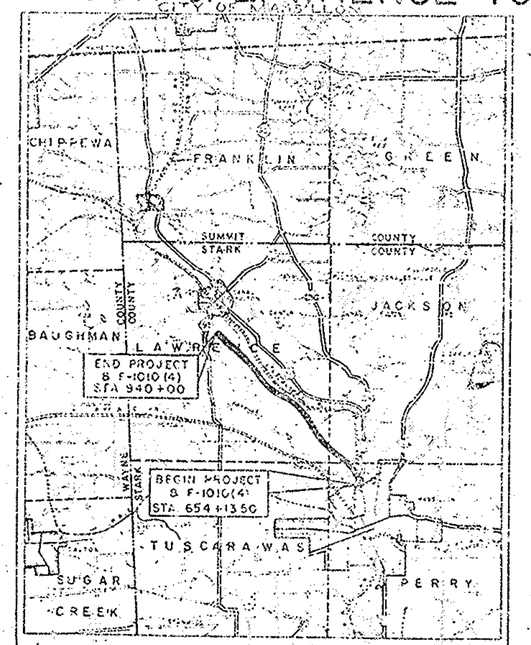
DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

1/166

F-1010(4)

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
STA-21-12.39
GRADE SEPARATION WITH
THE BALTIMORE & OHIO RAILROAD COMPANY
AND THE PENNSYLVANIA RAILROAD
STARK COUNTY
PERRY, JACKSON & LAWRENCE TOWNSHIPS



Average Haul From Siding - 27 Miles
Point of Delivery - Massillon, Ohio

LOCATION PLAN

SCALE IN MILES

LIMITED ACCESS

This improvement is especially designed for through traffic and has been designated a limited access highway or freeway by action of Director of Highways in accordance with the Provision of Section 5511.02 of the Revised Code of Ohio.

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

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

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 on the plans and estimates.

Approved
Date: Division Deputy Director

Approved
Date: Deputy Director of Planning & Programming

Approved
Date: 9-13-56 Engineer of Bridges

Approved
Date: 9-14-56 Engineer of Location & Design

Approved
Date: 9-14-56 Deputy Director of Design & Construction

Approved
Date: First Assistant Director

Approved
Date: Director of Highways

Approved
Date: The Baltimore and Ohio Railroad Company

Approved
Date: The Pennsylvania Railroad

CONVENTIONAL SIGNS

ER LINE	
TY LINE	
SHIP LINE	
TION LINE	
PORATION LINE	
PERTY LINE	
OLE LINE	
ENCE LINE	
RAILROADS	
GUARD RAIL	
DRAIN PIPE	

ROADWAY SYMBOLS

PORTION TO BE IMPROVED	
FEDERAL HIGHWAYS	
STATE HIGHWAYS	
OTHER ROADS	

SCALES

PLAN	1" = 50'
PROFILE - HORIZONTAL	1" = 50'
PROFILE - VERTICAL	1" = 5' & 1" = 10'
CROSS SECTIONS	1" = 10'
APPROACHES & INTERSECTIONS	1" = 20' & 1" = 50'

INDEX OF SHEETS

LE SHEET	1	CROSSROADS	
PICAL SECTIONS	2-3	TR 353	118-122
TESS & DETAILS	4-8	TR 352	123-125
LOCATION PLAN	9	TR 344	126-128
MMARIES	10-11	TR 356 & 357	129-131
512		TR 36A	132
E SHEETS & TRANSITIONS	12-38	INTERSECTION PLANS	133-134
PERELEVATION TABLES	39-40	SUPERELEVATION TABLE	135
SS-SECTIONS	41-117	STRUCTURES, 20' SPAN AND UNDER	136
		STRUCTURES, OVER 20' SPAN	137-152
		RIGHT-OF-WAY PLANS	153-166

LINE DATA

F-1010(4) B PROJECT STA. 654+13.50
F-1010(4) B PROJECT STA. 940+00.
OR STATION EQUATION
STA. 918+94.58 BACK = STA. 917+27.79 AHEAD + 166.79 L.F.
LENGTH F-1010(4) B PROJECT 28,753.29 L.F. OR 5.445 MI.

OR APPROACHES

353	STA. 39+43.18 TO STA. 56+65	1721.82 L.F.
36	STA. 41+71.75 TO STA. 55+20	1045.00 L.F.
344 SOUTH	STA. 0+00.0 TO STA. 5+40	540.00 L.F.
344 NORTH	STA. 0+00.0 TO STA. 8+00	800.00 L.F.
	654+48.71 TO STA. 654+13.50	64.79 L.F.

TOTAL APPROACHES = 4171.61 L.F.

TOTAL LENGTH WORK 34924.90 L.F. OR 6.235 MI.

Reviewed and Approved
Date: Engineer of Traffic

DATE OF LETTING
CONTRACT NO.

SUPPLEMENTAL SPECIFICATIONS

NUMBER	DATE	NUMBER	DATE
5	6-8-55	5-119 MAY	6-30-56
18	9-7-55	5-114	5-30-56
6	12-29-55	5-207	2-15-56
		L-209.12	7-11-54
		M-106.6 (d)	11-30-54
		M-110.27	9-9-52

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

DRAWING NO.	DATE	DRAWING NO.	DATE
T-1	5-1-56	C-15 No 1	6-1-56
L-1	4-1-50	C-15 No 2	12-1-54
L-3	4-1-50	C-15 No 4	12-1-54
L-3A	4-1-50	C-21-23	8-1-56
DR-1	1-3-55	S-T-C-1	6-1-56
R-1	1-3-55	S-T-C-10 THRU No 1	6-1-56
T-35	1-2-56	S-T-C-10 (2) THRU No 2	6-1-56
S-T-7R	3-2-53	C-2-54	12-1-54
C-1 No 1	7-1-55	06-53	7-21-55
S-27 PC-3	2-20-45		
S-27 PC-6	1-4-54	A-1-53	12-1-54
S-1, 2, 3 & 5	2-20-45	P-1-54	12-1-54
S-1 No 6	5-1-52	E-R-M-1	5-1-52
C-2	1-1-54	C-6 (2)	7-1-54
T-14-6	1-22-52		

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DISTRICT ENGINEER

PREPARED

CHICAGO

FED. AID DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

3

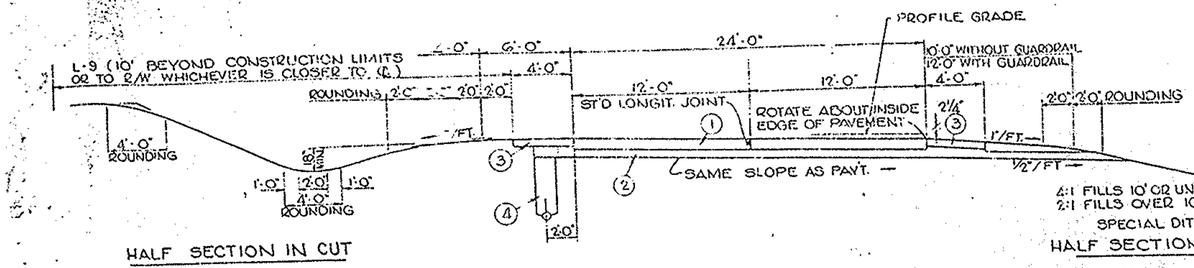
STA - 21 - 12.39

TYPICAL SECTIONS

TYPE T-71

SCALES-AS SHOWN

TYPE CODE 7221



HALF SECTION IN CUT

FROM	TO	STATE LIN. FT.	F-1010(4) LIN. FT.	FROM	TO	STATE LIN. FT.
730+97.11	738+25	✓	727.89			
798+32.55	819+15.05	✓	2082.50			
847+26.48	867+47.09	✓	2020.61			
868+89.09	872+26.48	✓	337.39			
878+25	900+82.26	✓	2257.26			
			7625.65			

SECTION "D"

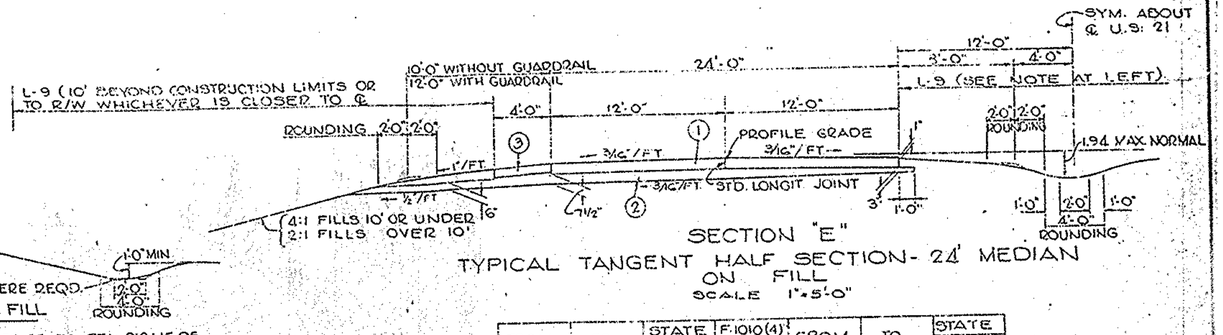
TYPICAL SUPERELEVATED SECTION

SINGLE LANE PAVEMENT

SCALE 1"=5'-0"

HALF SECTION ON FILL

FROM STA. 798+32.55 TO STA. 819+15.05 THE PAVEMENT IS TO BE SUPERELEVATED ABOUT THE RIGHT EDGE.



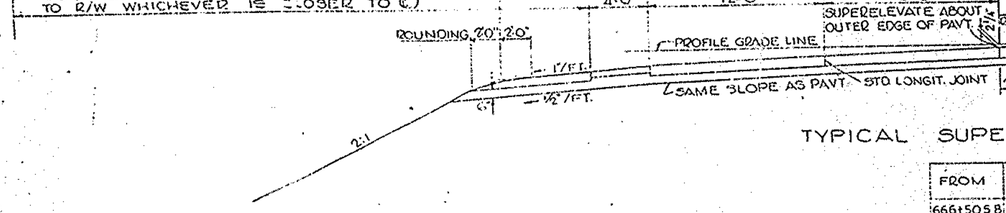
SECTION "E"

TYPICAL TANGENT HALF SECTION - 24' MEDIAN

ON FILL

SCALE 1"=5'-0"

FROM	TO	STATE LIN. FT.	F-1010(4) LIN. FT.	FROM	TO	STATE LIN. FT.
654+13.50	658+50.48	✓	436.98			
666+12.66	666+50.88		37.34			
666+12.66	667+50 N.B.		137.34			
			611.66			



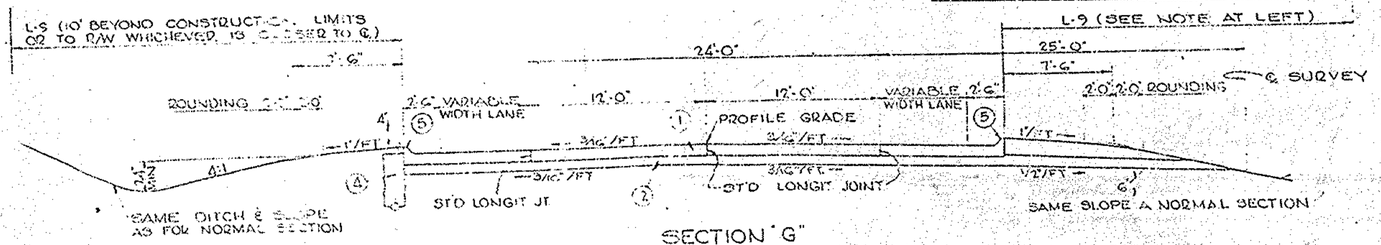
SECTION "F"

TYPICAL SUPERELEVATED SECTION - VARYING MEDIAN

SCALE 1"=5'-0"

FROM	TO	STATE LIN. FT.	F-1010(4) LIN. FT.	FROM	TO	STATE LIN. FT.
666+50 S.B.	682+25 S.B.	✓	1575.00			
667+50 N.B.	683+25 N.B.		1575.00			
			3150.00			

WHERE THE PAVEMENTS DIVERGE FROM A 24' MEDIAN TO A 50' MEDIAN, A SUITABLE TRANSITION IS TO BE MADE IN THE MEDIAN CROSS SLOPES AS SHOWN ON THE CROSS SECTIONS.



SECTION "G"

TYPICAL TANGENT SECTION AT GRADE INTERSECTIONS

SINGLE LANE PAVEMENT

SCALE 1"=5'-0"

NOTE:

PAVEMENT LENGTHS SHOWN IN TYPICAL SECTIONS DO NOT INCLUDE CERTAIN SPECIAL ADDITIONAL PAVEMENTS AS LISTED BELOW. THESE ADDITIONAL PAVEMENT AREAS ARE CARRIED ON THE PROPER LINE SHEETS.

① COMPLETE TRANSITION PAVEMENT STA. 721+08.33 TO STA. 730+97.11

② INTERSECTION PAVEMENT STA. 759+81.84

③ INTERSECTION PAVEMENT STA. 872+24.27

④ COMPLETE TRANSITION PAVEMENT STA. 900+82.26 TO STA. 915+00

① T-71 9" REINFORCED CONCRETE PAVEMENT

② T-72 6" SUBBASE EXCEPT AS OTHERWISE SHOWN

③ T-18 6" STABILIZED SHOULDERS

④ T-4 6" PIPE UNDERDRAIN FOR LOCATION, SEE PLAN & PROFILE SHEETS

⑤ T-12 TYPE 2A CURB

NOTE:

NEAR GRADE INTERSECTIONS WHERE ADDITIONAL LANES WITHOUT CURBS ARE USED, THE NORMAL SHOULDER DETAILS AS SHOWN ON SECTIONS "C" & "D" WILL BE USED ADJACENT TO THE ADDITIONAL LANES.

PREPARED AND RECOMMENDED BY

CHARLES E. DE LEUW

CONSULTING ENGINEER

CHICAGO ILLINOIS

TYPICAL SECTIONS

FED. NO. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

4

STA-21-12.39

GENERAL NOTES

FIELD OFFICE:—

The Contractor shall provide a suitable field office in accordance with section 5-0.08b having a minimum floor area of 300 sq. ft.

The Contractor shall have a telephone installed and maintained during the life of the Contract.

DESIGN SPEED:—

The geometrics for the main roadway of U.S. 21 on this project have been planned for a design speed of 70 miles per hour.

SEEDING QUANTITIES:—

Quantities for seeding are calculated for the soil areas between lines ten feet (10') outside the construction limits as shown on the cross sections or to the R/W line if such line is less than 10 feet from the construction limits. All areas outside these limits where the vegetative growth has been injuriously disturbed or destroyed by the Contractor shall be restored and seeded in accordance with the provisions of Item L-9 by the Contractor at his own expense.

EXISTING PAVEMENT REMOVAL:—

In areas where the existing roadway is being relocated and the abandoned pavement is removed, the old roadway shall be plowed, harrowed and dragged to a smooth grade, the old ditches filled, and the entire area left in a neat condition. Cost of this work shall be included in the price bid for pavement removal, Item E-8. Areas shall then be seeded and mulched, Item L-9.

SUBBASE COURSE:—

In the final finishing of slopes and ditches, care shall be exercised to assure that the exposed ends of the I-22 subbase or I-9 subdrains as the case may be are left free of earth cover that would impede free drainage.

BERMS AND SLOPES:—

Berms and slopes shall be finished in accordance with the typical sections except where shown otherwise on the cross sections. While the cross sections as drawn show straight lines and angles, the work shall be constructed so that all corners be rounded as per typical sections.

All transitions from cut to fill slopes shall be blended with the surrounding terrain as directed by the Engineer.

SMALL DRAINS:—

Where drains from downspouts, field drains, etc. are encountered and not shown on the plans, they shall be given an unobstructed outlet as directed by the Engineer. Estimated quantities of pipe to be used for this purpose have been included in the general summary.

No drainage carrying domestic wastes shall be connected to any proposed drainage facility.

WORK AT ABANDONED SITES:—

The following work within the right-of-way shall be performed by the Contractor.

Foundations, buildings, cisterns, wells and septic tanks shall be removed to a line at least 3 feet below pavement subgrade or 3 feet below the proposed finished grade outside pavement areas and the concrete floors broken up into pieces in which the area does not exceed one square foot, and the entire hole filled with acceptable material according to Sec. E-1.08 as directed by the Engineer. All the work described above is included in the unit price bid per cubic yard for E-1, Roadway Excavation

E-1:—

The removal and disposal of all pipe and miscellaneous masonry not specifically listed under a separate item shall be included in Item E-1, Roadway Excavation, for payment.

L-9 COMMERCIAL FERTILIZER:—

All areas to be seeded or sodded shall have commercial fertilizer (10-6-4 Mix) applied at the rate of twenty (20) pounds per 1,000 sq. ft.

SPECIAL DITCHES:—

For special ditch grades, see Cross Sections.

I-14 SPECIAL PAVED GUTTERS:—

Special Paved Gutters shall be constructed according to notes on Standard Dwg. I-14.G for Standard Paved Gutters. The cost for the cut off walls shall be included in the unit price bid for the I-14 Special. Paved Gutters.

SURPLUS EXCAVATION:—

All surplus excavation from driveway pipe, drainpipe, culvert and channel excavation when suitable, shall be used in lieu of borrow.

COOPERATION WITH ADJOINING CONTRACTORS:—

Contracts for construction of sections of relocated U.S. Route 21 north and south of this project have been or may be awarded while work on this project is under way. The Contractor shall arrange his work and material so as not to interfere with other Contractors, and shall join his work to that of other Contractors in a proper and workmanlike manner. The Contractor shall be held responsible for any damage done by him or his agents to the work of another Contractor.

I-4 SUBDRAIN WYE CONNECTIONS:—

The connections for I-4 Subdrains have been designed predominantly for 60° wyes in cases where the layout calls for an angle other than 60° and wye with this angle is not available for the kind of pipe chosen by the Contractor, the connection may be made by any wye plus a supplementary bend. However, the Contractor shall be paid for only the wye called for on the Plans.

I-5 PIPE SPECIALS:—

Deductions for pipe specials shown on the plans and in the quantity boxes are as follows:

Size	Wyes	Bends	Increasers
4'-6"	1'-1"	1'	1'
8"	3'-1"	1'	1'
15" & over	4'-1"		

UTILITY NOTE:—

Any and all work required for removing, relocating and construction of new facilities for private or public utilities will be done by and at the expense of the respective owners unless otherwise noted on the plans

The location of the underground utilities shown on the plans have been obtained by diligent field checks. It is believed they are essentially correct, but the State of Ohio makes no guarantee as to their accuracy or completeness.

I-10 DUMPED ROCK —

All dumped rock used at the outlet of culverts and at the low end of steep ditches shall be uniformly placed so that least 50% of the pieces will weigh at least 75 pounds.

Dumped rock shall be placed 30 inches thick.

Payment for excavation necessary for placing the Dumped Rock to the lines and grades shown on the plan is included in the unit price bid for Item I 10, Dumped Rock Fill

PROPERTY MARKERS.—

All iron pins or markers within the limits of work of the project shall be saved and adjusted to new grades by the Contractor as directed by the Engineer. Cost of adjusting or resetting markers shall be included in the price bid for E-1 Roadway Excavation.

REMOVAL OF TREES AND STUMPS —

Trees or stumps shall be removed or preserved as indicated on the plans by the following symbols

Trees or stumps to be removed ⊠

Trees to be preserved ○

The number of trees or stumps to be removed as indicated by the above symbol is approximate and the State of Ohio reserves the right to order the removal of additional trees or stumps, even though these trees or stumps are not indicated on the plans or are indicated to be preserved.

Payment for the removal of these additional trees or stumps is included in the Lump Sum bid for removal of Trees and Stumps.

SUBGRADE COMPACTION:—

Subgrade under B-119 used on cross roads and drives shall be compacted for a depth of six inches to the density requirements in Table III Item E-1 Payment for Subgrade compaction, as specified above, shall be included in the unit price bid for Item E-1, Roadway Excavation.

I-14 PAVED GUTTERS:—

The cost for the flared entrance for a paved gutter according to detail on Sheet No. 6 Miscellaneous Details shall be included in the unit price bid per lineal foot of paved gutter.

S-27:—

On endwalls for Culverts that will have to be extended when future N.B Lanes are to be built, at the right end of such culverts under 2 Lane construction, the end of pipe shall extend 6" from face of endwall to facilitate future extension of culvert.

MAINTENANCE OF TRAFFIC:—

On all intersecting and relocated township roads traffic shall be maintained by use of existing pavement, proposed pavement or temporary roadways surfaced with aggregate and stabilized with chloride, except as stated below. Payment for construction, maintenance and subsequent removal of temporary roadways shall be included in the Lump Sum bid for "Maintaining Traffic".

Aggregate and chloride required shall be paid for at the unit price bid for the respective I-10 or M-10 item.

Township Road 363 may be closed to traffic when construction of cul-de-sacs is started.

MINE SHAFTS:—

It is brought to the attention of the Contractor that abandoned and filled mine shaft outlets are located on or adjacent to the ℄ survey between Sta. 799+00 and Sta. 835+00 There is a quantity of 2000 c.y. of E-1 Excavation and 2500 c.y. of I-22 provided in the Sht.27 quantities for the possible excavating and backfilling of these outlets as directed by the Engineer.

R/W PLANS:—

It is to be noted that there may be some discrepancies in the R/W information as shown on the R/W Plans, Shts. 153 through 166 and that shown elsewhere on these plans. Information indicated on the R/W Plans shall in all cases be considered to govern.

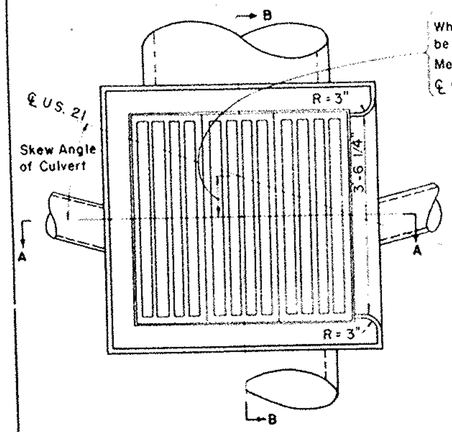
PREPARED AND RECOMMENDED BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F. 1010 (4)	

MEDIAN DITCH INLETS

Scale $\frac{3}{4}$" = 1'-0"

TYPE A & B



Where Culvert in skew passes through inlet, inlet must be offset from ℄ U.S. 21 to allow for centric access of Median flow. For amount of offset, measured along ℄ Culvert, See Culvert Summary Sheet, Column "Remarks"

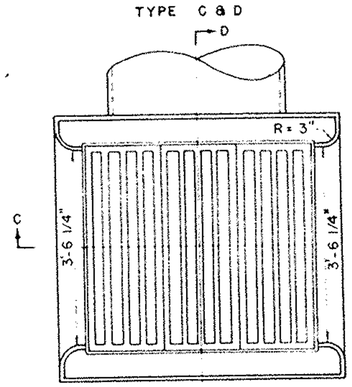
NOTE:
Finish bottom in accordance with standard Drawing 1-8 M.H. No.1 when culvert structure passes through basin Otherwise shape bottom to drain towards outlet pipe.

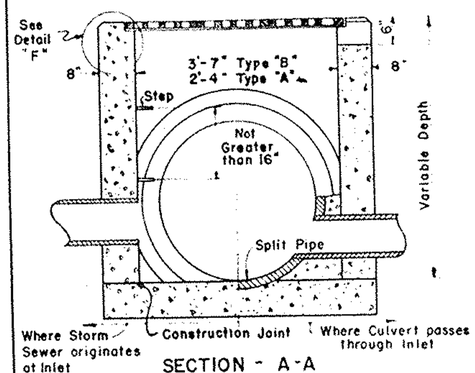
NOTE:
Outlet pipe to be placed at the direction of the Engineer.

NOTE:
Flowline to be 4" below normal ditch returning to normal 10' each side of basin.

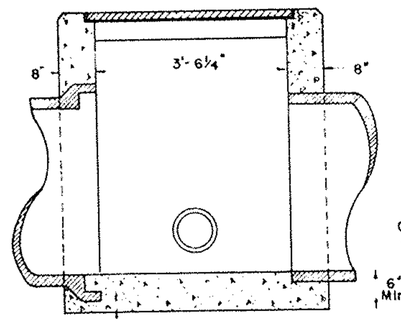
NOTE:
The Median ditch on the low side of a basin on a down grade shall rise at a rate of 1½ per ft. to a point that places it 16" below the profile grade and then sloped back down to meet the proposed ditch elevation.

TYPE C & D

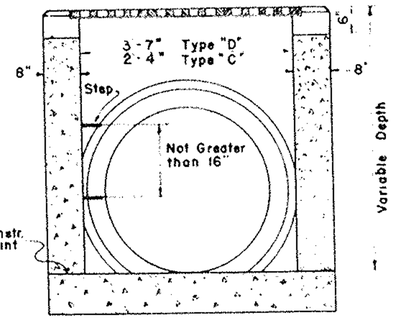




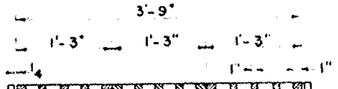
SECTION - A-A

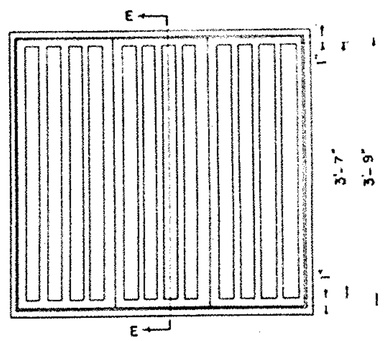


SECTION - B-B & D-D

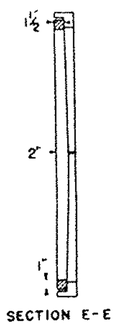


SECTION - C - C

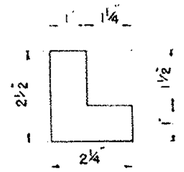




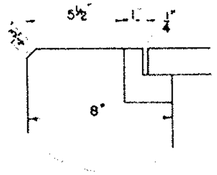
DETAIL OF CASTING
Scale 1" = 1'-0"



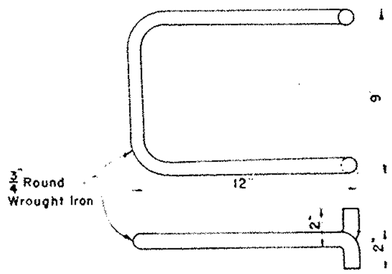
SECTION E-E



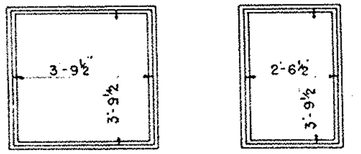
SECTION OF FRAME
Scale = 6" = 1'-0"



DETAIL "F"



DETAIL OF INLET STEP
Scale = 3" = 1'-0"



TYPES "B" & "D"

TYPES "A" & "C"

GRATING FRAMES
Scale ½" = 1'-0"

CASTINGS:

Castings shall be of cast iron in accordance with Material Details. The design shall be essentially the same and equally as strong as those shown hereon and shall be given one coat of asphaltum paint as per specifications.

Weights minimum are:

Grate (15"x45" Inv.)	104 lbs. each
Frame (A or C)	149 lbs. each
Frame (B or D)	179 lbs each

BEARING AREAS:

Bearing areas of frame and grate shall be so fitted and finished as to provide a firm and even seat for all portions of the grate in the frame. No projections shall exist on bearing areas of either casting and the grate shall seat in its frame without rocking. Frame and grate shall be fitted, matched and marked before delivery to the project.

CONCRETE:

Concrete to be class "C."

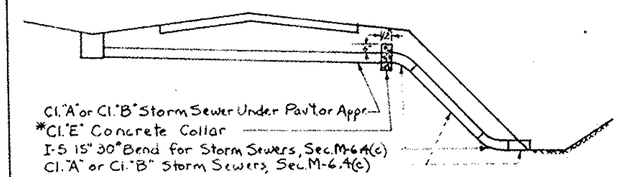
BRICK:

Brick side walls, when used in place of concrete shall be 8" inches in thickness. Every sixth course shall be a stretcher course.

STEPS:

Steps shall be installed on Inlets with a depth of more than 3'
Steps shall be ¾" round wrought iron free from cracks and painted with one coat of asphaltum paint as per specifications, spaced not greater than 16" inches center to center.

BROKEN-BACK SEWER



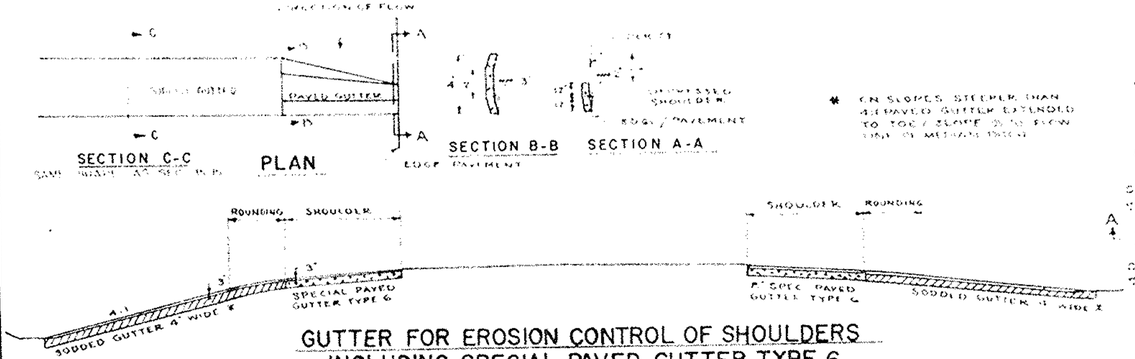
* Payment for Class "E" Concrete Collar is included in the unit price bid for Storm Sewers.

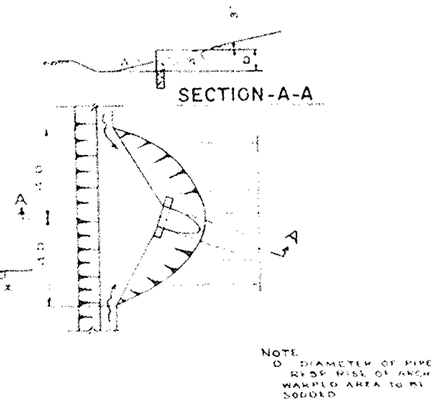
SPECIAL MEDIAN DITCH INLET & BROKEN-BACK SEWER

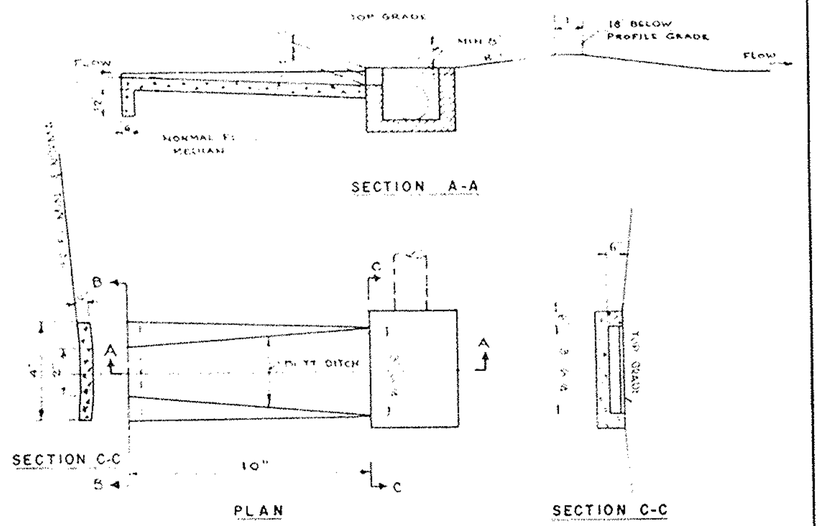
SHEET NO.	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

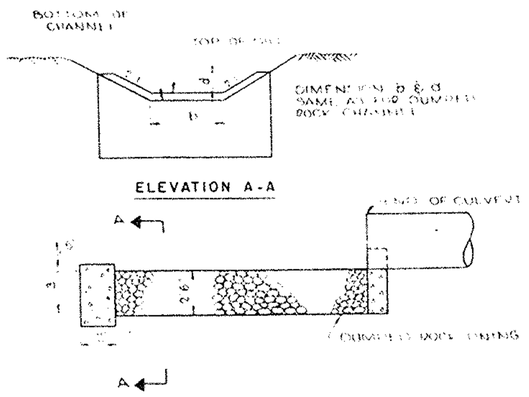
STA. 2+17.50

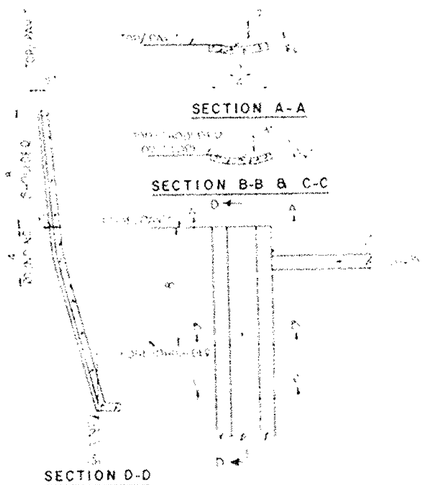
6

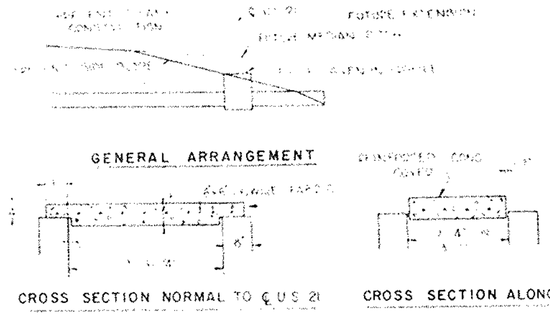


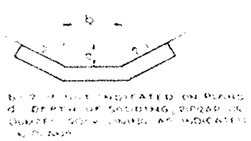


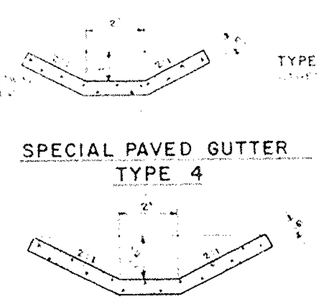


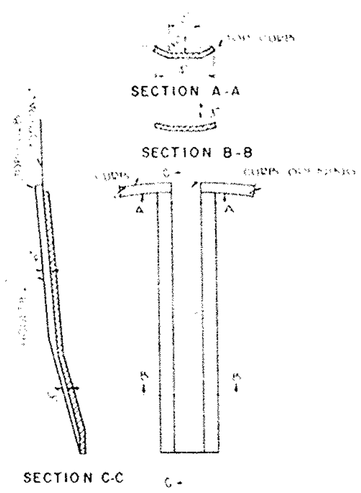


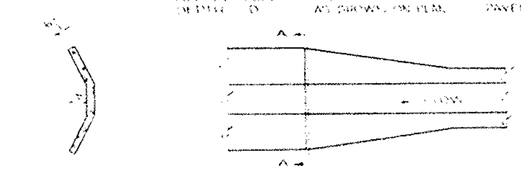


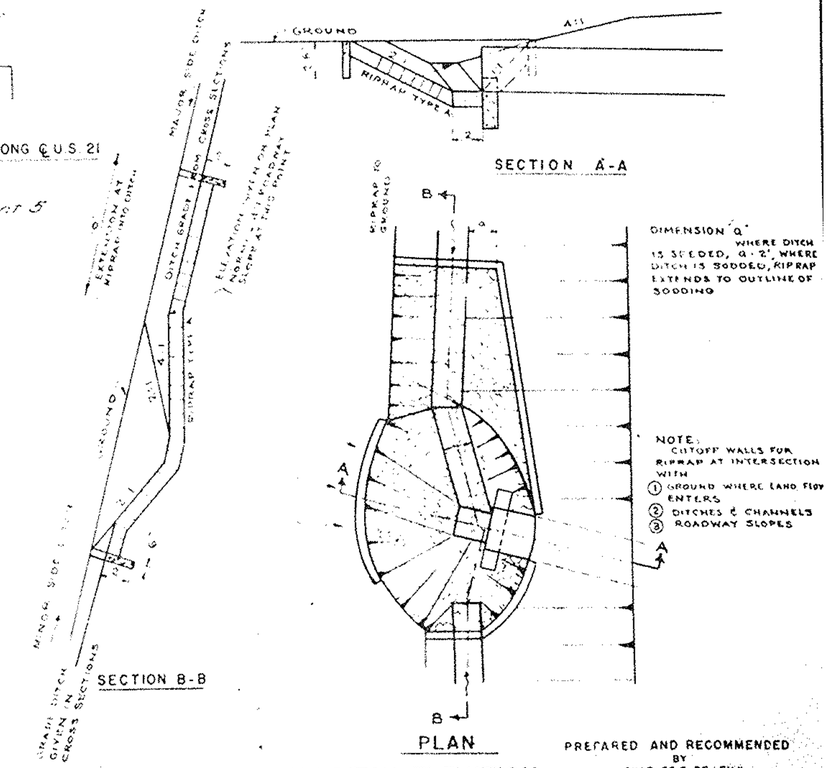












PREPARED AND RECOMMENDED BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

MISCELLANEOUS DRAINAGE DETAILS

STATE OF OHIO DEPARTMENT OF HIGHWAYS	STATE	PROJECT	
2	OHIO	F - 1010(4)	

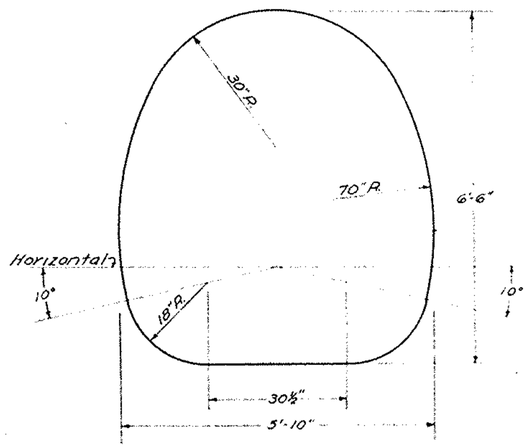
STA - 21 - 1239

7

PIPE CATTLE PASS STRUCTURES

When a pipe cattle pass structure is specified, either of the alternates shown hereon may be used. The design shall be in accordance with the appropriate table giving effect to the cover over the top of the pipe.

ALTERNATE "A"



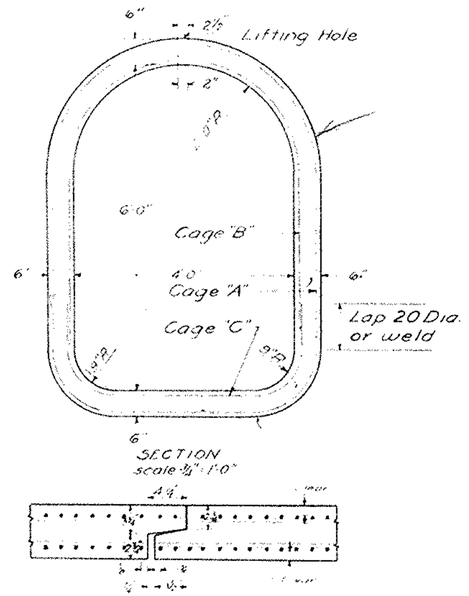
SECTION
SECTIONAL CORRUGATED METAL PIPE ARCH
scale ¾" = 1'-0"

If alternate "A" cattle pass structure is used, materials and construction shall be in accordance with Section M-6.4(g), standard drawing SP-53 and Item 5-28, except that the structure shall be measured and paid for as Item 5-27. The pipe shall be paved in accordance with Section M-6.4(e).

DESIGN	COVER	GAGE *
A-1	2'-3'	8-7
A-2	3'-10'	10-8
A-3	10'-12'	8-7
A-4	12'-14'	7-5
A-5	14'-16'	5-3
A-6	16'-18'	1-1

* The first number indicates the gage of all plates except the bottom and corner plates. The second number indicates the gage of bottom and corner plates.

ALTERNATE "B"



SECTION
scale ⅜" = 1'-0"

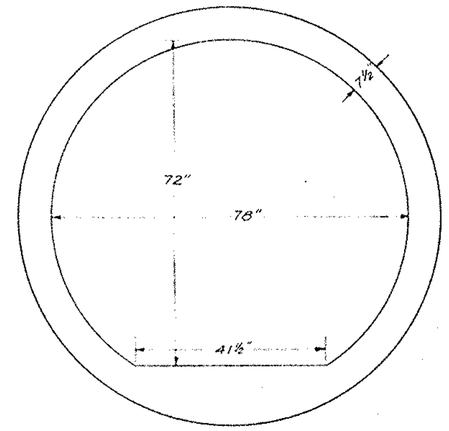
JOINT DETAIL
scale 1½" = 1'-0"

4'x6' REINFORCED CONCRETE PIPE

All splices in cage 'A' shall be welded or have 20 bar diameters lap for deformed bars and 40 bar diameters lap for wire.
Minimum steel requirements are listed below.
Materials, design and manufacturing methods shall meet the requirements of Sec M-6.6, Reinforced Concrete Pipe, except as otherwise noted. Concrete stresses shall have a minimum ultimate compressive value of 4500 lbs per sq in.
Sections of pipe shall have a minimum length of four feet.

DESIGN	COVER ft.	STEEL AREA PER FT. OF PIPE IN SQ IN.		
		Cage "A"	Cage "B"	Cage "C"
B-1	2-11	0.28	0.28	0.28
B-2	11-14	0.28	0.28	0.36
B-3	14-17	0.28	0.28	0.44
B-4	17-19	0.28	0.28	0.50
Minimum longitudinal steel = 2.1 sq. in. equally spaced				

ALTERNATE "C"



SECTION
78" x 72" REINFORCED CONCRETE PIPE
scale ¾" = 1'-0"

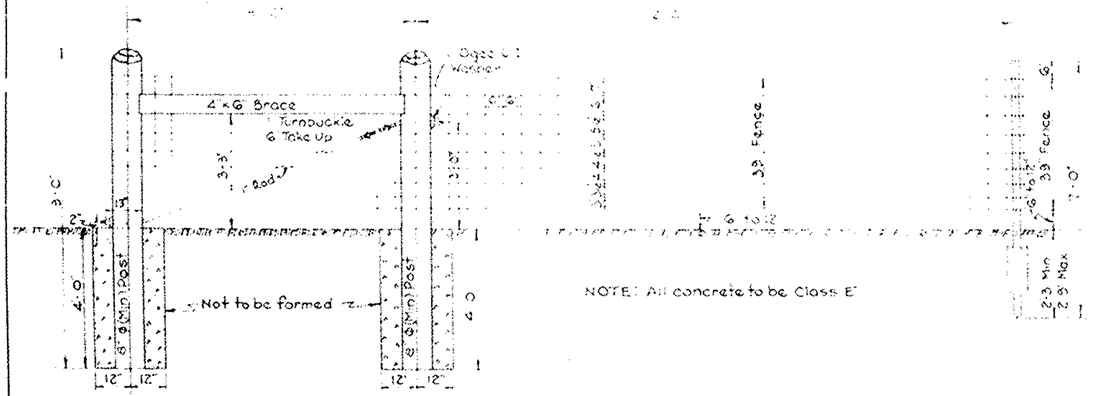
Materials, design and manufacturing methods shall meet the requirements of Sec M-6.6, Reinforced Concrete Pipe, except as otherwise noted. Concrete stresses shall have a minimum ultimate compressive value of 4500 lbs per sq in.

DESIGN	COVER	PIPE CLASS.
C-1	2' to 12'	Sec. M-6.6 (b)
C-2	12' to 19'	Sec. M-6.6 (c)
C-3	19' to 25'	Sec. M-106.6 (d)

CATTLE PASS STRUCTURE DETAILS
REV. 1-26-56 4-4-55

R/W FENCE DETAIL

DIST. NO.	STATE	PROJECT	TOTAL SHEETS
2	OHIO	F-1010(4)	8

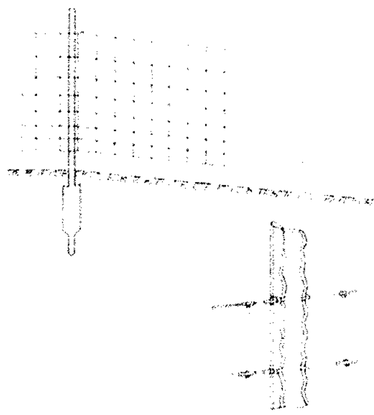


CORNER OR END POST ASSEMBLY

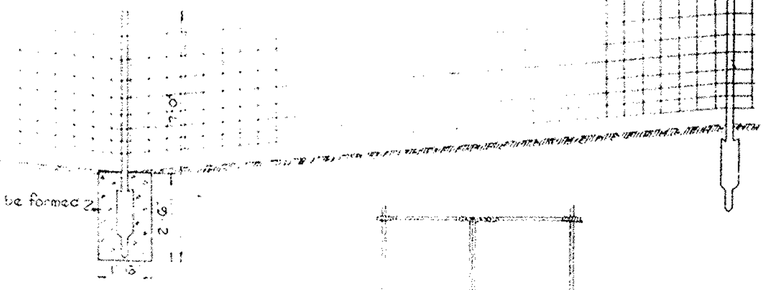
PLAN OF CORNER OR END POST ASSEMBLY

NOTE: All concrete to be Class E





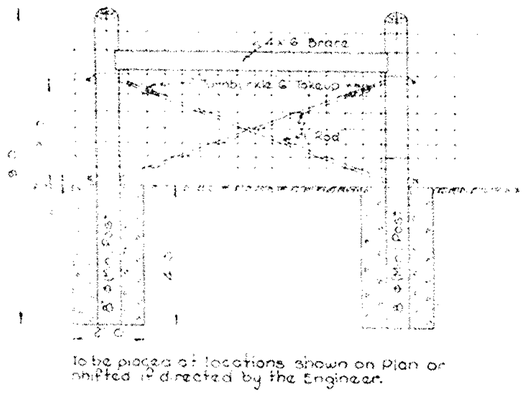
METHOD OF FASTENING FENCE AT LINE POST



LINE POST IN DIP SECTION

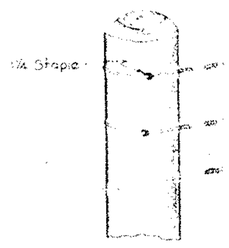


SPLICE DETAIL

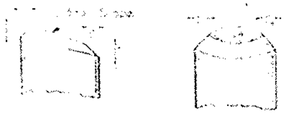


To be placed at locations shown on plan or omitted if directed by the Engineer.

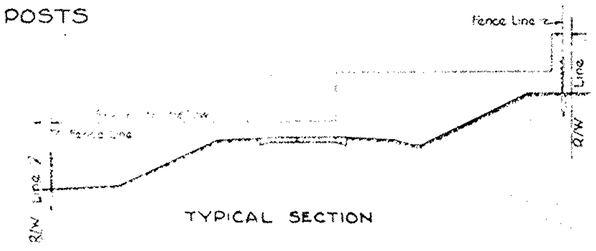
INTERMEDIATE ANCHOR POST ASSEMBLY



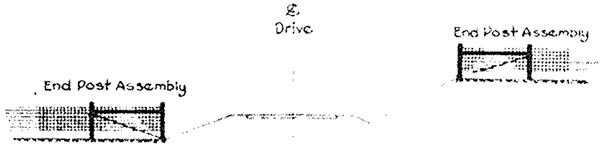
METHOD OF FASTENING FENCE AT END, CORNER POST AND ONE POST OF INTERMEDIATE ANCHOR POST ASSEMBLY



TOP OF POSTS



TYPICAL SECTION



R/W FENCE TREATMENT AT DRIVES



R/W FENCE TREATMENT AT CULVERTS

Notes

Where no special treatment is shown, anchor post assemblies or between end post assemblies and intermediate post assemblies shall be 660 Lin Ft.

At points where the actual spans of fence change alignment in excess of 4 degrees and less than 15 degrees, an intermediate anchor post assembly shall be built. If the change in alignment is 15 degrees or more a corner post assembly shall be built at the point of change.

In lieu of the requirement of Supplemental Specification No. 8 the End Posts Corner Posts and Intermediate Anchor Posts or Pull Posts shall be placed so that the side of the posts toward the highway is not less than the Right of Way line.

REV. 1-25-56

R/W FENCE DETAIL

2	0110	F-1010(4)		10

STA 21-12.39

GENERAL SUMMARY

LIN NO	SHEET	CALCULATIONS	ITEM NO.	TOTAL QUANTITY CODE 7221	UNIT	DESCRIPTION	
						ROADWAY	
1							
2			E-1	545211	CU YD	ROADWAY EXCAVATION AS PER PLAN	.50
3	21079 48420 11610 81774 42697 19467 383 4967 18211 23603 845 5213 14647 2008 13606 14731 10586 5256 20098 34930 38149 44124 17244 13271 8844 1170 941 9124 78 900	908.22	E-1	102220	SQ YD	COMPACTED SUBGRADE	.05
4	150 50 2275 1710 1040 200 232 1140 1566 2465	277097	E-4	277097	CU YD	BORROW .50 →	.50
5			E-6	1250	SQ YD	REMOVAL AND DISPOSAL OF EXISTING FLEXIBLE PAVEMENT AS PER PLAN	
6	1250 780 1500 240 1250 300		E-9	Lump	LUMP	REMOVAL OF TREES AND STUMPS	34,100.00
7		3616	E-11	3616	M GAL	WATER	3.20
8	168 100		E-12	268	LIN FT	PIPE REMOVED FOR REUSE OR STORAGE, 24" & Under	1.88
9							
10							
11	120		I-13	120	SQ FT	SIDEWALK, CONCRETE 4"	.75
12	28		I-13	28	LIN FT	CONCRETE STEPS AS PER PLAN	6.00
13	8		I-15	18	EA	GUARD POSTS WITHOUT RAIL (WOOD)	7.00
14	1025 1750 512.5 787.5 400 600 497.5 2202.5 650 818.39 344.11 850 1425 1272.40 281.48 205 1242.5 1050		T-15	17263.88	LIN FT	GUARD RAIL STEEL BEAM TYPE (DEEP)	2.83
15	75 75 75 55						
16		3750	I-18	4110	CU YD	STABILIZED CRUSHED AGGREGATE SHOULDERS AND APPROACHES	4.10
17							
18			L-9	390020	SQ YD	SEEDING AND PROTECTING	.066
19	10042 24020 20444 18370 19905 19514 12235 10694 10455 11271 11645 17425 12749 12582 14197 16079 14114 8812 9833 15974 22386 16603 14670 13328 1729 4368 1323 3328 5996 1538 2200	180.82	L-9	180.82	TON	AGRICULTURAL LIMING MATERIALS	12.50
20							
21		36.16	L-9	36.16	TON	COMMERCIAL FERTILIZER (10-6-4)	100.00
22	120 1130 1215 230 612 560 370 1300 385 215 260 350 290 410 110 60 1240 880 480 660 700 40 180		L-10	11797	SQ YD	MOWING	.30
23							
24							
25	1533 2337 2400 2400 2400 2400 2400 2675 2149 2400 2408 2410 2602 2402 2407 2405 2400 2312 2300 2400 2403 2734 2400 2400		S-18	57077	LIN FT	FENCE TYPE "A" AS PER PLAN	.79
26			T-10	2000	CU YD	TRAFFIC COMPACTED SURFACE COURSE FOR MAINTAINING TRAFFIC	3.45
27			M-10	45	TON	CALCIUM CHLORIDE FURNISHED AND APPLIED FOR MAINTAINING TRAFFIC	45.00
28							
29							
30							
31							
32							
33							
34							
35							
36							
37							
38							
39						PAVEMENT	
40	775 1760 1805 1620 1320 1400 1000 1130 1590 940 750 1120 900 1515 3290 960 830 760 1150 805 1090 1745 1565 1360		T-22	31180	Cu. Yd.	Subbase	1.80
41	177 50 85 30 70 105		B-55	517	CU YD	ASPHALTIC CONCRETE LEVELING COURSE (70-80)	19.25
42	55 56		B-70	111	SQ YD	PORTLAND CEMENT CONCRETE BASE COURSE 7"	3.50
43	725 190 347 131 319 435		B-119	2147	CU YD	CRUSHED AGGREGATE BASE COURSE	8.70
44	190 150		T-10	340	CU YD	TRAFFIC COMPACTED SURFACE COURSE	3.50
45	1150 300 552 222 521 690		T-30	3435	GAL	BITUMINOUS PRIME COAT Sec. M-5.2 RC-1 or RC-2 or Sec M-5.7 RT-2 or RT-3	.50
46	109 30 58 25 53 67 05 25		T-35	343	CU YD	ASPHALTIC CONCRETE SURFACE COURSE (70-80) Type A	19.25
47	135 1740 1510 2435	(APPROX)	T-7	10910	SQ YD	REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT 9"	5.10
48	2275 1655 1040 200 80		T-7	80	SQ YD	REINFORCED CONCRETE APPROACH SLAB (10"=T)	11.60
49			T-7	267	SQ YD	REINFORCED CONCRETE APPROACH SLAB (13"=T)	14.75
50	200 67		T-12	2402	LIN FT	CONCRETE CURB TYPE 2A (Std)	.70
51	20 526 630 296 408 522		T-2	8	CU YD	PORTLAND CEMENT CONCRETE MEDIAN PAVEMENT	40.00
52	4 4		T-23	34	EA	PRECAST WHITE PORTLAND CEMENT CONCRETE TRAFFIC DIVIDERS	10.50
53	9 10 15		T-30	11	Gal	Bituminous Tack Coat, as per plan	.50
54	5 6		—	685673	CUYD	EMBANKMENT	
55	71982 127650 34762 37979 166 696 6539 17185 18682 5090 5854 78442 29116 10243 5640 21474 41816 25586 10137 1464 37524 54784 3908 3074 23864 1358 1399 5 977 334 1543 400						
56							
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70							

CALCULATIONS

T-71 REINFORCED CONCRETE PAVEMENT

4 LANE:
8606 L F × 24 ÷ 9 = 45800 S Y
2 LANE:
16846 L F × 24 ÷ 9 = 44923 S Y
TOTAL 90822 S Y.

E-1 COMPACTED SUBGRADE

4 LANE:
8606 L F × 24 ÷ 9 = 45800 S Y
2 LANE:
16846 L F × 24 ÷ 9 = 44923 S Y
TOTAL 90822 S Y

I-18 STABILIZED SHOULDERS

253.6 L F × 2 × 4 × .05 ÷ 27 = 3.50 C Y

E-11 WATER

EMBANKMENT = 685673 C Y × 5 GAL/C Y ÷ 1000 = 3616 M GAL.
+ 4110 I-18
+ 31180 I-22
+ 2147 B-119
= 723110

L-9 AGRICULTURAL LIMING MATERIALS

SEEDING = 390020 S Y
SODDING = 11797 S Y
TOTAL 401817 S Y × 9 ÷ 1000 × 100# ÷ 2000 = 180.82 TONS

L-9 COMMERCIAL FERTILIZER

SEEDING 390020 S Y
SODDING 11797 S Y
TOTAL 401817 S Y × 9 ÷ 1000 × 20# ÷ 2000 = 36.16 TONS

EARTHWORK

EMBANKMENT = 685673 C Y × 1.20 = 822808 C Y
— EXCAVATION = 545711 C Y
E-4 BORROW = 277097 C Y

PREPARED AND RECOMMENDED BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

				11
	OHIO	F 1010(4)		

STA-21-12.39

GENERAL SUMMARY

LINE NO	SHEET 13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	118	119	123	124	126	127	129	132	A(151)	CULV. SUM 136	ITEM NO.	TOTAL QUANTITY CODE 7221	UNIT	DESCRIPTION
																																							DRAINAGE
71																																		3030	E-2	3042	CU. YD.	EXCAVATION FOR STRUCTURES 3.50
72																																		2220	E-3	2220	CU. YD.	CHANNEL EXCAVATION 3.88
73															5							1					4							81.5	S-1	8695	CU. YD.	CONCRETE FOR STRUCTURES, CLASS "E" 90.00
74				1	1	1	1																															
75																											0.8											
76				0.75	0.25	0.25	0.25								1.0			2.6				0.25												162	S-27	162	LIN. FT.	15" PIPE FOR ROADWAY CULVERTS 4.80
77																																		212	S-27	212	LIN. FT.	15" PIPE FOR ROADWAY CULVERTS Sec. M 6.6 (a) or Sec. M 6.8 (b) 4.80
78																																		124	S-27	124	LIN. FT.	18" PIPE FOR ROADWAY CULVERTS 5.65
79																																		76	S-27	76	LIN. FT.	8" PIPE FOR ROADWAY CULVERTS Sec. M 6.6 (b) or Sec. M 6.8 (b) 5.85
80																																		112	S-27	112	LIN. FT.	18" PIPE FOR ROADWAY CULVERTS Sec. M 6.4 (d) 5.65
81																																		234	S-27	234	LIN. FT.	18" PIPE FOR ROADWAY CULVERTS Sec. M 106.6 (d) 6.90
82																																						
83																																		788	S-27	788	LIN. FT.	24" PIPE FOR ROADWAY CULVERTS Sec M 6.6 (b) or Sec. M 6.8 (b) 7.55
84																																		360	S-27	360	LIN. FT.	24" PIPE FOR ROADWAY CULVERTS Sec. M 6.6 (b) 7.70
85																																		198	S-27	198	LIN. FT.	24" PIPE FOR ROADWAY CULVERTS Sec. M 6.6 (c) 8.20
86																																		426	S-27	426	LIN. FT.	30" PIPE FOR ROADWAY CULVERTS Sec. M 6.6 (b) or Sec. M 6.8 (b) 10.00
87																																		334	S-27	334	LIN. FT.	30" PIPE FOR ROADWAY CULVERTS Sec. M 6.6 (c) 11.20
88																																		200	S-27	200	LIN. FT.	36" PIPE FOR ROADWAY CULVERTS Sec. M 106.6 (d) or Sec. M 6.4 (d), 10 Gage ←
89																																		108	S-27	108	LIN. FT.	42" PIPE FOR ROADWAY CULVERTS ← 16.90 16.60
90																																		606	S-27	606	LIN. FT.	54" PIPE FOR ROADWAY CULVERTS Sec. M 106.6 (d) or Sec. M 6.4 (d), 29.00
91																																					LIN. FT.	8 Gage, Shop Elongated as per plan 18.75
92																																		266	S-27	266	LIN. FT.	43"x27" PIPE FOR ROADWAY CULVERTS Sec. M 6.4 (d) & (f) 10 GAGE 44.00
93																																		100	S-27	100	LIN. FT.	PIPE CATTLE PASS STRUCTURE, DESIGN A-2, B-1 or C-1
94																																		136	S-28	136	LIN. FT.	5'-0" Sectional Corrugated Metal Structure, Sec. M-6.4 (g) 10-10 Gage ←
95																																		106	S-28	106	LIN. FT.	7'3"x5'-3" SECTIONAL CORRUGATED METAL STRUCTURE, 10-8 GAGE ← 31.00 57.00
96																																						
97																																			I-1	80	LIN. FT.	8" PIPE FOR DRIVEWAYS, Sec. M-6.4(a) 2.80
98																													80						I-1	100	LIN. FT.	5" PIPE FOR DRIVEWAYS, Sec. M-6.4(a) 3.50
99																												100										6" PIPE FOR DRIVEWAYS, Sec. M-6.4(a) 6.60
100																											106							I-1	106	LIN. FT.	24" PIPE FOR DRIVEWAYS, Sec. M-6.4(a)
101																																			I-2	654	LIN. FT.	6" STORM SEWER UNDER PAVEMENT CLASS A, Sec. M-6.5(b) or Sec. M-6.8(b) 3.00
102				114	50	130	24			26	90				28			26	36	28		54	48												I-2	610	LIN. FT.	15" STORM SEWER UNDER PAVEMENT CLASS A, Sec. M-6.5(b) or Sec. M-6.8(b) 4.80
103		96	78	86	74	62																132	82											I-2	154	LIN. FT.	8" STORM SEWER CLASS A 5.30
104				12		24	20			22					32			32		12		38												I-2	106	LIN. FT.	15" STORM SEWER CLASS A, Sec. M-6.4(c) 5.90
105		68																																I-2	42	LIN. FT.	15" STORM SEWER CLASS B, Sec. M-6.4(c) 6.00
106																					42	24												I-2	60	LIN. FT.	15" STORM SEWER UNDER PAVEMENT CLASS B 5.25
107							36					22	98							182	268		152											I-3	454	LIN. FT.	4" ROADWAY DRAINAGE 1.30
108																																		I-3	268	LIN. FT.	6" ROADWAY DRAINAGE Under Pavt or Appr., Sec. M-6.6(b) 3.00
109													10										10											I-3	20	LIN. FT.	6" OUTLETS FOR ROADWAY DRAINAGE, Sec. M-6.4(h) without perforations ← 1.31 ← 4.40
110																																		I-4	27293	LIN. FT.	6" UNDERDRAINS 4.4
111		770	400	1110	2380	2392	1390			470	1148	2050			1440	804	1050	800	738	1055	2020	1098	1442	2288	1248									I-4	90	LIN. FT.	6" OUTLETS FOR UNDERDRAINS, Sec. M-6.4(h) without perforations 5.20
112		10					10				10	20				10		10	10		20		20		10									I-4	60	LIN. FT.	8" OUTLETS FOR UNDERDRAINS, Sec. M-6.4(a) 5.20
113				10																		2	2	10									I-5	8	Eq.	15" PIPE SPECIALS FOR STORM SEWERS, Sec. M-6.4(c) ← 39.50 ← 13.15
114		4																																I-5	5	EA.	6" PIPE SPECIALS FOR STORM SEWERS, Class A Under Pavt, Sec M-6.5(b) or Sec M-6.8(b) 16.00
115						2																												I-5	14	EA.	8" PIPE SPECIALS FOR STORM SEWERS, Class A ← 4.85 ← 4.10
116				2		2	2			2					2				2	2			1											I-5	3	EA.	15" PIPE SPECIALS FOR STORM SEWERS, Class A Under Pavt, Sec M-6.5(b) or Sec M-6.8(b)
117				1	1	1																	3	3	2									I-5	33	EA.	6" PIPE SPECIALS FOR UNDERDRAINS 4.75
118		2		2	1	1				1		2				3	3	3	1	3	2												I-5	5	EA.	4" PIPE SPECIALS FOR ROADWAY DRAINAGE
119																					2													I-5	1	EA.	15" PIPE SPECIALS FOR ROADWAY CULVERTS, Sec M-6.6(b) or Sec. M-6.8(b) 44.00
120																																		I-5	2	EA.	18" PIPE SPECIALS FOR ROADWAY CULVERTS, Sec M-6.6(b) or Sec. M-6.8(b) 62.00
121																																		I-5	6	EA.	24" PIPE SPECIALS FOR ROADWAY CULVERTS, Sec. M-6.6(b) or Sec. M-6.8(b) 84.00
122																																		I-5	1	EA.	30" PIPE SPECIALS FOR ROADWAY CULVERTS, Sec M-6.6(b) or Sec M-6.8(b) 130.00
123																																	300	I-3	300	LIN. FT.	6" ROADWAY DRAINAGE 1.55
124																																	200	I-3	200	LIN. FT.	8" ROADWAY DRAINAGE 1.75
125																																		I-6	8	EA.	SPECIAL MEDIAN INLET TYPE A 217.00
126		2		1	1																	1	1										I-6	2	EA.	SPECIAL MEDIAN INLET BASE TYPE A 195.00
127																																		I-6	1	EA.	SPECIAL MEDIAN INLET TYPE B 365.00
128																																		I-6	1	EA.	SPECIAL MEDIAN INLET BASE TYPE B 240.00
129																						1												I-6	1	EA.	SPECIAL MEDIAN INLET TYPE C 200.00
130						1																												I-6	2	EA.	STANDARD CATCH BASIN No. 6 300.00
131																																	100	I-3	100	LIN. FT.	6" ROADWAY DRAINAGE 2.20
132																																		I-7	1530	LIN. FT.	STONE UNDERDRAINS No. 2 1.82
133																											500	140	200	90	300	300		347	I-10	366	CU. YD.	DUMPED ROCK FILL OR EQUAL 6.75
134		16			23										120		126				12												340	I-10	438	SQ. YD.	RIPRAP TYPE A 8.50
135																											64							I-14	1452	LIN. FT.	PAVED GUTTER STANDARD TYPE 1 4.50
136			460	100	243				40			10		68		300	210				25													I-14	90	LIN. FT.	PAVED GUTTER STANDARD TYPE B 6.40
137						25															80												300	I-2	300	LIN. FT.	3' CLASS B CONCRETE SHOULDER GUTTER PAVEMENT OR APPROACHES 3.30
138				32	60	16																											200	I-2	200	LIN. FT.	PAVED GUTTER SPECIAL TYPE 2 as per plan 6.00
139																																		I-14	204	LIN. FT.	4' CONCRETE SHOULDER GUTTER PAVEMENT OR APPROACHES 4.05
140																																						

STREAMS OVER 20 FT. SPAN
For Estimated Quantities, Bridge No. STA-21-12.43, see Sheet No. 138
For Estimated Quantities, Bridge No. STA-21-16.45, see Sheet No. 152

PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

ANOTHER PROJECT

BEGIN PROJECT
& F-1010 (4)
STA. 654+13.50

NOTE: TYPICAL SECTION OF ADJOINING PAVEMENT IS THE SAME AS SHOWN FOR THIS PROJECT.

Begin Work
Sta. 653+48.71

STA. 654+00

CON N 25°24'17"W 652

653

654

655

24'

U.S. 21 650
(EXTENDED)

Bank

Abandoned Dry Bed Canal

Bank

Shed

Water Pump

1 Story Stucco Res.

2 Story Stucco Res.

Cinders

Garage

Shed

NORTH CITY LIMIT

+79.29
12.5

+48.71
12.5

100
12.5

END 1ST SHEET

654+13.5

89 59 60
25 24 17
N 64° 35' 43" E
S W

647 + 00

BEGIN SHEET STA. 645+00

645 646 647

FINAL SURVEY

ORIGINAL SURVEY

P.C. STA 650+30.50
EL. 943.93

P.I. STA. 652+05.50
EL. 943.05
V.C. 350'
CORR +1.385

P.T. STA. 653+80.50
EL. 947.78

PROFILE GRADE LINE

-0.500 %

+2.70 %

Existing Ground Line
Along ℄ Road

931.6
934.6
931.7
931.1
931.7
944.08
943.83
931.0
943.80
943.99
933.8
944.40
945.02
933.7
945.89
946.99
948.30

645 646 647 648 649 650 651 652 653 654

955
950
945
940
935
930
925

PREPARED AND RECOMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 645+00 TO STA. 654+00

ANOTHER PROJECT

BEGIN PROJECT STA. 21-12.39
STA 654+13.50

PROPOSED STRUCTURE DATA
BRIDGE No. STA-21-12.39
TYPE: CONTINUOUS STEEL PLATE GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS: 156'-0" + 195'-0" + 195'-0" + 156'-0" 4 BRGS.
ROADWAY: 30'-0" f/f 2'-0" SAFETY CURBS.
LOAD FREQUENCY RATING: CF = 2000
SKEW: 50° 22'-00" R.F.

BEGIN SHEET STA. 654+00

END SHEET STA 666+00

STA P.C. 664+56.9 SURVEY
P.O.T. ℄ N.B. & S.B. PAVT

STA. 664+19.00 ℄ U.S. 21
STA. 50+00 ℄ T.R. 353

RELOCATED T.R. 353

Bright Woods & Brush

Garden

Junk Yard

4-24" WILLOWS

14" ELM

TUSCARAWAS

P.R.R. R/W

66' R/W

N 25° 24' 17" W

℄ U.S. 21

DUMPED ROCK BANK PROTECTION 8' WIDE

FLOW LINE

℄ PIER

Top Bank

Heavy Woods

℄ Southbound Track 7 B.&O. AND P.R.R. (B.&O. OWNED)

℄ Northbound Track 1 B.&O. AND P.R.R. (B.&O. OWNED)

℄ YARD TRK. 7

℄ YARD TRK. 1

℄ FUTURE TRACK

P.R.R. R/W LINE

CONNECT S-27 WITH EXISTING PIPE

20" Trap Pipe Conc. Spillway Gate Valve

NOTE:
MARKER TO BE FURNISHED AND ERECTED ON THE RIGHT BY THE STATE OF OHIO BEFORE ACCEPTANCE OF THIS PROJECT.

FOR PLAN & PROFILE - RELOCATED T.R. 353
SEE SHEETS 33 & 34

BEGIN F-1010 (4)
STA. 654+13.50

B.M. # 302 ELEV. 928.93
RAILROAD SPIKE IN POWER POLE BY STONE PUMP HOUSE
190' LT. STA. 657+00

B.M. # 303 ELEV. 929.79
RAILROAD SPIKE IN 24" MAPLE BETWEEN RR TRKS. & RIVER
110' LT. STA. 661+50

B.M. # 304 ELEV. 948.56
RAILROAD SPIKE IN 24" SHINGLE OAK SOUTH SIDE T.R. 353 & EDGE OF RESIDENT DRIVE
160' LT. STA. 665+00

PLAN
SCALE 1" = 50'

NORTH CORPORATE LINE MASSILLON
654 + 13.50

NW CORNER RED BRICK SCHOOL BSF
P.C. = 664+56.20

Bridge Limits

STA. 658+15.47

Profile Grade Line

+2.665%

MEDIAN EL. 1.94 BELOW PROF GR

GRAPHIC GRADES

Existing Ground Line Along ℄ Road

Water Level Aug. 1955
EL. 924.3

Bottom of River Bed

Top EL. 926.0 6" Water Main

℄ FUTURE TRACK STA. 662+58.72
℄ YARD TRACK P.R.R. EL. 934.25 STA. 662+76.96
℄ YARD TRACK P.R.R. EL. 935.65 STA. 662+98.25
℄ YARD TRACK P.R.R. EL. 934.72 STA. 663+19.89
℄ B.&O. AND P.R.R. (B.&O. OWNED) STA. 663+46.45 EL. 936.36
℄ B.&O. AND P.R.R. (B.&O. OWNED) STA. 663+90.95 EL. 938.61
℄ RELOCATED T.R. 353

EXC	71	C.Y.
EMB	71,982	C.Y.
SEEDING	10,042	S.Y.

654+00	655	656	657	658	659	660	661	662	663	664	665	666+00
948.30 +13.5 948.67	939.4 950.95	939.5 953.57	939.1 956.24	939.0 958.90	939.2 961.57	939.2 964.23	966.90	937.7 969.56	972.22	937.3 974.89	942.0 977.56	939.5 980.22

SCALE: 1" = 10'

PREPARED AND RECOMMENDED BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 654+00 TO STA. 666+00

STRUCTURES - 20 SPAN AND UNDER

MARK	STATION	TYPE	SIZE	SHEET
C-1	654+71	PIPE CULVERT EXTENSION	30" x 204'	136

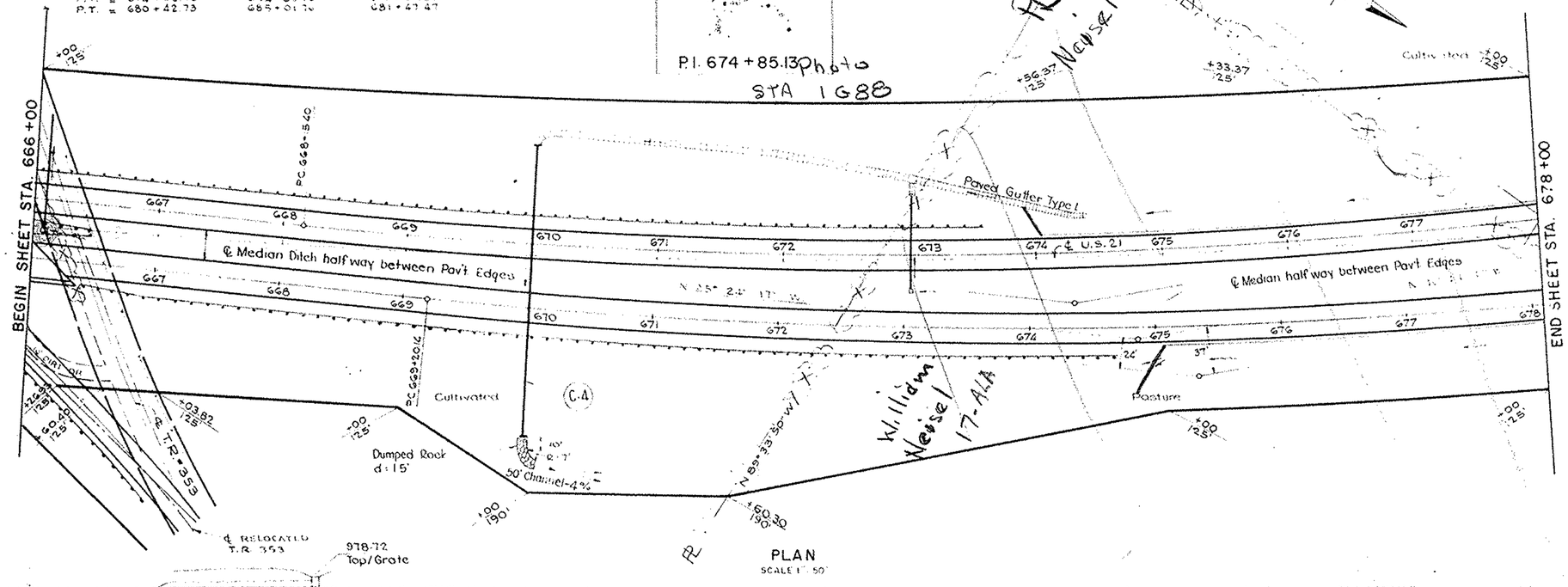
ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
1-15	Guard Rail	L.F.	654+13.50	658+19.75	L	406.25	
1-15	"	L.F.	654+13.50	659+19.75	R	506.25	
1-15	"	L.F.	658+13	658+63	L	50.00	
1-15	"	L.F.	658+15	658+77.5	R	62.50	1025.00
1-22	Subbase	C.Y.					775
SS-18	Fence	L.F.	654+59/80	654+78.29/123	L	37	
SS-18	"	L.F.	654+78.29/123	660+15/123	L	537	
SS-18	"	L.F.	664+56/123	666+00/123	L	144	
SS-18	"	L.F.	653+72/66	653+49.74/123	R	49	
SS-18	"	L.F.	653+49.74/123	661+15/123	R	766	1533
	PAVEMENT						
1-7	13" R.C. Appr Slab	S.Y.	658+21.50	658+46.50	L	66.7	
1-7	13" R.C. Appr Slab	S.Y.	665+58.69	665+83.69	L	66.7	
1-7	13" R.C. Appr Slab	S.Y.	658+79.45	659+04.45	R	66.7	200
	DRAINAGE						
1-10	Dumped Rock	C.Y.	660+40	660+60	R		16

NOTE: Underdrains to be omitted if granular soil is met at subgrade

CURVE DATA			
	℄ S.R. 241	℄ U.S. 21	℄ S.R. 241
Δ	19° 15' 00"	0° 21' 30"	19° 15' 00"
D	4583.66	1146.28	4583.66
R	1249.36	5026.93	1249.36
T	1227.33	282.56	1227.33
		564.78	
P.C.	668+15.40	674+56.20	669+20.14
P.C.C.	674+32.76	674+85.13	675+37.50
P.T.	680+42.73	685+01.76	681+47.47

P.I. 674 + 85.13 Photo STA 1688



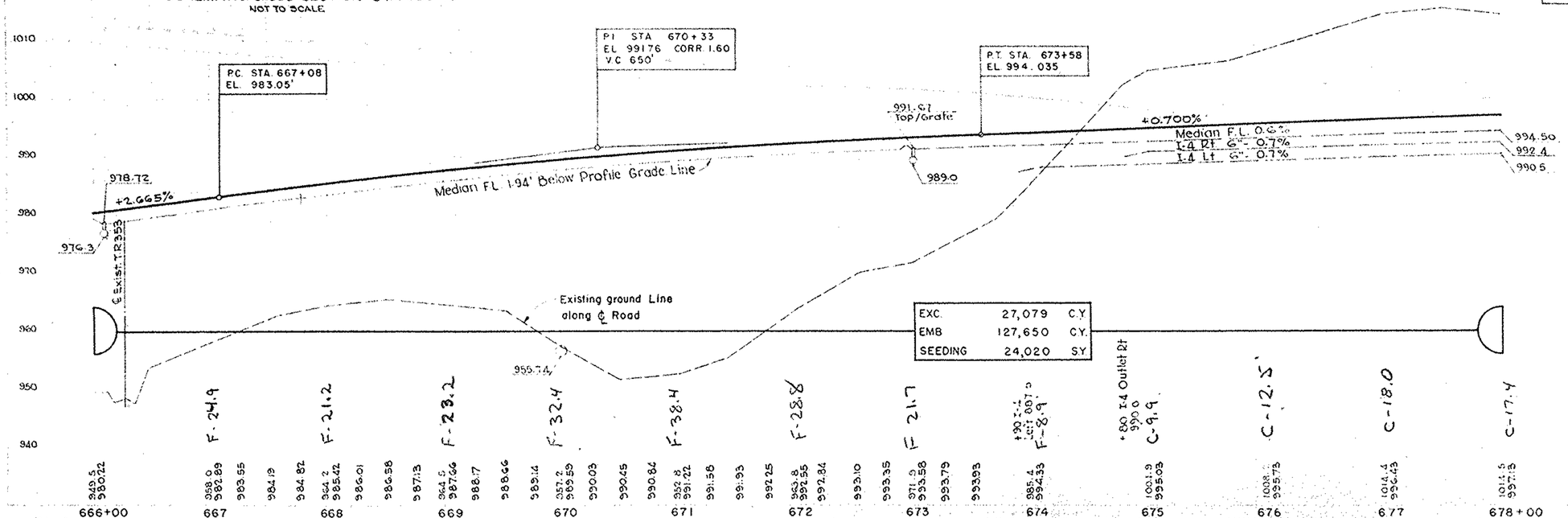
STRUCTURES 20' SPAN AND UNDER

MARK	STATION	TYPE	SIZE	DETAIL SHEET
C-4	670+00	Pipe Culvert	18" x 234'	136

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
1.22	Subbase	CY					1760
SS.18	Fence	LF	666+00/123	678+00/123	L	1200	
"	"	"	666+90/123	669+00/123	R	210	
"	"	"	669+00/123	670+00/188	R	120	
"	"	"	670+00/188	671+60.30/188	R	161	
"	"	"	671+60.30/188	675+00/123	R	346	
"	"	"	675+00/123	678+00/123	R	300	2337
1.15	Guard Rail	LF	665+42	673+57.09 2 SR	L	812.50	
"	"	"	666+43.50	674+65.81 SR	R	825.0	
"	"	"	665+85.20	666+47.70	L	62.5	
"	"	"	666+00	666+50	R	50.0	175000
	PAVEMENT						
1.7	13" RC Appr Slab	SY	666+16.64	666+41.64	R		67
	DRAINAGE						
1.2	15" Storm Sewer A Under Pavt	LF	666+10		L	46	
1.2	15" " " A " "	"	673+00		L	50	96
1.2	15" " " A	"	666+10		L	44	
"	15" " " A	"	673+00		L	24	68
15.6x12	30° Bend 15" Sec M 4.4(c)	Ea	666+10		L	2	
"	30° " 15" Sec M 4.4(c)	"	673+00		L	2	4
1.4	6" Underdrains	LF	673+90	678+00	L	430	
"	6" "	"	674+80	678+00	R	340	770
1.4	6" Outlet	"	674+80		R		10
15.6x14	60° Bend 6"	Ea	674+05		L	1	
"	60° " 6"	"	675+05		R	1	2
1.8	Spec. Median Inlet Type A	"	666+10		℄	1	
"	" " " " A	"	673+00		℄	1	2
1.14	Paved Gutter Type I	LF	670+00	674+40	L	450	
"	" " " I	"	673+00		L	10	460

SCHEMATIC CROSS SECTION STA 666+10
NOT TO SCALE



| | | | | | |

NOTE: Subdrains to be omitted if granular soil is met at subgrade

PLAN
SCALE 1"=50'

BEGIN SHEET STA. 678 +00

END SHEET STA. 690+00

PT = 689+01.76

Johnson

EQUATION: STA 686+98.46 ℄ S.B. PAVT. = STA 685+01.76 ℄ N.B. PAVT.

EQUATION: STA 685+13.90 ℄ N.B. PAVT. = STA 685+01.76 ℄ U.S. 21

℄ MEDIAN DITCH HALFWAY BETWEEN EDGES PAVEMENT

PAVED GUTTER TYPE I

Cultivated

Dumped Rock

U.S. 21

C-5

C-6

N 57° 35' E

N 87° 25' W

S.W.G. SEC. IN EMBANKMENT TYP.

B.M. # 305 ELEV. 981.65
RAILROAD SPIKE IN 18" CHERRY ON FENCE LINE
200' RT. STA. 681+00

B.M. # 306 ELEV. 995.86
RAILROAD SPIKE IN PROF. 18" OAK ON FENCE LINE
220' RT. STA. 688+00

S.B. P.C. STA. 680+60.50
EL. 998.95

S.B. P.I. STA. 682+60.50
EL. 1000.35 CORR. +0.95
400' V.C.

S.B. P.T. STA. 684+60.50
EL. 1005.55

P.C. STA. 680+65
EL. 998.96

P.I. STA. 682+65
EL. 1000.38
V.C. = 400' CORR. +.95

P.T. STA. 684+65
EL. 1005.5

N.B. P.C. STA. 680+83
EL. 999.11

N.B. P.I. STA. 682+83
EL. 1000.51 CORR. +0.95
400' V.C.

N.B. P.T. STA. 684+83
EL. 1005.71

Profile Grade Line S.B.

Profile Grade Line N.B.

Profile Grade Line

MEDIAN FL.

Top Grate

Existing Ground Line Along ℄ Road

+0.7%

+2.60%

-0.700%

MEDIAN FL ℄ 6%

994.50 1:4 RIGHT 6' @ -0.7%

992.4 1:4 LEFT 6' @ 0.7%

990.5

995.80

997.70

995.87

993.59

1007.75

27' BELOW PROF GR

1005.0

986.54 Inv. Inlet

EXC	48,420 C.Y.
EMB	34,762 C.Y.
SEEDING	20,444 S.Y.

VERTICAL SCALE: 1"=5'-0"

	678+00	679	680	681	682	683	684	685	686	687	688	689
	1014.5	1011.2	997.7	999.7	1015.2	1020.4	1017.8	1012.1	1002.0	991.7	998.5	1001.3
	999.13	997.83	995.53	999.26	1009.36	1001.94	1003.99	1006.49	1009.09	1011.69	1014.29	1016.89
	C-7.4	C-13.4	F-0.8	F-7.6	C-14.4	C-20'	C-12.1'	C-5.6	F-7.1	20.0	F 15.6	F-15.6
				C & G F. 11.8'								F-11.4
											38.1	119.49

STRUCTURES - 20' SPAN AND UNDER				
MARK	STATION	TYPE	SIZE	DETAIL SHEET
C-5	680+60	PIPE CULVERT	24" x 176'	136
C-6	687+30	"	24" x 210'	136

ESTIMATED QUANTITIES

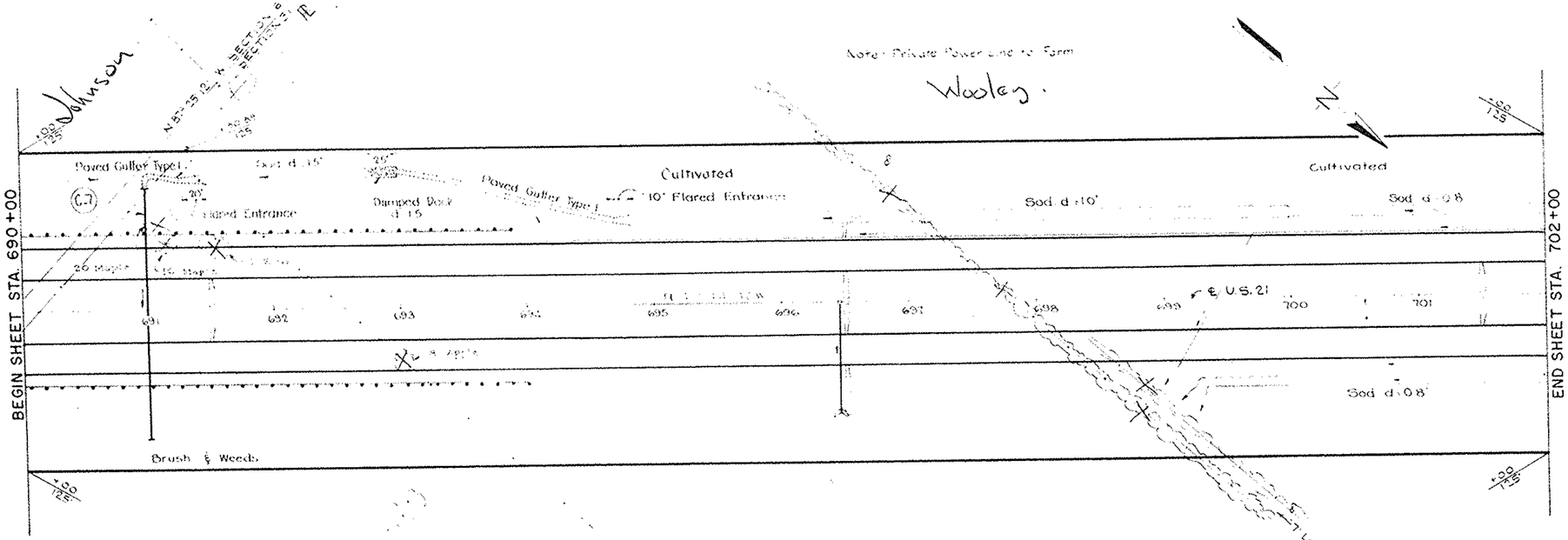
ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
1-15	Guard Rail	L.F.	680+30 NB	681+54 40 NB	R	125	
1-15	"	L.F.	685+40	688+52.5	R	312.5	
1-15	"	L.F.	689+25	690+00	L	75	512.5
1-22	Subbase	C.Y.					1805
L-6.0	Sodding 4' Wide	S.Y.	687+00	688+50	L	80	
L-6.0	" 4 "	S.Y.	681+50	& 686+35	L&R	20	
L-6.0	" 5 "	S.Y.	680+00	680+40	L	18	
L-6.0	Pipe End Treatment	S.Y.	686+30		L	2	120
SS-18	Fence	L.F.	678+00/123	690+00/123	L	1200	
SS-6	"	L.F.	678+00/123	690+00/123	R	1200	2400
	DRAINAGE						
7-2	15" Storm Sewer A Under Pvt	L.F.	686+30		L		78
7-4	6" Underdrains	L.F.	678+00	680+00	L&R		400
7-8	Spec. Median Inlet Type A	Ea.	686+30		℄		1
7-14	Paved Gutter Type I	L.F.	680+60	681+60	L		100
7-14	Spec Paved Gutter Type 6	L.F.	681+50	& 686+35	L&R		32

PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 678+00 TO STA. 690+0

DIVISION 2 | STATE OHIO | PROJECT F-[illegible](1) | TYPE FUNDS | 16

STA. 21 - 12.39

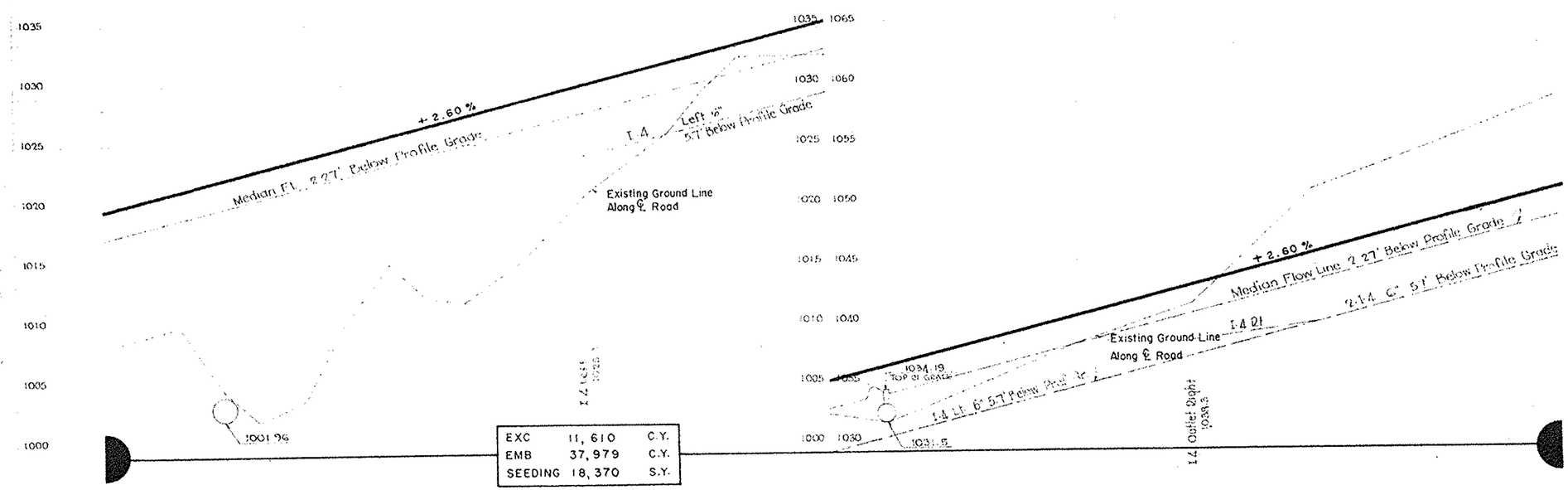


PLAN
SCALE 1"=50'

STRUCTURES - 20' SPAN AND UNDER				
MARK	STATION	TYPE	SIZE	DETAIL SHEET
C.7	691+00	Pipe Culvert	24" x 198'	136

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
1.22	Subbase	C.Y.	690+00	702+00	L & R		1620
1.15	Guard Rail	L.F.	690+00	693+87.50	L	387.5	
1.15	Guard Rail	L.F.	690+00	694+00	R	400	787.50
33.18	Fence	L.F.	690+00/123	702+00/123	L	1200	
33.18	Fence	L.F.	690+00/123	702+00/123	R	1200	2400
6.10	Seeding 9" Wide	S.Y.	691+48	692+75	L	190	
"	Seeding 8" Wide	S.Y.	694+80	700+00	L	520	
"	Seeding 7" Wide	S.Y.	700+00	702+00	L	160	
"	Seeding 7" Wide	S.Y.	699+40	702+00	R	200	
"	Seeding 4" Wide	S.Y.	691+50, 696+51, 701+50		L & R	60	1130
	DRAINAGE						
E.2	Excav For Endwall	C.Y.	696+46		R		1
S.1	Endwall	C.Y.	696+46		R		0.25
1.9	15" Storm Sewer A Under Pavt	L.F.	696+46		R		86
1.4	6" Underdrains	L.F.	694+00	702+00	L	820	
"	6" Underdrains	L.F.	699+10	702+00	R	290	1110
-	8" Outlet	L.F.	699+00		R		10
156.14	60° R-end - 6"	Ea.	694+16		R	1	
"	90° Bend - 6"	Ea.	699+10		R	1	2
1.8	Spec. Median Inlet Type A	Ea.	696+46		L & R		1
1.10	Dumped Rock	C.Y.	692+75	693+00	L		23
1.14	Paved Gutter Type I	L.F.	691+00	691+48	L	58	
	Paved Gutter Type I	L.F.	693+00	695+80	L	185	243
1.14	Spec. Paved Gutter Type 6	L.F.	691+50, 696+51, 701+50		L & R		60
1.2	6" Storm Sewer A Under Pavt	L.F.	699+10	699+10	Across		114
1.2	8" " " A "	L.F.	699+00	699+10	R		12
156.12	Y-8"-6"	Ea.	699+10				
-	Increaser 6"-8"	Ea.	699+10				



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BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

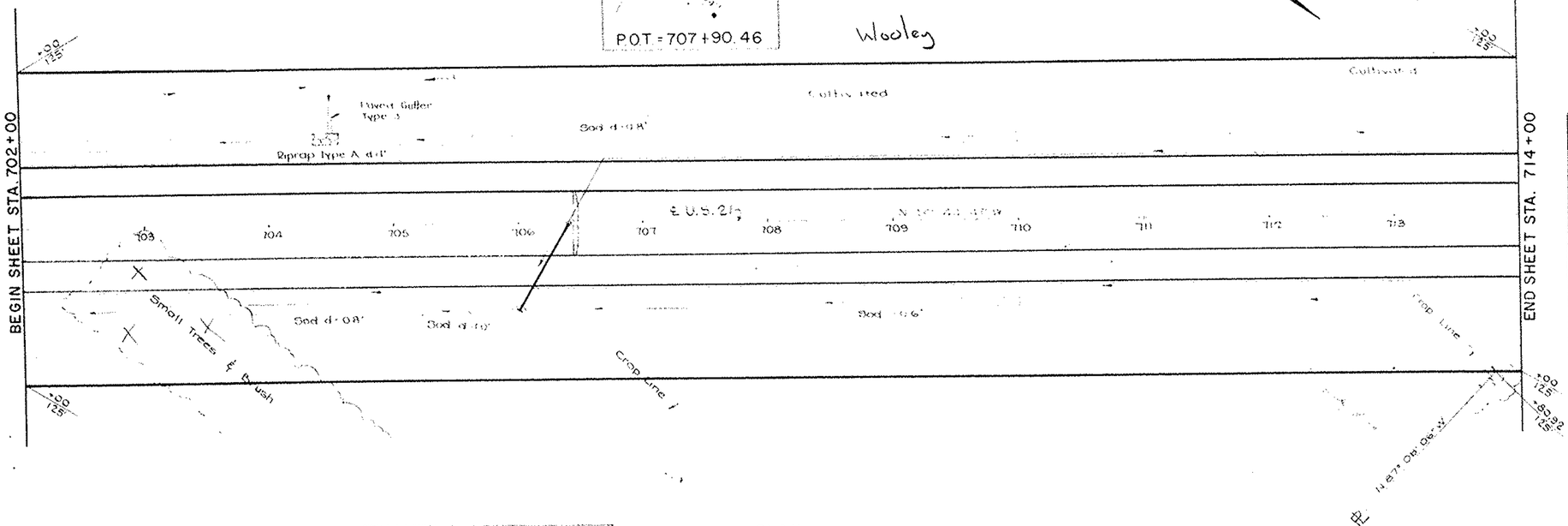
LINE SHEET STA. 690+00 TO STA. 702+

DIST. NO.	STATE	PROJECT	SHEET NO.
2	OHIO	F-1010(4)	17

SHEETS 17 TO 39



Wooley

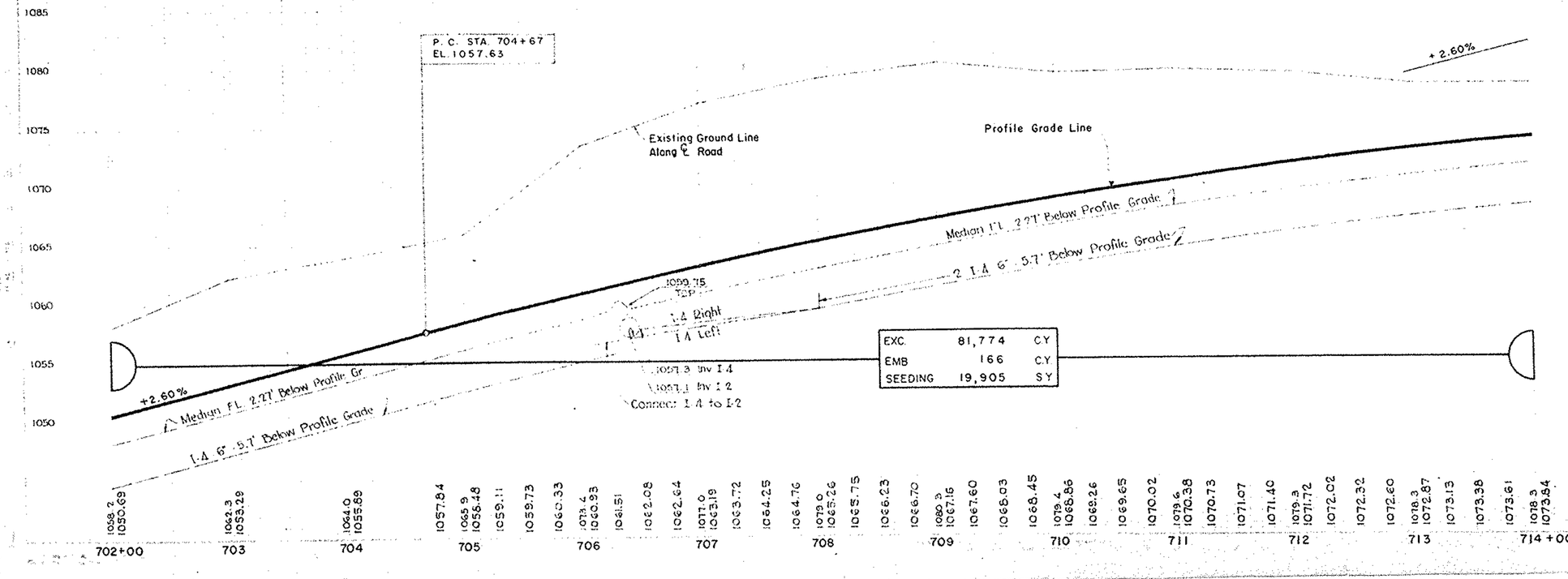


PLAN
SCALE 1"=50'

B.M. # 308 ELEV. 1065.38
RAIL ROAD SPIKE IN 8" TWIN WILD CHERRY
225' RT STA 705+75

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
1-22	Subbase	C.Y.	702+00	714+00	C.Y.		1320
L-10	Sodding 1' Wide	S.Y.	702+00	704+35	L	180	
L-10	Sodding 2' Wide	S.Y.	704+55	710+00	L	420	
L-10	Sodding 4' Wide	S.Y.	706+45		L & R	15	
L-10	Sodding 7' Wide	S.Y.	702+00	705+00	R	240	
L-10	Sodding 8' Wide	S.Y.	705+00	706+00	R	90	
L-10	Sodding 6' Wide	S.Y.	706+00	710+00	R	270	1215
SS-18	Fence	L.F.	702+00/123	714+00/123	L	1200	
SS-18	Fence	L.F.	702+00/123	714+00/123	R	1200	2400
	DRAINAGE						
E.Z	Excav for Endwall	C.Y.	706+00		R		1
S.1	Conc Class E for Endwall	C.Y.	706+00		R		0.25
1-2	6" Storm Sewer A Underlayd	L.F.	706+40	706+65	L		50
1-2	15" Storm Sewer A Underlayd	L.F.	706+40	706+00	R		74
1-4	6" Underdrains	L.F.	702+00	706+60	L	460	
1-4	6" Underdrains	L.F.	702+00	706+00	R	400	
1-4	6" Underdrains	L.F.	706+10	714+00	L	730	
1-4	6" Underdrains	L.F.	706+10	714+00	R	790	2380
15x6-2	15"-6" Wye Class A U.B.A.	Ea	706+10		R		1
15x6-A	6" 60° Bend	Ea	706+70		L		1
1-8	Spec Median Inlet Type A	Ea	706+40		R		1
1-14	Paved Gutter Type 3	L.F.	704+50		L		25
1-14	Spec Paved Gutter Type 6	L.F.	706+45		L & R		16



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LINE SHEET STA. 702+00 TO STA. 714+00

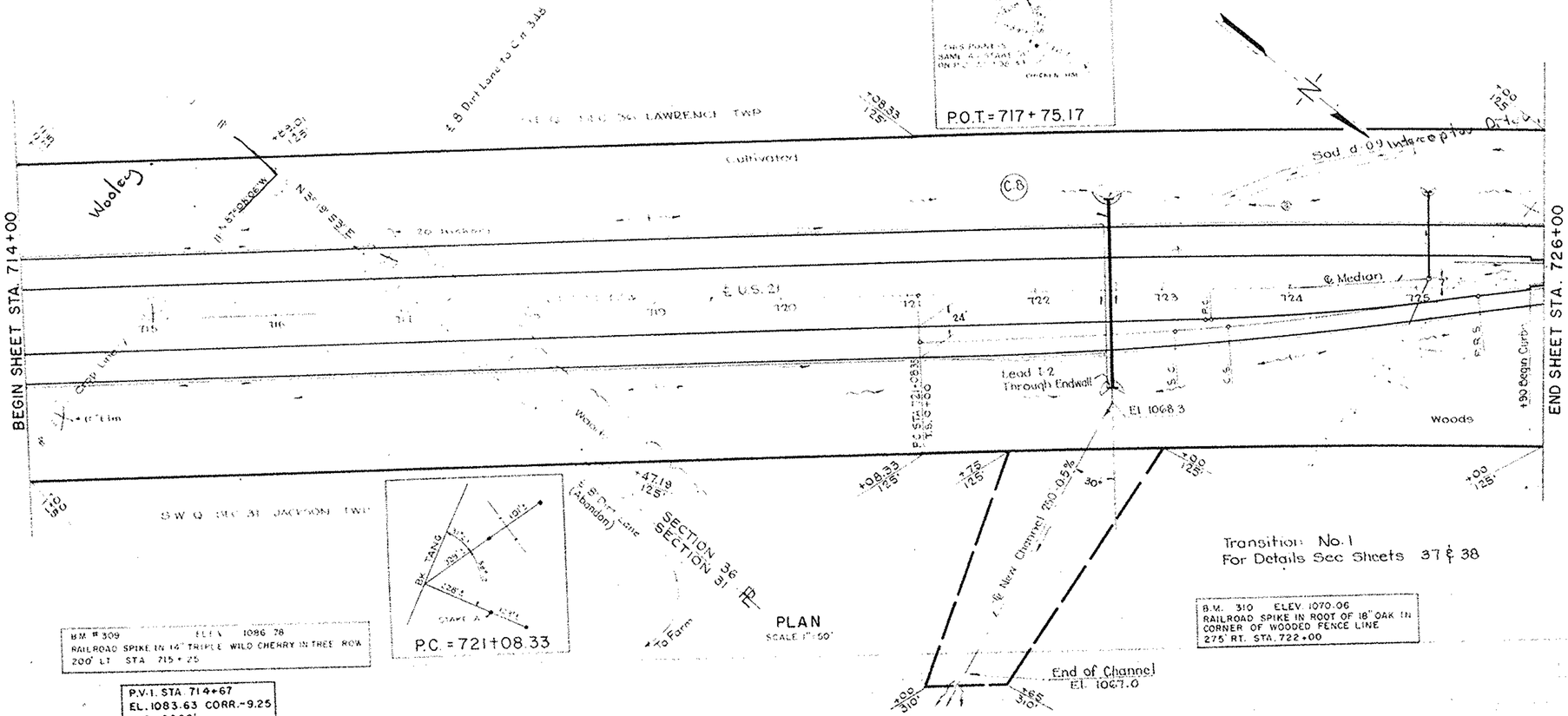
STA. [illegible] to 739

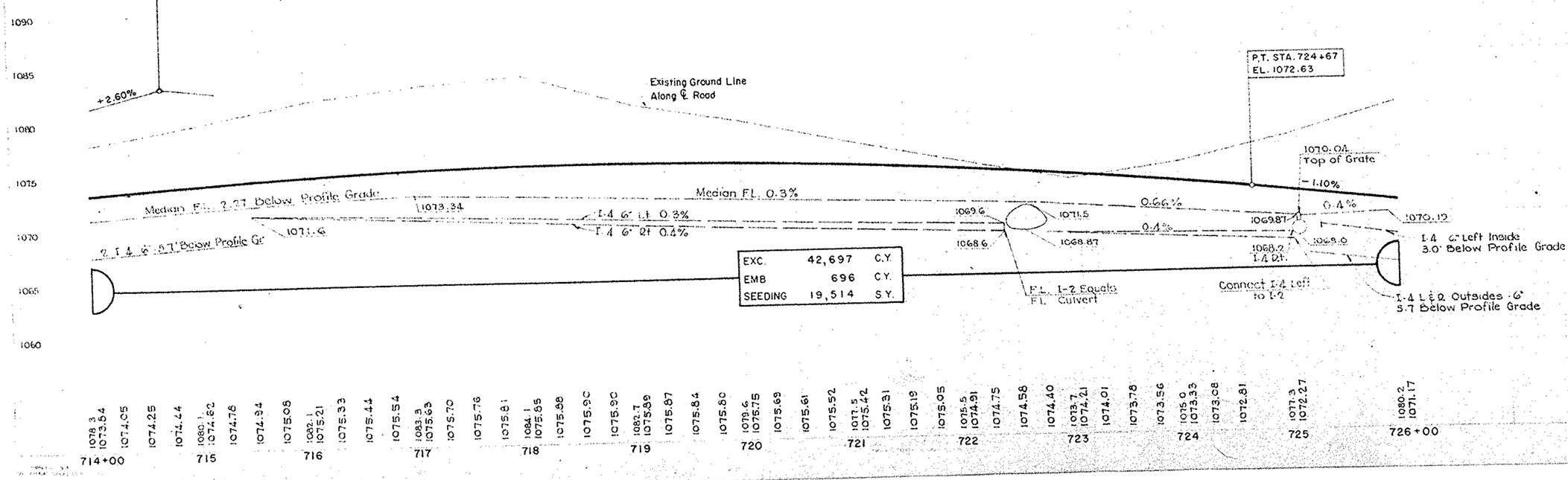
STRUCTURES 20' SPAN AND UNDER

MAP#	STATION	TYPE	SIZE	DETAIL SHEET
C-8	722+60	Pipe Arch Culvert	43"x27" x150'	136

ESTIMATED QUANTITIES

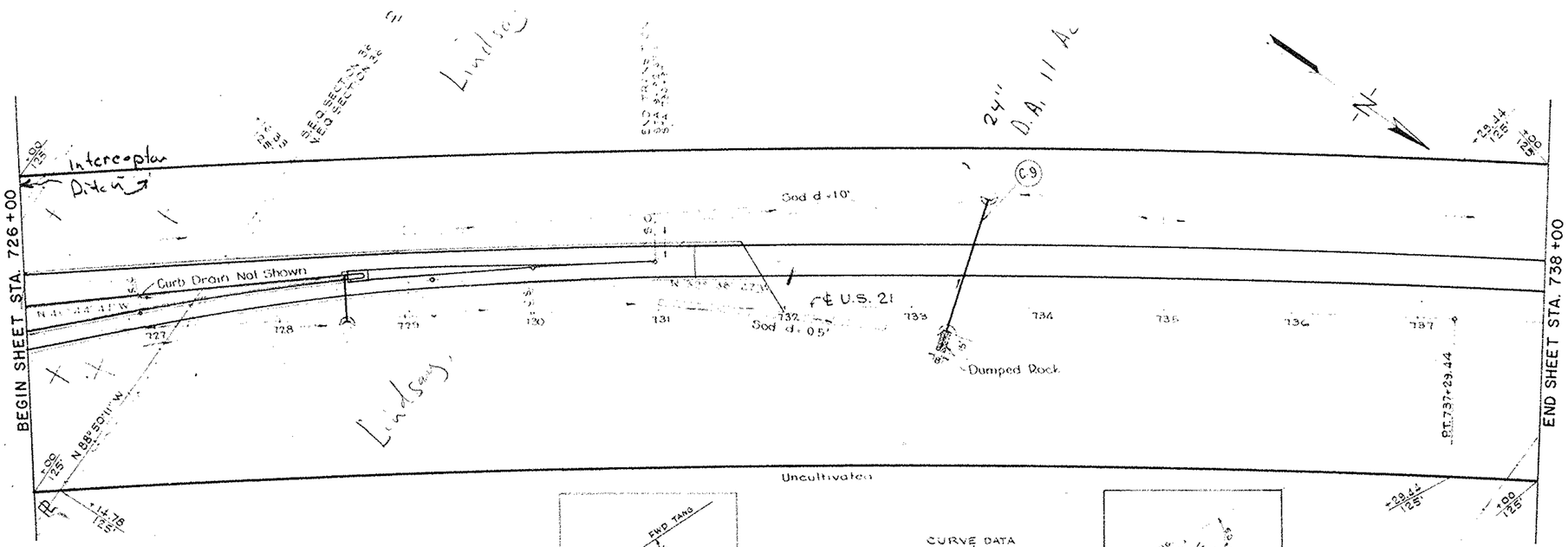
ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
[illegible]	[illegible] Subgrade	SY	721+08.35	726+00			2275
[illegible]	Stab Shoulder	C.Y.	721+08.35	726+00			75
[illegible]	[illegible]	CY	714+00	726+00	L&R		1400
[illegible]	[illegible]	LF	714+00/123	726+00/123	L	1200	
[illegible]	[illegible]	"	714+00/123	726+00/123	R	1200	2400
[illegible]	[illegible] 8' Wide	SY	722+60	725+00	L		230
	PAVEMENT						
T-11	9" P.C. Pavt	SY	721+08.35	726+00			2275
T-12	Type 2A Curb	LF	725+90	726+00	L&R		20
	DRAINAGE						
E-2	Excav for Endwall	CY	725+10		L		1
S-1	Endwall	CY	725+10		L	L	0.25
I-2	15" Storm Sewer A Under Pavt	LF	725+10		L	L	62
I-2	6" Storm Sewer A Under Pavt	LF	722+40			96	
"	6" Storm Sewer A Under Pavt	LF	724+95	725+10	R	34	130
I-2	8" Storm Sewer A	LF	722+40		R		24
I-A	6" Underdrains	LF	714+00	715+50	L&R	300	
"	6" "	"	715+50	722+40	L&R	1380	
"	6" "	"	722+10	725+10	L	240	
"	6" "	"	722+10	725+00	R	226	
"	6" "	"	725+20	726+00	L	150	
"	6" "	"	725+10	726+00	R	96	2392
15x12	6"-90° Bend	Ea	722+40		L		
"	6" 30° Bend	"	722-40		R		
"	6"-8" Increaser	"	722+40		L&R		
"	8"-6" Wye	"	722+40		R		
"	6"-15" Wye C1A"U-Pavt	"	725+10		L&R		
15x12	6" 60° Bend	"	725+00		L		
I-8	Spec Median Inlet Type C	"	725+10		L		

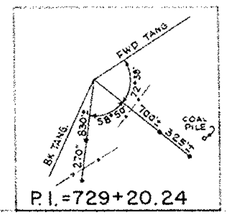




PREPARED AND RECOMMENDED BY
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LINE SHEET STA 714+00 TO STA. 726+





B.M.# 311 ELEV 1082.57
RAILROAD SPIKE IN 12" WILD CHERRY
250' LT STA 729+00

PLANE
SCALE 1"=50'

CURVE DATA
Δ = 8° 00' 20"
D = 04 30' 00"
R = 1459.18
T = 101.81
L = 202.11
E = 3.48
P.I. Sta. = 729+20.24
P.C. Sta. = 727+08.33
P.T. Sta. = 737+29.44

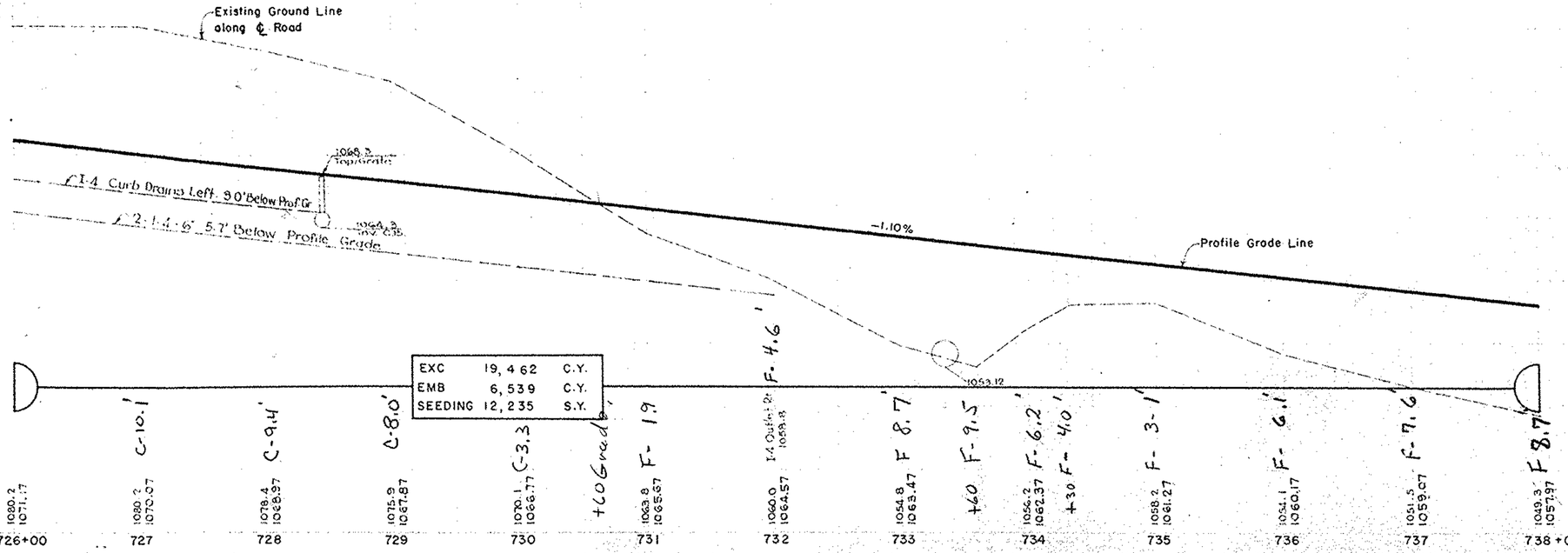


B.M.# 312 ELEV 1035.04
RAILROAD SPIKE IN ROOT 24" CHERRY
300' RT STA 737+00

STRUCTURES 20' SPAN & UNDER				
MARK	STATION	TYPE	SIZE	DETAIL SHEET
C 9	733+33	Pipe Culvert	24" x 108"	136

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
E-1	Comp Subgrade	SY	726+00	730+97.11			1655
I-18	Shoulder	CY	726+00	730+97.11	L&R		75
I-22	Subbase	CY	726+00	738+00	L&R		1000
SS.18	Fence	L.F.	726+00/123	738+00/123	L	1200	
"	"	"	726+00/123	738+00/123	R	1200	2400
L-10	Sodding 10' Wide	SY	729+00	733+60	L	510	
"	" 5' "	"	731+00	732+80	R	100	
"	Pipe End Treatment	"	728+46.9		R	2	612
	PAVEMENT						
B-70	7" P.C.C. Base Course	SY	728+67	729+87			55
I-12	Type 2A Curb	L.F.	726+00	728+52			526
I-21	P.C.C. Median Pavt	CY	728+52.67	728+67.67			4
I-23	Precast Traffic Div	Ea	728+67.67	730+97.11			9
F-35	2" Asph. Conc. Surf	CY	728+67	729+87			0.35
I-11	9" P.C. Pavt	SY	726+00	730+97.11			1655
T-30	Bit. Tack Coat	Gal	728+67	729+87		5.5	5.5
	DRAINAGE						
E-2	Excav for Endwall	CY	728+46.9		R		1
S-1	Class F Concr for Endwall	CY	728+46.9		R		0.25
I-2	15" Storm Sewer B Under Pavt	L.F.	728+46.9		L		36
"	6" " " A "	"	731+65	731+82	Across		24
"	8" " " A "	"	731+82	732+00	L		20
I-4	6" Underdrains	"	726+00	731+65	L	564	
I-4	6" "	"	726+00	731+80	R	580	
I-4	6" "	"	726+00	728+46.9	L	246	1390
I-5a-12	8"-6" Wye	Ea.	731+82		R		1
I-5a-13	6" 8" Increaser	Ea	731+80		R		1
I-5a-14	6" 60° Bend	Ea	731+65		L		1
I-8	Std Catch Basin Type 6	Ea	728+46.9		L		1
I-4	8" Outlet	L.F.	732+00		R		10



PREPARED AND RECOMMENDED
BY
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CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 726+00 TO STA. 738+00

SHEET	STATE	PROJECT	SHEET NUMBER
2	OHIO	F-1010(4)	20

STA - 21 - 12.39

Barnyard

New Fence

Board Fence

CROSS SECTION THROUGH CATTLE PASS APPROACH

140' Cattlepass Approach

10'

+75 200'

+25 200'

+00 125'

+25 125'

+25 125'

ROW Fence

ROW Fence

C.10

Sod d=0.5'

Sod d=0.7'

Crop Line

+00 125'

BEGIN SHEET STA. 738+00

℄ U.S. 21

N 32° 22' 15" W

739 740 742 743 744 745 746 747 748 749

END SHEET STA. 750+00

40' Cattlepass Approach 5%

ROW Fence

Cultivated

+00 125'

Pasture

PLAN

SCALE 1" = 50'

B.M. # 313 ELEV. 1032.82
RAIL ROAD SPIKE IN LONE 24" ELM
375' RT. STA. 745 + 75

STRUCTURE 20' SPAN AND UNDER

MARK	STATION	TYPE	SIZE	DETAIL SHEET
C. 10	739+34	Pipe Cattlepass	100' Long	136

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
1-15	Guard Rail	L.F.	749+00	750+00	L.	100	
"	"	L.F.	747+00	750+00	R.	300	400
1-22	Subbase	C.Y.	738+00	750+00			1130
SS 18	Fence	L.F.	738+00/123	739+40/123	L.	140	
"	"	"	739+40/123	739+08/90	L.	48	
"	"	"	739+08/90	739+08/82	L.	8	
"	"	"	739+08/82	739+24/82	L.	16	
"	"	"	739+44/82	739+62/82	L.	18	
"	"	"	739+62/82	739+85/123	L.	48	
"	"	"	739+85/123	750+00/123	L.	1015	
"	"	"	738+00/123	739+24/123	R.	124	
"	"	"	739+24/123	739+24/22	R.	101	
"	"	"	739+44/22	739+44/123	R.	101	
"	"	"	739+44/123	750+00/123	R.	1056	2675
L.10	Sodding 8' Wide	SY	739+00	741+00	L.	180	
"	" 5' "	"	744+00	746+00	L.	110	
"	" 6' "	"	746+00	750+00	L.	270	560
	DRAINAGE						
L.14	Paved Gutter Type 3	L.F.	739+10	739+30	L.	23	
"	" " "	"	739+43	739+54	L.	17	40

1065
1060
1055
1050
1045
1040
1035
1030

P.C. STA. 743+00
EL. 1052.47

P.I. STA. 745+00
EL. 1050.27 CORR. +0.15'
V.C. 400'

P.T. STA. 747+00
EL. 1048.67

-1.10 %

Profile Grade Line

-0.80 %

Cattlepass

1045.44

Existing Ground Line along ℄ Road

F-8.7' F-8.3' F-9.5' F-7.6' F-6.2' F-5.2' F-6.1' F-7.0' F-7.7' F-9.1' F-11.0' F-12.15' F-13.6'

EXC	383	C.Y.
EMB	17,185	C.Y.
SEEDING	10,694	S.Y.

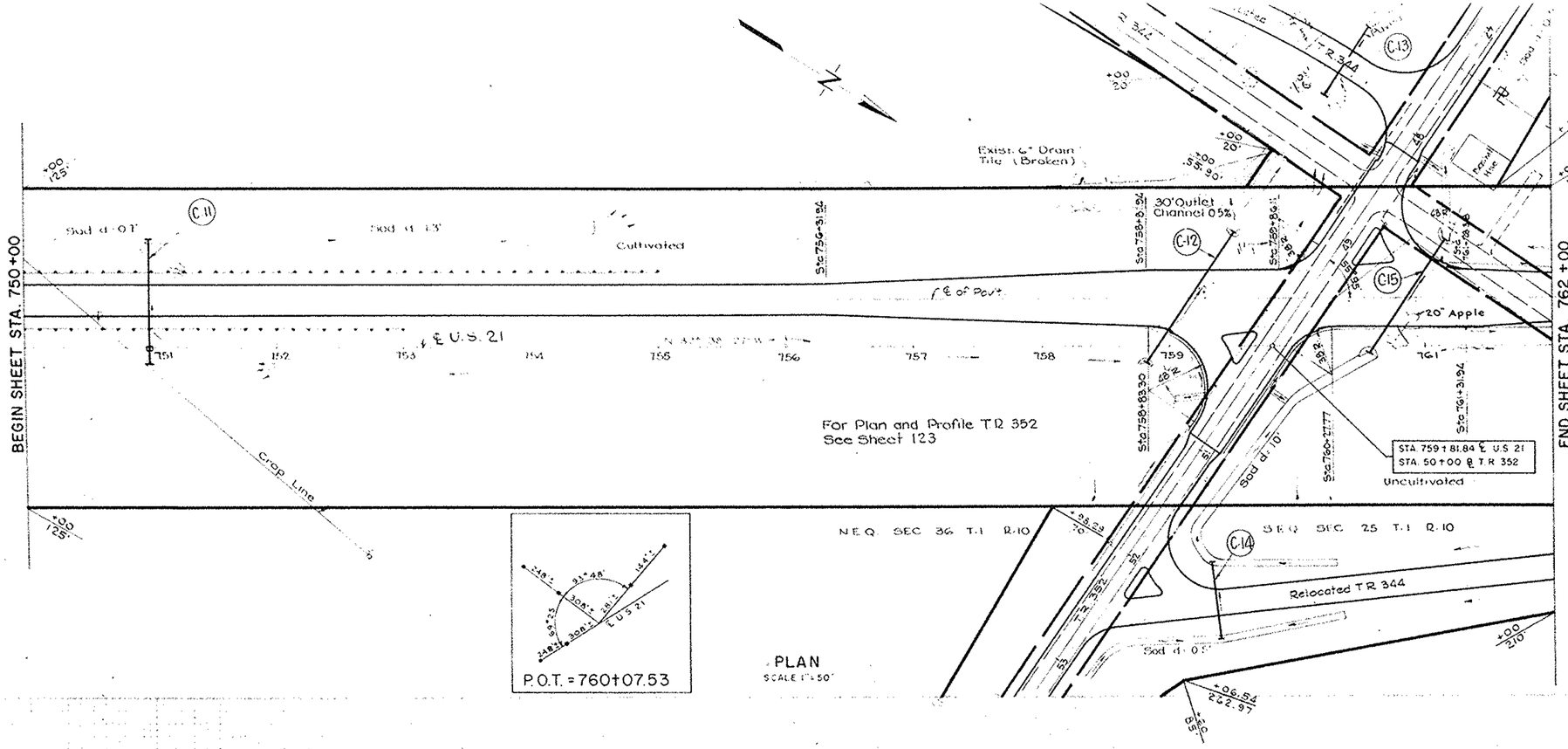
1049.3 1057.97 | 1048.6 1056.87 | 1046.3 1055.77 | 1047.1 1054.67 | 1047.4 1053.37 | 1047.3 1052.47 | 1052.20 | 1051.93 | 1051.67 | 1044.9 1051.41 | 1051.15 | 1050.90 | 1050.65 | 1043.4 1050.42 | 1050.19 | 1049.95 | 1049.73 | 1041.8 1049.51 | 1049.29 | 1049.08 | 1048.87 | 1039.6 1048.67 | 1036.9 1047.87 | 1034.6 1047.07 | 1032.7 1046.27

738+00 739 740 741 742 743 744 745 746 747 748 749 750+00

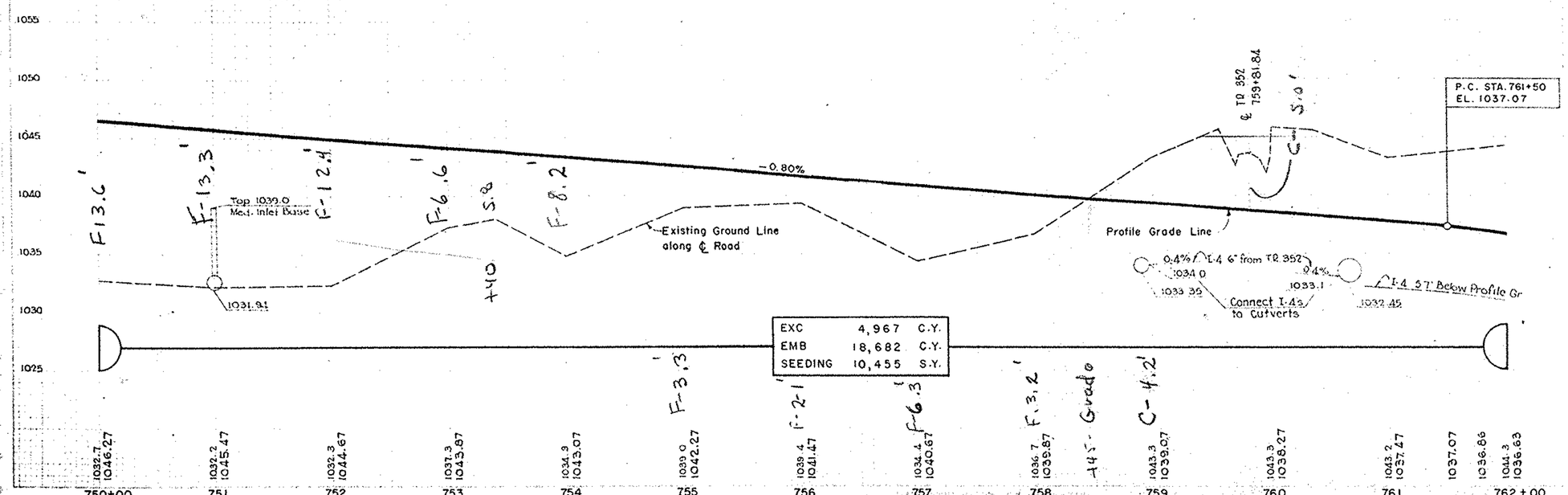
PREPARED AND RECOMMENDED BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 738+00 TO STA. 750

STRUCTURES 20' SPAN AND UNDER				
MARK	STATION	TYPE	SIZE	DETAIL SHEET
C 11	751+00	Pipe Culvert	15" X 98'	136
C 12	758+92	Pipe Culvert	15" X 122'	136
C 13	0+769 TR 344	" "	18" x 64' "	136
C 14	1+00 N	" "	18" x 60'	136
C 15	760+67	" "	24" X 112'	136



ESTIMATED QUANTITIES							
ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
E-1	Comp Subgrade	SY	756+31.94	762+00			1040
I-15	Guard Rail	LF	750+00	755+00	L	500	
I-15	" "	"	750+00	753+00	R	300	800
I-22	Subbase	"	750+00	762+00			1590
SS 18	Fence	LF	750+00/123	760+22/123	L	1022	
"	"	"	761+47/123	762+00/123	"	53	
"	"	"	750+00/123	758+44/123	R	844	
"	"	"	759+70/123	762+00/123	"	230	2149
L-10	Sodding 5' Wide	SY	750+00	751+00	L	60	
"	" 8' "	"	751+00	754+50	"	310	370
	PAVEMENT						
T-11	9" R.C. Pavt	CY.	756+31.94	762+00			1040
I-12	Curb Type 2A	LF	758+98	761+17			630
	DRAINAGE						
I-4	6" Underdrains	LF	51+00 TR 352	759+00	R	90	
"	" "	"	51+00 TR 352	760+75	R	180	
"	" "	"	761+20	762+00	L	80	
"	" "	"	760+80	762+00	R	120	470
156-12	30° Bend 6"	Ea	759+00		R		1



PREPARED AND RECOMMENDED BY
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LINE SHEET STA. 750+00 TO STA. 762+00

FUNDS

SEC F-1010(4)

STA - 21 - 12.39

P.O.T. = 764 + 05

P.O.T. = 770 + 46.08

BEGIN SHEET STA. 762 +00

END SHEET STA. 774+00

Small Trees & Brush

Garden

Septic Tank

Brush Weeds Scattered Small Trees

℄ U.S. 21

EXISTING TR 344

RELOCATED TR 344

Brick Mail Box

End Pvmt

Beg Pvmt

Gravel

B.M. # 314
ELEV. 1023.32
RAILROAD SPIKE IN 2-WIRE POLE, SOUTH SIDE
40 - CORNERS RD. 175' WEST CH. 348
225' LT. STA. 762+50

B.M. # 315
ELEV. 998.24
RAILROAD SPIKE IN 10" WILD CHEERY IN FENCE ROW
200' RT STA. 773+00

PLAN
SCALE 1" = 50'

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
E-1	Comp Subgrade	S.Y.	762+00	763+81.94			200
I-22	Subbase	C.Y.	762+00	774+00			940
SS-18	Fence	L.F.	762+00/123	774+00/123	L	1200	
SS-18	Fence	L.F.	762+00/123	774+00/123	R	1200	2400
L-10	Sodding 5' Wide	S.Y.	766+00	772+50	L	360	
"	6' "	S.Y.	767+00	774+00	R	940	1300
	DRAINAGE						
I-2	6 Storm Sewer A Under Pvmt	L.F.	767+70	767+84	L&R		26
I-2	8" " "	L.F.	767+84	767+95	L		22
I-5or12	6'-8" Increaser	E.A.	767+84		L		1
"	8'-6" Wye	E.A.	767+85		L		1
I-4	6" Underdrain	L.F.	762+00	767+84	L&R		1148
I-4	8" Outlet	L.F.	767+95		L		10
I-5or14	60° Bend 6"	E.A.	767+68		R		1
	PAVEMENT						
T-71	9" R.C. Pvmt	S.Y.	762+00	763+81.94			200

P.I. STA. 763 + 50
EL. 1035.47 CORR -0.60
V.C. = 400'
1800' P.S.D.

P.T. STA. 765 + 50
EL. 1031.47

Existing Ground Line along ℄ Road

Profile Grade Line

-0.80%

-2.00%

1.4 - 6" Storm Sewer Below Profile Grade

1.4 Left 1026.47 1026.1 Outlet

Profile Grade Line

-2.00%

Existing Ground Line along ℄ Road

EXC	18,211	C.Y.
EMB	5,090	C.Y.
SEEDING	11,271	S.Y.

	762+00	763	764	765	766	767	768	769	770	771	772	773	774+00
	1044.3	1044.8	1045.7	1042.0	1036.1	1036.3	1022.3	1020.0	1024.5	1016.5	1011.8	1006.8	1004.7
	1036.63	1035.53	1034.18	1032.43	1030.47	1028.47	1026.47	1024.47	1022.47	1020.47	1016.47	1016.47	1014.47

PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 762+00 TO STA. 774+00

Printed in U.S.A. by National Trade Cuts

CROSS SECTION by GENE BRETSCH CO. CHGO.

DIVISION	STATE	PROJECT	TYPE FUNDS
2	ILL.	F-1010(4)	

STA - 21 - 12.39

23

P.O.T. = 782+49.98

BEGIN SHEET STA. 774+00

END SHEET STA. 786+00

PLAN

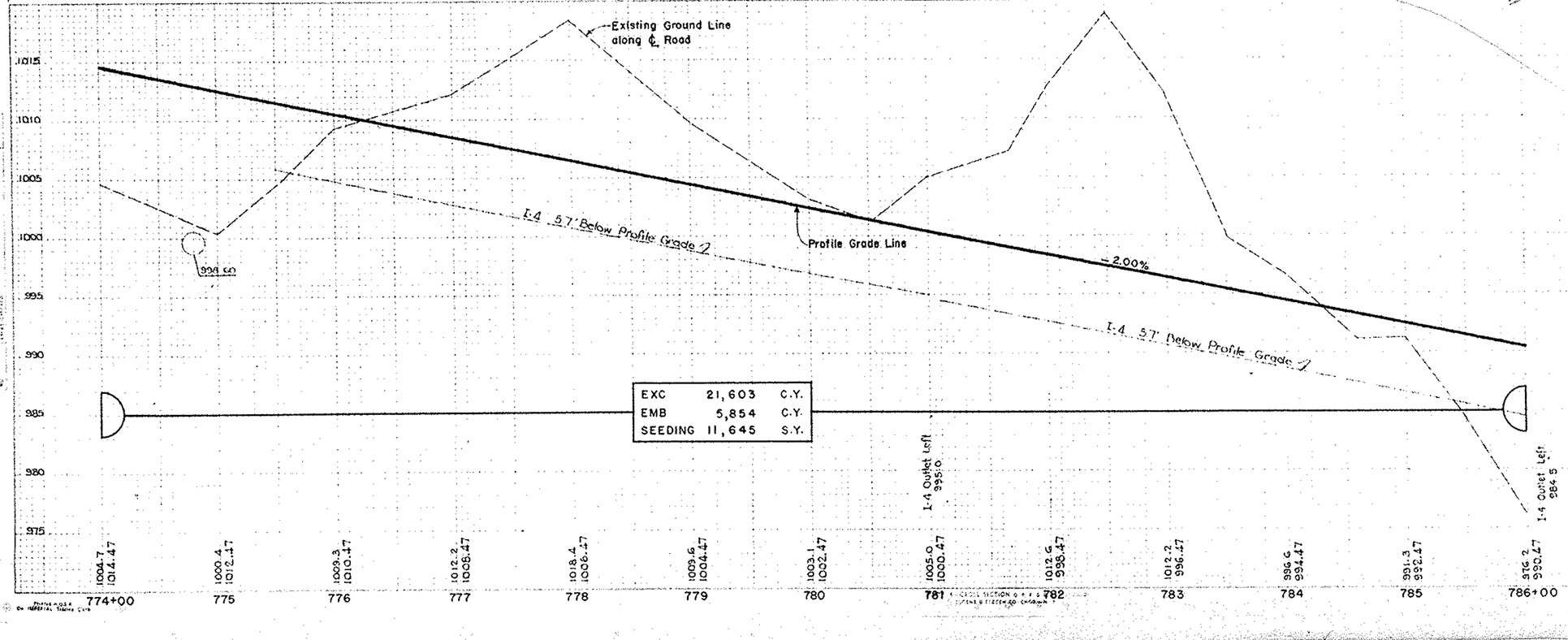
SCALE 1" = 50'

B.M. # 316 ELEV. 992.38
RAILROAD SPIKE IN ROOT 12" TWIN WILD CHERRY
160' LT STA. 781+00

STRUCTURES - 20' SPAN AND UNDER				
MARK	STA	TYPE	SIZE	DETAIL SHEET
C-16	774+80	PIPE CULVERT	24" x 106'	136

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
I-15	Guard Rail	L.F.	774+00	775+62.50	L	162.50	
"	" "	L.F.	774+00	775+50	R	150.00	
"	" "	L.F.	782+87.50	784+12.50	L	125.00	
"	" "	L.F.	785+40	786+00	R	60.00	497.50
I-22	Subbase	C.Y.	774+00	786+00			750
SS-18	Fence	L.F.	774+00/123	786+00/123	L	1200	
"	"	L.F.	774+00/123	779+00/123	R	500	
"	"	L.F.	779+00/123	782+80.62/117.25	R	384	
"	"	L.F.	782+80.62/117.25	786+00/123	R	324	2408
L-10	Sodding 6' Wide	S.Y.	780+00	783+00	R	200	
"	" 6' "	S.Y.	783+00	784+90	R	170	
"	" 1' "	S.Y.	784+90	786+00	R	15	385
	DRAINAGE						
I-2	6" Storm Sewer A Under Pvt	L.F.	785+75	786+00	ACROSS	40	
"	6" " " " "	L.F.	780+65	781+00	"	50	90
I-4	6 Underdrain	L.F.	775+50	780+85	L&R	1050	
"	6" "	L.F.	780+90	785+90	L&R	1000	2050
"	6" Outlet	L.F.	781+00		L	10	
"	6" "	L.F.	786+00		L	10	20
I-5 or I-2	6" Wye	Ea.	780+85		L	1	
" " "	6" "	Ea.	785+90		L	1	2
I-5 or I-4	60° Bend - 6"	Ea.	780+70		R	1	
" " "	60° " 6"	Ea.	785+73		R	1	2

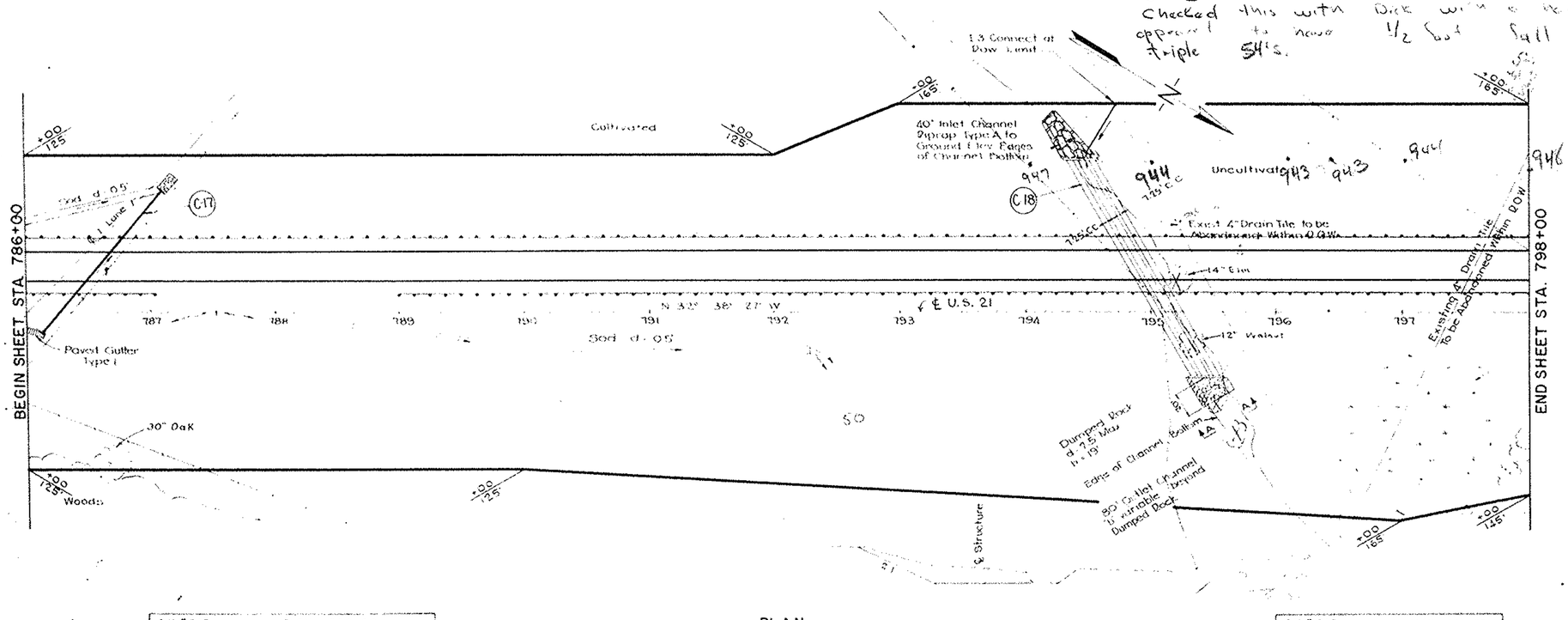


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CHICAGO ILLINOIS

LINE SHEET STA. 774+00 TO STA. 786+00

going to [illegible] Checked this with Dick [illegible] appears to have 1/2 Sod Spill back to Triple 54's.

DIVISION	STATE	PROJECT	TYPE FUNDS	24
2	OHIO	F-1010(4)		
	STA - 21 - 12.39			



STRUCTURES - 20 SPAN AND UNDER				
MARK	STA	TYPE	SIDE	DETAIL SHEET
C-17	786+26	PIPE CULVERT	24" x 150'	136
C-18	795+14	PIPE CULVERT	3-54" x 200'	136

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
I-15	Guard Rail	L.F.	786+00	798+00	L	1200.00	
"	"	L.F.	786+00	787+02.50	R	102.50	
"	"	L.F.	789+00	798+00	R	900.00	2202.50
I-22	Subbase	C.Y.	786+00	798+00			1120
SS-18	Fence	L.F.	786+00/123	792+00/123	L	600	
"	"	L.F.	792+00/123	793+00/163	L	107	
"	"	L.F.	793+00/163	798+00/163	L	500	
"	"	L.F.	786+00/123	790+00/123	R	400	
"	"	L.F.	790+00/123	797+00/163	R	701	
"	"	L.F.	797+00/163	798+00/143	R	102	2410
L-10	Sodding 4" Wide	C.Y.	788+62	792+30	R	160	
"	"	C.Y.	786+00	787+10	L	55	215
	DRAINAGE						
I-3	4" Roadway Drainage	L.F.	794+55	794+65	L		22
I-3	6" Outlet	L.F.	794+50	794+55	L		10
I-5[or]-3	4" - 45° Bend	Ea.	794+60		L		1
I-14	Paved Gutter Type I	L.F.	786+00	786+10	R		10

B.M. # 317 ELEV. 990.20
RAILROAD SPIKE IN 24" OAK NEAR EDGE OF WOODS
225' RT. STA 788 + 0.0

B.M. # 318 ELEV. 940.73
RAILROAD SPIKE IN ROOT OF 14" ELM
300' RT. STA. 797 + 0.0

PLAN
SCALE 1" = 50'

SECTION A-A
SCALE 1" = 10' HOR. & VERT.

P.C. STA. 792+50
EL. 977.47

P.I. STA. 794+50
EL. 973.47 CORR +1.40'
V.C. = 400'

P.T STA. 796+50
EL. 975.07

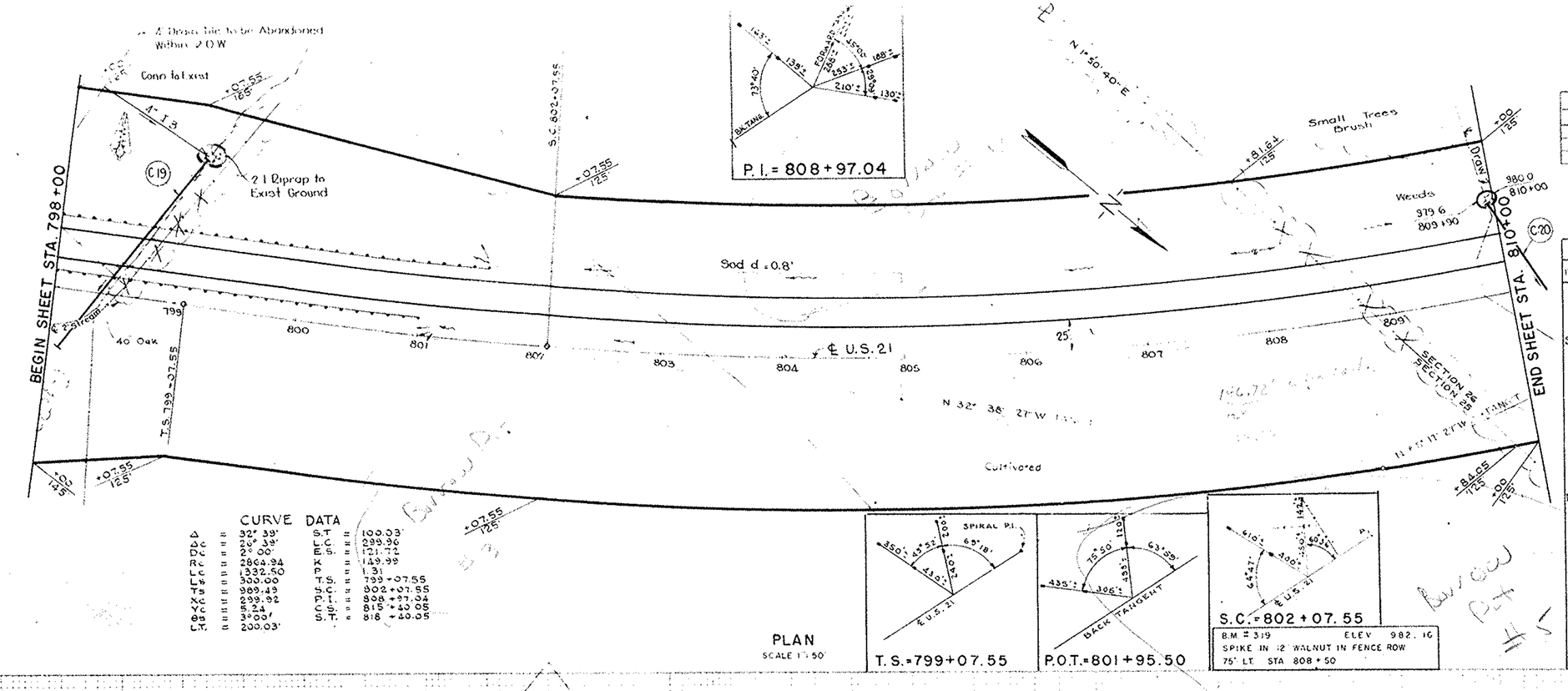
-2.00%
+0.80%
Profile Grade Line
Existing Ground Line along ℄ Road
373.61

EXC	845	C.Y.
EMB	78,442	C.Y.
SEEDING	17,425	S.Y.

974.2 990.47	982.0 983.47	981.7 986.47	971.1 984.47	966.2 982.47	963.0 980.47	963.0 976.47	977.47	976.99	956.2 976.56	976.17	975.82	975.52	954.2 975.26	975.04	974.87	974.74	947.2 974.66	974.62	974.62	974.67	942.3 974.76	974.89	975.07	943.2 975.47	945.4 976.27
786+00	787	788	789	790	791	792	793			794			795			796		797		798+00		

PREPARED AND RECOMMENDED BY
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CHICAGO ILLINOIS

LINE SHEET STA. 786+00 TO STA. 798+00



CURVE DATA

Δ	32° 39'	S.T.	100.03'
D_C	2° 39'	L.C.	299.96
R_C	2160.00'	E.S.	7.17
F_C	2804.34	F	149.99
L_C	1332.50	P	1.31
L_S	300.00	T.S.	799+07.55
T_S	989.49	S.C.	802+07.55
X_C	299.92	P.I.	808+97.04
Y_C	5.24	C.S.	815+40.05
θ_S	3°00'	S.T.	818+40.05
L.T.	200.03'		

PLAN
SCALE 1" = 50'

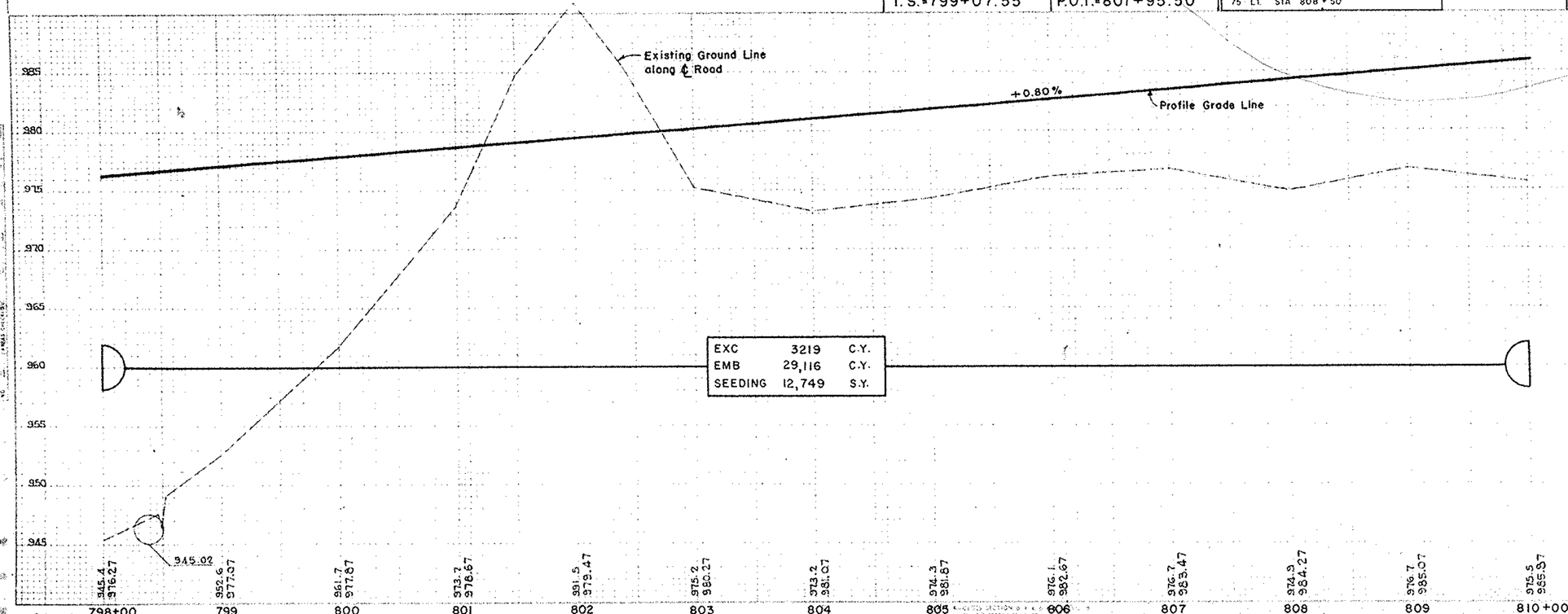
B.M. = 319 ELEV 982.16
SPIKE IN 12" WALNUT IN FENCE ROW
75' LT STA 808+50

STRUCTURES 20' SPAN AND UNDER

MARK	STATION	TYPE	SIZE	DETAIL SHEET
C19	798+38	Pipe Culvert	36"x 200'	13C
C20	810+27	" "	24"x 130'	13G

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
I-15	Guard Rail	LF	798+00	801+54.04	L	350	
I-15	Guard Rail	LF	798+00	801+00.64	R	300	650
SS-18	Fence	"	798+00/163	802+07.55/123	L	409	
"	"	"	802+07.55/123	810+00/123	L	892	
"	"	"	798+00/143	799+07.55/123	R	109	
"	"	"	799+07.55/123	810+00/123	R	1192	2602
I-10	7' Wide Sodding	SY	801+60	805+00	L		260
I-22	Subbase	CY	798+00	810+00			900
	DRAINAGE						
I 3	4" Roadway Drain	LF	798+20	799+10			98
156-13	90° Bend 4"ϕ	Ea	798+20				1



EXC	3219	C.Y.
EMB	29,116	C.Y.
SEEDING	12,749	S.Y.

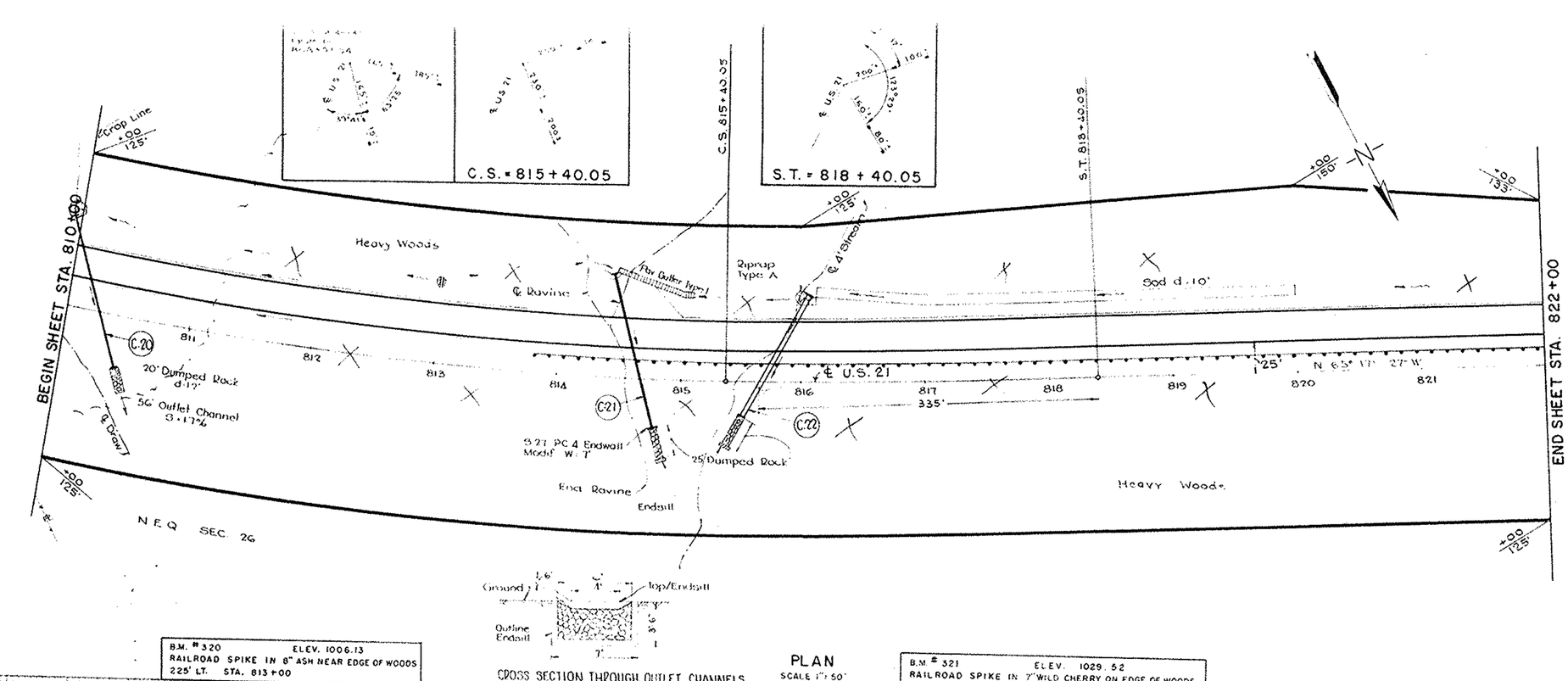
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 798+00 TO STA. 810+00

FINAL SURVEY — ORIGINAL SURVEY — DRAWN — TRACED — CHECKED — NOTE BOOK — DATE — BY

RD. NO. DIVISION	STATE	PROJECT	TYPE FUNDS	26
2	OHIO	F-1010 (4)		

STA - 21 - 12.39



PLAN
SCALE 1" = 50'

B.M. # 320 ELEV. 1006.13
RAILROAD SPIKE IN 8" ASH NEAR EDGE OF WOODS
225' LT. STA. 813+00

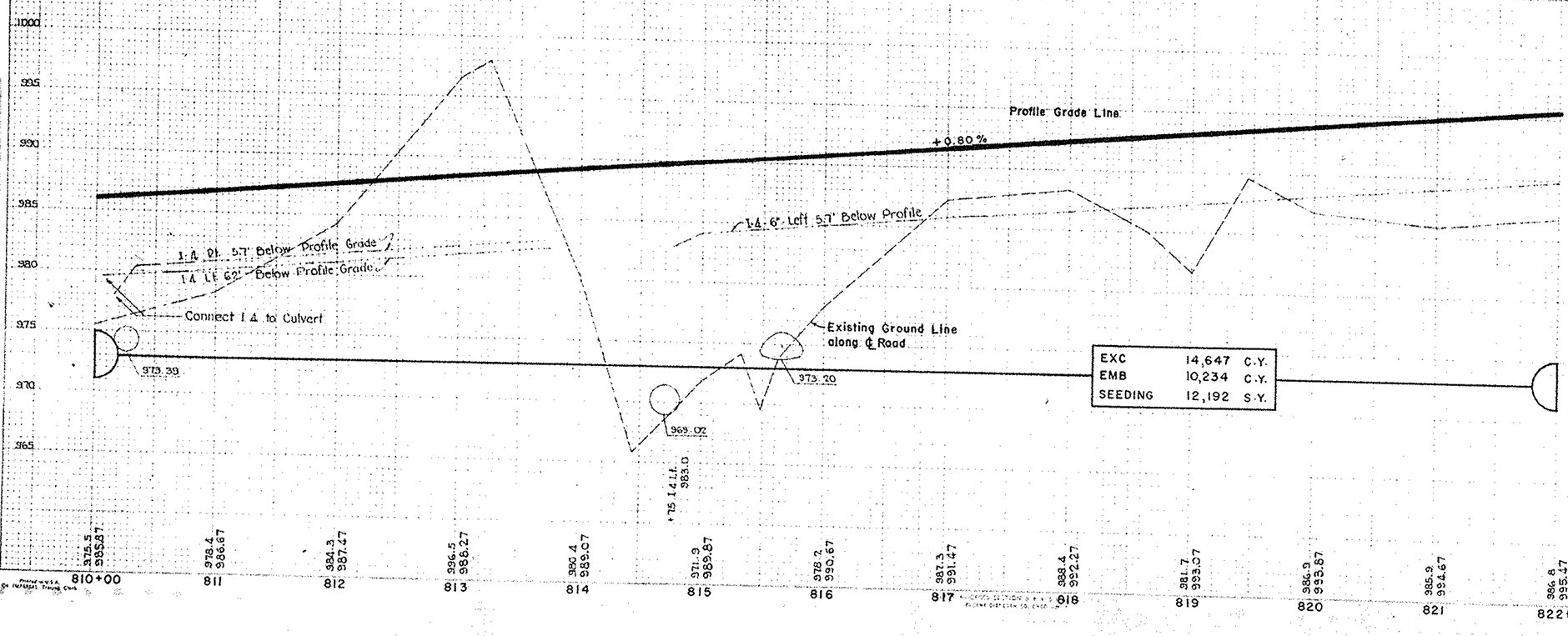
B.M. # 321 ELEV. 1029.52
RAILROAD SPIKE IN 7" WILD CHERRY ON EDGE OF WOODS
440' LT. STA. 816+75

STRUCTURES - 20 SPAN AND UNDER

MARK	STATION	TYPE	SIZE	DETAIL SHEET
C.20	810 + 27	PIPE CULVERT	24" x 130'	136
C.21	814 + 68	PIPE CULVERT	30" x 130'	136
C.22	815 + 65	PIPE ARCH CULVERT	43"x27"x 116'	136

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
1-15	Guard Rail	L.F.	813+80	822+00	R		818.39
1-22	Subbase	C.Y.	810+00	822+00			1515
SS-18	Fence	L.F.	810+00/123	816+00/123	L	600	
SS-18	"	L.F.	816+00/123	820+00/148	L	401	
SS-18	"	L.F.	820+00/148	822+00/133	L	201	
SS-18	"	L.F.	810+00/123	822+00/123	R	1200	2402
L-10	Sodding 8' Wide	S.Y.	816+07	820+00	L		350
	DRAINAGE						
I-4	6" Underdrains	L.F.	810+10	813+75	L&R	710	
"	6" "	L.F.	814+75	822+00	L	730	1440
I-5(or)4	Bend 6" } Angle of Bends to	Ea.	815+05		L	1	
" "	Bend 6" } fit Wyes in Culvert	Ea.	815+15		R	1	2
" "	45°-Bend 6"	Ea.	815+00		L		1
I-14	Paved Gutter Type 1	L.F.	814+45	815+10	L		65



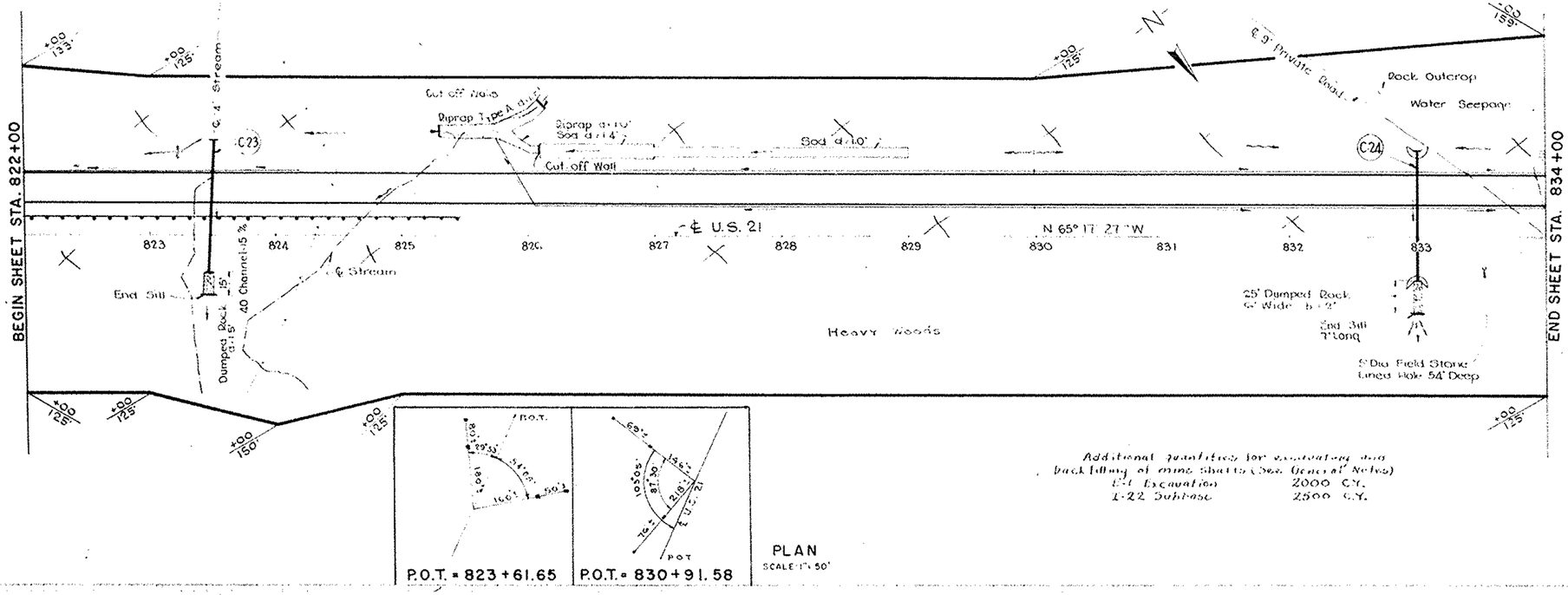
PREPARED AND RECOMMENDED BY
CHARLES E DELEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 810+00 TO STA

DIVISION	STATE	PROJECT	TYPE FUNDS	
2	OHIO	F-1010(4)		27

STA - 21 - 12.39

STRUCTURES 20' SPAN AND UNDER				
MARK	STATION	TYPE	SIZE	DETAIL SHEET
C 23	823+47.5	Pipe Culvert	42"x 106'	136
C 24	833+00	Pipe Culvert	24"x 104'	136

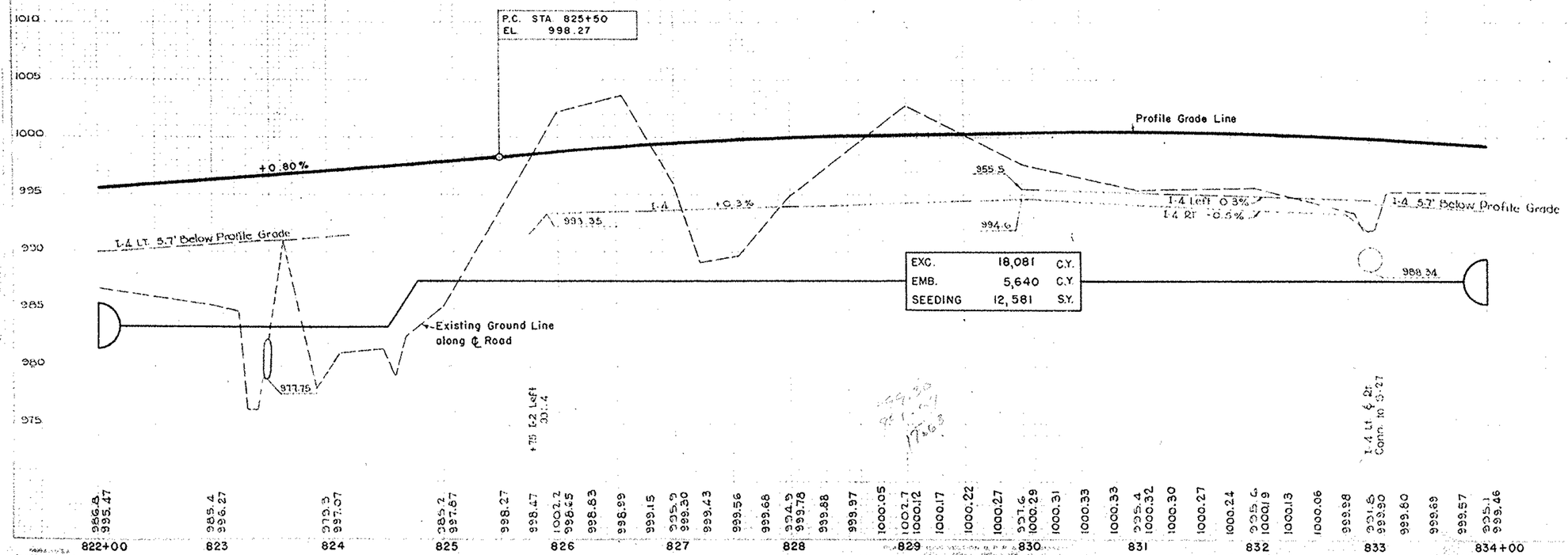


PLAN
SCALE 1" = 50'

Additional quantities for excavation and backfilling of mine shafts (See General Notes)

E-1 Excavation	2000 C.Y.
I-22 Subbase	2500 C.Y.

ESTIMATED QUANTITIES							
ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
I-15	Guard Rail	L.F.	822+00	825+44.11			344.11
I-22	Subbase	C.Y.	822+00	834+00			790
SS-18	Fence	L.F.	822+00/131	823+00/123	L	100	
"	"	"	823+00/123	830+00/123	L	700	
"	"	"	830+00/123	834+00/157	L	401	
"	"	"	822+00/123	823+00/125	R	100	
"	"	"	823+00/123	824+00/148	R	103	
"	"	"	824+00/148	825+00/123	R	103	
"	"	"	825+00/123	834+00/123	R	900	2407
I-10	Bedding 11' Wide	SY.	826+10	827+00	L	110	
"	" 8' Wide	"	827+00	829+00	L	180	290
	DRAINAGE						
I-2	6" Storm Sewer "A" Under Pvmt	L.F.	825+90	826+06	L&R		28
I-2	8" Storm Sewer A	L.F.	825+80	825+90	L		32
I-5 or I-3	8"-6" Wye	Ea.	825+90		L		1
I-5 or I-2	Increaser 6"-8"	Ea.	825+90		L		1
I-4	6" Underdrains	L.F.	822+00	824+20	L	220	
I-4	6" Underdrains	L.F.	825+90	830+00	L&R	800	
I-4	6" Underdrains	L.F.	830+00	833+00	L&R	594	
I-4	6" Underdrains	L.F.	833+05	834+00	L&R	190	1804
I-5 or I-4	60° Bend 6"	Ea.	826+06		R		1
I-5 or I-4	30° Bend 6"	Ea.	832+98		L&R		2
I-10	Riprap Type A	SY.	825+80	826+10	L		120
S-1	Class E Concr for Cut-off Walls	C.Y.	825+30	826+10	L		10
E-2	Excav for Cut-off Walls	C.Y.	825+30	826+10	L		30



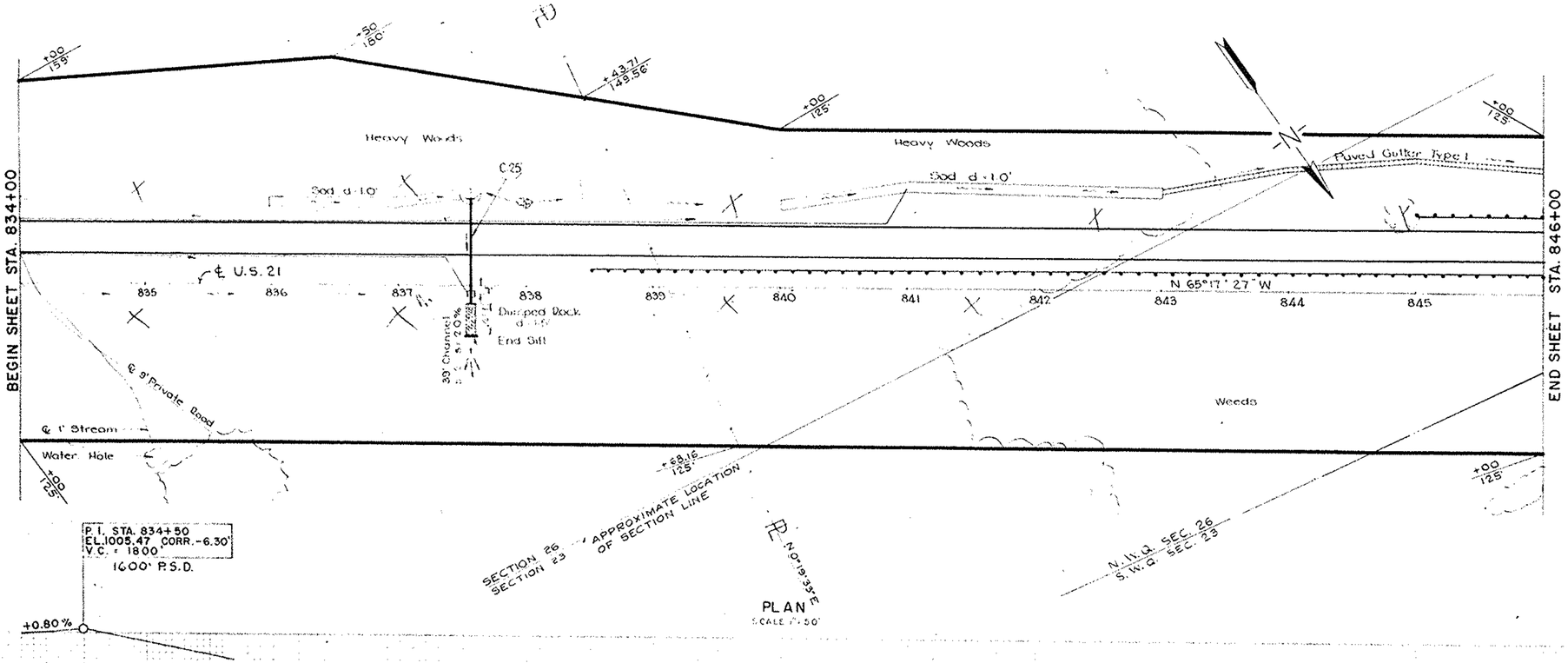
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 822+00 TO STA. 834+0

FED. HIG. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

28

STA - 21 - 12.39



STRUCTURES - 20' SPAN AND UNDER				
MARK	STATION	TYPE	SIZE	DETAIL SHEET
C-25	837+57	PIPE CULVERT	24"x 64'	136

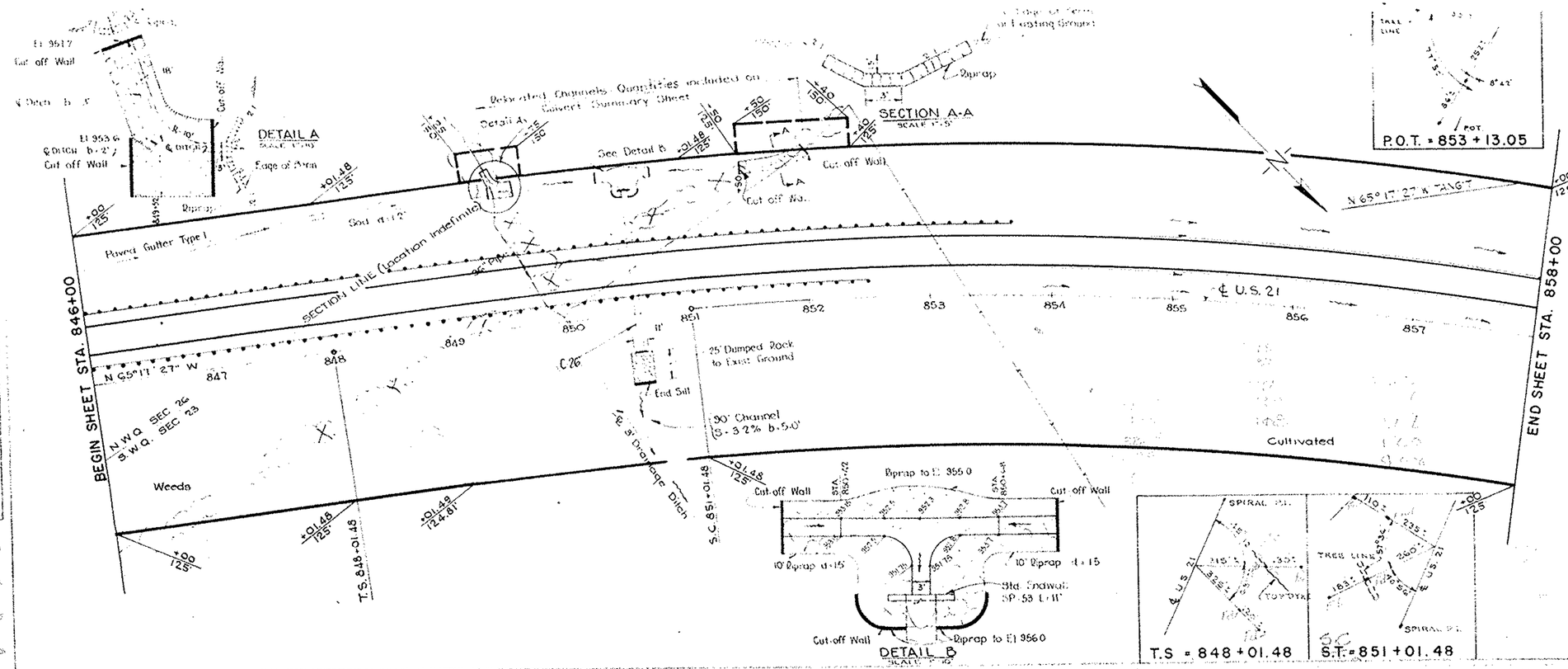
ESTIMATED QUANTITIES							
ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
I-22	Subbase	C.Y.	834+00	846+00			960
I-15	Guard Rail	L.F.	838+50	846+00	R	750	
I-15	" "	L.F.	845+00	846+00	L	100	850
SS-18	Fence	L.F.	834+00/157	836+50/178	L	251	
SS-18	"	L.F.	836+50/178	840+00/123	L	354	
SS-18	"	L.F.	840+00/123	846+00/123	L	600	
SS-18	"	L.F.	834+00/123	846+00/123	R	1200	2405
L-10	Sodding 8' Wide	S.Y.	836+00	837+57	L	140	
L-10	" 8' "	S.Y.	840+00	843+00	L	270	410
	DRAINAGE						
I-4	6" Underdrains	L.F.	834+00	837+57	L&R	714	
I-4	6" "	L.F.	837+57	840+95	L	346	1060
I-4	6" Outlet	L.F.	840+95	841+00	L		10
156-14	60° Bend - 6"	Ea.	837+38		R	1	
" "	" " 6"	Ea.	840+85		L	1	2
" "	30° Bend - 6"	Ea.	837+54		L		1
I-14	Paved Gutter Type I	L.F.	843+00	846+00			300

EXC.	13,606	C.Y.
EMB.	27,474	C.Y.
SEEDING	14,197	S.Y.

DATE
BY
FINAL SURVEY — SURVEYED — PLOTTED — NOTE BOOK — AREAS — AREAS CHECKED
ORIGINAL SURVEY — SURVEYED — PLOTTED — NOTE BOOK — AREAS — AREAS CHECKED

PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 834+00 TO STA. 846+00

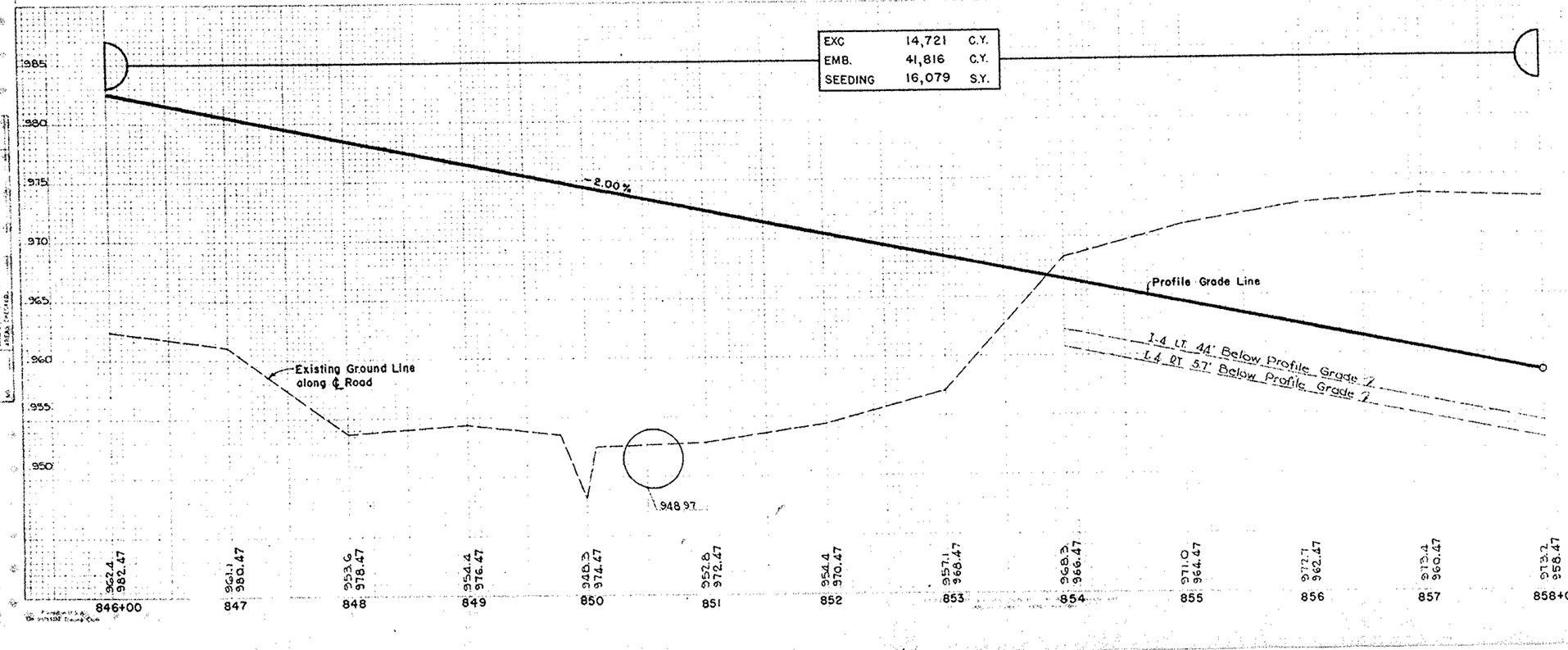


STRUCTURES - 20' SPAN AND UNDER				
MARK	STATION	TYPE	SIZE	DETAIL SHEET
C 26	850 + 55	PIPE CULVERT	60" × 136"	136

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
I-15	Guard Rail	L.F.	846+00	852+48.45	R	650	
I-15	"	L.F.	846+00	853+66.45	L	775	1425
I-22	Subbase	C.Y.	846+00	854+00			890
SS-18	Fence	L.F.	846+00/123	854+00/123	L	1200	
SS-18	"	L.F.	846+00/123	854+00/123	R	1200	2400
L-10	Sodding 7' Wide	S.Y.	846+10	849+47	L		110
			"	"			
	DRAINAGE						
I-4	6" Underdrains	L.F.	854+00	858+00	L&R		800
I-14	Paved Gutter Type I	L.F.	846+00	848+10			210

EXC	14,721	C.Y.
EMB.	41,816	C.Y.
SEEDING	16,079	S.Y.



PREPARED AND RECOMMENDED BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 846+00 TO STA. 858+

DRAWING NO. 5A-343

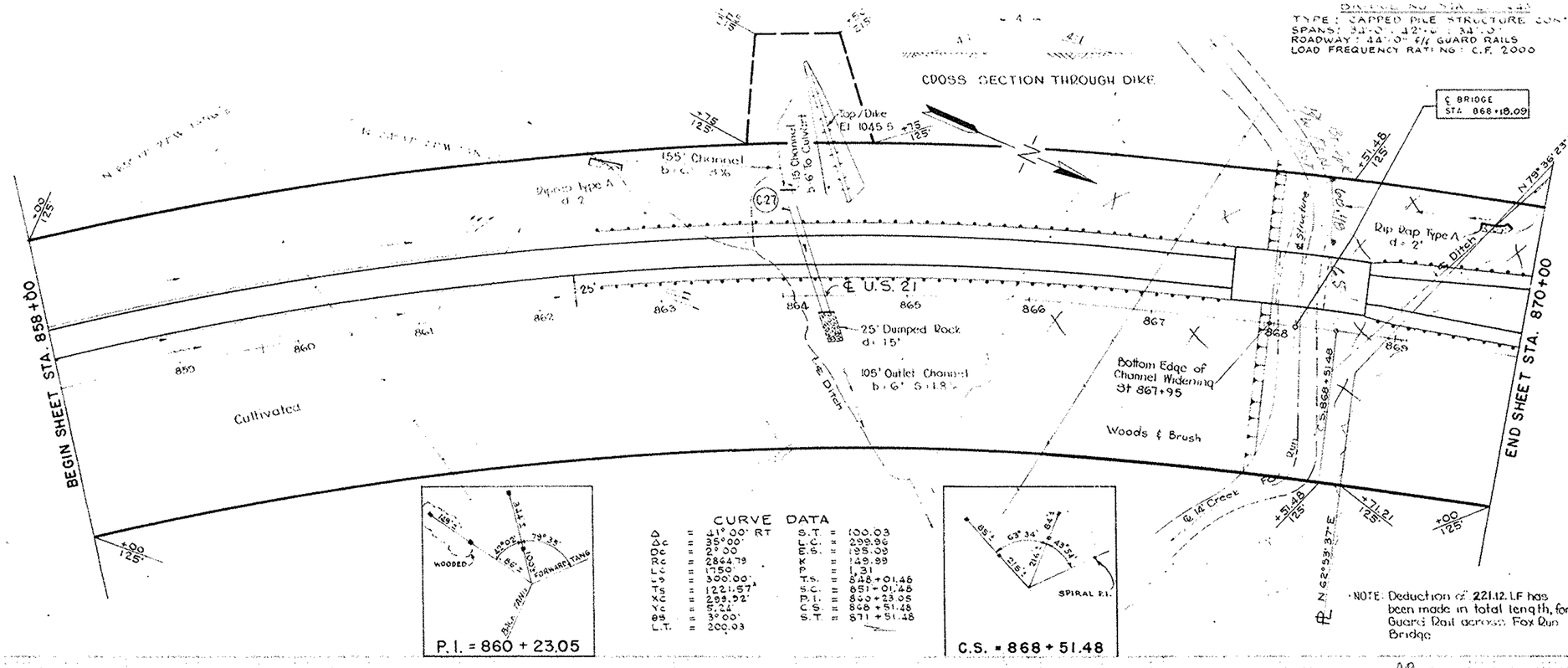
TYPE: CAPPED PILE STRUCTURE CONT. ROCK FILL
SPANS: 33'-0" - 42'-0" - 33'-0"
ROADWAY: 44'-0" f/f GUARD RAILS
LOAD FREQUENCY RATING: C.F. 2000

2	OHIO F-1010(4)		30

STA - 21 - 12.39

STRUCTURE 20' SPAN AND UNDER

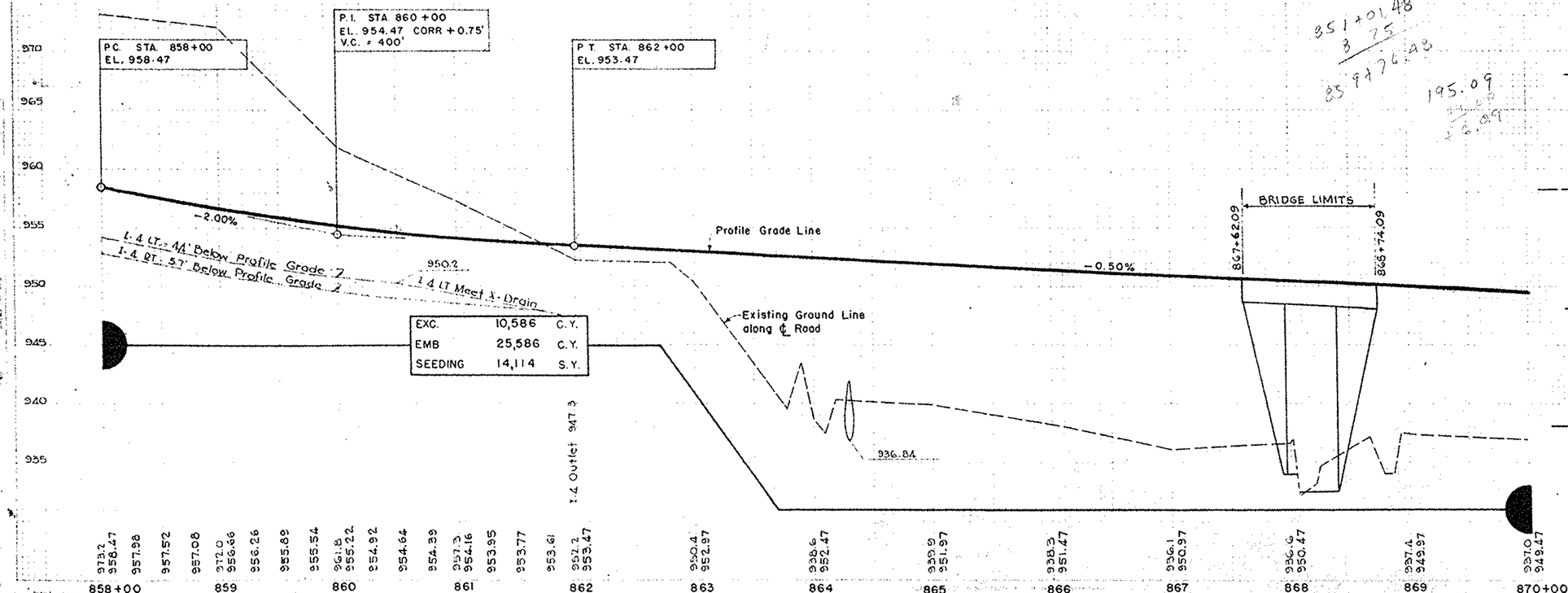
MARK	STATION	TYPE	SIZE	DETAIL SHEET
C 27	864+30	Steel CM Pipe Arch	8'3"x5'1"x100'	136

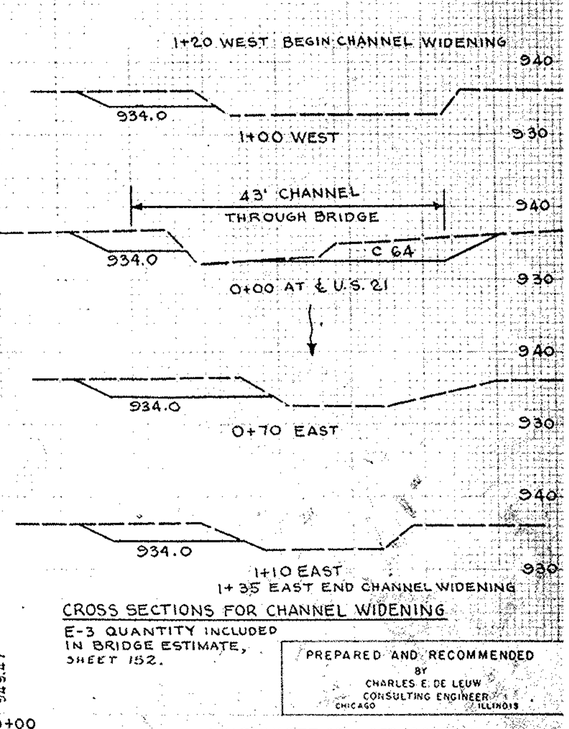


NOTE: Deduction of 221.12 LF has been made in total length, for Guard Rail across Fox Run Bridge

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
I-22	Subbase	C.Y.	858+00	870+00			760
I-15	Guard Rail	L.F.	862+51.86	870+00	R	637.58	
"	" "	"	862+54.62	870+00	L	634.82	1272.40
"	" "	"					
SS-18	Fence	L.F.	858+00/123	867+89/123	L	989	
"	"	"	868+33/123	870+00/123	L	167	
"	"	"	858+00/123	867+89/123	R	989	
"	"	"	868+33/123	870+00/123	R	167	2312
	PAVEMENT						
I-7	2C APPROACH SLAB 10"	S.Y.	867+49.09	867+62.09		40	
I-7	" " " "	S.Y.	868+74.09	868+89.09		40	80
T-71	9" P.C. Pavt. Add'l. Lanes	S.Y.	868+88.81	870+00			135
	DRAINAGE						
I-2	6" Storm Sewer "A" Under Pavt.	L.F.	861+60	861+78	L&R		26
I-2	8" " "A"	"	861+78	861+95	L		32
256M22	6"-8" Increaser	Ea	861+76		L		1
"	8"-6" Wye	"	861+78		L		1
I-4	6" Underdrain	L.F.	858+00	861+78	L&R		738
I-4	8" Outlet	"	861+95	862+00	L		10
256M24	6" 60° Bend	Ea.	861+60		R		1
I-10	Riprap Type A	S.Y.	862+55	862+80	L	13	
"	" " "	"	869+50	869+75	L	13	26
S-1	Cutoff Walls for Riprap	C.Y.	862+55	862+80	L	1.3	
"	" " "	"	869+50	869+75	L	1.3	2.6





CROSS SECTIONS FOR CHANNEL WIDENING

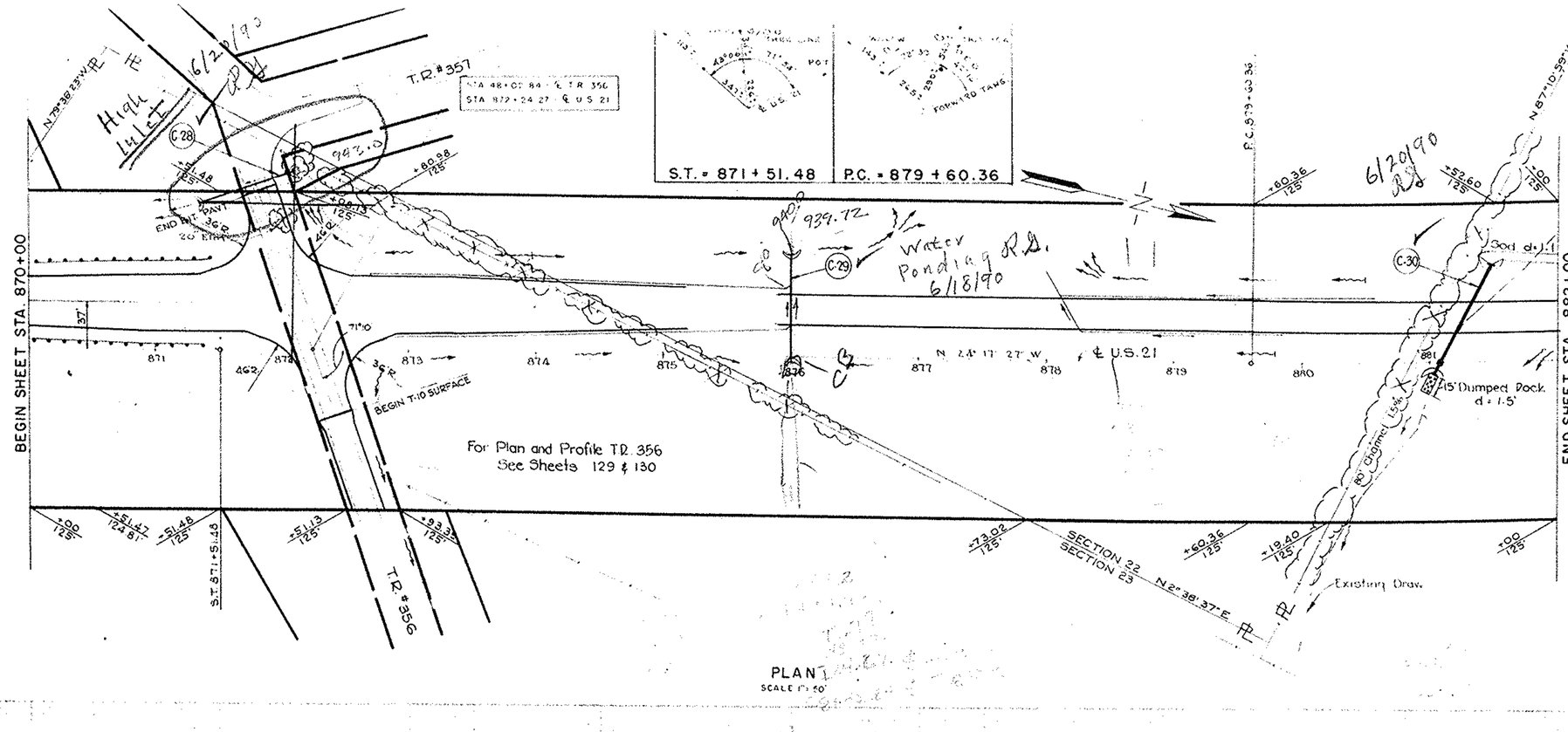
E-3 QUANTITY INCLUDED IN BRIDGE ESTIMATE, SHEET 152.

PREPARED AND RECOMMENDED BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 858+00 TO STA. 870+00

FED. NO. DIVISION	STATE	PROJECT	TYPE FUNDS	31
2	OHIO	F-1010(4)		

STA - 21 + 12.39

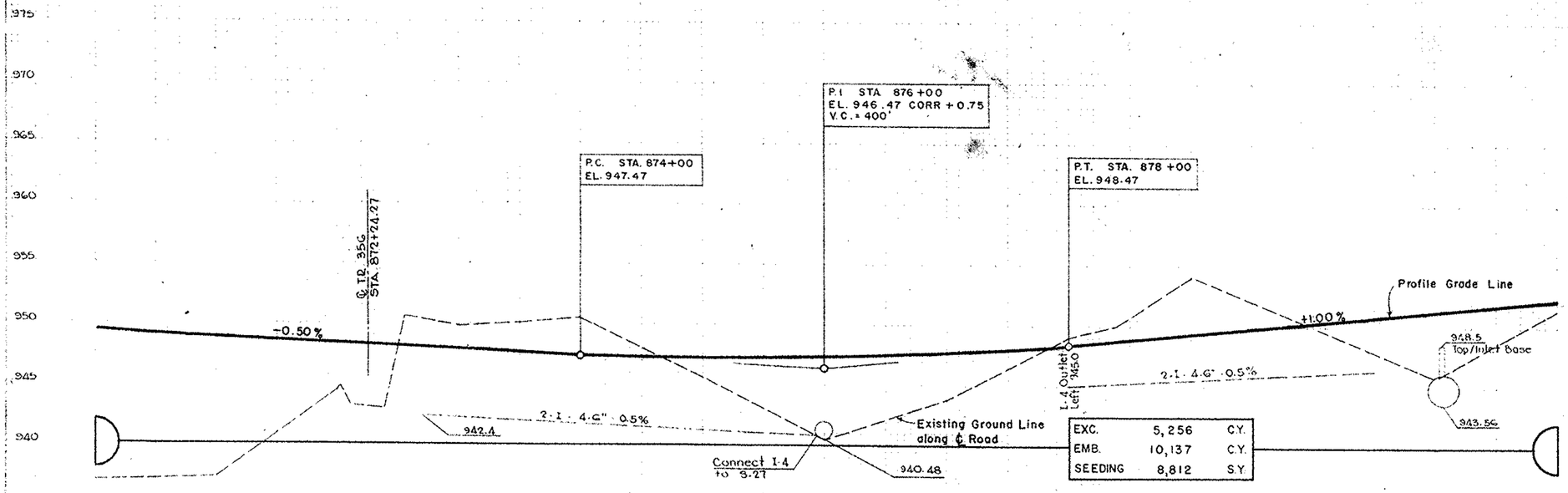


STRUCTURES - 20' SPAN AND UNDER

MARK	STATION	TYPE	SIZE	DETAIL SHEET
C-30	881+06	PIPE CULVERT	30"x 106'	136
C-29	876+00	" "	18"x 84'	136
C-28	46-65 T.R.356	" "	15"x 78'	136

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
E-1	Comp Subgrade	S.Y.	870+00	875+86.65			1740
I-15	Guard Rail	L.F.	870+00	871+39.36	R	139.36	
I-15	" "	L.F.	870+00	871+42.12	L	142.12	281.48
I-22	Subbase	C.Y.	870+00	882+00			1150
SS-18	Fence	L.F.	870+00/23	871+52/23	L	152	
SS-18	"	L.F.	872+09/23	882+00/23	L	991	
SS-18	"	L.F.	870+00/23	872+51/23	R	251	
SS-18	"	L.F.	872+94/23	882+00/23	R	906	2300
L-10	Sodding 9' Wide	C.Y.	881+40	882+00	L		60
	PAVEMENT						
I-12	Curb Type 2A	L.F.	871+47	872+76			296
T-71	9" R.C. Pavt. Add'l.	S.Y.	870+00	875+86.65			1740
	DRAINAGE						
I-2	6" Storm Sewer A Under Pavt.	L.F.	878+00	878+25	ACROSS		36
I-4	6" Underdrains	L.F.	878+10	880+50	L	235	
I-4	6" "	L.F.	878+25	879+80	R	154	
I-4	6" "	L.F.	872+70	876+00	L	330	
I-4	6" "	L.F.	872+70	876+00	R	366	1055
I-4	6" Outlet	L.F.	878+00		L		10
I-5(or)2	6" - Wye	Ea.	878+10		L		1
I-5(or)4	30° Bend - 6"	Ea.	875+98		L	2	
I-5(or)4	60° - 6"	Ea.	878+25		R	1	3

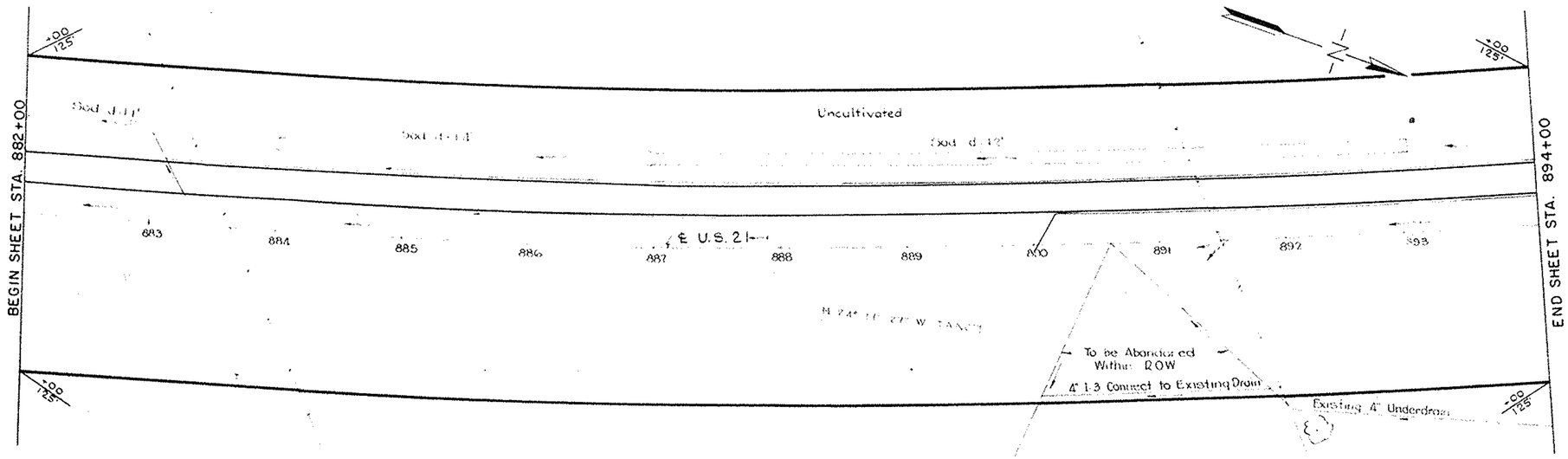


PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
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CHICAGO ILLINOIS

LINE SHEET STA. 870+00 TO STA. 882+00

SEC. NO. DIVISION	STATE	PROJECT	TYPE FUNDS	32
2	OHIO	F-1010(4)		

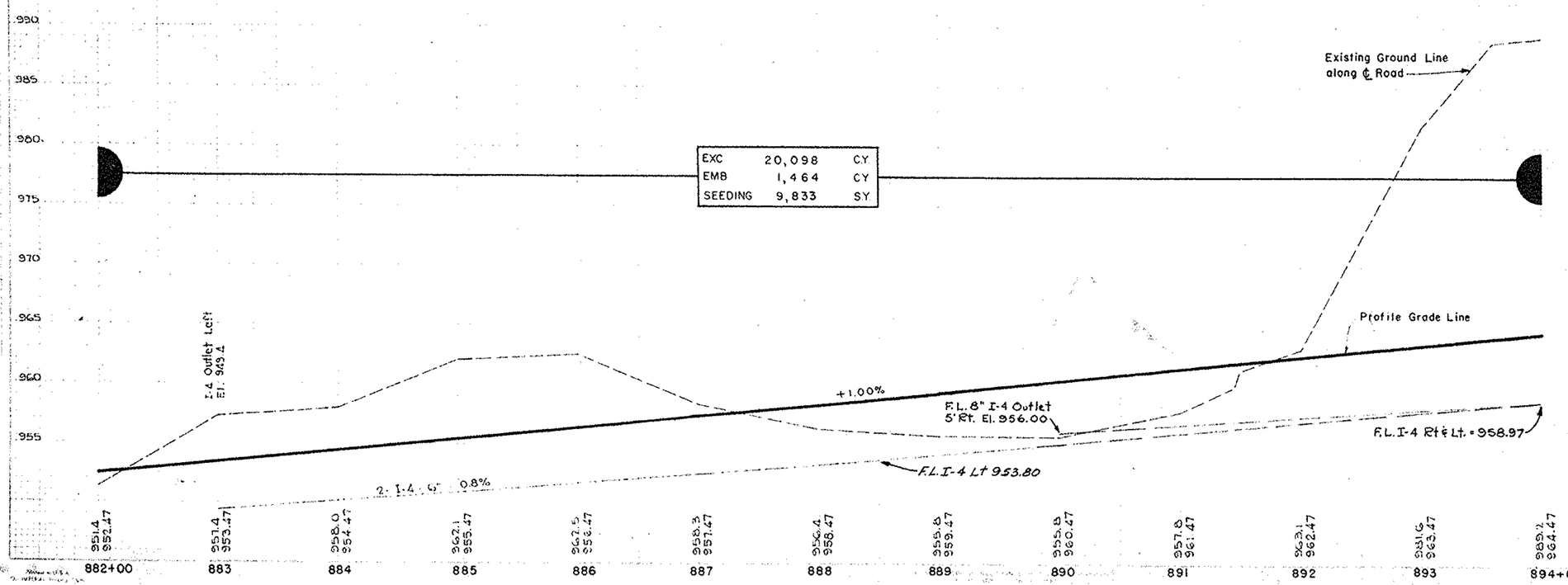
STA - 21 - 12.39



PLAN
SCALE 1"=50'

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
I-22	Subbase	C.Y.	882+00	894+00			805
SS-16	Fence	L.F.	882+00/123	894+00/123	L	1200	
SS-16	"	L.F.	882+00/123	894+00/123	R	1200	2400
L-10	Sodding 9' Wide	C.Y.	882+00	884+00	L	200	
L-10	" 11' "	C.Y.	884+00	887+00	L	370	
L-10	" 10' "	C.Y.	887+00	893+00	L	670	1240
	DRAINAGE						
I-2	8" Storm Sewer A	L.F.	883+05	883+12	L		12
I-2	8" Storm Sewer A Under Pvt	L.F.	883+12	883+25	ACROSS		28
I-3	4" Roadway Drainage	L.F.	890+00	891+90	R		182
I-5or13	45° Bend - 4"	Ea.	891+90		R		1
I-5or13	60° Bend - 4"	Ea.	890+00		R		1
I-4	6" Underdrains	L.F.	883+10	894+00	L	1090	
I-4	6" "	L.F.	883+25	887+50	R	525	2020
I-4	8" Outlet	L.F.	883+00		L	10	20
I-5or12	8"-8" Wye	Ea.	883+12		L		1
I-5or12	Increaser 6"-8"	Ea	883+12		L		1
I-5or14	60° Bend - 6"	Ea.	883+25		R	1	2
I-4	6" Underdrains	L.F	890+06	894+00	R	405	
I-5or14	60° Bend-6"	Ea.	890+17		R	1	
I-4	8" Outlet	L.F	890+00	890+06	R	10	



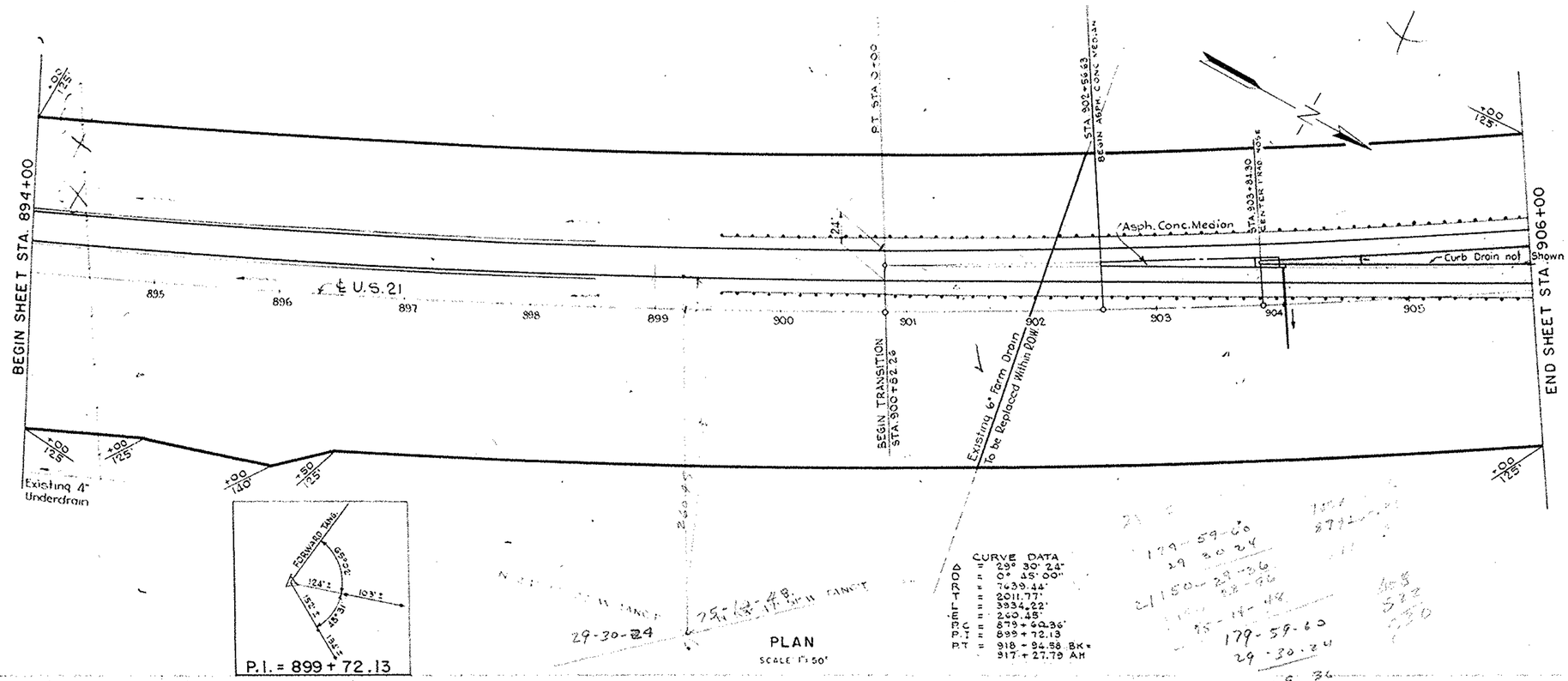
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 882+00 TO STA. 894+00

SHEET NO.	STATE	PROJECT	FED. FUNDS
2	OHIO	F-1010(1)	

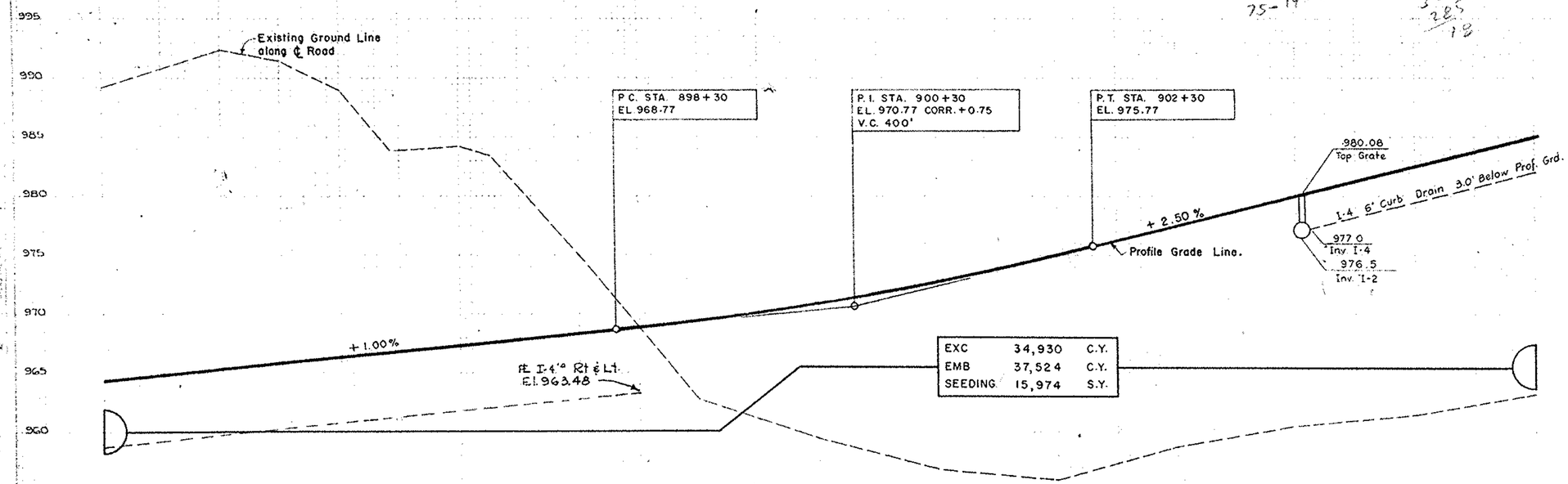
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STA - 21 - 12.39



ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
E-1	Comp Subgrade	S.Y.	900+82.26	906+00			1510
I-15	Guard Rail	L.F.	899+50	906+00	L	645.0	
I-15	Guard Rail	L.F.	899+50	906+00	R	650.0	1295.0
I-18	Shoulder	C.Y.	900+82.26	906+00			75
I-22	Subbase	C.Y.	894+00	906+00			1090
SS-18	Fence	L.F.	894+00/123	906+00/123	L	1200	
SS-18	"	L.F.	894+00/123	895+00/123	R	100	
SS-18	"	L.F.	895+00/123	896+00/138	R	101	
SS-18	"	L.F.	896+00/138	896+50/123	R	52	
SS-18	"	L.F.	896+50/123	906+00/123	R	950	2403
	PAVEMENT						
T-30	Bit. Tack Coat	Gal	902+56.63	903+81.30		5.6	5.6
B-70	PCC Base Course	S.Y.	902+56.63	903+81.30			56
I-12	Type 2A Curb	L.F.	903+96.30	906+00			408
I-21	P.C.C. Median Pavt.	C.Y.	903+81.30	903+96.30			4
I-23	Precast Traffic Div.	Ea.	902+56.63	903+84.30			10
T-35	2" Asph. Conc. Surf.	C.Y.	902+56.63	903+81.30			0.35
T-71	9" R.C. Pavt.	S.Y.	900+82.26	906+00			1510
	DRAINAGE						
I-4	6" Underdrains	L.F.	894+00	898+50	L	450	
I-4	6" Underdrains	L.F.	894+00	898+50	R	450	
I-2	15" Storm Sewer B Under Pavt.	L.F.	904+02.1		R		24
I-2	15" " " B	L.F.	904+02.1		R		42
I-3	6" Roadway Drainage U.F.D.	L.F.	901+50	902+45	L&R		268
I-5&12	30° Bend - 15" Sect. CA(6)	Ea.	904+02.1		R		2
I-8	Catchbasin Type 6	Ea.	904+02.1		L		1
I-4	6" Underdrains	L.F.	904+02.1	906+00	R	198	1098



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CHARLES E DE LEUW
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CHICAGO ILLINOIS

LINE SHEET STA. 894+00 TO STA. 906

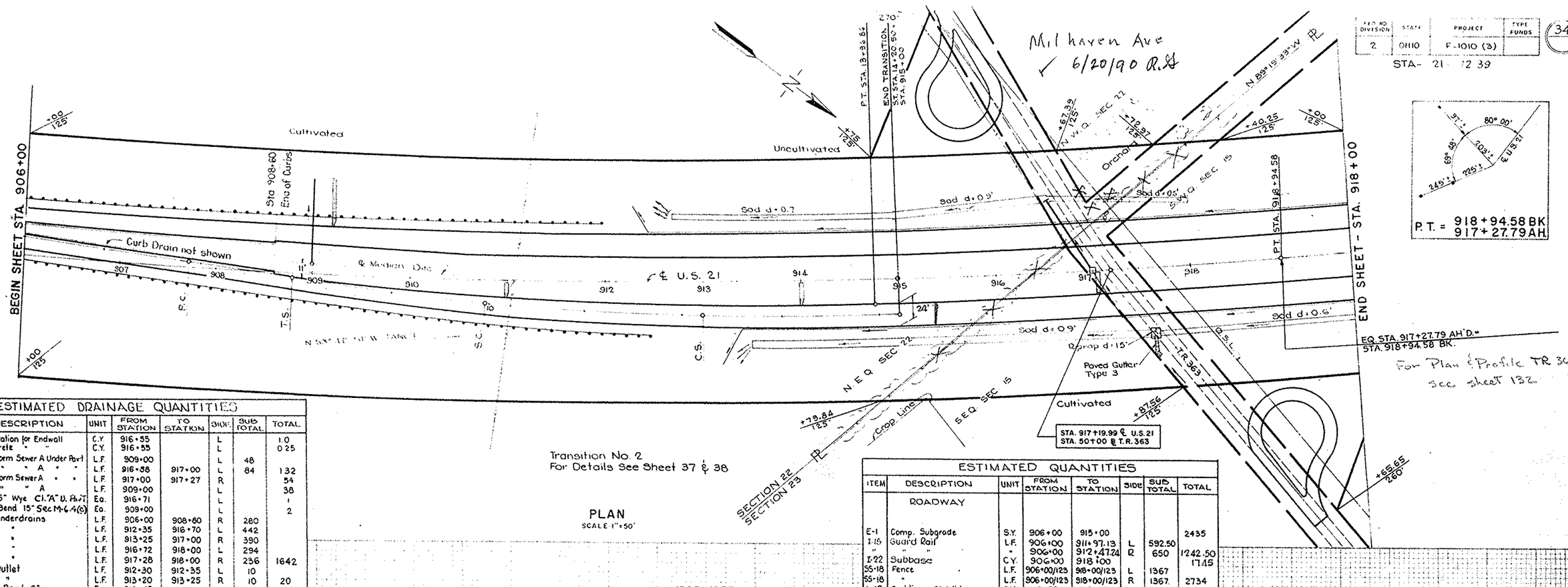
FED. HWY. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (3)	

STA- 21 12 39

34

Milhaven Ave
6/20/90 R.S

P.T. = 918+94.58 BK
917+27.79 AH



For Plan & Profile TR 363
see sheet 132

ESTIMATED DRAINAGE QUANTITIES

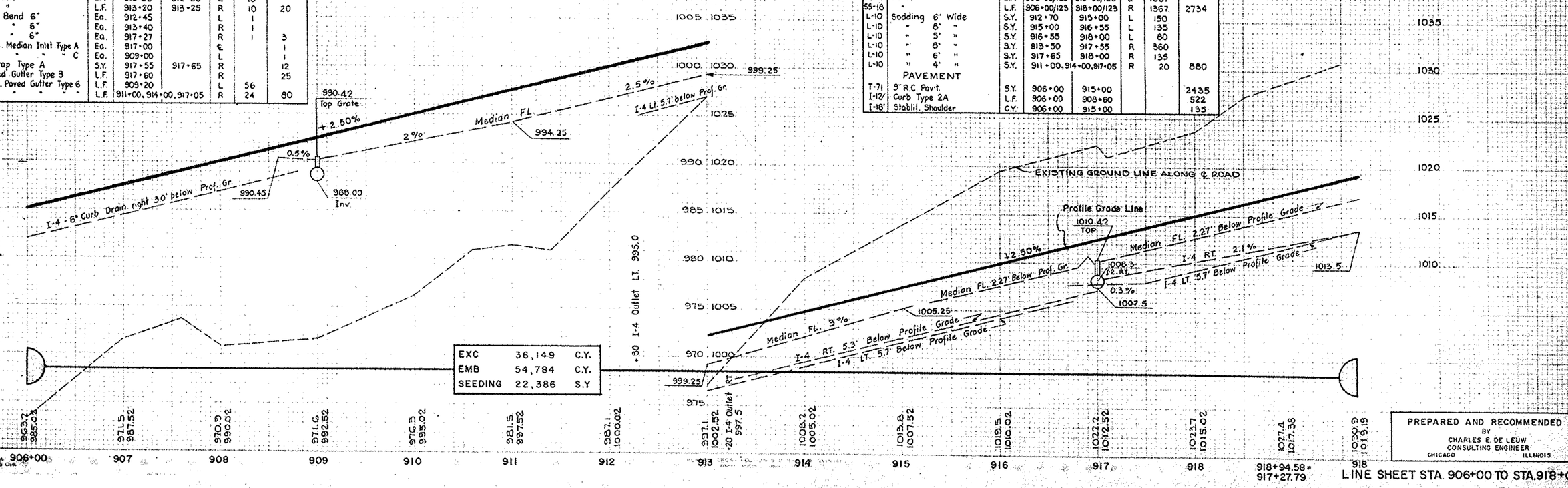
ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
E-2(or)2	Excavation for Endwall	C.Y.	916+55		L		1.0
S-1(or)2	Concrete "	C.Y.	916+55		L		0.25
I-2	15" Storm Sewer A Under Pavt	L.F.	909+00		L	48	
I-2	15" " " A " "	L.F.	916+58	917+00	L	84	132
I-2	6" Storm Sewer A " "	L.F.	917+00	917+27	R		54
I-2	15" " " A	L.F.	909+00		L		38
I-5(or)2	15"-6" Wye Cl. "A" U. Pav't	Ea.	916+71		L		1
I-5(or)2	30° Bend 15" Sec M-6.4(6)	Ea.	909+00		L		2
I-4	6" Underdrains	L.F.	906+00	908+80	R	280	
I-4	6" "	L.F.	912+35	916+70	L	442	
I-4	6" "	L.F.	913+25	917+00	R	390	
I-4	6" "	L.F.	916+72	918+00	L	294	
I-4	6" "	L.F.	917+28	918+00	R	236	1642
I-4	6" Outlet	L.F.	912+30	912+35	L	10	
I-4	6" "	L.F.	913+20	913+25	R	10	20
I-5(or)4	60° Bend 6"	Ea.	912+45		L	1	
I-5(or)4	60° " 6"	Ea.	913+40		R	1	
I-5(or)4	60° " 6"	Ea.	917+27		R	1	3
I-8	Spec. Median Inlet Type A	Ea.	917+00		℄		1
I-8	" " " C	Ea.	909+00		L		1
I-10	Riprap Type A	S.Y.	917+55	917+65	R		12
I-14	Paved Gutter Type 3	L.F.	917+60		R		25
I-14	Spec. Paved Gutter Type 6	L.F.	909+20		L	56	
I-14	" " " "	L.F.	911+00, 914+00, 917+05		R	24	80

Transition No. 2
For Details See Sheet 37 & 38

PLAN
SCALE 1"=50'

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
E-1	Comp. Subgrade	S.Y.	906+00	915+00			2435
I-16	Guard Rail	L.F.	906+00	911+97.13	L	592.50	
"	"	"	906+00	912+47.24	R	650	1242.50
I-22	Subbase	C.Y.	906+00	918+00			1745
S5-18	Fence	L.F.	906+00/123	918+00/123	L	1367	
S5-18	"	L.F.	906+00/123	918+00/123	R	1367	2734
L-10	Sodding 6' Wide	S.Y.	912+70	915+00	L	150	
L-10	" 8' "	S.Y.	915+00	916+55	L	135	
L-10	" 5' "	S.Y.	916+55	918+00	L	80	
L-10	" 8' "	S.Y.	913+30	917+55	R	360	
L-10	" 6' "	S.Y.	917+65	918+00	R	135	
L-10	" 4' "	S.Y.	911+00, 914+00, 917+05		R	20	880
	PAVEMENT						
T-71	9" R.C. Pav't.	S.Y.	906+00	915+00			2435
I-12	Curb Type 2A	L.F.	906+00	908+60			522
I-18	Stablil. Shoulder	C.Y.	906+00	915+00			135



EXC	36,149	C.Y.
EMB	54,784	C.Y.
SEEDING	22,386	S.Y

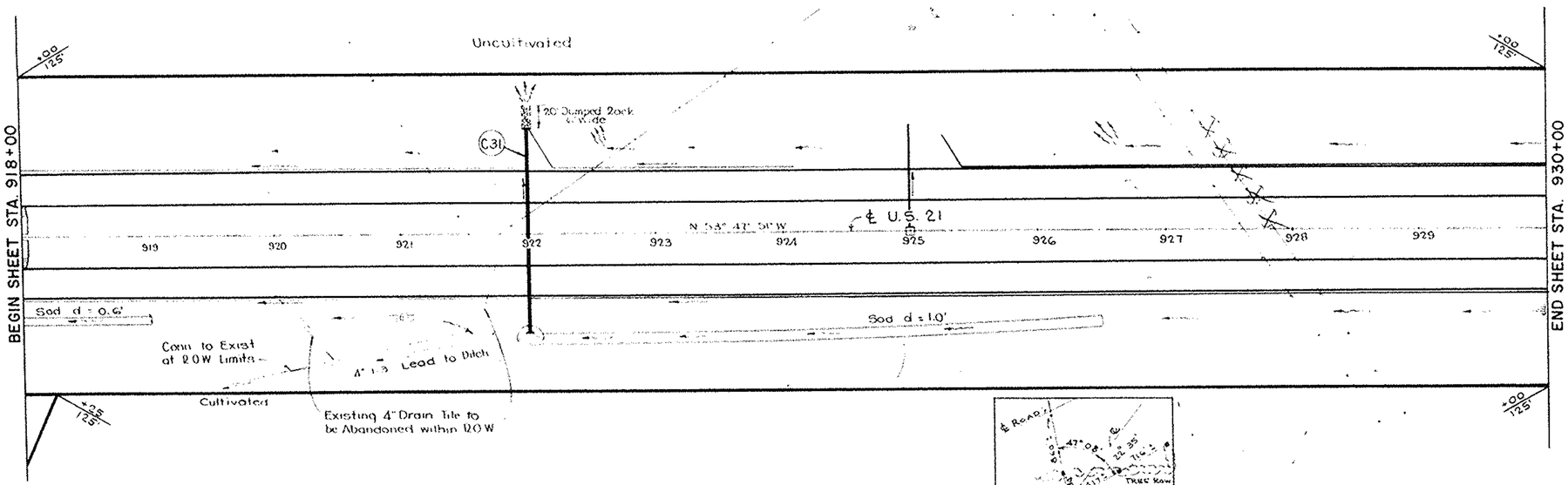
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 906+00 TO STA. 918+00

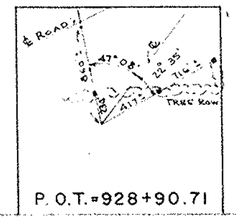
STRUCTURES - 20' SPAN AND UNDER				
MARK	STATION	TYPE	SIZE	DETAIL SHEET
C 31	922+00	PIPE CULVERT	30"x 160'	136

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
I-22	Subbase	C.Y.	918+00	930+00	L&R		1565
SS-18	Fence	L.F.	918+00/123	930+00/123	L	1200	
SS-18	"	L.F.	918+00/123	930+00/123	R	1200	2400
L-10	Sodding 4' Wide	S.Y.	918+00		L&R	15	
L-10	" 6'	S.Y.	918+00	919+00	R	65	
L-10	" 8'	S.Y.	922+00	926+50	R	400	480
	DRAINAGE						
I-2	15" Storm Sewer A Under Pvt	L.F.	925+00		L		82
I-3	4" Roadway Drainage	L.F.	920+08	920+70	R		152
I-3	6" Outlet	L.F.	920+60	920+70	R		10
I-4	6" Underdrains	L.F.	918+00	922+00	L&R	800	
I-4	6" "	L.F.	922+00	924+00	L	214	
I-4	6" "	L.F.	922+00	930+00	R	796	2288
I-5for I-4	30° Bend - 6"	Ea.	922+02		R		1
I-5for I-4	60° Bend - 6"	Ea.	922+22		L	1	
I-8	Spec Median Inlet Type A	Ea.	925+00		L		1
I-14	Spec Paved Gutter Type 6	L.F.	918+00		L&R		16
I-4	6" Underdrains	L.F.	925+31	930+00	L	478	
I-4	8" Outlet	L.F.	925+25	925+31	L		10
I-5for I-4	60° Bend-6"	Ea.	925+40		L	1	2

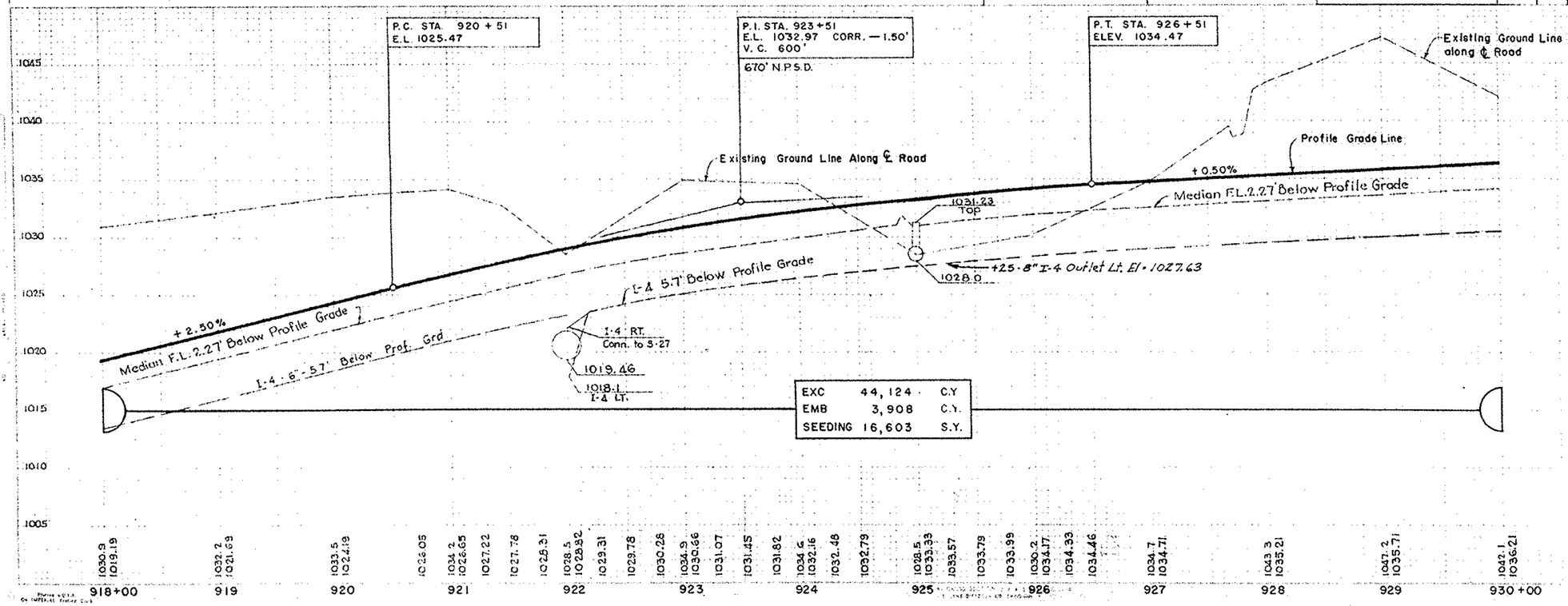


PLAN
SCALE 1" = 50'



P.O.T. = 928+90.71

B.M. # 331 ELEV. 1025.50
RAILROAD SPIKE IN 12" APPLE
225' LT STA 929+00



EXC	44,124	C.Y.
EMB	3,908	C.Y.
SEEDING	16,603	S.Y.

PREPARED AND RECOMMENDED BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

LINE SHEET STA. 918+00 TO STA. 930+0

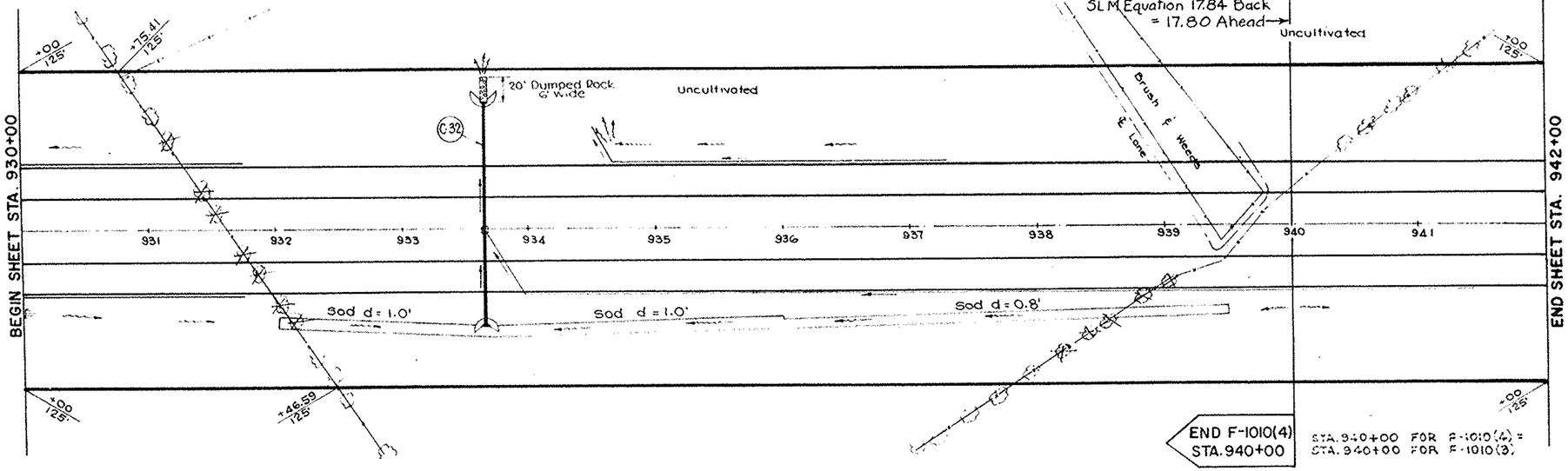
DIVISION	STATE	PROJECT	FUNDS
2	OHIO	F-1010(4)	

36

STA - 21 - 12.39

END PROJECT
STA-21-12.39
STA.940+00
5LM Equation 17.84 Back
= 17.80 Ahead →

ANOTHER PROJECT



END F-1010(4)
STA.940+00

STA.940+00 FOR F-1010(4) =
STA.940+00 FOR F-1010(3)

NOTE : Marker to be furnished and erected on the Left by the State of Ohio before acceptance of this Project.

NOTE: TYPICAL SECTION OF ADJOINING PAVEMENT IS THE SAME AS SHOWN FOR THIS PROJECT.

ALIGNMENT IS TANGENT FOR 1000' BEYOND END OF PROJECT.

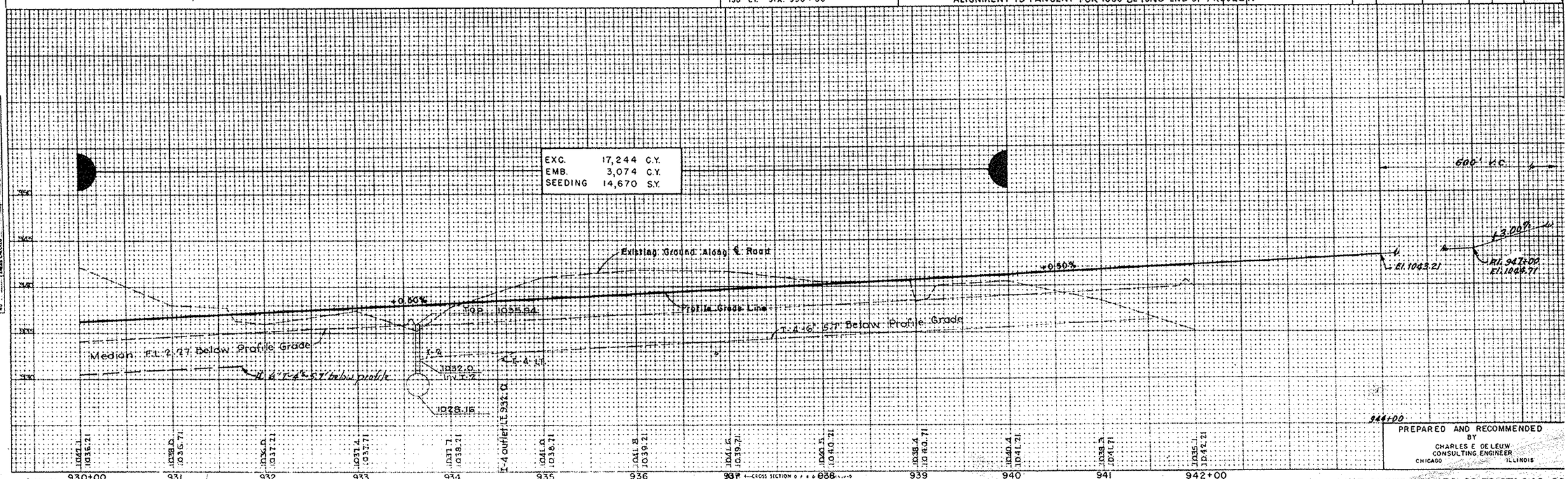
STRUCTURES - 20' SPAN AND UNDER				
MARK	STATION	TYPE	SIZE	DETAILS SHEET
C-32	933+65	PIPE CULVERT	30"x 178'	136

ESTIMATED QUANTITIES							
ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
I-22	Subbase	C.Y.	930+00	940+00	L&R		1360
SS-18	Fence	L.F.	930+00/123	940+00/123	L	1200	
SS-18	"	L.F.	930+00/123	940+00/123	R	1200	2400
L-10	Sodding 9' Wide	S.Y.	932+00	933+65	R	160	
L-10	" 9' "	S.Y.	933+65	936+00	R	230	
L-10	" 7' "	S.Y.	936+00	939+50	R	270	660
	DRAINAGE						
I-2	6" Storm Sewer A Under Pvt.	L.F.	933+65	933+92	R		48
I-4	6" Underdrains	L.F.	933+92	940+00	R	608	
I-4	6" "	L.F.	934+50	937+28	L	290	
I-4	6" Pipe Underdrain Outlet	L.F.	934+50		L		10
15[x]-4	60° Bend - 6"	Ea.	933+92		R	1	
15[x]-4	60° " 6"	Ea.	934+72		L	1	2
I-4	6" Underdrains	L.F.	930+00	931+75	R&L	350	1248

PLAN
SCALE: 1"=50'

B.M.# 332 ELEV. 1027.96
RAIL ROAD SPIKE IN ROOT OF 18" CHERRY
150' LT. STA. 938+00

EXC.	17,244 C.Y.
EMB.	3,074 C.Y.
SEEDING	14,670 S.Y.



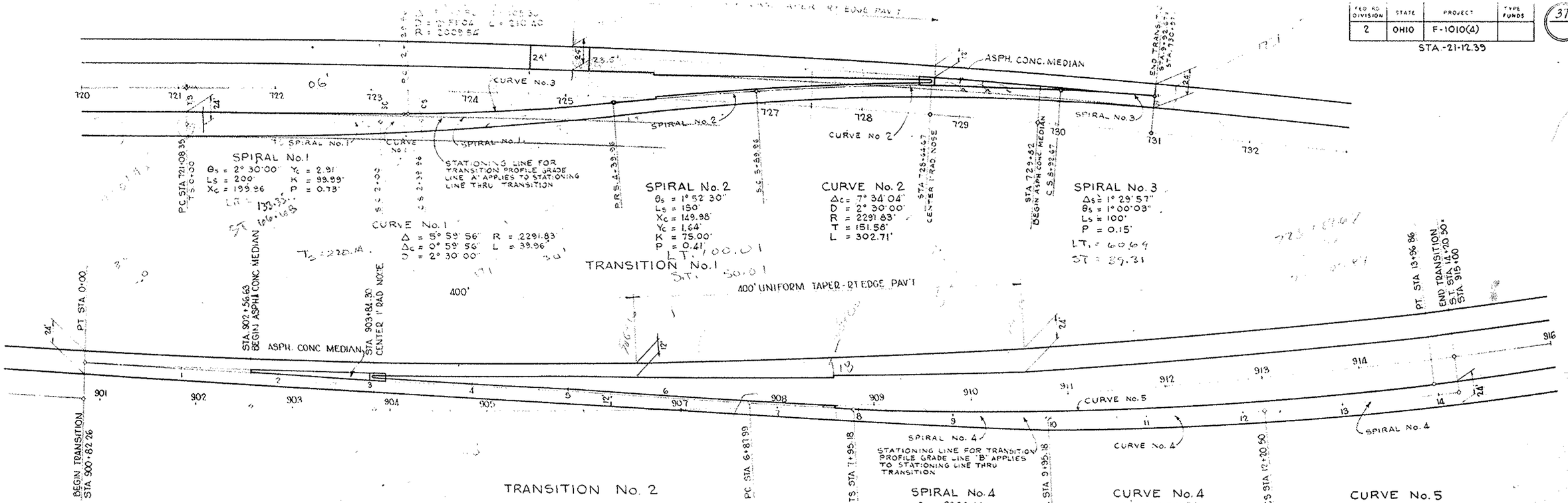
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CHICAGO ILLINOIS

LINE SHEET STA. 930+00 TO STA. 942+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA.-21-12.35

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NOTE: LEFT EDGE AND RIGHT EDGE IN TABLES BELOW REFERS TO N.B. LANE ONLY

TRANSITION No 1

U.S. 21 STATION	TRANS. STATION	LEFT EDGE ± FROM PROFILE GRADE	RIGHT EDGE ± FROM PROFILE GRADE	SUPERELEVATION STA 721+08.35 TO STA 730+97.11 ELEVATION LEFT EDGE	PROFILE GRADE LINE 'A'	ELEVATION RIGHT EDGE
	-0+40	-0.19	-0.19	1075.36	1075.55	1075.36
721+08.35	0+00	-0.19	0	1075.20	1075.39	1075.39
	0+20	-0.19	+0.09	1075.11	1075.30	1075.39
	+40	-0.19	+0.19	1075.01	1075.20	1075.39
	+60	-0.27	+0.29	1074.83	1075.10	1075.39
	+80	-0.36	+0.38	1074.62	1074.98	1075.36
	1+00	-0.44	+0.48	1074.42	1074.86	1075.34
	+20	-0.52	+0.58	1074.21	1074.73	1075.31
	+40	-0.59	+0.67	1074.01	1074.60	1075.27
	+60	-0.68	+0.78	1073.78	1074.46	1075.24
	+80	-0.75	+0.88	1073.55	1074.30	1075.18
	2+00	-0.81	+0.97	1073.33	1074.14	1075.11
	+25.69	-0.77	+0.97	1073.15	1073.92	1074.89
	+39.96	-0.73	+0.97	1073.07	1073.80	1074.77
	+59.96	-0.62	+0.88	1073.00	1073.62	1074.50
	+79.96	-0.49	+0.78	1072.94	1073.43	1074.21
	+99.96	-0.37	+0.68	1072.87	1073.24	1073.92
	3+19.96	-0.27	+0.59	1072.77	1073.04	1073.63
	+39.96	-0.18	+0.49	1072.65	1072.83	1073.32
	+59.96	-0.11	+0.38	1072.52	1072.63	1073.01
	+79.96	-0.06	+0.29	1072.35	1072.41	1072.70
	+99.96	-0.03	+0.19	1072.17	1072.20	1072.39
	4+19.96	-0.01	+0.10	1071.97	1071.98	1072.08
	+39.96	0	0	1071.76	1071.76	1071.76
	+43.83		-0.02		1071.74	1071.69
	+54.96		-0.10		1071.60	1071.50
	+69.96		-0.19		1071.43	1071.24
	+84.96		-0.29		1071.27	1070.98
	+99.96		-0.38		1071.10	1070.62
	5+14.96		-0.49		1070.94	1070.45
	+29.96		-0.59		1070.77	1070.18

TRANSITION No. 1

U.S. 21 STATION	TRANS. STATION	LEFT EDGE ± FROM PROFILE GRADE	RIGHT EDGE ± FROM PROFILE GRADE	SUPERELEVATION STA 721+08.35 TO STA 730+97.11 ELEVATION LEFT EDGE	PROFILE GRADE LINE 'A'	ELEVATION RIGHT EDGE
	+44.96		-0.68		1070.61	1069.93
	+59.96		-0.78		1070.44	1069.66
	+74.96		-0.88		1070.28	1069.40
	5+89.96		-0.97		1070.11	1069.14
	6+00				1070.01	1069.04
	+25.				1069.74	1068.77
	+50				1069.46	1068.49
	+75				1069.19	1068.22
	7+00				1068.91	1067.94
	+25				1068.64	1067.67
	+50				1068.36	1067.39
	7+75				1068.09	1067.12
	8+00				1067.81	1066.84
	8+25				1067.54	1066.57
	8+50				1067.26	1066.28
	8+75				1066.99	1066.02
	8+92.67		-0.97		1066.80	1065.83
	9+02.67		-0.83		1066.69	1065.80
	9+12.67		-0.82		1066.58	1065.76
	+22.67		-0.73		1066.47	1065.74
	+32.67		-0.66		1066.36	1065.70
	+42.67		-0.58		1066.25	1065.67
	+52.67		-0.50		1066.14	1065.64
	+62.67		-0.42		1066.03	1065.61
	+72.67		-0.35		1065.92	1065.57
	+82.67		-0.26		1065.81	1065.55
730+97.11	9+92.67	+0.19	-0.19	1065.89	1065.70	1065.51

END PROFILE GRADE LINE 'A' ELEV. TOP OF PAV'T. @ ℄ PAV'T.

TRANSITION No. 2

U.S. 21 STATION	TRANS. STATION	LEFT EDGE ± FROM PROFILE GRADE	RIGHT EDGE ± FROM PROFILE GRADE	SUPERELEVATION STA. 900+82.26 TO STA. 915+00 ELEVATION LEFT EDGE	PROFILE GRADE LINE 'B'	ELEVATION RIGHT EDGE
900+75	0-07.26	-0.19	+0.39	972.16		972.74
900+82.26	0+00		+0.33		972.59	972.92
901+00	0+17.74		+0.19		972.94	973.13
901+25	0+42.74		+0.19		973.45	973.64
901+50	0+67.74				973.99	974.18
901+75	0+92.74				974.55	974.74
902+00	1+17.74				975.13	975.32
902+30	1+47.74				975.87	976.06
902+56.63	1+74.37				976.54	976.73
902+75	1+92.74				977.00	977.19
903+00	2+17.74				977.62	977.81
903+25	2+42.74				978.25	978.44
903+50	2+67.74				978.87	979.06
903+75	2+92.74				979.50	979.69
903+84.30	3+02.04				979.72	979.91
	3+50				980.92	981.11
	4+00				982.17	982.36
	5+00				984.66	984.85
	6+00				987.16	987.35
	6+87.99	0		989.35	989.35	989.54
	7+00	0		989.45	989.45	989.64
	7+25	-0.01		990.27	990.28	990.47
	7+50	-0.02		990.88	990.90	991.09
	7+75	-0.03		991.50	991.53	991.72
	7+95.18	-0.03	+0.19	992.00	992.03	992.22
	8+15.18	-0.04	+0.27	992.44	992.52	992.79
	8+35.18	-0.10	+0.34	992.92	993.02	993.36
	8+55.18	-0.15	+0.42	993.37	993.52	994.04
	8+75.18	-0.21	+0.50	993.81	994.02	994.52
	8+95.18	-0.28	+0.58	994.24	994.52	995.10
	9+15.18	-0.36	+0.66	994.66	995.02	995.68

TRANSITION No. 2

U.S. 21 STATION	TRANS. STATION	LEFT EDGE ± FROM PROFILE GRADE	RIGHT EDGE ± FROM PROFILE GRADE	SUPERELEVATION STA.900+82.26 TO STA.915+00 ELEVATION LEFT EDGE	PROFILE GRADE LINE 'B'	ELEVATION RIGHT EDGE
	9+35.18	-0.43	-0.74	995.09	995.52	996.26
	9+55.18	-0.54	-0.81	995.48	996.02	996.83
	9+75.18	-0.67	+0.89	995.84	996.51	997.40
	9+95.18	-0.81	+0.97	996.20	997.01	997.98
	10+25	-0.89		996.87	997.76	998.73
	10+50	-0.93		997.45	998.38	999.35
	10+75	-0.95		998.06	999.01	999.98
	11+00	-0.97		998.66	999.63	1000.60
	11+25			999.28	1000.25	1001.22
	11+50			999.91	1000.88	1001.85
	11+75			1000.53	1001.50	1002.47
	12+00			1001.16	1002.13	1003.10
	12+20.50	-0.97	+0.97	1001.67	1002.64	1003.61
	12+40.50	-0.90	+0.90	1002.24	1003.14	1004.04
	12+60.50	-0.84	+0.84	1002.80	1003.64	1004.48
	12+80.50	-0.77	+0.77	1003.36	1004.13	1004.90
	13+00.50	-0.70	+0.70	1003.93	1004.63	1005.33
	13+20.50	-0.63	+0.63	1004.50	1005.13	1005.76
	13+40.50	-0.56	+0.56	1005.07	1005.63	1006.19
	13+60.50	-0.49	+0.49	1005.64	1006.13	1006.62
	13+80.50	-0.42	+0.42	1006.21	1006.63	1007.05
	14+00.50	-0.36	+0.36	1006.77	1007.13	1007.49
915+00	12+20.50	-0.29	+0.29	1007.33	1007.62	1007.91

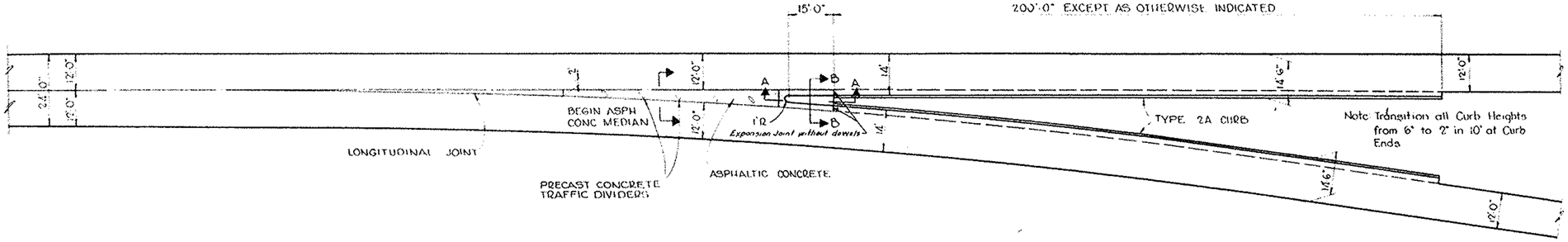
END PROFILE GRADE LINE "B" = ELEV. TOP OF PAVT. AT ℄ PAVT.

PREPARED AND RECOMMENDED BY
CHARLES E. DE LEUW
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CHICAGO ILLINOIS

PAVEMENT TRANSITI

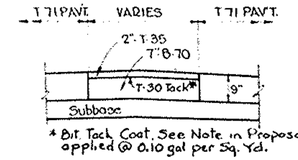
DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA. 21-12.39



TYPICAL PLAN NOSE AT TRANSITION

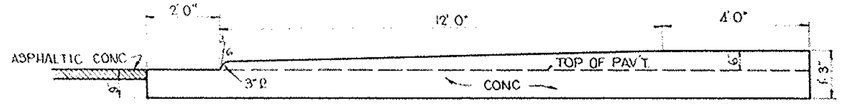
SCALE 1" = 20'-0"



* Bit. Tack Coat. See Note in Proposal applied @ 0.10 gal per Sq. Yd.

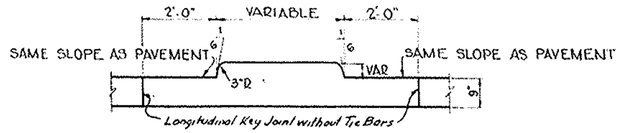
SECTION C-C

SCALE 1" = 2'-0



SECTION A-A

SCALE 1" = 2'-0"



SECTION B-B

SCALE 1" = 2'-0"

PREPARED AND RECOMMENDED
BY
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CHICAGO ILLINOIS

PAVEMENT TRANSITION DETAIL

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

STA 21-12.39

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SUPERELEVATION TABLES

D_c = 1° 15'
ROTATED ABOUT OUTSIDE (MEDIAN) EDGE
(MEDIAN VARIABLE)

SOUTHBOUND LANE
P. I. STA. 674+32.76

STATION	NORMAL PROFILE GRADE	LEFT +OR -FROM PROFILE	LEFT ELEVATION LEFT EDGE	CENTERLINE +OR -FROM PROFILE	CENTERLINE ELEVATION ACTUAL ℄	RIGHT +OR -FROM PROFILE	RIGHT ELEVATION RIGHT EDGE
666 +50	981.56	-0.19	981.37	0	981.56	-0.19	981.37
+75	982.22	-0.25	981.97	-0.06	982.16		982.03
667 +00	982.89	-0.31	982.58	-0.13	982.76		982.70
+25	983.55	-0.38	983.17	-0.19	983.36		983.36
+50	984.19	-0.47	983.72	-0.25	983.94		984.00
+75	984.82	-0.57	984.25	-0.31	984.51		984.63
668 +00	985.42	-0.67	984.75	-0.37	985.05		985.23
+25	986.01	-0.76	985.25	-0.43	985.58		985.82
+50	986.58	-0.86	985.72	-0.49	986.09		986.39
+75	987.13	-0.95	986.18	-0.55	986.58		986.94
669 +00	987.66	-1.05	986.61	-0.61	987.05		987.47
+25	988.17	-1.15	987.02	-0.67	987.50		987.98
+50	988.66		987.51		987.99		988.47
+75	989.14		987.99		988.47		988.97
670 +00	989.59		988.44		988.92		989.40
+25	990.03		988.88		989.36		989.84
+50	990.45		989.30		989.78		990.26
+75	990.84		989.69		990.17		990.65
671 +00	991.22		990.07		990.55		991.03
+25	991.58		990.43		990.91		991.39
+50	991.93		990.78		991.26		991.74
+75	992.25		991.10		991.58		992.06
672 +00	992.55		991.40		991.88		992.36
+25	992.84		991.69		992.17		992.65
+50	993.10		991.95		992.43		992.91
+75	993.35		992.20		992.68		993.16
673 +00	993.58		992.43		992.91		993.39
+25	993.79		992.64		993.12		993.60
+50	993.98		992.83		993.31		993.79
674 +00	994.93		993.18		993.66		994.14
675 +00	995.03		993.88		994.36		994.84
676 +00	995.73		994.58		995.06		995.54
677 +00	996.43		995.28		995.76		996.24
678 +00	997.13		995.98		996.46		996.94
679 +00	997.83		996.68		997.16		997.64
+50	998.18	-1.15	997.03	-0.67	997.51		997.99
+75	998.26	-1.05	997.21	-0.61	997.65		998.07
680 +00	998.53	-0.95	997.58	-0.55	997.98		998.34
+25	998.70	-0.86	997.84	-0.49	998.21		998.51
+50	998.88	-0.76	998.12	-0.43	998.45		998.69
+75	999.06	-0.67	998.39	-0.37	998.69		998.87
681 +00	999.36	-0.57	998.79	-0.31	999.05		999.17
+25	999.50	-0.47	999.03	-0.25	999.25		999.31
+50	999.77	-0.38	999.39	-0.19	999.58		999.58
+75	1000.05	-0.31	999.74	-0.13	999.92		999.86
682 +00	1000.39	-0.25	1000.14	-0.06	1000.33		1000.20
+25	1000.74	-0.19	1000.55	0	1000.74	-0.19	1000.55

D_c = 1° 15'
ROTATED ABOUT INSIDE (MEDIAN) EDGE
(MEDIAN VARIABLE)

NORTHBOUND LANE
P. I. STA. 675+37.50

STATION	NORMAL PROFILE GRADE	LEFT +OR -FROM PROFILE	LEFT ELEVATION LEFT EDGE	CENTERLINE +OR -FROM PROFILE	CENTERLINE ELEVATION ACTUAL ℄	RIGHT +OR -FROM PROFILE	RIGHT ELEVATION RIGHT EDGE
667 +50	984.19	-0.19	984.00	0	984.19	-0.19	984.00
+75	984.82		984.63		984.82	-0.13	984.69
668 +00	985.42		985.23		985.42	-0.06	985.36
+25	986.01		985.82		986.01	0	986.01
+50	986.58		986.39	0	986.58	+0.10	986.68
+75	987.13		986.94	+0.004	987.13	+0.19	987.32
669 +00	987.66		987.47	+0.05	987.71	+0.25	987.95
+25	988.17		987.98	+0.10	988.27	+0.39	988.56
+50	988.66		988.47	+0.15	988.81	+0.48	989.14
+75	989.14		988.95	+0.20	989.34	+0.58	989.72
670 +00	989.59		989.40	+0.24	989.83	+0.68	990.27
+25	990.03		989.84	+0.29	990.32	+0.77	990.80
+50	990.45		990.26		990.74		991.22
+75	990.84		990.65		991.13		991.61
671 +00	991.22		991.03		991.51		991.99
+25	991.58		991.39		991.87		992.35
+50	991.93		991.74		992.22		992.70
+75	992.25		992.06		992.54		993.02
672 +00	992.55		992.36		992.84		993.32
+25	992.84		992.65		993.13		993.61
+50	993.10		992.91		993.39		993.87
+75	993.35		993.16		993.64		994.12
673 +00	993.58		993.39		993.87		994.35
+25	993.79		993.60		994.08		994.56
+50	993.98		993.79		994.27		994.75
674 +00	994.33		994.14		994.62		995.10
675 +00	995.03		994.84		995.32		995.80
676 +00	995.73		995.54		996.02		996.50
677 +00	996.43		996.24		996.72		997.20
678 +00	997.13		996.94		997.42		997.90
679 +00	997.83		997.64		998.12		998.60
680 +00	998.53		998.34		998.82		999.30
+50	998.88		998.69	+0.29	999.17	+0.77	999.65
+75	999.05		998.86	+0.24	999.29	+0.68	999.73
681 +00	999.24		999.05	+0.20	999.44	+0.58	999.82
+25	999.45		999.26	+0.15	999.60	+0.48	999.93
+50	999.69		999.50	+0.10	999.79	+0.39	1000.08
+75	999.85		999.76	+0.05	1000.00	+0.28	1000.24
682 +00	1000.25		1000.06	+0.004	1000.25	+0.19	1000.44
+25	1000.58		1000.39	0	1000.58	+0.10	1000.68
+50	1000.94		1000.75		1000.94	0	1000.94
+75	1001.33		1001.13		1001.33	-0.06	1001.27
683 +00	1001.75		1001.56		1001.75	-0.13	1001.62
+25	1002.19	-0.19	1002.00	0	1002.19	-0.19	1002.00

D_c = 0° - 30'

P. I. STA. 729+20.24

STATION	NORMAL PROFILE GRADE	LEFT +OR -FROM PROFILE	LEFT ELEVATION LEFT EDGE	CENTERLINE +OR -FROM PROFILE	CENTERLINE ELEVATION ACTUAL ℄	RIGHT +OR -FROM PROFILE	RIGHT ELEVATION RIGHT EDGE
NORTHBOUND AND SOUTHBOUND LANES							
720 +00	1075.75	-0.19	1075.56	0	1075.75	-0.19	1075.56
+25	1075.69	-0.13	1075.56		1075.69		1075.50
+50	1075.61	-0.06	1075.55		1075.61		1075.42
+75	1075.52	0	1075.52		1075.52		1075.33
721 +00	1075.42	+0.06	1075.48		1075.42		1075.23
SOUTHBOUND LANE ONLY							
*721 +08.35	1075.39	+0.09	1075.48	0	1075.39	-0.19	1075.20
+25	1075.31	+0.13	1075.44		1075.31		1075.12
+50	1075.19	+0.19	1075.38		1075.19		1075.00
+75	1075.05		1075.24		1075.05		1074.86
722 +00	1074.91		1075.10		1074.91		1074.72
+25	1074.75		1074.94		1074.75		1074.56
+50	1074.58		1074.77		1074.58		1074.39
+75	1074.40		1074.59		1074.40		1074.21
723 +00	1074.21		1074.40		1074.21		1074.02
+25	1074.01		1074.20		1074.01		1074.82
+50	1073.78		1073.97		1073.78		1073.59
+75	1073.56		1073.75		1073.56		1073.37
724 +00	1073.33		1073.52		1073.33		1073.14
+25	1073.08		1073.27		1073.08		1072.89
+50	1072.81		1073.00		1072.81		1072.62
725 +00	1072.27		1072.46		1072.27		1072.08
** +07.67	1072.19		1072.38		1072.19		1072.00
+25	1071.98		1072.17		1071.98	-0.18	1071.80
+50	1071.71		1071.90		1071.71	-0.17	1071.54
+75	1071.44		1071.63		1071.44	-0.15	1071.29
726 +00	1071.17		1071.36		1071.17	-0.14	1071.03
+25	1070.90		1071.09		1070.90	-0.13	1070.77
+50	1070.62		1070.81		1070.62	-0.11	1070.51
+75	1070.35		1070.54		1070.35	-0.10	1070.25
727 +00	1070.07		1070.26		1070.07	-0.09	1069.98
+25	1069.80		1069.99		1069.80	-0.07	1069.73
+50	1069.52		1069.71		1069.52	-0.06	1069.46
+75	1069.25		1069.44		1069.25	-0.05	1069.20
728 +00	1068.97		1069.16		1068.97	-0.04	1068.93
+25	1068.70		1068.89		1068.70	-0.02	1068.68
+50	1068.42		1068.61		1068.42	-0.01	1068.41
** +67.67	1068.23		1068.42		1068.23	0.	1068.23
+75	1068.15		1068.34		1068.15		
729 +00	1067.87		1068.06		1067.87		
+25	1067.60		1067.79		1067.60		
+50	1067.32		1067.51		1067.32		
+75	1067.05		1067.24		1067.05		
730 +00	1066.77		1066.96		1066.77		
SINGLE LANE PAVEMENT							
*730 +97.11	1065.70	+0.19	1065.89	0	1065.70	-0.19	1065.51
731 +00	1065.67		1065.86		1065.67		1065.48
732 +00	1064.57		1064.76		1064.57		1064.38
733 +00	1063.47		1064.66		1063.47		1063.28
734 +00	1062.37		1062.56		1062.37		1062.18
735 +00	1061.27		1061.46		1061.27		1061.08
736 +00	1060.17		1060.36		1060.17		1059.98
+75	1059.34		1059.53		1059.34		1059.15
737 +00	1059.07	+0.13	1059.20		1059.07		1058.88
+25	1058.80	+0.06	1058.86		1058.80		1058.61
+50	1058.52	0	1058.52		1058.52		1058.33
+75	1058.25	-0.06	1058.19		1058.25		1058.06
738 +00	1057.97	-0.13	1057.84		1057.97		1057.78
+25	1057.70	-0.19	1057.51		1057.70		1057.51

STATION	NORMAL PROFILE GRADE	LEFT +OR -FROM PROFILE	LEFT ELEVATION LEFT EDGE	CENTERLINE +OR -FROM PROFILE	CENTERLINE ELEVATION ACTUAL ℄	RIGHT +OR -FROM PROFILE	RIGHT ELEVATION RIGHT EDGE

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

STA 21-12.39

SUPERELEVATION TABLES

$D_c = 2°-00'$

ROTATED ABOUT OUTER EDGE (FUTURE MEDIAN EDGE)

SINGLE LANE
P.I. STA. 808+97.04

	STATION	NORMAL PROFILE GRADE	LEFT +OR -FROM PROFILE	LEFT ELEVATION LEFT EDGE	CENTERLINE +OR -FROM PROFILE	CENTERLINE ELEVATION ACTUAL ℄	RIGHT +OR -FROM PROFILE	RIGHT ELEVATION RIGHT EDGE
	798+32.55	976.53	-0.19	976.34	0	976.53	-0.19	976.34
	+57.55	976.73	-0.25	976.48	-0.06	976.67		976.54
	+82.55	976.93	-0.31	976.62	-0.13	976.80		976.74
T.S.	799+07.55	977.13	-0.38	976.75	-0.19	976.94		976.94
	+37.55	977.37	-0.51	976.86	-0.27	977.10		977.18
	+67.55	977.61	-0.65	976.96	-0.34	977.27		977.42
	+97.55	977.85	-0.78	977.07	-0.42	977.43		977.66
	800+27.55	978.09	-0.92	977.17	-0.50	977.59		977.90
	+57.55	978.33	-1.05	977.28	-0.57	977.76		978.14
	+87.55	978.57	-1.19	977.38	-0.65	977.92		978.38
	801+17.55	978.81	-1.32	977.49	-0.73	978.08		978.62
	+47.55	979.05	-1.46	977.59	-0.80	978.25		978.86
	+77.55	979.29	-1.59	977.70	-0.88	978.41		979.10
S.C.	802+07.55	979.53	-1.72	977.81	-0.96	978.57		979.34
	803+00	980.27		978.55		979.31		980.08
	804+00	981.07		979.35		980.11		980.88
	805+00	981.87		980.15		980.91		981.68
	806+00	982.67		980.95		981.71		982.48
	807+00	983.47		981.75		982.51		983.28
	808+00	984.27		982.55		983.31		984.08
	809+00	985.07		983.35		984.11		984.88
	810+00	985.87		984.15		984.91		985.68
	811+00	986.67		984.95		985.71		986.48
	812+00	987.47		985.75		986.51		987.28
	813+00	988.27		986.55		987.31		988.08
	814+00	989.07		987.35		988.11		988.88
	815+00	989.87		988.15		988.91		989.68
C.S.	+40.05	990.19		988.47		989.23		990.00
	+70.05	990.43	-1.59	988.84	-0.88	989.55		990.24
	816+00.05	990.67	-1.46	989.21	-0.80	989.87		990.48
	+30.05	990.91	-1.32	989.59	-0.73	990.18		990.72
	+60.05	991.15	-1.19	989.96	-0.65	990.50		990.96
	+90.05	991.39	-1.05	990.34	-0.57	990.82		991.20
	817+20.05	991.63	-0.92	990.71	-0.50	991.13		991.44
	+50.05	991.87	-0.78	991.09	-0.42	991.45		991.68
	+80.05	992.11	-0.65	991.46	-0.34	991.77		991.92
	818+10.05	992.35	-0.51	991.84	-0.27	992.08		992.16
S.T.	+40.05	992.59	-0.38	992.21	-0.19	992.40		992.40
	+65.05	992.79	-0.31	992.48	-0.13	992.66		992.60
	+90.05	992.99	-0.25	992.74	-0.06	992.93		992.80
	819+15.05	993.19	-0.19	993.00	0	993.19		993.00

$D_c = 2°-00'$

ROTATED ABOUT FUTURE MEDIAN EDGE.

SINGLE LANE
P.I. STA. 860+23.05

	STATION	NORMAL PROFILE GRADE	LEFT +OR -FROM PROFILE	LEFT ELEVATION LEFT EDGE	CENTERLINE +OR -FROM PROFILE	CENTERLINE ELEVATION ACTUAL ℄	RIGHT +OR -FROM PROFILE	RIGHT ELEVATION RIGHT EDGE
	847+26.48	979.94	-0.19	979.75	0	979.94	-0.19	979.75
	+51.48	979.44	-0.13	979.31		979.43		979.25
	+76.48	978.94	-0.06	978.88		978.93		978.75
T.S.	848+01.48	978.44	0	978.44		978.43		978.25
	+31.48	977.84	+0.14	977.98		977.83		977.65
	+61.48	977.24	+0.27	977.51	+0.04	977.27		977.05
	+91.48	976.64	+0.41	977.05	+0.11	976.74		976.45
	849+21.48	976.04	+0.54	976.58	+0.18	976.21		975.25
	+51.48	975.44	+0.68	976.12	+0.24	975.67		975.25
	+81.48	974.84	+0.81	975.65	+0.31	975.14		974.65
	850+11.48	974.24	+0.95	975.19	+0.38	974.61		974.05
	+41.48	973.64	+1.08	974.72	+0.45	974.08		973.45
	+71.48	973.04	+1.22	974.26	+0.51	973.54		972.85
S.C.	851+01.48	972.44	+1.35	973.79	+0.58	973.01		972.25
	852+00	970.47		971.82		971.04		970.28
	853+00	968.47		969.82		969.04		968.28
	854+00	966.47		967.82		967.04		966.28
	855+00	964.47		965.82		965.04		964.28
	856+00	962.47		963.82		963.04		962.28
	857+00	960.47		961.82		961.04		960.28
	858+00	958.47		959.82		959.04		958.28
	+25	957.98		959.43		958.55		957.79
	+50	957.52		958.87		958.09		957.33
	+75	957.08		958.43		957.65		956.89
	859+00	956.66		958.01		957.23		956.47
	+25	956.26		957.61		956.83		956.07
	+50	955.89		957.24		956.46		955.70
	+75	955.54		956.89		956.11		955.35
	860+00	955.22		956.57		955.79		955.03
	+25	954.92		956.27		955.39		954.73
	+50	954.64		955.99		955.21		954.45
	+75	954.39		955.74		954.96		954.20
	861+00	954.16		955.51		954.73		953.97
	+25	953.95		955.30		954.53		953.76
	+50	953.77		955.12		954.34		953.58
	+75	953.61		954.96		954.18		953.42
	862+00	953.47		954.82		954.04		953.28
	863+00	952.97		954.32		953.54		952.78
	864+00	952.47		953.82		953.04		952.28
	865+00	951.97		953.32		952.54		951.78
	866+00	951.47		952.82		952.04		951.28
	867+00	950.97		952.32		951.54		950.78
	868+00	950.47		951.82		951.04		950.28
C.S.	+51.48	950.21		951.56		950.78		950.02
	+81.48	950.06	+1.22	951.28	+0.51	950.56		949.87
	869+11.48	949.91	+1.08	950.99	+0.45	950.35		949.72
	+41.48	949.76	+0.95	950.71	+0.38	950.13		949.57
	+71.48	949.61	+0.81	950.42	+0.31	949.91		949.42
	870+01.48	949.46	+0.68	950.14	+0.24	949.69		949.27
	+31.48	949.31	+0.54	949.85	+0.18	949.48		949.12
	+61.48	949.16	+0.41	949.57	+0.11	949.26		948.97
	+91.48	949.01	+0.27	949.28	+0.04	949.04		948.82
	871+21.48	948.86	+0.14	949.00	0	948.85		948.67
S.T.	+51.48	948.71	0	948.71		948.70		948.52
	+76.48	948.58	-0.06	948.52		948.58		948.39
	872+01.48	948.46	-0.13	948.33		948.45		948.27
	+26.48	948.33	-0.19	948.14		948.33		948.14

$D_c = 0°-45'$

ROTATED ABOUT INSIDE EDGE

SINGLE LANE
P.I. STA. 899+72.13

	STATION	NORMAL PROFILE GRADE	LEFT +OR -FROM PROFILE	LEFT ELEVATION LEFT EDGE	CENTERLINE +OR -FROM PROFILE	CENTERLINE ELEVATION ACTUAL ℄	RIGHT +OR -FROM PROFILE	RIGHT ELEVATION RIGHT EDGE
	878+25	948.72	-0.19	948.53	0	948.72	-0.19	948.53
	+50	948.97		948.78		948.97	-0.13	948.84
	+75	949.22		949.03		949.22	-0.06	949.16
	879+00	949.47		949.28		949.47	0	949.47
	+25	949.72		949.53		949.72	+0.10	949.82
P.C.	+50	949.97		949.78	+0.04	950.01	+0.19	950.16
	+75	950.22		950.03	+0.05	950.27	+0.29	950.51
	880+00	950.47		950.28	+0.10	950.57	+0.39	950.86
	881+00	951.47		951.28		951.57		951.86
	882+00	952.47		952.28		952.57		952.86
	883+00	953.47		953.28		953.57		953.86
	884+00	954.47		954.28		954.57		954.86
	885+00	955.47		955.28		955.57		955.86
	886+00	956.47		956.28		956.57		956.86
	887+00	957.47		957.28		957.57		957.86
	888+00	958.47		958.28		958.57		958.86
	889+00	959.47		959.28		959.57		959.86
	890+00	960.47		960.28		960.57		960.86
	891+00	961.47		961.28		961.57		961.86
	892+00	962.47		962.28		962.57		962.86
	893+00	963.47		963.28		963.57		963.86
	894+00	964.47		964.28		964.57		964.86
	895+00	965.47		965.28		965.57		965.86
	896+00	966.47		966.28		966.57		966.86
	897+00	967.47		967.28		967.57		967.86
	898+00	968.47		968.28		968.57		968.86
	+50	968.98		968.79		969.08		969.36
	+75	969.26		969.07		969.36		969.65
	899+00	969.56		969.37		969.66		969.95
	+25	969.89		969.70		969.99		970.28
	+50	970.22		970.03		970.32		970.61
	+75	970.59		970.40		970.69		970.98
	900+00	970.98		970.79		971.08		971.37
	+25	971.40		971.21		971.50		971.79
	+50	971.88		971.69		971.98		972.27
	+75	972.35		972.16		972.45		972.74

SOUTHBOUND LANE ONLY

	STATION	NORMAL PROFILE GRADE	LEFT +OR -FROM PROFILE	LEFT ELEVATION LEFT EDGE	CENTERLINE +OR -FROM PROFILE	CENTERLINE ELEVATION ACTUAL ℄	RIGHT +OR -FROM PROFILE	RIGHT ELEVATION RIGHT EDGE
*	900+82.26	972.49	-0.19	972.30	+0.10	972.59		
	901+00	972.84		972.65		972.94		
	+25	973.35		973.16		973.45		
	+50	973.89		973.70		973.99		
	+75	974.45		974.26		974.55		
	902+00	975.03		974.84		975.13		
	+25	975.64		975.45		975.74		
	+50	976.27		976.08		976.37		
	+75	976.90		976.71		977.00		
	903+00	977.52		977.33		977.62		
	+25	978.15		977.96		978.25		
	+50	978.77		978.58		978.87		
	+75	979.40		979.21		979.50		
	904+00	980.02		979.83		980.12		
	+25	980.65		980.46		980.75		
	+50	981.27		981.08		981.37		
	+75	981.90		981.71		982.00		
	905+00	982.52		982.33		982.62		
	+25	983.15		982.96		983.25		
	+50	983.77		983.58		983.87		
	+75	984.40		984.21		984.50		
	906+00	985.02		984.83		985.12		

SINGLE LANE (Con't)
P.I. STA. 899+72.13

	STATION	NORMAL PROFILE GRADE	LEFT +OR -FROM PROFILE	LEFT ELEVATION LEFT EDGE	CENTERLINE +OR -FROM PROFILE	CENTERLINE ELEVATION ACTUAL ℄	RIGHT +OR -FROM PROFILE	RIGHT ELEVATION RIGHT EDGE
	906+25	985.65	-0.19	985.46	+0.10	985.75		
	+50	986.27		986.08		986.37		
**	+56.63	986.44		986.25		986.54		
	+75	986.90		986.71		987.00	+0.11	987.01
	907+00	987.52		987.33		987.62	+0.13	987.65
	+25	988.15		987.96		988.25	+0.15	988.30
	+50	988.77		988.58		988.87	+0.17	988.94
	+75	989.40		989.21		989.50	+0.19	989.59
	908+00	990.02		989.83		990.12	+0.20	990.22
	+25	990.65		990.46		990.75	+0.22	990.87
	+50	991.27		991.08		991.37	+0.24	991.51
	+75	991.90		991.71		992.00	+0.26	992.16
	909+00	992.52		992.33		992.62	+0.28	992.80
	+25	993.15		992.96		993.25	+0.29	993.44
	+50	993.77		993.58		993.87	+0.31	994.08
	+75	994.40		994.21		994.50	+0.33	994.73
	910+00	995.02		994.83		995.12	+0.35	995.37
	+25	995.65		995.46		995.75	+0.37	996.02
	+50	996.27		996.08		996.37	+0.39	996.66
**	+56.63	996.44		996.25		996.54	+0.39	996.83
	911+00	997.52		997.33		997.61		997.91
	912+00	1000.02		999.83		1000.12		1000.41
	913+00	1002.52		1002.33		1002.62		1002.91
	914+00	1005.02		1004.83		1005.12		1005.41
*	915+00	1007.52		1007.33		1007.62		1007.91

NORTHBOUND AND SOUTHBOUND LANES

STATION	NORMAL PROFILE GRADE	LEFT +OR -FROM PROFILE	LEFT ELEVATION LEFT EDGE	CENTERLINE +OR -FROM PROFILE	CENTERLINE ELEVATION ACTUAL ℄	RIGHT +OR -FROM PROFILE	RIGHT ELEVATION RIGHT EDGE
916+00	1010.02	-0.19	1009.83	+0.10	1010.12	+0.39	1010.41
917+00	1012.52		1012.33		1012.62		1012.91
918+00	1015.02		1014.83		1015.12		1015.41
+41.79	1016.06		1015.87		1016.16		1016.45
+66.79	1016.69		1016.50	+0.05	1016.74	+0.29	1016.98
+91.79	1017.31		1017.12	+0.04	1017.35	+0.19	1017.50

STATION EQUATION -918+94.58 BACK = 917+27.79 AHEAD

917+50	1017.94	-0.19	1017.75	0	1017.94	+0.10	1018.04
+75	1018.57		1018.38		1018.57	0	1018.57
918+00	1019.19		1019.00		1019.19	-0.06	1019.13
+25	1019.82		1019.63		1019.82	-0.13	1019.69
+50	1020.44		1020.25		1020.44	-0.19	1020.25

* LIMITS OF TRANSITION No.2 2 LANE TO 4 LANE PAVEMENT FOR ELEVATIONS ON TRANSITION PAVEMENT, SEE SHEET

** LIMITS OF TAPER RIGHT EDGE SOUTHBOUND LANE

PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

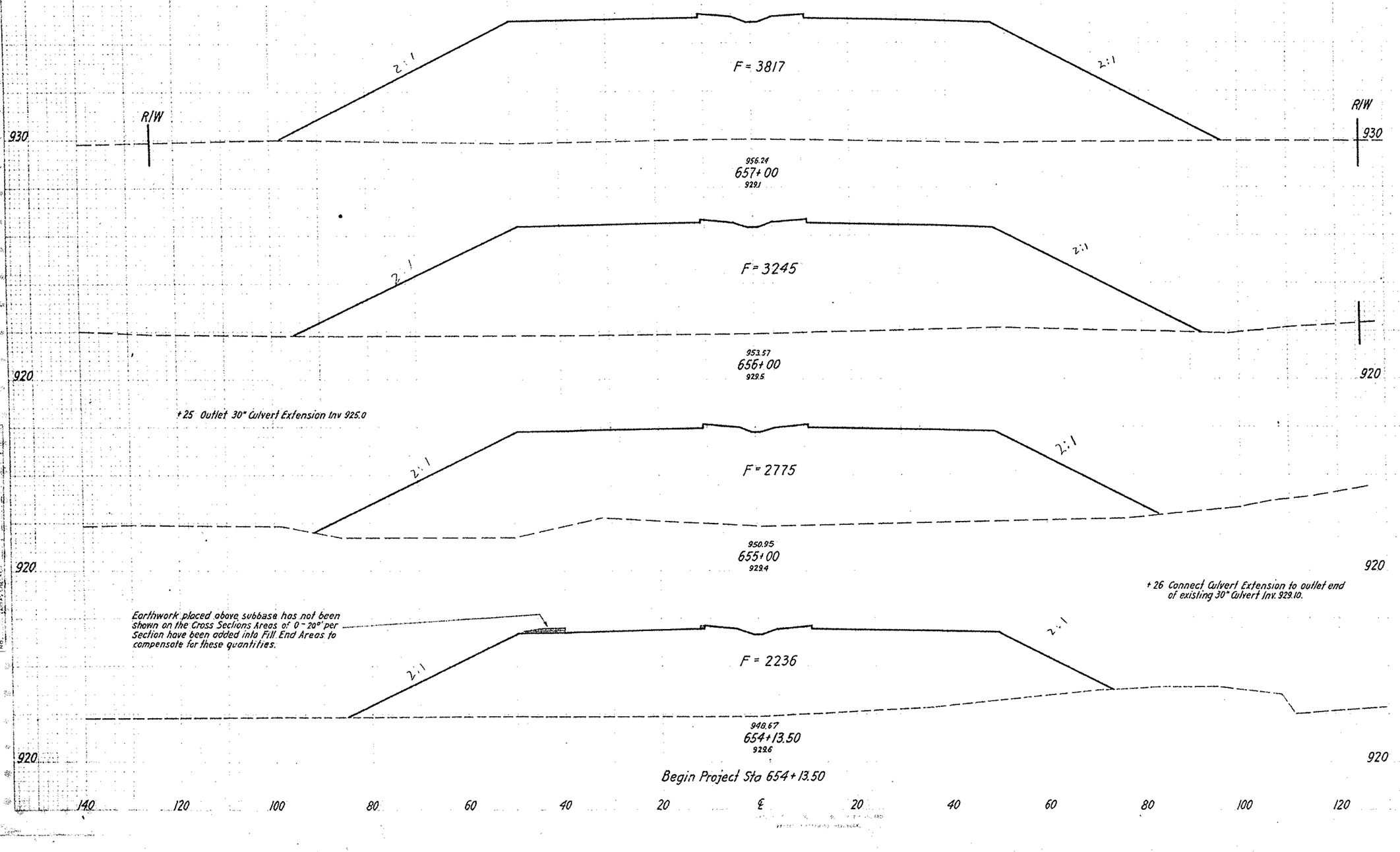
FED. NO. DIVISION	STATE	PROJECT	SUB FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

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FINAL SURVEY — SURVEYED / PLOTTED / TEMPLATE / AREAS CHECKED / NOTE BOOK / NO.

ORIGINAL SURVEY — SURVEYED / PLOTTED / TEMPLATE / AREAS CHECKED / NOTE BOOK / NO.



SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
172			3823		
	1878				13,100
166			3251		
	1756				11,170
150			2781		
	1346				8046
130			2242		

Sta 654+13.50 to Sta 657+0

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

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STA - 21-12.39

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
180			3705		
	807				5830
	210			40	860
152		10	1390		
	554			31	5026
150		2	2487		
	1647				12,906
160			4301		
	1844				15044

EXC. 71 C.Y.
EMB. 71,982 C.Y.
SEEDING 10,042 S.Y.

Sta 658+00 to Sta 666+

ORIGINAL SURVEY — NOTE BOOK — SURVEYED — PLOTTED — CHECKED — AREAS CHECKED — DATE

FINAL SURVEY — NOTE BOOK — SURVEYED — PLOTTED — CHECKED — AREAS CHECKED — DATE — NO.

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

940 930 920

± 10 15" Storm Sewer Inv. 958.5

2:1

F = 3705

680.22
666+00
949.5

R/W

Sta 662+31.57 ℄ U.S. 21 = ℄ Structure over Tuscarawas River. B.1 O.R.R ℄ Pa.R.R.℄ T.R.353.

660+40 Ditch runs out into River Bank. Protect Bank by dumped Rock 8' wide - 2'-6" deep.

F = 1390

Bridge Slope

0.5%

C=10

963.44
659+70
930.0

Tuscarawas River

F = 2487

0.5%

961.57
659+00
930.2

C=2

928.5

Begin Ditch.

F = 4295

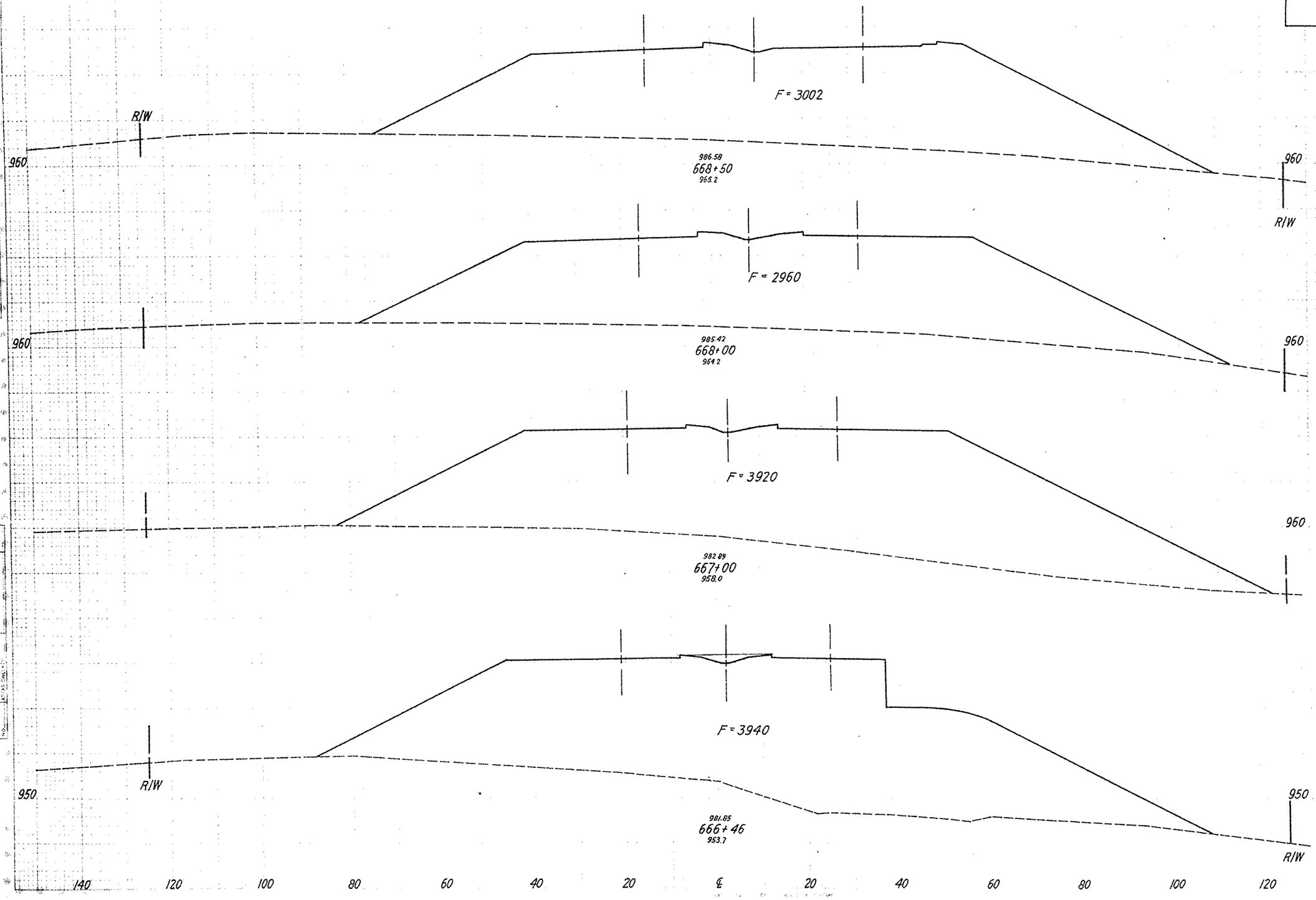
958.90
658+00
930.0

R/W

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

43

STA - 21 - 12.39



SEEDING		END AREA		CU. YDS.	
Lin.Ft.	Sq.Yds.	CUT	FILL	CUT	FILL
160			3008		
	917			-	5532
170			2966		
	1944				12763
180			3926		
	1035				7872
165			3946		
	882				652

Sta 667+00 to Sta 668+3

FED. HWY. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

44

STA - 21 - 12.39

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
246		32	6376		
	1350			80	10857
240		54	5350		
	1141			48	8281
188			3966		
	1043				7046
173			3351		
	925				5888

R/W

40%

961.5

C=32

F=6370

990.45

670+50

951.8

950

950

R/W 190'

4%

C=54

959.5

+00 End of Ditch

959.30

F=5344

989.59

670+00

957.2

950

960

Match Line

R/W 190'

Match Line

E-3 (See Culv. Summary Sheet)

949.94

F=3960

988.70

669+52

963.3

960

R/W 138'

960

960

F=3345

987.66

669+00

964.5

960

R/W

R/W

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

Sta 669+00 to Sta 670+50

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

45

STA - 21 - 12.39

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq.Yds.	CUT	FILL	CUT	FILL
210		50	3656		
	1381			61	8455
242		10	4651		
	1579			19	11172
248		8	6266		
	1162			14	9917
250		10	6491		
	1378			39	11911

EXC. 27,079 C.Y.
EMB 123,650 C.Y.
SEEDING 24,020 S.Y.

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

970

R/W

10%

C=50

973.5

993.15
672+55
970.1

F = 3650

Match Line

R/W 171.8'

960

10%

C=10

968.0

10%

+ 92 967.2

4%

992.55
672+00
963.8

F = 4645

Match Line

R/W 182.4'

950

965.2

C=8

4%

991.95
671+42
955.4

F = 6260

Match Line

940
R/W 185.5'

R/W

963.5

C=10

4%

991.22
671+00
952.8

F = 6485

Match Line

940
R/W 175'

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

Sta 671+00 to Sta 672+55

FINAL SURVEY
ORIGINAL SURVEY
DRAWING PLOTTED
NOTE BOOK
NO.
TEMPLATE
ITEMS CHECKED
QUANTITIES CHECKED

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

STA - 21 - 12.39

46

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
140		1618	4		
				3705	10
123		1324	4		
				880	9
122		940	20		
				1414	2607
157		27	1762		
				19	2464
166		8	2673		
				49	10,370
195		72	3426		
				102	5900

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W

1000

C = 1618

995.51
675+68
1006.4

993.11

R/W

1000

1000

C = 1324

995.03
675+00
1004.9

992.70

1000

+90 Ditch runs out on Ground

70

1000

C = 940

994.88
674+79
1002.3

992.57

F = 16

990

+40 Begin Paved Gutter Type I.

+30 FL. Ditch 991.0

10%

988.0

C = 27

992.10

F = 1756

980

994.33
674+00
985.4

10%

970

157

27

1762

R/W 144.1'

991.92

985.0

C = 8

F = 2667

994.12
673+70
979.2

10%

970

970

166

8

2673

991.67
Top Grate

R/W

C = 72

978.6

Pav Gutter Type I.

8" 15" Storm Sewer

16"-15" St. Sewer

988.5

50'-15" Storm Sewer - 1%

988.0

F = 3420

970

993.58
673+00
971.9

970

195

72

3426

R/W 163.2'

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

Sta 673+00 to Sta 675+68

ORIGINAL SURVEY
SURVEYED
PLOTTED
TRACE
NOTE BOOK
ISSUE DATE
NO.
AS BUILT CHECKED

DIVISION	STATE	PROJECT	FUNDS
2	OHIO	F-1013 (4)	

STA - 21 - 12.39

41

R/W

1010

C = 2350

994.50

998.53
678+00
1114.5

R/W

1010

C = 2824

994.20

996.78
677+50
1015.7

1010

C = 2805

993.90

996.43
677+00
1014.4

1010

R/W

C = 1838

993.30

995.73
676+00
1008.2

R/W

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

FINAL SURVEY — SURVEYED, PLOTTED, DRAWN, TRACED, CHECKED, DATE, NO.

ORIGINAL SURVEY — SURVEYED, PLOTTED, DRAWN, TRACED, CHECKED, DATE, NO.

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
145		2350	4		
	853			4791	7
162		2824	4		
	911			5212	7
166		2805	4		
	1678			8598	15
146		1838	4		
	508			2048	47

Sta 676+00 to Sta 678+0

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

48

STA - 21 - 12.39

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

980

990

1000

1010

1010

R/W

R/W

R/W

R/W

1.0%

End Sodding d=0.5'

C=7

990.1

995.95

F=1270

2.2:1

998.82
680+41
988.2

6.0%

F=26

C=76

992.5

C=174

995.70

2:1

997.6

Begin Sodding d=0.5'

998.51
680+00
997.7

1.0%

0.3%

C=1680

993.0

995.40

997.3

998.18
679+50
1007.5

0.3%

C=1895

993.5

995.10

997.80
679+00
1011.2

1.0%

C=2215

Top Dike 995.0

994.0

994.80

997.48
678+50
1011.7

SEEDING		END AREA		CU. YDS.	
Lin.Ft.	Sq.Yds.	CUT	FILL	CUT	FILL
155		7	1274		
	649			195	992
130		250	32		
	767			1787	33
146		1680	4		
	806			3310	7
144		1895	4		
	831			3806	7
155		2215	4		
	833			4227	

Sta 678+50 to Sta 680+

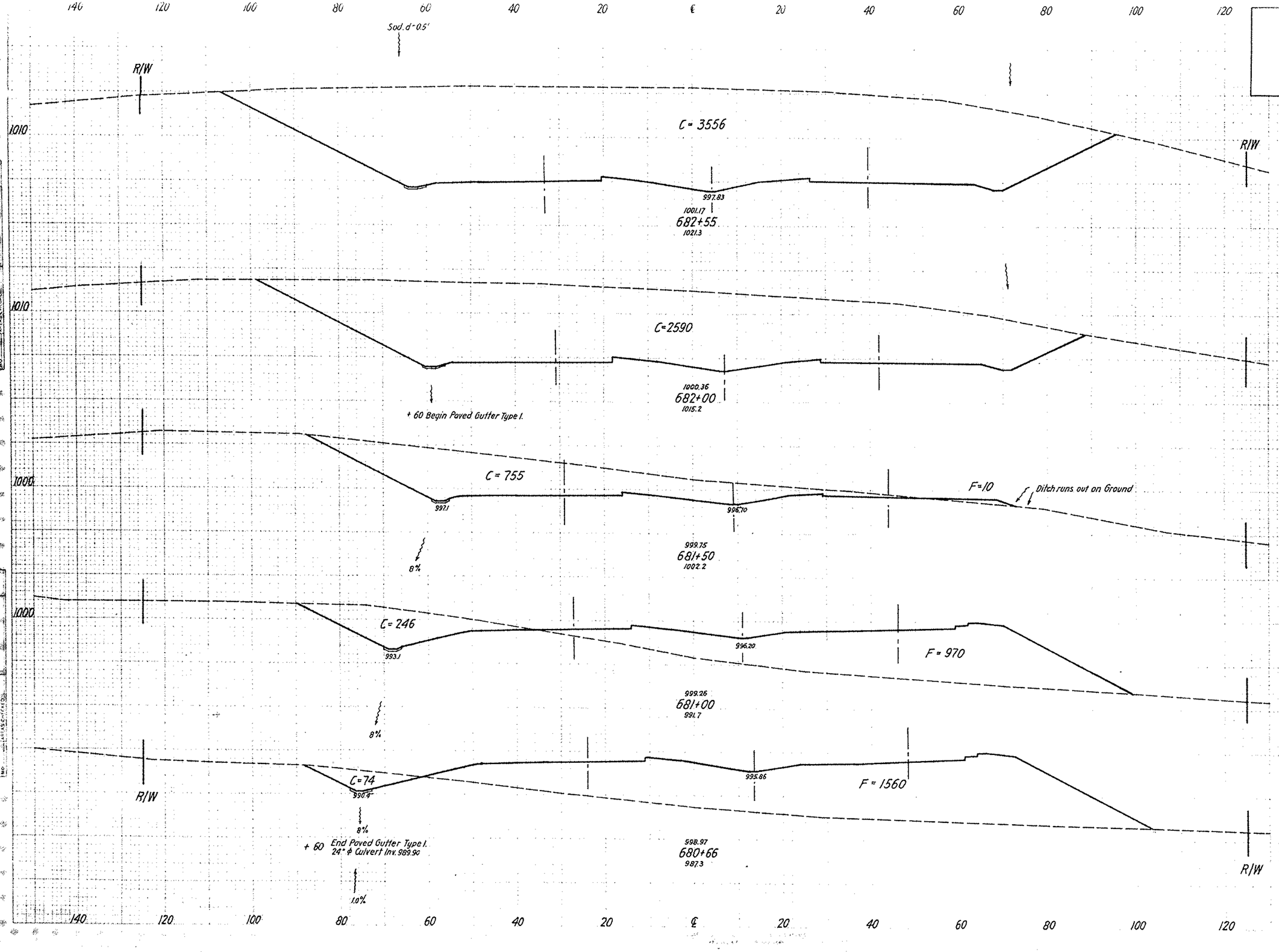
FINAL SURVEY — SURVEYED — PLOTTED — TRIPLATE — AREAS CHECKED — NOTE BOOK — NO.

ORIGINAL SURVEY — SURVEYED — PLOTTED — TRIPLATE — AREAS CHECKED — NOTE BOOK — NO.

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

49

STA - 21-12.39



SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
180		3556	6		
	1069			6260	12
170		2590	6		
	847			3097	20
135		755	16		
	836			927	91
166		246	976		
	629			201	160
167		74	1566		
	447			37	130

Sta 680+66 to Sta 682+5

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

STA - 21 - 12.39

50

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W

0.5%

C=170

1003.6

F=636

1008.10
685+62
1003.4

0.5%

+30 Begin Ditch

C=960

1003.9

1006.49
685+00
1012.1

C=1980

1003.40

1004.95
684+40
1016.0

C=2492

1001.60

1003.39
684+00
1017.8

C=3250

999.0

1001.94
683+00
1020.4

1000 1010

R/W

ORIGINAL SURVEY NOTED
FINAL SURVEY PLOTTED
NOTE BOOK TEMPLATE
NO. AREA CHECKED

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
135		170	642		
	923			1297	744
133		960	6		
	967			3267	13
157		1980	6		
	731			3313	9
172		2492	6		
	1956			10,633	22
180		3250	6		
	900			5672	1(

EXC. 48,420 C.Y.
EMB. 34,762 C.Y.
SEEDING 20,444 S.Y.

Sta 683+00 to Sta 685+6

FED. HG. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

51

STA - 21-12.39

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W 12.0% 1004.2 C=18 F=2080 1014.29 688+00 998.6 R/W 1000

12.0% 992.4 C=6 F=2812 1013.25 687+60 994.7 1000

4% 997.8 C=12 996.86 F=3010 24" Culvert -3.0% 1011.69 687+00 991.7 990.56 1000

±50 Ditch runs out on Ground
+30 15" Storm Sewer Inv. 1003.5

1003.3 C=12 F=1433 1009.77 686+26 1002.1 1000

C=78 1003.4 F=1095 1009.09 686+00 1002.0 0.5% R/W 1000

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING		END AREA		CU. YDS.	
Ln. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
155		18	2086		
	742			18	3633
179		6	2818		
	1236			20	6482
192		12	3016		
	1377			33	6105
143		12	1439		
	409			43	1656
140		78	2001		
	581			175	1860

Sta 686+00 to Sta 688+0

ORIGINAL SURVEY — SURVEYED, PLOTTED, TRIANGULATED, NOTE BOOK, AREAS COMPUTED, LINES CHECKED, NO.

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA-21-12.39

52

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

0.4%

1020

R/W

C=50

1003.5

F=1745

1021.13
690+63
1009.9

1010

R/W

0.4%

2:1

F=1326

1003.8

C=16

1019.49
690+00
1008.1

2:1

1010

1000

5.5%

3:1

F=1470

1005.7

C=20

1018.58
689+65
1005.9

1010

1000

10.0%

4:1

1012.2

C=4

F=1275

1016.89
689+00
1001.3

1010

1000

4.0%

R/W

4:1

1010.2

C=16

F=1530

1015.59
688+50
1000.9

3:1

R/W

1000

1000

12.0%

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
180		50	1753		
	1145			77	3602
147		16	1334		
	574			23	24
148		20	1478		
	960			29	332
117		4	1283		
	694			19	261
133		16	1538		
	800			31	33

Sta 688+50 to Sta 690+

ORIGINAL SURVEY — SURVEYED WITH TRANSIT AND STEEL TAPE — NOTE BOOK AREAS — ARTESIAN-ECKEL CO.

FINAL SURVEY — SURVEYED — PLOTTED — NOTE BOOK AREAS — ARTESIAN-ECKEL CO.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

53

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

Sod'd - 1.5'

1020 R/W

10%

1007.0

C = 45

F = 2200

1024.69
692+00
1010.0

1.0%

1020

2:1

C = 107

1007.3

F = 2610

1023.83
691+67
1003.6

1.0%

End Sodding d = 1.5'
+40 Begin Paved Gutter Type I.

1020

C = 190

1006.9

F = 2880

1022.82
691+28
1001.9

12.5%

1020 R/W

C = 55

1003.4

1003.30

198' 24" ϕ Culvert - 1.5%

F = 2650

1022.09
691+00
1004.4

1000.33

0.4%

1020 R/W

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
183		45	2208		
	781			93	2949
192		107	2618		
	854			214	3977
200		190	2888		
	611			127	2876
193		55	2658		
	767			72	3022

Sta 691+00 to Sta 692+00

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

54

STA - 21 - 12.39

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

ORIGINAL SURVEY — SURVEYED — PLOTTED — NOTE BOOK — TRACED — CHECKED — DATE — NO

2.16%

R/W

F = 1602

3:1

1010

1014.0 C=50

1028.59
693+50
1015.3

1.06%

R/W

1010

153 50 1610

906 94 3396

+00 End Paved Gutter Type I.
Begin Dumped Rock lining d=1.5'

F = 2050

1010

1008.7 C=52

1027.29
693+00
1011.8

1.0%

1010

173 52 2058

+75 { End Rock
Begin Sodding d=1.5'

599 45 2447

F = 2196

1010

1008.32 C=26

1026.48
692+69
1012.1

1.0%

1010

175 26 2204

628 20 2487

F = 1985

1010

1008.0 C=22

1025.65
692+37
1015.0

R/W

Sod. d=1.5'

1.0%

1010

178 22 1993

742 46 2878

R/W

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

Sta 692+37 to Sta 693+50

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

55

STA - 21-12.39

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
120		132	155		
	360			94	223
120		56	290		
	417			54	457
127		42	533		
	1093			119	1900
154		50	933		
	853			93	2355

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W

Sod. d=10'

1030

C=132

1033.19
695+27
1032.1

F=150

R/W
1030

C=56

1032.49
695+00
1029.5

F=285

1020

1020

+80 End Sodding d=10'
+80 Begin Paved Gutter Type I

2.6%

1028.96

C=42

F=525

1031.51
694+70
1026.0

1020

1020

6%

C=30

1024.8

F=925

1029.89
694+00
1020.6

1020

R/W

1020

R/W

21.6%

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

STA - 21 - 12.39

56

ORIGINAL SURVEY — NOTE BOOK — DATE — PARTY — PLOTTED — CHECKED — AREAS CHECKED

FINAL SURVEY — NOTE BOOK — DATE — PARTY — PLOTTED — CHECKED — AREAS CHECKED

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W

Sodd=10'

C=54

1030

1040.29
698+00
1037.9

F= 320

R/W 1030

C=128

1030

1037.69
697+00
1033.6

F= 515

1030

C=50

1030

1036.29
696+46
1031.5

F= 550

1030

1023.0

F=2

C=20

1030

1035.09
696+00
1032.3

F= 375

1030

R/W

R/W

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
140		54	325		
	1500			337	1565
130		128	520		
	795			178	1076
135		50	555		
	662			60	298
124		20	382		
	990			205	726

EXC. 11,160 C.Y.
EMB. 37,979 C.Y.
SEEDING. 18,370 S.Y.

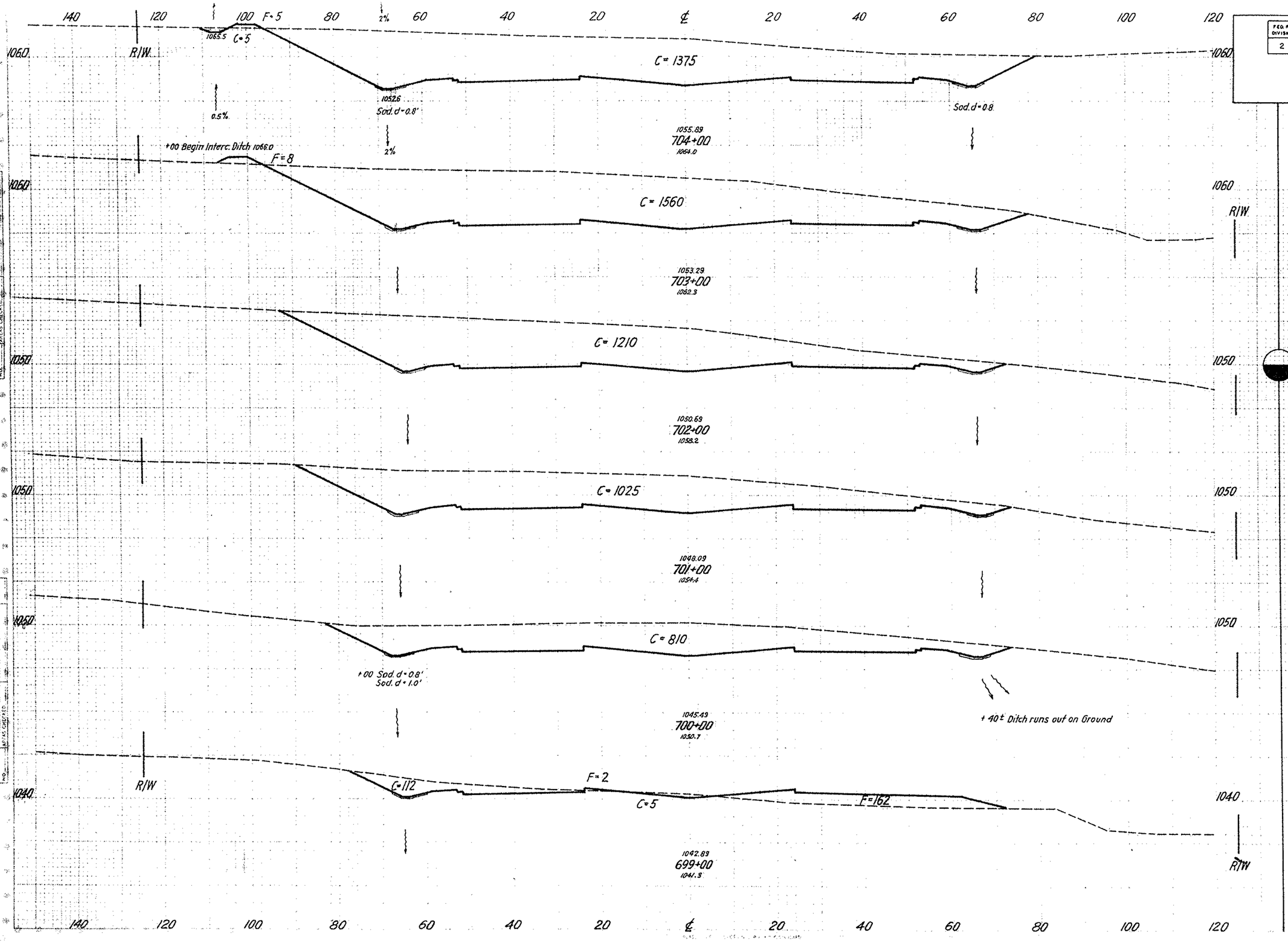
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

Sta 696+00 to Sta 698+00

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA - 21 - 12.39

57



SEEDING		END AREA		CU. YDS.	
Ln. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
154		1380	7		
	1717			5444	31
155		1560	10		
	1622			5130	22
137		1210	2		
	1494			4250	7
132		1025	2		
	1444			3398	7
128		810	2		
	1367			1717	317
118		117	169		
	1433			317	915

Sta. 699+00 to Sta. 704+00

ORIGINAL SURVEY
SURVEYED
PLOTTED
NOTE BOOK
NO.
TRACE
AREAS
AREAS CHECKED

FINAL SURVEY
SURVEYED
PLOTTED
TRACE
NOTE BOOK
NO.
AREAS
AREAS CHECKED

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

58

STA - 21-12.39

	SEEDING		END AREA		CU. YDS.	
	Lin.Ft.	Sq.Yds.	CUT	FILL	CUT	FILL
	170		2380	2		
		1894			9259	7
	171		2620	2		
		1928			9837	7
	176		2692	2		
		1906			9496	7
	177		2436	2		
		1856			7617	24
	157		1677	11		
		1727			5661	33

EXC. 81,774 C.Y.
EMB. 166 C.Y.
SEEDING. 19,905 S.Y.

Sta. 705+00 to Sta. 709+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

RIW

C = 2380

Sod. d = 0.8'

Sodding d = 0.6'

1067.16
709+00
1080.3

1070

C = 2620

1065.26
708+00
1079.0

C = 2692

1060.65

1063.19
707+00
1077.0

3.8%

C = 2436

1058.39

+50 Begin Interc. Ditch 1062.25

+00 15" Storm Sewer Inv 1056.8 FL. Ditch.

1056.8

+00 Sod. d = 0.6'
Sod. d = 1.0'

1060.93
706+00
1073.4

7%

3.2%

0.9%

F = 9

C = 17

1068.75

704+55 End Sodding
Begin Riprap
Type A d = 1'

1060

C = 1660

1055.2

1055.9

1065.25

0.5%

Paved Gutter Type 3

3.2%

704+35 End Riprap
Begin Sod. d = 0.8'

704+50

1053.6

2%

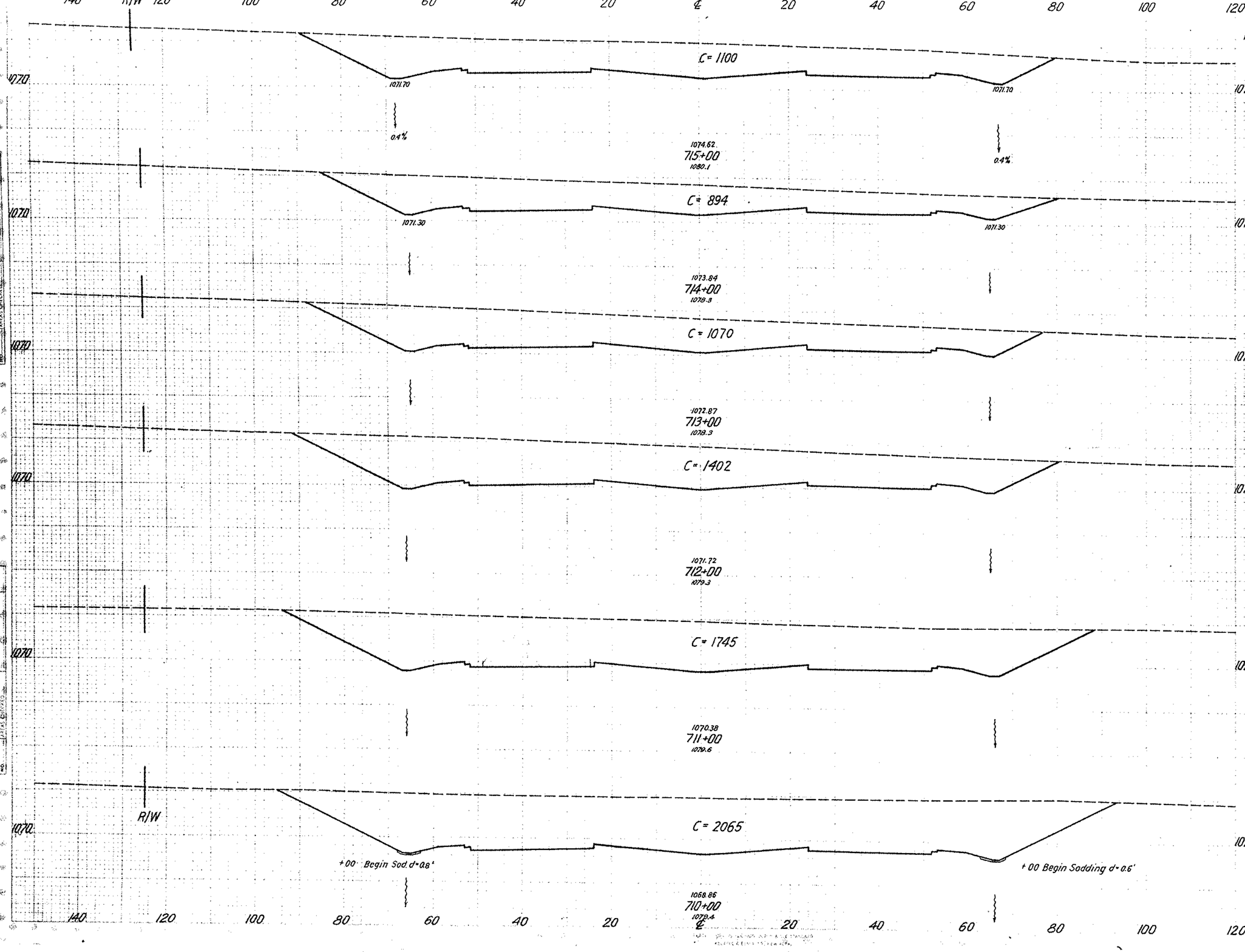
1058.48
705+00
1065.9

ORIGINAL SURVEY
FINAL SURVEY
SURVEYED
PLOTTED
TRACED
NOTE BOOK
LOCATION
DATE
BY
NO.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

59

STA - 21-12.39



SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
140		1100	2		
	1533			3692	7
136		894	2		
	1511			3637	7
136		1070	2		
	1622			4578	7
156		1402	2		
	1722			5828	7
154		1745	2		
	1756			7056	7
162		2065	2		
	1844			8231	7

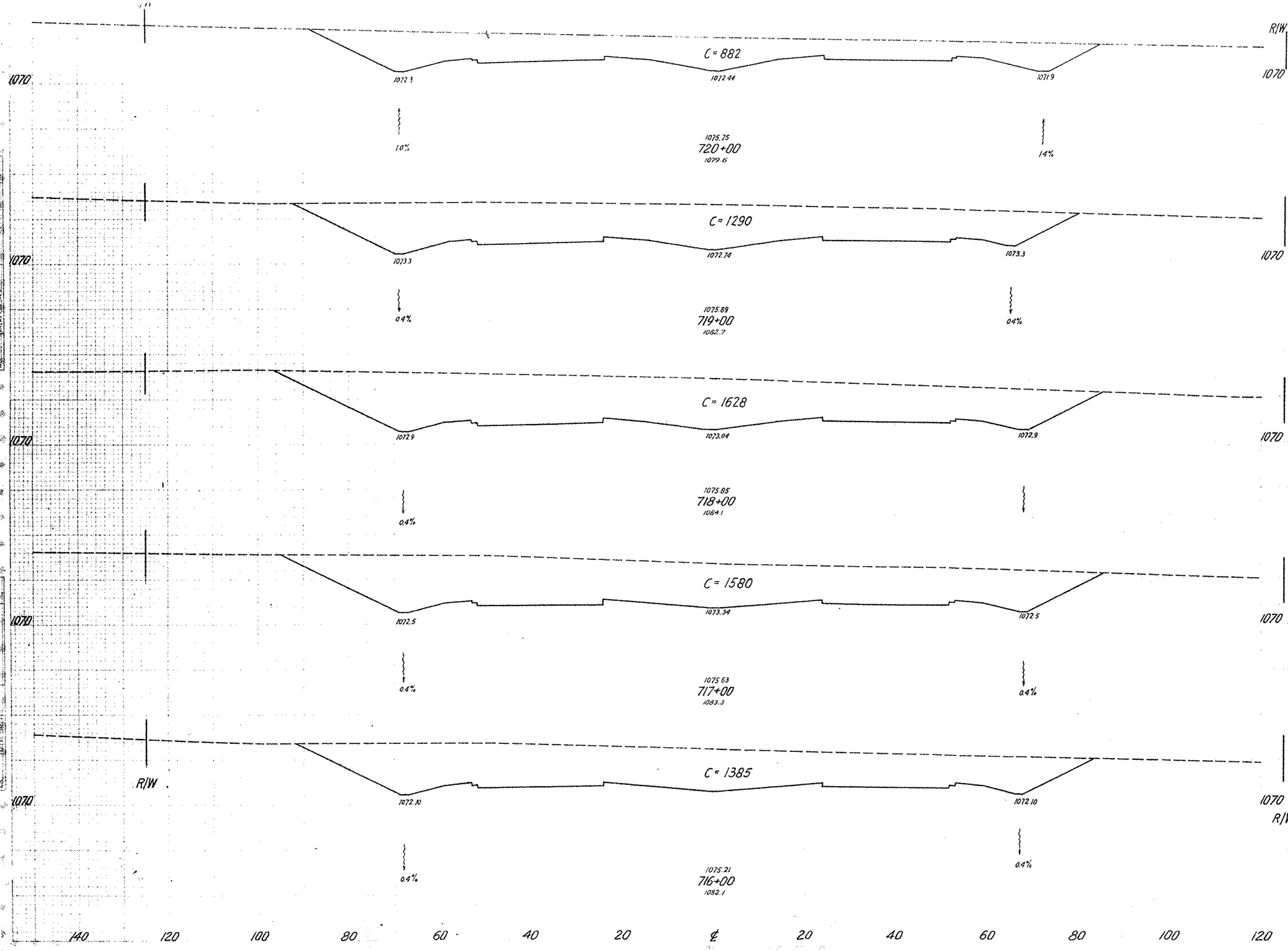
Sta. 710+00 to Sta. 715+00

FINAL SURVEY — SURVEYED, PLOTTED, TRIPLICATE, NOTE BOOK, NO., SEC., AREAS CHECKED

ORIGINAL SURVEY — SURVEYED, PLOTTED, TRIPLICATE, NOTE BOOK, NO., SEC., CHECKED

2	OHIO	F-1010(4)	

STA - 21+12.39



EXC. 42,697 C.Y.
EMB. 696 C.Y.
SEEDING 19,514 S.Y.

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
145		882	2		
	1606			4022	7
144		1290	2		
	1650			5404	7
153		1628	2		
	1694			5941	7
152		1580	2		
	1661			5491	7
147		1385	2		
	1594			4602	7

Sta 716+00 to Sta. 720+00

FINAL SURVEY — SURVEYED, PLOTTED, NOTE BOOK, AREAS, CHECKED, NO.

ORIGINAL SURVEY — SURVEYED, PLOTTED, CORRECTED, TRACE, NOTE BOOK, AREAS, CHECKED, NO.

DIVISION	STATE	PROJECT	FUNDS
2	OHIO	F-1010(4)	

STA - 27+12.39

(61)

R/W

C=5 1078.0
Begin Intercepter ditch

F=7

C= 1295

1067.2

1068.3

3.0%

0.4%

1071.17
726+00
1080.2

2.0%

+10 15" Storm Sewer Inv. El. 1067.6

Sod d=0.9'

C=15 1075.0

F=8

C= 920

1068.0

1069.93

1070.3

3.0%

3.8%

1072.27
725+00
1077.9

2.0%

F=6

Top Dike 1072.8

C=30 1072.0

1071.8

C= 350

1070.59

1072.3

+50 Intercepter ditch meets Roadway ditch

1.4%

1073.33
724+00
1075.0

2.86%

C=80

C= 83

1071.25

F=84

C=27

1.4%

2.86%

+60 43"x 27" C.M.A. Culvert Inv. 1069.80

+60 43"x 27" C.M.A. Culvert Inv. 1068.30

1.0%

1074.21
723+00
1073.7

C=370

1070.3

1071.84

F=50

C=40

1069.1

1.4%

1.0%

1074.91
722+00
1075.5

1.4%

R/W

C=606

1071.3

1072.14

F=6

C=45

1070.5

1075.42
721+00
1077.5

1060

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
134		1300	9		
		19	6		
	1633			4139	17
160		935	14	72	11
		20	0		
	1639			2435	48
135		380	12		
		0	0		
	1583			1056	189
150		190	90		
	1739			1111	270
163		410	56		
	1756			1965	115
153		651	6		
	1656			2839	15

Sta. 721+00 to Sta. 726+00

ORIGINAL SURVEY — PLOTTED / TRACED / DETAILED / CHECKED — NOTE BOOK — NO.

FINAL SURVEY — PLOTTED / TRACED / DETAILED / CHECKED — NOTE BOOK — NO.

FED. HG. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

62

FINAL SURVEY — SURVEYED — PLOTTED — TRACED — NOTE BOOK — DATE — CHECKED

ORIGINAL SURVEY — SURVEYED — PLOTTED — TRACED — NOTE BOOK — DATE — CHECKED

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W

1060

C = 152

1062.1

4.0%

1062.3

Begin Sod. d = 0.5'

2.8%

1065.67
731+00
1063.8

0.4%

C = 460

1065.5

Sod. d = 1.0'

1062.7

0.5%

1066.77
730+00
1070.1

2.0%

C = 1000

Sod. d = 1.0'

1066.0

1063.1

0.4%

1067.87
729+00
1075.9

+ 50 1063.3

+ 16.9 Storm Sewer Inv. 1063.5

2.0%

C = 1325

1066.4

1064.3

0.4%

1068.97
728+00
1078.4

2.0%

+ 00 Begin Intercepter ditch

F = 12

C = 7

1081.0

3%

C = 1535

1066.8

1066.3

1070.07
727+00
1080.2

2.0%

SEEDING		END AREA		CU. YDS.	
Ln. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
97		152			
	1072	20	18	1133	-
				172	70
96		460			
		73	20		
	1094			2704	-
				339	74
101		1000			
		110	20		
	1217			4306	11
				456	43
118	1325	6			
		136	14		
	1461			5309	42
				463	44
145	1542	14			
		114	10		
	1550			5268	42
				244	30

Sta. 727+00 to Sta. 731+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

63

STA - 21+12.39

R/W 0.5% 1051.8 C=7 F=368 1050 R/W

1057.97 738+00 1049.3

2.4% 1054.2 C=2 F=366 1050 1050

1059.07 737+00 1051.5

2.4% 1056.6 C=6 F=234 1050 1050

1060.17 736+00 1054.1

2.4% 1059.0 C=4 F=60 1050 1050

1061.27 735+00 1058.2

3.2% 1055.8 C=4 F=355 1050 1050

0.75% +60 24" S-27 Culvert Inv. 1055.50

1062.37 734+00 1056.2

2.8% 1057.1 C=30 F=415 1050 1050

+27 24" S-27 Culvert Inv. 1152.58

+80± Ditch runs out on Ground End Sodding

1063.47 733+00 1054.8

2.8% 1059.9 C=70 Sod d=1.0' F=106 1050 C=6 1058.5 Sod d=0.5' 1050

4.0% 4.0%

1064.57 732+00 1060.0

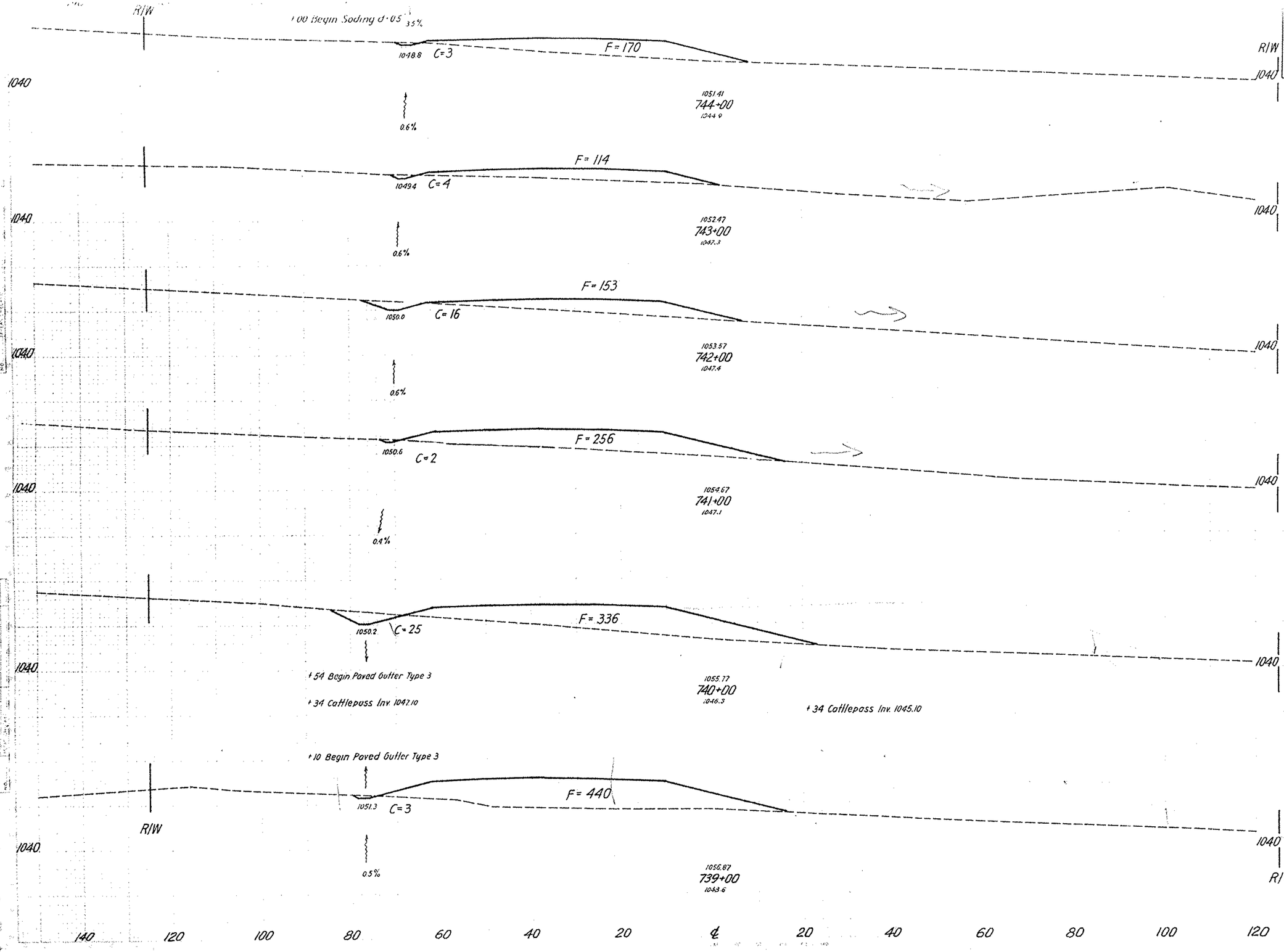
2.8% R/W R/W

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

	SEEDING		END AREA		CU. YDS.	
	Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
	88		7	374		
		956			17	1376
	84		2	369		
		867			15	1122
	72		6	237		
		683			19	556
	51		4	63		
		756			15	780
	85		4	358		
		1056			63	1437
	105		30	418		
		1039			196	976
	82		76	109		
		994			422	202
					37	33

EXC 19,462 C.Y.
EMB 6,539 C.Y.
SEEDING 12,235 SY.

Sta. 732+00 to Sta. 738+00



SEEDING		END AREA		CU. YDS.	
Lin Ft.	Sq Yds	CUT	FILL	CUT	FILL
66		3	176		
	694			13	548
59		4	120		
	678			37	517
63		16	159		
	828			33	780
86		2	262		
	1033			50	1119
100		25	342		
	1033			52	1459
86		3	446		
	967			19	1519

383 CY EXC
17,185 CY EMB
10,694 SY SEEDING

Sta 739+00 to Sta. 744+00

FED. HWY. DIVISION	STATE	PROJECT	TYPE FUNDS
7	OHIO	F-1010(41)	

65

STA. 21+12.39

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W

1030

F= 7.75

1034.1 C=4

1046.27
750+00
1032.7

2.6%

F= 7.92

1036.7 C= 7

1047.07
749+00
1034.6

1.7%

F= 6.10

1038.4 C=6

1047.87
748+00
1036.9

1.7%

F= 4.75

1040.1 C=20

1048.67
747+00
1039.6

1.7%

1040

+00 Sod. d= 0.7'

F= 3.70

1041.8 C= 8

1049.51
746+00
1041.8

3.5%

F= 2.80

1045.3 C=4

Sod. d= 0.5'

3.5%

1050.42
745+00
1043.4

R/W

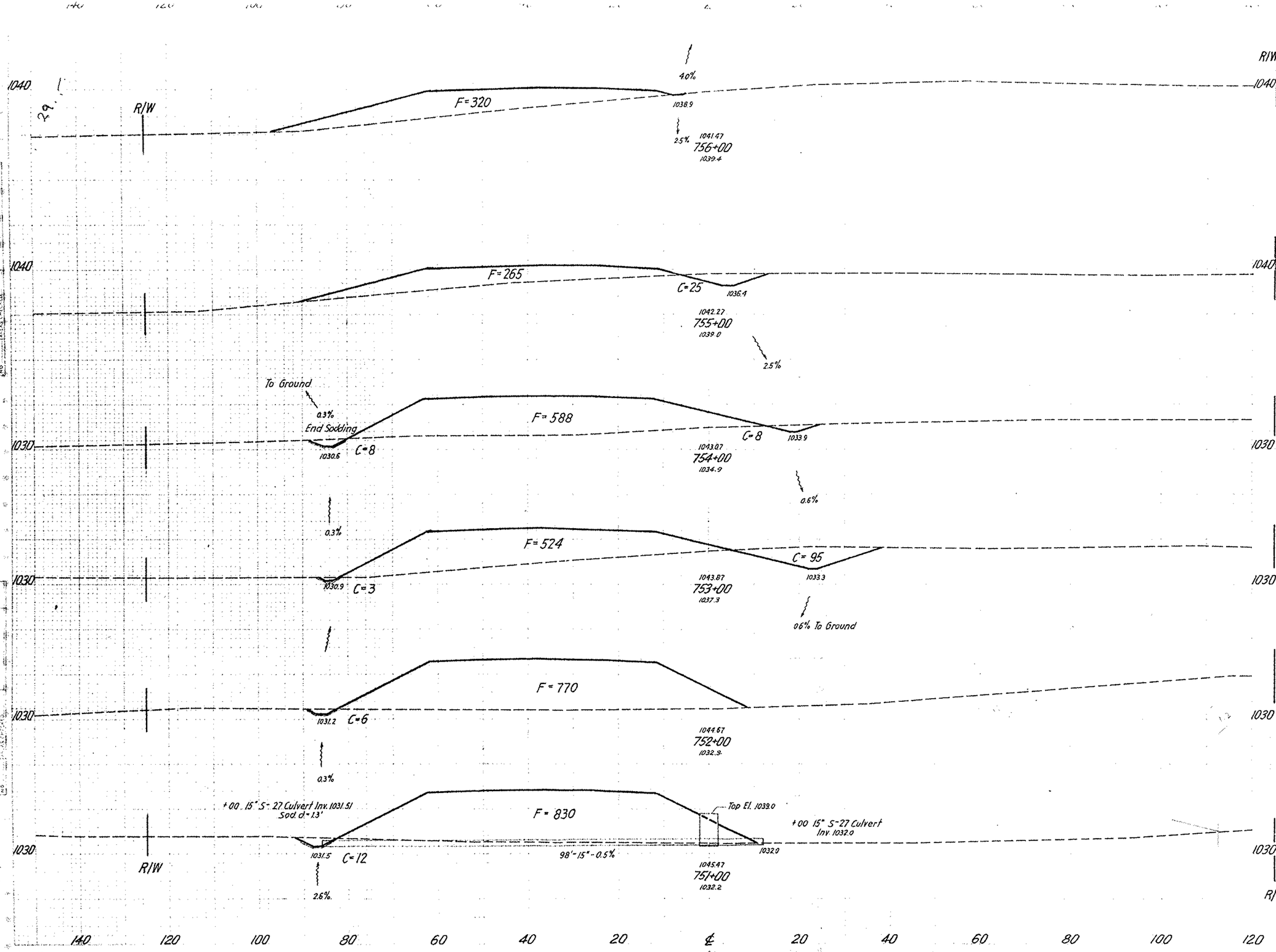
SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
90		4	781		
	1072			20	2924
103		7	798		
	1094			24	2619
94		6	616		
	1094			48	2031
103		20	481		
	1072			52	1587
90		8	376		
	911			22	1226
74		4	286		
	778			13	856

Sta. 745+00 to Sta. 750+00

FINAL SURVEY — ORIGINAL SURVEY
SURVEYED, DRAWN, PLOTTED, NOTE BOOK, TRACED, CHECKED, NO.

STATE DIVISION	STATE	PROJECT	TYPE WORK
2	OHIO	F-1010(4)	

STA 21+12.39



EXC 4967 C.Y.
EMB 18682 C.Y.
SEEDING 10455 S.Y.

SEEDING		END AREA		CU. YDS	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
78		1	326		
	956			48	1106
94		25	271		
	1106			76	1602
105		16	594		
	1233			211	2081
117		98	530		
	1161			193	2419
92		6	776		
	1056			33	2985
98		12	836		
	1044			30	2994

Sta. 751+00 to Sta. 756+00

FINAL SURVEY — DATE, NO., SURVEYED, PLOTTED, NOTE BOOK, TEMPLATE, AREAS CHECKED, NO., REVISION, BY

ORIGINAL SURVEY — DATE, NO., SURVEYED, PLOTTED, NOTE BOOK, TEMPLATE, AREAS CHECKED, NO., REVISION, BY

FED. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

67

STA - 21 - 12.39

25%

T.R.352

+14 24" S-27 Culvert
Inv 1031.94

+32 Dike El 1035.0
Ditch El 1034.5

R/W

1040

C = 595

2.9%

1033.6

1037.47
761+00
1043.2

2.9%

+62 24" S-27 Culvert
Inv. 1032.50

T.R.352

T.R.352

C = 200

To T.R.352 ditch

1038.27
760+00
1038.3

+60 Begin ditch

+53 15" S-27 Culvert
Inv. 1032.28

T.R.352

C = 30

F = 185

29.5

From T.R 352

3.0%

1039.07
759+00
1043.3

+85 15" S-27 Culvert
Inv. 1033.5

Sta 759+81.84 ℄ U.S. 21
Sta 50+00 ℄ T.R.352
(at grade intersection)

0.7%

F = 525

C = 45

1034.2

1039.87
758+00
1036.7

0.7%

F = 596

1034.9

1040.67
757+00
1034.4

4.0%

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING		END AREA		CU YDS	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
56		595			
	460			1472	-
		200			
	389			426	348
48		30	188		
	761			139	1331
77		45	531		
	917			85	2098
88		1	602		
	922			4	1718

Sta. 757+00 to Sta. 761+00

DIVISION	STATE	PROJECT	FED. FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

(608)

R/W

1040

+00 Begin Sod d=0.5'

C = 790

1030.47
766+00
1036.1

C = 965

1032.43
765+00
1042.0

C = 1110

1034.18
764+00
1045.7

C = 865

1035.53
763+00
1044.8

C = 620

1036.63
762+00
1044.3

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
102		790			
	1122			3250	
100		965			
	1083			3843	
95		1110			
	1083			3657	
100		865			
	1039			2750	
87		620			
	820			2250	

Sta. 762+00 to Sta. 766+00

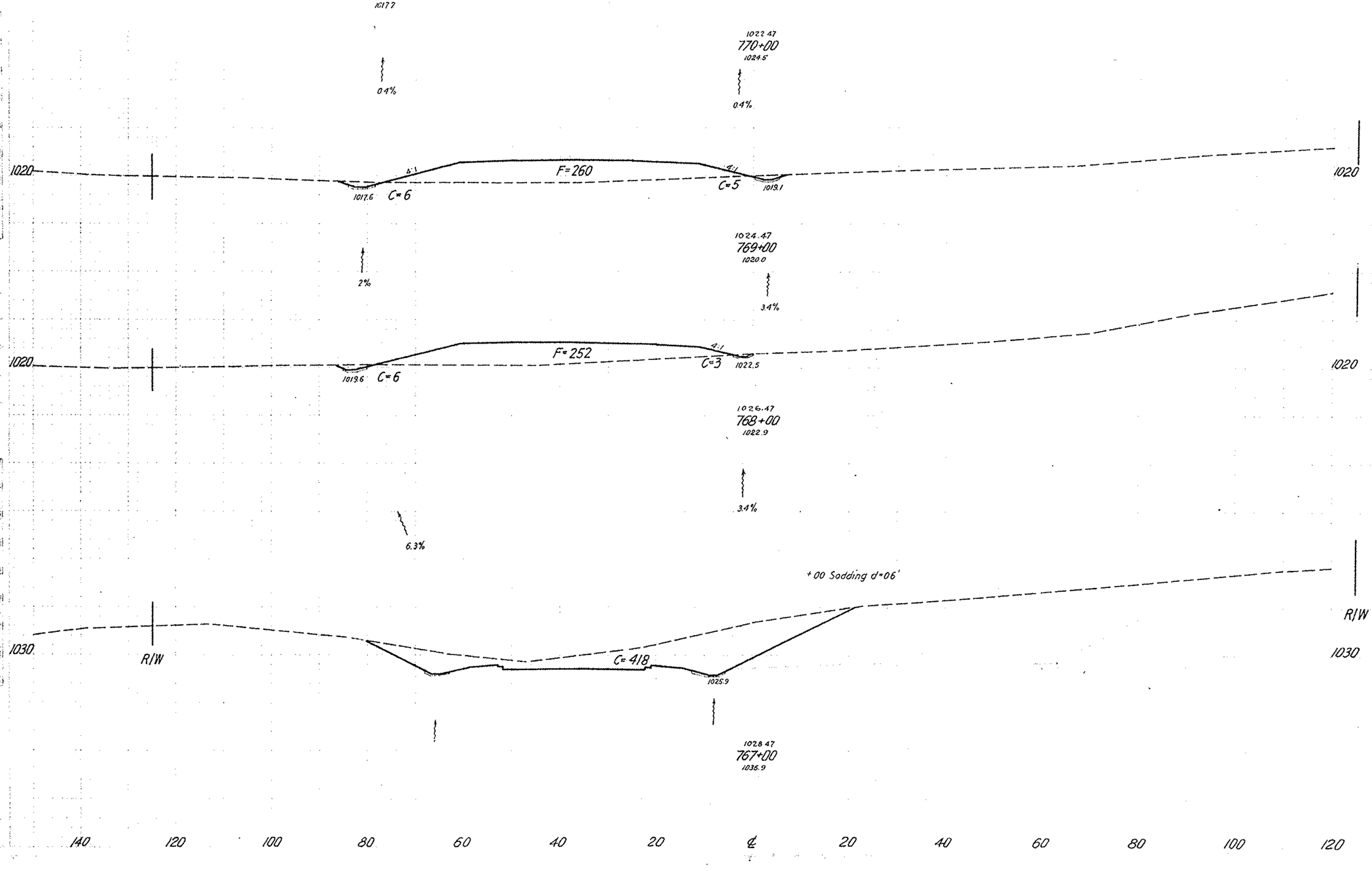
FINAL SURVEY — SURVEYED, PLOTTED, TRACED, CHECKED, LETTERED, DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, TRACED, CHECKED, NOTE BOOK, DATE, NO.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

69

STA - 21+12.39



	SEEDING		END AREA		CU. YDS.	
	Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
	114		254	94		
		1094			491	667
	83		11	266		
		894			37	970
	78		9	258		
		967			791	478
	96		418			
		1100			2237	

EXC. 18,211 C.Y.
EMB 5,090 C.Y.
SEEDING 11,271 S.Y.

Sta. 767+00 to Sta. 770+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

70

STA. 775+00

+ 70' Begin Ditch

RIW

1000

F = 866

4.4%

C = 2

999.9

1012.47

775+00

1000.4

+ 80 - 24" S-27 Culvert Inv 995.5

+ 80 - 24" S-27 Culvert 999.0

End Sodding

F = 268

3.5%

C = 4

1002.9

1014.47

774+00

1004.7

3.5%

F = 328

C = 8

1006.4

1016.47

773+00

1006.8

+ 50' Run out to Ground

End Sodding

2.0%

3.5%

C = 80

1015.8

F = 95

+ 00 Sod. d = 0.7'

C = 5

1009.9

1018.47

772+00

1011.8

0.9%

4.4%

1010

1020

R/W

C = 55

1016.8

F = 178

C = 35

1014.3

Sod d = 0.5'

Sod d = 0.6'

0.9%

1020.47

771+00

1016.5

4.4%

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING		END AREA		CU. YDS	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
92		2	872		
	989			11	2122
86		4	274		
	1006			22	1126
95		8	334		
	1011			172	806
87		85	101		
	1011			324	528
95		90	184		
	1161			637	515

Sta. 771+00 to Sta. 775+00

FINAL SURVEY — SURVEYED — PLOTTED — NOTE BOOK — DATE

ORIGINAL SURVEY — SURVEYED — PLOTTED — NOTE BOOK — DATE

DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

71

STA. 21+12.39

RIW 139.2' →

+00 Begin Sodding d=06'

RIW

1000 — C=310 — 1000 — 1002.47

780+00

1003.1

1010 — C=715 — 1010 — 1006 — 1010 RIW — 1004.47

779+00

1009.6

1010 — C=1150 — 1010 — 1009.9 — 1010

777+50 - 778+50 18" Subbase

1006.47

778+00

1018.4

+50 Ditch 1004.94

0.4%

1010 — C=548 — 1010 — 1004.7

1008.47

777+00

1012.2

0.4%

1010 — C=260 — 1010 — 1004.3 — 1010

RIW — RIW

1010.47

776+00

1009.3

4.4%

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

EXC. 21,603 C.Y.
EMB. 5,854 C.Y.
SEEDING 11,645 S.Y.

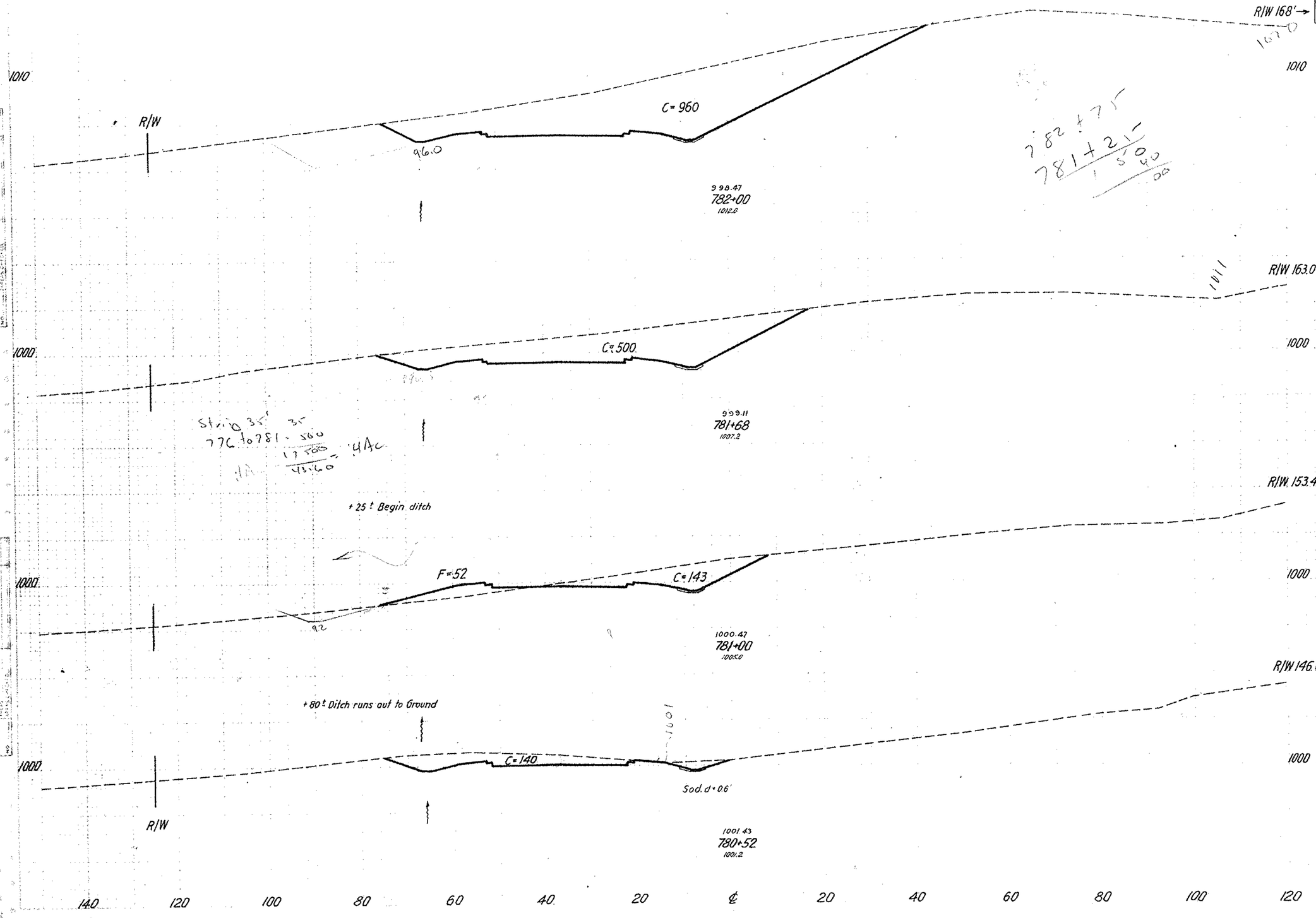
SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
70		310			
	944			1898	
100		715			
	1122			3454	
102		1150			
	1044			3144	
86		548			
	944			1496	
84		260			
	978			485	1615

Sta. 776+00 to Sta. 780+00

FINAL SURVEY — SURVEYED — PLOTTED — NOTE BOOK — SCALE — DATE

ORIGINAL SURVEY — SURVEYED — PLOTTED — NOTE BOOK — SCALE — DATE

2 | OHIO | F-1010(4)



SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq Yds.	CUT	FILL	CUT	FILL
114		960			
	352			865	
84		500			
	604			810	65
76		143	52		
	373			252	46
64		140			
	387			433	

Sta. 780+52 to Sta. 782+00

FINAL SURVEY — SURVEYED — PLOTTED — NOTE BOOK — DATE

ORIGINAL SURVEY — SURVEYED — PLOTTED — NOTE BOOK — DATE

REG. NO. DIVISION	STATE	PROJECT	FAPE FUNDS
2	OHIO	F-1010 (4)	

73

STA 21-12.39

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

990

1000

1000

R/W

2:1

F=336

C=85

995.45
783+51
999.7

R/W 167.3'

R/W 176.0'

+00. Sod.d=0.9'

C=790

F=160

3:1

996.47
783+00
1012.2

782+71
7F1+21
1 50
40
6000
4320
1.4 ac

+75' Ditch runs out to ground

1.4 Ac

R/W 174.7'

C=1750

1000

1000

1000

R/W

95

94.0

997.47
782+50
1018.9

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
101		85	336		
	606			826	468
113		790	160		
	678			2352	148
131		1750			
	681			2509	

Sta. 782+50 to Sta. 783+51

FINAL SURVEY — SURVEYED, PLOTTED, NOTE BOOK, DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, NOTE BOOK, DATE

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F - 1010 (4)	

14

STA - 21 + 12.39

R/W

980

C=24

984.0

14.0%

+67 988.6

2.0%

+57 Begin Sodding d=0.5'

F=670

+11 24" S-27 Culvert Inv 974.40
End Paved Gutter

C=7

975.94

990.47
786+00
976.2

14.0%

R/W

980

980

C=320

F=35

C=6

983.22

991.51
785+48
984.6

980

R/W 133.8' →

990

C=754

989.94

990

R/W 142.0' →

992.47
785+00
991.3

End Sodding
784+90 Begin Paved Gutter Type I.
1' Sodding on Roadway side slope

990

C=535

991.65
784+59
991.2

990

R/W 149.0' →

+20 Begin ditch

C=62

F=188

994.47
784+00
996.6

990

990

R/W 159.0' →

R/W

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
105		31	670		
	549			344	679
85		326	35		
	427			960	31
75		754			
	321			979	
66		535			
	511			652	205
90		62	188		
	520			133	475

140

Sta 784+00 to Sta 786+00

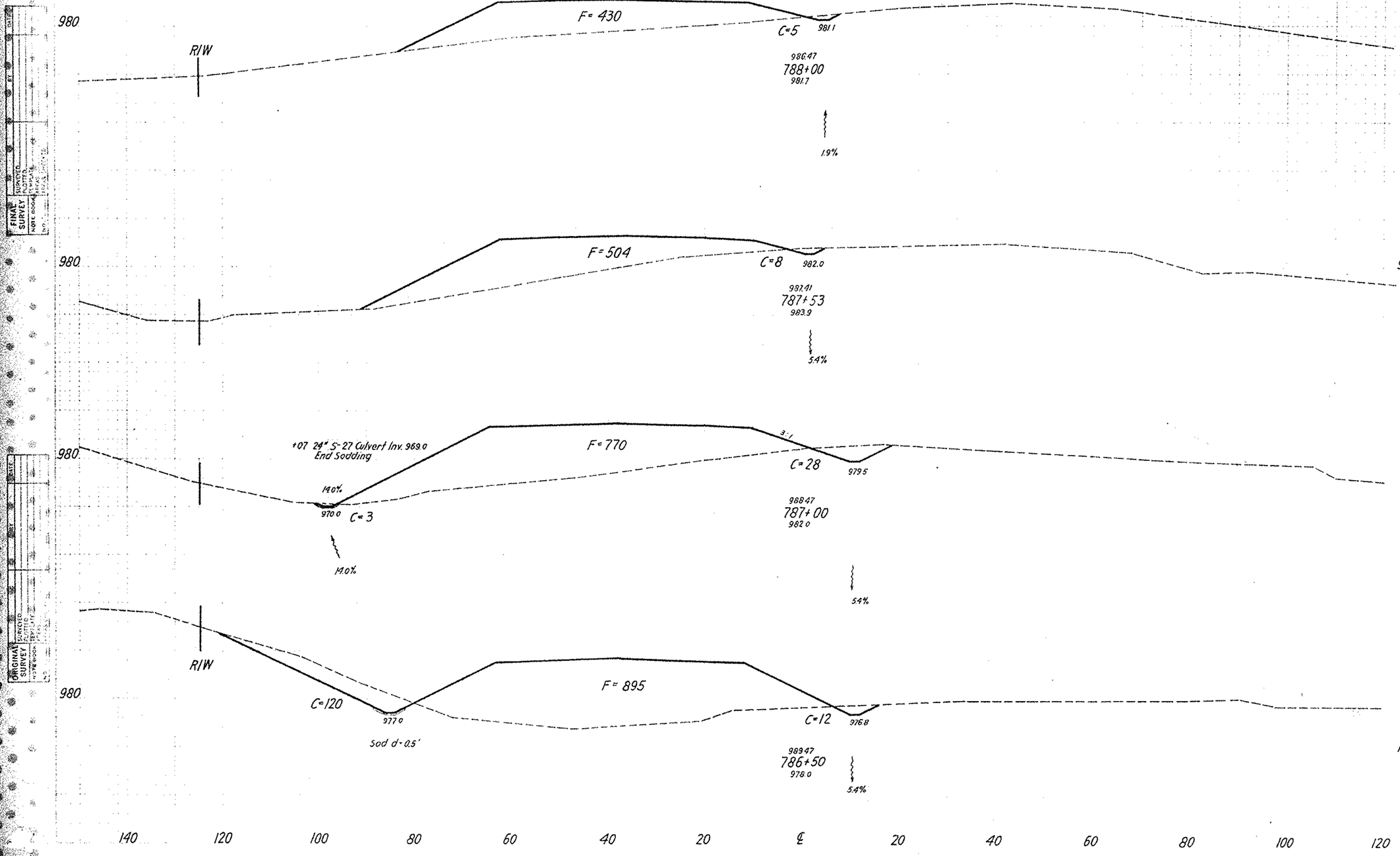
FINAL SURVEY — SURVEYED — PLOTTED — FIELD BOOK — PAGE NO. — BY — DATE

ORIGINAL SURVEY — SURVEYED — PLOTTED — FIELD BOOK — PAGE NO. — BY — DATE

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

75

STA - 21 - 12.39

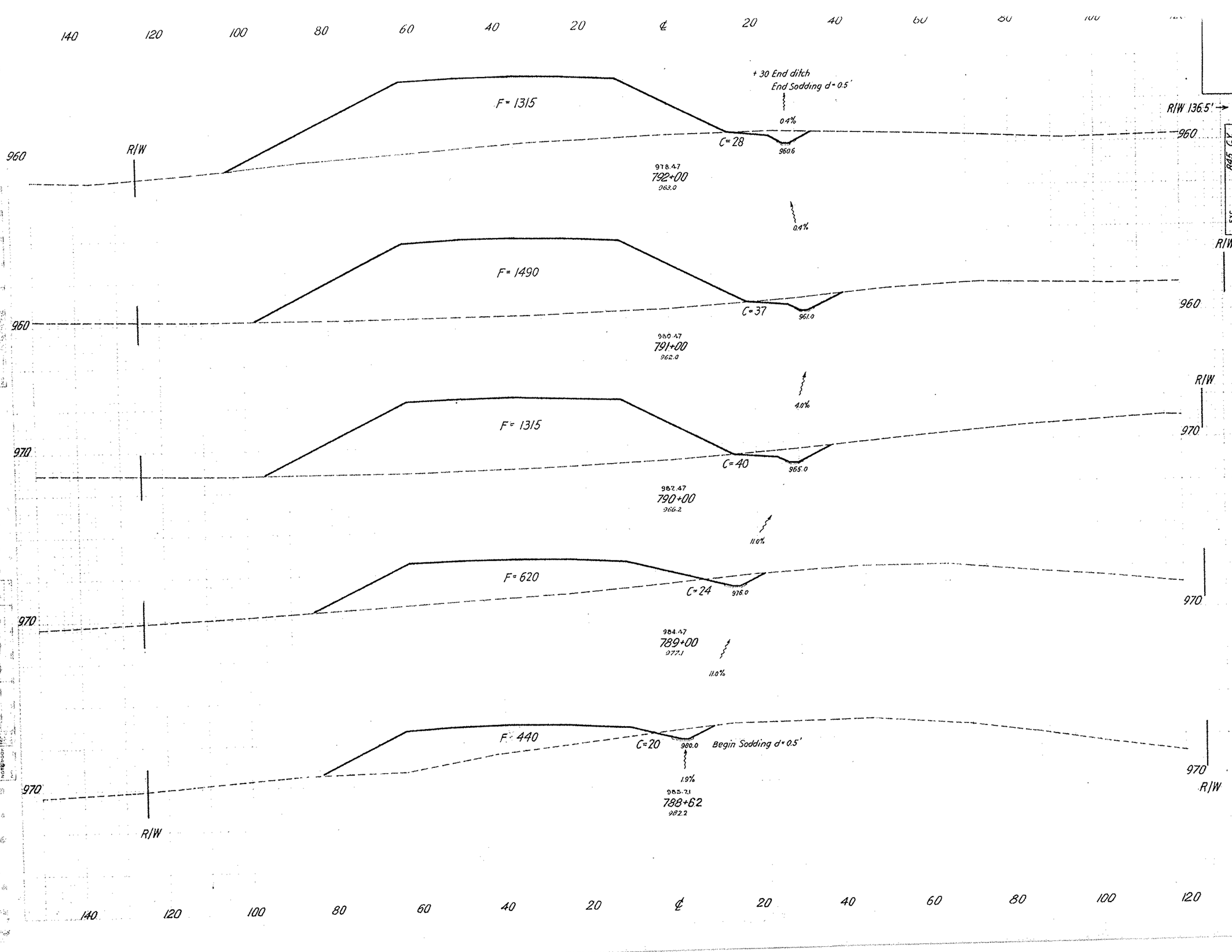


SEEDING		END AREA		CU. YDS.	
Ln. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
80		5	436		
	436			11	823
87		8	510		
	527			38	1262
92		31	776		
	600			151	1553
124		132	901		
	636			151	1455

Sta 786+50 to Sta 788+00

FED. AID DIVISION	STATE	PROJECT	TYPE FUNDS	16
2	OHIO	F-1010(4)		

STA - 21 - 12.39



SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
135		28	1321		
	1517			120	5217
138		37	1496		
	1494			143	5217
131		40	1321		
	1267			119	3605
97		24	626		
	378			31	754
82		20	446		
	558			29	1013

Sta. 788+62 to Sta. 792+0

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

77

STA - 21-12.39

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

F = 3455

← R/W 165'

940

943

974.76

796+00

942.3

940

R/W 159.0' →

F = 2965

+44 3-54" Culvert Inv. 940.08

950

← R/W 165'

944

974.66

795+00

947.2

950

R/W 153.4' →

+44 3-54 Culvert Inv. 942.48

F = 2085

← R/W 165'

950

947

975.26

794+00

954.2

R/W 147.8' →

950

F = 1480

← R/W 165'

950

976.56

793+00

956.2

R/W 142' →

950

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
174			3461		
	1839				11,911
157			2971		
	1661				9374
142			2091		
	1511				6624
130			1486		
	1472			52	5198

Sta. 793+00 to Sta. 796+00

FINAL SURVEY

ORIGINAL SURVEY

DIVISION	STATE	JOB NO.	FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

10

FINAL SURVEY PLOTTED NOTE BOOK DUPLICATE TRACED CHECKED DATE

ORIGINAL SURVEY PLOTTED NOTE BOOK CHECKED DATE

F= 2775

Top Dike 951.5

← R/W 165'

950

748

975.59
798+41
947.6

1152

R/W 136.8' →

950

F= 2960

← R/W 165'

950

748

+08 - 36" S-27 Culvert Inv. El. 944.57

976.27
798+00
945.4

950

R/W 145' →

F= 3345

← R/W 165'

940

744

975.47
797+00
943.2

R/W 165.0' →

940

F= 3476

← R/W 165'

940

743

975.01
796+41
941.9

940

R/W 161.4' →

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

Sta.	SEEDING Ln. Ft.	SEEDING Sq. Yds.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
796+41 to 798+41	147			2781		
		692				4364
	157			2966		
		1828				11698
	172			3351		
		1128				7466
	172			3482		
		788				5272

Sta. 796+41 to Sta. 798+41

DIVISION	STATE	PROJECT	FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

+15 Rt. Run out ditch to ground

F = 500

970

← R/W 138.3'

978.67
801+00
973.7

F = 1466

960

← R/W 151.7'

977.87
800+00
961.7

+13 36" S-27 Culvert Inv. 946.16
Riprap drop-down Entrance.

F = 2340

950

← R/W 165'

977.07
799+00
952.6

F = 2692

950

← R/W 165'

976.69
798+53
949.2

950

← R/W 165'

976.56
798+44
946.4

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W

970

960

R/W

950

R/W 134.4' →

950

R/W 136.2 →

950

SEEDING		END AREA		CU. YDS.	
Ln. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
85			503		
	1122				3652
117			1469		
	1416				7065
138			2346		
	752				4390
150			2698		
	198				1217

Sta. 798+44 to Sta. 801+00

FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS CHECKED, NOTE BOOK, NO.

ORIGINAL SURVEY — SURVEYED, PLOTTED, NOTE BOOK, NO.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

80

140 RIW 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

Sod. d = 0.8'

C = 65 F = 235

981.07
804+00
973.2

C = 135 F = 160

980.27
803+00
975.2

+ 80 ± Begin ditch.

C = 360

979.79
802+40
985.6

C = 800

975.85

+ 176 C

979.47
802+00
991.5

+ 60 End Sodding
Ditch runs out to ground

C = 240 F = 5

← R/W 131.6'

979.09
801+50
984.6

980 R/W

3219 C.Y.
29116 C.Y.
12749 S.Y.
EXC.
EMB
SEEDING

	SEEDING		END AREA		CU. YDS.	
	Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
	115		65	238		
		1128			370	731
	88		135	163		
		583			539	178
	87		360	3		
		398			852	-
	92		800	3		
		467			963	7
	76		240	8		
		447			222	47

Sta. 801+50 to Sta. 804+00

FINAL SURVEY — SURVEYED, PLOTTED, NOTE BOOK, SHEETS CHECKED, DATE, NO.

ORIGINAL SURVEY — SURVEYED, PLOTTED, NOTE BOOK, SHEETS CHECKED, DATE, NO.

FED. DIV.	STATE	PROJECT	FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

61

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

RIW

980

+95 24" S-27 Culvert Inv. 977.90

980.0 C=6

2:1 Drop-down to Culvert

2:1 Drop-down to Culvert

+90 979.6

0.3%

979.9 C=3

0.3%

+00 Dike El. 980.7

980.21

979.4 C=16

+45 24" S-27 Culvert Inv. 970.75

F=485

985.87
810+00
975.5

F=394

985.07
809+00
976.7

F=400

4:1

984.27
808+00
976.9

F=260

983.47
807+00
976.7

C=6

F=190

982.67
806+00
976.1

+00 Begin Sodding d= 0.8'

C=8

F=262

981.87
805+00
974.3

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
106		6	488		
1089				17	1639
90		3	397		
989				6	1481
88			403		
956				30	1233
84		16	263		
856				41	844
70		6	193		
833				26	848
80		8	265		
1083				135	926

Sta. 805+00 to Sta. 810+00

FINAL SURVEY PLOTTED TRACED CHECKED NO. LATEST CHECKED

ORIGINAL SURVEY PLOTTED TRACED CHECKED NOTEBOOK NO. LATEST CHECKED

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

82

STA - 21 - 12.39

SEEDING		END AREA		CU. YDS.	
Ln. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
110		1245			
	312			1109	
115		1150			
	1028			2639	19
70		275	10		
	900			528	644
92		10	338		
	1100			30	153

Sta 811+00 to Sta 8

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W

990

980

4.3%

C = 1245

983.1

988.47
813+25
998.0

4.3%

C = 1150

985.2 Top Dike

984.2

988.27
813+00
996.5

1.4%

F = 10

C = 275

982.8

987.47 S.B.
812+00
984.3

1.4%

F = 338

C = 10

981.4

986.67 S.B.
811+00
979.4

1.4%

ORIGINAL SURVEY — SURVEYED, PLOTTED, TRACED, CHECKED, DATE, SCALE, NOTE BOOK, NO.

FINAL SURVEY — SURVEYED, PLOTTED, TRACED, CHECKED, DATE, SCALE, NOTE BOOK, NO.

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

83

STA - 21-12.39

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
120		56	565		
	411			37	824
104		5	783		
688		11	2292		
117		6	1427		
506		36	1501		
90		38	423		
833		1782	58		

Sta 814+00 to Sta 815+3

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

980 970 960

R/W

985.7 C-56 F-562

1.0%

990.12 815+33 974.1

+10 Begin Paved Gutter Type I

C-5 985.4 F-780

11.6%

989.87 815+00 971.9

+44 End Paved Gutter

C-6 F-1424

918.90 Inv. 30" Culvert

1.0%

989.42 814+44 965.8

+20 FL. Ditch 979.1

4.3%

C-38 979.9 F-420

4.3%

989.07 814+00 980.4

ORIGINAL SURVEY NOTEBOOK

FED. RD. DIVISION	STATE	PROJECT	FUND
2	OHIO	F-1010(4)	

STA - 21-12.39

84

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
82		425	12		
	767			787	676
56			353		
339				30	713
109		44	688		
	182			46	378
110		120	673		
	192			49	344

EXC. 14,647 C.Y.
EMB 10,243 C.Y.
SEEDING 12,192 S.Y.

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W

Sodding d=1.0'

C=425

988.22

3.4%

End Sodding

+07 43"x27" Culvert Inv. 985.0

Dike and Roadway slope around Culvert Entrance to be riprapped to El. 987.7

F=12

991.47
817+00
987.3

980

R/W

Top of Dike 987.4

F=350

990.67
816+00
978.2

1.0%

980

C=44

986.0

F=685

1.0%

990.37
815+63
973.9

970

+50 43"x27" Culvert Inv. 969.04

R/W

C=120

985.85

F=670

1.0%

990.25
815+48
969.6

970

R/W

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

Sta 815+48 to Sta 817+0

DIVISION 2 | STATE OHIO | FUNDS F-1010(4)

STA-21-12.39

35

SEEDING		END AREA		CU YDS	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
105		384	173		
	406			589	134
98		500	28		
640		1126	40		
82		450	6		
	911			1620	33

Sta. 818+00 to Sta. 819+00

R/W 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

C = 384

Sod. d = 1.0'

F = 170

980

R/W

993.07
819+00
981.7

C = 500

F = 25

980

992.78
818+64
985.0

R/W

C = 450

F = 6

980

R/W

992.27
818+00
988.4

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

ORIGINAL SURVEY — SURVEYED / PLOTTED / WORK ROOM / FIELD BOOK / AREAS CHICAGO / DATE / BY / NO.

DIVISION	STATE	PROJECT	FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

86

SEEDING		END AREA		CU. YDS.	
Lin.Ft.	Sq.Yds.	CUT	FILL	CUT	FILL
97		370	65		
	1061			1730	163
94		564	23		
	455		723		23
55		146			
	400		442		144

Sta. 819+45 to Sta. 821+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W

C = 370

F = 62

980

994.67
821+00
995.9

C = 564

F = 70

100 Begin Sodding d = 10'

993.87
820+00
994.9

C = 146

990

10%

993.43
819+45
993.6

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

87

STA - 21-12.39

140 R/W 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

+53 42" Culvert Inv. 989.0

+45 - 42" Culvert Inv. 973.10

C=116

F=202

996.62
823+38
976.2

Ditch runs out into Ravine

R/W 134.5 →

C=60

F=242

996.45
823+23
984.9

R/W

C=164

F=162

996.27
823+00
985.4

R/W

C=350

F=35

995.47
822+00
986.8

R/W

980 980 980 990 990 980

Sta	SEEDING Lin. Ft.	SEEDING Sq. Yds.	END AREA CUT	END AREA FILL	CU. YDS. CUT	CU. YDS. FILL
822+00						
	77		116	205		
		135			49	125
	85		60	245		
		226			95	175
	92		164	165		
		1033			952	376
	94		350	38		
823+38		1061			1333	191

Sta 822+00 to Sta 823+38

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA-21-12.39

88

ORIGINAL SURVEY — SURVEYED, PLOTTED, NOTE BOOK, NO., AREA, CHECKED

R/W

0.5%

990

C=25

991.3

F=780

997.53
824+57
979.3

990

R/W 135.75' →

C=206

991.0

990

F=520

997.15
824+10
981.2

990

R/W 147.5' →

C=400

990.9

980

F=560

0.5%

997.01
823+91
977.5

980

R/W 147.75' →

F=170

C=67

990.8

0.5%

R/W

980

+57 Ditch runs out into Ravine

996.77
823+62
991.0

980

R/W 140.5' →

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

	SEEDING		END AREA		CU. YDS.	
	Ln. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
	107		25	786		
		595			201	1139
	121		206	523		
		265			213	382
	130		400	563		
		324			251	397
	71		67	176		
		211			81	169

Sta 823+62 to Sta 824+57

DIVISION		FUNDS	
2	OHIO	F-1010(4)	

STA - 21-12.39

SEEDING		END AREA		CU YDS	
Lin.Ft.	Sq.Yds.	CUT	FILL	CUT	FILL
88		375			
	470			1150	-
100		1005			
	581			1698	-
90		662			
	1028			1300	956
95		40		516	
	483			52	1037

Sta. 825+00 to 827+00

0.5%
Sodding d=1.0'
C=375
996.3
Sodding d=1.4'
0.5%
999.30
827+00
996.9
C=1005
996.1
+10 Begin Riprap present Channel d=1.5'
End Sodding d=1.4'
+10 Begin Riprap d=1.0'
0.5%
68' from ℄
C=662
995.8
32%
<4'>
13.5%
Slope varies
996.4
993.8
+87 Begin of Riprapped Confluence
+82
994.5
993.0
32%
19.5%
Slope Varies
+75 Channel ditch meet
991.9
62' from ℄
+50 to +30 narrow bottom width of ditch from 4' to 2'
0.5%
+30 End Riprap
999.01
826+55
1003.6
998.65
826+00
1002.2
R/W
4:1
C=40
F=510
991.5
0.5%
997.87
825+00
985.2
R/W
R/W
140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120
990
1000
980

DIVISION	STATE	PROJECT	FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

90

SEEDING		END AREA		CU. YDS.	
Lin Ft.	Sq Yds.	CUT	FILL	CUT	FILL
96		640			
	1033			2107	9
90		495	10		
	841			997	272
104		195	188		
	235			228	75

18,081 C.Y. EXC.
5,640 C.Y. EMB.
12,581 SQ.Y. SEEDING

RIW

1000

0.5%

C=640

992.3

+00 Begin Sodding d=10'

1000.12
829+00
1002.7

0.5%

1000

RIW

990

C=495

F=10

996.8

0.5%

99978
828+00
994.9

990

RIW

C=195

F=188

996.4

990

99943
827+22
989.1

RIW

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

Sta. 827+22 to Sta. 829+00

ORIGINAL SURVEY — SURVEYED — PLOTTED — NOTE BOOK — PAGE — LOCATION

FINAL SURVEY — PLOTTED — TEMPLATE — NOTE BOOK — AREA — PAGE — CHECKED

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA - 21 - 12.39

91

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W

0.6%

C = 565

996.6

990

990

R/W

0.6%

1000.19

832+00

995.6

C = 465

F = 4

997.2

990

990

1000.32

831+00

995.4

0.6%

R/W

C = 295

997.8

990

990

R/W

0.5%

1000.29

830+00

997.6

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING		END AREA		CU YDS.	
LIN. FT.	SQ. YDS.	CUT	FILL	CUT	FILL
90		565			
				1073	1907
96		465	4		
				978	1407
80		295			
				978	1731

Sta. 830+00 to Sta. 832+00

FINAL SURVEY — SURVEYED, PLOTTED, NOTE BOOK, NO., DATE

ORIGINAL SURVEY — SURVEYED, PLOTTED, NOTE BOOK, NO., DATE

FED. HWY. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

92

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W 158.8'

C = 515

Top of Dike EL 998.0

996.9

F = 23

990

R/W

0.9%

999.46

834+00

995.1

R/W

990

C = 450

996.0

Inv. El 995.68

24" Culvert

F = 131

990

Inv. El 984.45

6" below exist. ground

End Sill

0.6%

999.90

833+00

991.9

R/W

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
90		515	23		
	1211			1787	270
128		450	131		
	1211			1880	243

Sta. 833+00 to Sta. 834+00

FINAL SURVEY — DATE — SURVEYED — PLOTTED — NOTE BOOK — LEVEL — LOCAL CHECKED — NO

ORIGINAL SURVEY — DATE — SURVEYED — PLOTTED — NOTE BOOK — LEVEL — LOCAL CHECKED — NO

DIVISION	STATE	PROJECT	FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

93

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

← R/W 170'

3.5%

C = 755

994.65

1000

997.19
837+00
995.5

R/W

← R/W 175.8'

C = 890

1000

Begin Sodding d=.10'

998.10
836+00
997.9

← R/W 167.3'

C = 705

1000

998.65
835+00
996.9

R/W

FINAL SURVEY PLOTTED CHECKED TRACED

ORIGINAL SURVEY PLOTTED CHECKED TRACED

SEEDING		END AREA		CU. YDS.	
Lin.Ft.	Sq.Yds.	CUT	FILL	CUT	FILL
117		755			
	1356			3046	–
127		890			
	1272			2954	–
102		705			
	1067			2259	43

Sta. 835+00 to Sta. 837+00

FED. NO. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

94

R/W

C = 320

F = 42

980

R/W

994.89
839+00
996.3

R/W 155'

C = 570

Top of Dike 994.5

990

990

23%

996.12
838+00
996.4

R/W 162'

C = 830

990

992.6
Inv. EL 992.25

End Sodding d = 1.0'

24" Culvert

989.0

E-3 Channel excavation
covered in Culvert Summary Sheet.

Inv. EL 983.35

996.60
837+57
992.2

36%

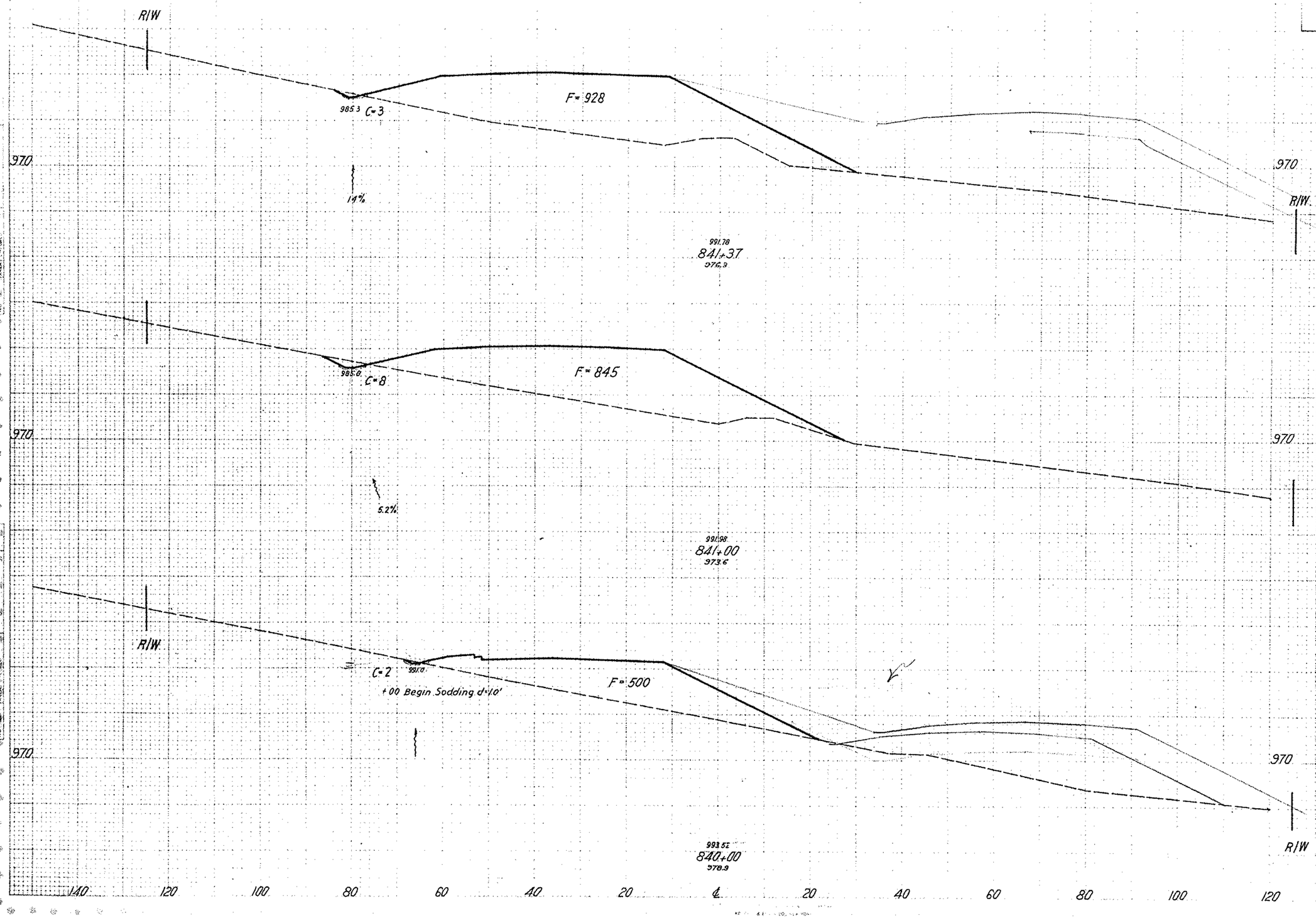
990

R/W

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING		END AREA		CU. YDS.	
Lin.Ft.	Sq.Yds.	CUT	FILL	CUT	FILL
90		320	45		
	1000			1648	89
90		570	3		
	535			1115	5
134		830	3		
	795			1673	3

Sta. 837+57 to Sta. 839+00



	SEEDING		END AREA		CU. YDS.	
	Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
	98		3	934		
		428			8	1223
	110		8	851		
	1056				19	2507
	80		2	503		
	944				596	1015

EXC. 13,606 C.Y.
EMB. 27,474 C.Y.
SEEDING 14,197 S.Y.

Sta. 840+00 to Sta. 841+37

DIVISION	STATE	PROJECT	FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

96

SEEDING		END AREA		CU. YDS.	
Lin.Ft.	Sq.Yds.	CUT	FILL	CUT	FILL
118		12	1048		
1267				56	3581
110		18	886		
728				25	2123

ORIGINAL SURVEY — SURVEYED BY ... NOTE BOOK ... DATE ... AREAS ... LATTICE CHECKED ... CUT ... FILL ...

FINAL SURVEY — SURVEYED BY ... NOTE BOOK ... DATE ... AREAS ... LATTICE CHECKED ... CUT ... FILL ...

20%

R/W

983.0 C=12

+00 Begin Paved Gutter Type I

+00 End Sodding d=10'

F=1042

1.4%

988.45
843+00
987.5

970

R/W

984.4 C=18

F=880

1.4%

990.30
842+00
971.9

970

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

Sta. 842+00 to Sta. 843+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	
2	OHIO	F-010(4)		97

STA 21-12.39

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
145		78	1188		
	1539			215	4674
132		38	1336		
	1550			111	5735
147		22	1761		
	1606			57	6235
142		9	1606		
	1444			39	4915

R/W 7.5% C=78 9640 F=1188 980.47 847+00 961.1 960 R/W

40%

R/W 9680 C=38 F=1330 982.47 846+00 962.4 960 960

40%

R/W 972.0 C=22 F=1755 984.47 845+00 959.6 960 960

40%

R/W 976.0 C=9 F=1600 986.47 844+00 969.6 960 960 R/W

7.0%
Paved Gutter Type I.

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

Sta. 844+00 to Sta. 847+00

ORIGINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — NOTE BOOK — DATE — SCALE — CHIEF OF PARTY — NO.

FINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — NOTE BOOK — DATE — SCALE — CHIEF OF PARTY — NO.

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

98

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
151			1498		
	1739				6326
162			1918		
	1728			52	7030
149		28	1878		
	1667			89	7119
151		20	1966		
	1644			181	5841

Sta 848+00 to Sta 851+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

960

R/W

2.8%

+50 Ditch EL. 954.10

0.5%

E-3

953.85

0.5%

F=1495

972.47

851+00

952.8

See Line Sheet for details

+78 End Riprap

+68 Ditch El. 953.7

+55 60" ϕ Culvert Inv. EL. 951.26

+42 Ditch EL. 953.15 Begin drop-down

+32 Begin Riprap

0.5%

+55 60" Culvert Inv. EL. 948.36

F=1915

E-3

953.36

R/W

0.5%

974.47

850+00

948.3

+52 Ditch EL. 953.60

(See Line Sheet for Riprap details)

+47 End Sodding d=12"

20%

F=1875

R/W

954.6

C=28

976.47

849+00

954.4

20%

+10 Begin Sodding d=12"

+10 End Paved Gutter Type I

F=1960

R/W

956.6

C=20

7.4%

978.47

848+00

953.6

R/W

ORIGINAL SURVEY | PLANIMETRIC | TOPOGRAPHY | AREAS CHECKED | NOTE BOOK | PAGE NO.

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

99

STA - 21+12.39

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

960

C = 950

RIW

962.47
856+00
972.7

C = 690

964.47
855+00
971.0

F = 48

C = 77

966.47
854+00
968.3

F = 915

968.47
853+00
957.1

F = 1205

970.47
852+00
954.4

RIW

	SEEDING		END AREA		CU. YDS.	
	Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
	101		950			
		1072			3037	–
	92		690			
		856			1420	89
	62		77	48		
		900			143	1789
	100		918			
		1122			–	3937
	102		1208			
		1406				5011

	C.Y.	C.Y.	S.Y.
EXC.	4,782	41,816	16,079
EMB.			
SEEDING			

Sta. 852+00 to Sta. 856+00

ORIGINAL SURVEY
CROSS SECTIONED
PLOTTED
CORRELATED
FINAL
NOTE BOOK
NO.
KEYS CHECKED

DIVISION	STATE	PROJECT	FUNDS
2	OHIO	F-1010(4)	

STA - 21+12.39

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
80		24	140		
	833			381	259
70		182	–		
	739			837	
63		270	–		
	1044			3509	
125		1625	–		
	1383			5815	
124		1515	–		
	1322			5315	–
114		1355			
	1194			4269	–

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140

+60 Intercept Existing Channel at Left
EL 943.0±

R/W F=140 C=24 953.47 862+00 952.2 950

C=182 954.16 861+00 957.3 950

C=270 965.22 860+00 961.8 950

C=1625 956.66 859+00 972.0 960

C=1515 958.47 858+00 973.2 960

R/W C=1355 960.47 857+00 973.4 960

R/W

Sta. 857+00 to Sta. 862+00

ORIGINAL SURVEY — DRAWN — TRACED — PLOTTED — CHECKED — NOTE BOOK — TEMPLATE — AREAS CHECKED — NO.

FED. AID DIVISION	STATE	PROJECT	SUPP. FUNDS
2	OHIO	F-1010(4)	

101

STA - 21 - 12.39

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
93			951		
	978				3294
83			828		
	922 Dike 1800				3104 Dike 140
83			848		
	100				3150
97		–	853		
	155				446
118		+	1000		
	967			–	2186
108		–	533		
	1044			44	1246

EXC. 10,586 C.Y.
EMB. 25,586 C.Y.
SEEDING 14.114 S.Y.

940 R/W

F = 948

951.47
866+00
938.3

940

F = 825

Dike Top El. 945.5
140 C.Y. Fill, Seeded 1800 S.Y.

951.97
865+00
939.9

+ 05 7'-3" x 5'-3" S-28 Culvert
Inv. 938.50

+ 34 7'-3" x 5'-3" S-28 Culvert
Inv. 936.59.

940

F = 848

952.47
864+00
938.6

940

F = 850

+ 90 Ditch joins existing Stream Bed

952.62
863+90
949.4

940

3.0%

1'/Ft

E-3
940.0

F = 997

Channel excavation E-3
covered in Culvert Summary Sheet.

952.59
863+77
939.5

940

3.0%

1'/Ft

E-3

942.3

3.0

F = 530

R/W

952.97
863+00
950.4

940 R/W

+ 55 to 85 Riprap Type A d = 2' to protect outside bank in curve of ditch diversion
+ 60 Intercept existing stream bed.

(+4) 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

Sta. 863+00 to Sta. 866+00

FINAL SURVEY — ORIGINAL SURVEY — NOTE BOOK — NO. — SECTIONS PLOTTED — TEMPLATE — AREAS CHECKED

FED. HWY. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA - 21-12 39

102

R/W

0.8%

0.4%

944.0

C = 236

945.2

947.97
873+00
949.7

0.7%

To Culvert under 356

T.R. 356

T.R 356

Sta 872+11.65 ℄ U.S. 21
Sta 47+63.75 ℄ T.R. 356

940

F=115

948.47
872+00
944.5

F = 1000

948.97
871+00
937.2

F = 1184

949.47
870+00
937.0

+60 Intercept existing ditch with new ditch 4' bottom width EL 934.3.

+50 to +75 Riprap Type A d=2' to protect outside bank in curve of ditch diversion.

0.5%

934.0

F=1120

949.97
869+00
937.4

+40 Ditch flows into Fox Run FL Ditch 933.7

Sta 868+17.81 ℄ Bridge over Fox Run.

950.47
868+00
936.6

F = 1105

950.97
867+00
936.1

℄

R/W

140 120 100 80 60 40 20 0 20 40 60 80 100 120

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
70		236			
	389			437	213
–		–	115		
	483				2070
87			1003		
	1017				4056
96		–	1187		
	1161				2478
113			1123		
	1083				1644
	833				3026
100			1108		
	1072			–	3813

Sta. 867+00 to Sta. 873+00

ORIGINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — NOTEBOOK — AREAS — CHECKED — NO.

FINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — NOTEBOOK — AREAS — CHECKED — NO.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

103

+80 Begin Ditch

950 R/W C=392

949.47
879+00
954.1

940 F=30 C=45

948.47
878+00
949.0

3.9%

940 F=270 C=10 1042.9

947.66
877+00
943.8

0.5% to Drain

1.5%

940 F=350 C=4 18" Culvert

Inv. El. 940.0

Inv. El. 940.50

947.22
876+00
940.5

4.3%

3.9%

940 C=75 944.4 F=42 944.4 C=5

947.16
875+00
945.6

0.5%

0.4%

950 R/W C=625 944.8 944.8 R/W

0.7%

0.4%

947.47
874+00
950.5

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

EXC. 5,256
EMB 19,137
SEEDING 8,812

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
74		392			
	756			809	61
62		45	33		
	789			102	572
80		10	276		
	861			26	1170
75		4	356		
	783			156	737
66		80	42		
	850			1306	78
87		625			
	872			1594	–

Sta. 874+00 to Sta. 879+00

FINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, AREAS, VOLS., CHECKED, NOTE BOOK, REF. OR FILE, NO.

ORIGINAL SURVEY — SURVEYED, PLOTTED, TEMPLATE, NOTE BOOK, REF. OR FILE, NO.

FED AID DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

104

STA-21-12.39

SEEDING		END AREA		CU. YDS.	
Ln. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
78		220			
	883			620	19
81		115	10		
	822			269	176
67		30	85		
	750			56	630
68		255			
	644			22	511
48		12	21		
	678			748	39

Sta. 880+00 to Sta. 884+00

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W 950 1.0% 951.5 Sod. d=11' C=220 R/W 950

954.47 884+00 958.0

2.62%

950 F=10 948.9 C=25 C=90 950

959.47 883+00 957.4

2.62%

950 F=82 946.3 C=30 + 00 End ditch 950

952.47 882+00 951.4

2.62%

+ 48 - 30" Culvert Inv. 944.90

940 F=252 940

951.47 881+00 946.8

+ 50 Begin Ditch + 95 - 30" Culvert Inv. 943.25

950 F=18 C=12 950

R/W R/W

950.47 880+00 950.0

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

PLATE ROCKY CREEK VALLEY DAM AND RESERVOIR GENESEE COUNTY, NEW YORK

ORIGINAL SURVEY — DRAWN — CHECKED — PLOTTED — TRACING — NOTE BOOK — NO — AREAS CHECKED

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

105

STA - 21-12.39

	140	R/W 120	100	80	60	40	20	℄	20	40	60	80	100	120
960					957.5 C=18 Sod d=12'		F=135							960
					1.0%			960.47 890+00 955.8						R/W
950					956.5 C=18		F=110							950
					1.0%			959.47 889+00 955.8						
					C=85		F=24							
950					955.5									950
					1.0%			958.47 888+00 956.4						
								℄ 90 Begin ditch						
					C=310									
950					954.5 Sod d=14'									950
					1.0%			957.47 887+00 956.3						
960					C=680									960
					953.5									
					1.0%			956.47 886+00 962.5						
960		R/W			C=610									R/W 960
					952.5									
								955.47 885+00 962.1						
	140	120	100	80	60	40	20	℄	20	40	60	80	100	120

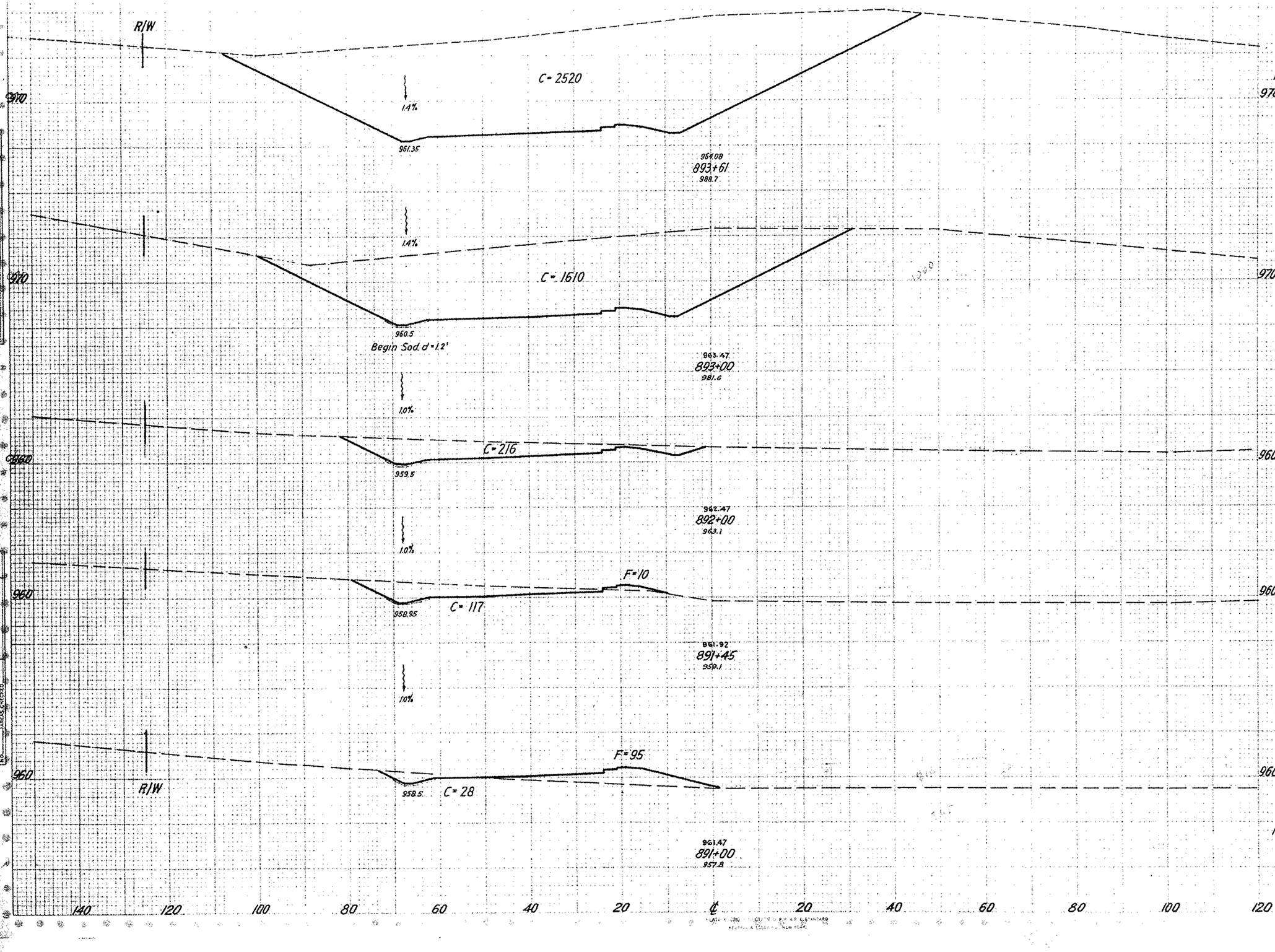
EXC. 20098 C.Y.
EMB. 1464 C.Y.
SEEDING 9833 S.Y.

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
71		18	135		
	756			67	454
65		18	110		
	694			191	248
60		85	24		
	767			731	44
78		310			
	956			1833	–
94		680			
	1022			2389	–
94		610			
	956			1537	–

Sta. 885+00 to Sta. 890+00

2	OHIO	F-1010(4)	

STA-21-12.39



	SEEDING		END AREA		CU. YDS.	
	Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
	154		2520			
		956			4865	-
	128		1610			
		1044			3381	-
	60		216			
		370			339	10
	61		117	10		
		343			121	87
	76		28	95		
		817			85	426

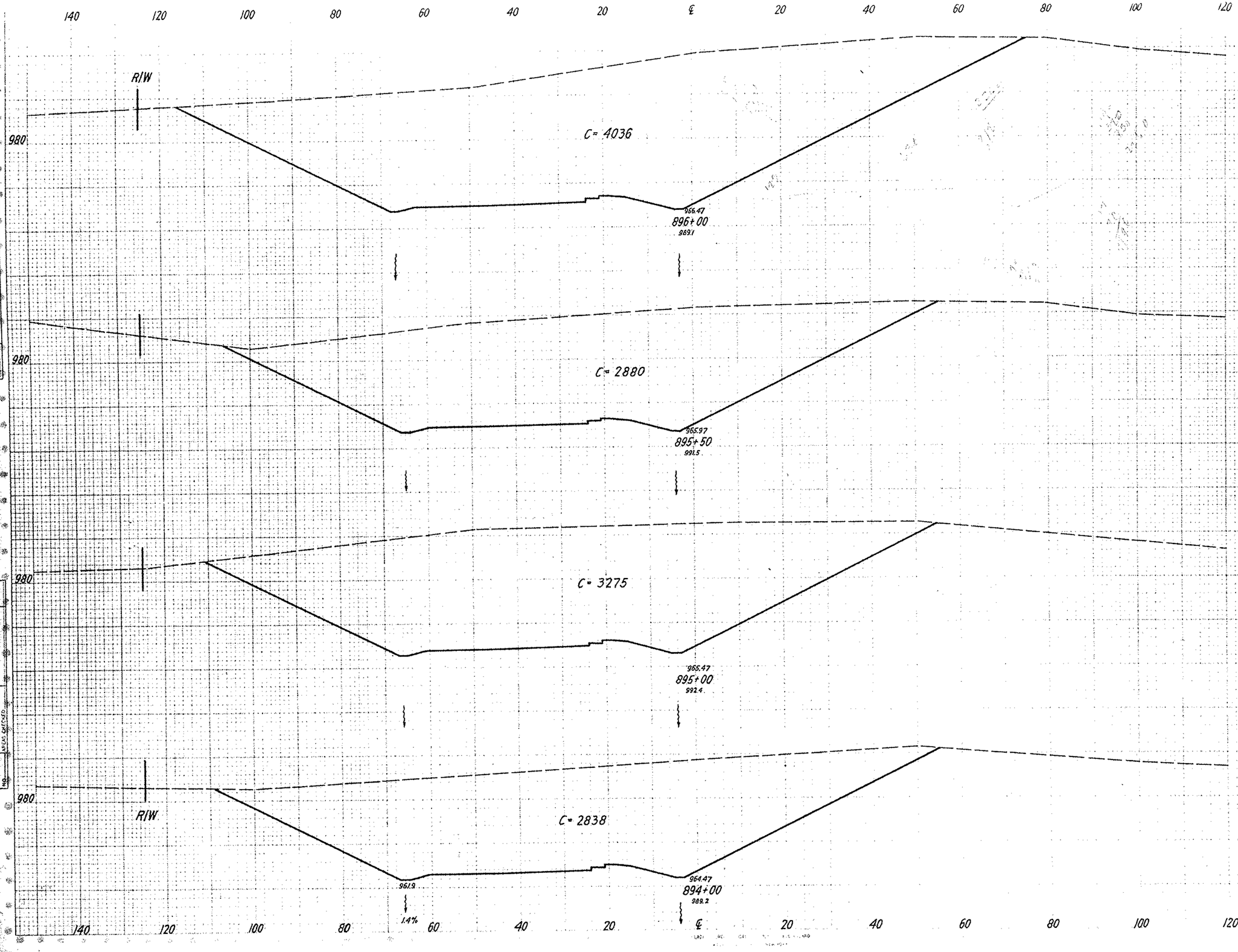
Sta. 891+00 to Sta. 893+61

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

107

ORIGINAL SURVEY — SURVEYED / PLOTTED / TRIANGULATE / AREAS / NOTE BOOK / NO. / AREAS CHECKED



	SEEDING		END AREA		CU. YDS.	
	Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
980	195		4036	3		
		992			6404	6
R/W 980	162		2880	3		
		911			5699	6
980	166		3275	3		
		1828			11,320	11
980 R/W	163		2838	3		
		687			3870	—

Sta 894+00 to Sta 896+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

108

STA - 21-12.39

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

+54 Begin ditch

+54 Begin ditch

970 R/W

C = 375

968.47
898+00
976.0

980

C = 902

967.73
897+26
983.5

970

C = 1507

967.47
897+00
984.2

980

C = 1648

966.91
896+44
983.9

970 R/W

980 R/W

	SEEDING		END AREA		CU. YDS.	
	Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
970	81		375	3		
		765			1750	8
980	105		902	3		
		329			1160	3
970	123		1507	3		
		796			3272	6
980 R/W	133		1648	3		
		802			4631	5

Sta 896+44 to Sta 898+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

STA - 21 - 12.39

109

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W

960

F = 1445

977.52
903+00
958.6

960

F = 1536

976.03
902+00
955.9

960

F = 1306

972.84
901+00
956.8

960

F = 870

970.98
900+00
959.5

960

F = 580

969.56
899+00
962.7

R/W

960

R/W

960

960

960

960

960

960

R/W

960

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
116			1448		
	1278				5531
114			1539		
	1228				5274
107			1309		
	1089				4041
89			873		
	1050				2696
100			583		
	1006		694		1085

EXC. 34,930 C.Y.
EMB. 37,524 C.Y.
SEEDING 18,974 S.Y.

SURVEY
PLOTTED
TEMPLATE
AREAS CHECKED
LATAS CHECKED
NO. BOOK

Sta. 899+00 to Sta. 903+00

FED. NO. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

STA - 21-12.39

110

980

R/W

F = 2310

990.02
908+00
970.9

980

F = 1865

989.04
907+61
978.6

970

F = 1875

987.52
907+00
971.5

F = 2340

960

985.02
906+00
963.2

F = 1662

960

980.08
Top Grate

987.52
905+00
961.4

976.5

24"-15" Storm Sewer

976.3

F = 1525

30"-15" Storm Sewer

960

960.0

12"-15" Storm Sewer

959.8

980.02
904+00
960.5

Catch Basin and Storm Sewer shown from Sta 904+02.1

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

	SEEDING		END AREA		CU. YDS.	
	Ln. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
	147		-	2314		
		622				3021
	140		-	1869		
		929				4234
	134		-	1879		
		1533				7820
	142			2344		
		1400				7426
	110			1666		
		1233				5915
	112			1528		
		1267				5511

Sta. 904+00 to Sta. 908+00

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F - 1010 (4)	

STA - 21 - 12.39

111

+70' Ditch runs out to ground. End Sodding

C = 90

+50' Ditch runs out to ground. End Sodding

F = 566

F = 1694

F = 2196

F = 2075

F = 2445

F = 2634

4:1

1002.52
913+00
997.1

999.26

996.75

1000.02
912+00
987.1

995.25

998.52
911+00
981.0

999.25

997.52
911+00
981.5

992.25

993.02
910+00
976.3

990.50 TOP

11" excentric

48' - 15" Storm Sewer - 1.0%

988.0 Inv.

28' - 15" Storm Sewer

10' - 15" Storm Sewer

987.5

972.5

972.2

992.52
909+00
971.6

R/W

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

990 980

EXC. 36,149 C.Y.
EMB. 54,784 C.Y.
SEEDING. 22,386 S.Y.

	SEEDING		END AREA		CU. YDS.	
	Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
	132		90	566		
		1589				4191
	154			1697		
		1040				4329
	158			2199		
		698				3168
	156			2078		
		1783				8381
	165			2448		
		1861				9417
	170			2637		
		1761				9169

Sta. 909+00 to Sta. 913+00

ORIGINAL SURVEY — SURVEYED — PLOTTED — HOR. SCALE — HOR. BOOK — NO. — TEMPLATE — AREAS CHECKED

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

112

EQUATION
918+94.58 BK. = 917+27.79 AH.

	SEEDING		END AREA		CU. YDS.	
	Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
	155		1660			
		1794			6574	-
	168		1890			
		1811			6763	-
	158		1762			
		1711			5637	-
	150	1282				
		1667			3957	-
	150	855				
		1567			1583	1048

Sta. 914+00 to Sta. 918+00

PLATE 3

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

113

STA - 21-12.39

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
123		740	2		
	633			1543	3
130		1112	2		
	1511			4948	7
142		1560	2		
	1661			6522	7
157		1962	2		
	1750			7535	7
158		2107	2		
	2900			11,635	6

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

1080

R/W

C = 740

1030

1023.2

2.2%

1027.80
921+45
1032.8

R/W

1030

C = 1112

Top of Dike EL 1025.0

1025.65
921+00
1031.2

1030

1030

C = 1560

1024.19
920+00
1033.5

+00 Begin Sodding d = 0.6'

35

1030

1030

C = 1962

1021.69
919+00
1032.2

1030

1030

R/W

C = 2107

R/W

1017.10

2.7%

1019.19
918+00 Ahead
1030.3

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

Sta. 918+00 to Sta. 921+45

ORIGINAL SURVEY: SURVEYED / PLOTTED / INK PLATE / NOTE BOOK / AREAS CHECKED / NO.

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

STA - 21-12.39

114

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W

1030

F = 315

+50 Begin Sodding d = 1.0'

C = 5

1029.2

1034.17

926+00

1030.2

1.8%

R/W

+00 15" I-2 Storm Sewer
Inv. 1025.5

F = 485

82' - 15" I-2

1030

C = 60

1022.4

1033.33

925+00

1028.5

1.8%

R/W

1030

C = 855

1025.6

1032.16

924+00

1034.6

1.8%

1030

C = 1065

1023.8

1030.66

923+00

1034.9

1.8%

R/W

1020

F = 265

30" Culvert

C = 425

1022.0

End Sodding d = 1.0'

1021.85

1016.89

1028.82

922+00

1026.5

2.2%

R/W

1020

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

	SEEDING		END AREA		CU. YDS.	
	Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
	116		5	323		
		1411			120	1511
	138		60	493		
		1600			1694	917
EXC. 44,724 C.Y. EMB. 3,908 C.Y. SEEDING 16,603 S.Y.						
	150		855	2		
		1667			3556	7
	150		1065	2		
		1661			2759	504
	149		425	270		
		831			1187	277

Sta. 922+00 to Sta. 926+00

ORIGINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — NOTEBOOK — AREAS CHECKED — NO.

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA - 21-12.39

115

SURVEY	STARTED	COMPLETED
	PLOTTED	
	NOTE BOOK	
	NO.	AREAS CHECKED

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

1040 R/W

C = 945

0.5%

Top of Dike Elev. 1034.5

1040 R/W

1036.21
930+00
1042.1

1040

C = 1820

1040

1035.71
929+00
1047.2

1040

C = 1378

1040

1035.21
928+00
1043.9

1.8%

1040

C = 856

1040

1032.2

1035.06
927+69
1039.5

1.8%

1030

C = 266

1030 R/W

1031.0

1034.71
927+00
1036.7

1.8%

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
137		945	2		
	1556			5120	7
143		1820	2		
	1561			5922	19
138		1378	8		
	465			1282	9
132		856	8		
	970			1434	20
121		266	8		
	1317			502	613

PLATE 3 CROSS SECTION PAPER BY KEUFFEL & ESSER CO. NEW YORK

Sta. 927+00 to Sta. 930+00

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA - 21 - 12.39

116

FINAL SURVEY — ORIGINAL SURVEYED — FINAL SURVEY — FIELD BOOK — NO. — WITE BOOK — PAGES — MISC. CHECKED

140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120

R/W

1040

C = 915

1038.71
935+00
1041.0

1033.3

1.1%

F = 156

C = 405

1038.21
934+00
1037.7

1032.2

1.1%

1035.94
Top Inlet

F = 430

C = 280

30' Culvert

1028.16
Inv.

1031.8

1031.60

1024.98

1038.04
933+65
1035.2

0.5%

F = 125

C = 360

1037.71
933+00
1037.4

1032.2

0.5%

F = 172

C = 187

1032.7

0+00 Begin Sodding @ 10'

1037.21
932+00
1036.0

0.5%

C = 460

1033.2

0.5%

1036.71
931+00
1038.0

EXC. 17,244 C.Y.
EMB. 3,074 C.Y.
SEEDING, 14,670 S.Y.

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
155		915			
	1794			2444	289
168		405	156		
	681			444	382
182		280	434		
	1181			770	678
145		360	129		
	1567			1013	565
137		187	176		
	1489			1198	341
131		460	8		
	1489			2602	19

Sta. 931+00 to Sta. 935+00

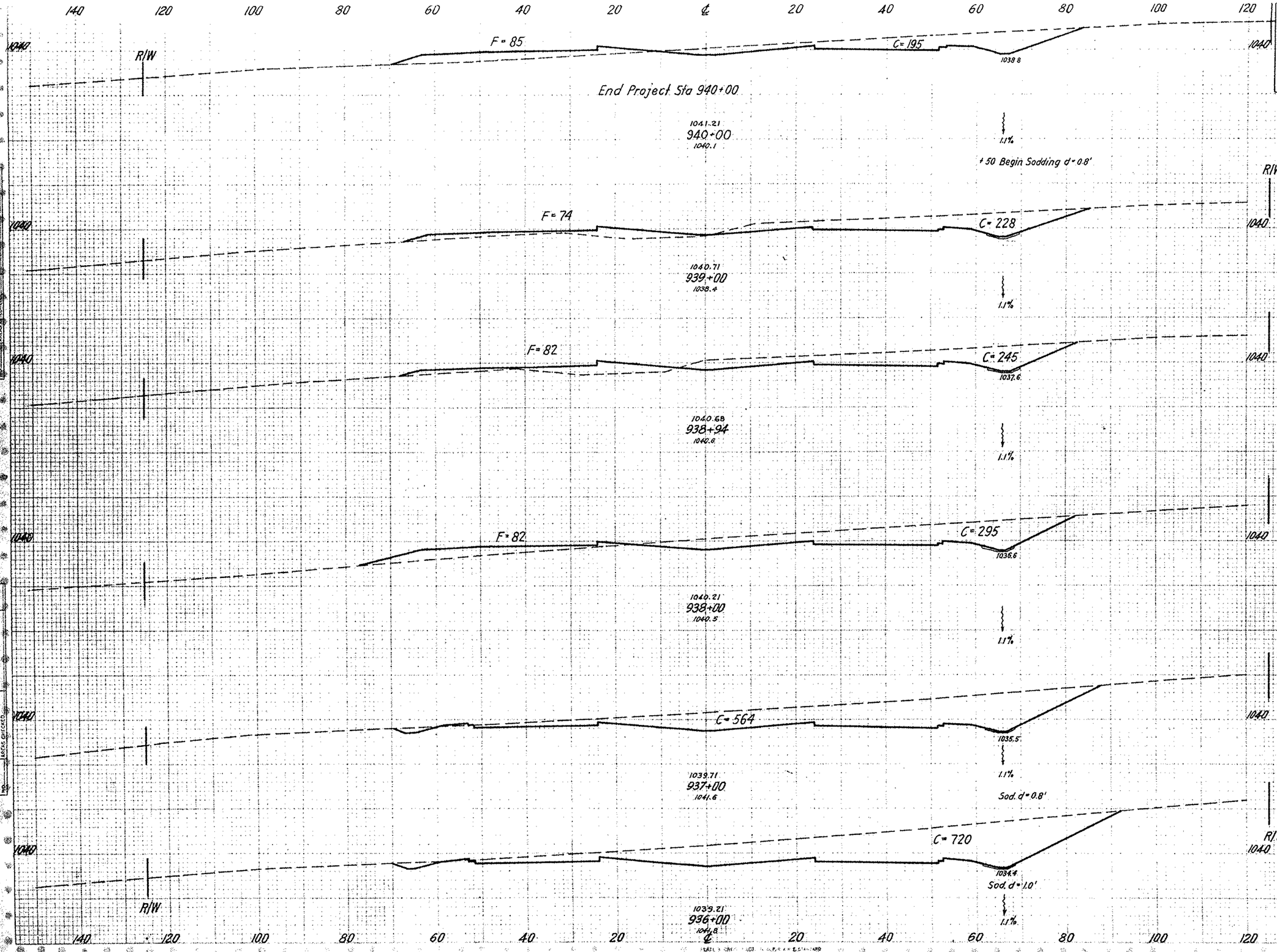
FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

117

STA - 21-12.39

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
120		195	89		
	1333			783	309
120		228	78		
	79			53	18
117		245	86		
	1279			940	299
128		295	86		
	1411			1591	163
126		564	2		
	1433			2378	7
132		720	2		
	1594			3028	4

Sta. 936+00 to Sta. 940+00



FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

118

STA - 21-12.39

Remove existing Pavement from here north

Note
Structure omitted over relocated T.R. 353 for clarity
For Superelevation, see table sheet 135.

STA 50+00 ℄ RELOC. T.R. 353 = STA. 664+91 ℄ U.S. 21

STRUCTURES - 20' SPAN AND UNDER				
MARK	STATION	TYPE	SIZE	DETAIL SHEET
C-2	40+80	PIPE CULVERT	15" x 84'	136
C-3	48+03	"	18" x 112'	136

FOR ESTIMATED QUANTITIES SEE SHEET NO. 119.

BEGIN WORK STA. 39+43.18

STA 38+01.59 ℄ C.H. 353 = STA 0+00 ℄ EARL RD.

STA. 2+08.03 ℄ EARL RD. = STA. 39+43.18 ℄ RELOC. C.H. 353

STA. 40+50.28 ℄ B&O RR = STA. 4+08.03 ℄ EARL RD.

Base Line

Existing T.R. 353

℄ Relocated T.R. 353

℄ EARL RD

℄ Exist. Jt. B.&O. and P.R.R. R/W

℄ Exist. P.R.R. R/W

Exist. B.&O. R/W

66' B.&O. R/W

100' P.R.R. R/W

Slope Easement

Open up channel to exist. Railroad Culvert

12" V.C.P.

Joint B.&O.-P.R.R. S.B. Main (B.&O. Owned)

Joint B.&O. P.R.R. N.B. Main (P.R.R. Owned)

P.R.R. YARD TRACK

P.R.R. YARD TRACK

P.R.R. YARD TRACK

℄ FUTURE TRACK-P.R.R.

Top West Bank-Toscarawas River

Swamp

Brush & Small Trees

Garden

Woods

1 St. Br. Warehouse

Well

2 St. Fr. Hse.

1 St. Fr. Hse.

2 Car Fr. Gar.

Fr. Gar. & Shed

10" C.I.P.

12" Cor. Dr.

8" C.M.P.

Barn

PI. 48+94.10
Δ = 17°24'40"
D = 12°00'00"
R = 477.46'
T = 73.10'
L = 145.09'

PI. 52+53.27
Δ = 5°30'00"
D = 3°00'00"
R = 1909.86'
T = 91.73'
L = 183.33'

PI. 46+05.48
Δ = 19°41'00"
D = 12°00'00"
R = 477.46'
T = 82.83'
L = 164.03'

PC. 45+22.66

PT. 46+86.69

PC. 48+21.00

PC. 664+56.18 ℄ U.S. 21

PT. 665+66.09 ℄ U.S. 21

PC. 51+41.54

℄ U.S. 21

END SHEET STA. 53+00

EXC 13,271 C.Y.
EMB 23,864 C.Y.
SEED. 13,328 S.Y.

EXISTING GROUND LINE ALONG ℄ RELOCATED T.R. 353

PROFILE GRADE - RELOCATED T.R. 353

+1.34%

Top W. Rail B.&O. S. Bound Track

℄ U.S. 21

15' Min. Clear

P.I. 51+50
EL. 952.60 CORR. 2.77
V.C. 350'

-3.00%

P.I. 39+77
EL 936.78 CORR. 0.25
V.C. 40'

S. EARL ROAD EL. 937.25

EL. 929.02

EL. 928.16

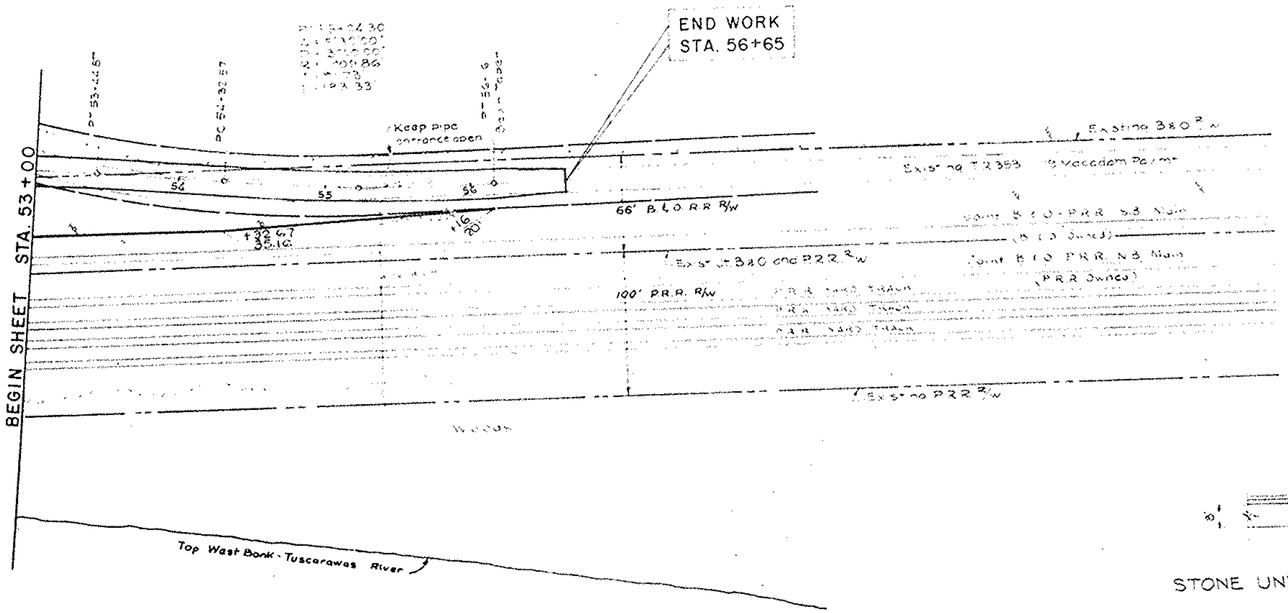
	40	41	42	43	44	45	46	47	48	49	50	51
	937.3	938.8	945.4	954.8	954.9	948.0	936.9	928.0	928.0	933.9	940.8	950.60
	937.01	938.45	939.77	943.11	942.45	943.79	945.18	946.47	947.81	949.15	950.45	950.65
												950.83
												943.6
												950.41
												950.11
												949.71
												949.20
												939.3
												948.58
												947.84
												946.99
												944.02
												937.0
												944.94

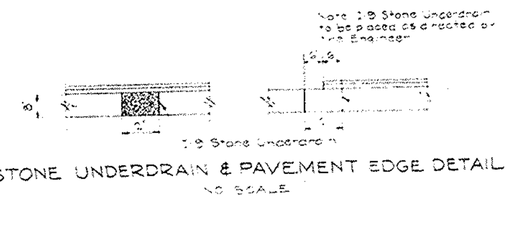
PREPARED AND RECOMMENDED BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

RELOCATED T.R. 353 - STA. 39+43.18 TO STA. 53+00

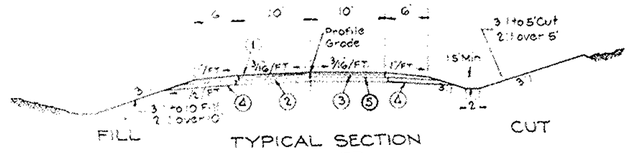
ORIGINAL SURVEY — SURVEYED / PLOTTED / NOTE BOOK / FIELD CHECKED

FINAL SURVEY — SURVEYED / PLOTTED / TEMPORARY BENCH MARKS / NOTE BOOK / FIELD CHECKED



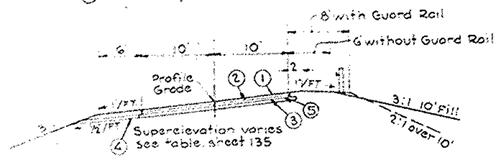


STONE UNDERDRAIN & PAVEMENT EDGE DETAIL
NO SCALE

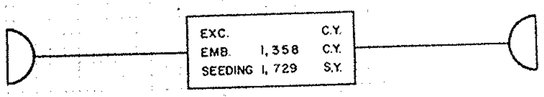


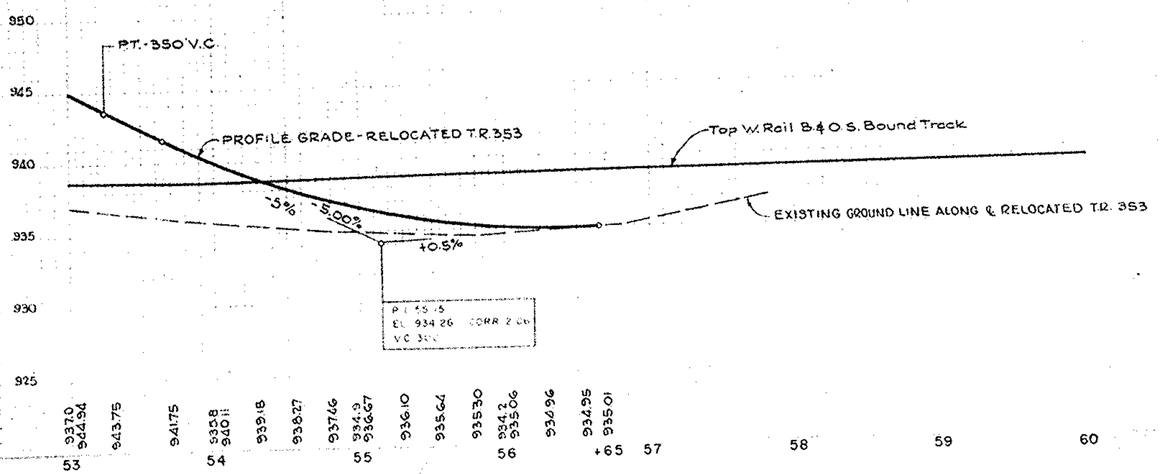
TYPICAL SECTION
TR 353

① T-35 1/4 Asphaltic Concrete Surface Course
② B-35 2 Asphaltic Concrete Leveling Course
③ B-119 8 Crushed Aggregate Base Course
④ I-9 Stone Drains No2 (Spacing Vax & Normal 50')
⑤ T-30 Bit Prime Coat



SUPERELEVATED SECTION
SCALE 1"=10'
Superelevate by removing crown





ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	FOR SHEET 119						
	ROADWAY						
E-6	Remov. & Disp. Exist. Pvt.	S.Y.					780
	PAVEMENT						
B-35	2" Asph. Conc. Leveling	C.Y.					50
B-119	8" Gravel Base	C.Y.					190
T-30	Bit. Prime	GAL.					300
T-35	1½" Asph. Conc. Surf.	C.Y.					30
	DRAINAGE						
I-9	Stone Drains No. 2	L.F.	53+00	56+65			140

ESTIMATED QUANTITES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	FOR SHEET 118						
	ROADWAY						
E-6	Remov. & Disp. Exist. Pvt.	S.Y.					1250
I-15	Guard Rail	L.F.	46+25	49+50	L	325	1050
I-15	" "	L.F.	46+00	53+00	R	700	
I-15	" "	L.F.	45+52	Exist Rd	Across	25	
	PAVEMENT						
B-35	2" Asph. Conc. Leveling	C.Y.					177
B-119	8" Gravel Base	C.Y.					725
T-30	Bit. Prime	GAL.					1150
T-35	1½" Asph. Conc. Surface	C.Y.					109
	DRAINAGE						
I-9	Stone Drains No. 2	L.F.	39+80	53+00	L&R		500

PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

RELOCATED T.R. 353 STA. 53+00 TO STA. 60+0

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

120

STA - 21-12.39

ORIGINAL SURVEY — RUNNING SURVEYED / PLOTTED / NOTE BOOK / PAGE / CHECKED / NO.

0.4%

+50 Ft. ditch 941.3

← R/W 70'

950

C = 952

942.45

44+00

954.9

← R/W 70'

950

C = 1140

941.11

43+00

954.8

R/W

940

C = 490

937.6

939.77

42+00

945.4

+60 Ditch runs out on Ground

+40 ditch runs out on Ground

930

F = 530

938.43

41+00

928.8

+80 15" ϕ Culvert Inv. 929.80

+80 15" Culvert Inv. 928.12

+50 Ditch runs out on Ground

+50 Ditch runs out on Ground

0.5%

0.5%

930

R/W

934.5

0.5%

937.01

40+00

937.3

C = 120

934.5

0.5%

R/W

Sta 39+43.18 ℄ Relocated T.R. 353 =

Sta 2+08.03 ℄ Earl Road

60 40 20 ℄ 20 40 60

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
100		952			
	1183			3874	-
113		1140			
	1100			3019	-
85		490			
	944			907	981
85				530	
	817			222	981
62		120			
	186			120	

F = 1300

Unsuitable material 498

946.47

47+00

928.0

Ditch runs out on Ground

940.7 C=1

F = 472

R/W 85' →

930

945.13

46+00

936.9

0.4%

← R/W 70'

C = 550

940

941.1

R/W 65' →

943.79

45+00

948.0

0.4%

60 40 20 ℄ 20 40 60

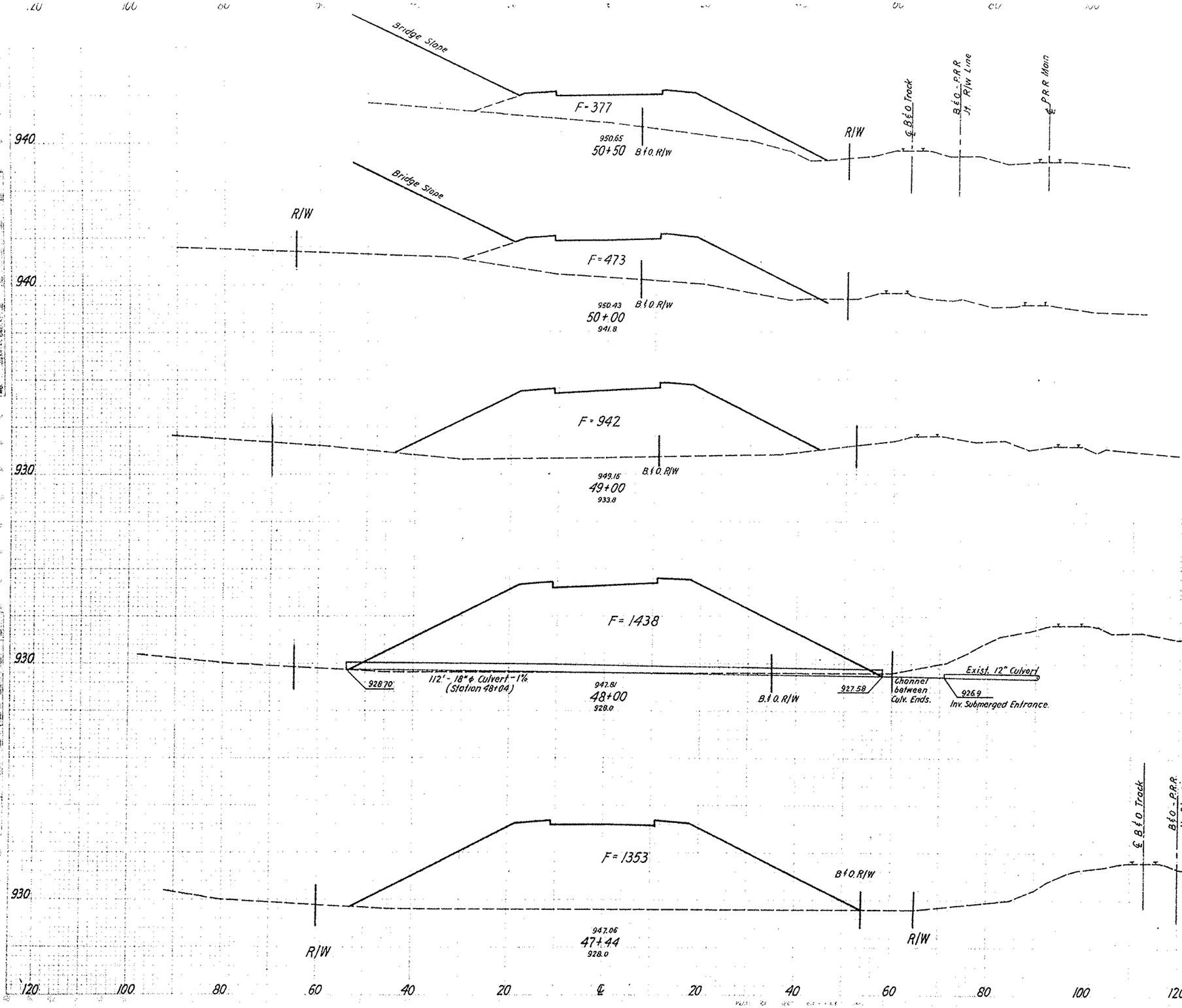
SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
					406
110		498	1798		
	1072			-	5126
83		1	472		
	989			1020	874
95		550			
	1083			2781	

Relocated T.R. 353 Sta 40+00 to Sta 47+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-310 (4)	

STA - 21+12.39

121



SEEDING		END AREA		CU. YDS.	
Ln. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
79			377		
	497				787
80			473		
	972				2620
95			942		
	1206				4407
122			1438		
	747				2894
118			1353		
	557				2567

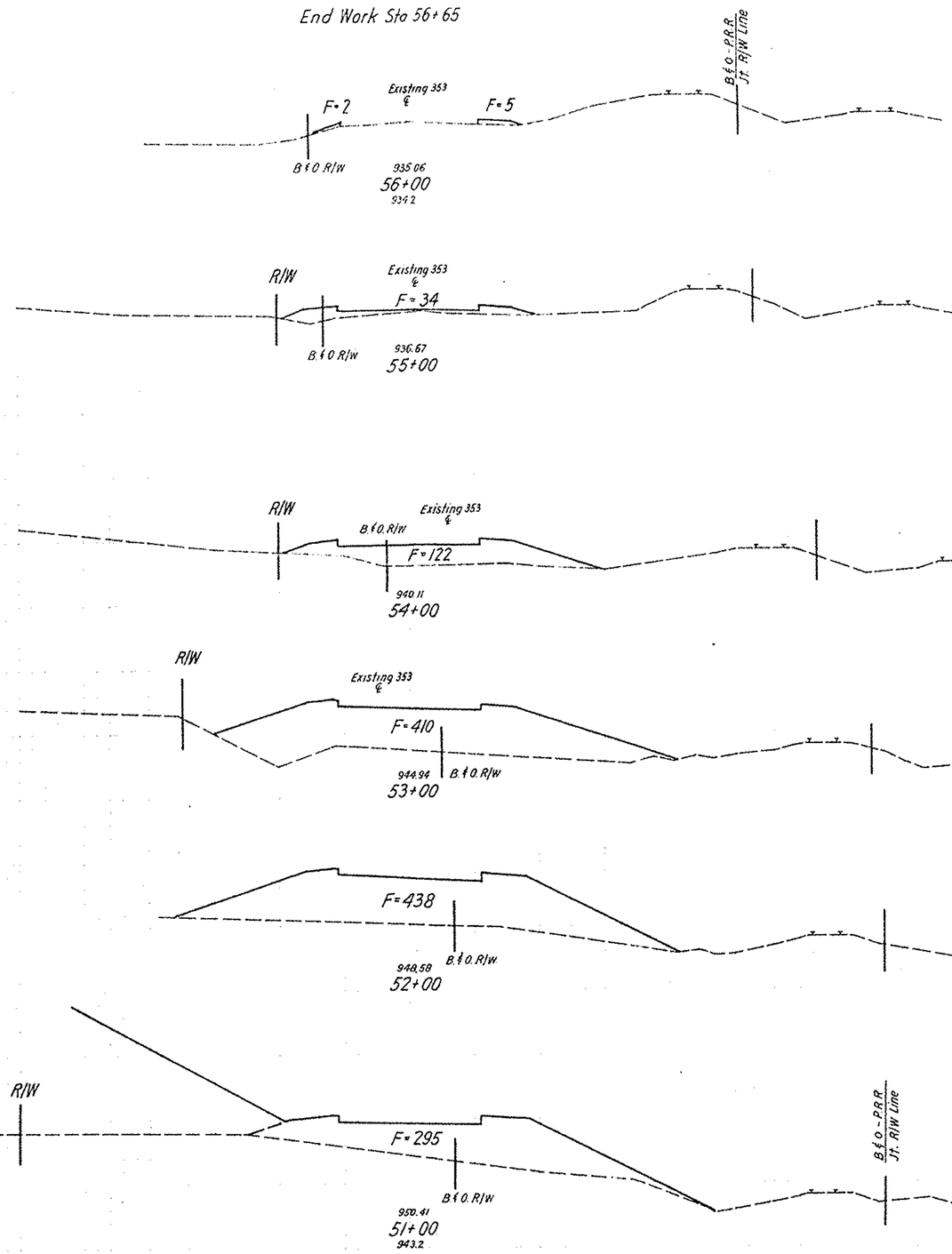
Relocated T.R. 353 Sta 47+44 to Sta 50+50

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

122

STA - 21-12.39

End Work Sta 56+65



Totals Sta 53+00 to Sta 56+65

EXC		
EMB	1,358	C.Y.
SEEDING	1,729	S.Y.

Totals Sta 39+54 to Sta 53+00

EXC	13,271	C.Y.
EMB	23,864	C.Y.
SEEDING	13,328	S.Y.

SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
	90				8
			7		
	411				76
49			34		
	550				289
50			122		
	678				985
72			410		
	828				1570
77			438		
	761				1357
60			295		
	386				622

Relocated T.R. 353 Sta 51+00 to Sta 56+00

2 OHIO F-101(4)

STRUCTURES - 20' SPAN AND UNDER				
MARK	STATION	TYPE	SIZE	DETAIL SHEET
C-13	0+76 TR 344 S	PIPE CULVERT	16" x 64'	136
C-12	758+92 US 21	" "	15" x 122'	136
C-15	760+67	" "	24" x 112'	136
C-14	1+00 TR 344 N	" "	16" x 60'	136

FOR T.R 344 NORTH & SOUTH
SEE SHEETS 127 & 126

FOR U.S 21 PLAN & PROFILE
SEE SHEET 21

FOR INTERSECTION PLAN
SEE SHEET 133

BEGIN SHEET – STA. 39+60

END SHEET – STA. 53+00

BEGIN WORK
STA. 44+75

BEGIN NEW BITUMINOUS PAV'T
STA 45+00

STA 47+83 ℄ T.R 352
STA 0+00 ℄ T.R 344

STA 48+43.29 ℄ T.R 352
STA. 47+86.57 ℄ T.R 344

STA 759-81.84 ℄ U.S 21
STA 50+00 ℄ T.R. 352

STA. 52+58 ℄ T.R 352
STA. 0+00 ℄ T.R. 344

STA 760+39.85 ℄ U.S 21
STA 50+00 ℄ T.R 344

END TAPER
STA. 45+40

PC 0+02

PT. 2+15.08

END T-35 PAV'T

BEGIN T-35 PAV'T

℄ OF PAV'T 2

℄ RELOCATED T.R. 344

℄ U.S. 21
STA 50+00

P.I 48+30
EL. 1036.02
V.C. 200'
CORR. 0.605

P.I 51+00
EL. 1036.98
V.C. 200'
CORR. 1.21

STA. 47+83
℄ RELOCATED T.R. 344

1038.20

1034.4
I-4 6" Right

1033.8
I-4 6" Lt.

Connect I-4 Lines
to Culverts

+1.74%
-0.84%
0.4%
+4.0%
+4.16%

NEW PROFILE GRADE
T.R 352

Existing Profile Along
℄ Road

ESTIMATED QUANTITIES							
ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
E-8	Remov. & Disp Exist. Part.	S.Y.					1500
I-15	Sidewalk	S.F.	46+22		R		120
L-10	Sodding 7' Wide	S.Y.	45+00	48+50	L	290	
L-10	Sodding	S.Y.	45+40	46+00	R	40	
L-10	"	S.Y.	46+40	46+90	R	50	
L-10	"	S.Y.	46+90	47+50	R	30	
L-10	" 7' Wide	S.Y.	49+60	51+65	L	180	
L-10	" 5' "	S.Y.	52+15	53+00	L	70	
L-10	" 4' "	S.Y.	48+15		L	10	
L-10	" 4' "	S.Y.	48+30		R	7	
L-10	" 4' "	S.Y.	50+25		L	10	
L-10	" 4' "	S.Y	50+55		R	13	700
	PAVEMENT						
B-35	2" Asph. Conc. Leveling	C.Y.					85
B-119	8" Gravel Base	C.Y.				332	
B-119	5" Gravel Base for Drive & Mail Appr.	C.Y.	45+10		R	15	347
T-30	Bit. Prime	GAL.				525	
T-30	Bit. Prime for Drive	GAL	45+10		R	27	552
T-35	1¼" Asph. Conc. Surf.	C.Y				53	
T-35	2" Asph. Conc. Surf. for Drive	C.Y.	45+10		R	5	58
I-21	Traffic Dividers (Sht 133)	Ea.	48+16	49+00	℄	8	
I-21	Traffic Dividers (Sht 133)	Ea.	50+28	51+00	℄	7	15
	DRAINAGE						
E-2(or)-1	Excav. for Endwall	C.Y.	45+40		R	2	
E-2(or)-1	" " "	C.Y.	46+40		R	2	4
E-12	12" Pipe Remov. for Re-use or Stor.	L.F.	47+80	48+86	R	106	
E-12	12" " " " " "	L.F.	48+22	48+37	L	16	122
E-12	24" Pipe Remov. for Reuse or Stor	L.F.	48+22	48+68	L		46
I-1	24" ϕ Pipe for Driveway	L.F	44+75	45+40	R	66	
I-1	24" ϕ " " "	L.F.	46+00	46+40	R	40	106
I-4	Quantities Included in U.S. 21 Sheet						
I-9	Stone Drains No.2	L.F.	45+00	48+15	L&R	130	
I-9	" " "	L.F.	51+00	53+00	L&R	70	200
I-14	Paved Gutter Type 1	L.F.	46+90	47+50	R		64
S-1(or)-1	Endwall	C.Y.	45+40		R	0.4	
S-1(or)-1	"	C.Y.	46+40		R	0.4	0.8

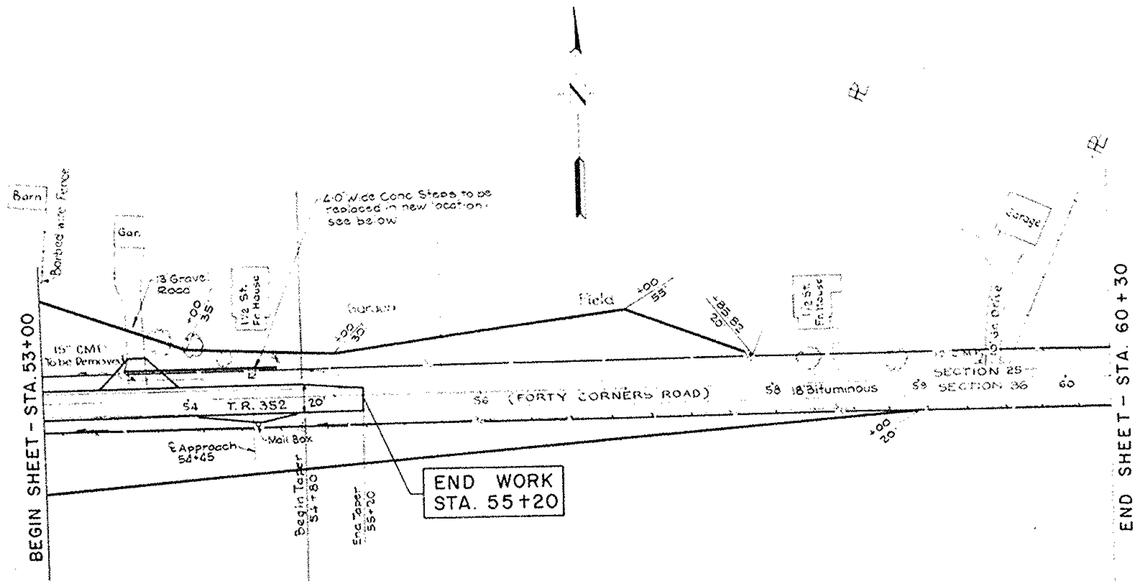
EXC.	8844 C.Y.
EMB.	1399 C.Y.
SEEDING	4368 C.Y.

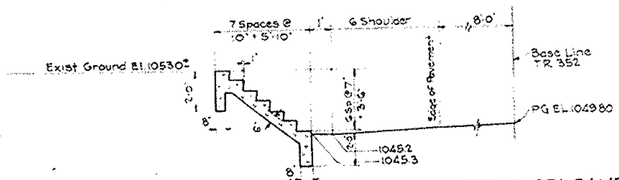
STATION	40	41	42	43	44	45	46	47	48	49	50	51	52	52+50	53
	1006.7	1011.5	1013.5	1014.6	1016.5	1019.0	1022.3	1024.3 1026.45	1026.3 1030.61	1031.86	1032.67	1033.60	1032.8 1034.77	1035.27	1035.97	1036.61	1036.7 1037.23	1037.76	1043.6 1037.82	1037.72	1037.71	1037.40	1041.0	1038.42	1039.18	1040.05	1048.6 1040.98	1042.98	1049.0 1044.98
			+50							+50	+50	+75		+25	+50	+75				+25	+50	+75		+25	+50	+75			

ELEVATION	
1045	
1040	
1035	
1030	
1025	
1020	
1015	
1010	
1005	

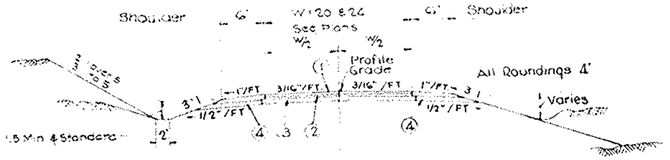
PREPARED AND RECOMMENDED
BY
CHARLES E DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

T.R. 352 – STA. 39+60 TO STA. 53+00



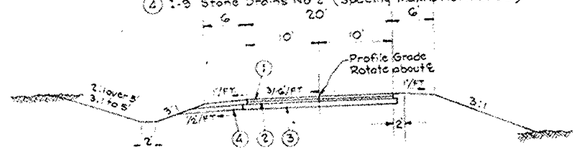


SECTION THRU NEW CONCRETE STEPS STA. 54+45



TYPICAL TANGENT SECTION
T.R. 352 & T.R. 344

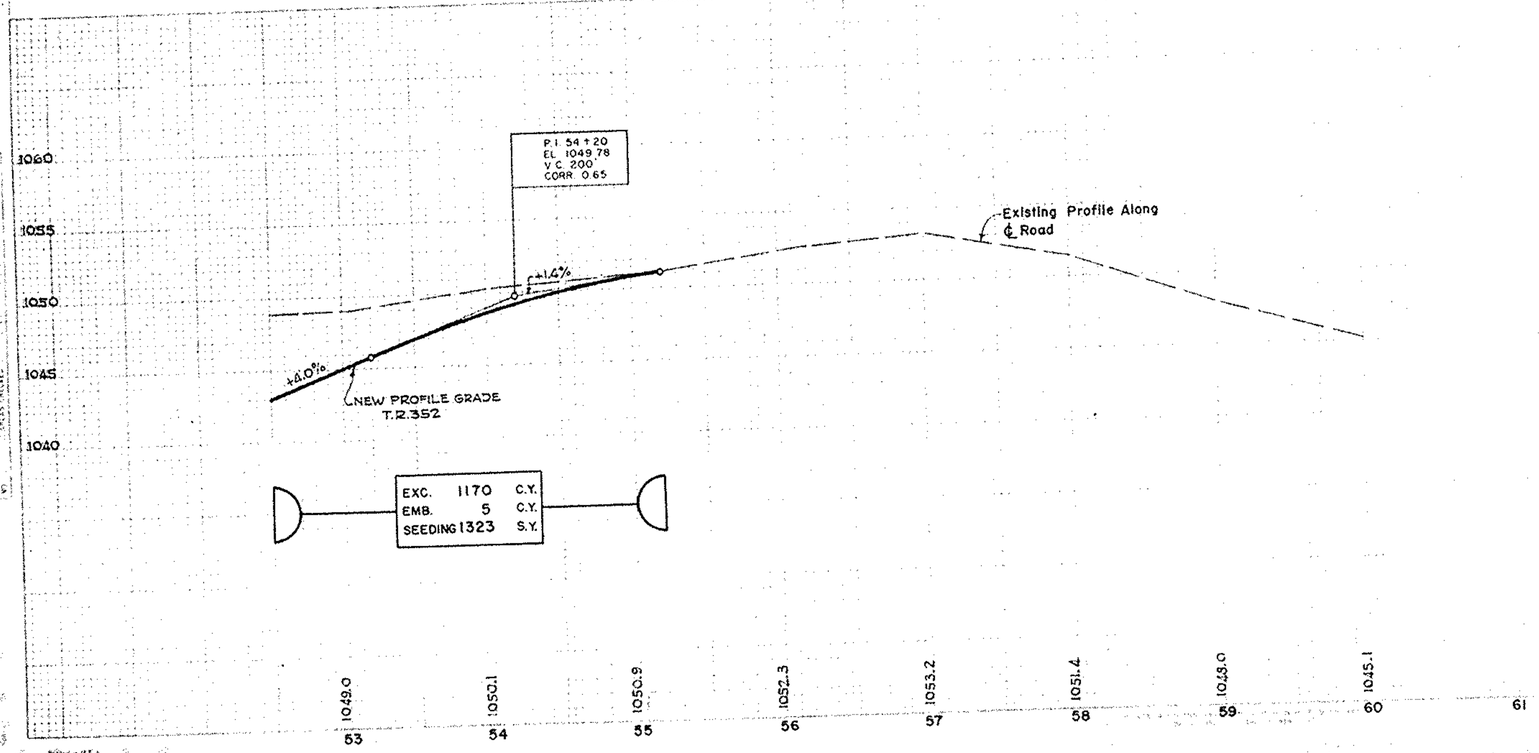
① T-35 1½ Asphaltic Concrete Surface Course
② B-35 2" Asphaltic Concrete Leveling Course
③ B-119 8" Crushed Aggregate Base Course
④ I-9 Stone Drains No 2 (Spacing Max. & Normal 50')



TYPICAL SUPERELEVATED SECTION
T.R. 344
Superelevate by removing crown

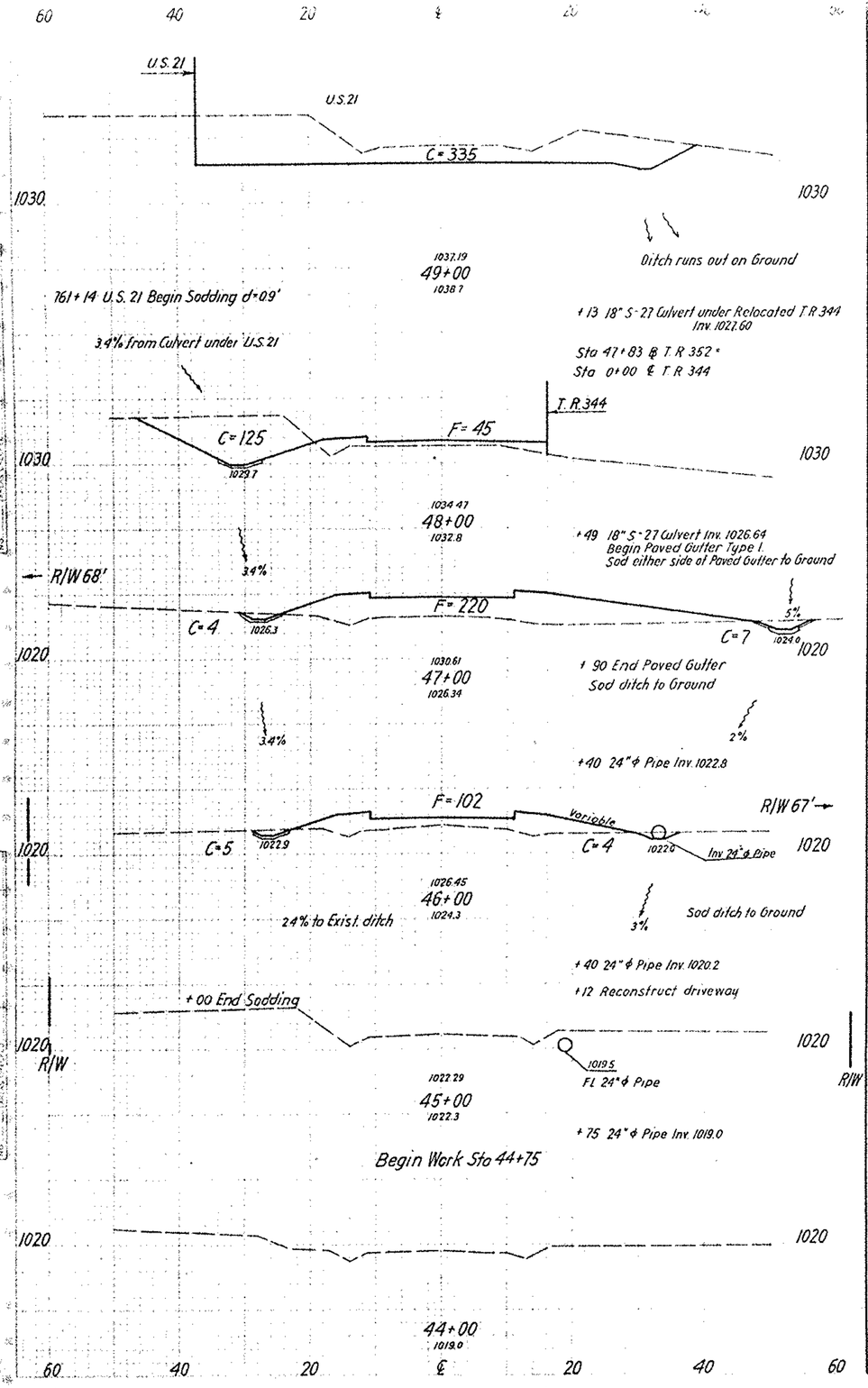
ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
E-8	Remov. & Disp Exist. Pavt.	S.Y.	53+00	55+20			240
I-13	Conc. Steps	L.F.	54+45				26
	PAVEMENT						
B-35	2" Asph Conc Leveling	C.Y.				115	30
B-119	8" Gravel Base	C.Y.				11	
B-119	5" " " for Drive	C.Y.	53+65		L	5	
B-119	5" " " for Mail Appr.	C.Y.	54+45		R	5	131
T-30	Bit. Prime	GAL.				185	
T-30	" " for Drive	GAL.	53+65		L	26	
T-30	" " Mail Appr.	GAL.	54+45		R	11	222
T-35	1¼" Asph. Conc. Surf.	C.Y.				18	
T-35	2" " " for Drive	C.Y.	53+65		L	5	
T-35	2" Asph. Conc. Surf. for Mail Appr.	C.Y.	54+45		R	2	25
	DRAINAGE						
E-12	15" Pipe to be Removed for Re-use A Storage.	L.F.	53+60	54+60	L		100
		L.F.	53+60	54+60	L		100
I-1	15" Pipe for Driveway	L.F.	53+00	55+20	L&R		90
I-9	Stone Drains No 2.						

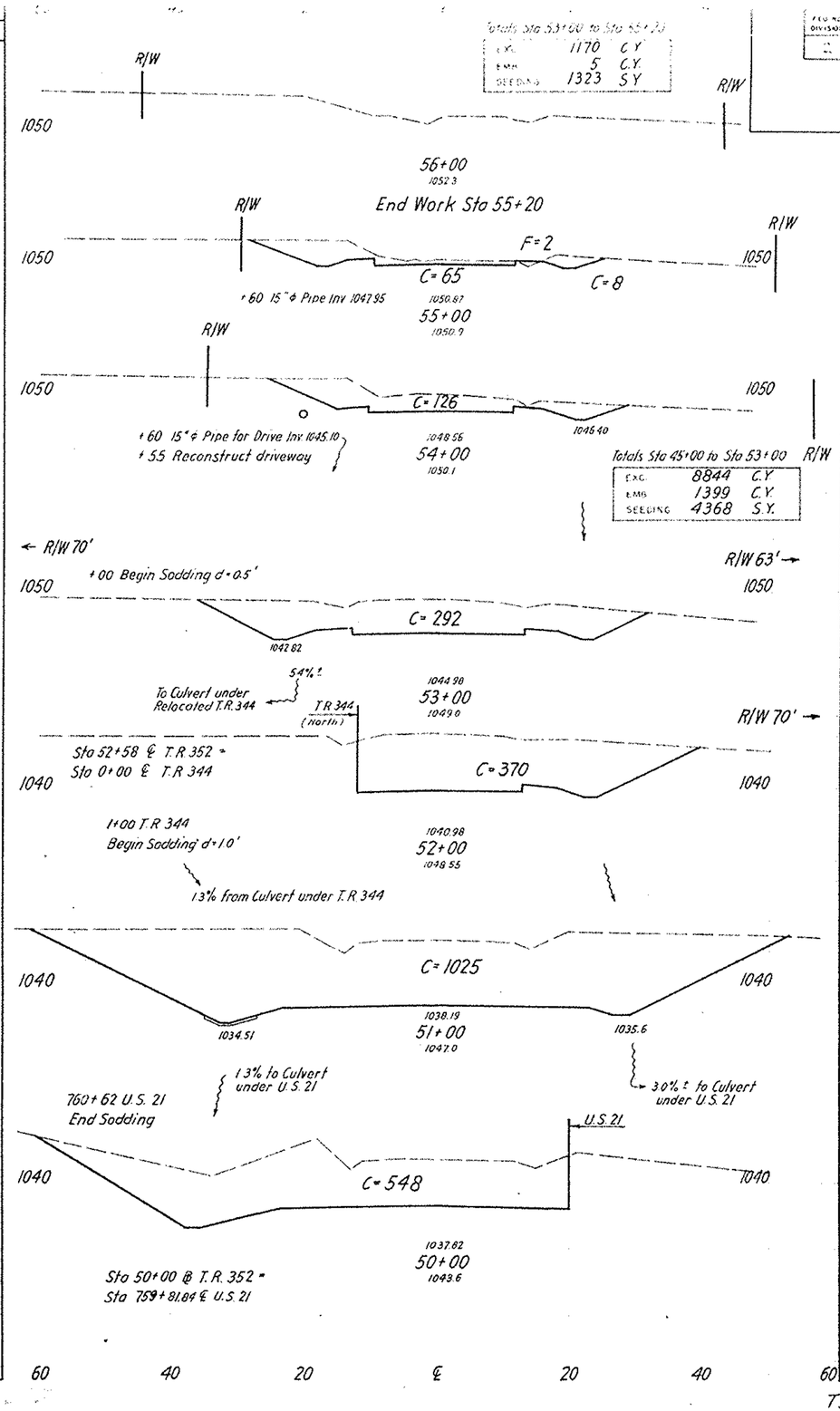


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CHICAGO ILLINOIS

T.R. 352 – STA. 53+00 TO STA. 60+30



SEEDING		END AREA		CU. YDS.	
Ln. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
35		335	3		
	678			852	89
50		125	45		
	767			252	491
89		11	220		
	861			37	596
66		9	102		
	367			17	189



SEEDING		END AREA		CU. YDS.	
Ln. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
	62			27	1
56		73	2		
	605			369	4
53		126			
	656			774	-
65		292			
	464			1226	-
40		370			
	820			2583	11
114		1025			
	907			2913	17
60		548			
	204			964	6

FED. DIV.	STATE	PROJECT	TYPE FUNDS
5	OHIO	F-100 (4)	

STA - 21 - 12.39

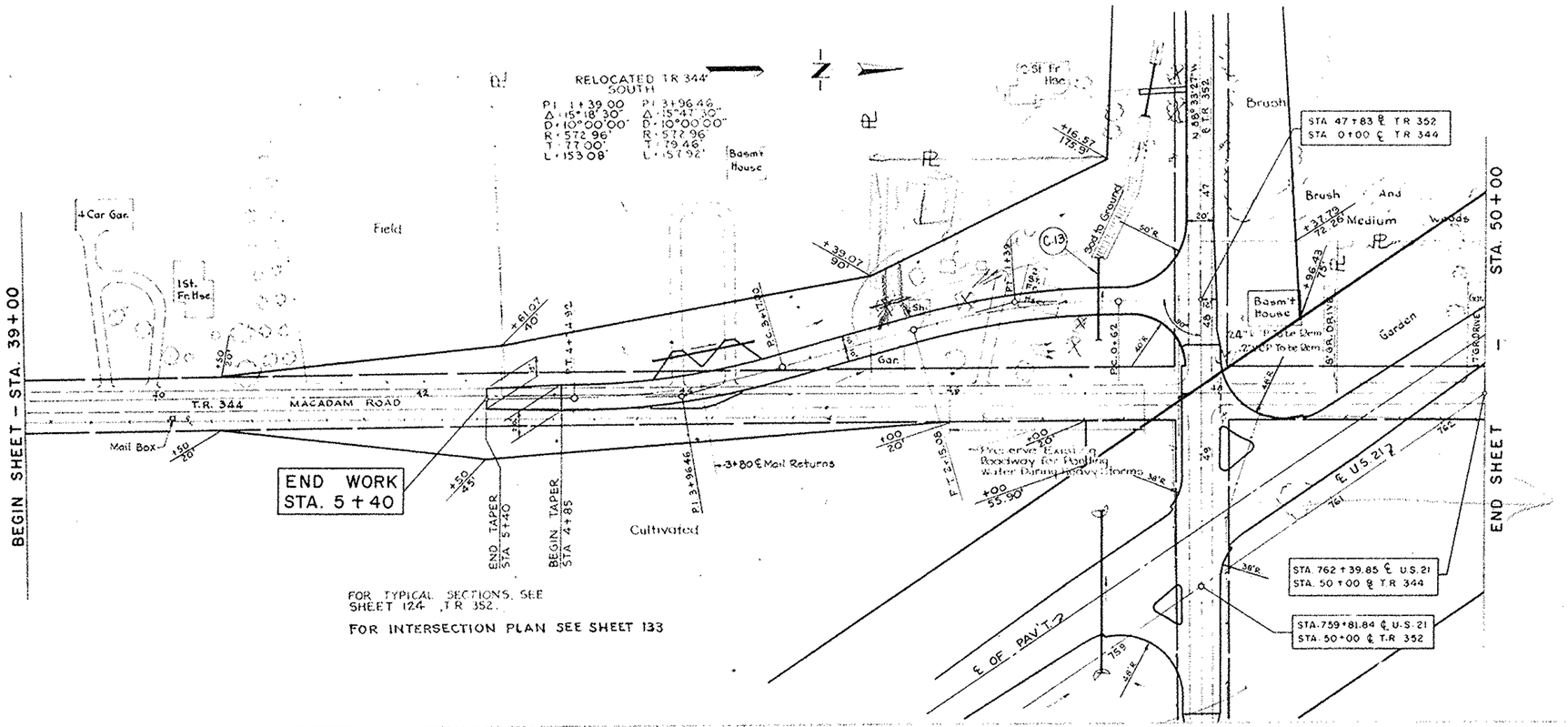
125

T.R. 352 Sta 44+00 to Sta 56+00

FED. ROAD DIVISION	STATE	PROJECT	FILE NUMBER
2	OHIO	F-1010(4)	

STA - 21 - 12.39

126

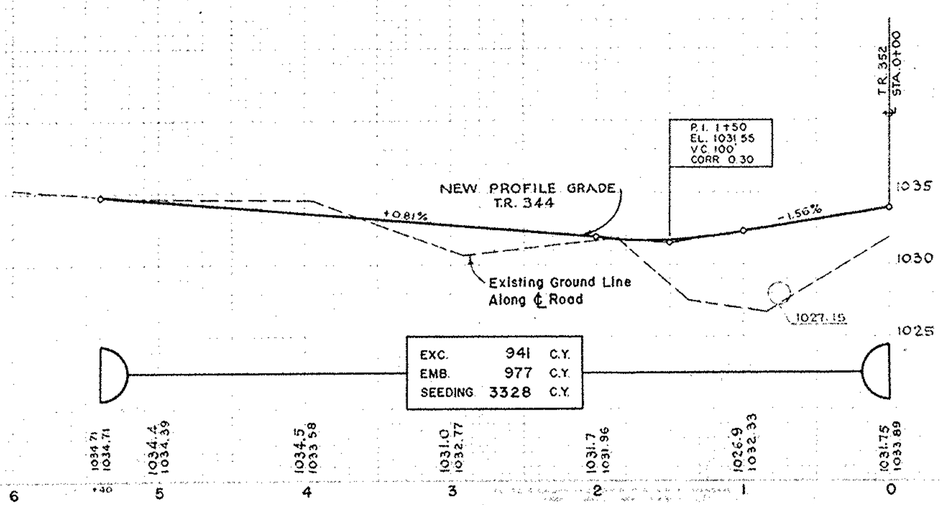


STRUCTURES - 20' SPAN AND UNDER

MARK	STATION	TYPE	SIZE	DETAIL SHEET
C-13	0+76	PIPE CULVERT	18" × 64'	136

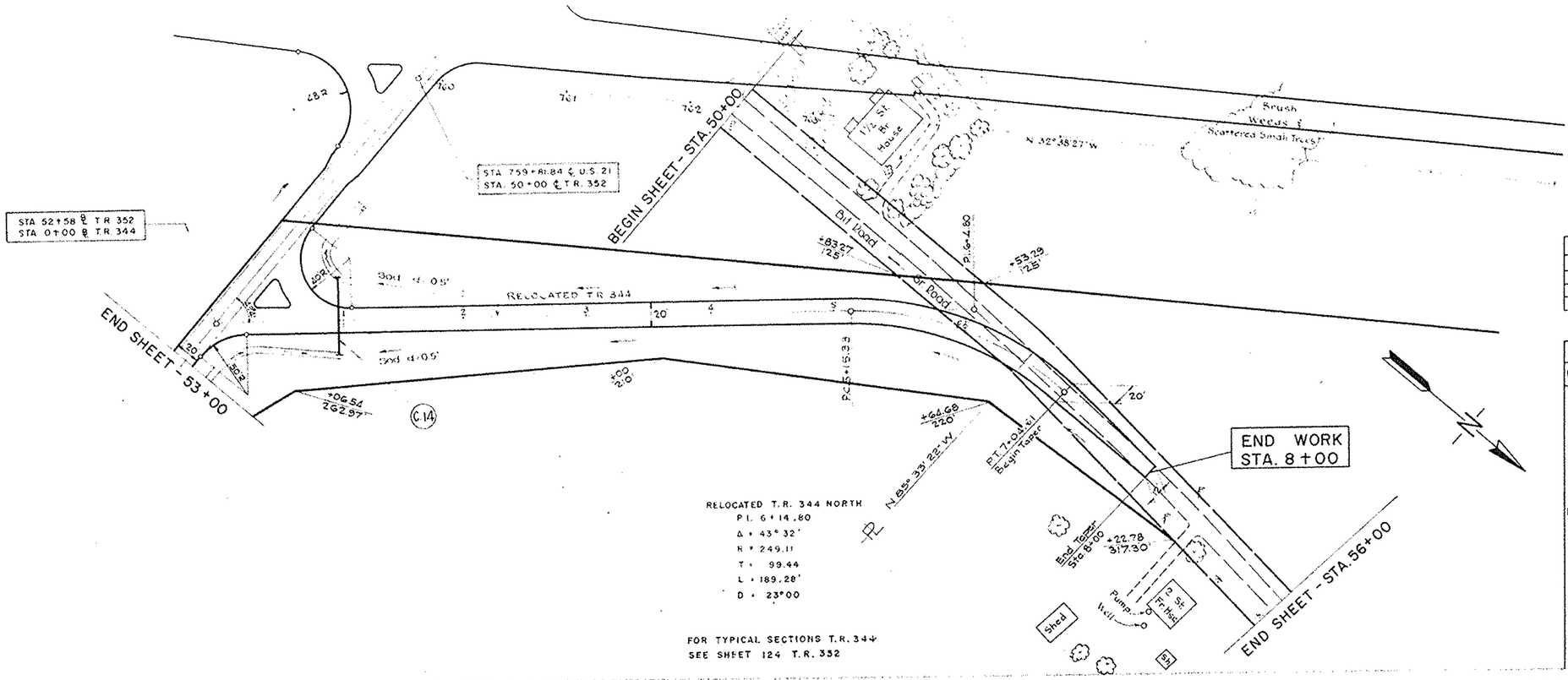
ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
E-8	Remov & Disp Exist Pavt.	S.Y.					1250
	PAVEMENT						
B-119	6" Gravel Base	C.Y.				295	
B-119	5" " for Drive	C.Y.	3+78		L	19	
B-119	5" " Mail Appr.	C.Y.	3+80		R	5	319
B-85	2" Asph. Conc Leveling	C.Y.					70
T-30	Bit. Prime Coat	GAL.				465	
T-30	Bit. Prime for Drive	GAL.	3+78		L	45	
T-30	Bit. Prime for Mail Appr.	GAL.	3+80		R	11	521
T-35	1½" Asph. Conc. Surf.	C.Y.				44	
T-35	2" Asph Conc Surf for Drive	C.Y.	3+78		L	7	
T-35	2" Asph Conc Surf for Mail Appr.	C.Y.	3+80		R	2	53
	DRAINAGE						
I-1	8" Pipe for Driveways	L.F.	3+30	4+10	R		80
I-9	Stone Drains No. 2	L.F.	0+20	5+40	L&R		200



PREPARED AND RECOMMENDED BY
CHARLES E DE LEUW
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CHICAGO ILLINOIS

RELOCATED T. R. 344 - SOUTH - STA. 0+00 TO STA. 5+40



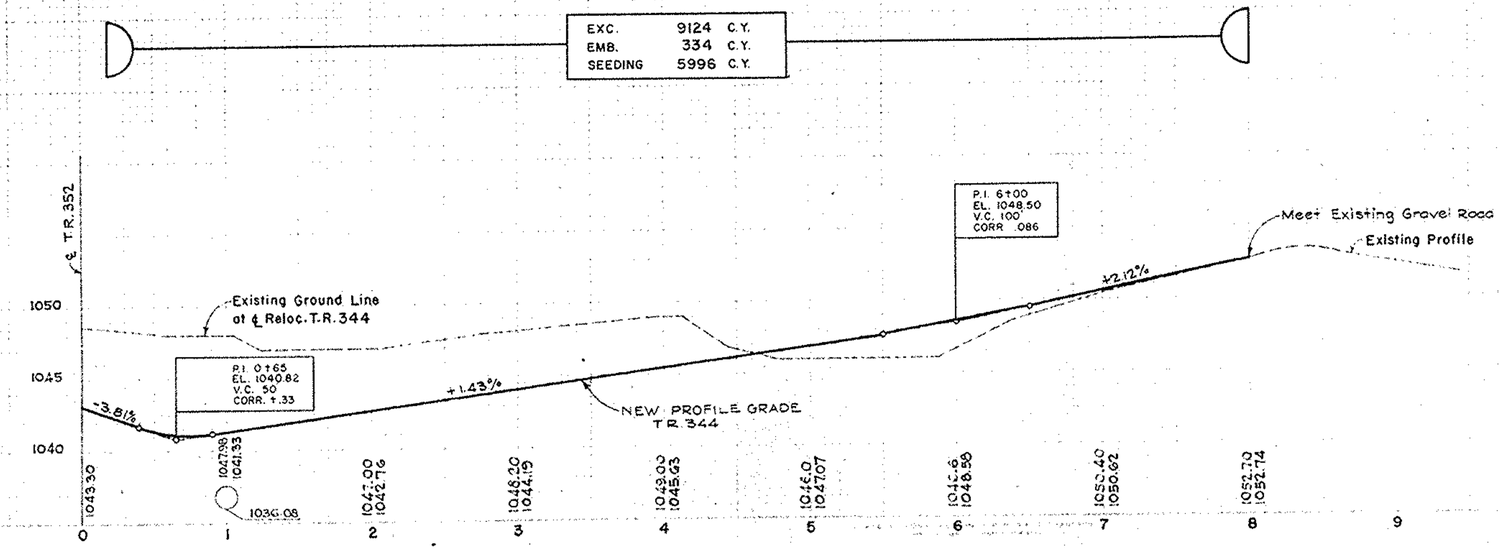
RELOCATED T.R. 344 NORTH
P.I. 6+14.80
Δ = 43° 32'
R = 249.11
T = 99.44
L = 189.28'
D = 23°00

FOR TYPICAL SECTIONS T.R. 344
SEE SHEET 124 T.R. 352

STRUCTURES : 20' SPAN AND UNDER				
MARK	STATION	TYPE	SIZE	DETAIL SHEET
C 14	1 + 00	PIPE CULVERT	18" × 60'	136

ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
E-8	Remov & Disp Exist. Pav't	SY					300
L-10	Sodding 5' Wide	SY	1+00	2+00	L&R		110
	PAVEMENT						
B-35	2" Asph. Conc Leveling	CY					105
B-119	8" Gravel Base	CY					435
T-30	Bit Prime Coat	GAL.					690
T-35	1¼" Asph. Conc. Surf.	CY					67
	DRAINAGE						
I-9	Stone Drains No. 2	L.F.	0+20	8+00	L&R		300



PREPARED AND RECOMMENDED BY
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CHICAGO, ILLINOIS.

RELOCATED T.R. 344 - NORTH - STA. 0+00 TO STA. 8+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

STA - 21+12.39

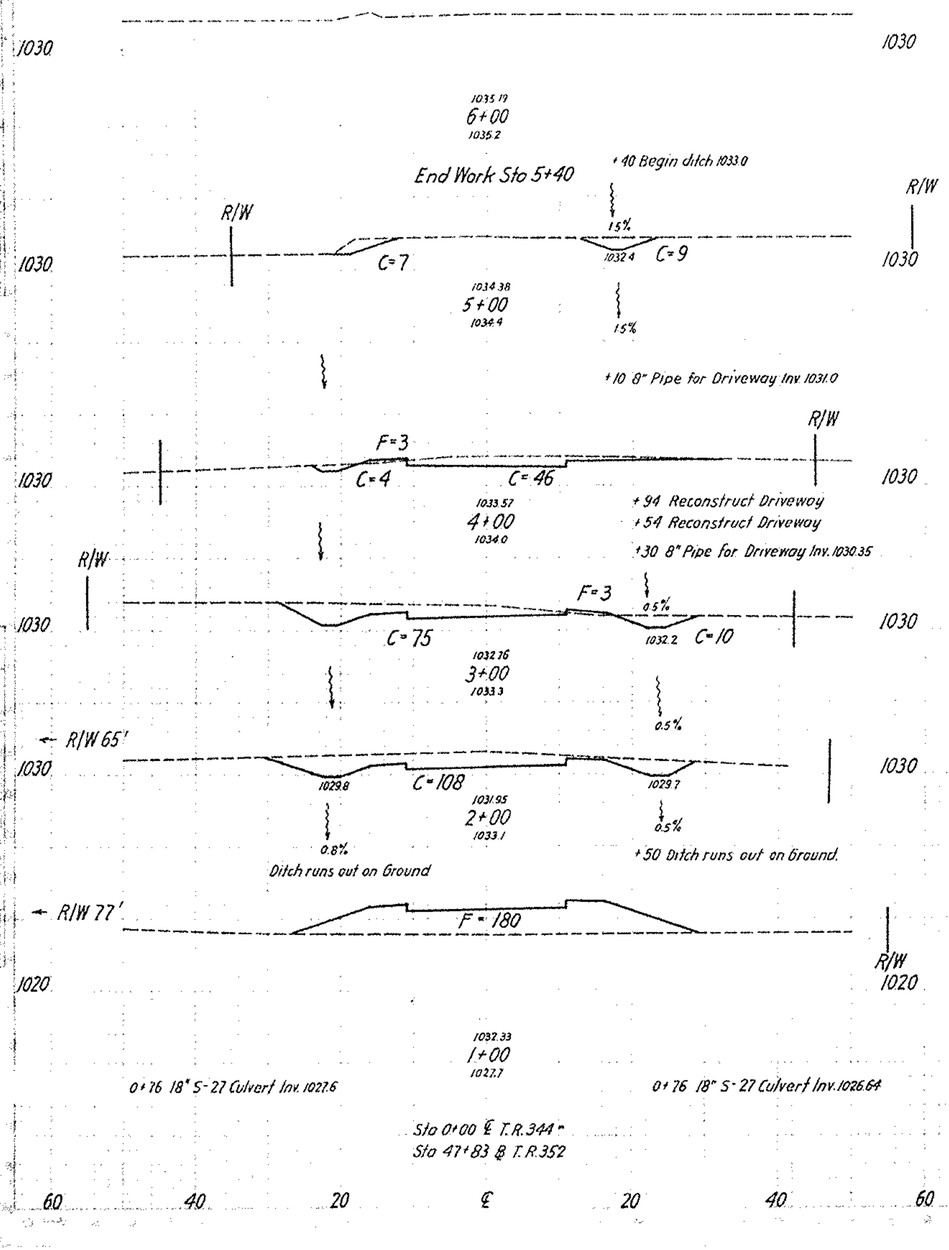
128

Totals Sta 0+14 to Sta 5+40

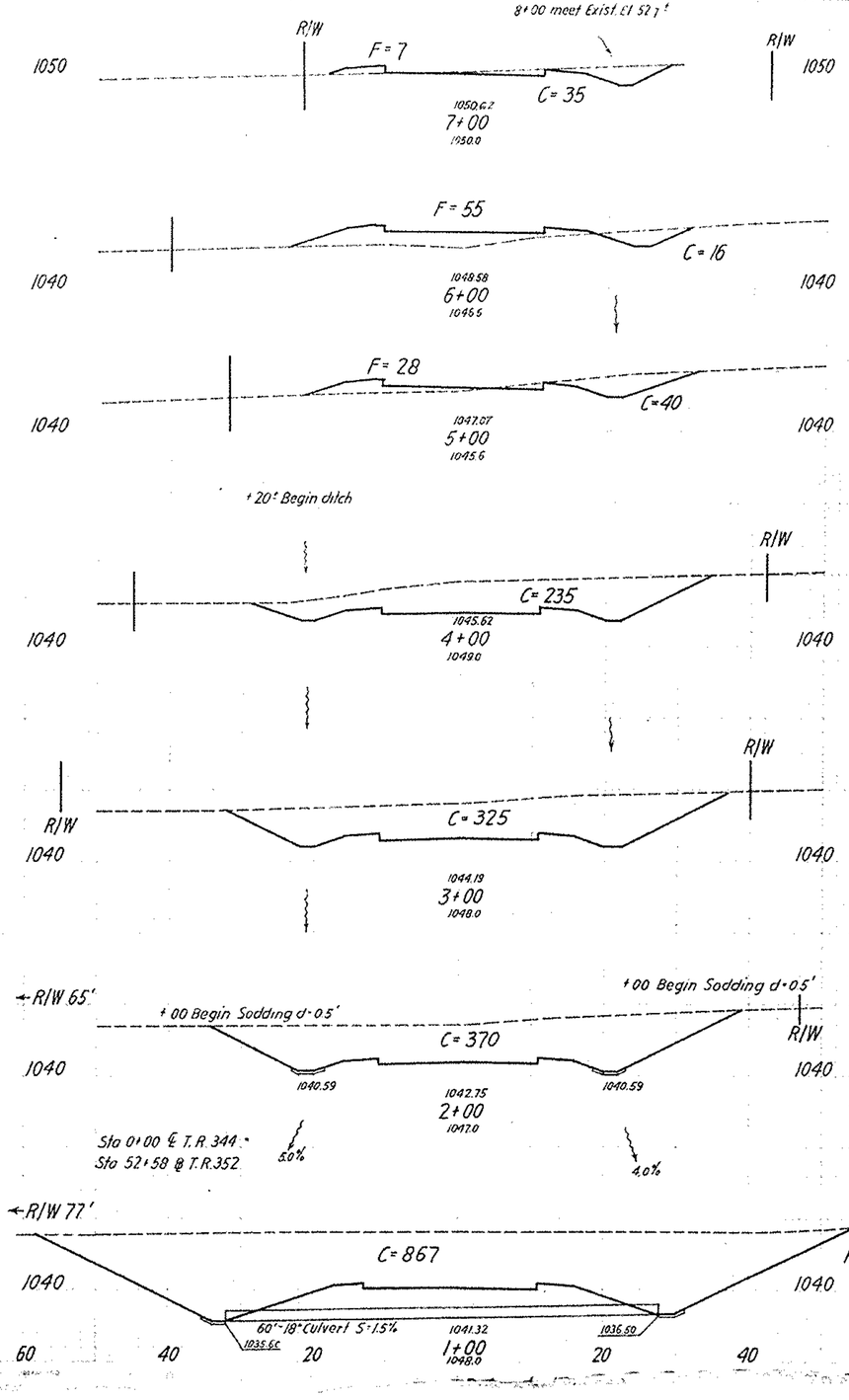
EXC	941	C.Y.
EMB	977	C.Y.
SEEDING	3320	S.Y.

Totals Sta 0+10 to Sta 8+00

EXC	9124	C.Y.
EMB	334	C.Y.
SEEDING	5996	S.Y.



SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
	218			12	-
49		16			
	572			122	6
54		50	3		
	611			250	11
56		85	3		
	633			357	6
58		108			
	656			200	333
60		180			
	638			621	



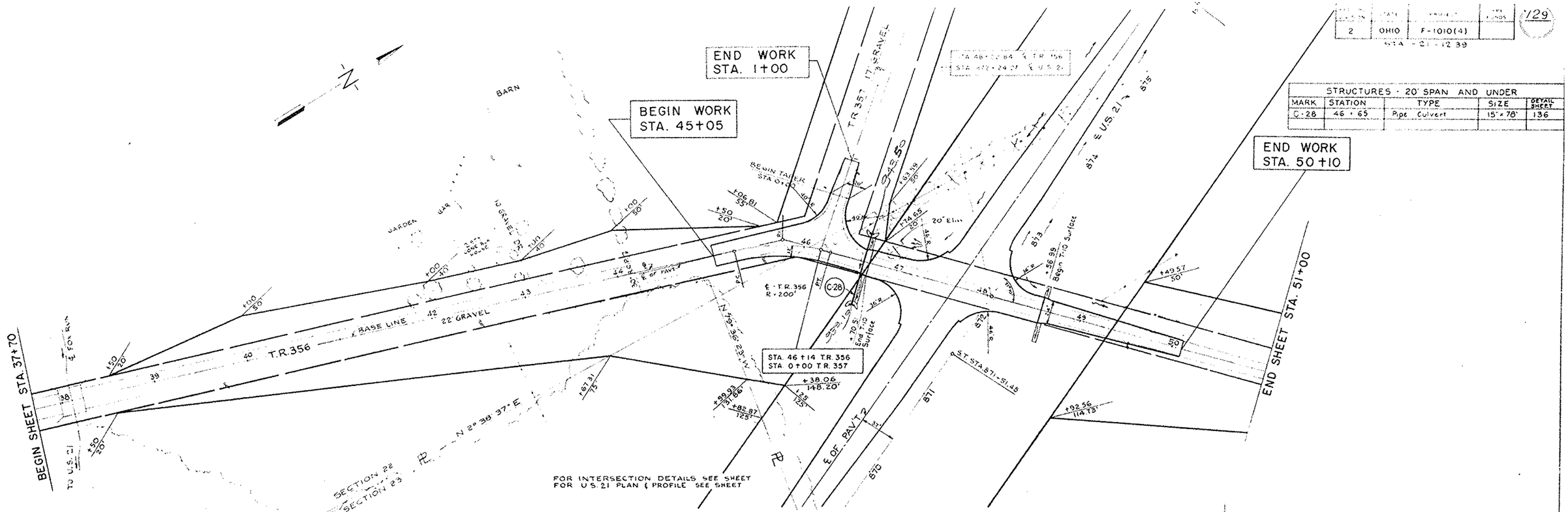
SEEDING		END AREA		CU. YDS.	
Lin. Ft.	Sq. Yds.	CUT	FILL	CUT	FILL
50	278	35	7	65	13
	606			94	115
59		16	55		
	617			104	154
52		40	28		
	650			509	52
65		235			
	772			1222	
74		325			
	844			1287	
78		370			
	1089			2291	
118		867			
1140				3552	

North Sta. 1+00 to Sta. 7+00

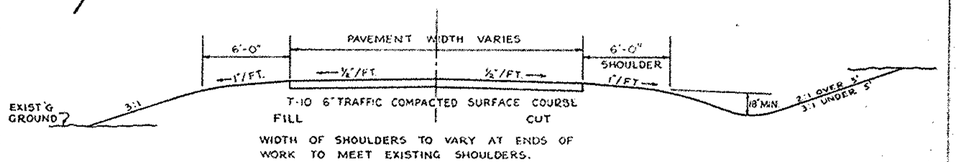
ORIGINAL SURVEY NOTE BOOK PLOTTED TEMPLATE CHECKED
FINAL SURVEY NOTE BOOK PLOTTED TEMPLATE CHECKED

SHEET NO.	STATE	PROJECT		129
2	OHIO	F-1010(4)		

STA. - 21 - 12.39

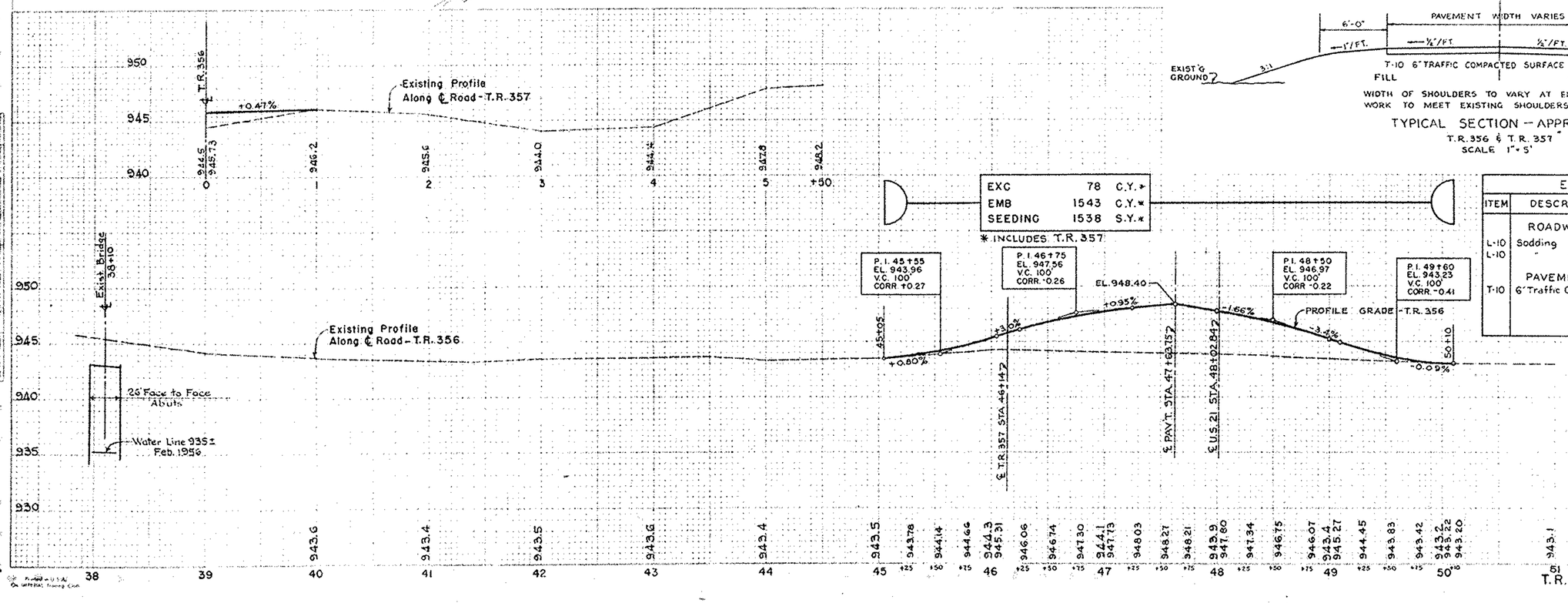


STRUCTURES - 20' SPAN AND UNDER				
MARK	STATION	TYPE	SIZE	DETAIL SHEET
C-28	46+65	Pipe Culvert	15" × 76'	136



WIDTH OF SHOULDERS TO VARY AT ENDS OF WORK TO MEET EXISTING SHOULDERS.

TYPICAL SECTION -- APPROACHES
T.R. 356 & T.R. 357
SCALE 1" = 5'



EXC	78	C.Y.*
EMB	1543	C.Y.*
SEEDING	1538	S.Y.*

*INCLUDES T.R. 357

P.I. 45+55 EL. 943.96 V.C. 100' CORR +0.27
P.I. 46+75 EL. 947.56 V.C. 100' CORR -0.26
P.I. 48+50 EL. 946.97 V.C. 100' CORR -0.22
P.I. 49+60 EL. 943.23 V.C. 100' CORR -0.41

ESTIMATED QUANTITIES

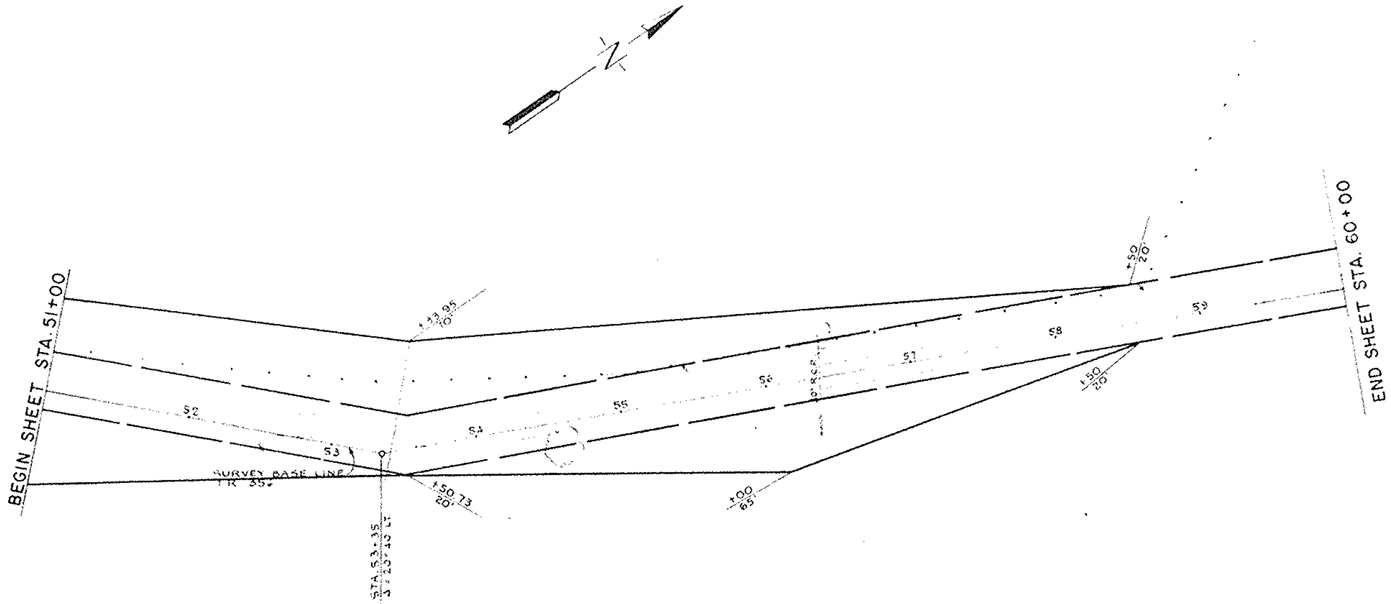
ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	ROADWAY						
L-10	Sodding 4' Wide	S.Y.	46+68		L&R	25	
L-10	" 4' "	S.Y.	48+59		L&R	15	40
	PAVEMENT						
T-10	6" Traffic Comp Surface	C.Y.					190

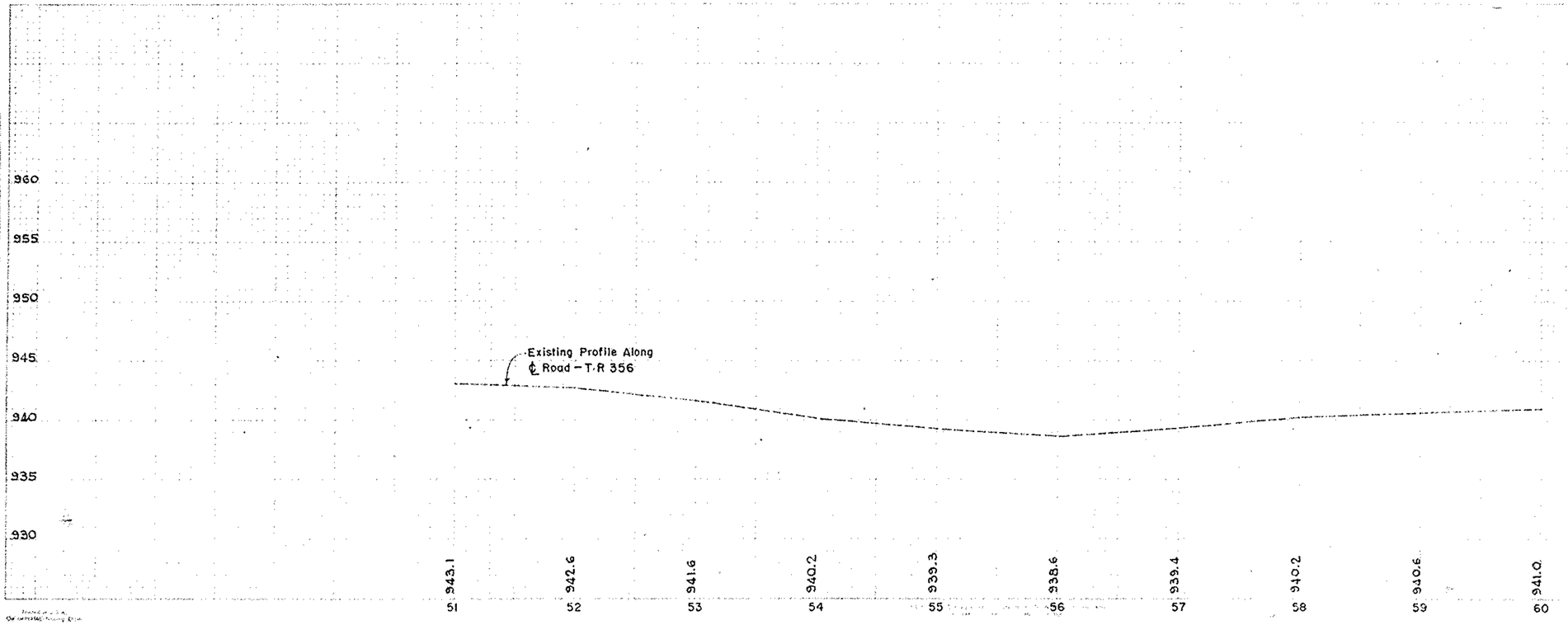
PREPARED AND RECOMMENDED BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO, ILLINOIS.

T.R. 356 — STA. 37+70 TO STA. 51+00 & T.R. 357

SURVEY: FINAL SURVEY | NOTE BOOK | NO. | DATE | SURVEYED | PLOTTED | TEMPLATES | AREAS DIGGED | AREAS CHECKED

Printed in U.S.A. IMPERIAL Printing Co.





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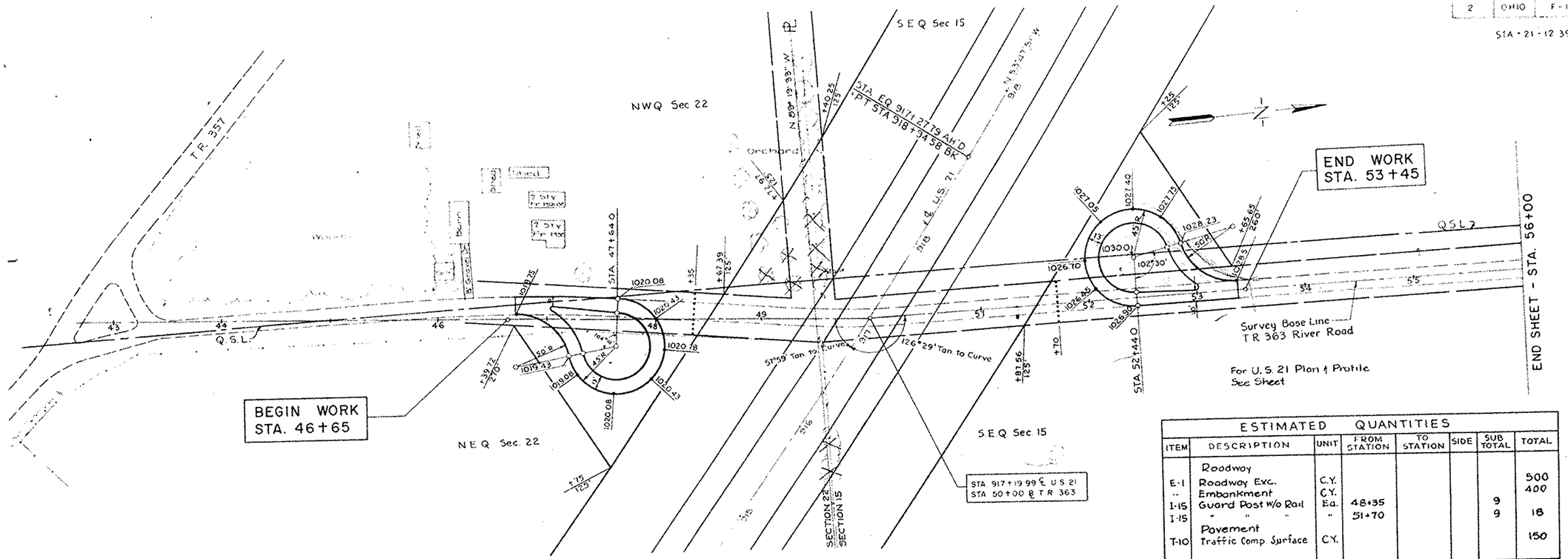
T.R. 356 – STA. 51+00 TO STA. 60+00

OHIO F-[illegible]-4)
STA 2+-2 39



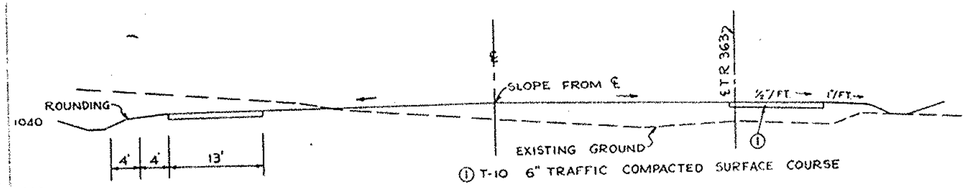
SEEDING		END AREA		CU. YDS.	
Lin. Ft	Sq. Yds.	CUT	FILL	CUT	FILL
64		9	118		
	500			50	489
26		18	146		
	90			11	321
60	-		172		
	435				419
30	-		54		
	158				95

SEEDING		END AREA		CU. YDS.	
Lin. Ft	Sq. Yds.	CUT	FILL	CUT	FILL

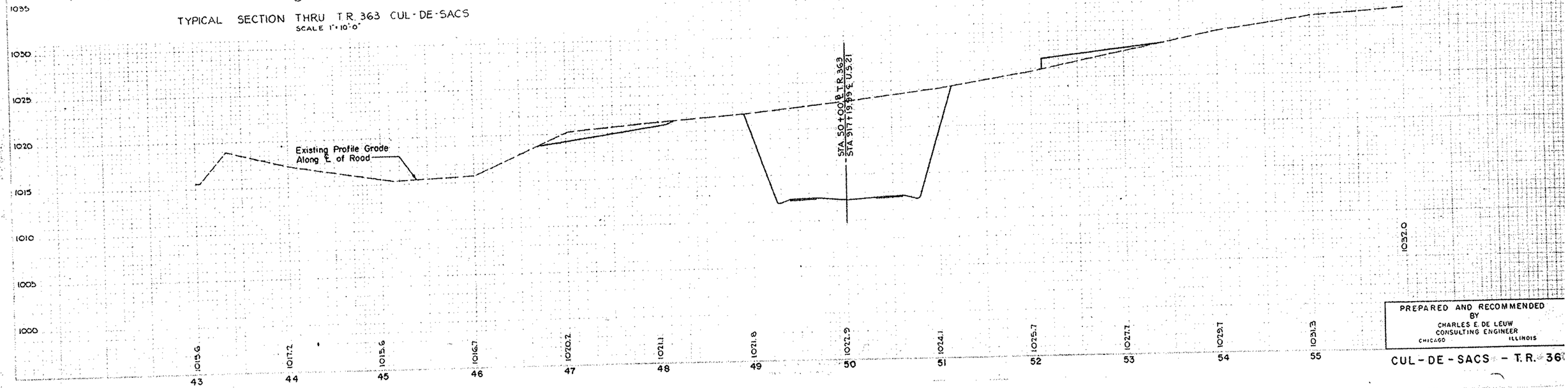


ESTIMATED QUANTITIES

ITEM	DESCRIPTION	UNIT	FROM STATION	TO STATION	SIDE	SUB TOTAL	TOTAL
	Roadway						
E-1	Roadway Exc.	C.Y.					500
--	Embankment	C.Y.					400
I-15	Guard Post W/o Rail	Ea.	48+35			9	
I-15	" " "	"	51+70			9	18
	Pavement						
T-10	Traffic Comp. Surface	C.Y.					150



TYPICAL SECTION THRU T.R. 363 CUL-DE-SACS
SCALE 1"=10'-0"



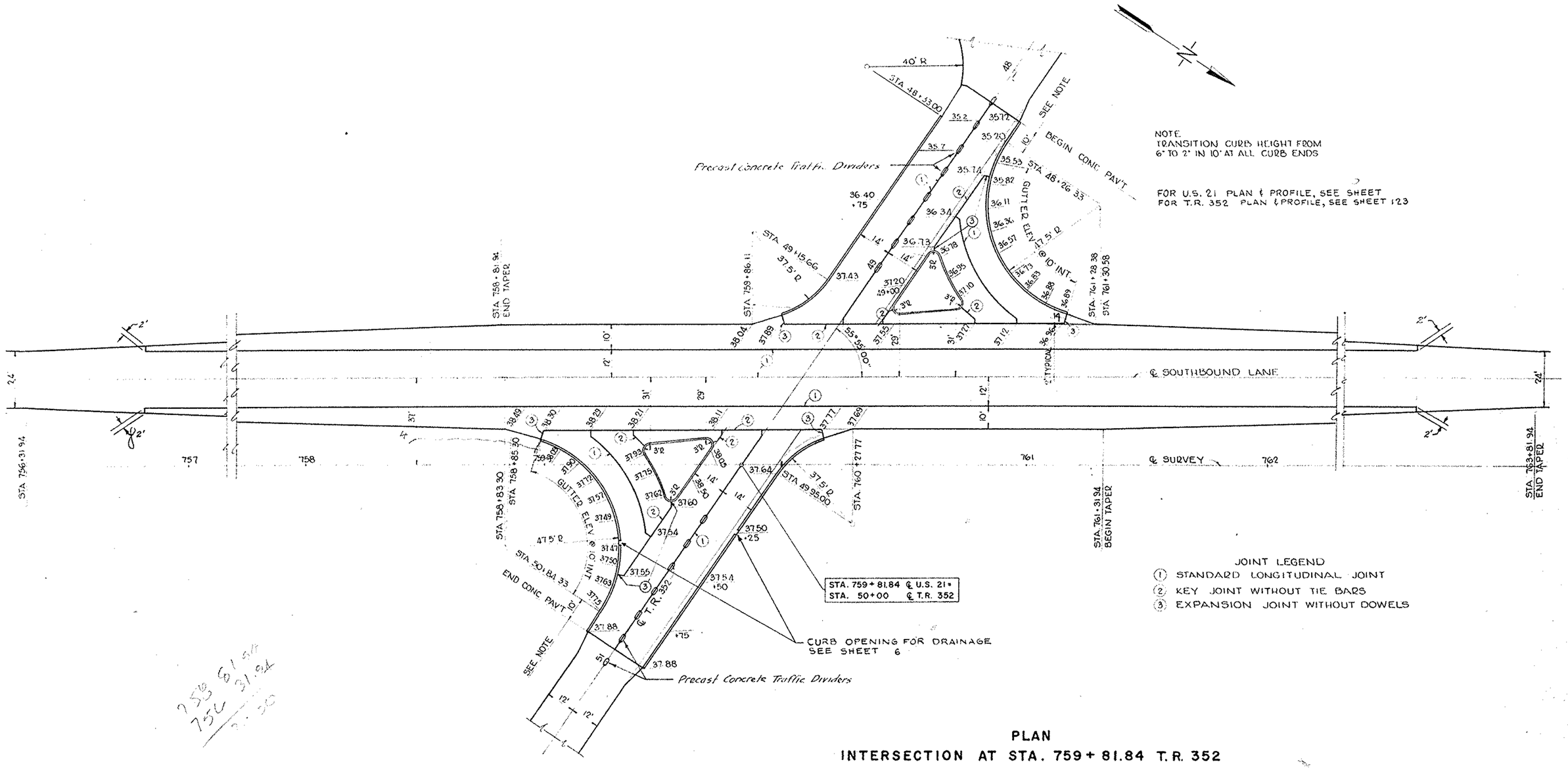
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

CUL-DE-SACS - T.R. 363

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F 1010 (4)	

STA 21 - 12 39

133



NOTE.
TRANSITION CURB HEIGHT FROM
6" TO 2" IN 10' AT ALL CURB ENDS

FOR U.S. 21 PLAN & PROFILE, SEE SHEET
FOR T.R. 352 PLAN & PROFILE, SEE SHEET 123

JOINT LEGEND
(1) STANDARD LONGITUDINAL JOINT
(2) KEY JOINT WITHOUT TIE BARS
(3) EXPANSION JOINT WITHOUT DOWELS

758 60' Rt
75U 31.94
30

PLAN
INTERSECTION AT STA. 759+81.84 T.R. 352

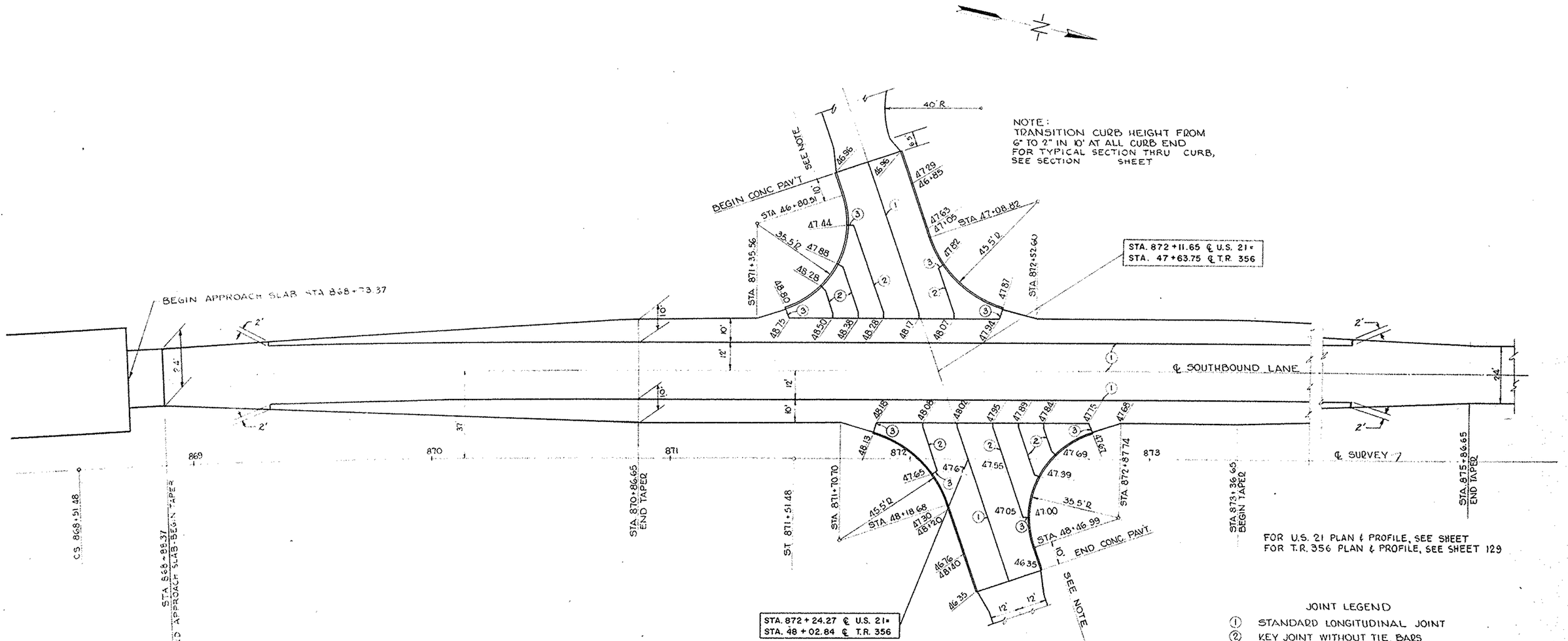
SCALE 1" = 20'-0"

PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

RECORD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F 1010 (4)	

STA. 21 - 12.39

134



FOR U.S. 21 PLAN & PROFILE, SEE SHEET
FOR T.R. 356 PLAN & PROFILE, SEE SHEET 129

JOINT LEGEND

① STANDARD LONGITUDINAL JOINT
② KEY JOINT WITHOUT TIE BARS
③ EXPANSION JOINT WITHOUT DOWELS

PLAN

INTERSECTION AT STA. 872+24.27 ℄ U.S. 21

SCALE 1" = 20'-0"

PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

135

STA - 21 - 12 39

SUPERELEVATION TABLES

LEFT		CENTERLINE		RIGHT	
ELEVATION LEFT EDGE	+OR-FROM PROFILE	STATION	PROFILE GRADE	ELEVATION RIGHT EDGE	+OR-FROM PROFILE

LEFT		CENTERLINE		RIGHT	
ELEVATION LEFT EDGE	+OR-FROM PROFILE	STATION	PROFILE GRADE	ELEVATION LEFT EDGE	+OR-FROM PROFILE

LEFT		CENTERLINE		RIGHT	
ELEVATION LEFT EDGE	+OR-FROM PROFILE	STATION	PROFILE GRADE	ELEVATION RIGHT EDGE	+OR-FROM PROFILE

T.R. 353

LEFT		CENTERLINE		RIGHT	
ELEVATION LEFT EDGE	+OR-FROM PROFILE	STATION	PROFILE GRADE	ELEVATION RIGHT EDGE	+OR-FROM PROFILE
942.16	-0.16	43+90	942.32	942.16	-0.16
942.32	-0.13	44+00	942.45	942.29	-0.16
942.72	-0.07	44+25	942.79	942.63	-0.16
943.12	0	44+50	943.12	942.96	-0.16
943.60	+0.14	44+75	943.46	943.30	-0.16
944.07	+0.28	45+00	943.79	943.49	-0.30
P.C. 45+22.66		D_c = 12°-00' RT			
944.55	+0.42	45+25	944.13	943.70	-0.43
945.02	+0.56	45+50	944.46	943.89	-0.57
945.50	+0.70	45+75	944.80	944.10	-0.70
945.96	+0.83	46+00	945.13	944.30	-0.83
946.17	+0.70	46+25	945.47	944.77	-0.70
946.36	+0.56	46+50	945.80	945.24	-0.56
946.56	+0.42	46+75	946.14	945.72	-0.42
P.T. 46+86.69		D_c = 12°-00' RT			
946.75	+0.28	47+00	946.47	946.19	-0.28
946.95	+0.14	47+25	946.81	946.67	-0.14
947.14	0	47+50	947.14	947.14	0
947.34	-0.14	47+75	947.48	947.62	+0.14
947.53	-0.28	48+00	947.81	948.09	+0.28
P.C. 48+21.00		D_c = 12°-00' LT.			
947.73	-0.42	48+25	948.15	948.57	+0.42
947.92	-0.56	48+50	948.48	949.04	+0.56
948.12	-0.70	48+75	948.82	949.52	+0.70
948.32	-0.83	49+00	949.15	949.98	+0.83
948.79	-0.70	49+25	949.49	950.19	+0.70
949.25	-0.57	49+50	949.82	950.38	+0.56
P.T. 49+66.09		D_c = 12°-00' LT.			
949.73	-0.43	49+75	950.16	950.58	+0.42
950.13	-0.30	50+00	950.43	950.71	+0.28
950.46	-0.16	50+25	950.60	950.74	+0.14
950.49	-0.16	50+50	950.65	950.65	0
950.45	-0.13	50+75	950.58	950.51	-0.07
950.34	-0.07	51+00	950.41	950.28	-0.13
950.11	0	51+25	950.11	949.95	-0.16
949.81	+0.10	51+50	949.71	949.55	-0.16
P.C. 51+61.54		D_c = 3°-00' RT.			
949.41	+0.21	51+75	949.20	948.99	-0.21
948.90	+0.32	52+00	948.58	948.26	-0.32
948.16	+0.32	52+25	947.84	947.52	-0.32
947.31	+0.32	52+50	946.99	946.67	-0.32
946.34	+0.32	52+75	946.02	945.70	-0.32
945.26	+0.32	53+00	944.94	944.62	-0.32
944.07	+0.32	53+25	943.75	943.43	-0.32
P.T. 53+44.87		D_c = 3°-00' RT.			
942.71	+0.21	53+50	942.50	942.29	-0.21
941.35	+0.10	53+75	941.25	941.15	-0.10
940.11	0	54+00	940.11	940.11	0
939.08	-0.10	54+25	939.18	939.28	+0.10
P.C. 54+32.67		D_c = 3°-00' LT.			
938.07	-0.21	54+50	938.27	938.48	+0.21
937.14	-0.32	54+75	937.46	937.78	+0.32
936.35	-0.32	55+00	936.67	936.99	+0.32
935.78	-0.32	55+25	936.10	936.42	+0.32
935.43	-0.21	55+50	935.64	935.85	+0.21
935.14	-0.16	55+75	935.30	935.40	+0.10
934.90	-0.16	56+00	935.06	935.06	0
P.T. 56+16.00		D_c = 3°-00' LT.			
934.80	-0.16	56+25	934.96	934.89	-0.07
934.79	-0.16	56+50	934.95	934.82	-0.13
934.84	-0.16	56+60	935.00	934.84	-0.16

CO.	PATH	PROJECT	FED. FUNDS
2	OH10	F-1010(4)	

136

STA. 21-12.39

CULVERT SUMMARY SHEET

The 54" C.M.P. if used shall be shop elongated to produce and maintain a 5% Vertical Elongation.

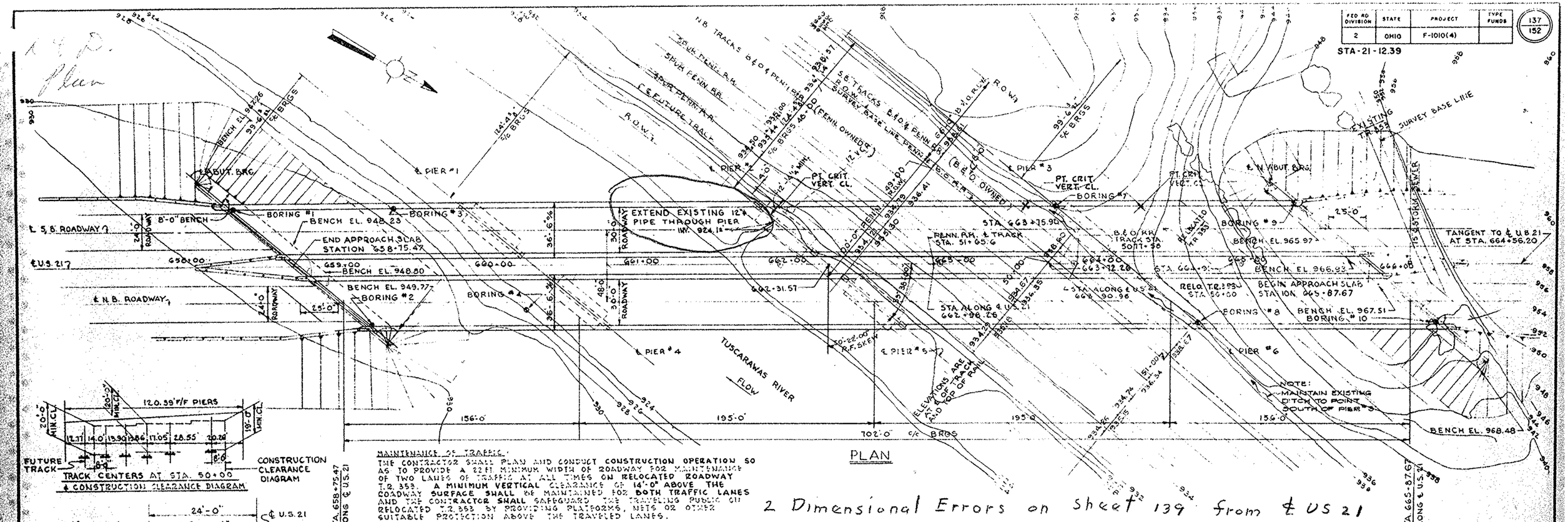
| CULVERT NO | STATION | TYPE AND SIZE | LENGTH TOTAL | L | R | SKEW | FLOW LINE ELEVATION L | FLOW LINE ELEVATION R | GRADE % | DESIGN DATA DA ACRE | DESIGN DATA FREQ YEAR | DESIGN DATA Q CFS | HYDRAULIC CONTROL | I-8 MEDIAN INLET TYPE A | I-8 MEDIAN INLET TYPE B | I-8 MEDIAN INLET BASE TYPE A | I-8 MEDIAN INLET BASE TYPE B | I-5 Y 15"ϕ | I-5 Y 18"ϕ | I-5 Y 24"ϕ | I-5 Y 30"ϕ | S-27 DEDUCTION | S-27 15"ϕ | S-27 15"ϕ M6.6(b) M6.8(b) | S-27 18"ϕ | S-27 18"ϕ M6.8(b) | S-27 18"ϕ M6.6(d) | S-27 18"ϕ M106.6(d) | S-27 24"ϕ M6.6(b) M6.8(b) | S-27 24"ϕ M6.6(b) | S-27 24"ϕ M6.6(c) | S-27 30"ϕ M6.8(b) | S-27 30"ϕ M6.6(c) | S-27 36"ϕ M106.6(d) M6.4(d) | S-27 42"ϕ M106.6(d) | S-28 54"ϕ M106.6(d) | S-28 60"ϕ M6.4(g) | S-27 43"x27" | S-27 Catt.pass | S-28 7'3"x5'3" | S-1 FOR CUTOFF WALLS CY. | S-1 FOR WINGWALLS CY. | S-1 FOR ENDWALLS CY. | E-2 KIND OF END WALL | E-2 LOCATION OF STRUCTURE | E-3 CHANNEL EXCAVATION CY. | I-10 RIP RAP TYPE A SQ.YD. | I-10 DUMPED ROCK CY. | I-14 GUTTER TYPE LF | I-14 GUTTER TYPE LF | I-14 GUTTER TYPE LF | L-10 SODDING SQ.YD. | CHANNEL GRADE % L | CHANNEL GRADE % R | |
|---|---|---|---

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

137 / 152

STA-21-12.39

R.P. Plan



PLAN

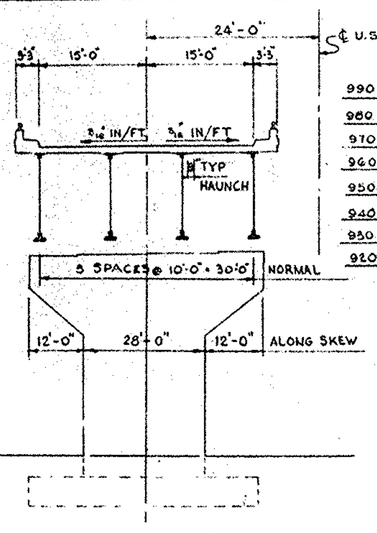
2 Dimensional Errors on Sheet 139 from ℄ US 21

MAINTENANCE OF TRAFFIC.

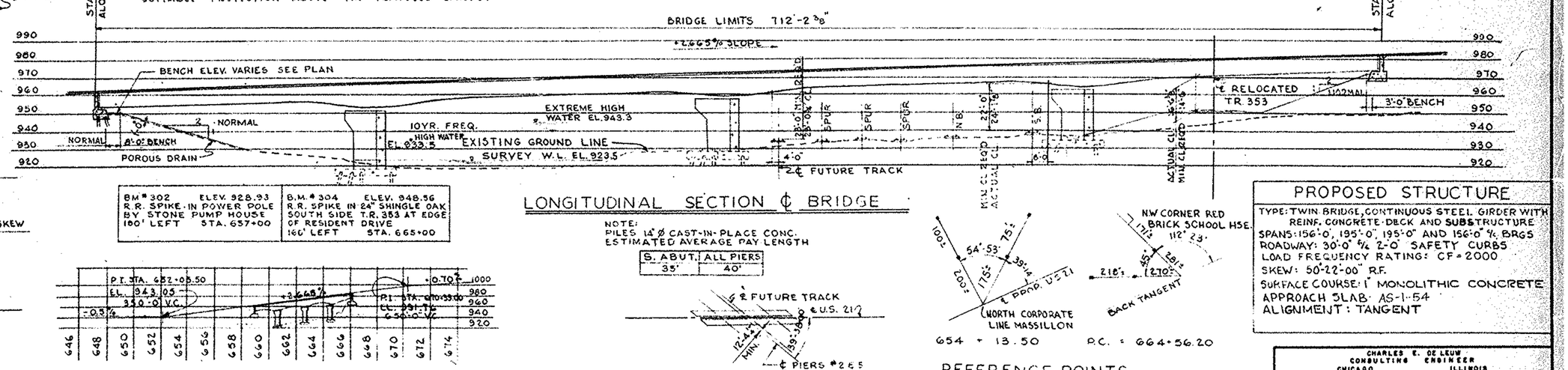
THE CONTRACTOR SHALL PLAN AND CONDUCT CONSTRUCTION OPERATION SO AS TO PROVIDE A 22 FT. MINIMUM WIDTH OF ROADWAY FOR MAINTENANCE OF TWO LANES OF TRAFFIC AT ALL TIMES ON RELOCATED ROADWAY T.R. 353. A MINIMUM VERTICAL CLEARANCE OF 14'-0" ABOVE THE ROADWAY SURFACE SHALL BE MAINTAINED FOR BOTH TRAFFIC LANES AND THE CONTRACTOR SHALL SAFEGUARD THE TRAVELING PUBLIC ON RELOCATED T.R. 353 BY PROVIDING PLATFORMS, NETS OR OTHER SUITABLE PROTECTION ABOVE THE TRAVELED LANES.

TRACK CENTERS AT STA. 50+00
℄ CONSTRUCTION CLEARANCE DIAGRAM

CONSTRUCTION CLEARANCE DIAGRAM



CROSS-SECTION OF BRIDGE



B.M.# 302	ELEV. 928.93
R.R. SPIKE IN POWER POLE BY STONE PUMP HOUSE 100' LEFT	STA. 657+00

B.M.# 304	ELEV. 948.56
R.R. SPIKE IN 24" SHINGLE OAK SOUTH SIDE T.R. 353 AT EDGE OF RESIDENT DRIVE 160' LEFT	STA. 665+00

PROFILE U.S. 21

LONGITUDINAL SECTION ℄ BRIDGE

NOTE:
PILES 14"ϕ CAST-IN-PLACE CONC.
ESTIMATED AVERAGE PAY LENGTH

S. ABUT.	ALL PIERS
35'	40'

ALIGNMENT U.S. 21

654 + 13.50 P.C. = 664+56.20

REFERENCE POINTS

TOP OF RAIL ELEVATION (TRACKS IN ORDER WEST TO EAST)

SURVEY STA.	43+00	44+00	45+00	46+00	47+00	48+00	49+00	50+00	51+00	52+00	53+00	54+00	55+00	56+00	57+00
S.B. MAIN	938.58	938.63	938.60	938.56	938.55	938.57	938.61	938.60	938.67	938.68	938.73	938.69	938.83	938.80	938.96
N.B. MAIN	936.21	936.35	936.44	936.45	936.45	936.44	936.41	936.35	936.34	936.30	936.29	936.28	936.33	936.20	936.09
SPUR			934.94	935.01	935.09	935.00	934.79	934.67	934.74	934.57	934.23	934.04	934.10		
SPUR			935.51	935.49	935.53	935.44	935.30	935.18	935.15	935.01	934.84	934.70	934.77		
SPUR			934.63	934.57	934.63	934.50	934.21	934.23	934.26	934.18	935.05	934.04	934.07		

NOTE.

DRAINAGE AREA	426 SQ. M.
ESTIMATED RUNOFF, 50 YR. FREQ.	26,000 C.F.S
ESTIMATED EXTREME HIGH WATER	EL. 943.3
ESTIMATED HIGH WATER 10 YR. FREQ.	EL. 933.5
WATERWAY AREA PROVIDED FOR 10 YR. FREQ. HIGH WATER	1640 SQ FT.

FOUNDATION SOUNDINGS

FOUNDATION DESIGN AND FOUNDATION QUANTITIES ARE BASED ON A STUDY OF SOIL SAMPLING SOUNDINGS MADE AT THE SITE. THIS SOUNDING INFORMATION MAY BE INSPECTED IN THE OFFICE AT THE BUREAU OF BRIDGES IN COLUMBUS OR IN AN ABRIDGED FORM IN THE DIVISION OFFICE, BUT THE STATE ASSUMES NO RESPONSIBILITY FOR THE ACCURACY THEREOF.

PROPOSED STRUCTURE

TYPE: TWIN BRIDGE, CONTINUOUS STEEL GIRDER WITH REINF. CONCRETE DECK AND SUBSTRUCTURE
SPANS: 156'-0", 195'-0", 195'-0" AND 156'-0" ℄ BRGS
ROADWAY: 30'-0" & 2-0" SAFETY CURBS
LOAD FREQUENCY RATING: CF = 2000
SKEW: 50°-22'-00" R.F.
SURFACE COURSE: 1" MONOLITHIC CONCRETE
APPROACH SLAB: AS-1-54
ALIGNMENT: TANGENT

CHARLES E. DE LEUW CONSULTING ENGINEER
CHICAGO ILLINOIS

SITE PLAN

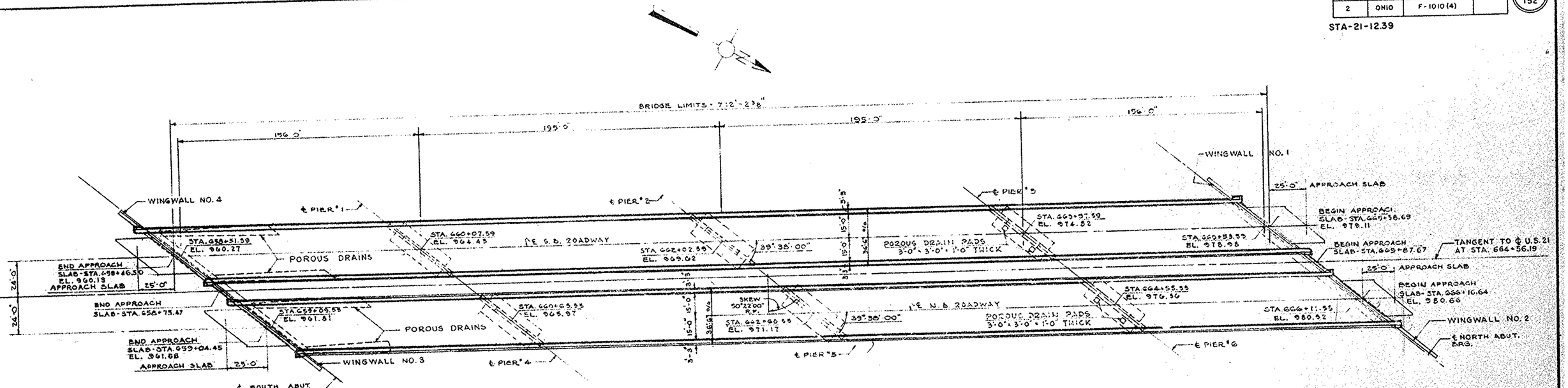
BRIDGE NO. STA. 21-1248
U.S. 21 OVER TUSCARAWAS RIVER
PENNA. R.R., B. & O. R.R. and T.R. 353
STARK CO. STA 662+31.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.A.E.	F.S.		S.G.	L.N.R.	7-13-56	

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

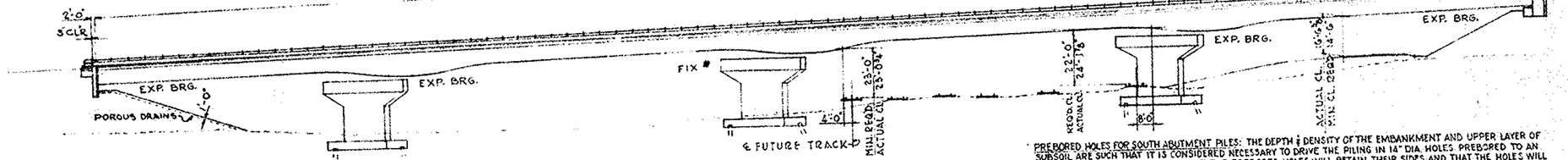
138
152

STA-21-12.39



PLAN

87 RAILING PANELS @ 8'-1⅛" = 704'-10⅜"



ELEVATION

FIXED PIER
INTERIOR BRGS. - FIXED
FASCIA BRGS. - EXPANSION

ESTIMATED QUANTITIES (FOR TWO BRIDGES)

ITEM	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER	GENERAL
SPECIAL	900	LIN. FT.	PRE-BORED HOLES FOR PILES	900			1,100
SPECIAL	900	LIN. FT.	CASING PRE-BORED HOLES FOR PILES	900			3,300
SPECIAL	LUMP SUM		EXPANSION JOINT FILLER	LUMP			165.00
E-2	LUMP SUM		COFFERDAMS, CRIBS AND SHEETING			25,000	LUMP
E-2	2314	CU. YDS.	UNCLASSIFIED EXCAVATION	606	1708	1986	4,25
S-1	1,986	CU. YDS.	CLASS "C" CONCRETE, SUPERSTRUCTURE & PYLONS				63.50
S-1	1,044	CU. YDS.	CLASS "C" CONCRETE, PIERS ABOVE FOOTINGS		1044		50.75
S-1	824	CU. YDS.	CLASS "E" CONCRETE, ABUTMENT WALLS	824			52.25
S-1	824	CU. YDS.	CLASS "E" CONCRETE, FOOTINGS	29	585		35.70
S-4	641,765	LBS.	REINFORCING STEEL	41,882	116,180	483,286	386.13
S-7	3,871,000	LBS.	STRUCTURAL STEEL			3,871,000	.28
S-8	3,871,000	LBS.	FIELD PAINTING OF STRUCTURAL STEEL (3 COATS IN TRACK SPAN)			3,871,000	.005
S-14	2,834	LIN. FT.	RAILING (ALUMINUM RAIL & SUPPORTS & CONC PARAPET)			2,834	13,00
S-16	LUMP SUM		FIRST TEST PILE			2,000.00	LUMP
S-17	LUMP SUM		FIRST PILE TEST LOAD			2,500.00	LUMP
S-18	11,000	LIN. FT.	14" CAST-IN-PLACE REINFORCED CONCRETE PILES	1400	9600		.710
S-29	53	CU. YD.	POROUS DRAINS ON EMBANKMENT SLOPES			10.50	53
S-29	402	CU. YD.	POROUS BACKFILL			1.25	402
S-29	30	LIN. FT.	WATERPROOFING PREMOLDED SEALING STRIP	30			3.60
S-29	30	LIN. FT.	1" GREY STRONG-FLEXIBLE PREFORMED EXPANSION JT. FILLER	30			3.60
S-29	190	LIN. FT.	6 DIA WROUGHT IRON OR GALVANIZED STEEL CONDUCTOR PIPE, INCLUDING SPECIALS				16.50
S-17	1	EACH	SUBSEQUENT PILE TEST LOAD			2,500.00	

GENERAL NOTES

REFERENCE SHALL BE MADE TO SUPPLEMENTAL SPECIFICATION NO. S-114 DATED AUG 30, 1955 AND SUPPLEMENTAL SPECIFICATION NO. S-207 DATED APR. 28, 1955.

SPECIFICATIONS: THIS WORK SHALL BE GOVERNED BY THE "DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES" OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, DATED 10-1-51, TOGETHER WITH REVISIONS THEREOF DATED 7-15-52, 4-1-54 AND 2-1-55, AND BY THE "CONSTRUCTION AND MATERIAL SPECIFICATIONS" OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, DATED 1-1-55.

FOUNDATION PRESSURE: MAXIMUM SOIL PRESSURE UNDER WINGWALL FOOTINGS IS 3000 LBS. PER SQ. FOOT.

WELDING OF STRUCTURAL STEEL SHALL BE CLASS "A" EXCEPT AS OTHERWISE SHOWN. WELDS SHOWN AS FIELD WELDS MAY, AT THE OPTION OF THE CONTRACTOR, BE MADE IN THE SHOP.

PAINT, BOTH SHOP AND FIELD, SHALL BE APPLIED BY BRUSHING. SPRAY APPLICATION WILL NOT BE PERMITTED. ONE EXTRA FIELD COAT OF SHOP PAINT IS REQUIRED IN THE TRACK SPAN.

PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF FIFTY (50) TONS. THE LENGTH OF PENETRATION OF EVERY PILE SHALL BE AT LEAST 80% OF THE ESTIMATED AVERAGE LENGTH OF PENETRATION OF THE PILES AS INDICATED ON THE PLANS UNLESS A LESSER PENETRATION IS APPROVED BY THE ENGINEER.

PREBORED HOLES FOR SOUTH ABUTMENT PILES: THE DEPTH & DENSITY OF THE EMBANKMENT AND UPPER LAYER OF SUBSOIL ARE SUCH THAT IT IS CONSIDERED NECESSARY TO DRIVE THE PILING IN 14" DIA. HOLES PREBORED TO AN ELEVATION OF 922. TO INSURE THAT THE PREBORED HOLES WILL REMAIN OPEN TO THE BORED DEPTH REQUIRED, THE CONTRACTOR SHALL, IF DIRECTED BY THE ENGINEER, CASE THE HOLES. THE FOUNDATION TESTS INDICATE THE TOP LAYER OF SOIL AT THE ABUTMENT IS OF SUCH NATURE THAT CAVING OF THE PREBORED HOLES IS NOT LIKELY TO OCCUR. IF CASING IS USED, NO LESS THAN 18" INSIDE DIAMETER CASING (MEETING THE REQUIREMENTS OF APPROPRIATE PARTS OF SEC. S-18.09) WILL BE PERMITTED. CASING, IF USED, SHALL BE LEFT IN PLACE AND THE SPACE BETWEEN PILE AND CASING SHALL BE FILLED WITH THE SAME CLASS OF CONCRETE AS USED IN THE PILE. TOP OF CASING SHALL EXTEND TO BOTTOM OF ABUTMENT CAP AND DOWN TO AN ELEVATION DETERMINED BY THE ENGINEER FROM CONDITIONS FOUND AT THE SITE. PAYMENT FOR "PREBORED HOLES" OR "CASING PREBORED HOLES" INCLUDING ALL LABOR, TOOLS, WORK, EQUIPMENT, MATERIAL AND ALL INCIDENTALS NECESSARY TO COMPLETE EACH ITEM, SHALL BE AT THE CONTRACT UNIT PRICE PER LINEAL FOOT BID FOR "PREBORED HOLES FOR PILES" OR "CASING PREBORED HOLES FOR PILES."

POROUS DRAINS EXTENDING FROM FACE OF ABUTMENT TO EL. 930 SHALL BE PLACED ON AND FLUSH WITH EMBANKMENT SLOPES AT THE SOUTH END OF THE BRIDGE. THE DRAINS SHALL BE 7'-0" WIDE AT THE LOWER END, TAPERING TO 4'-0" WIDE AT FACE OF ABUTMENT AND ONE FT. THICK. THEY SHALL BE CENTERED UNDER THE SCUPPERS.

GRAVEL, IF USED AS THE COARSE AGGREGATE SHALL BE ACCORDING TO SEC. M-3.93 INSTEAD OF M-3.91 FOR CLASS "C" CONCRETE, SUPERSTRUCTURE. GRAVEL MEETING THE REQUIREMENTS OF SEC. M-3.93 ALSO MAY BE USED FOR OTHER CONCRETE IN THIS STRUCTURE INCLUDING CONCRETE FOR PYLONS.

SPLICE OF REINFORCING STEEL: REINFORCING STEEL SHALL BE SPLICED BY LAPPING BARS A MINIMUM OF 30 TIMES THE DIAMETER OF THE SMALLER BAR CONCERNED.

SURFACE FINISH OF CONCRETE: RAILING END POSTS, CURB FACES, FASCIAS OF DECK AND EXPOSED SURFACES OF PIERS 3 AND 6, AND NORTH ABUTMENT (INCLUDING WING WALLS) SHALL RECEIVE A RUBBED SURFACE FINISH. ALL OTHER EXPOSED SURFACES SHALL BE GOVERNED BY THE PROVISIONS OF ITEM S-1.

GALVANIZING: WHERE SPECIFIED, SHALL BE AS CALLED FOR IN SEC. M-7.4(1) AS CALLED FOR IN SECTION M-10.30.

EXCAVATION QUANTITY INCLUDES THE REMOVAL OF FILL MATERIAL BETWEEN THE TOP OF THE EARTH BENCH AND THE BOTTOM OF THE ABUTMENT.

CONSTRUCTION CLEARANCE OF 13'-0" FOR B & O R.R. AND 20'-0" FOR PENN. R.R. VERTICALLY ABOVE THE TOP OF THE RAILROAD TRACKS AND 8'-0" HORIZONTALLY FROM THE CENTER OF ALL TRACKS SHALL BE MAINTAINED AT ALL TIMES.

SHEETING & BRACING: BEFORE CONSTRUCTION IS STARTED, SIXTEEN SETS OF PRINTS SHOWING DETAILS OF THE SHEETING AND BRACING TO BE USED FOR EXCAVATION ADJACENT TO THE RAILROAD TRACKS SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL BY THE DEPARTMENT OF HIGHWAYS AND BY THE RAILROAD COMPANY.

ALIGNING RAILROAD TRACKS: AFTER THE CONTRACTOR HAS COMPLETED ALL EXCAVATION AND BACKFILL ADJACENT TO THE RAILROAD TRACKS IN COMPLIANCE WITH SEC. S-2.04 AND S-2.08 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, SUBJECT TO THE SUPERVISION OF THE RAILROAD COMPANIES CONCERNED, NOTHING IN SECTIONS S-2.04, S-2.08 OR S-3.07 OF THE SPECIFICATIONS SHALL BE CONSTRUED TO HOLD THE CONTRACTOR LIABLE FOR ALIGNING AND RESURFACING THE RAILROAD TRACKS.

WEIGHT OF STRUCTURAL STEEL HAS BEEN ESTIMATED ON THE BASIS OF THE ACTUAL TONNAGE GOING INTO THE BRIDGE, INCLUDING RIVET HEADS.

CHARLES E. DE LEUW CONSULTING ENGINEER CHICAGO ILLINOIS

GENERAL PLAN & ELEVATION NOTES & ESTIMATED QUANTITIES

BRIDGE NO. STA. 21-1248

U.S. 21 OVER TUSCARAWAS RIVER

PENNA. R.R., B. & O. R.R. and T.R. 353

STARK CO. STA. 662+31.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.A.E.	F.S.		S.G.	L.N.R.	7-13-56	

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F - 1010 (4)	

139
152

STA - 21 - 12.39

NORTH FOR NORTH ABUT.
SOUTH FOR SOUTH ABUT.

℄ ROADWAY

℄ GIRDER

CONSTRUCTION JOINT

℄ U.S. 21

PILE SPACING 8 SPACES @ 7'-0" = 56'-0"

30'-2½"

39° 38' 00"

FOR REINF. SEE SH.#140 DETAIL 'A'

FOR REINF. SEE SH.#140 DETAIL 'B'

N.A. EL. 979.04
S.A. EL. 961.78

N.A. EL. 980.58
S.A. EL. 960.21

W.W.#2 - N. ABUT.
W.W.#4 - S. ABUT.

SEE DET. DRG. 139

℄ Joint

℄ BRG

W.W.#1 - N. ABUT.
W.W.#3 - S. ABUT.

DRILL 2¼" HOLES FOR ANCHOR BOLTS BEFORE SUPERSTRUCT. IS ERECTED SEE BRG. DETAILS SH.#147 AND TYPICAL MASONRY PLATE LAYOUT SH.#140.

PLAN

N.A. EL. 979.10
S.A. EL. 962.95

N. ABUT. EL. 967.97
S. ABUT. EL. 951.77

N. ABUT. EL. 968.45
S. ABUT. EL. 951.60

N. ABUT. EL. 968.77
S. ABUT. EL. 951.28

N. ABUT. EL. 968.93
S. ABUT. EL. 950.80

N.A. EL. 980.21
S.A. EL. 961.81

N.A. EL. 980.65
S.A. EL. 961.58

N. ABUT. EL. 969.51
S. ABUT. EL. 950.73

N.A. EL. 979.08
S.A. EL. 959.33

N. ABUT. EL. 969.99
S. ABUT. EL. 950.06

N.A. EL. 979.86
S.A. EL. 958.50

N. ABUT. EL. 970.31
S. ABUT. EL. 949.74

N. ABUT. EL. 970.48
S. ABUT. EL. 949.26

1-A520 NF
1-A521 FF

N. ABUT. EL. 977.54
S. ABUT. EL. 960.88

38-A515 @ 12 FF

2-A519 FF

9-AG01 @ 12 FF
6-A516 @ 15 NF

9-AG02 @ 12 FF

5-AG14

5-AG12

ADD BARS AS24 ALT. WITH A515 @ A689 UNDER EACH BRG.

38-AG03 @ 12 FF
39-A517 @ 15 NF

CONST. JOINT

61-AG04 @ 12 FF DOWELS
65-A518 @ 15 NF DOWELS
5-AG13

7-A519 FF

5-AG11

4-A516 @ 15 NF

5-AG01 @ 12 FF
5-AG03 @ 12 FF

1-A522 NF

1-AG05 FF

1-AG06 FF
1-A529 NF

℄ SURVEY

8-A527 @ 15 NF

7-AG06 @ 12 FF

SA526 @ 15 NF

SA526 @ 15 NF

SEE DET. DRG. 139

6-AG07 @ 12 FF

6-A528 @ 15 NA.

17-AG08 @ 12 FF

12-A527 @ 15 NA.

REMAINDER OF REINFORCING IN THIS PORTION OF ABUTMENT SAME AS IN LEFT SIDE

BOTT. POROUS BACKFILL SLOPES @ 3/16" PER FT. EACH WAY FROM ℄ EACH RDWY. EXTENDS OUTWARD TO EMBANKMENT SLOPE.

TYP. 4 ABUTS.

BENCH ELEV.

2-4" ϕ WEEPHOLES N. ABUT. & S. ABUT.

N. ABUT. EL. 964.00
S. ABUT. EL. 943.75

41-A523 SPACING AS SHOWN
41-A589
41-A5125 } IN PAIRS - SPACING AS SHOWN

N. ABUT. EL. 962.50
S. ABUT. EL. 945.25

ELEVATION

NORTH ABUT. AS SHOWN
SOUTH ABUT. AS NOTED (PILES FOR SOUTH ABUT ONLY)

NOTE
POROUS BACKFILL SHALL EXTEND TO THE APPROACH SLAB AND TO THE SURFACE OF THE EARTH SHOULDERS AND OUTWARD TO THE SURFACE OF THE EMBANKMENT SLOPE.

BACK WALL SLOPE IS SHOWN AS FOR NORTH WALL. SOUTH WALL TO CONFORM TO THIS DET. IN A-A

POROUS BACKFILL

ALL FRONT PILES BATTERED AS SHOWN

ALL REAR PILES ARE VERTICAL

VARIES

N.EL 981.76
S.EL. 960.27

SEC A-A SOUTH ABUTMENT

1/4 REMAINDER OF DIMENSIONS AND REINF. SAME AS FOR NORTH ABUT.
CAST IN PLACE PILES 50 TON CAPACITY

CROWN

℄ BRG

A515

A516 @ A517 @ 15

A518 @ 15

AG01 AG02 & AG05 @ 12"

AG04 @ 12

CONST. JT.

A589

A5125

A524

A523

A607

5 TOP BARS AG11 AG12 AG14

SLOPE BETWEEN BRIDGE SEATS

12"x2" PREMOLDED SEALING STRIP IN 13"x3¼" RECESS @ US. 21

DETAIL 'Y'

1" THICKNESS OF PREFORMED GRAY SPONGE RUBBER EXPANSION JOINT FILLER

SECTION A-A

NORTH ABUTMENT

EL. 979.10
EL. 970.39
EL. 964.50
EL. 962.50

1-A532 EF
A539 THRU A554 EF
13-A504 @ 7½" EF
A553 @ 15 EF
A553 @ 15 NF
16 A505 TOTAL T & B
3-A609 BOTTOM @ 7½" 945 @ 12"
9-A530 @ 12" TOP
2-A553
EL. 960.00
EL. 964.00
18'-0"
10'-0"

WW 1

EL. 981.76
1-A588 EF
EL. 972.84
A555 THRU A560 @ 15" EF
41-A504 @ 7½" EF
2-A514 @ 15" NF
A501 THRU A503 @ 15 EF
6'-10⅛"
EL. 947.75
2-A584
16-A581 TOTAL T & B
26-A530 @ 12" TOP
41-A609 @ 7½" BOTT.
26-A513 @ 12"
29'-3"
35'-3"
10'-0"

WW 2

EL. 962.93
E 5106 EF
1-A510 EF
EL. 950.69
A591 THRU A5101 @ 15 EF
12-A504 @ 7½" EF
6-A514 @ 15 NF
A501 THRU A5105 @ 15 EF
8'-0½"
2-A590 @ 15 NF
EL. 945.25
16-A574 TOTAL T & B
2-A553
EL. 946.25
EL. 943.75
6'-0"
7'-0"
13'-0"

WW 3

4'-0"
16'-3"
EL. 960.27
1-A5124 EF
A5120 THRU A5122 @ 15 EF
EL. 953.09
A5106 THRU A5119 @ 15 EF
17-A504 @ 7½" EF
8-A540 @ 15 NF
7-A5136 @ 15 EF
6'-10⅛"
12-A5123 TOTAL T & B
A541
17-A609 @ 7½" BOTT.
11-A513 @ 12"
11-A530 @ 12"
10'-3"
10'-0"
20'-3"

WW 4

NOTES
REINF. STEEL SHALL BE 2" CLEAR FROM SURFACE OF CONCRETE UNLESS OTHERWISE NOTED.
CONCRETE IN PYLONS TO BE INCLUDED IN ITEM 511 CLASS 'C' CONCRETE SUPERSTRUCTURE.
REINF. STEEL IN TOP OF ABUT. BRIDGE SEAT TO BE PLACED TO CLEAR ANCHOR BOLTS.
Rev. 1-21-57
Rev. 12-24-56

CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

ABUTMENT DETAILS

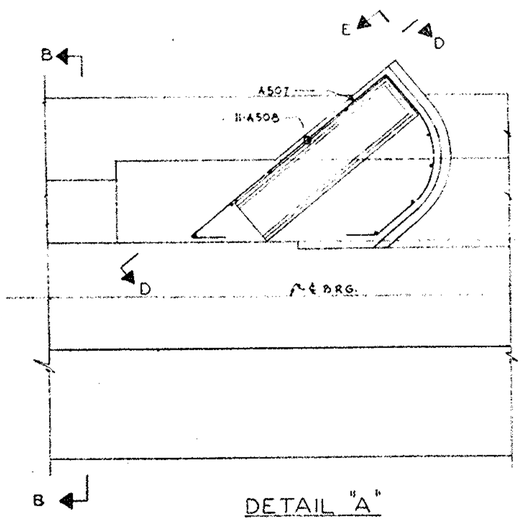
BRIDGE NO. STA. 21 - 1248
U.S. 21 OVER TUSCARAWAS RIVER
PENNA. R.R., B. & O. R.R. and T.R. 353
STARK CO
STA 662 + 31.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
S.G.	F.S.		C.A.E.	L.N.R.	7-13-56	

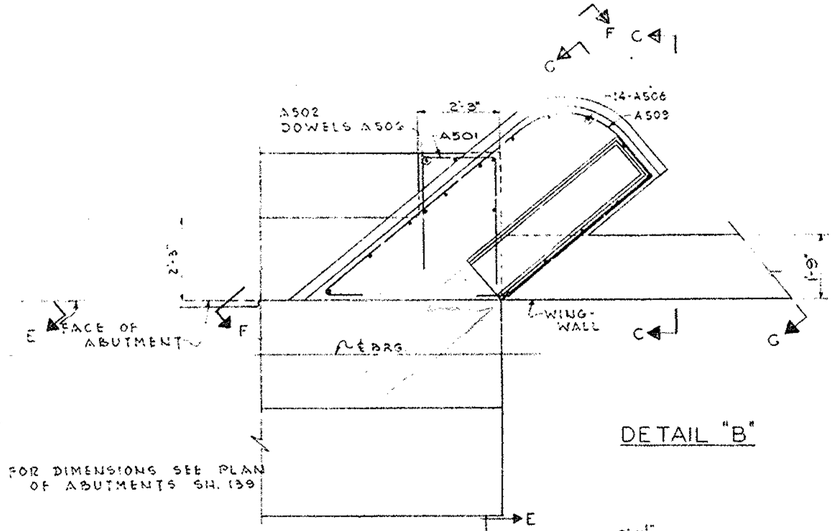
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

140
152

STA-21-12.39

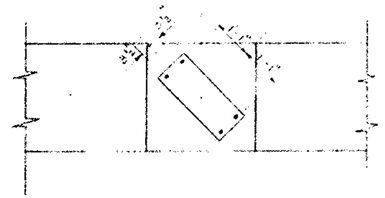


DETAIL "A"

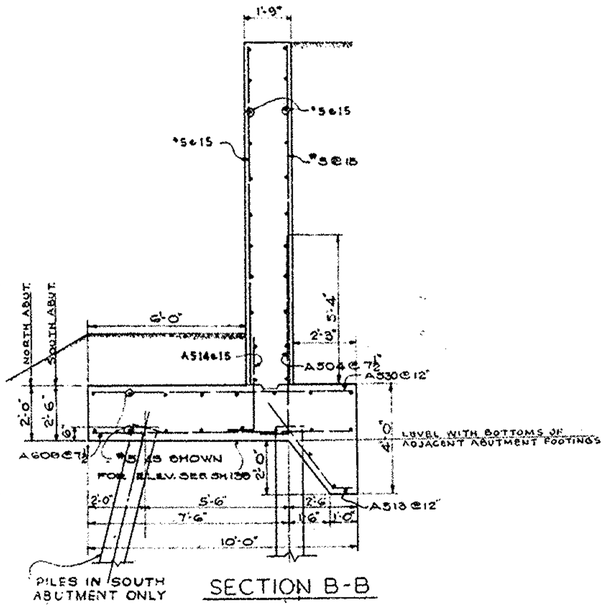


FOR DIMENSIONS SEE PLAN OF ABUTMENTS SH. 139

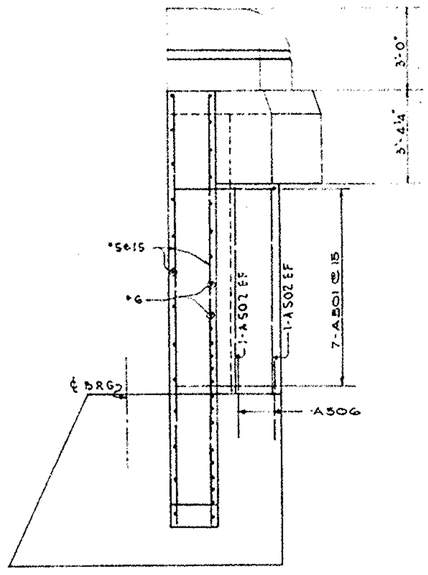
DETAIL "B"



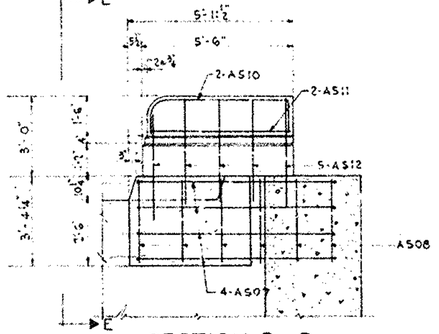
TYPICAL MASONRY PLATE BOLT SETTING



SECTION B-B

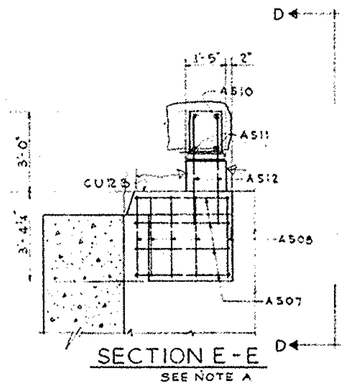


SECTION C - C



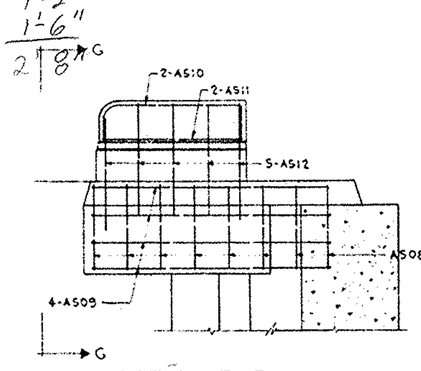
SECTION D - D

SEE NOTE A

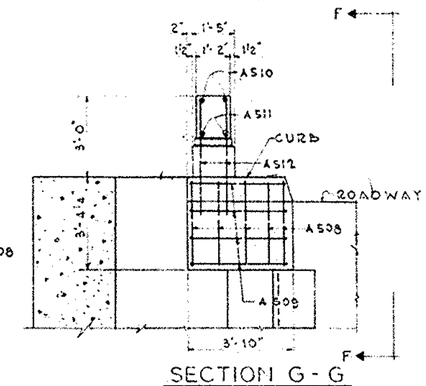


SECTION E - E

SEE NOTE A



SECTION F - F



SECTION G - G

NOTE A: ABUTMENT POSTS, CLASS "C" CONCRETE, INCLUDED WITH ABUTMENT WALL CONCRETE FOR PAYMENT.

CHARLES E. DE LEUW CONSULTING ENGINEER
CHICAGO ILLINOIS

ABUTMENT DETAILS

BRIDGE NO. STA. 21-1248
U.S. 21 OVER TUSCARAWAS RIVER
PENNA. R.R., B. & O. R.R. and T.R. 353
STARK CO. STA. 662+31.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
S.G.	AL.B.		C.A.E.	L.N.R.	7-13-56	

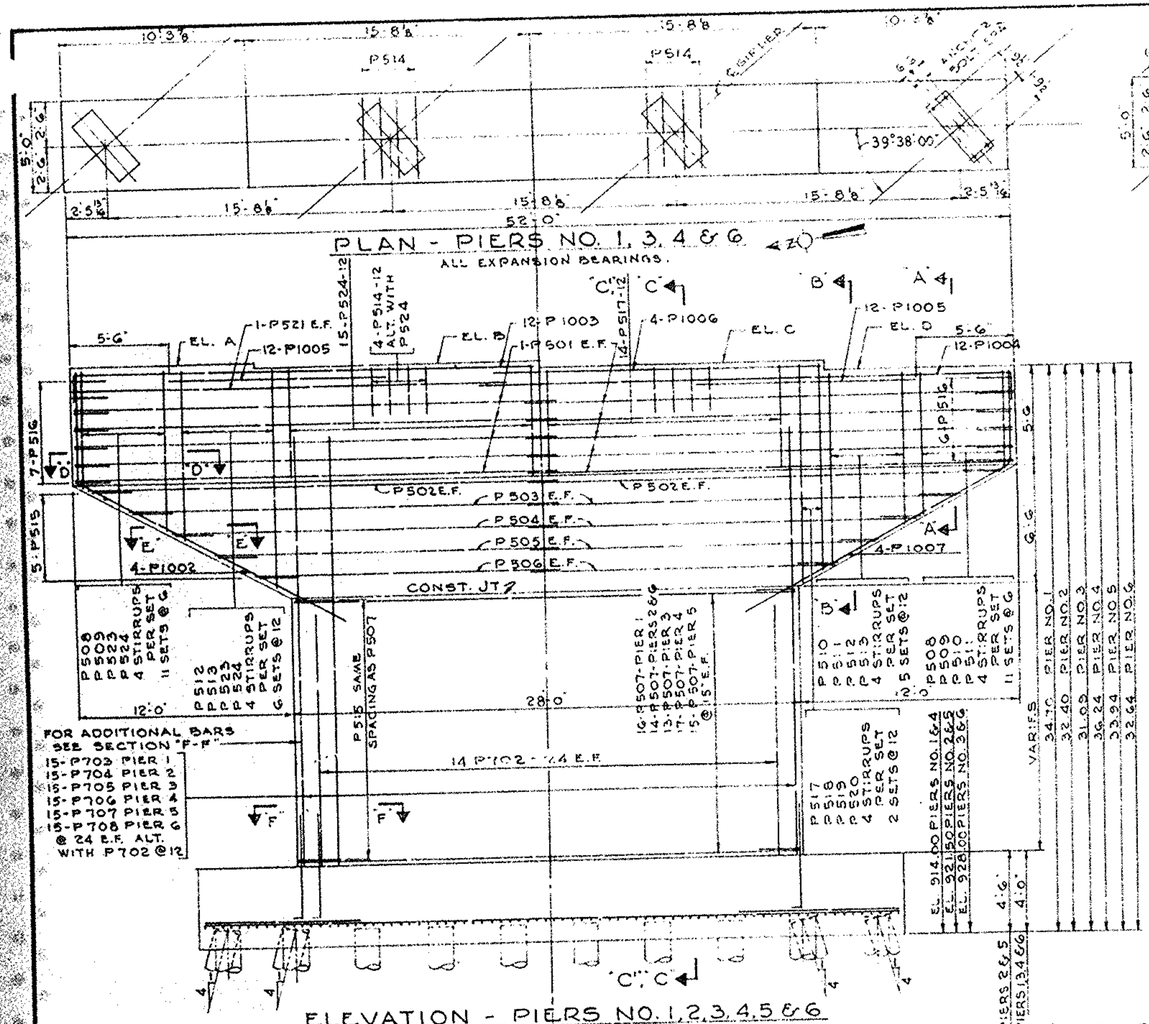
FED RD DIVISION	STATE	PROJECT	FIPE FUNDS
2	OHIO	F-100(4)	

141
152

STA-21-12.39

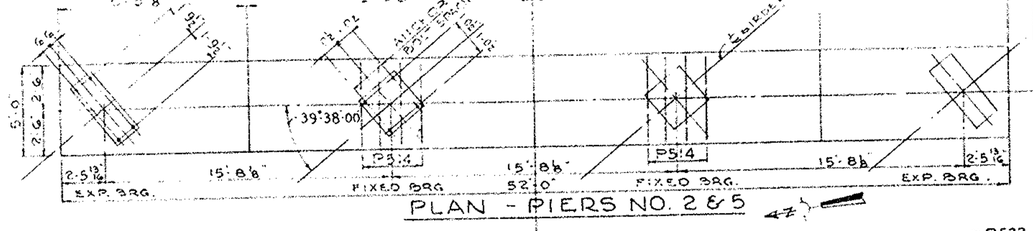
PLAN - PIERS NO. 1, 3, 4 & 6

ALL EXPANSION BEARINGS.

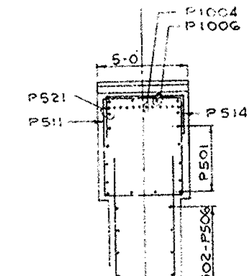


ELEVATION - PIERS NO. 1, 2, 3, 4, 5 & 6

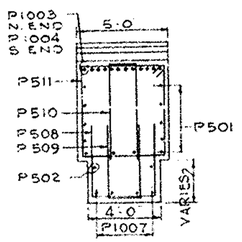
(SEE DETAIL 'A' FOR NOSING ON PIERS NO. 2, 3, 5 & 6)



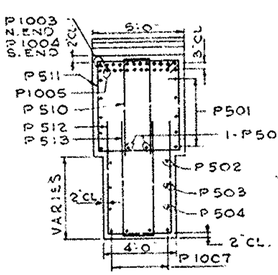
PLAN - PIERS NO. 2 & 5



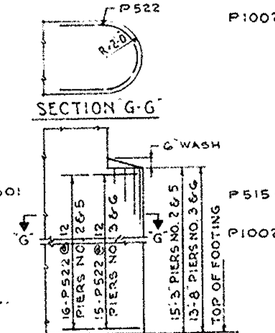
SECTION "C-C" PIERS NO. 1, 3, 4 & 6

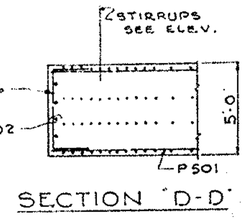


SECTION "A-A"



SECTION "B-B"

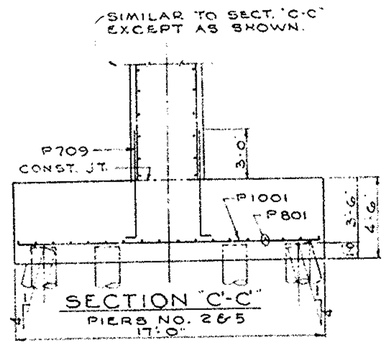




2-P527 PIER NO.1
2-P528 PIER NO.2
2-P529 PIER NO.3
2-P530 PIER NO.4
2-P531 PIER NO.5
2-P532 PIER NO.6

SECTION "C'-C'"

PIERS NO. 2 & 5



	ELEV. A	ELEV. B	ELEV C	ELEV. D
PIER NO. 1	949.66	949.50	949.18	948.70
PIER NO. 2	954.86	954.70	954.37	953.90
PIER NO. 3	960.06	959.89	959.57	959.09
PIER NO. 4	951.21	951.04	950.72	950.24
PIER NO. 5	956.40	956.24	955.92	955.44
PIER NO. 6	961.60	961.44	961.11	960.64

GENERAL NOTES.

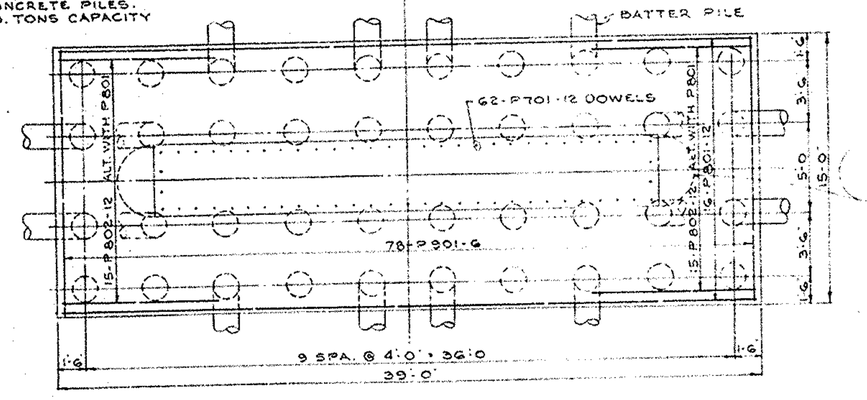
ALL REINFORCING STEEL SHALL CLEAR FACE OF CONCRETE 2" UNLESS OTHERWISE SHOWN.

REINFORCING BARS IN BRIDGE SEATS TO BE PLACED TO CLEAR ANCHOR BOLTS.

ALL EXPOSED EDGES TO BE CHAMFERED ¾" UNLESS OTHERWISE NOTED.

E.F. DENOTES EACH FACE.

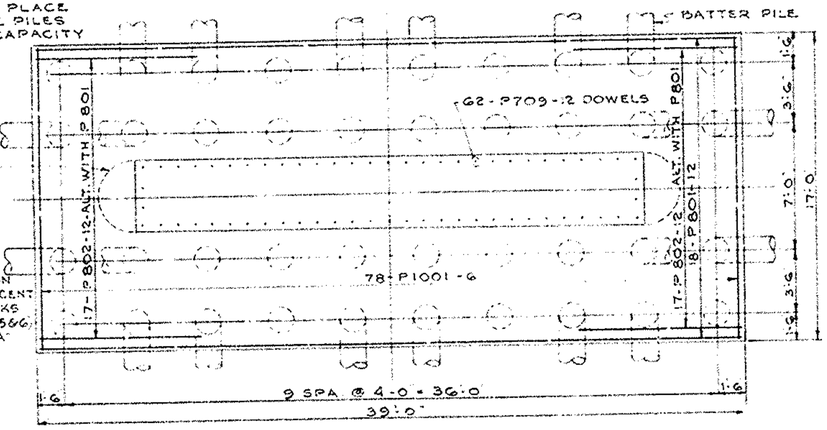
14" CAST IN PLACE CONCRETE PILES. 50. TONS CAPACITY



FOOTING PLAN "A" - PIERS NO. 1, 3, 4 & 6

NOTE:
NOSING ON LOWER PORTION OF PIERS ADJACENT TO R.R. TRACKS (PIERS NO. 2, 3, 5 & 6) SEE DETAIL 'A'

14" CAST IN PLACE CONCRETE PILES. 50. TONS CAPACITY



FOOTING PLAN "B" - PIERS NO. 2 & 5

CHARLES E. DE LEUW CONSULTING ENGINEER CHICAGO ILLINOIS

PIER DETAILS

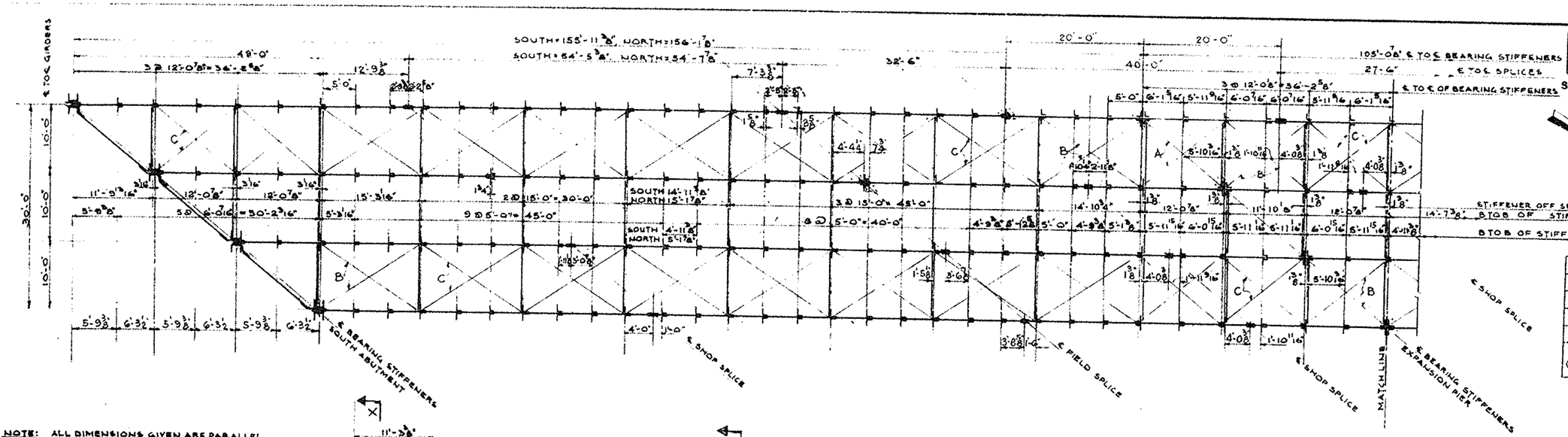
BRIDGE NO. STA. 21 - 1248
U.S. 21 OVER TUSCARAWAS RIVER
PENNA. R.R., B. & O. R.R. and T.R. 353
STARK CO. STA. 662 + 31.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
S.G.	R.E.B.		S.G.	L.N.R.	7-13-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

142
152

STA-21-12.39



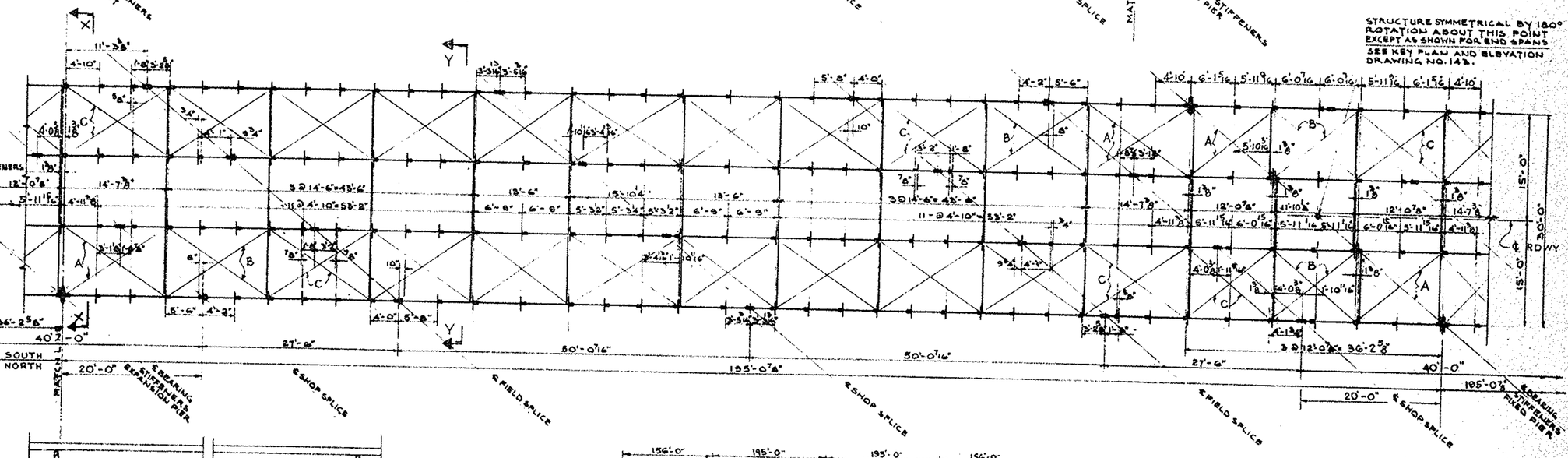
LATERAL BRACING MEMBERS		
MARK	PART	H.S. BOLTS EACH END
A	1 ⊿ 4 × 3½ × 3/8	4
B	1 ⊿ 3½ × 3 × 3/8	4
C	1 ⊿ 3½ × 2½ × 3/8	3
←	1 ⊿ 3½ × 2½ × 5/16	3
	FOR ALL OTHERS - UNMARKED	

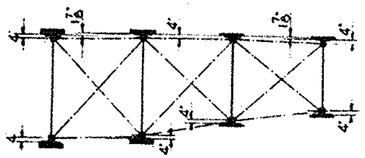
NOTE: ALL DIMENSIONS GIVEN ARE PARALLEL TO GRADE.
DIMENSIONS LABELED "SOUTH" APPLY TO SOUTH END SPAN ONLY
DIMENSIONS LABELED "NORTH" APPLY TO NORTH END SPAN ONLY.

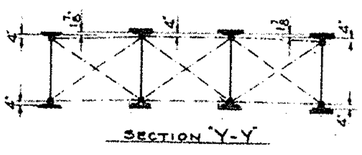
STRUCTURE SYMMETRICAL BY 180° ROTATION ABOUT THIS POINT EXCEPT AS SHOWN FOR END SPANS

SEE KEY PLAN AND ELEVATION DRAWING NO. 142.

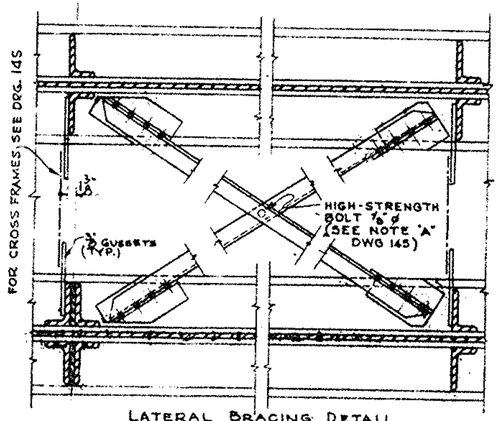
STIFFENER OFF SETS FROM ℄ OF BEARING STIFFENERS
B. TO B. OF STIFFENER ⊿S AT CROSS FRAMES
B. TO B. OF STIFFENERS ⊿S



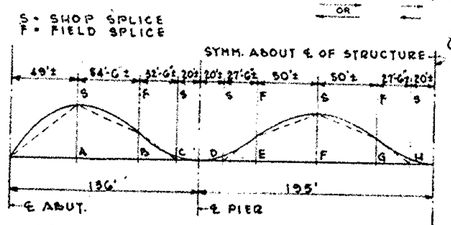




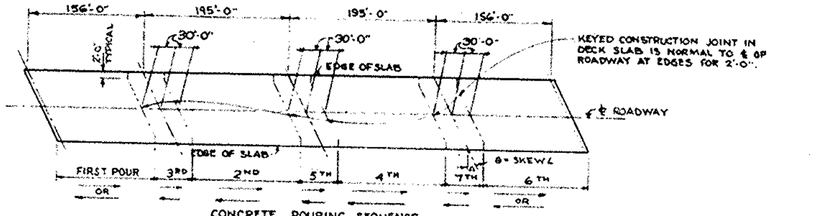
ALL DIMENSIONS ON ABOVE 2 SECTIONS RELATE TO BACKS OF FLANGE ⊿S



LATERAL BRACING DETAIL
MEMBERS TABULATED ABOVE
SEE CONNECTION DETAIL DRG. 145



DEFLECTION AND CAMBER DIAGRAM



CONCRETE POURING SEQUENCE
(SEE DWG. 146 FOR DETAILS & REINF. DECK SLAB)

DEFLECTION AND CAMBER										
DIMENSIONS IN INCHES: AT		A	B	C	D	E	F	G	H
DEFLECTION DUE TO WT. OF STEEL	FASCIA	5/16	1/4	1/32	3/64	5/16	5/8	5/16	5/64
	INTERIOR	5/16	1/4	1/32	3/64	5/16	5/8	5/16	5/64
DEFLECTION DUE TO WT. OF CONC.	FASCIA	5/16	3/4	5/32	5/32	1/16	1/4	1/16	5/32
	INTERIOR	1	1 2/3	1/32	1/64	1/2	7/8	1/2	1/64
TOTAL DEFLECTION	FASCIA	7/8	1	1/8	1/64	7/8	1 5/8	7/8	1/64
	INTERIOR	1 1/16	3/4	1/16	5/32	1/16	1/4	1/16	5/32
CAMBER ORDINATES	FASCIA	1 7/8	1	0	0	1	1 5/8	1	0
	INTERIOR	1 5/8	3/4	0	0	3/8	1/4	3/4	0

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STEEL FRAMING PLAN & DETAILS

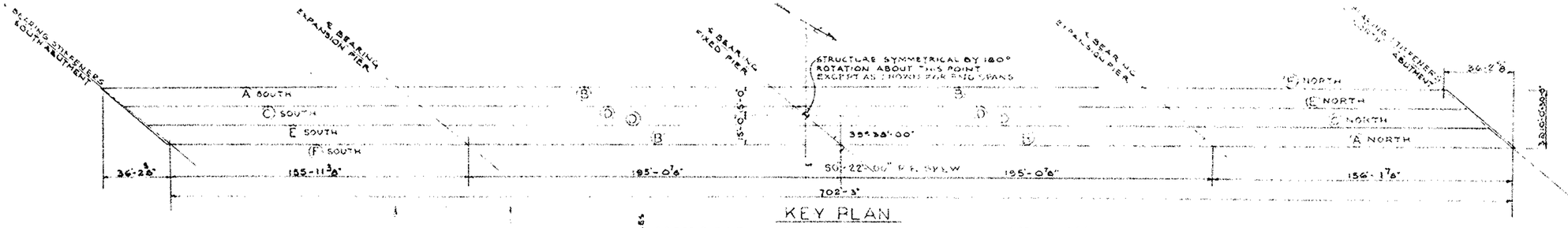
BRIDGE NO. STA. 21 - 1248
U. S. 21 OVER TUSCARAWAS RIVER
PENNA. R.R., B. & O. R.R. and T.R. 353
STARK CO. STA 662 + 31.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.J.L.	J.G.		C.A.E.	L.N.R.	7-13-56	

FED. ROAD DIV. NO.	STATE	PROJECT	TYPE WORK
2	OHIO	F-1010(4)	

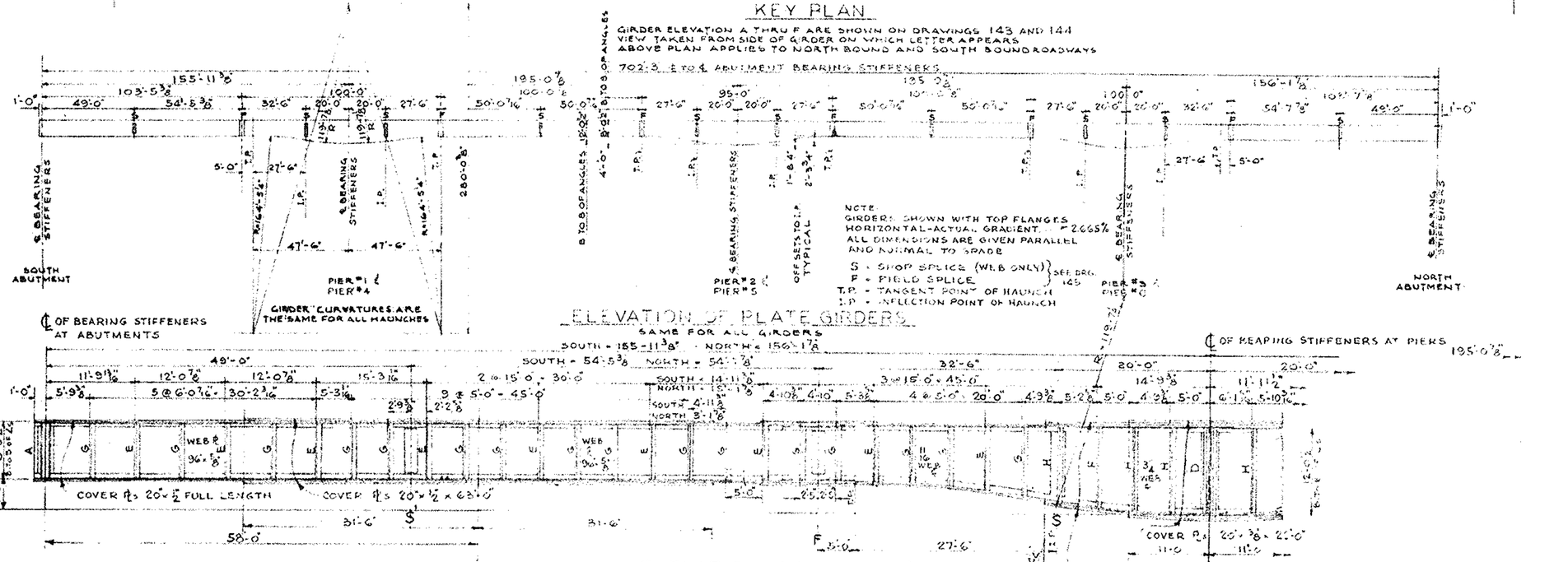
143
152

STA-21-12.39



KEY PLAN

GIRDER ELEVATION A THRU F ARE SHOWN ON DRAWINGS 143 AND 144
VIEW TAKEN FROM SIDE OF GIRDER ON WHICH LETTER APPEARS
ABOVE PLAN APPLIES TO NORTH BOUND AND SOUTH BOUND ROADWAYS

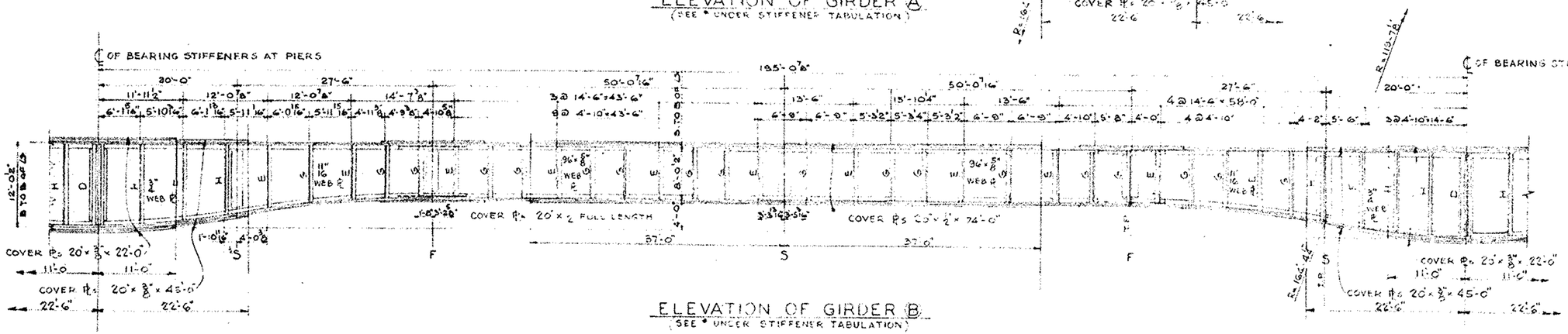


ELEVATION OF PLATE GIRDERS

SAME FOR ALL GIRDERS

ELEVATION OF GIRDER A

(SEE * UNDER STIFFENER TABULATION)



ELEVATION OF GIRDER B

(SEE * UNDER STIFFENER TABULATION)

MARK	DETAIL PARTS	
A	ABUTMENT BEARING STIFFENERS	SEE DETAIL DRG. 145
B	"	" " " "
C	"	" " " "
D	PIER BEARING STIFFENERS	" " " "
E	STIFFENERS AT CROSS FRAMES	2 ∠s 6"×4"×⅜" WITH FILL*
F	"	2 ∠s 7"×4"×½" WITH FILL*
G	INTERMEDIATE STIFFENERS	2 ∠s 6"×4"×⅜" CRIMPED
H	"	2 ∠s 7"×4"×½" CRIMPED

*FASCIA GIRDERS AT CROSS-FRAMES, FILL INTERIOR, CRIMP EXTERIOR STIFFENER.
ALL FLANGE ∠s 8"×8"×¾"
ALL RIVETS ⅞ ø
ALL HOLES 15/16" ø
MAXIMUM PIVET PITCH GIRDER FLANGES TO BE 5" THROUGHOUT
MAXIMUM CRIMP STIFFENER ∠s = 1"
ALL STIFFENERS NORMAL TO GRADE

CHARLES E. DE LEUW CONSULTING ENGINEER
CHICAGO ILLINOIS

GIRDER ELEVATIONS

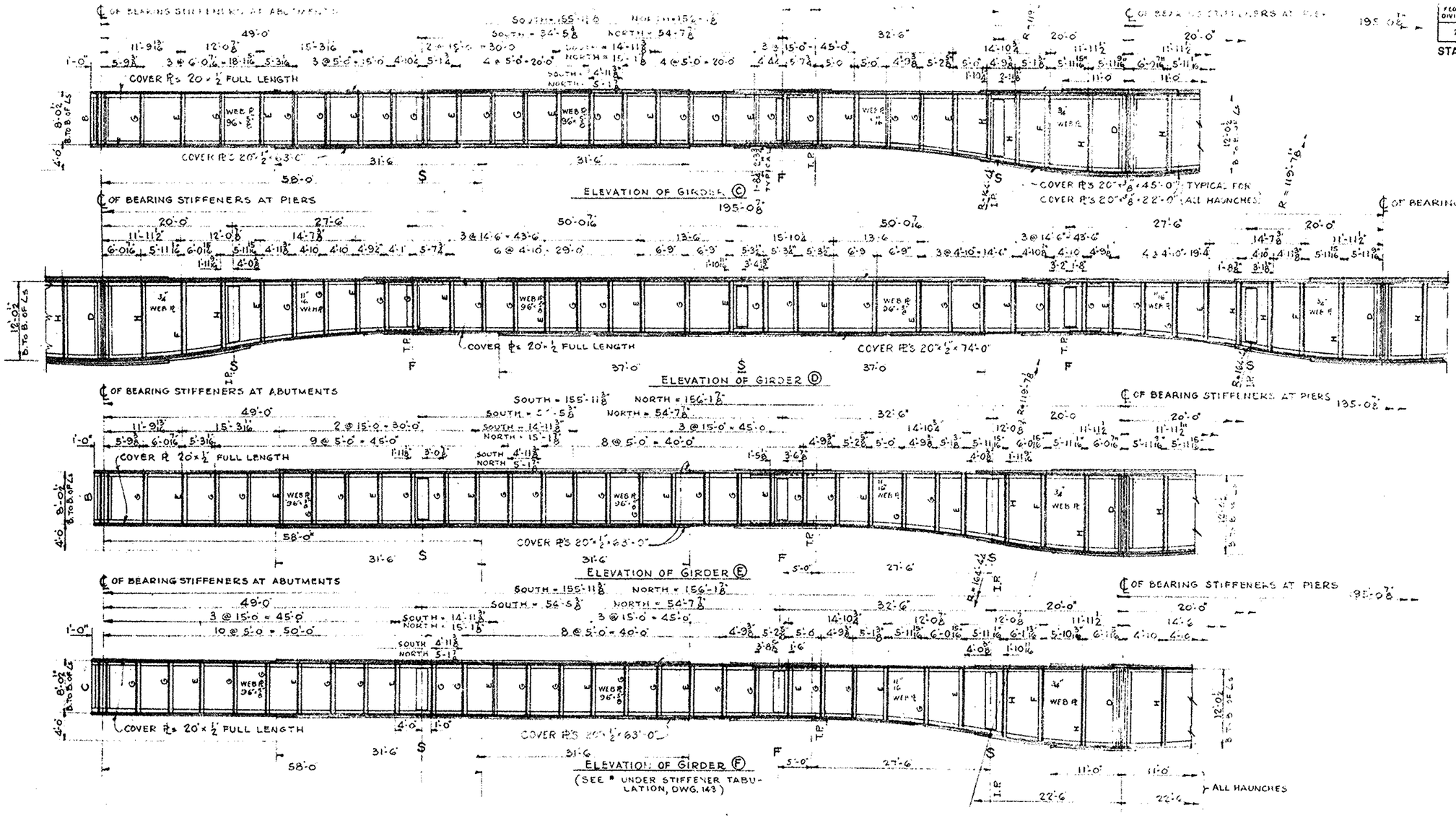
BRIDGE NO. STA. 21-1248
U.S. 21 OVER TUSCARAWAS RIVER
PENNA. R.R., B. & O. R.R. and T.R. 351
STARK CO. STA. 662+31.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.J.L.	V.S.		C.A.E.	L.N.R.	7-13-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

144
152

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CHARLES E. DE LEUW
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GIRDER ELEVATIONS

BRIDGE NO. STA. 21-1248
U.S. 21 OVER TUSCARAWAS RIVER
PENNA. R.R., B. & O. R.R. and T.R. 353
STARK CO. STA. 662+31.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.J.L.	Y.N.H.		C.A.E.	L.N.R.	7-13-56	

FED. NO. DIVISION	STATE	PROJECT	SHT. FUNDS	SHEETS
2	OHIO	F-1010 (4)		145 152

STA-21-12.39

ABUTMENT BEARING STIFFENER

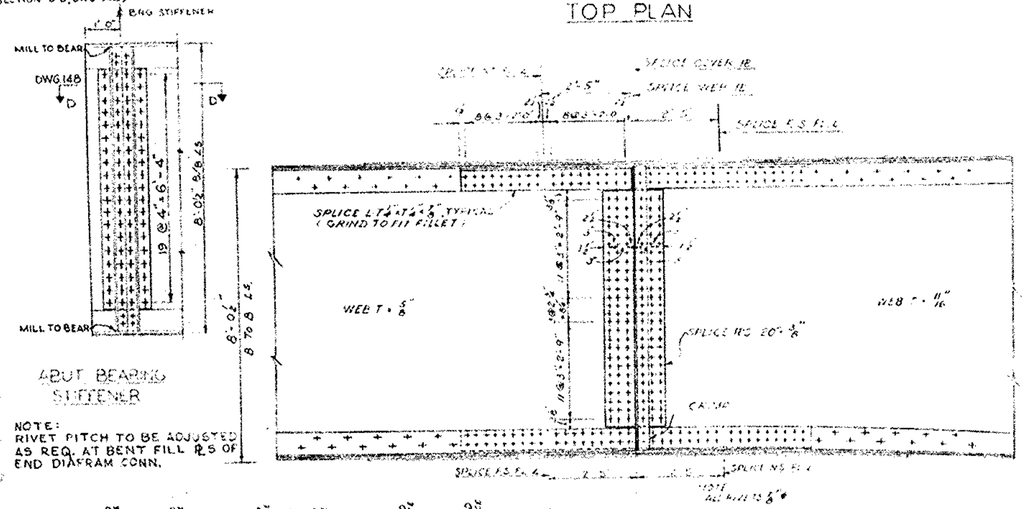
(PARTS)

MARK 'A' 4 ∠'s 7"x4"x⅞" + 2 Rs 16"x⅜"
2 BENT ¾" Rs WITH CLIPS N.S.

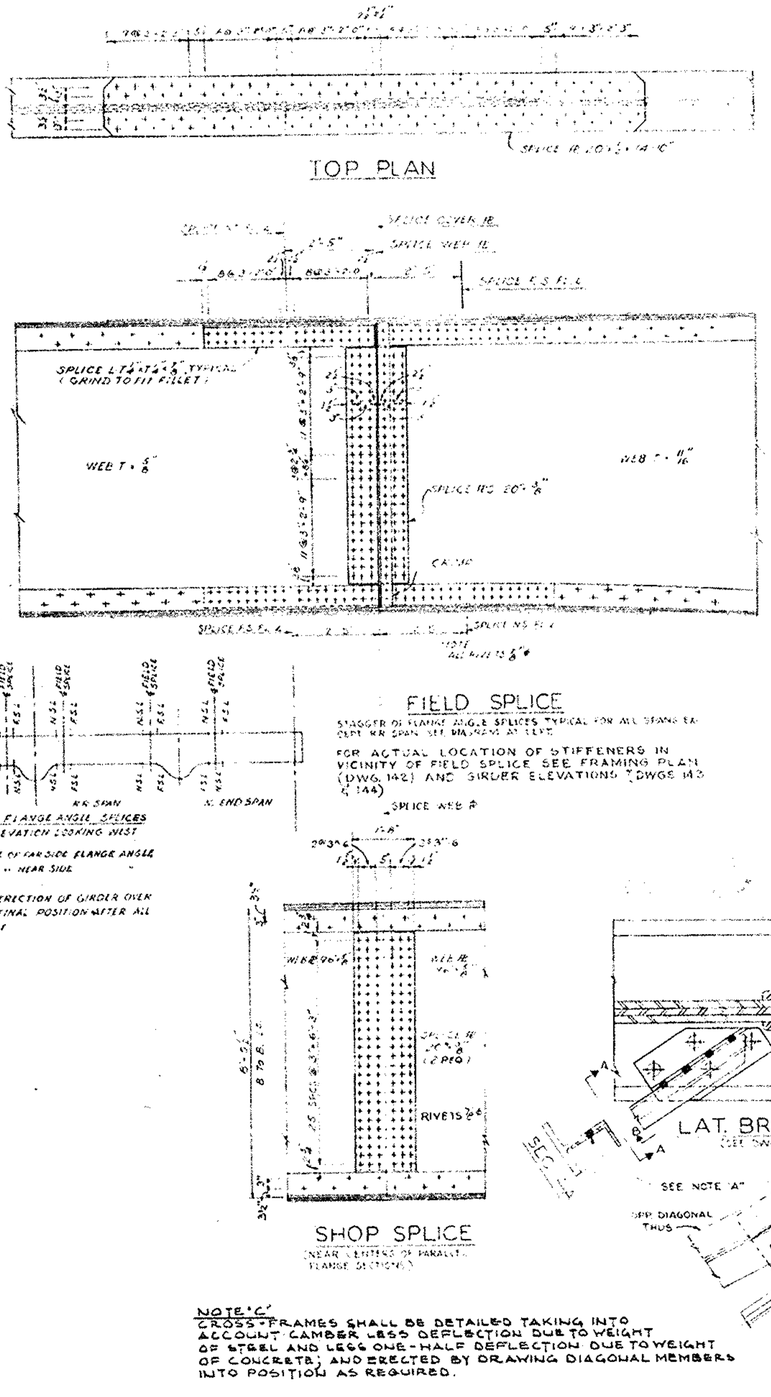
MARK 'B' 4 ∠'s 7"x4"x⅞" + 2 Rs 16"x¾" + 2 BENT ¾" Rs WITH CLIPS N.S. + 2 BENT ¾" Rs F.S.

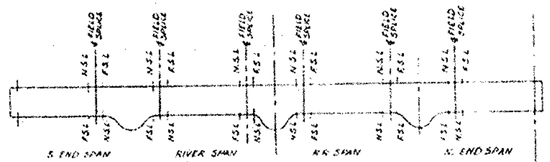
MARK 'C' 4 ∠'s 7"x4"x⅞" + 2 Rs 16"x¾" + 2 BENT ¾" Rs F.S.

(SEE SHOP ELEVATIONS, DWGS. 143 AND 144 AND SECTION D-D, DWG. 148)



NOTE:
RIVET PITCH TO BE ADJUSTED AS REQ. AT BENT FILL Rs OF END DIAPHRAM CONN.





STAGGER OF FLANGE ANGLE SPLICES
GIRDER ELEVATION LOOKING WEST

NOTE:
F.S.L. INDICATES LOCATION OF SPLICE OF FAR SIDE FLANGE ANGLE
N.S.L. " " " " NEAR SIDE "

THIS ARRANGEMENT PERMITS ERECTION OF GIRDER OVER R.R. TRACKS BY ROTATION INTO FINAL POSITION AFTER ALL OTHER MEMBERS ARE IN PLACE

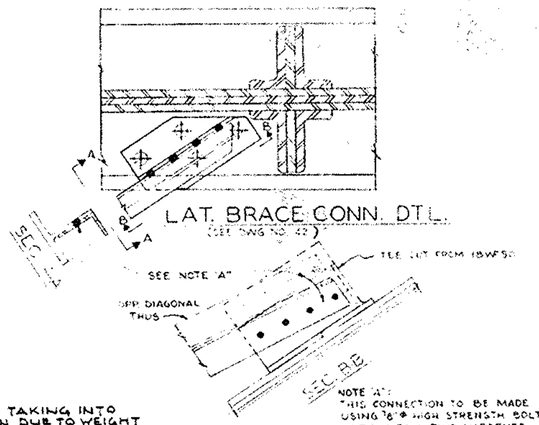
FIELD SPLICE

STAGGER OF FLANGE ANGLE SPLICES TYPICAL FOR ALL SPANS EXCEPT R.R. SPAN. SEE DIAGRAMS AT LEFT.

FOR ACTUAL LOCATION OF STIFFENERS IN VICINITY OF FIELD SPLICE SEE FRAMING PLAN (DWG. 142) AND GIRDER ELEVATIONS (DWGS 143 & 144)

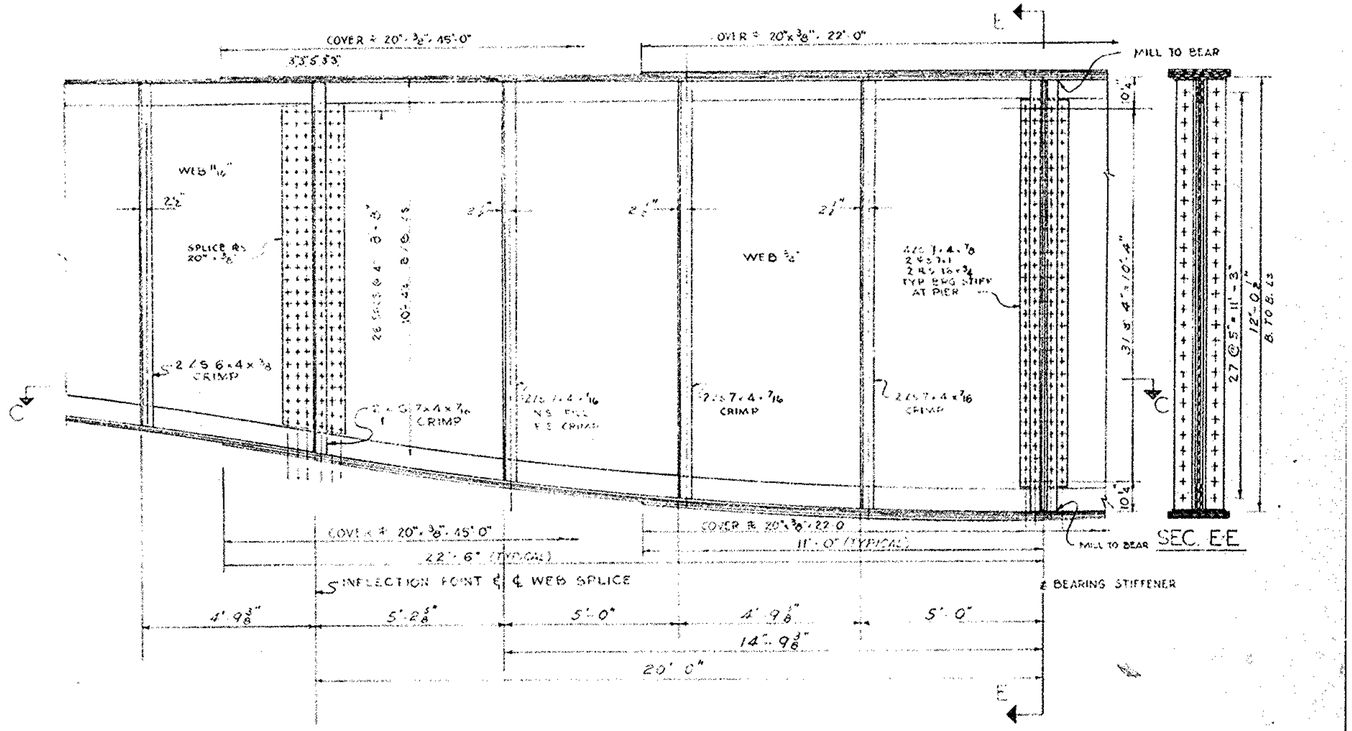
SHOP SPLICE

(NEAR CENTERS OF PARALLEL FLANGE SECTIONS)



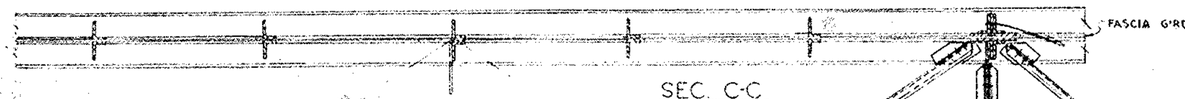
NOTE 'A':
THIS CONNECTION TO BE MADE USING ⅞" ø HIGH STRENGTH BOLTS WITH NUTS & TWO HARDENED STEEL WASHERS. SEE SUPPLEMENTAL SPECIFICATION No S-207 DATED APRIL 28, 1955.

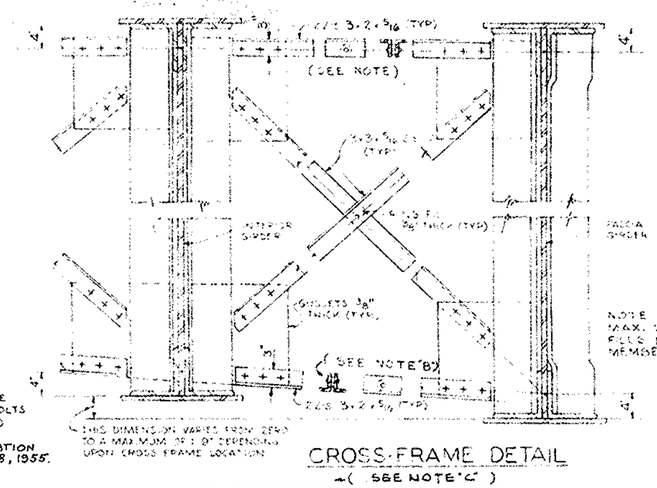
NOTE 'C':
CROSS-FRAMES SHALL BE DETAILED TAKING INTO ACCOUNT CAMBER LESS DEFLECTION DUE TO WEIGHT OF STEEL AND LESS ONE-HALF DEFLECTION DUE TO WEIGHT OF CONCRETE; AND ERECTED BY DRAWING DIAGONAL MEMBERS INTO POSITION AS REQUIRED.



DETAIL - GIRDER 'A' HAUNCH

TYPICAL FOR ALL GIRDERS EXCEPT STIFFENER LOCATION WHICH APPLIES TO GIRDER 'A' ONLY.





NOTE
MAX. SPACING OF RING FILLS IN DOUBLE ANGLE MEMBERS IS 2'-6"

CROSS-FRAME DETAIL

(SEE NOTE 'C')

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GIRDER DETAILS

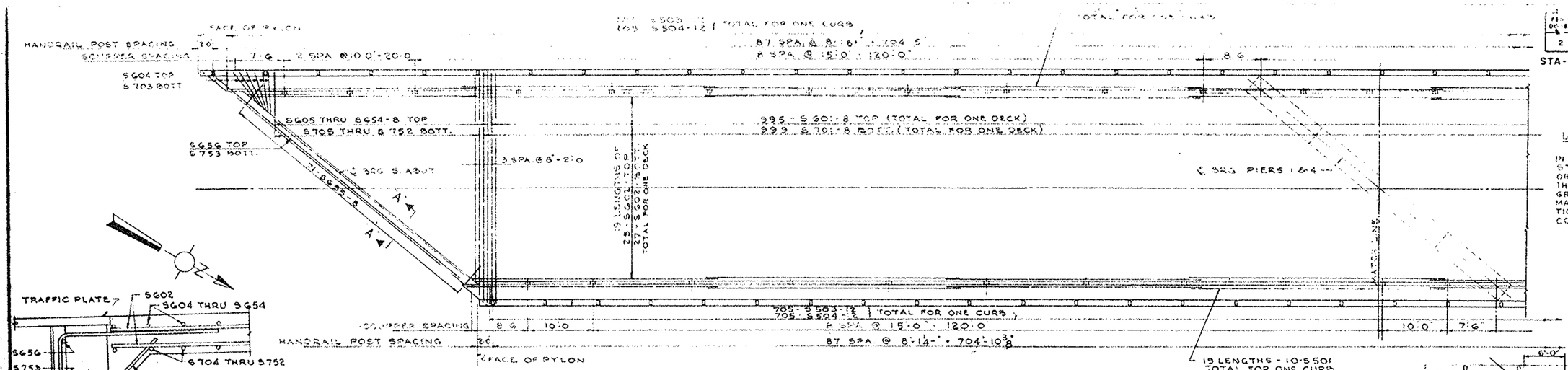
BRIDGE NO. STA. 21-1248
U.S. 21 OVER TUSCARAWAS RIVER
PENNA. R.R., B. & O. R.R. and T.R. 353
STARK CO. STA. 662+31.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.J.L	Y.N.H.		C.A.E.	L.N.R.	7-13-56	

FED. ROAD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

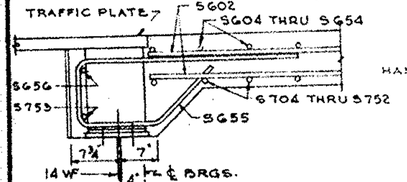
146
152

STA-21-12.39



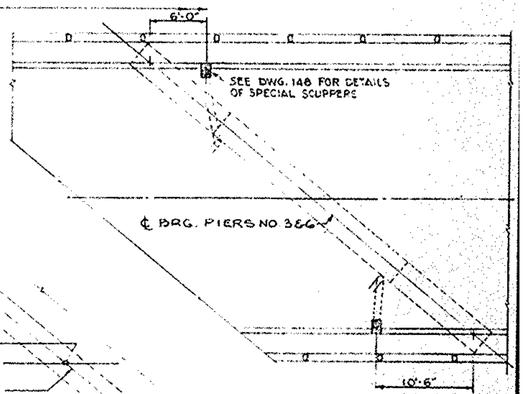
DECK CONSTRUCTION PROCEDURE

THE DECK SLAB SHALL BE PLACED IN SECTIONS BETWEEN TRANSVERSE CONSTRUCTION JOINTS IN THE NUMERICAL ORDER AND IN THE DIRECTION SHOWN ON THE CONCRETE POURING SEQUENCE DIAGRAM, DWG. 142, IN ORDER THAT THE MAJOR PORTION OF THE DEAD LOAD DEFLECTION WILL OCCUR PRIOR TO PLACING CONCRETE OVER EACH PIER.

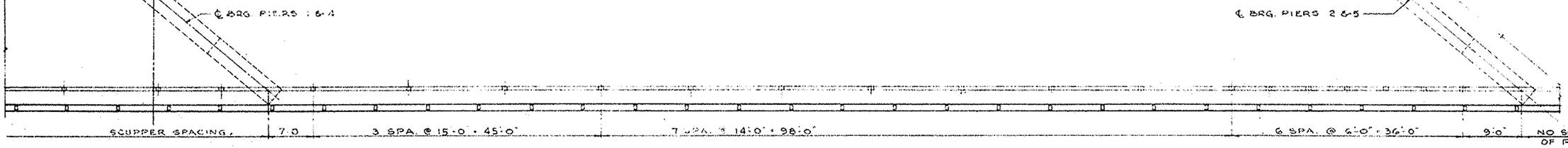


SECTION "A-A"

DECK PLAN — SOUTH END SPAN



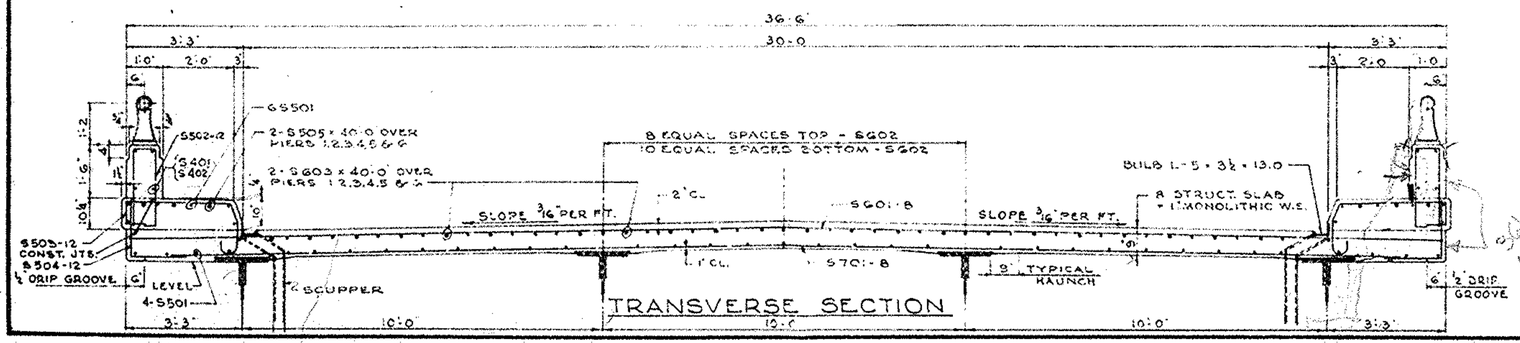
NO SCUPPERS NORTH OF PIERS NO. 2 & 5 EXCEPT AS SHOWN AT PIERS NO. 3 & 6.



NO SCUPPERS NORTH OF PIERS NO. 2 & 5. EXCEPT AS SHOWN AT PIERS NO. 3 & 6.

DECK PLAN — SOUTH MAIN SPAN

ONE BRIDGE DECK SHOWN OR NOTED (2 REQUIRED)



TRANSVERSE SECTION

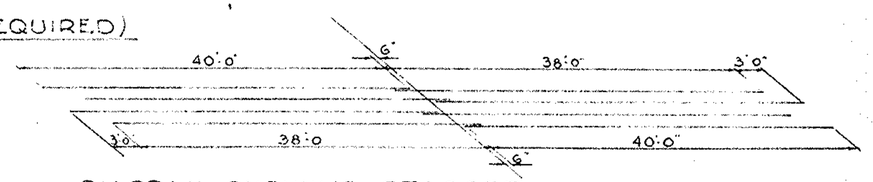


DIAGRAM SHOWING STAGGER OF S603 BARS OVER PIERS

CHARLES E. DE LEUW CONSULTING ENGINEER
CHICAGO ILLINOIS

DECK PLAN, SECTION & REINFORCEMENT

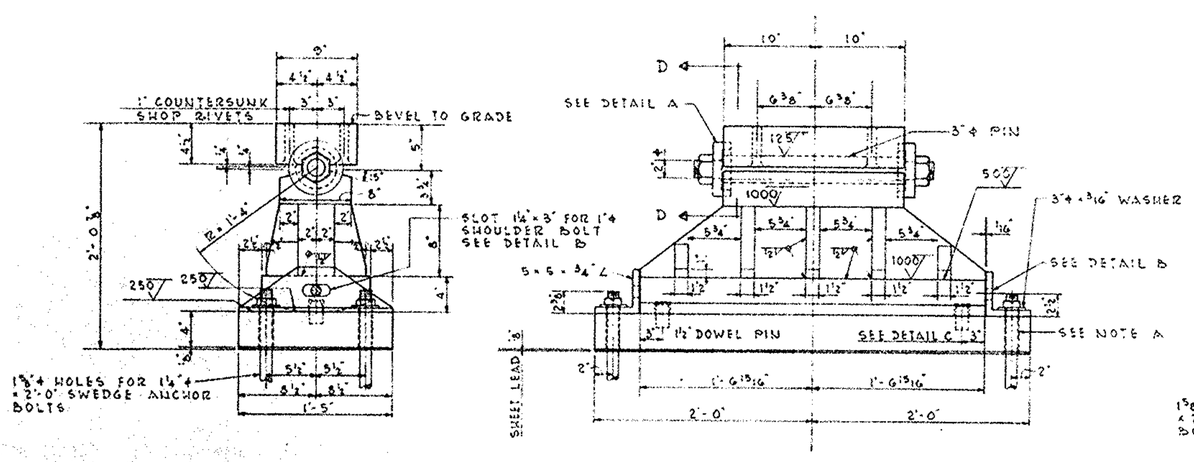
BRIDGE NO. STA. 21 - 1248
U.S. 21 OVER TUSCARAWAS RIVER
PENNA. RR., B. & O. R.R. and T.R. 353
STARK CO. STA 662+31.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
C.A.E.	R.E.B.		S.G.	L.N.R.	7-13-56	

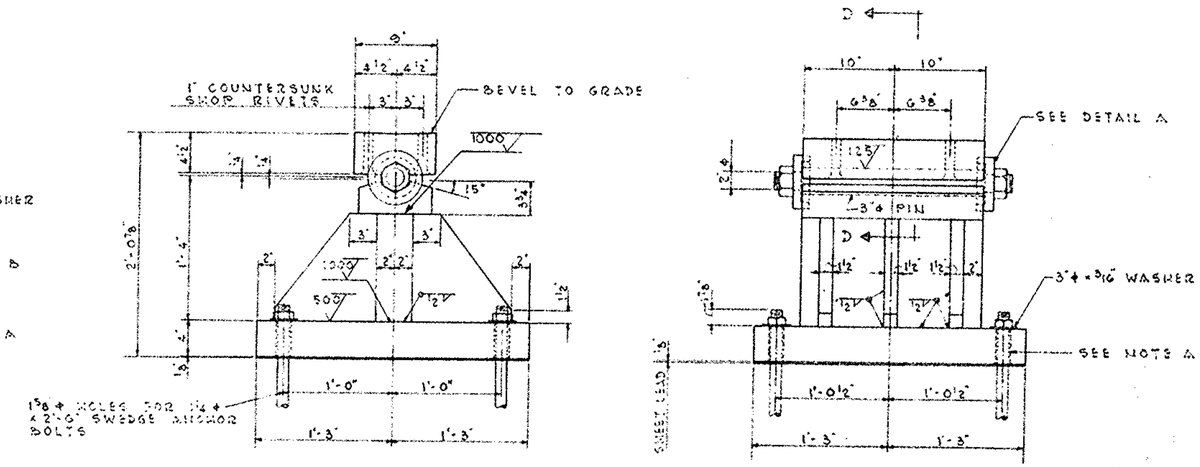
FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

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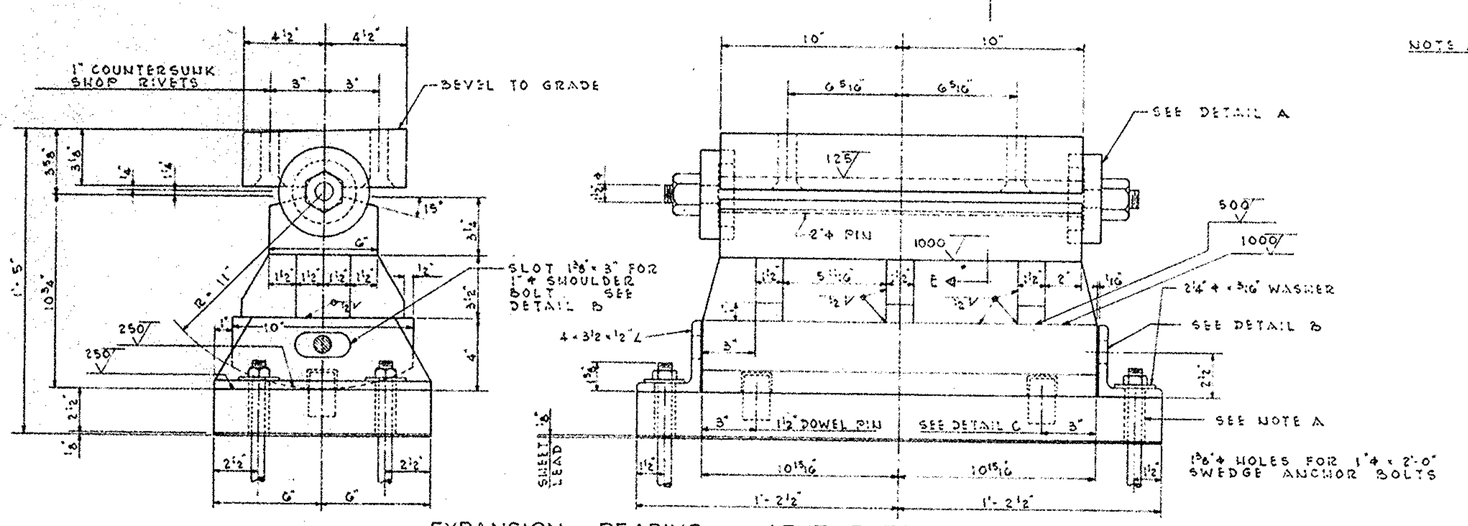
STA - 21 - 12.39



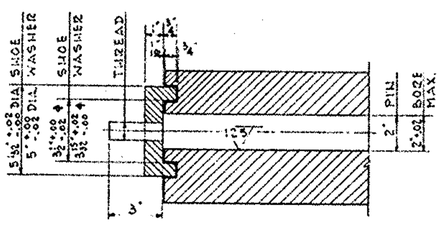
EXPANSION BEARING — PIERS



FIXED BEARING — PIERS

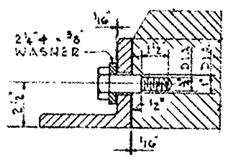


EXPANSION BEARING — ABUTMENTS

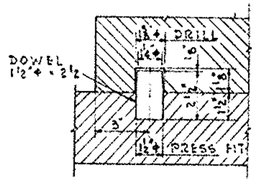


DETAIL FOR 2"ϕ PIN
FOR 3"ϕ PIN ADD 1" TO ALL DIAMETERS

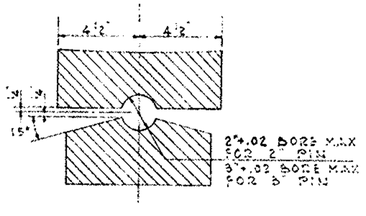
DETAIL A



DETAIL B



DETAIL C



SECTION D-D
(SECTION E-E SIMILAR)

NOTE A — FILL ANCHOR BOLT HOLES IN BASE R WITH MASTIC AFTER BEARING IS PROPERLY SET AND ALL ADJUSTMENTS ARE MADE

NOTES:
1. ALL MATERIAL TO BE ASTM A7 STEEL
2. BEARING SHOES SHALL BE SET VERTICAL @ 65°F
3. DRILL 2½"ϕ HOLES FOR ANCHOR BOLTS BEFORE SUPERSTRUCTURE IS ERECTED.

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CHICAGO ILLINOIS

BEARING DETAILS

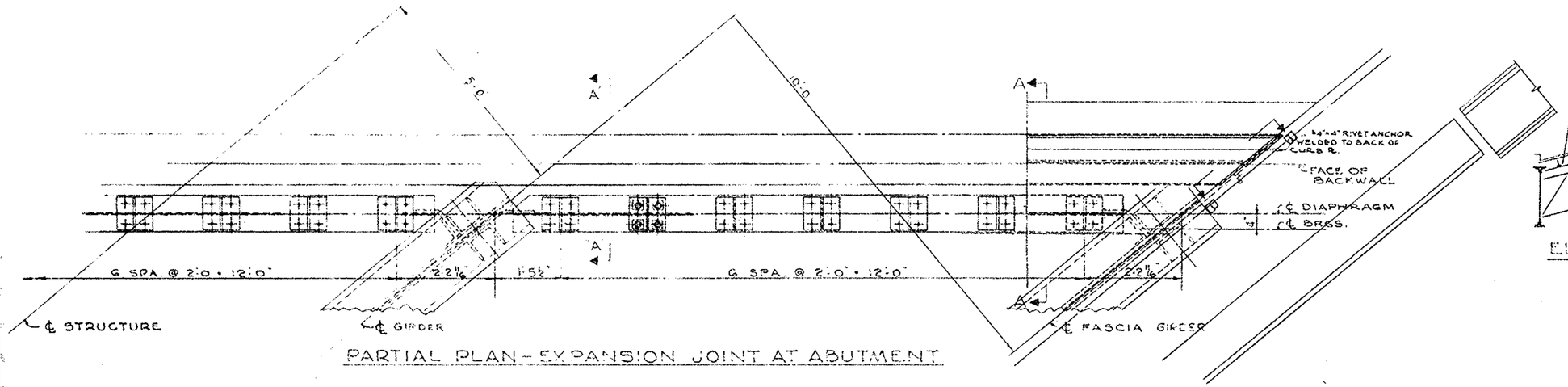
BRIDGE NO. STA. 21 - 1248
U.S. 21 OVER TUSCARAWAS RIVER
PENNA. R.R., B. & O. R.R. and T.R. 353
STARK CO. STA. 662+31.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.F.	G.F.		S.G.	L.N.R.	7-13-56	

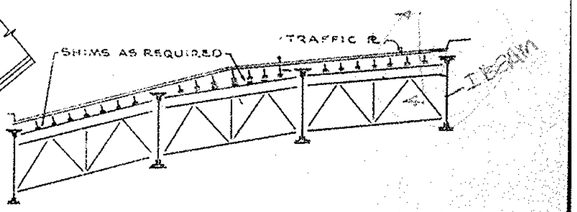
FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

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STA-21-12.39



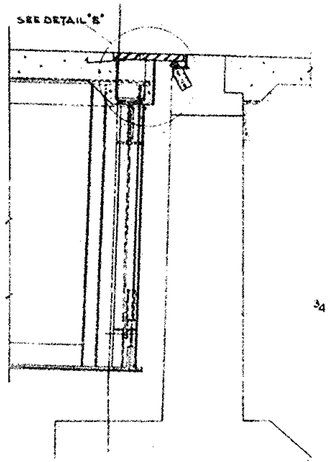
PARTIAL PLAN - EXPANSION JOINT AT ABUTMENT



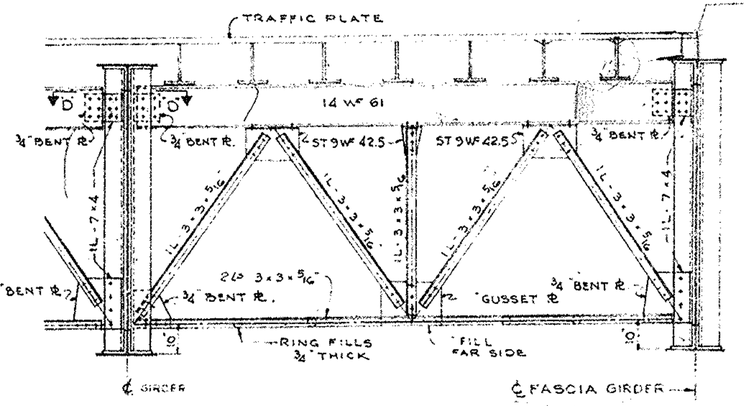
ELEVATION OF END DIAPHRAGM

(NOT TO SCALE.)

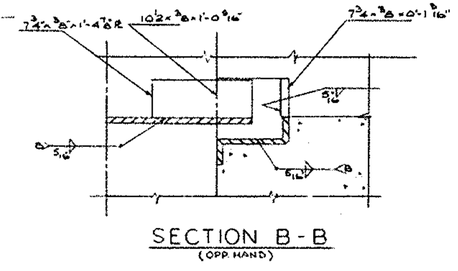




SECTION 'A-A'

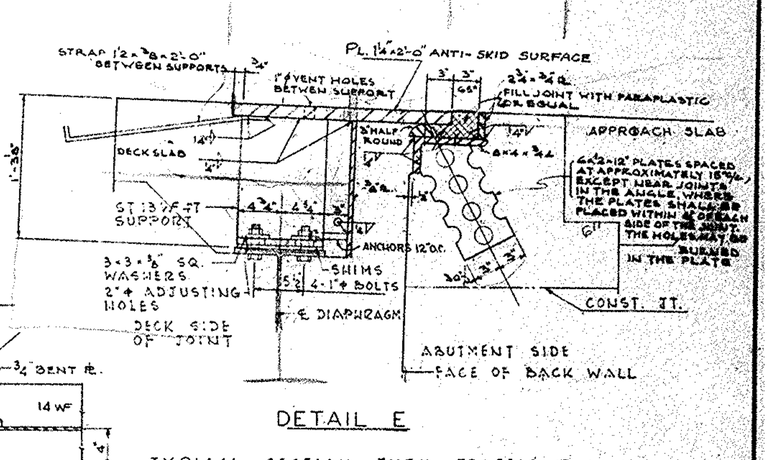


PARTIAL ELEVATION END DIAPHRAGM

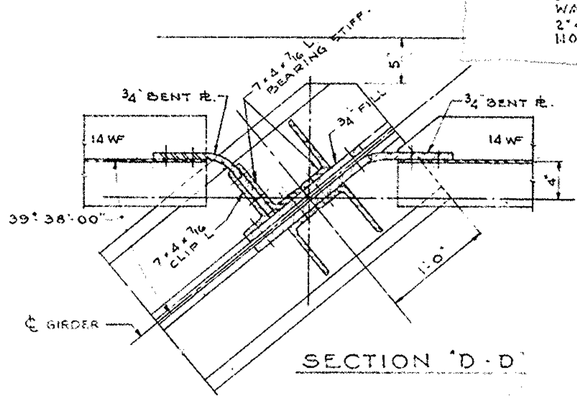


SECTION B-B

(OPP. HAND)

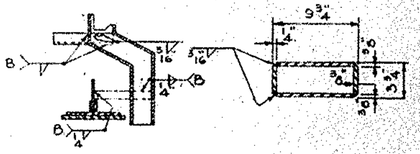


DETAIL E

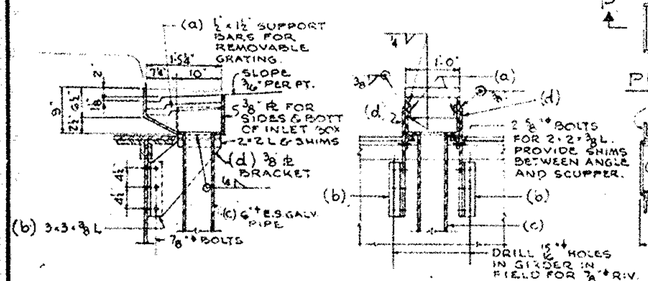


SECTION 'D-D'

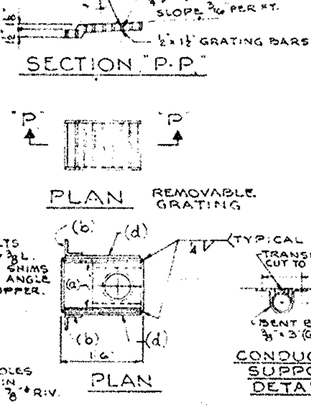
TYPICAL SECTION THRU TRAFFIC R.



SECTION N-N SECTION K-K



SPECIAL SCUPPER & SUPPORT BRACKET AT PIERS 3 & 6 (FOR LOCATION SEE DWG. 146)

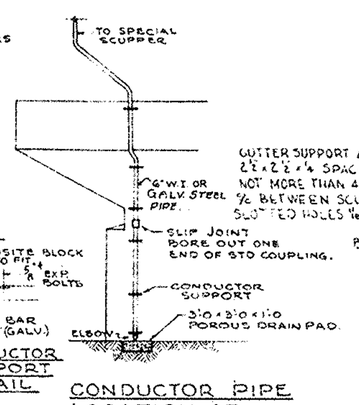


SECTION "P-P"

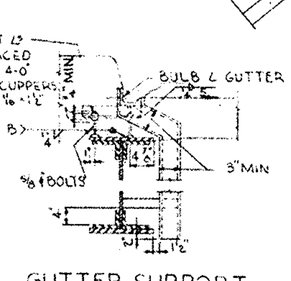
PLAN REMOVABLE GRATING

PLAN

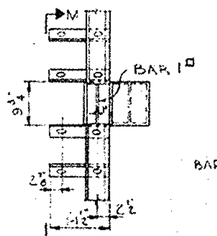
CONDUCTOR SUPPORT DETAIL



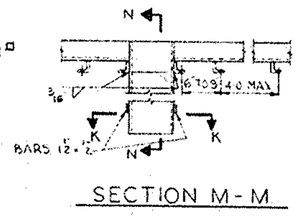
CONDUCTOR PIPE LOCATION AT PIERS NO. 3 & 6.



GUTTER SUPPORT AND SCUPPER



PART PLAN



SECTION M-M

CHARLES E. DE LEUW CONSULTING ENGINEER CHICAGO ILLINOIS

END CROSS-FRAME & EXPANSION JOINT DETAILS

BRIDGE NO. STA. 21 - 1248

U.S. 21 OVER TUSCARAWAS RIVER

PENNA. R.R., B. & O. R.R. and T.R. 353

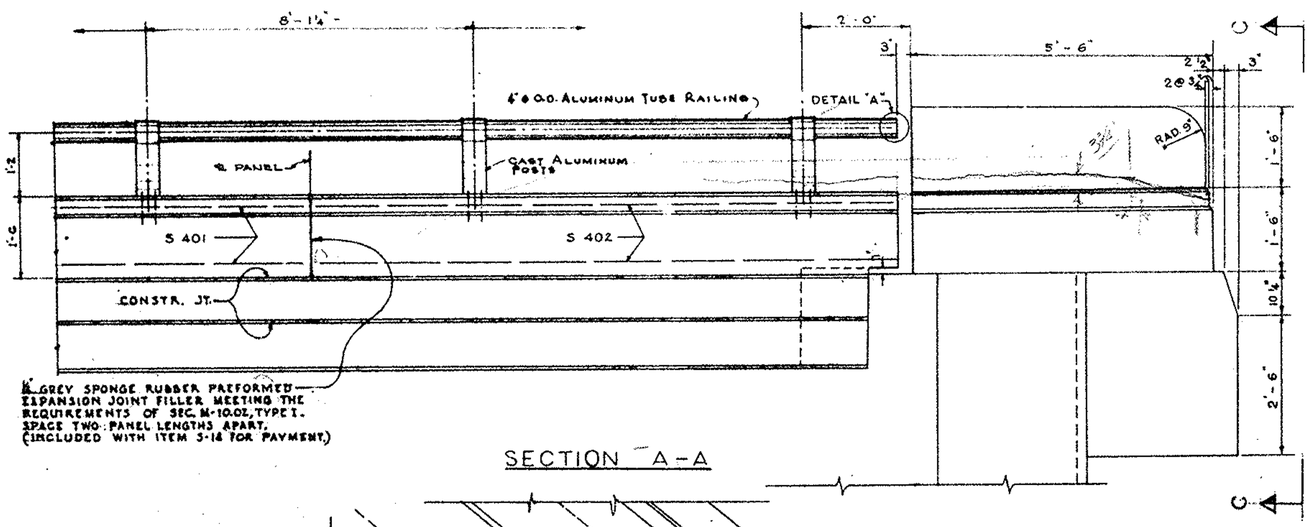
STARK CO. STA. 662 + 31.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.F.	R.E.B.		C.A.E.	L.N.R.	7-13-56	

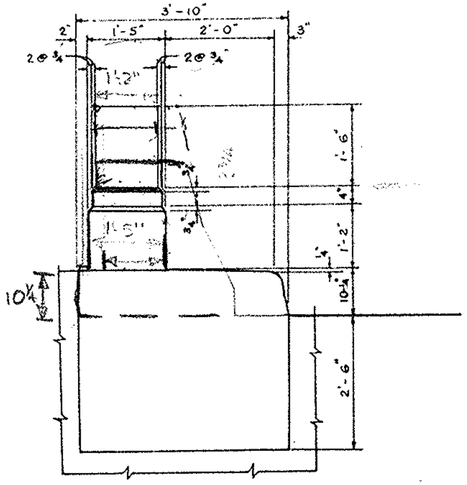
FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

149/152

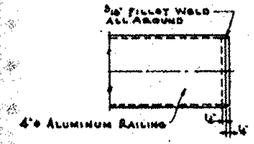
STA-21-12.39



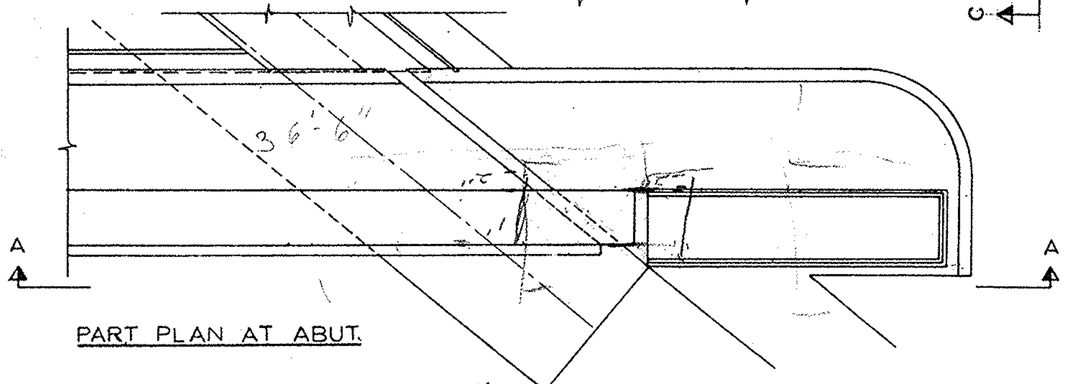
SECTION A-A



VIEW C-C

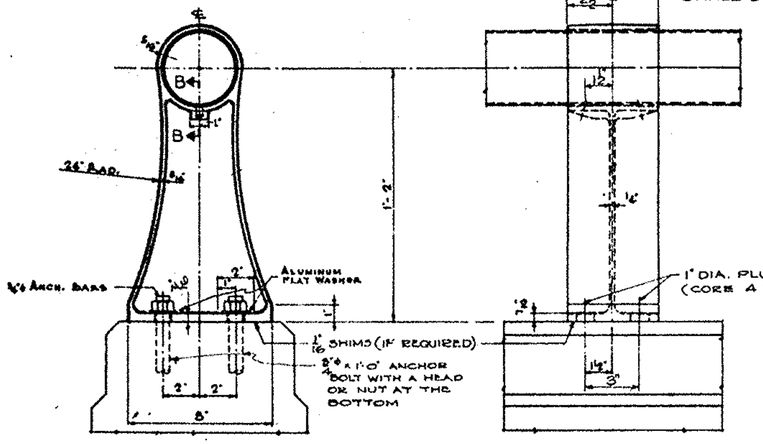


DETAIL A

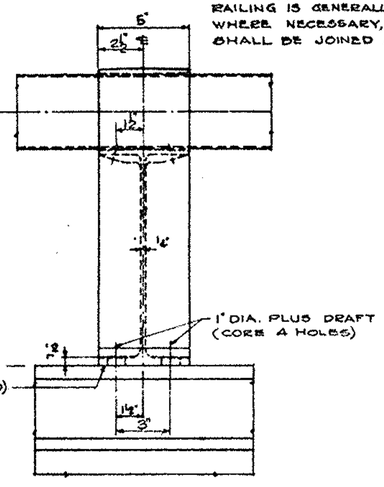


PART PLAN AT ABUT.

4" O.D. × ⅛" WALL ALUMINUM TUBE RAILING IS GENERALLY CONTINUOUS. WHERE NECESSARY, RAILING TUBE SHALL BE JOINED AS SHOWN.

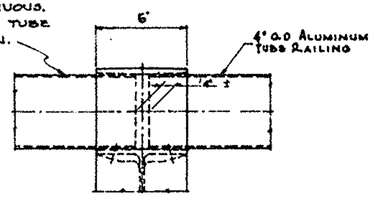


SECTION

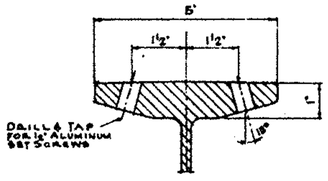


ELEVATION

HANDRAIL DETAILS



TYPICAL PIPE JOINT



SECTION B-B

NOTE:

FOR FURTHER DETAILS SEE SUPPLEMENTAL SPECIFICATIONS NO. S-114 ALUMININUM FOR BRIDGE RAILING, DATED AUGUST 30, 1955.

CHARLES E. DE LEUW CONSULTING ENGINEER CHICAGO ILLINOIS

HANDRAIL AND PYLON DETAILS

BRIDGE NO. STA. 21-1248

U.S. 21 OVER TUSCARAWAS RIVER

PENNA. R.R., B. & O. R.R. and T.R. 353

STARK CO. STA. 662+31.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G.F.	V.S.		C.A.E.	L.N.R.	7-13-56	

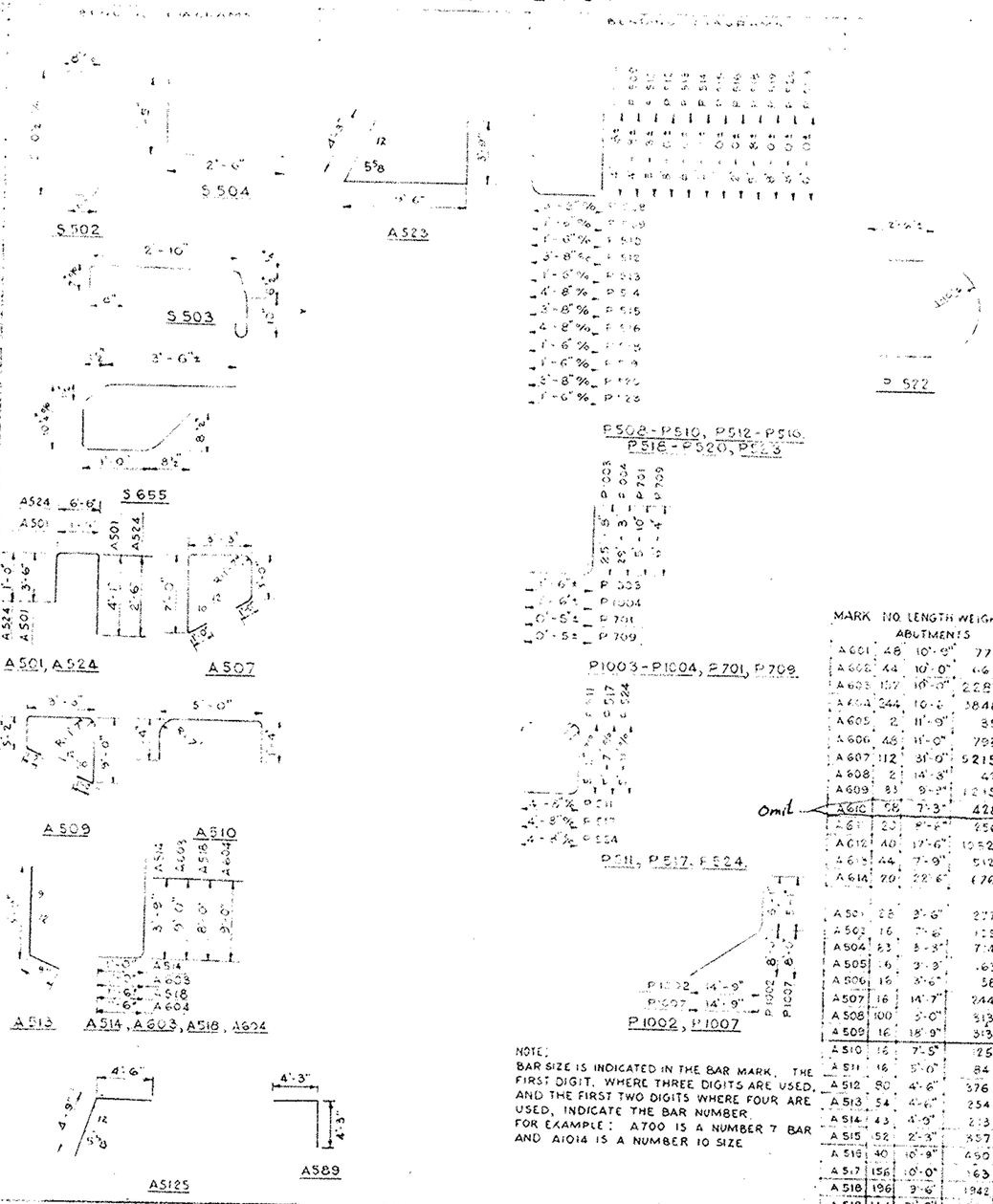
FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

150
152

STA-21-12.39

REINFORCING STEEL LIST

BENDING DIAGRAMS



MARK	NO	LENGTH	WEIGHT	SHP
SUPERSTRUCTURE				
S 701	1998	34'-5"	118,854	S
S 704	54	5'-6"	270	S
S 705	4	5'-11"	45	S
S 706	4	6'-5"	52	S
S 707	4	7'-0"	57	S
S 708	4	7'-7"	62	S
S 709	4	8'-2"	67	S
S 710	4	8'-8"	71	S
S 711	4	9'-3"	76	S
S 712	4	9'-9"	80	S
S 713	4	10'-4"	84	S
S 714	4	10'-11"	89	S
S 715	4	11'-5"	93	S
S 716	4	12'-0"	98	S
S 717	4	12'-7"	103	S
S 718	4	13'-1"	107	S
S 719	4	13'-8"	112	S
S 720	4	14'-2"	116	S
S 721	4	14'-9"	121	S
S 722	4	15'-4"	125	S
S 723	4	15'-10"	129	S
S 724	4	16'-5"	134	S
S 725	4	17'-0"	139	S
S 726	4	17'-6"	143	S
S 727	4	18'-1"	148	S
S 728	4	18'-8"	153	S
S 729	4	19'-3"	157	S
S 730	4	19'-10"	162	S
S 731	4	20'-4"	166	S
S 732	4	20'-11"	171	S
S 733	4	21'-6"	176	S
S 734	4	22'-0"	180	S
S 735	4	22'-7"	185	S
S 736	4	23'-1"	189	S
S 737	4	23'-8"	194	S
S 738	4	24'-3"	198	S
S 739	4	24'-9"	202	S
S 740	4	25'-4"	207	S
S 741	4	25'-11"	212	S
S 742	4	26'-6"	217	S
S 743	4	27'-1"	221	S
S 744	4	27'-7"	225	S
S 745	4	28'-2"	230	S
S 746	4	28'-8"	234	S
S 747	4	29'-3"	239	S
S 748	4	29'-10"	244	S
S 749	4	30'-4"	248	S
S 750	4	30'-11"	253	S
S 751	4	31'-6"	258	S
S 752	4	32'-1"	262	S
S 753	8	27'-9"	454	S
S 601	1992	36'-2"	108,111	S
S 602	1976	38'-9"	115,008	S
S 603	288	40'-0"	17,303	S
S 604	24	6'-8"	240	S
S 605	4	7'-0"	42	S
S 606	4	7'-6"	46	S
S 607	4	8'-1"	49	S
S 608	4	8'-8"	52	S
S 609	4	9'-2"	56	S
S 610	4	9'-9"	59	S
S 611	4	10'-4"	62	S
S 612	4	10'-10"	65	S
S 613	4	11'-5"	69	S
S 614	4	12'-0"	72	S

MARK	NO	LENGTH	WEIGHT	SHP
OUTER STRUCTURE				
S 615	4	12'-6"	75	S
S 616	4	13'-1"	79	S
S 617	4	13'-7"	82	S
S 618	4	14'-2"	85	S
S 619	4	14'-9"	89	S
S 620	4	15'-4"	92	S
S 621	4	15'-10"	95	S
S 622	4	16'-5"	99	S
S 623	4	16'-11"	102	S
S 624	4	17'-6"	105	S
S 625	4	18'-1"	109	S
S 626	4	18'-7"	112	S
S 627	4	19'-2"	115	S
S 628	4	19'-9"	119	S
S 629	4	20'-4"	122	S
S 630	4	20'-11"	126	S
S 631	4	21'-5"	129	S
S 632	4	22'-0"	132	S
S 633	4	22'-7"	136	S
S 634	4	23'-1"	139	S
S 635	4	23'-8"	142	S
S 636	4	24'-2"	145	S
S 637	4	24'-9"	149	S
S 638	4	25'-4"	152	S
S 639	4	25'-10"	155	S
S 640	4	26'-5"	159	S
S 641	4	27'-0"	162	S
S 642	4	27'-7"	166	S
S 643	4	28'-2"	169	S
S 644	4	28'-8"	172	S
S 645	4	29'-3"	176	S
S 646	4	29'-9"	180	S
S 647	4	30'-4"	182	S
S 648	4	30'-11"	186	S
S 649	4	31'-5"	189	S
S 650	4	32'-0"	192	S
S 651	4	32'-7"	196	S
S 652	4	34'-7"	207	S
S 653	4	35'-4"	212	S
S 654	4	35'-10"	215	S
S 655	284	6'-5"	2740	B
S 656	8	29'-6"	354	S
S 501	760	38'-9"	30,716	S
S 502	2976	5'-3"	16,296	B
S 503	2820	5'-11"	17,342	B
S 504	2820	3'-11"	11,500	B
S 505	72	40'-0"	3,004	S
S 401	672	15'-10"	7,106	S
S 402	32	13'-9"	294	S
TOTAL			483,286	

MARK	NO	LENGTH	WEIGHT	SHP
ABUTMENTS				
A 501	6	7'-0"	25	S
A 521	4	8'-1"	22	S
A 522	2	14'-2"	23	S
A 523	44	7'-8"	225	B
A 524	66	10'-0"	449	B
A 525	26	19'-3"	232	S
A 526	26	19'-9"	237	S
A 527	26	4'-6"	122	S
A 528	24	7'-8"	78	S
A 529	6	8'-0"	27	S
A 530	84	3'-3"	146	S
A 531	116	27'-6"	451	S
A 532	8	18'-5"	41	S
A 533	8	18'-3"	156	S
A 534	2	5'-3"	12	S
A 535	2	6'-6"	14	S
A 536	2	7'-3"	15	S
A 537	4	7'-3"	32	S
A 538	2	8'-3"	17	S
A 539	2	9'-0"	19	S
A 540	2	9'-6"	20	S
A 541	4	10'-0"	42	S
A 542	2	10'-3"	22	S
A 543	2	11'-3"	23	S
A 544	2	12'-0"	25	S
A 545	2	12'-6"	26	S
A 546	2	13'-3"	28	S
A 547	2	13'-9"	29	S
A 548	2	14'-6"	30	S
A 549	2	17'-3"	36	S
A 550	2	14'-6"	30	S
A 551	2	12'-0"	25	S
A 552	2	9'-6"	20	S
A 553	4	6'-3"	26	S
A 554	1	4'-3"	9	S
A 555	8	15'-6"	128	S
A 556	2	15'-3"	32	S
A 557	2	14'-8"	31	S
A 558	2	14'-6"	30	S
A 559	2	14'-0"	29	S
A 560	2	13'-9"	29	S
A 561	2	13'-6"	28	S
A 562	2	13'-0"	27	S
A 563	2	12'-8"	27	S
A 564	2	12'-3"	26	S
A 565	2	12'-0"	25	S
A 566	2	11'-6"	24	S
A 567	2	11'-3"	23	S
A 568	2	10'-8"	22	S
A 569	2	10'-6"	22	S
A 570	2	10'-3"	21	S
A 571	2	9'-9"	20	S
A 572	2	9'-6"	20	S
A 573	2	9'-0"	19	S
A 574	18	8'-9"	164	S
A 575	2	8'-3"	17	S
A 576	2	8'-0"	17	S
A 577	2	7'-9"	16	S
A 578	2	7'-3"	15	S
A 579	2	7'-0"	15	S
A 580	2	6'-9"	14	S
A 581	12	37'-0"	461	S
A 582	2	33'-3"	69	S
A 583	2	28'-0"	58	S
A 584	4	24'-3"	101	S
A 585	2	20'-0"	42	S
A 586	2	15'-6"	32	S

MARK	NO	LENGTH	WEIGHT	SHP
ABUTMENTS				
A 601	48	10'-9"	775	S
A 602	44	10'-0"	661	S
A 603	102	10'-0"	2283	B
A 604	244	10'-2"	3848	B
A 605	2	11'-9"	85	S
A 606	46	11'-0"	793	S
A 607	112	31'-0"	5215	S
A 608	2	14'-3"	43	S
A 609	83	9'-9"	1215	S
A 610	68	7'-3"	428	S
A 611	20	9'-4"	256	S
A 612	40	17'-6"	1052	S
A 613	44	7'-9"	512	S
A 614	20	22'-6"	676	S
A 501	28	3'-6"	227	B
A 502	16	7'-6"	155	S
A 504	63	3'-3"	714	S
A 505	6	3'-3"	163	S
A 506	16	3'-6"	58	S
A 507	16	14'-7"	244	B
A 508	100	3'-0"	313	S
A 509	16	18'-9"	313	B
A 510	16	7'-5"	25	B
A 511	16	5'-0"	84	S
A 512	80	4'-6"	376	S
A 513	54	4'-6"	254	B
A 514	43	4'-9"	213	B
A 515	52	2'-3"	157	S
A 516	40	10'-9"	450	S
A 517	156	10'-0"	1563	S
A 518	196	9'-6"	1942	B
A 519	144	31'-0"	4656	S

Omit

MARK	NO	LENGTH	WEIGHT	SHP
ABUTMENTS				
A 587	4	7'-0"	42	S
A 588	1	20'-3"	67	S
A 55	164	8'-6"	1455	S
A 590	96	14'-8"	2465	S
A 591	2	8'-3"	16	S
A 592	2	10'-6"	20	S
A 593	2	10'-0"	21	S
A 594	2	10'-6"	22	S
A 595	2	11'-3"	24	S
A 596	2	11'-9"	25	S
A 597	2	12'-3"	26	S
A 598	2	12'-9"	27	S
A 599	2	13'-3"	28	S
A 600	2	13'-9"	29	S
A 5124	2	91'-9"	20	S
A 5101	6	71'-3"	15	S
A 5104	8	13'-6"	115	S
A 5107	2	13'-3"	25	S
A 5108	2	12'-9"	27	S
A 5109	2	12'-3"	26	S
A 5110	2	11'-9"	25	S
A 5111	2	11'-0"	23	S
A 5112	2	10'-6"	22	S
A 5113	2	10'-0"	21	S
A 5114	2	9'-6"	20	S
A 5115	2	9'-0"	19	S
A 5116	2	8'-3"	17	S
A 5117	2	7'-8"	16	S
A 5118	2	7'-3"	15	S
A 5119	2	6'-9"	14	S
A 5120	2	18'-0"	38	S
A 5121	2	15'-3"	32	S
A 5122	4	12'-3"	51	S
A 5123	16	12'-0"	200	S
A 5124	8	17'-6"	36	S
A 5125	164	9'-3"	1582	B
A 5126	14	22'-0"	321	S
TOTA			41882	

MARK	NO.	LENGTH	WEIGHT	SHR
PIERS				
P 501	100	36'-6"	10,280	S
P 502	188	8'-9"	4,392	S
P 701	245	6'-1"	3,076	S
P 702	168	14'-9"	4,807	S
P 703	30	27'-9"	1,702	S
P 704	30	24'-11"	1,528	S
P 705	30	24'-2"	1,482	S
P 706	30	29'-3"	1,794	S
P 707	30	24'-6"	829	S
P 708	30	25'-8"	1,574	S
P 709	124	6'-7"	1,668	B
P 501	24	26'-6"	6,148	S
P 502	24	26'-2"	660	S
P 503	24	24'-0"	60	S
P 504	24	21'-9"	546	S
P 505	24	19'-8"	480	S
P 506	24	17'-0"	42	S
P 507	178	27'-8"	5,137	S
P 508	132	12'-9"	1,755	B
P 509	132	10'-7"	1,456	B
P 510	96	11'-9"	1,176	B
P 511	96	20'-2"	2,022	B
P 512	66	19'-5"	1,356	B
P 513	66	17'-3"	1,188	B
P 514	48	8'-11"	444	B
P 515	238	7'-5"	2,605	B
P 516	78	8'-5"	684	B
P 517	96	21'-0"	210	B
P 518	12	12'-7"	156	B
P 519	12	17'-3"	216	B
P 520	12	19'-5"	246	B
P 521	12	24'-0"	300	S
P 522	245	10'-9"	2,161	B
P 523	102	13'-3"	1,410	B
P 524	182	21'-8"	4,338	B
P 525	4	20'-6"	86	S
P 528	4	17'-6"	73	S
P 529	4	16'-9"	70	S
P 530	4	22'-6"	9	S
P 531	4	19'-3"	80	S
P 532	4	18'-3"	76	S
TOTAL			(116,180)	

MARK	NO	LENGTH	WEIGHT	SHR
P 1001	156	16'-6"	11,076	S
P 1002	24	22'-9"	2,352	B
P 1003	72	26'-11"	5,739	B
P 1004	72	30'-9"	6,127	B
P 1005	144	2'-0"	744	S
P 1006	24	18'-0"	186	S
P 1007	24	20'-9"	2,244	B
P 901	312	14'-6"	15,380	S

MARK	NO.	LENGTH	WEIGHT	SHR
REPLACEMENT BARS				
R 1001	2	7'-3"	62	S
R 801	1	6'-10"	23	S
R 501	1	6'-6"	17	S
R 701	9	6'-3"	115	S
R 601	14	5'-11"	124	S
R 501	7	5'-7"	41	S
R 401	1	5'-3"	4	S
TOTAL			386	

NOTE:
BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST DIGIT, WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATE THE BAR NUMBER.
FOR EXAMPLE: A700 IS A NUMBER 7 BAR AND A1014 IS A NUMBER 10 SIZE.

Rev. 12-24-56

CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

REINFORCING STEEL LIST

BRIDGE NO. STA. 21-1248
U.S. 21 OVER TUSCARAWAS RIVER
PENNA. R.R., B. & O. R.R. and T.R. 353
STARK CO
STA. 662+31.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
S. G.	M.S.R.		C.A.E.	L.N.R.	7-13-56	

PERRY TOWNSHIP, STARK CO. VAL SECT 1 OH-122.4 (30)
Sec. STA-21-12.39

NOTE
Structure will be on tangent

Relocated T R 353

Abbott Location
24" B. Culvert

Existing T R 353

Proposed Pedestrian Overhead Bridge

South Bound Roadway Overhead Bridge

North Bound Roadway Overhead Bridge

12 CR Dr

15 St Pa Hse

Elevation 1019

PC 49+94.10
D 17°00'00"
Δ 17°24'
T 87.82
L 164.03

PC 49+76.28

PI 52+08.23
D 5°00.00
Δ 5°60'
T 1909.86
L 91.73
183.33

PI 55+24.30
D 9°00.00'
Δ 5°10'00"
T 1909.86
L 91.73
183.33

PC 54+17.67

PC 53+44.00

PC 51+61.54

WUP 85

12" VCP

Elevation 1019

Proposed Piers 2 & 3

Joint B&O-PRR LRM
(B&O Owned)

Joint B&O PRR WRM
(PRR Owned)

PRR
PRR
PRR

East B&O R/w

East PRR R/w

1XA 10 W

To Hanoway

To Warwick

To Dover

50' R/w

66'

100'

Base Pole Line, If Necessary

← Tuscarawas River

Top West Bank Tuscarawas River

1" 60'
1.7' 57'

BRIDGE No. STA-21-1248

THE BALTIMORE AND OHIO SYSTEM
THE BALTIMORE AND OHIO RAILROAD COMPANY
WHEELING DIV.-WHEELING-LORAIN LINE-MASSILLON, O.
WORK TO BE DONE BY RAILROAD FORCES
ACCOUNT RELOCATION OF U.S. ROUTE 21
Scale: 1"=50' September 13, 1956
Office of Regional Engineer
Pittsburgh, Pa.
16480

Added to plans Oct. 31, 1956

File No. G1A-31

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

151
152

STA.-21-12.39
CODE-TYPE-X020

F+D Plan

DRAINAGE AREA 14 SQ. MILES
ESTIMATED RUNOFF 50 YR FREQUENCY 1600 CFS
ESTIMATED HIGH WATER 10 YR FREQUENCY EL. 940.5
HIGHEST HIGH WATER EL 944 (BACKWATER FROM TUSCARAWAS RIVER)
WATERWAY AREA PROVIDED FOR 10 YR. HIGH WATER. = 450 SQ. FT.

SWAMP

CREEK FROM 30" PIPE UNDER C.H. 256

RIPRAP-TYPE A

34'-0" | 42'-6" | 34'-0"

46'-0" (NEW CHANNEL)

℄ PIER #1

℄ PIER #2 ℄ BRIDGE

GUARD RAIL

3'-6" BENCH

APPROACH SLAB 19'-0"

END APPROACH SLAB STA. 867+62.00

24'-0"

37'-0"

BENCH 3'-6"

15'-0" APPROACH SLAB

STA. 868+74.09

℄ PROPOSED S.B. ROADWAY

GUARD RAIL

868+18.09

C.S. 868+51.48

℄ PROPOSED U.S. 21

GUARD RAIL

867 868 869 870 871 872

865 866

℄ FUTURE N.B. ROADWAY

FOUNDATION SOUNDINGS

FOUNDATION DESIGN AND FOUNDATION QUANTITIES ARE BASED ON A STUDY OF SOIL SAMPLING SOUNDINGS MADE AT THE SITE. THIS SOUNDING INFORMATION MAY BE INSPECTED IN THE OFFICE AT THE BUREAU OF BRIDGES IN COLUMBUS OR IN AN ABRIDGED FORM IN THE DIVISION OFFICE, BUT THE STATE ASSUMES NO RESPONSIBILITY THEREOF.

NOTE
ALL STATIONING GIVEN ALONG ℄ OF U.S. 21.

End Approach Slab ℄ — 112'-0" — Begin Approach Slab ℄

ASSUMED CENTER OF SLAB REACTION | 34'-0" | 42'-6" | 34'-0" | ASSUMED CENTER OF SLAB REACTION

℄ PIER #1 ℄ PIER #2

℄ BRIDGE 21°-3"

REF. LINE

℄ S.B. ROADWAY

90°

2.41'

1.06'

NEW CHANNEL

STA. 868+18.09

STA. 867+62.00

STA. 868+40

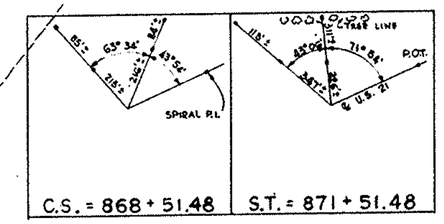
℄ U.S. 21

RADIAL RADIAL RADIAL

NOTE:
REFERENCE LINE IS CHORD BETWEEN INTERSECTION OF ℄ OF S.B. ROADWAY & ASSUMED CENTER OF SLAB REACTIONS AT ABUTMENTS.

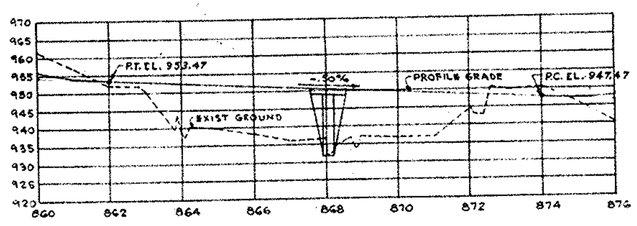
LAYOUT DIAGRAM

PLAN
SCALE 1"=20'

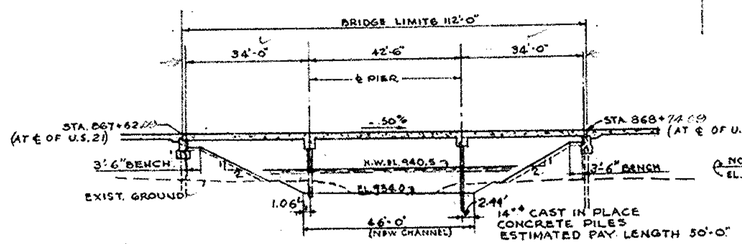


C.S. = 868 + 51.48 | S.T. = 871 + 51.48

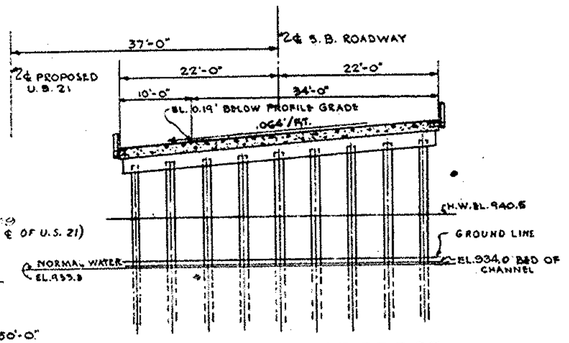
REFERENCE POINTS



PROFILE U.S. 21
HORIZONTAL SCALE 1"=200'
VERTICAL SCALE 1"=20'



TYPICAL SECTION AT ℄ S.B. ROADWAY
SCALE 1"=20'



CROSS SECTION OF BRIDGE
SCALE 1"=10'

CURVE DATA

PI 860+23.05

Δ - 41°-00' R.T.	Y_c - 5.24'
Δ_s - 35°-00'	Θ_s - 3°-00'
D_e - 2°-00'	L.T. - 200.03'
R_c - 2864.79'	S.T. - 100.03'
L_c - 1750.00'	B_s - 195.09'
L_s - 300.00'	K - 149.99'
T_s - 1221.57'	P - 1.31'
X_c - 299.92'	

PROPOSED STRUCTURE

TYPE: CAPPED PILE STRUCTURE. CONTINUOUS SLAB
SPANS: SOUTH BOUND - 34'-0", 42'-6", 34'-0"
ROADWAY: 44'-0" W/ GUARD RAILS
LOAD FREQUENCY RATING: C.F. 2000
SURFACE COURSE: 1" MONOLITHIC SURFACE
SKEW: 0°-00'-00"
APPROACH SLABS: AS-1-54
ALIGNMENT: BRIDGE ON 2° CURVE
SUPERELEVATION - .064 FT/FT.

CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

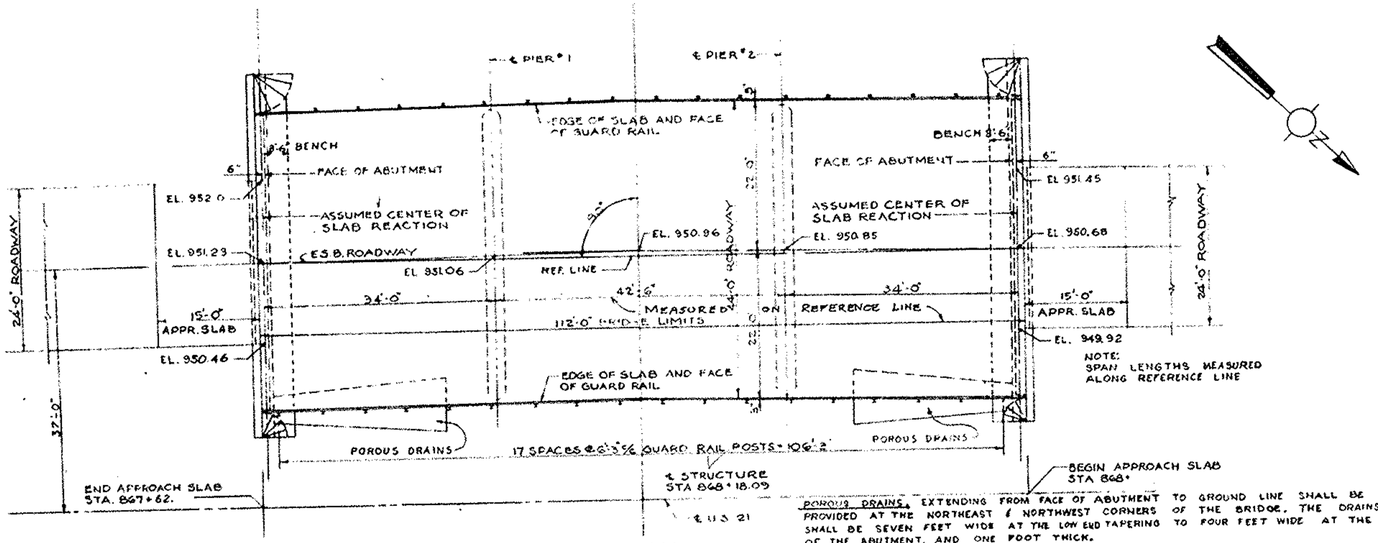
SITE PLAN

BRIDGE NO. STA.-21-164.3
U.S. 21 OVER FOX RUN
STARK CO. STA. 868+18.09

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
S.G.	F.S.		R.E.H.	L.M.R.	7-6-56	

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS	152 / 152
2	OHIO	F-1010(4)		

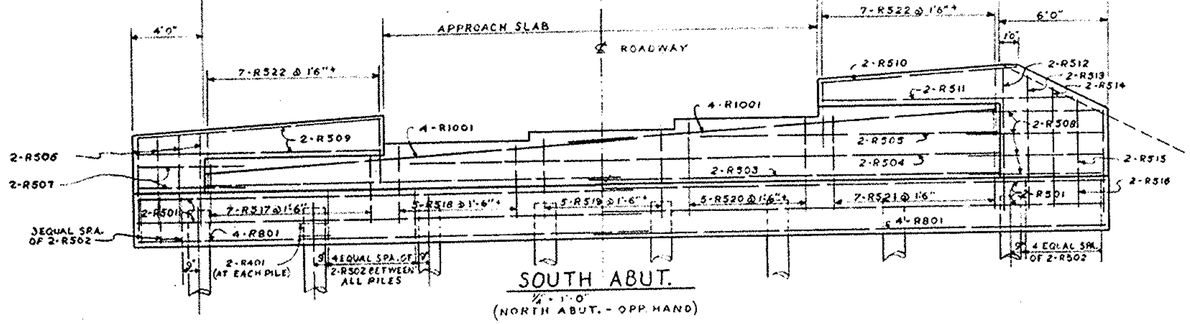
STA. - 21 - 12.39



PLAN
3/32" = 1'-0"

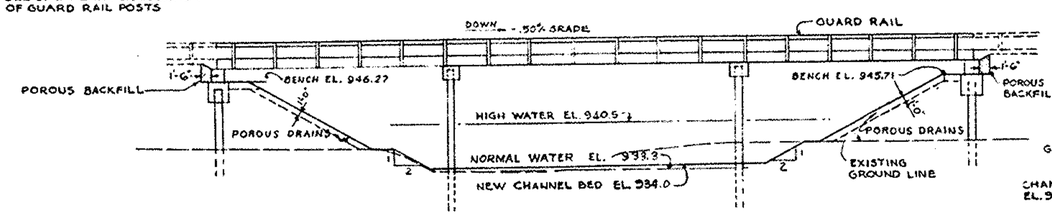
POROUS DRAINS, EXTENDING FROM FACE OF ABUTMENT TO GROUND LINE SHALL BE PROVIDED AT THE NORTHEAST & NORTHWEST CORNERS OF THE BRIDGE. THE DRAINS SHALL BE SEVEN FEET WIDE AT THE LOW END TAPERING TO FOUR FEET WIDE AT THE FACE OF THE ABUTMENT, AND ONE FOOT THICK.

PIER PILE ENCASEMENT, AS SHOWN ON STD DWG. NO. P-1-54 MAY BE OMITTED PROVIDED THAT THE TAPERED PORTION, IF ANY, OF ALL PIER PILES DOES NOT EXTEND ABOVE THE STREAM BED OR THE PROPOSED SURFACE OF THE GROUND. IF THE TAPERED PORTION OF ANY PILE EXTENDS ABOVE THESE LIMITATIONS, THE ENCASEMENT WILL BE REQUIRED FOR ALL THE PIER PILES. IF THE ENCASEMENT IS OMITTED, THE PAINTING OF THE PILES SHALL EXTEND TO LOW WATER ELEVATION OR, IF THE PROPOSED SURFACE OF THE GROUND IS ABOVE LOW WATER, IT SHALL EXTEND TO AT LEAST ONE FOOT BELOW THE PROPOSED SURFACE OF THE GROUND.

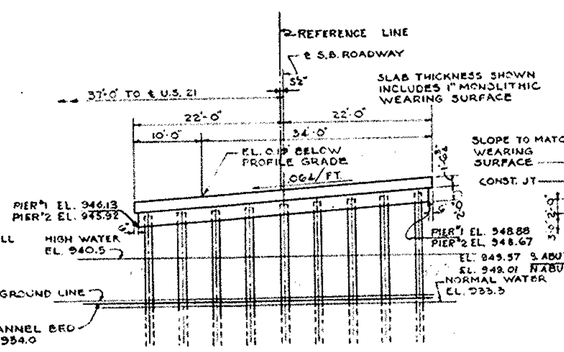


SOUTH ABUT.
1/4" = 1'-0"
(NORTH ABUT. - OPP HAND)

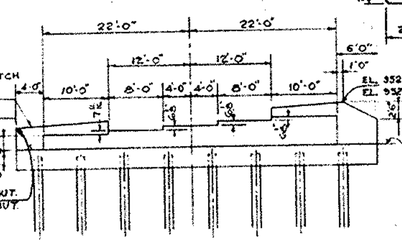
SEE SITE PLAN FOR LOCATION OF GUARD RAIL POSTS



ELEVATION
3/32" = 1'-0"



ELEVATION OF PIERS
3/32" = 1'-0"



ELEVATION OF SOUTH ABUT.
3/32" = 1'-0"
(NORTH ABUT. - OPP. HAND EXCEPT AS SHOWN)

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPERSTR	GENERAL		
E-2	60	CU. YD.	UNCLASSIFIED EXCAVATION	60				4	25
E-3	750	CU. YD.	CHANNEL EXCAVATION				750	1	66
S-1	304	CU. YD.	CLASS "C" CONCRETE, SUPERSTRUCTURE & PIER CAPS		16	288		71	30
S-1	64	CU YD	CLASS "E" CONCRETE, ABUTMENTS	64				54	90
S-4	75,699	LBS.	REINFORCING STEEL	9,542	4,908	64,124	166		13
S-14	221 12	LIN. FT	RAILING (TYPE T-15.13 WITH GALV. STEEL POSTS & RCL'S)				221 12	8	40
S-16	LUMP SUM	LUMP SUM	FIRST TEST PILE				LUMP SUM	1500	00
S-18	1,700	LIN. FT	14" cast-in-place reinforced concrete piles	800	900		34	7	10
S-29	54	CU. YD	POROUS BACKFILL				18	7	50
S-29	18	CU. YD.	POROUS DRAINS ON EMBANKMENT SLOPE					10	50

GENERAL NOTES

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS CS-1-54, SHEET NO 1 & 2, A-1-54 AND P-1-54 DATED 12-1-54 Without Curbs.

SPECIFICATIONS: THIS WORK SHALL BE GOVERNED BY THE DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS INCLUDING REVISIONS THRU FEB 1, 1955, AND BY THE "CONSTRUCTION AND MATERIAL SPECIFICATIONS" OF THE STATE OF OHIO, DEPT OF HIGHWAYS, DATED JAN 1, 1955.

PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 80 TONS FOR THE ABUTMENTS 42 TONS FOR THE PIERS. THE LENGTH OF PENETRATION OF EVERY PILE SHALL BE AT LEAST 80% OF THE ESTIMATED AVERAGE LENGTH OF PENETRATION OF THE PILES AS INDICATED ON THE PLANS, UNLESS A LESSER PENETRATION IS APPROVED BY THE DIRECTOR.

POROUS BACKFILL: SHALL EXTEND UPWARD TO THE APPROACH SLAB AND TO THE SURFACE OF THE EARTH SHOULDERS, AND OUTWARD TO THE SURFACE OF THE EMBANKMENT SLOPES. EXCAVATION THEREFOR, IN EXCESS OF THAT REQUIRED FOR CONSTRUCTION OF THE FOOTING, SHALL BE CONSIDERED AS PAID FOR IN THE BID PRICE PER CU. YD. PAID FOR POROUS BACKFILL.

GALVANIZING: OF ALL MEMBERS WHICH ARE SPECIFIED TO BE GALVANIZED SHALL BE AS CALLED FOR IN SEC. M-7.4 (4).

GRAVEL: IF USED AS THE COARSE AGGREGATE, SHALL BE ACCORDING TO SEC M-3.93 INSTEAD OF M-3.91 FOR CLASS "C" CONCRETE, SUPERSTRUCTURE, GRAVEL MEETING THE REQUIREMENTS OF M-3.93 ALSO MAY BE USED FOR OTHER CONCRETE IN THIS STRUCTURE.

SPLICE OF REINFORCING STEEL: REINFORCING STEEL SHALL BE SPLICED BY LAPPING BARS A MIN. OF 30 TIMES THE DIAMETER OF THE SMALLER BAR CONCERNED.

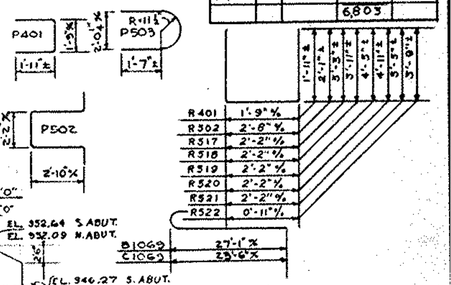
REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	SHAPE
SUPERSTRUCTURE				
A1065	120	39'-2"	20,308	S
B1069	40	28'-4"	4,876	B
C1069	38	24'-9"	4,050	B
D1069	20	25'-10"	2,225	S
E1069	19	16'-4"	1,500	S
F1069	90	28'-4"	10,971	S
G1065	46	13'-3"	2,623	S
H1069	44	8'-10"	1,622	S
J601	46	22'-1"	1,526	S
K601	23	18'-6"	639	S
M701	103	45'-6"	9,160	S
N601	70	45'-6"	4,574	S
			64,124	
PIERS				
P1001	8	45'-6"	1,498	S
P901	8	40'-6"	1,102	S
P701	108	4'-0"	863	S
P501	4	40'-6"	169	S
P502	68	9'-0"	659	B
P503	8	6'-4"	54	B
P401	72	5'-5"	261	B
			4,006	

MARK	NO.	LENGTH	WEIGHT	SHAPE
ABUTMENTS				
R1001	16	23'-8"	1,690	S
R801	16	28'-3"	1,207	S
R501	16	27'-8"	462	S
R502	162	6'-7"	1,112	B
R503	8	22'-10"	190	S
R504	4	32'-6"	136	S
R505	4	16'-6"	69	S
R506	16	5'-0"	83	S
R507	8	5'-8"	47	S
R508	16	7'-6"	131	S
R509	8	13'-8"	114	S
R510	4	10'-9"	45	S
R511	4	14'-0"	58	S
R512	4	8'-0"	33	S
R513	4	7'-6"	31	S
R514	4	6'-10"	28	S
R515	4	6'-2"	26	S
R516	4	5'-6"	23	S
R517	14	8'-5"	123	B
R518	10	9'-9"	102	B
R519	10	10'-9"	112	B
R520	10	11'-9"	123	B
R521	14	12'-9"	186	B
R522	28	8'-2"	239	B
R401	64	5'-5"	232	B
			6,803	

REPLACEMENT BARS

MARK	NO.	LENGTH	WEIGHT	SHAPE
R1004	3	7'-2"	93	S
R 901	1	6'-10"	23	S
R 802	1	6'-6"	18	S
R701	1	6'-2"	13	S
R601	1	5'-11"	9	S
R524	1	5'-7"	6	S
R402	1	5'-3"	4	S
			166	



CHARLES E. DE LEUW CONSULTING ENGINEER
CHICAGO ILLINOIS

GENERAL PLAN & ELEVATION NOTES & ESTIMATED QUANTITIES

BRIDGE NO. STA.-21-164.8
U.S. 21 OVER FOX RUN
STARK CO. STA. 868+18.09

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
S.G.	F.S.		R.E.H.	L.N.R.	7-6-56	

FED RD DIV-SION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

153/166

STA- 21-12.39

STARK COUNTY
SECTION 6 NW Q
PERRY TWP
T-10 R-9

BEGIN PROJECT
STA. 654 + 13.50

CITY OF MASSILLON
CORPORATION LINE

MIKE DROBNEY
ANNA DROBNEY
(12 LA) Cont 0.26 Ac.±

OHIO WATER SERVICE CO
Cont. 0.630 Ac.±
(13 LA)

Gate Valve
Masonry Pump House

ALFRED L. SELOGY
Cont. 0.12 Ac.±
(11 LA)

OHIO CANAL
(10 LA) Cont. 0.130 Ac.±

PENNSYLVANIA R.R.
(18) Cont 0.340 Ac.±

C. L. & W. R.R. (B & O R.R.)
(19) Cont 0.224 Ac.±

LOUIS S. SELOGY
GLORIA J. SELOGY
(20 LA) Cont. 0.739 Ac.± PRO. 0.125 Ac.±

HAROLD H. SWARTZ
BERTHA M. SWARTZ
(14 LA) Cont. 1.855 Ac.±

HENRY DEL VECCHIO
ELIZABETH ANN DEL VECCHIO
(15 LA) Cont. 0.145 Ac.±

WILLIAM NEUSEL
(17 LA) Cont. 0.272 Ac.±

TUSCARAWAS RIVER
WEST BANK RIVER
EAST BANK RIVER

N 25° 24' 17" W
Proposed U.S. 21

Proposed R/W
Construction Limit
Existing R/W
Existing Joint R/W
8' Gravel Lane
Concrete Spillway
Abandoned Dry Bed Canal
Water Pump
Gate Valve
Drive
Gravel Drive
Track

SEE SHEET 154

RAYMOND L. JOHNSON
(37 LA) Cont. 3.934 Ac.±
PRO. 0.125 Ac.±

STARK COUNTY
SECTION 6 NWQ
PERRY TWP
T-10 R-9

CURVE DATA
Δ = 15° 20' 30"
R = 7639.44
T = 1028.93
L = 2045.56
D = 0° 45' 00"
PC = 664 + 56.20
PI = 674 + 85.13
PT = 685 + 01.76

RAYMOND L. JOHNSON
(37 A-LA) Cont. 7.088 Ac.±

WILLIAM NEUSEL
(17 A-LA) Cont. 3.101 Ac.±

SEE SHEET 3

STARK COUNTY
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

Rev 7-11-56

RIGHT-OF-WAY SHEET - STA. 650+00-680+00

DIVISION	STATE	PROJECT	SHEET NO.
2	OHIO	F-1010(4)	154 / 166

STA. 21+12.39

STARK COUNTY
SECTION 9
PERRY TWP
T-10 R-9

C.L.&W.R.R.(B&O.R.R.)
(19) Cont. 0.224 Ac.±
(19 SL) Cont. 0.582 Ac.±

LOUIS S. & GLORIA J. SELOGY
(20) Cont. 0.197 Ac.±
(20 A) Cont. 0.030 Ac.±
(20 LA) Cont. 0.739 Ac.± P.R.O. 0.125 Ac.±

DOROTHY J. SLAGGY
(21) Cont. 0.411 Ac.±

(22) Cont. 0.50 Ac.±

(28) Cont. 3.296 Ac.±

CELESTE H. YOB
(23) Cont. 0.529 Ac.±

RAYMOND & LUCILLE MARTZ
(30) Cont. 0.374 Ac.±

CHARLES A. HEATHER
EDNA M. HEATHER
(25) Cont. 0.055 Ac.±

RAYMOND L. JOHNSON
(37 LA) Cont. 3.934 Ac.± PRO 0.125 Ac.±

ROBERT L. RADTKA
(26) Cont. 0.018 Ac.±

RAYMOND V. LEADING
(24) Cont. 0.25 Ac.±

ARVINE SWISHER
ESTHER SWISHER
(27) Cont. 0.040 Ac.±

CURVE DATA

Δ = 15° 20' 30"
R = 7639.44
D = 0° 45' 00"
T = 1028.93
L = 2045.56
P.C. = 664 + 56.20
P.I. = 674 + 85.13
P.T. = 685 + 01.76

CURVE DATA - RELOCATED T.R. #353

Ⓐ	Ⓑ	Ⓒ	Ⓓ
Δ = 19° 41'	Δ = 17° 24' 40"	Δ = 5° 30'	Δ = 5° 30'
D = 12° 00'	D = 12° 00'	D = 3° 00'	D = 3° 00'
R = 477.46	R = 477.46	R = 1909.86	R = 1909.86
T = 82.83	T = 73.10	T = 91.73	T = 91.73
L = 164.03	L = 145.09	L = 183.33	L = 183.33

HESS ROAD
EARL ROAD
MASSILLON-CRAWFORD ROAD NO 345
N 78° 02' 37" W
N 18° 25' 43" E
N 13° 25' 43" E
N 11° 57' 25" E
N 31° 38' 23" E
N 40° 10' 43" E
N 14° 40' 43" E
N 25° 24' 17" W
N 14° 13' 43" E
N 15° 29' 43" E

LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 7
LOT 8
HEPPERT'S SUBDV. P.B. 13 P. 107 P.R. 2180

1 Story Frame House
2 Story Frame House
1 Story Brick Warehouse
JOHN W. SELOGY SR.
DOROTHY J. SLAGGY
LOUIS S. SELOGY GLORIA J. SELOGY
Part Gravel Drive
1½ Story Frame House

Construction Limit
Proposed R/W
Existing R/W
℄ RELOCATED T.R. #353 (E) Existing
℄ Proposed U.S. 21
℄ Existing Joint R/W
℄ PENNSYLVANIA R.R. R/W
℄ C.L.&W.R.R.(B.&O.R.R.)
℄ T.R. #353
CURVE Ⓐ
CURVE Ⓑ
CURVE Ⓒ
CURVE Ⓓ
EARL'S OUTLOTS P.B. 1-31
CITY OF MASSILLON CORPORATION LINE APPROXIMATE LOCATION
EAST LINE OF EARL'S C.L. No. 12
Top West Bank Tuscarawas River
MATCH LINE 55+00
END OF WORK 56+68
SEE SHEET 1
SEE SHEET 1

STARK COUNTY
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

RIGHT-OF-WAY SHEET T.R. 353

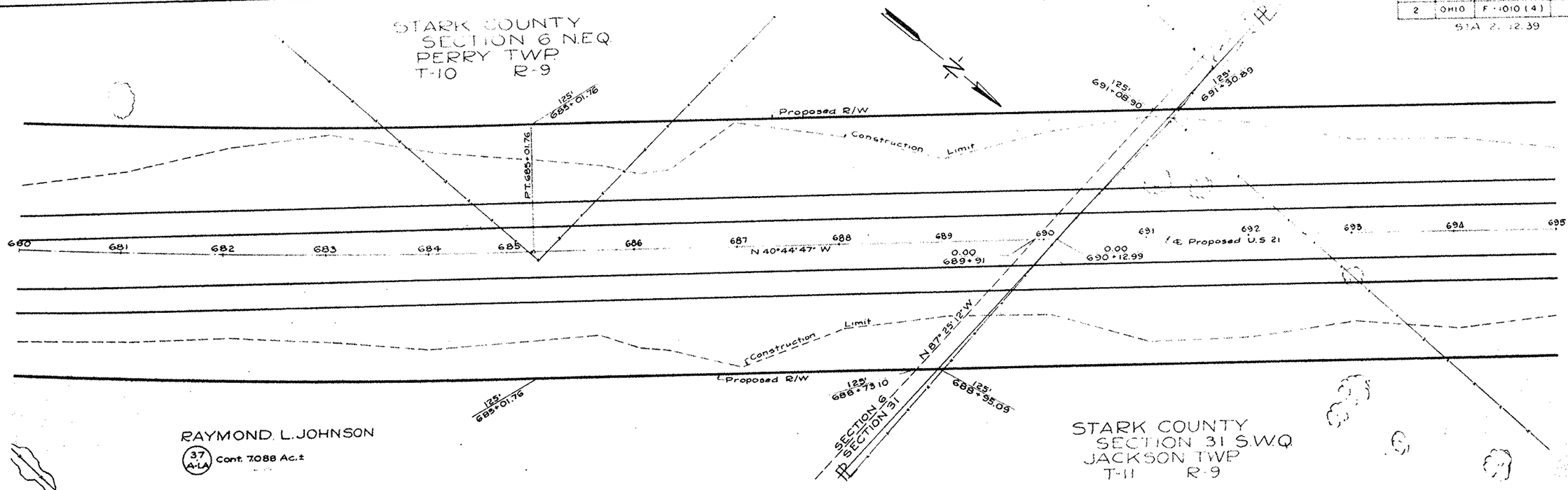
Rev. 11-58

FED. ROAD SYSTEM	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA 2. 12.39

155/166

STARK COUNTY
SECTION 6 N.E.Q.
PERRY TWP.
T-10 R-9



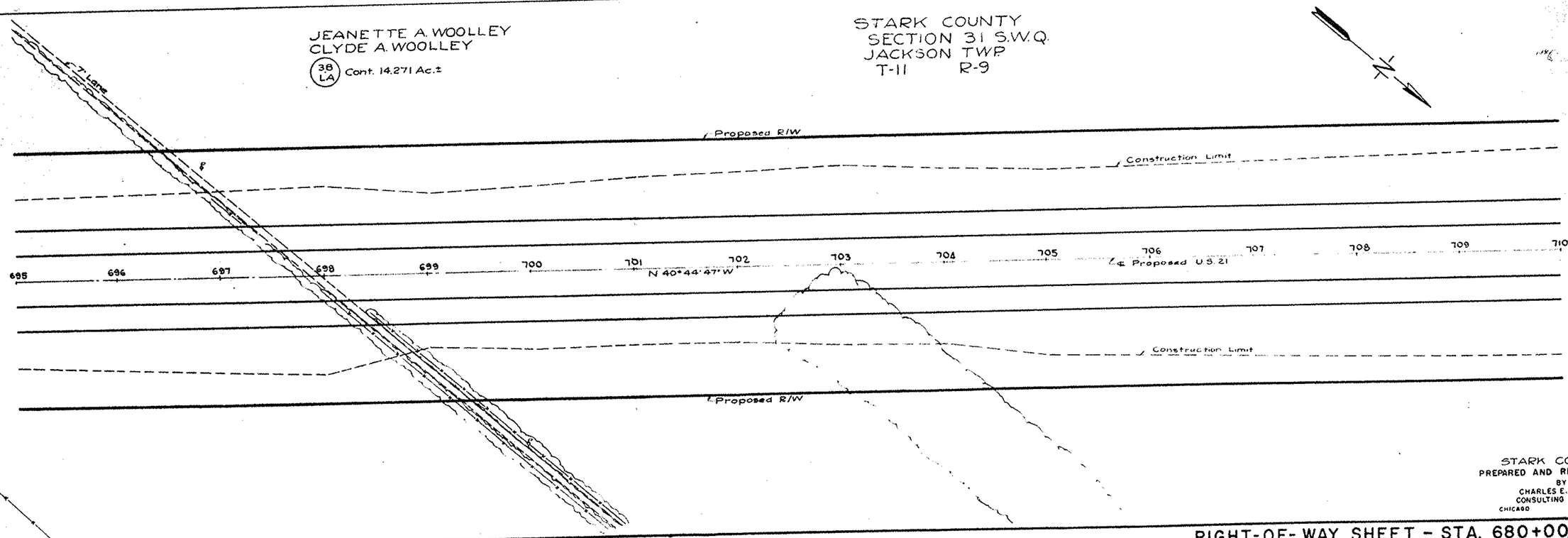
SEE SHEET 1

RAYMOND L. JOHNSON
(37 A-LA) Cont. 7.088 Ac.±

STARK COUNTY
SECTION 31 S.W.Q.
JACKSON TWP
T-11 R-9

JEANETTE A. WOOLLEY
CLYDE A. WOOLLEY
(36 LA) Cont. 14.271 Ac.±

STARK COUNTY
SECTION 31 S.W.Q.
JACKSON TWP
T-11 R-9



SEE SHEET 4

STARK COUNTY
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

RIGHT-OF-WAY SHEET - STA. 680+00-710+00

Rev. 7-11-56

FED. RD. DIV. SION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA. 21-12.39

156
166

JEANETTE A. WOOLLEY
CLYDE A. WOOLLEY
(36 LA) Cont. 14.271 Ac.±

STARK COUNTY
SECTION 36 S.E.Q.
LAWRENCE TWP
T-1 R-10

N

N 3°-19'-35" E
125'
715+89.01
109.22'
716+04.05
B. Diff. Lane
Proposed R/W
Construction Limit
125'
721+08.33
710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725
N 40°-44'-47" W
0.00
715+00
0.00
717+18.10
℄ Proposed U.S. 21
TOWNSHIP LINE
Construction Limit
P.C. 721+08.33
Proposed R/W
125'
715+80.92
N 87°-08'-06" W
125'
716+41.19
5' Dirt Lane
SECTION 36
SECTION 31
125'
721+08.33
125'
721+75
125'
723+00
41 X
S. New Channel
310'
721+85
310'
721+00

SEE SHEET 3

STARK COUNTY
SECTION 31 S.W.Q.
JACKSON TWP
T-11 R-9

LOUIS NEISEL
(40 LA) Cont. 1.254 Ac.±

WILLIAM NEISEL
(41 LA) Cont. 5.733 Ac.±
(41 X) Cont. 0.403 Ac.±

EARL T. LINDSAY
GRACE LINDSAY
(42 I.A) Cont. 18.597 Ac.±
PRO. 0.141 Ac.±

S.E.Q. SEC. 36
N.E.Q. SEC. 31
125'
726+16.33
R=11584.16'
Proposed R/W
125'
737+29.44
125'
739+75
200'
739+75
200'
740+25
125'
740+25
WA
Construction Limit
Proposed Cattle Underpass
725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740
0.00
727+17
℄ Proposed U.S. 21
N 32°-35'-27" W
P.T. 737+29.44
Construction Limit
R=11334.16'
Proposed R/W
125'
737+29.44
125'
726+14.78
N 88°-50'-11" W
10.5'

CURVE DATA
Δ = 8° 06' 20"
T = 811.91
R = 11459.16
D = 0° 30' 00"
L = 1621.11
E = 28.73
P.C. = 721+08.33
P.I. = 729+20.24
P.T. = 737+29.44

SEE SHEET 5

STARK COUNTY
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

Rev. 7-11-56

RIGHT-OF-WAY SHEET - STA. 710+00-740+00

FED RD DIV-SION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

STA-21-12.39

157/166

EARL T. LINDSAY
GRACE LINDSAY
(42 LA) Cont 18.597 Ac.±
PRO. 0.141 Ac.±

SEE SHEET 4

Proposed R/W
℄ Construction Limit
740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755
N 32° 38' 27" W
℄ Proposed U.S. 21
℄ Construction Limit
Proposed R/W

STARK COUNTY
SECTION 36 N.E.Q.
LAWRENCE TWP
T-1 R-10

EARL T. LINDSAY
GRACE LINDSAY
(42 LA) Cont: 18.597 Ac.±
PRO. 0.141 Ac.±

BYRON BOWERS
RUTH BOWERS
(45) Cont: 0.639 Ac.±

SEE SHEET 6

SEE SHEET 158

THEODORE D. LONG
ALICE M. LONG
(54 LA) Cont 0.047 Ac.±
PRO. 0.042 Ac.±
(54) Cont. 0.104 Ac.±

DOROTHY O. LONG
(55 LA) Cont 0.549 Ac.±
PRO. 0.127 Ac.±

ALTA M. GEORGE
EDWIN GEORGE
(60 LA) Cont. 9.189 Ac.±
PRO. 0.031 Ac.±

STARK COUNTY
SECTION 25 S.W.Q.
LAWRENCE TWP
T-1 R-10

Existing R/W
℄ Existing R/W
SECTION 36 N.W.Q.
SECTION 36 N.E.Q.
N 1°16' 35" E
SECTION 25 S.E.Q.
SECTION 36
SECTION 25
12" V.C.P.
Easement House
Proposed R/W
℄ Construction Limit
125' 760+23.03
116.15' 760+46.28
93.74' 760+69.42
64.39' 761+46.14
80.81' 761+97.56
125' 761+87.46
125' 762+60.66
18" Sign Line
M.H. to Septic Tank
6" Water
8" Gas
8" Sewer
17'6" Brick House
Concrete Drive
0.00 762+75.67
1.41' 764+38.27
0.00 764+37.32
77.43' 763+84.95
93.85' 763+73.53
125' 764+53.29
125' 763+83.27
125' 761+16.28
755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770
N 32° 38' 27" W
℄ Proposed U.S. 21
0.00 759+57.69
0.00 760+05.95
0.00 759+81.84
0.00 762+03.65
0.00 762+38.66
SECTION 36 N.E.Q.
SECTION 25 S.E.Q.
SECTION 25 S.W.Q.
N 2°-11' 38" E
42 LA
56 LA
℄ Construction Limit
℄ Proposed R/W
125' 758+73.11
125' 759+21.41
125' 758+97.86
N 88°-33' 35" W
RELOCATED T. R. #344
KERMIT H. SHANKLIN
MARIE S SHANKLIN
(56 LA) Cont 1.160 Ac.±
PRO. 0.315 Ac.±
℄ Q.S.L.
N 0°-41' 38" E
Existing R/W
Existing R/W

SEE SHEET 8

SEE SHEET 158

STARK COUNTY
SECTION 36
LAWRENCE TWP
T-1 R-10

STARK COUNTY
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

Rev. 7-11-56

RIGHT-OF-WAY SHEET - STA. 740+00-770+00

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

STA.-21-12.39

158/166

STARK COUNTY
SECTION 36
LAWRENCE TWP
T-1 R-10

STARK COUNTY
SECTION 25 S.W.Q.
LAWRENCE TWP
T-1 R-10

HARRY MAXHEIMER
OSSEE MAXHEIMER
43 Cont 0.048 Ac.±

SIDNEY J PREECE
46 Cont 0.185 Ac.±

ALFRED L COLES
CLARIS E COLES
44 Cont 0.287 Ac.±

BYRON P BOWERS
RUTH BOWERS
45 Cont 0.639 Ac.±

ALTA M. GEORGE
EDWIN GEORGE
60 LA Cont 9.89 Ac.±
PR.O 0.031 Ac.±

DOROTHY O. LONG
55 LA Cont 0.85 Ac.±
PR.O 0.127 Ac.±

EARL T. LINDSAY
GRACE LINDSAY
42-B Cont. 0.158 Ac.±
42-A Cont. 0.021 Ac.±

KERMIT H. SHANKLIN
MARIE S. SHANKLIN
56 LA Cont. 1.160 Ac.±
PR.O. 0.315 Ac.±
56 Cont. 1.616 Ac.±

HAROLD J. SIMON
GLADYS M. SIMON
59 Cont 0.06± Ac.±

SEE SHEET 7

SEE SHEET 7

STARK COUNTY
SECTION 36 N.E.Q.
LAWRENCE TWP
T-1 R-10

STARK COUNTY
SECTION 25
LAWRENCE TWP
T-1 R-10

STARK COUNTY
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

RIGHT-OF-WAY SHEET T.R. 344

FED RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

159/166

STA-21+12.39

BYRON WOLGAMONT
(52) Cont. 0.022 Ac.±

CARL MYERS
MARY F. MYERS
(53) Cont. 0.109 Ac.±

STARK COUNTY
SECTION 25 S.W.Q.
LAWRENCE TWP.
T-1 R-10

ALTA M. GEORGE
EDWIN GEORGE
(60) Cont. 0.463 Ac.±

THEODORE D. LONG
ALICE M. LONG
(54) Cont. 0.104 Ac.±

RELOCATED T.R.-344

Existing R/W

Proposed R/W

Construction Limit

Brush

Basement House

8' Gravel Drive

12" VCP

12" CMP

12" CMP

SECTION 25 S.E.Q.
SECTION 36 N.E.Q.

SECTION 25 S.W.Q.
SECTION 36 N.W.Q.

℄ T.R. 352

N 88° 33' 27" W

℄ Proposed U.S. 21

N 32° 35' 27" W

Gravel Drive

Concrete Walk

1 St. Fr. Hse.

2 St. Fr. Hse.

2 Sty. Fr. Hse.

Garage

Inlet

Ditch

SAMUEL D. SHERRETS
ETHEL SHERRETS
(47) Cont. 0.269 Ac.±

BYRON WOLGAMOT
(48) Cont. 0.057 Ac.±

STARK COUNTY
SECTION 36 N.W.Q.
LAWRENCE TWP.
T-1 R-10

SIDNEY J. PREECE
(46) Cont. 0.185 Ac.±

BYRON P. BOWERS
RUTH BOWERS
(45) Cont. 0.639 Ac.±

SEE SHEET 6

HARRY F. ALLMAN
REA F. ALLMAN
(57)

SEE SHEET 8

STARK COUNTY
SECTION 25 S.E.Q.
LAWRENCE TWP.
T-1 R-10

KERMIT H. SHANKLIN
MARIE S. SHANKLIN
(56) Cont. 1.616 Ac.±

Barn

Garden

Field

Concrete Steps

EARL T. LINDSAY
GRACE LINDSAY
(42) Cont. 0.422 Ac.±

STARK COUNTY
SECTION 36
LAWRENCE TWP.
T-1 R-10

STARK COUNTY
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CHICAGO ILLINOIS

Rev. 7-11-56

RIGHT-OF-WAY SHEET T.R. 352

FED RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

160
166

STA.-21-12.39

ALTA M. GEORGE
EDWIN GEORGE
(60 LA) Cont 9.189 Ac.±
PRO. 0.031 Ac.±

WILLIAM D. SOURS
DON M. SOURS
(51 LA) Cont. 0.262 Ac.±

N 0° 12' 33" E

125' 778+09.41

N 89° 47' 27" W

125' 780+34.47

℄ Proposed R/W

Construction Limit

770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785

℄ Proposed U.S. 21

N 32° 38' 27" W

230.2' 779+88.95

400' 780+03

45.49' 780+73.45

Construction Limit

℄ Proposed R/W

125' 778+00

140.94' 780+11.82

138.57' 782+17.61

167.60' 781+38.87

179.25' 782+60.62

JOHN ASTON
(61 LA) Cont. 0.295 Ac.±

JEWELL ROSE
(62 LA) Cont. 0.030 Ac.±

SEE SHEET 5

STARK COUNTY
SECTION 25
LAWRENCE TWP.
T-1 R-10

MATTIE CHOVAN
SUSAN CHOVAN
PAUL SIROTAK aka PAUL SIROTIAK
(63 LA) Cont. 17.692 Ac.±

T Line

125' 792+00

165' 793+00

℄ 3' Stream

℄ Proposed R/W

Construction Limit

785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800

N 32° 38' 27" W

℄ Proposed U.S. 21

T.S. 799+07.50

℄ 5' Stream

135' 799+07.55

Swamp

Construction Limit

125' 785+00

125' 790+00

℄ Proposed R/W

℄ 5' Stream

165' 797+00

125' 799+07.55

STARK COUNTY
SECTION 25
LAWRENCE TWP.
T-1 R-10

SEE SHEET 9

STARK COUNTY
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

Rev. 7-11-56

RIGHT-OF-WAY SHEET - STA. 770+00-800+00

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

161/166

STA. 21 12.39

CURVE DATA NO 3

D	= 29°00'00"	X	= 5.24
R	= 200.00	Y	= 299.92
D/5	= 32°39'	P	= 1.31
L/100	= 57.90	P.I.	= 808+97.04
Δc	= 26°39'	T.S.	= 799+07.55
L.S.	= 989.49	S.C.	= 802+07.55
Lc	= 1332.50	C.S.	= 815+40.05
RR	= 2864.94	S.T.	= 818+40.05
E	= 121.72		
V	= 200.03		
V'	= 100.02		

STARK COUNTY
SECTION 25
LAWRENCE TWP
T-1 R-10

STARK COUNTY
SECTION 26
LAWRENCE TWP.
T-1 R-10

SEE SHEET 8

MATTIE CHOVAN
SUSAN CHOVAN
PAUL SIROTAK aka PAUL SIROTIAK
(GS LA) Cont. 17.692 Ac.±

W. D. SOURS
DON M. SOURS
(64 LA) Cont. 18.197 Ac.±

STARK COUNTY
SECTION 26 N.E.Q.
LAWRENCE TWP.
T-1 R-10

SEE SHEET 10

STARK COUNTY
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

RIGHT-OF-WAY SHEET - STA. 800+00-830+00

Rev. 7-11-56

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

STA -21-12.39

162
166

W.D. SOURS
DON M. SOURS
(64 LA) Cont. 18.197 Ac.±

STARK COUNTY
SECTION 26 N.W.Q.
LAWRENCE TWP.
T-1 R-10

9' Private Dirt Road
Proposed R/W
180' 836+50
140.56' 838+43.71
125' 840+00
Rock Outcrop Water Seepage
E. Fork Stream
Construction Limit
SECTION 26 N.W.Q. SECTION 23 S.W.Q.
SEE SHEET 9
125' 830+00
830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845
℄ Proposed U.S. 21
N 65° 17' 27" W
0.00 837+11.15
5" Dia. Field Stone Lined Hole 54" Deep.
SECTION 26 N.W.Q. SECTION 26 N.E.Q.
Construction Limit
℄ Proposed R/W
Water Hole 3.5' Deep
Clearing
Saw Mill
Logging Road
125' 839+68.16
SECTION 26 N.E.Q. SECTION 23 S.E.Q. APPROXIMATE LOCATION OF SECTION LINE
N 0° 19' 33" E

STARK COUNTY
SECTION 23 S.W.Q.
LAWRENCE TWP.
T-1 R-10

150' 846+50
150' 847+75
125' 848+25
125' 848+01.48
150' 849+75
125' 849+75
125' 851+01.48
125' 851+50
150' 851+50
150' 852+40
125' 852+40
(65 X)
(65 Y)
Proposed R/W
Construction Limit
℄ Proposed U.S. 21
R = 2989.79
845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860
N 65° 17' 27" W
S.C. 851+01.48
T.S. 848+01.48
℄ New Channel
℄ 3' Drainage Ditch
125' 851+01.48
125' 848+01.48
Construction Limit
℄ Proposed R/W
R = 2739.79
SEE SHEET 11

CURVE DATA

D =	2° 00' 00"	X =	5.24
Ls =	3 00.00	Y =	299.92
Δ =	41° 00' 00"	P =	1.31
Δs =	3° 00' 00"	K =	149.98
Δc =	35° 00' 00"	P.I =	860 + 23.05
Ts =	1221.57	T.S =	848 + 01.48
Lc =	1750.00	S.C =	851 + 01.48
Rc =	2864.79	C.S =	868 + 51.48
E =	195.09	S.T. =	871 + 51.48
LT =	200.03		
ST =	100.02		

ROBERT D. CLAY
(65 LA) Cont. 17.227 Ac.±
(65 X) Cont. 0.029 Ac.±
(65 Y) Cont. 0.052 Ac.±
(65 Z) Cont. 0.170 Ac.±

STARK COUNTY
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

Rev. 1-11-56

RIGHT-OF-WAY SHEET - STA. 830+00 - 860+00

FED RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

163/166

STA 21+12.39

ROBERT D. CLAY
(65 LA) Cont. 17.227 Ac.±
(65 Z) Cont. 0.170 Ac.±
(65 X) Cont 0.029 Ac.±
(65 Y) Cont 0.052 Ac.±

SEE SHEET 10

STARK COUNTY
SECTION 23 S.W.Q.
LAWRENCE TWP.
T-1 R-10

BERNARD S. NICHOLS
(66 LA) Cont. 3.306 Ac.±
P.R.O. 0.242 Ac.±

SEE SHEET 164

JAMES E. BRIGHAM
ANNA M. BRIGHAM
(67 LA) Cont. 3.208 Ac.±

STARK COUNTY
SECTION 22 S.E.Q.
LAWRENCE TWP.
T-1 R-10

CHRISTINA TIPPEL
(69 LA) Cont. 20.180 Ac.±
P.R.O. 0.048 Ac.±

SEE SHEET 13

Rev. 7-11-56

STARK COUNTY
PREPARED AND RECOMMENDED
BY
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CONSULTING ENGINEER
CHICAGO ILLINOIS

RIGHT-OF-WAY SHEET - STA. 860+00-890+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

164
166

STA - 21-12.39

STARK COUNTY
SECTION 22 S.E.Q.
LAWRENCE TWP.
T-1 R-10

JAMES E. BRIGHAM
ANNA M. BRIGHAM

(67 A) Cont. 0.453 Ac.±

(67 B) Cont. 0.275 Ac.±

(67 C) Cont. 0.222 Ac.±

(67 D) Cont. 0.160 Ac.±

SEE SHEET 103

MATCH LINE STA. 1+50

Barn

Garden

Gar

Gravel Drive

2 St. Conc. Bl. House

Concrete Bridge

Proposed R/W

Existing R/W

Construction Limit

℄ TR.* 356

N 18° 03' 24" E

Existing R/W

Construction Limit

Proposed R/W

Proposed R/W

Existing R/W

1 Stop Sign

Proposed R/W

Existing R/W

℄ TR.* 357

N 39° 58' 27" W

Prop. U.S. 21

N 24° 17' 27" W

Existing R/W

N 46° 37' 09" E

℄ TR.* 356

N 25° 29' 38" E

Existing R/W

Proposed R/W

Existing R/W

Construction Limit

℄ TR.* 357

N 39° 58' 27" W

Proposed R/W

Existing R/W

Construction Limit

MATCH LINE - STA. 1+50

SECTION 22 S.E.Q.
SECTION 23 S.W.Q.

N 2° 38' 37" E

ROBERT D. CLAY

(65 A) Cont. 0.131 Ac.±

STARK COUNTY
SECTION 23 S.W.Q.
LAWRENCE TWP.
T-1 R-10

BERNARD S. NICHOLS

(66 LA) Cont. 3.306 Ac.±
PRO. 0.242 Ac.±

N 79° 36' 23" W

SEE SHEET 163

SEE SHEET 11

Existing R/W

1 Stop Sign

℄ TR.* 357

N 39° 58' 27" W

Existing R/W

Proposed R/W

SECTION 22 S.E.Q.
SECTION 23 S.W.Q.

N 2° 38' 37" E

Proposed U.S. 21

N 24° 17' 27" W

Proposed R/W

BERNARD S. NICHOLS

(66 A) Cont. 0.647 Ac.±

(66 B) Cont. 0.262 Ac.±

(66 C) Cont. 0.462 Ac.±

(66 D) Cont. 0.272 Ac.±

(66 E) Cont. 0.020 Ac.±

STARK COUNTY
SECTION 23 S.W.Q.
LAWRENCE TWP.
T-1 R-10

Existing R/W

N 18° 03' 24" E

℄ Construction Limit

Existing R/W

Proposed R/W

Proposed R/W

N 46° 37' 09" E

Existing R/W

Construction Limit

℄ TR.* 356

N 25° 29' 38" E

Proposed R/W

SECTION 22
SECTION 23

N 79° 36' 23" W

SEE SHEET 11

STARK COUNTY
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

Rev. 7-11-56

RIGHT-OF-WAY SHEET T.R. 356

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

STA.-21-12.39

165/166

CURVE DATA
Δ = 29° 30' 24
D = 0° 45' 00
R = 7639.44
T = 2011.77
L = 3934.22
E = 260.45
PI = 899+72.13
PC = 879+60.36
PT = 918+94.58 BK.
PT = 917+27.79 AH

STARK COUNTY
SECTION 22
LAWRENCE TWP
T-1 R-10

SEE SHEET 11

℄ Proposed R/W R = 7514.44'
Construction Limit
℄ Proposed U.S. 21
Construction Limit
℄ Proposed R/W R = 7764.44'
L-R = 7764.44'

890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906

0.00 891+49
0.00 894+45
125' 895+00
140' 896+00
125' 896+50

STARK COUNTY
SECTION 22 N.E.Q.
LAWRENCE TWP
T-1 R-10

CHRISTINA TIPPEL
(69 LA) Cont. 20.197 Ac.±
P.R.O. 0.048 Ac.±
(69) Cont. 0.245 Ac.±

FRANK A. BROWNE
(70 LA) Cont. 0.082 Ac.±
P.R.O. 0.077 Ac.±

STARK COUNTY
SECTION 15 S.W.Q.
LAWRENCE TWP
T-1 R-10

270+ 915+39.72
℄ Proposed R/W
Existing R/W
℄ T-R = 363
N 38° 57' E
(69)
125' 914+75
Existing R/W
N 89° 19' 33" W
125' 916+44.65
125' 916+67.39
125' 917+72.97
125' 918+06.61
125' 918+40.25
125' 918+84.58 BK. 917+27.79 AH
Pt 918+94.58 BK. 917+27.79 AH
Curve Data
Δ = 29° 30' 24
D = 0° 45' 00
R = 7639.44
T = 2011.77
L = 3934.22
E = 260.45
PI = 899+72.13
PC = 879+60.36
PT = 918+94.58 BK.
PT = 917+27.79 AH
R = 7514.44
℄ Proposed R/W
Construction Limit
125' 916+21.91
39.51 916+90.42
0.00 916+70
7.58 916+74.39
916
917
0.00 917+18.07
0.00 917+19.99
0.00 917+44.86
0.00 916+38.26
0.00 916+81.12
125' 917+67.56
N 58° 47' 51" W
918 919 920
907 908 909 910 911 912 913 914 915
℄ & Proposed U.S. 21
Construction Limit
R = 7764.44'
℄ Proposed R/W
SECTION 22
SECTION 15
125' 914+79.84
FRANK A. BROWNE
VIRGINIA BROWNE
(72 LA) Cont 0.538 Ac.±
P.R.O. 0.090 Ac.±
Existing R/W
N 12° 33' E
℄ Proposed R/W
125' 918+17.43
125' 918+37.30
125' 918+84.58 BK. 917+27.79 AH
125' 918+25.00
Q.S.L.
(73)
FLOYD L. REICHENBACH
MILDRED M. REICHENBACH
(73 LA) Cont. 8.892 Ac.±
P.R.O. 0.160 Ac.±
(73) Cont. 0.239 Ac.±
240 917+65.65

SEE SHEET 14

STARK COUNTY
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

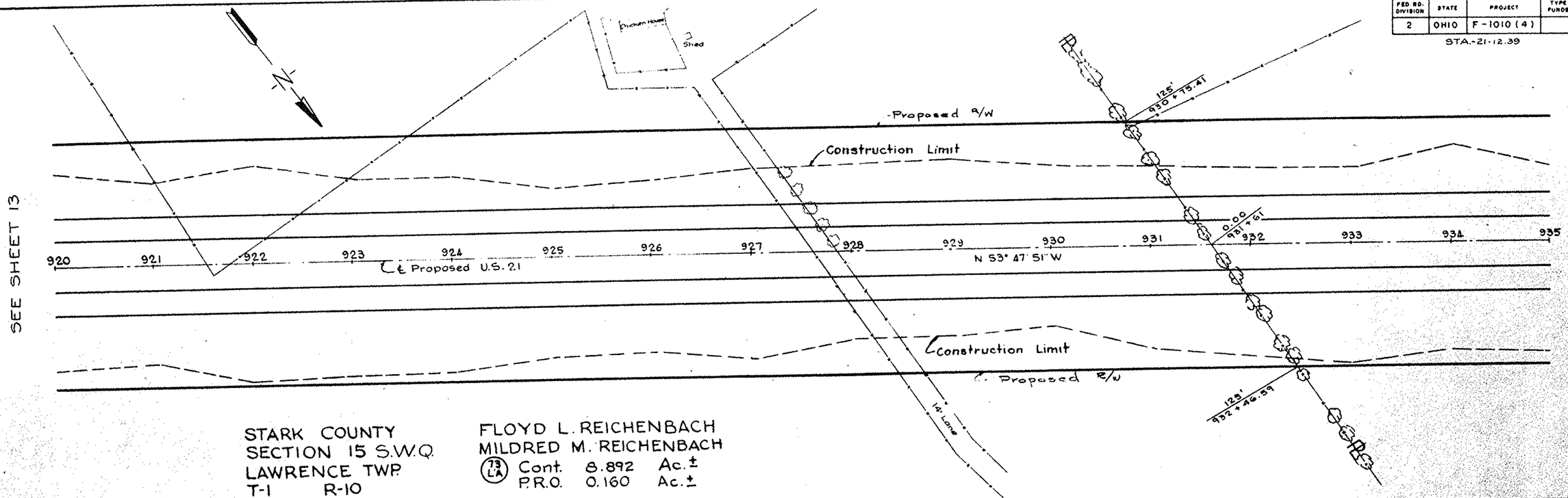
Rev. 7-11-56

RIGHT-OF-WAY SHEET - STA. 890+00-920+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

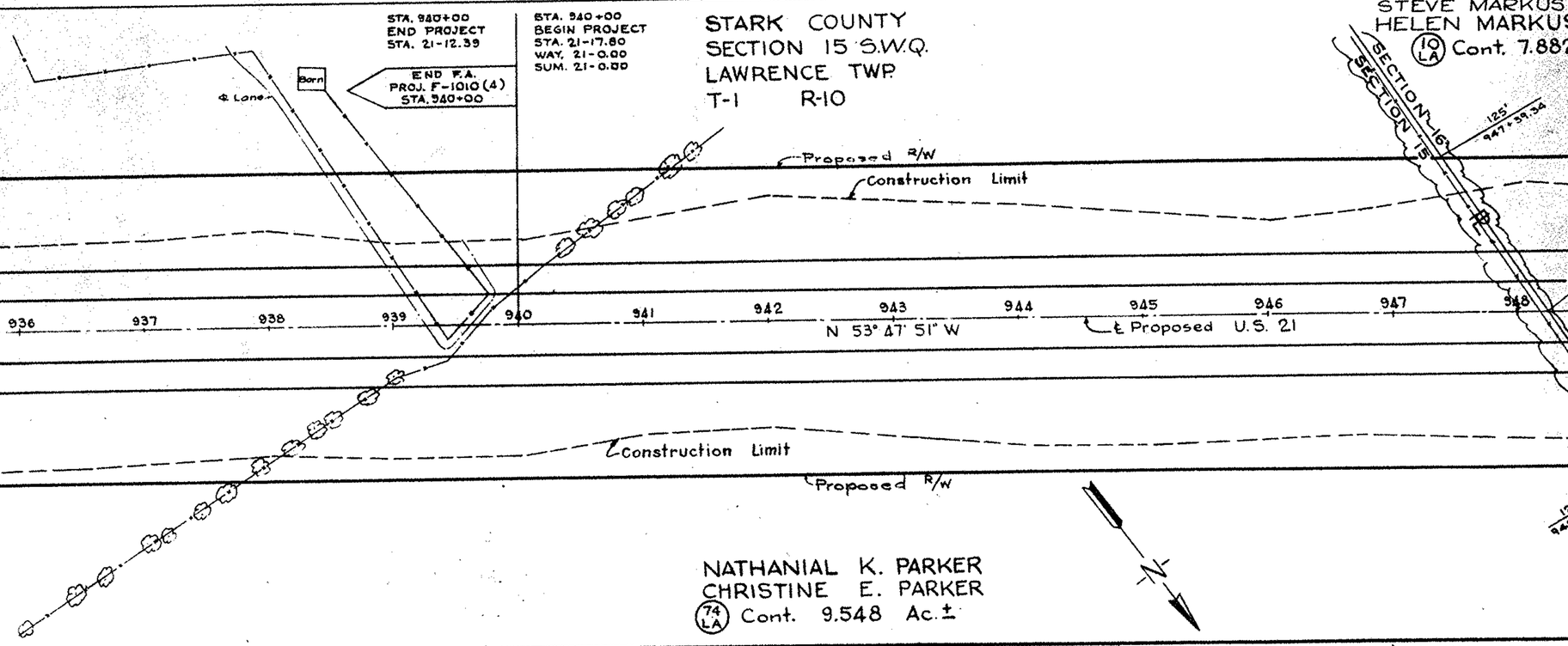
STA.-21-12.39

166/166



STARK COUNTY
SECTION 15 S.W.Q.
LAWRENCE TWP.
T-1 R-10

FLOYD L. REICHENBACH
MILDRED M. REICHENBACH
(73 LA) Cont. 8.892 Ac.±
P.R.O. 0.160 Ac.±



NATHANIAL K. PARKER
CHRISTINE E. PARKER
(74 LA) Cont. 9.548 Ac.±

Rev. 7-11-58

RIGHT-OF-WAY SHEET - STA. 920+00-950+00

21-STA-12

1/2

LOCATION PLAT

STA - 21 - 12.39

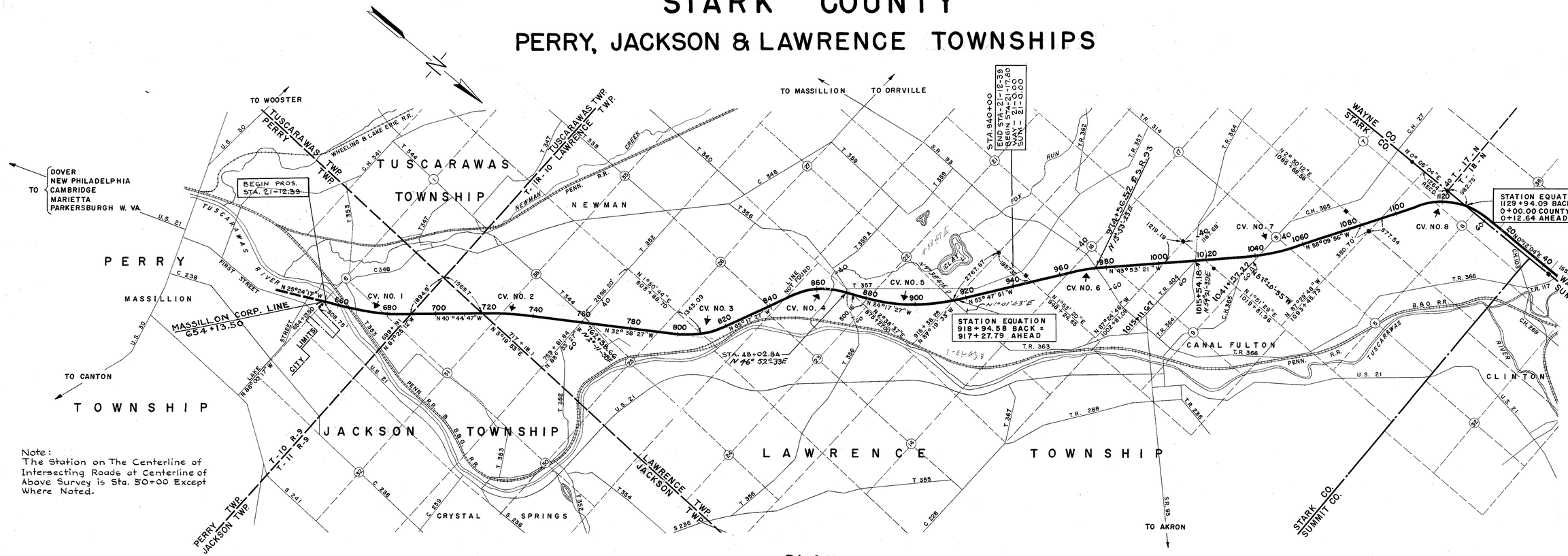
MASSILLON—CLEVELAND ROAD

STARK COUNTY

PERRY, JACKSON & LAWRENCE TOWNSHIPS

Signed Albert B. Birdsall
Albert Birdsall
Registered Surveyor No. 2798
Date MARCH 27, 1956

LIMITED ACCESS HIGHWAY
I Hereby Certify this Plat to be Correct
Signed by Carl L. Campbell
Division Deputy Director
State of Ohio Department of Highways
Received May 14 1956 at 2:00 P.M.
Recorded May 14, 1956
Plat Book 32 Page 71 & 72
Signed Kenneth E. Motta Recorder, Stark County, Ohio
Fee $10.40 (2 pages)
9-94-



Note:
The Station on The Centerline of Intersecting Roads at Centerline of Above Survey is Sta. 50+00 Except Where Noted.

PLAN

SCALE
0 1000 2000 4000

CURVE NO. 1		CURVE NO. 2		CURVE NO. 5		CURVE NO. 6		CURVE NO. 7		CURVE NO. 3		CURVE NO. 4		CURVE NO. 8	
Δ	15° 20' 30" LT.		8° 06' 20" RT		29° 30' 24" LT.		9° 54' 30" RT.		14° 16' 35" LT.	Δ	32° 39'		41° 00' RT.		58° 22'
D	0° 45'		0° 30'		0° 45'		0° 45' 00"		0° 45'	Δc	26° 39'		35° 00'		52° 22'
R	7639.44		11459.16		7639.44'		7639.44		7639.44	Dc	2° 00		2° 00'		2° 00' 00"
T	1028.93		811.91		2011.77'		662.21		956.72	Rc	2864.94		2864.79'		2618.34'
L	2045.56		1621.11		3934.22'		1321.11		1903.52	Lc	1332.50		1750'		300.00'
E	68.98		28.73		260.45'		28.65		61.07	Ls	300.00		300.00'		1750.70'
P.C.	664+56.20		721+08.33		879+60.36		964+52.73		1037+49.30	Ts	989.49		1221.51'		299.92
P.I.	674+85.13		729+20.24		893+72.13		971+14.94		1047+06.02	Xc	299.92		299.92'		5.24'
P.T.	685+01.76		737+29.44		918+94.58 Bk =		977+73.84		1056+52.82	Yc	5.24		5.24'		3°00'
					917+27.79 Ah.					θs	3° 00'		3°00'		200.03
										L.T.	200.03'		200.03'		100.03
										S.T.	100.03'		100.03		299.96'
										L.C.	299.92		299.92		418.02
										Es	121.72		195.09		149.99
										k	149.99		149.99		1.31
										p	1.31		1.31		1109+18.69
										T.S.	799+07.55		848+01.48		1112+18.69
										S.C.	802+07.55		851+01.48		1126+69.38
										P.I.	808+97.04		860+23.05		C.S. 1138+37.03 = 8+55.58
										C.S	815+40.05		868+51.48		S.T. 1141+37.03 = 11+55.58
										S.T.	818+40.05		871+51.48		

PREPARED AND RECOMMENDED
BY
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CONSULTING ENGINEER
CHICAGO ILLINOIS

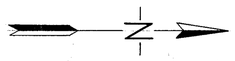
LOCATION PLAT

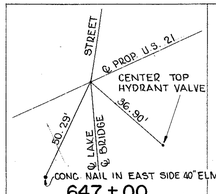
STA - 21 - 12.39

MASSILLON - CLEVELAND ROAD

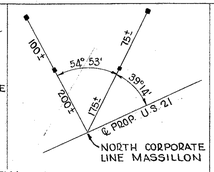
STARK COUNTY

PERRY, JACKSON & LAWRENCE TOWNSHIPS

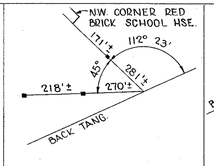




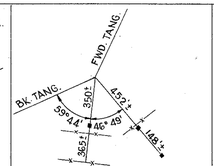
647 + 00



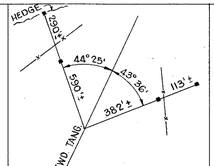
654 + 13.50



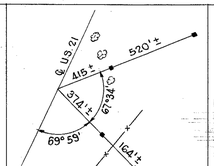
P.C. =664+56.20



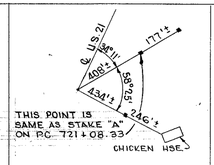
P.I.=674 + 85.13



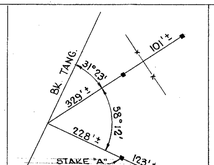
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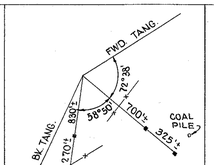
P.O.T.= 707+90.46



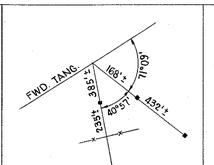
P.O.T.=717+75.17



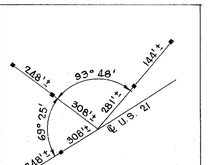
P.C. = 721+08.33



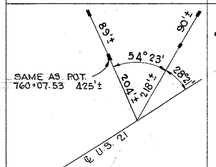
P.I.=729+20.24



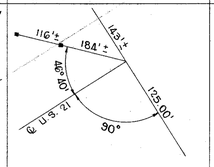
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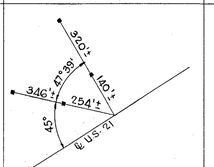
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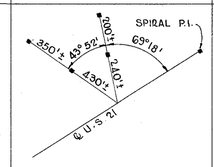
P.O.T. = 764 + 05



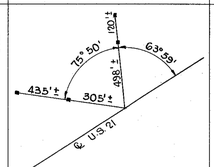
P.O.T.=770 + 46.08



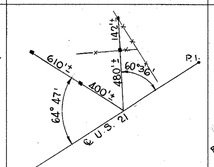
P.O.T= 782+49.98



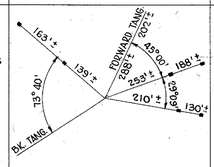
T. S.=799+07. 55



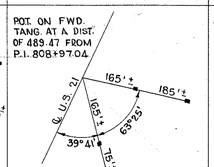
P.O.T.=801+95.50

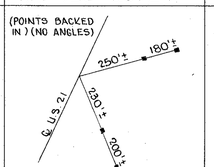


S.C.= 802 + 07. 55

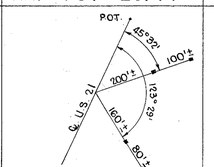


P. I. = 808 + 97.04

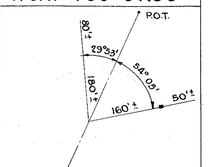




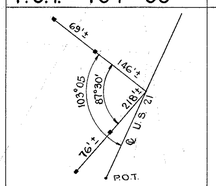
C.S.= 815+40.05



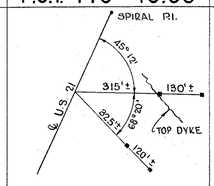
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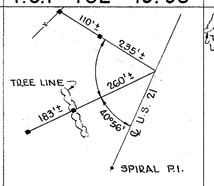
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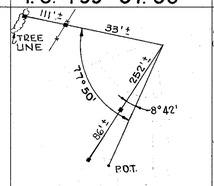
P.O.T.= 830+91.58



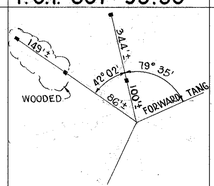
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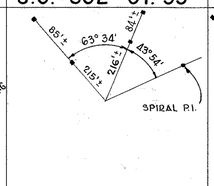
S.C.=851 + 01. 98



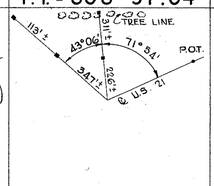
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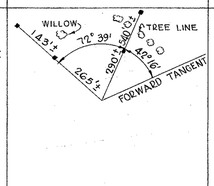
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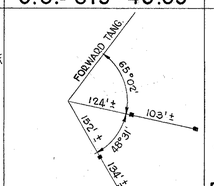
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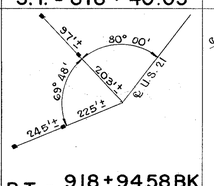
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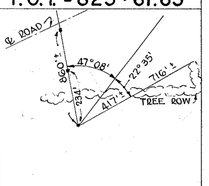
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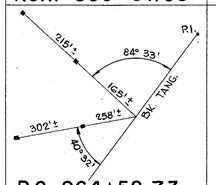
P.I. = 899 + 72 .13



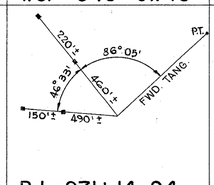
P.T. = 918+94.58 BK
917+27.79 AH.



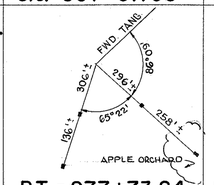
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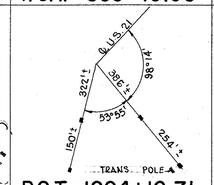
P.C.=964+52.73



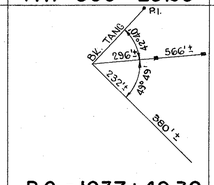
P. I. = 971+ 14. 94



P.T. = 977 +73.84



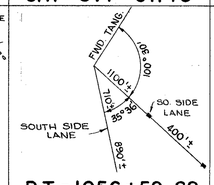
P.O.T. = 1004+10.71



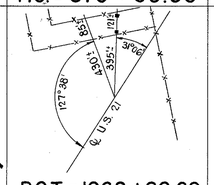
P.C. = 1037+49.30



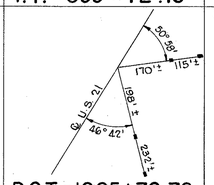
P.I. = 1047+06.02



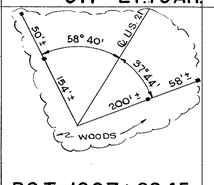
P.T. = 1056+52.82



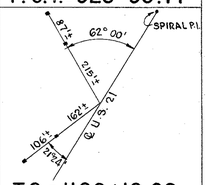
P.O.T. = 1062 +80.68



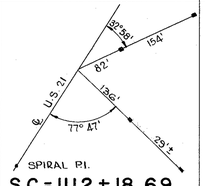
P.O.T.=1085+70.78



P.O.T.=1097+88.45



T.S.= 1109+18.69



S.C.= 1112 + 18.69

CENTERLINE MONUMENTS WILL BE SET DURING OR AFTER CONSTRUCTION

NOTE:
ALL POINTS ARE 2"X2" TACKED HUBS
EXCEPT WHERE OTHERWISE NOTED.

PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

12 SH

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA- 21-12.39

1/14

STARK COUNTY
SECTION 6 S.E.Q.
PERRY TWP.
T-10 R-9

BEGIN PROJECT
STA. 654 + 13.50

CITY OF MASSILLON
CORPORATION LINE

MILDRED L. SELOGY
(11 LA) Cont. 0.12 Ac.±

MIKE DROBNEY
ANNA DROBNEY
(12 LA) Cont. 0.26 Ac.±

OHIO WATER SERVICE CO.
(13 LA) Cont. 0.630 Ac.±

N.E. QR. SEC. 6

SEE SHEET 2

PENNSYLVANIA R.R.
(18) Cont. 0.340 Ac.±

C.L. & W. R.R. (B. & O.R.R.)
(19) Cont. 0.224 Ac.±

LOUIS S. SELOGY
GLORIA J. SELOGY
(20 LA) Cont. 0.739 Ac.±
P.R.O. 0.125 Ac.±

OHIO CANAL

HAROLD H. SWARTZ
BERTHA M. SWARTZ
(14 LA) Cont. 1.855 Ac.±

HENRY DEL VECCHIO
ELIZABETH ANN DEL VECCHIO
(15 LA) Cont. 0.145 Ac.±

OHIO CANAL
(10 LA) Cont. 0.130 Ac.±

WILLIAM NEUSEL
(17 LA) Cont. 0.272 Ac.±

TUSCARAWAS RIVER

SEE SHEET 2

SEE SHEET 2

RAYMOND L. JOHNSON
(37 LA) Cont. 3.934 Ac.±
P.R.O. 0.125 Ac.±

STARK COUNTY
SECTION 6 N.E.Q.
PERRY TWP.
T-10 R-9

CURVE DATA
Δ = 15° 20' 30
R = 7639.44
T = 1028.93
L = 2045.56
D = 0° 45' 00
P.C. = 664 + 56.20
P.I. = 674 + 85.13
P.T. = 685 + 01.76

RAYMOND L. JOHNSON
(37 A-LA) Cont. 7.088 Ac.±

C.L. & W. R.R. (B. & O.R.R.)
(19)

PENNSYLVANIA R.R.
(18)

WILLIAM NEUSEL
(17 A-LA) Cont. 3.101 Ac.±

STARK COUNTY
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CHICAGO ILLINOIS

SEE SHEET 3

Revised 7-24-56

RIGHT-OF-WAY SHEET - STA. 650+00-680+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

STA.-21-12.39

2/14

STARK COUNTY
SECTION 6 NEQ
PERRY TWP.
T-10 R-9

CURVE DATA
Δ = 15° 20' 30"
R = 7639.44
D = 0° 45' 00"
T = 1028.93
L = 2045.56
P.C. = 664+56.20
P.I. = 674+85.13
P.T. = 685+01.76

CURVE DATA - RELOCATED T.R.#353

(A)	(B)	(C)	(D)
Δ = 17° 25'	Δ = 10° 05' 17"	Δ = 5° 30'	Δ = 5° 30'
D = 10° 00'	D = 10° 00'	D = 3° 00'	D = 3° 00'
R = 572.96'	R = 572.96'	R = 1909.86	R = 1909.86
T = 87.76'	T = 50.69'	T = 91.73	T = 91.73
L = 174.17	L = 100.88'	L = 183.33	L = 183.33

C.L. & W. R.R. (B. & O. R.R.)
(19) Cont. 0.224 Ac.±
(19 SL) Cont. 0.582 Ac.±

LOUIS S. SELOGY
GLORIA J. SELOGY
(20) Cont. 0.197 Ac.±
(20 A) Cont. 0.030 Ac.±
(20 LA) Cont. 0.739 Ac.±
P.R.O. 0.125 Ac.±

DOROTHY J. SLAGGY
(21) Cont. 0.400 Ac.±

JOHN W. SELOGY SR.
(22) Cont. 0.384 Ac.±

CELESTE H. YOB
(23) Cont. 0.464 Ac.±

CHARLES A. HEATHER
EDNA M. HEATHER
(25)

ROBERT L. RADTKA
(26)

ARVINE SWISHER
ESTHER SWISHER
(27)

WILLIAM R. ROSKIE
JACQUELINE ROSKIE
(28) Cont. 0.335 Ac.±

RAYMOND & LUCILLE MARTZ
(30) Cont. 0.311 Ac.±

RAYMOND L. JOHNSON
(37 LA) Cont. 3.934 Ac.±
P.R.O. 0.125 Ac.±

RAYMOND V. LEADING
(24) Cont. 0.046 Ac.±

SEE SHEET 1

Revised 7-24-56

RIGHT-OF-WAY SHEET T.R. 353

STARK COUNTY
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CHICAGO ILLINOIS

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

3/14

STA.-21-12.39

STARK COUNTY
SECTION 6 N.W.Q.
PERRY TWP.
T-10 R-9

SEE SHEET 1

125' 685+01.76

℄ Proposed R/W

P.T. 685+01.76

℄ Construction Limit

680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695

N 40°44'47" W

0.00 689+91

0.00 690+12.99

℄E Proposed U.S. 21

O.L.T. TWP. LINE

125' 691+08.90

125' 691+30.89

R = 7764.44

℄ Construction Limit

℄ Proposed R/W

125' 685+01.76

125' 688+73.10

N 87°25'12" W

125' 688+95.09

SECTION 6
SECTION 31

RAYMOND L. JOHNSON
37 A-LA Cont. 7.088 Ac.±

STARK COUNTY
SECTION 31 S.W.Q.
JACKSON TWP.
T-11 R-9

JEANETTE A. WOOLLEY
CLYDE A. WOOLLEY
38 LA Cont. 14.271 Ac.±

STARK COUNTY
SECTION 31 S.W.Q.
JACKSON TWP.
T-11 R-9

℄ T' Lane

℄ Proposed R/W

℄ Construction Limit

695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710

N 40°44'47" W

℄E Proposed U.S. 21

℄ Construction Limit

℄ Proposed R/W

SEE SHEET 4

Revised 7-24-56

STARK COUNTY
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RIGHT-OF-WAY SHEET - STA. 680+00-710+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

4/14

STA.-21-12.39

JEANETTE A. WOOLLEY
CLYDE A. WOOLLEY
(38 LA) Cont. 14.271 Ac.±

STARK COUNTY
SECTION 36 S.E.Q.
LAWRENCE TWP.
T-1 R-10

N 3°19'55" E
125' 715+89.01
109.22' 716+04.05
25' Dirt Lane
Proposed R/W
Construction Limit
125' 721+08.33
710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725
N 40°44'47" W
0.00 715+00
0.00 717+18.10
℄ Proposed U.S. 21
P.C. 721+08.33
St. 21-1368
TOWNSHIP LINE
Construction Limit
Proposed R/W
125' 713+80.92
N 87°08'06" W
125' 718+47.19
SECTION 36
SECTION 31
125' 721+08.33
125' 721+75
125' 723+00
R = 11331.16
41 X

STARK COUNTY
SECTION 31 S.W.Q.
JACKSON TWP.
T-11 R-9

LOUIS NEISEL
(40 LA) Cont. 1.254 Ac.±

WILLIAM NEISEL
(41 LA) Cont 5.733 Ac.±
(41 X) Cont. 0.403 Ac.±

℄ New Channel
310' 721+65
310' 721+00

EARL T. LINDSAY
GRACE LINDSAY
(42 LA) Cont. 18.597 Ac.±
P.R.O. 0.141 Ac.±

S.E.Q. SEC. 36
N.E.Q. SEC. 36
125' 728+16.53
R = 11584.16'
Proposed R/W
125' 737+29.44
200' 739+75
200' 740+25
WA
125' 739+25
125' 740+25
Construction Limit
Proposed Cattle Underpass
0.00 727+17
725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740
℄ Proposed U.S. 21
N 32°38'27" W
P.T. 737+29.44
Construction Limit
℄ R = 11334.16'
Proposed R/W
125' 726+14.78
N 88°50'11" W
125' 737+29.44

CURVE DATA
Δ = 8° 06' 20"
T = 811.91
R = 11459.16
D = 0° 30' 00"
L = 1621.11
E = 28.73
P.C. = 721+08.33
P.I. = 729+20.24
P.T. = 737+29.44

SEE SHEET 3

SEE SHEET 5

STARK COUNTY
PREPARED AND RECOMMENDED
BY
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CONSULTING ENGINEER
CHICAGO ILLINOIS

Revised 7-28-56

RIGHT-OF-WAY SHEET - STA. 710+00-740+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

5/14

STA.-21-12.39

EARL T. LINDSAY
GRACE LINDSAY
42 LA — Cont. 18.597 Ac.±
P.R.O. 0.141 Ac.±

SEE SHEET 4

Proposed R/W
Construction Limit
740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755
N 32° 38' 27" W
℄ Proposed U.S. 21
Construction Limit
Proposed R/W

STARK COUNTY
SECTION 36 N.E.Q.
LAWRENCE TWP.
T-1 R-10

EARL T. LINDSAY
GRACE LINDSAY
42 LA — Cont. 18.597 Ac.±
P.R.O. 0.141 Ac.±

BYRON P. BOWERS
RUTH BOWERS
45 — Cont. 0.639 Ac.±

SEE SHEET 6

SEE SHEET 7

THEODORE D. LONG
ALICE M. LONG
54 LA — Cont. 0.047 Ac.±
P.R.O. 0.042 Ac.±
54 — Cont. 0.104 Ac.±

DOROTHY O. LONG
55 LA — Cont. 0.549 Ac.±
P.R.O. 0.127 Ac.±

ALTA M. GEORGE
EDWIN GEORGE
60 LA — Cont. 9.189 Ac.±
P.R.O. 0.031 Ac.±

STARK COUNTY
SECTION 25 S.W.Q.
LAWRENCE TWP.
T-1 R-10

Existing R/W
℄ C.T.R. #3522
N 89° 33' 27" W
Existing R/W
℄ Proposed U.S. 21
Construction Limit
Proposed R/W
SECTION 36 N.E.Q.
SECTION 25 S.E.Q.
SECTION 36 N.W.Q.
SECTION 25 S.W.Q.
N 2° 11' 38" E
Basement House
1½ Story Brick House
Gravel Drive
M.H. to Septic Tank
Concrete Drive
Proposed R/W
Construction Limit
℄ C.T.R. #3522
N 89° 33' 27" W
Existing R/W
RELOCATED T.R. # 344
Existing R/W
℄ S.L.
N 69° 41' 38" E
Existing R/W

KERMIT H. SHANKLIN
MARIE S. SHANKLIN
56 LA — Cont. 1.160 Ac.±
P.R.O. 0.315 Ac.±

STARK COUNTY
SECTION 36
LAWRENCE TWP.
T-1 R-10

SEE SHEET 7

SEE SHEET 6

SEE SHEET 8

STARK COUNTY
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CHICAGO ILLINOIS

Revised 7-24-56

RIGHT-OF-WAY SHEET - STA. 740+00-770+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

6/14

STA.-21-12.39

STARK COUNTY
SECTION 36 NWQ
LAWRENCE TWP.
T-1 R-10

STARK COUNTY
SECTION 25 S.W.Q.
LAWRENCE TWP.
T-1 R-10

SEE SHEET 7

HARRY MAXHIMER
OSEE MAXHIMER
(43) Cont. 0.048 Ac.±

SIDNEY J. PREECE
(46) Cont. 0.185 Ac.±

ALFORD L. COLES
CLARIS E. COLES
(44) Cont. 0.287 Ac.±

BYRON P. BOWERS
RUTH BOWERS
(45) Cont. 0.639 Ac.±

ALTA M. GEORGE
EDWIN GEORGE
(60 LA) Cont. 9.189 Ac.±
P.R.O. 0.031 Ac.±

DOROTHY O. LONG
(55 LA) Cont. 0.55 Ac.±
P.R.O. 0.127 Ac.±

EARL T. LINDSAY
GRACE LINDSAY
(42-B) Cont. 0.158 Ac.±
(42-A) Cont. 0.021 Ac.±

KERMIT H. SHANKLIN
MARIE S. SHANKLIN
(56 LA) Cont. 1.160 Ac.±
P.R.O. 0.315 Ac.±
(56) Cont. 1.616 Ac.±

HAROLD J. SIMON
GLADYS M. SIMON
(59) Cont. 0.064 Ac.±

℄ T.R.352 = Sta. 50+00

℄ Proposed U.S. 21 N 32° 38' 27" W

RELOCATED T.R.#344

SEE SHEET 7

STARK COUNTY
SECTION 36 N.E.Q.
LAWRENCE TWP.
T-1 R-10

STARK COUNTY
SECTION 25
LAWRENCE TWP.
T-1 R-10

STARK COUNTY
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Revised 7-24-56

RIGHT-OF-WAY SHEET T.R. 344

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

7/14

STA.-21-12.39

BYRON WOLGAMOT
(52) Cont. 0.022 Ac.±

CARL S. MYERS
MARY F. MYERS
(53) Cont. 0.109 Ac.±

STARK COUNTY
SECTION 25 S.W.Q.
LAWRENCE TWP.
T-1 R-10

ALTA M. GEORGE
EDWIN GEORGE
(60) Cont. 0.463 Ac.±

THEODORE D. LONG
ALICE M. LONG
(54) Cont. 0.104 Ac.±

SEE SHEET 6

SAMUEL D. SHERRETS
ETHEL SHERRETS
(47) Cont. 0.269 Ac.±

BYRON WOLGAMOT
(48) Cont. 0.057 Ac.±

STARK COUNTY
SECTION 36 N.W.Q.
LAWRENCE TWP.
T-1 R-10

SIDNEY J. PREECE
(46) Cont. 0.185 Ac.±

BYRON P. BOWERS
RUTH BOWERS
(45) Cont. 0.639 Ac.±

SEE SHEET 6

SEE SHEET 6

STARK COUNTY
SECTION 25 S.E.Q.
LAWRENCE TWP.
T-1 R-10

KERMIT H. SHANKLIN
MARIE S. SHANKLIN
(56) Cont. 1.616 Ac.±

HARVEY F. ALLMAN
REA F. ALLMAN
(57)

EARL T. LINDSAY
GRACE LINDSAY
(42) Cont. 0.422 Ac±

STARK COUNTY
SECTION 36 NEQ
LAWRENCE TWP.
T-1 R-10

STARK COUNTY
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CHICAGO ILLINOIS

Revised 7-24-56

RIGHT-OF-WAY SHEET T.R. 352

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

8/14

STA.-21-12.39

ALTA M. GEORGE
EDWIN GEORGE
(60 LA) Cont. 9.189 Ac.±
PRO. 0.031 Ac.±

WILLIAM D. SOURS
(51 LA) DON M. SOURS
Cont. 0.262 Ac.±

N 0° 12' 33" E

125' 778+09.41

N 89° 47' 27" W

125' 780+34.47

Proposed R/W

Construction Limit

9.00' 780+03

23.62' 779+68.95

770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785

℄ Proposed U.S. 21

N 32° 38' 27" W

45.49' 780+73.45

Construction Limit

℄ Proposed R/W

138.57' 782+17.61

125' 779+00

140.94' 780+11.86

167.60' 781+88.87

179.25' 782+80.62

JOHN ASTON
(61 LA) Cont. 0.295 Ac.±

JEWELL ROSE
(62 LA) Cont. 0.030 Ac.±

SEE SHEET 5

STARK COUNTY
SECTION 25
LAWRENCE TWP.
T-1 R-10

MATTIE CHOVAN
SUSAN CHOVAN
PAUL SIROTAK aka PAUL SIROTIAK
(63 LA) Cont. 17.692 Ac.±

T.L. gas

125' 792+00

165' 793+00

℄ 3 Stream

Proposed R/W

Construction Limit

165' 793+07.55

℄ 2 Stream

T.S. 794+07.55

785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800

N 32° 38' 27" W

℄ Proposed U.S. 21

℄ 1 Stream 795+14

Swamp

Construction Limit

125' 786+00

125' 790+00

℄ Proposed R/W

NOTE:
TO BE ACQUIRED
SUM. 11.49
ON WAY. 0.00
STA. 0.00

(63 WA) MATTIE CHOVAN & SUSAN CHOVAN

45°

10'

℄ 5 Stream

165' 797+00

125' 793+07.55

SEE SHEET 9

STARK COUNTY
SECTION 25
LAWRENCE TWP.
T-1 R-10

STARK COUNTY
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BY
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CONSULTING ENGINEER
CHICAGO ILLINOIS

ADDED 63 WA 11-25-60 S.J.S.

Revised 7-24-59

RIGHT-OF-WAY SHEET - STA. 770+00-800+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

9/14

STA.-21-12.39

CURVE DATA NO. 3

D	= 2° 00' 00"	X	= 5.24
L_s	= 300.00	Y	= 299.92
Δ	= 32° 39'	P	= 1.31
Δ_s	= 3° 00'	P.I.	= 808+97.04
Δ_c	= 26° 39'	T_s	= 739+07.55
T_s	= 988.49	S_c	= 802+07.55
R_c	= 1332.50	C_s	= 815+40.05
R	= 2864.94	S.T.	= 818+40.05
E	= 121.72		
C	= 200.03		
V	= 100.02		

STARK COUNTY
SECTION 25
LAWRENCE TWP.
T-1 R-10

STARK COUNTY
SECTION 26
LAWRENCE TWP.
T-1 R-10

SEE SHEET 8

T Gravel Lane

125' 802+07.55

S.C. 802+

07.55

Proposed R/W

125' 807+81.64

N 1° 30' 40" E

R = 2739.94

Construction Limit

800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815

℄ Proposed U.S. 21

0.00 808+88.70

℄ 815+03

℄ of Ravine

℄ of Ravine

End of Ravine

MATTIE CHOVAN
SUSAN CHOVAN
PAUL SIROTAK aka PAUL SIROTIAK

(63 LA) Cont. 17.692 Ac.±

125' 802+07.55

Construction Limit

Proposed R/W

R = 2989.94

125' 809+84.08

PP SECTION 26 N.E.Q. SECTION 25 N.W.Q.

64 WA

W.D. SOURS
DON M. SOURS
(64 LA) Cont. 18.197 Ac.±

125' 816+00

150' 820+00

10' Logging Road

Proposed R/W

Construction Limit

C.S. 815+40.05

S.T. 818+40.05

℄ 4' Stream

125' 823+00

℄ 4' Stream

N

815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830

℄ Proposed U.S. 21

N 65° 17' 27" W

Possible Filled In Shaft

11' Dia.

7' Dia.

℄ 815+03

Construction Limit

Proposed R/W

125' 816+40.05

125' 823+00

150' 824+00

125' 825+00

50'

30'

125' 816+40.05

64 WA

W.D. SOURS & DON M. SOURS OWNERS
WILLIAM B. YOUNG HOLDER OF LAND CONTRACT

NOTE:
TO BE ACQUIRED
SUM 11.49
ON WAY 0.00
STA. 0.00

SEE SHEET 10

Revised 7-27-61

STARK COUNTY
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ADDED 64-WA 11-25-60

RIGHT-OF-WAY SHEET - STA. 800+00-830+00

FED-RD-DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

10/14

STA.-21-12.39

W.D. SOURS
DON M. SOURS
64 LA Cont. 18.197 Ac.±

STARK COUNTY
SECTION 26 N.W.Q.
LAWRENCE TWP.
T-1 R-10

9' Private Dirt Road
Proposed R/W
180' 836+50
149.36' 838+43.71
125' 840+00
125' 830+00
Rock Outcrop
Water Seepage
℄ 1' Stream
Construction Limit
SECTION 26 N.W.Q.
SECTION 23 S.W.Q.
0.00 839+11.15
SEE SHEET 9
830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845
℄ Proposed U.S. 21
N 65° 17' 27" W
5' Dia. Field Stone Lined Hole 54' Deep.
SECTION 26 N.W.Q.
SECTION 26 N.E.Q.
Construction Limit
Proposed R/W
Water Hole 3.5' Deep
Clearing
Saw Mill
Logging Road
125' 839+68.16
SECTION 26 N.E.Q.
SECTION 23 S.E.
APPROXIMATE LOCATION OF SECTION LINE
N. 0° 19' 33" E.

STARK COUNTY
SECTION 23 S.W.Q.
LAWRENCE TWP.
T-1 R-10

Proposed R/W
125' 848+01.48
150' 849+28'
125' 849+85.35'
65 X
150' 849+75
122' 849+75
125' 851+01.48
125' 851+50
65 Y
150' 851+50
150' 852+40
125' 852+40
Construction Limit
R = 2989.79
℄ ST 21-1610
845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860
℄ Proposed U.S. 21
N 65° 17' 27" W
T.S. 848+01.48
S.C. 851+01.48
Construction Limit
℄ New Channel
125' 851+01.48
Proposed R/W
125' 848+01.48
℄ St. Drainage Ditch
R = 2739.79
SEE SHEET 11

CURVE DATA

D =	2° 00' 00	X =	5.24
Ls =	3 00.00	Y =	299.92
Δ =	41° 00'00"	P =	1.31
Δs =	3°00' 00"	K =	149.98
Δc =	35° 00'00"	P.I =	860 + 23.05
Ts =	1221.57	T.S =	848 + 01.48
Lc =	1750.00	S.C =	851 + 01.48
Rc =	2864.79	C.S =	868 + 51.48
E =	195.09	S.T. =	871 + 51.48
LT =	200.03		
ST =	100.02		

ROBERT D. CLAY
65 LA Cont. 17.227 Ac.±
65 X Cont. 0.029 Ac.±
65 Y Cont. 0.052 Ac.±
65 Z Cont. 0.170 Ac.±

STARK COUNTY
PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

Revised 7-24-56

RIGHT-OF-WAY SHEET - STA. 830+00-860+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

11/14

STA. 21-12.39

ROBERT D. CLAY
65 LA Cont. 17.227 Ac.±
65 Z Cont. 0.170 Ac.±
65 X Cont. 0.029 Ac.±
65 Y Cont. 0.052 Ac.±

SEE SHEET 10

STARK COUNTY
SECTION 23 S.W.Q.
LAWRENCE TWP.
T-1 R-10

NOTE:
TO BE ACQUIRED
SUM. 11.49
ON WAY. 0.00
STA. 0.00
65 WA
ROBERT D. CLAY

BERNARD S. NICHOLS
66 LA Cont. 3.306 Ac.±
P.R.O. 0.242 Ac.±

SEE SHEET 12

JAMES E. BRIGHAM
ANNA M. BRIGHAM
67 LA Cont. 3.208 Ac.±

STARK COUNTY
SECTION 22 S.E.Q.
LAWRENCE TWP.
T-1 R-10

CHRISTINA TIPPEL
69 LA Cont. 20.20 Ac.±
P.R.O. 0.048 Ac.±

SEE SHEET 13

STARK COUNTY
PREPARED AND RECOMMENDED
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CHARLES E. DE LEUW
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CHICAGO ILLINOIS

ADDED 65-WA 11-25-60

Revised 7-29-59

RIGHT-OF-WAY SHEET - STA. 860+00-890+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

12/14

STA - 21 - 12.39

STARK COUNTY
SECTION 22 S.E.Q.
LAWRENCE TWP.
T-1 R-10

JAMES E. BRIGHAM
ANNA M. BRIGHAM

(67 A) Cont. 0.453 Ac.±

(67 B) Cont. 0.275 Ac.±

(67 C) Cont. 0.222 Ac.±

(67 D) Cont. 0.160 Ac.±

ROBERT D. CLAY
(65 A) Cont. 0.131 Ac.±

STARK COUNTY
SECTION 23 S.W.Q.
LAWRENCE TWP.
T-1 R-10

BERNARD S. NICHOLS
(66 LA) Cont. 3.306 Ac.±
P.R.O. 0.242 Ac.±

BERNARD S. NICHOLS
(66 A) Cont. 0.647 Ac.±
(66 B) Cont. 0.724 Ac.±
(66 D) Cont. 0.272 Ac.±
(66 E) Cont. 0.020 Ac.±

STARK COUNTY
SECTION 23 S.W.Q.
LAWRENCE TWP.
T-1 R-10

SEE SHEET 11

MATCH LINE STA. 1+50

MATCH LINE - STA. 1+50

Barn
Garden
Gar
2 st. Conc. Bl. House
10' Gravel Drive
Concrete Bridge
Proposed R/W
Existing R/W
Construction Limit
℄ T.R.#356
℄ T.R.#357
℄ Proposed U.S. 21
N 18° 03' 24" E
N 2° 38' 37" E
N 79° 36' 23" W
N 24° 17' 27" W
N 38° 58' 27" W
N 46° 37' 09" E
N 25° 29' 38" E
1 Stop Sign
SECTION 22 S.E.Q.
SECTION 23 S.W.Q.
S.T. 871+51.48
41.78' 46+87.81
131.86' 46+99.33
75' 45+67.31
125' 863+82.87
125' 870+25.47
148.20' 47+38.06
125' 870+25
125' 871+51.48
125' 872+08.13
125' 872+25.63
125' 872+80.98
125' 872+93.39
125' 872+51.13
114.73' 50+92.56
70' 55+33.95
0.00 55+41
20' 55+50.73
0.00 872+25.63
0.00 872+25.53
0.00 871+51.48
0.00 51+32.27
20' 51+33.19
20' 51+49.57
20' 51+25.35
20' 47+66.61
20' 47+80.31
20' 48+67.73
20' 48+80.81
20' 55+43.27
20' 40+50
20' 60+50
30' (℄357) 0+20.67
55' (℄357) 0+06.81
50' 42+00
40' 44+00
50' 46+00
20' 47+50
30' (℄357) 0+20.00
50' (℄357) 0+63.33
30' (℄357) 0+41.06
60.65' (℄357) 0+20.00
20.0' (℄354) 48+74.65
30' 5+00
55' 3+00
50' 3+00
30' RC P.C.
Revised 7-29-76

SEE SHEET 11

STARK COUNTY
PREPARED AND RECOMMENDED
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RIGHT-OF-WAY SHEET T.R. 356

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010 (4)	

13/14

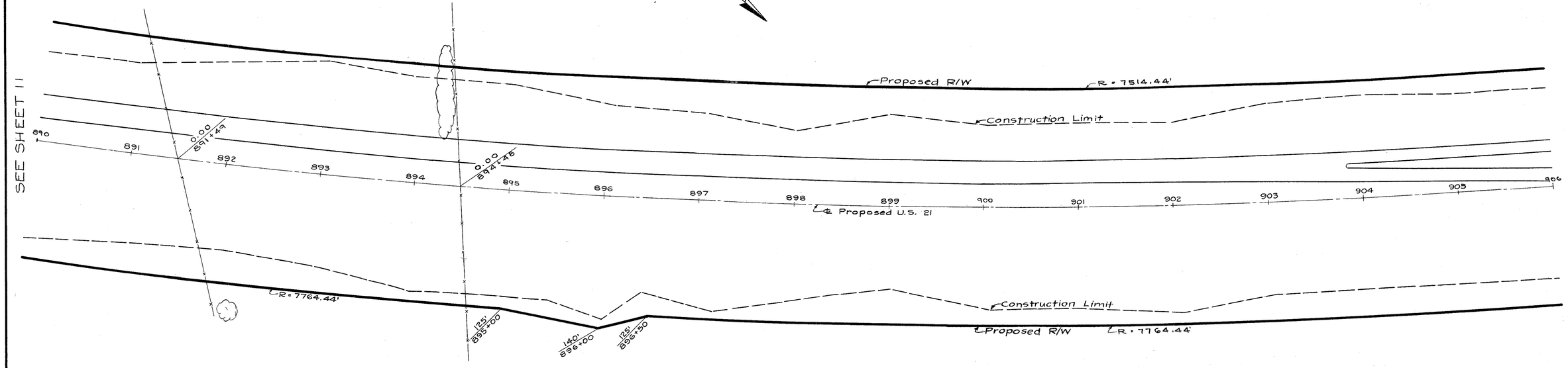
STA.-21-12.39

CURVE DATA

Δ = 29° 30' 24
D = 0° 45' 00
R = 7639.44
T = 2011.77
L = 3934.22
E = 260.45

P.I. = 899+72.13
P.C. = 879+60.36
P.T. = 918+94.58 BK.
= 917+27.79 AH

STARK COUNTY
SECTION 22
LAWRENCE TWP.
T-1 R-10

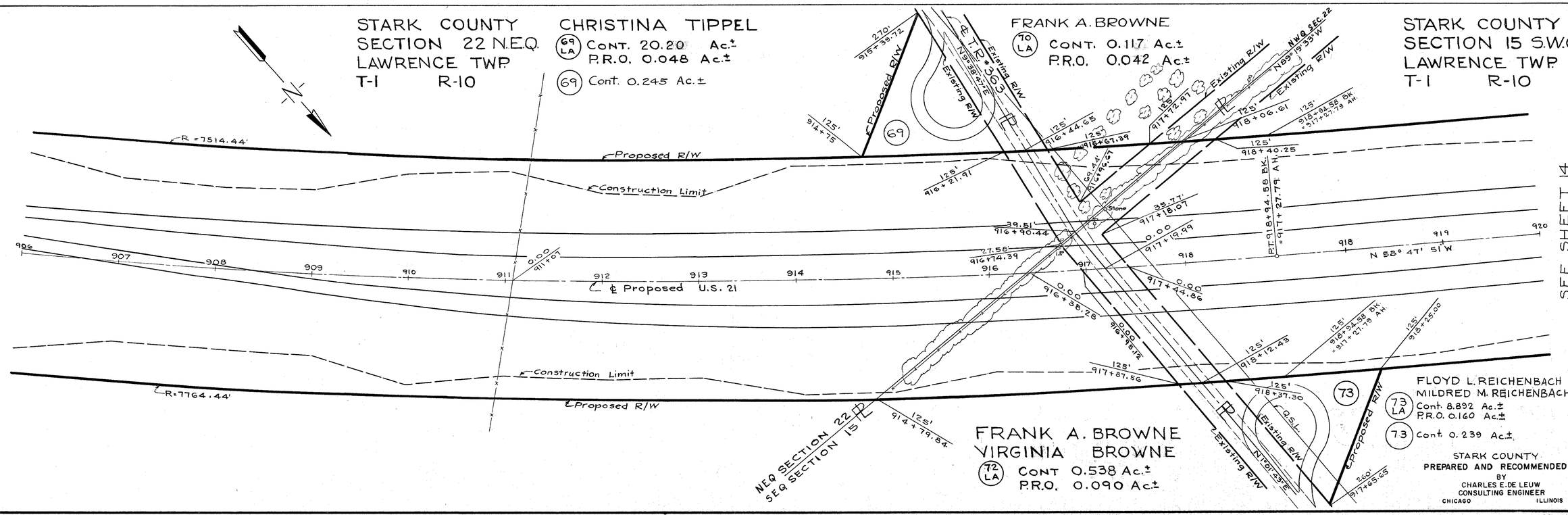


STARK COUNTY
SECTION 22 N.E.Q.
LAWRENCE TWP.
T-1 R-10

CHRISTINA TIPPEL
(69 LA) Cont. 20.20 Ac.±
P.R.O. 0.048 Ac.±
(69) Cont. 0.245 Ac.±

FRANK A. BROWNE
(70 LA) Cont. 0.117 Ac.±
P.R.O. 0.042 Ac.±

STARK COUNTY
SECTION 15 S.W.Q.
LAWRENCE TWP.
T-1 R-10



FRANK A. BROWNE
VIRGINIA BROWNE
(72 LA) Cont 0.538 Ac.±
P.R.O. 0.090 Ac.±

FLOYD L. REICHENBACH
MILDRED M. REICHENBACH
(73 LA) Cont. 8.892 Ac.±
P.R.O. 0.160 Ac.±
(73) Cont. 0.239 Ac.±

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SEE SHEET 14

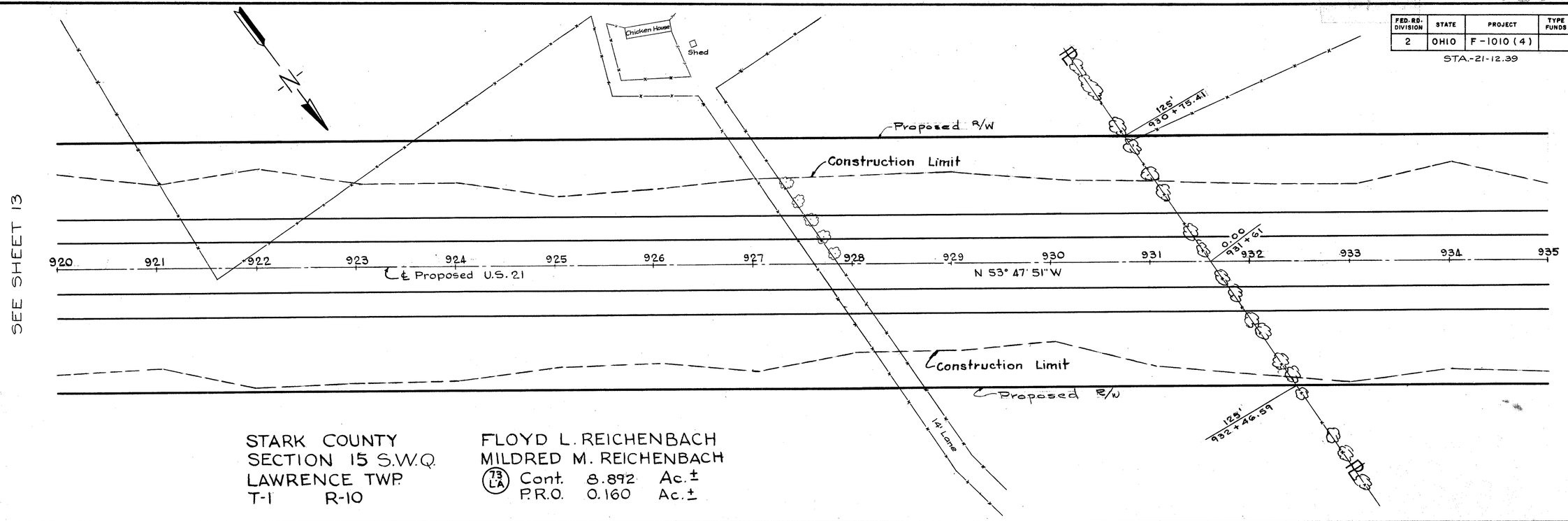
Revised 7-29-55

RIGHT-OF-WAY SHEET - STA. 890+00-920+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	F-1010(4)	

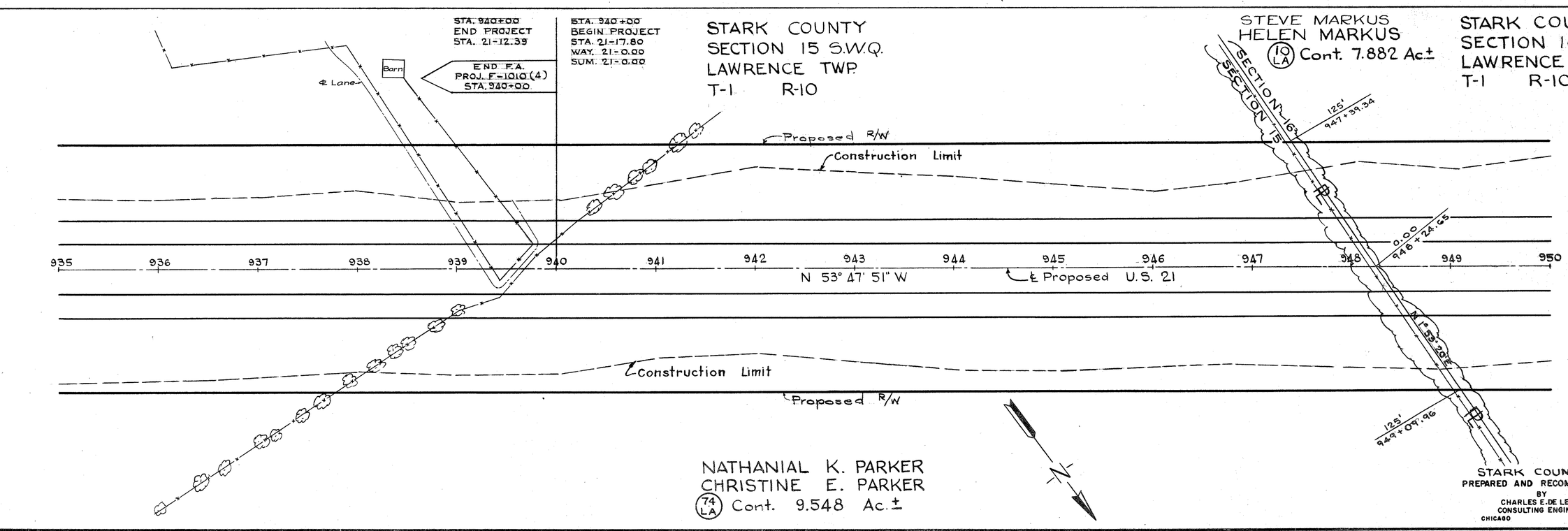
14/14

STA.-21-12.39



STARK COUNTY
SECTION 15 S.W.Q.
LAWRENCE TWP.
T-1 R-10

FLOYD L. REICHENBACH
MILDRED M. REICHENBACH
(73 LA) Cont. 8.892 Ac.±
P.R.O. 0.160 Ac.±



STARK COUNTY
SECTION 15 S.W.Q.
LAWRENCE TWP.
T-1 R-10

NATHANIAL K. PARKER
CHRISTINE E. PARKER
(74 LA) Cont. 9.548 Ac.±

STEVE MARKUS
HELEN MARKUS
(10 LA) Cont. 7.882 Ac.±

STARK COUNTY
SECTION 16
LAWRENCE TWP.
T-1 R-10

STARK COUNTY
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CHICAGO ILLINOIS

Revised 7-27-62

RIGHT-OF-WAY SHEET - STA. 920+00-950+00

SOIL PROFILE

STA - 21 - 12.39

STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

1/11

LEGEND FOR PROJECT - AVERAGE RESULTS OF TESTS — 348 SAMPLES TESTED

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG.	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
GRAVEL &/OR STONE FRAGMENTS	A-1-a	A-1-a	65	15	10	5	5	N.P.	N.P.	13	10
GRAVEL &/OR STONE FRAGMENTS WITH SAND	A-1-b	A-1-b	43	21	19	10	7	N.P.	N.P.	11	18
COARSE & FINE SAND	A-3	A-3a	8	21	48	12	11	N.P.	N.P.	12	16
GRAVEL &/OR STONE FRAGMENTS WITH SAND, SILT	A-2-4	A-2-4	41	15	17	16	11	24	6	13	20
GRAVEL &/OR STONE FRAGMENTS WITH SAND, SILT & CLAY	A-2-6	A-2-6	42	16	12	12	11	32	13	14	6
SANDY SILT	A-4	A-4a	15	7	19	35	24	25	7	14	145
SILT	A-4	A-4b	1	2	10	58	29	27	7	22	38
SILT & CLAY	A-6	A-6a	9	4	11	39	37	31	12	17	54
CLAY	A-6	A-6b	3	2	7	40	48	37	17	21	16
ELASTIC CLAY	A-7-5	A-7-5	5	3	8	39	45	58	25	32	5
CLAY	A-7-6	A-7-6a	1	1	9	44	45	43	20	26	8
TOP SOIL			VISUAL CLASSIFICATION								
BERM MATERIAL			VISUAL CLASSIFICATION								
PEAT OR ORGANIC MATERIAL											
SANDSTONE											
SHALE											

AUGER BORING PLOTTED TO VERTICAL SCALE ONLY

AUGER BORING - PLAN VIEW

MOISTURE CONTENT NEARLY EQUAL TO OR GREATER THAN THE LIQUID LIMIT.

SWAMP GRASS & ROOTS

NOTES:

1. FIGURES BESIDE BORINGS INDICATE MOISTURE IN PERCENT.
2. U.S.S. IMMEDIATELY ABOVE THE BORING INDICATES THE THICKNESS OF UNSATISFACTORY SUBGRADE SOIL.
3. SAMPLES TESTED - LABORATORY NUMBERS.
   26221 - 26346, 26540 - 26599
   27447 - 27456, 28143 - 28184
   28384 - 28413, 31905 - 31984

SOME OF THESE WERE WEATHERED SHALES, SANDSTONE, OR ORGANIC AND ARE NOT INCLUDED IN ABOVE TABLE.

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SOIL PROFILE

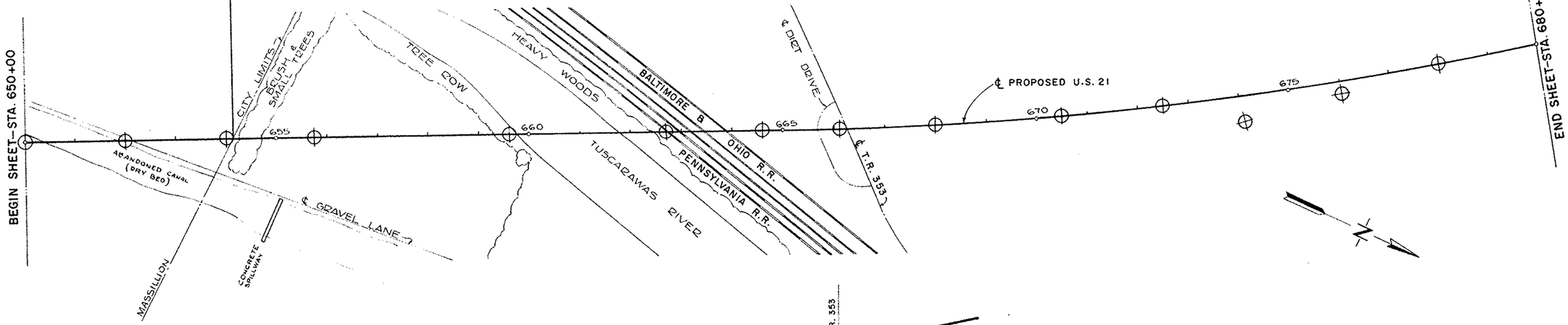
STA - 21 - 12.39

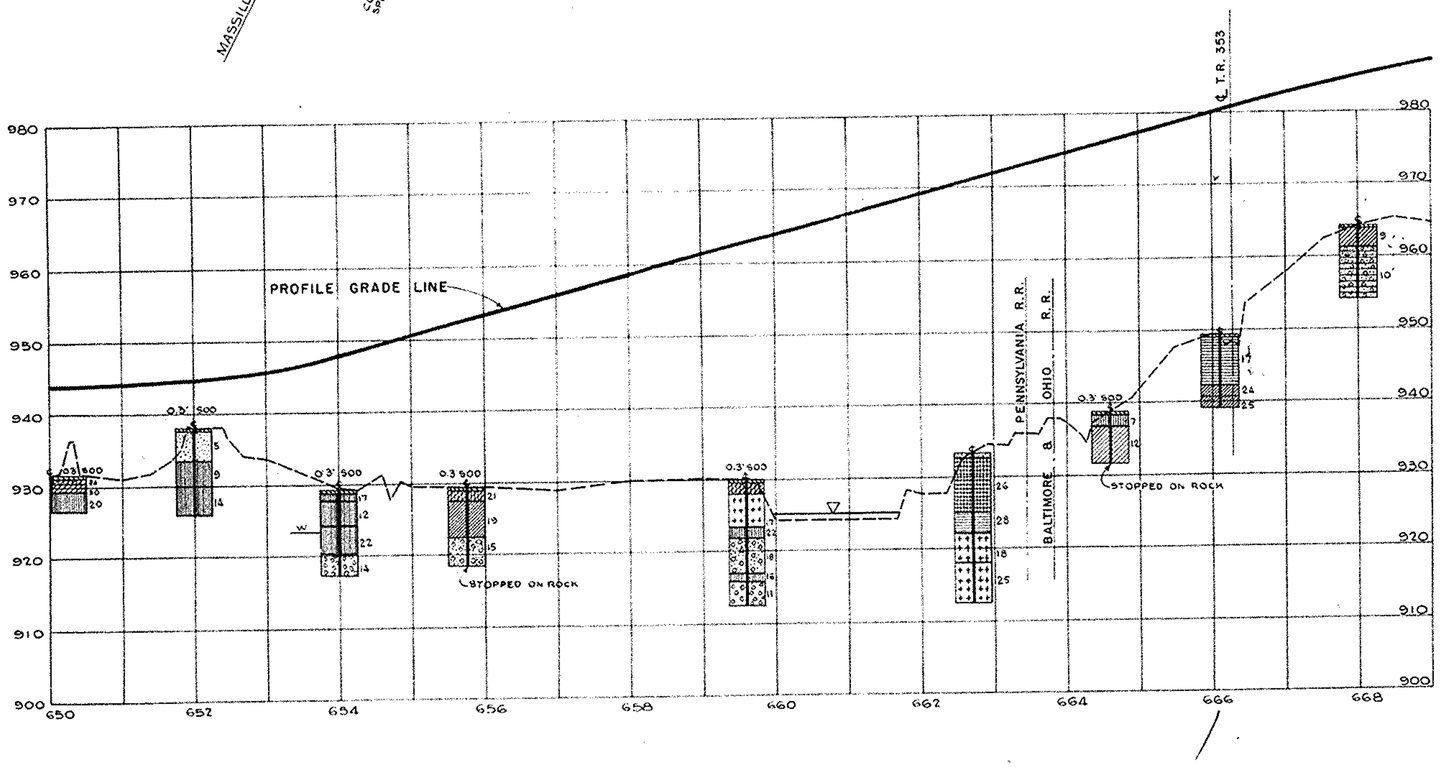
2/11

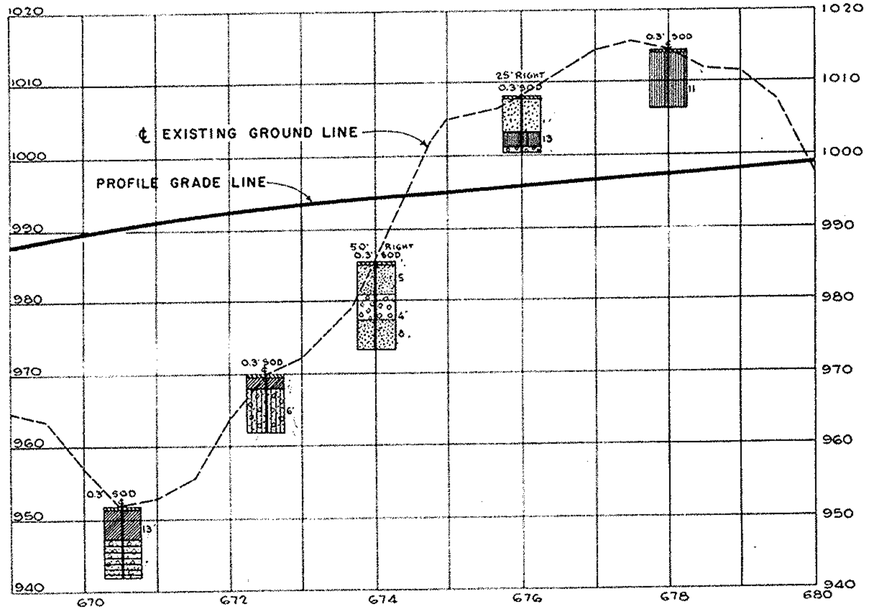
STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O. S. U. CAMPUS, COLUMBUS, OHIO

ANOTHER PROJECT
(BY OTHERS)

BEGIN PROJECT
STA - 21 - 12.39
STA. 654+13.50







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BY
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CHICAGO ILLINOIS

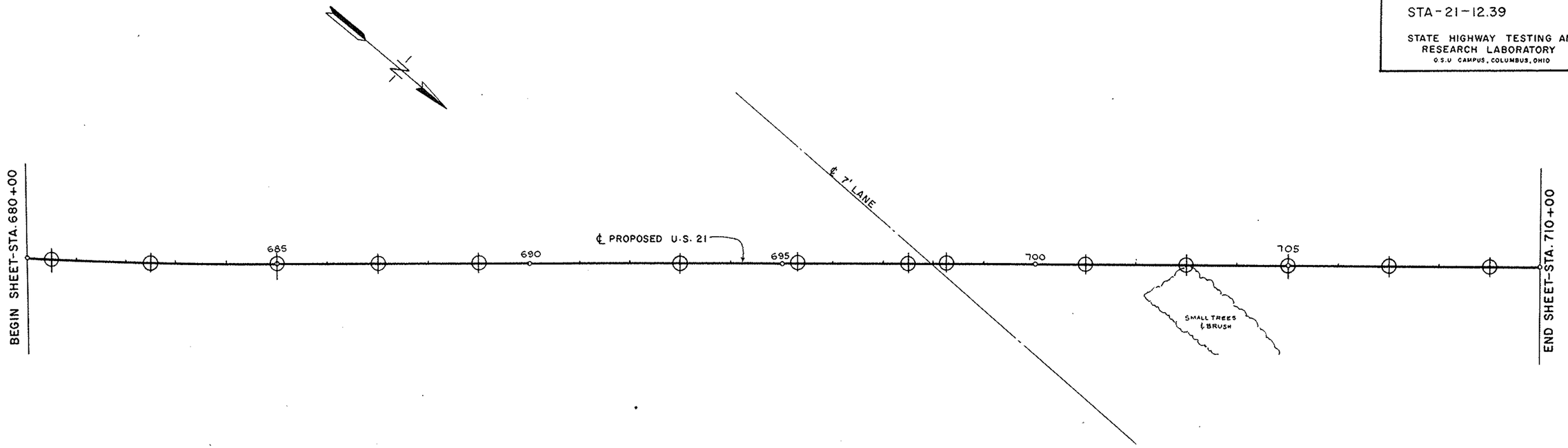
STA. 650+00 TO STA. 680+00

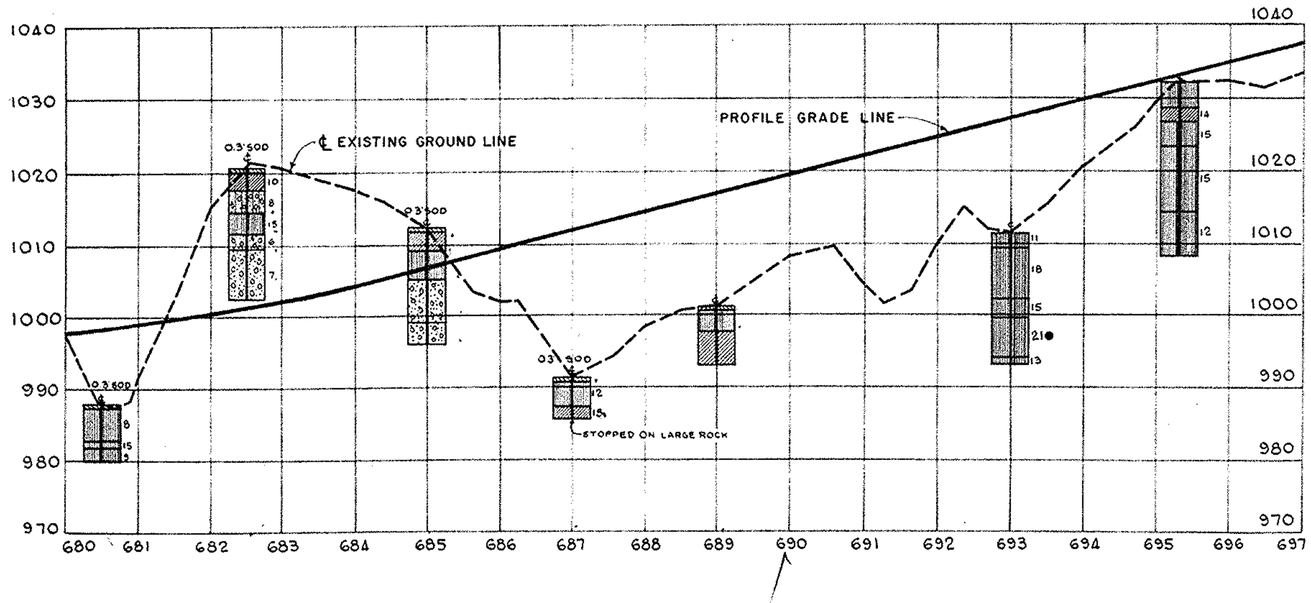
SOIL PROFILE

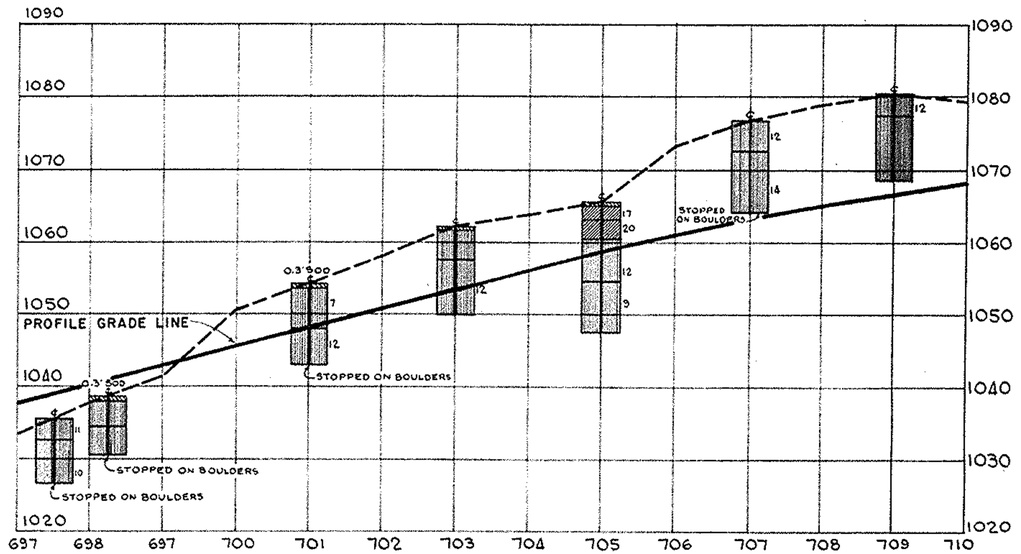
STA-21-12.39

(3/11)

STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O.S.U. CAMPUS, COLUMBUS, OHIO







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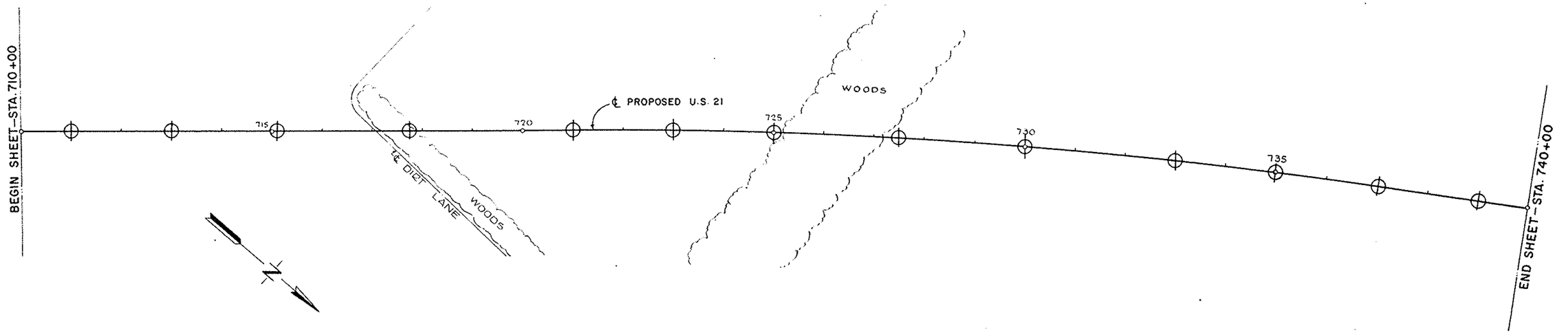
STA. 680+00 TO STA. 710+00

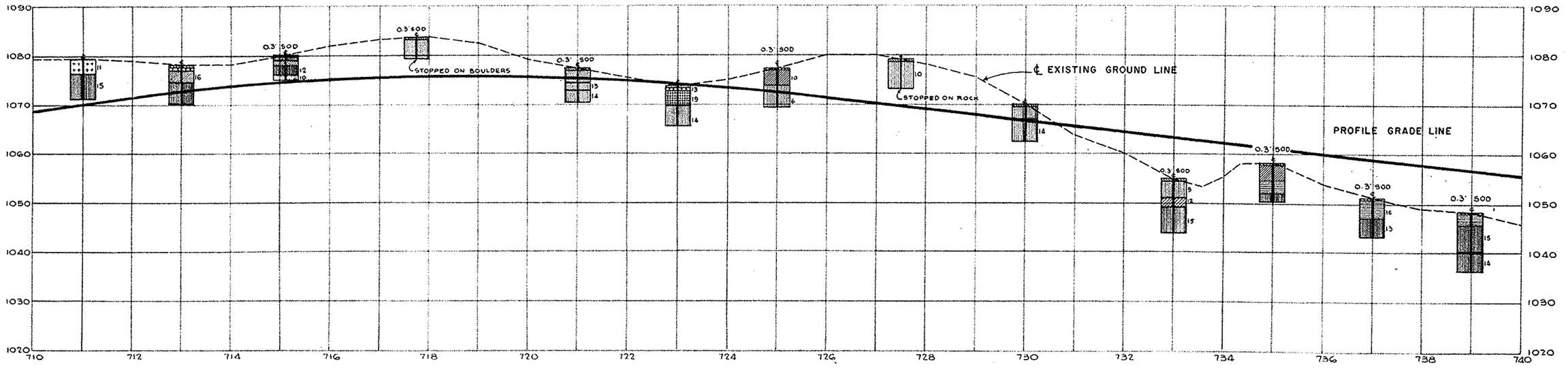
SOIL PROFILE

STA - 21 - 12.39

4/11

STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O.S.U. CAMPUS, COLUMBUS, OHIO





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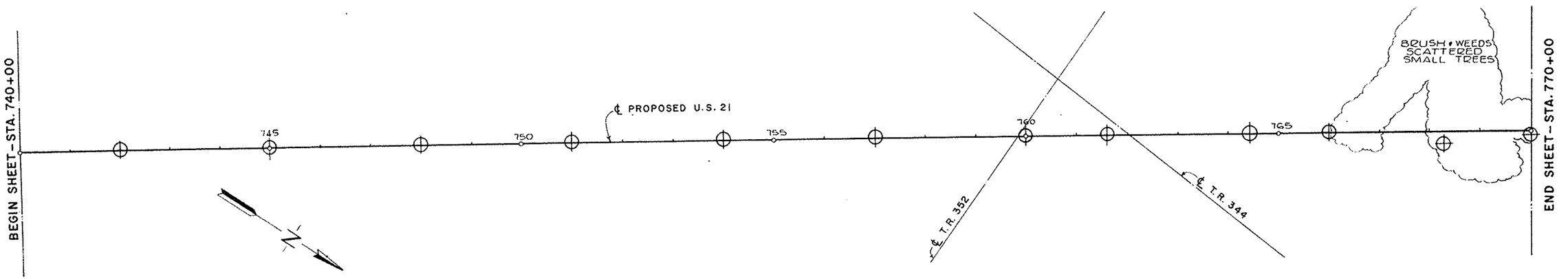
STA. 710+00 TO STA. 740+00

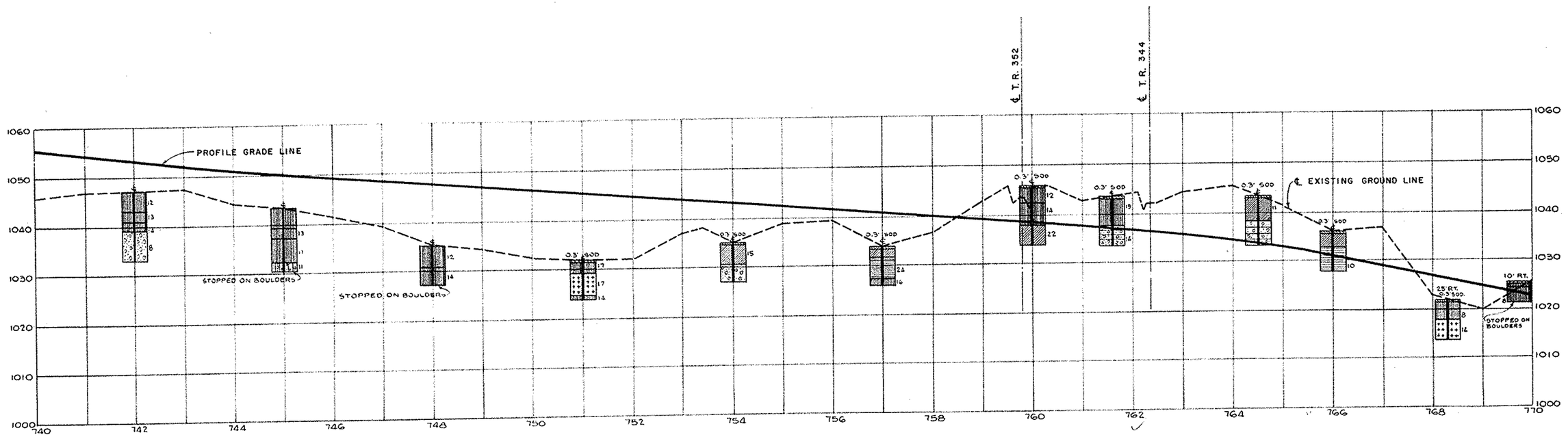
SOIL PROFILE

STA - 21 - 12.39

STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O.S.U. CAMPUS, COLUMBUS, OHIO

5/11





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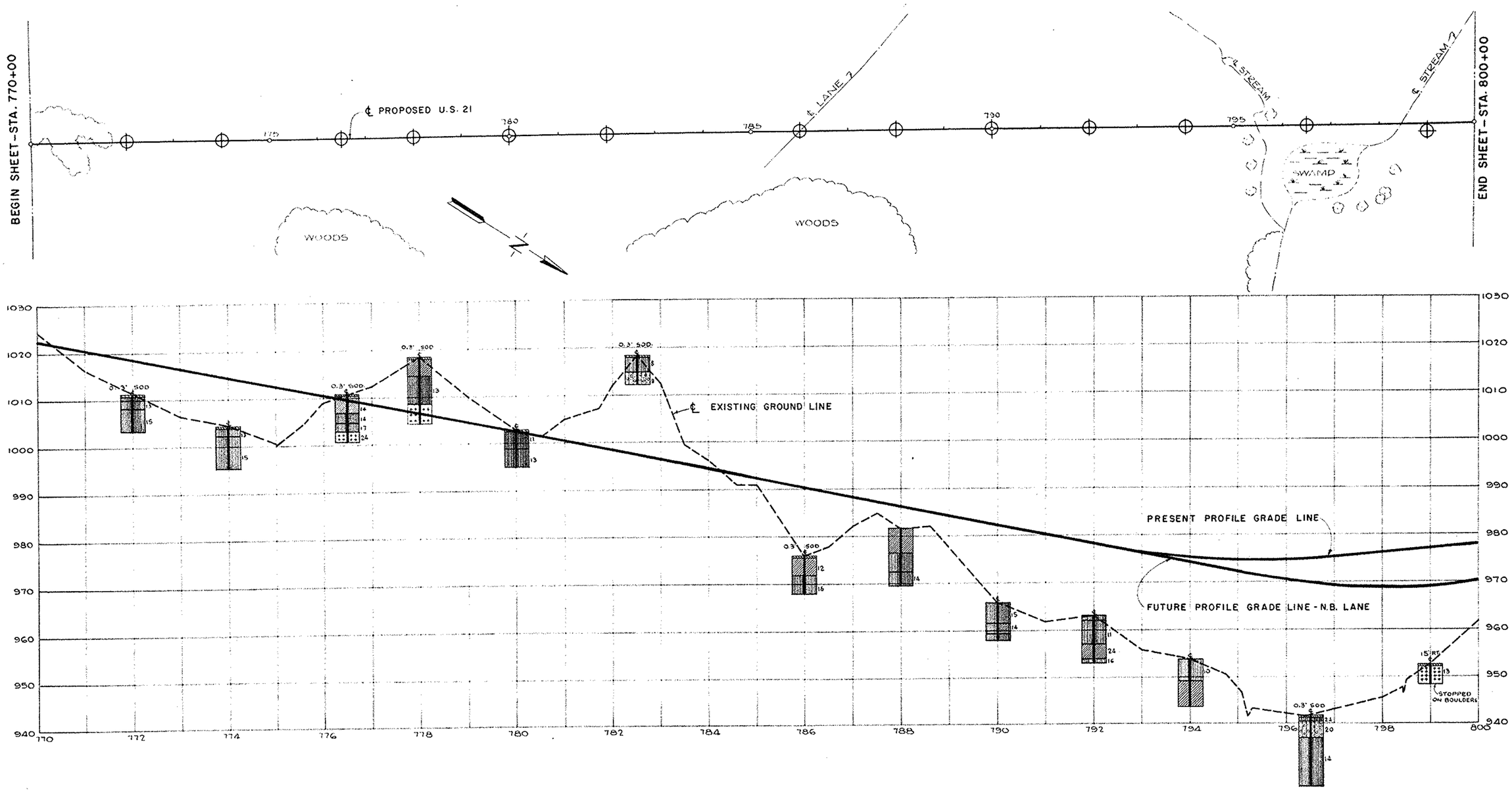
STA. 740+00 TO STA. 770+00

SOIL PROFILE

STA - 21 - 12.39

6/11

STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O.S.U. CAMPUS, COLUMBUS, OHIO



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CHICAGO ILLINOIS

STA. 770+00 TO STA. 800+00

SOIL PROFILE

STA-21-12.39

7/11

STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O.S.U CAMPUS, COLUMBUS, OHIO

BEGIN SHEET-STA. 800+00

℄ BENT LINE

SMALL TREES & BRUSH

HEAVY WOODS

℄ RAVINE

℄ STREAM

END RAVINE

℄ DIRT LOGGING RD.

ABANDONED QUARRY

℄ STREAM

℄ PROPOSED U.S. 21

END SHEET-STA. 830+00

805 810 815 820 825

11'DIA. 7'DIA. POSSIBLE FILLED IN SHAFTS

℄ EXISTING GROUND LINE

PRESENT PROFILE GRADE LINE

FUTURE PROFILE GRADE LINE-N.B. LANE

CORE BORING

0.3' SOD

GLACIAL TILL

Gravel, sand, cobbles, & sandstone boulders in brown clay.

% LOSS-ROCK CORE
Med. firm. gr. & br. Slightly micaceous, fine grained.

GRAY SANDY SHALE

Sandstone boulders & Clay.

% LOSS-ROCK CORE
8 Soft, gr. to Br.

% LOSS
Gr. clay, moist, plastic, with shale fragments.

Dk. gr. & bc, slightly siliceous, very broken, very soft to soft.

Black, carbonaceous shale, siliceous, soft to med. firm, broken at top.

Black, carbonaceous shale, Siliceous, firm.

Dk. gr. to bk., siliceous, in part carbonaceous, hard, firm.

STA. 813+00 30' LT. EL. 998.5

STA. 815+00 70' RT. EL. 986.5

STA. 820+00 - 100' LT. EL. 1015.1

% LOSS-ROCK CORE
- Lt. gr. med. firm, thin beaded.
- Dk. gr. to black. firm to soft, broken.
- Gr., med. firm to friable, argillaceous.
- Br. med. firm, siliceous.
- Gr., siliceous, in part carbonaceous, firm to med. firm.

CORE BORING STA. 823+00 75' LT. EL. 1010

% LOSS-ROCK CORE
- Med. firm to friable, gr. & br. micaceous
- Gr. Siliceous, firm.

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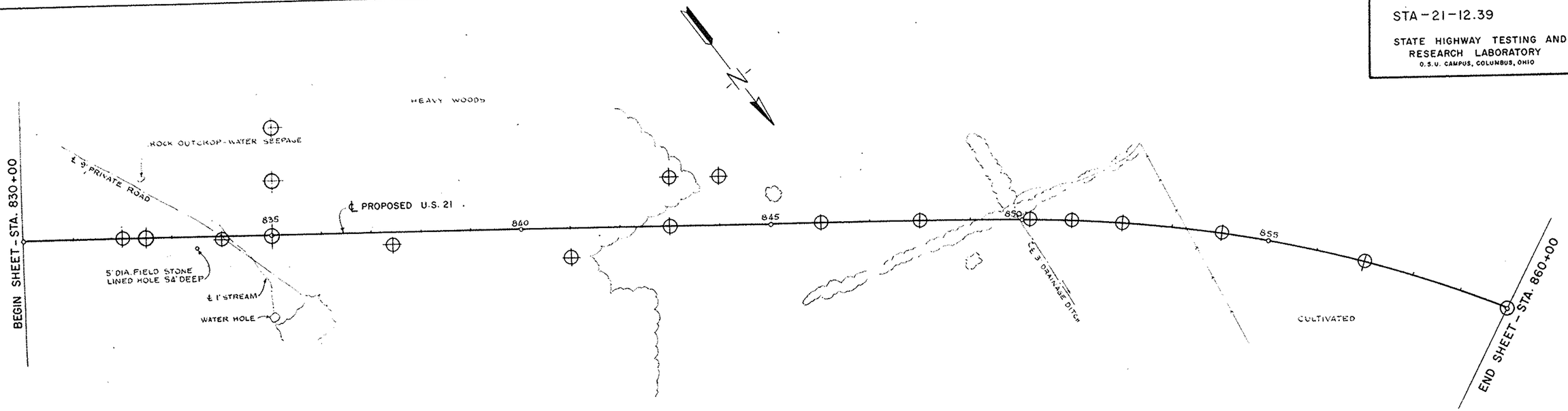
STA. 800+00 TO STA 830+00

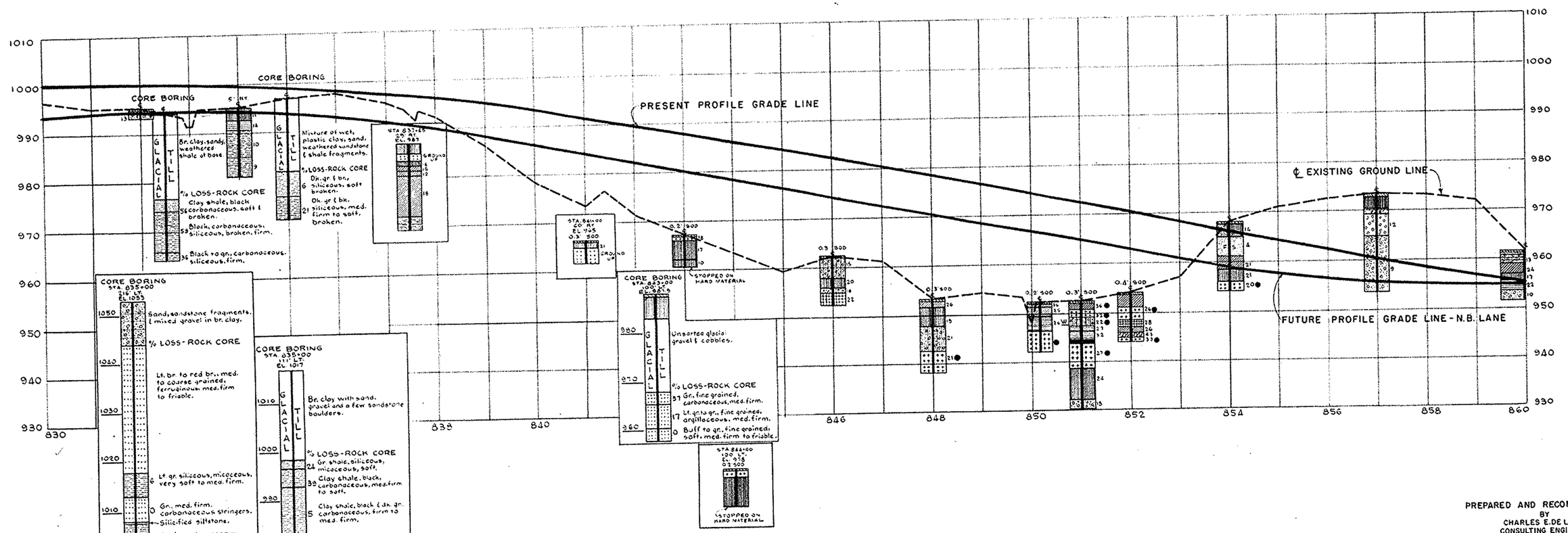
SOIL PROFILE

STA - 21 - 12.39

8/11

STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O.S.U. CAMPUS, COLUMBUS, OHIO





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CONSULTING ENGINEER
CHICAGO ILLINOIS

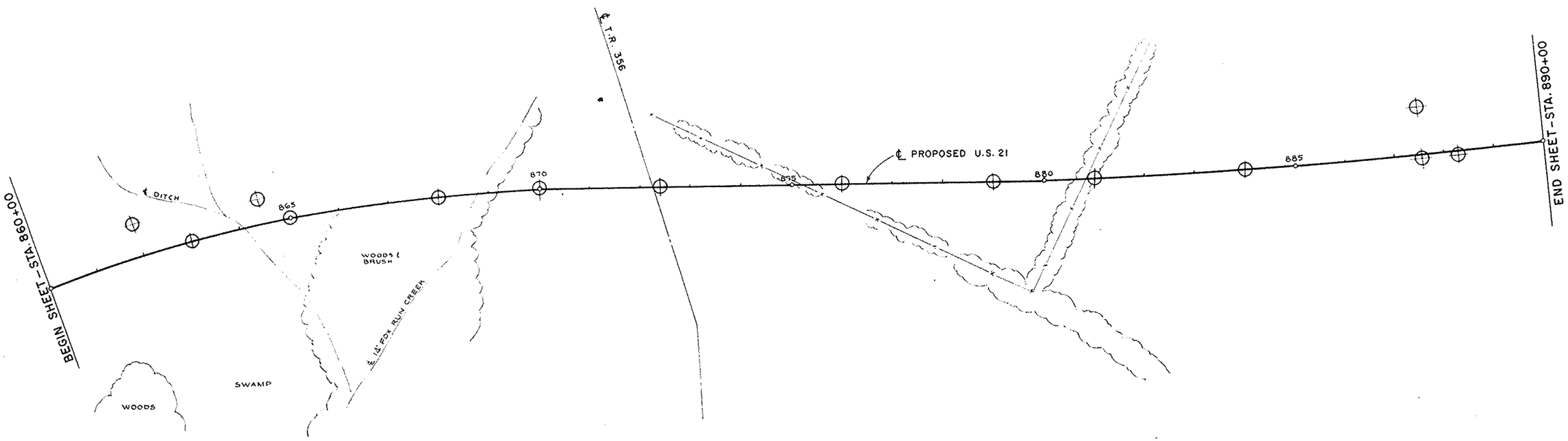
STA. 830+00 TO STA. 860+00

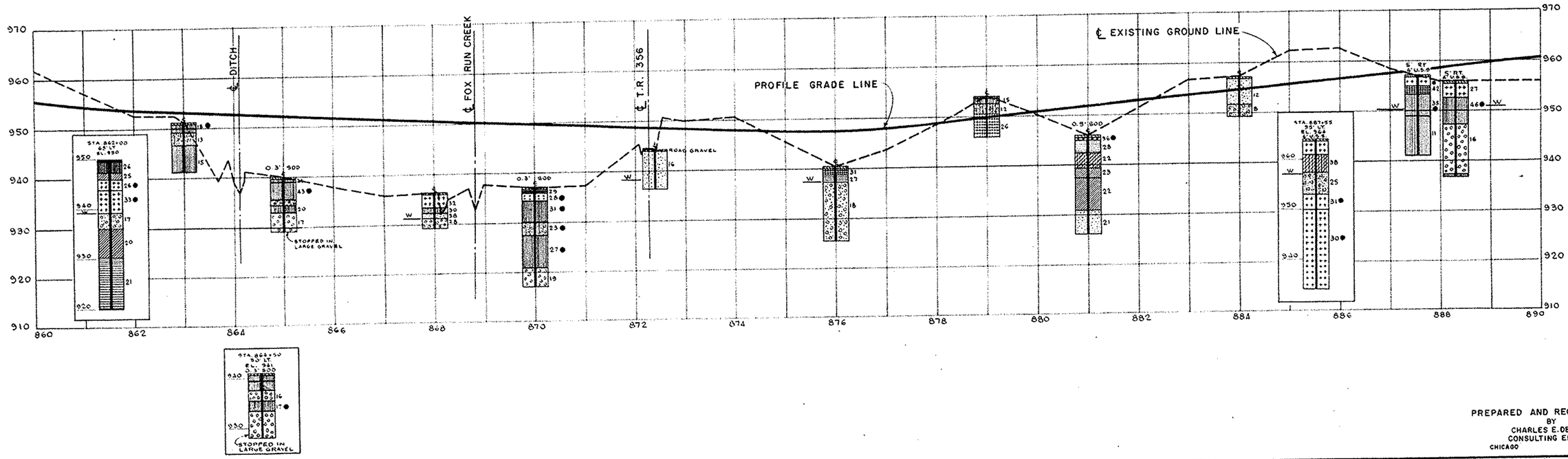
SOIL PROFILE

STA - 21 - 12.39

STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O.S.U. CAMPUS, COLUMBUS, OHIO

9/11





PREPARED AND RECOMMENDED
BY
CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

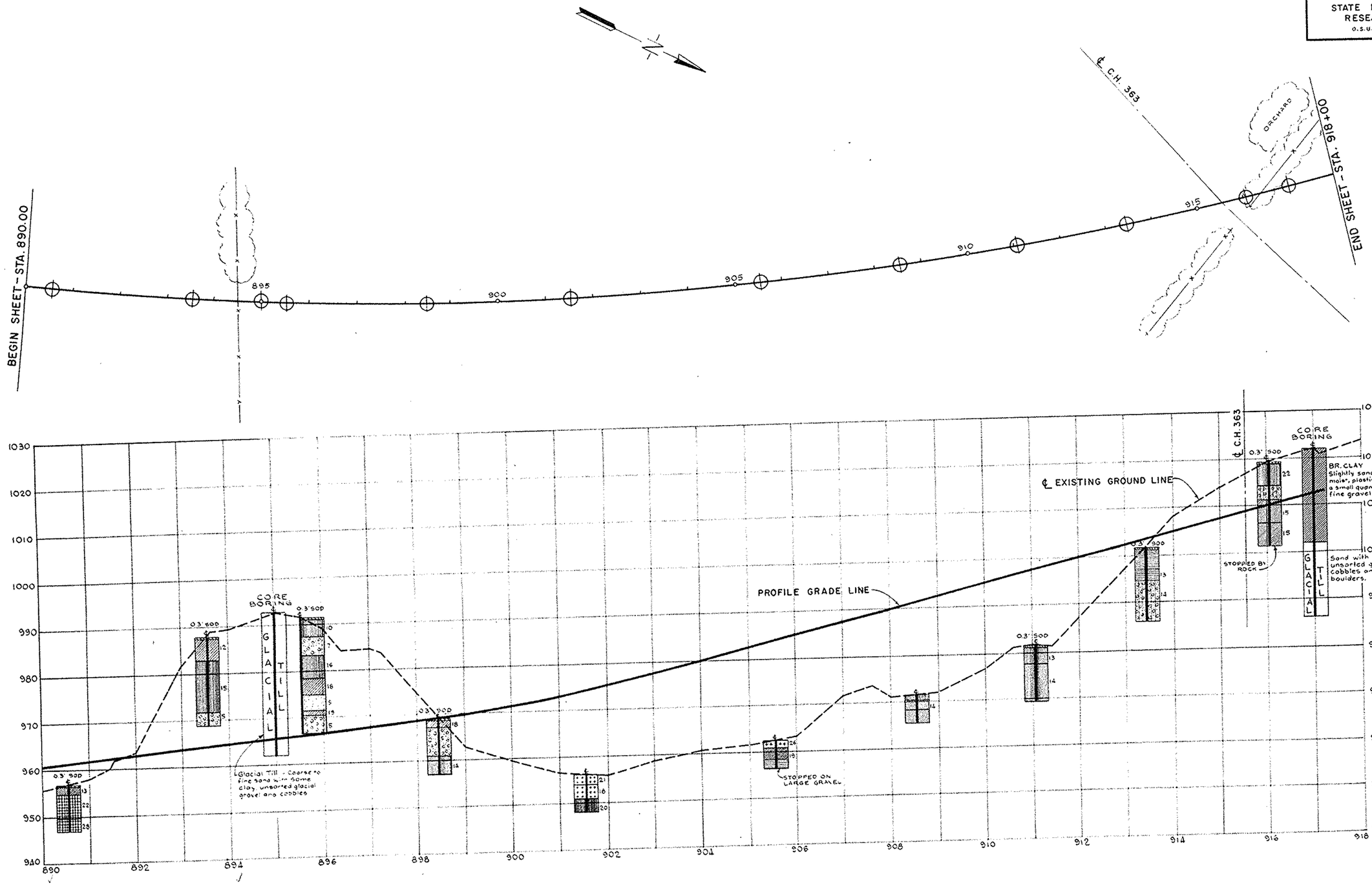
STA. 860+00 TO STA. 890+00

SOIL PROFILE

STA - 21-12.39

10/11

STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O.S.U. CAMPUS, COLUMBUS, OHIO



PREPARED AND RECOMMENDED
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CHARLES E. DE LEUW
CONSULTING ENGINEER
CHICAGO ILLINOIS

STA. 890+00 TO STA. 918+00

PROFILE

STA – 21 – 12.39

STATE HIGHWAY TESTING AND RESEARCH LABORATORY
O S U CAMPUS, COLUMBUS, OHIO

END PROJECT
STA-21-12.39
STA. 940+00

BEGIN PROJECT
STA-21-17.80
WAY-21-000
SUM-21-0.00

STATION EQUATION
STA. 918+94.58 BACK
STA. 917+27.79 AHEAD

BEGIN SHEET - STA. 918+00

℄ PROPOSED U.S. 21

END SHEET - STA. 947+00

STATION EQUATION
STA. 918+94.58 BACK = STA 917+27.79 AHEAD

CORE BORING

CORE BORING

CORE BORING

℄ EXISTING GROUND LINE

PROFILE GRADE LINE

GLACIAL TILL

Gingerless mixture of gravel, coarse and fine sand in matrix of brown sandy clay

Uniform mixture of gravel, coarse and fine sand in matrix of brown sandy clay

STOPPED ON ROCK

1060
1050
1040
1030
1020
1010
1000
990

915 917 919 921 923 925 927 929 931 933 935 937 939 941 943 945 947

PREPARED AND RECOMMENDED
BY
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CONSULTING ENGINEER
CHICAGO ILLINOIS

STA. 918+00 TO STA. 947+