EMERGENCY RELIEF HIGHWAY
PROJECT Nº ER-50-A(1)

FED. RD. DIST. NO.	STATE	E.R.H. PROJECT	FISCAL YEAR
10	OHIO	Nº ER50-A(1)	1937

1/34

S.H. 7 SEC. S(PT.) ATHALIA (PT.)
LAWRENCE COUNTY

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

OHIO RIVER ROAD

S.H. Nº. 7 SEC. S PT. ATHALIA PT.

LAWRENCE COUNTY

ROME TOWNSHIP
VILLAGE OF ATHALIA

CONVENTIONAL SIGNS

- STATE LINE
- CITY OR VILLAGE LINE
- STEAM RAIL ROAD
- CENTER LINE
- FENCE LINE
- PROPERTY LINE
- NEW PIPE
- STRUCTURE LINES (OLD TO BE REMOVED)

INDEX OF SHEETS

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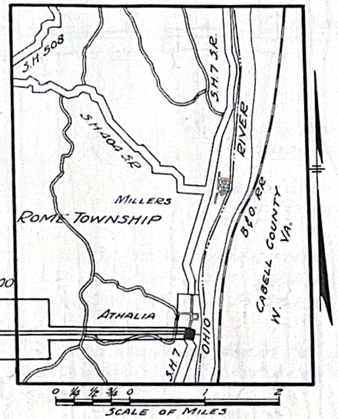
LINE DATA

Beginning of E.R.50-A(1) Sta. 14+50
End of E.R.50-A(1) Sta. 41+00
Gross length of E.R.50-A(1) 2650 Lin. Ft.
No deductions or additions
Net length of E.R.50-A(1) 2650 Lin. Ft. or 0.501 mi.



LOCATION MAP

PORTION TO BE IMPROVED
STATE HIGHWAYS
COUNTY ROADS
DELIVERY POINT VIA RAIL C&O & B&O RRs. HUNTINGTON W.VA.
DELIVERY POINT VIA RIVER ATHALIA O.
AVERAGE HAUL 6 MILES

SCALES

TYPICAL SECTION	1"=2'
PLAN	1"=100'
PROFILE HORIZ.	1"=100'
PROFILE VERT.	1"=10'
CROSS SECTIONS	1"=5'
CHANNEL PLAN	1"=50'
CHANNEL SECTIONS	1"=5'
STRUCT. 20' SPAN & UNDER	1"=5'

SUPPLEMENTAL PRINTS OF STANDARD CONST. DRAWINGS

DRAWINGS	DATE
E-5	7-12-35
S-27, P.C-2	4-20-36
S-27, PC-3	1-1-36
I-8, CB 1-2, 2-2	11-12-35
I-8, I Nº 1	1-1-36
I-1, 2, 3, 4 & 5	1-1-36
G-7.07	10-1933

The Standard Specifications of the State of Ohio, Department of Highways, including changes and Supplemental Specifications listed in the proposal, shall govern this improvement.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that traffic will be maintained as provided by these plans and estimates.

The Right of Way necessary for this improvement will be provided by the State of Ohio.

Approved _____
Date _____ Resident District Deputy Director

Approved Joseph N. Doyle P.E. 1209
Date 11/3/37 Resident Division Deputy Director

Approved _____
Date _____ Chief Engineer, Bureau Maintenance

Approved J.P. Burkey P.E. #45
Date 7-8-38 Chief Engineer, Bureau Bridges

Approved K.L. Rothermund P.E. #83
Date 7/12/38 Chief Engineer Location & Design

Approved [signature]
Date 7-12-38 First Assistant Director & Chief Engr.

Approved John Jaster Jr.
Date 7-12-38 Director of Highways

Recommended for Approval _____
Date _____ District Engr. Bureau Public Roads

Recommended for Approval _____
Date _____ Chief Engr. Bureau Public Roads

Approved _____
Date _____ Chief of Bureau

CONSTRUCTION BUREAU
AUG 23 1956
GROUND PHOTOLAB

SUPPLEMENTAL SPECIFICATIONS
E-305
T-111
M-110.10 (Rev. 6-1-36)

File 301

FILE Nº	S.H. 7 SEC. S(PT.) ATHALIA (PT.) LAWRENCE COUNTY
3	DATE OF LETTING _____ 193
	CONTRACT Nº _____

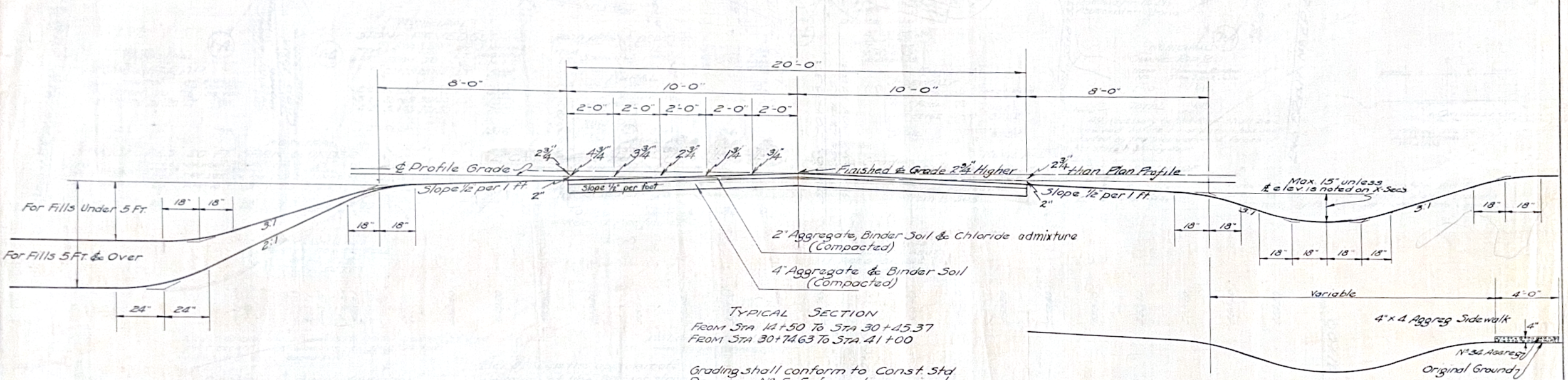
FED. RD. DIST. NO.	STATE	E.R.H. PROJECT	FISCAL YEAR	2
10	OHIO	Nº ER 50 A(1)	1937	34

S.H. 7 SEC. 5(Pt) ATHALIA (Pt)
LAWRENCE COUNTY

NOTE —
All trees marked for removal will be painted with yellow paint, no tree shall be removed without the approval of the division landscape engineer.

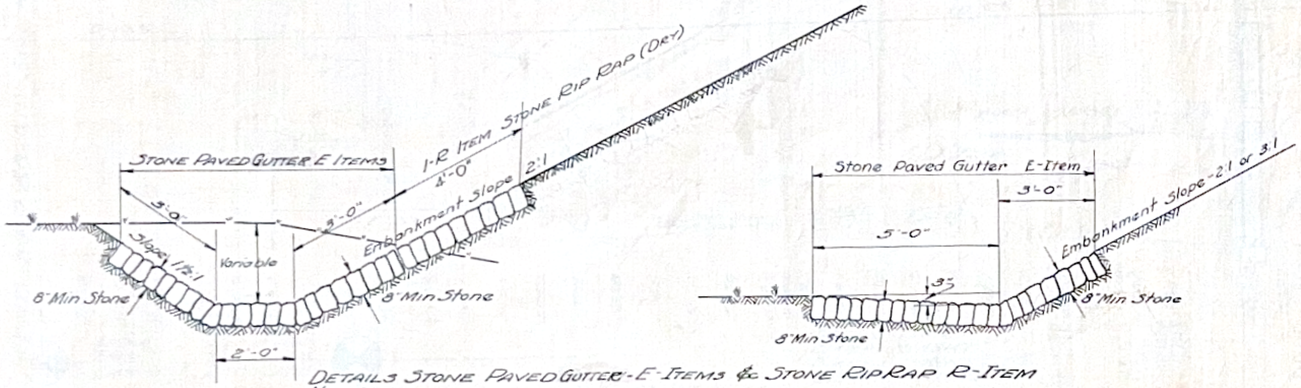
TYPICAL SECTION

TYPE T-111



TYPICAL SECTION
FROM STA 14+50 TO STA 30+45.37
FROM STA 30+74.63 TO STA 41+00

Grading shall conform to Const. Std. Drawing Nº E-5 for entire project.



DETAILS STONE PAVED GUTTER - E-ITEMS & STONE RIP RAP R-ITEM

NOTES —
Payment for excav. to ℄ ditch shall be paid for in regular rdwy. excav. item. necessary excav. below ℄ shall be included in price bid per Lin. Ft. of stone paved ditch. Necessary excav. for Rip Rap shall be included in price bid per Sq. Yd. of stone rip rap. Payment for stone paved ditch shall be as specified under Item I-14. Payment for stone rip rap shall be as specified under Item I-10.

TRAFFIC NOTE —
Traffic between sta 14+50 & sta 41+00 shall be maintained at all times. Contractor shall furnish all necessary watchmen, lights, signs, barricades and aggregates.

Note:- Any material listed for removal and storage shall be stored on the right of way at the disposal of the State Forces.

NOTE —
Superelevated curves shall be built without crown. The crown shall be worked out of the pavement in that portion between the beginning of the transition and the point where the superelevation equals twice the crown.

		ERH		3
10	OHIO	NAERS(AD)	1937	34

SH 7 SEC 5(Pt) ATHALIA(Pt)
LAWRENCE COUNTY

BEGIN ERHP Nº ER-50-A(11) STA. 14+50

END RURAL — BEGIN MUNICIPAL

END ERHP Nº ER-50-A(11) STA. 41+00

Section 3 Kaiser
Creighton
TOWNSHIP
VILLAGE ATHALIA
Anna Schrum

Creighton Kaiser
Anna Schrum

Δ° 17° 13' Lt
Dc 2° 00
T 433.69
L 860.83
R 2864.79

PC Sta 16+41.75

Begin Prism Chan Clean Sta 3+00

End Prism Cut & Channel Sta 8+50

PC Sta 25+02.56

Sta 13+00

Sta 27+00

Schrum
Wilson

Sta 41+00

Orchard

DESERT ROAD

Creighton Kaiser
Δ° 13° 25 Rt
Dc 2° 00
T 336.26
L 670.33
R 2866.79

PC Sta 29+41.00

J Essa Wilson

Begin Rec Channel Sta 37+00

PC Sta 35+87.83

Pear Orchard

N 13° 01' E

Typical Section Adjacent Pavt. Sta. 14+50

Typical Section Adjacent Pavt. Sta. 41+00

Cr. 18 ft Wide Retread Pavt Thickness Variable

Cr. 18 ft Wide Retread Pavt Thickness Variable

ITEM E-305 RURAL

STATION FROM	TO	DRESS & SEEDING SHOULDERS - 7.8 MILES
14+50	18+50	1666
TOTAL		1666

ITEM E-305 MUNICIPAL

STATION FROM	TO	DRESS & SEEDING SHOULDERS 35.0 MILES DITCHES 38 YDS
18+50	41+00	17,150
TOTALS		17,150

PROPOSED STRUCTURE

Type — Concrete slab
Span — 26.00 ft. clear
Roadway — 35 ft.
Skew — 20°00 R.F.
Wearing Surf. — 1" Mono Conc.
Approach Slabs — None.
Superelevation — 0.42 ft per ft.

EXISTING STRUCTURE

Type — Steel truss
Span — 66 ft.
Roadway — 16 ft.
Abutments — Stone

MUNICIPAL STONE RIP RAP

ITEM Nº	STATION FROM	TO	℄ LT	℄ RT	8" MIN. STONE RIP RAP 36 YDS
1-R	22+00	24+20	LT		98.
TOTAL					98.

MUNICIPAL STONE PAVED GUTTER

ITEM Nº	STATION FROM	TO	RT & LT ℄	8 MIN. STONE PAVED GUTTER LIN. FT.
1-E	22+25	28+12	LT	595
2-E	26+50	30+72	RT	422
3-E	28+63	30+20	LT	157
4-E	30+48	32+50	LT	202
TOTALS				1376

MUNICIPAL SIDEWALK

ITEM Nº	STATION FROM	TO	Nº 3A ASHES 4" THK SIDEWALK SQ. FT.
1-W	32+62	41+00	3252
TOTAL			3252

MUNICIPAL CHANNEL RIP RAP

ITEM Nº	CHANNEL RIP RAP 8" Min. Stone 3a Yds
1-10	615.
TOTAL	615.

Note — All necessary Guard Rail shall be removed before construction has been started by the maintenance forces of the state highway dept.

MUNICIPAL PRES PAVT REMOVAL RT ℄ 18 FT WIDE

Begin Sta. 21+25 End 32+50
Total Removal 2312 3a Yds
Item E-305 2312 3a Yds.

Note — Contractor shall maintain traffic at hrs per day and shall furnish all necessary watchmen, lights, signs, barricades and aggregates.

MUNICIPAL STRUCTURES 20 FT. SPAN & UNDER

ITEM Nº	STATION	ROADWAY ℄ DISPOSAL ℄ SQ. FT.	TYPE SIZE	NEW WORK STRUCT. EXCAV. CU YDS	CONC 1-5½	12" PIPE LIN. FT	18" PIPE LIN. FT	8" STONE STD 2-2 RIP RAP C BASIN 3a YDS	UNIT	STD 4 INLET UNIT	SAS SHT Nº
1-C	18+70	20	PIPE 18"	19	1.3	22	90	5	1	1	15
TOTALS		20		19	1.3	22	90	5	1	1	

ROAD APPR. & DRIVEWAYS

ITEM Nº	STATION	RT ℄ LT	12" PIPE LIN. FT	Nº 3A ASHES CU YDS	RIP RAP 18" THK LIN. FT	REMOVE & RELAY 12" PIPE
RURAL						
1-A	18+50	Rt		3		15
MUNICIPAL						
1-A	18+50	Rt		3		15
2-A	19+90	Lt		15		
3-A	28+37	Lt		8		
4-A	32+38	Lt		15	36	
5-A	36+50	Lt	20	3		
6-A	39+50	Lt	20	3		
7-A	40+20	Rt		5		
8-A	40+20	Lt	20	5		
9-A	40+60	Lt	20	3		
10-A	37+30	Lt	10	3		
11-A	38+60	Lt	20	3		
TOTAL			360	67	36	30

* Relay 12" Pipe from 1-C

B.M. STA. 16+50
SPIKE IN POWER POLE
22 FT RT ℄
ELEV. 547.64

B.M. STA 31+75
X ON W COR. N ABUT
PRES BRIDGE
ELEV. 548.43

Station 30+45.37 — Bridge Limits — Station 30+72.63

1937 Ohio River H.W. 564.52

Note — Grade line shown is 2% below crown of finished pavt. except on horiz curves see sheet Nº 4 for elevs on Lt & Rt edges pavt.

Elev. 550.0 is the approximate elevation of the 50 foot stage at Two Mile Creek.

END RURAL — BEGIN MUNICIPAL

0.00 %

+0.30%

-0.94%

Inlet El. 562.0

Outlet El. 544.5

Creek HW 534.5

300 FT. V.C.

P.V.C. 548.00

Excavation (Total) 3019 Cu Yds
Embankment 56625 Cu Yds
Embankment +15% 65119 Cu Yds
Channel Excav. 19075 Cu Yds.

Excav. 271 Cu Yds.
Emb. 253 Cu Yds
Emb +15% 291 Cu Yds

STA 16+50

Note — See Summary Sheet Nº 34 for Borrow Reduction.

FED. R.D. DIST. NO.	STATE	E.R.H. PROJECT	FISCAL YEAR
10	0410	NHERS(AIU)	1937

4
34

3H 7 SEC 3 (PT) ATHALIA (PT)
LAWRENCE COUNTY

CURVE TABLES

PC STA. 16+41.75 PT STA. 25+02.58
Dc. 2°00' LT.

LEFT — ELEV	LEFT ELEV LT EDGE PAVT	LEFT WIDTH	STATION	PROFILE GRADE ELEV	RIGHT WIDTH	RIGHT ELEV RT EDGE PAVT	RIGHT -0.17 + ELEV
0.17	547.83	1.000	14+91.75	548.00	1.000	547.83	0.00
			15+00			547.84	0.01
			+06.75			547.85	0.02
			+21.75			547.90	0.07
			+25			547.91	0.08
			+36.75			547.98	0.13
			+50			548.09	0.25
			+51.75			548.10	0.27
			+66.75			548.25	0.42
			+75			548.33	0.51
			+81.75			548.40	0.57
			+96.75			548.52	0.69
			16+00			548.54	0.71
			+11.75			548.60	0.77
			+25			548.65	0.82
			+26.75			548.65	0.80
			+41.75			548.67	0.84
			+50				
			+75				
			17+00				
			+25				
			+50				
	547.83		+75	548.00		548.67	
	547.84		18+00	548.01		548.68	
	547.86		+25	548.03		548.70	
	547.88		+50	548.05		548.72	
	547.91		+75	548.08		548.75	
	547.94		19+00	548.11		548.78	
	547.98		+25	548.15		548.82	
	548.03		+50	548.20		548.87	
	548.09		+75	548.26		548.92	
	548.14		20+00	548.31		548.98	
	548.21		+25	548.38		549.05	
	548.28		+50	548.45		549.12	
	548.36		+75	548.53		549.20	
	548.44		21+00	548.60		549.27	
	548.51		+25	548.68		549.35	
	548.58		+50	548.75		549.42	
	548.66		+75	548.83		549.50	
	548.73		22+00	548.90		549.57	
	548.81		+25	548.98		549.65	
	548.88		+50	549.05		549.72	
	548.96		+75	549.13		549.80	
	549.03		23+00	549.20		549.87	
	549.11		+25	549.28		549.95	
	549.18		+50	549.35		550.02	
	549.26		+75	549.43		550.10	
	549.33		24+00	549.50		550.17	
	549.41		+25	549.58		550.25	
	549.48		+50	549.65		550.32	
	549.56		+75	549.73		550.40	
	549.63		25+00	549.80		550.47	
	549.64		+02.58	549.81		550.48	0.84
	549.68		+17.58	549.85		550.50	0.82
	549.71		+25	549.88		550.51	0.80
	549.73		+32.58	549.90		550.50	0.77
	549.77		+47.58	549.94		550.46	0.69
	549.78		+50	549.95		550.45	0.67
	549.82		+62.58	549.99		550.39	0.57
	549.86		+75	550.03		550.31	0.445
	549.88		+77.58	550.03		550.28	0.42
	549.91		+92.58	550.08		550.18	0.27
	549.93		26	550.10		550.14	0.21
	549.95		+07.58	550.12		550.11	0.15
	550.00		+22.58	550.17		550.07	0.07
	550.01		+25	550.18		550.07	0.06
	550.04		+37.58	550.21		550.03	0.02
	550.06		+50	550.25		550.03	0.00
0.17	550.09	10.00	26+52.58	550.26	10.00	550.09	0.00

No Extra Area

PC STA. 29+17.00 PT STA. 36+87.83
Dc. 2°00' Rt.

LEFT -0.17 + ELEV	LEFT ELEV LT EDGE PAVT	LEFT WIDTH	STATION	PROFILE GRADE ELEV	RIGHT WIDTH	RIGHT ELEV RT EDGE PAVT	RIGHT — ELEV
0.00	550.43	10.00	27+67	550.60	10.00	550.43	0.17
0.01	550.47		+15	550.63		550.46	
0.02	550.50		+82	550.65		550.48	
0.07	550.59		+97	550.69		550.52	
0.08	550.61		28+00	550.70		550.53	
0.13	550.72		+12	550.74		550.57	
0.25	550.86		+25	550.78		550.61	
0.27	550.88		+27	550.78		550.61	
0.42	550.08		+42	550.83		550.66	
0.51	551.13		+50	550.85		550.68	
0.57	551.27		+57	550.87		550.70	
0.69	551.44		+72	550.92		550.75	
0.71	551.47		+75	550.93		550.76	
0.77	551.56		+87	550.98		550.79	
0.82	551.65		29+00	551.00		550.83	
0.82	551.66		+02	551.01		550.84	
0.84	551.72		+17	551.05		550.88	
	551.75		+25	551.08		550.91	
	551.82		+50	551.15		550.98	
	551.90		+75	551.23		551.06	
	551.97		30+00	551.30		551.13	
	552.05		+25	551.38		551.21	
	552.12		+50	551.45		551.28	
	552.20		+75	551.53		551.36	
	552.27		31+00	551.60		551.43	
	552.35		+25	551.68		551.51	
	552.42		+50	551.75		551.58	
	552.50		+75	551.83		551.66	
	552.57		32+00	551.90		551.73	
	552.65		+25	551.98		551.81	
	552.72		+50	552.05		551.88	
	552.80		+75	552.13		551.96	
	552.87		33+00	552.20		552.03	
	552.95		+25	552.28		552.11	
	553.02		+50	552.35		552.18	
	553.10		+75	552.43		552.26	
	553.17		34+00	552.50		552.33	
	553.22		+25	552.58		552.41	
	553.32		+50	552.65		552.48	
	553.40		+75	552.73		552.56	
	553.47		35+00	552.80		552.63	
	553.55		+25	552.88		552.71	
	553.62		+50	552.95		552.78	
	553.70		+75	553.03		552.86	
0.64	553.79		35+87.83	553.06		552.89	
0.83	553.76		36+00	553.10		552.93	
0.82	553.76		+02.83	553.11		552.94	
0.77	553.75		+17.83	553.15		552.99	
0.74	553.79		+25	553.18		553.01	
0.69	553.72		+32.83	553.20		553.03	
0.57	553.64		+47.83	553.24		553.07	
0.55	553.63		+50	553.25		553.08	
0.42	553.54		+62.83	553.29		553.12	
0.29	553.45		+75	553.33		553.16	
0.27	553.43		+77.83	553.33		553.16	
0.15	553.36		+92.83	553.37		553.21	
0.11	553.30		37+00	553.40		553.23	
0.07	553.32		+07.83	553.42		553.25	
0.02	553.32		+22.83	553.47		553.30	
0.01	553.32		+25	553.48		553.31	
0.00	553.34	10.00	37+37.83	553.51	10.00	553.34	0.17

No Extra Area

END AREA	CU YDS
CUT / FILL	CUT / FILL
Sta. 21+50 0	6.58 / 15 833
14 241	℄ 546.52
23 264	
11 44	℄ 546.17
35 73	
27 35	℄ 546.02
35 57	
11 26	℄ 545.87
43 103	
36 86	℄ 545.72
43 90	
30 52 / 24 69	
13 39	℄ 545.55
30 48	
16 22	℄ 545.56
35 34	
22 15	℄ 545.71
38 29	
19 17	℄ 545.86
34 35	
17 20	℄ 546.01
35 32	
21 15	℄ 546.16
36 23	
18 10	℄ 546.31
33 11	
18 2	℄ 546.46
17 2	
Sta. 14+50 0	0.0 Sec.

Cu Yds
Excav Emb 2559
Ditch Exc 65625
Total Exc 65119
461
3019

Excav Emb 2911
Cu Yds 2653
Cu Yds 291

Excav Emb 115%
Cu Yds
Cu Yds

2-A Item
Driveway Sta 18+50
12"x30' Pipe

See sheet Sta 18+35
Back Sta 18+65

See sheet Sta 18+35
Back Sta 18+65

See sheet Sta 18+35
Back Sta 18+65

2-A Item
Township Road Sta 19+90

I-C Structures
Sta 18+70 18'x 90'-0" Pipe Culv
See Sheet № 15 for details

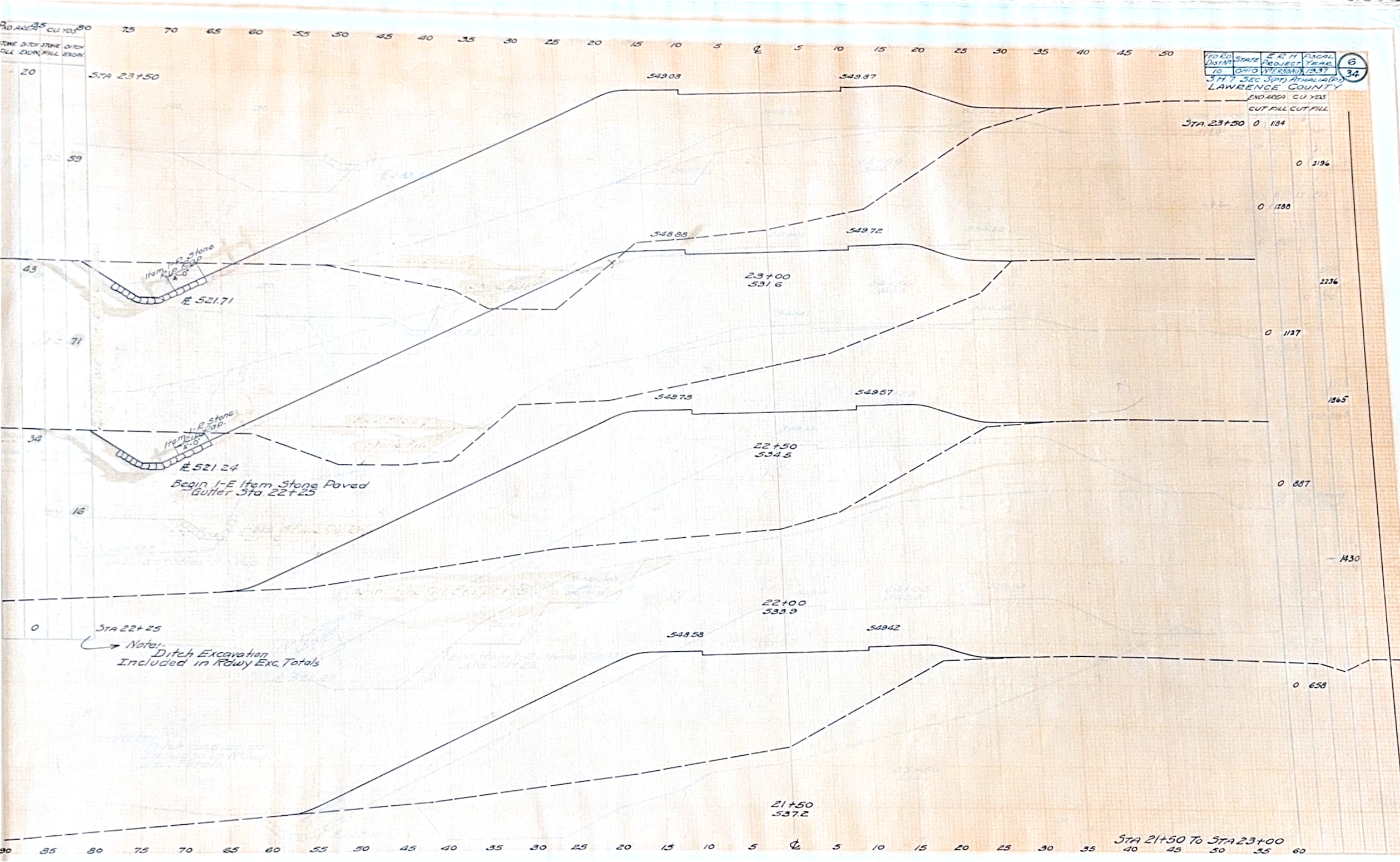
BEGIN MUNICIPAL
STA. 18+50
END RURAL

BEGIN ERHP № ER 50-A(1) STA. 14+50

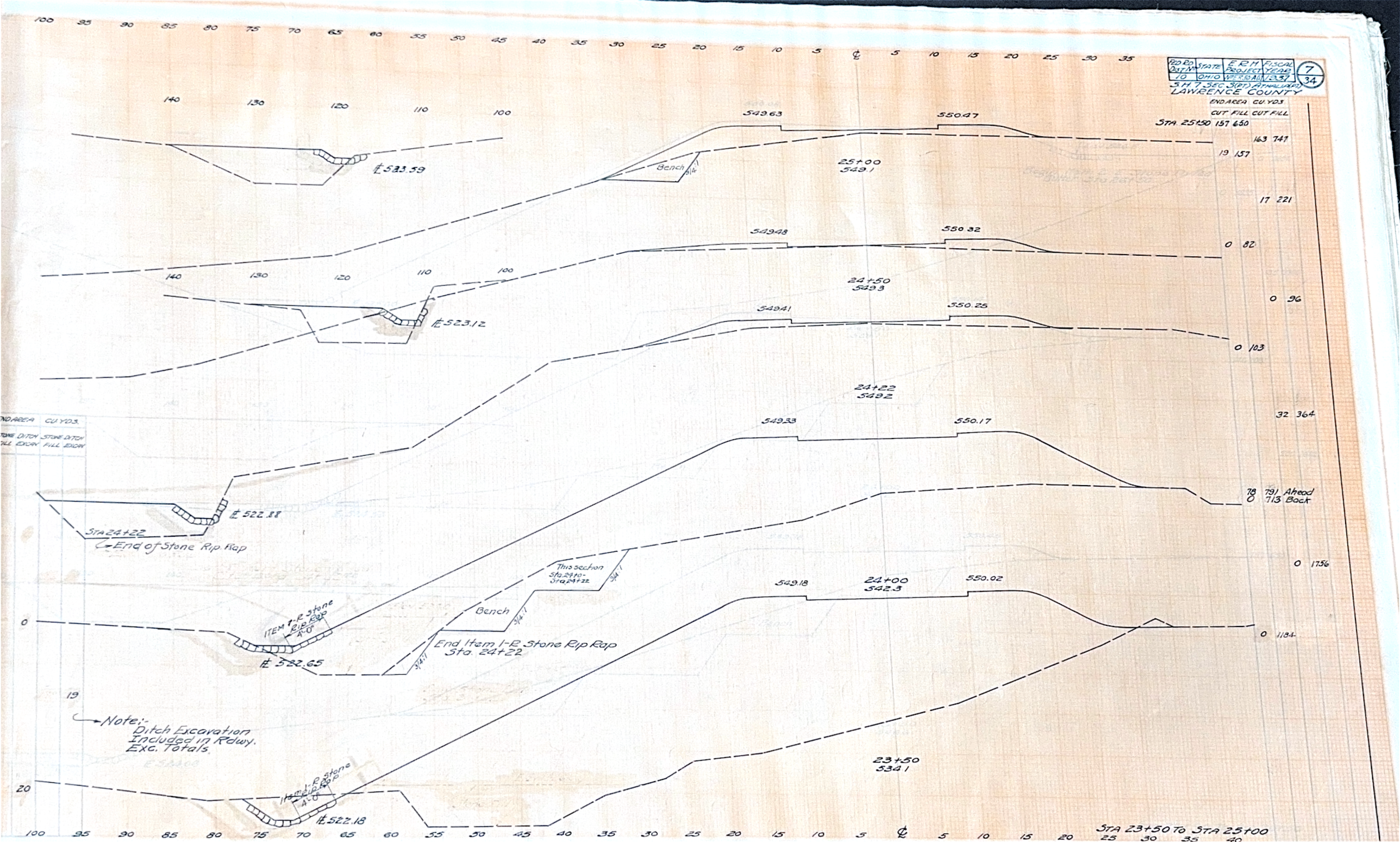
STA 14+50 TO STA 21+00

ROAD OUTLET	STATE	E.R.H. PROJECT	FISCAL YEAR	5
10	OHIO	ER-50-A(1)	1957	34

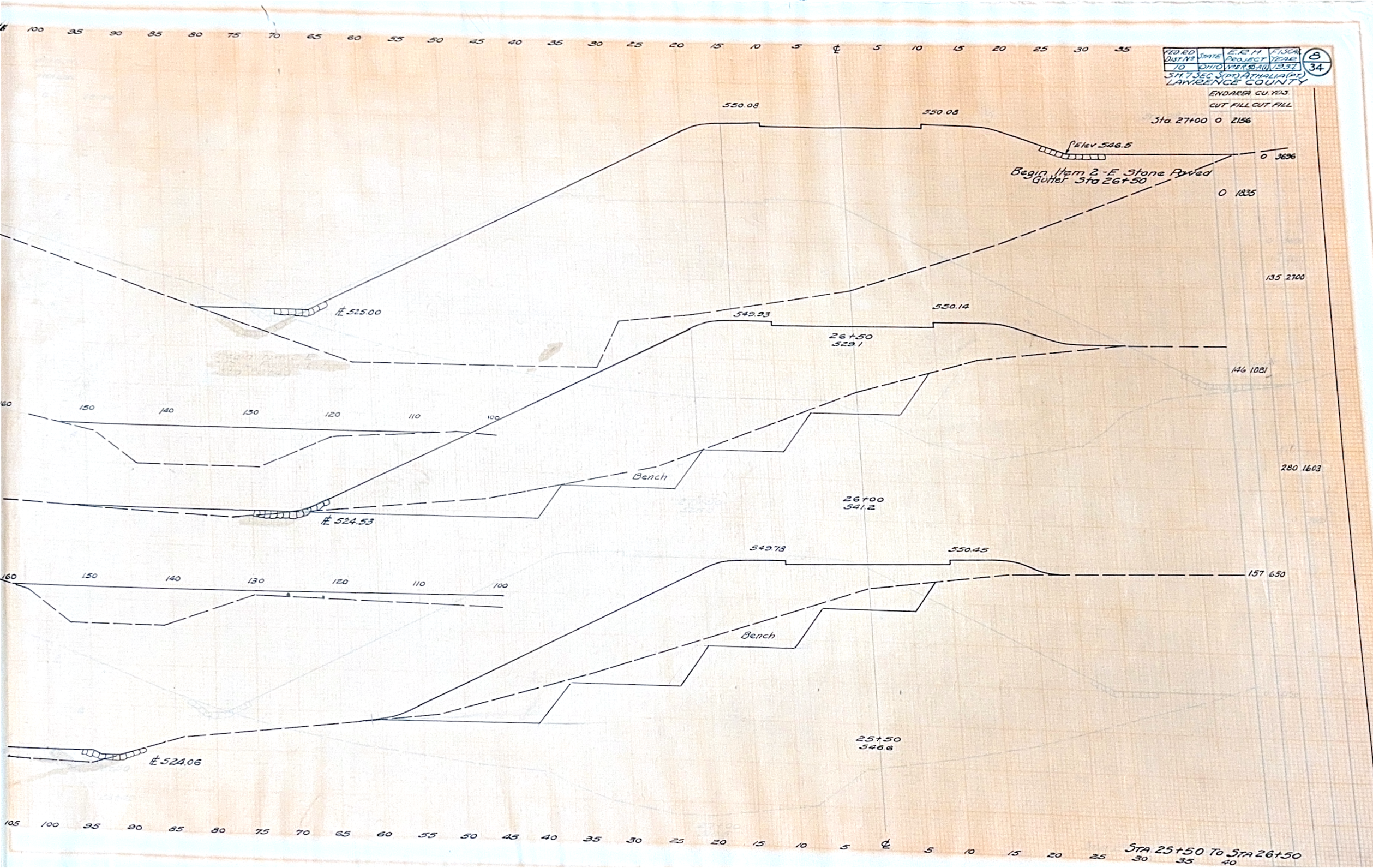
3 H 7 SEC 3 (pt) ATHENS (pt)
LAWRENCE COUNTY



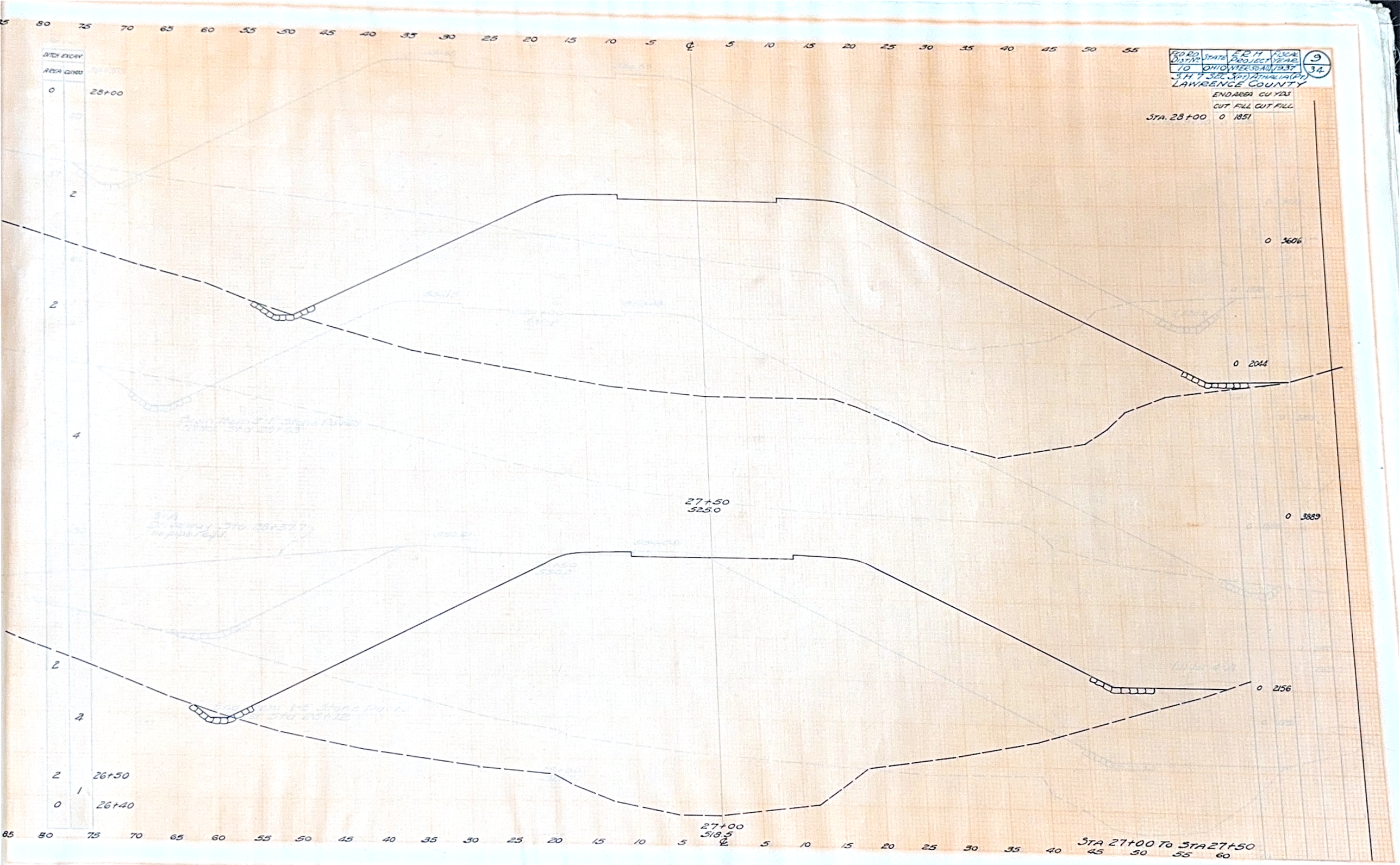
FED RD DIST NO 10
STATE OHIO
E R H PROJECT NO ER 58A(1)
FISCAL YEAR 1937
6
34
S.H. 7 SEC 5(PT) ATHALIA (PT)
LAWRENCE COUNTY
END AREA CU. YDS.
CUT FILL CUT FILL
STA. 23+50 0 1184
0 2196
0 1288
2236
0 1127
1865
0 887
1430
0 658
STA 23+50
549.03
549.87
548.88
549.72
23+00
531.6
548.73
549.57
22+50
534.5
22+00
533.9
548.58
549.42
21+50
537.2
Item 1-R Stone Rip Rap
℄ 521.71
℄ 521.24
Begin 1-E Item Stone Paved Gutter Sta. 22+25
STA 22+25
Note:- Ditch Excavation Included in Rdwy Exc. Totals
STA 21+50 TO STA 23+00



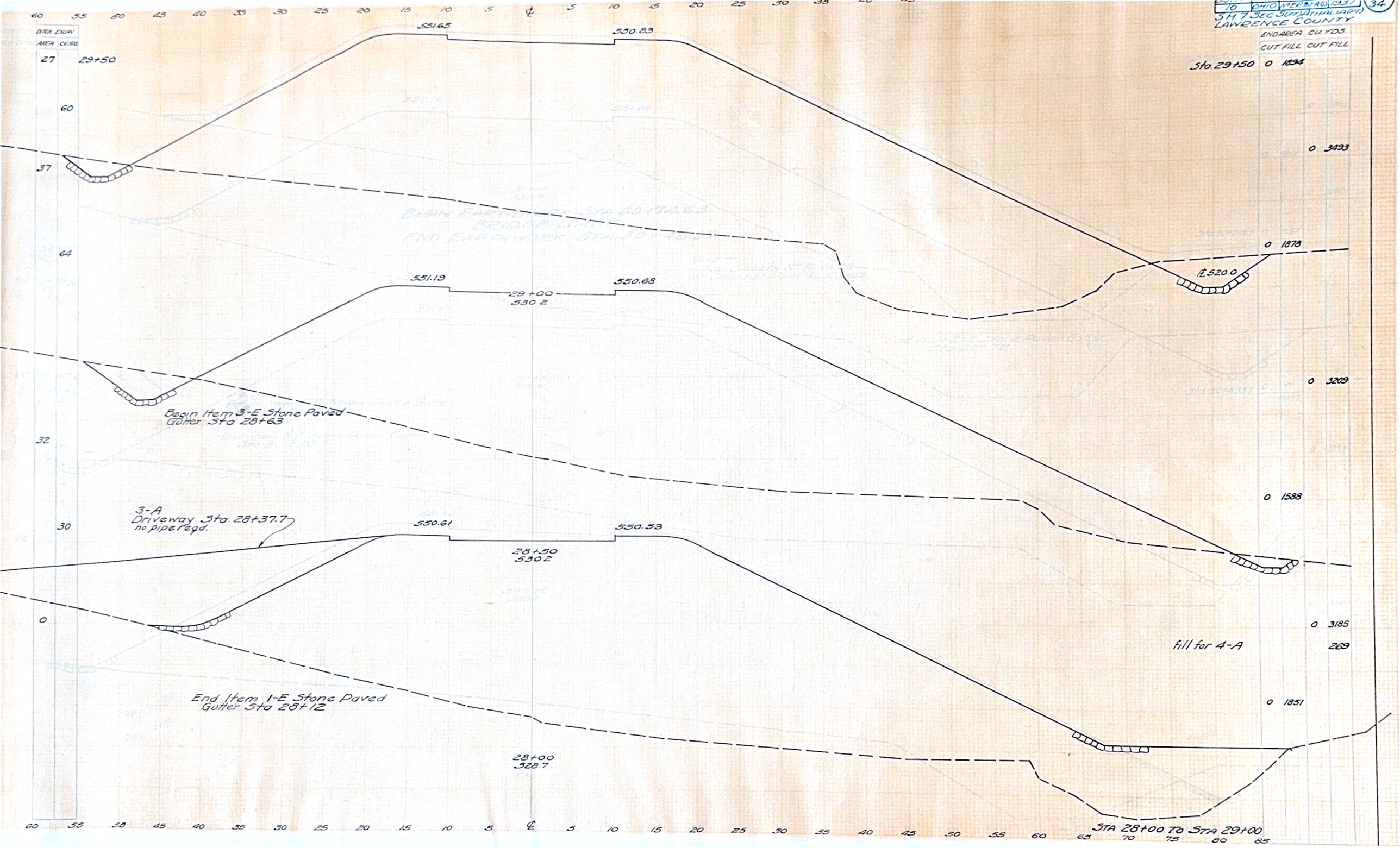
FED RD DIST NO 10
STATE OHIO
E.R.H. PROJECT NPER 50 A(1)
FISCAL YEAR 1937
7
34
S.H. 7 SEC 3(PT) ATHALIA(PT)
LAWRENCE COUNTY
END AREA CU. YDS.
CUT FILL CUT FILL
STA. 25+50 157 650
163 747
19 157
17 221
0 82
0 96
0 103
32 364
78 791 Ahead
0 713 Back
0 1756
0 1184
549.63
550.47
25+00
549.1
Bench
3/4:1
549.48
550.32
24+50
549.3
549.41
550.25
24+22
549.2
549.33
550.17
549.18
24+00
542.3
550.02
23+50
534.1
℄ 523.59
℄ 523.12
℄ 522.88
STA 24+22
End of Stone Rip Rap
This section Sta. 24+0 - Sta. 24+22
ITEM 1-R Stone Rip Rap 4'-0"
℄ 522.65
End Item 1-R Stone Rip Rap Sta. 24+22
Item 1-R Stone Rip Rap 4'-0"
℄ 522.18
Note:- Ditch Excavation Included in Rdwy. Exc. Totals.
STA 23+50 TO STA 25+00



FED RD DIST No 10
STATE OHIO
E.R.H. PROJECT NO ER 50 A(1)
FISCAL YEAR 1937
8
34
SH. 7 SEC S(PT) ATHALIA (PT)
LAWRENCE COUNTY
ENDAREA CU. YDS.
CUT FILL CUT FILL
Sta. 27+00 0 2156
0 3696
0 1835
135 2700
146 1081
280 1603
157 650
550.08
550.08
Elev 546.5
Begin Item 2-E Stone Paved Gutter Sta 26+50
℄ 525.00
549.93
550.14
26+50
529.1
Bench
26+00
541.2
℄ 524.53
549.78
550.45
Bench
25+50
546.6
℄ 524.06
STA 25+50 TO STA 26+50



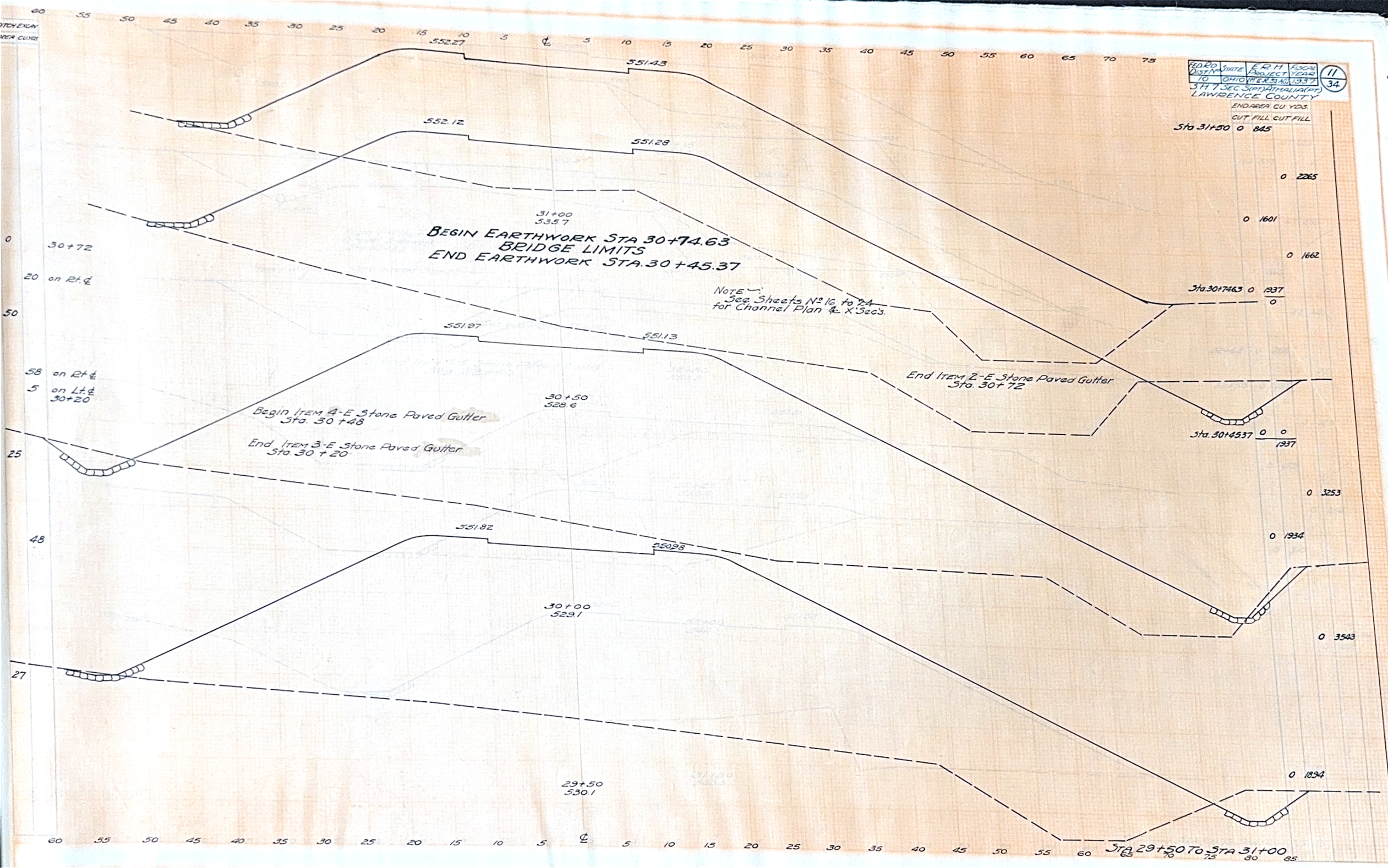
FED RD DIST No 10
STATE OHIO
E R H PROJECT No ERSD-A(1)
FISCAL YEAR 1937
9
34
S.H. 7 SEC 3(PT) ATHALIA (PT)
LAWRENCE COUNTY
END AREA CU YDS
CUT FILL CUT FILL
STA. 28+00 0 1851
DITCH EXCAV
AREA CU YDS
0 28+00
0 3606
0 2044
27+50
525.0
0 3889
0 2156
2 26+50
0 26+40
27+00
518.5
STA 27+00 TO STA 27+50



SH 7 SEC 5(PT) ATHALIA(PT)
LAWRENCE COUNTY
34
DITCH EXCAV
AREA CU.YDS.
27
29+50
60
37
64
32
30
0
551.65
550.83
551.19
550.68
29+00
530.2
Begin Item 3-E Stone Paved
Gutter Sta 28+63
3-A
Driveway Sta. 28+37.7
no pipe reqd.
550.61
550.53
28+50
530.2
End Item 1-E Stone Paved
Gutter Sta 28+12
28+00
528.7
℄ 520.0
END AREA CU.YDS.
CUT FILL CUT FILL
Sta. 29+50 0 1894
0 3493
0 1878
0 3209
0 1588
0 3185
fill for 4-A
269
0 1851
STA 28+00 TO STA 29+00

FED. DIST. NO.	STATE	E.R.H. PROJECT	FISCAL YEAR	11
10	OHIO	H.E.R.S.(4)	1937	34

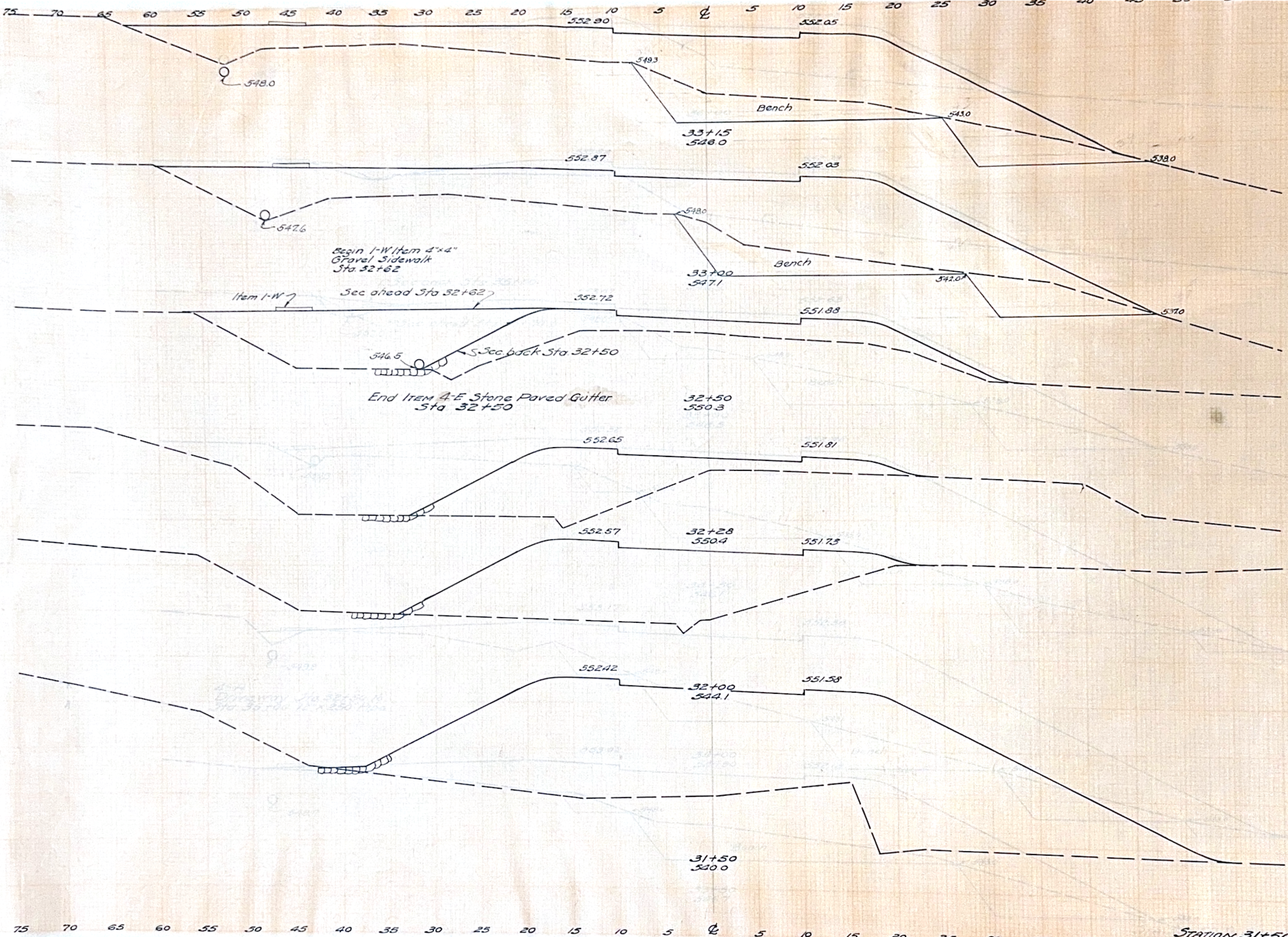
STH 7 SEC 5(PT) ATHALIA(PT)
LAWRENCE COUNTY



	ENDAREA CU YDS.	
	CUT	FILL
Sta 31+50	0	845
	0	2265
	0	1601
	0	1662
Sta. 30+74.63	0	1237
	0	
Sta. 30+45.37	0	0
		1937
	0	3253
	0	1934
	0	3543
	0	1834

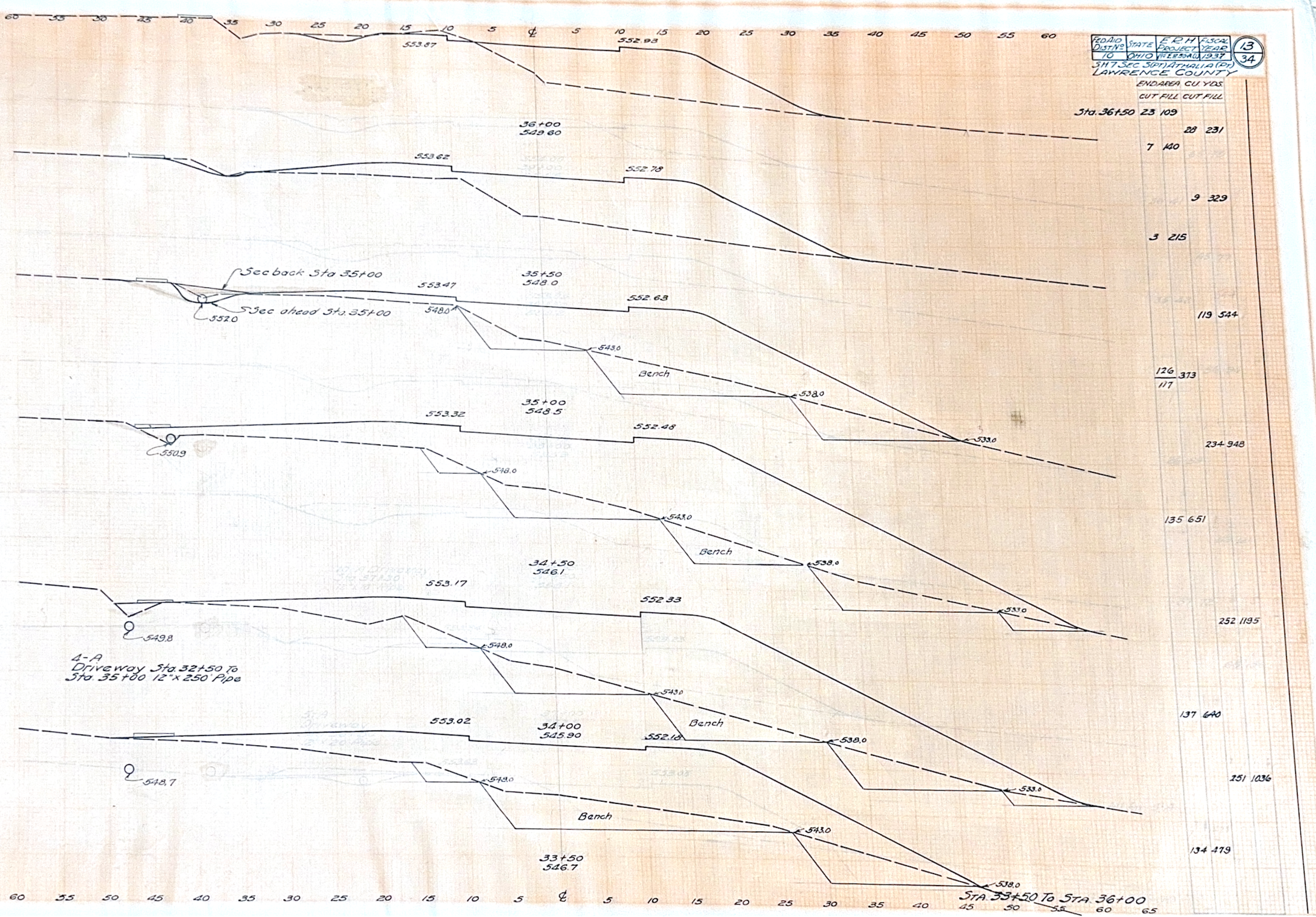
DIST. NO.	STATE	PROJECT	YEAR	12
10	OHIO	NFER 50 A(1)	1937	34

S.H. 7 SEC. S(PT) ATHALIA (PT)
LAWRENCE COUNTY

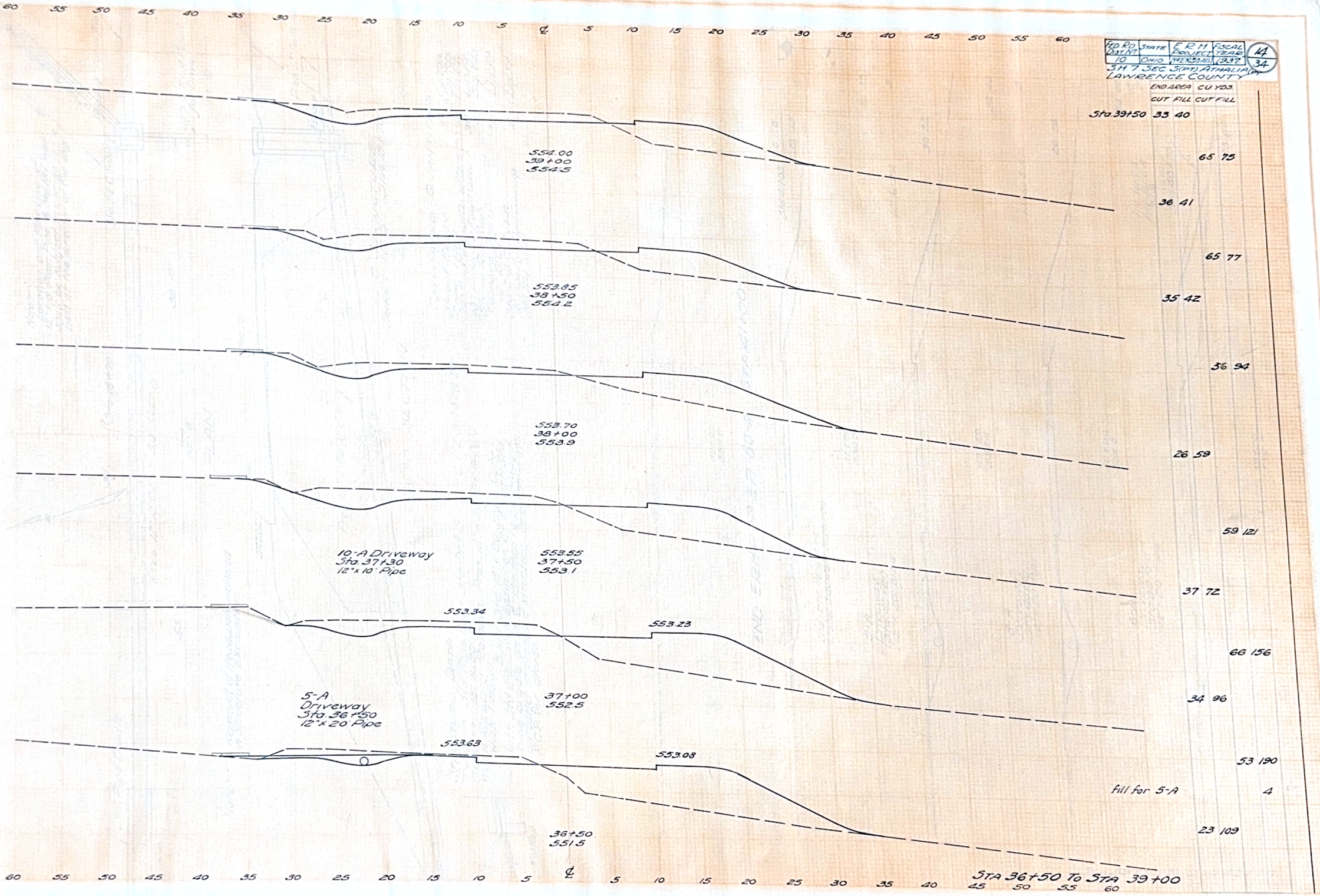


	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
Sta. 33+50	134	479		
			167	639
	124	507		
			67	299
	117	569		
			82	603
32+62	0	288		
			0	92
32+50	0	124		
			0	123
	0	179		
			0	254
	0	310		
			0	1070
	0	845		

STATION 31+50 TO STATION 33+15



FED AID DIST No 10
STATE OHIO
E.R.H. PROJECT
FISCAL YEAR 1937
13
34
SH 7 SEC 5(PT) ATHALIA (PT)
LAWRENCE COUNTY
ENDAREA CU. YDS.
CUT FILL CUT FILL
Sta. 36+50 23 109
28 231
7 140
9 329
3 215
119 544
126/117 373
234 948
135 651
252 1195
137 640
251 1036
134 479
36+00
549.60
553.87
552.93
553.62
552.78
Sec back Sta 35+00
Sec ahead Sta. 35+00
552.0
35+50
548.0
553.47
552.63
548.0
543.0
Bench
538.0
533.0
35+00
548.5
553.32
552.48
550.9
548.0
543.0
Bench
538.0
533.0
34+50
546.1
553.17
552.33
549.8
548.0
543.0
Bench
538.0
533.0
4-A
Driveway Sta. 32+50 To
Sta. 35+00 12" x 250' Pipe
553.02
34+00
545.90
552.18
548.7
548.0
Bench
543.0
538.0
33+50
546.7
STA. 33+50 To STA. 36+00



FED. RD. DIST. No. 10
STATE OHIO
F.R.H. PROJECT NHER 50 A(1)
FISCAL YEAR 1937
14
34
SH 7 SEC. 5 (PT) ATHALIA (PT)
LAWRENCE COUNTY
END AREA CU YDS.
CUT FILL CUT FILL
Sta. 39+50 33 40
65 75
36 41
65 77
35 42
36 94
26 59
59 121
37 72
66 156
34 96
53 190
Fill for 5-A 4
23 109
554.00
39+00
554.5
553.85
38+50
554.2
553.70
38+00
553.9
10-A Driveway
Sta. 37+30
12"x10' Pipe
553.55
37+50
553.1
553.34
553.23
5-A
Driveway
Sta. 36+50
12"x20' Pipe
37+00
552.5
553.63
553.08
36+50
551.5
STA 36+50 TO STA 39+00

END AREA	CU YDS	
CUT	FILL	CUT FILL

Note 1: Location and Flow Line of 12"x18" Horiz. Elliptical Pipe @ Sta 18+70 shall be subject to change in the field at the direction of the engr.

Sta 18+70

Sta #1 Inlet

Pipes 12" Form Tile

Sta 2-2 C. Basin

Pipes 12"x 50' R.C.P. Reinforced Concrete Pipe

Pipes 12"x 50' R.C.P. Reinforced Concrete Pipe

Sta 2-2 C. Basin

Pipes 12" Form Tile

Sta #1 Inlet

Pipes 12"x 50' R.C.P. Reinforced Concrete Pipe

		ERH			16
10	OHIO	NHER30A(1)1937			34

SH 7 SEC 3(Pt) ATHALIA(Pt)
LAWRENCE COUNTY

Pl. 7+63
43°30' Lt

Pl. 6+00
17°50 Lt

Pl. 3+70
6°40'30 Rt

Pl. 1+25
6°31'30 Rt

Pl. 10+78
6°17'20 Lt

Channel R/W

Channel R/W

End Pres. Channel Cleaning
Sta 13+00

Begin Pres. Channel Cleaning
Sta. 3+00

Pl. 5+00
10°00 Rt

Pl. 4+00
22°30 Rt

Sta 6+27 (P.I.)
Sta. 3+00

79°30'

Δ 25°10' L
D 57°19'
T 22.37'
L 44.02'
R 100.22'

PC 7+66.80

R 100.22'

End Creek Channel
Sta 9+20.17

Pl. 6+48.28

Δ 63°15' R
D 100°
T 59.56'
L 81.29'
R 57.53'

PC 5+07.23

Channel width to decrease from 26' at Sta 5 to 16' at Sta 6

126.80

1.77

5+26.14

85°

90°

Δ 25°00' L
D 21°
T 60.49'
L 119.05'
R 272.84'

PC 4+07.15

Stone Paved Ditch

Stone Paved Ditch

Tang to Curve at
Sta. 30+60.7

70°

N 0°24 W

PC 29+17.00

Δ 30°10' R
Dc 45°
T 59.60
L 117.49'
R 127.32

DT 21+52.01

Stone Paved Ditch
S.H. R/W

Pres. Bridge to be Removed
(Stone Abuts)
Chan. R/W

PC 14+60.42

Δ 13°25' R
Dc 2°00
T 336.96
L
R 2864.79

Creek Channel
Sta 0+00

Channel width to increase 1' in each 24' to Sta 2+63

3541 3573 3536 3523 3488 3488 3488

E.R.H. 17

10 OHIO MER30A(1)1937 34

SH 7 SEC. S(PT) ATHALIA(PT)
LAWRENCE COUNTY

CHANNEL EXCAV 16,678 CU YDS
Channel Rip Rap 615.0 SQ YDS

CHANNEL
AREA CURVE

| | | |

ERH 18

10 OHIO MERIDIAN (I) 1937 34

SH 7 SEC 5(Pt) ATHALIA(Pt)
LAWRENCE COUNTY

CHAN. EQUIV.	
AREA	EQUIV.
101.5	697
399	434
290	152
121	24
8	1
0	
0	
16	33
161	90
168	
204	238
311	
1589	

Sta 41+00

519.16
3+50
530.0

END OF E.R.50-A(1)

518.70
3+16
527.1

518.42
2+96
523.2

2+78

2+81

518.29
2+86
516.5

518.11
2+73
517.2

2+63

518.00
2+63
523.6

End Paved Flow Line
2+63

25'

Section back

12'

Section ahead

6"

24'-5"

517.87
2+50
523.5

12'

6"

23'-5"

517.62
2+25
523.2

Begin paved flow line
at 2+25

Section back

Section ahead

12'

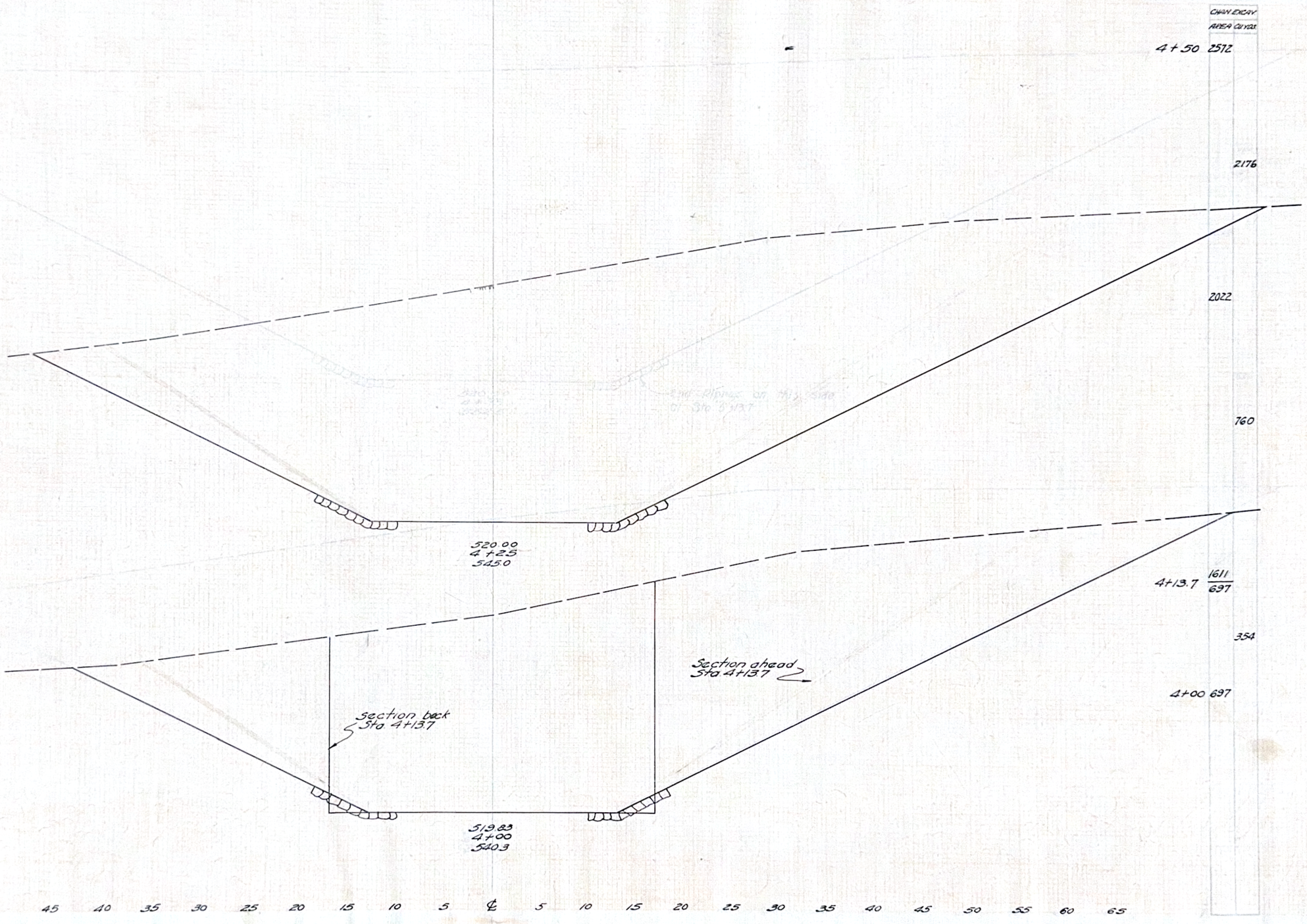
50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60 65

ERH 19

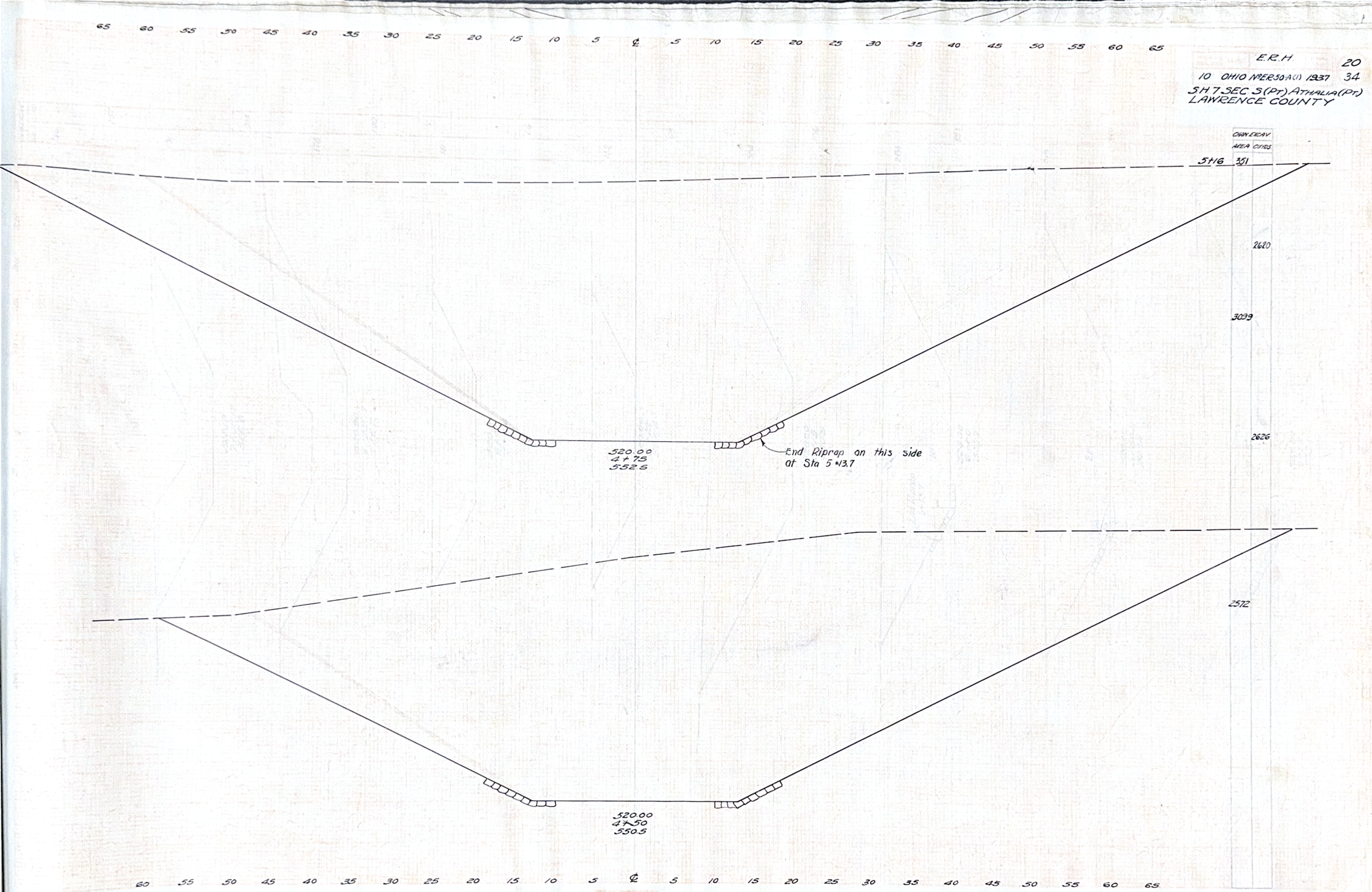
10 OHIO NºER 50 A(1) 1937 34

SH 7 SEC 3(PT) ATHALIA(PT)

LAWRENCE COUNTY



45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60 65


E.R.H. 20
10 OHIO NºER50-A(1) 1937 34
SH 7 SEC S(PT) ATHALIA(PT)
LAWRENCE COUNTY
CHAN EXCAV
AREA CUYDS
5+16 351
2620
3099
2626
2572
520.00
4+75
552.5
End Riprap on this side
at Sta 5+13.7
520.00
4+50
550.5
65 60 55 50 45 40 35 30 25 20 15 10 5 ℄ 5 10 15 20 25 30 35 40 45 50 55 60 65

ERH 21
10 OHIO NBER 30 A(D) 1937 34
S.H. 7 SEC 3(PT) ATHALIA(PT)
LAWRENCE COUNTY

DRAWDEPTH
RIGHT CLEAR

196 257 191 314 170 190 141 26 142 68 384 186 284 533 513 418 351

7+59.17

522.19
7+09.17
525.9

520.90
6+59.17
525.2

520.00
6+27
525.4

520.00
6+22
525.4

520.00
6+15
530.5

End Riprap
6+15.7

16'

520.00
6+00
528.7

21'

520.00
5+50
528.4

24'-5"

520.00
5+16
528.1

5 10 15 20 25 30

E.R.H. 22

10 OHIO N&ER 30A(1) 1937 34

SH 7 SEC. 3(PT.) ATHALIA(PT.)
LAWRENCE COUNTY

CHAINAGE	5+50	6+00	6+50	7+00	7+50	8+00	8+50	9+00	9+17
AREA CU YDS	78	164	101	184	97	194	112	225	131	234	122	0
ELEV	520.18	520.13	520.09	520.04	520.0							
	5+00	4+50	4+00	3+50	3+00							
	525.8	525.7	525.1	525.1	525.4							

CHAINAGE	9+17	9+50	10+00	10+50	11+00	11+50	12+00	12+50	13+00
AREA CU YDS	0	60	64	110	55	158	116		
ELEV	526.9	526.7	526.4	526.2					
	9+09.17	9+59.17	10+59.17	11+59.17					

ERH 23

10 OHIO N-ER50-A(1) 1937 34

SH 7 SEC 5(PT) ATHALIA(PT)
LAWRENCE COUNTY

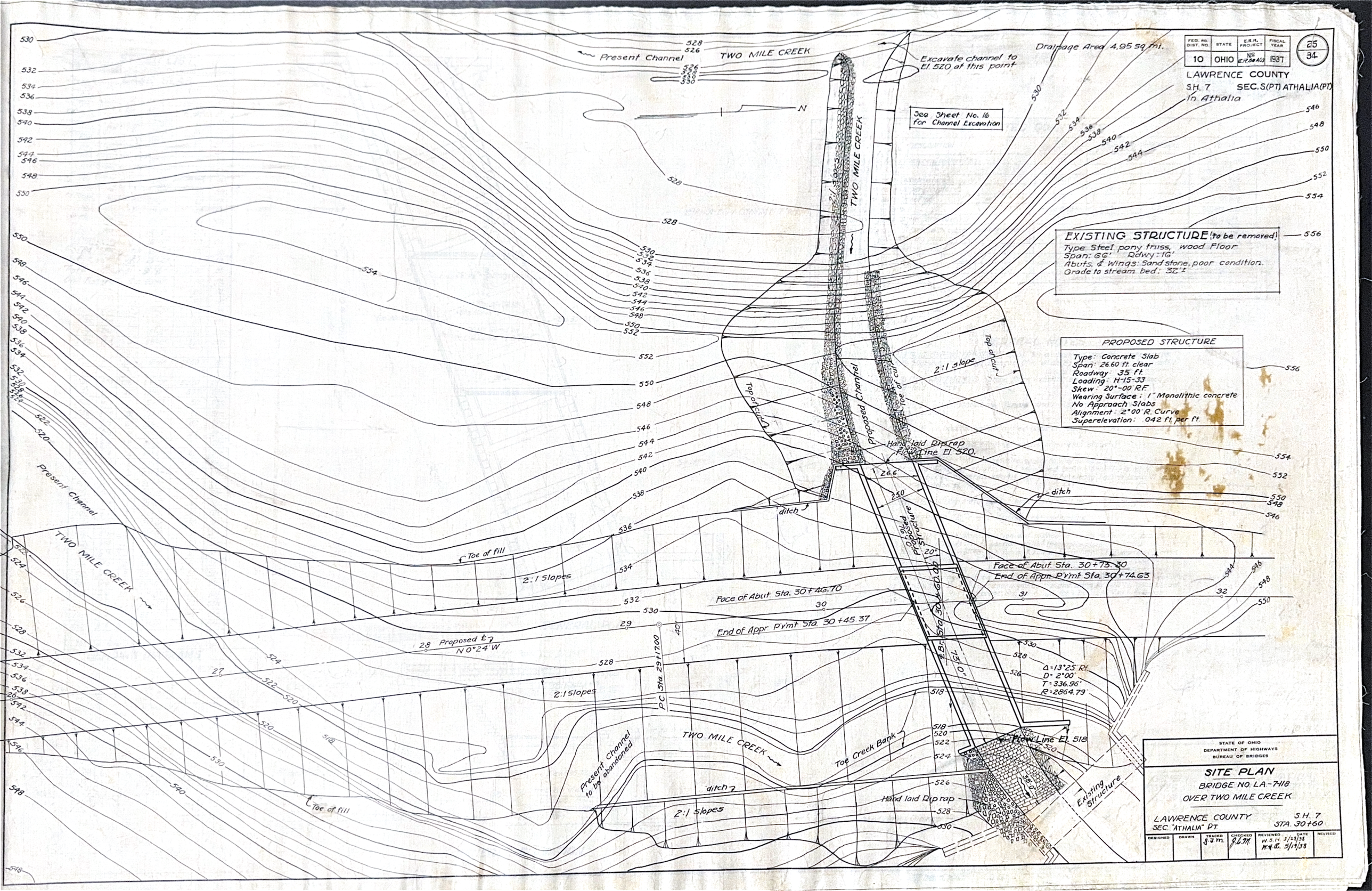
EXCAV CHANNEL CLEANING 2397 CU YDS

	10+50	10+00	9+50	9+00	8+50	8+00	7+50	7+00	6+50	6+00	5+50
CHANNEL AREA	47	29	44	55	57	68	83	82	70	84	78
CHANNEL CLEAN	70	68	92	98	110	140	153	141	144	136	
		520.63	520.58	520.54	520.49	520.45	520.40	520.36	520.31	520.27	520.22
		5226	523.1	523.4	523.4	523.3	525.0	525.0	524.5	524.5	524.6

ER-H 24

10 OHIO N-ER-30-A(1) 1937 34

S.H. 7 SEC 3(PT) ATHALIA(PT)
LAWRENCE COUNTY



FED. RD. DIST. NO. 10
STATE OHIO
E.R.H. PROJECT No. ER.50A(1)
FISCAL YEAR 1937
25
34
LAWRENCE COUNTY
S.H. 7 SEC. S(PT) ATHALIA(PT)
In Athalia
Drainage Area 4.95 sq. mi.
Present Channel
TWO MILE CREEK
Excavate channel to El. 520 at this point
See Sheet No. 16 for Channel Excavation
N
EXISTING STRUCTURE (to be removed)
Type Steel pony truss, wood Floor
Span: 66' Rdwy: 16'
Abuts. & Wings: Sandstone, poor condition.
Grade to stream bed: 32'±
PROPOSED STRUCTURE
Type: Concrete Slab
Span: 26.60 ft. clear
Roadway: 35 ft.
Loading: H-15-33
Skew: 20°-00' R.F.
Wearing Surface: 1" Monolithic concrete
No Approach Slabs
Alignment: 2°00' R. Curve
Superelevation: .042 ft. per ft.
Top of cut
2:1 slope
Proposed Channel
Toe of cut
Hand laid Riprap
Flow Line El. 520.
26.6'
25.0'
ditch
Proposed Structure
20°
Face of Abut. Sta. 30+73.30
End of Appr. P'vmt Sta. 30+74.63
Face of Abut. Sta. 30+46.70
End of Appr. P'vmt Sta. 30+45.37
Toe of fill
2:1 Slopes
Proposed ℄ N 0°24' W
P.C. Sta. 29+17.00
℄ Br. Sta. 30+60.00
73'0"
Δ=13°25' Rt.
D=2°00'
T=336.96'
R=2864.79'
Flow Line El. 518
Present Channel to be abandoned
Toe Creek Bank
Hand laid Riprap
Existing Structure
STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES
SITE PLAN
BRIDGE NO. LA-7-118
OVER TWO MILE CREEK
LAWRENCE COUNTY
SEC. "ATHALIA" PT.
S.H. 7
STA. 30+60
DESIGNED
DRAWN
TRACED J.J.M.
CHECKED J.L.M.
REVIEWED W.S.H. 3/28/38 W.H.C. 5/19/38
DATE
REVISED

FED. ROAD DIST. NO.	STATE	F.A.I.H. PROJECT	FISCAL YEAR	26 / 34
10	OHIO	NR F.A.I.H.30(4)J	1937	

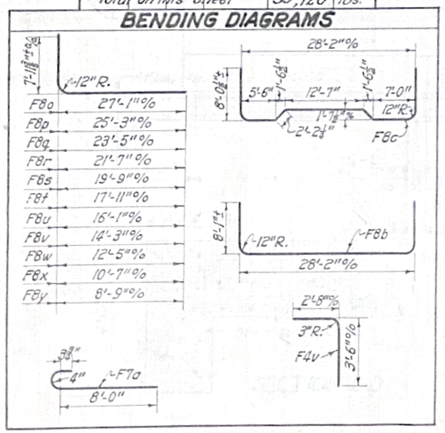
LAWRENCE COUNTY
S.H.7 SEC."S"Pt. "ATHALIA" Pt.

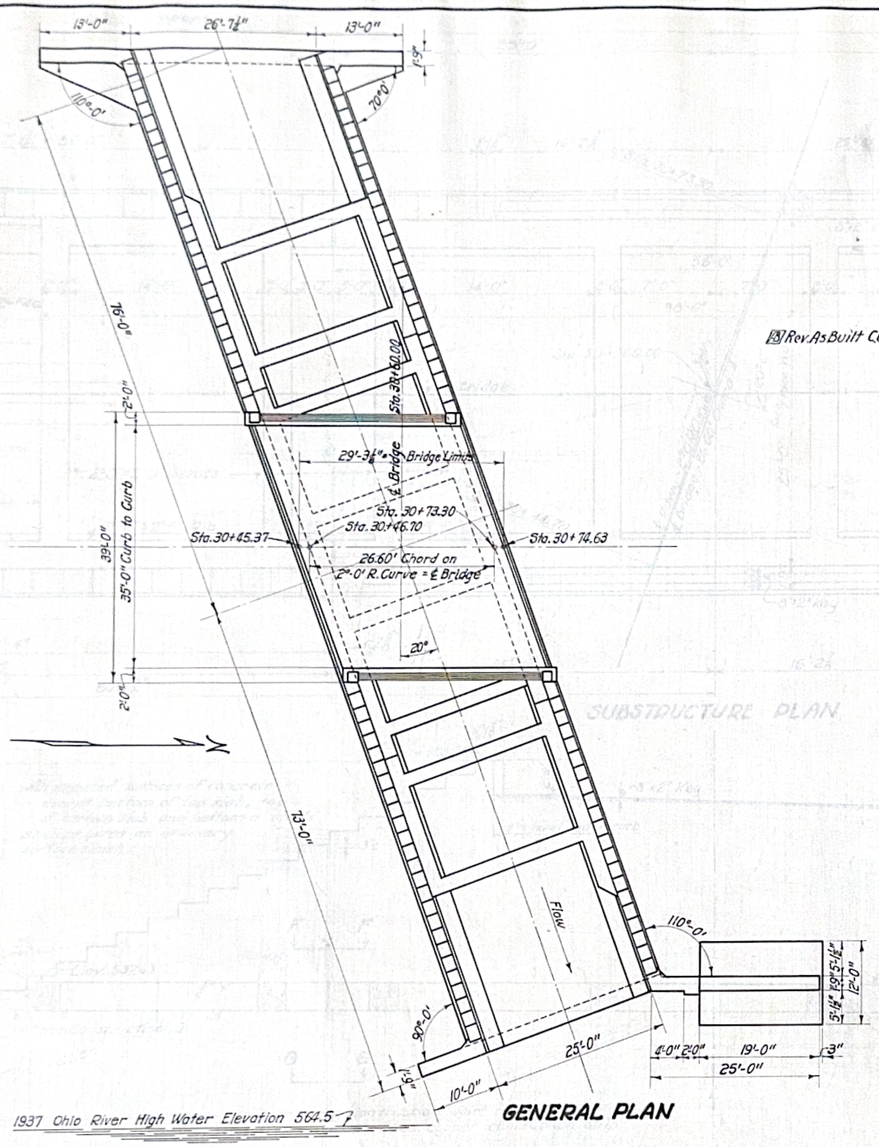
STEEL LIST

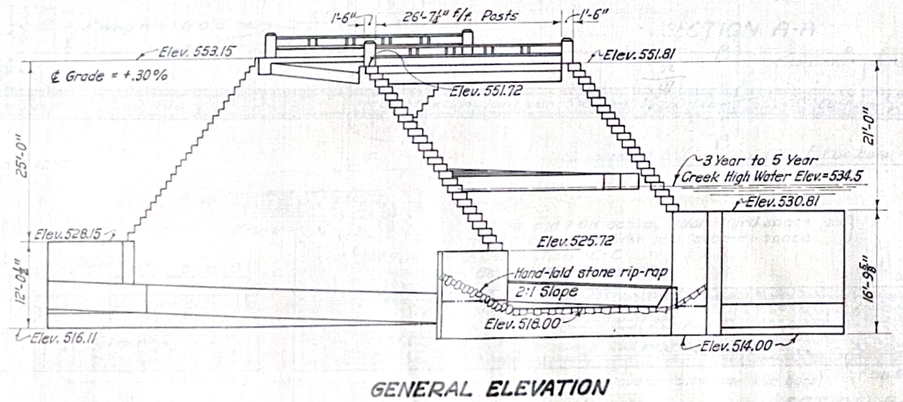
BASE SLAB

MARK	SIZE	NO.	LENGTH	WEIGHT	SHAPE
F8a	1"□	76	28'-6"	7370	Str.
F8b	1"□	72	43'-3"	10,600	Bt.
F8c	1"□	141	44'-6"	21330	Bt.
F8d	1"□	1	27'-0"	90	Str.
F8e	1"□	1	25'-3"	90	Str.
F8f	1"□	1	23'-3"	80	Str.
F8g	1"□	1	21'-6"	70	Str.
F8h	1"□	1	19'-9"	70	Str.
F8i	1"□	1	17'-9"	60	Str.
F8j	1"□	1	16'-0"	50	Str.
F8k	1"□	1	14'-3"	50	Str.
F8l	1"□	1	12'-3"	40	Str.
F8m	1"□	1	10'-6"	40	Str.
F8n	1"□	1	8'-9"	30	Str.
F8o	1"□	1	34'-6"	120	Bt.
F8p	1"□	1	32'-9"	110	Bt.
F8q	1"□	1	30'-9"	100	Bt.
F8r	1"□	1	29'-0"	100	Bt.
F8s	1"□	1	27'-3"	90	Bt.
F8t	1"□	1	25'-6"	90	Bt.
F8u	1"□	1	23'-6"	80	Bt.
F8v	1"□	1	21'-9"	70	Bt.
F8w	1"□	1	20'-0"	70	Bt.
F8x	1"□	1	18'-0"	60	Bt.
F8y	1"□	1	16'-3"	60	Bt.
F8z	1"□	4	36'-0"	520	Str.
F7a	1"ϕ	219	9'-6"	5560	Bt.
F4a	5/8"ϕ	176	29'-0"	5330	Str.
F4b	5/8"ϕ	44	18'-0"	830	Str.
F4c	5/8"ϕ	3	16'-0"	50	Str.
F4d	5/8"ϕ	3	17'-0"	50	Str.
F4e	5/8"ϕ	2	17'-6"	40	Str.
F4f	5/8"ϕ	2	18'-0"	40	Str.
F4g	5/8"ϕ	2	18'-6"	40	Str.
F4h	5/8"ϕ	2	19'-0"	40	Str.
F4i	5/8"ϕ	2	19'-6"	40	Str.
F4j	5/8"ϕ	2	20'-0"	40	Str.
F4k	5/8"ϕ	2	20'-6"	40	Str.
F4l	5/8"ϕ	2	21'-0"	40	Str.
F4m	5/8"ϕ	2	21'-6"	40	Str.
F4n	5/8"ϕ	2	22'-0	50	Str.
F4o	5/8"ϕ	2	22'-6"	50	Str.
F4p	5/8"ϕ	2	23'-0"	50	Str.
F4q	5/8"ϕ	2	23'-6"	50	Str.
F4r	5/8"ϕ	2	24'-0"	50	Str.
F4s	5/8"ϕ	2	24'-6"	50	Str.
F4t	5/8"ϕ	2	25'-0"	50	Str.
F4u	5/8"ϕ	6	26'-0"	160	Str.
F4v	5/8"ϕ	60	7'-0"	440	Bt.
F4w	5/8"ϕ	2	28'-6"	60	Str.
F4x	5/8"ϕ	2	38'-0"	80	Str.
F4y	5/8"ϕ	68	4'-6"	410	Str.
Total on this sheet				55,120	lbs.

BENDING DIAGRAMS







[13] Rev. As Built C.O. No 2 & M.O. No 1

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	SUB-STRUCTURE	SUPER-STRUCTURE	GENERAL	TOTAL
E-2	Excavation for structures, unclassified.	500			500 Cu. Yds.
E-2	Porous backfill			Lump	Lump Sum
S-1	1-5½ Concrete (substructure)	980			980 Cu. Yds.
S-1	1-5½ Concrete (superstructure)		76		76 Cu. Yds.
S-3	Type "B" Waterproofing	268			268 Sq. Yds
S-4	Reinforcing steel 152,997	~~152,680~~	12,440	280	~~165,400 Lbs.~~ 165 717.
S-9	Folded Copper Strip (12" @ 24 ea.)	125			125 Lin. Ft.
S-14	Bridge railing, Concrete with copper bearing steel pipe or W.I. including painting.		59.2		59.2 Lin. Ft.
S-24	Removal of existing bridge			Lump	Lump Sum

GENERAL NOTES

EXISTING SUPERSTRUCTURE shall be dismantled and delivered to the State Highway Garage at Ironton, Ohio when no longer needed for traffic

EXISTING ABUTMENTS. Stone from existing abutments may be used as hand-laid rip-rap.

SHORING. Superstructure forms shall not be supported on cross struts.

FLOODING of backfill not permitted back of abutments and wing walls.

CHAMFER all exposed edges ¾" unless otherwise shown.

BACKFILL shall be placed simultaneously to the same elevation at both abutments. Ribs and struts shall be placed before backfill is made above elevation 520.0. Superstructure slab shall be placed before backfill is made above elevation 536.0.

VIBRATION. All concrete, except base slab, shall be mechanically vibrated.

BARS MARKED "RE" are to replace test specimens.

EXCAVATION The classification and method of measurement of excavation shall be as follows: That portion within the limits shown in cross-sections on sheets 17 to 24 will be paid for as "Channel Excavation", the vertical planes indicating the limits that will be paid for between Sta. 2+64.7 and Sta. 4+13.7 All necessary excavation below channel sections and additional excavation required for wings will be paid for as "Excavation for Structures" measured as per Item E-2. All necessary sheeting and bracing will be considered as paid for in the unit price bid per cu. yd. for Channel Excavation and Excavation for Structures.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

GENERAL PLAN AND ELEVATION; NOTES AND ESTIMATED QUANTITIES REINFORCING STEEL OF BASE SLAB

BRIDGE No. LA-7-118
OVER TWO MILE CREEK
LAWRENCE COUNTY S.H. 7
SEC. "ATHALIA" Pt. STA. 30+60.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.E.D.	K.E.D.	J.E.	R.W.S.	W.G.H. 3/21/38 M.M.C. 5/19/38		

[28] Revised As Built 4-2640 F.G.N.

FED. HIS. DIST. NO.	STATE	S. P. M. PROJECT No.	FISCAL YEAR
10	OHIO	ER-50-A(4)	1937

27
34

LAWRENCE COUNTY
S.H.7 SEC. "S" Pt. "Athalia" Pt.

See Sheet No. 28 for Retaining Wall Details

SUBSTRUCTURE PLAN

SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

SECTION F-F

SECTION GG

3"x7" Key extends from base slab to bottom of rib

DETAIL OF 12"~24 oz. FOLDED COPPER CONTRACTION STRIP

All exposed surfaces of concrete except bottom of top slab, top of bottom slab and bottom of struts shall be given an ordinary surface finish.

Paint Contraction Jt. with parafine ⅛" thick (from bottom of rib to top of wall). Parrafine included with concrete for payment.

Porous backfill 2'-0" wide to extend from construction joint of bottom of walls to within 2'-0" of top of embankment.

See Sheet No. 26 for Steel List of Base Slab

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SUBSTRUCTURE LAYOUT

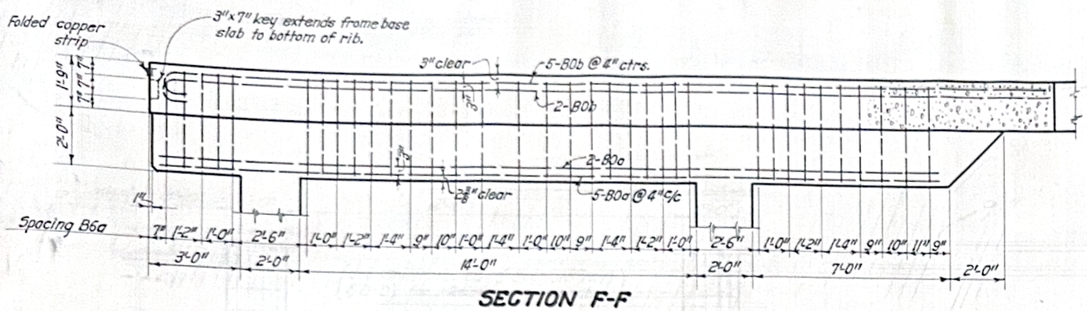
BRIDGE NO. LA-7-118 OVER TWO MILE CREEK
LAWRENCE COUNTY — S.H. 7
SEC. "Athalia" Pt. — STA 30+60.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.E.B.	K.E.B.	C.D.G.	R.W.S.	W.S.H. 3/21/38 M.M.C. 5/19/38	6/20/38	

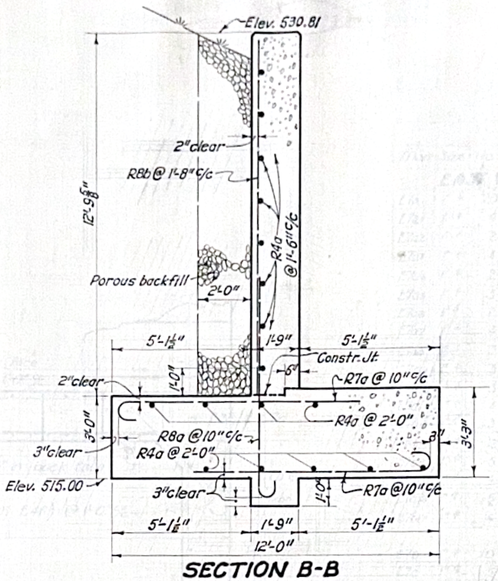
FED. NO. DIST. NO.	STATE	F.A.H. PROJECT	FISCAL YEAR
10	OHIO	NO (F.A.)50 A01	1937

28
34

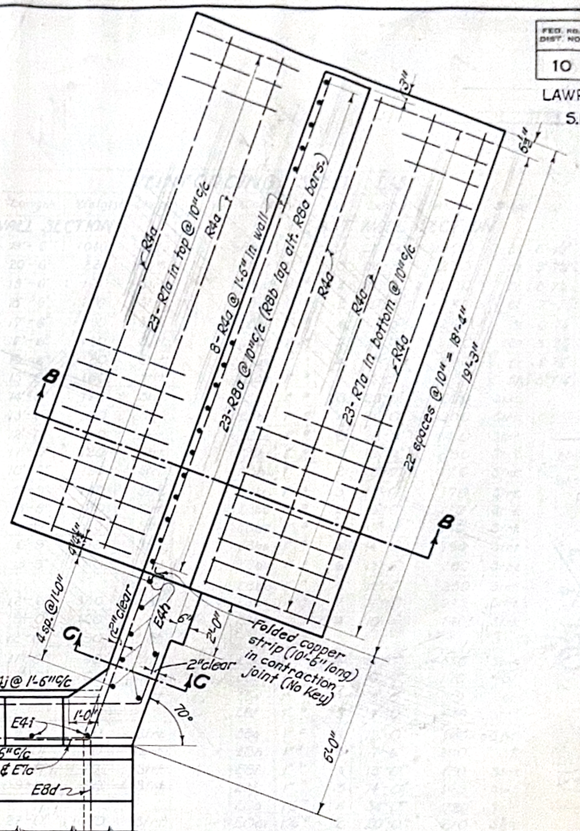
LAWRENCE COUNTY
S.H.7 SEC. "S" Pt. & ATHALIA Pt.

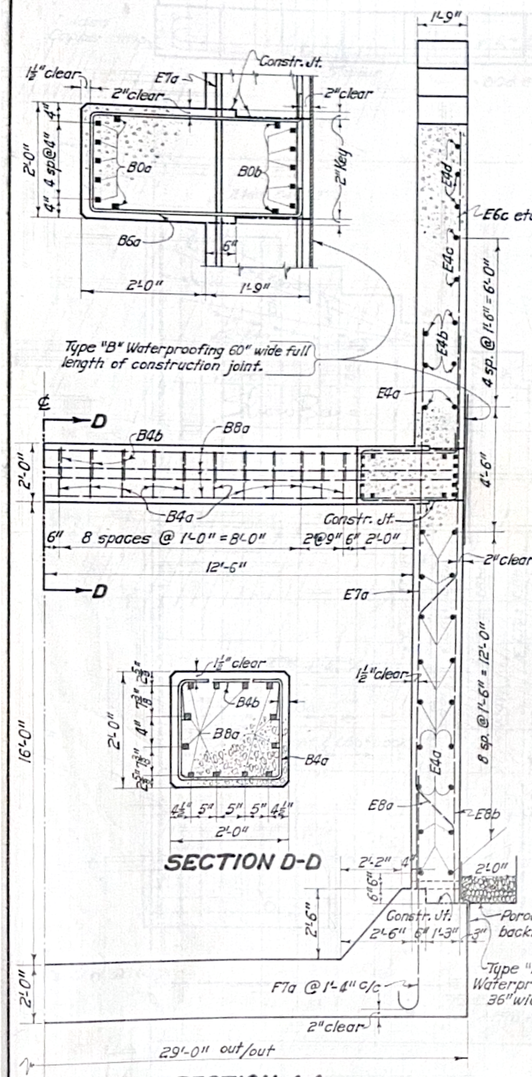


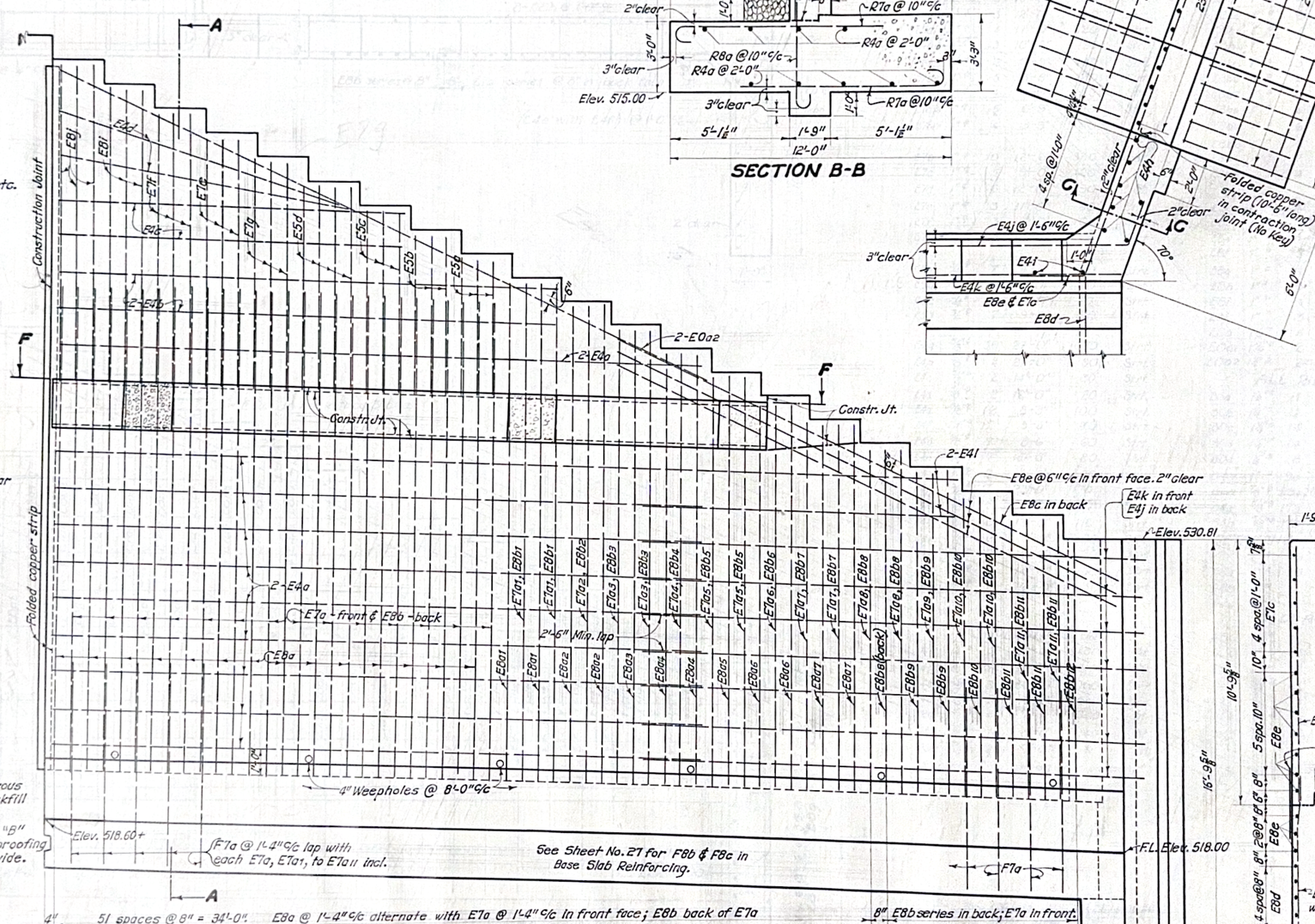
SECTION F-F



SECTION B-B



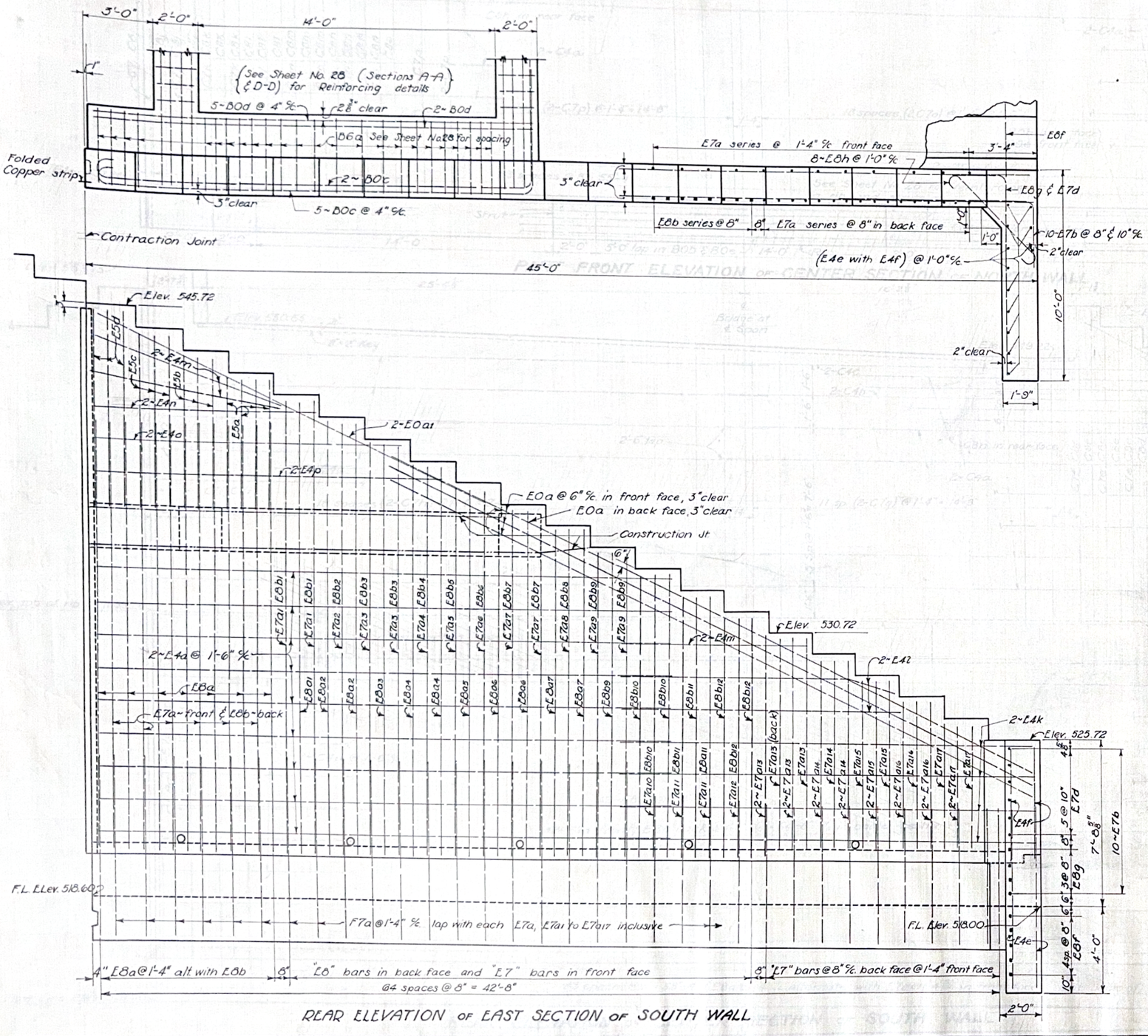



A
Construction Joint
E8d
E8c
E8b
E8a
E7f
E7e
E5b
E5c
E5b
E5a
2-E7b
6"
2-E0a2
2-E4a
F
F
Constr. Jt.
Constr. Jt.
2-E4l
E8e @ 6" c/c in front face. 2" clear
E8c in back
E4k in front
E4j in back
Elev. 530.81
1'-9"
Folded copper strip
2-E4a
E7a - front & E8a - back
2'-6" Mtg. lap
E8a
E7a01, E8b1
E7a02, E8b2
E7a03, E8b3
E7a04, E8b4
E7a05, E8b5
E7a06, E8b6
E7a07, E8b7
E7a08, E8b8
E7a09, E8b9
E7a10, E8b10
E7a11, E8b11
E8a1
E8a2
E8a3
E8a4
E8a5
E8a6
E8a7
E8a8(back)
E8b9
E8b10
E8b11
E8b12
E8d
E8a
E8b
E7a
E8a
E8b
E8a
E8b
E8a
E8b

FED. HIS. DIST. NO.	STATE	E. D. H. PROJECT	FISCAL YEAR
10	OHIO	No. E.R.30A(1)	1937

29
34

LAWRENCE COUNTY
S.H. 7 SEC. "S" Pt. "Athalia" Pt.



REAR ELEVATION OF EAST SECTION OF SOUTH WALL

REINFORCING STEEL LIST

EAST WALL SECTION

Mark	Size	No.	Length	Weight	Shape
E7a	1" ♦	20	19'-6"	1040	Strt.
E7a1	1" ♦	4	20'-6"	220	Strt.
E7a2	1" ♦	2	19'-6"	100	Strt.
E7a3	1" ♦	4	18'-6"	200	Strt.
E7a4	1" ♦	2	17'-6"	90	Strt.
E7a5	1" ♦	3	16'-6"	130	Strt.
E7a6	1" ♦	2	15'-6"	80	Strt.
E7a7	1" ♦	4	15'-0"	160	Strt.
E7a8	1" ♦	3	14'-0"	110	Strt.
E7a9	1" ♦	3	13'-0"	100	Strt.
E7a10	1" ♦	3	12'-0"	100	Strt.
E7a11	1" ♦	4	11'-0"	120	Strt.
E7a12	1" ♦	3	10'-9"	90	Strt.
E7a13	1" ♦	6	9'-9"	160	Strt.
E7a14	1" ♦	5	8'-9"	120	Strt.
E7a15	1" ♦	4	7'-9"	80	Strt.
E7a16	1" ♦	5	6'-9"	90	Strt.
E7a17	1" ♦	4	5'-9"	80	Strt.
E7b	1" ♦	10	12'-6"	330	Bt.
E7c	1" ♦	5	9'-0"	120	Bt.
E7d	1" ♦	6	12'-0"	190	Bt.
E7e	1" ♦	3	11'-0"	90	Strt.
E7f	1" ♦	3	12'-0"	100	Strt.
E7g	1" ♦	3	10'-0"	80	Strt.
E5a	3/4" ♦	7	6'-0"	60	Strt.
E5b	3/4" ♦	6	7'-0"	60	Strt.
E5c	3/4" ♦	6	8'-0"	70	Strt.
E5d	3/4" ♦	7	9'-0	90	Strt.
E4a	5/8" ♦	38	27'-0"	1070	Strt.
E4b	5/8" ♦	4	21'-0"	90	Strt.
E4c	5/8" ♦	2	14'-0"	30	Strt.
E4d	5/8" ♦	2	12'-0"	20	Strt.
E4e	5/8" ♦	12	8'-3"	100	Strt.
E4f	5/8" ♦	12	5'-3"	70	Strt.
E4g	5/8" ♦	7	8'-6"	60	Strt.
E4h	5/8" ♦	7	10'-6"	80	Strt.
E4i	5/8" ♦	2	10'-0"	20	Strt.
E4j	5/8" ♦	7	23'-0"	170	Bt.
E4k	5/8" ♦	15	20'-6"	320	Strt.
E4l	5/8" ♦	8	13'-6"	110	Strt.
E4m	5/8" ♦	6	9'-0"	60	Strt.
E4n	5/8" ♦	2	10'-0"	20	Strt.
E4o	5/8" ♦	2	14'-0"	30	Strt.
E4p	5/8" ♦	2	16'-0"	30	Strt.

SUPERSTRUCTURE

S0a	1 1/4" □	58	30'-6"	9400	Bt.
S4a	3/8" ♦	14	28'-0"	410	Strt.
S4b	3/8" ♦	94	20'-0"	1960	Strt.
S4c	3/8" ♦	56	4'-0"	230	Strt.
S2a	1/2" ♦	60	7'-6"	300	Bt.
D4a	5/8" ♦	16	8'-6"	140	Bt.
R6a	7/8" ♦	20	7'-0"	*	Bt.

*Included in railing for payment

EAST WALL SECTION

Mark	Size	No.	Length	Weight	Shape	"a"
E8a	1" □	21	21'-0"	1500	Bt.	6'-4 1/2"
E8a1	1" □	3	22'-3"	230	Bt.	9'-7 1/4"
E8a2	1" □	4	21'-3"	290	Bt.	8'-7 1/4"
E8a3	1" □	2	20'-3"	140	Bt.	7'-7 1/8"
E8a4	1" □	4	19'-3"	260	Bt.	6'-7 1/8"
E8a5	1" □	2	18'-3"	120	Bt.	5'-7 1/4"
E8a6	1" □	4	17'-3"	240	Bt.	4'-7 1/8"
E8a7	1" □	4	16'-3"	220	Bt.	3'-7 1/4"
E8b	1" □	20	20'-0"	1360	Strt.	
E8b1	1" □	4	21'-0"	290	Strt.	
E8b2	1" □	2	20'-0"	140	Strt.	
E8b3	1" □	4	19'-0"	260	Strt.	
E8b4	1" □	2	18'-0"	120	Strt.	
E8b5	1" □	3	17'-0"	170	Strt.	
E8b6	1" □	2	16'-0"	110	Strt.	
E8b7	1" □	4	15'-6"	210	Strt.	
E8b8	1" □	4	14'-6"	190	Strt.	
E8b9	1" □	6	13'-6"	280	Strt.	
E8b10	1" □	6	12'-6"	250	Strt.	
E8b11	1" □	7	11'-6"	270	Strt.	
E8b12	1"	4	10'-6"	140	Strt.	
E8c	1" □	4	24'-0"	330	Strt.	
E8d	1" □	5	10'-0"	170	Bt.	
E8e	1" □	10	9'-0"	310	Bt.	
E8f	1" □	5	14'-0"	240	Strt.	
E8g	1" □	4	12'-0"	160	Bt.	
E8h	1" □	8	7'-6"	200	Bt.	
E8i	1" □	3	13'-0"	130	Strt.	
E8j	1" □	3	14'-0"	140	Strt.	
E0a	1 1/8" □	4	34'-0"	720	Strt.	
E0a1	1 1/8" □	2	20'-0"	210	Strt.	
E0a2	1 1/8" □	2	30'-0"	320	Strt.	

ALL RIBS & STRUTS

B0a	1 1/8" □	14	27'-6"	2050	Strt.
B0b	1 1/8" □	42	31'-6"	7030	Bt.
B0c	1 1/8" □	14	30'-0"	2230	Bt.
B0d	1 1/8" □	14	20'-6"	1530	Strt.
B0e	1 1/8" □	28	30'-0"	4470	Bt.
B8a	1" □	96	29'-6"	9640	Bt.
B6a	7/8" ♦	~~257~~260	8'-9"	~~4552~~4657	Bt.
B4a	5/8" ♦	176	6'-3"	1150	Bt.
B4b	5/8" ♦	176	3'-3"	600	Bt.

RETAINING WALL AT N.E. CORNER

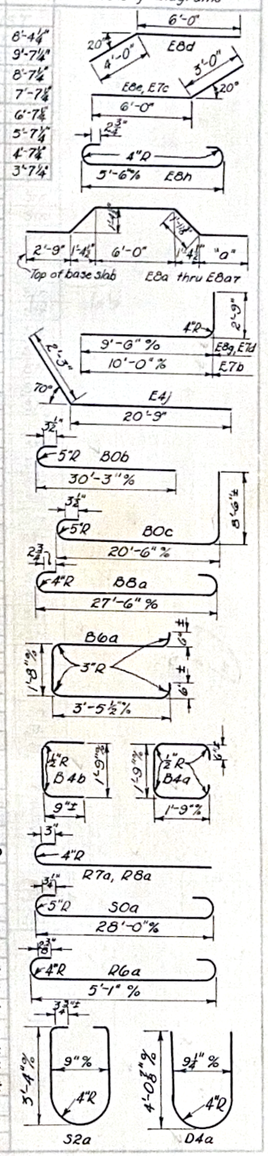
R7a	1" ♦	46	10'-0"	1230	Bt.
R8a	1" □	23	11'-0"	860	Bt.
R8b	1" □	12	12'-6"	510	Strt.
R4a	5/8" ♦	17	18'-6"	330	Strt.

REPLACEMENT STEEL

RE0	1 1/8" □	2	10'-0"	110	Strt.
RE8	1" □	3	8'-0"	80	Strt.
RE7	1" ♦	2	8'-0"	40	Strt.
RE6	7/8" ♦	1	8'-0"	20	Strt.
RE5	3/4" ♦	1	8'-0"	10	Strt.
RE4	5/8" ♦	2	7'-0"	10	Strt.
RE2	1/2" ♦	2	7'-0"	10	Strt.

TOTAL (this Sheet) ~~65,147#~~ 65,247

Bending Diagrams



See Sheets No. 26, 30, and 32 for other steel lists

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

REINFORCING DETAILS FOR EAST SECTION OF SOUTH WALL AND PART OF STEEL LIST

BRIDGE No. LA-7118
OVER Two Mile CREEK

LAWRENCE COUNTY — S.H. 7
Sec. "Athalia" Pt. — STA. 30+60

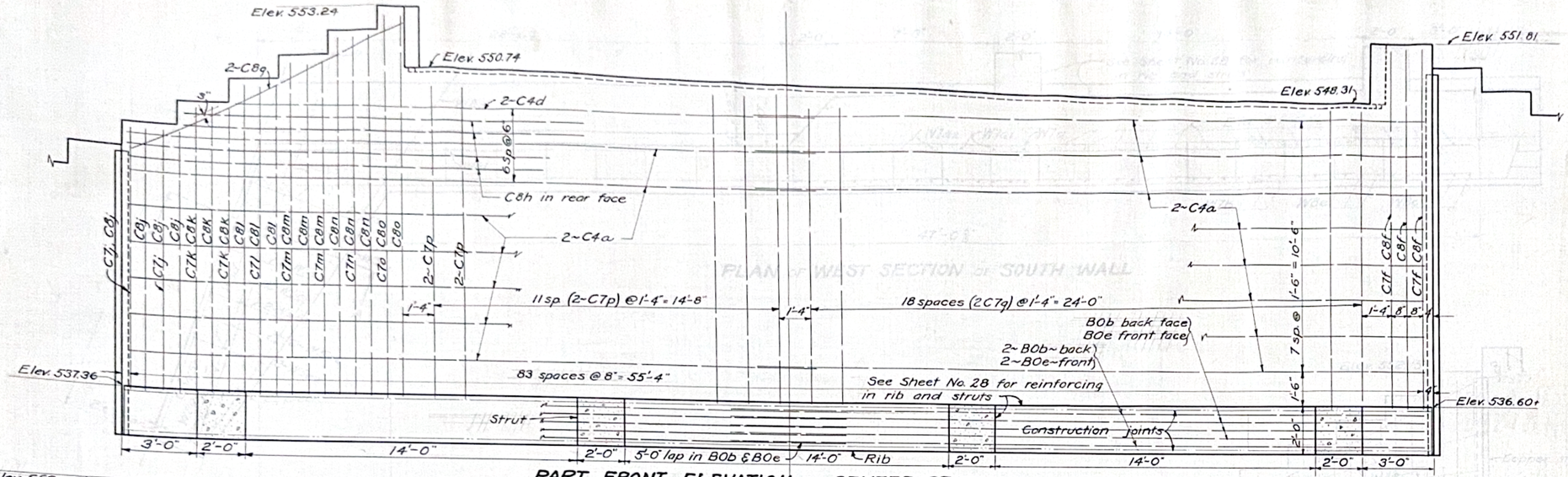
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.E.D.	K.E.D.	O.E.G.	R.W.S.	H. S. H. 4/22/38 M.H.C. 5/11/38		

Revised As-Built 4-26-40 F.C.N.

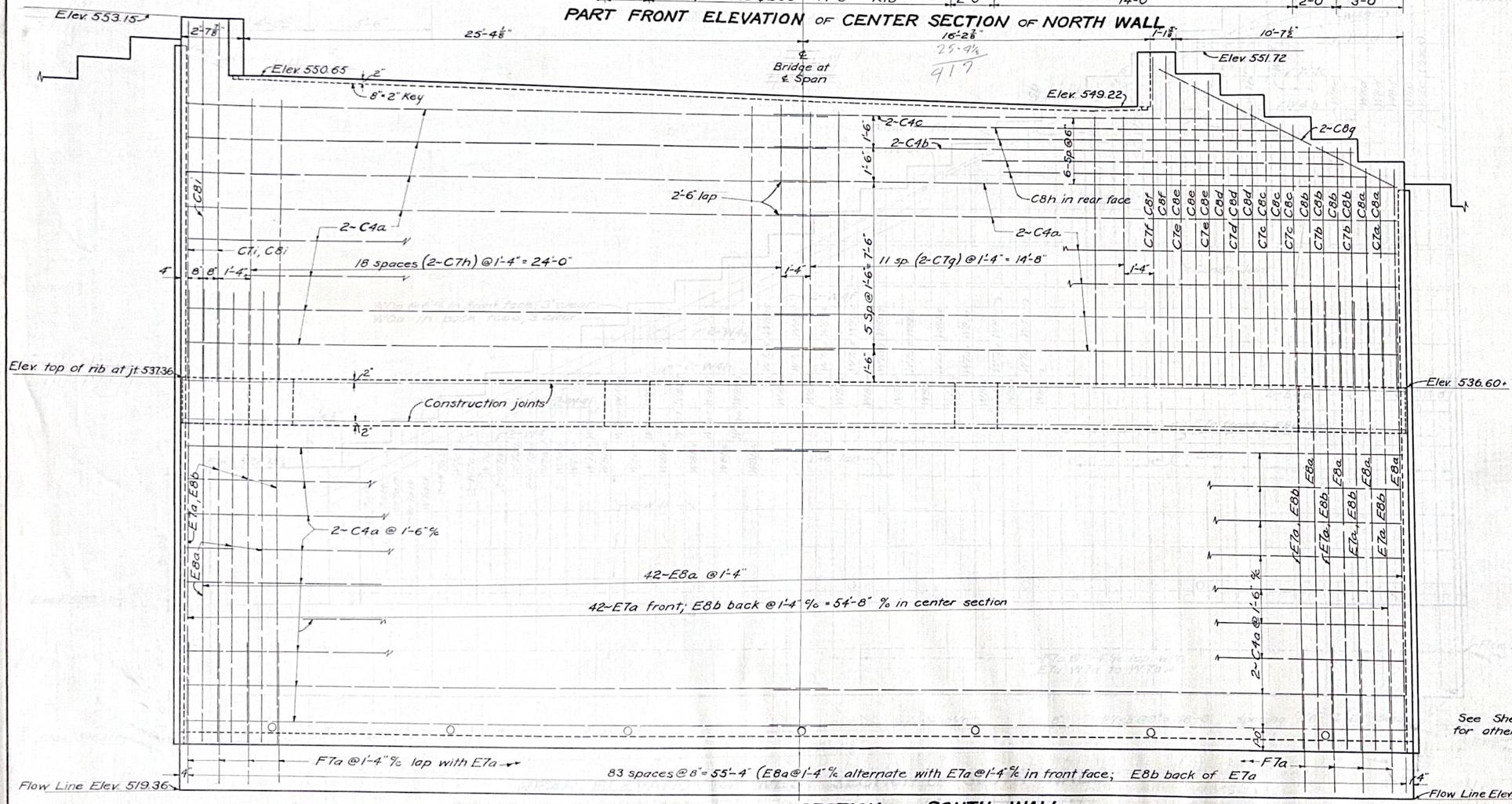
FED. RD. DIST. NO.	STATE	F.A.H. PROJECT	FISCAL YEAR
10	OHIO	NO ER-50 A(1)	1937

30
34

LAWRENCE COUNTY
S.H. 7 SEC. 5 (PT) ATHALIA (PT)



PART FRONT ELEVATION OF CENTER SECTION OF NORTH WALL



REAR ELEVATION OF CENTER SECTION OF SOUTH WALL

REINFORCING STEEL LIST FOR CENTER WALL SECTION

Mark	Size	No.	Length	Weight	Shape
E8a	1"□	84	21'-0"	6000	Bt
E8b	1"□	84	20'-0"	5720	Str.
E7a	1"□	84	19'-6"	4380	Str.
C8a	1"□	2	10'-0"	70	Str.
C8b	1"□	4	11'-0"	150	Str.
C8c	1"□	3	12'-0"	120	Str.
C8d	1"□	3	12'-9"	130	Str.
C8e	1"□	3	13'-9"	140	Str.
C8f	1"□	5	14'-9"	250	Str.
C8g	1"□	4	12'-6"	170	Str.
C8h	1"□	8	17'-0"	460	Str.
C8i	1"□	3	15'-6"	160	Str.
C8j	1"□	4	10'-9"	150	Str.
C8k	1"□	3	11'-9"	120	Str.
C8l	1"□	3	12'-9"	130	Str.
C8m	1"□	3	13'-9"	140	Str.
C8n	1"□	3	14'-9"	150	Str.
C8o	1"□	2	15'-9"	110	Str.
C7a	1"ø	1	10'-0"	30	Str.
C7b	1"ø	2	11'-0"	60	Str.
C7c	1"ø	2	12'-0"	60	Str.
C7d	1"ø	1	12'-9"	30	Str.
C7e	1"ø	2	13'-9"	70	Str.
C7f	1"ø	3	14'-9"	120	Str.
C7g	1"ø	24	12'-3"	790	Str.
C7h	1"ø	38	12'-6"	1270	Str.
C7i	1"ø	2	15'-6"	80	Str.
C7j	1"ø	2	10'-9"	60	Str.
C7k	1"ø	2	11'-9"	60	Str.
C7l	1"ø	1	12'-9"	30	Str.
C7m	1"ø	2	13'-9"	70	Str.
C7n	1"ø	1	14'-9"	40	Str.
C7o	1"ø	1	15'-9"	40	Str.
C7p	1"ø	24	13'-0"	830	Str.
C7q	1"ø	38	12'-6"	1270	Str.
C4a	⅝"ø	130	29'-0"	3940	Str.
C4b	⅝"ø	2	27'-0"	60	Str.
C4c	⅝"ø	2	23'-0"	50	Str.
C4d	⅝"ø	2	25'-0"	50	Str.
Total on this sheet				27,560	Lbs.

See Sheets No. 26, 29 and 32 for other steel lists

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

REINFORCING DETAILS FOR CENTER SECTION OF WALLS AND REINFORCING STEEL LIST FOR CENTER SECTION

BRIDGE NO. LA-7-11.8
OVER TWO MILE CREEK
LAWRENCE COUNTY S.H. 7
SEC. ATHALIA (DT) STA. 30+60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.E.D.	K.E.D.	Y.H.H.	R.W.S.	W.S.A. 2/21/38 H.H.R. 5/19/38		

FED. RD. DIST. NO.	STATE	F.E.R.H. PROJECT	FISCAL YEAR
10	OHIO	No ER30 A(1)	1937

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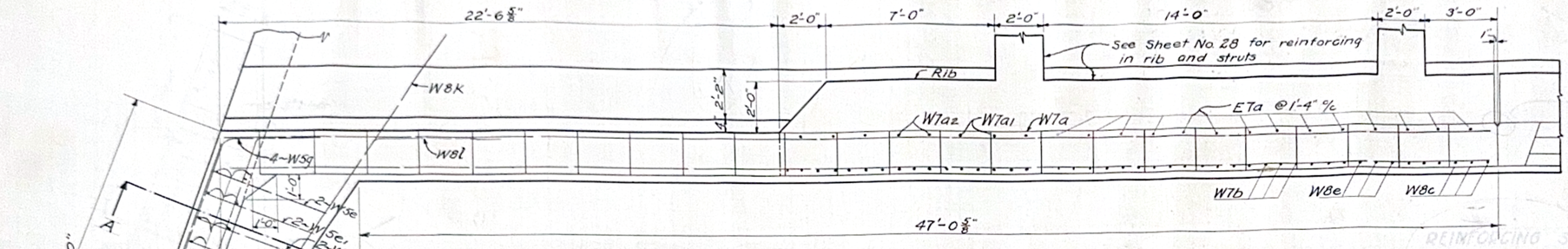
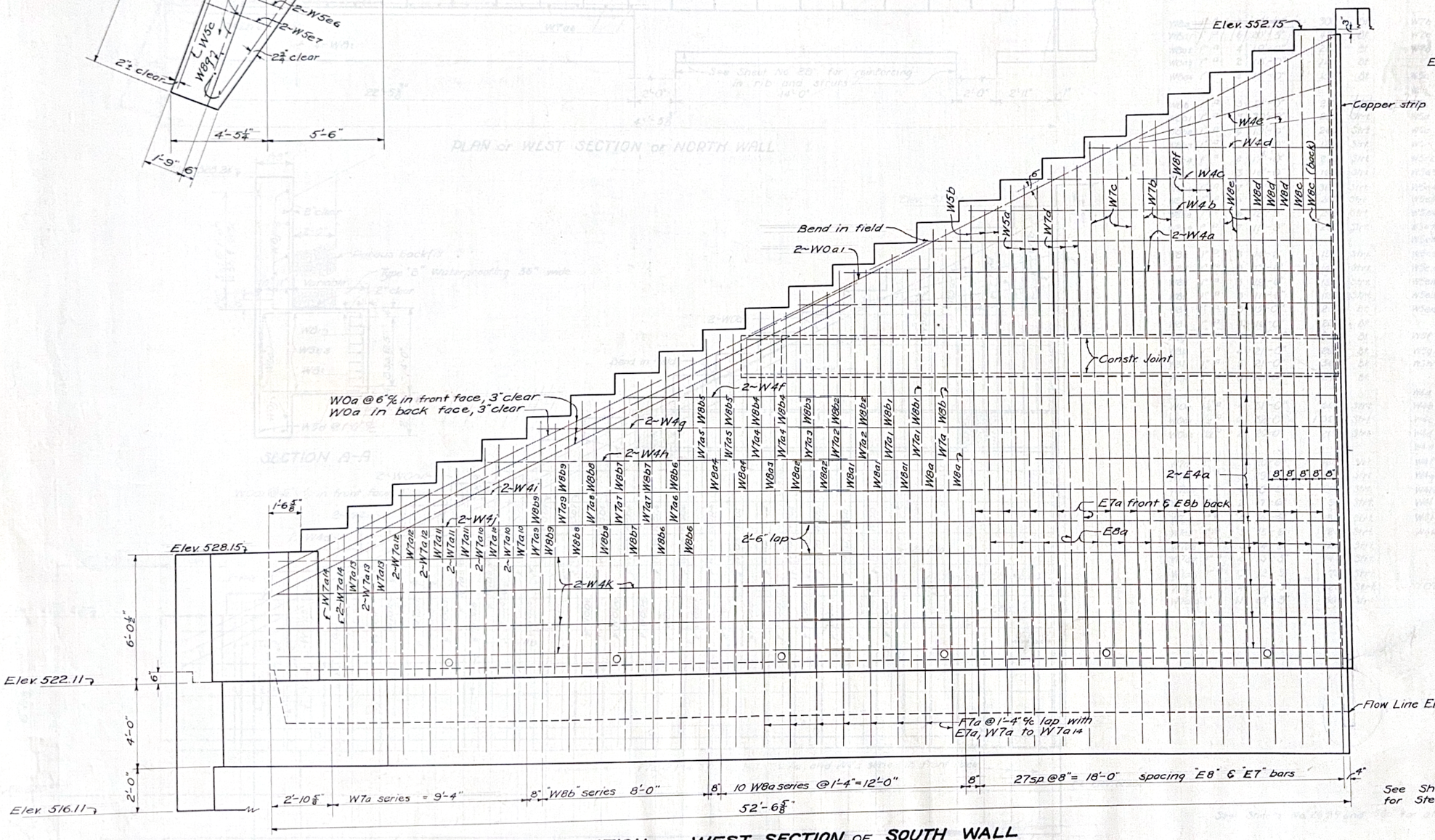
34

LAWRENCE COUNTY
S.H.7 SEC. "S" (PT) ATHALIA (PT)

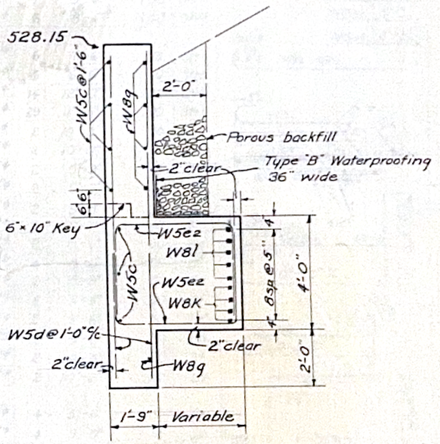


PLAN OF WEST SECTION OF SOUTH WALL



See Sheet No. 32 for Steel List

REAR ELEVATION OF WEST SECTION OF SOUTH WALL



SECTION A-A

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

REINFORCING DETAILS OF WEST SECTION OF SOUTH WALL

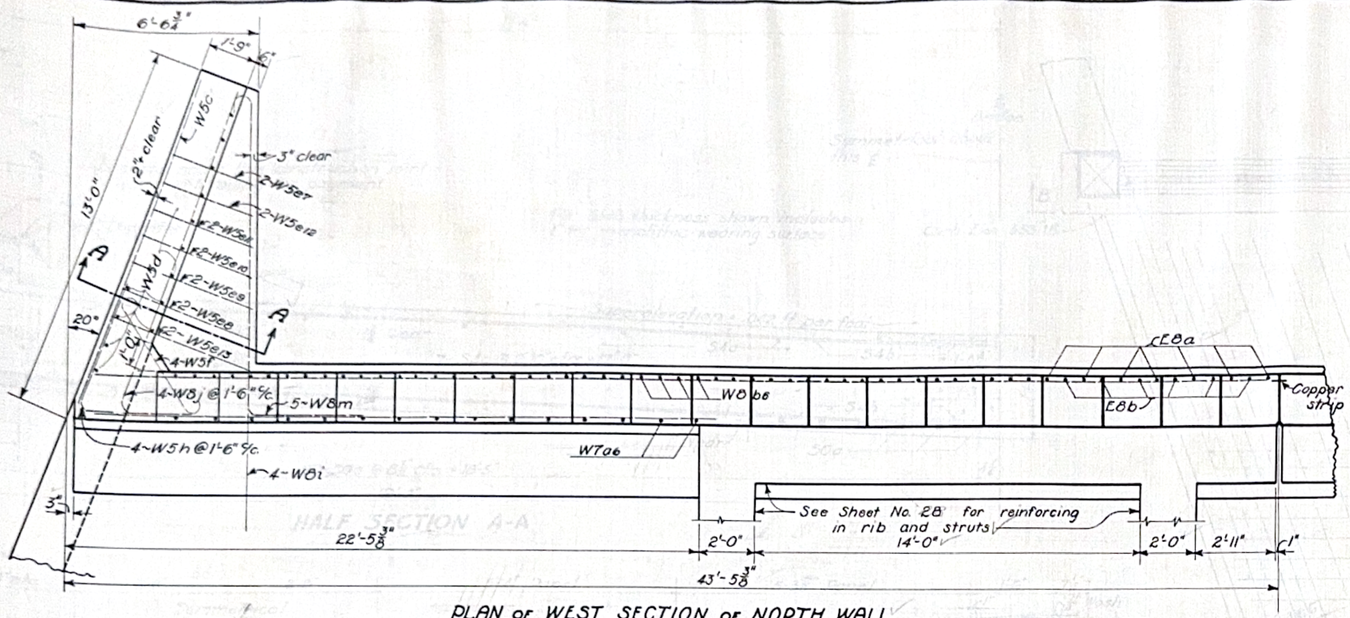
BRIDGE NO. LA-7-118
OVER TWO MILE CREEK
LAWRENCE COUNTY S.H.7
SEC. "ATHALIA" PT. STA. 30+60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.E.D.	K.E.D.	G.H.H.	R.W.S.	W.S.H. 3/28/38 W.H.L. 5/19/38		

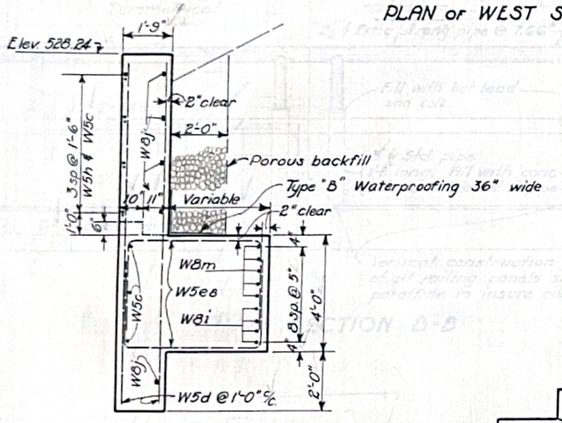
FED. RD. DIST. NO.	STATE	F. A. PROJECT NO.	FISCAL YEAR
10	OHIO	ER,60-A01	1937

32/34

LAWRENCE COUNTY
S.H. 7 SEC. "S" Pt., "Athalia" Pt.



PLAN or WEST SECTION or NORTH WALL



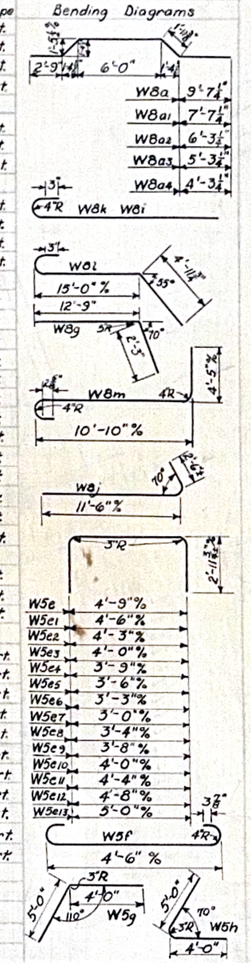
SECTION A-A

FRONT ELEVATION OF WEST SECTION OF NORTH WALL

REINFORCING STEEL IN WEST WALL SECTION

Mark	Size	No.	Length	Weight	Shape
E8a	1" □	20	21'-0"	1430	Bt.
E8b	1" □	20	20'-0"	1360	Strt.
E7a	1" ϕ	20	19'-6"	1040	Strt.
E4a	⅝" ϕ	38	27'-0"	1070	Strt.
W8a	1" □	4	22'-3"	300	Bt.
W8a1	1" □	6	20'-3"	420	Bt.
W8a2	1" □	4	19'-0"	260	Bt.
W8a3	1" □	2	18'-0"	120	Bt.
W8a4	1" □	4	17'-0"	230	Bt.
W8b	1" □	3	21'-0"	210	Strt.
W8b1	1" □	3	20'-0"	200	Strt.
W8b2	1" □	4	19'-0"	260	Strt.
W8b3	1" □	2	18'-0"	120	Strt.
W8b4	1" □	4	17'-0"	230	Strt.
W8b5	1" □	3	16'-0"	160	Strt.
W8b6	1" □	7	15'-0"	360	Strt.
W8b7	1" □	6	13'-9"	280	Strt.
W8b8	1" □	6	12'-9"	260	Strt.
W8b9	1" □	7	11'-9"	280	Strt.
W8c	1" □	3	14'-6"	150	Strt.
W8d	1" □	3	13'-6"	140	Strt.
W8e	1" □	3	12'-6"	130	Strt.
W8f	1" □	3	11'-6"	120	Strt.
W8g	1" □	5	15'-0"	260	Bt.
W8i	1" □	4	16'-0"	220	Bt.
W8j	1" □	5	14'-0"	240	Bt.
W8k	1" □	4	21'-0"	290	Bt.
W8l	1" □	5	21'-0"	360	Bt.
W8m	1" □	5	16'-0"	270	Bt.
W0a	1¼" □	4	31'-0"	660	Strt.
W0a1	1¼" □	6	32'-0"	1020	Strt.
W0a2	1¼" □	2	20'-0"	210	Strt.
W7a	1" ϕ	3	20'-6"	160	Strt.
W7a1	1" ϕ	3	19'-6"	160	Strt.
W7a2	1" ϕ	4	18'-6"	200	Strt.
W7a3	1" ϕ	2	17'-6"	90	Strt.
W7a4	1" ϕ	4	16'-6"	180	Strt.
W7a5	1" ϕ	3	15'-6"	120	Strt.
W7a6	1" ϕ	3	14'-6"	120	Strt.
W7a7	1" ϕ	4	13'-3"	140	Strt.
W7a8	1" ϕ	2	12'-3"	70	Strt.
W7a9	1" ϕ	4	11'-3"	120	Strt.
W7a10	1" ϕ	11	10'-3"	300	Strt.
W7a11	1" ϕ	8	9'-3"	200	Strt.
W7a12	1" ϕ	10	8'-3"	220	Strt.
W7a13	1" ϕ	8	7'-3"	150	Strt.
W7a14	1" ϕ	8	6'-3"	130	Strt.
W7b	1" ϕ	3	10'-6	80	Strt.
W7c	1" ϕ	7	9'-6"	180	Strt.
W7d	1" ϕ	6	8'-6"	140	Strt.
W5a	¾" ϕ	6	7'-6"	70	Strt.
W5b	¾" ϕ	6	6'-6"	60	Strt.
W5c	¾" ϕ	14	12'-0"	250	Strt.
W5d	¾" ϕ	29	11'-6"	500	Strt.
W5e	¾" ϕ	2	10'-3"	30	Bt.
W5e1	¾" ϕ	2	10'-0"	30	Bt.
W5e2	¾" ϕ	2	9'-9"	30	Bt.
W5e3	¾" ϕ	2	9'-6"	30	Bt.
W5e4	¾" ϕ	2	9'-3"	30	Bt.
W5e5	¾" ϕ	2	9'-0"	30	Bt.
W5e6	¾" ϕ	2	8'-9"	30	Bt.
W5e7	¾" ϕ	4	8'-6"	60	Bt.
W5e8	¾" ϕ	2	8'-9"	30	Bt.
W5e9	¾" ϕ	2	9'-3"	30	Bt.
W5e10	¾" ϕ	2	9'-6"	30	Bt.
W5e11	¾" ϕ	2	9'-9"	30	Bt.
W5e12	¾" ϕ	2	10'-3"	30	Bt.
W5e13	¾" ϕ	2	10'-6"	30	Bt.
W5f	¾" ϕ	4	5'-6"	30	Bt.
W5g	¾" ϕ	4	3'-0"	50	Bt.
W5h	¾" ϕ	4	3'-0"	50	Bt.
W4a	⅝" ϕ	4	24'-6"	100	Strt.
W4b	⅝" ϕ	11 ℔	18'-6"	210 ~~200~~	Strt.
W4c	⅝" ϕ	5 ℔	14'-0"	70 ~~40~~	Strt.
W4d	⅝" ϕ	4 ℔	12'-0"	50 ~~40~~	Strt.
W4e	⅝" ϕ	6 ℔	10'-0"	60 ~~40~~	Strt.
W4f	⅝" ϕ	2	11'-6"	20	Strt.
W4g	⅝" ϕ	2	15'-6"	30	Strt.
W4h	⅝" ϕ	2	18'-0"	40	Strt.
W4i	⅝" ϕ	2	22'-0"	50	Strt.
W4j	⅝" ϕ	2	24'-0"	50	Strt.
W4k	⅝" ϕ	8	28'-0"	230	Strt.
				17,790	
TOTAL (This Sheet)				17,580 ~~17,790~~	

Bending Diagrams



See Sheets No. 26, 29 and 30 for other steel lists.

Revised Feb. 7, 1939:- W4b, W4c, W4d & W4e revised in No. and Weight.
K.E.D.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

REINFORCING DETIALS FOR WEST SECTION or NORTH WALL AND REINFORCING STEEL LIST for WEST SECTION

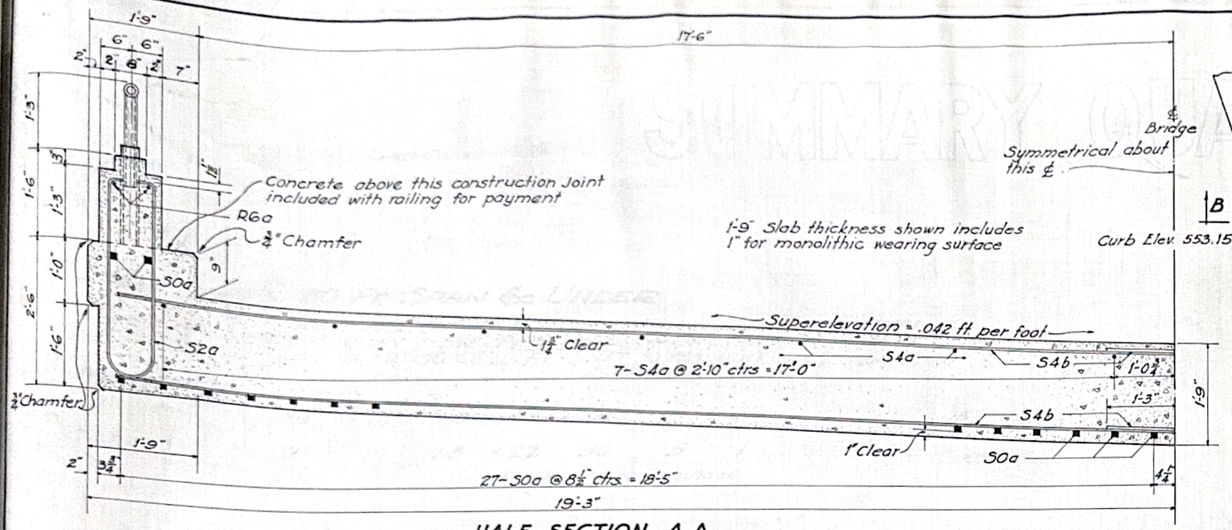
BRIDGE NO. LA-7-118
over TWO MILE CREEK
LAWRENCE COUNTY S.H.7
SEC. "Athalia" Pt. STA. 30+60

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.E.D.	K.E.D.	C.E.G.	R.W.S.	W.S.H. 3/28/38 W.H.C. 5/11/38		2-3-39

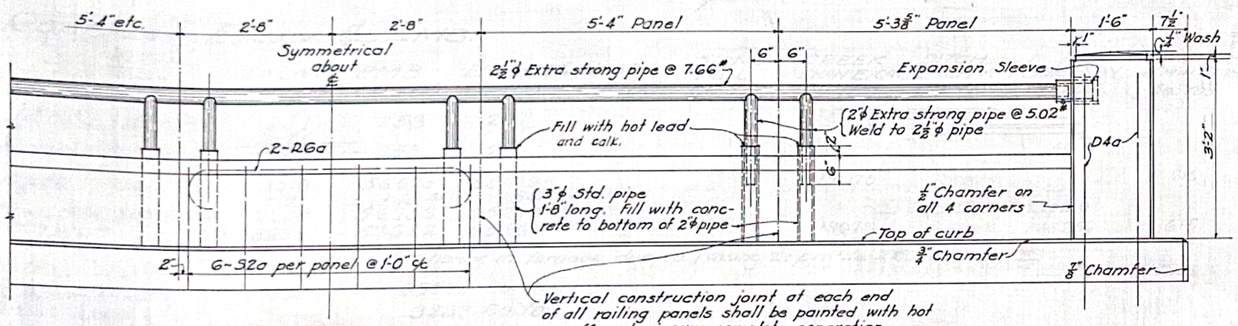
FED. RD. DIST. NO.	STATE	F.A.H. PROJECT	FISCAL YEAR
10	OHIO	N2 ER-50A(1)	1937

33
34

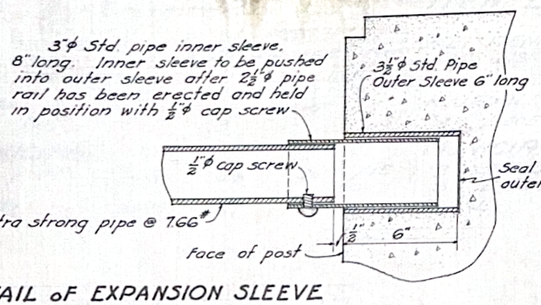
LAWRENCE COUNTY
S.H. 7 SEC. "S" PT. ATHALIA PT.



HALF SECTION A-A

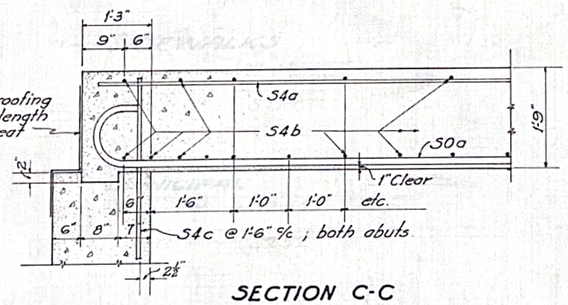


HALF SECTION B-B



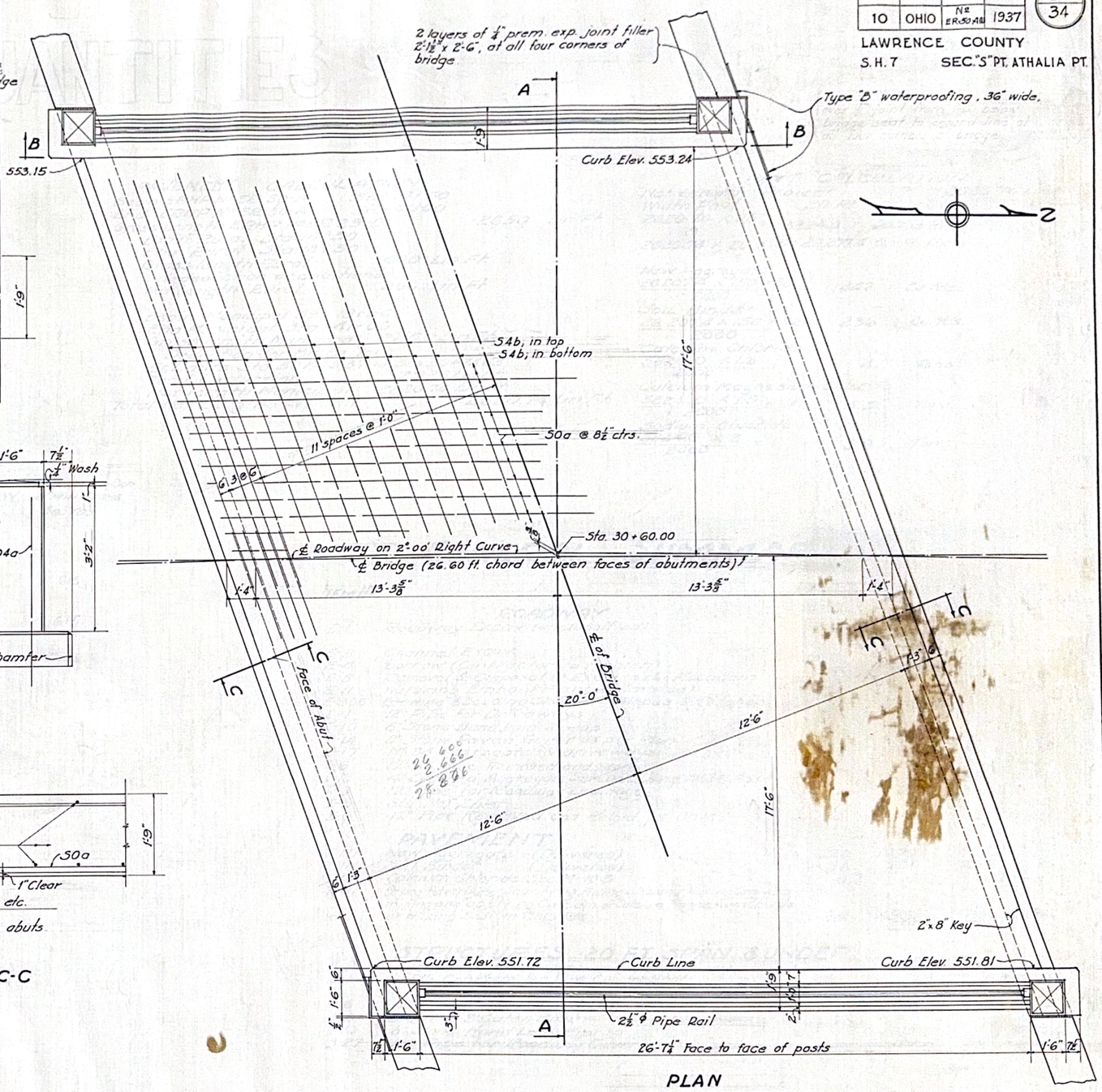
DETAIL of EXPANSION SLEEVE

4 Required. Included with railing for payment.



SECTION C-C

Pipe shall be painted with one shop coat of red lead and two field coats of light gray to match the color of the concrete. Painting shall be done in accordance with Item 5-8. "Outer Sleeves" and imbedded portion of vertical sleeves shall not be painted. Pipe and painting included with railing for payment.
Grind all welded joints smooth.



PLAN

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

SUPERSTRUCTURE DETAILS

BRIDGE NO. LA-7-118
OVER TWO MILE CREEK

LAWRENCE COUNTY SH. 7
SEC. "ATHALIA" PT. STA. 30+60.00

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.E.B.	K.E.B.	W	R.W.S.	W.S.H. 3/31/38 W.H.C. 5/19/38		

FED. RD. DIST. NO.	STATE	E.R.H. PROJECT	FISCAL YEAR	
10	OHIO	NºER 50-A(I)	1937	34 / 34

SH. 7 SEC. 3(Pt.) ATHALIA(Pt.)
LAWRENCE COUNTY

SUMMARY QUANTITIES

STRUCTURES 20 FT. SPAN & UNDER

SHEET Nº	ITEM Nº	REMOVE AND DISPOSE OF 12" R.C.P. LIN. FT.	STRUCT EXCAV. CU. YDS.	CONC. 1-5½ CU. YDS	12" PIPE LIN. FT.	18" PIPE LIN. FT.	8" STONE R.P. RAP SQ. YDS.	STD. 2-2 C. BASIN UNIT		STD. Nº 1 INLET UNIT	SEE SHEET Nº
MUNICIPAL											
3	1-C		20	19	1.3	22	90	5	1		1	15
TOTALS			20	19	1.3	*22	90	5	1		*1	

* For Roadway Drainage

ROADWAY EXCAV. & EMB.

STATION FROM	STATION TO	EXCAV. CU. YDS.	EMB. CU. YDS.	EMB+15% CU. YDS.	WASTE CU. YDS.	STONE FILL CU. YDS.	CREEK CHAN. EXCAV. CU. YDS	DITCH EXCAV. CU. YDS.	I BORROW CU. YDS.	CHANNEL RIP RAP 8" MIN. STONE Sq. Yds.
14+50	18+50	271	253	291						
*		-26								
RURAL-Sub-total		245	253	291					46	
18+50	41+00	3019	56625	65119			19075			615
*		-31	+134	154						
MUNICIPAL-Sub-total		2988	56759	65273					43210	
TOTALS		3233	57012	65564			19075		43256	615

NOTE: REDUCTION OF BORROW

Gross Embankment +15%	65564	Cu. Yds.
Gross Excavation	3233	Cu. Yds.
Borrow	62331	Cu. Yds.
Channel Excavation	19075	Cu. Yds.
Net Borrow	43256	Cu. Yds.

* Change in Yardage due to raising & profile 2½"

DRIVES & ROAD APPRS.

SHEET Nº	ITEM Nº	12" PIPE LIN. FT.	Nº 34 AGGREGATE CU. YDS.	REMOVE CLEAN STORE 12" V.S.P.	REMOVED & RELAID 12" PIPE LIN. FT.
RURAL					
3	1-A		3		15
MUNICIPAL					
3	HA10-A	360	64	36	15
TOTAL		360	67	36	30

ITEM E-305

SHEET Nº	ITEM Nº	DRESS & SEEDING SHOULDERS SLOPES DITCHES SQ. YDS.
RURAL		
3	E-305	1666
MUNICIPAL		
3	E-305	17150
3	E-305	2312
TOTAL		21128

SIDEWALKS

SHEET Nº	ITEM Nº	Nº 34 AGGREGT. 4"x4' SIDEWALK SQ. FT.
MUNICIPAL		
3	HW	3252
TOTAL		3252

STONE RIP RAP

SHEET Nº	ITEM Nº	8" MIN. STONE RIP RAP SQ. YDS.
MUNICIPAL		
3	1-R	98
TOTAL		98

STONE PAVED GUTTER

SHEET Nº	ITEM Nº	8" MIN. STONE PAVED DITCH LIN. FT.
MUNICIPAL		
3	HEA-E	1376
TOTAL		1376

PAVT. REMOVAL

SHEET Nº	ITEM Nº	REMOVAL & DISPOSAL OF EXISTING BIT. MACADAM SQ. YDS.
MUNICIPAL		
3	E-8	2312
TOTAL		2312

PAVEMENT CALCULATION

Begin E.R.H.P. NºER 50-A	Sta. 14+50	
End E.R.H.P. NºER 50-A	Sta. 41+00	
Gross Length E.R.H.P. NºER 29-D		2650 Lin. Ft.
Begin Rural	Sta. 14+50	
End Rural	Sta 18+50	
Gross length Rural		400 Lin. Ft.
No deduction or additions		
Net Length Rural		400 Lin. Ft.
Begin Municipal	Sta 18+50	
End Municipal	Sta. 41+00	
Gross length Municipal		2250 Lin. Ft.
Deduction for Br. La. 7-118		
Br. Limits	Sta 30+45.37 To Sta 30+71.63	
		25.26 Lin. Ft.
Total Deduction		
Net length Municipal		2220.74 Lin. Ft.
Total Net Length Pavement		2620.74 Lin. Ft.

PAVT. CALCULATION

Net Length Project 2620.74 Lin. Ft.
Width Pavt. 20 Ft.

2620.74 × 20 = 5824.0 Sq. Yds. Pavt.
9

2620.74 × 20 × .5 = 26,207.4 Cu. Ft. Pavt.

New Aggregate
$\frac{26207.4 \times 150 \times 88}{2400}$ = 1442 Cu. Yds.

Soil Binder
$\frac{26,207.4 \times 150 \times .12}{2000}$ = 236 Cu. Yds.

Calcium Chloride
$\frac{5824.0 \times 1.6}{2000}$ = 4.7 Tons

Calcium Magnesium Chloride
$\frac{5824.0 \times 1.9}{2000}$ = 5.5 Tons.

Sodium Chloride
$\frac{5824.0 \times 2}{2000}$ = 5.9 Tons

GENERAL SUMMARY

ITEM Nº		RURAL	MUNICIPAL	TOTAL	UNIT
	ROADWAY				
E-1	Roadway Excav. (unclassified)	245	2988	3233	Cu. Yds.
E-3	Channel Excav.		19075	19075	Cu. Yds.
E-4	Borrow (Contractor to furnish)	46	43210	43256	Cu. Yds.
E-8	Removal & Disposal of Existing Bit. Macadam		2312	2312	Sq. Yds.
E-11	Watering Embankment (estimated)	1	284	285	M Gals.
E-305	Grading & Seeding Shoulders, Slopes & Ditches	1666	19462	21128	Sq. Yds.
I-1	12" Pipe for Driveways		360	360	Lin. Ft.
I-10	8" Stone Hand Laid Riprap		713	713	Sq. Yds.
I-14	8" Stone Paved Gutter as per Plan		1376	1376	Lin. Ft.
I-17	Nº 34 Aggregate for driveways	3	64	67	Cu. Yds.
I-6	12" V.S. Pipe Removed and Stored		36	36	Lin. Ft.
I-13	4" Crushed Aggregate Sidewalk Using No 34 Aggr.		3252	3252	Sq. Ft.
I-3	12" Pipe for Roadway Drainage		22	22	Lin. Ft.
I-8	Std. Nat. Inlet		1	1	Each
I-6	12" Pipe Removed and Reloid for Drives	15	15	30	Lin. Ft.
	PAVEMENT				
T-111	New Aggregate (Delivered)	220	1222	1442	Cu. Yds.
T-111	Soil Binder (Delivered)	36	200	236	Cu. Yds.
T-111	Calcium Chloride Sec. M-10.3	0.7	4	4.7	Tons
T-111	Drying, Pulverizing, Scarifying, Mixing, Shaping, Wetting, Compacting mixing and applying Calcium or Calcium Magnesium Chloride or mixing Sodium Chloride	889	4935	5824	Sq. Yds.
	STRUCTURES 20 FT. SPAN & UNDER				
E-2	Excavation for Structures (Unclassified)		19	19	Cu. Yds.
S-1	1-5½ Concrete for Pipe Culvert Ends.		1.3	1.3	Cu. Yds.
I-6	12" Pipe Removed and Disposed Of.		20	20	Lin. Ft.
I-8	Std Nº 2-2 Catch Basin		1	1	Each
I-10	8" Stone Hand Laid Riprap		5	5	Sq. Yds.
S-27	18" Pipe for Roadway Culverts		90	90	Lin. Ft.
	ALTERNATES FOR CALCIUM CHLORIDE				
T-111	Calcium Magnesium Chloride Sec. M-10.4	0.9	4.6	5.5	Tons
T-111	Sodium Chloride Suppl. Spec. M-110.10	0.9	5.0	5.9	Tons

STRUCTURES OVER 20 FT. SPAN

For Estimated Quantities See Sheet 26

Q-37-7