34	610.08		610.27	0.000227	3.68	5992.73	555.23	0.16
Main Reach	6849.903	100-YR FW	19000.00	589.34	610.15		610.33	0.000224	3.66	6020.45	556.36	0.16
Main Reach	6725.722	100-YR FP	19000.00	589.11	609.66		610.19	0.000808	7.06	3786.19	333.89	0.29
Main Reach	6725.722	100-YR FW	19000.00	589.11	609.73		610.25	0.000794	7.02	3809.59	334.17	0.29
Main Reach	6498.638	100-YR FP	19000.00	588.76	609.70	599.31	610.00	0.000303	4.42	4418.30	321.31	0.18
Main Reach	6498.638	100-YR FW	19000.00	588.76	609.77	599.31	610.07	0.000298	4.39	4437.40	312.05	0.18

HEC-RAS Plan: Prop FPFW River: Escondido Creek Reach: Main Reach (Continued)

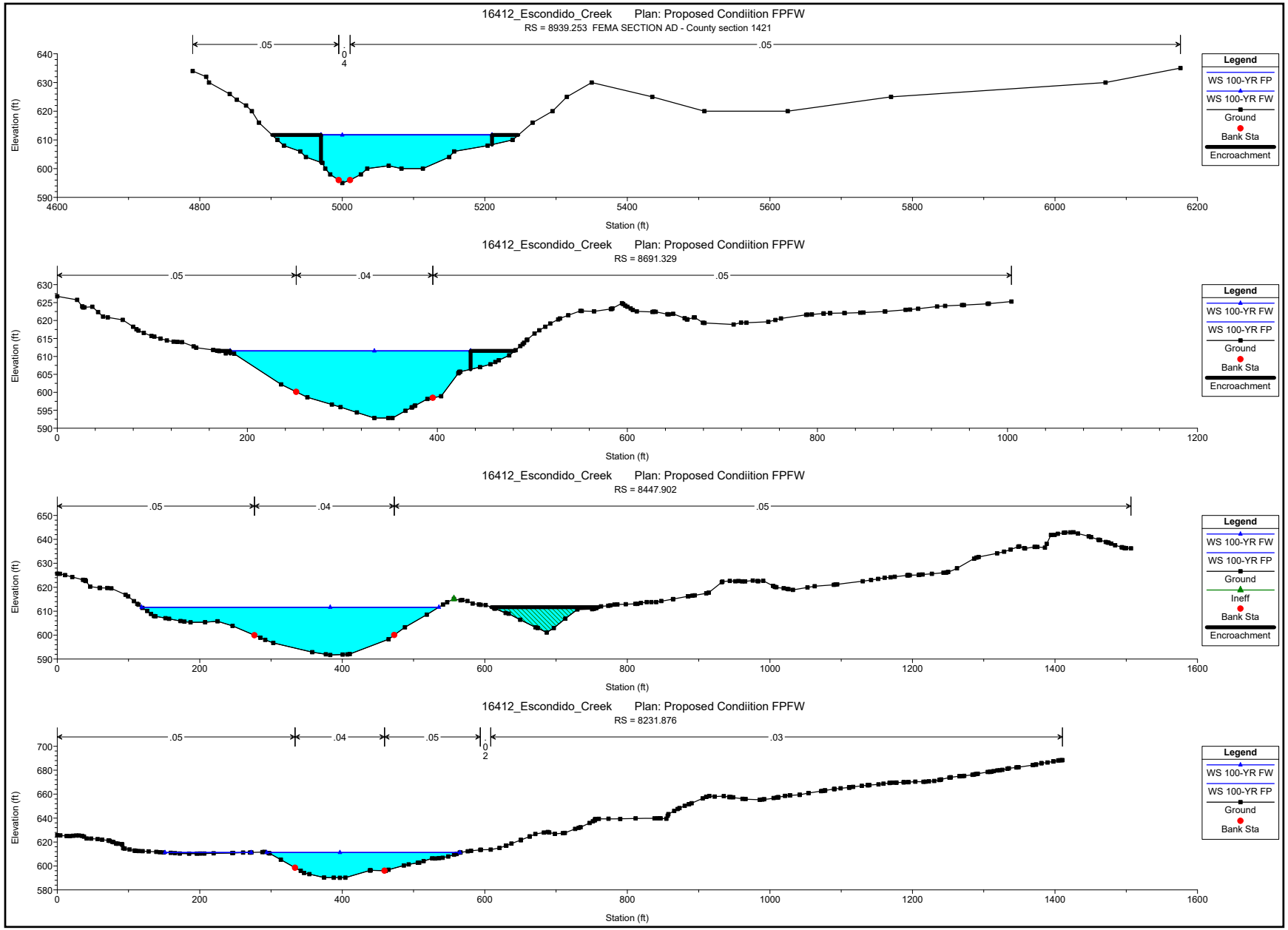
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main Reach	6450		Bridge									
Main Reach	6405.532	100-YR FP	19000.00	588.20	609.68		609.97	0.000179	3.53	4891.53	346.85	0.14
Main Reach	6405.532	100-YR FW	19000.00	588.20	609.75		610.04	0.000176	3.52	4900.35	339.23	0.14
Main Reach	6330.518	100-YR FP	19000.00	587.17	609.69	599.60	609.95	0.000086	3.04	5559.59	397.60	0.12
Main Reach	6330.518	100-YR FW	19000.00	587.17	609.76	599.60	610.02	0.000085	3.03	5586.45	397.78	0.12
Main Reach	6300		Culvert									
Main Reach	6291.376	100-YR FP	19000.00	584.95	609.59		609.87	0.000184	3.91	4540.42	399.10	0.15
Main Reach	6291.376	100-YR FW	19000.00	584.95	609.67		609.95	0.000181	3.88	4566.75	399.31	0.15
Main Reach	6198.205	100-YR FP	19000.00	584.95	609.38		609.84	0.000394	5.24	3665.75	401.72	0.20
Main Reach	6198.205	100-YR FW	19000.00	584.95	609.46		609.91	0.000386	5.20	3690.93	401.43	0.20
Main Reach	6011.941	100-YR FP	19000.00	585.37	607.42		609.53	0.002443	12.21	1671.15	152.95	0.50
Main Reach	6011.941	100-YR FW	19000.00	585.37	607.52		609.61	0.002391	12.12	1682.97	151.62	0.49
Main Reach	5878.831	100-YR FP	19000.00	584.48	607.70		609.06	0.001428	9.70	2132.87	245.36	0.39
Main Reach	5878.831	100-YR FW	19000.00	584.48	607.81		609.14	0.001391	9.61	2151.09	231.77	0.38
Main Reach	5723.492	100-YR FP	19000.00	584.16	607.85		608.74	0.000952	8.25	2866.84	345.16	0.32
Main Reach	5723.492	100-YR FW	19000.00	584.16	607.98		608.82	0.000907	8.08	2865.02	296.00	0.32
Main Reach	5573.125	100-YR FP	19000.00	584.75	607.79		608.57	0.000905	7.59	2843.57	407.05	0.30
Main Reach	5573.125	100-YR FW	19000.00	584.75	607.91		608.67	0.000870	7.47	2882.36	353.00	0.30
Main Reach	5433.669	100-YR FP	19000.00	584.41	603.68	603.68	607.93	0.006796	17.61	1260.93	230.01	0.79
Main Reach	5433.669	100-YR FW	19000.00	584.41	603.61	603.61	608.02	0.007033	17.86	1232.44	208.00	0.81
Main Reach	5279.805	100-YR FP	19000.00	582.48	599.57	599.57	605.20	0.009448	19.34	1056.06	102.41	0.93
Main Reach	5279.805	100-YR FW	19000.00	582.48	599.45	599.45	605.31	0.009907	19.68	1024.99	94.10	0.95
Main Reach	5085.005	100-YR FP	19000.00	577.88	594.51	594.51	599.61	0.009508	18.26	1094.12	121.65	0.93
Main Reach	5085.005	100-YR FW	19000.00	577.88	594.52	594.52	599.61	0.009484	18.25	1095.11	121.68	0.93
Main Reach	4830.943	100-YR FP	19000.00	574.37	589.77	589.77	594.27	0.009271	17.41	1192.58	143.33	0.92
Main Reach	4830.943	100-YR FW	19000.00	574.37	589.77	589.77	594.27	0.009263	17.40	1191.26	140.98	0.92

HEC-RAS Plan: Prop FPFW River: Escondido Creek Reach: Main Reach (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main Reach	4629.579	100-YR FP	19000.00	571.59	585.96	585.96	590.74	0.010838	17.62	1103.23	125.41	0.98
Main Reach	4629.579	100-YR FW	19000.00	571.59	585.96	585.96	590.74	0.010838	17.62	1103.23	125.41	0.98
Main Reach	4388.312	100-YR FP	19000.00	570.84	583.76		586.10	0.005491	12.37	1599.24	191.89	0.70
Main Reach	4388.312	100-YR FW	19000.00	570.84	583.76		586.10	0.005491	12.37	1599.24	191.89	0.70
Main Reach	4145.791	100-YR FP	19000.00	568.57	583.42		584.96	0.002683	10.59	2028.08	203.86	0.52
Main Reach	4145.791	100-YR FW	19000.00	568.57	583.42		584.96	0.002683	10.59	2028.08	203.86	0.52
Main Reach	3841.946	100-YR FP	19000.00	564.49	583.05		584.24	0.001813	10.39	2349.81	185.59	0.44
Main Reach	3841.946	100-YR FW	19000.00	564.49	583.05		584.24	0.001813	10.39	2349.81	185.59	0.44
Main Reach	3656.395	100-YR FP	19000.00	564.06	578.99	578.99	583.31	0.009364	18.43	1275.41	148.48	0.94
Main Reach	3656.395	100-YR FW	19000.00	564.06	578.99	578.99	583.31	0.009364	18.43	1275.41	148.48	0.94
Main Reach	3505.716	100-YR FP	19000.00	559.66	576.20		578.39	0.003615	13.25	1774.92	185.98	0.60
Main Reach	3505.716	100-YR FW	19000.00	559.66	576.20		578.39	0.003615	13.25	1774.92	185.98	0.60
Main Reach	3241.734	100-YR FP	19000.00	559.40	573.99	573.99	577.02	0.007518	16.37	1642.30	361.38	0.82
Main Reach	3241.734	100-YR FW	19000.00	559.40	573.99	573.99	577.02	0.007518	16.37	1642.30	361.38	0.82
Main Reach	3093.182	100-YR FP	19000.00	559.68	571.32	571.32	573.95	0.007269	14.55	1757.36	387.81	0.81
Main Reach	3093.182	100-YR FW	19000.00	559.68	571.32	571.32	573.95	0.007269	14.55	1757.36	387.81	0.81
Main Reach	3008.318	100-YR FP	19000.00	559.33	570.03	567.15	571.58	0.003998	10.06	1955.79	293.51	0.58
Main Reach	3008.318	100-YR FW	19000.00	559.33	570.13	567.15	571.64	0.003864	9.95	1979.94	250.00	0.57
Main Reach	2960		Bridge									
Main Reach	2920.482	100-YR FP	19000.00	552.80	569.03		570.64	0.004936	10.51	2055.57	371.14	0.50
Main Reach	2920.482	100-YR FW	19000.00	552.80	569.22		570.78	0.004715	10.36	2099.96	238.66	0.49
Main Reach	2784.674	100-YR FP	19000.00	552.18	568.07	567.48	569.94	0.004027	12.87	2297.11	406.45	0.62
Main Reach	2784.674	100-YR FW	19000.00	552.18	567.94	567.33	570.00	0.004392	13.35	2166.01	351.65	0.65
Main Reach	2576.711	100-YR FP	19000.00	552.16	566.15	565.34	568.68	0.008331	13.74	1746.68	455.41	0.71
Main Reach	2576.711	100-YR FW	19000.00	552.16	566.45	565.35	568.78	0.007462	13.23	1836.61	302.18	0.68

HEC-RAS Plan: Prop FPFW River: Escondido Creek Reach: Main Reach (Continued)

Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main Reach	2153.799	100-YR FP	19000.00	549.98	566.03		566.89	0.001649	8.37	3014.94	577.45	0.40
Main Reach	2153.799	100-YR FW	19000.00	549.98	566.20		567.10	0.001656	8.46	2962.79	313.83	0.40
Main Reach	1955.801	100-YR FP	19000.00	549.58	565.75		566.59	0.001577	8.23	3377.30	524.51	0.39
Main Reach	1955.801	100-YR FW	19000.00	549.58	565.91		566.80	0.001604	8.37	3189.61	308.00	0.40
Main Reach	1657.338	100-YR FP	19000.00	549.26	565.32		566.16	0.001379	8.16	3096.34	483.76	0.37
Main Reach	1657.338	100-YR FW	19000.00	549.26	565.55		566.36	0.001292	7.98	3079.66	358.37	0.36
Main Reach	1296.548	100-YR FP	19000.00	549.05	564.88		565.60	0.001603	8.30	3691.88	631.81	0.40
Main Reach	1296.548	100-YR FW	19000.00	549.05	564.83		565.79	0.001947	9.13	2984.32	405.00	0.44
Main Reach	1072.523	100-YR FP	19000.00	549.00	564.57		565.22	0.001767	8.24	3518.58	503.35	0.41
Main Reach	1072.523	100-YR FW	19000.00	549.00	564.50		565.29	0.002277	8.96	3025.07	382.00	0.43
Main Reach	819.4155	100-YR FP	19000.00	548.80	561.57	561.57	564.24	0.007491	14.95	1782.77	325.02	0.82
Main Reach	819.4155	100-YR FW	19000.00	548.80	561.21	561.21	564.12	0.008414	15.48	1618.70	258.56	0.86
Main Reach	674.1666	100-YR FP	19000.00	544.37	560.40		562.20	0.003987	13.34	2230.25	326.61	0.62
Main Reach	674.1666	100-YR FW	19000.00	544.37	561.44		562.72	0.002619	11.33	2445.64	261.00	0.51
Main Reach	502.4229	100-YR FP	19000.00	544.70	559.39		561.44	0.005521	14.34	1916.86	252.25	0.71
Main Reach	502.4229	100-YR FW	19000.00	544.70	558.69	558.34	561.86	0.008537	17.15	1509.91	191.00	0.88
Main Reach	329.0702	100-YR FP	19000.00	541.82	559.71		560.69	0.002138	10.03	2705.68	280.91	0.46
Main Reach	329.0702	100-YR FW	19000.00	541.82	559.61		560.72	0.002375	10.52	2529.90	252.00	0.48
Main Reach	173.2091	100-YR FP	19000.00	541.59	558.48		560.22	0.003676	12.36	2147.10	283.88	0.59
Main Reach	173.2091	100-YR FW	19000.00	541.59	558.49		560.24	0.003681	12.37	2114.96	264.17	0.59
Main Reach	5.534686	100-YR FP	19000.00	545.00	557.76	555.81	559.25	0.009071	16.58	2158.26	319.68	0.83
Main Reach	5.534686	100-YR FW	19000.00	545.00	557.85	555.81	559.28	0.008223	15.87	2164.79	295.00	0.80


16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 8939.253 FEMA SECTION AD - County section 1421
.05
.05
0.04
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 8691.329
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 8447.902
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 8231.876
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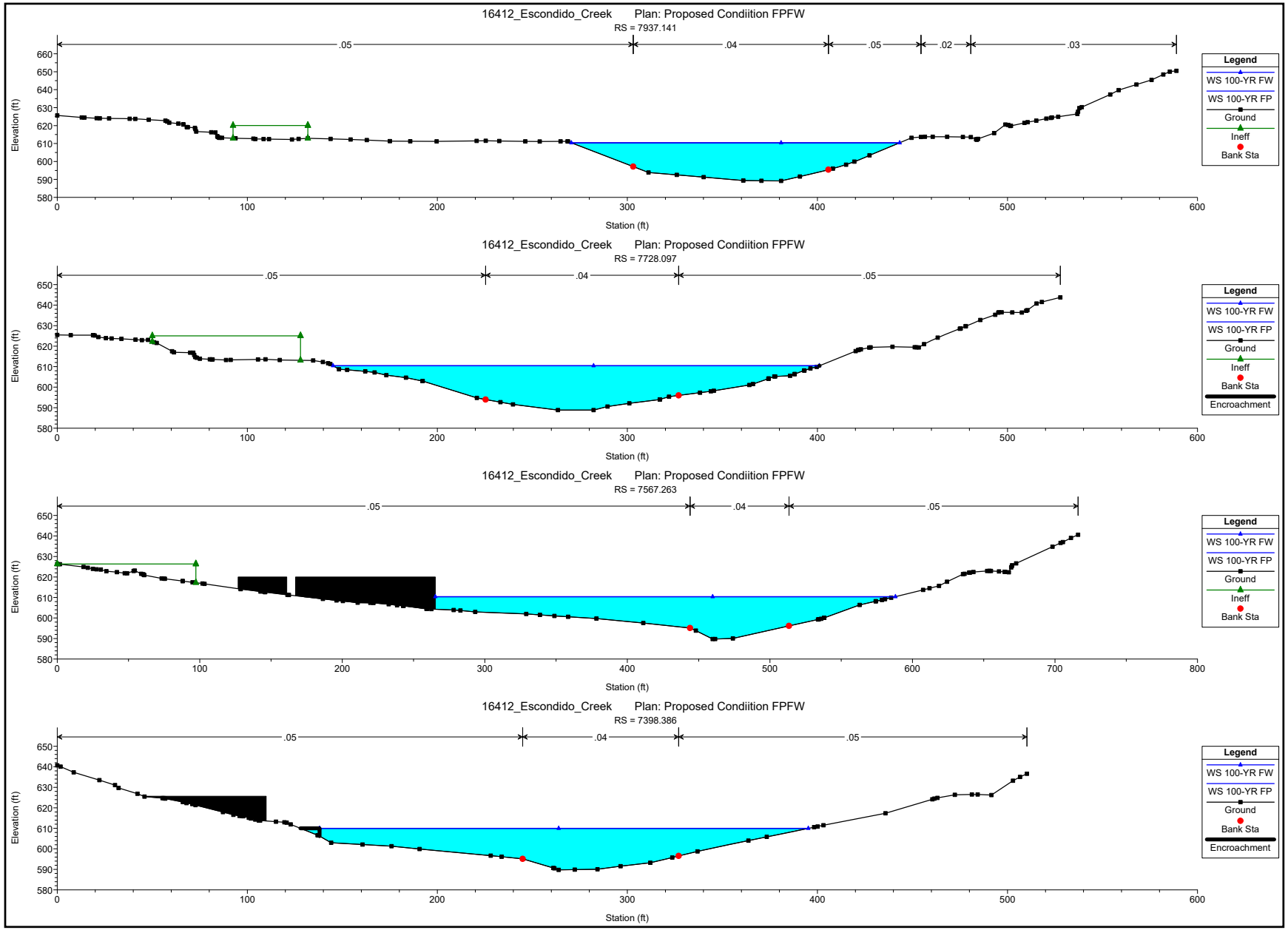
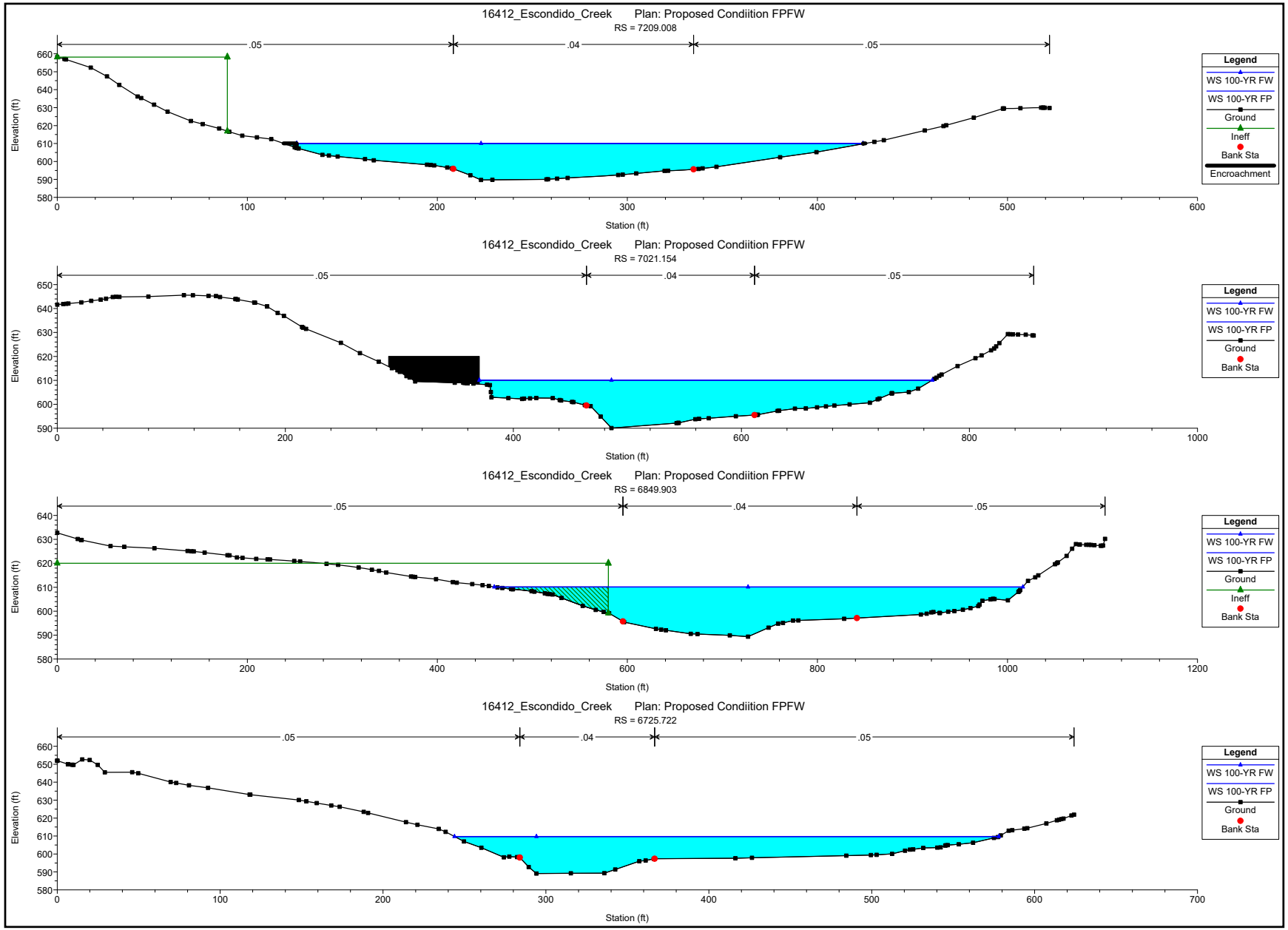
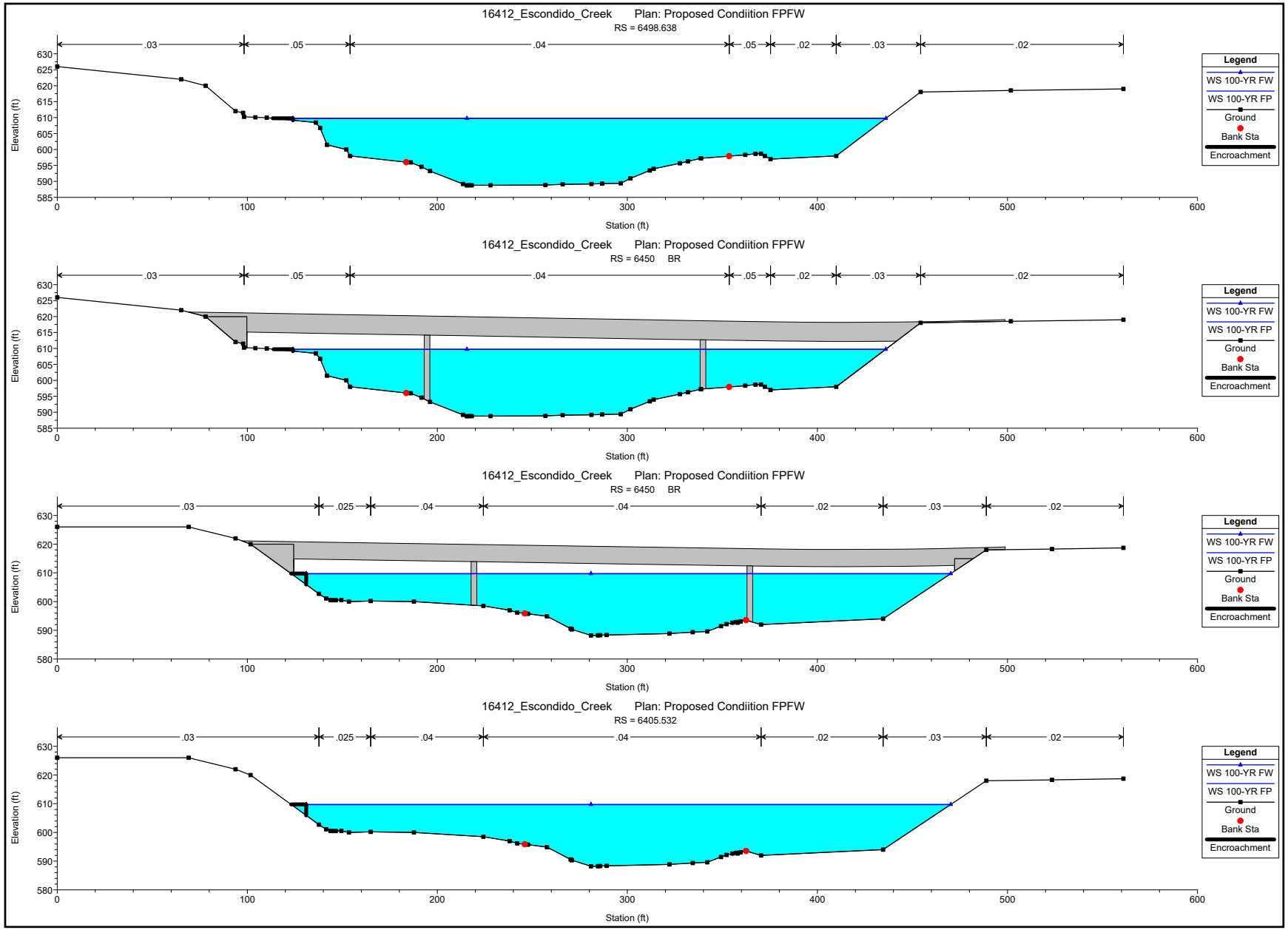
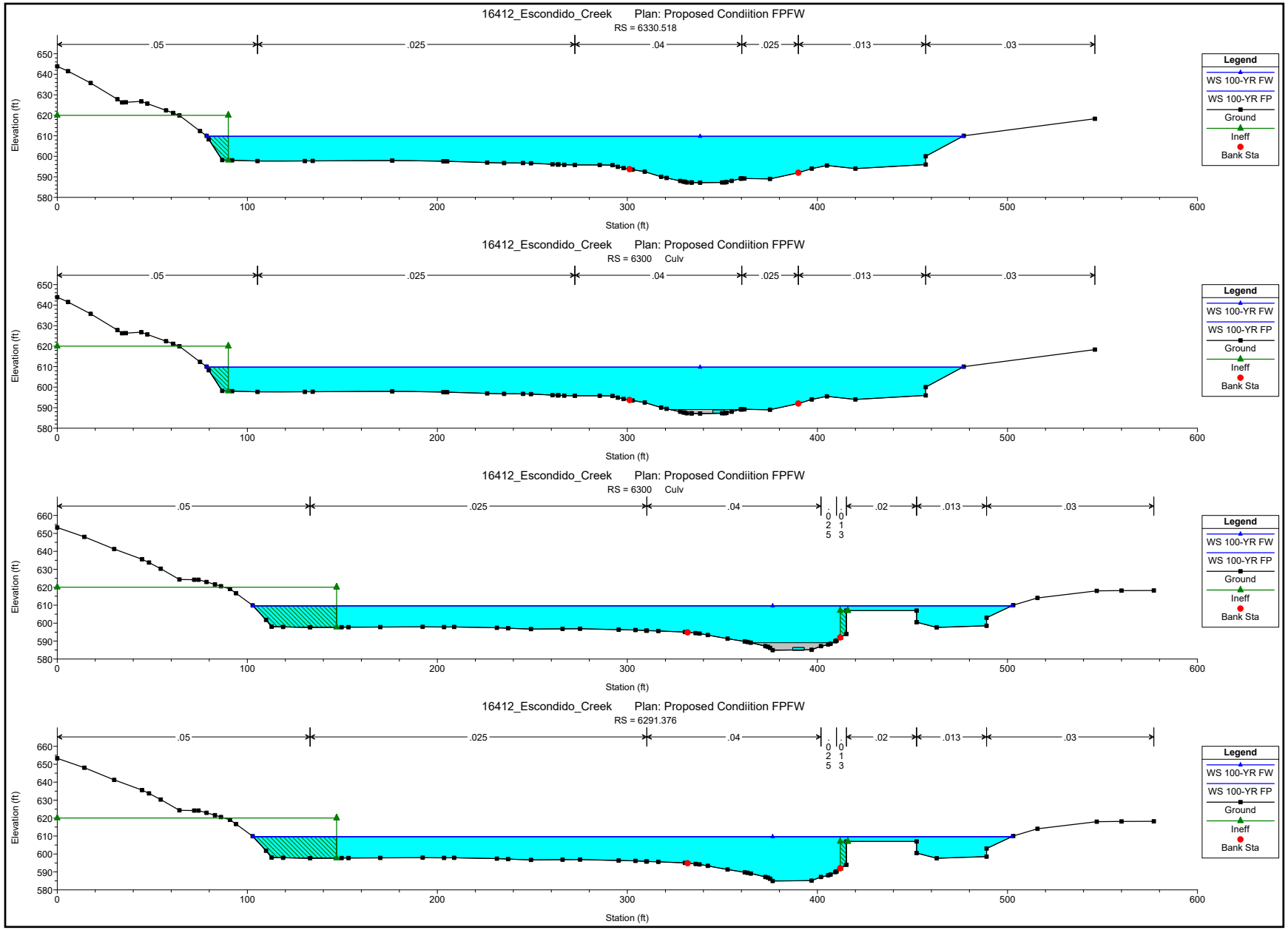
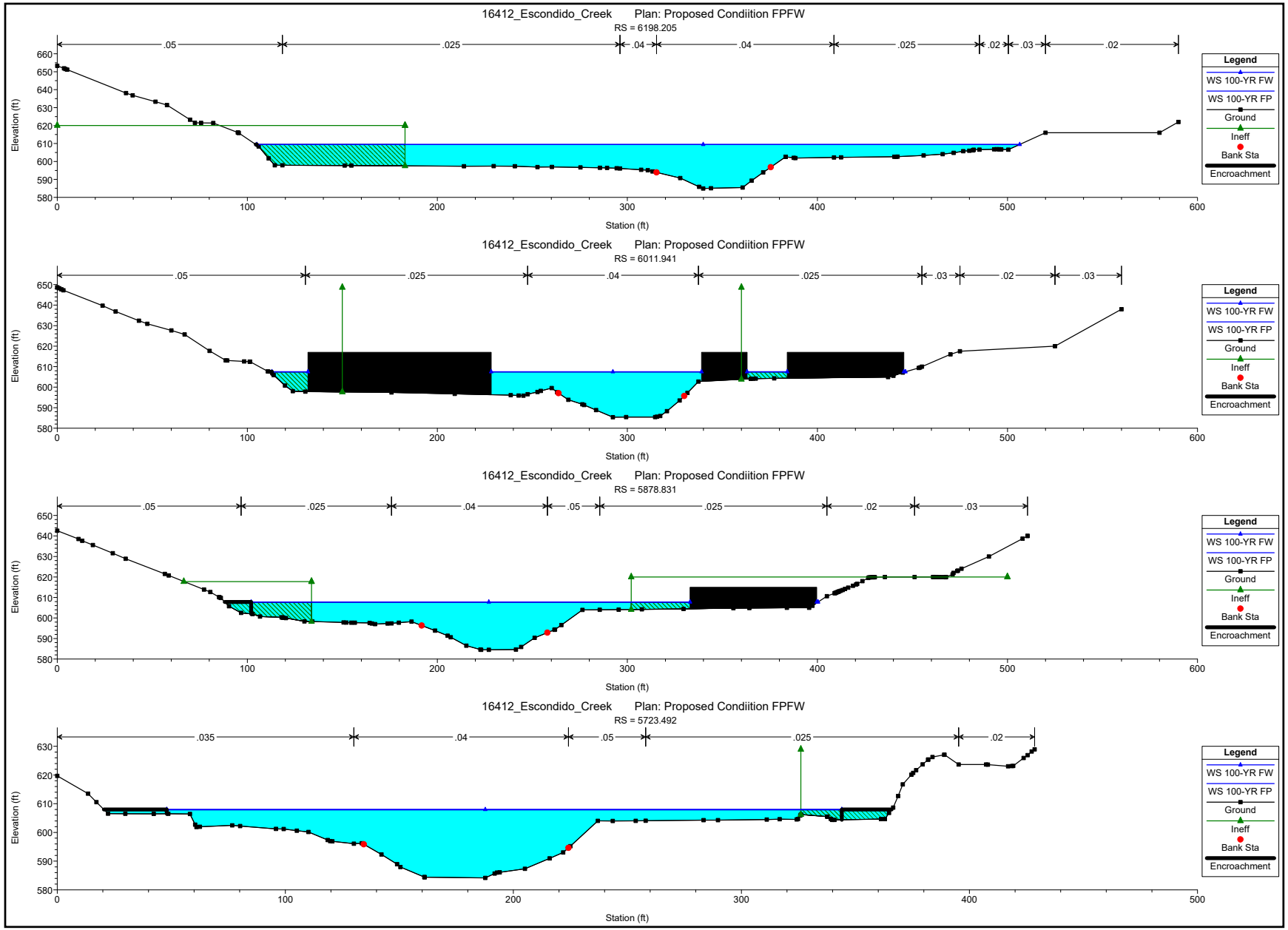
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta

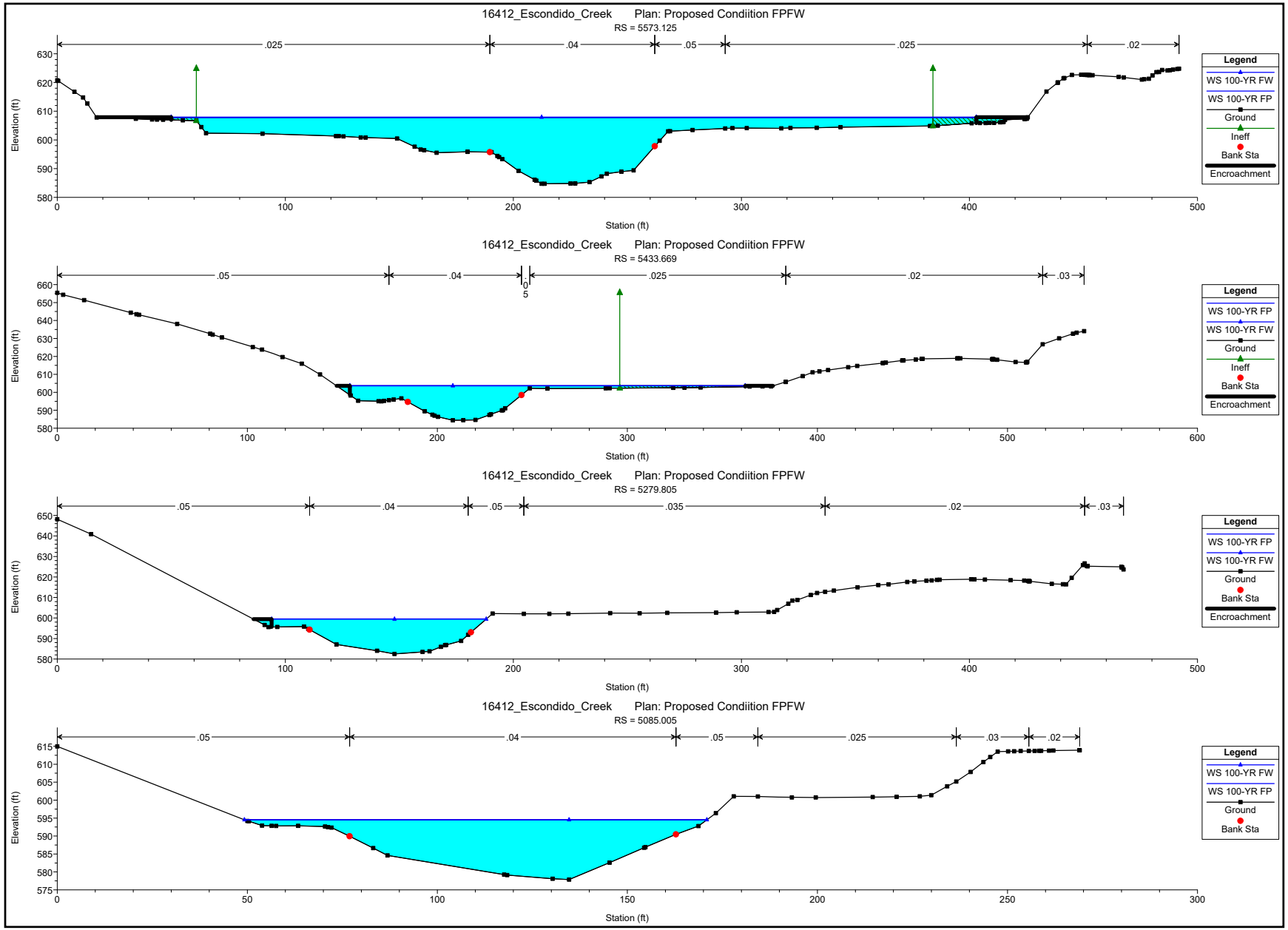

16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 7937.141
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 7728.097
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 7567.263
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 7398.386
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment

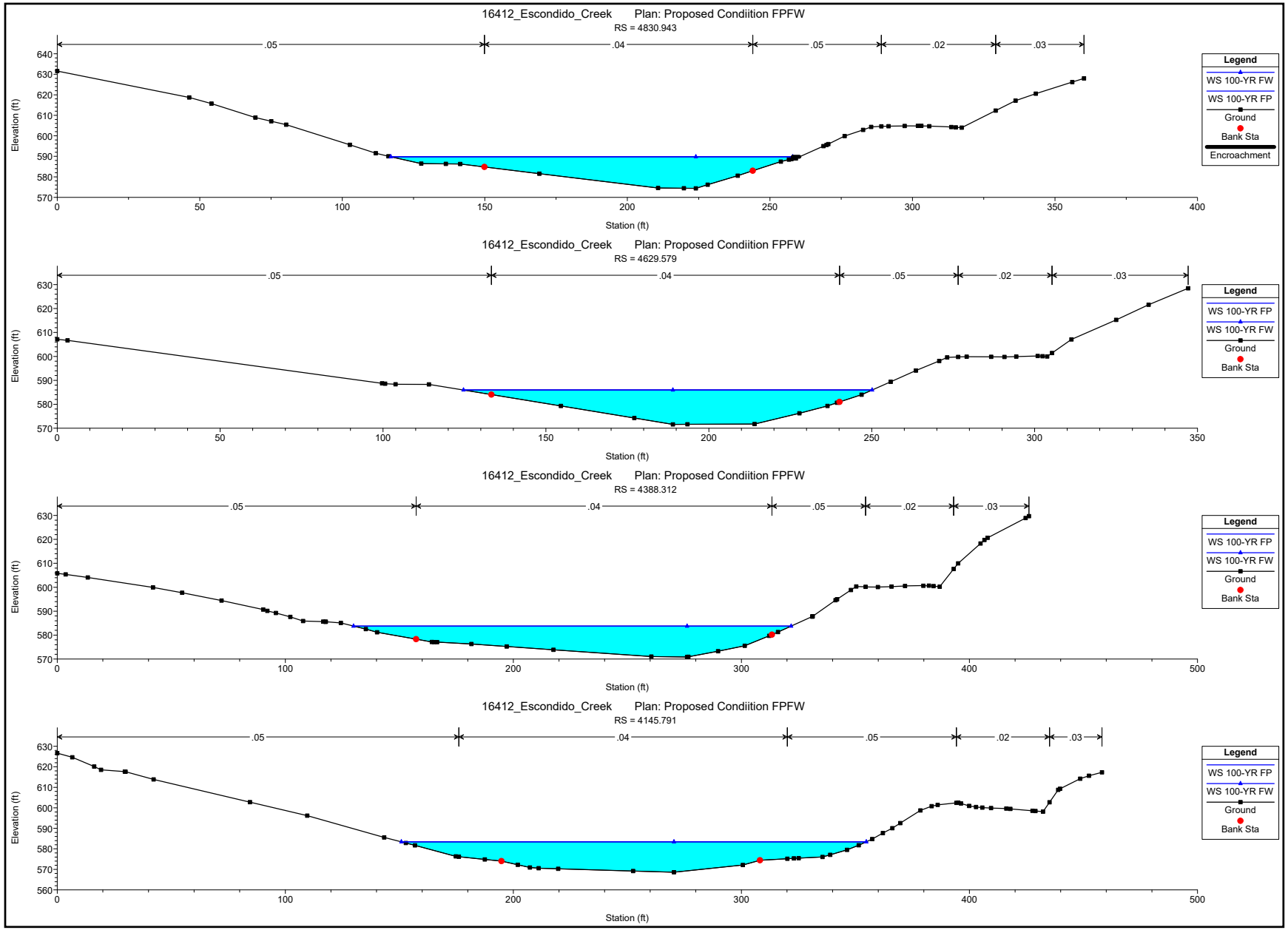

16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 7209.008
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 7021.154
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 6849.903
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 6725.722
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta

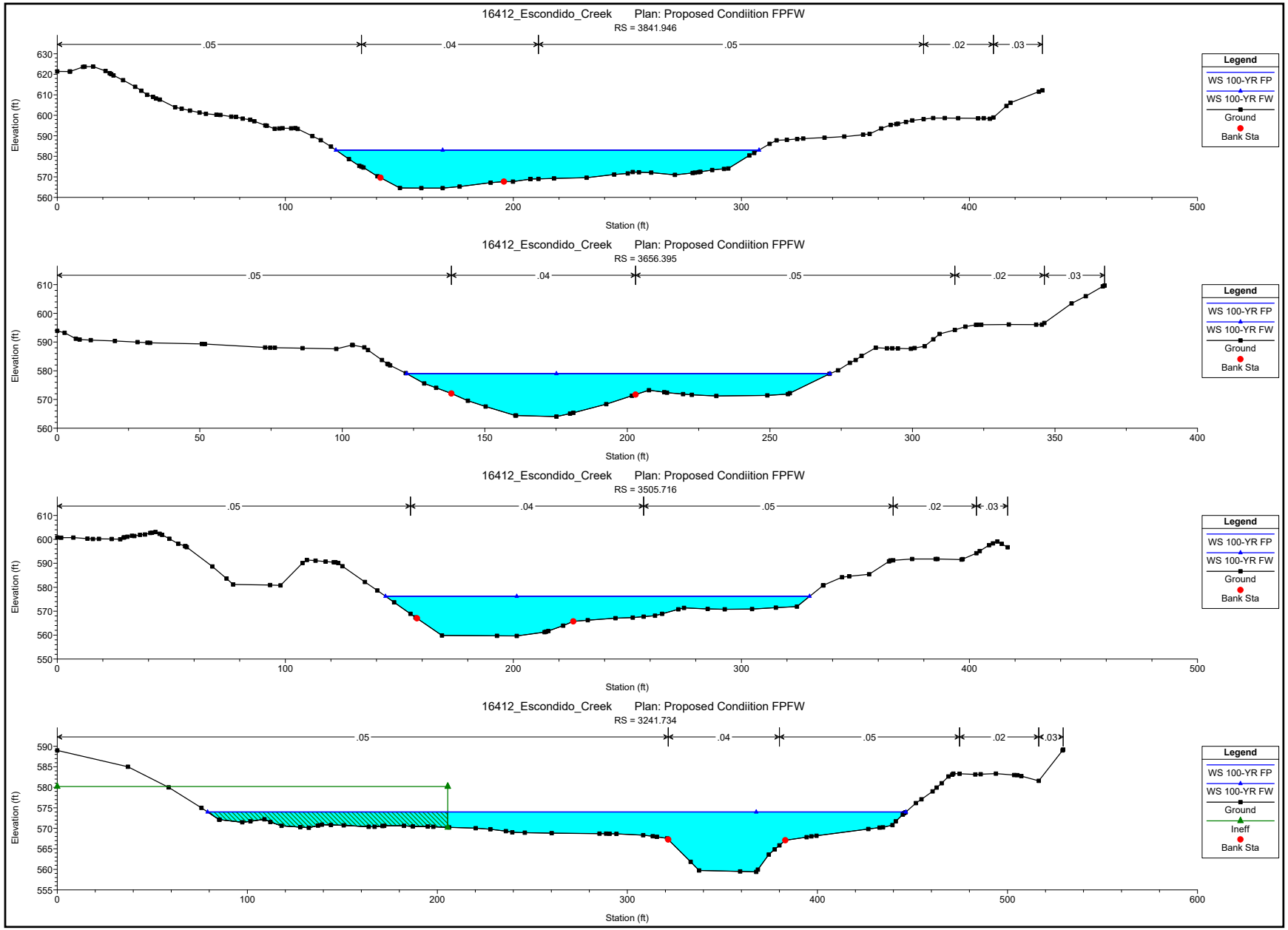

16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 6498.638
.03
.05
.04
.05
.02
.03
.02
Elevation (ft)
630
625
620
615
610
605
600
595
590
585
0
100
200
300
400
500
600
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 6450 BR
.03
.05
.04
.05
.02
.03
.02
Elevation (ft)
630
625
620
615
610
605
600
595
590
585
0
100
200
300
400
500
600
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 6450 BR
.03
.025
.04
.04
.02
.03
.02
Elevation (ft)
630
620
610
600
590
580
0
100
200
300
400
500
600
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 6405.532
.03
.025
.04
.04
.02
.03
.02
Elevation (ft)
630
620
610
600
590
580
0
100
200
300
400
500
600
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment

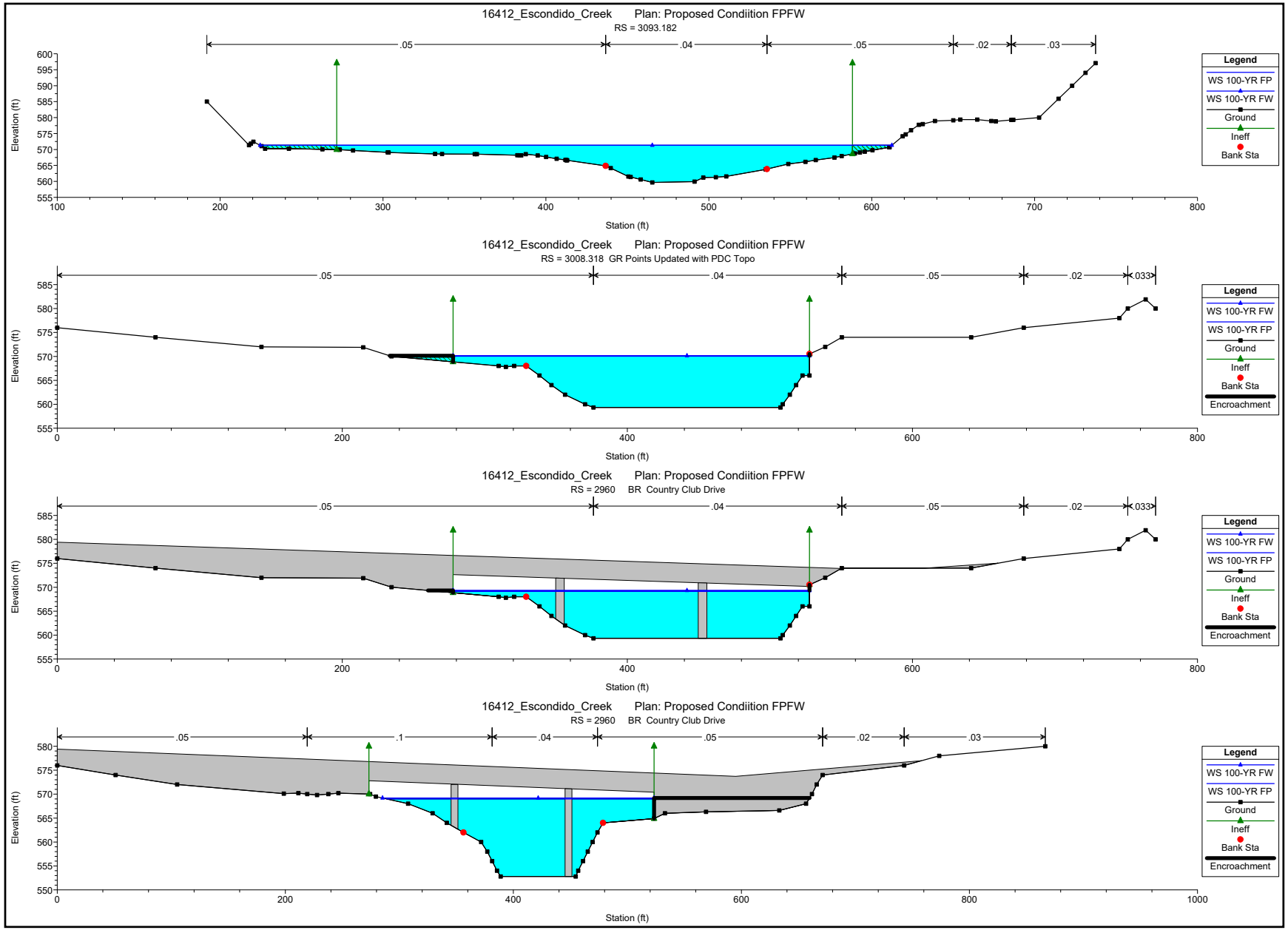

16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 6330.518
.05
.025
.04
.025
.013
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 6300 Culv
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 6300 Culv
.02
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 6291.376

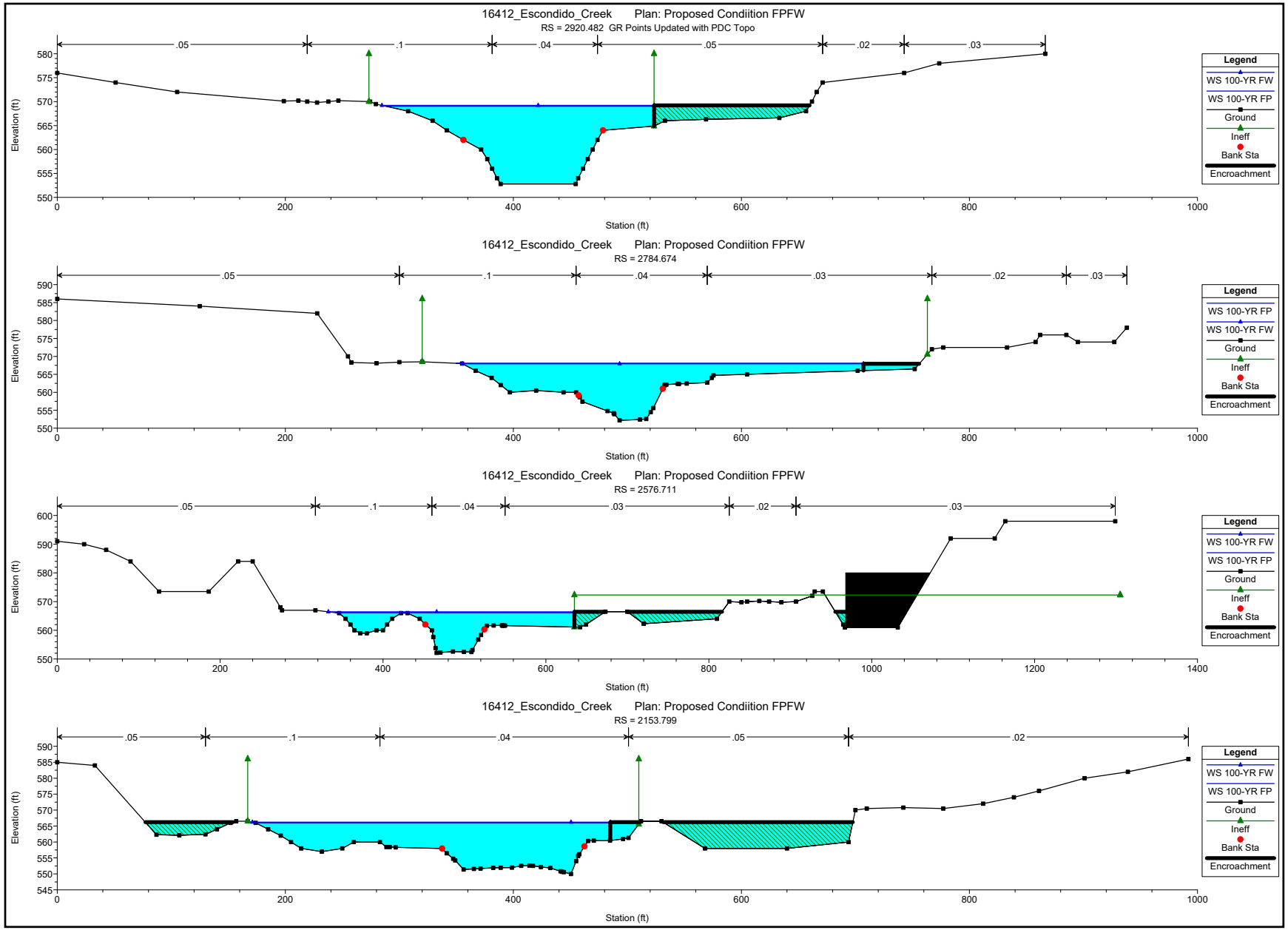

16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 6198.205
.05
.025
.04
.04
.025
.02
.03
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 6011.941
.05
.025
.04
.025
.03
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 5878.831
.05
.025
.04
.05
.025
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 5723.492
.035
.04
.05
.025
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment

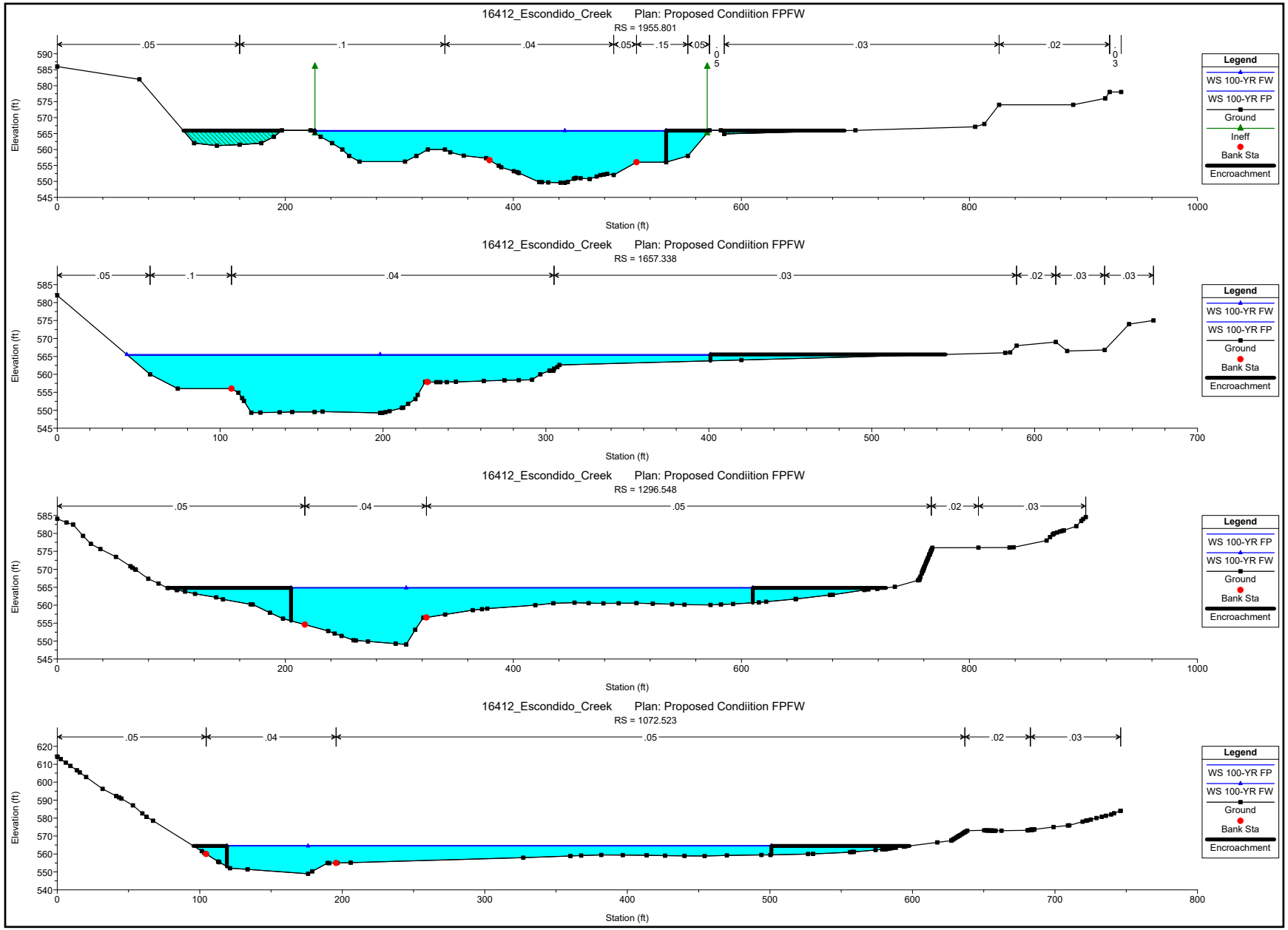

16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 5573.125
.025
.04
.05
.025
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 5433.669
.05
.04
0
5
.025
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 5279.805
.05
.04
.05
.035
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 5085.005
.05
.04
.05
.025
.03
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta

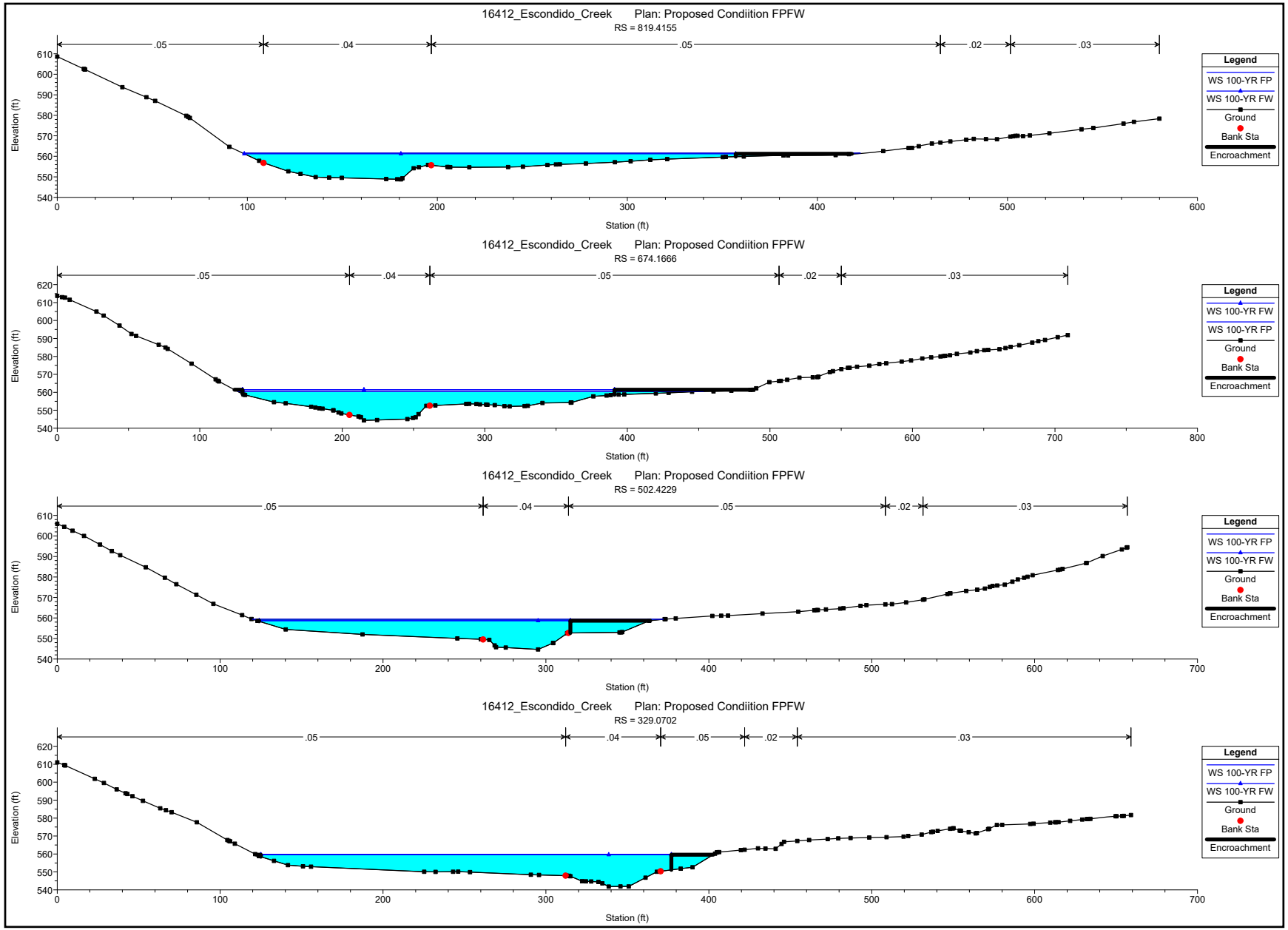

16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 4830.943
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 4629.579
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 4388.312
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 4145.791
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta

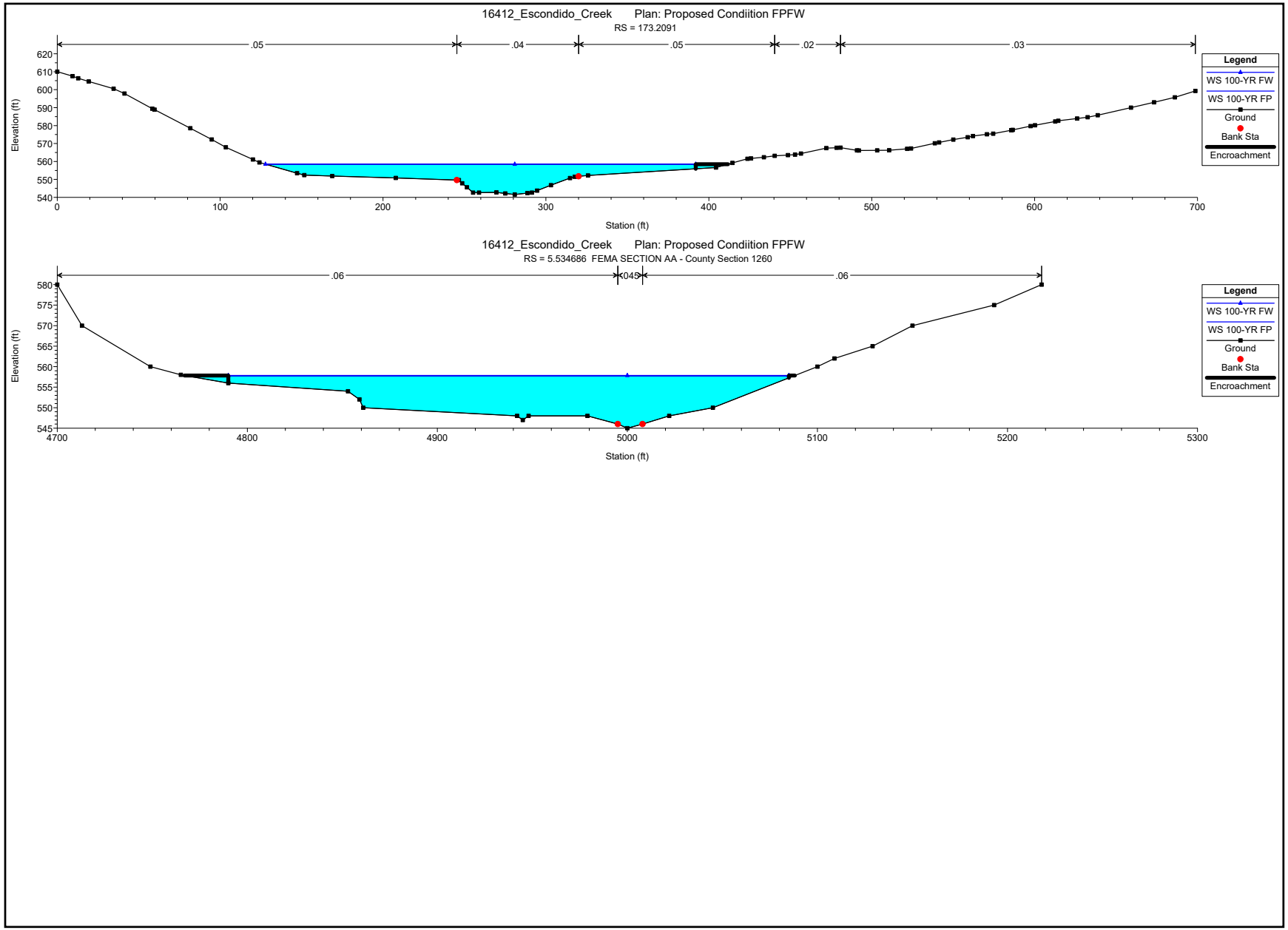

16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 3841.946
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 3656.395
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 3505.716
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 3241.734
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Ineff
Bank Sta


16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 3093.182
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 3008.318 GR Points Updated with PDC Topo
.05
.04
.05
.02
.033
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 2960 BR Country Club Drive
.05
.04
.05
.02
.033
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 2960 BR Country Club Drive
.05
.1
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment


16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 2920.482 GR Points Updated with PDC Topo
.05
.1
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 2784.674
.05
.1
.04
.03
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 2576.711
.05
.1
.04
.03
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 2153.799
.05
.1
.04
.05
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment


16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 1955.801
.05
.1
.04
.05
.15
.05
.03
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Ineff
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 1657.338
.05
.1
.04
.03
.02
.03
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 1296.548
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 1072.523
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
Encroachment


16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 819.4155
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 674.1666
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 502.4229
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 329.0702
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
WS 100-YR FW
Ground
Bank Sta
Encroachment


16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 173.2091
.05
.04
.05
.02
.03
Elevation (ft)
620
610
600
590
580
570
560
550
540
0
100
200
300
400
500
600
700
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment
16412_Escondido_Creek Plan: Proposed Condiition FPFW
RS = 5.534686 FEMA SECTION AA - County Section 1260
.06
.045
.06
Elevation (ft)
580
575
570
565
560
555
550
545
4700
4800
4900
5000
5100
5200
5300
Station (ft)
Legend
WS 100-YR FW
WS 100-YR FP
Ground
Bank Sta
Encroachment

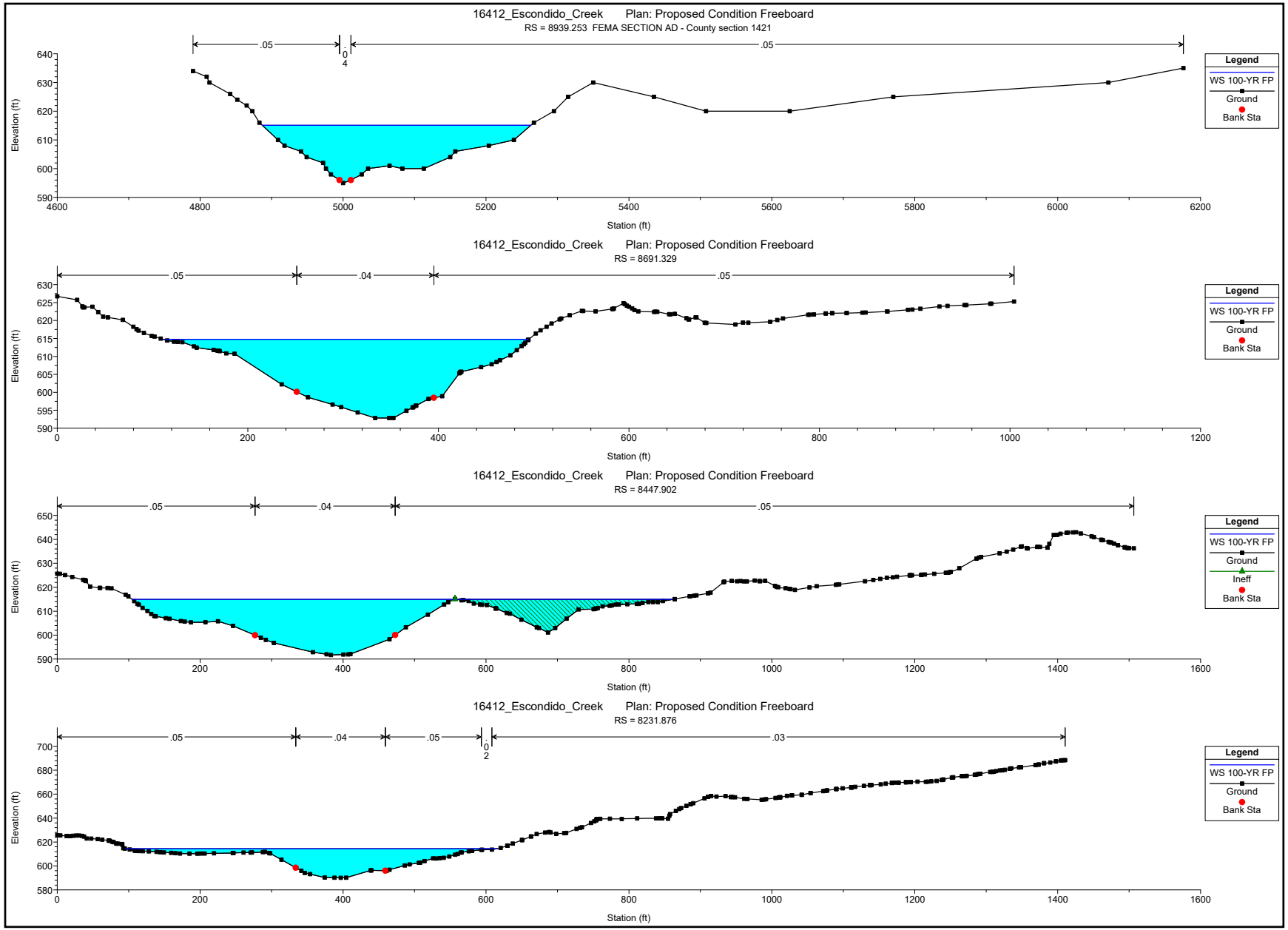
PROPOSED CONDITION WITH NV5 Q100 TO CHECK FREEBOARD

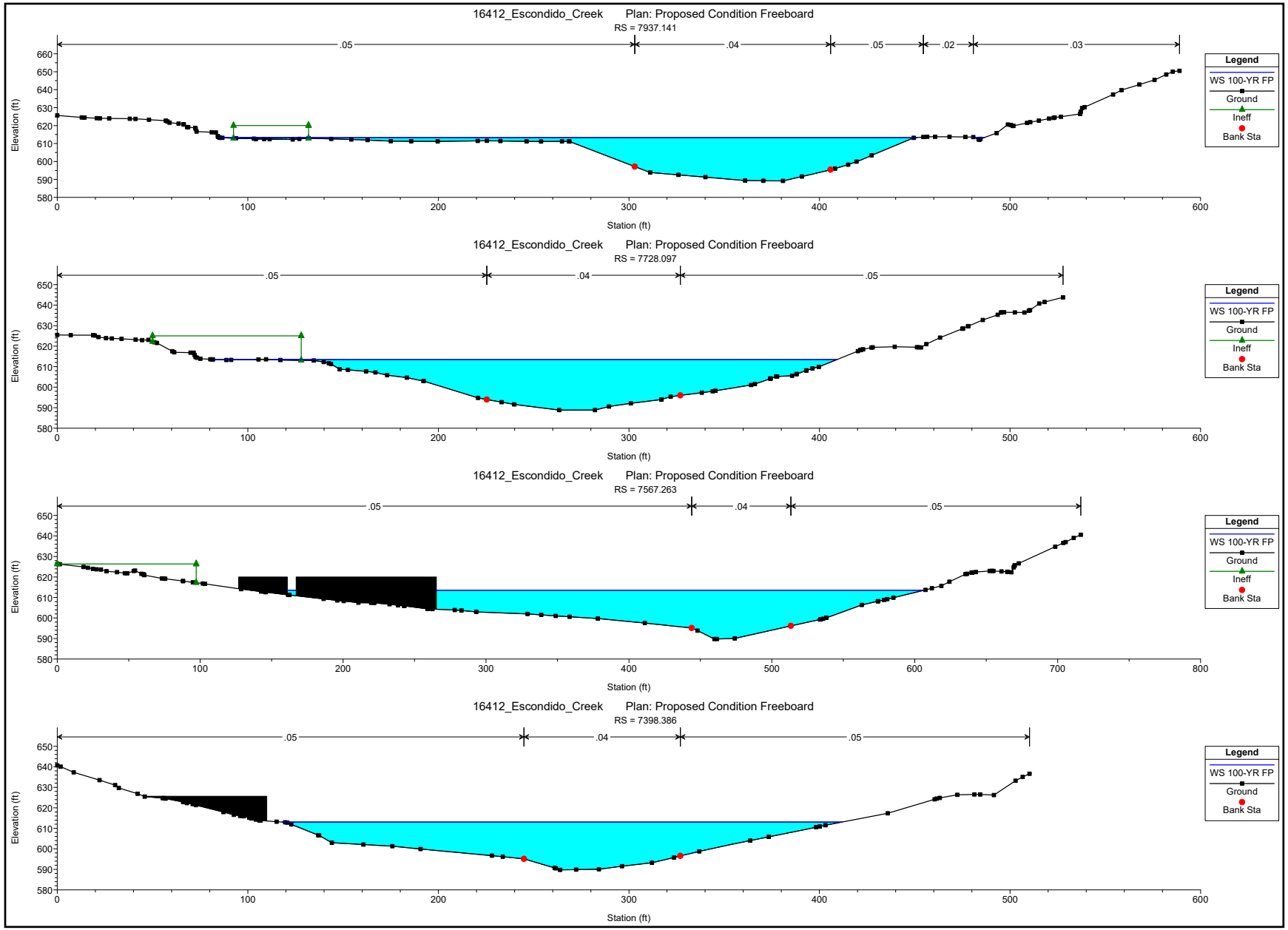
HEC-RAS Plan: Prop Cond FB River: Escondido Creek Reach: Main Reach Profile: 100-YR FP

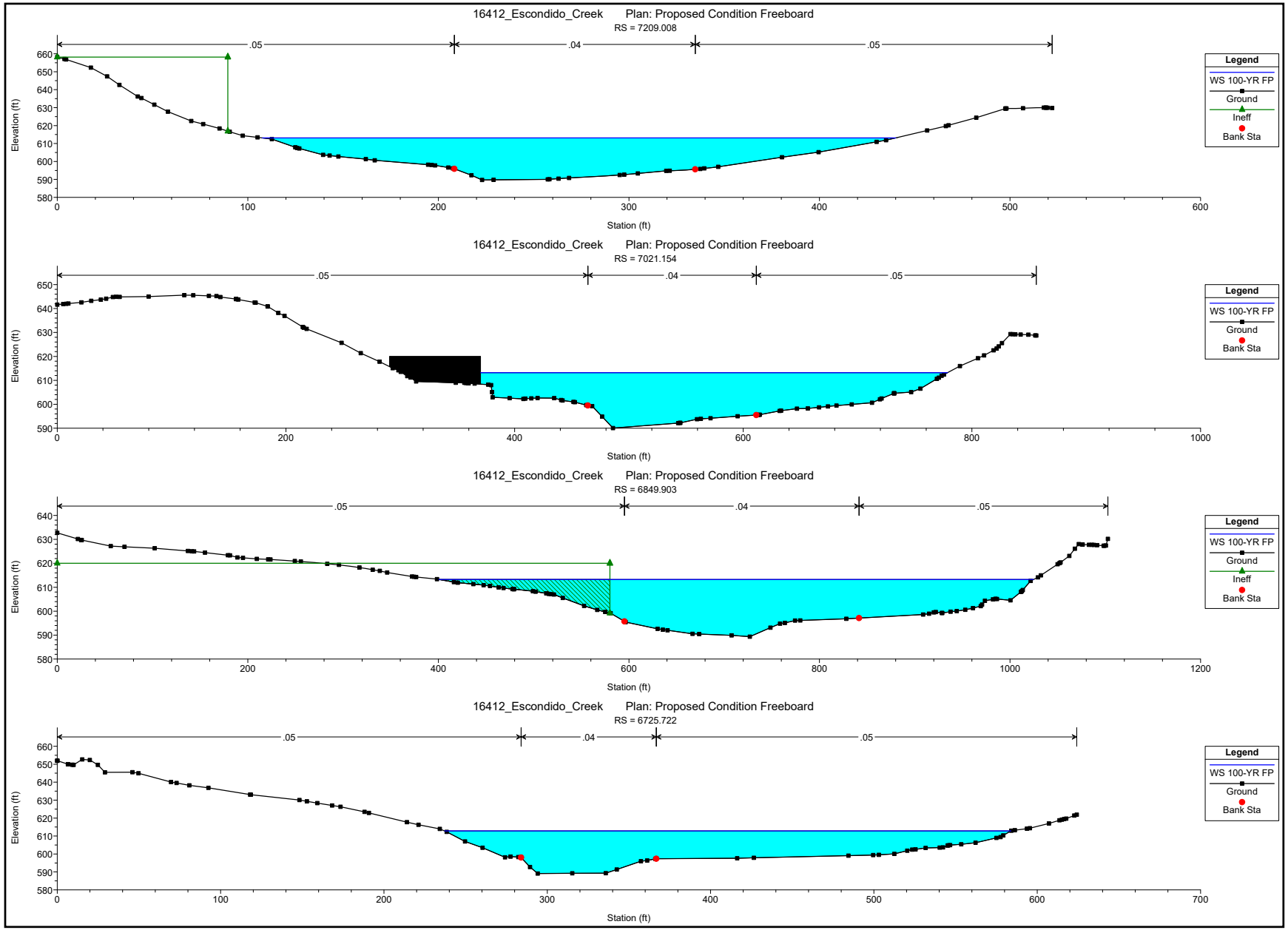
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main Reach	8939.253	100-YR FP	26031.00	595.00	615.09		615.82	0.001707	11.09	4133.16	375.81	0.44
Main Reach	8691.329	100-YR FP	26031.00	592.83	614.77		615.54	0.000852	7.71	4328.65	383.75	0.31
Main Reach	8447.902	100-YR FP	26031.00	591.67	614.92	603.11	615.29	0.000381	5.34	6042.57	751.96	0.21
Main Reach	8231.876	100-YR FP	26031.00	590.12	614.47		615.15	0.000682	7.42	4925.48	520.48	0.28
Main Reach	7937.141	100-YR FP	26031.00	589.14	613.33		614.80	0.001290	10.27	3208.76	371.50	0.39
Main Reach	7728.097	100-YR FP	26031.00	588.81	613.50	603.68	614.41	0.000873	8.60	3963.90	318.86	0.32
Main Reach	7567.263	100-YR FP	26031.00	589.73	613.54	605.92	614.19	0.000857	8.23	4637.71	347.36	0.31
Main Reach	7398.386	100-YR FP	26031.00	589.73	613.04		613.99	0.001090	9.25	3892.07	293.81	0.36
Main Reach	7209.008	100-YR FP	26031.00	589.70	613.12	602.99	613.75	0.000640	7.12	4711.34	332.35	0.27
Main Reach	7021.154	100-YR FP	26031.00	590.07	613.19		613.58	0.000449	5.74	5889.06	408.45	0.23
Main Reach	6849.903	100-YR FP	26031.00	589.34	613.25		613.48	0.000225	4.10	7386.93	624.07	0.16
Main Reach	6725.722	100-YR FP	26031.00	589.11	612.83		613.40	0.000732	7.48	4863.30	346.62	0.28
Main Reach	6498.638	100-YR FP	26031.00	588.76	612.86	600.67	613.23	0.000301	4.90	5494.94	350.77	0.19
Main Reach	6450		Bridge									
Main Reach	6405.532	100-YR FP	26031.00	588.20	612.82		613.17	0.000180	3.92	6001.72	360.49	0.15
Main Reach	6330.518	100-YR FP	26031.00	587.17	612.84	600.91	613.15	0.000085	3.33	6811.98	426.28	0.12
Main Reach	6300		Culvert									
Main Reach	6291.376	100-YR FP	26031.00	584.95	612.72		613.06	0.000171	4.14	5665.20	412.55	0.15
Main Reach	6198.205	100-YR FP	26031.00	584.95	612.51		613.03	0.000343	5.37	4686.13	412.56	0.19
Main Reach	6011.941	100-YR FP	26031.00	585.37	609.63		612.64	0.003007	14.60	1915.95	165.42	0.56
Main Reach	5878.831	100-YR FP	26031.00	584.48	610.24		611.98	0.001514	10.84	2559.37	252.61	0.41
Main Reach	5723.492	100-YR FP	26031.00	584.16	610.64		611.56	0.000878	8.63	3724.35	350.61	0.32
Main Reach	5573.125	100-YR FP	26031.00	584.75	610.60		611.41	0.000733	7.48	3752.18	413.12	0.28
Main Reach	5433.669	100-YR FP	26031.00	584.41	605.93	605.93	610.76	0.006743	19.22	1599.23	239.93	0.81
Main Reach	5279.805	100-YR FP	26031.00	582.48	604.42	604.42	608.76	0.005230	17.68	1834.47	239.04	0.73
Main Reach	5085.005	100-YR FP	26031.00	577.88	597.14	597.14	603.05	0.008671	19.91	1426.08	131.11	0.92
Main Reach	4830.943	100-YR FP	26031.00	574.37	592.08	592.08	597.33	0.008620	19.05	1535.96	153.60	0.92
Main Reach	4629.579	100-YR FP	26031.00	571.59	588.52	588.52	594.00	0.009267	18.97	1447.13	152.91	0.94
Main Reach	4388.312	100-YR FP	26031.00	570.84	586.37		588.96	0.004482	13.12	2132.64	221.67	0.66
Main Reach	4145.791	100-YR FP	26031.00	568.57	586.17		587.93	0.002430	11.46	2609.66	218.20	0.51
Main Reach	3841.946	100-YR FP	26031.00	564.49	585.76		587.25	0.001902	11.73	2862.29	193.32	0.46
Main Reach	3656.395	100-YR FP	26031.00	564.06	581.17	581.17	586.27	0.009087	20.29	1608.97	157.29	0.95
Main Reach	3505.716	100-YR FP	26031.00	559.66	577.60		580.70	0.004627	15.90	2037.47	189.87	0.69
Main Reach	3241.734	100-YR FP	26031.00	559.40	575.46	575.46	579.11	0.008113	18.33	1999.69	364.92	0.87
Main Reach	3093.182	100-YR FP	26031.00	559.68	572.62	572.62	575.73	0.007672	16.23	2168.02	400.04	0.85
Main Reach	3008.318	100-YR FP	26031.00	559.33	572.02	568.95	573.89	0.003862	11.14	2453.02	396.40	0.58
Main Reach	2960		Bridge									
Main Reach	2920.482	100-YR FP	26031.00	552.80	570.52		572.77	0.006115	12.54	2421.44	485.18	0.57
Main Reach	2784.674	100-YR FP	26031.00	552.18	570.24	568.83	571.87	0.003068	12.42	3241.40	507.73	0.56
Main Reach	2576.711	100-YR FP	26031.00	552.16	567.82	567.26	570.75	0.007694	14.45	2301.83	560.95	0.70
Main Reach	2153.799	100-YR FP	26031.00	549.98	567.71		568.84	0.001900	9.72	3589.24	625.08	0.44

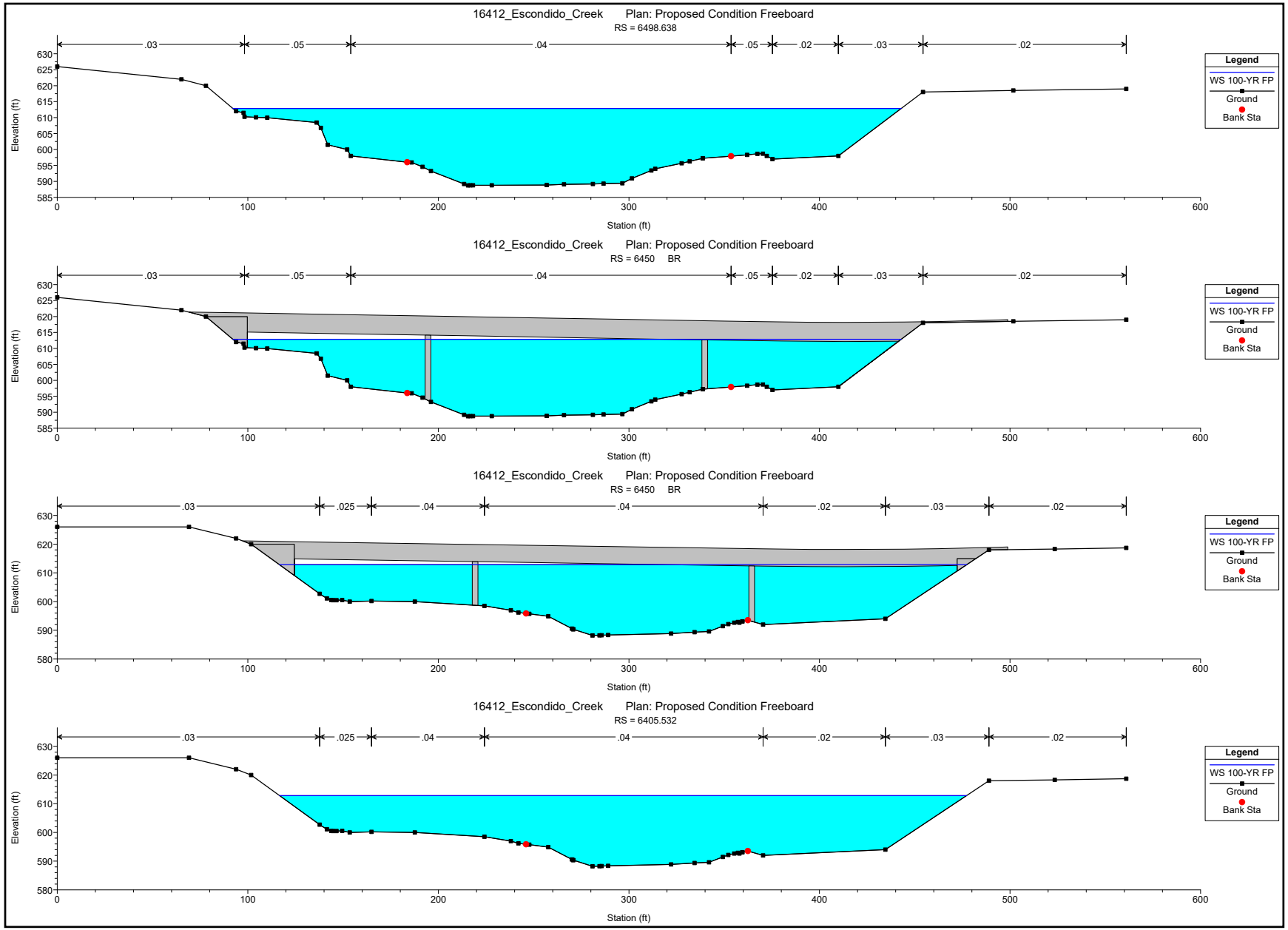
HEC-RAS Plan: Prop Cond FB River: Escondido Creek Reach: Main Reach Profile: 100-YR FP (Continued)

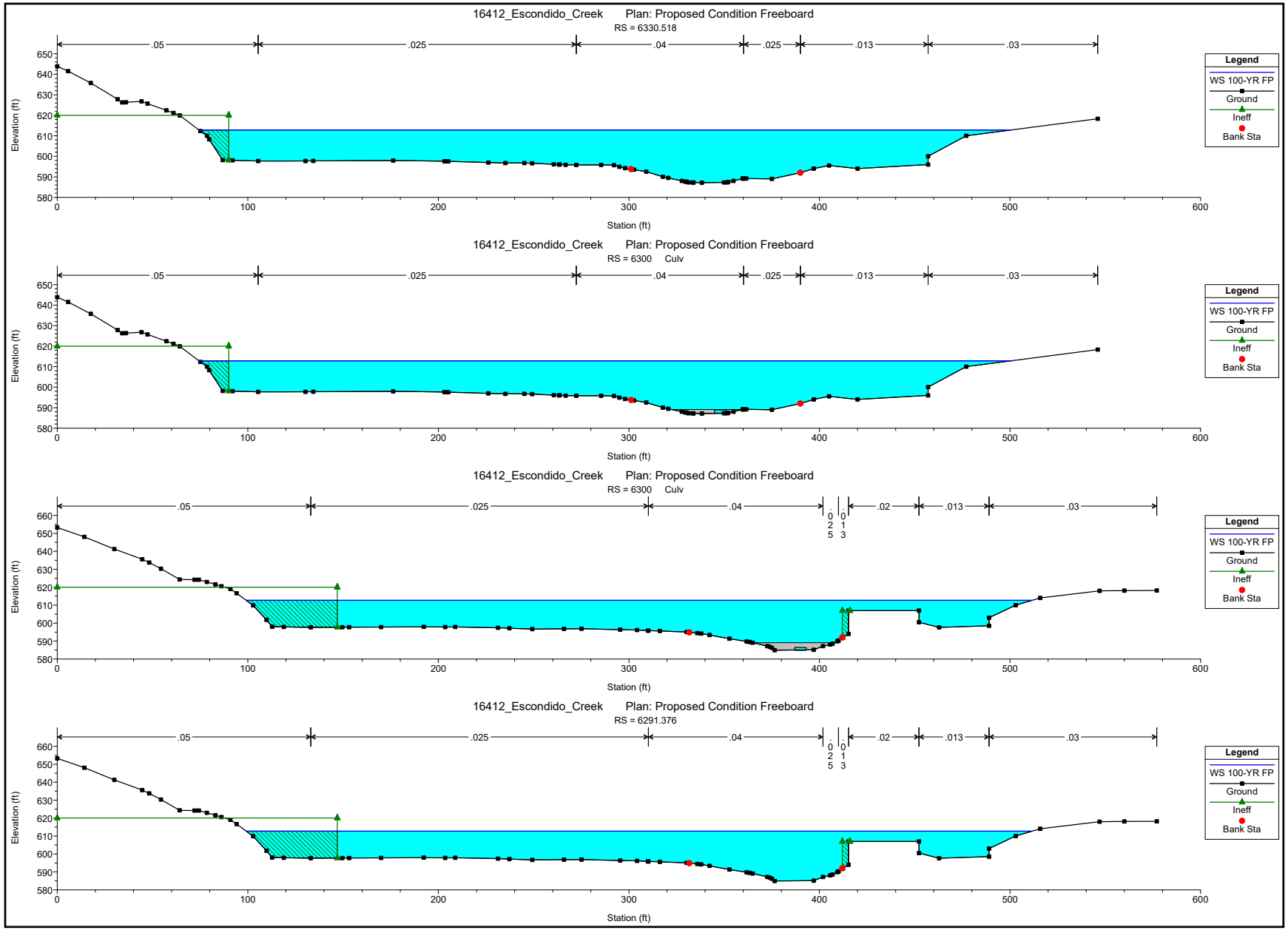
Reach	River Sta	Profile	Q Total	Min Ch El	W.S. Elev	Crit W.S.	E.G. Elev	E.G. Slope	Vel Chnl	Flow Area	Top Width	Froude # Chl
			(cfs)	(ft)	(ft)	(ft)	(ft)	(ft/ft)	(ft/s)	(sq ft)	(ft)	
Main Reach	1955.801	100-YR FP	26031.00	549.58	567.34		568.49	0.001917	9.76	3925.26	699.97	0.44
Main Reach	1657.338	100-YR FP	26031.00	549.26	567.02		567.96	0.001437	8.95	4007.33	573.00	0.39
Main Reach	1296.548	100-YR FP	26031.00	549.05	566.64		567.38	0.001500	8.72	4843.35	666.91	0.39
Main Reach	1072.523	100-YR FP	26031.00	549.00	566.30		567.04	0.001746	8.93	4407.13	523.95	0.42
Main Reach	819.4155	100-YR FP	26031.00	548.80	562.96	562.96	566.03	0.007693	16.48	2249.21	343.98	0.85
Main Reach	674.1666	100-YR FP	26031.00	544.37	562.52		564.35	0.003620	13.93	2988.80	369.45	0.61
Main Reach	502.4229	100-YR FP	26031.00	544.70	560.78		563.51	0.006519	16.71	2289.14	282.38	0.79
Main Reach	329.0702	100-YR FP	26031.00	541.82	561.24		562.58	0.002586	11.78	3142.05	289.99	0.51
Main Reach	173.2091	100-YR FP	26031.00	541.59	559.40	558.20	561.97	0.005060	15.15	2413.51	291.10	0.70
Main Reach	5.534686	100-YR FP	26031.00	545.00	557.76	557.42	560.56	0.017027	22.72	2158.26	319.68	1.14

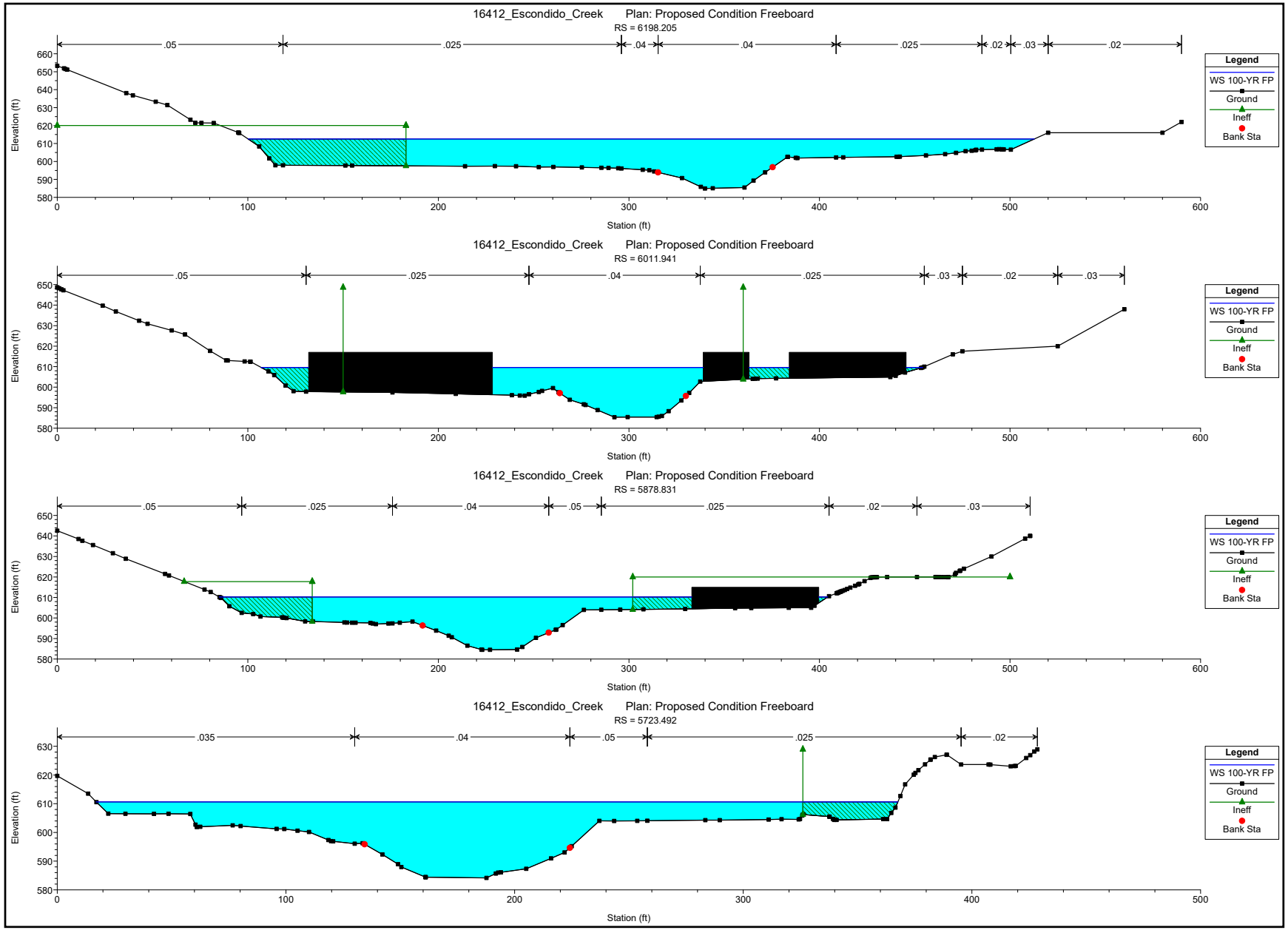

16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 8939.253 FEMA SECTION AD - County section 1421
.05
.05
.04
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 8691.329
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 8447.902
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 8231.876
.05
.04
.05
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta

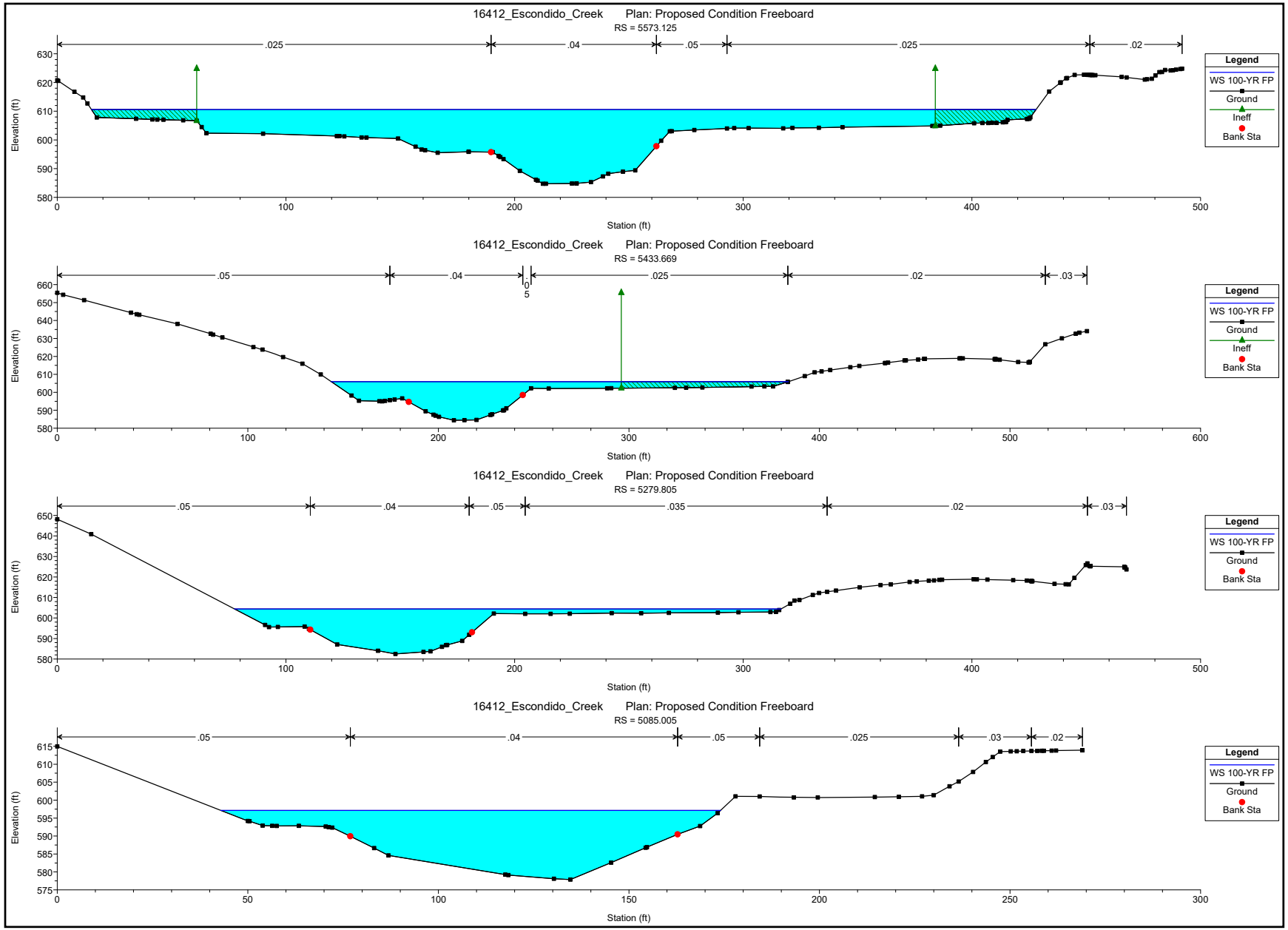

16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 7937.141
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 7728.097
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 7567.263
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 7398.386
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta

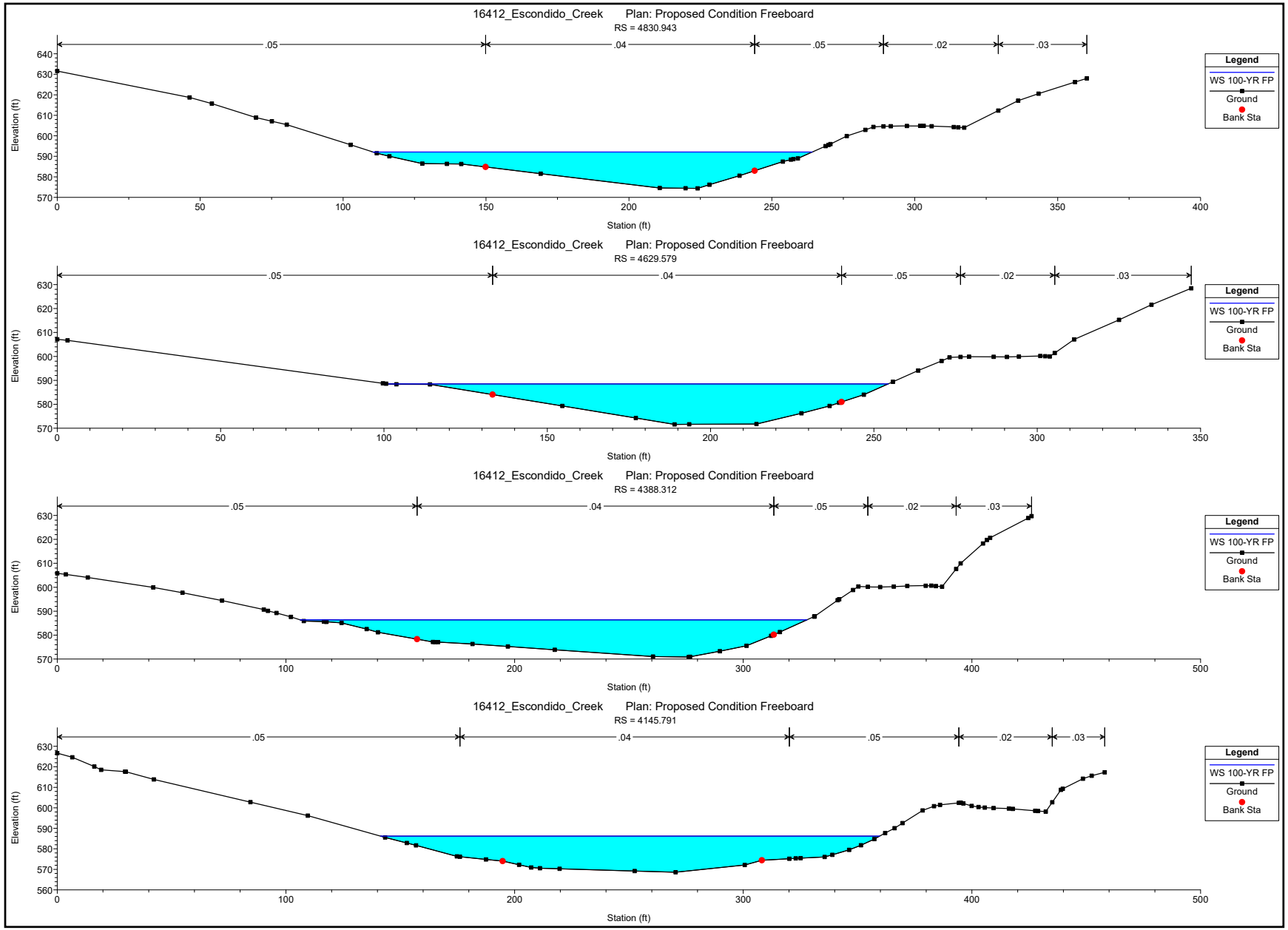

16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 7209.008
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 7021.154
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 6849.903
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 6725.722
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta

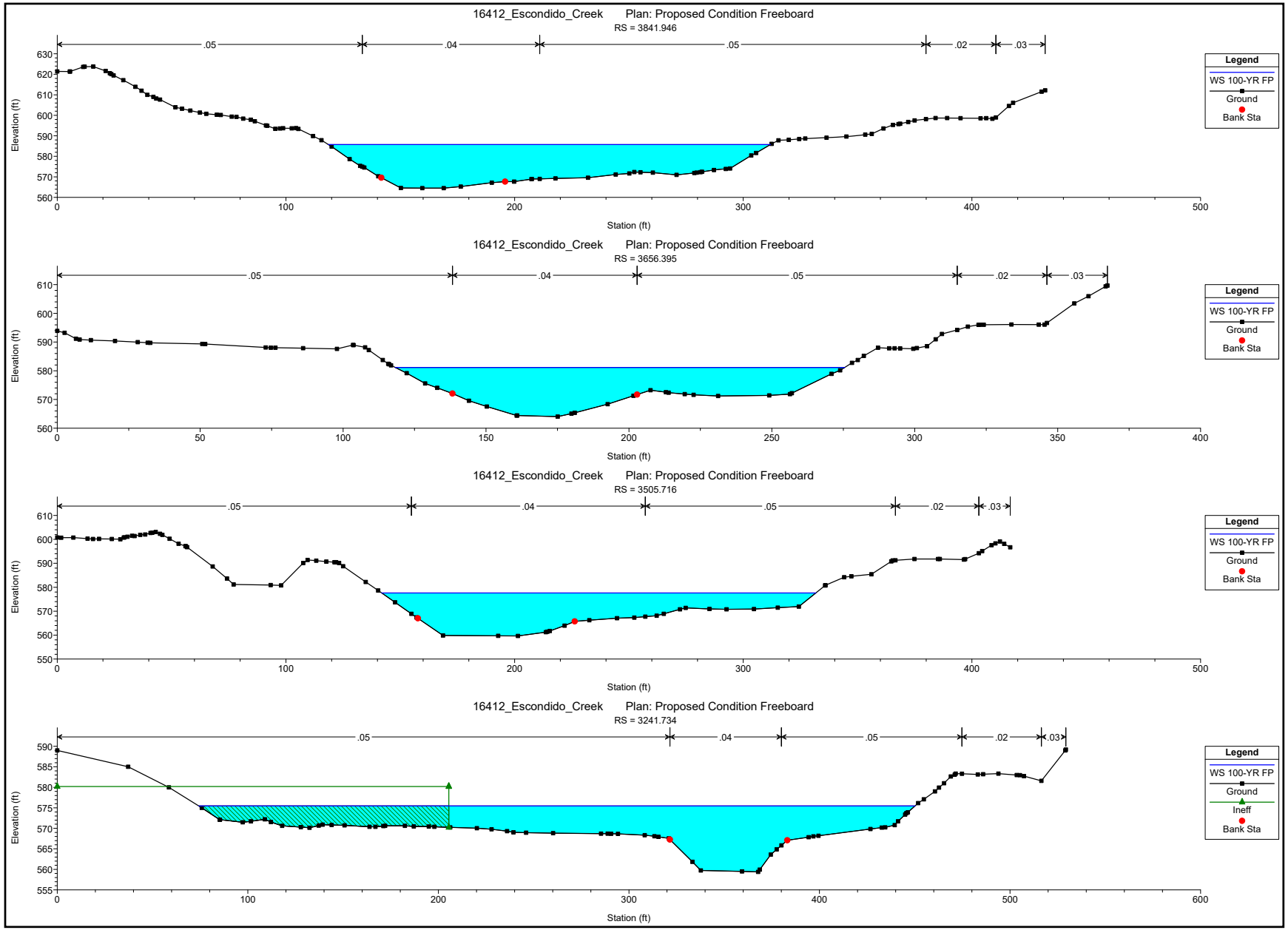

16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 6498.638
.03
.05
.04
.05
.02
.03
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 6450 BR
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 6450 BR
.025
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 6405.532

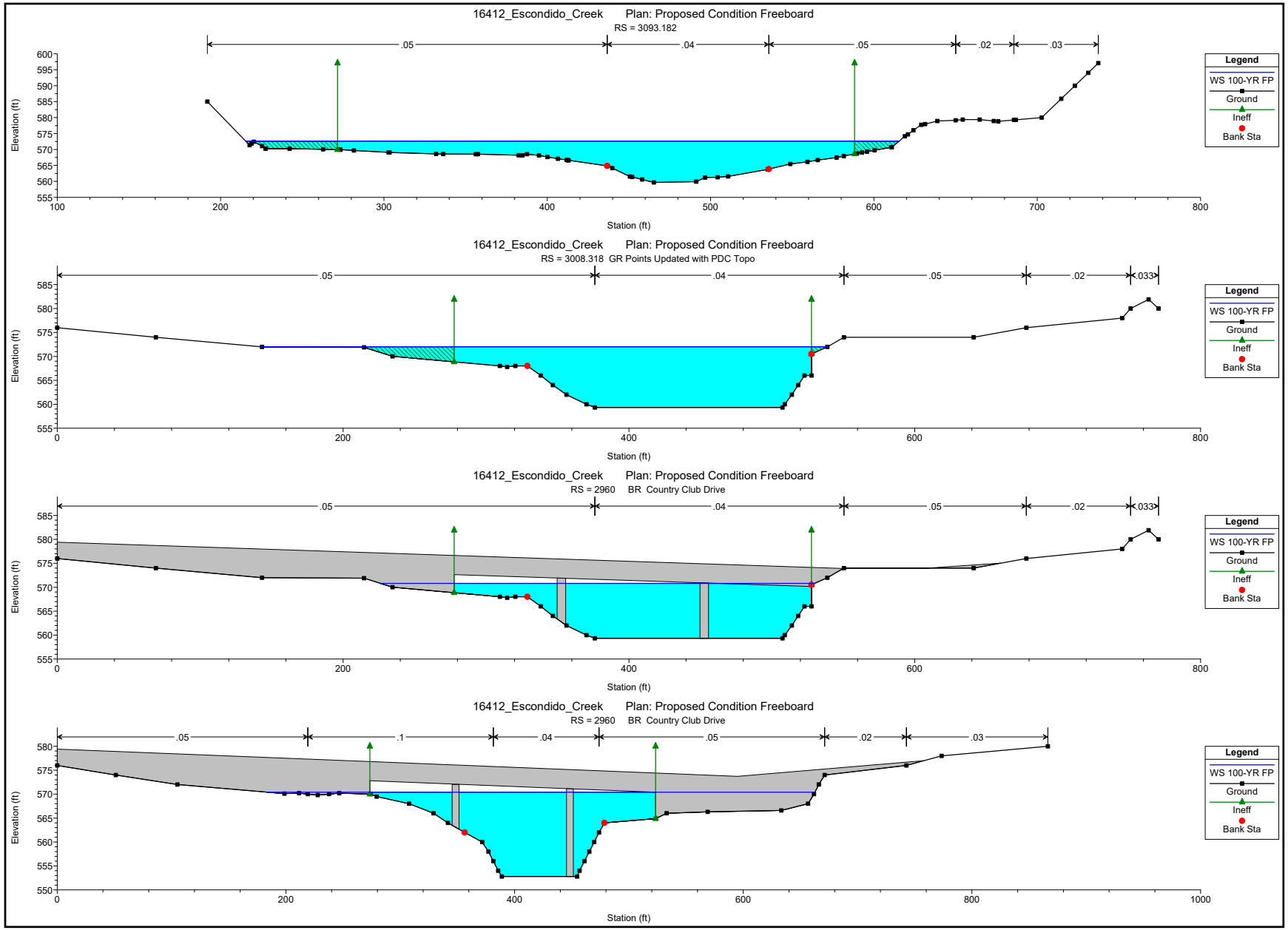

16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 6330.518
.05
.025
.04
.025
.013
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 6300 Culv
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 6300 Culv
.02
.015
.013
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 6291.376

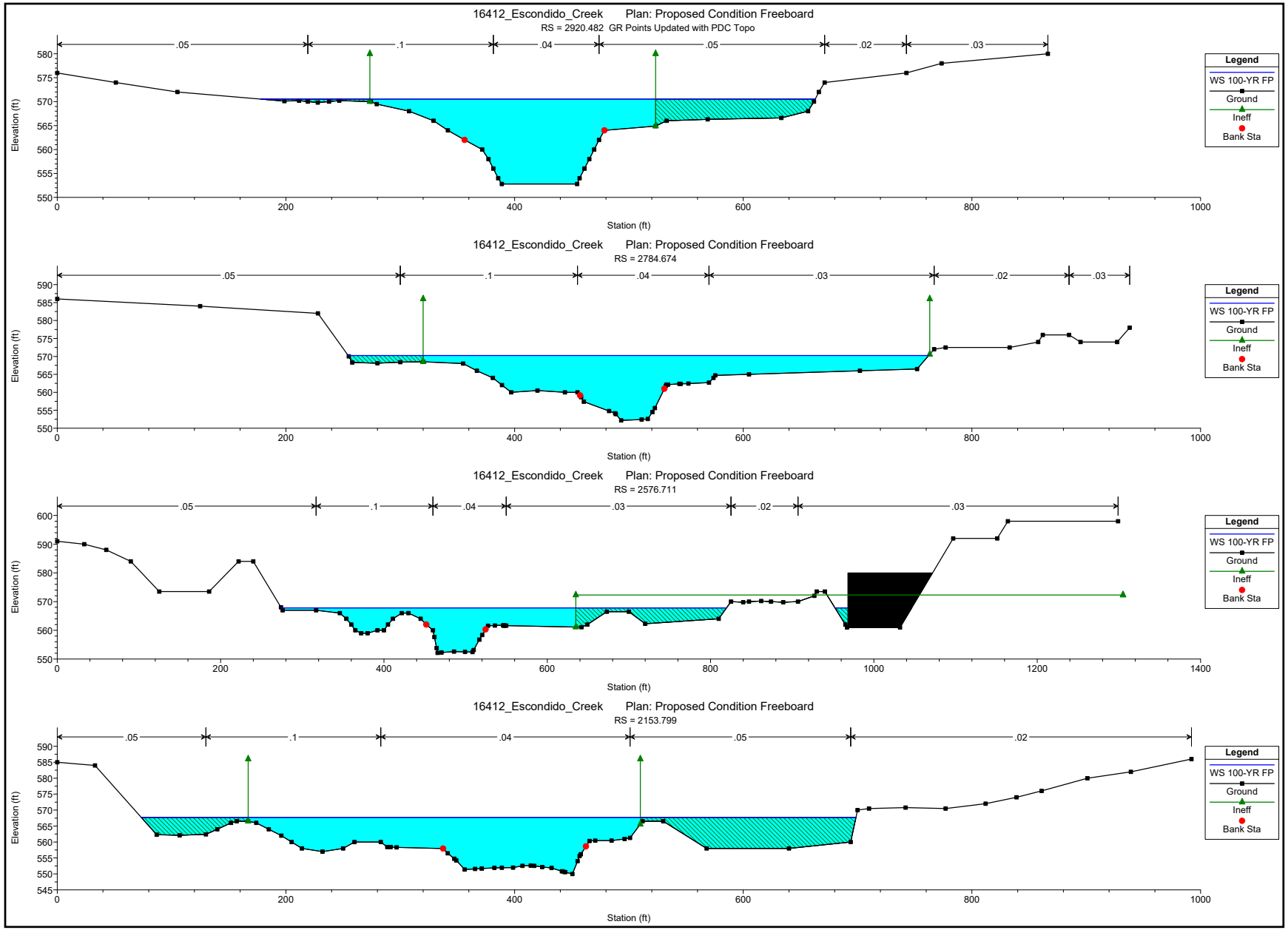

16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 6198.205
.05
.025
.04
.04
.025
.02
.03
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 6011.941
.05
.025
.04
.025
.03
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 5878.831
.05
.025
.04
.05
.025
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 5723.492
.035
.04
.05
.025
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta

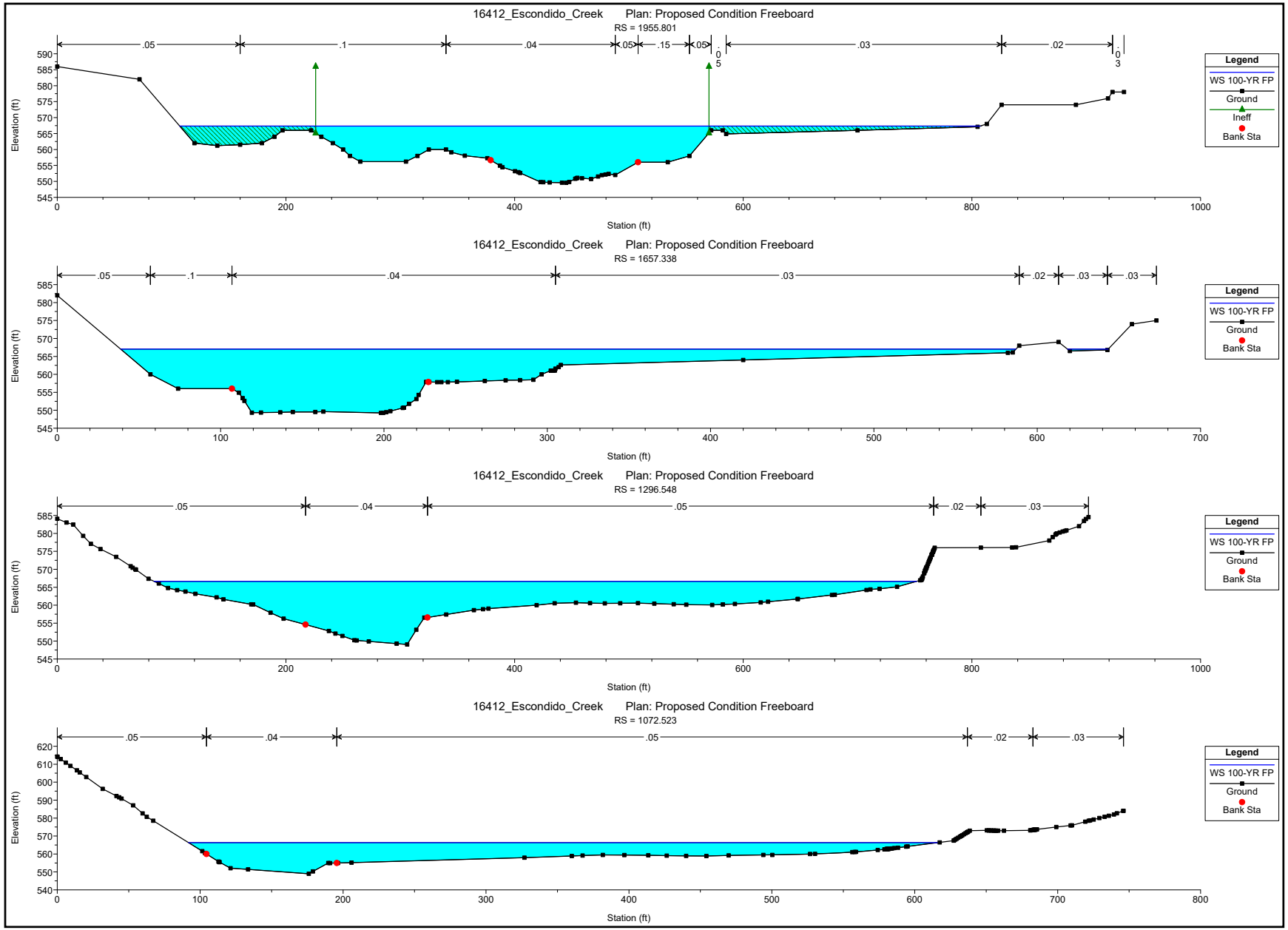

16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 5573.125
.025
.04
.05
.025
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 5433.669
.05
.04
.025
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 5279.805
.05
.04
.05
.035
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 5085.005
.05
.04
.05
.025
.03
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta

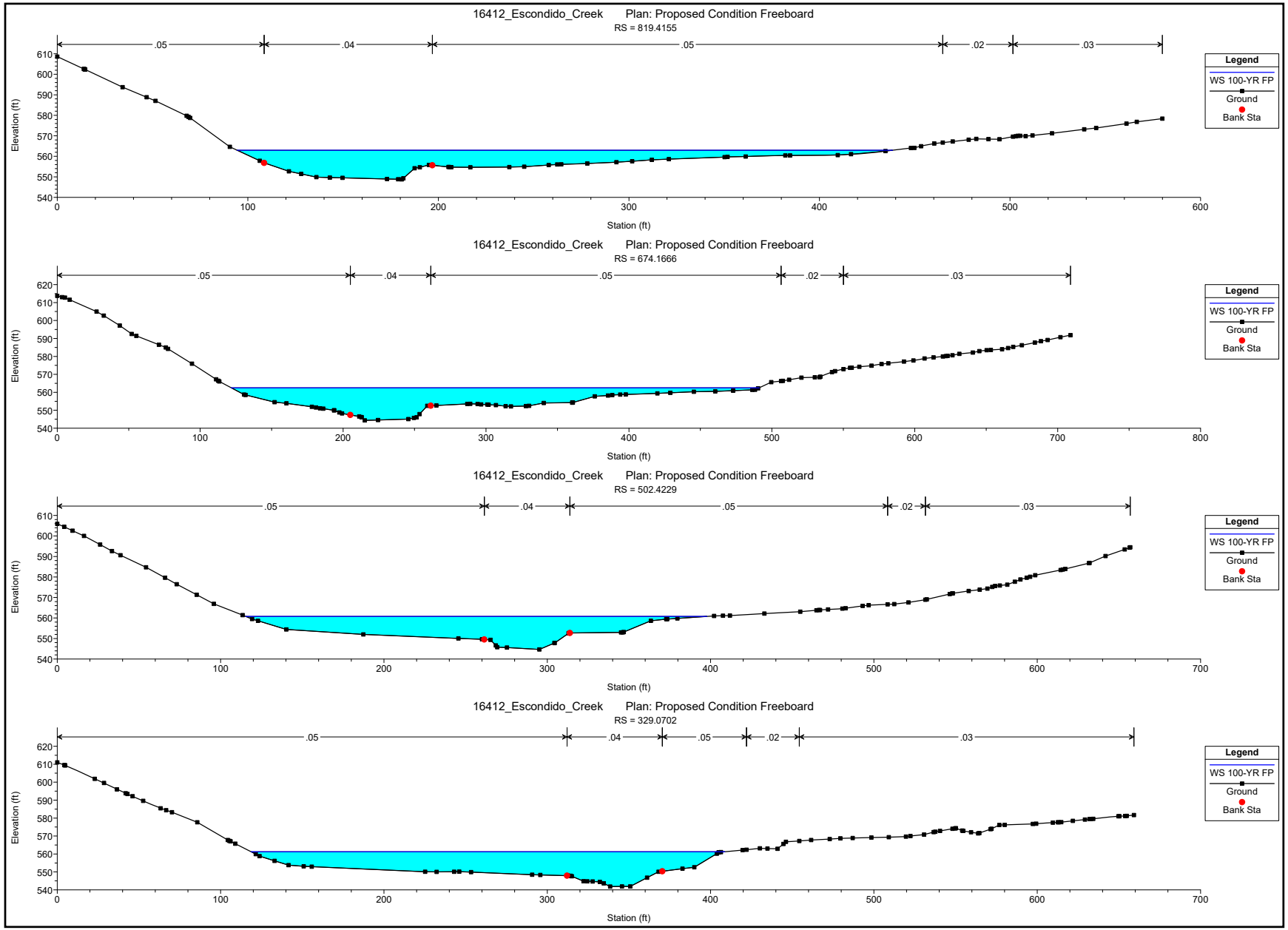

16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 4830.943
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 4629.579
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 4388.312
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 4145.791
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta

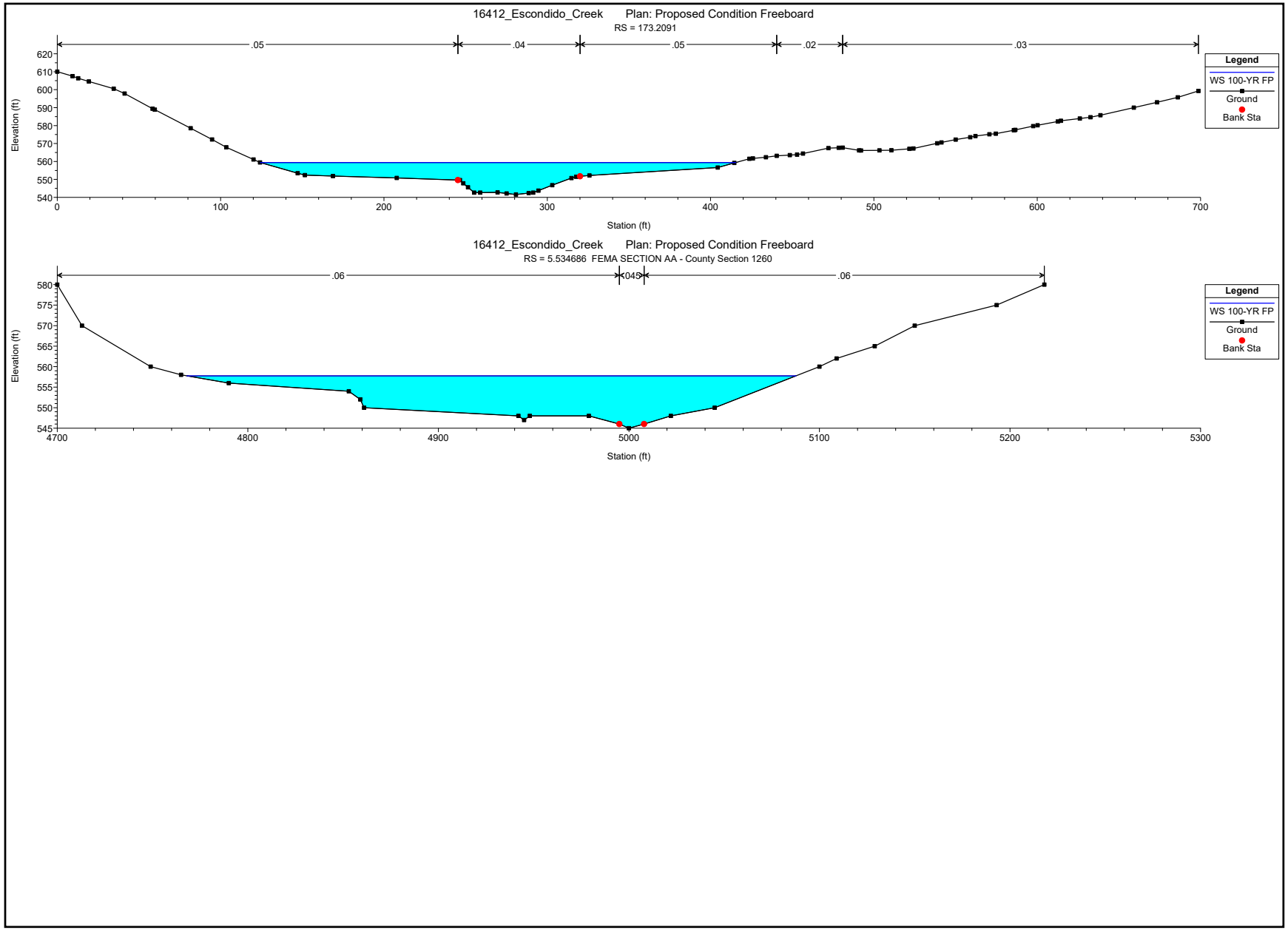

16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 3841.946
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 3656.395
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 3505.716
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 3241.734
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta


16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 3093.182
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 3008.318 GR Points Updated with PDC Topo
.05
.04
.05
.02
.033
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 2960 BR Country Club Drive
.05
.04
.05
.02
.033
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 2960 BR Country Club Drive
.05
.1
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta


16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 2920.482 GR Points Updated with PDC Topo
.05
.1
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 2784.674
.05
.1
.04
.03
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 2576.711
.05
.1
.04
.03
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 2153.799
.05
.1
.04
.05
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta


16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 1955.801
.05
.1
.04
.05
.15
.05
.03
.02
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Ineff
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 1657.338
.05
.1
.04
.03
.02
.03
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 1296.548
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 1072.523
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta


16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 819.4155
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 674.1666
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 502.4229
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 329.0702
.05
.04
.05
.02
.03
Elevation (ft)
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta


16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 173.2091
.05
.04
.05
.02
.03
Elevation (ft)
620
610
600
590
580
570
560
550
540
0
100
200
300
400
500
600
700
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta
16412_Escondido_Creek Plan: Proposed Condition Freeboard
RS = 5.534686 FEMA SECTION AA - County Section 1260
.06
.045
.06
Elevation (ft)
580
575
570
565
560
555
550
545
4700
4800
4900
5000
5100
5200
5300
Station (ft)
Legend
WS 100-YR FP
Ground
Bank Sta

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 12 SOUTH, RANGE 2 WEST AND TOWNSHIP 12 SOUTH, RANGE 3 WEST.

ance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

0 250 500 750 1,000 FEET

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1057G

FIRM

FLOOD INSURANCE RATE MAP

SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 1057 OF 2375

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
ESCONDIDO, CITY OF	060290	1057	G
SAN DIEGO COUNTY	060284	1057	G
SAN MARCOS, CITY OF	060296	1057	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER 06073C1057G

MAP REVISED MAY 16, 2012

Federal Emergency Management Agency

ZONE X
ZONE AE
ZONE AA
ZONE AB
Escondido Creek (at Escondido)
BRESA DE LOMA DR
WILGEN DR
PUBLIC RD
MOUNTAIN VIEW
GRANDVIEW
LIVE OAK PL
HILLSIDE DR
SUNFLOWER LN
WASHINGTON CIR
HARMONY GROVE RD
COUNTRY CLUB DR
CORDREY DR
PROFILE BASE LINE
Private Rd
30
31
R. 3 W.
R. 2 W.
JOINS PANEL 1059
6290000 FT
1980000 FT
33°05'37.5"
117°07'30"

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

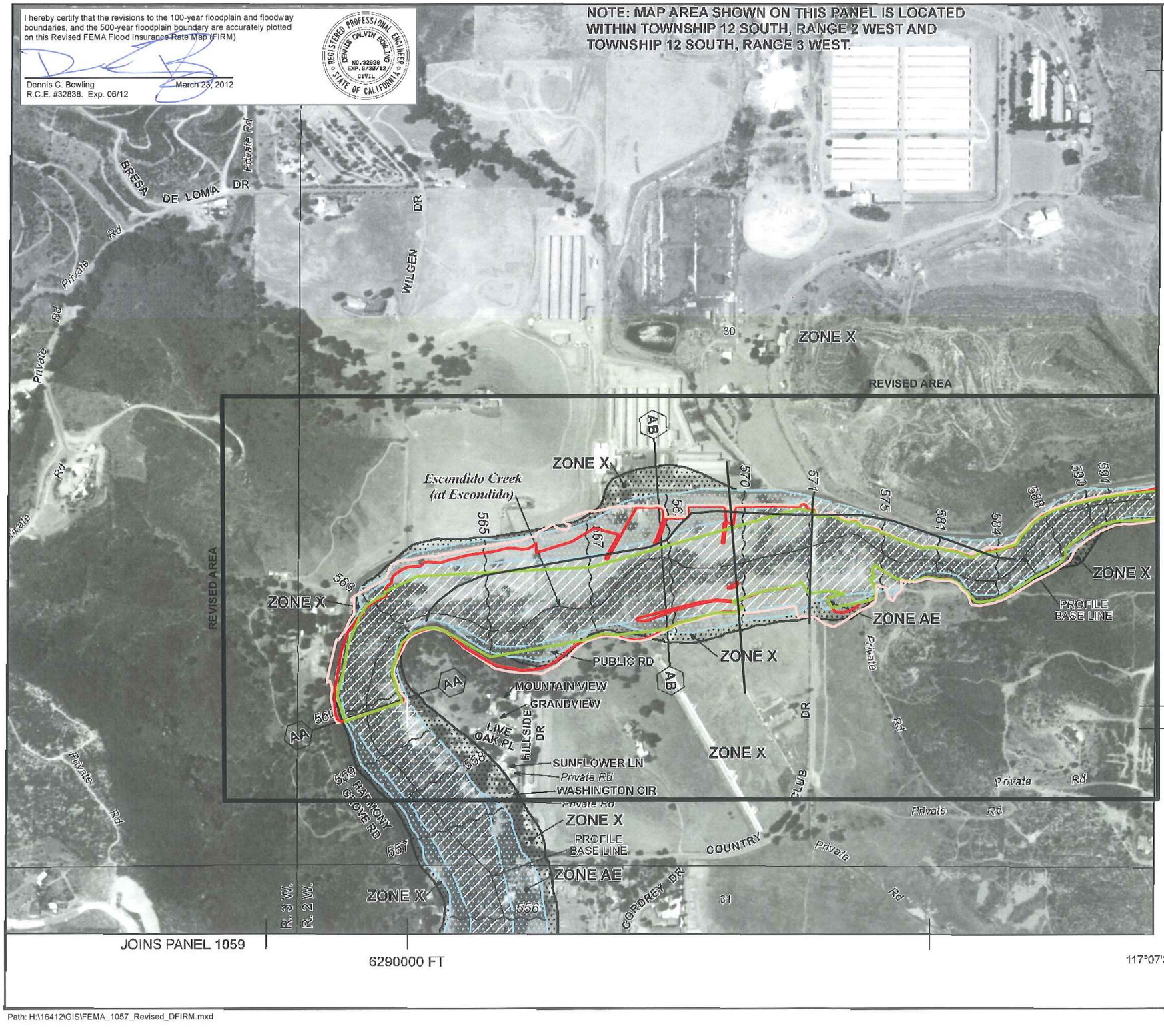
I hereby certify that the revisions to the 100-year floodplain and floodway boundaries, and the 500-year floodplain boundary are accurately plotted on this Revised FEMA Flood Insurance Rate Map (FIRM)

Dennis C. Bowling
R.C.E. #32838. Exp. 06/12

March 23, 2012

REGISTERED PROFESSIONAL ENGINEER
DENNIS CALVIN BOWLING
NO. 32838
EXP. 6/30/12
CIVIL
STATE OF CALIFORNIA

NOTE: MAP AREA SHOWN ON THIS PANEL IS LOCATED WITHIN TOWNSHIP 12 SOUTH, RANGE 2 WEST AND TOWNSHIP 12 SOUTH, RANGE 3 WEST.



ance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

0 250 500 750 1,000 FEET

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 1057G

FIRM REVISED

FLOOD INSURANCE RATE MAP
SAN DIEGO COUNTY, CALIFORNIA
AND INCORPORATED AREAS

PANEL 1057 OF 2375

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS

COMMUNITY	NUMBER	PANEL	SUFFIX
ESCONDIDO, CITY OF	060290	1057	G
SAN DIEGO, CITY OF	060284	1057	G
SAN MARCOS, CITY OF	060295	1057	G

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

MAP NUMBER
06073C1057G

MAP REVISED
MAY 16, 2012

Federal Emergency Management Agency

Legend

- 100YR FLOODWAY
- 100YR FLOODPLAIN
- 500YR FLOODPLAIN

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

Path: H:\16412\GIS\FEMA_1057_Revised_DFIRM.mxd

1” = 100’

0 100

LEGEND:

- HEC–RAS CROSS–SECTION
- EXISTING CONDITION 100–YEAR FLOODPLAIN
- EXISTING CONDITION 100–YEAR FLOODWAY
- PROPOSED CONDITION 100–YEAR FLOODPLAIN
- PROPOSED CONDITION 100–YEAR FLOODWAY
- EXPANSION–CONTRACTION ZONE

NOTE:
THE EXISTING CONDITION FLOODPLAIN AND FLOODWAY ARE FROM THE CLOMR PROPOSED CONDITION RESULTS.

HEC–RAS WORK MAP