SUPERELEVATION TABLES - ABOUT CENTER LINE

FED. RD. DIVISION	STATE	
2	OHIO	U-UG-1C

STA. 21-10.2

LEFT OF ℄								SURVEY ℄ STATION	RIGHT OF ℄								REMARKS
Speed Change Lane		Outside Edge Pav't.		Inside Edge Pav't.		Storage Lane			Storage Lane		Inside Edge Pav't.		Outside Edge Pav't.		Speed Change Lane		
Elevation	Dist.	Elevation	Dist.	Elevation	Dist.	Elevation	Dist.		Elevation	Dist.	Elevation	Dist.	Elevation	Dist.	Elevation	Dist.	
		For Pav't. Elevations from Sta. 539+75 to Sta. 541+00						See Intersection Detail Sheet No. 82									
		935.27	34.0'	934.67	10.0'			541+00	934.38	1.5'	934.38	4.5'	935.74	30.0'			Full Superelevation 0.025 Ft. Per Ft.
		935.28		934.68	10.0'			541+25	934.39	1.5'	934.39		933.75				
		935.36		934.76	10.0'			541+50	934.47	1.5'	934.47		933.83				
		935.49		934.89	10.0'			541+75	934.60	1.5'	934.60		933.96				
		935.69		935.09	10.0'			542+00	934.80	1.5'	934.80		934.16				P.V.T.
		936.15		935.55	10.0'			542+50	935.26	1.5'	935.26		934.62				
		936.56		935.96	10.0'			543+00	935.71	0.0'	935.71		935.07				
		936.94		936.36	10.0'	936.17	2.5'	543+50			936.17		935.53				
		937.30		936.67	9.0'	936.62	7.0'	544+00			936.62		935.98				
		937.72		937.08	8.5'			544+50			937.08		936.44				
		938.17		937.53				545+00			937.53		936.89				
		938.63		937.99				545+50			937.99		937.35				
		939.08		938.44				546+00			938.44		937.80				
		939.54		938.90				546+50			938.90		938.26				
		939.99		939.35				547+00			939.35		938.71				
		940.45		939.81				547+50			939.81	4.5'	939.17				
		940.90		940.26				548+00	940.26	3.5'	940.20	6.0'	939.59				
		941.36		940.72				548+50	940.72	0.5'	940.58		939.98				
		941.81		941.17		941.17	4.5'	549+00			940.91		940.30				
		942.27		941.63		941.63	5.5'	549+50			941.34		940.74				
		942.72	34.0'	942.08	8.5'	942.08	5.5'	550+00			941.79	6.0'	941.19	30.0'			
		For Pavement Elevations from Sta. 550+50 to Sta. 554+50						See Intersection Detail Sheet No. 82									
		929.18	34.0'	929.48	10.0'			580+00	929.58	0.5'	929.58	2.5'	929.18	28.0'			
		929.05	34.0'	929.35	10.0'			580+17.05	929.45	0.5'	929.45	2.5'	929.05	28.0'			Begin Transition Lt. Lane
		928.97	33.9'	929.29	9.9'			580+35.05	929.33	0.5'	929.33	2.5'	928.93	28.0'			
		928.92	33.8'	929.21	9.8'			580+45.05	929.25	0.5'	929.25	2.5'	928.85	28.0'			T.S.
		928.83	33.7'	929.08	9.7'			580+60	929.15	0.5'	929.15	2.5'	928.75	28.0'			P.V.C.
		928.75	33.2'	928.91	9.2'			580+95.05	928.96	0.5	928.96	2.5'	928.56	28.0'			
		928.75	32.6'	928.84	8.6'			581+25	928.88	0.0'	928.88	2.5'	928.48	28.0'			
		928.78	32.4'	928.85	8.4'	928.88	0.2'	581+55			928.88	2.5'	928.48	28.0'			
		928.86	31.9'	928.90	7.9'	928.91	1.3'	581+55.05			928.91	2.5'	928.49	27.8'			
		928.96	31.6'	928.97	7.6'	928.97	4.0'	581+75			928.97	2.1'	928.49	27.6'			Sta. 581+60 Begin Transition Rt. Lane
		929.21	30.9'	929.11	6.9'	929.10	5.1'	582+00			929.10	2.0'	928.50	27.5'			P.V.I.
		929.52	30.3'	929.29	4.8'			582+25			929.29	1.8'	928.56	27.3'			Sta. 582+48 Rt. Begin Full Superelevation 0.033 Ft. Per Ft.
		929.98	29.5'	929.60	4.0'			582+55.05			929.60	1.6'	928.78	27.1'			
		930.30	29.1'	929.85	3.6'			582+75			929.85	1.5'	928.99	27.0'			
		930.33	29.1'	929.88	3.6'						929.85	1.5'	929.01	27.0'			
		930.84	28.5'	930.23	3.0'			583+00			930.23	1.3'	929.39	26.8'			
		931.22	28.2'	930.52	2.7'			583+17.30			930.52	1.2'	929.68	26.7'			
		931.63	27.9'	930.85	2.4'			583+35.05			930.85	1.1'	930.01	26.6'			
		931.74	27.8'	930.95	2.3'			583+40			930.95	1.0'	930.11	26.5'			P.V.T.
		931.86	27.7'	931.05	2.2'			583+45.05			931.05		930.21				S.C. Begin Full Superelevation 0.033 Ft. Per Ft. Lt.
		932.39	27.2'	931.55	1.7'			583+70			931.55		930.71				
		932.99	26.7'	932.15	1.2'			584+00			932.15		931.31				
		933.35	26.6'	932.51	1.1'			584+18			932.51		931.67				
		933.99	26.5'	933.15	1.0'			584+50			933.15		932.31				
		934.49		933.65				584+75			933.65		932.81				P.V.C.
		934.78		933.94				584+90			933.94		933.10				
		935.42		934.58				585+25			934.58		933.74				
		935.83		934.99				585+50			934.99		934.15				
		936.20		935.36				585+75			935.36		934.52				
		936.40		935.56				585+90			935.56		934.72				
		936.53		935.69				586+00			935.69		934.85				P.V.I.
		936.84		936.00				586+25			936.00		935.16				
		937.00		936.16				586+40			936.16		935.32				
		937.10	26.5'	936.26	1.0			586+50			936.26	1.0'	935.42	26.5'			

SUPERELEVATION TABLES - ABOUT CENTER LINE

FED. RD. DIVISION	STATE	PROJECT
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LEFT OF ℄								SURVEY ℄ STATION	RIGHT OF ℄								REMARKS
Speed Change Lane		Outside Edge Pav't.		Inside Edge Pav't.		Storage Lane			Storage Lane		Inside Edge Pav't.		Outside Edge Pav't.		Speed Change Lane		
Elevation	Dist.	Elevation	Dist.	Elevation	Dist.	Elevation	Dist.		Elevation	Dist.	Elevation	Dist.	Elevation	Dist.	Elevation	Dist.	
		937.33	26.5'	936.49	1.0'			586+75			936.49	1.0'	935.65	26.5'			
		937.44		936.60				586+90			936.60		935.76				
		937.51		936.67				587+00			936.67		935.83				
		937.67		936.83				587+25			936.83		935.99				P.V.T.
		937.75		936.91				587+40			936.91		936.07				
		937.80		936.96				587+50			936.96		936.12				
		938.02		937.18				587+90			937.18		936.34				
		938.07		937.23				588+00			937.23		936.39				
		938.29		937.45				+40			937.45		936.61				
		938.34		937.50				+50			937.50		936.66	26.5'			
		938.48		937.64				+75			937.64	1.0'	936.80	26.5'			
		938.56		937.72				+90			937.72	1.2'	936.88	26.7'			Begin Median Transition Rt.
		938.61		937.77				589+00			937.77	1.4'	936.93	26.9'			
		938.83		937.99				+40			937.99	2.0'	937.15	27.5'			
		938.88		938.04				+50			938.04	2.2'	937.20	27.7'			
		939.10		938.26				+90			938.26	2.8'	937.42	28.3'			
		939.15		938.31				590+00			938.31	3.0'	937.47	28.5'			
		939.37		938.53				+40			938.53	3.6'	937.69	29.1'			
		939.42		938.58				+50			938.58	3.8'	937.74	29.3'			
		939.64		938.80				+90			938.80	4.4'	937.96	29.9'			
		939.69		938.85				591+00			938.85	4.6'	938.01	30.1'			
		939.91		939.07				+40			939.07	5.2'	938.23	30.7'			
		939.96		939.12				+50			939.12	5.4'	938.28	30.9'			
		940.18		939.34				+90			939.34	6.0'	938.50	31.5'			
		940.23		939.39				592+00			939.39	6.2'	938.55	31.7'			
		940.45		939.61				+40			939.61	6.8'	938.77	32.3'			
		940.50		939.66				+50			939.66	7.0'	938.82	32.5'			
		940.72		939.88				+90			939.88	7.6'	939.04	33.1'			
		940.77		939.93				593+00			939.93	7.8'	939.09	33.3'			
		941.04		940.20				+50			940.20	8.6'	939.36	34.1'			
		941.31		940.47				594+00			940.47	9.4'	939.63	34.9'			
		941.58		940.74				+50			940.74	10.2'	939.90	35.7'			
		941.85		941.01				595+00			941.01	11.0'	940.17	36.5'			
		942.12		941.28				+50			941.28	11.0'	940.44				End Median Transition Rt.
		942.39		941.55				596+00	941.55	11.0'	941.55	11.0'	940.71		940.71	36.5'	Sta. 596+25 Begin Transition Rt. Lane
		942.66		941.82				+50	941.82	9.5'	941.76	12.5'	940.92		940.87	38.8'	P.V.C.
		942.78		941.94				+75	941.94	8.0'	941.81		940.99		940.88	40.1'	
		942.86		942.02				597+00	942.02	6.0'	941.83		941.01		940.85	41.3'	
		942.90		942.06				+25	942.06	3.5'	941.81		941.00		940.78	42.6'	
		942.90		942.06				+50	942.06	2.2'	941.74		940.94		940.67	43.9'	
		942.87		942.03				+75	942.03	1.2'	941.66		940.87		940.56	45.2'	End Transition Rt Lane
		942.80		941.96				598+00	941.96	1.0'	941.58		940.79		940.46	46.5'	P.V.I.
		942.69		941.85				+25	941.85		941.47		940.67		940.35		
		942.54		941.70				+50	941.70		941.31		940.52		940.19		
		942.51		941.67				+54	941.67		941.28		940.49		940.16		
		942.38		941.52				+75	941.52		941.12		940.33		940.01		Begin Transition Lt Lane
		942.19	26.5'	941.31	1.0'			599+00	941.31	1.0'	940.91	12.5'	940.12	36.5'	939.79	46.5'	

For Pav't Elevations from Sta 599+25 to Sta 602+53 See Intersection Detail Sheet No. 84

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SUPERELEVATION TABLES - ABOUT CENTER LINE

LEFT OF ℄								SURVEY ℄ STATION	RIGHT OF ℄								REMARKS
Speed Change Lane		Outside Edge Pav't		Inside Edge Pav't		Storage Lane			Storage Lane		Inside Edge Pav't		Outside Edge Pav't		Speed Change Lane		
Elevation	Dist.	Elevation	Dist.	Elevation	Dist.	Elevation	Dist.		Elevation	Dist.	Elevation	Dist.	Elevation	Dist.	Elevation	Dist.	
		940.76	Existing	939.56	Existing Profile Grade			602+53	939.02	8.5'	939.02	10.5'	937.67	37.0'			Full Superelevation 0.050 Ft. Per Ft.
								+75	939.29		939.29		937.94				
		941.35		940.08				603+00	939.60		939.60		938.25				
								+25	939.90		939.90		938.55				
		941.89		940.64				+46	940.16		940.16		938.81				
								+50	940.21		940.21		938.86				P.V.C.
								+75	940.45		940.45		939.14				
		942.44		941.20				604+00	940.73		940.73		939.38				
								+25	940.91		940.91		939.56				
								+50	941.03	8.5'	941.03		939.68				
								+75	941.13	8.2'	941.13		939.78				P.V.I.
		942.85		941.60				605+00	941.21	7.8'	941.21		939.86				
								+25	941.28	6.0'	941.28		939.93				
								+50	941.28	4.0'	941.28		939.93				
								+75	941.22	1.6'	941.22		939.87				
		942.40		941.32		941.14	0.5'	606+00			941.14		939.79				P.V.T.
						940.99	1.0'	+25			940.99		939.64				
						940.80	1.0'	+50			940.80	10.5'	939.45	37.0'			End Work
								+75									
		941.54	Existing	940.36	Existing Profile Grade			607+00									

GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	
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STA. 21-10.23

DESIGN SPEED

The geometrics for this project have been planned for a design speed of 50 miles per hour.

FIELD OFFICE

The Contractor shall provide a suitable "Field Office" in accordance with Section S-0.01(b) having a minimum of 500 square feet of floor space. The Contractor shall have a telephone installed and maintained in this field office during construction of the project.

MONUMENT ASSEMBLY ITEM 1-8

See Standard Drawing R1-1 for details of Standard Monument Assembly.

MAINTENANCE OF TRAFFIC

Local traffic detours shall be as directed by the City of Massillon.
WALNUT ROAD, CHERRY ROAD, and U.S.R. 21 north of CHERRY ROAD
Two Way Vehicular and Pedestrian Traffic shall be Maintained at all times.
PEDESTRIAN TRAFFIC -
Where temporary walks are required they shall be at least 5 feet wide within the limits of the work and have an aggregate surface (4" Minimum thickness) or equal.

The Contractor shall furnish all lights, flagmen, watchmen and all other items necessary to expedite movement of traffic in accordance with Sections G-1.07 and G-4.05. Quantities of T-10, M-10, I-15 Temporary Guard Rail and "T-35 for Maintaining Traffic" to be placed if and as directed by the Engineer, have been carried in the General Summary.

Payment for construction, maintenance, and subsequent removal, wherever required, of temporary roadways and walks except for furnishing and placing items T-10, M-10, I-15 temporary Guard Rail and "T-35 for Maintaining Traffic" is included in the Lump Sum bid for "Maintaining Traffic."

REMOVAL OF TREES AND STUMPS

Sizes - 12" to 18" - 10	Sizes - 30" to 36" - 2
18" to 24" - 4	36" to 42" - 3
24" to 30" - 3	42" to 48" - 2

Payment for removal of trees and stumps shall be included in the lump sum bid for Item E-9, Removal of trees and stumps. Approximately 24 trees and stumps, as tabulated above, are to be removed. No tree shall be removed until specifically marked for removal by the Engineer. The State of Ohio reserves the right to order the removal of additional trees and stumps, even though these trees or stumps are not indicated on the plans. Payment for removal of these additional trees or stumps is included in the lump sum bid for the removal of trees and stumps.

MISCELLANEOUS PAVEMENT REMOVAL

Removal of all private drives, steps, sidewalks, and patios on this project shall be considered miscellaneous removals per Sec. E-1.03(c) unless otherwise specified on these plans.

NON-RIGID PAVEMENT REMOVAL

Removal and disposal of existing non-rigid pavement, unless otherwise indicated on these plans, shall be measured and paid for as Item E-1 Roadway Excavation.

DRIVEWAYS

Wherever new Roadway or Sidewalk disturbs existing bituminous or concrete drives and parking areas, the area between the back edge of the new sidewalk and edge of the existing surface will be replaced in kind at locations shown by the plans or as designated by the Engineer. Payment shall be at the unit prices bid for the various payment items required.

COMPACTION FOR DRIVES

The subgrade for new drives or drives being reconstructed shall be compacted for a depth of six (6) inches to the density requirements of 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.

EXPANSION JOINTS

Although specific locations of certain expansion joints have been detailed on this plan, no waiver of the specifications is intended and expansion joints shall be provided at all major structures as required by Standard Construction Drawing T.J.

CONTRACTION JOINTS

In addition to the joints indicated on plan details, the maximum distance between Contraction Joints shall in all cases be in accordance with Standard Construction Drawing T.J.

HEAVY EQUIPMENT

The Contractor shall exercise care in the use of heavy equipment over finished work and will be required to remove and replace any completed work destroyed thereby. Culverts shall be backfilled to a height of four feet before loaded earth-moving equipment is permitted to cross the trench. Any additional fill and subsequent excavation required to provide this minimum cover shall be made at no additional cost to the State. Heavy equipment shall not be operated over any completed layer of embankment, compacted subgrade, or subbase, if such operation tends to destroy the soil structure or pipe underdrains; however, if such operation cannot be avoided, the Contractor will be required to reduce the size of loads to an extent that damage does not occur.

BERMS AND SLOPES

Berms, slopes and rounding shall be finished in accordance with Standard Drawing R1-1 except where otherwise shown on the cross sections. All slopes in transitions from cut to fill shall be made in a manner to blend with the surrounding terrain as directed by the Engineer.

The grading tolerances as noted in Section E-1.10 of the Specifications shall be modified as follows: The finished graded and seeded section in the areas of lawns or residences shall not deviate more than one inch vertically below the grade and lines as shown in these plans. These areas are to be in smooth contour and free from sticks, stones and other debris. Care shall be exercised, as directed by the Engineer, to assure that proper surface drainage is obtained in the areas involved as well as adjacent to or across any driveways that may be located in the areas. Payment for any additional tools, labor including handraking if necessary, incidentals and operations necessary to accomplish this shall be included in the price bid for Item E-1 Roadway Excavation.

The above note shall be considered to be particularly applicable in the following areas:

Edwin Ave.	Sta. 0+24 to Sta. 1+80 Lt. & Rt.
Mainline	Sta. 570+50 to Sta. 573+55 Rt.
	Sta. 578+60 to Sta. 584+50 Rt.
	Sta. 597+90 to Sta. 603+60 Rt.

ITEM SPECIAL- FINE AGGREGATE, AS PER PLAN

This item shall consist of furnishing & placing a fine aggregate blanket as shown on sheet no. 4 and on the cross sections. Fine Aggregate shall meet the requirements as designated in Section M-2.1 of the Construction and Material Specifications of the State of Ohio.

Quantity to be paid for shall be the number of cubic yards compacted in place in conformity with the lines and grades as shown on the cross sections. Construction shall conform essentially with Sec. 1-22.03 of the Construction and Material Specifications.

The yardage measured as provided above shall be paid for at the contract unit price bid for "Item Special, Fine Aggregate As Per Plan" which price and payment shall constitute full compensation for compacting the subgrade, furnishing, hauling, placing and compacting the aggregate and for all labor, equipment, tools and incidentals necessary to complete this item except excavation which is paid under Item E-1 Roadway Excavation.

SPECIAL ABANDONING OF EXISTING 48" SEGMENTAL BLOCK AND 54" TWO-RING BRICK SANITARY SEWER

The existing sewer and manholes within the limits of Sta. 542+06 to the manhole opposite Sta. 552+15 shall be uncovered, the portions above the sewer spring line removed and/or broken down, and the trench backfilled in accordance with Sec. E-12.04. Payment for the above, including removal of manholes, shall be included in the unit price bid for Item E-12, Abandoning 48" and 54" Sewer.

Between Stations 552+15 and 558+47.5 and between Stations 567+69.5 and 575+47, the existing 48 inch sewer shall be abandoned in place. In these areas the existing manholes shall be abandoned under Item I-16 and bulkheads shall be provided in the sewer at the locations shown on the plans. The bulkheads shall consist of brick masonry as specified in Sec. I-8.05 with a minimum thickness of 12 inches.

Each of these bulkheads in place, completed and accepted, shall be paid for at the contract unit price bid for "Item Special, 48"in Bulkheads, which price and payment shall constitute full compensation for all labor, furnishing and placing all materials, tools, equipment, excavation, backfill, disposal of materials and incidentals necessary to complete this item.

MANHOLE RECONSTRUCTED TO GRADE USING SALVAGED CASTING ITEM I-8

The Contractor shall remove existing casting and reconstruct existing manhole to grade using materials designated in Section I-8.02 of the specifications. The salvaged casting shall be cleaned of all concrete, etc. and placed on the manhole. Reconstruction shall conform, as nearly as practicable, to the existing type of construction.

Payment for this item shall be at the contract unit price "Each" for Item I-8, Manhole Reconstructed to Grade Using Salvaged Casting As Per Plan. Extent of removal and reconstruction shall be at least down to the existing spring line.

MANHOLE ADJUSTMENTS

It is the intent of this plan that any manhole adjustment not specifically detailed for which the grade is raised more than 12 inches or lowered more than 6 inches shall be considered as "Reconstructed to Grade." Any adjustment falling within the above limits shall be considered as "Adjusted to Grade."

TILE FOR SUBGRADE DRAINAGE

Drain Tile, Sec. M-6.7(b), shall be furnished and placed by the contractor, in manholes, catch basins and inlets for subgrade drainage, where, and as directed by the Engineer. Payment for same shall be included in the price bid per "Each" for manholes, catch basins and inlets.

ESTIMATED QUANTITIES

The following estimated quantities of class "B" Storm Sewers and No. 7 Catch Basins have been provided in the General Summary for replacement and reconstruction, as directed by the Engineer.

6" - 100 Lin. Ft. 8" - 100 Lin. Ft 2 each I-8 C.B. No. 7

Specific location and usage of estimated quantities set up on this plan to be used "as directed by the Engineer," shall be made a matter of record by incorporation into the final change order governing construction on this project.

SANITARY SEWER RELOCATION

The Contractor will be required to keep properly functioning existing sanitary sewers affected by the construction of this project, until the proper connections and relocations are made as shown on the Plans.

M-6.6(b) or M-6.6(c) Pipe used in I-2 Storm Sewers (Sanitary) shall be factory lined with two (2) coats of Bitumastic Super Service Black, as manufactured by the Tar Products Division of the Koppers Company, Inc., Pittsburgh 12, Pa., or approved equal.

The entire interior of the Pipe, the interior and end of the bell and outside and end of the tongue shall be coated.

Joints in the concrete pipe shall be sealed with "Hexseal" rubber gaskets, or approved equal, installed in accordance with the manufacturer's recommendations and as directed by the Engineer.

Payment for all the above shall be included in the contract Unit Price per linear foot bid for "Item I-2 Sec. M-6.6(b) or M-6.6(c) Storm Sewers (Sanitary).

REMOVAL OF EXISTING HOUSE DRAINS

The removal of all existing house connections, which includes sanitary, yard, roof, basement and other similar pipe drains within the roadway construction limits shall be classified and paid for as Item E-1, Roadway Excavation, unless otherwise itemized for payment in the plans.

CONNECTIONS TO EXISTING SEWERS

At places where the plan provides for proposed drainage pipe to be connected to existing pipes, it shall be the responsibility of the Contractor to locate the existing pipe both as to line and grade before he starts to lay the proposed sewer. The cost of this operation and the provision of suitable connections to the existing sewers shall be included in the unit price bid for the pertinent Item I-2 Storm Sewer.

PLUGGING OF EXISTING STORM AND SANITARY SEWERS

The contractor shall plug the existing sewers at locations designated on plans. Construction methods and materials for this work shall be in accordance with Section I-16.03 of the Construction and Material Specifications. Cost of this work will be included under E-1, Roadway Excavation, and no additional compensation shall be allowed.

CASTINGS

All castings from abandoned manholes, inlets and catch basins shall be carefully removed and stockpiled along the Right of Way. The City of Massillon shall have the choice of selecting the casting they can use. The balance of the castings, if any, shall become the property of the contractor and shall be removed from the site by him.

Continued On Sheet No. 10

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA. 21-10.23

GENERAL NOTES

FLOOD PROTECTION

The flood wall parallel to this project is for the protection of the City of Massillon. The Contractor shall be required to schedule his work on the Alterations to "Sippo Creek Conduit and Pumping Station" and "Federal Avenue Pump Station Relocation," so that the City of Massillon will have maximum flood protection at all times.

Payment for this Flood Protection and furnishing and maintaining stand-by pumps, temporary drainage and special schedule or sequence of Construction, wherever required, shall be included in the lump sum bid for "Alterations Sippo Creek Conduit & Pumping Station" and/or "Relocation Federal Avenue Pump Station" and no additional compensation shall be allowed.

PROTECTION OF EXISTING LEVEE AND TOE DRAIN

The Contractor is hereby instructed that all construction work adjacent to or on existing levee, that may disturb existing toe drain, must be protected by shoring or other suitable methods acceptable to the Corps of Engineers.

This protection shall be done at no additional cost to the State.

PUBLIC UTILITIES AFFECTED

East Ohio Gas Company
Ohio Water Service Company
Ohio Bell Telephone Company
Ohio Edison Power Company
City of Massillon Storm & Sanitary Sewers
Pennsylvania Railroad Company
Wheeling & Lake Erie Railroad Company (N.K.P.)
Baltimore & Ohio Railroad Company
Western Union Telegraph Company

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.

UNDERGROUND UTILITIES

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

FILLING BASEMENTS

All basements or portions thereof within the right of way but beyond the normal slope lines shall be filled to surrounding ground elevation as directed by the Engineer. Prior to filling within this area, the basement floors and walls shall be broken up or removed as provided under Sec. E-1.03(c) and all house drains not removed shall be plugged as described in note entitled "Plugging of Existing Storm and Sanitary Sewers" on Sheet 9.

Where basements, drives, garage floors and other masonry extend beyond the right of way line, but are within slope easement or work agreement lines, they shall be removed and filled to the elevation of the surrounding ground as directed by the Engineer but the requirements of Sec. E-1.03(c) shall be waived for those portions extending beyond the right of way line.

Payment for all of the above is included in the unit price bid for Roadway Excavation, Item E-1.

SEEDING ITEM L-9

Item L-9 Seeding quantities shall include all soil areas between the Right-Of-Way lines excepting areas to be sodded.

The seeding mixture for the entire project shall be as follows:

25%	Kentucky Bluegrass
60%	Kentucky 31 Fescue
10%	Red Top
5%	Alsike Clover

SODDING ITEM L-10

Areas to be sodded shall be loosened to a depth of 2" just prior to laying the sod. This work shall be included for payment in the price bid per sq. yd. of sodding.

PLACING SOD IN DITCHES

All sod placed in ditches shall be laid with the long edges of the strips perpendicular to the flow line of the ditch. Successive strips shall be neatly matched and all joints staggered or broken. The sod shall be staked securely with stakes placed on maximum two (2) foot centers in rows not more than two (2) feet apart. Stakes in adjacent rows shall be staggered. The stakes shall be wood from ½" x ¾" x 12" to 1" x 1" x 24", as required to hold the sod, and shall be driven flush with the top of the sod.

CONSTRUCTION LAYOUT STAKES

See note in proposal describing the work included in this lump sum pay item.

RIPRAP, USING 6" REINFORCED CONCRETE SLAB, AS PER PLAN

In addition to meeting the general requirements of Sections I-10.03 and I-10.05, the riprap furnished for this item shall be a 6-inch reinforced concrete slab, reinforced with bars or fabricated reinforcement equivalent to 3/8-inch round bars spaced at two-foot centers, two directions, and placed approximately midway between the top and bottom of the slab. Formed construction joints may be used subject to the approval of the Engineer. Reinforcement shall extend through all construction joints.

The requirements of Sec. I-10.05 for depressed grooves and thickened bottom edges in this item shall be waived. In lieu thereof cut-off walls and impressed contraction joints, as noted on Standard Construction Drawing I-14G, shall be provided and payment therefor shall be included in the unit price bid for this item.

APPROVALS BY THE CORPS OF ENGINEERS, U.S. ARMY

Where these plans indicate that approval of the Contractor's construction methods and procedures and/or construction sequence will be required of the U.S. Army Corps of Engineers, the necessary submissions to the Corps of Engineers shall be made through the Project Engineer who will coordinate the proposed work and advise the Contractor when the approval has been obtained.

SUBBASE, GRADING "A" or "B", AS PER PLAN

The material furnished for this item shall meet the requirements of Grading A or B of Sec. I-22.02 except that, for either grading, no more than 10 percent of the material shall pass a No. 200 sieve.

GUARD RAIL POST ANCHORS

Where existing or proposed culvert or pier construction interferes with proposed guard rail construction and sufficient post depth is not available, anchors as detailed on Standard Construction Drawing I-15 No. 6 or an equal approved by the Engineer shall be provided. Payment for these anchors shall be included in the unit price bid for Item I-15 Guard Rail.

REFERENCES TO CITY PARTICIPATION

References to percentage city participation, other than 100% City Participation items, appearing throughout these plans shall be disregarded except for purposes of identification of the proposed work area in relation to the north curb line of Cherry Road.

Quantities indicated as "1.58% City" in the sub-summaries involve work north of said curb line. Quantities indicated as "5% City" involve work south of said curb line.

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA - 21 - 10.23

TYPE CODE 7221

ITEM	U-1010(5) FULL PROJECT PARTICIPATION - SOUTH OF CHERRY ROAD																				SUB TOTAL
	9	13	14	15	17	18	19	20	21	22	24	25	26	27	28	29	30	31	32	35	36	
E-1			33884			1			14			98									8	33205
E-1			52108																			52108
E-4			92256																			92256
E-8						622			1488			520		675				844	1037	500	390	6076
E-8						106			353					267				18	68	272	78	1162
E-8						8			107										1898			2013
E-9	L.S.																					L.S.
E-11			838																			838
I-8			10																			10
I-13			10691																			10691
I-15					1550			1687.5			1012.5	550	125		662.5			25				5612.5
I-15					487.5																	487.5
L-9		61910																				61910
L-9		5.63																				5.63
L-9		28.15																				28.15
L-10		638																				638
SS-18		6090																				6090
SS-18		2																				2
T-10	250																					250
M-10	5																					5
T-35	50																					50
Special									1		3	4	4	1								13
E-4				605																		605
E-4				40																		40
E-5				3																		3
E-12					345			507	216													1068
E-12						75	1	133								1	1	1				212
E-12												96									28	124
E-12											410	260	278									948
I-2																34						34
I-2																			12			12
I-2	75																					75
I-2	75											54										129
I-2						64						40		10				6				120
I-2								92				72										164
I-2																254						254
I-2														74								74
I-2														106								106
I-2															178	70						248
I-2					126	142	60							234		214	70	56		158	352	114	1526
I-2								100						192	40								332
I-2															104	80							184
I-2														92			64						156
I-2																264							264
I-2																	28						28
I-2					390		396			452	464	135	85										1922
I-2								400															400
I-2												84											84
I-4			12438																				12438
I-4				683																			683
I-4				600																			600
I-4				250																			250
I-4				728																			728
I-4				162																			162
I-4				42																			42
I-5				39																			39
I-5				2																			2
I-5				1																			1
I-5																		2					2
I-5														1									1
I-5																		2					2
I-8																							
I-8														2		2	1		1				6
I-8					1	2			2					2		2					4	2	15
I-8						4														5			9
I-8	1																						1
I-8																			1				1
I-8																1	1	1					3
I-2																			144				144

ITEM	FULL PROJECT PARTICIPATION NORTH OF CHERRY ROAD						SUB TOTAL
	9	13	14	15	32	34	
E-1			979				979
E-1			2673				2673
E-8					1378	67	1445
E-9	L.S.						L.S.
E-11			6				6
I-15							
L-9		1723					1723
L-9		0.16					0.16
L-9		0.78					0.78
SS-18		210					210
T-10	250						250
M-10	5						5
T-35	50						50
I-4							
I-4							
I-4							
I-4							
I-4							
I-4							
I-4							
I-4							
I-4							
I-5							
I-5							
I-5							
I-5							
I-5							
I-8							
I-8							
I-8							
I-8							
I-8							
I-8							
I-8							
I-2							

ITEM	100% CITY						SUB TOTAL
	13	14	35				
E-1		195	3				198
E-1		428					428
E-8							
E-9	L.S.						L.S.
E-11		1					1
I-15							
L-9	157						157
L-9	0.02						0.02
L-9	0.07						0.07
SS-18							
T-10							
M-10							
T-35							
I-4							
I-4							
I-4							
I-4							
I-4							
I-4							
I-4							
I-4							
I-5							
I-5							
I-5							
I-5							
I-5							
I-8							
I-8							
I-8							
I-8							
I-8							
I-8							
I-8							
I-2							

ITEM	FED. PARTIC SUB TOTAL	TOTAL
E-1	34184	34382
E-1	54781	55209
E-4	92256	92256
E-8	6076	6076
E-8	1162	1162
E-8	3458	3458
E-9	L.S.	L.S.
E-11	844	845
I-8	10	10
I-13	10691	10691
I-15	5612.5	5612.5
I-15	487.5	487.5
L-9	63633	63790
L-9	5.79	5.81
L-9	28.93	29.00
L-10	638	638
SS-18	6300	6300
SS-18	2	2
T-10	500	500
M-10	10	10
T-35	100	100
I-4	605	605
I-4	40	40
I-5	3	3
E-12	1068	1068
E-12	213	213
E-12	89	89
E-12	948	948
I-2	34	34
I-2	12	12
I-2	75	75
I-2	129	129
I-2	120	120
I-2	164	164
I-2	254	254
I-2	74	74
I-2	106	106
I-2	248	248
I-2	1650	1650
I-2	332	332
I-2	184	184
I-2	156	156
I-2	264	264
I-2	28	28
I-2	1922	1922
I-2	400	400
I-2	84	84
I-4	13029	13029
I-4	683	683
I-4	600	600
I-4	250	250
I-4	740	748
I-4	162	162
I-4	42	42
I-5	40	40
I-5	2	2
I-5	1	1
I-5	2	2
I-5	1	1
I-5	2	2
I-8		
I-8	6	6
I-8	15	15
I-8	9	9
I-8	1	1
I-8	1	1
I-8	4	4
I-2	144	144

ITEM	UG-1010(5) FULL PROJECT PARTICIPATION - SOUTH OF CHERRY RD.							TOTAL
	9	13	14	15	23	24	95	
E-1			25009					25009
E-1			3356					3356
E-4								
E-8								
E-8								
E-8								
E-9	L.S.							L.S.
E-11			6					6
I-8								
I-13								
I-15						62.5		62.5
I-15								
L-9		3518						3518
L-9		0.32						0.32
L-9		1.58						1.58
L-10								
SS-18		210						210
SS-18								
T-10								
M-10								
T-35								
Special								
E-4								
E-4								
E-5								
E-12								
E-2					1	1	280	282
E-12								
E-12								
I-2								
I-2								
I-2								
I-2								
I-2								
I-2								
I-2								
I-2								
I-2					274	152		426
I-2					136			136
I-2					208	130		338
I-2								
I-2								
I-2								
I-2								
I-2								
I-2								
I-4					765			765
I-4								
I-4								
I-4								
I-4					46			46
I-4								
I-4								
I-5					3			3
I-5								
I-5								
I-5								
I-5								
I-8					1			1
I-8					2	2		4
I-8								
I-8								
I-8								
I-8								
I-8								
I-2								

GRAND TOTAL ITEM	QUANT.	UNIT	DESCRIPTION
			ROADWAY
E-1	59391	Cu.Yds.	Roadway Excavation, Method B, as per plan
E-1	58565	Sq.Yds.	Compacted Subgrade
E-4	92256	Cu.Yds.	Borrow
E-8	6076	Sq.Ft.	Removal and Disposal of Existing Sidewalk
E-8	1162	Lin.Ft.	Removal and Disp. of Exist. Curb, Curb & Gutter, or Header Curb
E-8	3458	Sq.Yds.	Removal and Disposal of Existing Pavement (Rigid)
E-9	L.S.	Lump Sum	Removal of Trees & Stumps
E-11	851	M. Gal.	Water
I-8	10	Each	Standard Monument Assemblies
I-13	10691	Sq.Ft.	4" Concrete Sidewalk
I-15	5675	Lin.Ft.	Guard Rail, Steel Beam Standard Type (Deep)
I-15	487.5	Lin.Ft.	Temporary Guard Rail
L-9	67308	Sq.Yds.	Seeding & Protecting, As per Plan
L-9	6.13	Tons	Commercial Fertilizer (12-12-12)
L-9	30.58	Tons	Agricultural Liming Materials
L-10	638	Sq.Yds.	Sodding, As per Plan
SS-18	6510	Lin.Ft.	Fence, Type "C"
SS-18	2	Each	Fence Gates, Type C
T-10	500	Cu.Yds.	Traffic Compacted Surface Course for Maintaining Traffic
M-10	10	Tons	Calcium Chloride, Furnished and Applied for Maintaining Traffic
T-35	100	Cu.Yds.	Asphaltic Concrete Surface Course or an Approved Bituminous Pre-mixed Surface Course for Maintaining Traffic
			DRAINAGE
Special	13	Each	48" diameter Bulkheads
E-4	605	Lin.Ft.	6" Underdrains, Sec. M-6.4 (4)(c)
E-4	40	Lin.Ft.	6" Pipe Outlets for Underdrains, Sec. M-6.4(4)(c) without perforations
E-5	3	Each	6" Pipe Specials for Underdrains, Sec. M-6.4(4)(c)
E-12	1068	Lin.Ft.	Abandoning Existing 48" & 54" Segmental Block or Two Ring Brick San. Sewer, as per plan
E-2	495	Cu.Yds.	Excavation for Structures
E-12	213	Lin.Ft.	Pipe Removed, 15" and Under
E-12	948	Lin.Ft.	Pipe Removed, Over 15"
I-2	34	Lin.Ft.	12" Class A Storm Sewers
I-2	12	Lin.Ft.	15" Class A Storm Sewers
I-2	100	Lin.Ft.	6" Class B Storm Sewers
I-2	154	Lin.Ft.	8" Class B Storm Sewers
I-2	120	Lin.Ft.	12" Class B Storm Sewers
I-2	164	Lin.Ft.	15" Class B Storm Sewers
I-2	254	Lin.Ft.	18" Class B Storm Sewers
I-2	74	Lin.Ft.	24" Class B Storm Sewers
I-2	106	Lin.Ft.	30" Class B Storm Sewers
I-2	248	Lin.Ft.	36" Class B Storm Sewers
I-2	2076	Lin.Ft.	12" Class B Storm Sewers Under Pavement or Approaches
I-2	468	Lin.Ft.	15" Class B Storm Sewers Under Pavement or Approaches
I-2	522	Lin.Ft.	18" Class B Storm Sewers Under Pavement or Approaches
I-2	156	Lin.Ft.	24" Class B Storm Sewers Under Pavement or Approaches
I-2	264	Lin.Ft.	36" Class B Storm Sewers Under Pavement or Approaches
I-2	28	Lin.Ft.	24" Storm Sewers Sec. M-6.6(b) or Sec. M-6.8(b)
I-2	1922	Lin.Ft.	48" Storm Sewers (Sanitary) Sec. M-6.6(b) As per Plan
I-2	400	Lin.Ft.	48" Storm Sewers (Sanitary) Sec. M-6.6(c) As per Plan
I-2	84	Lin.Ft.	8" Storm Sewers (Sanitary) Sec. M-6.8(b)
I-4	13,794	Lin.Ft.	6" Underdrains
I-4	683	Lin.Ft.	8" Underdrains, Sec. M-6.4(f)
I-4	600	Lin.Ft.	12" Underdrains, Sec. M-6.4(f)
I-4	250	Lin.Ft.	15" Underdrains, Sec. M-6.4(f)
I-4	788	Lin.Ft.	6" Pipe Outlets for Underdrains Sec. M-6.4(h) Without Perforations
I-4	162	Lin.Ft.	8" Pipe Outlets for Underdrains Sec. M-6.4(c)
I-4	42	Lin.Ft.	15" Pipe Outlets for Underdrains Sec. M-6.4(c)
I-5	45	Each	6" Pipe Specials for Underdrains
I-5	2	Each	8" Pipe Specials for Underdrains, Sec. M-6.4(f)
I-5	1	Each	15" Pipe Special for Underdrains, Sec. M-6.4(f)
I-5	2	Each	8" Pipe Specials for Class B Storm Sewers
I-5	1	Each	24" Pipe Special for Class B Storm Sewers
I-5	2	Each	36" Pipe Specials for Class B Storm Sewers under Pavement or Approaches
I-8	1	Each	Catch Basin, Standard No. 2-2B
I-8	10	Each	Catch Basins, Standard No. 2-2A
I-8	15	Each	Catch Basins, Standard No. 3
I-8	9	Each	Catch Basins, Standard No. 3A
I-8	2	Each	Catch Basins, Standard No. 7 Side Ditch
I-8	1	Each	Median Inlet, Standard No. 2-6
I-8	4	Each	Median Inlets, Standard No. 2-8
I-2	144	Lin.Ft.	18" Class B Storm Sewers Under Pavement or Approaches, Sec. M-6.6(b) Sec. M-6.8

GENERAL SUMMARY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA - 21 - 10.23

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TYPE CODE 7221

U-1010(5) — FULL PROJECT PARTICIPATION - SOUTH OF CHERRY ROAD

ITEM	13	14	17	18	19	20	21	22	24	25	26	27	28	29	30	31	32	35	36	SUB TOTAL	97	106	109	115	116
I-8			1		1								1							3					
I-8											3		1							4					
I-8											1		1							2					
I-8																	1			1					
I-8												1								1					
I-8							1										1			2					
I-8												2								2					
I-8											2		4	2		1		1		10					
I-8			1		2	2		1	1	2	1						1			11					
I-8														1			2	2		5					
I-8				1												1	1			3					
I-8				1																1					
SPECIAL																				L.S.				L.S.	
SPECIAL																				L.S.					L.S.
I-14											10									10					
I-14													485	1130		200				1815					
I-14																									
I-16				1				1	2	3	1	2	2			1		2		15					
S-1			0.46	1.64	0.23	1.08								0.23	0.23	0.23				4.1					
S-27						150														150					
S-27				116																116					
SPECIAL		3082																		3082					
I-10			18	20	9	20														67					
SPECIAL																				L.S.	L.S.				
SPECIAL																				L.S.		L.S.			
E-3																				1700	1700				
I-10																				329	329				
B-19							26			90			12						7	135					
B-219		584																		584					
T-31		1750																		1750					
T-31		56																		56					
T-70				4			7										11		19	41					
T-71	45110																			45110					
I-12	98																			98					
I-12	15824																			15824					
I-12	2078																			2078					
I-12													450							450					
I-18		1004																		1004					
I-21		1310																		1310					
I-22	9368																			9368					
E-2																				L.S.					
S-1																									
S-4																									
S-9																									
SPECIAL																				135	135				
SPECIAL																				100	100				
																				L.S.					

FULL PROJECT PARTICIPATION - N. OF CHERRY RD. / 100% CITY

ITEM	34	13	14	32	SUB TOTAL	13	15	21	27	35	SUB TOTAL	FED PARTIC SUB TOTAL	TOTAL
I-8												3	3
I-8				1	1							5	5
I-8												2	2
I-8												1	1
I-8												1	1
I-8												2	2
I-8												2	2
I-8												10	10
I-8				1	1			1	2	1	4	6	10
I-8												3	3
I-8	1				1							2	2
SPECIAL												L.S.	L.S.
SPECIAL												L.S.	L.S.
I-14												10	10
I-14												1815	1815
I-14													
I-16				2	2							17	17
S-1	0.2				0.2							4.3	43
S-27												150	150
S-27												116	116
SPECIAL												3082	3082
I-10	9				9							76	76
SPECIAL												L.S.	L.S.
SPECIAL												L.S.	L.S.
E-3												1700	1700
I-10												329	329
B-19											3	3	135	138
B-219												584	584
T-31												1750	1750
T-31												56	56
T-70												41	41
T-71	2678			2473	428							428	47783	49211	2596
I-12												98	98
I-12	1350			1358	108							108	17382	17290	916
I-12												2078	2078
I-12												450	450
I-18												1004	1004	110
I-21		101		101								1411	1411
I-22	571			571	76							76	9939	10015	552
E-2														L.S.
S-1														134
S-4														34	19347
S-9														1540
SPECIAL												135	135		
SPECIAL												100	100		
				L.S.								L.S.	L.S.	LS	

UG-1010(5) — FULL PROJECT PARTICIPATION - SOUTH OF CHERRY RD.

TOTAL	13	14	23	24	95
1				1	
20			20		
695			495	209	
30				30	
1.6			0.2	1.4	

GRAND TOTAL

ITEM	QUANT.	UNIT	DESCRIPTION
			DRAINAGE (Continued)
I-8	3	Each	Median Inlets, Standard No. 2-10
I-8	5	Each	Paved Shoulder Inlets, Standard No. 2-6, Modified As per Plan
I-8	2	Each	Paved Shoulder Inlets, Standard No. 2-8, Modified As per Plan
I-8	1	Each	Paved Shoulder Inlet, Standard No. 2-10, Modified As per Plan
I-8	1	Each	Paved Shoulder Inlet, Standard No. 2-12, Modified As per Plan
I-8	2	Each	Paved Shoulder Inlets, Standard No. 2-14, Modified As per Plan
I-8	2	Each	Paved Shoulder Inlets, Standard No. 2-18, Modified As per Plan
I-8	11	Each	Manholes, Standard No. 1
I-8	11	Each	Manholes, Standard No. 2 Without Drop Pipes
I-8	10	Each	Manholes Adjusted to Grade
I-8	3	Each	Manholes Reconstructed to Grade, using Salvaged Casting, As per Plan
I-8	2	Each	Inlets Adjusted to Grade
SPECIAL	L.S.	Lump Sum	Alterations to Tremont Avenue Siphon Outlet Structure
SPECIAL	L.S.	Lump Sum	Cherry Road Siphon Outlet Structure
I-14	30	Lin. Ft.	Paved Gutter, Standard Type 1, Modified As per Plan
I-14	2510	Lin. Ft.	Paved Gutter, Standard Type 2
I-14	38	Lin. Ft.	Paved Gutter, Standard Type 2, Modified As per Plan
I-16	17	Each	Manholes, Catch Basins, or Inlets Abandoned
S-1	5.9	Cu. Yds.	Concrete for Structures, Class E
S-27	150	Lin. Ft.	24" Pipe for Roadway Culverts, Sec. M-6.6(b) or M-6.8(b)
S-27	116	Lin. Ft.	36" Pipe for Roadway Culverts, Sec. M-6.6(b) or M-6.8(b)
SPECIAL	3082	Cu. Yds.	Fine Aggregate, As per Plan
I-10	76	Cu. Yds.	Dumped Rock Channel Protection
SPECIAL	L.S.	Lump Sum	Alterations to Sippo Creek Conduit and Pumping Station
SPECIAL	L.S.	Lump Sum	Relocation of Federal Avenue Pump Station
E-3	1700	Cu. Yds.	Channel Excavation
I-10	329	Sq. Yds.	Riprap using 6" Reinforced Concrete Slab, as per plan
			SEE CONTINUATION OF DRAINAGE ITEMS BELOW
			PAVEMENT
B-19	138	Cu. Yds.	Aggregate Base Course
B-219	648	Cu. Yds.	Waterproofed Aggregate Base Course
T-31	1940	Gal.	Bituminous Surface Treatment - Bituminous Material, As per Plan
T-31	63	Cu. Yds.	Bituminous Surface Treatment - No. 6 Aggregate
T-70	41	Sq. Yds.	7" Portland Cement Concrete Pavement, As per Plan
T-71	50007	Sq. Yds.	9" Reinforced Portland Cement Concrete Pavement
I-12	98	Lin. Ft.	Concrete Curb, Standard Type 6
I-12	18206	Lin. Ft.	Concrete Curb, Standard Type 2A
I-12	2078	Lin. Ft.	Combination Curb and Gutter, Standard Type 2
I-12	450	Lin. Ft.	Reinf. Comb. Barrier Curb and Gutter, As per Plan
I-18	1114	Cu. Yds.	Stabilized Crushed Aggregate Shoulders and Approaches
I-21	1411	Sq. Yds.	4" Portland Cement Concrete Median Pavement, Standard Type 1, As per Plan
I-22	18567	Cu. Yds.	Subbase, Grading "A" or "B", as per plan
			DRAINAGE (CONTINUED)
E-2	L.S.	Lump Sum	Cofferdams, Cribs and Sheeting
S-1	134	Cu. Yds.	Concrete for Structures, Class "C"
S-4	19361	Lbs.	Reinforcing Steel
S-9	1540	Sq. Ft.	2" Preformed Expan. Joint Filler, "Flexcium", or approved equal
SPECIAL	135	Lin. Ft.	Pressure Relief Wells
SPECIAL	100	Lin. Ft.	Piezometer Tubes
	L.S.	Lump Sum	Construction Layout Stakes

QUANTITIES FOR RETAINING WALL

Sta. 583+50 to 584+43 Rt. - See Sheet No. 109

QUANTITIES FOR STRUCTURES OVER 20 FOOT SPAN

Bridge No. Sta. 21-1069 - See Sheet No. 120

Bridge No. Sta. 21-1073 - See Sheet No. 138

Alterations - Tremont Avenue Bridge - See Sheet No. 144

BUILDING REMOVALS

For Estimated Quantities, See Sheet 146

* Denotes Quantities Continued on Designated Sheets

CALCULATIONS

T-71 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

CODE U-1010(5) 5% CITY

STATION TO STATION		LENGTH	AV. WIDTH	SQ.YDS.	REMARKS
MAIN LINE					
539+75	540+50	75.00	64.0	533.33	Lt. & Rt.
540+50	542+50	200.00	35.5	788.89	Lt.
540+50	547+64	714.00	25.5	2,023.00	Rt.
542+50	544+50	200.00	30.5	677.78	Lt.
544+50	551+62	712.00	25.5	2,017.33	Lt.
547+64	549+40	176.00	30.5	596.44	Rt.
549+40	551+62	222.00	35.5	875.67	Rt.
551+62	552+62	100.00	64.0	711.11	Lt. & Rt.
552+62	554+60	198.00	47.5	1,045.00	Lt.
552+62	563+58	1,096.00	25.5	3,105.33	Rt.
554+60	555+00	40.00	46.5	206.67	Lt.
555+00	556+00	100.00	39.5	438.89	Lt.
556+00	557+04	104.00	29.5	340.89	Lt.
557+04	563+58	654.00	25.5	1,853.00	Lt.
568+16	575+54	738.00	25.5	2,091.00	Rt.
568+16	577+85	969.00	25.5	2,745.50	Lt.
575+54	577+33	179.00	35.5	706.06	Rt.
577+33	579+34	(By Planimeter 17.24"² x 400)		766.22	Rt.
577+85	578+96	(By Planimeter 8.74"² x 400)		388.44	Lt.
578+96	581+20	224.00	34.5	858.67	Lt.
579+34	596+00	1,666.00	25.5	4,720.33	Rt.
581+20	582+00	80.00	30.0	266.67	Lt.
582+00	600+00	1,800.00	25.5	5,100.00	Lt.
596+00	597+00	100.00	31.5	350.00	Rt.
597+00	598+00	100.00	41.5	461.11	Rt.
598+00	600+00	200.00	45.5	1,011.11	Rt.
600+00	600+86	86.00	26.5	253.22	Lt.
600+00	600+35	35.00	46.5	180.83	Rt.
600+35	600+69	34.00	42.5	160.56	Rt.
600+69	601+00	31.00	39.5	136.06	Rt.
600+86	601+00	14.00	13.25	50.06	Lt.
601+00	601+22	22.00	13.25	48.28	Rt.
Main Line Total				35,507.45	
EDWIN AVE. CONNECTION					
0+23.9	0+75	(By Planimeter 6.20"² x 400)		275.56	
0+75	5+00	425.00	29.0	1,369.44	
5+00	5+73	(By Planimeter 7.80"² x 400		346.67	
Edwin Ave. Conn. Total				1,991.67	
WALNUT ROAD					
8+00	9+67	167.00	31.0	575.22	
9+67	10+19	(By Planimeter 7.62"² x 400)		338.67	
10+84	11+58.3	(By Planimeter 10.77"² x 400)		478.67	
Walnut Road Total				1,392.56	
NICKLE PLATE DRIVE (Lt. of Walnut Rd. Sta. 8+64)					
0+15.5	0+40	(By Planimeter 2.12"² x 400)		94.22	
Nickle Plate Drive Total				94.22	
CHARLES AVE.					
8+40	10+04	(By Planimeter 7.56"² x 400)		336.00	Lt.
8+40	10+04	(By Planimeter 9.06"² x 400)		402.67	Rt.
Deceleration Lane		(By Planimeter 6.52"² x 400)		289.78	Lt.
7+95	8+40	38.5 x 45		192.50	
Charles Ave. Total				1,220.95	
THIRD STREET (At Charles Ave.)					
10+21	11+00	(By Planimeter 8.72"² x 400)		387.56	
Third St. Total (At Charles Ave.)				387.56	
THIRD STREET CONNECTION					
0+19	0+79	(By Planimeter 6.56"² x 400)		291.56	
0+79	6+38	559.00	29.0	1,801.22	
6+38	6+63.5	(By Planimeter 2.43"² x 400)		108.00	
Third St Conn. Total				2,200.78	
WEIRICH BLVD.					
5+18	6+00	(By Planimeter 9.64"² x 400)		428.44	
Weirich Blvd. Total				428.44	

T-71 9" REINFORCED PORTLAND CEMENT CONCRETE PAVEMENT

CODE U-1010(5) 5% CITY (Continued)

STATION TO STATION		LENGTH	AV. WIDTH	SQ.YDS.	REMARKS
CHERRY ROAD					
2+92.20	4+51	(By Planimeter 17.02"² x 400)		756.44	
Deceleration Lane		(By Planimeter 6.95"² x 400)		308.89	Lt.
5+25	6+08.6	(By Planimeter 14.41"² Minus for Island 0.58"²=13.83"² x 400)		614.67	
Acceleration Lane		(By Planimeter 4.64"² x 400)		206.22	
Cherry Rd. Total				1,886.22	
TOTAL CODE U-1010(5) 5% CITY				45,109.85	

USE 45,110 SQ.YDS.

CODE U-1010(5) 1.58% CITY

MAIN LINE					
600+86	601+00	34.00	13.25	50.06	Lt. & ℄
601+00	601+22	22.00	13.25	48.28	℄ & Rt.
601+00	602+53	153.00	26.5	450.50	Lt.
601+22	601+66	44.00	39.5	193.11	Rt.
601+66	602+53	87.00	9.0	87.00	Stand-by Lane
601+66	602+40	74.00	28.5	234.33	Rt.
602+40	606+50	410.00	27.0	1,230.00	Rt.
602+53	604+50	197.00	11.0	240.78	Stand-By Lane
604+50	605+00	50.00	10.5	58.33	Stand-by Lane
605+00	606+00	100.00	6.25	69.44	Stand-by Lane
606+00	606+50	50.00	2.0	11.11	Stand-by Lane
TOTAL CODE U-1010(5) 1.58% CITY				2,672.94	

USE 2,673 SQ.YDS.

CODE U-1010(5) 100% CITY

THIRD STREET (At Third St. Conn.)				
23+30	24+54	104.00	37.0	427.56
TOTAL CODE U-1010(5) 100% CITY				427.56

USE 428 SQ.YDS.

CODE UG-1010(5) 5% CITY

563+58	568+16	458.00	25.5	1,297.67	Lt.
563+58	568+16	458.00	25.5	1,297.67	Rt.
TOTAL CODE UG-1010(5) 5% CITY				2,595.34	

USE 2,596 SQ.YDS.

ITEM I-22 SUBBASE

CODE U-1010(5) 5% CITY

		CU.YDS.
MAIN LINE	(See Engr's Comp.)	
Sta. 539+75 to Sta. 563+58 } Sta. 568+16 to Sta. 601+22 }		7,535.51
EDWIN AVE.		391.93
WALNUT ROAD		260.54
NICKLE PLATE DRIVE (At Walnut Rd.)		19.48
CHARLES AVE.		206.75
THIRD ST. (At. Charles Ave.)		76.30
THIRD ST. CONNECTION		420.84
WEIRICH BLVD.		83.93
CHERRY ROAD		372.30
TOTAL CODE U-1010(5) 5% CITY		9,367.58

USE 9,368 CU.YDS.

CODE U-1010(5) 1.58% CITY

600+86	606+50	570.61
TOTAL CODE U-1010(5) 1.58% CITY		570.61

USE 571 CU.YDS.

CODE U-1010(5) 100% CITY

THIRD ST. (At Third St. Conn.)	75.50
TOTAL CODE U-1010(5) 100% CITY	75.50

USE 76 CU.YDS.

CODE UG-1010(5) 5% CITY

563+58	568+16	551.30
TOTAL CODE UG-1010(5) 5% CITY		551.30

USE 552 CU.YDS.

ITEM SS-18 FENCE, TYPE C

CODE U-1010(5) 5% CITY

STATION TO STATION		SIDE	LIN. FT.	REMARKS
540+51	551+82	Rt.	1150	
552+50.5	562+36±	Rt.	990	(Approx.)
568+16	574+14	Rt.	620	
574+30	577+97	Rt.	380	
579+22	582+10	Rt.	350	
582+85	585+49.5	Rt.	70	
584+44	601+03.5	Rt.	1650	
EDWIN AVE. CONN.				
0+40	4+61.5	Lt.	430	
0+40	4+88	Rt.	450	
TOTAL CODE U-1010(5) 5% CITY			6,090 LIN. FT.	

CODE U-1010(5) 1.58% CITY

601+87	603+67.5	Rt.	210
TOTAL CODE U-1010(5) 1.58% CITY			210 LIN. FT.

CODE UG-1010(5) 5% CITY

566+06	568+16	Rt.	210
TOTAL CODE UG-1010(5) 5% CITY			210 LIN. FT.

ITEM SS-18 FENCE GATES, TYPE C

CODE U-1010(5) 5% CITY

STATION TO STATION		SIDE	GATES
574+57	574+71	Rt.	1
585+28		Rt.	1
TOTAL CODE U-1010(5) 5% CITY			2

ITEM L-10 SODDING

CODE U-1010(5) 5% CITY

STATION TO STATION		SIDE	LIN. FT.	WIDTH	SQ. FT.
547+75	551+06	Rt.	331	9.5	3145
577+40	9+37 Lt. Charles St.	Rt.	50	4.5	225
595+55	595+75	Rt.	20	8.5	170
EDWIN AVE.					
9+00	5+00	Rt.	200	11.0	2200
TOTAL CODE U-1010(5) 5% CITY					5,740 S.F.

5,740 S.F. ÷ 9 = 638 SQ.YDS.

ITEM L-9 SEEDING & PROTECTING, AS PER PLAN

	CODE U-1010(5)			CODE UG-1010(5)
	5% CITY	1.58% CITY	100% CITY	5% CITY
	S.Y.	S.Y.	S.Y.	S.Y.
Tabulation from Item E-1 (Roadway Exc.)	62,548	1,723	157	3,518
Subtract L-10 Sodding	638	—	—	—
TOTALS	61,910	1,723	157	3,518

ITEM L-9 COMMERCIAL FERTILIZER 12-12-12

(S.Y. x 9 x 88/1000 ÷ 2000 = Tons)

	CODE U-1010(5)						CODE UG-1010(5)	
	5% CITY		1.58% CITY		100% CITY		5% CITY	
	S.Y.	TONS	S.Y.	TONS	S.Y.	TONS	S.Y.	TONS
Tabulation from Item L-9 Seeding	61,910	—	1723	—	157	—	3,518	—
Item L-10 Sodding	638	—	—	—	—	—	—	—
TOTAL TONS	62,548	5.63	—	0.16	—	0.02	—	0.32

ITEM L-9 AGRICULTURAL LIMING MATERIALS

(S.Y. x 9 x 100/1000 ÷ 2000 = Tons)

	CODE U-1010(5)						CODE UG-1010(5)	
	5% CITY		1.58% CITY		100% CITY		5% CITY	
	S.Y.	TONS	S.Y.	TONS	S.Y.	TONS	S.Y.	TONS
Tabulation from Item L-9 Seeding } Item L-10 Sodding }	62,548	—	1723	—	157	—	3,518	—
	—	28.15	—	0.78	—	0.07	—	1.58
TOTAL TONS								

ITEM I-12 COMBINATION CURB & GUTTER, TYPE 2

CODE U-1010(5) 5% CITY

STATION TO STATION		SIDE	LIN. FT.	REMARKS
573+75	580+50	Lt.	654	
575+54	577+33	Rt.	170	
579+22	588+75	Rt.	928	
585+00	588+25	Lt.	326	
TOTAL CODE U-1010(5) 5% CITY			2,078 LIN. FT.	

ITEM I-12 CONCRETE CURB, TYPE 6

CODE U-1010(5) 5% CITY

STATION TO STATION		SIDE	LIN. FT.	REMARKS
540+62	540+72	Rt.	12	
551+40	551+50	Lt.	12	
552+78	552+88	Rt.	12	
588+25	588+75	Lt.	50	
599+50	599+60	Lt.	12	
TOTAL CODE U-1010(5) 5% CITY			98 LIN. FT.	

ITEM I-12 CONCRETE CURB, TYPE 2-A

CODE U-1010(5) 5% CITY

STATION TO STATION		SIDE	LIN. FT.	REMARKS
540+50	551+64	Median	2,198	
552+60	563+58	Median	2,200	
568+16	578+36	Median	2,044	
578+94	600+00	Median	4,224	
EDWIN AVE. CONN.				
0+23.9	5+88	Rt.	584	
0+23.9	5+34	Lt.	520	
WALNUT ROAD				
8+00	10+18	Rt.	248	
8+00	10+12	Lt.	220	
10+84	11+58.3	Lt.	104	
11+06	11+58.3	Rt.	82	
CHARLES AVE.				
7+95	@ 577+33	Lt.	212	
8+40	8+66	Rt.	14	
8+79	9+94	Median	234	
8+95	9+19	Rt.	86	Island
9+38	9+99	Lt.	170	Island
9+58	10+22	Rt.	86	
THIRD ST. (At Charles Ave.)				
10+21	11+00	Lt. & Rt.	156	
THIRD ST. CONN.				
0+04	1+70	Rt.	182	
0+26	6+63.5	Lt.	642	
2+82	6+63.5	Rt.	398	
WEIRICH BLVD.				
4+74	6+00	Rt.	132	
5+74	6+00	Lt.	26	
CHERRY ROAD				
2+92.2	599+54 @	Lt.	244	
2+92.2	602+53 @	Rt.	174	
3+74	4+39	Rt.	192	Island
4+16	4+65	Lt.	152	Island
4+89	5+96	Rt	124	
5+45	5+66	Lt.	76	Island
599+60 @	6+08.60	Lt.	100	
TOTAL CODE U-1010(5) 5% CITY			15,824 LIN. FT.	

CODE U-1010(5) 1.58% CITY

601+66	606+50	Median	968	
602+53	606+50	Rt.	390	
TOTAL CODE U-1010(5) 1.58% CITY			1,358 LIN. FT.	

CODE U-1010(5) 100% CITY

THIRD ST. (At Third St. Conn.)				
23+30	24+54	Lt.	108	
TOTAL CODE U-1010(5) 100% CITY			108 LIN. FT.	

CODE UG-1010(5) 5% CITY

563+58	568+16	Median	916	
TOTAL CODE UG-1010(5) 5% CITY			916 LIN. FT.	

CALCULATIONS

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

14

STA. 21-10.23

ITEM I-13 4" CONCRETE SIDEWALK

STATION	TO STATION	AV. LENGTH	AV. WIDTH	SIDE	SQ. FT.
		CODE U-1010 (5)	5% CITY		
EDWIN AVE. CONN.					
0+31	—	25	5.0	Lt.	125.00
0+31	—	17	5.0	Rt.	85.00
WALNUT ROAD					
8+00	8+43	40	5.0	Lt.	200.00
8+00	10+14	220	5.0	Rt.	1,100.00
8+84	10+10	131	5.0	Lt.	655.00
10+87	11+48	71	5.0	Lt.	355.00
11+08	11+56.3	57	5.0	Rt.	285.00
11+48	11+56.3	10.3	5.0	Lt.	51.50
CHARLES AVE.					
8+40	8+80	42	4.0	Lt.	168.00
8+40	8+75	34	4.0	Rt.	136.00
THIRD ST. (At Charles Ave.)					
10+75	10+80	7	5.0	Lt.	35.00
THIRD ST. CONN.					
0+31	6+63.5	656	5.0	Lt.	3,280.00
0+07	2+07	225	5.0	Rt.	1,125.00
6+60	—	11	5.0	Rt.	55.00
WEIRICH BLVD.					
4+97	5+25	25	4.0	Rt.	100.00
MAIN LINE					
597+86 Rt.	3+22 Lt. Cherry Rd.	368	5.0	Rt & Lt.	1,840.00
CHERRY ROAD					
2+92.2	3+45	47	5.0	Rt.	235.00
3+74	4+35	58	5.0	Rt.	290.00
4+93	5+95	114	5.0	Rt.	570.00
TOTAL CODE U-1010 (5) 5% CITY					10,690.50

USE 10,691 SQ. FT.

ITEM I-21 PORTLAND CEMENT CONCRETE MEDIAN PAV'T., TYPE 1

STATION	TO STATION	SIDE	SQ. FT.
		CODE U-1010 (5) 5% CITY	
540+50	543+32	Median	969.00
548+82	551+64	Median	948.00
552+60	555+42	Median	969.00
578+25	578+36	Median	45.00
578+94	591+35	Median	5,362.50
597+10	600+00	Median	760.00
CHARLES AVE.			
8+79.5	9+93.5	Median	228.00
8+95	9+19	Island Rt.	336.00
9+38	9+99	Island Lt.	1,120.00
CHERRY ROAD			
4+16	4+65	Island Lt.	820.00
5+45	5+66	Island Lt.	232.00
TOTAL CODE U-1010 (5) 5% CITY		11,789.50 S.F. ÷ 9 = 1309.94 S.Y.	

USE 1310 SQ. YDS.

CODE U-1010(5) 1.58% CITY

601+66	605+48	Median	904.00
TOTAL CODE U-1010(5) 1.58% CITY			

USE 101 SQ. YDS.

GRADING ANALYSIS - TOTAL PROJECT

	EMBANKMENT	EMBANKMENT + 22%
CODE U-1010 (5) 5% CITY (Roadway)	122,997 C.Y.	150,057 C.Y.
CODE U-1010 (5) 5% CITY (Basements)	700 C.Y.	854 C.Y.
CODE U-1010 (5) 1.58% CITY (Roadway)	226 C.Y.	278 C.Y.
CODE U-1010 (5) 100% CITY (Roadway)	10 C.Y.	12 C.Y.
CODE UG-1010(5) 5% CITY (Roadway)	18 C.Y.	22 C.Y.
TOTAL CODE U-UG 1010(5)	123,953 C.Y.	151,223 C.Y.

EXCAVATION EMBANKMENT AND SEEDING

STATION	TO STATION	ITEM E-1 ROADWAY EXCAVATION METHOD B CU. YDS.	ITEM E-1 ROADWAY EMBANKMENT CU. YDS.	ITEM L-9 SEEDING & PROTECTING AS PER PLAN SQ. YDS.
		CODE U-1010 (5) 5% CITY		
533+10	538+78	2,212	0	1,370
538+78	545+00	1,005	19,810	7,857
545+00	550+00	1,070	21,852	5,867
550+00	555+00	749	21,198	4,304
555+00	563+58	4,850	23,115	8,242
568+16	575+00	5,954	11,741	9,096
575+00	580+00	5,389	241	3,945
580+00	584+90	2,924	970	1,516
584+90	589+90	411	3,570	1,991
589+90	595+00	374	4,291	2,705
595+00	601+00	1,439	8,474	3,755
Add Seeding for Work Agreement Areas				1,612
540+00 ±	550+00 ±	2,000	2,000	(Rubbish piles, etc. Estimated Quantity)
EDWIN AVE.				
0+23.9	5+50	1,762	3,705	6,142
WALNUT ROAD				
8+00	11+58.3	191	1,645	1,238
CHARLES AVE.				
7+95	9+75	528	16	489
THIRD ST. CONN.				
0+25	6+63.5	1,508	113	1,315
WEIRICH BLVD.				
4+85	6+00	261	0	171
THIRD ST. (At Charles Ave.)				
10+25	11+00	209	9	201
CHERRY ROAD				
2+92.2	6+08.6	248	247	732
TOTAL CODE U-1010 (5) 5% CITY		33,084 C.Y.	122,997 C.Y.	62,548 S.Y.

CODE U-1010 (5) 1.58% CITY

601+00	607+14	979	228	1,723
TOTAL CODE U-1010(5) 1.58% CITY		979 C.Y.	228 C.Y.	1,723 S.Y.

CODE U-1010 (5) 100% CITY

THIRD ST. (At Third St. Conn.)				
23+30	24+54	195	10	157
TOTAL CODE U-1010 (5) 100% CITY		195 C.Y.	10 C.Y.	157 S.Y.

CODE UG-1010(5) 5% CITY

563+58	568+16	25,009	18	3,184
Add Seeding for Work Agreement Areas				334
TOTAL CODE UG-1010(5) 5% CITY		25,009 C.Y.	18 C.Y.	3,518 S.Y.

ITEM E-4 BORROW CALCULATIONS

	EMBANKMENT + 22%	EXCAVATION
	CODE U-1010 (5) 5% CITY	
ROADWAY	150,911 C.Y.	(Suitable Mat'l.) 31,084 C.Y.
SIPPO CREEK CHANNEL (See Sheet No. 37)		1,700 C.Y.

CODE U-1010 (5) 1.58% CITY

278 C.Y. — 979 C.Y.

CODE U-1010 (5) 100% CITY

12 C.Y. — 195 C.Y.

CODE UG-1010(5) 5% CITY

22 C.Y. — 25,009 C.Y.

TOTAL PROJECT 151,223 C.Y. — 58,967 C.Y.

TOTAL EMBANKMENT + 22% 151,223 C.Y.
TOTAL EXCAVATION 58,967 C.Y.

TOTAL BORROW 92,256 C.Y.

B-219 WATERPROOFED AGGREGATE BASE COURSE AND I-18 STABILIZED CRUSHED AGGREGATE SHOULDERS

STATION	TO STATION	LENGTH	B-219 WIDTH	I-18 WIDTH	I-18 DEPTH	SIDE	B-219 SQ. FT.	I-18 CU. FT.
			CODE U-1010 (5)	5% CITY				
539+75	551+45	1170.00	8.0	8.25	0.417	Lt.	9,360.00	4,025.09
540+67	551+53	1086.00	8.0	8.25	0.417	Rt.	8,688.00	3,736.11
552+73	563+58	1085.00	8.0	8.25	0.417	Lt.	8,680.00	3,732.67
552+83	563+58	1075.00	8.0	8.25	0.417	Rt.	8,600.00	3,698.27
568+16	573+75	559.00	8.0	8.25	0.417	Lt.	4,472.00	1,923.10
568+16	575+54	738.00	8.0	8.25	0.417	Rt.	5,904.00	2,538.90
588+75	599+55	1080.00	8.0	8.25	0.417	Lt.	8,640.00	3,715.47
588+75	599+54	1079.00	8.0	8.25	0.417	Rt.	8,632.00	3,712.03

TOTAL CODE U-1010(5) 5% CITY ITEM B-219 62,976 S.F. x 0.25 ÷ 27 = 583.11 C.Y. USE 584 CU. YDS.
TOTAL CODE U-1010(5) 5% CITY ITEM I-18 27,081.64 C.F. ÷ 27 = 1,003.02 C.Y. USE 1004 CU. YDS.

CODE UG-1010 (5) 5% CITY

563+58	568+16	458.00	8.0	8.25	0.417	Lt.	3,664.00	1,575.63
563+58	568+16	458.00	8.0	8.25	0.417	Rt.	3,664.00	1,575.63

TOTAL CODE UG-1010 (5) 5% CITY ITEM B-219
7328 S.F (−) 495 S.F.(7' Shoulders) = 6833 S.F. x 0.25 ÷ 27 = 63.27 C.Y. USE 64 CU. YDS.
TOTAL CODE UG-1010 (5) 5% CITY ITEM I-18
3151.26 C.F. (−) 206.42 C.F.(7' Shoulders) = 2944.84 C.F. ÷ 27 = 109.07 C.Y. USE 110 CU. YDS.

T-31 BITUMINOUS SURFACE TREATMENT - BITUMINOUS MATERIAL

(Rate of Application - 0.25 Gal. per Square Yard)

CODE U-1010 (5) 5% CITY

62,976 S.F. ÷ 9 = 6,997.33 S.Y. x 0.25 = 1,749.33 Gals.
TOTAL CODE U-1010 (5) 5% CITY BITUMINOUS MATERIAL USE 1750 GALS.

CODE UG-1010 (5) 5% CITY

6,833 S.F. ÷ 9 = 759.22 S.Y. x 0.25 = 189.81 Gals.
TOTAL CODE UG-1010 (5) 5% CITY BITUMINOUS MATERIAL USE 190 GALS.

T-31 BITUMINOUS SURFACE TREATMENT NO. 6 AGGREGATE

(Rate of Application - 0.008 Cu.Yds. per Square Yard)

CODE U-1010 (5) 5% CITY

6,997.33 S.Y. x 0.008 = 55.98 Cu.Yds.
TOTAL CODE U-1010 (5) 5% CITY No. 6 AGGREGATE USE 56 CU. YDS.

CODE UG-1010 (5) 5% CITY

759.22 S.Y. x 0.008 = 6.07 Cu.Yds.
TOTAL CODE UG-1010 (5) 5% CITY No. 6 AGGREGATE USE 7 CU. YDS.

ITEM E-1 COMPACTED SUBGRADE

CODE U-1010 (5) 5% CITY

Under Item T-71	45,110 Sq.Yds.
Under Item B-219	6,998 Sq.Yds.
TOTAL CODE U-1010 (5) 5% CITY	52,108 Sq.Yds.

CODE U-1010 (5) 1.58% CITY

Under Item T-71	2,673 Sq.Yds.
TOTAL CODE U-1010 (5) 1.58% CITY	2,673 Sq.Yds.

CODE U-1010 (5) 100% CITY

Under Item T-71	428 Sq.Yds.
TOTAL CODE U-1010 (5) 100% CITY	428 Sq.Yds.

CODE UG-1010 (5) 5% CITY

Under Item T-71	2,596 Sq.Yds.
Under Item B-219	760 Sq.Yds.
TOTAL CODE UG-1010 (5) 5% CITY	3,356 Sq.Yds.

ITEM I-8 STANDARD MONUMENT ASSEMBLY

STATION	LOCATION	NO.
	CODE U-1010(5) 5% CITY	
E.S. 543+90.15	℄	1
P.T. 550+89.02	℄	1
P.O.T. 552+13.71	℄	1
P.C. 554+39.28	℄	1
E.S. 562+12.50	℄	1
P.T. 569+85.71	℄	1
P.O.T. 578+62.48	℄	1
T.S. 580+45.05	℄	1
S.C. 583+45.05	℄	1
E.S. 596+22.60	℄	1
TOTAL CODE U-1010(5) 5% CITY		10

ITEM SPECIAL - FINE AGGREGATE (As Per Plan)

CODE U-1010 (5) 5% CITY

MAIN LINE			(See Engr's. Comp.) CU. YDS.
Sta. 547+50	to	Sta. 551+50	954.74
Sta. 581+50	to	Sta. 594+75	1,759.26
Sta. 596+43	to	Sta. 599+40	367.33
TOTAL CODE U-1010(5) 5% CITY			3,081.33

USE 3,082 CU. YDS.

ITEM E-11 WATER

CODE U-1010 (5) 5% CITY

ROADWAY EMBANKMENT + 22%	150,911 C.Y.	
150,911 C.Y. x 5.00 ÷ 1000 =		754.56 M. GALS.
SUBBASE	9,368 C.Y.	
STAB. CR. AGGR. SHOULDERS	1,004 C.Y.	
	10,372 C.Y.	
10,372 C.Y x 8.00 ÷ 1000 =		82.98
TOTAL CODE U-1010 (5) 5% CITY		837.54 M. GALS.

USE 838 M. GALS.

CODE U-1010 (5) 1.58% CITY

EMBANKMENT + 22%	278 C.Y.	
278 C.Y. x 5.00 ÷ 1000 =		1.39 M. GALS.
SUBBASE	571 C.Y.	
571 C.Y. x 8.00 ÷ 1000 =		4.57
TOTAL CODE U-1010 (5) 1.58% CITY		5.96 M. GALS.

USE 6 M. GALS.

CODE U-1010 (5) 100% CITY

EMBANKMENT + 22%	12 C.Y.	
12 C.Y. x 5.00 ÷ 1000 =		0.06 M. GALS.
SUBBASE	76 C.Y.	
76 C.Y. x 8.00 ÷ 1000 =		0.61
TOTAL CODE U-1010 (5) 100% CITY		0.66 M. GALS.

USE 1 M. GALS.

CODE UG-1010 (5) 5% CITY

EMBANKMENT + 22%	22 C.Y.	
22 C.Y. x 5.00 ÷ 1000 =		0.11 M. GALS.
SUBBASE	552 C.Y.	
STAB. CR. AGGR. SHOULDERS	110 C.Y.	
	662 C.Y.	
662 C.Y. x 8.00 ÷ 1000 =		5.30
TOTAL CODE UG-1010 (5) 5% CITY		5.41 M. GALS.

USE 6 M. GALS.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA. - 21 - 10.23

TABULATION - PIPE UNDERDRAIN

CODE U-1010(5) 5% CITY

STATION TO STATION		SIDE	F.L. ELEV.	F.L. ELEV.	I-4 LIN. FEET 6" UDRAIN SHALLOW	I-4 LIN. FEET 6" UDRAIN OUTLET	I-5 EACH 6"-30° BEND	6"-60° Y	6"-45° BEND	6" TEE	6"-90° BEND	OUTLET STATION & REMARKS
539 + 90 M.L.	541 + 07 M.L.	Rt.	930.90	930.24	117'	16'				1		541 + 07 Rt. M.L.
2+18 Edwin Ave. Conn.	2+45 Edwin Ave. Conn.	Rt.	926.00	925.80	27'	20'				1		2+45 Rt. Edwin Ave Conn.
2+50 Edwin Ave. Conn.	4+98 Edwin Ave Conn.	Lt.	925.82	929.25	248'	18'					1	2+50 Lt. Edwin Ave Conn.
2+45 Edwin Ave. Conn.	5+00 Edwin Ave Conn.	Rt.	925.80	929.28	256'							2+45 Rt. Edwin Ave Conn.
5+00 Edwin Ave. Conn.	540 + 60 M.L.	Rt.	929.28	930.00	96'	20'					1	5+00 Rt. Edwin Ave. Conn.
541 + 07 M.L.	544 + 00 M.L.	Rt.	930.24	932.48	293'							541 + 07 Rt. M.L.
544 + 00 M.L.	547 + 00 M.L.	Rt.	932.48	935.21	300'	18'					1	544 + 00 Rt. M.L.
542 + 50 M.L.	546 + 75 M.L.	Lt.	931.76	935.62	427'							542 + 50 Lt. M.L. Median
546 + 75 M.L.	549 + 00 M.L.	Lt	935.62	937.67	226'							546 + 75 Lt M.L. Median
547 + 00 M.L.	550 + 00 M.L.	Rt.	935.21	937.69	300'	18'					1	547 + 00 Rt. M.L.
550 + 00 M.L.	553 + 00 M.L.	Rt.	937.69	940.91	300'	8'					1	550 + 00 Rt. M.L.
551 + 00 M.L.	551 + 17 M.L.	Lt.	934.00	939.97		23'			1			551 + 00 Lt. M.L. Toe Ditch
551 + 17 M.L.	551 + 70 M.L.	Lt.	939.97	940.25	54'			1				
551 + 70 M.L.	11+18 Walnut Road	Lt.	940.25	940.29	34'							
551 + 70 M.L.	555 + 95 M.L.	Lt.	940.25	942.86	425'							
551 + 00 M.L.	11+58.30 Walnut Road	Lt.	934.00	940.20	102'							
11+58.30 Walnut Road	11+58.30 Walnut Road	Lt. & Rt.	940.20	940.25	40'		1				1	
11+58.30 Walnut Road	11+07 Walnut Road	Rt.	940.25	940.62	76'							
11+18 Walnut Road	11+58.30 Walnut Road	Lt.	940.29	940.21	40'					1		
551 + 53 M.L.	9+02 Walnut Road	Rt. & Lt	939.48	933.90	136'							9+02 Lt. Walnut Road
552 + 73 M.L.	8+24 Walnut Road	Rt	940.50	930.60	214'							8+24 Rt. Walnut Road
8+00 Walnut Road	8+24 Walnut Road	Rt.	930.93	930.60	24'							8+24 Rt. Walnut Road
9+02 Walnut Road	8+24 Walnut Road	Lt.	933.90	930.60	78'							8+24 Lt. Walnut Road
8+00 Walnut Road	8+24 Walnut Road	Lt.	930.99	930.60	24'							8+24 Lt. Walnut Road
553 + 00 M.L.	555 + 95 M.L.	Rt.	940.91	943.00	295'	18'					1	553 + 00 Rt. M.L.
555 + 95 M.L.	559 + 00 M.L.	Lt.	942.86	940.00	305'	68'					1	559 + 00 Rt. M.L.
555 + 95 M.L.	559 + 00 M.L.	Rt.	943.00	939.32	305'	18'				1		559 + 00 Rt. M.L.
559 + 00 M.L.	561 + 00 M.L.	Rt.	940.00	934.71	200'	68'	1					561 + 65 Rt. M.L.
559 + 00 M.L.	561 + 00 M.L.	Lt.	940.00	934.71	200'	58'	1					561 + 55 Lt. M.L.
561 + 80 M.L.	562 + 25 M.L.	Rt.	932.06	925.75	45'					1		562 + 25 Rt. M.L.
562 + 25 M.L.	562 + 50 M.L.	Rt.	929.75	929.87	25'	14'						562 + 25 Rt. M.L.
561 + 75 M.L.	564 + 00 M.L.	Lt.	932.23	926.00	225'	14'				1		564 + 00 Lt. M.L.
569 + 00 M.L.	572 + 26 M.L.	Rt.	930.85	934.74	326'	18'					1	569 + 00 Rt. M.L.
569 + 00 M.L.	572 + 26 M.L.	Lt.	930.85	934.74	326'	20					1	569 + 00 Lt. M.L.
572 + 26 M.L.	574 + 10 M.L.	Rt.	934.74	933.46	184'	18'					1	574 + 10 Rt. M.L.
572 + 26 M.L.	574 + 05 M.L.	Lt.	934.74	933.53	179'	30'					1	574 + 05 Lt. M.L.
574 + 46 M.L.	576 + 50 M.L.	Lt.	932.91	928.52	204'							576 + 50 Lt. M.L.
574 + 50 M.L.	575 + 54 M.L.	Rt	932.84	930.69	104'	12'					1	
575 + 54 M.L.	577 + 30 M.L.	Rt.	930.54	927.25	176'						1	577 + 30 Rt. M.L.
576 + 75 M.L.	578 + 25 M.L.	Lt.	928.30	926.75	150'							578 + 25 Lt. M.L.
578 + 25 M.L.	579 + 95 M.L.	Lt.	926.75	925.54	170'							579 + 95 Lt. M.L.
577 + 30 M.L.	9+18 Charles Avenue	Rt. & Lt.	927.25	925.00	110'							9+18 Lt. Charles Avenue
9+18 Charles Avenue	8+18 Charles Avenue	Lt.	925.00	926.19	100'							9+18 Lt. Charles Avenue
8+18 Charles Avenue	7+95 Charles Avenue	Lt.	926.19	926.57	23'							8+18 Lt. Charles Avenue
7+95 Charles Avenue	8+65 Charles Avenue	Rt.	926.68	925.69	70'							8+65 Rt. Charles Avenue
8+65 Charles Avenue	10+50 Third Street	Rt.	925.69	926.03	34'							8+65 Rt. Charles Avenue
10+50 Third Street	11+00 Third Street	Rt.	926.03	921.45	50'							10+50 Rt. Third Street
11+00 Third Street	10+40 Third Street	Lt.	927.29	925.20	63'	24'					1	10+25 Lt. Third Street
9+44 Charles Avenue	578 + 98 M.L.	Rt.	925.10	926.21	74'							9+44 Rt. Charles Avenue
577 + 30 M.L.	580 + 20 M.L.	Rt	927.25	925.37	290'							580 + 20 Rt. M.L.
579 + 95 M.L.	580 + 15 M.L.	Lt	924.40	925.40	20'							579 + 95 Lt. M.L.
580 + 20 M.L.	580 + 35 M.L.	Rt.	925.54	924.20	15'	4'						580 + 35 Rt. M.L.
580 + 35 M.L.	581 + 25 M.L.	Rt.	924.20	924.81	90'					1		580 + 35 Rt. M.L.
581 + 55 M.L.	582 + 90 M.L.	Rt.	924.82	925.57	135'	16'	1					581 + 40 Rt. M.L.
582 + 90 M.L.	584 + 75 M.L.	Rt.	925.57	929.14	186'							582 + 90 Rt. M.L.
584 + 75 M.L.	586 + 00 M.L.	Rt.	929.14	931.18	125'							584 + 75 Rt. M.L.
586 + 00 M.L.	588 + 60 M.L.	Rt.	931.18	933.04	260'							586 + 00 Rt. M.L.
588 + 60 M.L.	593 + 00 M.L.	Rt.	933.04	935.59	440'							588 + 60 Rt. M.L.
594 + 87 M.L.	597 + 40 M.L.	Rt.	937.44	938.57	257'							593 + 00 Rt. M.L.
593 + 05 M.L.	597 + 40 M.L.	Rt.	935.62	937.20	435'	20'					1	593 + 05 Rt. M.L.
597 + 40 M.L.	599 + 50 M.L.	Rt.	937.20	935.72	210'	8'					1	
599 + 50 M.L.	600 + 50 M.L.	Rt.	935.42	933.24	100'						1	600 + 50 Rt. M.L.

CODE U-1010(5) 5% CITY - *Continued*

STATION TO STATION		SIDE	F.L. ELEV.	F.L. ELEV.	I-4 LIN. FEET 6" UDRAIN SHALLOW	I-4 LIN. FEET 6" UDRAIN OUTLET	I-5 EACH 6"-30° BEND	6"-60° Y	6"-45° BEND	6" TEE	6"-90° BEND	OUTLET STATIONS & REMARKS
4+41 Cherry Road	2+95 Cherry Road	Lt.	933.24	928.57	154'							2+95 Lt. Cherry Road
2+95 Cherry Road	602 + 60 M.L.	Rt.	928.57	934.25	178'							2+95 Rt. Cherry Road
5+94 Cherry Road	601 + 62 M.L.	Rt. & Lt.	940.68	936.26	144'							602 + 62 Lt. M.L.
6+15 Cherry Road	599 + 64 M.L.	Lt.	941.60	938.02	88'	46'					1	599 + 82 ℄ M.L.
23+32 Third Street	23+48 Third Street	Lt.	931.28	930.76	15'	32'		1				23+32 Rt. Third Street
24+52 Third Street	23+48 Third Street	Lt.	931.81	930.76	105'							23+32 Rt. Third Street
23+32 Third Street	5+68 Weirich Boulevard	Rt.	931.28	925.79	290'	24'				1		5+68 Rt. Weirich Boulevard
5+68 Weirich Boulevard	6+00 Weirich Boulevard	Rt.	925.79	926.06	32'							
24+52 Third Street	2+82 Third St. Conn.	Rt. & Lt.	931.78	925.64	272'	34'		1				2+97 Rt Third St. Conn.
2+82 Third St. Conn.	4+17 Third St. Conn.	Lt.	925.64	926.69	135'							
3+00 Third St. Conn.	4+17 Third St. Conn.	Lt. & Rt	925.70	926.69	117'	3'		1				2+97 Rt. Third St. Conn.
5+71 Weirich Boulevard	6+00 Weirich Boulevard	Lt.	925.81	926.07	29							5+71 Lt. Weirich Boulevard
4+17 Third St. Conn.	6+30 Third St. Conn.	Rt.	926.69	924.30	213'	3'				1		6+30 Rt. Third St. Conn.
4+17 Third St. Conn.	6+30 Third Street	Lt	926.69	924.30	213'	3'				1		6+30 Lt. Third St. Conn.
6+30 Third St. Conn.	4+62 First Street	Rt	924.30	925.68	44'							6+30 Rt. Third St. Conn.
6+30 Third St. Conn.	5+40 First Street	Lt.	924.30	924.72	44'							6+30 Lt. Third St. Conn.
5+68 Weirich Boulevard	2+95 Third St. Conn.	Lt	925.44	925.66	22'	4'		1				5+71 Lt. Weirich Boulevard
581 + 40 M.L.	581 + 50 M.L.	℄	925.00	925.70		▲40'					#1	581+40 Rt. M.L. - Fine Aggregate Blanket Area
581 + 50 M.L.	582 + 40 M.L.	Lt.	925.70	926.70	*90'					#1		581+40 ℄ M.L. - Fine Aggregate Blanket Area
581 + 50 M.L.	581 + 50 M.L.	Lt.	926.50	925.70	*40'					#1		581+50 ℄ M.L. - Fine Aggregate Blanket Area
582 + 00 M.L.	582 + 00 M.L.	Lt.	926.90	926.10	*40'							582+00 ℄ M.L. - Fine Aggregate Blanket Area
582 + 40 M.L.	582 + 40 M.L.	Lt.	927.40	926.70	*35'							582+40 ℄ M.L. - Fine Aggregate Blanket Area
547 + 50 M.L.	551 + 50 M.L.	℄	925.10	926.70	*400'							546+50 Rt. M.L. - Fine Aggregate Blanket Area
CODE U-1010(5) 5% CITY - TOTALS →					13,043	768	4	5	1	12	20	

* Using Sec. M-6.4(f) material
▲ Using Sec. M-6.4(f)(c) material, without perforations

CODE U-1010(5) 1.58% CITY

602 + 60 M.L.	605 + 00 M.L.	Rt.	934.25	936.36	240'							602 + 60 Rt. M.L.
605 + 00 M.L.	606 + 50 M.L.	Rt.	936.36	935.95	150'	12'					1	606 + 50 Rt. M.L.
605 + 25 M.L.	606 + 35 M.L.	Rt.	938.11	937.43	110'							606 + 35 M.L.
601 + 62 M.L.	602 + 53 M.L.	Lt.	936.26	937.26	91'							602 + 62 Lt. M.L.
CODE U-1010(5) 1.58% CITY - TOTALS →					591'	12'					1	

CODE UG-1010(5) 5% CITY

564 + 00 M.L.	564 + 35 M.L.	Lt.	926.00	926.30	35'							564 + 00 Lt. M.L.
564 + 45 M.L.	565 + 40 M.L.	Lt.	926.19	925.72	95'	12'			1			565 + 50 Lt. M.L.
565 + 55 M.L.	569 + 00 M.L.	Lt.	925.72	930.85	345'	10'		1				565 + 50 Lt. M.L.
566 + 10 M.L.	567 + 00 M.L.	Rt.	925.93	925.66	90'	24'				1		567 + 00 Rt. M.L.
567 + 00 M.L.	569 + 00 M.L.	Rt.	925.66	930.85	200'							567 + 00 Rt. M.L.
CODE UG-1010(5) 5% CITY - TOTALS →					765'	46'		1	1	1		

TABULATION - PIPE UNDERDRAIN FOR SPECIAL FINE AGGREGATE BLANKET

CODE U-1010(5) 5% CITY

STATION TO STATION		SIDE	F.L. ELEV.	F.L. ELEV.	I-4 LIN. FEET 8" UDRAIN	I-4 LIN. FEET 8" UDRAIN Outlet	I-5 EACH 8"-45° BEND	8" TEE	8"-90° BEND	OUTLET STATIONS & REMARKS
582 + 40 M.L.	586 + 25 M.L.	℄	926.10	931.49	385'					582 + 40 ℄ M.L.
546 + 50 M.L.	547 + 50 M.L.	Rt.	924.93	924.66		124'	1			546 + 50 Rt M.L.
596 + 43 M.L.	599 + 40 M.L.	℄	931.00	937.95	298'	38'			1	596 + 43 Lt. M.L. F.L. 930.18
	TOTALS →				*683	‡ 162	1		1	
					12" UDRAIN	12" UDRAIN Outlet	12"-45° BEND	12" TEE	12"-90° BEND	
588 + 75 M.L.	594 + 75 M.L.	℄	931.58	934.10	600					
	TOTALS				*600					586 + 00 Rt. M.L.
					15" UDRAIN	15" UDRAIN Outlet	15"-45° BEND	15" TEE	15"-90° BEND	
586 + 00 M.L.	586 + 25 M.L.	Rt.	930.45	930.58		42	1			
586 + 25 M.L.	588 + 75 M.L.	℄	930.58	931.33	250					586 + 00 Rt M.L.
CODE U-1010(5) 5% CITY - TOTALS →					*250	‡ 42	1			586 + 00 Rt M.L.

* Using Sec. M-6.4(f) material
‡ Using Sec. M-6.4(c) material

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-U6-1010(5)	

STA. - 21 - 10.23

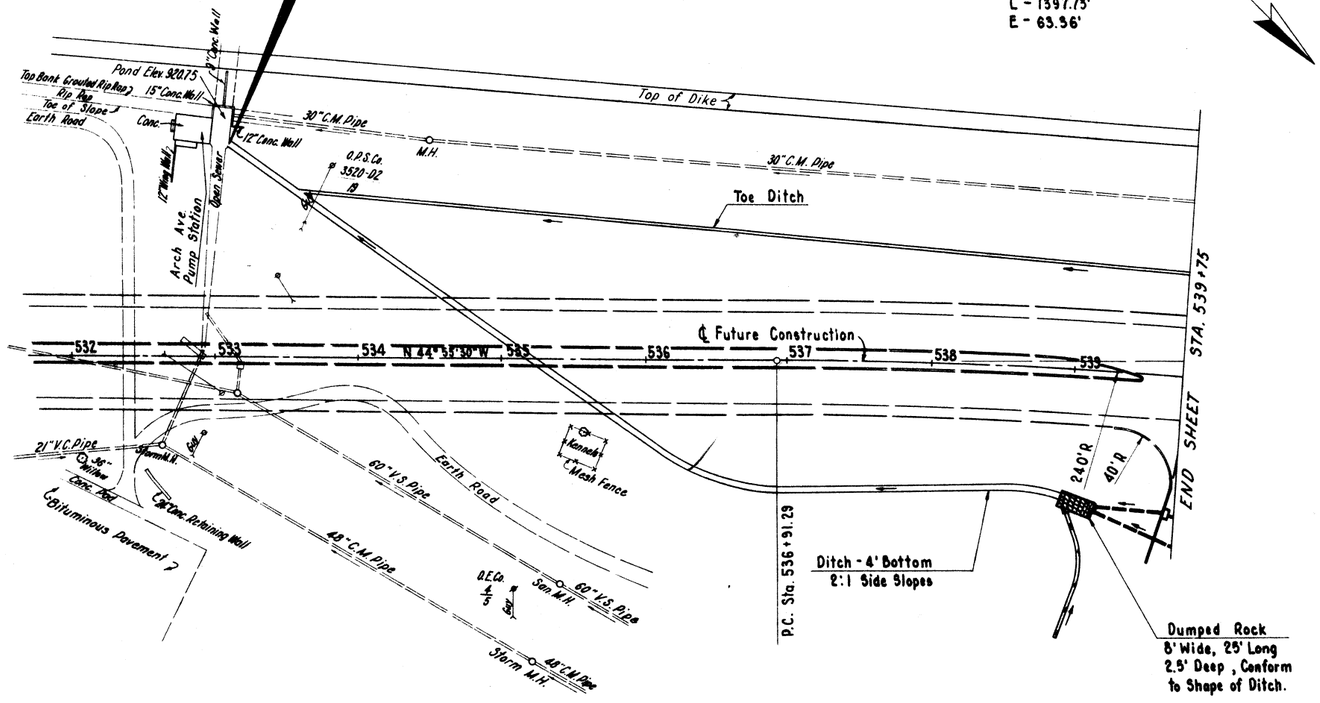
16

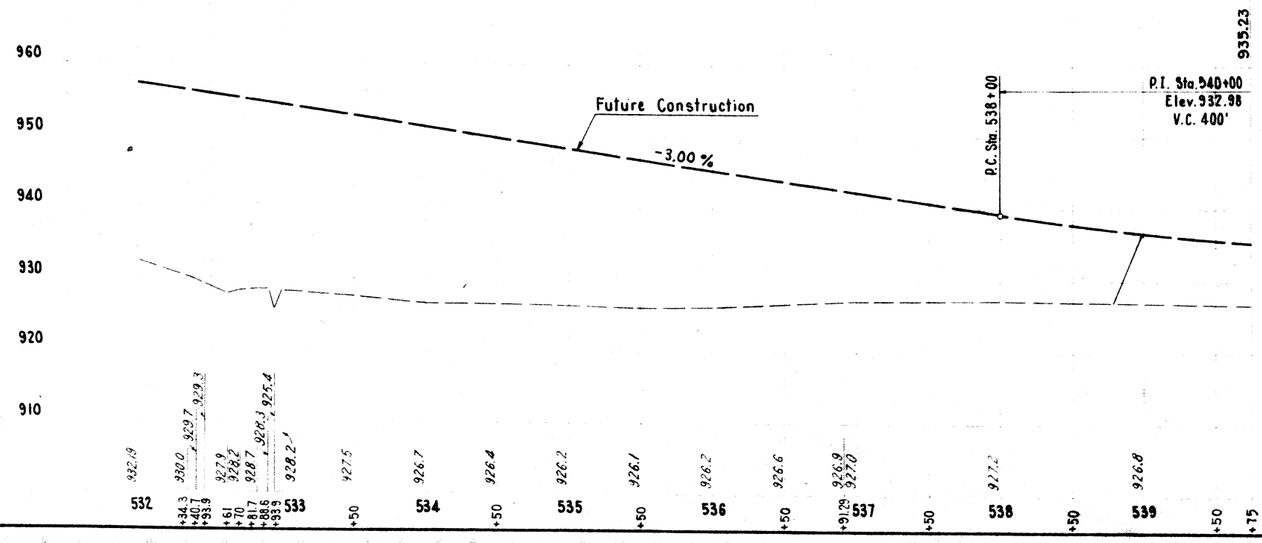
B.M. No. 21-10 Elev. 935.82
Top of S.W. Bolt in Conc. Footer of Lawson Milk Co. Sign @ S.E. Corner of Erie St. and Edwin Ave.

BEGIN WORK STA. 533+10

Curve Data
P.I. Sta. 543+97.71
Δ - 20°30'00" Rt.
D - 1°28'00"
R - 3906.53'
T - 706.42'
L - 1397.75'
E - 63.56'

For Proposed Typical Section of Adjoining Pavement to the South See Typical Section Sheet No. 5





Scale: Hor. 1"=50'
Vert. 1"=10'

LINE & PROFILE SHEET STA. 532+00 TO ST

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA - 21 - 10.23

B.M. No. 21-10 Elev. 935.82
Top of S.W. Bolt in Conc. Footer of Lawson Milk Co. Sign @ S.E. Corner of Erie St. and Edwin Ave.

U-UG-1010 (5)

Dumped Rock 6.5' Wide - 15' Long 2'6" Deep, Conform to Shape of Ditch

Dumped Rock 6.5' Wide - 15' Long 2'6" Deep, Conform to Shape of Ditch

M.H. Meter Station Conc. Bldg

Top of Dike

Toe Drain

Toe Ditch

R/W Line

BEGIN SHEET STA. 539+75

BEGIN PROJECT STA. 539+75

P.O.C. STA. 540+18.94 = EDWIN AVE. STA. 6+04.98

Future Construction

Hub Set P.T. Sta. 543+97.71
372.97'
N 01° 05' 36" E
E. Edwin Ave. Sta. 6+04.98
E. Edwin Ave. Z
Δ = 20° 30' 00"
D = 9° 32' 05"
R = 600.00'
T = 108.97'
L = 214.73'
159° 30' 00"
P.T. Sta. 550+18.00
Erie St.
Sta. 8+00 Edwin Ave.

REFERENCE POINT
P.O.C. STA. 540 + 18.94

Existing 48" San. Sewer To Be Abandoned, as per plan See Sheet No. 9

N 24° 25' 30" W

N 44° 55' 30" W

48" Seg. Blk. San. Sewer

End Temporary Guard Rail

54"

Existing 54" San. Sewer To Be Abandoned To This M.H.

16" Birch

Future Construction

Temporary Guard Rail

S 69° 28' 08" W

EDWIN AVE CONNECTION

40' R

10' R

55' R

NOTE: Federal Marker U-UG 1010 (5) Will Be Furnished And Erected On The Right By The State of Ohio Prior To Acceptance Of This Project.

54" Two ring brick San. sewer 311.9'

Δ = 142° - 07'
T = 9.60'

48" REPLACED

Bob Wire Fence

Ditch 4' Bottom 2:1 Side Slopes

CURVE DATA
P.I. Sta. 543+97.71
Δ = 20° 30' 00" Rt.
D = 1° 28' 00"
R = 3906.53'
T = 706.42
L = 1397.73'
Ex = 63.36'

STA. 545+00 SHEET END

940	935.23	935.94	934.71	934.54	934.42	934.36	934.39	934.47	934.60	934.80	935.28	935.71	936.17	936.62	937.08	937.55
935	BEGIN PROJECT STA. 539+75				V.C.=400' P.I. Sta. 540+00 Elev. 932.98					P.T. Sta. 542+00						
930	-3.000 %												+0.910 %			
	Begin 6"I-4 Pipe Rt. F.L. 930.90				End 6"I-4 Pipe Rt. F.L. 930.24	Begin 6"I-4 Pipe Rt. F.L. 930.24	6"I-4 Pipe Rt.		Begin 6"I-4 Pipe Lt. F.L. 931.76		6"I-4 Pipe Lt.		End 6"I-4 Pipe Rt. F.L. 932.48		F.L. 934.03	F.L. 935.39
					Outlet 6"I-4 Pipe Rt. F.L. 930.00									Begin 6"I-4 Pipe Rt. F.L. 932.48		
925														Outlet 6"I-4 Pipe Rt.		
920																
915	926.4				926.4					926.3			926.3		926.7	926.8
	+75	540			541					542			543		544	545

Existing 54" Sanitary Sewer

CODE U-1010(5) 5% CITY
ITEM 1-15 GUARD RAIL

REF. NO.	Station to Station	Side	Std. Design	Temporary Guard Rail
1-GR	5+02 Edwin - 545+82	Lt.		487.5
2-GR	540+19 (RR-39-90) Normal	Lt.	775.0	
3-GR	543+82 - 551+34	Lt.	775.0	
			1550	487.5

CODE U-1010(5) 5% CITY
STORM SEWERS

REF. NO. From	REF. NO. To	STATION From	STATION To	Side	12"Class B Storm Sewer Under Pavement or Approaches I-2 (LIN. FEET)	Special M-4.6(b)/40" Pipe for Sanitary Sewer I-2 (LIN. FEET)	Standard No.2 Manhole I-8 EACH	Standard No.2-10 Medium Inlet I-8 EACH	Standard No.3 Catch Basin I-8 EACH	Dumped Rock Cu. Yd. I-10	Concrete for Abandoning Existing Seg. Block Class E-S-27D.C.4 Sanitary Sewer S-1	48" Wall E-12	54"	
411	5	541+07	542+00	Rt.	62'				1	9		0.23		
5	410	542+00	542+50	Rt.	64'					9		0.23		
410	5	542+50	543+25	Rt.										158
5	409	543+25	543+00	Rt.										187
409	5	543+00	545+00	Rt.		390'	1	1	1	18		0.48		345
701	5	540+00	542+00	Rt.		390'	1	1	1					
5	701	542+00	543+00	Rt.		126'								
			TOTAL		126'	906'	2	2	3	27		0.71		345

For Intersection Detail of Edwin Ave. Connection See Sheet No. 82.

For Profiles of Storm Sewers See Sheet No. 85

For Profile of Sanitary Sewer See Sheet No. 93

Scale: Hor. 1"=50' Vert. 1"=5'

LINE & PROFILE SHEET STA. 539+75 TO

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

16

STA. - 21 - 10.23

B.M. No. 21-10 Elev. 935.82
Top of S.W. Bolt in Conc. Footer of Lawson Milk Co. Sign, S.E. Corner of Erie St. & Edwin Ave.

Abandon Catch Basin Sta 0+23 - 11' Lt.

Sta. 0+00 Edwin Ave. Conn. = Sta. 28+43.85 Erie St. South

BEGIN WORK Sta. 0 + 15

CODE U-1010(5) 5% CITY

STORM SEWERS

I/Io Inlet Abandoned	I-8 Adjust Inlet to Grade	REF. NO. From	REF. NO. To	STATION From	STATION To	SIDE	I-2 LIN. FT. 12"Class B Storm Sewer Under Pavement or Approaches	I-2 LIN. FT. 12"Class B Storm Sewer	I-8 EACH Standard No. 3 Catch Basin	I-8 EACH Standard No. 3-A Catch Basin	I-8 EACH Manhole Reconstructed to Grade Using Salvaged Casting As Per Plan	S-27 LIN.FT. 36" Roadway Culvert M 6.6 (b) or M 6.8 (b)	S-1 CU.YD. Concrete for Structures Class E 9-27 P.C.4 End Wall	E-2 Excavation for Structures Cu. Yd.	I-10 Dumped Rock Cu. Yd.
1	1	423 S	422 S	0 + 15	0 + 80	Rt.	64			1					
		422 S	421 S	0 + 80	0 + 80	Rt. & Lt.	26			1					
		418 S	419 S	2 + 45	2 + 45	Rt. & Lt.	26		1						
		419 S	420 S	2 + 45	2 + 45	Lt.		18	1				0.23	1	
		424 S	—	3 + 68	—	Rt.				1					
		416 S	417 S	4 + 80	4 + 80	Lt. & Rt.						116	1.18	75	20
		413 S	414 S	5 + 00	5 + 00	Lt. & Rt.	26			1					
		414 S	415 S	5 + 00	4 + 84	Lt.		46		1			0.23	1	
1	1				TOTALS		142	64	2	4	1	116	1.64	75	20

DRIVE - CODE U-1010(5) 5% CITY

Station	Side	ITEM E-1 Roadway Exc. C.Y.	ITEM E-1 Roadway Emb. C.Y.	ITEM T-70-7" S.Y.
0+30	Lt.	1	0	4

Ditch 4' Bottom 2:1 Side Slopes Sodded

Dumped Rock 8.5' Wide 25' Long 2.5' Deep Conform to Shape of Ditch

Toe Ditch

Nail Set & Edwin Ave. Conn. 89°52'05" & Erie St. 1196.18' 95°06'50" & Walnut Rd. 280.51' D.K. Nail & First St. 86°46'00" Nail Set

REFERENCE POINT
Sta. 0+00 Edwin Ave. Conn.

CODE U-1010(5) 5% CITY

ITEM E-8		
Removal & Disposal of Existing Sidewalk	622	Sq.Ft.
Removal & Disposal of Curb, Curb & Gutter or Header Curb	106	Lin.Ft.
Removal & Disposal of Existing Pavement	8	Sq.Yds.

For Intersection Detail of Edwin Ave. See Sheet No. 82
For Profiles of Storm Sewer & Culverts See Sheet Nos. 85 & 92

P.O.C. Sta. 540 + 18.94 = Sta. 6 + 04.98 Edwin Ave. Conn.

BEGIN WORK Sta. 0 + 23.9

END WORK Sta. 5 + 75.20

Future Construction

END WORK Sta. 5 + 75.20

Scale: Hor. 1" = 20' Vert. 1" = 5'

-1.825 %

+1.670 %

V.C. = 200'
P.I. Sta. 2 + 40
Elev. = 928.66

BEGIN 6"I-4 Pipe Lt. F.L. 926.00

End 6"I-4 Pipe Rt. F.L. 929.79

Begin 6"I-4 Pipe Lt. F.L. 925.82

Outlet 6"I-4 Pipe Rt. F.L. 925.50

Outlet 6"I-4 Pipe Lt. F.L. 925.70

Begin 6"I-4 Pipe Rt. F.L. 925.79

6"I-4 Pipe Lt. & Rt.

End 6"I-4 Pipe Lt. F.L. 929.25

Begin 6"I-4 Pipe Rt. F.L. 929.28

End 6"I-4 Pipe Rt. F.L. 929.28

Outlet 6"I-4 Pipe Rt. F.L. 929.50

6"I-4 Pipe Rt.

End 6"I-4 Pipe Rt. F.L. 930.00

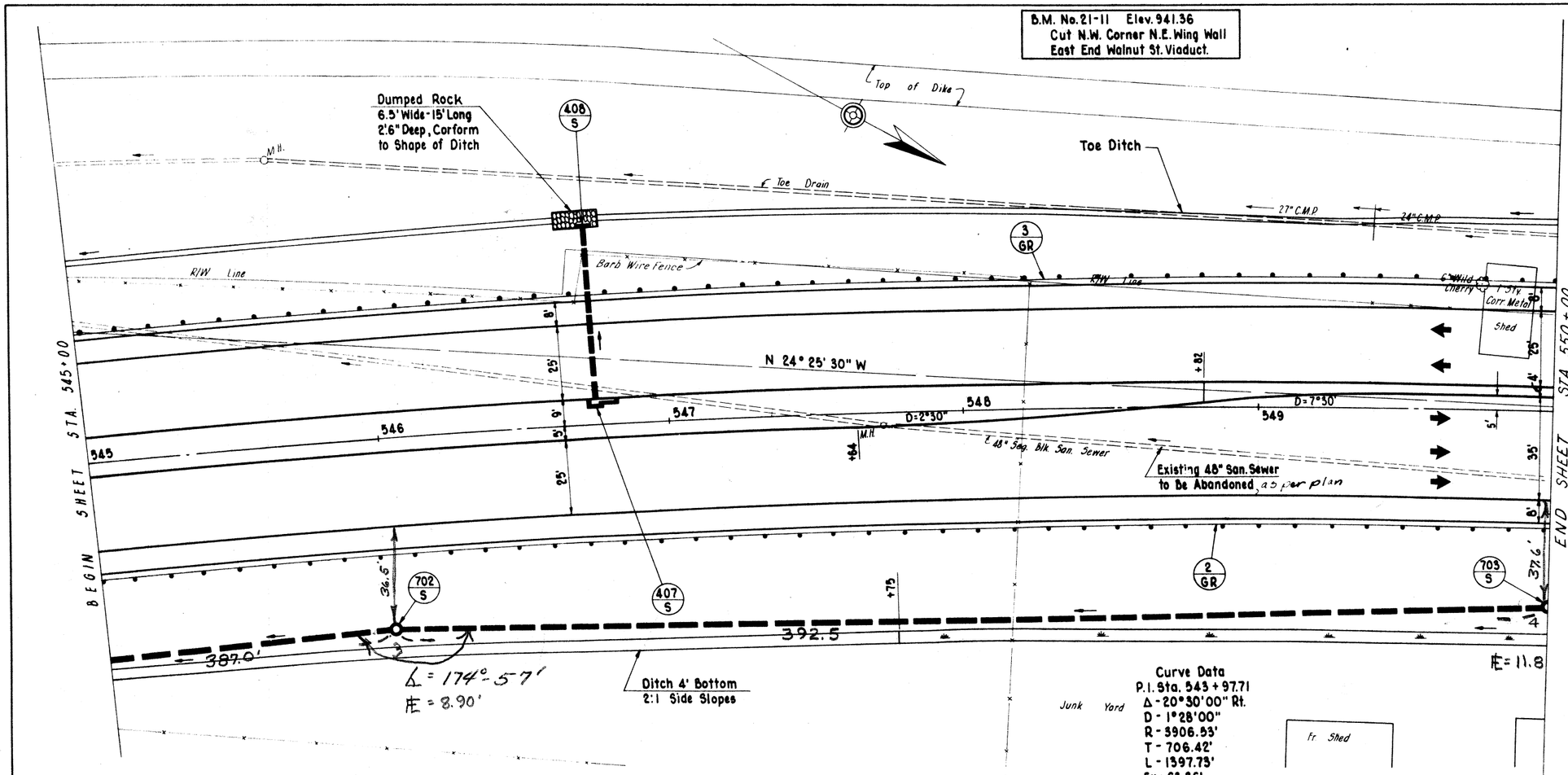
LINE & PROFILE SHEET - EDWIN AVE. CONNECT

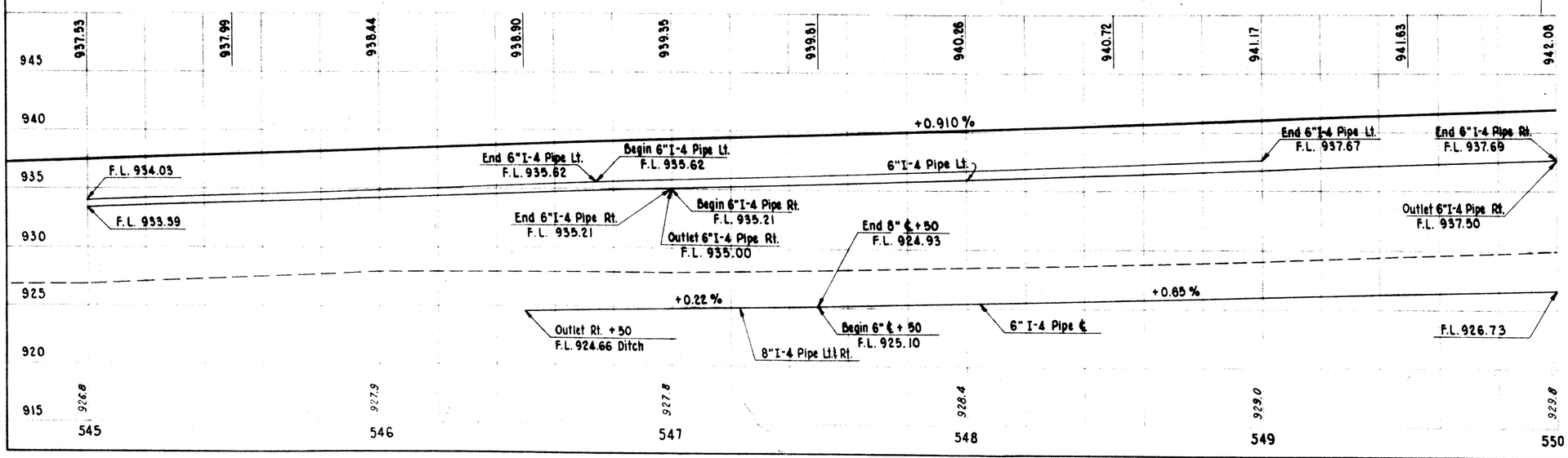
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA - 21 - 10.23

19

B.M. No. 21-11 Elev. 941.36
Cut N.W. Corner N.E. Wing Wall
East End Walnut St. Viaduct.





CODE U-1010(5) 5% CITY

STORM SEWERS

REF. NO. From	REF. NO. To	STATION From	STATION To	SIDE	E-2 Excavation for Structure CU. YD.	I-2 (LIN. FEET) 12" Class B Storm Sewer under Pav't or Approaches	I-2 (LIN. FEET) Special M-6.6 (b) 48" Pipe for Sanitary Sewer	I-8 EACH Standard Manhole NO. 2	I-8 EACH Standard Median Inlet NO. 2-10	I-10 Dumped Rock Cu. Yds.	S-1 CU. YD. Concrete for Structures Class E S-27 P.C.4 End Wall	E-12 Abandoning Existing 48" Sag. Block Sanitary Sewer Lin. Ft.
702S	703S	546+00	550+00	Rt.			396'	2				
407S	408S	546+75	545+00	Lt.	1	60'			1	9	0.23	507
				RKLU								
				TOTALS	1	60'	396'	2	1	9	0.23	507

For Profile of Storm Sewer
See Sheet No. 85

For Profile of Sanitary Sewer
See Sheet No. 93

Scale: Hor. 1"=20'
Vert. 1"=5'

LINE & PROFILE SHEET STA. 545+00 TO S

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

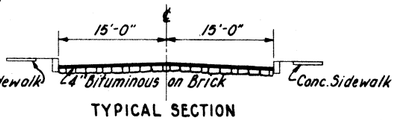
20

STA - 21 - 10.23

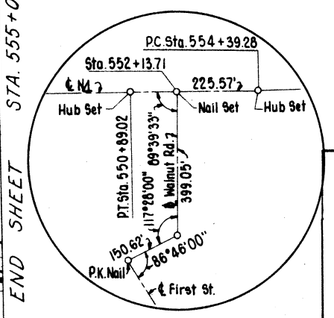
Curve Data
P.I. Sta. 543 + 97.71
Δ - 20° 30' 00" Rt.
D - 1° 28' 00"
R - 3906.53'
T - 706.42'
L - 1397.73'
Ex. - 63.36'

B.M. 21-11 Elev. 941.36
Cut N.W. Corner N.E. Wing Wall
East End Walnut Rd. Viaduct.

Curve Data
P.I. Sta. 562 + 13.52
Δ - 7° 13' 00" Lt.
D - 0° 28' 00"
R - 12,277.70'
T - 774.24'
L - 1546.43'
Ex. - 24.39'



TYPICAL SECTION
EXISTING WALNUT ROAD

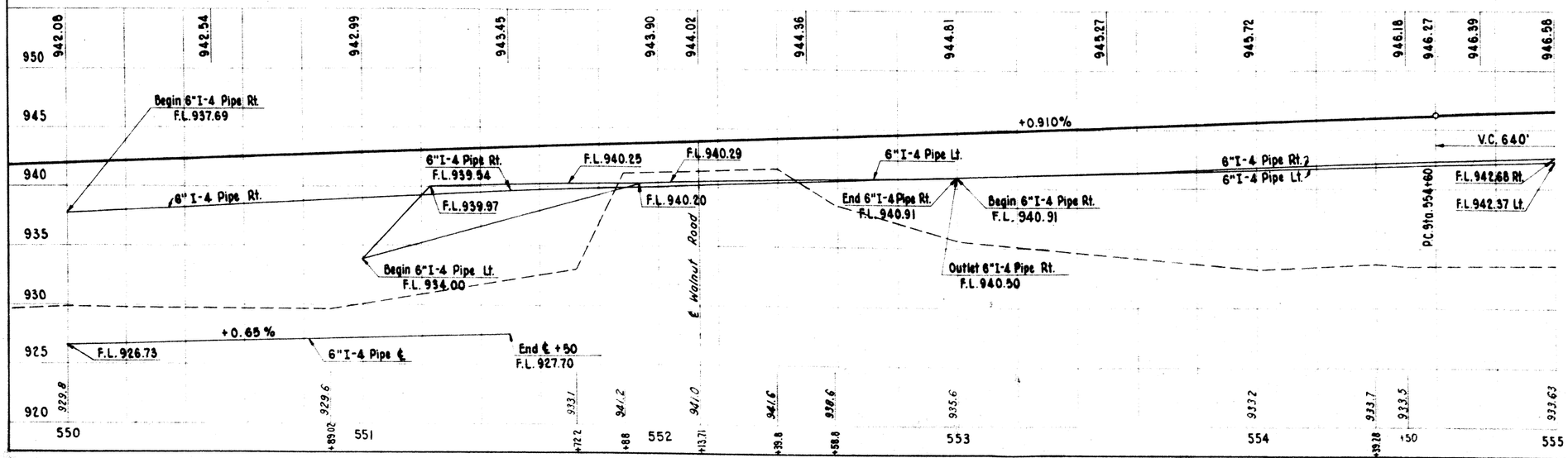


REFERENCE POINT
P.O.T. Sta. 552 + 13.17

BEGIN SHEET STA. 550+00

END SHEET STA. 555+00

Top of Dike
End Work Sta. 11 + 58.3
Toe Ditch
24" C.M. Pipe
18" C.M. Pipe
24" R.C. Pipe
M.H.
10' R.
45' R.
30' R.
Conc. Sidewalk
6" Conc. Curb
Conc. Sidewalk
P.C. Sta. 554 + 39.28
B. L.O.R.R. Siding
Track No. 27 C
Track To Be Abandoned By Others
Timber Retaining Curb
8" V.C. Pipe
6" H.P. Gas Line
6" Water Line
S 65° 54' 57" W
N 24° 25' 30" W
D - 6° 15' 00"
P.C.
550
551
552
553
554
+62
+60
N.P.R.R.
S 89° 59' 33" E
O.P.S.Co. #252AA3 21
Bulkhead
2" H.P. Gas Line
48" Seg. Blk. Pipe San. Sewer
12" Alley
to be Abandoned, as per plan
See note, Sheet 9
Cone
Tile Block Garage
Existing 48" San. Sewer
To Be Abandoned in place
Sta. 552 + 13.71 Main Line =
Sta. 10 + 49.67 Walnut Road
187.8'
447.5
210.5
85.0'
Bituminous
Wood fence
Gate
Truck Scales
Parking Lot (Earth)
1-Sty. Conc. Block Office & Warehouse
Ditch 4' Bottom 2:1 Side Slopes Sodded
Dumped Rock 8.5' Wide, 2.5' Long Conform to Shape of Ditch.
1'-2" Sumacs
Conc. Pad
Conc. Ramp
Transformers
Metal Scrap Dock
Fuel Oil Tank & Hand Pump
4" V.C. Pipe ?
4" Metal Pipe ?
O.P.S.Co. #252AA2 41
Brick Shed
1-Sty. Brick Brick Shop
WALNUT ROAD
R/W
℄ Walnut Road
8" C.I. Pipe San. Sewer ?
N.P.R.R.
MH #5:
℄ = 23.7'
I.N.E. = 17.4'
I.N.N. = 13.3'
℄ = 14.85
I.N.N. = 9.10
703 S
703a S
704 S
406 S
401 S
402 S
2 GR
3 GR
4 GR
5 GR



CODE U-1010(5) 5% CITY ITEM 1-15 GUARD RAIL					
Ref. No.	Station to Station	Side	Standard Design	Temporary Guard Rail	
4 - GR	9+50 Walnut 560+60	Rt.		862.5	
5 - GR	552+14 to 561+00	Lt.		825.0	
	TOTAL			1,687.5	

CODE U-1010(5) 5% CITY
STORM SEWERS

REF. NO.	STATION From	STATION To	Pipe Size		E-2 Excavation for Structures Cu. Yd.	I-2 (Lin. Feet) 15" Class B Storm Sewer	Special 48" M-6.6 (c) Pipe for San. Sewers	I-8 EACH Standard Manhole No. 2	I-10 Dumped Rock Cu. Yd.	S-1 Cu. Yd. Concrete for Structures Class E S.S.S.A.-1 Brickwall	S-27 Lin. Ft. Roadway Culvert 24" M-6.6 (b)	E-12 Abandoning Existing 48" Seg. Block San. Sewer	SPECIAL Bulkhead Each
703 S	703a S	550+00	552+14	Rt.			212	1					
703a S	704 S	552+14	564+06	Rt.			180	1					
405 S	406 S	Walnut Rd. 9+49 Lt.			1	92			20	0.26	150	1	
402 S	401 S	551+38	552+80	Rt.	1.92					0.82			1
		550+00	595+00	Rt.									
		TOTALS			1.33	92	400	2	20	1.08	150	1	1

For Intersection Detail of Walnut Rd. Connection. See Sheet No. 82

For Profiles of Storm Sewers See Sheet No. 85

For Profile of Sanitary Sewer See Sheet No. 93

Scale: Hor. 1" = 20'
Vert. 1" = 5'

LINE & PROFILE SHEET STA. 550+00 TO STA. 555+00

B.M. No. 21-11 Elev. 941.36
Cut N.W. Corner N.E. Wing Wall
East End Walnut St. Viaduct

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

21

STA. -21- 10.23

BEGIN WORK
Sta. 8 + 00

END WORK
Sta. 11 + 58.3

Meet Existing Grade

END WORK
Sta.0 + 70

Sta. 8 + 64 Walnut Road =
Sta. 0 + 00 Nickel Plate Drive

Sta. 552 + 13.71 Main Line =
Sta. 10 + 49.67 Walnut Rd.

552 + 13.71
- 25.00
551 + 88.71

WALNUT ROAD
Bituminous Pav't.

1-Sty. Brick Freight Sta. NICKEL PLATE R. R.

2-Sty. - Frame Warehouse
MASSILLON CLEVELAND AKRON SIGN CO.

3-Sty. - Brick
MASSILLON RIVET & MFG. CO.

Tile Block Garage

Existg. 48" San. Sewer to be Abandoned

Concr. Pad

Timber Wall

Toe Ditch

Top of Dike

Drive (Gravel)

Drive (Pushed Slag)

1" to 2" Sumacs

W. Meter & Valve Box

1" Water Line

End Concrete Sewer

8'x12' Sign Board

R.R. Crossing Sign

P.R. Warning Sign, Conc. Sidewalk & Guard Fence

8" V.C. Pipe San. Sewer

6" V.C. Pipe

8" V.C. Pipe

12" V.C. Pipe

12" V.C. Pipe

2" C.M. Pipe

M.H.

Plug

Bulkhead

6" Water Line

6" H.P. Gas Line

2" H.P. Gas Line

Street Light

O.P.S.Co. 2520A-3 18

O.P.S.Co. 2520A-3 19

O.P.S.Co. 2520A-3 20

O.P.S.Co. 2520A-3 21

O.P.S.Co.

Q.B.T.Co.

N.P.R.R. #9572

N.P.R.R.

I.P.

J.E. or O.

Track No. 27

Track No. 27E

Track No. 27F

Conc.

6" V.C. Pipe

8" V.C. Pipe

12" C.I. Pipe

Timber Rail Curb

Top of Bank

Top of Dike

Existg. Bridge

S 65°54'57" W

N 74°25'30" W

89°39'35"

552

553

15'

16'

33'

20'

25' R

45' R

50' R

10' R

+40

+40

Sta. 0 + 00 Nickel Plate Drive

Sta. 10 + 49.67 Walnut Rd.

Sta. 11 + 58.3

Sta. 0 + 70

Sta. 8 + 64 Walnut Road

Sta. 8 + 90

Sta. 9 + 02

Sta. 9 + 24

Sta. 8 + 24

Sta. 10 + 15

Sta. 9 + 75

Sta. 8 + 10

Sta. 8 + 00

Sta. 11 + 58.3

Sta. 552 + 13.71 Main Line =
Sta. 10 + 49.67 Walnut Rd.

403 S

403a S

404 S

405 S

406 S

401 S

402 S

2 GR

3 GR

4 GR

5 GR

CODE U-1010(5) 5% CITY

ITEM E-8

Removal & Disposal of Existing Sidewalk	1488	Sq.Ft.
Removal & Disposal of Curb, Curb & Gutter or Header Curb	353	Lin.Ft.
Removal & Disposal of Existing Pavement	107	Sq.Yds.

CODE U-1010(5) 5% CITY

STORM SEWERS

REF. NO. From	REF. NO. To	STATION From	STATION To	SIDE	I-2 LIN.FT. 15" Class B Storm Sewer Under Pav't. or Approaches	I-8 LIN.FT. Standard No. 3 Catch Basin	I-8 LIN.FT. Standard Inlet No. 2-A-14	
403 S	404 S	8 + 24	8 + 24	Lt & Rt.	26	2		
404 S	405 S	8 + 24	9 + 02	Lt.	74		1	
			TOTALS		100	2	1	

CODE U-1010(5) 5% CITY

DRIVE

STATION	SIDE	ITEM E-1 Roadway Exc. C.Y.	ITEM E-1 Roadway Emb. C.Y.		ITEM B-19 6" C.Y.	ITEM T-707 7" S.Y.
8 + 64	Lt.	14	0		14	0
8 + 90	Rt.	0	20		12	7
TOTALS		14	20		26	7

CODE U-1010(5)

100% CITY

I-8

Manhole Adjusted To Grade

403a	8 + 49 Walnut Rd.	1

15'-0" | 15'-0"
Conc. Sidewalk | 4" Bituminous | Conc. Sidewalk

TYPICAL SECTION
EXISTING WALNUT ROAD

END WORK-Sta. 0 + 70
Meet Existing Grade

935.27 | 935.03 | 934.96 | 934.65 | 934.49 | 934.18

935
930
925

-1.56 %

Sta. 0 + 00 = Sta. 8 + 64 Walnut Rd.

933.87 | 934.44 | 934.37 | 934.18 | 933.95

0 | +15 | +25 | +50 | +10 | 100

PROFILE - NICKEL PLATE DRIVE

934.54 | 934.41 | 934.34 | 934.51 | 934.75 | 935.10 | 935.82 | 936.78 | 937.50 | 939.31 | 940.03 | 941.03 | 942.35 | 943.23 | 943.55 | 943.62 | 944.02 | 944.02 | 943.99 | 943.89

945
940
935
930
925

V.C. - 80'
P.I. Sta. 8 + 50
El. 933.90

V.C. - 80'
P.I. Sta. 9 + 75
El. 942.91

P.C. Sta. 8 + 10
P.T. Sta. 8 + 90
P.C. Sta. 9 + 35
P.T. Sta. 10 + 15

BEGIN WORK
Sta. 8 + 00
Track No. 27E

+1.600 %
+7.208 %
-1.270 %
-0.174 %

Begin 6" I-4 Pipe Lt. F.L. 930.99
Begin 6" I-4 Pipe Rt. F.L. 930.93
End 6" I-4 Pipe Lt. & Rt. F.L. 930.60
Begin 6" I-4 Pipe Rt. & Lt. F.L. 930.60
Begin 6" I-4 Pipe Lt. F.L. 933.90
End 6" I-4 Pipe Lt. F.L. 933.90
6" I-4 Pipe Rt.
6" I-4 Pipe Lt.
End 6" I-4 Pipe Lt. F.L. 939.48
End 6" I-4 Pipe Rt. F.L. 940.50
Begin 6" I-4 Pipe Lt. F.L. 940.25
End 6" I-4 Pipe Lt. F.L. 940.29
Begin 6" I-4 Pipe Rt. F.L. 940.62
6" I-4 Pipe Rt.
6" I-4 Pipe Lt.
End 6" I-4 Pipe Lt. F.L. 940.21
Begin 6" I-4 Pipe Lt. F.L. 940.29
End 6" I-4 Pipe Rt. F.L. 940.25

Existg. Bridge

Sta. 552 + 13.71 Main Line =
Sta. 10 + 49.67 Walnut Road

934.70 | 934.54 | 934.18 | 934.67 | 936.05 | 937.12 | 938.42 | 939.19 | 940.91 | 942.05 | 942.78 | 942.90 | 943.45 | 943.83 | 943.88 | 943.81

+75 | 8 | +50 | 9 | +50 | +75 | 10 | +14.67 | +19.67 | +50 | +74.67 | +83.7 | +96.67 | 11 | +25 | +50 | +59.3 | 12

For Intersection Detail of Walnut Road Connection See Sheet No. 82

For Profiles of Storm Sewer & Culvert See Sheets No. 85 & 92

For Profile of Sanitary Sewer See Sheet No. 93

Scale: Hor. 1" = 20'
Vert. 1" = 5'

LINE & PROFILE SHEET- V

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

22

STA - 20 - 10.23

B.M. No. 21-11 Elev. 941.36
Cut N.W. Corner N.E. Wing Wall
East End Walnut St. Viaduct

CURVE DATA
P.I. Sta. 562 + 13.52
Δ - 7° 13' 00" Lt.
D - 0° 28' 00"
R - 12,277.70'
T - 774.24'
Ex - 24.39'
L - 1546.43'

BEGIN SHEET STA. 555+00

END SHEET STA. 560+00

Top of Dike

Track To Be Abandoned By Others

18" CM Pipe

Track No. 27 C

B&O RR Siding

N.P.R.R. Siding 2

D = 6°15'

D = 5°00'

N 24°25'30" W

555 556 557 558 559 560

48" Seg Block Pipe San Sewer

Bulkhead

12' Alley

M.H.

Existing 48" San. Sewer
To Be Abandoned in place

48" R.C.C. Pipe Sanitary Sewer

O.P.CO.

34.65'

Toe Ditch

Track No. 27 D

℄ = 16.1'

Tracks To Be Abandoned By Others

Track No. 42

Track No. 34

Track No. 29 E

(Abandoned) Conc. Blk. House

Wood Scale Platform

O.P.C. #2520A2 43

W & L.E. R.R.

Track To Be Abandoned By Others

Derailer

1-Sty. Brick Brick Shop

	946.58	946.72	946.82	946.87	946.89	946.87	946.81	946.70	946.55	946.37	946.14	945.86 / 945.81	945.56	945.20	944.81	944.37	943.90	943.38	942.82	942.23	941.58
950																					
945																					
940																					
935																					
930																					
925																					
920	933.63		933.3		933.52		933.9		934.12		934.2		934.99		935.7		936.24		937.3	937.4	937.0

+0.910 %

-3.304 %

F.L. 942.68 Rt.
6" I-4 Pipe Rt.
F.L. 942.37 Lt.
6" I-4 Pipe Lt.

End 6" I-4 Pipe Rt. F.L. 943.00
Begin 6" I-4 Pipe Rt. F.L. 943.00
End 6" I-4 Pipe Lt. F.L. 942.86
Begin 6" I-4 Pipe Lt. F.L. 942.86

6" I-4 Pipe Rt. F.L. 942.65
6" I-4 Pipe Lt.
6" I-4 Pipe Lt. F.L. 942.64

6" I-4 Pipe Lt.
6" I-4 Pipe Rt.
V.C. 640'
P.I. Sta. 557+80
Elev. 949.18

End 6" I-4 Pipe Lt. F.L. 940.00
Begin 6" I-4 Pipe Rt. & Lt. F.L. 940.00
Outlet 6" I-4 Pipe Lt. & Rt. F.L. 939.00
End 6" I-4 Pipe Rt. F.L. 939.32
6" I-4 Pipe Lt. & Rt.
6" I-4 Pipe Lt. & Rt. F.L. 937.68

555 +50 556 +50 557 +50 558 559 +42 +44 +51.3 +69 +80.5 +86 +99.3 560

For Profile of Sanitary Sewer
See Sheet No. 93

Scale: Hor. 1"=20'
Vert. 1"=5'

LINE & PROFILE SHEET STA. 555+00 TO STA. 560+00

CODE U-1010(5) 5% CITY
STORM SEWER

REF. NO. From	REF. NO. To	STATION From	STATION To	Size	I-16	SPECIAL		
						Manhole Abandoned		
						48" Bulkhead Each		
							1	1
							3	3
							1	1
					1-8 EACH	Standard Manhole No. 2		
					1-2 LIN. FT.	Special 48" M-6.6(b) Pipe For Sanitary Sewer		
704 S	705 S	554 + 00	558 + 47.5	452' Rt.				
		555 + 00	558 + 47.5	452' Lt.				
			TOTAL	904'			3	3

B.M. No. 21-12 Elev. 949.60
Cut Conc. Wing Wall East End P.R.R. Bridge Over Tuscarawas River 6' South of South Bridge Rail. West Corner of Angle Point in Wing Wall of North Bridge of Two Bridges.

BEGIN SHEET STA. 560+00

END SHEET STA. 565+00

Top of Dike

SUSPEND U-1010(5) Sta. 563+58

BEGIN UG-1010(5) Sta. 563+58

Sta. 564+09.11 U.S. Rt. 21 = Sta. 12+78.12 Track No. 29 Reloc.

Tracks To Be Abandoned By Others

Toe Ditch

Track No. 27 C

Track No. 27 B

Track No. 29

B&O R.R.

5 GR

4 GR

101 S

100 S

105 S

102 S

10'

8'

12'

7' Shoulder

25'

9'

5'

560

561

562

563

564

565

N 24° 25' 30" W

N 31° 38' 30" W

31° 45' 17" Tan. To Curve

W. & L.E. R.R.

48" R.C.C.P. Sanitary Sewer

Toe Ditch

Wetmore Creek

(Pressure Conduit)

P.C. Sta. 13+83.58

P.T. Sta. 14+69.80

+50

14

W. & L.E. R.R. & B&O R.R.

Tracks To Be Abandoned By Others

Track No. 29 E

Track No. 30 D

Track No. 29 15

Track Relocation (By Others)

M.H.

48" C.I.P. (Extra Heavy) Sanitary Sewer

Earth Road

PRR Telegraph

PRR Telegraph

For Alterations Wetmore Creek Pressure Conduit See Sheet No. 95

Track No. 29
Curve Data
P.I. Sta. 14+27
Δ = 13°47'00" Rt.
D = 16°00'00"
T = 43.42'
L = 86.22'
R = 359.26'

Curve Data
P.I. Sta. 562+13.52
Δ = 7°13'00" Lt.
D = 0°28'00"
T = 774.24'
L = 1546.43'
R = 12,277.70'
Ex = 24.39'

PROPOSED MINOR STRUCTURE
Type: Reinf. Conc. Saddle For Protection of Pressure Conduit
Alignment: Parallel to Existing Conduit (on 8° Curve)

EXISTING WETMORE CREEK STRUCTURE
Reinforced Concrete Pressure Conduit
Span 14'±
Height 7'-9"
(To Remain in Place)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

23

STA - 21 - 10.23

PROPOSED STRUCTURE BRIDGE NO. STA-21-10 69
U.S.R. 21 UNDER W. & L.E. R.R.
Type: Thru-girder with wrought iron plate deck and reinforced concrete substructure.
Spans: 82'-9" & 82'-0" c/c Brgs.
39.88' & 39.49' Clear. f/f substructure
Width: 1 Track 19'-9½" c/c girders plus 3'-0" Sidewalk (So. Side)
Clearance: 15.10' Min. Vertical
Loading: Coopers E-72
Skew: 58° 14' 43" Rt. Forward
Alignment: R.R. Tangent and 16°00' Curve Rt. U.S.R. 21 on 0°28' Curve Lt.
Superelevation: None
Design Criteria: A.R.E.A. Specifications

CODE UG-1010(5) 5% CITY

STORM SEWERS

REF. NO. From	REF. NO. To	STATION From	STATION To	SIDE	E-2 Excavation For Structures Cu. Yd.	I-2 (LIN. FT.) Class B Storm Sewer Under Pav't. or Approaches 12"-15"	I-2 (LIN. FT.) Class B Storm Sewer Under Pav't. Approaches 18"	I-6 EACH Standard Catch Basin 2-A1-2-25	I-14 (LIN. FT.) Standard Type I Paved Gutter Modified As Per Plan	I-14 (LIN. FT.) Standard Type 2 Paved Gutter	S-1 CU. YD. Concrete for Structures Class E S-27 P.C.4 End Wall
100 S	105 S	562+25	564+45	Rt.		222		1	10		0.23
102 S	105 S	564+08	564+45	Rt.	1	52					
105 S	106 S	564+45	566+50	Rt.			208	1	10	370	
101 S	103 S	564+00	565+30	Lt.			136			125	
—	—	562+50	566+20	Rt.							
—	104 S	564+25	565+50	Lt.							
			TOTAL		1	274	136	2	20	495	0.23

941.58 940.90 940.18 939.41 938.61 936.96 935.30 934.51 933.77 933.10 932.46 931.92 931.43 930.99 930.62 930.30 930.04 929.85 929.81 929.70

950
945
940
935
930
925
920

V.C. 640'
P.T. Sta. 561+00
P.C. Sta. 562+00
V.C. 560'
P.I. Sta. 564+80
Elev. 926.05
15.10' Min. Vert. Clearance

6"I-4 Pipe Lt. & Rt.
F.L. 937.68
-3.304%
End 6"I-4 Pipe Rt. & Lt.
F.L. 934.71
6"I-4 Pipe Lt. & Rt.
Outlet 6"I-4 Pipe Lt.
F.L. 934.30
6"I-4 Pipe Lt.
6"I-4 Pipe Rt.
Outlet 6"I-4 Pipe Rt.
F.L. 934.14
Wetmore Creek Pressure Conduit
Begin 6"I-4 Pipe Rt.
F.L. 932.06
6"I-4 Pipe Lt. 2
Begin 6"I-4 Pipe Lt.
F.L. 932.23
End 6"I-4 Pipe Rt.
F.L. 929.75
Begin 6"I-4 Pipe Rt.
F.L. 929.75
Outlet 6"I-4 Pipe Rt.
F.L. 929.65
End 6"I-4 Pipe Rt.
F.L. 929.87
6"I-4 Pipe Lt. 2
6"I-4 Pipe Lt.
F.L. 928.58
End 6"I-4 Pipe Lt.
F.L. 926.00
Outlet 6"I-4 Pipe Lt.
F.L. 925.70
End 6"I-4 Pipe Lt.
F.L. 926.50
Begin 6"I-4 Pipe Lt.
F.L. 926.00
6"I-4 Pipe Lt.
F.L. 925.80
+2.071%
Begin 6"I-4 Pipe Lt.
F.L. 926.19

560 +14 +28.2 +46.5 +53 561 +39.2 +41.5 +52.5 +65.5 +71 +76.1 562 +87.5 +91 +93 +12.1 +47.6 563 +87 +50 564 +22 +50 +89 565

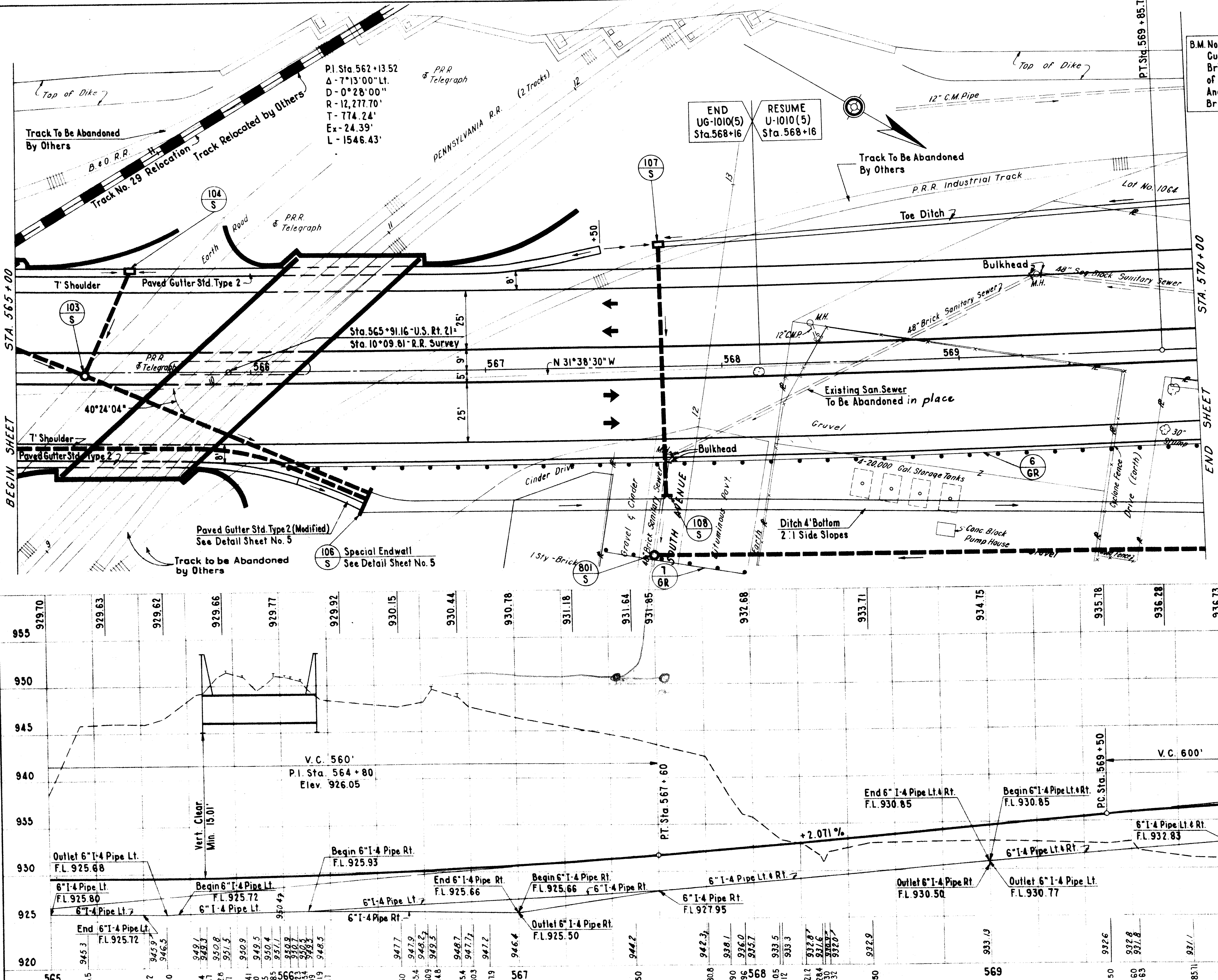
936.7 937.0 935.7 934.8 937.6 936.8 937.4 939.4 939.8 940.1 940.6 940.2 939.8 939.9 940.0 938.6 931.8 931.4 930.6 930.1 932.0 933.9 935.0 938.4

Bridge No. STA. 21-1069
U.S.R. 21 under W. & L.E. R.R
Sta. 564+09.11 See Sheet Nos. 119-129

For Profile of Storm Sewers See Sheet No. 86

Scale: Hor. 1"=20' Vert. 1"=5'

LINE & PROFILE SHEET STA. 560+00 TO STA.



B.M. No. 21-12 Elev. 949.60
Cut Conc. Wing Wall East End P.R.R. Bridge Over Tusarawas River 6' South of South Bridge Rail. West Corner of Angle Point in Wing Wall of North Bridge of Two Bridges.

For Profile of Storm Sewers See Sheet No. 86

For Profile of Sanitary Sewer See Sheet No. 94

STORM SEWERS

REF. NO. From	REF. NO. To	STATION From	STATION To	Side	E-2 CU. YD. Excavation For Structures	I-2 LIN. FT. Class B Storm Sewer Under Pavement or Approaches 12"	I-2 LIN. FT. 18"	I-2 LIN. FT. Special M-6.6(b) Pipe For San. Sewer 48"	I-8 EACH Standard Manholes No. 1	I-8 EACH Standard Manholes No. 2	I-8 EACH Std. C.B. No. 2-2A	S-4 Reinf. Steel Lbs.	I-14 LIN. FT. Standard Paved Gutter Type 2	I-14 LIN. FT. Modified	S-1 CU. YD. Concrete For Structures Class E S-27 P.C.4 End Wall	S-1 CU. YD. Concrete For Structures Class E Special End Wall	SPEC. Bulkhead	I-16 Manhole Abandoned
UG-1010(5) 5% CITY																		
103 S	106 S	565+30	566+50	Rt.			130		1			34				1.16		
104 S	103 S	565+50	565+30	Lt. & Rt.		46					1							
104 S	—	565+50	567+50	Lt.									200					
107 S	108 S	567+75	567+75	Lt. & Rt.	1	106					1				0.23			
	106 S	566+20	566+50											30				
CODE UG-1010(5) 5% CITY TOTAL					1	152	130		1		2	34	200	30	0.23	1.16		
U-1010(5) 5% CITY																		
801 S	802 S	567+69.5	572+30	Rt.				464		1							4	2
		567+69.5	570+00															
CODE U-1010(5) 5% CITY TOTAL								464		1							4	2

ITEM I-15 GUARD RAIL

REF. NO.	STATION TO STATION	SIDE	STANDARD DESIGN	CODE U-1010(5) 5% CITY	CODE UG-1010(5) 5% CITY
6 GR	566+12 576+14	Rt.		1012.5	
CODE U-1010(5) 5% CITY TOTAL				1012.5	
7 GR	567+49 568+07	Rt.			62.5
CODE UG-1010(5) 5% CITY TOTAL					62.5

PROPOSED STRUCTURE BRIDGE NO. STA.-21-1073
U.S.R. 21 UNDER PA.R.R. Sta. 565+91.16
Type: 2-Span Continuous Welded deck girder with wrought iron plate deck and reinf. concrete substructure
Spans: 66'-0½" & 66'-5¼" c/c Brgs.
40.51' & 40.77' Clear. Between Faces of Substructure
Width: 2 Tracks @ 14'-0" c/c (On Curve)
32'-6" c/c Fascia girders; 37'-1" o/o Parapets
Clearance: 15.02' Min. Vertical
Loading: Coopers E-72 Steam Impact
Skew: 48°16'02" Rt. Fwd.
Alignment: P.R.R. on 3°30'± Curve Rt. / U.S.R. 21 on 0°28' Curve Lt. } Bridge designed to fit present rail location
Superelevation: 6" (Each Track)
Design Criteria: AREA Specifications

Bridge No. STA.-21-1073
U.S.R. 21 Under Penna. R.R.
Sta. 565+91.16
See Sheet Nos. 130-143

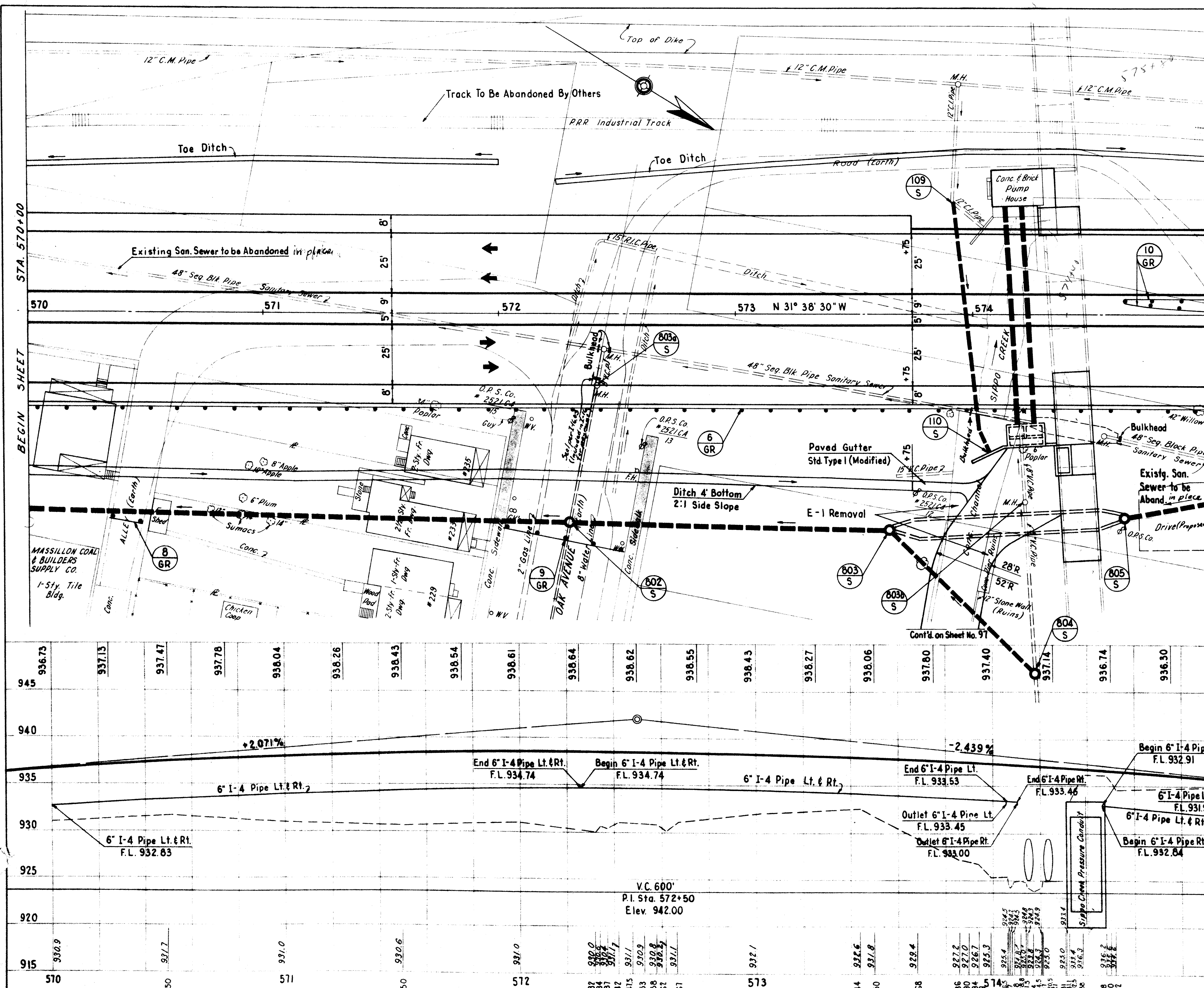
Scale: Hor. 1" = 20' Vert. 1" = 5'

B.M. 21-13 Elev. 938.23
Cut Top S.W. Corner Pier Footer of Third Pier West of East Abutment of Tremont Ave. Viaduct Tuscarawas River

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG 1010 (5)	

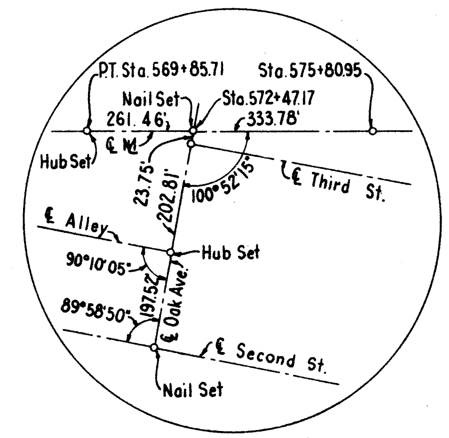
STA - 21 - 10.23

25

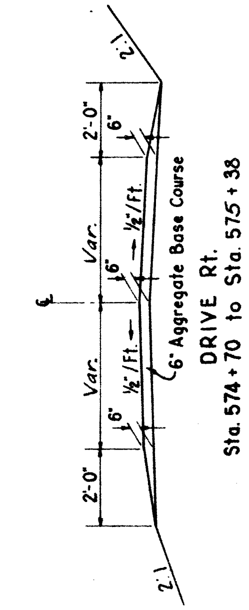


STA. 575+00

CODE U-1010(5) 5% CITY DRIVE				
STATION TO STATION	SIDE	ITEM E-1 ROADWAY EXC.	ITEM E-1 ROADWAY EMB.	ITEM B-19 6" C.Y.
574+70 - 575+38	Rt.	98	0	90



REFERENCE POINT
P.O.T. Sta. 572+47.17



DRIVE Rt.
Sta. 574+70 to Sta. 575+38

CODE U-1010(5) 5% CITY ITEM I-15 GUARD RAIL				
Ref. No.	Station to Station	Side	Std. Design	Temporary Guard Rail
8-GR	570+32 to 570+48	Rt.	12.5	
9-GR	572+05 to 572+52	Rt.	50.0	
10-GR	574+63 to 577+00	Median	487.5	
TOTAL			550.0	

CODE U-1010 (5) 5% CITY STORM SEWERS										
REF. NO.		STATION		SIDE	I-2 LIN. FT.			I-8 EACH	SPECIAL	I-16
From	To	From	To		12" Class B Storm Sewer Sec. M-6.4 (c)	Special M-6.6(b) Pipe For San. Sewer 48"	8" Pipe For San. Sewer M-6.8(b)	Standard Manhole No. 2	48" Bulkhead	Abandoned Manholes
802S	803S	572+30	573+64	Rt.		135		1		
804S	803S	574+26	574+26	Rt.			84	1		
109S	110S	573+92	574+06	Lt.&Rt.	*					
		570+00	575+47	Lt.&Rt.					4	1
803a		572+41		Rt.						1
803b		574+21		Rt.						1
TOTAL					*	135	84	2	4	3

* Included in Lump Sum bid for "Alterations to Sippo Creek Conduit and Pumping Station"

CODE U-1010(5) 5% CITY ITEM E-8	
Removal & Disposal of Existing Sidewalk	520 S.F.

Scale: Hor. 1" = 20' Vert. 1" = 5'

For Details of Alteration Sippo Creek Conduit & Pump House See Sheets No. 97 to 105

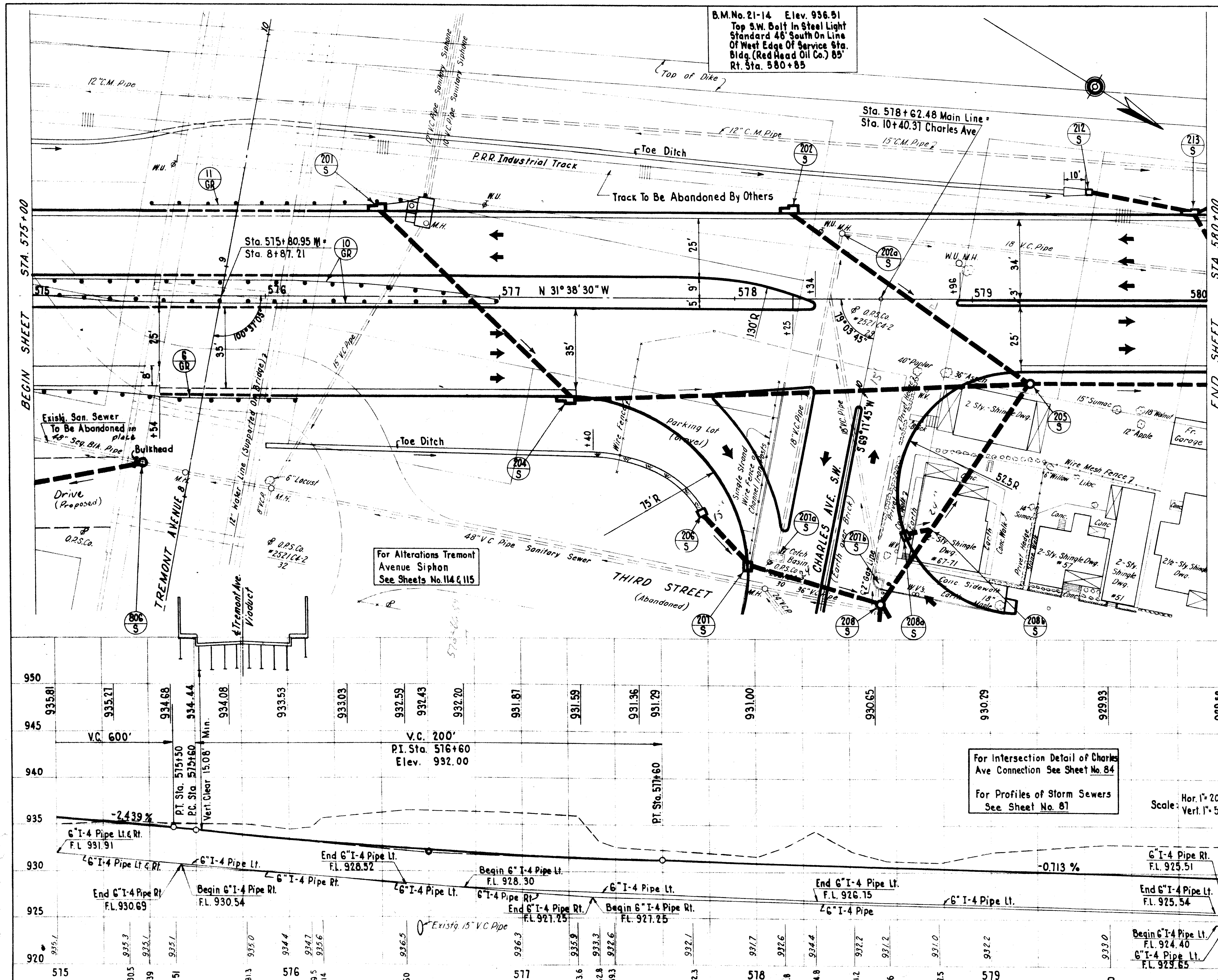
For Profile of Sanitary Sewer See Sheet No. 94

LINE & PROFILE SHEET STA. 570+00 TO STA. 575+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA - 21 - 10.23

26



EXISTING STRUCTURE BRIDGE NO 21 - 1092
USR 21 UNDER EXISTING TREMONT AVE.
STA. 575 + 80.95

Type : Continuous Steel beams with concrete Filled I-Beam-Lok deck and Reinforced concrete substructure
Spans : 50'-55'-55'-50', 83'-95'-83', 62'-45'-10 13/16", 67'-1 3/16"-58' c/c Brgs.
Roadway : 40'-0" f/f curbs + two 6'-6" Sidewalks
Loading : H-20-33
Skew : 6° 24' 08" Rt. Fwd. Piers 2 to 7
9° 08' 46" Rt. Fwd. Piers 8 to 10
Alignment : Tangent

CODE U-1010(5) 5% CITY
ITEM I-15 GUARD RAIL

Ref. No.	Station To Station	Side	Std. Design	Temporary Guard Rail
11-GR	575+52-576+71	Lt.	125.0	

STORM SEWERS CODE U-1010(5) 5% CITY

REF. NO From	REF. NO To	STATION From	STATION To	Side	I-2 Class B Storm Sewer Under Pavement or Approaches 12"	I-2 Class B Storm Sewer Under Pavement or Approaches 15"	I-2 Class B Storm Sewer Under Pavement or Approaches 24"	I-2 Class B Storm Sewer 12"	I-2 Class B Storm Sewer 15"	I-2 Class B Storm Sewer 24"	I-2 Class B Storm Sewer 30"	I-2 Special M-65(b) Pipe for Sanitary Sewer 48"	I-16 Manhole Abandoned	E-12 Pipe Removed Over 15"	I-5 Pipe Special for Class B Storm Sewer 24"	I-8 Standard Manhole No. 1	I-8 Standard Manhole No. 2	I-8 Standard Catch Basin No. 2-2A	I-8 Standard Catch Basin No. 3	I-8 Standard Inlet (Modified) 2-A-6	I-8 Standard Inlet (Modified) 2-A-8	I-14 Standard Paved Gutter Type 1 Modified As Per Plan	SPEC Bulkhead
805 S	806 S	514+64	575+41	Rt								85'					1						
201 S	204 S	576+50	577+30	Lt & Rt	112															1	1		
204 S	205 S	577+30	519+25	Rt.		192										1							
202 S	205 S	518+25	579+25	Lt & Rt.	122															1			
206 S	201 S	9+37	9+18	Lt.					30									1	1				
201 S	208 S	9+18 Charles Ave	10+25 Third St.	Lt & Rt.			56									1							
208 S	208b S	10+25 Third St.	9+48 Charles Ave	Rt.			36								1								
208a S	208b S	9+41 Charles Ave	9+48 Charles Ave	Rt.				10											1				
208b S	205 S	9+48 Charles Ave	519+25	Rt						14													
212 S	213 S	519+50	519+95	Lt					42									1		1		10	
205 S	216 S	579+25	580+35	Rt.							106												
207a	–	518+45	–	Lt.									1	410									
			575+45	Rt.																			1
TOTAL					234	192	92	10	72	14	106	85	1	410	1	2	1	2	2	3	1	10	1

LINE & PROFILE SHEET STA. 575+00 TO STA. 580+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

27

B.M. No. 21-14 Elev. 936.51
Top S.W. Bolt In Steel Light Standard 46' South On Line Of West Edge Of Service Sta. Bldg. (Red Head Oil Co.) 85' Rt. Sta. 580+85

STA. - 21-10.23

TYPICAL SECTION
EXISTING CHARLES AVENUE
℄
EXISTING THIRD STREET

19'-0" 19'-0"
Conc. Sidewalk
Stone Curb
Bituminous Surface
Conc. Sidewalk
Stone Curb

2nd STREET (Bituminous)
N 20° 45' 20" W
90° 03' 05"
Sta. 5+00 Charles Ave. =
Sta. 20+48.52 Secand St.
CHARLES AVE. S.W. (Bituminous)
S 69° 17' 45" W
BEGIN WORK
Sta. 7+95
Sta. 8+99.39 Charles Ave. =
Sta. 10+00 Third St.
3rd STREET (Abandoned)
N 20° 39' 07" W
89° 56' 52"
79° 03' 45"
N 31° 38' 30" W
END WORK
Sta. 11+00
Sta. 10+40.37 Charles Ave. =
Sta. 578+62.48 ℳ

3-Sty Brick
Parking Lot
Wire Fence
Gravel Alley
Gravel Drive
Drive
Toe Ditch
Single Strand Wire Fence Channel Iron Posts
Wood Curb
Earth over Brick
2"x6" Wood Pole
3'x5' Metal Sign
Parking Sign (Blocked Off)
Stop Sign
Parking Sign
Street Marker
Street Light Pole
Street Light
Catch Basin
Hedge
Privet Hedge
Wire Mesh Fence
Stone Walk
Earth
Conc. Walk
Brick
Stone Sidewalk
Conc. Sidewalk
6" Stone Curb
Snow Fence
6" Water Line
6" Gas Line
3" Gas Line
2" Gas Line
18" V.C.P.
24" V.C.P.
36" V.C.P.
W.U.Ø
M.H.
W.V.
G.V.
F.H.
Bit.
Conc.
Stone
Brick
Earth
Rose
Lilac
Willow
Locust
Cherry
Apple
Sumac
Maple
Poplar
Aspen

OPS Co. #2521C4-1 43
OPS Co. #2521C4-1 52
OPS Co. #2521C4-1 42
OPS Co. #2521C4-2 26
OPS Co. #2521C4-2 25
OPS Co. #2521C4-2 28
OPS Co. #2521C4-2 27
OPS Co. #2521C4-2 29
OBT Co. #2762
OBT Co. M.H.

#301 #300 #295 #1051 #1053 #1054 #189 #186 #172 #171 #174 #175 #173

207 S (No Number) 206 S 206a S 206b S 209 S 202 S 202a S 207a S 207b S 208 S 208a S 208b S 211 S 205 S

CODE U-1010(5) 5% CITY									
STORM SEWERS									
REF. NO.		STATION			SIDE	I-2 (LIN. FT.)	I-8 EACH	I-16	E-12
From	To	From	To			Class B Storm Sewer Under Pavement or Approaches	Standard Inlets (Modified)	Catch Basins Abandoned	Pipe Removal Over 15"
						15" 18"	2-A-12 2-A-18		
209S	210S	8+18 Charles Ave.	8+65 Charles Ave.	Lt. & Rt.		60			
210S	206S	8+65 Charles Ave.	10+25 Third St.	Rt. & Lt.		44	1 1		
211S	208S	10+50 Third St.	10+25 Third St.	Rt. & Lt.	40		1		
207a		9+24 Charles Ave.		Lt.				1	140
207b		9+20 Charles Ave.		Rt.				1	120
TOTALS					40	104	1 2	2	260

CODE U-1010(5) 5% CITY		
ITEM E-8		
Removal & Disposal of Existing Sidewalk	675	Sq. Ft.
Removal & Disposal of Curb, Curb & Gutter or Header Curb	267	Lin. Ft.
Removal & Disposal of Existing Pavement	—	Sq. Yds.

REFERENCE POINT
P.O.T. Sta. 578+62.48

Second St. ℄ 2 S.W.
Charles Ave. ℄
Axle Set
Existg. I.P. 90°03'05"
399.39'
180°00'00"
Sta. 575+80.86
79°03'45"
Sta. 578+62.48
140.98'
182.57'
Hub Set
Third St. ℄ 2
T.S. Sta. 580+45.05

PROFILE - THIRD STREET RT.

CODE U-1010(5) 100% CITY		
I-8		
Manhole Adjusted To Grade		
206 a	9+00 Charles Ave.	1
206 b	9+10 Charles Ave.	1
TOTAL		2

END WORK
Sta. 11+00
P.I. Sta. 10+20
No Curve
End 6"I-4 Pipe Rt. F.L. 926.03
-1.300 %
+2.910 %
Begin 6"I-4 Pipe Rt. F.L. 925.69
Begin 6"I-4 Pipe Rt. F.L. 926.03
6"I-4 Pipe Rt.
End 6"I-4 Pipe Rt. F.L. 927.45
End 6"I-4 Pipe Lt. F.L. 927.29
6"I-4 Pipe Lt.
Begin 6"I-4 Pipe Lt. F.L. 925.20
Outlet 6"I-4 Pipe Lt. F.L. 925.00
Sta. 10+00 Third St. = Sta. 8+99.39 Charles Ave.
930.12 929.03 929.99 930.77 931.39
935 930 925 920 915 910
10 +25 +50 +75 11

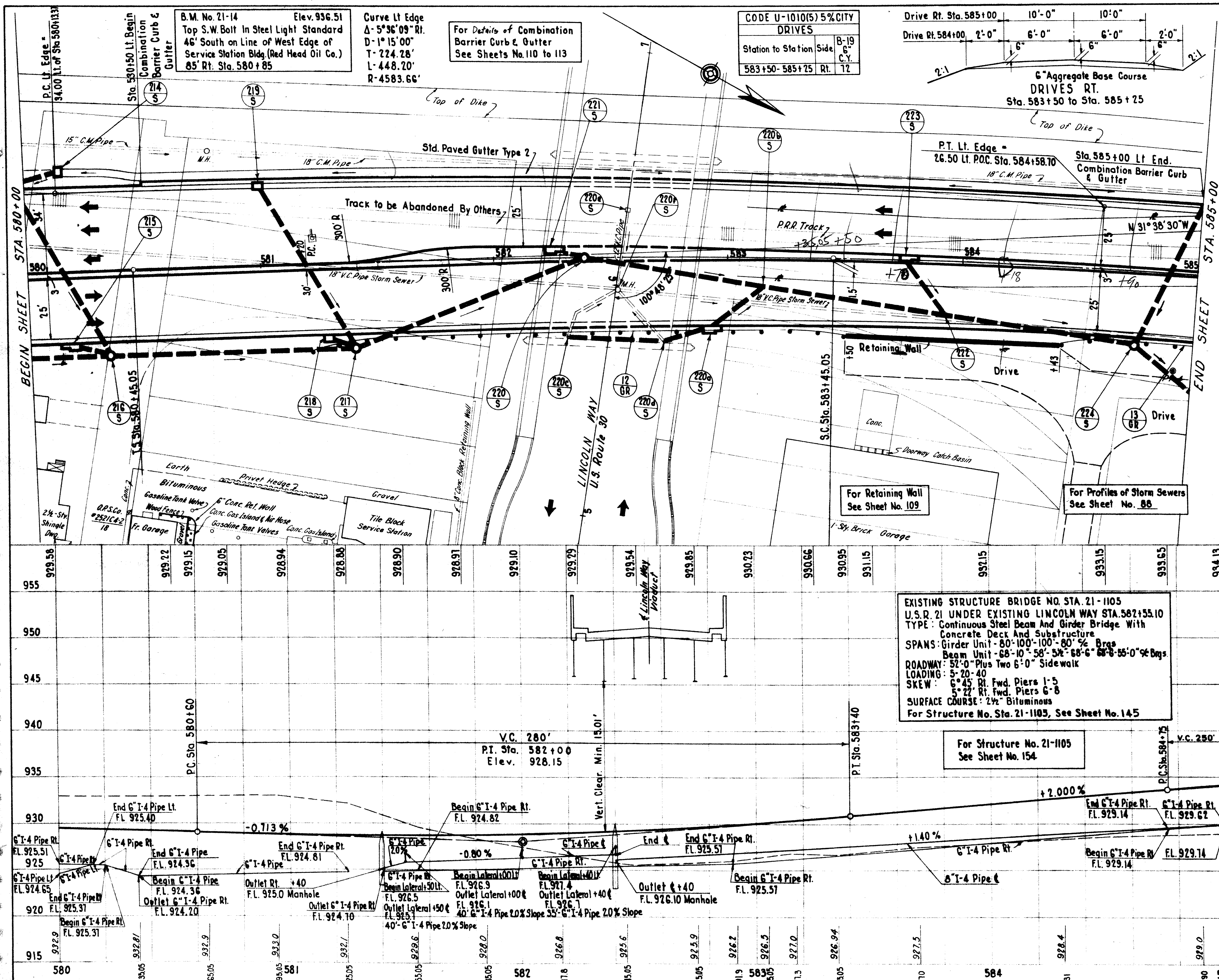
PROFILE - CHARLES AVENUE

Existg. ℄ Grade
BEGIN WORK
Meet Existg. Grade
Sta. 7+95
-1.420 %
Begin 6"I-4 Pipe Lt. F.L. 926.19
Begin 6"I-4 Pipe Rt. F.L. 926.68
End 6"I-4 Pipe Lt. F.L. 926.19
End 6"I-4 Pipe Rt. F.L. 925.69
6"I-4 Pipe Rt.
6"I-4 Pipe Lt.
Begin 6"I-4 Pipe Lt. F.L. 926.57
Begin 6"I-4 Pipe Rt. F.L. 925.69
End 6"I-4 Pipe Rt. F.L. 926.03
6"I-4 Pipe Rt.
End 6"I-4 Pipe Lt. F.L. 925.00
6"I-4 Pipe Lt.
Begin 6"I-4 Pipe Lt. F.L. 925.00
6"I-4 Pipe Lt.
Begin 6"I-4 Pipe Rt. F.L. 925.10
P.C. Sta. 8+66.64
V.C. 100'
P.I. Sta. 9+16.64
Elev. 928.93
P.T. Sta. 9+66.64
+1.332 %
End 6"I-4 Pipe Lt. F.L. 927.25
6"I-4 Pipe Rt.
6"I-4 Pipe Rt. F.L. 926.18
Sta. 8+99.39 Charles Ave. = Sta. 10+00 Third St.
Sta. 10+40.37 Charles Ave. = Sta. 578+62.48 ℳ
930.59 929.88 929.64 929.54 929.32 929.27 929.28 929.41 926.80 923.71 930.04 930.20
932.00 931.28 930.65 930.58 929.87 929.66 929.17 928.14 928.62 929.07 929.72 930.12
935 930 925 920 915 910
7 +50 +66 +66.64 +75 +99.39 +16.64 +28 +86.64 +75 10

For Intersection Detail of Charles Ave. Connection See Sheet No. 84
For Profiles of Storm Sewer See Sheet No. 87
℄ 98

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA - 21 - 10.23



CODE U-1010(5) 5% CITY		
DRIVES		
Station to Station	Side	B-19 6" C.Y.
583+50 - 585+25	Rt.	72

Spiral Curve Data
P.I. Sta. 597+73.67
Δ - 60°40'16" Rt.
D - 2°07'30"
L.S. - 300.00'
R - 2696.27
θs - 3°11'15"
P - 1.39'
Xc - 299.91'
Yc - 5.57'
K - 149.99'
L.T. - 200.03'
S.T. - 100.03'
Lc - 2555.11'
Ts - 1728.62
Es - 429.34
Lc - 2555.11

CODE U-1010(5) 5% CITY	
ITEM I-12 COMBINATION BARRIER CURB & GUTTER	
Sta. 580+50 - 585+00 Lt.	450 L.F.

CODE U-1010 (5) 5% CITY

ITEM I-15 GUARD RAIL

Ref. No.	Station to Station			Std. Design		Temporary Guard Rail
12-GR	581+20	583+50	Rt.		231.5	
13-GR	584+44	588+69	Rt.		425.0	
	Total				662.5	

CODE U-1010 (5) 5% CITY

STORM SEWERS

REF. NO. From	REF. NO. To	STATION From	STATION To	Side	I-2 LIN. FT. Class B Storm Sewer Under Pavement or Approaches 12"	18"	36"	I-2 LIN. FT. Class B Storm Sewer 8"	12"	36"	I-8 EACH Standard Manhole No. 1	Standard Catch Basin 2-2A	No. 3	Standard Inlet Modified 2A-6	2A-8	Standard Median Inlet 2-8	2-10	I-14 LIN FT. Standard Paved Gutter Type 2	I-5 EACH Pipe Special for Class B Storm Sewer 36" Wye	Pipe Special for Class B Storm Sewer 8" Tee	Pipe Special for Class B Storm Sewer 8" 90° Bend	I-16 Catch Basin Abandoned	Manhole Abandoned	E-12 Pipe Removal 15" and Under	Pipe Removal Over 15"
214 S	213 S	580+15	519+95	Lt.					16			1													
213 S	216 S	519+95	580+35	Lt. & Rt.		80					1														
215 S	216 S	580+20	580+35	Rt.					12					1											
216 S	217 S	580+35	581+40	Rt.						102	1														
218 S	211 S	581+25	581+40	Rt.					12				1												
219 S	217 S	581+00	581+40	Lt. & Rt.	78								1												
217 S	220 S	581+40	582+40	Rt.			104				1														
221 S	220 S	582+25	582+40	Lt.	12											1									
220 S	220b S	582+40	583+16	Rt.						16															
220c S	220d S	582+32	582+72	Rt.				36												1	1				
220d S	220a S	582+72	582+90	Rt.				18																	
220a S	220b S	582+90	583+16	Rt.	90										1				1						
220b S	222 S	583+16	583+92	Rt.			78												1						
223 S	222 S	583+75	583+92	Rt.	28												1								
222 S	224 S	583+92	584+15	Rt.			82				1														
225 S	224 S	585+01	584+75	Lt. & Rt.	66							1													
214 S	225 S	580+15	585+01	Lt.														485							
220e S	-	582+55	-	Rt.																		1		62	278
220f S	-	582+58	-	Lt.																			1	34	
TOTALS					274	80	264	54	40	118	4	2	2	1	1	1	1	485	2	1	1	1	1	96	278

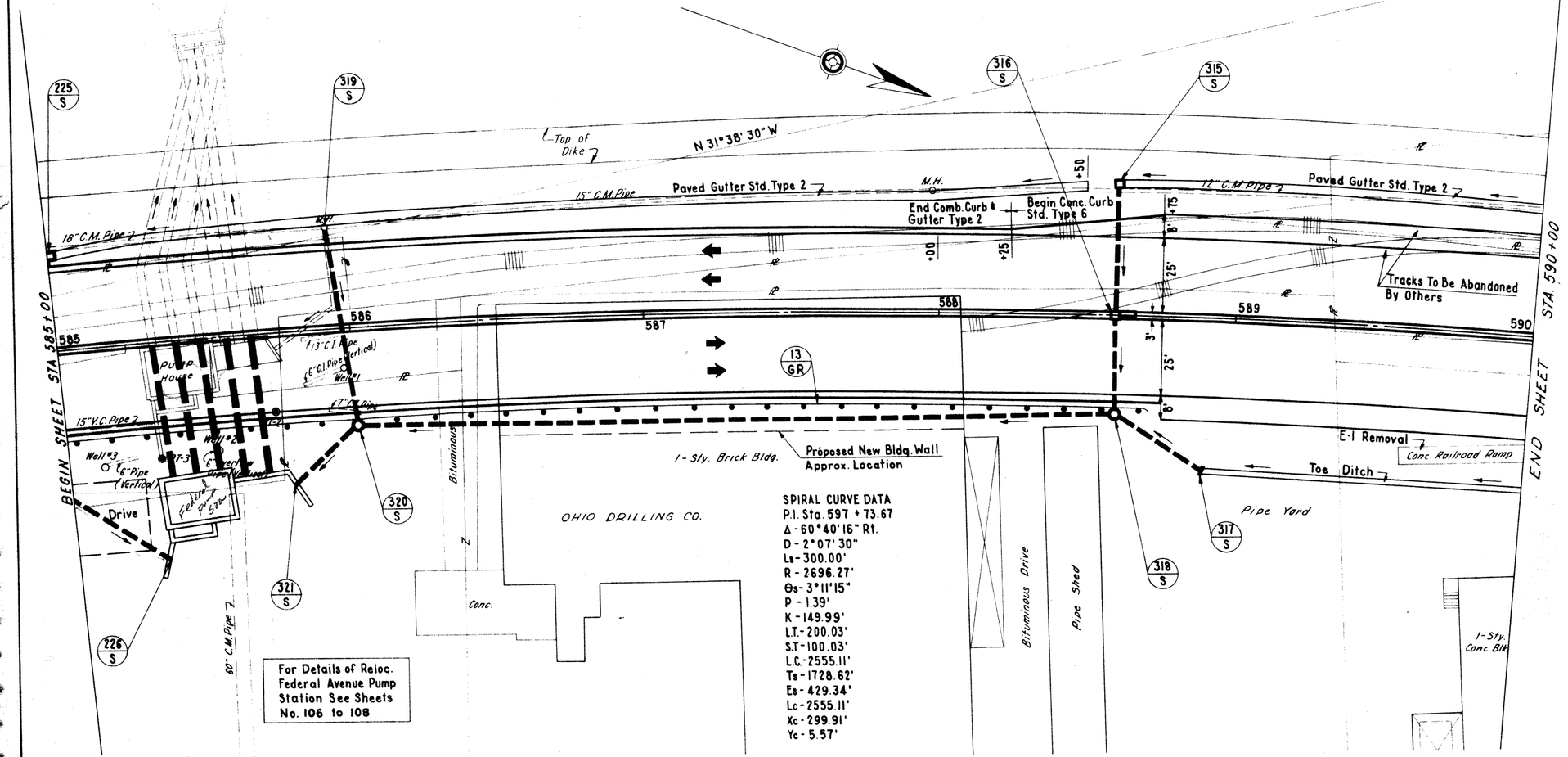
Scale: Hor. 1" = 20'
Vert. 1" = 5'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

29

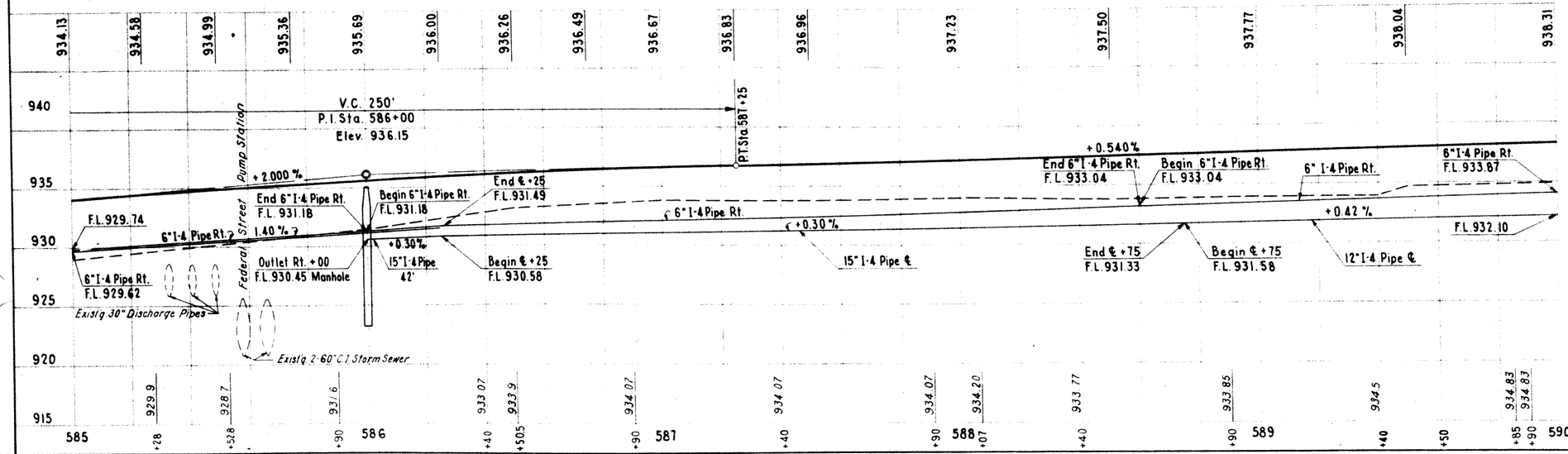
STA - 21 - 10.23

B.M. 21-15 Elev. 935.64
Top Flange Bolt on Street Side of Fire Hydrant 8' East of S.E. Corner Ohio Drilling Co. Bldg. (Front) on 3rd. St. N.W. East Bolt of Two Bolts.



SPIRAL CURVE DATA
P.I. Sta. 597 + 73.67
Δ - 60°40'16" Rt.
D - 2°07'30"
Ls - 300.00'
R - 2696.27'
Θs - 3°11'15"
P - 1.39'
K - 149.99'
L.T. - 200.03'
S.T - 100.03'
L.C. - 2555.11'
Ts - 1728.62'
Es - 429.34'
Lc - 2555.11'
Xc - 299.91'
Yc - 5.57'

For Details of Reloc. Federal Avenue Pump Station See Sheets No. 106 to 108



For Profiles of Storm Sewers See Sheet No. 89

Scale: Hor. 1"=20' Vert. 1"=5'

CODE U-1010(5) 5% CITY

STORM SEWERS

REF. NO. From	REF. NO. To	STATION From	STATION To	Side	Class B Storm Sewer Under Pav't or Approaches 12"	Class B Storm Sewer Under Pav't or Approaches 24"	I-2 (LIN.FT.) Class A Storm Sewer 12"	Class B Storm Sewer 18"	Class B Storm Sewer 24"	Class B Storm Sewer 36"	Storm Sewer M-63(D) M-68(D) 24"	I-8 (EACH) Standard Manhole No. 1	I-8 (EACH) Adjust Manhole To Grade	I-8 (EACH) Standard Catch Basin 2-2A	I-8 (EACH) Standard Median Inlet 2-8	S-1 (CU.YD) Concrete for Structures Class E S-27 P.C.4 End Wall	E-2 (CU.YD) Excavation For Structures	I-14 (LIN.FT.) Standard Paved Gutter Type 2
224 S	226 S	584+75	585+31	Rt.						70								
319 S	320 S	585+94	586+00	Lt. & Rt.		64							1					
321 S	320 S	585+76	586+00	Rt.														
320 S	318 S	586+00	588+60	Rt.				254				1						
315 S	316 S	588+60	588+60	Lt.	40							1						
316 S	318 S	588+60	588+60	Rt.	30													
318 S	317 S	588+60	588+90	Rt.			34											
225 S	—	585+01	588+50	Lt.														
315 S	—	588+60	596+40	Lt.														
TOTALS					70	64	34	254	—	70	28	2	1	1	1	0.23	1	1130

LINE & PROFILE SHEET STA. 585+00 TO STA 590+00

FED.RD. DIVISION	STATE	PROJECT	
2	OHIO	U-U6-1010(5)	

STA. 21-10.23

30

B.M. No. 21-15 Elev. 935.64
Top Flange Bolt on Street Side of Fire Hydrant 8' East of S.E. Corner Ohio Drilling Co. Bldg. (Front) on Third St. N.W. East Bolt of Two Bolts.

BEGIN SHEET STA 590+00

END SHEET STA 595+00

Top of Dike

Std. Paved Gutter Type 2 — Toe Drain

12" C.M. Pipe

Tracks To Be Abandoned By Others

P.R.R. Tracks

E-1 Removal

Conc. Coal Pit

Metal Door

Cherry Rd. Siphon

30" San. Sewer

E-1 Removal

Conc. Railroad Ramp

1-Sty. Tile Block

5-Sty. Brick Warehouse

Toe Ditch

14" Apple

Lilac

Lawn

2-Sty. Insulbric Dwg.

Truck Scales

Gas Pump

Conc.

12" Sumac

6" Sumac

Private Hedge

Parking Lot & Pipe Yard

1-Sty. Conc. Blk.

Gravel

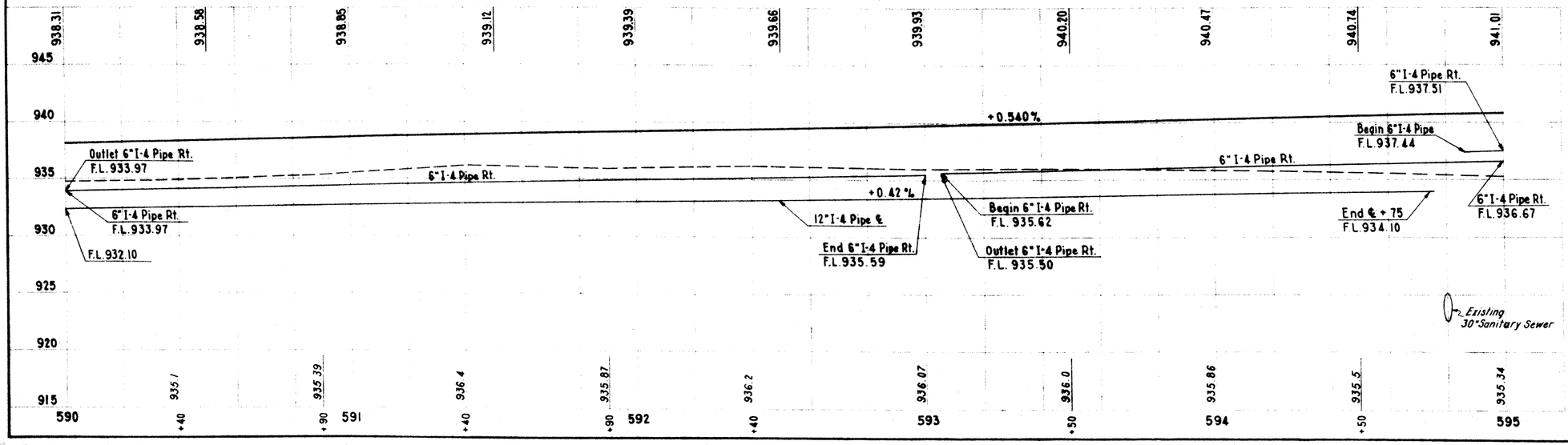
M.H.

8" Gas Line

For Details of Reloc. Cherry Rd. Siphon See Sheets No. 116 to 118

SPIRAL CURVE DATA

P.I. Sta. 597+73.67	Yc - 5.57'
Δ - 60°40'16" Rt.	K - 149.99'
D - 2°07'30"	L.T - 200.03'
Ls - 300.00'	S.T. - 100.03'
R - 2696.27'	L.C. - 2555.11'
θs - 3°11'15"	Ts - 1728.62'
P - 1.39'	Es - 429.34'
Xc - 299.91'	Lc - 2555.11'



For Storm Sewer Profile See Sheet No. 89

Scale: Hor. 1" = 20'
Vert. 1" = 5'

CODE U-1010(5) 5% CITY

STORM SEWERS										
REF. NO. From	REF. NO. To	STATION From	STATION To	Side	E-2 (CU. YD.) Excavation For Structures	E-2 (LIN. FT.) 12" Class B Storm Sewer Under Pavement or Approaches	1-8 EACH Standard Median Inlet 2-8	S-1 (CU. YD.) Concrete For Structures Class E S-27 P.C.4 End Wall		
313 S	314 S	593+00	593+00	Rt.	1	56	1	0.23		
				TOTAL	1	56	1	0.23		

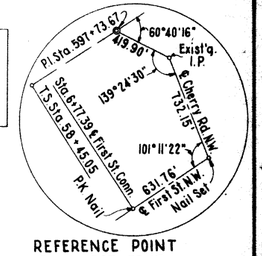
LINE & PROFILE SHEET STA. 590+00 TO STA. 595+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

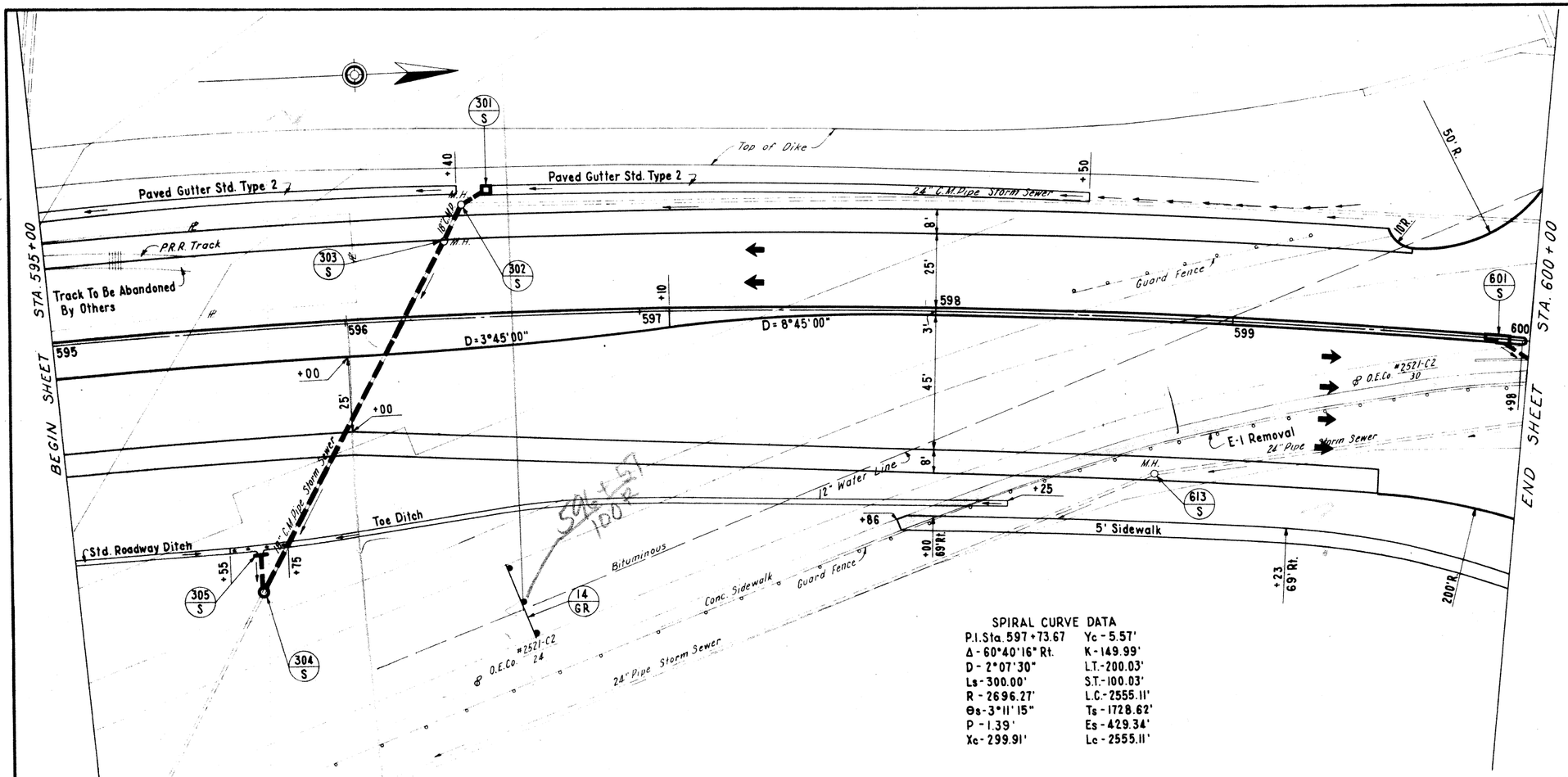
31

STA - 21 - 10.23

B.M. 21-3 Elev. 946.59
Cut S.E. Corner S.E. Wingwall East and Viaduct Cherry Rd. N.W., 100' Lt. Sta. 599 + 50-10'S. of S. Bridge Rail East End at Tuscarawas River.

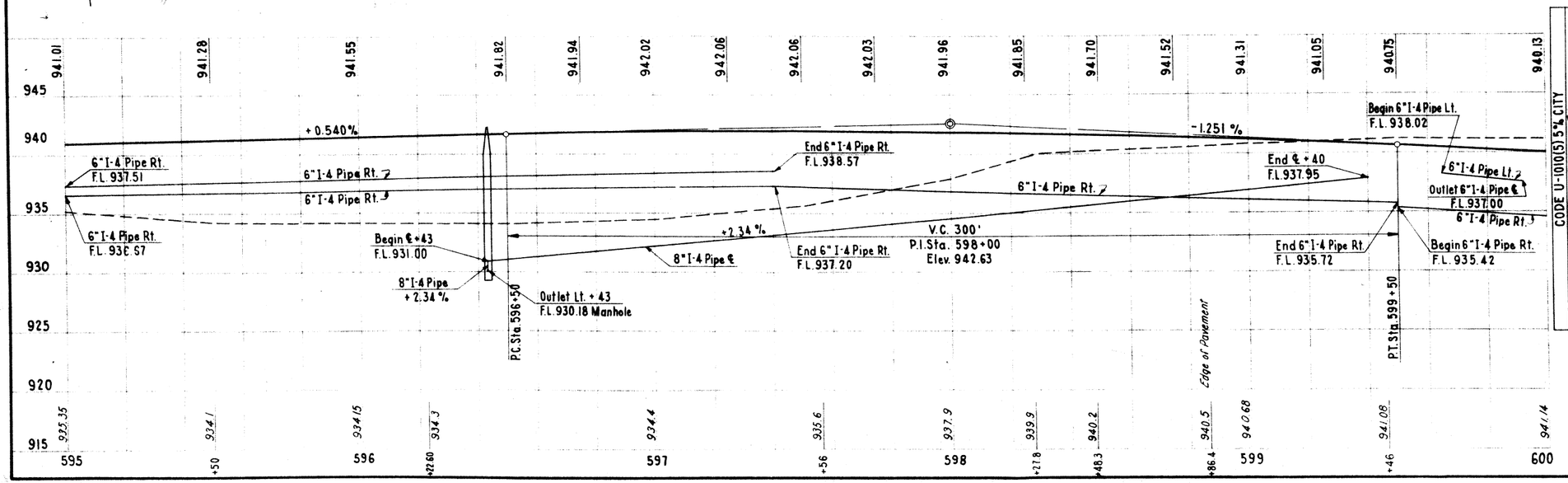


REFERENCE POINT
P.I. Sta. 597+73.67



SPIRAL CURVE DATA

P.I. Sta. 597+73.67	Yc - 5.57'
Δ - 60°40'16" Rt.	K - 149.99'
D - 2°07'30"	L.T. - 200.03'
Ls - 300.00'	S.T. - 100.03'
R - 2696.27'	L.C. - 2555.11'
Θs - 3°11'15"	Ts - 1728.62'
P - 1.39'	Es - 429.34'
Xc - 299.91'	Lc - 2555.11'



CODE U-1010(5) 5% CITY
ITEM E-8

Ref. No.	Station To Station	Side	Standard Design	Temporary Guard Rail
14 GR	597 + 00	Rt.	25	
			TOTAL	25

		Item	Sq. Ft.
Removal & Disposal of Existing Sidewalk			844
Removal & Disposal of Curb, Curb & Gutter or Header Curb			18
Removal & Disposal of Existing Pavement			—

CODE U-1010(5) 5% CITY
STORM SEWERS

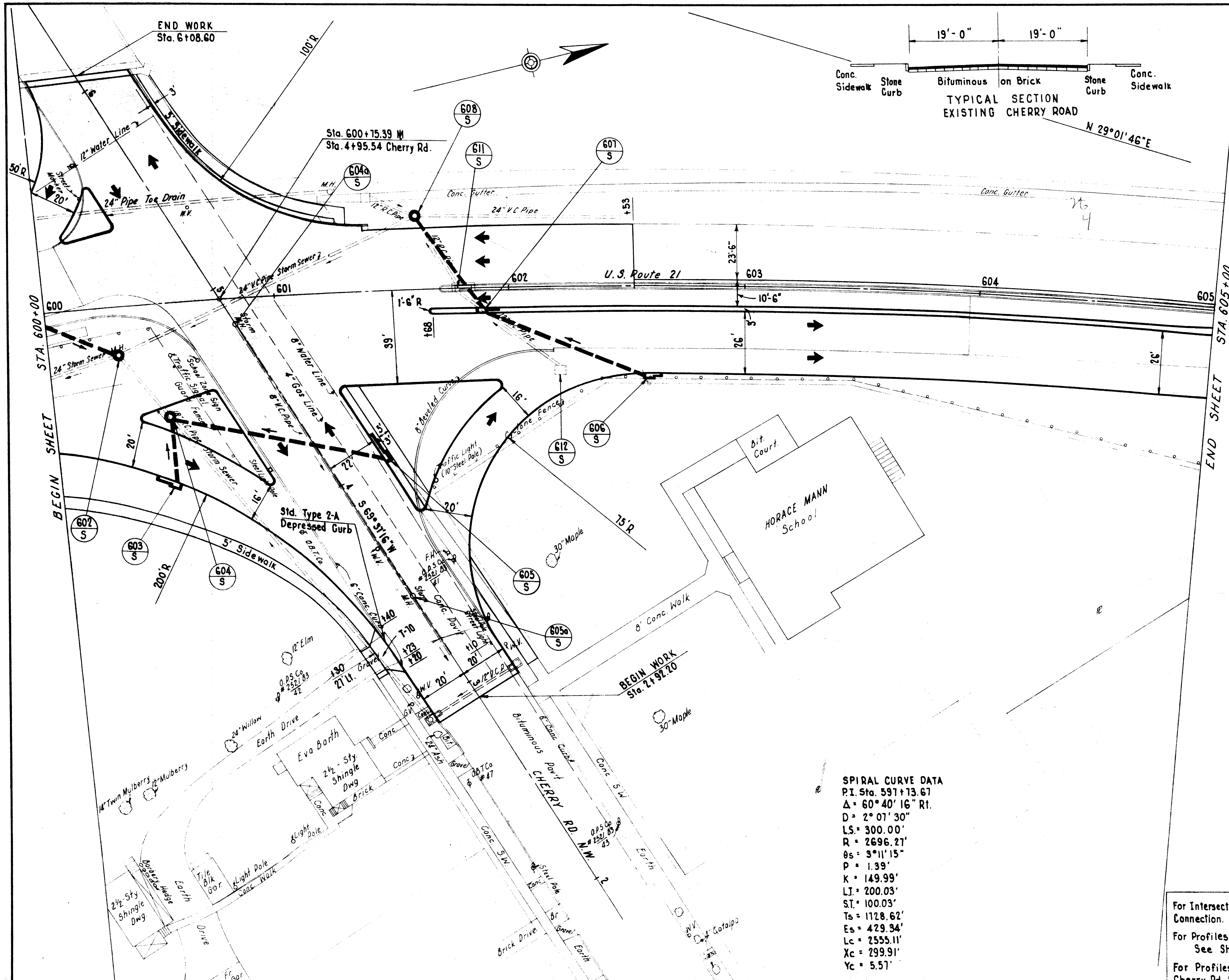
REF. NO. From	REF. NO. To	STATION From	STATION To	Side	E-2 (CU YD) Excavation For Structures	I-2 (LIN. FT.) 18" Class B Storm Sewer Under Pavement or Approaches (Class A-6 Encl.)	I-2 (LIN. FT.) Class B Storm Sewer 12"	I-2 (LIN. FT.) Class A Storm Sewer 15"	I-8 (EACH) Standard Manhole No. 1	I-8 (EACH) Standard Catch Basin 2-2A	I-8 (EACH) Manhole Reconstructed To Grade Using Salvage Casting As Per Plan	I-14 (LIN. FT.) Standard Paved Gutter Type 2	S-1 (CU YD) Concrete Structures Class E S-27 P.C. 4 End Wall	I-16 (EACH) Manhole Abandoned
301 S	302 S	596 + 50	596 + 43	Lt.			6			1				1
302 S	304 S	596 + 43	595 + 65	Lt & Rt.		144			1					
304 S	305 S	595 + 65	595 + 65	Rt.	1			12						
303 S	—	596 + 36	—	Lt.								200	0.23	1
301 S	—	596 + 50	596 + 50								1			
613 S	—	598 + 15	—				"							
		TOTALS			1	144	6	12	1	1	1	200	0.23	1

For Profile of Storm Sewer See Sheet No. 89

Scale: Hor. 1" = 20' Vert. 1" = 5'

LINE & PROFILE SHEET STA. 595+00 TO STA.

B.M. No. 21-3 Elev. 946.59
Cut S.E. Corner S.E. Wingwall East and viaduct Cherry Rd. N.W., 100' Lt. Sta. 599+50-10'S of S. Bridge Rail East end @ Tuscarawas River



SPIRAL CURVE DATA
P.I. Sta. 597+73.67
Δ = 60° 40' 16" Rt.
D = 2° 07' 30"
L.S. = 300.00'
R = 2696.27'
θs = 3° 11' 15"
P = 1.39'
K = 149.99'
L.T. = 200.03'
S.T. = 100.03'
Ts = 1128.62'
Es = 429.34'
Lc = 2555.11'
Xc = 299.91'
Yc = 5.57'

DRIVE		CODE U-1010(5) 5% City
Cherry Rd. Station	Side	Item T-10 T" S.Y.
3+30	Lt.	11

ITEM E-8	CODE U-1010(5) 5% City	1.58% City	
Removal & Disposal of Existing Sidewalk	1031	-	Sq. Ft.
Removal & Disposal of Curb, Curb & Gutter or Header Curb	68	-	Lin. Ft.
Removal & Disposal of Existing Pavement	1898	1578	Sq. Yds.

U-1010 (5)

STORM SEWER

	REF. No. From	REF. No. To	STATION From	STATION To	SIDE	I-2 LIN. FT. 12" Class B Storm Sewer Under Pavement or Approaches	I-8 EACH Manhole Reconstructed to Grade Using Salvaged Casting As Per Plan	Manhole Adjusted to Grade	Standard Manhole No. 2	Standard Median Inlet No. 2-6	Standard Median Inlet No. 2-8	Standard Inlet (Modified) 2-A-6	Standard Inlet (Modified) 2-A-10	Standard Inlet (Modified) 2-A-10-M	I-16 Inlets Abandoned	E-12 Pipe Removal 15" and Under
5% City	601 S	602 S	599+92	600+30	Rt.	40	1			1						
5% City	603 S	604 S	600+50	600+50	Rt.	26			1				1			
5% City	604 S	605 S	600+50	4+00 Cherry Rd.	Rt.	92								1		
1.58% City	608 S	601 S	601+62	601+90	Lt. & Rt.	46		1								
1.58% City	607 S	606 S	601+90	602+60	Rt.	12					1	1				
1.58% City	608 S	611 S	601+62	601+18	Lt.										1	34
1.58% City	611 S	612 S	601+18	602+21	Rt.										1	55
5% City	604a		4+85	Cherry Rd.	℄			1								
5% City	605a		3+44	Cherry Rd.	℄			1								
	CODE U-1010(5) 5% City			TOTAL		158	1	2	1	1		1	1	1		
	CODE U-1010(5) 1.58% City			TOTAL		118	-	1	-	-	1	1	-	-	2	89

For Intersection Detail of Cherry Rd. Connection. See Sheet No 84

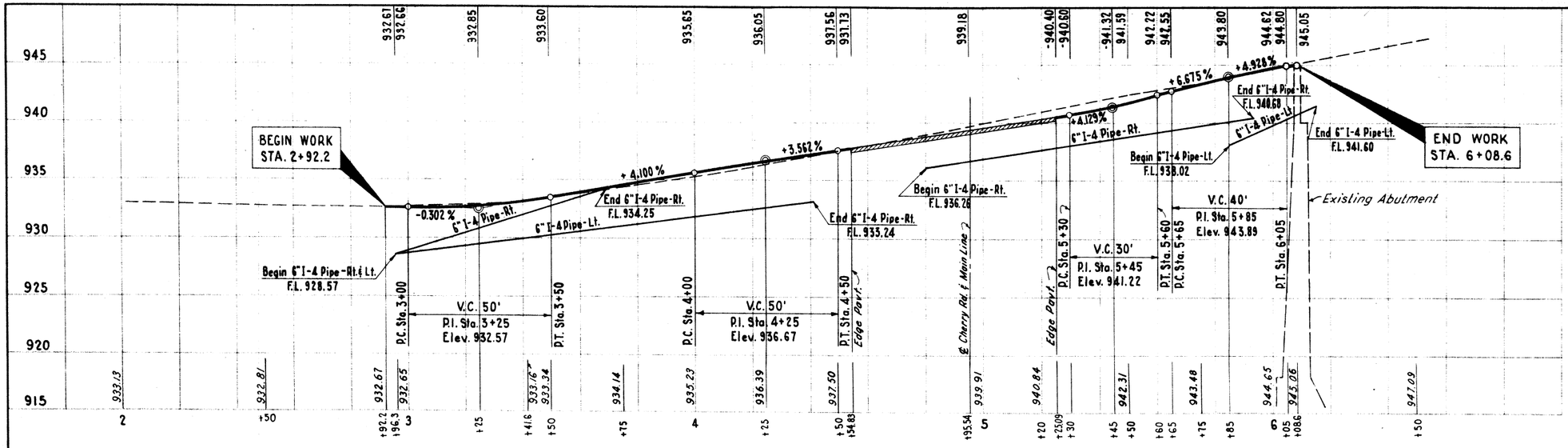
For Profiles of Storm Sewers See Sheet No 91

For Profiles of Mainline and Cherry Rd. See Sheet No. 33

Scale: 1"=20'

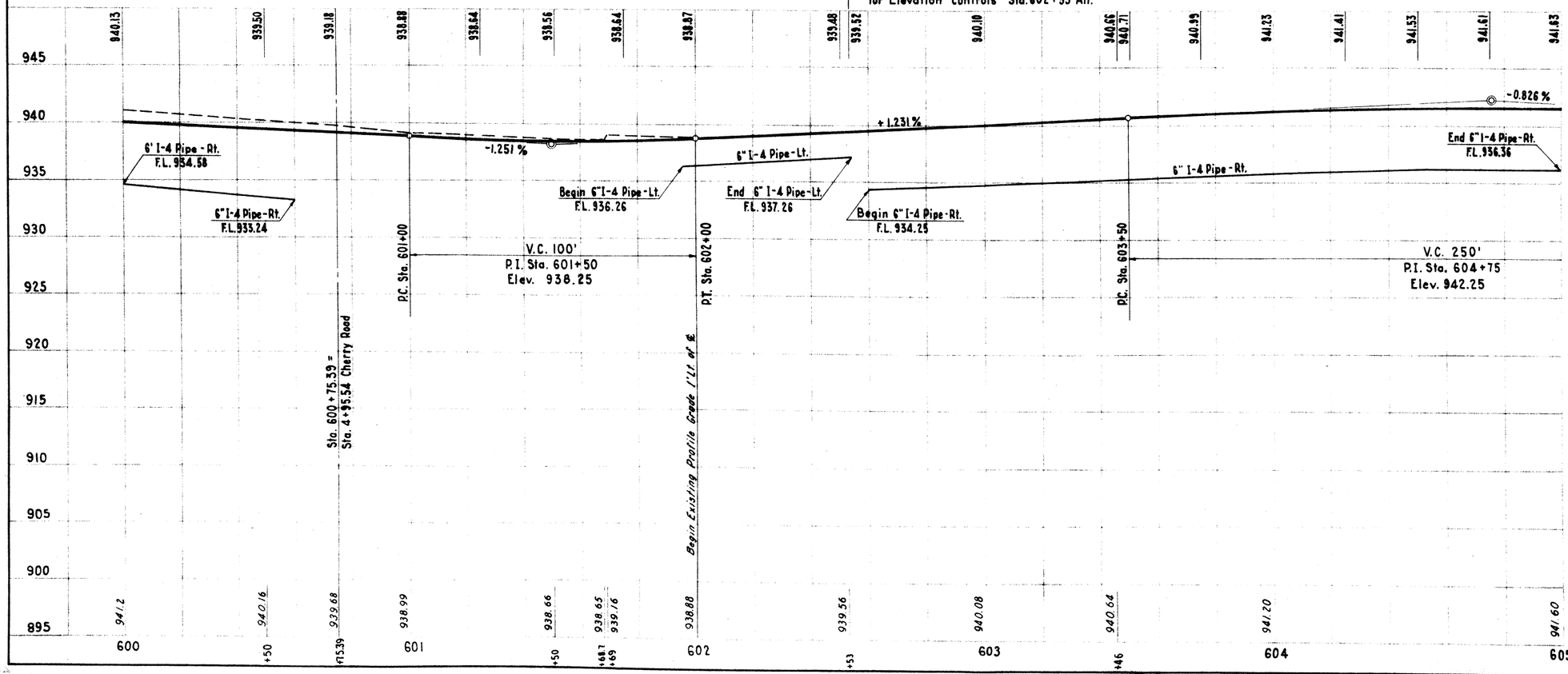
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG 1010 (5)	

STA - 21 - 10.23



PROFILE CHERRY ROAD

See Superelevation Tables for Elevation Controls Sta. 602+53 Ah.



For Plan Views of Main Line ℄ Cherry Rd. See Sheet No. 32

Scale: Hor. 1" = 20'
Vert. 1" = 5'

PROFILE SHEET - CHERRY ROAD AND ℄ - STA. 600+00 TO STA. 605+00

NOTE: Federal Marker U-UG1010(5) Will be Furnished and Erected On the Left by The State of Ohio Prior to Acceptance of This Project.

STORM SEWERS					CODE U-1010(5)		1.58 % CITY		
Ref. No.		STATION			E-2 (Cu.Yd.)	I-2 (Lin.Ft.)	I-8 (Each)	S-1 (Cu.Yd.)	I-10 (Cu.Yd.)
From	To	From	To	Side	Excavation For Structures	12"Class B Storm Sewers Under Pavement or Approaches	Inlet Adjusted To Grade	Concrete for Structures Class E. S-27 P.C. 4 End Wall	Dumped Rock
609 S	610 S	606+33	606+35	Rt.	1	6	1	0.23	9
TOTAL					1	6	1	0.23	9

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG1010(5)	

34

STA. - 21 - 10.23

ITEM E-8	CODE U-1010(5)	1.58 % CITY	
Removal & Disposal of Existing Pavement		67	Sq.Yds.

B.M. 21-3 Elev. 946.59
Cut S.E. Corner S.E. Wingwall East and Viaduct Cherry Rd. N.W., 100' Lt. Sta. 599+50 - 10' S of S.Bridge Rail East End @ Tuscarawas River

U-UG-1010 (5)

END PROJECT STA. 606+50

END WORK STA. 607+14

BEGIN SHEET - STA. 605+00

EXISTING U.S. ROUTE 21

Conc. Gutter

24" V.C.P. Storm Sewer

N 29°01'46" E

U.S.R. 21

M.H.

15" R.C. Pipe

12" R.C. Pipe

D=5°00'

D=8°45'

23'-6"

13'-6"

26'

24'

+48

606

607

608

609

610

611

Future Curb

FUTURE CONSTRUCTION

Ditch

Toe Ditch

Dumped Rock
6.5' Wide 15' Long
2'6" Deep, Conform to Shape of Ditch

OPS Co

WARWICK AVE. N.W.

FIRST ST. N.W.

GROSE AVE.

Conc. Blk Garage

2-Sty Brick Shingle House

2-Sty Frame House

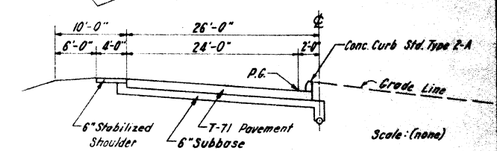
W.M.C. to CY

Conc. Walk

C.S. Sta. 609+00.16

Spiral Curve Data

Δ - 60°40'16" Rt.	Xc - 299.91'
Dc - 2°07'30"	Ts - 1728.62'
R - 2696.27	Es - 429.34'
Ls - 500.00'	Lc - 2555.11'
θ - 3°11'15"	T.S. - 580+45.05
P - 1.39'	S.C. - 583+45.05
K - 149.99'	Δc - 54°17'46"
ST - 100.03'	Yc - 5.57'
LT - 200.03'	



TYPICAL SECTION OF EXISTING PAVEMENT
STA. 609+00

END PROJECT Sta. 606+50

END WORK Sta. 607+14

Begin 6" I-4 Pipe-Rt. F.L. 938.11

6" I-4 Pipe-Rt.

End 6" I-4 Pipe-Rt. F.L. 937.43

6" I-4 Pipe-Rt.

Begin 6" I-4 Pipe-Rt. F.L. 936.36

End 6" I-4 Pipe-Rt. F.L. 935.95

Outlet 6" I-4 Pipe-Rt. F.L. 935.50

V.C. 250'

P.T. Sta. 606+00

941.63 941.61 941.53 941.39 941.22 940.80

940.60 941.32 940.89 940.30 940.14 939.86 939.70 939.47 939.36 939.13 938.99 938.00 939.2 939.0 938.7 938.3 938.1 938.0 937.7 937.5

940 935 930 925 920 915

605 606 45.3 607 +25 +50 +75 608 +25 +50 +72+75 609 +30 +60 +90 610 +20 +50 +80 611 +10

For Profile of Storm Sewers See Sheet No. 91

Scale: Hor. 1"=20' Vert. 1"= 5'

LINE & PROFILE SHEET - STA. 605+00 TO STA. 611+00

B.M. No. 21-3 Elev. 946.59
Cut S.E. Corner S.E. Wingwall East and Viaduct Cherry Rd. N.W., 100' Lt. Sta. 599+50 10' S. of S. Bridge Rail East End Tuscarawas River.

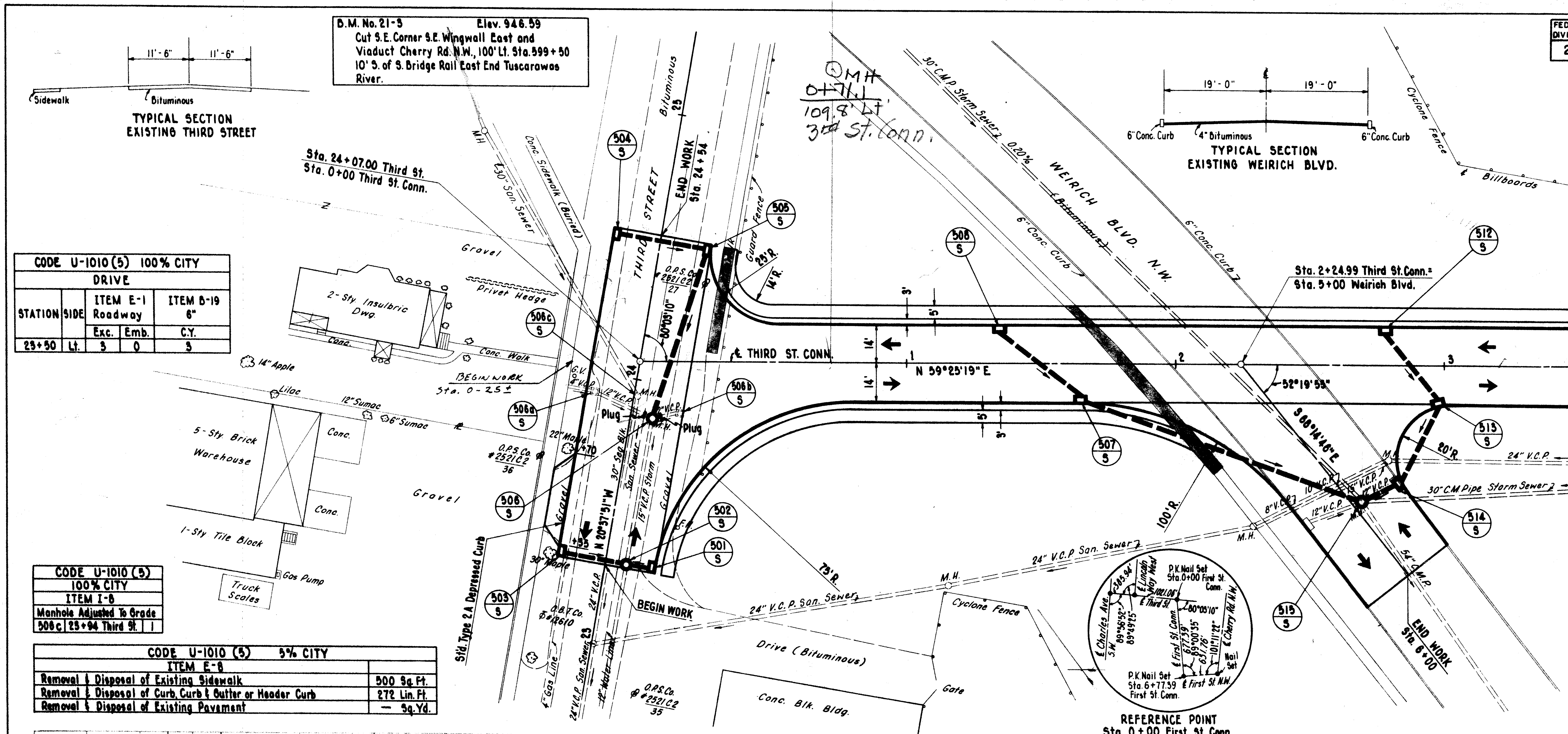
TYPICAL SECTION EXISTING THIRD STREET

TYPICAL SECTION EXISTING WEIRICH BLVD.

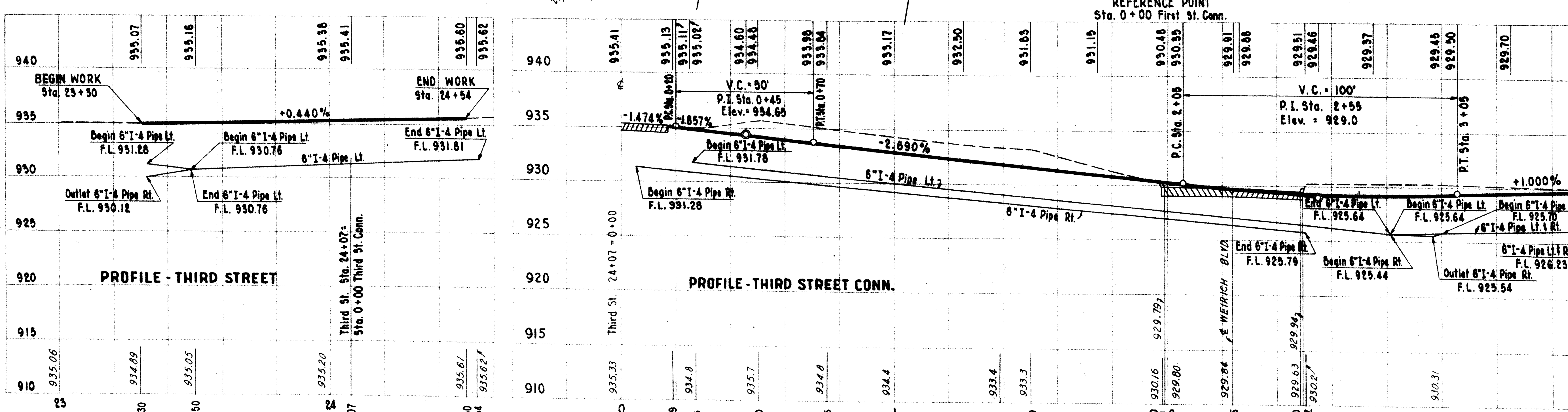
CODE U-1010(5) 100% CITY				
DRIVE				
STATION	SIDE	ITEM E-1 Roadway		ITEM B-19 6"
		Exc.	Emb.	C.Y.
23+50	Lt.	3	0	3

CODE U-1010(5)		
100% CITY		
ITEM I-8		
Manhole Adjusted To Grade		
506c	23+94 Third St.	1

CODE U-1010 (5) 5% CITY	
ITEM E-8	
Removal & Disposal of Existing Sidewalk	500 Sq. Ft.
Removal & Disposal of Curb, Curb & Gutter or Header Curb	272 Lin. Ft.
Removal & Disposal of Existing Pavement	— Sq. Yd.



OMH 0+71.1 109.8' Lt. 3rd St. Conn.



CODE U-1010 (5) 5% CITY											
STORM SEWERS					E-12 (LIN. FT.)	I-2 (LIN. FT.)	I-8 (EACH)				I-16
REF. NO.		STATION							Standard Catch Basin		
From	To	From	To	Side	Pipe Removal 15"⌀ Under	12" Class B Storm Sewer Under Pav't. or Approaches	Standard Manhole No. 1	Manhole Adjusted to Grade	No. 5	No. 3A	Catch Basin Abandoned
506a S	506 S	23+95	23+88	Lt. & Rt.	20'						1
506b S	506 S	23+90	23+88	Rt.	8'						1
504 S	505 S	24+52	24+52	Lt. & Rt.		32'				1	
505 S	506 S	24+52	23+88	Rt.		64'		1		1	
503 S	502 S	23+92	23+92	Lt. & Rt.		22'			1		
501 S	502 S	23+92	23+92	Rt.		8'			1		
512 S	513 S	2+78 Third St. Conn.	2+97 Third St. Conn.	Lt. & Rt.		32'	1		1		
513 S	514 S	2+97 Third St. Conn.	5+71 Weirich Blvd.	Lt. & Rt.		54'			1		
514 S	515 S	5+71 Weirich Blvd.	5+66 Weirich Blvd.	Lt.		14'		1		1	
508 S	507 S	1+35 Third St. Conn.	1+64 Third St. Conn.	Lt. & Rt.		56'				1	
507 S	515 S	1+64 Third St. Conn.	5+66 Weirich Blvd.	Lt. & Rt.		106'				1	
TOTALS					28'	[illegible]	1	2	4	5	2

For Intersection Detail of Third St. Connection See Sheet No. 83
For Profile Weirich Blvd. See Sheet No. 83
For Profiles of Storm Sewer See Sheet No. 90

Scale: Hor. 1" = 20' Vert. 1" = 5'

LINE & PROFILE SHEET - THIRD ST. CONN. - STA. 0+00 TO STA. 3+50
THIRD ST. - STA. 23+30 TO STA. 24+54

FED. RD DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

36

STA -21-10.23

B.M. No. 21-3 Elev. 946.59
Cut S.E. Corner S.E. Wing Wall
East end Viaduct Cherry Rd N.W.
100' Lt. Sta. 599+50 10' S. of S. Bridge
Rail East End at Tuscarawas River.

SHEET 12

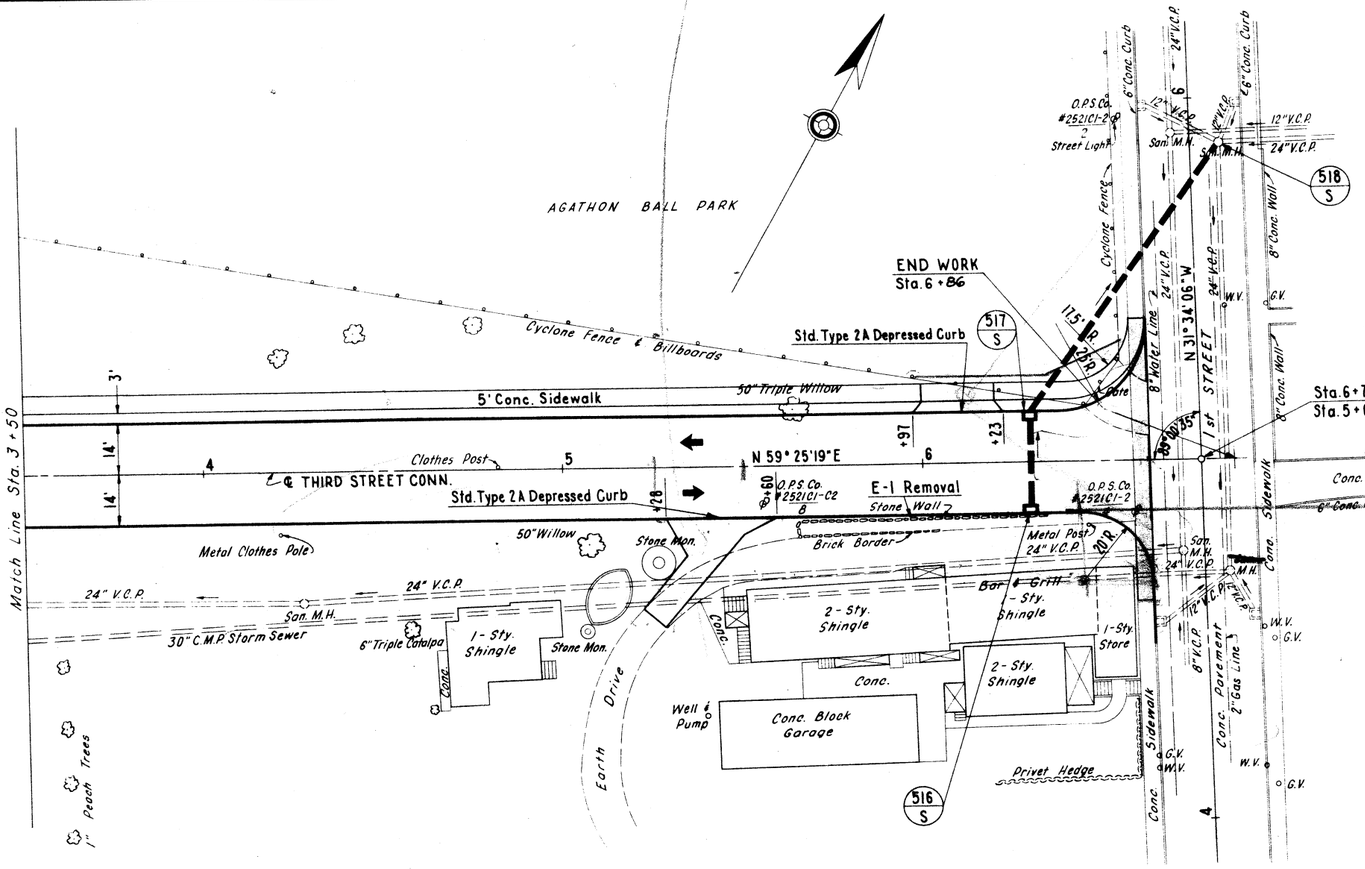
2" CONC.

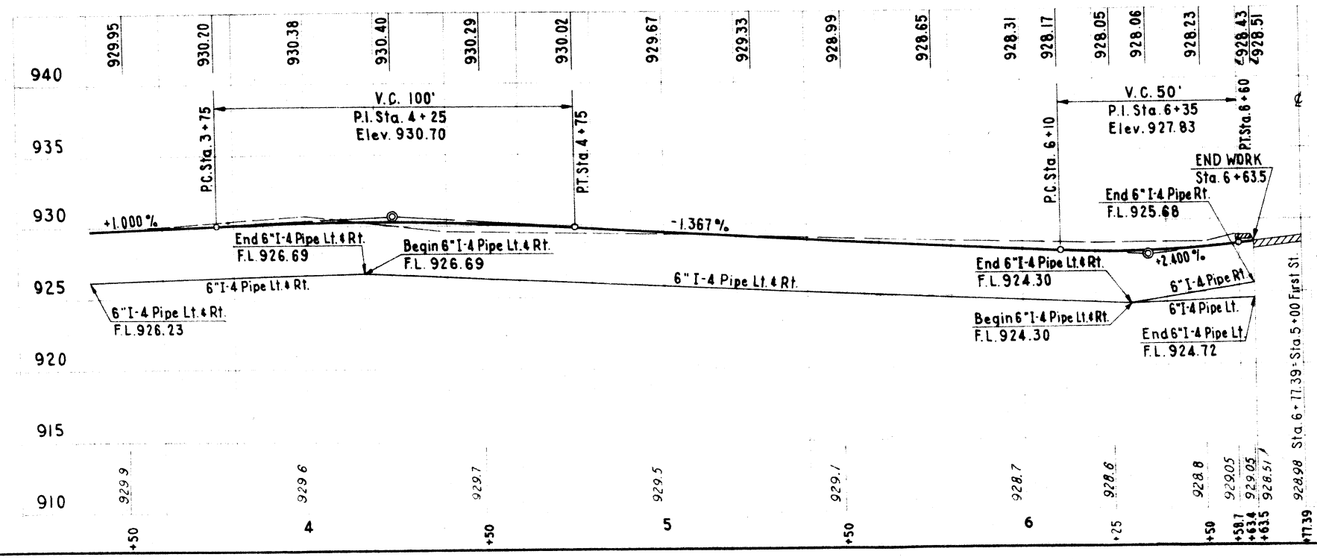
CODE U-1010(5) 5 % CITY DRIVE						
STATION	SIDE	ITEM E-1 Roadway		ITEM B-19 6"	ITEM T-70	
		Exc.	Emb.	C.Y.	S.Y.	
5+40	Rt.	7	0	7		
6+10	Lt.	1	0	0	19	
TOTALS		8	0	7	19	

28
12

CODE U-1010(5) 5 % CITY ITEM E-8		
Removal & Disposal of Existing Sidewalk	390	Sq. Ft.
Removal & Disposal of Curb, Curb & Gutter or Header Curb	78	Lin. Ft.
Removal & Disposal of Existing Pavement	—	Sq. Yds.

CODE U-1010(5) 5 % CITY STORM SEWERS						
REF. NO.		STATION			I-2 (LIN. FT.)	I-8 (EACH)
From	To	From	To	Side	12" Class B Storm Sewer Under Pavement or Approaches	Standard Catch Basin No. 3
516 S	517 S	6+30 Third St. Conn.	6+30	Lt. & Rt.	26	1
517 S	518 S	6+30	5+87.5 First St.	Lt. & Rt.	88	1
TOTALS					114	2





For Intersection Detail of Third St. Conn.
See Sheet No. 83

For Profiles of Storm Sewer
See Sheet No. 90

Scale: Hor. 1" = 20'
Vert. 1" = 5'

LINE & PROFILE SHEET THIRD ST. CONN. STA. 3+50 TO STA. 6+77.

SECTIONS

CUT	FILL
192	
291	
46	
399	
46	
511	
46	
45	
46	
415	
46	

℄ Survey Line

539+00 925 — 70' Rt. — F.L. 921.61

538+00 925 — 70' Rt. — F.L. 921.48

537+00 925 — 70' Rt. — F.L. 921.35

536+91.29 925 — 70' Rt. — F.L. 921.34

R/W 105'

RW 110'

RW 119'

RW 119'

F.L. 923.8

F.L. 923.3

F.L. 922.8

F.L. 922.76

80' Lt.

80' Lt.

80' Lt.

938.47
539+00
926.8

938.98
538+00
927.2

941.98
537+00
927.0

942.24
536+91.29
926.9

Future

Future

Future

R/W

R/W

R/W

Sta. 538+78
Begin Embankment
Area 0

Sta. 533+65

Begin Seeding
Sta. 533+10

Begin Ditch Lt.
Sta. 533+10

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
86	1065		
		75	434
98	0		
		289	0
102	0		
		393	0
110	0		
		56	0
114	0		
		1378	0
114	0		
		116	0
0			

Scale 1" = 5'

10 60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS - STA. 536+91.29 TO STA. 539+00

SEEDING: AND WIDTH | SQ. YDS.

END AREA: CUT | FILL
VOLUME: CUT | FILL

543+00 925 — 70'Rt. — F.L. 923.40 — R/W

96 — R/W — F.L. 925.8 — 48 894

R/W — 80' Lt. — 542+00 925 — Existg. San. Sewer

935.71 543+00 926.3

542+00 925 — 70'Rt. — R/W — F.L. 923.04

1089 — 156 5119

100 — F.L. 925.3 — 36 790

R/W — 80'Lt. — 541+00 925

934.80 542+00 926.3

541+00 925 — 70'Rt. — F.L. 922.68 — R/W

1350 — 148 2852

143 — F.L. 924.8 — 44 750

R/W — 80'Lt. — 540+00 925

934.38 541+00 926.4

1144 — 111 2810

63 — 16 800

175 — F.L. 924.3 — Match Line Edwin Ave Sta. 5+50 — 189 3454

63 150 192 — 1458

Sta. 539+75 Ahead Back Sta. 539+00

934.94 540+00 926.4

80 70 60 50 40 30 20 10 — 10 20 30 40

Scale 1" = 5'

Sta. 539+00 — 86 1065

CROSS SECTIONS - STA. 540+00 TO STA. 543+00

SHEET NO.	STATE	PROJECT
2	OHIO	U-UG-1010(5)

STA.- 21 - 10.23

SETTING

LANE WIDTH	SLOPE
110	
9.22	
12.17	
109	
12.11	
109	
11.39	
96	

547+00
925
F.L. 924.84
70'Rt.
RW

939.35
547+00
927.8
Existg. San. Sewer
F.L. 928.25
RW

546+00
925
F.L. 924.48
70'Rt.
RW

938.44
546+00
927.9
Existg. San Sewer
F.L. 927.3
RW

545+00
925
F.L. 924.12
70'Rt.
RW

937.53
545+00
926.8
Existg. San. Sewer
F.L. 926.8
RW

544+00
925
F.L. 923.76
70'Rt.
RW

936.62
544+00
926.7
Existg. 48" Seg. Blk. San. Sewer
F.L. 926.3
RW

Sta. 543+00

Sta. 545+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
24	1196		
		104	4211
32	1078		
		111	3941
28	1050		
		144	3685
50	940		
		182	3396
48	894		

Scale = 1" = 5'

CROSS SECTIONS - STA. 544+00 TO STA. 547+00

SEEDING	
ENG. WIDTH	SQ. YDS.
99	969
97	1078
97	1139
108	1211
110	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
64	1518		
		227	4141
74	1194		
		274	4495
74	1232		
		337	4687
108	1272		
		244	4578
24	1196		

550+89.02
925
70'Rt.
F.L. 927.25

RW
F.L. 933.93
942.89
550+89.02
929.6
Shed
Existg. San. Sewer
550+00
925
70'Rt.
F.L. 926.61

RW
F.L. 933.4
942.08
550+00
929.8
Existg. San. Sewer
549+00
925
70'Rt.
F.L. 925.91

RW
F.L. 932.8
941.17
549+00
929.0
Existg. San. Sewer
548+00
925
70'Rt.
F.L. 925.20

RW
F.L. 930.53
940.26
548+00
928.4
Existg. 48" Seg. Blk. San. Sewer
Sta. 547+00

Sta. 547+15 Rt.
Begin L-10 Sodding
Width 9.5
Sta. 547+00

Scale 1"=5'

10 60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS - STA. 548+00 TO STA. 550+89.0

SEQ. NO.	STATE	PROJECT NO.	
2	OHIO	U-UG-1010(5)	

41

STA.- 21 - 10.23

SEEDING	
END WIDTH	SQ. YDS.
54	190
72	190
99	

Sta. 552+60 ± Existing Toe Drain Begins

RW 92.5'

Back Area

Match Line Walnut Rd.

944.44
552+58.8
930.6

Begin Seeding
Sta. 552+58.8

Existg. San Sewer

944.26
552+39.8
941.6

943.79
551+88
941.2

RW 96

Area Ahead
Match Line Walnut Rd.
Sta. 11+00

End Seeding
Sta. 551+72.2

Sta. 551+70 ± Existing Toe Drain Ends

Existg. 18" Pipe

943.65
551+72.2
933.1

Sta. 550+89.0℄

Area Ahead
Match Line
Walnut Rd.
Sta. 10+00

Existg. San. Sewer

Existg. 48" Seg Blk. San. Sewer

Sta. 551+06 Rt.
End L-10 Sodding
Width 9.5

Scale 1" = 5'

RW 90'

END AREA		VOLUME	
CUT	FILL	CUT	FILL
Ahead 0	1106		
Back 0	672		
		1	305
		2	190
		4	311
		2	154
		1	327
Ahead 0	982		
Back 0	1370		
		99	414
		64	1318

10 60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS - STA. 551+72.2 TO STA. 552+58.8

U-UG-1010(5)

STA.- 21 - 10.23

SEEDING

END WIDTH	SQ. YDS.
93	648
99	434
100	1111
100	352

RW 87'

Top of Dike

RW 89'

Top of Dike

RW 90'

Top of Dike

RW 92'

Top of Dike

946.58
555+00
933.63

946.08
554+39.28
933.7

945.72
554+00
933.2

944.81
553+00
935.6

555+00
930
10'Rt.
F.L. 929.7

554+3928
930
10'Rt.
F.L. 929.4

554+00
930
10'Rt.
F.L. 929.2

553+00
930
10'Rt.
F.L. 928.7

Existg. San. Sewer

Existg. Sewer

Existg. 48" Seg. Blk. San Sewer

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
30	1524		
		90	3557
50	1444		
		77	2966
56	1396		
		207	4811
56	1202		
		43	1761
0	1106		

Sta. 552+58.8

60 50 40 30 20 10 10 20 30 40

Scale 1"= 5'

Sta. 552+58.8 Ahead

CROSS SECTIONS- STA. 553+00 TO STA. 555+00

	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	43

STA.- 21 - 10.23

SEEDING		END AREA		VOLUME	
END WIDTH	SQ YDS	CUT	FILL	CUT	FILL
97	1122				
		25	1190		
				56	4886
105	1172				
		5	1454		
				45	5478
106	1106				
		18	1504		
				89	5608
95		30	1524		

W 70'Rt. 558+00 930 F.L. 931.2 RW

945.56 558+00 934.99

W 10'Rt. 557+00 930 F.L. 930.7 RW

Existg. San Sewer

946.55 557+00 934.12

End Toe Drain Sta. 556+50 Lt.

W 70'Rt. 556+00 930 F.L. 930.2 RW

Existg. San Sewer

946.89 556+00 933.52

Scale: 1" = 5'

Existg. 48" R.C.C. San. Sewer Sta. 555+00

Sta. 555+00

70 60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS STA. 556+00 TO STA. 558+00

NO.	DATE	REVISION
2		U-UG-1010(5)

STA. - 21 - 10.23

SEEDING

END WIDTH	SQ. YDS.
69	761
68	922
98	1072
95	1067

NET AREA CUT	NET AREA FILL	VOLUME CUT	VOLUME FILL
484	0		
		1052	111
84	60		
		156	1184
0	556		
		80	2322
43	718		
		126	3553
25	1190		

R/W

F.L. 932.86

935.50
562+00
939.92

F.L. 932.98

F.L. 936.06

938.61
561+00
939.58

F.L. 936.29

10'Rt.
560+00
930

F.L. 939.26

941.58
560+00
937.4

10'Rt.
559+00
930

Existing 48" R.C.C. San. Sewer

943.90
559+00
936.24

F.L. 931.7

Sta. 558+00

Scale: 1"=5'

70 60 50 40 30 20 10 ℄ 10 20 30 40

CROSS SECTIONS STA. 559+00 TO STA. 562+00

SEEDING	
ENG. WIDTH	SQ. YDS.
20	
	391
59	
	261
53	
	542
53	
	618
69	

DIST.	STATE	PROJECT
2	OHIO	U-UG-1010(5)

45

STA.- 21 - 10.23

END AREA		VOLUME	
CUT	FILL	CUT	FILL
1106	0		
		7897	7
652	4		
		989	11
620	10		
		3285	30
576	18		
		1963	33
484	0		

Sta. 563+58

Sta. 562+00

Abut.

F.L. 928.49

RW 89.5

F.L. 928.30

Sta. 564+25 Lt.
Begin Paved Gutter
Std. Type-2

929.76
564+89
935.0

930.62
564+00
930.1

932.48
563+00
931.4

R W

Abut.

F.L. 928.53

R W

F.L. 929.23

R W

F.L. 929.66

F.L. 931.11

Abut.

Sta. 562+50 Rt.
Begin Paved Gutter
Std Type-2

Scale: 1"=5'

70 60 50 40 30 20 10 ℄ 10 20 30 40

CROSS SECTIONS STA. 563+00 TO STA. 564+89

SECTIONS		END AREA		VOLUME	
END WIDTH	VOL.	CUT	FILL	CUT	FILL
69					
	194				
			1760	0	
				8011	0
74					
	432				
			2566	0	
				6131	0
18					
	56				
			1352	0	
				1206	0
20					
			1106	0	

Sta. 567+50 Lt.
End Paved Gutter
Std. Type-2

Abut.

FL. 929.46

930.78
567+00
946.34

10' Rt.

567+00
925

FL. 924.65

Sta. 566+50 Rt.
End Paved Gutter
Std. Type 2

Abut.

FL. 928.43

929.77
566+00
950.4

10' Rt.

566+00
940

FL. 927.97

Abut.

FL. 928.35

929.66
565+15.5
945.3

Abut.

FL. 928.40

Sta. 564+89

Scale: 1"=5'

70 60 50 40 30 20 10 10 20 30 40 CROSS SECTIONS STA. 565+15.5 TO STA. 567+00

OHIO U-UG-1010(5)

STA.- 21 - 10.23

AREA		VOLUME	
CUT	FILL	CUT	FILL
522	32		
		2173	53
875	2		
		181	0
898	0		
		1148	0
1204	0		
		4446	0
1760	0		

117
1085
115
70
115
370
111
810
69

RW 87'

F.L. 930.77

934.75
569+00
933.13

Existg. San. Sewer

W
70' Rt.
569+00
930

R/W

F.L. 924.38

Sta. 568+16

RW 86'

W
70' Rt.
568+10.5
930

R/W

F.L. 930.10

932.89
568+10.5
933.5

F.L. 924.50

Existg. San. Sewer

RW 85'

W
70' Rt.
567+81
930

R/W

F.L. 929.88

932.28
567+81
942.4

F.L. 924.54

Existg. 48" Brick San Sewer

Scale: 1" = 5'

Sta. 567+00

Sta. 568+16

70 60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS STA. 567+81 TO STA. 569+00

2	OHIO	U-UG-1010(5)		48

STA.- 21 - 10.23

END AREA		VOLUME	
		CUT	FILL
136	658		
		548	2308
160	588		
		793	1889
268	432		
		140	215
260	382		
		1241	657
		522	32

RW 86'

121

F.L. 933.00

1335

RW 86.5'

119

F.L. 932.25

1322

RW 81.5'

119

F.L. 931.51

186

RW 81.5'

115

F.L. 931.40

1105

117

Sta. 569+00

938.61
572+00
931.0

Existg San. Sewer

938.04
571+00
930.99

Existg. San. Sewer

936.73
570+00
931.0

Existg. San. Sewer

936.47
569+85.71
931.1

Existg. 48" Seg. Block San. Sewer

572+00
930
70' Rt.

571+00
925
70' Rt.

570+00
930
70' Rt.

569+85.71
930
70' Rt.

R/W

F.L. 923.97

F.L. 924.11

F.L. 924.24

F.L. 924.26

Scale: 1" = 5'

Sta. 569+00

70 60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS - STA. 569+85.71 TO STA. 572+00

OHIO U-UG-1010(5)

STA.- 21 - 10.23

45

SEEDING

12.5	
1333	
117	
1356	
127	
1378	
121	

RW 85'

F.L. 931.50

RW 85.5'

Pump House Floor

F.L. 992.45

Existing Pressure Conduit

RW 86'

F.L. 953.40

Sta. 572+00

935.81
515+00
935.06

937.49
514+00
925.2

938.43
513+00
932.06

515+00
935
10' Rt.

Drive

RW

Drive

Existg. San. Sewer

RW 89'

Existg. San. Sewer

RW

10' Rt.
513+00
925

Existg. Seq. Blk. San. Sewer

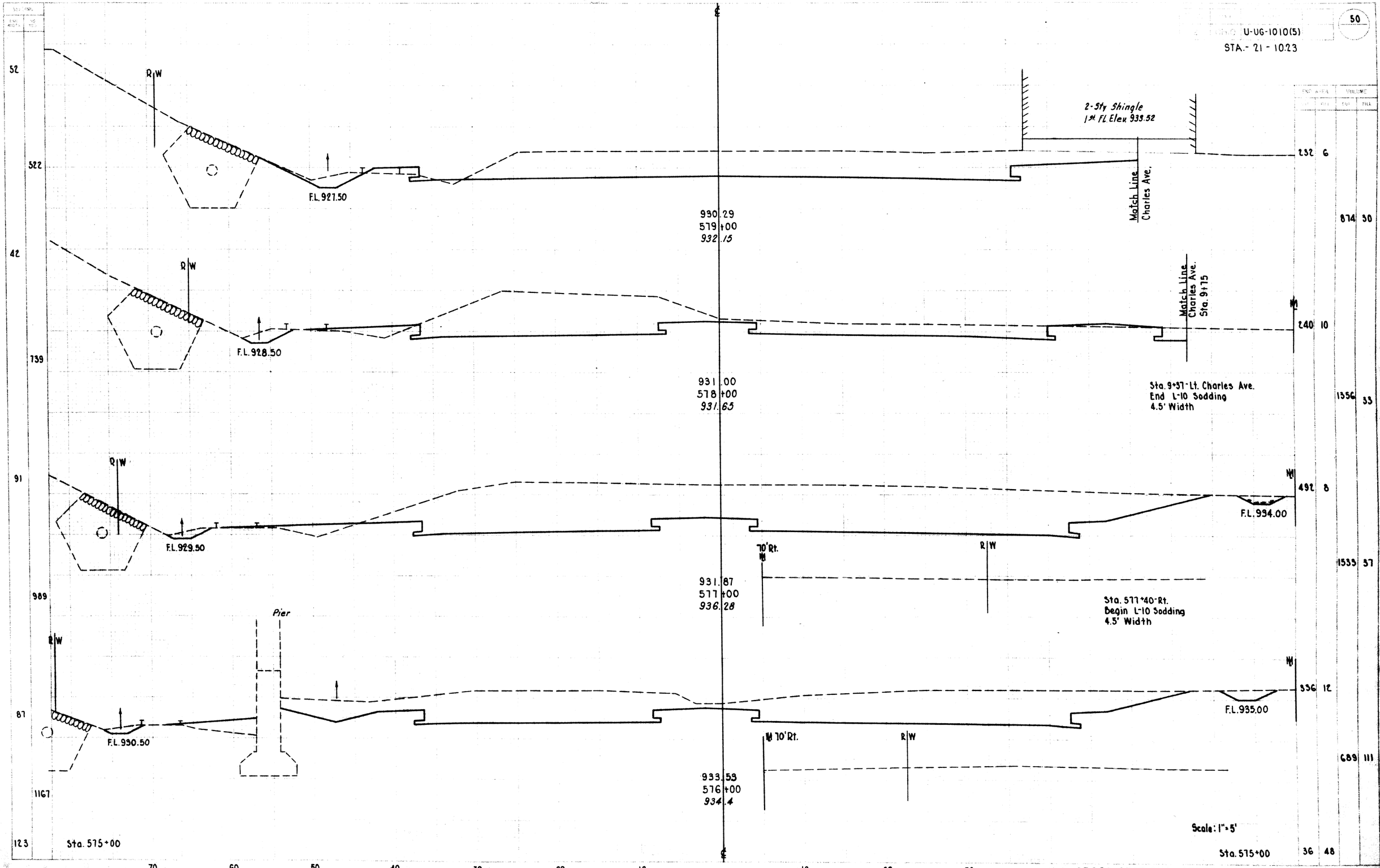
F.L. 923.84

Scale: 1"=5'

VOLUME CUT	VOLUME FILL
56	48
70	1752
2	898
370	2696
198	556
619	122
Sta. 572+00	136 658

70 60 50 40 30 20 10 ℄ 10 20 30 40

CROSS SECTIONS - STA. 573+00 TO STA. 575+00



END AREA		VOLUME	
CUT	FILL	CUT	FILL
232	6		
		874	30
240	10		
		1356	33
491	8		
		1535	37
336	12		
		689	111
		36	48

CROSS SECTIONS - STA. 576+00 TO STA. 579+00

U-UG-1010(5)

STA.- 21 - 10.23

51

SECTIONAL AREA CUT	SECTIONAL AREA FILL	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
41					
280		400	40		
				851	51
45					
317		336	6		
				671	18
52					
185		238	10		
				532	15
43					
528		274	10		
				937	30
52		232	6		

R/W

F.L. 931.22

928.91
581+55.05
929.6

R/W

R/W

F.L. 929.84

928.96
580+95.05
933.0

R/W

Sta. 580+50 Lt.
Begin Comb. Barrier Curb & Gutter

R/W

F.L. 928.46

Sta. 580+15 Lt.
Begin Paved Gutter
Std. Type 2

929.33
580+35.05
932.8

R/W

R/W

Garage
Fl. Elev. 933.8

929.58
580+00
932.87

Sta. 579+00

70 60 50 40 30 20 10 10 20 30 40

Scale: 1" = 5'

Sta. 579+00

CROSS SECTIONS - STA. 580+00 TO STA. 581+55.05

SLOPING

END WIDTH	1/2 LOC
9	48
9	45
13	23
10	66
9	278
41	

End Retaining Wall - Sta. 584 + 43

R/W — F.L. 935.90 — 932.51 — 584+18 — 928.4

R/W — Drive

R/W — F.L. 935.62 — 931.55 — 583+10 — 927.5

R/W — 1st Fl. Elev. 936.65

R/W — Drive

Basement Elev. 923.84

Begin Retaining Wall - Sta. 583 + 50

R/W — F.L. 935.20 — 930.85 — 583+35.05 — 926.94

R/W — 1st Fl. Elev. 936.65

PROGRESSIVE CHEVROLET GARAGE

Basement Elev. 923.84

R/W — F.L. 934.90 — 930.52 — 583+11.30 — 927.0

R/W

R/W — F.L. 933.52 — 929.60 — 582+56.05 — 925.9

R/W

Sta. 581+55.05

Scale: 1" = 5'

AREA CUT	AREA FILL	VOLUME CUT	VOLUME FILL
60	100		
		15	174
24	96		
28	94		
20	50		
18	29		
54	38		
72	83		
28	54		
192	137		
Sta. 581+55.05		400	40

50 40 30 20 10 ℄ 10 20 30 40 50 60

CROSS SECTIONS - STA. 582+55.05 TO STA. 584+18

SEEDING
LEFT WIDTH | LEFT AREA

RIGHT WIDTH | RIGHT AREA

22 | 122
22 | 200
50 | 611
60 | 276
9

R/W
F.L. 936.12
Ohio Drilling Co.
R/W
Proposed Bldg. Wall
Approx. Location
936.60
586+90
934.1

22 | 132
39 | 252

R/W
F.L. 936.21
R/W
936.16
586+40
933.07

20 | 140
20 | 457

R/W
F.L. 935.71
Existing Pumping Station
L/A
R/W
3 Existing 30" Steel Pipes
Sta. 585+00 Lt.
End Comb. Barrier Curb & Gutter
935.56
585+90
931.6
2-60" Cast Iron Pipes
R/W
F.L. 936.12
L/A
R/W
Seeding Limit

2 | 354
11 | 985

4 | 178
85 | 371

933.94
584+90
929.0

Scale: 1" = 5'

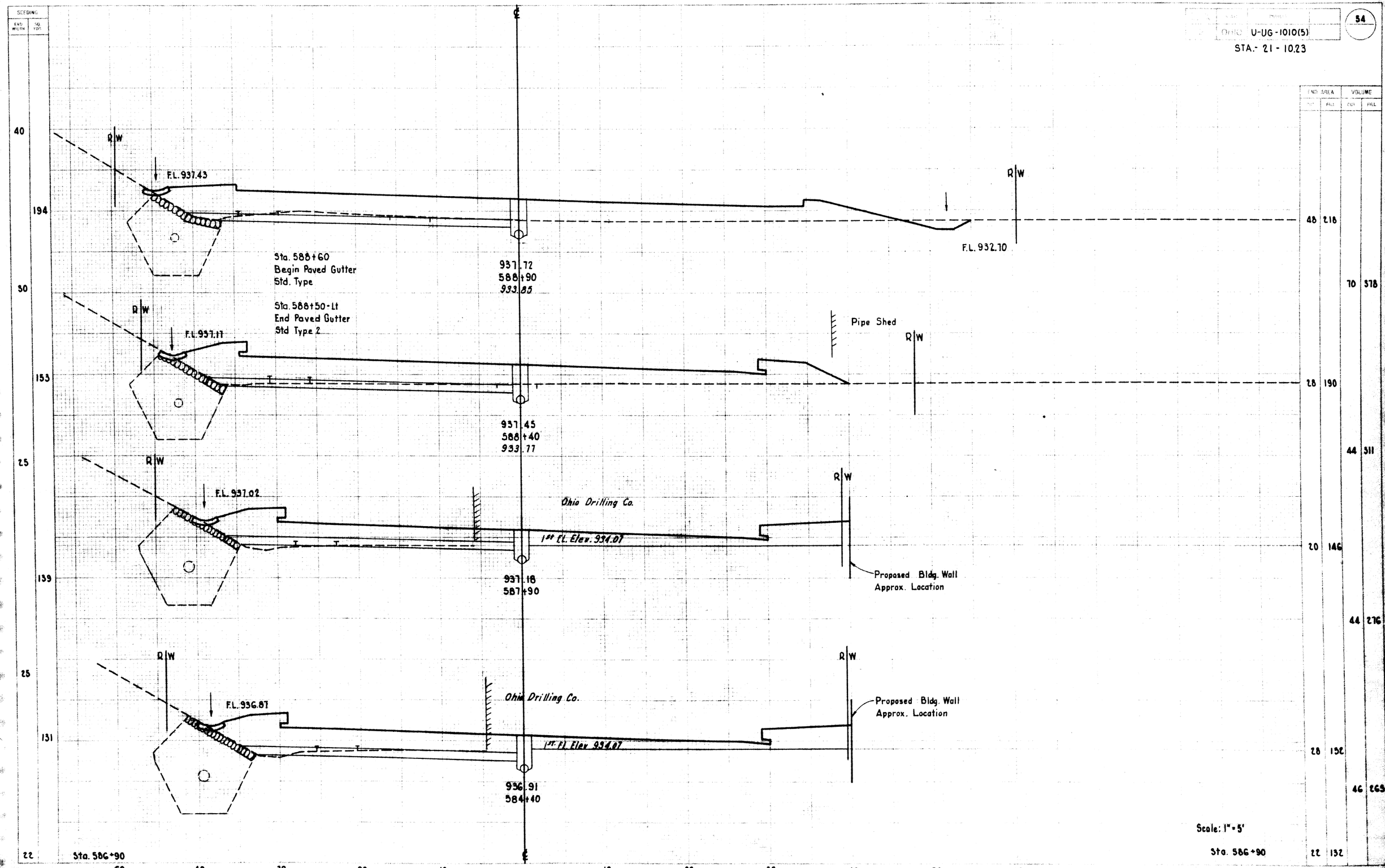
Sta. 584+18
60 | 100

50 40 30 20 10 ℄ 10 20 30 40 50 60

CROSS SECTIONS - STA. 584+90 TO STA. 586+90

Proj. U-UG-1010(5)

STA.- 21 - 10.23

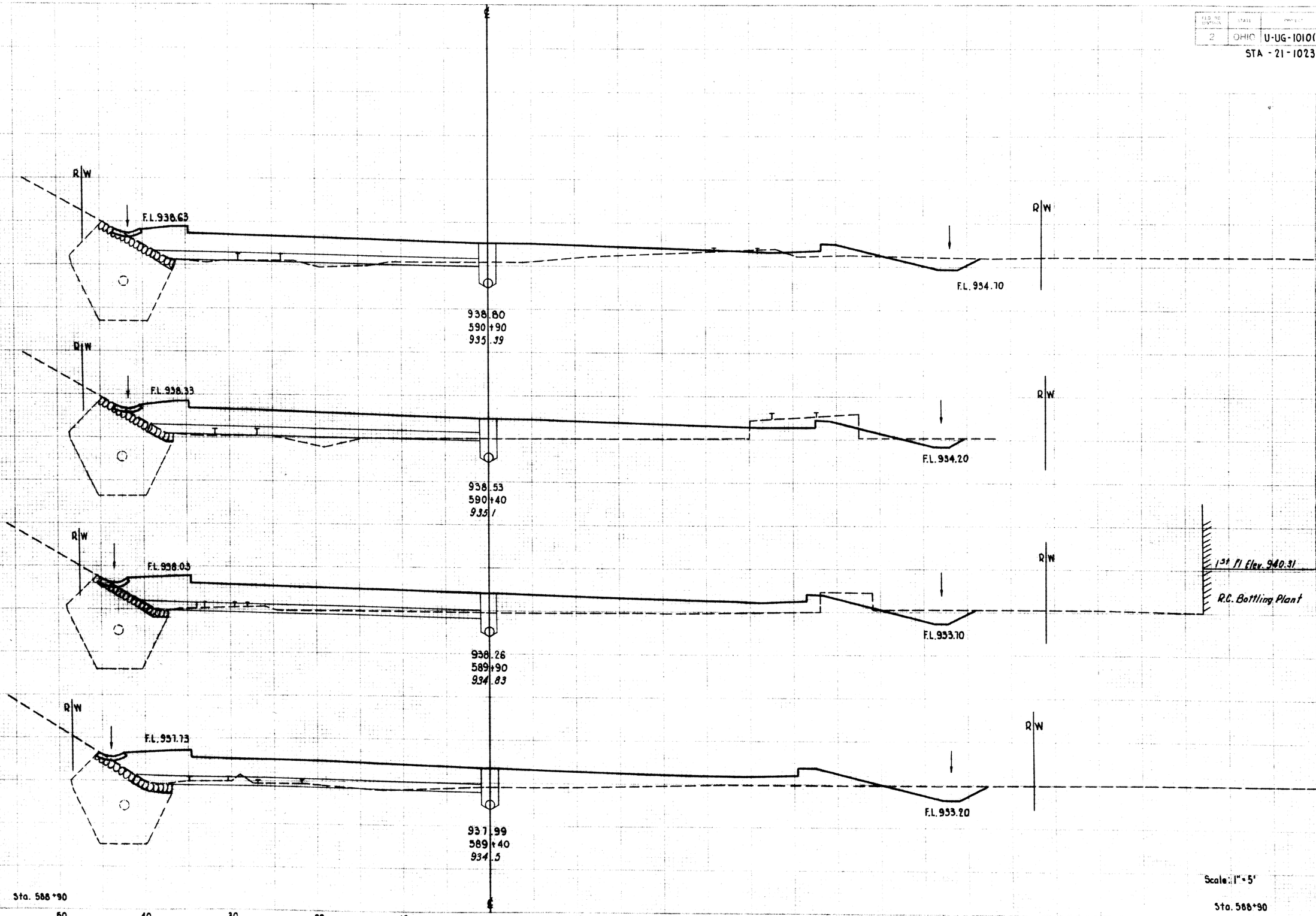


CROSS SECTIONS - STA. 587+40 TO STA. 588+90

FED. ROAD DIVISION	STATE	PROJECT	SHEET NO.
2	OHIO	U-UG-1010(5)	55

STA - 21 - 1023

SEEDING		
LAND WIDTH	SLOPE RATIO	
36	2	
37	3	
39	2	
40	3	
40	2	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
18	126		
20	144	35	250
59	280		
44	158	67	296
28	162	70	352
48	218		

CROSS SECTIONS - STA. 589+40 TO STA. 590+90

SHEET	PROJECT	
2	OHIO U-UG-1010(5)	

56

STA - 21 - 1023

SEEDING

END WIDTH	SQ. YDS.
53	333
47	250
43	228
39	208
36	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
26	244		
			47 480
16	188		
		22	317
8	154		
		19	256
12	122		
		28	230
18	126		

R/W
F.L. 939.78
Garage
939.93
593+00
936.07
1st Fl. Elev. 938.68
F.L. 934.90
Basement Elev. 930.93
R/W

R/W
F.L. 939.53
Warehouse
939.61
592+40
936.2
F.L. 935.32
R/W

R/W
F.L. 939.23
1st Fl. Elev. 940.38
939.54
591+90
935.87
F.L. 935.67
R/W

R/W
F.L. 938.93
939.07
591+40
936.4
F.L. 935.20
R/W

Scale: 1"=5'

Sta. 590+90

60 50 40 30 20 10 10 20 30 40 50 60

Sta. 590+90

CROSS SECTIONS - STA. 591+40 TO STA. 593+00

STATE	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

57

STA - 21 - 1023

SLOPING

END AREA		VOLUME	
CUT	FILL	CUT	FILL
28	376		
		48	644
24	320		
		41	563
20	288		
		43	495
26	244		

59

R|W

F.L. 940.33

940.14
594+50
935.5

R|W

F.L. 933.85

58

R|W

F.L. 940.14

314

940.47
594+00
935.86

R|W

F.L. 934.20

55

R|W

F.L. 939.96

300

940.20
593+50
936.0

R|W

F.L. 934.55

Scale: 1" = 5'

53

Sta. 593+00

50 40 30 20 10 0 10 20 30 40 50 60

Sta. 593+00

CROSS SECTIONS - STA. 593+50 TO STA. 594+50

Sta. 596 + 40 Lt
End Paved Gutter
Std Type 2

R/W

F.L. 940.88

941.55
596+00
934.15

R/W

F.L. 934.20

Sta. 595+75-Rt.
End L-10 Sodding
Width 8.5'

R/W

F.L. 940.10

Sta. 595+55-Rt.
Begin L-10 Sodding
Width 8.5'

R/W

F.L. 933.15

941.28
595+50
934.1

R/W

EXISTING PUMP STATION

F.L. 940.52

R/W

F.L. 933.50

941.01
595+00
935.34

Existing 3-Pipe Siphon - 10", 15", 18" VP

Existing 30" Pipe

Sta. 594+50

Sta. 594+50

Scale: 1" = 5'

CROSS SECTIONS - STA. 595+00 TO STA. 596+00

STATION		END AREA		VOLUME	
		CUT	FILL	CUT	FILL
596+00					
	40 Lt	12	574		
595+75	Rt				
		24	1041		
595+55	Rt				
		14	550		
595+50					
		19	959		
595+00					
		6	464		
594+50				32	778
		28	576		

SETTING

NO. RT.	NO. LT.
77	
	417
62	
	539
35	
	472
50	
	622
62	

VOLUME

CUT	FILL
88	350
	208 692
120	282
	311 937
48	224
	122 1278
18	466
	56 1986
12	574

R|W 15'Rt.
599+54
930

R|W

940.70
599+54
941.23

R|W 15'Rt.
599+00
930

R|W

R|W

941.31
599+00
940.68

Sta. 598+50 Lt.
End Paved Gutter
Std Type 2

R|W
F.L. 941.05

R|W 15'Rt.

R|W

941.96
598+00
937.9

598+00
930

R|W
80'

F.L. 938.20

R|W

R|W
F.L. 941.05

F.L. 937.50

Sta. 596+50 Lt.
Begin Paved Gutter
Std. Type 2
F.L. 940.80

942.02
597+00
934.4

Scale : 1"=5'

Sta. 596+00

30 60 50 40 30 20 10 10 20 30 40

Sta. 596+00

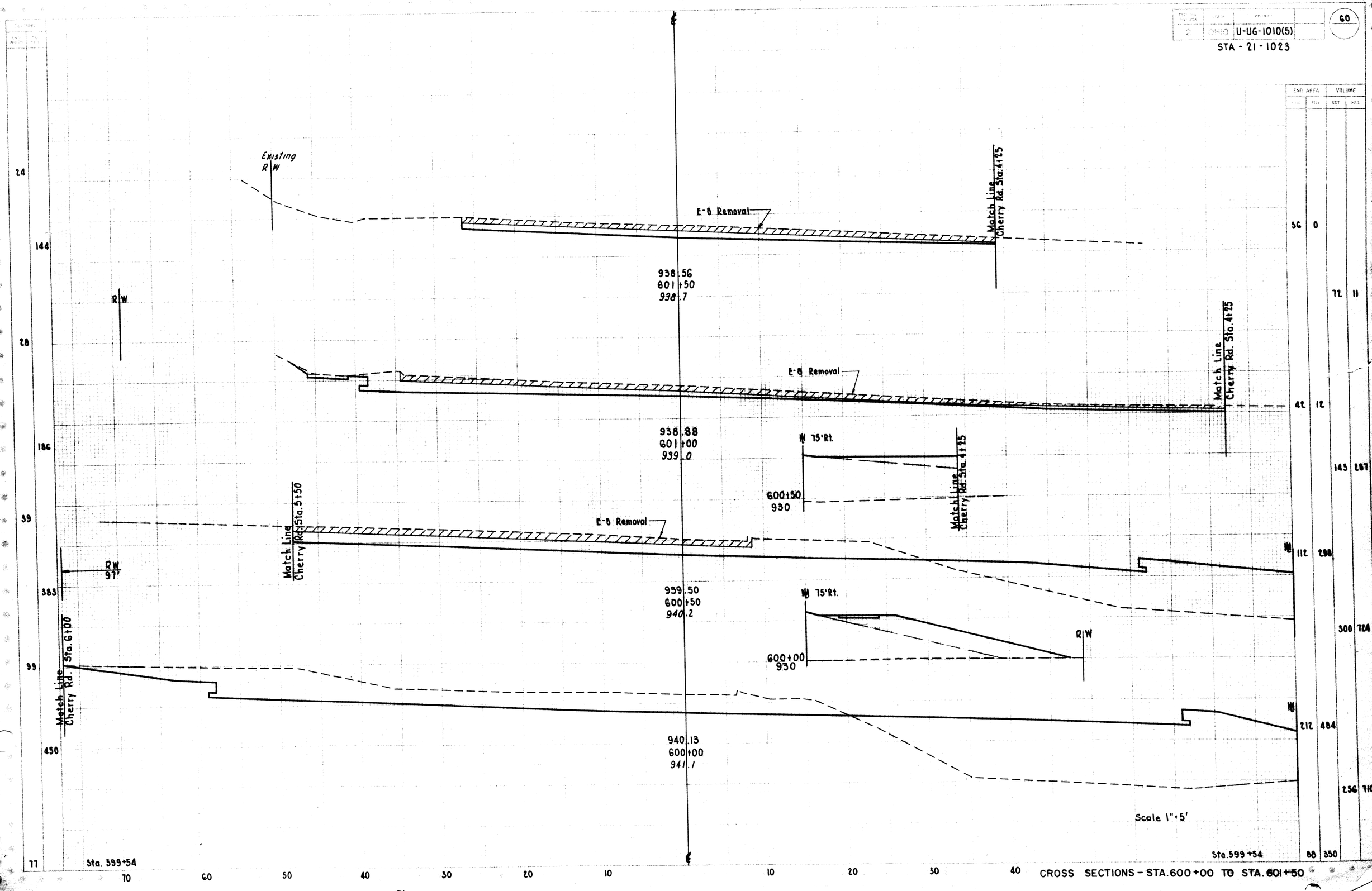
CROSS SECTIONS - STA. 597+00 TO STA. 599+54

PROJECT			
2	OHIO	U-UG-1010(5)	

60

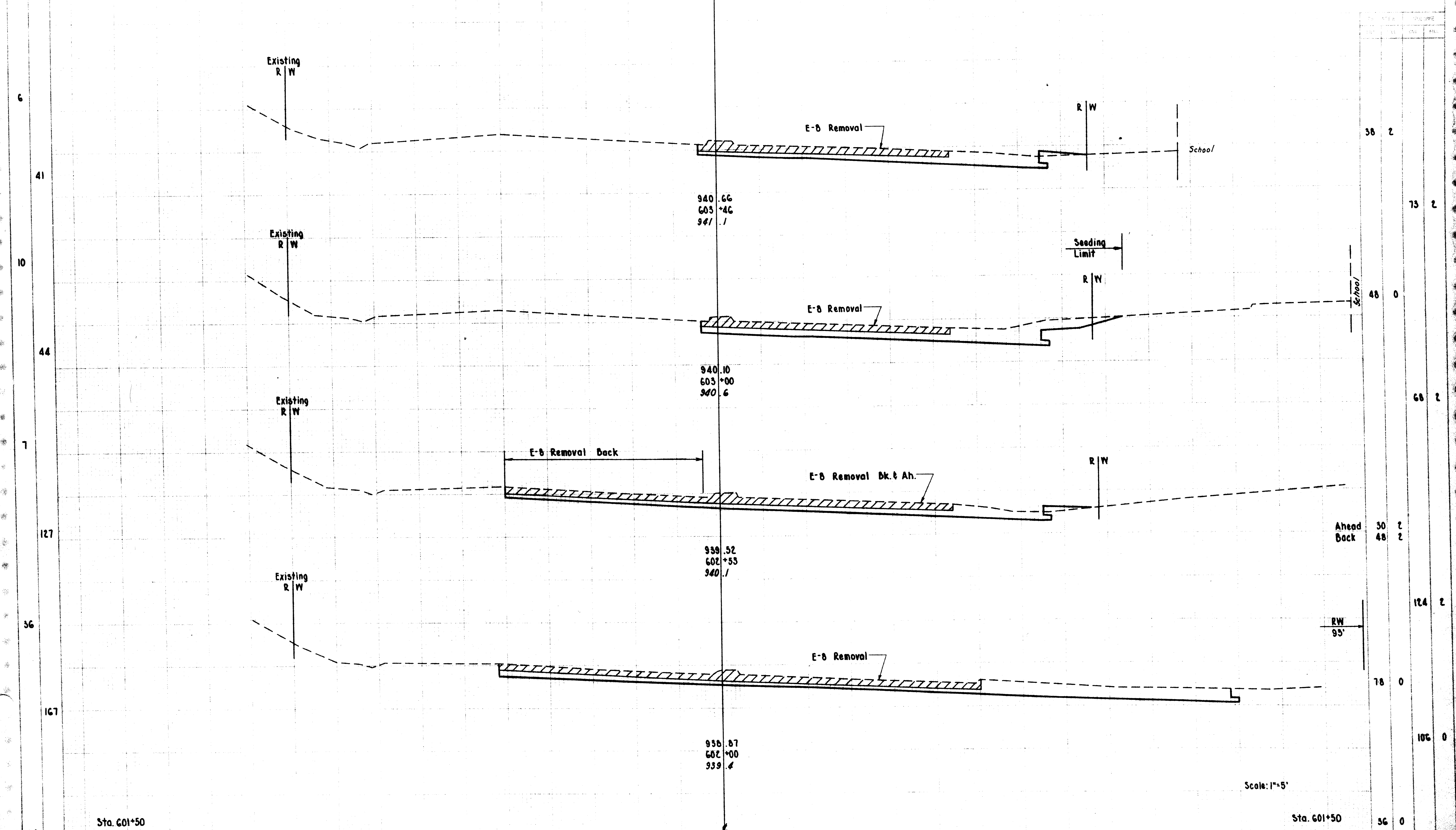
STA - 21 - 1023

END AREA		VOLUME	
CUT	FILL	CUT	FILL
36	0		
		72	11
42	12		
		143	287
112	298		
		300	724
212	484		
		256	710
88	350		



U-UG-1010(5)

STA. 21-10.23



CROSS SECTIONS-STA.602+00 TO STA.603+46

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

62

STA. 21-10.23

SEEDING END WIDTH	SEEDING SQ. YDS.
19	30
19	356
45	433
35	300
21	81
6	

End Seeding
Sta. 607+14

607+00
940.3

End Earthwork
Sta. 607+14

Seeding Limit

F.L. 932.90

R W

E-8 Removal

941.22
606+00
941.9

Sta. 606+30

Seeding Limit

F.L. 933.40

R W

E-8 Removal

941.63
605+00
942.2

F.L. 935.90

R W

E-8 Removal Back

941.23
604+00
941.7

Seeding Limit

R W

Scale: 1"=5'

Sta. 603+46

Sta. 603+46

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
2	0		
		1	0
2	0		
		4	0
Ahead 2	0		
Back 44	16		
		81	30
44	16		
		193	56
60	14		
		189	89
Ahead 42	54		
Back 30	34		
		68	36
58	2		

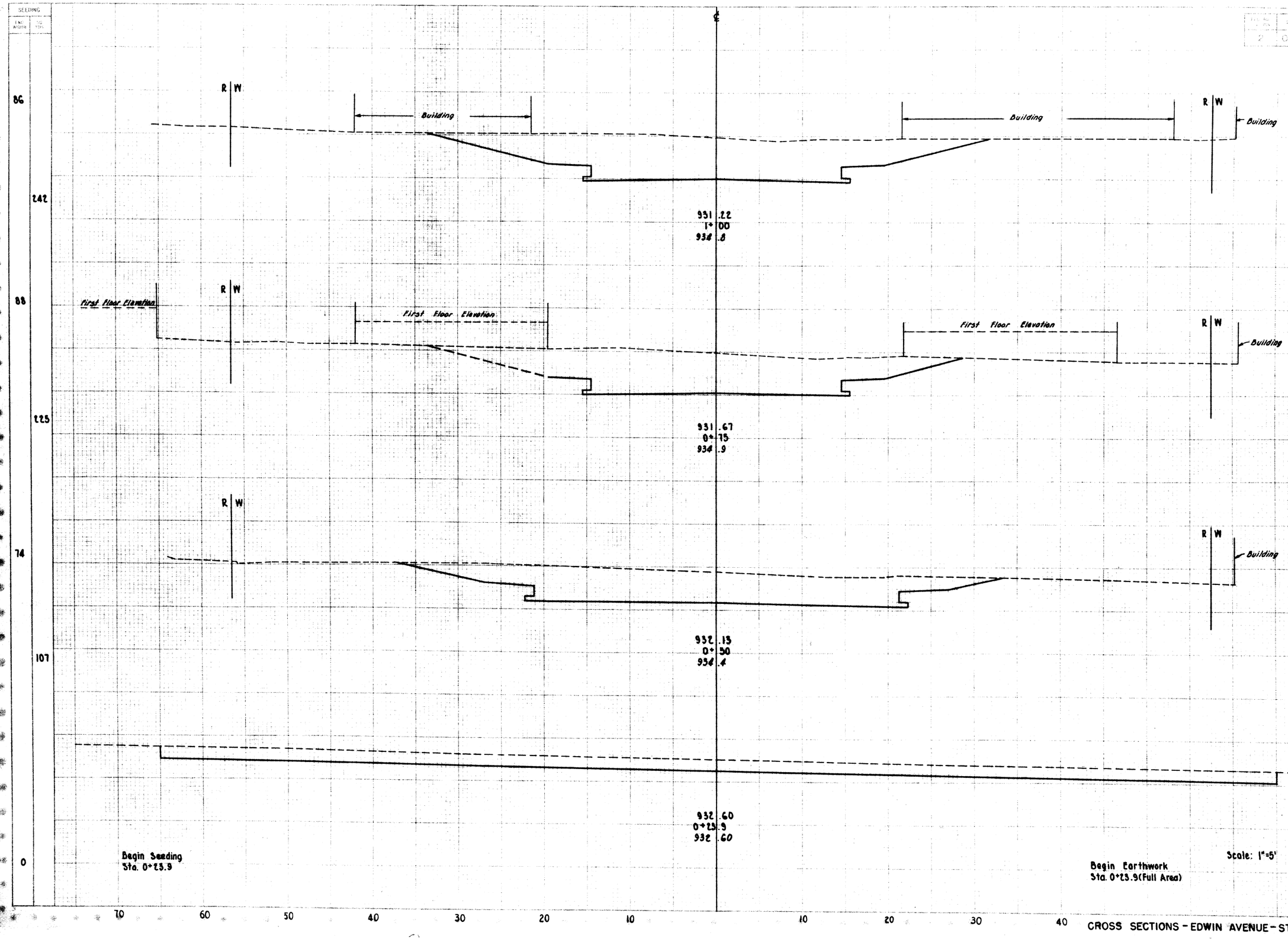
CROSS SECTIONS - STA. 604+00 TO STA. 607+00

PID	DIST	REF	
2	OHIO	U-06-1010(5)	

STA: 21-10.23

SEEDING

END AREA		VOLUME	
CUT	FILL	CUT	FILL
226	0		
		101	0
208	0		
		186	0
194	0		
		177	0
172	0		



CROSS SECTIONS - EDWIN AVENUE - STA. 0+23.9 TO STA. 1+00

SHEETS	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA: 21-10.23

64

SPACING	
END AREA	50 FEET

END AREA		VOLUME	
CUT	FILL	CUT	FILL
	18		2.12
		193	393
	86		0
		152	0
	230		0
		212	0
	246		0
		457	0
	226		0

105

R W

F.L. 924.82

Existing 54" Brick San Sewer

929.80
3+00
925.3

F.L. 923.65

R W

Sta. 3+00-Rt.
Begin L-10 Sodding
Width 11.0'

1089

91

R W

R W

929.10
2+00
930.7

259

88

R W

R W

929.22
1+74
934.0

235

88

R W

R W

Shed

930.31
1+50
934.3

483

86

Sta. 1+00

Sta. 1+00

Scale: 1"=5'

70 60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS - EDWIN AVENUE - STA. 1+50 TO STA. 3+00

SEEDING	
END WIDTH	VOL TO
134	381
140	399
147	1478
119	1244
105	

ROUTE SECTION	STATE	PROJECT
2	OHIO	U-U6-1010(5

STA: 2I-10.23

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	546	0	467
0	462	0	423
0	452	85	1433
46	522	119	989
18	212		

℄

934.25
5+15
926.2

End Seeding
Sta. 5+50

Seeding Limit

End Earthwork
Sta. 5+50 (Full Area)

Seeding Limit
106'

933.84
5+50
926.0

Seeding Limit

Seeding Limit
112'

933.42
5+25
926.0

Seeding Limit

Seeding Limit
122'

933.00
5+00
925.6

Sta. 5+00-Rt.
End L-10 Sodding
Width 11.0'

R/W

F.L. 923.09

931.35
4+00
925.6

F.L. 922.95

R/W

Existing 54" Brick San. Sewer

Sta. 3+00

Sta. 3+00

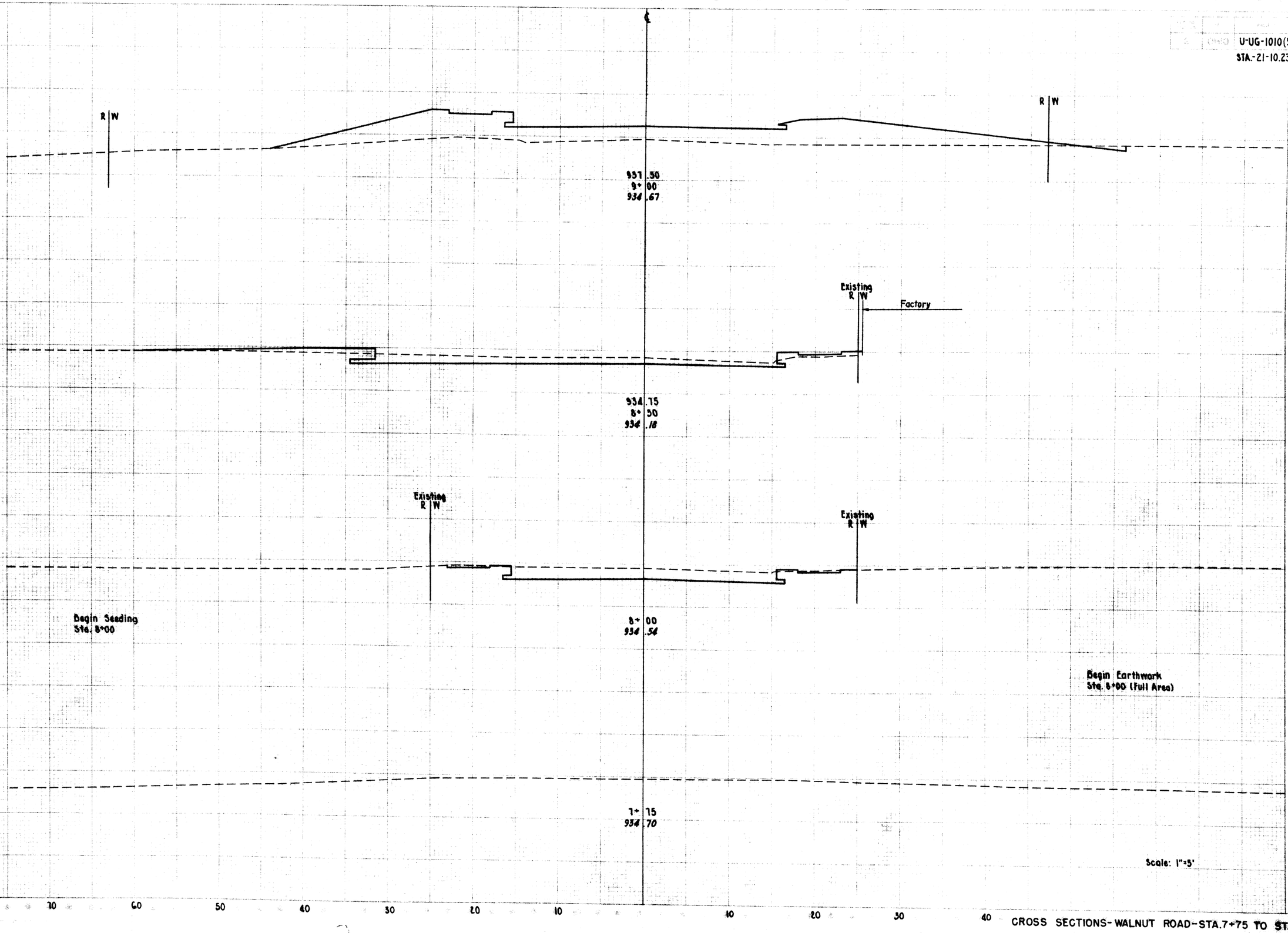
Scale: 1"=5'

70 60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS - EDWIN AVENUE - STA. 4+00 TO STA. 5+75

SEEDING

END WIDTH	SQ YDS
12	
	214
5	
	42
10	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2	178		
		37	174
58	10		
		72	10
40	1		

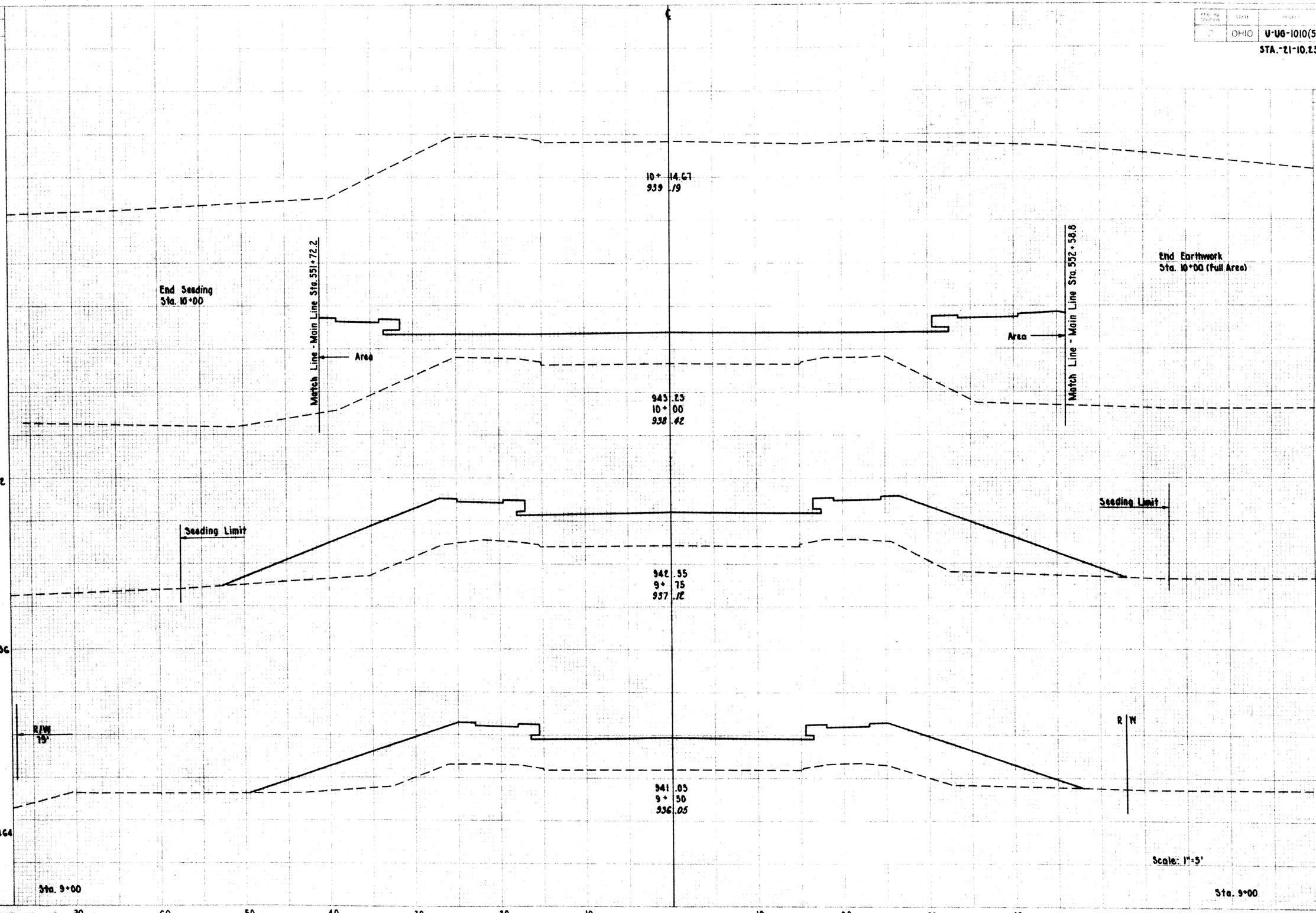
CROSS SECTIONS- WALNUT ROAD- STA.7+75 TO STA.9+00

STATE	PROJECT
OHIO	U-UG-1010(5)

STA.-21-10.23

67

SEEDING	
2 NO. WIDTH	3 SQ. YDS.
13	
122	
75	
236	
95	
464	
72	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	456		
0	408		
0	428		
0	363		
0	356		
0	494		
℄	178		

CROSS SECTIONS-WALNUT ROAD-STA.9+50 TO STA.10+14.67

SEEDING	
END WIDTH	SQ. YDS.
10	18
28	88
35	54
4	

SHEET NO.	STATE	PROJECT NO.	TOTAL SHEETS
2	OHIO	U-UG-1010(5)	68

STA: 21-10.23

End Seeding
Sta. 11+58.3

Existing
R | W

Existing
R | W

End Earthwork
Sta. 11+58.3 (Full Area)

R | W

R | W

11+58.3
943.88

943.91
11+50
943.83

Match Line - Main Line

945.94
11+25
945.65

Match Line - Main Line

Match Line - Main Line Sta. 551+72.2

943.99
11+00
944.90

Match Line - Main Line Sta. 552+58.8

Begin Seeding
Sta. 11+00

Begin Earthwork
Sta. 11+00 (Full Area)

Scale: 1"=5'

END AREA		VOLUME	
CUT	FILL	CUT	FILL
38	0		
		12	0
38	0		
		36	60
40	130		
		32	185
30	162		

70 60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS-WALNUT ROAD-STA.11+00 TO STA.11+58.3

SEEDING	
END WIDTH	SQ YDS
25	89
7	4
7	

DIST	STATE	PROJECT		69
2	OHIO	U-U6-1010(5)		

STA: 21-10.23

END AREA		VOLUME	
CUT	FILL	CUT	FILL
72	0		
		111	0
48	0		
		9	0
48			

R | W

929.66
8+50
929.67

Existing R | W

R | W

Seeding Limit

Existing R | W

930.59
8+00
930.58

Existing R | W

Begin Seeding Sta. 7+95

Seeding Limit

Existing R | W

7+95
930.65

Begin Earthwork Sta. 7+95

Existing R | W

Existing R | W

7+50
931.28

Scale: 1"=5'

70 60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS - CHARLES STREET - STA 7+50 TO STA 8+50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA.-21-10.23

10

SEEDING	
END WIDTH	SQ YDS
61	110
18	135
30	155
25	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
170	14	131	6
112	4	157	6
58	2	120	2
12	0		

75' Lt.

9+15
950

End Seeding
Sta. 9+75

930.04
10+00
930.12

First Floor Elevation

RW
81'

End Earthwork
Sta. 9+75 (Fill Area)

RW
82'

929.71
9+75
929.72

Seeding Limit

Match Line 3rd St.

First Floor Elevation

929.41
9+50
929.07

Match Line-3rd St. Sta. 10+25

℄ W

929.32
9+00
929.14

50 60 70

Scale: 1"=5'

Sta. 8+50

10 60 50 40 30 20 10 10 20 50 40

Sta. 8+50

CROSS SECTIONS-CHARLES STREET-STA.9+00 TO STA.10+00

SEEDING	
END WIDTH	SQ YDS
17	
	49
18	
	97
52	
	96
17	

STATE	PROJECT	SHEET NO.
OHIO	U-UG-1010(5)	11

STA: 21-10.23

END AREA		VOLUME	
CUT	FILL	CUT	FILL
86	0		
		80	0
86	0		
		88	0
104	0		
		93	0
96	0		

℄

R | W

Seeding Limit

933.17
1+00
933.4

R | W

Seeding Limit

933.84
0+75
934.8

Seeding Limit

R | W

934.68
0+50
935.7

R | W

R | W

935.02
0+25
936.8

Begin Seeding
Sta. 0+25

Begin Earthwork
Sta. 0+25

Scale: 1"=5'

10 60 50 40 30 20 10 10 20 30 40 50 60 70

CROSS SECTIONS-THIRD STREET CONN.-STA.0+25 TO STA.1+00

SEEDING	
LINEAR WIDTH	SQ YDS
18	78
10	58
11	78
17	94

PID NO. DIVISION	DIST.	FED. PROJ.	STATE PROJ.
2	OHIO	U-UG-1010(5)	

STA.: 21-10.23

72

Seeding Limit

R/W

℄

R/W

929.45
3+00
930.9

Seeding Limit

R/W

Match Line Weirich Blvd.

929.51
2+50
930.2

Seeding Limit

R/W

Match Line Weirich Blvd.

930.48
2+00
929.80

Seeding Limit

R/W

R/W

951.85
1+50
953.5

Sta. 1+00

Scale: 1"=5'

Sta. 1+00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
82	0		
		157	0
88	0		
		119	7
40	8		
		128	7
98	0		
		170	0
86	0		

60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS-THIRD STREET CONN.-STA.1+50 TO STA.3+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA: 2+10.23

13

SEEDING END WIDTH	SEEDING SQ. YDS.
22	
	111
18	
	114
23	
	114
18	
	100
18	

Seeding Limit

R/W

R/W

929.67
5+00
929.5

Seeding Limit

R/W

R/W

930.29
4+50
929.7

Seeding Limit

R/W

R/W

930.38
4+00
929.6

Seeding Limit

R/W

R/W

929.95
3+50
929.9

Sta. 3+00

Scale: 1"=5'

Sta. 5+00

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
38	10		
		61	15
28	6		
		43	26
18	22		
		52	26
38	6		
		111	6
62	0		

CROSS SECTIONS-THIRD STREET CONN.-STA.3+50 TO STA. 5+00

SEEDING	
ENG. WIDTH	HOR. DIST.
0	
	11
15	
	31
22	
	58
20	
	114
21	
	119
22	

DIST.	STATE	PROJECT	SHEET NO.
2	OHIO	U-UG-1010(5)	14

STA: 2.1-10.23

Seeding Limit

End Seeding
Sta. 6+63.5

928.51
6+63.5
928.54

Seeding Limit

First Floor Elev.?

End Earthwork
Sta. 6+63.5

928.23
6+50
928.8

Seeding Limit

R/W

R/W

Bldg.

928.05
6+25
928.6

Seeding Limit

R/W

R/W

First Floor Elev.?

928.31
6+00
928.7

Seeding Limit

R/W

R/W

First Floor Elev.?

928.99
5+50
929.1

Scale: 1"=5'

Sta. 5+00

Sta. 5+00

END AREA		VOLUME	
CUT	FILL	CUT	FILL
126	0		
		57	0
100	0		
		84	0
82	0		
		72	2
74	4		
		113	9
48	6		
		80	15
38	10		

70 60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS-THIRD STREET CONN.- STA.5+50 TO STA. 6+63.5

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA: 21-10.23

15

SEEDING	
END WIDTH	SQ YDS
14	60
6	97
19	

End Seeding
Sta. 24+54

Existing R/W

Existing R/W

End Earthwork
Sta. 24+54

935.62
24+54
935.62

Existing R/W

Match Line Third St. Conn.

935.38
24+00
935.22

Existing R/W

Existing R/W

Begin Seeding
Sta. 23+30

935.07
23+30
934.89

Begin Earthwork
Sta. 23+30

Scale: 1"=5'

END AREA		VOLUME	
CUT	FILL	CUT	FILL
90	3		
		86	6
36	3		
		109	4
48	0		

30 60 50 40 30 20 10 0 10 20 30 40

CROSS SECTIONS-THIRD STREET-STA.23+30 TO STA.24+54

SHEET	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

76

STA: 21-10.23

SEEDING

LINE WIDTH	SQ YDS
24	
	47
10	
	22
6	
	24
11	
	9
0	

Existing R/W

929.66
5+75
929.94

Match Line Third St. Conn.

Existing R/W

929.23
5+50
929.91

Match Line Third St. Conn.

Existing R/W

929.51
5+25
929.86

Match Line Third St. Conn.

Seeding Limit

929.88
5+00
929.92

Begin Seeding
Sta. 4+85

Begin Earthwork Rt.
Sta. 4+85

Scale: 1"=5'

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
58	0		
		80	0
114	0		
		81	0
62	0		
		42	0
28	0		
		8	0
0	0		

70 60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS - WEIRICH BLVD. - STA. 5+00 TO STA. 5+75

SETTING	
H.O. WIDTH	V.E. 10/1

SHEET NO.	DATE	PROJECT	
2	OHIO	U-UG-1010(5)	

77

STA: 21+10.23

END AREA		VOLUME	
CUT	FILL	CUT	FILL

6+00
930.75

7+50
930.58

7+00
930.39

6+50
930.10

End Earthwork
Sta. 6+00

End Seeding
Sta. 6+00

Existing
R/W

Existing
R/W

929.93
6+00
629.93

Scale: 1"=5'

Sta. 5+75

Sta. 5+75

26
69
24

70 60 50 40 30 20 10 10 20 30 40

50 0
50 0
58 0

CROSS SECTIONS- WEIRICH BLVD.- STA.6+00 TO STA.8+00

NO.	STATE	PROJECT	78
2	OHIO	U-UG-1010(5)	

STA: 21-10.23

SEEDING		
	END WIDTH	SO YDS.
	18	
		74
	35	
		74
	18	
		53
	20	

END AREA		VOLUME	
CUT	FILL	CUT	FILL
54	0		
		50	0
54	0		
		60	0
76	0		
		99	9
138	20		

End Seeding
Sta. 11+00

First Floor Elev.

Existing R | W

931.39
11+00
931.52

End Earthwork
Sta. 11+00

Seeding Limit

930.66
10+75
930.77

Begin Seeding
Sta. 10+25

Match Line Charles Ave. Sta. 9+75

929.93
10+50
929.99

Proposed Sidewalk

Begin Earthwork
Sta. 10+25

10+25
929.03

Scale: 1"=5'

70 60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS - THIRD STREET - STA. 10+25 TO STA. 11+00

SEEDING
LB/1000 SY | SY/1000

R/W

Match Line Main Line

E-B Removal

934.62
3+75
936.16

Existing R/W

E-B Removal

933.60
3+50
933.56

Existing R/W

R/W

E-B Removal

932.66
3+00
932.65

Existing R/W

First Floor Elev.

Existing R/W

E-B Removal

932.70
2+92.2
932.67

Begin Seeding
Sta. 2+92.2

Begin Earthwork
Sta. 2+92.2

Scale: 1"=5'

SEEDING LB/1000 SY	SEEDING SY/1000
29	89
35	172
27	21
22	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
54	20		
		46	9
46	0		
		70	0
30	0		
		7	0
20	0		

70 60 50 40 30 20 10 | 10 20 30 40

CROSS SECTIONS-CHERRY STREET-STA.2+92.2 TO STA.3+75

	OHIO	U-UG-1010(5)	

STA: 21-10.23

SEEDING

END WIDTH	SQ YDS
94	235
75	144
29	

939.36
5+00
939.91

937.56
4+50
937.50

936.65
4+25
936.39

935.65
4+00
935.23

RW 112'

75'Lt.

4+25
925

End Seeding
Sta. 4+25

End Earthwork
Sta. 4+25

E-B Removal

Match Line - Main Line Sta. 601+50

Match Line Main Line

RW 88'

E-B Removal

Sta. 3+75

Sta. 5+75

Scale: 1"=5'

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
12	292		
		16	182
22	102		
		35	56
54	20		

30 60 50 40 30 20 10 10 20 30 40

CROSS SECTIONS-CHERRY STREET-STA. 4+00 TO STA. 5+00

SEEDING

ACC.	VOL.
0	
	3
7	
	24
10	
	44
22	

End Seeding
Sta. 6+08.60

Begin Seeding
Sta. 5+50

Match Line W. Sta. 600+00

Match Line

Match Line Sta. 600+50

Main Line

E-8 Removal

E-8 Removal

E-8 Removal

944 .62
6+ 00
944 .65

943 .20
5+ 75
943 .48

941 .59
5+ 50
942 .31

940 .40
5+ 25
941 .10

R W

R W

End Earthwork
Sta. 6+08.60 (Use Area 6+00)

Begin Earthwork
Sta. 5+50

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
32	0		
		10	0
32	0		
		30	0
32	0		
		34	0
42	0		

Scale: 1"=5'

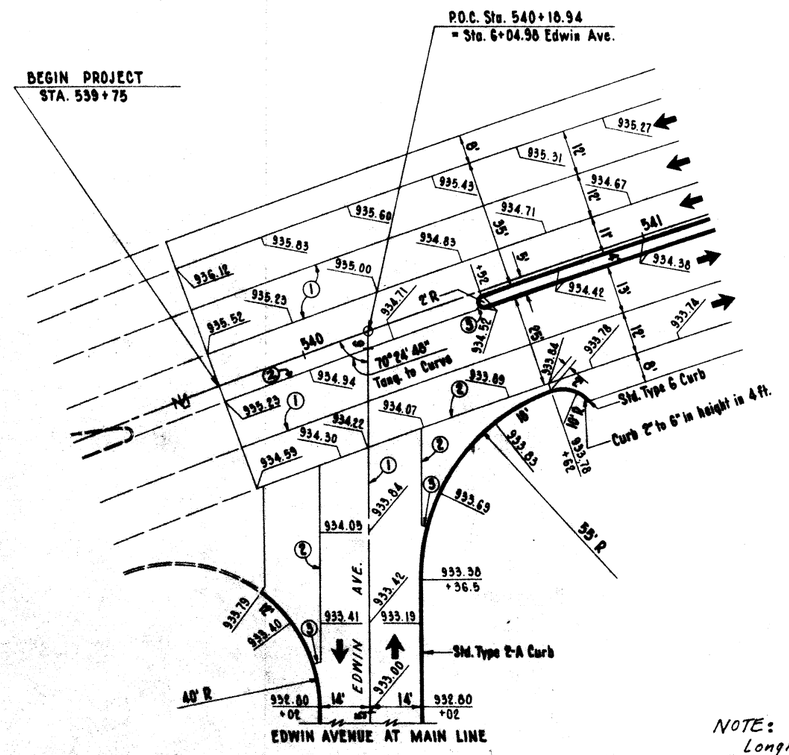
70 60 50 40 30 20 10 10 20 30 40

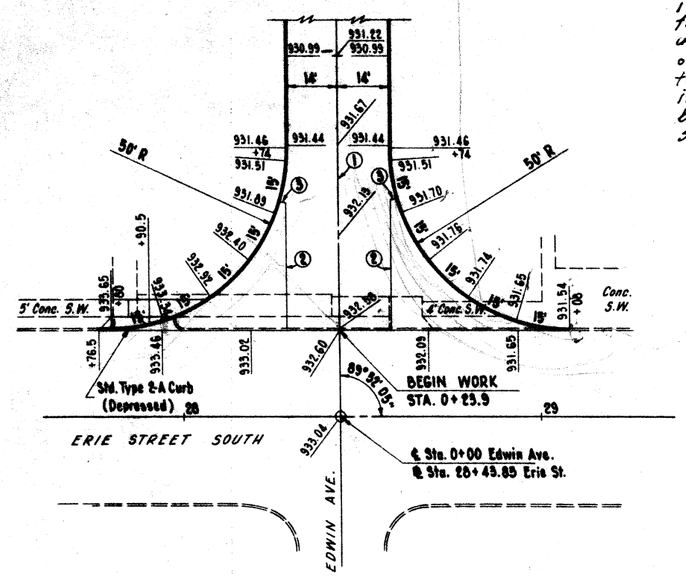
CROSS SECTIONS-CHERRY STREET-STA. 5+25 TO STA. 6+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

82

STA. - 21 - 10.23



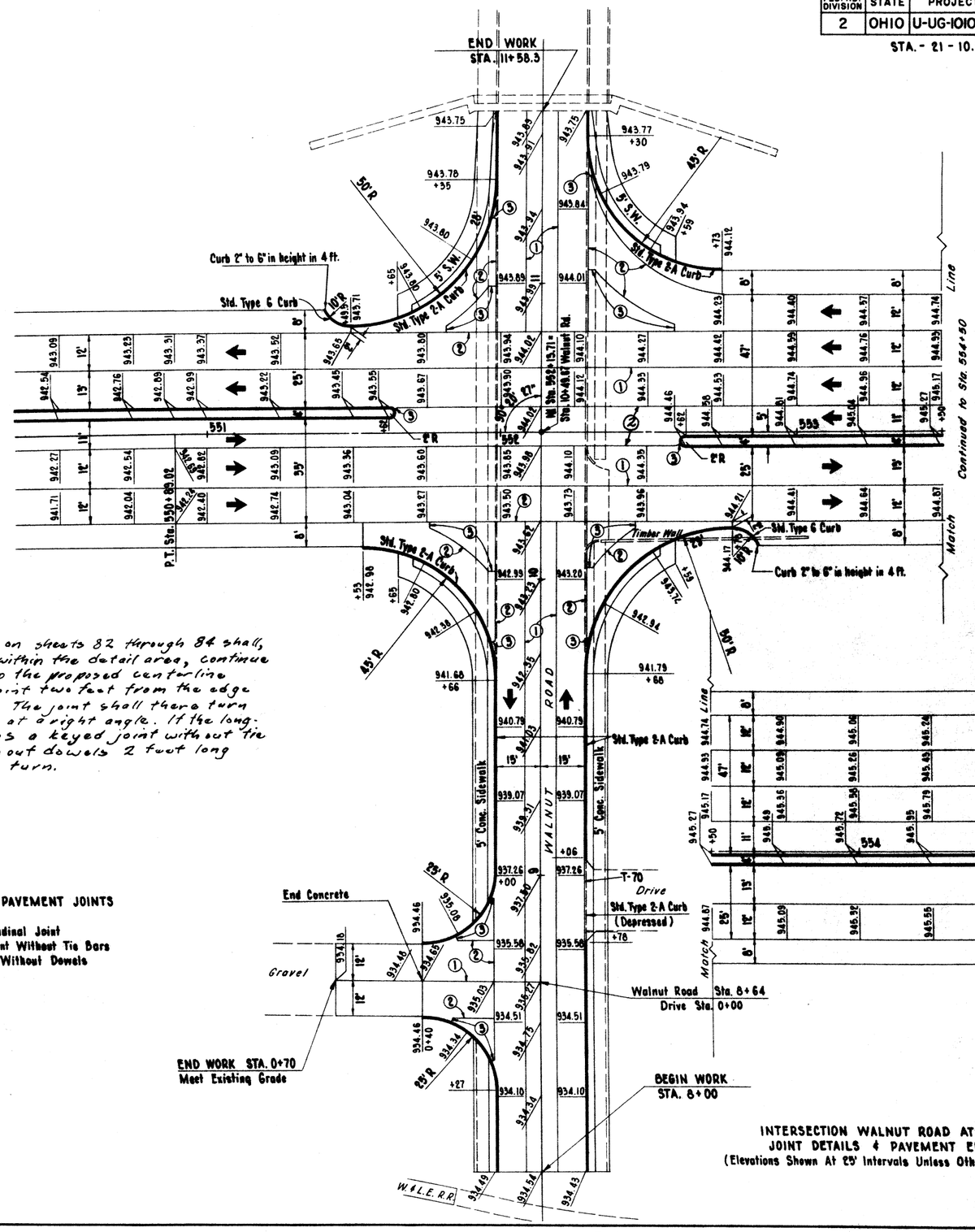


INTERSECTION EDWIN AVENUE AT ERIE STREET
JOINT DETAILS & PAVEMENT ELEVATIONS
(Elevations Shown At 25' Intervals Unless Otherwise Indicated)

NOTE:
Longitudinal joints shown on sheets 82 through 84 shall, if termination is not shown within the detail area, continue forward and back parallel to the proposed centerline until the joint reaches a point two feet from the edge of the proposed pavement. The joint shall there turn to meet the pavement edge at a right angle. If the longitudinal joint is indicated as a keyed joint without tie bars, an expansion joint without dowels 2 feet long shall be provided at the turn.

LEGEND - FOR PAVEMENT JOINTS

① Standard Longitudinal Joint
② Standard Key Joint Without Tie Bars
③ Expansion Joint Without Dowels

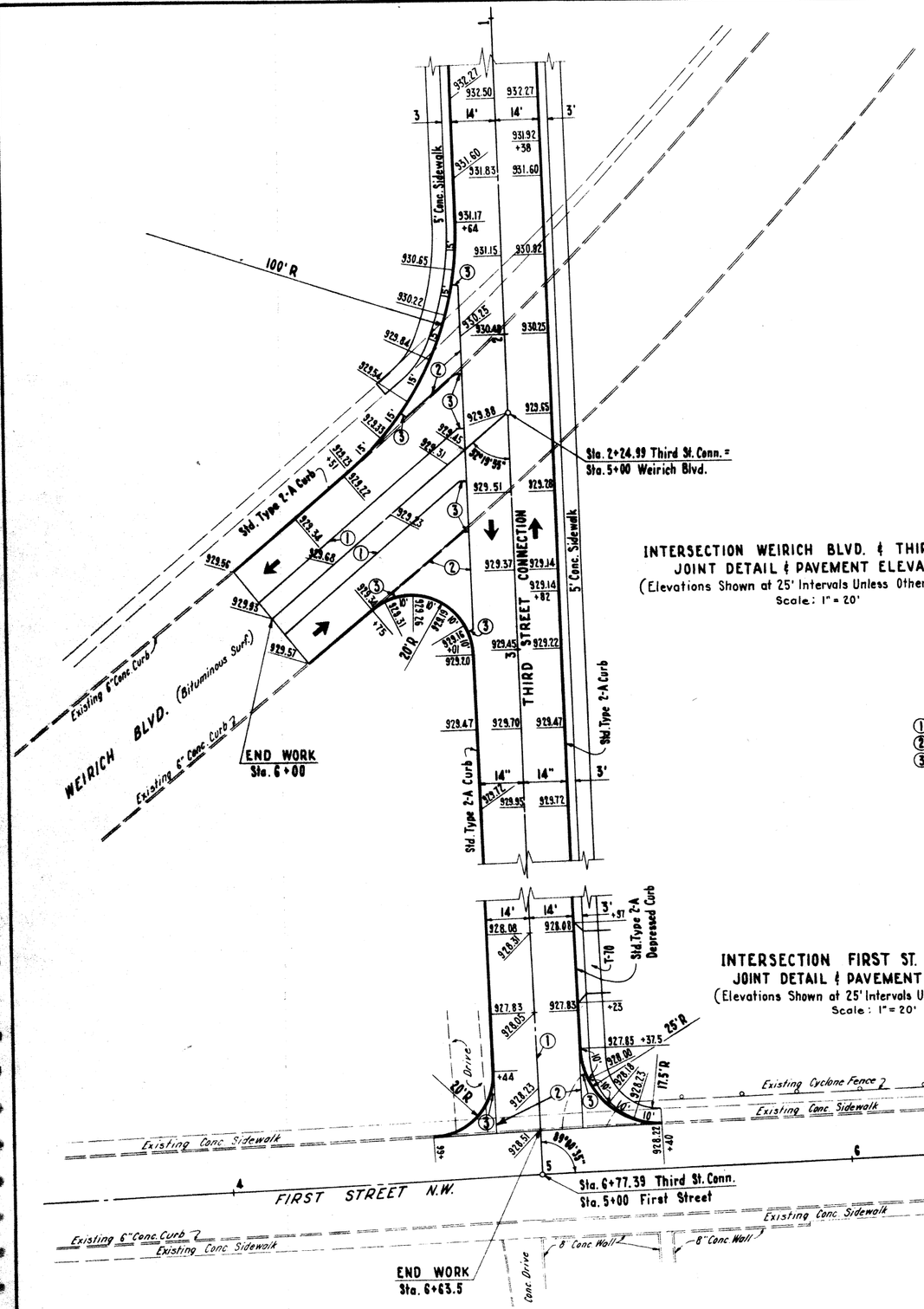


INTERSECTION WALNUT ROAD AT MAIN LINE
JOINT DETAILS & PAVEMENT ELEVATIONS
(Elevations Shown At 25' Intervals Unless Otherwise Indicated.)

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010 (5)	

85

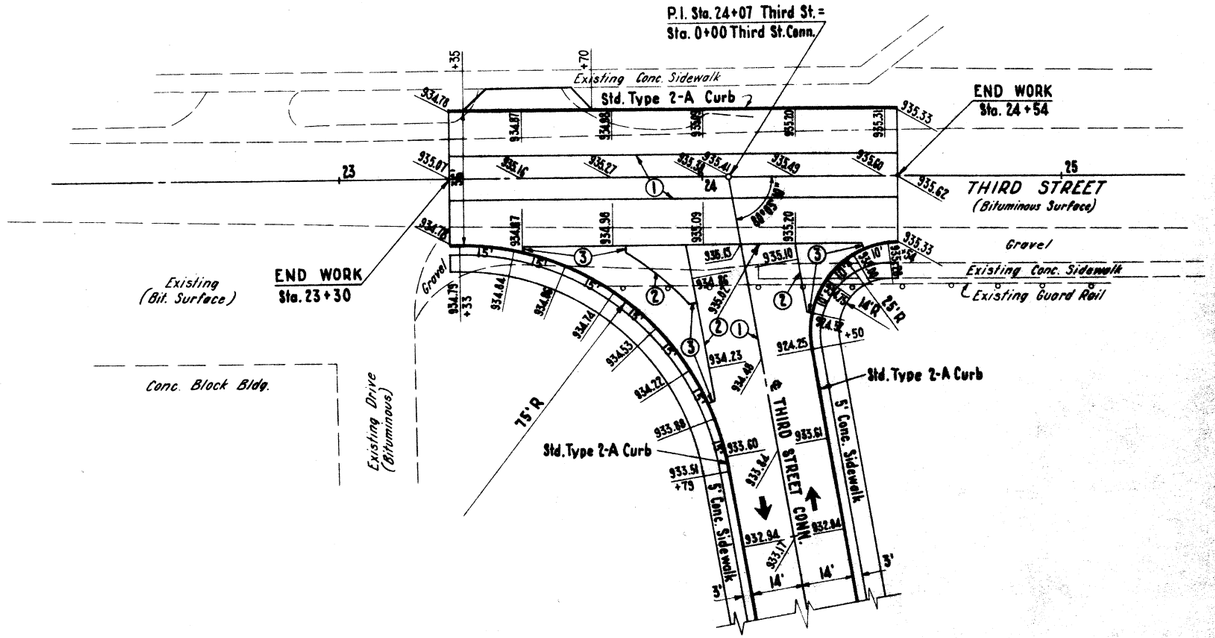
STA. 21-10.23



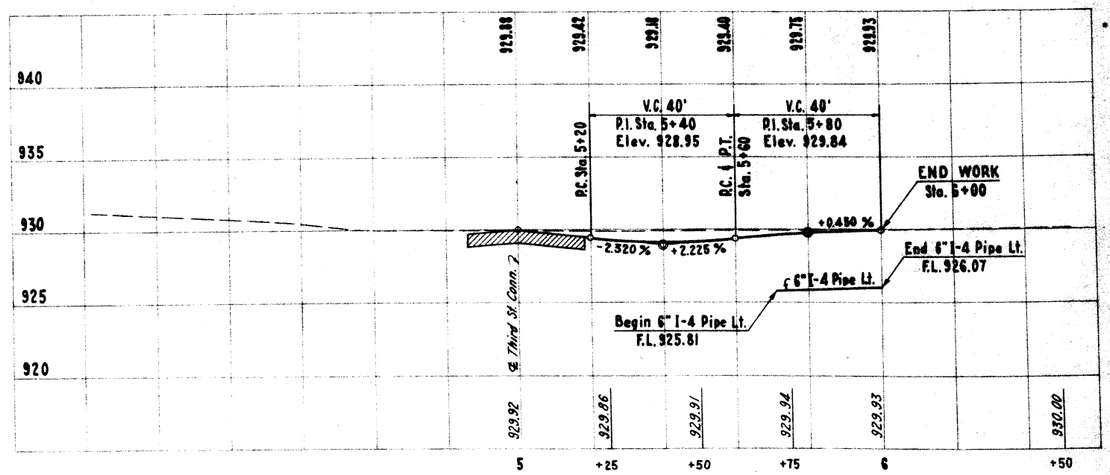
INTERSECTION WEIRICH BLVD. & THIRD ST. CONN.
JOINT DETAIL & PAVEMENT ELEVATIONS
(Elevations Shown at 25' Intervals Unless Otherwise Indicated)
Scale: 1" = 20'

INTERSECTION FIRST ST. & THIRD ST. CONN.
JOINT DETAIL & PAVEMENT ELEVATIONS
(Elevations Shown at 25' Intervals Unless Otherwise Indicated)
Scale: 1" = 20'

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



INTERSECTION THIRD ST. & THIRD ST. CONN.
JOINT DETAILS & PAVEMENT ELEVATIONS
Elevations Shown at 25' Intervals Unless Otherwise Indicated
Scale: 1" = 20'

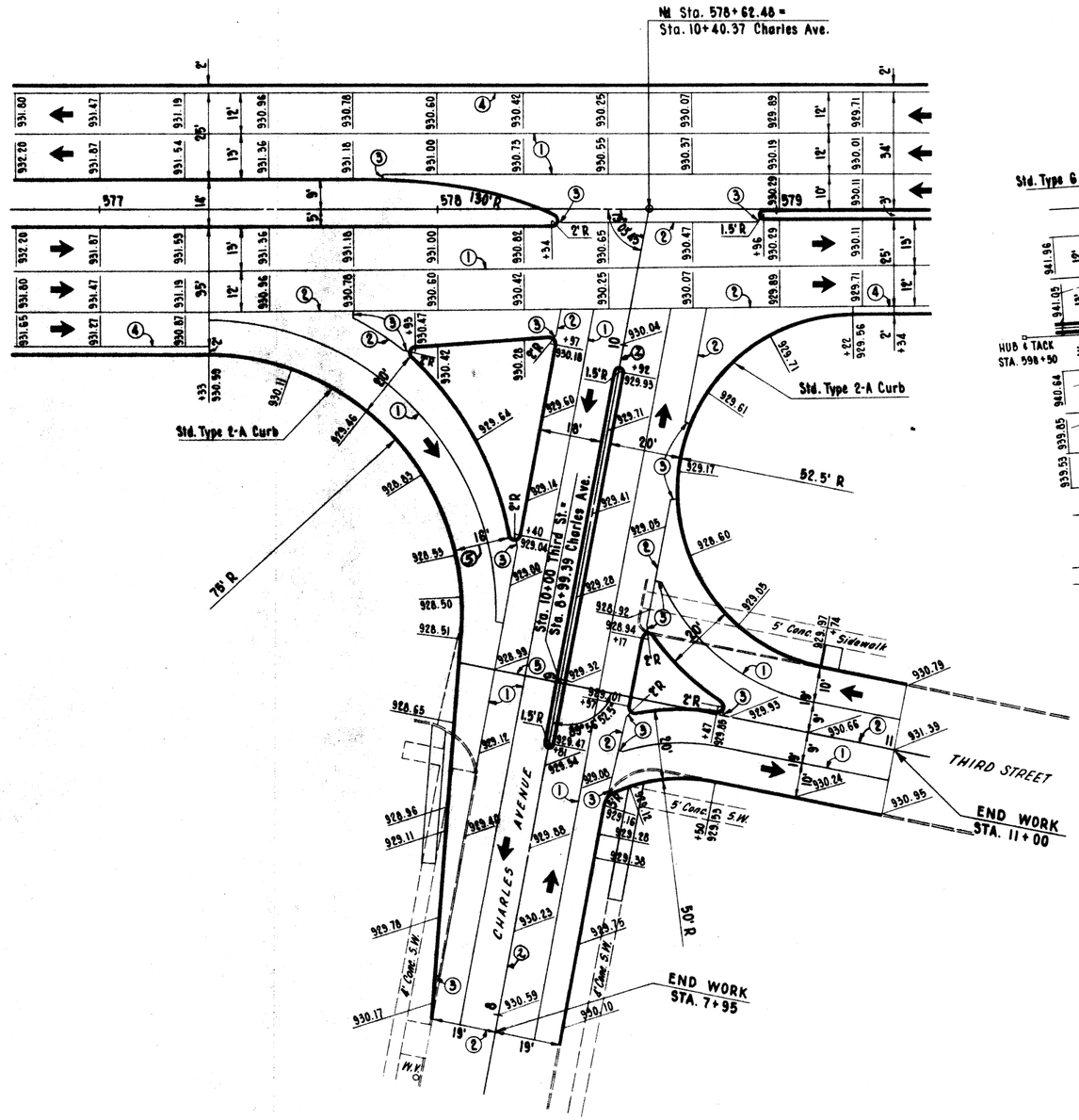


PROFILE WEIRICH BLVD. AT THIRD ST. CONN.
Scale: Hor. 1" = 20'
Vert. 1" = 5'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA. - 21 - 10.23

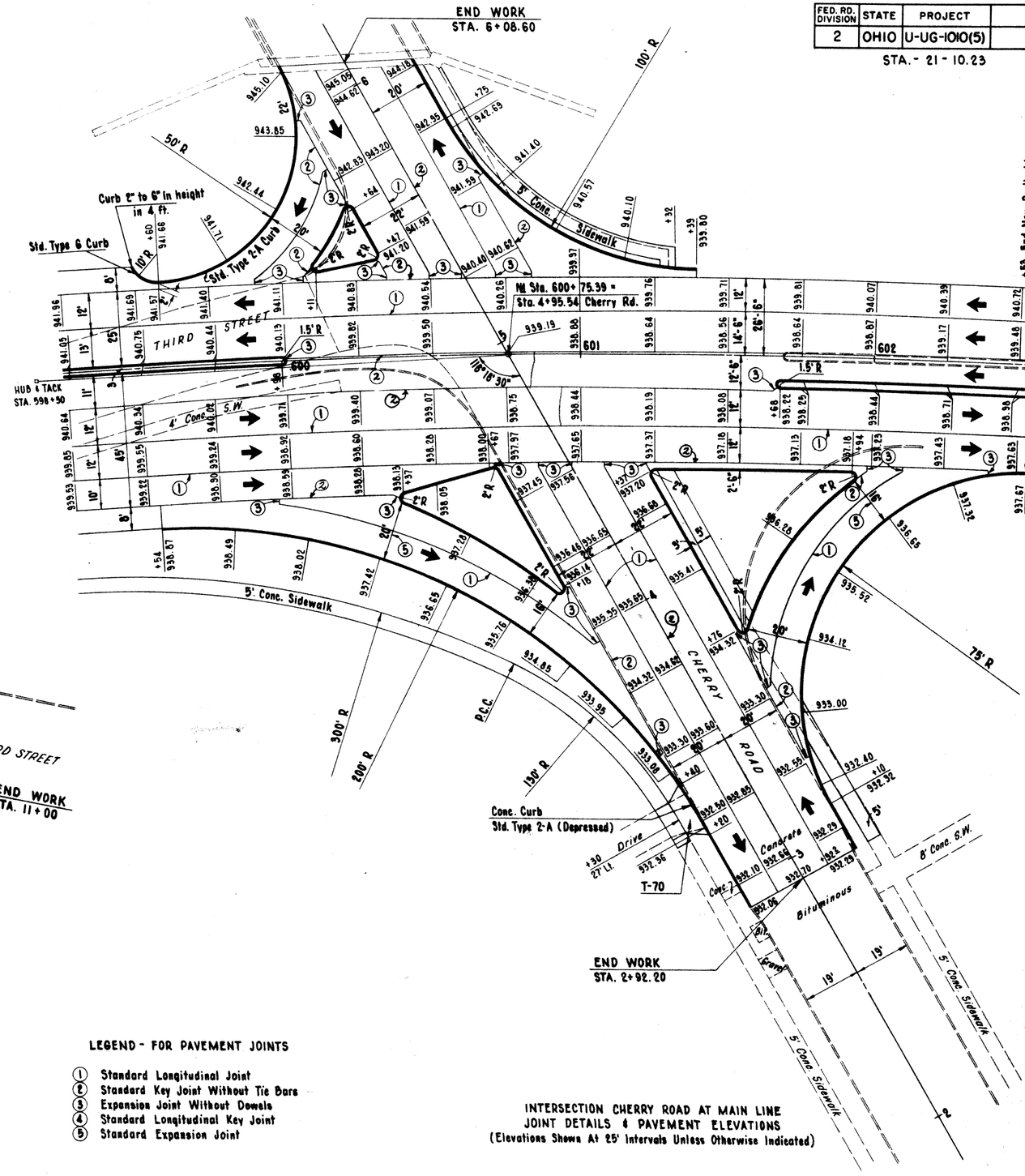
84



INTERSECTION CHARLES AVE. AT MAIN LINE & THIRD STREET
JOINT DETAILS & PAVEMENT ELEVATIONS
(Elevations Shown At 25' Intervals Unless Otherwise Indicated)

LEGEND - FOR PAVEMENT JOINTS

1. Standard Longitudinal Joint
2. Standard Key Joint Without Tie Bars
3. Expansion Joint Without Dowels
4. Standard Longitudinal Key Joint
5. Standard Expansion Joint

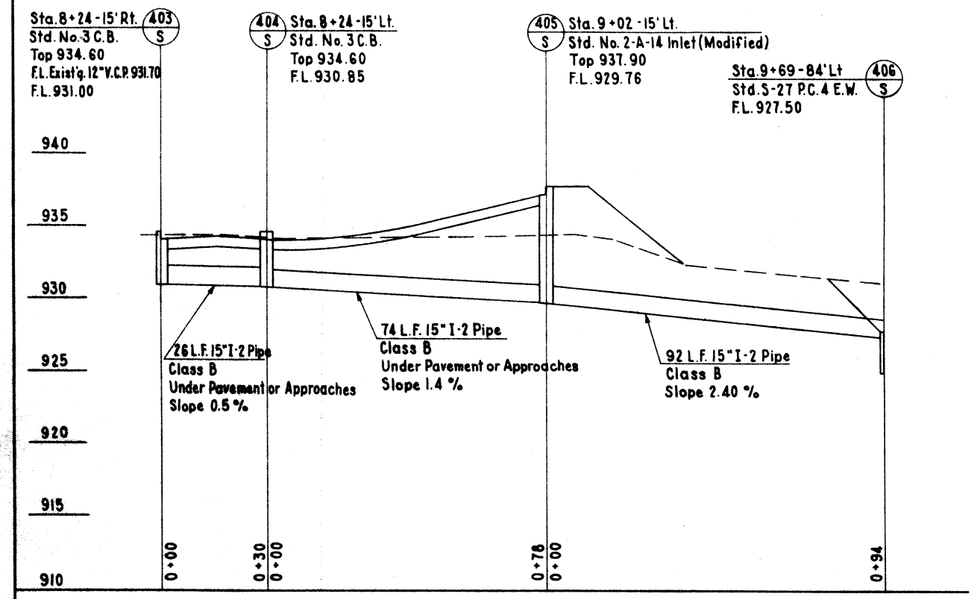


INTERSECTION CHERRY ROAD AT MAIN LINE
JOINT DETAILS & PAVEMENT ELEVATIONS
(Elevations Shown At 25' Intervals Unless Otherwise Indicated)

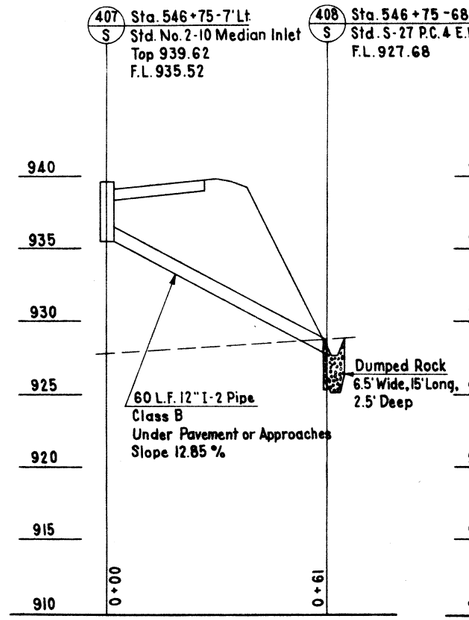
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-U6-1010(5)	

85

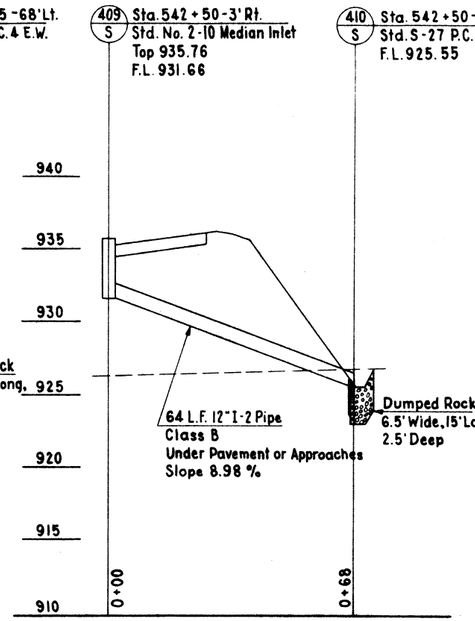
STA. - 21 - 10.23



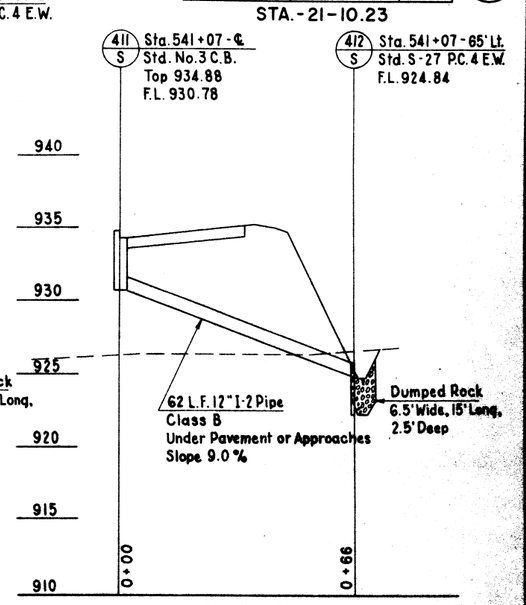
Scale: Hor. 1" = 20'
Vert. 1" = 5'



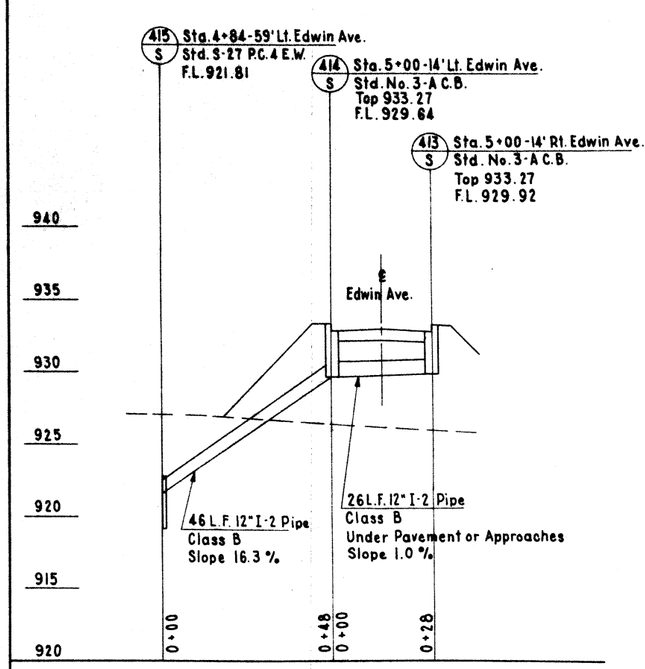
Scale: Hor. 1" = 20'
Vert. 1" = 5'



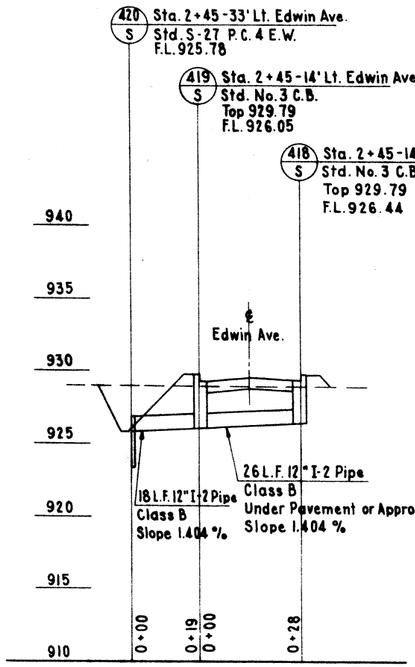
Scale: Hor. 1" = 20'
Vert. 1" = 5'



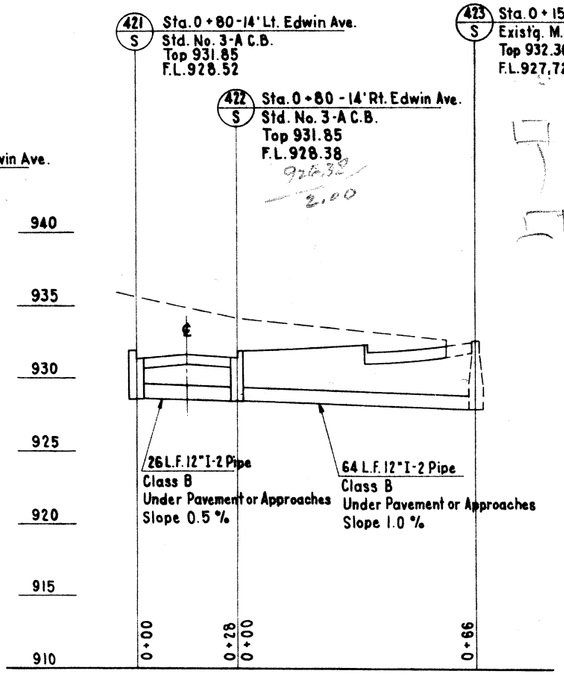
Scale: Hor. 1" = 20'
Vert. 1" = 5'



Scale: Hor. 1" = 20'
Vert. 1" = 5'

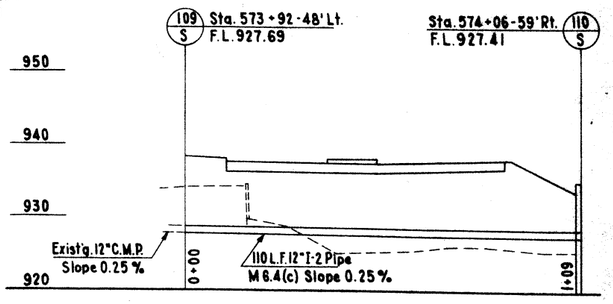


Scale: Hor. 1" = 20'
Vert. 1" = 5'



Scale: Hor. 1" = 20'
Vert. 1" = 5'

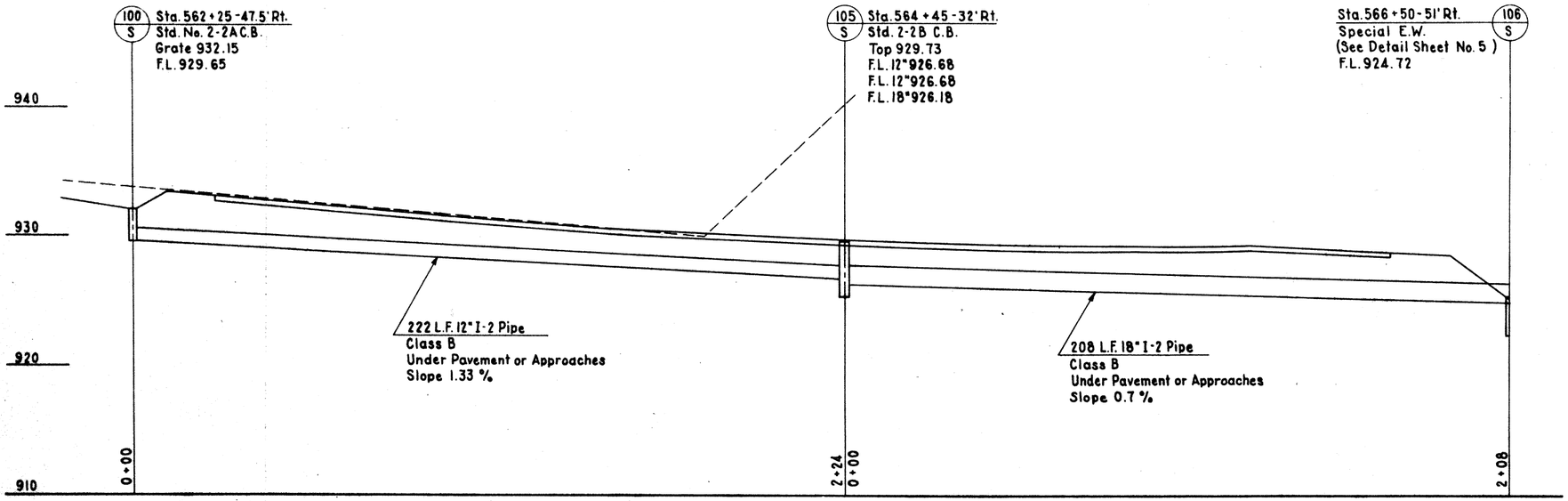
927.0 ℄
926.38

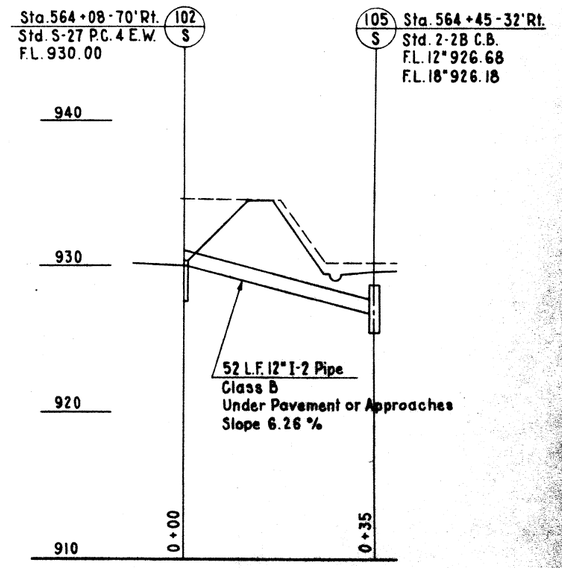


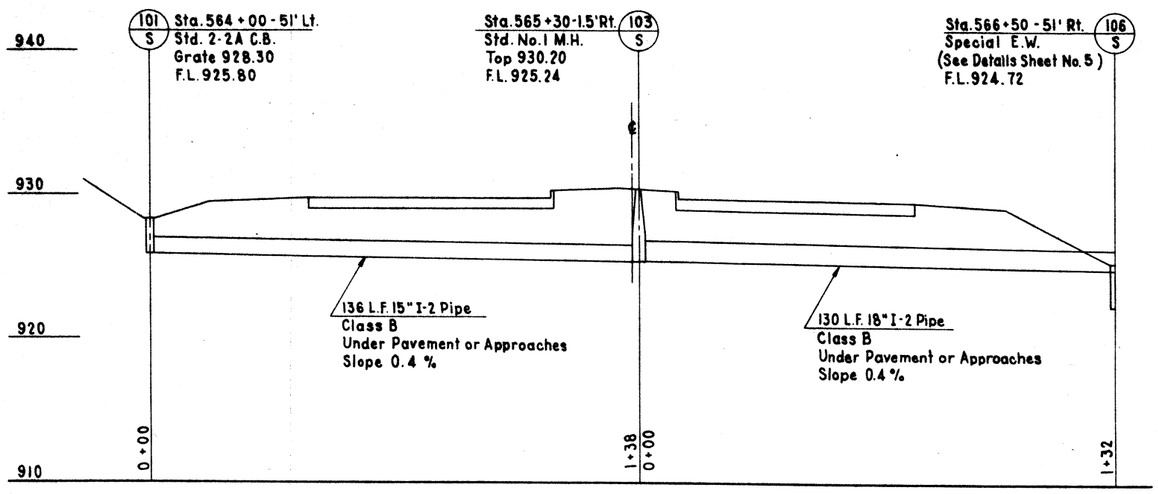
Scale: Hor. 1" = 20'
Vert. 1" = 10'

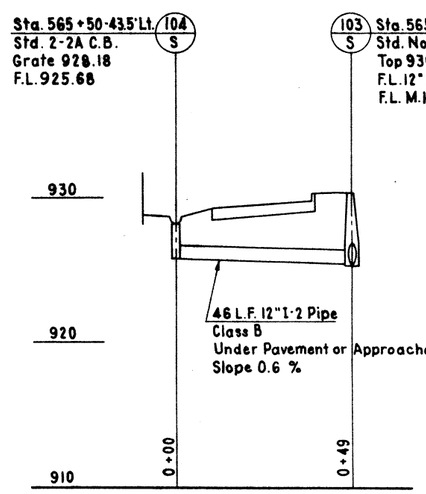
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

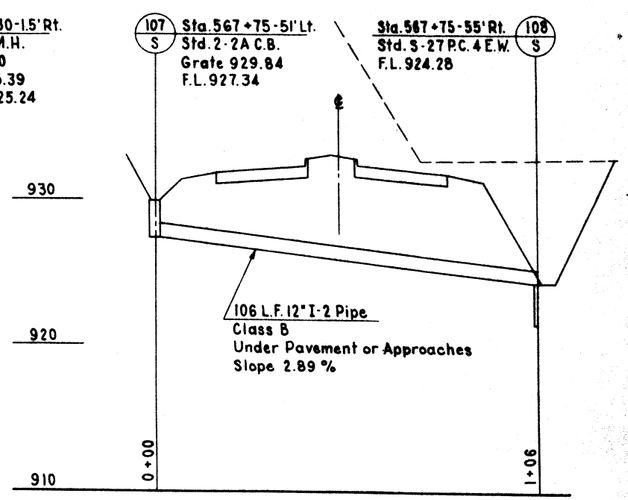
STA.-21-10.23











Scale: Hor. 1" = 20'
Vert. 1" = 5'

STORM SEWER PROFILES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-U6-1010(5)	

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STA. - 21 - 10.23

202 S Sta. 578 + 25 - 37' Lt.
Std. 2-A-6 Inlet (Mod.)
Top 930.75
F.L. 926.65

Sta. 579 + 25-36' Rt. 205 S
Std. No. 1 M.H.
Top 930.30
F.L. 12" 926.03
F.L. 15" 925.52
F.L. 924.12

122 L.F. 12" I-2 Pipe
Class B
Under Pavement or Approaches
Slope 0.5 %

221 S Sta. 582 + 25 - 3' Lt.
Std. No. 2-B Median Inlet
Top 929.79
F.L. 925.69

220 S Sta. 582 + 40 ℄
Std. No. 1 M.H.
Top 930.00
F.L. 12" 925.53
F.L. 923.01

Sta. 583 + 16 - 13' Rt. 220b S
12" x 36" x 36" Wye
F.L. 12" 924.50
F.L. 36" 922.78

Sta. 583 + 92 - 23.5' Rt. 222 S
12" x 36" x 36" Wye
F.L. 12" 924.00
F.L. 922.55

Sta. 584 + 75 - 32' Rt. 224 S
Std. No. 1 M.H.
Top 933.30
F.L. 12" 928.70
F.L. 922.30

Sta. 585 + 31 - 74' Rt. 226 S
F.L. 36" 922.00

12 L.F. 12" I-2 Pipe
Class B
Under Pavement or Approaches
Slope 1.0 %

76 L.F. 36" I-2 Pipe
Class B
Under Pavement or Approaches
Slope 0.3 %

78 L.F. 36" I-2 Pipe
Class B
Under Pavement or Approaches
Slope 0.3 %

82 L.F. 36" I-2 Pipe
Class B
Under Pavement or Approaches
Slope 0.3 %

70 L.F. 36" I-2 Pipe
Class B
Slope 0.42 %

223 S Sta. 583 + 75 - ℄
Std. No. 2-10 Median Inlet
Top 932.15
F.L. 928.02

222 S Sta. 583 + 92 - 23.5' Rt.
12" x 36" x 36" Wye
F.L. 12" 924.00
F.L. 36" 922.55

28 L.F. 12" I-2 Pipe
Class B
Under Pavement or Approaches
Slope 13.5 %

225 S Sta. 585 + 01 - 32' Lt.
Std. 2-2A C.B.
Grate 934.80
F.L. 931.50

Sta. 584 + 75 - 32' Rt. 224 S
Std. No. 1 M.H.
Top 933.30
F.L. 12" 928.70
F.L. 922.30

66 L.F. 12" I-2 Pipe
Class B
Under Pavement or Approaches
Slope 4.0 %

201 S Sta. 576 + 50 - 36' Lt.
Std. 2-A-6 Inlet (Modified)
Top 932.52
F.L. 928.42

Sta. 577 + 30 - 42' Rt. 204 S
Std. 2-A-8 Inlet (Modified)
Top 931.25
F.L. 12" 927.27
F.L. 926.90

Sta. 579 + 25 - 36' Rt. 205 S
Std. No. 1 M.H.
Top 930.30
F.L. 12" 926.03
F.L. 15" 925.52
F.L. 924.12
F.L. 12" 926.03

112 L.F. 12" I-2 Pipe
Class B
Under Pavement or Approaches
Slope 1.0 %

192 L.F. 15" I-2 Pipe
Class B
Under Pavement or Approaches
Slope 0.72 %

212 S Sta. 579 + 50 - 45' Lt.
Std. 2-2A C.B.
Grate 927.00
F.L. 924.50

213 S Sta. 579 + 95 - 36' Lt
Std. 2-A-6 Inlet (Modified)
Top 929.54
F.L. 12" 925.40
F.L. 924.23

216 S Sta. 580 + 35 - 36' Rt.
Std. No. 1 M.H.
Top 929.50
F.L. 12" 924.97
F.L. 18" 923.90
F.L. 30" 923.79
F.L. 923.54

42 L.F. 15" I-2 Pipe
Class B
Slope 0.6 %

80 L.F. 18" I-2 Pipe
Class B
Under Pavement or Approaches
Slope 0.4 %

220c S Sta. 582 + 32 - 34' Rt.
8" - 90° Bend
F.L. 925.78

220d S Sta. 582 + 90 - 38' Rt.
Std. 2-A-6 Inlet
Top 929.57
F.L. 926.47
F.L. 925.47

Sta. 582 + 72 - 36' Rt. 220e S
8" x 8" x 8" Tee
F.L. 925.78

Sta. 583 + 10 - 87' Rt. 220f S
12" x 36" x 36" Wye
F.L. 12" 924.50
F.L. 36" 922.78

214 S Sta. 580 + 15 - 42.5' Lt.
Sta. 2-2A C.B.
Top 926.00
F.L. 925.50

213 S Sta. 579 + 95 - 36' Lt.
Std. 2-A-6 Inlet
Top 929.54
F.L. 12" 925.40
F.L. 924.23

16 L.F. 12" I-2 Pipe
Class B
Slope 0.5%

36 L.F. 8" I-2 Pipe
Class B
Slope 0.5 %

18 L.F. 8" I-2 Pipe
Class B
Slope 0.5%

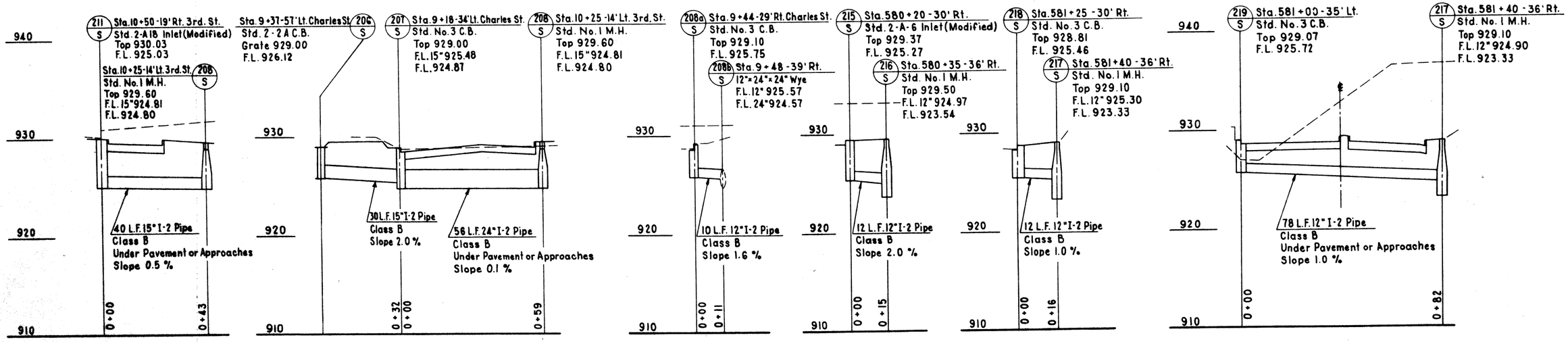
30 L.F. 12" I-2 Pipe
Class B
Under Pavement or Approaches
Slope 3.2 %

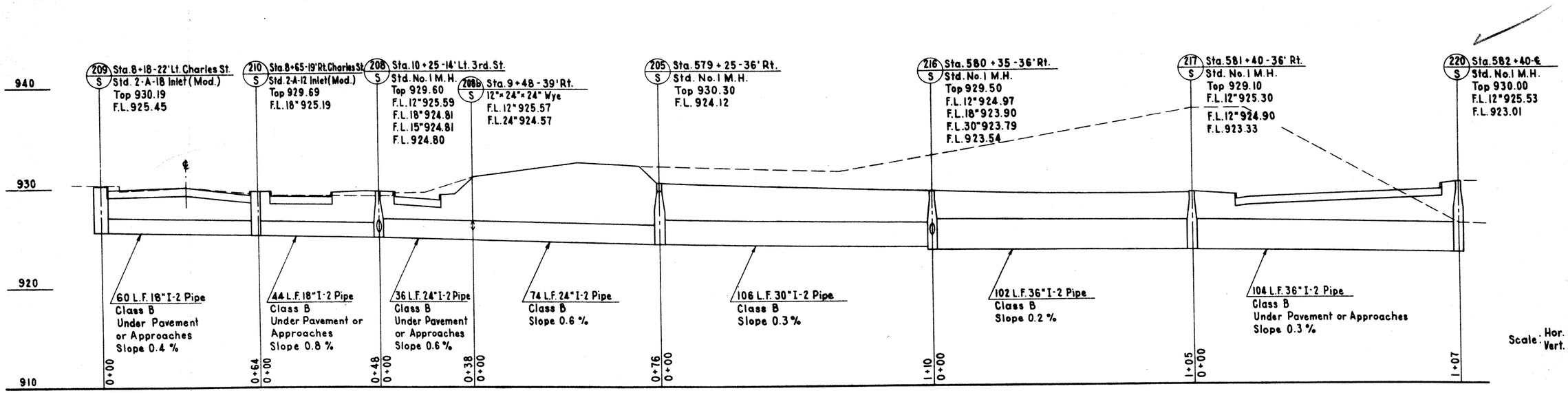
Scale: Hor. 1" - 20'
Vert. 1" - 5'

STORM SEWER PROFILES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA.-21-10.23





STORM SEWER PROFILES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-U6-1010(5)	

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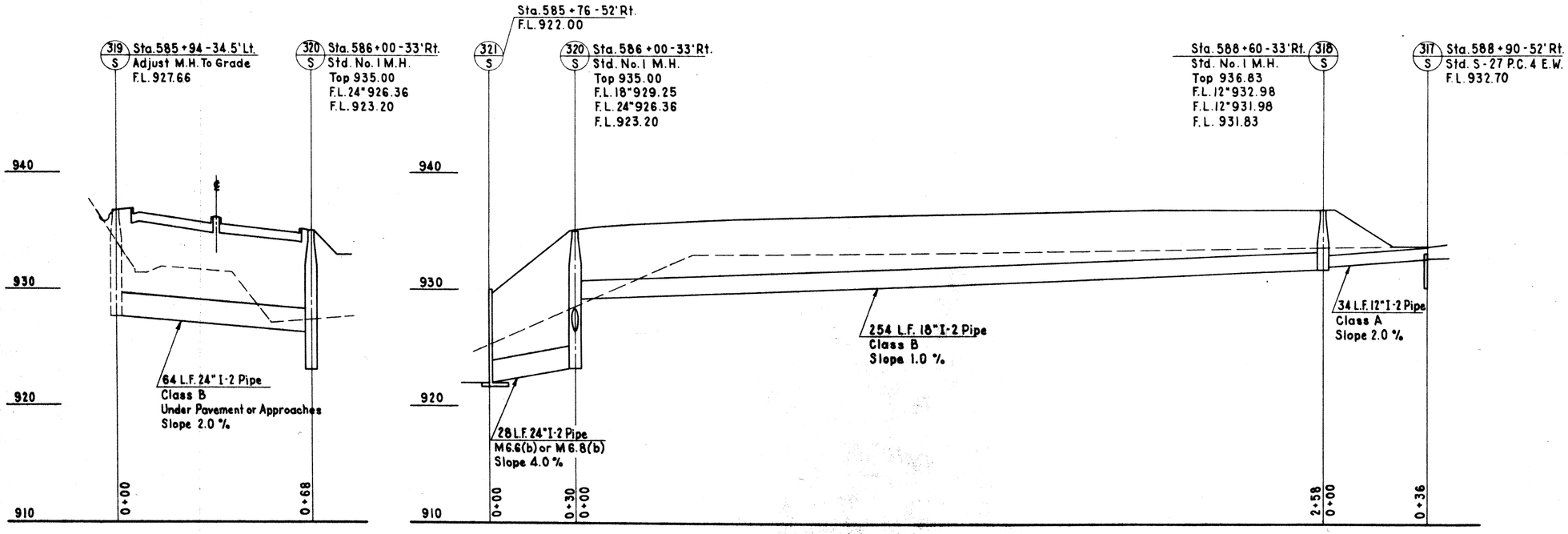
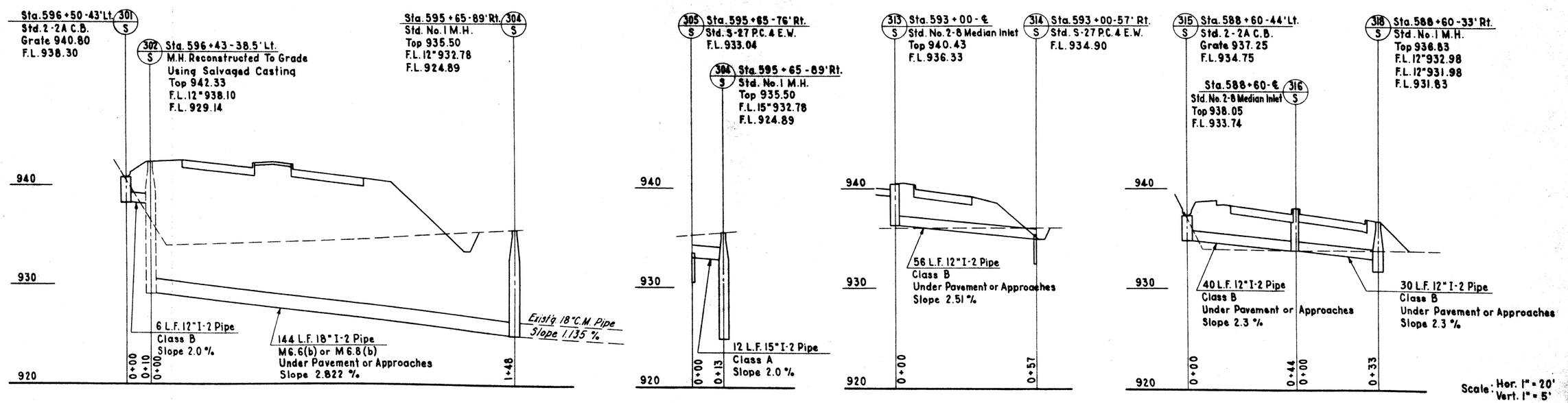
STA.-21-10.23





STORM SEWER PROFILES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

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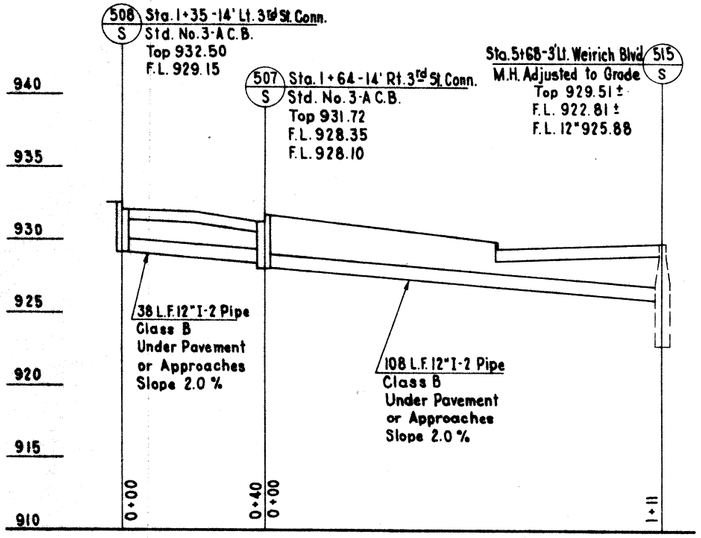
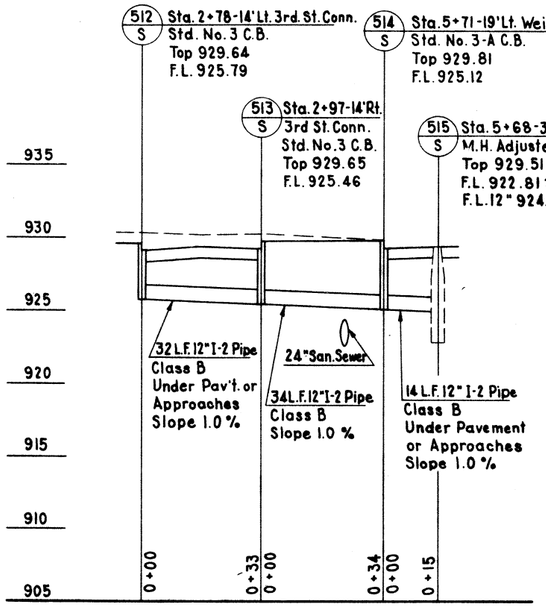
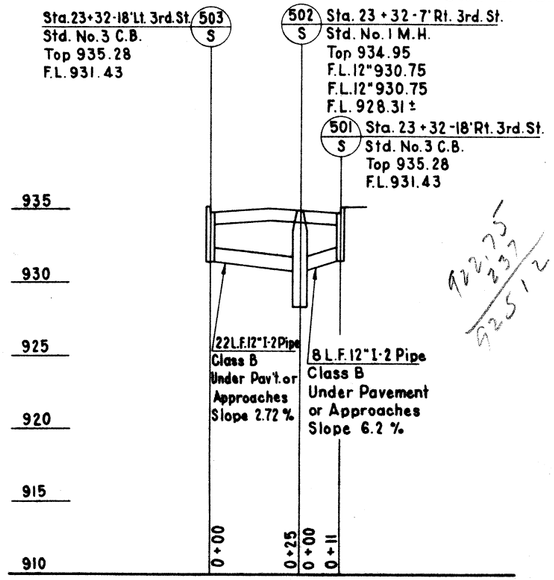
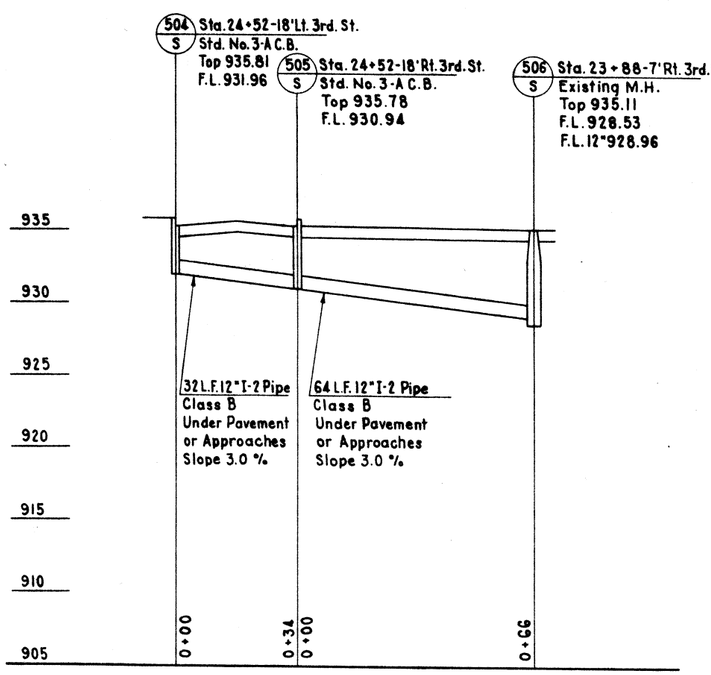
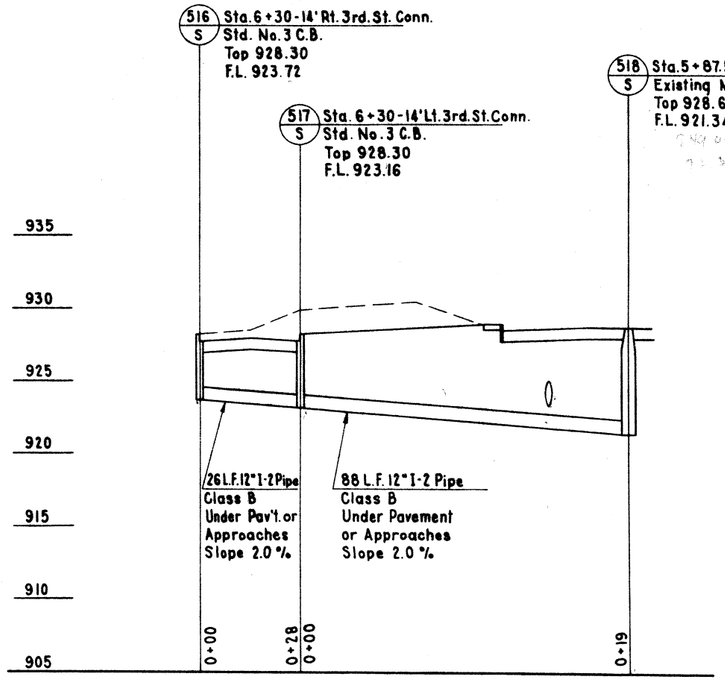
STA. -21-10.23











Scale : Hor. 1" = 20'
Vert. 1" = 5'

STORM SEWER PROFILES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

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STA.-21-10.23

601 S Sta. 600+92 - ℄
Std. No. 2-G Median Inlet
Top 940.63
F.L. 936.53

602 S Sta. 600+30-20' Rt.
M.H. Reconstructed To Grade
Top 939.21
F.L. 12" 935.18
Exist'g. Top 936.90
Exist'g. F.L. 921.81

40 L.F. 12" I-2 Pipe
Class B
Under Pavement
or Approaches
Slope 3.2 %

940 935 930 925 920 915 910
0+00 0+42

603 S Sta. 600+50-76' Rt.
Std. No. 2-A-10 Inlet (Modified)
Top 937.24
F.L. 933.14

604 S Sta. 600+50-49' Rt.
Std. No. 2 M.H.
Top 938.78
F.L. 12" 932.85
F.L. 12" 930.87
F.L. 923.00 ±

Sta. 4+00-22' Rt. 605 S
Std. No. 2-A-14 Inlet (Modified)
Top 935.91
F.L. 931.81

26 L.F. 12" I-2 Pipe
Class B
Under Pav't.
or Approaches
Slope 1.0 %

Exist'g. 18" R.C.P.
3.6 % ±

92 L.F. 12" I-2 Pipe
Class B
Under Pavement
or Approaches
Slope 1.0 %

940 935 930 925 920 915 910
0+00 0+29 0+00 0+94

606 S Sta. 601+62-31' Lt.
M.H. Adjusted To Grade
F.L. 12" 932.94

607 S Sta. 601+90-9' Rt.
Std. No. 2-B Median Inlet
Top 938.24
F.L. 933.44

46 L.F. 12" I-2 Pipe
Class B
Under Pavement
or Approaches
Slope 1.0 %

72 L.F. 12" I-2 Pipe
Class B
Under Pavement
or Approaches
Slope 1.0 %

940 935 930 925 920 915 910
0+00 0+50 0+00 0+76

606 S Sta. 602+60-37' Rt.
Std. No. 2-A-6 Inlet (Modified)
Top 938.30
F.L. 934.20

609 S Sta. 606+35 - ℄
Adjust Exist'g. Inlet
Top 941.43
F.L. 12" 935.33

610 S Sta. 606+35-54' Rt.
Std. S-27 P.C. 4 E.W.
F.L. 934.16

Existing 12" R.C.P.
2.173 %

Dumped Rock
6.5' Wide, 15' Long,
2.6' Deep

6 L.F. 12" I-2 Pipe
Class B
Under Pavement
or Approaches
Slope 2.173 %

945 940 935 930 925 920 915
0+00 0+54

Scale: Hor. 1" = 20'
Vert. 1" = 5'

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-U6-1010(5)	

STA.-21-10.23

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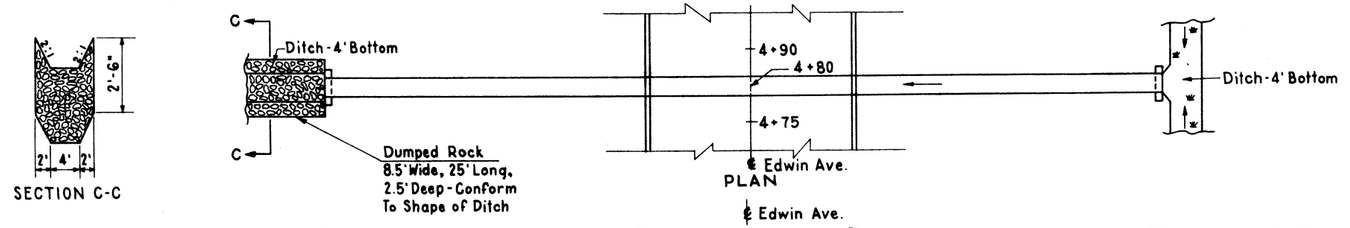
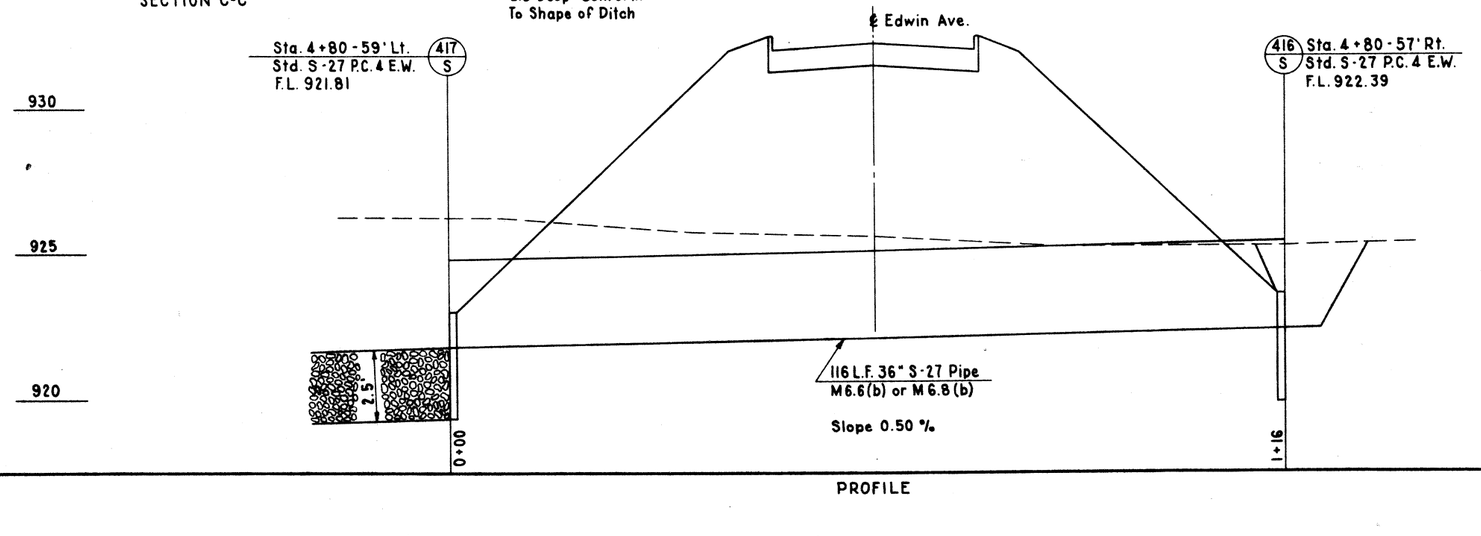
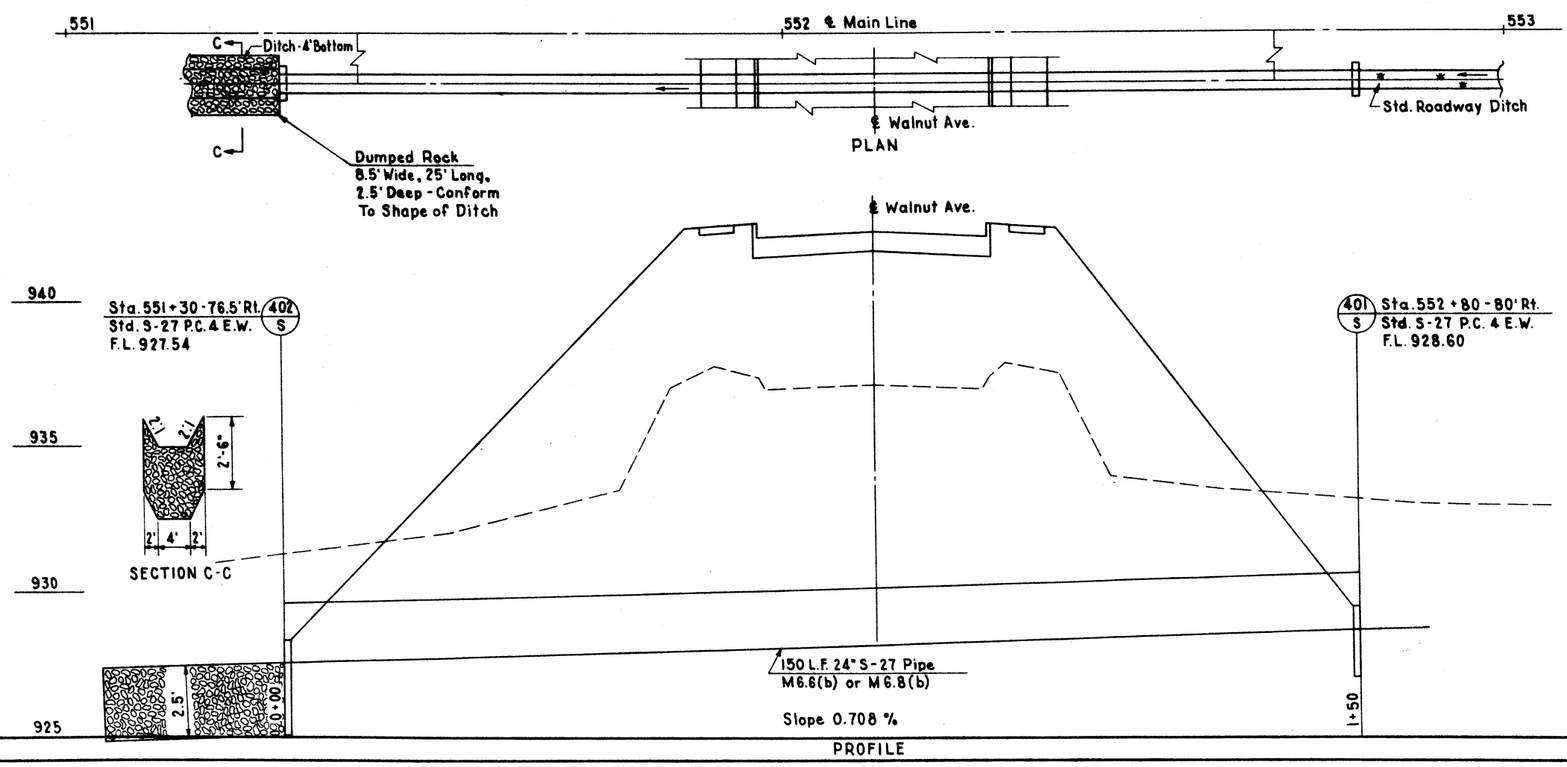




Area = 22.84 Ac.
Q_{25} = 40.0 C.f.s.

Scale: Hor. 1" = 10'
Vert. 1" = 2.5'



Area = 4.81 Ac.
Q_{25} = 10.0 C.f.s.

Scale: Hor. 1" = 10'
Vert. 1" = 2.5'

CULVERT DETAILS EDWIN AVE. STA. 4+80 ℄ STA. 551+30 TO STA. 552+80

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-U6-1010(5)	

STA.-21-10.23

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701 S Sta. 542+06-60' Rt.
Std. No. 2 M.H.
Top 928.0
F.L. 918.60 (To Meet Exist'g. F.L.)

702 S Sta. 546+00-65.5' Rt.
Std. No. 2 M.H.
Top 928.0
F.L. 918.68

930
925
915

Proposed Grade Over Pipe

Exist'g. 54" San. Sewer

0+00

390 L.F. 48" I-2 Pipe Special
M 6.6 (b)
Slope 0.021 %

3+90
0+00

396 L.F. 48" I-2 Pipe Special
M 6.6 (b)
Slope 0.021 %

Match Line Sta. 2+00

703a S Sta. 552+14-66' Rt.
Std. No. 2 M.H.
Top 942.35
F.L. 918.81

703 S Sta. 550+00-66.5' Rt.
Std. No. 2 M.H.
Top 929.6
F.L. 918.77

704 S Sta. 554+00-66' Rt.
Std. No. 2 M.H.
Top 934.2
F.L. 918.85

Proposed Grade Over Pipe

WALNUT ROAD

925
920
915

Match Line Sta. 2+00

3+96
0+00

212 L.F. 48" I-2 Pipe Special
M 6.6 (c)
Slope 0.021 %

168 L.F. 48" I-2 Pipe Special
M 6.6 (c)
Slope 0.021 %

4+00
0+00

Match Line Sta. 0+50

Sta. 558+47.5-61.5' Rt. 705 S
Std. No. 2 M.H.
Top 935.5
F.L. 918.95 ± (Meet Exist'g. F.L.)

Proposed Grade Over Pipe

930
925
920
915

Match Line Sta. 0+50

Exist'g. 48" R.C. Pipe San. Sewer

452 L.F. 48" I-2 Pipe Special
M 6.6 (b)
Slope 0.021 %

4+52

Scale: Hor. 1" = 20'
Vert. 1" = 5'

SANITARY SEWER PROFILE

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

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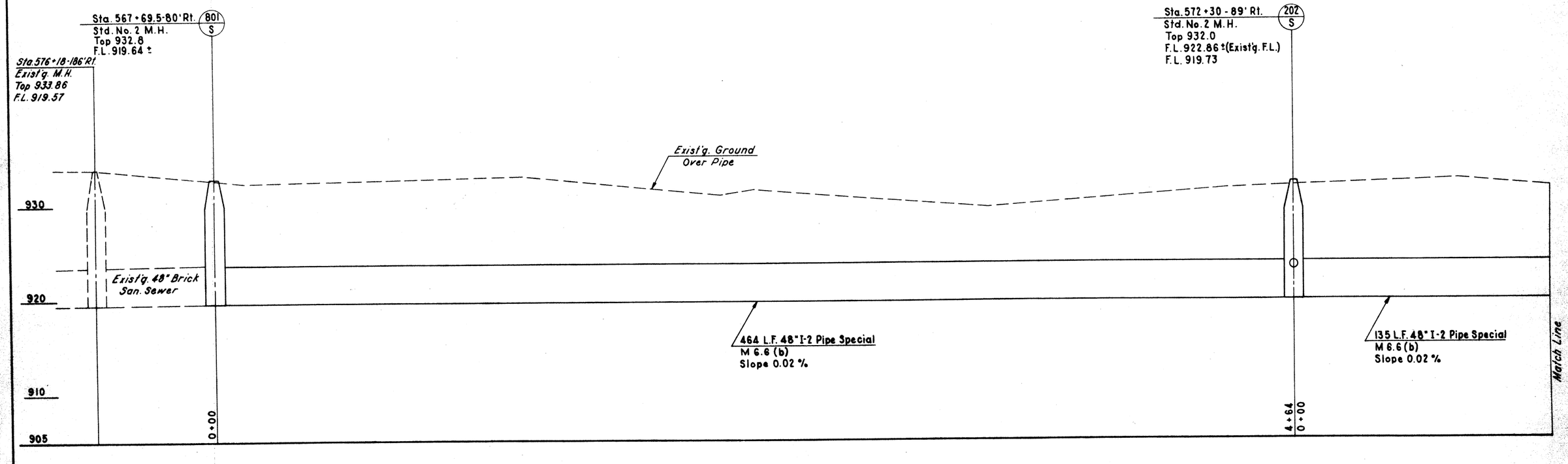
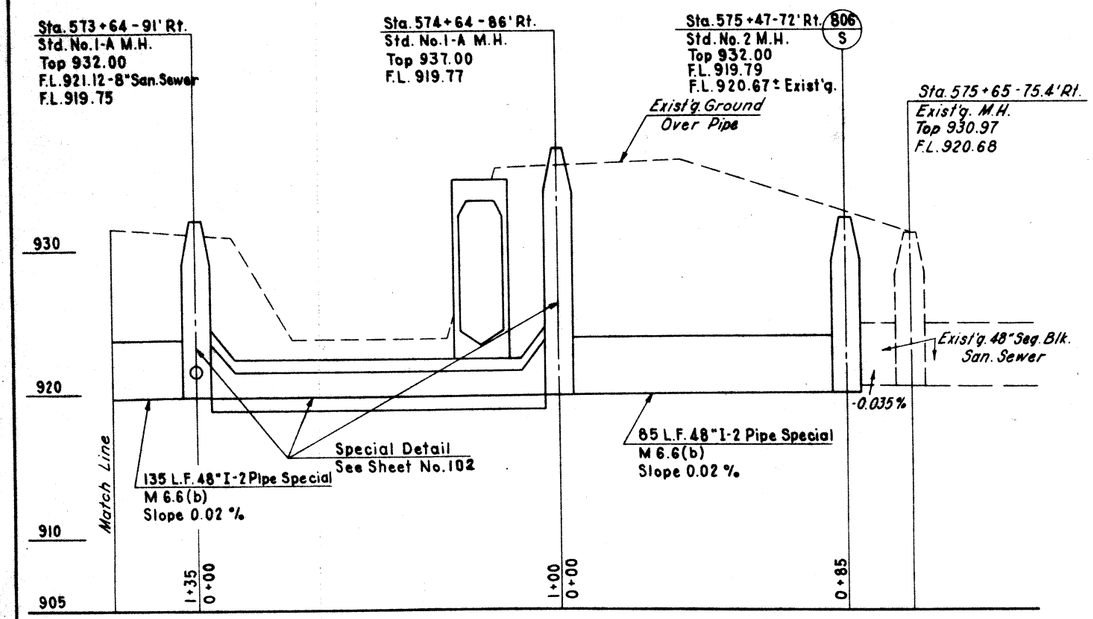
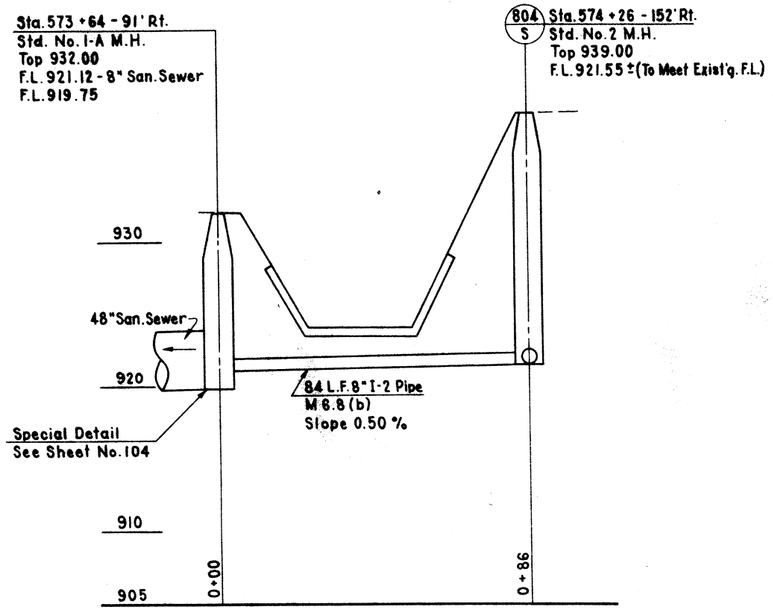
STA.-21-10.23







Scale: Hor. 1" = 20'
Vert. 1" = 5'

SANITARY SEWER PROFILE

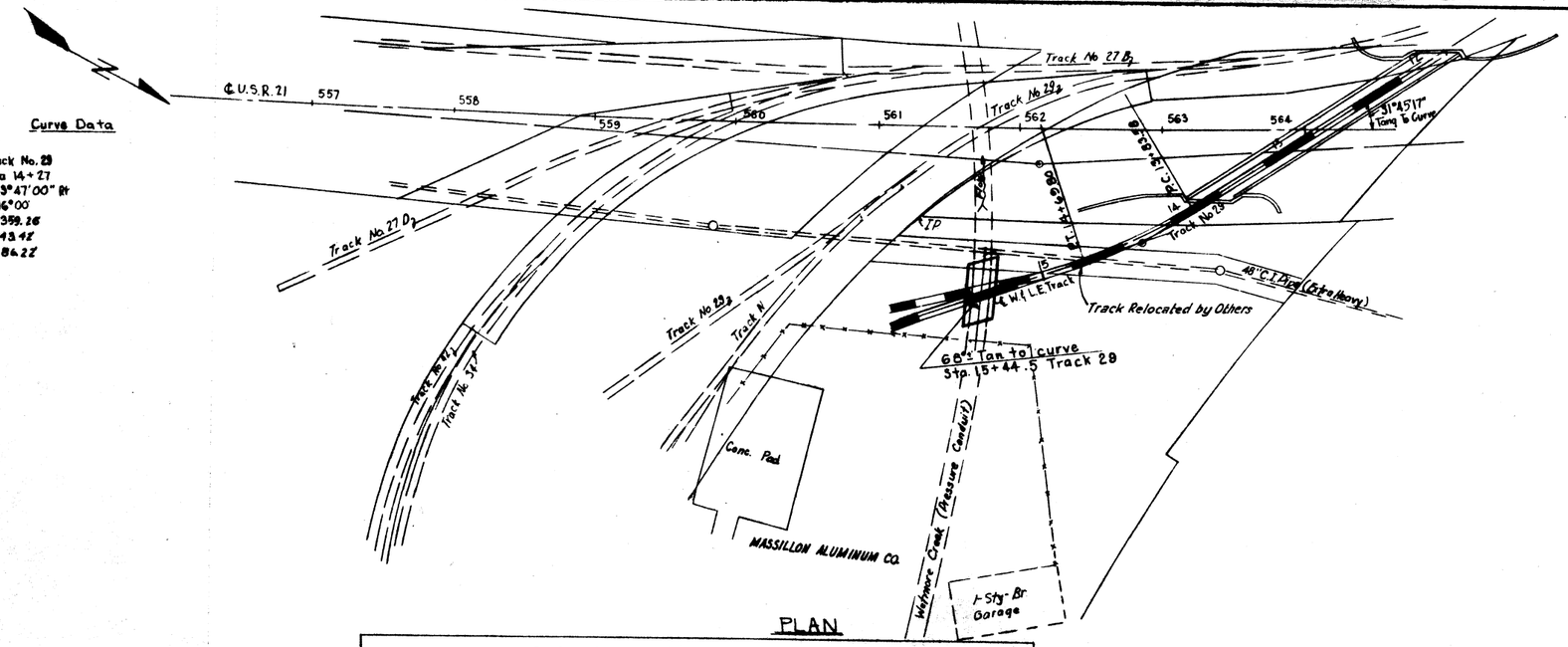
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

95

STA-21-10.23

Curve Data

Track No. 29
P.I. Sta 14+27
Δ = 13°47'00" Rt
D = 16°00'
R = 359.26
T = 43.42
L = 86.22



PLAN

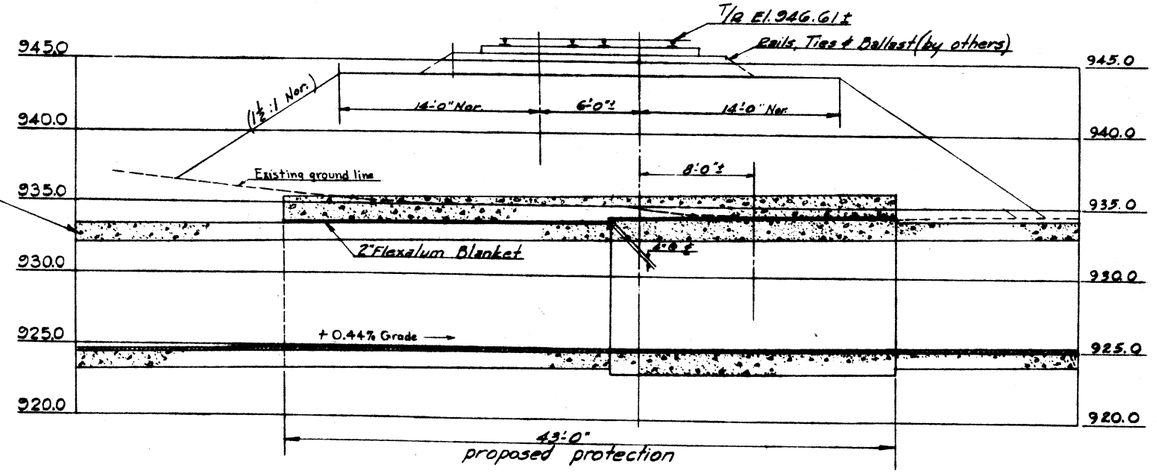
ESTIMATED QUANTITIES

Item	Totals	Unit	Description
E-2		L.S.	Cofferdams, Cribs & Sheeting
E-2	280.	C.Y.	Unclassified excavation
S-1	134.	C.Y.	Class "C" concrete
S-4	18347.	lbs.	Reinforcing steel
S-9	1540.	Sq.ft.	2" Preformed expansion filler (Flexalum)

EXISTING STRUCTURE

14'± Span x 7'-9" Height Reinforced Concrete Pressure Conduit

(To remain in place)



Proposed protection to be located to fit final railroad alignment.

LONGITUDINAL SECTION THRU CONDUIT
LOOKING NORTH

NOTES:-

- Design Specification: This structure conforms to the requirements of Design Specifications for Highway Structures of the State of Ohio, Dept. of Highways dated 9-1-57, revised 2-21-58.
- Modifications to the above specification:-
  (a) Material specification shall govern except specification for Flexalum or approved equal as follows:-

  (b) Design procedures, allowable stresses and distribution of live load pertaining to railroads are to follow A.R.E.A. Specifications (1959)

- Foundation bearing pressure: Footings are designed for a maximun bearing pressure of 2.75 tons per sq. ft.
- All concrete to be Class "C."

PROPOSED MINOR STRUCTURE

Type: Reinforced Concrete Saddle protection for Pressure Conduit.
Span: 14'-10" normal x 43.0' Long
Skew: 22°± Rt. Fwd.
Loading: Coopers E-72
Alignment: Parallel to existing Conduit (on 8° curve)

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SITE PLAN

W&LE RR OVER WETMORE CREEK PRESSURE CONDUIT - MASSILLON, OHIO.

STARK COUNTY — U.S.R. 21 Rt. of Sta 561+70

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
HGW	HGW		S.J.F. J.D.K.		

FED. NO. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

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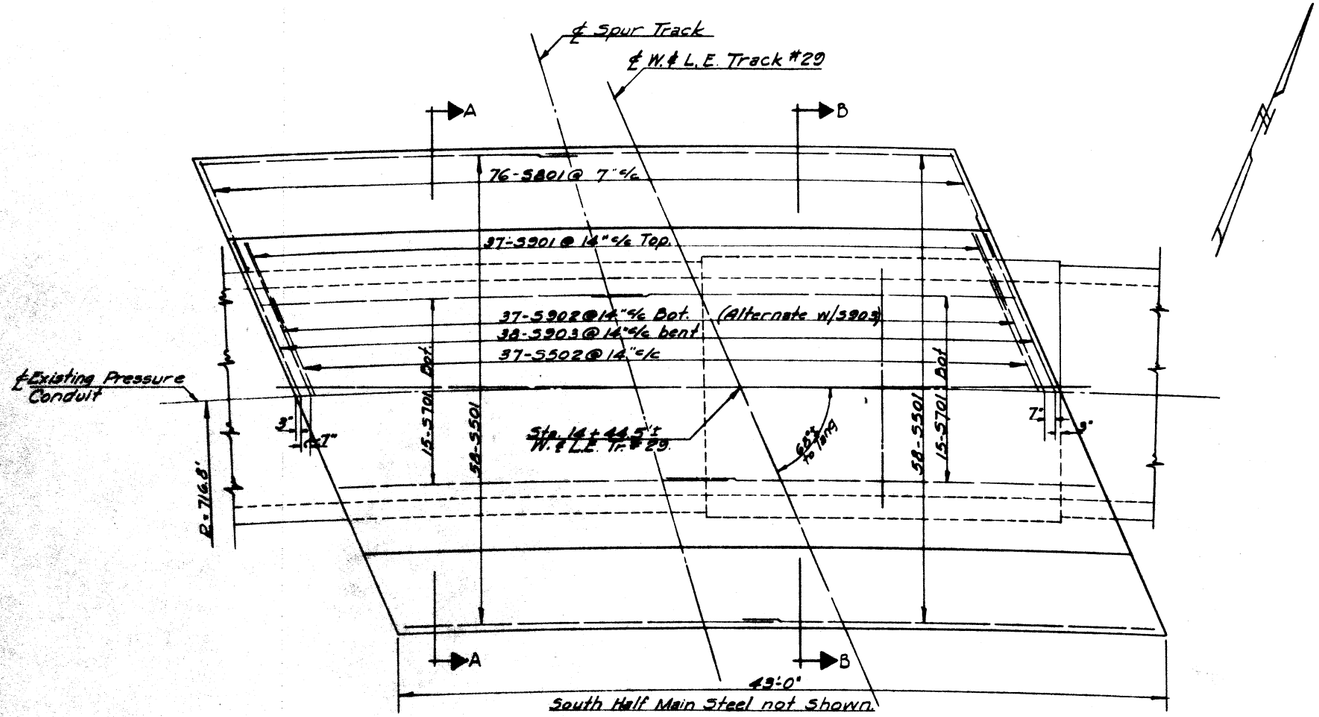
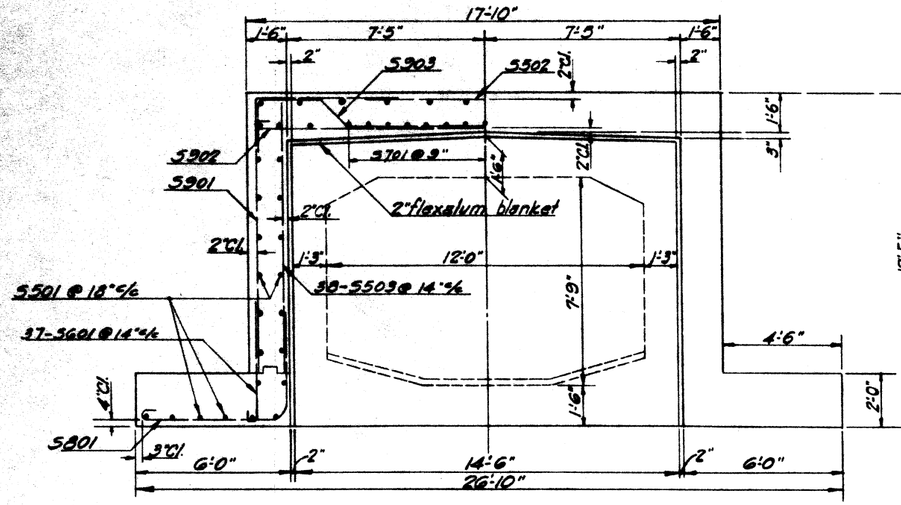
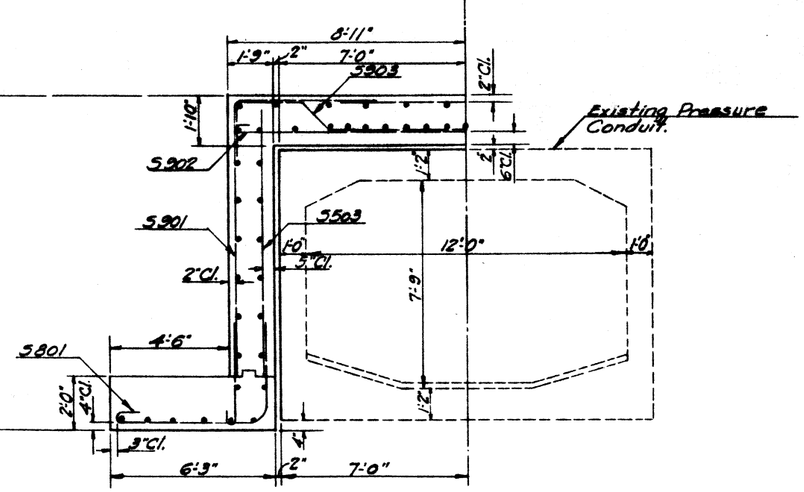
STA-21-10.23



PLAN



SECTION-B B

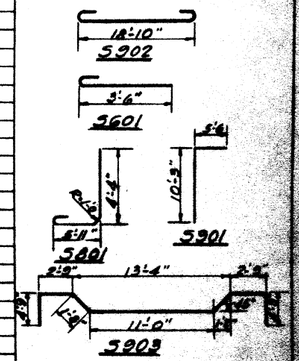


SECTION A A

REINFORCING·STEEL·LIST.

Mark	No.	Length	Weight	Shape
5501	116	22'-4"	2702.	5
5502	37	9'-9"	905.	5
5503	76	10'-0"	793.	5
5601	74	4'-2"	463.	B
5701	30	22'-6	1380.	5
5801	76	11'-8"	2367.	B
5901	74	15'-9"	8963.	B
5902	37	21'-4"	2684.	B
5903	38	29'-4"	3690.	B
Replacement Bars				
RE500	1	5'-7		5
RE600	2	4'-2"		B
RE700	1	6'-2"		5
RE800	2	4'-4		5
RE900	1	6'-10"		5

Bending Diagrams



Replacement bars are not required if reinforcing steel is fabricated from stock previously tested and approved by the Ohio Highway Testing Laboratory

Bar size is indicated in the bar mark. The first digit where three digits are used, indicates the bar size number.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

CONCRETE SADDLE PROTECTION

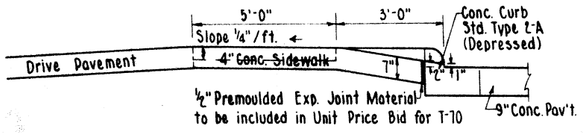
W.℄L.E.RR over WETMORE CREEK, PRESSURE CONDUIT ~ MASSILLON, OHIO.

STARK COUNTY U.S.R. 21
Rt. of Sta. 561+74 ±

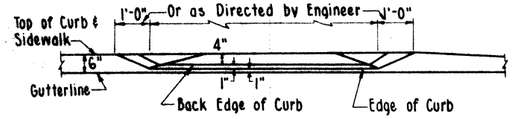
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	APPROVED
DWP	TGP		SJF		

BEAVER VALLEY BLUEPRINTING SUPPLIES COMPANY BEAVER, PA. 15009

FED. RD. DIVISION	STA.
2	OHIO

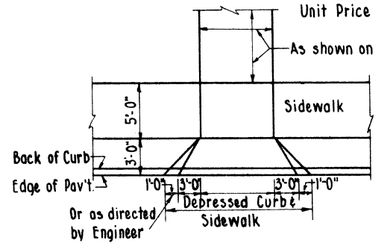


DETAIL OF CURB & SIDEWALK AT DRIVES
No Scale



ELEVATION OF CURB AT DRIVEWAYS
No Scale

NOTE: Payment for Curb Section on T-10 Pavement between edge of through Pavement & Sidewalk is Included in the Unit Price Bid for Item T-10



DETAIL OF PRIVATE DRIVES
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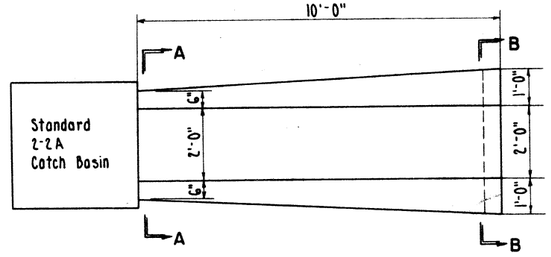
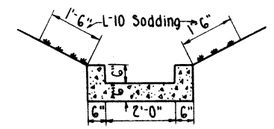
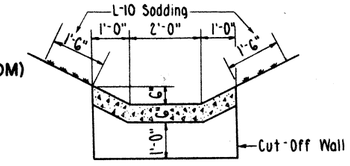


STANDARD PAVED GUTTER
TYPE I MODIFIED AS PER PLAN (2' WIDTH BOTTOM)
Scale: ½" = 1'-0"

NOTE: For Details and Notes not shown Refer to Std. Const. Dwg. 1-14 G

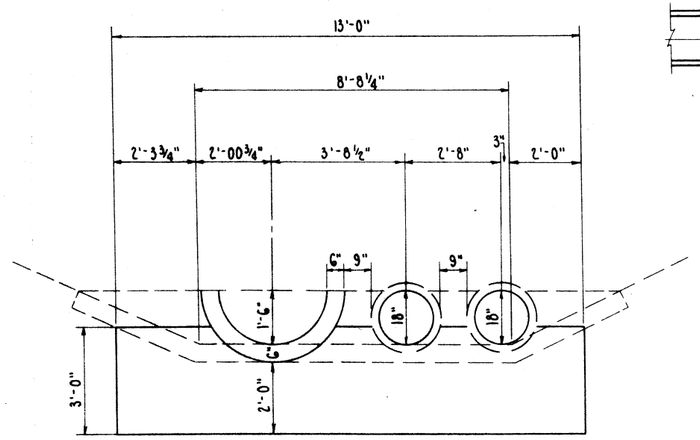


SECTION A-A

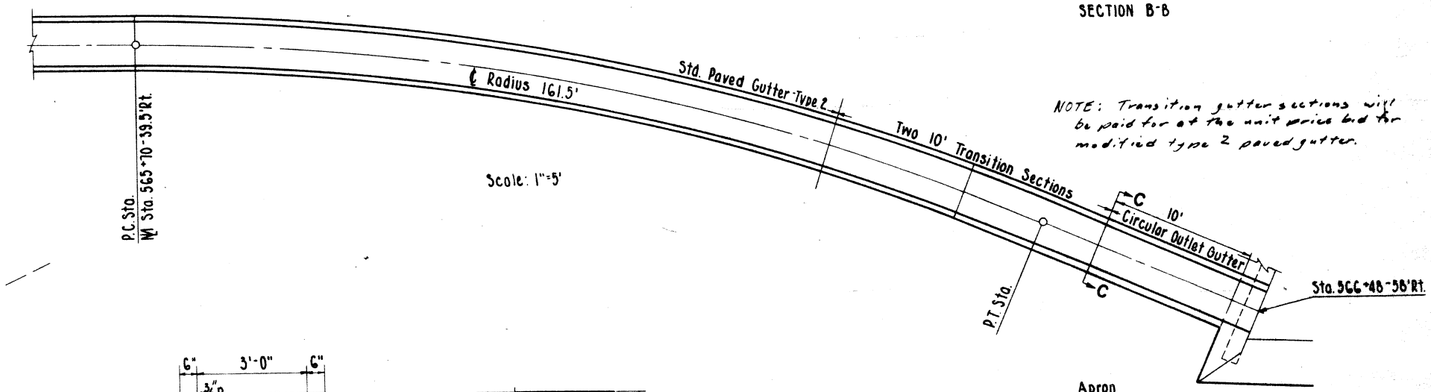


SECTION B-B

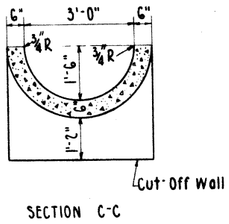
SIDE VIEW



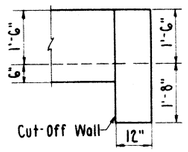
SECTION B-B
END VIEW
DETAIL SPECIAL ENDWALL



NOTE: Transition gutter sections will be paid for at the unit price bid for modified type 2 paved gutter.

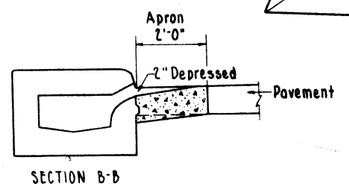


SECTION C-C

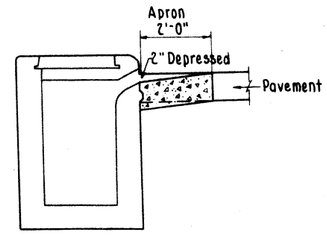


SIDE VIEW

PAVED GUTTER STD. TYPE 2 (MODIFIED) AS PER PLAN
CIRCULAR OUTLET GUTTER
Scale: 1"=2'



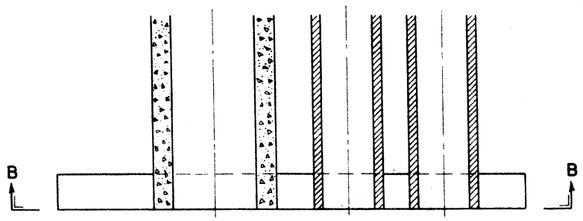
SECTION B-B



SECTION A-A

PAVED SHOULDER INLET
STANDARD NO. 2 (MODIFIED)
To be Used with 1-12 Combination Curb & Gutter Std. Type 2
(See Standard Construction Drawing 1-8 Inlet No. 2A)

Scale: ½" = 1'-0"



PLAN VIEW
DETAIL SPECIAL ENDWALL
See Plan Sheet No. 24

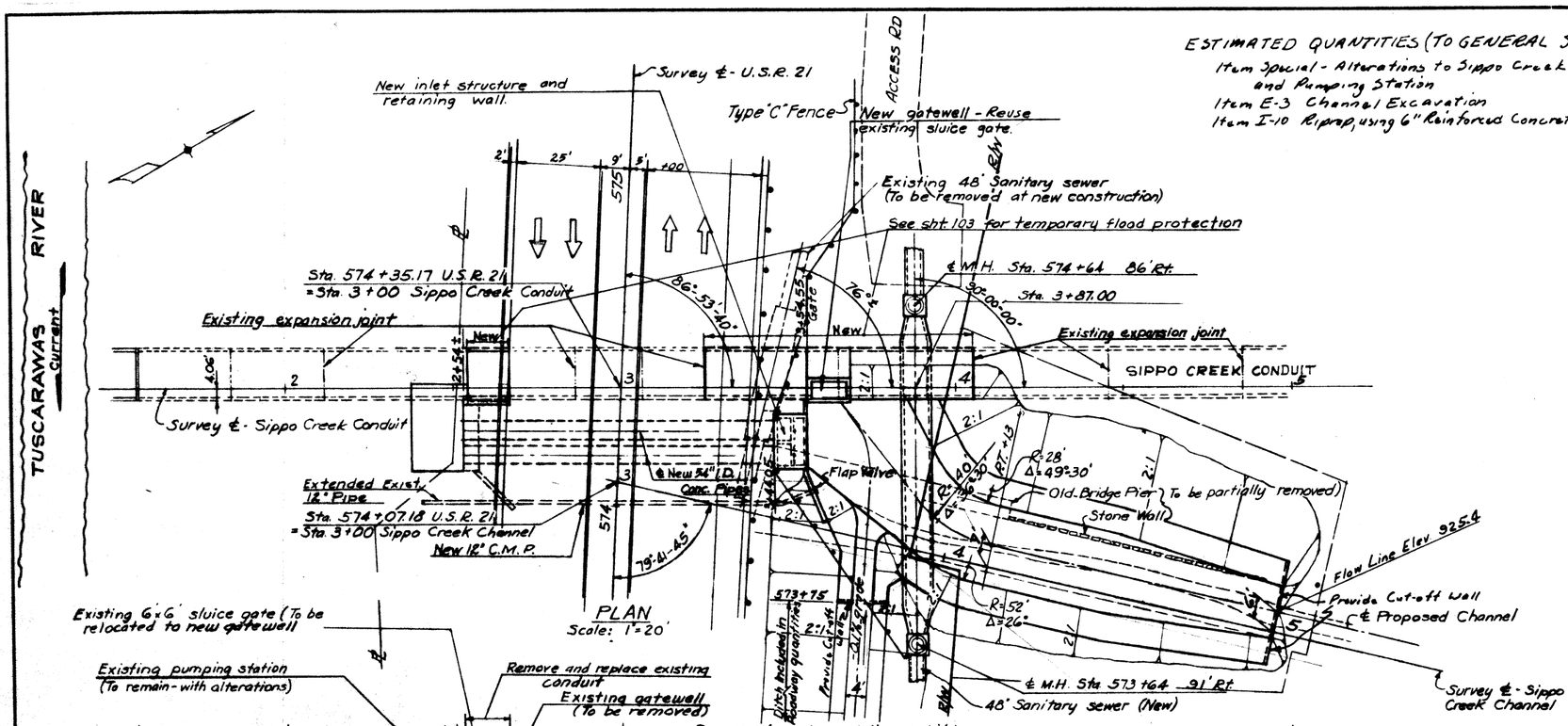
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010 (5)	

97

STA-21-10.23

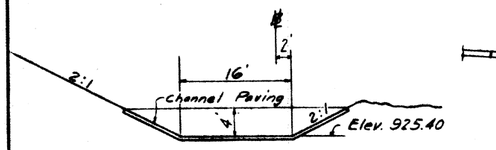
ESTIMATED QUANTITIES (TO GENERAL SUMMARY)

Item Special - Alterations to Sippo Creek Conduit and Pumping Station	Lump Sum
Item E-3 Channel Excavation	1700 Cu. Yds.
Item I-10 Riprap, using 6" Reinforced Concrete Slab	829 Sq. Yds.

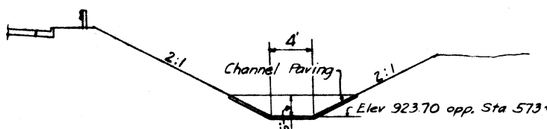


PROFILE ALONG CONDUIT BASELINE

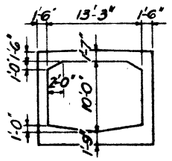
Elevations shown are invert for existing and proposed flow line.



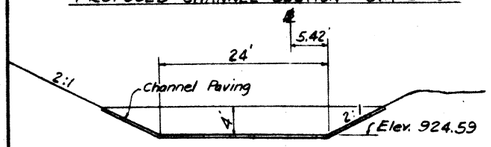
PROPOSED CHANNEL SECTION @ STA 5+00



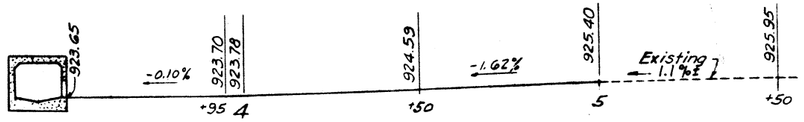
TYPICAL ROADWAY DITCH SECTION



PROPOSED SECTION



PROPOSED CHANNEL SECTION @ STA. 4+50



PROFILE OF PROPOSED CHANNEL

PROPOSED WORK.

1. The contractor shall secure written approval of his proposed construction procedure and sequence from the Corp of Engineers, U.S. Army, Huntington, W. Va. prior to beginning work on this item.
2. Remove section of existing pressure conduit and build new 48" sanitary sewer transition section between manholes. Divert sewer flow from existing to new section.
3. Remove section of existing pressure conduit and build new gatewell section and new conduit section, installing existing 6'x6' sluice gate.
4. Remove existing gatewell conduit section and build new pressure conduit. Remove trash screen and inlet facilities at pump house.
5. Lay new 54" pipes, repairing pump house wall as required. Build new inlet structure and retaining wall. Extend existing 12" pipe and reinstall flap valve.
6. Install existing 5'x5' sluice gates with manual controls, and trash screen at new inlet structure.
7. Install new ladder in existing discharge well.
8. Make backfill around pump house, 54" pipes and inlet structure.
9. Excavate channel; place roadway embankment; pave new creek channel and roadway drainage ditch.
10. Seed area bared by channel excavation in conjunction with seeding of roadway embankment slopes.
11. Make alterations to electric service as per Plans.
12. Maintain conduit flow and provide flood protection during construction.

GENERAL NOTES

1. Copper water stop to be installed in all conduit monolith joints.
2. Partial removal of old bridge pier and stone wall included with E-3 for payment.
3. See Sheets No. 104 & 105 for Pumping Station Electric Service Alterations.
4. See Sheet No 103 for suggested details of Flood Protection during construction, also see General Note Sheet No. 10 and Special Drainage Structure notes on Sheet 118-A.

Construction and materials shall be governed by the provisions of Construction and Material Specifications, State of Ohio, Dept. of Highways, dated January 1, 1959 or as approved by the Corps of Engineers, U.S. Army.

Foundation Bearing Pressure: Footings are designed for a maximum bearing pressure of 3# per sq. ft.

- For Location see Roadway Plan Sheet No. 25

ESTIMATED-MAJOR-QUANTITIES

Item	Total	Unit	Description
E-2	L.S.	lump sum	Cofferdams, cribs and sheeting
E-2	900	cu. yds.	Unclassified excavation
S-1	325	cu. yds.	Class 'C' concrete, pressure conduit & gatewell
S-1	39	cu. yds.	Class 'C' concrete, sewer transition section
S-1	78	cu. yds.	Class 'C' concrete, inlet structure & retaining wall
S-1	1	cu. yds.	Class 'C' concrete, pump house alterations
S-4	62,578	lbs.	Reinforcing steel
S-7	L.S.	lump sum	Structural Steel (gratings)
S-9	389	sq. ft.	½" Preformed Expansion joint filler Sec. M-10.02
S-9	135	lin. ft.	Folded copper strip (18" wide x 16 oz)
S-14	50	lin. ft.	Railing - steel pipe
S-22	223	cu. yds.	Removal of portions of existing conduit and pumping station
S-25	L.S.	lump sum	Pumping station electric service alterations.
S-29	5	cu. yds.	Porous backfill
I-2	182	lin. ft.	54" Reinforced concrete pipe (M-6.6 c)
I-2	110	lin. ft.	12" Bit. Coated Corrugated metal pipe (M-6.4 c) including special
Special	L.S.	lump sum	Reset existing sluice gates and trash screen.
Special	L.S.	lump sum	Alterations to manual controls for sluice gates
I-8	2	each	Manhole standard No. 1A without drop pipes
Special	L.S.	lump sum	*Construct, maintain and remove temporary flood protection

*For Details see sheet no. 103.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ALTERATIONS TO SIPPO CREEK CONDUIT AND PUMPING STATION

RELOCATION OF U.S. ROUTE 21

STARK COUNTY STA. 574+35.17

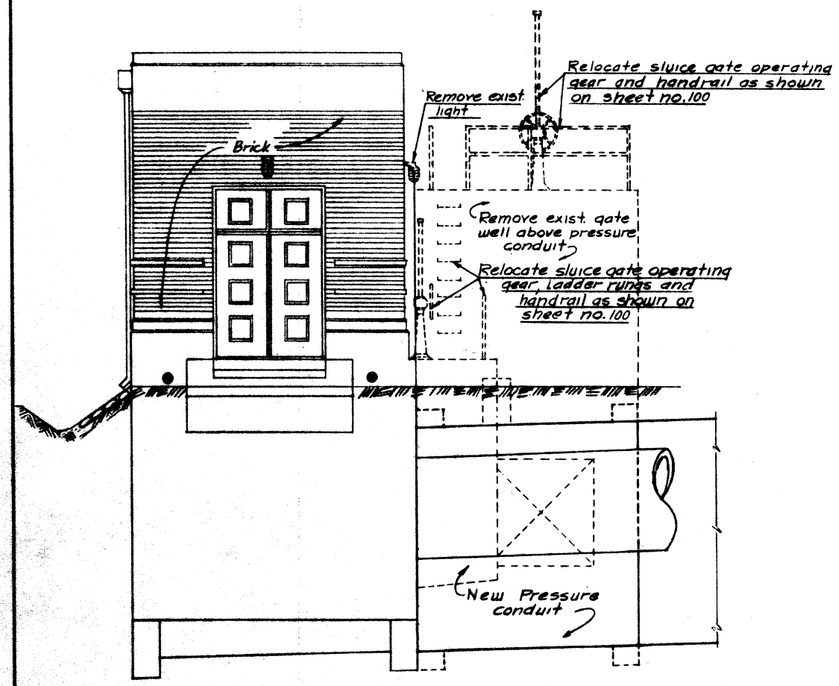
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
D.W.P. J.D.Y.	ASWG		CFF		

BEAVER VALLEY BLUEPRINTING SUPPLIES COMPANY BEAVER 1-2700

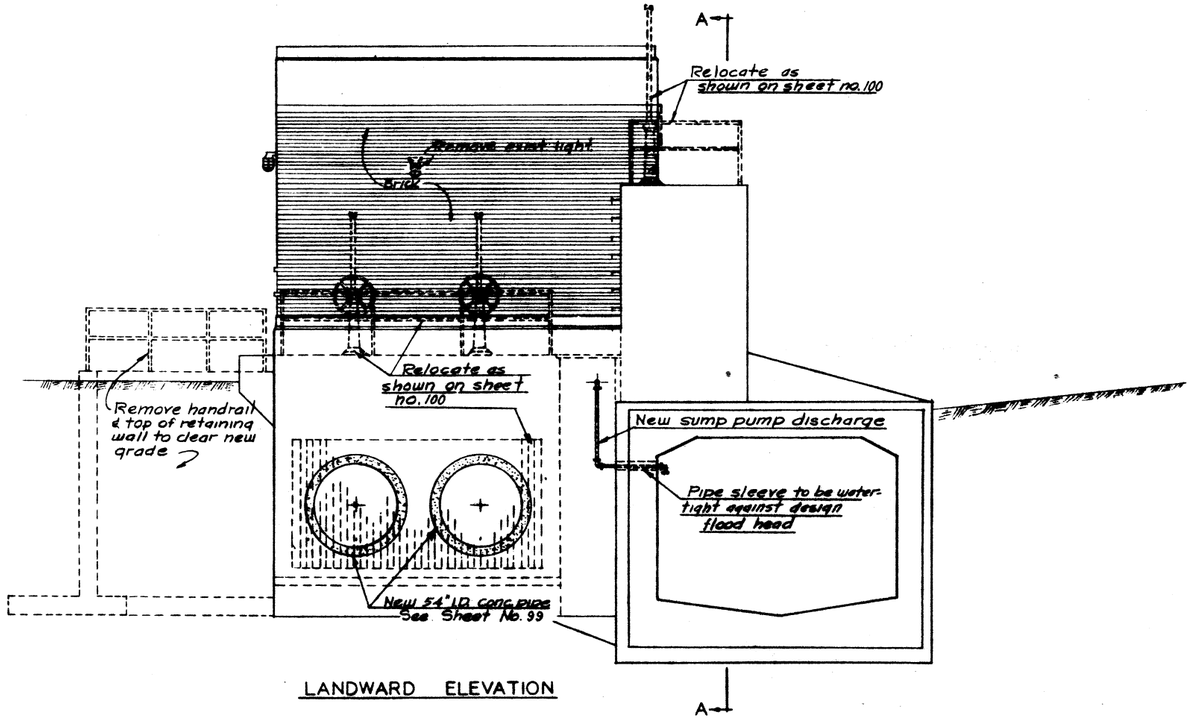
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

98

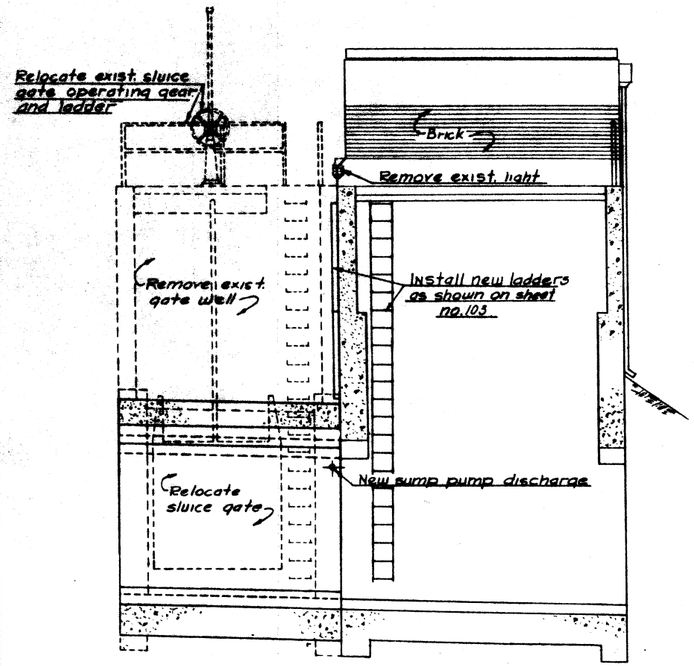
STA. -21-10.23



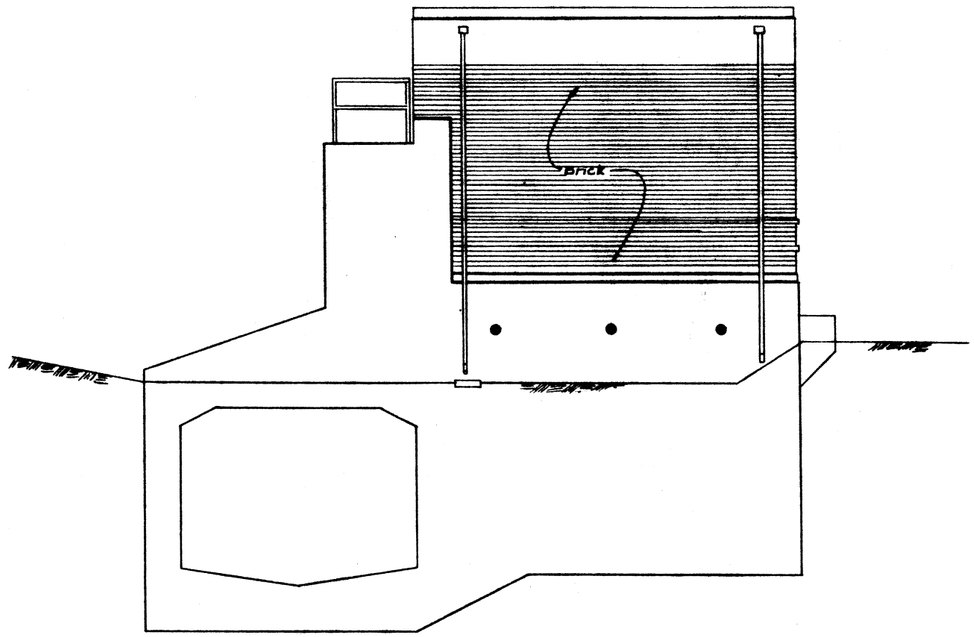
DOWNSTREAM ELEVATION



LANDWARD ELEVATION



SECTION A-A



RIVERWARD ELEVATION

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ALTERATIONS TO SIPPO CREEK CONDUIT AND PUMPING STATION

ELEVATIONS

STARK COUNTY STA 574+35.17

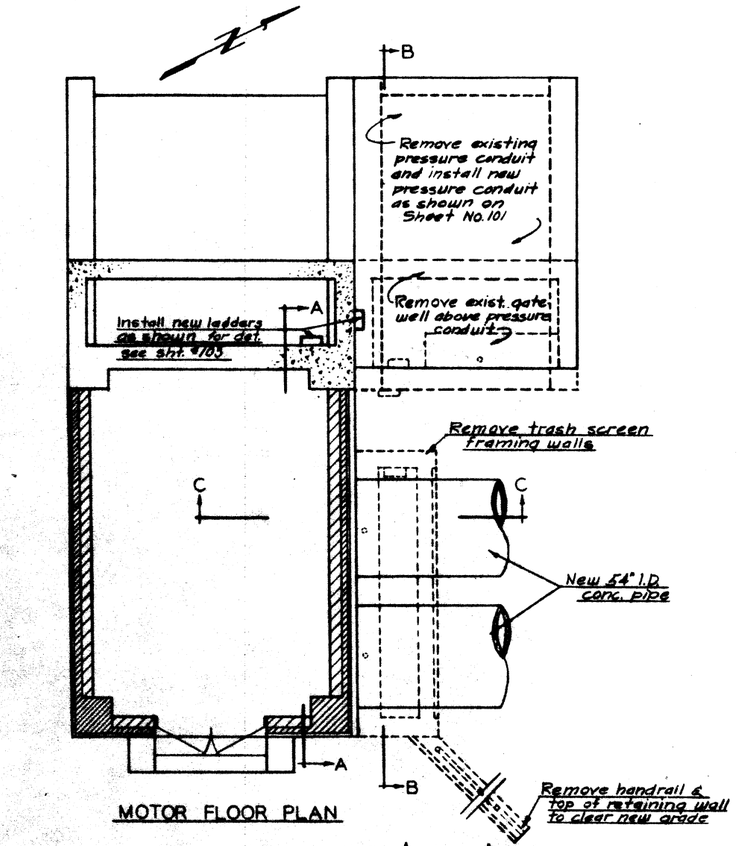
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	SHEET NO.
J.D.Y.	J.D.Y.		C.F.F.		

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27001

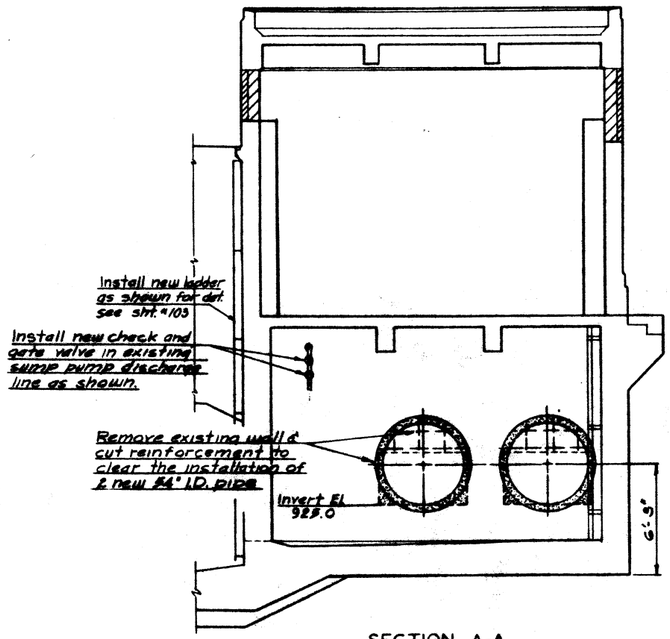
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

99

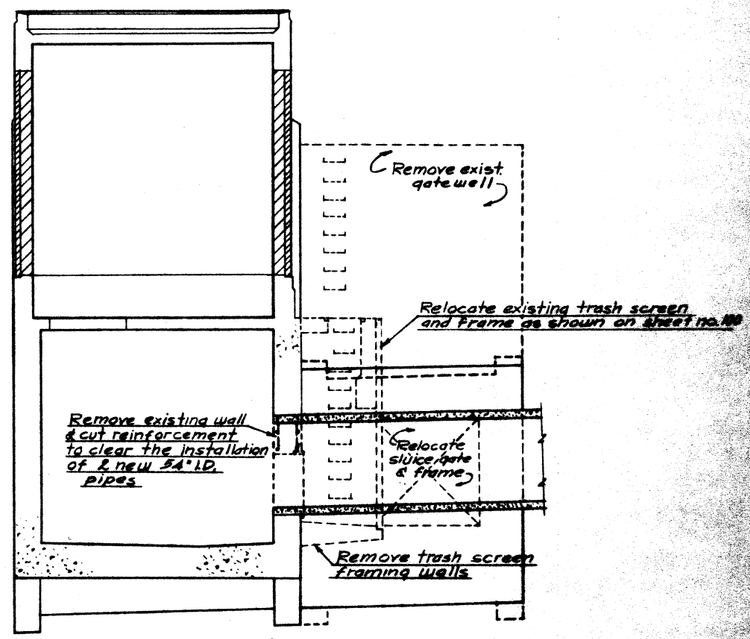
STA.-21-10.23



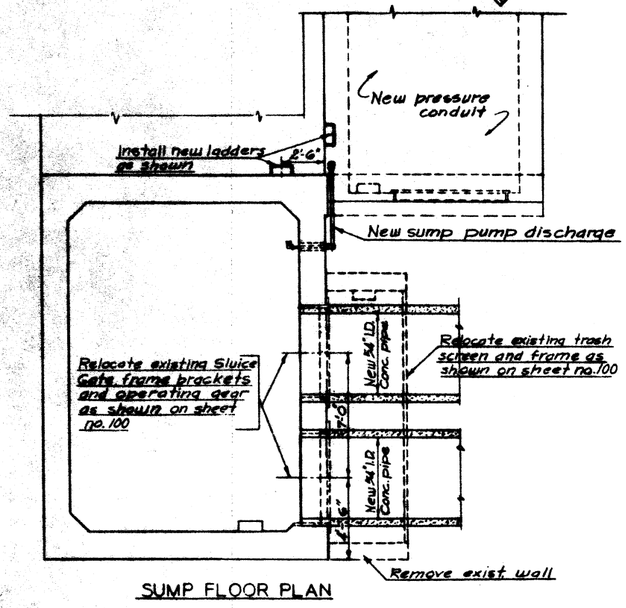
MOTOR FLOOR PLAN



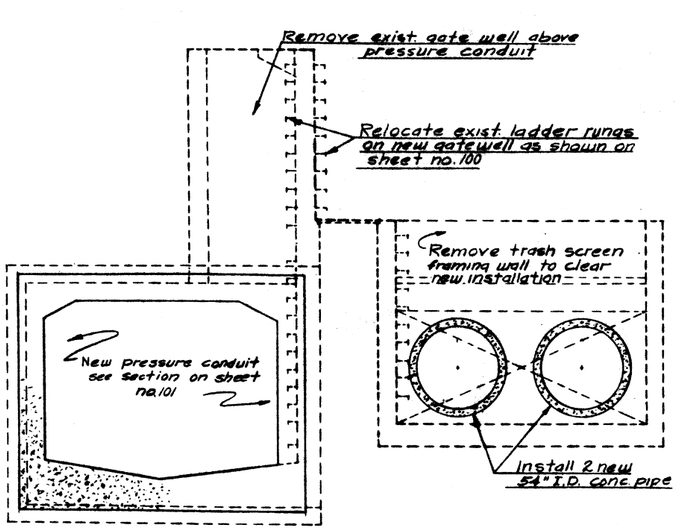
SECTION A-A



SECTION C-C

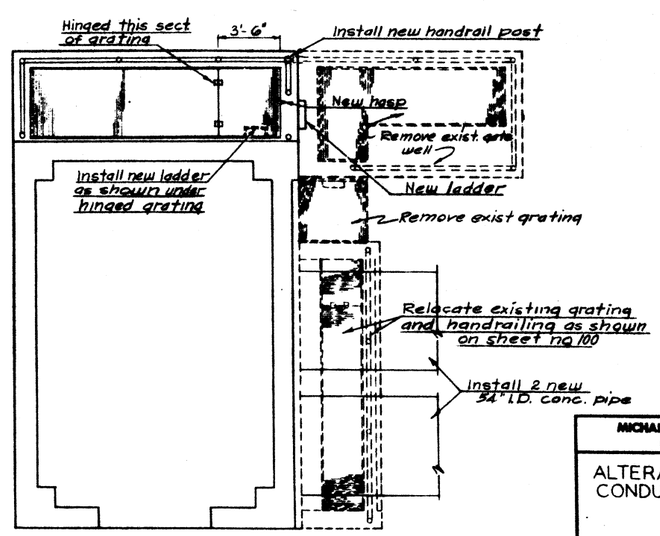


SUMP FLOOR PLAN



SECTION B-B

LEGEND.
O.F. = Outside Face
I.F. = Inside Face



MOTOR FLOOR PLAN

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ALTERATIONS TO SIPPO CREEK CONDUIT AND PUMPING STATION

PLAN & SECTIONS

STARK COUNTY STA 574+35.17

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVIEWED
J.D.Y.	J.D.Y.		CFF		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

100

STA-21-10.23

Existing Culvert — Sta 3+24.55± — New Culvert

Sta 3+24.55± — Sta 3+67.05 — New Sanitary sewer see sht. #102 — New Culvert — Sta 4+04.69± — Existing Culvert

½" Expansion Jt See Detail Sht #103

New pressure conduit For section see sht. #101

New Gatewell

Relocated ladder rungs

Notch edges to install relocated grating & frame

Relocated handrailing and alter as required

Relocated Floorstand, stem, stem guide & sluice gate & frame and replace all damaged parts

Relocated Trash Screen, frame & fittings

Relocated handrailing, Alter as required

Relocated Floorstand, Sluice gate & frame, Alter as required.

Relocated grating & frame, Notch edge as required

Relocated flap valve

New 54" I.D. Pipe

Install new grating & notch edges

PLAN

New 12" concrete pipe toe drain extension

Lengthen or replace existing stem as required

Finished grade El. 936.23

El. 937.27

opening

60"x36" Opening

SECTION B-B

El. 945.00

El. 929.65

New pressure conduit similar to Section shown on sheet no 101

El. 923.65

El. 920.65

New pressure conduit. For Sections See Sht. #101

Warp bottom of transformation chamber to fit contour of new 54" I.D. Pipe

SECTION A-A

El. 937.27

Lengthen or replace existing stem as required

Trash Screen Headwall

El. 930.85

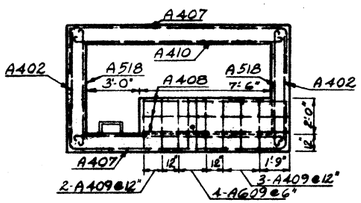
72"x72" opening

El. 925.10

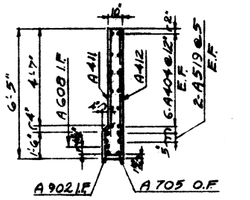
SECTION C-C

NOTE: Reinforcement to be 2" clear.

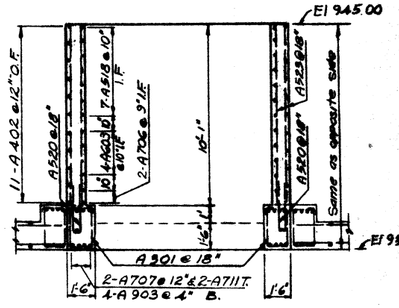
LEGEND
O.F. = Outside Face
I.F. = Inside Face



PLAN OF GATEWELL—TOP



TRASH SCREEN HEADWALL



SECTION D-D

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ALTERATIONS TO SIPPO CREEK CONDUIT AND PUMPING STATION

DETAILS

STARK COUNTY STA. 574+35.17

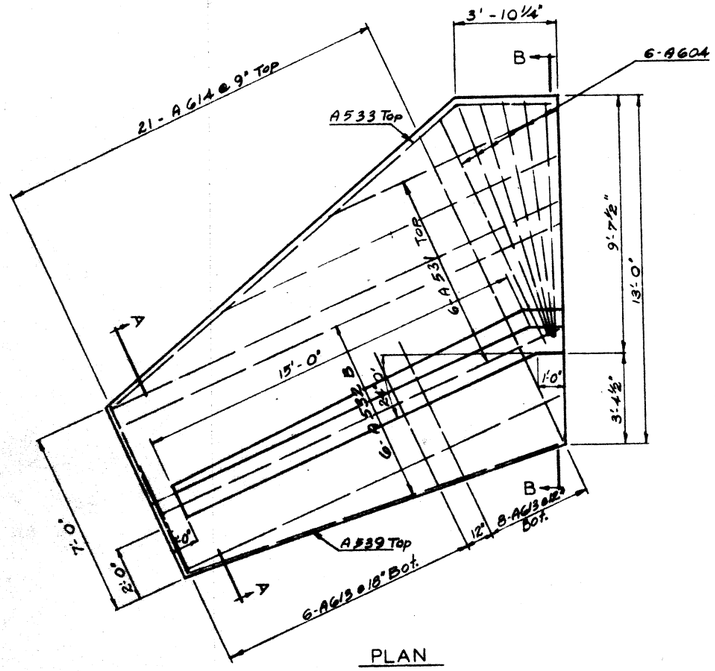
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.D.Y.	J.D.Y.		C.F.F.		

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-ST901

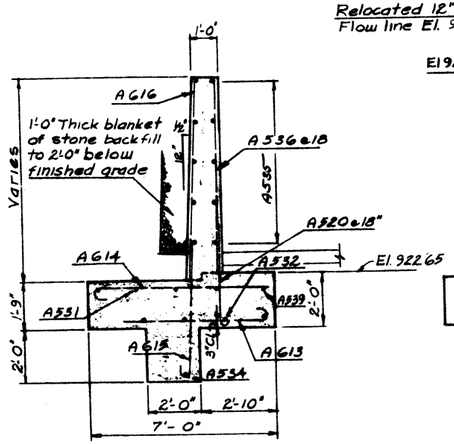
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

101

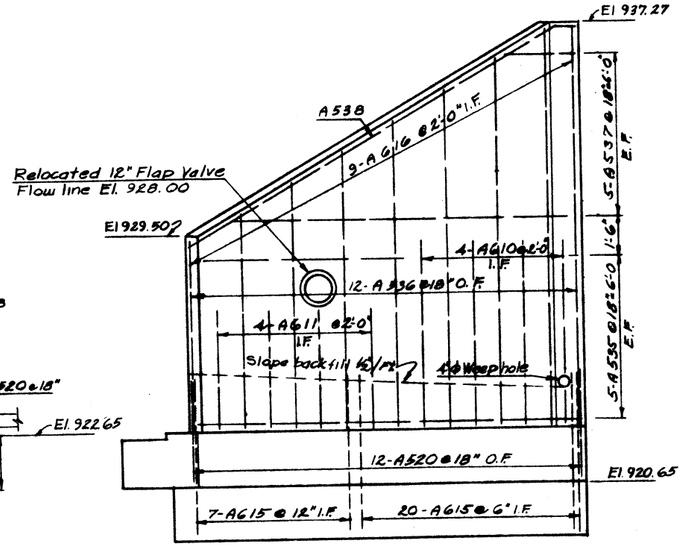
STA.-21-10.23



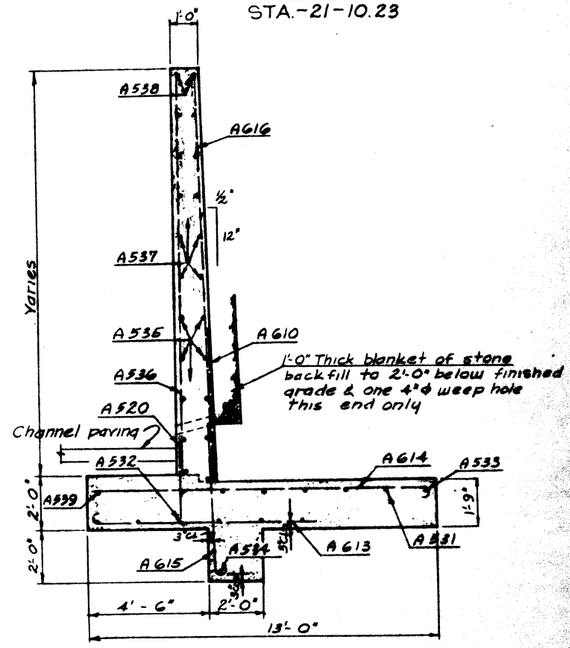
PLAN



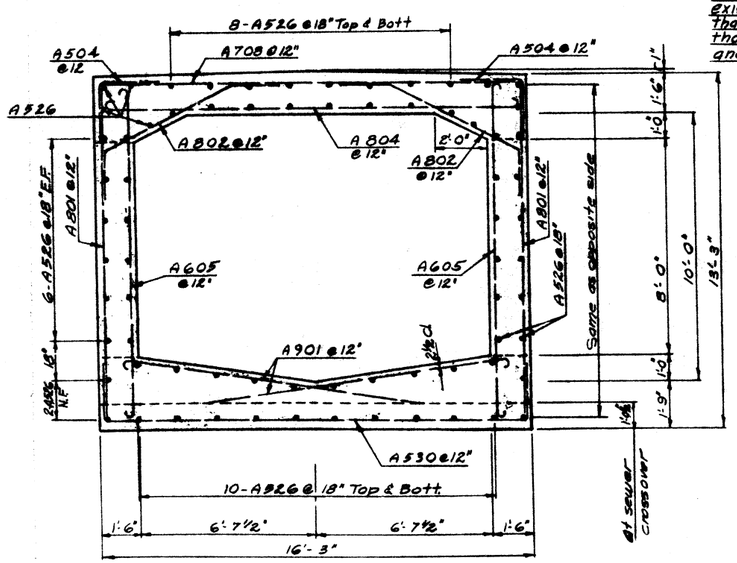
SECTION A-A



ELEVATION

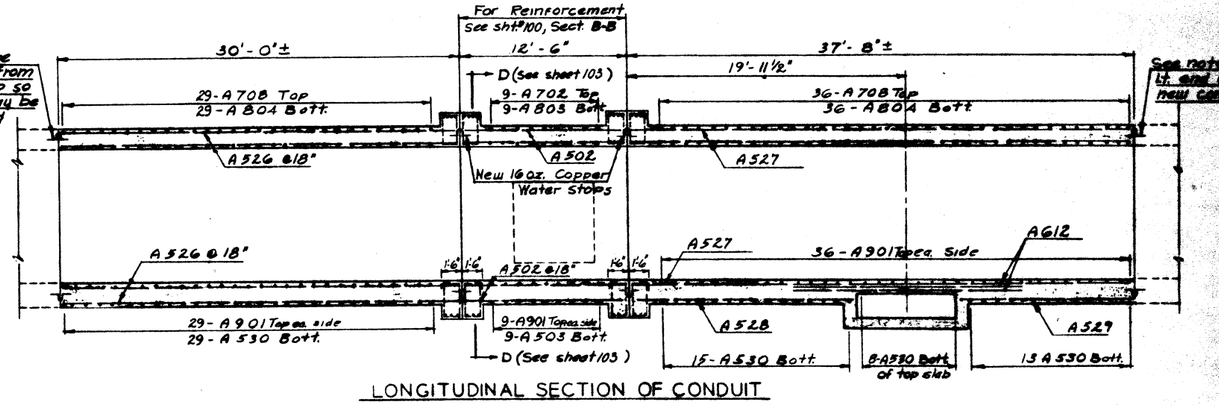


SECTION B-B



TYPICAL CONDUIT SECTION

Concrete should be carefully removed from existing waterstop so that water stop may be thoroughly cleaned and reused.



LONGITUDINAL SECTION OF CONDUIT

NOTE:
Reinforcement to be 2" Cl. except as noted.

LEGEND
O.F. = Outside Face
I.F. = Inside Face
E.F. = Each Face

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ALTERATIONS TO SIPPO CREEK CONDUIT AND PUMPING STATION

DETAILS

STARK COUNTY STA 574+35.17

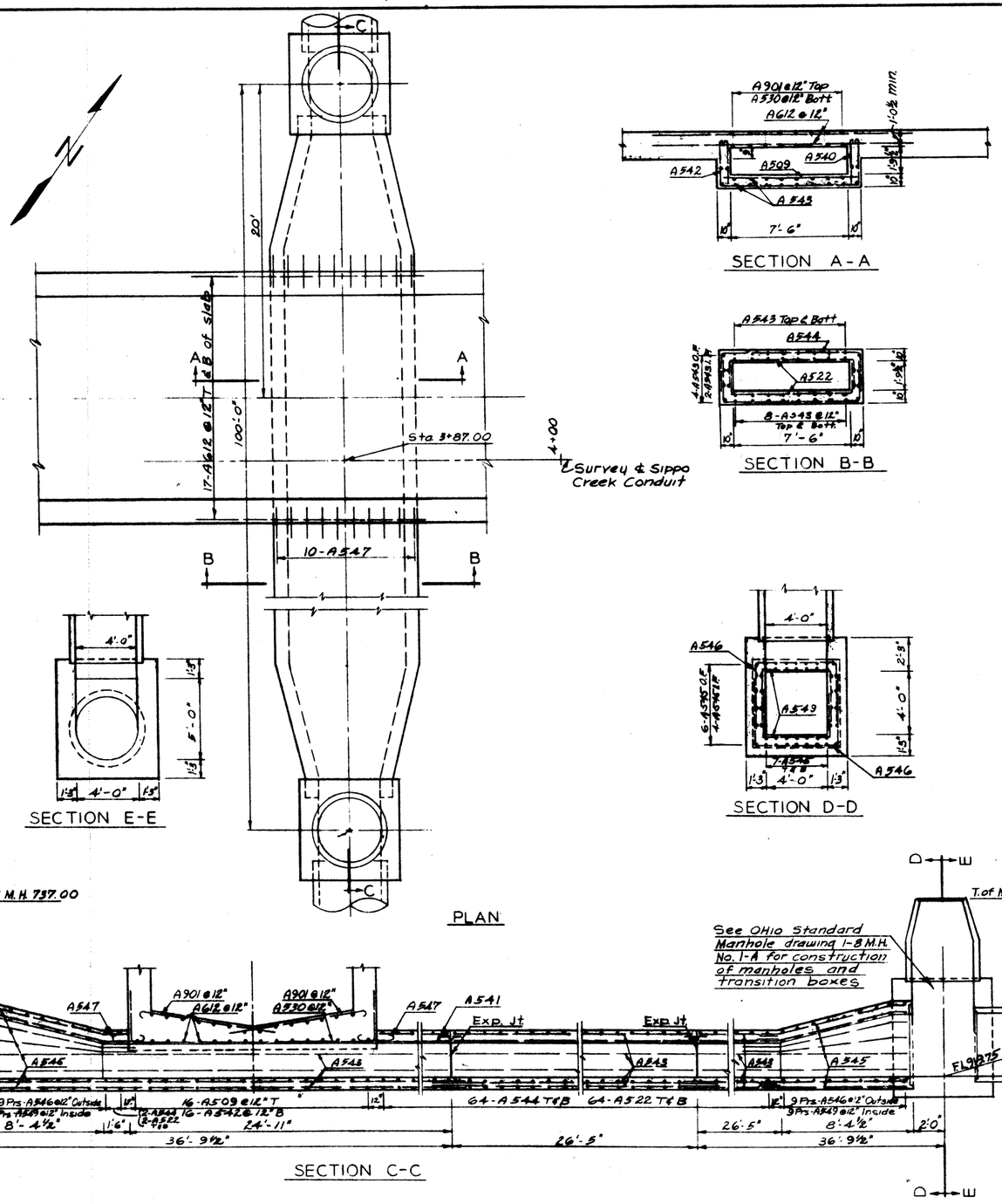
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.D.Y.	J.D.Y.		CFF		

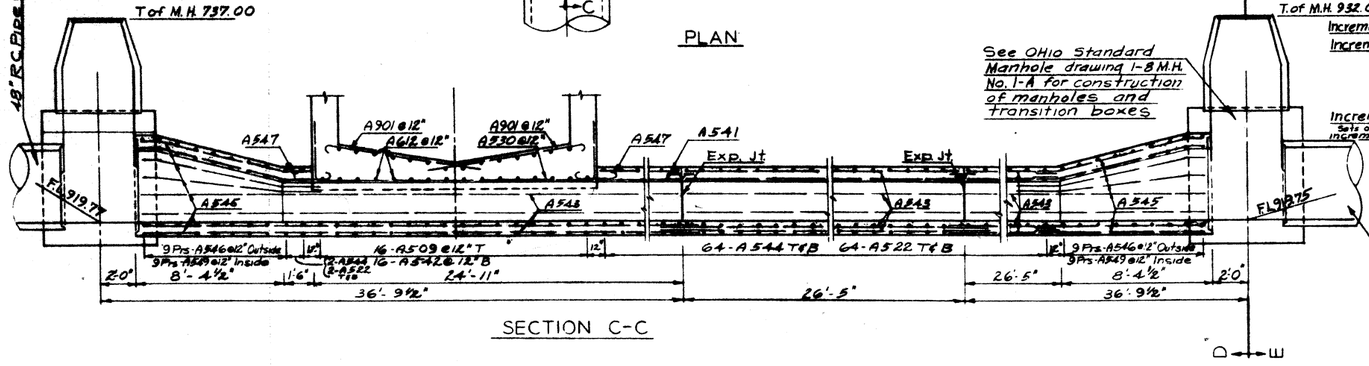
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-27001

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010 (5)	

102

STA-21-10.23





See notes for bar size code.

REINFORCING STEEL LIST

Mark	No	Length	Weight	Shp	Bending Diagram
A301	36	7'-0	95	B	
A302	72	5'-4"	142	B	
A402	22	6'-7"	97	S	
A403	8	18'-5"	98	B	
A404	12	19'-7"	157	S	
A405	13	15'-7"	135	S	
A406	28	5'-7"	104	S	
A407	10	14'-5"	96	B	
A408	5	8'-1"	27	S	
A409	5	8'-10"	30	B	
A410	11	13'-1"	96	B	
A411	14	6'-0"	56	S	
A412	14	8'-7"	80	B	
A550	10	6'-6"	68	B	
A501	28	10'-10"	316	S	
A502	124	12'-3"	1584	S	
A503	9	21'-0"	197	B	
A504	165	5'-11"	1018	B	
A505	8	15'-4"	128	B	
A506	17	15'-7"	276	S	
A507	4	7'-0"	29	S	
A508	35	13'-3"	484	B	
A509	16	8'-9"	146	S	
A510	6	9'-0"	56	S	
A511	6	9'-7"	60	B	
A512	8	8'-0"	67	S	
A513	12	10'-9"	134	S	
A514	7	16'-9"	122	B	
A515	58	10'-1"	610	S	
A516	64	13'-0"	868	S	
A517	7	16'-3"	119	S	
A518	14	7'-9"	113	B	
A519	4	20'-7"	86	S	
A520	69	3'-5"	246	B	
A521	16	6'-2"	103	B	
A522	132	11'-0"	1514	B	
A523	16	9'-11"	165	S	
A524	8	7'-9"	65	S	
A525	16	8'-10"	147	B	
A526	72	29'-8"	2228	S	
A527	60	37'-4"	2336	S	
A528	12	15'-9"	197	S	
A529	12	13'-6"	169	S	
A530	78	19'-10"	1613	B	
A531	6	9'-3" to 18'-6"	87	S	Increment 1½"
A532	6	18'-0" to 150'	103	S	Increment 7"
A533	1	20'-5"	21	B	
A534	1	16'-9"	17	B	
A535	10	15'-9"	164	B	
A536	12	6'-9" to 14'-5"	132	S	
A537	10	15'-0" to 26'-6"	81	B	Increments Sets of 5 Increment 2½"
A538	2	17'-6"	96	B	
A539	1	15'-0"	16	S	
A540	32	3'-9"	125	B	
A541	22	8'-6"	195	S	
A542	16	16'-0"	267	B	
A543	110	26'-1"	2992	S	
A544	132	13'-10"	1904	B	
A545	96	9'-8"	968	B	
*A546	4 Ser 9	15'-7" to 12'-5"	485	B	
A547	20	4'-2"	87	B	
A548	80	7'-4"	612	B	
*A549	4 Ser 9	10'-11" to 9'-9"	388	B	
AG01	7	13'-5"	142	B	
AG02	5	15'-5"	116	B	
AG03	8	7'-11"	95	B	
AG04	6	9'-5"	85	B	
AG05	165	14'-2"	3511	B	
AG06	2	15'-7"	47	S	
AG07	12	11'-5"	206	B	
AG08	1	15'-7"	23	S	
AG09	4	8'-11"	54	B	
AG10	4	7'-0"	42	S	
AG11	4	4'-6"	27	S	
AG12	34	17'-0"	868	S	
AG13	14	5'-6" to 9'-0"	149	B	
AG14	21	6'-8" to 8'-6"	302	B	
AG15	27	6'-4"	257	B	
AG16	9	6'-9" to 14'-5"	143	S	
A701	3	16'-1"	99	B	
A702	9	11'-2"	205	B	
A703	7	13'-9"	197	B	
A704	12	6'-4"	155	B	
A705	1	20'-7"	42	S	
A706	4	8'-3"	67	B	
A707	8	24'-3"	397	B	
A708	79	15'-10"	2524	S	
A709	2	12'-1"	49	S	
A710	12	30'-1"	738	B	
A711	8	9'-3"	151	S	
A712	24	16'-4"	801	B	
AB01	165	12'-10"	5654	S	
AB02	165	8'-3"	3635	B	
AB03	9	15'-0"	360	B	
AB04	78	18'-0"	3749	B	
A901	174	13'-3"	7839	B	
A902	1	15'-7"	53	S	
A903	16	20'-5"	1111	B	
A904	24	12'-6"	1020	B	
A905	24	9'-9"	796	B	
A1001	32	12'-11"	1779	B	

REPLACEMENT BARS

RE300	1	4'-11"	S
RE400	1	5'-3"	S
RE500	2	5'-7"	S
RE600	1	5'-10"	S
RE700	1	6'-2"	S
RE800	1	6'-6"	S
RE900	1	6'-10"	S
RE1000	1	7'-2"	S

* 4 S of 9 indicates 4 Series of 9 bars = a total of 36 bars

NOTE:
Reinforcement to be 2" clear

Bar size is indicated in the bar mark. The first digit where three digits are used, indicates the bar size number. Example = A901 is a no. 9 bar; A1001 is a no. 10 bar

Replacement Bars: IF reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Sec. S-4.02 need not be furnished and replacement bars will not be required.

LEGEND
O.F. = Outside Face
I.F. = Inside Face
E.F. = Each Face

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ALTERATIONS TO SIPPO CREEK CONDUIT AND PUMPING STATION

SEWER SECTION & STEEL LIST

STARK COUNTY STA 574+35

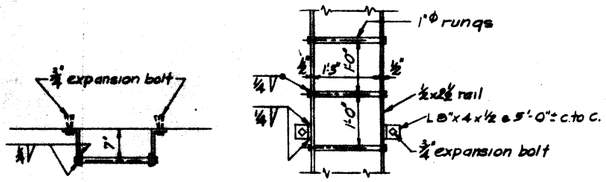
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.D.Y.	J.D.Y.		CFF		

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY BEAVER, PA. 27001

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

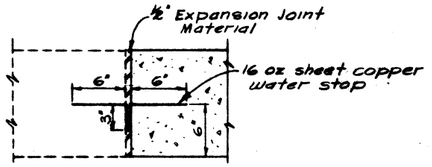
105

STA.-21-10.23

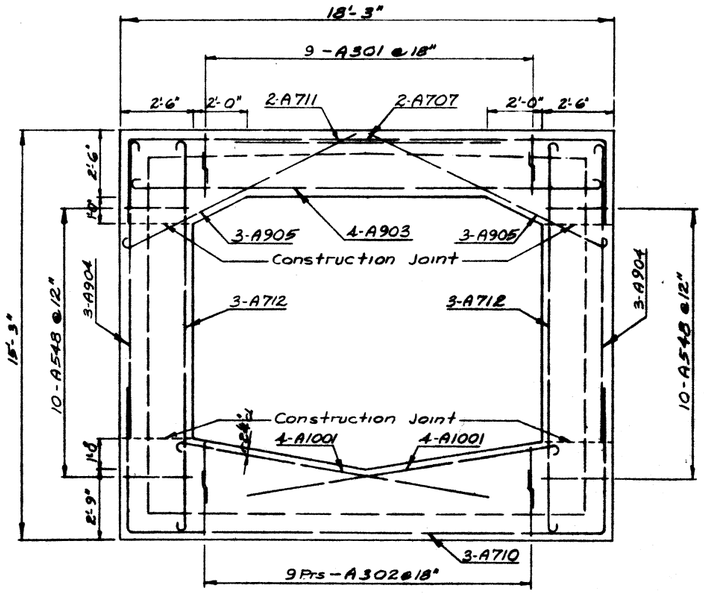


PLAN ELEVATION

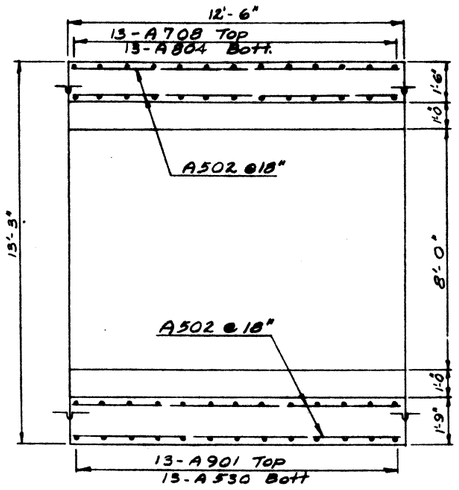
LADDER DETAILS
FOR OLD WORK



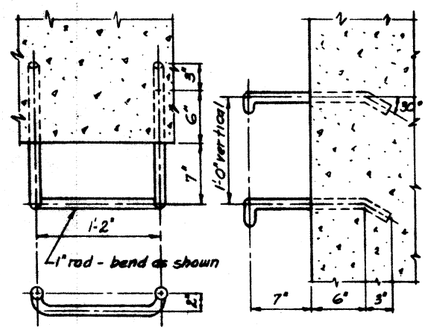
TYPICAL EXPANSION JOINT



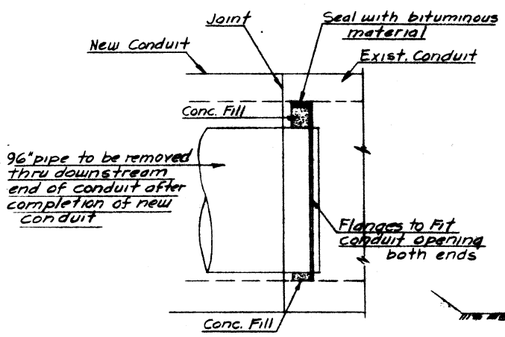
SECTION D-D OF FRAME

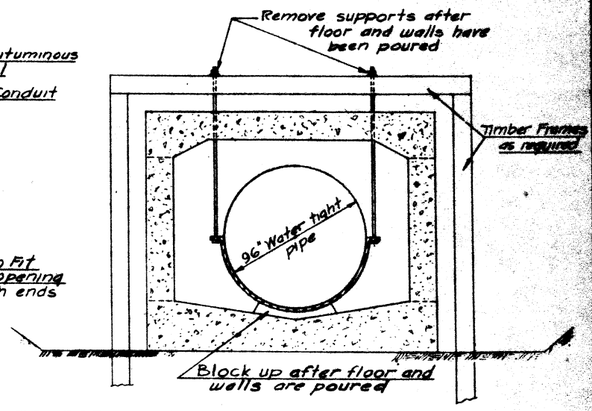


SECTION OF NEW PRESSURE CONDUIT
NEXT TO PUMP HOUSE



LADDER RUNG
FOR NEW WORK





SUGGESTED TEMPORARY FLOOD PROTECTION

Note:
Temporary flood protection may be accomplished by an alternate method subject to approval of the Director of Highways, the Bureau of Public Roads and the U.S. Army Corps of Engineers.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ALTERATIONS TO SIPPO CREEK CONDUIT AND PUMPING STATION

MISCELLANEOUS DETAILS

STARK COUNTY STA 574+35.17

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
J.D.Y.	J.D.Y.		CFF		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

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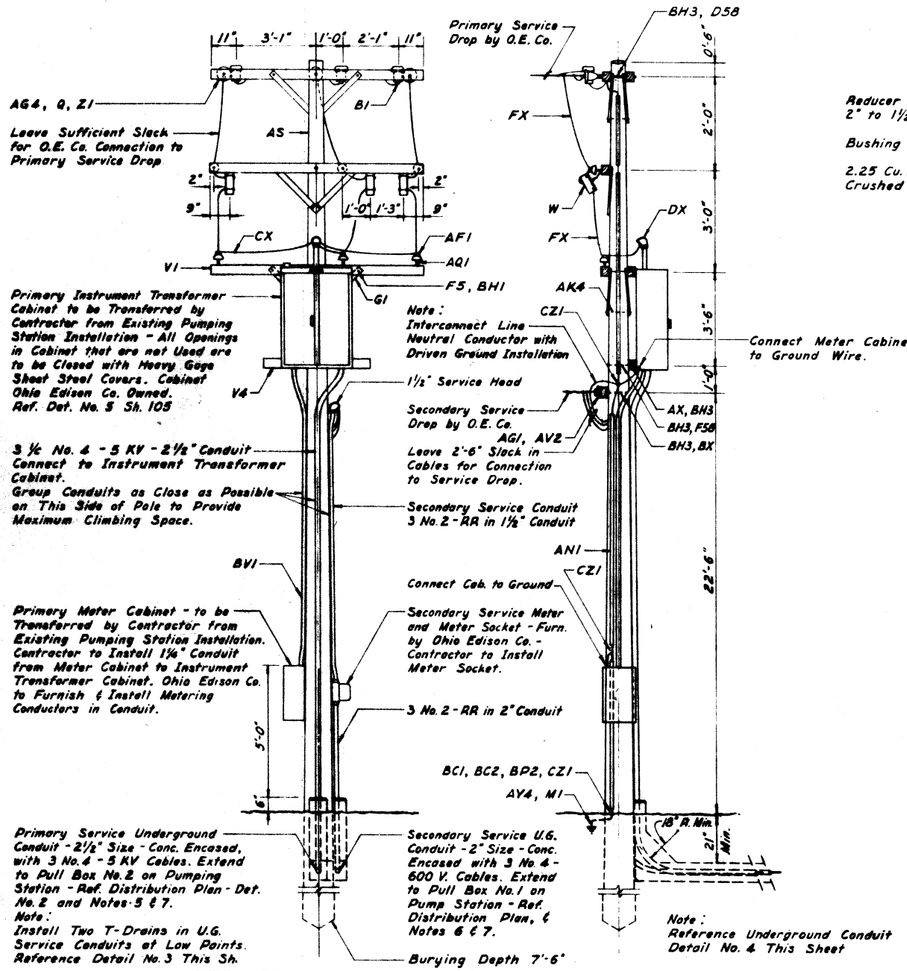
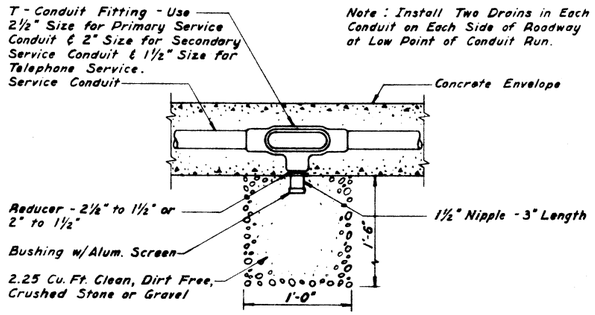


SERVICE METERING & TERMINAL POLE DETAIL NO. 1

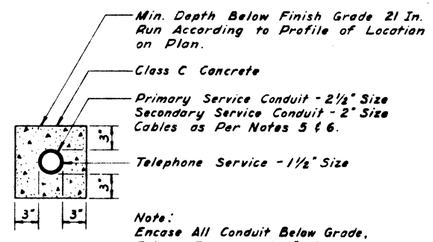
No Scale

Symbol	Quantity	Item & Description
AF1	6	Pin Type Insulator - O.B. 12847 or Equivalent
AG1	1	Secondary Rack Spool Insulator - 3" Dia. Size
AG4	3	6" Strain Dist. Insulator - O.B. 32433 or Equiv. (Furn. & Inst. by O.E. Co.)
AK4	10	½" x 4" Fetter Drive Lag Screw
AN1	3	Wood Moulding - 1" x 8' with ½" Groove (Treated)
AQ1	6	⅝" Steel Dist. Pin
AS	1	40' Pole CL 3 (Fully Treated) per ASA Specs. Pine or Cedar
AV2	1	1 Spool Secondary Rack
AY4	2	⅝" x 8'-0" Copperweld Sectional Ground Rod
B1	3	3 KV Arrester - Valve Type per O.E. Specs.
BC1	15	1⅛" x 3" Copperweld Staple
BC2	4	⅝" x 1½" Copperweld Staple
BH1	10	1" Round Washer
BH3	27	2⅛" Square Washer
BP2	40 L.F.	Wire - #2, #3 or #4 Bare or Weatherproof Copper
BX	1	⅝" x 9" Machine Bolt
DX	1	Service Hd. & Conduit Extension (Exist. Equip. from Pumping Station)
FX	As Req'd.	Wire #4, Weatherproof Copper (Medium Hard Drawn)



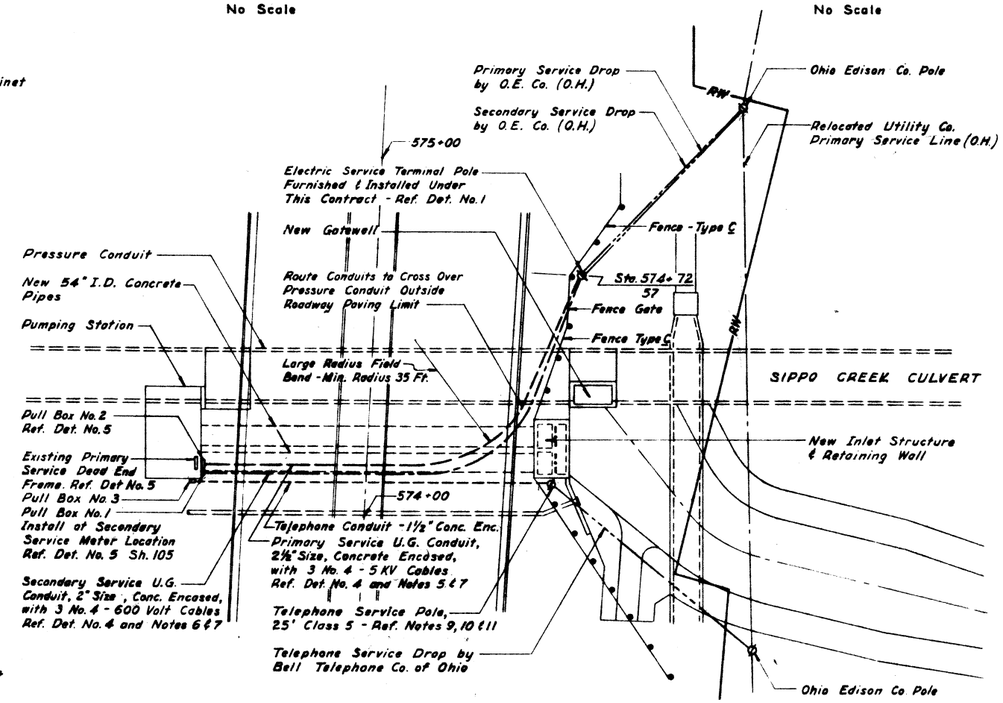
TYPICAL CONDUIT DRAIN DETAIL NO. 3

No Scale



SERVICE CONDUIT ENCASEMENT DETAIL NO. 4

No Scale



ELECTRIC SERVICE DISTRIBUTION PLAN - DETAIL NO. 2

Scale : 1" = 20'

Symbol	Quantity	Item & Description
BV1	As Req'd.	Conduit - 1¼" Galv. Rigid - From Instrument Transformer Cabinet to Meter Cabinet (Furn. & Installed by Contractor, O.E. to Furn. & Inst. Wiring)
CZ1	3	Line Connector - #6 Solid to #2 Stranded Copper
DS8	8	⅝" x 18" Double Arming Bolt
F5	10	⅜" x 5½" Machine Bolt
F58	1	⅝" x 12" Machine Bolt
G1	10	30" Wood Crossarm Brace with Clips (Treated)
M1	1	⅜" Bronze Ground Rod Clamp
Q	3	Strain Clamp (Furn. by O.E. Co. & Installed by O.E. Co.)
V1	10	3½" x 4¼" x 8' - 6 Pin Dist. Wood Crossarm (Treated)
V4	1	3½" x 4¼" x 4' - Outrigger Crossarm (Treated)
W	3	Cutout 5 KV - 100 Amp. - Porcelain Enclosed Type.
Z1	3	⅝" Nut, 1½" Eye (Furn. & Installed by O.E. Co.)
	2	Hangers - For Primary Instrument Transformer Cabinet (Furn. by O.E. Co.)
AX	4	½" x 5" Machine Bolt (For Fastening Cabinet to Crossarm)
CX	As Req'd.	Cable - 1/c No. 8 - 5000 Volt, Okonite Co. Cat. No. 10502

Note: Work This Sheet in Conjunction with the Notes & Details on Sheet No. 105

NOTES

1. Contractor to Review Metering Installation Details with O.E. Co. Meter Section Before Construction and shall Comply with Rules and Regulations of O.E. Co. for This Installation.
2. All Materials to be Furnished and Installed by Contractor Unless Otherwise Noted.
3. All Hardware shall be Hot Dipped Galvanized.
4. Primary Instrument Transformer Cabinet to be Transferred from Pumping Station to Terminal Pole.
5. Primary Service Cables shall be Single Conductor, A.W.G. No. 4, Unshielded, Concentric Stranded, Rated 5000 Volts with 10/64 th Inch Rubber Insulation and 3/64 th Inch Polychloroprene Sheath Equivalent to Okonite Company Okolite - Okoprene Cat. No. OK 10507.
6. Secondary Service Cables shall be Single Conductor, A.W.G. No. 4, Concentric Stranded, Rated 600 Volts with 4/64 th Inch Rubber Insulation and 3/64 th Inch Polychloroprene Sheath Equivalent to Okonite Co. Okolite - Okoprene Cat. No. OK 10030.
7. Terminate Cables in Accordance to Manufacturer's Recommendations. Substitution of Cable Type Listed in Notes 5 & 6 shall not be Permitted Unless Approved in Writing by the Engineer.
8. Installation shall Conform to Rules and Regulations of the National Electrical Code and the National Electrical Safety Code.
9. Telephone Service shall be Installed in Accordance to Rules & Regulations of Bell Telephone Co. of Ohio.
10. Install No. 12 Gage Galv. Drag Wire in Tele. Conduit.
11. Telephone Service Pole shall be Buried 6 Ft. Extend Conduit on Pole 18' Above Finish Grade and Terminate with Service Head.
12. All Material shall be New, First Grade and Approved by Underwriters Laboratories.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ALTERATIONS TO SIPPO CREEK CONDUIT AND PUMPING STATION

SERVICE PLAN & DETAILS

STARK COUNTY STA. 574+35.17

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVISED
		RLB	EEE	RLB	

BEAVER VALLEY ENGINEERING SUPPLIES CO.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

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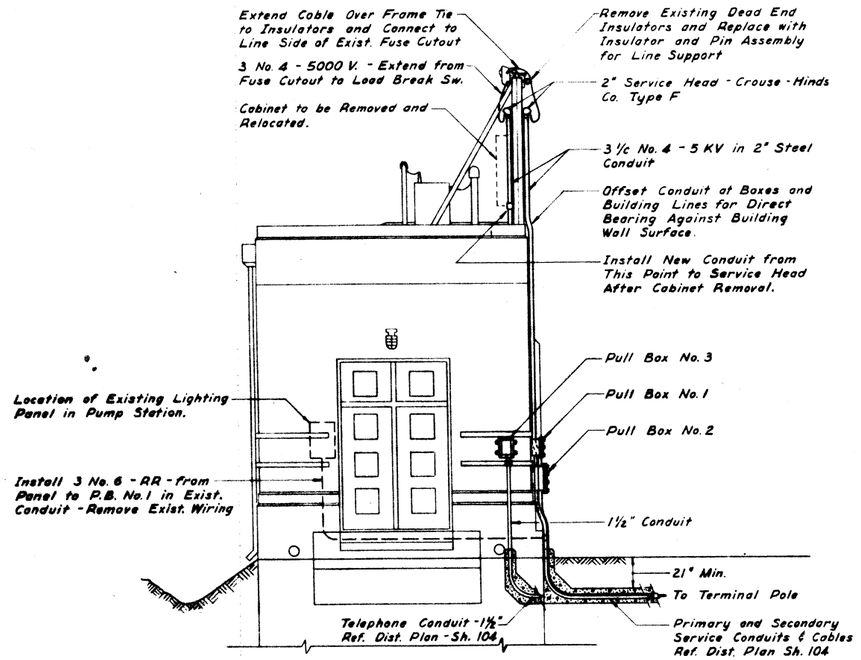
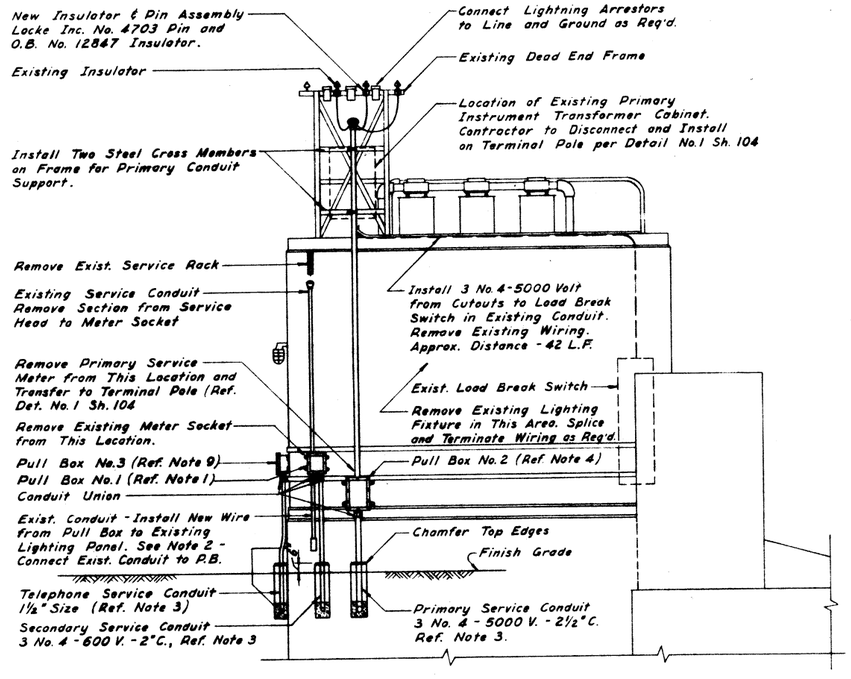


DOWNSTREAM ELEVATION



LANDWARD ELEVATION

PUMPING STATION ELECTRIC SERVICE ALTERATIONS
DETAIL NO. 5

Scale : ¼" = 1'-0"

Note : Work This Sheet in Conjunction with the Notes and Details on Sheet No. 104

NOTES

1. Pull Box No. 1 to be Cast Type with Screw Cover and Mounting Lugs. Inside Dim. 10" x 8" x 6", Equal to Spring City Electrical Co. No. HF 100806. Mount Box at Existing Meter Location and Connect Existing Service Conduit and Underground Service Conduit to Box.
2. Wire from P.B. No. 1 to Lighting Panel Shall Consist of 3 No. 6 - RR Wires. Remove Exist. Wire. Splice New Wire to U.G. Service Cables in P.B. and Connect to Panel. Approx. Distance from P.B. No. 1 to Ltng. Panel - 23 L.F.
3. Route Service Conduits to Terminal Pole in Accordance to Plan on Sheet 104.
4. Pull Box No. 2 to be Cast Type with Screw Cover and Mounting Lugs. Inside Dim. 18" x 12" x 8", Equal to Spring City Electrical Co. No. HF 181208. Mount Box at Approx. Location of Primary Meter and Connect Underground Service Conduit and Riser to Dead End Frame.
5. Mount Boxes with ½" ϕ Codmium Plated Machine Bolts and Expansion Anchors.
6. Support Conduits on Pump House with One Hole Pipe Straps at 8 Ft. Intervals.
7. Conduits shall be Screwed into Boxes. Red Lead All Conduit Joints.
8. Remove Primary Service Metering Conduit and Wire from Instrument Cabinet to Primary Service Meter.
9. Pull Box No. 3 shall be Equivalent to Pull Box No. 1 (Ref. Note 1). Mount Box at Existing Telephone Service Entrance Point. Remove Discontinued Existing Equipment.
10. Repair and Patch Building to Match Existing Installation at All New Openings and Where Existing Equipment is Removed.
11. All Conduit shall be Rigid Steel, Galvanized or Sheradized, Threaded Type. Mandrel and Clean Conduits Before Installation of Cable.
12. Contractor shall Obtain All Permits and Licences Required for This Work.
13. All Work shall be Subject to Requirements and Approval of Corps of Engineers, U.S. Army Office of the District Engineer, Huntington, West Virginia. The Above Office shall be Advised of Commencement of Work and Periods of Service Interruption shall be Subject to Approval from This Office. Requests and Approval for Service Interruption shall be Made in Writing.
14. Ground All Conduit and Boxes in Accordance to the National Electrical Code Requirements.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ALTERATIONS TO SIPPO CREEK CONDUIT AND PUMPING STATION
SERVICE DETAILS

STARK COUNTY STA. 574+35.17

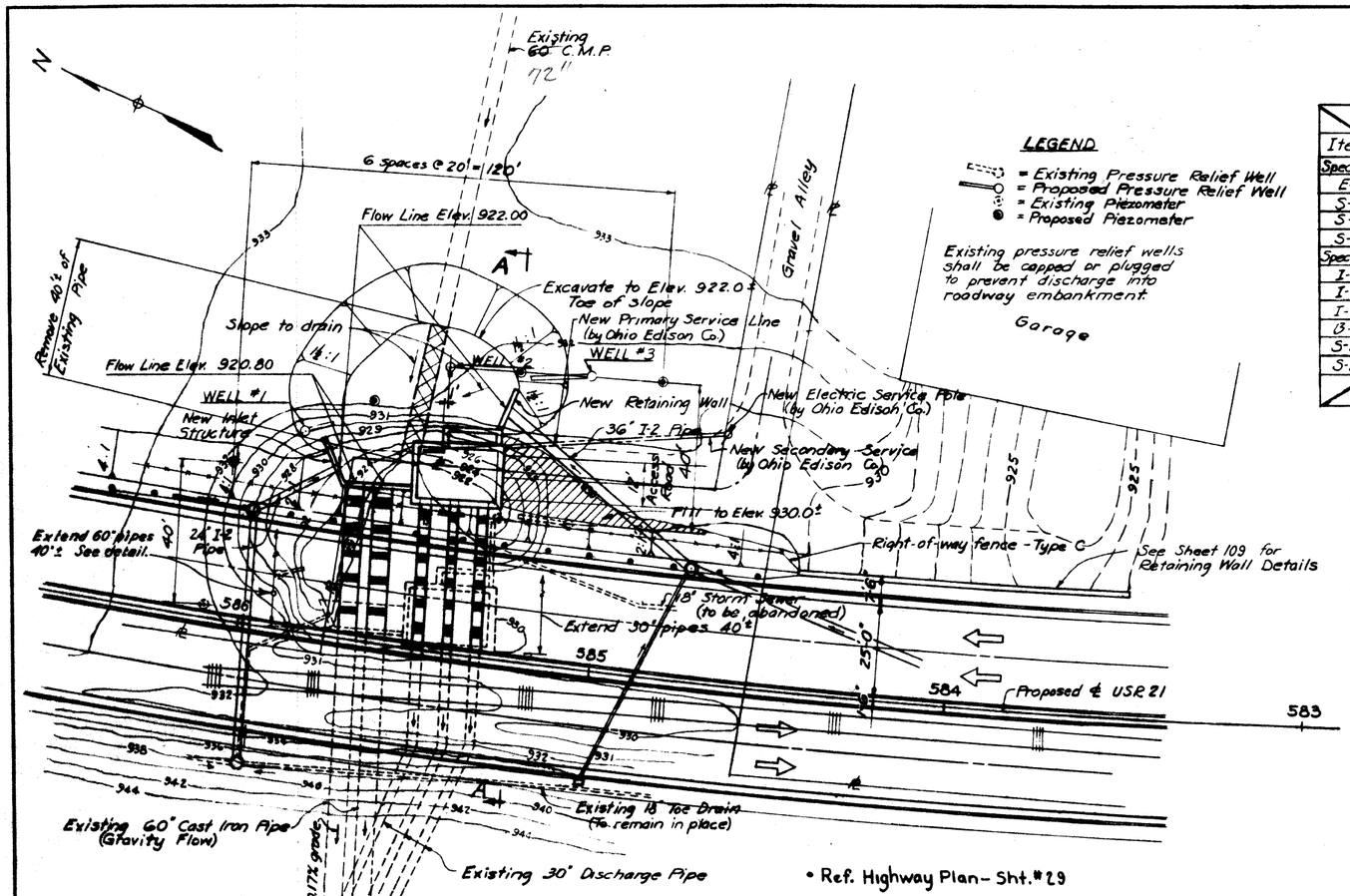
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
		RLB	EEE	RLB	

BEAVER VALLEY ENGINEERING SUPPLIES CO

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010 (5)	

106

STA - 21 - 10.23



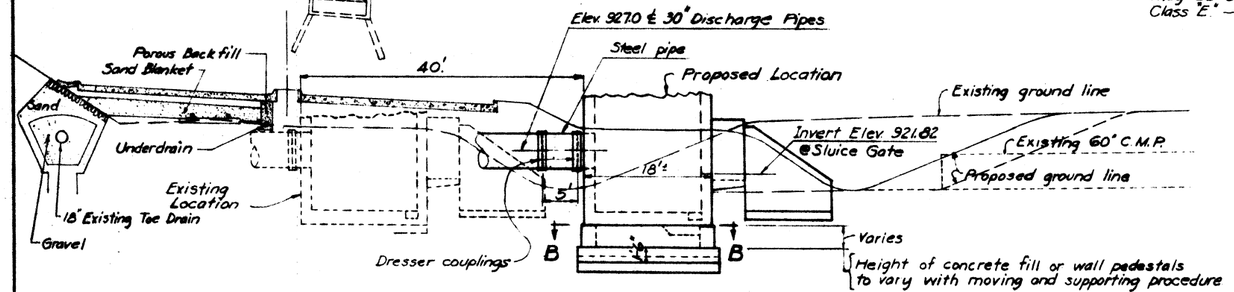
LEGEND

= Existing Pressure Relief Well
= Proposed Pressure Relief Well
= Existing Piezometer
= Proposed Piezometer

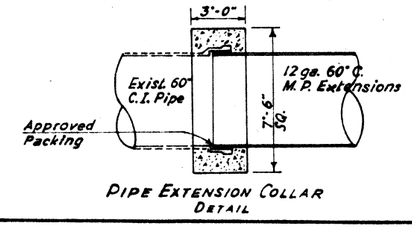
Existing pressure relief wells shall be capped or plugged to prevent discharge into roadway embankment.

• Ref. Highway Plan - Sht. # 29

PLAN
Scale 1"=20'



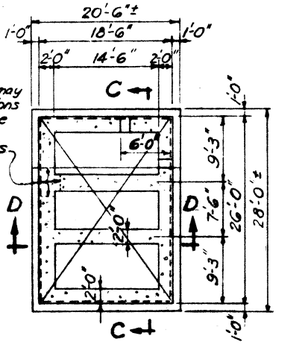
SECTION A-A
Scale 1"=10'



PIPE EXTENSION COLLAR DETAIL

ESTIMATED MAJOR QUANTITIES

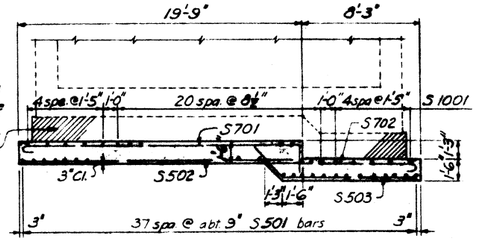
Item	Total	Unit	Description
Special	Lump Sum	lump	Temporary flood protection
E-2	667	cu. yds	Unclassified excavation
S-1	35	cu. yds	Class "C" concrete
S-1	35	cu. yds	Class "E" concrete, foundation slab
S-4	10451	lbs.	Reinforcing steel
Special	Lump Sum	lump	Support, raise and move exist bldg.
I-2	82	lin. ft	72"± 50" C.M. Pipe, Sec. m-6.4(4)
I-2	120	lin. ft	30" steel pipe, Sec. M-6.9
I-13	24	lin. ft.	Concrete steps
B-19	12	cu. yds	Aggregate Base Course
S-24	Lump Sum	lump	Removal of existing retaining walls & inlet structure
S-25	Lump Sum	lump	Electrical grounds



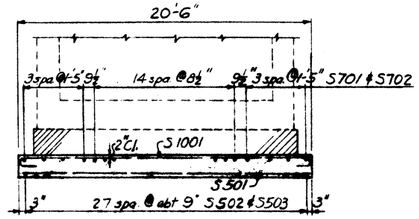
Pedestals, if used, may be poured in sections to facilitate release and removal of temporary supports. Pedestal concrete shall be Class 'C'.

PLAN SECTION B-B
SHOWING SUGGESTED PEDESTALS
Scale 1"=10'

If desired, temporary supports may remain under building and be encased in solid concrete fill. Concrete for solid fill may be either Class 'C' or Class 'E'.



SECTION C-C
Scale 1"=5'



SECTION D-D
Scale 1"=5'

Concrete for foundation slab shall be Class 'E'.

PROPOSED WORK

Contractor shall secure written approval of his proposed moving methods, procedures and rein. conc. foundation slab and pedestals from the Corp of Engineers, U.S. Army, Huntington, W.Va. prior to beginning work on this item. Remove existing retaining wall, inlet structure and 60" corrugated metal pipe as required for new construction.

Excavate for and pour reinforced concrete foundation slab at new location. Move building to a position directly over this slab. Support, shim and plumb building at desired elevation. Pour wall pedestals or solid concrete fill on new foundation. Remove temporary supports.

Extend existing pipes to building and connect them. Build new inlet structure and retaining wall, extending and connecting pipes as per Plans. Install new electrical grounds. In conjunction with highway earthwork, place backfill around structures. Build access road and steps to entrance.

Align and level pumps and test operation of controls. Install new pressure relief wells and piezometers.

The Contractor must assume full responsibility for the moving procedure and the condition of the building after moving.

PLANS of existing construction are on file in both the Division and Central Offices of the Ohio Department of Highways and in the District Office of the Corps of Engineers, U.S. Army at Huntington, W.Va. The Corps of Engineers reserves the right to inspect all work performed under the special item "Relocation of Federal Avenue Pump Station, as per Plan."

For special drainage structure notes, see Sheet 118-A

ELECTRICAL GROUNDS: Contractor shall disconnect existing external ground system at the pump station, install new equivalent grounding system for the pump station at the proposed location and connect as required to station grounding bus. Work shall be subject to approval of the Corps of Engineers, U.S. Army, and requirements of the National Electric Code.

FLOOD PROTECTION: See General Note Sheet No. 10

ESTIMATED QUANTITIES (TO GENERAL SUMMARY)

Item Special - Relocation of Federal Avenue Pump Station — Lump Sum

Item Special - Pressure Relief Wells — 135 Lin. Ft.

Item Special - Piezometer Tubes — 100 Lin. Ft.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

FEDERAL AVENUE PUMP STATION RELOCATION
Tuscarawas River Local Protection Project - Massillon, Ohio
STARK COUNTY U.S.R. 21
Sta. 585+40

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
MBJ	AWB		J.G.H. S.J.F.		

BEAVER VALLEY ENGINEERING SUPPLIED COMPANY REORDER A-27001

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

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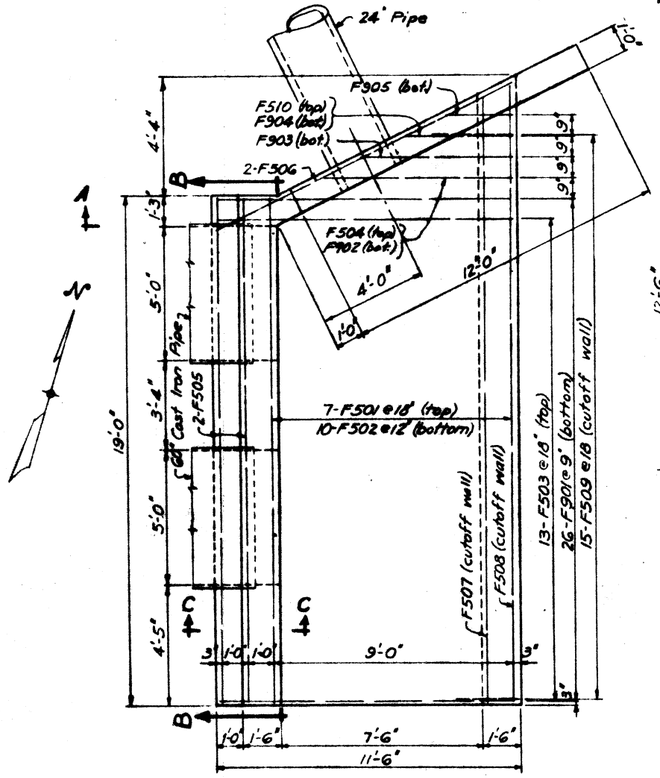
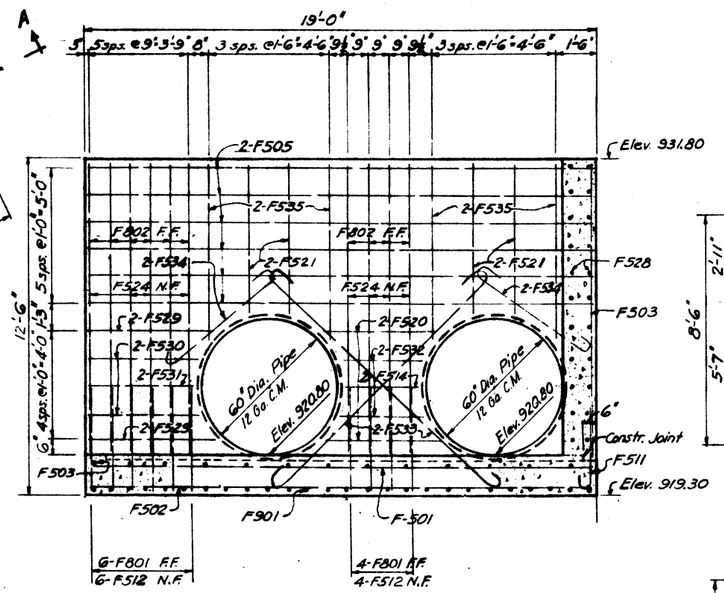
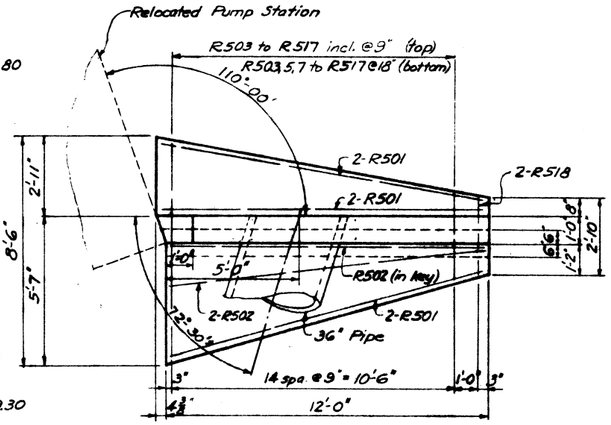


PLAN SHOWING FOOTING STEEL
Scale $\frac{1}{8}$"=1'-0"

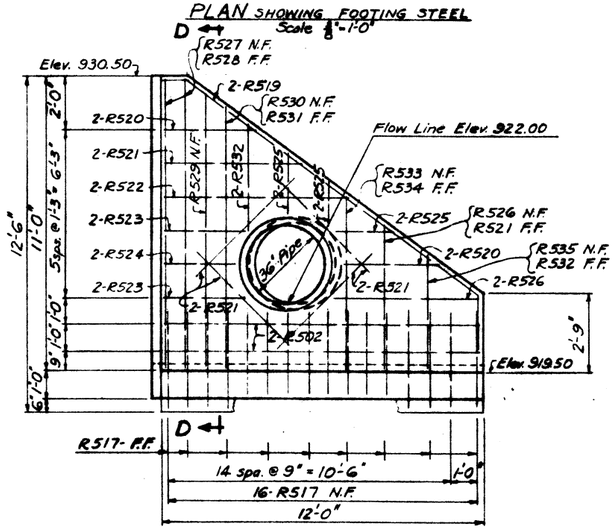


SECTION B-B
Scale $\frac{1}{8}$"=1'-0"

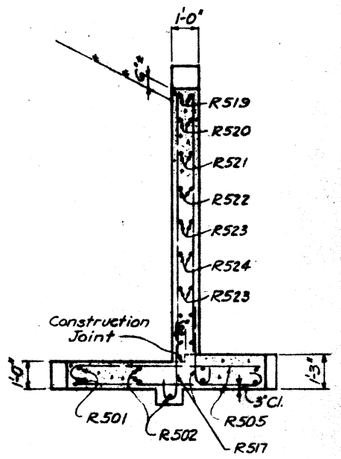


PLAN SHOWING FOOTING STEEL
Scale $\frac{1}{8}$"=1'-0"

INLET STRUCTURE

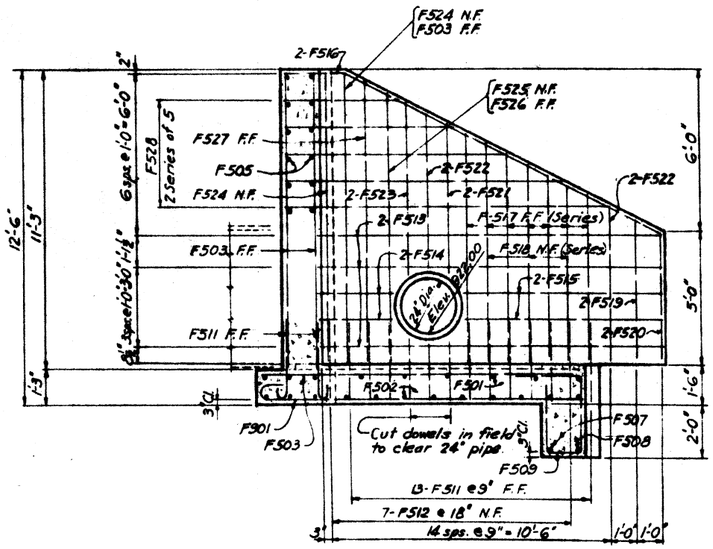


ELEVATION
Scale $\frac{1}{8}$"=1'-0"

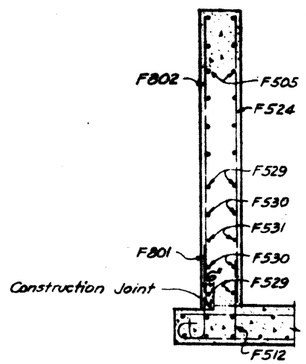


SECTION D-D
Scale $\frac{1}{8}$"=1'-0"

RETAINING WALL



SECTION A-A
Scale $\frac{1}{8}$"=1'-0"



SECTION C-C
Scale $\frac{1}{8}$"=1'-0"

NOTES

Concrete for inlet structure and retaining wall shall be Class 'C'.
Reinforcing steel shall have 2" minimum cover unless noted.
See Sheet 108 for Reinforcing Steel List.

LEGEND: N.F. = Near Face
F.F. = Far Face

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

DETAILS OF INLET STRUCTURE AND RETAINING WALL
FEDERAL AVE. PUMP STATION RELOCATION

STARK COUNTY U.S.R. 21
Sta. 585+40

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
H.G.W. S.J.F.	D.W.P.		J.D.Y. S.J.F.		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

108

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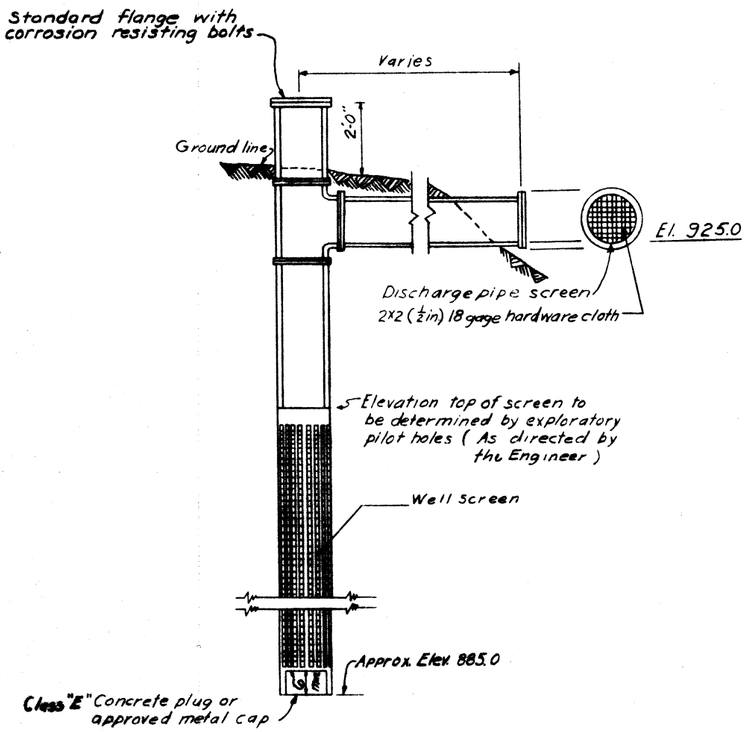
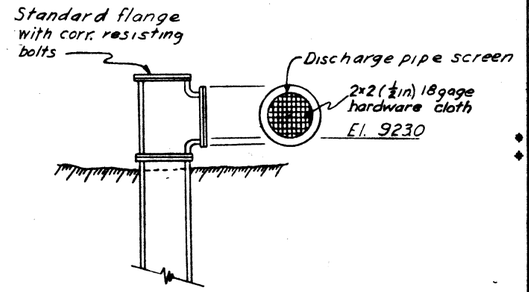


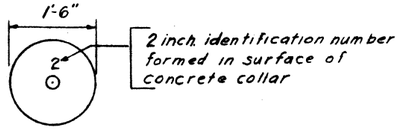
TYPICAL CROSS SECTION
THRU WELLS 1 & 3

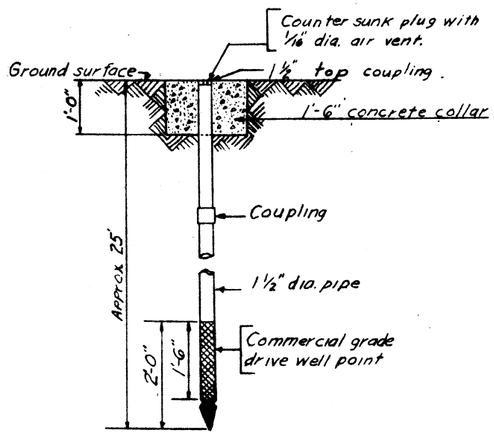
NOT TO SCALE



TYPICAL CROSS SECTION
THRU WELL 2

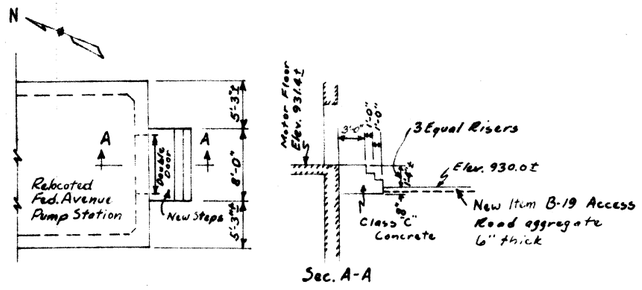
NOT TO SCALE





PIEZOMETER TUBE DETAILS

SCALE ¾" = 1'-0"



NEW STEP DETAILS
(as per Item I-13)

REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp
INLET STRUCTURE				
F901	26	12'-3"	1083	B
F902	1	8'-3"	28	B
F903	1	6'-9"	23	B
F904	1	5'-3"	18	B
F905	1	3'-9"	13	B
F801	10	4'-7"	122	B
F802	10	11'-0"	294	S
◆ F501	1 Set 7	18'-6" to 22'-9"	151	S
◆ F502	1 Set 10	18'-6" to 22'-9"	215	S
F503	16	11'-0"	184	S
F504	1	7'-0"	7	S
F505	16	18'-8"	312	S
F506	2	12'-3"	26	S
F507	1	22'-3"	23	S
F508	1	22'-9"	24	S
F509	15	8'-0"	125	B
F510	1	4'-0"	4	S
F511	15	3'-2"	50	B
F512	17	3'-4"	58	S
F513	6	13'-0"	81	S
F514	6	2'-6"	16	S
F515	4	7'-6"	31	S
F516	2	14'-0"	29	B
◆ F517	1 Set 7	8'-8" to 6'-5"	55	S
◆ F518	1 Set 3	8'-1" to 6'-7"	23	S
F519	2	5'-2"	11	S
F520	6	4'-6"	28	S
F521	10	5'-6"	57	S
F522	4	5'-9"	24	S
F523	2	6'-4"	13	S
F524	10	10'-9"	112	S
F525	1	10'-0"	10	S
F526	1	10'-3"	11	S
F527	1	10'-6"	11	S
◆ F528	2 Set 5	4'-0" to 12'-0"	83	S
F529	4	4'-9"	20	S
F530	4	4'-1"	17	S
F531	2	3'-11"	8	S
F532	4	2'-9"	11	S
F533	4	12'-5"	52	B
F534	4	6'-2"	26	B
F535	8	6'-7"	55	S
RETAINING WALL				
R501	6	12'-0"	75	S
R502	7	11'-6"	84	S
R503	2	8'-4"	17	B
R504	1	8'-0"	8	B
R505	2	7'-8"	16	B
R506	1	7'-4"	8	B
R507	2	7'-0"	15	B

Bending Diagrams

F901 11'-0"±
F902 7'-0"±
F903 5'-6"±
F904 4'-0"±
F905 2'-6"±
F801 3'-6"±
F511 2'-7"±
R508 7'-9"±

◆ F501 Vary by 8½"±
◆ F502 Vary by 5½"±

2'-0"
2'-0"
1'-6"

F533 11'-3"±
F534 5'-0"±
S1001 20'-0"±

F502

6 12
1'-0"
19'-0"
F516
13'-7"±
12 9 12
R519

◆ F517 Vary by 4½"±
◆ F518 Vary by 3"±

19'-3"±
S701
12 12
9'-5"±
S503

◆ F528 Vary by 2'-0"

R504	7'-9"±
R505	7'-1"±
R506	6'-9"±
R507	6'-3"±
R508	8'-7"±
R509	3'-9"±
R510	3'-5"±
R511	3'-0"±
R512	2'-8"±
R513	2'-4"±
R514	2'-0"±
R515	3'-8"±
R516	3'-4"±
R517	3'-0"±
R518	2'-6"±
RE1000	7'-3"±
RE700	6'-6"±
S702	10'-0"±

Mark	No.	Length	Weight	Shp
R508	1	6'-8"	7	B
R509	2	6'-4"	13	B
R510	1	6'-0"	6	B
R511	2	5'-7"	12	B
R512	1	5'-3"	5	B
R513	2	4'-11"	10	B
R514	1	4'-7"	5	B
R515	2	4'-3"	9	B
R516	1	3'-11"	4	B
R517	27	3'-7"	101	B
R518	2	3'-1"	6	B
R519	2	16'-4"	34	B
R520	4	3'-9"	14	S
R521	11	5'-0"	57	S
R522	2	6'-9"	14	S
R523	4	3'-0"	13	S
R524	2	2'-6"	5	S
R525	6	2'-3"	14	S
R526	3	5'-3"	16	S
R527	2	10'-9"	22	S
R528	2	10'-6"	22	S
R529	1	10'-3"	11	S
R530	1	9'-9"	10	S
R531	1	9'-6"	10	S
R532	3	4'-0"	13	S
R533	1	6'-6"	7	S
R534	1	6'-3"	7	S
R535	1	4'-3"	4	S
FOUNDATION SLAB				
S1001	31	22'-10"	3042	B
S701	23	21'-10"	1026	B
S702	23	10'-10"	509	B
S501	38	20'-0"	793	S
S502	26	16'-9"	465	S
S503	28	12'-8"	378	B
REPLACEMENT STEEL				
RE1000	1	9'-1"	—	B
RE900	1	6'-10"	—	S
RE800	1	6'-6"	—	S
RE700	1	7'-4"	—	B
RE500	1	5'-7"	—	S

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four digits are used indicate the bar size number. For example, S1001 is a No. 10 size bar and F802 is a No. 8 size bar.

REPLACEMENT BARS: If reinforcing bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Section S-4.02 need not be furnished and replacement bars will not be required.

◆ Note:
1S of 7 etc. indicates 1 series of 7 bars which vary in length by 8½" ±

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

MISCELLANEOUS DETAILS
REINFORCING STEEL LIST
FEDERAL AVE. PUMP STATION RELOCATION

STARK COUNTY U.S.R. 21
Sta. 585 +40

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
D.W.B.	D.W.B.		D.W.B.		
S.J.F.	D.W.P.		S.J.F.		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

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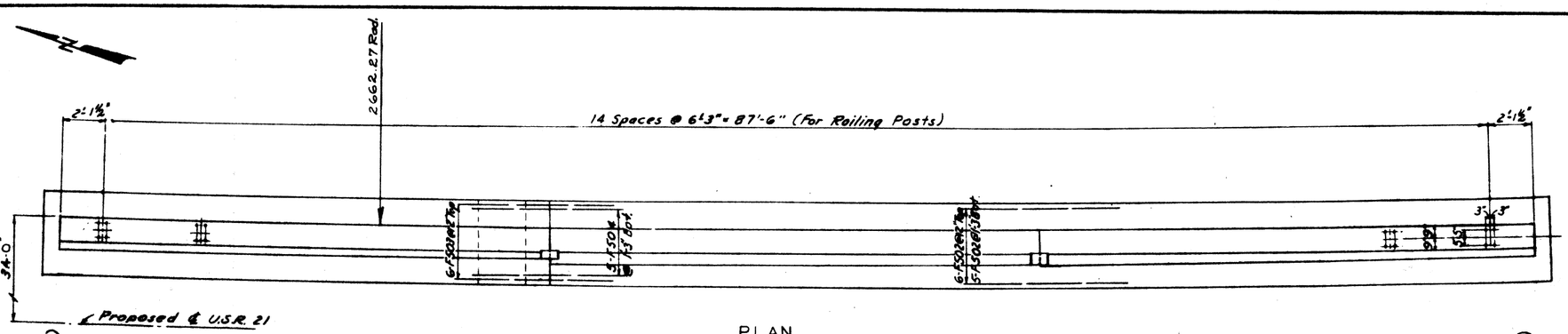
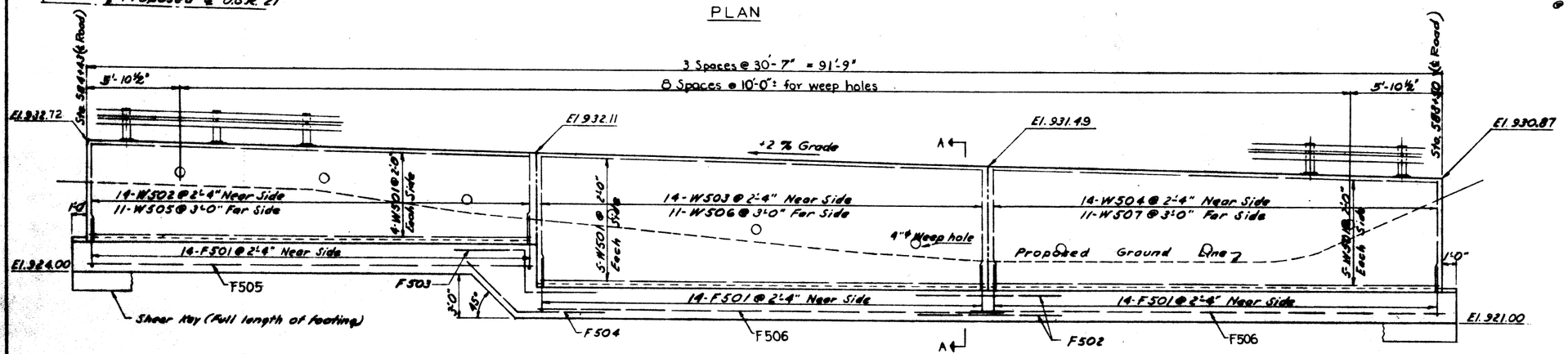


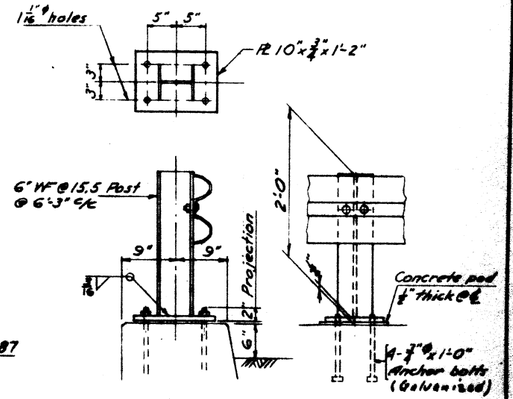
PLAN



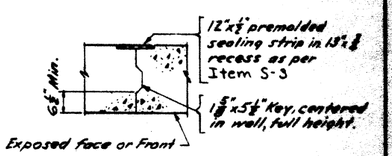
ELEVATION

SPIRAL CURVE DATA

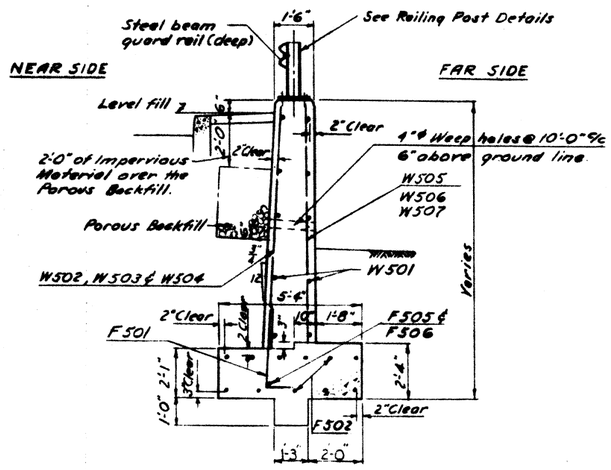
PI Sta. 597+37.67	Xc = 299.51
Δ = 60°-40'-16" Rt.	Yc = 5.87
D = 2°-07'-30"	K = 149.99
L.S = 300.00'	Lt = 200.03
R = 2696.27'	S.T. = 100.03
Θs = 3°-11'-16"	Lc = 2955.11
P = 1.39'	Ts = 1728.62
	Es = 429.34



RAILING POST DETAILS



CONTRACTION JOINT



SECTION A-A

REINFORCING STEEL LIST

MARK	No.	LENGTH	WEIGHT	SHAPE	BENDING DIAGRAMS
F501	42	4'-11"	215	B	
F502	11	10'-0"	115	S	
F503	6	13'-0"	81	B	
F504	5	11'-0"	57	B	5'-0" 6'-0" 45° F504
F505	1	30'-5"	32	S	
F506	2	32'-7"	68	S	
W501	28	30'-3"	883	S	
W502	14	5'-10" to 6'-5"	89	S	Vary by ½"
W503	14	8'-2" to 8'-9"	123	S	Vary by ½"
W504	14	7'-7" to 8'-2"	115	S	Vary by ½"
W505	11	5'-7" to 6'-2"	67	S	Vary by ½"
W506	11	7'-11" to 8'-6"	94	S	Vary by ½"
W507	11	7'-4" to 7'-11"	88	S	Vary by ½"
					5'-0" 5'-0" 30" F503
REPLACEMENT BAR					
RE500	1	5'-7"			3'-11" ½ 30" 12" F501

Replacement Bars: If reinforcing bars are fabricated from stock which has previously been tested by the Ohio Highway Testing Laboratory, test samples as provided in Sec. S-402 need not be furnished and replacement bars will not be required.

GENERAL SUMMARY - RETAINING WALL

ESTIMATED QUANTITIES U 1010(5) SOUTH OF CHERRY RD.

Item	Total	Unit	Description
E-2	L.S.	lump sum	Cofferdams, cribs and sheeting
E-2	160	cu. yd.	Excavation for Structures
S-1	91	cu. yd.	Class "E" concrete for structures
S-3	18	lin. ft.	Waterproofing, premolded sealing strip
S-4	2027	lbs	Reinforcing steel
S-29	144	cu. yd.	Porous backfill
S-14	87.5	lin. ft.	Railing, Type T-15.13 steel posts, standard

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

FOUNDATION BEARING PRESSURE: Footings are designed for a maximum bearing pressure of 1.4 tons per sq. ft.

POROUS BACKFILL: 2 ft. thick, as shown on Section AA shall extend full length of retaining wall.

SHEAR KEY on footing shall be placed in a carefully made trench against undisturbed earth.

CONCRETE shall be class "E."

• Ref. Highway Plan - Sht # 28

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

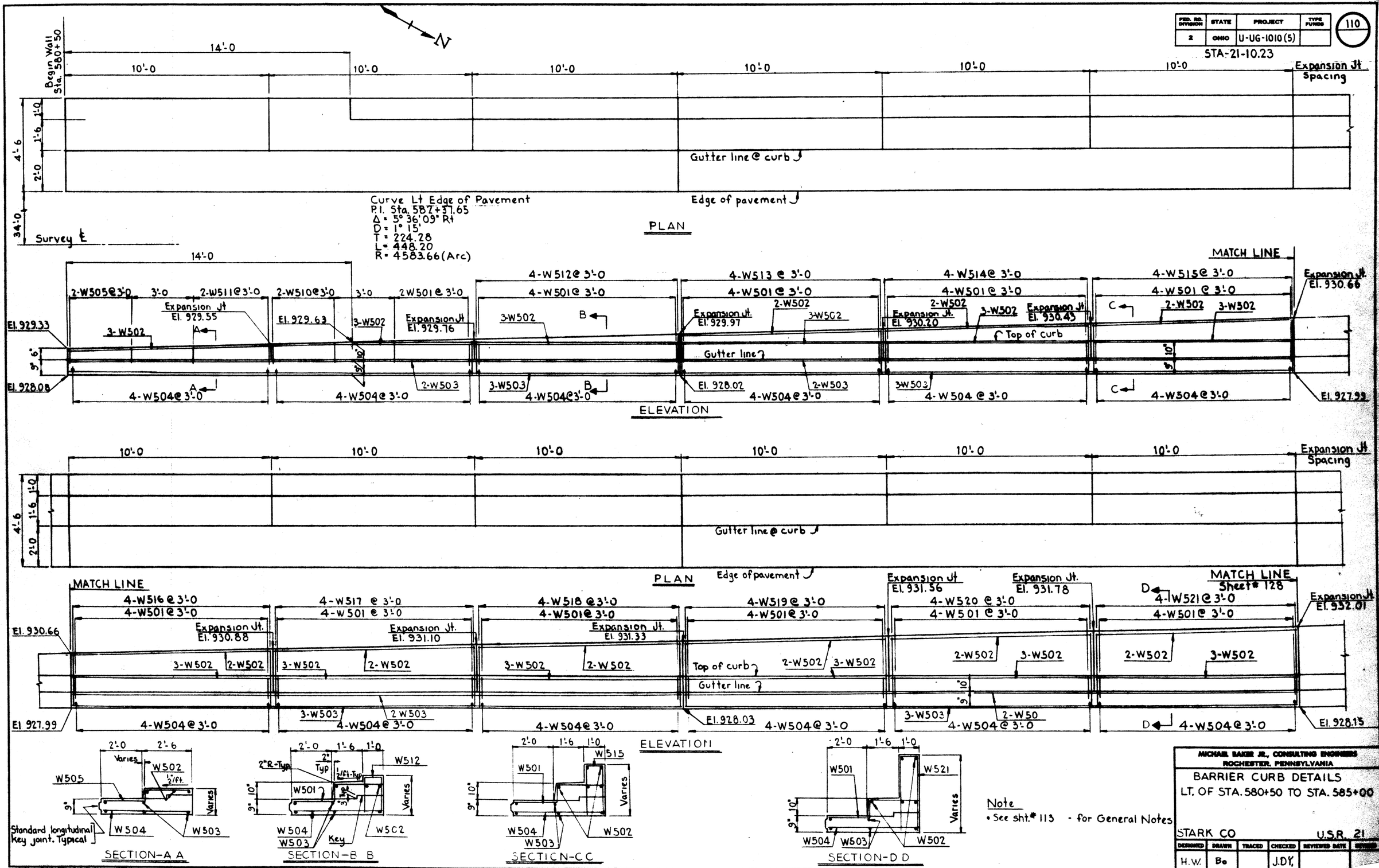
RETAINING WALL
Rt. of Sta. 583+50 to Sta. 584+43
STARK COUNTY U.S.R. 21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
	aw		HGW		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

110

STA-21-10.23



Note
- See sht.# 113 - for General Notes

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

BARRIER CURB DETAILS
LT. OF STA. 580+50 TO STA. 585+00

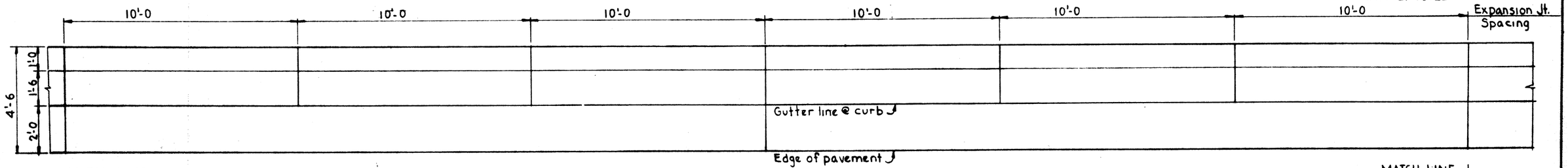
STARK CO U.S.R. 21

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
H.W.	Bo		J.D.Y.		

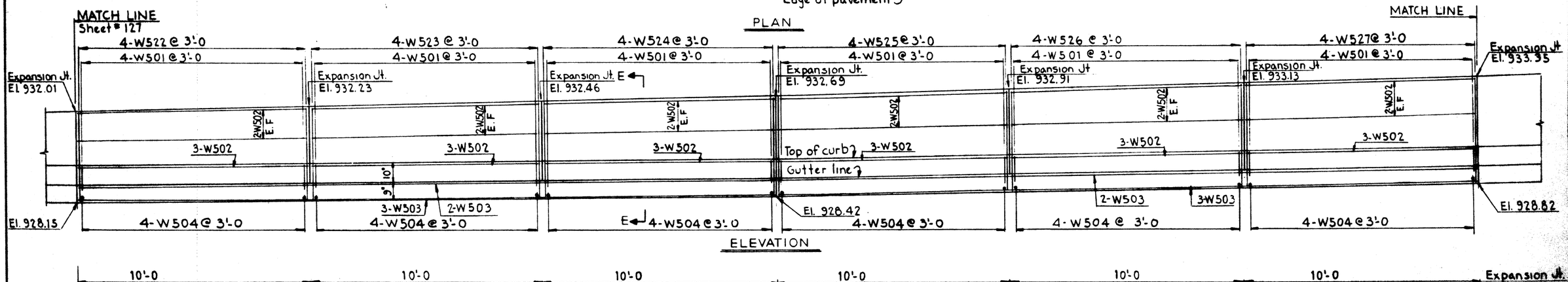
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

111

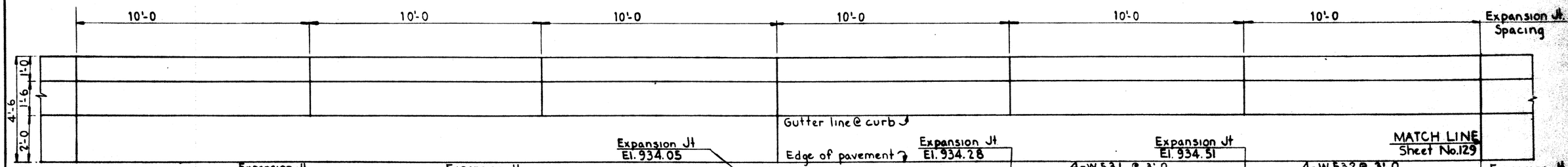
STA-21-10.23



PLAN

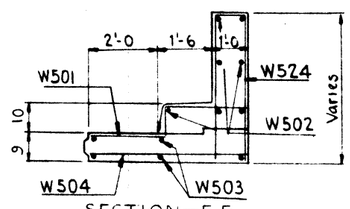


ELEVATION

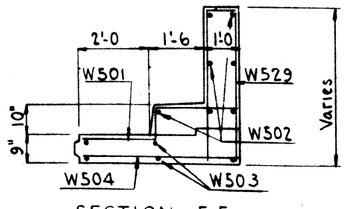


PLAN

ELEVATION



SECTION—E E



SECTION—F F

Note
See sht # 113 - for General Notes

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

BARRIER. CURB DETAILS
LT. OF STA. 580+50 TO STA. 585+00

STARK CO. U.S.R. 21

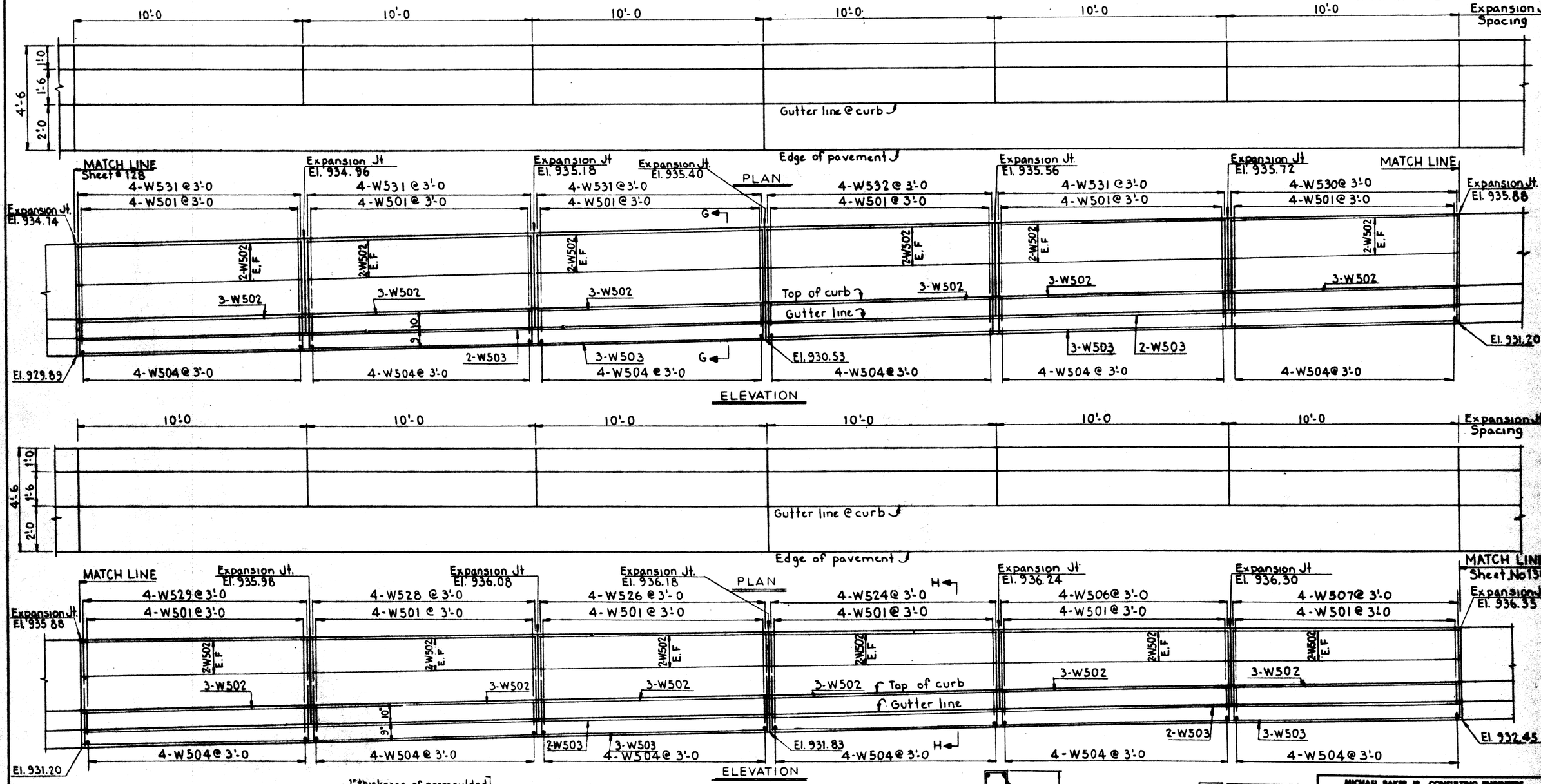
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
H.W	Bo.		J.D.K		

DENVER VALLEY ENGINEERING SUPPLIES COMPANY REGISTERED A-27001

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

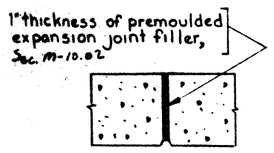
112

STA.- 21-10.23



★ ESTIMATED QUANTITIES

Item	Total	Units	Description
S-1	127	Cu Yds	Class "C" Concrete
S-4	7269	Lbs	Reinforcing Steel



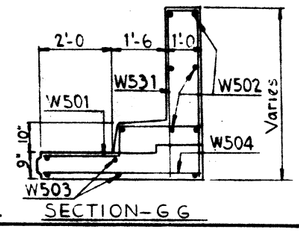
EXPANSION JOINT

Note

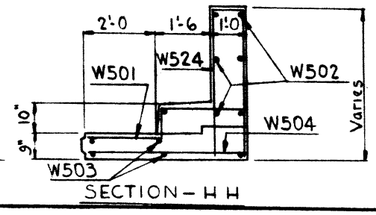
See sht. # 113 for General Notes

★ Basis of Payment:

This item shall be paid for at the contract unit price per linear foot bid for item I-12 Reinf. Comb. barrier curb and gutter, as per plan, which price and payment shall constitute full compensation for all materials and work necessary to complete this item. Length measured at back face of wall.



SECTION - G G



SECTION - H H

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

BARRIER CURB DETAILS
LT. OF STA. 580+50 TO STA. 585+00

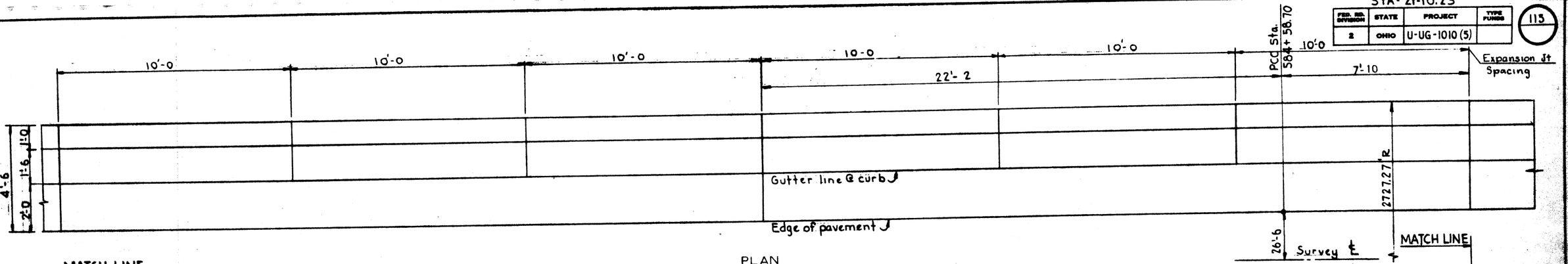
STARK CO U.S.R. 21

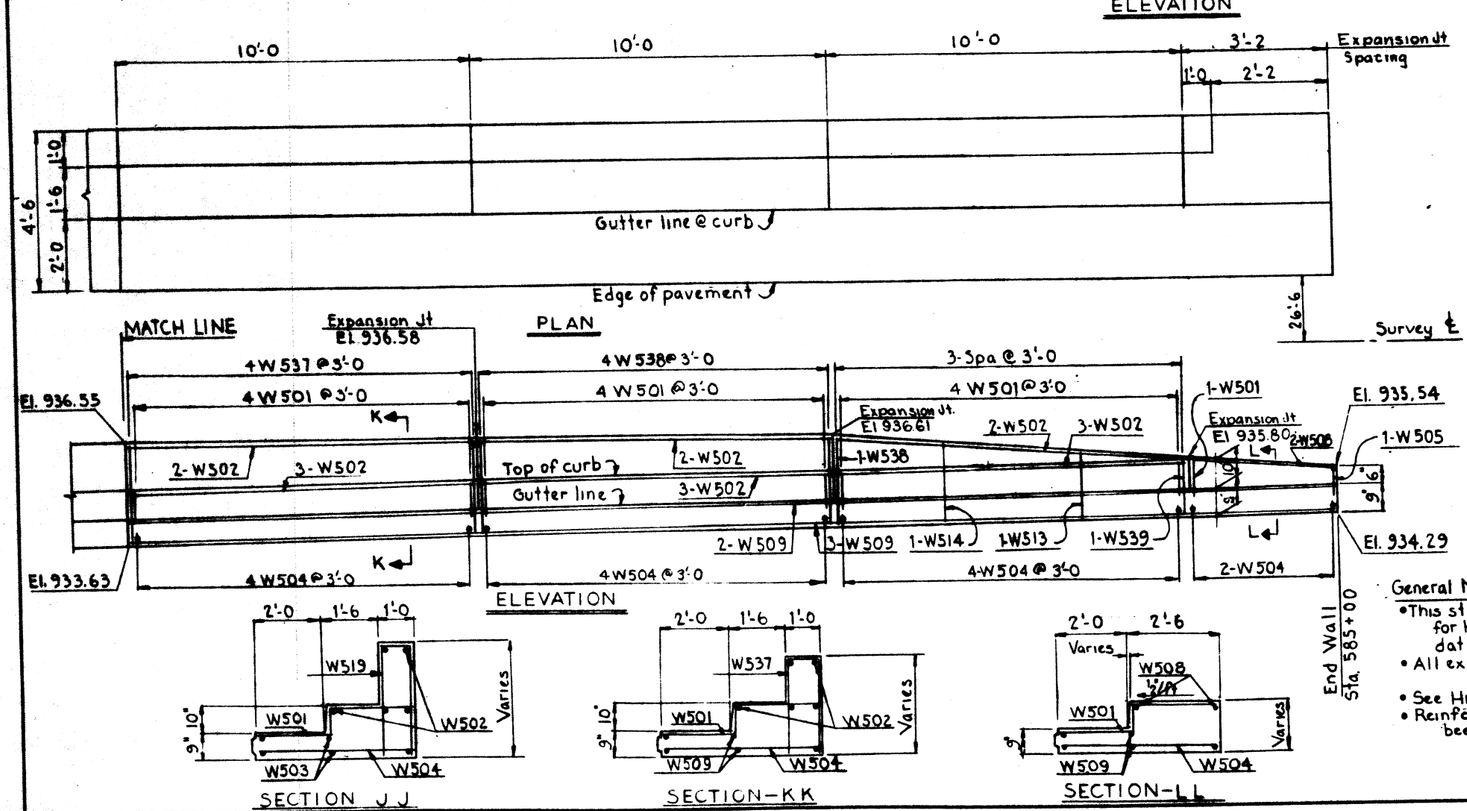
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
H.W	Bo		J.D.Y		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010 (5)	

113

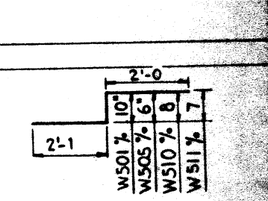
STA. 21+10.25





REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shp	Mark	No	Length	Weight	Shp
W501	175	4'-6	852#	B	W521	4	7'-1	30	B
W502	267	9'-8	2692	S	W522	4	7'-5	31	B
W503	70	29'-8	1436	S	W523	4	7'-9	32	B
W504	182	4'-2	791	S	W524	8	8'-1	67	B
W505	3	4'-4	14	B	W525	4	8'-3	34	B
W506	4	7'-11	33	B	W526	8	8'-5	70	B
W507	4	7'-7	32	B	W527	4	8'-7	36	B
W508	2	2'-10	6	S	W528	8	8'-9	73	B
W509	5	32'-10	171	S	W529	8	8'-11	74	B
W510	2	4'-6	9	B	W530	8	9'-1	76	B
W511	2	4'-5	9	B	W531	24	9'-3	232	B
W512	4	3'-1	13	B	W532	8	9'-5	79	B
W513	5	3'-7	19	B	W533	4	7'-3	30	B
W514	5	4'-1	21	B	W534	4	6'-11	29	B
W515	4	4'-7	19	B	W535	4	6'-7	27	B
W516	4	5'-1	21	B	W536	4	5'-7	23	B
W517	4	5'-5	23	B	W537	4	5'-3	22	B
W518	8	5'-11	49	B	W538	5	4'-11	26	B
W519	8	6'-3	52	B	W539	1	2'-11	5	B
W520	4	6'-9	28	B					



8"	
3'-9" W506	3'-11" W528
3'-7" W507	4'-0" W529
1'-4" W512	4'-1" W530
1'-7" W513	4'-2" W531
1'-10" W514	4'-3" W532
2'-1" W515	4'-4" W533
2'-4" W516	4'-5" W534
2'-6" W517	4'-6" W535
2'-9" W518	4'-8" W536
2'-11" W519	4'-9" W537
3'-2" W520	4'-11" W538
3'-4" W521	5'-0" W539
3'-6" W522	
3'-8" W523	
3'-10" W524	

General Notes

- This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Dept of Highways dated 9-1-57 together with current revisions there of.
- All exposed surfaces shall be finished as per Sec. I-12.09
- See Highway Plan - Sht. #28 for layout of curb & Highway.
- Reinforcing bars are to be fabricated from stock which has been tested by the Ohio Highway Testing Laboratory.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

BARRIER CURB DETAILS
LT. OF STA. 580+50 TO STA. 585+00

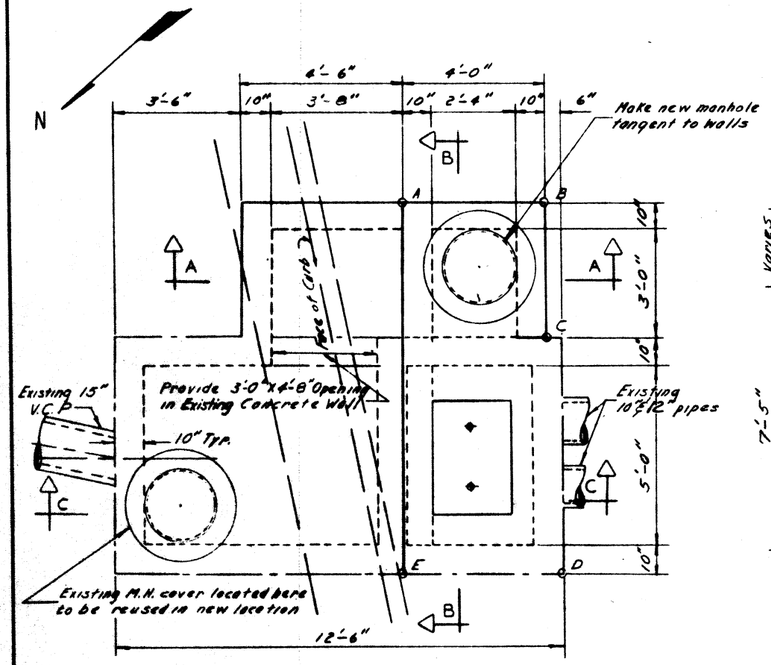
STARK CO. U.S.R. 21

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	
HGW	BO		J.D.Y.		

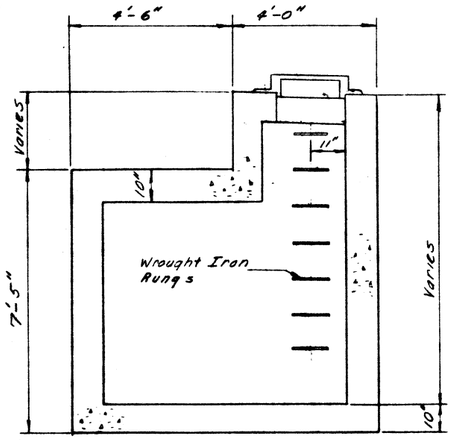
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

114

STARK COUNTY
STA. 21-10.23

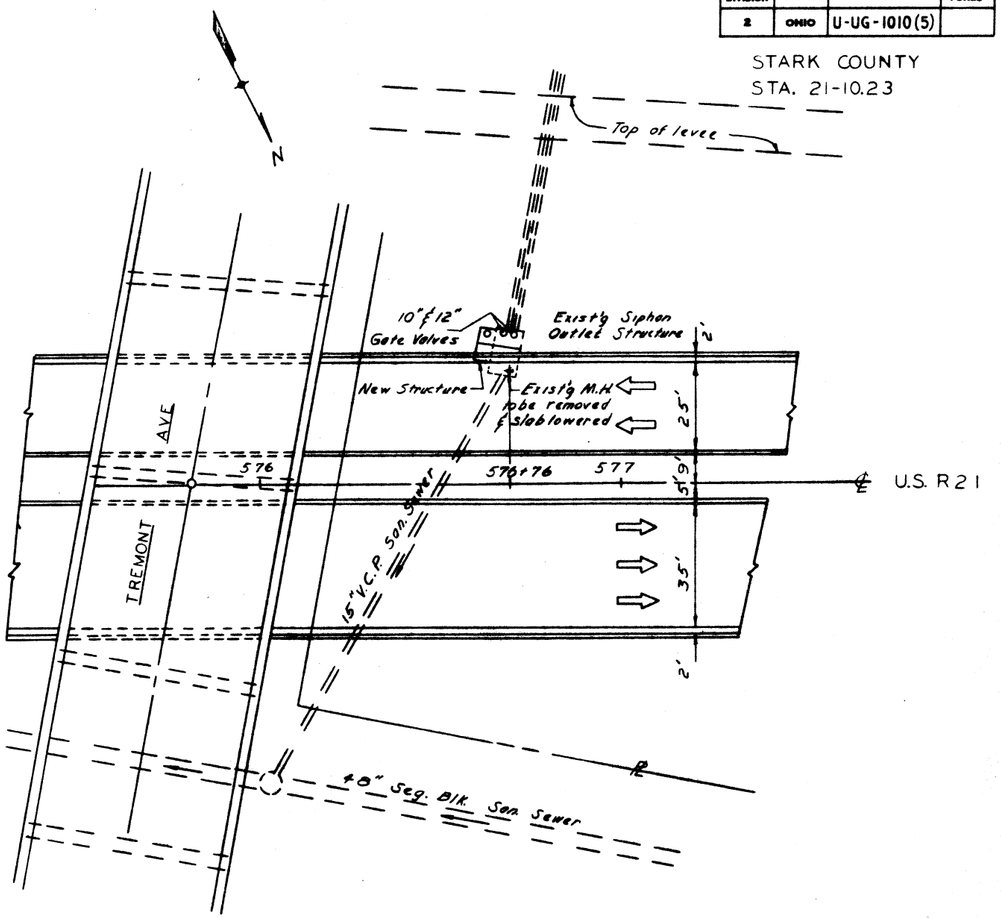


PLAN

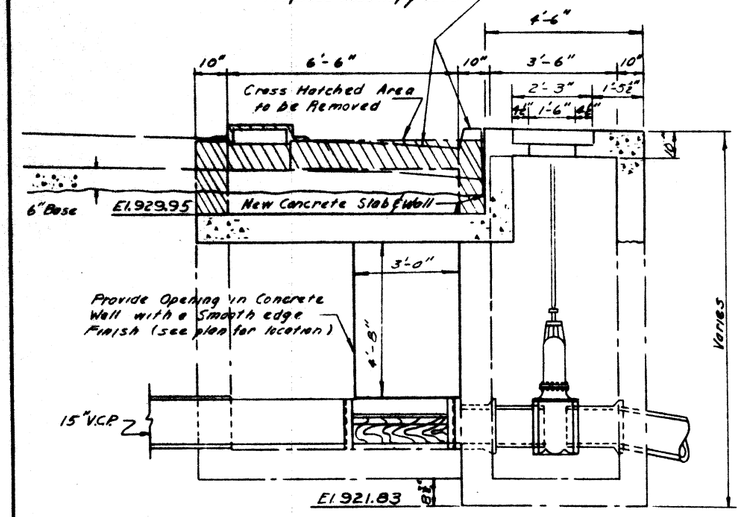


SECTION A-A

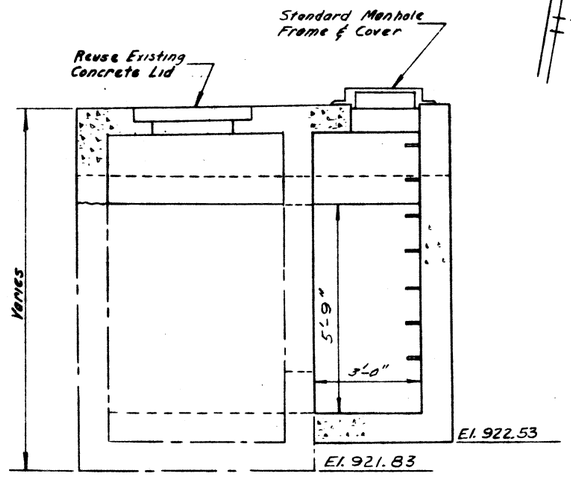
Top of slab elevations	
A	932.15
B	931.97
C	931.91
D	931.87
E	932.08



LOCATION PLAN



SECTION C-C



SECTION B-B

- Ref. Highway Plan - Sht # 26

For special drainage structure notes, see Sheet 118-A.

For details and estimated quantities see sht. # 115

- Existing 15" V.C.P., 10" & 12" pipe valves & lower portion of existing structure is to remain in place.

Sheet 1 of 2

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

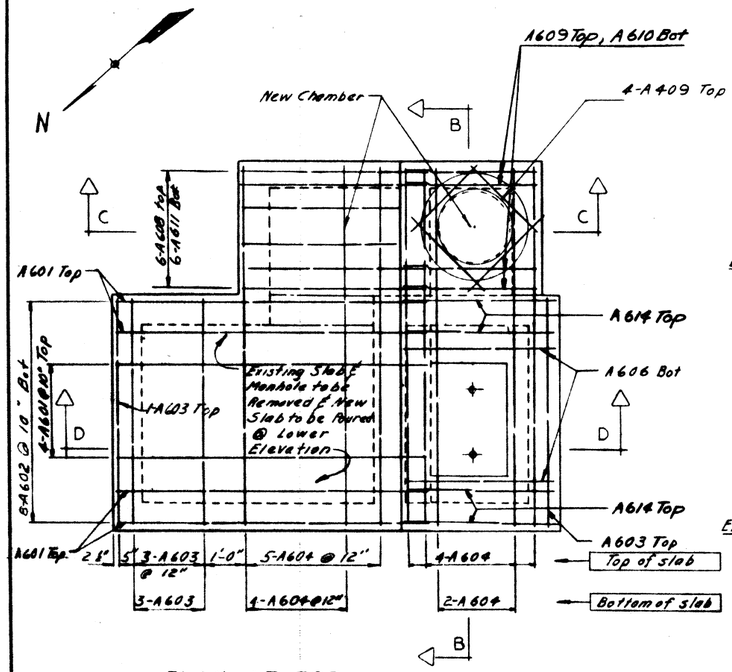
ALTERATIONS TO TREMONT AVE.
SIPHON OUTLET STRUCTURE
RELOCATION OF U.S. ROUTE 21
STARK COUNTY Sta. 576+76

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	SHEET
S.J.F.	S.J.F.		W.A.K. D.W.P.		

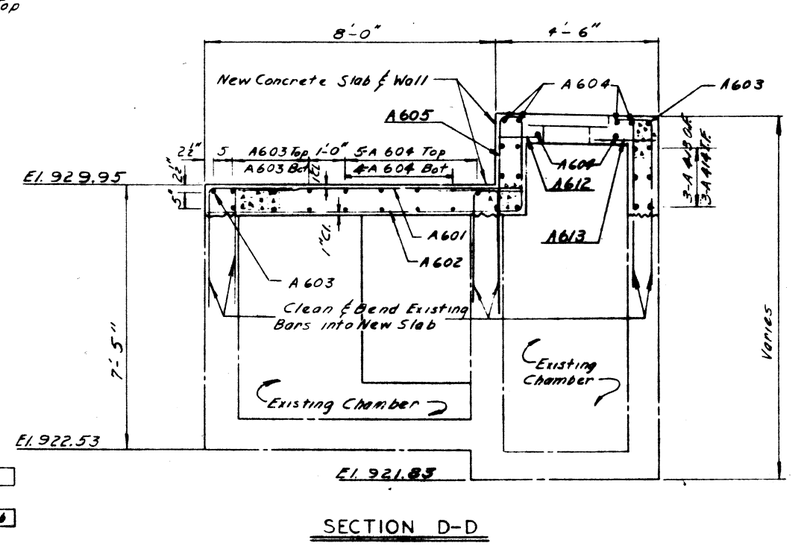
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

115

STARK COUNTY
STA. 21-10.23



PLAN AT TOP



SECTION D-D

ESTIMATED MAJOR QUANTITIES

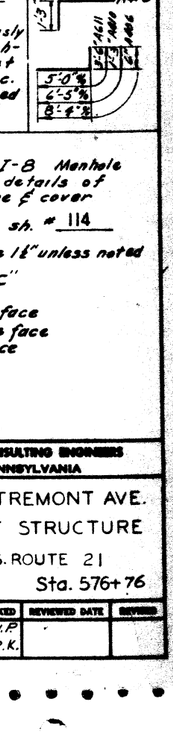
Item	Total	Unit	Description
E-2	32	cu. yd.	Unclassified excavation
S-1	10	cu. yd.	Class "C" concrete
S-4	1965	lbs.	Reinforcing steel
S-22	6	cu. yd.	Removal of portions of exist. Structure

ESTIMATED QUANTITIES (TO GENERAL SUMMARY)
Item Special – "Alterations to Tremont Avenue Siphon Outlet Structure" Lump Sum

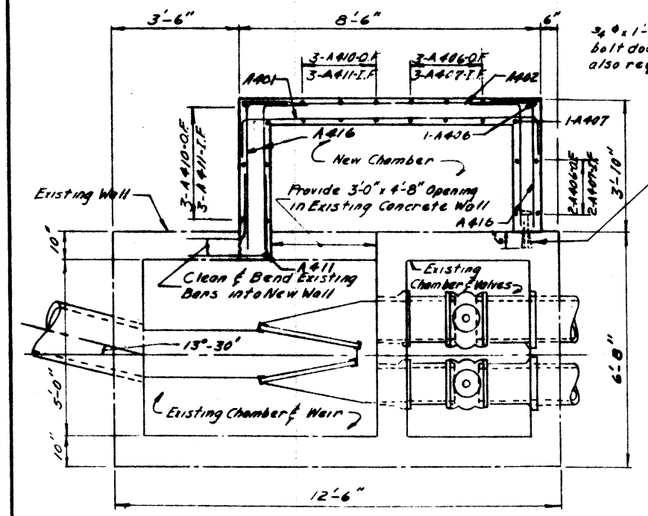
REINFORCING STEEL LIST

Mark	No.	Length	Weight	Shape	Bending Diagrams
A401	8	10'-6"	56	B	
A402	8	8'-2"	44	S	
A403	3	12'-2"	24	B	
A404	3	10'-2"	20	B	
A405	12	3'-3"	26	B	
A406	6	8'-9"	35	B	
A407	6	8'-4"	33	S	
A408	6	3'-8"	15	S	
A409	4	2'-3"	6	S	
A410	6	7'-7"	30	B	
A411	7	6'-5"	30	S	
A412	6	5'-6"	22	B	
A413	3	17'-10"	36	B	
A414	3	21'-10"	44	B	
A415	12	1'-11"	15	S	
A416	32	4'-10"	103	B	
A601	8	8'-6"	182	S	
A602	8	10'-11"	131	B	
A603	8	6'-4"	76	S	
A604	15	10'-2"	229	S	
A605	6	2'-10"	26	B	
A606	2	4'-2"	13	S	
A607	6	8'-2"	74	S	
A608	6	5'-0"	45	S	
A609	4	8'-5"	51	B	
A610	4	3'-8"	22	S	
A611	6	7'-4"	66	B	
A612	4	1'-0"	6	S	
A613	8	1'-9"	21	S	
A614	4	8'-11"	54	B	
Replacement Bars					
RE400	1	5'-3"		S	
RE600	1	5'-10"		S	

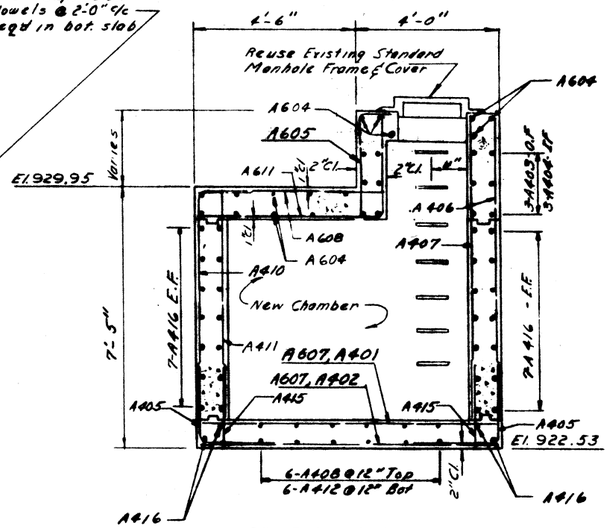
- Bar size is indicated in the bar mark. The first digit indicates the bar size number.
- Replacement Bars: If reinforcing bars are fabricated from stock which has previously been tested by the Ohio Highway Testing Laboratory, test samples as provided in Sec. S-4.02 need not be furnished and replacement bars will not be required.



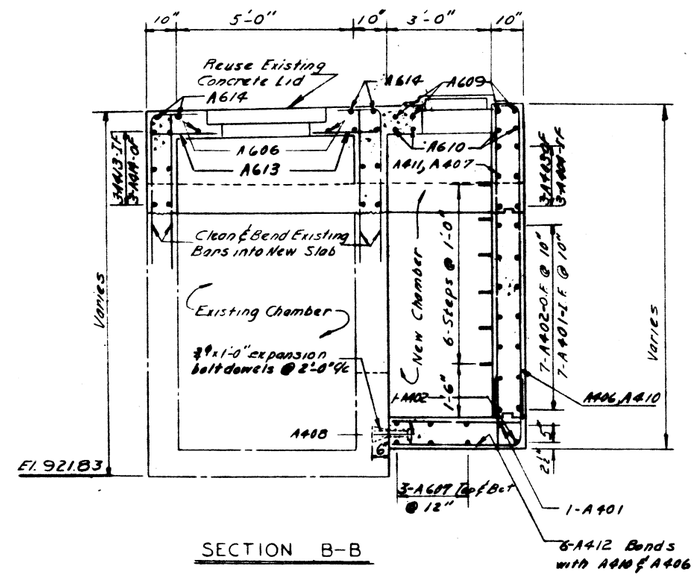
- See Ohio Std. Drawing I-B Manhole No 1 dated 5-1-52 for details of steps & manhole frame & cover
- For Location Plan see sh. # 114
- Cover for reinforcing tobe 1½" unless noted
- Concrete to be class "C"
- Legend – I.F. = inside face
  O.F. = outside face
  E.F. = each face



PLAN AT ELEVATION 927.00



SECTION C-C



SECTION B-B

Sheet 2 of 2

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

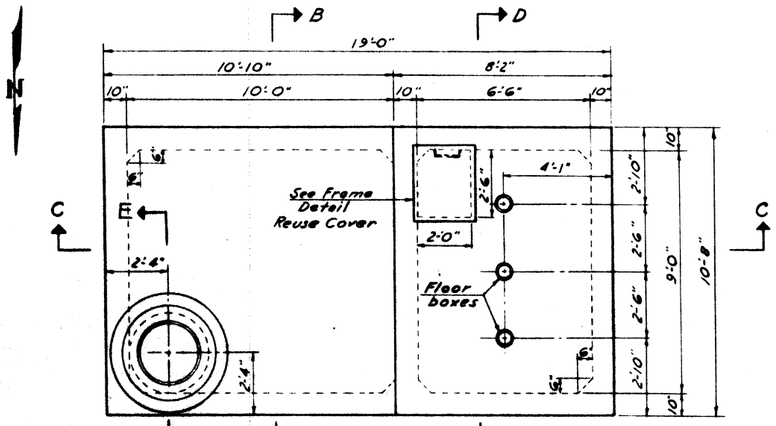
ALTERATIONS to TREMONT AVE.
SIPHON OUTLET STRUCTURE
RELOCATION OF US. ROUTE 21
STARK COUNTY Sta. 576+76

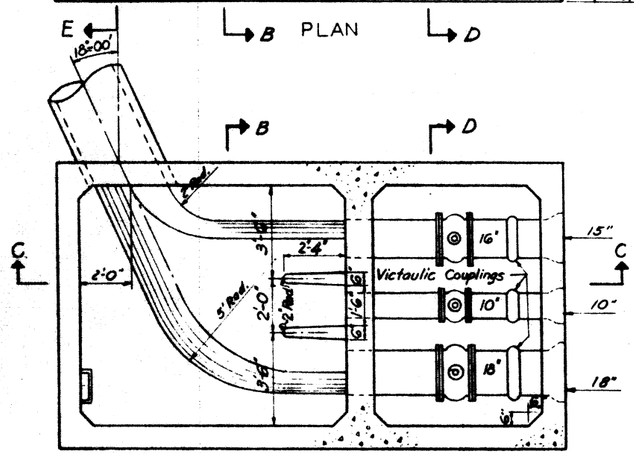
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
S.J.F.	S.J.F.		D.W.P. W.A.K.		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

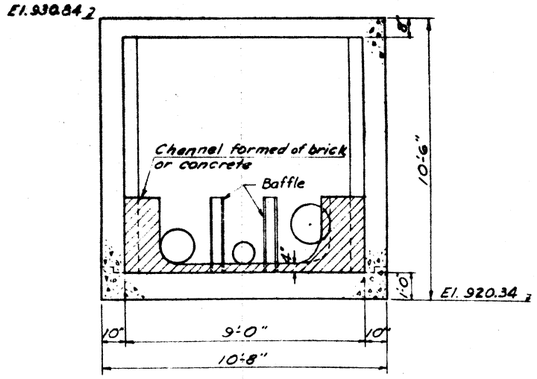
116

STA. - 21 - 10.23

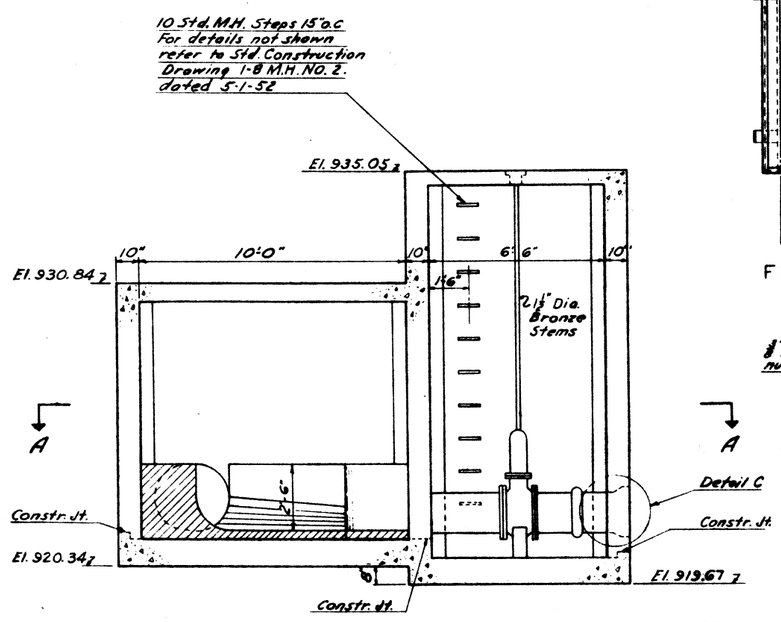




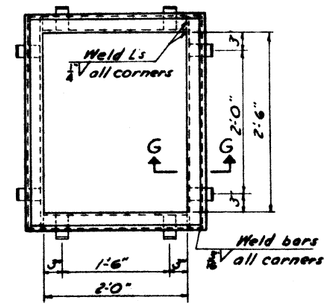
SECTION A-A



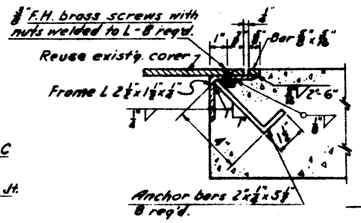
SECTION B-B



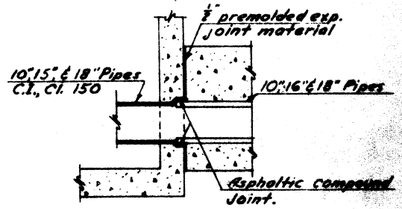
SECTION G-C



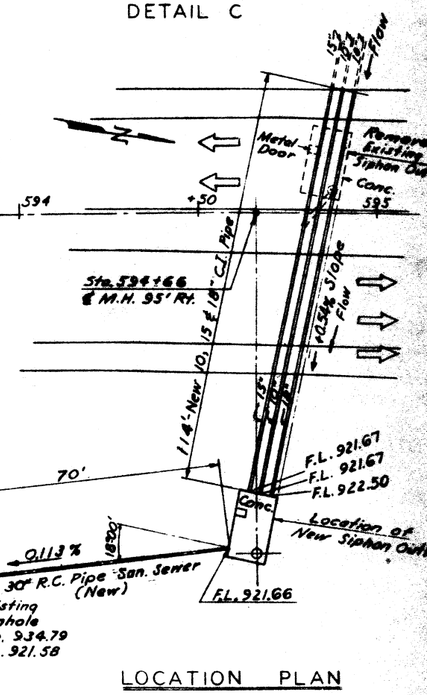
FRAME DETAIL
Scale 1"=1'-0"



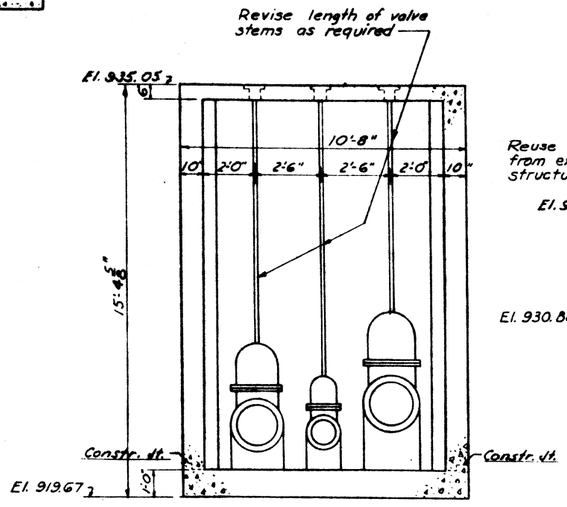
SECTION G-G



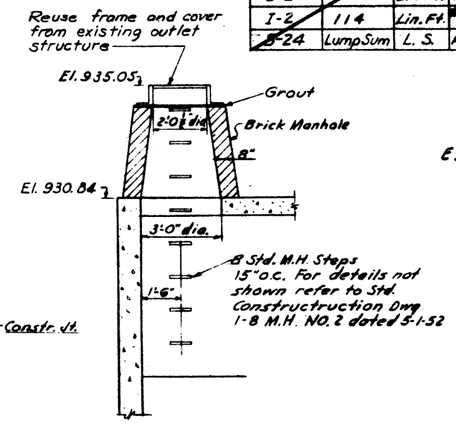
DETAIL C



LOCATION PLAN



SECTION D-D



SECTION E-E

LIST OF MAJOR QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION
E-2	147	Cu. Yds.	Unclassified excavation
E-2	1400	Sq. Ft.	Cofferdams, cribs and sheeting
S-1	39	Cu Yds	Concrete for structures, Class "C"
S-4	6109	Lbs	Reinforcing steel
Special	Lump Sum	Lump Sum	Remove, recondition, & install existing valves and couplings
I-8	One	Each	Brick manhole as per plan
I-2	70	Lin. Ft.	30" Conc. san. Sewer pipe, Su M6&C
I-2	114	Lin. Ft.	10" C.I. pipe - Mech. Joint, Class 150
I-2	114	Lin. Ft.	15" C.I. pipe - Mech Joint, Class 150
I-2	114	Lin. Ft.	18" C.I. pipe - Mech Joint, Class 150
S-24	Lump Sum	L. S.	Removal of existing outlet structure

ESTIMATED QUANTITIES (TO GENERAL SUMMARY)

Item Special - Cherry Road Siphon Outlet Structure — Lump Sum

- Ref. Highway Plan - Sht # 30
- Cherry Road Siphon - Profiles - sht 118

Gate valves and couplings shall be removed from existing siphon outlet structure, cleaned, repaired if necessary and reused.

Sheet 1 of 2

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

CHERRY ROAD SIPHON OUTLET STRUCTURE RT. OF STATION 594+66

STARK COUNTY — U.S.R. 21

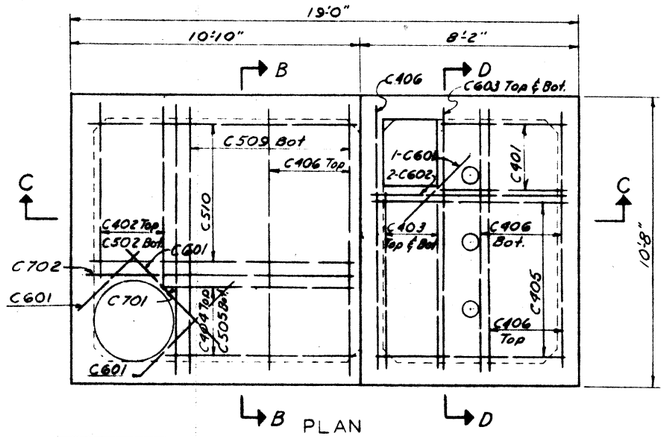
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
C.C.D.	O.W.		D.W.P. S.J.F.		

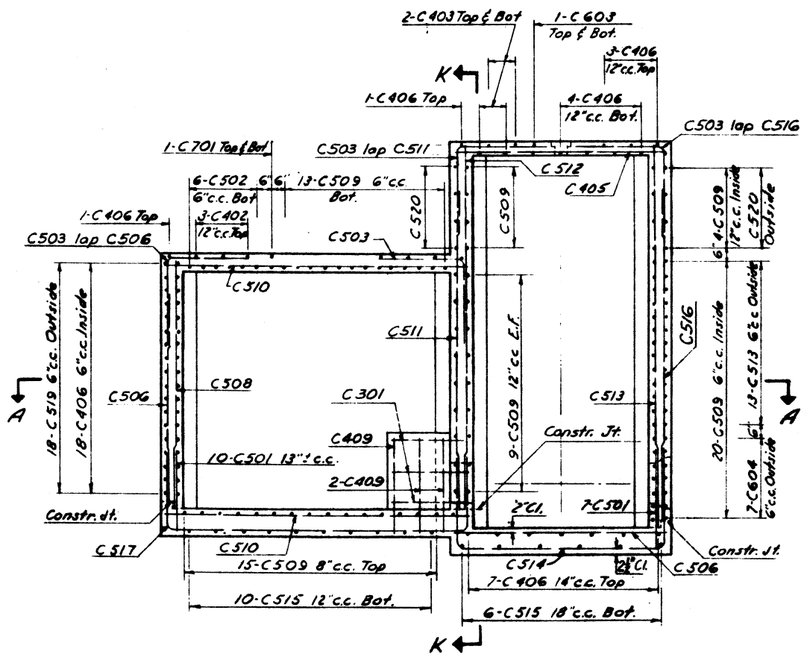
GRAVE VALLEY ENGINEERING SUPPLIES COMPANY REORDER S-27001

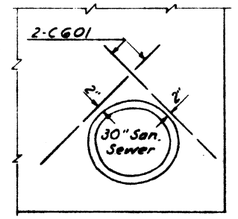
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

117

STA.- 21 - 10.23







ELEVATION H-H

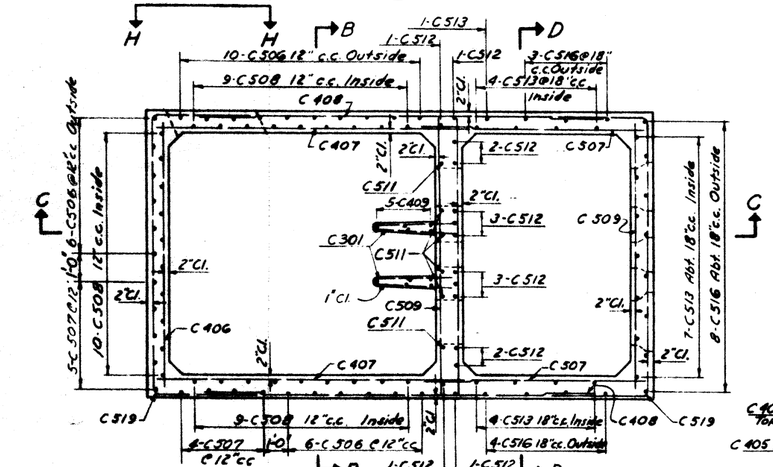
REINFORCING STEEL LIST

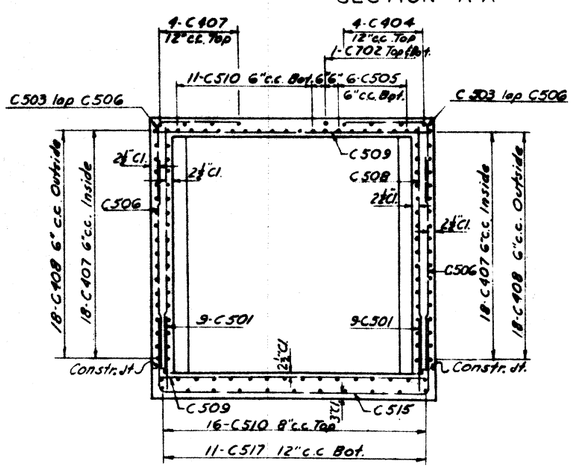
Mark	No.	Length	Weight	Shape	Bending Diagram
C401	8	4'-9"	25#	Str.	
C402	3	6'-3"	13	Str.	
C403	4	6'-9"	18	Str.	
C404	4	7'-3"	19	Str.	
C405	19	7'-9"	99	Str.	
C406	38	10'-3"	260	Str.	
C407	10	11'-3"	300	Str.	
C408	36	14'-9"	355	Str.	
C501	43	2'-9"	123	Str.	
C502	6	6'-3"	39	Str.	
C503	46	6'-3"	313	Bent	
C504	4	6'-3"	26	Str.	
C505	6	7'-3"	45	Str.	
C506	46	7'-9"	372	Str.	
C507	29	8'-6"	257	Str.	
C508	28	9'-3"	270	Str.	
C509	74	10'-3"	791	Str.	
C510	27	11'-3"	317	Str.	
C511	6	12'-0"	75	Str.	
C512	14	13'-4"	195	Str.	
C513	16	14'-0"	234	Str.	
C514	13	13'-3"	181	Bent	
C515	16	14'-8"	245	Bent	
C516	15	12'-5"	194	Str.	
C517	11	15'-8"	180	Bent	
C519	31	17'-6"	566	Bent	
C520	8	19'-7"	164	Bent	
C601	8	6'-0"	72	Str.	
C602	2	7'-9"	23	Str.	
C603	2	10'-9"	31	Str.	
C604	7	17'-5"	183	Bent	
C701	2	10'-9"	42	Str.	
C702	2	11'-9"	46	Str.	
C301	6	5'-8"	13	Bent	
C409	10	3'-6"	23	Str.	
TOTAL WEIGHT			6109#		

BAR SIZE is indicated in the bar mark. The first digit indicates the bar size number. For example, C512 is a No. 5 size bar

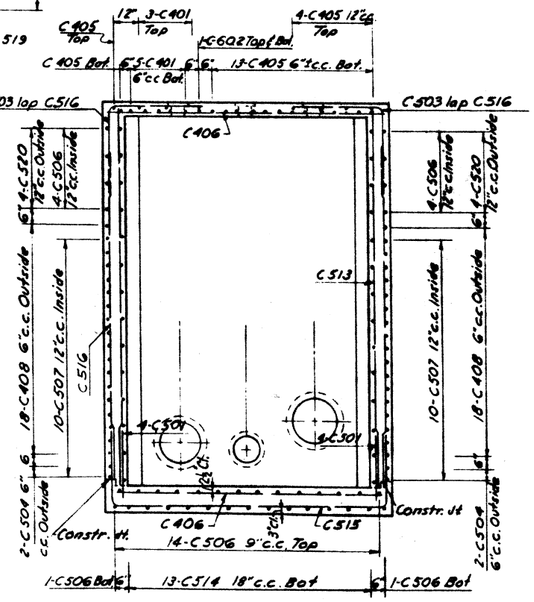
Replacement Bars				
Mark	No.	Length	Weight	Shape
RE400		5'-3"		Str.
RE500		5'-6"		Str.
RE600		5'-10"		Str.
RE700		6'-2"		Str.

Replacement Bars: If reinforcing bars are fabricated from stock which has previously been tested by the Ohio Highway Testing Laboratory, test samples as provided in Sec. 5-4.02 need not be furnished and replacement bars will not be required.

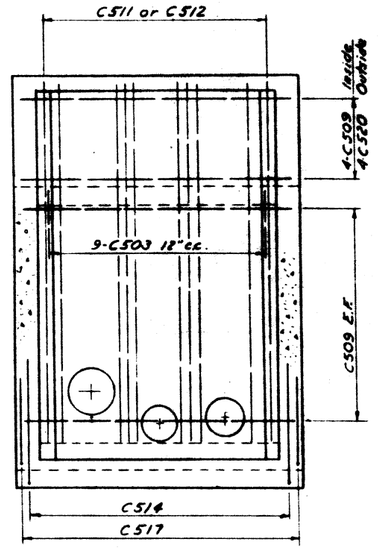




SECTION B-B



SECTION D-D



SECTION K-K

NOTES:

All Concrete shall be class "C" (f'_c = 4000 psi)
All reinforcing steel to have 1½" cover unless otherwise shown.
Reinforcing bars may be rotated, bent or cut in the field to clear pipes. Cut pieces shall be used to frame around pipes.
Min laps 30 bar diameters.
For special drainage structure notes, see Sheet 118-A.

Sheet 2 of 2

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

CHERRY ROAD SIPHON
OUTLET STRUCTURE
RT. OF STATION 594+66

STARK COUNTY USR 21

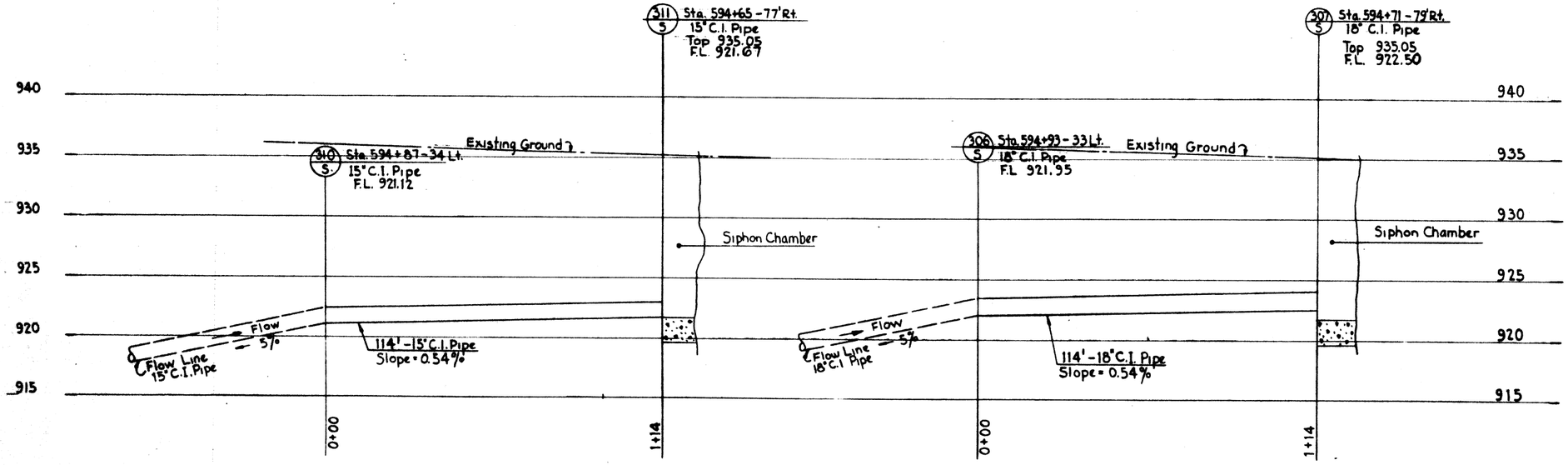
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
C.C.D.	.Q.W.		D.W.P. S.J.F.		

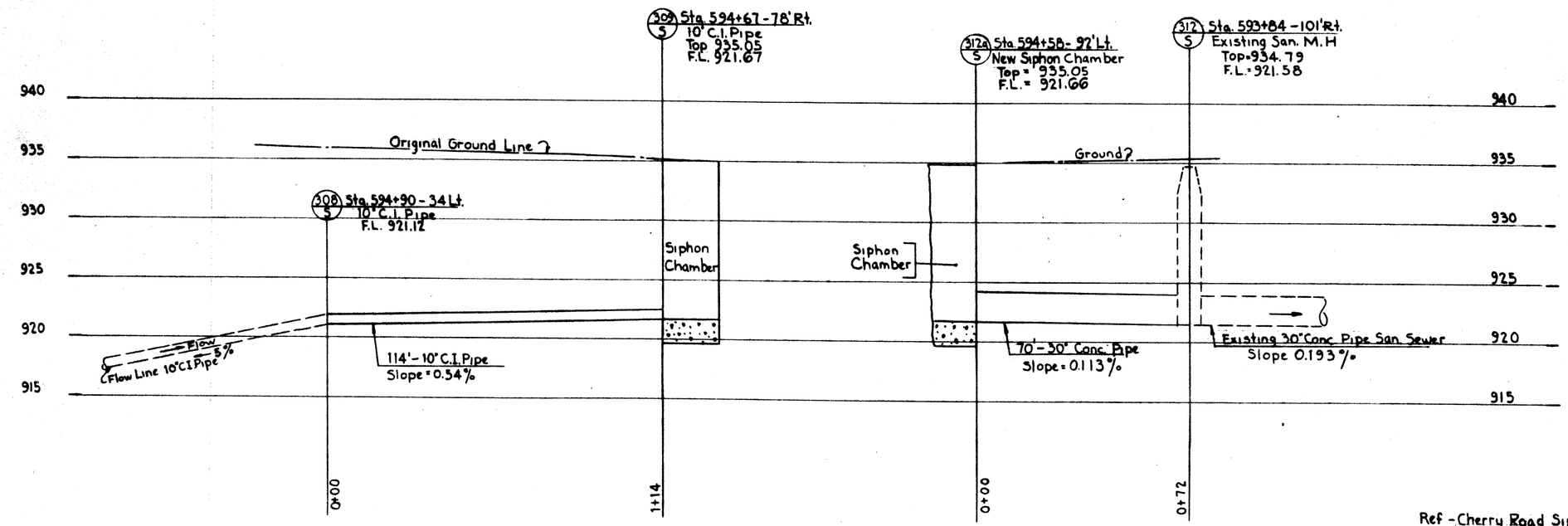
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY BEAVER, PA. 15009

FED. AID DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

118

STA - 21 - 10.23





Ref - Cherry Road Siphon Struct.
Sht. 116 & 117

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

CHERRY ROAD SIPHON
PROFILE

STARK CO. U.S.R. 21

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
	Bo		DWP		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

STA.- 21 - 10.23

118A

GENERAL NOTES - SPECIAL DRAINAGE STRUCTURES AND SANITARY SEWERS

GENERAL PROVISIONS FOR SPECIAL DRAINAGE STRUCTURES

All work in connection with the removal, relocation, alteration, rebuilding or extension of existing special drainage structures on this project shall, unless otherwise specified, conform to the following specifications :

1. Excavation, backfill, pumping, dewatering and provision of necessary cofferdams, cribs and sheeting shall conform to the requirements of Item E-2.
2. Preparation and placement of Portland cement concrete, and concrete classes indicated shall be governed by and conform to the provisions of Item S-1.
3. Material requirements and placement of reinforcing steel shall conform to the provisions of Item S-4.
4. Removal of portions of existing structures remaining in place shall be governed by the provisions of Item S-22.
5. Excavation for, placement of, and backfill for proposed pipes, shall be in accordance with Item I-2 specifications for Storm Sewers Under Pavement or Approaches. Basic material for each run of pipe shall be as indicated on the plans.
6. Construction of, and materials for, proposed manholes shall meet the requirements of Item I-8.
7. Electric work, unless otherwise indicated, shall conform to the requirements of Item S-25.
8. Materials for, and installation of, expansion joint filler and copper water stops shall be governed by the provisions of Item S-9.
9. Materials for, and placement of, porous backfill shall conform to the requirements of Item S-29.
10. Any component item not specifically indicated to be removed and which is damaged or destroyed by the Contractor's operations shall be replaced by him at no expense to the State. Any mechanical item removed by the Contractor during construction and which is to be reinstalled may be replaced in kind by the owner at the owners expense. Installation of items so replaced shall be in accordance with these specifications.

STORM SEWERS (SANITARY)

8" and 48" Storm sewers (Sanitary) shall be constructed as described on Sheet No. 9 and, in addition, shall meet the following requirements :

1. TEST FOR WATER TIGHTNESS

The maximum allowable infiltration into the completed sewer shall be 1000 gallons per day, per inch of diameter, per mile of pipe. Infiltration in excess of the specified rate shall be considered sufficient cause for the rejection of the work.

Infiltration tests shall be made on sections of completed sewer as directed by the Engineer. The first test shall be made immediately after the first section of sewer pipe is laid between adjacent manholes to demonstrate that infiltration requirements are met before proceeding with additional pipe laying. The minimum section to be tested shall be approximately 500 feet, or between manholes, the maximum approximately 1200 feet. The time at which the test shall be run and the detailed methods proposed by the Contractor shall be approved by the Engineer. The length of each test shall be not less than 30 minutes nor more than 60 minutes. If workmanship demonstrates, and one or more tests show that the standard of water tightness specified herein is being obtained, the Engineer may waive as much of the remaining testing as may be indicated.

The Contractor shall furnish all labor, materials and equipment necessary to conduct the infiltration tests, including water, pumps, hose, etc. This work shall be considered to be a part of Item I-2. Payment for testing shall be included in the contract unit price bid for Items I-2, 48" Storm Sewer (Sanitary), Sec. M-6.6 (b) or Sec. M-6.6 (c) as per plan or Item I-2, 8" Storm Sewer (Sanitary), Sec. M-6.8 (b) as per plan.

ALTERATIONS TO SIPPO CREEK CONDUIT & PUMPING STATION

All work indicated on Sheets No. 97 through 105, unless separately itemized, shall be performed in accordance with the general provisions indicated above, with the following additions :

1. New steel grating shall be Kerrigan, Reliance, or approved equal, with 1¼" x 3/16" Bearing bars @ 13/16" c/c - as per Item S-7.

2. Existing trash screen frame may be cleaned, repaired if necessary, and reused. If new trash screen frame is furnished, it shall be of the same section as existing frame and its construction shall be governed by the provisions of Item S-7, using copper bearing steel.

3. Existing cast iron sluice gate frames are considered to be very difficult to remove in usable condition and therefore new frames may be obtained either from the sluice gate manufacturer, Morse Brothers Machinery Company, if available, or cast locally. In the latter event, the frames will have to be removed carefully and completely for pattern purposes. Material for casting shall have a minimum tensile strength of 30,000 psi and shall conform to Sec. M-7.8. Manufacturers designation for 6'x6' sluice gate is Perkul Model 45; for 3'x5' sluice gate is also Perkul Model 45.

4. New railing, where required, shall be made of 1½" ϕ standard weight welded or seamless steel pipe, galvanized after fabrication, as per Item S-14. Joints shall be flush welded type.

5. Field painting of new and reused steel shall be in accordance with Item S-8.

6. Replacement or extension parts for sluice gate operating mechanism shall be of same section and material as existing.

7. Materials for and placement of ladders shall conform to the requirements of Item I-8.

8. It is anticipated that the existing flap valve on 12" pipe discharging thru retaining wall will be reusable at the new location. If its condition should prove unsatisfactory for reuse, a new valve shall be furnished and installed. New valve, if furnished, shall be Neenah Series 5050 or Armco Model 10-C valve or approved equal.

9. Reinforced concrete sewer section between manholes as shown on Sheet No. 102 shall be tested for water tightness as indicated on this sheet for 48" sanitary sewer.

10. Basis of Payment - The lump sum price bid for "Item Special - Alterations to Sippo Creek Conduit and Pumping Station" shall constitute full compensation for altering the conduit and pumping station as detailed, for removing portions of the existing pressure conduit, including gatewell, trash screens, and inlet facilities, for building new sewer transition section, manholes, conduit, gatewell, inlet structure and retaining wall, installing new 12" and 54" pipe and ladders, resetting sluice gates and trash screens, altering manual gate controls, for excavation, backfill, concrete, reinforcing steel, structural steel, joint materials, porous backfill and railing, for alterations to pump station electrical service, for maintaining conduit and sewer flow, for construction, maintenance and removal of flood protection, for testing as specified, and for all labor, equipment, tools and incidentals necessary to complete this item.

RELOCATION OF FEDERAL AVENUE PUMP STATION

All work indicated on Sheets No. 106 through 108, unless separately itemized, shall be performed in accordance with the general provisions indicated above, with the following additions :

1. Packing for 60" corrugated metal pipe extensions shall be in accordance with Sec. M-10.08, Bituminous Joint Sealer.

2. TESTING OF PUMP STATION OPERATION : Before beginning construction, Contractor shall test operation of existing electrical and mechanical equipment at its present location. After moving building, aligning, reconnecting and leveling, similar tests shall be made. Contractor shall be responsible for making any adjustments necessary to produce comparable test results at the new location. Final testing will be observed by and shall meet with the approval of the Corps of Engineers, U.S. Army.

3. Construction and testing of, and materials for, pressure relief wells and piezometer tubes shall conform to notes in the Proposal. Testing of pressure relief wells will be under the joint supervision of the State of Ohio and the Corps of Engineers.

4. Basis of Payment - The lump sum price bid for "Item Special - Relocation of Federal Avenue Pump Station" shall constitute full compensation for excavation and backfill, removal of existing inlet structure and retaining wall, reinforced concrete foundation slab and pedestals or solid fill to support existing building at new location, new reinforced concrete inlet structure, the moving of existing building to new location, extension of 30" steel pipes Sec. M-6.9 from old to new location, the extension of 60" cast iron pipe with 12 Ga. 60" C.M.P. Sec. M-6.4 (d), the capping of existing pressure relief wells, new electrical grounds, testing of pump station operation, flood protection during construction, and for all materials, labor, equipment, tools and incidentals necessary to complete this item.

ALTERATIONS TO TREMONT AVENUE SIPHON OUTLET STRUCTURE

All work indicated on Sheets No. 114 and 115, unless separately itemized, shall be performed in accordance with the general provisions indicated above.

The lump sum price bid for "Item Special - Alterations to Tremont Avenue Siphon Outlet Structure" shall constitute full compensation for removing portions of the existing structure and rebuilding as detailed, for excavation and backfill, for furnishing and placing reinforcing steel and concrete, and for all labor, equipment, tools, and incidentals necessary to complete this item.

CHERRY ROAD SIPHON OUTLET STRUCTURE

All work indicated on Sheets No. 116 through 118, unless separately itemized, shall be performed in accordance with the general provisions indicated above, with the following additions :

1. TEST FOR WATER TIGHTNESS

The maximum allowable infiltration into the completed pipes shall be 1000 gallons per day, per inch of pipe diameter, per mile of pipe. Infiltration in excess of the specified rate shall be considered sufficient cause for the rejection of the work. Contractor shall test completed pipes as indicated for 48" sanitary sewer as directed by the Engineer.

2. Cast iron pipe shall be mechanical joint, Class 150, centrifugally cast in metal moulds in accordance to American Standard Specifications A 21.6 - 1953, or as amended. Cast iron pipe fittings and special castings shall conform to Standard Specifications for Cast Iron Pipe and Fittings, of the American Water Works Association and Federal Specification WW-P-421a where applicable.

The mechanical joint shall be of the stuffing box type. Each joint shall consist of :

(a) a bell cast integrally with the pipe or fitting and provided with an exterior flange having cored or drilled bolt holes and interior annular recesses for the sealing gasket and the spigot of the pipe or fitting.
(b) a pipe of fitting spigot.
(c) a sealing gasket.
(d) a separate cast iron follower gland having cored or drilled bolt holes.
(e) cast iron tee-head bolts and hexagon nuts.

The mechanical joint shall meet all applicable requirements of A.S.A. A 21.6 - 1953, or as amended, "Specifications for Cast Iron Pipe Centrifugally Cast in Metal Molds for Water or Other Liquids," and shall have the same pressure rating as the pipe or fitting of which it is a part.

3. Material for 30" concrete sanitary sewer pipe shall conform to Sec. M-6.6 (c).

4. The existing siphon outlet chamber shall be completely removed in accordance with Item S-24.

5. Basis of Payment - The lump sum price bid for "Item Special - Cherry Road Siphon Outlet Structure" shall constitute full compensation for furnishing, hauling and placing, ready for operation, the siphon outlet chamber, as detailed, cast iron siphon pipe and pipe specials, removal, repair and reinstallation of existing gate valves, stems, and guides, the 30" Sec. M-6.6 (c) discharge pipe, concrete, reinforcing steel, castings, joint materials, brick masonry, structural steel, excavation and backfill, for the testing specified, for making all connections, for removal of the existing chamber, and for all labor, equipment, tools and incidentals necessary to complete this item.

All component parts not specifically mentioned hereon or called for on the details, but which are required for a first class installation or satisfactory operation of the altered or relocated drainage structures shall also be furnished and placed and shall be considered as paid for as a part of the payment for each special "lump sum" item.

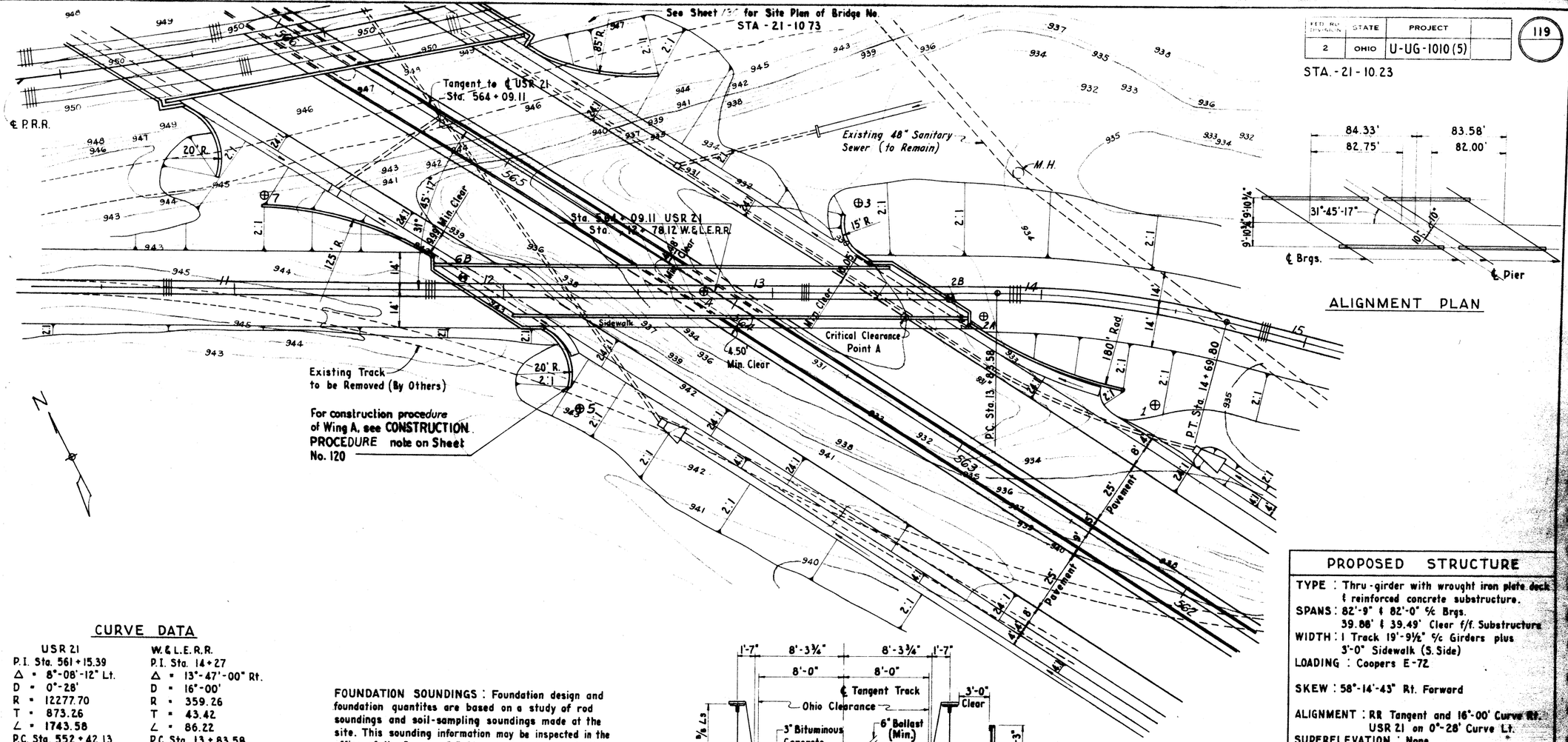
CAPPING OF EXISTING PRESSURE RELIEF WELLS AT FEDERAL AVENUE PUMP STATION

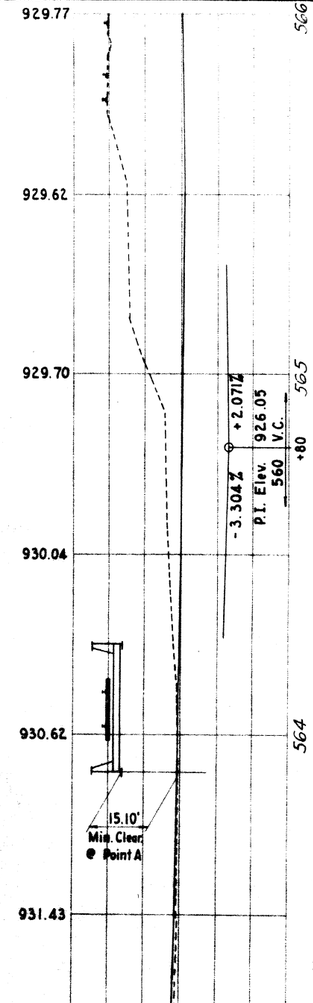
The existing discharge tee, discharge pipe, and portions of casing and flange cover above the tee shall be carefully removed and disposed of. The casing shall be cut off at least two feet below the proposed finished grade outside proposed pavement areas or at least two feet below the proposed subgrade elevation inside proposed pavement areas and capped with Class "E" concrete or an approved prefabricated cap.

FED. NO. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

119

STA. - 21 - 10.23



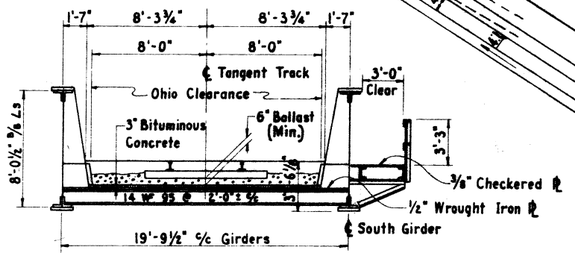


CURVE DATA

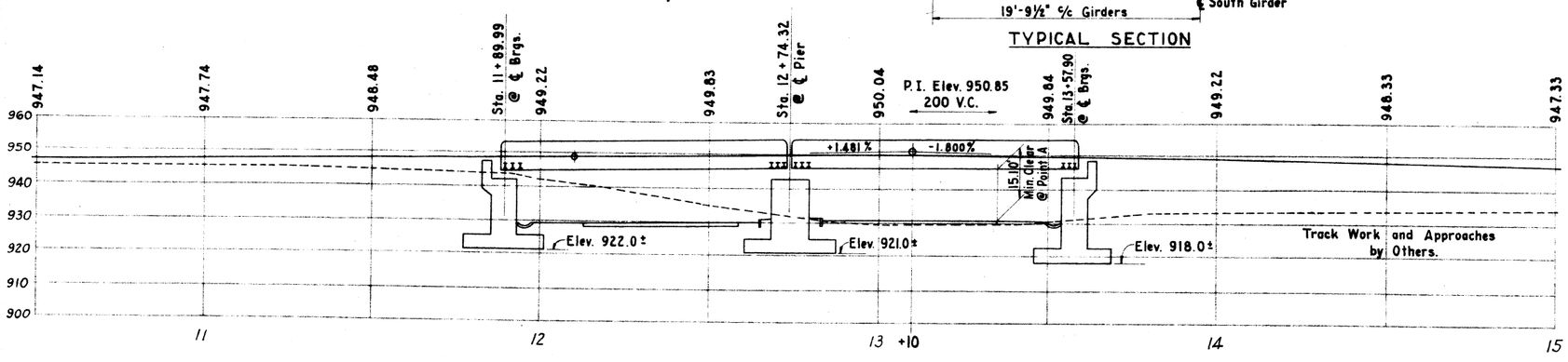
USR 21	W. & L.E.R.R.
P.I. Sta. 561 + 15.39	P.I. Sta. 14 + 27
Δ = 8°-08'-12" Lt.	Δ = 13°-47'-00" Rt.
D = 0°-28'	D = 16°-00'
R = 12277.70	R = 359.26
T = 873.26	T = 43.42
∠ = 1743.58	∠ = 86.22
P.C. Sta. 552 + 42.13	P.C. Sta. 13 + 83.58
P.T. Sta. 569 + 85.71	P.T. Sta. 14 + 69.80

FOUNDATION SOUNDINGS : Foundation design and foundation quantites are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus, or in the Division office, but the State assumes no responsibility for the accuracy thereof.

LEGEND ⊕ - Rod Sounding
⊖ - Core Boring



TYPICAL SECTION



PROPOSED STRUCTURE

TYPE : Thru-girder with wrought iron plate deck & reinforced concrete substructure.
SPANS : 82'-9" & 82'-0" ⅝ Brgs.
39.88' & 39.49' Clear f/f. Substructure
WIDTH : 1 Track 19'-9½" ⅝ Girders plus 3'-0" Sidewalk (S. Side)
LOADING : Coopers E-72
SKEW : 58°-14'-43" Rt. Forward
ALIGNMENT : RR Tangent and 16°-00' Curve Rt. USR 21 on 0°-28' Curve Lt.
SUPERELEVATION : None
DESIGN CRITERIA : A.R.E.A. Specifications
CLEARANCE : 15.10' Minimum - Vertical

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SITE PLAN
BRIDGE NO. STA.-21-1069
U.S.R. 21 UNDER W. & L.E. RR.

STARK COUNTY

SCALE : 1" = 20' STA. 564 + 09.11

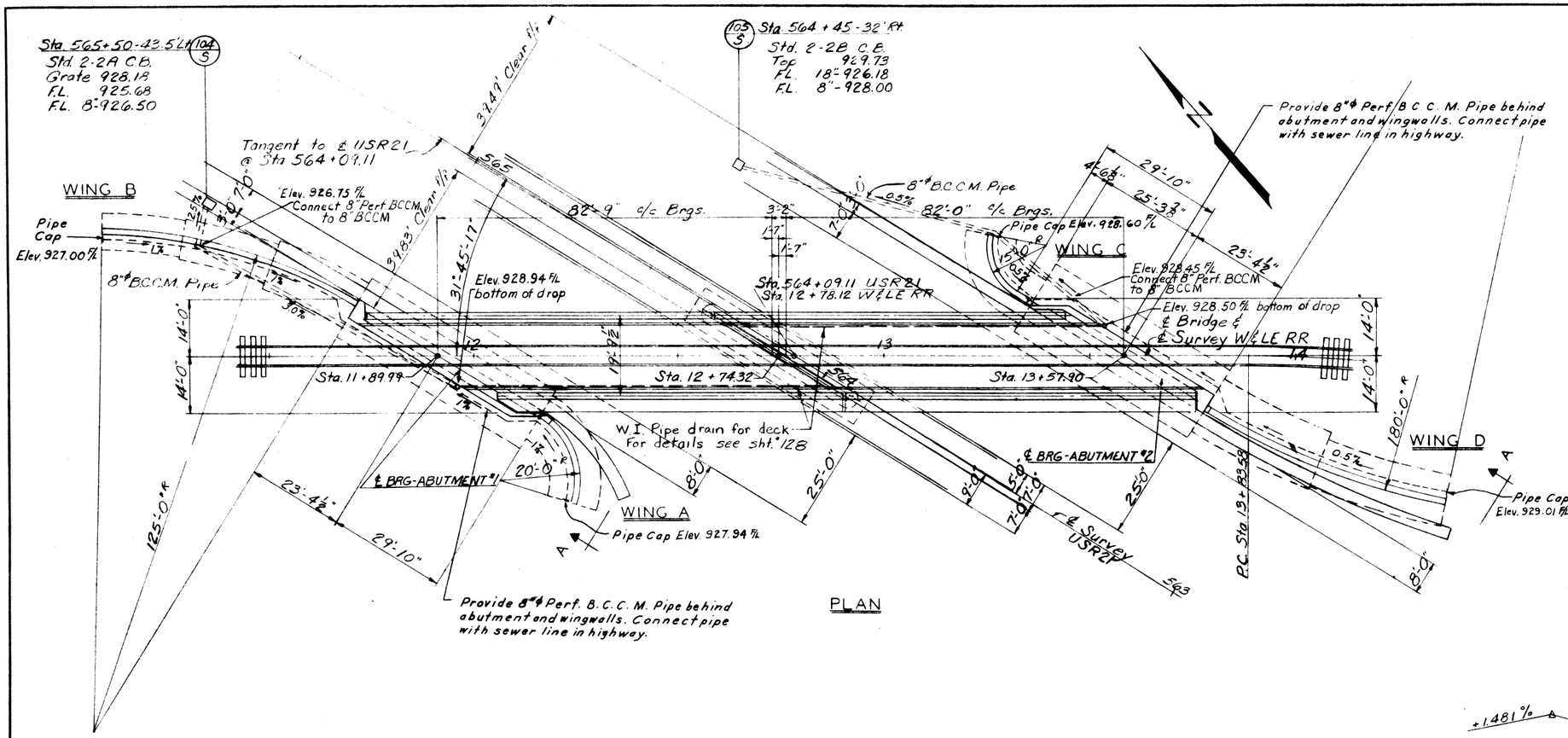
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVISED
MBJ	DWP	DWP	DWP	WRK	

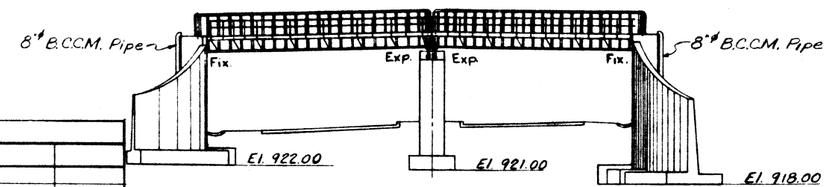
BAKER VALLEY ENGINEERING SUPPLIES CO.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

120

STA-21-10.23





ELEVATION AA

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Super	Abuts	Wings	Piers
E-2	Lump Sum	L.S.	Cofferdams Cribs & Sheeting		Lump Sum	Lump Sum	Lump Sum
E-2	2,640	C.Y.	Unclassified Excavation		1,100	1,340	200
S-1	39	C.Y.	Class "C" Concrete, Superstructure	39			
S-1	579	C.Y.	Class "E" Concrete, Abut. & Pier above footings		410		169
S-1	266	C.Y.	Class "E" Concrete, Wingwalls above footings			266	
S-1	490	C.Y.	Class "E" Concrete, Footings		233	206	51
S-3	143	L.F.	Waterproofing, premolded sealing strip		90	53	
S-3	3	Sq.Yd	Type "B" Waterproofing		3		
S-4	76,490	Lbs	Reinforcing Steel	2,722	34,772	32,587	6,409
S-107	566,600	Lbs	Structural Steel, Including Castings & W.I. plate	566,600			
S-8	566,600	Lbs	Field painting of structural steel, as per plan	566,600			
S-9	218	Sq.Ft.	1" Preformed expansion joint filler		218		
S-9	97	Lin.Ft.	Folded Copper strip 24 oz - 12" wide		97		
S-9	380	Lin.Ft.	Waterstop - 8" wide 24 oz copper flashing		150	230	
S-29	264	C.Y.	Porous Backfill		128	105	
S-29	200	Lin.Ft.	8" Bituminous coated corrugated metal pipe		200		
S-29	180	Lin.Ft.	8" Half round wrought iron pipe deck drain	180			
T-35	18	Cu.Yd.	Asphaltic concrete surface course (Type C) (85-100)	18			
S-29	282	Lin.Ft.	8" Perf. Bituminous coated corrugated metal pipe		282		

+1.481% & -1.800%

VPI Sta. 13+10
Elev. 950.85
200' V.C.
.820' M.O.

CURVE DATA

GENERAL NOTES

- CONSTRUCTION AND MATERIAL SPECIFICATIONS: State of Ohio, Department of Highways Construction and Material Specifications 1-1-57 and Supplemental Specifications No. S-103, revised 2-16-55 and No. S-107, revised 2-16-55.
- DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 9-1-57 and revised 2-21-58, and the A.R.E.A. Specifications amended to 3-11-59 for Cooper's E-72 Live Load.
- FOUNDATION BEARING PRESSURE: Footings are designed for a maximum bearing pressure of 3½ tons per sq. ft.
- WELDING of structural steel and wrought iron shall be Class "A" and shall comply with Sec. S-7.22 of the C.&S. Spec's. Welds shown as field welds may, at the option of the Contractor, be made in the shop.
- CONCRETE Superstructure concrete shall be Class "C." Pier, Wing and Abutment concrete shall be Class "E."
- SURFACE FINISH OF CONCRETE: Form liners or plywood shall be used on all exposed surfaces of abutments, wings, and piers. These surfaces are to be grout cleaned according to Sec. S-1.22. The rubbing of concrete surfaces will not be permitted. Porous backfill shall be 2ft thick, extend up to the railroad ballast, and to the surface of the earth shoulders, and outward to the ends of the wingwalls and surface of the embankment slopes. The porous backfill shall extend down to the flow line of the 8" dia. drainpipe back of abutment and wingwalls.
- CHAMFER: Exposed Concrete edges to have 1" x 1" chamfer.
- SHEETING & BRACING: Before construction is started, eight 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.

RAILROAD NOTE:
Track relocation, ballast, & ties or any work incidental thereto, is not included in this contract. The contractor is requested only to coordinate his work where possible with the track work done by others.

CONSTRUCTION PROCEDURE:
Wing "A" from expansion Jt. at abutment to end of wall, to be constructed after railroad over bridge is opened to traffic. Any additional sheeting, cribbing, or cofferdams required will be included in Item E-2 Cofferdams, Cribs & Sheeting.

UTILITY LINE (S)
All labor and expense involved in relocating (installing) the affected utility lines shall be borne by the owner(s). The Contractor and Owner(s) are requested to cooperate by arranging their work in such a manner that inconvenience to either will be held to a minimum.
RAILROAD AERIAL LINES shall be relocated by the railroad. The Contractor shall use all precautions necessary to see that lines are not disturbed during the construction stage and shall cooperate with the railroad in the relocation of these lines. The cost of the relocation shall be included in the railroad force account work.

FORCE ACCOUNT WORK
by the
New York, Chicago, & St. Louis Railroad
1. Engineering and Inspection
2. Communications and Signal Work
3. Track Work

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

GENERAL PLAN AND ELEVATION & ESTIMATED QUANTITIES
BRIDGE NO. STA-21-1069
USR21 UNDER W&LE RR
STARK CO. STA. 564+09.11

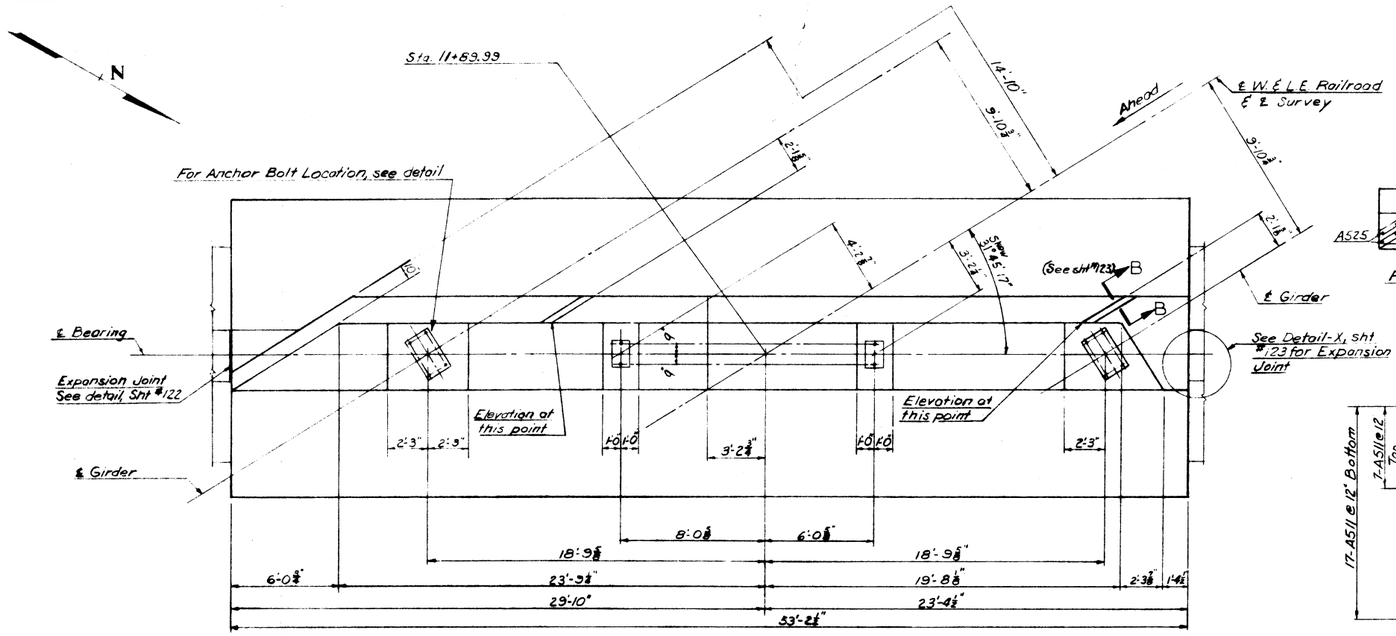
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
CFF	RLM		CFF		

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-57879

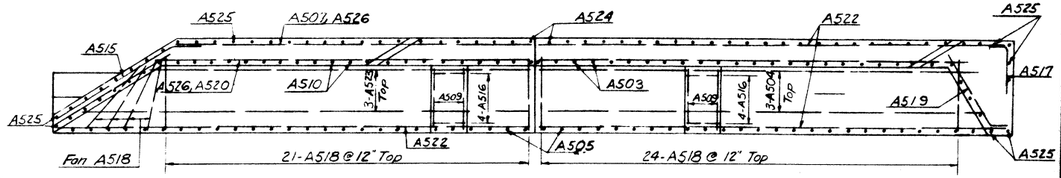
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010 (5)	

121

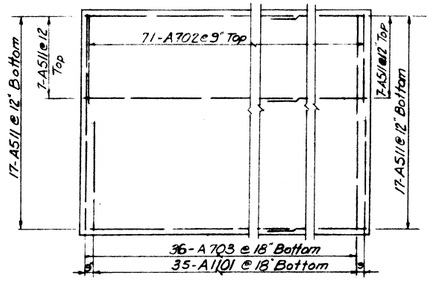
STA - 21-10.23



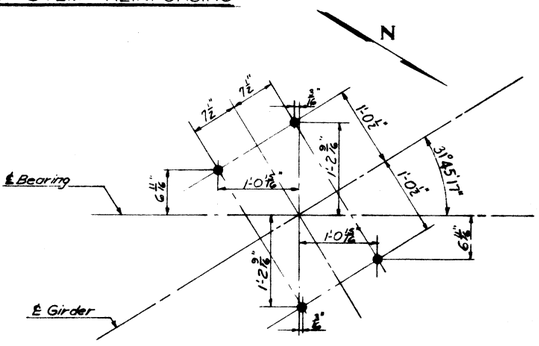
PLAN



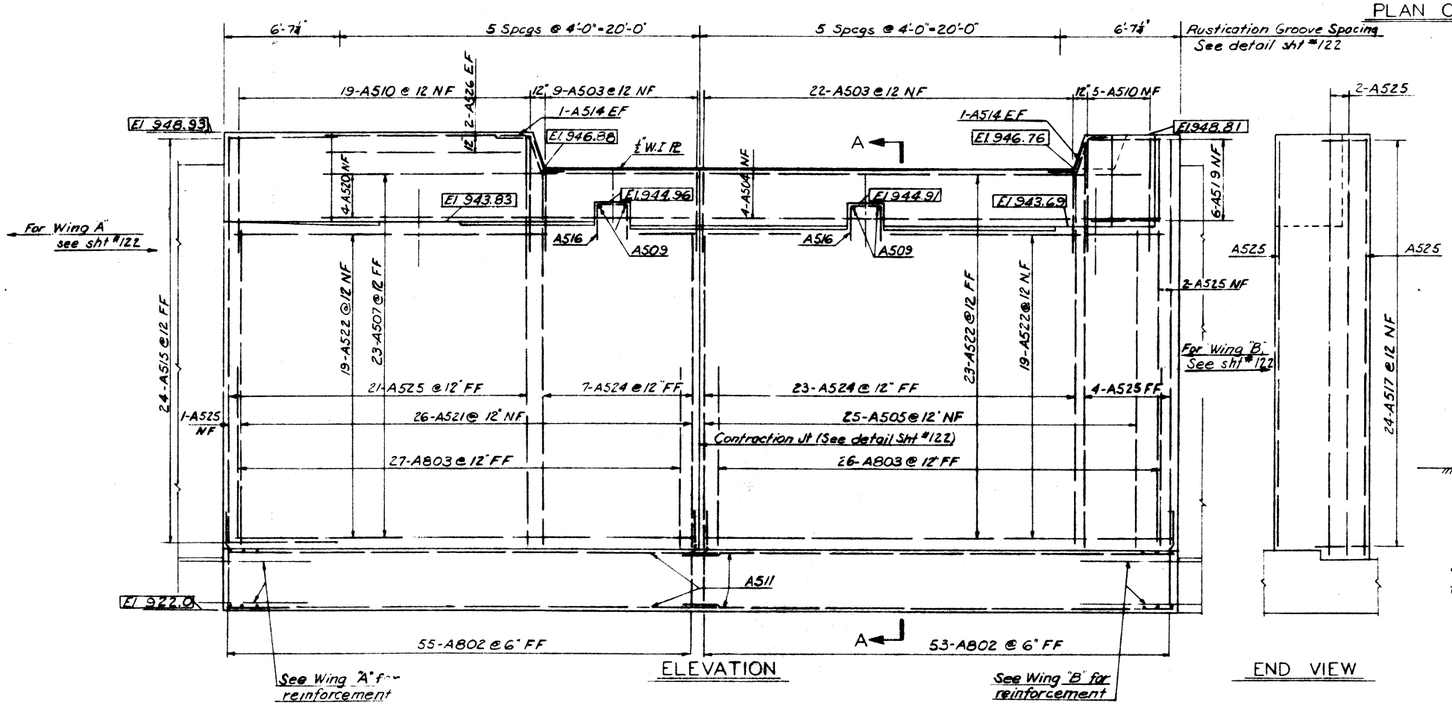
PLAN OF STEM REINFORCING



PLAN OF FOOTING REINFORCING

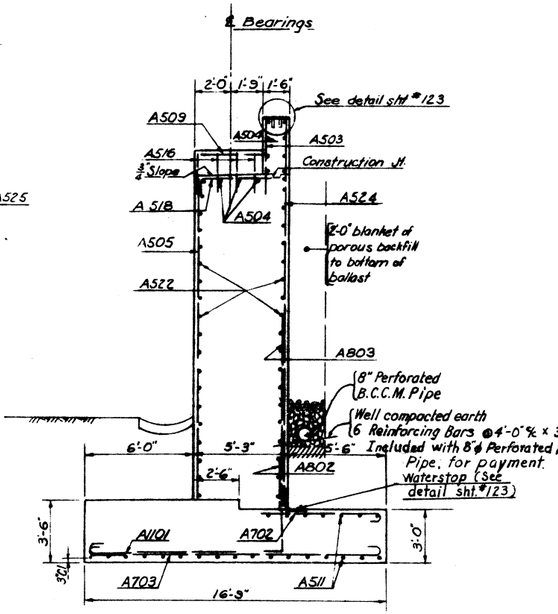


ANCHOR BOLT LOCATION PLAN FOR GIRDERS



ELEVATION

END VIEW



SECTION A-A

NOTE :
- Clearance of reinforcing steel shall be 2" from face of concrete unless otherwise noted.
- Special care shall be taken in placing reinforcing steel in the bearing seat so that it will not interfere with the drilling of anchor bolt holes.

N.F. = Near Face
F.F. = For Face
E.F. = Each Face

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

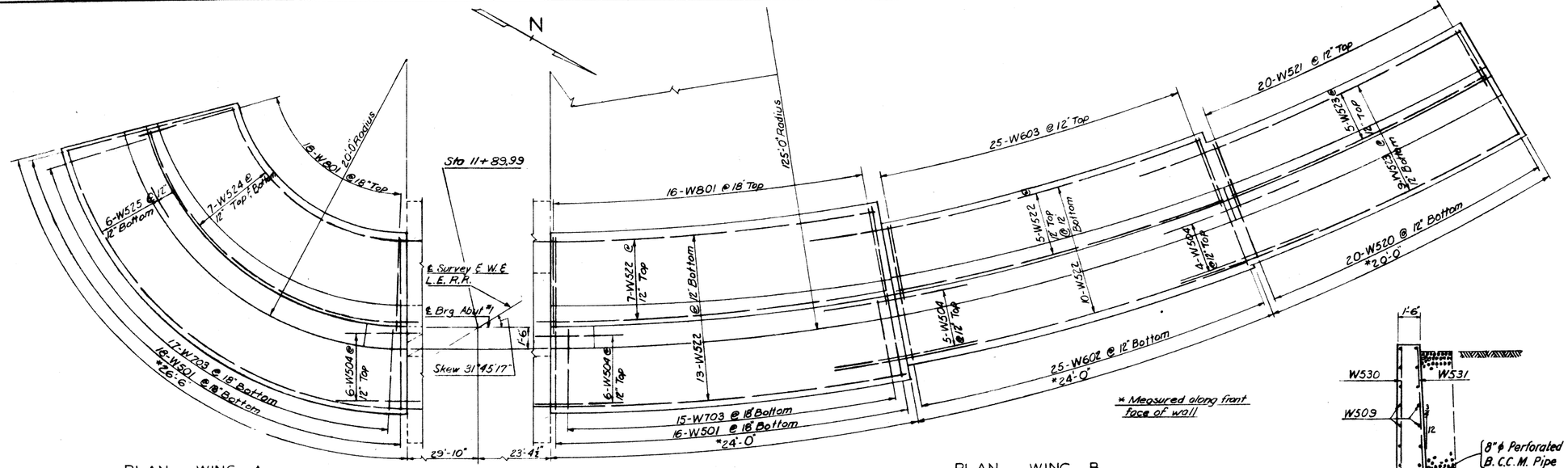
ABUTMENT NO. 1 DETAILS
BRIDGE NO STA-21-1069
USR 21 UNDER W. & L.E. R.R.
STARK COUNTY STA 564+09.11

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
DWB	CFF		KAE		

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-50310

FED. RD. DIVISION	STATE	PRO
2	OHIO	U-UG-1010

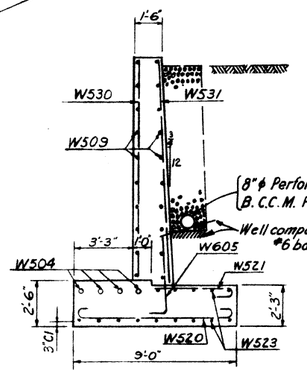
STA-21-1023



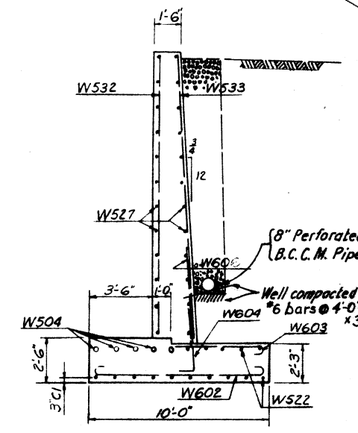
PLAN – WING A

PLAN – WING B

* Measured along front face of wall

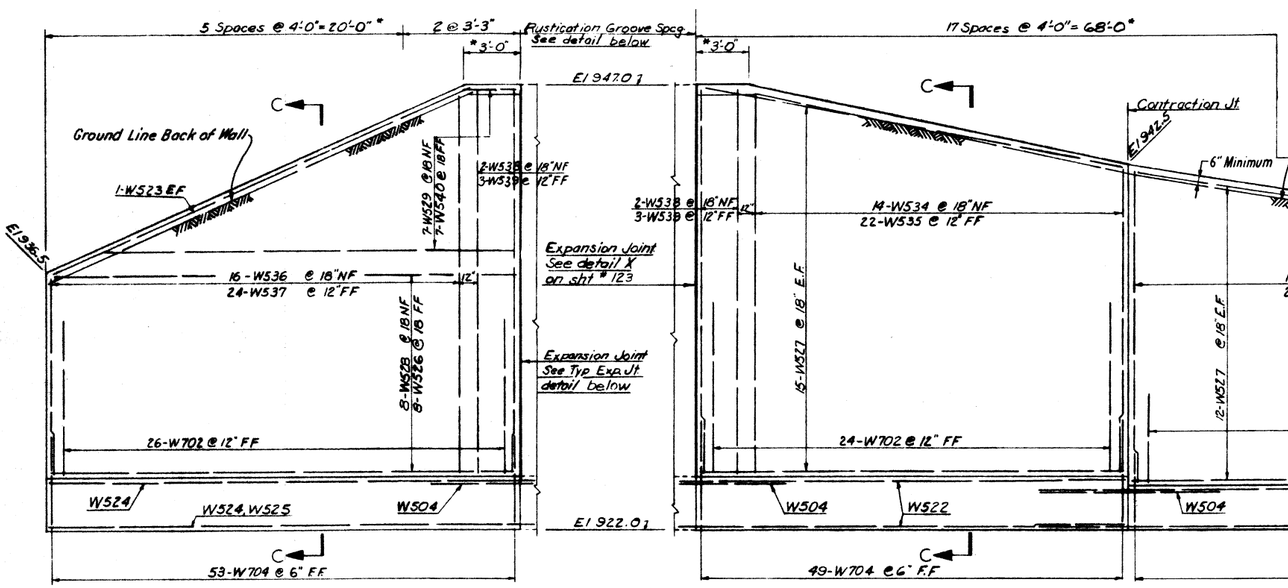


SECTION A-A



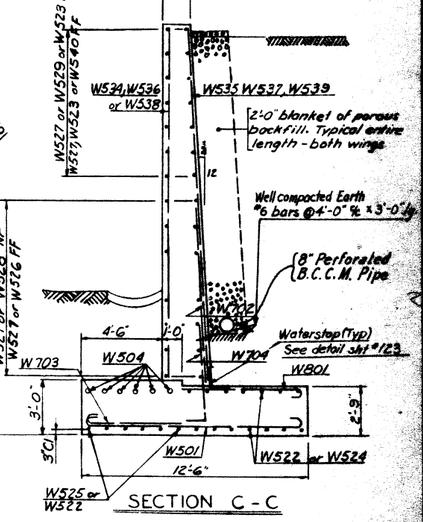
SECTION B-B

Note: *6 bars to be included with 8" ϕ perforated BCCM pipe for payment.

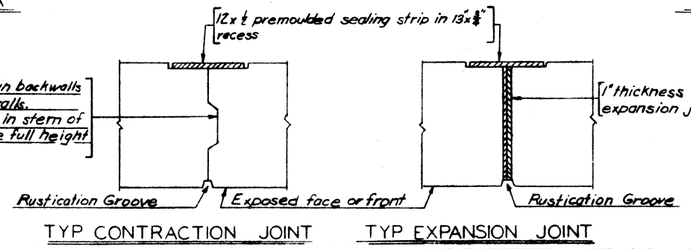


ELEVATION – WING A

ELEVATION – WING B

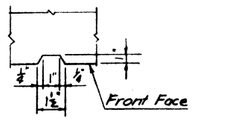


SECTION C-C



TYP CONTRACTION JOINT

TYP EXPANSION JOINT



RUSTICATION GROOVE DETAIL

NOTE
- Clearance of reinforcing steel shall be 2" from face of concrete unless otherwise shown.

N.F. = Near Face
F.F. = Far Face
E.F. = Each Face

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

WINGWALL DETAILS ABUTMENT NO. 1

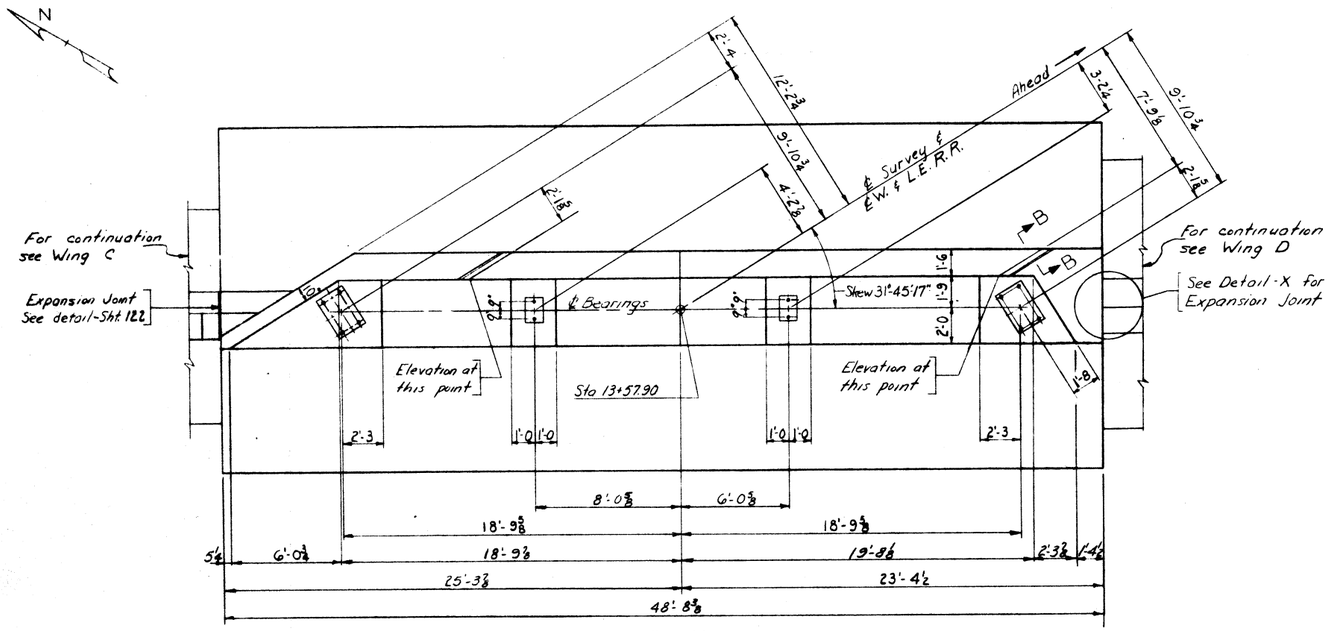
BRIDGE NO. STA-21-1069
USR 21 UNDER W. & L.E. RR.
STARK COUNTY. STA. 564+09.11

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
DWB	CFF		KAE		

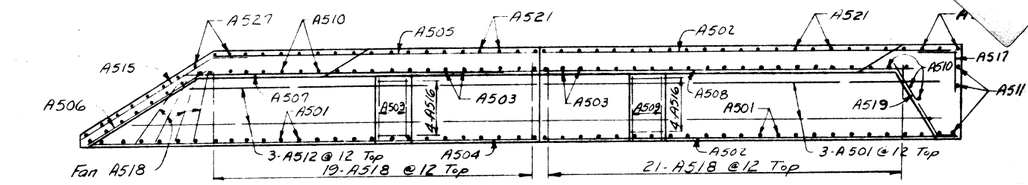
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY PEORIA A 38316

FED. RD. DIVISION	STATE	P
2	OHIO	UUG-10

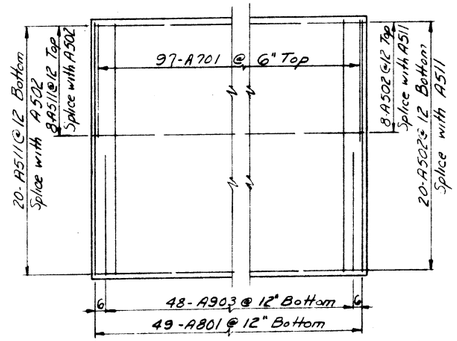
STA -21-10.23



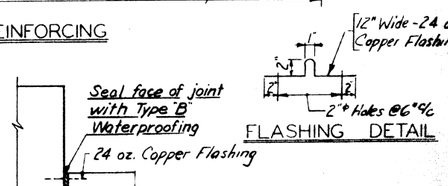
PLAN

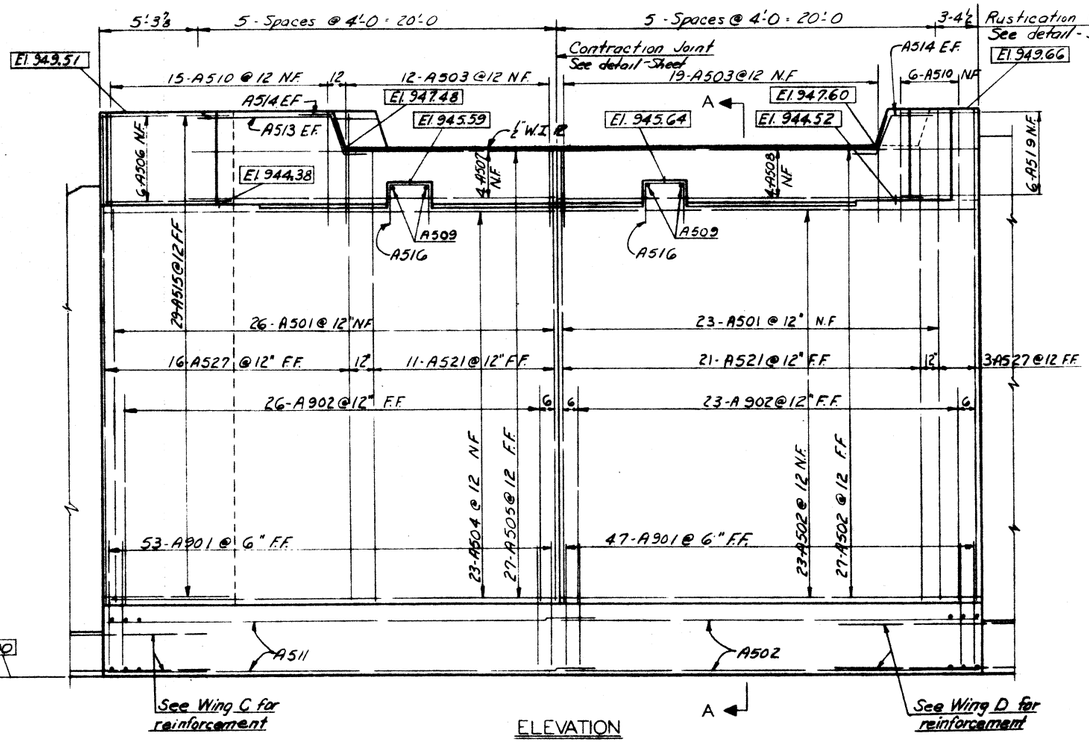


PLAN OF STEM REINFORCING

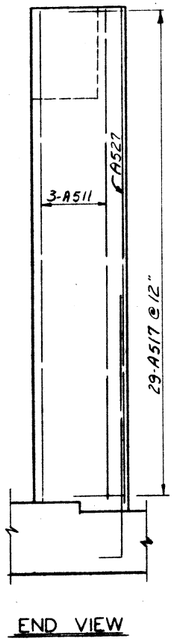


PLAN OF FOOTING REINFORCING

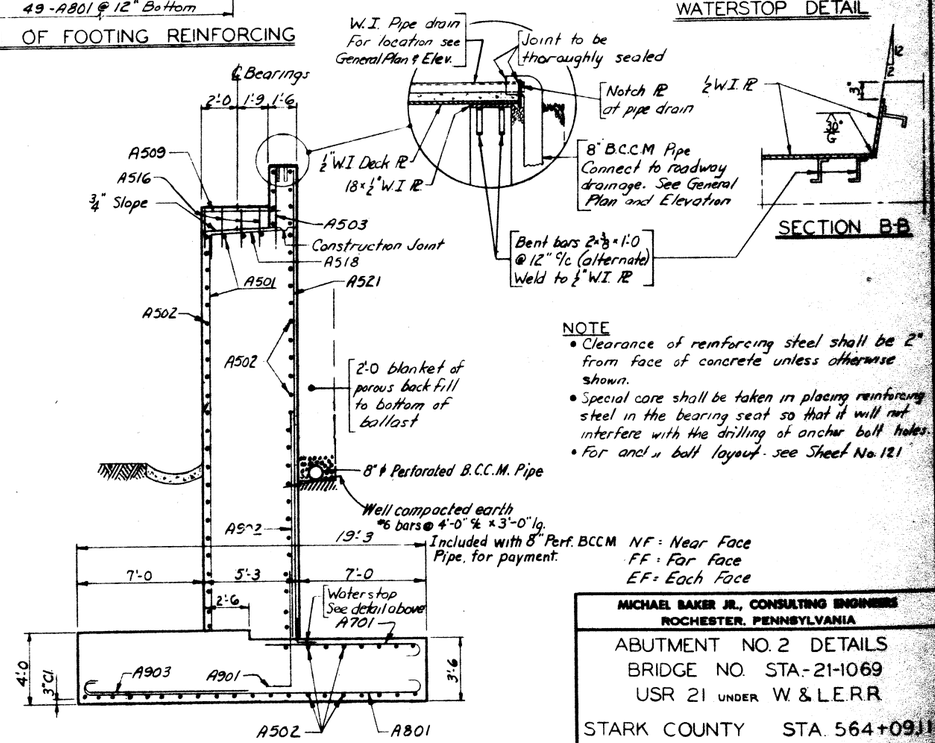




ELEVATION



END VIEW



SECTION A-A

NOTE

- Clearance of reinforcing steel shall be 2" from face of concrete unless otherwise shown.
- Special care shall be taken in placing reinforcing steel in the bearing seat so that it will not interfere with the drilling of anchor bolt holes.
- For anchor bolt layout - see Sheet No. 121

NF = Near Face
FF = For Face
EF = Each Face

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

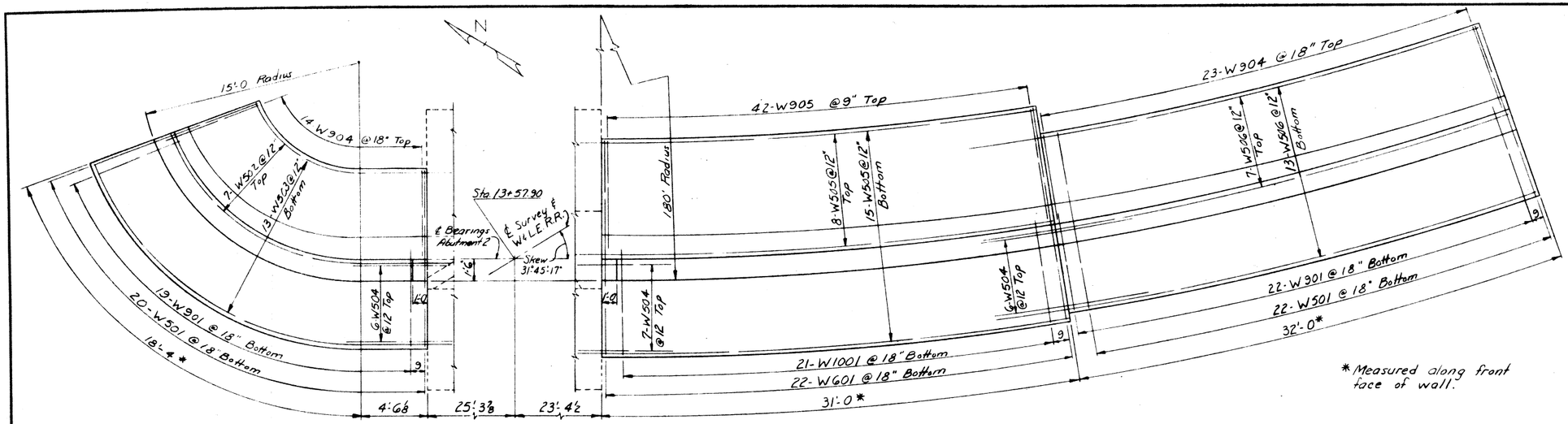
ABUTMENT NO. 2 DETAILS
BRIDGE NO. STA.-21-1069
USR 21 UNDER W. & L.E.R.R.
STARK COUNTY STA. 564+09.11

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
DWB	KAE		RLM		

ROANE VALLEY ENGINEERING SUPPLIES COMPANY RECORDER A-29510

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010 (5)	

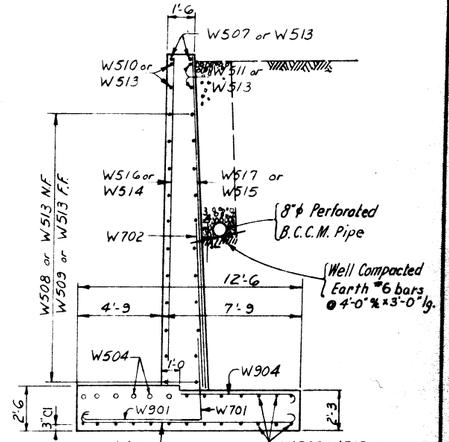
STA. - 21-10.23



* Measured along front face of wall.

PLAN - WING C

PLAN - WING D



SECTION A-A

Note: *6 bars to be included with 8" ϕ perforated BCCM pipe for payment

SECTION B-B

ELEVATION — WING C

ELEVATION — WING D

NOTE
- Clearance of reinforcing steel shall be 2" from face of concrete unless otherwise shown.

NF = Near Face
FF = Far Face
EF = Each Face

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

WINGWALL DETAILS
ABUTMENT NO. 2
BRIDGE NO. STA.-21-1069
USR 21 UNDER W & LE. RR
STARK COUNTY STA. 564+09.11

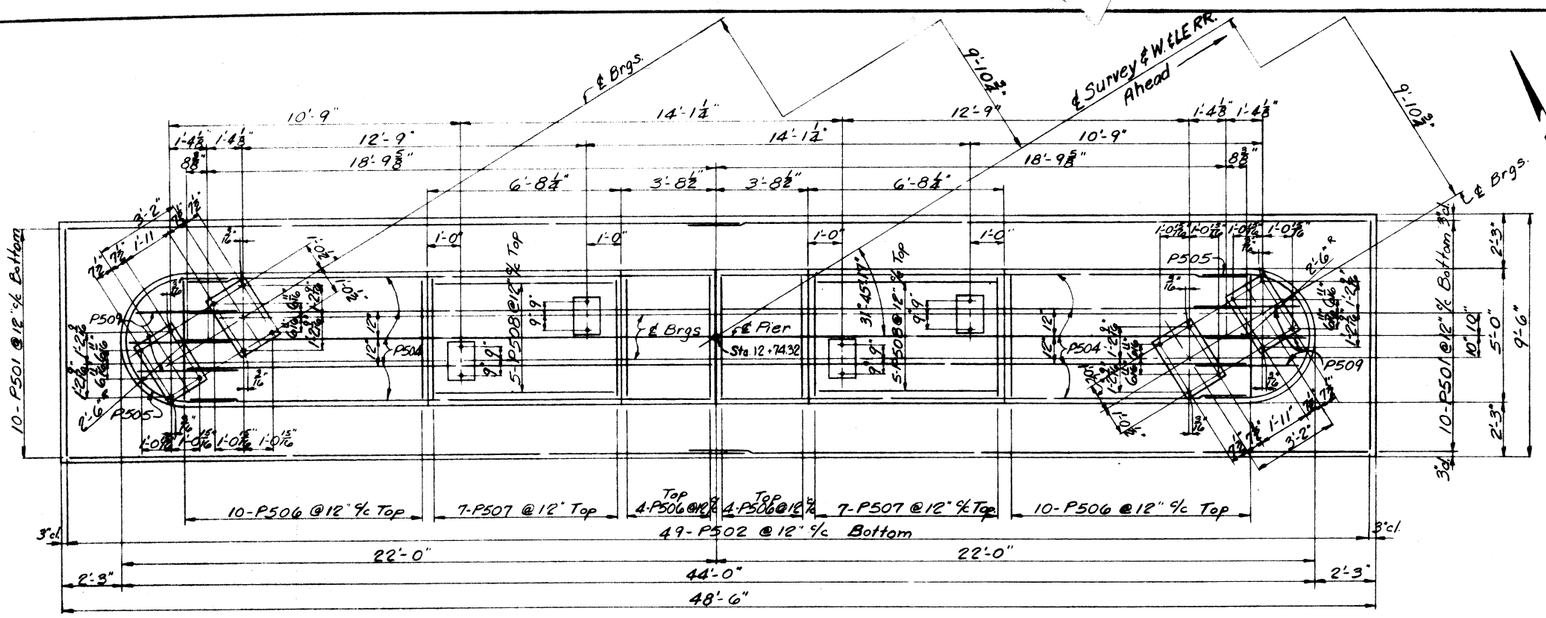
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
DWB	KAE		CFF		

DIXON VALLEY ENGINEERING SUPPLIES COMPANY PROVIDENCE R-20316

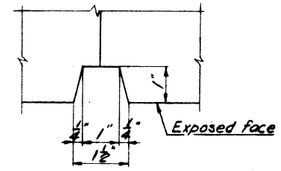
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG1010 (5)	

125

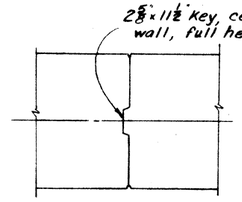
STA 21 - 10.23



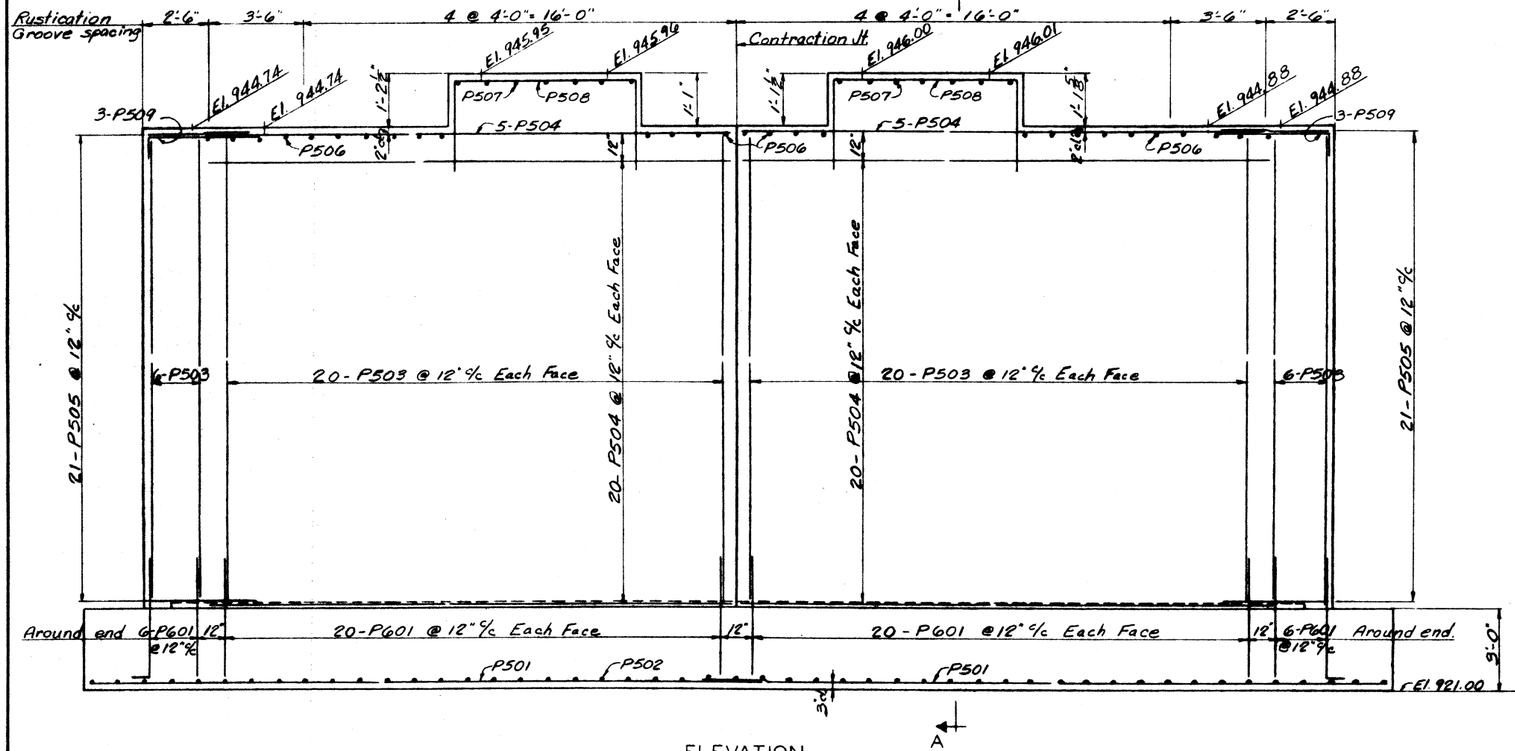
PLAN



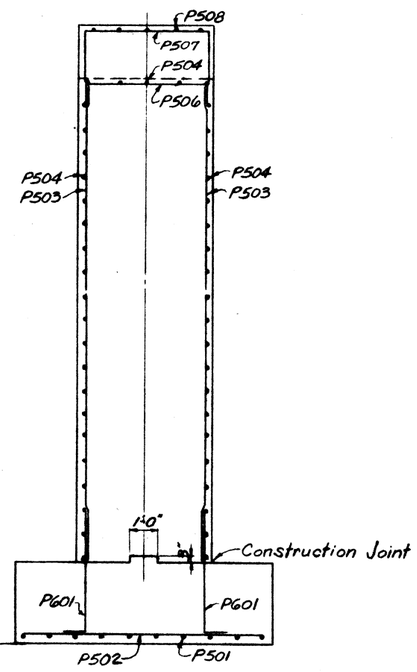
RUSTICATION GROOVE DETAIL



CONTRACTION JOINT DETAIL



ELEVATION



SECTION AA

Note:
- Special care shall be taken in placing reinforcing steel in the bearing seat so that it will not interfere with the drilling of anchor bolt holes.
- See sheet 129 for anchor bolts.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

PIER DETAILS
BRIDGE NO. STA. 21-1069
USR 21 UNDER W & LE RR

STARK CO. STA. 564+09.11

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
CFF	RLM		DWB		

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-39316

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG-1010(5)	

126

STA. 21-10.23

REINFORCING STEEL LIST

ABUTMENTS

MARK	NUMBER ABUT. 1	NUMBER ABUT. 2	NUMBER TOTAL	LENGTH	WEIGHT	SHP
A501		52	52	22'-2	1202	S
A502		78	78	23'-0	1871	S
A503	31	31	62	4'-2	269	S
A504	7	23	30	25'-0	782	S
A505	51	27	78	17'-11	1458	S
A506		6	6	8'-0	50	S
A507	23	4	27	19'-4	544	S
A508		4	4	20'-3	84	S
A509	4	4	8	4'-9	40	S
A510	24	21	45	6'-2	289	S
A511	48	31	79	27'-4	2252	S
A512		3	3	20'-0 to 23'-4 Vary ea. 1'-8	68	S
A513		2	2	7'-6	16	S
A514	4	4	8	4'-0	33	B
A515	24	29	53	9'-4	516	B
A516	8	8	16	5'-11	99	B
A517	24	29	53	3'-10	112	B
A518	49	44	93	5'-0	485	B
A519	6	6	12	5'-9	72	B
A520	4		4	20'-9	87	S
A521		32	32	25'-10	862	S
A522	61		61	26'-3	1670	S
A523	3		3	21'-6 to 25'-0 Vary ea. 1'-9	73	S
A524	30		30	21'-7	675	S
A525	30		30	23'-8	741	S
A526	4		4	12'-0	50	S
A527		19	19	27'-10	552	S
A701		97	97	9'-4	1850	B
A702	71		71	7'-8	1113	B
A703	36		36	18'-1	1331	B
A801		49	49	21'-1	2758	B
A802	108		108	6'-9"	1946	B
A803	53		53	10'-9	1521	S
A901		100	100	9'-6	3230	B
A902		49	49	14'-11	2485	S
A903		48	48	10'-3	1673	B
A1101	35		35	9'-9	1813	B

WINGWALLS

MARK	NUMBER ABUT. 1	NUMBER ABUT. 2	NUMBER TOTAL	LENGTH	WEIGHT	SHP
W501	34	42	76	13'-4	1057	B
W502		7	7	18'-0 to 25'-7 Vary ea. 1'-3⅜"	159	S*
W503		13	13	18'-0 to 33'-3 Vary ea. 1'-3¼"	347	S*
W504	21	19	40	10'-0	417	S
W505		23	23	36'-6"	876	S*
W506		20	20	37'-6	782	S*
W507		2	2	23'-0	48	S*
W508		11	11	22'-4	256	S*
W509	20	11	31	19'-4	625	S*
W510		6	6	2'-6 to 20'-8 Vary ea. 3'-7⅝"	72	S*
W511		6	6	2'-6 to 18'-0 Vary ea. 3'-1¼"	64	S*
W512		38	38	30'-8	1215	S*
W513		30	30	31'-8	991	S*

WINGWALLS

MARK	NUMBER ABUT. 1	NUMBER ABUT. 2	NUMBER TOTAL	LENGTH	WEIGHT	SHP
W514		22	22	15'-4 to 21'-6 Vary ea. 3½"	423	S
W515		32	32	15'-7 to 21'-8 Vary ea. 2⅜"	622	S
W516		16	16	15'-10 to 24'-10 Vary ea. 7¼"	339	S
W517		21	21	16'-1 to 25'-1 Vary ea. 5⅜"	451	S
W518		21	21	21'-0 to 26'-10 Vary ea. 3½"	524	S
W519		31	31	21'-3 to 27'-1 Vary ea. 2⅜"	781	S
W520	20		20	9'-10	205	B
W521	20		20	5'-1	106	B
W522	35		35	29'-0	1059	S*
W523	16		16	25'-0	417	S*
W524	2 Groups of 7		14	21'-0 to 29'-0 Vary ea group 1'-4"	365	S*
W525	6		6	31'-6 to 37'-6 Vary ea. 1'-2⅜"	216	S*
W526	8		8	22'-8	189	S*
W527	54		54	23'-3	1309	S*
W528	8		8	25'-11	216	S*
W529	7		7	3'-3 to 23'-9 Vary ea. 3'-5"	99	S*
W530	14		14	11'-10 to 13'-9 Vary ea. 1¾"	187	S
W531	20		20	12'-1 to 14'-0 Vary ea. 1¼"	272	S
W532	16		16	13'-9 to 17'-9 Vary ea. 3¼"	264	S
W533	25		25	14'-0 to 18'-0 Vary ea. 2"	417	S
W534	14		14	17'-5 to 21'-9 Vary ea. 4"	286	S
W535	22		22	17'-8 to 22'-0 Vary ea. 2¾"	455	S
W536	16		16	11'-5 to 21'-5 Vary ea. 8"	274	S
W537	24		24	11'-8 to 21'-8 Vary ea. 5¼"	417	S
W538	4		4	21'-10	91	S
W539	6		6	22'-1	138	S
W540	7		7	2'-9 to 21'-3 Vary ea. 3'-1"	88	S*
W601		22	22	16'-0	529	B
W602	25		25	11'-0	413	B
W603	25		25	5'-9	216	B
W604	49		49	4'-6	331	B
W605	20		20	4'-11	148	B
W606	24		24	5'-3	189	S
W701		106	106	6'-1	1318	B
W702	50	53	103	9'-6	2000	S
W703	32		32	6'-8	436	B
W704	102		102	6'-9	1407	B
W801	34		34	8'-4	756	B
W901		41	41	7'-8	1069	B
W902		62	62	8'-6	1792	B
W903		31	31	15'-6	1634	S
W904		37	37	8'-3	1038	B
W905		42	42	9'-11	1416	B
W1001		21	21	8'-7	776	B

PIER

MARK	NUMBER	LENGTH	WEIGHT	SHP
P501	20	24'-10	518	S
P502	49	9'-0	460	S
P503	92	20'-7	1975	S
P504	90	19'-4	1815	S
P505	42	10'-5	456	B
P506	28	5'-7	163	B
P507	14	10'-1	147	B
P508	10	11'-10	123	B
P509	6	4'-4	27	B
P601	92	5'-3	725	B

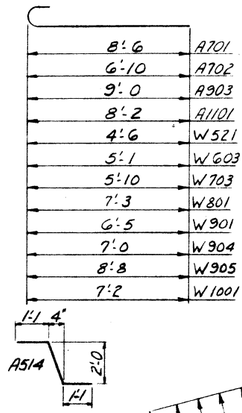
SUPERSTRUCTURE

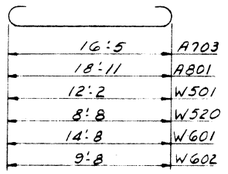
S501	84	30'-0	2628	S
S502	6	6'-6	41	B
S503	6	6'-5	40	B
S504	6	0'-9"	5	S
S505	4	2'-0	8	S

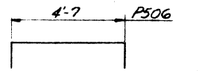
REPLACEMENT BARS

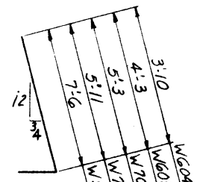
RE501	3	5'-7		S
RE601	1	5'-3		S
RE701	1	6'-2		S
RE801	1	6'-6		S
RE901	1	6'-10		S
RE1001	1	7'-2		S
RE1101	1	7'-7		S

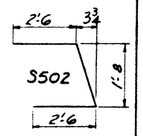
BENDING DIAGRAMS

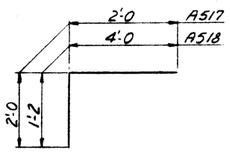


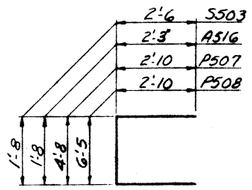


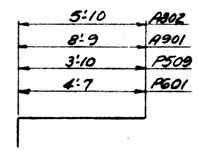


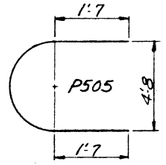


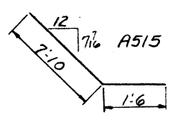


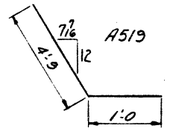












All dimensions are out to out.

* Bars marked thus are to be bent in the field.

BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four digits are used, indicate the bar size number. For example, A701 is a No. 7 size bar and A1101 is a No. 11 size bar.

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

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

REINFORCING STEEL LIST

BRIDGE NO. STA-21-1069
USR 21 UNDER W & LE RR
STARK COUNTY STA. 564+09.11

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
KAE	KAE		C.F.F.		

SHEAR VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-57576

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG1010(5)	

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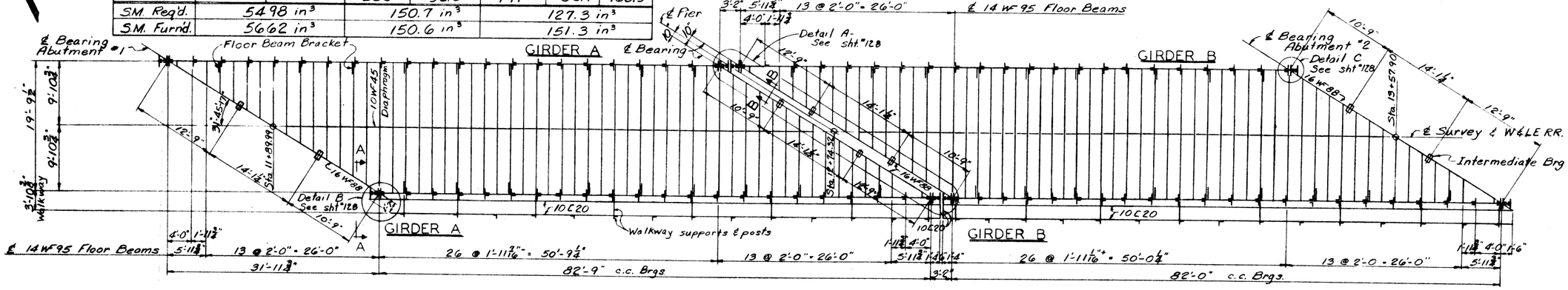
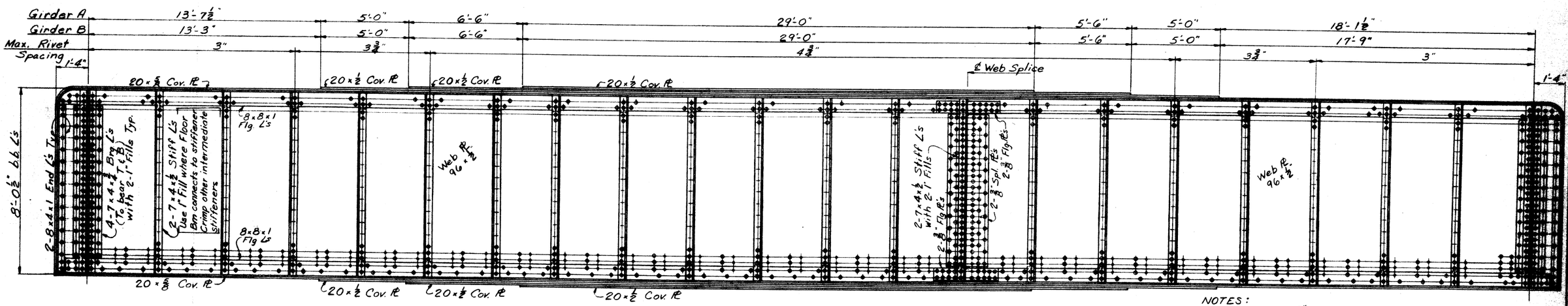
STA21-10.23

	Girder		Floor Beam		End Beam		
	Max. Mom.	Max. React.	Max. Mom	Max. React	Max. Mom.	Max React End	Max React Int.
Dead Load	2604'K	130.5K	21'K	4.7K	31'K	11.0K	26.8K
Live Load	3728'K	210.8K	120'K	16.2K	89'K	41.9K	78.6K
Impact	1726'K	97.6K	71'K	9.6K	53'K	25.1K	47.2K
Rolling	189'K	10.8K	14'K	1.8K	18'K	8.4K	15.7K
Total	8247'K	449.7K	226'K	32.3K	191'K	86.4K	168.3K
S.M. Req'd.	5498 in³		150.7 in³		127.3 in³		
S.M. Furn'd.	5662 in³		150.6 in³		151.3 in³		

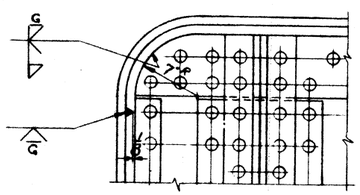


FRAMING PLAN

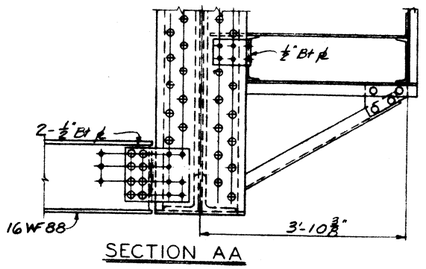


ELEVATION

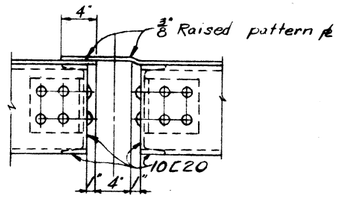
WALKWAY NOT SHOWN



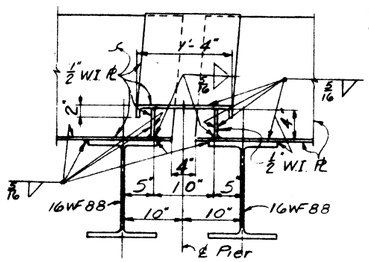
CORNER DETAIL



SECTION AA



WALKWAY EXPANSION JOINT



SECTION BB

NOTES:
- Rivets shall be 7/8" diameter unless other wise noted.
- Material: Structural steel ASTM-A7
  Rivet steel ASTM-A141
- No camber required.
- All dimensions are horizontal.
- Painting.- After erection and after the shop coat has been cleaned and, where necessary, repainted in accordance with Sec. 8.04, an additional coat of the same paint as used in the shop shall be applied over the outside face of the girders, all sides of bottom flange and entire surface of walkway.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE DETAILS
BRIDGE NO. STA 21-1069
USR 21 UNDER W.&L.E. RR.

STARK CO. STA. 564+09.11

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
CFF	RLM		KAE		

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-39310

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-UG 1010 (5)	

STA. 21-1023

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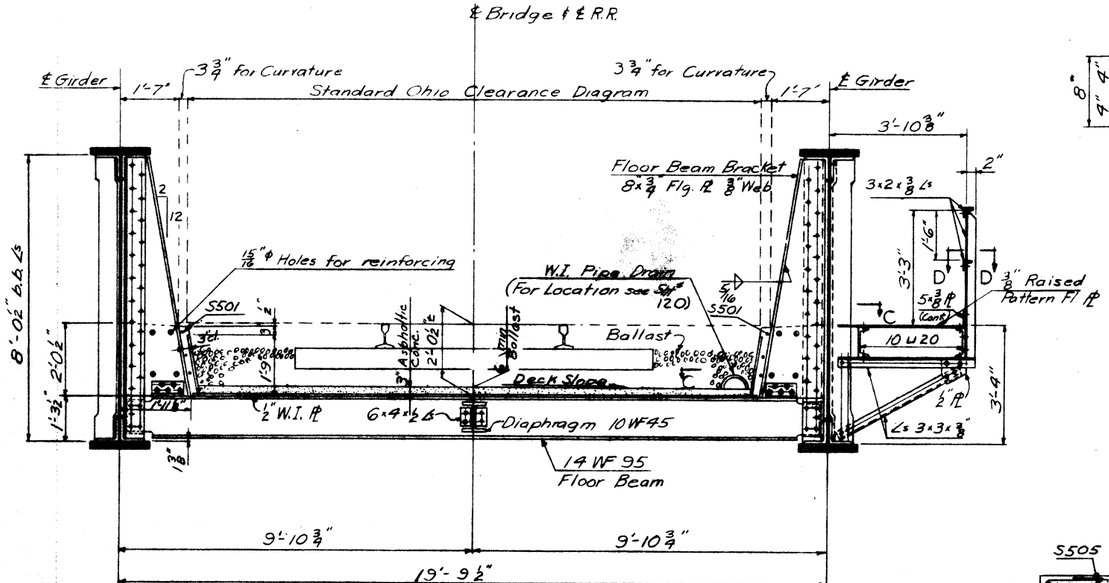
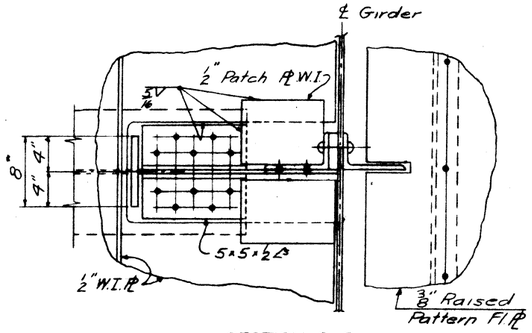
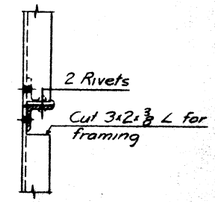
Note:
Ballast, ties, rails and other track requirements by others.



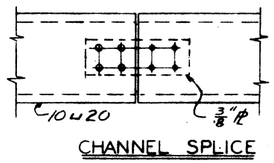
TYPICAL SECTION



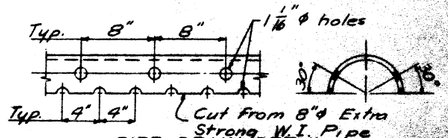
SECTION C-C



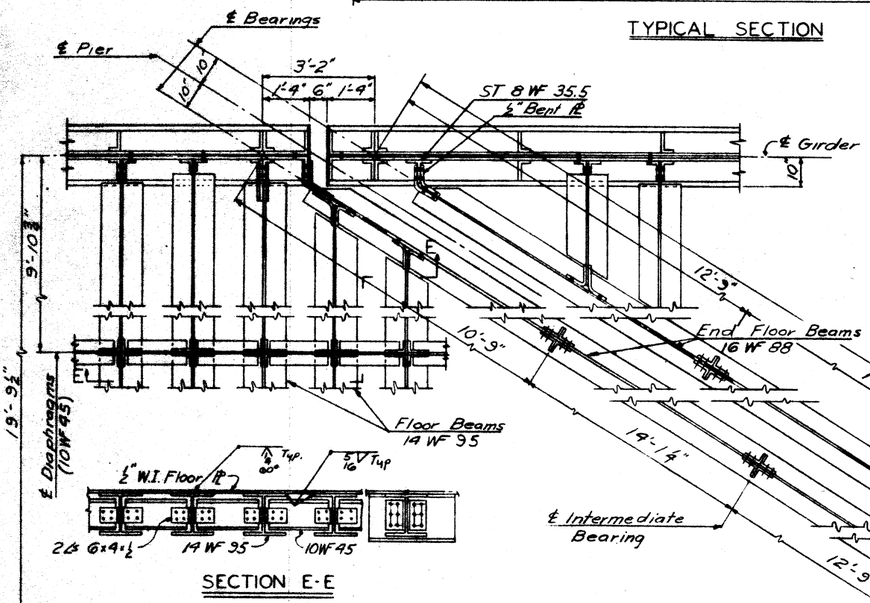
SECTION D-D



CHANNEL SPLICE

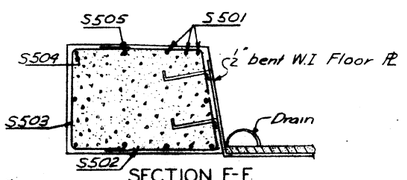


PIPE DRAIN DETAIL

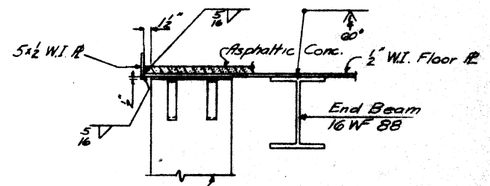


SECTION E-E

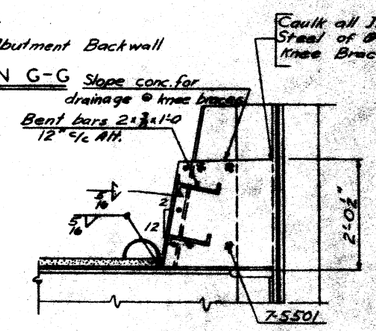
DETAIL-A



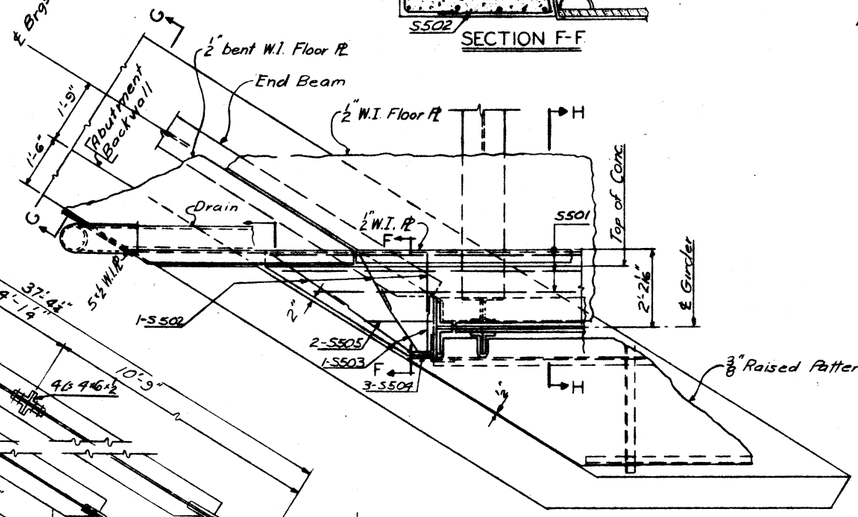
SECTION F-F



SECTION G-G Slope conc. for drainage @ knee braces



SECTION H-H



DETAIL B & DETAIL C

Detail B as shown
Detail C as shown, except walkway omitted.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE DETAILS
BRIDGE NO. STA. 21-1023
USR 21 UNDER W.&L.E.R.R.

STARK COUNTY STA. 584+08

DESIGNED	DRAWN	TRACED	CHECKED	
CFF	DWB		CFF	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

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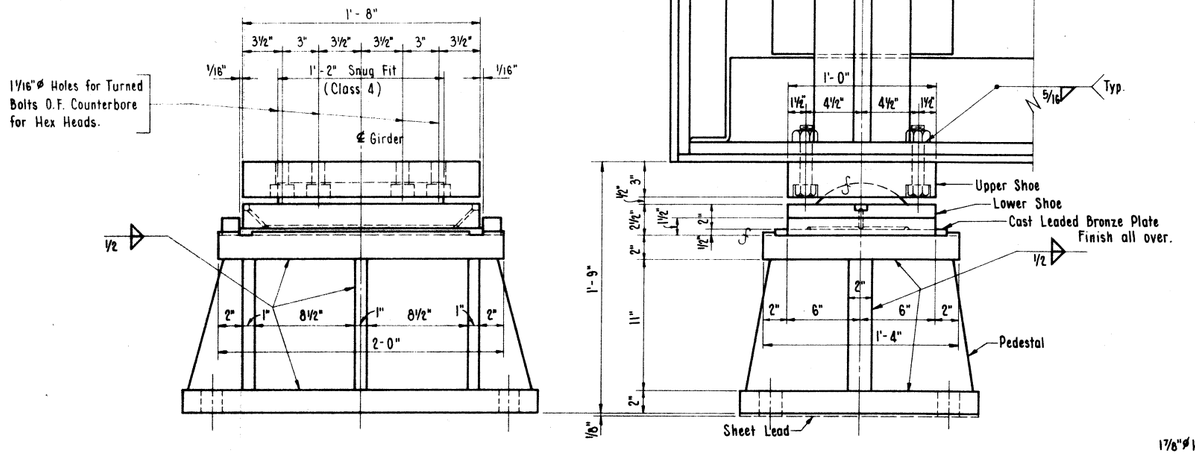
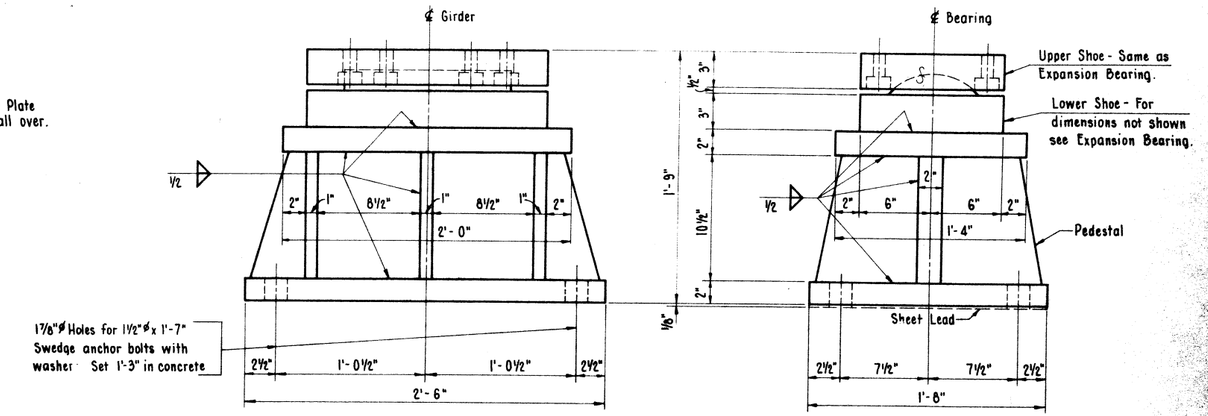
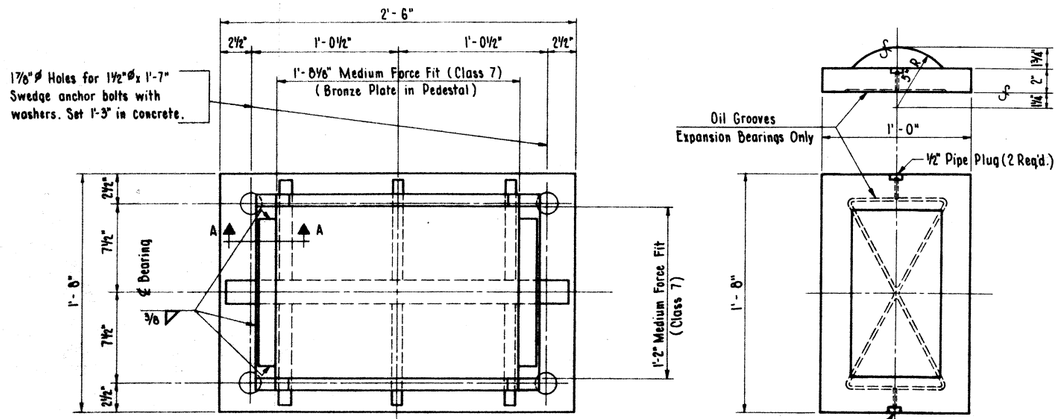
STA 21-10.23





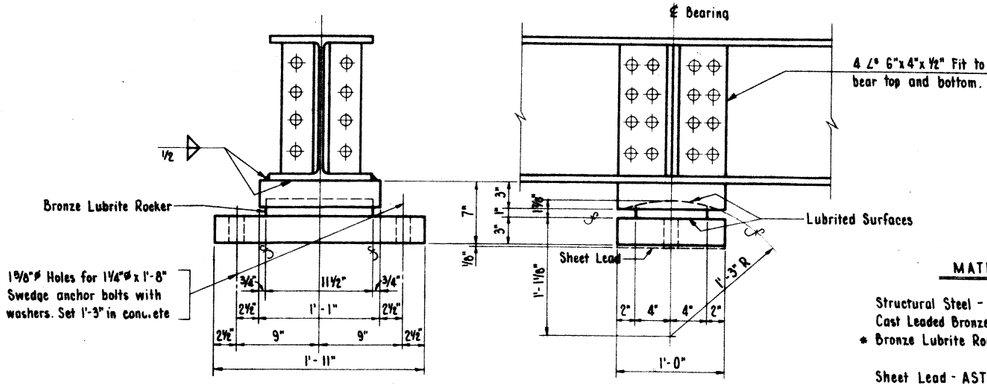
FIXED BEARING
4 REQ'D



PLAN OF PEDESTAL

PLAN OF LOWER SHOE

EXPANSION BEARING
4 REQ'D

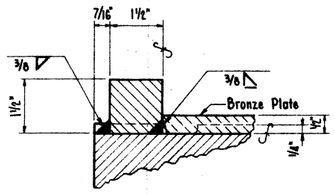


INTERMEDIATE BEARING
8 REQ'D

MATERIAL

Structural Steel - ASTM-A7
Cast Leaded Bronze Plate - ASTM-B144-Alloy 3A
* Bronze Lubrite Rocker - Cast Bridge Bearing Bronze-ASTM-B22 - Alloy E
Sheet Lead - ASTM-B29

*Lubrite or equal



SECTION AA

DETAIL OF OIL GROOVE

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE DETAILS
BRIDGE NO. STA 21-1069
USR 21 UNDER W. & L.E. R.R.

STARK CO. STA. 564+09.11

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
RLM	RLM	C.K.C.	J.D.Y.		

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

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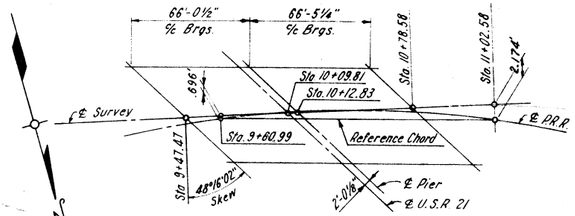
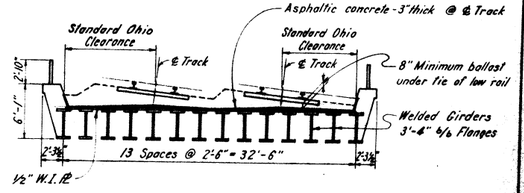
STA - 21 - 10.23

See Sheet No. 119 for Site Plan of Br. No. STA.-21-1069

14'-0" from ℄ each track to shoulder. Shoulder elevation 2'-6" below adjacent rail at abutment wings.



ALIGNMENT PLAN



TYPICAL SECTION

Tangent to ℄ U.S.R. 21 @ Sta. 565 + 91.16

Survey ℄ U.S.R. 21

Survey ℄ W.&L.E. R.R.

Sta. 565+91.16 U.S.R. 21 = Sta. 10+09.81 ℄ Survey

Survey ℄ P.R.R.

Siding Tracks to be abandoned

Critical clearance point "A"

Actual ℄ Min. Clear.

Existing 48" Sanitary Sewer (To remain in place)

M.H.

Siding Track to be abandoned

Sta. 7

Ver.

Hor.

Pvmt.

Rad.

Min.

Clear.

Actual

Point "A"

Pier

Brgs.

Survey

Elev.

Sta.

Rail

Elevations Shown on Rail 4 (North Rail) Rail 2 Elevations in Parentheses

930.04
929.70
929.62
929.77
930.15
930.78
930.64
+2.071 %
-3.304 %
560' V.C.
Pl. Elev 926.05
15'0" Min. - 15.02' Actual Cl. @ Point "A"
565
566
567
+80

960 950 940 930 920 910 900

8 9 10 11 12

951.29 (951.84)
951.10 (951.59)
950.92 (951.37)
9+47.87 @ ℄ Brgs.
950.75 (951.15)
950.65 (950.97)
10+12.83 @ ℄ Pier
15.02' Actual 15.00 Min. Cl. @ Point "A"
950.55 (950.81)
10+78.58 @ ℄ Brgs.
950.37 (950.68)
950.30 (950.49)
950.15 (950.24)

Elev. 921.00
Elev. 923.50
Elev. 922.00

CURVE DATA

P.R.R.
D = 3°30'±
R = 1637.28±

FOUNDATION SOUNDINGS: Foundation design and foundation quantities are based on a study of rod soundings and soil-sampling soundings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in the Division office, but the State does not guarantee the accuracy thereof.

LEGEND ⊕ = Rod Sounding ● = Core Boring

PROPOSED STRUCTURE

TYPE: 2-Span Continuous Welded deck-girder with wrought iron plate deck and reinforced concrete substructure
SPANS: 66'-0½" ℄ 66'-5¼" ℄ Brgs. 40.51' ℄ 40.77' Clear between faces of substructure.
WIDTH: 2 tracks @ 14'-0" ℄ (on curve) 32'-6" ℄ Fascia girders 37'-1" ℄ Parapets
CLEARANCE: 15.02' Min. vertical
LOADING: Coopers E-72 - Steam Impact
SKEW: 48°16'02" Rt. Fwd.
ALIGNMENT: Bridge designed to fit present rail location (P.R.R. on 3°30'± Curve Rt. U.S.R. 21 on 0°28' Curve Lt.
SUPERELEVATION: 6" (each track)
DESIGN CRITERIA: AREA Specifications

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SITE PLAN
BRIDGE NO. STA-21-1073
USR 21 UNDER PA. R.R.

STARK COUNTY
Scale: 1" = 20'
STA. 565+91.16

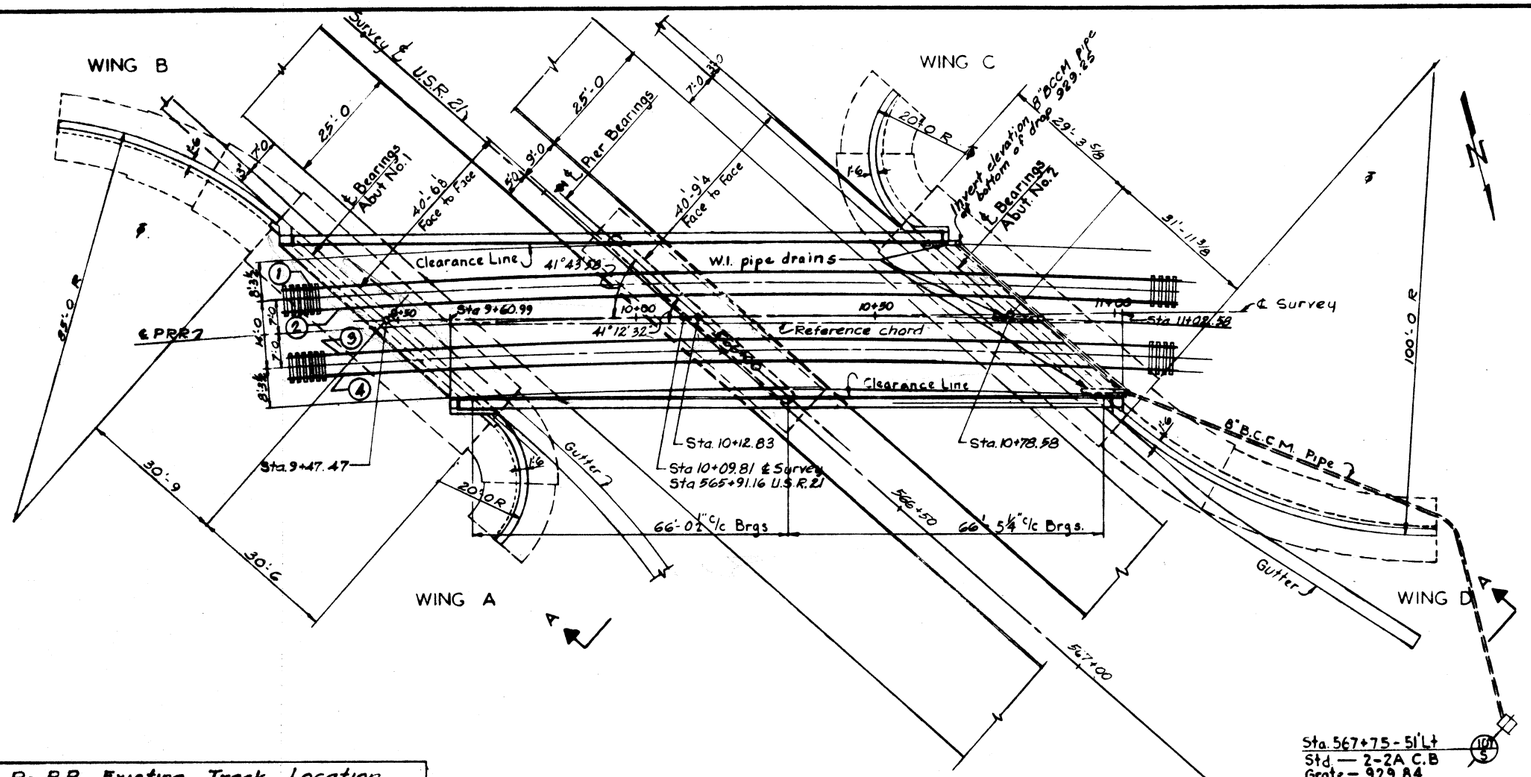
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVISED
MBJ	COW	DWP RLM	DWP KAE	WRK RLM	

BEAVER VALLEY ENGINEERING SUPPLIES CO.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

131

STA.-21-10.23



CURVE DATA

P.R.R. — U.S.R. 21

D = 3° 30'± — P.I Sta = 561+15.39

R = 1637.28'± — Δ = 8° 08'12" Lt

D = 0° 28'

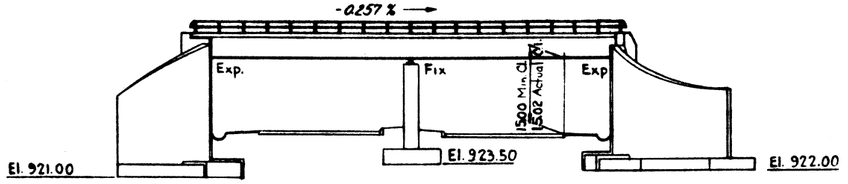
R = 12277.70'

T = 873.26

L = 1743.58

Pa. R.R. Existing Track Location							
Station	Rail ①	Rail ②	Rail ③	Rail ④	℄ (1-2)	℄ (3-4)	℄ R.R.
8+00	4.75R	9.45R	14.90R	23.64R	7.10R	21.27R	14.18°R
8+20	2.15R	6.96R	16.95R	21.15R	4.57R	18.75R	11.66R
8+40	0.07L	4.68R	14.05R	18.81R	2.28R	16.43R	9.36°R
8+60	2.11L	2.69R	11.98R	16.72R	0.26R	14.35R	7.90°R
8+80	3.88L	0.83R	10.19R	14.92R	1.52L	12.52R	5.52R
9+00	5.44L	0.73L	8.64R	13.35R	3.08L	11.00R	3.96°R
9+20	6.70L	2.02L	7.34R	12.05R	4.36L	9.70R	2.67R
9+30	7.27L	2.57L	6.78R	11.49R	4.92L	9.14R	2.11R
9+40	7.77L	3.06L	6.29R	11.02R	5.42L	8.66R	1.62R
9+50	8.18L	3.48L	5.88R	10.58R	5.83L	8.23R	1.20R
9+60	8.58L	3.90L	5.53R	10.22R	6.24L	7.86R	0.82R
9+70	8.96L	4.16L	5.25R	9.94R	6.51L	7.60R	0.54R
9+80	9.17L	4.48L	4.97R	9.65R	6.80L	7.31R	0.26R
9+90	9.33L	4.61L	4.80R	9.48R	6.97L	7.14R	0.08°R
10+00	9.48L	4.79L	4.64R	9.36R	7.14°L	7.00R	0.07L
10+09.81	9.57L	4.85L	4.64R	9.28R	7.21L	6.96R	0.12°L
10+20	9.60L	4.85L	4.59R	9.29R	7.22°L	6.94R	0.14°L
10+30	9.51L	4.80L	4.66R	9.33R	7.16°L	7.00°R	0.08L
10+40	9.39L	4.69L	4.78R	9.47R	7.04L	7.12°R	0.04R
10+50	9.24L	4.53L	4.93R	9.64R	6.88°L	7.28°R	0.20R
10+60	9.03L	4.30L	5.18R	9.90R	6.66°L	7.54R	0.44R
10+70	8.70L	4.02L	5.27R	10.16R	6.36L	7.72°R	0.69R
10+80	8.43L	3.70L	5.80R	10.46R	6.06L	8.13R	1.09R
10+90	7.98L	3.30L	6.21R	10.91R	5.64L	8.56R	1.46R
11+00	7.61L	2.89L	6.61R	11.31R	5.25L	8.96R	1.86°R
11+20	6.93L	1.89L	7.75R	12.47R	4.18L	10.11R	2.96°R
11+40	5.18L	0.45L	9.09R	13.80R	2.82°L	11.44°R	4.32°R
11+60	3.63L	1.10R	10.63R	15.40R	1.26°L	13.02°R	5.88°R
11+80	1.80L	2.94R	12.48R	17.17R	0.57R	14.82°R	7.70R
12+00	0.40R	5.10R	14.53R	19.25R	2.75R	16.89R	9.82R

NOTE: Offsets measured to guage line of rails @ 90° to base line. Field Book No 4 1-25-60



ELEVATION — AA

Scale 1"=15'-0

GENERAL NOTES

CONSTRUCTION AND MATERIAL SPECIFICATIONS for this structure shall be the State of Ohio, Dept. of Highway Construction and Material Specifications dated 1-1-59 and Supplemental Specifications No. S-101 dated 12-2-59 and No S-107 revised 2-16-55 and S-307 dated 8-23-60

DESIGN SPECIFICATIONS: This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Dept. of Highways, dated 9-1-57 and revised 2-21-58, and the A.R.E.A. Specifications amended 3-11-59.

FOUNDATION BEARING PRESSURE: Footings are designed for a maximum bearing pressure of 3½ tons per sq/ft..

WELDING of structural steel and wrought iron shall be Class "A": Welds shown as field welds may, at the option of the Contractor, be made in the shop.

CONCRETE: Superstructure concrete shall be Class "C". Pier, wings and abutments shall be Class "E" concrete.

SURFACE FINISH OF CONCRETE: Pier, wings and abutment walls shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the pro — visions of Item S-1.

CHAMFER: Exposed edges shall be chamfered 1"x1"

SHEETING AND BRACING: Before construction is started, eight 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 Dept. Of Highways and by the Railroad Company.

RAILROAD NOTE: Track relocation, ballast and ties or any work incidental thereto is not included in this contract. The Con — tractor is requested to coordinate his work where possible with the track — work done by others.

TEMPORARY SPANS FOR THE PENN — SYLVANIA RAILROAD: This item consists of the construction of cofferdams, sheet piling between cofferdams, and temporary spans to support two main tracks as shown on the plans, their maintenance and subsequent removal. The Contractor shall furnish all materials, labor, equipment and incidentals except as otherwise specified herein. The Railroad Company shall furnish and install the rails and other track metal. The Railroad Company will furnish and install temporary cross overs between the two main tracks at locations beyond each end of the bridge site to facilitate single track operation. The Contractor shall arrange his working schedule in such a manner that the temporary spans will be built with a reasonable minimum of interference with the railroad traffic. The contractor shall, prior to starting work, prearrange and agree with the Regional Engineer of the Pennsylvania Railroad on the methods and procedures for maintaining and protecting railroad traffic and operations and the time schedules for carrying out the necessary steps in such procedure. The Contractor shall, prior to performing work which will affect the railroad's operation, submit to the State, signed copies of such agreement with the Railroad. Timber shall be in accordance with A.R.E.A Specifications for f1800 structural grade timber, except that only structural grade ties and blocking need be used. Structural steel shall be in accordance with Item S-107 and of the dimensions, weight and fabrication shown on the plans Used structural steel of proper dimensions will be permitted if the material which the Contractor proposes to furnish is approved by the Area Engineer, Pennsylvania Railroad Company and the Director. The minimum size and weight of such steel shall not be less than that shown on the plans.

After completion of the temporary spans, the Contractor shall maintain them at the direction of the Railroad Company. The Railroad Company shall remove the rails and fastenings and the Contractor shall dismantle and remove the temporary spans, cofferdams and sheet piling as indicated in the "Construction Procedure." The salvaged materials will become the property of the Contractor and shall be removed from the site by him. This item shall be paid for at the contract lump sum price bid for "Temporary Spans for Pennsylvania Railroad" which lump sum price shall constitute full compensation for the temporary spans, cofferdams, and sheet piling required to support the two main tracks as shown on the plans; for the furnishing of materials as herein specified; for the erection, maintenance and removal of the temporary spans including all necessary excavation and backfill beyond the limits for items E-1 and E-2, and for all labor, equipment, tools and incidentals necessary to complete this item.

ROLL-IN BENTS, APPURTENANCES, INCLUDING ROLL-IN OPERATION: This item consists of the construction by the Contractor of roll-in bents and jacking supports for the purpose of supporting the superstructure parts while they are being constructed off to the side of their permanent position (Superstructure to be erected in halves split longitudinally and rolled in from the respective sides of their final position.) The Contractor shall furnish all materials, labor, equipment and incidentals necessary to construct the bents and supports as shown on Sht 143 of the plans. This item also includes the work to be done by the Contractor in performing the roll-in and jack down of the superstructure to its permanent position on the abutments and pier. The method and equipment that is to be used by the Contractor in this operation shall meet the approval of the Area Engineer, Pennsylvania Railroad Company and the Director. The Railroad Company will place ties, rails and ballast on the deck before the roll-in operation is performed and will make the connections to the rails on approaches after the superstructure is in its permanent position. All roll-in work as set forth in this item shall be done at the time prescribed and within the time limit set by the Railroad Company and without interference to railroad traffic on the adjacent track. The Contractor may submit an alternate or modified plan for roll in bents to the Area Engineer, Pennsylvania Railroad Company and the Director for approval. All salvaged roll-in bents will become the property of the Contractor and shall be removed from the site by him. This item shall be paid for at the contract lump sum price bid for "Roll-In Bents and Appurtenances including Roll-In Operation". As an emergency measure, duplicate winches and jacks shall be required during roll-in.

REINFORCING STEEL: All reinforcing steel shall be deformed bars and shall meet the requirements of section M-7.1, intermediate grade billet steel.

RAILROAD AERIAL LINES shall be relocated by the railroad. The Contractor shall use all precautions necessary to see that the lines are not disturbed during construction stages and shall cooperate with the railroad in the relocation of these lines. The cost of the relocation shall be included in the railroad force account work.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

GENERAL PLAN & ELEVATION
BRIDGE NO STA 21-1073
USR 21 UNDER P.R.R.

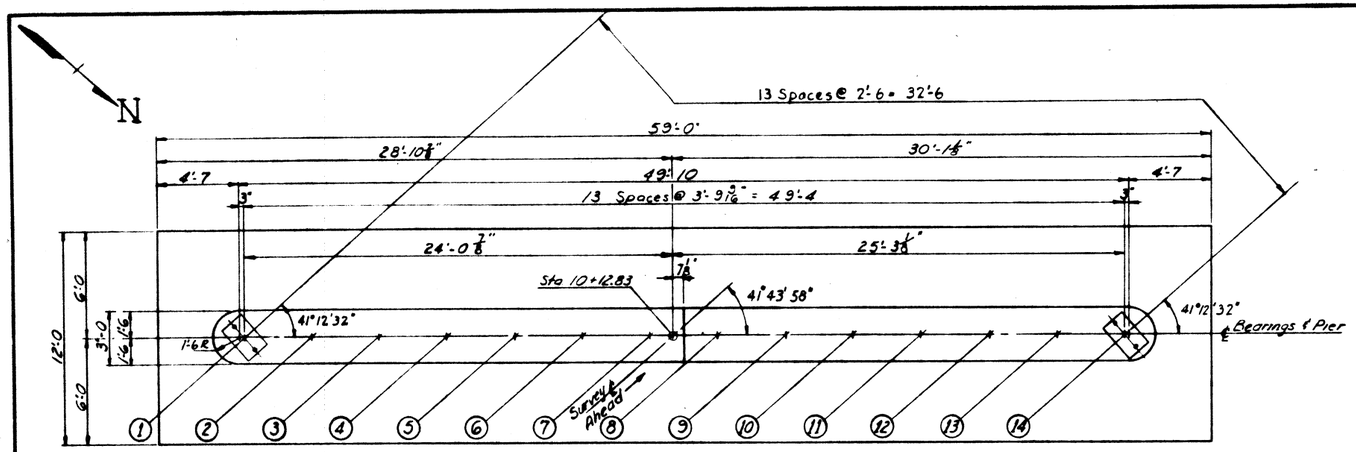
STARK CO. STA. 565+91.16

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
R.L.M	J.Y. -bo-		KAE		

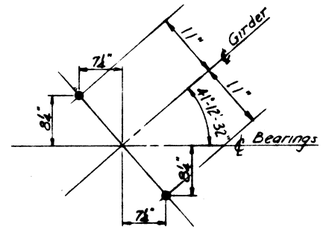
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

132

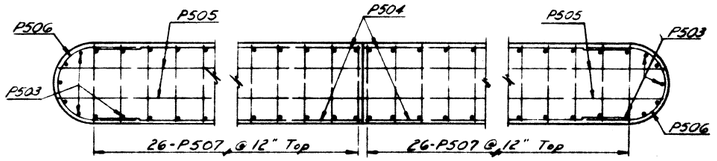
STA-21-10.23



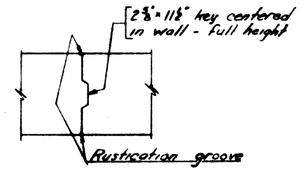
PLAN
Scale 1/4"=1'-0



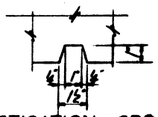
ANCHOR BOLT LAYOUT
Scale 1"=1'-0



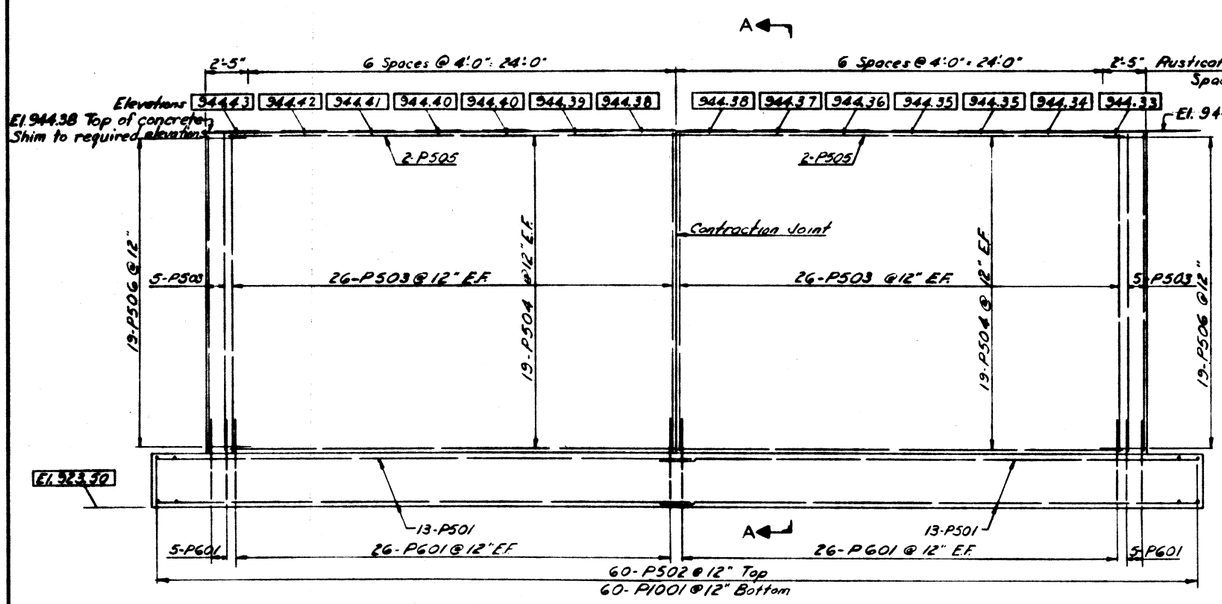
PLAN OF REINFORCEMENT
Scale 3/8"=1'-0



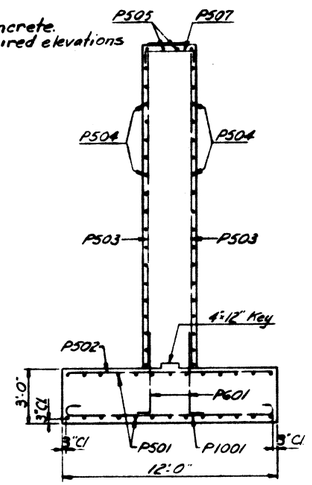
CONTRACTION JOINT DETAIL
Scale 3/8"=1'-0"



RUSTICATION GROOVE DETAIL
Scale 3"=1'-0"



ELEVATION
Scale 1/4"=1'-0



SECTION A-A
Scale 1/4"=1'-0

NOTE
- Clearance of reinforcing steel shall be 2" from the face of the concrete unless otherwise shown.
- All Anchor Bolts are to be preset.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

PIER DETAILS
BRIDGE NO. STA 21-1073
USR 21 UNDER PRR

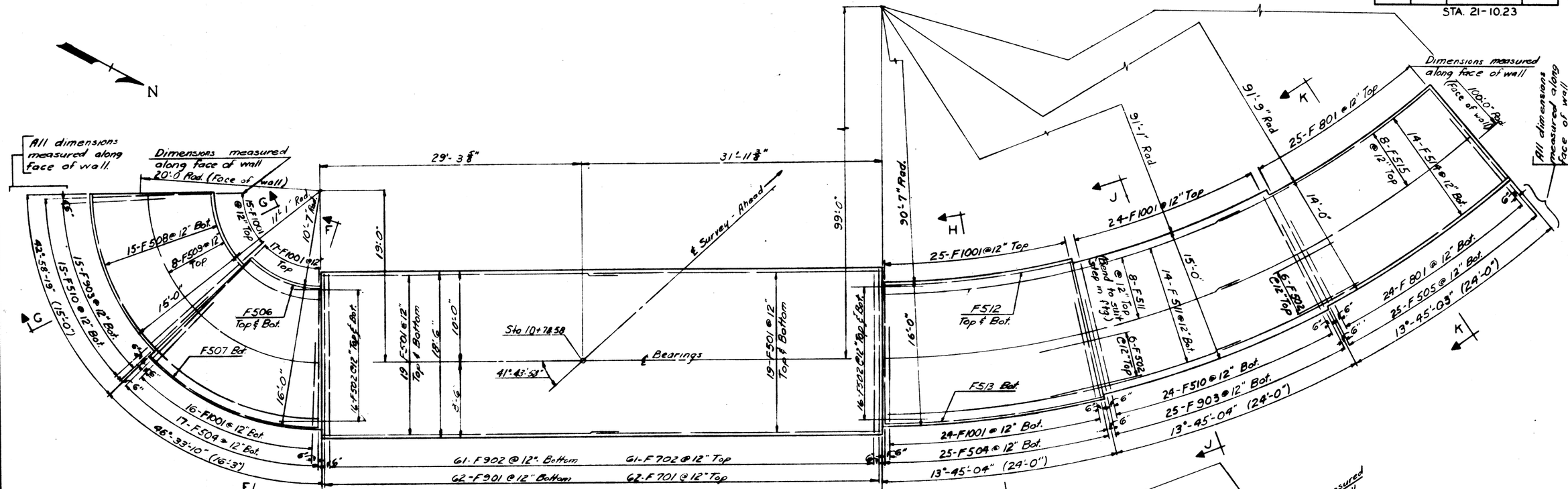
STARK COUNTY STA. 565+91.6

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	APPROVED
KAE	KAE		RLM		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

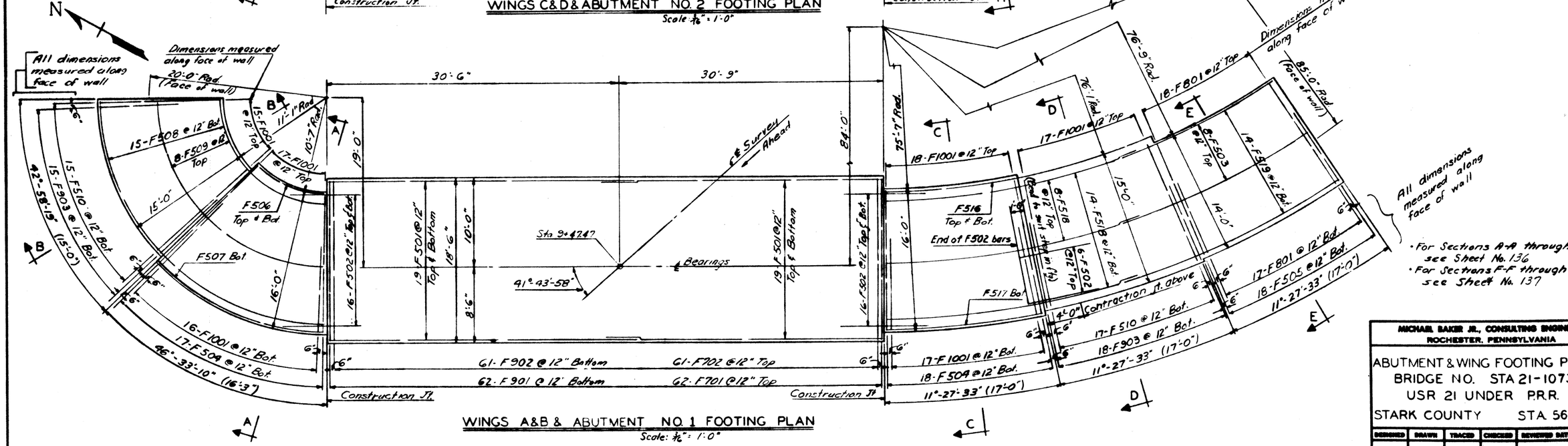
133

STA. 21-10.23



WINGS C&D & ABUTMENT NO. 2 FOOTING PLAN

Scale: ⅜" = 1'-0"



WINGS A&B & ABUTMENT NO. 1 FOOTING PLAN

Scale: ⅜" = 1'-0"

- For Sections A-A through E-E see Sheet No. 136
- For Sections F-F through K-K see Sheet No. 137

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ABUTMENT & WING FOOTING PLANS
BRIDGE NO. STA 21-1073
USR 21 UNDER P.R.R.
STARK COUNTY STA. 565+91.16

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
DWE	DWB		RLM		

FED. AID DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

134

STA 21-10.23

13 Spaces @ 2'-6" = 32'-6"

Threaded anchors

Sta 9+47.47

Survey Ahead

Expansion Jt

Bearings

Wing A - See Sheet No. 136

Wing B - See Sheet No. 136

F1004

24'-4½"

24'-11⅜"

13 Spaces @ 3'-9⅜" = 49'-4

21'-0⅝"
23'-6¼"
29'-4⅝"
30'-6"

25'-3½"
27'-8"
28'-4⅝"
30'-9"

61'-3

PLAN
Scale: ¼"=1'-0"

½" W.I. Deck IR

¼" W.I. IR

SECTION - B B
Scale ¼"=1'-0"

2⅝"x11½" key centered in wall - full height

12"x½" premolded sealing strip in 13"x¾" recess

Waterstop - 8" wide 24 oz copper flashing

Rustication groove

Exposed face

CONTRACTION JOINT
Scale: ½"=1'-0"

See Flashing Detail

1" thick preformed expansion joint filler

EXPANSION JOINT
Scale: ¾"=1'-0"

12" wide - 24 oz copper flashing

FLASHING DETAIL
Not to scale

Girder

Bearings

ANCHOR BOLT LAYOUT
Scale: 1½"=1'-0"

RUSTICATION GROOVE DETAIL
Scale: 3"=1'-0"

Waterstop - 8" wide 24 oz. copper flashing continuous at all walls and abutments. Bend in field.

WATERSTOP DETAIL
Not to scale

Limits of Precast Backwall

7 Spaces @ 4'-0" = 28'-0"

7 Spaces @ 4'-0" = 28'-0"

2'-7½ Rustication Groove Spacing

10-A518 @ 12" F.F.

22-A511 @ 12"

El. 944.50 Top of concrete - Shim to req'd elevations

26-A511 @ 12"

El. 944.55 Top of concrete Shim to required elevations

Limits of Precast Backwall

A521 Elevs.

944.50 944.51 944.52 944.52 944.53 944.54 944.55

944.55 944.56 944.57 944.58 944.58 944.59 944.60

28-A517@12"

3-A504

27-A517@12"

3-A504

Contraction Joint

31-A501@12" NF
34 A502@12" FF

31-A501@12" NF
32-A502@12" FF

33-A100@12" FF

31-A100@12" FF

5'-6"

2@10'-0" = 20'-0"

5'-0"

5'-0"

2@10'-0" = 20'-0"

5'-9"

F.L. 929.15

F.L. 929.20

F.L. 929.25

F.L. 929.30

F.L. 929.35

Gutter flow line

F.L. 929.40

24-A505@12" FF

20-A503@12" NF

24-A504@12" FF

20-A503@12" NF

24-A506@12" FF

El. 921.00

67-F1004@6" FF

63-F1004@6" FF

ELEVATION
Scale: ¼"=1'-0"

* Bend A508 & A513 bars to suit in field

Bearings.

A505 A511 A517 A504 A502 A501 A505 A503 A1001

Precast concrete, included with abutment concrete for payment. See Detail Sheet 135

2'-0" Blanket of porous backfill to bottom of ballast

4" ø Weepholes @ 10'-0" %

7'-0" 4'-6" 7'-0"

See waterstop detail.

F701 F902 F1004 F702 F501 F901

4'-0" 2'-0" 1'-6" 3'-6" 1'-0" 3"CL 3"CL

18'-6"

SECTION A-A
Scale: ¼"=1'-0"

NOTE

- All Anchor Bolts and Threaded Anchors are to be preset.

Clearance of reinforcing steel shall be 2" from the face of the concrete unless otherwise shown.

- For Footing Plan see Sheet No. 133
  NF = Near Face
  FF = For Face
- Material - Wrought Iron Plate ASTM-A42
  High Strength Steel ASTM-A325

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ABUTMENT NO. 1 DETAILS
BRIDGE NO. STA 21-1073
USR 21 UNDER PRR

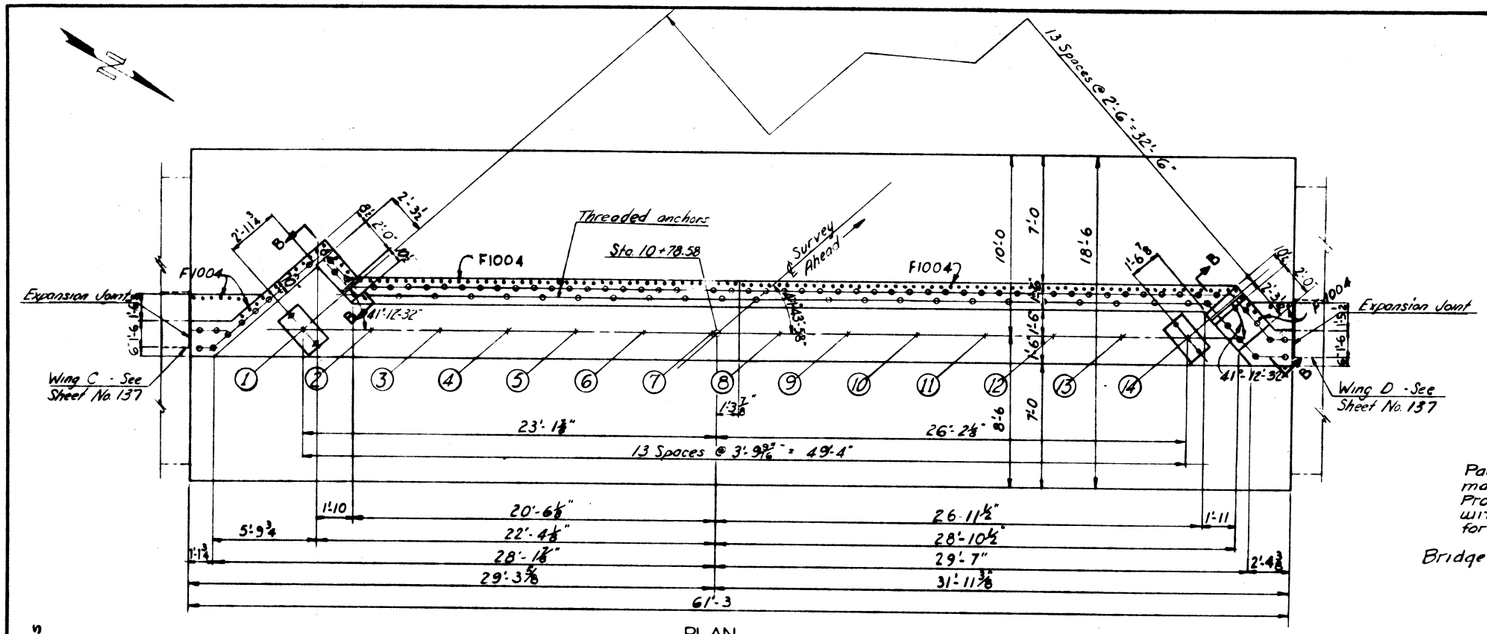
STARK COUNTY STA 565+91.6

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
KAE	KAE		RLM	.	

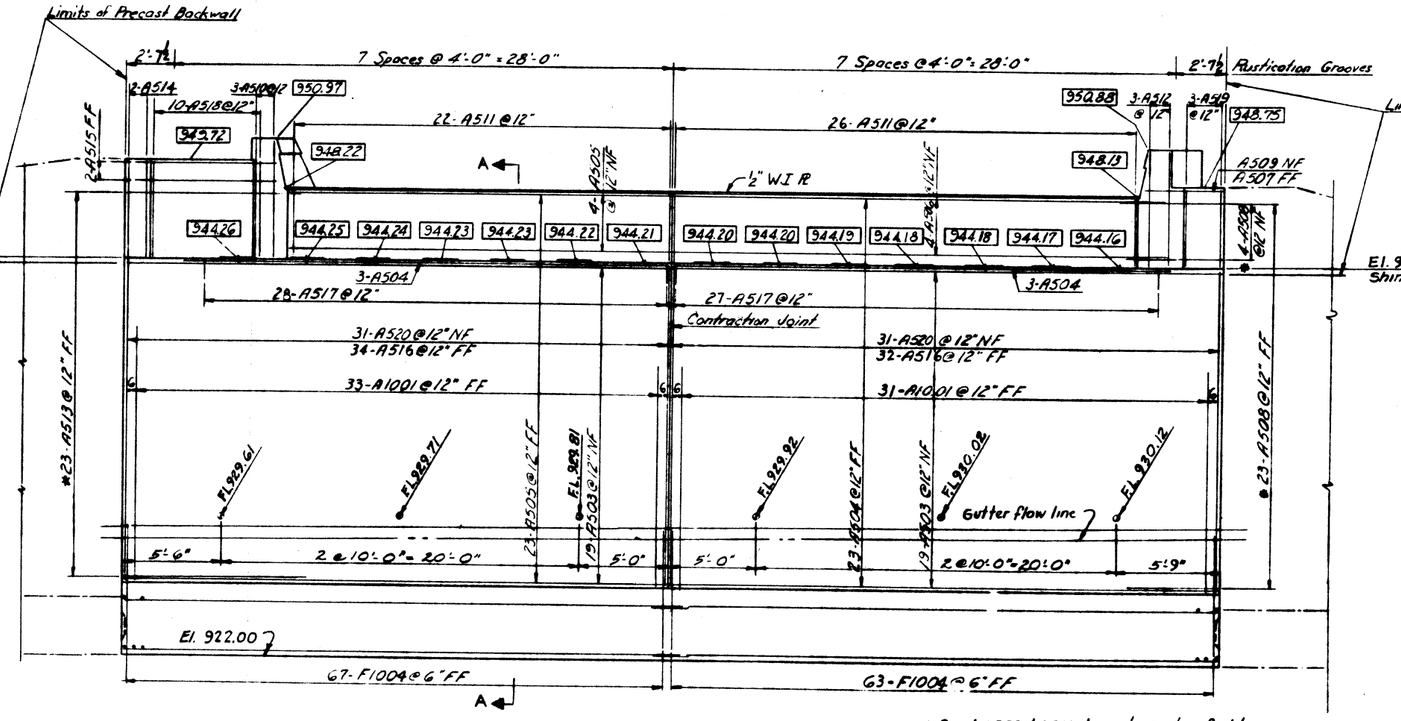
FED. REG. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

135

STA 21-10.23

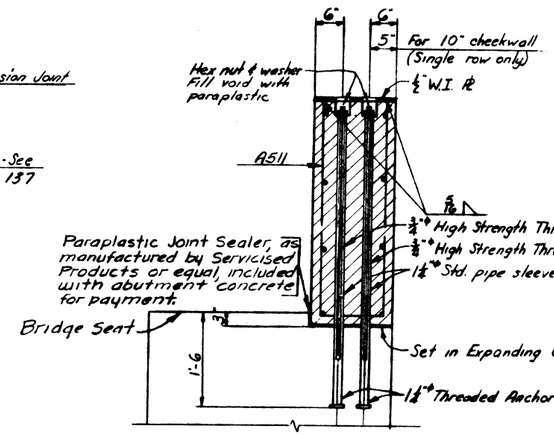


PLAN
Scale: ¼" = 1'-0"

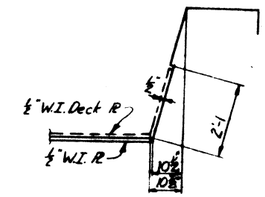


ELEVATION
Scale: ¼" = 1'-0"

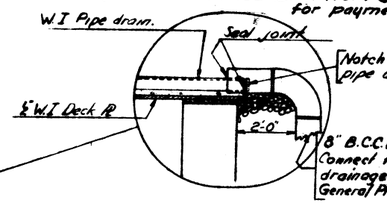
* Bend A508 & A513 bars to suit in field

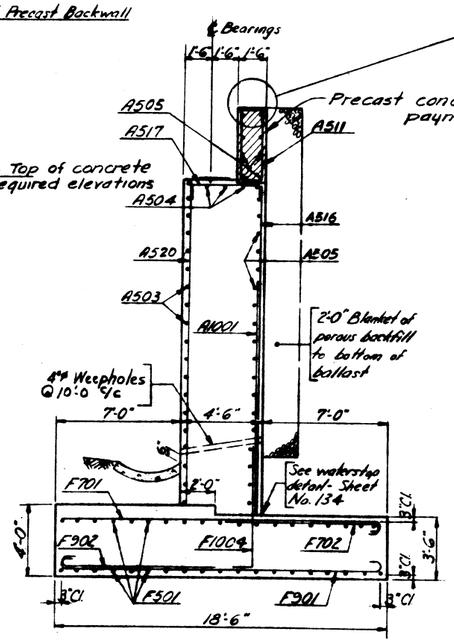


PRECAST BACKWALL DETAIL
Scale: ¾" = 1'-0



SECTION B-B
Scale ½" = 1'-0





SECTION A-A
Scale: ¼" = 1'-0"

NOTE

- All Anchor Bolts and Threaded Anchors are to be preset.
- Clearance of reinforcing steel shall be 2" from the face of the concrete unless otherwise shown.
- For expansion and contraction joint detail and for rustication groove detail, see Sheet No. 134
- For Anchor Bolt layout see Sheet No. 134
- For Footing Plan see Sheet No. 133
  N.F. = Near Face
  F.F. = For Face
- Material - Wrought Iron Plate ASTM-A42
  High Strength Steel ASTM-A325

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ABUTMENT NO. 2 DETAILS
BRIDGE NO. STA 21-10.73
USR 21 UNDER PRR

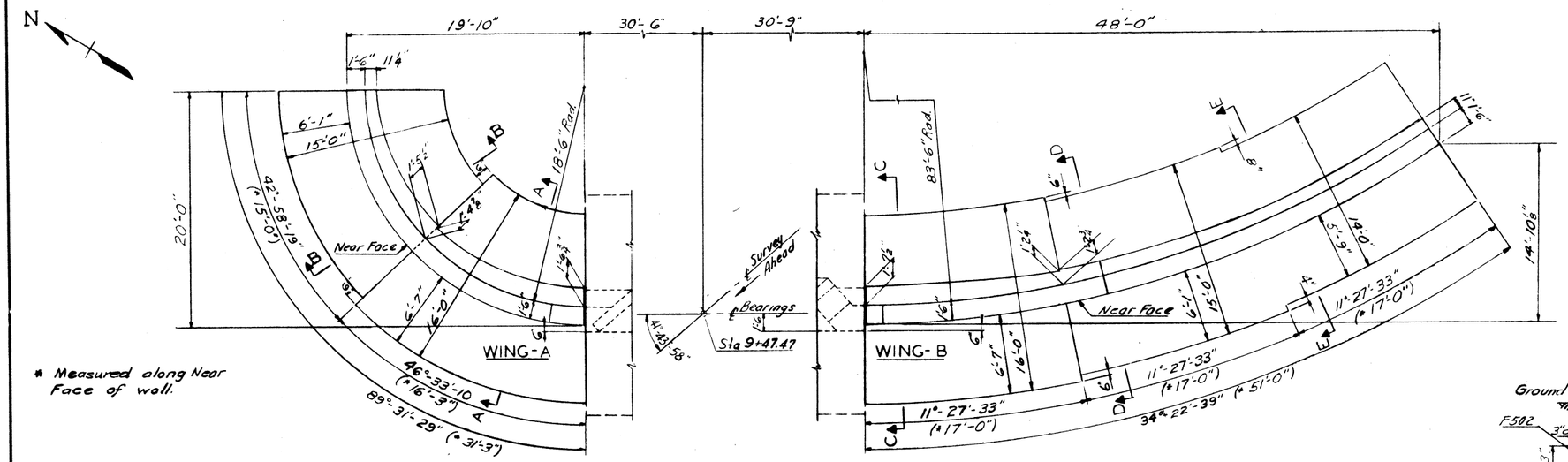
STARK COUNTY STA 565+91.6

DESIGNED	DRAWN	TRACED	CHECKED	SUBMITTED DATE	ISSUED
KAE	KAE		RLM		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

136

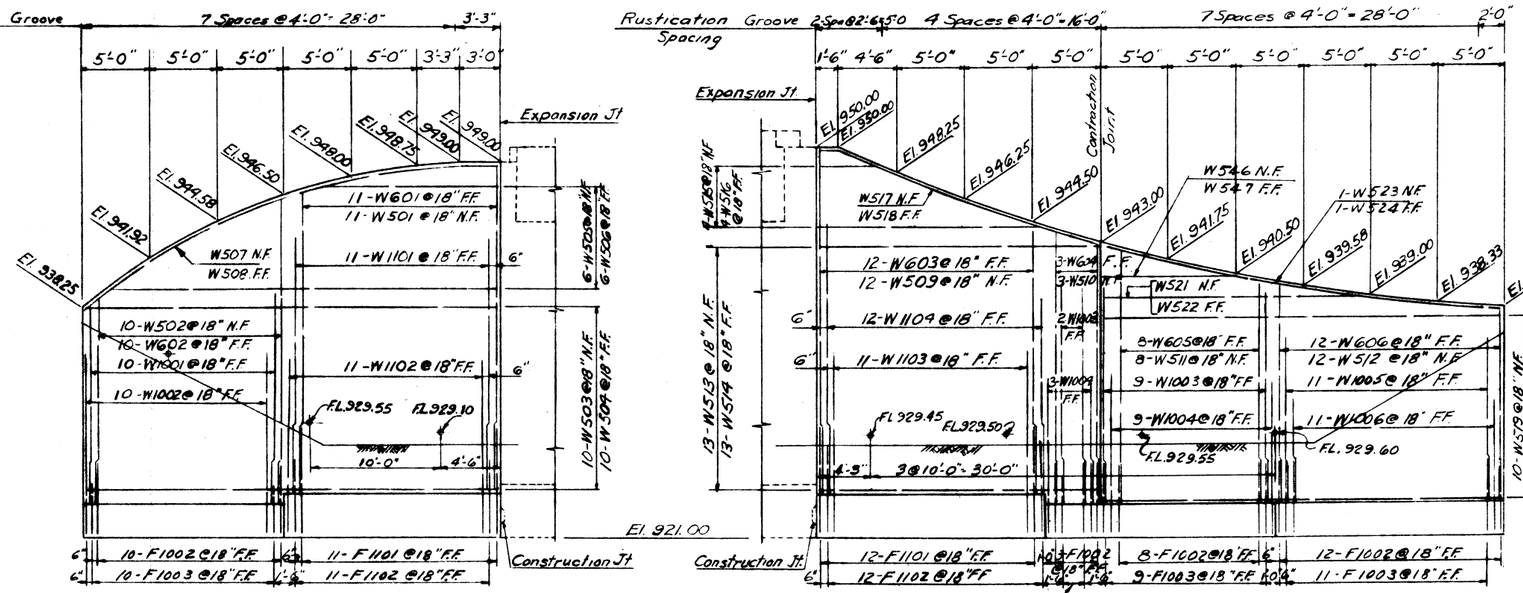
STA. 21-10.23



* Measured along Near Face of wall.

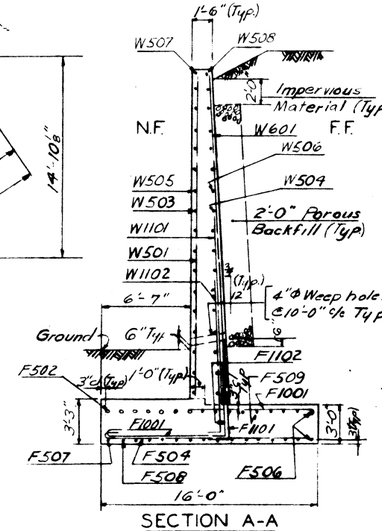
PLAN OF WING A & B

Scale: 3/16" = 1'-0"



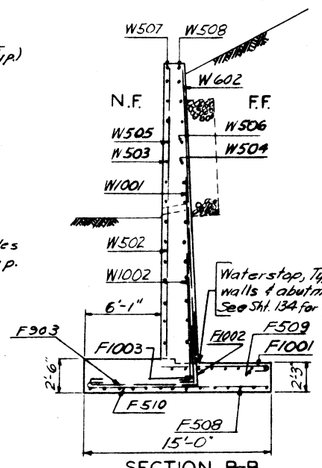
ELEVATION OF WING A&B – DEVELOPED VIEW

Scale: 3/16" = 1'-0"



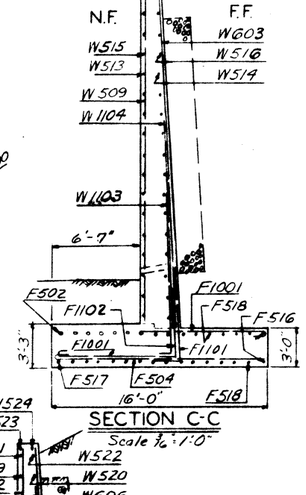
SECTION A-A

Scale: 3/16" = 1'-0"



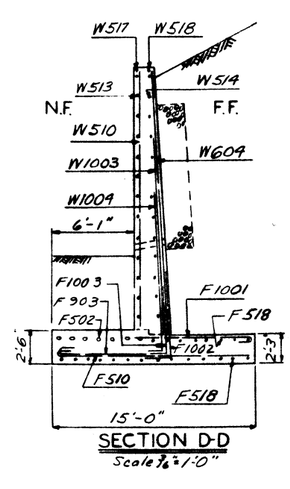
SECTION B-B

Scale: 3/16" = 1'-0"



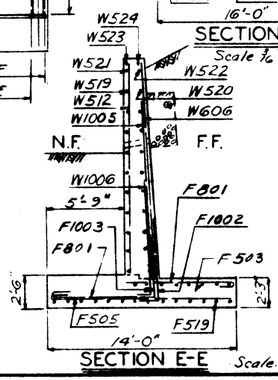
SECTION C-C

Scale: 3/16" = 1'-0"



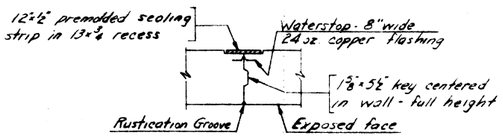
SECTION D-D

Scale: 3/16" = 1'-0"



SECTION E-E

Scale: 3/16" = 1'-0"



CONTRACTION JOINT

Scale: 1/2" = 1'-0"

NOTE

- Clearance of Reinforcing Steel from face of concrete shall be 2" unless otherwise noted.
- For Footing Plan see Sheet No. 133
- N.F. = Near Face
- F.F. = For Face
- E.F. = Each Face
- For Expansion Joint, Rustication Groove, and Flashing Detail see Sheet No. 134.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

WING A&B DETAILS
ABUTMENT NO. 1
BRIDGE NO. STA 21-1073
USR 21 UNDER P.R.R.
STARK COUNTY STA. 565+91.18

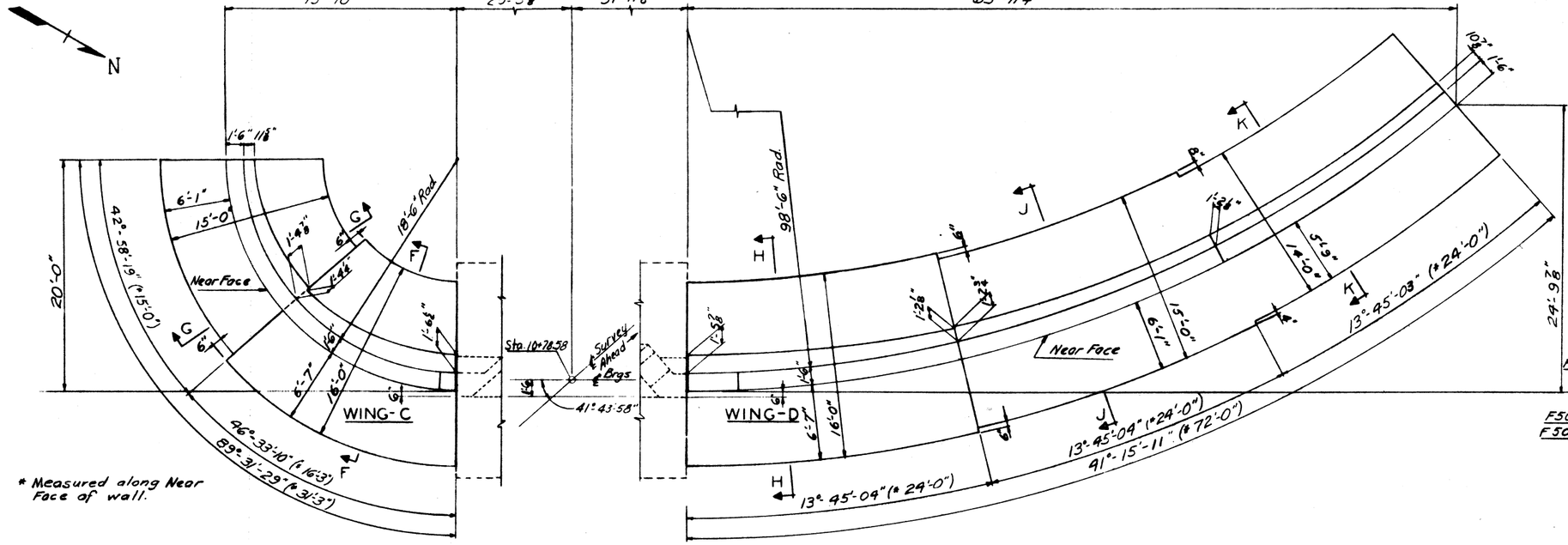
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
DWB	DWB		RLM		

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-36316

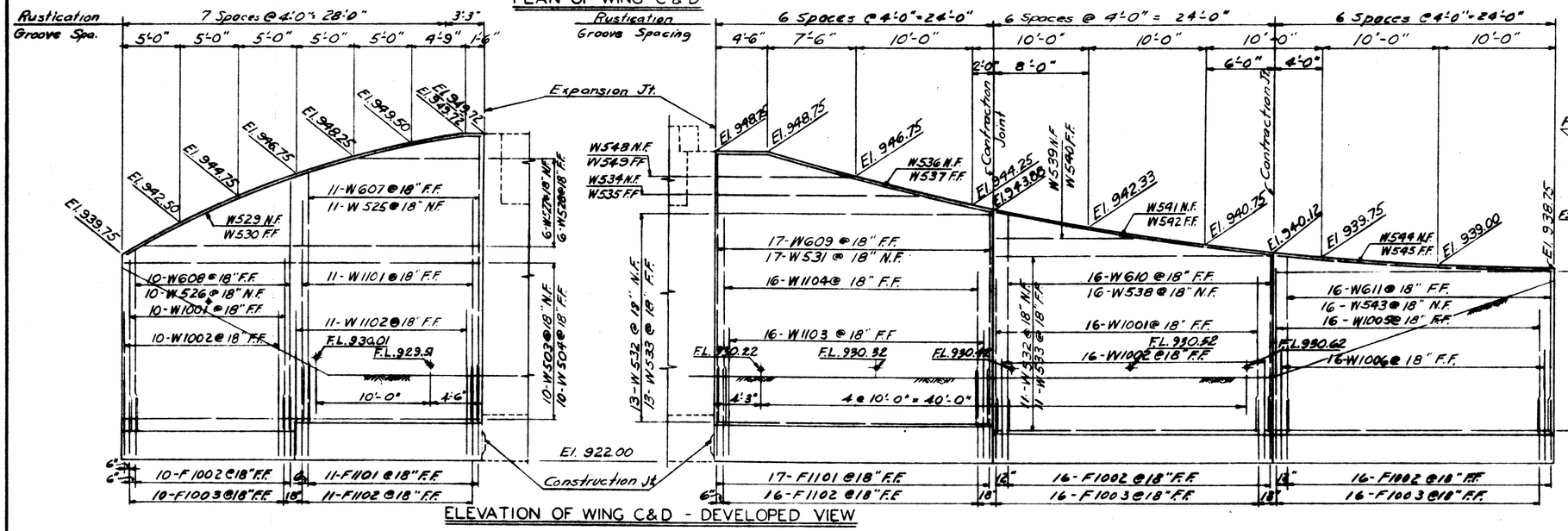
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

137

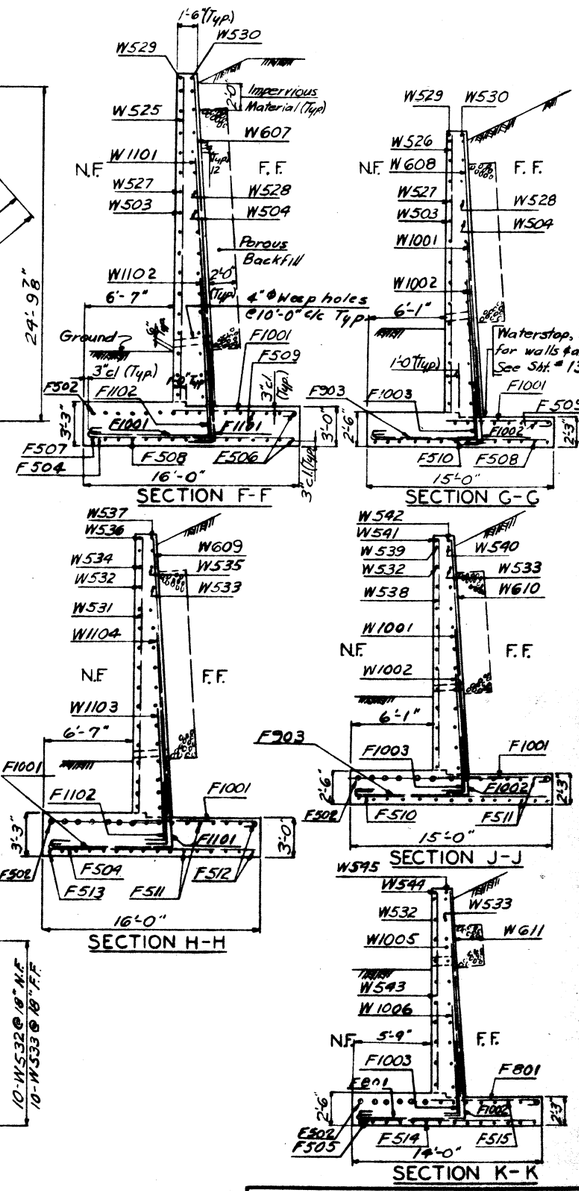
STA. 21 - 10. 23



PLAN OF WING C & D



ELEVATION OF WING C&D - DEVELOPED VIEW



NOTE

- Clearance of Reinforcing Steel from face of concrete shall be 2" unless otherwise noted.
- For Footing Plan see Sheet No. 133
- For Expansion Jt., Rustication Groove, and Flashing Detail see Sheet No. 134

LEGEND

N.F. = Near Face
F.F. = Far Face
E.F. = Each Face

Scale: 3/16" = 1'-0

- For Contraction Jt Detail see Sheet No. 136

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

WING C&D DETAILS
ABUTMENT NO. 2
BRIDGE NO. STA 21-1073
USR 21 UNDER P.R.R.
STARK COUNTY STA. 565+91.16

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
DWB	DWB		RLM		

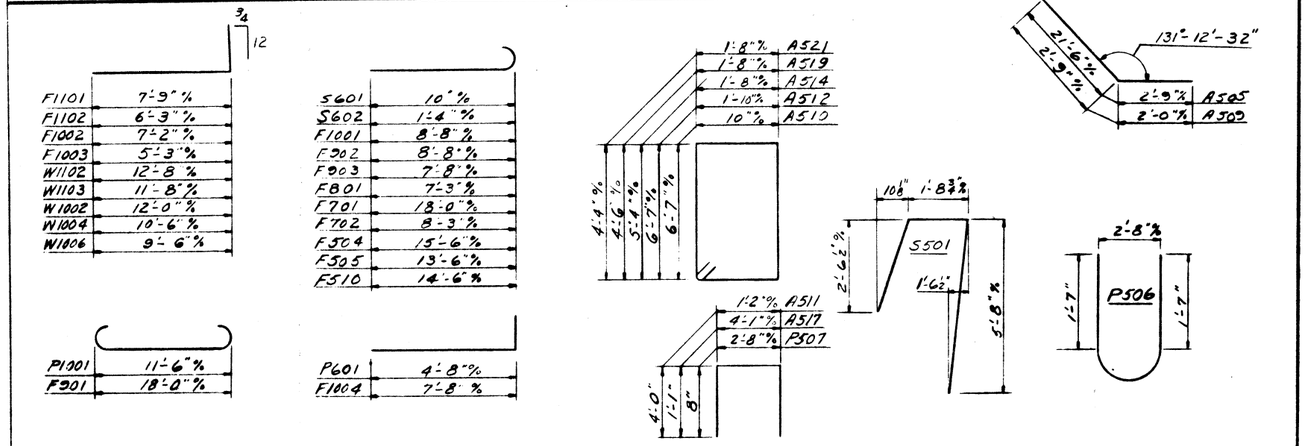
BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-5000

FED. ROUTE DESIGNATION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

138

STA 21-10.23

BENDING DIAGRAM



ESTIMATED QUANTITIES

Item	Total	Unit	Description	Superstructure	Pier	Abuts.	Wings	General		
E-2	3936	C.Y.	Unclassified excavation		236	1784	1916			
S-1	96	C.Y.	Class "C" concrete - Superstructure	96						
S-1	805	C.Y.	Class "E" concrete - Walls		103	424	278			
S-1	664	C.Y.	Class "E" concrete - Footings		99	314	271			
S-3	201	Lin. Ft.	Waterproofing, premolded sealing strip			144	57			
S-4	131,331	Lbs.	Reinforcing steel	4224	11,626	56,871	58,610			
S-107	1,022,695	Lbs.	Structural steel, including W.I. Plate	1,022,695						
S-8	1,022,695	Lbs.	Field painting of structural steel	1,022,695						
S-9	227	S.F.	1" Preformed expansion joint filler			227				
S-9	100	Lin. Ft.	Folded copper strip 24 oz - 12" wide			100				
S-9	411	Lin. Ft.	Waterstop - 8" wide - 24 oz copper strip			170	241			
Special	Lump Sum	L.S.	Temporary spans for Pennsylvania Railroad					Lump Sum		
Special	Lump Sum	L.S.	Roll-in bents and appurtenances including roll-in operation					Lump Sum		
S-14	270	Lin. Ft.	Railing (Steel pipe posts with rect. tubing rails)	270						
S-29	175	Lin. Ft.	8" Bituminous-coated corrugated metal pipe, including fittings			175				
S-29	426	Lin. Ft.	8" Half round wrought iron pipe deck drain, including specials	426						
S-29	374	C.Y.	Porous backfill			177	147			
T-35	34	C.Y.	Asphaltic concrete surface course - Type A or C (185-100) as per plan	34						

REINFORCING STEEL LIST

Mark	Abut. No. 1	Abut. No. 2	Wing A&B	Wing C&D	Total	Length	Weight	Shp	Remarks
F1101			23	28	51	8'-11"	2416	B	
F1102			23	27	50	7'-5"	1370	B	
F1001			100	121	221	10'-1"	9589	B	
F1002			33	42	75	8'-3"	2662	B	
F1003			32	42	74	6'-4"	2017	B	
F1004	130	130			260	8'-9"	9789	B	
F301	62	62			124	20'-6"	8643	B	
F302	61	61			122	9'-11"	4113	B	
F303			33	40	73	8'-11"	2213	B	
F801			35	49	84	8'-4"	1863	B	
F701	62	62			124	18'-10"	4773	B	
F702	61	61			122	9'-1"	2265	B	
F501	76	76			152	31'-4"	4367	S	
F502	64	64	6	12	146	10'-0"	1523	S	
F503			1 of 8		8	20'-0" & 24'-5"	185	S	Vary ea. by 7½"
F504			35	42	77	16'-1"	1232	B	
F505			18	25	43	14'-1"	632	B	
F506			2	2	4	8'-3"	34	S	
F507			1	1	2	20'-10"	43	S	
F508			1 of 15	1 of 15	30	17'-7" & 40'-3"	905	S	Vary ea. by 1'-7½"
F509			1 of 8	1 of 8	16	17'-7" & 29'-0"	385	S	Vary ea. by 1'-7½"
F510			32	39	71	15'-1"	1117	B	
F511				22	22	38'-3"	889	S	
F512				2	2	21'-3"	44	S	
F513				1	1	25'-0"	26	S	
F514				1 of 14	14	28'-10" & 38'-7"	492	S	Vary ea. by 9"
F515				1 of 8	8	28'-10" & 34'-4"	262	S	Vary ea. by 9"
F516			2		2	14'-8"	31	S	
F517			1		1	17'-9"	19	S	
F518			22		22	27'-6"	631	S	
F519			1 of 14		14	20'-0" & 28'-1"	351	S	Vary ea. by 7½"
A1001	64	64			128	13'-2"	7252	S	
A501	62				62	19'-4"	1250	S	
A502	66				66	19'-7"	1348	S	

Mark	Abut. No. 1	Abut. No. 2	Wing A&B	Wing C&D	Total	Length	Weight	Shp	Remarks
A503	40	38			78	30'-3"	2461	S	
A504	30	29			59	27'-2"	1672	S	
A505	28	27			55	24'-3"	1331	B	
A506	4	4			8	26'-0"	217	S	
A507	2	1			3	3'-9"	12	S	
A508	28	27			55	6'-6"	373	S	
A509	2	1			3	4'-9"	13	B	
A510	3	3			6	15'-4"	96	B	
A511	45	48			96	8'-11"	833	B	
A512	3	3			6	17'-4"	108	B	
A513	24	23			47	10'-6"	515	S	
A514	3	2			5	14'-6"	76	B	
A515	2	2			4	8'-6"	35	S	
A516		66			66	18'-3"	1256	S	
A517	55	55			110	6'-0"	608	B	
A518	10	10			20	5'-4"	111	S	
A519		3			3	12'-10"	40	B	
A520		62			62	18'-0"	1164	S	
A521	1				1	12'-6"	13	B	
W1101			11	11	22	13'-4"	2260	S	
W1102			11	11	22	13'-10"	1617	B	
W1103			11	16	27	12'-10"	1841	B	
W1104			12	16	28	18'-4"	2727	S	
W1001			10	26	36	15'-0"	2324	S	
W1002			10	26	36	13'-1"	2027	B	
W1003			11	11	22	16'-9"	769	S	
W1004			12		12	11'-7"	598	B	
W1005			11	16	27	14'-0"	1627	S	
W1006			11	16	27	10'-7"	1230	B	
W601			1 of 11		11	22'-9" & 24'-9"	392	S	Vary ea. by 2½"
W602			1 of 10		10	15'-6" & 29'-0"	289	S	Vary ea. by 10"
W603			1 of 12		12	24'-3" & 25'-9"	415	S	Vary ea. by 6"
W604			1 of 3		3	19'-6" & 20'-6"	30	S	Vary ea. by 6"
W605			1 of 8		8	16'-3" & 19'-3"	213	S	Vary ea. by 5"
W606			1 of 12		12	14'-6" & 16'-6"	279	S	Vary ea. by 2"
W607				1 of 11	11	22'-0" & 24'-6"	384	S	Vary ea. by 3"
W608				1 of 10	10	15'-11" & 22'-1"	285	S	Vary ea. by 8½"
W609				1 of 17	17	18'-8½" & 23'-6"	538	S	Vary ea. by 5"
W610				1 of 16	16	13'-8½" & 19'-0"	417	S	Vary ea. by 2½"
W611				1 of 16	16	14'-3" & 15'-6"	357	S	Vary ea. by 1"
W501			1 of 11		11	22'-6" & 24'-6"	270	S	Vary ea. by 2½"

Mark	Abut. No. 1	Abut. No. 2	Wing A&B	Wing C&D	Total	Length	Weight	Shp	Remarks
W502	1 of 10			10	10	15'-5" & 22'-9"	198	S	Vary ea. by 10"
W503	10	10		20	20	30'-4"	633	S	
W504	1 of 10	1 of 10		20	20	27'-1" & 27'-8"	573	S	Vary ea. by 1"
W505	1 of 6			6	6	19'-0" & 21'-0"	131	S	Vary ea. by 3'-2½"
W506	1 of 6			6	6	12'-3" & 27'-6"	124	S	Vary ea. by 3'-1"
W507	1			1	1	34'-6"	36	S	
W508	1			1	1	33'-0"	34	S	
W509	1 of 12			12	12	20'-6" & 25'-6"	285	S	Vary ea. by 6"
W510	1 of 3			3	3	19'-3" & 20'-8"	62	S	Vary ea. by 6"
W511	1 of 8			8	8	16'-3" & 19'-0"	147	S	Vary ea. by 3"
W512	1 of 12			12	12	14'-3" & 16'-3"	191	S	Vary ea. by 2"
W513	13			13	13	20'-7"	279	S	
W514	13			13	13	20'-3"	275	S	
W515	1 of 4			4	4	4'-0" & 16'-0"	42	S	Vary ea. by 4'-8"
W516	1 of 4			4	4	3'-8" & 15'-8"	40	S	Vary ea. by 4'-0"
W517	1			1	1	21'-2"	22	S	
W518	1			1	1	20'-10"	22	S	
W519	10			10	10	29'-7"	309	S	
W520	10			10	10	29'-3"	305	S	
W521	1			1	1	18'-6"	19	S	
W522	1			1	1	18'-2"	19	S	
W523	1			1	1	30'-0"	31	S	
W524	1			1	1	29'-8"	31	S	
W525		1 of 11		11	11	21'-9" & 24'-3"	264	S	Vary ea. by 3"
W526		1 of 10		10	10	15'-9" & 21'-11"	196	S	Vary ea. by 2½"
W524		1 of 6		6	6	11'-3" & 29'-1"	126	S	Vary ea. by 3'-7"
W528		1 of 6		6	6	9'-9" & 27'-7"	117	S	Vary ea. by 3'-7"
W527		1		1	1	34'-0"	35	S	
W530		1		1	1	32'-6"	34	S	
W531		1 of 17		17	17	18'-5" & 28'-3"	369	S	Vary ea. by 3½"
W532		34		34	34	23'-7"	836	S	
W533		34		34	34	23'-4"	827	S	
W534		1		1	1	17'-6"	18	S	
W535		1		1	1	17'-3"	18	S	
W536		1		1	1	24'-4"	25	S	
W537		1		1	1	24'-1"	25	S	
W538		1 of 16		16	16	15'-3" & 18'-9"	285	S	Vary ea. by 2½"
W539		1		1	1	12'-0"	13	S	
W540		1		1	1	11'-9"	12	S	
W541		1		1	1	23'-9"	25	S	
W542		1		1	1	23'-6"	25	S	
W543		1 of 16		16	16	14'-0" & 15'-3"	244	S	Vary ea. by 1"
W544		1		1	1	23'-8"	25	S	
W545		1		1	1	23'-5"	24	S	
W546	1			1	1	9'-9"	10	S	
W547	1			1	1	9'-5"	10	S	
W548		1		1	1	11'-6"	12	S	
W549		1		1	1	11'-3"	12	S	

Mark	No.	Length	Weight	Shp
SUPERSTRUCTURE				
S601	272	1'-6"	613	B
S602	134	2'-0"	403	B
S501	138	16'-0"	1432	B
S502	48	35'-4"	1769	S
PIER				
P1001	60	14'-4"	3700	B
P601	114	5'-4"	913	B
P501	52	30'-1"	1632	S
P502	60	11'-6"	720	S
P503	114	17'-8"	2101	S
P504	76	24'-9"	1762	S
P505	4	26'-0"	108	S
P506	38	7'-3"	287	B
P507	52	3'-9"	203	B
REPLACEMENT BARS				
RE1100	1	7'-7"		S
RE1000	3	7'-3"		S
RE900	1	6'-10"		S
RE800	1	6'-6"		S
RE700	1	6'-3"		S
RE600	1	5'-11"		S
RE500	3	5'-7"		S

Item T-35: The mix design of the asphaltic concrete as set up by the Laboratory shall have 0.75% more asphalt cement than the mix as normally designed for pavement use, using the proposed source of aggregate.

Bar Size:
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 size number. For example, W501 is a number 5 size bar and W1101 is a number 11 size bar.

Replacement Bars:
If replacement bars are fabricated from stock which has previously been tested and approved by the Ohio Highway Testing Laboratory, test samples as provided in Section S-4.02 need not be furnished and replacement bars will not be required.

∫ = Series

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

REINFORCING STEEL LIST AND QUANTITIES
BRIDGE NO. STA 21-1073
USR 21 UNDER PRR
STARK COUNTY STA 565+91.16

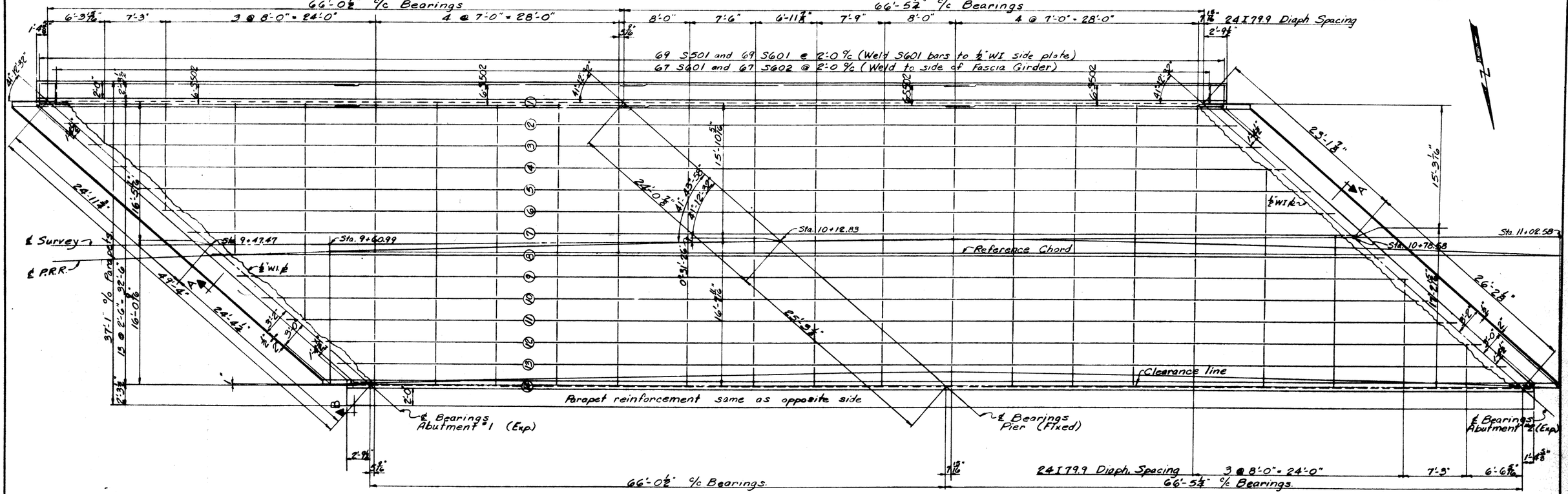
DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
RLM MAE	S.J.F.		RLM		

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY NUMBER A-27670

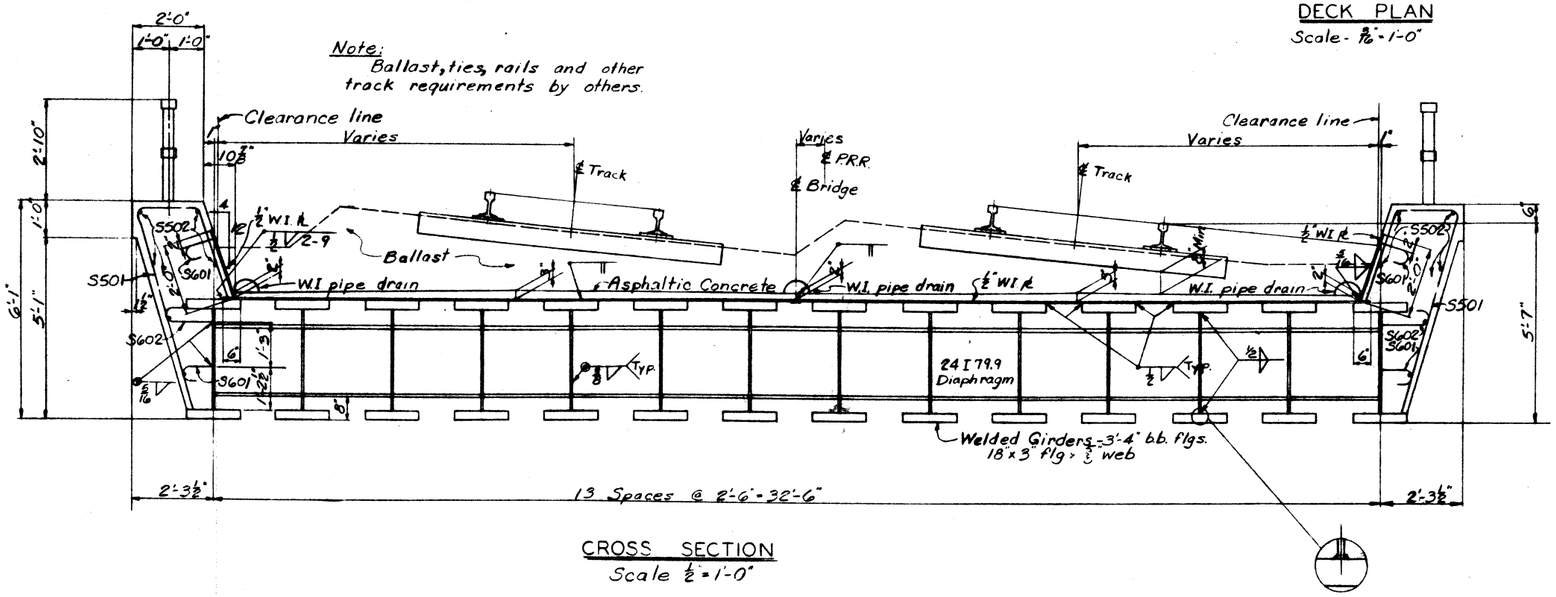
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

139

STA. 21-10.23



DECK PLAN
Scale - ⅜" = 1'-0"



CROSS SECTION
Scale ½" = 1'-0"

Notes:

Material - Structural Welding Steel ASTM-A373 unless noted.
Wrought Iron Plate ASTM-A42.
Welded Wrought Iron Pipe ASTM-A72.
All plan dimensions are horizontal.
No camber required.
For Sections A and B see Sheet No. 140

LOADS	INTERIOR GIRDER				FASCIA GIRDER			
	Maximum Positive Moment	Maximum Negative Moment	Maximum Abutment Reaction	Maximum Pier Reaction	Maximum Positive Moment	Maximum Negative Moment	Maximum Abutment Reaction	Maximum Pier Reaction
DEAD	356 ft	651 ft	29.1 k	97.0 k	705 ft	1268 ft	56.2 k	187.6 k
LIVE	839 ft	1061 ft	67.3 k	152.5 k				
IMPACT	512 ft	648 ft	41.0 k	93.0 k				
CENT. FORCE	168 ft	212 ft	13.5 k	30.5 k				
TOTAL	1875 ft	2572 ft	150.9 k	373.0 k	705 ft	1268 ft	56.2 k	187.6 k
SM (Req'd-Stress)	1718. inches³							
SM (Furnished)	* 1952. inches³							

* Size of girder selected to meet deflection specifications. AREA 15-4-4 (5)

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTRUCTURE DETAILS
BRIDGE NO. STA 21-1073
USR 21 UNDER P.R.R.

STARK CO. STA. 565+91.16

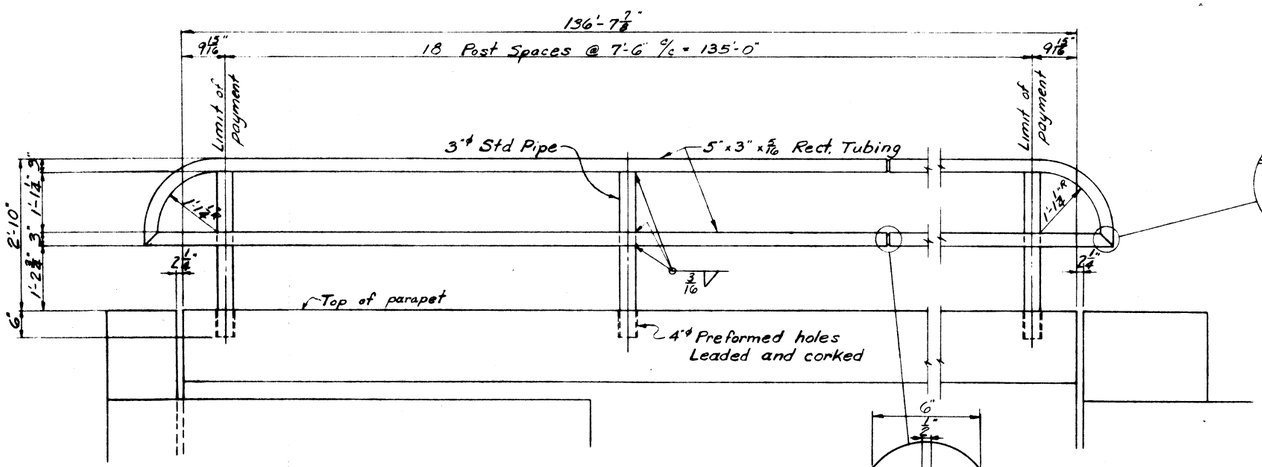
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	APPROVED
KAE RLM	RLM		KAE		

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY REORDER A-37676

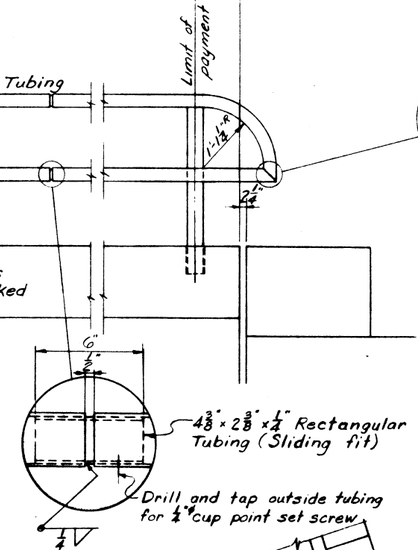
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

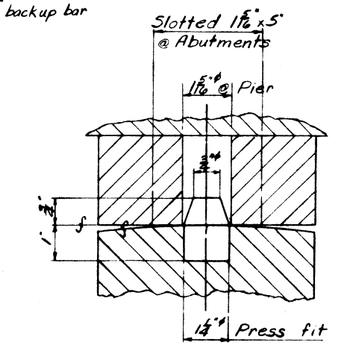
140

STA. 21-10.23

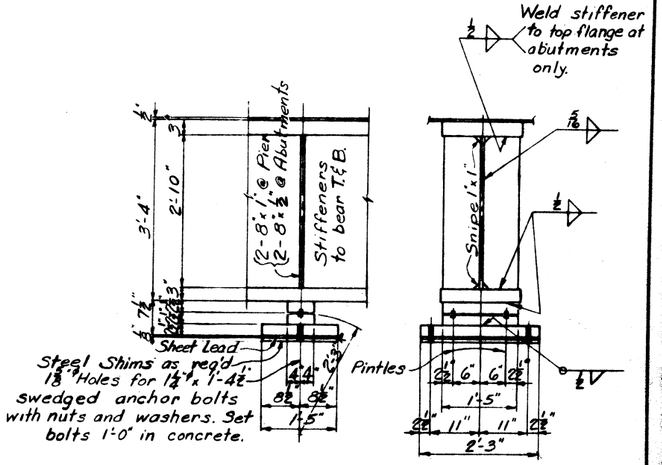


RAILING DETAIL
Scale 3/4"=1'-0"

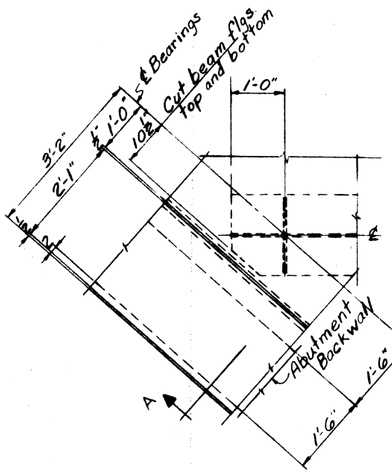


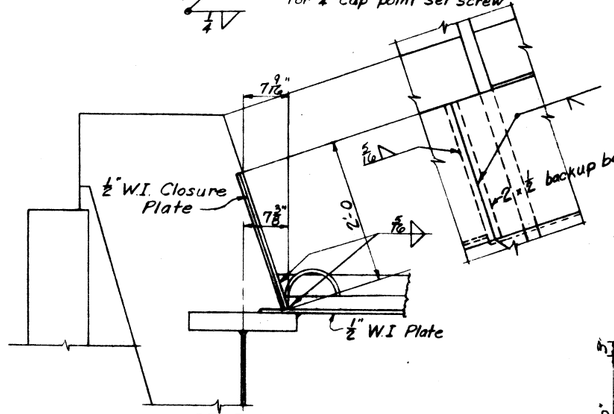


PINTLE DETAIL
Scale - 6"=1'-0"

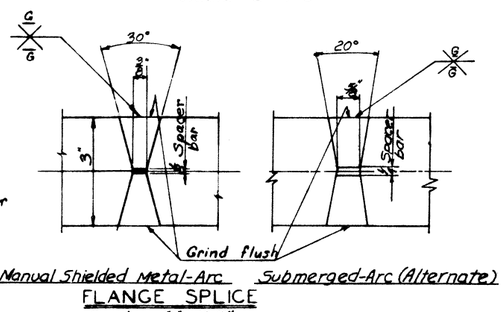


BEARING DETAIL
Scale 3/4"=1'-0"

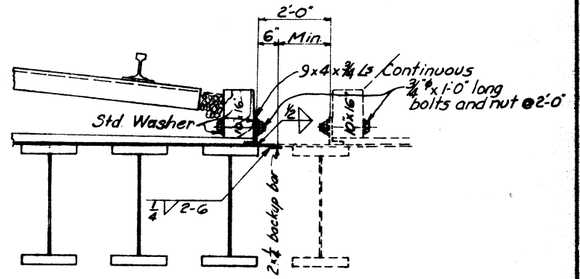




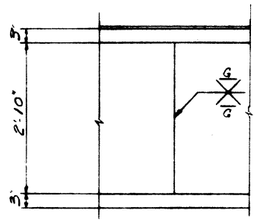
SECTION B
TYPICAL ALL CORNERS
Scale 1"=1'-0"



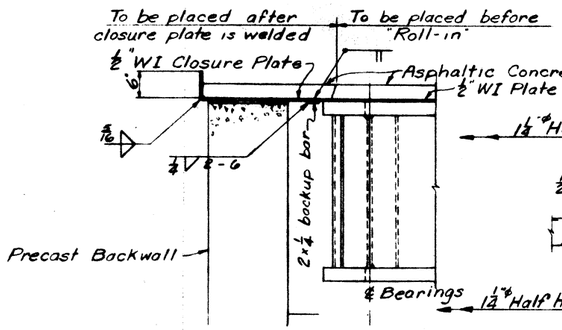
Manual Shielded Metal-Arc Submerged-Arc (Alternate)
FLANGE SPLICE
Scale - 6"=1'-0"



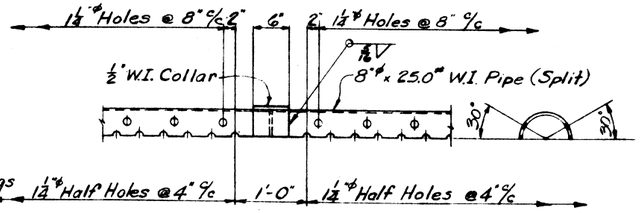
TEMPORARY BALLAST DAM DETAILS
Scale 1/2"=1'-0"
To remove dam, burn off upstanding leg of angle.



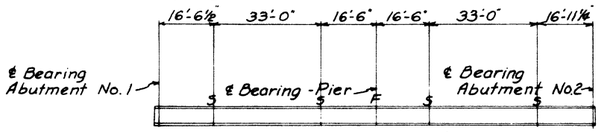
WEB SPLICE
Scale 3/4"=1'-0"



SECTION A
Scale 3/4"=1'-0"



W.I. PIPE DRAIN
Scale 1"=1'-0"



GIRDER SPLICES

GIRDER SPLICE NOTES

All splices are to be optional. See "RADIOGRAPH WELDING INSPECTION" requirements on sheet 131.

S = Shop Splice
F = Field Splice

NOTES

Splices in the wrought iron deck plate shall be arranged so that no transverse welding to the beams is within the tension flange area.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SUPERSTUCTURE DETAILS
BRIDGE NO STA 21-1073
USR 21 UNDER P.RR.

STARK CO. STA. 565+91.16

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	REVISED
KAE RLM	RLM		KAE		

BEAVER VALLEY ENGINEERING SUPPLIES COMPANY ROCHESTER N.Y. 57670

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

141

STA - 21-10.23

CONSTRUCTION PROCEDURE

To avoid delays and expedite construction, the Contractor may modify or revise any of the construction steps to suit unforeseen conditions that may arise in the field. However, any changes in the procedure must first be approved by the Area Engineer of the Pennsylvania Railroad and the Director.

TOTAL ESTIMATED QUANTITIES	
TOTAL	DESCRIPTION
339097 lbs	Structural Steel
84782 in ft	Piling
2125 Sq Ft	Sheet Piling
19251 lbs	Hardware
99 M.B.M.	Timber

NOTE:
The State of Ohio does not assume responsibility for any variations in estimated quantities listed in this table. The Contractor shall be paid his lump sum bid price for "Temporary Spans for Pennsylvania Railroad" regardless of any variations in quantities.

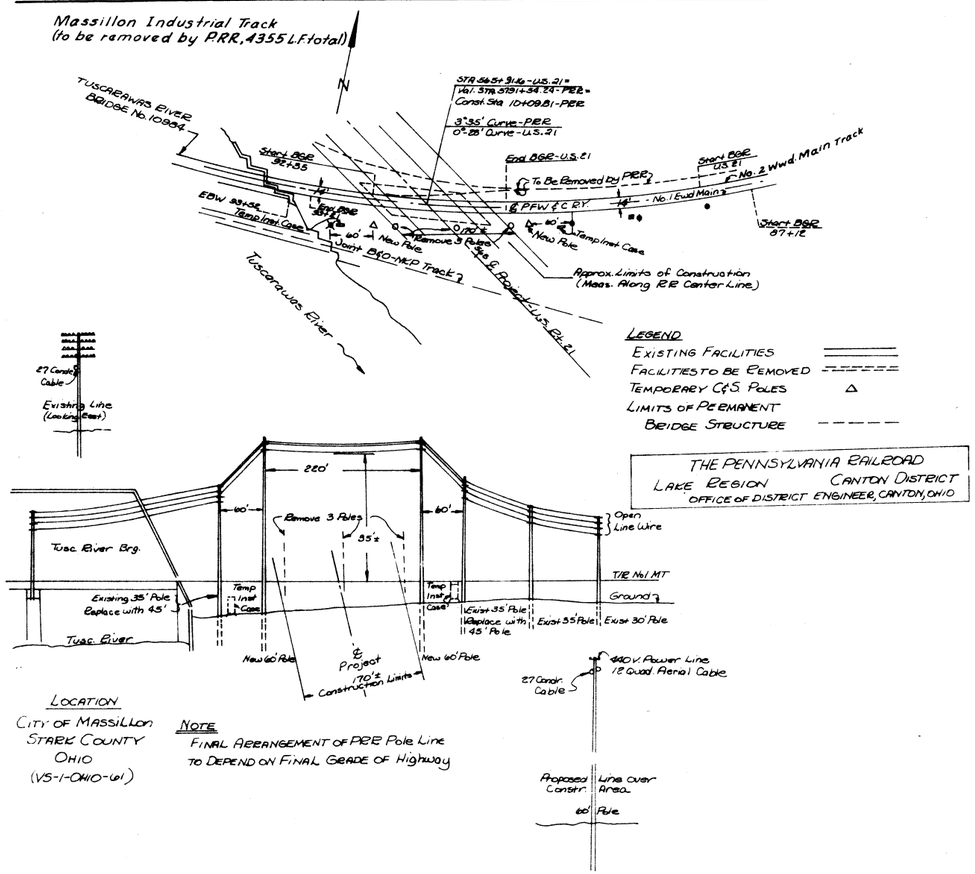
CONSTRUCTION STEPS:

1. Drive piling as required for the construction of cofferdams for the temporary spans for one track doing only such work on a daily basis as may be accomplished within the hours approved by Railroad. This includes replacing track, and otherwise making it ready for railroad traffic.
2. Repeat Step 1 for the other track.
3. Drive sheet piling and anchor piling between cofferdams as shown on plan.
4. Excavate inside cofferdams down to about 2'0" below top of piling for south side track using temporary shoring, if required, to hold till under north side track. Erect the necessary bracing and prepare pile tops for temporary spans. Erect temporary spans for south side track. Note "Working Time" condition in Step 1.
5. Repeat Step 4 for north side temporary spans.
6. Continue excavation inside cofferdams alternating from one track to the other as required to produce efficient and steady progress. Erect bracing steel as shown on plans when excavated depths have been reached.
7. Pour footings and block as shown. Remove bracing as shown on plans and pour stems up to bearing elevations. Note: All anchors to be preset.
8. Erect jacking supports, roll-in bents, roller assemblies and closure span supports.
9. Erect superstructure halves on their respective bent positions. Pour concrete parapets on superstructure.
10. Place asphaltic concrete and deck drains on deck.
11. Lay new ballast, ties and track on superstructure while supported on roll-in bents.
12. Excavate for and place 1¼" ø tie rods and bracing between anchor piling and sheet piling.

ROLL-IN

13. (a) Remove south side track, ties and ballast. Remove south side temporary spans.
(b) Excavate between cofferdams to 6'-9" below low rail elevation. Burn off tops of cofferdam piling that interfere with roll-in. Place masonry bearing plates.
(c) Roll superstructure-half into place and jack down to final position on bearings.
(d) Erect closure spans, precast backwalls and closure plates. Lay closure ballast, ties and rails.
(e) Roll-in operations 13(a) through 13(d) shall be started and completed within the time limits approved by Railroad.

(f) Remove sheet piling, anchor piling and rods from between cofferdams and repeat Steps 13(a) through 13(e) for north side track.
(g) Weld superstructure halves together and complete construction along center line as shown on plans.
14. Construct wings as shown on plan, removing piling where necessary.
15. Backfill behind abutments and wings. Thoroughly compact fill and then remove closure spans for one track only. Complete construction as shown on plans. Salvage piling and other materials. Note "Working Time" condition in Step 1.
16. Repeat Step 15 for the other track.



THE PENNSYLVANIA RAILROAD
LAKE REGION CANTON DISTRICT
OFFICE OF DISTRICT ENGINEER, CANTON, OHIO

LOCATION
CITY OF MASSILLON
STARK COUNTY
OHIO
(VS-1-OHIO-61)

NOTE
FINAL ARRANGEMENT OF P.R.R. Pole Line TO DEPEND ON FINAL GRADE OF Highway

RAILROAD FORCE ACCOUNT PLAN

MATERIAL BILL FOR TEMPORARY STRUCTURE			
No. of Pieces	SIZE	LENGTH	REMARKS
STRUCTURAL STEEL			
10	8 WF 35	13'-11¼	Top struts for pier cofferdam
20	8 WF 35	20'-5¼	Top struts for abut. cofferdams
10	8 WF 40	11'-11⅜	Bottom struts for pier cofferdam
20	8 WF 40	18'-5⅜	Bottom struts for abut. cofferdams
—	12 WF 58	540 Lin. ft.	Wale
—	12 C 25.0	1620 Lin. ft.	Wale
8	27 WF 102	25'-0	Pier temporary spans
8	36 WF 182	33'-0	Abut. #1 temporary spans
8	36 WF 182	36'-0	Abut #2 temporary spans
16	36 WF 150	14'-6	Closure spans
12	36 WF 150	5'-3	End diaphragms for closure spans
48	18 I 54.7	3'-5⅛	Diaphragms for abut. temporary spans
16	18 I 54.7	3'-5½	Diaphragms for pier temporary spans
24	18 I 54.7	3'-5⅜	Diaphragms for closure spans
4	L 9×4×½	25'-0	Pier
4	L 9×4×½	33'-0	Abut #1
4	L 9×4×½	36'-0	Abut #2
8	L 9×4×½	14'-6	Closure spans
—	R 60×¾	550 Lin. ft.	Deck R on temp. and closure spans
—	R 22×½	282 Lin. ft.	
—	G C 10.5	458 Lin. ft.	
PILING			
125	DP-2	12'-9	2125 Sq. ft. Sheet piling
8	14 WF 127	20'-0	160 Lin. ft. Anchor piles
84	14 WF 127	47'-0	3948 Lin. ft.
84	14 WF 127	52'-0	4368 Lin. ft.
HARDWARE			
196	¾" ø	1'-0	Bolts complete with washers & nut
192	1¼" ø	3½"	H.S. Bolts complete with washers & nut
32	1" ø	6"	Lag screws
80	¾" ø	1'-6	Drift pins
8	1¼" ø	15'-6	Tie rods complete with washers & nuts
2	1⅛" ø	12'-6	Tie rods complete with washers & nuts
2	1¼" ø	6'-6	Tie rods complete with washers & nuts
TIMBER			
	4" Thick	4'-0	35,000 bd. ft. Between piles
	4" Thick	3'-0	23,400 bd. ft. Between piles
	4" Thick		2,462 bd. ft. Behind temporary spans
	10×12	196 Lin. ft.	1,960 bd. ft. Ballast retainers
	10×18	196 Lin. ft.	2,940 bd. ft. Ballast retainers
	8×16	164 Lin. ft.	1,749 bd. ft. Closure span supports
245	8×8	21'-0	27,440 bd. ft. Closure span columns
30	8×8	6'-0	960 bd. ft. Struts
	8×8	170 Lin. ft.	907 bd. ft. Wales
			1,642 bd. ft. Sheeting
			500 bd. ft. Blocking
	2" Thick		550 bd. ft. Safety walk

FORCE ACCOUNT WORK by the Pennsylvania Railroad

1. Engineering and Inspection
2. Communications and Signal Work
3. Track Work, Temporary
4. Track Work, Permanent

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

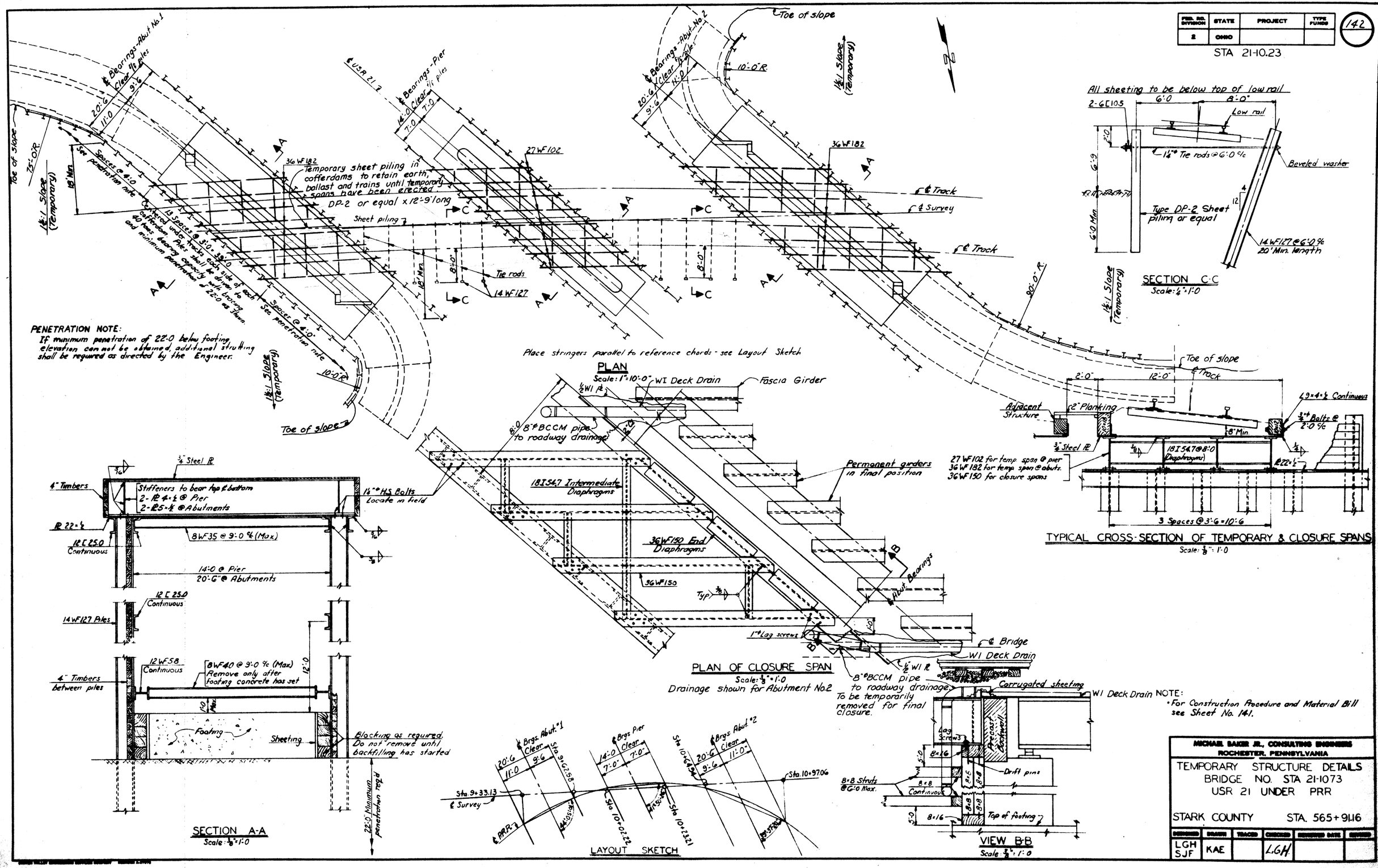
TEMPORARY STRUCTURE DETAILS
BRIDGE NO. STA 2H073
USR 21 UNDER PRR;
RAILROAD FORCE ACCOUNT WORK
STARK COUNTY STA 565+91.16

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
RLM KAE	KAE		RLM		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

142

STA 21-10.23



NOTE:
*For Construction Procedure and Material Bill see Sheet No. 141.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

TEMPORARY STRUCTURE DETAILS
BRIDGE NO. STA 21-1073
USR 21 UNDER PRR

STARK COUNTY STA. 565+91.16

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	APPROVED
LGH SJF	KAE		LGH		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

143

STA-21-10.23

ROLL-IN OPERATION NO. 1

Initial position Roller #1

℄ Fascia Girder - Erection Position

6 Spaces @ 2'-6" = 15'-0

32'-0" Minimum

Final position Roller #1

24'-3⅞" Roller Travel

48'-6⅛" Girder Travel

℄ Bearings Abutment No. 1

℄ Bearings Pier

℄ Bearings Abutment No. 2

℄ Fascia Girder - Final Position

℄ First Interior Girder

12'-6 (typ.)

Face of Abutment

Jacking Positions

12'-6 (typ.)

52'-0" ℄ Rollers on Guides to be assembled and in position before Roll-in.

22'-9⅞"

℄ First Interior Girder

℄ Fascia Girder - Final Position

℄ Roll-in bent

℄ Roll-in bent

℄ Roll-in bent

32'-0" Minimum

6 Spaces @ 2'-6" = 15'-0

℄ Fascia Girder - Erection Position

ROLL-IN OPERATION NO. 2

PLAN

Scale: 1" = 10'-0

21 WF 68

10 x 10 x 1'-6 Blocking

¾" Bolts

Rs 8 x ⅜ - Weld to rails & beams See Elevation A-A for location

5" Ø x 1½" thick Guide Collar at every 8th roller. Shrink Fit (Class B)

¾" Tie rods @ 8'-0" ℄

AREA 90# R.A.-A Rails

Track spike

8 x 8 Ties

VIEW B-B

Scale: 1" = 1'-0

Pipe Separators ⅝" Bolts x 1'-11" Long

Bar 2½ x ⅝ Guide

1⅛" Holes in Guides

3" CR.S. Rollers 1'-3" Bet. Shoulders

2 - Splice Bars 2½ x ⅝ x 1'-3" Long

GUIDE DETAIL

Scale: 1" = 1'-0

Minimum top of rail elevation: Abut. No. 1 - 942.82; Pier - 942.65; Abut. No. 2 - 942.48

B

C

Blocking, ¾" Bolts @ 8'-¾" Ctrs. All spaced @ 2'-9 ½

30 WF 116 Jacking beam under one track

5 - ⅞ Stiffeners over jacks

℄

R 10 x 2½ x 0'-10 over jacks Weld to beam

8 x 8 Ties @ 1'-6" ℄

3-12 x 12 Stringers

3-12 x 12 x 3'-0 Corbel Blocks

12 x 12 Cap

3-12 x 12 Cpls. 4'-0 ℄ Pier 8'-0 ℄ Abutments

¾" Bolts

Steel Bearing Pl 12 x 1⅛ x 4'-0

3-10 Braces

3-12 x 12 Sills

6" Wedges

8 x 12 Sills

3-12 x 12

5-6 x 12 Mud sill runners

℄ Jacking columns

6 x 12 x 5'-0 Mud sills

ROLL-IN BENT ELEVATION A-A AT PIER ABUTMENTS SIMILAR

Scale: ¼" = 1'-0

Beam seat

See View B-B for details not shown

Extend every 5th tie to wall

Dudgeon Universal Hydraulic Jack No. 991A or equal - 200 ton cap. 6" stroke. Req'd travel - 2⅜ Max. 1⅛ Min.

Steel Bearing Pl 11 x 4 x 2-10

4 WF 127

Face of abutment or pier

3-12 x 12 ℄ Jacks

Blocking as required

10 x 10 Struts - Block against cofferdam at alternate columns and at jacking positions.

SECTION C-C & D-D

Scale ¼" = 1'-0

Roll-in bent omitted at Section D-D

ROLL-IN BENT OUTSIDE COFFERDAM

Scale: ¼" = 1'-0

See View B-B for details not shown

4'-0

Drift pin

12 x 12 Bracing at alternate ends

3-10 Braces

6 x 12 x 3'-0 Wedges

12 x 12 x 3'-0

3-6 x 12 x 3'-0

NOTE:

- For construction procedure, see Sheet No. 141
- Timber to have minimum stress values of: 350 psi - compression perpendicular to grain, 1010 psi - compression parallel to grain.
- Structural steel shall be in accordance with Item S-107 and of the dimensions, weight and fabrication shown on the plans. Used structural steel of proper dimensions will be permitted if the material which the contractor proposes to furnish is approved by the Area Engineer, Pennsylvania Railroad Company and the Director. The minimum size and weight of such steel shall not be less than that shown on the plans.

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

ROLL-IN BENT & JACKING DETAILS
BRIDGE NO. STA 21-1073
USR 21 UNDER PRR

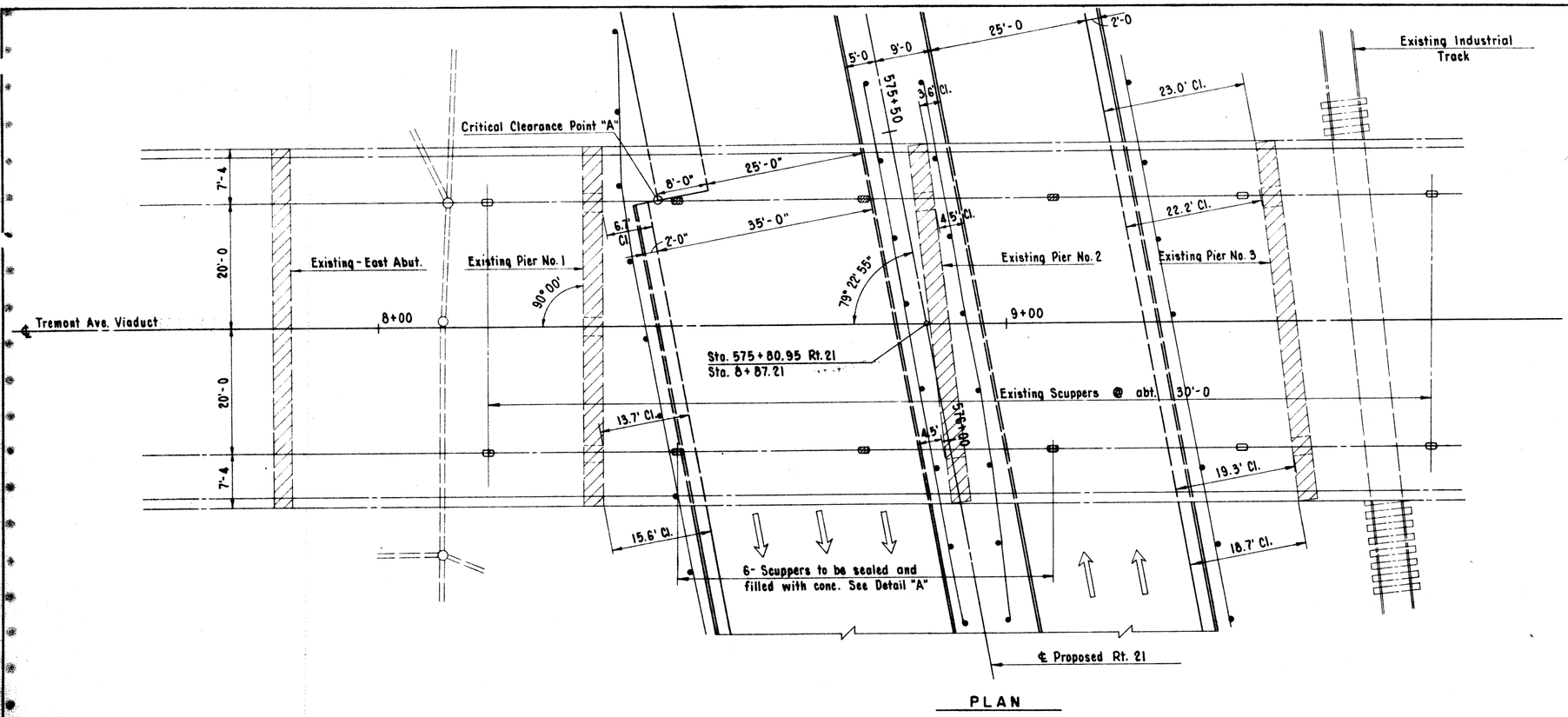
STARK COUNTY STA. 565+91.6

DESIGNED	DRAWN	TRACED	CHECKED	REVISED DATE	ISSUED
KAE RLM	KAE		L.G.H.		

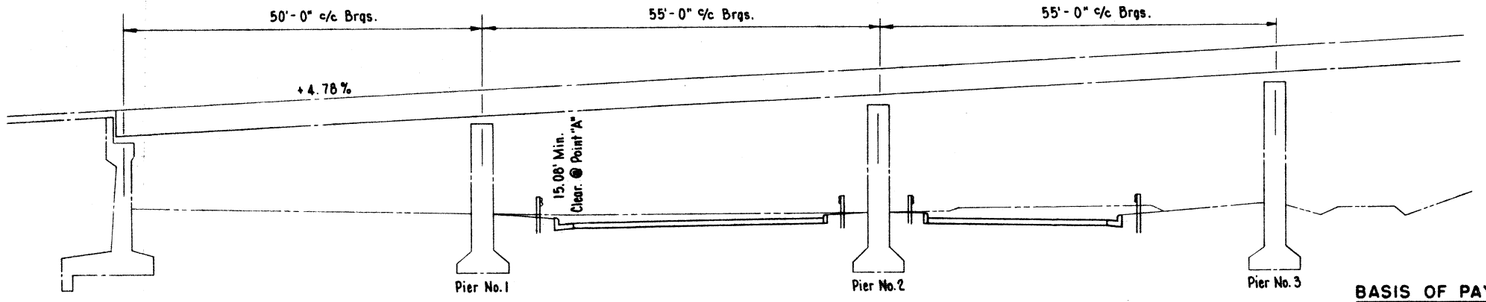
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

144

STA - 21 - 10.23



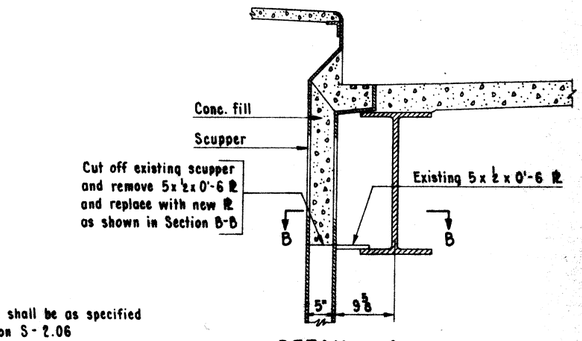
PLAN



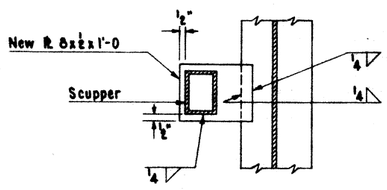
ELEVATION

EXISTING STRUCTURE

TYPE : Continuous steel beams with concrete filled I-Beam-Lok deck and reinforced concrete substructure
SPANS : 50'-55'-55'-50'; 83'-95'-83'; 62'-45'-10 13/16"; 67'-13/16" - 58' c/c Brgs.
ROADWAY : 40'-0" f/f curbs + two 6'-6" sidewalks
LOADING : H-20-33
SKEW : 6°-24'-08" Rt. Fwd. Piers 2 to 7
9°-08'-46" Rt. Fwd. Piers 8 to 10
ALIGNMENT : Tangent



DETAIL - A



SECTION B-B

NOTE : Concrete shall be as specified in Section S - 2.06

BASIS OF PAYMENT

Alteration to existing scuppers on Tremont Avenue Bridge shall be paid for at the lump sum bid - Item Special - which lump sum price and payment shall constitute full compensation for cutting off existing scuppers, sealing scuppers and filling scuppers with concrete and for all labor, tools, equipment, material and incidentals necessary to complete this item.

QUANTITIES

Item Special - Alterations to existing Tremont Avenue Bridge - Lump Sum

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SITE PLAN
ALTERATIONS TO EXISTING BRIDGE NO. STA. 21-1092 U.S.R. 21 UNDER EXISTING TREMONT AVENUE STA. 575+80.95

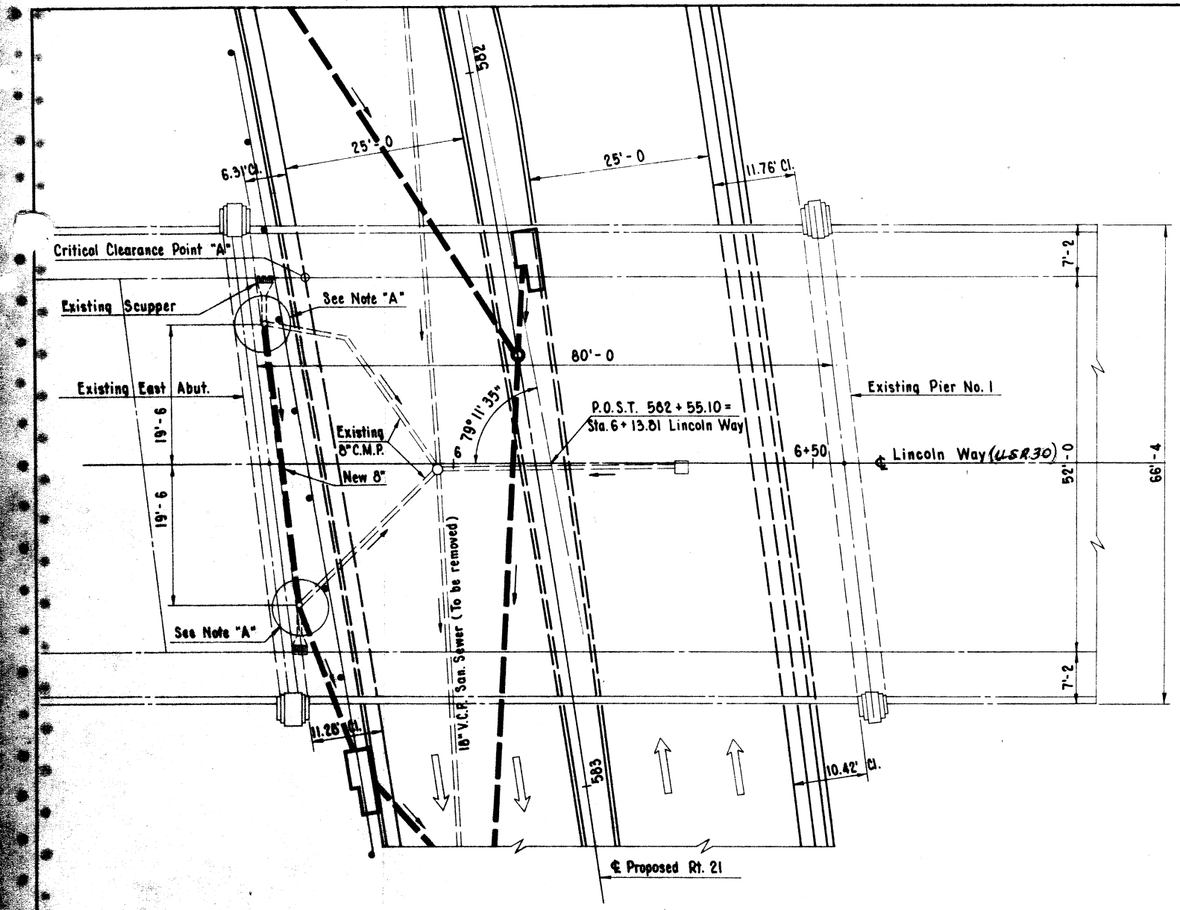
PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVISIONS
		D.W.B.	Bo	KAE	

LAMB-VALLEY ENGINEERING SUPPLIES CO

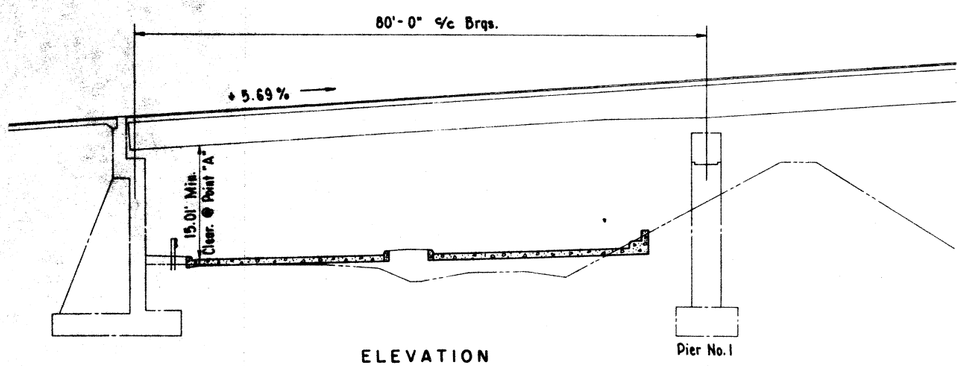
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

145

STA - 21 - 10.23



PLAN



ELEVATION

NOTE "A"

Disconnect down drain from existing 8" C.M.P. and connect to new 8" Class "B", I-2.

NOTE :

For Quantities see Sheet No. 28
(Included in Roadway Quantities)

EXISTING STRUCTURE

TYPE : Continuous steel beam and girder bridge with concrete deck and substructure
SPANS : Girder unit - 80'-100'-100'-80' ℄c Brgs.
Beam unit - 68'-10"-58'-5½"-68'-6"-68'-6"-55'-0" ℄c Brgs.
ROADWAY : 52'-0" plus two 6'-0" sidewalks
LOADING : S-20-40
SKEW : 6°-45' Rt. Fwd. Piers 1-5
5°-22' Rt. Fwd. Piers 6-8
SURFACE COURSE : 2½" Bituminous

MICHAEL BAKER JR., CONSULTING ENGINEERS
ROCHESTER, PENNSYLVANIA

SITE PLAN
ALTERATIONS TO EXISTING BRIDGE NO. STA.-21-1105 U.S.R. 21 UNDER EXISTING LINCOLN WAY STA. 582+55.10

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVISED
		D.W.B	Bo	K.A.E.	

KEUFFEL & ESSER CO. ENGINEERING SUPPLIES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

STA.-21-10.23

146

GENERAL SUMMARY (BUILDING REMOVAL)

ITEM	U-1010(5) QUANTITY	UNIT	PARCEL NO.	DESCRIPTION	UG-1010(5) QUANTITY
S-24	Lump	Lump	109 LA	Removal of 2½ Story Frame Dwelling, 2 Story Frame Stable	
S-24	Lump	Lump	110 LA	Removal of 2½ Story Frame Dwelling, Frame Garage, Frame Shed	
S-24	Lump	Lump	113 LA	Removal of Tile Block Garage	
S-24	Lump	Lump	113 C-LA	Removal of 1 Story Corrugated Metal Shed	
S-24		Lump	115 LA	Removal of 1 Story Brick Office & Warehouse	Lump
S-24	Lump	Lump	115 A-LA	Removal of Four 20,000 Gal. Storage Tanks & Concrete Block Pump House	
S-24	Lump	Lump	116 LA	Removal of 1½ Story Frame Dwelling	
S-24	Lump	Lump	117 LA	Removal of 2 Story Frame Dwelling	
S-24	Lump	Lump	118 LA	Removal of 2½ Story Frame (Shingle) Dwelling	
S-24	Lump	Lump	119 LA	Removal of Frame Shed	
S-24	Lump	Lump	124 LA	Removal of 2 Story Frame (Shingle) Dwelling	
S-24	Lump	Lump	125 LA	Removal of 2 Story Frame (Shingle) Dwelling	
S-24	Lump	Lump	132 LA	Removal of 1 Story Brick Industrial Bldg. & Office, 1 Story Pipe Shed	

LOCATION PLAT

STA-21-10.23 U-UG-1010(5)

STARK COUNTY

CITY OF MASSILLON

LIMITED ACCESS HIGHWAY

DIRECTORS JOURNAL VOL. PAGE

SCALE: 1" = 200'

NOTE: Spiralled Curves indicated on this Plan are Developed as outlined in "Transition Curves for Highways" by Joseph Barnett. Published in 1940 by U.S. Government Printing Office.

NOTE: True Bearings Established From Observation on Polaris.

STATE OF OHIO — MICHAEL BAKER JR. — 53424 — REGISTERED SURVEYOR

I HEREBY CERTIFY THIS PLAT TO BE CORRECT.

SIGNED BY Michael Baker Jr.

MICHAEL BAKER JR.- REG. LAND SURVEYOR. 53424

RECEIVED FOR RECORD 7/27/ 196[illegible]

RECORDED VOL. 34 PAGE 64 OF THE STARK COUNTY RECORDS

RECORDER

CERTIFICATE OF APPROVAL

APPROVED _____

DATE _____ DIVISION DEPUTY DIRECTOR

APPROVED _____

DATE _____ CITY ENGINEER CITY OF MASSILLON

SPIRAL CURVE DATA

P.I. Sta. 597+73.67
Δ - 60°40'16" Rt.
D - 2°07'30"
L.S. - 300.00'
R - 2696.27'
θs - 3°11'15"
P - 1.39'
Xc - 299.91'
Yc - 5.57'
K - 149.99'
L.T. - 200.03'
S.T. - 100.03'
Lc - 2555.11'
Ts - 1728.62'
Es - 429.34'

CURVE DATA

P.I. Sta. 543+97.71
Δ - 20°30'00" Rt.
D - 1°26'00"
R - 3906.53'
T - 706.42'
L - 1397.73'
Ex - 63.36'

P.I. Sta. 562+13.52
Δ - 7°13'00" Lt.
D - 0°28'00"
R - 12277.70'
T - 774.24'
L - 1546.43'
Ex - 24.39'

● Monument Assembly will be set during Construction on ℄ Stations shown above.

LOCATION PLAT

SUMMARY OF ADDITIONAL R/W REQUIRED

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

148

STA-21-10.23
LIMITED ACCESS

2/23

TOTAL NO. OF OWNERS — 34

U-1010 (5) Exemp.

PARCEL NO.	OWNER	AREA ACRES	EXIST. BLDG.	SHEET NOS.	REMARKS
100 LA	U.S.A.	0.002		5	P.T. OL No. 297
100A LA	U.S.A.	0.036		5	P.T. OL No. 137 Parcel 97, Tr. A
100B LA	U.S.A.	0.601	Yes	6&7	P.T. OL No. 137 & No. 156 Parcel 199H
100C LA	U.S.A.	0.019	Yes	7	P.T. OL No. 137 Parcel 95
100D LA	U.S.A.	0.035		7	P.T. OL No. 138 Parcel 97, Tr. B
100E LA	U.S.A.	0.021		7	P.T. OL 35 Parcel 90A, Tr. B
100G LA	U.S.A.	0.329		7&8	P.T. OL 36 P.T. Parcel 1996
100H LA	U.S.A.	0.012		7	OL 29 Parcel 2006
100J LA	U.S.A.	0.102	Yes	10	P.T. Paved 88
100R LA	U.S.A.			9&10	Parcel 199E, Tr. A
100S	U.S.A.			10	Parcel 89 & 90
100T LA	U.S.A.	0.051		10	P.T. Parcel 151, Tr. 10 (P.T. Oak Ave.)
100U					
100W LA	U.S.A.	0.059		8	Parcel 2006, OL 29
101A LA	Massillon Conservancy District	0.285		10	Parcel 87, Lot No. 1056
101B LA	Massillon Conservancy District	0.115	Yes	11	Parcel 88C, Lot No. 1057
101C LA	Massillon Conservancy District	0.318		10	Abandoned 3rd. St. P.T. Lot No. 11143
101C	Massillon Conservancy District	0.076		10&11	P.T. Lot 11143
101E LA	Massillon Conservancy District	0.113		11	P.T. Lot No's. 174&175
101F LA	Massillon Conservancy District	0.042		11&12	P-179
101G LA	Massillon Conservancy District	0.0004		12	P-80, Lot No. 165
101H LA	Massillon Conservancy District	0.328		14&15	
101J LA	Massillon Conservancy District	0.072		10	P.T. Lot 1089
101J X	Massillon Conservancy District	0.222		10	P.T. Lot 1089
102 TS	W. & L.E. R.R.			7	Parcel 97, Tr. C

PARCEL NO.	OWNER	AREA ACRES	EXIST. BLDG.	SHEET NOS.	REMARKS
105 LA	City of Massillon	0.165		4	OL 383
126	City of Massillon			16	
126A LA	City of Massillon			16	
108	George & Anna Bickis			4	Lot No. 9946 Not Touched
109 LA	W.A. Welling	0.219	Yes	4	Lot No. 9945
110 LA	Irene Peters	0.151	Yes	4	Lot No. 9944
112	Fera Mihu			4	Lot No. 9942 Not Touched
113 LA	Massillon Paper Co.	6.773	Yes	3,4,5,6&7	P.T. OL 297, 138, 137
113A LA	Massillon Paper Co.	0.380		5	P.T. OL 137
113C LA	Massillon Paper Co.	1.042		5,6&7	Parcel 97
113 S	Massillon Paper Co.	0.081		3	
114 LA	Massillon Spring & Rivet Corp.	0.470		7	P.T. OL 35 Parcel 90A
114 TS	Massillon Spring & Rivet Corp.			7	P.T. OL 35
115 LA	Campbell Oil Company	0.155	Yes	9	P.T. Lot No. 9368
115A LA	Campbell Oil Company	0.304	Yes	9&10	Lot No's. 2134, 2135 & 2136
115 WA	Campbell Oil Company			9	Lot No. 9368
116 LA	Massillon Coal & Bldg. Supply Co.	0.103	Yes	10	Lot No. 2128
117 LA	Joseph Oates	0.089	Yes	10	Lot No. 2127
118 LA	Roy Reynolds	0.102	Yes	10	Lot No. 2126
119 LA	Ollie Neal	0.016	Yes	10	Lot No. 2125
120	Betty Newman			10	Lot No. 2124 Not Touched
121					
122					
123 LA	S.J. Sanders	0.571		11	Lot No's. 1051, 1052 & 1055 P.T. Lot No. 1066, 11142
123	S.J. Sanders	0.012		11	P.T. Lot 295
123A	S.J. Sanders	0.072		11	P.T. Lot 11142
124 LA	Ruth Marcus et al	0.042	Yes	11	Lot No. 173
125 LA	Donald Richardson	0.057	Yes	11	Lot No. 172
128 LA	John Smith MCD	0.046		11	Lot No. 169
129 TS	Ralph L. Phillips			11	P.T. Lot No. 189
130 LA	Red Head Oil Co.	0.150		11&12	Lot No's. 159, 161, 162 & 163
131 WA	Progressive Chevrolet Co.			12	P.T. Lots 400 & 401
132 LA	Ohio Drilling Co.	0.559	Yes	12&13	
132 WA	Ohio Drilling Co.		Yes	12&13	
132	Ohio Drilling Co.	0.076		12	
132 X	Ohio Drilling Co.	0.101		12	
133 LA	Anthony Fulmer	0.154	Yes	13	OL 14
133 WA	Anthony Fulmer		Yes	13	OL 14
133A LA	Anthony Fulmer	0.181		14	P.T. Lot 9248
134 LA	Catherine Kolek	0.125	Yes	13&14	Lot No. 9249
134 WA	Catherine Kolek		Yes	13&14	Lot No. 9249
135 LA	Massillon School Dist.	0.070		15	P.T. Lot No. 3598
136 LA	L & A Lemmon	0.120		13	P.T. OL. 13
137	E. Smally			16	P.T. OL. 11
150 LA	U.S.A.	0.074		11	P.T. Charles St. P.T. Lot No's. 110, 174 & 175
150A LA	U.S.A.	0.015		11	P-151, Tr. 7
150B LA	U.S.A.	0.018		12	P-151, Tr. 7
150C LA	U.S.A.	0.284		12&13	P.T. Lot No. 398
150D LA	U.S.A.	0.033	Yes	12	P-76 P.T. Lot No's. 398 & 399
150D WA	U.S.A.			12	P.T. Lot Nos. 399, 400 & 401
150D	U.S.A.	0.159		12	P.T. Lot Nos. 399, 400 & 401

PARCEL NO.	OWNER	AREA ACRES	EXIST. BLDG.	SHEET NOS.	REMARKS
150E LA	U.S.A.	0.017		12	P-76A, P.T. Lot 400
150G LA	U.S.A.	0.082		13	P-71
150H LA	U.S.A.	0.062		13	P-65
150J LA	U.S.A.	0.060		14	P-63, P.T. Lot 9248
150K LA	U.S.A.	0.027		14	P.T. OL 15
150L LA	U.S.A.	0.150		14	P-151, Tr. 5
150M LA	U.S.A.	0.028		14	P-151, Tr. 5
150P LA	U.S.A.	0.140		14	P.T. P-61 B, Tr. A
150E WA	U.S.A.			12	P-76A
150 L	U.S.A.	0.040		14	P.T. P-151, Tr. 5
150 P	U.S.A.	0.002		14	P.T. P-61 B, Tr. B
107	E.K.C.O. Foundation Inc.	0.643		17	P.T. OL 31, P-92, Tr. B
150R LA	U.S.A.	0.019		15	P.T. P-57-P-58-P-59
150S LA	U.S.A.	0.239		14	P.T. P-61, Tr. B
150T LA	U.S.A.	0.439		14&15	P.T. P-61, Tr. A
150U LA	U.S.A.	0.009		14	P.T. P-61 B, Tr. B
100E	U.S.A.	0.019		7	P.T. O.L. 35 Parcel 9A, Tr. B
114	Massillon Spring & Rivet Co.	0.013		7	P.T. O.L. 35
119 WA	Ollie Neal		Yes	10	Lot No. 2125

UG-1010 (5)

PARCEL NO.	OWNER	AREA ACRES	EXIST. BLDG.	SHEET NOS.	REMARKS
100K LA	U.S.A.	0.012		9	P.T. O.L. 30 Parcel 200V, Tr. A
100M LA	U.S.A.	0.067		8	P.T. O.L. 30 Parcel 200U, Tr. A
100P LA	U.S.A.	0.021		9	P.T. O.L. 30 Parcel 200U, Tr. A
102B LA	W. & L.E. R.R.	0.546		8&9	O.L. 36 Parcel 200U, Tr. D
102C LA	W. & L.E. R.R.	0.292		8&9	P.T. OL 36 P.T. Parcel 1996
103 LA	B. & O. R.R.	1.672		7&8	P.T. OL 36 B.O. 59, 188 S. P.T. Parcel 1996 1888
104A LA	Penna. R.R.	0.880		9&10	P.T. OL 30 & 36
104B LA	Penna. R.R.	0.020		9&10	P.T. OL 30
104C LA	Penna. R.R.	0.659	Yes	9-14	P.T. Parcel 8, P.T. Parcel 88 P.T. Lot Nos. 1058, 1059, 1060, 1063 & 1064 (P.T. Oak Ave.)
104D LA	Penna. R.R.	0.510		9-14	P.A. 9, P.T. Lot No. 1054 P.T. Charles Ave. P.T. Lot Nos. 164, 165, 169, 174 & 175
104E LA	Penna. R.R.	0.782	Yes	9-14	P.A. 10
104F LA	Penna. R.R.	0.036		9-14	P.A. 11
106 LA	B. & O. R.R. & W. & L.E. R.R.	0.451		8&9	P.T. OL 29 & 32 Parcel 200U, Tr. A & Tr. D P.T. OL 36 P.T. Parcel 1996

Sheet Completed
Date 1-27-60

Revised
Date 2-11-60
Parcels 101C LA, 101C, 101D LA, 123 LA & 123 A
5-23-60
Added R.R. Parcels

FED. RD DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

149

STA. - 21 - 10.23

LIMITED ACCESS

3/23 R/W

Outlet Structure

Discharge Well

BEGIN ACQUISITION
Sta. 535+64
103' Lt.

Twin Box Conduit

4' Conc.

533+20
159.5'

12" Toe Drain

Inlet Structure

12" Conc.

Elev. 920.75

Conc. Pump House

ARCH ST. PUMP STATION

Conc.

30" C.M.P. Toe Drain

M.H.

30" C.M.P. Toe Drain

Top of Dike

P-97 Tr. A
O.L. 138
U.S.A.

533+79
122'

O.P.S. Co. #3520 D1 18

R/W Line

534+25
133.5'

535+52
131.5'

535+51
121.5'

R/W Line

532+87
146'

533+98.5
120'

113 S

113 LA

MASSILLON PAPER CO.

12" Pressure Conduit

12" Manhole

533+62.5
93'

O.P.S. Co. #3520 D-2 19

Guy

533+99.5

24" R.C.P.

534

535

N 44° 55' 30" W

536

537

538

P.C. Sta. 536+91.29

Meter Box Meter Station

60" V.S.P.

Guy

Guy

Earth Road

24" Elm

Mesh Fence Kennels

CURVE DATA
P.I. Sta. 543+97.71
Δ - 20° 30' 00" Rt.
D - 1° 28' 00"
R - 3906.93'
T - 706.42'
L - 1397.75'
Ex - 65.56'

538+97
110'

Limit of Construction

R/W Line

538+00
106'

24" Conc. Retain Wall

O.P.S. Co. #3520 D-1 4

U.S.A.

48" C.M.P.

BEGIN ACQUISITION
Sta. 533+48.5
61' Rt.

R/W Line

534+42
117'

CITY OF MASSILLON

Sheet Completed Date 1-27-60

Revised Date 3-23-60

END SHEET STA. 539+00

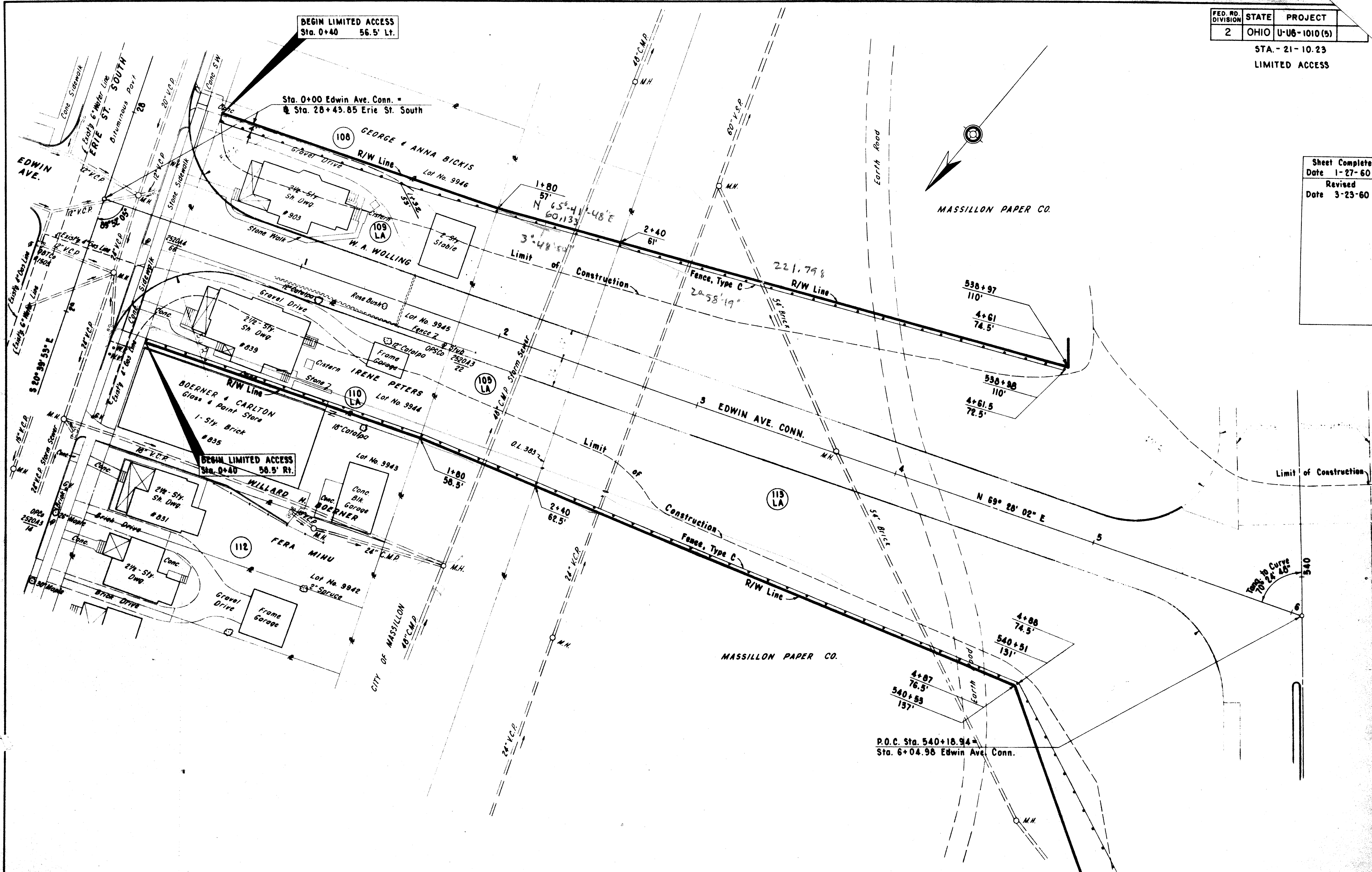
STA. 532+45 TO STA. 539+00 - RIGHT OF WAY PLAN

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	U-U6-1010(5)

STA. - 21 - 10.23
LIMITED ACCESS

4/23 R/W

Sheet Completed Date 1-27-60
Revised Date 3-23-60



EDWIN AVE. CONN. - STA. 0+00 TO STA. 6+04.98 - RIGHT OF WAY PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

151

3/23 R/W

STA.- 21- 10.23
LIMITED ACCESS

BEGIN SHEET STA. 539+00

END SHEET STA. 545+00

Top of Dike

PT O.L. 297

539+85 105'

540+05 100.8'

R/W Line

M.H. Meter Station Conc. Bldg.

541+02.5 96'

U. S. A.

542+04.5 89'

P 97 TRACT A

543+01.5 82'

100 LA

543+44 81.5'

543+97.5 74'

R/W Line

544+99 82'

545+00 89'

100A LA

544+94.5 65'

100B LA

M.H.

48" Seg. Blk. San. Sewer

N 24° 25' 30" W

543+41.5 78'

Limit of Construction

48" Seg. Blk. San. Sewer

N 44° 55' 30" W

544+83 22'

115C LA

119A LA

O.L. 137

10" Leaver

544

543

542

541

540

16" Birch

542+83.5 10'

Junk Yard 544+67.5 36'

115 LA

Future Construction

70° 35' 48" Rt. to Curve

EDWIN AVE. CONN. N 69° 28' 00" E

542+00 56'

Fence, Type C

Proposed San. Sewer

Proposed M.H.

54" Brick San. Sewer

P.O.C. Sta. 540+18.94 = Sta. 6+04.98 Edwin Ave. Conn. 115 LA

PT O.L. 297

Limit of Construction

R/W Line

545+00 84'

542+00 89'

E & R MASSILLON PAPER CO.

W. & L.E. R.R.

4+88 74.5'

540+51 131'

Fence, Type C

R/W Line

M.H.

4+07 76.5'

Earth Road

540+55 137'

54" Brick San. Sewer

Track No. 27 E

CURVE DATA
P.I. Sta. 543+97.71
Δ - 28° 30' 00" Rt.
D - 1° 28' 00"
R - 3986.55'
T - 706.42'
L - 1397.73'
Ex - 69.36'

Sheet Completed
Date 1-27-60
Revised
Date 3-23-60

STA. 539+00 TO STA. 545+00 - RIGHT OF WAY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

152

6/23 R/W

STA.- 21-10.23

LIMITED ACCESS

O.L. 140

O.L. 137 U.S.A. P 95

Top of Dike

O.L. 137 P 95 U.S.A.

550+50 80' 100C LA

R/W Line

547+00 82'

548+00 80.5'

P 199 H U.S.A.

M.H.

27" C.M. Pipe

U.S.A.

Limit of Construction

27" C.M. Pipe

24" C.M. Pipe

R/W Line

546+71.5 60'

100B LA

545+81.5 56'

546+69.5 45'

Barb Wire Fence

O.L. 136

6" Wild Cherry

1-Sty. Corr. Metal Shed

(No Number)

Corr. Metal Fence

MASSILLON PAPER CO.

O.L. 136

113C LA

N 24° 25' 30" W

48" Seg. Blk. San. Sewer

548

550

547

546

M.H.

48" Seg. Blk. San. Sewer

END SHEET STA. 551+00

BEGIN SHEET STA. 545+00

Corr. Metal Fence

549+00 64.5'

550+00 64'

107'

105'

113 LA

Tile Blk. Garage

548+00 65.5'

Fence, Type C

Junk Yard

Proposed San. Sewer

546+00 65'

Limit of Construction

MASSILLON PAPER CO

R/W Line

550+00 88'

Truck Scales

Gate

548+00 87'

O.L. 138

Junk Yard

Frame Shed

1-Sty. Conc. Block

Earth

546+00 86.5'

R/W Line

P.T. Sta. 550+62.02

OPSCo. #2520A3 35

Corr. Metal Fence

OPSCo. #2520A3 34

OPSCo. #2520A3 17

Cinder Drive

Twin 12" Sumac

12" Sumac

O.L. 138

W. & L.E. R.R. (NICKEL PLATE R.R.)

Crushed Slag Drive

CURVE DATA
P.I. Sta. 549+97.71
Δ - 20° 30' 00" Rt.
D - 1° 28' 00"
R - 3906.53'
T - 706.42'
L - 1397.73'
Ex - 69.36'

P 97 Tr. C

Sheet Completed Date 1-27-60

Revised Date 3-23-60

Frame Ramp

Frame Loading Platform

1-Sty. Brick

Track No. 27 E

STA. 545+00 TO STA. 551+00 - RIGHT OF WAY PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-U6-1010(5)	

153

7/23 R/W

STA.- 21 - 10.29

LIMITED ACCESS

END LIMITED ACCESS Sta. 551+89 110' Lt.

BEGIN LIMITED ACCESS Sta. 552+40 110' Lt.

BEGIN SHEET STA. 551+00

END SHEET STA. 557+00

U. S. A.

533+00 91' P 200 G O.L. 29

R/W Line

Top of Dike

551+50 81'

100H LA

100C LA

Limit of Construction

551+85 77'

100B LA

U. S. A.

24" C.M.P. M.H.

N.P.R.R. (No Number) 552+38.5 93'

552+39 72'

R.R. Crossing Sign

24" R.C.P.

18" C.M.P.

PT 199 G O.L. 36

U.S.A.

Limit of Construction

100G LA

PT 199 G O.L. 36

80-60

80-3

B. & O.

103 LA

PT 199 G O.L. 36

18" C.M.P. Toe Drain

B. & O. R.R. Siding

Timber Retaining Curb

P 199 G

P.C. Sta. 554+39.20

B. & O.

PT 199 G O.L. 36

103 LA

551+87.5 27.5'

P 97

12" V.C.P.

Conc. Sidewalk

S 65° 54' 57" W

6" Water Line

Conc. Sidewalk

80-59

PT 199 G O.L. 36

103 LA

6" V.C.P.

552 553 N 24° 25' 30" W 554 555 556

W.P.R.R. (No Number)

MASSILLON PAPER CO.

113C LA

551+71.8 44.5'

551+87.5 44'

Sewer Light

OPSCo #2599A3 21 M.H.

48" Seg. Blk. San. Sewer

Conc.

C.N.P. Gas Line

Timber Wall

48" Seg. Blk.

Existing 6" N.P. Gas Line

12' Alley

ORD. #1223 DEDICATION

M.H.

556+44 38'

48" R.C.C.P.X

556+42.5 58.5'

552+56 39.5'

Tile Blk. Garage

MASSILLON PAPER CO.

551+82 64.5'

552+38 39'

Fence, Type C

Ex. 35

W. & L.E.

102L LA

551+92.5 90'

118 LA

100D LA

Limit of Construction

Asbestos

Concrete Pad

Construction

P 97 TR. B

U.S.A. O.L. 136

552+50.5 64'

552+92 95'

552+66.5 95'

100E LA

554+00 63'

Metal Scrap Dock

MASSILLON SPRING & RIVET CORP.

554+39 96'

556+41 87.5

Limit of Construction

R/W Line

R/W Line

P 90 A O.L. 35

Conc. Blk. Scale House (Abandoned)

Wood Scale Platform

OPSCo #2520A2 45

Derailer

Track No. 27D

P 200 J TR. B O.L. 32 W. & L.E. R.R.

CURVE DATA
P.I. Sta. 562+19.52
Δ - 7° 13' 00" Lt.
D - 0° 28' 00"
R - 12,277.70'
T - 774.24'
L - 1546.45'
Ex - 24.39'

Sheet Completed Date 1-27-60
Revised Date 5-25-60

552+66.5 150'

Fuel Oil Tank & Hand Pump

OPSCo #2520A2 P 41 Brick Shed

OPSCo (No Number)

4" Metal Pipe

END LIMITED ACCESS Sta. 551+92 190' Rt.

BEGIN LIMITED ACCESS Sta. 552+38-95' Rt.

Drive (Gravel)

551+99 158'

1" Water Line

Transformers

OPSCo #2520A2 60

Conc. Ramp

1-Sty. Brick

OPSCo #2520A3 19

OPSCo #2520A3 20

551+38 165'

552+83 156.5'

Metal Valve Box Water Meter

551+77.5 158'

551+88 158'

552+48 165'

552+83 169'

552+38 168.5'

Gravel

Crushed Slag Drive

MASSILLON SPRING & RIVET CORP.

1-Sty. Brick

1-Sty. Corr. Metal

Bituminous

Warehouse 2-Sty. Brick

8" Sumac

OPSCo (No Number) 3-Sty. Brick

14" Sumac

12" Sumac

P 97 TR. C

551+09 208'

551+87.5 208'

102 TS

1-Sty. Brick

Guard Posts

Conc. Sidewalk

Wood R.R. Warning Sign

O.R. Crossing Sign

OPSCo #2599A3 18

N.P.R.R. #9572

Track No. 17

Track No. 37

Track No. 27E

W. & L.E. R.R.

STA. 551+00 TO STA. 557+00 - RIGHT OF WAY PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010 (5)	

154

8
23
R/W

STA.- 21 - 10.23

LIMITED ACCESS

BEGIN SHEET STA. 557+00

END SHEET STA. 563+00

558+00
74.5'

O.L. 29

R/W Line 2

U.S.A.

P.T. 199-G - O.L. 36

100G LA

Top of Dike

Limit of Construction

100W LA

560+50
77'

561+00
67'

P 200-G

R/W Line 2

80-60
80-S

103 LA

559+13
51.5'

559+95
62.5'

U.S.A.

P.T. 199-G - O.L. 36

560+72.5
60.5'

P 200-J
Tr. A
O.L. 29

106 LA

562+89
41.5'

P 200-J Tr. A O.L. 32

B.E.O.R.R.

Track No. 27C

Track No. 27B

80-58

B.f.O.

103 LA

80-58

559+94
18.5'

P.T. 199-G - O.L. 36

P 199-G

558+89
00'

-O.L. 36

P.T. 199-G

560+73.5
32'

561+74
31.5'

P200-J
Tr. B
O.L. 32

Track No. 29

558

559

560

561

562

562+93.5
12'

N 24° 25' 30" W

N 31° 58' 30" W

559+97.5
5'

561+29
60.5'

@ OPSCa
(No Number)

Track No. 27D

558+49
58.5'

102C LA

A.T.O.R.R. & W.+L.E.R.R. Joint

W.+L.E.R.R.

560+66
75'

Limit of Construction

102B LA

U.S.A.
O.L. 30
P 199-F

100A LA

Proposed San Sewer

557+61
64'

W.+L.E.R.R.

558+76.5
70'

P.T. 199-G - O.L. 36

Fence, Type C

M.H.

R/W Line

EKCO
FOUNDATION INC.

48" R.C.C. PX

Existing Pipeline Conduit

R/W Line

P 200-J
Tr. B
O.L. 32

559+07.5
72'

102B LA

559+85
77'

560+41
80.9'

Existing Pipe Easement

562+25.54
63.88'

P-92
Tr. B

O.L. 31

561+30.77
61.84'

558+97.5
81.5'

558+64
82.5'

TRACT D - P 200-J

O.L. 32
W.+L.E.R.R.

Track No. 30

P200-J
Tr. B
O.L. 32

EKCO
FOUNDATION INC.

107

Track No. 29

Track No. 42

Track No. 34

TRACT E - P200-J

559+96.79
188.74'

560+19.58
188.41'

Track No. 31

O.L. 31

CURVE DATA
P.I. Sta. 562+13.52
Δ - 7° 15' 00" Lt.
D - 0° 28' 00"
R - 12,277.70'
T - 774.24'
L - 1546.45'
Ex - 24.39'

Sheet Completed
Date 1-27-60
Revised
Date 3-23-60

STA. 557+00 TO STA. 563+00 - RIGHT OF WAY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010 (5)	

155

9 / 29 R/W

STA. - 21 - 10.23

LIMITED ACCESS

Suspend U-1010 (5) | Begin UG-1010 (5)

End UG-1010 (5) | Resume U-1010 (5)

BEGIN SHEET STA. 563+00

END SHEET STA. 569+00

Sta. 563+90

Sta. 568+16

563+49 86.5' R/W Line ℄ Limit of Construction ℄

564+29 82'

565+93.04 70.43'

565+85.71 69.91'

567+60.89 84.94' R/W Line ℄ Limit of Construction ℄

Top of Dike

30" Wing Wall

U. S. A.

O.L. 29

Track No. 27 B

℄ P.R.R. Telegraph Pole

PENNSYLVANIA RAILROAD (2 Tracks)

B & O. R.R.

P-200-J TRACT A P.T. O.L. 30

P-199 E TRACT B P.T. South Ave.

P-199 E TRACT A

100 R LA

12" C.M.P.

100 L LA

106 LA

104 C LA

PA-8

P 200-J TRACT A P.T. O.L. 30

O.L. 30

104 B

568+30.5 17.5' M.H. 12" C.M.P.

564 565 566 567 568

P-199-F P.T. O.L. 30

N 31° 38' 30" W

100 M LA

567+61.5 2'

30" Elm

CAMPBELL OIL Co.

48" Brick San. Sewer

Lot No. 2136

4-20,000 Gal. Storage Tanks

Conc. Blk. Pump House

115 A LA

115 LA

567+68 76.5

Earth

Bituminous

Cone

Conc. Pad

Corr. Metal Shed

568+22 86.5'

568+12 86.5'

R/W Line Lot No. 2136

P 199 F P.T. O.L. 30

564+83.27 98.71'

℄ P.R.R. Telegraph Pole

104 A

565+96.27 59.21'

566+08 93.5'

Limit of Construction Fence, Type C

567+00 89'

567+43 86.5'

Sty. Brick

R/W Line

CAMPBELL OIL Co. (Gravel)

WA

Water Meter

Gas Pump Tank Tops

Breather Pipe Tank Top

Concrete Tank Tops

O.P.S. Co. # 2520 Bl

Gas Sign

Gas Island

Conc. S.W.

W.V.

Conc.

566+06 104'

1-Sty. Conc. Blk. Shed

Lot No. 9368

1-Sty. Brick

566+88 146'

567+34 154'

(Bituminous)

Lot No. 2134

Cyclone Fence

Alley (Cinder)

8" Sumac

Snow Fence

4" Sumac

Bit.

Oil Tank Cap

Earth

Conc. Ramp

Existing R/W

1-Sty. Tile Block

SOUTH AVENUE

Depressed Curb

6" Conc. Curb

Cinder Drive

Lot No. 9373

Lot No. 9369

Existing Pipe Easement

48" C.I.P. Extra Heavy

48" Brick San. Sewer

Gravel Alley

8" V.C.P.

M.H.

G.V.

EKCO FOUNDATION INC.

563+89.84 81.84'

107

48" R.C.P.

P-92 TRACT A P.T. O.L. 31

PENNA. R.R.

O.L. 38

Earth Road

℄ P.R.R. Telegraph Pole

CURVE DATA
P.I. Sta. 562+19.52
Δ - 7° 19' 00" Lt.
D - 0° 28' 00
R - 12,277.70'
T - 774.24'
L - 1566.45'
Ex - 24.99'

Sheet Completed Date 1-27-60

Revised Date 3-23-60

STA. 563+00 TO STA. 569+00 - RIGHT OF WAY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-U6-1010(5)	

156

10/23 R/W

STA. - 21 - 10.23

LIMITED ACCESS

CURVE DATA
P.I. Sta. 562+13.52
Δ - 7° 15' 00" Lt.
D - 0° 28' 00"
R - 12,277.70'
T - 774.24'
L - 1546.49'
Ex - 24.99'

BEGIN SHEET STA. 569+00

END SHEET STA. 575+00

P-199 E TRACT A — U. S. A. — Top of Dike — 12" C.M. Pipe — Lot No. 1060 — M.H. — 15" C.M. Pipe — R/W Line

100R LA — 570+02, 87' — P-90 — 100S LA — U. S. A. — P-89 — P-151 TRACT 10 — R/W Line — 104C LA

PA-8 — Limit of Construction — Lot No. 1064 — PENNA. R.R. — 572+24, 56.5' — PA-8 — 104C LA — 574+10, 49' — Earth Road — 573+90.5, 71.5' — Lot No. 1059

104A — 569+36, 68' — 104C LA — P.T. Sta. 569+85.71 — M.H. — 48" Brick San. Sewer — 48" Seg. Block San. Sewer — U. S. A. — 100T LA — P-151 TRACT 10 — 572+92, 63' — P-88 — U. S. A. — 100J LA — Conc. & Brick Pump House — P-88C — 574+25.5, 49.5' — 101B LA

572+19, 28' — 15" R.C. Pipe — 572+89, 45' — 101A LA — Lot No. 1057 — MASSILLON CONSERVANCY DIST. — 574+27, 18.5' — MASSILLON CONSERVANCY DIST. — P-88C

572+85, 26' — Ditch — Earth Drive — 570 — 571 — 572 — 573 — N 31° 38' 30" W — 574 — STIPPO CREEK

569+68, 8' — CAMPBELL OIL CO. — 569+86.5, 11' — Conc. Work — 570+45.5, 22.5' — 30" Stump — 572+81, 1.5' — OPSCo #2521C4 — P-87 — Lot No. 1056 — 48" Seg. Blk. Pipe San. Sewer — 574+30, 46' — Fence Gate Type C — Fence Type C

1½-Sty. Fr. Dwg. — JOSEPH OATES — 117 LA — 2-Sty. Fr. #235 — 34" Poplar — OPSCo #2521C4 15 — Guy — W.V. — Lot No. 2127 — 116 LA — 118 LA — ROY REYHOLDS — 8" Apple — 10" Apple — 570+54, 77' — 570+64, 92' — 6" Plum — Stone Wall — 2" Gas Line — 8" Water Line — F.H. — MASSILLON CONSERVANCY DIST. — 4" Elm — 574+14, 47' — 42" Willow — 574+41, 54' — 48" Seg. Blk. Pipe San. Sewer — 574+57, 54'

Lot No. 2136 — 115A LA — Cyclone Fence — Proposed 48" Sanitary Sewer — Lot No. 2126 — Stone Wall — 24" Sew. Drainage — # 233 — Fence Type C — Garrison — Lot No. 11143 — 572+68, 64.5' — OPSCo #2521C4 13 — 573+89, 87.5' — 573+60, 87.5' — 101J LA — 101C LA — 6" Poplar — 8" V.C.P. — 15" V.C.P. — Channel — 574+91, 69' — 67' Gravel Drive — OPSCo (No Number)

Weed Fence — Barricade — Limit of Construction — R/W Line — 569+53, 88.5' — Lot No. 2128 — 569+71, 89' — 570+52.5, 91' — 570+51, 91.5' — 571+46, 95' — R/W Line — 572+61.5, 99' — 573+55, 102' — Cherry — Concrete — Cone. Pav. Notch — 574+57.5, 100.5'

Lot No. 2135 — Gravel — 1-Sty. Tile Block — MASSILLON COAL & BLDG. SUPPLY CO. — Drive (Earth) — Alley (Cinder) — 119 WA — 119 LA — 570+62, 100' — 570+48, 96' — Chicken Coop — 120 — BETTY NEWMAN — Row of Fence Posts — 10" Apple — 6" Apple — Wire Mesh Fence — Frame Garage — 2-Sty. Shingle # 223 — Stone — Lot No. 2129 — Wood Post — 1-Sty. Fr. # 229 — 2-Sty. Fr. # 227 — 4" Elm — 10" Conc. — Conc. — Lot No. 2134 — Cyclone Fence — Alley (Cinder) — (Brick) — (Cinder) — 3-Sty. Brick — 12" Sumac — 8" Sumac — Board Fence — Frame Garage — 18" Maple — 14" Sumac — Frame Shed — OAK AVENUE (Earth) — Existing R/W — Cone. Sidewalk — Brick — Gas Meter — Lot No. 1067 — Lot No. 1068 — 1½-Sty. Brick Church A.M.E.Z. CHURCH — 573+54.5, 200' — 573+66.5, 202' — 14" Sumac — 573+65.5, 207' — 22" Elm — 573+54.5, 154' — 18" Stone Wall (Ruins) — Lot No. 1071 — Edge Cone. — Lot No. 1070 — 26" Willow — P-87A — 574+42.5, 144' — 574+34, 182' — P-87B — 574+16.5, 217' — Post Pc. — Mesh Fence — Lot No. 1072 — P-87C

Sheet Completed Date 1-27-60
Revised Date 2-11-60
Parcel 101 C LA
Parcel 101 C Revised
Date

STA. 569+00 TO STA. 575+00 - RIGHT OF WAY PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

157

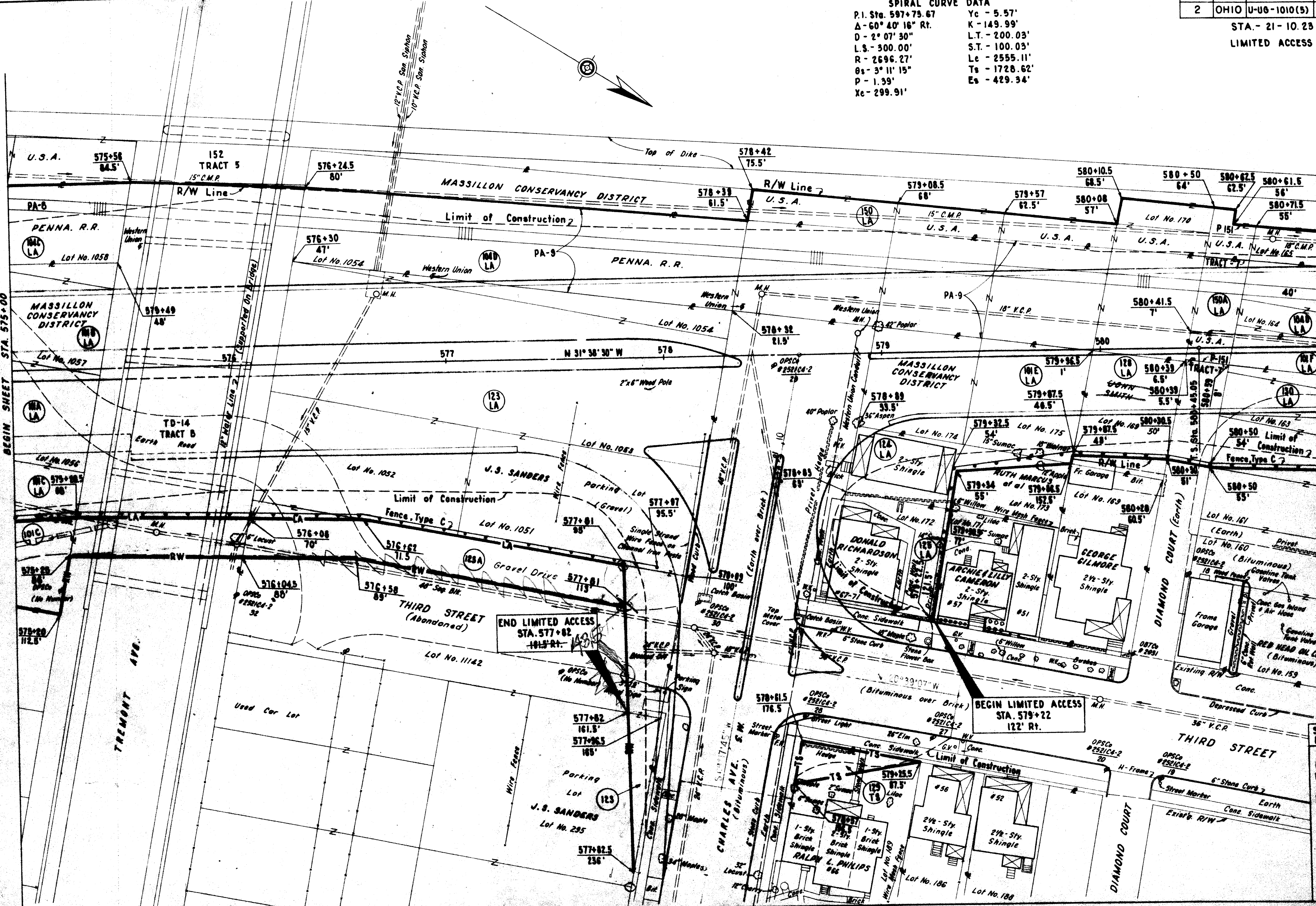
11/23 R/W

STA.- 21-10.23

LIMITED ACCESS

SPIRAL CURVE DATA

P.I. Sta. 597+79.67	Yc - 5.57'
Δ - 60° 40' 16" Rt.	K - 149.99'
D - 2° 07' 30"	L.T. - 200.03'
L.S. - 300.00'	S.T. - 100.03'
R - 2696.27'	Lc - 2555.11'
θs - 3° 11' 15"	Ts - 1728.62'
P - 1.39'	Es - 429.34'
Xc - 299.91'	



Sheet Completed Date 1-27-60

Revised Date 2-11-60 Parcels 101 C LA, 101 C, Parcels 101 D LA, 125 LA & 125 A Revised

Date

STA. 575+00 TO STA. 581+00 — RIGHT OF WAY PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

158

12/23 R/W

STA. - 21 - 10.23

LIMITED ACCESS

SPIRAL CURVE DATA

P.I. Sta. 597+73.67
Δ - 60° 40' 16" Rt.
D - 2° 07' 30"
L.S. - 300.00'
R - 2696.27'
θs - 3° 11' 15"
P - 1.39'
Xe - 299.91'
Ye - 5.57'
K - 149.99'
L.T. - 200.03'
S.T. - 100.03'
Le - 2555.11'
Ts - 1728.62'
Es - 429.34'

BEGIN SHEET STA. 581+00

END SHEET STA. 587+00

MASSILLON CONS. DIST.

Top of Dike

R/W Line

Limit of Construction

18" C.M.A. - Parcel 80 - U.S.A.

18" C.M.P.

15" C.M.P.

Lot No. 165

Lot No. 398

Lot No. 399

Lot No. 400

Lot No. 401

Lot No. 402

Lot No. 403

Lot No. 404

Lot No. 405

Lot No. 406

Lot No. 162

Lot No. 161

Lot No. 160

Lot No. 159

PENNA. R.R.

R.R. Clearance Indicator

Conc. Footer

N 31° 38' 30" W

Parcel 79

Parcel 80

MASSILLON CONS. DIST.

Parking Lot (Gravel)

RED HEAD OIL CO.

Guard Rail

Fence, Type C

Tile Block

Conc. Gas Island

Conc. Walk

(Bituminous)

(Conc.)

Lawn

Conc.

6" Conc. Curb

Depressed Curb

6" Stone Curb

Earth

Conc. Sidewalk

(Bituminous over Brick)

LINCOLN WAY

Existy R/W

PROGRESSIVE CHEVROLET CO.

S.C. Sta. 583+45.05

1-Sty. Brick

Gravel Alley

THIRD STREET

Window Wells

Conc. S.W.

Parking Sign

Drive (Gravel)

Pipe Yard

Bituminous Parking Area

1-Sty. Shingle

Fence Gate Type C

Pump House

Wall #1

Wall #2

Wall #3

Vertical Wall

6' C.L.P. Vert. Wall #1

7' C.L.P.

OHIO DRILLING CO.

1-Sty. Brick

Limit of Fill

Bituminous

Conc.

Bituminous Ramp

Fire & Police Call Box

Doorway Catch Basin

Alley (Bit.)

FEDERAL AVE. S.W. (Bit.)

Bit. Sidewalk

M.H.

G.V.

W.V.

OPSCo #2521C4-2

OPSCo #2521C1-3

582+11 41.5'
582+08 27'
582+08 27.5'
582+14 35'
581+99 25'
581+82.9 60'
582+10 58'
582+85 39'
583+00 36'
582+90.5 64'
583+10.5 36.5'
583+18 18.5'
583+64 16.5'
583+09.5 11'
583+09 18.5'
583+49.5 35.5'
583+50 34.5'
583+68.5 39.5'
583+30 35.5'
583+69 36'
583+74.5 36.5'
583+93 36'
584+00 40'
584+15 35'
584+44 35.5'
584+48.5 64'
584+72.5 20.5'
584+94 13.5'
584+55 10'
584+63 40'
584+70 46'
584+89 57.5'
584+51 57'
584+67 82'
585+00 40'
585+04.5 85'
585+18 22.5'
585+22 5'
585+22 5'
585+43 58'
585+74 22'
585+72.5 52.5'
585+98.5 31'
586+00 40'
586+30 85'
586+43.5 8.5'
586+37.5 16.5'
586+06 41'
586+05 67'
586+47 37.5'
586+49.5 38.5'
589+02 119'
586+03.5 124'

Sheet Completed Date 1-27-80

Revised Date 3-23-80

STA. 581+00 TO STA. 587+00 - RIGHT OF WAY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010 (5)	

STA. - 21 - 10.25

LIMITED ACCESS

152

15 / 23 R/W

SPIRAL CURVE DATA

P.I. Sta. 597+73.67
Δ - 60° 40' 16" Rt.
D - 2° 07' 30"
L.S. - 300.00'
R - 2696.27'
θs - 5° 11' 15"
P - 1.39'
Xs - 299.91'
Ys - 5.57'
K - 149.99'
L.T. - 200.05'
S.T. - 100.03'
Ls - 2555.11'
Ts - 1728.62'
Es - 429.54'

N 91° 58' 30" W

BEGIN SHEET STA. 587+00

END SHEET STA. 593+00

587+00 40'
588+00 45'
588+86.5 32'
589+00 50'
589+30.5 32'
590+00 48'
591+00 47'
591+30.5 46'
591+55 30'
592+00 46'
592+67 7'

U.S.A.
R/W Line
14" C.M.P.
Top of Dike
D-71 U.S.A.
P65
Limit of Construction
PENNA R.R.
PA-10
O.L. 13
O.L. 12
O.L. 14
Guard Rail
Conc. Wall Track-Support
Earth
Fence, Type C
OHIO DRILLING CO.
1 - Sty. Brick
1 - Sty. Conc. Blk.
3 - Sty. Brick
1 - Sty. Tile Block
5 - Sty. Brick
2 - Sty. Insulbrix
Conc. Blk. Garage
Brick
Lilac
Lawn
Parking Lot & Pipe Yard
Gravel
Truck Scales
Gas Pump
Pipe Shed
Bituminous Drive
Bituminous
Cyclone Fence
Drive (Gravel)
Conc. Walk
Conc. Sidewalk
Bituminous Sidewalk
Concrete Curb
Depressed Curb
Parking Sign
Conc. Blk. Garage
Concrete
Conc. Blk.
Lilac
14" Apple
6" Sumac
Lyons
Gravel
Bituminous
THIRD STREET (Bituminous)
L.F.A. LEMMON (Peoples Coal Co. & Hale Building Co.)
ANTHONY FULMER
CATHERINE HOLER
Ld. No. 9249
MASSILLON CONS. DIST.
Existing R/W
Guard Rail
Drive (Bituminous)
Bituminous Sidewalk
Gravel
Parking Sign
Concrete
Conc. Blk. Garage
Conc. Blk.
Brick
Lilac
Lawn
Parking Lot & Pipe Yard
Truck Scales
Gas Pump
Conc.
Insulbrix
Tile Block
Garage
Conc. Blk.
Sumac
Apple
Lyons
Gravel
Bituminous
Bituminous Sidewalk
Concrete Curb
Depressed Curb
Parking Sign
Conc. Walk
Drive (Gravel)
Drive (Bituminous)
Pipe Shed
Bituminous Drive
Cyclone Fence
Guard Rail
Earth
Fence, Type C
Conc. Wall Track-Support
Limit of Construction
Existing R/W
R/W Line
O.L. 12
O.L. 13
O.L. 14
OHIO DRILLING CO.
L.F.A. LEMMON (Peoples Coal Co. & Hale Building Co.)
ANTHONY FULMER
CATHERINE HOLER
Ld. No. 9249
MASSILLON CONS. DIST.
THIRD STREET (Bituminous)
U.S.A.
PENNA R.R.
PA-10
P65
D-71 U.S.A.
14" C.M.P.
Top of Dike
Limit of Construction
Existing R/W
R/W Line
Guard Rail
Earth
Conc. Wall Track-Support
Fence, Type C
OHIO DRILLING CO.
1 - Sty. Brick
1 - Sty. Conc. Blk.
3 - Sty. Brick
1 - Sty. Tile Block
5 - Sty. Brick
2 - Sty. Insulbrix
Conc. Blk. Garage
Brick
Lilac
Lawn
Parking Lot & Pipe Yard
Gravel
Truck Scales
Gas Pump
Pipe Shed
Bituminous Drive
Bituminous
Cyclone Fence
Drive (Gravel)
Conc. Walk
Conc. Sidewalk
Bituminous Sidewalk
Concrete Curb
Depressed Curb
Parking Sign
Drive (Bituminous)
Concrete
Conc. Blk.
Lilac
14" Apple
6" Sumac
Lyons
Gravel
Bituminous
THIRD STREET (Bituminous)
L.F.A. LEMMON (Peoples Coal Co. & Hale Building Co.)
ANTHONY FULMER
CATHERINE HOLER
Ld. No. 9249
MASSILLON CONS. DIST.
U.S.A.
PENNA R.R.
PA-10
P65
D-71 U.S.A.
14" C.M.P.
Top of Dike
Limit of Construction
Existing R/W
R/W Line
Guard Rail
Earth
Conc. Wall Track-Support
Fence, Type C
OHIO DRILLING CO.
1 - Sty. Brick
1 - Sty. Conc. Blk.
3 - Sty. Brick
1 - Sty. Tile Block
5 - Sty. Brick
2 - Sty. Insulbrix
Conc. Blk. Garage
Brick
Lilac
Lawn
Parking Lot & Pipe Yard
Gravel
Truck Scales
Gas Pump
Pipe Shed
Bituminous Drive
Bituminous
Cyclone Fence
Drive (Gravel)
Conc. Walk
Conc. Sidewalk
Bituminous Sidewalk
Concrete Curb
Depressed Curb
Parking Sign
Drive (Bituminous)
Concrete
Conc. Blk.
Lilac
14" Apple
6" Sumac
Lyons
Gravel
Bituminous
THIRD STREET (Bituminous)
L.F.A. LEMMON (Peoples Coal Co. & Hale Building Co.)
ANTHONY FULMER
CATHERINE HOLER
Ld. No. 9249
MASSILLON CONS. DIST.

587+28.5 122'
587+98 8'
588+08.5 38.5'
588+60 89'
588+75 9.5'
588+91 61'
588+72 217.5'
589+33.5 2.5'
589+34.5 15'
589+38.5 62.5'
589+55 8'
590+37 12.5'
590+43.5 64'
590+56 1.5'
591+38 0.5'
591+47.5 61'
591+98.5 123'
592+73 126'
587+28.5 122'
592+67 7'
592+80 71'
592+87.5 169'

Sheet Completed Date 1-27-60

Revised Date 9-29-60

STA. 587+00 TO STA. 593+00 RIGHT OF WAY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-U8-1010(5)	

STA. - 21- 10.23

LIMITED ACCESS

160

14
23
R/W

SPIRAL CURVE DATA

P.I. Sta. 597+73.67	Ys - 5.57'
Δ - 60° 40' 16" Rt.	K - 149.99'
D - 2° 07' 30"	L.T. - 200.03'
L.S. - 300.00'	S.T. - 100.03'
R - 2696.27'	Lc - 2555.11'
θs - 3° 11' 15"	Ts - 1728.62'
P - 1.39'	Es - 429.34'
Xs - 299.91'	

BEGIN SHEET STA. 593+00

END SHEET STA. 599+00

P-63 | P-62 | U.S.A. | P-151 TRACT-5 | P-61B TRACT-A | P-61 TRACT-A | P-61 TRACT-B | P-61B TRACT-B | P-154 TRACT-5 | P-153 TRACT-4 | P-72

Cherry Road Siphon 15" 18" 10"

Abandoned Third Street

Approx. Old Channel ℄

593+08 47' | 150J LA | 593+11.5 33' | 593+17 8' | 593+18 3.5' | 154 LA | 153A LA | 153B LA | 150K LA | 150L LA | 150P LA | 150Q LA | 150R LA | 150S LA | 150T LA | 150U LA | 150V LA | 150W LA | 150X LA | 150Y LA | 150Z LA | 104E LA | 104F LA

594+12.5 48' | 594+16 34' | 594+23.5 4' | 594+36 43' | 594+66.5 78.5' | 594+73 5' | 594+83 87.5' | 594+89 79' | 594+95.5 35' | 595+06 49' | 595+36 36.5' | 595+51 6' | 595+56.5 55' | 595+59 65' | 595+07.5 80' | 596+04.5 49' | 596+13.5 36.5' | 596+14 7' | 596+18 36' | 596+21 46' | 596+20 81' | 597+00 48' | 597+59 5' | 597+97 21' | 597+76.5 75' | 597+81.5 67' | 598+10 82.5' | 598+71 61'

Limit of Construction | R/W Line | 18" C.M.P. | Top of Dike | PENNA. R.R. O.L. 15 | Metal Trap Door | Conc. Pit Cover | Conc. Block Garage | Storm Sewer 24" C.M.P. | 15" C.M.P. | M.H. | Fence, Type C | Guard Rail | Existing 2'-0" Sidewalk | Existing 12" Water Line | Barricade | Conc. Sidewalk | 24" V.C.P. | Cyclone Fence & Billboards | Ball Park

ANTHONY FULMER Lot No. 9248 | CATHERINE ROLER Lot No. 9249 | 2-Sty. Insulbric #315 | Gravel Yard | Lawn | Conc. Walk | Conc. S.W. (Buried) | 30" Sanitary Sewer | Sta. 84+07.00 Third St. = Sta. 0+00 Third St. Conc. | 80° 03' 10" | 15" V.C.P. | OPSCo #2521-C2 27 | OPSCo #2521-C2 29 | OPSCo #2521-C2 52 | 54" C.M.P. | 6' Conc. Curb | 6' Conc. Curb

THIRD STREET (Bituminous) | WEIRICH BLVD. N.W. (Bituminous) | E. SMALLEY ST. CONN.

CITY OF MASSILLON | MASSILLON CONSERVANCY DISTRICT

Sheet Completed Date 1-27-88

Revised Date 9-25-90

STA. 593+00 TO STA. 599+00 - RIGHT OF WAY

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-UG-1010(5)	

161

STA. - 21 - 10.23
LIMITED ACCESS

15/23 R/W

END LIMITED ACCESS STA. 599+89 97' Lt.

BEGIN LIMITED ACCESS STA. 600+54 97' Lt.

Sta. 600+75.39 M. = Sta. 4+95.54 Cherry Rd.

END ACQUISITION STA. 601+30 50' Lt.

599+96.5 80'

600+54 97'

600+70 65.5'

601+00 50'

602+37 40'

603+46 40'

603+67.5 43'

602+36.5 44.5'

END ACQUISITION STA. 603+62 43.5' Rt.

BEGIN LIMITED ACCESS STA. 602+ 0.5 102' Rt.

END LIMITED ACCESS STA. 601+51 193' Rt.

599+51 40.5

599+50 66'

600+00 75.5'

600+50 85'

601+02.5 118'

600+28 600 18'

600+91.5 33'

601+58 84.5'

601+90.5 107'

601+87 108'

602+15 152'

599+98 132.5'

U.S.A. P-61, TRACT A 599+48.5 47.5'

Top of Dike

U.S.A. Limit of Construction

R/W Line

Limit of Construction

Existing R/W

Conc. Gutter

24" C.M. Pipe Storm Sewer

24" V.C. Pipe

12" R.C. Pipe

Existing 12" Water Line

(Bituminous)

Guard Fence

Conc. Sidewalk

24" Pipe Storm Sewer

Traffic Signal

School Zone Sign

8" V.C. Pipe Sanitary Sewer

16" Water Line

Steel Pole

Existing 8" Gas Line

Traffic Light (10" Steel Pole)

Cyclone Fence

Fence, Type C

Fence, Type C_2

Limit of Construction Fence Type C_2

Bit. Court

HORACE MANN SCHOOL

8" Conc. Walk

MASSILLON CONSERVANCY DISTRICT

MASSILLON CITY SCHOOL DISTRICT

30" Maple

Lot No. 3598

Lot No. 3597

Lot No. 4

Lot No. 5

CHERRY ROAD N. W.

Bituminous Pvmt.

Existing R/W

6" Conc. Curb

Existing 8" Water Line

Conc. S/W

Brick Drive

Earth Drive

Cyclone Fence

16" Twin Mulberry

12" Mulberry

22" Willow

12" Elm

2½-Sty. Shingle Dwg.

Tile Blk. Gar.

Conc. Walk

Light Pole

Fr. Gar.

Conc.

Brick

Earth

Bit.

Steel Pole

Lot No. 4

Lot No. 5

SPIRAL CURVE DATA

P.I. Sta. 597+73.67
A - 60° 40' 16" Rt.
D - 2° 07' 30"
L.S. - 500.00'
R - 2696.27'
θs - 3° 11' 15"
P - 1.39'
Xc - 299.91'
Yc - 5.57'
K - 149.99'
L.T. - 200.09'
S.T. - 100.09'
Lc. - 2565.11'
Ts - 1728.62'
Es - 429.34'

BEGIN SHEET STA. 599+00

END SHEET STA. 605+00

Sheet Completed Date 1-27-60

Revised Date 3-25-60

Scale : 1" = 20'

STA. 599+00 TO STA. 605+00 - RIGHT OF WAY PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	U-U8-1010(5)	

STA.- 21-10.23

162

16
23
R/W

AGATHON BALL PARK

THIRD STREET (Bituminous)

Conc. Sidewalk

Guard Fence

Existing R/W Line

6" Conc. Curb

54" C.M.P. Storm Sewer

CITY OF MASSILLON

WEIRICH BLVD. N.W. (Bituminous)

Sta. C+1.66 Third St. Conn. =
Sta. B+90 Weirich Blvd.

Cyclone Fence & Billboards

END WORK
Sta. 0+63.5

6" Conc. Curb

O.P.S.Co. #2521C1-2

Cyclone Fence

Conc. Sidewalk

Street Light

0+56 25'

0+48 45.5'

0+75 25'

RW

0+46 29.5'

0+78.5 17'

0+28 27'

157

0+79.5 25'

0+84 25'

126

RW

M.H.

Gravel

E. SMALLY

Q.L. II

0+22 99

CITY OF MASSILLON

24" V.C.P. San. Sewer

M.H.

Cyclone Fence

Drive (Bituminous)

Gate

Conc. Blk. Bldg.

S 65° 14' 45" E

2521C1-2
O.P.S.Co.
Street Light
Dead End

M.H.

6" V.C.P.

10" V.C.P.

15" V.C.P.

12" V.C.P.

M.H.

84" C.M.P.

Existing R/W Line

Existing R/W Line

1" Peach Trees

N 59° 25' 19" E

Clothes Post

Metal Clothes Pole

48" Willow

Stone Mon.

24" V.C.P.

San. M.H.

30" C.M. Pipe Storm Sewer
(Approx. Location)

6" Triple Catalpa

1-Sty. Shingle

Stone Mon.

Conc.

Earth Drive

Well & Pump

Conc. Blk. Garage

2-Sty. Shingle

Bar & Grill
1-Sty. Shingle

2-Sty. Shingle

1-Sty. Store

Conc.

Brick Border

Metal Post

24" V.C.P.

Stone Wall

O.P.S.Co. #2521C1-2

O.P.S.Co. #2521C1-2

Privet Hedge

48" Triple Willow

The City Will Acquire Right-of-Way For First Street Connection Between First Street And Third Street. There Will Be No Federal Participation In The Right-of-Way For This Portion of Project.

Sheet Completed
Date 1-27-60

Revised
Date 3-25-60

Scale: 1" = 20'

THIRD STREET CONN. STA. 0+00 to STA. 6+63.5 RIGHT OF WAY

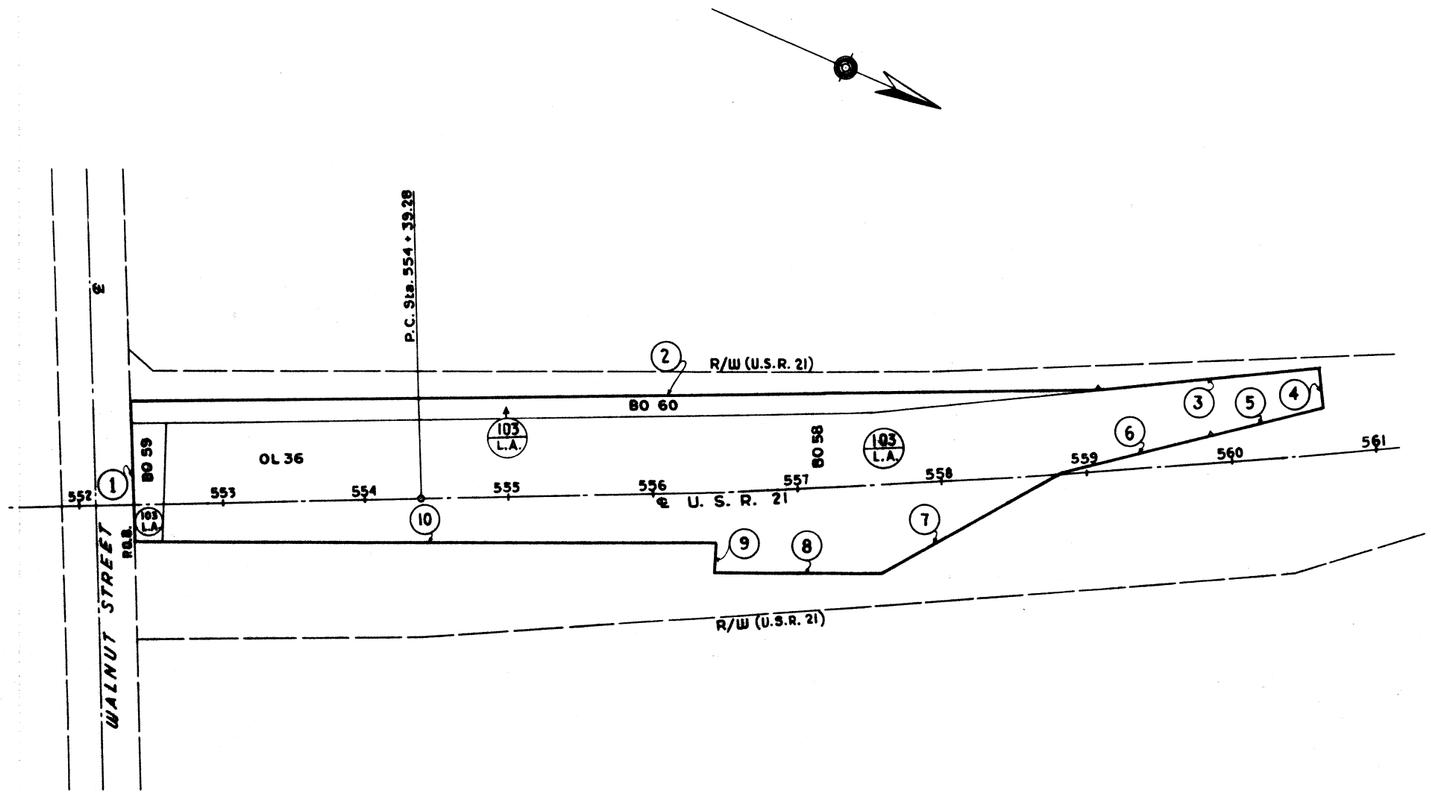
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	UG-1010(5)	

STA. -21-10.23

LIMITED ACCESS

163

17/23 R/W



BOUNDARY LINES		
LINE	BEARING	DISTANCE
1	S 65°59'30"W	97.69
2	N 23°27'41"W	670.53
3	N 30°08'54"W	159.73
4	N 59°51'06"E	28.92
5	S 36°37'36"E	80.95
6	S 36°37'36"E	105.99
7	S 52°22'03"E	143.04
8	S 23°00'30"E	118.00
9	S 69°11'00"W	20.03
10	S 23°00'30"E	407.30

AREA
72,842.13 Sq. Feet
1.6722 . . Acres

Information Taken From
B. & O. R. R. CO., Wheeling Division
STATION MAP V172-4 S29

Refer to R/W Plans - Sheets 7 & 8
Refer to Design Plans - Sheets 20 & 23

Scale: 1" = 50'

Property to be Acquired from the B. & O. R. R. Co.

B. & O. R. R. RIGHT OF WAY PLAN

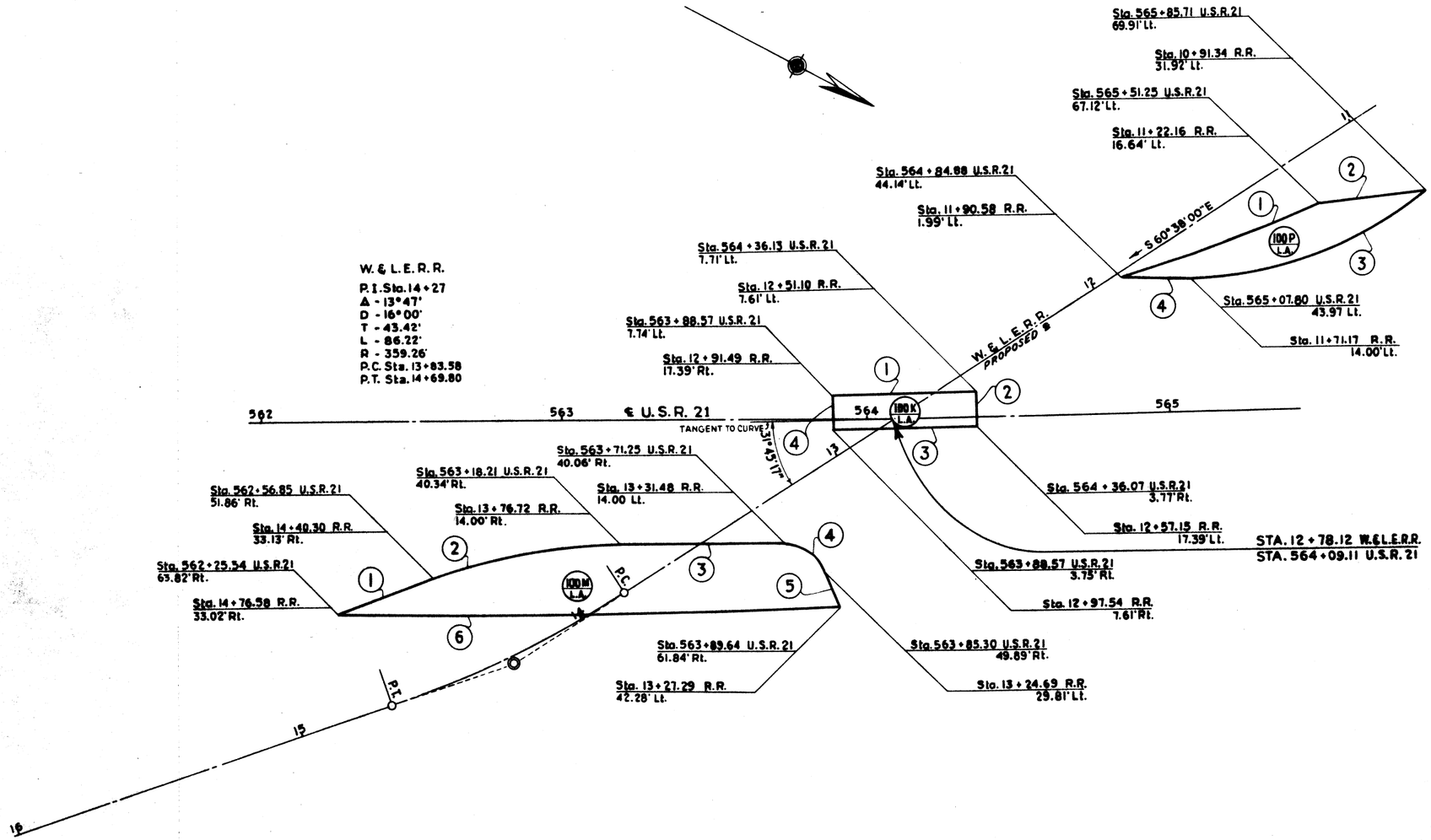
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	UG - 1010(5)	

164

STA. - 21 - 10.23

LIMITED ACCESS

18/23 R/W



BOUNDARY LINES		
100 P		
COURSE	BEARING	DISTANCE
1 ARC	R=598.69'	70.00
CHORD	N 48°32'55"W	69.96
2 ARC	R=2,897.93'	34.42
CHORD	N 34°15'31"W	34.41
3 ARC	R=125.00'	83.36
CHORD	S 47°58'49"E	81.82
4	S 28°52'43"E	22.82
AREA		
TOTAL SQ. FEET	TOTAL ACRES	
924.59	0.0212	

BOUNDARY LINES		
100 K		
COURSE	BEARING	DISTANCE
1	N 28°52'43"W	47.50
2	N 61°07'17"E	11.50
3	S 28°52'43"E	47.50
4	S 61°07'17"W	11.50
AREA		
TOTAL SQ. FEET	TOTAL ACRES	
546.25	0.0125	

BOUNDARY LINES		
100 M		
COURSE	BEARING	DISTANCE
1	N 48°55'55"W	33.64
2 ARC	R=100.00'	63.00
CHORD	N 38°54'19"W	62.00
3	N 28°52'43"W	53.20
4 ARC	R=15.00'	18.33
CHORD	N 06°07'50"E	17.21
5	N 41°08'17"E	12.73
6 ARC	R=3,017.93	164.98
CHORD	S 29°05'22"E	164.97
AREA		
TOTAL SQ. FEET	TOTAL ACRES	
2,907.36	0.0667	

Refer to R/W Plans - Sheets 8 & 9
Refer to Design Plans - Sheet 12

Scale 1" = 20'

Property to be Acquired from the U. S. A. for the W. & L. E. R. R. Co.

W & L.E.R.R. RIGHT OF WAY PLAN

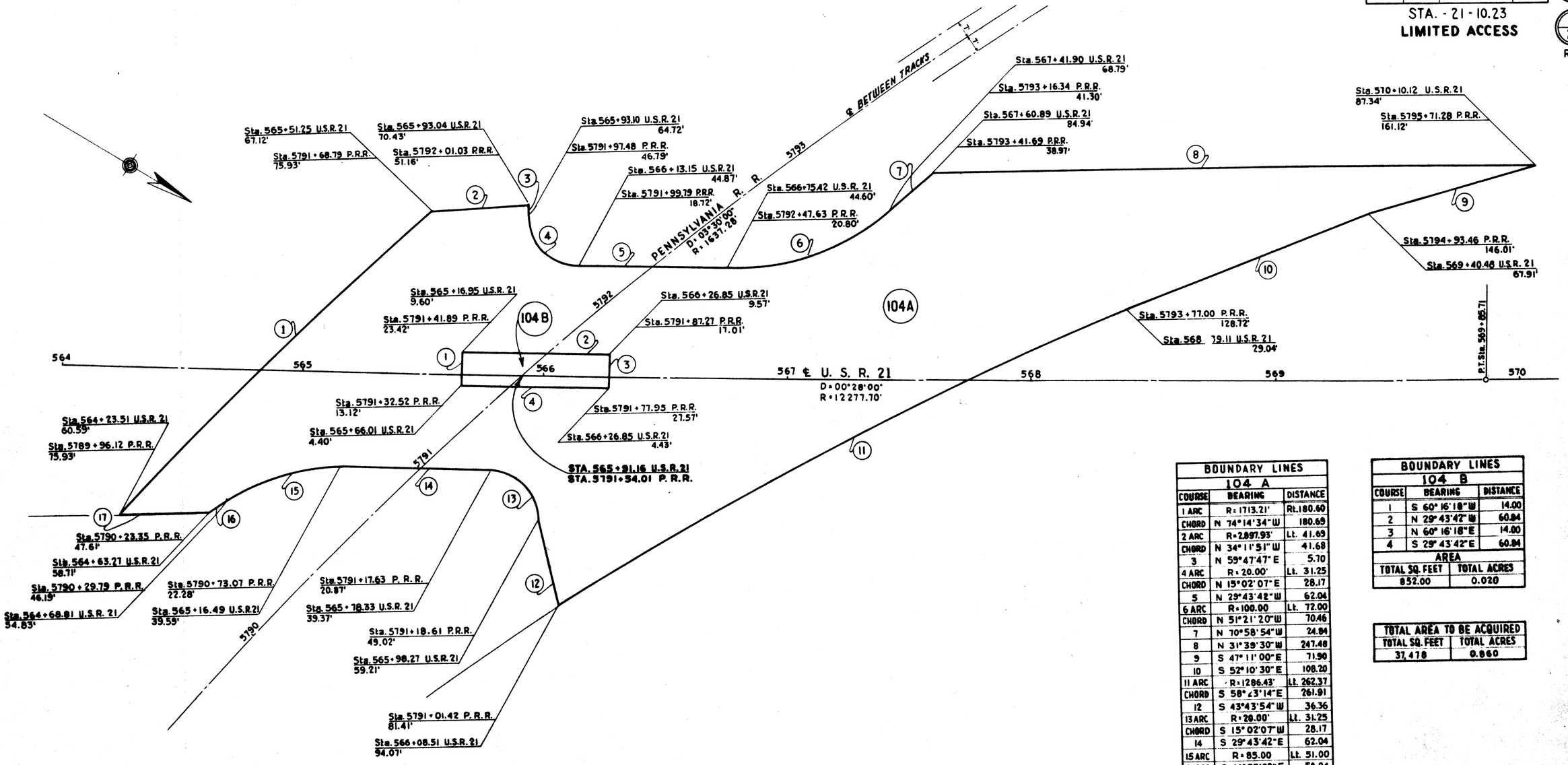
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	UG-1010(5)	

165

19/23 R/W

STA. - 21 - 10.23

LIMITED ACCESS



BOUNDARY LINES 104 A		
COURSE	BEARING	DISTANCE
1 ARC	R=1713.21'	Rt. 180.60
CHORD	N 74°14'34" W	180.69
2 ARC	R=2,897.93'	Lt. 41.69
CHORD	N 34°11'51" W	41.68
3	N 59°47'47" E	5.70
4 ARC	R=20.00'	Lt. 31.25
CHORD	N 15°02'07" E	28.17
5	N 29°43'42" W	62.04
6 ARC	R=100.00	Lt. 72.00
CHORD	N 51°21'20" W	70.46
7	N 70°58'54" W	24.84
8	N 31°39'30" W	247.48
9	S 47°11'00" E	71.90
10	S 52°10'30" E	108.20
11 ARC	R=1286.43'	Lt. 262.37
CHORD	S 58°43'14" E	261.91
12	S 43°43'54" W	36.36
13 ARC	R=20.00'	Lt. 31.25
CHORD	S 15°02'07" W	28.17
14	S 29°43'42" E	62.04
15 ARC	R=85.00	Lt. 51.00
CHORD	S 46°55'02" E	50.24
16	S 64°06'21" E	6.78
17 ARC	R=3017.93	Rt 40.02
CHORD	S 31°43'18" E	40.01
AREA		
TOTAL SQ. FEET	TOTAL ACRES	
38,330	0.880	

BOUNDARY LINES 104 B		
COURSE	BEARING	DISTANCE
1	S 60°16'18" W	14.00
2	N 29°43'42" W	60.84
3	N 60°16'18" E	14.00
4	S 29°43'42" E	60.84
AREA		
TOTAL SQ. FEET	TOTAL ACRES	
852.00	0.020	

TOTAL AREA TO BE ACQUIRED	
TOTAL SQ. FEET	TOTAL ACRES
37,478	0.860

Information Taken From
PGH. FT. W. & CHI. R.R.
R/W & TRACK MAP (ILLINOIS 61.1)

Refer to R/W Plans - Sheets 9 & 10
Refer to Design Plans - Sheets 23 & 24

Scale: 1" = 20'

Property to be Acquired from the P.R.R.

P.R.R. RIGHT OF WAY PL

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	UG-1010 (5)	

STA. -21-10.23
LIMITED ACCESS

166

20/23 R/W

558 559 560 U. S. 561 R. 21 562 563 564

Sta. 561+30.77 U.S.R. 21
61.84' Rt

Sta. 15+65.95 R.R.
65.95' Rt.

ARC 281.50' → N 28°23'13"W CHORD 281.39'
R 3017.93'

→ S60°38'00"E

OL 31

R 612.27'
ARC 169.78' → N 75°42'50"W CHORD 169.23'

℄ Proposed Track No. 29

→ S46°51'00"E

Sta. 559+56.79 U.S.R. 21
182.74' Rt.

Sta. 560+19.58 U.S.R. 21
188.41' Rt

Sta. 17+14.16 R.R.
15.74' Lt.

Sta. 17+72.15 R.R.
11.32' Rt.

→ N 21°49'30"W - 64.00'

(107)

Limit of Construction

→ S43°42'58"E - 101.00'

→ S50°43'04"E - 200.00'

Sta. 13+08.85 R.R.
52.84' Lt.

Sta. 564+10.77 U.S.R. 21
61.09' Rt.

Sta. 14+98.59 R.R.
36.66' Lt.

Sta. 562+27.14 U.S.R. 21
136.85' Rt.

Sta. 15+99.44 R.R.
31.14 Lt.

Sta. 561+31.19 U.S.R. 21
164.54' Rt.

→ S52°40'18"E - 94.00'

→ S61°10'29"E - 56.00'

Sta. 16+92.95 R.R.
40.67' Lt.

Sta. 560+47.50 U.S.R. 21
204.71' Rt.

Sta. 17+47.21 R.R.
54.53' Lt.

Sta. 560+01.90 U.S.R. 21
236.08' Rt.

→ S79°28'11"E - 80.15'

→ S68°27'18"W - 111.80'

Proposed Track No. 30

℄ Proposed Track No. 29

Sta. 559+46.90 U.S.R. 21
293.27' Rt.

Sta. 18+19.99 R.R.
89.03' Lt.

11.00'

Building J

N 22°05'41"W - 10.00'

TRACK NO. 29
P.I. Sta. 14+27
Δ - 13°41' Rt.
D - 16°00'
T - 43.42'
L - 86.22'
R - 359.26'
P.C. Sta. 13+85.58
P.T. Sta. 14+69.80

AREA
28,023 Sq. Feet
0.643 Acres

Refer to R/W Plans - Sheets 8 & 9
Refer to Design Plans - Sheets 22 & 23

Scale: 1" = 20'

Property to be Acquired for the W.&L.E.R.R.Co.
from the Ekco Foundation, Inc.

W&L.E. R.R. RIGHT OF WAY PLAN

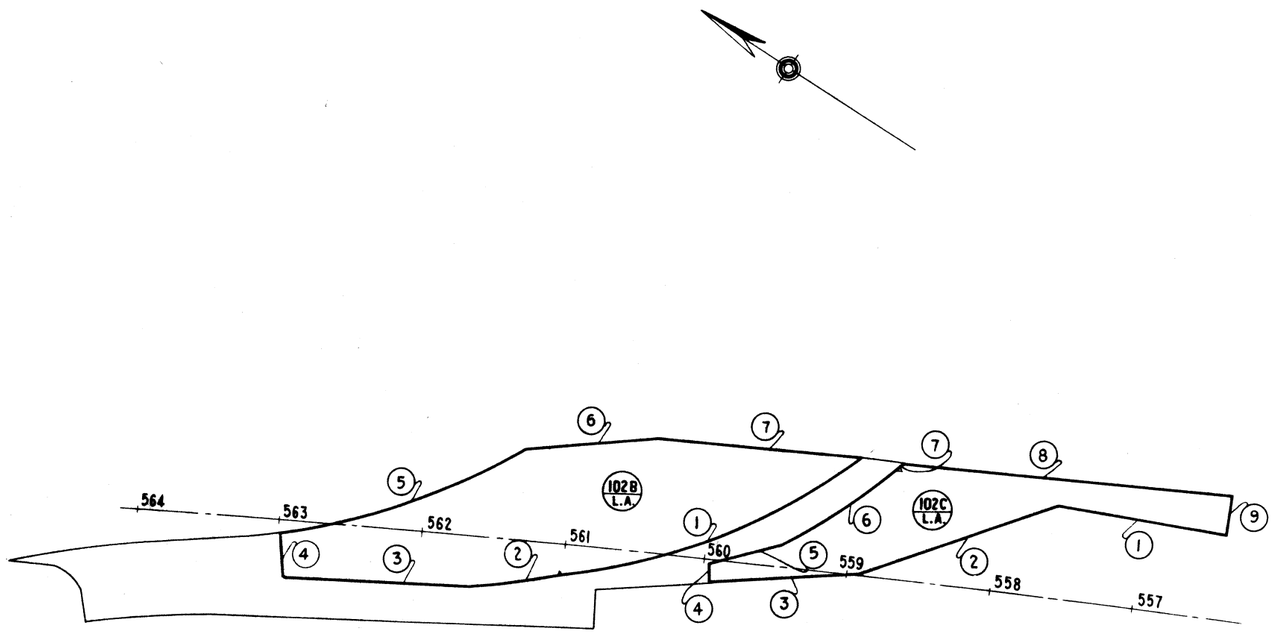
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	UG-1010(5)	

167

STA. - 21 - 10.23

LIMITED ACCESS

21/23 R/W



BOUNDARY LINES		
102 C		
COURSE	BEARING	DISTANCE
1 ARC	R = 400.28'	231.31
CHORD	N 53°52'50"W	228.10
2 ARC	R = 608.30'	63.95
CHORD	N 34°18'28"W	63.53
3	N 32°55'17"W	125.47
4	N 50°12'07"E	29.56
5 ARC	R = 453.34'	181.04
CHORD	S 51°52'21"E	179.83
6	S 38°58'22"E	92.01
7	S 27°14'26"E	144.66
AREA		
TOTAL SQ. FEET	TOTAL ACRES	
23,797.87	0.5463	

BOUNDARY LINES		
102 B		
COURSE	BEARING	DISTANCE
1	N 23°00'30"W	118.00
2	N 52°22'03"W	143.04
3	N 36°37'36"W	105.99
4	N 48°39'06"E	13.75
5	S 49°19'04"E	50.24
6 ARC	R = 420.28'	104.37
CHORD	S 65°56'37"E	104.11
7	S 75°04'32"E	1.45
8	S 27°14'26"E	229.61
9	S 69°11'00"W	29.26
AREA		
TOTAL SQ. FEET	TOTAL ACRES	
12,742.59	0.2925	

Information Taken From
R/W & TRACK MAP
Wheeling & Lake Erie R.R. CO.
STATION MAP V-8B ST-17

Refer to R/W Plans - Sheets 8 & 9
Refer to Design Plans - Sheets 22 & 23

Scale: 1" = 50'

Property to be Acqurred from the W. & L. E. R. R. Co.

W & L. E. R. R. RIGHT OF WAY PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	UG - 1010(5)	

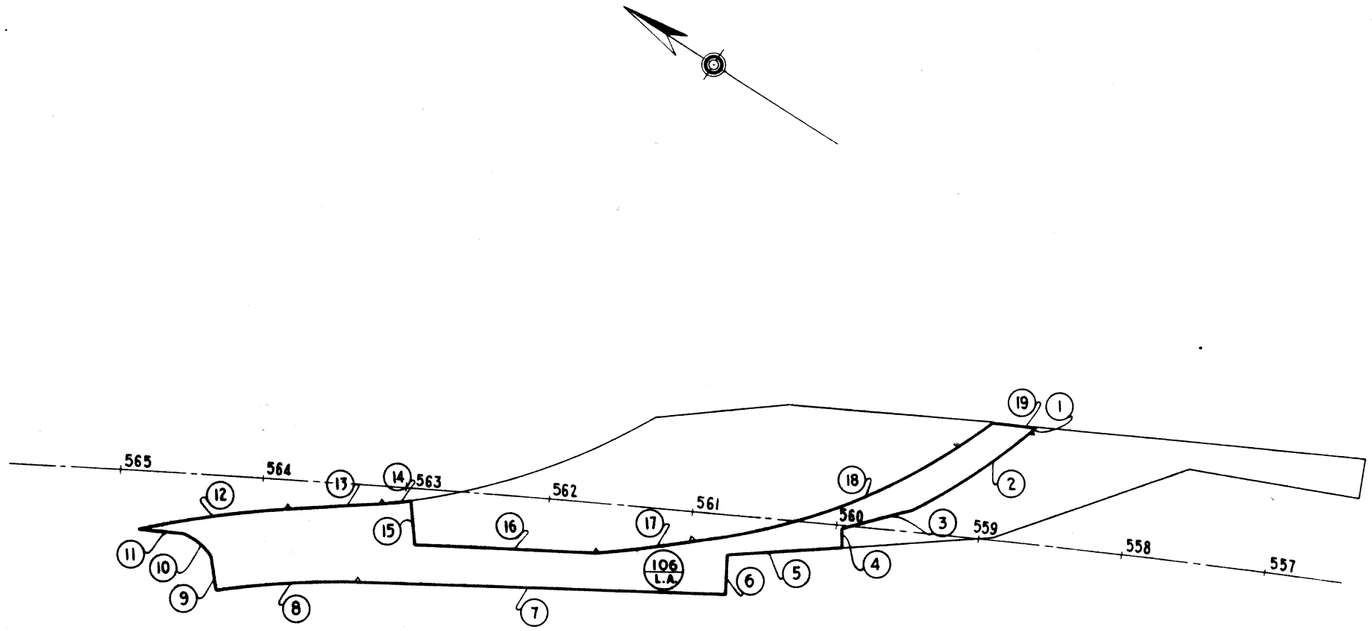
STA. - 21 - 10.23

LIMITED ACCESS

168

22/23

R/W



BOUNDARY LINES		
106		
COURSE	BEARING	DISTANCE
1	N 75°04'32"W	1.45
2 ARC	R=420.28'	104.37
CHORD	N 65°56'37"W	104.11
3	N 49°19'04"W	98.24
4	S 48°39'06"W	13.75
5	N 36°37'36"W	80.95
6	S 59°51'06"W	28.92
7	N 30°08'54"W	259.40
8 ARC	R=548.69'	97.23
CHORD	N 35°39'46"W	97.09
9	N 41°02'17"E	23.14
10 ARC	R=20.00'	26.50
CHORD	N 09°04'50"E	24.60
11	N 28°52'43"W	30.38
12 ARC	R=598.69'	105.05
CHORD	S 40°22'04"E	104.93
13	S 35°54'21"E	63.84
14 ARC	R=453.34'	23.81
CHORD	S 38°48'36"E	23.81
15	S 50°12'07"W	29.56
16	S 32°55'17"E	125.47
17 ARC	R=608.30'	63.55
CHORD	S 34°18'28"E	63.53
18 ARC	R=400.28'	231.31
CHORD	S 53°52'50"E	228.10
19	S 27°14'26"E	28.54
AREA		
TOTAL SQ.FEET	TOTAL ACRES	
19,652.14	0.4512	

Information Taken From
B. & O. R.R. CO., Wheeling Division
STATION MAP VIII-6 529

Refer to R/W Plans - Sheets 8 & 9
Refer to Design Plans - Sheets 22 & 23

Scale: 1" = 50'

Property to be Acquired from the B. & O. & W. & L. E. R.R. Co's. Joint

B. & O. & W. & L. E. R.R. RIGHT OF WAY PLAN

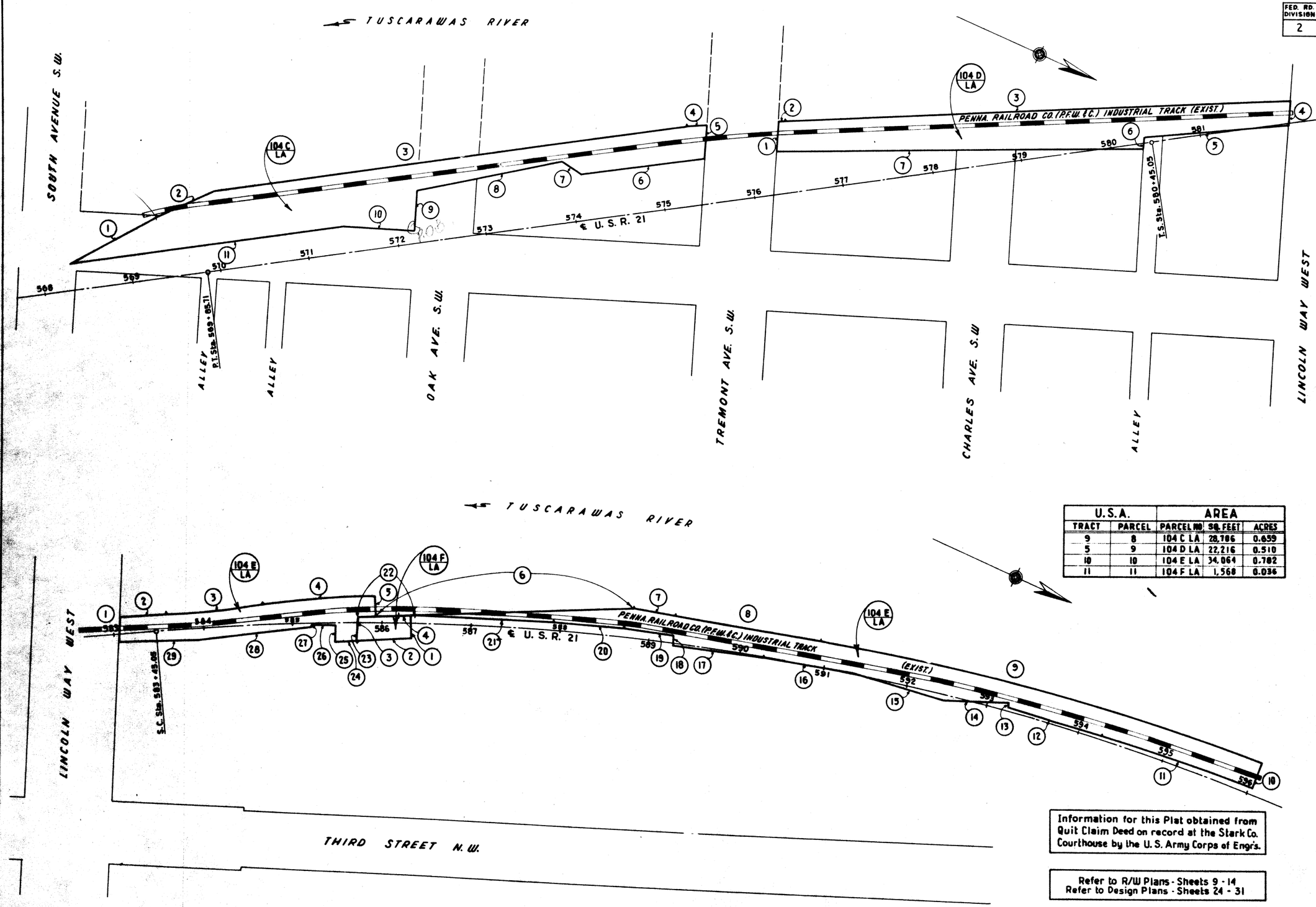
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO	UG-1010(5)	

169

23/23 R/W

STA.-21-10.23

LIMITED ACCESS



BOUNDARY LINES

COURSE	BEARING	DISTANCE
104 C LA		
1	N 52° 10' 30" W	100.28
2	N 47° 11' 00" W	71.90
3	N 31° 14' 37" W	534.40
4 ARC	R-1285.57'	Rt. 23.12
CHORD	N 30° 44' 49" W	23.12
5	N 69° 19' 30" E	36.49
6	S 30° 44' 00" E	139.66
7	S 09° 52' 00" W	23.35
8	S 34° 47' 30" E	167.82
9	N 69° 24' 30" E	44.50
10	S 20° 37' 00" E	83.53
11	S 31° 17' 00" E	389.95
104 D LA		
1	S 69° 19' 30" W	34.36
2 ARC	R-1285.57	Rt. 6.99
CHORD	N 26° 24' 34" W	6.99
3	N 26° 18' 07" W	566.39
4	N 69° 25' 30" E	28.41
5	S 28° 48' 38" E	180.98
6	N 69° 25' 38" E	13.98
7	S 24° 19' 00" E	412.58
104 E LA		
1	S 69° 25' 30" W	29.38
2	N 26° 19' 07" W	96.33
3 ARC	R-1261.57	Lt. 100.85
CHORD	N 28° 48' 47" W	100.91
4 ARC	R-1023.99	Rt. 121.89
CHORD	N 21° 44' 17" W	121.68
5	N 64° 43' 00" E	24.49
6	N 25° 17' 00" W	280.85
7 ARC	R-1158.28'	Rt. 47.25
CHORD	N 14° 28' 28" W	47.25
8	N 13° 18' 27" W	166.96
9 ARC	R-2697.89'	Rt. 513.63
CHORD	N 07° 51' 13" W	512.84
10	N 87° 36' 02" E	30.00
11 ARC	R-2867.89	Lt. 176.17
CHORD	S 04° 18' 51" E	176.13
12	S 86° 52' 00" E	107.00
13	S 69° 07' 00" W	5.70
14	S 20° 43' 00" E	72.00
15	S 86° 38' 00" E	100.30
16	S 13° 30' 30" E	101.82
17	S 15° 29' 00" E	102.22
18	S 68° 47' 00" W	12.10
19	S 16° 26' 30" E	58.11
20	S 19° 17' 09" E	77.00
21	S 28° 03' 30" E	150.00
22	S 25° 17' 00" E	61.94
23	N 69° 23' 00" E	25.00
24	S 25° 17' 00" E	23.00
25	S 67° 27' 30" W	10.00
26	S 22° 32' 30" E	28.50
27	N67° 27' 30" E	2.75
28	S 29° 20' 30" E	100.00
29	S 26° 17' 30" E	90.00
104 F LA		
1	N 69° 23' 00" E	25.00
2	S 25° 17' 00" E	62.54
3	S 69° 23' 00" W	25.00
4	N 25° 17' 00" W	62.54

U.S.A. AREA

TRACT	PARCEL	PARCEL NO	SQ. FEET	ACRES
9	8	104 C LA	28,706	0.659
5	9	104 D LA	22,216	0.510
10	10	104 E LA	34,064	0.782
11	11	104 F LA	1,568	0.036

Information for this Plat obtained from Quit Claim Deed on record at the Stark Co. Courthouse by the U. S. Army Corps of Engr's.

Refer to R/W Plans - Sheets 9 - 14
Refer to Design Plans - Sheets 24 - 31

Scale: 1" = 50'

Property to be Acquired from the Pennsylvania R.R. Co.

P.R.R. RIGHT OF WAY

FED. ROAD DIV.	STATE	PROJECT		1/6
2	OHIO	U-UG 1010 (5)		

SOIL PROFILE
STARK COUNTY STA. 21-10.23
MASSILLON, OHIO

NOTE: THE INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS SECURED FOR THE USE OF THE STATE OF OHIO AND IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING THE CONSTRUCTION OF THE PROJECT.

LEGEND FOR PROJECT — AVERAGE RESULTS OF TESTS — 43 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 AND/OR STONE FRAGMENTS	A-1a(0)	A-1a	79	8	5	7	1	NP	NP	14	1
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1b(0)	A-1a	39	21	19	13	8	NP	NP	13	7
FINE SAND	—	—	—	—	—	—	—	—	—	—	—
COARSE AND FINE SAND	—	A-3a	14	20	40	18	8	NP	NP	13	4
GRAVEL AND/OR STONE FRAGMENTS WITH SAND & SILT	A-2-4(0)	A-2-4	32	16	22	20	10	17	4	12	10
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-2-5(0)	A-2-5	29	26	19	20	6	46	4	17	2
SANDY SILT	A-4(6)	A-4a	21	11	23	28	17	26	6	20	17
SILT	A-4(8)	A-4b	1	4	24	50	21	26	6	36	1
ELASTIC SILT & CLAY WITH OR WITHOUT ORGANIC MATERIAL	—	—	—	—	—	—	—	—	—	—	—
SILT AND CLAY	A-6(9)	A-6a	5	6	10	44	35	31	13	25	1
SILTY CLAY	—	—	—	—	—	—	—	—	—	—	—
ELASTIC CLAY	—	—	—	—	—	—	—	—	—	—	—
CLAY	—	—	—	—	—	—	—	—	—	—	—
TOP SOIL	(VISUAL CLASSIFICATION)										
BERM MATERIAL	(VISUAL CLASSIFICATION)										
CINDERS WITH OR WITHOUT SOIL	(VISUAL CLASSIFICATION)										
ROCK-SOIL MIXTURE	(VISUAL CLASSIFICATION)										
PEAT OR ORGANIC MATERIAL	(VISUAL CLASSIFICATION)										

SOD & TOP SOIL - X = APPROX. DEPTH

BERM MATERIAL

AUGER BORING PLOTTED TO VERTICAL SCALE ONLY

AUGER BORING - PLAN VIEW

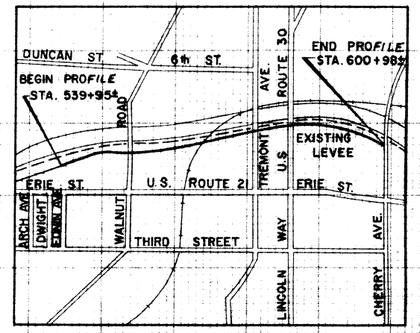
CORE BORING - PLAN VIEW

NUMBER OF BLOWS FOR "STANDARD PENETRATION" TEST.
X = NUMBER OF BLOWS FOR THE FIRST 6 INCHES.
Y = NUMBER OF BLOWS FOR THE SECOND 6 INCHES.

NOTE: FIGURES BESIDE BORINGS INDICATE WATER CONTENT IN PER CENT.

◆ WATER CONTENT EQUAL TO OR GREATER THAN LIQUID LIMIT.

W - FREE WATER



LOCATION MAP

SUMMARY OF SOIL TEST DATA

NOTE: N.P. SHOWN IN LIQUID LIMIT AND PLASTICITY INDEX COLUMNS INDICATES THAT THE MATERIAL IS NON-PLASTIC

STATION & OFFSET		DEPTH FROM - TO	% AGG	% CS	% FS	% SILT	% CLAY	LL	PI.	% WC.	SHTL. CLASS
536+50	℄	0-5	28	21	21	19	11	23	7	14	A-2-4
		5-10	29	13	33	17	8	NP	NP	8	A-2-4
		10-16	22	23	26	22	7	NP	NP	8	A-2-4
539+50	℄	0-5	14	12	37	21	16	24	6	18	A-4a
		5-10	9	10	58	17	6	NP	NP	16	A-3a
545+00	40'LT.	0-5	11	11	15	37	26	41	10	24	A-4a
		5-10	10	7	19	41	23	27	4	31	A-4a
548+00	40'LT.	4.5-12	17	12	33	24	14	25	7	10	A-4a
551+25	20' RT.	0-10	30	24	16	24	6	42	4	17	A-2-5
		10-12	32	16	20	23	9	24	5	12	A-2-4
556+00	℄	4.5-12	30	14	19	25	12	29	2	24	A-4a
559+00	℄	0-10	79	8	5	7	1	NP	NP	14	A-1-a
560+00	℄	4-10	51	21	11	10	7	NP	NP	18	A-1-b
561+50	℄	14-20	44	16	17	16	7	NP	NP	6	A-1-b
562+00	℄	9-25	32	15	32	15	6	NP	NP	14	A-2-4
564+00	℄	4.5-10	37	22	23	11	7	NP	NP	10	A-1-b
565+00	℄	0-4	29	10	21	25	15	28	8	19	A-4a
		4-14.5	30	8	20	27	15	26	8	26	A-4a
		14.5-18	42	15	19	14	10	23	5	12	A-1-b
565+50	℄	7-20	28	28	23	16	5	50	4	17	A-2-5
		20-30	33	15	17	25	10	22	3	15	A-2-4

STATION & OFFSET		DEPTH FROM - TO	% AGG	% CS	% FS	% SILT	% CLAY	LL	PI.	% WC.	SHTL. CLASS
566+50	℄	0-18	47	23	16	11	3	NP	NP	16	A-1-b
567+50	℄	0-16	23	30	28	9	10	NP	NP	9	A-1-b
		16-20	15	24	33	20	8	NP	NP	16	A-3a
		20-25	13	28	36	13	10	18	2	9	A-3a
568+25	℄	0-10	36	16	16	18	14	31	10	18	A-2-4
572+00	℄	0-10	35	15	19	21	10	21	3	11	A-2-4
574+00	15'LT.	4.5-9.5	37	11	15	24	13	30	9	21	A-4a
576+00	℄	5-12	29	17	20	23	11	25	7	7	A-2-4
578+00	℄	0-4.5	27	18	17	27	11	20	4	8	A-4a
		4.5-11	5	6	10	44	35	31	13	25	A-6a
		11-15	10	8	28	31	23	20	5	19	A-4a
580+00	℄	0-10	29	8	27	24	12	23	4	19	A-4a
582+00	℄	0-4.5	19	16	24	26	15	22	6	14	A-4a
		4.5-10	18	10	35	23	14	20	5	20	A-4a
584+00	℄	0-5	16	10	23	35	16	34	10	30	A-4a
		5-9.5	1	4	24	50	21	26	6	36	A-4b
		9.5-15	36	12	18	23	11	24	5	16	A-2-4
588+00	10'LT.	0-4.5	20	17	34	22	7	NP	NP	13	A-3a
		4.5-10	9	11	16	41	23	28	7	24	A-4a
592+00	℄	0-5	34	19	19	19	9	NP	NP	21	A-1-b
596+00	℄	0-4.5	25	11	21	28	15	24	5	14	A-4a
		4.5-10	25	13	21	24	17	24	7	17	A-4a

FED. DIVISION 2 | PROJECT 1010(5) | 2/6

FILE
STARK COU STA. 21-10.23
MASSIL 10

536 537 538 539 540 541 542 543 544 545 546 547 548 549 550

P.C. Sta. 536+91.29

40'L

40'L

40'L

16" Birch

6" Wild Cherry

1-Sty. Corr. Metal Shed

-3.0%

+0.910%

40'LT.

LOOSE AND DENSE
12
8
7

MEDIUM STIFF
18
16
LOOSE

SOFT
16
20
MEDIUM DENSE
19

40'LT.
LOOSE
24
SOFT
31

40'LT.
31
LOOSE
10
MEDIUM DENSE
20

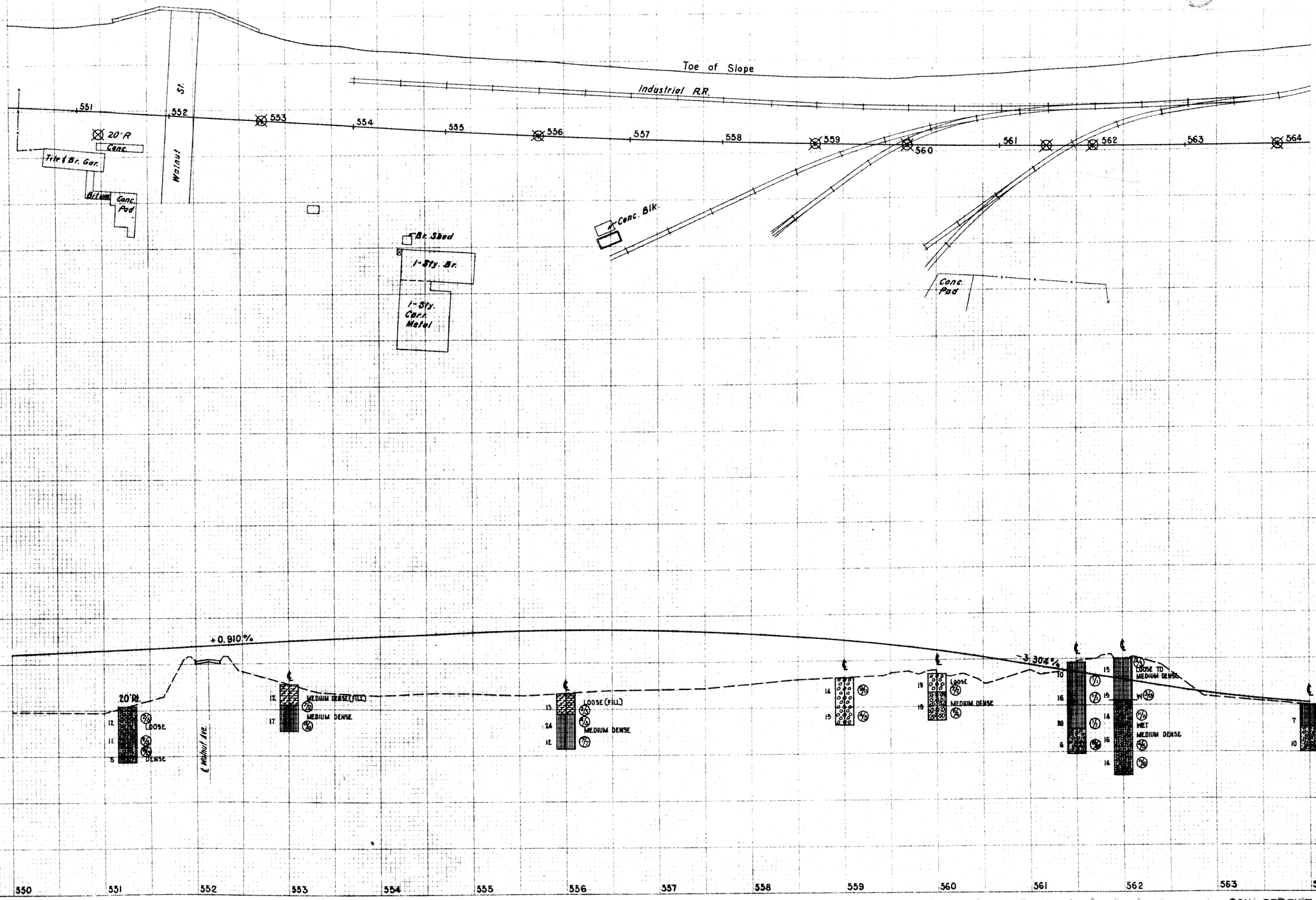
970 960 950 940 930 920 910 900

SOIL PROFILE

2	OHIO	U-UG1010(5)	

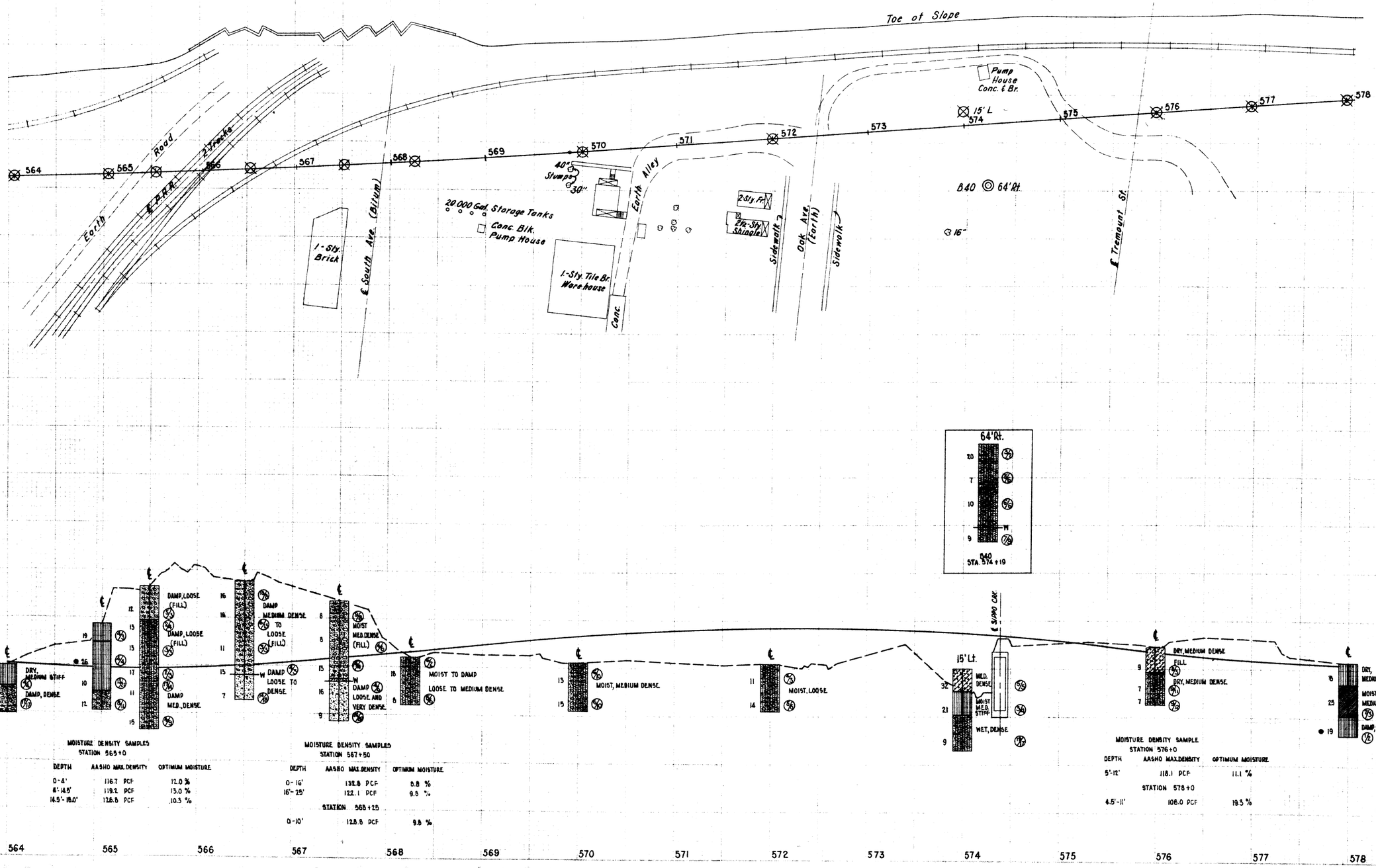
3/6

SOIL PROFILE
STARK COUNTY STA. 21-10.23
MASSILLON, OHIO



SOIL PROFILE

SOIL PROFILE
STARK COUNTY STA. 21-10.23
MASSILLON, OHIO



MOISTURE DENSITY SAMPLES
STATION 565+0

DEPTH	AASHO MAX. DENSITY	OPTIMUM MOISTURE
0-4'	116.7 PCF	12.0 %
4'-14.5'	119.2 PCF	13.0 %
14.5'-18.0'	128.8 PCF	10.3 %

MOISTURE DENSITY SAMPLES
STATION 567+50

DEPTH	AASHO MAX. DENSITY	OPTIMUM MOISTURE
0-16'	132.8 PCF	8.8 %
16'-25'	122.1 PCF	9.8 %

STATION 568+25

0-10'	128.8 PCF	9.8 %

MOISTURE DENSITY SAMPLE
STATION 576+0

DEPTH	AASHO MAX. DENSITY	OPTIMUM MOISTURE
5'-12'	118.1 PCF	11.1 %

STATION 578+0

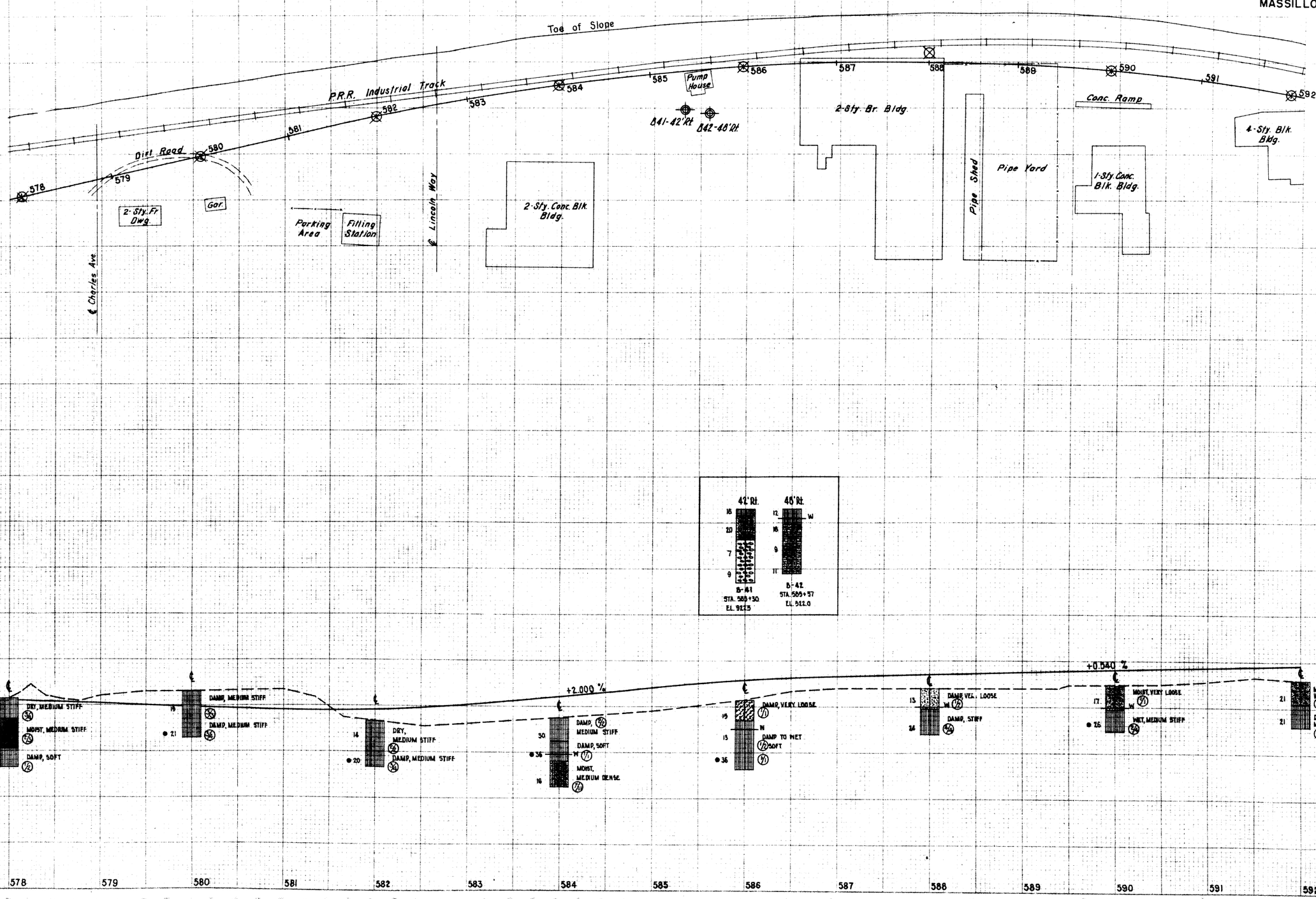
4.5'-11'	106.0 PCF	19.5 %

SOIL PROFILE

FED. ROAD DIVISION	STATE	PROJECT	
2	OHIO	U-UG1010(5)	

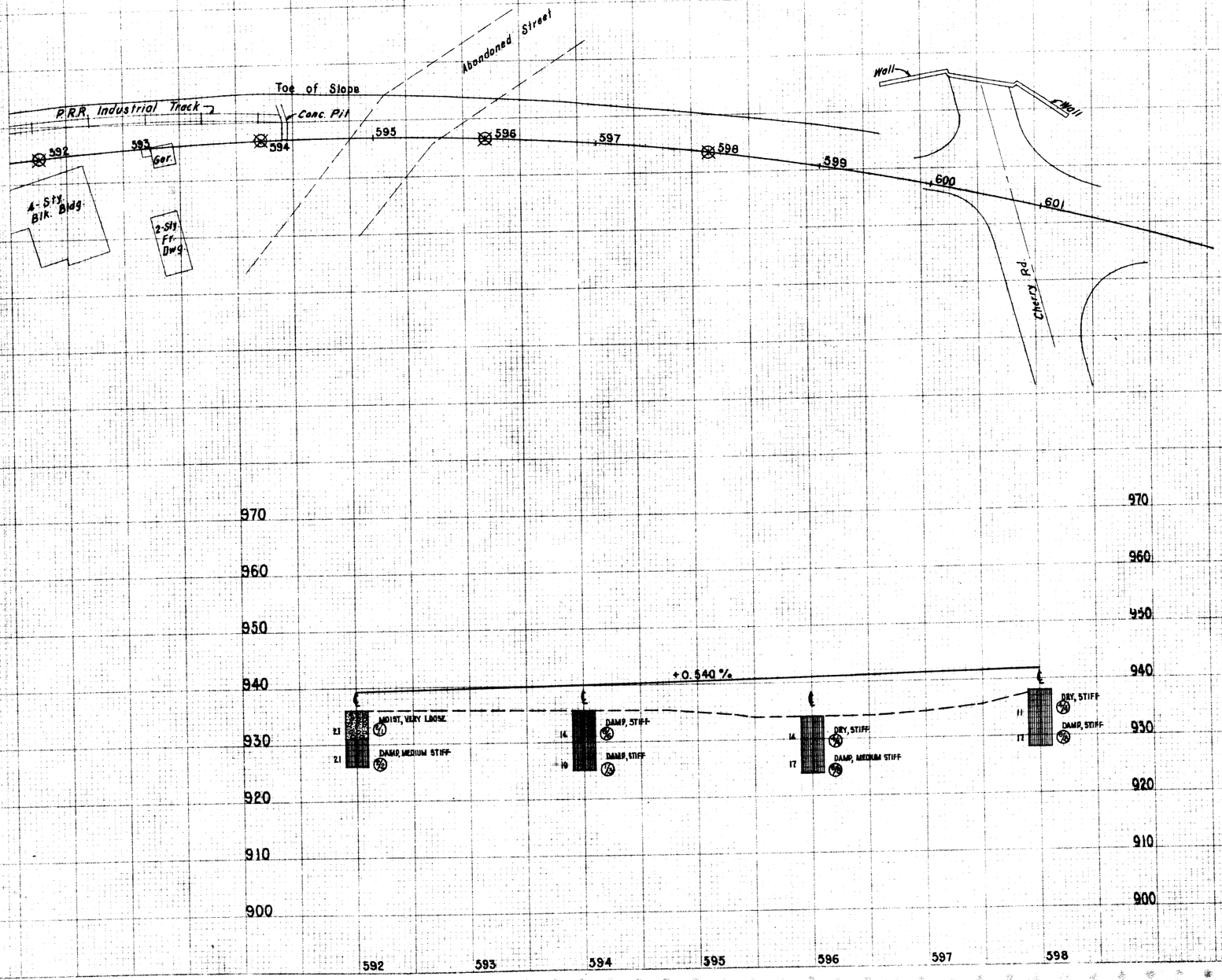
5
6

SOIL PROFILE
STARK COUNTY STA. 21-10.23
MASSILLON, OHIO

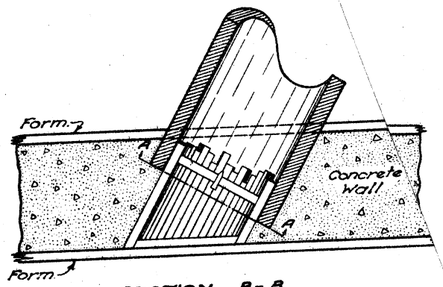


SOIL PROFILE

SOIL PROFILE
STARK COUNTY STA. 21-10.23
MASSILLON, OHIO



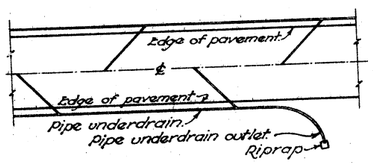
CONSTRUCTION METHODS



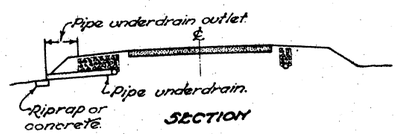
SECTION B-B
Through wall and pipe.

BARRELLING CONCRETE WALL

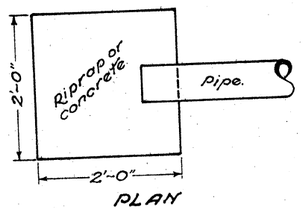
SECTION A-A



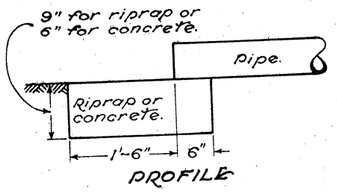
PLAN



SECTION

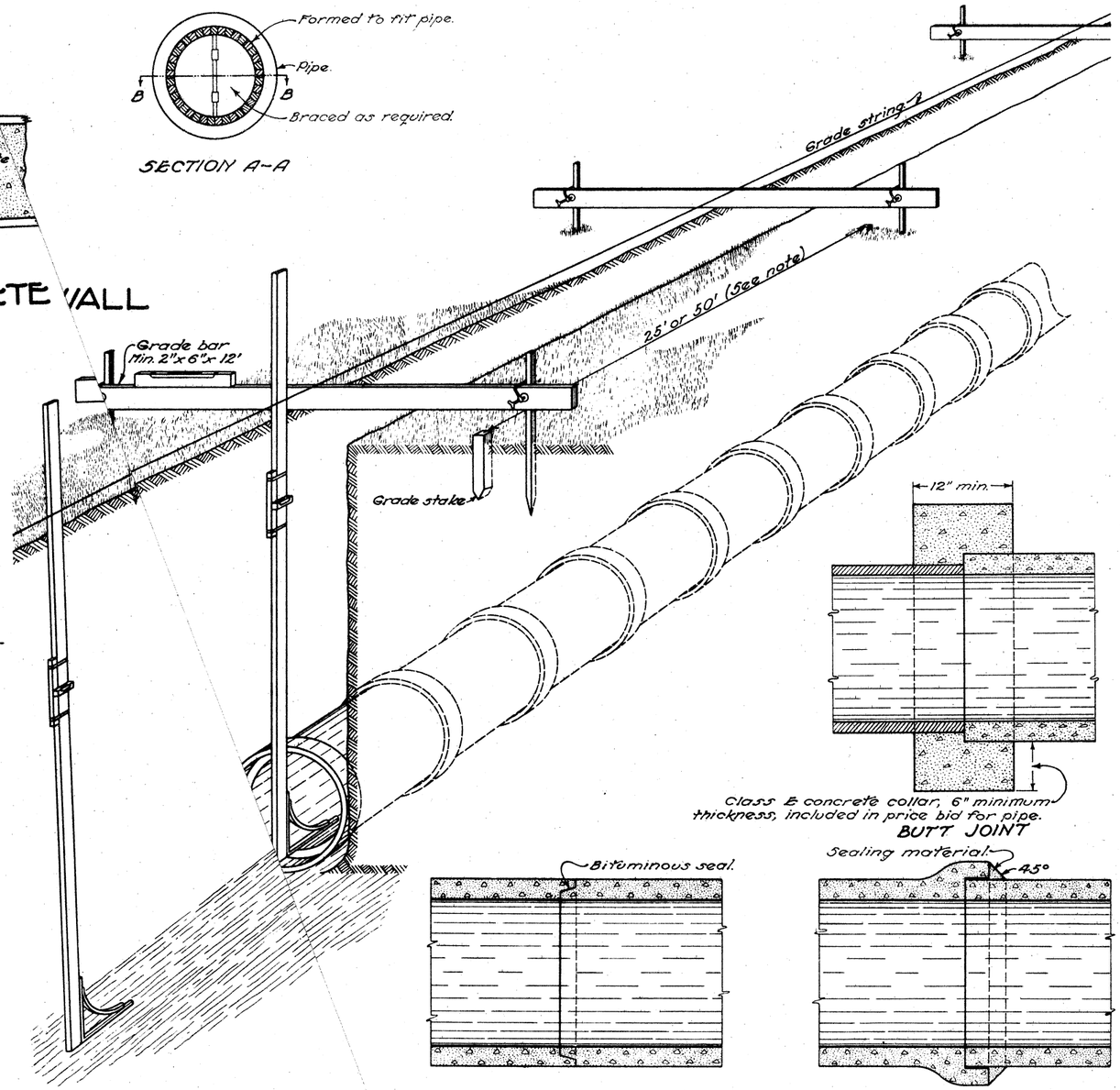


PLAN



PROFILE

PIPE UNDERDRAIN OUTLET



LAYING PIPE

NOTES

BARRELLING OUT CONCRETE WALL:- When necessary that the pipe be barrelled out to the required lengths, it shall be done according to the details shown hereon.

GRADE STAKES shall be set at the following intervals:- For grades less than 0.70% - 25 feet. For grades of 0.70% and over - 50 feet.

GRADE POLE shall be a straight pole dressed with corners rounded, size depending on the length but approximately 1"x 2". The pole shall be equipped with a metal bracket on the bottom with a projecting length of 12". Notches shall be cut on the pole for the depth of the flow line below the grade string and for the depth of trench. A spirit level shall be used on the pole to determine when the pole is vertical.

PIPE JOINTS:- When the construction item calls for sealed joints they shall conform to the details shown hereon and to the appropriate sections of the Construction and Material Specifications.

Where called for on the plans, in the proposal or the specifications, pipe of the type and size specified, shall be encased with a minimum of five inches of Class "E" concrete meeting the requirements of Item 5-1. Payment for furnishing and placing the concrete, and for any additional excavation required, shall be included in the price bid per linear foot of the pertinent pipe item.

PIPE UNDERDRAIN OUTLET:- Place type A riprap 9" thick or Class "E" plain concrete slab 6" thick at the outlet end of underdrain pipe as shown. Cost of furnishing and placing riprap or concrete slab shall be included in price bid per lineal foot of outlet pipe.

Class E concrete collar, 6" minimum thickness, included in price bid for pipe.

BUTT JOINT

TONGUE AND GROOVE JOINT

BELL AND SPIGOT JOINT

SEALED PIPE JOINTS

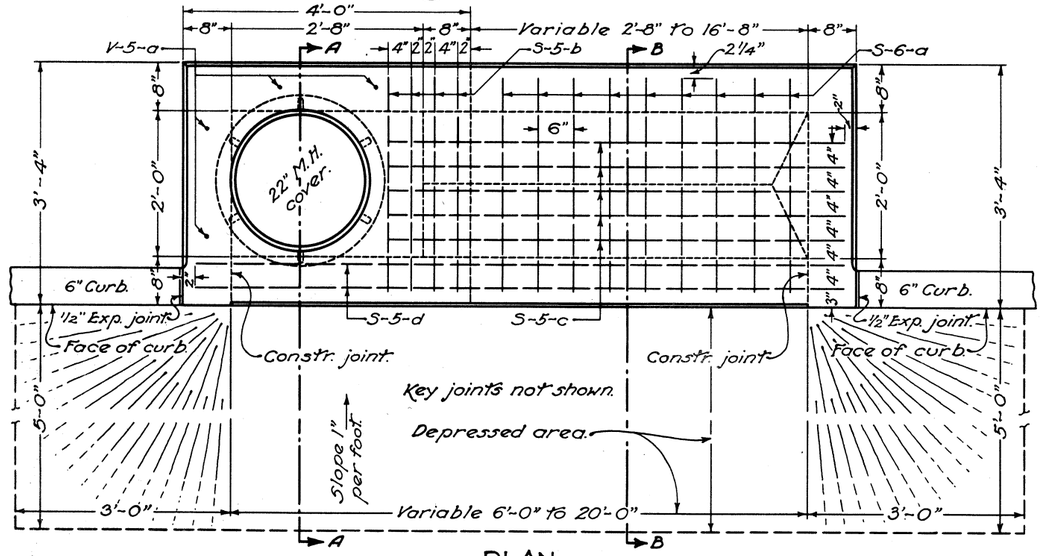
BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS

DRAINS AND SEWERS

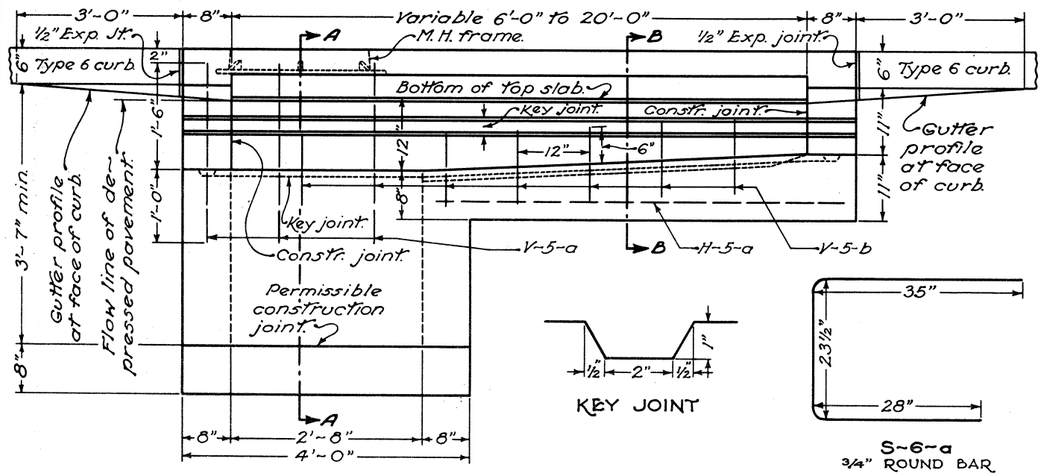
STANDARD CONSTRUCTION DRAWING I-1,2,3,4 & 5

DATE
9-1-1933
4-1-1934
5-1-1934
1-1-1936
3-1-1939
1-1-1945
2-20-1945
4-24-1958

STANDARD No. 2-6 TO 2-20 PAVED SHOULDER INLETS



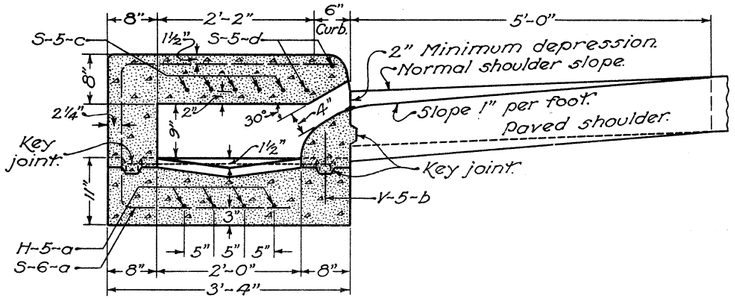
PLAN



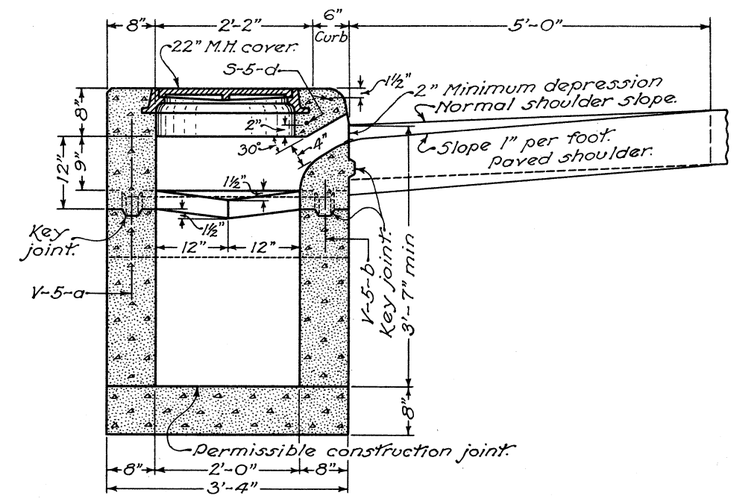
FRONT ELEVATION

KEY JOINT

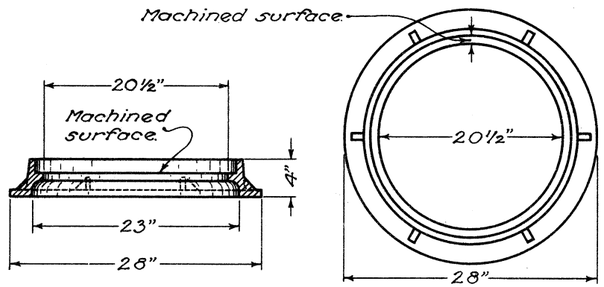
S-6-a
¾" ROUND BAR



SECTION B-B



SECTION A-A



FRAME SECTION PLAN OF FRAME

MANHOLE FRAME

NOTES

CASTINGS shall meet the requirements of Item I-8. The design shall be essentially the same and equally as strong as those shown hereon and shall be given one coat of paint as per specifications.

Bearing areas of frame and cover shall be so fitted and finished as to provide a firm and even seat for the entire cover in the frame. No projections shall exist on bearing areas of either casting and the cover shall seat in it's frame without rocking.

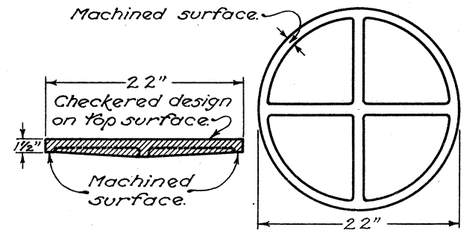
Minimum weight of frame and cover 150 pounds.

REINFORCING STEEL:- All straight bars shall be ⅝ inch round. Bent bars shall be ¾ inch round in accordance with steel details shown hereon and conforming to Item 5-4 of the Construction Materials Specifications. Cost of furnishing and placing reinforcing steel shall be included in Item I-8 for payment.

CONCRETE cast in place to be Class "C".

END WALLS:- The sections of the end walls above the key joint may be of brick or concrete block construction.

QUANTITIES of curb within the limits of the inlet shall be deducted from the project quantities.



COVER SECTION BOTTOM PLAN OF COVER

MANHOLE COVER

CONCRETE AND REINFORCING STEEL QUANTITIES

LENGTH FT.	CONCRETE CU. YDS.	S-6-a		S-5-b		S-5-c		S-5-d		H-5-a		V-5-a		V-5-b		WEIGHT IN LBS.
		NO.	LIN. FT.	NO.	LIN. FT.	NO.	LIN. FT.	NO.	LIN. FT.	NO.	LIN. FT.	NO.	LIN. FT.	NO.	LIN. FT.	
6	2.4	5	7'-2½"	4	2'-11"	5	4'-4"	2	7'-0"	4	3'-8"	4	2'-6"	5	1'-0"	133
8	2.8	9	7'-2½"	4	2'-11"	5	6'-4"	2	9'-0"	4	5'-8"	4	2'-6"	7	1'-0"	202
10	3.2	13	7'-2½"	4	2'-11"	5	8'-4"	2	11'-0"	4	7'-8"	4	2'-6"	9	1'-0"	270
12	3.6	17	7'-2½"	4	2'-11"	5	10'-4"	2	13'-0"	4	9'-8"	4	2'-6"	11	1'-0"	338
14	4.0	21	7'-2½"	4	2'-11"	5	12'-4"	2	15'-0"	4	11'-8"	4	2'-6"	13	1'-0"	406
16	4.4	25	7'-2½"	4	2'-11"	5	14'-4"	2	17'-0"	4	13'-8"	4	2'-6"	15	1'-0"	475
18	4.8	29	7'-2½"	4	2'-11"	5	16'-4"	2	19'-0"	4	15'-8"	4	2'-6"	17	1'-0"	543
20	5.2	33	7'-2½"	4	2'-11"	5	18'-4"	2	21'-0"	4	17'-8"	4	2'-6"	19	1'-0"	611

NOTE:- The above table of quantities is included with this drawing for estimating purposes only. The cost of furnishing and placing all concrete, reinforcing steel, casting, etc. shall be included in Item I-8 for payment.

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS

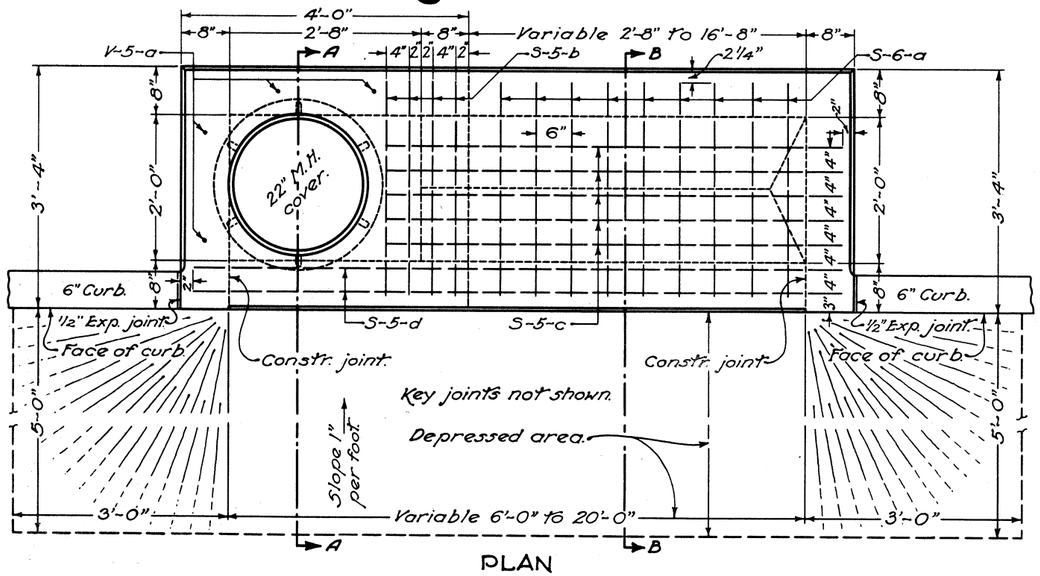
PAVED SHOULDER INLETS

DATE 4-23-59

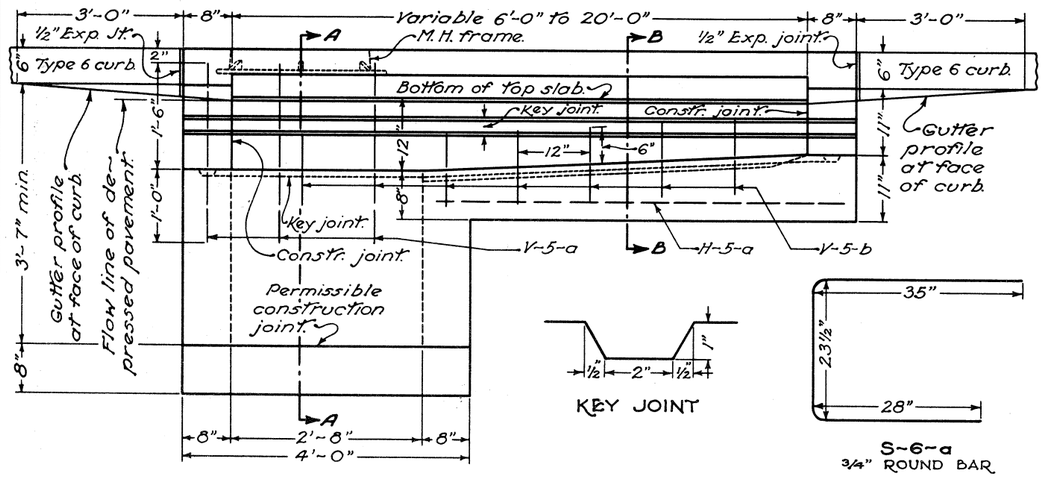
STANDARD CONSTRUCTION DRAWING I-8 I. No. 2-A

APPROVED _____ ENGR. L. & D.

STANDARD No. 2-6 TO 2-20 PAVED SHOULDER INLETS



PLAN



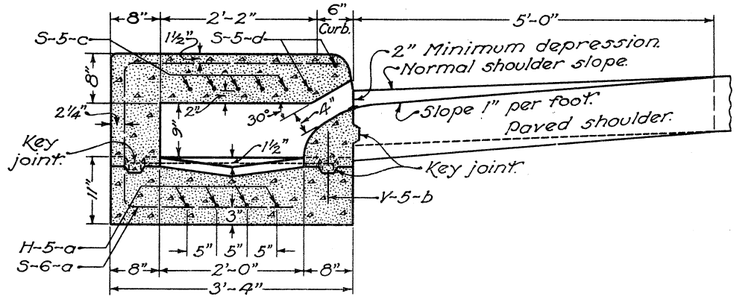
FRONT ELEVATION

KEY JOINT

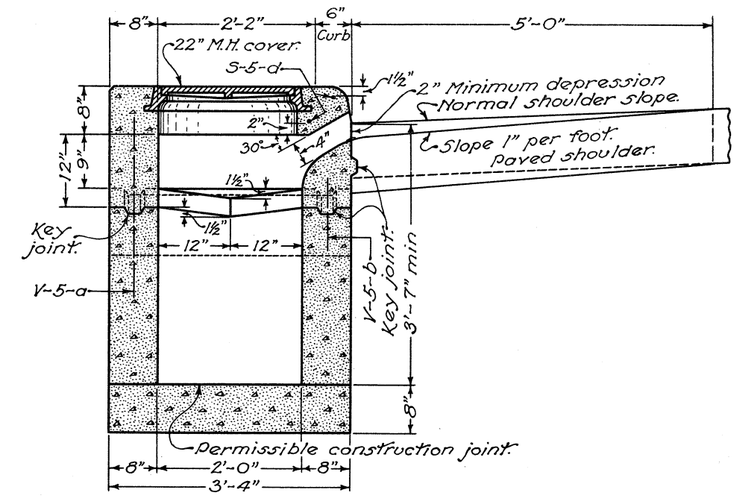
S-6-a
¾" ROUND BAR

CONCRETE AND REINFORCING STEEL QUANTITIES																	
LENGTH FT.	CONCRETE CU. YDS.	S-6-a		S-5-b		S-5-c		S-5-d		H-5-a		V-5-a		V-5-b		WEIGHT IN LBS.
		NO.	LIN. FT.	NO.	LIN. FT.	NO.	LIN. FT.	NO.	LIN. FT.	NO.	LIN. FT.	NO.	LIN. FT.	NO.	LIN. FT.	
6	2.4	5	7'-2½"	4	2'-11"	5	4'-4"	2	7'-0"	4	3'-8"	4	2'-6"	5	1'-0"	133
8	2.8	9	7'-2½"	4	2'-11"	5	6'-4"	2	9'-0"	4	5'-8"	4	2'-6"	7	1'-0"	202
10	3.2	13	7'-2½"	4	2'-11"	5	8'-4"	2	11'-0"	4	7'-8"	4	2'-6"	9	1'-0"	270
12	3.6	17	7'-2½"	4	2'-11"	5	10'-4"	2	13'-0"	4	9'-8"	4	2'-6"	11	1'-0"	338
14	4.0	21	7'-2½"	4	2'-11"	5	12'-4"	2	15'-0"	4	11'-8"	4	2'-6"	13	1'-0"	406
16	4.4	25	7'-2½"	4	2'-11"	5	14'-4"	2	17'-0"	4	13'-8"	4	2'-6"	15	1'-0"	475
18	4.8	29	7'-2½"	4	2'-11"	5	16'-4"	2	19'-0"	4	15'-8"	4	2'-6"	17	1'-0"	543
20	5.2	33	7'-2½"	4	2'-11"	5	18'-4"	2	21'-0"	4	17'-8"	4	2'-6"	19	1'-0"	611

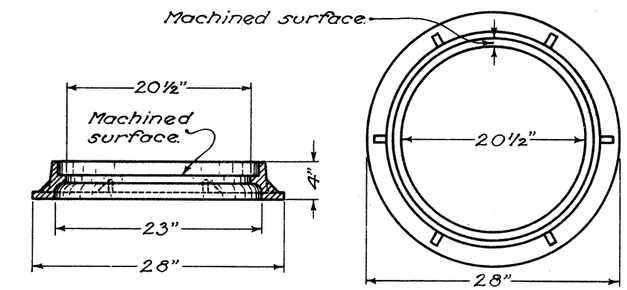
NOTE:- The above table of quantities is included with this drawing for estimating purposes only. The cost of furnishing and placing all concrete, reinforcing steel, casting, etc. shall be included in Item I-8 for payment.



SECTION B-B



SECTION A-A



FRAME SECTION PLAN OF FRAME

MANHOLE FRAME

NOTES

CASTINGS shall meet the requirements of Item I-8. The design shall be essentially the same and equally as strong as those shown hereon and shall be given one coat of paint as per specifications.

Bearing areas of frame and cover shall be so fitted and finished as to provide a firm and even seat for the entire cover in the frame. No projections shall exist on bearing areas of either casting and the cover shall seat in it's frame without rocking.

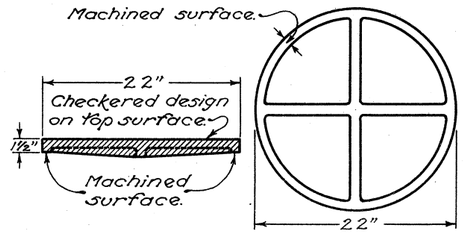
Minimum weight of frame and cover 150 pounds.

REINFORCING STEEL:- All straight bars shall be ⅝ inch round. Bent bars shall be ¾ inch round in accordance with steel details shown hereon and conforming to Item 5-4 of the Construction Materials Specifications. Cost of furnishing and placing reinforcing steel shall be included in Item I-8 for payment.

CONCRETE cast in place to be Class "C".

END WALLS:- The sections of the end walls above the key joint may be of brick or concrete block construction.

QUANTITIES of curb within the limits of the inlet shall be deducted from the project quantities.



COVER SECTION BOTTOM PLAN OF COVER

MANHOLE COVER

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS

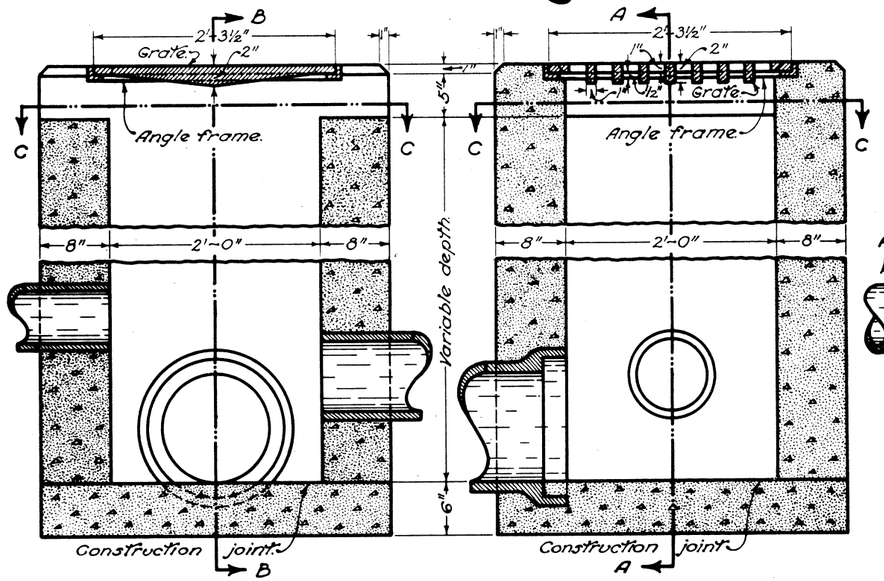
PAVED SHOULDER INLETS

DATE 4-23-59

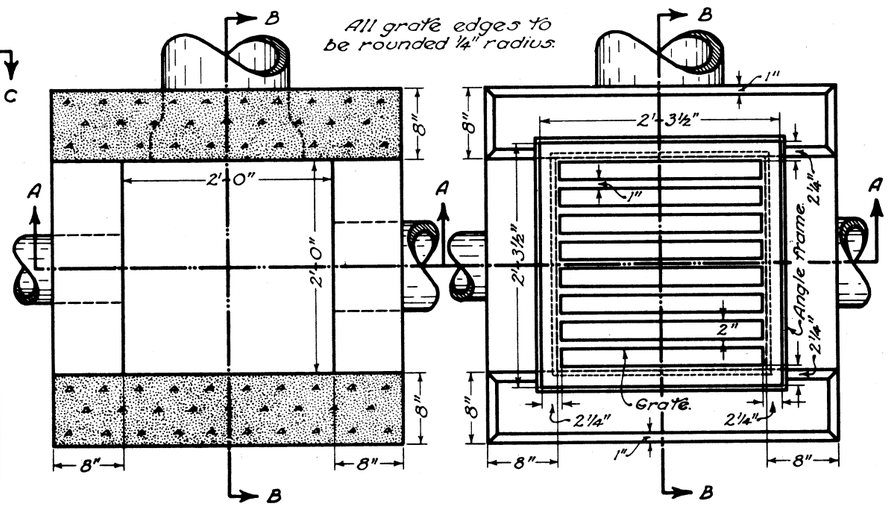
STANDARD CONSTRUCTION DRAWING I-8 I. No. 2-A

APPROVED _____ ENGR. L. & D.

STANDARD No. 2-2-A CATCH BASIN



SECTION A-A SECTION B-B



SECTION C-C PLAN

NOTES

GRATING AND FRAME shall meet the requirements of Item I-8. The design shall be essentially the same and equally as strong as the one shown hereon and shall be given one coat of paint as per specifications.

Weight of grate, minimum, 120 lbs.
Weight of frame, minimum, 40 lbs.

CONCRETE cast in place to be Class "C".

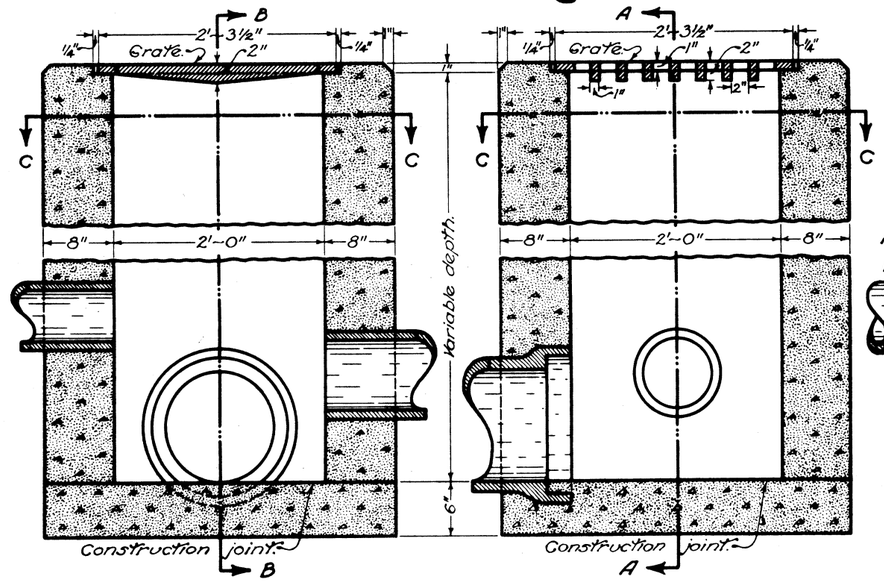
BRICK OR CONCRETE BLOCK side walls, when used in place of concrete, shall be 8 inches minimum in thickness. When brick or concrete blocks are used, the walls of the catch basin above the flow line of the side opening shall be constructed of Portland Cement concrete.

2-2-A SIDE INLETS to be placed 4 to 6 inches below normal elevations of median or ditch flow line returning to normal 10 feet each side of basin.

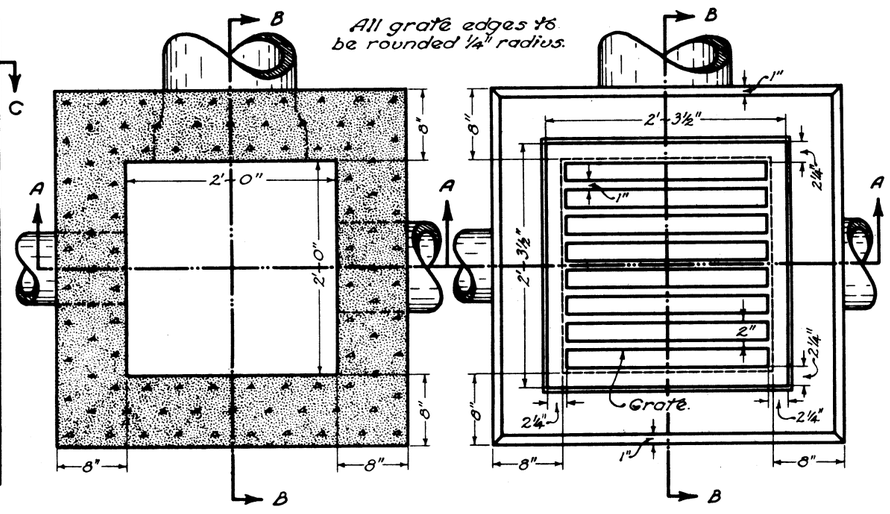
2-2-B GRATE elevation to be placed 4 to 6 inches below normal ditch returning to normal 10 feet each side of basin.

SIDE INLETS shall be provided on both sides of the No. 2-2-A catch basin in sags and on upstream side only where the ditch has a continuous down grade past the catch basin.

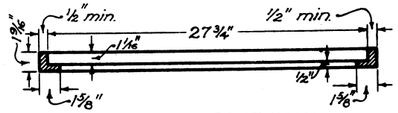
STANDARD No. 2-2-B CATCH BASIN



SECTION A-A SECTION B-B



SECTION C-C PLAN



SECTION THROUGH ANGLE FRAME

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS

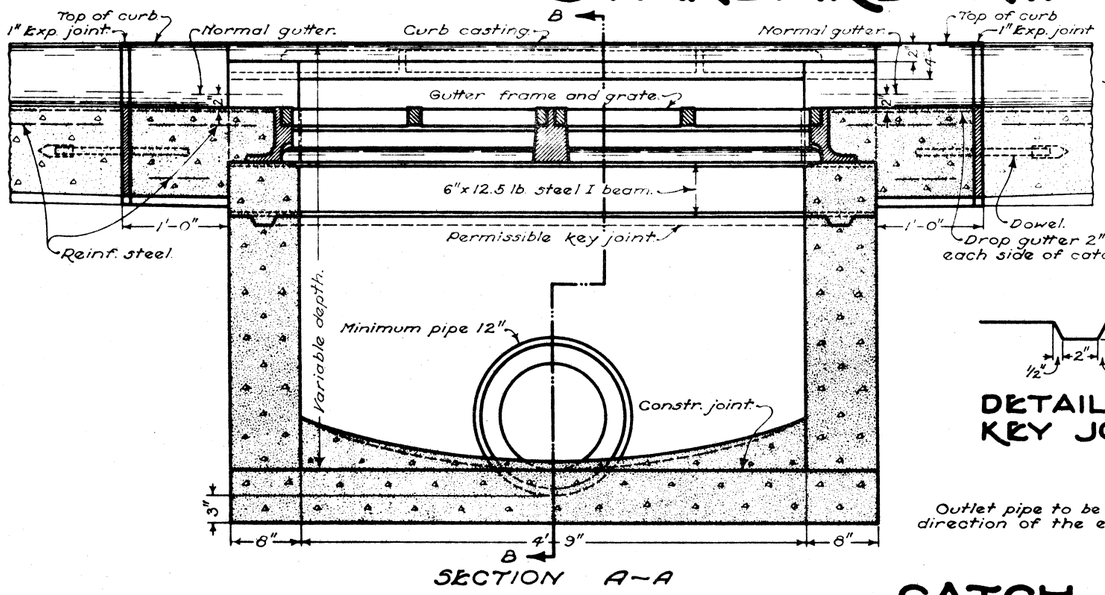
CATCH BASINS

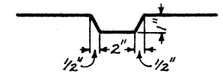
STANDARD CONSTRUCTION DRAWING I-8 C.B. 2-2-A & B

APPROVED _____ ENGR. L. & D.

DATE
6-1933
4-1934
11-12-35
3-1-39
11-1-39
11-24-39
12-15-41
1-2-51
5-1-52
7-2-56
8-1-56
3-2-59

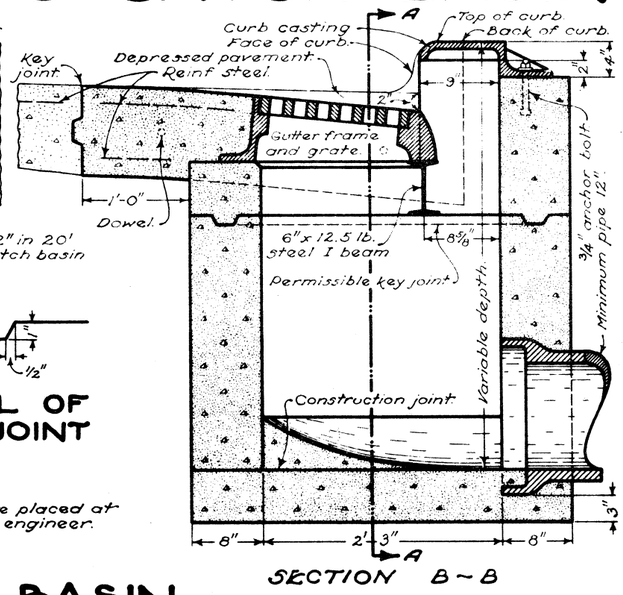
STANDARD No. 3 CATCH BASIN





DETAIL OF KEY JOINT

Outlet pipe to be placed at direction of the engineer.



NOTES

CASTINGS shall meet the requirements of Item I-8. The design shall be essentially the same and equally as strong as those shown hereon, and shall be given one coat of paint as per specifications.

WEIGHTS, minimum :—

Curb casting	305 pounds.
Two grates	254 pounds.
Gutter frame	590 pounds.

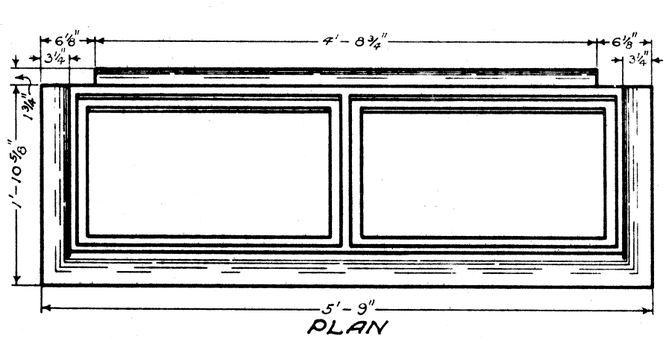
BEARING AREAS of frame and grate shall be so fitted and finished as to provide a firm and even seat for all portions of the grate in the frame. No projections shall exist on bearing areas of either casting and each grate shall seat in its frame without rocking. Frames and grates shall be fitted, matched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

DOWELS to be 1 inch round, smooth bars 18 inches long spaced as shown hereon and greased.

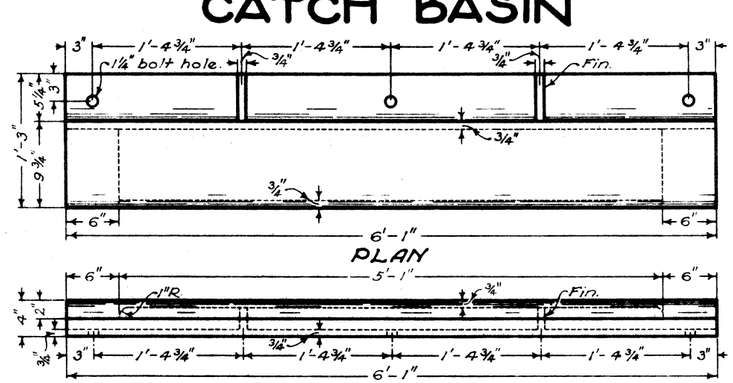
CONCRETE cast in place to be Class "C". BRICK OR CONCRETE BLOCK side walls, when used in place of concrete, shall be 8 inches minimum in thickness.

PAVEMENT :— The portion blocked out of the pavement shall be placed after the casting has been set but shall be paid for as part of the pavement.

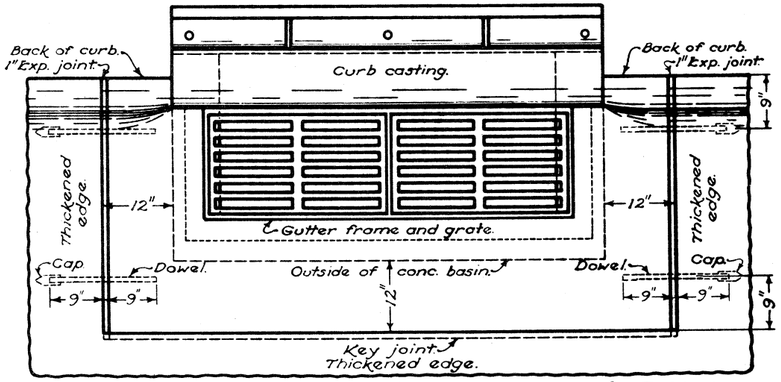
CATCH BASIN



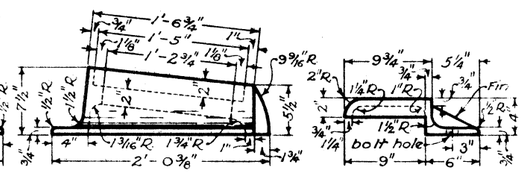
GUTTER FRAME

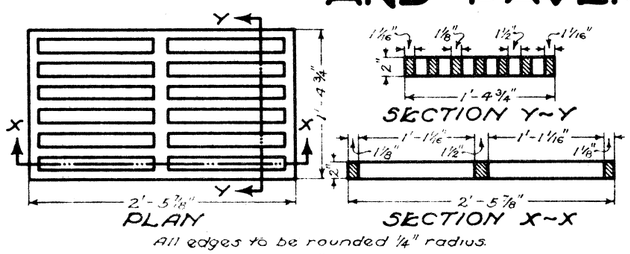


CURB CASTING



PLAN OF CATCH BASIN AND PAVEMENT JOINTS





All edges to be rounded ¼" radius.

GRATE

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS

CATCH BASINS

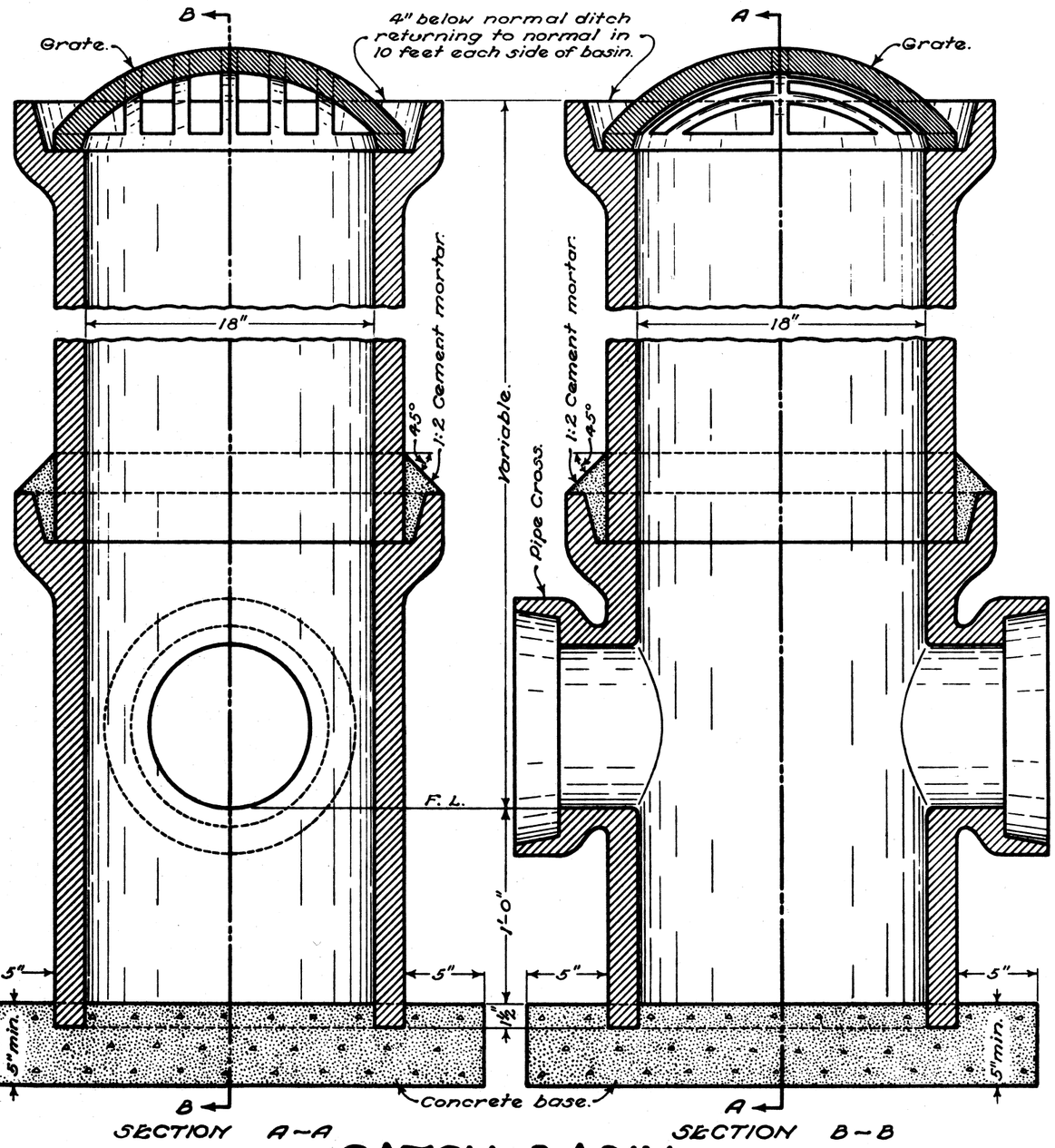
STANDARD CONSTRUCTION DRAWING

I-8 C.B. No. 3

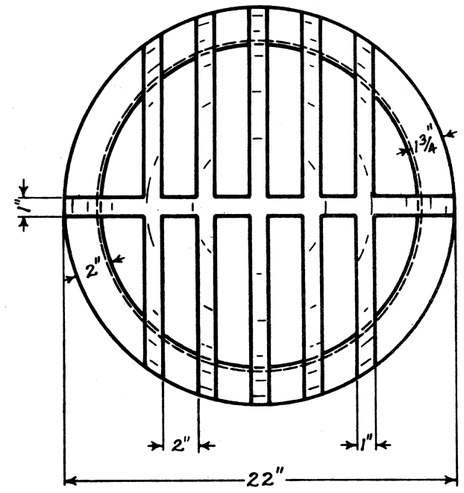
APPROVED [signature] ENGR. L. & D.

DATE
9-1933
11-12-35
12-15-36
3-1-39
11-1-39
8-1-41
9-2-41
12-15-41
1-2-51
5-15-51
5-1-52
1-26-59

STANDARD No. 7 SIDE DITCH CATCH BASIN

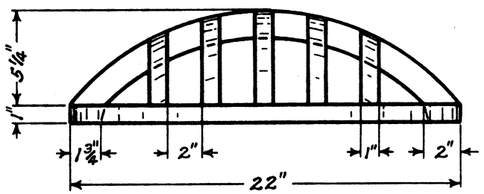


CATCH BASIN



PLAN

All edges to be rounded ¼ inch radius.



ELEVATION

GRATE

NOTES

GENERAL:- Care shall be taken by the field engineer in the placing of this type catch basin. Special note shall be given to the grade elevation of drain pipe and when finished the catch basin shall stand in a true vertical position.

No cutting of holes in side of pipe will be permitted.

CASTING shall meet the requirements of Item I-8. The design shall be essentially the same and equally as strong as the one shown hereon, and shall be given one coat of paint as per specifications.

Weight, minimum, 70 pounds.

RISER PIPE in all cases shall be 18 inches in diameter regardless of size of carrying line.

CROSS:- Where carrying line is not continuous thru catch basin the upstream opening of the cross shall be properly plugged using vitrified or concrete stopper and sealed joint.

RISER AND CROSS shall be constructed of Standard Strength Vitrified Sewer Pipe or Standard Strength Plain Cement Concrete pipe, bell and spigot pipe only.

CONCRETE BASE to be Class "C".

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS

CATCH BASINS

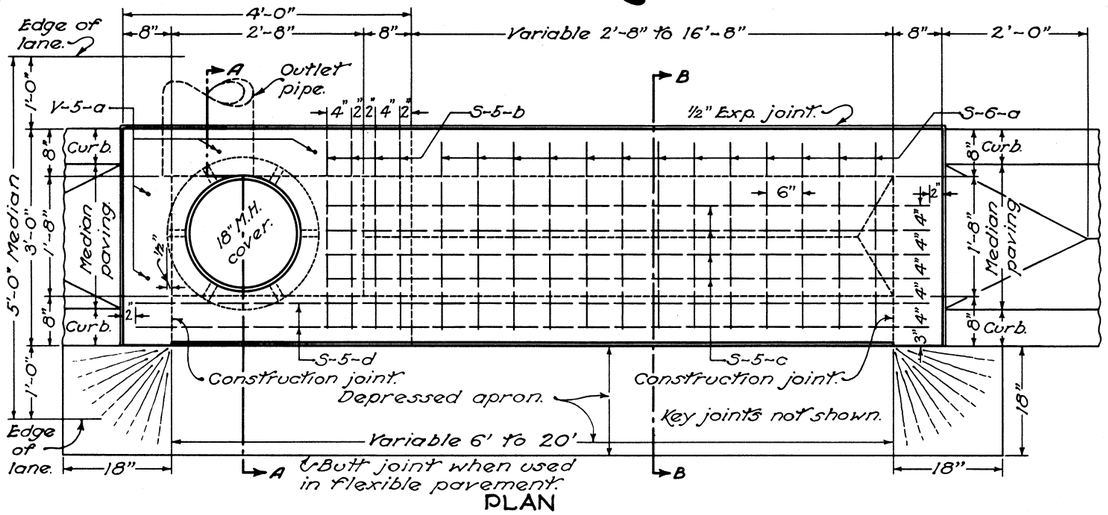
STANDARD CONSTRUCTION DRAWING

I-8 C.B. No. 7

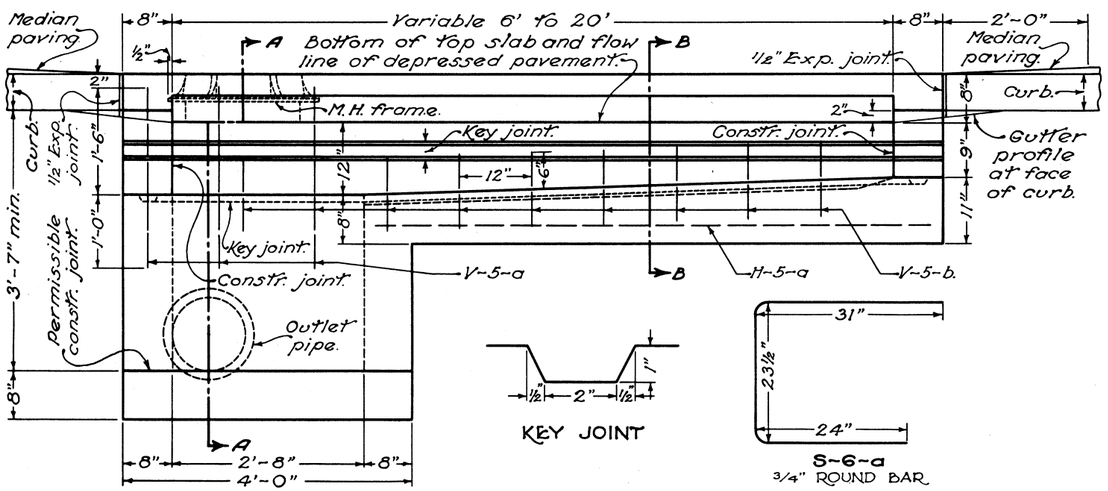
APPROVED _____ ENGR. L. & D.

DATE
6-10-36
3-1-39
8-1-41
5-1-47
5-1-52
3-2-59
3-11-60

STANDARD No. 2-6 TO 2-20 MEDIAN INLETS



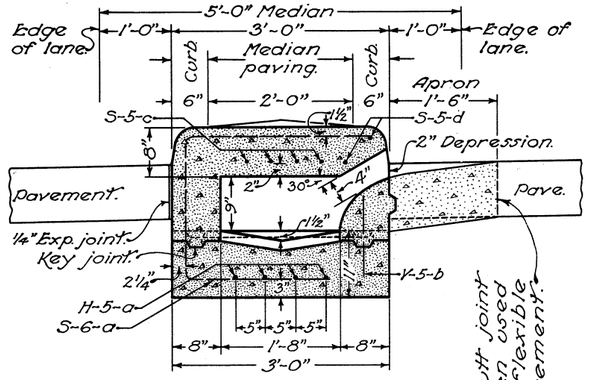
PLAN



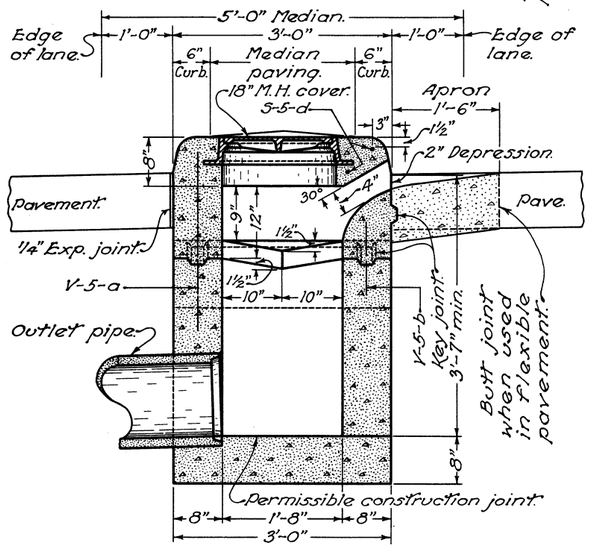
FRONT ELEVATION

KEY JOINT

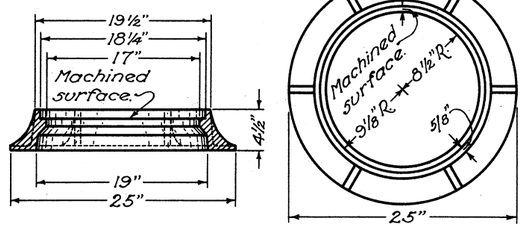
S-6-a
¾" ROUND BAR



SECTION B-B



SECTION A-A



FRAME SECTION PLAN OF FRAME

MANHOLE FRAME

NOTES

CASTINGS shall meet the requirements of Item I-8. The design shall be essentially the same and equally as strong as those shown hereon and shall be given one coat of paint as per specifications.

Bearing areas of frame and cover shall be so fitted and finished as to provide a firm and even seat for the entire cover in the frame. No projections shall exist on bearing areas of either casting and the cover shall seat in its frame without rocking.

Minimum weight of frame and cover 130 lbs.

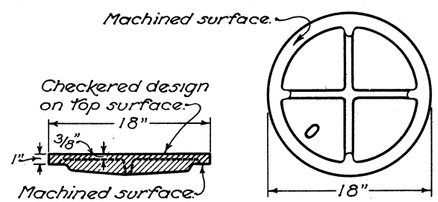
REINFORCING STEEL shall be round bars in accordance with steel details shown hereon and conforming to Item S-4 of the Construction Materials Specifications. Cost of furnishing and placing reinforcing steel shall be included in Item I-8 for payment.

CONCRETE cast in place to be Class "C".

END WALLS:- The sections of the end walls above the key joint may be of brick or concrete block construction.

DEPRESSED APRON:- The 18" depressed apron shall be an integral part of concrete pavements with the hand finishing required for the 2" depression being performed before the initial set. When the inlets are used with flexible pavements, the depressed apron shall be of 9" thick class "C" concrete. Payment for all labor and material required to construct the depressed apron shall be included in the cost of the inlet. The subgrade shall be adjusted to receive the depressed apron.

QUANTITIES of curb, pavement, depressed apron and median pavement within the limits of the inlet shall be deducted from the project quantities.



COVER SECTION BOTTOM PLAN OF COVER

MANHOLE COVER

CONCRETE AND REINFORCING STEEL QUANTITIES

LENGTH FT.	CONCRETE CU. YDS.	S-6-a NO.	S-6-a LIN. FT.	S-5-b NO.	S-5-b LIN. FT.	S-5-c NO.	S-5-c LIN. FT.	S-5-d NO.	S-5-d LIN. FT.	H-5-a NO.	H-5-a LIN. FT.	V-5-a NO.	V-5-a LIN. FT.	V-5-b NO.	V-5-b LIN. FT.	WEIGHT IN LBS.
6	2.2	5	6'-6½"	4	2'-7"	4	4'-4"	2	7'-0"	4	3'-8"	4	2'-6"	5	1'-0"	123
8	2.6	9	6'-6½"	4	2'-7"	4	6'-4"	2	9'-0"	4	5'-8"	4	2'-6"	7	1'-0"	186
10	3.0	13	6'-6½"	4	2'-7"	4	8'-4"	2	11'-0"	4	7'-8"	4	2'-6"	9	1'-0"	248
12	3.4	17	6'-6½"	4	2'-7"	4	10'-4"	2	13'-0"	4	9'-8"	4	2'-6"	11	1'-0"	310
14	3.8	21	6'-6½"	4	2'-7"	4	12'-4"	2	15'-0"	4	11'-8"	4	2'-6"	13	1'-0"	372
16	4.2	25	6'-6½"	4	2'-7"	4	14'-4"	2	17'-0"	4	13'-8"	4	2'-6"	15	1'-0"	435
18	4.6	29	6'-6½"	4	2'-7"	4	16'-4"	2	19'-0"	4	15'-8"	4	2'-6"	17	1'-0"	497
20	5.0	33	6'-6½"	4	2'-7"	4	18'-4"	2	21'-0"	4	17'-8"	4	2'-6"	19	1'-0"	559

NOTE:- The above table of quantities is included with this drawing for estimating purposes only. The cost of furnishing and placing all concrete, reinforcing steel, casting, etc. shall be included in Item I-8 for payment.

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS

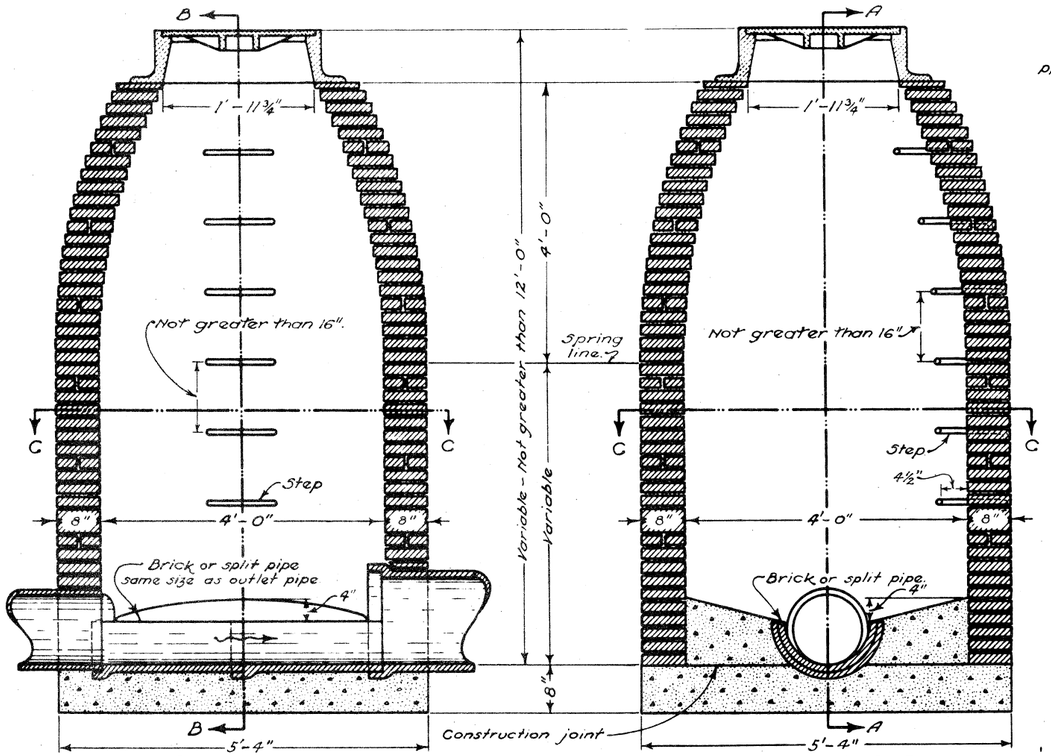
DATE 12-1-'54 4-23-'59

MEDIAN INLETS

STANDARD CONSTRUCTION DRAWING I-8 I. No. 2

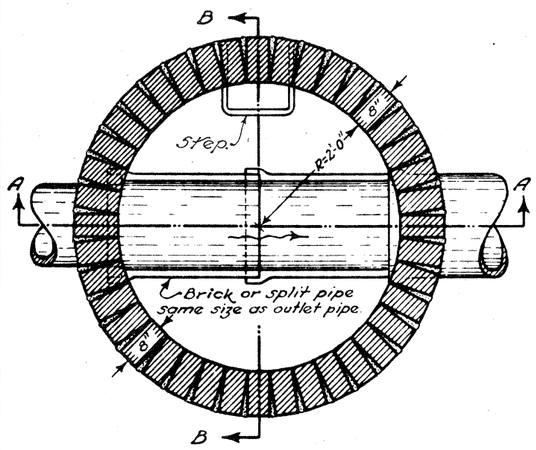
APPROVED _____ ENGR. L. & D.

STANDARD No. 1 MANHOLE

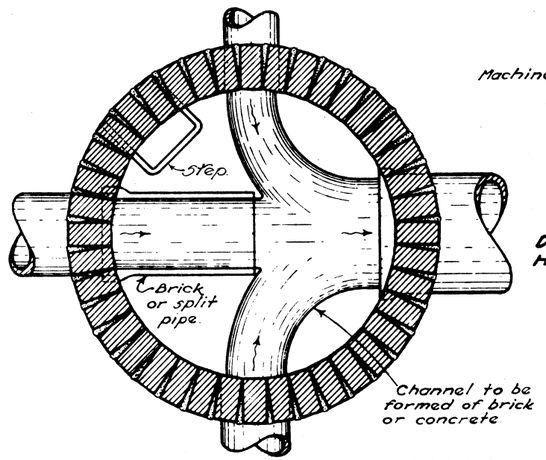


SECTION A-A

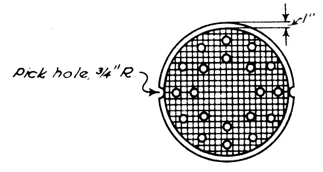
SECTION B-B



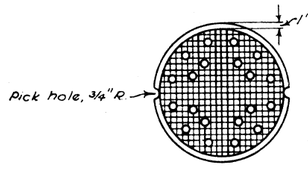
SECTION C-C



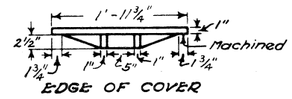
SECTION BELOW SPRING LINE SHOWING METHOD OF TURNING SIDE DRAINS.



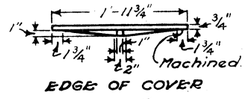
PLAN OF COVER



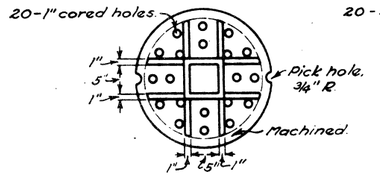
PLAN OF COVER



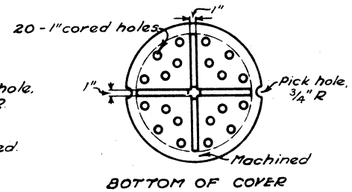
EDGE OF COVER



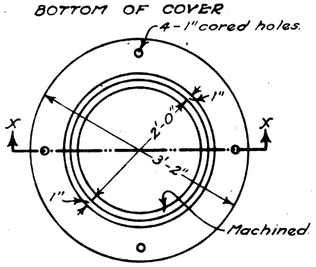
EDGE OF COVER



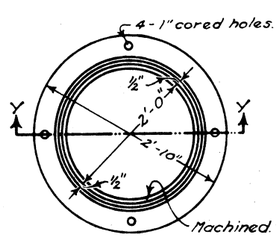
BOTTOM OF COVER



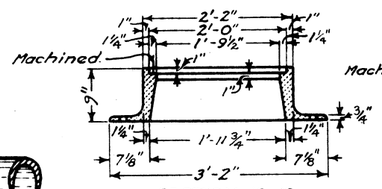
BOTTOM OF COVER



PLAN OF FRAME

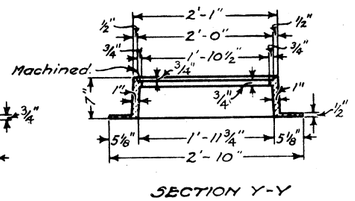


PLAN OF FRAME



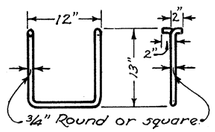
SECTION X-X

DETAIL OF HEAVY MANHOLE FRAME & COVER



SECTION Y-Y

DETAIL OF LIGHT MANHOLE FRAME & COVER



STEP DETAIL

NOTES

GENERAL :- The design shown hereon is for brick construction. If precast solid concrete blocks, precast concrete rings, or cast in place concrete is used the design shall be modified to fit the dimensions of the material used except that the thickness of the wall shall not be less than 6 inches for precast solid concrete blocks or cast in place concrete construction.

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

SETTING OF CASTING :- The base of the frame shall be set in a full bed of portland cement mortar, and so adjusted to conform to the finished pavement grade.

CASTINGS:- The heavy frame and cover shall be used whenever the manhole is placed within the limits of the pavement.

The light frame and cover may be used whenever the manhole is placed outside the limits of the pavement.

Castings shall meet the requirements of Item I-8. The design shall be essentially the same and equally as strong as those shown hereon, and shall be given one coat of paint as per specifications.

Minimum weight of light frame and cover 275 pounds, of heavy frame and cover 475 pounds.

STEPS shall be wrought iron or nodular iron meeting the requirements of Item I-8 and shall be given one coat of paint Sec. M-9.18 or Sec. M-9.19.

CONSTRUCTION:- Manholes shall be built of brick, precast solid concrete blocks, precast concrete rings, or cast in place concrete. When manholes are constructed of brick, every sixth course shall be a stretcher course.

Bottom of manhole shall be class "C" concrete.

Channel sections in the manhole shall be constructed of split pipe or brick except curved sections which may be built by forming a channel in the concrete.

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS

STANDARD MANHOLE

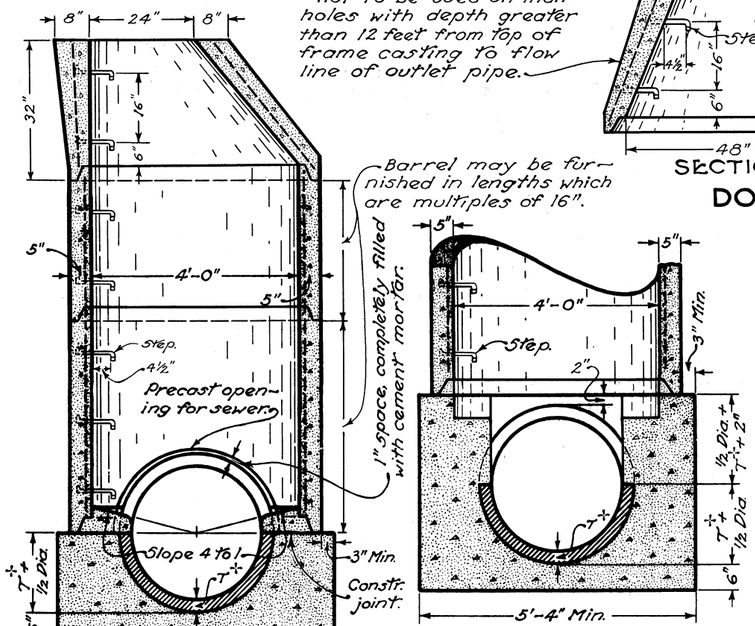
STANDARD CONSTRUCTION DRAWING

I-8 M.H. No. 1

APPROVED W. F. Cunningham ENGR. L. & D.

DATE
9-1933
4-1934
2-20-36
3-1-39
4-1-42
3-1-39
5-1-47
1-2-51
5-1-51
5-1-52
1-26-59

STANDARD MANHOLE

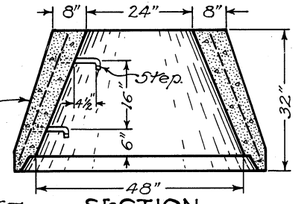


SECTION

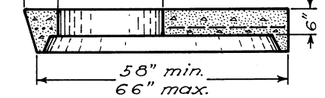
ALTERNATE MANHOLE BASE

PRECAST MANHOLE ON SEWERS 42" AND UNDER

Not to be used on manholes with depth greater than 12 feet from top of frame casting to flow line of outlet pipe.

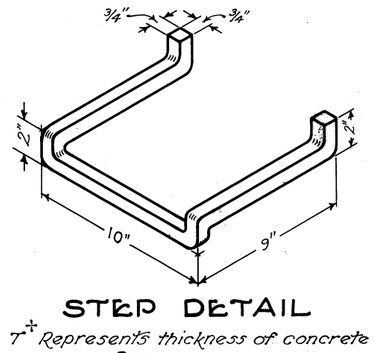


SECTION



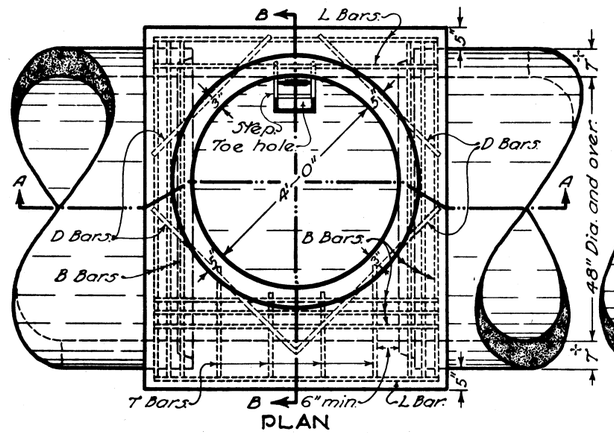
SECTION

DOME ALTERNATES

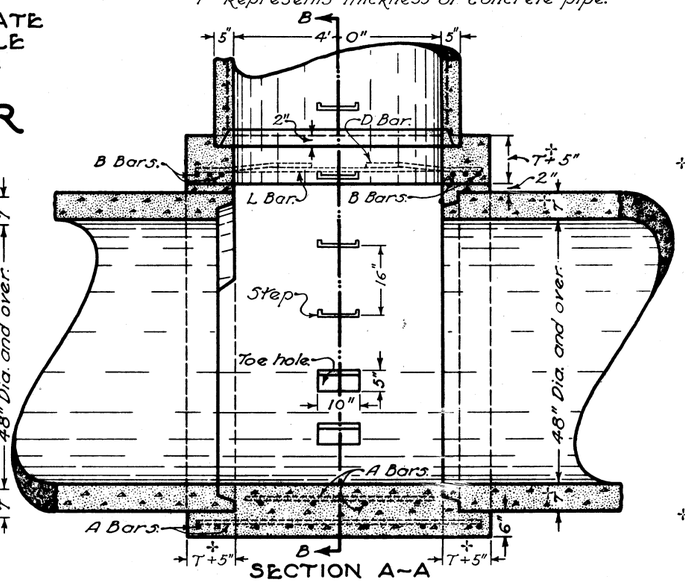


STEP DETAIL

T+ Represents thickness of concrete pipe.

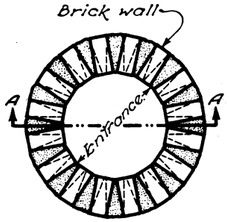


PLAN

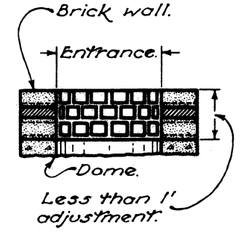


SECTION A-A

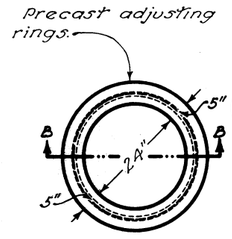
CONNECTION BOX FOR PRECAST MANHOLES ON SEWERS 48" AND OVER



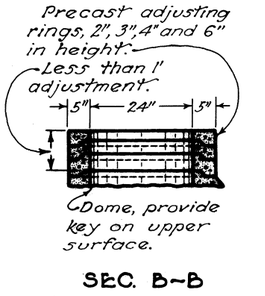
PLAN



SEC. A-A

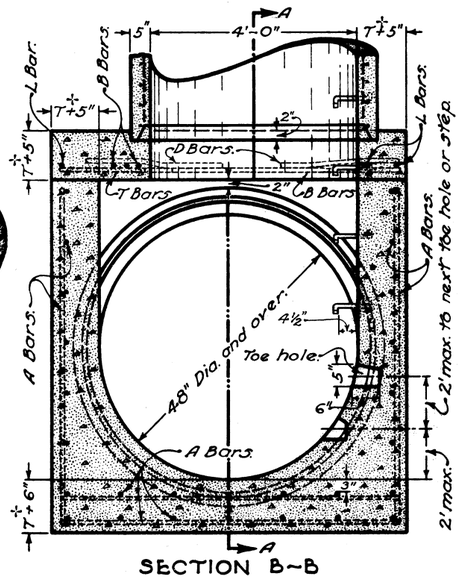


PLAN



SEC. B-B

ALTERNATE METHODS OF ADJUSTING TO GRADE



SECTION B-B

NOTES

GENERAL:— Precast reinforced concrete manholes detailed on this drawing may be used in lieu of the design shown on Standard Drawings I-8 M.H. No. 1 and I-8 M.H. No. 2.

Openings for the inlet and outlet sewer pipe shall be cast in the precast ring unless the manhole base is built to an elevation two inches above the top of the outlet pipe.

Openings for pipes 18" diameter or less entering the manhole above the spring line of the outlet sewer may be cut in the field provided the portion of the pipe (15" or 18" diam.) inside the manhole is cut to fit the circumference of the manhole. Pipes over 18" diameter entering the manhole above the spring line of the outlet sewer shall be connected to the manhole by a Tee connection precast with the barrel of the manhole.

All joints of pipe openings in the manhole shall be thoroughly caulked with cement mortar or other suitable material to prevent infiltration of earth into the manhole.

Drop pipes when required shall be constructed as shown on Standard Drawing I-8 M.H. No. 2.

MATERIALS:— Concrete for the manhole base and connection box shall be Class "C".

Precast reinforced concrete riser rings and domes shall comply with the requirements of Sec. M-6.6, except for Minimum Designs and Marking. Minimum wall thickness shall be 5 inches and circular reinforcement shall be 0.18 sq. in. per foot minimum. Concrete shall have a minimum strength of 4,000 pounds per square inch. 1¼" holes for handling may be cast in domes and rings. The following shall be clearly stenciled or impressed on each riser ring:—

a. M.H.
b. The date of manufacture
c. The name or trade-mark of the manufacturer and location of the plant.

Steps shall be wrought iron or nodular iron meeting the requirements of Item 8 and shall be given one coat of paint Sec. M-9.18 or Sec. M-9.19 Castings shall be as specified on Standard Drawing I-8 M.H. No. 1 or I-8 M.H. No. 2.

CONNECTION BOXES for sewers 48 inches and over in diameter shall be reinforced as shown and as specified below:—

A bars shall be spaced at 12" centers in both directions.

B bars shall be spaced at 3" centers in both directions.

A, B and L bar sizes:—
- ⅝" ϕ for 48" to 60" sewers.
- ¾" ϕ for 66" to 78" sewers.
- ⅞" ϕ for 84" to 96" sewers.

T bars shall be ⅝" ϕ spaced at 12" centers.

D bars shall be ⅝" ϕ.

Reinforcing steel shall have 2 inch clearance except where otherwise specified.

ADJUSTING RINGS, precast, shall be reinforced with one No. 3 gage wire or equivalent.

BUREAU OF LOCATION AND DESIGN
OHIO DEPARTMENT OF HIGHWAYS

STANDARD MANHOLE

STANDARD CONSTRUCTION DRAWING I-8 M.H. No. I-A

APPROVED _____ ENGR. L. & D.

DATE
6-1-54
1-3-55
1-26-59
2-1-61