



April 25, 2023

Keith Curtis, PE, CFM  
Floodplain Administrator, PPRBD  
2880 International Circle  
Colorado Springs, CO 80910

Re: Engineer's Certification of No Impact  
Case No. :

Dear Mr. Curtis,

This letter serves as Certification of No Impact to the Floodplain for the project entitled "Saddlehorn Ranch – Filing 3." The project is located in the unincorporated El Paso County and involves a proposed rural 2.5 acre lot subdivision.

The Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) shows the project area located on Panel No. 08041C0558G for El Paso County, Colorado dated December 7, 2018. The project area is located along Haegler Ranch MS-06 and is within a designated Zone AE Special Flood Hazard Area (SFHA).

JR Engineering has evaluated the effects of the proposed development on the Haegler Ranch floodplain using the effective modeling as a baseline. The HEC-RAS modeling was obtained in PDF format from the "*Santa Fe Springs – Haegler Ranch Drainage Basin Letter of Map Revision (LOMR)*" by Tri-Core Engineering, dated October 20, 2004, from the Federal Emergency Management Agency (FEMA). The effective model is the "*Santa Fe Springs – Haegler DB. – Letter of Map Revision*" prepared for FEMA by Tri-Core Engineering. The effective model was pared down to the stretch between Cross Sections 4 and 19 along Reach H8 (Haegler Ranch Tributary 3) for purposes of analysis within the context of this project.

JR Engineering utilized the calculated 100-year water surface from the aforementioned model to establish the existing 100-year floodplain. Proposed channel and culvert improvements were modeled utilizing the 100-year flow of 505 cfs established in the "*Santa Fe Springs – Haegler Ranch Drainage Basin Letter of Map Revision (LOMR)*". Cross sections for the proposed channel improvements were modeled using the CivilGeo HECRAS program. The program models the projects proposed dual 12'x4' RCBC, this also took into hydraulic head built at the culvert crossing to establish an accurate base flood elevation. The computed water surface elevation at each cross section was compared to the effective model to ensure a no rise scenario.

Select results of the analysis are presented in Table 1, on the following page:

Table 1: Base Flood Elevation Comparison

Cross Section	Base Flood Elevation (ft)	
	Ex. 100-Year	Pr. 100-Year
13	6723.61	6723.60
14	6722.03	6719.68
15	6720.65	6718.33
16	6717.71	6717.56
17	6714.03	6714.03

Based on the results of the CivilGeo HECRAS Analysis, no increase to either the floodplain width or water surface elevation will result from the proposed site development.

Sincerely,

Bryan Law PE  
 Colorado P.E. #25043

### No Rise Certification

I certify that I am a duly qualified registered Professional Engineer in the State of Colorado.

I certify the proposed project, Saddlehorn Ranch Filing No. 3, as detailed on the following sheets and calculations will result in zero rise in the FEMA designated 100 year flood heights, and no increase in the 100-year discharge and no increase in the 100-year floodplain width, at published and unpublished cross sections of the current FEMA floodplain of Haegler Ranch MS-06 as shown on FEMA map 08041C0558G. This certification is intended as proof of meeting the requirements set forth in the Pikes Peak Regional Building Code RBC313.20.1.

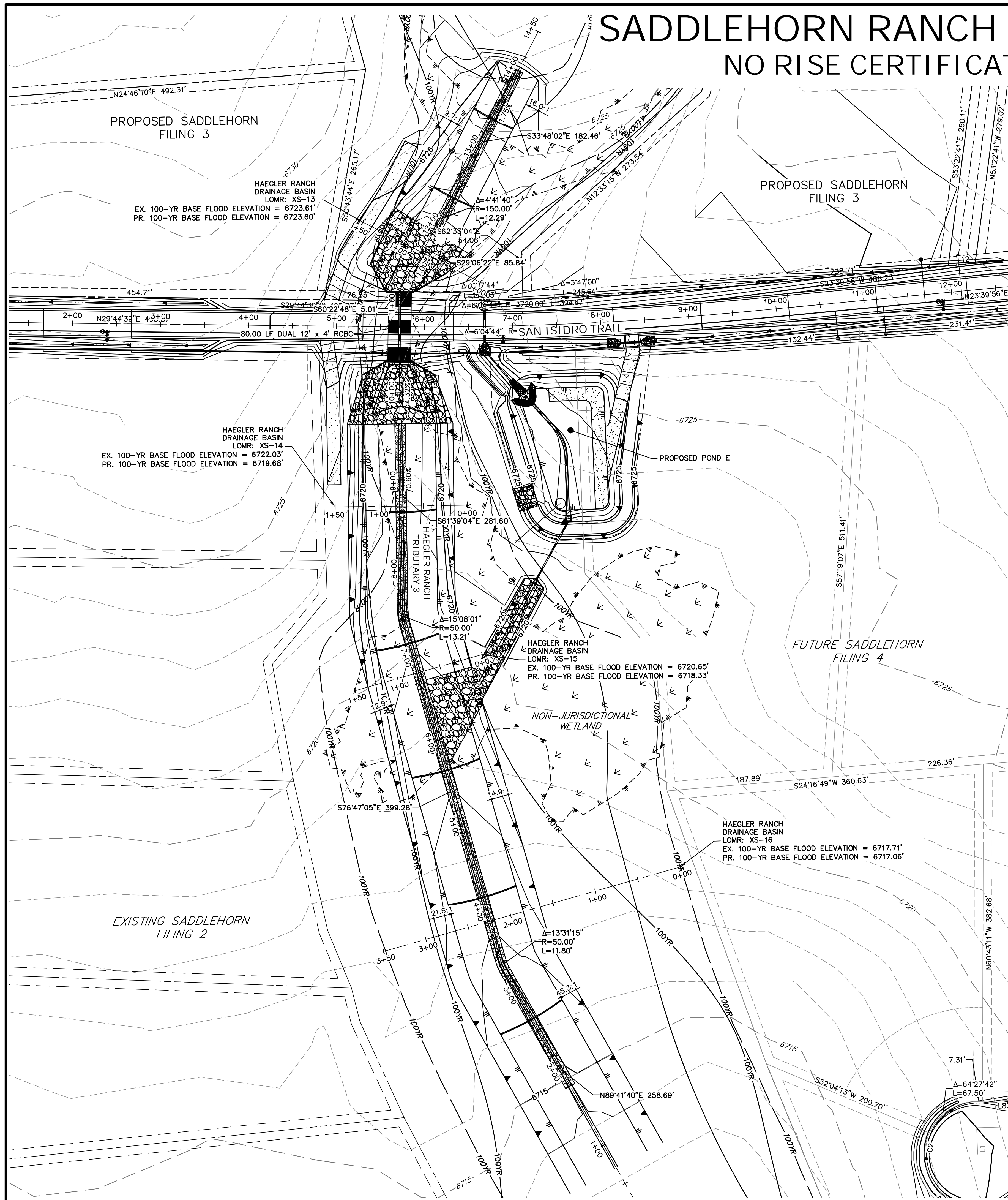
I further certify that the design conditions needed to meet the zero rise, box culvert and wing walls, are detailed in sufficient nature to allow for field confirmation and included among the supporting documentation.

I further certify that the structure in question will be securely anchored to prevent flotation, collapse or lateral movement in order to withstand the velocity of floodwaters as required by RCB313.18.1 and RBC313.21.2.

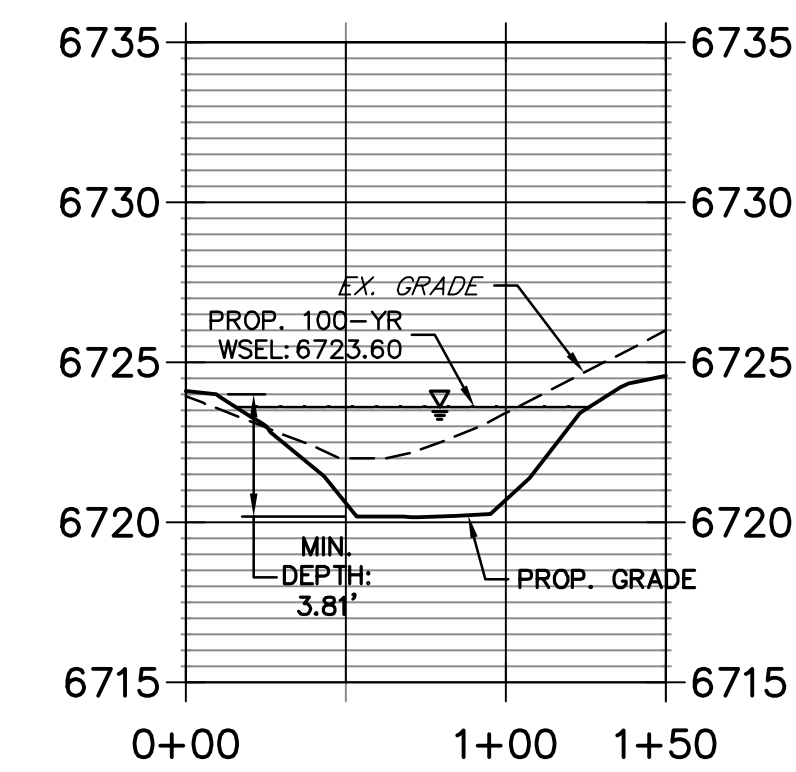
  
 Bryan Law PE  
 Colorado P.E. #25043
 

# SADDLEHORN RANCH - FILING 3

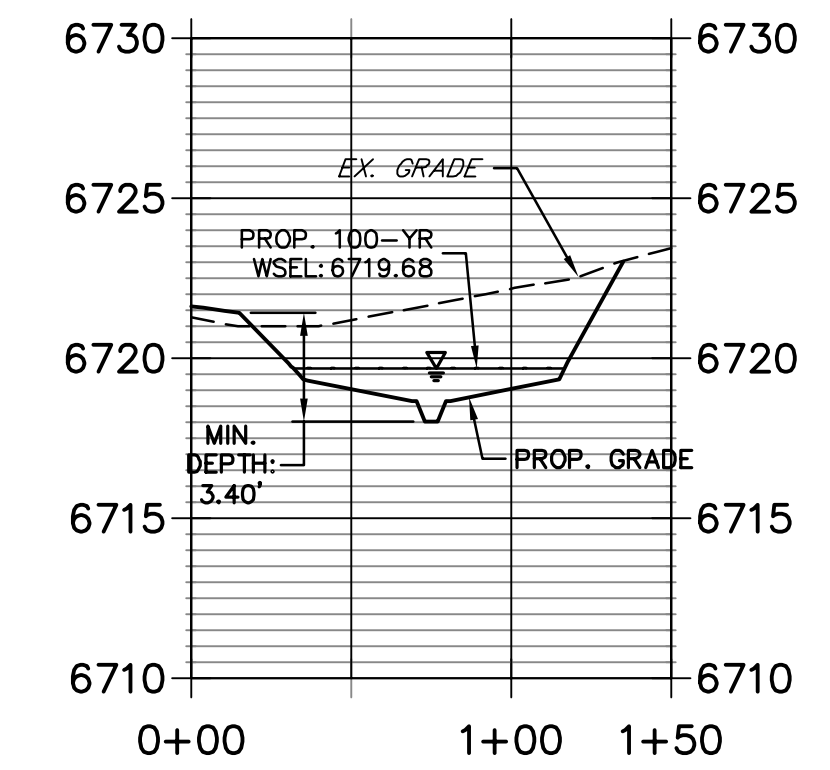
## NO RISE CERTIFICATION



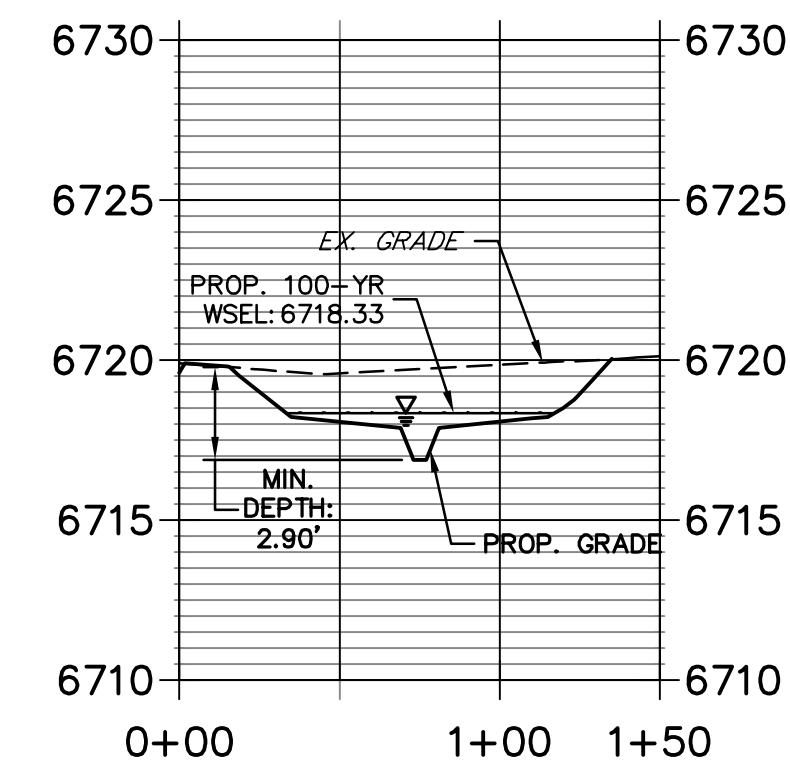
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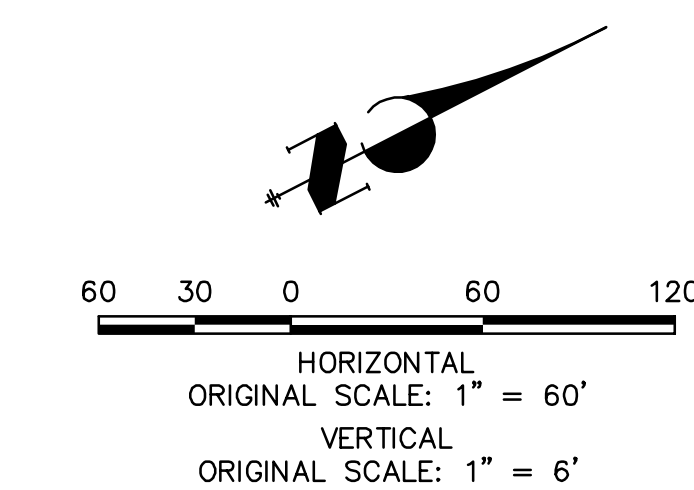
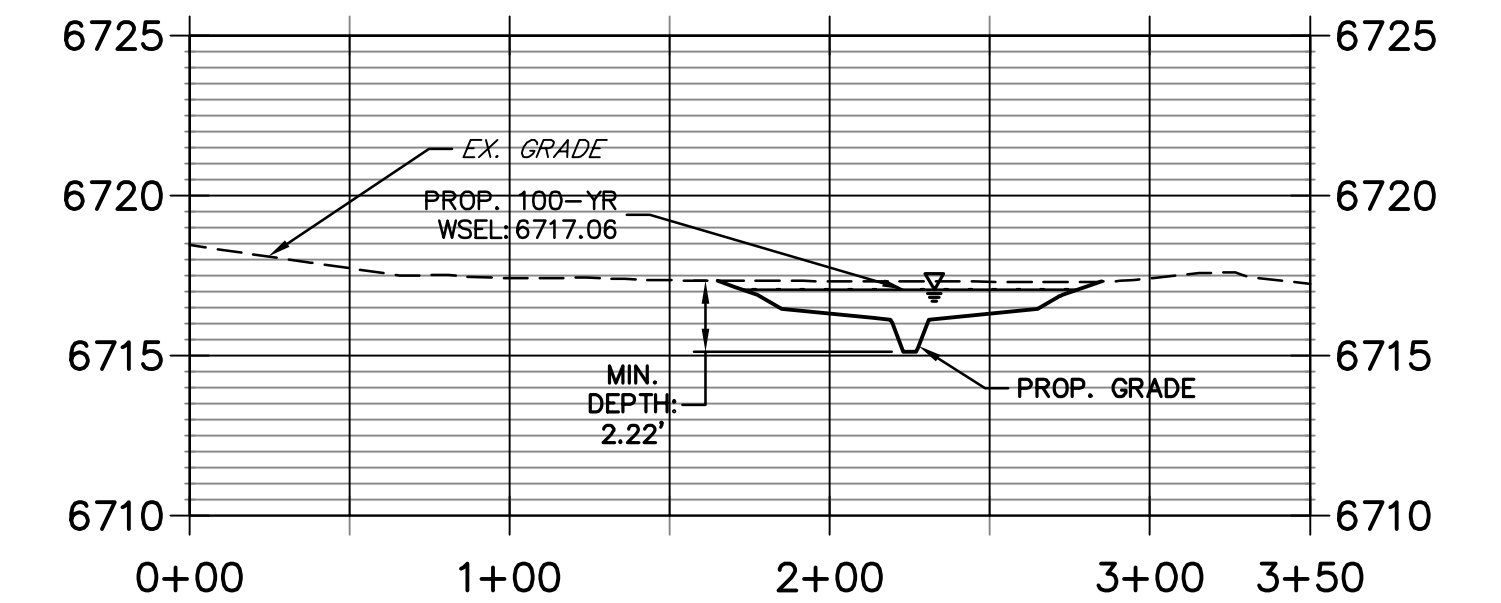
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CROSS SECTION 15 PROFILE  
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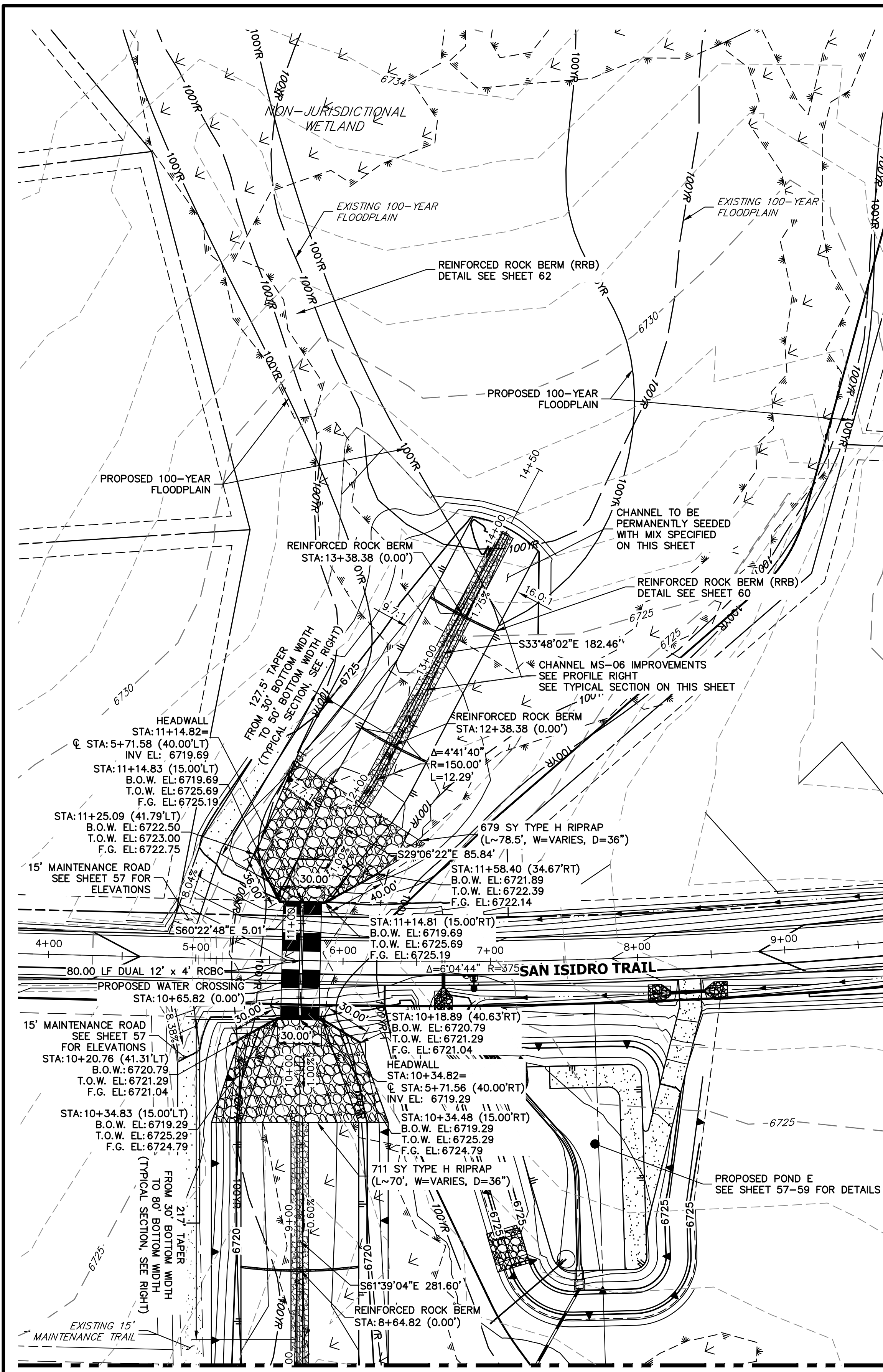
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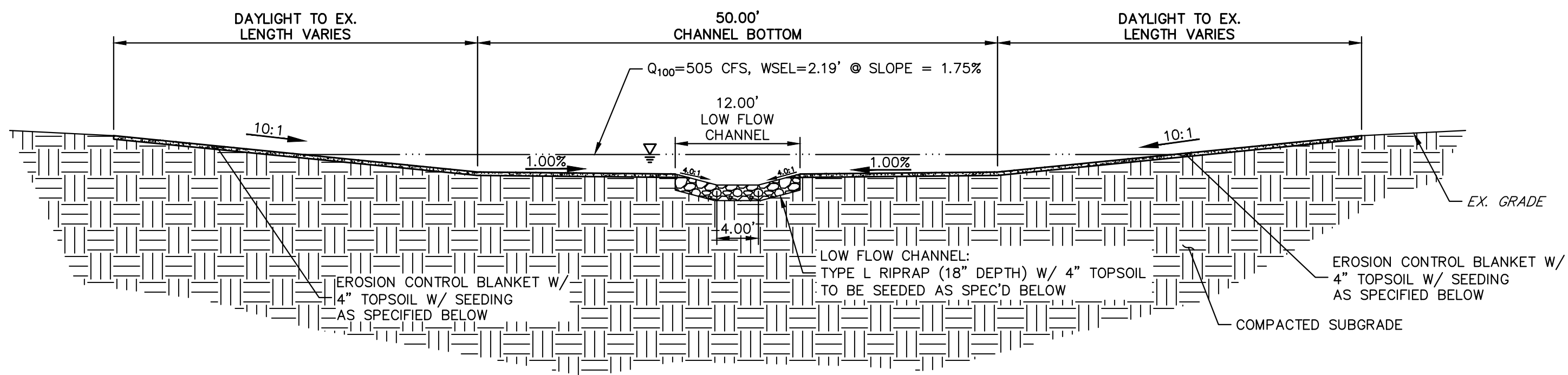
NO RISE CERTIFICATION  
SADDLEHORN RANCH - FILING 3  
JOB NO. 25142.05  
4/24/23  
SHEET 1 OF 1



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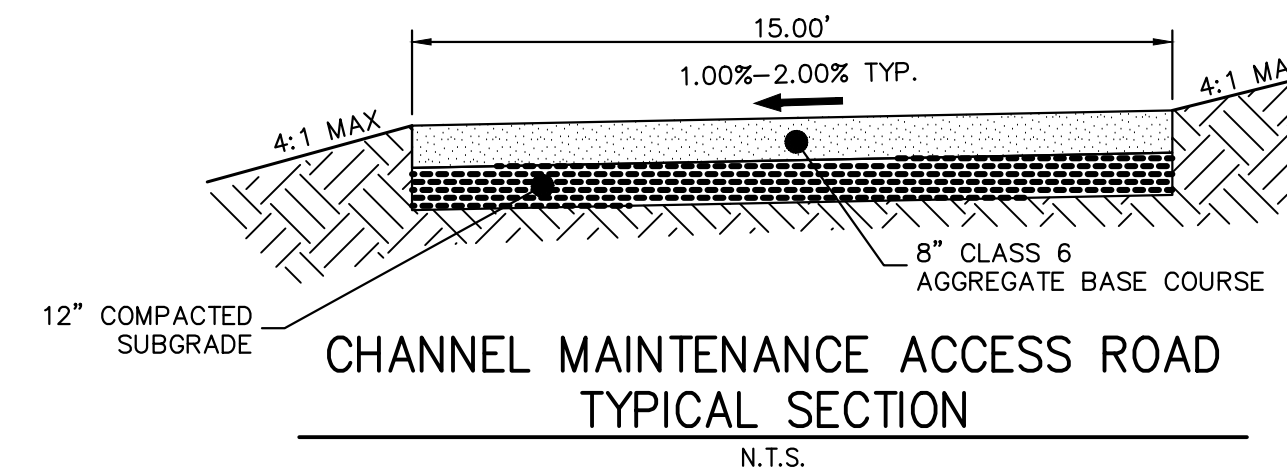
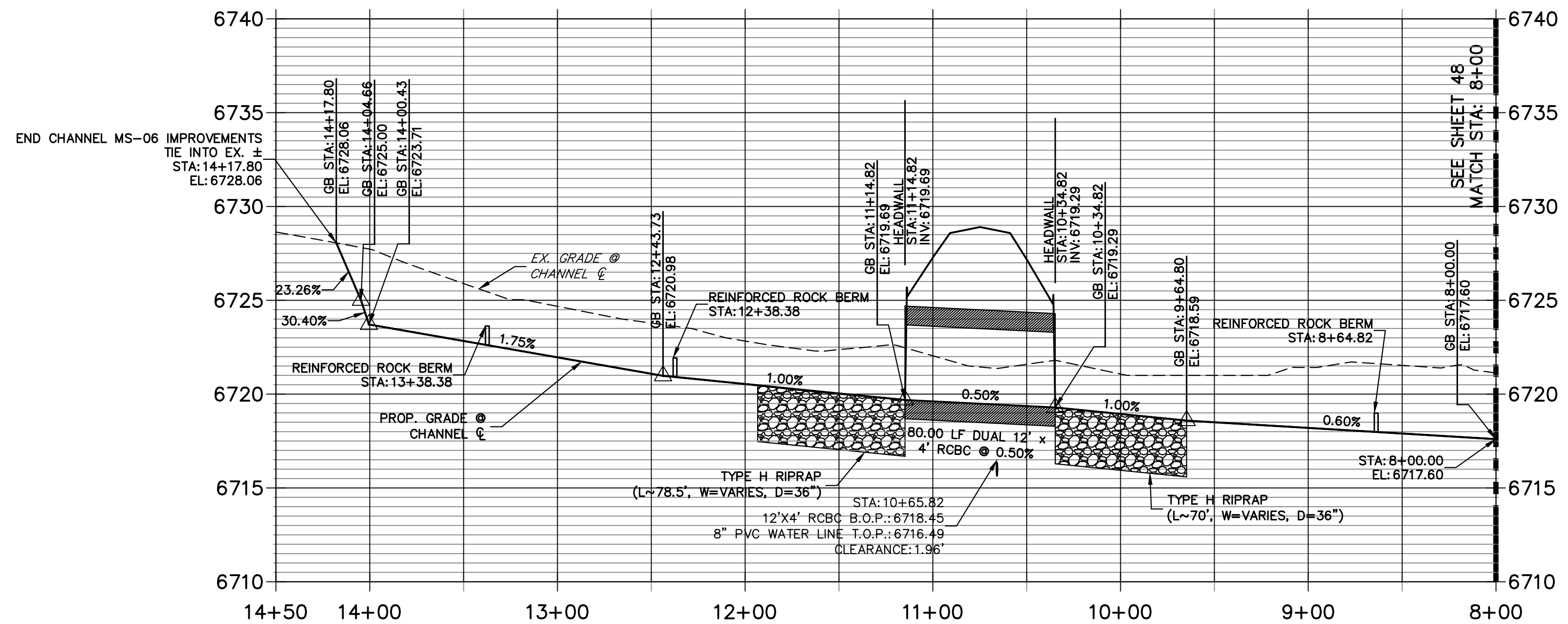
SEE SHEET 48



**MS-06 CHANNEL IMPROVEMENTS - TYPICAL SECTION**

SCALE: 1"=10'  
 TYPICAL SECTION FOR CHANNEL WEST OF SAN ISIDRO TRAIL  
 CHANNEL SEED MIX: EROSION CONTROL BLANKET WITH PAWNEE BUTTES SEED INC. - "LOW GROW NATIVE MIX"  
 -IDaho FESCUE  
 -SANDBERG BLUEGRASS  
 -ROCKY MOUNTAIN FESCUE  
 -BIG BLUEGRASS

**MS-06 PROFILE (1)  
 STA 8+00.00 TO 14+50.00**

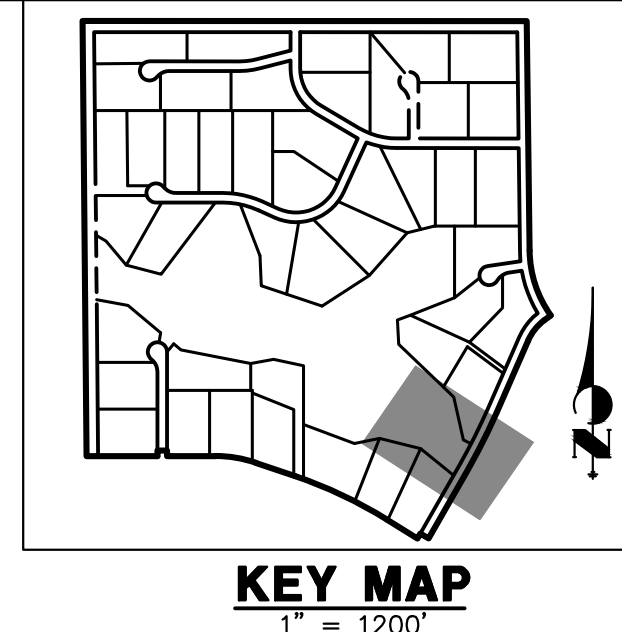


CHANNEL MAINTENANCE ACCESS ROAD  
 TYPICAL SECTION  
 N.T.S.

50 25 0 50 100  
 HORIZONTAL ORIGINAL SCALE: 1" = 50'  
 VERTICAL ORIGINAL SCALE: 1" = 5'  
**811**  
 Know what's below.  
 Call before you dig.

**ENGINEER'S STATEMENT**  
 PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

BRYAN T. LAW, P.E. DATE \_\_\_\_\_  
 COLORADO P.E. 25043  
 FOR AND ON BEHALF OF JR ENGINEERING, LLC



UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE ONLY AS DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
**ROI PROPERTY GROUP, LLC**  
 2495 RIGDON STREET  
 NAPA, CALIFORNIA  
 (707) 365-6891  
 BRADY WILLIAMS

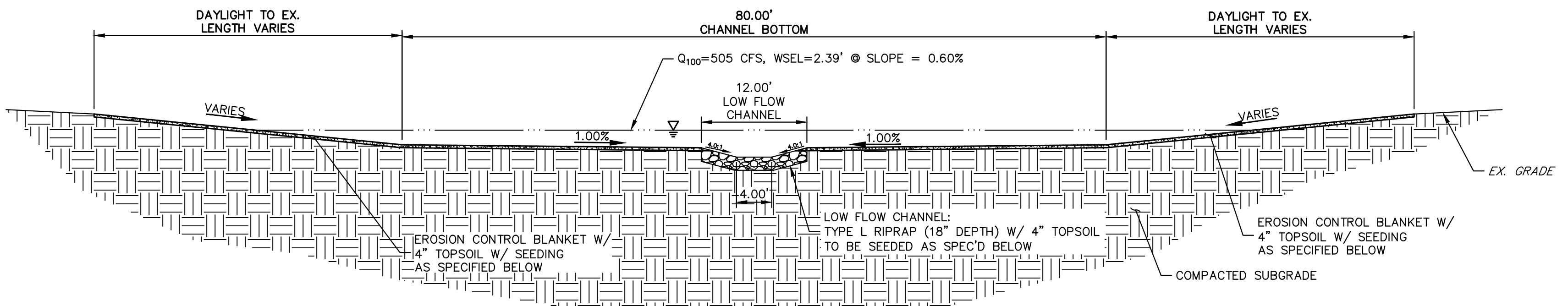
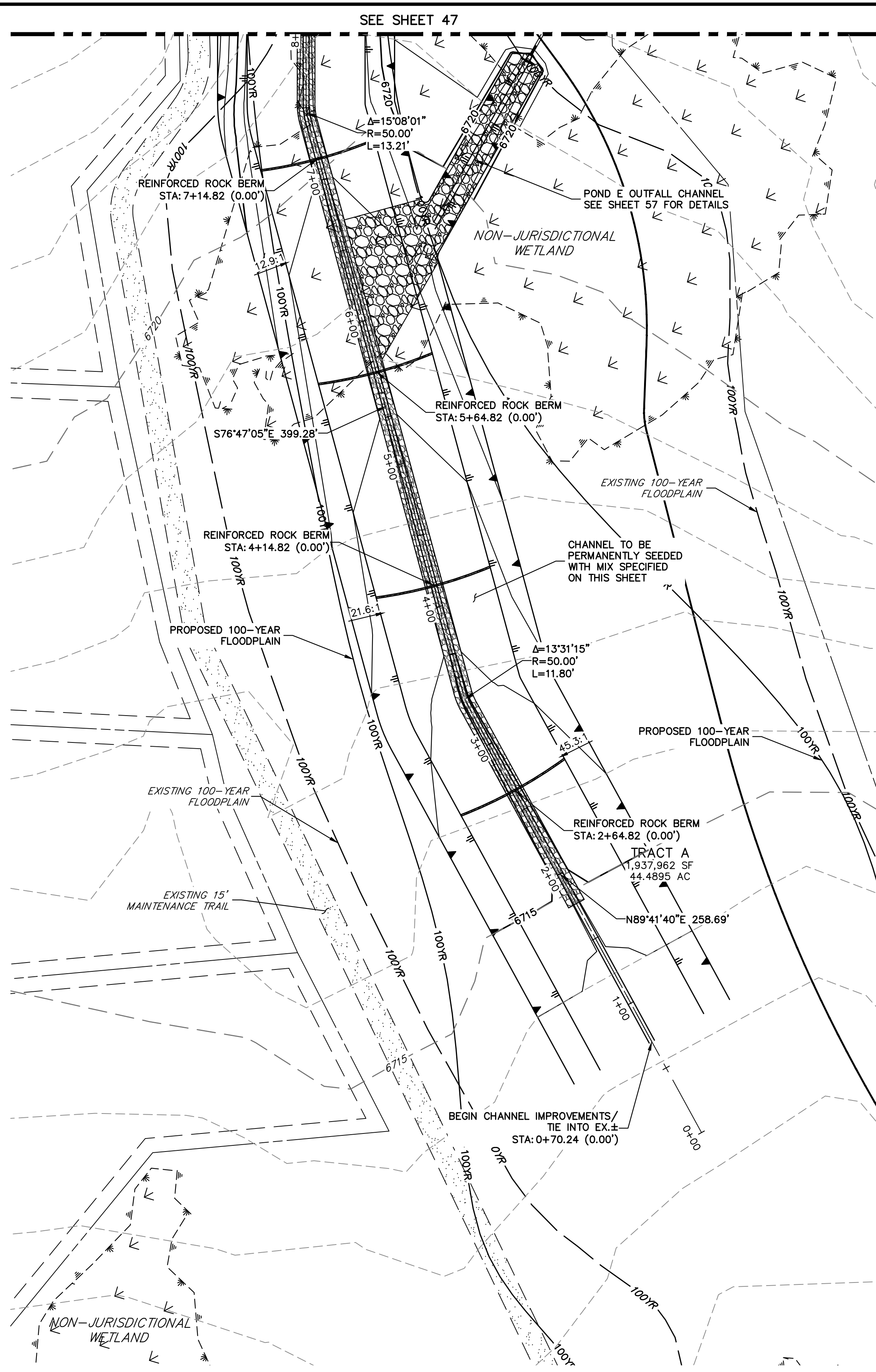
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BY	DATE	REVISION

H-SCALE 1"=50'  
 V-SCALE 1"=5'  
 DATE 4/25/23  
 DESIGNED BY AAM  
 DRAWN BY AAM  
 CHECKED BY

SADDLEHORN RANCH -  
 FILING 3  
 CHANNEL IMPROVEMENT  
 PLANS

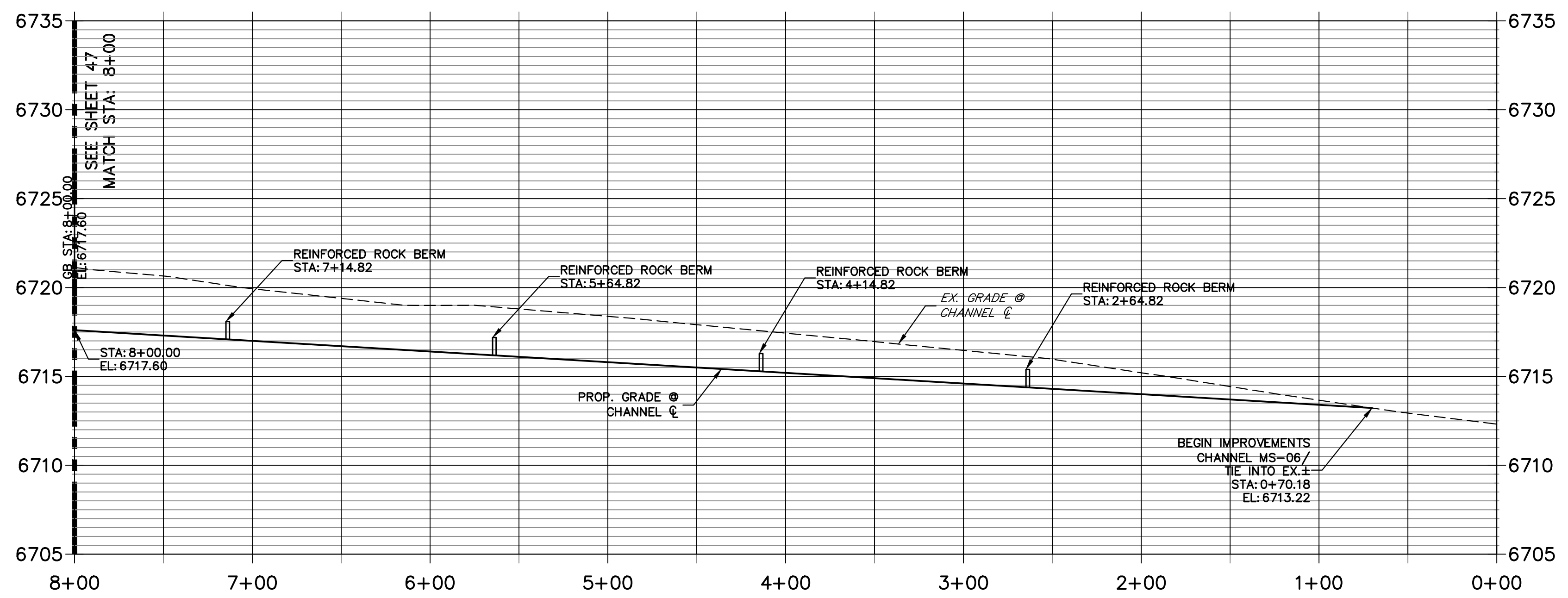
SHEET 47 OF 63  
 JOB NO. 21542.05



**MS-06 CHANNEL IMPROVEMENTS - TYPICAL SECTION**

SCALE: 1"=10'  
 TYPICAL SECTION FOR CHANNEL EAST OF SAN ISIDRO TRAIL  
 CHANNEL SEED MIX: EROSION CONTROL BLANKET WITH PAWNEE BUTTES SEED INC. - "LOW GROW NATIVE MIX"  
 -IDAHO FESCUE  
 -SANDBERG BLUEGRASS  
 -ROCKY MOUNTAIN FESCUE  
 -BIG BLUEGRASS

**MS-06 PROFILE  
 STA 0+00.00 TO 8+00.00**



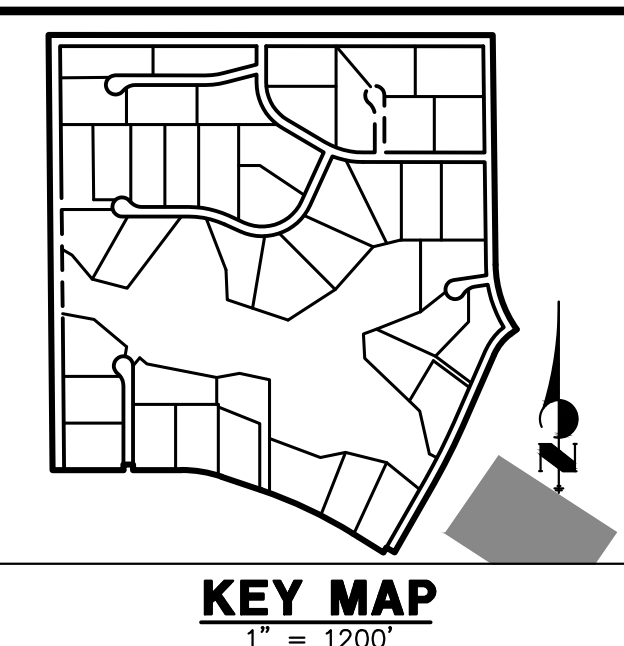
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BRYAN T. LAW, P.E. \_\_\_\_\_ DATE \_\_\_\_\_  
 COLORADO P.E. 25043  
 FOR AND ON BEHALF OF JR ENGINEERING, LLC



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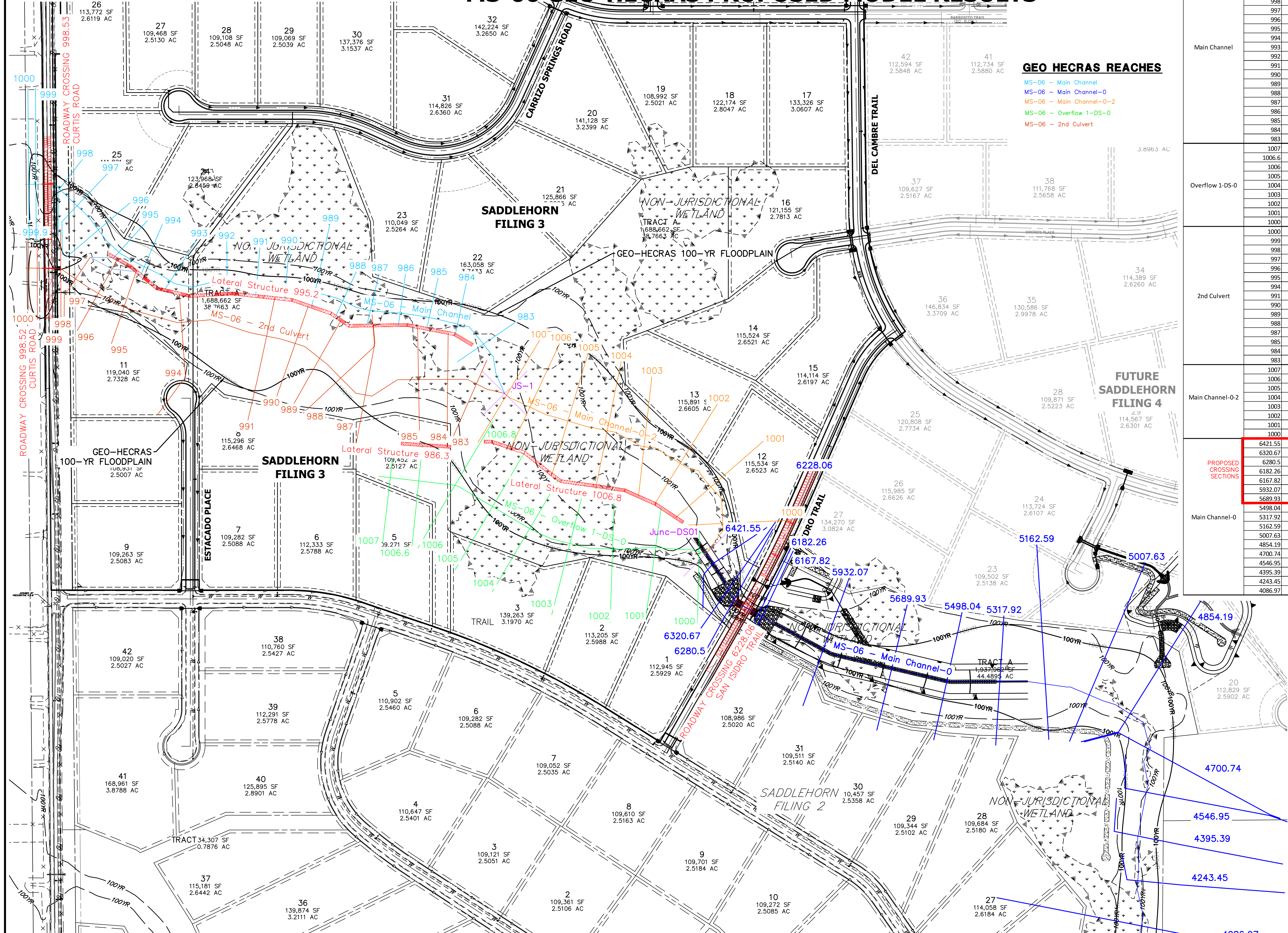
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No.	REVISION	BY	DATE

# SADDLEHORN FILING 3

## MS-06 GEO-HECRAS PROPOSED MODEL RESULTS

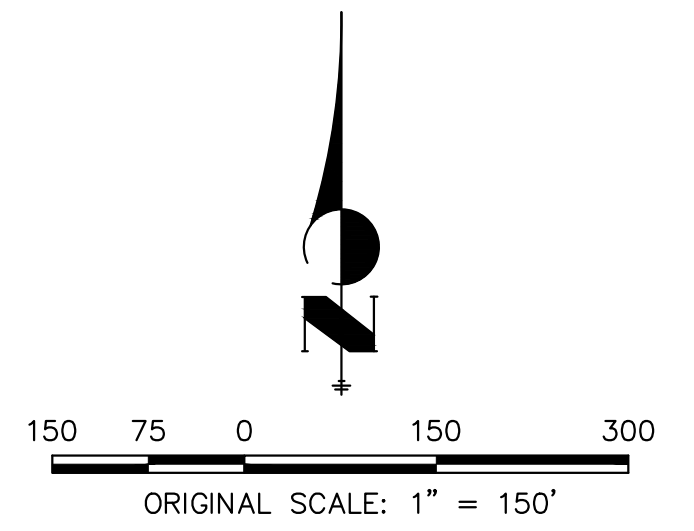


**GEO HECRAS REACHES**

- MS-06 - Main Channel
- MS-06 - Main Channel-0
- MS-06 - Main Channel-0-2
- MS-06 - Overflow 1-DS-0
- MS-06 - 2nd Culvert

**GEO HECRAS DATA**

Reach	River Sta	Q Total (cfs)	Min Ch El (ft)	W.S. Elev (ft)	Vel Chnl (ft/s)	Froude # Chl	Shear Total (lb/sq ft)	
Main Channel	1000	505	6765.9	6768.13	1.05	0.15	0.05	
	999	486.12	6765.4	6768.12	0.81	0.1	0.03	
	998	486.12	6764	6765.41	2.91	0.56	0.52	
	997	486.12	6763.48	6764.56	2.56	0.56	0.49	
	996	486.12	6762.4	6763.92	1.81	0.29	0.18	
	995	474.21	6761.5	6763.42	3.12	0.55	0.56	
	994	413.73	6760.3	6762.01	4.34	0.82	1.14	
	993	353.31	6758.7	6760.31	4.27	0.68	0.97	
	992	287.87	6756.1	6757.33	3.94	0.77	0.95	
	991	251.38	6754.3	6755.49	4.13	0.75	1	
	990	227.11	6753	6754.24	3.1	0.56	0.56	
	989	219.27	6751.9	6752.85	3.64	0.8	0.88	
Overflow 1-DS-0	1007	0	6745.24	6745.02	0	0	0	
	1006.6	0	6743.4	6743.42	0	0.01	0	
	1006	0	6740.87	6740.22	0	0	0	
	1005	31.98	6737.8	6738.13	1.4	0.59	0.2	
	1004	35.6	6735.5	6735.93	1.39	0.5	0.18	
	1003	35.6	6733.7	6734.17	1.51	0.51	0.2	
	1002	35.6	6731.5	6732.21	1.81	0.58	0.28	
	1001	36.2	6728.3	6728.81	2.96	1.01	0.78	
	1000	36.2	6722.9	6724.11	0.83	0.2	0.05	
	1000	0	6765.7	6766.02	0	0	0	
	999	18.88	6765.2	6766.02	0.13	0.03	0	
	998	18.88	6763.1	6763.42	1.28	0.68	0.2	
2nd Culvert	997	18.88	6762.1	6762.28	0.98	0.43	0.1	
	996	38.77	6761.2	6761.59	1	0.34	0.09	
	995	76.38	6760.2	6760.81	1.68	0.55	0.25	
	994	164.79	6757.3	6758.35	2.17	0.53	0.33	
	991	270.9	6753.9	6754.53	2.21	0.64	0.37	
	990	284.89	6752	6752.94	2.38	0.62	0.42	
	989	287.06	6750.2	6750.86	3.58	0.92	0.94	
	988	286.8	6747.82	6749.07	1.82	0.43	0.22	
	987	286.8	6747.5	6748.18	2.35	0.57	0.36	
	985	288.5	6744.9	6745.31	2.27	0.68	0.43	
	984	292.47	6743.3	6743.84	1.99	0.53	0.32	
	983	302.68	6741.3	6741.98	3.86	1	1.1	
Main Channel-0-2	1007	505	6740	6740.87	2.35	0.51	0.3	
	1006	486.37	6738.7	6739.72	2.94	0.72	0.51	
	1005	469.4	6736.6	6737.4	2.2	0.6	0.41	
	1004	469.4	6733.8	6734.73	3.54	0.86	0.84	
	1003	469.01	6730.8	6732.27	2.72	0.54	0.43	
	1002	468.8	6729.3	6730.2	4.15	0.9	1.13	
	1001	468.8	6725	6727.95	3.08	0.49	0.51	
	1000	468.8	6724.2	6726.1	5.42	0.99	1.72	
	PROPOSED CROSSING SECTIONS	6421.55	505	6721.4	6723.94	3.27	0.53	0.18
		6320.67	505	6720.2	6723.88	1.49	0.17	0.05
		6280.5	505	6719.9	6723.81	2.29	0.26	0.12
		6182.26	505	6719.3	6721.6	8.46	0.98	1.67
	6167.82	505	6719.1	6721.14	3.78	0.54	0.37	
	5932.07	505	6717.5	6719.88	4.43	0.67	0.49	
	5689.93	505	6716.1	6718.47	4.18	0.62	0.4	
Main Channel-0	5498.04	505	6714.9	6717.13	4.71	0.75	0.29	
	5317.92	505	6713.8	6715.23	5.6	1	0.55	
	5162.59	505	6712.5	6713.42	1.96	0.38	0.38	
	5007.63	505	6710.6	6711.71	2.61	0.52	0.72	
	4854.19	505	6708.4	6710.39	1.35	0.22	0.16	
	4700.74	505	6706.7	6709.73	2.4	0.43	0.59	
	4546.95	505	6704.9	6708.42	2.76	0.39	0.67	
	4395.39	505	6704.1	6707.53	2.51	0.33	0.53	
	4243.45	505	6704.1	6706.62	2.45	0.4	0.58	
	4086.97	505	6702.5	6705	3.09	0.51	0.93	



MS-06 GEO-HECRAS PROPOSED MODEL RESULTS  
 SADDLEHORN FILING 3  
 JOB NO. 25142.05  
 04/24/23  
 SHEET 1 OF 1

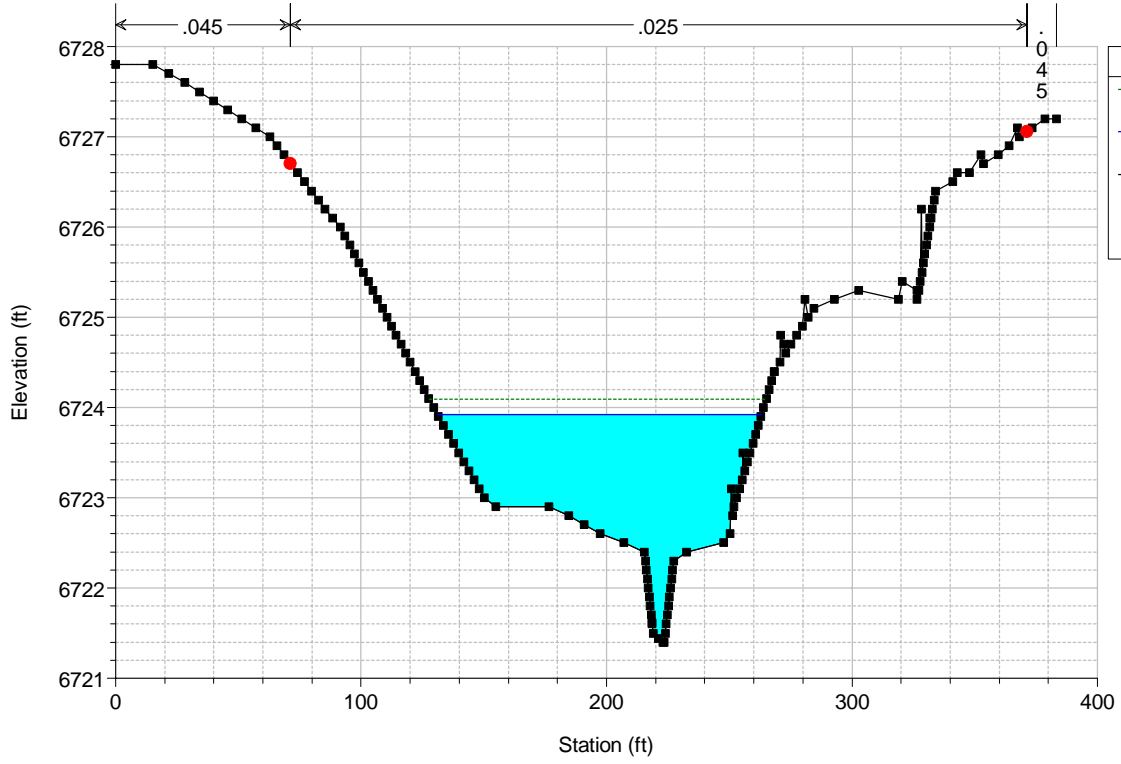


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HEC-RAS Model Plan: Default Scenario 3/1/2023

Flow: Default Steady Flow

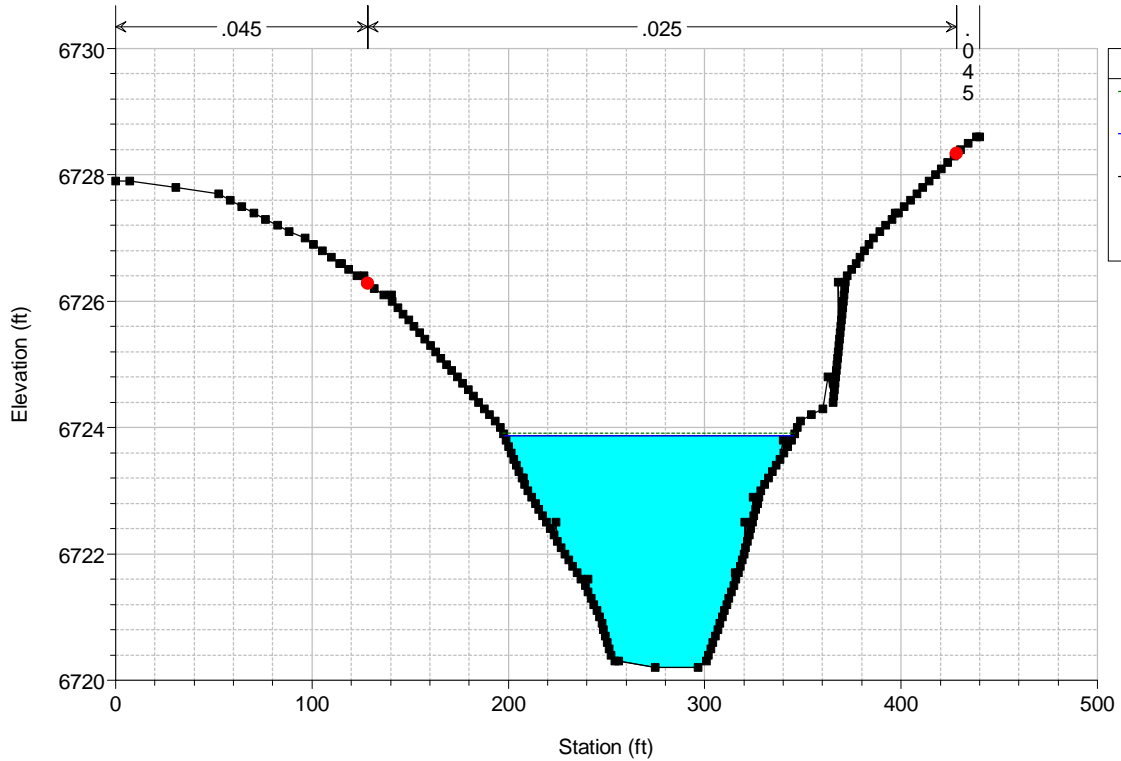
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HEC-RAS Model Plan: Default Scenario 3/1/2023

Flow: Default Steady Flow

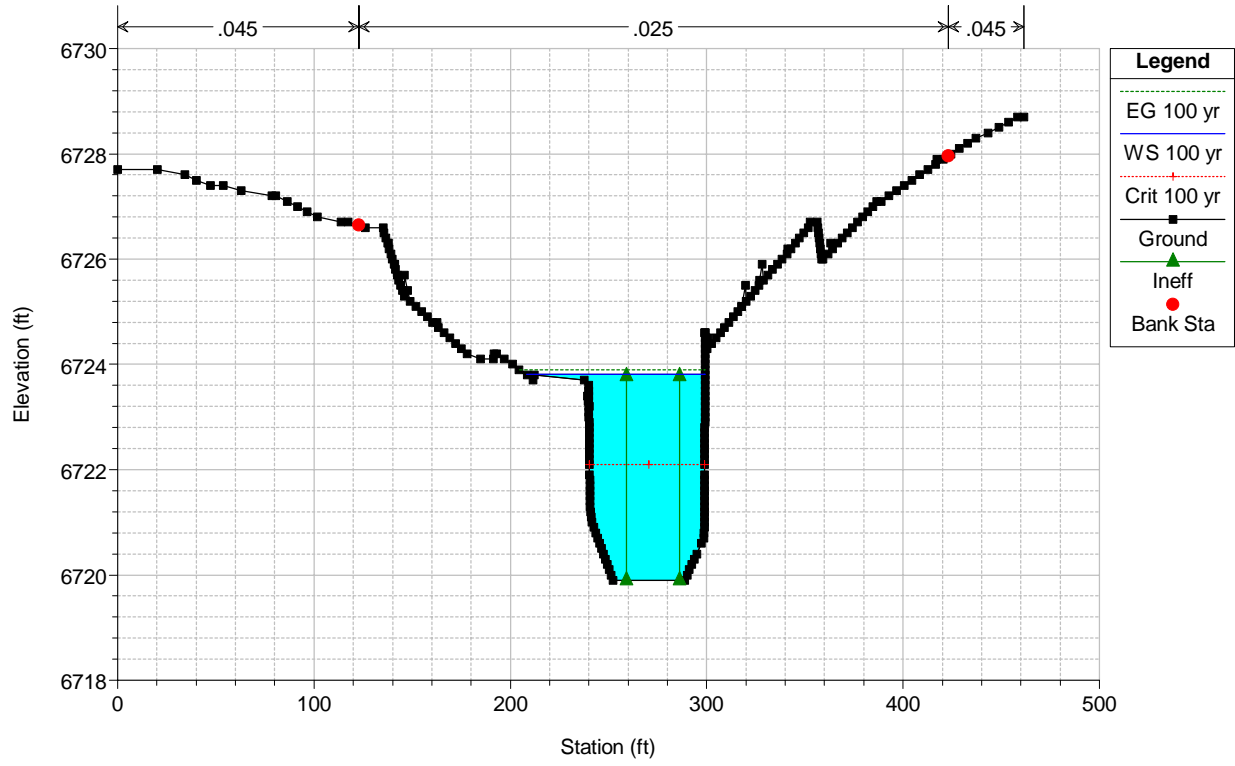
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HEC-RAS Model Plan: Default Scenario 3/1/2023

Flow: Default Steady Flow

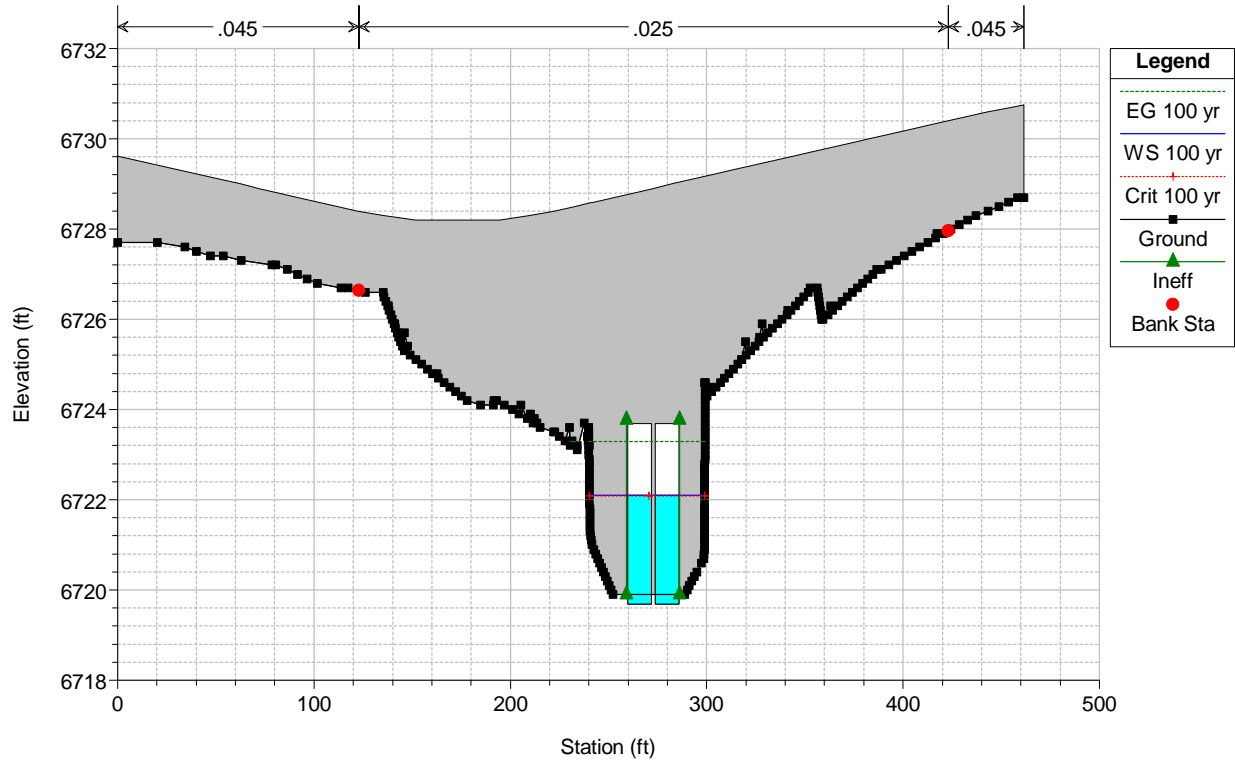
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HEC-RAS Model Plan: Default Scenario 3/1/2023

Flow: Default Steady Flow

River = MS-06 Reach = Main Channel-0 RS = 6228.06 Culv

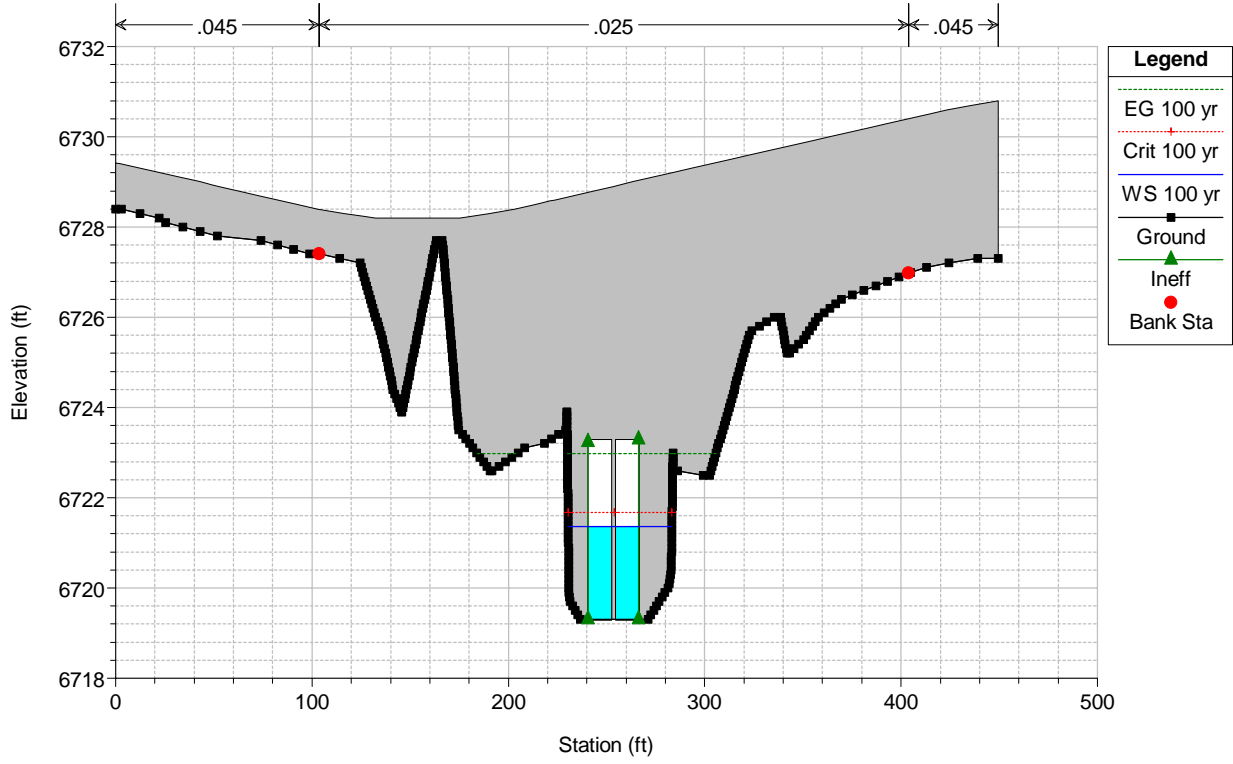




HEC-RAS Model Plan: Default Scenario 3/1/2023

Flow: Default Steady Flow

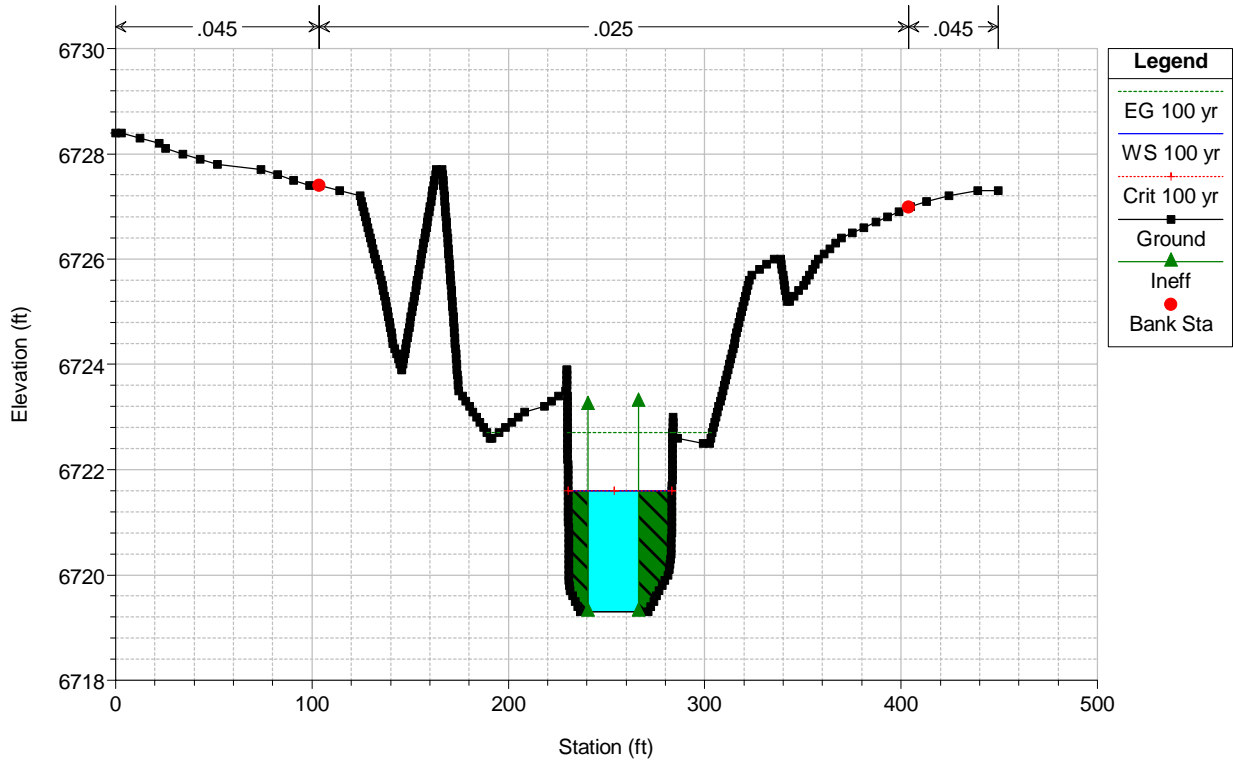
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HEC-RAS Model Plan: Default Scenario 3/1/2023

Flow: Default Steady Flow

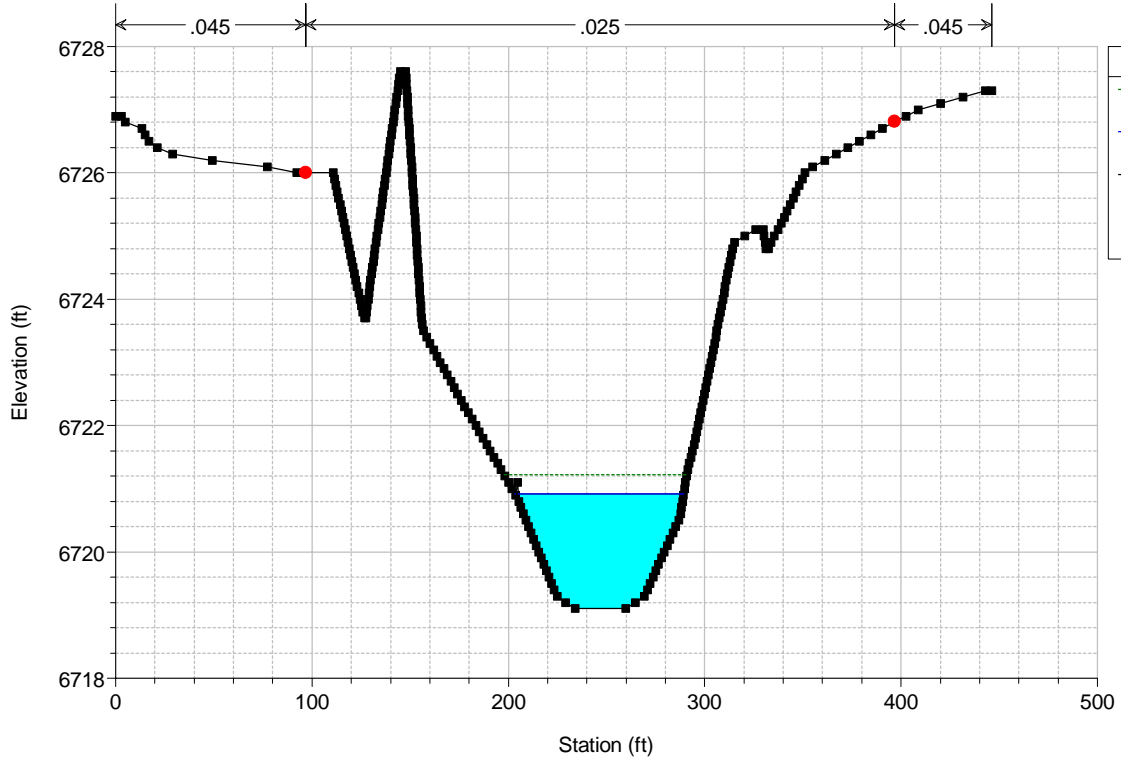
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HEC-RAS Model Plan: Default Scenario 3/1/2023

Flow: Default Steady Flow

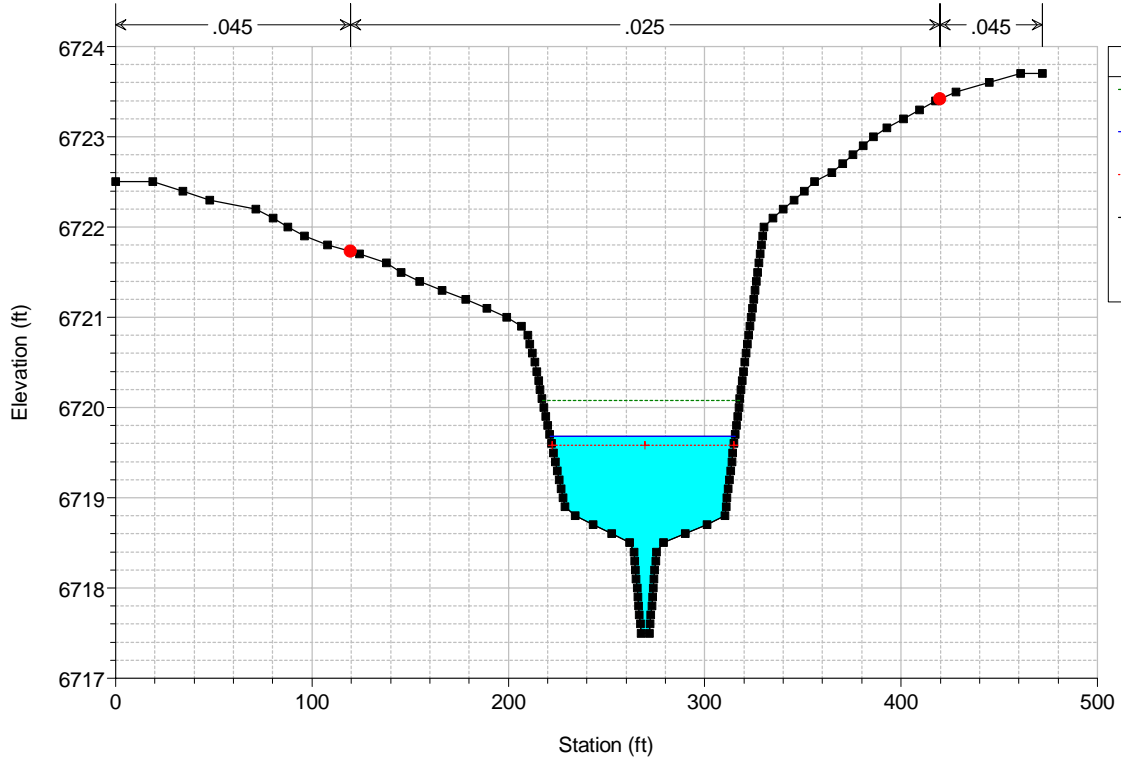
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HEC-RAS Model Plan: Default Scenario 3/1/2023

Flow: Default Steady Flow

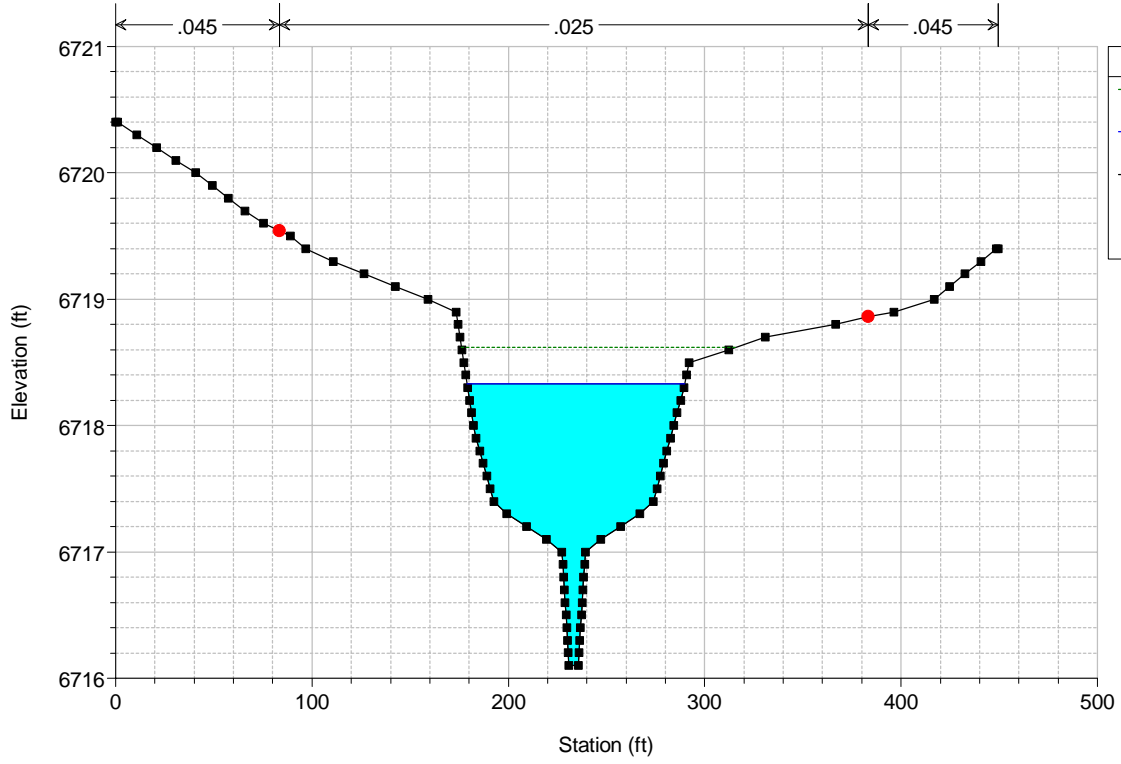
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HEC-RAS Model Plan: Default Scenario 3/1/2023

Flow: Default Steady Flow

River = MS-06 Reach = Main Channel-0 RS = 5689.93



HEC-RAS Model Plan: Default Scenario 3/1/2023

Flow: Default Steady Flow

River = MS-06 Reach = Main Channel-0 RS = 5498.04

