

STATE OF
COLORADO

Lennberg - DNR, Patrick <patrick.lennberg@state.co.us>

Adequacy Review No. 1, TR-7, Home Office Mine, M1977-439

Julie Mikulas <Julie.Mikulas@martinmarietta.com>

Fri, Jan 26, 2024 at 2:03 PM

To: "DRMS-Patrick Lennberg (patrick.lennberg@state.co.us)" <patrick.lennberg@state.co.us>, "rob.zuber@state.co.us" <rob.zuber@state.co.us>

Cc: Brian Smith <Brian.Smith@acewater.com>

Patrick and Rob, please see Anderson Consulting response below along with attachments and file link for input and output.

From: Brian Smith <Brian.Smith@acewater.com>**Sent:** Friday, January 26, 2024 1:53 PM**To:** Julie Mikulas <Julie.Mikulas@martinmarietta.com>**Subject:** RE: Adequacy Review No. 1, TR-7, Home Office Mine, M1977-439

EXTERNAL SENDER – PLEASE ASSESS AND VERIFY

Hi Julie,

Below is our response to the DRMS' comments.

- Comment #1:
 - As discussed in the submitted technical memo, two sets of hydraulic models were utilized for the analysis. A one-dimensional model with cross sections was prepared back in 2014-2015 using HEC-RAS Version 4.1. Cross Section print outs from this model are attached with annotation noting which ones are Sections CV, CW, and CX. Please note that the 1D model utilized split flow paths, so cross section print outs are provided for both the main channel and right split flow path. The cross section numbers noted on the attached pdfs correlate to those shown on Figure 2 in Attachment C of the memo. This figure has been attached to this e-mail for reference and has been annotated to show which cross sections are contained along the Right Split Flow Path.
 - A two-dimensional model, that evaluated two sets of topographic data as discussed in the memo, was also prepared using HEC-RAS Version 6.3. If necessary, this model can be utilized to develop cross sectional plots at any location through the model domain.
 - The input files, output files and all corresponding data necessary to review and re-run both of the hydraulic models are provided in the following link:

 [Taft Hill Flood Evaluation](#)

- Comment #2:
 - A velocity output map from the 2D modeling results is attached. A more zoomed in picture of the northeast corner of Pit E-I is also attached and shows velocities of 1 ft/sec or less in this area. If further output data

from the 2D model is needed, the RAS-Mapper application that is contained within the HEC-RAS model Version 6.3 can be utilized to review this data.

- Comment #3:
 - The HEC-RAS files are contained in the link provided as part of the response to Comment #1 above.

I am happy to help walk the DRMS staff through the models and how to review the 2D results with the RAS-Mapper application if necessary.

Thanks,

Brian A. Smith, P.E., CFM

Principal Engineer/Project Manager

Anderson Consulting Engineers, Inc.

375 E. Horsetooth Road, Bldg. 5

Fort Collins, CO 80525

Phone: (970) 226-0120

Email: Brian.Smith@acewater.com

Website: www.acewater.com

From: Julie Mikulas <Julie.Mikulas@martinmarietta.com>

Sent: Friday, January 19, 2024 3:39 PM

To: Brian Smith <Brian.Smith@acewater.com>

Subject: FW: Adequacy Review No. 1, TR-7, Home Office Mine, M1977-439

Brian, can you review the attached and let me know if this is something you can reply to this email with or set up a sharefile to give them access to.

From: Lennberg - DNR, Patrick <patrick.lennberg@state.co.us>

Sent: Friday, January 19, 2024 2:56 PM

To: Julie Mikulas <Julie.Mikulas@martinmarietta.com>

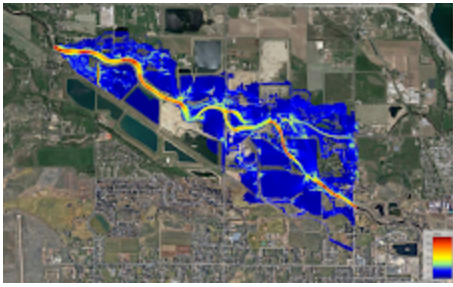
Cc: Zuber - DNR, Rob <rob.zuber@state.co.us>

Subject: Adequacy Review No. 1, TR-7, Home Office Mine, M1977-439

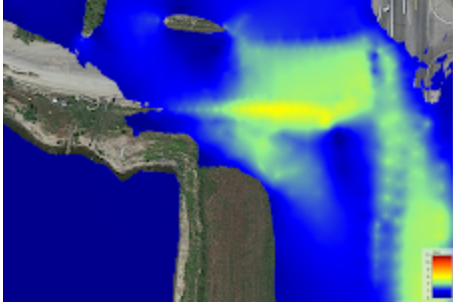
EXTERNAL SENDER – PLEASE ASSESS AND VERIFY

[Quoted text hidden]

5 attachments



2D Max Velocity Results.png
1982K



2D Max Velocity Zommed in to Northeast Corner of Plt E-I.png
844K



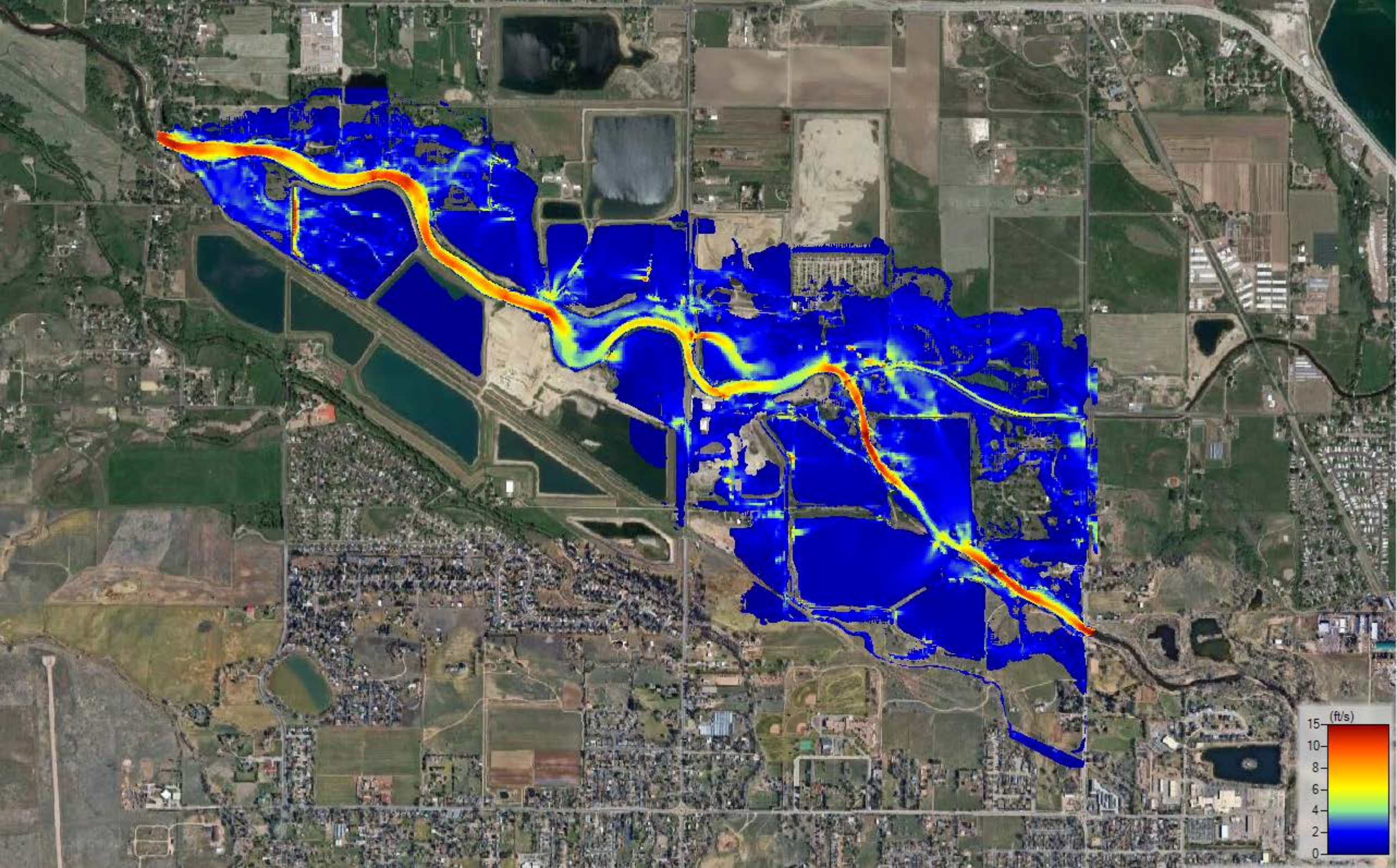
Main Channel Cross Sections.pdf
129K

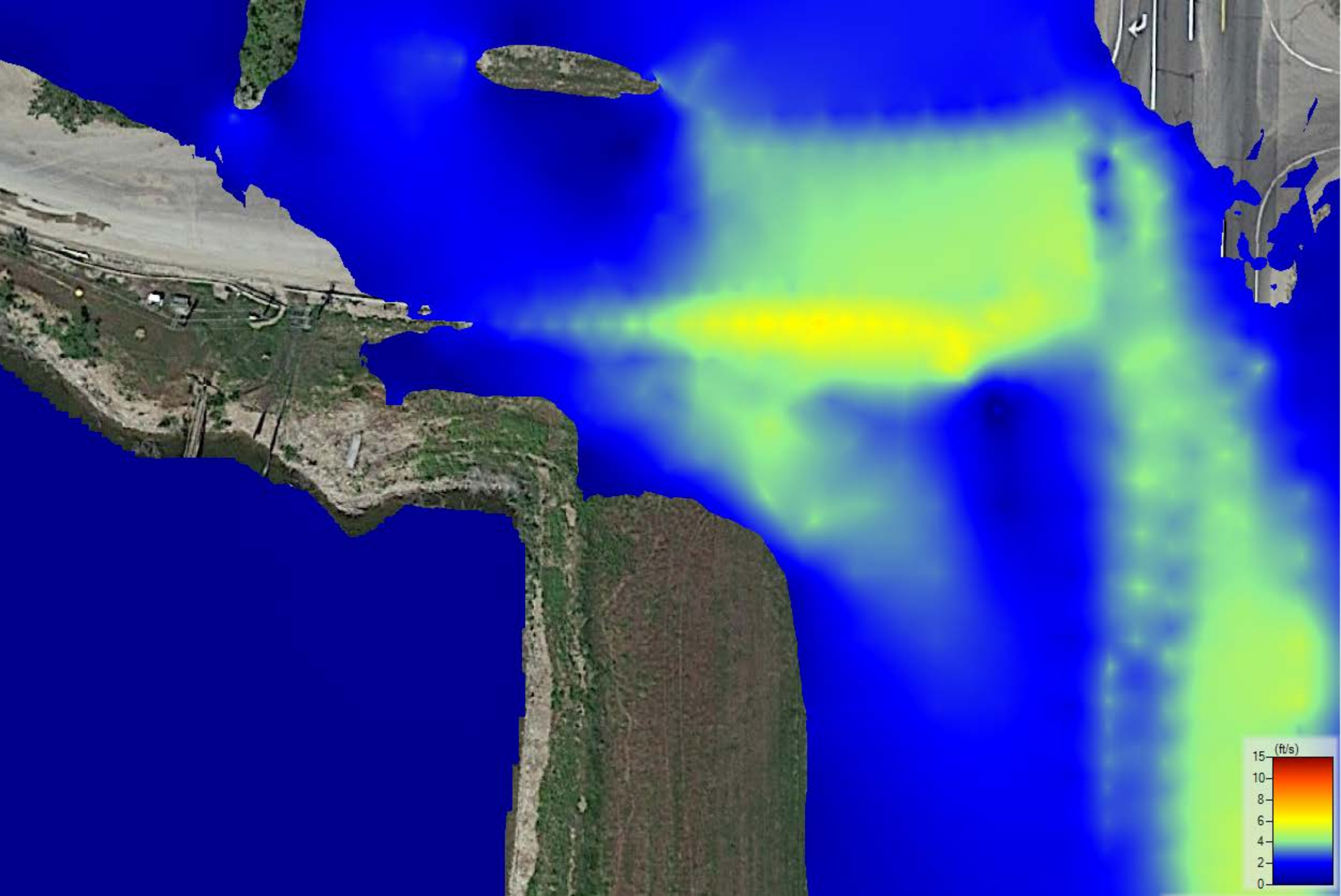


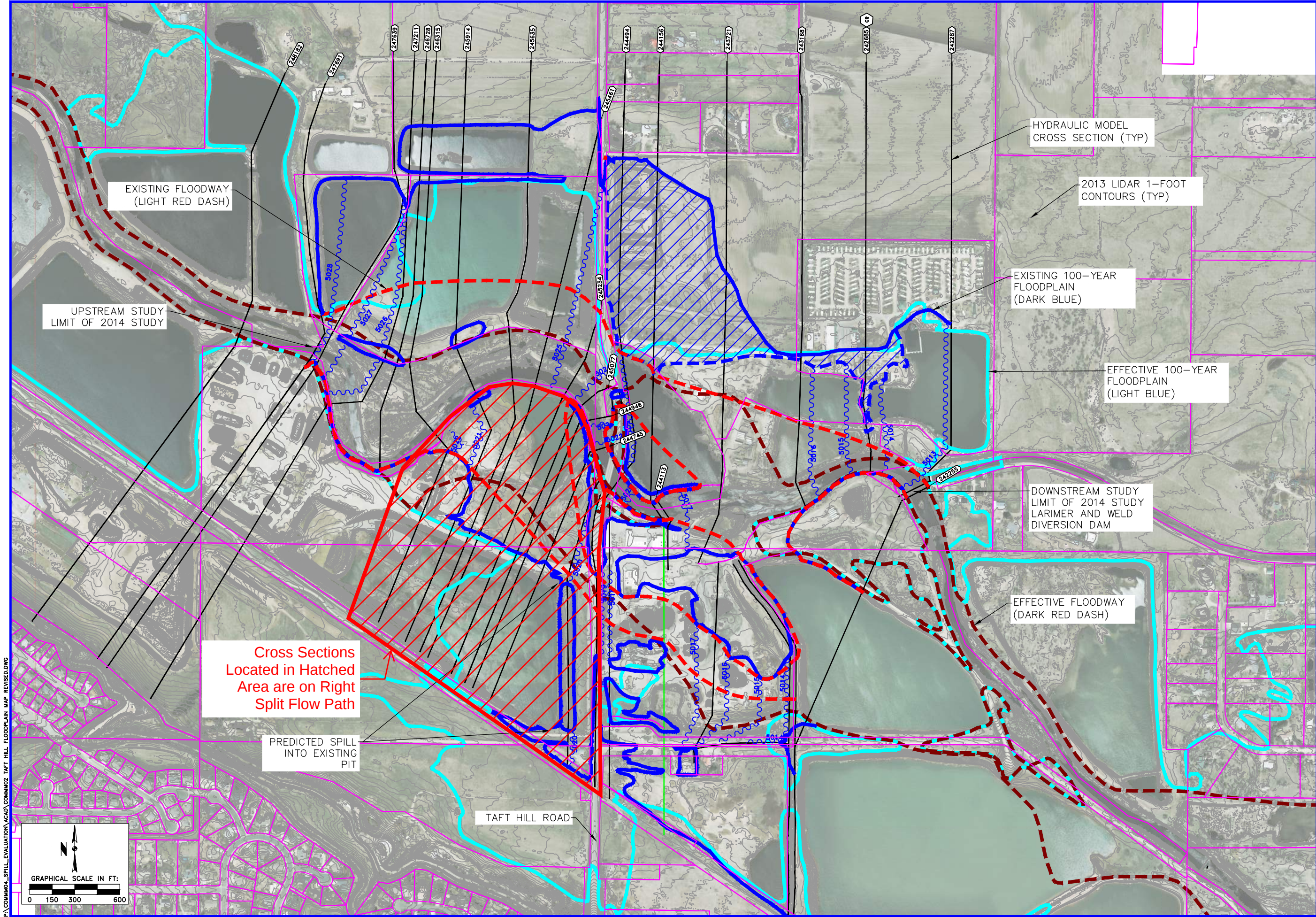
Split Flow Path Cross Sections.pdf
130K



Figure 2.pdf
4847K







P:\COMMON_4_SPILL_EVALUATION\ACU\COMMON2 TAFT HILL FLOODPLAIN MAP REVISED.DWG

Anderson Consulting Engineers, Inc
Civil • Water Resources • Environmental
375 East Horsetooth Road, Building 5, Fort Collins, CO 80525
Phone (970) 226-0120 / Fax (970) 226-0121
www.ac-engineers.com



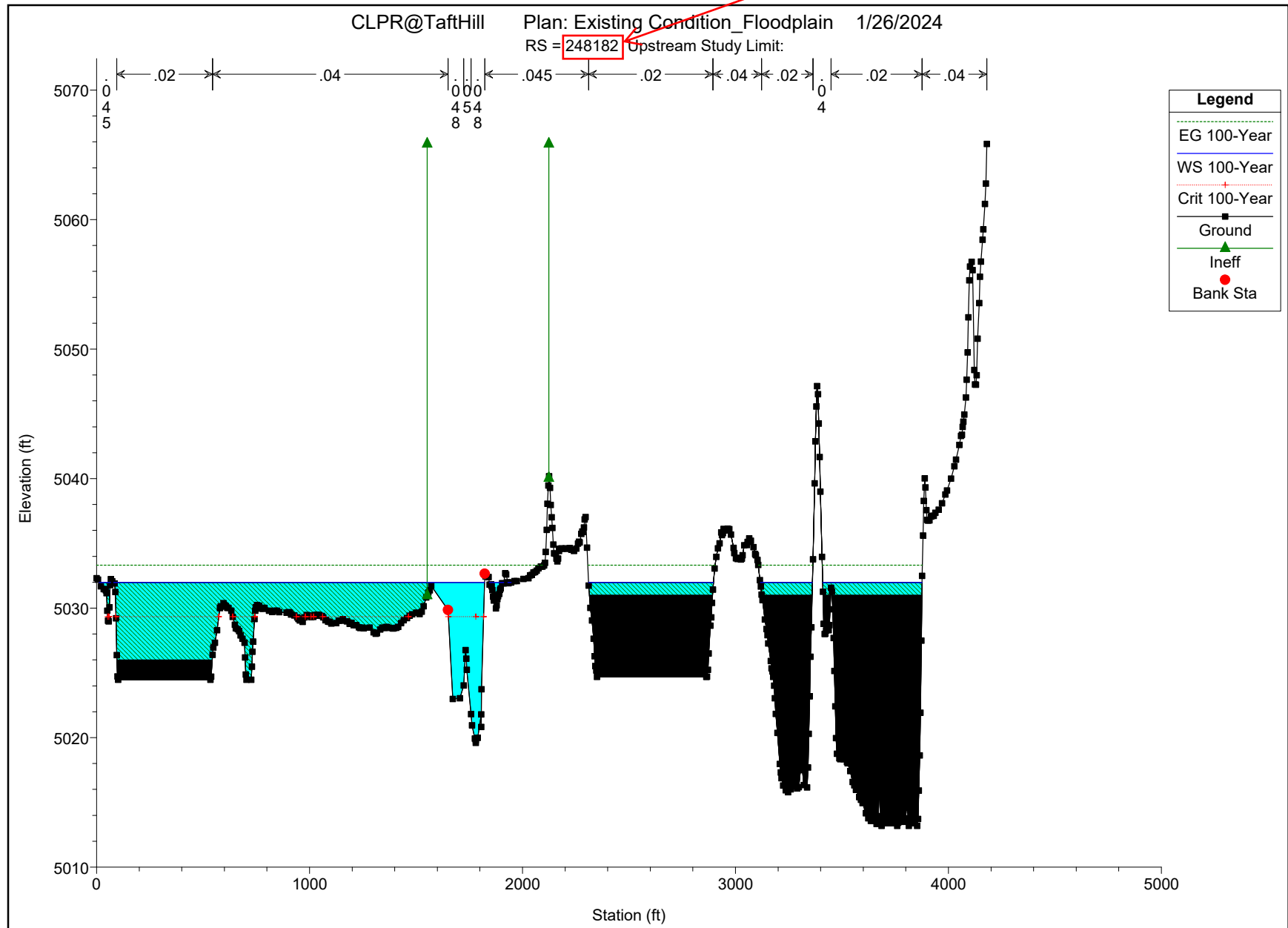
EXISTING CONDITION FLOODPLAIN AND FLOODWAY WORKMAP

MARTIN MARIETTA MATERIALS TAFT HILL SITE

DRAWN BY:	BAS
DESIGNED BY:	BAS
CHECKED BY:	CJP
PROJECT NUMBER:	COMM02
DATE:	01/22/2015
FIGURE:	2

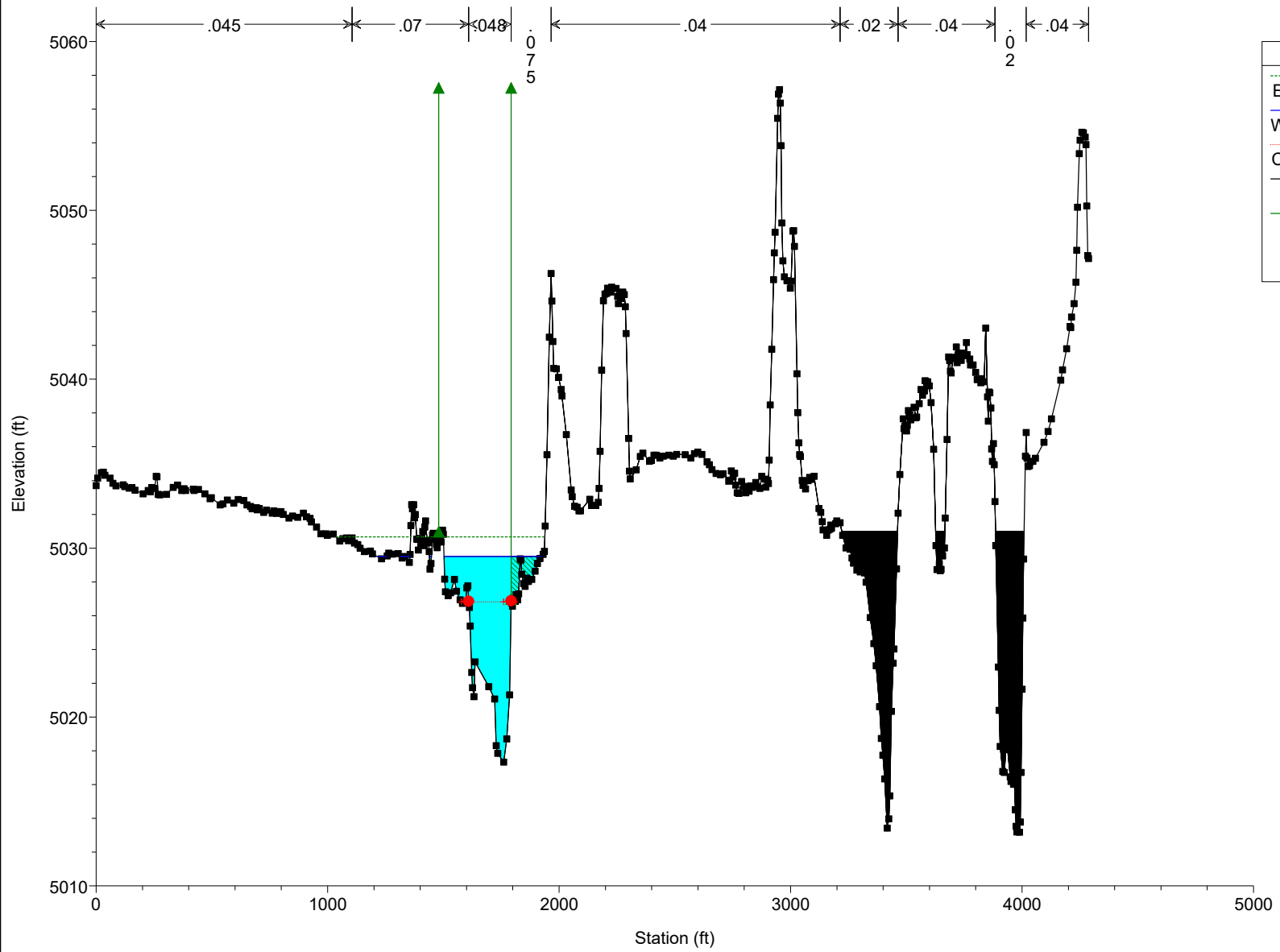
Cross Section CX

Cross Section
Number as Shown on
Figure 2

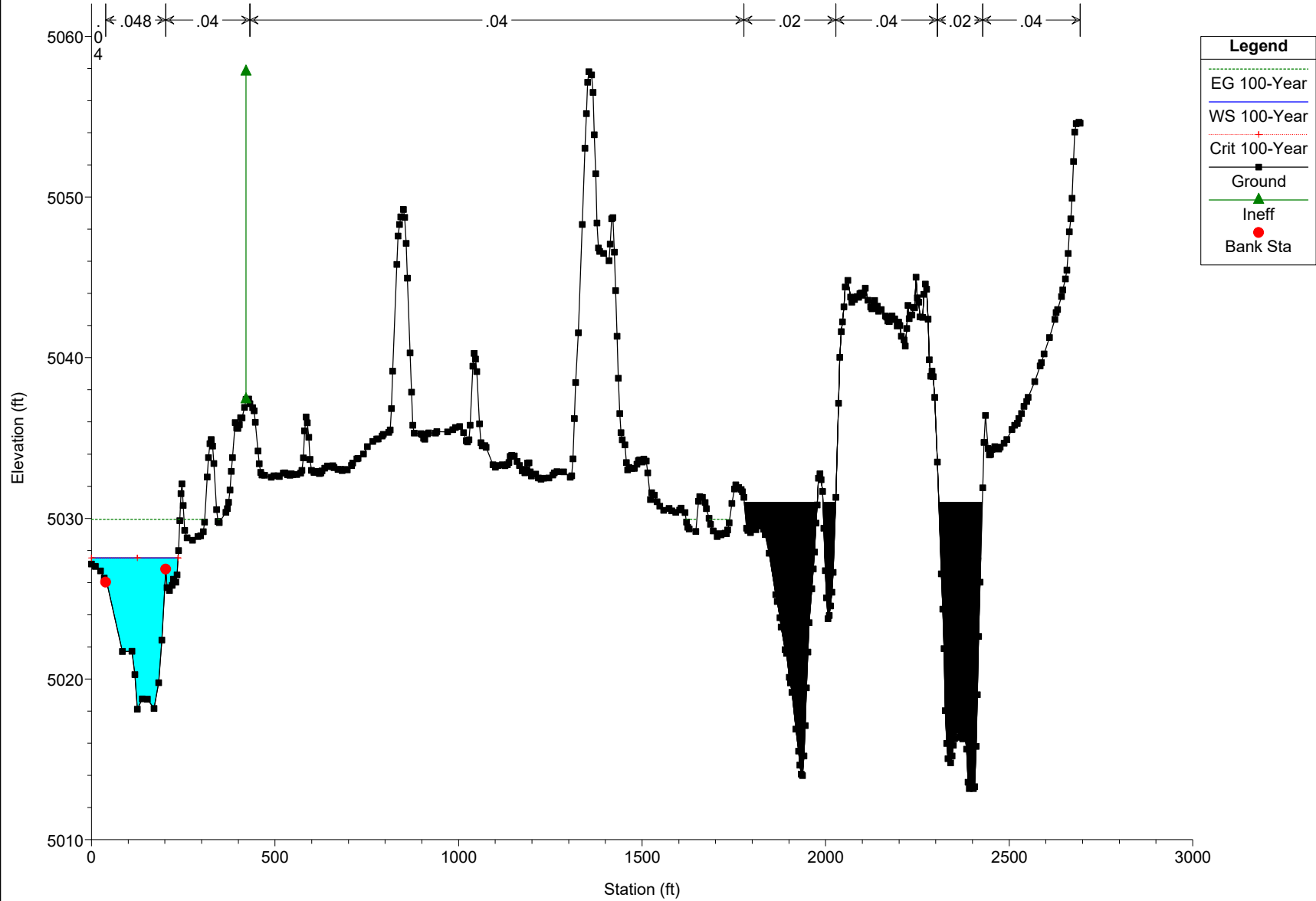


CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

RS = 247691

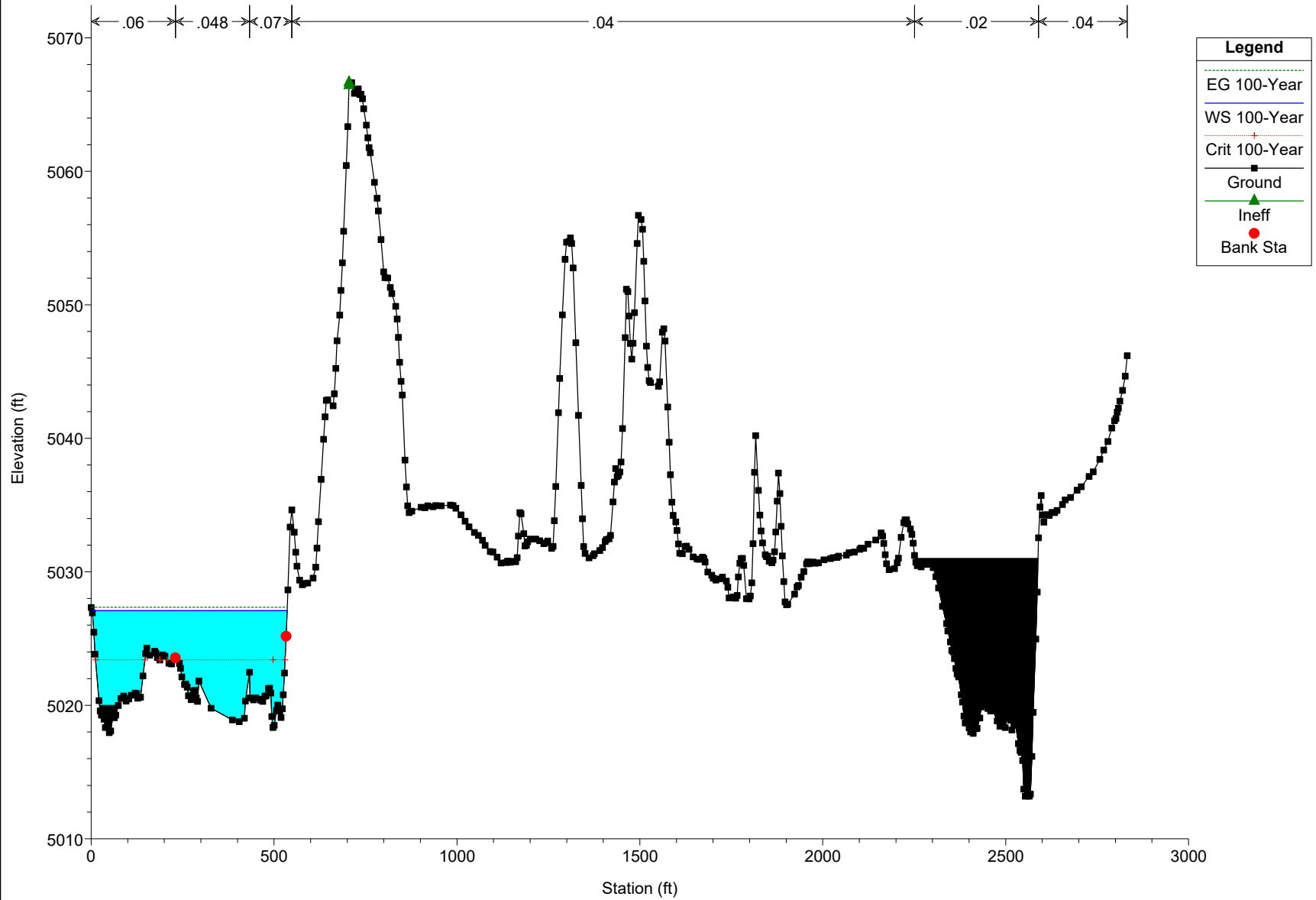


CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024
RS = 247639



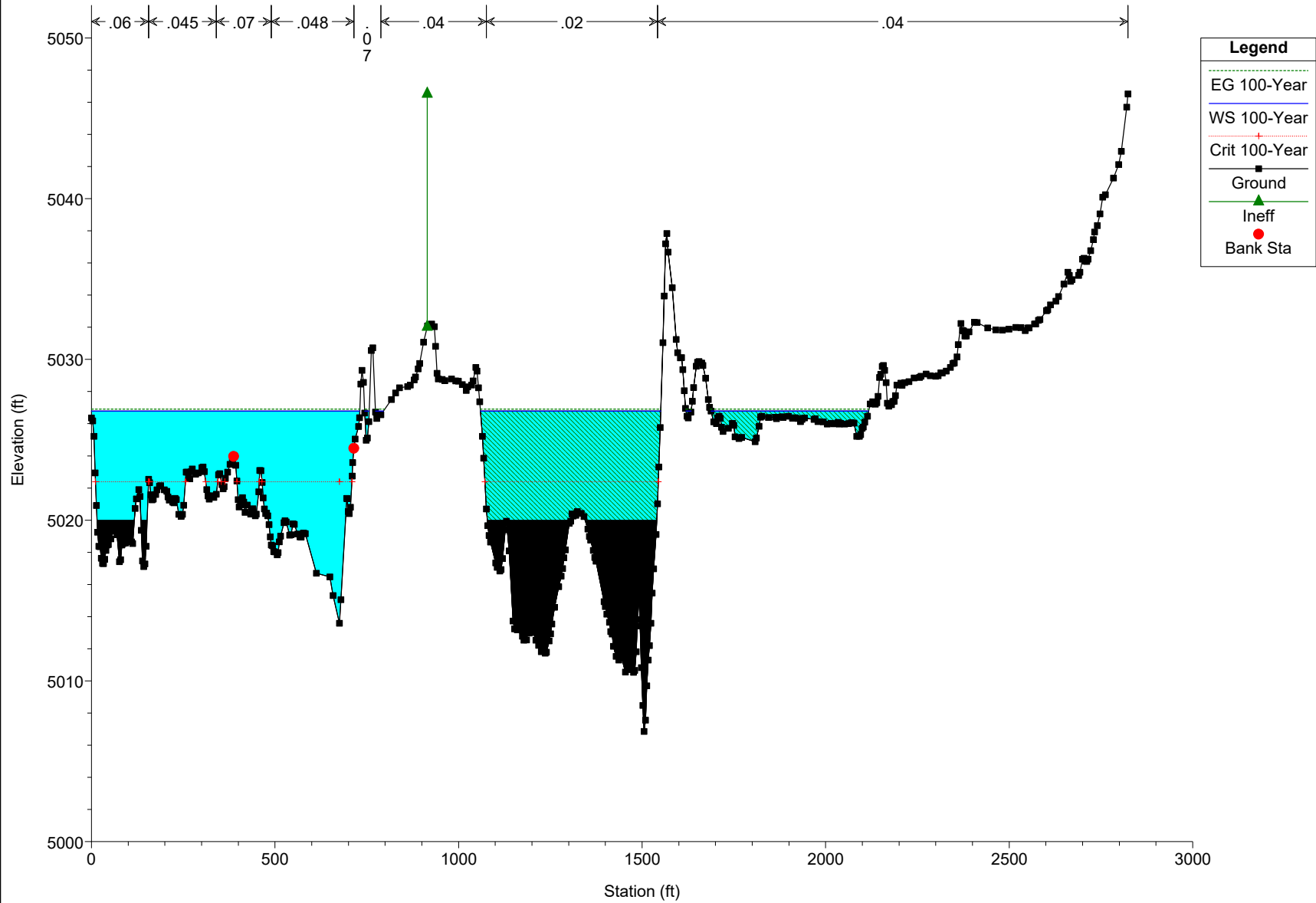
CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

RS = 247211



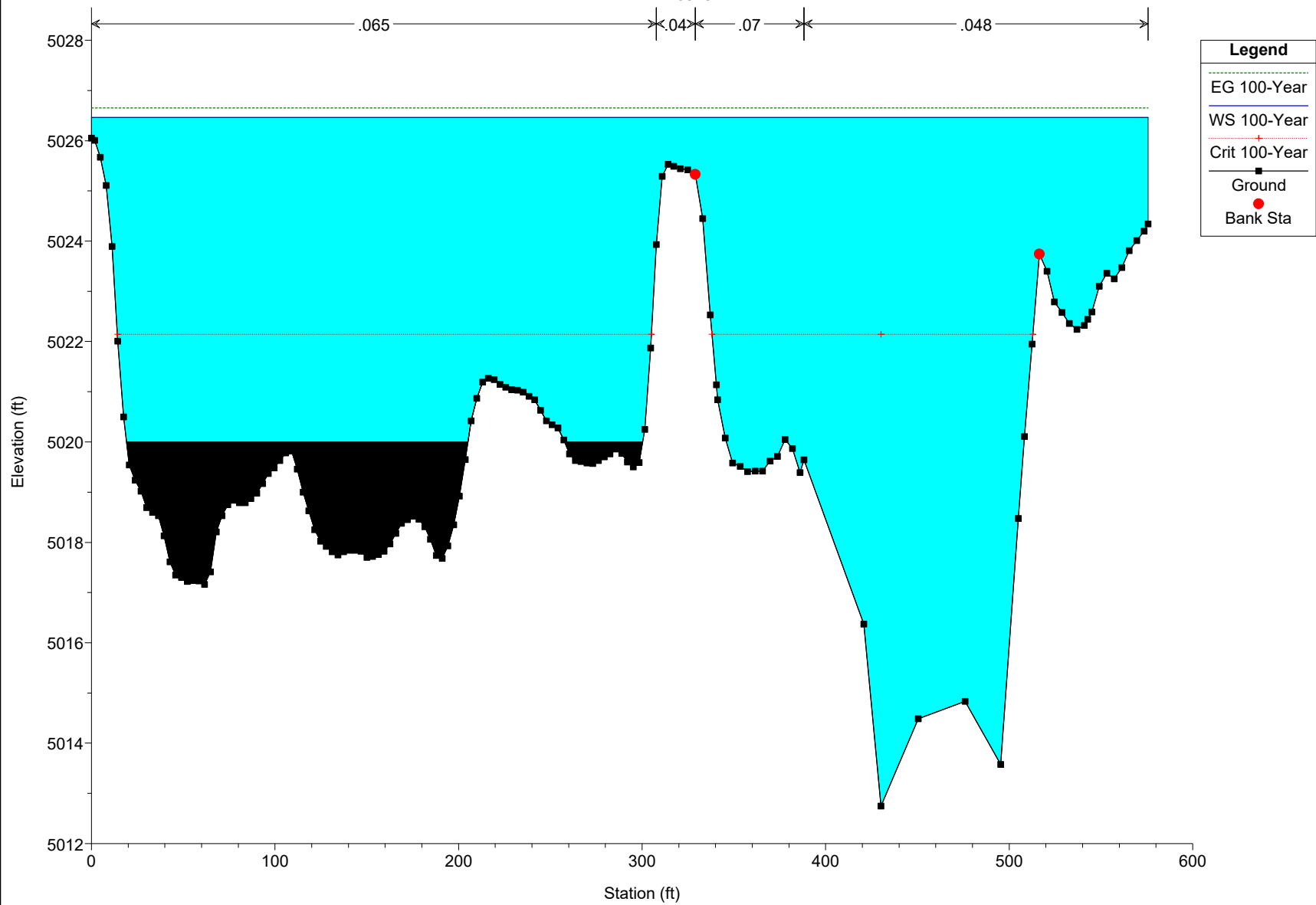
CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

RS = 246728



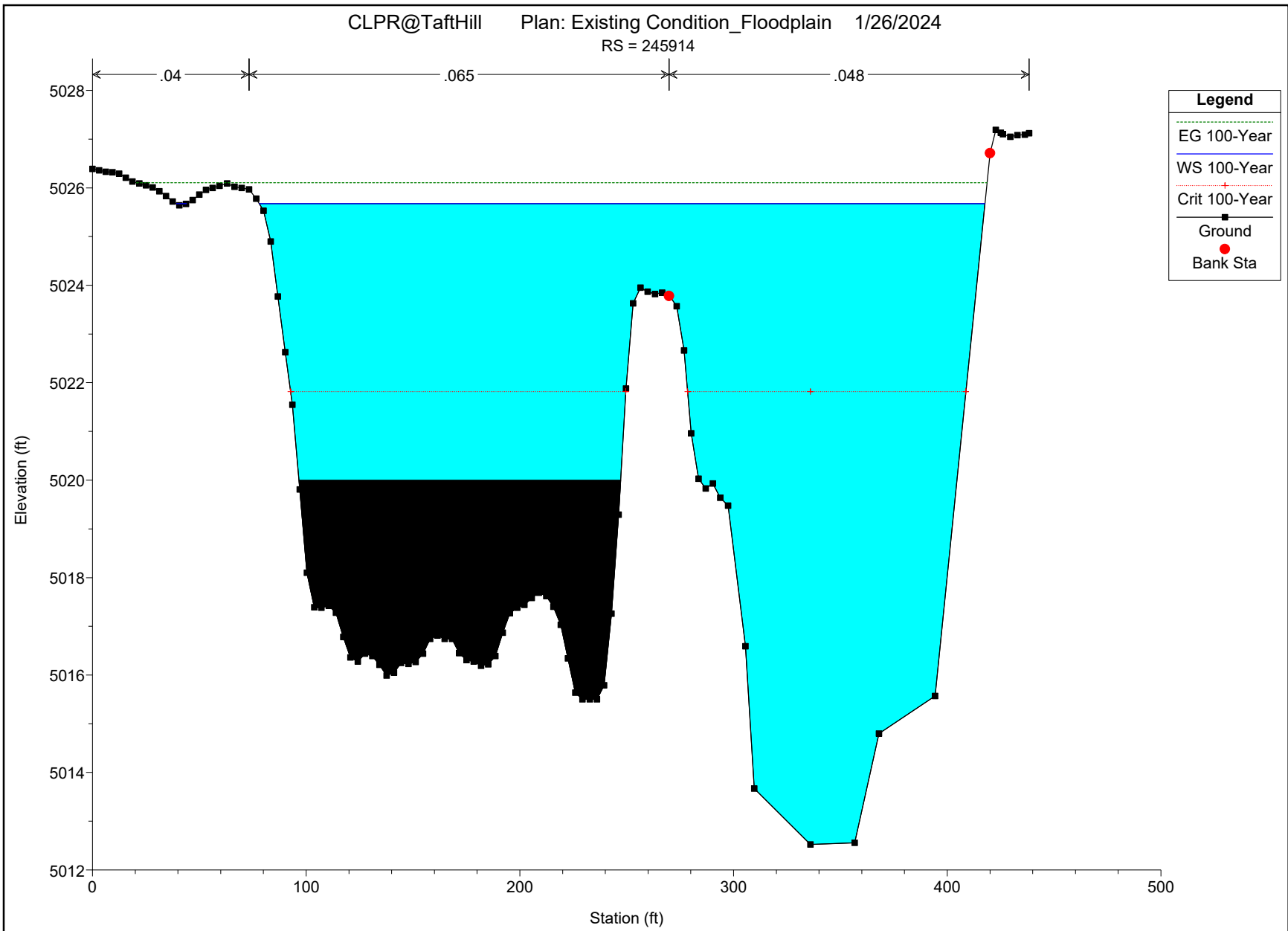
CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

RS = 246315



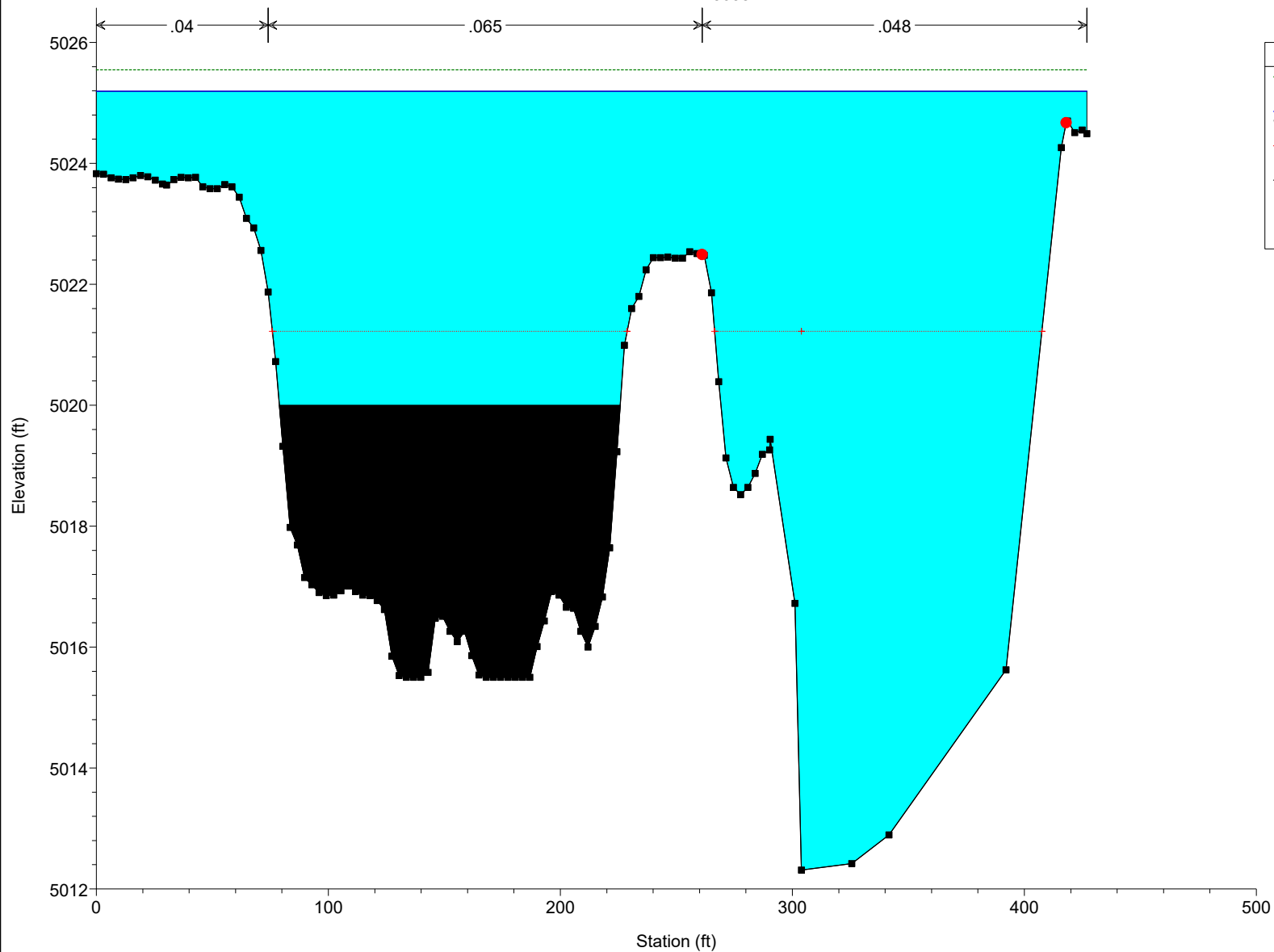
Cross Section CW

CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024
RS = 245914

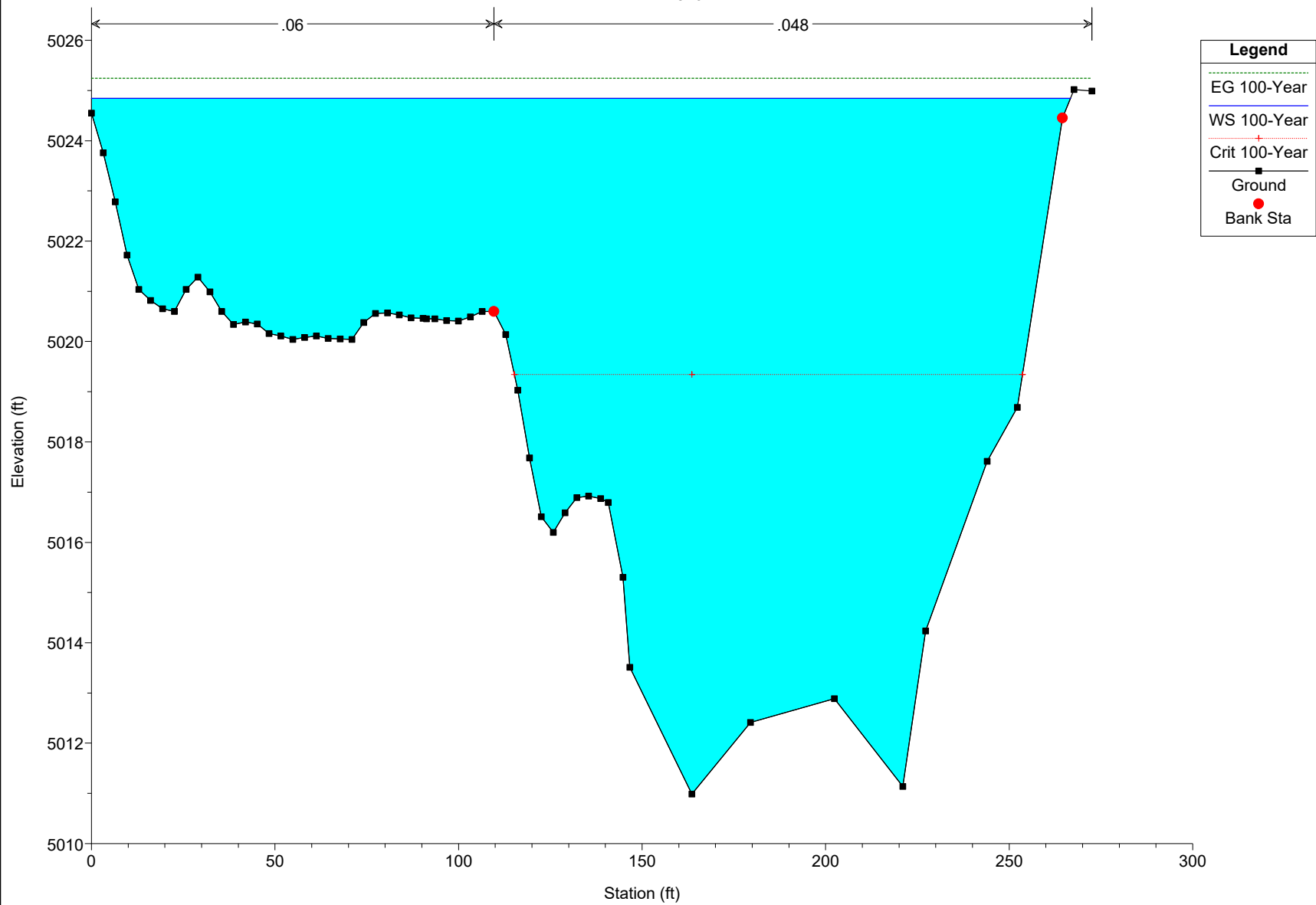


CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

RS = 245635

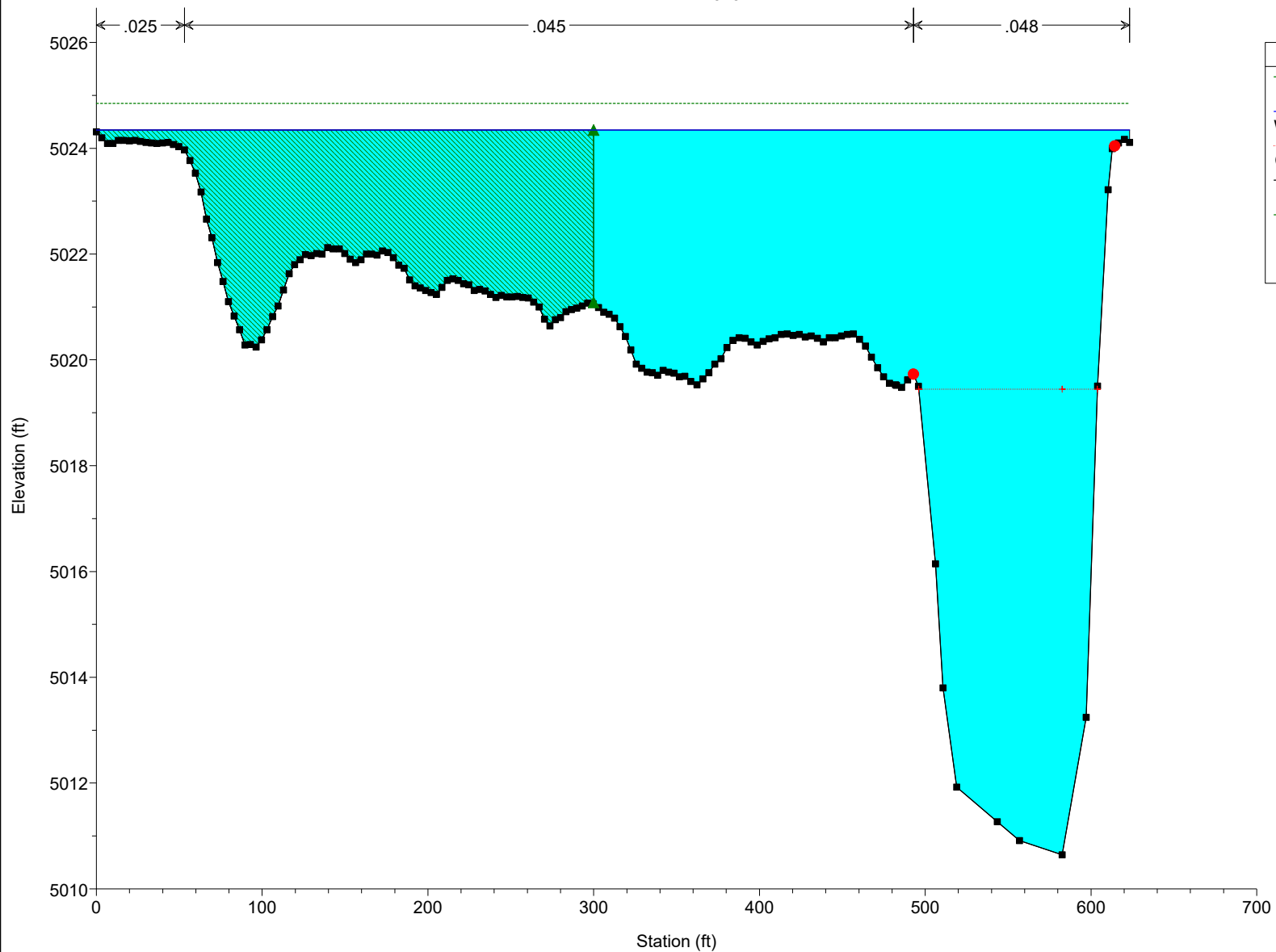


CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024
RS = 245461



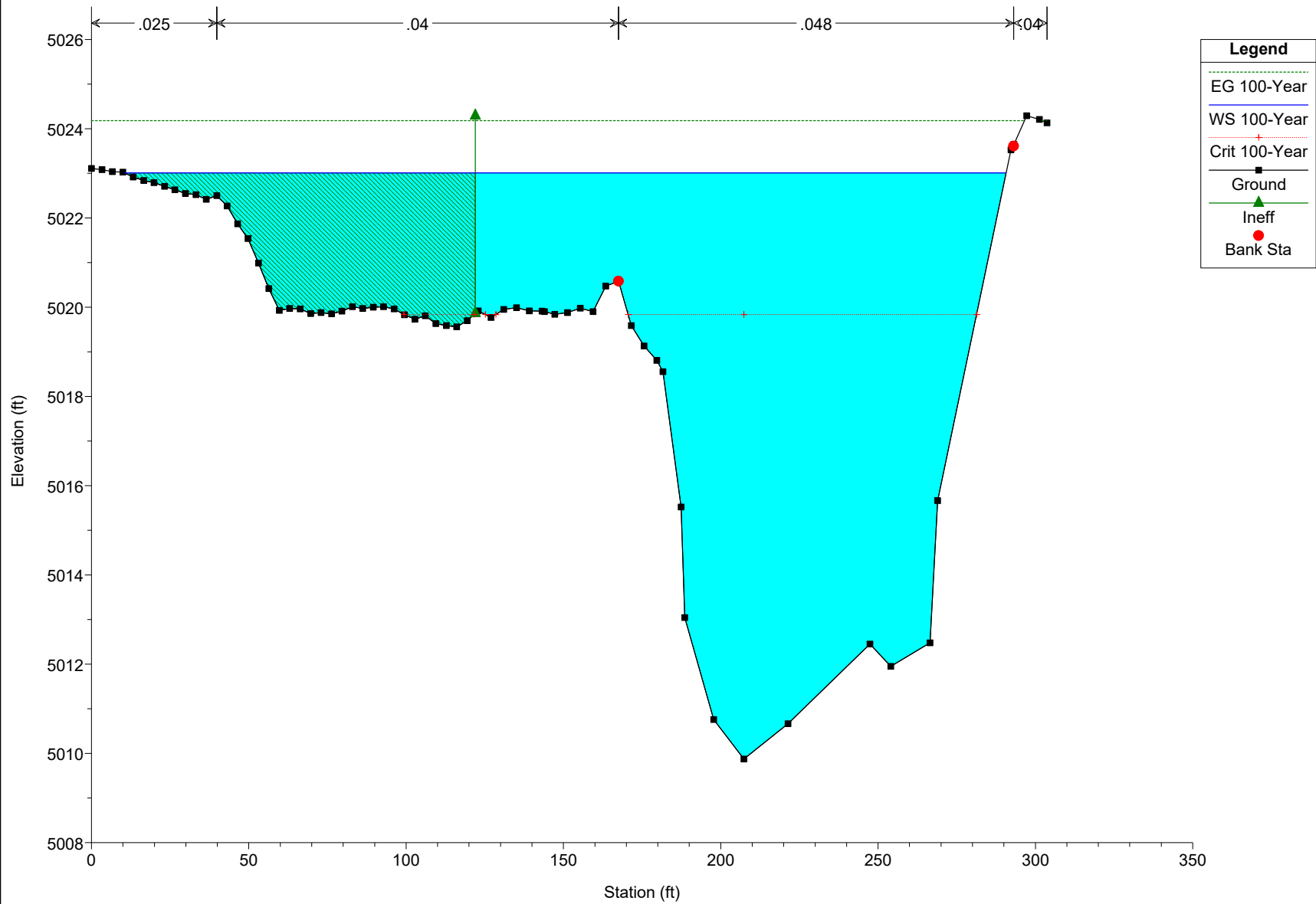
CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

RS = 245234

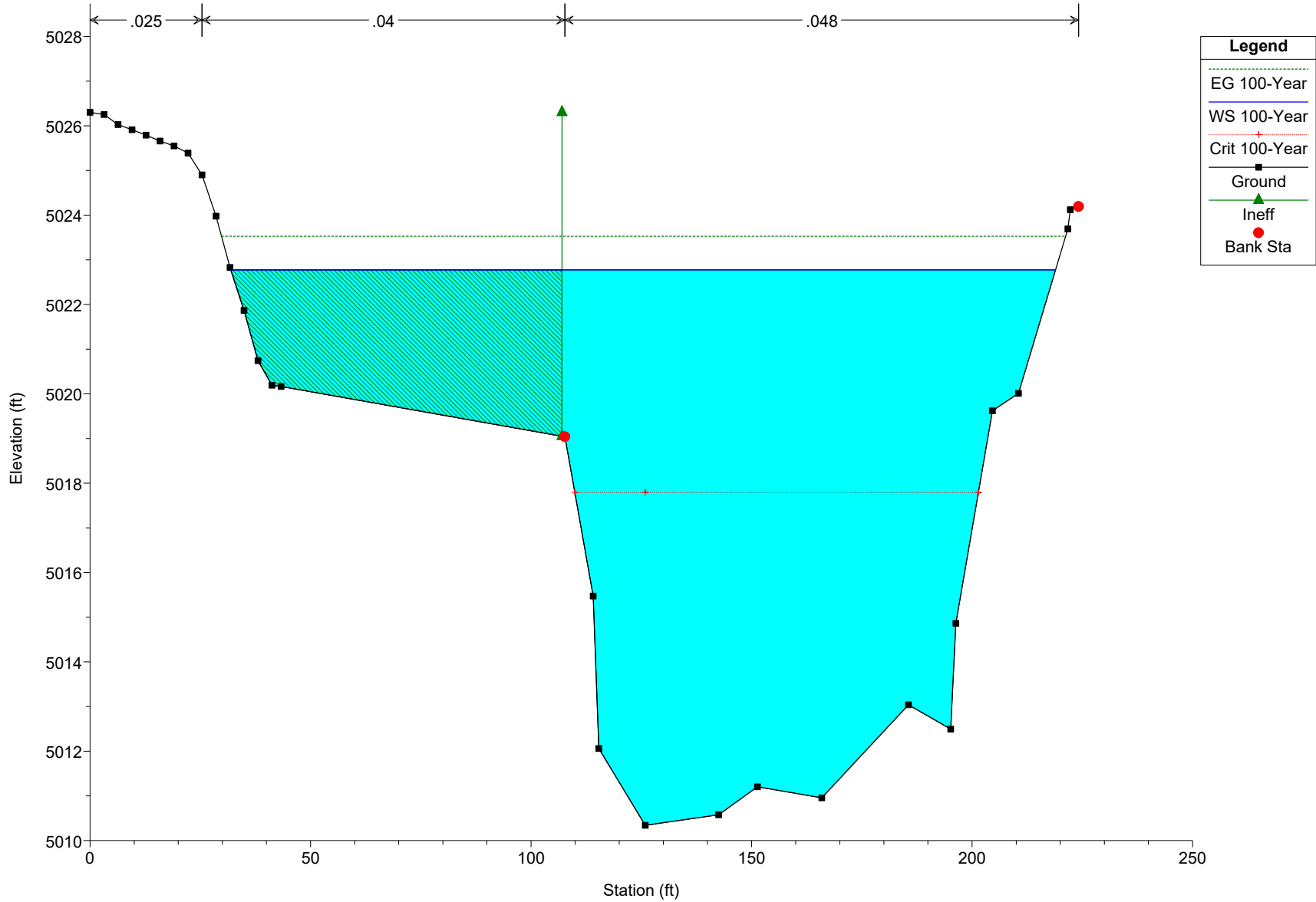


CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

RS = 245077

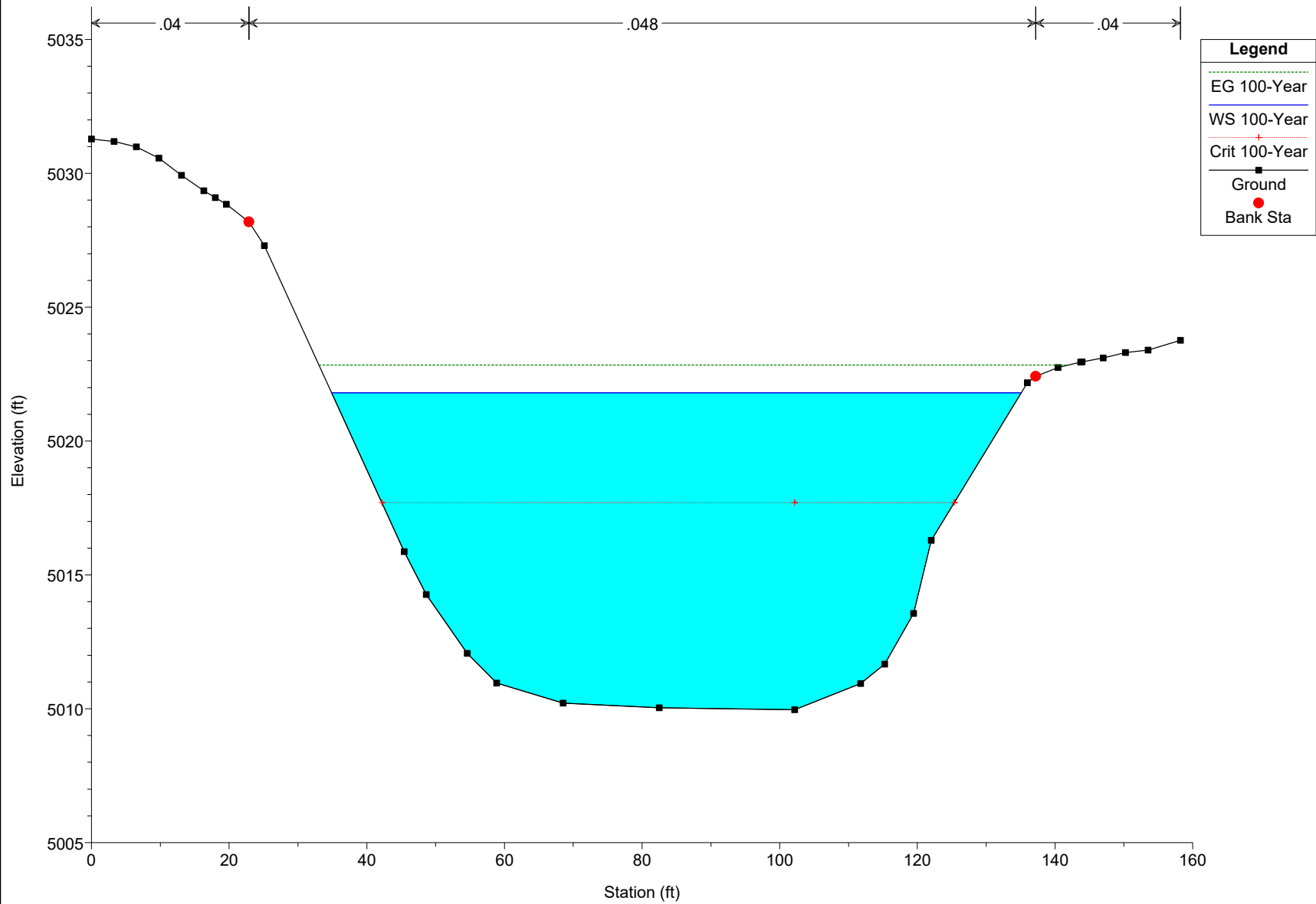


CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024
RS = 244946

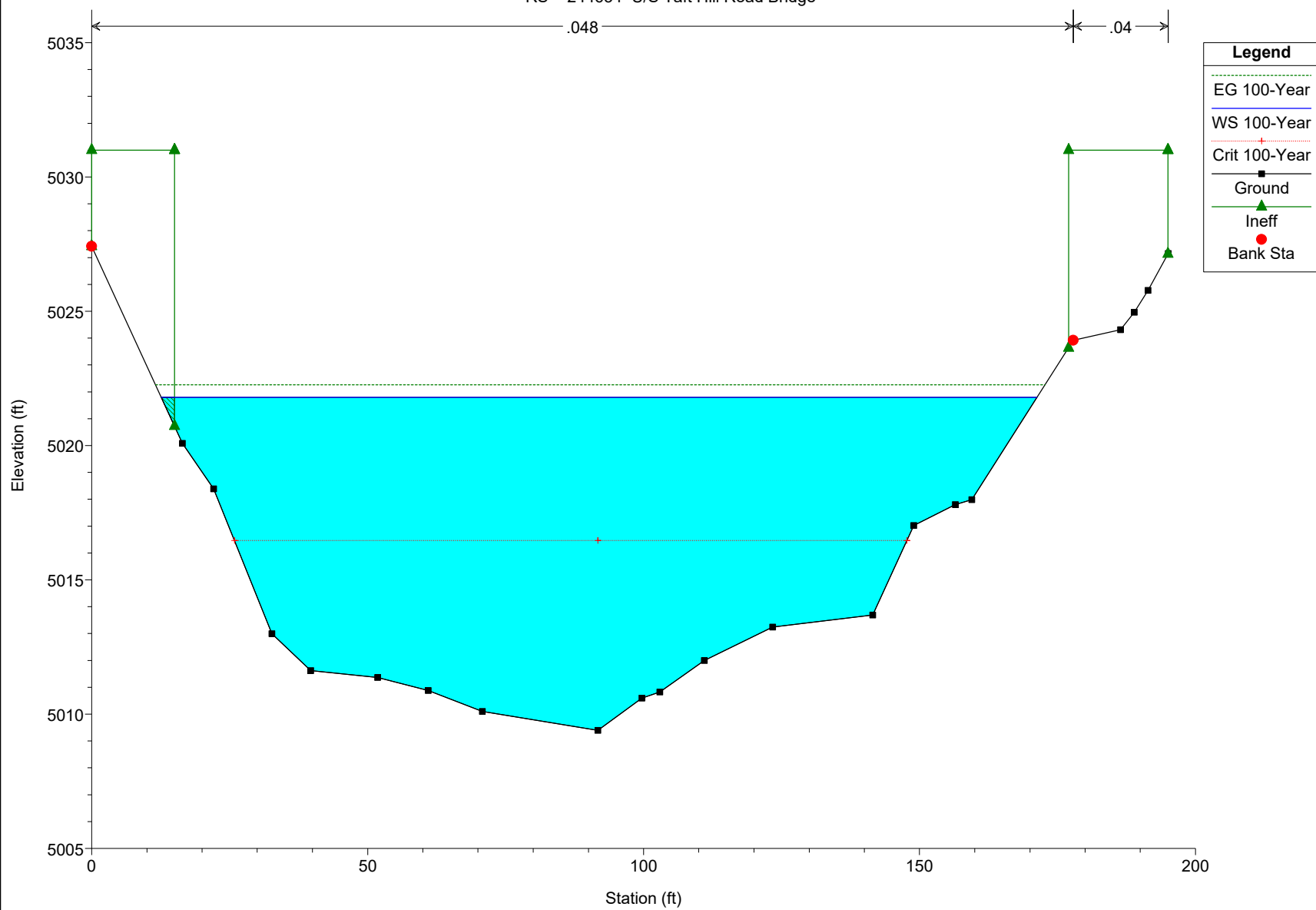


CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

RS = 244745

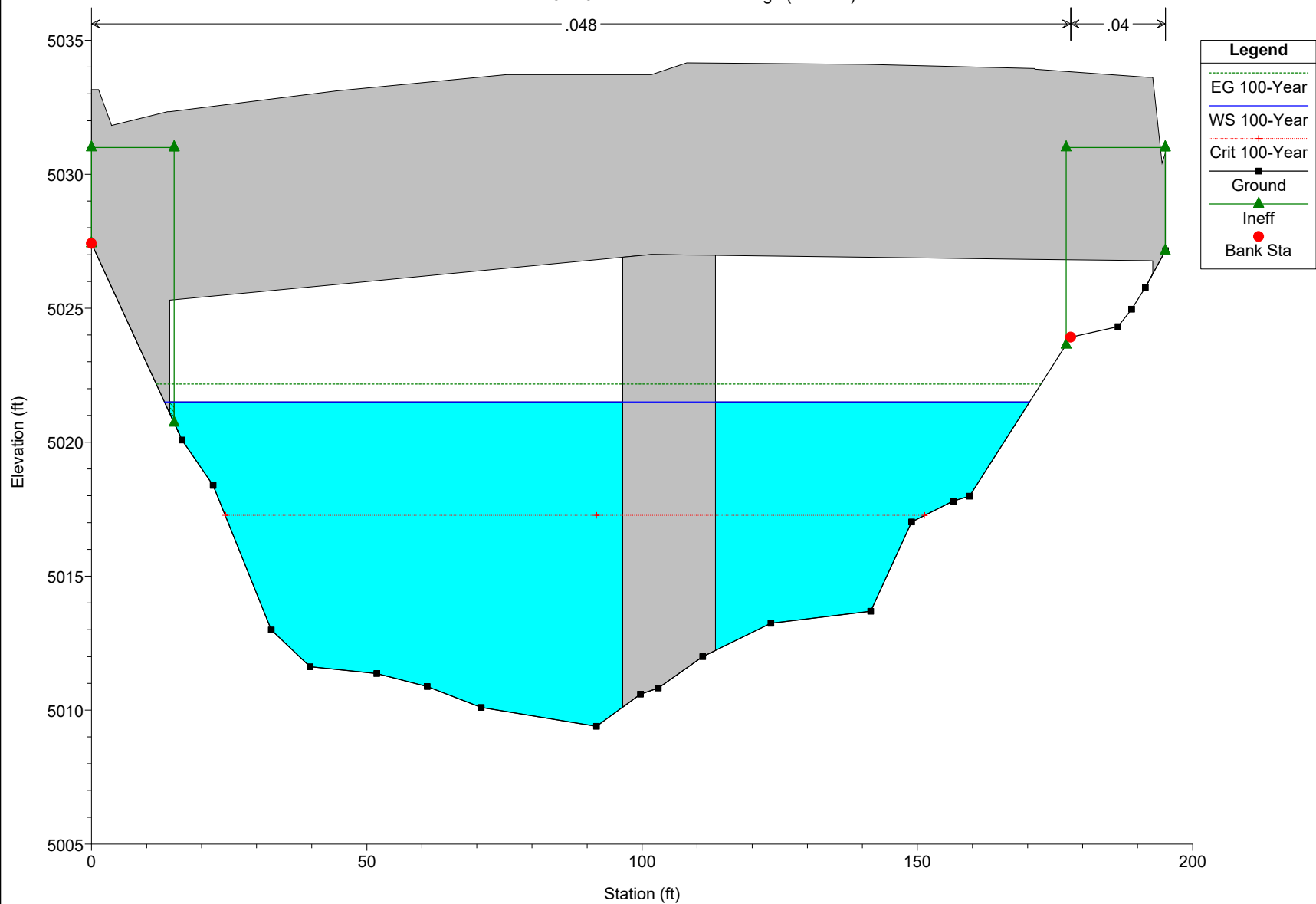


RS = 244634 U/S Taft Hill Road Bridge



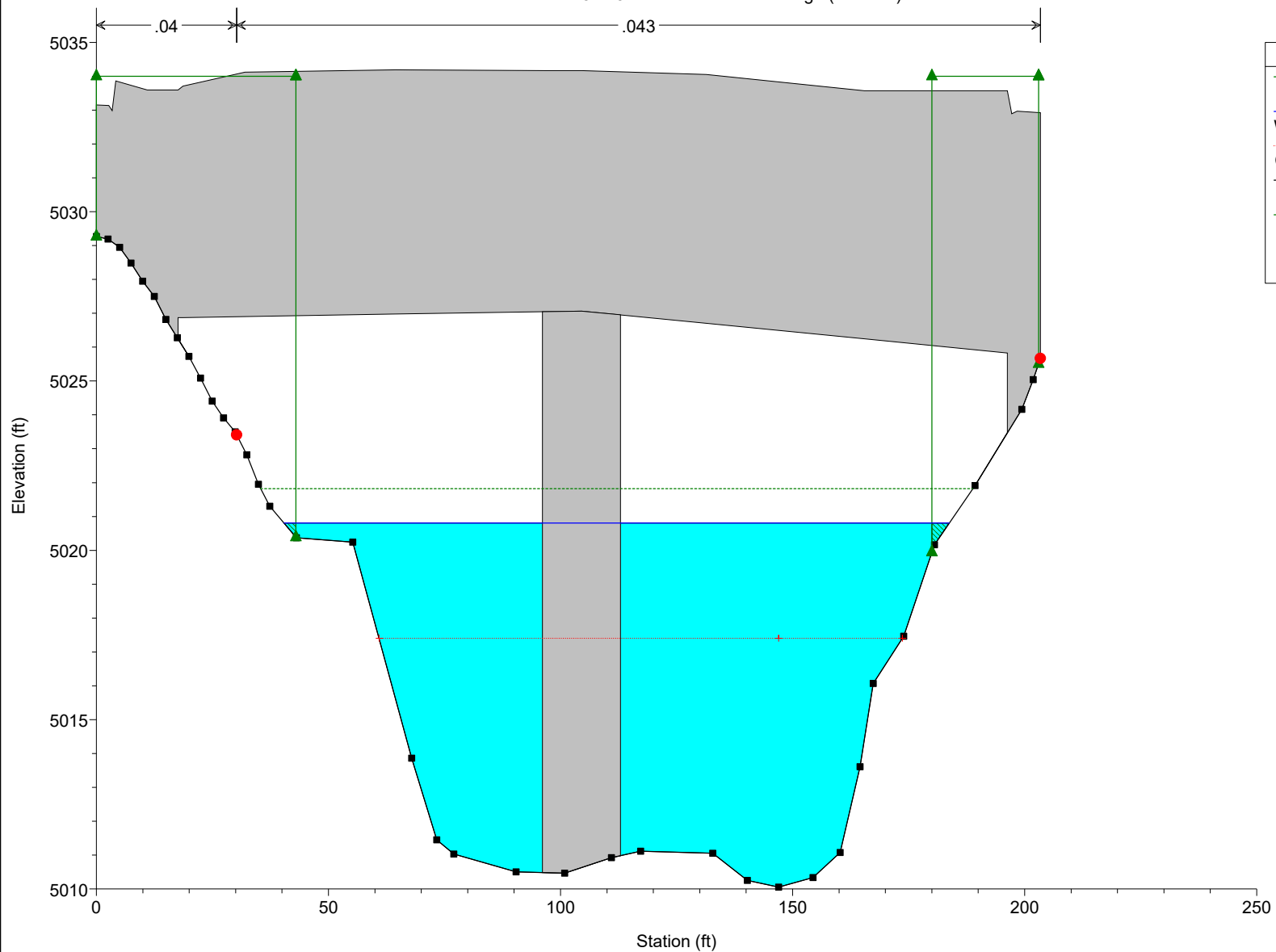
CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

RS = 244544.5 BR Taft Hill Road Bridge (Skewed)



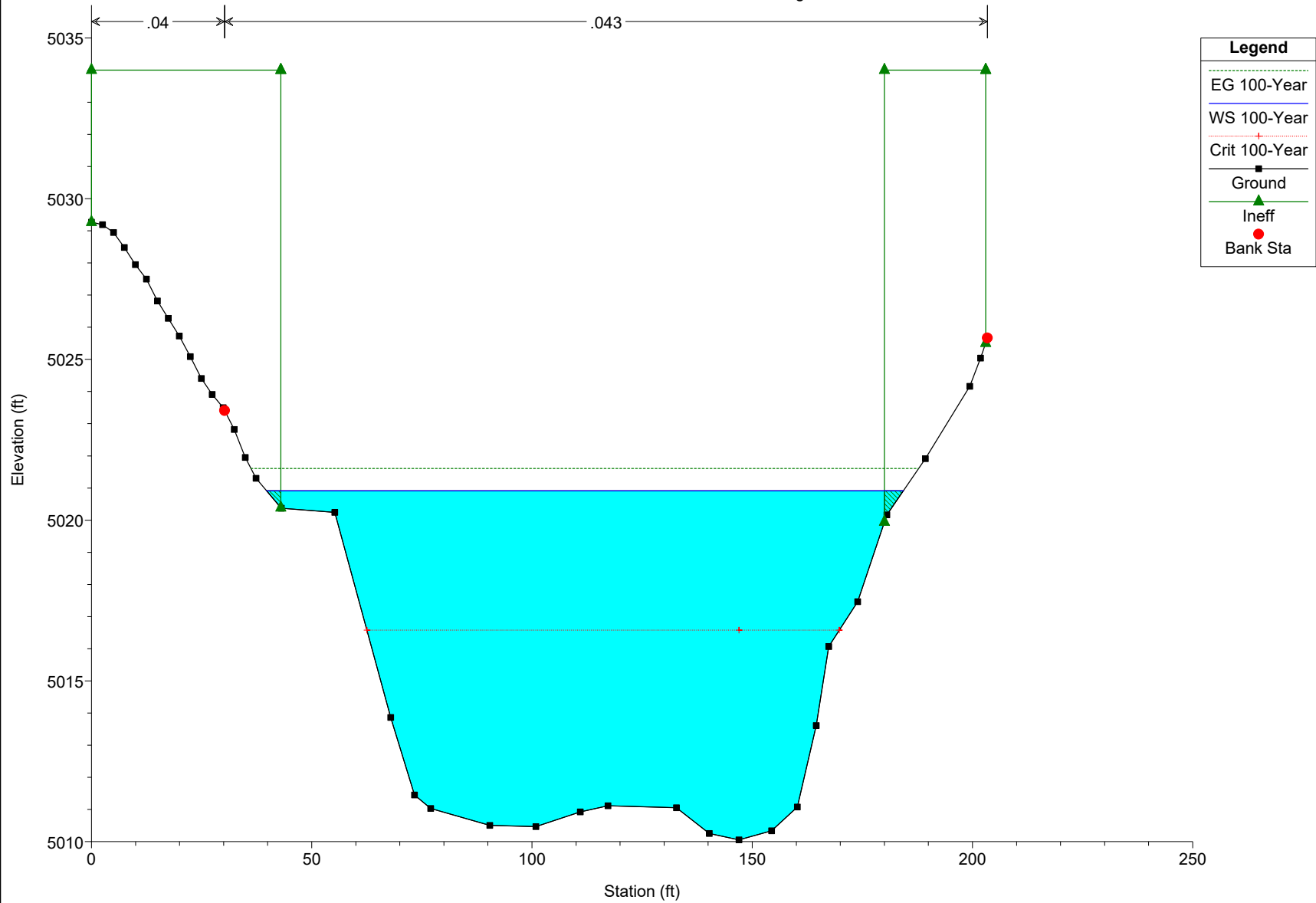
CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

RS = 244544.5 BR Taft Hill Road Bridge (Skewed)

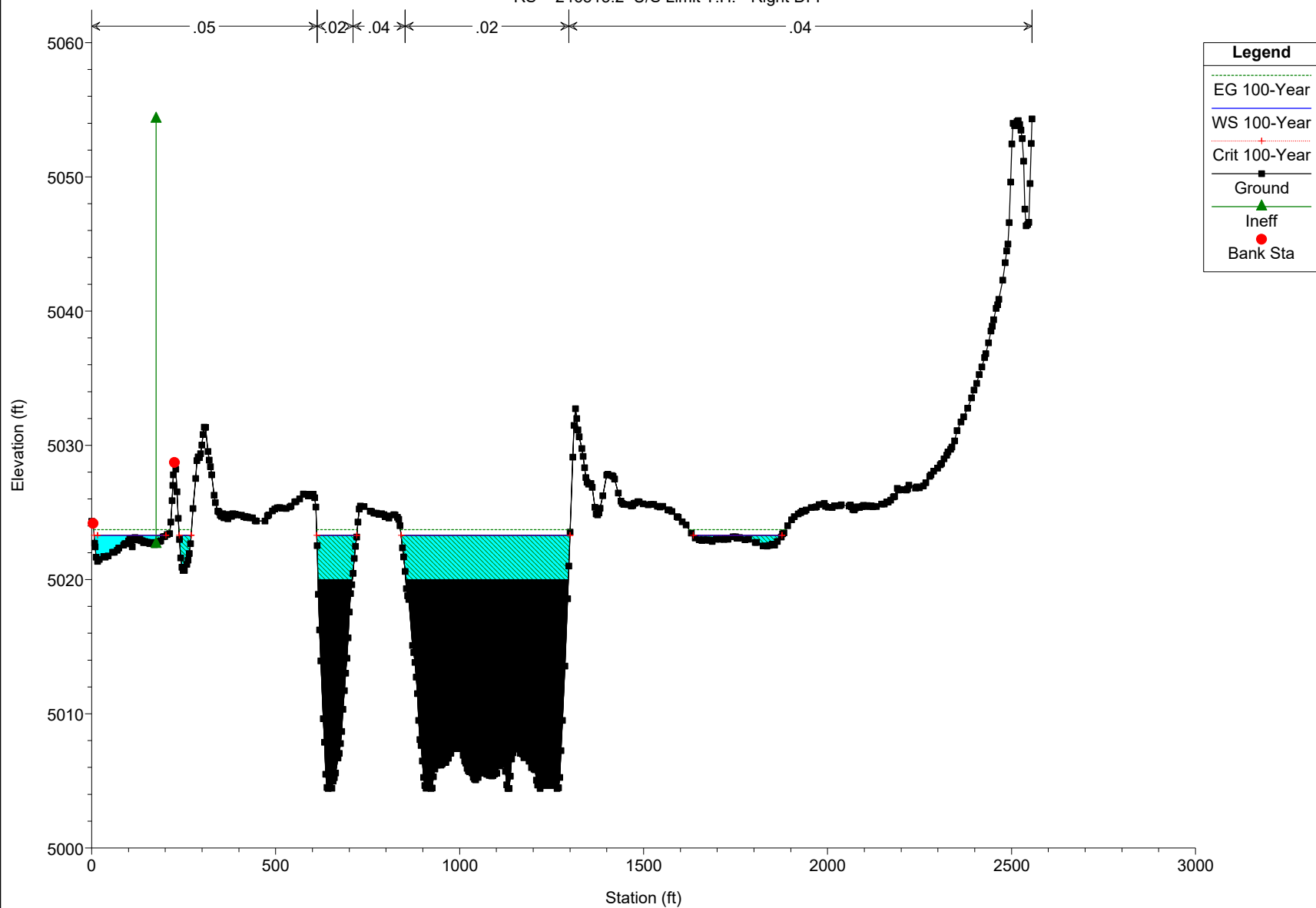


Cross Section CV

CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024
RS = 244544 D/S Taft Hill Road Bridge

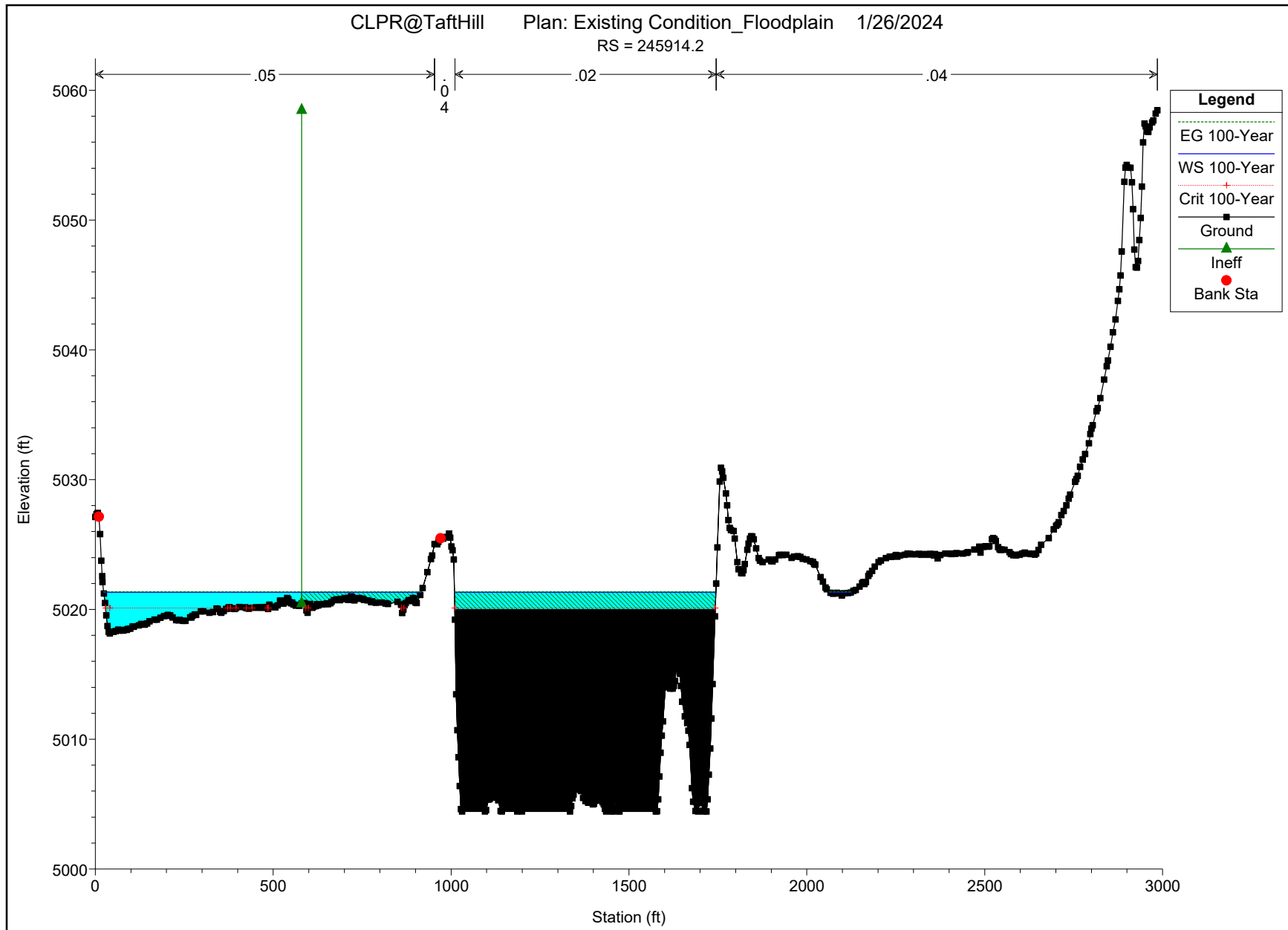


RS = 246315.2 U/S Limit T.H. - Right DFP



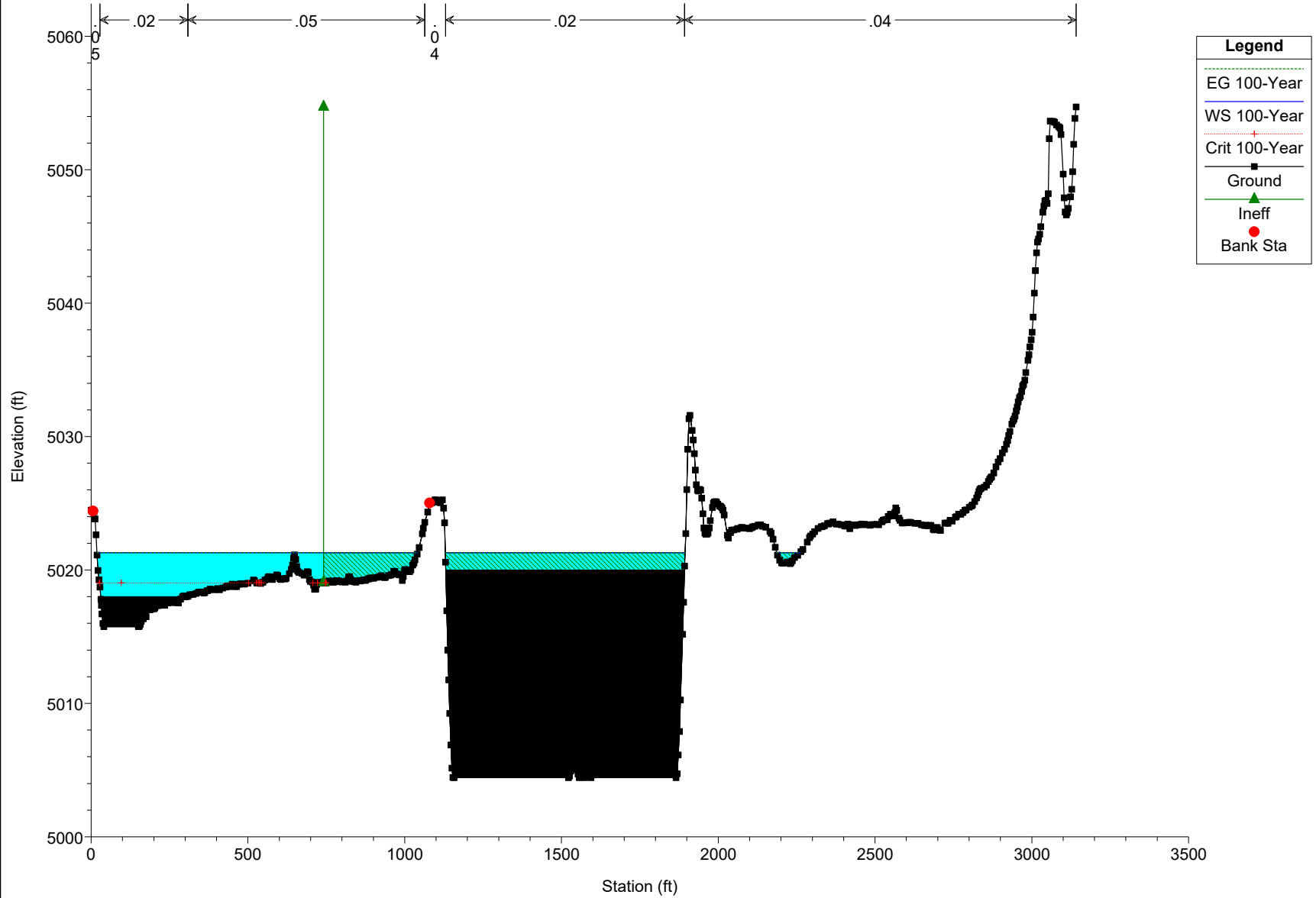
Cross Section CW

CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024
RS = 245914.2



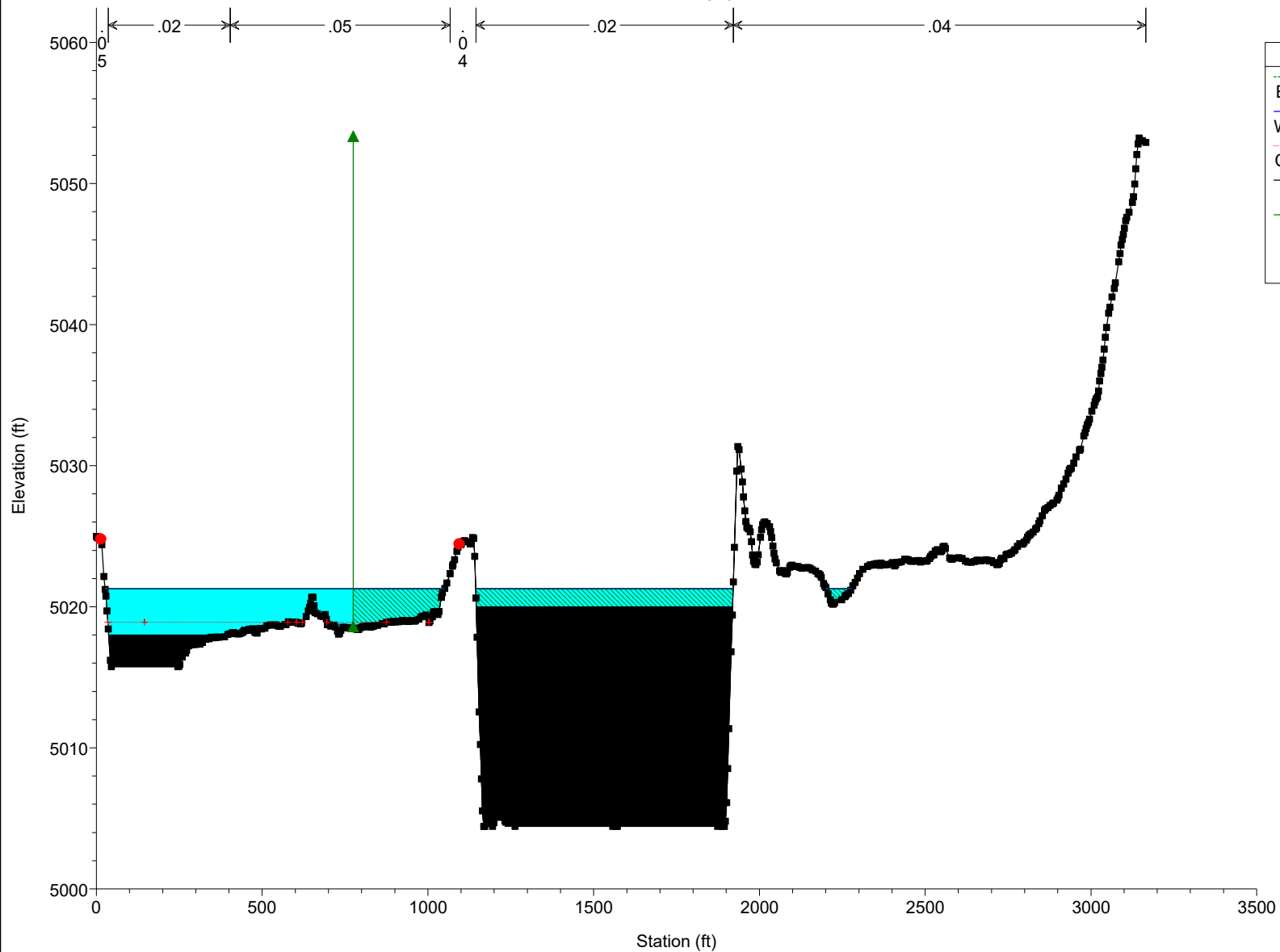
CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

RS = 245635.2



CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

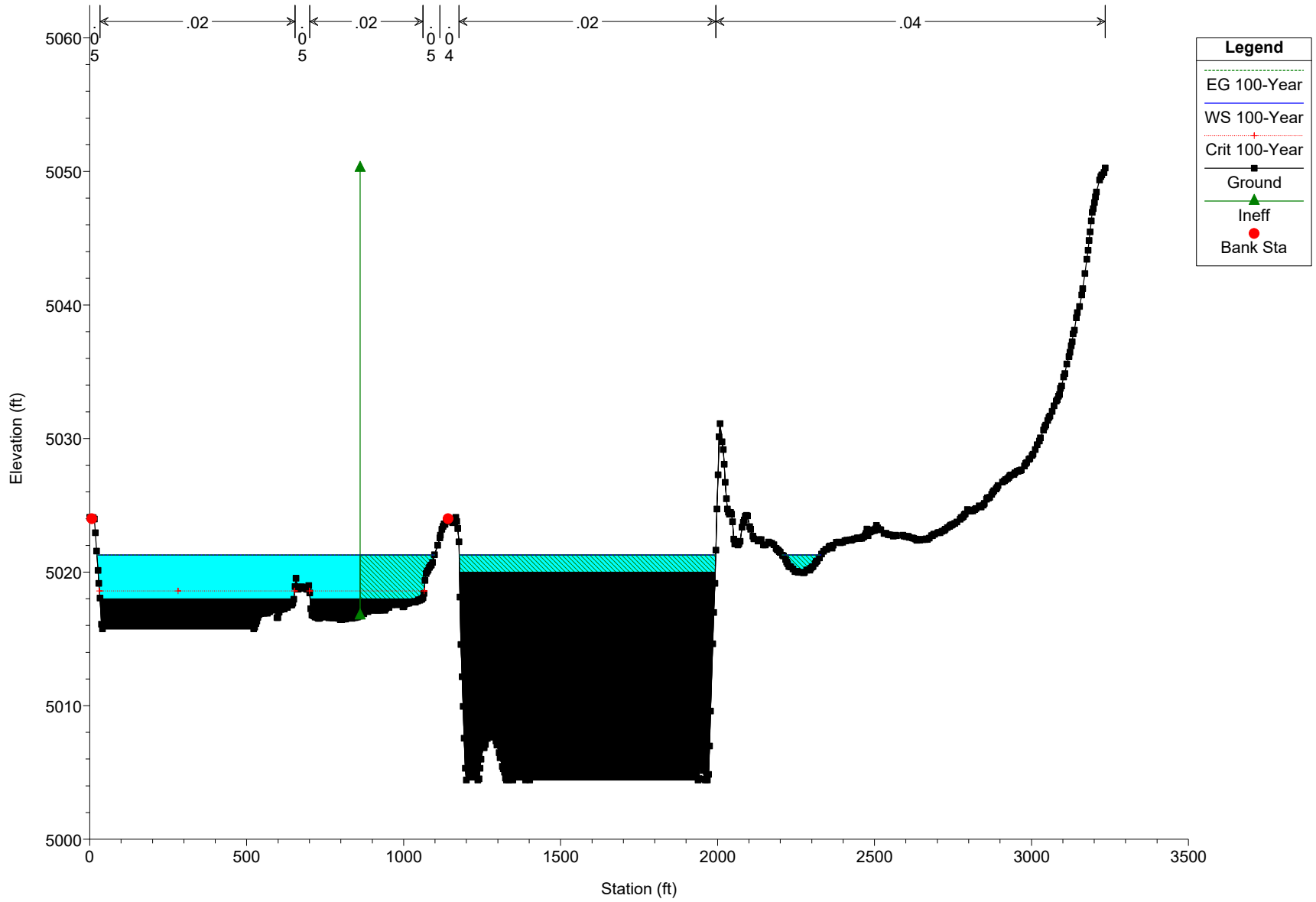
RS = 245461.2



Legend	
EG 100-Year	
WS 100-Year	
Crit 100-Year	
Ground	
Ineff	
Bank Sta	

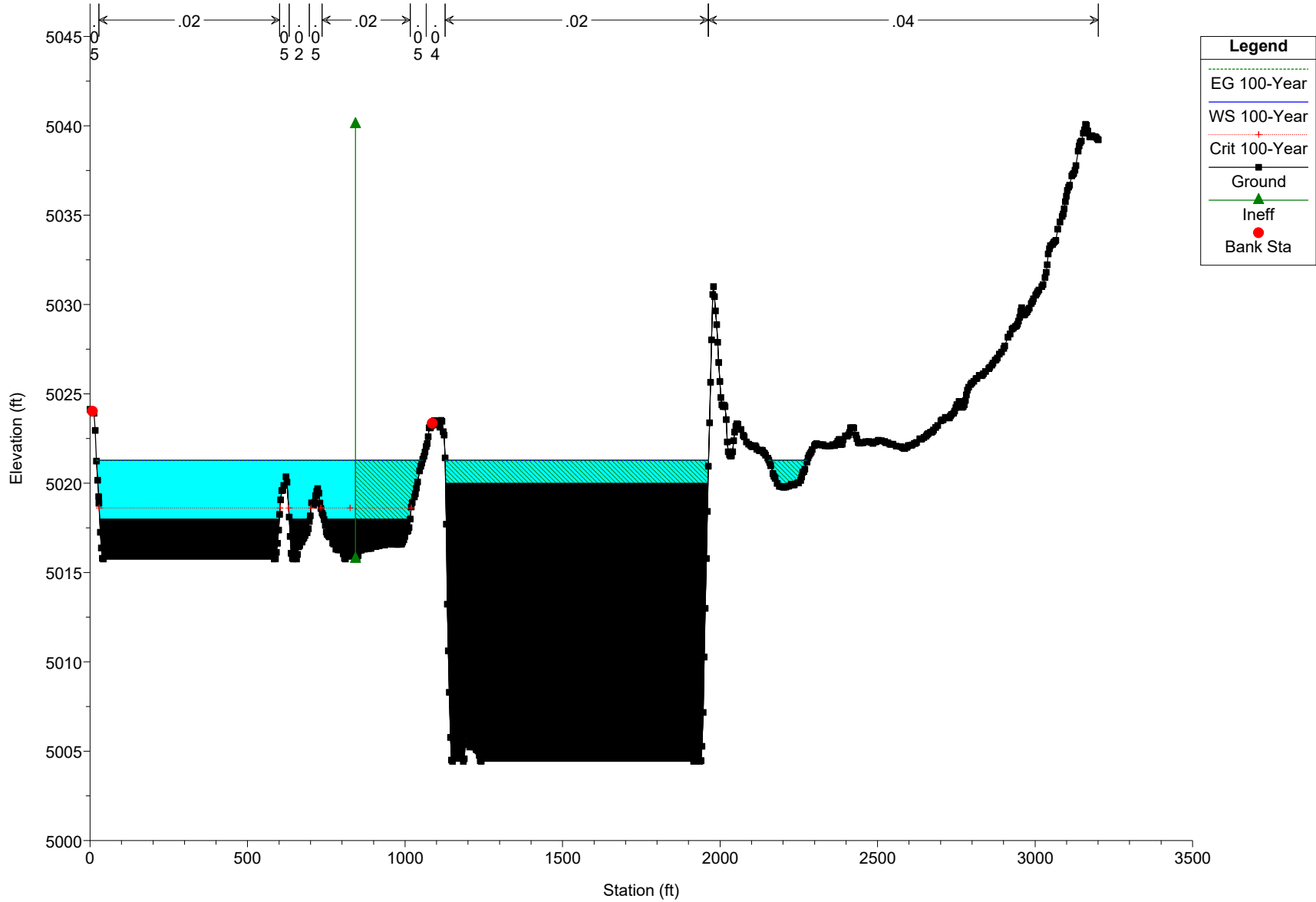
CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

RS = 245234.2



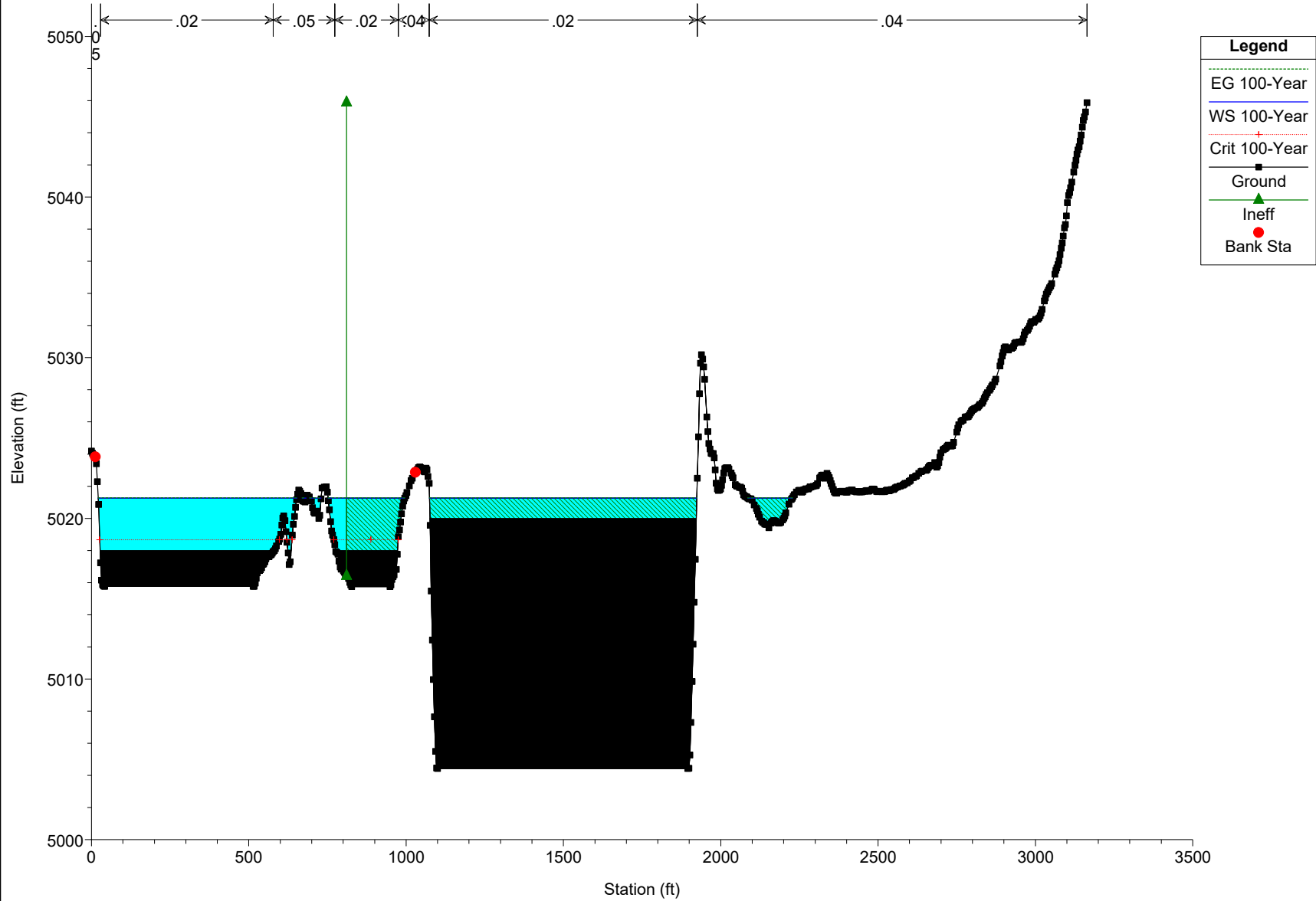
CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

RS = 245077.2

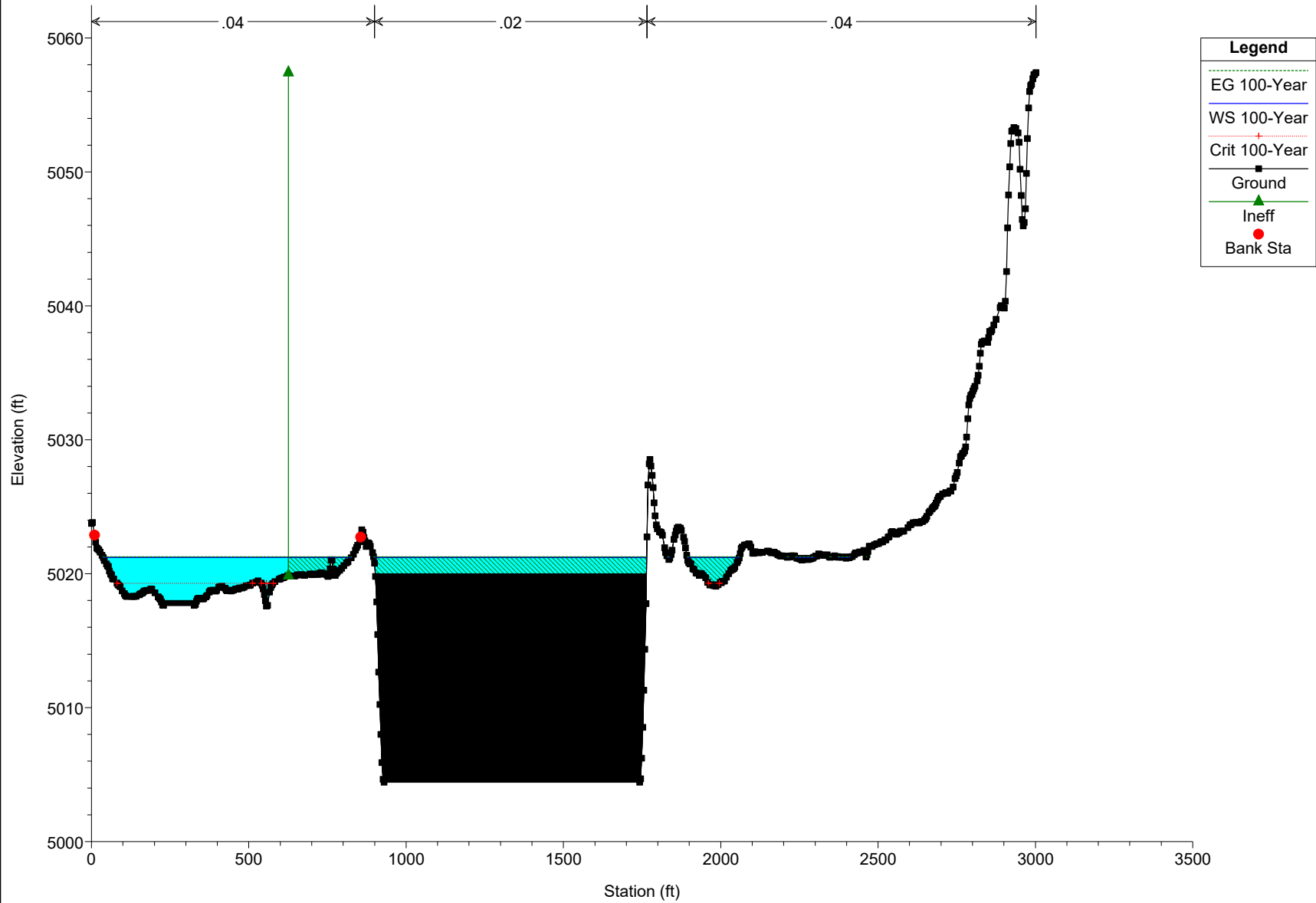


CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024

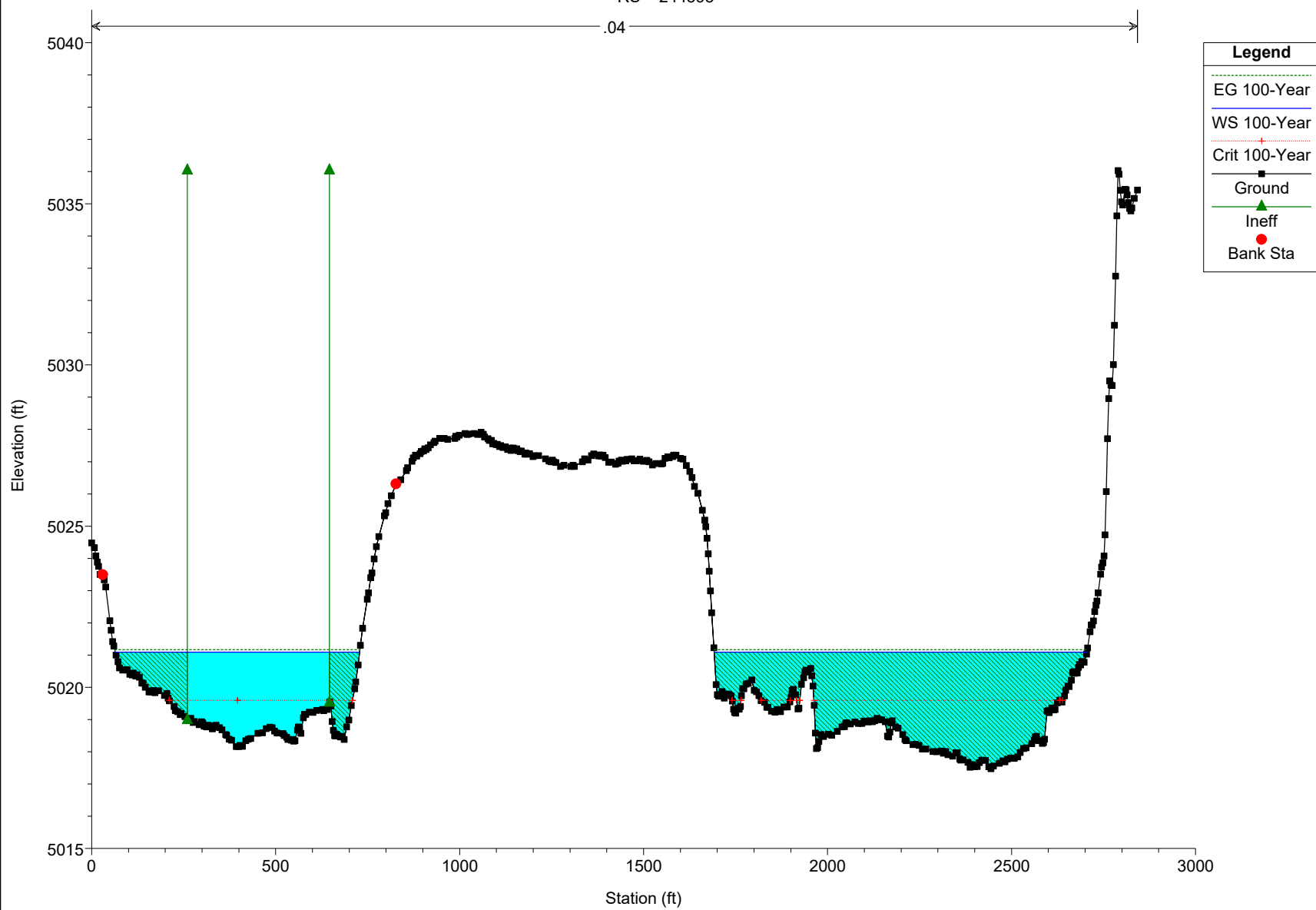
RS = 244946.2



CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024
RS = 244745.2



RS = 244595



Cross Section CV

CLPR@TaftHill Plan: Existing Condition_Floodplain 1/26/2024
RS = 244524 Taft Hill Road Overtopping Cross Section

