



## CERTIFICATION OF A “NO-RISE” DETERMINATION FOR A PROPOSED FLOODWAY DEVELOPMENT

Montecito  
Community Name

Promise Land LLC  
Development Name

1690 San Leandro  
Lot/Property Designation

Promise Land LLC  
Property Owner

I hereby certify that the proposed remedial measures, in combination with the property development designated above, will result in no loss of flow conveyance during the occurrence of the 1 percent annual chance of exceedence (100-year flood) discharge.

I further certify that the data submitted herewith in support of this request are accurate to the best of my knowledge, that the analyses have been performed correctly and in accordance with sound engineering practice, and that the proposed structural works are designed in accordance with sound engineering practice.

5/17/2024  
Date

Todd Robinson PE 75756  
Registered Professional Engineer



Date: April 12, 2024  
Revised: June 13, 2024  
To: County of Santa Barbara Flood Control  
Subject: 100-year FEMA Base Flood Elevation Review  
1690 San Leandro Lane  
Santa Barbara, CA 93108  
007-280-012

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Dear Flood Control Staff,

The below memo provides supplemental information as requested per our teleconference meeting held on February 13, 2024 with County staff and Suzanne Elledge Planning and Permitting Services, Inc. The purpose of this memo and attached exhibit is to verify the validity of the initial FEMA flood study presented to flood control.

This study utilizes current effective FEMA maps and flood insurance studies (FIS) to extrapolate and calculate approximate Base Flood Elevations (BFE) at the wall. The study shows the San Ysidro Creek 100-year BFE overlain on current topographic contours showing the existing channel and the subject wall. The current effective FIS study should reflect the conditions with the historical wall since it is our understanding that the wall predates the adoption of the NFIP/FIRM in Santa Barbara County (1979). This is confirmed by a historical study provided by others. We determined that the 100-year BFE does not breach the existing/historical wall. See sheets FP0 to FP5.

At the request of Flood Control Staff, a conservative validity check was completed with the following method:

- ✓ The 100-year floodway flow rate was calculated using section area and velocity values from FEMA FIS data and found to be approximately 3,500 cfs.
- ✓ The channel slope was estimated to be 5% from recently surveyed topographic data.
- ✓ After the 100-year peak flow and channel slope were determined, three sections were analyzed across the channel at varying points along the subject wall: Section 1, Section 2, and Section 3 (refer to attached exhibits).
- ✓ The Civil 3D Extension Hydraflow program, which applies Manning's equation to hydraulic calculations, was used to determine the capacity at varying depths for each section. An average  $n$  value of 0.040 was used  
([https://www.fsl.orst.edu/geowater/FX3/help/8\\_Hydraulic\\_Reference/Mannings\\_n\\_Tables.htm](https://www.fsl.orst.edu/geowater/FX3/help/8_Hydraulic_Reference/Mannings_n_Tables.htm)).
- ✓ The area and wetted perimeter were determined from the sections. Please refer to sheets FS6 and FS7 for each section's water surface elevation and summarized tables of calculated values.

In review of the developed cross sections showing both the current FEMA FIS study and the conservative channel hydraulic analysis (see FP6 and FP7), we found the computed water surface elevations generally align with the current FEMA maximum base flood elevations. It is also noted that supplemental study/comparison is based on a simplistic approach and does not account for many factors that are utilized in the detailed study from FEMA (i.e. the values are not "apples to apples" comparison). Further, the intent of the comparison to provide a general "comfort" level with the current effective FIS study results and the recently surveyed channel geometry due to the consideration that the recent large

storms may have transported sediment into the channel and thus likely the channel conveyance capacity has been decreased due to this.

It is our opinion that the 100-year water surface elevation will not breach the subject historical wall.

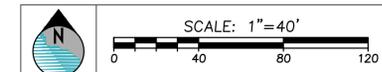
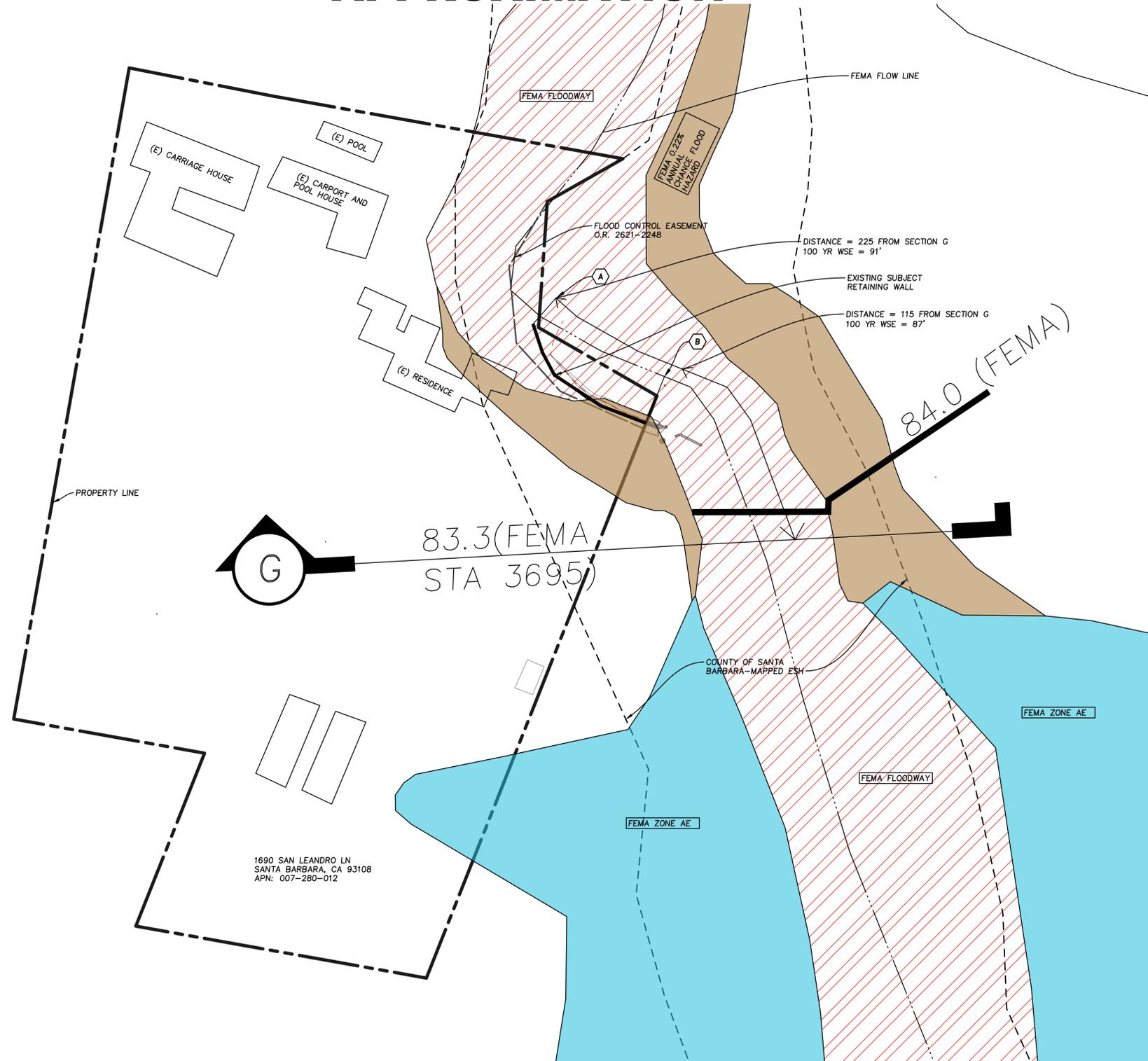
Additionally, since the subject wall pre-dates the current FIS/FIRM data, the wall can be considered to not have caused a rise in water surface elevation.

Please reach out with any questions.



Todd Robinson, PE  
(805)242-6365 ex. 41

# FEMA FLOOD MAP BFE EXTRAPOLATION 100 YEAR WATER SURFACE APPROXIMATION



FEMA MAP REFERENCE

NATIONAL FLOOD INSURANCE PROGRAM  
FLOOD INSURANCE RATE MAP

SANTA BARBARA  
COUNTY, CALIFORNIA  
and Incorporated Areas

PANEL 1411 OF 1835

Panel Contains:  
COMMUNITY NUMBER PANEL SUFFIX  
SANTA BARBARA COUNTY 060331 1411 H



MAP PROJECTION

**BASIS OF BEARINGS**  
THE BASIS OF BEARINGS FOR THIS SURVEY IS THE NAD83 CALIFORNIA COORDINATE SYSTEM, ZONE 5 AS DERIVED BY STATIC GPS OBSERVATION AND POST-PROCESSING THROUGH THE NGS OPUS ONLINE PORTAL. VALUES FOR THE LOCAL CONTROL POINTS SET AS A PART OF THIS SURVEY ARE SHOWN IN THE TABLE HEREON.

**BENCHMARK**  
THE VERTICAL DATUM FOR THIS SURVEY IS NAVD88 AS DERIVED BY STATIC GPS OBSERVATION AND POST-PROCESSING THROUGH THE NGS OPUS ONLINE PORTAL. VALUES FOR THE LOCAL CONTROL POINTS SET AS A PART OF THIS SURVEY ARE SHOWN IN THE TABLE HEREON.

**FEMA MAP**  
GIS DOWNLOAD SHP FILE WITH A MAP PROJECTION OF NORTH AMERICAN DATUM 1983; WESTERN HEMISPHER; VERTICAL DATUM NAVD88

MAP BFE - FIS EXTRAPOLATION

**100 YR BFE DETERMINATION**  
CROSS SECTION G = ELEVATION 83.3 (NAVD 88)  
CROSS SECTION G = STATION 3695

LOCATION A:  
DISTANCE FROM CROSS SECTION G TO BEGINNING (UPSTREAM END) OF SUBJECT WALL (LOCATION A) = 225' (CENTER OF FEMA FLOW LINE)  
EXTRAPOLATED 100 YEAR BFE = 91' FROM FEMA FLOOD PROFILES @ 3695 + 225 = 3920'

LOCATION B:  
DISTANCE FROM CROSS SECTION G TO END (DOWNSTREAM END) OF SUBJECT WALL (LOCATION B) = 115' (CENTER OF FEMA FLOW LINE)  
EXTRAPOLATED 100 YEAR BFE = 87' FROM FEMA FLOOD PROFILES @ 3695 + 225 = 3810'

**PROJECT DESCRIPTION**  
THE PROJECT IS A REQUEST FOR A COASTAL DEVELOPMENT PERMIT WITH HEARING TO LEGALIZE AN AS-BUILT CONSTRUCTION OF AN APPROXIMATELY 110 FT. LONG SANDSTONE BOULDER RETAINING WALL WITHIN THE SAN YSIDRO CREEK. THE WALL RANGES IN HEIGHT FROM 2 TO 12 FEET TALL AND 7.5 TO 15 FEET WIDE. THE PROJECT WILL ALSO INCLUDE THE REMOVAL OF THE TOP LAYER OF UNGROUTED ROCK ALONG THE AS-BUILT SECTION RESULTING IN A HEIGHT OF 2 TO 10 FEET TALL. NO GRADING OR TREE REMOVAL WILL OCCUR.



REVISIONS:	DATE:	DESCRIPTION:
1	02/04/2025	REVISIONS

LOCATION	DRAWN	CHECKED	TAR
1690 SAN LEANDRO LN SANTA BARBARA, CA 93108 PROJECT NO. 007-280-012	NLC	NLC	
PROJECT NO. 23034			
CLIENT BOB GREENE			

1690 SAN LEANDRO LN  
FEMA MAP OVERLAY  
TITLE SHEET



**COAST**

ENGINEERING & SURVEY, INC.  
785 HIGH STREET  
SAN LUIS OBISPO, CA. 93401  
PH: (805) 242-6365



REVISIONS:	DATE:	DESCRIPTION:
1	02/04/2025	REVISIONS

LOCATION 1690 SAN LEANDRO LN. SANTA BARBARA, CA 93108	DRAWN NLC	CHECKED TAR
PROJECT NO. 007-280-012	CLIENT BOB GREENE	

**1690 SAN LEANDRO LN**  
FIRM STUDY TABLE 24  
FLOODWAY DATA

SHEET: OF: 8

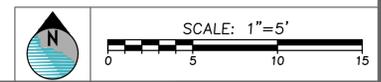
**FP1**

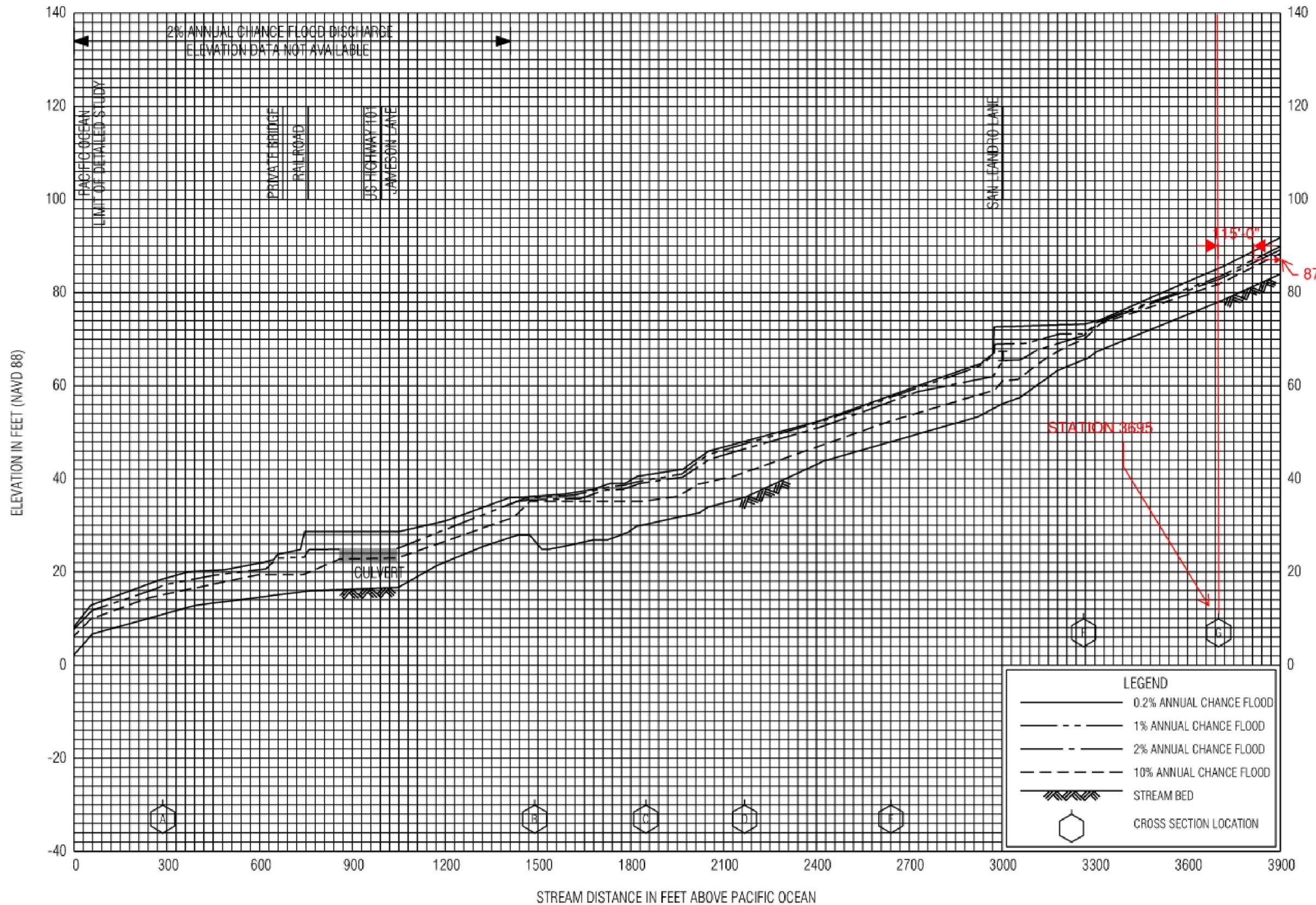
DATE: APRIL 12, 2024

LOCATION		FLOODWAY			1% ANNUAL CHANCE FLOOD WATER SURFACE ELEVATION (FEET NAVD88)			
CROSS SECTION	DISTANCE <sup>1</sup>	WIDTH (FEET)	SECTION AREA (SQ. FEET)	MEAN VELOCITY (FEET/ SEC)	REGULATORY	WITHOUT FLOODWAY	WITH FLOODWAY	INCREASE
A	278	1,170	*	*	17.0	17.0	18.0	1.0
B	1,478	207	661	5.3	35.8	35.8	35.8	0.0
C	1,848	65	324	10.8	39.6	39.6	39.6	0.0
D	2,165	393	747	4.7	47.6	47.6	47.7	0.1
E	2,640	260	500	7.0	58.4	58.4	58.5	0.1
F	3,264	143	462	7.6	70.9	70.9	71.0	0.1
G	3,695	83	314	11.1	83.3	83.3	83.3	0.0
H	5,084	114	352	10.0	129.4	129.4	129.4	0.0
I	5,566	46	259	13.5	145.1	145.1	145.1	0.0
J	6,390	52	269	13.0	177.4	177.4	177.4	0.0
K	6,759	59	281	12.4	192.2	192.2	192.2	0.0
L	8,235	56	277	12.6	251.5	251.5	251.5	0.0
M	8,592	59	281	12.4	269.4	269.4	269.4	0.0
N	9,328	50	269	13.0	303.1	303.1	303.1	0.0
O	9,932	61	303	12.7	341.4	341.4	341.4	0.0
P	10,516	68	314	12.3	382.8	382.8	382.8	0.0
Q	11,031	46	276	14.0	420.7	420.7	420.7	0.0
R	11,221	51	285	13.5	432.1	432.1	432.1	0.0
S	12,000	48	280	13.7	490.1	490.1	490.1	0.0
T	12,742	75	387	12.9	531.9	531.9	532.1	0.2

<sup>1</sup>Feet above Pacific Ocean  
\*Data not available

TABLE 24	FEDERAL EMERGENCY MANAGEMENT AGENCY <b>SANTA BARBARA, CALIFORNIA</b> AND INCORPORATED AREAS	<b>FLOODWAY DATA</b>
		FLOODING SOURCE: SAN YSIDRO CREEK





**FLOOD PROFILES**

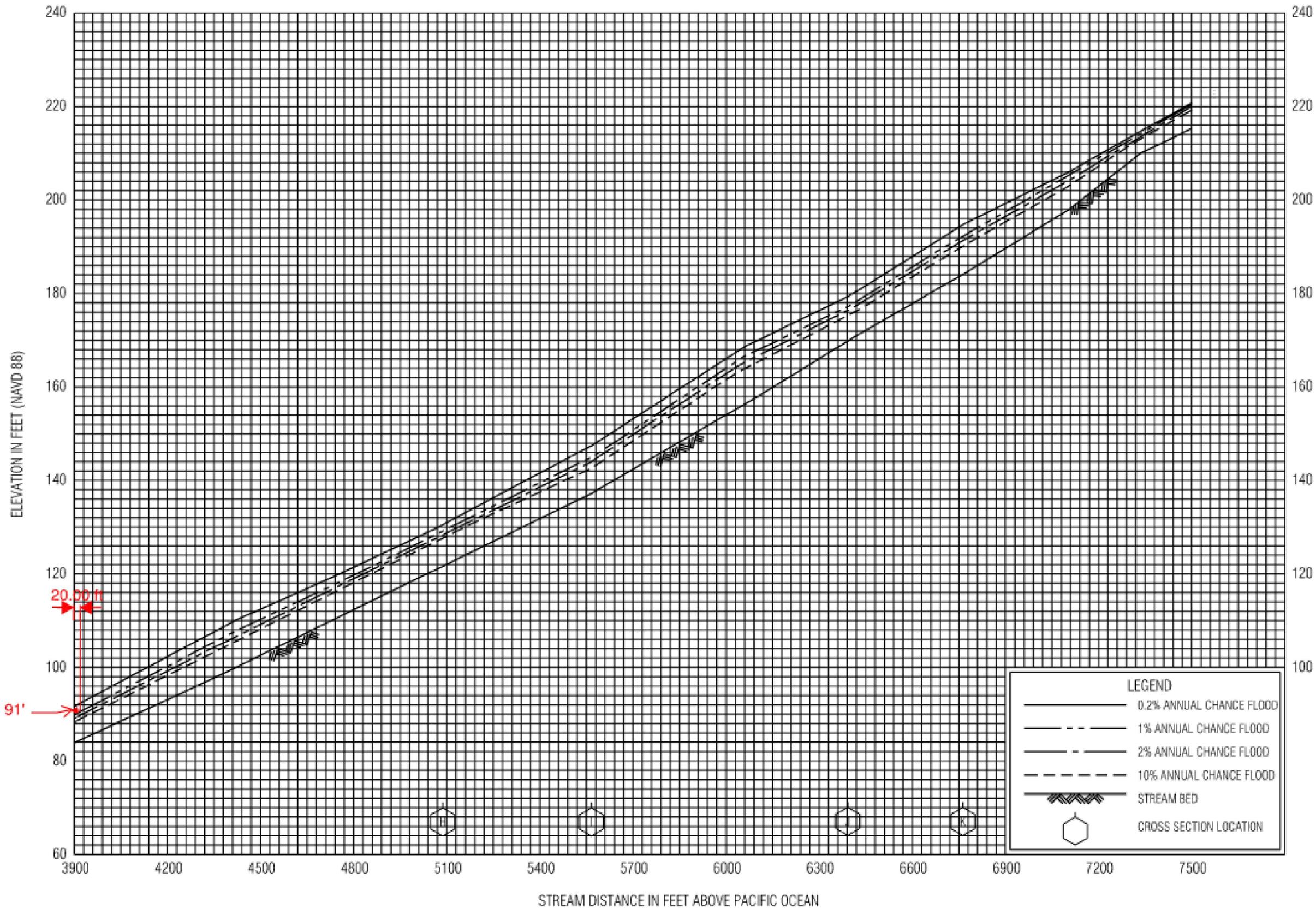
**SAN YSIDRO CREEK**

**FEDERAL EMERGENCY MANAGEMENT AGENCY  
SANTA BARBARA COUNTY, CA  
AND INCORPORATED AREAS**

**153P**

REVISIONS:	DATE:	DESCRIPTION:
1	02/04/2025	REVISIONS

LOCATION 1690 SAN LEANDRO LN SANTA BARBARA, CA 93108	DRAWN NLC	CHECKED TAR
PROJECT NO. 007-280-012		
PROJECT NO. 23034	CLIENT BOB GREENE	



**FLOOD PROFILES**  
**SAN YSIDRO CREEK**

**FEDERAL EMERGENCY MANAGEMENT AGENCY**  
**SANTA BARBARA COUNTY, CA**  
**AND INCORPORATED AREAS**

**154P**

REVISIONS	DATE	DESCRIPTION
1	02/04/2025	REVISIONS

LOCATION 1690 SAN LEANDRO LN SANTA BARBARA, CA 93108 007-280-012	DRAWN NLC	CHECKED TAR
PROJECT NO. 23034	CLIENT BOB GREENE	

**1690 SAN LEANDRO LN**  
**FIRM PROFILE 154P**

**FLOOD PROFILES**



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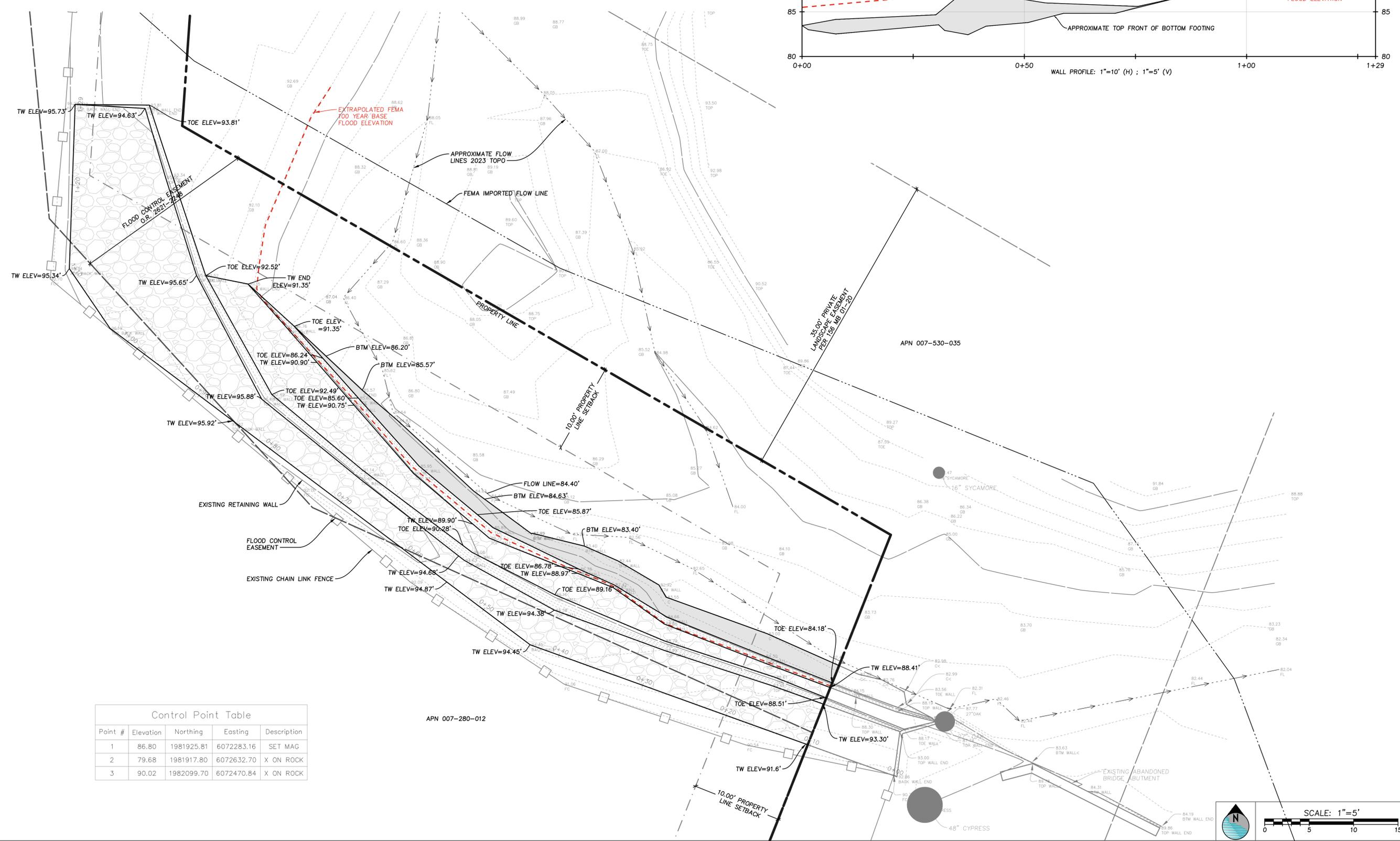
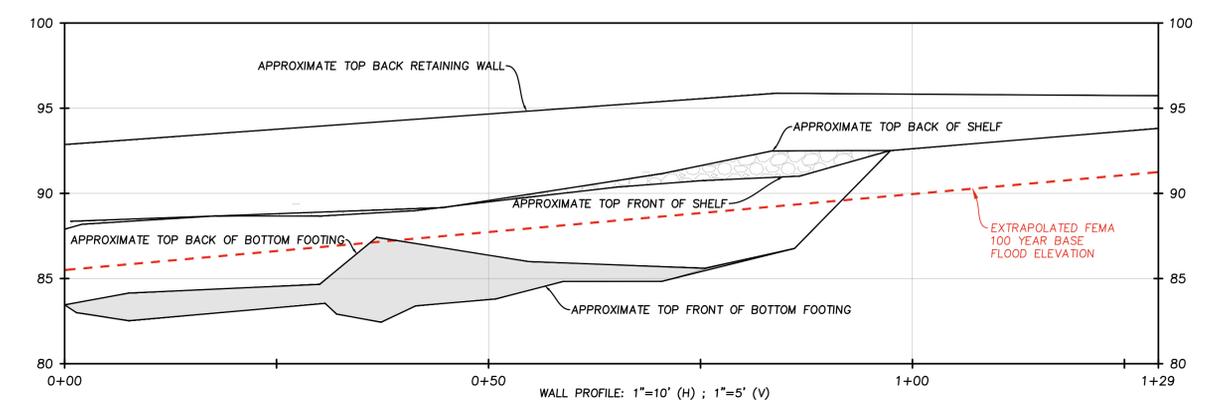


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1	02/04/2025	REVISIONS

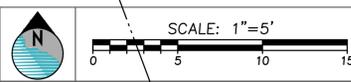
LOCATION	1690 SAN LEANDRO LN SANTA BARBARA, CA 93108	DRAWN	NLC	CHECKED	TAR
PROJECT NO.	007-280-012				
PROJECT NO.	23034				
CLIENT	BOB GREENE				

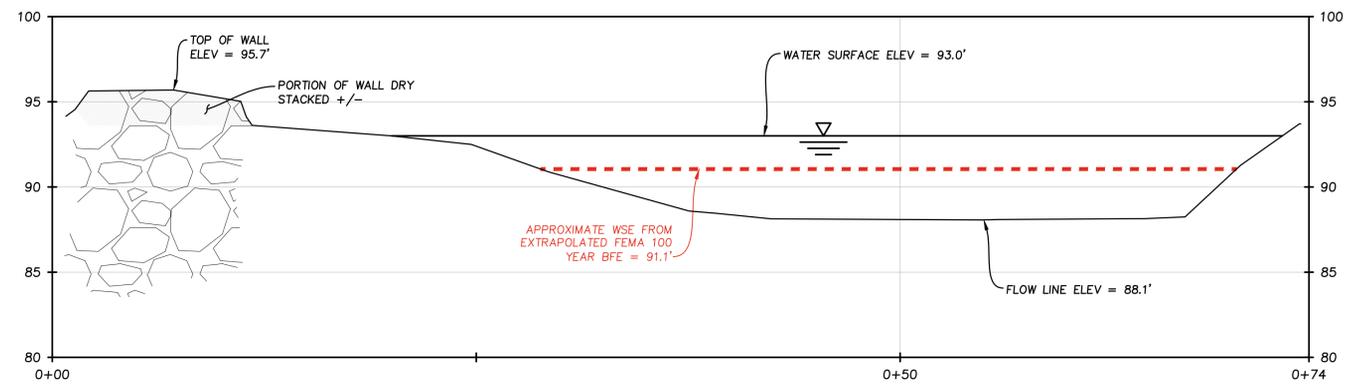
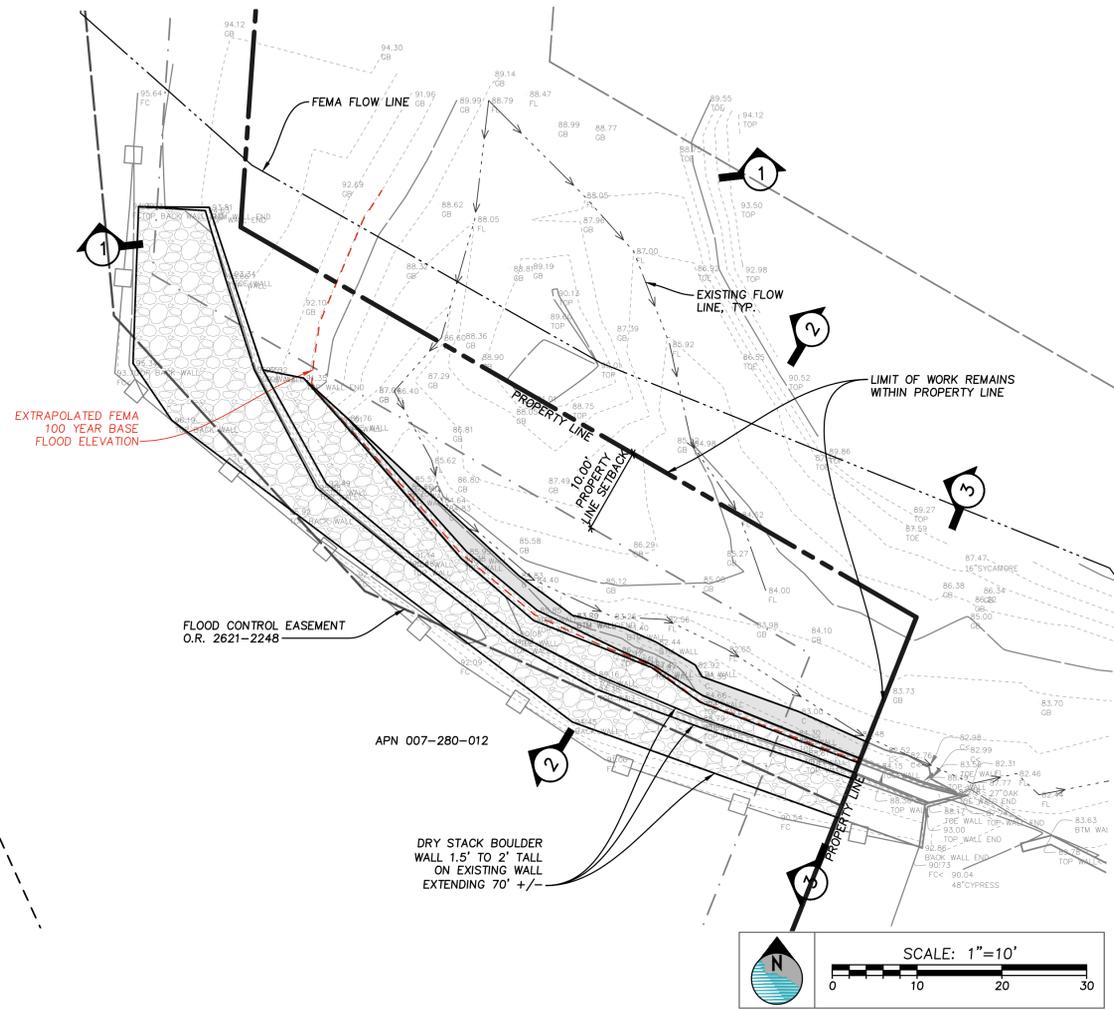
**1690 SAN LEANDRO LN**  
**EXTRAPOLATED 100 YR BFE PLAN AND PROFILE**  
**RETAINING WALL SITE AND SECTIONS**

SHEET: OF: 8  
**FP5**  
DATE: APRIL 12, 2024

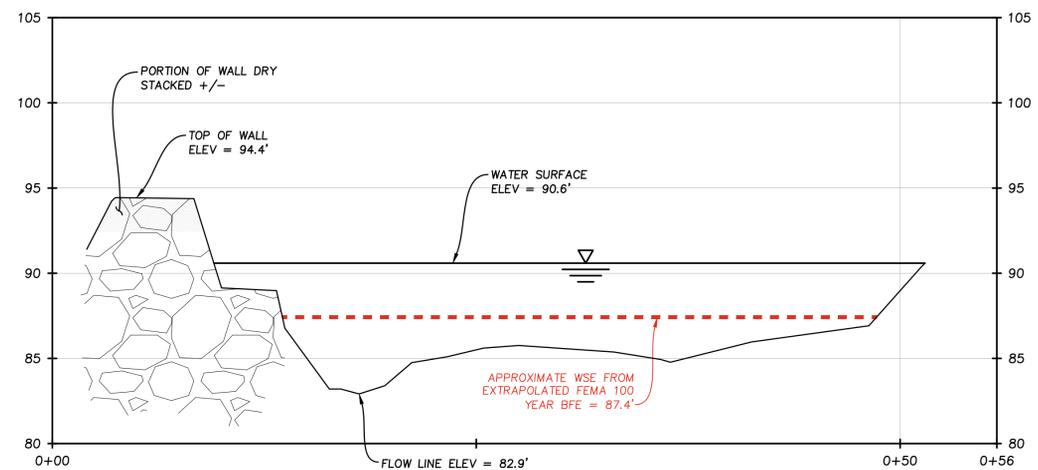


Point #	Elevation	Northing	Eastng	Description
1	86.80	1981925.81	6072283.16	SET MAG
2	79.68	1981917.80	6072632.70	X ON ROCK
3	90.02	1982099.70	6072470.84	X ON ROCK

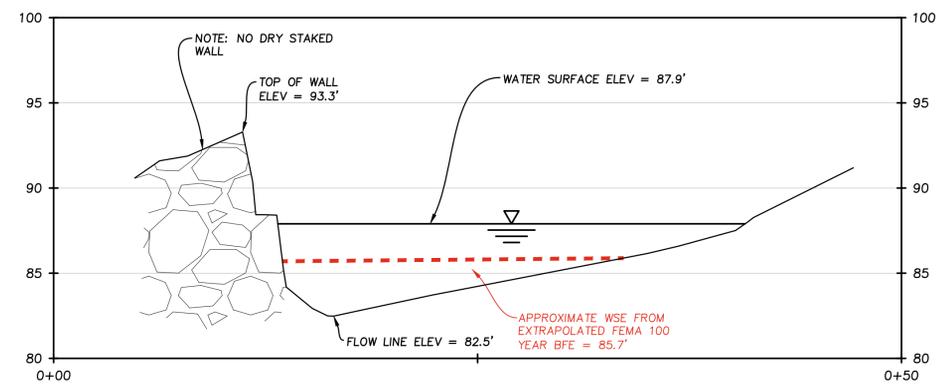




1 EXISTING SECTION 1  
SCALE: 1"=5'



2 EXISTING SECTION 2  
SCALE: 1"=5'



3 EXISTING SECTION 3  
SCALE: 1"=5'



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LOCATION	1690 SAN LEANDRO LN SANTA BARBARA, CA 93108	DRAWN	NLC	CHECKED	TAR
PROJECT NO.	007-280-012				
	23034				
CLIENT	BOB GREENE				

**1690 SAN LEANDRO LN**  
EXTRAPOLATED 100 YR BFE PLAN AND PROFILE  
EXISTING RETAINING WALL SITE AND SECTIONS

SHEET: OF: 8

**FP6**

DATE: APRIL 12, 2024



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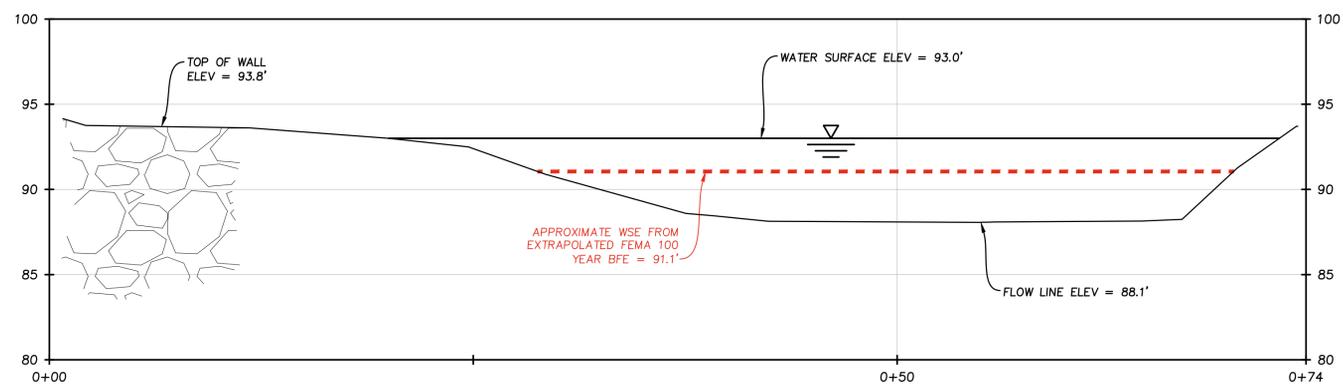
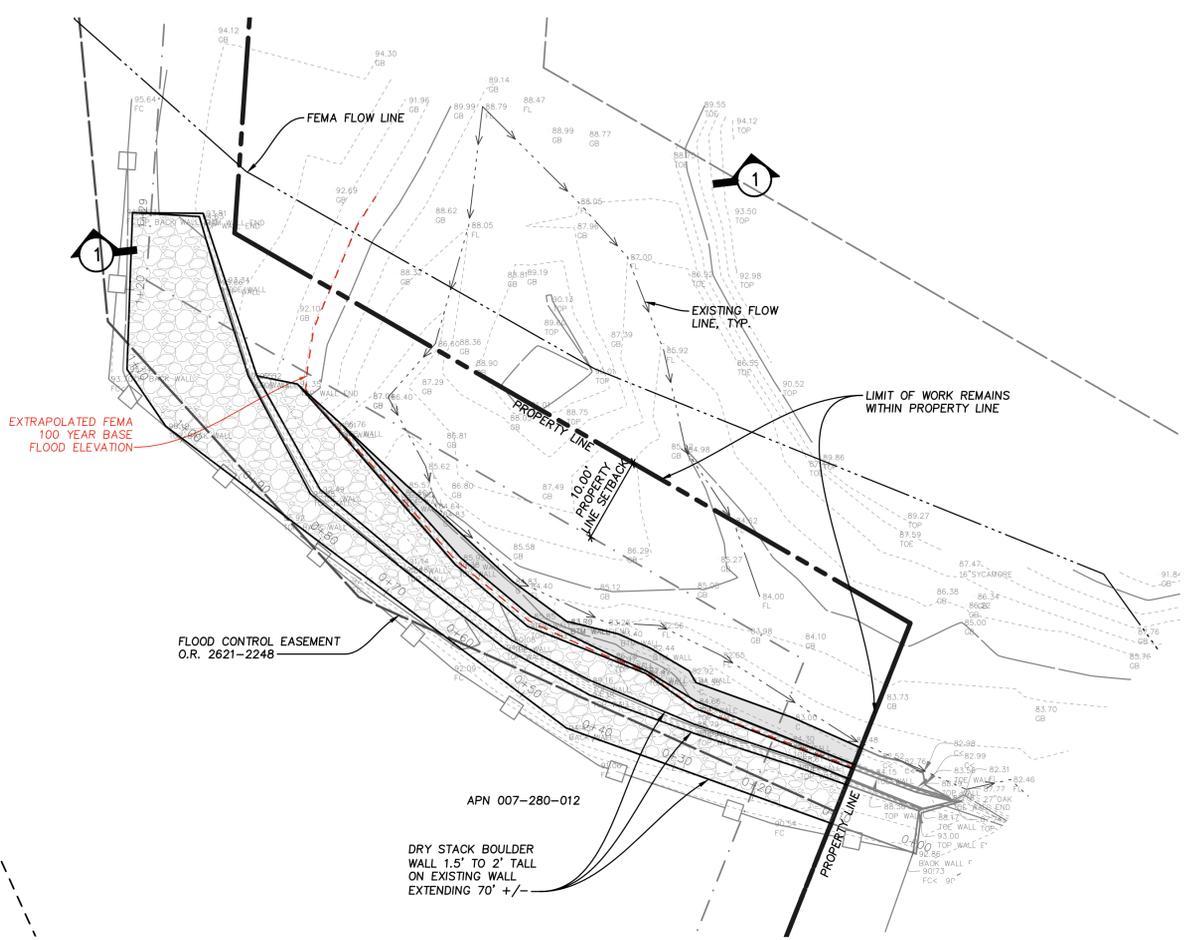


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LOCATION	1690 SAN LEANDRO LN SANTA BARBARA, CA 93108	DRAWN	NLC	CHECKED	TAR
PROJECT NO.	007-280-012				
CLIENT	BOB GREENE				

**1690 SAN LEANDRO LN**  
EXTRAPOLATED 100 YR BFE PLAN AND PROFILE  
PROPOSED RETAINING WALL SITE AND SECTIONS

SHEET: OF: 8  
**FP7**  
DATE: APRIL 12, 2024



**1 PROPOSED SECTION 1**  
SCALE: 1"=5'



Depth (ft)	Q (cfs)	Area (sqft)	Veloc (ft/s)	Wp (ft)	Yc (ft)	TopWidth (ft)	Energy (ft)
4.90	3,500	186.1	18.80	54.80	6.60	52.44	10.40

HYDRAFLOW EXPRESS RESULTS FOR SECTION 1

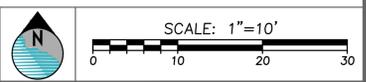
SUMMARY OF HYDRAULIC CALCULATIONS

CREEK FLOW,  $Q=VA= (314 \text{ FT}^2)(11.1 \text{ FT/SEC}) = 3500 \text{ CFS}$   
(FROM FEMA FLOODWAY DATA, SHEET FP1)

MANNING'S "N" VALUE ASSUMED TO BE 0.040 FOR MAIN CHANNEL, CLEAN, WINDING, SOME POOLS AND SHOALS.

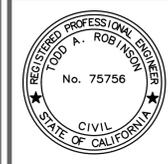
[HTTPS://WWW.FSL.ORST.EDU/GEOWATER/FX3/HELP/8\\_HYDRAULIC\\_REFERENCE/MANNINGS\\_N\\_TABLES.HTM](https://www.fsl.orst.edu/geowater/fx3/help/8_HYDRAULIC_REFERENCE/MANNINGS_N_TABLES.HTM)

CHANNEL SLOPE FOUND TO BE APPROX. 5% FROM TOPO





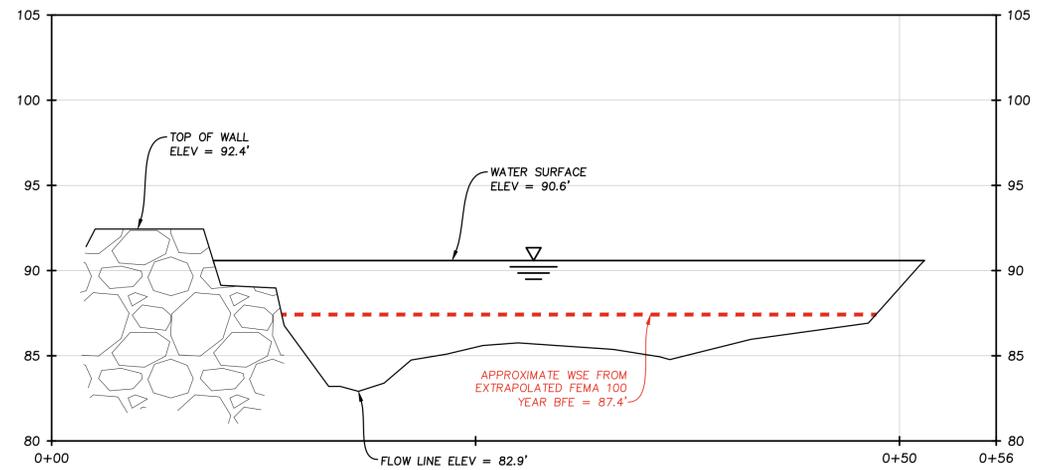
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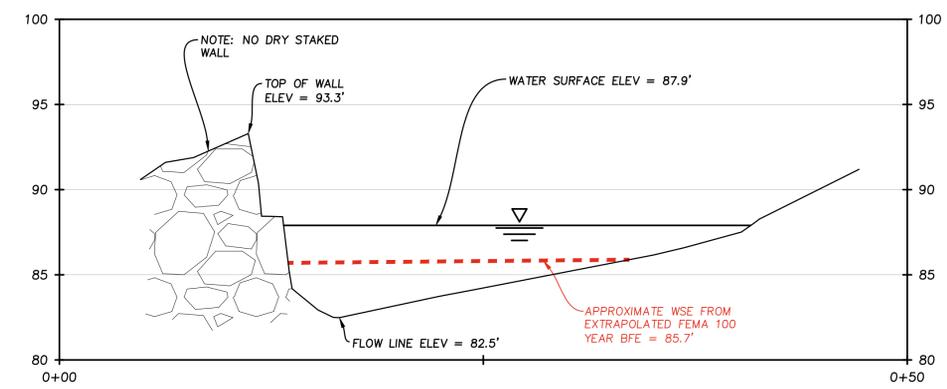
REVISIONS:	DESCRIPTION:
1	02/04/2025
	REVISIONS

LOCATION:	1690 SAN LEANDRO LN SANTA BARBARA, CA 93108	DRAWN:	NLC	CHECKED:	TAR
PROJECT NO.:	007-280-012	CLIENT:	BOB GREENE		
	230334				

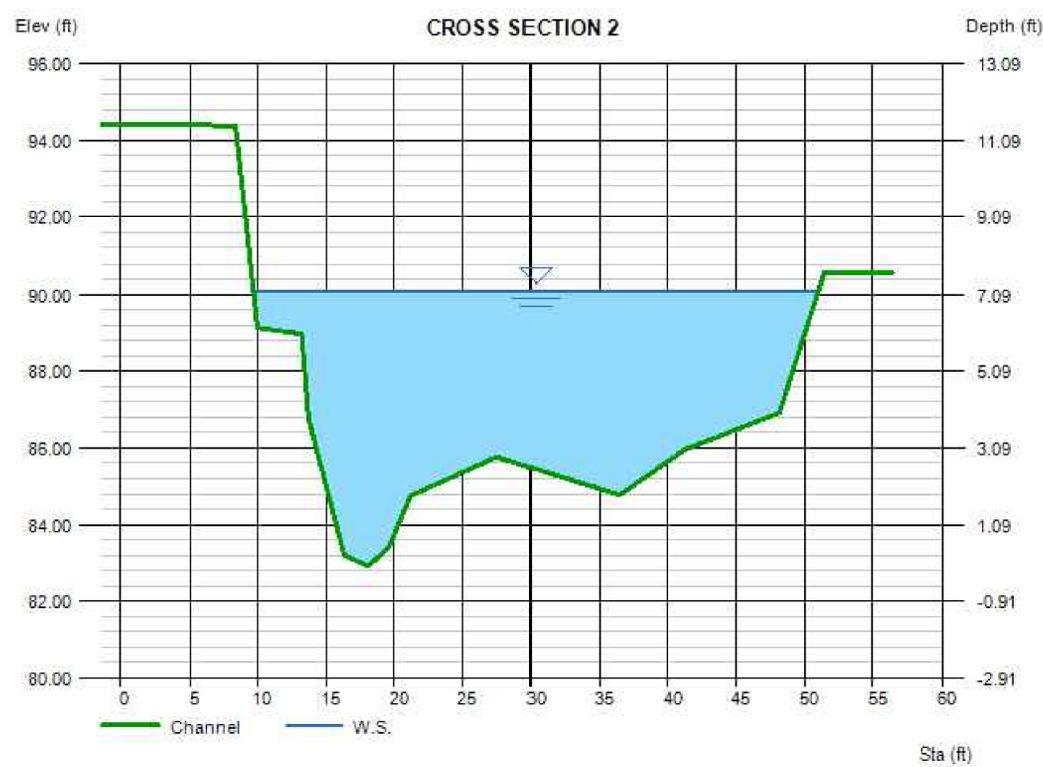
**1690 SAN LEANDRO LN**  
EXTRAPOLATED 100 YR BFE PLAN AND PROFILE  
PROPOSED RETAINING WALL SITE AND SECTIONS



**2** PROPOSED SECTION 2  
SCALE: 1"=5'

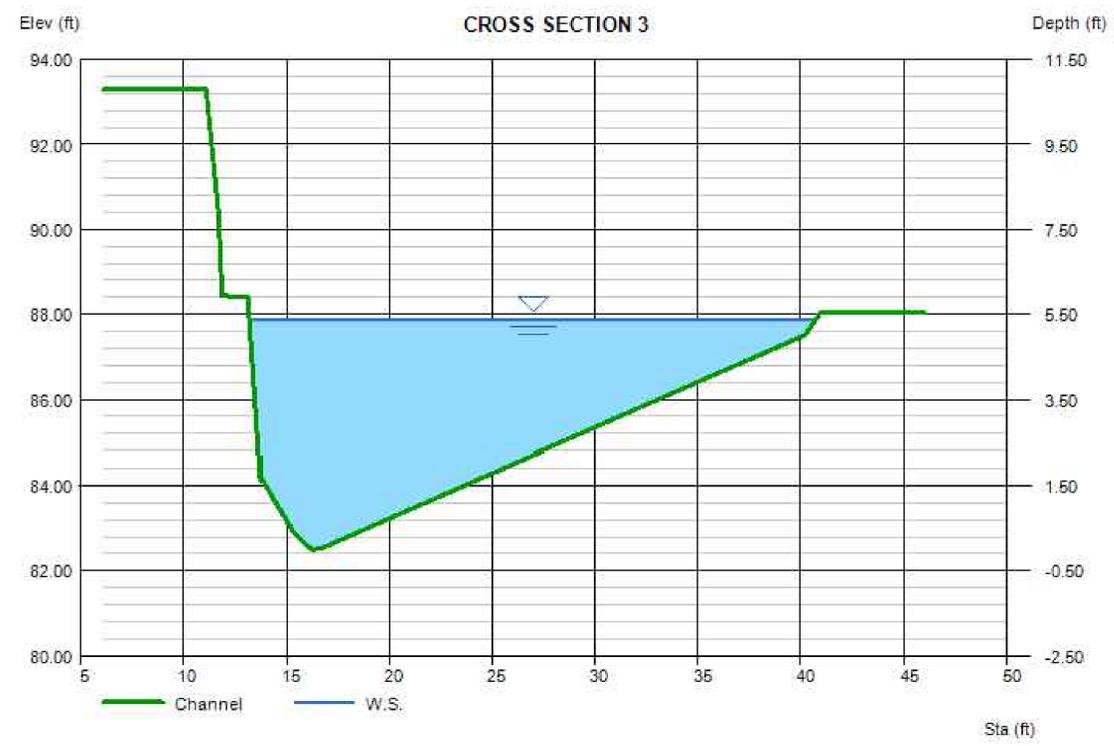


**3** PROPOSED SECTION 3  
SCALE: 1"=5'



Depth (ft)	Q (cfs)	Area (sqft)	Veloc (ft/s)	Wp (ft)	Yc (ft)	TopWidth (ft)	Energy (ft)
7.19	3,500	176.8	19.79	47.99	9.00	41.35	13.28

HYDRAFLOW EXPRESS RESULTS FOR SECTION 2



Depth (ft)	Q (cfs)	Area (sqft)	Veloc (ft/s)	Wp (ft)	Yc (ft)	TopWidth (ft)	Energy (ft)
5.40	1,298	82.72	15.69	31.95	6.54	27.53	9.22

HYDRAFLOW EXPRESS RESULTS FOR SECTION 3

