I-9

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

S.H.(I.C.H.) 33 & 447
SEC. BURTON VILLAGE
GEAUGA COUNTY
1/13
SR 87 R 89 304 ~ 14.03

CLEVELAND - BURTON ROAD
SH(ICH)33 SEC. BURTON VILLAGE PET. NO. 6904
BURTON - BLOOMFIELD ROAD
SH(ICH)447 SEC. BURTON VILLAGE PET. NO. 6904
GEAUGA COUNTY
JANUARY 1930

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The Standard Specifications of the STATE OF OHIO, Department of Highways in force on date of contract will govern this improvement.

I, hereby approve these plans and declare that the making of the improvement will require the closing to traffic of the highway and that detours will be provided as indicated on the plans and specifications.
Contractor shall Construct section so as to permit traffic between Sta. 23+00 and Sta. 26+00 or between Sta. 26+00 and Sta. 29+00 at all times.

Approved _____ Resident District Deputy Director
Date 1-31-30

Approved _____ Resident Division Deputy Director
Date 2/1-30

Approved _____ Chief Engr. Bureau of Construction
Date 2/4/30

Approved _____ Chief Engr. Bureau of Maintenance
Date _____

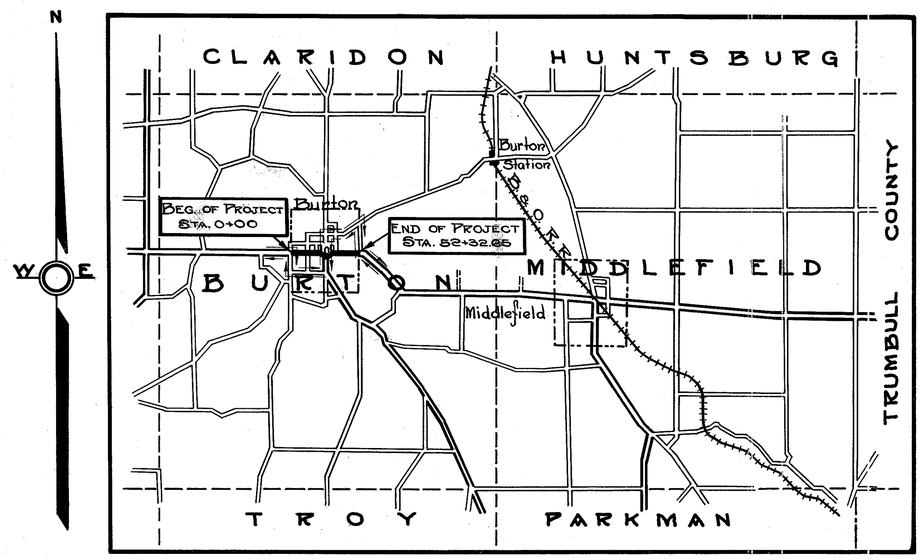
Approved _____ Chief Engr. Bureau of Bridges
Date _____

Approved _____ Chief Engineer
Date 2-4-30

Approved _____ Director of Highways
Date 2-4-30

CONVENTIONAL SIGNS

County Line
Township Line
Property Line
Center Line
Corporation Line
Fence
C.E.I. Poles
Telephone Poles
Railroad
Guard Rail
Storm Sewer & Inlets
Trees
Manholes
Fire Hydrants
Gate Valves



LOCATION PLAN

Scale of Miles
1 Mi. 0 1 Mi. 2 Mi.

Portion To Be Improved
State Roads
Other Roads
Detours

We the Commissioners of Geauga County hereby approve these plans and certify that the right-of-way 66 ft. wide is available for the construction, maintenance and repair of the above highway.

W. H. Cromwell
T. J. Russell
J. Shafford

Date: 1-27-30 County Commissioners

SCALES

Plan	1"=50'
Profile (Vertical)	1"=5'
Profile (Horizontal)	1"=50'
Cross-Sections	1"=5'

CONSTRUCTION BUREAU
APR 4 1956
GROUND PHOTOLAB

SUPPLEMENTAL PRINTS OF STRUCTURAL STANDARDS

Pipe Culverts	Dr. №	300
Box Culverts	" "	301
Standard Inlets	" "	305
Std. Curb Types 2 & 3	" "	129
Guard Rail Type D	" "	105
Contraction Joint	" "	95
Center Joint	" "	100

1001

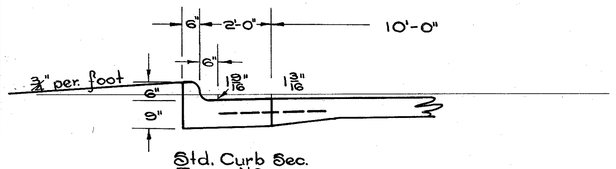
Checked 2-4-29 H.M.Gause

2 - GEAUGA - 33/447 - BURTON VILLAGE

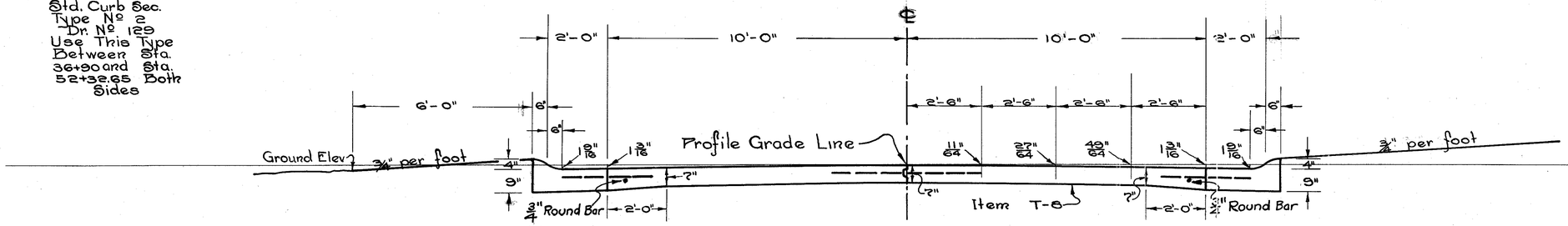
1930

TYPE-C
TYPICAL SECTIONS

SCALE IN FEET
0 2 4 6 8 10



Std. Curb Sec.
Type Nº 2
Dr. Nº 129
Use This Type
Between Sta.
36+90 and Sta.
52+32.65 Both
Sides

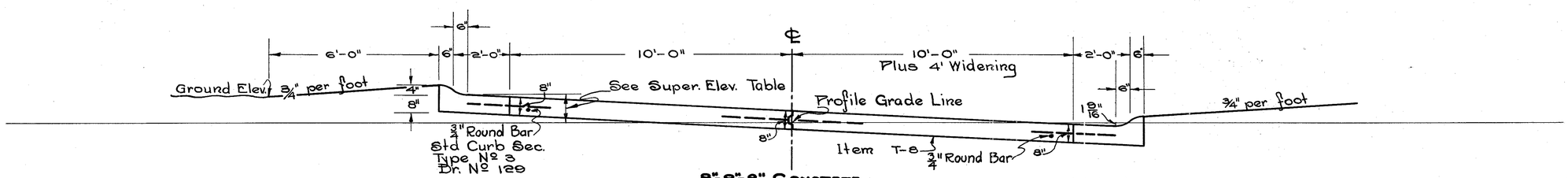


Std. Curb Sec.
Type Nº 3
Dr. Nº 129

9"-7"-9" CONCRETE
24' PAVEMENT
USE THIS SECTION BETWEEN
STA. 0+00 AND STA. 21+40.17
STA. 31+03.51 AND STA. 48+70.81

Std. Curb Sec. Type Nº 3
Dr. Nº 129. Use this Type
Between Sta. 0+00 and
Sta. 36+90 Both Sides

NOTE :-
Curb to be lowered at road approaches and drives where directed.



Std Curb Sec.
Type Nº 3
Dr. Nº 129

8"-8"-8" CONCRETE
24' PAVEMENT
USE THIS SECTION BETWEEN
STA. 21+40.17 AND STA. 31+03.51
STA. 48+70.81 AND STA. 52+32.65

Std. Curb Sec
Type Nº 3
Dr. Nº 129

NOTE :-
Flow Line of Storm Sewer shall be 3'-6" below profile grade unless otherwise shown. Total Lin. Ft. of Vit. S. Pipe item for storm sewer includes the furnishing and placing of all Ys, Ts, Ls, etc. to make necessary connections.

NOTE :-
CONCRETE PAVEMENT includes center joint, dowels and edge bars Drawing No. 100, and transverse joints at 40 foot intervals as per Drawing No. 95. Dowel bars connecting curb and gutter to pavement to be 1/2" round deformed bars 3'-0" long, spaced 5'-0" center to center.

NOTE :-
THE EXCAVATION ITEM includes all necessary grubbing and removal of all trees so indicated.
Old Pavement to be scarified as directed.

NOTE: Between Sta. 21+40.17 and 31+03.5 curves are widened 4' on inside and superelevated 1.50' with Std. 150 foot approach at each end.

CURVE DATA STA. 21+40.17 to 24+48.89

LEFT		CENTER LINE		RIGHT	
Elev. Edge of Pav't.	Width	Station	Grade Elev	Width	Elev. Edge of Pav't.
1307.19	12.50	21+40.17	1307.32	12.50	1307.19
07.89	"	+65.17	07.77	12.69	07.64
08.59	"	+90.17	08.22	13.22	08.09
08.87	"	22+00	08.40	13.54	08.27
09.24	"	+15.17	08.67	14.13	08.54
09.99	"	+40.17	09.12	15.39	08.99
10.69	"	+65.17	09.57	16.23	09.44
11.39	"	+90.17	10.02	16.50	09.89
11.57	"	23+00	10.20	16.50	10.07
12.00	"	+25	10.63	16.50	10.50
12.37	12.50	+48.89	11.00	16.50	10.87
12.34	13.00	+73.89	11.34	16.00	11.21
12.26	13.50	+98.89	11.64	15.50	11.51
12.25	13.52	24+00	11.65	15.48	11.52
12.15	14.00	+23.89	11.90	15.00	11.77
1311.98	14.50	+48.89	1312.11	14.50	1311.98
	Extra Pavt.		96.0 Sq.Yds		

CURVE DATA STA. 24+48.89 to 28+42.99

LEFT		CENTER LINE		RIGHT	
Elev. Edge of Pav't.	Width	Station	Grade Elev	Width	Elev. Edge of Pav't.
1311.98	14.50	24+48.89	1312.11	14.50	1311.98
12.15	15.00	+73.89	12.28	14.00	12.53
12.27	15.50	+98.89	12.40	13.50	13.02
12.27	15.52	25+00	12.40	13.48	13.04
12.37	16.00	+23.89	12.50	13.00	13.50
12.47	16.50	+48.89	12.60	12.50	13.97
12.61	16.50	+75	12.74	"	14.11
12.82	16.50	26+00	12.95	"	14.32
13.11	16.50	+25	13.24	"	14.61
13.47	16.50	+50	13.60	"	14.97
13.91	16.50	+75	14.04	"	15.41
14.42	16.50	27+00	14.55	"	15.92
15.01	16.50	+25	15.14	"	16.51
15.47	16.50	+42.99	15.60	12.50	16.97
16.17	16.00	+67.99	16.30	13.00	17.30
16.87	15.50	+92.99	17.00	13.50	17.62
17.07	15.36	28+00	17.20	13.64	17.72
17.57	15.00	+17.99	17.70	14.00	17.95
1318.24	14.50	+42.99	18.37	14.50	1318.24
	Extra Pavt		164.5 Sq.Yds.		

CURVE DATA STA. 28+42.99 to 31+03.51

LEFT		CENTER LINE		RIGHT	
Elev. Edge of Pav't.	Width	Station	Grade Elev.	Width	Elev. Edge of Pav't.
1318.24	14.50	28+42.99	1318.37	14.50	1318.24
19.17	14.00	+67.99	18.92	15.00	18.79
19.98	13.50	+92.99	19.36	15.50	19.23
20.08	13.36	29+00	19.44	15.64	19.31
20.64	13.00	+17.99	19.64	16.00	19.51
21.18	12.50	+42.99	19.81	16.50	19.68
21.04	"	+53.51	19.67	16.50	19.54
20.74	"	+78.51	19.62	16.23	19.49
20.65	"	30+00	19.74	15.55	19.61
20.58	"	+03.51	19.71	15.39	19.58
20.08	"	+28.51	19.46	14.13	19.33
19.53	"	+53.51	19.16	13.54	19.03
18.98	"	+78.51	18.86	12.69	18.73
18.51	"	31+00	18.60	12.51	18.47
1318.43	12.50	+03.51	1318.56	12.50	1318.43
	Extra Pavt		75.9 Sq.Yds.		

CURVE DATA STA. 48+70.81 to 52+32.65

LEFT		CENTER LINE		RIGHT	
Elev. Edge of Pavt.	Width	Station	Grade Elev.	Width	Elev. Edge of Pavt.
1205.63	12.50	48+70.81	1205.76	12.50	1205.63
04.23	"	+95.81	04.08	12.58	1203.95
04.01	"	49+00	03.82	12.62	1203.69
02.94	"	+20.81	02.52	12.82	1202.39
01.75	"	+45.81	1201.05	13.22	1200.92
1200.67	"	+70.81	1199.70	13.84	1199.57
1199.68	"	+95.81	1198.43	14.47	98.30
99.52	"	50+00	98.23	14.55	98.10
98.79	"	+20.81	97.27	14.75	97.14
98.62	"	+25	97.10	"	96.97
97.57	"	+50	96.05	"	95.92
96.65	"	+75	95.13	"	95.00
95.79	"	51+00	94.27	"	94.14
95.09	"	+25	93.57	"	93.44
94.42	"	+50	92.90	"	92.77
93.52	"	+75	92.00	"	91.87
93.46	"	52+00	91.94	"	91.81
93.14	"	+25	91.62	"	91.49
1193.05	12.50	52+32.65	91.53	14.75	1191.40
	Extra Pavt		67.8 Sq.Yds.		

NOTE: This curve contains one transition approach and portion of curve located in Burton Village

S.H.(I.C.H.) 33 & 447
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GEAUGA COUNTY

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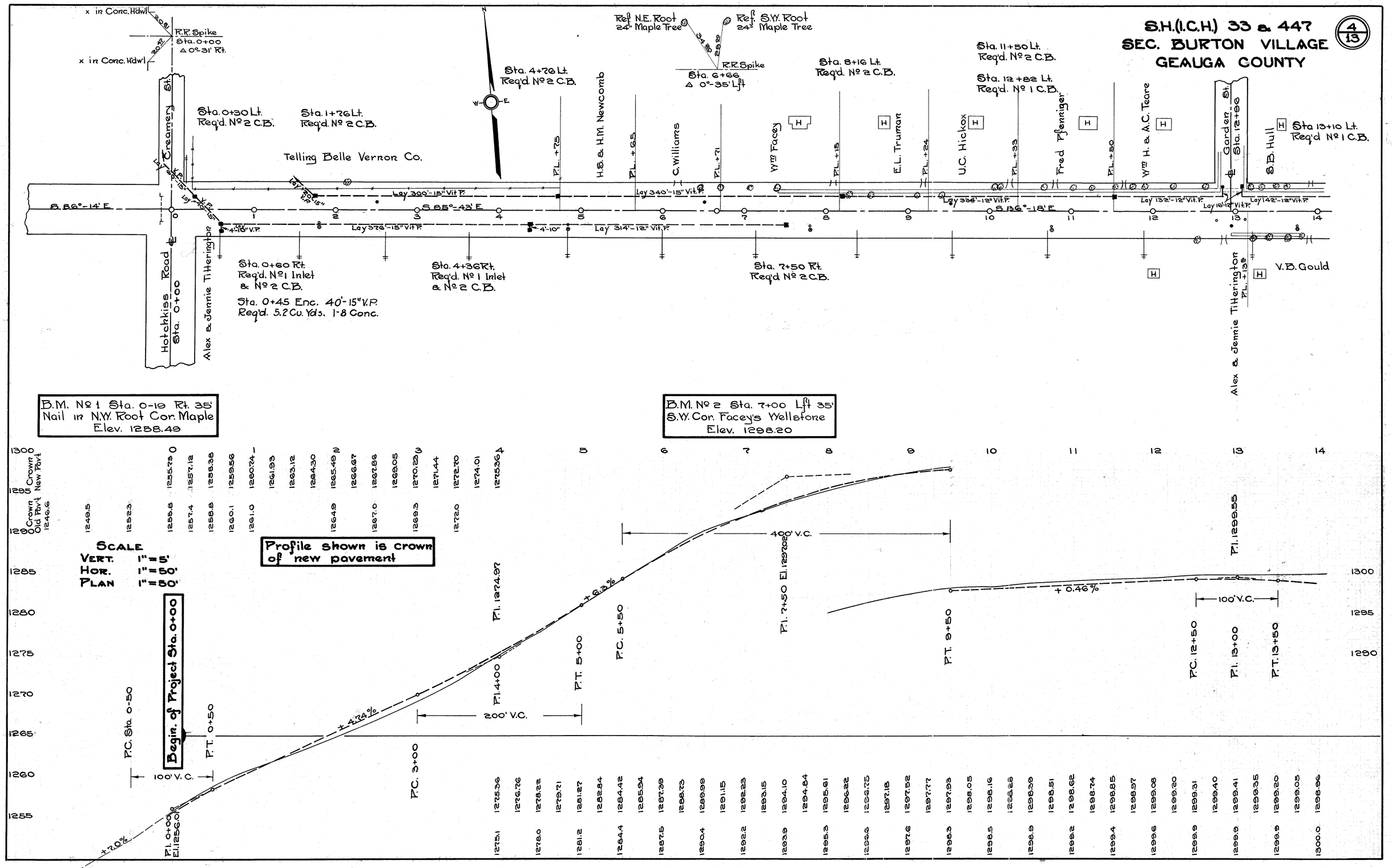


S.H. (I.C.H.) 33 & 447
SEC. BURTON VILLAGE
GEAUGA COUNTY

5/13

Sta. 14+52 Lt.
Req'd. No 2 C.B.

Sta. 14+52 Rt.
Req'd. No 2 C.B.

Sta. 14+52 Enc. 26'-15" V.P.
Req'd. 3.4 Cu. Yds. 1-8 Conc.

Relay 200'-15" Vit. P.

Sta. 17+30 Lt.
Req'd. No 2 C.B.

Sta. 17+60 Rt.
Req'd No 2 C.B.

Sta. 17+45 Enc. 40'-12" V.P.
Req'd. 4.3 Cu. Yds. 1-8 Conc.

M. M. Lawyer etal
Sta. 19+10 Lt. Req'd. No 1 C.B.
Sta. 19+35 Lt. Req'd. No 1 C.B.

Sta. 19+50 Rt.
Req'd. No 2 C.B.

Sta. 21+74 Rt.
Req'd No. 2 C.B.

Sta. 21+59. Enc. 40'-15" V.P.
Req'd. 4.3 Cu. Yds. 1-8 Conc.

Sta. 21+44. Lt.
Req'd. No. 2 C.B.

Sta. 23+34 Lt.
Req'd. No 1 C.B.

Sta. 24+40 Lt.
Req'd. No 1 C.B.

Sta. 25+90 Lt.
Req'd. No 2 C.B.

Sta. 28+10 Lt.
Req'd. No 1 C.B.

Sta. 28+80 Lt.
Req'd. No 1 C.B.

Sta. 25+90. Enc. 100'-15" V.P.
Req'd. 13.0 Cu. Yds. 1-8 Conc.

Sta. 26+50 Rt.
Req'd. No 1 Inlet.

Sta. 28+20 Rt.
Req'd. No 1 Inlet.

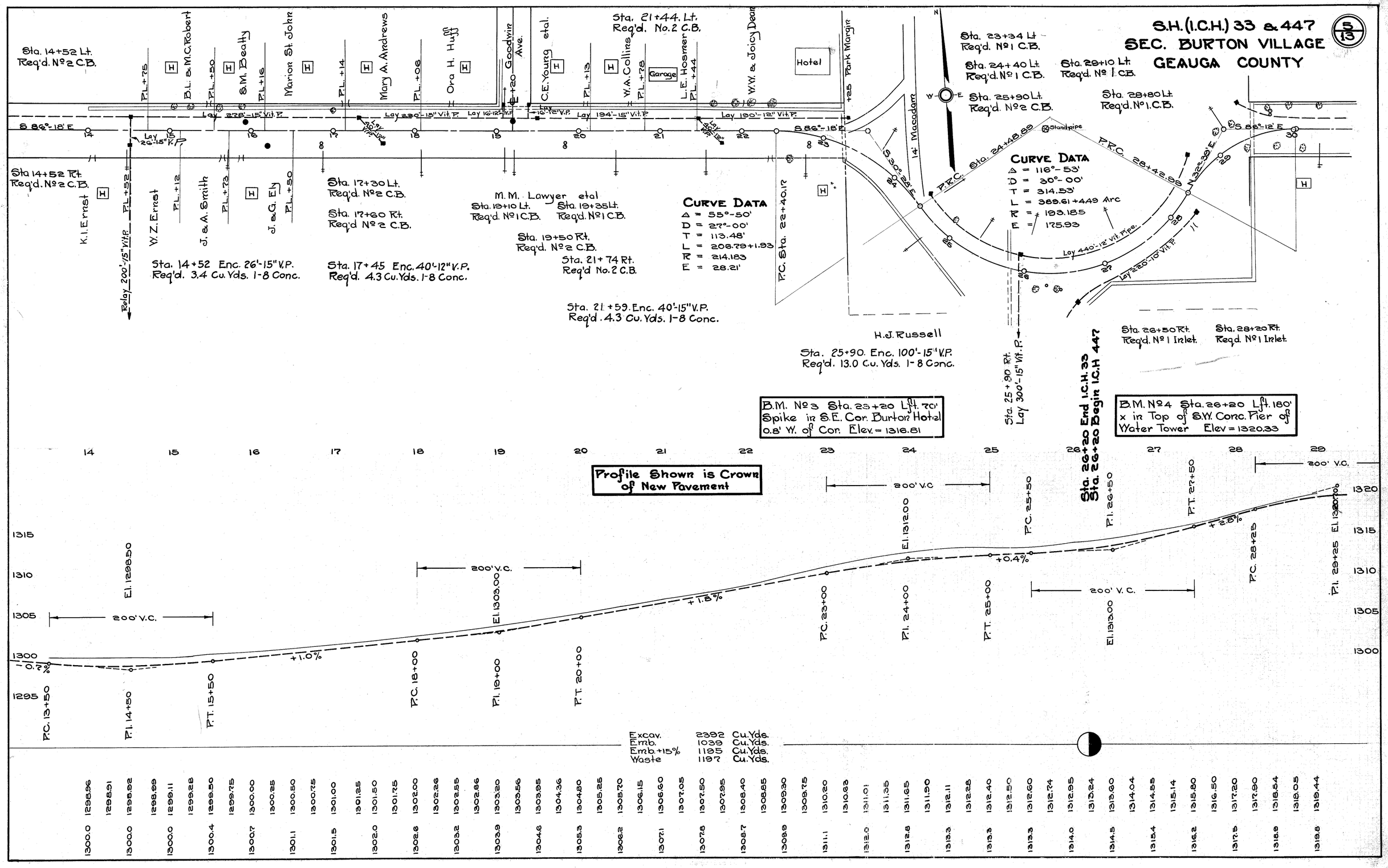
Sta. 25+90 Rt.
Lay 300'-15" Vit. P.

Sta. 26+20 End I.C.H. 33
Sta. 26+20 Begin I.C.H 447

B.M. No 3 Sta. 23+20 Lft. 70'
Spike in S.E. Cor. Burton Hotel
0.8' W. of Cor. Elev. = 1316.81

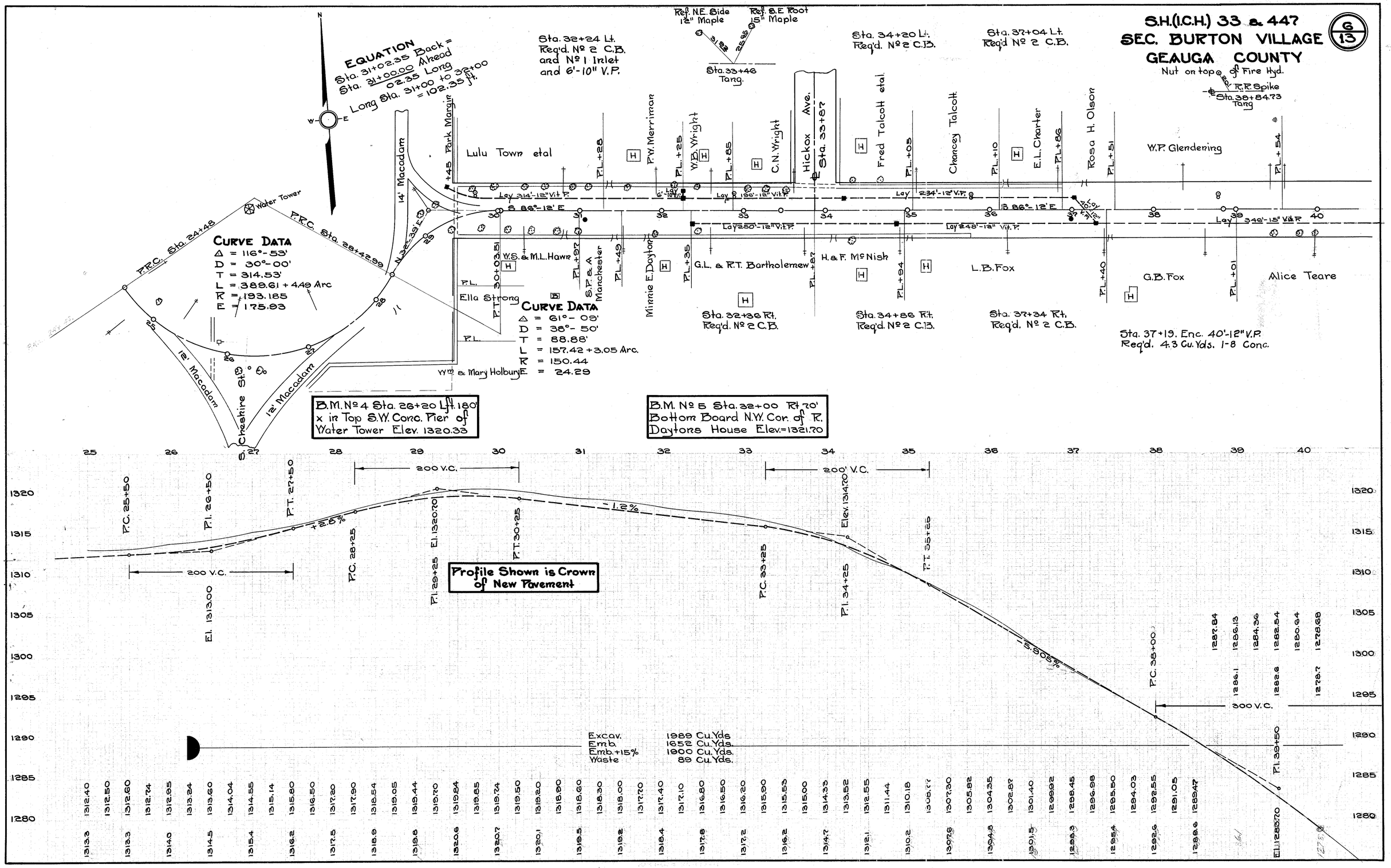
B.M. No 4 Sta. 26+20 Lft. 180'
x in Top of S.W. Conc. Pier of
Water Tower Elev = 1320.33

Profile Shown is Crown of New Pavement



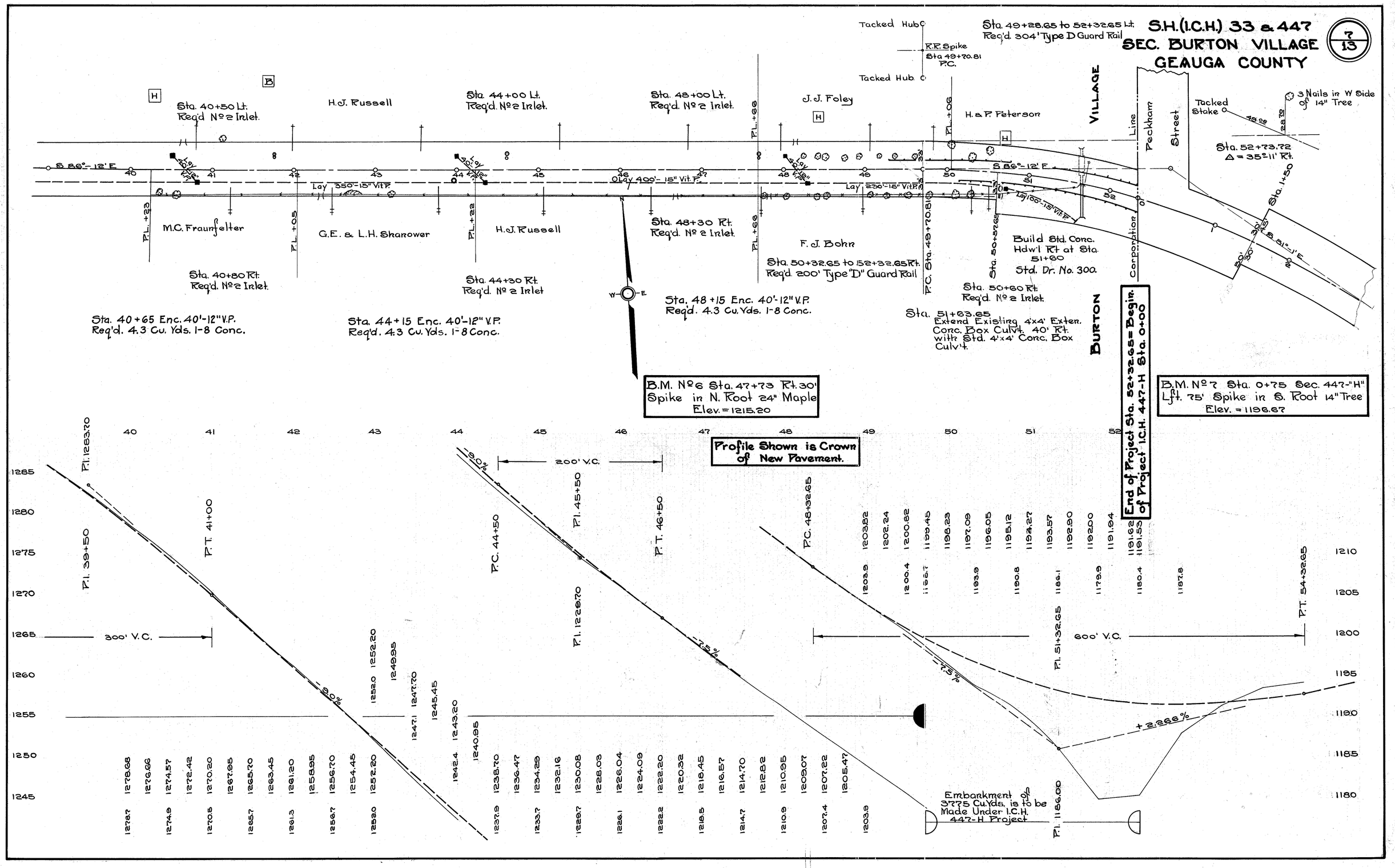
S.H.(I.C.H.) 33 & 447
SEC. BURTON VILLAGE
GEAUGA COUNTY

6/13



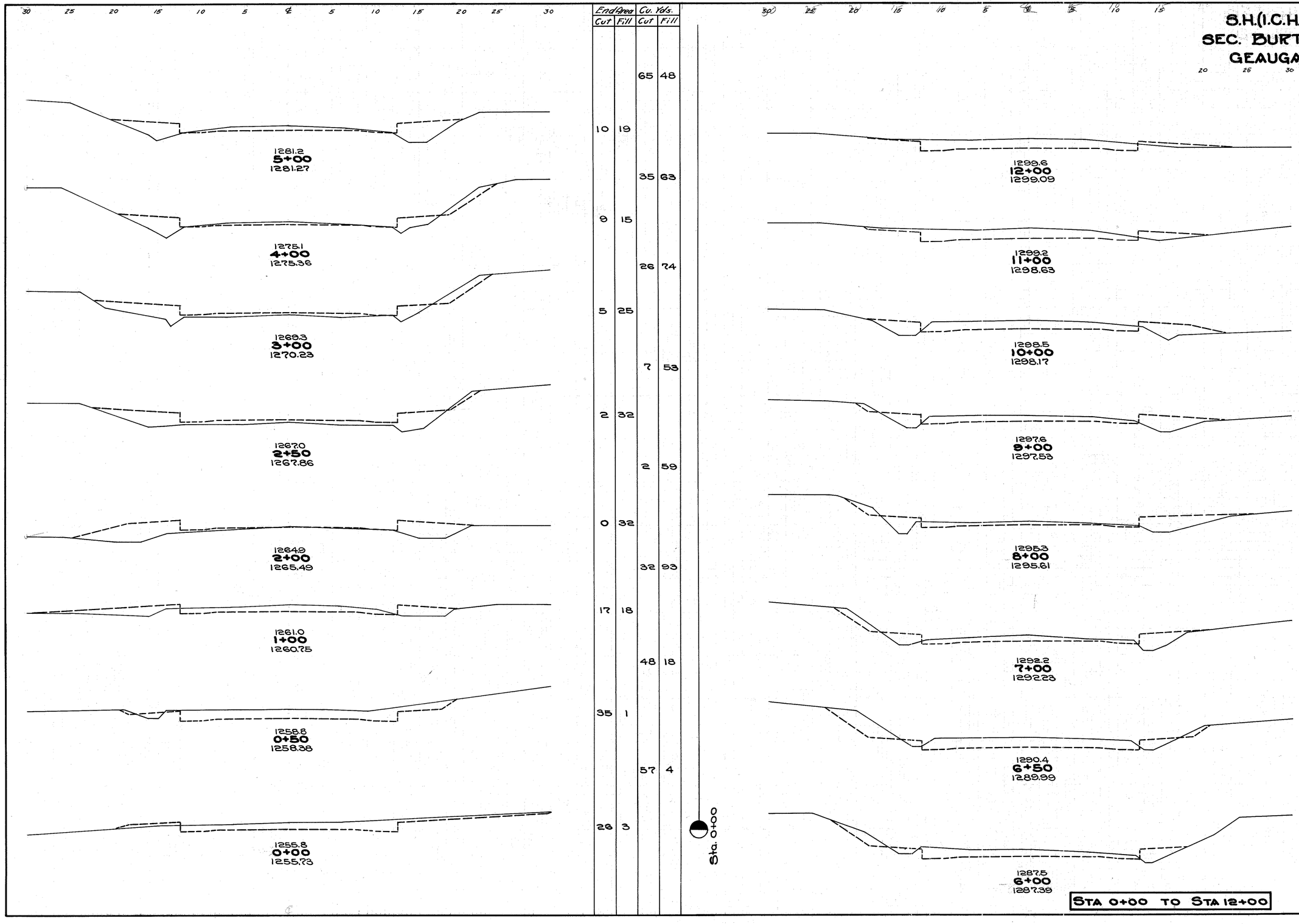
S.H. (I.C.H.) 33 & 447
SEC. BURTON VILLAGE
GEAUGA COUNTY

7/13



S.H.(I.C.H.) 33 & 447
SEC. BURTON VILLAGE
GEAUGA COUNTY

8/13



End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		65	48
10	19		
		35	63
9	15		
		26	74
5	25		
		7	53
2	32		
		2	59
0	32		
		32	93
17	18		
		48	18
35	1		
		57	4
26	3		

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		124	9
27	4		
		106	19
30	6		
		94	46
21	19		
		69	65
16	16		
		50	67
11	20		
		56	61
19	13		
		55	17
40	5		
		60	11
25	7		

Excav. 2392 Cu.Yds.
Emb. 1039 Cu.Yds.
Emb. + 15% 1195 Cu.Yds.
Waste 1197 Cu.Yds

STA 0+00 TO STA 12+00

S.H.(I.C.H.) 33 & 447
SEC. BURTON VILLAGE
GEAUGA COUNTY

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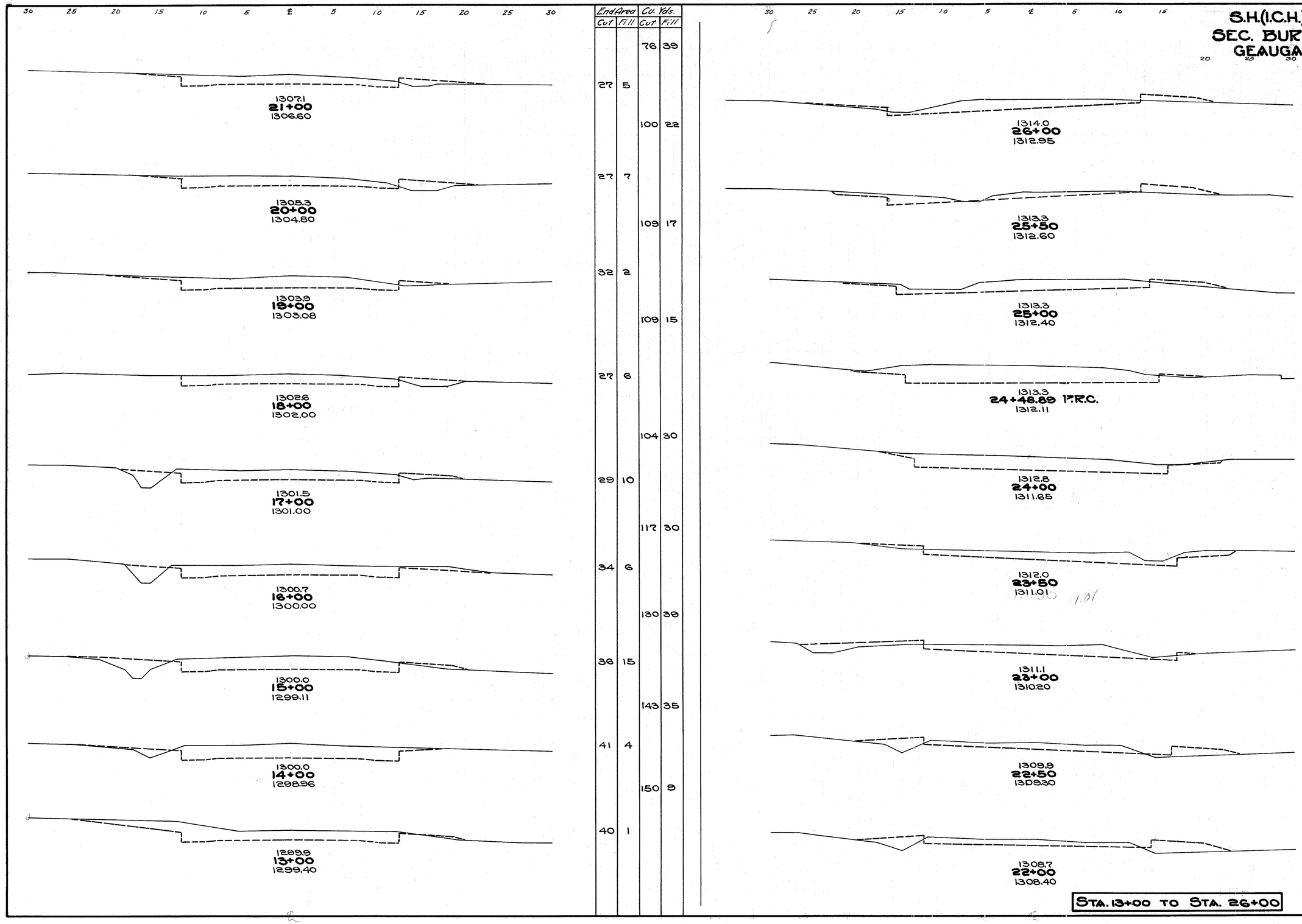

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		76	39
27	5		
		100	22
27	7		
		109	17
32	2		
		109	15
27	6		
		104	30
29	10		
		117	30
34	6		
		130	39
38	15		
		143	35
41	4		
		150	9
40	1		

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		25	8
		42	13
		17	5
23	6		
		39	12
19	7		
		47	10
32	4		
		87	5
60	1		
		96	1
46	0		
		69	2
28	2		
		48	13
24	12		
		37	22
16	12		
		28	26
14	16		

Sta. 26+20

STA. 13+00 TO STA. 26+00

S.H.(I.C.H.) 33 & 447
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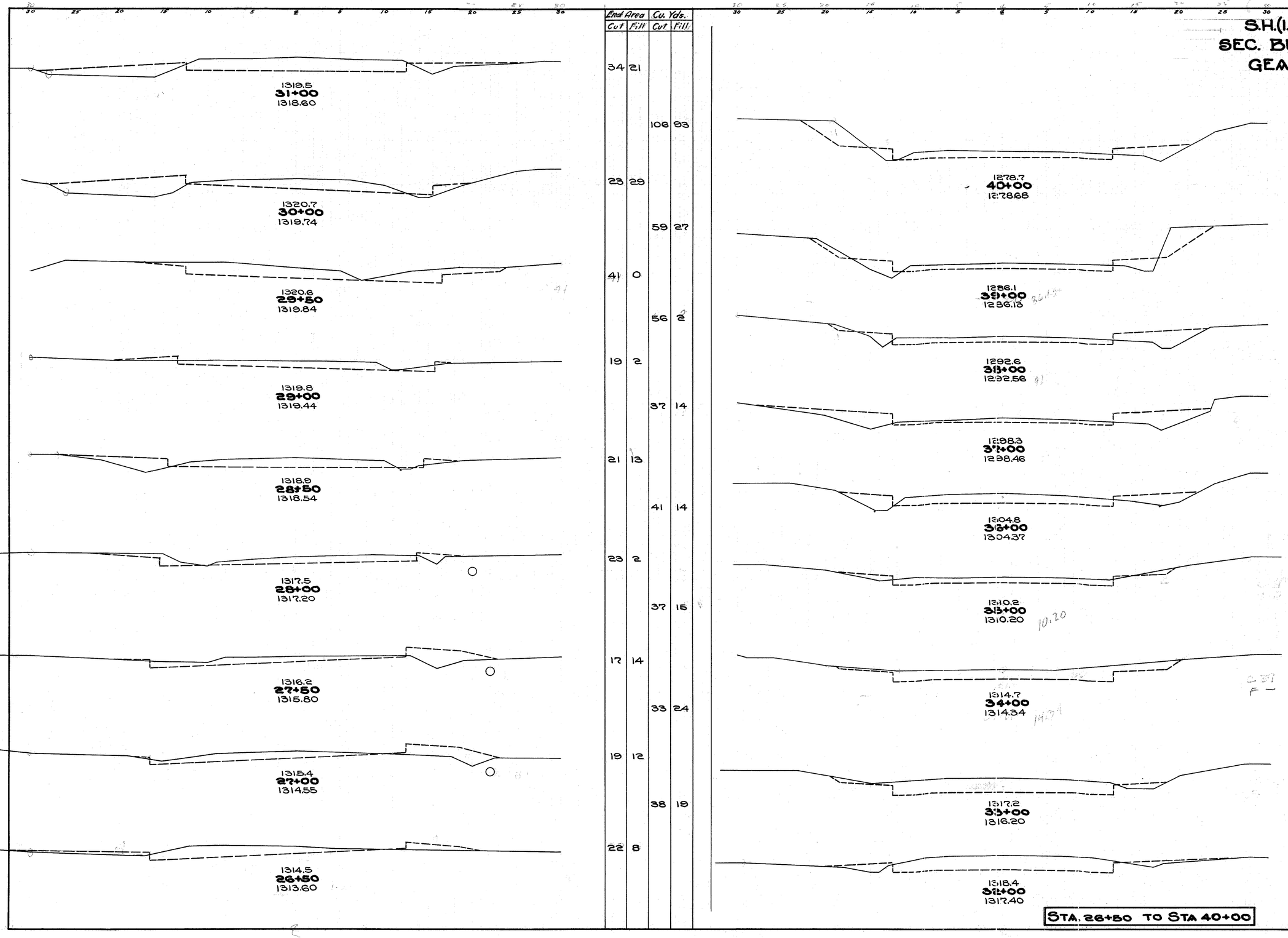

STA. 26+50 TO STA 40+00

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
34	21		
		106	93
23	29		
		59	27
41	0		
		56	2
19	2		
		37	14
21	13		
		41	14
23	2		
		37	15
17	14		
		33	24
19	12		
		38	19
22	8		

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
		133	65
28	13		
		102	44
27	11		
		82	52
17	17		
		50	87
10	30		
		63	87
24	17		
		83	37
21	3		
		111	6
39	0		
		146	6
40	3		
		148	20
40	8		
		137	54

Excav. 1989 Cu.Yds.
Emb. 1652 Cu.Yds.
Emb+15% 1900 Cu.Yds.
Waste 89 Cu.Yds.

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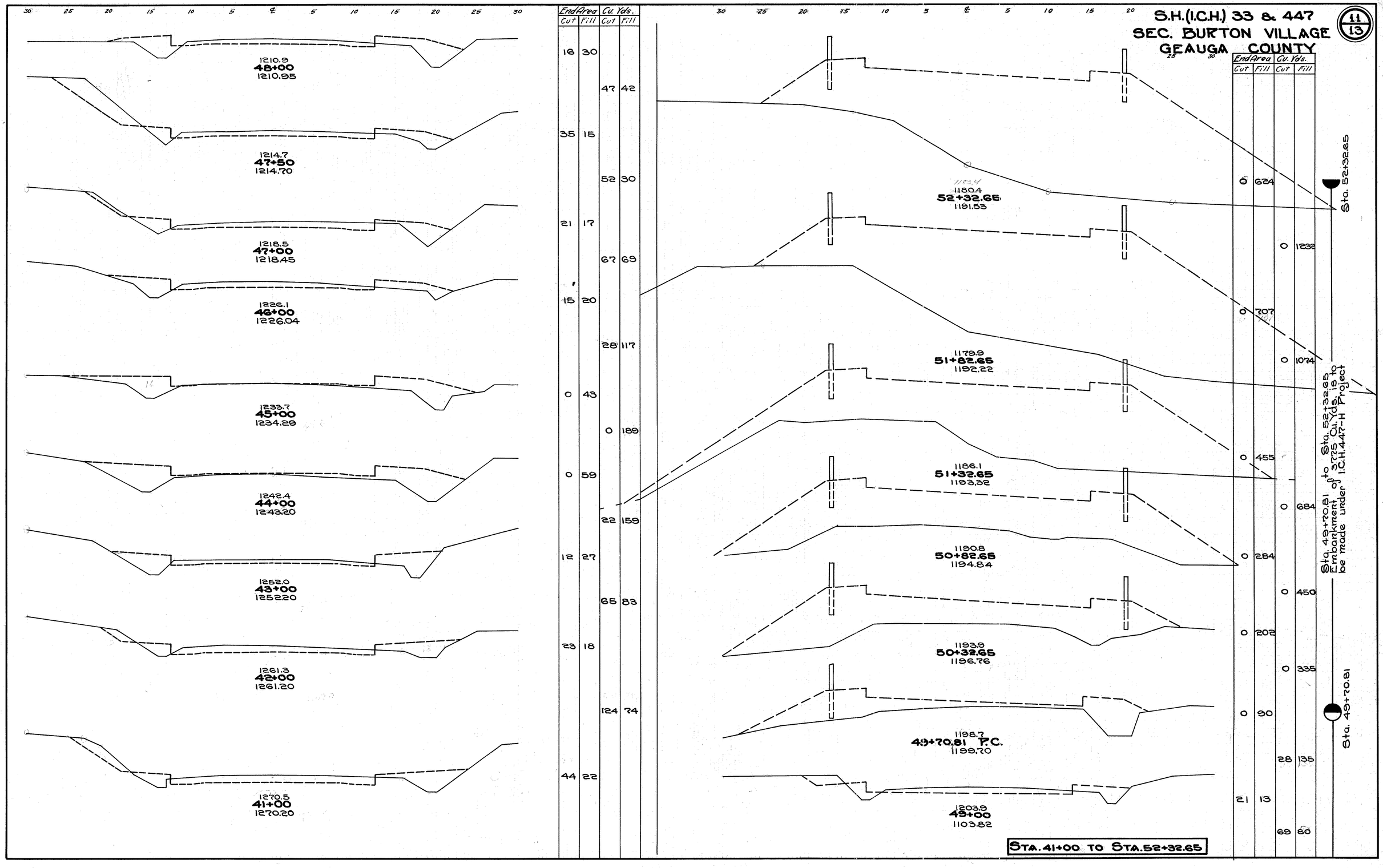

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
16	30		
		47	42
35	15		
		52	30
21	17		
		67	69
15	20		
		28	117
0	43		
		0	189
0	59		
		22	159
12	27		
		65	83
23	18		
		124	74
44	22		

End Area Cut	End Area Fill	Cu. Yds. Cut	Cu. Yds. Fill
0	624		
		0	1232
0	707		
		0	1074
0	455		
		0	684
0	284		
		0	450
0	202		
		0	335
0	90		
		28	135
21	13		
		69	60

S.H.(I.C.H.) 33 & 447
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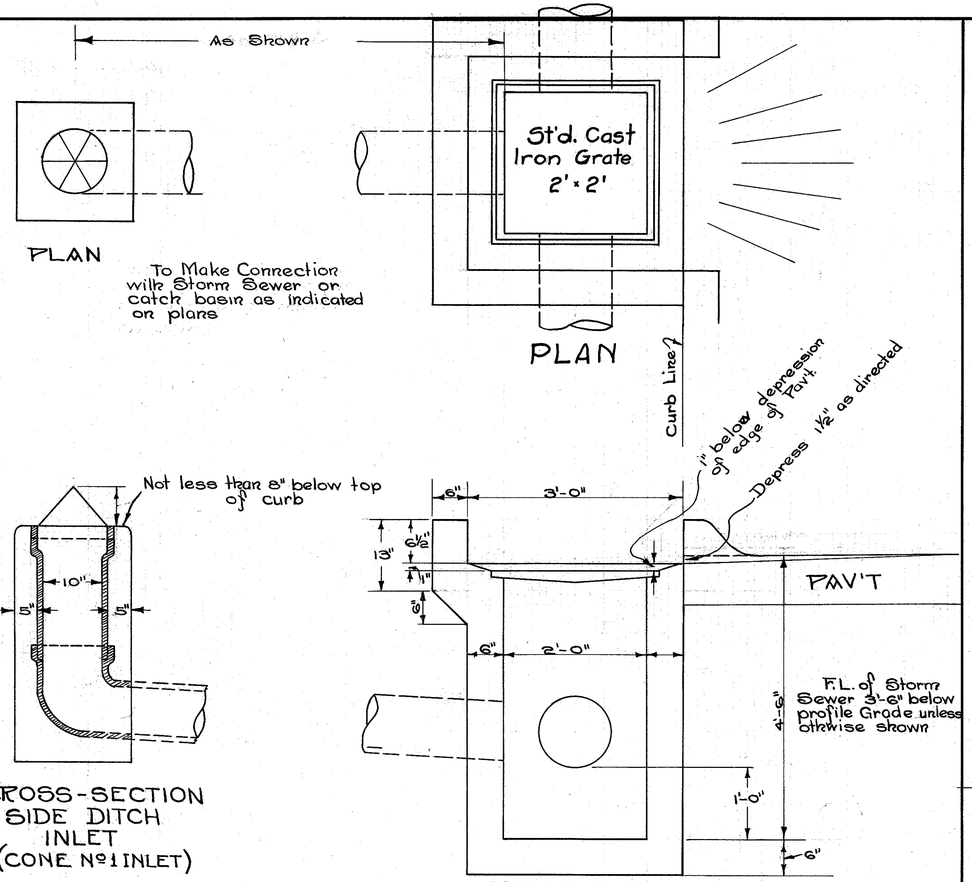
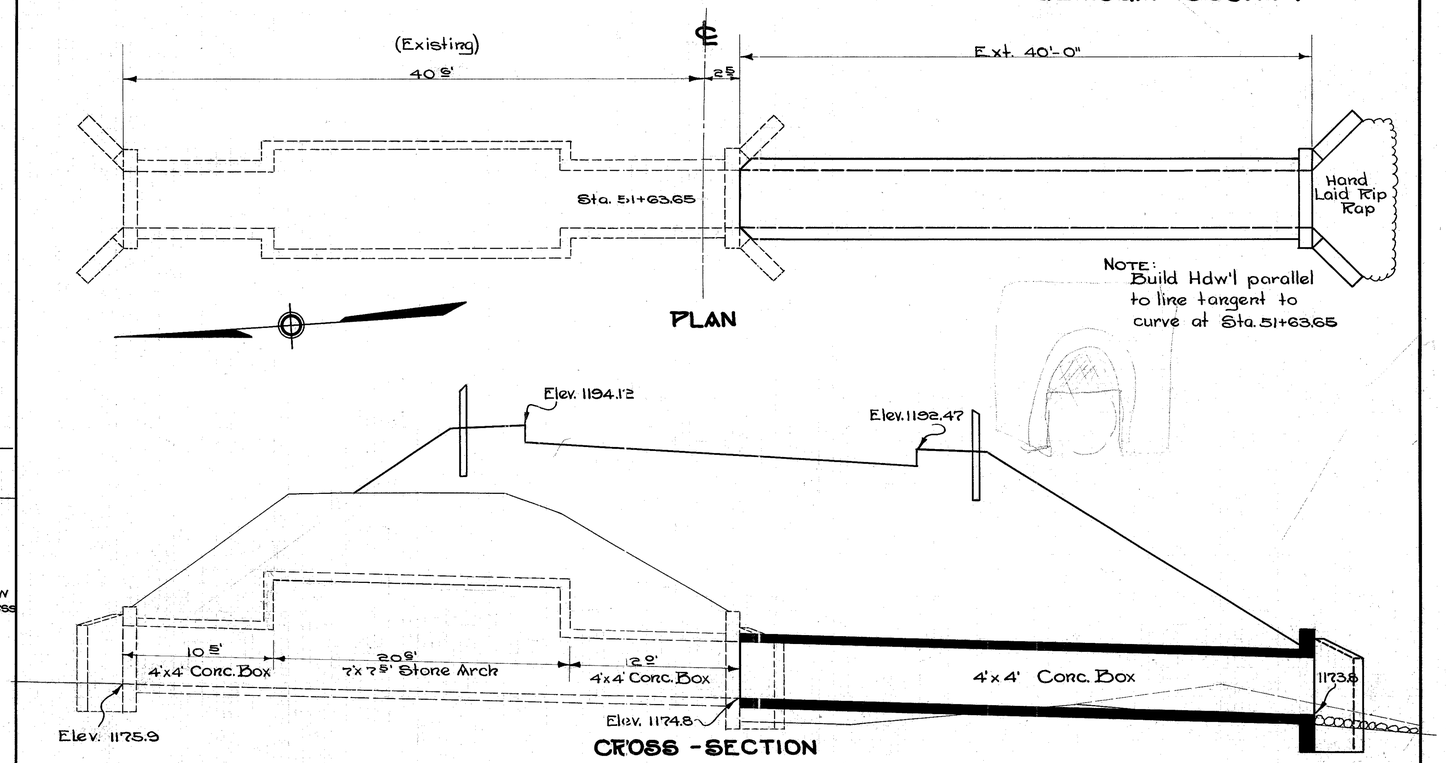
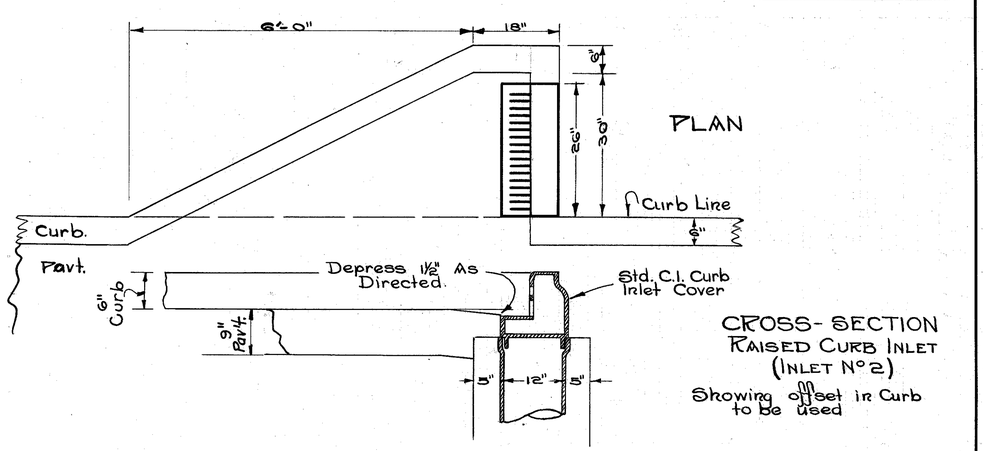
GEAUGA COUNTY

12/13







CULVERT DATA

Type: Conc. Box Ext. Dr. Nº 301
Size: 4'x4'x40'
Work Req'd: Extend Existing 4'x4' Extension Conc. Box Culv't. 40' Ft. with Std. 4'x4' Conc. Box Culv't.

Drawn by F.S. 1/29/30 Div. Engr. D.W.L.
Checked by G.R.H. Date: 2-2-30
Traced by F.S.

EST. QUANTITIES

Excav.	20 Cu. Yds.
Conc. 1-5½	22.5 Cu. Yds.
Reinf. Steel	1142 Lbs
Rip Rap	5.0 Sq. Yds.

STA. 51+63.65

SUMMARY OF QUANTITIES

Nº	STA.	TYPE	SIZE	LENGTH	EXCAV. CULV'T CU.YDS.	CONCRETE 1-5½ CU.YDS.	CONCRETE 1-8 CU.YDS.	REINF. STEEL LBS.	RIP RAP SQ.YDS.	REMARKS
1	51+63.65	Box	4'x4'	40'	20	22.5		1142	5	Build New Std. 4'x4'x40' Culv't. Extension Rt. of Existing Structure
				Totals	20	22.5		1142	5	

SUMMARY OF V.S.P. STORM SEWERS, INLETS & CATCH BASINS

FROM STATION	TO STATION	SIDE	LIN.FT. V.S.P. 10"	12"	15"	ST'D. INLETS & C.BASINS 1-8 Conc. INLETS #1	#2	Nº1 C.B.	Nº2 C.B.	Cu.Yds.	PIPE RELAID 15"	REMARKS
0-10	0+60	Diag			100					5.2		Encase 40'-15" Vit.P. Under Roadway
0+60	4+36	Rt.			376							
4+36	7+50	Rt.		314								
1+56	8+16	Lt.			660							
8+16	12+82	Lt.		466								
13+10	14+52	Lt.		142								
14+52		℄			26					3.4	200	Encase 26'-15" Vit.P. Under Roadway
14+52	21+44	Lt.			692							
21+44	23+34	Lt.		190								
17+45		Diag		40						4.3		Encase 40'-12" Vit.P. Under Roadway
21+59		Diag		40						4.3		Encase 40'-12" Vit.P. Under Roadway
24+40	28+80	Lt.		440								
25+90		℄			300					13.0		Lay 300'-15" Vit.P. Rt. Encase 100' Under Rd.Wy
26+00	28+20	Lt.	220									
29+10	37+04	Lt.		794								
32+36	37+34	Rt.		498								
37+34	51+60	Rt.			1426							
37+19		Diag		40						4.3		Encase 40'-12" Vit.P. Under Roadway
40+65		Diag		40						4.3		" " " " " "
44+15		Diag		40						4.3		" " " " " "
48+15		Diag		40						4.3		" " " " " "
0+30		Lt.							1			
0+60		Rt.	4			1			1			
1+76		Lt.							1			
4+36		Rt.	4			1			1			
4+76		Lt.							1			
7+50		Rt.							1			
8+16		Lt.							1			
11+50		Lt.							1			
12+82		Lt.		16				1				
13+10		Lt.		16				1				
14+52		Rt. & Lt.							2			
17+30 & 17+60		Rt. & Lt.							2			
19+10		Lt.		16				1				
19+35		Lt.		16				1				
19+50		Lt.							1			
21+44 & 21+74		Rt. & Lt.							2			
23+34		Lt.						1				
24+40		Lt.						1				
25+90		Lt.							1			
28+80		Lt.						1				
28+50 & 28+80		Rt.				2						
29+10		Lt.						1				
32+24		Lt.	6			1			1			
32+36		Rt.							1			
34+20		Lt.							1			
34+86		Rt.							1			
37+04 & 37+34		Rt. & Lt.							2			
40+50 & 40+80		Rt. & Lt.					2					
44+00 & 44+30		Rt. & Lt.					2					
48+00 & 48+30		Rt. & Lt.					2					
50+60		Rt.					1					1 Std. 15" Vit.P. Culv't Conc. Headwall
	Totals		234	3148	3580	5	7	8	22	47.4	200	1 Std. 15" Vit.P. Culv't Conc. Headwall

SUMMARY OF EXCAV. AND EMBANKMENT

FROM STATION	TO STATION	EXCAV CU.YDS	EMB. CU.YDS	+15% CU.YDS	WASTE CU.YDS
0+00	46+20	1989	1652	1900	89
46+20	49+70.81	2392	1039	1195	1197
49+70.81	52+32.65	Filled from 447 "H"			
Totals		4381	2691	3095	1286

SUMMARY OF CONC. PAV'T.

FROM STATION	TO STATION	LENGTH	WIDTH	9"-7"-9" SQ.YDS.	8"-8"-8" SQ.YDS.	REMARKS
0+00	21+40.17	2140.17	20.0	4755.9		
31+03.51	48+70.81	1767.30	20.0	3927.3		
21+40.17	31+03.51	963.34	20.0		2140.8	On Curve
Long Sta.		2.35	20.0		5.2	Long Sta. Equation
21+40.17	24+48.89	308.72	4.0		96.0	Curve Widening
24+48.89	28+42.99	394.10	4.0		164.5	Curve Widening
28+42.99	31+03.51	160.52	4.0		75.9	Curve Widening
48+70.81	52+32.65	361.84	20.0		804.0	On Curve
48+70.81	52+32.65	361.84	2.25		67.8	Curve Widening
		Totals		8683.2	3354.2	

Berms	5232.65	Lin.Ft.
	2.35	
Total Length	5235.00	Lin.Ft.
Scarifying	6500.00	Sq.Yds.
Manholes Brought to Grade	As Directed	(Proposal No.2).
Gate Valves Brought to Grade	As Directed	(Proposal No.2).
Fire Hydrants Moved.		(Proposal No.2).

SUMMARY OF CONC. CURB

7585 Lin.Ft. Conc. Curb Type Nº 3 Dr. Nº 129 (Proposal No.2).
2885 Lin.Ft. Conc. Curb Type Nº 2 Dr. Nº 129 (Proposal No.2).

SUMMARY OF TYPE "D" GUARDRAIL

FROM STATION	TO STATION	SIDE	LIN. FT.
49+29.85	52+32.65	Lt.	304
50+32.65	52+32.65	Rt.	200
		Total	504