FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	STATE	

SUM-91-7.82

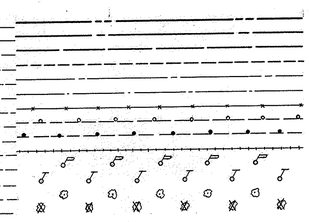
1/30

APR 17 1964
GROUND PHOTOLAB

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
SUM-91-7.82
SUMMIT COUNTY
VILLAGE OF MUNROE FALLS

CONVENTIONAL SIGNS

STATE LINE
COUNTY LINE
TOWNSHIP LINE
SECTION LINE
CENTER LINE
CORPORATION LINE
FENCE LINE
GUARD RAIL (EXISTING)
GUARD RAIL (PROPOSED)
STEAM RAILROAD
POWER POLES
TELEPHONE POLES
TREES (EXISTING)
TREES (TO BE REMOVED)



INDEX OF SHEETS

	NO.
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RETAINING WALL	4
GENERAL NOTES	5
CENTER LINE PLAT	6
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PLAN AND PROFILE	9-12
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STRUCTURES 20' SPAN & UNDER	22
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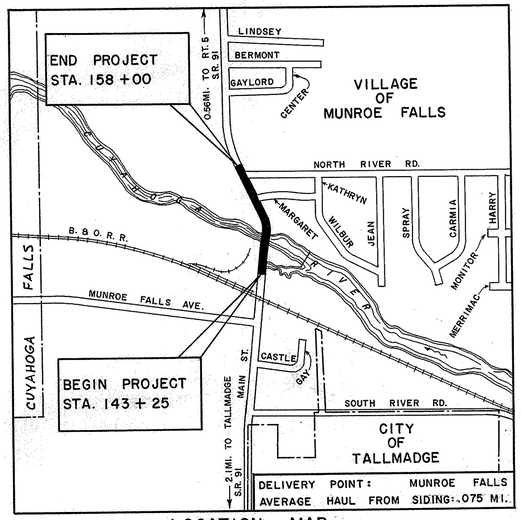
RIGHT OF WAY	30

Shts 24, 25, 27, 28 Rev 9/6/62

LINE DATA

BEGIN PROJECT & WORK	STA. 143 + 25.00
END PROJECT	STA. 158 + 00.00
NET LENGTH OF PROJECT	1475 LIN. FT.
OR	0.279 MILES
END WORK	STA 158 + 25.00
NET LENGTH OF WORK	1500 LIN FT.
OR	0.284 MILES



LOCATION MAP

0 1/2

PORTION TO BE IMPROVED
STATE ROADS
OTHER ROADS
DETOURS SHOWN THUS

SCALE

PLAN	1" = 50'
PROFILE - HORIZONTAL	1" = 50'
PROFILE - VERTICAL	1" = 5'
CROSS SECTIONS	1" = 5'

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

THE RIGHT OF WAY FOR THIS IMPROVEMENT WILL BE PROVIDED BY THE STATE OF OHIO.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING OF THE HIGHWAY TO TRAFFIC AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED Leslie B. Wolfe P. E. NO. 2033
DATE 2-19-62 SUMMIT COUNTY ENGINEER

APPROVED Earl L. Campbell
DATE 5-14-62 DIVISION DEPUTY DIRECTOR

APPROVED D. H. Berryman
DATE 6-11-62 ENGINEER OF BRIDGES

APPROVED W. J. Ivanson
DATE 6-18-62 ENGINEER OF LOCATION & DESIGN

APPROVED C. W. McCaughey
DATE 6-14-62 DEPUTY DIRECTOR OF DESIGN & CONSTRUCTION

APPROVED W. M. J. Linn
DATE 6-13-62 DEPUTY DIRECTOR OF RIGHT OF WAY

APPROVED Guy E. Meeker
DATE 6-18-62 DEPUTY DIRECTOR OF PLANNING & PROGRAMMING

APPROVED G. A. Berry
DATE 6-19-62 FIRST ASSISTANT DIRECTOR

APPROVED E. F. Preston
DATE 6-19-62 DIRECTOR OF HIGHWAYS

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS					
G-7.07	6-1-56	I-15 NO. 1	11-15-60	RW-45	9-18-47
DR-1	1-3-55	I-8 C.B. No.6	1-26-59	T-35	1-2-56
HW-C	7-15-57	I-15 NO. 2-A	8-17-60		
I-1	11-15-60	L-1	4-1-50		
I-8 CB. 2-2-A & B	3-2-59	L-3	4-1-50	AS-1-54	12-1-54
I-8 CB. 2-3 & 2-4	1-26-59	L-3-A	4-1-50	CSB-2-56(1,2,3,6 SH.)	2-2-59
I-14-G	1-22-52	R1-1	7-15-58		

SUPPLEMENTAL SPECIFICATIONS			
I-124 Rev.	3-20-61		

APR 17 1964
GROUND PHOTOLAB

FILE NO.	SUMMIT COUNTY SUM-91-7.82
	DATE OF LETTING _____ 19____
	CONTRACT NO. _____

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

SUM – 91 – 7.82

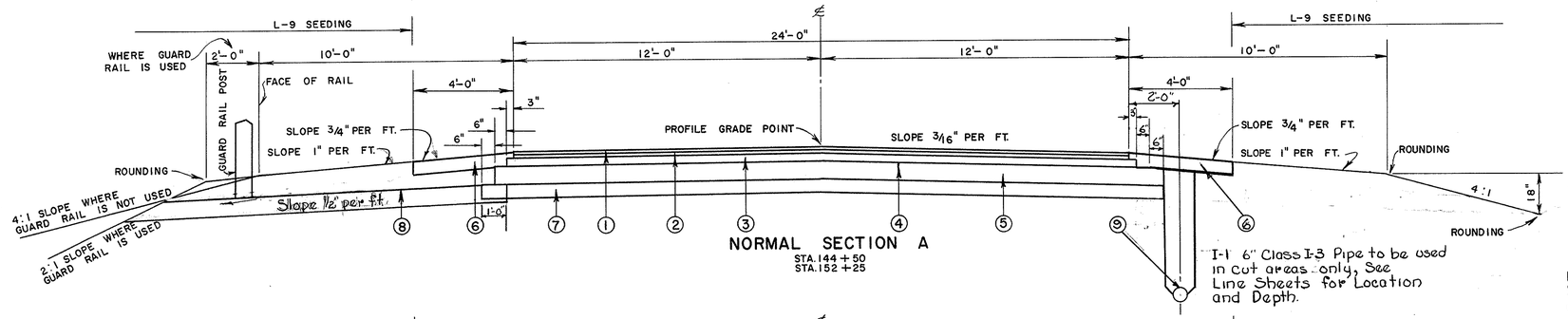
2/30

PUBLIC UTILITIES
OHIO BELL TELEPHONE CO., AKRON, OHIO
OHIO EDISON CO., AKRON, OHIO
EAST OHIO GAS CO., AKRON, OHIO
WATER DEPT., VILLAGE OF MUNROE FALLS, OHIO

TYPICAL SECTIONS
TYPE T-35 ON B-19

DESIGN SPEED 35 M.P.H.

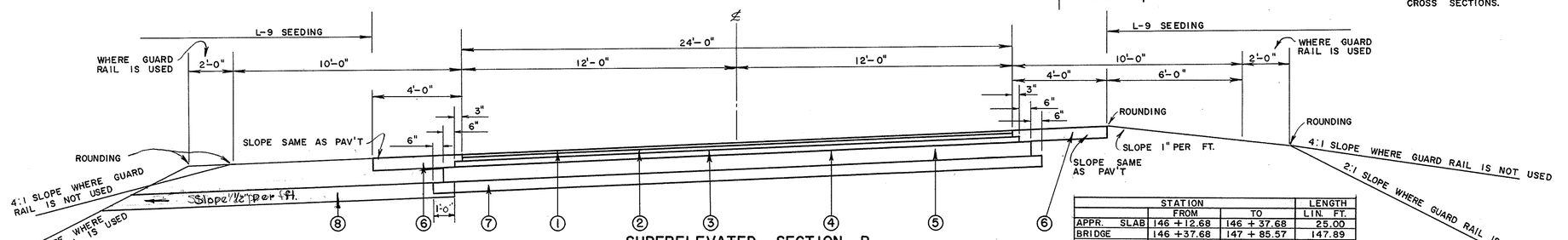
NOTE: SLOPES, DITCH DETAILS AND CHANGE OF SLOPE ROUNDING SEE STD. DRAWING RI-1



NORMAL SECTION A
STA. 144 + 50
STA. 152 + 25

I-1 6" Class I-3 Pipe to be used in cut areas only, See Line Sheets for Location and Depth.

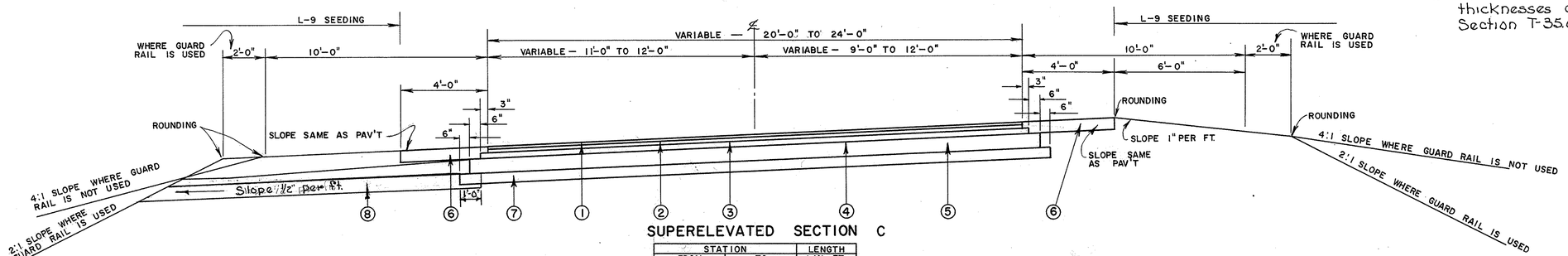
L-9 SEEDING: QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE WORK LIMITS AS SHOWN ON THE ROADWAY CROSS SECTIONS.



SUPERELEVATED SECTION B

STATION FROM	STATION TO	LENGTH LIN. FT.
145 + 50	146 + 12.68	62.68
148 + 10.57	153 + 00	689.43
	TOTAL	752.11

	STATION FROM	STATION TO	LENGTH LIN. FT.
APPR. SLAB	146 + 12.68	146 + 37.68	25.00
BRIDGE	146 + 37.68	147 + 85.57	147.89
APPR. SLAB	147 + 85.57	148 + 10.57	25.00
INTER		156 + 70	
		TOTAL	197.89



SUPERELEVATED SECTION C

STATION FROM	STATION TO	LENGTH LIN. FT.
143 + 25	145 + 50	225.00
	TOTAL	225.00

★ Thicknesses shown are "Designed" thicknesses as described in Section T-35.01 and Section B-35.01.

LEGEND

★ (1) T-35 1¼" ASPHALTIC CONCRETE SURFACE COURSE TYPE "C" (70-85)
★ (2) B-35 1¼" ASPHALTIC CONCRETE LEVELING COURSE (70-85)
★ (3) B-35 3" ASPHALTIC CONCRETE BASE COURSE (70-85)
(4) T-30 BITUMINOUS PRIME COAT: SEC. M-57, RT-2 OR RT-3 (APPLIED AT THE RATE OF 0.4 GAL PER SQ. YD.)
(5) B-19 8" AGGREGATE BASE COURSE
(6) I-18 6" STABILIZED CRUSHED AGGREGATE SHOULDERS & APPROACHES (UPPER 3" TO BE STABILIZED WITH CALCIUM CHLORIDE, SEE NOTE IN PROPOSAL)
(7) I-22 6" SUBBASE
(8) I-9 STONE UNDERDRAIN NO. 2
(9) I-1 6" Class I-3 Pipe
(10) B-35 0" Min. Asphaltic Concrete Preleveling Course (70-85)
(11) T-30 Bituminous Tack Coat; Sec. M-5.5, MS-2 or RS-1; or Sec. M-5.2, RC-1 or RC-2 applied at the rate of 0.1 Gal Per Square Yard.

REVISED 2-7-62 G.A.M.C.C.
REVISED 5-1-61 G.A.M.C.C.
REVISED 12-15-60 G.A.M.C.C.

MUNROE FALLS BRIDGE NO. 1
VILLAGE OF MUNROE FALLS
SUM-91-0788
TYPICAL SECTIONS

SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

DRAWN BY G. A. M.C.C.	SCALE 3/8" = 1'-0"
SUBMITTED BY G. A. M.C.C. CHESNEY (DESIGNING ENGINEER)	DATE NOV. 1961
APPROVED BY (COUNTY ENGINEER)	FIELD BOOK 147-833
	TRACED BY S. L. UNDERHILL

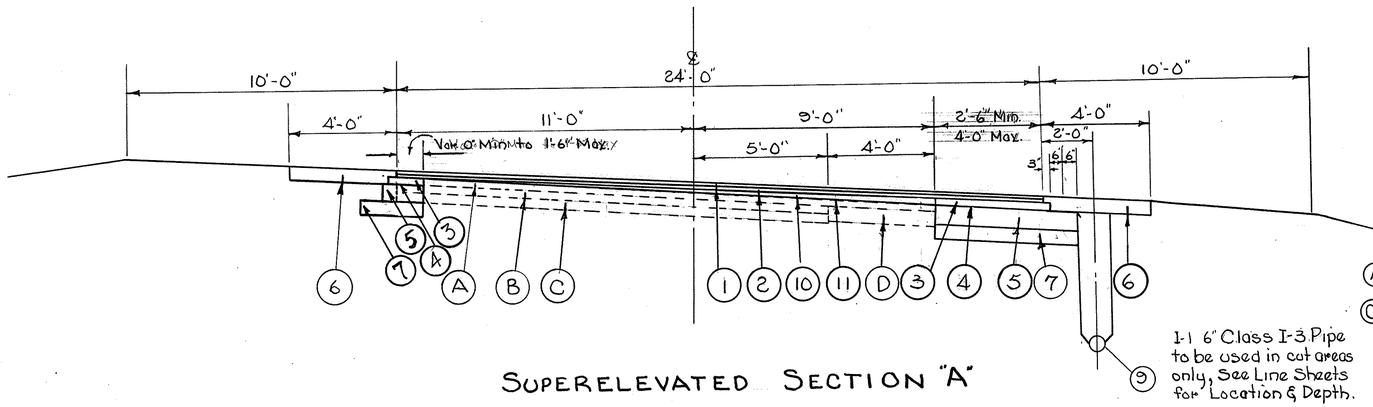
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

2-A
30

SUM-91-7.82

TYPICAL SECTIONS
TYPE T-35

SCALE 3/8" = 1'-0"



SUPERELEVATED SECTION "A"

STA. 155+00 TO STA 158+00

1-1 6" Class I-3 Pipe to be used in cut areas only, See Line Sheets for Location & Depth.

LEGEND OF EXISTING PAVEMENT

(A) Existing 2" Min. T-35 Asphaltic Conc. Surf & Level Course
(B) Existing 4" Brick (Monolithic)
(C) Existing 4" Concrete Base
(D) Existing 6" B-35 Asphaltic Concrete Base Course

NOTE: See Sheet No 2. For Legend of Proposed Pavement

NOTE: Slopes, Ditch Details and Change of Slope Rounding, See Std. Drawing R I-1.

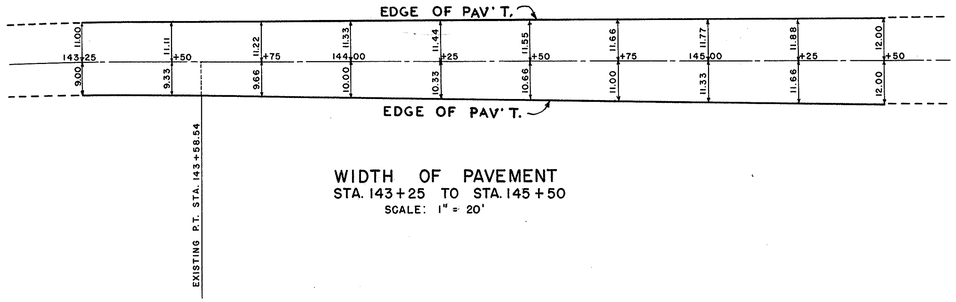
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

3 / 30

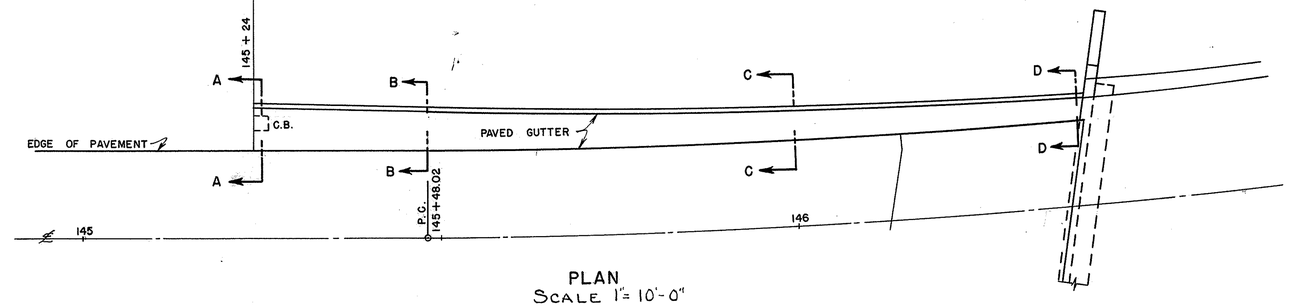
SUM-91-7.82

SCHEDULE OF SUPERELEVATION
STA. 143+00 TO STA. 158 +25

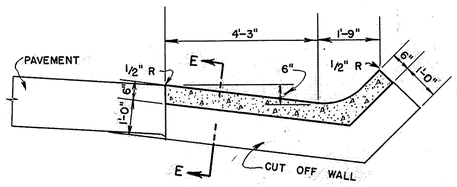
LEFT			CENTER LINE		RIGHT		
+ OR - FROM R.E. OF ℄	EL. EDGE	W	STATION	GRADE	W	EL. EDGE	+ OR - FROM L.E. OR ℄
+0.60 R.E.	1013.31	11.00	143+00	1012.40	9.00	1012.71	-0.19 ℄
+0.47 "	1012.46	11.00	+25	1012.13	9.00	1011.99	-0.14 "
+0.37 "	1011.66	11.11	+50	1011.44	9.33	1011.29	-0.15 "
+0.27 "	1010.97	11.22	+75	1010.85	9.66	1010.70	-0.15 "
+0.17 "	1010.34	11.33	144+00	1010.33	10.00	1010.17	-0.16 "
+0.07 "	1009.81	11.44	+25	1009.90	10.33	1009.74	-0.16 "
-0.18 ℄	1009.40	11.55	+50	1009.56	10.66	1009.39	-0.17 "
-0.23 "	1009.10	11.66	+75	1009.30	11.00	1009.23	-0.07 "
-0.26 "	1008.88	11.77	145+00	1009.14	11.33	1009.14	-0.00 "
-0.30 "	1008.76	11.88	+25	1009.06	11.66	1009.17	+0.11 ℄
-0.33 "	1008.74	12.00	+50	1009.07	12.00	1009.29	+0.22 "
-0.38 "	1008.81	12.00	+75	1009.16	12.00	1009.48	+0.32 "
-0.42 "	1008.95	12.00	146+00	1009.35	12.00	1009.72	+0.42 "
-0.42 "	1009.04	12.00	+12.68	1009.46	12.00	1009.88	+0.42 "
-0.42 "	1009.15	12.00	+25	1009.57	12.00	1009.99	+0.42 "
-0.42 "	1009.27	12.00	+37.68	1009.69	12.00	1010.11	+0.42 "
-0.52 "	1009.28	15.00	+50	1009.80	15.00	1010.32	+0.52 "
-0.52 "	1009.50	15.00	+75	1010.02	15.00	1010.54	+0.52 "
-0.52 "	1009.73	15.00	147+00	1010.25	15.00	1010.77	+0.52 "
-0.52 "	1009.95	15.00	+25	1010.47	15.00	1010.99	+0.52 "
-0.52 "	1010.18	15.00	+50	1010.70	15.00	1011.22	+0.52 "
-0.52 "	1010.40	15.00	+75	1010.92	15.00	1011.42	+0.52 "
-0.42 "	1010.60	12.00	+85.57	1011.02	12.00	1011.44	+0.42 "
-0.42 "	1010.73	12.00	148+00	1011.15	12.00	1011.57	+0.42 "
-0.42 "	1010.82	12.00	+10.57	1011.24	12.00	1011.66	+0.42 "
-0.42 "	1010.95	12.00	+25	1011.37	12.00	1011.79	+0.42 "
-0.42 "	1011.18	12.00	+50	1011.60	12.00	1012.02	+0.42 "
-0.42 "	1011.32	12.00	+66	1011.74	12.00	1012.16	+0.42 "
-0.42 "	1011.40	12.00	+75	1011.82	12.00	1012.24	+0.42 "
-0.42 "	1011.63	12.00	149+00	1012.05	12.00	1012.47	+0.42 "
-0.42 "	1011.85	12.00	+25	1012.27	12.00	1012.69	+0.42 "
-0.42 "	1012.08	12.00	+50	1012.50	12.00	1012.92	+0.42 "
-0.42 "	1012.30	12.00	+75	1012.72	12.00	1013.14	+0.42 "
-0.42 "	1012.53	12.00	150+00	1012.95	12.00	1013.37	+0.42 "
-0.42 "	1012.68	12.00	+15	1013.10	12.00	1013.52	+0.42 "
-0.42 "	1012.80	12.00	+25	1013.21	12.00	1013.63	+0.42 "
-0.42 "	1013.13	12.00	+50	1013.55	12.00	1013.97	+0.42 "
-0.42 "	1013.58	12.00	+75	1013.97	12.00	1014.35	+0.42 "
-0.38 "	1014.08	12.00	151 +00	1014.46	12.00	1014.78	+0.32 "
-0.33 "	1014.68	12.00	+25	1015.04	12.00	1015.26	+0.22 "
-0.30 "	1015.38	12.00	+50	1015.68	12.00	1015.79	+0.11 "
-0.26 "	1016.10	12.00	+75	1016.41	12.00	1016.40	+0.01 "
-0.25 "	1016.70	12.00	+94	1016.95	12.00	1016.90	-0.05 "
-0.23 "	1016.97	12.00	152 +00	1017.20	12.00	1017.11	-0.09 ℄
-0.19 ℄	1017.89	12.00	+25	1018.08	12.00	1017.89	-0.19 "
+0.10 R. E.	1018.94	12.00	+50	1019.03	12.00	1018.84	-0.19 "
+0.20 "	1020.03	12.00	+75	1020.02	12.00	1019.83	-0.19 "
+0.24 "	1020.50	12.00	+86	1020.45	12.00	1020.26	-0.19 "
+0.30 "	1021.12	12.00	153 +00	1021.01	12.00	1020.82	-0.19 "
+0.40 "	1022.21	12.00	+25	1022.00	12.00	1021.81	-0.19 "
+0.50 "	1023.30	12.00	+50	1022.99	12.00	1022.80	-0.19 "
+0.60 "	1024.39	12.00	+75	1023.98	12.00	1023.79	-0.19 "
+0.60 "	1025.38	12.00	154 +00	1024.97	12.00	1024.78	-0.19 "
+0.60 "	1026.37	12.00	+25	1025.96	12.00	1025.77	-0.19 "
+0.60 "	1027.36	12.00	+50	1026.95	12.00	1026.76	-0.19 "
+0.60 "	1028.35	12.00	+75	1027.94	12.00	1027.75	-0.19 "
+0.60 "	1028.75	12.00	+85	1028.34	12.00	1028.15	-0.19 "
+0.60 "	1029.43	12.00	155 +00	1029.02	12.00	1028.83	-0.19 "
+0.60 "	1030.42	12.00	+25	1030.01	12.00	1029.82	-0.19 "
+0.60 "	1030.46	12.00	+26	1030.05	12.00	1029.86	-0.19 "
+0.60 "	1031.41	12.00	+50	1031.00	12.00	1030.81	-0.19 "
+0.60 "	1032.40	12.00	+75	1031.99	12.00	1031.80	-0.19 "
+0.60 "	1033.39	12.00	156 +00	1032.98	12.00	1032.79	-0.19 "
+0.60 "	1033.58	12.00	+25	1032.97	12.00	1033.78	-0.19 "
+0.60 "	1034.78	12.00	+37	1034.37	12.00	1034.18	-0.19 "
+0.60 "	1035.37	12.00	+50	1034.96	12.00	1034.77	-0.19 "
+0.60 "	1035.81	12.00	+61	1035.40	12.00	1035.21	-0.19 "
+0.60 "	1036.36	12.00	+75	1035.95	12.00	1035.76	-0.19 "
+0.50 "	1037.25	12.00	157 +00	1036.94	12.00	1036.75	-0.19 "
	1038.20	12.00	+25	1038.03	12.00	1037.80	
	1039.22	12.00	+50	1039.16	12.00	1038.92	
	1040.30	12.00	+75	1040.15	12.00	1039.88	
	1041.41	12.00	158 +00	1041.00	12.00	1040.55	



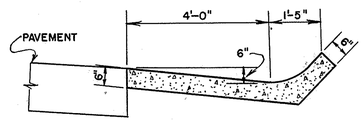
WIDTH OF PAVEMENT
STA. 143+25 TO STA. 145+50
SCALE: 1" = 20'



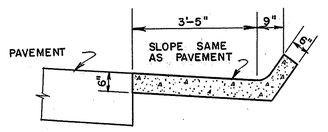
PLAN
SCALE 1"= 10'-0"



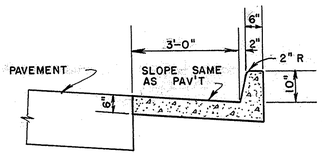
SECTION A-A



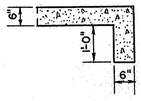
SECTION B-B



SECTION C-C



SECTION D-D



SECTION E-E

PAVED GUTTER
STA. 145+24 TO STA. 146+40
SCALE: 1"= 20'

MUNROE FALLS BRIDGE NO. 1
VILLAGE OF MUNROE FALLS
SUM-91-0788
SCHEDULE OF SUPERELEVATION
WIDTH OF PAVEMENT
PAVED GUTTER

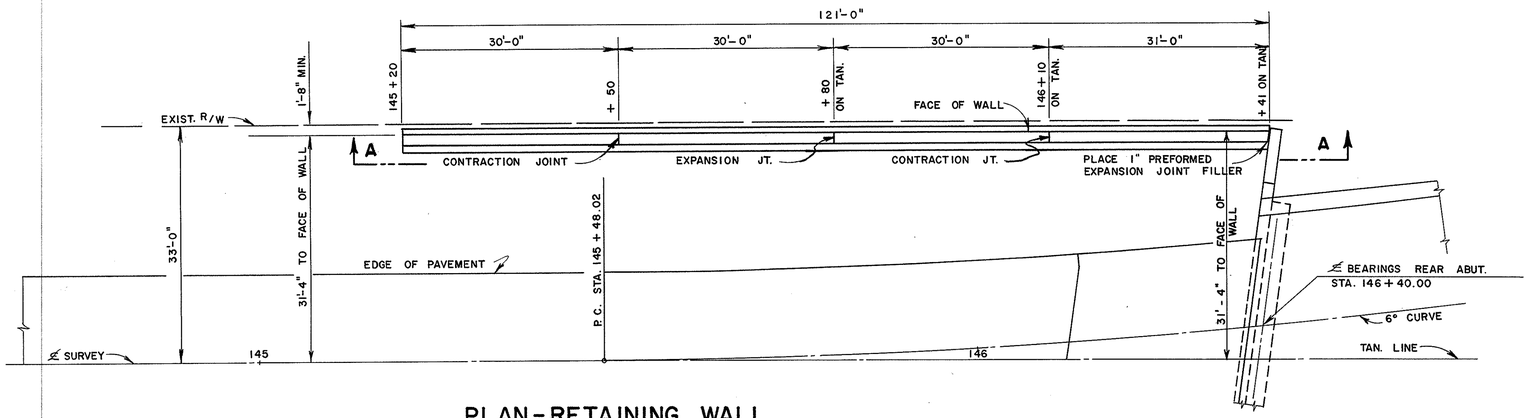
SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

DRAWN BY G. A. McC.	SCALE AS SHOWN
SUBMITTED BY G. A. McCHESNEY (DESIGNING ENGINEER)	DATE JANUARY, 1962
APPROVED BY (COUNTY ENGINEER)	FIELD BOOK
	TRACED BY S. L. UNDERHILL

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

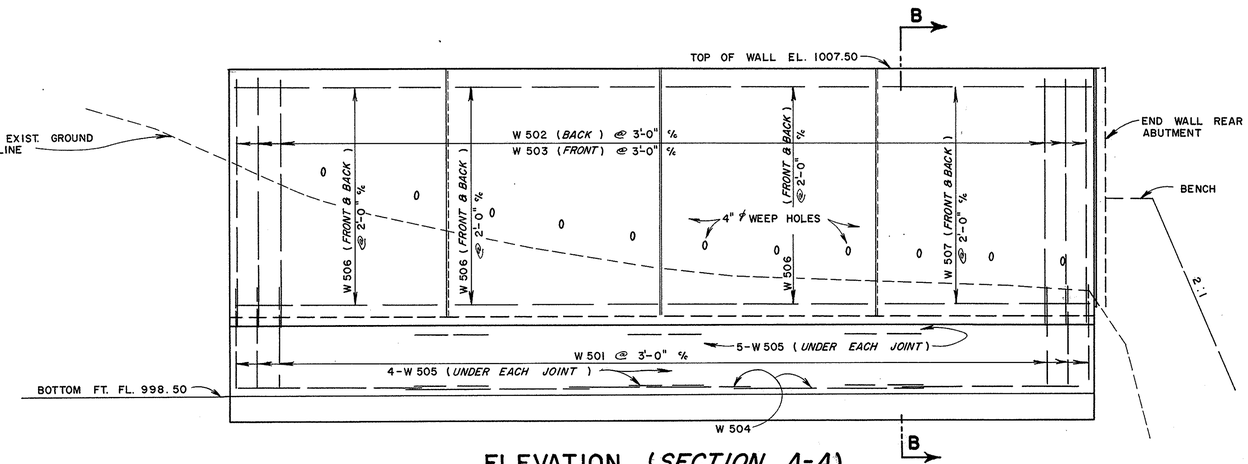
4/30

SUM-91-7.82



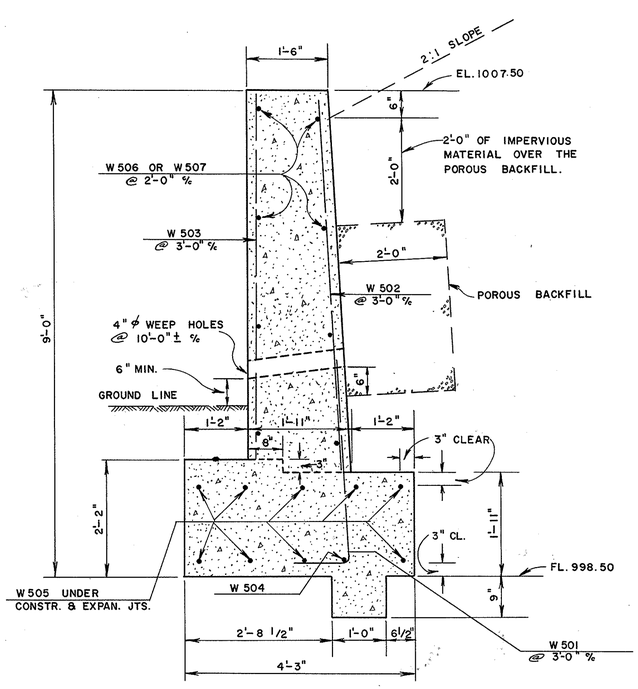
PLAN-RETAINING WALL

SCALE: 1"=10'-0"



ELEVATION (*SECTION A-A*)

SCALE: HORIZ. 1" = 10'-0"
VERT. 1" = 2'-0"



SECTION B-B

SCALE: 3/4" = 1'-0"

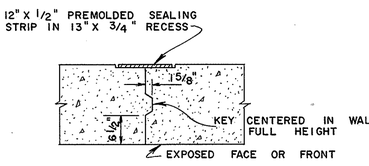
REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	SHP.	BENDING DIAGRAMS
W 501	41	4'-8"	200	BENT	3/4", 1'-0", 3'-9" ℄, W 501
W 502	41	6'-10"	292	STR.	
W 503	41	6'-1"	282	STR.	
W 504	5	24'-11"	139	STR.	
W 505	27	10'-0"	281	STR.	
W 506	24	29'-6"	738	STR.	
W 507	8	30'-6"	254	STR.	
		TOTAL	2186		

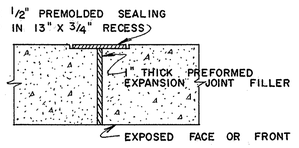
ESTIMATED QUANTITIES

ITEM	DESCRIPTION	AMOUNT	UNIT
E-2	EXCAVATION FOR STRUCTURES	85	CU. YD.
S-1	CLASS "E" CONCRETE FOOTING & WALL	96	CU. YD.
S-3	WATERPROOFING, PREMOLDED SEALING STRIP	22	LIN. FT.
S-4	REINFORCING STEEL	2186	LBS.
S-9	1" PREFORMED EXPANSION JOINT FILLER	25	SQ FT.
S-29	POROUS BACKFILL	22	CU. YD.
S-22	REMOVAL OF *PORTIONS OF EXISTING STRUCTURE* *	LUMP	

*-*Remove portions of existing retaining wall to accomodate proposed construction in this area. For location see sheets 10, 23 and cross sections.*



CONTRACTION JOINT



EXPANSION JOINT

GENERAL NOTES

REFERENCE: SHALL BE MADE TO STANDARD DRAWINGS RW-45 REVISED 9-18-47.

MUNROE FALLS BRIDGE NO.1
VILLAGE OF MUNROE FALLS
SUM-91-0788

RETAINING WALL

SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

DRAWN BY G. A. McC.	SCALE AS SHOWN
SUBMITTED BY G. A. McCHESNEY, DESIGNING ENGINEER	DATE NOVEMBER, 1961
APPROVED BY ..., COUNTY ENGINEER	FIELD BOOK
	TRACED BY S. L. UNDERHILL

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

SUM -91-7.82

5/30

GENERAL NOTES

BERMS AND SLOPES:
BERMS AND SLOPES SHALL BE FINISHED IN ACCORDANCE WITH THE STANDARD DRAWING R I-1 EXCEPT WHERE OTHERWISE SHOWN ON THE CROSS SECTIONS. ALL TRANSITIONS FROM CUT TO FILL SLOPES SHALL BE BLENDED WITH THE SURROUNDING TERRAIN, AS DIRECTED BY THE ENGINEER.

PROPERTY MARKERS:
ALL IRON PIPES OR MARKERS WITHIN THE LIMITS OF THE PROJECT SHALL BE SAVED AND ADJUSTED TO THE NEW GRADE BY THE CONTRACTOR, AS DIRECTED BY THE ENGINEER. COST OF ADJUSTING OR RESETTING MARKERS SHALL BE INCLUDED IN THE PRICE BID FOR E-1 ROADWAY EXCAVATION.

FIELD OFFICE:
THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE FOR THE EXCLUSIVE USE OF THE ENGINEERS AND INSPECTORS ASSIGNED TO THIS PROJECT. THIS OFFICE SHALL HAVE A MINIMUM OF 300 SQUARE FEET OF FLOOR SPACE AND BE SO ARRANGED, EQUIPPED AND LIGHTED THAT THE STATE EMPLOYEES WILL HAVE A CONVENIENT PLACE FOR MAKING THE NECESSARY RECORDS ETC. AND HAVE A SAFE PLACE FOR STORAGE OF EQUIPMENT, PLANS AND NECESSARY SUPPLIES. THE CONTRACTOR SHALL HAVE A TELEPHONE INSTALLED AND MAINTAINED DURING CONSTRUCTION OF THE PROJECT. WHEN WORK IS IN PROGRESS DURING COLD WEATHER THE OFFICE SHALL BE HEATED TO A TEMPERATURE OF AT LEAST (70) SEVENTY DEGREES FAHRENHEIT. THE FIELD OFFICE SHALL BE IN ACCORDANCE WITH SECTION S-0.01(b)

SUPER-ELEVATION:
SUPER ELEVATED CURVES SHALL BE BUILT WITHOUT CROWN. THE CROWN SHALL BE WORKED OUT OF THE PAVEMENT IN THE PORTION BETWEEN THE BEGINNING OF THE TRANSITION AND THE POINT WHERE THE SUPER ELEVATION EQUALS TWICE THE CROWN.

ACCESS

ACCESS TO ALL PROPERTIES ABUTTING THIS PROJECT SHALL BE PROVIDED AND MAINTAINED AT ALL TIMES BY THE CONTRACTOR.

E-1:
THE UNIT PRICE BID FOR ITEM E-1 SHALL INCLUDE THE REMOVAL OF ALL SMALL PIPE AND MISCELLANEOUS MASONRY NOT SPECIFICALLY MENTIONED SHALL BE REMOVED AND PAID FOR UNDER ITEM E-1 ROADWAY EXCAVATION.

E-8 REMOVAL AND DISPOSAL OF EXISTING PAVEMENT:
THE QUANTITY FOR THIS ITEM IS CALCULATED ON THE ORIGINAL PAVEMENT WIDTH OF 16.0'. THE BALANCE OF THE EXISTING PAVEMENT SHALL BE REMOVED AND DISPOSED OF UNDER ITEM E-1 AND THE QUANTITY FOR SAME SHALL BE INCLUDED IN THE CU. YDS. OF E-1 EXCAVATION.

L-9 SEEDING & PROTECTING, L-9 (12-12-12)COMMERCIAL FERTILIZER AND L-9 AGRICULTURAL LIMING MATERIAL:
QUANTITIES FOR THESE ITEMS ARE CALCULATED FOR THE SOIL AREAS BETWEEN THE WORK LIMITS AS SHOWN ON THE CROSS SECTIONS.
SEED MIXTURE FOR THE ENTIRE PROJECT SHALL BE AS FOLLOWS:

20%	KENTUCKY BLUEGRASS (POA PRATENSIS)
45%	KENTUCKY 31 FESCUE (FESTUCA ELATIOR, VAR. KY. 31) OR ALTA FESCUE (FESTUCA ELATIOR, VAR. ARUNDINACEA)
20%	CREEPING RED FESCUE (FESTUCA RUBRA)
10%	RED TOP (AGROSTIS ALBA)
5%	ALSIKE CLOVER (TRIFOLIUM HYBRIDUM)

MAIL BOXES:
THE PROTECTING, MOVING, ADJUSTING, ETC. OF ALL MAIL BOXES TO SECURE SATISFACTORY DELIVERY OF UNITED STATES MAIL SHALL BE CONSIDERED A PART OF ITEM G-7.09 "PRESERVATION AND RESTORATION OF PROPERTY."

I-15 GUARD RAIL REMOVED AND STORED:
ONLY RAIL ELEMENTS AND INCIDENTAL HARDWARE SHALL BE STORED UNDER THIS ITEM. THE POSTS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY HIM.

I-9 STONE UNDERDRAIN NO. 2:

STONE UNDERDRAINS SHALL BE PLACED AT 50 FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS, AND AT 25 FOOT INTERVALS ON THE LOW SIDE OF SUPERELEVATED SECTIONS; EXCEPT WHERE PIPE UNDERDRAINS HAVE BEEN PROVIDED.

CARE SHALL BE TAKEN THAT THE OUTLET OF THE UNDERDRAIN IS NOT OBSTRUCTED IN THE FINISHING AND SEEDING OPERATIONS. AN ESTIMATED QUANTITY OF I-9 STONE UNDERDRAINS OF 100 LIN. FT. IS PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER.

TREE AND STUMP REMOVAL

ALL TREES AND STUMPS WITHIN THE CONSTRUCTION LIMITS, WHICH ARE 12" OR MORE AS MEASURED PER SEC. E-9.01 SHALL BE PAID FOR UNDER ITEM E-9 (LUMP): IF MARKED FOR REMOVAL BY THE ENGINEER. THIS NUMBER MAY VARY FROM THE TREES SO MARKED ON THE PLAN. SEE SHEET NO. 8 FOR ESTIMATED QUANTITY.

THIS ESTIMATE IS APPROXIMATE, AND THE STATE OF OHIO RESERVES THE RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES OR STUMPS OUTSIDE OF THE LIMITS OF CONSTRUCTION, BUT WITHIN THE RIGHT OF WAY AND/OR EASEMENT LINES. PAYMENT FOR REMOVAL OF THESE ADDITIONAL TREES OR STUMPS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM E-9 REMOVAL OF TREES AND STUMPS.

TRENCH ROLLER

IN NARROW BASE WIDENING AREA INACCESSIBLE TO THE STANDARD WIDTH ROLLERS THE NECESSARY COMPACTION SHALL BE OBTAINED WITH A ROLLER MEETING REQUIREMENTS OF SEC. C.E.-1.08.

UTILITIES

THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS HAVE BEEN OBTAINED BY DILIGENT FIELD CHECKS AND SEARCH OF AVAILABLE RECORDS. IT IS BELIEVED THAT THEY ARE ESSENTIALLY CORRECT, BUT THE STATE OF OHIO MAKES NO GUARANTEE AS TO THEIR ACCURACY OR COMPLETENESS.

ANY AND ALL WORK REQUIRED FOR REMOVING, RELOCATING AND CONSTRUCTING OF NEW FACILITIES FOR PRIVATE OR PUBLIC UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THE RESPECTIVE OWNERS UNLESS OTHERWISE NOTED ON THESE PLANS.

DRIVES

DRIVEWAYS SHALL BE LOCATED AS SHOWN ON THE PLANS. FIELD DRIVES SHALL BE PAVED WITH SIX INCHES OF B-19 MATERIAL. RESIDENTIAL DRIVES AND MAIL BOX APPROACHES SHALL BE PAVED WITH FIVE (5) INCHES OF B-19 AND TWO INCHES*OF T-35 SURFACE. BUSINESS DRIVES SHALL BE PAVED WITH SEVEN (7) INCHES OF B-19 AND TWO INCHES*OF T-35 SURFACE. QUANTITIES ARE AS ESTIMATED ON THE PLANS.

*(2 ONE-INCH COURSES)

ROAD NAME SIGNS

ALL STREET NAME SIGNS THAT WILL BE DISTURBED BY THE CONSTRUCTION SHALL CAREFULLY BE REMOVED AND STORED BY THE CONTRACTOR FOR DISPOSAL BY SUMMIT COUNTY OR BY VILLAGE OF MUNROE FALLS. PAYMENT FOR THIS OPERATION SHALL BE INCLUDED IN THE UNIT PRICE BID FOR E-1 ROADWAY EXCAVATION.

TRAFFIC

TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR'S ATTENTION IS CALLED TO SEC. G-7.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT WHEN, IN THE OPINION OF THE ENGINEER, ONE-WAY TRAFFIC IS NECESSARY TO PERFORM A PARTICULAR PORTION OF THE WORK. ONLY THEN WILL ONE-WAY TRAFFIC BE PERMITTED, AND IT SHALL BE RESTRICTED BOTH IN LENGTH AND TIME OF OPERATION TO THAT ABSOLUTELY NECESSARY TO PERFORM THIS WORK. ONE-WAY TRAFFIC WILL ALSO BE PERMITTED IN CONSISTENCE WITH THE SPECIFICATIONS REQUIREMENTS FOR PROTECTION OF WEARING COURSES. AN ESTIMATED QUANTITY OF 750 CU. YDS. OF T-10 AND 135 TONS OF M-10 IS CARRIED TO THE GENERAL SUMMARY TO MAINTAIN TRAFFIC WHERE TEMPORARY RUN-AROUND IS NOT PROVIDED.

REMOVAL OF EXISTING HOUSE DRAINS

THE REMOVAL OF ALL EXISTING HOUSE CONNECTIONS, WHICH INCLUDES SANITARY, YARD, ROOF OR SIMILAR PIPE DRAINS WITHIN THE ROADWAY CONSTRUCTION LIMITS, SHALL BE CLASSIFIED AND PAID FOR AS ITEM E-1 ROADWAY EXCAVATION, UNLESS OTHERWISE ITEMIZED IN THE PLANS. ALL EXISTING ROOF DRAINS WHICH ARE DISTURBED WITHIN THE WORK LIMITS SHALL BE REPLACED AND OUTLETTED AT THE DIRECTION OF THE ENGINEER. 100 LIN. FT. OF 4" CLASS T-3 PIPE IS CARRIED ON THE RECAP SHEET FOR THIS PURPOSE.

PAVEMENT EDGE ELEVATIONS

PROPOSED EDGE OF PAVEMENT ELEVATIONS ON INTERSECTIONS MAY BE REVISED BY THE ENGINEER DURING CONSTRUCTION, TO FACILITATE DRAINAGE AND/OR TO PROVIDE A SMOOTH TRANSITION BETWEEN PROPOSED PAVEMENT AND EXISTING PAVEMENT.

0" MINIMUM PRE-LEVELING COURSE

Quantities of 0" Minimum Asphaltic Concrete Pre-leveling Course materials have been provided herein. This material is to be used on all salvage sections, as directed by the Engineer. This Course shall be completed prior to any Base Widening Operation. This course shall not exceed (3") three inches in depth when compacted.

ITEM T-30 TACK COAT

Although This Item Has Been Estimated For Use On The Entire Existing Bituminous Pavement Area To Be Resurfaced, It Shall Be Used Only On Dry Or Checked Pavement Areas Where Specifically Directed By The Engineer.
Pay Quantities For This Item Shall Be Determined By Final Measurement.

TRENCH FOR WIDENING

Trench Excavation For Base Widening Shall Be Performed Only On One Side Of The Pavement At A Time. The Open Trench Shall Be Adequately Maintained And Protected With Temporary Guide Markers Or Barricades At All Times. Placement Of Proposed Subbase And Base Material up To A Level 3 Inches Below The Existing Pavement Edge Shall Follow As Closely As Possible Behind The Excavation Operations. The Length Of Widening Trench Which Is Open At Any One Time Shall Be Held To A Minimum And Shall At All Times Be Subject To Approval Of The Engineer.

GENERAL NOTES

SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

DRAWN BY F. P. BERDYCK	SCALE
SUBMITTED BY G. A. MCCHESNEY (DESIGNING ENGINEER)	DATE 2-15-62
APPROVED BY (COUNTY ENGINEER)	FIELD BOOK
	TRACED BY

This Plat supersedes
Plat Recorded Vol 62, Pg 16-17, 6/8/62

Re Recording
6-5-62 TNN
OK Revd
Re-Record Vol 62 Pg 16+17

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

6/30

SUM-91-7.82

D.H. FD. ℄ SURVEY
57.90'
66.80'
HO.
TOP OF TOP CONC. BLOCK S.W. COR. HOUSE FOUND.
BOTTOM OF BOTTOM CONC. BLOCK N.W. COR. HO. FOUND.
P.I. STA. 142 + 57.56

VILLAGE OF MONROE FALLS
STOW TOWNSHIP
SUMMIT COUNTY

LOT 6
RANGE 10W
TWP. 3N

P.I. STA. 135 +95.96 Δ = 0° 01' LT.
℄ MUNROE FALLS RD.
D.H. FD.
136 137 138 139 140 141 142 143 144
33'
I.P.
B.&O. R.R.
N. 5° 46' 30" E. EXIST. & SURVEY ℄
BEGIN PROJECT STA. 143 + 25.00
N. 9° 49' 00" E. EXIST ℄
N. 9° 49' 00" E. ℄ SURVEY
90°
STA. 145 + 00
MATCH LINE
LOT 6
EXIST. STA. 141 + 56.46
EXIST. STA. 143 + 58.54

EXIST. CURVE DATA
P.I. STA. 142 + 57.56
Δ = 4° 02' 30" RT.
D = 2°
T = 101.10'
E = 1.80'
L = 202.08
R = 2864.79

UPPER 6" TO BE FORMED
2" BELOW GROUND LEVEL
16-d NAIL (*COMMON*) PLACED AT DIRECTION OF ENGINEER.
36"
CLASS "C" CONCRETE
NOTE: MONUMENTS TO BE FURNISHED AND SET BY THE CONTRACTOR.
8" MIN.
8 MIN.
SECTION
PLAN

DETAIL OF CENTERLINE REFERENCE MONUMENTS
SCALE: ½" = 1'-0"

I HEREBY CERTIFY THIS PLAT TO BE CORRECT.
G.A. Mc CHESNEY
REG. LAND SURVEYOR NO. 2455

CERTIFICATE OF APPROVAL.
SIGNED BY Earl L. Campbell
DIVISION ENGINEER

NOTE:
This Centerline Plat supersedes the Centerline Plat recorded in Vol. 62 Pages 16 & 17 of the Summit County Record of Plats and is re-recorded because the reference monuments previously shown, have been removed.

TR. SPK. N.E. SIDE POLE Nº 713
PK. NAIL
54.12'
℄ SURVEY
63.90'
TR. SPK. N.W. SIDE POLE Nº 62286
P.T.
P.T. STA. 157 + 35.55

MATCH LINE STA. 145 + 00
P.C. STA. 145 + 48.02
N. 9° 49' 00" E. EXIST. ℄ SURVEY
146 147 148 149 150 151
RIVER
CUYAHOGA
CHANNEL CROSS SECT. BASE LINE
TR. SPK.

LOT 6

SURVEY CURVE DATA
P.I. STA. 148 + 56.79
Δ = 35° 50' LT.
D = 6°
T = 308.77'
E = 48.67
L = 597.22
R = 954.93

P.T. STA. 151 + 45.24
N. 27° 55' 14" W. EXIST.
15.31'
90°
N. 26° 01' 00" W. SURVEY ℄
EXIST. P.I. STA. 152 + 97.32
D.H. FD.
N. 20° 07' 14" W. EXIST. ℄
152 153 154 155 156 157 158 159
P.K. NAIL
SURVEY ℄
N. 17° 09' 30" W. SURVEY ℄
N. 16° 41' 29" W. EXIST. ℄
P.C. STA. 156 + 92.64

P.I. STA. 155 + 14.54

TR. SPK. S. SIDE POLE Nº 74
PK. NAIL
58.24'
℄ SURVEY
48.06'
T.R. SPK. N. SIDE 24" TREE

SURVEY CURVE DATA
P.I. STA. 155 + 14.54
Δ = 8° 50' 00" RT.
D = 2°
T = 221.90'
E = 8.57'
L = 442.91
R = 2864.79'

VILLAGE OF MUNROE FALLS
STOW TOWNSHIP
SUMMIT COUNTY
RANGE 10W
TWP. 3N
LOT 5
LOT 6
LOT LINE
LOT 15
LOT 16
363.10'
LOT LINE
N. 0° 38' 31" E.
N. 89° 28' 14" W.
133.26'
STA. 156 + 70.47
107° 41' 16"
℄ N. RIVER RD.
LOT LINE
S. 69° 28' 14" E.
STA. 156 + 70.47
P.T. STA. 157 + 35.55
STA. 158 + 00 BACK
STA. 158 + 14.80 AHEAD
END PROJECT STA. 158 + 00

280477

RECEIVED FOR RECORD
June 1, 1962
At 3:52 o'clock P.M.
Recorded JUNE 8 1962
Vol. 62 Page 42-43
Roy A. Ruff
Recorder
Summit County, Ohio
88.79

TRANSFER NOT NECESSARY
JUN 1 - 1962
C. L. Bower, County Auditor

EXIST. CURVE DATA
P.I. STA. 148 + 56.79
Δ = 37° 44' 14" LT
D = 23°
T = 85.14'
E = 14.15'
L = 164.07'

SURVEY ℄
SURVEY ℄
TR. SPK. SET
74.45'
76.78'
HO.
S.E. COR. WEATHER STRIP
N.W. COR. TILE FOUND.
SURVEY P.I. STA. 148 + 56.79

LOT 6

EXIST. CURVE DATA
P.I. STA. 152 + 97.32
Δ = 7° 48' RT.
D = 3°
T = 130.20'
E = 4.43
L = 260.00

45.27'
D.H. FD.
SPK. IN POLE Nº ST. 709
EXIST. ℄
15.31'
90°
SURVEY ℄
84.69'
P.C. 152 + 92.64
SPK. IN POLE Nº E 367
EXIST. P.I. STA. 152 + 97.32

LOT 16

EXIST. CURVE DATA
P.I. STA. 156 + 65.47
Δ = 3° 29' RT.
D = 3°
T = 58.09
E = 0.90
L = 116.11

HO.
64.66'
EXIST. ℄
5.0'
EXIST. ℄
84.11'
LOT LINE
℄ & RD.
TR. SPK. N. SIDE 24" TREE
EXIST. P.I. STA. 156 + 65.47

MONUMENT ASSEMBLIES WILL BE SET ON CENTERLINE AT THE FOLLOWING STA.

P.T. STA. 143 + 58.54	P.C. STA. 156 + 92.64
P.C. STA. 145 + 48.02	P.I. STA. 155 + 14.54
P.T. STA. 151 + 45.24	P.T. STA. 157 + 35.55

REVISED 4-25-62 RFD

CENTERLINE PLAT

SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

DRAWN BY G.A. Mc C	SCALE 1" = 50'
SUBMITTED BY G.A. Mc CHESNEY (DESIGNING ENGINEER)	DATE NOV. 3, 1961
APPROVED BY (COUNTY ENGINEER)	FIELD BOOK 147 - 833
	TRACED BY R.A.F.

GENERAL SUMMARY

ITEM	QUANTITY	UNIT	DESCRIPTION
			ROADWAY
E-1	3054	SQ. YDS.	COMPACTED SUBGRADE
E-1	3116	CU. YDS.	ROADWAY EXCAVATION, METHOD "A", AS PER PLAN
E-1	4703	CU. YDS.	EMBANKMENT, METHOD "A"
E-2	85	CU. YDS.	EXCAVATION FOR STRUCTURE
E-8	1850	SQ. YDS.	REMOVAL AND DISPOSAL OF EXISTING PAVEMENT
E-8	97	LIN. FT.	REMOVAL AND DISPOSAL OF EXISTING CURB
E-9	LUMP	LUMP SUM	REMOVAL OF TREES AND STUMPS
E-11	33	M-GALS.	WATER
E-12	661	LIN. FT.	PIPE REMOVED, 15" AND UNDER
E-12	523	LIN. FT.	PIPE REMOVED, OVER 15"
I-8	6	EACH	STANDARD MONUMENT ASSEMBLIES
I-13	60	LIN. FT	Concrete Steps
I-15	516.72	LIN. FT.	GUARD RAIL, STEEL BEAM STANDARD TYPE (DEEP)
I-15	238	LIN. FT.	GUARD RAIL, REMOVED AND STORED, AS PER PLAN
I-15	182	LIN. FT.	GUARD RAIL, REMOVED AND DISPOSED OF
I-18	232	CU. YDS.	STABILIZED CRUSHED AGGREGATE SHOULDERS AND APPROACHES
L-9	6803	SQ. YDS.	SEEDING AND PROTECTING AS PER PLAN
L-9	0.61	TONS	COMMERCIAL FERTILIZER (12-12-12)
L-9	3.06	TONS	AGRICULTURAL LIMING MATERIAL
SPEC.	1382	SQ. YDS.	MIXING CALCIUM CHLORIDE AND AGGREGATE
M-10	16.46	TONS	FURNISHING AND APPLYING CALCIUM CHLORIDE
T-10	750	CU. YDS.	TRAFFIC COMPACTED SURFACE COURSE FOR MAINTAINING TRAFFIC
S-1	96	CU. YDS.	CONCRETE FOR STRUCTURES, CLASS E
S-3	22	LIN. FT.	WATERPROOFING, REMOLDED SEALING STRIP
S-4	2186	LBS.	REINFORCING STEEL
S-9	25	SQ. FT.	1" PRE-FORMED EXPANSION JOINT FILLER
S-29	22	CU. YDS.	POROUS BACKFILL
			DRAINAGE
I-1	115	LIN. FT.	12" PIPE CLASS A-1 SEC. M-6.6 (a) OR SEC. M-6.8 (b)
I-1	389	LIN. FT.	12" PIPE CLASS B-1
I-1	240	LIN. FT.	15" PIPE CLASS B-1
I-1	205	LIN. FT.	18" PIPE CLASS B-1
I-1	68	LIN. FT.	30" PIPE CLASS B-1
I-1	100	LIN. FT.	4" PIPE CLASS 1-3
I-1	1555	LIN. FT.	6" PIPE CLASS 1-3
I-1	40	LIN. FT.	6" PIPE CLASS F-1
I-1	30	LIN. FT.	8" PIPE CLASS F-1
I-1	80	LIN. FT.	12" PIPE CLASS F-1
I-1	78	LIN. FT.	24" PIPE CLASS A-1
I-1	8	LIN. FT.	42" PIPE CLASS A-1 SEC. M-6.6 (a)
I-124	116	LIN. FT.	NEW 16" WATER MAIN (MECHANICAL JOINT), AS PER PLAN
I-2	11	CU. YDS.	MASONRY
I-5	2	EACH	12" PIPE SPECIALS FOR CLASS B-1
I-5	4	EACH	6" PIPE SPECIALS FOR CLASS 1-3
I-8	7	EACH	STANDARD NO. 2-2A CATCH BASINS
I-8	2	EACH	STANDARD NO. 2-2B CATCH BASINS
I-8	2	EACH	NO. 2-3 CATCH BASINS, MODIFIED AS PER PLAN
I-8	1	EACH	STANDARD NO. 12-4 CATCH BASIN
I-8	1	EACH	STANDARD NO. 6 CATCH BASIN
I-9	100	LIN. FT.	STONE UNDERDRAINS NO. 2
SPEC.	54	LIN. FT.	PIPE CLEANOUT
I-14	22	LIN. FT.	PAVED GUTTER, STANDARD TYPE 1
I-14	20	LIN. FT.	PAVED GUTTER, TYPE 1 MODIFIED, AS PER PLAN
I-14	116	LIN. FT.	PAVED GUTTER, TYPE 5 MODIFIED, AS PER PLAN
I-16	12	EACH	CATCH BASINS, ABANDONED
S-22	LUMP	LUMP	REMOVAL OF PORTIONS OF EXISTING STRUCTURES
S-24	LUMP	LUMP	REMOVAL OF EXISTING STRUCTURES
			PAVEMENT
B-19	643	CU. YDS.	AGGREGATE BASE COURSE
B-35	257	CU. YDS.	ASPHALTIC CONCRETE BASE COURSE (70-85)
B-35	199	CU. YDS.	ASPHALTIC CONCRETE LEVELING COURSE (70-85)
T-30	1601	GALS.	BITUMINOUS PRIME COAT: SEC. M-5.7, RT-2 OR RT-3
T-35	194	CU. YDS.	ASPHALTIC CONCRETE SURFACE COURSE, TYPE "C", (70-85)
I-7	133	SQ. YDS.	REINFORCED CONCRETE APPROACH SLABS (T=13")
I-22	598	CU. YDS.	SUBBASE
T-30	73	GALS.	Bituminous Tack Coat: Sec. M-5.5, MS-2 or RS-1; or Sec. M-5.2, RC-1 or RC-2, as per Sec. T-30.02

SEE SHEET NO. 24 FOR QUANTITIES FOR STRUCTURE OVER 20' SPAN.

GENERAL SUMMARY

SUM-91-7.82

30

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

8/30

SUM.-91-7.82

RECAPITULATION

ROADWAY

SHEET NO.	E-1 EXCAV. C.Y.	E-1 COMPACT SUBGRADE S.Y.	E-2 EXCAV. FOR STRUCT. C.Y.	E-8 REM.& DISP. EXIST. PAVT. S.Y	E-8 REM.& DISP. EXIST. CURB L.F.	E-12 REM. & DISP. PIPE 15" & UNDER L.F.	E-12 REM. & DISP. PIPE OVER 15" L.F.	I-8 MON. ASSY. EA.	I-15 GUARD RAIL REMOVE & Store L.F.	I-15 GUARD RAIL REMOVE & DISP L.F.	I-15.11 STEEL BEAM (DEEP) L.F.	I-18 STAB. CRUSH AGG. SHOULDER & APP. C.Y.	S-1 CL. E CONCRETE C.Y.	S-3 PRE. SEAL STRIP L.F.	S-4 REINF. STEEL LBS.	S-9 EXPAN. JT. FILLER SQ. FT.	S-29 POROUS BACKFILL CU.YD.	I-13 Conc. Steps L.F.	L-9 Seeding S.Y.	SHEET NO.
4			85										96	22	2186	25	22		2453	4
10	173			1000	97	350	25	2	77	182	416.72	72.8								10
11	2661			890		311	498	4	161		100.00	20.0						60	4030	11
21	282	313.0																	260	21
TOTAL		313	85	1890	97	661	523	6	238	182	516.72	92.8	96	22	2186	25	22	60	6803	TOTAL
TO CAL.		313										92.8								TO CAL.
TO SUM.	3116		85	1890	97	661	523	6	238	182	516.72		96	22	2186	25	22	60	6803	TO SUM.

DRAINAGE

SHEET NO.	I-1 CI A-1 Sec M:6.6(a) Sec M:6.8(b) 12" L.F.	I-1 PIPE CLASS F-II 12" L.F.	I-1 PIPE CL. I-3 4" L.F.	I-1 PIPE CLASS B-1 12" L.F.	15" L.F.	18" L.F.	30" L.F.	I-8 C.B. 2-2A Eo.	No 6 Ea.	No 2-2B Eo.	No 2-3 Mod. Eo.	I-14 PAVED GOTTER Type I L.F.	Type II Mod. L.F.	Type S Mod L.F.	I-16 CATCH BASIN ABAN. EA.	STRUCTURES 20' SPAN & UNDER I-124 New 16" Water Main Mech. Joint L.F.	CL. A-1 24" PIPE L.F.	I-1 CI A-1 Sec M:6.6(a) 42" L.F.	I-2 MASONRY CU. YDS.	I-8 CATCH BASIN 2-4 EA.	S-22 REM. PORT. OF EXIST. STRUCT. LUMP	SPEC. PIPE CLEAN OUT L.F.	S-24 REM. EXIST. STRUCT. LUMP	I-9 Stone Underdrains No.2 L.F.	SHEET NO.
10	55			289	25			2	1	2				116	4									10
11	60	80		100	215	205	68	5			1				7						LUMP				11
22											1	22	20		1	116	78	8	11			54	LUMP		22
4																					LUMP				4
5			1100																					100	5
TOTALS	115	80		389	240	205	68	7	1	2	2	22	20	116	12	116	78	8	11	1	LUMP	54	LUMP	100	TOTAL
TO SUM.	115	80	100	389	240	205	68	7	1	2	2	22	20	116	12	116	78	8	11	1	LUMP	54	LUMP	100	TO SUM

PAVEMENT

SHEET NO.	I-7 REINF. CONC. APP. SLAB S.Y.	B-19 AGGREGATE BASE COURSE 5" C.Y.	B-19 AGGREGATE BASE COURSE 8" C.Y.	B-35 Level Course 1 1/4" C.Y	B-35 BASE COURSE 3" C.Y.	T-30 BIT. PRIME COAT GAL.	T-35 ASPHALTIC CONC. SURFACE COURSE 1 1/4" C.Y.	T-35 ASPHALTIC CONC. SURFACE COURSE 2" C.Y.	SHEET NO.
10	133.34	18.3				52.9		17.3	10
11		114.0				328.2		45.7	11
21			77.0	10.9	27.0	129.6	10.9		21
TOTAL	133.34	132.3	77.0	10.9	27.0	511.07	10.9	63.0	TOTAL
TO CAL.		209.3		10.9	27.0	511.07	73.9		TO CAL.
TO SUM.	133								TO SUM.

DRAINAGE (CON'T.)

SHEET NO.	I-5 for Class B-1 12"x45° Wye Ea.	I-5 for Class B-1 12"x30° Bend Ea.	I-1 Cl. I-3 6" L.F.	I-1 Class F-1 6" L.F.	I-1 Class F-1 8" L.F.	I-5 for Cl. I-3 6"x45° Bend Ea.	I-5 for Cl. I-3 6"x45° Wye Ea.	SHEET NO.
	1	1	511	20	30	2		10
			1044	20		1	1	11
								21
TOTAL	1	1	1555	40	30	3	1	TOTAL
TO CAL.								TO CAL.
TO SUM.	1	1	1555	40	30	3	1	TO SUM.

CALCULATIONS

	I 1/4" T-35 SURF. COURSE	C.Y.	I 1/4" B-35 LEVEL COURSE	C.Y.	3" B-35 BASE COURSE	C.Y.	T-30 PRIME COAT	GAL.
SECTION B	752.11 X 24 X 1.25 ÷ (9X36)=	69.74	752.11 X 24 X 1.25 ÷ (9X36)=	69.74	752.11 X 24.5 X 3 ÷ (9X36) =	170.62	752.11 X 24.5 X 4 ÷ 9	818.96
SECTION C	225.00X22X 125 ÷ (9X36) =	19.10	225.00 X 22 X 1.25 ÷ (9X36) =	19.10	225.00 X 22.5 X 3 ÷ (9X36) =	46.87	225.00 X 22.5 X 0.4 ÷ 9 =	225.00
SECTION A	300.00x24x1.25 ÷ (9x36 =	27.78	300.00x24x1.25÷ (9x36) =	27.78	Estimated	12.22	Estimated	45.33
FROM RECAP		73.90		10.90		27.00		511.00
FEATHER		2.85	FEATHER	1.43				
TOTAL		193.37	TOTAL	128.95	TOTAL	256.71	TOTAL	1600.29
TO GENL. SUMMARY		194	TO GENL. SUMMARY	129	TO GENL. SUMMARY	257	TO GENL. SUMMARY	1601

	T-30 TACK COAT	GAL.	B-35.0"MIN. ASPHALTIC CONC. PRELEVEL. COURSE	C.Y.
		67.0	Estimated	70.0
	FEATHER	6.1		
		73.1		70.0
		73		70

	B-19 8" AGGR. BASE COURSE	C.Y.	I-22 6" SUBBASE	C.Y.	I-18 6"STAB. CRUSHED AGG. SHOULD	C.Y.
SECTION B	752.11 X 25.5 X 8 ÷ (9 X 36) =	473.55	752.11 X 26.5 X 6 ÷ (9 X 36) =	369.10	752.11 X 8 X 6 ÷ (9 X 36)	111.42
SECTION C	225.0 X 23.5 X 8 ÷ (9X36) =	130.55	225.0 X 24.5 X 6 ÷ (9X36) =	102.08	225.00x8X6 ÷ (9X36) =	33.34
SECTION A	Estimated	38.50	Estimated	33.33		44.44
FROM RECAP		209.30		92.80		92.80
					DEDUCT FOR DRIVES	50.00
TOTAL		642.60	TOTAL	597.31	TOTAL	232.00
TO GENL. SUMMARY		643	TO GENL. SUMMARY	598	TO GENL. SUMMARY	232

SPECIAL MIXING M-10	CALCIUM CHLORIDE & MIXING	AGG. MIXING	
I-18	232.00 CU. YDS.		
232.0 X 6 X 2.1 ÷ 2000 =	1.46 TONS	232.0 X 36 ÷ 6 =	1382 SQ. YDS.
FROM SHEET 5	115.00 TONS	TO GENL. SUMM.	1382 SQ. YDS.
TO SUMMARY	16.46 Tons		

E-1 EXCAVATION SHEET NO.	E-1	EMB.	SEEDING
10	173	3885	2453
11	2661	804	4030
21	282	10	260
TOTAL	3116	4705	6803

E-1 COMPACTED SUBGRADE	S.Y.
SEC. B. 752.11 X 24 ÷ 9	2,005.60
APPROACH SLABS	133.34
SEC. C 225.00 X 22 ÷ 9	550.00
INTERSECTION	313.00
PAVED GUTTER, TYPE S MOD. (116 x Ave 4÷9)	52.06
TOTAL TO GENL. SUMMARY	3054

E-11 WATER	M GAL.
EMBANKMENT 4703 X .005	23.52
B-19 FROM CALC. 1000X.010	6.48
I-18 FROM CALC. 232X.010	2.32
TOTAL	32.27
TO GENL. SUMMARY	33

E-9 REMOVAL OF TREES AND STUMPS SIZES	12"-18"	18"-24"	24"-30"	30"-36"
NO TREES	3	3	1	1
NO STUMPS	0	0	0	0

L-9 FERTILIZER	TONS
FERTILIZER @ 20 LBS. PER 1000 D'	
6803 X 9 X 20 ÷ (1000 X 2000)	0.61
TOTAL	0.61
TO GENL. SUMMARY	0.61

L-9 AGRICULTURAL LIMING MAT.	
AGR. LIMING MAT. @ 100 LBS. PER. 1000 D'	TONS
6803 X 9 X 100 ÷ (1000 X 2000)	3.06
TOTAL	3.06
TO GENL. SUMMARY	3.06

RECAPITULATION

CALCULATIONS

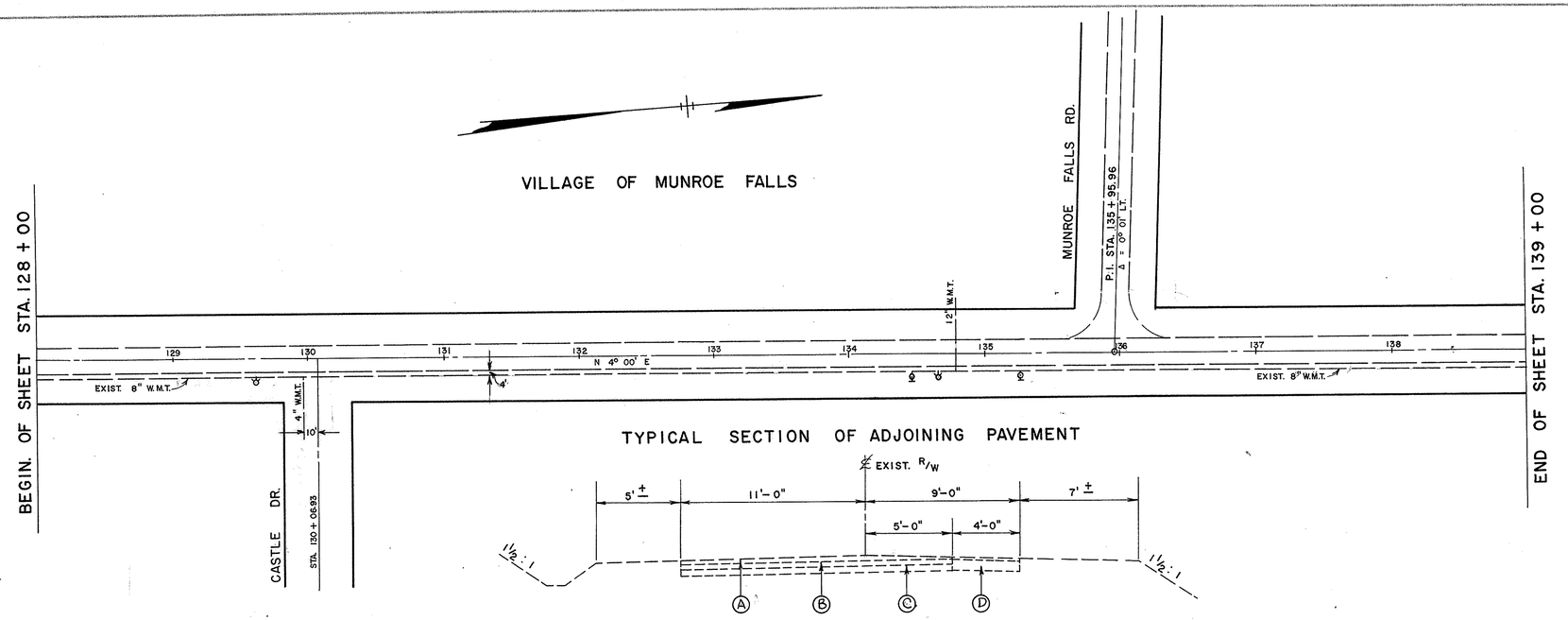
SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

DRAWN BY F. P. B.	SCALE
SUBMITTED BY G. A. MECHESNEY, DESIGNING ENGINEER	DATE 2-21-82
APPROVED BY ..., COUNTY ENGINEER	FIELD BOOK
	TRACED BY

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

9/30

SUM - 91 - 7.82



(A) EXIST. 2" MIN. T-35 ASPHALTIC CONCRETE SURFACE AND LEVELING COURSE
(D) EXIST. 6" B-35 ASPHALTIC CONCRETE BASE COURSE
(B) EXIST. 4" BRICK (MONOLITHIC)
(C) EXIST. 4" CONCRETE BASE

SCALE: 1" = 50'

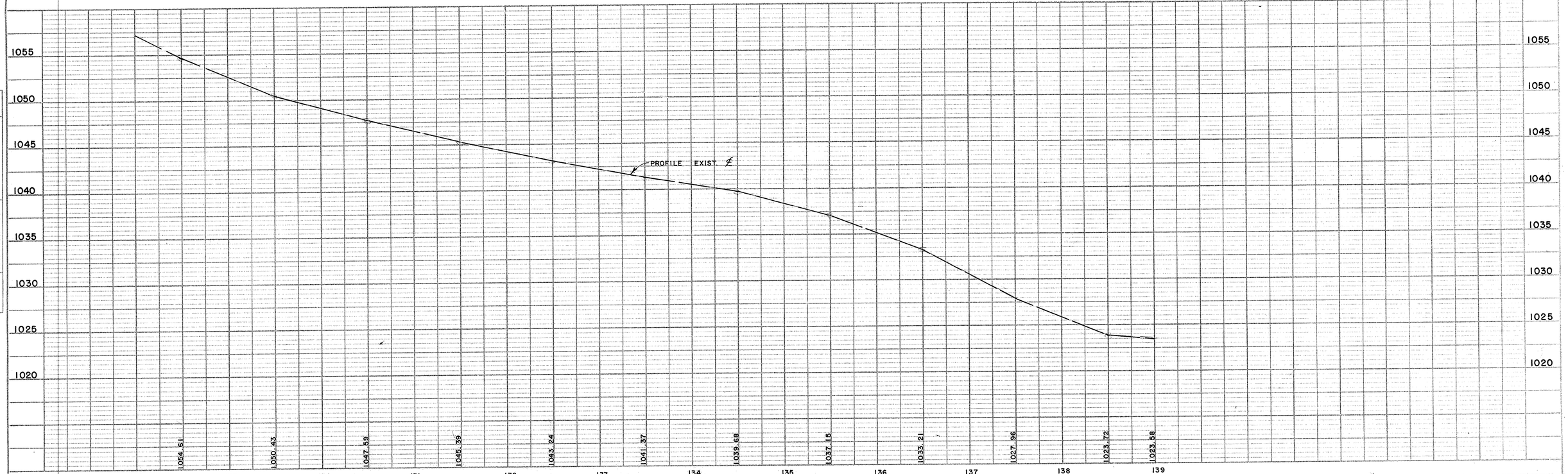


PLATE 1 PLAN - PROFILE B P R STANDARD
EUGENE DIETZGEN CO., CHICAGO - NEW YORK

LINE SHEET STA. 128+00 TO STA. 139+00

PLAN — NOTE BOOK NO. 833 — SURVEYED — PLOTTED — ALIGNMENT CHECKED — RT. OF WAY CHECKED — BY HOLSHUE UNDERHILL — DATE

PROFILE — NOTE BOOK NO. 833 — SURVEYED — PLOTTED — GRADES CHECKED — B.M. NOTED — STRUCTURE NOTATIONS CHKD — BY HOLSHUE UNDERHILL — DATE

Printed in U.S.A. On IMPERIAL Tracing Cloth

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

10/30

SUM-91-0788
PROPOSED STRUCTURE
TYPE: CONTINUOUS STEEL BEAM WITH REINF. CONCRETE DECK & SUB-STRUCTURES.
SPAN: 46'-55'-46'
ROADWAY: 30'-0" F/F OF 2'-3" SAFETY CURBS
SKEW: 18° L. FWD.
WEARING SURFACE: 1" MONOLITHIC CONC.
ALIGNMENT: 6° CURVE
DECK: SUPERELEVATED

LOAD FREQUENCY: CF 400 (57)
APPROACH SLABS: AS-1-54 (25' LONG)

SUM-91-7.82

UNDERDRAINS

STATION FROM	STATION To	SIDE	I-1 Cl. I-3 6" L.F.	I-1 Cl. F-1 6" L.F.	I-1 Cl. F-1 8" L.F.	I-5 Cl. I-3 6"x 45° Bend Ea.
143+50	146+00	Rt	246	10	10	1
143+90	146+41	Lt	231	10	10	
149+56	150+00	Lt	40		10	1
TOTALS			511	20	30	2

DRAINAGE

STATION FROM	STATION TO	SIDE	I-1 Class A-1 M-6.4 (6) 12" L.F.	I-1 Cl. B-1 12" L.F.	I-1 Cl. B-1 15" L.F.	I-5 12"x30° Bend Ea.	I-8 C.B. Ea.	I-8 C.B. Ea.	I-5 12"x45° Wye Ea.
143+40	143+80	RT. & LT	55	8		1	1	1	
143+80	145+25	LT.		144				1	
145+25	146+42	LT.		117					
149+75	150+00	RT.			25		1		
148+80	148+96	Rt.		20			1		1
TOTAL			55	289	25	1	2	2	1

DRIVES & APPROACHES

STATION	SIDE	I-18 6" C.Y.	T-35 2" C.Y.	B-19 5" C.Y.	T-30 Prime Gal.
143+78	RT.	13			
143+51	LT.	12			
144+76	RT.	14.8			
148+75	RT.	13	5.6	14.0	40.6
149+50 (M.B)	Rt.		1.7	4.3	12.3
TOTALS		52.8	7.3	18.3	52.9

STRUCTURES 20' SPAN & UNDER

MARK	STATION	TYPE	SIZE	SHT. NO.
C-1	144+53	I-124 New 16" Water Main w/Mech. Joint	16" X 116'	22

I-15 GUARD RAIL

STATION FROM	STATION To	SIDE	I-15 STEEL BEAM L.F.	REMOVE & STORE L.F.	Remove & Dispose L.F.
145+25.00	145+67.00	RT.			42
145+82.72	148+06.97	RT.	102.11		
145+82.65	148+88.95	LT.	314.61		
145+35	146+12	LT.		77	
145+62	146+12	RT.			50
147+70	148+60	RT.			50
TOTALS			416.72	77	182

* Deduction made for Bridge.

REMOVALS

STATION FROM	STATION To	SIDE	E-12 15" & UNDER L.F.	PIPE OVER 15" L.F.	I-16 C.B. ABAN EACH
143+47		RT.			1
143+47	144+12	RT.	65		
144+12		RT			1
144+12	144+25	RT.	13		
143+80	144+25	LT.	45		
144+62	145+14	LT.	52		
145+14		LT.			1
148+25	149+35	LT.	110		1
149+35	150+00	LT.	65		
149+75	150+00	RT.		25	
TOTAL			350	25	4

E-8 PAVT. & CURB REMOVAL

STATION FROM	STATION TO	REM & DISP EXIST. PAVT. S.Y.	REM & DISP EXIST. CURB L.F.
143+25	146+12	510	
147+67	150+00	490	
145+15	146+12		97
TOTAL		1000	97

I-8 MON. ASS'Y

STATION	LOCATION	MON. ASSY. EA.
143+58.54	P.T.	1
145+48.02	P.C.	1
TOTAL		2

PAVED GUTTER

STATION FROM	STATION TO	SIDE	PAVED GUTTER LIN.-FT.	DETAIL SHEET NO.
145+24	146+40	LT.	116	3
TOTAL			116	

RETAINING WALL

STATION FROM	STATION To	SIDE	SHEET NO.
145+20	146+41	LT.	4

I-7 REINF. CONC. APP. SLAB (T-13")

STATION FROM	STATION TO	LENGTH	SQ. YD.
146+12.68	146+37.68	25	66.67
147+85.57	148+10.57	25	66.67
TOTAL			133.34

NOTE: 20 C.Y. I-18 & 10 C.Y. T-35 to be used to feather from Sta. 143+80 to Sta 144+80 on Left, at the direction of the Engineer.

VILLAGE OF MUNROE FALLS

P.T. STA 143+58.54 — P.I. STA. 148+56.79

℄ Survey 2 — S side ℄ #695 — 68.05' — 38.86' — Paper Office

℄ S.R. 91 — 114.45' — 116.78' — Hse

BEGIN PROJECT STA. 143+25 SLM-7.82

BEGIN OF SHEET STA. 139+00

END OF SHEET STA 150+00

PAPER MILL

B.&O. R.R. — NORTH TRACK — 139.4 ℄ R.R. SIDE — +85 DR.

COAL & SUPPLY — WAREHOUSE — SCALES

OFFICE — WOODEN DECK — 8" C.I.P. — 65' C.I.P. — PROPOSED RETAIN. WALL LT. STA. 145+20 TO 146+41 SEE SHT. NO. 4

CONC. PITT WATER VALVE — 2-30" TREES — 2-12" TREES — 10" TREE — +72 BLACK TOP — +54 CONC. WALK — +92 ℄ DR. — +90 ℄ DR.

GATE — FENCE — 20' — 24" — 14' — 4" W.M.G. — 115' HEDGE — 6" H.P. GAS LINE — 4" R.P. GAS LINE — EXIST. PAV'T. — EXIST. 8" W.M.T.

N. 5° 46' 30" E. — 140 — 141 — 142 — 143 — 144 — 145 — 146 — 147 — 148 — 149 — 150

33' — 33' — 36" TREE — 6" TREES — 24" TREE — 30" TREE — 6" TREES — 4" CONC. BOX — 12" — 14" — 6" C.I. INLET — 12" — 24" — 30" — 18" — 24" — 36" — 30" — 24" — 18" — 12" — 6" — 4" — 2" C.I.P.

FIRE DEPT. — +84 ℄ DR. — +18 ℄ DR. — +94 ℄ DR. — +23 ℄ DR. — +47 ℄ DR. — +73 ℄ Dr. — +10 PARKING AREA — ℄ Dr. — +10

EXIST. R.R. SIGN — EXIST. R.C. STA. 141+56.46 — EXIST. P.T. STA. 143+58.54

EXIST. P.I. STA. 142+57.56
Δ = 4° 02' 30"
D = 2°
T = 101.10'
E = 1.80'
L = 202.08'
R = 2864.79'

SUPERELEVATION AT THE RATE OF 0.035' PER FT., SEE TABLE SHEET NO. 3

B.M. 1 T.S.E. SIDE 24" MAPLE 45' LT. STA. 143+38 ELEV. 1012.69

EXIST. P.C. STA. 145+48.02

P.I. STA. 148+56.79 Δ = 35° 50' 00" LT. D = 6° T = 308.77' L = 48.67' R = 597.22' R = 954.93'

SUPERELEVATION AT THE RATE OF 0.035' PER FT. SEE TABLE SHEET NO. 3

END OF APPROACH SLAB STA. 146+37.68

℄ BEARING REAR ABUT. BRGS. STA. 146+40.00

REAR ABUT. — 18.50 — 18.50 — ISLAND PIER — ℄ FWD. PIER — ℄ BEARING FWD. ABUT. BRGS. STA. 147+85.57

BEGIN OF APPROACH SLAB STA. 147+85.57

EXIST. 8" W.M. BEGIN C.I.P. — 33' — 50' — 30' — 50' — 33' — 8" W.M.

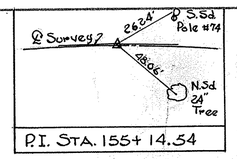
Shed Fdn. — 7.90 — 8.55 — 6.66 — 8.55 — 7.90 — Δ=33° — CH=40 — 2-30" — 16" — 12" — 18" — 24" — 30" — 36" — 42" — 48" — 54" — 60" — 66" — 72" — 78" — 84" — 90" — 96" — 102" — 108" — 114" — 120" — 126" —

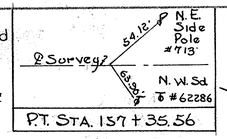
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

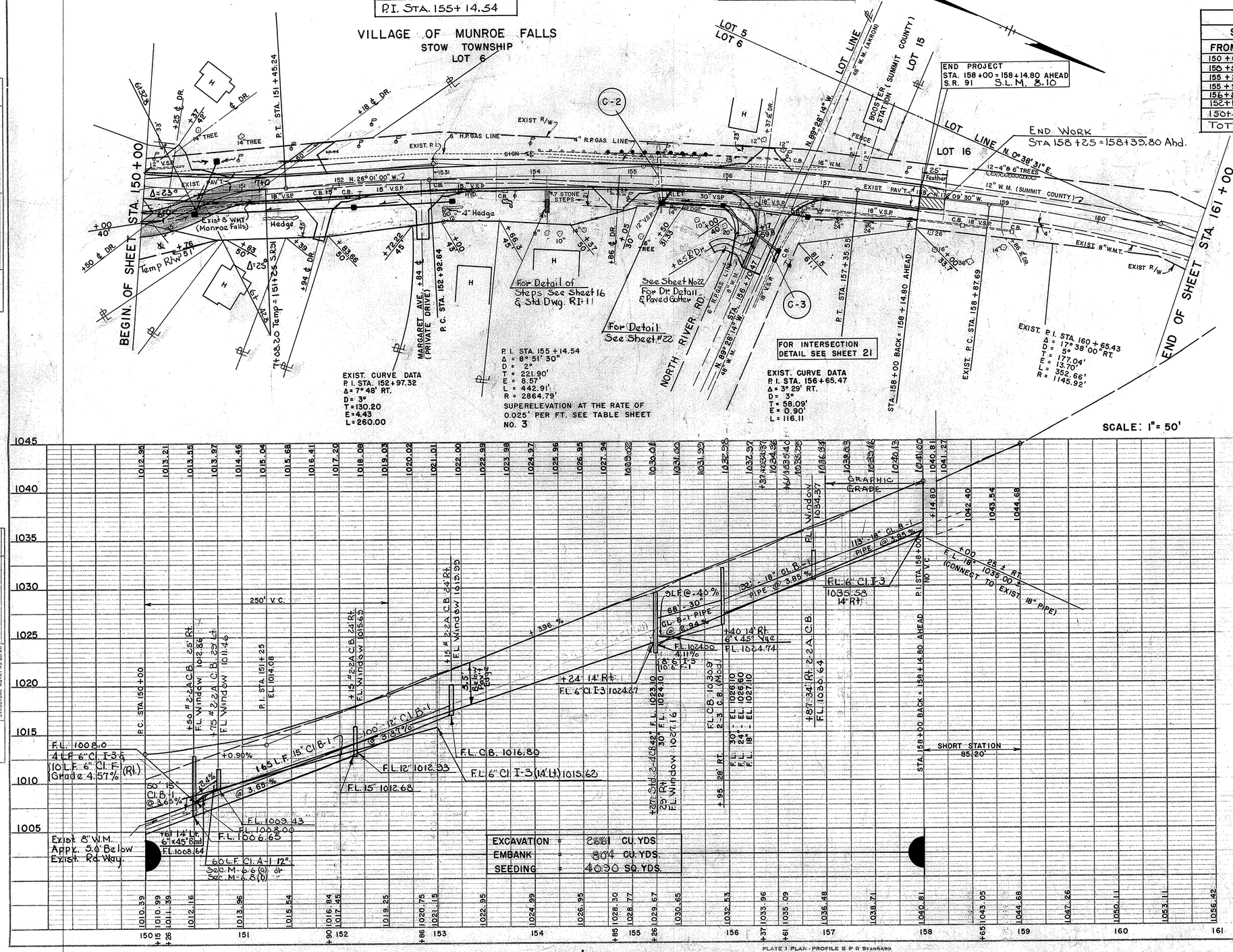
11/30

SUM - 91 - 7.82

NOTE: 20 C.Y. I-18 is carried to the Recap, to be used to feather from Sta. 156+90 to Sta. 157+80 on the left, at the direction of the Engineer







DRAINAGE									
STATION FROM	STATION TO	SIDE	I-1 PIPE CLASS A-1 12" Sec. M-6.6(a) or M-6.8(b) L.F.	I-1 PIPE CLASS B-1 18" L.F.	12" L.F.	15" L.F.	30" L.F.	I-8 CATCH BASIN 2-2-A EACH	2-3 MOD. EACH
150+00	150+50	RT.				50		1	
150+50	152+15	RT.				165		1	
155+27	155+95	RT.					68		1
155+95	156+87	RT.		92				1	
156+87	158+00	RT.		113				1	
152+15	153+15	Rt.			100			1	
150+50	150+75	Lt-Rt.	60					1	
TOTALS			60	205	100	215	68	5	1

STATION	LOC.	I-8 MON ASSY EA.
151+45.24	P.T.	1
152+92.64	P.C.	1
155+14.54	P.I.	1
157+35.55	P.T.	1
TOTAL		4

I-13 CONC. STEPS		
STATION	SIDE	Conc. Steps 4' Wide R=6" T=12" L.F.
154+13	Rt.	60
TOTAL		60

REMOVALS						
STATION FROM	STATION TO	SIDE	E-12 15" & UNDER L.F.	E-12 OVER 15" L.F.	I-16 C.B. ABAN EACH	S-22 Remove Exist. Steps Lump
150+00	150+38	LT.	38			
150+00	151+75	RT.		175	1	
150+00	150+33	RT.	33			
151+75	152+05	RT.	30		1	
152+05	152+96	RT.	91		1	
152+96	153+69	RT.	73		1	
154+77	154+93	RT.	16			
155+27	156+30	RT.		103	2	
156+30	156+35	RT.	30			
156+30	156+81	RT.		51	1	
156+60	156+81	RT.		50		
156+81	158+00	RT.		119		
154+11		Rt.				Lump
TOTALS			311	498	7	Lump

STRUCTURES 20' SPAN & UNDER				
MARK	STATION	TYPE	SIZE	SHT. NO.
C-2	155+26	PIPE CULVERT	42" X 78'	22
C-3	0+73	PIPE CULVERT	24" X 78'	22

DRIVES & APPROACHES						
STATION	SIDE	I-1, 12" CL. F-1 L.F.	T-35 2" C.Y.	B-15 5" C.Y.	T-30 Prime GAL.
150+25	LT.		6.0	14.9	42.8
150+50	RT.		5.0	12.5	36.0
151+18	LT.	50	7.0	17.5	50.4
151+94	RT.		7.0	17.4	50.0
152+84	RT.		6.2	15.4	44.4
154+86	RT.		4.3	10.8	31.0
156+37	LT.		4.2	10.5	30.1
* 0+85	RT.	30	6.0	15.0	43.5
TOTAL		80	45.7	114.0	328.2

* Stationing on N. River Rd.

I-15 GUARD RAIL				
STATION FROM	STATION TO	SIDE	I-15 STEEL BEAM L.F.	REMOVE & STORE
154+05	155+66	LT.		161
154+75	155+75	LT.	100	
TOTAL			100	161

E-8 PAVT. REMOVAL		
STATION FROM	STATION TO	REMOVAL & DISP. EXIST. PAV'T S.Y.
150+00	155+00	830
TOTAL		830

UNDERDRAINS						
STATION FROM	STATION TO	SIDE	I-1 Cl. I-3 6" L.F.	I-1 Cl. F-1 6" L.F.	I-5 for Cl I-3 6" x 45° Bend Eq.	Wye Eq.
150+00	153+00	Lt.	300			
150+50	155+24	Rt.	467	10	1	
150+27	158+00	Rt.	277	10		1
TOTALS			1044	20	1	1

PLATE 1 PLAN - PROFILE B P R STANDARD
EUGENE DIETZGEN CO., CHICAGO - NEW YORK

Printed in U.S.A. On IMPERIAL Tracing Cloth

LINE SHEET STA. 150+00 TO STA. 161+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

12/30

SUM - 91 - 7.82

VILLAGE OF MUNROE FALLS

BEGIN. OF SHEET STA. 161+00

EXIST. P.T. STA. 162+40.35

12" W.M. (SUMMIT COUNTY)

EXIST. 8" W.M.T. (MUNROE FALLS)

4"

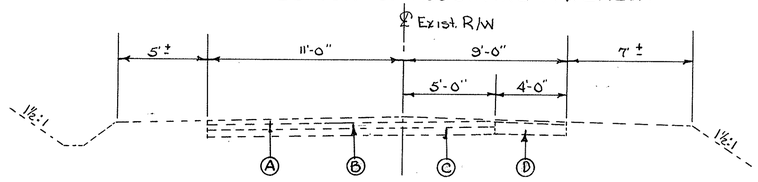
P.I. STA. 168+44.42
Δ = 0° 05' LT.

6" W.M.T.

N 0° 52' 44" W

END OF SHEET STA. 172+00

TYPICAL SECTION OF ADJOINING PAVEMENT



Ⓐ Exist. 2" Min. T-35 Asphaltic Conc. Surface & Level. Course
Ⓓ Exist 6" B-35 Asphaltic Concrete Base Course
Ⓑ Exist. 4" Brick (Monolithic)
Ⓒ Exist. 4" Concrete Base

SCALE: 1" = 50'

EXIST ℄ PROFILE

1095
1090
1085
1080
1075
1070
1065
1060
1055

1056.42 (161)
1059.87 (162)
1066.78 (163)
1073.33 (164)
1078.13 (165)
1082.15 (166)
1086.17 (167)
1090.19 (168)
1094.02 (169)
1096.85 (170)
1098.67 (171)
1099.38 (172)

PLAN
SURVEYED
PLOTTED
NOTE BOOK
ALIGNMENT CHECKED
R/W CHECKED
NO. 833

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
R/W CHECKED
STRUCTURE NOTATIONS CHECKED
NOTE BOOK
NO. 833

BY HOLSHUE UNDERHILL
DATE 4-61

Printed in U.S.A. On IMPERIAL Trading Cloth

PLATE 1 PLAN-PROFILE B P R STANDARD EUGENE DIETZGEN CO., CHICAGO - NEW YORK

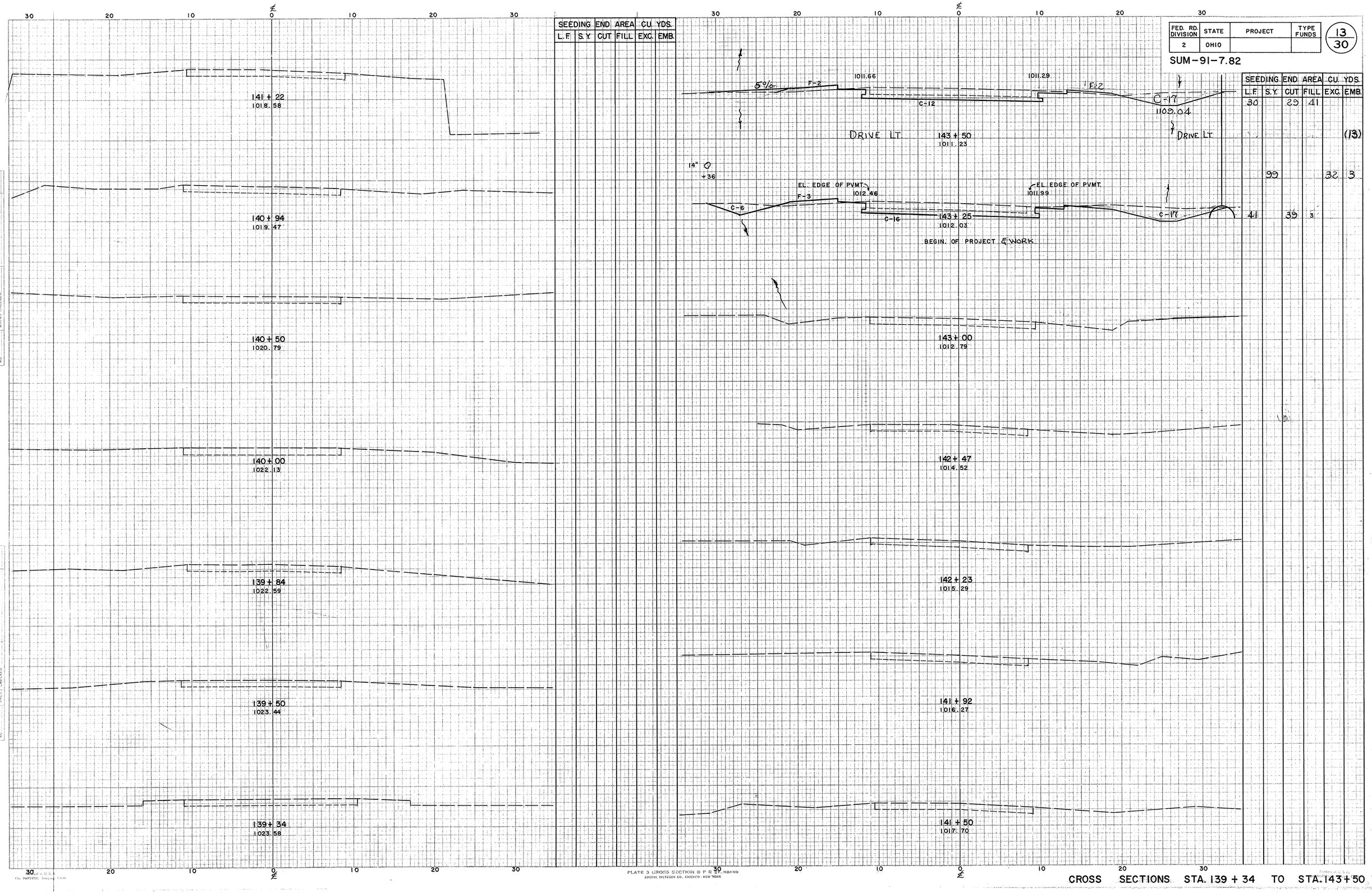
LINE SHEET STA. 161+00 TO STA. 172+00

Printed in U.S.A. On IMPERIAL Trading Cloth

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

13/30

SUM-91-7.82



SEEDING		END AREA		CU. YDS.	
L.F.	S.Y.	CUT	FILL	EXC.	EMB.
30		29	41		
					(13)
	99			32	3
41		39	3		

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

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

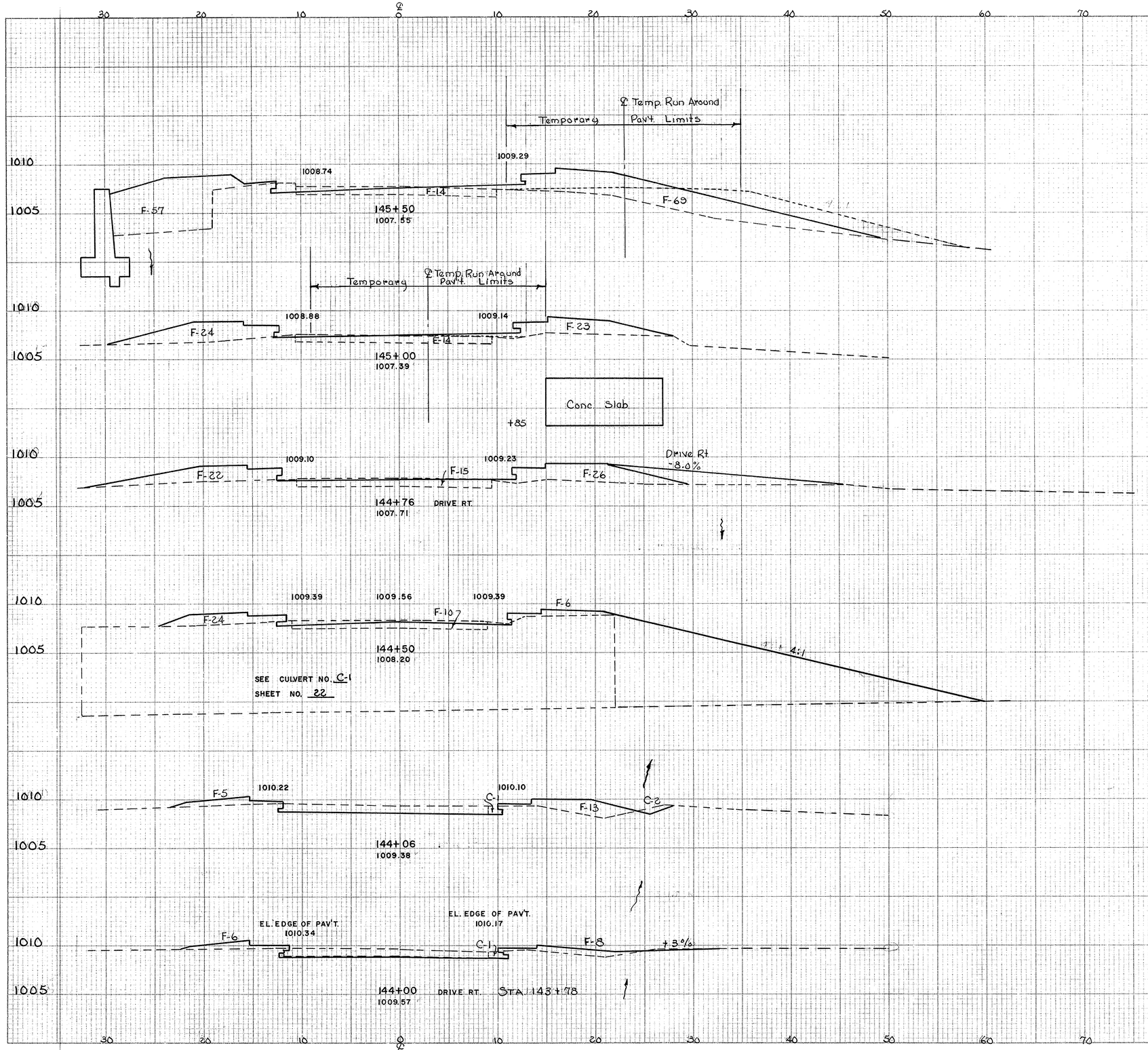
PLATE 3 CROSS SECTION B P R STANDARD
EUGENE DIETZGEN CO. CHICAGO - NEW YORK

CROSS SECTIONS STA. 139 + 34 TO STA. 143 + 50

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

13-A

SUM-91-7.82



DRIVE RT.

BACKFILLING EXIST. CULVERT

	CU. YDS.	CU. YDS.	SQ. YDS.
EXCAVATION	173		
EMBANKMENT		3889	
SEEDING			2453

DRIVE RT.

STA. 143+50

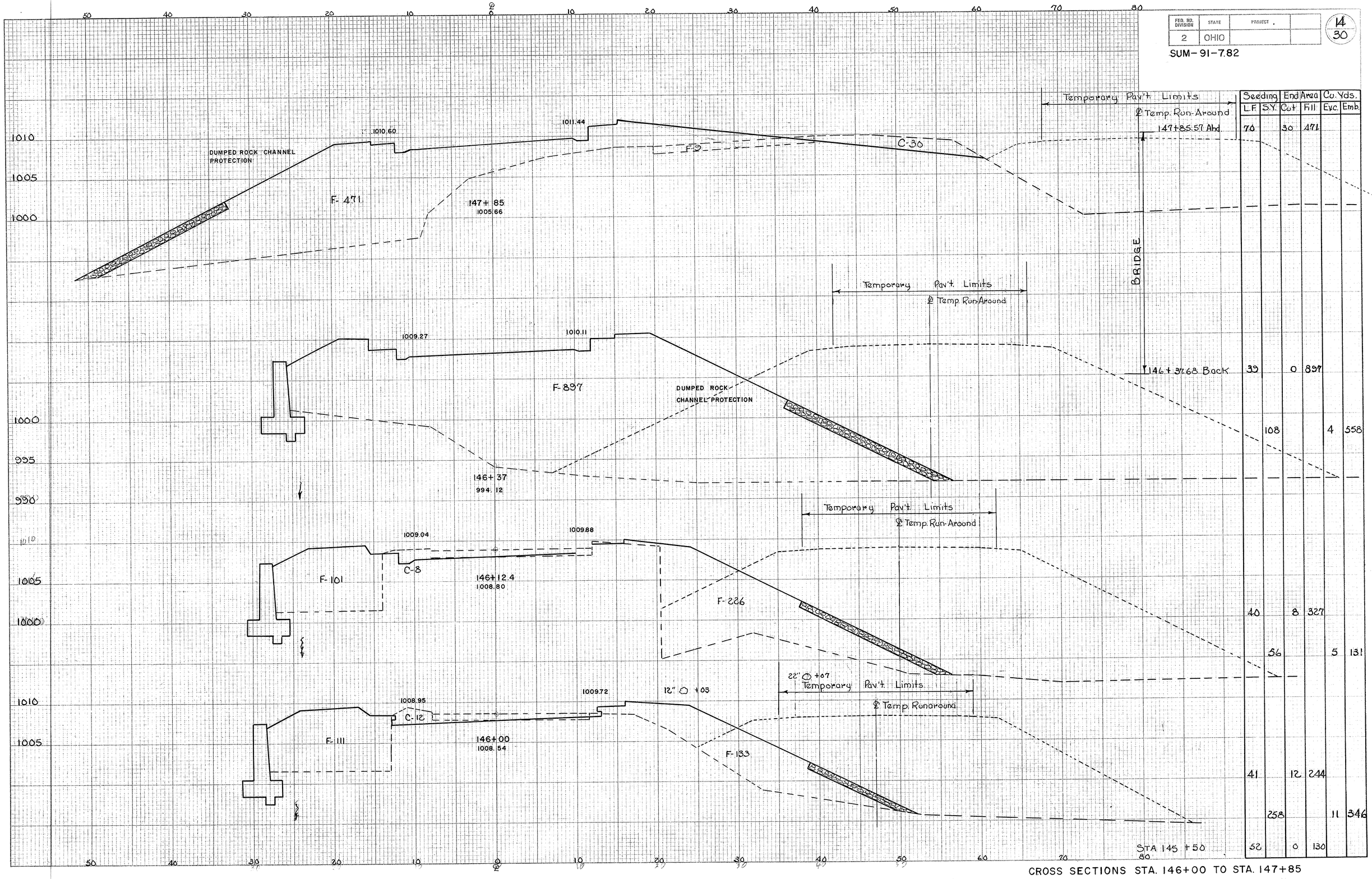
SEEDING		END AREA		C.U. YDS.	
L.E	S.Y.	CUT	FILL	EXC.	EMB.
52		0	130		
	233			0	177
32		0	61		
	92			0	55
36		0	63		
				(1)	(1)
	105			0	105
	82			0	50
21		0	40		
	134			3	47
33		3	18		
27		1	14		
					(15)
	159			28	51
30		29	41		

CROSS SECTIONS STA. 144+00 TO STA. 145+50

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

14
30

SUM-91-7.82



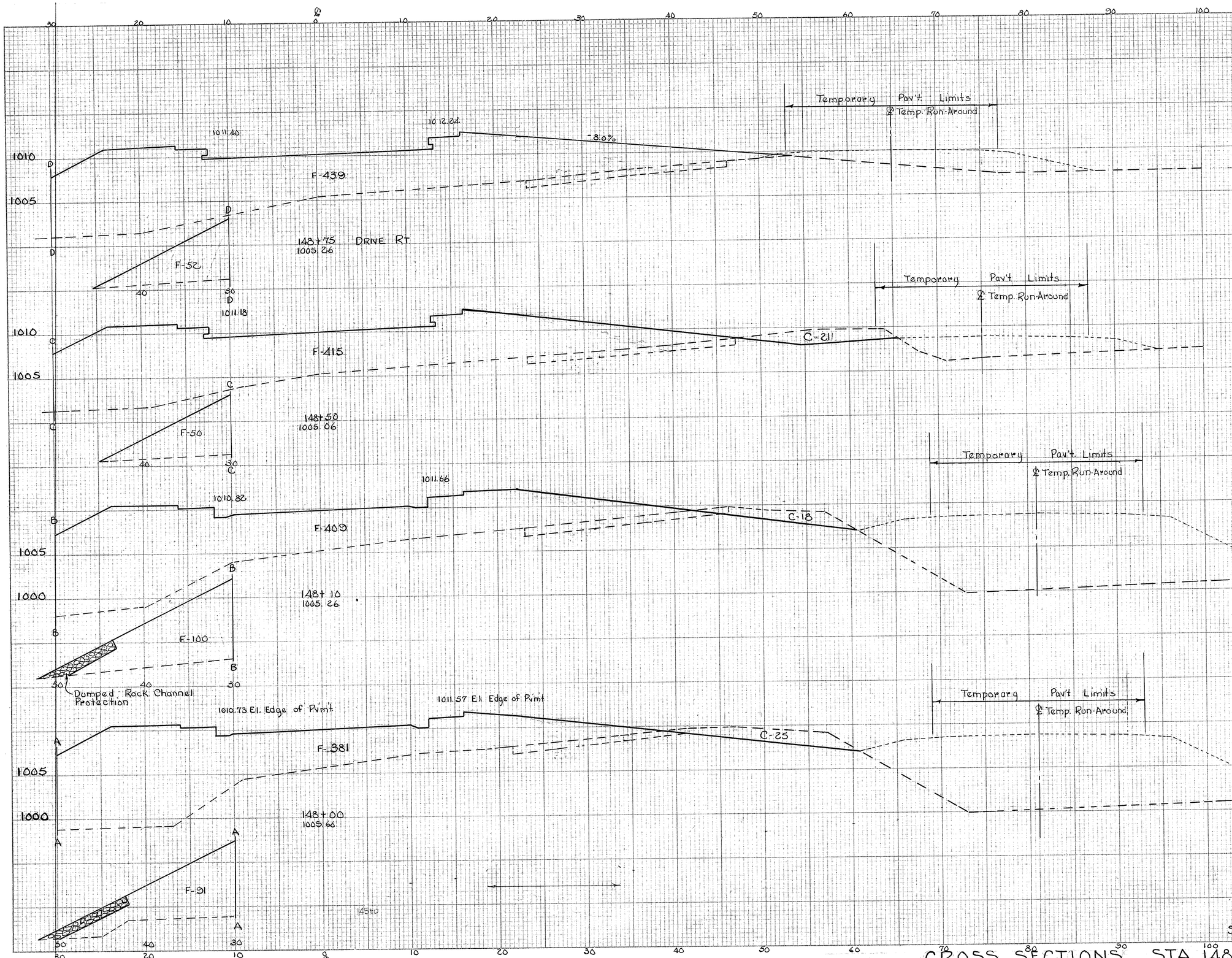
	Seeding		End Area		Co. Yds.	
	L.F.	S.Y.	Cut	Fill	Exc.	Emb.
147+85.57 Ahd.	70		30	471		
146+37.68 Back	39		0	897		
		108			4	558
	40		8	327		
		56			5	131
	41		12	244		
		258			11	346
	52		0	130		

CROSS SECTIONS STA. 146+00 TO STA. 147+85

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

14-A
30

SUM-91-7.82



Seeding		End Area		Cu. Yds	
L.F.	S.Y.	Cut	Fill	Exc	Emb
73		0	491		
				(20)	
	221			10	443
86		21	465		
	351			29	722
72		18	509		
	83		8	182	
78		25	472		
	123		15	262	
70		30	471		

CROSS SECTIONS STA. 148+00 TO STA. 148+75

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

15
30

SUM- 91 - 7.82

℄ Temp. Run-around

El. Edge of Pvmt 1013.13

1013.97 El. Edge of Pvmt

F-15 F-37 C-1 F-23

150+50
1012.16

-15.0%

150+50 DRIVE RT ON SKEW
1012.16

1012.80 1013.63

-13.0% F-23 F-41 C-5

1011.2

150+25 DRIVE LT.
1011.39

1012.68 1013.52

F-78 C-2

F-15 1010.0

150+15
1010.39

1012.53 1013.37

F-121 C-2

F-15 1009.75

150+00
1010.39

1012.08

F-251 C-2

F-17 1008.0

149+50
1007.86

℄ Temp. Run-around

1011.63 1012.47

F-330 F-18 C-7

1007.3

149+00
1005.86

STA 148+75

	Seeding		End Area		Cu. Yds.	
	L.F.	S.Y.	Cut	Fill	Exc.	Emb.
	25		1	47		
DRIVE RT.					(10)	
		89			3	52
DRIVE LT.	39		5	64		
					(8)	
		46			1	29
	43		2	93		
		79			1	64
	52		2	136		
		289			4	374
	52		2	268		
		160			4	313
	63		7	408		
		189			3	416
	73		0	491		

CROSS SECTIONS STA. 149+00 TO STA. 150+50

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

16/30

SUM-91-7.82

	SEEDING		END AREA		C.U. YDS.	
	L.F.	S.Y.	CUT	FILL	EXC.	EMB.
152+84 MARGARET AVE. RT. 1020.75						
MARGARET AVE.						(57)
152+50 1019.25		45	155	0		
		308			407	0
152+00 1017.45		66	284	0		
		317			394	1
DRIVE RT.						(63)
151+94 DRIVE RT. 1016.84		48	147	1		
		256			189	10
151+50 1015.54						
DRIVE LT. (ON SKEW)						(24)
151+18 1014.00		44	57	9		
		192			54	52
151+00 1013.96						
150+50		25	-1	47		
155+00 1028.77		31		26	11	
		209			69	17
154+86 DRIVE RT. 1028.30						(21)
		44		48	6	
154+50 1026.95		239			117	8
		42		79	2	
154+00 1024.99		231			123	3
		41		54	1	
153+50 1022.95		297			183	1
153+00 1021.15		66		143	0	
		303			296	0
152+50		45		155	0	

HOUSE FOUND. 80' RT. 150+75 EL. 1026.04

HOUSE FOUND 85' RT. 154+50 EL. 1036.28

HOUSE FOUND 90' RT. 153+51 EL. 1034.42

Prop. Conc. Steps

EXIST. STONE STEPS

HEDGE

DR.

HYD.

EL. EDGE OF PVMT. 1014.08

EL. EDGE OF PVMT. 1014.78

℄ Temporary Run-around

℄ Temporary Run-Around

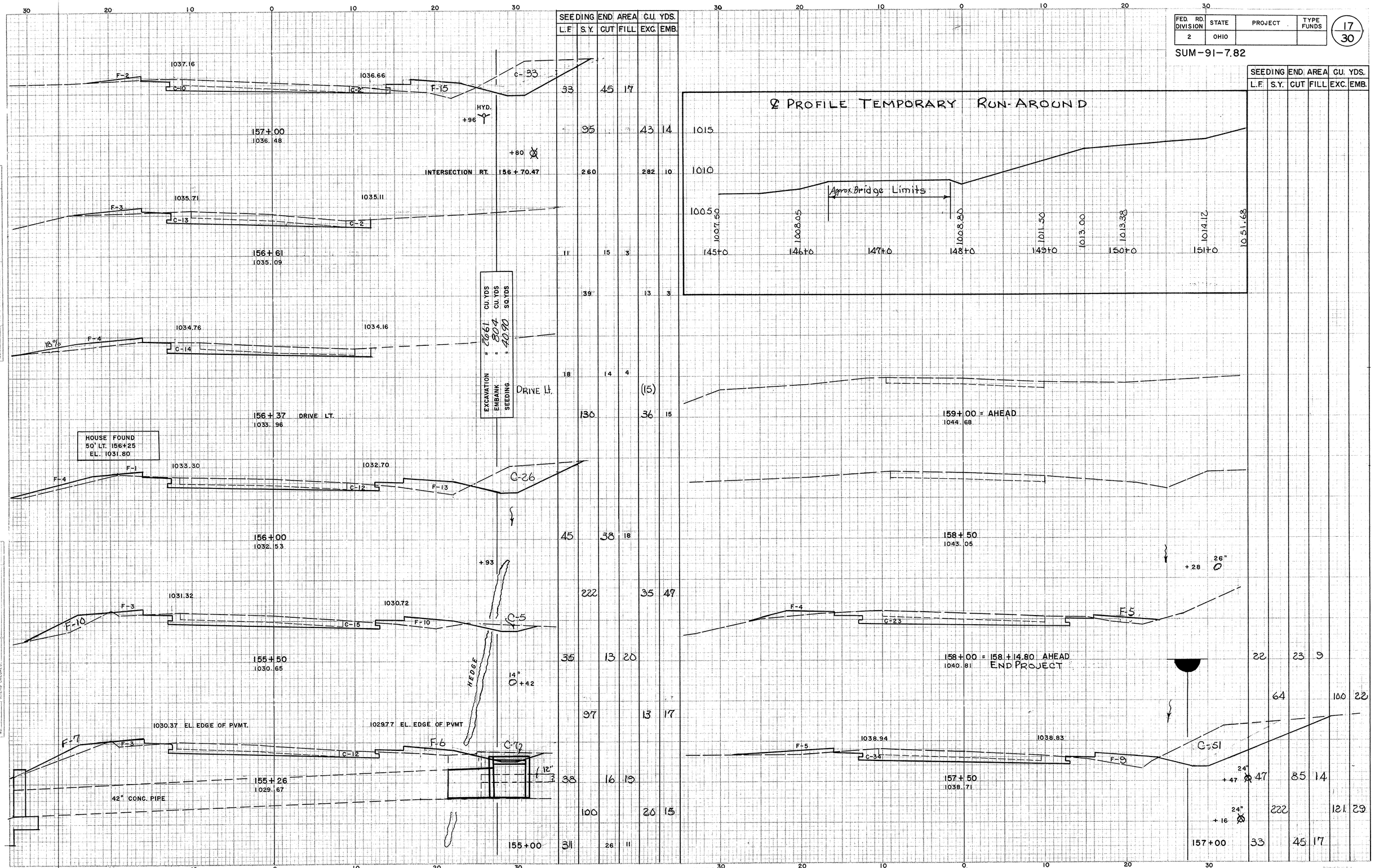
PLATE 3 CROSS SECTION B P R STANDARD
EUGENE DIETZGEN CO., CHICAGO - NEW YORK

CROSS SECTIONS STA. 151+00 TO STA. 155+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

17/30

SUM-91-7.82



SEEDING L.F.	SEEDING S.Y.	END AREA CUT	END AREA FILL	C.U. YDS. EXC.	C.U. YDS. EMB.
33		45	17		
	95			43	14
	260			282	10
11		15	3		
	39			13	3
18		14	4		
				(15)	
	130			36	15
45		38	18		
	222			35	47
35		13	20		
	97			13	17
38		16	19		
	100			20	15
31		26	11		

SEEDING L.F.	SEEDING S.Y.	END AREA CUT	END AREA FILL	C.U. YDS. EXC.	C.U. YDS. EMB.
22		23	9		
	64			100	22
47		85	14		
	222			121	29
33		45	17		

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

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

PLATE 3 CROSS SECTION B P R STANDARD

CROSS SECTIONS STA. 155 + 26 TO STA. 159+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

18
30

SUM-91-7.82

SEEDING		END AREA		CU. YDS.	
L.F.	S.Y.	CUT	FILL	EXC.	EMB.
		0	263		
				68	244
		73	0		
				126	0
		64	0		
				59	0
		0	0		
				0	0
		0	0		

F-180

F-83

992.00

2+0

992.28

BASE LINE

C-65

C-8

992.00

1+50

995.10

C-48

C-16

992.00

1+0

993.70

0+50

991.90

BASE LINE

0+0

991.80

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

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

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PLATE 3 CROSS SECTION E P R 30 BOARD
EUGENE DIETZGEN CO., CHICAGO - NEW YORK

Printed in U.S.A. On PARKSIDE Tracing Cloth

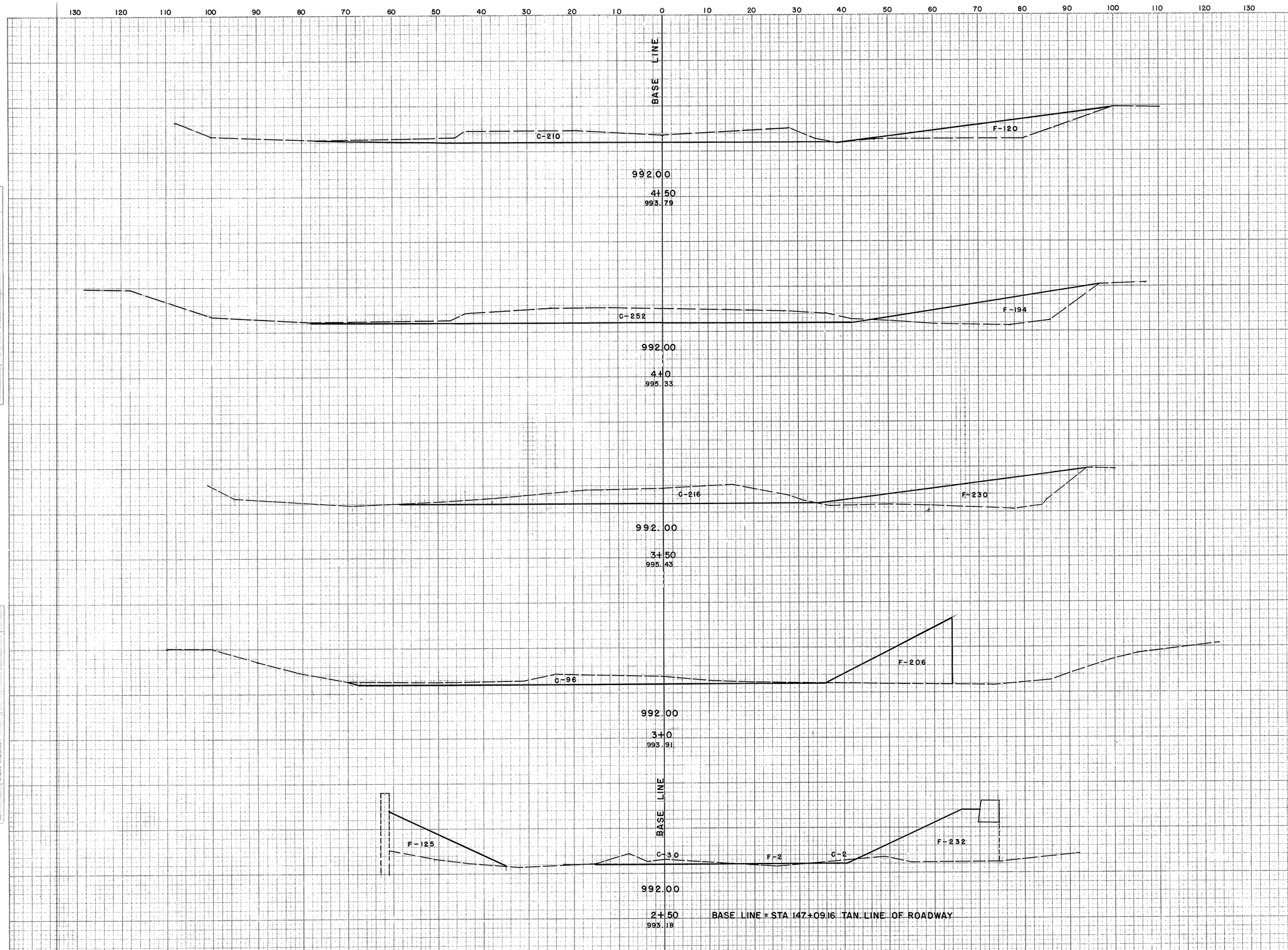
NORTH — SOUTH

CHANNEL CROSS SECTIONS STA. 0+00 TO STA. 2+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

19/30

SUM-91-7.82



SEEDING L.F.	SEEDING S.Y.	END AREA CUT	END AREA FILL	CU. YDS. EXC.	CU. YDS. EMB.
		210	120		
				428	291
		252	194		
				433	393
		216	230		
				289	404
		96	206		
		32	359		
				30	576
		0	263		

EXCAVATION = 3912 CU. YDS.
EMBANK = 2019 CU. YDS.

2+0

CHANNEL CROSS SECTIONS STA. 2+50 TO STA. 4+50

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

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

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PLATE 3 CROSS SECTION B P R STANDARD
ENGINE BRYZGEN CO., CHICAGO - NEW YORK

Printed in U.S.A. On IMPERIAL Training Cloth

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

20
30

SUM - 91 - 7.82

SEEDING		END AREA		CU. YDS.	
L.F.	S.Y.	CUT	FILL	EXC.	EMB.
		102	0		
				448	0
		140	0		
				682	0
		228	0		
				696	0
		260	0		
				220	0
		258	0		
				433	111
		4+50		210	120

130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130

BASE LINE

C-52 C-50

922.00

8+0
992.39

C-140

922.00

7+0
994.39

C-228

922.00

6+0
994.56

C-260

922.00

5+23
993.76

BASE LINE

C-258

922.00

5+0
993.79

NORTH

SOUTH

4+50

CHANNEL CROSS SECTIONS STA. 5+00 TO STA. 8+00

FINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
COMPUTED
AREAS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
NOTE BOOK
NO.
SURVEYED
PLOTTED
COMPUTED
AREAS
AREAS CHECKED
BY
DATE

PHASE 3 CROSS-SECTION B P R STANDARD
EUGENE DIETZGEN CO. CHICAGO - NEW YORK

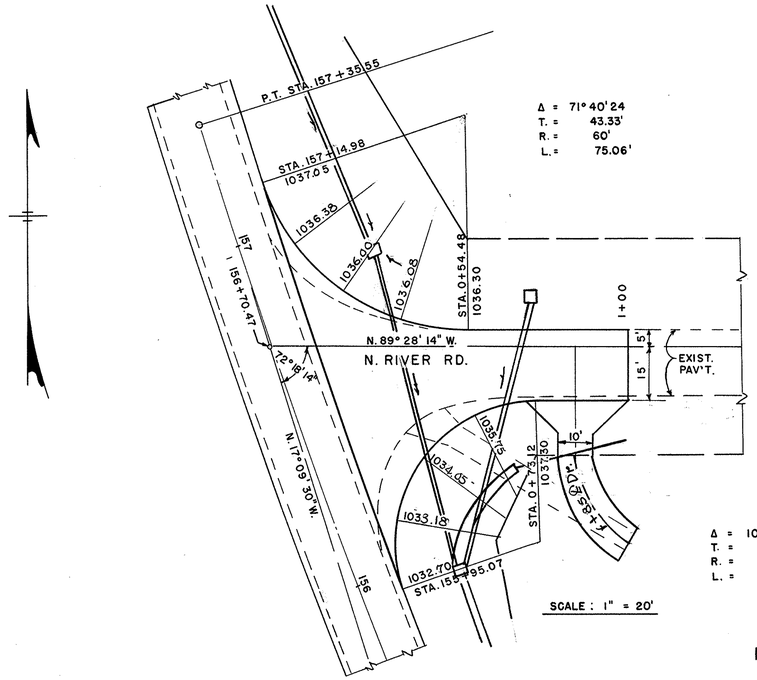
Printed in U.S.A.
On IMPERIAL Printing Cloth

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

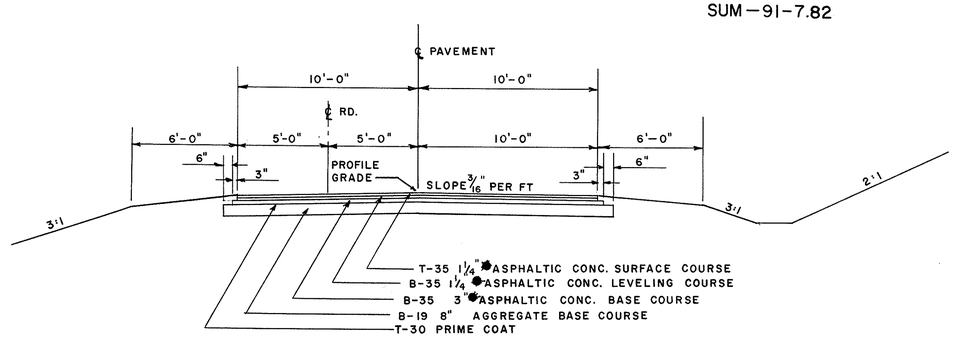
21/30

SUM-91-7.82

INTERSECTION DETAILS
NORTH RIVER RD. STA. 156 + 70.47
SCALE 1" = 20'



NOTE: For Drainage & Drive Detail
See Sheet No. 28



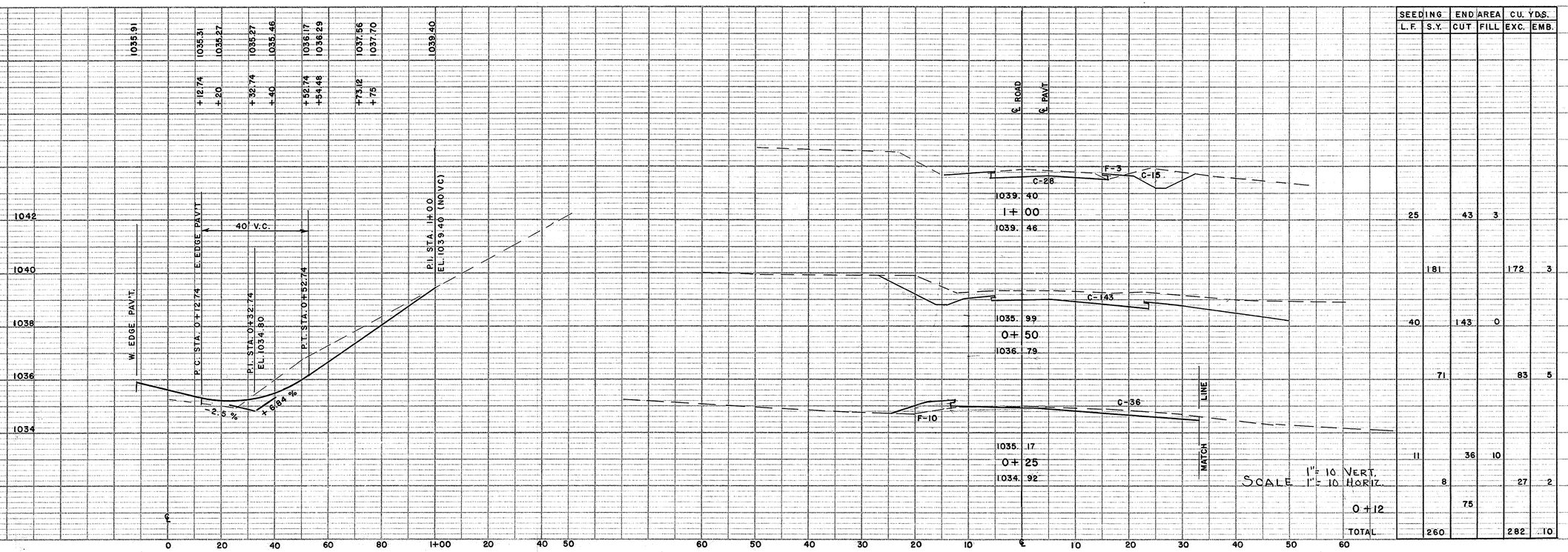
TYPICAL SECTION
SCALE ¼" = 1'-0"

●Thicknesses shown are "designed" thicknesses, as described in Sect. T-35.01 and Sect. B-35.01.

ESTIMATED QUANTITIES

T-35 1¼"	ASPHALTIC CONCRETE SURFACE COURSE	10.87	CU. YDS.
B-35 1¼"	ASPHALTIC CONCRETE LEVELING COURSE	10.87	CU. YDS.
B-35 3"	ASPHALTIC CONCRETE BASE COURSE	27.00	CU. YDS.
B-19 8"	AGGREGATE BASE COURSE	76.94	CU. YDS.
T-30	PRIME COAT	129.63	GAL.
✱E-1	ROADWAY EXCAVATION	282	CU. YDS.
	ROADWAY EMBANKMENT	10	CU. YDS.
✱E-1	COMPACTED SUBGRADE	313	SQ. YDS.
✱L-9	SEEDING	260	SQ. YDS.

✱ NOTE: EARTHWORK AND SEEDING QUANTITIES CARRIED TO CROSS SECTIONS



	SEEDING		END AREA		CU. YDS.	
	L.F.	S.Y.	CUT	FILL	EXC.	EMB.
	25		43	3		
		181			172	3
	40		143	0		
		71			83	5
	11		36	10		
		8			27	2
			75			
TOTAL		260			282	10

PLAN: SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, NOTE BOOK, NO., BY, DATE

PROFILE: SURVEYED, PLOTTED, GRADES CHECKED, B.M.s NOTED, STRUCTURE NOTATIONS CHKD, NOTE BOOK, MD., BY, DATE

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PLATE 1 PLAN - PROFILE B P R STANDARD
CHICAGO BLUEPRINT CO., CHICAGO - NEW YORK

INTERSECTION DETAILS

Printed in U.S.A. On IMPERIAL Tracing Cloth

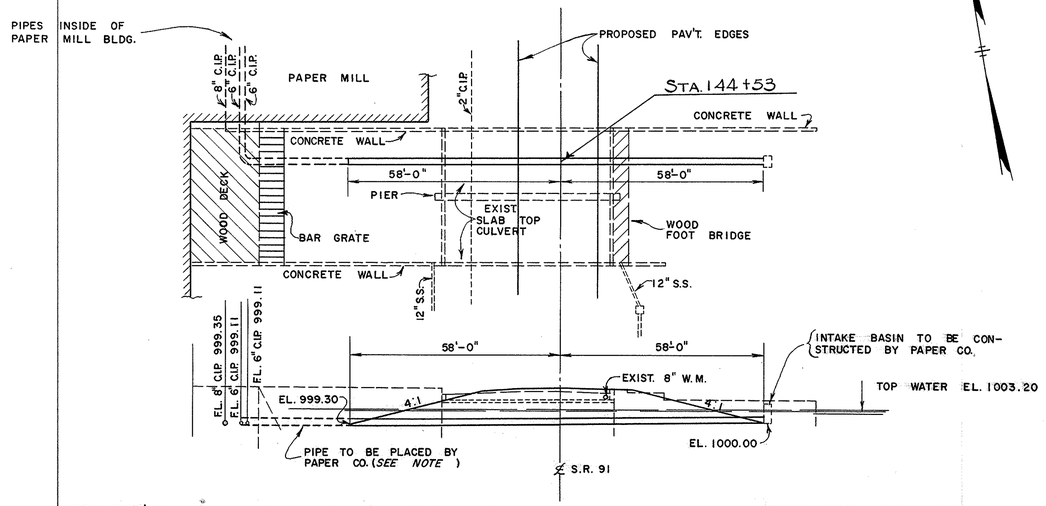
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

22/30

SUM-91-7.82

C-1 STRUCTURE NO. SUM-91-0783

STA. 144+53 SKEW: 0°
SIZE: 16" X 116' SLOPE: 0.60 %
FOR RAW WATER TO MILL ONLY
SCALE: 1" = 20'



WORK REQ'D: REMOVE EXISTING STRUCTURE INCLUDING CONCRETE WALLS WITHIN THE LIMITS OF THE ROADWAY. PLACE 116' I-124 New 16" Waterman WITH MECHANICAL JOINTS. THE PIPE SHALL BE PLACED IN ACCORDANCE WITH SPECIFICATIONS I-1 CLASS A-1 PIPE.

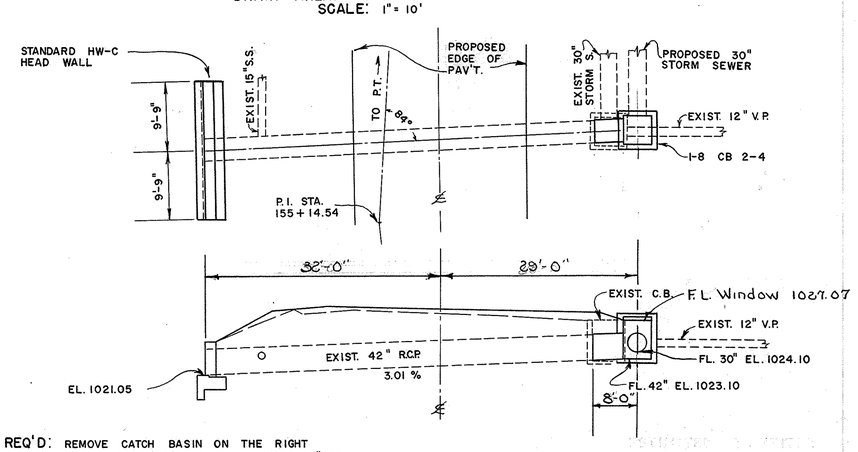
NOTE: THE MUNROE FALLS PAPER CO. WILL FURNISH AND PLACE 16" Pipe FROM WEST END OF CULVERT TO THE PIPES THAT ENTER INTO THE MILL, AND CONSTRUCT INTAKE BASIN ON THE EAST END OF CULVERT. THE CULVERT IS FOR FURNISHING RAW WATER TO THE PAPER MILL AND WILL BE MAINTAINED BY THE PAPER CO.

ESTIMATED QUANTITIES

S-24	REMOVAL OF EXISTING STRUCTURE	LUMP
I-124	NEW 16" WATERMAIN (MECHANICAL JOINT)	116 LIN. FT.

C-2 STRUCTURE NO. SUM-91-0803

STA. 155+26 SKEW: 6° RT. FWD. FROM TAN.
SIZE: 42" EXTENSION SLOPE: 3.01 %
DRAIN AREA: 42 AC. Q
SCALE: 1" = 10'



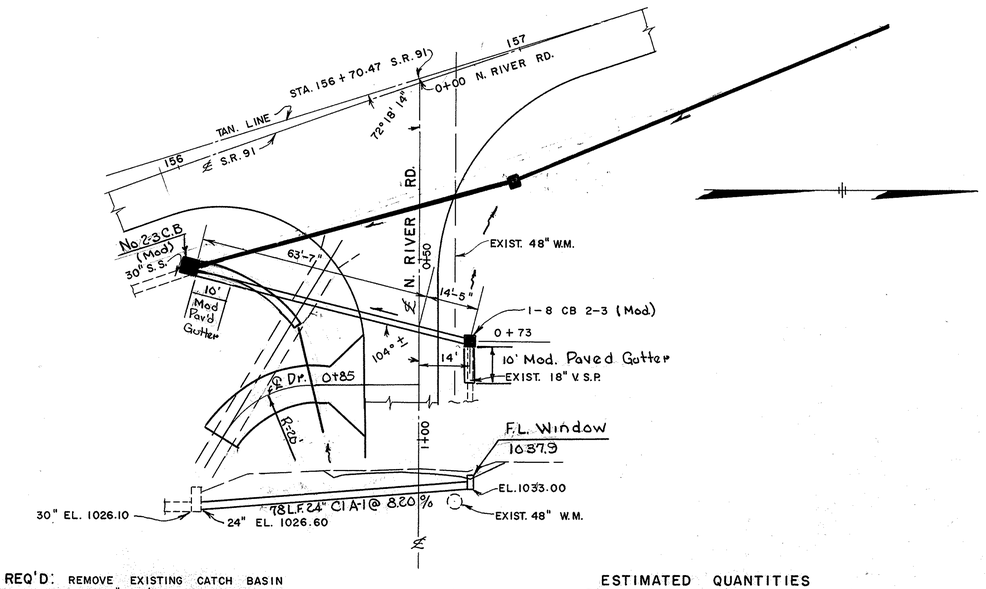
WORK REQ'D: REMOVE CATCH BASIN ON THE RIGHT AND EXTEND EXISTING PIPE CULVERT WITH 42" R.C.P. CONSTRUCT STANDARD 2-4 CATCH BASIN ON THE RIGHT AND STANDARD HW-C HEAD WALL ON THE LEFT. CLEAN OUT EXISTING 42" REINFORCED CONCRETE PIPE TO ALLOW FREE FLOW IN CULVERT. CONNECT EXISTING 12" V.P. ON THE RIGHT.

ESTIMATED QUANTITIES

I-1	42" PIPE CLASS A-1 SEC. M-6.6 (a)	8 LIN. FT.
I-2	MASONRY	11 CU. YDS.
I-8	STANDARD CATCH BASIN 2-4	1 EACH
SPEC.	PIPE CLEANOUT 42"	54 L.F.

C-3 STRUCTURE NO. SUM-91-0806

STA. 0+73 SIDE ROAD SKEW: 14° LT. FWD.
SIZE: 24" X 78' SLOPE: 8.20 %
DRAIN AREA: 32 AC. Q
SCALE: 1" = 20'

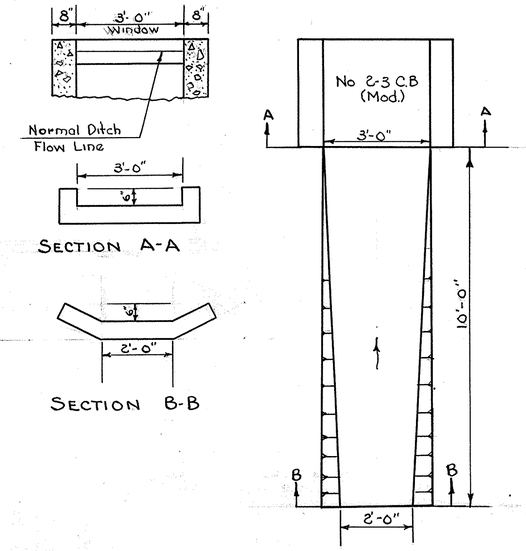


WORK REQ'D: REMOVE EXISTING CATCH BASIN ON LEFT. CONSTRUCT 24" X 78' PIPE CULVERT WITH No. 2-3 C.B. (Mod.) ON LEFT. CONNECT EXISTING 18" V.S.P. ON THE EAST.

ESTIMATED QUANTITIES

I-14	Mod. Paved Gutter	20 Lin. Ft.
I-1	24" PIPE FOR CULVERT CLASS A-1	78 LIN. FT.
I-8	No. 2-3 CATCH BASIN (Mod.)	1 EACH
I-14	Type I Paved Gutter	22 Lin. Ft.
I-16	Catch Basin, Abandoned	1 Each

No. 2-3 CATCH BASIN (MODIFIED & PAVED GUTTER DETAIL



MUNROE FALLS BRIDGE NO. 1
VILLAGE OF MUNROE FALLS
SUM-91-0788

CULVERT DETAILS

SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

DRAWN BY G. A. M.C.C.	SCALE AS SHOWN
SUBMITTED BY G. A. M.C. CHESNEY (DESIGNING ENGINEER)	DATE JANUARY, 1962
APPROVED BY (COUNTY ENGINEER)	FIELD BOOK 833
	TRACED BY S.L. UNDERHILL

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

23/30

SUM-91-7.82

PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINF. CONCRETE DECK & SUBSTRUCTURE.
SPAN: 44'-55'-44'
ROADWAY: 30'-0" & OF 2'-3" SAFETY CURBS.
SKEW: 18° L. FWD.
WEARING SURFACE: 1" MONOLITHIC CONC.
ALIGNMENT: 6° CURVE
DECK: SUPERELEVATE AT THE RATE OF 0.035 PER FOOT.
LOAD FREQUENCY: CF400 (57)
APPROACH SLABS: AS-1-54 (25' LONG)

PAPER MILL
BRICK BLDG.
RACE
Existing R/W
Concrete Wall
Conc. Rail 2'6"H.
Concrete Spillway
Conc. Pad & W. Valve
Proposed Retaining Wall
Proposed P.C. Sta. 145+48.02
Black Top Driveway
6" Gas line
Exist. ℄ T
Concrete Sidewalk
Conc. Curb
Iron Picket Fence
Tarvia plank Walk
Existing R/W
Driveway to Mill
8" W.M.
Proposed ℄ Bearings Sta. 146+40.00
℄ Bearings Sta. 146+37.68
146 End Appr. Slab
Reference Line (Chord between ℄ Abut. Brgs.)
℄ Rear Pier
℄ Fwd Pier
℄ Bearing Rear Abutment Brgs
℄ Bearing Fwd Abutment Brgs
℄ Bearings Sta. 147+83.18
Begin. Appr. Slab Sta. 147+85.57
Wooded Area 12" & over 9 Trees
RIVER
Grade Island To El. 992.00
Concrete Toe Wall
Stone Protection
El. 992.00
El. 1000.00
44'-0"
55'-0"
27'-6"
27'-6"
18°
PROPOSED CURVE
Pi Sta. 148+56.79
35°50' Lt.
Δ = 6°
D = 308.77'
T = 48.67'
E = 597.22'
L = 954.93'
Proposed ℄
Exist. ℄
Exist. 20' Pav't.
6" H.P. Gas Line
12" S.S.
18" S.S. c.o.
8" W.M. C.I.P.
Proposed Tan. Line
Tr. P.
Dr. I
Dr. II
Dr. III
Dr. IV
Temp. Runaround
GRADE SHOWN ON CROSS SECTIONS
3" Water Line TO BE REPLACED BY SUMMIT CO.
Item I-10.07 Dumped Rock
Item II-10.07 Dumped Rock Channel Protection
Ftg. El. 992.00
Ftg. El. 988.00
Ftg. El. 979.00
CUYAHOGA
Channel Cross Section Base Line
Grade Island To El. 992.00
Wooded Area 40 Trees 12" & over
3" Water Line
Spring
H.O.
B.M. "2. Arrow, Top of Fire Hyd. Rt. Sta. 145 El. 1009.16

EXISTING STRUCTURE

TYPE: Concrete Arch
SPAN: 48-56-48'
ROADWAY: 20' & 2-5' Walks.
ALIGNMENT: Tan. with 23° curve at N. end.
CONDITION: Poor
DATE BUILT: About 1920

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.

BRIDGE NO. SUM.-91-0788
DRAINAGE AREA = 331 Sq. Mi.

BRIDGE LIMITS
Sta. 146+37.68
Sta. 147+85.57
Bench El. 1003.86
Bench El. 1005.17
-3.26 %
+0.90%
Exist. ℄ Profile
Proposed ℄ Profile
High Water El. 1003.22 (1913)
Normal Water El. 993.00
El. 1002.00
Exist. 3" Water Line F.I. El. 992.00?
Mud Sill
2:1 (Normal)
Item I-10.07 Dumped Rock
P.I. 144+50 El. 1008.00
P.T. 146+04
All piles "H" Bearing Piles (10 BP 42)
Est. Avg Pay Length Rear Abt. 25 ft.
" " " " Fwd Abt. 13 ft.

Reviewed 2/1/62 C.O.B.
Revised 3/21/61 G.A.M.c.C.

MUNROE FALLS BRIDGE NO. 1
STA. 146+37.68 — STA. 147+85.57
SITE PLAN
LOAD FREQUENCY CF-400(57)

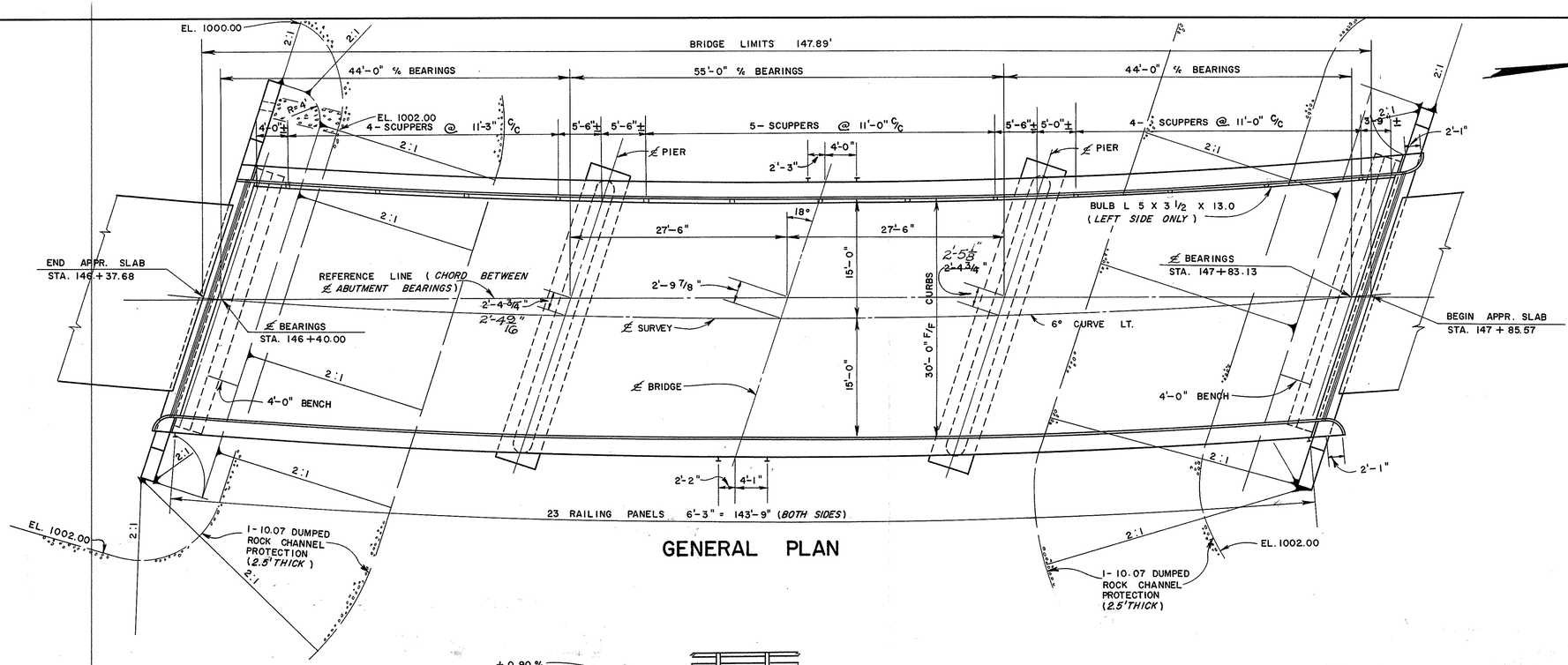
SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

DRAWN BY G.A.M.c.C.
SUBMITTED BY G.A.M.c.Chesney
APPROVED BY Ralph Van Brunt COUNTY ENGINEER
SCALE 1" = 20'
DATE Nov. 1960
FIELD BOOK 147 - 8.33
TRACED BY G.A.M.c.C.

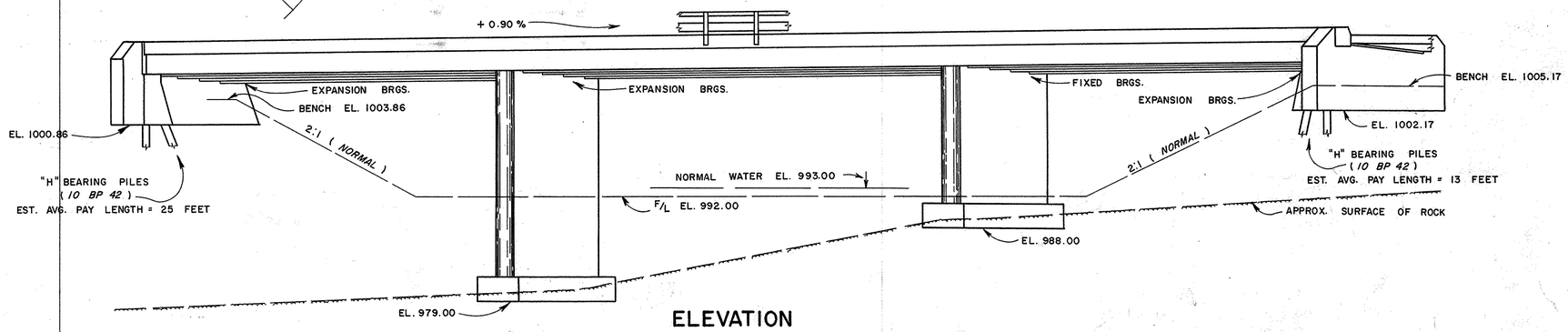
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

24/30

SUM – 91 – 7.82



GENERAL PLAN



ELEVATION

ESTIMATED QUANTITIES

ITEM	TOTAL	UNITS	DESCRIPTION	SUPER.	ABUTS.	PIERS	GEN'L.
E– 2	LUMP	SUM	COFFERDAMS, CRIBS AND SHEETING				LUMP
E– 2	275	CU. YD.	EXCAVATION FOR STRUCTURES (UNCLASSIFIED INCLUDING ROCK)		77	198	
E– 3	3912	CU. YD.	CHANNEL EXCAVATION				3912
S– 1	148	CU. YD.	CONCRETE FOR STRUCTURES CLASS "C" SUPERSTRUCTURE	148			
S– 1	138	CU. YD.	CONCRETE FOR STRUCTURES CLASS "C" PIERS ABOVE FOOTINGS			138	
S– 1	49	CU. YD.	CONCRETE FOR STRUCTURES CLASS "E" PIER FOOTINGS			49	
S– 1	101	CU. YD.	CONCRETE FOR STRUCTURES CLASS "E" ABUTMENTS		101		
S– 4	51,740	LB.	REINFORCING STEEL	38,698	6930	6112	
S– 7	120,000	LB.	STRUCTURAL STEEL	120,000			
S– 8	120,000	LB.	FIELD PAINTING OF STRUCTURE STEEL	120,000			
S–14	295.78	LIN. FT.	Railing (Type 1-1611 with handrail and galv. steel posts & bolts)	295.78			
S–15	LUMP	SUM	TEMPORARY RUNAROUND BRIDGE AND APPROACHES				LUMP
S–16	LUMP	SUM	FIRST TEST PILE				LUMP
S–18	380	LIN. FT.	"H" BEARING PILES. (10 BP 42)		380		
S–24	LUMP	SUM	REMOVAL OF EXISTING STRUCTURE				LUMP
S–29	24	CU. YD.	POROUS BACKFILL		24		
S–29	13	EACH	SCUPPERS	13			
* SPECIAL	148	EACH	WATER-REDUCING, SET RETARDING ADMIXTURE	148			
1–10.	600	CU. YD.	DUMPED ROCK CHANNEL PROTECTION (2.5' THICK)				600

* SEE PROPOSAL NOTE

GENERAL NOTES

REFERENCE: SHALL BE MADE TO STANDARD DRAWINGS CSB–2–56, SHEETS 1,2,3 AND 6, REVISED 2-2-59.

REMOVAL OF EXISTING STRUCTURE: SHALL BE REMOVED IN ACCORDANCE WITH SEC. S 24.02. ALL MASONRY MATERIALS NOT USED *as channel protection (Item 1-10) or incorporated in the embankment may be disposed of along the river banks* AS DIRECTED BY THE ENGINEER.

PROCEDURE: EACH EMBANKMENT SHALL BE PLACED AND COMPACTED TO THE LEVEL OF THE EARTH BENCH, AFTER WHICH EXCAVATION SHALL BE MADE FOR THE ABUTMENTS AND THE PILES DRIVEN.

EXCAVATION QUANTITY: INCLUDES THE REMOVAL OF FILL MATERIAL REQUIRED FOR CONSTRUCTION OF THE ABUTMENTS.

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.

TEMPORARY RUN-AROUND BRIDGE AND APPROACHES: LOAD FREQUENCY FOR BRIDGE, CF = 130, WITH UNIT STRESSES INCREASED 25 % AS PER THE PROVISIONS FOR TEMPORARY BRIDGES IN THE DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES. BRIDGE WIDTH, 24' APPROACH WIDTH, OUT-TO-OUT OF SHOULDERS, 30'. APPROACH PAVEMENT SHALL BE CLASS "B" 24' WIDE.

PILES: SHALL BE DRIVEN TO FIRM CONTACT WITH ROCK. IF THE LENGTH OF PENETRATION IS APPROXIMATELY EQUAL TO THE DEPTH TO ROCK ACCORDING TO THE BRIDGE FOUNDATION INVESTIGATION REPORT, THE FIRM CONTACT SHALL BE CONSIDERED AS ATTAINED WHEN THE CAPACITY ACCORDING TO THE FORMULA IN SEC. S-18.05 IS NOT LESS THAN THE FOLLOWING VALUE FOR A PILE HAMMER OF THE INDICATED ENERGY RATING.

REAR ABUT.	FORWARD ABUT.	
47	50	TONS PER PILE USING A 11,000 FT. LB. HAMMER.
34	37	TONS PER PILE USING A 15,000 FT. LB. OR GREATER HAMMER.

IF THE ENERGY RATING OF THE HAMMER IS BETWEEN THE RATINGS AS SHOWN ABOVE, THE REQUIRED FORMULA CAPACITY SHALL BE DETERMINED BY INTERPOLATION. THE DESIGN LOAD IS 20 TONS PER PILE FOR THE ABUTMENT PILES.

PIER FOOTINGS: SHALL EXTEND A MINIMUM OF 3" INTO SOLID ROCK OR TO THE ELEVATION SHOWN, WHICHEVER IS LOWER.

PIER FOUNDATION BEARING PRESSURE: PIER FOOTINGS ARE DESIGNED FOR A MAXIMUM BEARING PRESSURE OF 5 TONS PER SQ. FT.

UTILITY LINES: ALL LABOR AND EXPENSE INVOLVED IN RELOCATING THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE OWNER. THE CONTRACTOR AND OWNER ARE REQUESTED TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

SHOP PAINTING STEEL: The surface preparation of all steel, requiring shop painting as per the Plans and Specifications, shall be accomplished by blast cleaning or power tool cleaning, except as noted in the Specifications regarding the use of Chromate Primers.

Revised 9/6/62
Reviewed 2/1/62 C.D.B.

MUNROE FALLS BRIDGE NO. 1
VILLAGE OF MUNROE FALLS
SUM–91–0788
GENERAL PLAN & ELEVATION
NOTES & ESTIMATED QUANTITIES

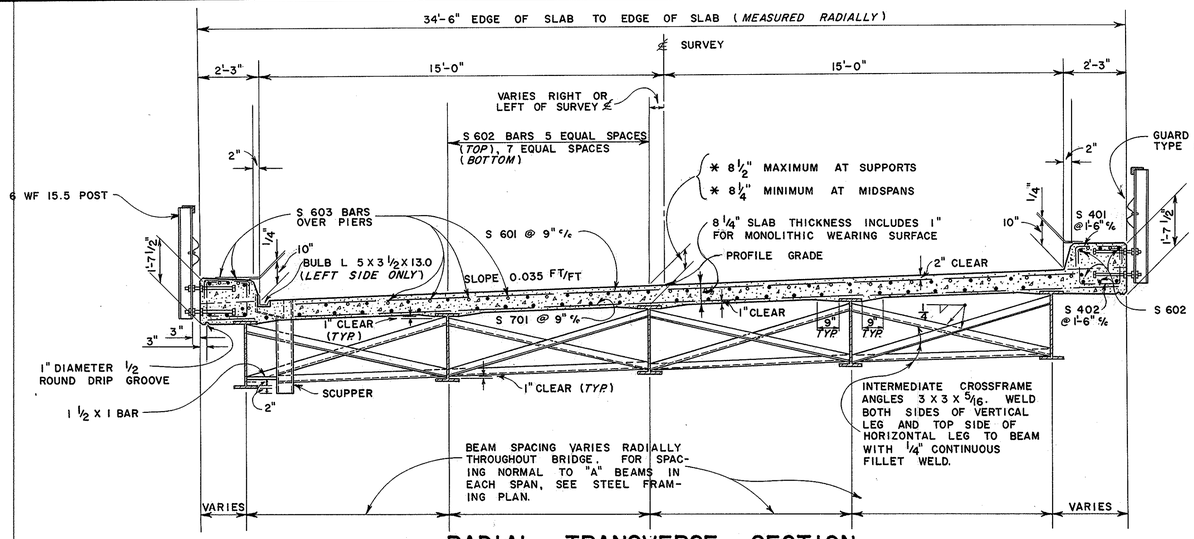
SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

DRAWN BY G. A. M.C.C.	SCALE 1/8" = 1'
SUBMITTED BY G. A. M.C.CHESNEY	DATE OCTOBER, 1961
APPROVED BY Joseph Chas. Brimmer DESIGNING ENGINEER / COUNTY ENGINEER	FIELD BOOK
	TRACED BY S. L. UNDERHILL

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

25/30

SUM-91-7.82



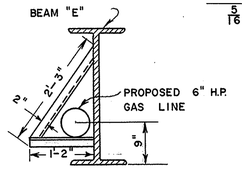
RADIAL TRANSVERSE SECTION

FOR ADDITIONAL REINFORCING STEEL DETAILS SEE SHEET NO. 29

SCALE: 3/8" = 1'-0"

* THIS IS A NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED ON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE BEAM MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION INDICATED ON THE PLANS.

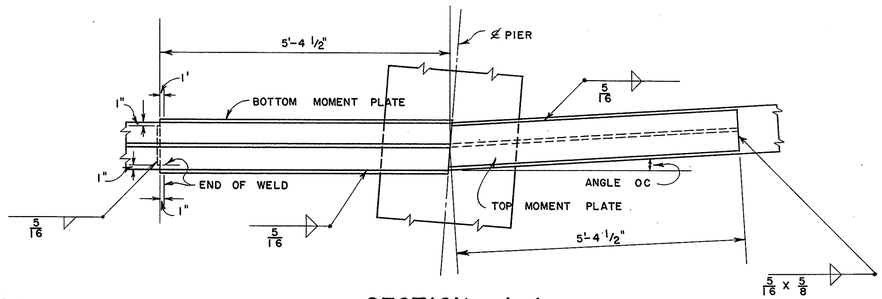
ANGLE OC	REAR PIER	FWD. PIER
BEAM LINES A, B, C, & D	2° 54' 59"	2° 55' 40"
BEAM LINE "E"	3° 22' 13"	2° 40' 14"



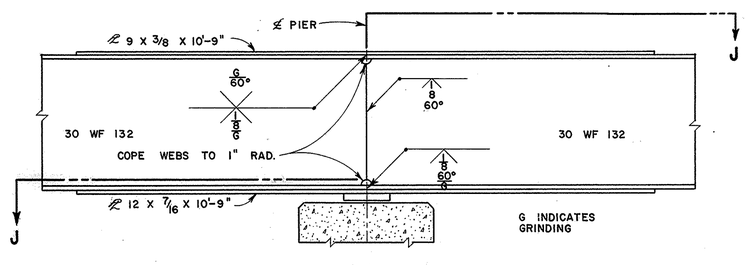
DETAIL OF HANGER FOR GAS LINE

NOTE: HANGERS SHALL BE PLACED ON THE WEST SIDE OF BEAM "E" AND SPACED AT 20'-0" ± ".

THE HANGERS SHALL BE FURNISHED AND INSTALLED BY THE EAST OHIO GAS CO.



SECTION J-J

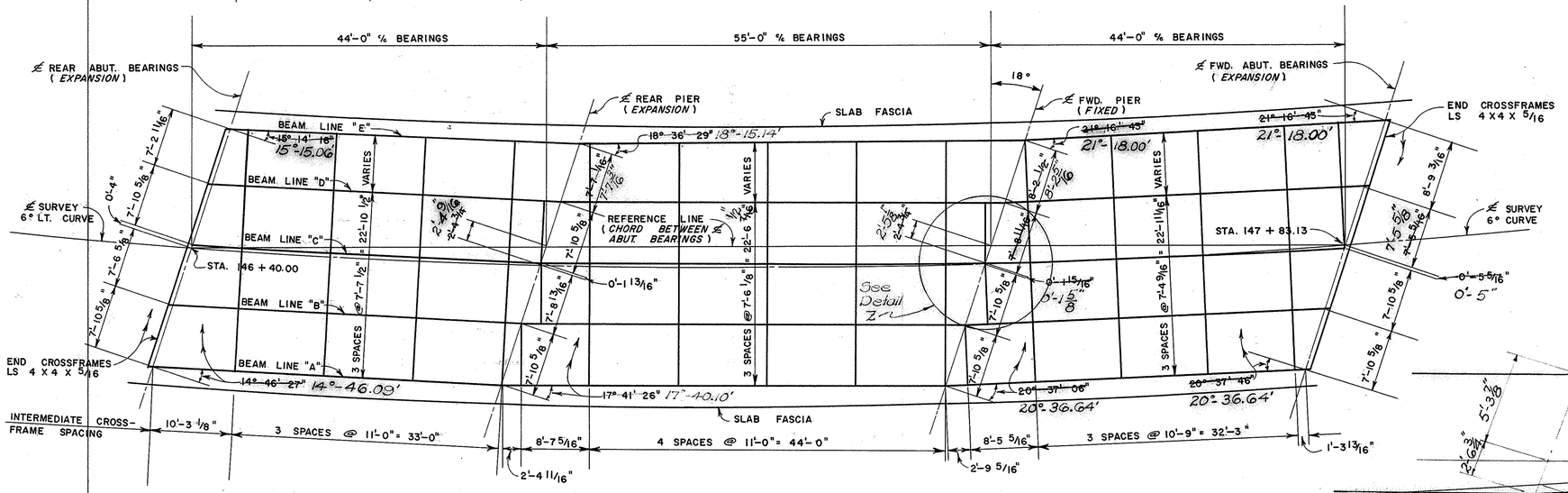


BEAM SPLICE DETAIL

SCALE: 3/4" = 1'-0"

DEVELOPED BEAM LENGTHS

	℄ BRGS. REAR ABUT.	℄ BRGS. REAR PIER	℄ BRGS. FWD. PIER	℄ BRGS. FWD. ABUT.
BEAM LINE "A" "B" "C" & "D"	43'-~~3 1/8~~" 3 5/16"	~~54'-10 3/16"~~ 55'-0 1/32"	~~44'-8 1/2"~~ 44'-~~9 7/16~~"	
BEAM LINE "E"	43'-~~3 1/8~~" 4 1/2"	~~55'-1"~~ 55'-0 1/32"	~~11"~~ 44'-~~9 3/4~~"	



STEEL FRAMING PLAN

SCALE: 1/8" = 1'-0"

ALL BEAMS 30 WF 132

NOTE: NO CAMBER WILL BE REQUIRED IN THE BEAMS.

IF THERE IS CAMBER IN THE BEAM, THE CONVEX FLANGE SHALL BE PLACED UP.

Beam Line "E" and Beam Line "A" are layed out so that the ends of the beams for each span intersect the face of curb at the ℄ of bearings.

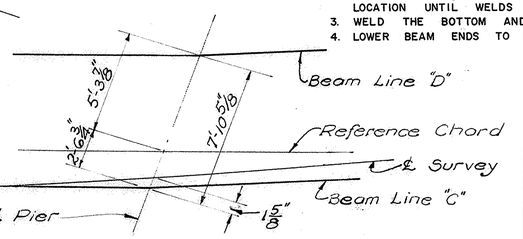
INTERMEDIATE CROSSFRAMES: ARE NORMAL TO BEAM LINE "A" IN THEIR RESPECTIVE SPANS.

SLAB FASCIA: IS CONCENTRIC TO CENTERLINE OF SURVEY.

FOR ADDITIONAL DETAILS: SEE STANDARD DRAWINGS CSB-2-56, SHEETS 1, 2, 3, AND 6, WITH THESE MODIFICATIONS: THE 5 X 3 1/2 X 13.0 BULB ANGLE AND SCUPPERS WILL NOT BE REQUIRED ON THE HIGH SIDE OF THE DECK.

BEAM SPLICE WELDING PROCEDURE:

1. RAISE THE ABUTMENT ENDS OF THE BEAMS 5/8 INCHES
2. BUTT-WELD THE BEAM FLANGES AND WEB, USING THE FOLLOWING SEQUENCE; MAKE TWO PASSES ON EACH FLANGE, THEN TWO ON THE WEB; REPEAT, USING ONE PASS AT EACH LOCATION UNTIL WELDS ARE COMPLETED.
3. WELD THE BOTTOM AND TOP MOMENT PLATES.
4. LOWER BEAM ENDS TO FINAL POSITION.



DETAIL "Z"

Revised 9/6/62
Reviewed 8/1/62 CDB

MUNROE FALLS BRIDGE NO. 1
VILLAGE OF MUNROE FALLS
SUM-91-0788

SUPERSTRUCTURE DETAILS

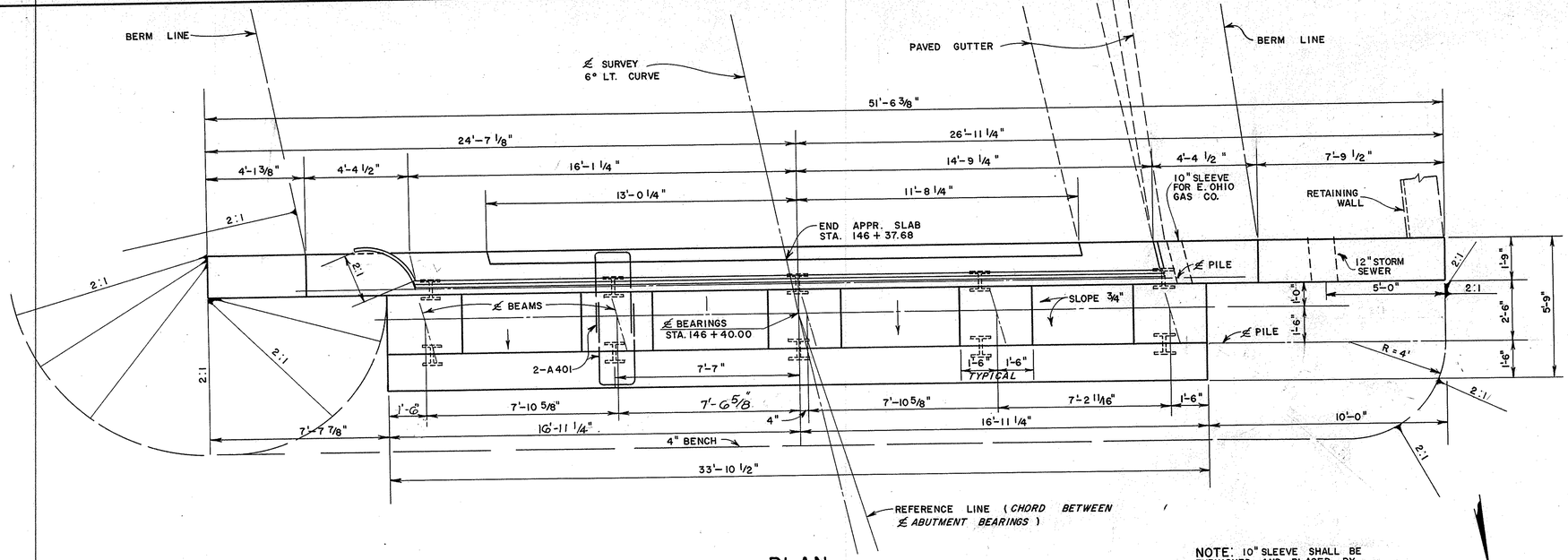
SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

DRAWN BY G.A. McC.	SCALE AS SHOWN
SUBMITTED BY G.A. McCHESNEY	DATE JULY, 1961
APPROVED BY Ralph Dan Brenner, DEPUTY, COUNTY ENGINEER	FIELD BOOK
	TRACED BY S.L. UNDERHILL

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

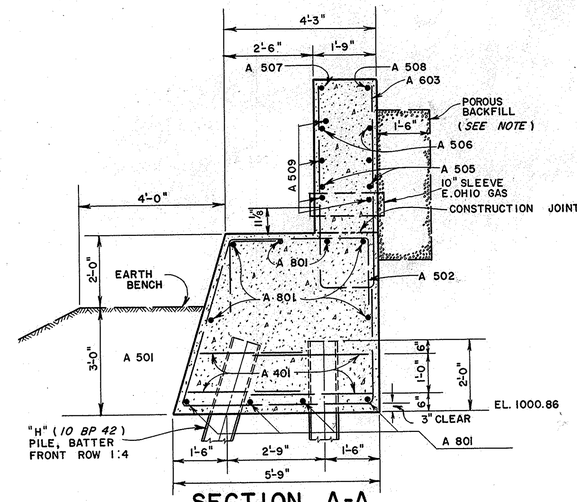
26
30

SUM-91-7.82

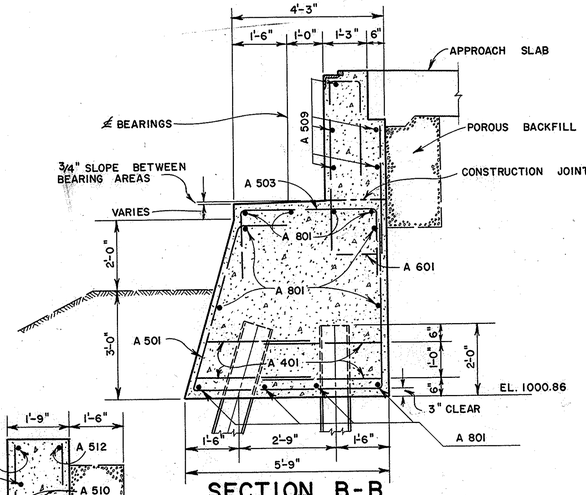


PLAN
SCALE: 3/8" = 1'-0"

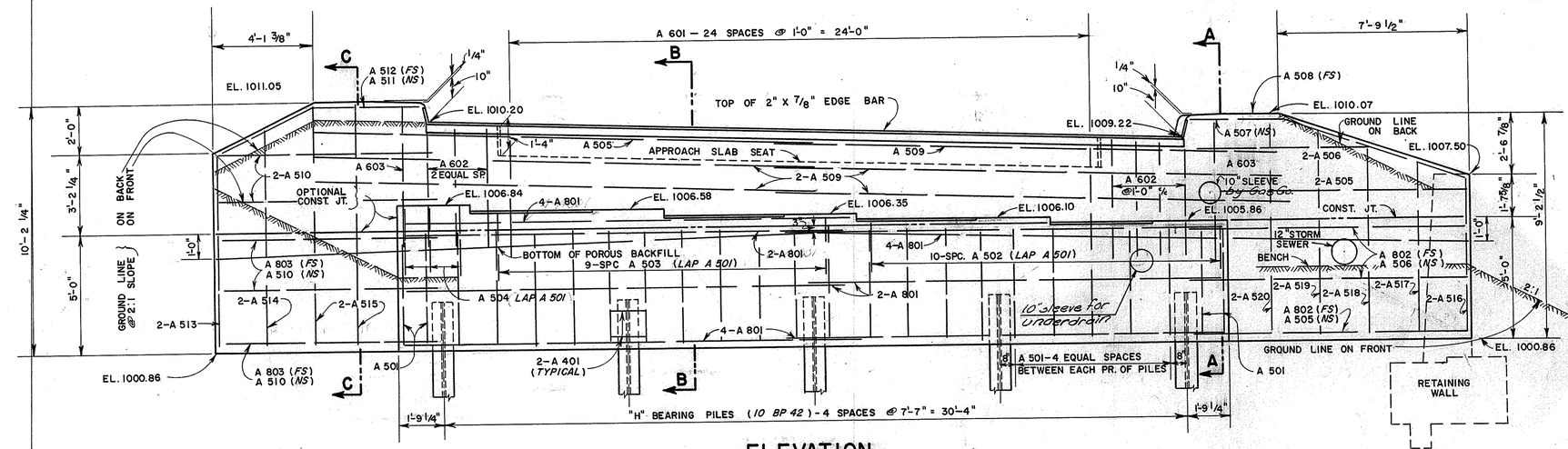
NOTE: 10" SLEEVE SHALL BE FURNISHED AND PLACED BY THE EAST OHIO GAS CO.



SECTION A-A
SCALE: 1/2" = 1'-0"



SECTION B-B
SCALE: 1/2" = 1'-0"

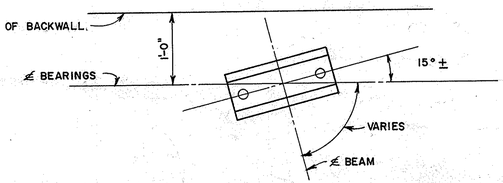


ELEVATION
SCALE: 3/8" = 1'-0"

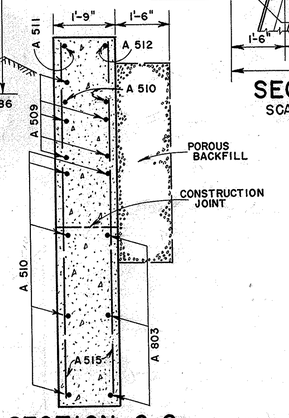
POROUS BACKFILL: SHALL EXTEND UPWARD TO THE APPROACH SLAB AND TO THE SURFACE OF THE EARTH SHOULDERS, AND OUTWARD TO THE SURFACE OF THE EMBANKMENT SLOPES. EXCAVATION THEREFOR, IN EXCESS OF THAT REQUIRED FOR CONSTRUCTION OF THE ABUTMENT, SHALL BE CONSIDERED AS PAID FOR IN THE BID PRICE PER CU. YD. PAID FOR POROUS BACKFILL.

PILES: SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 20 TONS PER PILE. ESTIMATED AVERAGE LENGTH IS 25 FEET.

SPECIAL CARE: SHALL BE TAKEN IN PLACING REINFORCING STEEL IN THE BRIDGE SEAT SO THAT IT WILL NOT INTERFERE WITH THE DRILLING OF ANCHOR BOLT HOLES.



TYPICAL BEARING PLATE LAYOUT



SECTION C-C
SCALE: 1/2" = 1'-0"

Reviewed 2/16/62 CDB

MUNROE FALLS BRIDGE NO.1
VILLAGE OF MUNROE FALLS
SUM-91-0788

REAR ABUTMENT DETAILS

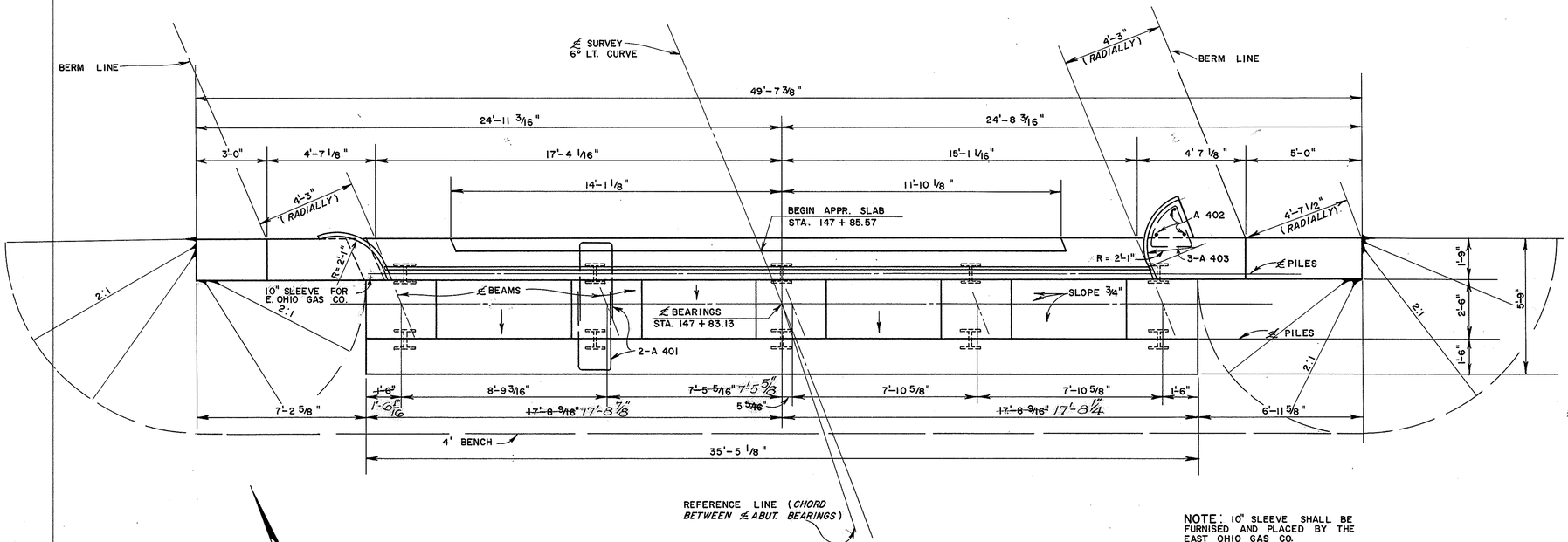
SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

DRAWN BY G.A. McC.	SCALE AS SHOWN
SUBMITTED BY G.A. McCHESNEY	DATE JULY, 1961
APPROVED BY Ralph Van Brimmer DEPUTY COUNTY ENGINEER	FIELD BOOK
	TRACED BY S.L. UNDERHILL

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

27
30

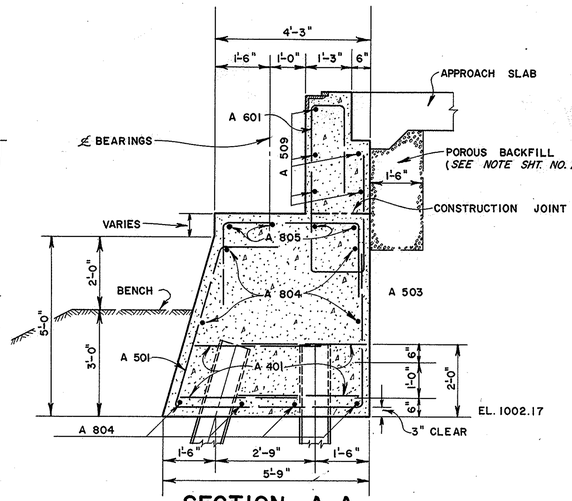
SUM-91-7.82



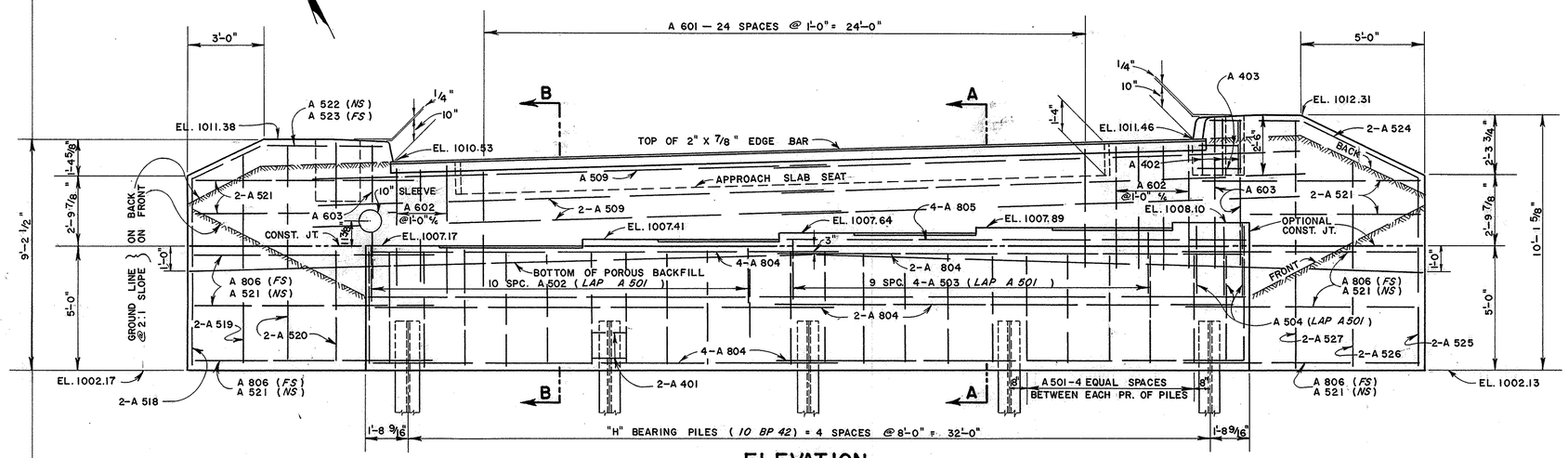
PLAN
SCALE: 3/8"= 1'-0"

REFERENCE LINE (*CHORD BETWEEN ℄ ABUT. BEARINGS*)

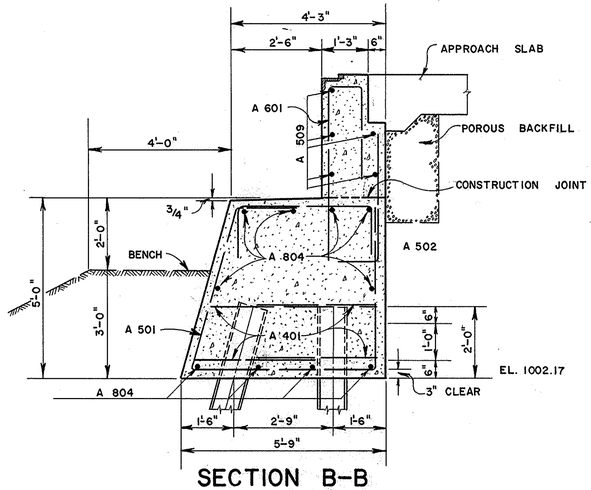
NOTE: 10" SLEEVE SHALL BE FURNISED AND PLACED BY THE EAST OHIO GAS CO.



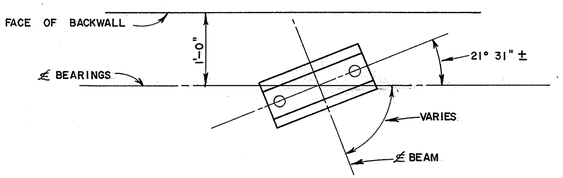
SECTION A-A
SCALE: 1/2"= 1'-0"



ELEVATION
SCALE: 3/8"= 1'-0"



SECTION B-B
SCALE: 1/2"= 1'-0"



TYPICAL BEARING PLATE LAYOUT
SCALE: 1"= 1'-0"

SPECIAL CARE: SHALL BE TAKEN IN PLACING REINFORCING STEEL IN THE BRIDGE SEAT SO THAT IT WILL NOT INTERFERE WITH THE DRILLING OF ANCHOR BOLT HOLES.

PILES: SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 20 TONS PER PILE. ESTIMATED AVERAGE LENGTH IS 13 FEET.

Revised 9/6/62
Reviewed 2/1/62 COB

MUNROE FALLS BRIDGE NO.1
VILLAGE OF MUNROE FALLS
SUM-91-0788

FORWARD ABUTMENT DETAILS

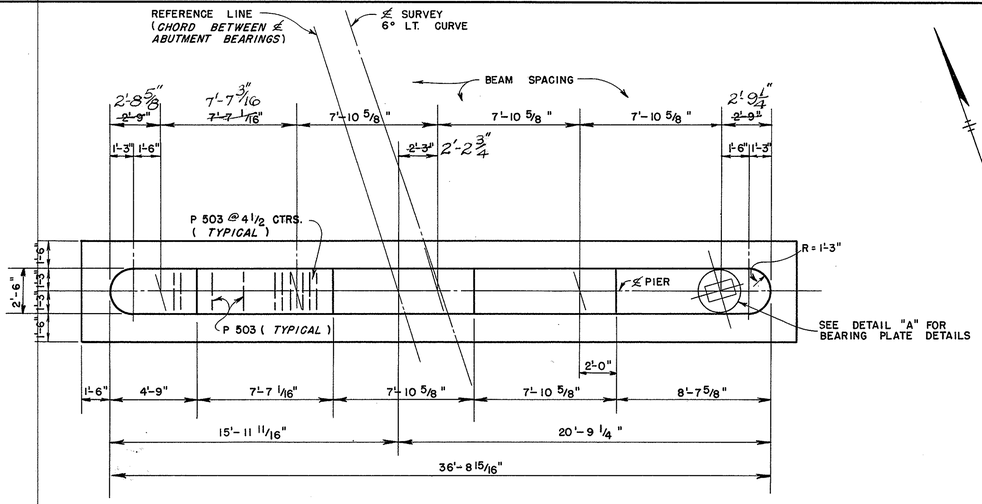
SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

DRAWN BY G. A. MC C.	SCALE AS SHOWN
SUBMITTED BY G. A. MC CHESNEY	DATE AUGUST, 1961
APPROVED BY Paul Van Schuyver DEPUTY STATE HIGHWAY DIRECTOR ASST. COUNTY ENGINEER	FIELD BOOK
	TRACED BY S. L. UNDERHILL

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

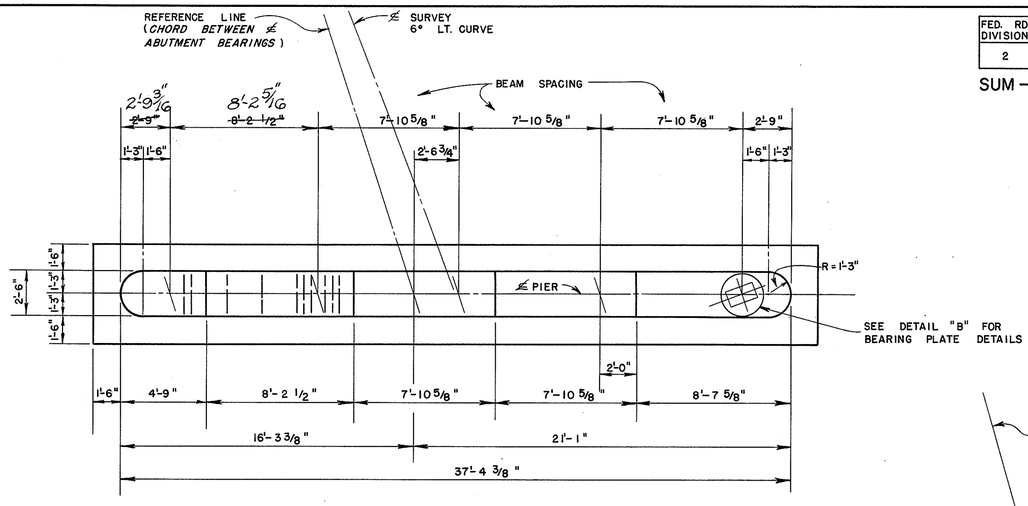
28/30

SUM-91-7.82

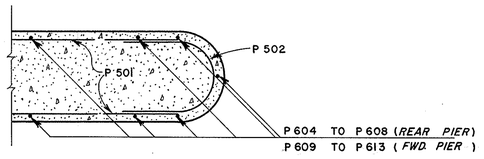


PLAN
(REAR PIER)
SCALE: 1/4" = 1'-0"

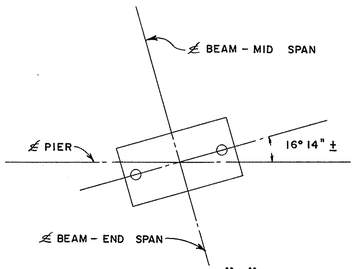
ELEVATION	A	B	C	D	E
REAR PIER	1006.20	1006.43	1006.68	1006.92	1007.16
FWD. PIER	1006.78	1007.02	1007.25	1007.50	1007.72



PLAN
(FWD. PIER)
SCALE: 1/4" = 1'-0"

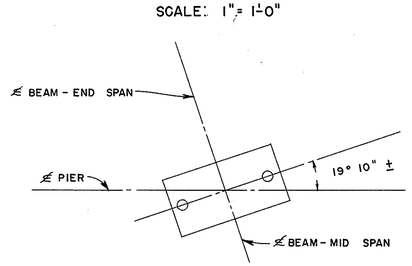


SECTION B-B

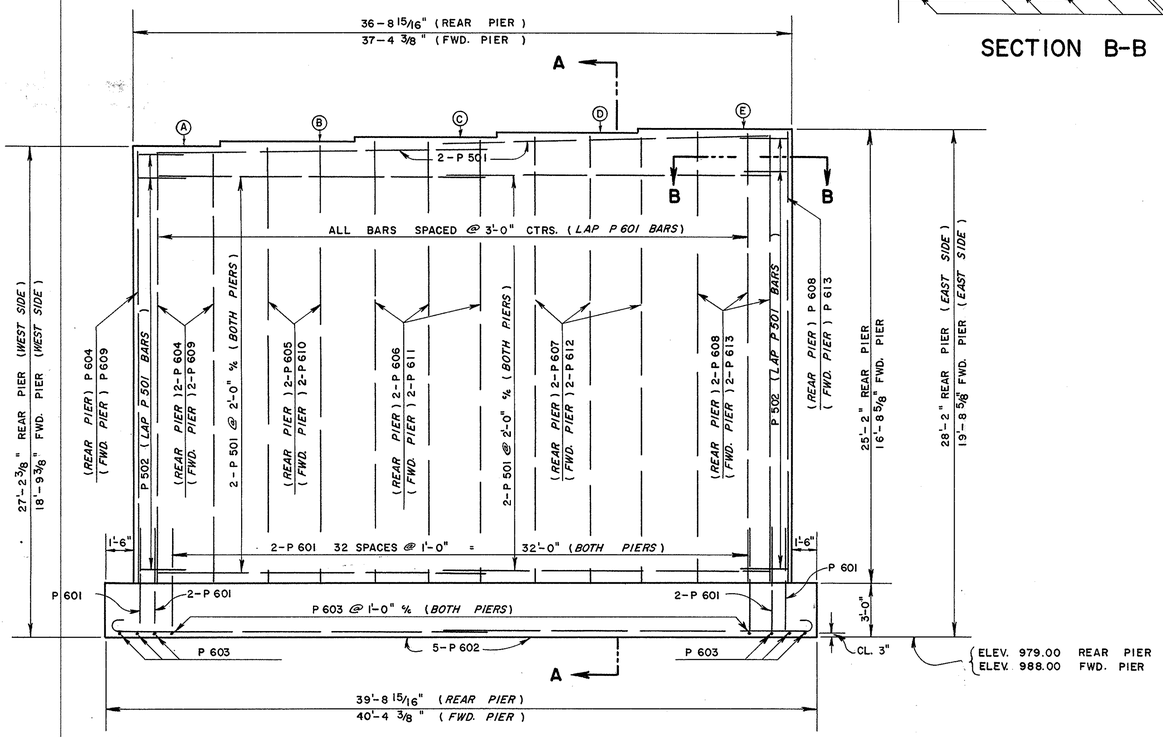


DETAIL "A"
TYPICAL FOR REAR PIER BEARINGS (EXPANSION)

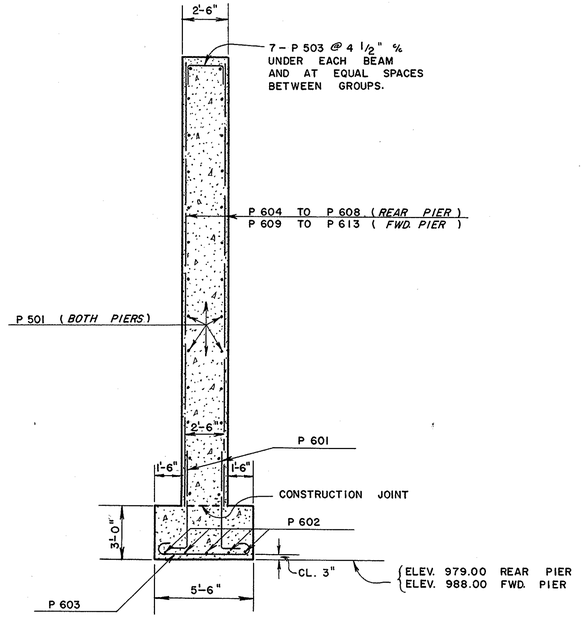
SCALE: 1" = 1'-0"



DETAIL "B"
TYPICAL FOR FWD. PIER BEARINGS (FIXED)



ELEVATION
SCALE: 1/4" = 1'-0"



SECTION A-A
SCALE: 1/4" = 1' 0"

NOTE: SPECIAL CARE SHALL BE TAKEN IN PLACING REINFORCING STEEL IN BRIDGE SEAT SO THAT IT WILL NOT INTERFERE WITH THE DRILLING OF ANCHOR BOLT HOLES.
ALL REINFORCING STEEL SHALL BE 2" CLEAR FROM FACE OF CONCRETE EXCEPT AS SHOWN.

MUNROE FALLS BRIDGE NO. 1
VILLAGE OF MUNROE FALLS
SUM-91-0788

PIER DETAILS

SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

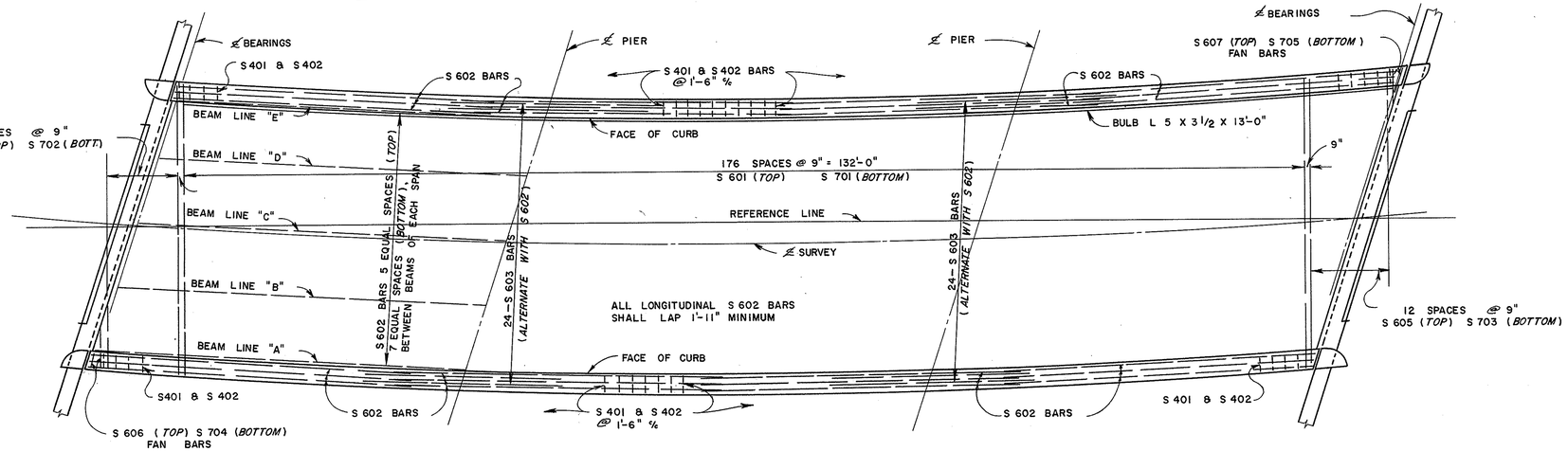
DRAWN BY G. A. McC.	SCALE AS SHOWN
SUBMITTED BY G. A. M. CHESNEY	DATE OCT. 1961
APPROVED BY L. G. WOLFE COUNTY ENGINEER	FIELD BOOK
	TRACED BY S. L. UNDERHILL

Revised 3/6/62
Reviewed 2/1/62 CDB

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

29/30

SUM-91-7.82



PLAN OF SUPERSTRUCTURE REINFORCING STEEL

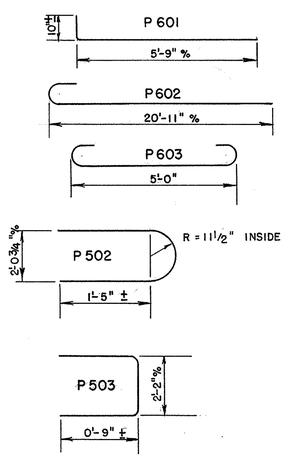
SCALE: 1/8" = 1'-0"

LONGITUDINAL BARS SHALL BE PLACED APPROXIMATELY PARALLEL TO THE BEAMS IN EACH SPAN AND THE TRANSVERSE BARS SHALL BE PLACED PERPENDICULAR TO THE REFERENCE LINE.

REINFORCING STEEL LIST

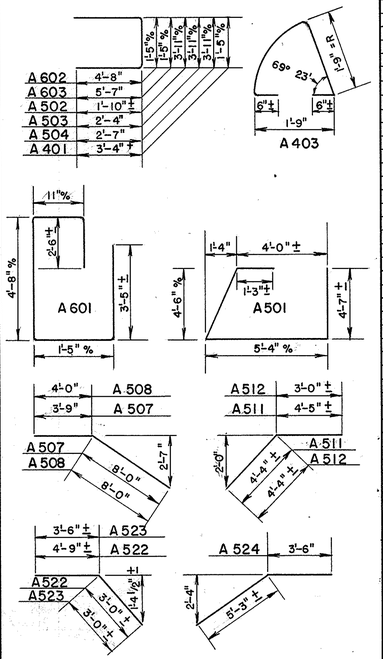
MARK	NO.	LENGTH	WEIGHT	SHP
PIERS				
P601	78	6'-5"	752	B
P602	20	21'-7"	648	B
P603	78	6'-4"	742	B
P604	5	24'-0"	180	S
P605	4	24'-2"	145	S
P606	6	24'-5"	220	S
P607	6	24'-8"	222	S
P608	7	24'-11"	262	S
P609	5	15'-7"	117	S
P610	4	15'-10"	95	S
P611	6	16'-1"	145	S
P612	6	16'-4"	147	S
P613	7	16'-6"	173	S
P501	88	18'-2"	1667	S
P502	44	5'-10"	268	B
P503	86	3'-8"	329	B
TOTAL			6112	

BENDING DIAGRAMS



MARK	NO.	LENGTH	WEIGHT	SHP
ABUTMENTS				
A801	22	33'-6"	1968	S
A802	3	12'-6"	100	S
A803	3	10'-3"	82	S
A804	18	18'-9"	901	S
A805	4	18'-4"	196	S
A806	6	9'-8"	155	S
A601	50	12'-2"	914	B
A602	14	5'-9"	120	B
A603	5	6'-8"	50	B
A501	48	15'-6"	776	B
A502	22	7'-4"	168	B
A503	20	8'-4"	174	B
A504	6	8'-10"	55	B
A505	4	11'-6"	47	S
A506	2	7'-3"	15	S
A507	1	11'-9"	12	B
A508	1	12'-0"	13	B
A509	20	20'-10"	435	S
A510	7	9'-0"	66	S
A511	1	8'-9"	9	B
A512	1	7'-4"	8	B
A513	2	7'-9"	16	S
A514	2	8'-9"	18	S
A515	4	9'-9"	41	S
A516	2	6'-3"	13	S
A517	2	6'-11"	14	S
A518	4	7'-6"	31	S
A519	4	8'-2"	34	S
A520	6	8'-10"	55	S
A521	14	8'-10"	129	S
A522	1	7'-9"	8	B
A523	1	6'-6"	8	B
A524	2	8'-9"	18	B
A525	2	7'-3"	15	S
A526	2	8'-5"	18	S
A527	2	9'-9"	20	S
A401	40	8'-0"	214	B
A402	3	2'-2"	4	S
A403	3	5'-0"	10	B
TOTAL			6930	

BENDING DIAGRAMS



MARK	NO.	LENGTH	WEIGHT	SHP	
SUPERSTRUCTURE					
S701	177	34'-2"	12,361	S	
S702	1 SERIES OF 12	33'-3 1/8" TO 7'-3 3/4"	498	S	← VARY BY 2'-4 15/16" INCREMENTS
S703	1 SERIES OF 13	33'-3 1/8" TO 6'-2 3/8"	524	S	← VARY BY 2'-4 15/16" INCREMENTS
S704	2	4'-6"	18	S	
S705	2	4'-0"	16	S	
S601	177	34'-2"	9,083	S	
S602	228	37'-6"	12,842	S	
S603	48	22'-0"	1,586	S	
S604	1 SERIES OF 12	33'-3 1/8" TO 7'-3 3/4"	366	S	← VARY BY 2'-4 15/16" INCREMENTS
S605	1 SERIES OF 13	33'-3 1/8" TO 6'-2 3/8"	385	S	← VARY BY 2'-4 15/16" INCREMENTS
S606	2	4'-6"	14	S	
S607	2	4'-0"	12	S	
S401	194	2'-9"	356	S	
S402	194	4'-11"	637	S	
TOTAL			38,698		
REPLACEMENT BARS					
RE801	1	6'-6"	—	S	
RE701	2	6'-2"	—	S	
RE601	2	5'-11"	—	S	
RE501	1	5'-7"	—	S	
RE401	1	5'-3"	—	S	

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.

MUNROE FALLS BRIDGE NO.1
VILLAGE OF MUNROE FALLS
SUM-91-0788
SUPERSTRUCTURE REINFORCING STEEL & REINFORCING STEEL LIST

SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

DRAWN BY G. A. M&C
SUBMITTED BY G. A. McCHESNEY
APPROVED BY Ralph J. Brown ASSISTANT COUNTY ENGINEER
SCALE 1/8" = 1'
DATE OCTOBER, 1961
FIELD BOOK
TRACED BY S. L. UNDERHILL

Reviewed 2/1/62 CDB

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

30/30

SUM - 91 - 7.82

VILLAGE OF MONROE FALLS
STOW TOWNSHIP
SUMMIT COUNTY
LOT 6
RANGE 10W
TWP. 3N

CURVE DATA
P.I. = STA. 148 + 56.79
Δ = 35° 50' 00" LT.
D = 6°
T = 308.77'
E = 48.67'
L = 597.22'
R = 954.93'

EXIST. CURVE DATA
P.I. STA. 148 + 56.79
Δ = 37° 44' 14" LT.
D = 23°
T = 85.14'
E = 14.15'
L = 164.07'

EXIST. P.I. STA. 142 + 57.56
Δ = 4° 02' 30"
D = 2°
T = 101.10'
E = 1.80
L = 202.08'
R = 2864.79'

CURVE DATA
P.I. STA. 152 + 97.32
Δ = 7° 48' RT.
D = 3°
T = 130.20
E = 4.43
L = 260.00

CURVE DATA
P.I. STA. 155 + 14.54
Δ = 8° 51' 30"
D = 2°
T = 221.90'
E = 8.57'
L = 442.91'
R = 2864.79'

EXIST. CURVE DATA
P.I. STA. 156 + 65.47
Δ = 3° 29' RT.
D = 3°
T = 58.09
E = 0.90'
L = 116.11

EXIST. P.I. STA. 160 + 65.43
Δ = 17° 38' 00" RT.
D = 5°
T = 177.04
E = 13.70'
L = 352.66'
R = 1145.92'

SUMMARY OF ADDITIONAL R/W REQUIRED

PARCEL NO.	OWNER	AREA ACRES	EXIST. BLDGS.	SHEET NO.	REMARKS
1 WA	The Flintkote Company, a Massachusetts corporation				MILL RACE PIPE
* 1 WA-1	" " " "				DRIVE
1 WA-2	" " " "				CHANNEL
1 SL	" " " "	0.04			
1 T	" " " "	0.33			TEMP. RUNAROUND
2	OHIO EDISON CO.	0.03			
* 3	The Flintkote Company, a Massachusetts corporation	0.003			
4	FRANK E. BINGHAM AND				
	DORIS V. BINGHAM	0.06			
4 WA	" "				DRIVE
5	GEORGE A. ROMACKER AND				
	CLARA E. ROMACKER	0.05			
6	RALPH J. LITCHARD JR. AND				
	WILLIAM E. MILLER	0.05			
7	EDWARD J. MACKEY AND				
	MARY K. MACKEY	0.05			
7 A	" "	0.01			
7 WA	" "				DRIVE
8	THE STANDARD OIL CO., AN OHIO CORP.	0.04			
9 WA	The Flintkote Company, a Massachusetts corporation				MILL RACE PIPE
9 WA1	" " " "				CHANNEL
10	C. E. McCRACKEN (EXECUTOR)	0.27			
10 WA	" " " "				CHANNEL
11	OHIO EDISON CO.	NONE			
12	FORD GRUBB	NONE			
13	SUMMIT COUNTY COMM.	NONE			
14	M. E. OLSON	NONE			
T. 6 WA	Ralph J. Lichard Jr. and William E. Miller				Drive

* PCL'S 1-T, 1SL, 1WA, 1WA-1, 1WA-2 & 3 DELETED FROM PLAN PER I.O.C. - STRAHL DATED 12/17/64 NON-PERFORMED, FROM PLAN 12/28/64

RIGHT OF WAY SHEET

SUMMIT COUNTY
ENGINEERING DEPARTMENT
COURT HOUSE AKRON, OHIO
L. G. WOLFE COUNTY ENGINEER

DRAWN BY G.A. McC	SCALE 1" = 50'
SUBMITTED BY G.A. McCHESNEY (DESIGNING ENGINEER)	DATE NOV. 1961
APPROVED BY (COUNTY ENGINEER)	FIELD BOOK 147 - 833
	TRACED BY S. L. U.

Parcels 1, 3, 9 Name change 3-30-64
Pcl 2T Deleted 12-2-63
NAME CHANGE Pcl 8 4-23-63
PCLS-3 & 2 REVISED BY G.A.McC 6-5-62
Pcls 2-T & 6 W/A Added 5-22-62