S-312(4)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	S-312(4)	

1/22

TUSCARAWAS COUNTY
CO. RD. 1

DESIGN DESIGNATION

Current ADT (1964)	650
Design Year (1984)	884
D.H.V.	106
D. (directional distribution)	67%
T. (percent B&C trucks)	5%
V. (design speed)	30 M.P.H.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
COUNTY ROAD 1
TUSCARAWAS COUNTY
OXFORD TOWNSHIP
AND VILLAGE OF NEWCOMERSTOWN

CONVENTIONAL SIGNS

County Line
Township Line
Corporation Line
Center Line
Property Line
Right of Way Line
Pole Line
Fence Line
Railroad
Guard Rail
Droin Pipe
Trees

Telephone Electric
Existing New
Existing New
Existing To be removed

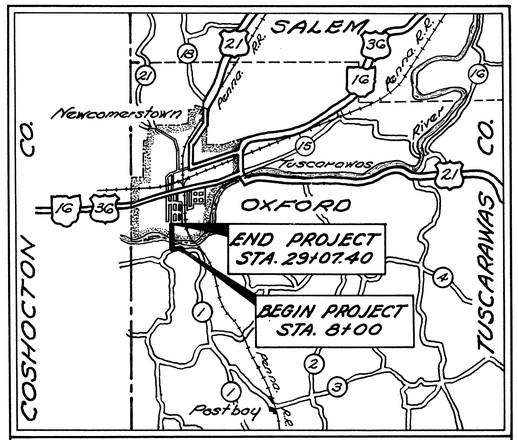
INDEX OF SHEETS

Sht 16 Rev 8/25/66

LINE DATA

Begin Project = Sta. 8+00
End Project = Sta. 29+07.40
No Additions Or Deductions
Net Length of Project = 2107.40 Lin. Ft. or 0.399 Mile

Begin Work = Sta. 7+50
End Work = Sta. 29+07.40
Net Length of Work = 2157.40 Lin. Ft. or 0.408 Mile



DELIVERY POINT = NEWCOMERSTOWN
AVERAGE HAUL = 1 MILE

LOCATION MAP

Scale of Miles: 0 1 2

Portion to be improved
Federal Highways
State Highways
County Roads
Township Roads

SCALE

Plan 0 50'
Profile (Horizontal) 0 50'
(Vertical) 0 10'
Cross Sections 0 10'

We, the Commissioners of Tuscarawas County, in formal session, hereby approve these plans and certify that the necessary right of way is available. We agree to maintain the Project in a manner satisfactory to the Director of Highways, State of Ohio, or his duly authorized Representatives and will make ample provision each year for such maintenance.

Done under authority of Sections 5535.01 and 5555.02 Et Seq. of the Revised Code of Ohio.
BOARD OF COMMISSIONERS, TUSCARAWAS CO.
William E. Winters
Approved this Date of: March 16, 1966. A. R. Dennison
J. S. Dunn

1965 SPECIFICATIONS

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 provisions for the maintenance and safety of traffic will be as set forth in these plans and estimates.

Approved Earl W. Nelson
Date 3-24-66 Division Deputy Director.

Approved C. H. Arbaugh
Date 6-9-66 Engineer of Bridges.

Approved R. N. Ritchie
Date 6-10-66 Engineer of Location and Design.

Approved P. E. Rudolf
Date 6-12-66 Deputy Director of Design and Construction.

Approved
Date Deputy Director of Right of Way.

Approved E. W. Wilson
Date 6-20-66 Deputy Director of Planning and Programming.

Approved
Date First Assistant Director.

Approved F. E. Hewitt
Date 6/20/66 Director of Highways.

Approved Charles R. Young
Date 3-16-66 Engineer of Tuscarawas County.

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER DATE

PAUL H. PRINCE & ASSOCIATES
CONSULTING ENGINEERS

FILE No.	TUSCARAWAS COUNTY COUNTY ROAD 1
	Date of Letting 196
	Contract No.

STANDARD DRAWINGS

BP-5	6-1-65	L-1	6-1-65	SD-1-65, Sh. 1,2 & 3	11-8-65
BP-6	6-1-65	MC-1	6-1-65	RB-1-55	2-2-59
FACI-1	6-1-65	MC-3	5-1-66	MH-1-A	6-1-65
FACI-2	6-1-65	MC-4	6-1-65	BP-3	6-1-65
GR-1	6-1-65	AS-1-54	8-10-65		
GR-2A	9-1-65	MH-1	6-1-65		
HW-E	6-1-65	CSB-2-63, Sh. 1&2	12-8-65		

SUPPLEMENTAL SPECIFICATIONS

808	2-7-66
811	3-29-65
825	4-22-65
828	3-21-66
1001	3-21-66

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

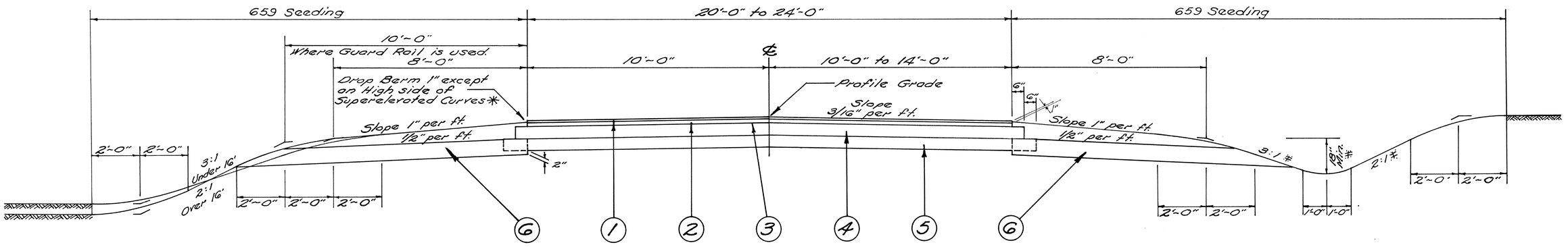
2/22

TUSCARAWAS COUNTY
CO. RD. 1

TYPICAL SECTION
TYPE: 404 ON 304
SCALE : 1"= 2'-0"

* For shoulder treatment on superelevated curves, See Std. Dwg M.C.-1

Unless otherwise shown on Cross Sections.



STA. 8+00 TO STA. 13+09.75 = 509.75 LIN. FT.
STA. 17+32.25 TO STA. 29+07.40 = 1175.15 LIN. FT.
1684.90 LIN. FT.

NOTE: For Details not shown see Std. Dwg. MC-1, and Superelevation Tables. The actual centerline elevation will not be the same as Profile Grade elevation between Sta. 8+00 and Sta. 13+09.75.

~KEY~

1. Item 404 - 1¼" Asphalt Concrete (85-100)
2. Item 402 - 1¾" Asphalt Concrete (85-100)
3. Item 408 - Bituminous Prime Coat, 702.09, RT-2 or RT-3, applied at the rate of 0.40 gal. per Sq. Yd.
4. Item 304 - 6" Aggregate Base
5. Item 310 - 6" Subbase
6. Item 605 - Aggregate Drains

GENERAL NOTES (CONT'D)

ITEM 605 AGGREGATE DRAINS: Aggregate drains shall be placed at Fifty (50) foot intervals on each side of normal crowned sections and at Twenty-Five (25) foot intervals on the low side only of super-elevated sections. An estimated quantity of 800 Lin. Ft. has been included in the General Summary.

An aggregate drain shall be placed at the low point of each sag vertical curve.

TRAFFIC: The Contractor shall maintain traffic at all times by use of either the existing pavement and structure, the proposed pavement and structure, or temporary roadways. A suggested temporary roadway is shown on sheets 6, 9, 10 & 11. However the Contractor may employ alternate schemes if approved in writing by the Director.

Temporary roadways shall be surfaced with #10 Aggregate and stabilized with CIC Calcium Chloride and the surface maintained daily in a manner satisfactory to the Engineer. Two way traffic lanes shall be surfaced with aggregate at least 20 feet wide and one way traffic lanes shall have the surfacing aggregate at least 12 feet wide. The length and duration of one way traffic lanes shall be kept to a minimum consistent with the requirements of the work.

Payment for constructing, maintaining and removing temporary traffic lanes, except furnishing and placing #10 Aggregate and CIC Calcium Chloride and Water, shall be included in the lump sum bid for CI4, Maintaining Traffic.

SUMMARY OF QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TUSCARAWAS COUNTY
CO. RD. 1

3
22

* CODE TYPE Y 005

PAVEMENT CALCULATIONS

Net Length of Pavement = 1,684.90 Lin. Ft.
Pavement Area for Net Length = 1684.90×20÷9 = 3,744 Sq. Yds.
Additional Pavt Area (Curve Widening) From Sh. # 4 138 Sq. Yds.
Total Pavement Area = 3,882 Sq. Yds.

ITEM 203, SUBGRADE PREPARATION
3744+138 = 3,882 Sq. Yds.
Add for Compaction Under Appr. Slabs, 2×(20×25÷9) 111 Sq. Yds.
TOTAL ITEM 203 3,993 Sq. Yds.

ITEM 310, SUBBASE
(1684.90×22×0.5÷27)+(138×0.167) = 709.44 Cu. Yds.
Under Approach Slabs 2(25×21×0.5)÷27 = 19.44 Cu. Yds.
TOTAL ITEM 310 = 729 Cu. Yds.

ITEM 304, AGGREGATE BASE
[(1684.90×21×0.5÷27)+(138×0.167)] = 679 Cu. Yds.

ITEM 408, BITUMINOUS PRIME COAT, 702.09, RT-2 OR RT-3
[(1684.90×21÷9)+(138)] × 0.4 = 1,628 Gals.

ITEM 402, ASPHALT CONCRETE LEVELING COURSE (85-100)
3,882 × 0.0486 = 189 Cu. Yds.

ITEM 404, ASPHALT CONCRETE (85-100)
3,882 × 0.0347 = 135 Cu. Yds.

ITEM 203, WATER
(Embankment + Item 310)
(35,537 + 787)×5 ÷ 1000 = 182 M-Gals.

ITEM 304, WATER
(817)×5 ÷ 1000 = 5 M-Gals.

ITEM 410, TRAFFIC COMPACTED SURFACE, TYPE A OR B
Estimated Length = 1100 Lin. Ft.
1100×75÷100 = 825 Cu. Yds. USE 1,000 CU. YDS.
1000×25% = 250 Cu. Yds.

ITEM 410, TRAFFIC COMPACTED SURFACE, TYPE C
1000×75% = 750 Cu. Yds.

ITEM 616, CALCIUM CHLORIDE
Estimated = 5 Tons

ITEM 616, WATER
Estimated = 15 M-Gals.

EARTHWORK AND SEEDING

STATION From	STATION To	Excav. Cu. Yds.	Emb. Cu. Yds.	Emb. +15% Cu. Yds.	Borrow Cu. Yds.	Seeding Sq. Yds.	Fertilizer Tons	Liming Tons
7+50	13+80	1,396	21,913	25,200	23,804	8,290	0.75	3.76
16+65	29+07.40	1,344	19,624	15,668	14,324	8,099	0.73	3.65
TOTALS		2,740	35,537	40,868	38,128	16,389	1.48	7.41

GENERAL SUMMARY

TOTALS FROM SHEETS № 2								TYPE CODE G201			
2	3	4	5	6	7	14		ITEM	QUANTITY	UNIT	DESCRIPTION
											ROADWAY
		Lump						201	Lump	Lump	Clearing & Grubbing
						60		202	60	Lin. Ft.	Pipe Removed 15" & Under
				118				202	118	Lin. Ft.	Pipe Removed, Over 15"
					115			202	115	Sq. Ft.	Existing Sidewalk Removed & Disposed of
2,740								203	2,740	Cu. Yds.	Excavation Including Embankment Construction, As per Plan
38,128								203	38,128	Cu. Yds.	Borrow
3,993						321		203	4,314	Sq. Yds.	Subgrade Preparation
182								203	182	M. Gals.	Water
250								410	250	Cu. Yds.	Traffic Compacted Surface, Type A or B
750								410	750	Cu. Yds.	Traffic Compacted Surface, Type C
			234.80	10	65.20			G06	1300	Lin. Ft.	Guard Rail, Type 4
5								G16	5	Tons	Calcium Chloride
15								G16	15	M. Gals.	Water
16,389								G59	16,389 *	Sq. Yds.	Seeding & Mulching
1.48								G59	1.48 *	Tons	Commercial Fertilizer (12-12-12)
7.41								G59	7.41 *	Tons	Agricultural Liming
											DRAINAGE
				6				202	6	Cu. Yds.	Portions of Existing Structures Removed
				44		16		G01	60 *	Cu. Yds.	Dumped Rock Channel Protection
				0.3		0.6		G02	0.9	Cu. Yds.	Concrete Masonry
		100						G03	100	Lin. Ft.	6" Conduit, Type E
		10						G03	10	Lin. Ft.	8" Conduit, Type F
						60		G03	60	Lin. Ft.	18" Conduit, Type A 706.08, 706.01 or 706.02, with Class B Bedding
800								G05	800	Lin. Ft.	Aggregate Drains
				1				G04	1	Each	Std. № 1 Manhole
				70				603	70	Lin. Ft.	18" Conduit Type C with Class B Bedding 706.08 E.S. or 706.02 Cl III
											PAVEMENT
679				14	68	56		304	817	Cu. Yds.	Aggregate Base
5								304	5	M. Gals.	Water
729						58		310	787	Cu. Yds.	Subbase
189						16		402	205	Cu. Yds.	Asphalt Concrete (85-100)
135					20	11		404	166	Cu. Yds.	Asphalt Concrete (85-100)
1,628						130		408	1,758	Gals.	Bituminous Prime Coat, 702.09 RT-2 or RT-3
				111				G11	111	Sq. Yds.	Reinforced Concrete Approach Slabs (T=13")
											STRUCTURES OVER 20' SPAN
											See Sheet No 16 for Quantities
		Lump							Lump	Lump	Field Office
		Lump							Lump	Lump	Construction Layout Stakes
Lump								G14	Lump	Lump	Maintaining Traffic

CURVE TABLES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

TUSCARAWAS COUNTY CO. RD. 1

4/22

P.C. 8+87.06 D=26°00'RT. P.T. 12+94.30

LEFT Edge of Pavement	LEFT Width	LEFT Add Super	Station	Profile Grade	RIGHT Deduct Crown	RIGHT Width	RIGHT Edge of Pavement
821.14	10.00'	.00'	8+00	821.30	.16	10.00'	821.14
821.59		Obtained Graphically	+25	821.45		10.50'	821.29
821.72			+50	821.38		11.00'	821.22
821.73			+75	821.10		11.50'	820.94
821.67			P.C.+87.06	820.88		11.74'	820.72
821.50			9+00	820.60		12.00'	820.44
821.05			+25	819.87		12.50'	819.71
820.38			+50	818.93		13.00'	818.77
819.46			+75	817.77		13.50'	817.61
818.23		2.00'	10+00	816.39		14.00'	816.23
816.64			+25	814.80			814.64
815.10			+50	813.26			813.10
813.73			+75	811.89			811.73
812.53			11+00	810.69			810.53
812.10		2.00'	+10	810.26		14.00'	810.10
811.45		Obtained Graphically	+25	809.66		13.70'	809.50
810.41			+50	808.80		13.20'	808.64
809.43			+75	808.12		12.70'	807.96
808.57			12+00	807.60		12.20'	807.44
807.87			+25	807.26		11.70'	807.10
807.36			+50	807.08		11.20'	806.92
807.08			+75	807.08		10.70'	806.92
807.06			P.T.+94.30	807.18		10.31'	807.02
807.08			13+00	807.24		10.20'	807.08
807.18	10.00'	.00	+10	807.34	.16	10.00'	807.18

EXTRA AREA = 138 SQ. YDS.

P.C. 18+23.67 D=1°28' RT. P.T. 21+36.17

LEFT Edge of Pavement	LEFT Width	LEFT Add Super	Station	Profile Grade	RIGHT Deduct Crown	RIGHT Width	RIGHT Edge of Pavement
806.58	10'	.00'	17+50	806.74	.16	10'	806.58
806.36		OBT. Graph.	+75	806.49			806.33
806.16			18+00	806.24			806.08
805.99			P.C.+23.67	806.00			805.84
805.98			+25	805.99			805.83
805.80			+50	805.74			805.58
805.61			+75	805.49			805.33
805.40		.32'	19+00	805.24			805.08
805.15			+25	804.99			804.83
804.90			+50	804.74			804.58
804.65			+75	804.49			804.33
804.40			20+00	804.24			804.08
804.15			+25	803.99			803.83
803.90			+50	803.74			803.58
803.65		.32'	+75	803.49			803.33
803.37		OBT. Graph.	21+00	803.24			803.08
803.07			+25	802.99			802.83
802.92			P.T.+36.17	802.88			802.72
802.74			+50	802.74			802.58
802.40			+75	802.49			802.33
802.10			22+00	802.24			802.08
801.83	10'	.00'	+25	801.99	.16	10'	801.83

P.C. 23+91.12 D=1°00' LT. P.T. 26+91.12

LEFT Edge of Pavement	LEFT Width	LEFT Deduct Crown	Station	Profile Grade	RIGHT Add Super	RIGHT Width	RIGHT Edge of Pavement
801.08	10'	.16	23+00	801.24	.00'	10'	801.08
800.84			+25	801.00	OBT. Graph.		800.86
800.62			+50	800.78			800.69
800.41			+75	800.57			800.58
800.29			P.C.+91.12	800.45			800.52
800.23			24+00	800.39			800.48
800.06			+25	800.22			800.37
799.92			+50	800.08	.32'		800.24
799.79			+75	799.95			800.11
799.68			25+00	799.84			800.00
799.58			+25	799.74			799.90
799.48			+50	799.64			799.80
799.38			+75	799.54			799.70
799.28			26+00	799.44			799.60
799.18			+25	799.34			799.50
799.08			+50	799.24	.32'		799.40
798.99			+75	799.15	OBT. Graph.		799.26
798.95			P.T.+91.12	799.11			799.18
798.93			27+00	799.09			799.14
798.89			+25	799.05			799.05
798.88			+50	799.04			798.98
798.89			+75	799.05			798.94
798.93	10'	.16	28+00	799.09	.00'	10'	798.93

CONSTRUCTION LAYOUT STAKES: See note in proposal describing the work included in this lump sum pay item.

DESIGN SPEED: The geometrics for this Project have been planned for a design speed of 30 miles per hour.

FIELD OFFICE: The Contractor shall, in addition to the requirements of 105.152, provide a field office having a minimum of 300 sq. ft. of floor space. The Contractor shall have a telephone installed and maintained in this field office during the construction of this project. The Contractor shall also provide Sanitary provisions as per 107.06. All the above is included in the lump sum price bid for Field Office.

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS: The rounded corners shown on Standard Drawing MC-1, apply to all cross sections, even though otherwise shown on these plans.

REMOVAL OF TREES AND STUMPS: All trees and stumps specifically marked for removal within the construction limits of this project shall be removed under the lump sum price bid for Item 201 Clearing and Grubbing. The following is an approximate estimate of the number of trees and stumps to be removed.

Sizes	Trees	Stumps
18"	62	4
30"	3	0
48"	2	0
60"	0	0

The above estimate is approximate and the State of Ohio reserves the right to order the removal of additional trees or stumps outside of the limits of construction but within the right-of-way and/or easement lines. Payment for the removal of these additional trees or stumps shall be included in the lump sum price bid for Item 201 Clearing and Grubbing.

GENERAL NOTES

SEEDING: Quantities for seeding are calculated for the soil areas between the work limits, as shown on the cross sections.

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS: The Contractor shall furnish, erect, maintain and subsequently remove Federal Aid construction identification signs at each of the following approximate locations:

1. On the right of STA. 7+50
2. On the left of STA. 29+07

Sign details shall be as specified on Standard Drawing FACI-1, Code: N34(10)-96(2), modified by deleting reference to "State Highway Fund's ____" and "Ohio Department of Highways" appearing in the lower right portion of the sign and inserting therein "Local Funds ____" and "County of Tuscarawas".

The signs shall be erected in accordance with Standard Drawing FACI-2. Additional requirements shall be in accordance with notes in the proposal.

PART-WIDTH CONSTRUCTION: Because of the necessity of building portions of this project under traffic and constructing the pavement part at a time, extreme care shall be taken to prevent the construction of a butt joint on centerline in the 304 and 310 courses.

This shall be accomplished by building the 304 and 310 courses placed with the first portion of the pavement built, at least eighteen (18) inches beyond the centerline and by surfacing no closer than eighteen (18) inches to this edge of the above courses. When the second portion of the pavement is built, at least twelve (12) inches of these projecting courses shall be broken down and thoroughly keyed in with the newly placed corresponding courses in the second portion of the pavement built. Payment for this operation shall be included in the unit prices bid for the pertinent pavement items.

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

ESTIMATED QUANTITIES: Specific locations and usage of estimated quantities set up on this plan to be used "as directed by the Engineer" shall be made a matter of record by incorporation into the final change order governing completion of this project. None of the above quantities shall be ordered by the Contractor until requested by the Engineer.

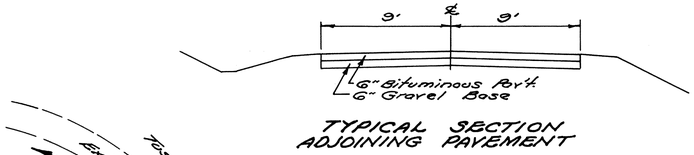
SMALL DRAINS: Where field drains, etc; are encountered and not shown on the plans, they shall be given an unobstructed outlet as directed by the Engineer. No drain carrying domestic waste shall be connected to any proposed drainage facility. The following estimated quantities have been included in the General Summary for the work noted above: Item 603 - 6" Conduit, Type 6 - 100 Lin. Ft.
Item 603 - 8" Conduit, Type F - 10 Lin. Ft.

USE OF TEMPORARY ROADWAYS: The limits and duration of use of temporary roadways shall be held to an absolute minimum, and in all cases shall be subject to the approval of the Engineer.

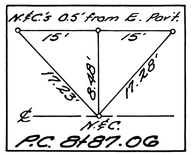
CONNECTIONS TO EXISTING PIPE: At places where the plans provide for proposed pipe to be connected to existing pipe, it shall be the responsibility of the Contractor to locate the existing pipe both as to line and grade before he starts to lay the proposed pipe. The cost of this operation shall be included in the unit price bid for the pertinent 603 conduit item.

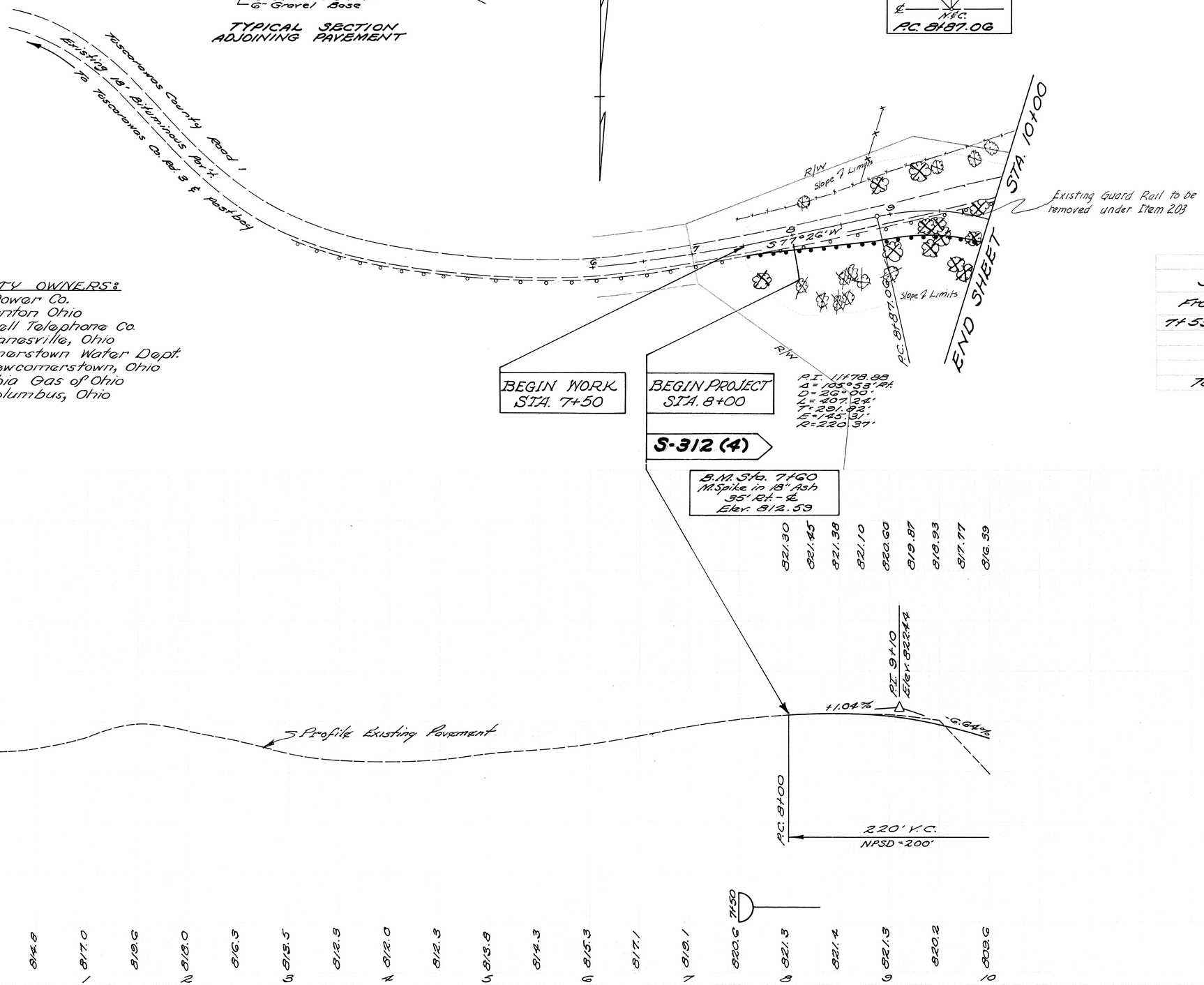
GENERAL NOTES CONT'D ON SH. #2

TUSCARAWAS COUNTY
CO. RD. 1



TYPICAL SECTION
ADJOINING PAVEMENT





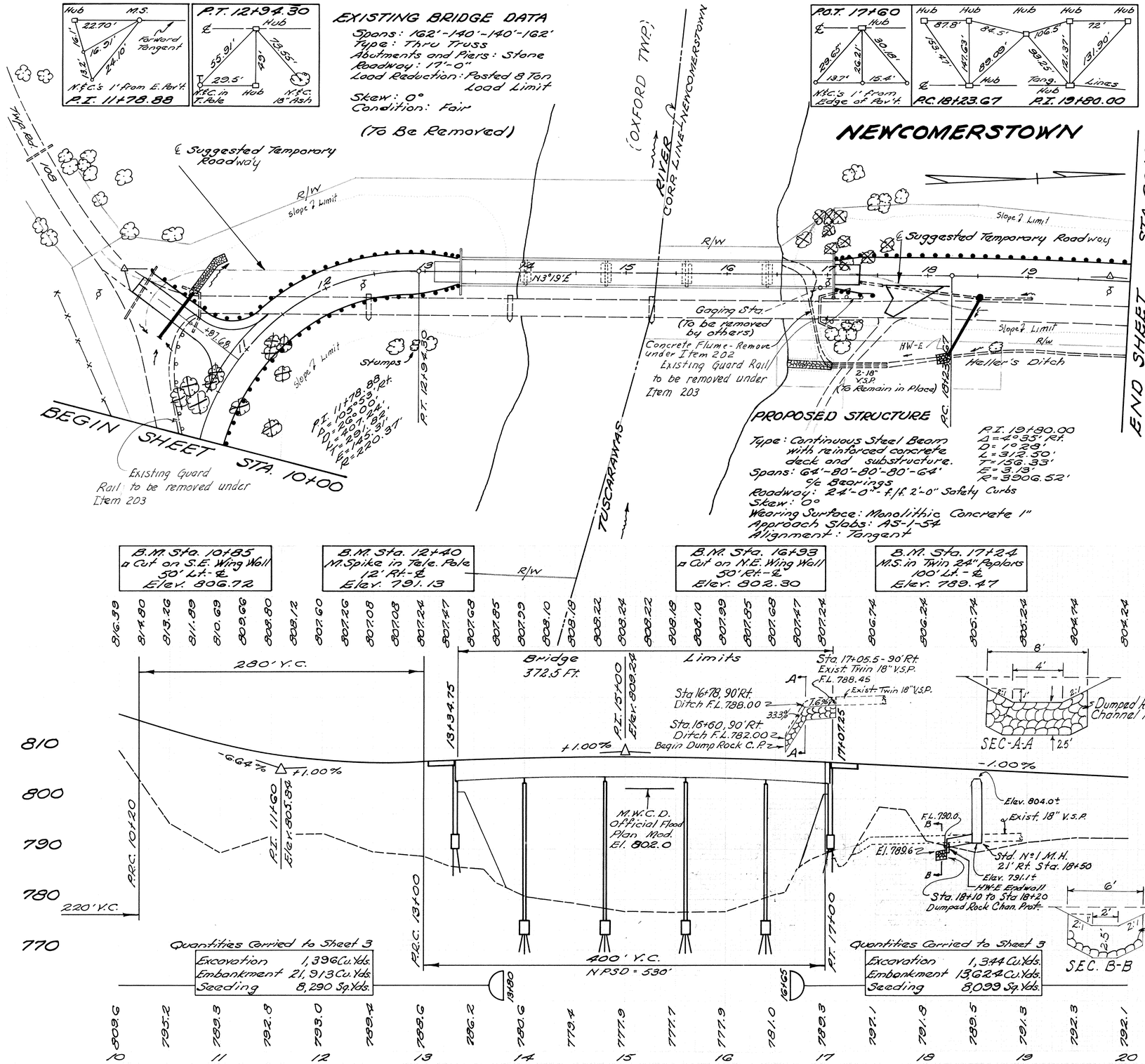
GUARD RAIL

Station		Side	Type A
From	To	℄	Lin. Ft.
7+53.5	10+00	Rt.	234.80
Total			234.80

UTILITY OWNERS:
Ohio Power Co.
Canton Ohio
Ohio Bell Telephone Co.
Zanesville, Ohio
Newcomerstown Water Dept.
Newcomerstown, Ohio
Columbia Gas of Ohio
Columbus, Ohio

STA. 0+00 TO STA. 10+00

TUSCARAWAS COUNTY
CO. RD. 1



APPROACHES

Station	Side	See Sheet	Item 304 Aggr. Base Cu. Yds.
10+87.68	Lt.	14	
17+80	Rt.	11	14
Total			14

DRAINAGE

Station From	Station To	Side &	See Sheet	New Work Type	Size	Leng.	Item 601 Dumped Rock Chan. Prot. Cu. Yds.	Item 202 Pipe Rem'd. Over 15" Lin. Ft.	Item 602 Conc. Masonry Cu. Yds.	Item 604 Std. No. 1 M.H. Each
16+60	17+05.5	Rt.	G				34			
17+33±	18+50	Rt.	G					118.		
18+20	18+50	Rt.	G	A	18"	70			0.3	1
18+10	18+20	Rt.	G				10			
Total						70*	44	118	0.3	1

* 70'×18" Conduit, Type C, 706.08.ES or 706.02, Class III, with Class B Bedding.

GUARD RAIL

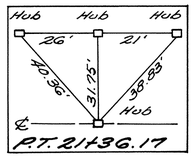
Station From	Station To	Side &	Type 4 Lin. Ft.
10+00	13+33.50	Rt.	302.70
Appr. Sta. 31+95	13+33.50	Lt.	337.50
17+08.50	20+94.31	Lt.	387.50
17+08.50	17+45.6	Rt.	37.50
Total			1065.20

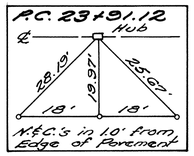
MISCELLANEOUS

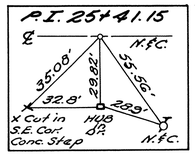
Station From	Station To	Side &	See Sheet	Item 202 Part. Exist. Struc. Remv'd. CU. Yds.	Item 611 Rein. Conc. Appr. Slabs Sq. Yds.
16+81	17+05	Rt.	G	G	
13+09.75	13+34.75	R.&L.	G		55.5
17+07.25	17+32.25	R.&L.	G		55.5
Total				G	111.0

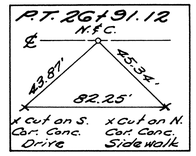
STA. 10+00 TO STA. 20+00

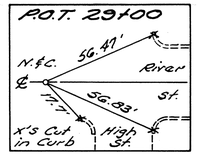
TUSCARAWAS COUNTY
CO. RD. 1

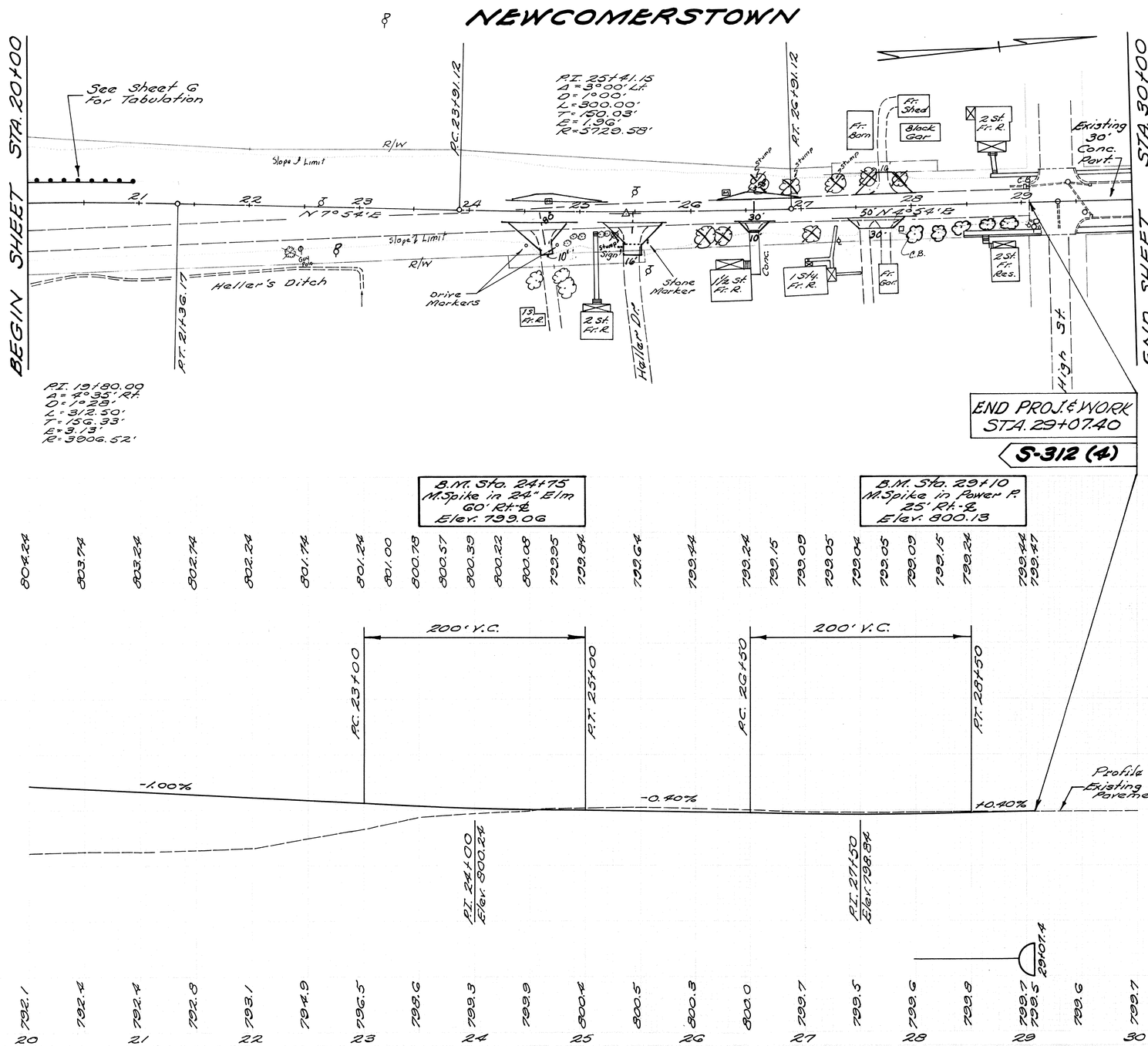












APPROACHES

Station	Side ℄	See Sheet	Item 304 Aggr. Base Cu. Yds.	Item 404 Asphalt Conc. (85-100) Cu. Yds.
24+63	L.F.R.	12	16	6.0
25+47	Rt.	12	23	4.5
26+58	L.F.R.	12	8	3.0
27+67	Rt.	12	6	2.5
27+76	Lt.	13	15	4.1
Total			68	20.1

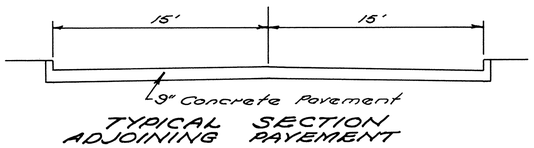
MISCELLANEOUS

Station From	Station To	Side ℄	See Sheet	Item 202 Exist. Sidewalk Remv. Sq. Ft.
25+15	~	Rt.	7	70
27+30	~	Rt.	7	45
Total				115

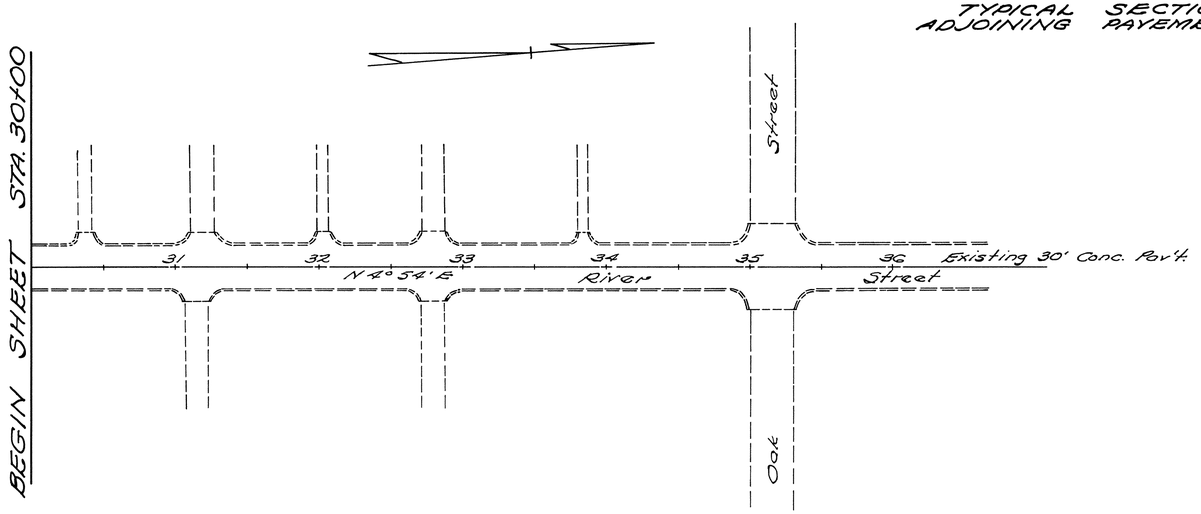
STA. 20+00 TO STA. 30+00

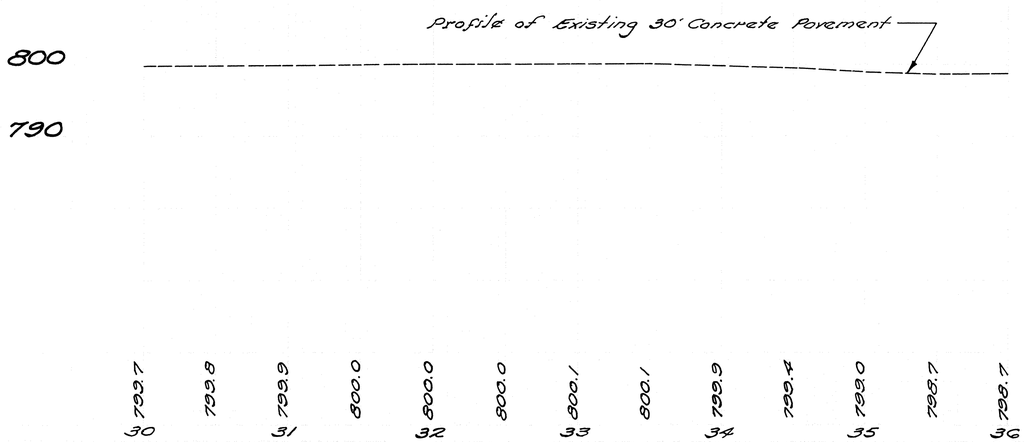
TUSCARAWAS COUNTY
CO. RD. 1

NEWCOMERSTOWN

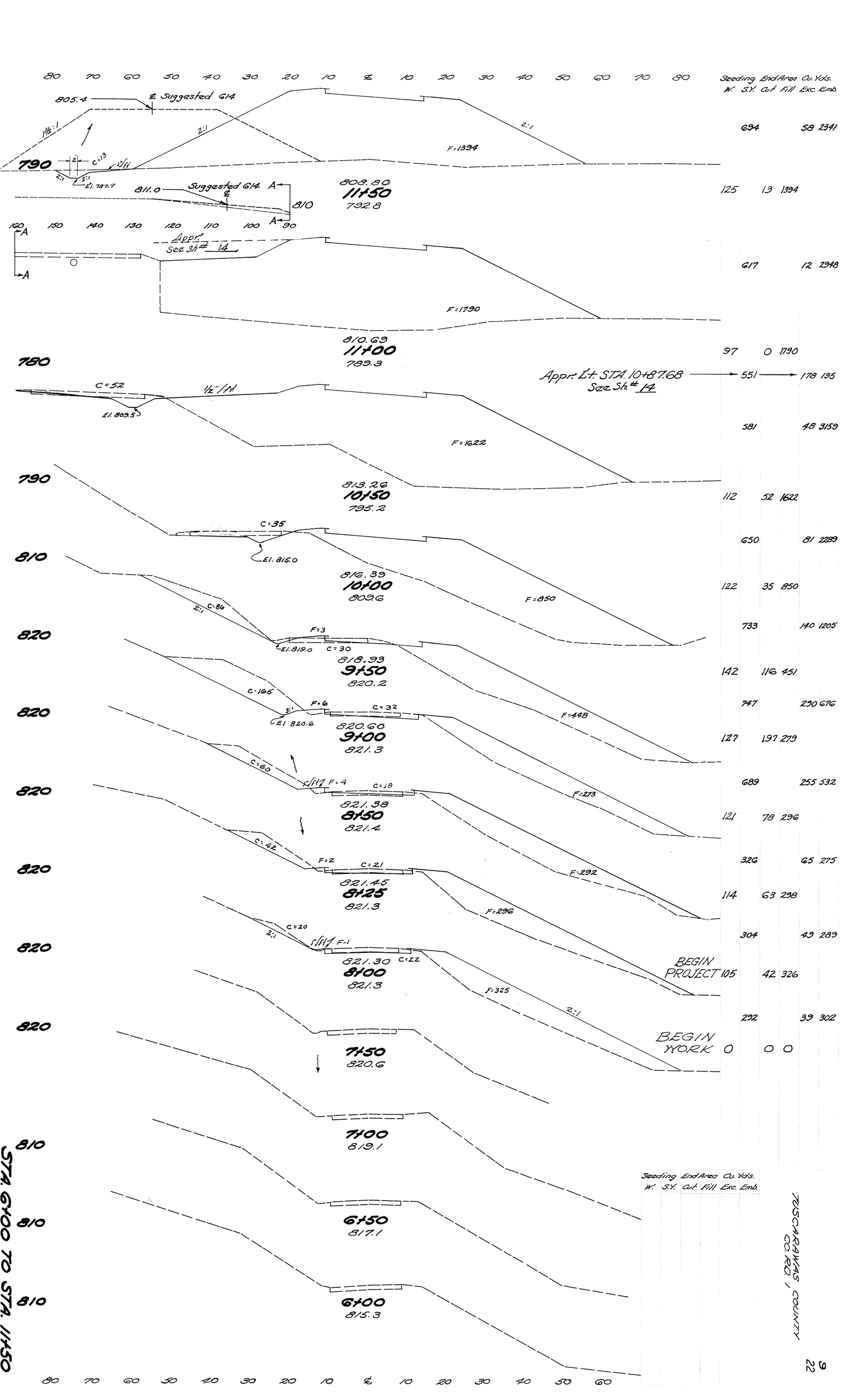


TYPICAL SECTION
ADJOINING PAVEMENT





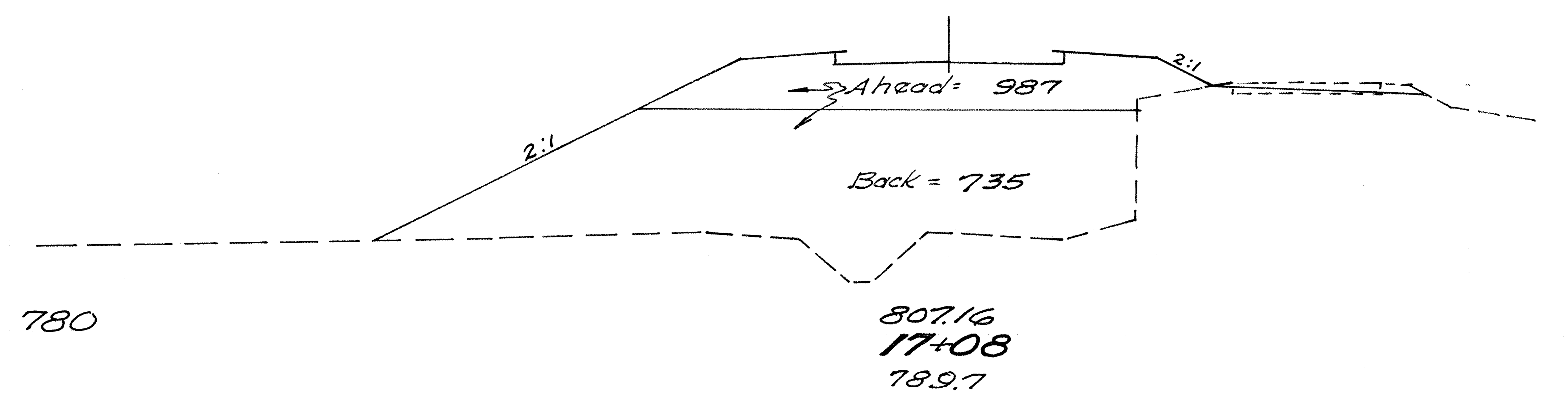
STA. 30+00 TO STA. 36+00


80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80
Seeding End Area Cu. Yds.
W. S.Y. Cut Fill Exc. Emb.
805.4
℄ Suggested G14
1½:1
2:1
2:1
F=1394
790
2'
C=13
1"/ft
2:1
2:1
El. 787.7
811.0
Suggested G14
℄
A
A
810
808.30
11+50
792.8
G94 58 2341
125 13 1394
100 150 140 130 120 110 100 90
A
A
Appr.
See Sh.# 14
F=1790
G17 12 2948
810.69
11+00
789.3
97 0 1790
780
Appr. Lt. STA. 10+87.68
See Sh. # 14
551 178 135
C=52
1½"/ft.
El. 809.5
F=1622
581 48 3159
790
813.26
10+50
795.2
112 52 1622
C=35
El. 815.0
G50 81 2289
810
816.39
10+00
809.6
122 35 850
C=86
2:1
F=850
820
F=3
El. 819.0
C=30
818.93
9+50
820.2
733 140 1205
142 116 451
C=165
2:1
F=6
C=32
El. 820.6
F=448
747 290 676
820.60
9+00
821.3
127 197 279
820
C=60
1"/ft
F=4
C=18
F=273
689 255 532
821.38
8+50
821.4
121 78 296
C=42
F=2
C=21
F=292
820
326 65 275
821.45
8+25
821.3
114 63 298
F=296
C=20
2:1
1"/ft
F-1
304 49 289
820
821.30
C=22
8+00
821.3
BEGIN PROJECT 105 42 326
F=325
2:1
820
292 39 302
BEGIN WORK 0 0 0
7+50
820.6
7+00
819.1
810
6+50
817.1
810
6+00
815.3
810
STA 6+00 TO STA 11+50
Seeding End Area Cu. Yds.
W. S.Y. Cut Fill Exc. Emb.
80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60
PUSCARAWAS COUNTY
22

TUSCARAWAS COUNTY
CO. RD. 1

STA. 12+00 TO STA. 17+08

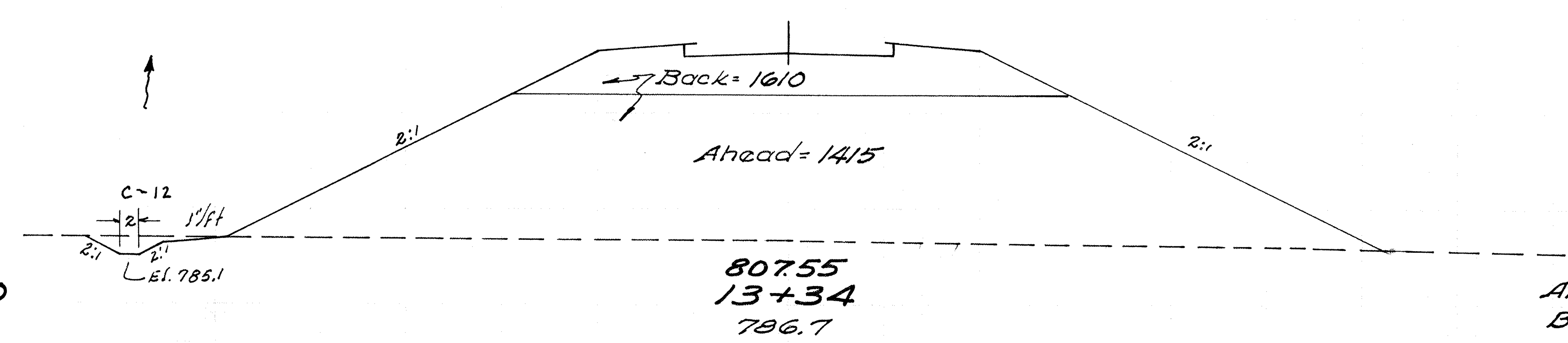
80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80

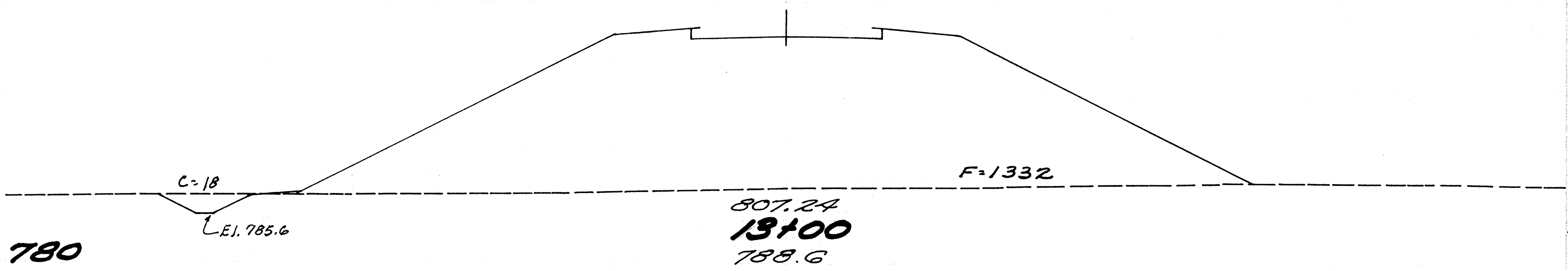


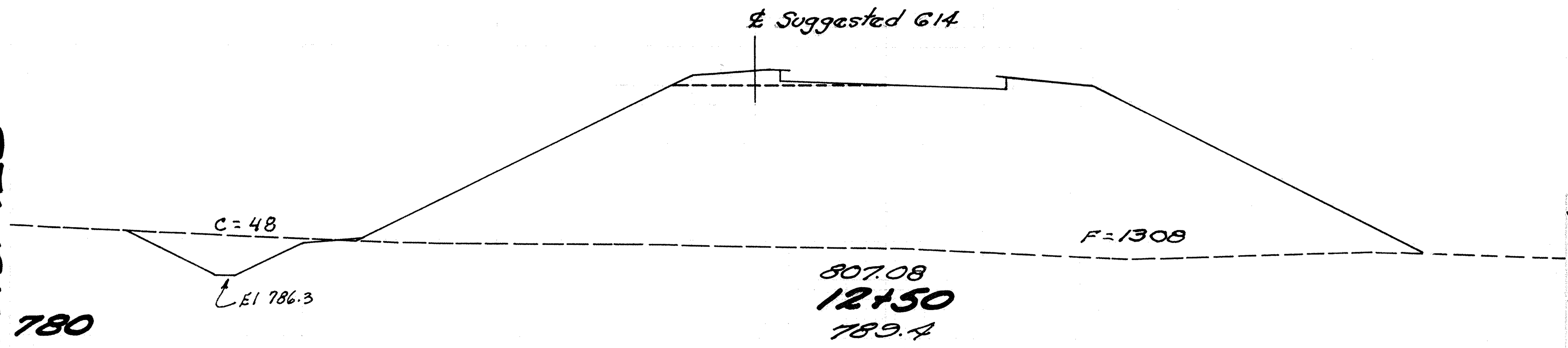
16+65 RESUME EARTHWORK

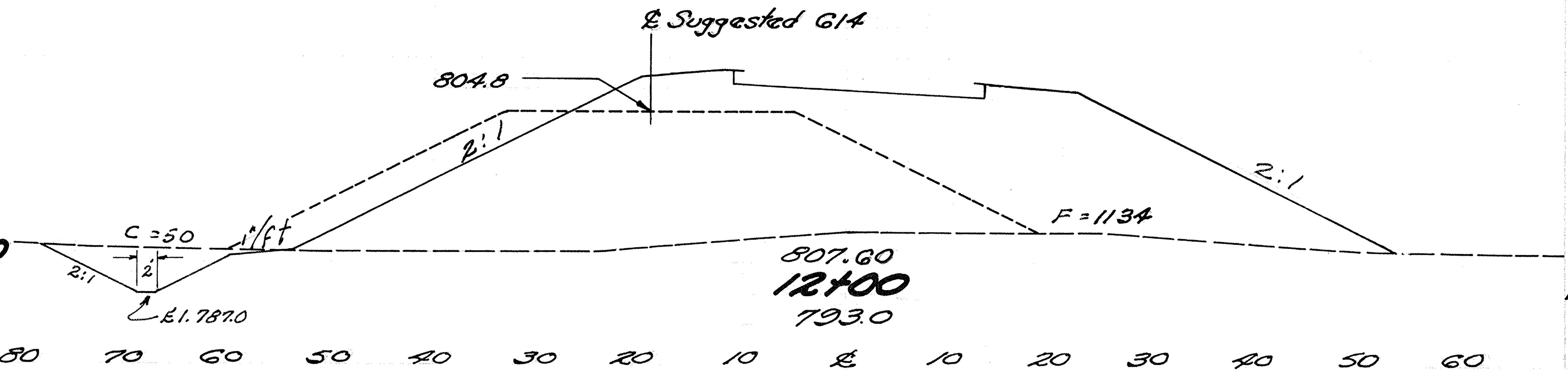
BRIDGE

13+80 SUSPEND EARTHWORK



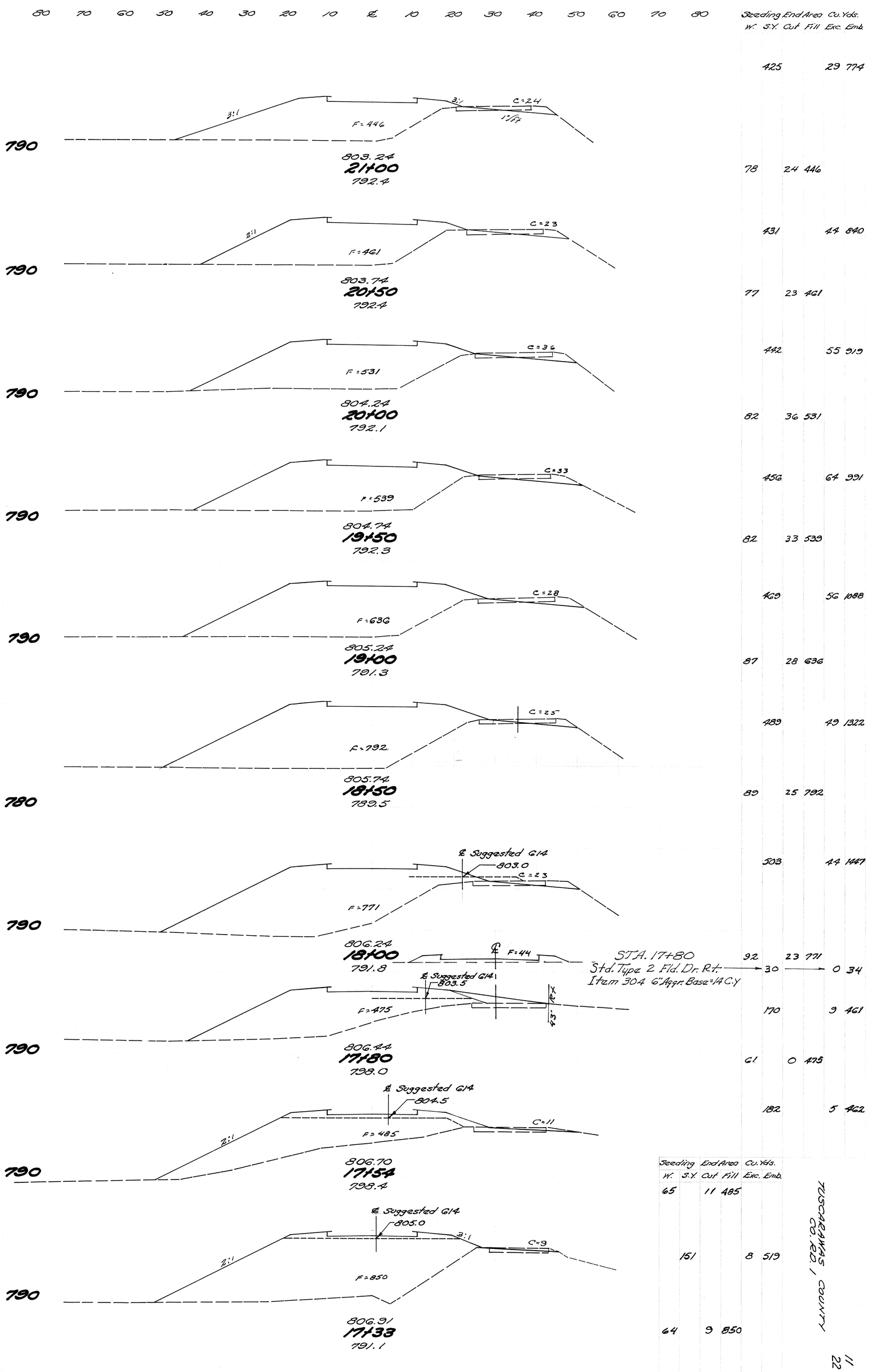


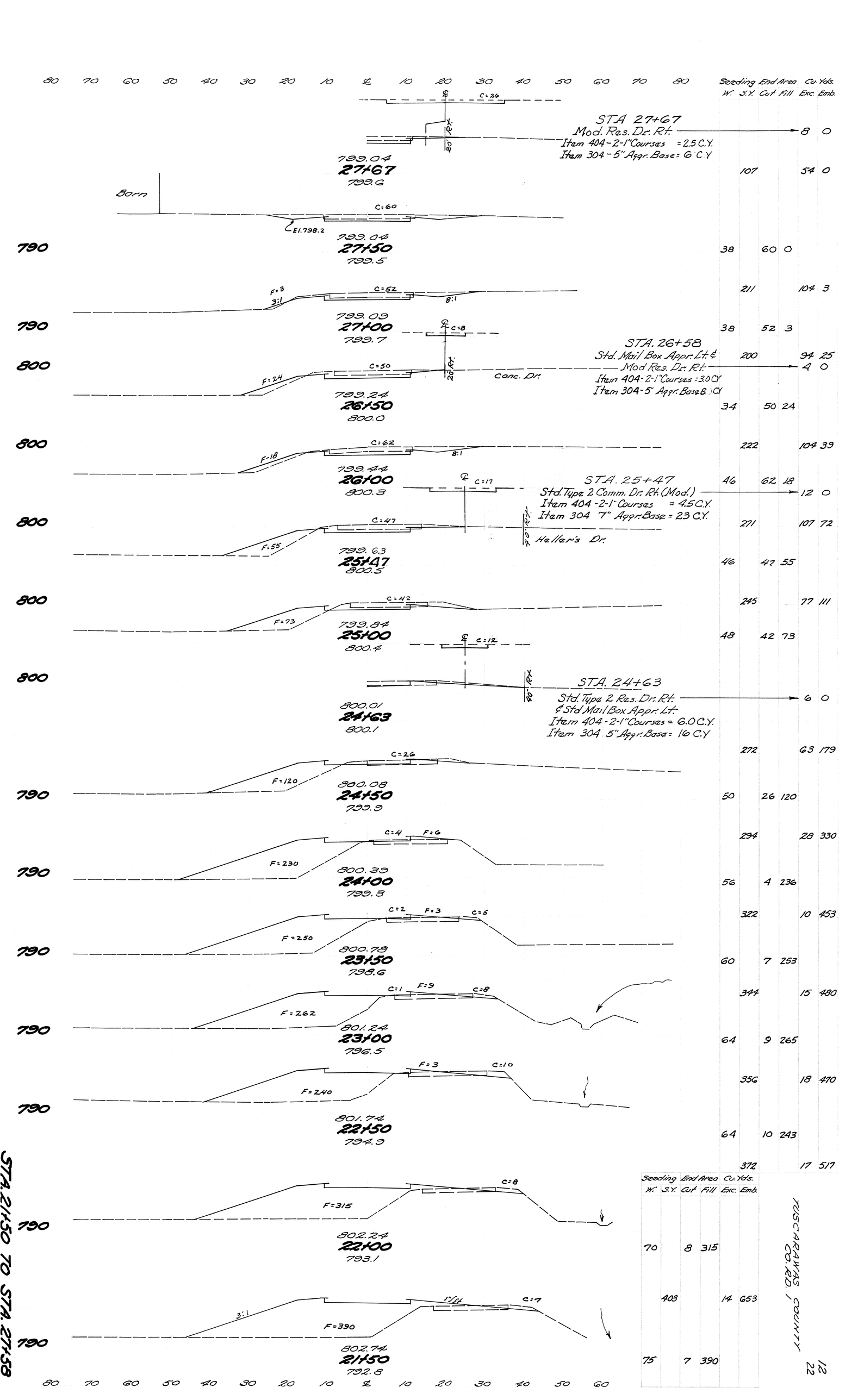




80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60

Station	Seeding W.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
		193			4	850
17+08 Ahead	75		0	987		
17+08 Back	80		0	735		
		142			0	585
16+65	0		0	0		
13+80	0		0	0		
		285			10	1205
13+34 Ahead	125		12	1415		
13+34 Back	132		12	1610		
		468			19	1852
13+00	116		18	1332		
		664			61	2444
12+50	123		48	1308		
		689			91	2261
12+00	125		50	134		


80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80
Seeding End Area Cu. Yds.
W. S.Y. Cut Fill Exc. Emb.
790
3:1
3:1
C=24
1'/ft.
F=446
803.24
21+00
792.4
425 29 774
78 24 446
2:1
C=23
F=461
803.74
20+50
792.4
431 44 840
77 23 461
C=36
F=531
804.24
20+00
792.1
442 55 919
82 36 531
C=33
F=539
804.74
19+50
792.3
456 64 991
82 33 539
C=28
F=636
805.24
19+00
791.3
469 56 1088
87 28 636
C=23
F=792
805.74
18+50
789.5
489 49 1322
89 25 792
℄ Suggested G14
803.0
C=23
F=771
806.24
18+00
791.8
503 44 1447
92 23 771
℄
F=44
STA. 17+80
Std. Type 2 Fld. Dr. Rt.
Item 304 6" Aggr. Base=14 C.Y
30 0 34
℄ Suggested G14
803.5
F=475
4.3' ±ex
170 3 461
806.44
17+80
798.0
61 0 475
℄ Suggested G14
804.5
C=11
F=485
806.70
17+54
798.4
182 5 462
℄ Suggested G14
805.0
3:1
C=9
F=850
806.91
17+33
791.1
Seeding End Area Cu. Yds.
W. S.Y. Cut Fill Exc. Emb.
65 11 485
151 8 519
64 9 850
STA. 17+33 TO STA. 21+00
TUSCARAWAS CO. RD. 1 COUNTY
11
22



Seeding W.	Seeding S.Y.	End Area Cut	End Area Fill	Cu. Yds. Exc.	Cu. Yds. Emb.
				8	0
	107			54	0
	38	60	0		
	211			104	3
	38	52	3		
	200			94	25
				4	0
	34	50	24		
	222			104	39
	46	62	18		
				12	0
	271			107	72
	46	47	55		
	245			77	111
	48	42	73		
				6	0
	272			63	179
	50	26	120		
	294			28	330
	56	4	236		
	322			10	453
	60	7	253		
	344			15	480
	64	9	265		
	356			18	470
	64	10	243		
	372			17	517
70		8	315		
	403			14	653
75		7	390		

80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60 70 80

Seeding End Area Cu. Yds.
W. S.Y. Cut Fill Exc. Emb.

800

31+00
799.9

800

30+50
799.8

800

30+00
799.7

800

29+50
799.6

800

Begin Existing Concrete Pavement

W611
Walk

799.47
29+07.4
799.5

C=24 Back

END PROJECT & WORK

0 24 0

800

C=40
6:1
F.L. 798.9

799.44
29+00
799.7

12 9 0

28 40 0

800

C=53
4:1
F.L. 798.6
6:1
F.L. 798.7
W611
Walk

799.24
28+50
799.8

150 86 0

26 53 0

800

C=50
5:1
F.L. 798.4
F.L. 798.6

799.09
28+00
799.6

Seeding End Area Cu. Yds.
W. S.Y. Cut Fill Exc. Emb.

150 95 0

28 50 0

800

Type 2 Dr. Lt

C=52
6:1
F.L. 798.3

799.05
27+76
799.6

STA. 27+76
Std Type 2 Res. Dr. Lt. → 0 7
Item 404=2-1" Courses 4.1 C.Y.
Item 304=5" Aggr. Base 15 C.Y.

85 45 0

36 52 0

STA. 27+76 TO STA. 31+00

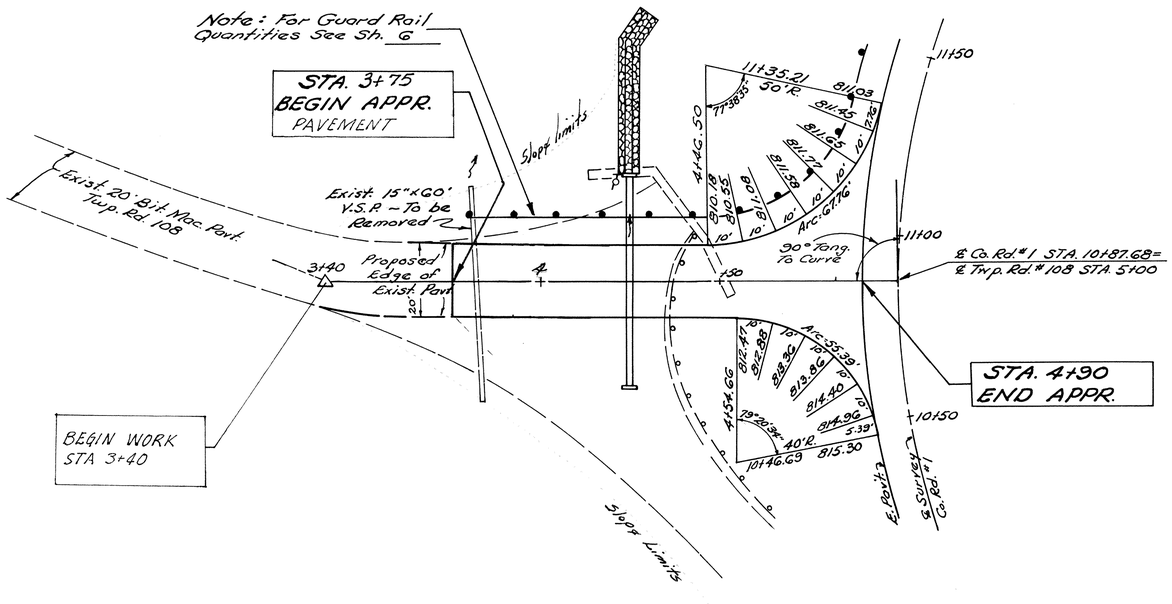
TUSCARAWAS COUNTY
CO. RTE. 1

13
22

80 70 60 50 40 30 20 10 ℄ 10 20 30 40 50 60

TUSCARAWAS COUNTY
CO. RD. 1

Note: For Typical Section,
See Sheet No 2

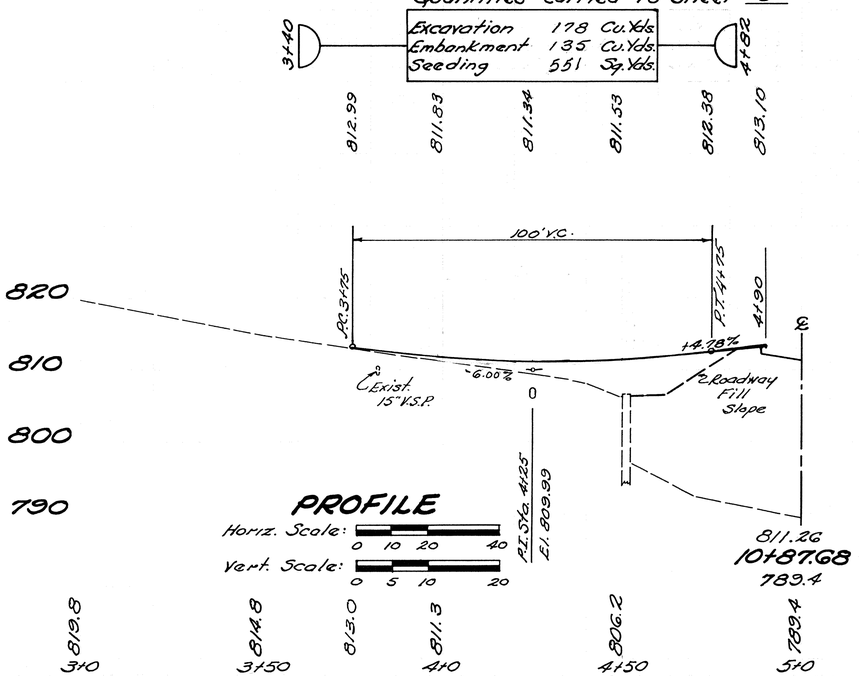


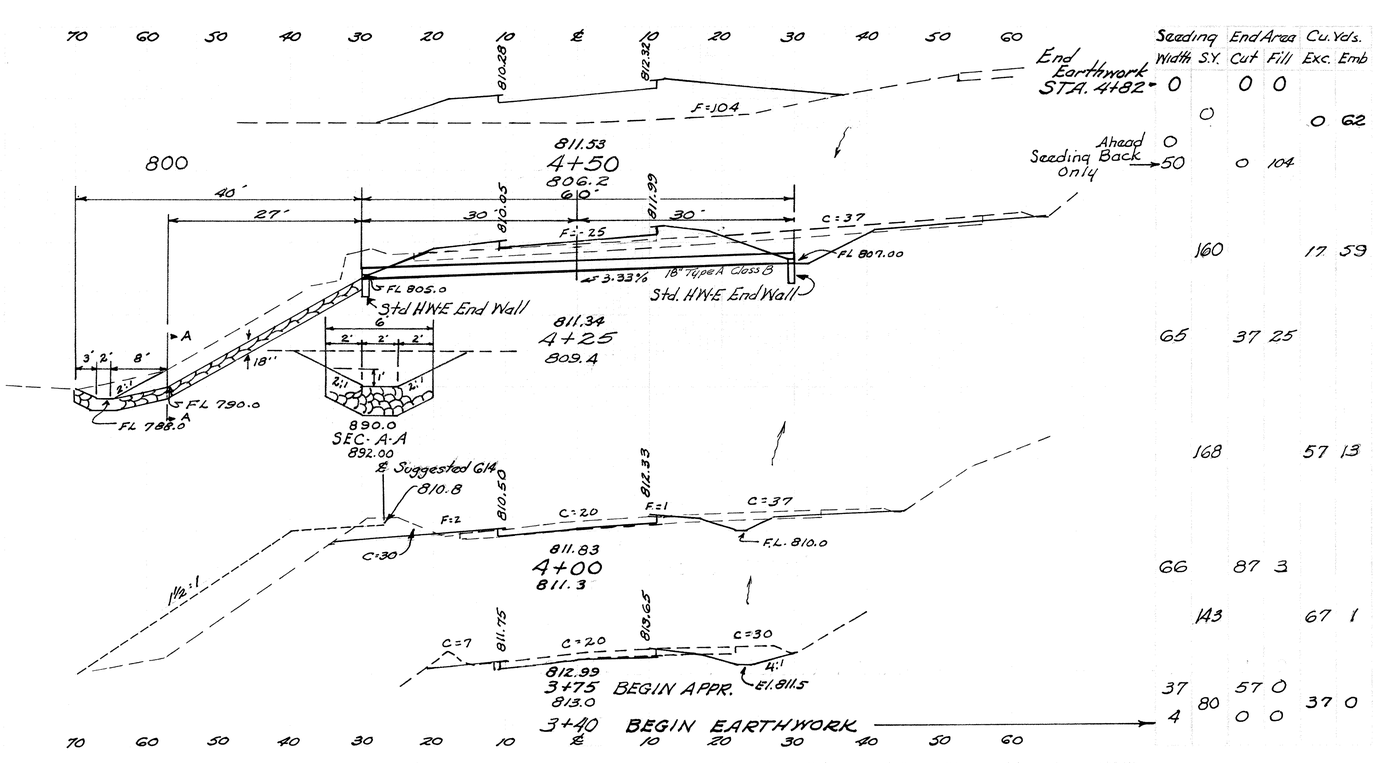
PLAN

Scale: 0 5 10 20 40

Quantities Carried to Sheet 9

Excavation	178	Cu. Yds.
Embankment	135	Cu. Yds.
Seeding	551	Sq. Yds.





Seeding Width	S.Y.	End Area Cut	Fill	Cu. Yds. Exc.	Emb
	0	0	0		
	0			0	62
Ahead Seeding Back Only	0				
	50	0	104		
	160			17	59
	65	37	25		
	168			57	13
	66	87	3		
	143			67	1
	37	57	0		
	80			37	0
	4	0	0		

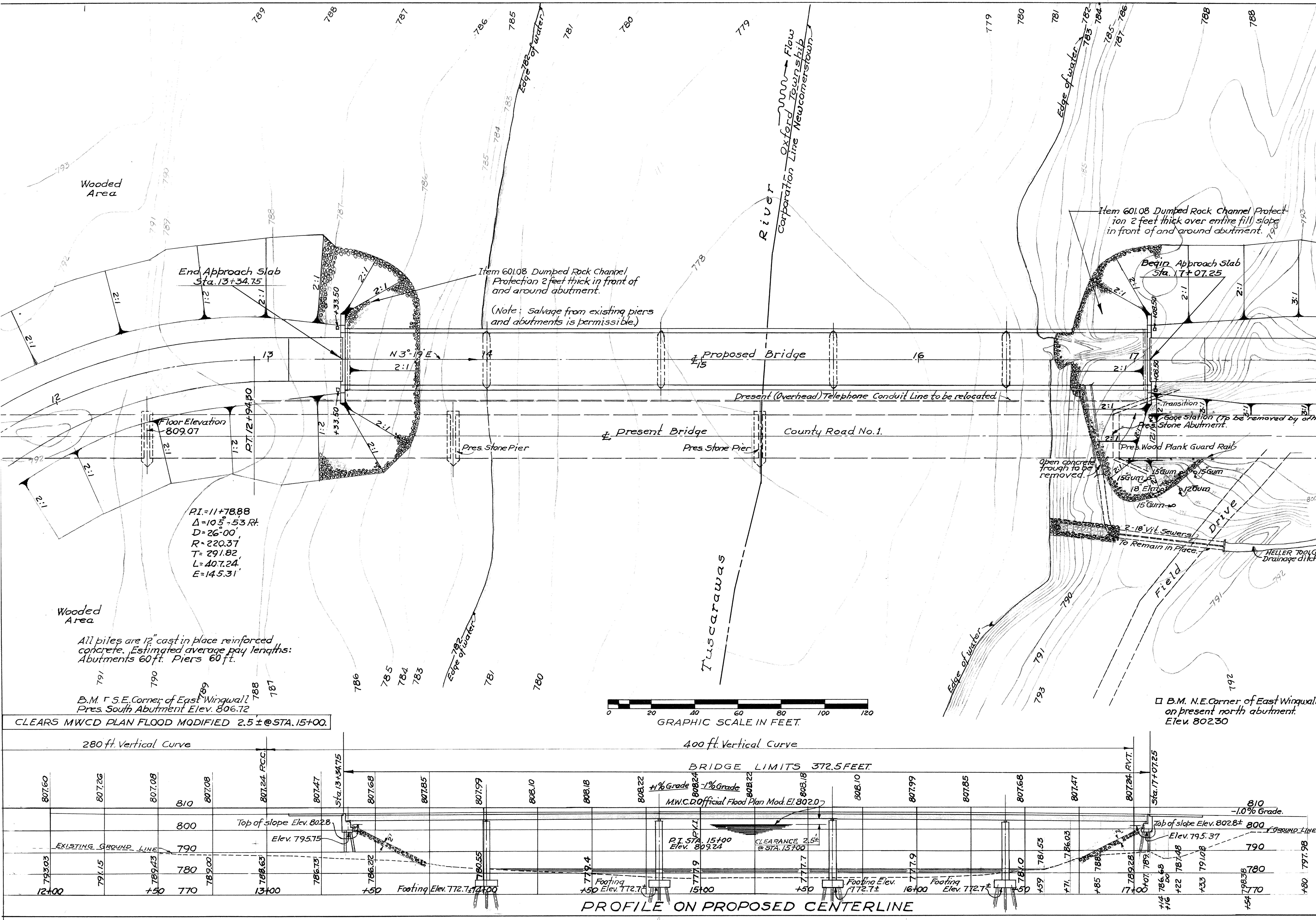
TWP. RD. 108 APPROACH

ESTIMATED QUANTITIES

ITEM 404,	1¼" Asphalt Concrete (85-100)	11.1 Cu. Yds.
ITEM 402,	1¾" Asphalt Concrete (85-100)	15.6 Cu. Yds.
ITEM 408,	Bituminous Prime Coat, 702.09 RT-2 or RT-3	130 Gals.
ITEM 304,	6" Aggregate Base	56 Cu. Yds.
ITEM 310,	6" Subbase	58 Cu. Yds.
ITEM 203,	Subgrade Preparation	321 Sq. Yds.
ITEM 601,	Dumped Rock Channel Protection	16 Cu. Yds.
ITEM 602,	Concrete Masonry	0.6 Cu. Yds.
ITEM 603,	18" Conduit Type A, 706.08, 706.01 or 706.02, with Class B Bedding	60 Lin. Ft.
ITEM 202,	Pipe Removed 15" & Under	60 Lin. Ft.

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR	15/22
2	OHIO			

TUSCARAWAS COUNTY, CO. RD. NO. 1 IN NEWCOMERSTOWN, OHIO.



NORTH
Wooded Area
End Approach Slab Sta. 13+34.75
Item 601.08 Dumped Rock Channel Protection 2 feet thick in front of and around abutment.
(Note: Salvage from existing piers and abutments is permissible.)
Item 601.08 Dumped Rock Channel Protection 2 feet thick over entire fill slope in front of and around abutment.
Begin Approach Slab Sta. 17+07.25
Tuscarawas River
Oxford Township
Corporation Line Newcomerstown
Flow
Edge of water
N 3°-19' E
℄ Proposed Bridge
Present (Overhead) Telephone Conduit Line to be relocated
℄ Present Bridge
County Road No. 1.
Pres. Stone Pier
Floor Elevation 809.07
P.T. 12+94.50
Transition
Gage Station (to be removed by others)
Pres. Stone Abutment
Pres. Wood Plank Guard Rail
Open concrete trough to be removed
2-18" Vit. Sewers To Remain in Place.
HELLER TOOL CO. Drainage ditch
Field Drive
P.I. = 11+78.88
Δ = 105°-53 Rt.
D = 26°-00'
R = 220.37'
T = 291.82'
L = 407.24'
E = 145.31'
Wooded Area
All piles are 12" cast in place reinforced concrete. Estimated average pay lengths: Abutments 60 ft. Piers 60 ft.
B.M. ┌ S.E. Corner of East Wingwall Pres. South Abutment Elev. 806.72
B.M. N.E. Corner of East Wingwall on present north abutment. Elev. 802.30
GRAPHIC SCALE IN FEET
CLEARS MWCD PLAN FLOOD MODIFIED 2.5 ± @ STA. 15+00.
280 ft. Vertical Curve
400 ft. Vertical Curve
BRIDGE LIMITS 372.5 FEET
+1% Grade -1% Grade
M.W.C.D. Official Flood Plan Mod. El. 802.0
Top of slope Elev. 802.8
Elev. 795.75
P.I. STA. 15+00 Elev. 809.24
CLEARANCE 2.5± @ STA. 15+00
Top of slope Elev. 802.8±
Elev. 795.37
-1.0% Grade.
EXISTING GROUND LINE
Footing Elev. 772.7±
PROFILE ON PROPOSED CENTERLINE

Drainage Area = 2436 sq. miles

EXISTING BRIDGE DATA

Present bridge located 35 feet upstream.
Load Reduction: Posted 8 ton Load Limit
Spans: ① 162'-0" ② 140'-0" ③ 140'-0" ④ 162'-0"
Type: Spans 1-3 & 4 are Thru Pratt Trusses. Span 2 is a Thru Whipple Truss.
Abutments and Piers: Stone
Roadway: 17'-0"
Loading:
Skew: 0°
Condition: Fair
Date Built: 1894. Fabricator: The Wrought Iron Bridge Co., Canton, Ohio.

PROPOSED STRUCTURE

Type: Continuous Steel Beam with reinforced concrete deck and substructure.
Spans: 64'-80'-80'-80'-64' c/c Bearings
Roadway - 24'-0" f/f 2'-0" Safety Curbs.
Load Frequency: CF 130 (57).
Skew: 0°

Wearing Surface: Monolithic Concrete 1"
Approach Slabs: AS-1-54 (25' long).
Alignment: Tangent.

OFFICE OF THE COUNTY ENGINEER
TUSCARAWAS COUNTY, OHIO.

PAUL A. PRINCE AND ASSOCIATES
CONSULTING ENGINEERS
368 4TH ST., N.W. NEW PHILADELPHIA, O.

SITE PLAN

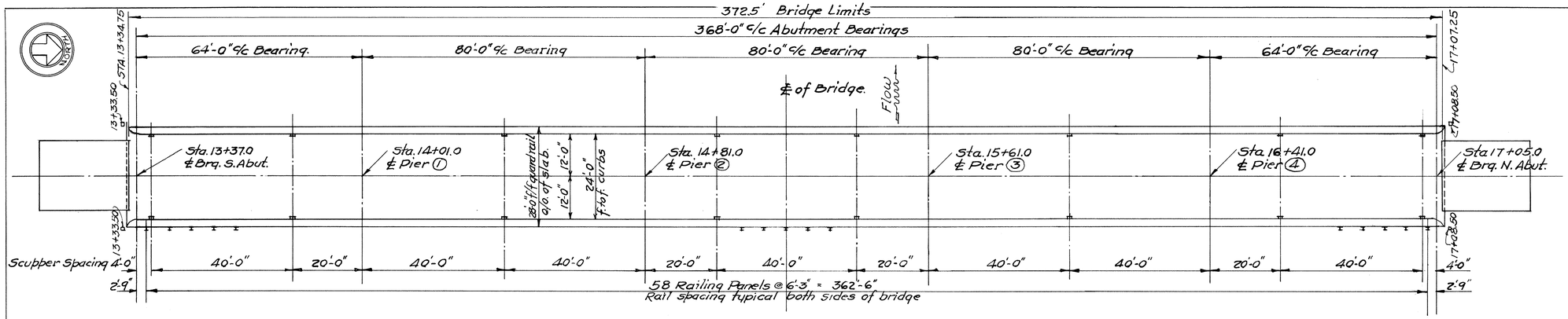
BRIDGE NO. 1 - ON TUSCARAWAS CO. RD. #1. OVER TUSCARAWAS RIVER.

EXISTING TOPO.		PROPOSED WORK			
SURVEY	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
		RK	J.P.K.	P.A.P.	

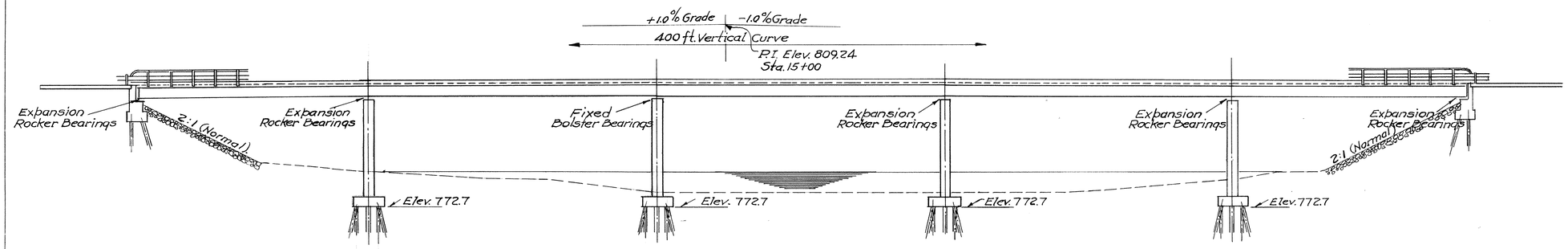
FED. RD DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

16
22

TUSCARAWAS COUNTY ROAD NO. 1.
IN NEWCOMERSTOWN, OHIO.



GENERAL PLAN



ELEVATION

DESIGN DATA

DESIGN LOADING: CF 130 (57).
CONCRETE CLASS C
Basic unit stress 1,333 p.s.i.
CONCRETE CLASS E
Basic unit stress 1,133 p.s.i.
STRUCTURAL STEEL:
A.S.T.M A36 - basic unit stress 20,000 p.s.i.

REINFORCING STEEL:
A.S.T.M. A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN'L.
503	Lump	Sum	Cofferdams, Cribs and Sheeting				Lump.
503	369	Cu.Yds	Excavation for structures	235	126		
511	331	Cu.Yds.	Class "C" Concrete - Superstructure.			331	
511	108	Cu.Yds.	Class "E" Concrete - Abutments.	108			
511	122	Cu.Yds.	Class "E" Concrete - Pier Footings		122		
511	332	Cu.Yds.	Class "E" Concrete - Piers above footings.		332		
	≠286,400						
509	94,875	Lbs.	Reinforcing Steel.	6902	12,680	75293	
513	386,400	Lbs.	Structural Steel.			386,400	
514	386,400	Lbs.	Field Painting of Structural Steel			386,400	
517	750	Lin.Ft.	Railing (Steel Post with Deep Beam Rail & Hand rail)			750	
505	Lump	Sum	First Test Pile				Lump
506	Lump	Sum	First Pile Test Load				Lump
507	6000	Lin.Ft.	12" Cast in place reinforced concrete piles.	960	5040		
	1	Each	Subsequent pile test load.				1
518	82	Lin.Ft.	6" perforated helical c.m.p. including specials 707.06	82			
202	Lump	Sum	Removal of existing structure.				Lump
518	32	Cu.Yds	Porous Backfill.	32			
518	16	Each	Scuppers, including supports			16	
518	47	Lin.Ft.	6" non-perforated helical c.m.p., 707.06	47			
601	535	Cu.Yds.	Dumped rock channel protection.	535			
808	331	Units	Water reducing, set retarding admixture			331	
825	1237	Sq.Yds.	Concrete surface treatment.	13		1224	
828	48	Lin.Ft.	Joint sealer. (End dam.)			48	

GENERAL NOTES

REFERENCE shall be made to Standard Drawings CSB-2-63 Sheet 1 and 2 of 4, both revised 12-8-65, SD-1-65 Sheets 1, 2 & 3 dated 11-8-65 and to RB-1-55 revised 2-2-59 and to Supplemental Specifications 808 dated 2-7-66, 811 dated 3-29-65, 825 dated 4-22-65 and 828 dated 3-21-66.

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures of the State of Ohio, Department of Highways, dated 9-1-57 together with the current revisions thereof.

PILES shall be driven to a minimum bearing capacity of 35 tons per pile for the abutments and 35 tons per pile for the piers.

PILE TEST LOAD shall be applied only if and where directed by the Engineer

EXCAVATION QUANTITY includes the removal of the fill material required for the construction of the abutments.

CONCRETE DECK PLACING: In order to facilitate water curing of the concrete of the deck slabs, the placing of the concrete shall progress upgrade. The slab may be placed in sections, between transverse construction joints which are parallel to transverse reinforcing steel and are located near the center of any span.

REMOVAL OF EXISTING STRUCTURE: When no longer needed to maintain traffic, the existing structure shall be removed. Existing abutments and south pier shall be removed to 2 feet below finished ground elevation or where necessary for new construction. Existing center pier shall be removed to Elev. 781 and existing north pier shall be removed to Elev. 777. Suitable waste masonry shall be used in Item 601.

UTILITY LINES: All labor and expense involved in relocating the affected utility lines shall be borne by the owner of said utility. The Contractor and the Owner are requested to co-operate by arranging their work in such a manner that any inconvenience to either shall be held to a minimum.

MACHINE FINISH: The concrete bridge deck shall be finished by the use of a finishing machine

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TUSCARAWAS COUNTY, OHIO.
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CONSULTING ENGINEERS
368 FOURTH ST. N.W. NEW PHILADELPHIA, O.

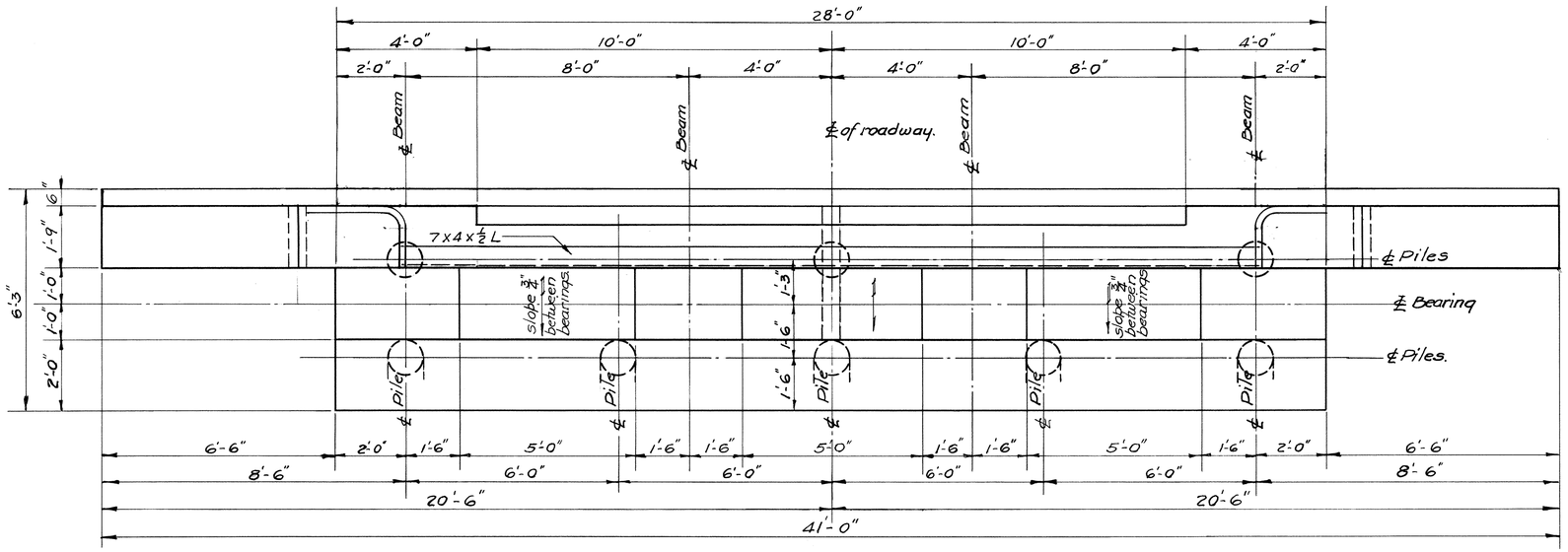
GENERAL PLAN, ELEVATION & NOTES
BRIDGE NO. 1 ON TUSCARAWAS CO. RD. #1
OVER TUSCARAWAS RIVER

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISIONS
RK	JPK	JPK	PAP			8/25/66

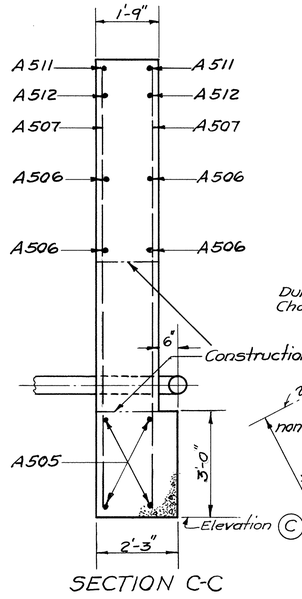
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

17
22

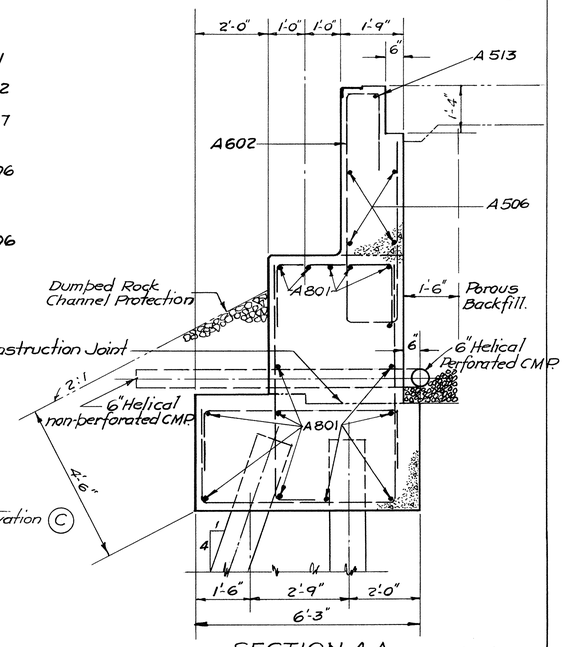
TUSCARAWAS COUNTY RD. #1
IN NEWCOMERSTOWN, OHIO.



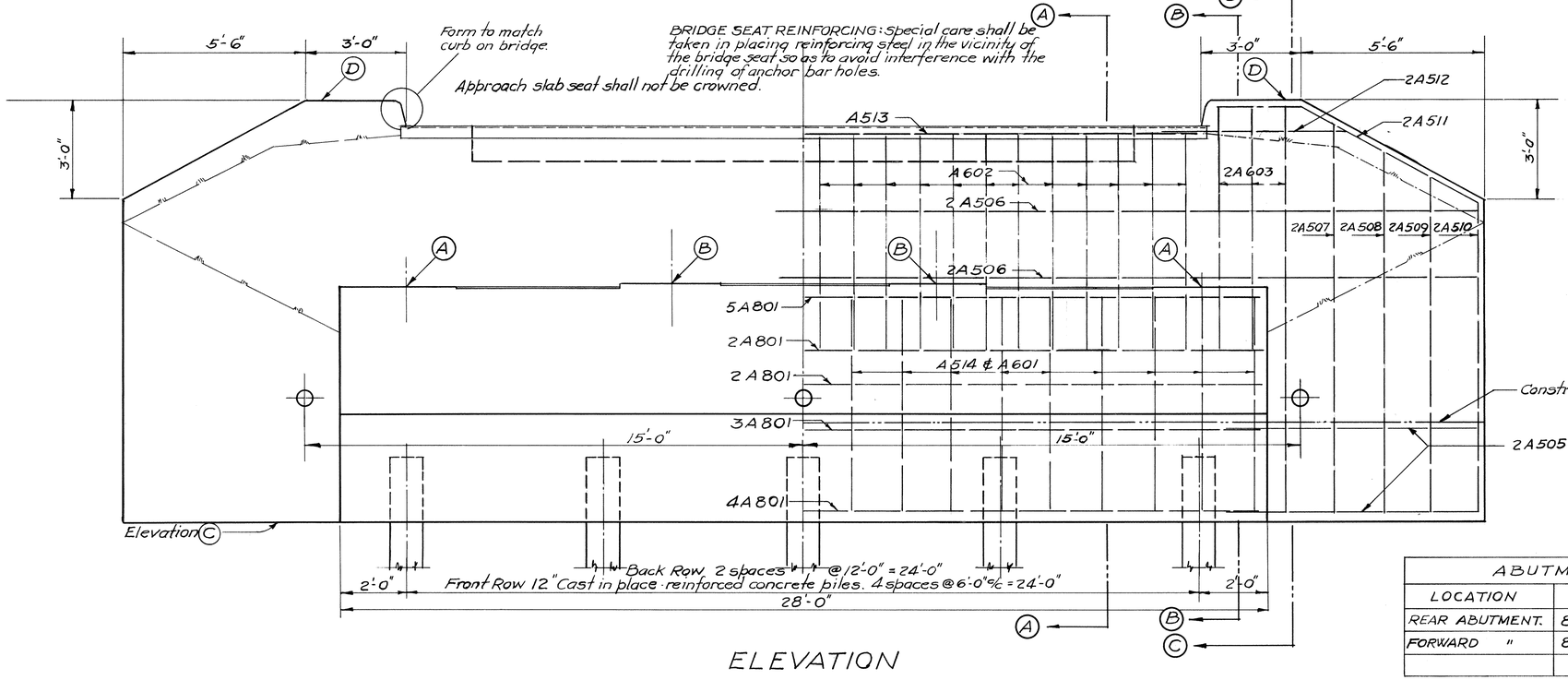
PLAN



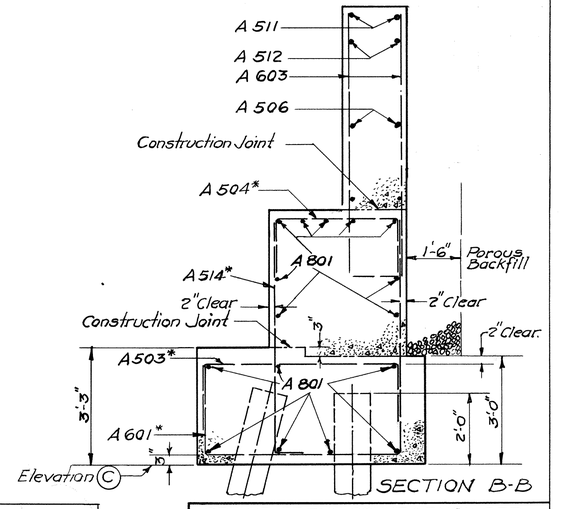
SECTION C-C



SECTION A-A



ELEVATION



SECTION B-B

ABUTMENT ELEVATIONS				
LOCATION	A	B	C	D
REAR ABUTMENT.	802.84	802.97	795.75	808.25
FORWARD "	802.46	802.59	795.37	807.87

PROCEDURE: The embankment shall be placed and compacted up to the finished spill-thru slope, after which excavation shall be made for the abutment and piles driven.

POROUS BACKFILL 1'-6" thick, full length of abutment and wings, shall extend up to the underside of the approach slab or to the finished ground surface.

*after reinforcing bar number denotes bars to be equally spaced between piles @ approximately 1'-6" centers.

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ABUTMENT DETAILS

TUSCARAWAS COUNTY BRIDGE OX-1-1
OVER TUSCARAWAS RIVER

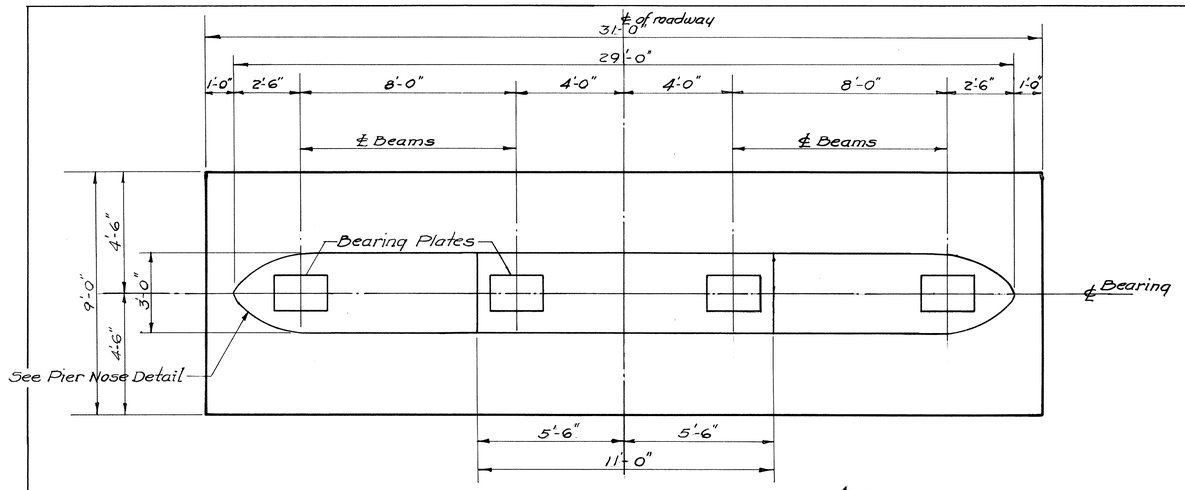
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISIONS
RK	JPK	JPK	PAP			

FED. RD DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

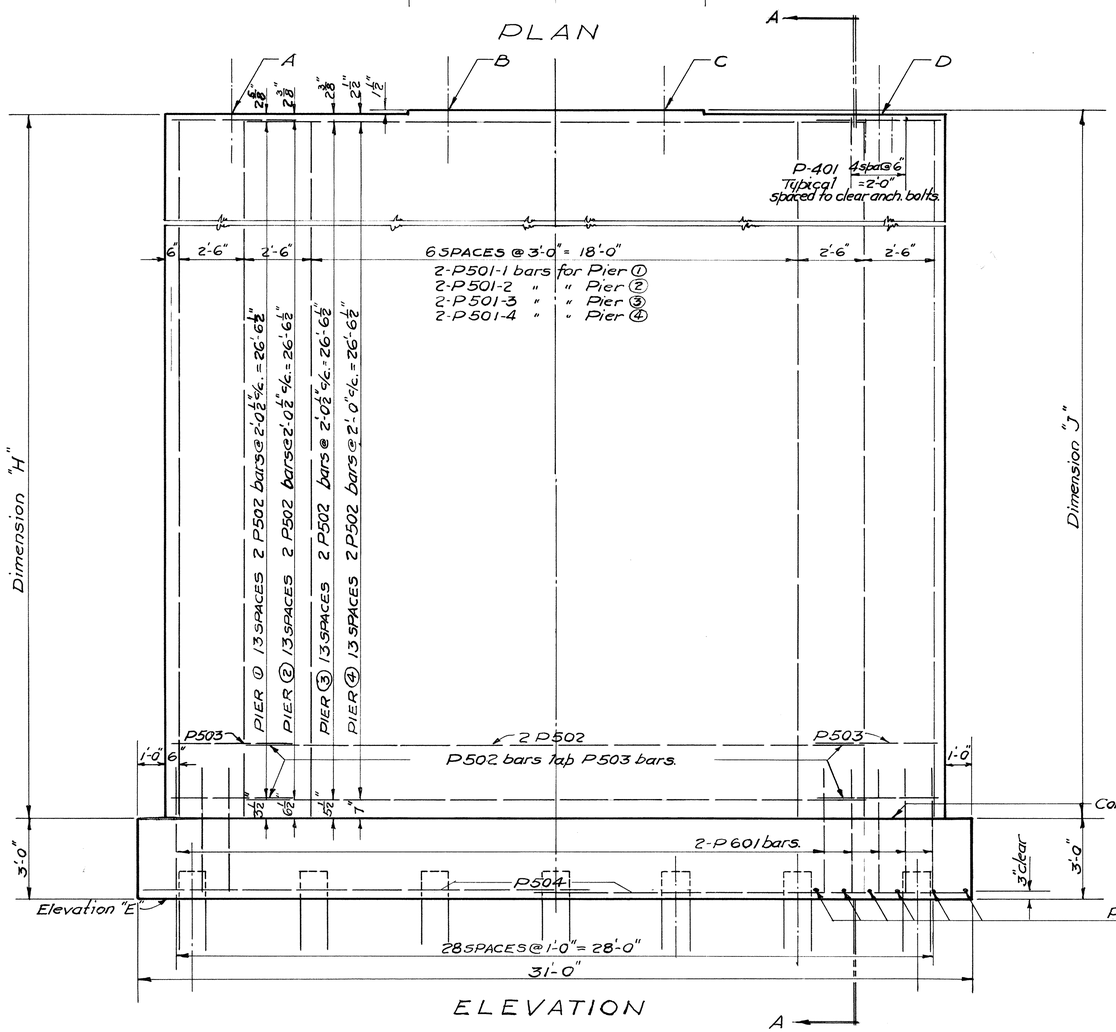
18
22

TUSCARAWAS COUNTY ROAD NO. 1.
IN NEWCOMERSTOWN, OHIO.

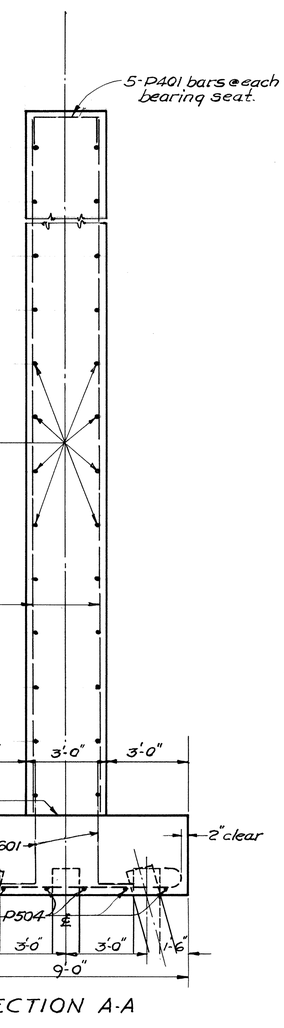
4
5



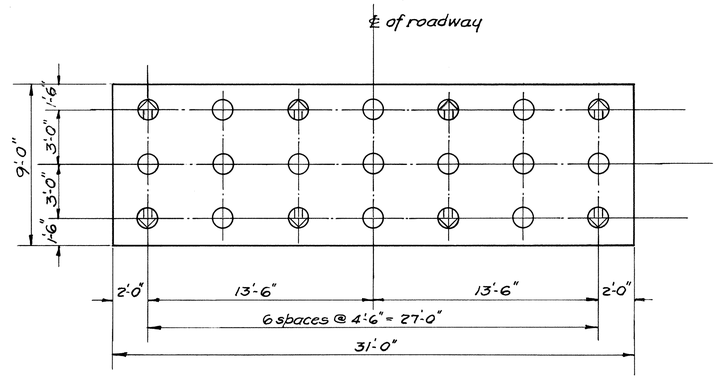
PLAN



ELEVATION



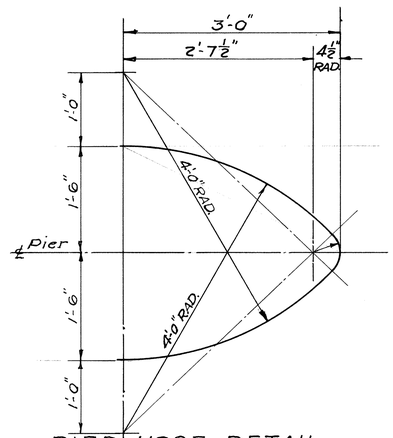
SECTION A-A



PILING PLAN

Indicates direction of slope for sloping piles.

PIER	ELEVATIONS A	B	C	D	E		DIMENSIONS H	J
1	802.75	802.88	802.88	802.75	772.7		27'-0 5/8"	27'-2 1/8"
2	802.98	803.11	803.11	802.98	772.7		27'-3 3/8"	27'-4 7/8"
3	802.90	803.03	803.03	802.90	772.7		27'-2 3/8"	27'-3 7/8"
4	802.49	802.62	802.62	802.49	772.7		26'-9 1/2"	26'-11"



PIER NOSE DETAIL.

Note: Care should be taken, in placing the reinforcing steel in the bridge seat, to avoid interference with drilling of the anchor bolt holes.

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PIERS

TUSCARAWAS COUNTY BRIDGE OX-1-1
OVER TUSCARAWAS RIVER

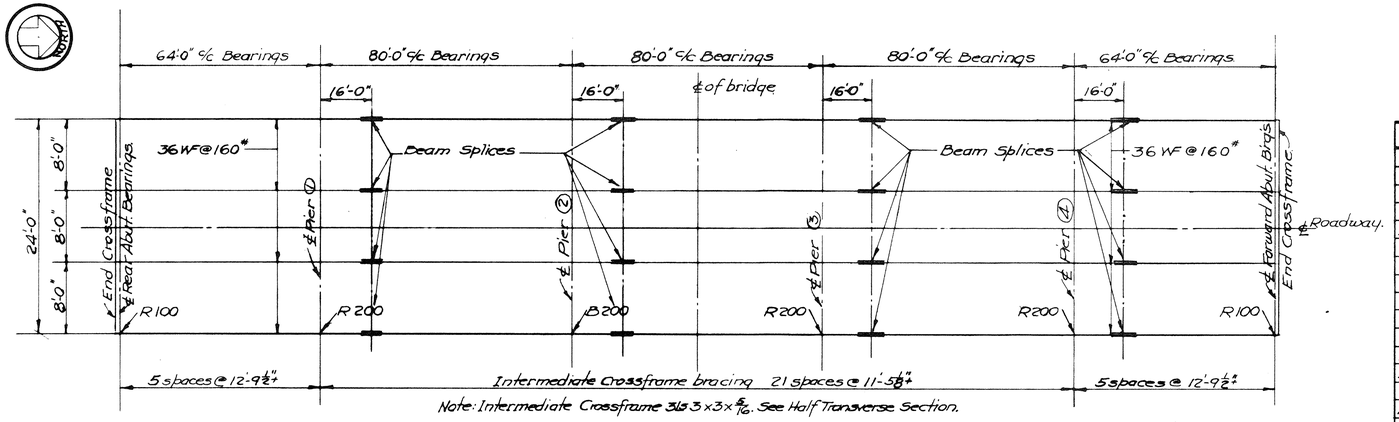
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RK	J.P.K.	JPK	PAP			

FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

19
22

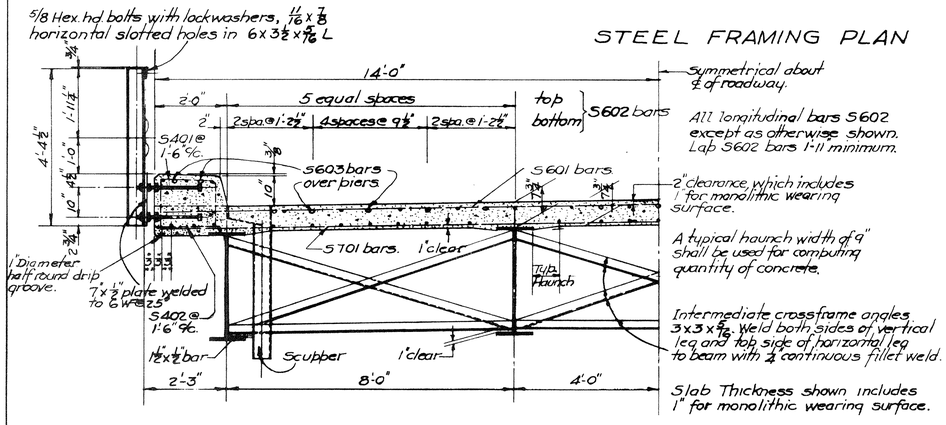
TUSCARAWAS-COUNTY ROAD NO.1
IN NEWCOMERSTOWN, OHIO.

5
6



Note: Intermediate Crossframe 3½ 3 x 3 x 5/16. See Half Transverse Section.

STEEL FRAMING PLAN



HALF TRANSVERSE SECTION

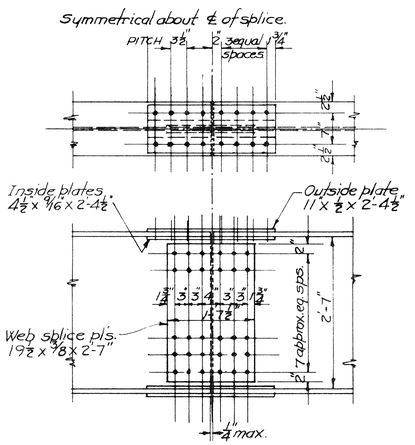
* Beams with natural camber shall be fabricated with convex side up.

DEFLECTION AND CAMBER

	SPAN 1	SPAN 2	SPAN 3	SPAN 4	SPAN 5
Deflection due to weight of steel	3 1/32"	3/16"	3/16"	3/16"	3/32"
Deflection due to remaining Dead Load.	3/8"	1/2"	7/16"	1/2"	3/8"
Convexity required for vertical curve	3/8"	1/2"	9/16"	1/2"	3/8"
Sum of Deflection and Convexity	27/32"	1 3/16"	1 3/16"	1 3/16"	27/32"
Required Camber	3/4"	1 3/16"	1 3/16"	1 3/16"	3/4"

BEAM MOMENT PLATES

PIER 1	Top	10½ x 7/16 x 16'-4"
	Bottom	13½ x ½ x 16'-4"
PIER 2	Top	10½ x 7/16 x 16'-4"
	Bottom	13½ x ½ x 16'-4"
PIER 3	Top	10½ x 7/16 x 16'-4"
	Bottom	13½ x ½ x 16'-4"
PIER 4	Top	10½ x 7/16 x 16'-4"
	Bottom	13½ x ½ x 16'-4"

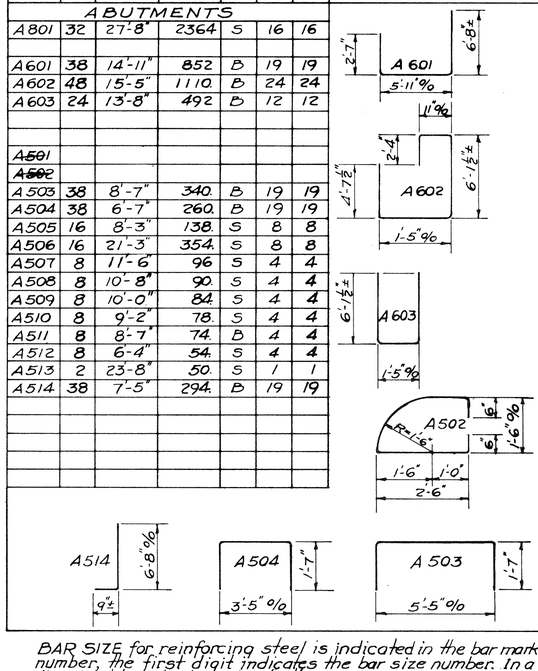


BEAM·SPLICE·DETAIL

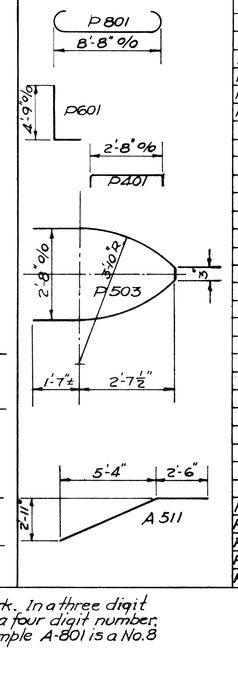
REINFORCING STEEL LIST

MARK	NO.	LENGTH	WGT.	SHAPE	REAR	FWD.
ABUTMENTS						
A801	32	27'-8"	2364	S	16	16
A601	38	14'-11"	852	B	19	19
A602	48	15'-5"	1110	B	24	24
A603	24	13'-8"	492	B	12	12
~~A501~~						
~~A502~~						
A503	38	8'-7"	340	B	19	19
A504	38	6'-7"	260	B	19	19
A505	16	8'-3"	138	S	8	8
A506	16	21'-3"	354	S	8	8
A507	8	11'-6"	96	S	4	4
A508	8	10'-8"	90	S	4	4
A509	8	10'-0"	84	S	4	4
A510	8	9'-2"	78	S	4	4
A511	8	8'-7"	74	B	4	4
A512	8	6'-4"	54	S	4	4
A513	2	23'-8"	50	S	1	1
A514	38	7'-5"	294	B	19	19

BENDING DIAGRAM

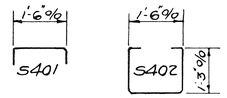


BENDING DIAGRAM



MARK	NO.	LENGTH	WGT.	SHAPE
PIERS				
P801	112	10'-10"	3240	B
P601	232	5'-6"	1916	B
P401	80	3'-6"	188	B
P501-1	22	26'-10"	616	S
P501-2	22	27'-1"	622	S
P501-3	22	27'-0"	620	S
P501-4	22	26'-7"	610	S
P502	112	25'-0"	730	S
P503	112	9'-9"	1140	B
P504	48	16'-2"	808	S
SUPERSTRUCTURE				
S401	494	2'-4"	770	B
S402	494	4'-7"	1511	B
S601	440	27'-8"	18,287	S
S602	490	35'-7"	26,186	S
S603	76	32'-0"	3,653	S
S701	440	27'-8"	24,886	S
REPLACEMENT BARS.				
RE 800	1	6'-6"		S
RE 700	2	6'-3"		S
RE 600	2	5'-11"		S
RE 500	1	5'-7"		S
RE 400	1	4'-7"		S

BAR SIZE for reinforcing steel is indicated in the bar mark. In a three digit number, the first digit indicates the bar size number. In a four digit number, the first two digits indicate the bar size number. For example A-801 is a No.8 size bar.



REPLACEMENT BARS:
If reinforcing bars are fabricated from stock which has been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sect. 5·402 need not be furnished and replacement bars will not be required.

DECK AND GUTTER ELEVATIONS

LOCATION	STA.	GUTTER 12FT. LEFT	℄ OF DECK	GUTTER 12FT. RIGHT
S.ABUT.	13+37.0	807.38	807.57	807.38
	13+53.0	807.51	807.70	807.51
	13+69.0	807.62	807.81	807.62
	13+85.0	807.72	807.91	807.72
PIER①	14+01.0	807.81	808.00	807.81
	14+21.0	807.90	808.09	807.90
	14+41.0	807.96	808.15	807.96
	14+61.0	808.01	808.20	808.01
PIER②	14+81.0	808.04	808.23	808.04
	15+01.0	808.05	808.24	808.05
	15+21.0	808.04	808.23	808.04
	15+41.0	808.01	808.20	808.01
PIER③	15+61.0	807.96	808.15	807.96
	15+81.0	807.89	808.08	807.89
	16+01.0	807.79	807.98	807.79
	16+21.0	807.68	807.87	807.68
PIER④	16+41.0	807.55	807.74	807.55
	16+57.0	807.43	807.62	807.43
	16+73.0	807.30	807.49	807.30
	16+89.0	807.16	807.35	807.16
P.V.T.	17+00.0	807.05	807.24	807.05
N.ABUT.	17+05.0	807.00	807.19	807.00

OFFICE OF THE COUNTY ENGINEER
TUSCARAWAS COUNTY, OHIO.

PAUL A. PRINCE & ASSOCIATES
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368 FOURTH ST. N.W. NEW PHILA., OHIO

SUPERSTRUCTURE DETAILS
REINFORCING STEEL LIST
BRIDGE NO. OX-1-1 ON TUSC. COUNTY RD. 1.

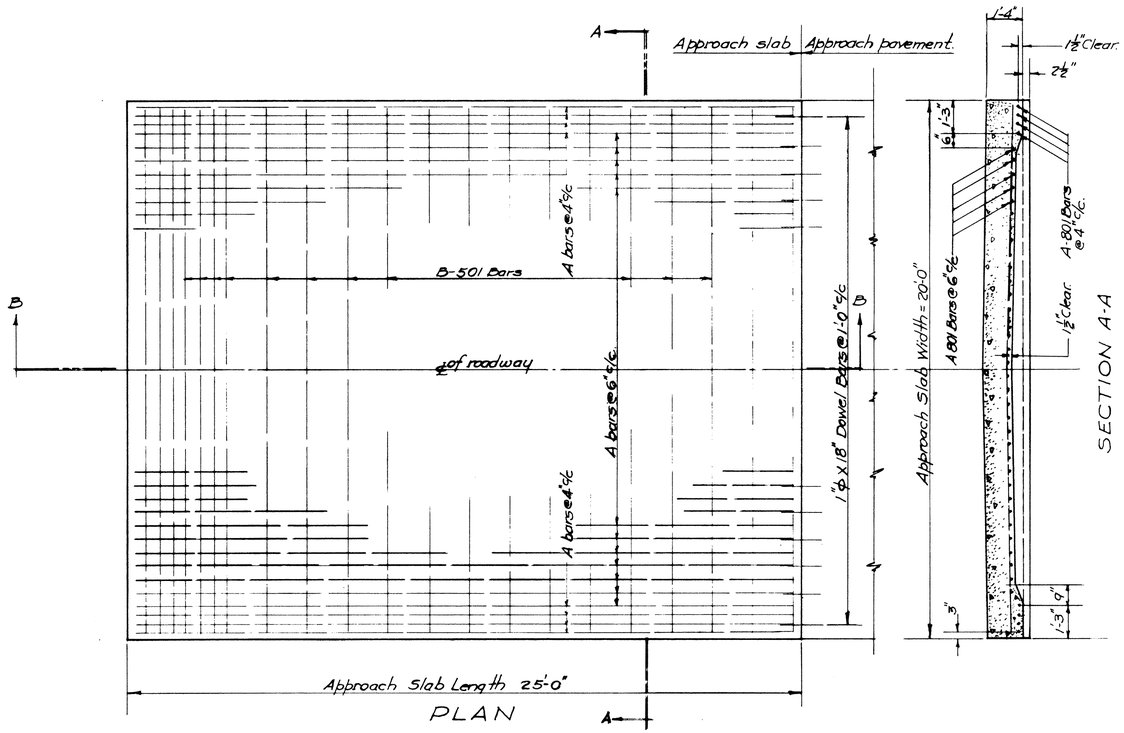
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RK	JPK	JPK	PAP	-	-	

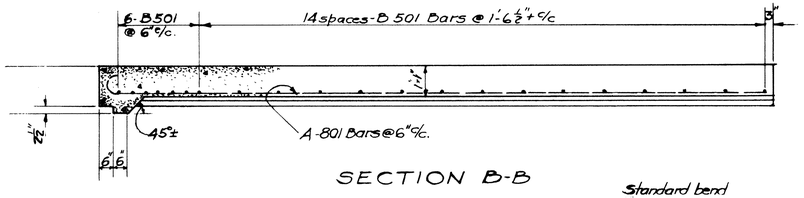
FED. RD. DIVISION	STATE	PROJECT	FISCAL YEAR
2	OHIO		

20
22

TUSCARAWAS COUNTY, CO. RD. NO. 1.
IN NEWCOMERSTOWN, OHIO.

66



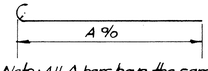


SECTION B-B

REINFORCING STEEL For Approach Slabs.				1 SLAB	2 SLABS
Mark	Bar Size	Length	Dim. "A"	Reqd.	Reqd.
A801	1"	25'-7"	24'-6"	42	84
B501	5/8"	19'-6"	——	20	40

Note: For reference see Std. Highway Drwg. AS-1-54 rev. 8-10-65.

Standard bend



Note: All A bars have the same bend. Different lengths affect only the dimension "A %".
Details shown are for Approach Slab Sta. 17+07.25 to Sta. 17+32.25
Approach Slab Sta. 13+09.75 to Sta. 13+34.75 is opposite and details are similar.

NOTE: BAR SIZE for reinforcing steel is indicated in the bar mark. In a three digit number the first digit indicates the bar size number. In a four digit number, the first two digits indicate the bar size number. For example A-801 is a No. 8 size bar.

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TUSCARAWAS COUNTY, OHIO

PAUL A. PRINCE & ASSOCIATES
CONSULTING ENGINEERS
NEW PHILADELPHIA, OHIO.

BRIDGE OX-1-1 TUSC. CO. RD. NO. 1
OVER TUSCARAWAS RIVER
NEWCOMERSTOWN, TUSCARAWAS CO., O.

SCALE | CONTRACT

DESIGN BY	DRAWN BY	TRACED BY	CHECKED BY
RK	JPK	JPK	PAP

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

OXFORD TWP. - 2ND. QR., T-5, R-3. --- VILLAGE OF NEWCOMERSTOWN

TUSCARAWAS COUNTY
CO. ROAD 1.
RIGHT OF WAY PLANS

1
2


N.
VILLAGE OF
NEWCOMERSTOWN
3
Board of Education - Newcomerstown Exempted Village School District
T.B.A. 1.74 ac.
P.R.O. 0.71 ac.
2
Paul M. & Della L. Jones
T.B.A. 4.24 ac.
P.R.O. 1.00 ac.
1
Charles M. & Freda L. Harshbarger
T.B.A. 0.58 ac.
P.R.O. 0.25 ac.
4
The Heller Bros. Co.
Heller Tool Company
(V. 436 - P. 3)
Twp. Road #108
Co. Road No 1
Tuscarawas River
Existing Bridge
River Gaging Statn.
Corporation Line
County Commissioners of Tuscarawas County
P.M. & D.L. Jones
C.M. & F.L. Harshbarger
P. & D. Jones
Heller Tool Co.
Exist. & Proposed R/W
Ditch - (Heller Co.)
(4-WA-1)
P.C. 8+87.06
P.T. 12+94.30
P.I. 11+78.88
Δ = 105°-53' Rt.
D = 26°-00'
L = 407.24'
T = 291.82'
E = 145.31'
R = 220.37'
P.I. 19+80.00
Δ = 4°-35' Rt.
D = 1°-28'
L = 312.50'
T = 156.33'
E = 3.13'
R = 3906.52'
P.C. 18+23.67
P.T. 21+36.17
STA. 22+00
END SHEET
BEGIN PROJECT STA. 8+00.0
S-312 (4)
BEGIN WORK STA. 7+50.0
N. 19°-14' W. - 180.00'
N. 3°-21' E. - 304.50'
N. 3°-13' E. - 119.00'
S. 8°-55' W. - 152.86'
S. 10°-03' W. - 202.17'
S. 4°-00' W. - 725.15'
S. 3°-14' W. - 181.20'
S. 70°-53' E. - 276.00'
N. 7°-54' E.
S. 10°-38' E.
S. 69°-20' W.
S. 71°-25' W. - 163.50
N. 81°-25' W. - 97.50'
N. 5°-19' E.
8+77.51
238.11'
430.09'
187.00'
191.98'
Stumps

SCALE - 1 IN. = 50 FT. -- 0 50 100

PLANS COMPLETED	

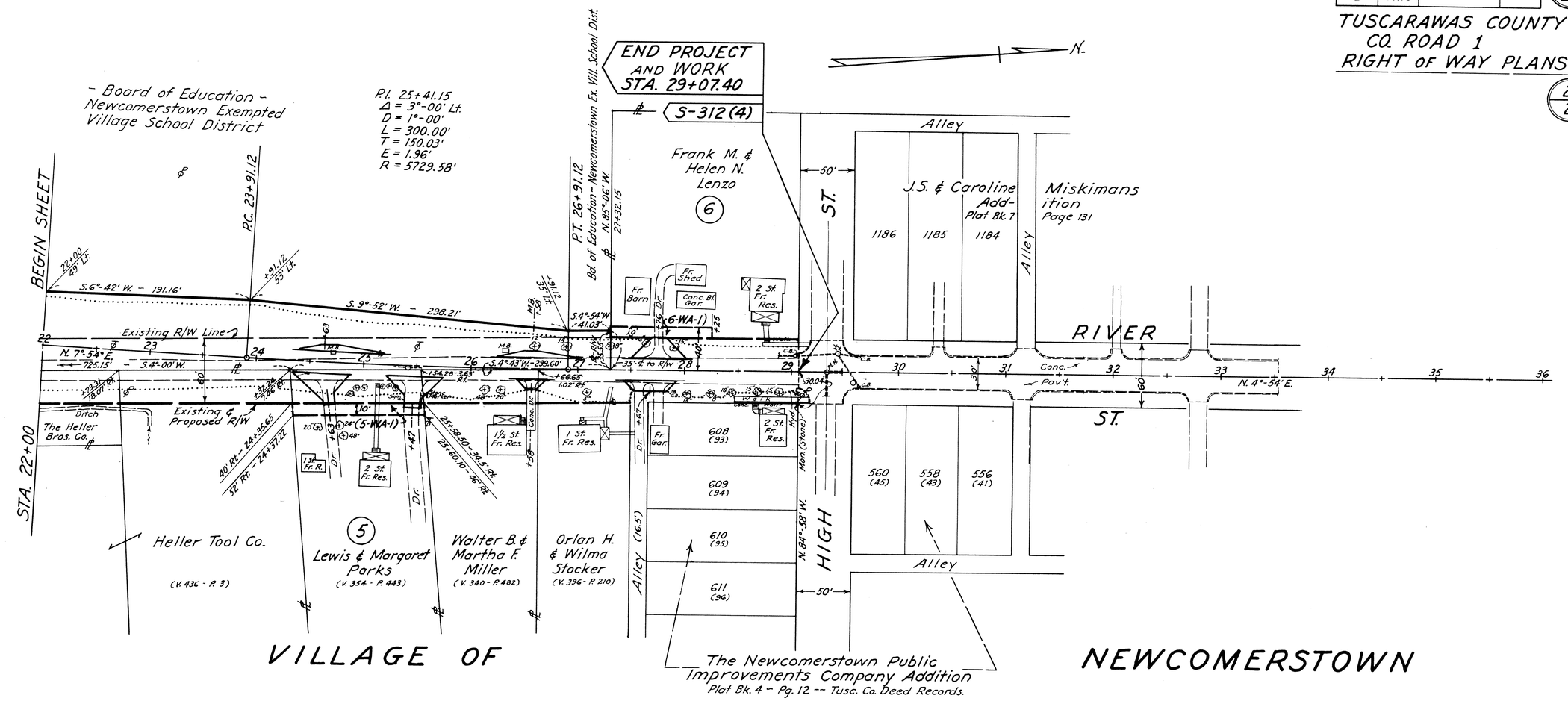
OXFORD TWP. - 2ND. QR., T-5, R-3. --- VILLAGE OF NEWCOMERSTOWN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

22/22

TUSCARAWAS COUNTY CO. ROAD 1 RIGHT OF WAY PLANS

2/2



SUMMARY OF ADDITIONAL RIGHT OF WAY REQUIRED - CO. ROAD 1

TOTAL Nº OF OWNERS

PARCEL Nº	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA	TO BE ACQUIRED LAND	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	SHEET Nº	REMARKS
1	Charles M. & Freda L. Harshbarger	431	568	16.71 ac.	0.58 ac.	No	-	-	1	
2	Paul L. & Della M. Jones	391	470	100 ac.	4.24 ac.	No	-	-	1	
3	Board of Education - Newcomerstown Exempted Village School District	444	717	11.10 ac.	1.74 ac.	No	-	-	1 & 2	
4	The Heller Brothers Company	258	455	1.14 ac.	No	No			1	
4-WA-1	ditto								1	Drainage
5	Lewis & Margaret Parks	354	443	0.923 ac.	No	No			2	
5-WA-1	ditto								2	Drive
6	Frank M. & Helen Lenzo	347	108	-	No	No			2	
6-WA-1	ditto								2	Drive

SCALE - 1 IN. = 50 FT. -- 0 50 100

PLANS COMPLETED	