

CONSTRUCTION PLANS FOR

COMMODORE 5 TUNNEL REHABILITATION

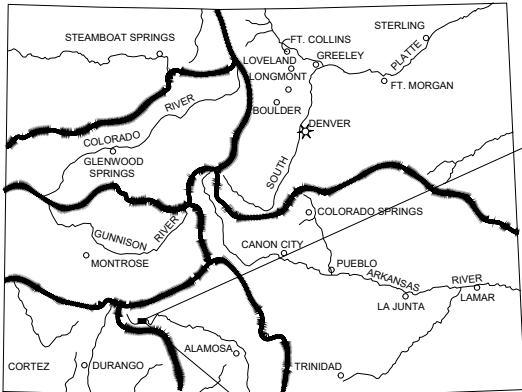
SEGMENT 6

MINERAL COUNTY, COLORADO

PREPARED FOR:

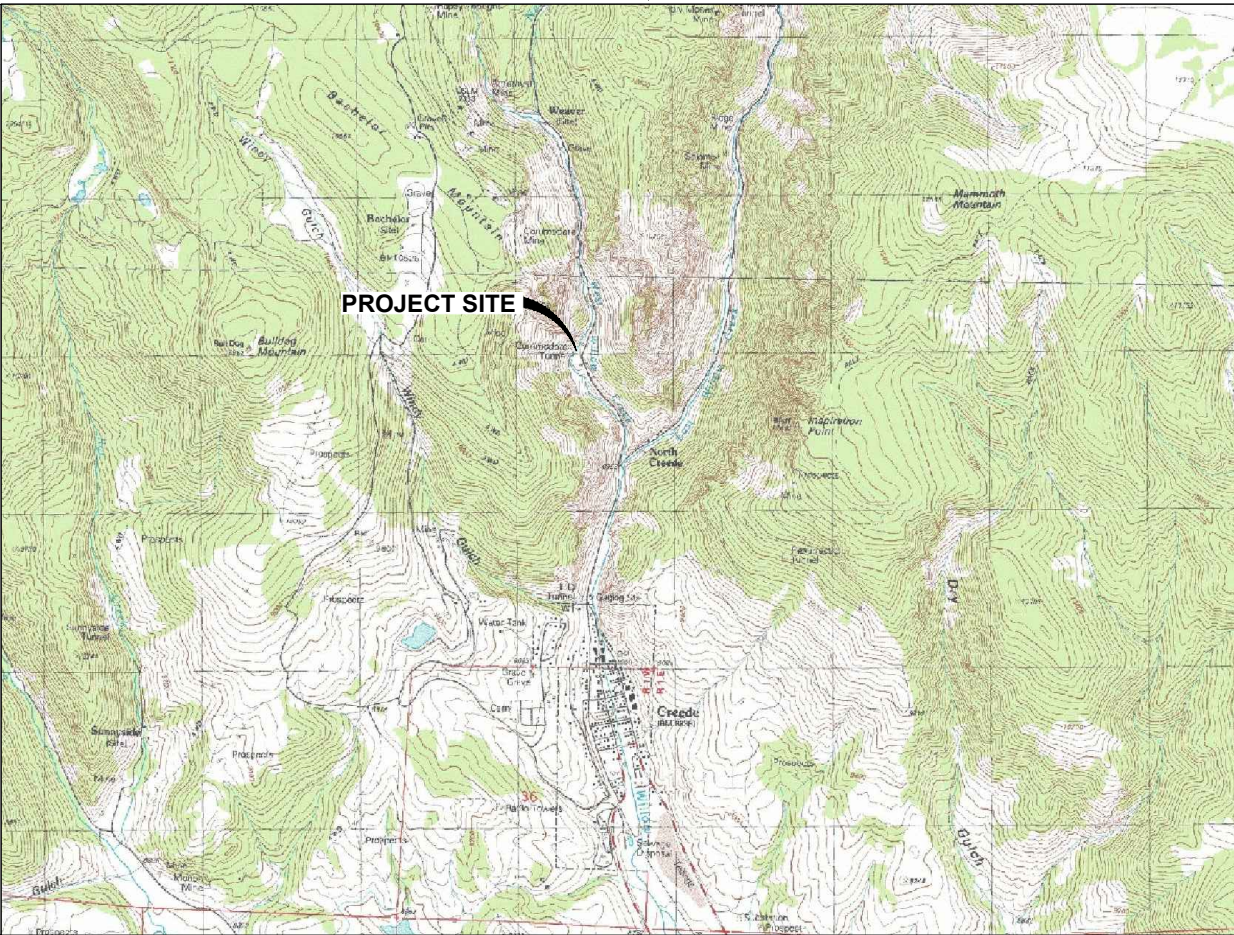
TETRA TECH, INC.
1560 BROADWAY, SUITE 1400
DENVER, COLORADO 80202

R1W| R1E

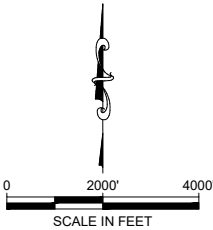


STATE OF COLORADO
PROJECT LOCATION MAP

SCALE: NONE



R1W| R1E



CALL 2-BUSINESS DAYS IN ADVANCE BEFORE YOU
DIG, GRADE, OR EXCAVATE FOR THE MARKING OF
UNDERGROUND MEMBER UTILITIES.

DEERE & AULT CONSULTANTS, INC. ASSUMES NO
RESPONSIBILITY FOR EXISTING UTILITY LOCATIONS (HORIZONTAL
AND VERTICAL). THE EXISTING UTILITIES SHOWN ON THIS
DRAWING HAVE BEEN PLOTTED FROM THE BEST AVAILABLE
INFORMATION. IT IS, HOWEVER, THE RESPONSIBILITY OF THE
CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL UTILITIES
PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION
ACTIVITIES.

SHEET INDEX:

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- 2 PORTAL AREA, EXISTING CONDITIONS AND SURVEY CONTROL
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- 13 SEGMENT 6 STA 62+90 TO 64+40
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- 23 SEGMENT 6 STA 76+90 TO 78+40
- 24 ORE CHUTE AREA CROSS SECTIONS
- 25 STRUCTURAL DETAILS
- 26 GENERAL DETAILS
- 27 STEEL SET DETAILS

NOTES:

DEERE AND AULT CONSULTANTS, INC. IS NOT A GUARANTOR OF THE
PERFORMANCE OF THE WORK.

DEERE AND AULT CONSULTANTS, INC. IS NOT RESPONSIBLE FOR SAFETY, IN,
ON, OR ABOUT THE PROJECT SITE, NOR FOR COMPLIANCE BY THE
APPROPRIATE PARTY WITH ANY REGULATIONS RELATED THERETO.

DEERE AND AULT CONSULTANTS, INC. EXERCISES NO CONTROL OVER THE
SAFETY OR ADEQUACY OF ANY EQUIPMENT, BUILDING COMPONENTS,
FORMS, OR OTHER WORK AIDS USED IN OR ABOUT THE PROJECT, OR OVER
THE SUPERINTENDING OF THE SAME.

WRITTEN SCALES ON PLAN ARE FOR FULL SIZED 22" x 34" PLANS AND DO
NOT APPLY TO REDUCED PLAN SETS.

NOTE:

TOWNSHIP & RANGE BASED ON 6TH PRINCIPAL MERIDIAN

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COMMODORE 5 REHABILITATION SEGMENT 6

COVER & VICINITY MAP

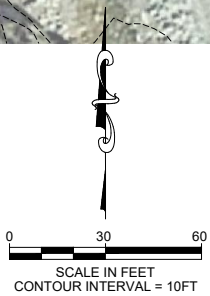
NO.	REVISIONS	DATE	BY
1	60% PLANS	9/3/21	CMG
2	95% BID SET	9/30/21	CMG

DESIGNED BY: CMG	APPROVED BY: CMG	JOB NO.	SHEET:
DRAWN BY: HOG	DATE: 9/30/21	20C26033.04	1 of 27
CHECKED BY: MWK	SCALE: AS NOTED		

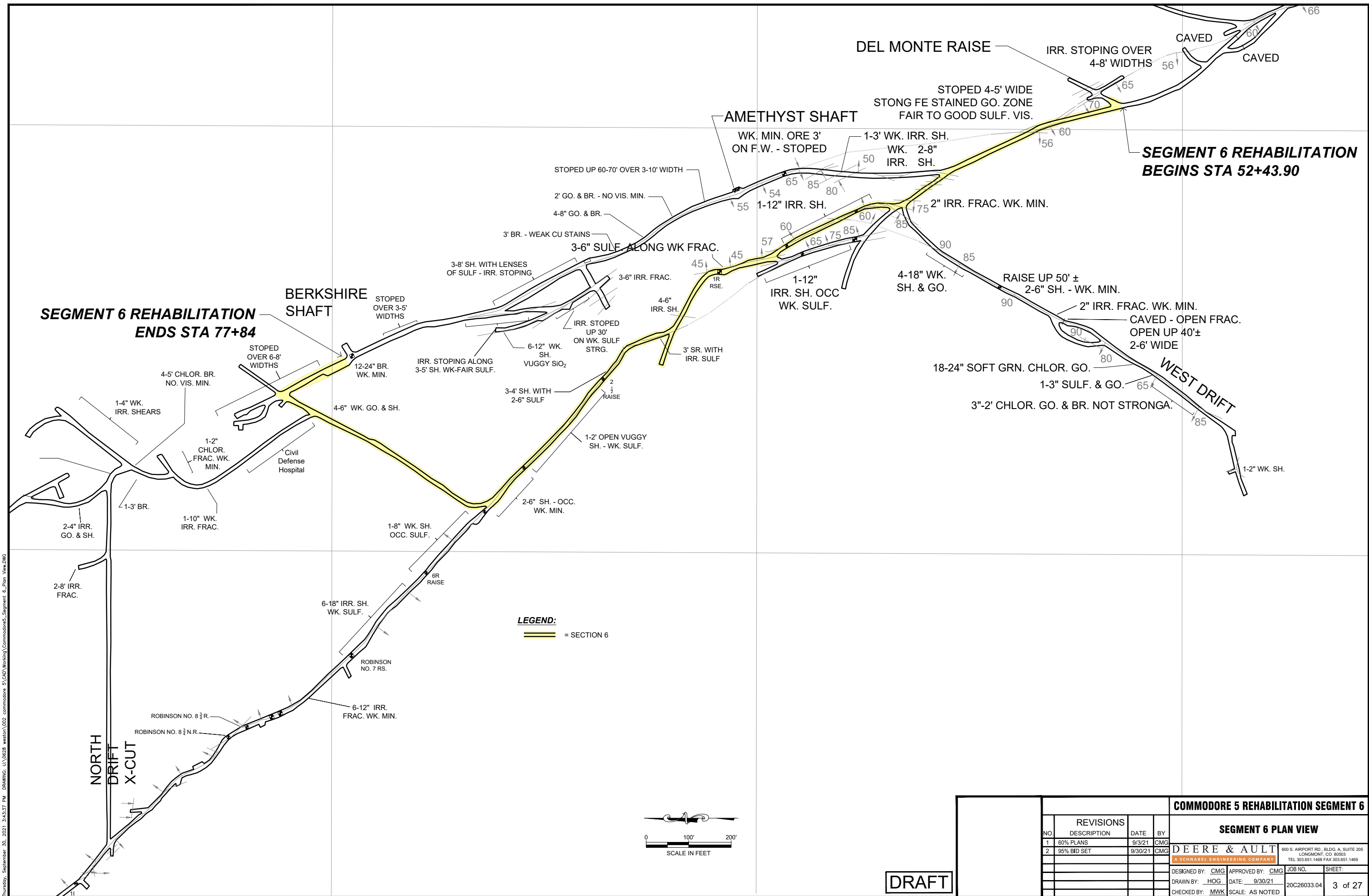


NOTES:

1. COMMODORE 5 INVERT (TOP OF RAIL) ELEVATION BY ITC RESOURCES 5/9/2019.
2. NELSON TUNNEL INVERT ELEVATION BASED ON TOP OF FLUME SURVEYED BY ITC RESOURCES 5/9/2019.
3. SOURCE OF AERIAL PHOTO: GOOGLE EARTH PRO, IMAGERY DATE 10/13/15
4. TOPOGRAPHICAL SURVEY MAPPED BY ENVIRONMENTAL RESEARCH, INC. LINDEN, VIRGINIA. DATE OF PHOTOGRAPHY: 5-17-18.
5. TUNNEL SURVEY POINTS PROVIDED BY ITC RESOURCES, DATED 3-13-19.
6. HORIZONTAL DATUM IS COLORADO STATE PLANE SOUTH, MODIFIED TO GROUND BY A SCALE FACTOR OF 1.000487327.



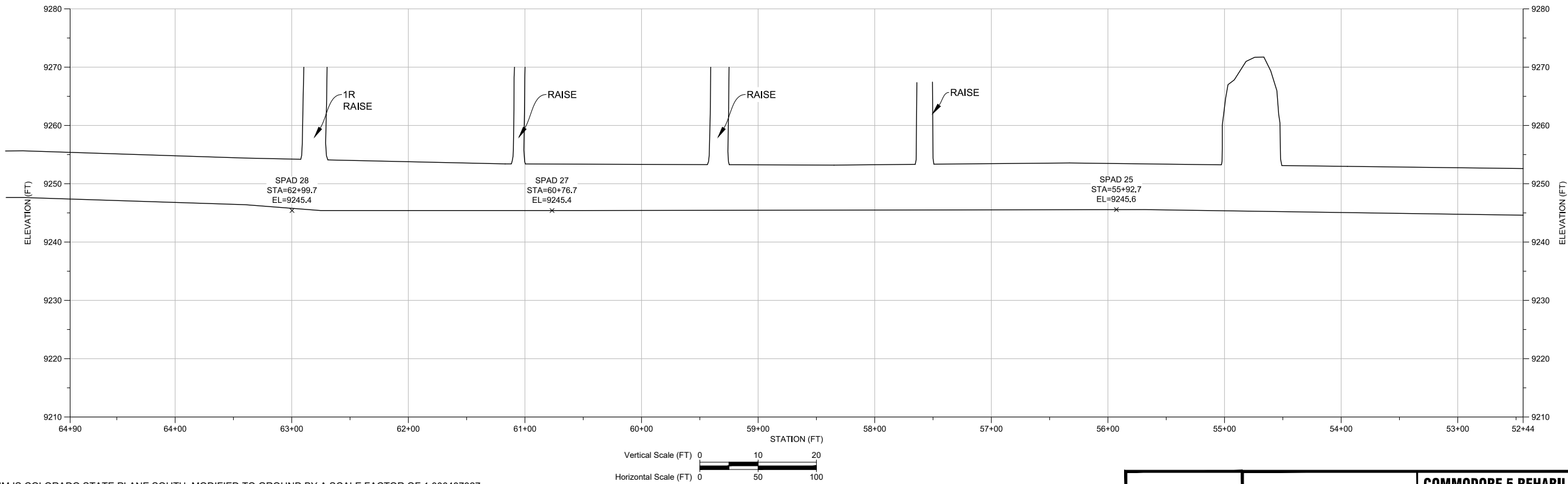
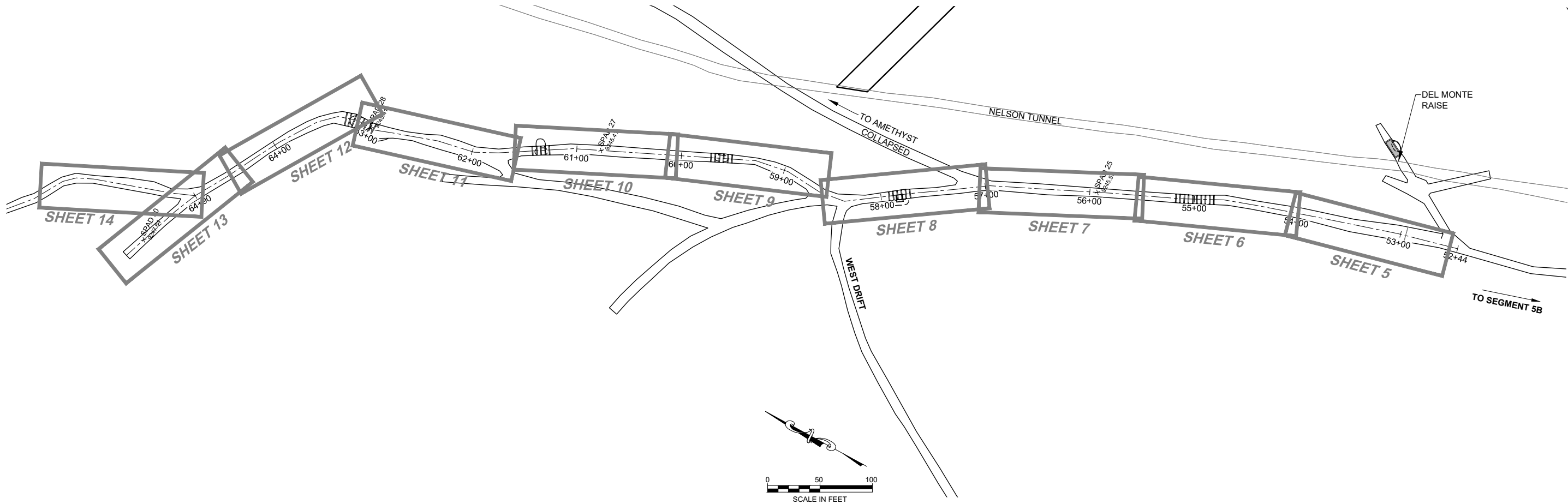
REVISIONS				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	DESCRIPTION	DATE	BY	PORTAL AREA, EXISTING CONDITIONS AND SURVEY CONTROL			
1	80% PLANS	9/3/21	CMG	DEERE & AULT <small>A SCHNABEL ENGINEERING COMPANY</small>			
2	95% BID SET	9/30/21	CMG				
				DESIGNED BY: <u>CMG</u>	APPROVED BY: <u>CMG</u>	JOB NO.	SHEET:
				DRAWN BY: <u>HOG</u>	DATE: <u>9/30/21</u>	20C26033.04	2 of 27
				CHECKED BY: <u>MWK</u>	SCALE: AS NOTED		



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				COMMODORE 5 REHABILITATION SEGMENT 6																																																													
<table><tr><th colspan="2">REVISIONS</th><th>DATE</th><th>BY</th></tr><tr><td>NO.</td><td>DESCRIPTION</td><td></td><td></td></tr><tr><td>1</td><td>60% PLANS</td><td>9/3/21</td><td>CMG</td></tr><tr><td>2</td><td>95% BID SET</td><td>9/30/21</td><td>CMG</td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td><td> </td></tr></table>				REVISIONS		DATE	BY	NO.	DESCRIPTION			1	60% PLANS	9/3/21	CMG	2	95% BID SET	9/30/21	CMG																									<table><tr><th colspan="4">SEGMENT 6 PLAN VIEW</th></tr><tr><td colspan="2">DEERE & AULT A SCHNABEL ENGINEERING COMPANY</td><td colspan="2">600 S. AIRPORT RD., BLDG. A, SUITE 205 LONGMONT, CO 80503 TEL. 303.651.1468 FAX 303.651.1469</td></tr><tr><td>DESIGNED BY: CMG</td><td>APPROVED BY: CMG</td><td>JOB NO.</td><td>SHEET:</td></tr><tr><td>DRAWN BY: HOG</td><td>DATE: 9/30/21</td><td rowspan="2">20C26033.04</td><td rowspan="2">3 of 27</td></tr><tr><td>CHECKED BY: MWK</td><td>SCALE: AS NOTED</td></tr></table>				SEGMENT 6 PLAN VIEW				DEERE & AULT A SCHNABEL ENGINEERING COMPANY		600 S. AIRPORT RD., BLDG. A, SUITE 205 LONGMONT, CO 80503 TEL. 303.651.1468 FAX 303.651.1469		DESIGNED BY: CMG	APPROVED BY: CMG	JOB NO.	SHEET:	DRAWN BY: HOG	DATE: 9/30/21	20C26033.04	3 of 27	CHECKED BY: MWK	SCALE: AS NOTED
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- NOTES:**
- HORIZONTAL DATUM IS COLORADO STATE PLANE SOUTH, MODIFIED TO GROUND BY A SCALE FACTOR OF 1.000487327.
 - SPAD ELEVATIONS: DAVIS ENGINEERING 2004 - STATIONS ARE APPROXIMATE.
 - SCALE LOOSE BLOCKS AS NEEDED FOR CONTRACTOR SAFETY.
 - NO BLASTING FOR ENTIRETY OF WORK.

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COMMODORE 5 REHABILITATION SEGMENT 6

SEGMENT 6 PLAN & PROFILE

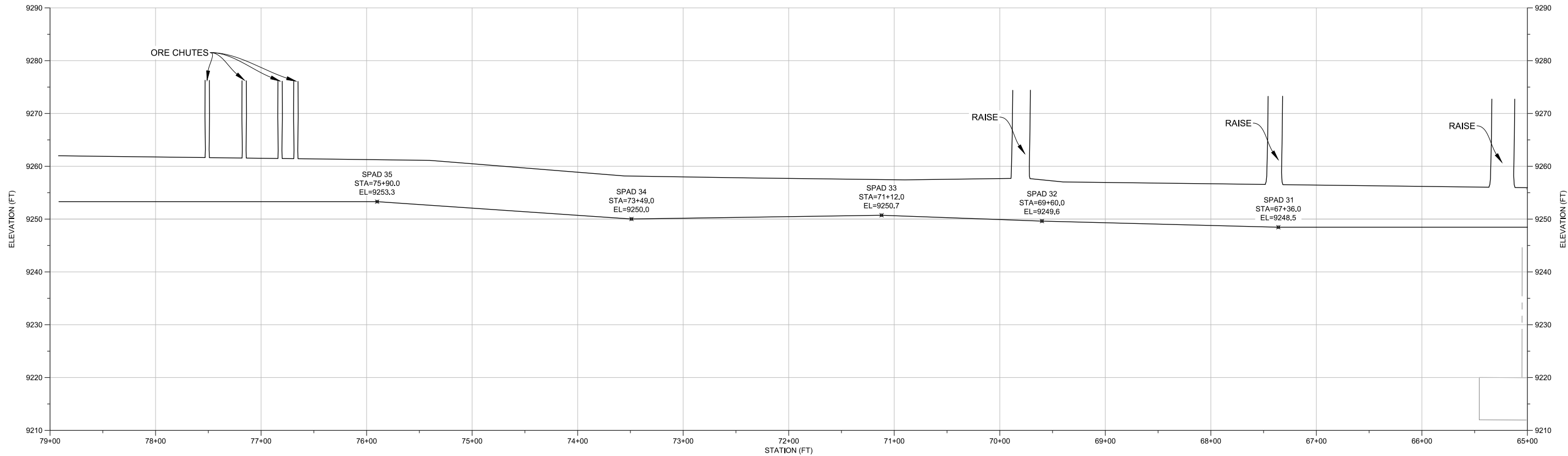
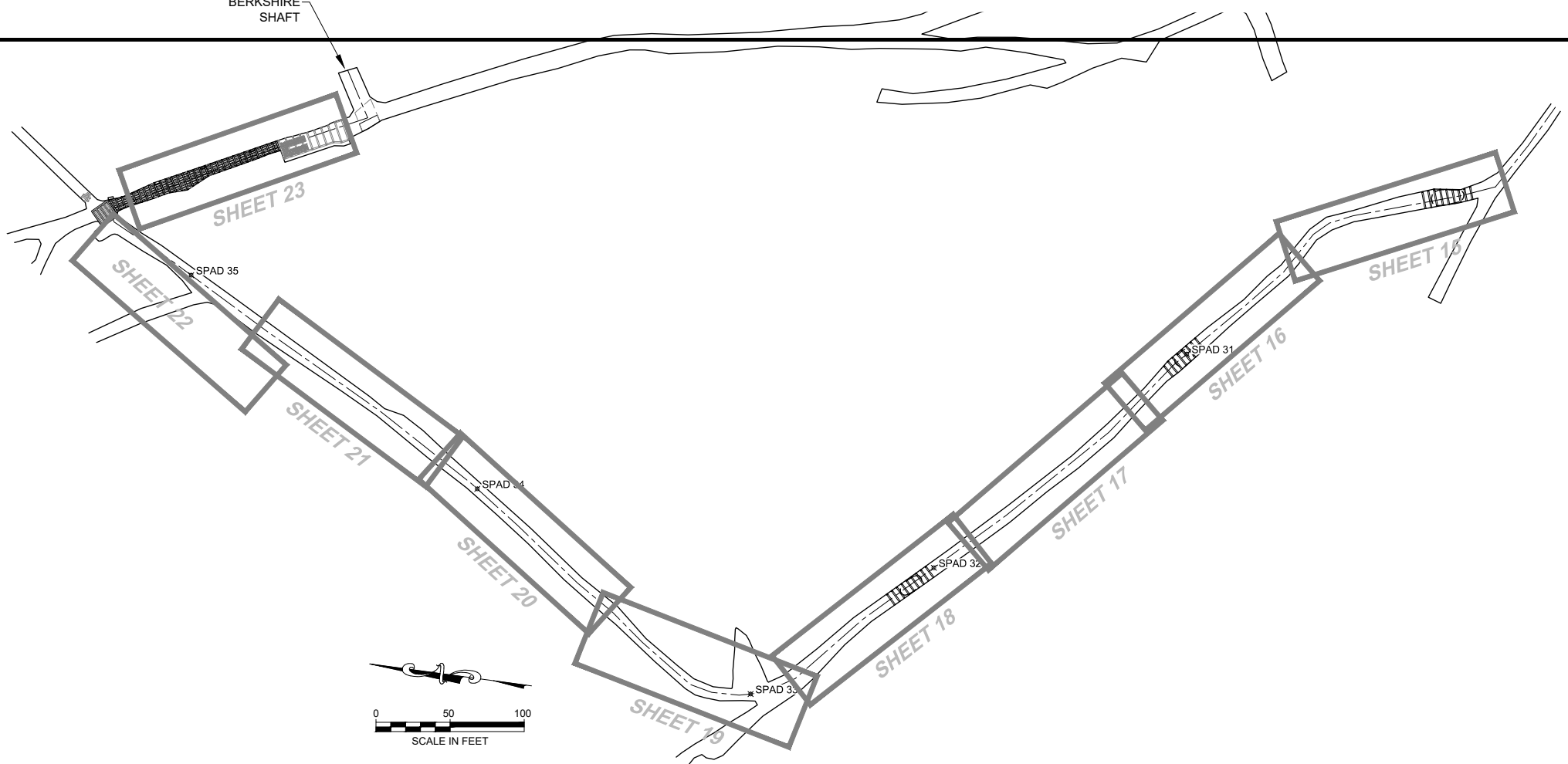
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2	95% BID SET	9/30/21	CMG

DESIGNED BY: CMG APPROVED BY: CMG
DRAWN BY: HOG DATE: 9/30/21
CHECKED BY: MWK SCALE: AS NOTED

DEERE & AULT
A SCHNABEL ENGINEERING COMPANY
600 S. AIRPORT RD. BLDG. A, SUITE 205
LONGMONT, CO 80503
TEL. 303.651.1468 FAX. 303.651.1469

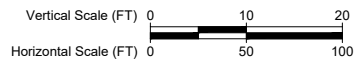
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SHEET: 4 of 27

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NOTES:

- HORIZONTAL DATUM IS COLORADO STATE PLANE SOUTH, MODIFIED TO GROUND BY A SCALE FACTOR OF 1.000487327.
- SPAD ELEVATIONS: DAVIS ENGINEERING 2004 - STATIONS ARE APPROXIMATE.
- SCALE LOOSE BLOCKS AS NEEDED FOR CONTRACTOR SAFETY.
- NO BLASTING FOR ENTIRETY OF WORK.



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COMMODORE 5 REHABILITATION SEGMENT 6

SEGMENT 6 PLAN & PROFILE CONTINUED

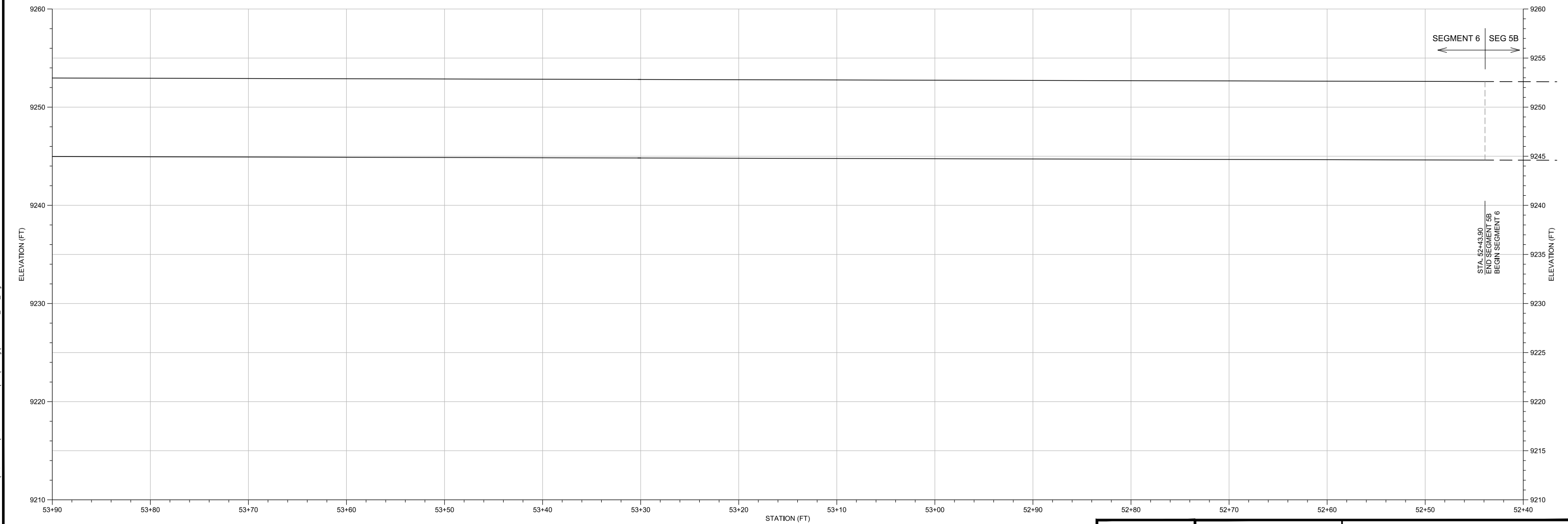
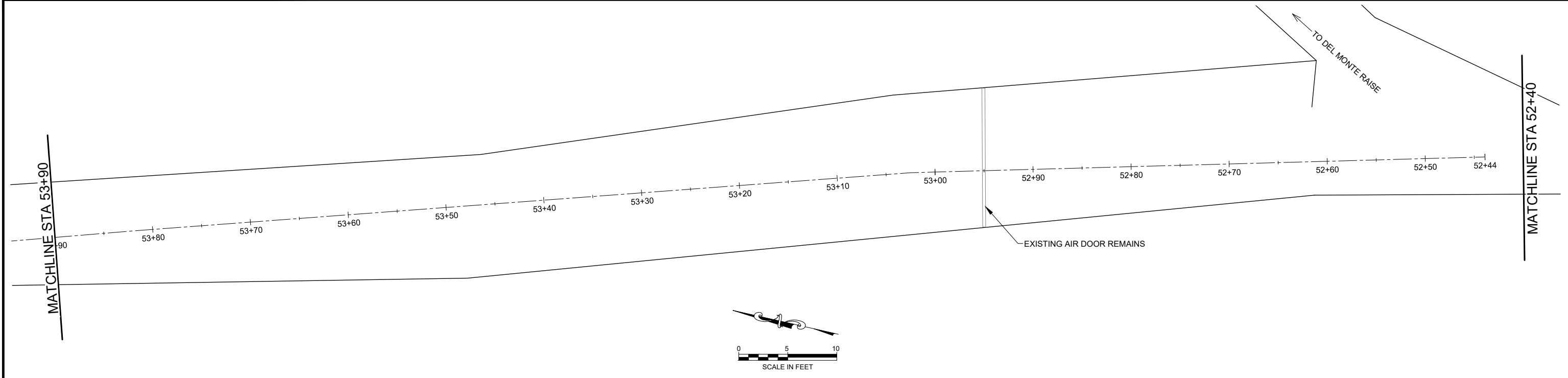
NO.	REVISIONS	DATE	BY
1	60% PLANS	9/3/21	CMG
2	95% BID SET	9/30/21	CMG

DEERE & AULT
A SCHNABEL ENGINEERING COMPANY

DESIGNED BY: CMG
DRAWN BY: HOG
CHECKED BY: MWK
APPROVED BY: CMG
DATE: 9/30/21
SCALE: AS NOTED

600 S. AIRPORT RD. BLDG. A, SUITE 205
LONGMONT, CO 80503
TEL. 303.651.1468 FAX. 303.651.1469
JOB NO. 20C26033.04
SHEET: 5 of 27

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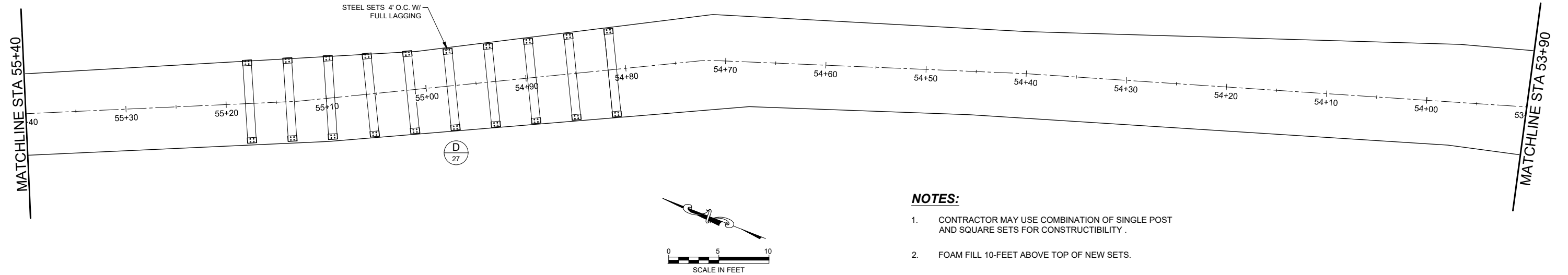


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REVISIONS				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	DESCRIPTION	DATE	BY	SEGMENT 6 STA 52+40 TO 53+90			
1	60% PLANS	9/3/21	CMG	DEERE & AULT <small>A SCHNABEL ENGINEERING COMPANY</small>			
2	95% BID SET	9/30/21	CMG				
				DESIGNED BY: <u>CMG</u>	APPROVED BY: <u>CMG</u>	JOB NO.	SHEET:
				DRAWN BY: <u>HOG</u>	DATE: <u>9/30/21</u>	20C26033.04	6 of 27
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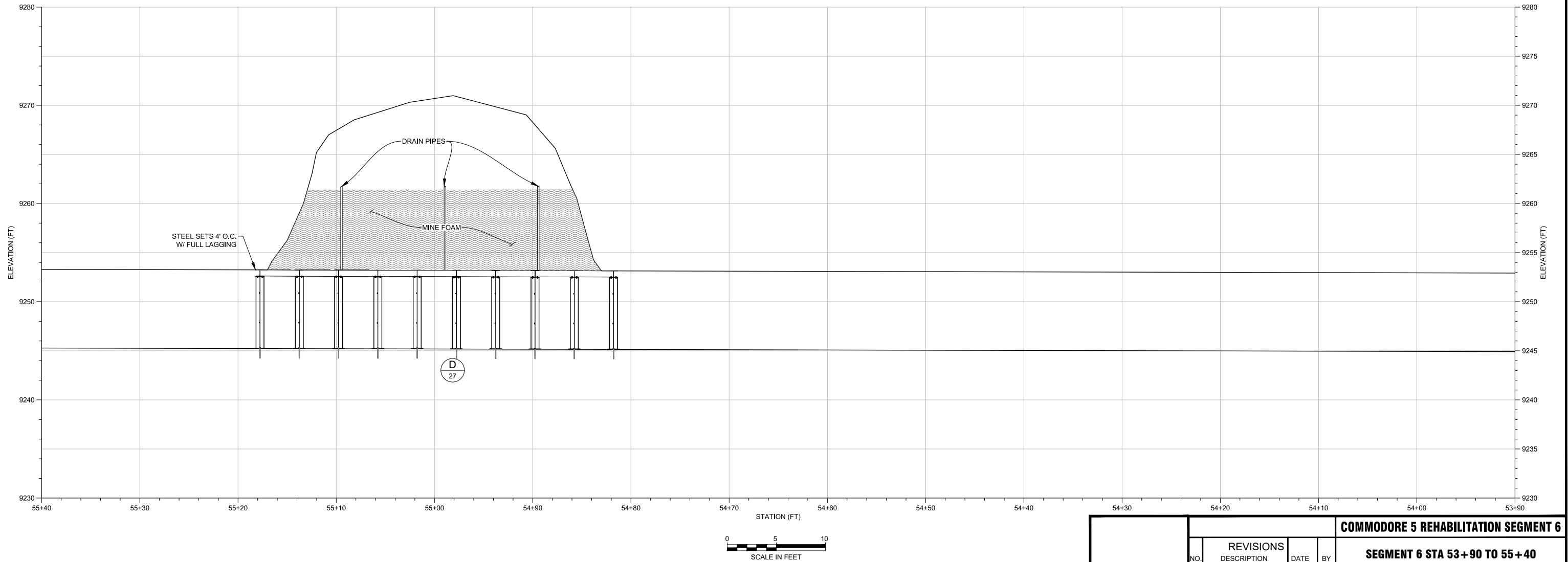
600 S. AIRPORT RD. BLDG. A, SUITE 205
LONGMONT, CO 80503
TEL 303.651.1488 FAX 303.651.1489

Thursday, September 30, 2021 3:44:04 PM DRAWING: U:\0628 weston\002 commodore 5\CAD\Working\Commodore5_Plan_Segment 6.DWG



NOTES:

1. CONTRACTOR MAY USE COMBINATION OF SINGLE POST AND SQUARE SETS FOR CONSTRUCTIBILITY .
2. FOAM FILL 10-FEET ABOVE TOP OF NEW SETS.



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COMMODORE 5 REHABILITATION SEGMENT 6

SEGMENT 6 STA 53+90 TO 55+40

REVISIONS			
NO.	DESCRIPTION	DATE	BY
1	60% PLANS	9/3/21	CMG
2	95% BID SET	9/30/21	CMG

DEERE & AULT
A SCHNABEL ENGINEERING COMPANY

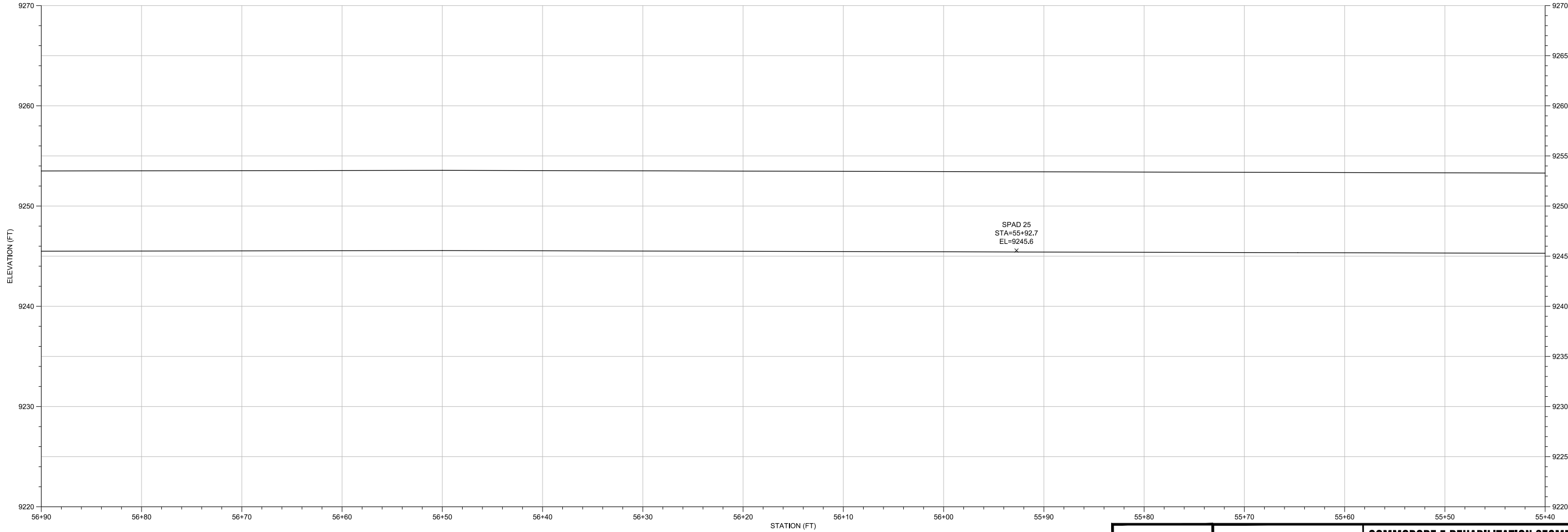
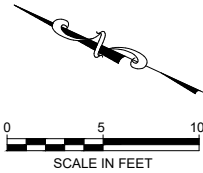
600 S. AIRPORT RD. BLDG. A, SUITE 205
LONGMONT, CO 80503
TEL 303.651.1468 FAX 303.651.1469

DESIGNED BY: CMG	APPROVED BY: CMG	JOB NO.	SHEET:
DRAWN BY: HOG	DATE: 9/30/21	20C26033.04	7 of 27
CHECKED BY: MWK	SCALE: AS NOTED		

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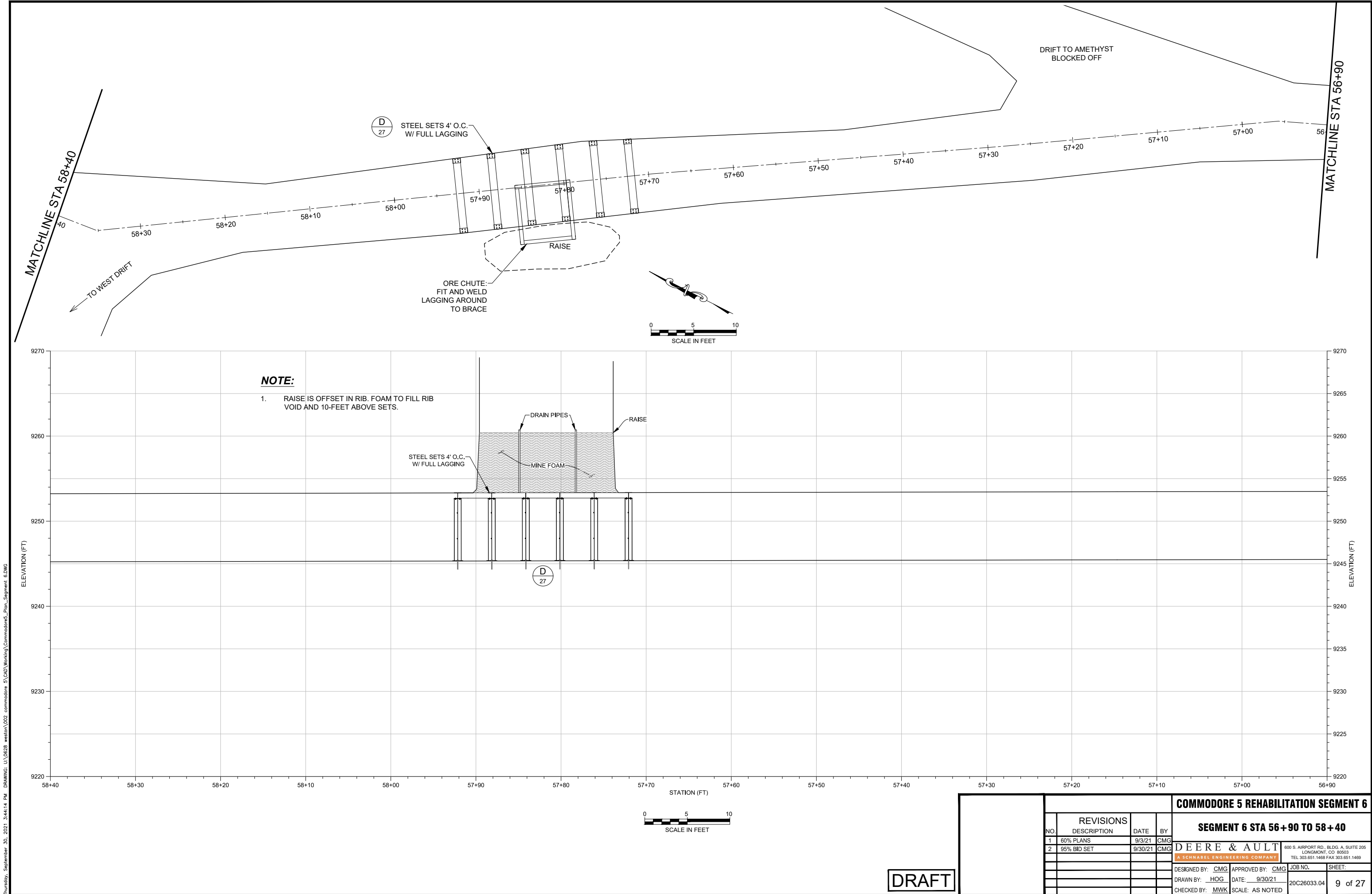
MATCHLINE STA 56+90

MATCHLINE STA 55+40



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REVISIONS				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	DESCRIPTION	DATE	BY	SEGMENT 6 STA 55+40 TO 56+90			
1	80% PLANS	9/3/21	CMG	DEERE & AULT <small>A SCHNABEL ENGINEERING COMPANY</small>			
2	95% BID SET	9/30/21	CMG				
				DESIGNED BY: <u>CMG</u>	APPROVED BY: <u>CMG</u>	JOB NO.	SHEET:
				DRAWN BY: <u>HOG</u>	DATE: <u>9/30/21</u>	20C26033.04	8 of 27
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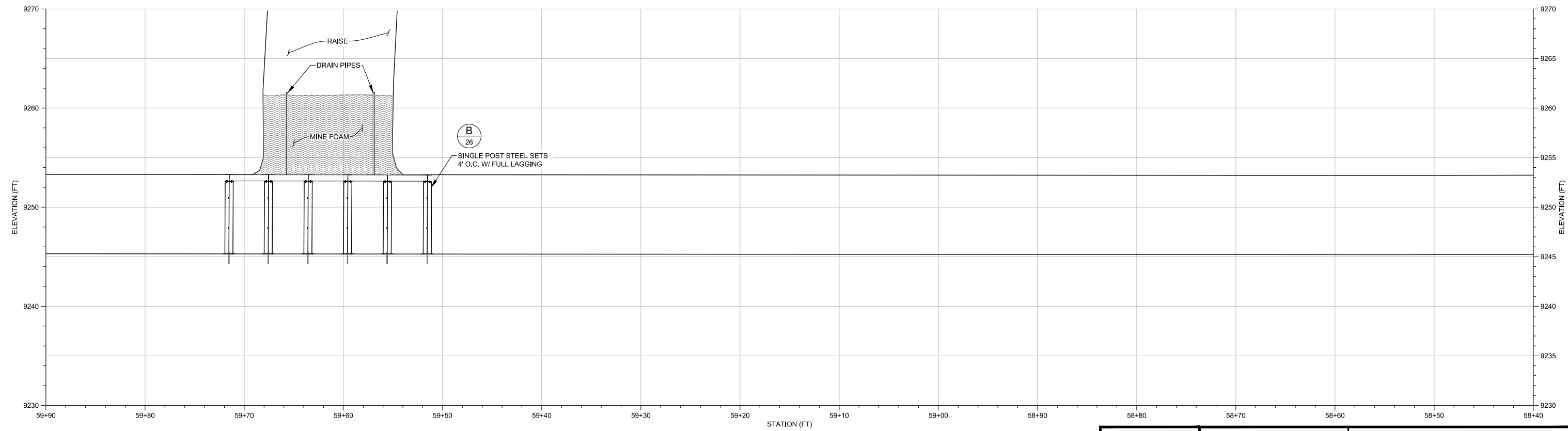
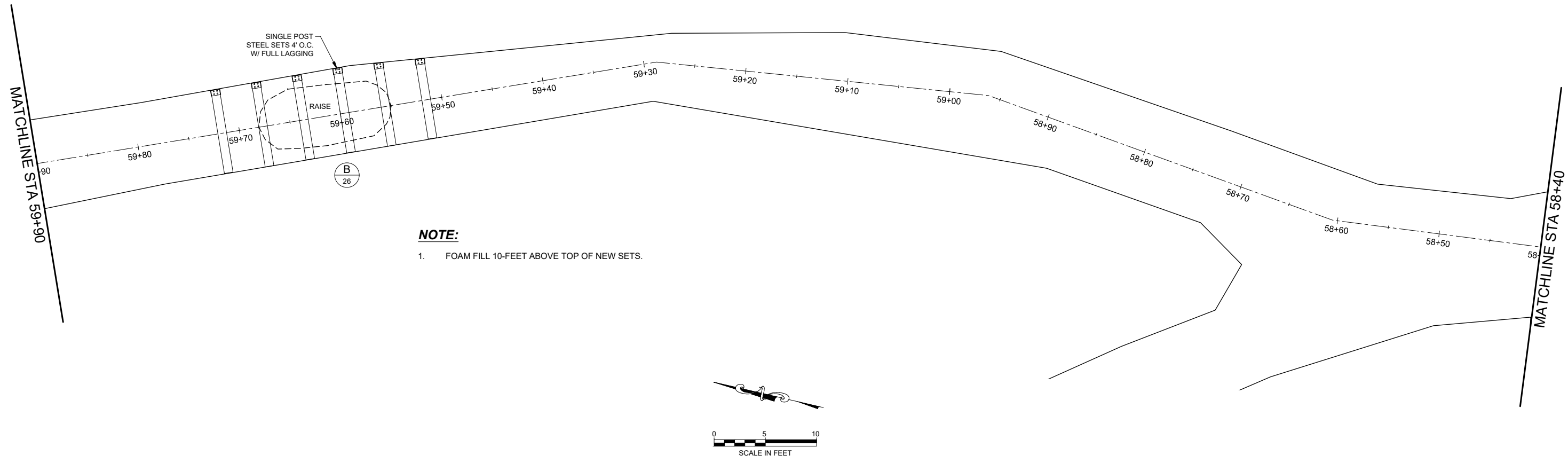
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REVISIONS				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	DESCRIPTION	DATE	BY	SEGMENT 6 STA 56+90 TO 58+40			
1	60% PLANS	9/3/21	CMG	DEERE & AULT <small>A SCHNABEL ENGINEERING COMPANY</small>			
2	95% BID SET	9/30/21	CMG				
				DESIGNED BY: <u>CMG</u>	APPROVED BY: <u>CMG</u>	JOB NO.	SHEET:
				DRAWN BY: <u>HOG</u>	DATE: <u>9/30/21</u>	20C26033.04	9 of 27
				CHECKED BY: <u>MWK</u>	SCALE: AS NOTED		

600 S. AIRPORT RD. BLDG. A, SUITE 205
LONGMONT, CO 80503
TEL 303.651.1488 FAX 303.651.1469

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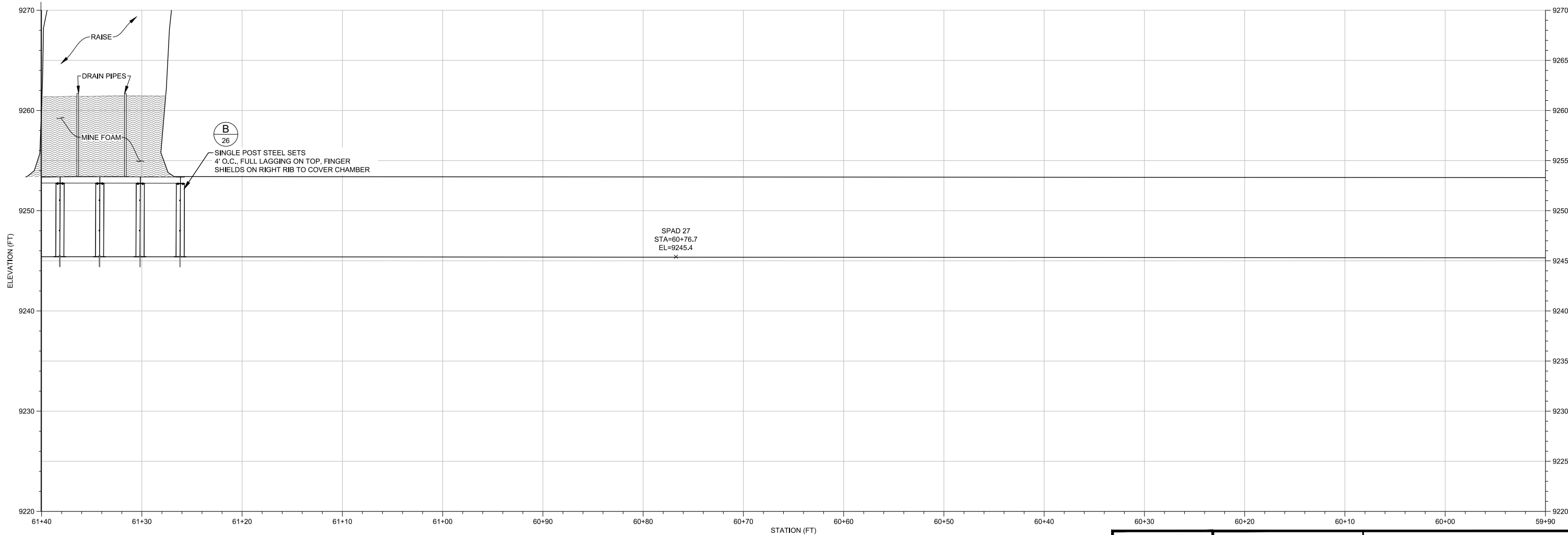
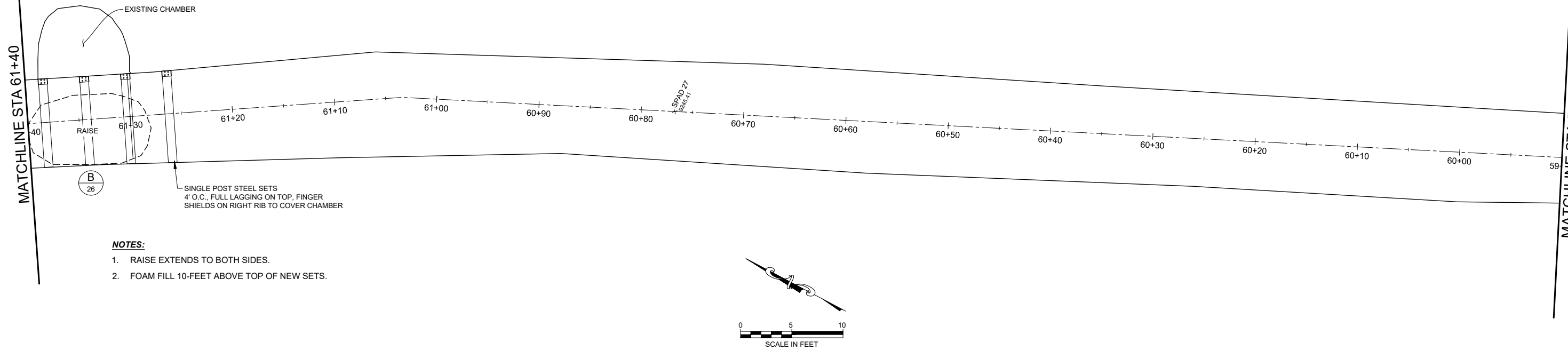


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REVISIONS				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	DESCRIPTION	DATE	BY	SEGMENT 6 STA 58+40 TO 59+90			
1	60% PLANS	9/3/21	CMG	DEERE & AULT <small>A SCHNABEL ENGINEERING COMPANY</small>			
2	95% BID SET	9/30/21	CMG				
				DESIGNED BY: <u>CMG</u>	APPROVED BY: <u>CMG</u>	JOB NO.	SHEET:
				DRAWN BY: <u>HOG</u>	DATE: <u>9/30/21</u>	20C26033.04	10 of 27
				CHECKED BY: <u>MWK</u>	SCALE: AS NOTED		

600 S. AIRPORT RD. BLDG. A, SUITE 205
LONGMONT, CO 80503
TEL. 303.651.1468 FAX 303.651.1469

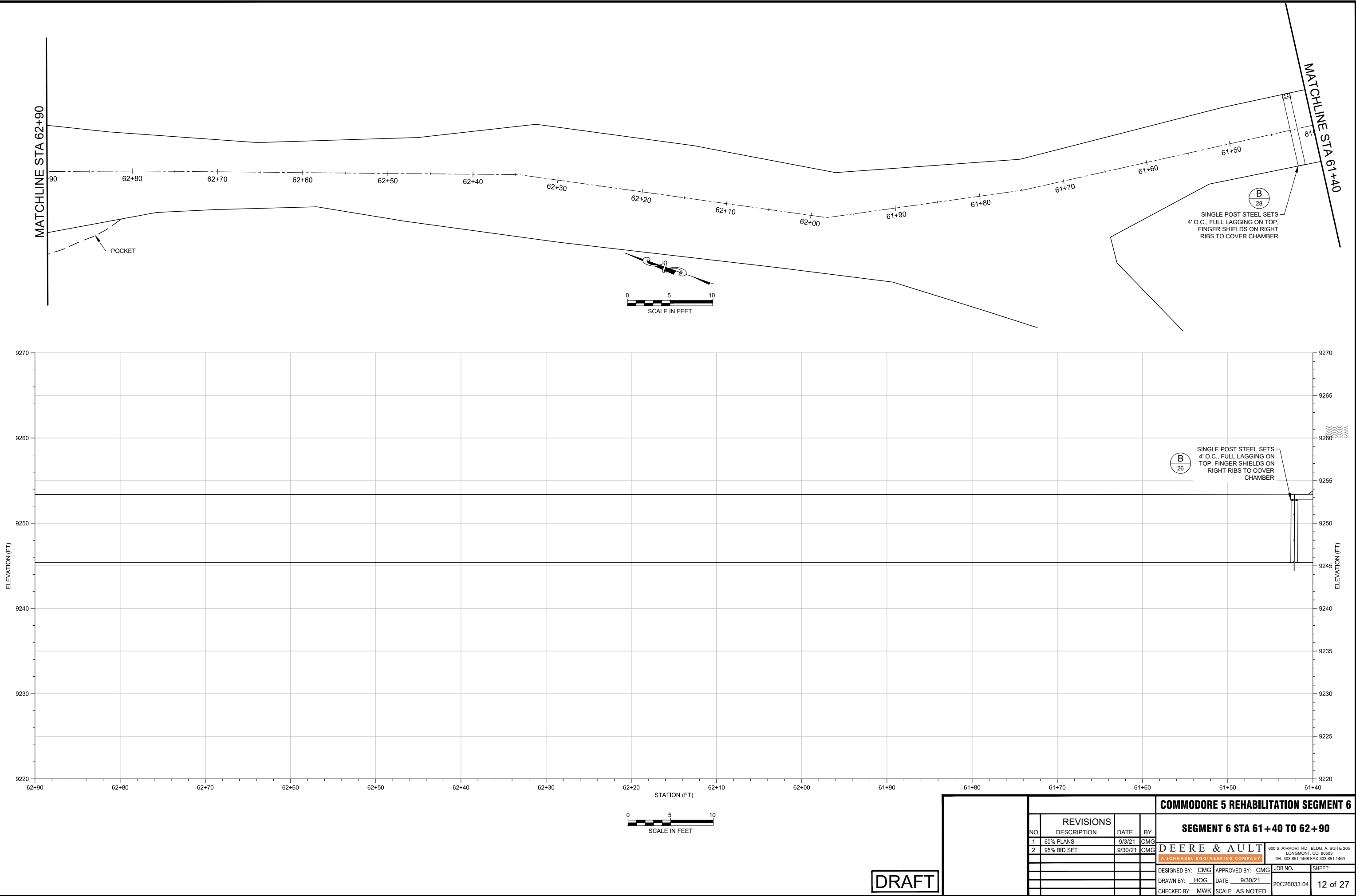
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				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	REVISIONS DESCRIPTION	DATE	BY	SEGMENT 6 STA 59+90 TO 61+40			
1	60% PLANS	9/3/21	CMG	DEERE & AULT A SCHNABEL ENGINEERING COMPANY		600 S. AIRPORT RD. BLDG. A, SUITE 205 LONGMONT, CO. 80503 TEL 303.651.1468 FAX 303.651.1469	
2	95% BID SET	9/30/21	CMG				
				DESIGNED BY: CMG	APPROVED BY: CMG	JOB NO.	SHEET:
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				COMMODORE 5 REHABILITATION SEGMENT 6			
REVISIONS				SEGMENT 6 STA 61+40 TO 62+90			
NO.	DESCRIPTION	DATE	BY				
1	60% PLANS	9/3/21	CMG	DEERE & AULT A SCHNABEL ENGINEERING COMPANY			
2	95% BID SET	9/30/21	CMG				
				600 S. AIRPORT RD., BLDG. 4, SUITE 205 LONGMONT, CO. 80503 TEL. 303.651.1468 FAX 303.651.1469			
				DESIGNED BY: <u>CMG</u>	APPROVED BY: <u>CMG</u>	JOB NO.	SHEET:
				DRAWN BY: <u>HOG</u>	DATE: <u>9/30/21</u>	20C26033.04	12 of 27
				CHECKED BY: <u>MWK</u>	SCALE: <u>AS NOTED</u>		

Thursday, September 30, 2021 3:44:34 PM DRAWING: U:\0628 weston\002 commodore 5\CAD\Working\Commodore5_Plan_Segment 6.DWG

MATCHLINE STA 64+40

64+30

64+20

64+10

64+00

63+90

63+80

63+70

63+60

63+50

63+40

63+30

63+20

63+10

63+00

MATCHLINE STA 62+90

POCKET

IR RAISE

63+00

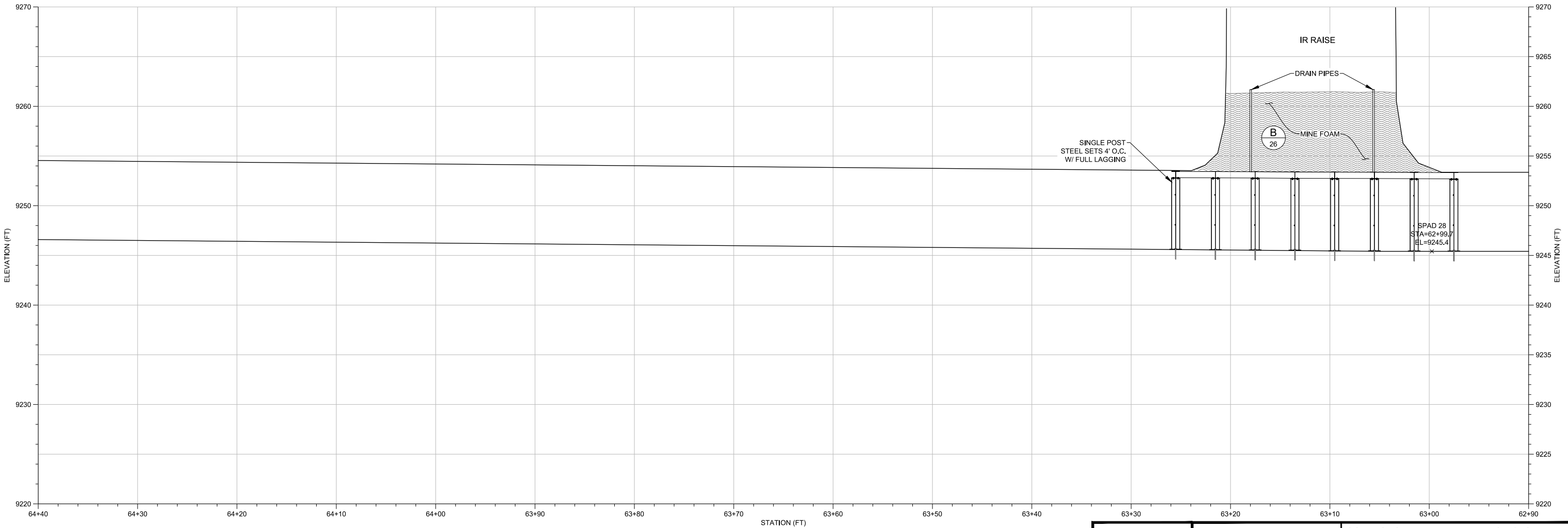
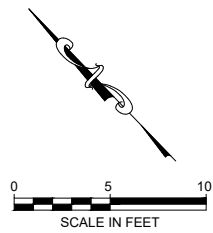
SPAD 28

STA=62+99.7

EL=9245.4

NOTE:

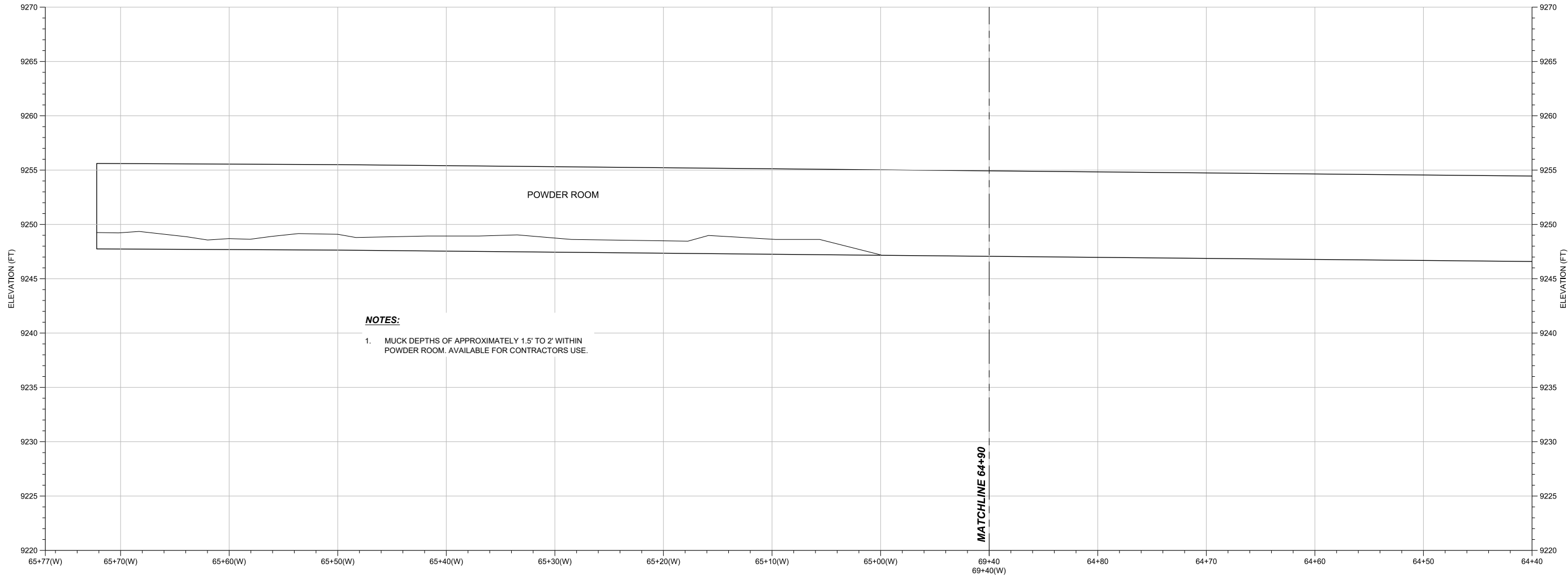
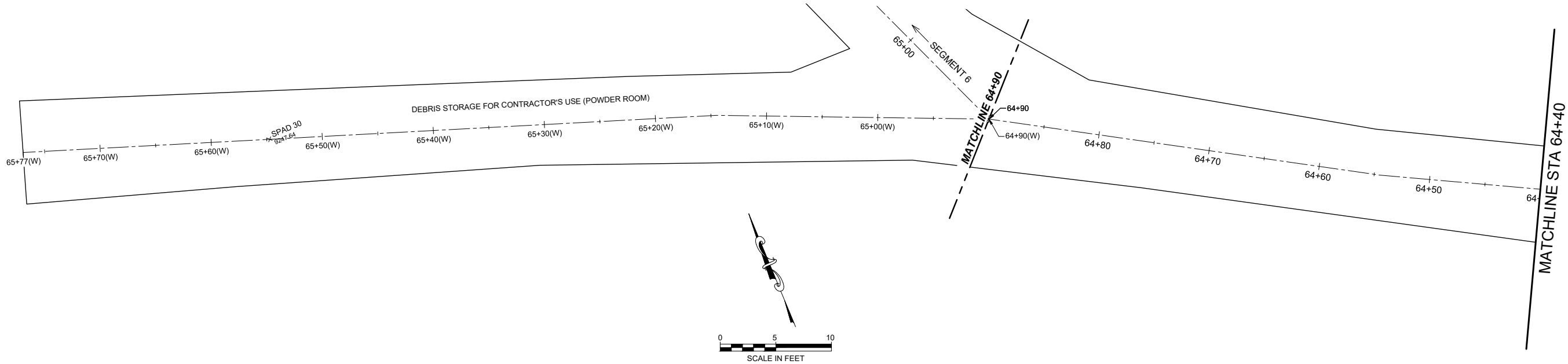
1. FOAM FILL 10-FEET ABOVE TOP OF NEW SETS.



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REVISIONS				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	DESCRIPTION	DATE	BY	SEGMENT 6 STA 62+90 TO 64+40			
1	60% PLANS	9/3/21	CMG	DEERE & AULT A SCHNABEL ENGINEERING COMPANY			
2	95% BID SET	9/30/21	CMG				
				DESIGNED BY: CMG	APPROVED BY: CMG	JOB NO.	SHEET:
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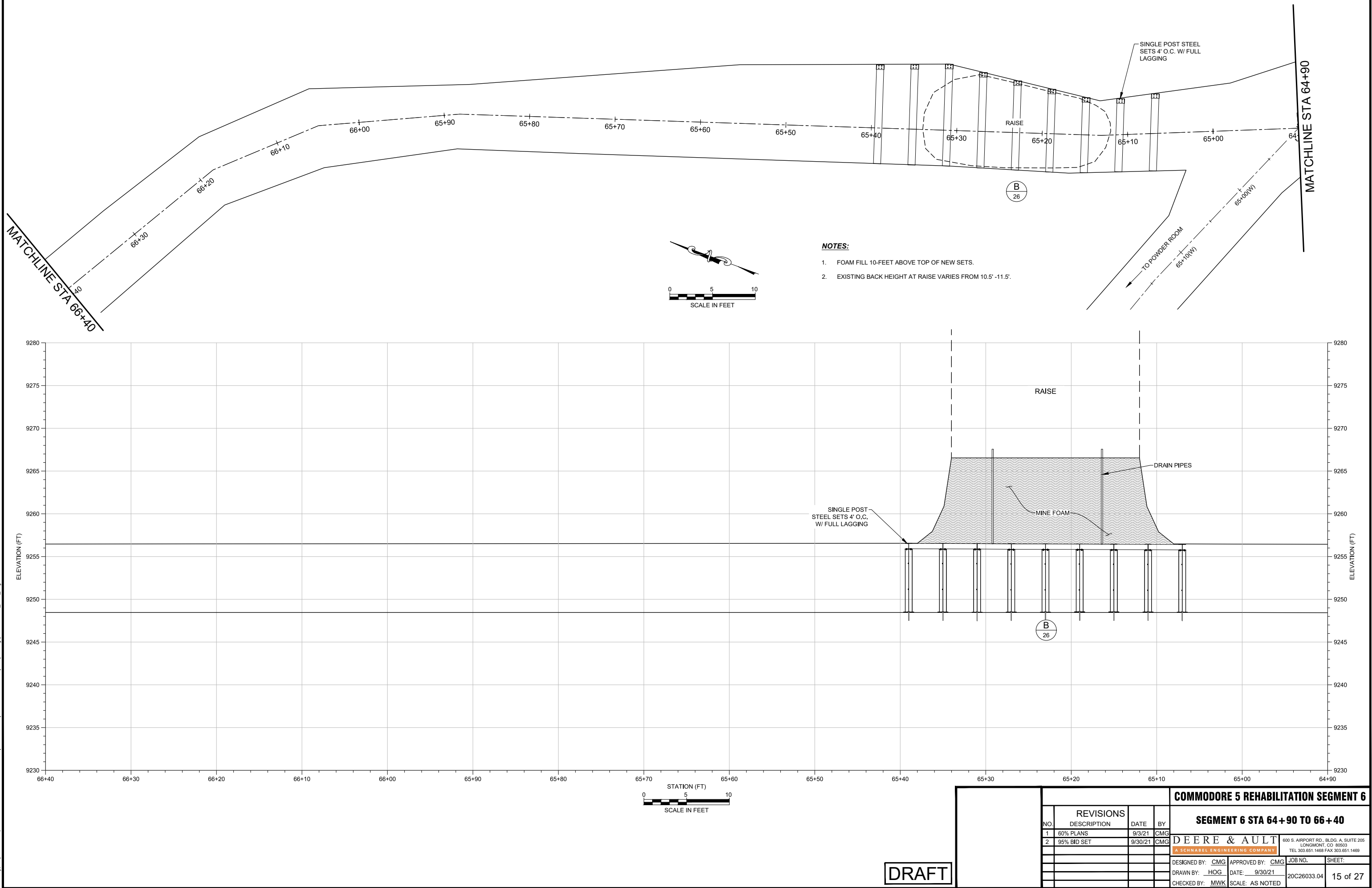
NOTES:

1. MUCK DEPTHS OF APPROXIMATELY 1.5' TO 2' WITHIN POWDER ROOM. AVAILABLE FOR CONTRACTORS USE.

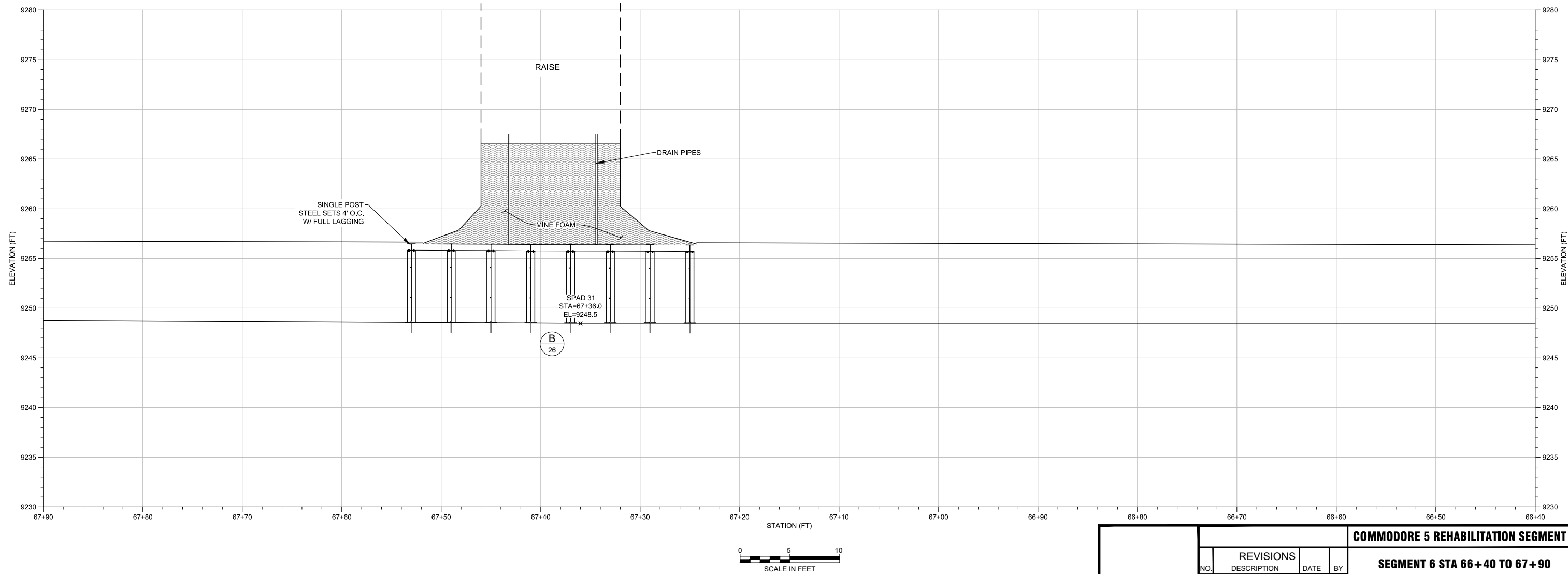
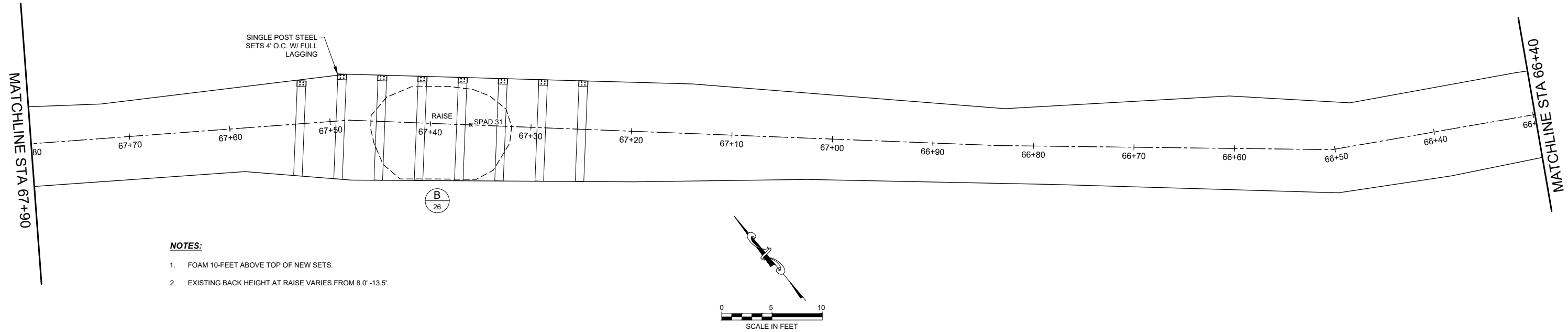
DRAFT

REVISIONS				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	DESCRIPTION	DATE	BY	SEGMENT 6 STA 64+40 TO 64+90 THROUGH POWDER ROOM			
1	60% PLANS	9/3/21	CMG	DEERE & AULT <small>A SCHNABEL ENGINEERING COMPANY</small>			
2	95% BID SET	9/30/21	CMG				
				DESIGNED BY: <u>CMG</u>	APPROVED BY: <u>CMG</u>	JOB NO.	SHEET:
				DRAWN BY: <u>HOG</u>	DATE: <u>9/30/21</u>	20C26033.04	14 of 27
				CHECKED BY: <u>MWK</u>	SCALE: AS NOTED		

Thursday, September 30, 2021 3:44:51 PM DRAWING: U:\0628 weston\002 commodore 5\CAD\Working\Commodore5_Plan_Segment 6 Continued.DWG



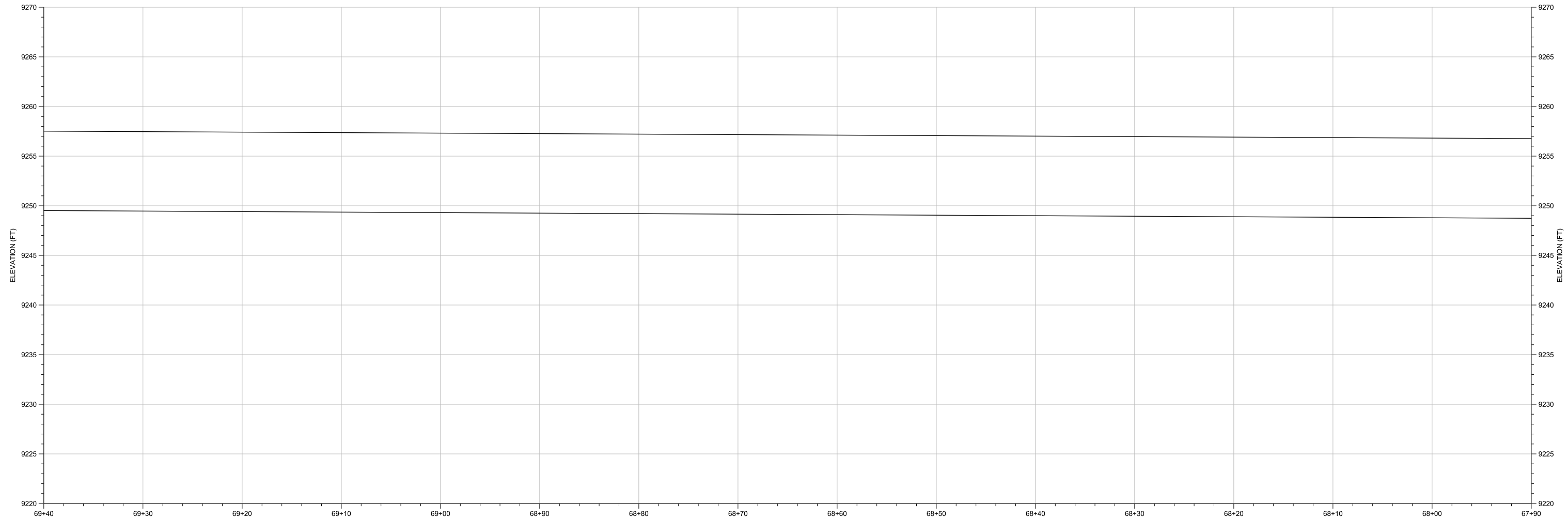
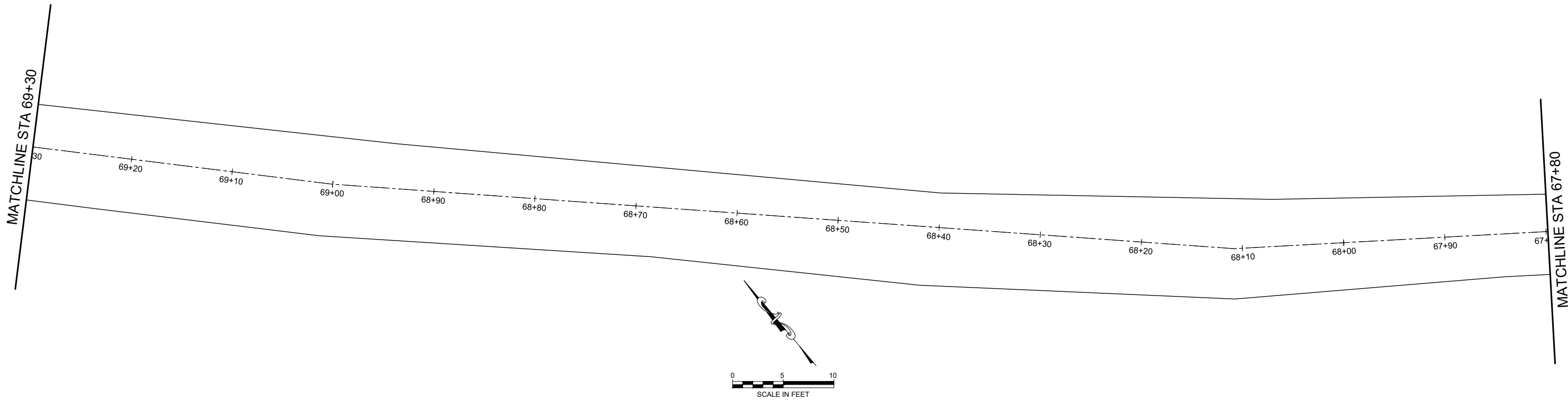
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DRAFT

REVISIONS				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	DESCRIPTION	DATE	BY	SEGMENT 6 STA 66+40 TO 67+90			
1	60% PLANS	9/3/21	CMG	DEERE & AULT A SCHNABEL ENGINEERING COMPANY			
2	95% BID SET	9/30/21	CMG				
				DESIGNED BY: CMG	APPROVED BY: CMG	JOB NO.	SHEET:
				DRAWN BY: HOG	DATE: 9/30/21	20C26033.04	16 of 27
				CHECKED BY: MWK	SCALE: AS NOTED		

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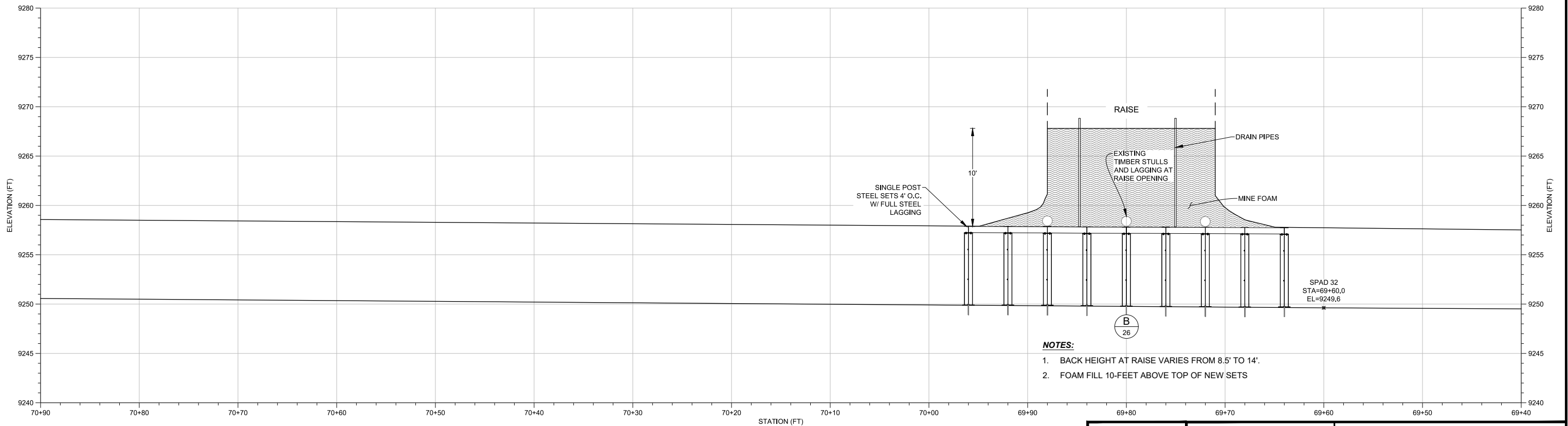
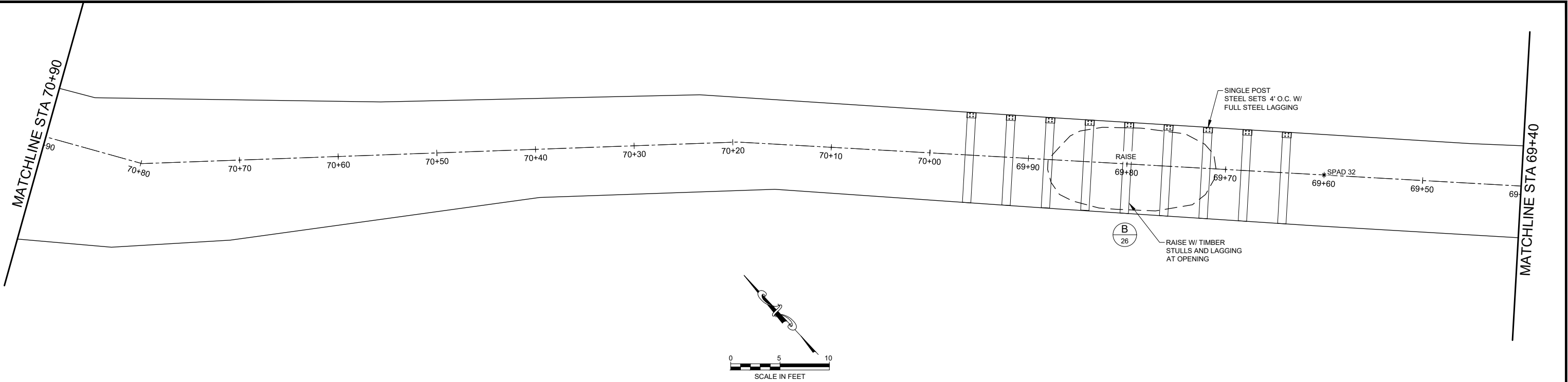


STATION (FT)
STA 67+90 TO STA 69+40
SCALE IN FEET

DRAFT

REVISIONS				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	DESCRIPTION	DATE	BY	SEGMENT 6 STA 67+90 TO 69+40			
1	60% PLANS	9/3/21	CMG	DEERE & AULT <small>A SCHNABEL ENGINEERING COMPANY</small>			
2	95% BID SET	9/30/21	CMG				
				DESIGNED BY: <u>CMG</u>	APPROVED BY: <u>CMG</u>	JOB NO.	SHEET:
				DRAWN BY: <u>HOG</u>	DATE: <u>9/30/21</u>	20C26033.04	17 of 27
				CHECKED BY: <u>MWK</u>	SCALE: AS NOTED		

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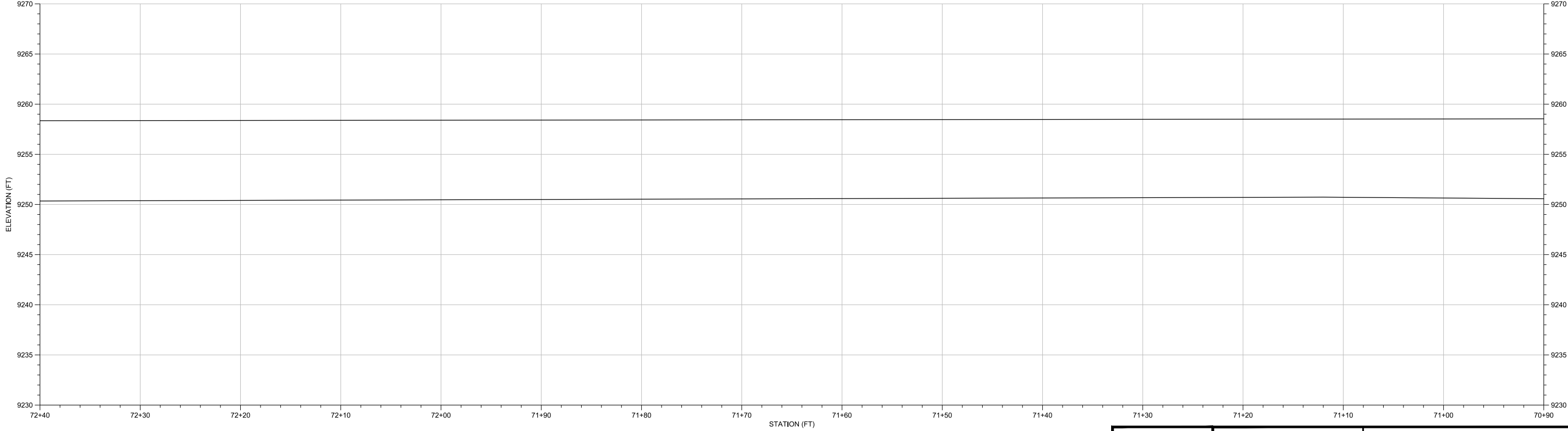
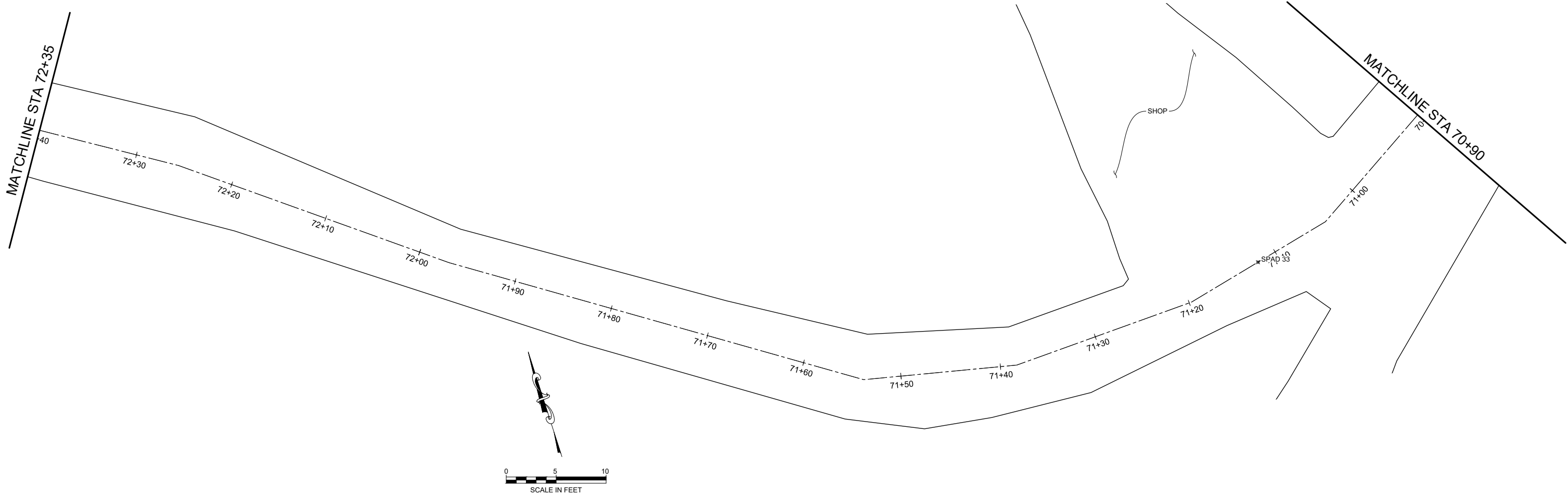


- NOTES:**
1. BACK HEIGHT AT RAISE VARIES FROM 8.5' TO 14'.
 2. FOAM FILL 10-FEET ABOVE TOP OF NEW SETS

DRAFT

REVISIONS				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	DESCRIPTION	DATE	BY	SEGMENT 6 STA 69+40 TO 70+90			
1	60% PLANS	9/3/21	CMG	DEERE & AULT A SCHNABEL ENGINEERING COMPANY			
2	95% BID SET	9/30/21	CMG				
				DESIGNED BY: CMG	APPROVED BY: CMG	JOB NO.	SHEET:
				DRAWN BY: HOG	DATE: 9/30/21	20C26033.04	18 of 27
				CHECKED BY: MWK	SCALE: AS NOTED		

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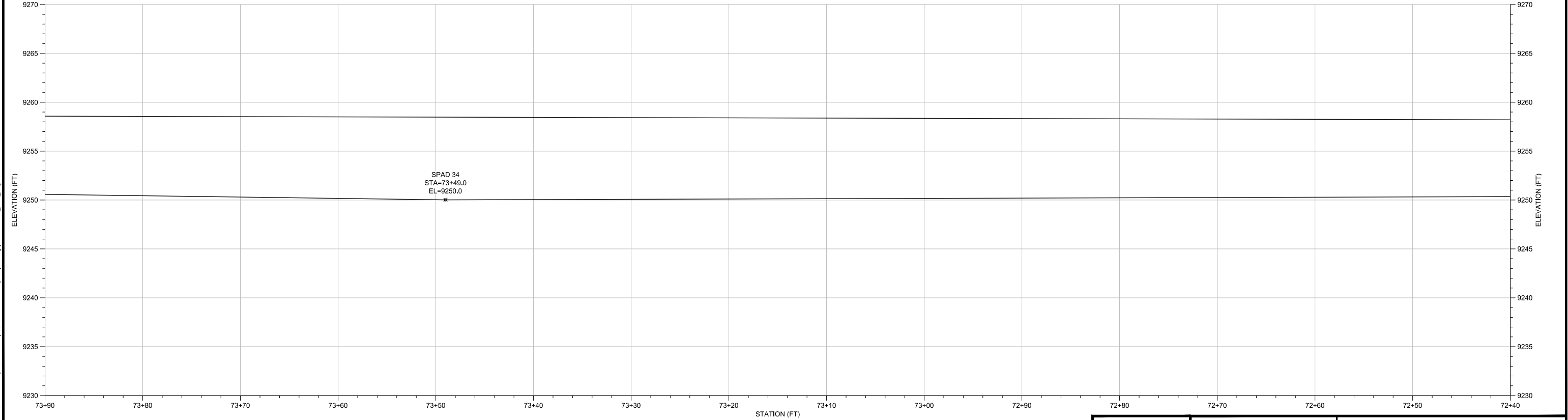
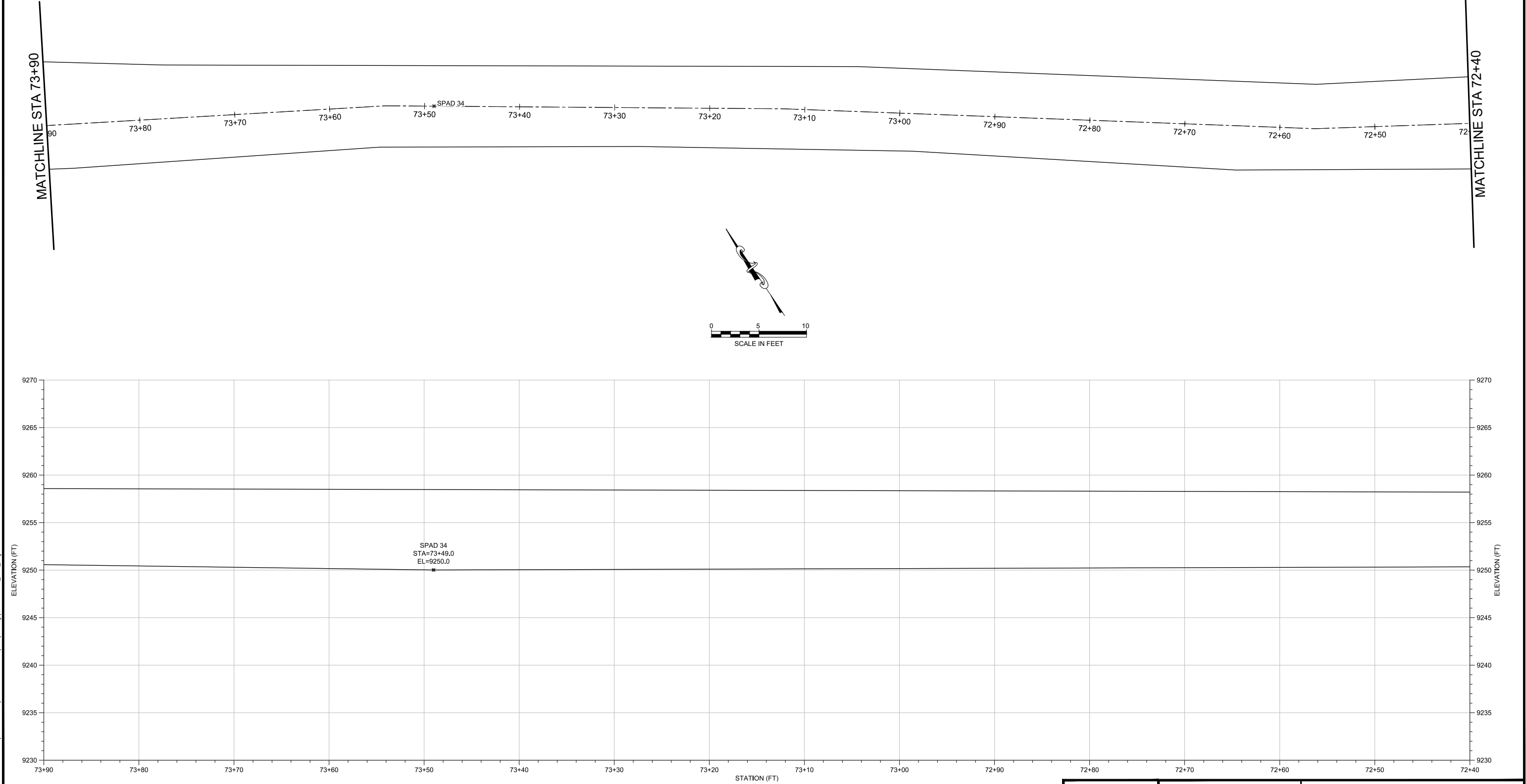


DRAFT

REVISIONS				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	DESCRIPTION	DATE	BY	SEGMENT 6 STA 70+90 TO 72+40			
1	60% PLANS	9/3/21	CMG	DEERE & AULT <small>A SCHNABEL ENGINEERING COMPANY</small>			
2	95% BID SET	9/30/21	CMG				
				DESIGNED BY: <u>CMG</u>	APPROVED BY: <u>CMG</u>	JOB NO.	SHEET:
				DRAWN BY: <u>HOG</u>	DATE: <u>9/30/21</u>	20C26033.04	19 of 27
				CHECKED BY: <u>MWK</u>	SCALE: AS NOTED		

600 S. AIRPORT RD. BLDG. A, SUITE 205
LONGMONT, CO 80503
TEL. 303.651.1468 FAX 303.651.1469

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DRAFT

COMMODORE 5 REHABILITATION SEGMENT 6			
SEGMENT 6 STA 72+40 TO 73+90			
NO.	REVISIONS	DATE	BY
1	60% PLANS	9/3/21	CMG
2	95% BID SET	9/30/21	CMG
DESIGNED BY: CMG			
APPROVED BY: CMG			
DRAWN BY: HOG			
DATE: 9/30/21			
CHECKED BY: MWK			
SCALE: AS NOTED			
DEERE & AULT		600 S. AIRPORT RD. BLDG. A, SUITE 205 LONGMONT, CO 80503 TEL 303.651.1468 FAX 303.651.1469	
A SCHNABEL ENGINEERING COMPANY		JOB NO. 20C26033.04	
		SHEET: 20 of 27	

Thursday, September 30, 2021 3:45:20 PM DRAWING: U:\0628 weston\002 commodore 5\040\Working\Commodore5_Plan_Segment 6 Continued.DWG

MATCHLINE STA 75+40

MATCHLINE STA 73+90

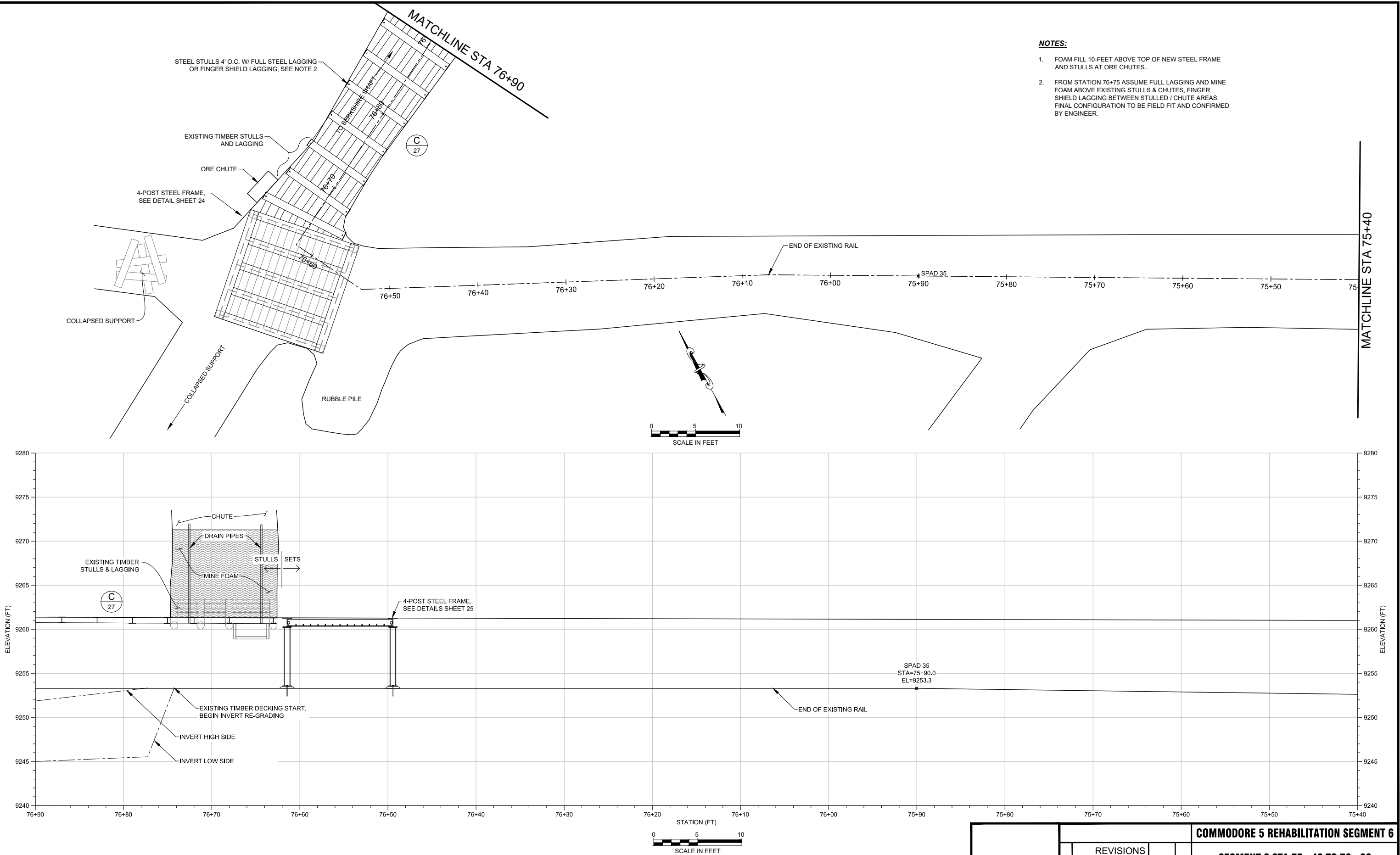


DRAFT

REVISIONS				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	DESCRIPTION	DATE	BY	SEGMENT 6 STA 73+90 TO 75+40			
1	60% PLANS	9/3/21	CMG	DEERE & AULT <small>A SCHNABEL ENGINEERING COMPANY</small>			
2	95% BID SET	9/30/21	CMG				
				DESIGNED BY: <u>CMG</u>	APPROVED BY: <u>CMG</u>	JOB NO.	SHEET:
				DRAWN BY: <u>HOG</u>	DATE: <u>9/30/21</u>	20C26033.04	21 of 27
				CHECKED BY: <u>MWK</u>	SCALE: AS NOTED		

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Thursday, September 30, 2021 3:45:28 PM DRAWING: U:\0628 weston\002 commodore 5\CAD\Working\Commodore5_Plan_Segment 6 Continued.DWG



NOTES:

1. FOAM FILL 10-FEET ABOVE TOP OF NEW STEEL FRAME AND STULLS AT ORE CHUTES..
2. FROM STATION 76+75 ASSUME FULL LAGGING AND MINE FOAM ABOVE EXISTING STULLS & CHUTES, FINGER SHIELD LAGGING BETWEEN STULLED / CHUTE AREAS. FINAL CONFIGURATION TO BE FIELD FIT AND CONFIRMED BY ENGINEER.

DRAFT

COMMODORE 5 REHABILITATION SEGMENT 6

SEGMENT 6 STA 75+40 TO 76+90

NO.	REVISIONS DESCRIPTION	DATE	BY
1	80% PLANS	9/3/21	CMG
2	95% BID SET	9/30/21	CMG

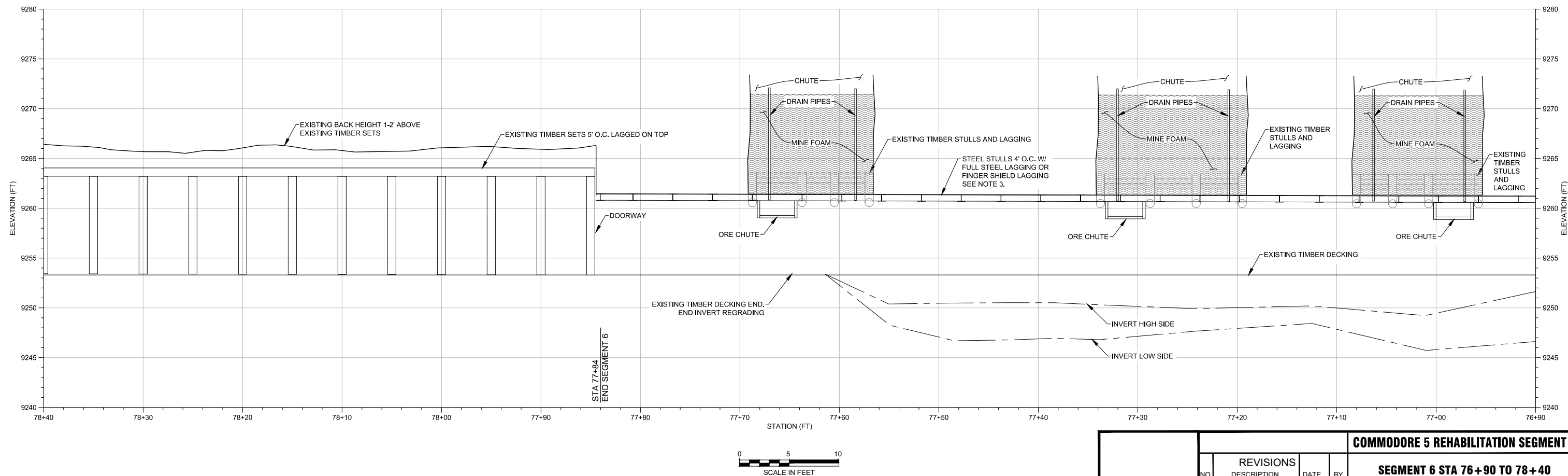
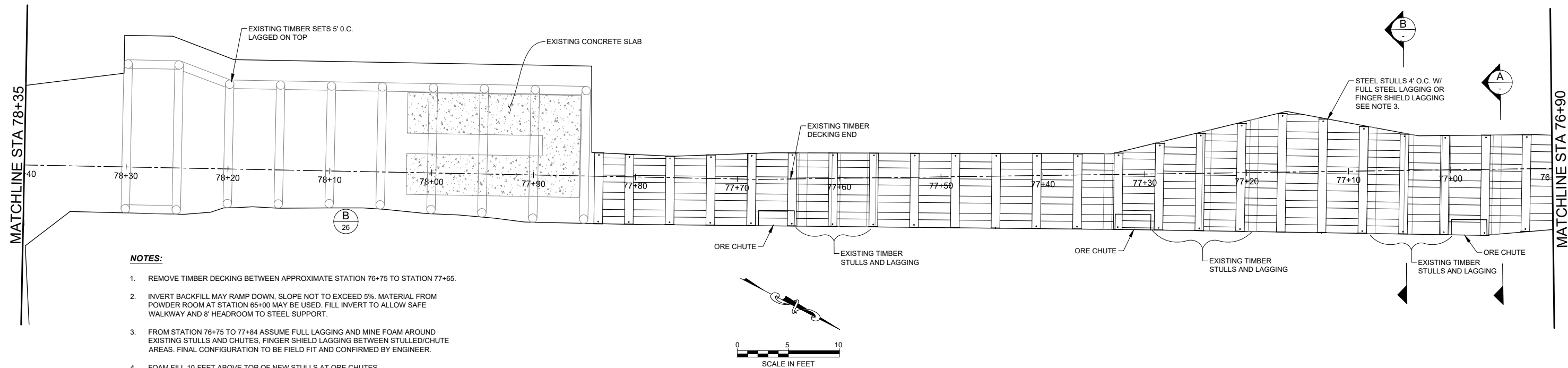
DEERE & AULT
A SCHNABEL ENGINEERING COMPANY

DESIGNED BY: CMG
DRAWN BY: HOG
CHECKED BY: MWK
APPROVED BY: CMG
DATE: 9/30/21
SCALE: AS NOTED

600 S. AIRPORT RD. BLDG. A, SUITE 205
LONGMONT, CO 80503
TEL. 303.651.1488 FAX 303.651.1489

JOB NO. 20C26033.04
SHEET: 22 of 27

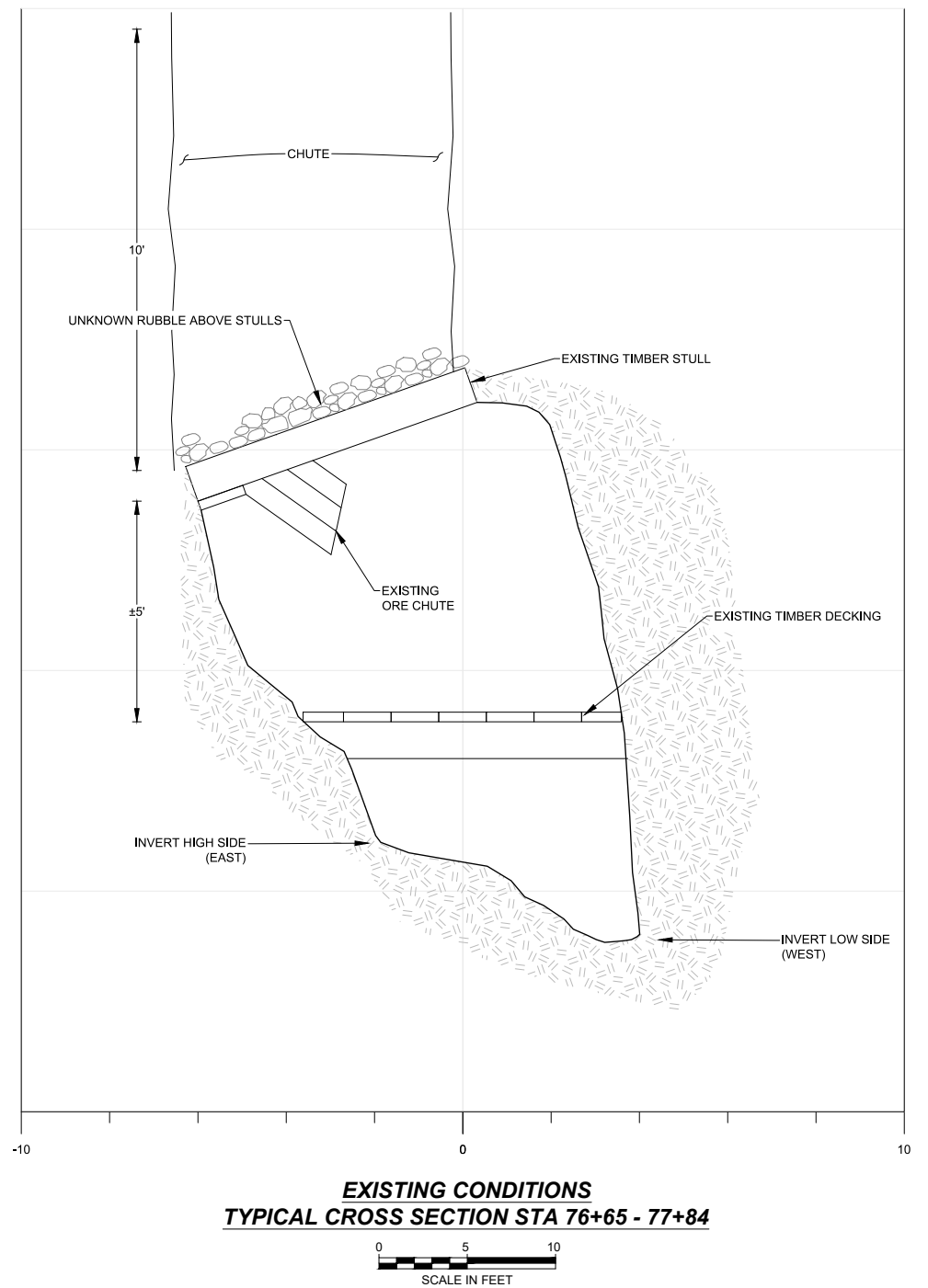
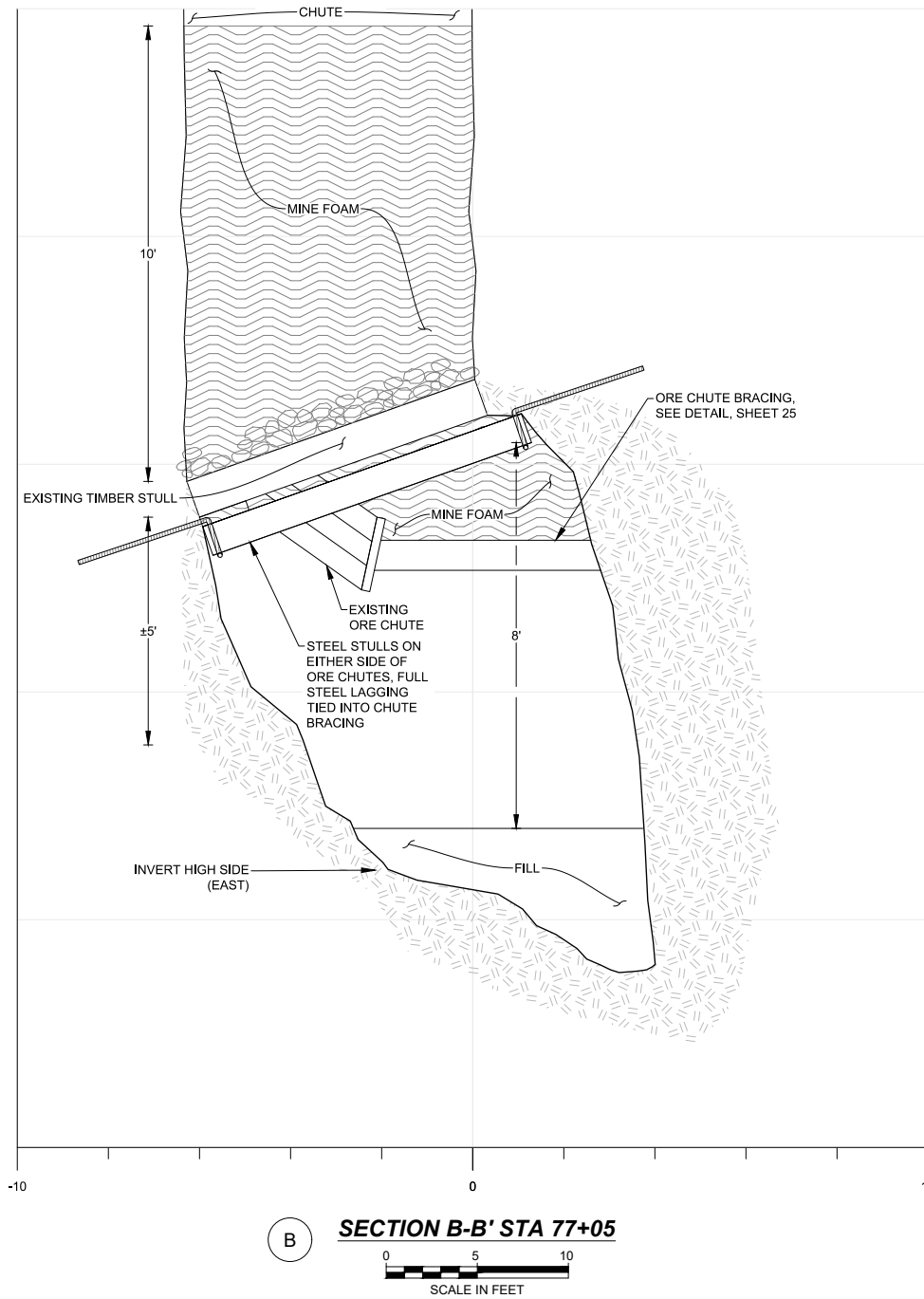
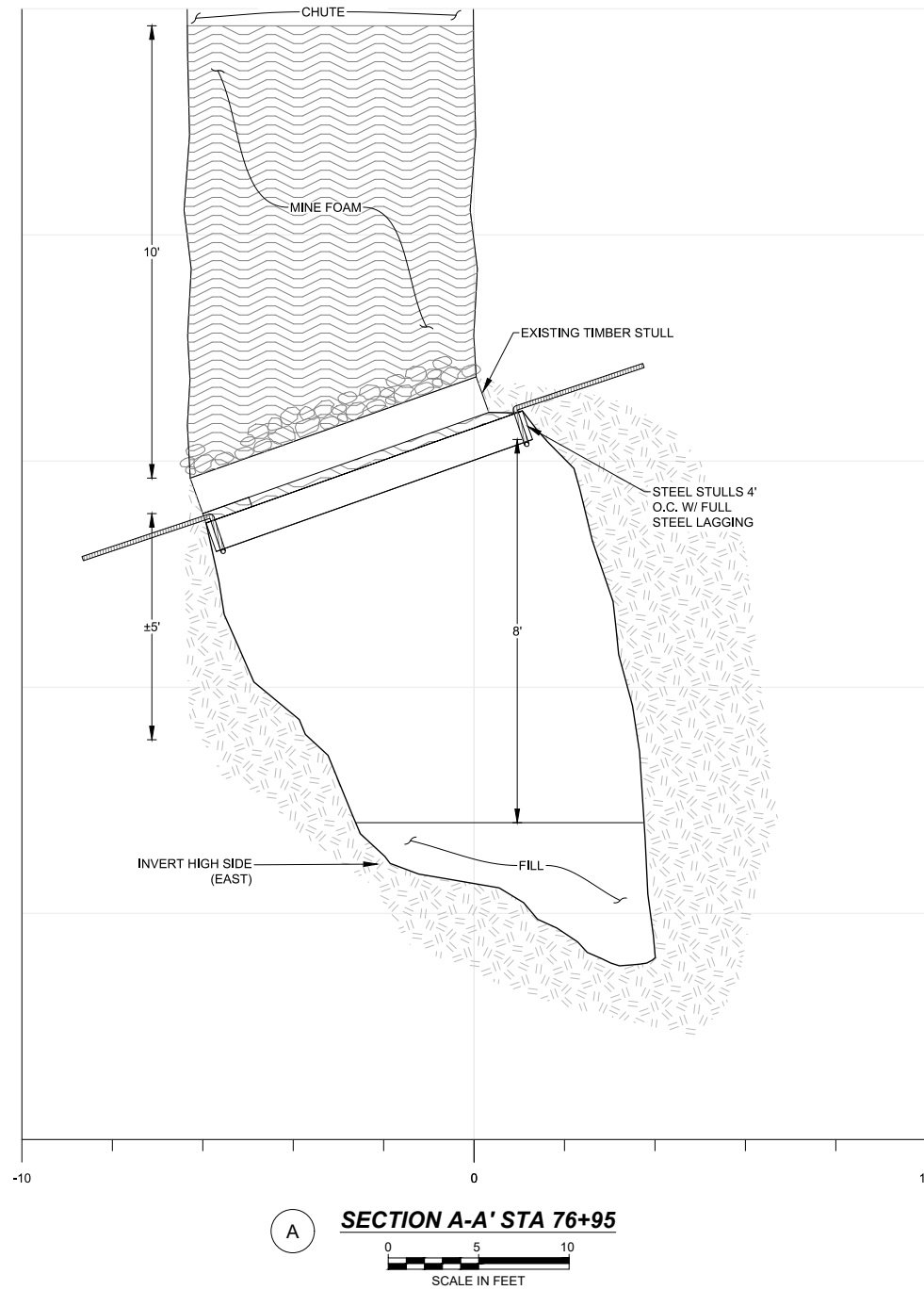
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DRAFT

REVISIONS				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	DESCRIPTION	DATE	BY	SEGMENT 6 STA 76+90 TO 78+40			
1	60% PLANS	9/3/21	CMG	DEERE & AULT A SCHNABEL ENGINEERING COMPANY			
2	95% BID SET	9/30/21	CMG				
	DESIGNED BY: CMG	APPROVED BY: CMG		600 S. AIRPORT RD. BLDG. A, SUITE 205 LONGMONT, CO 80503 TEL 303.651.1468 FAX 303.651.1469			
	DRAWN BY: HOG	DATE: 9/30/21		JOB NO. SHEET:			
	CHECKED BY: MWK	SCALE: AS NOTED		20C26033.04 23 of 27			

Thursday, September 30, 2021 3:45:35 PM DRAWING: U:\0628 weston\002 commodore 5\CAD\Working\Commodore5_Plan_Segment 6 Continued.DWG



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COMMODORE 5 REHABILITATION SEGMENT 6

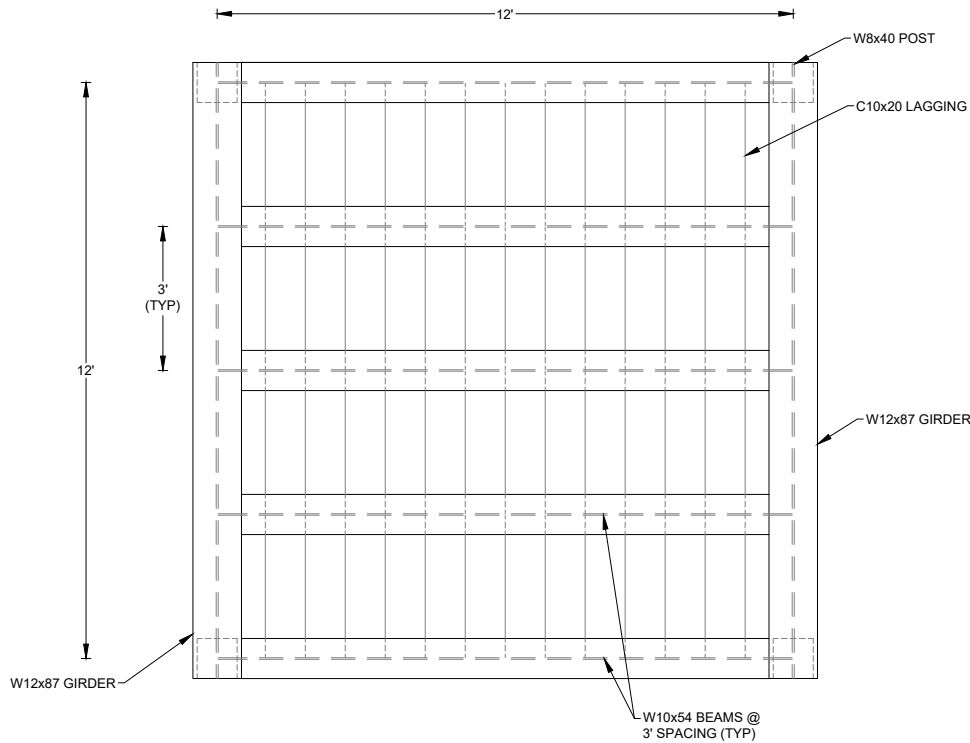
ORE CHUTE AREA CROSS SECTIONS

NO.	REVISIONS DESCRIPTION	DATE	BY
1	60% PLANS	9/3/21	CMG
2	95% BID SET	9/30/21	CMG

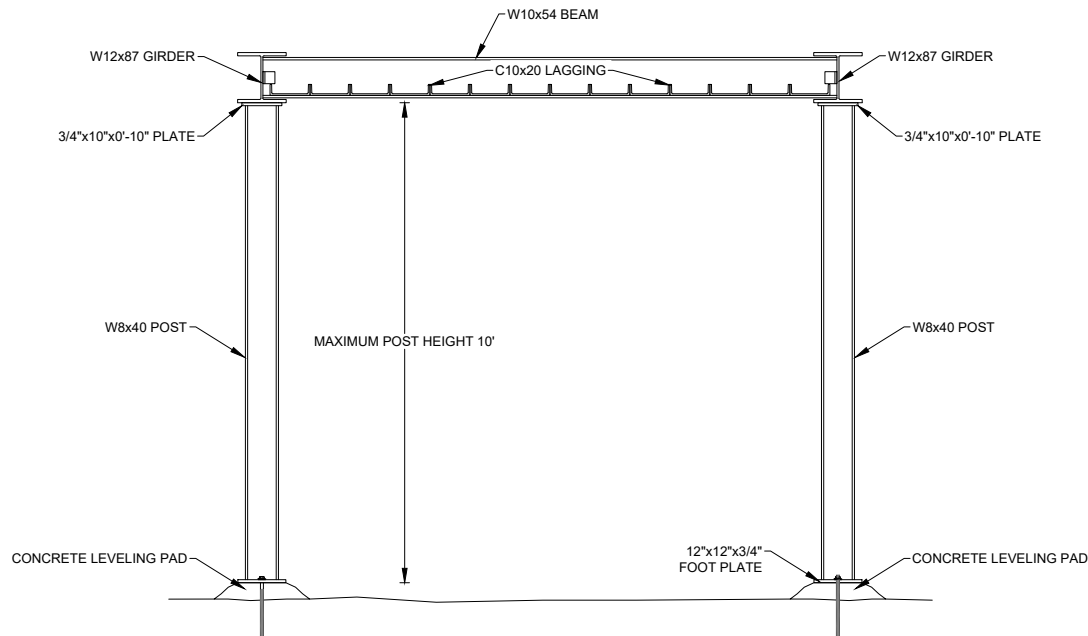
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DRAWN BY: HOG	DATE: 9/30/21	20C26033.04	24 of 27
CHECKED BY: MWK	SCALE: AS NOTED		

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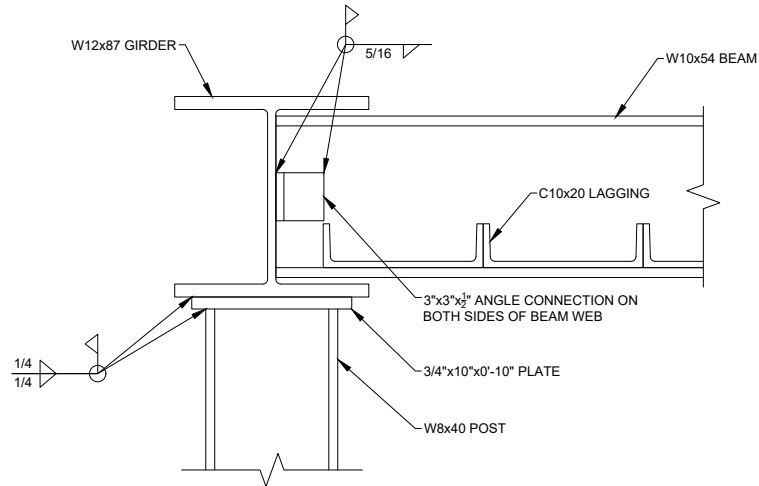
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STEEL FRAME PLAN

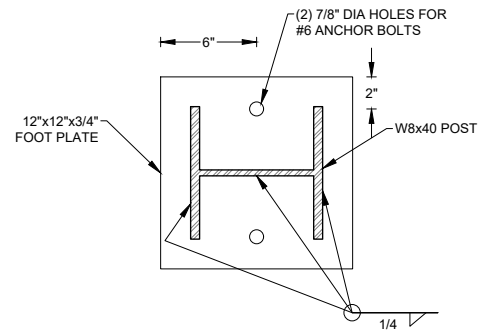


STEEL FRAME SECTION

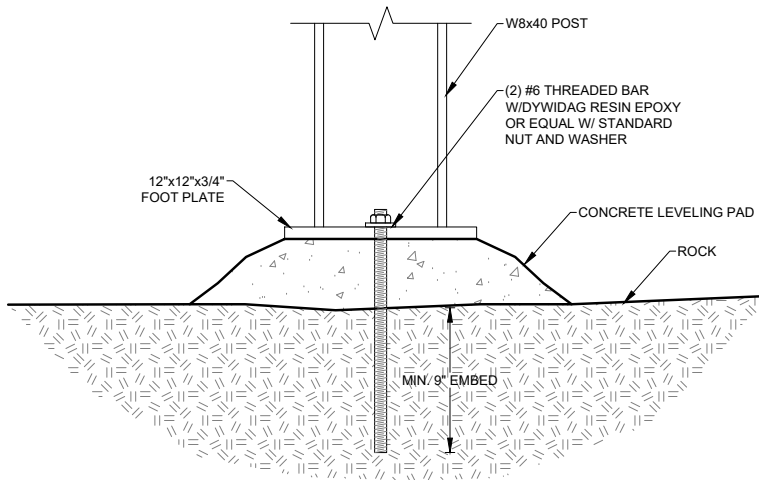


STEEL FRAME CONNECTION DETAIL

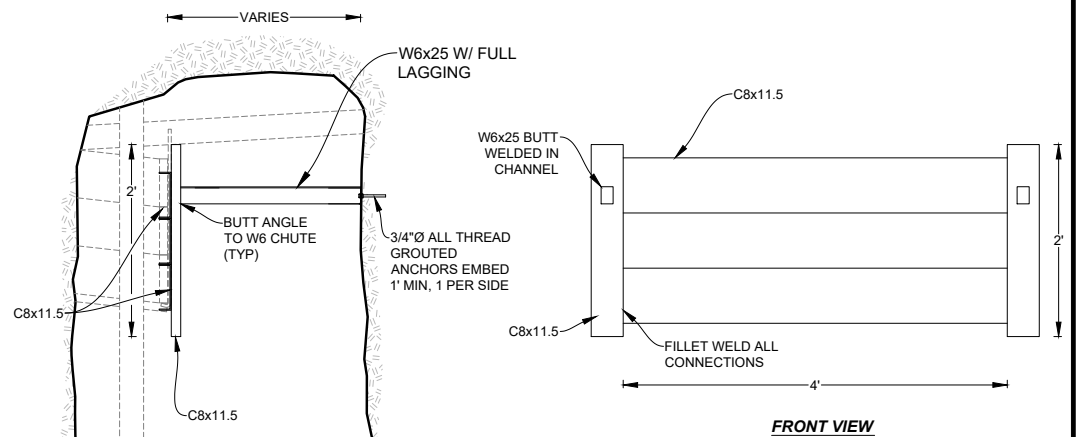
NTS



STEEL FRAME FOOT PLATE DETAIL



STEEL FRAME FOOTER DETAIL



ORE CHUTE BRACING DETAIL



- NOTE:**
1. ROUGHEN INVERT AND REMOVE ALL DEBRIS. WET ROCK SURFACE PRIOR TO PLACING CONCRETE WITH POTABLE WATER.
 2. ADD STEEL TO TRANSITION ORE CHUTE BRACING TO STEEL STULLS ON EITHER SIDE OF ORE CHUTE, ALLOWING FOR MINE FOAM ABOVE.
 3. ORE CHUTE SIZING VARIES, CONFIRM IN FIELD.

DRAFT

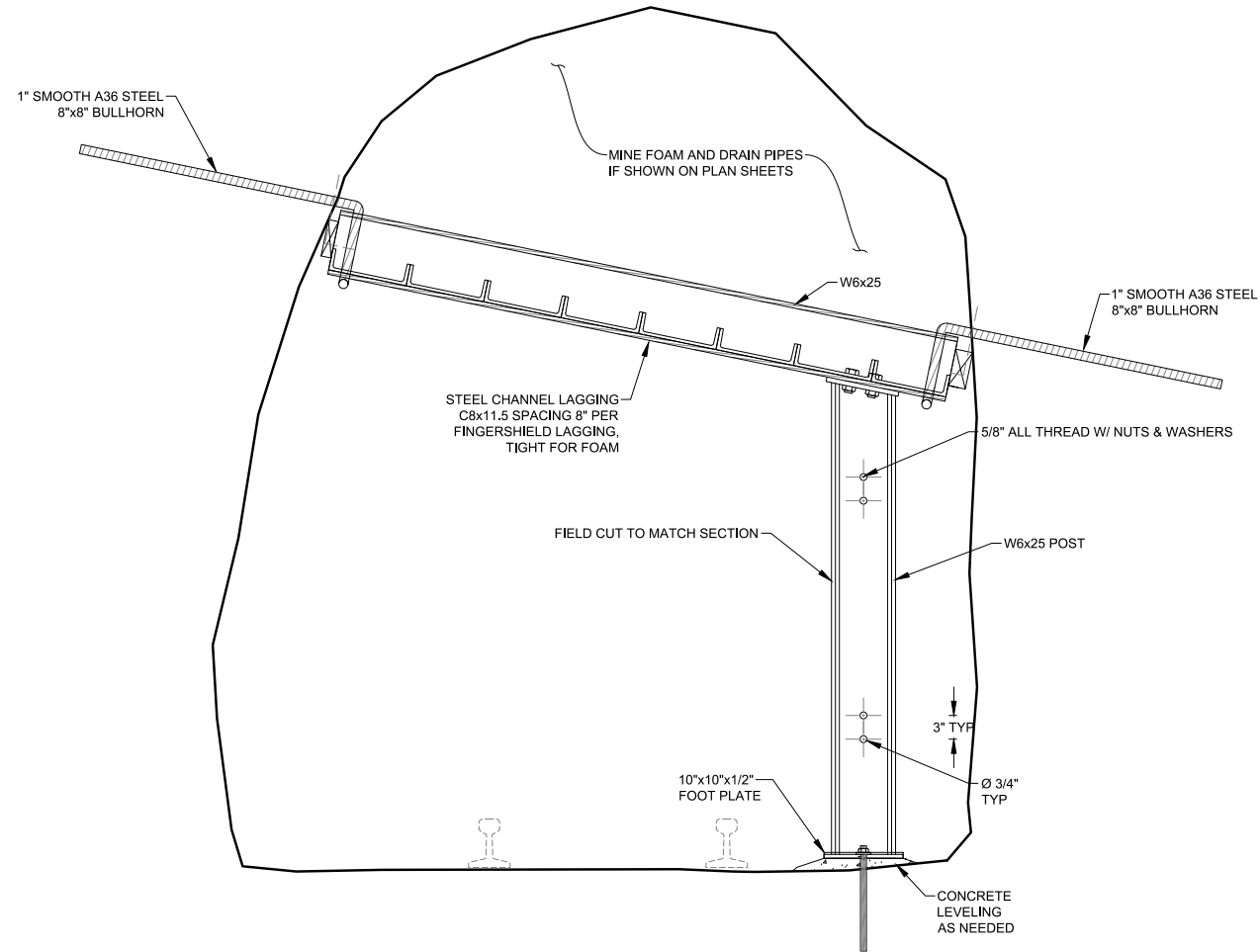
COMMODORE 5 REHABILITATION SEGMENT 6

STRUCTURAL DETAILS

NO.	REVISIONS DESCRIPTION	DATE	BY
1	60% PLANS	9/3/21	CMG
2	95% BID SET	9/30/21	CMG

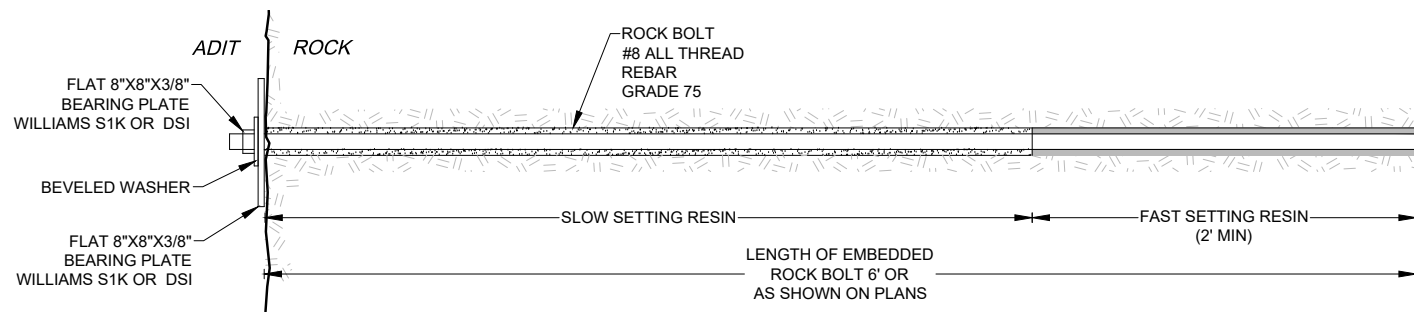
DEERE & AULT		600 S. AIRPORT RD. BLDG. A, SUITE 205 LONGMONT, CO 80503 TEL. 303.651.1468 FAX. 303.651.1469	
DESIGNED BY: CMG	APPROVED BY: CMG	JOB NO.	SHEET:
DRAWN BY: HOG	DATE: 9/30/21	20C26033.04	25 of 27
CHECKED BY: MWK	SCALE: AS NOTED		

Thursday, September 30, 2021 3:45:48 PM DRAWING: U:\0628 weston\002 commodore 5\CAD\Working\Commodore5_Details_Segment 7.DWG



SINGLE POST SET DETAIL

B

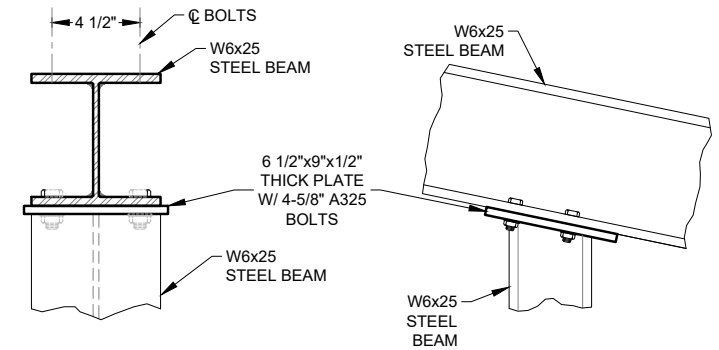
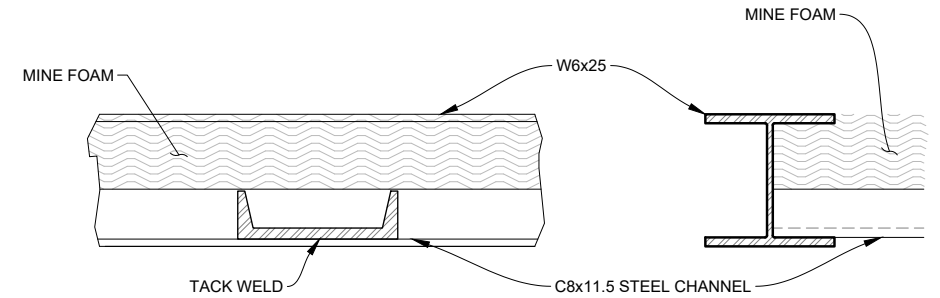
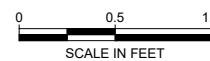


NOTES:

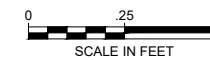
- BOREHOLE DIAMETERS FOR BOLT INSTALLATION SHALL BE PER MANUFACTURER'S RECOMMENDATIONS.
- IN LIEU OF RESIN GROUTED BOLTS, CEMENT GROUTED BOLTS WITH ANCHORS MAY BE USED.
- LENGTHS OF ROCK BOLTS INDICATED ON THE DRAWINGS ARE EMBEDDED LENGTHS IN THE ROCK. CONTRACTOR SHALL PROVIDE SUFFICIENT LENGTHS OF BAR TO ALLOW FOR INSTALLATION OF END HARDWARE.
- INSPECT AND SCALE AREA BEFORE BOLTING.
- ALL ROCK BOLTS TO BE FULLY RESIN OR GROUT ENCAPSULATED AND TENSIONED TO 2/3 YIELD STRENGTH.

ROCK BOLT DETAIL

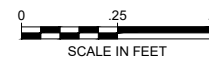
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POST CONNECTION

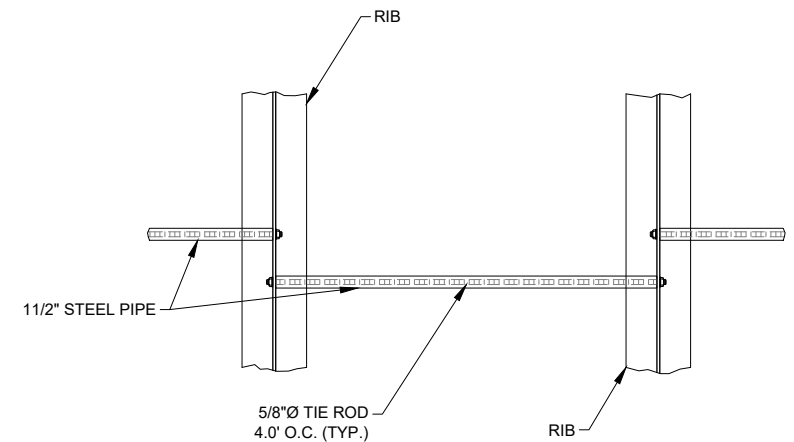


POST CONNECTION

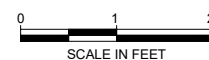


NOTES:

FIELD DIMENSIONS VARY.
CUSTOM FITTING WILL BE REQUIRED.



TIE ROD DETAIL



DRAFT

COMMODORE 5 REHABILITATION SEGMENT 6

GENERAL DETAILS

DEERE & AULT
A SCHNABEL ENGINEERING COMPANY

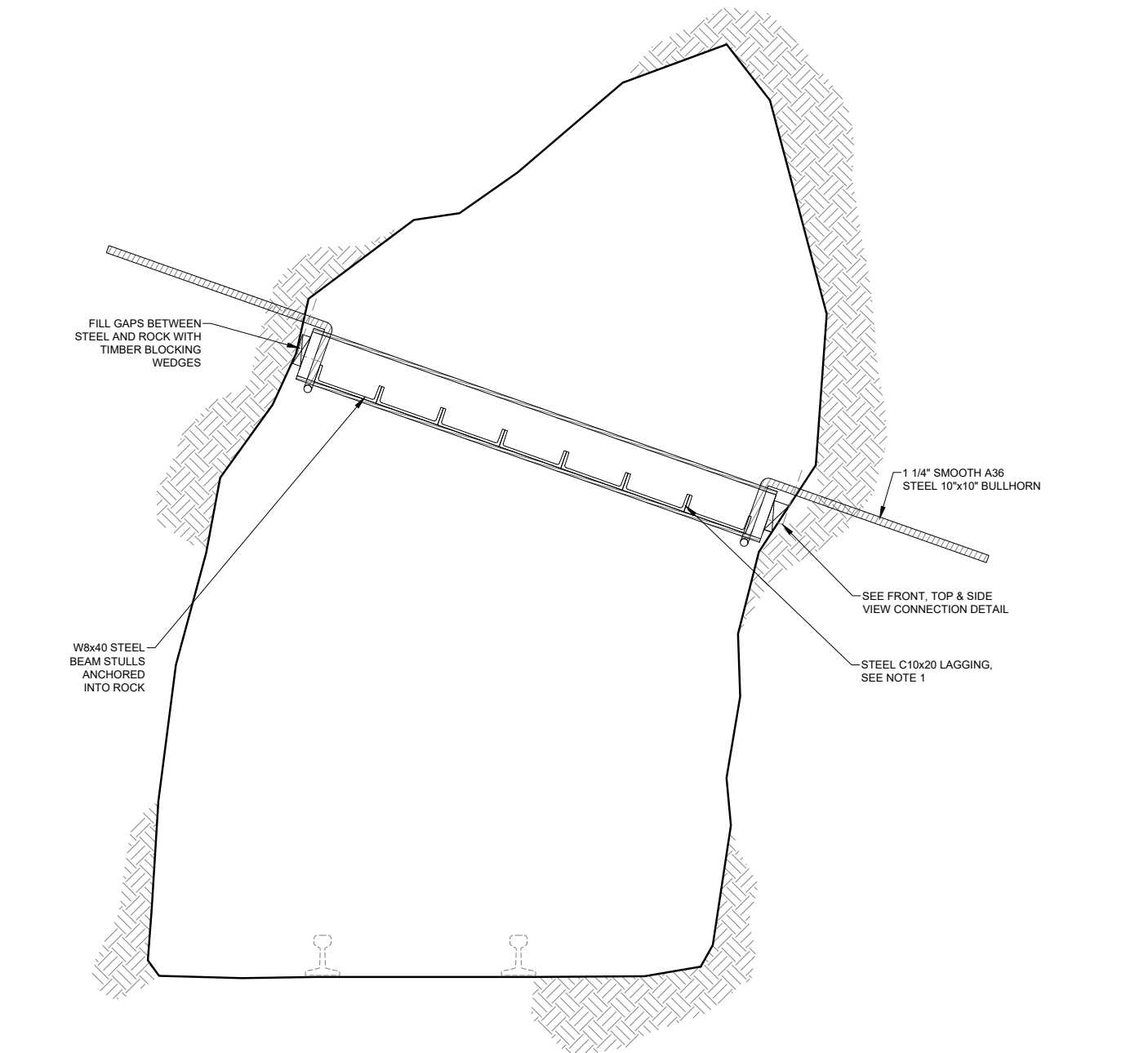
DESIGNED BY: CMG
DRAWN BY: HOG
CHECKED BY: MWK

APPROVED BY: CMG
DATE: 9/30/21
SCALE: AS NOTED

600 S. AIRPORT RD. BLDG. A, SUITE 205
LONGMONT, CO 80503
TEL. 303.651.1468 FAX. 303.651.1469

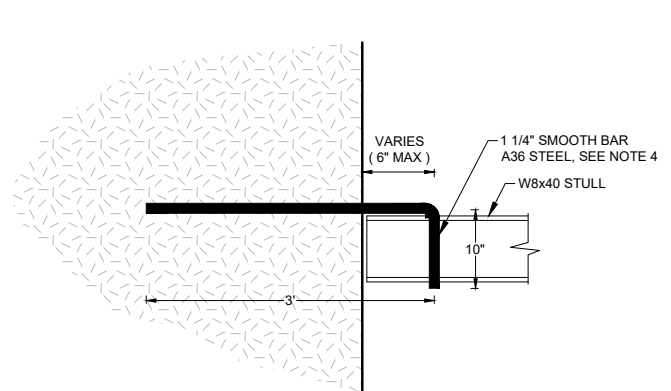
JOB NO. 20C26033.04
SHEET: 26 of 27

Thursday, September 30, 2021 3:45:56 PM DRAWING: U:\0628 weston\002 commodore 5\CAD\Working\Commodore5_Details_Segment 7.DWG



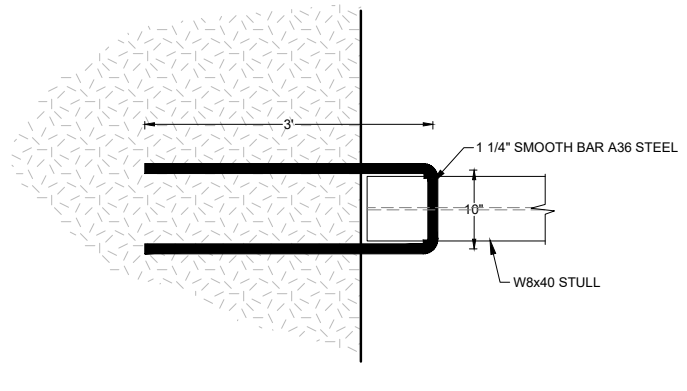
TYPICAL STEEL STULL SECTION (C)

0 1' 2'
SCALE IN FEET



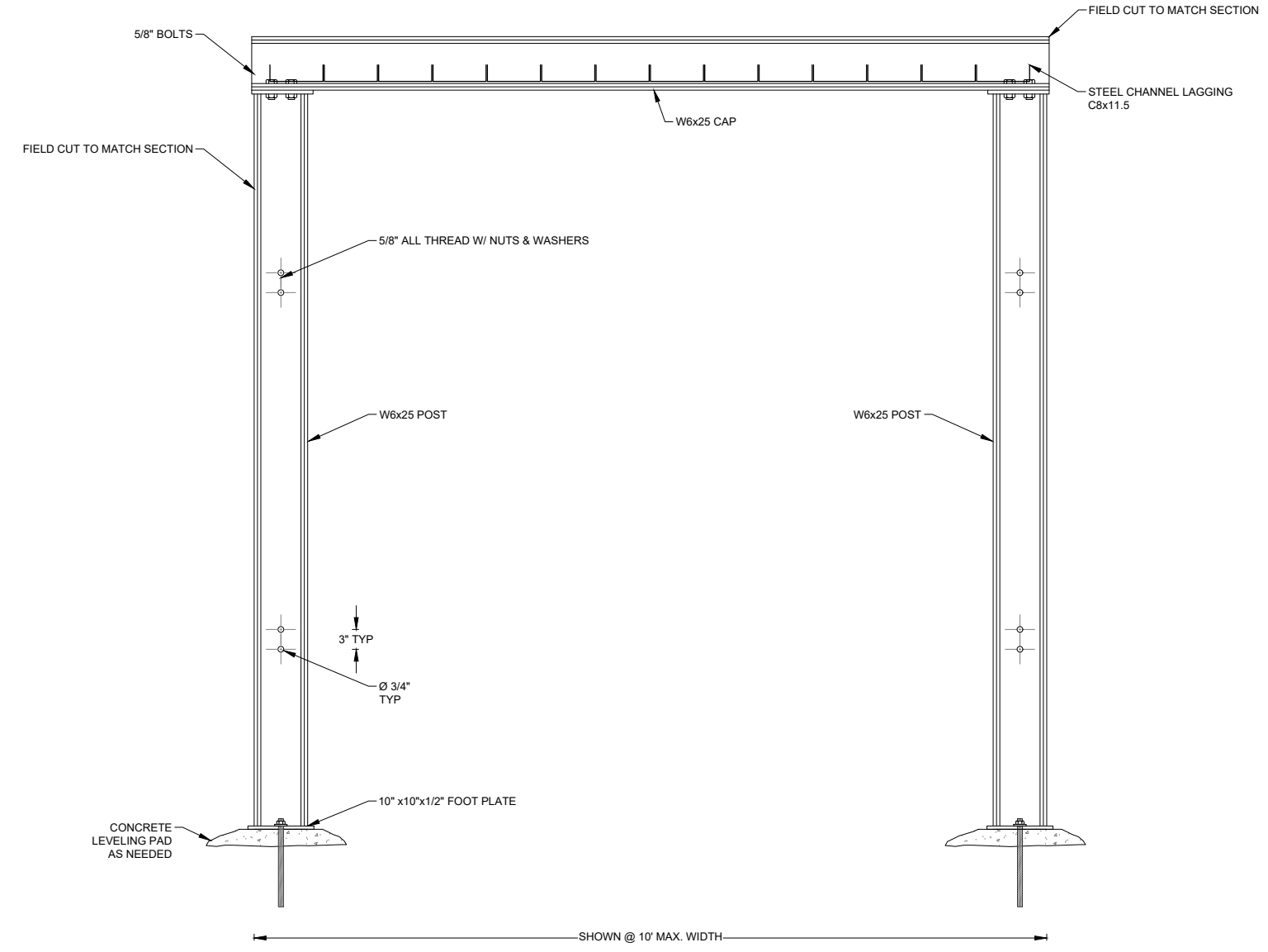
STULL CONNECTION SIDE VIEW

0 1' 2'
SCALE IN FEET



STULL CONNECTION TOP VIEW

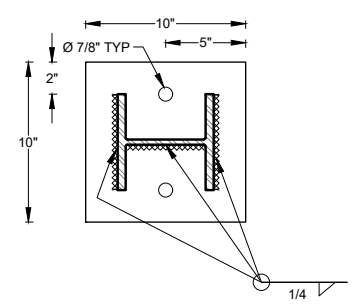
0 1' 2'
SCALE IN FEET



- NOTES:**
1. STEEL STULL LAGGING VARIES, SEE SHEET 22 AND 23.
 2. FINGER SHIELD LAGGING C10x20, 10" O.C., TIGHT FOR FOAM.
 3. FIELD DIMENSIONS VARY
 4. CUSTOM FITTING WILL BE REQUIRED.
 5. USE 8"x8", 1"Ø BULLHORN FOR W6x25 CAP AT SINGLE POST SETS.

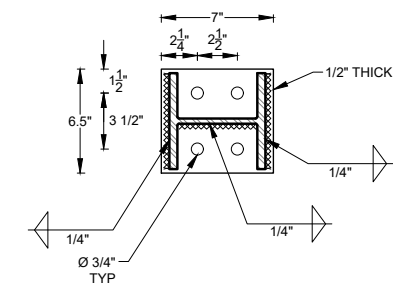
3 PIECE SQUARE SET OF W8x28 (D)

0 1' 2'
SCALE IN FEET



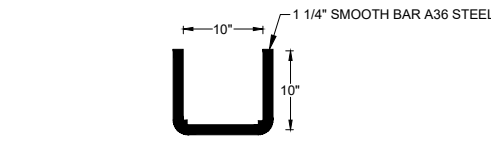
FOOT PLATE DETAIL

0 .5 1'
SCALE IN FEET



BUTT PLATE DETAIL

0 .5 1'
SCALE IN FEET



STULL CONNECTION FRONT VIEW

0 1' 2'
SCALE IN FEET

DRAFT

REVISIONS				COMMODORE 5 REHABILITATION SEGMENT 6			
NO.	DESCRIPTION	DATE	BY	STEEL SET DETAILS			
1	60% PLANS	9/3/21	CMG	DEERE & AULT A SCHNABEL ENGINEERING COMPANY			
2	95% BID SET	9/30/21	CMG				
				DESIGNED BY: CMG	APPROVED BY: CMG	JOB NO.	SHEET:
				DRAWN BY: HOG	DATE: 9/30/21	20C26033.04	27 of 27
				CHECKED BY: MWK	SCALE: AS NOTED		