MILL CREEK FLOOD RISK MANAGEMENT GENERAL INVESTIGATION

Draft Feasibility Study and Environmental Assessment Report

APPENDIX B, ENGINEERING
ANNEX A, REFERENCE DRAWINGS – PART 2

DRAFT

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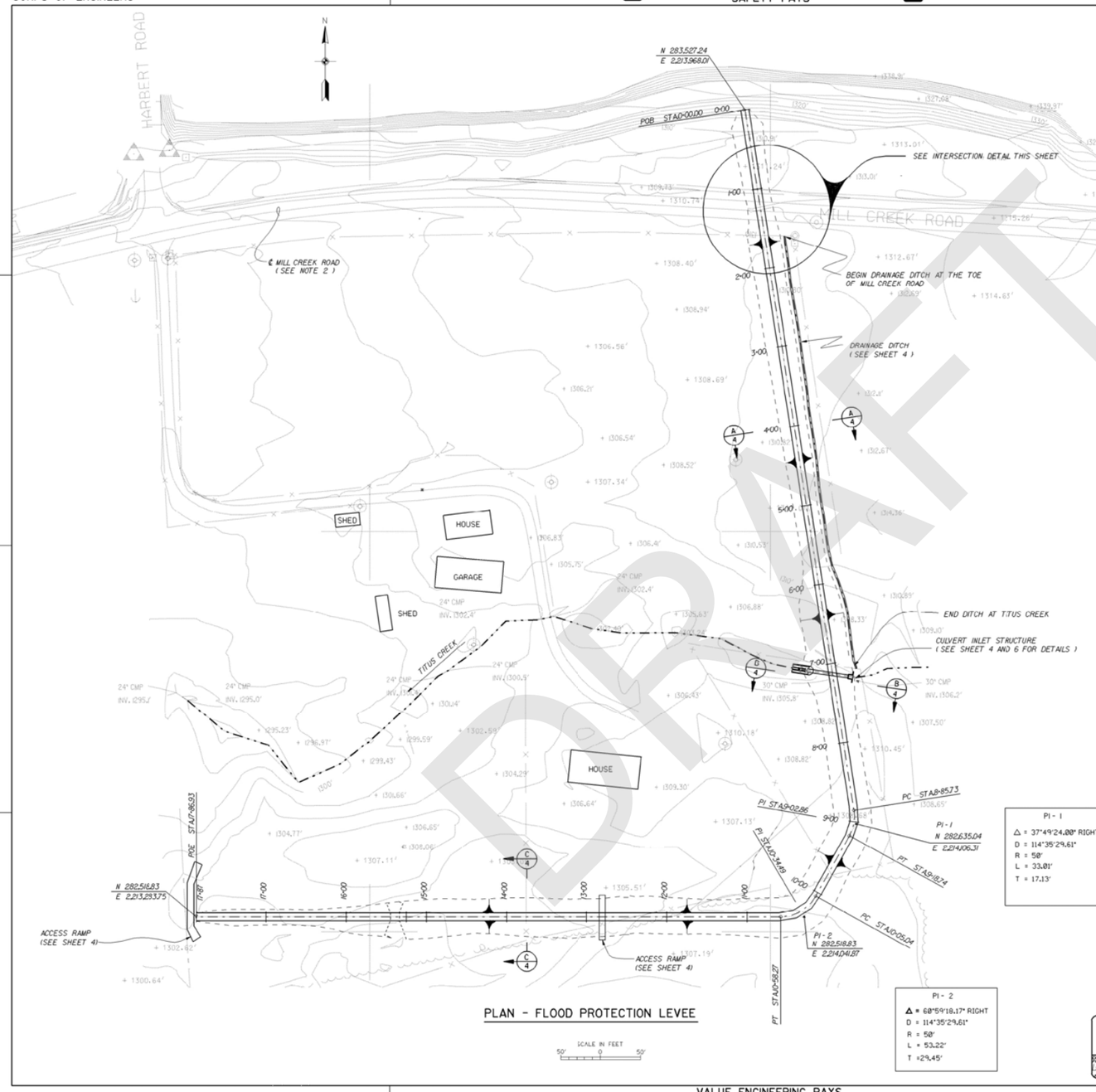
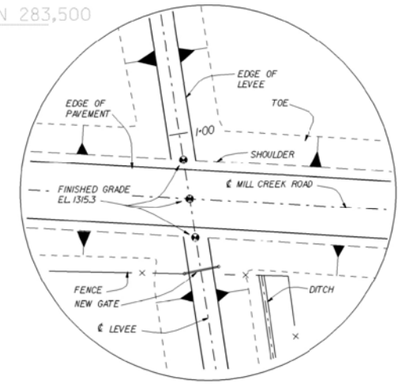
CORPS OF ENGINEERS | SAFETY PAYS | U. S. ARMY



PLAN - FLOOD PROTECTION LEVEE

PI - 1
Δ = 37°49'24.00" RIGHT
D = 114°35'29.61"
R = 50'
L = 33.81'
T = 17.13'

PI - 2
Δ = 68°59'18.17" RIGHT
D = 114°35'29.61"
R = 50'
L = 53.22'
T = 29.45'



DETAIL - ROADWAY AND LEVEE INTERSECTION

SCALE IN FEET
20' 0 20'

NOTES:

1. SEE SHEET 4 FOR LEVEE PROFILE AND SECTIONS
2. FOR MILL CREEK ROAD RELOCATION WORK SEE SHEETS 8-11

LEGEND

- TOP OF LEVEE
- APPROXIMATE TOE OF LEVEE
- ℄ OF LEVEE

REVISION	DATE	DESCRIPTION	CHKD.	APPR.
A	3 JAN 03	AS CONSTRUCTED		

U . S . ARMY ENGINEER DISTRICT
WALLA WALLA, WASHINGTON

SECTION 205 FLOOD CONTROL
MILL CREEK RIGHT BANK LEVEE EXTENSION

LEVEE
PLAN AND DETAIL

DESIGNED BY: JOL MARTIN
DRAWN BY: KD
CHECKED BY: STEVE FINK
SUPERVISED:
CHIEF 1:
SUBMITTED:
CHIEF 2:
RECOMMENDED:
CHIEF:
APPROVED: DATE 15 AUG 2002

SCALE AS SHOWN | INV. NO. 01-B-16
SHEET NO. 3 | FILE NO. MC-1-111/3

COMPUTER AIDED DESIGN & DRAFTING
FILENAME: L:\MCL\cad\mcrl\mcrlc03.dgn
PLOTTING TIME: 06-JAN-2003 16:14

VALUE ENGINEERING PAYS | CONT. NO. 02-C-18

REFERENCE FILES ATTACHED: YES NO
LEVELS ON FOR CONTRACT DRWGS: S
L:\MCL\cad\mcrl\mcrlc03.dgn 06-JAN-2003 16:14

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY:
DRAWN BY:
CHECKED BY:
SUBMITTED BY:
SIZE:
ISSUE DATE: 12/9/2019
SOLICITATION NO.:
CONTRACT NO.:
FILE NO.: MC-1-111/3

U.S.ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
WALLA WALLA, WASHINGTON

MILL CREEK FLOOD CONTROL PROJECT
WALLA WALLA, WASHINGTON
GENERAL INVESTIGATION

RIGHT BANK LEVEE EXTENSION
PLAN AND DETAIL

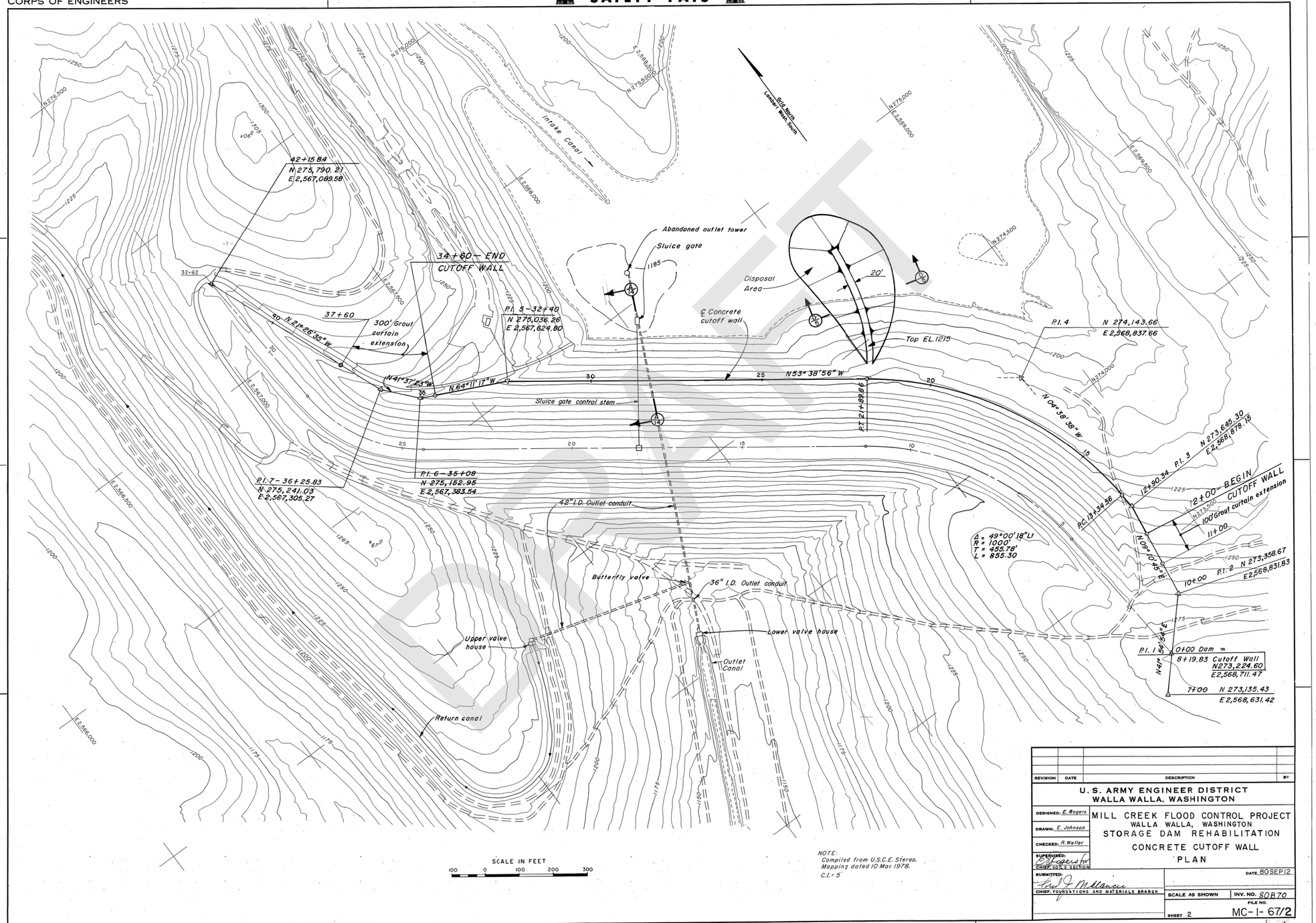
SHEET ID
A-26

DATE AND TIME PLOTTED: 12/9/2019 DESIGN FILE: V:\General Investigations\S.1 Mill Creek - Active\Draft Feasibility Report\V0_Pre-Draft\Appendices\Appendix X - Engineering\Annexes\A - Existing Project Plates\CAD\MCL-GI_A-26.dgn

CORPS OF ENGINEERS

SAFETY PAYS

U. S. ARMY



NOTE:
Compiled from U.S.C.E. Stereo. Mapping dated 10 Mar. 1978.
C.I. = 5'

REVISION	DATE	DESCRIPTION	BY

U. S. ARMY ENGINEER DISTRICT
WALLA WALLA, WASHINGTON

DESIGNED: E. Rogers
DRAWN: E. Johnson
CHECKED: R. Weller
SUPERVISED: E. Rogers for CHIEF, SOILS SECTION
SUBMITTED: [signature] CHIEF, FOUNDATIONS AND MATERIALS BRANCH

MILL CREEK FLOOD CONTROL PROJECT
WALLA WALLA, WASHINGTON
STORAGE DAM REHABILITATION
CONCRETE CUTOFF WALL
PLAN

DATE 80SEP12
SCALE AS SHOWN
INV. NO. 80B70
FILE NO. MC-1-67/2
SHEET 2

VALUE ENGINEERING PAYS

CONT. NO. 81-C-33
VOL. NO.

Rogers - contract
MILL CR. 78-49.2

US Army Corps of Engineers

MARK	DESCRIPTION	DATE

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SUBMITTED BY:
SIZE:
ISSUE DATE: 12/9/2019
SOLICITATION NO.:
CONTRACT NO.:
FILE NO.: MC-1-67/2

U.S.ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
WALLA WALLA, WASHINGTON

MILL CREEK FLOOD CONTROL PROJECT
WALLA WALLA, WASHINGTON
GENERAL INVESTIGATION

STORAGE DAM REHABILITATION
CONCRETE CUTOFF WALL
PLAN

SHEET ID
A-27

DATE AND TIME PLOTTED: 12/9/2019

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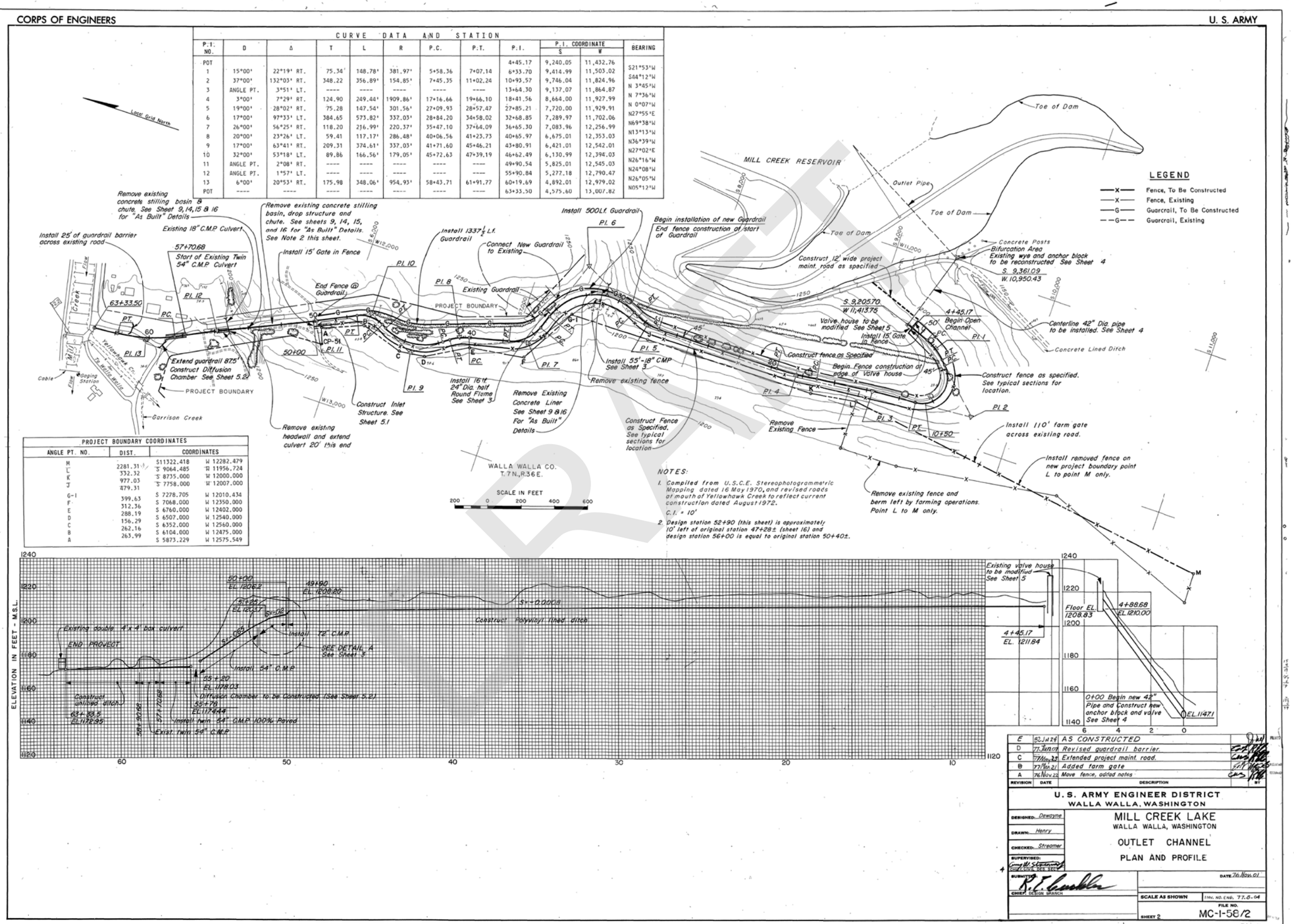
CORPS OF ENGINEERS — U. S. ARMY



CURVE DATA AND STATION											
P.I. NO.	D	Δ	T	L	R	P.C.	P.T.	P.I.	P.I. COORDINATE S	P.I. COORDINATE W	BEARING
POT								4+45.17	9,240.05	11,432.76	
1	15°00'	22°19' RT.	75.34'	148.78'	381.97'	5+58.36	7+07.14	6+33.70	9,414.99	11,503.02	S21°53'W
2	37°00'	132°03' RT.	348.22	356.89'	154.85'	7+45.35	11+02.24	10+93.57	9,746.04	11,824.96	S44°12'W
3	ANGLE PT.	3°51' LT.	----	----	----	----	----	13+64.30	9,137.07	11,864.87	N 3°45'W
4	3°00'	7°29' RT.	124.90	249.44'	1909.86'	17+16.66	19+66.10	18+41.56	8,664.00	11,927.99	N 7°36'W
5	19°00'	28°02' RT.	75.28	147.54'	301.56'	27+09.93	28+57.47	27+85.21	7,720.00	11,929.91	N 0°07'W
6	17°00'	97°33' LT.	384.65	573.82'	337.03'	28+84.20	34+58.02	32+68.85	7,289.97	11,702.06	N27°55'E
7	26°00'	56°25' RT.	118.20	236.99'	220.37'	35+47.10	37+64.09	36+65.30	7,083.96	12,256.99	N69°38'W
8	20°00'	23°26' LT.	59.41	117.17'	286.48'	40+06.56	41+23.73	40+65.97	6,675.01	12,353.03	N13°13'W
9	17°00'	63°41' RT.	209.31	374.61'	337.03'	41+71.60	45+46.21	43+80.91	6,421.01	12,542.01	N36°39'W
10	32°00'	53°18' LT.	89.86	166.56'	179.05'	45+72.63	47+39.19	46+62.49	6,130.99	12,394.03	N27°02'E
11	ANGLE PT.	2°08' RT.	----	----	----	----	----	49+90.54	5,825.01	12,545.03	N26°16'W
12	ANGLE PT.	1°57' LT.	----	----	----	----	----	55+90.84	5,277.18	12,790.47	N24°08'W
13	6°00'	20°53' RT.	175.98	348.06'	954.93'	58+43.71	61+91.77	60+19.69	4,892.01	12,979.02	N26°05'W
POT	----	----	----	----	----	----	----	63+33.50	4,575.60	13,007.82	N05°12'W

PROJECT BOUNDARY COORDINATES			
ANGLE PT. NO.	DIST.	COORDINATES	
M	2281.31	S11322.418	W 12282.479
L	332.32	S 9064.485	W 11956.724
K	977.03	S 8735.000	W 12000.000
J	479.31	S 7758.000	W 12007.000
G-1	399.63	S 7278.705	W 12010.434
F	312.36	S 7068.000	W 12350.000
E	288.19	S 6760.000	W 12402.000
D	156.29	S 6507.000	W 12540.000
C	262.16	S 6352.000	W 12560.000
B	263.99	S 6104.000	W 12475.000
A		S 5873.229	W 12575.549

NOTES:

1. Compiled from U.S.C.E. Stereophotogrammetric Mapping dated 16 May 1970, and revised roads at mouth of Yellowhawk Creek to reflect current construction dated August 1972.
   C.I. = 10'
2. Design station 52+90 (this sheet) is approximately 10' left of original station 47+28± (sheet 16) and design station 56+00 is equal to original station 50+40±.

REVISION	DATE	DESCRIPTION	BY
E	80 Jan 24	AS CONSTRUCTED	
D	77 June 07	Revised guardrail barrier.	
C	77 Nov 23	Extended project maint. road.	
B	77 Nov 21	Added farm gate	
A	76 Nov 22	Move fence, added notes	

U. S. ARMY ENGINEER DISTRICT
WALLA WALLA, WASHINGTON

DESIGNED: Dewayne
DRAWN: Henry
CHECKED: Streamer
SUPERVISED:
SUBMITTED: R. T. Crawford
CHIEF, DESIGN BRANCH

MILL CREEK LAKE
WALLA WALLA, WASHINGTON
OUTLET CHANNEL
PLAN AND PROFILE

DATE 76 Nov 01
SCALE AS SHOWN
INV. NO. ENG. 77.8-04
FILE NO. MC-1-58/2
SHEET 2

Cont. 77C47

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MARK	DESCRIPTION	DATE

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CHECKED BY:
SUBMITTED BY:
SIZE:
ISSUE DATE: 12/9/2019
SOLICITATION NO.:
CONTRACT NO.:
FILE NO.: MC-1-58/2

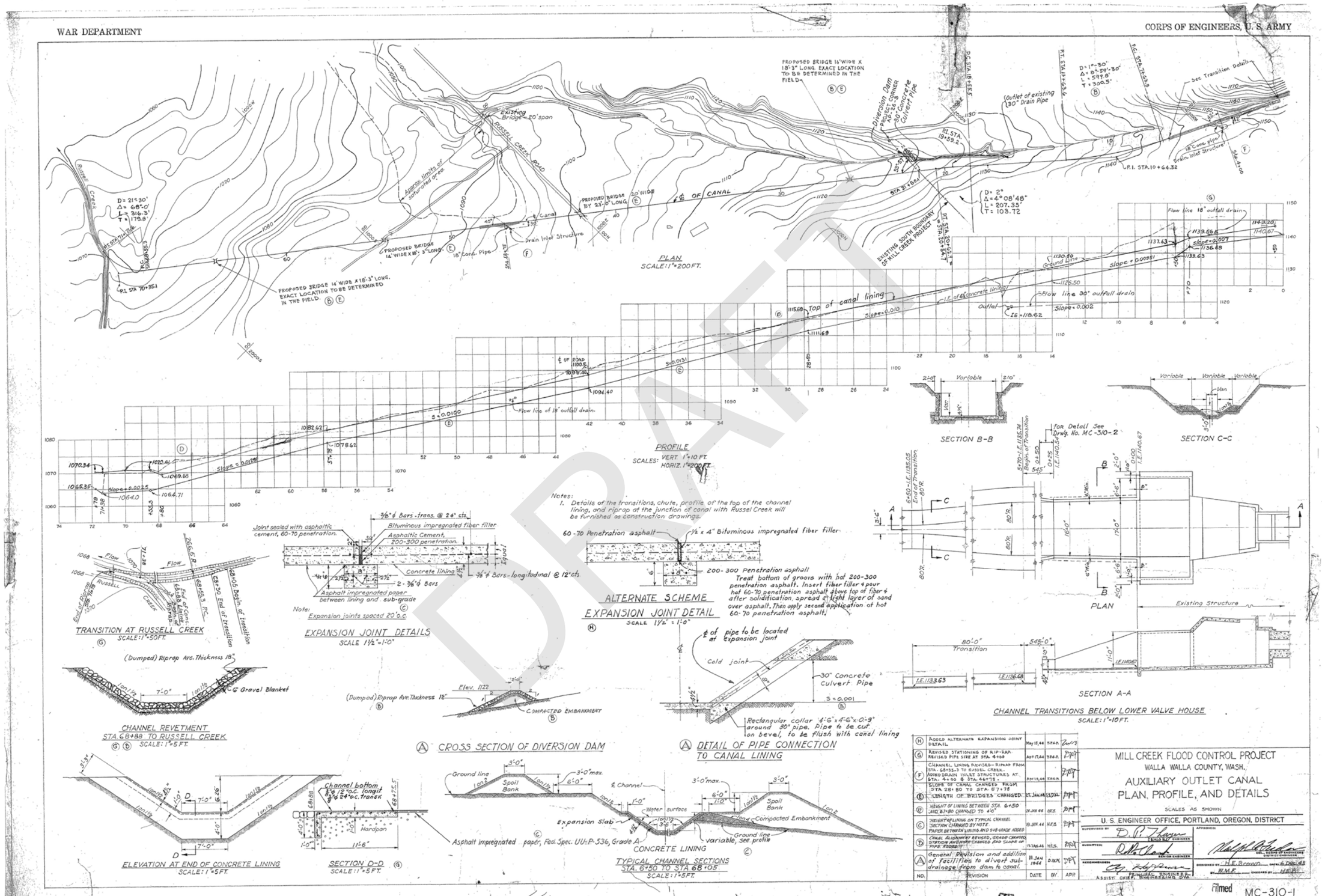
U.S.ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
WALLA WALLA, WASHINGTON

MILL CREEK FLOOD CONTROL PROJECT
WALLA WALLA, WASHINGTON
GENERAL INVESTIGATION

OUTLET CHANNEL
PLAN AND PROFILE

SHEET ID
A-28

DATE AND TIME PLOTTED: 12/9/2019 DESIGN FILE: V:\General Investigations\S.1 Mill Creek - Active\Draft Feasibility Report\V0_Pre-Draft\Appendices\Appendix X - Engineering\Annexes\A - Existing Project Plates\CAD\MCL-GI_A-28.dgn



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US Army Corps of Engineers

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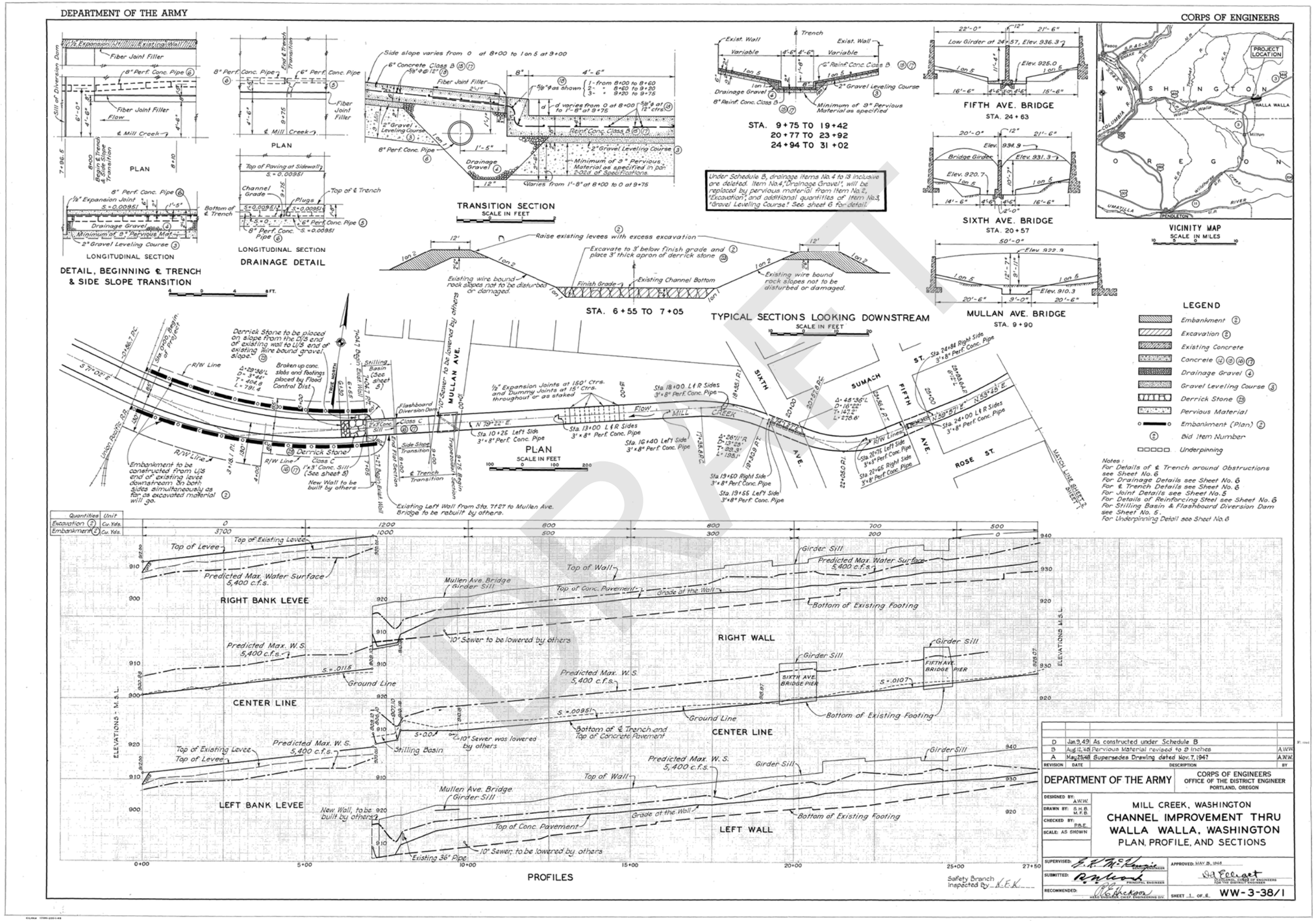
DRAWN BY: | SOLICITATION NO.:
CHECKED BY: | CONTRACT NO.:
SUBMITTED BY: | FILE NO.: MC-310-1
SIZE:

U.S.ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
WALLA WALLA, WASHINGTON

MILL CREEK FLOOD CONTROL PROJECT
WALLA WALLA, WASHINGTON
GENERAL INVESTIGATION

AUXILIARY OUTLET CANAL
PLAN, PROFILE, AND DETAILS

SHEET ID
A-29



US Army Corps of Engineers

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SUBMITTED BY:
SIZE:
ISSUE DATE: 12/9/2019
SOLICITATION NO.:
CONTRACT NO.:
FILE NO.: WW-3-38/1

U.S.ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
WALLA WALLA, WASHINGTON

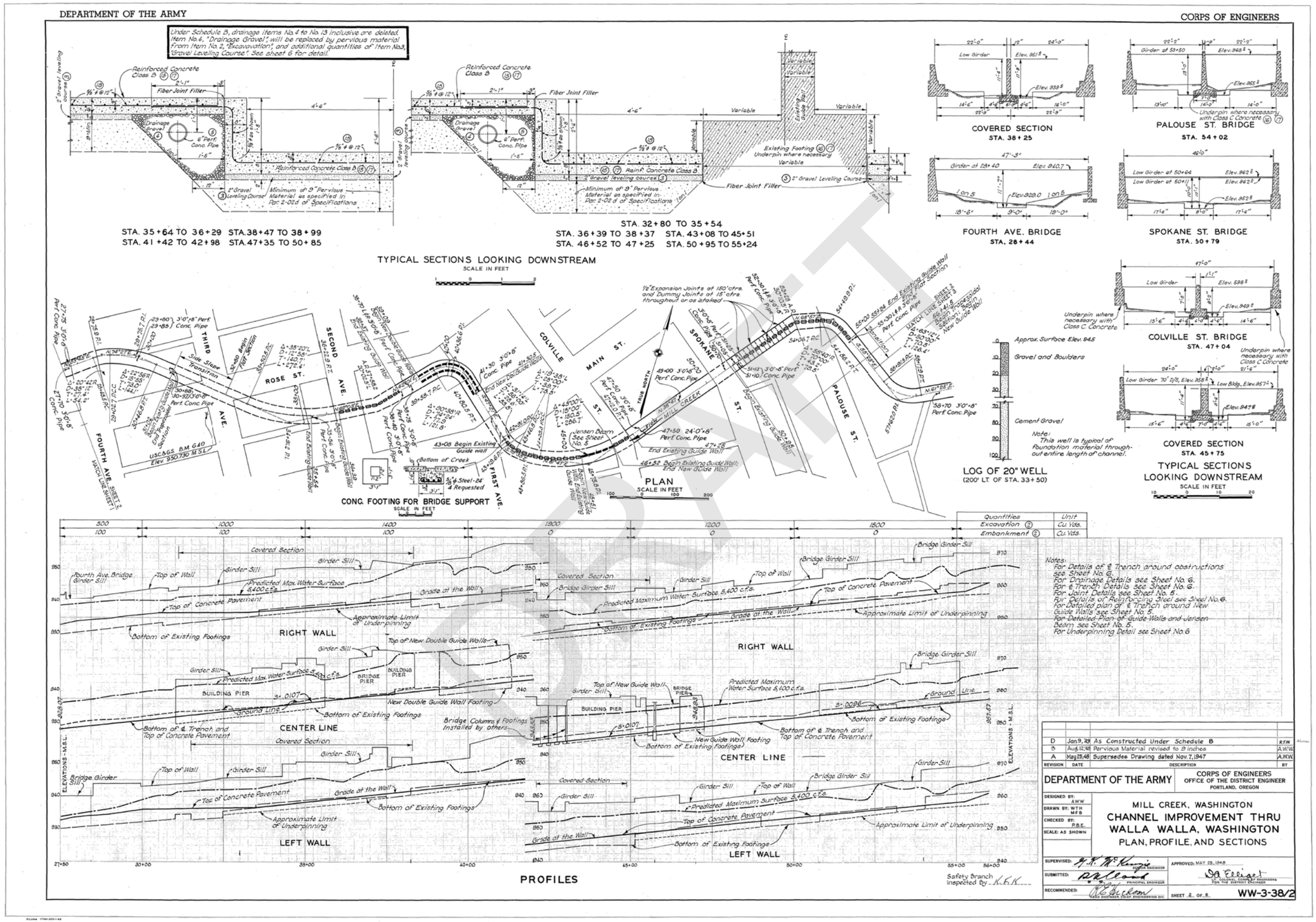
MILL CREEK FLOOD CONTROL PROJECT
WALLA WALLA, WASHINGTON
GENERAL INVESTIGATION

CHANNEL IMPROVEMENT THROUGH
WALLA WALLA, WASHINGTON
PLAN, PROFILE, AND SECTIONS

SHEET ID
A-30

DATE AND TIME PLOTTED: 12/9/2019

DESIGN FILE: V:\General Investigations\S.1 Mill Creek - Active\Draft Feasibility Report\V0_Pre-Draft\Appendices\Appendix X - Engineering\Annexes\A - Existing Project Plates\CAD\MCL-GI_A-30.dgn



B-Annex A-31

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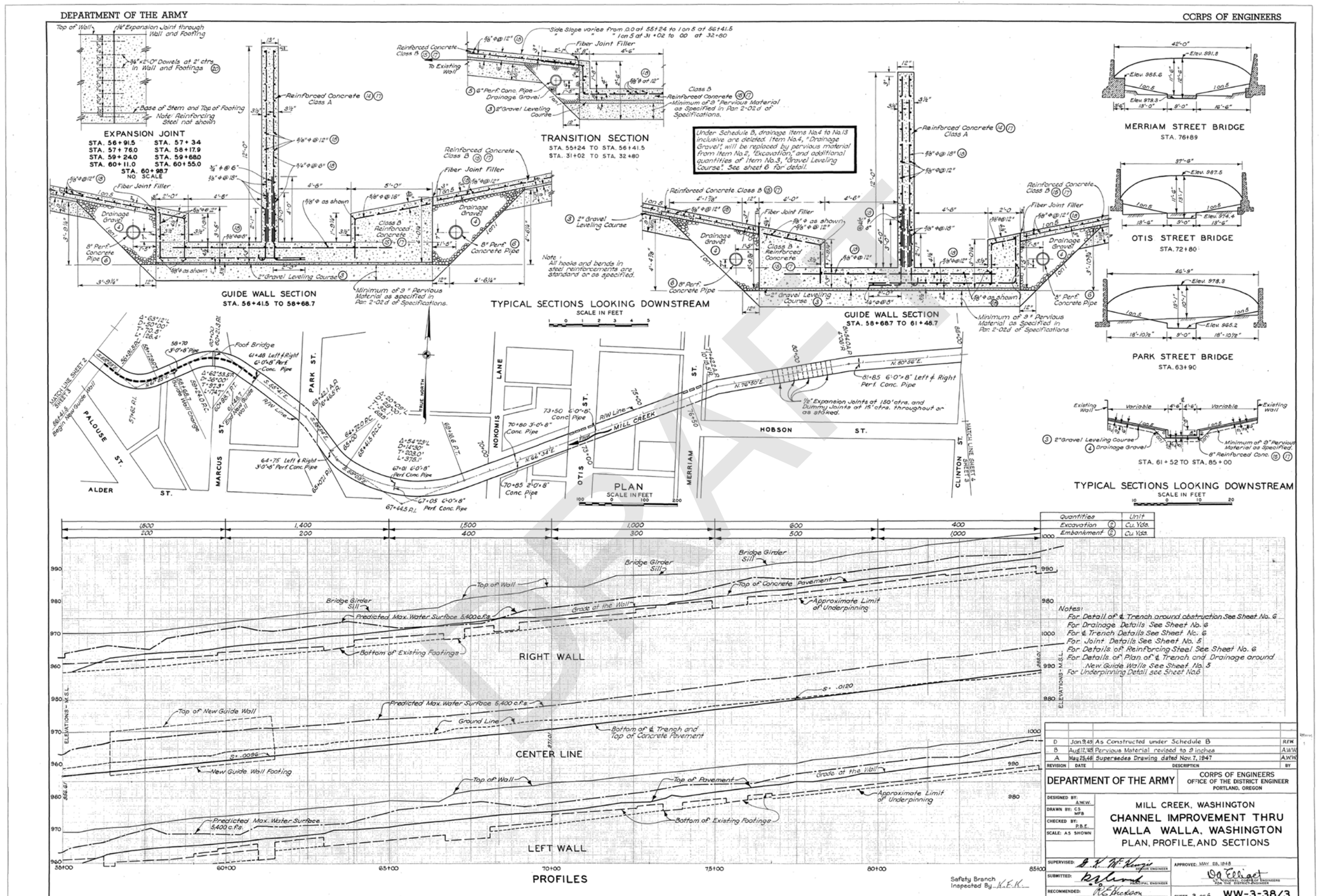
SUBMITTED BY:
SIZE:
ISSUE DATE: 12/9/2019
SOLICITATION NO.:
CONTRACT NO.:
FILE NO.: WW-3-38/2

U.S.ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
WALLA WALLA, WASHINGTON

MILL CREEK FLOOD CONTROL PROJECT
WALLA WALLA, WASHINGTON
GENERAL INVESTIGATION

CHANNEL IMPROVEMENT THROUGH
WALLA WALLA, WASHINGTON
PLAN, PROFILE, AND SECTIONS

SHEET ID
A-31



US Army Corps of Engineers

MARK	DESCRIPTION	DATE

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CHECKED BY:
SUBMITTED BY:
SIZE:
ISSUE DATE: 12/9/2019
SOLICITATION NO.:
CONTRACT NO.:
FILE NO.: WW-3-38/3

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
WALLA WALLA, WASHINGTON

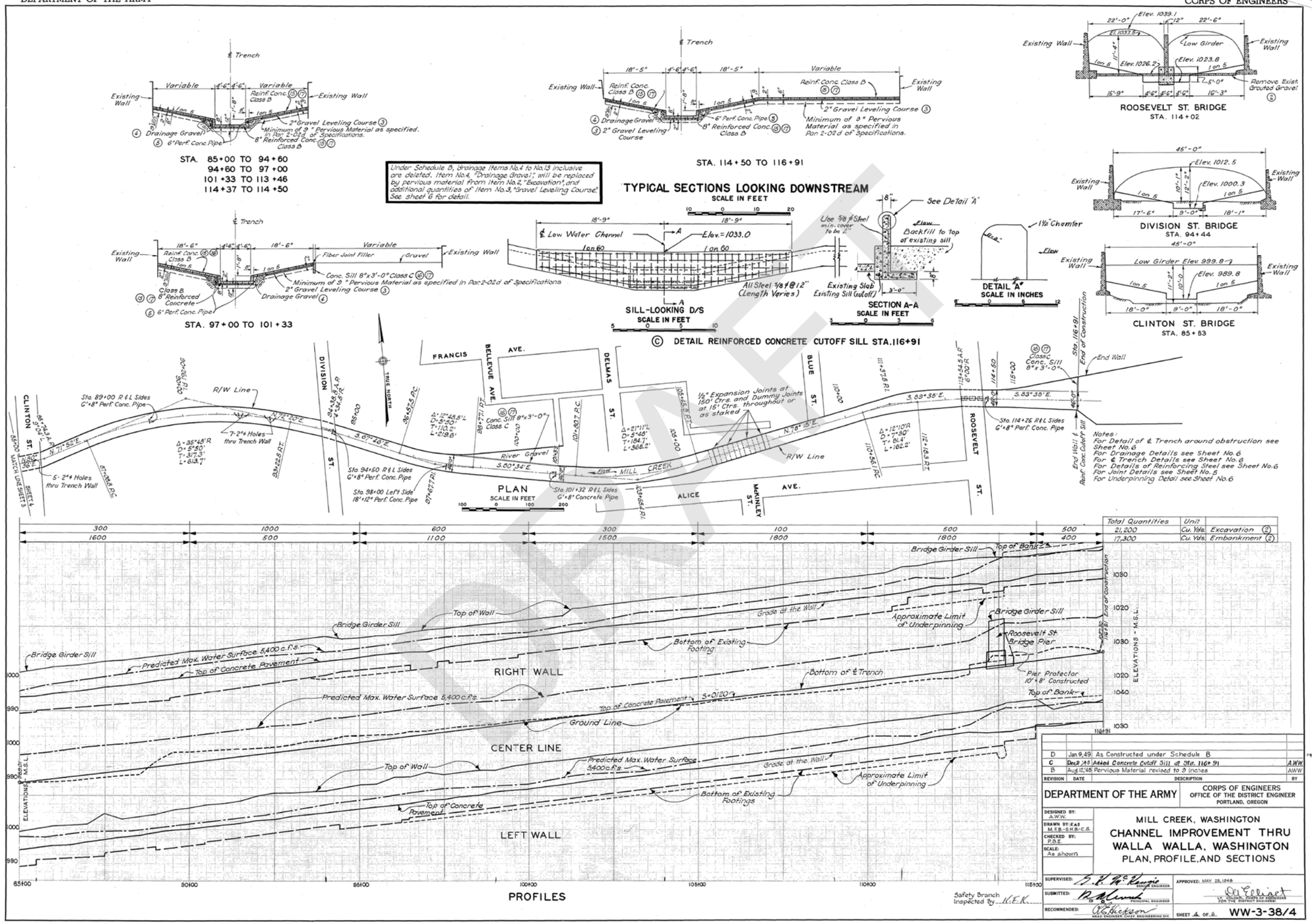
MILL CREEK FLOOD CONTROL PROJECT
WALLA WALLA, WASHINGTON
GENERAL INVESTIGATION

CHANNEL IMPROVEMENT THROUGH
WALLA WALLA, WASHINGTON
PLAN, PROFILE, AND SECTIONS

SHEET ID
A-32

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS



US Army Corps of Engineers

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DESIGNED BY: | ISSUE DATE: 12/9/2019
DRAWN BY: | SOLICITATION NO.:
CHECKED BY: | CONTRACT NO.:
SUBMITTED BY: | FILE NO.: WW-3-3814
SIZE:

U.S.ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
WALLA WALLA, WASHINGTON

MILL CREEK FLOOD CONTROL PROJECT
WALLA WALLA, WASHINGTON
GENERAL INVESTIGATION

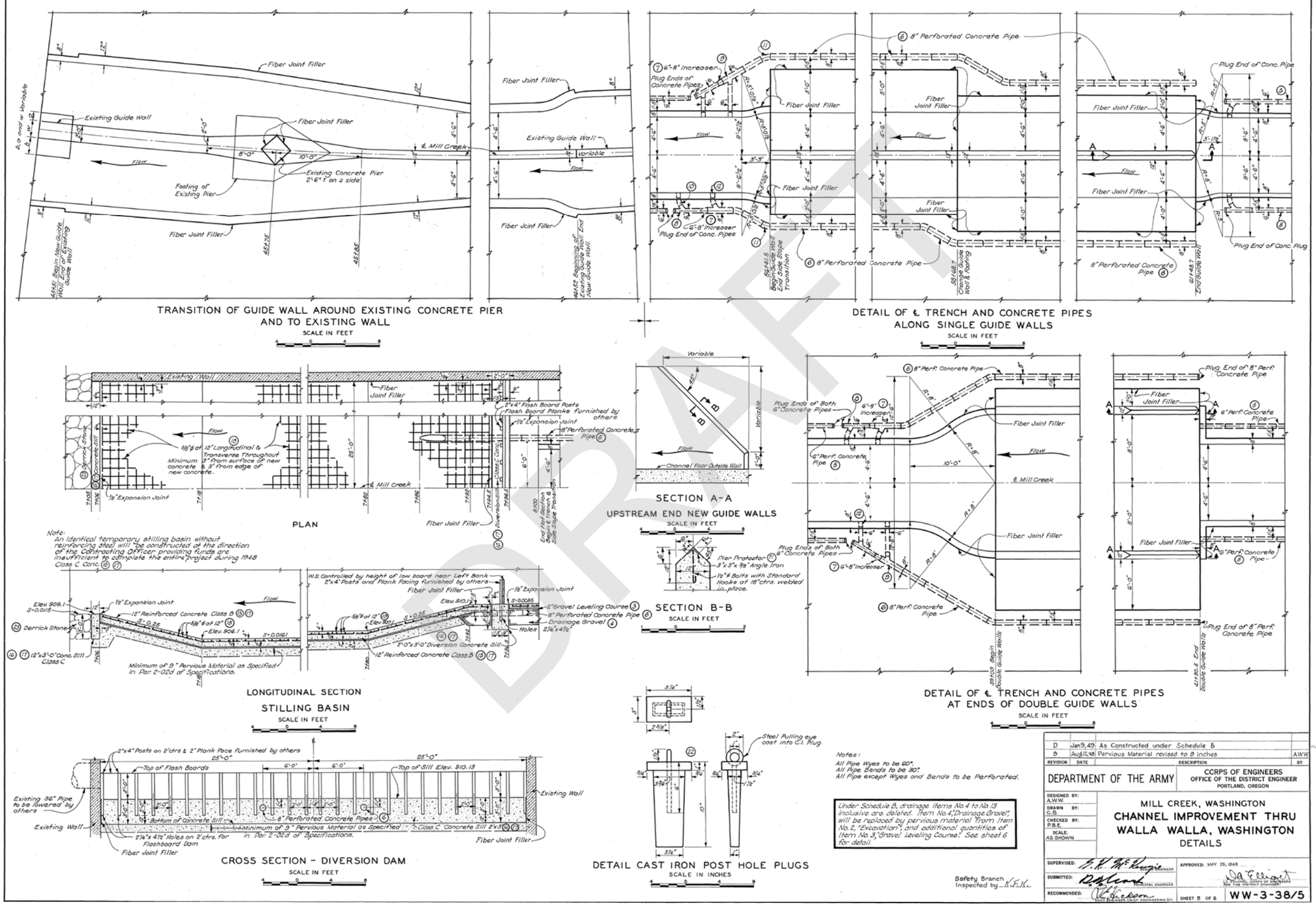
CHANNEL IMPROVEMENT THROUGH
WALLA WALLA, WASHINGTON
PLAN, PROFILE, AND SECTIONS

SHEET ID
A-33

DATE AND TIME PLOTTED: 12/9/2019 DESIGN FILE: V:\General Investigations\S.1 Mill Creek - Active\Draft Feasibility Report\V0_Pre-Draft\Appendices\Appendix X - Engineering\Annexes\A - Existing Project Plates\CAD\MCL-GI_A-33.dgn

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS



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US Army Corps of Engineers

MARK	DESCRIPTION	DATE

ISSUE DATE: 12/9/2019
SOLICITATION NO.:
CONTRACT NO.:
FILE NO.: WW-3-38/5
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CHECKED BY:
SUBMITTED BY:
SIZE:

U.S.ARMY ENGINEER DISTRICT CORPS OF ENGINEERS WALLA WALLA, WASHINGTON

MILL CREEK FLOOD CONTROL PROJECT WALLA WALLA, WASHINGTON GENERAL INVESTIGATION

CHANNEL IMPROVEMENT THROUGH WALLA WALLA, WASHINGTON DETAILS

SHEET ID

A-34

DATE AND TIME PLOTTED: 12/9/2019

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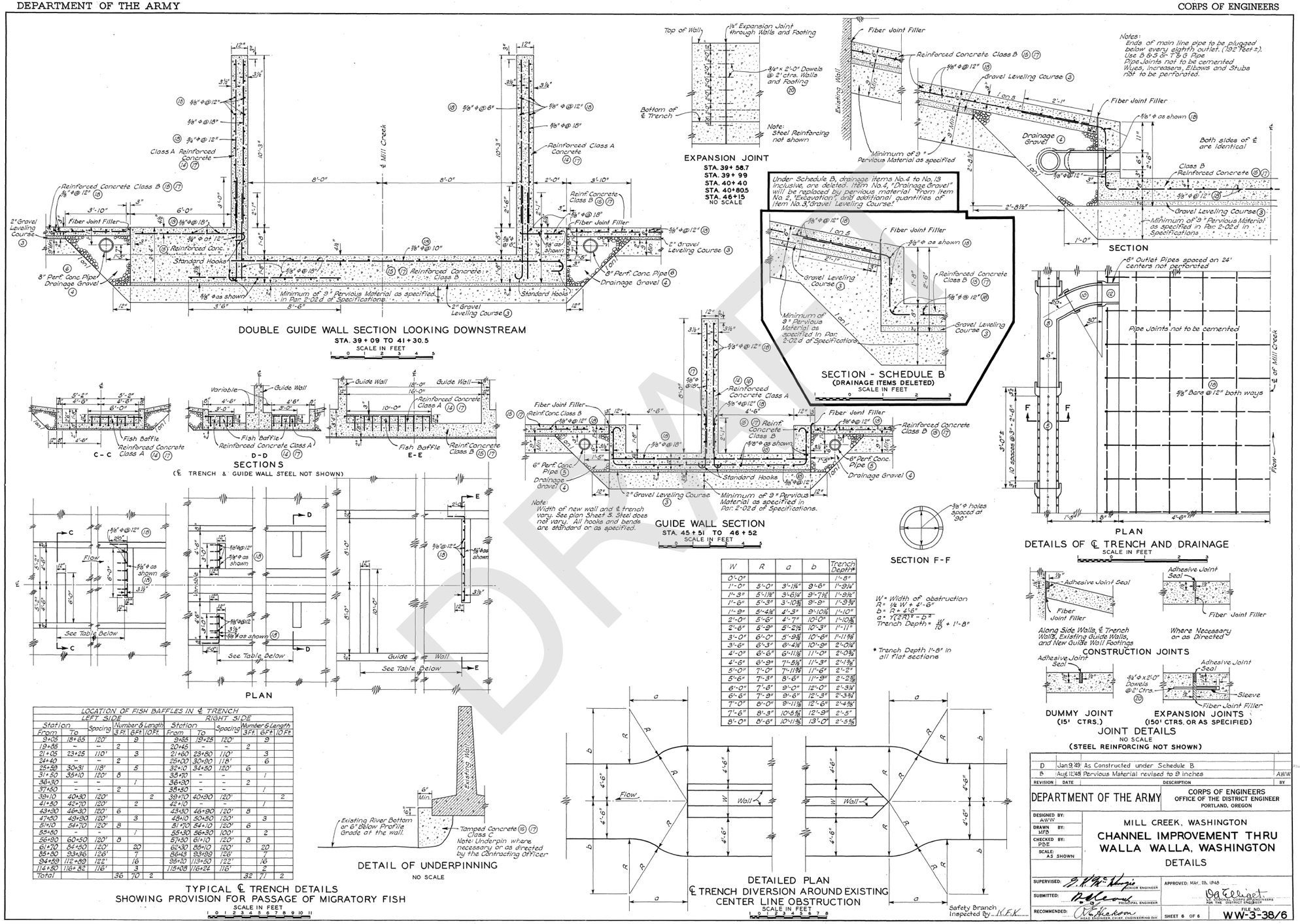
DEPARTMENT OF THE ARMY — CORPS OF ENGINEERS



W	R	a	b	Trench Depth*
0'-0"				1'-8"
1'-0"	5'-0"	3'-1⅛"	9'-6"	1'-9¼"
1'-3"	5'-1½"	3'-6¼"	9'-7½"	1'-9⅛"
1'-6"	5'-3"	3'-10⅜"	9'-9"	1'-9¾"
1'-9"	5'-4½"	4'-3"	9'-10½"	1'-10"
2'-0"	5'-6"	4'-7"	10'-0"	1'-10⅜"
2'-6"	5'-9"	5'-2½"	10'-3"	1'-11"
3'-0"	6'-0"	5'-9⅜"	10'-6"	1'-11⅝"
3'-6"	6'-3"	6'-4¼"	10'-9"	2'-0¼"
4'-0"	6'-6"	6'-11⅛"	11'-0"	2'-0¾"
4'-6"	6'-9"	7'-5½"	11'-3"	2'-1⅞"
5'-0"	7'-0"	7'-11⅜"	11'-6"	2'-2"
5'-6"	7'-3"	8'-6"	11'-9"	2'-2⅝"
6'-0"	7'-6"	9'-0"	12'-0"	2'-3¼"
6'-6"	7'-9"	9'-6"	12'-3"	2'-3¾"
7'-0"	8'-0"	9'-11⅞"	12'-6"	2'-4⅜"
7'-6"	8'-3"	10'-5⅝"	12'-9"	2'-5"
8'-0"	8'-6"	10'-11⅜"	13'-0"	2'-5⅝"

LOCATION OF FISH BAFFLES IN ℄ TRENCH

LEFT SIDE					RIGHT SIDE				
Station		Spacing	Number & Length		Station		Spacing	Number & Length	
From	To		3 Ft	6 Ft	10 Ft	From	To		3 Ft	6 Ft	10 Ft
9+05	18+65	120'		9		9+35	19+25	120'		9	
19+85	–	–	2			20+45	–	–	2		
21+05	23+25	110'		3		21+60	23+80	110'		3	
24+40	–	–	2			25+00	30+30	118'		6	
25+59	30+31	118'		5		32+10	34+50	120'	6		
31+50	35+10	120'	8			35+70	–	–		1	
36+30	–	–		1		36+90	–	–	2		
37+60	–	–	2			38+30	–	–		1	
39+10	40+30	120'			2	39+70	40+90	120'			2
41+50	42+70	120'		2		42+10	–	–		1	
43+90	46+30	120'	6			43+30	46+90	120'	8		
47+50	49+90	120'		3		48+10	50+50	120'		3	
51+10	54+70	120'	8			51+70	54+10	120'	6		
55+80	–	–		1		55+30	56+30	100'		2	
56+90	60+50	120'	8			57+50	61+10	120'	8		
61+70	64+50	120'		20		62+30	65+10	120'		20	
65+50	93+95	126'		7		66+43	93+99	126'		7	
94+59	112+59	122'		16		95+20	113+50	122'		16	
114+50	116+82	116'		3		115+08	116+24	116'		2	
Total			36	70	2				32	71	2

REVISION	DATE	DESCRIPTION	BY
D	Jan 9 '49	As Constructed under Schedule B	
B	Aug 12 '48	Pervious Material revised to 9 inches	AWW

DEPARTMENT OF THE ARMY — CORPS OF ENGINEERS, OFFICE OF THE DISTRICT ENGINEER, PORTLAND, OREGON

DESIGNED BY: AWW
DRAWN BY: MFB
CHECKED BY: PDE
SCALE: AS SHOWN

MILL CREEK, WASHINGTON
CHANNEL IMPROVEMENT THRU WALLA WALLA, WASHINGTON
DETAILS

SUPERVISED: SENIOR ENGINEER
SUBMITTED: PRINCIPAL ENGINEER
RECOMMENDED: HEAD ENGINEER, CHIEF, ENGINEERING DIV.
APPROVED: MAY 25, 1948 — D.A. Elliott, Colonel, Corps of Engineers, For the District Engineer
SHEET 6 OF 6 — FILE NO. WW-3-38/6

US Army Corps of Engineers®

MARK	DESCRIPTION	DATE

DESIGNED BY: | ISSUE DATE: 12/9/2019
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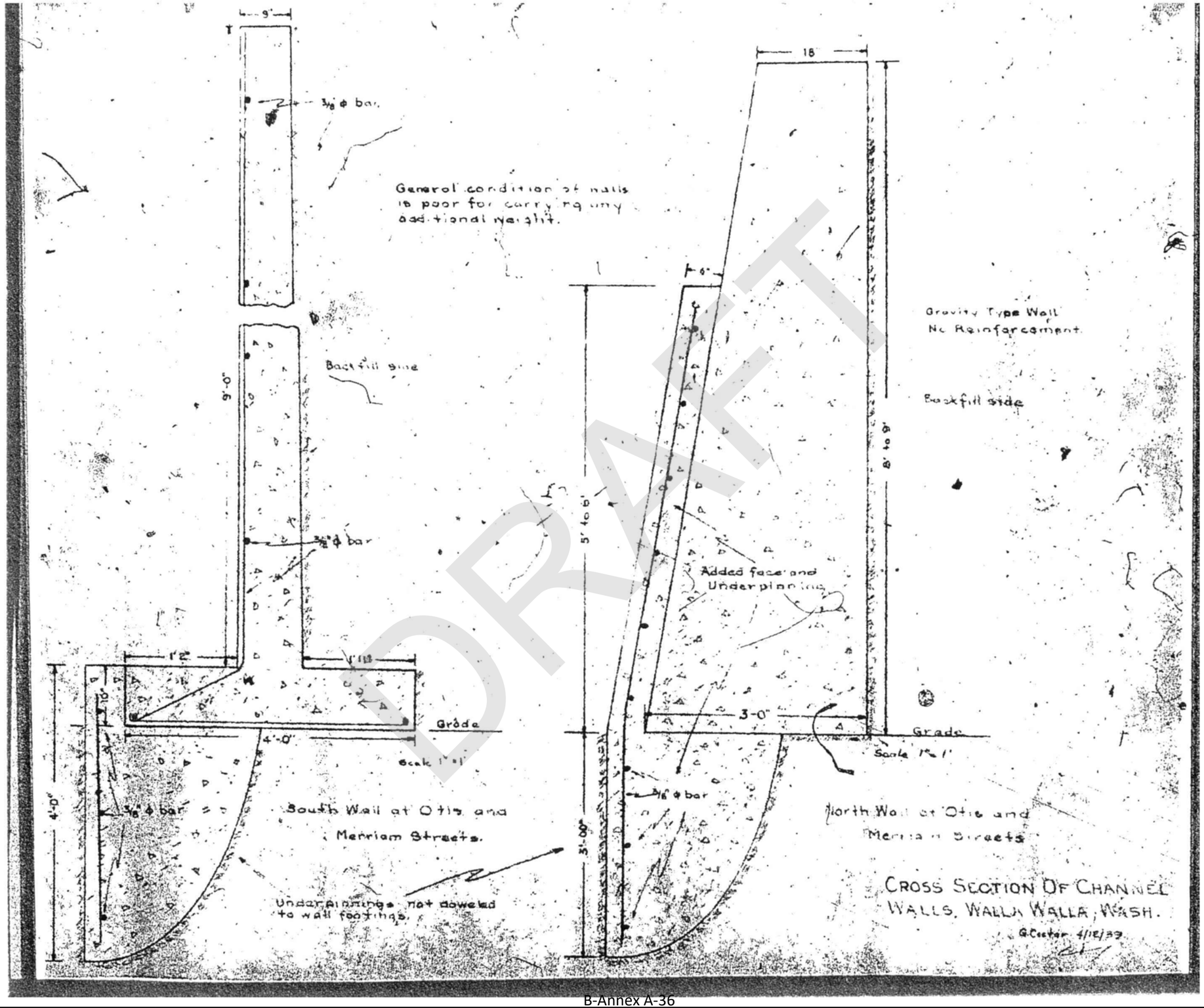
CHECKED BY: | CONTRACT NO.:
SUBMITTED BY: | FILE NO.: WW-3-38/6
SIZE:

U.S.ARMY ENGINEER DISTRICT, CORPS OF ENGINEERS, WALLA WALLA, WASHINGTON

MILL CREEK FLOOD CONTROL PROJECT, WALLA WALLA, WASHINGTON, GENERAL INVESTIGATION

CHANNEL IMPROVEMENT THROUGH WALLA WALLA, WASHINGTON, DETAILS

SHEET ID: A-35



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US Army Corps of Engineers®

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U.S.ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS
WALLA WALLA, WASHINGTON

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CHECKED BY:
SUBMITTED BY:
SIZE:

ISSUE DATE: 12/9/2019
SOLICITATION NO.:
CONTRACT NO.:
FILE NO.: WW-2-386

MILL CREEK FLOOD CONTROL PROJECT
WALLA WALLA, WASHINGTON
GENERAL INVESTIGATION

CROSS SECTION OF CHANNEL
WALLA WALLA, WASHINGTON
NORTH WALL AT OTIS AND MERRIAM STREETS

SHEET ID
A-36