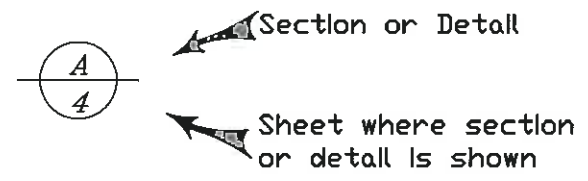


VICINITY MAP
Scale 1:500

INDEX OF SHEETS	
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	NOTES AND QUANTITIES
3	SITE PLAN
4	PLAN VIEW
5	PLAN/PROFILE VIEW
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8	BASIN PLAN VIEW
9	BASIN PROFILE VIEW
10	PLAN/PROFILE VIEW
11	PLAN/PROFILE VIEW
12	PLAN/PROFILE VIEW
13	TYPICAL SECTION VIEWS
14	BASIN DETAILS
15	BASIN DETAILS
16	FENCING

LEGEND



UTILITY STATEMENT

No representation is made as to the existence or nonexistence of any utilities, public and/or private, buried or overhead, except as shown on the drawings. Where utilities are shown on the drawings, the location, depth and/or height are approximate. The exact location, depth and/or height must be determined by the utility company prior to any construction in the vicinity of the utility.

CALL BEFORE YOU DIG.
IT'S FREE & IT'S THE LAW.

BLUE STAKES OF UTAH
Utility Notification Center, Inc.
1-800-662-4111
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Dig Safely

Hildale
EMERGENCY WATERSHED PROTECTION PROGRAM

Washington County, Utah

PREPARED BY
U.S. DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE

This project is partially funded by NRCS through the Emergency Watershed Program (EWP).

GENERAL NOTES

The attached NRCS Construction and Material Specifications are part of this plan and shall govern the installation of this project.

This project shall be constructed to the lines and grades shown in the drawings and detailed in the Construction Specifications.

All stationing refers to centerline of construction and is the measured horizontal distance.

The vertical accuracy of contour lines is approximately one half of the contour interval shown in any given area of this plan.

RESPONSIBILITY OF PERMITS

The NRCS does not assume any responsibility in the determination, application and/or securing of any necessary permits for the construction and operation of this project. All permits are the responsibility of the owner, operator and/or contractor.

REVIEW AND ACCEPTANCE

The drawings, Construction and Material Specifications for this project have been reviewed by me and are accepted for installation. I also acknowledge that any modifications implemented prior to review and approval by the NRCS may result in NRCS disapproval of this installation. I hereby acknowledge receipt of a copy(ies) of this plan.

Real [Signature] 12-14-16
SPONSOR APPROVING AUTHORITY DATE

BRONSON SMART
NRCS APPROVING AUTHORITY DATE

Digitally signed by BRONSON SMART
DN: c=US, o=U.S. Government, ou=Department of Agriculture, cn=BRONSON SMART,
0.9.2342.19200300.100.1.1=12001000371143
Date: 2016.11.02 08:11:03 -0600

Date	7/16	7/16	10/16	11/16
Designed	LMS	LMS	ASR	
Drawn				
Checked				
Approved				

HILDALE EWP PROJECT
COVER SHEET
#402 Dam Floodwater Retarding, # 400 Floodwater Diversion
Washington County, Utah
Job Class V

United States
Department of
Agriculture
USDA
Natural Resources
Conservation Service

File No.
Hildale.dwg

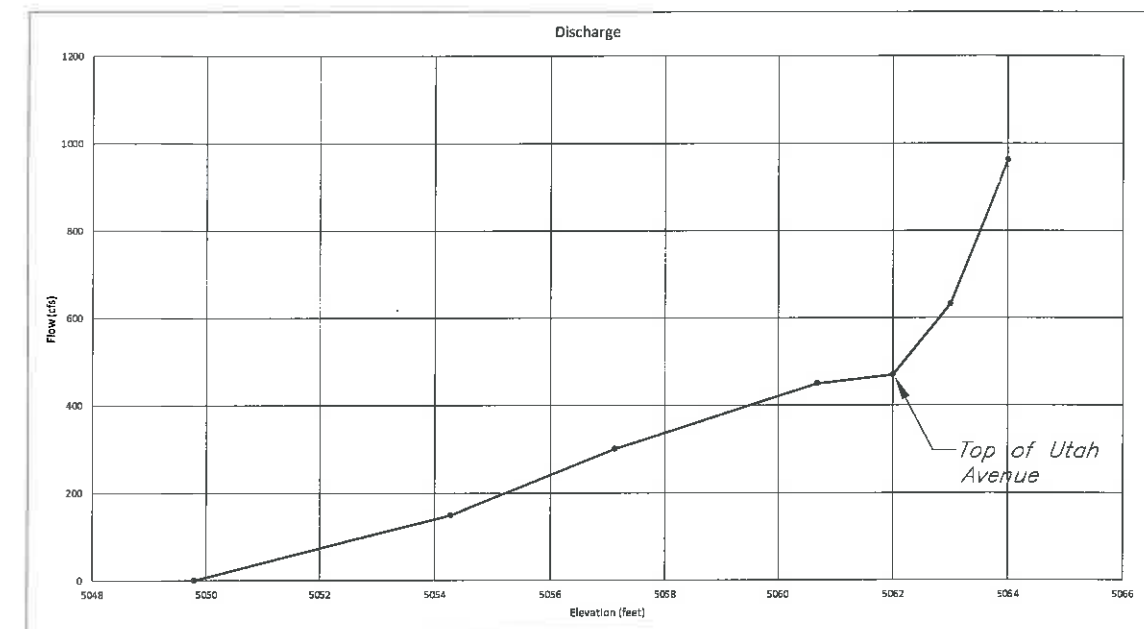
Drawing No.
11/1/16 7:10 AM
Sheet 1 of 16

Item	Quantity	Unit
Clearing and Grubbing	1	LS
Earthwork cut/fill	10,700	CY
Rock Riprap Hauling and Placement	9,750	TN
Excess excavation	18,000	CY
6x6 Box Culvert	60	LF
Grout for Riprap	100	CY

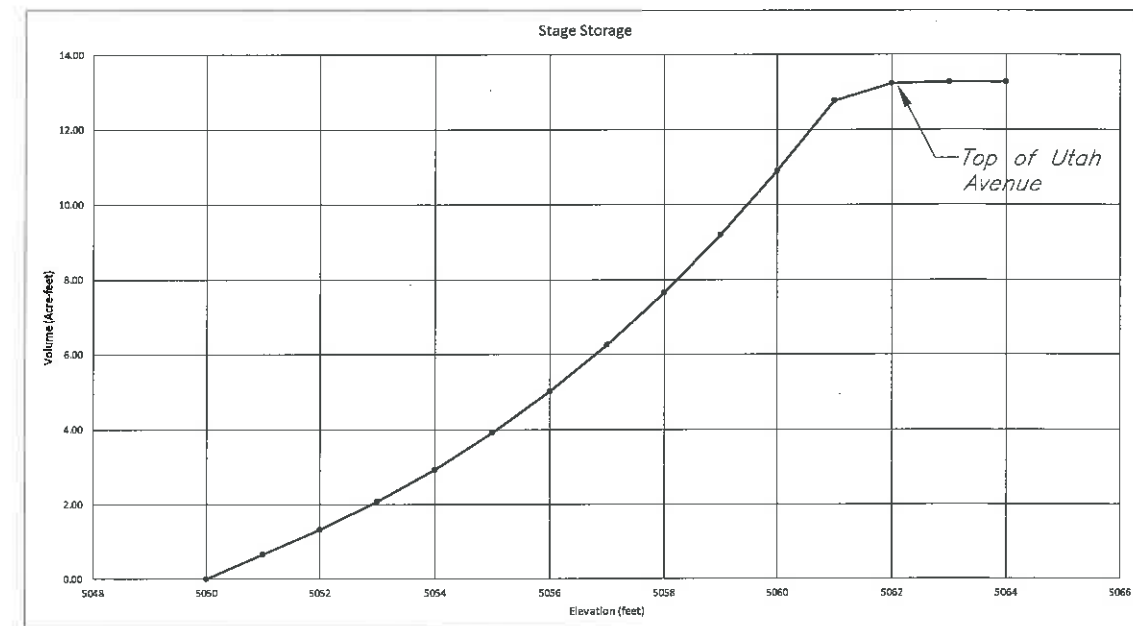
Species	Variety	PLS Rate (lbs/ac)	Bulk Rate (lbs/ac)
Wheatgrass, western	Ariba	3.00	4.71
Wheatgrass, Siberian	VavilovII	2.70	3.34
Wheatgrass, crested (Cristatum)	Ephraim	2.25	2.94
Wildrye, Russian	Bozoiski II	2.25	3.13
Beeflower, Rocky Mountain	common	1.28	1.30
Penstemon, Palmer's	Cedar	0.30	0.37
Flax, blue		0.30	0.35

SEED MIX

Rock Gradation	
% Passing	Diameter, in
D100	18
D85	15
D50	12
D10	9



BASIN OUTLET RATING CURVE



BASIN STAGE STORAGE CURVE

HILDALE EWP PROJECT
NOTES AND QUANTITIES
#402 Dam Floodwater Retarding, # 400 Floodwater Diversion

#402 Dam Floodwater Retarding, # 400 Floodwater Diversion

Job Class V

Washington County, Utah Approved

Date 7/16Designed LMS

11/16

Drawn LMS

Checked —

Approved _____

File No.
Hildale.dwg

Drawing No.

12/9/16 1:31 PM
Sheet 2 of 16

37° 0' 0" N

113° 0' 0" W



113° 0' 0" W

37° 0' 0" N

HILDALE EWP PROJECT SITE PLAN

#402 Dam Floodwater Retarding, # 400 Floodwater Diversion

United States
Department of
Agriculture



Natural Resources
Conservation Service

File No.
Hildale.dwg

Drawing No.

10/28/16 5:31 AM
Sheet 3 of 16

Designed LMS

Date
7/16

Drawn LMS

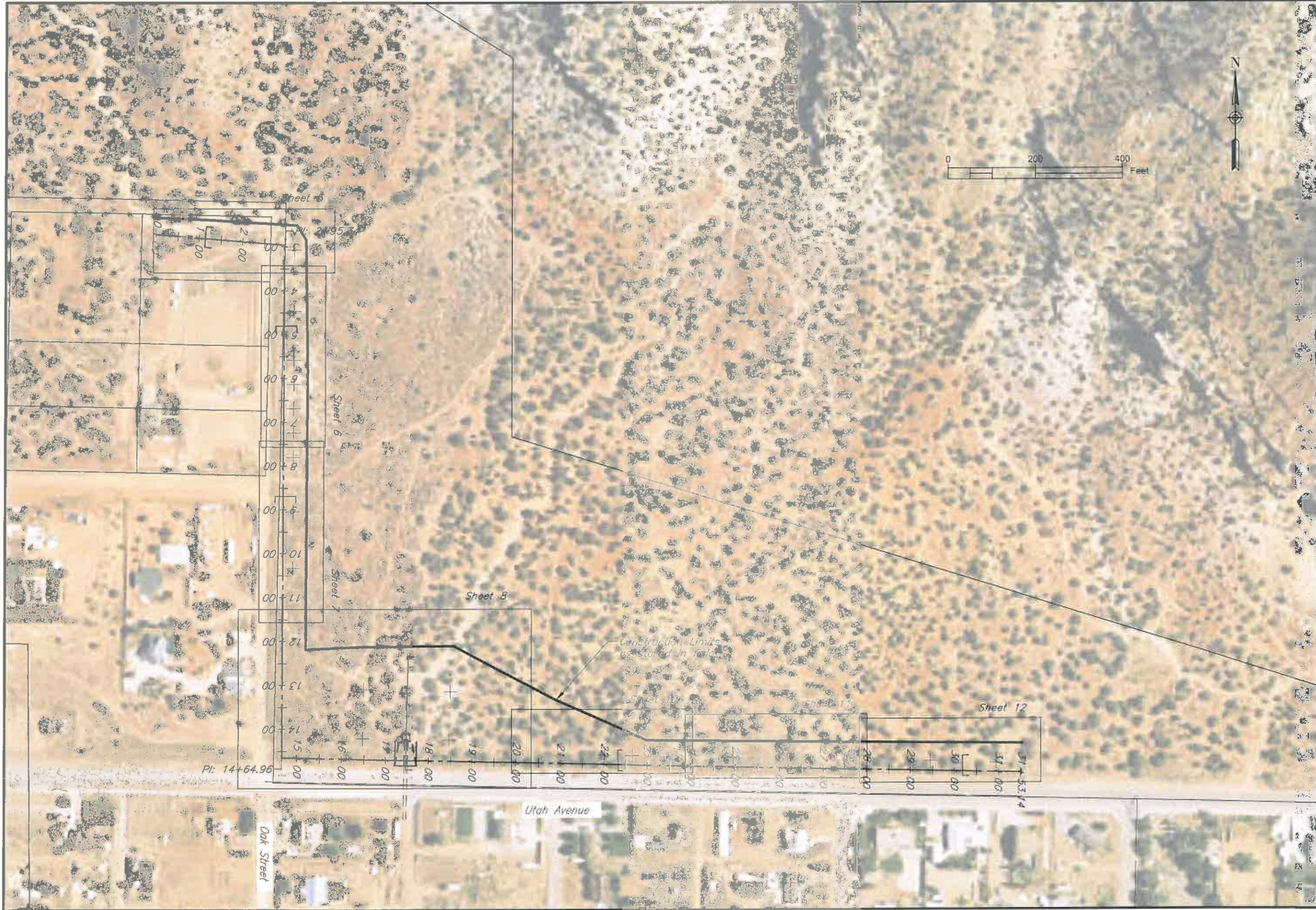
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7/16

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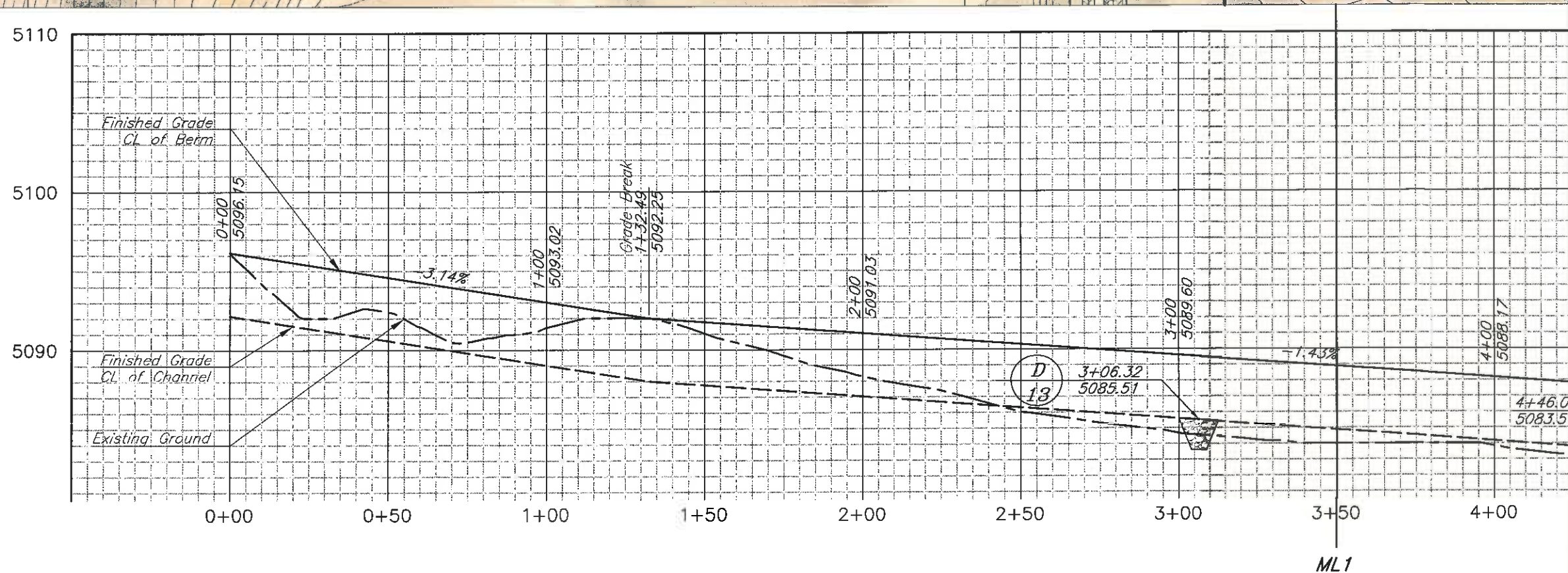
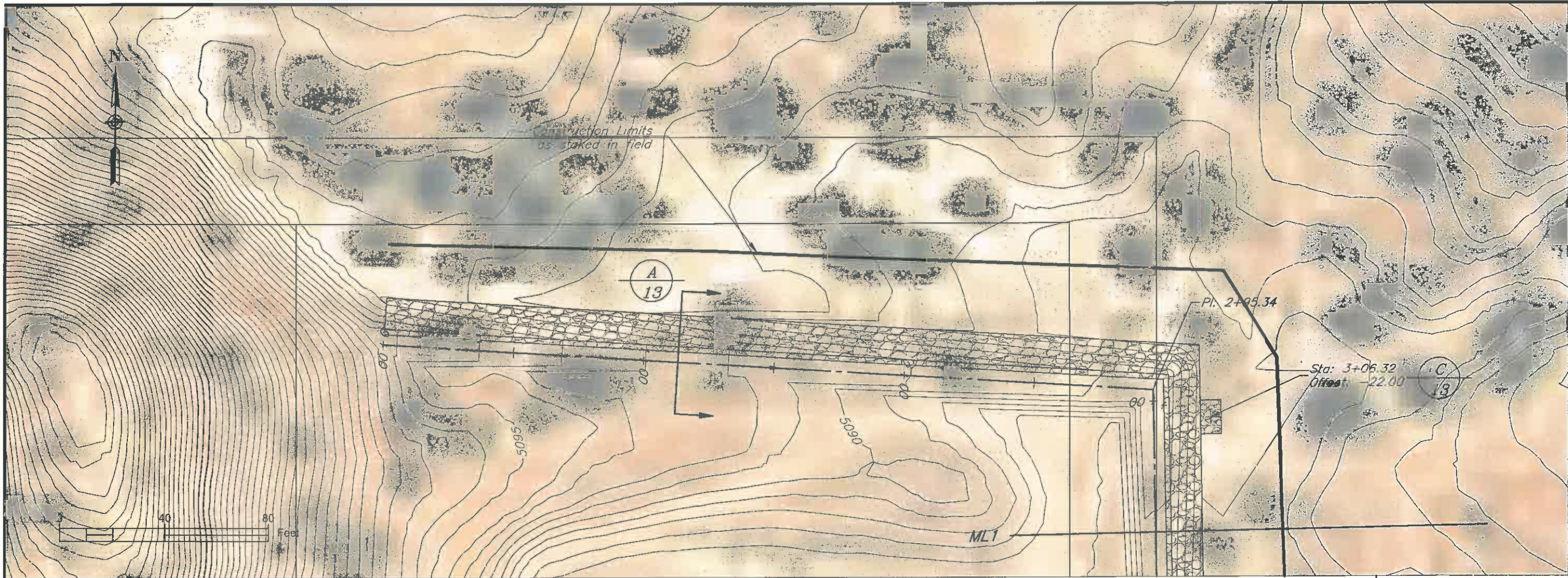
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Job Class V

Washington County, Utah



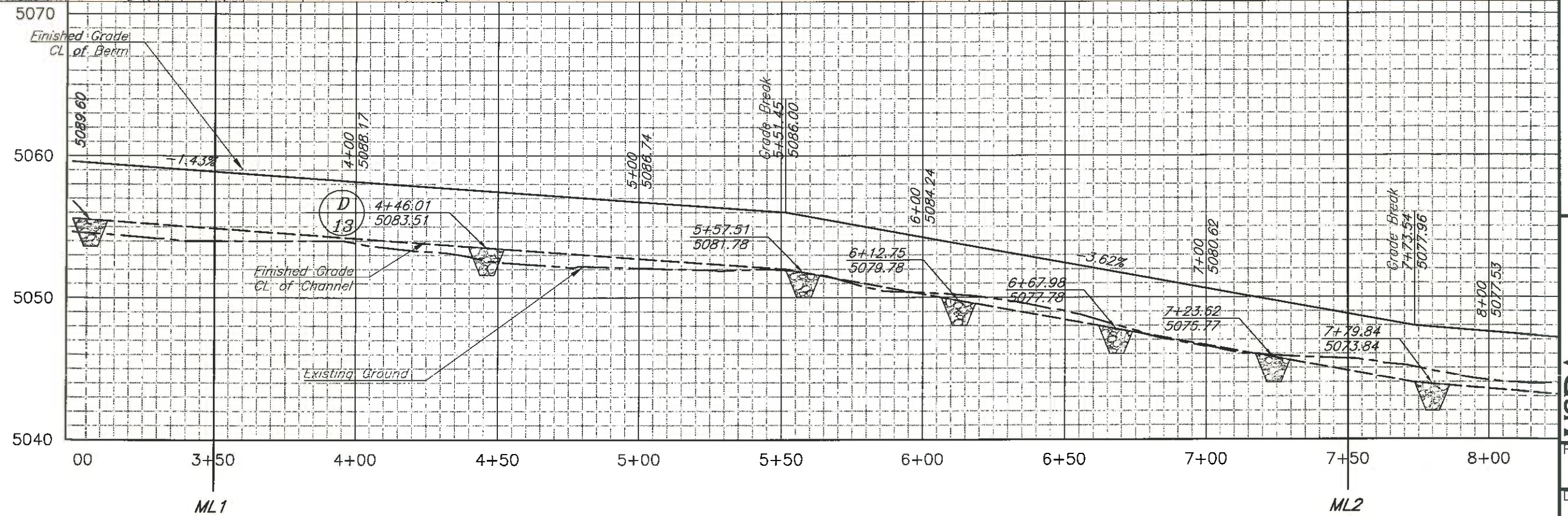
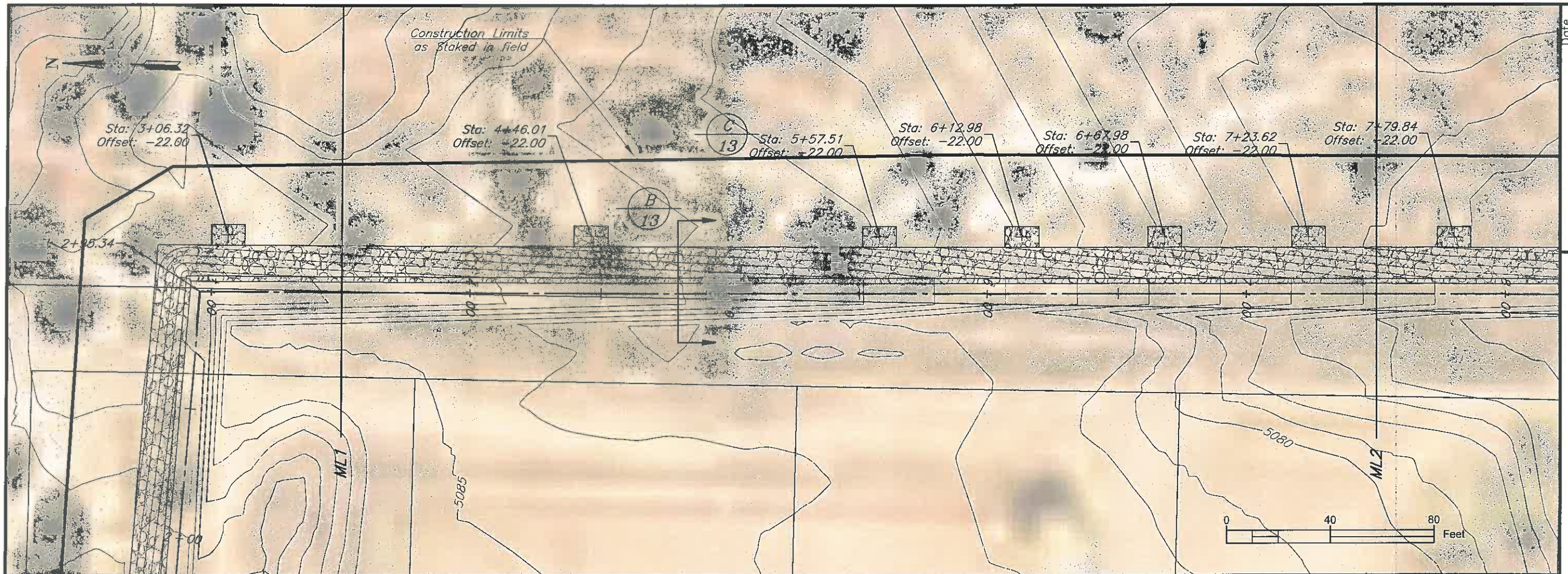
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	#402 Dam Floodwater Retarding, # 400 Floodwater Diversion			Drawn <i>LMS</i>	<i>7/16</i>
	Job Class V			Checked	
	Washington County, Utah			Approved	
File No. <i>Hildale.dwg</i>		Drawing No.		10/31/16 6:10 AM Sheet 4 of 16	



Date 7/16	
Designed LMS	Drawn LMS
Checked	Approved
Washington County, Utah	
Job Class V	
United States Department of Agriculture Natural Resources Conservation Service	
File No. Hildale.dwg	
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10/31/16 6:10 AM Sheet 5 of 16	

HILDALE EWP PROJECT PLAN/PROFILE VIEW

402 Dam Floodwater Retarding, #400 Floodwater Diversion



Date: 7/16
 Designed: LMS
 Drawn: LMS
 Checked: _____
 Approved: _____

HILDAL EWP PROJECT PLAN/PROFILE VIEW

402 Dam Floodwater Retarding, #400 Floodwater Diversion

Job Class V

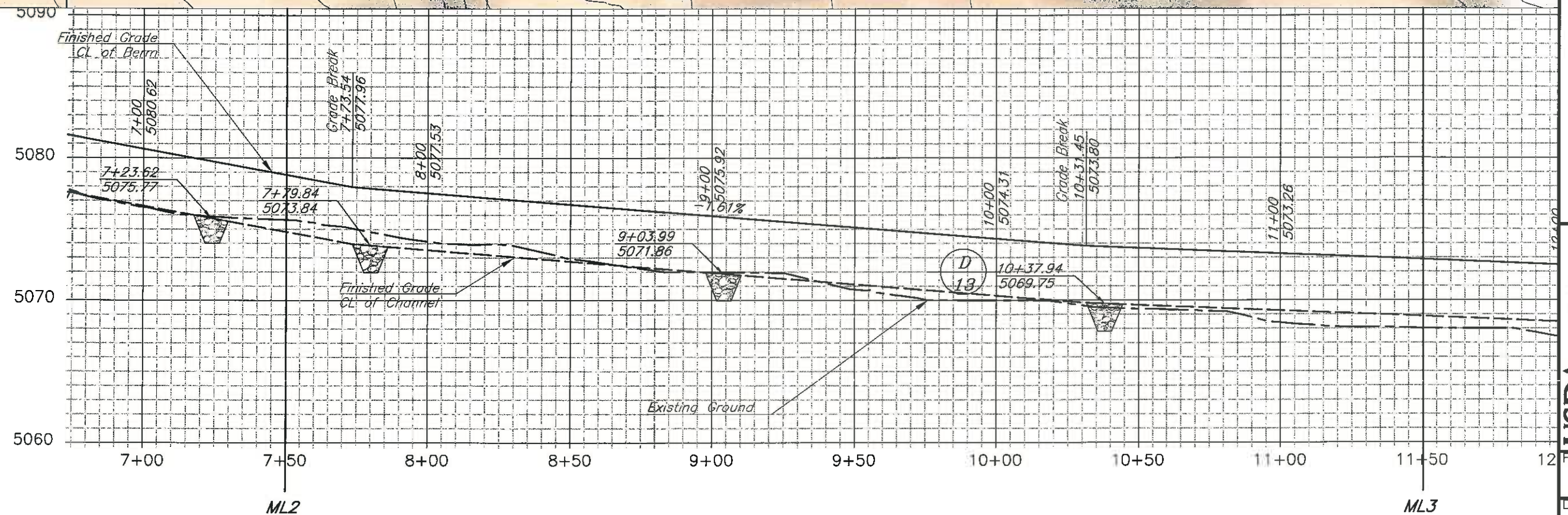
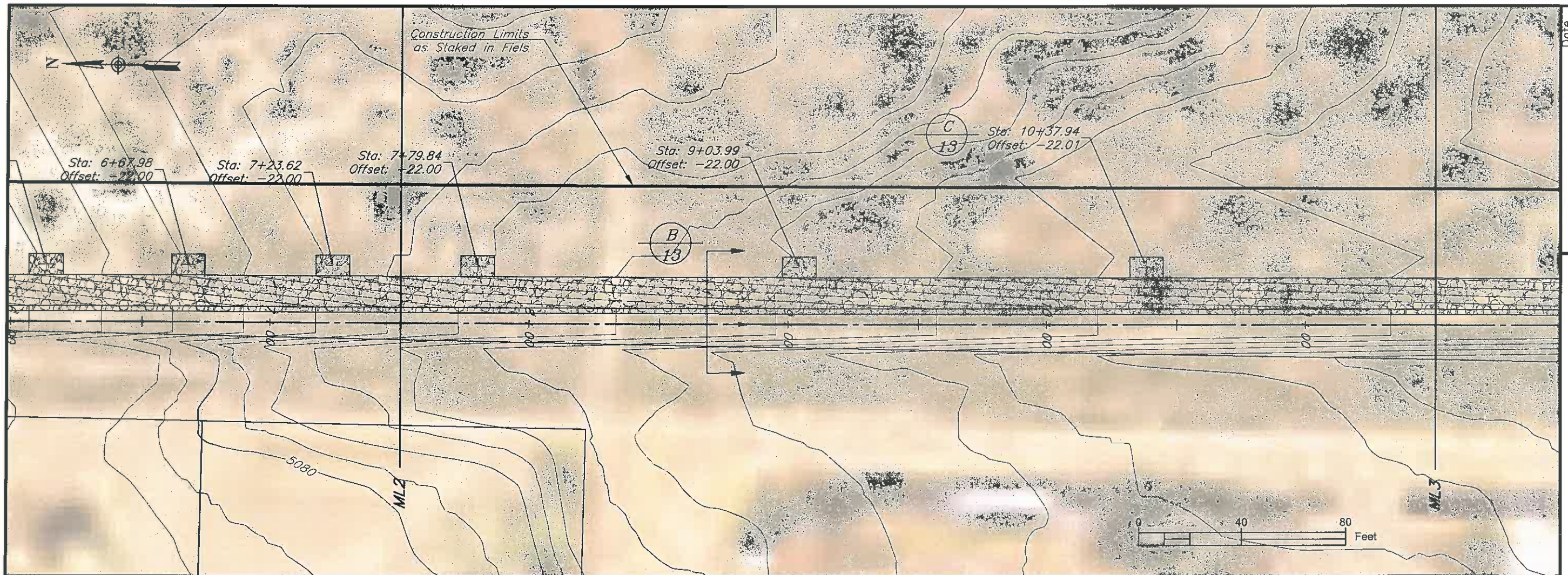
Washington County, Utah

United States
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 Agriculture
USDA
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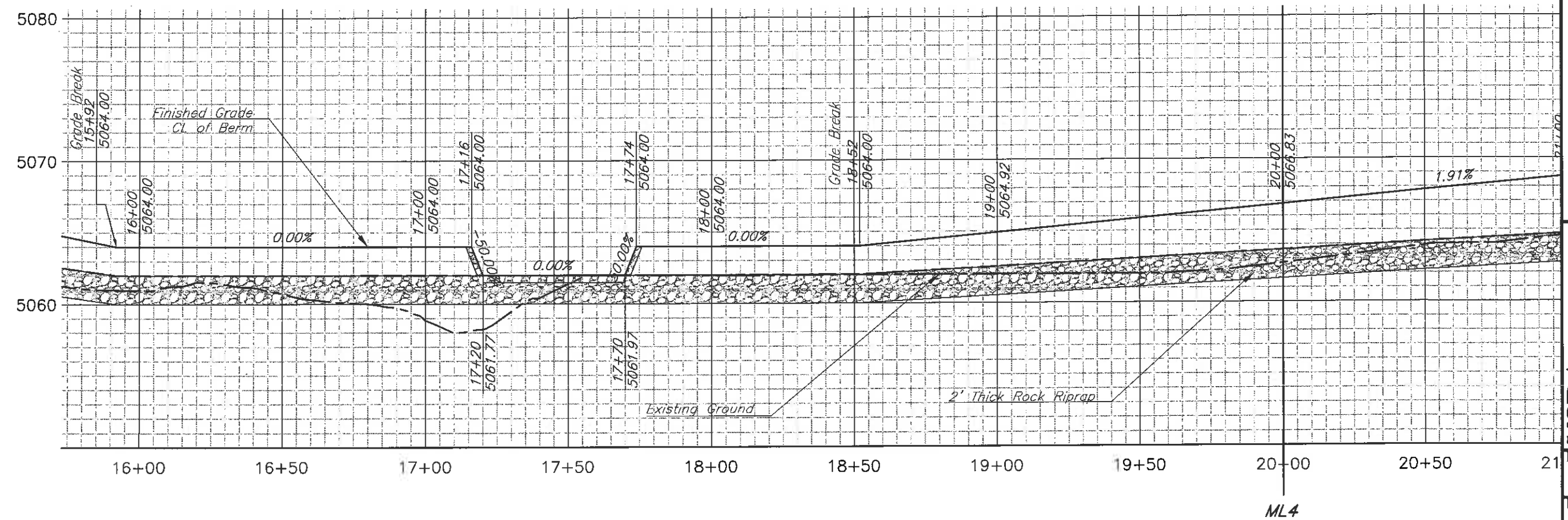
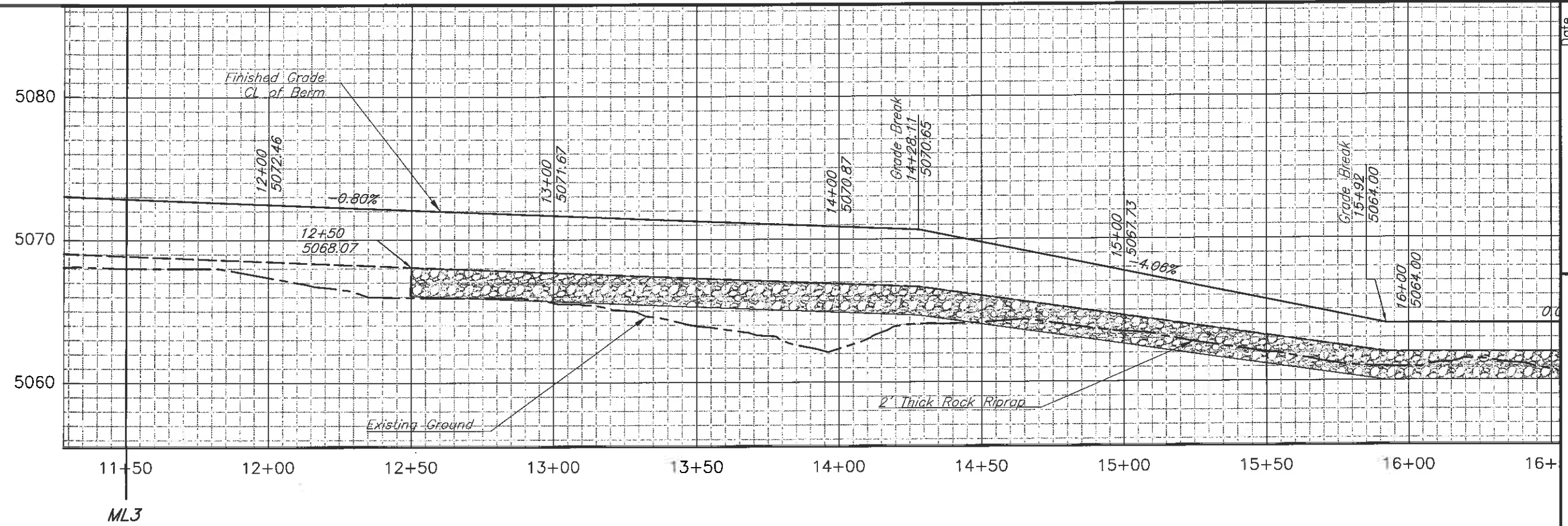
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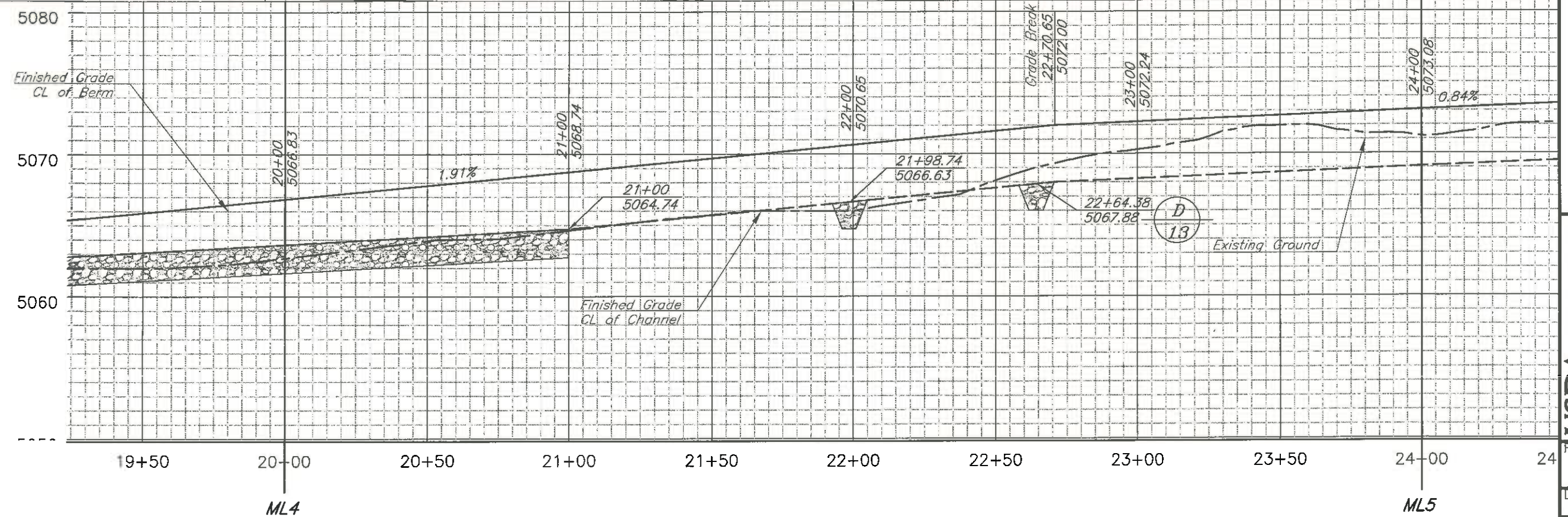
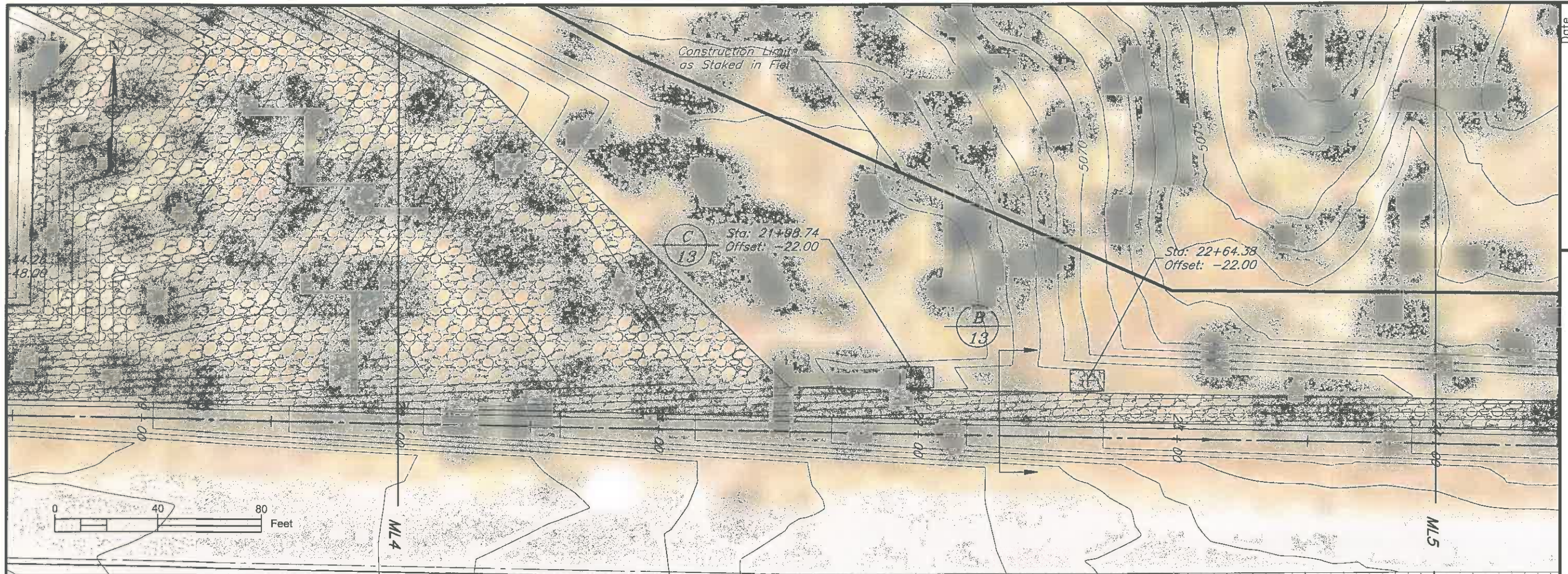
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 Designed LMS
 Drawn LMS
 Checked
 Approved

HILDALE EWP PROJECT
 PLAN/PROFILE VIEW
 # 402 Dam Floodwater Retarding, #400 Floodwater Diversion
 Washington County, Utah
 Job Class V

United States Department of Agriculture
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 Sheet 7 of 16



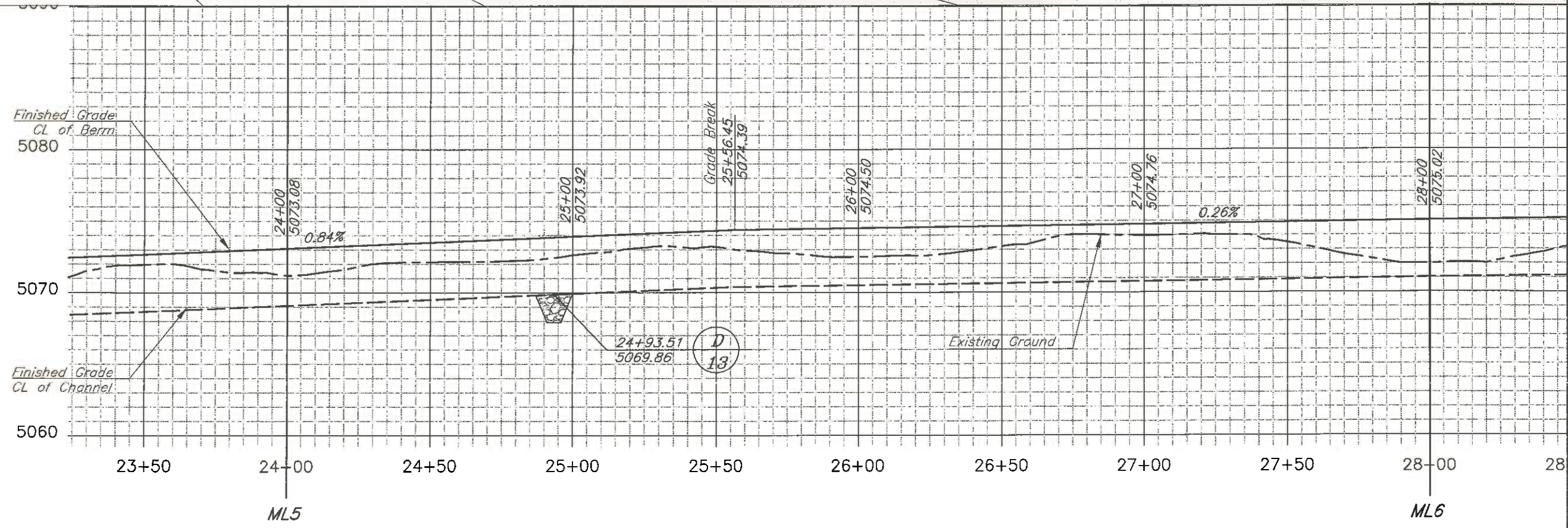
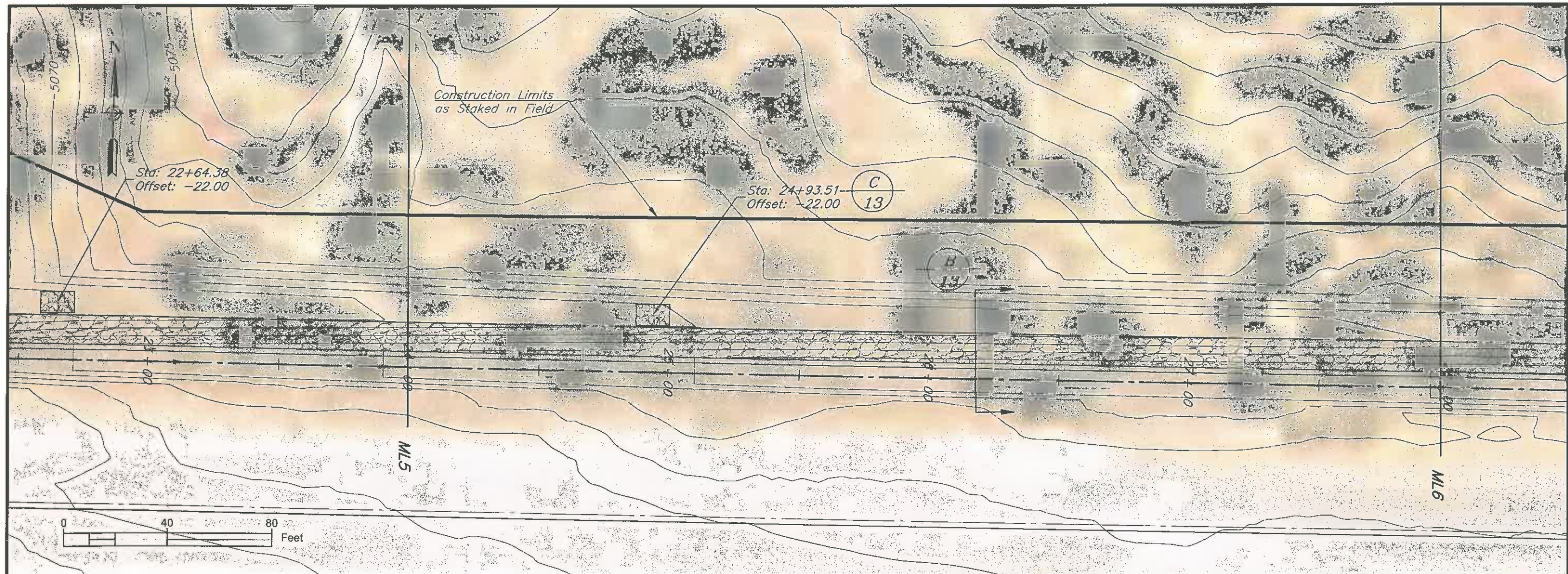
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	Washington County, Utah		Job Class V
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	Approved		
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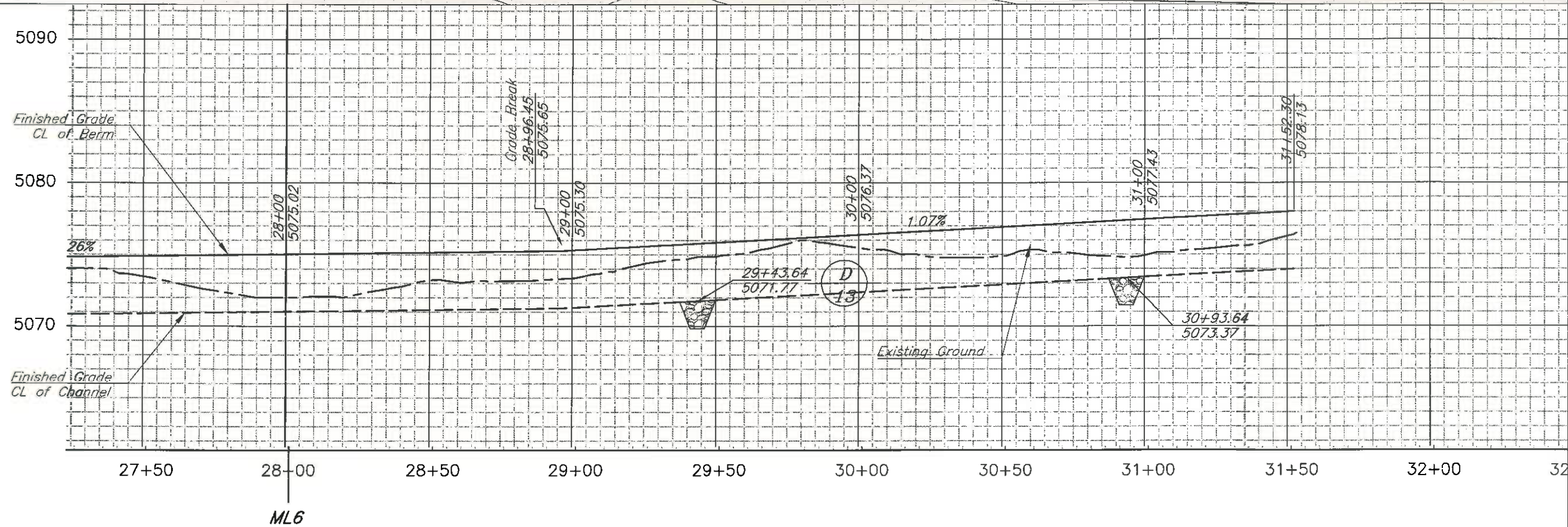
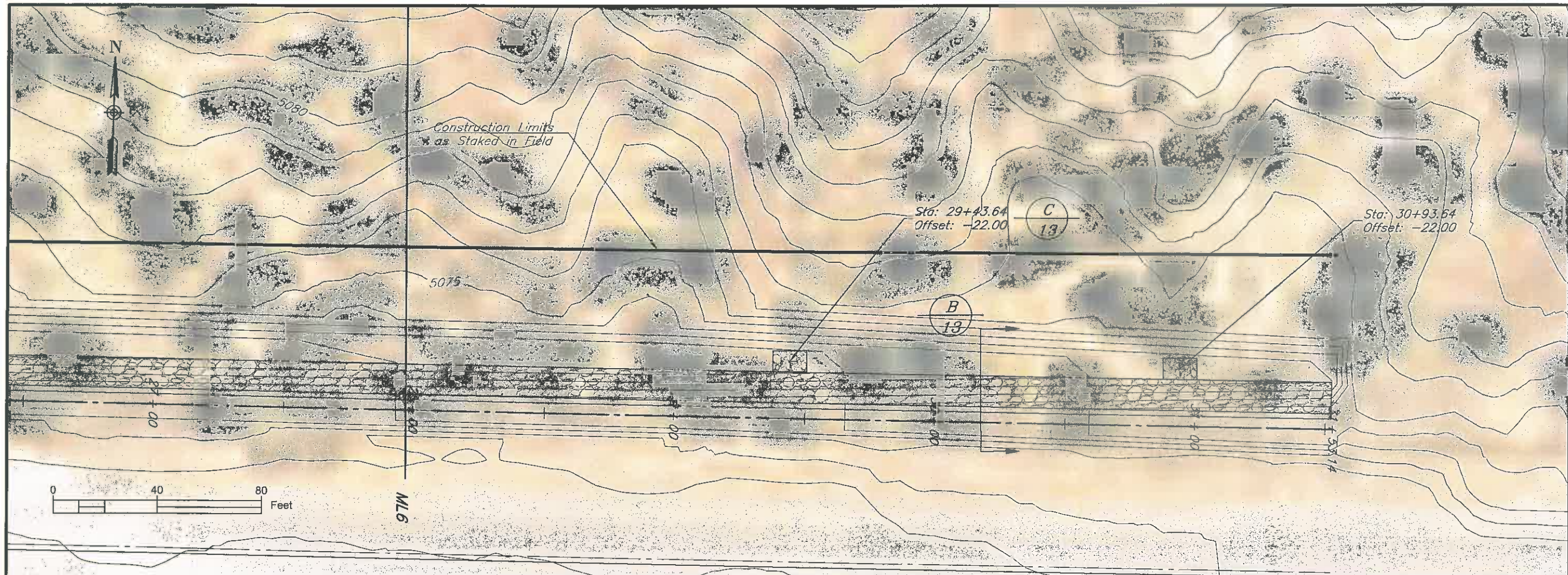
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Job Class V		
# 402 Dam Floodwater Retarding, #400 Floodwater Diversion		
Washington County, Utah		

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Designed	LMS	Drawn	LMS
Checked		Approved	



HILDALE EWP PROJECT PLAN/PROFILE VIEW		Date 7/16
Designed LMS	Drawn LMS	Checked _____
Approved _____		Date 7/16
# 402 Dam Floodwater Retarding, #400 Floodwater Diversion		
Washington County, Utah		
Job Class V		
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	Drawing No.	Designed LMS
	10/31/16 8:09 AM Sheet 12 of 16	Drawn LMS
	Job Class V	Checked Approved

402 Dam Floodwater Retarding, #400 Floodwater Diversion
 Washington County, Utah

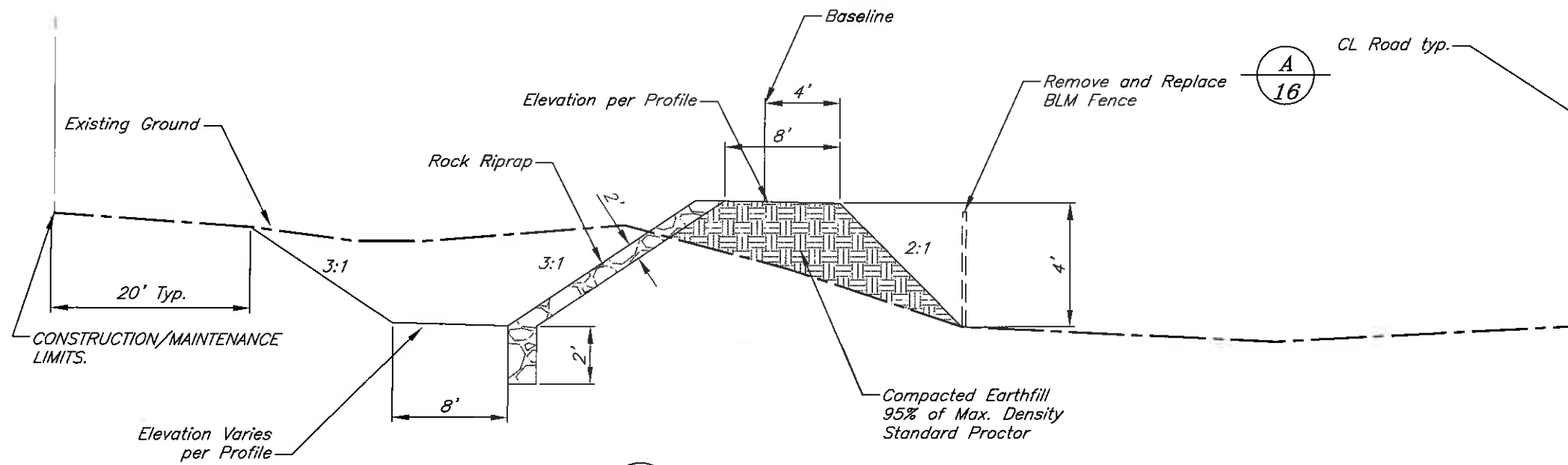
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Date	7/16
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Drawn	LMS
Checked	
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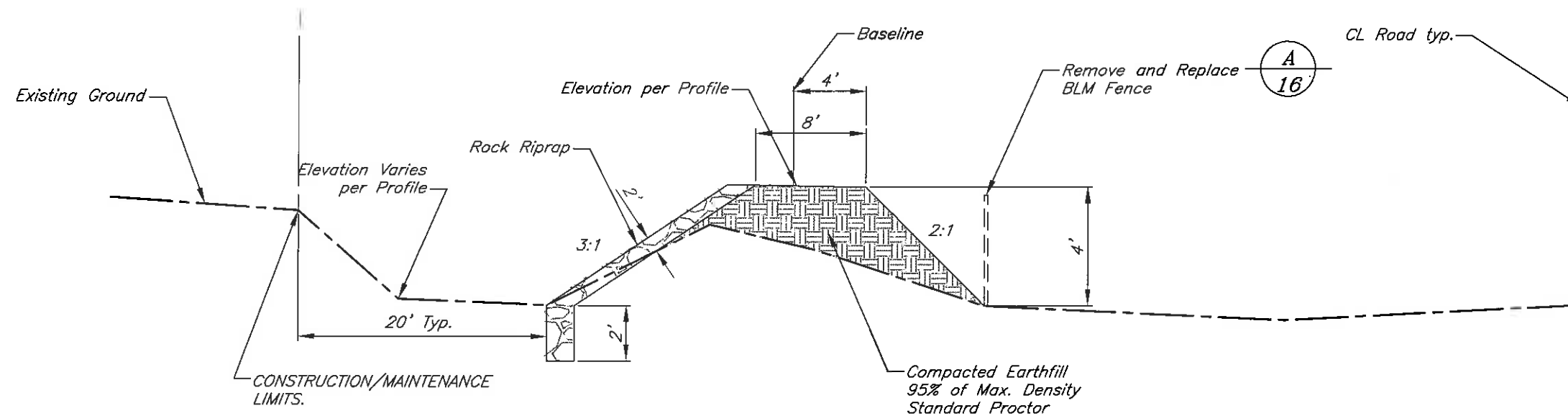
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#402 Dam Floodwater Retarding, # 400 Floodwater Diversion
Washington County, Utah
Job Class V



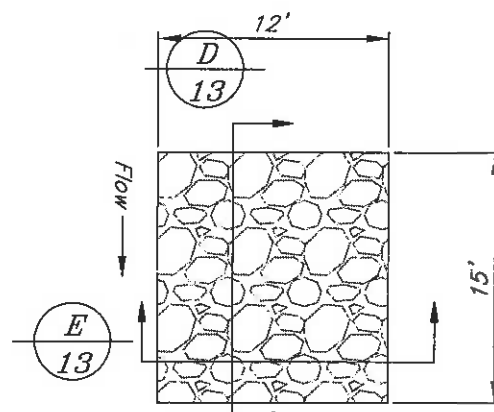
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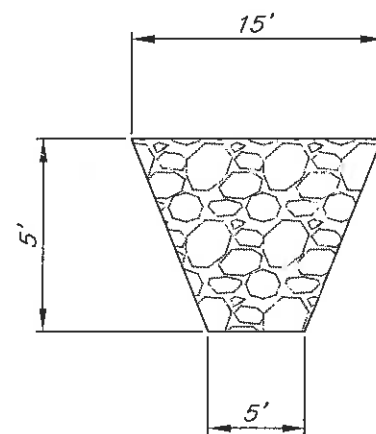
B
13 TYPICAL SECTION VIEW
Sta. 2+95 - 12+50
Sta. 21+00 - 31+50



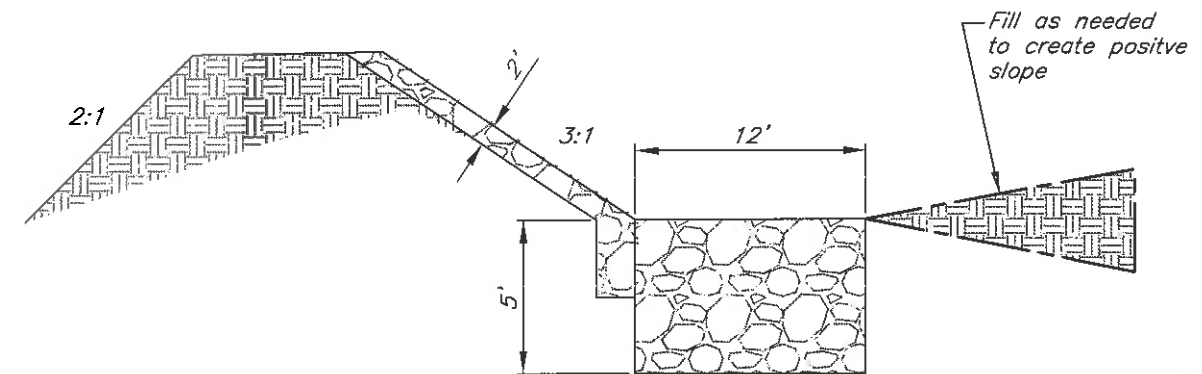
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13 TYPICAL SECTION VIEW
Sta. 0+00 - 2+95



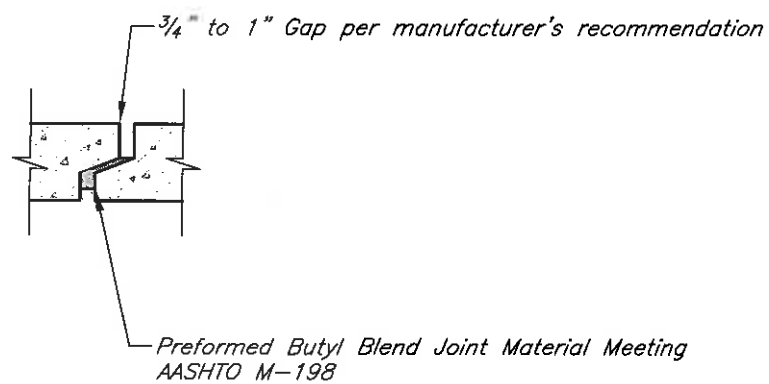
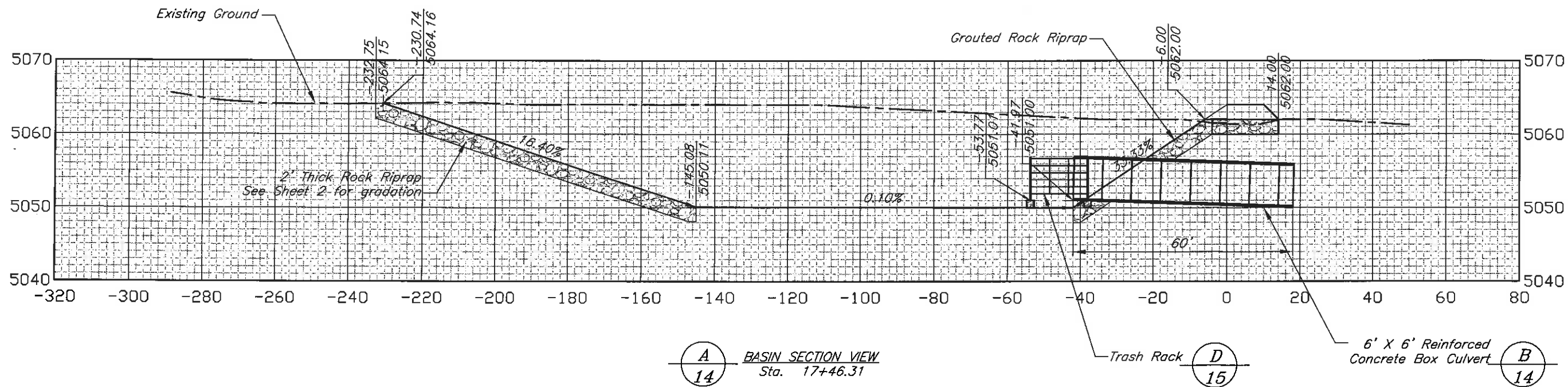
C
13 PLAN VIEW



D
13 SECTION VIEW



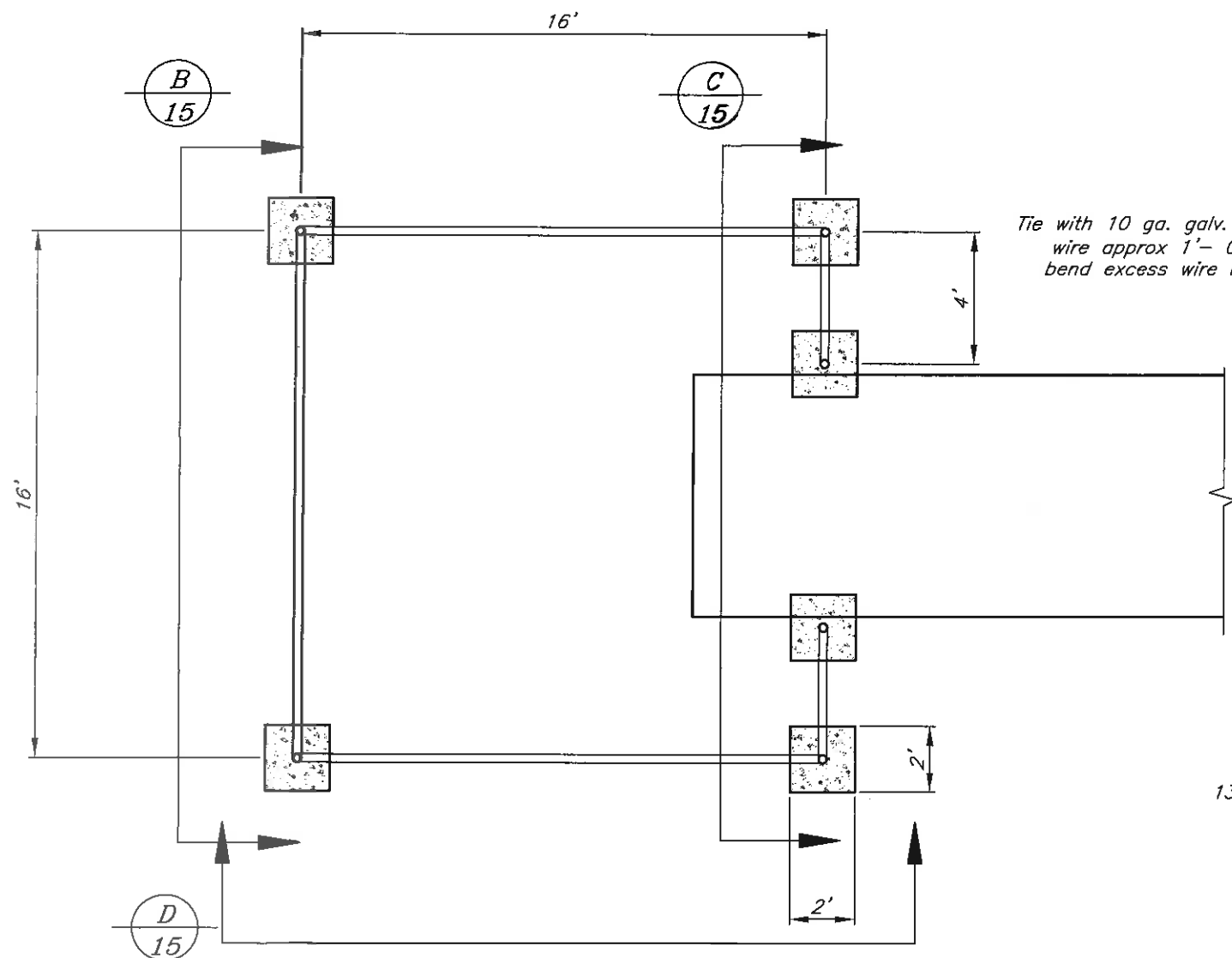
E
13 SECTION VIEW



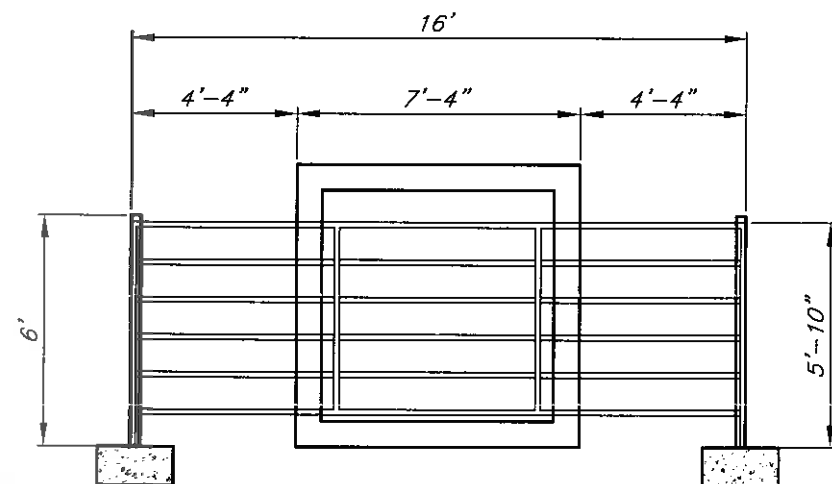
Excess material extruding from the interior of the joint must be removed flush with the box wall, floor, and ceiling.

B
14 Joint Sealant Detail

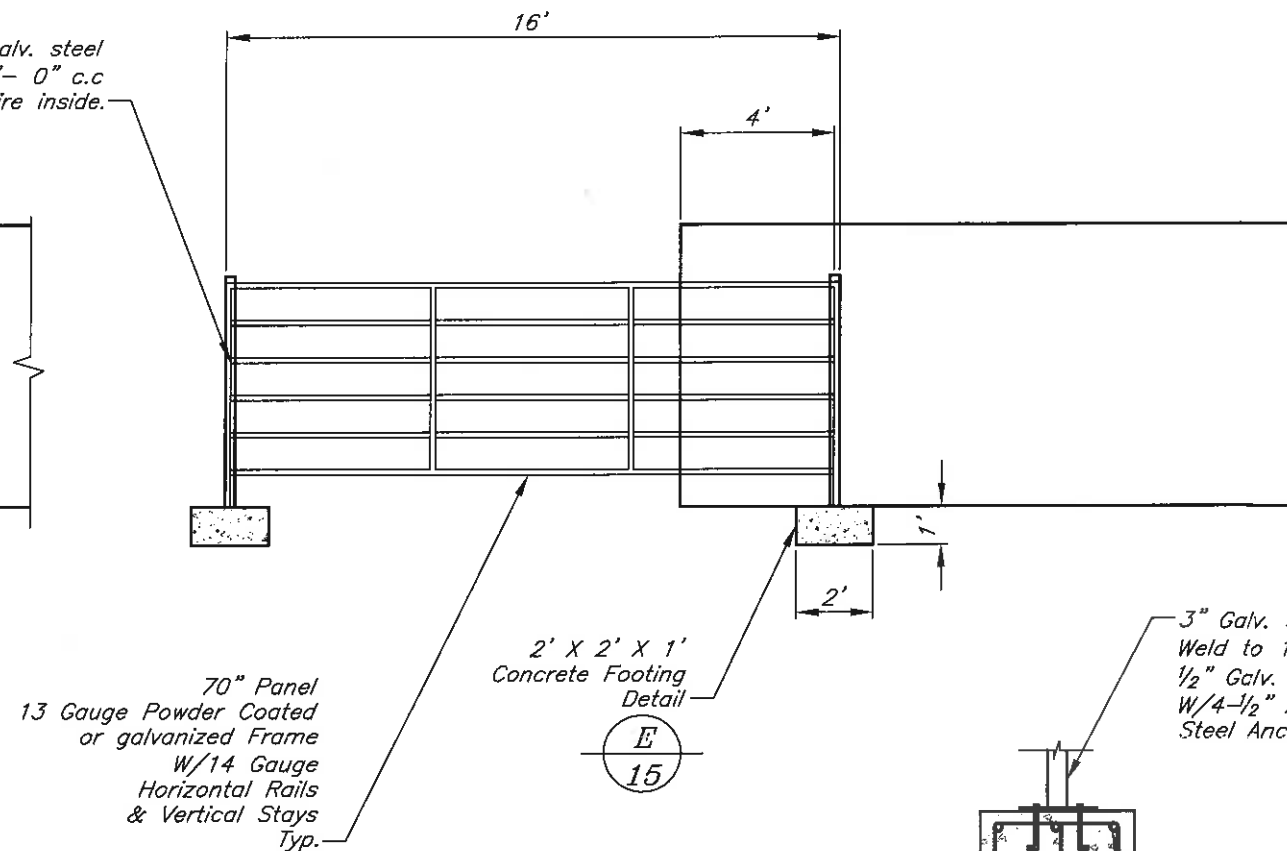
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	Washington County, Utah			
	Job Class V			
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10/31/16 8:37 AM Sheet 14 of 16		Designed LMS Drawn LMS Checked Approved		



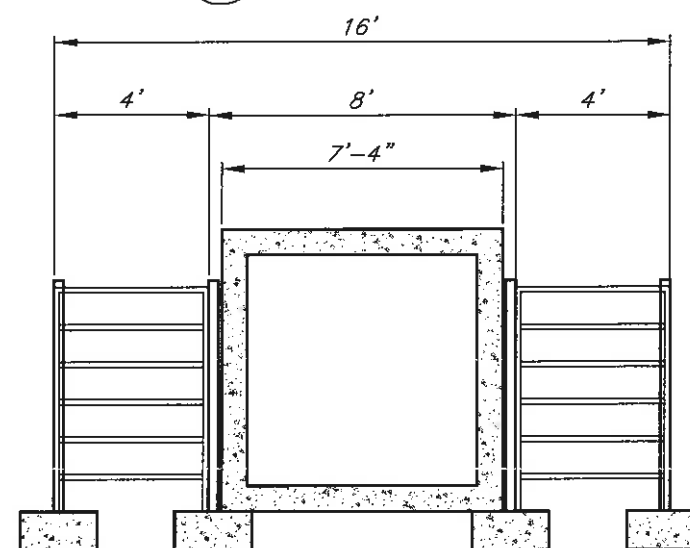
A
14 Trash Rack Plan View



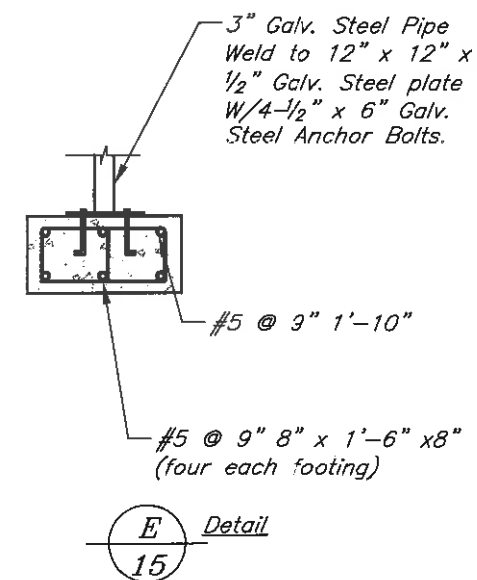
B
15 Section View

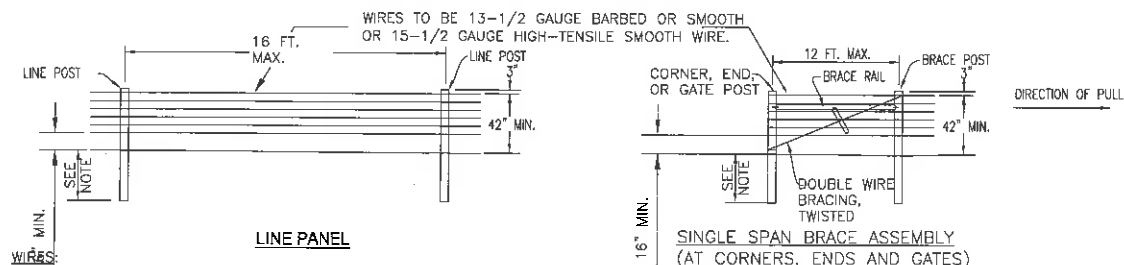


D
15 Section View



C
15 Section View





BARBED WIRE SHALL BE NEW, EITHER ZINC OR ALUMINUM COATED WITH A MINIMUM DOUBLE STRAND STRENGTH OF 950 LBS. CONVENTIONAL BARBED OR SMOOTH WIRE WILL BE AT LEAST 13-1/2 GAUGE. HIGH-TENSILE SMOOTH SINGLE STRAND WIRE WILL BE AT LEAST 15-1/2 GAUGE. ALL WIRE SHALL BE MALLEABLE ENOUGH SO THAT PROPER SPLICES CAN BE MADE WITHOUT DAMAGE TO WIRE OR COATING.

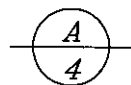
WIRE SPACING:
FOR STANDARD WIRE FENCES (MEASURED FROM THE GROUND) (MORE WIRES CAN BE ADDED TO CONTROL SMALLER ANIMALS IF NEEDED)

3 WIRE: 18", 28", 42"
4 WIRE: 16", 24", 34", 48"
5 WIRE: 16", 28", 36", 44", 58"

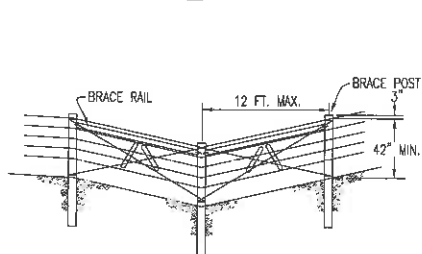
BOTTOM WIRE CANNOT BE A BARBED WIRE AND IS TO BE 16 IN. FROM THE GROUND OF LINE POST IN SOIL.

DEPTH OF LINE POSTS IN MEDIUM TO HEAVY TEXTURED SOILS SHALL BE A MINIMUM OF 24 INCHES EXCEPT FOR STEEL POSTS, WHICH SHALL BE A MINIMUM OF 18 INCHES.

DEPTH OF LINE POSTS IN SANDY OR GRAVELY TEXTURED SOILS SHALL BE A MINIMUM OF 30 INCHES EXCEPT FOR STEEL POSTS, WHICH SHALL BE A MINIMUM OF 24 INCHES.



STANDARD WIRE FENCE DETAILS



BRACING AND ALIGNMENT:

BRACING IS REQUIRED AT ALL CORNERS, GATES, DIRECTION CHANGES, AND STEEP VERTICAL ANGLES IN THE LINE. IN ADDITION, LINE BRACING IS REQUIRED AT INTERVALS TO FACILITATE WIRE STRETCHING.

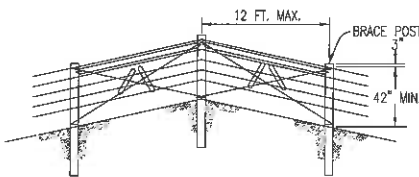
MAXIMUM DISTANCE BETWEEN BRACE PANELS IN THE FENCE LINE SHALL NOT EXCEED 80 RODS ON LEVEL TERRAIN AND SHALL BE INSTALLED AT LESSER INTERVALS WHEREVER HORIZONTAL DIRECTION OF FENCE CHANGES MORE THAN 15° OR WHERE VERTICAL ANGLES CAUSE EXCESSIVE STRAIN ON FASTENERS AND POSTS.

ALL CORNER AND DIRECTION CHANGE BRACES SHALL BE BRACED IN BOTH DIRECTIONS OF THE FENCE. FOR STANDARD "H-TYPE" BRACES, A TENSION MEMBER WILL BE INCORPORATED IN ALL BRACE PANELS. THIS WILL BE COMPOSED OF 4 COMPLETE LOOPS OF 14 GAUGE SMOOTH WIRE OR ITS EQUIVALENT CROSS SECTIONAL AREA IN A HEAVIER GAUGE WIRE.

TENSION WIRE MUST BE AT LEAST 1 IN. BELOW TOP AND BOTTOM OF BRACE POST.

BRACE PANELS SHOULD BE AT LEAST 2:1 RATIO OF BRACE LENGTH TO HEIGHT OF TOP WIRE.

STANDARD DETAIL OVER UNEVEL TERRAIN AND LARGE VERTICAL ANGLES



SINGLE SPAN BRACE ASSEMBLY (AT CORNERS, ENDS AND GATES)

LINE POSTS (SOFT WOOD): MIN. 3 1/2 IN. Ø INSIDE BARK

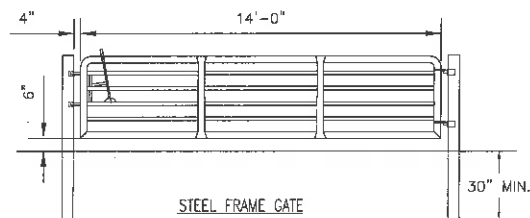
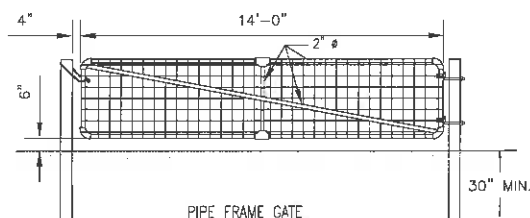
LINE POSTS (HARD WOOD): MIN 2 IN. Ø INSIDE BARK

LINE POSTS (STEEL): STUDDED OR GROOVED T, U, OR Y SHAPED, WITH ANCHOR PLATES. MIN. WEIGHT 1.3 LBS./FT. (EXCLUDING ANCHOR PLATE). TOP WIRE CAN BE 1" FROM THE TOP OF THE POST.

CORNER, END, AND GATE POSTS: MIN 5 IN. DIAM. INSIDE BARK FOR REGULAR WOOD AND 4 IN. MIN. DIAM. INSIDE BARK FOR HARD WOOD.

STEEL GATE POSTS TO BE 2.8 LBS./FT. (EXCLUDING ANCHOR PLATE). DEPTH OF POSTS IN SOIL SHALL BE A MINIMUM OF 30 INCHES.

SPECIES AND TREATMENT FOR ALL WOOD: USE UNTREATED DURABLE POSTS OF SPECIES SUCH AS RED CEDAR, JUNIPER OR OSAGE-ORANGE. NON-DURABLE WOOD SHALL AS A MINIMUM BE TREATED WITH AN APPROVED EPA METHOD SUCH THAT COMPLETE PENETRATION OF THE SAPWOOD SHALL BE OBTAINED. TREATMENT SHALL EXTEND UP THE POST A MINIMUM OF THE BURIAL DEPTH IN THE SOIL SPECIFIED. DO NOT USE RED PINE.

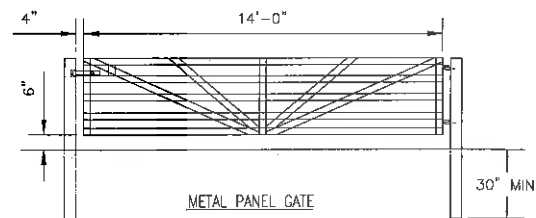


STANDARD GATE PANELS DETAIL

STANDARDS FOR ANCHORING WIRE TO POSTS MUST BE DONE IN ACCORDANCE WITH NRCS UTAH FENCE CODE 382 AND/OR MANUFACTURERS RECOMMENDATIONS.

STANDARDS FOR ENERGIZERS SHOULD BE IN ACCORDANCE WITH NRCS UTAH FENCE CODE 382 AND SHOULD BE SIZED BY MANUFACTURER FOR LENGTH, SIZE AND TYPE OF WIRE.

ADDITIONAL CRITERIA CAN ALSO BE FOUND IN NRCS UTAH FENCE CODE 382



GATES:

WIRE GATES SHALL CONFORM TO THE KINDS, GRADES, AND SIZES SPECIFIED FOR NEW FENCE.

TIMBER GATES SHALL BE CONSTRUCTED OF 2 IN. OR LARGER DIMENSIONAL LUMBER.

COMMERCIAL GATES SHALL BE OF DURABLE MATERIAL AND INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

FABRICATED METAL GATES SHALL BE CONSTRUCTED OF MATERIAL OF QUALITY EQUIVALENT TO AND WITH A LIFE EXPECTANCY OF THE REST OF THE FENCING MATERIAL.

Date 7/16
Designed LMS
Drawn LMS
Checked
Approved

HILDALE EWP PROJECT FENCING

#402 Dam Floodwater Retarding, # 400 Floodwater Diversion

Washington County, Utah

Job Class V

United States Department of Agriculture
USDA
Natural Resources Conservation Service

File No.
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Sheet 16 of 16