2	OHIO	U-1085(1)	1 / 112

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
COLUMBUS EXPRESSWAY SYSTEM
FRA-40R-12.30
CITY OF COLUMBUS, FRANKLIN COUNTY
MOUND ST EXPRESSWAY
INCLUDING GRADE SEPARATIONS WITH THE CHESAPEAKE AND OHIO RAILWAY COMPANY AND THE NEW YORK CENTRAL RAILROAD COMPANY

U-1085(1)

FRANKLIN COUNTY
FRA-40R-12.30

"LIMITED ACCESS"

This improvement is especially designed for thru traffic and has been declared a Limited Access highway or Freeway by action of the Director of Highways, in accordance with the provisions of Sec. 5511.02 of The Revised Code of Ohio.

The Standard Specifications of the State of Ohio, Department of Highways, including changes and supplemental specifications listed in the proposal, shall govern this 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 require the closing of the highway to traffic except as noted on sheet No. 5 and that detours will be provided as indicated on the plans.

Approved _____ Carl W. Schoene
Date MARCH 1, 1956 Chief Engineer, Division of Sewerage & Drainage, Col., O.

Approved _____ Robert F. Werner
Date Mar. 1, 1956 Chief Engineer Division of Engineering & Construction Col., O.

Approved _____ Floyd C. Reduck
Date Mar. 1, 1956 Director of Public Service Columbus, Ohio

Approved _____ G. W. Alsdorf
Date 1-4-56 Division Deputy Director

Approved _____ John F. Heuer
Date 4-11-56 Deputy Director of Planning & Programming

Approved _____ Richard Dick
Date 4-9-56 Engineer of Bridges

Approved 4-9-56 E. S. Braxton
Date _____ Engineer of Location & Design

Approved _____ I. F. Gerold
Date 4-9-56 Deputy Director of Design & Construction

Approved _____ N. F. Schlemmer
Date 4-11-56 First Assistant Director

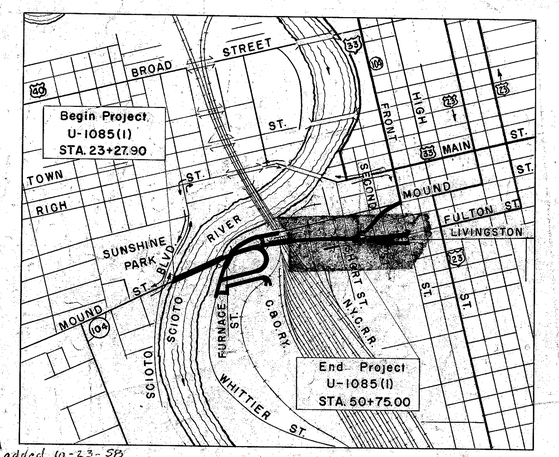
Approved _____ L. D. Linzell
Date 4-11-56 Director of Highways

CONVENTIONAL SIGNS

Center Line		Gas Valves	
Section Line		Existing Catch Basins	
Existing R/W		Proposed Catch Basins	
Proposed R/W		Catch Basins Adjusted to Grade	
Slope Easement		Catch Basins Abandoned	
Property Line		Catch Basins Removed	
Fence Line		Telephone Pole	
Water Line		Water Hydrant	
Gas Line		Traffic Light	
Existing Sewer			
Proposed Sewer			
Water Valves			
Existing Manholes			
Proposed Manholes			
Manholes Adjusted to Grade			
Manholes Abandoned			
Manholes Removed			
Power Pole			
Light Pole			
Trees to be Removed			
Railroads			
Existing Retaining Wall			
Existing Guard Rail			
Proposed Guard Rail			

INDEX OF SHEETS

7AR 80R 81R 82A
@ 11R 99R 102A added to 2-23-56



DELIVERY POINT C & O Ry. Co. Siding

AVERAGE HAUL 0.2 Mile

LOCATION PLAN

PORTION TO BE IMPROVED
STATE HIGHWAYS
CITY STREETS
DETOURS

SCALE

PLAN AND PROFILE — 1" = 40'
PAVEMENT DETAILS — 1" = 20'
CROSS SECTIONS — 1" = 10'

Reviewed & Approved _____ N. F. Schlemmer
Date 3/8/56 Engineer of Traffic

Approved _____
Date _____ Chief Engineer The Chesapeake & Ohio Railway Company

Approved _____
Date _____ Chief Engineer The New York Central Railroad Company

n Project Sta. 23+27.90
Project Sta. 50+75.00
Net Length of Project = 2747.10 L.F. = 0.520 Mi.

Lengths

℄	Sta. 22+50.00	to	Sta. 50+75	=	2825.00 L.F.
Bound Ramp	Sta. 50+75.00	to	Sta. 60+51.11	=	976.11 L.F.
Bound Ramp	Sta. 0+75.00	to	Sta. 10+69.80	=	994.80 L.F.
A	Sta. 0+91.25	to	Sta. 1+81.94	=	90.69 L.F.
B	Sta. 6+59.10	to	Sta. 14+51.00	=	791.90 L.F.
C	Sta. 3+21.79	to	Sta. 5+25.50	=	203.71 L.F.
D	Sta. 1+11.50	to	Sta. 2+18.34	=	106.84 L.F.
ce Road A	Sta. 0+25.00	to	Sta. 6+08.86	=	583.86 L.F.
ce Road B	Sta. 2+00.00	to	Sta. 10+69.66	=	869.66 L.F.
Street	Sta. 0+15.00	to	Sta. 2+21.87	=	206.87 L.F.
ier Street	Sta. 4+75.00	to	Sta. 21+00.00	=	1625.00 L.F.
ce Road C	Sta. 0+88.00	to	Sta. 4+83.00	=	395.00 L.F.

Net Length of Work = 9669.44 L.F. = 1.831 Mi.

FRANKLIN COUNTY FRA 40R-12.30
of Letting _____
act Number _____

STANDARD DRAWINGS

NUMBER	DATE	NUMBER	DATE
L-3	4-1-50	I-14G	1-22-52
L-3-A	4-1-50	I-15 No.2	12-1-54
RI-1	1-3-55	I-21-23	10-17-55
DR-1	1-3-55	G 7.07	1-2-53
T-35	1-2-56	B-T-50-70	
LJ No1	7-1-55	71E No1	10-1-47
TJ	2-23-56	AS-1-54	12-1-54
L-1	4-1-50	I-15 N21	8-1-55
S-27-PC-1	5-1-52	I-8CB NO.6	5-1-52
I-1234 & 5	2-20-45	03-1	7-1-55
I-8CBI-2A&B	5-1-52		
I-8C.B. 2-2A & B	5-1-52		
I-8C.B. 2-3&2-4	5-1-52		
I-8INo2	12-1-54		
I-8MH No1	5-1-52		
I-8MH No.2	5-1-52		
I-8MH No1-A	1-3-55		
I-12	7-1-54		

SUPPLEMENTAL SPECIFICATIONS

NUMBER	DATE	NUMBER	DATE
30	5-28-48	8-119 Rev.	12-14-55
L-209.12	7-17-54	5	6-8-55
M-106.6(d)	11-30-54	S-102	6-15-49
M-109.23 Rev.	5-28-54		
S-114	8-30-55		
M-110.27	9-9-52		

CONSTRUCTION BUREAU DEC 2 1959 FOUND FACTORY

Revised 5/18/56 N.F.S.

PLANS PREPARED BY
ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
245 NORTH HIGH STREET.
COLUMBUS, OHIO
FOR
CITY OF COLUMBUS, OHIO

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

_____
DISTRICT ENGINEER DATE

FED. AID DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

2
112

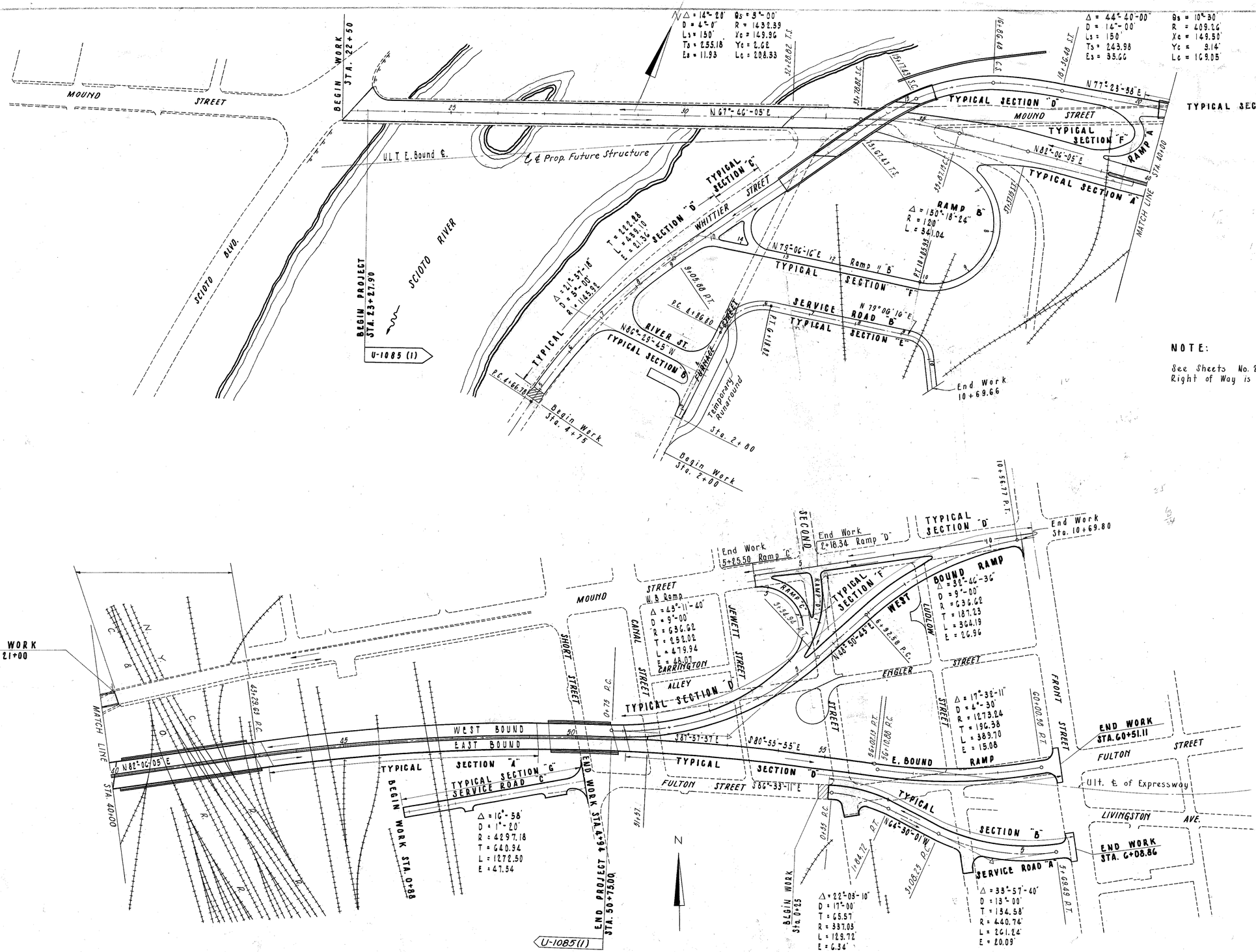
FRANKLIN COUNTY
FRA-40R-12.30

SCHEMATIC PLAN

TYPICAL SECTION "C"

NOTE:

See Sheets No. 25 & 26 for Ultimate Construction & Right of Way is provided for an Ultimate 6 Lane facility.

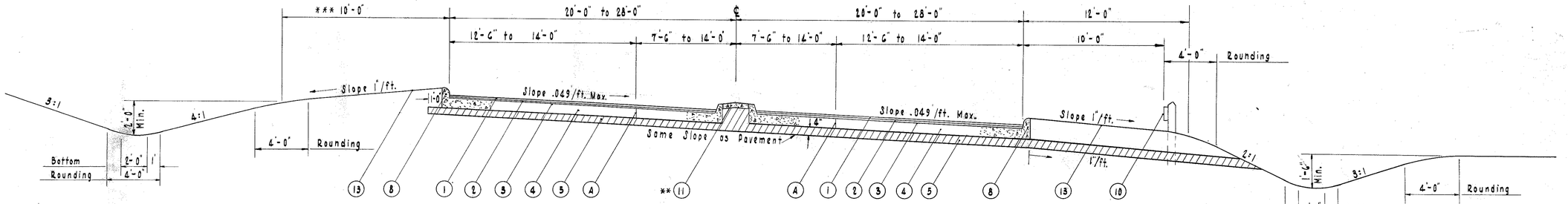


TYPICAL SECTIONS

TYPE T-35 ON B-70

FED. RD. DIVISION	STATE	PROJECT	TYPE	3
2	OHIO	U-1085-1		112

FRANKLIN COUNTY
FRA-40R-12.30
TYPICAL SECTION

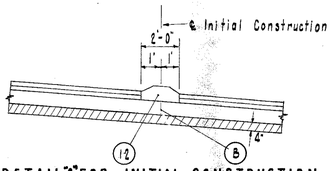


TYPICAL SECTION "A"

Superelevated Curbed Section
* Sta. 32+28 to Sta. 39+66.55
* Sta 43+48.79 to Sta. 49+22.68

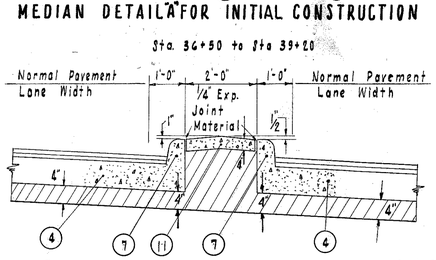
*Note: Sta. 32+28 to Sta. 33+25 – See Sheet No. 28 for Joint Spacing & Width.
Sta. 36+50 to Sta. 39+66.55 See Sheet No. 29 for Joint Spacing & Width
Sta. 43+48.79 to Sta. 49+22.68 See Sheet No. 34 for Joint Spacing & Width
Sta. 33+25 to Sta. 36+50 See Sheet No. 29 for Joint Spacing & Width

** Sta. 36+50 to Sta. 39+20 See Median Detail "A" at Left.
** Sta. 32+28 to Sta. 36+50 No Median
*** Note: Sta. 32+28 to 38+50 Lt. 11'-0"
Sta 39+25 to 39+66.55 & Sta 43+48.79 to 49+22.68
Profile Grade 2' Rt. & Lt. of ℄ Survey



MEDIAN DETAIL "A" FOR INITIAL CONSTRUCTION

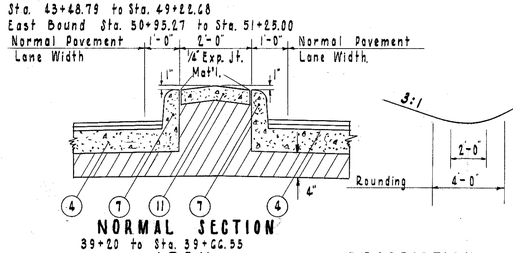
Sta. 36+50 to Sta 39+20



PORTLAND CEMENT CONCRETE MEDIAN (MOD) DETAIL

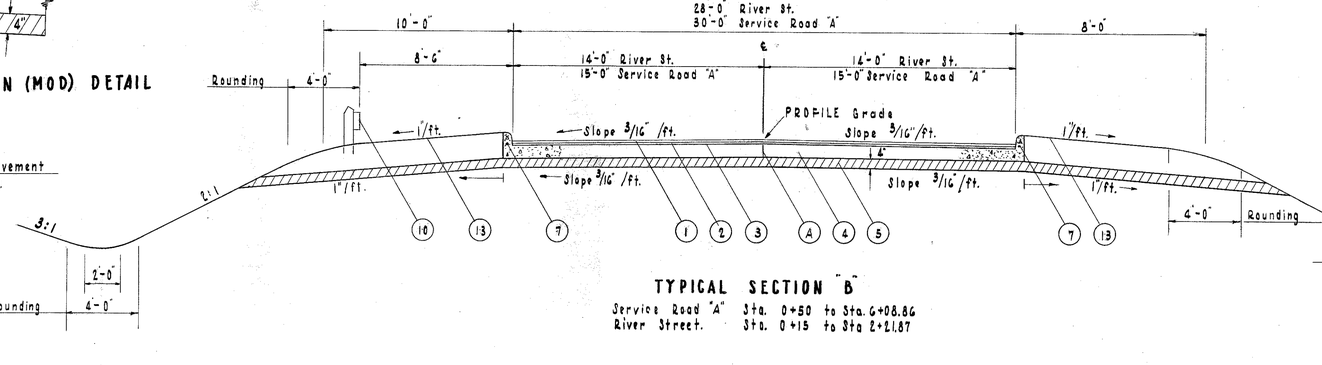
Superelevated Section

Sta. 43+48.79 to Sta. 49+22.68
East Bound Sta. 50+95.27 to Sta. 51+25.00



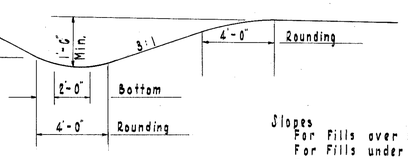
NORMAL SECTION

39+20 to Sta. 39+66.55



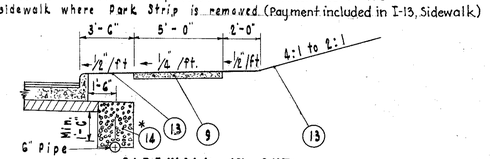
TYPICAL SECTION "B"

Service Road "A" Sta. 0+50 to Sta. 6+08.86
River Street. Sta. 0+15 to Sta 2+21.87



SIDEWALK IN FILL

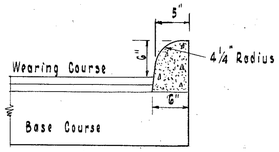
* Sta. 33+00 Lt. to Sta. 34+65 Lt. 2'-6"
Sta. 34+65 Lt. to Sta. 38+56.31 Lt.
Note: Place 1/2" Premolded Expansion Joint between curb and sidewalk where Park Strip is removed. (Payment included in I-13, Sidewalk.)



SIDEWALK IN CUT

Service Road "A" Sta. 1+57.82 Rt. to Sta. 5+81 Rt.
*I-4 Underdrains Sta. 1+50 to Sta. 5+75 (Service Road "A") Rt & Lt.

Slopes
For Fills over 5', use 2:1 slopes
For Fills under 5', Use 4:1 Slopes
For Cuts under 5', use 3:1 backslopes
For Cuts over 5', use 2:1 backslopes



TYPE "A" CONCRETE CURBS

ITEM		DESCRIPTION
(1)	T-35	1 1/4" Asphaltic Concrete Surface Course - Type "C" (GO-70)
(2)	B-35	1 1/4" Asphaltic Concrete Leveling Course (GO-70)
(3)	T-30	Tack Coat (0.1 Gal./Sq.Yd.) See Proposal Note
(4)	B-70	9" Portland Cement Concrete Base Course
(5)	I-22	4" Subbase Grading A or B
(7)	I-12	Standard Concete Curb Type 2-B
(8)	I-12	Concrete Curb Type "A" as per. plan.

ITEM		DESCRIPTION
(9)	I-13	4" Concrete Sidewalk
(10)	I-15	Guard Rail, Steel Beam Type "Deep" as shown on plans
(11)	I-21	4" Portland Cement Concrete Median Type I (Mod.)
(12)	I-23	Standard Precast White Portland Cement Concrete Traffic Dividers
(13)	L-9	Seeding and Protecting
(14)	I-4	6" Underdrains
(A)		Standard Longitudinal Joint
(B)		Longintudinal Key Joint without Tie Bars

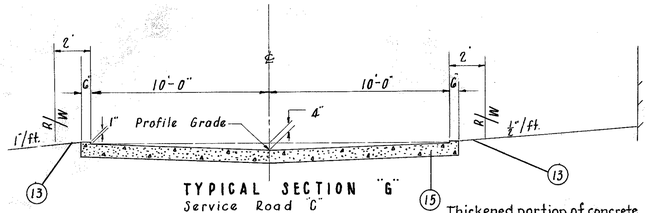
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-1085-1	

4
112

FRANKLIN COUNTY
FRA.-40R-12.30
TYPICAL SECTIONS

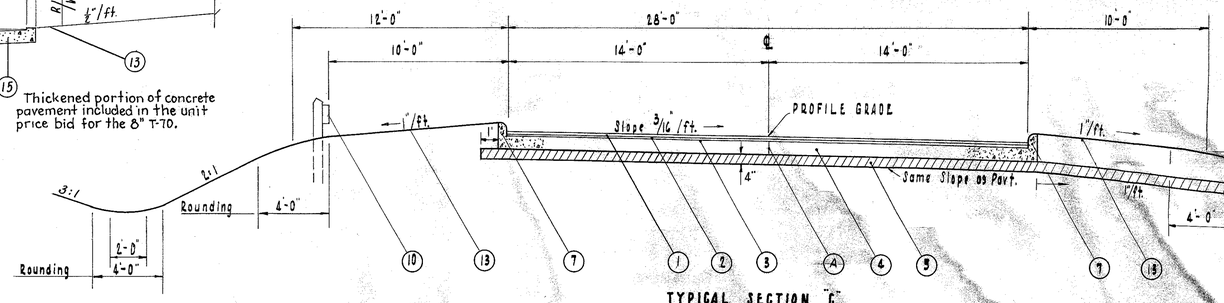
TYPICAL SECTIONS

TYPE T-35 ON B-70



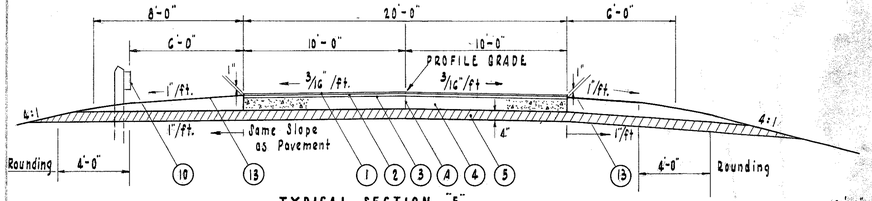
TYPICAL SECTION "G"
Service Road "G"
Sta. 0+88 to Sta. 4+83

Thickened portion of concrete pavement included in the unit price bid for the 8" T-70.



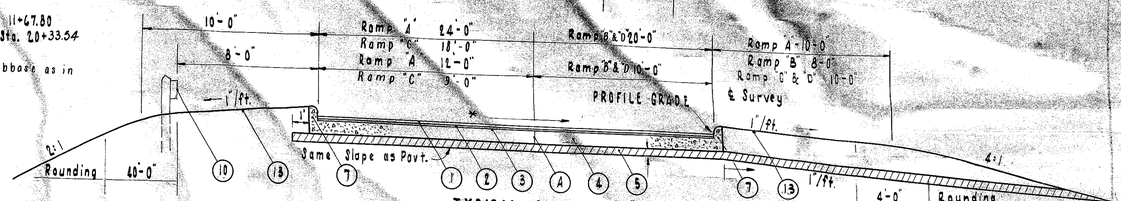
TYPICAL SECTION "C"
Whittier Street Sta. 10+50 to Sta. 11+47.80
* Whittier Street Sta. 18+32.64 to Sta. 20+33.54

* The slope of pavement & I-22 Subbase as in Typical Section "E".



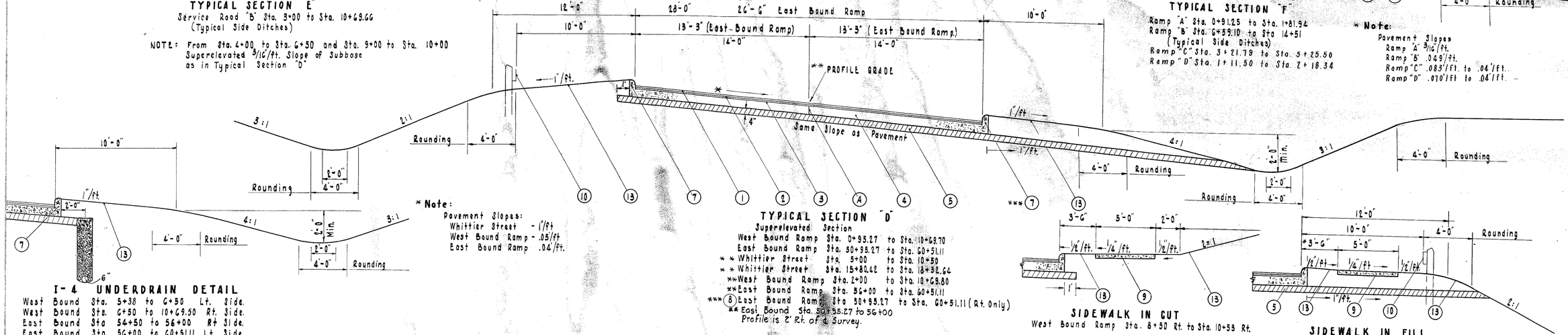
TYPICAL SECTION "E"
Service Road "B" Sta. 3+00 to Sta. 10+69.66
(Typical Side Ditches)

NOTE: From Sta. 4+00 to Sta. 6+50 and Sta. 9+00 to Sta. 10+00 Superelevated 3/16"/ft. Slope of Subbase as in Typical Section "D"



TYPICAL SECTION "F"
Ramp "A" Sta. 0+91.25 to Sta. 1+81.94
Ramp "B" Sta. 6+59.10 to Sta. 14+51
(Typical Side Ditches)
Ramp "C" Sta. 3+21.79 to Sta. 5+25.50
Ramp "D" Sta. 1+11.50 to Sta. 2+18.34

* **Note:**
Pavement Slopes
Ramp "A" 3/16"/ft.
Ramp "B" .049"/ft.
Ramp "C" .083"/ft. to .04"/ft.
Ramp "D" .070"/ft to .04"/ft.



* **Note:**
Pavement Slopes:
Whittier Street - 1"/ft
West Bound Ramp - .05/ft
East Bound Ramp .04/ft.

TYPICAL SECTION "D"
Superelevated Section
West Bound Ramp Sta. 0+95.27 to Sta. 10+69.70
East Bound Ramp Sta. 50+95.27 to Sta. 60+51.11
* * Whittier Street Sta. 5+00 to Sta. 10+50
* * Whittier Street Sta. 15+80.42 to Sta. 18+32.64
** West Bound Ramp Sta. 2+00 to Sta. 10+69.80
** East Bound Ramp Sta. 54+00 to Sta. 60+51.11
*** (8) East Bound Ramp Sta 50+95.27 to Sta. 60+51.11 (Rt. Only)
** East Bound Sta. 50+95.27 to 56+00
Profile is 2' Rt. of ℄ Survey.

SIDEWALK IN CUT
West Bound Ramp Sta. 8+50 Rt. to Sta. 10+53 Rt.

SIDEWALK IN FILL
* Whittier Street Sta. 20+17 Rt. to Sta. 21+60 Rt. , 183'
Ramp "A" Sta. 0+51.25 Rt. to Sta. 2+23.67 Rt.

I-4 UNDERDRAIN DETAIL

West Bound	Sta. 5+38	to	6+50	Lt. Side.
West Bound	Sta. 6+50	to	10+69.50	Rt. Side.
East Bound	Sta 54+50	to	56+00	Rt Side.
East Bound	Sta 56+00	to	60+51.11	Lt Side.

	ITEM	DESCRIPTION
(1)	T-35	1 1/4" Asphaltic Concrete Surface Course Type "C" (60-70)
(2)	B-35	1 1/4" Asphaltic Concrete Leveling Course (60-70)
(3)	T-30	Tack coat (0.1 gal./Sq.Yd.) See Proposal Note
(4)	B-70	9" Portland Cement Concrete Base Course
(5)	I-22	Subbase, Grading A or B
(7)	I-12	Standard Concrete Curb Type 2-B
(8)	I-12	Concrete Curb Type "A" as per plan
(9)	I-13	4" Concrete Sidewalk
(10)	I-15	Guard Rail, Steel Beam Type "Deep" as show on plans
(13)	L-9	Seeding and Protecting
(14)	I-4	6" Underdrains
(A)		Standard Longitudinal Joint
(15)	T-70	8" Portland Cement Concrete Pavement

Slopes:
For Fills over 5', use 2:1 Slopes
For Fills under 5', use 4:1 Slopes
For Cuts under 5' use 3:1 backslopes
For Cuts over 5, use 2:1 backslopes

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

5
112

FRANKLIN COUNTY
FRA - 40 R - 12.30

GENERAL NOTES

GENERAL NOTES

GENERAL

FIELD OFFICE

The Contractor shall provide a suitable field office in accordance with Sec S-0.01 (b) having a minimum of 300 Sq.Ft. of floor space. The Contractor shall have a telephone installed and maintained during construction of this project. This office is to be for the exclusive use of the Engineer and his assistants.

UTILITY ADJUSTMENT

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.
WATER LINES that are to be abandoned or relocated will be done by the city of Columbus and are not included in this Contract.

EXISTING UNDERGROUND APPURTENANCES

The location, size and depth of all existing pipe and underground utility appurtenances represents the best information available, but the State of Ohio does not guarantee the correctness or completeness thereof.

UTILITY OWNERSHIP

The Ohio Bell Telephone Company, Columbus, Ohio.
The Ohio Fuel Gas Company, Columbus, Ohio.
Columbus & Southern Ohio Electric Company, Columbus, Ohio.
City Of Columbus, Department Of Water, Columbus, Ohio.
City Of Columbus, Department Of Sewerage, Columbus, Ohio.

Columbus Municipal Power Company, Columbus, Ohio.

STREET MARKER & LIGHT STANDARD REMOVAL

The City Of Columbus shall remove all street marker standards, street light standards and other traffic control devices, not the property of the State Of Ohio, within the work limits.
The removal of the Light Standards on the Existing Scioto River Bridge (FRA-40R-1230) will be included in the Bridge Quantities

PAYMENT

Payment For: All signal lights, barricades, signs, etc. necessary to perform the prescribed Traffic Maintenance is to be included in the Lump Sum Bid for Maintaining Traffic.

ELEVATION DATUM

All elevations are based on City Of Columbus Datum. (U.S.G.S.).

REPLACEMENT

The contractor shall replace at his own expense any item not specifically listed for removal that is damaged or destroyed by his operations.

LIMITED ACCESS

All improvements are to have Limited Access except Service Roads "A" & "B"

RIGHT OF WAY

The Right of Way provided is for an Ultimate Six-Lane facility, with the additional lanes on the outside of the proposed 4 lanes.

DESIGN SPEED

Main Center Line - 50 M.P.H. Eastbound Ramp - 35 M.P.H. Ramp "B" - 25 M.P.H.
Westbound Ramp - 35 M.P.H. Whittier Street - 35 M.P.H.

GENERAL (CONTINUED)

CONSTRUCTION LAYOUT STAKES

See Note in proposal describing the work included in this Lump Sum pay item.

COOPERATION NOTE

The Contractor will note that the Mound-Sandusky Interchange and the East-Bound River Bridge will be connected to the Mound Street Expressway. The contractor will give his fullest cooperation in making the necessary connections if the two projects are constructed concurrently to insure proper coordination.

TRAFFIC MAINTENANCE

Mound Street: The street will be closed to traffic from the east end of the existing structure over the C&O Ry. to the west end of the existing Mound Street River Bridge, when deemed necessary for construction by the Engineer. The detour is as shown on Sheet № 1.

Two-way traffic shall be maintained between Short Street and Front Street unless otherwise directed by the Engineer. One-way traffic Westbound will be maintained at all times.

Front Street: Two-way traffic shall be maintained at all times.

Furnace Street: A temporary run-a-round shall be provided on Furnace Street to Mound Street until the River Street connection is open to traffic. The traffic will then move from Furnace Street to River Street and turn south on Whittier Street. Two-way traffic shall be maintained at all times.

Whittier Street: The street will be closed to traffic until the River Street connection is made and then Whittier Street will be open to traffic from the south to River Street.

Short Street: The Contractor shall plan the construction operations so as to provide two ten foot lanes of traffic. A minimum vertical clearance of 14 feet above the roadway surface shall be maintained for all traffic lanes and the Contractor shall safeguard vehicular traffic on Short Street by providing platforms, nets or other suitable protection above the traveled roadway.

Canal Street: Canal Street between Mound Street and Fulton Street may be closed to traffic when deemed necessary by the Engineer.

Jewett Street: Jewett Street between Mound Street and Fulton Street may be closed to traffic when deemed necessary by the Engineer.

Second Street: Second Street from Fulton Street to Mound Street may be closed to traffic when deemed necessary by the Engineer.

Ludlow Street: Ludlow Street from Mound Street to a point 50' North of Engler Street may be closed to traffic when deemed necessary by the Engineer.

Ludlow Street at Fulton Street may be closed when deemed necessary by the Engineer.

Ludlow Street at the intersection of Service Road "A" may be closed to traffic when deemed necessary by the Engineer.

Fulton Street: Fulton Street between Second and Front Street may be closed to traffic when deemed necessary by the Engineer.

Engler Street: Engler Street between Second Street and Canal Street may be closed to traffic when deemed necessary by the Engineer.

Business Traffic: Local traffic is to be maintained as prescribed above, also traffic to local business firms and manufacturing establishments shall be maintained to the extent that normal business operations can be conducted.

SCHEDULE OF OPERATIONS

STAGE 1 a) Construct temporary runaround for Furnace Street Sta. 2+00 to Sta. 5+54.
b) Construct River Street, Whittier Street, from Sta. 4+75 to 8+50, Service Road "B" from Sta. 2+80 to Sta. 4+75. Service Rd. "C" from Sta. 0+88 to Sta. 4+94.
c) Construct turnaround at Sta. 7+57 W. Bound 101' Rt.
d) Construct turnaround at Sta. 4+87 W. Bound 55' Rt.
e) Construct Expressway, Sta. 39+00 to Sta. 50+00 including Bridge № FRA-40-1255 and west abutment of Bridge № FRA-40-1279.

STAGE 2 a) After completion of Stage 1, item b, remove the temporary run-around and construct remainder of Service Road "B".
b) After completion of Stage 1, item c, construct W.B. Ramp Sta. 2+00 to 10+69.80 & Ramp C & D
c) After completion of Stage 1, item d, construct Service Road "A".

STAGE 3 a) After completion of Stage 2, item a, construct the rest of Whittier Street including Bridge № FRA-40-1250 and alterations to existing Mound Street viaduct.
b) Construct Expressway Sta. 22+23 to Sta. 39+00
c) Construct Ramps "A" and "B".
d) After completion of Stage 2, item c, construct East Bound Ramp Sta. 52+00 to 60+51.11.

STAGE 4 a) After the removal of the Columbus and Southern Ohio Electric Company outdoor substation, construct the remainder of the expressway and Bridge № FRA-40-1279.

The Schedule of Operations shown above is a suggested schedule. The Contractor may, at his option, submit a revised Schedule of Operations for approval by the Engineer.

ROADWAY

SEEDING AND PROTECTING

Quantities for seeding, Item L-9 are calculated for the soil areas ten feet (10) outside the construction limits as shown on the cross sections or to the Right Of-Way Line if such a line is less than ten (10) feet from the construction limits. All areas outside these limits, where the vegetative growth has been injuriously disturbed or destroyed by the Contractor, shall be restored and seeded in conformance with the provisions of Item L-9, by the Contractor at his own expense. All disturbed areas resulting from building removal shall be seeded. The limits for seeding for all disturbed areas, resulting from building removal, shall be 10' outside the original building line.

Quantities for seeding, Item L-9 are calculated for the entire area within the Right Of Way Line East of Short Street.

FERTILIZER, SEEDING & SODDING

Comercial fertilizer (10-6-4) is to be used on all seeded and sodded areas. Sod is to be used around catch basins, structures, and ditches where necessary to prevent erosion as indicated on the plans and where and as directed by the Engineer.

BASEMENTS

Before backfilling all basements within the R/W limits, all floors shall be broken up and all drains plugged. Payment for same is to be included in the unit bid price for E-1, Roadway Excavation.

MISCELLANEOUS REMOVALS

The removal and disposal of any existing pavement, sidewalk, building foundations, steps, cellar floors, well covers, cistern covers, septic tanks, concrete bases, walls, curbs, curb and gutter, rails, ties, pole stubs, headwalls, pipes, driveway and garage floors or other masonry lying within the right of way (and not specifically paid for under a separate item) shall be classified as excavation, and paid for under the excavation item of which they are a part. If lying below or outside the plan limits for excavation, additional excavation necessary to perform the above operation shall be paid for at the contract unit price bid per Cu. Yd. for Roadway Excavation Item E-1 or Excavation for Structures Item E-2.

Pavements, sidewalks, steps, cellar floors, or other masonry shall be excavated to a depth of three (3) feet below the the proposed pavement subgrade, and to a depth of three (3) feet below proposed finished surface if located outside the proposed pavement area. If items extend below the above limits, they shall be broken up into portions not to exceed One (1) square foot in area but need not be removed.

Wells, cisterns and septic tanks encountered on the project shall be filled with broken foundation masonry or rock placed as rock embankment according to section E-1.08 of the Construction and Materials Specifications.

TREE REMOVAL

Payment for removal of all trees and stumps under 12" shall be included in the unit price bid for Item E-1 Roadway Excavation.

All trees and stumps 12" and over shall be paid for under Lump Sum Price Bid for Item E-9 Removal of Trees and Stumps. The number designated for removal on the plans is approximate and the State of Ohio reserves the right to order the removal of additional trees even though these trees are not indicated on the plans or are indicated to be preserved. All trees not labled but indicated for removal are less than 12" in diameter. The approximate number of trees and stumps to be removed are as follows:

Sizes	12"to18"	18"to 24"	24"to 30"	30"to 36"	36"to42"	42"to 48"	Over 48"
Number Trees	15	1	0	1	0	0	0
Number Stumps	0	0	0	0	0	0	0

SIDEWALKS

Where new sidewalk is to meet existing sidewalk, the new sidewalk shall be built to the existing joint.

GUARD RAIL

Ends of individual runs will be adjusted as directed by the Engineer at the time of construction to accommodate 12'6" panel lengths.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

6
112

FRANKLIN COUNTY
FRA - 40 R - 12.30
GENERAL NOTES

GENERAL NOTES

PAVEMENT

NON-RIGID PAVEMENT REMOVAL

The payment for removal and scarifing of non-rigid type pavement shall be included in the Unit Price Bid of Item E-1, Roadway Excavation. Where fill is to be placed on a non-rigid pavement, the pavement shall be scarified before placing the fill and payment shall be included in the Unit Bid Price for Item E-1, Roadway Excavation.

EXISTING PAVEMENT REMOVAL

After the existing pavement has been removed the old roadway shall be plowed, harrowed and dragged to a smooth grade, the old ditches filled and the entire area left in a neat condition. Cost of this work shall be included in the price bid for pavement removal, E-8. Areas shall then be seeded and mulched.

FINISHING CONCRETE PAVEMENT

Hand finishing as per Sec T-71.211 of the General Specifications will be permitted at approach slabs, intersections, sections where maintenance of traffic requires hand finishing and sections of variable width lanes which in the opinion of the Engineer require hand finishing.

FLEXIBLE FORMS

Approved flexible forms shall be used for construction of circular pavement edges under 200 foot radius.

PAVEMENT JOINTS

The location of construction joints not indicated on the plans shall be located by the contractor subject to the approval of the Engineer.

SUPERELEVATIONS

Superelevated curves shall be built without crown. The crown shall be worked out of the pavement in the area indicated on pavement details.

PAVEMENT ELEVATIONS

Pavement edge elevations are at the face of the curb unless otherwise indicated.

T-30 BITUMINOUS PRIME COAT

On proposed B-119 base courses, the rate of application shall be 0.35 gal per sq. yd. for T-30 Prime Coat.

TACK COAT INCLUDING SAND COVER

Bituminous tack coat shall be applied at the rate of 0.10 gal. per sq. yd. After the bituminous material has been applied, all material not required to give a uniform coating to the surface shall be swept into all cracks and open joints before the sand coat is placed. Sand cover shall be uniformly spread at a rate of 2 to 5 lbs. per sq. yd. and at such a time that it will adhere to the bituminous material. Cost of sand cover shall be included in the price bid per gallon for bituminous material. Tack coat will not be used where an existing bituminous pavement is to be resurfaced. (See proposal Note.)

PAVEMENT (CONTINUED)

PAVEMENT JOINT SYMBOLS

—— L —— Standard Longitudinal Joint

—— LK —— Longitudinal Key Joint without Tie Bars

═══ E ═══ Standard Expansion Joint

═══ (E) ═══ Expansion Joint without Dowels, 2' Minimum length

SUBBASE COURSE

In the final finishing of slopes and ditches, care shall be exercised to assure that the exposed edge of the subbase course will be left free of earth cover that would impede free drainage.

SEEDING & PROTECTING (Cont'd)

The rate of seeding shall be 3 pounds per 1000 sq. ft. and the seed mixture shall be as follows:

40% Kentucky Bluegrass (Poa pratensis)
10% Kentucky 31 Fescue (Festuca elatior)
30% Creeping Red Fescue (Festuca rubra)
15% Red Top (Agrostis alba)
5% White Dutch Clover (Trifolium repens)

E-1 SUBGRADE COMPACTION

The subgrade under B-119 material used for drives shall be compacted to a depth of six (6) inches to the density requirements in Table III, Item E-1. Payment for subgrade compaction, as specified above, will be included in the unit price bid for Item E-1, Roadway Excavation.

DRAINAGE

CONNECTIONS TO EXISTING SEWERS

At places where the plans provide 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 shall be included in the cost bid for the pertinent Item I-2 Storm Sewer.

INLET ELEVATIONS

The inlet elevation shown on plans is the elevation that the top of grate is to be placed in the pavement.

GENERAL SUMMARY

ITEM	QUANTITIES			UNIT	DESCRIPTION
	TOTAL EXPRESSWAY	SER RD. & WHITTIERS TOTAL	PROJECT TOTAL CODE 6707		
					ROADWAY
E-1	3,701	23,433	27,134	C.Y.	Roadway Excavation as per Plan.
E-1	8,472	19,812	28,284	S.Y.	Compacted Subgrade
E-4	153,679	127,930	281,609	C.Y.	Borrow
I-18		22	22	C.Y.	Stabilized Crushed Aggregate Shoulders and Approaches
E-8	2,172	6,238	8,410	S.Y.	Removal & Disposal of Existing Pavement as per Plan.
E-8	-	13,179	13,179	S.F.	Removal & Disposal of Existing Sidewalk
E-8	313	2,916	3,229	L.F.	Removal & Disposal of Existing Curb
S-15		Lump	Lump	Lump	Temporary Runaround Road.
E-9	Lump	Lump	Lump	Lump	Removal of Trees and Stumps
E-11	824	773	1597	M-Gals.	Water
E-12	345	663	1008	L.F.	Pipe Removed, 15" and Under
E-12	-	25	25	L.F.	Pipe Removed, over 15"
S-15		450	450	C.Y.	Furnishing And Placing Aggregate for Traffic Bound Surface Course
I-13	3,042	6,746	9,788	S.F.	4" Concrete Sidewalk
I-15	1642.62	5507.40	7150.02	L.F.	Guard Rail, Steel Beam Type (Deep)
S-15		9	9	Tons	Furnishing And Applying Calcium Chloride or Calcium Magnesium Chloride
L-9	30,452	62,967	93,419	S.Y.	Seeding & Protecting as per Plan
L-9	2.74	5.76	8.50	Tons	Commercial Fertilizer (10-6-4)
L-10	139	1,078	1,217	S.Y.	Sodding
Special	1		1	Each	Single Pole Overhead Sign Assembly, Type "A"
					*LIGHTING
S-25	10	35	45	Ea.	Combination Foundation & Pull Box as per Plan
S-25	2	12	14	Ea.	Pull Box as per Plan
S-25	10	23	33	Ea.	Lamp Standards with Single 15' Bracket.
S-25	-	4	4	Ea.	Lamp Standards with 10' and 15' Brackets.
S-25	-	6	6	Ea.	Lamp Standards with Single 10' Brackets
S-25	-	2	2	Ea.	Lamp Standards with Double 10' Brackets.
S-25	102	428	530	L.F.	2" I.D. Fiber Conduit Concrete Encased as per Plan.
					DRAINAGE
E-2	4	22	26	C.Y.	Excavation for Structures
I-2		90	90	L.F.	8" Class "B" Storm Sewers
I-2		8	8	L.F.	6" Class "B" Storm Sewers
I-2	254	668	922	L.F.	12" Class "B" Storm Sewers
I-2	476	1,086	1,562	L.F.	15" Class "B" Storm Sewers
I-2	30	-	30	L.F.	18" Class "B" Storm Sewers
I-2	-	10	10	L.F.	12" Class "B" Storm Sewers, Paved Bit. Coated C.M.P. M-6.4 (d)
I-2	-	36	36	L.F.	15" Class "B" Storm Sewers S.R.C.S.P. M-6.6 (a)
I-2	124	760	884	L.F.	12" Class "B" Storm Sewers Under Pavement or Approaches
I-2	108	711	819	L.F.	15" Class "B" Storm Sewers Under Pavement or Approaches.
I-2	214		214	L.F.	12" Class "B" Storm Sewers Under Pavement or Approaches. Heavy Duty R.C.C.P. M-106.6 (d)
I-2		112	112	L.F.	18" Class "B" Storm Sewers Under Pavement or Approaches, S.S.R.C.C.P. M-6.6 (b)
I-2		166	166	L.F.	24" Class "B" Storm Sewers Under Pavement or Approaches, Heavy Duty R.C.C.P. M-106.6 (d)
I-2		164	164	L.F.	60" Storm Sewers Under Pavement or Approaches, Heavy Duty R.C.C.P. M-106.6 (d) with Full Vitrified Liner as per Plan.
I-2	194		194	L.F.	8" Class "A" Storm Sewer E.S.V.S.P. M-6.8 (b)
I-2	-	42	42	L.F.	15" Class "A" Storm Sewers Under Pavement or Approaches
I-2	-	136	136	L.F.	21" Class "A" Storm Sewers Under Pavement or Approaches, Heavy Duty R.C.C.P. M-106.6 (d)
I-5		1	1	Ea.	8" Pipe Special for Class "B" Storm Sewers
I-4	-	1,853	1,853	L.F.	6" Underdrains
I-4		36	36	L.F.	6" Pipe Outlet for Underdrains, Sec. M-6.4(h) Without Perforations
I-5		1	1	Ea.	24" Automatic Drainage Gate, As Per Plan
I-5	1	-	1	Ea.	12" Pipe Special for Class "B" Storm Sewer Under Pavement or Approaches
I-5	2	4	6	Ea.	15" Flap Gate, Neenah R-5040 Series or Equal with Bronze Hinge Pins.
I-8	-	2	2	Ea.	Standard No. 1-2a Catch Basins Modified as per Plan
I-8	2	5	7	Ea.	Standard No. 2-2a Catch Basins Modified as per Plan
I-8	-	2	2	Ea.	Standard No. 2-3 Catch Basins Modified as per Plan.
I-5		1	1	Ea.	18" Flap Gate, Neenah R-5040 Series or Equal with Bronze Hinge Pins.
I-8	13	36	49	Ea.	Standard No. 2-6 Inlets Modified as per Plan.
I-8	1	-	1	Ea.	Standard No. 2-14 Inlet Modified as per Plan.
I-8	3	9	12	Ea.	Standard No 1 Manholes Modified as per Plan.
I-8	-	1	1	Ea.	Standard No 2 Manhole Modified as per Plan
I-8		3	3	Ea.	Standard No. 2 Manhole without Drop Pipe as per plan
I-8	-	1	1	Ea.	Catch Basin Adjusted to grade
I-8	-	1	1	Ea.	Manhole Adjusted to Grade
I-5		3	3	Ea.	12" Flap Gate, Neenah R-5040 Series or Equal with Bronze Hinge Pins.
I-10	20	2	22	S.Y.	Riprap, Type "A" Grout Filled
I-14		89	89	L.F.	Paved Gutter, Type 1 Modified as per Plan.
I-14	64	215	279	L.F.	Paved Gutter, Type 3 Modified as per Plan.
I-14	10	30	40	L.F.	Paved Gutter Type "A" as per Plan.
I-5		1	1	Ea.	8" Flap Gate, Neenah R-5040 Series or Equal with Bronze Hinge Pins.
I-16	2	13	15	Ea.	Catch Basins Abandoned
I-16	3	1	4	Ea.	Manholes Abandoned.
I-8		2	2	Ea.	Standard No. 6 Catch Basin Modified as per plan
S-1	1.7	8.6	10.3	C.Y.	Concrete for Structures Class "C"
S-4	48	217	265	Lb.	Reinforcing Steel.
S-24		Lump	Lump	Lump	Removal of Existing Structures
Special		Lump	Lump	Lump	Abandoning Existing 60" Brick Sewer.
					DRAINAGE ALTERNATE See Proposal and Sheet No. 38
I-2		164	164	Lin. Ft.	60" Storm Sewers Under Pavement or Approaches, Heavy Duty R.C.C.P, Sec. M-106.6(d) As Per Plan (Without Vitrified Liner)
					PAVEMENT
T-35	302	718	1020	C.Y.	Asphaltic Concrete Surface Course Type "C" (60-70)
B-35	302	697	999	C.Y.	Asphaltic Concrete Leveling Course (60-70)
B-35	-	812	812	L.F.	Sealing Vertical Face of Existing Pavement.
T-30	871	1885	2.756	Gal.	Bituminus Tack Coat as per Plan
T-30	-	268	268	Gal.	Bituminus Prime Coat, Sec. M-5.2, RC-1 or RC-2 or Sec. M-5.7, RT-2 or RT-3.
B-70	8,472	18,847	27,319	S.Y.	9" Portland Cement Concrete Base Course
T-70		1,054	1,054	S.Y.	8" Portland Cement Concrete Pavement.
B-119	-	222	222	C.Y.	Crushed Aggregate Base Course
I-7	-	97	97	S.Y.	Reinforced Concrete Approach Slabs (T = 10")
I-7	475	242	717	S.Y.	Reinforced Concrete Approach Slabs (T = 13")
I-12		173	173	L.F.	Std Type 2-A Concrete Curb
I-12	1,286	9414	10.700	L.F.	Std Type 2-b Concrete Curb
I-12		256	256	L.F.	Std. Type 6 Concrete Curb.
I-12	2,525	966	3,491	L.F.	Type "A" Concrete Curb as per Plan.
I-21	128	47	175	S.Y.	Standard Type 1 (Modified) Portland Cement Concrete Median Pavement
I-22	1,381	2998	4379	C.Y.	Subbase Grading "A" or "B"
I-23	21		21	Ea.	Precast White Portland Cement Concrete Traffic Dividers.
					STRUCTURES
					For Quantities, Structure No. FRA-40R-1230 — See Sht No. 75
					For Quantities, Structure No. FRA-40R-1250 — " " " 87
					For Quantities, Structure No. FRA-40R-1255 — " " " 89
					For Quantities, Structure No. FRA-40R-1279 — " " " 105
					For Quantities, Structure on Existing Mound St. over C. & O.RY. and N.Y.C. R.R. — " " " 111
					For Quantities, Retaining Wall — " " " 71
					For Quantities, Sidewalk and Railing Replacement — " " " 112
	ump	Lump	Lump	Lump	Construction Layout Stakes.

and Federal Participation in Lighting Items See Table on Sheet 43.

DIST. NO. 2 DIVISION | STATE OHIO | PROJECT | TYPE FUNDS

COUNTY FRANKLIN
FRA-40R-12.30

GENERAL SUMMARY

7/112

PAVEMENT & ROADWAY QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

FRANKLIN COUNTY
FRA-40R-12.30

8
112

Sheet Nº	Ref. Nº	Station	T-35 1¼"	T-35 2"	B-35 1¼"	B-35 0" to 6" Variable Thickness	B-35 Sealing Vertical Face	B-70 9"	T-30 Prime Coat	T-30 Tack Coat	I-7 10" Appr. Slabs	I-7 13" Appr. Slabs	I-12 2-B Curb	I-12 Type "A" Curb	I-12 Type G Curb	I-21 Conc. Median	I-23 Traffic Dividers	I-22 Grading "A" or "B"	B-119 6"	B-119 7"	I-18 Stabil. Crushed Aggr. Shoulder & Appr.	I-13 Sidewalk	E-8 Removal Exist. Pav't.	E-8 Removal Exist. Sidewalk	E-8 Removal Exist. Curb		S-24 Removal of Structure				Special Overhead Signs
			C.Y.	C.Y.	C.Y.	C.Y.	L.F.	S.Y.	Gal.	Gal.	S.Y.	S.Y.	L.F.	L.F.	L.F.	S.Y.	Each	C.Y.	C.Y.	C.Y.	C.Y.	S.F.	S.Y.	S.F.	L.F.		Lump				Each
19		28+00 to 36+00	67.8		67.8			1990		195.1								314.2													
19	1-G													303.0																	
19	2-G													390.7																	
19	1-R																														
19	2-R																														
19	1-S																							313.0							
20		36+60 Rt.																				1676.0									
20		36+00 to 45+00	142.6		142.6			3,898.5		412.2		316.7										1700.0									
20	4-G													36.2				223.9													
20	6-G													141.2																	1
20	7-G													141.2																	
20	8-G												302.4																		
20	9-G													158.0																	
20	10-G													57.7																	
20	11-G													332.6																	
20	13-G												96.3																		
20	14-G																														
20	16-G												41.7			33.6															
20	1-R																														
20	3-S																														
20	18-G																														
21		45+00 to 50+75	91.5		91.5			2,583.0		263.6		158.4					21					1,521.5	496.0								
21	1-G													417.2				442.2													
21	2-G													427.0																	
21	9-G												845.4																		
21	10-G															93.9															
21																															
		TOTAL (Taken to Gen. Summary)	301.9		301.9			8471.5		870.9		475.1	1285.8	2524.8		127.5	21	1380.3				3041.5	2172.0		313.0						
21		50+75 to 54+00 E.B.	33.3		33.3			1,010.3		95.9		158.3						174.4													
21		0+75 to 4+00 W.B.	33.1		33.1			987.6		95.4			302.5					181.2													1
21	3-G												312.7																		
21	4-G												304.6																		
21	5-G													296.8																	
21	6-G														60.0																
21	7-G														35.0																
21	8-G															27.4															
21	11-G																														
21	1-R																														
21	2-R																														
21	3-R																														
21	4-R																							201.5							
21	5-R																							356.5							
21	6-R																					1,235.7									
21	7-R																					5.0									
21	8-R																							150.0							
21	1-A		0.2		0.2			5.0		0.5														37.0							
																														Lump.	
22		54+00 to 60+51.11 &	74.0		74.0			2206.4		213.2		145.0											16.0							Lump	
22		0+25 to 6+08.86 Service Rd. A	79.9		79.9			2365.8		230.0		132.0																			
22	1-G																	276.5													
22	2-G												288.8					288.8													
22	3-G												969.1																		
22	4-G												245.8																		
22	5-G														42.1																
22	6-G													668.5																	
22	7-G												667.2																		
22	8-G												76.5																		
22	1-R														50.0																
22	2-R																														
22	3-R																														
22	4-R																														
22	5-R																						2366.5								
22	6-R																							344.0							
22	7-R																							232.0							
22	8-R																							188.0							
22	9-R																							224.0							
22	10-R																							296.0							
22	11-R																					147.0		92.0							
22	12-R																						2777.4								
22	13-R																							921.5						Lump	
22	14-R																					1436.0									
22	15-R																					1988.0									
22	1-S																														
22	2-S																													Lump	
22	3-S																													Lump	
22	4-S																						390.0								
22	5-S																					894.0									
22	1-A			4.1																		1005.2									
22	2-A		3.8			18.1	28.0															840.0									
22	3-A		2.9		2.9		30.0		10.9													1090.0									
22	4-A			33.0					29.2													500.0									
22	5-A		2.9			13.9	30.0		198.0											14.2											
22	6-A		0.4		0.4			12.3		8.3																					
										1.2										13.9											
		TOTAL (Taken to Sheet Nº 9)	230.5	37.1	2,238	32.0	365.0	6,587.40	238.1	644.5		158.3	2,767.2	965.30	187.1	27.4		920.9	13.9	129.7		4329.2	4827.7	6455.40	2121.0		Lump				

PAVEMENT & ROADWAY QUANTITIES

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

9 / 112

FRANKLIN COUNTY
FRA-40R-12.30

Sheet Nº	Ref Nº	Station	T-35 1¼" C.Y.	T-35 2" C.Y.	B-35 1¼" C.Y.	B-35 0" to 6" Variable Thickness C.Y.	B-35 Sealing Vertical Face L.F.	B-70 9" S.Y.	T-30 Prime Coat Gal.	T-30 Tack Coat Gal.	I-7 10" Appr. Slabs S.Y.	I-7 13" Appr. Slabs S.Y.	I-12 2-B Curb L.F.	I-12 Type "A" Curb L.F.	I-12 Type G Curb L.F.	I-21 Conc. Median S.Y.	I-23 Traffic Dividers Each	I-22 Grading "A" or "B" C.Y.	B-119 6" C.Y.	B-119 7" C.Y.	I-18 Stabil. Crushed Aggr. Shoulder & Appr. C.Y.	I-13 Sidewalk S.F.	E-8 Removal Exist. Pav't. S.Y.	E-8 Removal Exist. Sidewalk S.F.	E-8 Removal Exist. Curb L.F.	T-70 6" S.Y.	S-24 Removal of Structure Lump	S-15 Agg. for Traffic Bound Sur. Cour. C.Y.	S-15 Furnishing & Placing Chloride Ton	S-15 Temporary Runaround & Apps. Lump	I-12 Type 2-A Curb L.F.
23		W. Bound 4+00 to 10+69.80	76.6		76.6		150	2,269.0		220.7								299.6													
23		Ramp "C" 3+21.79 to 5+25.50	19.3		19.3			578.4		55.9								103.4													
23		Ramp "D" 1+11.50 to 2+18.34	6.6		6.6			202.0		19.1								25.0													
23																															
23																							817.2								
23	1-R																								167						
23	2-R																								208						
23	3-R																						592.4								
23	4-R																								420						
23	5-R																							1,050							
23	6-R																							1344							
23	7-R																							179							
23	8-R																							2,150							
23	9-R																														
23	1-S																					1,800.									
23	1-C												328.1			11.1															
23	2-C												795.6			8.0															
23	3-C												680.9																		
23	4-C												325.5																		
23	1-A		3.9		3.9		175	119.1		11.3								14.6													
23	2-A			4.7					29.6											16.6											
23	3-A		8.7			8.7				25.1																					
23	4-A		4.6		4.6		90	148.4		13.2								19.5													
20		Ramp "A" 0+91.25 to 1+81.94	10.2		10.2			306.8		29.4								50.5													
20	2-C												90.7																		
20	3-C												140.6																		
20	1-S																					381.5									
20		Ramp "B" 6+59.10 to 7+50	7.6		7.6			228.4		21.8								39.7													
20	5-C												111.6																		
20	12-C												93.8																		
24		Ramp "B" 7+50 to 14+75.81	62.5		62.5			1888.4		180								362.5													
24	1-C												772.6																		
24	2-C												705.1																		
24	3-C												167.1																		
24		Whittier St. 4+75 to 11+50	70.2		70.2			2081		202.2								308.2													
24	4-C												654.3																		
24	5-C												157.6																		
24	9-C												159.3																		
24	10-C												30.3																		
24	4-A		2.9			13.9	32																								
19		11+50 to 16+50	12.6		12.6			281.7		36.5	96.7							65.5													
19	3-C												18																		
19	4-C												18																		
19	5-C												77																		
19	6-C												64																		
20		16+50 to 21+00	49.5		49.5			1,445.1		142.6		83.3						288.8													
20	1-C												385																		
20	15-C												32																		
20	17-C												352.7																		
20	2-S																					235									
24		Service Rd. "B" 2+80 to 10+69.66	59.4		59.4			1710.4		171								321.6		24.5									250	5	Lump	
24	2-A			7																											
24	3-A		1.4	4.3	1.4					14								4.4	6.7	15.1											
24																															
		River St. 0+00 to 2+31.87	33.9		33.9			1001		97.5								173.7													
24	6-C														68.6																
24	7-C												233.5																		
24	8-C												253.5																		
24	1-R																											Lump			
24	1-A			4.3																15.1	22										
																											980				
21		Service Rd C 0+88 to 4+83																													
21	12-C																										54				
21	13-C																										20				
21	2-A																														
21	3-A																														
		Maintenance of Local Traffic																										200	4		
		Total	429.9	20.3	418.3	22.6	447.0	12,259.7		1,239.9	96.7	83.3	6,646.8		68.6	19.1		2,077.0	6.7	71.3	22	2416.5	1409.6	6,723.0	795.0	1054	Lump	450	9	L	
		Total from Sheet Nº 8	230.5	37.1	223.8	32.0	365.0	6,587.4	267.7	644.5		158.3	2,767.2	965.3	187.1	27.4	21	920.9	13.9	129.7		4,329.2	4827.7	6,455.4	2,121.0		Lump				
		Total (taken to Gen. Summary)	660.4	57.4	642.1	54.6	812.0	18,847.1	267.7	1,884.4	96.7	241.6	9,414.0	965.3	255.7	46.5	21	2,997.9	20.6	201.0	22	6,745.7	6237.3	13,178.4	2,916.0	1054	Lump	450	9	L	

DRAINAGE SUMMARY

FRANKLIN COUNTY
FRA - 40R - 12.30

Sheet Nº	Ref. Nº	Station	I-2 Class "B" Storm Sewers 6" L.F.	12" L.F.	15" L.F.	18" L.F.	8"		M-6.4 (d) 12" L.F.	M-6.6 (a) 15" L.F.	I-2 Class "B" Storm Sewers under Pav't. & Approaches 12" L.F.	15" L.F.			M-106.6 (d) 12" L.F.	M-6.6 (b) 18" L.F.	M-6.6 (c) 24" L.F.	I-2 M-106.6 (d) as per plan 60" L.F.	I-2 Class "A" Storm Sewer M-6.8 (b) 8" L.F.	I-2 Class "A" Storm Sew. under Pav't. & Appr. 15" L.F.		M-6.6 (c) 21" L.F.		I-4 6" Underdrain L.F.	I-4 6" Pipe Outlet for Underdrain L.F.	I-5 24" Flap Gate Ea.	8"-30° Bend Ea.	I-5 Pipe Spec. 12" to 10" Red. Each	I-8 Manholes Nº 1 Mod. Each	Nº 2 Mod. Each	M.H. Adjust. to grade Each	I-8 Catch Basins No. 6 (Mod) C.B. Adj. to grade Each	Nº 2-2A Mod. Each	Nº 1-2A Mod. Each	Nº 2-3 Mod. Each	I-8 Inlets Nº 2-14 Mod. Each	Nº 2-6 Mod. Each	I-14 Paved Gutter Type 1 Mod. L.F.	Type 3 Mod. L.F.	Type "A" L.F.	I-10 Riprap Type "A" S.Y.	Special Aban. 60" Brick Sewer Lump	I-16 C.B. Aband. Eq.	M.H. Aband. Eq.	L-10 Sod S.Y.	E-2 Excav. For Struct's. C.Y.	E-12 Pipe Removed 15" & under L.F.	Over 15" L.F.	S-1 Conc. For Struct. Class "C" C.Y.	S-4 Reinf Steel Lbs.	S-24 Removal of Exist. Struct's. LUMP	I-5 Flap Gate Neenah R5040 Ser. or Equal 8"	12"	15"	18"	I-8 Nº 2 M.H. Without Drop Pipe Each
36		Main ℄ 32+28 to 36+00																																																						
36	1-D			86	30																							1							1			64		20					2.1			0.85	24						
36	2-D			46						40	64																								3																			
36	3-D																																												129											
36	1-R																																										2				78									
37		36+00 to 45+00																																																						
37	1-D			122	46						44																								4																			
37	2-D				32																																		10						2.1			0.85	24						
37	7-D														214													1					1												4.7											
37	1-R																																											1			267									
38		45+00 to 50+75																																																						
38	1-D				244					28																									2																			
38	2-D				36					56																	1								4																			
38	3-D				88	30																						1				1																							
38	12-D																		194																																					
38	1-R																																											1	4.7											
38	2-R																																											1												
		Total		254	476	30				124	108			214				194									1	3				2			1	13		64	10	20			1										2		
		Total taken to Summary																																									2	3	138.4		[illegible]		1.70							
38	12-D	Service Rd. "C"																																																						
38		50+75 to 54+00 (W.B.)									174	32																																											
38	4-D																																																							
38	5-D			34			90																								2																								
38	6-D			12	136																																																		
38	7-D				164					70															1		1																											
38	8-D				122																																																		
38	9-D				40						82																				1																							
38	10-D										28																						1																						
38	11-D																												1																											
38	3-R																																				1																			
38	4-R											226					164																																						
38	5-R																																																							
38	6-R																													1																										
38	7-R																																				2																			
38	8-R																																1																							
39																																		1																						
39		54+00 to 60+51.11 & Service Rd. "A"																											1																											
39	1-D																																																							
39	2-D																																																							
39	3-D																													1																										
39	4-D			76																																																			
39	5-D				18																																																		
39	6-D											58																																											
39	7-D			106	26					84																																												
39	8-D																																																							
39	9-D																																																							
39	10-D											40																																											
39	11-D										54																																												
39	12-D																																																							
39	1-R										28																														Lump														
39	2-R																																																							
39	3-R																																										1													
39	4-R																																										2				165									
37																															1																									
37		Ramp "B" to 7+50 & Whittier																						428					1				1					36									15									
37	3-D	St. 16+58 to 21+00																											1				1				1			10																
37	4-D																							128																																
37	5-D																							280	36												4																			
37	6-D				72																		527													1								392											
37	8-D				34																																																		
37	9-D			34	70					26																									1								4.7											
41											74																																	4.7											
41		Whittier St. 5+00 to 11+50								36																																														
41		River St. & Service Rd. "B"																																																						
41	1-D	& Ramp "B" 7+50 to 14+75.81																																																						
41	2-D														112																																									
41	3-D																																																					1		
41	4-D																																																							
41	5-D		8																									1																								1	1	1	
41	6-D			70	40				10																										1																					
41	7-D										48																									2						2													
41	8-D			96																																3						2				40									
41	9-D										8	50																								1						2				18									
41	1-R																																										1				34									
40																																																25								
40	1-D	West Bound 4+00 to 10+69.8 Ramp "C&D"		52						108	84																																											
40	2-D														166																							25	67						4.7											
40	3-D																																						88																	
40	4-D			42	100																							1																											
40	5-D			146	72																						1																		2.8										
40	6-D																	42	136																1		1								38											
40	7-D										58																																												
40	1-R				116																																											1.0							
					76																													1		4				2									26						
		Total taken to Gen. Summary	8	668	1086		90		10		58	81																								1																			1
																																					2		60						4.7											

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

11/112

FRANKLIN COUNTY
FRA-40R-12.30
QUANTITIES

EARTHWORK & SEEDING TABLE

STATION TO STATION	EXCAVATION	EMBANKMENT	EMBANKMENT+20	COMPACTED SUBGRADE		SEEDING
MAIN LINE	C.Y.	C.Y.	C.Y.	S.Y.		S.Y.
32+28 36+00	1582	3800	4560	1,990.0		5,836
36+00 45+00	838	75542	90,650	3898.5		12,003
45+00 50+75	1281	56812	68174.	2,583.0		12,613
TOTAL	3701	136154	163,384.	8,471.5		30,452
EAST BOUND						
50+75 54+00	97	11 715	14,058.00	1,010.3		2,509
54+00 60+38	9834	1366	1,639.20	2,206.4		11,391
WEST BOUND						
0+75 4+00	339	9358	11,229.60	987.6		3439
4+00 to 10+69.80	3217	1,430	1,716	2269.0		6,750
Ramp "C"	320	46	55.20	578.4		944
Ramp "D"	22	276	331.20	202.0		454
WHITTIER ST.						
4+75 11+50	2418	15136	18,163.20	2081.0		5,485
11+50 16+50		12778	15,333.60	281.7		2,166
16+50 21+00	470	15.793	18.951.60	1,433.0		3,594
RAMP "A"		2497	2,996.40	306.8		1,111
RAMP "B"						
7+00 7+50	64	1830	2,196.00	228.4		978
7+50 14+40	1345	42876	51,451.20	1,888.4		16,467
SERVICE RD. "A"						
0+55 6+00	3189	12	14.40	2,365.8		2,149
SERVICE RD. "B"						
2+80 10+70	1621	719	862.80	1,967.1		4,017
SERVICE RD. "C"						
0+88 to 4+83	477			1,005.0		
RIVER ST.						
0+62 2+00	20	3685	4,422.00	1,001.0		1,513
Add for Basements		6648	7,977.60			
TOTAL	23,433	126,165	151,398.00	19,811.9		62,967

GUARD RAIL

Sheet Nº	Ref. Nº	L.F.
Main Line		
19	5-G	68
20	4-G	39.3
20	5-G	330.5
20	6-G	169.0
20	7-G	150.0
21	1-G	441.5
21	2-G	444.32
Total		1,642.62
Total taken to Gen. Summary		
East Bound		
21	5-G	320
21	6-G	155
22	1-G	95
22	2-G	92.5
West Bound		
21	3-G	325
21	4-G	152.5
23	1-G	87.5
23	2-G	97.5
23	3-G	25.0
Whittier St.		
19	1-G	20.2
19	2-G	20.2
19	3-G	87.0
19	4-G	75.75
20	1-G	415.5
20	2-G	336.75
24	3-G	667.3
24	4-G	58.3
24	6-G	160.0
24	9-G	30.3
Ramp "A"		
20	3-G	155.2
Ramp "B"		
20	8-G	80.7
20	9-G	94.5
24	1-G	788.6
24	2-G	674.0
Service Rd. "B"		
24	5-G	75
River St.		
24	7-G	213.9
24	8-G	204.2
		5,507.40

(Taken to Gen. Summary)

EARTHWORK CALCULATIONS

Sta. 32+28 to Sta. 50+75

E-1 Excavation	3,701 C.Y.
E-2 Excavation for Structures.	4
Total Excavation.	3705 C.Y.
Embankment +20%	163,384
E-4 Borrow 163,384 − 3705 =	159,679 C.Y.

Ramp, Service Rds. & Whittier St.

E-1 Excavation	23.433 C.Y.
E-2 Excavation for Structures	22 C.Y.
Total Excavation	23,455 C.Y.
Embankment + 20%	151,398 C.Y.
E-4 Borrow 151,398 − 23,468 =	127,930 C.Y.

FERTILIZER

Sta. 32+28 to Sta. 50+75

L-9	30,452 S.Y.
L-10	9.4 S.Y.
Total	30,461.4 S.Y.
30,461.4 X 9 X 20 / 2000 X 100.0 =	2.74 Tons.

Ramps, Service Rds. & Whittier St.

L-9	62,967 S.Y.
L-10	1044 S.Y.
Total	64,011 S.Y.
64011 X 9 X 20 / 2000 X 1000 =	5.76 Tons.

WATER

Sta. 32+28 to Sta. 50+75

Embankment	163,384 C.Y.
I-22 Subbase	1,381 C.Y.
Total	164,765 C.Y.
164,764 X 5 ÷ 1000 =	823.8 M. Gal.

Ramps Service Rds. & Whittier St.

B-119	222 C.Y.
Embankment	151,398 C.Y.
I-22 Subbase	2,998 C.Y.
I-18	22 C.Y.
Total	154,640 C.Y.
154.640 X 5 ÷ 1000 =	773.2 M. Gal.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

12
112

FRANKLIN COUNTY
FRA-40R-12.30
RIGHT-OF-WAY PLANS
LIMITED ACCESS

S C I O T O R I V E R

BARCUS & MARTIN ADDITION

WHITTIER ST. & 60' R/W Ord. # 376.44

WHITTIER

FURNACE ST. 60'

RIVER ST. 50'

SELLS SUBDIVISION

EBERLY ST. Vacated Ord. # 5122 3-24-19

MOUND ST.

City of Columbus 10-9-17

City of Columbus 11-27-17

City of Columbus (III) D.B. 650 P. 66 1.10 Ac.

Const. Limits

Vacated Ord. # 14.47

Vacated Ord. # 14.47

P.C. 9+45.80

9+89.62 Whittier 14+16.81 Ramp B

N 32° 45' 58" E

N 10° 46' 40" E 6

Δ 21° 57' 18" D 5°00' T 122.18

N 67° 46' 05" E

N 32° 45' 58" E

N 3° 27' 40" E

214.49'

N 79° 06' 16" E

N 79° 06' 16" E Ramp B

Survey

Dedicated as part of Mound St. Ord. # 232.50

H. No. 409 Gen. Heating Equip & Ser. Co. 1-5-C.B.

Par. No. 57546

488.93'

Par No 62 614 .504 Ac.

Horton M. Bell 0.40 Ac. D.B. 1414 P. 558

Citizens Coal Co. 1-3-C.B.

Citizens Coal Co.

1.72 Ac.

Δ = 44°-40' D = 14°-00' T = 263.98

5.623 Ac.

C & O Ry. Co. 5-7-30 8.81 Ac. D.B. 110 P. 191

P.T. 10+05.93

0.993 Ac.

P.C. 9+98.67

P.T. 10+76.17

Rail Mon. 10+76.17 16' Rt.

10+51.06 40' Lt.

N 38° 36' 28" E 50.29' to P.T.

C. & O. Ry. Co. D.B. 110 P. 254 C.R.C. P. 582

C. B. Bldg. The Concrete Long Concrete Co. 1.15 Ac. D.B. 643 P. 501 D.B. 405 P. 290 Par. No. 10,234

J. M. DAVIS 5-27-24 (Br.) Bldg. 0.486 Ac.

Par. No. 35077

Par. No. 10414

0.435 Ac.

Par. No. CC148

3-5" Sumacs 8-6" Tulip Maples 1-12" Sycamore

6" Ash

Under 6" Sumacs 6-6" & 3-8" Pines

Under 4" Sumac 105 Sumac 2.5-6' 5-8' 2-10' 1-12' 1-14'

Sumac 19-4' to 8'

2-16' Sumac 1-18' 1-8'

T.P.

Twin Sumac

8" Sumac

16" Poplar

6' Chain Link Fence

New River St.

Brush

Fence

Survey

X in Masonry

Citizens Coal Co.

Rev. 4-13-56

LEGEND

Limited Access Highway	(L.A.)	———
Special Agreement	(S.A.)	— —
Temporary Right of Way	(T.)	— —
Existing Right of Way		———...———
Property Line		———.———
Lot Line or Other Division not a Property Line		— — — —
Survey by others or Proposed boundary dimension		(154.51)
Dimension of record		187.50

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

13
112

FRANKLIN COUNTY
FRA-40R-12.30
RIGHT-OF-WAY PLANS
LIMITED ACCESS

Note: R/W data taken from General Plan Superstructure for Mound St. Viaduct Sheet 1 of 4 File No. M-2467

SCIOTO RIVER

City of Columbus

Const. Limits

MOUND

WHITTIER EXTENSION

Par. No 57543

Par. No 146 P.U.

Par. No 145 P.U.

Par. No 57542 BUTTLES & COMSTOCK Common Pleas Ct. C.R.22 C & O Ry. Co.

Par. No 57546

Par. No 8447 1-S Metal

Par. No 481 P.U.

Par. No 20428 2-S-C.B.

LAND OWNED BY Columbus Coal & Lime Co.

Land Leased to Columbus Coal & Lime Co. By C. & O. RWY. CO.

C & O RY. CO.

C & O Ry. Co.

Conc. Pad

Metal Shed

Fr. Shed

Fr. Office

Scale Shed

Fr Barn

Coal Pile

Poplar 1-C 2-4'

5-5' Sumac.

2-5' Sumac

Triple Sumac 1-C 2-4'

3 Sumac

1-S-C.B. Sheds

2-S-C.B.

Cons. Pad

Joseph L. Schwartz

COMSTOCK'S SUB.

SUB. D. 589

ALLEY

SERVICE ROAD "C"

City of Columbus Par. No. 151 Ex. 0.143 Ac.

1.72 Ac.

9.623 Ac.

1.601 Ac.

0.771 Ac.

0.938 Ac.

0.496 Ac.

0.360 Ac.

0.810 Ac.

.023 Ac.

0.007 Ac.

.044 Ac.

.018 Ac.

7-LA 0.078 Ac.

8JA 0.081 Ac.

9SA

4 LA

4 JA

9 LA

10 LA

11 LA

12 LA

13 LA

9

9-T

11

11-T

13

Easement

Land Leased to Columbus Coal & Lime Co. By C. & O. RWY. CO.

Conc. Limits

Cons Limit

Tie Bar

Tie Pile

Coal Pile

Metal Shed

Fr. Shed

Fr. Office

Scale Shed

Fr Barn

Conc. Pad

Conc Pad

Poplar 1-C 2-4'

5-5' Sumac.

2-5' Sumac

Triple Sumac 1-C 2-4'

3 Sumac

1-S-C.B. Sheds

2-S-C.B.

Joseph L. Schwartz

COMSTOCK'S SUB.

SUB. D. 589

ALLEY

SERVICE ROAD "C"

City of Columbus Par. No. 151 Ex. 0.143 Ac.

1.72 Ac.

9.623 Ac.

1.601 Ac.

0.771 Ac.

0.938 Ac.

0.496 Ac.

0.360 Ac.

0.810 Ac.

.023 Ac.

0.007 Ac.

.044 Ac.

.018 Ac.

7-LA 0.078 Ac.

8JA 0.081 Ac.

9SA

4 LA

4 JA

9 LA

10 LA

11 LA

12 LA

13 LA

9

9-T

11

11-T

13

Easement

Land Leased to Columbus Coal & Lime Co. By C. & O. RWY. CO.

Conc. Limits

Cons Limit

Tie Bar

Tie Pile

Coal Pile

Metal Shed

Fr. Shed

Fr. Office

Scale Shed

Fr Barn

Conc. Pad

Conc Pad

Poplar 1-C 2-4'

5-5' Sumac.

2-5' Sumac

Triple Sumac 1-C 2-4'

3 Sumac

1-S-C.B. Sheds

2-S-C.B.

Joseph L. Schwartz

COMSTOCK'S SUB.

SUB. D. 589

ALLEY

SERVICE ROAD "C"

City of Columbus Par. No. 151 Ex. 0.143 Ac.

1.72 Ac.

9.623 Ac.

1.601 Ac.

0.771 Ac.

0.938 Ac.

0.496 Ac.

0.360 Ac.

0.810 Ac.

.023 Ac.

0.007 Ac.

.044 Ac.

.018 Ac.

7-LA 0.078 Ac.

8JA 0.081 Ac.

9SA

4 LA

4 JA

9 LA

10 LA

11 LA

12 LA

13 LA

9

9-T

11

11-T

13

Easement

FRANKLIN COUNTY
FRA-40R-12.30
RIGHT-OF-WAY PLANS
LIMITED ACCESS

SMALL PARCEL TABLE

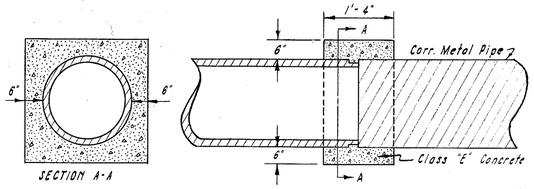
ACREAGE	CITY PARCEL Nº	PARCEL Nº	NAME
0.001	35 L.A.	10114	Lily C. West
0.031	45 L.A.	65243	Richard E. & Lottie B. Walsh.
0.023	46 L.A.	65242	Walter B. & Catherine M. Pierson
0.024	47 L.A.	65241	Harry W. Singer.
0.024	48 L.A.	63820	Benjamin H. Yaple.
0.024	49 L.A.	64923	Olin. L. Parret.
0.031	50 L.A.	65008	Thurman A. & Mildred L. Eggleston.
0.059	36 L.A.	5550	Thos. C. Sparks
0.043	21 L.A.	23865	Mary S. Smith, Walter R. Souder
0.044	22 L.A.	13598	Bernie Davis

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

15
112

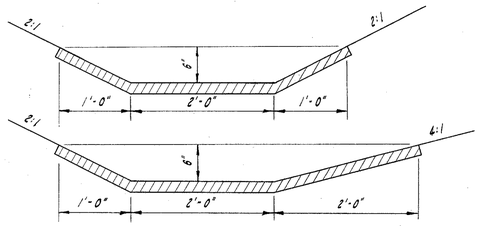
FRANKLIN COUNTY
FRA-40R-12.30

DETAIL SHEETS



DETAIL OF CONCRETE COLLAR

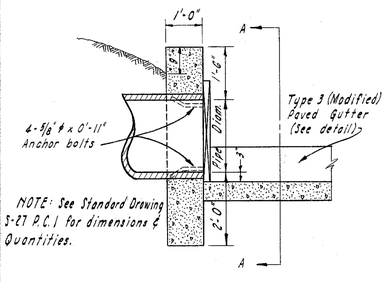
The cost of the materials and work required to construct collar shall be included in the price bid per lineal feet of Item I-2 Pipe for Storm Sewers."
No forms will be required.

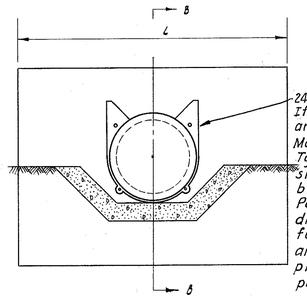


SOD DETAIL

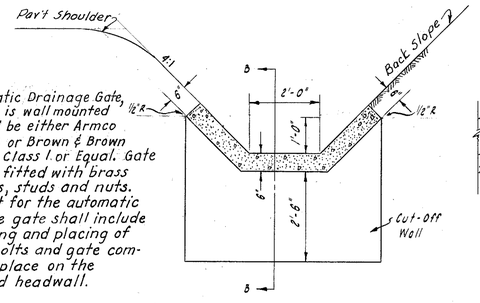
REINFORCING STEEL QUANTITIES

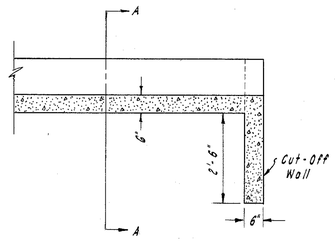
S-5-a		S-5-b		S-5-c	S-5-d		H-5-a		V-5-a	V-5-b		Weight
Nº	Lin.Ft.	Nº	Lin.Ft.	Nº Lin.Ft.	Nº	Lin.Ft.	Nº	Lin.Ft.	Nº Lin.Ft.	Nº	Lin.Ft.	Lbs.
21	5'-11½"	4	2'-7"	3 12"-4"	2	15'-0"	4	11'-8"	4 2'-6"	13	0'-10"	282





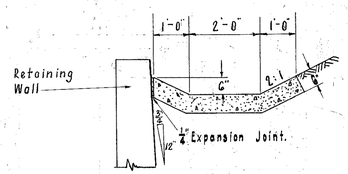
24" Automatic Drainage Gate, Item I-5, is wall mounted and shall be either Armco Model 100 or Brown & Brown Type "M, Class I or Equal. Gate shall be fitted with brass bushings, studs and nuts. Payment for the automatic drainage gate shall include furnishing and placing of anchor bolts and gate complete in place on the proposed headwall.



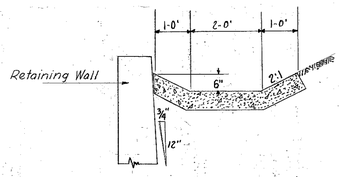


REINFORCED CONCRETE HEADWALL WITH FLAP GATE DETAIL

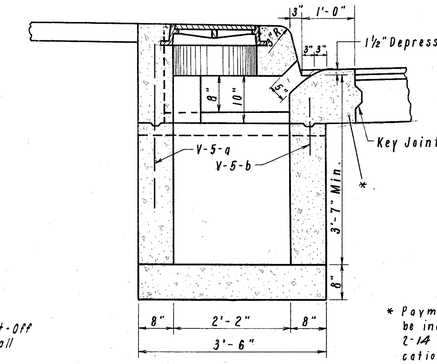
TYPE 3 (MODIFIED) PAVED GUTTER DETAIL



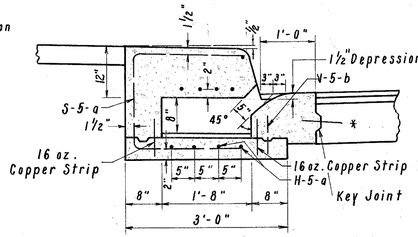
TYPE 1 MODIFIED PAVED GUTTER



SOD DETAIL BEHIND RETAINING WALL

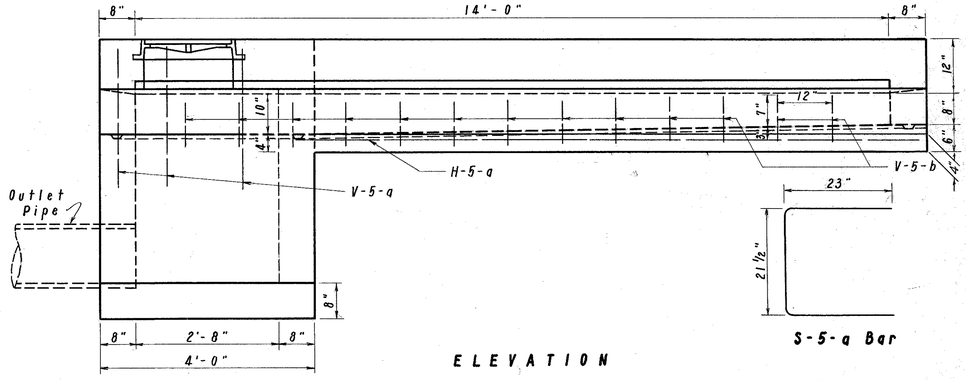


SECTION A-A



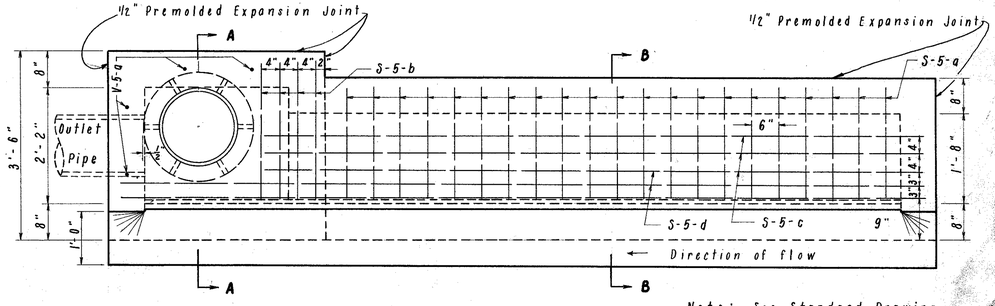
SECTION B-B

* Payment for the above portion of pavement is to be included in the Unit Bid Price for I-8 Nº 2-14 Inlets and conforming to the same specifications and requirements as perscribed under Item T-10 .



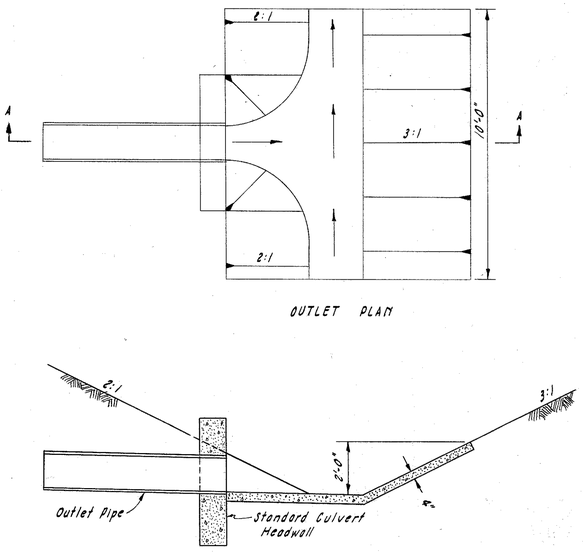
ELEVATION

S-5-q Bar



PLAN Nº 2-14 (MODIFIED) INLET

Note: See Standard Drawing I-8-I 2 for notes & Casting Details.



PAVED GUTTER TYPE "A" DETAIL

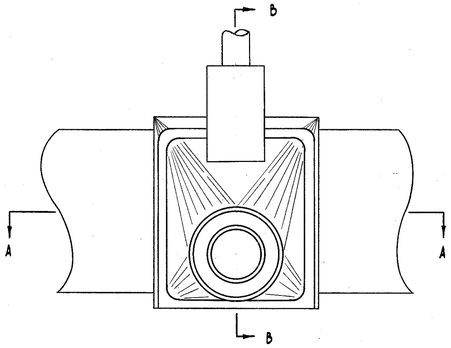
For Headwall Entrance or Side Ditch Entrance

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

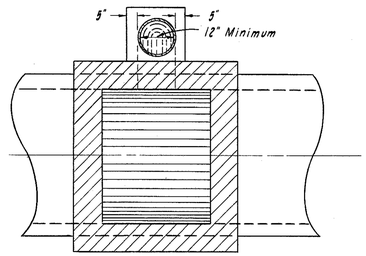
16
112

FRANKLIN COUNTY
FRA-40R-12.30

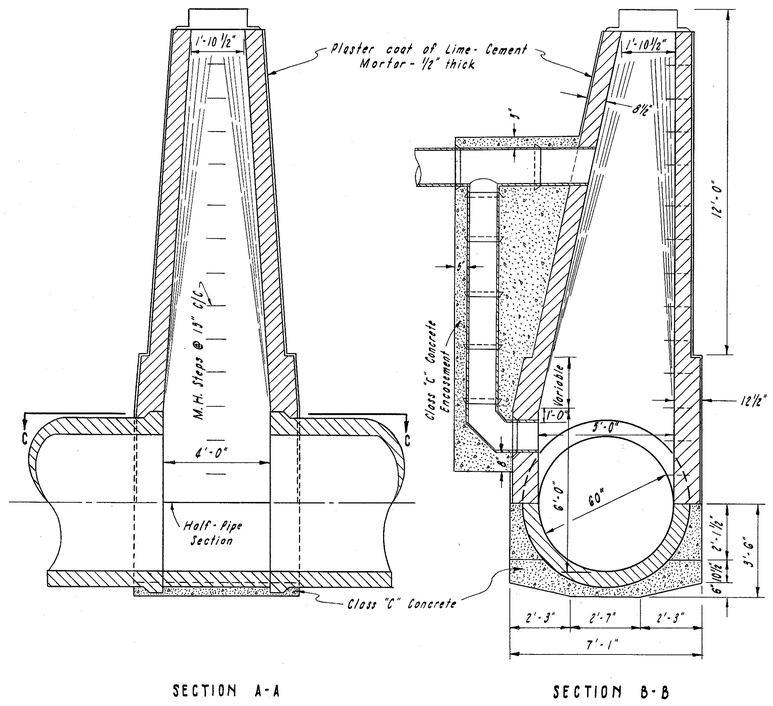
DETAIL SHEETS



PLAN



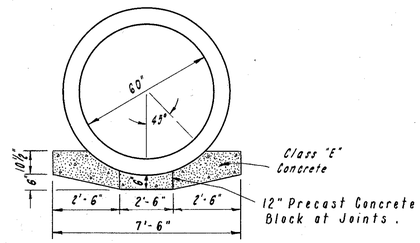
SECTION C-C



SECTION A-A SECTION B-B

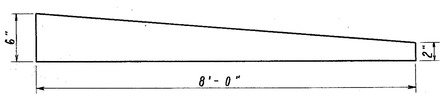
Nº. 2 MANHOLE MODIFIED

Note:
Materials and Construction to be in accordance with Standard Drawing I-8 M.H. Nº. 2 except that brick will not be allowed in the Invert.
The invert shall consist of a 4 foot length of half pipe of the type used in the pipe line. Payment to be included in the price bid for Manhole.
M.H. Frame Cover and Steps are to be as shown in detail.

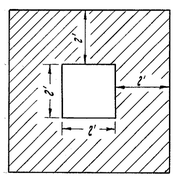


CONCRETE CRADLE DETAIL

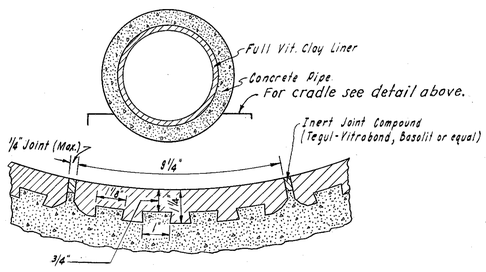
The cost of furnishing and placing the precast Concrete Blocks and Class "E" Concrete shall be included in the Unit Bid Price per lin. ft. of the pipe.



CURB HEIGHT REDUCTION DETAIL

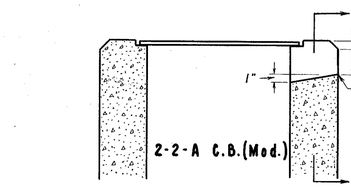


SOD DETAIL FOR DITCH CATCH BASINS

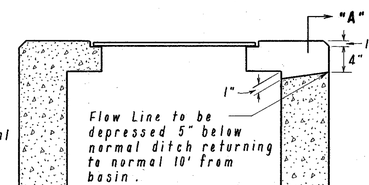


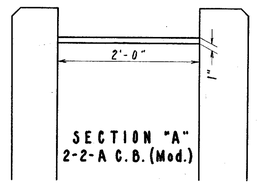
FULL VITRIFIED CLAY LINER PLATE DETAIL

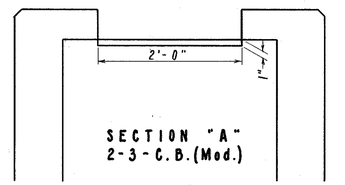
Note:
The Joints between plates of adjacent sections of pipe shall be sealed with some material as shown above.
The cost of furnishing and placing the Vitrified Clay Liner Plates and special joints shall be included in the unit price bid per lineal foot of pipe.

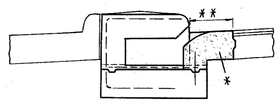


All Construction Proceedures, Material and Dimensions not shown shall be as shown on I-8 C.B. 2-2-A & B and I-8 C.B. 2-3 & 2-4 of the Standard Construction Drawings.



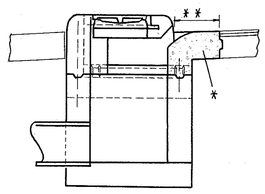






SECTION B

** 1ft. for Inlets at edge of pav't & 1½" depression
2ft. for Median Inlets & 2" depression



SECTION A

* Payment for the above portion of pavement is to be included in the Unit Bid Price for I-8 Nº 2-6 Inlets and conforming to the same specifications and requirements as perscribed under Item I-70.

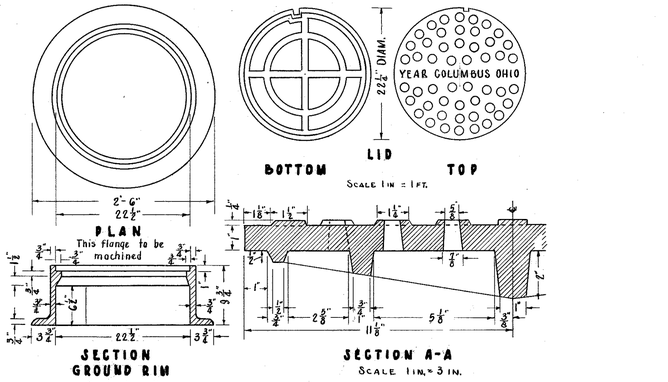
STD. No. 2-6 INLET (MOD)

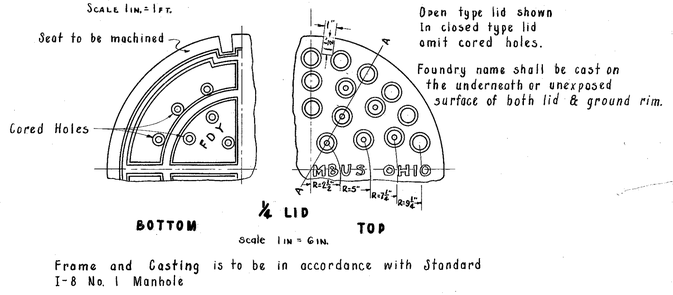
See Standard Drawing I-8 Std. Nº 2-6 Inlet for notes and dimensions other than shown above.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

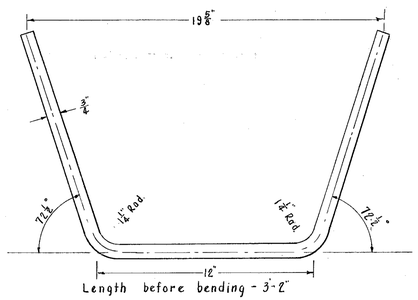
17
112

FRANKLIN COUNTY
FRA.- 40 R- 12.30
DETAIL SHEET



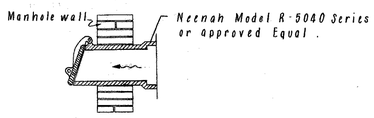


Frame and Casting is to be in accordance with Standard I-8 No. 1 Manhole

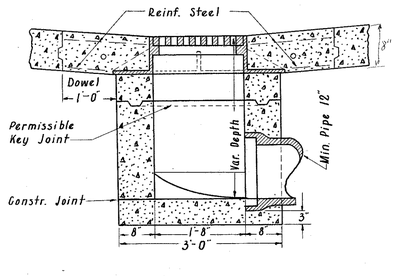


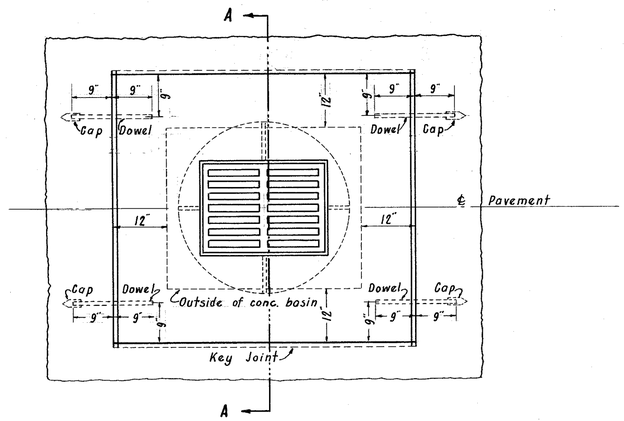
Steps shall be of good quality wrought iron in accordance with, Material Details, free from cracks and shall be given one coat of asphaltum paint as per specifications.

MANHOLE FRAME, COVER AND STEP DETAIL
Std. No. 1 Manhole Modified
Std. No 2 Manhole Modified.



MANHOLE FLAP VALVE DETAIL





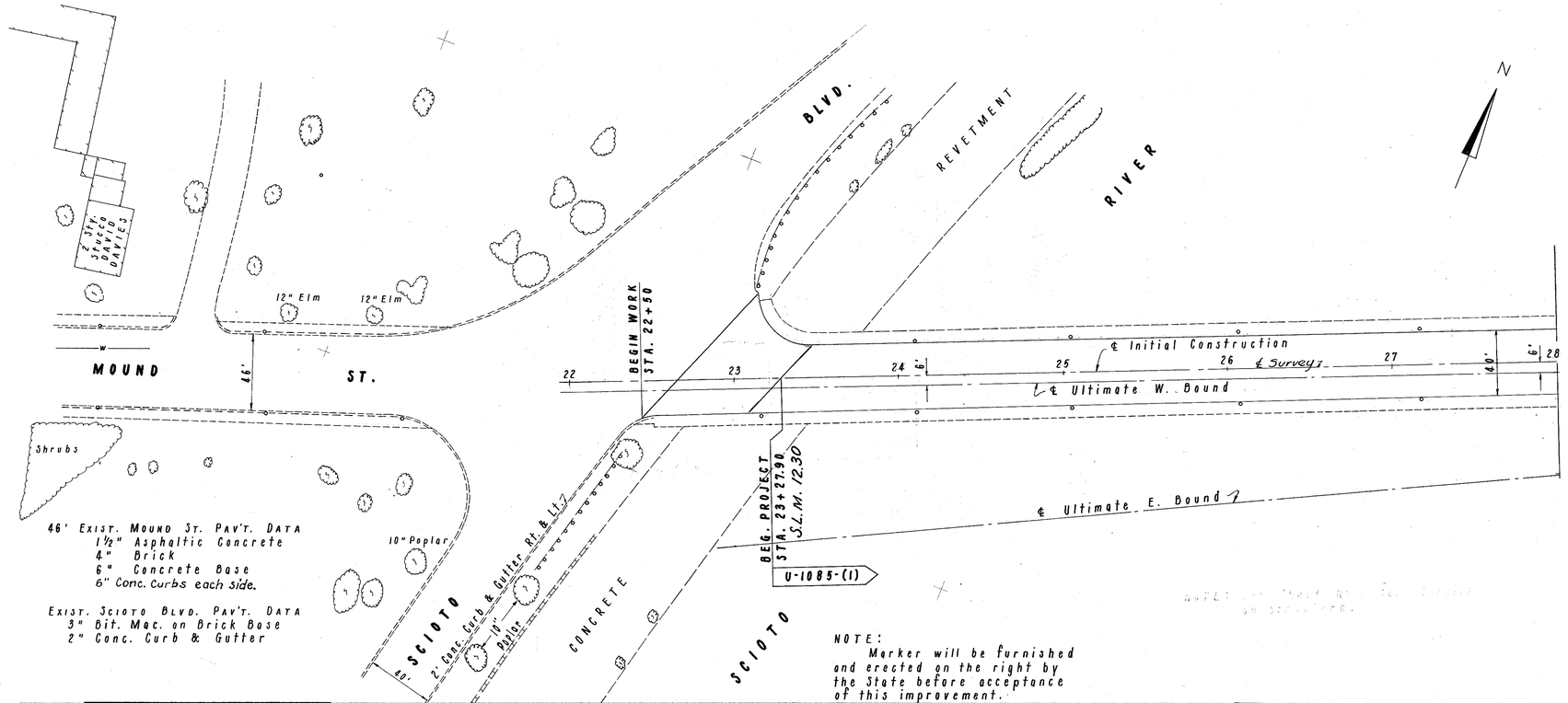
STANDARD NO. 6 C.B. (MODIFIED)

NOTE: See I-8 No. 6 C.B. for Casting, Weights, Bearing Areas, Dowels, Concrete, Brick & Pavement Notes and other details not shown above.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

18
112

FRANKLIN COUNTY
FRA-40R-12.30
PLAN AND PROFILE



46' Exist. Mound St. Pav't. Data
1½" Asphaltic Concrete
4" Brick
6" Concrete Base
6" Conc. Curbs each side.

Exist. Scioto Blvd. Pav't. Data
3" Bit. Mac. on Brick Base
2" Conc. Curb & Gutter

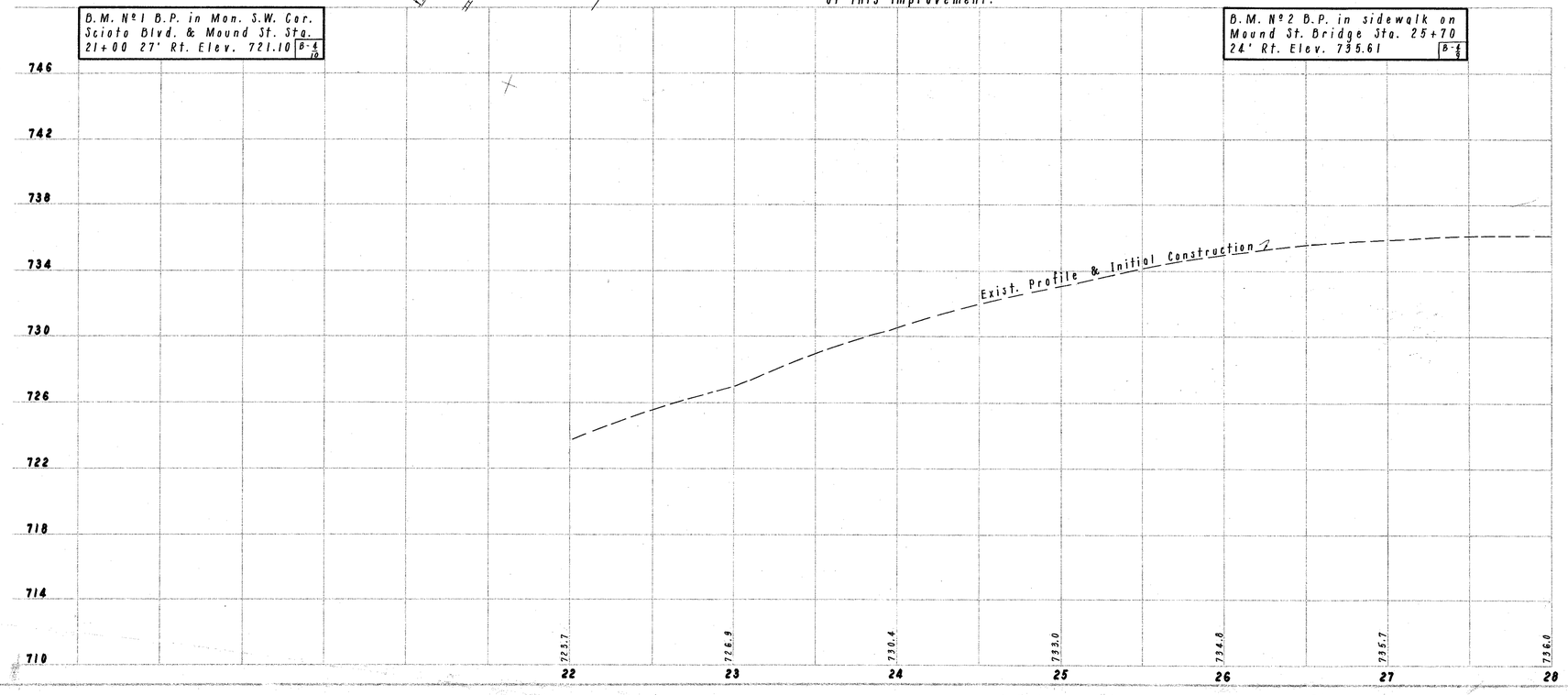
NOTE:
Marker will be furnished and erected on the right by the State before acceptance of this improvement.

EXISTING SCIOTO RIVER BRIDGE
TYPE: Spandrel Filled Rein. Conc. Arches With Rein. Conc. Substructure
Skew: 45° L.F.
Roadway Width: 40' f/f Curbs With 6'-0" Sidewalks
Spans: Variable 77' to 110'
Condition: Needs resurfacing and sidewalks replaced. Concrete on Arch Wings and Pier Walls is disintegrating.

PROPOSED WORK
T-35 Resurfacing on Roadway.
New Sidewalk, Curb & Lighting.
No Widening on Structure.

B.M. Nº1 B.P. in Mon. S.W. Cor. Scioto Blvd. & Mound St. Sta. 21+00 27' Rt. Elev. 721.10 B-6 10

B.M. Nº2 B.P. in sidewalk on Mound St. Bridge Sta. 25+70 24' Rt. Elev. 735.61 B-6 9



F.A.P. NO. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

19
112

FRANKLIN COUNTY
FRA-40R-12.30

PLAN AND PROFILE

WHITTIER STREET CURVE DATA
P.I. = 16+11.41
Δ = 44°-40'
D = 14°-00'
Ls = 150'
Es = 35.66'
θs = 10°-30'
Xc = 149.50'
Yc = 9.14'
Lc = 169.05'
Ts = 243.98'
Se = 1"/ft.
Design Speed = 40 M.P.H.

PROPOSED STRUCTURE Nº FRA-40R-1250
TYPE - Continuous steel girder with reinf. concrete deck and abutments and steel piers.
SPANS - 77'-0", 96'-0", 96'-0", 77'-0" along chords bearings on ℄ Roadway.
ALIGNMENT - Tangent, spiral and 14°-00' Curve.
ROADWAY - 28'-1"/t 2'-0" safety curbs with concrete parapet and aluminum railing.
SUPERELEVATION - Variable.
SKEW - 0°-00" with Whittier St. Tangent.
WEARING SURFACE - 2½" Asphaltic Concrete.
LOADING FREQUENCY - CF-400.
APPROACH SLABS - AS-1-54. (15' Long)

Removal of Existing Pavement.

Existing Pavement to be Scarified.

FOR PROFILE OF WHITTIER ST. EXTENSION SEE SHEET 27.

N

Shiner in Sign Post. 56.84' P.K. Spike 81.79' Conc. Blk. Bldg. Conc. Blk. Bldg.

S.C. Sta. 33 + 78.82 Initial Construction

Shiner in 12" Sumac 46.79' Tacked Hub 58.98' Shiner in Tel. Pole. Shiner In Tel. Pole. 54.71'

S.C. 15 + 17.43 Initial Construction Whittier St.

Axle B-4/8 P.K. Spike B-4/7 50.20' 7°17'30" 83.23' 83.22' Iron Pin (T.S.) Conc. Blk. Bldg.

T.S. Sta. 13 + 67.43 Whittier St. Initial Construction

Exist. Whittier & Furnace Sts. Bituminous Surface & Waterbound Base.

See Sheets Nº 28 & 29 for Pavement Details, Elevations & Joints

Prop. 8", 36" W. Line & 36" W.V. Vault. (Work to be done by City and not a part of this Contract.)

RIVER

SCIOTO

MOUND STREET

WHITTIER STREET

FURNACE ST.

Initial ℄ Survey

12" F.O. Pull Box

Shiner in 6" Tree. 17.12' 66.92' Shiner in 12" Tree. Iron Pin 78.65' Shiner in P.P.

P.I. on Whittier, N. of Mound Initial Construction Sta. 16+11.41

NOTE: See Sheet Nº 25 for ultimate ℄

(T.S.) P.K. Spike 62.61' Axle B-4/8 209°41'30" P.K. Spike B-4/7 50.20' 83.23' Conc. Blk. Bldg.

T.S. Sta. 32 + 28.82 Initial Construction

Shiner in 4'x4' Sign Post 58.67' 83.23' Shiner in P.P. 57.27' Shiner in P.P. ℄ Ex. Mound St. P.K. Spike.

P.I. Sta. 34 + 84.00 Initial Construction

Brush

1-S 1-C 1-R 2-R 2-C 3-C 1-G 4-C 2-G 3-G 4-G 5-C 6-C 5-G

87 L.F. G. Rail.

Begin Appr. Slab Sta. 15 + 65.42

End Appr. Slab Sta. 15 + 80.42

Retaining Wall

36" Water Valve Chamber

To be abond.

15.75 L.F. G. Rail.

2½" Bit. Surface Conc. Base

3' Park Strip

N. 74°-28'-22" E.

Brick on Conc. Base. Tacked Hub. Shiner in Stone Viaduct Wall. 12.29' 38.12' 70.12' Shiner in Stone Viaduct Wall. Shiner in N.E. Cor. Conc. Blk. Bldg.

C.S. Sta. 35 + 87.15 Initial Construction

End Appr. Slab Sta. 11 + 82.82

Begin Appr. Slab Sta. 11 + 67.80

MATCH LINE Sta. 11 + 50.

Pines 10" Spruce

20.2 L.F. G. Rail.

Cinder Parking & Drive.

Conc. Block Gen. Heating & Equipment Co

1 Sty. Conc. Bl. Citizens Coal Co.

Cinder Drive

Retaining Wall to be Removed under Sta. 5+24.

68 L.F. Guard Rail.

Ramp B

Sta. 5+51.76 Δ = 36°-58'-57" R = 374.31 L = 241.60

C.S. 33 + 78.82 C.S. 15 + 17.43 C.S. 35 + 87.15

INITIAL CONSTRUCTION CURVE DATA
P.I. = 34+84
Δ = 14°20'
D = 4°00'
Ls = 150'
Ts = 255.18'
Es = 11.93'
θs = 3°-00'
Yc = 2.62
Xc = 149.96'
Lc = 208.33'
Se = 0.049/ft.

BENCH MARK Nº 3.
Axle near ℄ of Furnace St. & S. Curb Line of Mound St. 24' Rt. Sta. 32+74. Elev. 726.81 B-4/8

Proposed relocation of 8" Water Line.

To be abandoned

728.93 728.33 727.78 727.32 726.96 726.70 726.54 726.47 726.49 726.62 726.84 727.15 727.56 728.07 728.68 729.38 730.13

746 742 738 734 730 726 722 718 714 710

350' V.C. P.V.I. Sta. 34 + 00 El. 724.13

-2.40 % +3.00 %

Profile is 12' Right of ultimate W.B. Centerline

℄ WHITTIER ST. EXTENSION

12" Storm Sewer.

736.0 735.6 734.0 731.8 729.3 726.5 724.5 723.7 724.0 (+28) 718.8

28 29 30 31 32 33 34 35 36

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

20
112

FRANKLIN COUNTY
FRA-40R-12.30

PLAN AND PROFILE

See Structure Sheet Nº 112 for Details and Quantities

Water Line

Prop. 36" W. Line (Work to be done by City and not a part of this Contract.)

NOTE: Ramp "A" Quantities from Sta. 0+91.25 to 1+81.94

End of Work Sta. 21+00.

Prop. 36" W. Line

413.5 L.Ft. G. Rail.

Whittier Street Curve Data.
P.I = Sta. 16+11.41
△ = 44°-40'
D = 14°-00'
Ls = 150'
Es = 35.66
θs = 10°-30'
Xc = 149.50
Yc = 9.14
Lc = 169.05
Ts = 243.98
D.S. 40 M.P.H.
Sε = 1"/ft.

Overhead Sign Sta. 36+60 Rt. Type: OS-1-A Plate 19-6 (76a) H: 3' D: 8' 1 Sign 3'x10' 2 Sign Supports

End Appr. Slab Sta. 20+58.54

Begin Appr. Slab Sta. 20+33.54

To be abandoned

WHITTIER ST.

℄ Survey

336.75 L.F. G. Rail

End Stone Arch Viaduct Remove under Sta. 34+38.63 - 34.58 Lt.

P.I. = Sta. 36+93.63 - 34.58 Lt. C.H.P.

MOUND ST.

Exist. Brick Surface Conc. Base

705.95 L.F. G. Rail

339.33 Lt. 12+23.47

Type A

Type 2-B

RAMP

Iron Pin

Shiner

S.T. Sta. 18+36.48 Whittier St.

N 74°-28'-22" E

△ = 6°-38'-10"
D = 10°-00'
T = 33.22
L = 66.36.37

Initial ℄ Survey

Greif Bros Cooperage

N 82°-06'-05" E

Shiner in 14" Boxwood

Tacked Hub.

Shiner in 6" Boxwood
O.S. 16+86.48 Whittier St.

39.9 L.Ft. G. Rail.

P.K. Nail in Shiner in Stone Viaduct between 2nd & 3rd Arch

Iron Pin

Shiner

Shiner in 4"x6" Post of Sign.
S.T. Sta. 37+37.16

80.7 L.F. G. Rail

Spur track to be removed see sheet No 24

Type A

Type 2-B

Δ = 9°-24'-47"
D = 4°-00'

P.C.C. 6+64.89

CURVE DATA
P.I. Sta. 34+84.00
△ = 14°-20'
D = 4°-00'
Ls = 150
Ts = 255.18
Es = 11.93
θs = 3°-0
Lc = 208.93
Yc = 2.62
Xc = 149.96
D.S. 30 M.P.H.
Sε = 0.045'/ft.

Sta. 36+36 to 39+08
I-23.21 Precast Conc. Traffic Dividers @ 12' c/c

MATCH LINE STA. 7+50

94.5 L.F. G. Rail

330.0 L.Ft. G. Rail

To be removed

Begin Appr. Slab Sta. 33+46.55

End Appr. Slab Sta. 33+91.55

Frame Sheds.

NOTE: Ramp "B" Quantities begin at Sta. 6+64.89

B.M. Nº 4 B.P. in sidewalk top West Approach Mound St. R.R. Viaduct Sta. 40+20 145 Lt. Elev. 741.26

NOTE: See Sheets Nos. 29 & 34 for Pavement Details Elevations & Joints.

Metal Shed.

Fr. Shed 6gr

Fr. Shed

Fr. Office A.E. & C. Co. Ross Jackson.

Brick Office Yale Coal Co.

Scales Shed.

3-Sty. Brick Office.

Coal Dock

Coal Conveyor

Coal Bins

Coal Gonzo Limits of C. & O. Ry. Co.

169 L.Ft. G. Rail

Begin Appr. Slab. Sta. 43+23.79

End Appr. Slab. Sta. 43+48.79

Co. C. & O. Ry. Co. Ry. Co. C. & O. Ry. Co. C. & O. Ry. Co.

3 Sty. Conc. Block Sheds

3 Sty. Coal & Lime Co.

Coal & Lime Co.

10" Storm Sewer

℄ Survey

Track tobe removed by C. & O. Ry. Co.

Track to be removed by C. & O. Ry. Co.

Track to be removed by C. & O. Ry. Co.

Track to be removed by C. & O. Ry. Co.

Boss Line to ℄ Main Tracks

Boss Line to ℄ Main Tracks

Sta. 41+99.87 10° 00' R.R. Highway

175' Spur Track to be removed

P.C. 43+29.6

75' Taper

CURVE DATA
Initial & Ultimate
P.I. = Sta. 49+70.57
△ = 16°-58'
D = 1°-20'
R = 4297.18
T = 640.94
L = 1272.50
E = 47.54
D.S. = 50 M.P.H.
Sε = 0.023 /ft.

270 ft. of Spur track to be removed by C. & O. Ry. Co.

150 L.Ft. G. Rail

265 ft. of Spur Track to be removed

55' of spur track to be removed by C. & O. Ry. Co.

B.M. No. 5 B.P. in Mon. W. of C. & O. R.R. Main Track 375' So. of W. Pier Mound St. Viaduct Sta. 42+10 215' Rt. Elev. 716.87

Existing Pavement to be Scarified

Removal of Existing Pavement.

	36	37	38	39	40	41	42	43	44	45
Ground Line	730.13	733.13	736.13	739.14	739.85	740.66	741.44	742.23	742.99	743.68
Ground Line	744.30	744.84	745.31	745.71	746.03	746.28	746.45	746.55	746.58	746.54
Ground Line	746.42	746.23	745.96	745.62	745.21	744.72	744.16	743.53		
Grade Line	718.8	715.6	716.2		715.0	715.2	717.1	718.5	715.5	714.5
Grade Line	713.5	713.5								

100' V.C. P.V.I. Sta. 39+50 El. 740.63

+3.20%

Profile Grade ℄ Rt. & Lt. of Initial & Ultimate ℄ of Survey.

-2.68 %

+3.00%

Profile is 12' Rt. of ultimate ℄ to Sta. 38+76.20

Bridge Limits = 332.24

500' V.C.

P.V.I. STA. 42+50 Elev. 750.23

40 sq

PROPOSED STRUCTURE FRA-40R-1255

Type: Continuous Steel Beam with reinforced concrete deck. Concrete and steel Substructure
Span: 57'-0", 95'-3", 95'-3", 80'-0" c/c Brgs.
Roadway: 56'-0" f/f 2'-0" Safety Curbs with 3' median, conc. parapet and aluminum railing
Loading: C.F. 2000
Wearing Surface: 2½" Asphaltic Conc.
Skew: 18°-33" Rt. Forward
Alignment: Tangent
Appr. Slabs: As per plan. (25' Long)

EXISTING MOUND ST. BRIDGE OVER C.&O.RY. & N.Y.C. R.R

EXISTING STRUCTURE

Main Span Type: Plate Girder with encased transverse floor beams on Concrete and Steel Piers and Concrete and Stone Abutments.
Approach Span Type: Stone arches with concrete protection and earth fill on stone and concrete substructure
Main Spans: 49.70, 76.64, 71.25, 65.65 c/c Bearings along ℄ Roadway
Approach Spans: 9 Variable spans
Roadway: 29'-4" f/f curbs with 4'-10" Sidewalk on South Side.
Skew: Variable
Wearing Surface: Bituminous material over Brick on Concrete Slab.
Loading: H-15

PROPOSED STRUCTURE

Type: Steel beam with reinforced concrete deck and substructure.
Span: 38'0" c/c brgs.
Roadway: 29'4" f/f curbs with 4'0" S.W. 1'0" safety curb and steel railing
Loading: C.F. 400.
Surface Course: 2½" Asphaltic conc.
Skew: 5° 58' 30" Rt. Fwd.
Alignment: Tangent.

FED. RD. DESIGNATION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

21
112

FRANKLIN COUNTY
FRA-40R-12.30

PLAN AND PROFILE

See Structure Sheet № 112 for Detail & Quantities

CANAL ST. PAVT. DATA
30' Existing Pavement.
4" Brick ½" Sand Cushion
6" Conc. Base
Sandstone Curb

U-1085(1)

Remove Pavement & Curb to Curb Returns on Mound St.

Remove under S-24 2' Conc. Wall

WEST BOUND RAMP CURVE DATA
P.I. Sta. 3+27.02
Δ = 43°-11'-40"
D = 9°-00'
R = 636.62
T = 252.02
L = 479.94
E = 48.07
D.S. = 35 M.P.H.
Sε = 0.05'/ft.

N

Parking Platform
1-Sty. Corrugated Metal Bldg.
Columbus Coal & Lime Co.
2-Sty. Conc. Block
Columbus Hide & Fur Co.
1-Sty. Conc. Block
conc. pad
328' of Spur Track to be removed by C.&O.Ry.Co.
180' of Spur Track to be removed by C.&O.Ry.Co.
441.5 L.F. G. Rail
444.32 L.F. G. Rail
Frame Barn Columbus Coal & Lime Co.
Stock Piles
Dept. of Public Service
Parking Lot
8" San.
Const. Limits
10.5' X 12' Interceptor
SHORT ST.
CANAL ST.
JEWETT ST.
ENGLER ST.
CARRINGTON ALLEY
2-Sty. Brick
3" W.M.P. (Private)
Transformer
Tank
Crane Hoist
S.L.W. 1282
Conc. Found. & 3' Wall
Capacitors
1½-Sty. Brick Res.
1½-Sty. Conc. Blk. Gar.
1-Sty. Brick Res.
2-Sty. Brick Res.
Frame Res.
Gang. Blk. Wall
Conc. Blk. Canal St. Mission
1-Sty. Fr. Canal Street Holiness Mission
2-Sty. Brick Capital Mfg. & Supply Co.
2 Story Brick Conduit Pipe Products Co. Capital Mfg. & Supply Co.
2 W.B. RAMP
Ramp "C"
Begin App. Slab Sta. 49+22.68
End App. Slab Sta. 49+47.68
Begin Appr. Slab 50+70.27
End Appr. Slab 50+99.27
Transition Curb from 6" to 1" Conc. Block
2-A Curb
Conc. Drive
Gravel
Bit. Drive
Type G Curb
3" H.P.
Br. S.W. To be removed under E-1
FULTON ST. 18" Storm
Road "C"
Service
BEGIN WORK STA. 0+88
END WORK, STA. 4+83
See Sheet No. for Pavement Elevations & Joints.
6"-10" Sumac
3" Sumac
8" Sumac
10" Sumac
14" Sumac
2-6" Sumac
4" Pop.
8" Plum
Survey
Const. Limits
75' Taper
Transition Curb from 6" @ Bldg to 0" @ Edge Pavt.
2-A Curb
Plug & Abandon From Mound St.
Go to Mound St.

CURVE DATA - MAIN ℄
P.I. = 49+70.57
Δ = 16°-58'
D = 1°-20'
R = 4297.18
T = 640.94
L = 1272.50
E = 47.54
Design Speed 50 M.P.H.
Sε = 0.023'/ft.

BENCH MARK NO.6
4x16 48.3 N.W. of N.W. Cor. of City Garages. Sta. 46+87
Elev. 714.04 B-3/5

BENCH MARK NO.7
B.P. in Mon. N.E. Cor. Short & Fulton Sta. 50+45 75 Rt.
Elev. 714.04 B-3/3

BENCH MARK NO.8
4x16 N.E. Corner of Canal & Fulton Sta. 52+08 75 Rt.
Elev. 715.44 B-3W/2

60 L.F. Type G Curb

NOTE: Marker will be furnished and erected on the left by the State before acceptance of this improvement

325 L.F. G. Rail.
152.5 L.F. G. Rail.
155 L.F. G. Rail
320 L.F. G. Rail.
53+83.56 (Ult. E.B. Ramp)
P.C. 28' Rt.
35' L.F. Type G Curb

Ultimate Construction.
℄ Service Rd "C"

Face of Initial Curb is Face of Ultimate Median

NOTE: 2-A & 3-A 8" T-70

INTERSECTION DETAIL

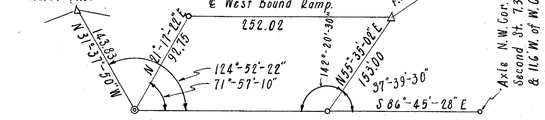
EXISTING PAVEMENT SHORT ST.
21'~4" Brick, 1½" Cushion, 6" Concrete Base Sandstone Curbs.

EXISTING PAVEMENT ENGLER ST.
21' Bit. Macadam Pavement.

EXISTING PAVEMENT JEWETT ST.
12" Bit. Macadam & Cinder Base

Removal of Exist. Pavement.

Exist. Pavement to be Scarified

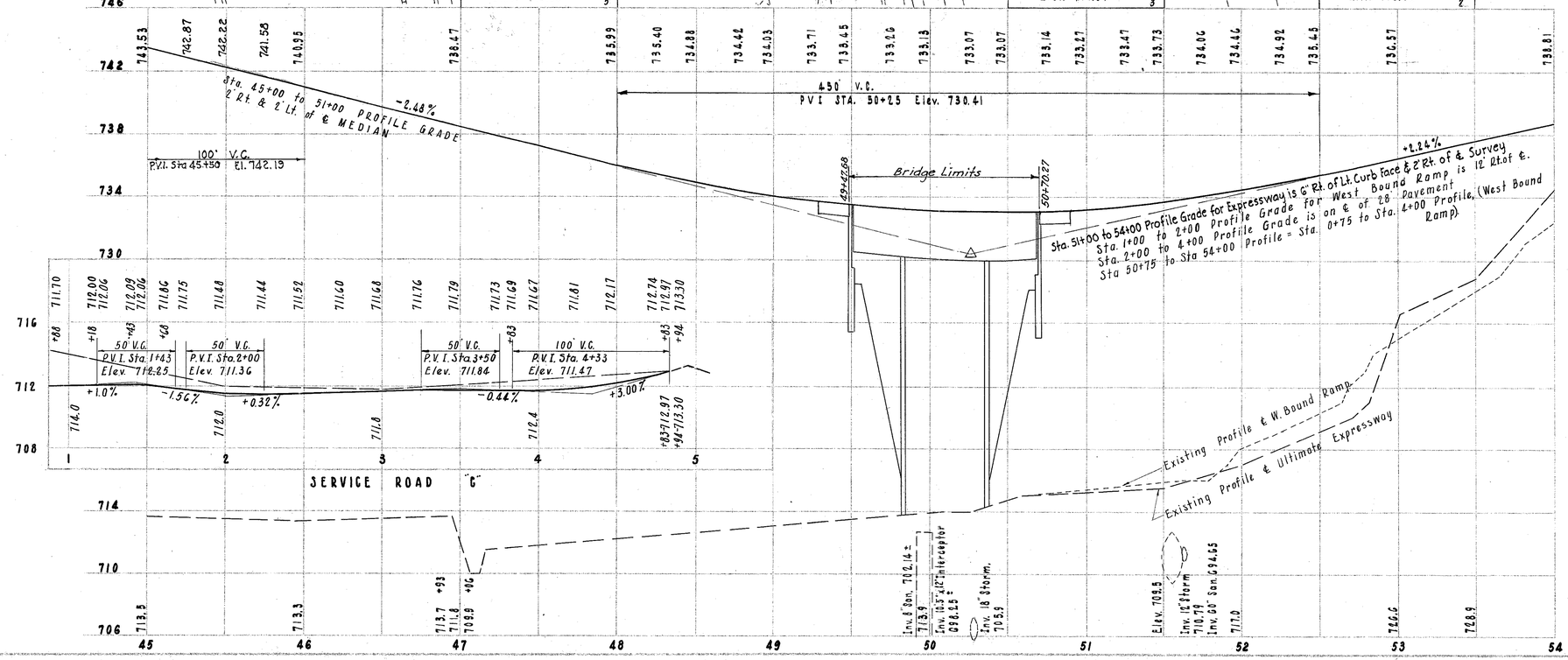


Brass Plug in Conc. Mon. N.E. Cor. Short & Fulton. 5.5 N. of N. Curb & 2.3 E. of E. Curb

Axle N.E. Cor. Canal & Fulton 7.7 E. of E. Curb & 5.6' N. of N. Curb

Axle N.W. Cor. Fulton & Second St. 7.3' W. of W. Curb & 11.6' W. of W. Curb.

DETAILS FOR FIELD LOCATION



PROPOSED STRUCTURE № FR 40R-1279
TYPE; Continuous Steel Beams with reinforced conc. deck & Substructure
SPANS; 32'-0", 54'-0", 32'-0" c/c bearings (along Tangent)
SKEW; 11°-01'-00" Right Forward
ALIGNMENT; 1°-20' Curve Right.
ROADWAY; 56'-0" f/f of Safety Curbs with 3' raised Median
SUPERELEVATION; .023per ft.
SURFACE COURSE; 1½" Asphaltic Concrete (Type C)
LOAD FREQUENCY; C.F. 2000
APPROACH SLABS: As Per Plan (25' Long)

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

22
112

FRANKLIN COUNTY
FRA-40R-12.30

PLAN AND PROFILE EAST BOUND RAMP & SERVICE ROAD "A"

SEE SHEET NOS. 30, 31 & 34 for PAVEMENT DETAILS, ELEVATIONS & JOINTS

SEE SHEET NO. 31 for SECOND, FULTON & FRONT EXISTING PAVEMENT DATA

20' EXIST. LUDLOW ST. PAVEMENT DATA
2" Bit. Asph. Surface, Cinder Base

16' EXIST. ENGLER ST. PAVEMENT DATA
2" Bit. Asph. Surface, Cinder Base

LEGEND

- 2" T-35 ; 7" B-119 T-30 Prime Coat.
- 4" Concrete Sidewalk
- Removal of existing Pavement
- 1¼" T-35, 1¼" B-35, T-30 Prime Coat 6" B-119, Crushed Agg. & Base Course & 4" I-22 Subbase
- 1¼" T-35, 0-6" Var. thickness B-35, T-30 Tack Coat

N

6" to be lowered as required.

SEE TURN-AROUND SECTION AT THE RIGHT FOR DETAILS

℄ WESTBOUND RAMP

Pavement to 15" Comb. be removed under E-1

ENGLER ST.

SECOND ST.

LUDLOW ST.

FRONT ST.

FULTON ST.

LIVINGSTON AVE.

℄ ULTIMATE EXPRESSWAY

Prop. 24" & 36" W. Ls.. (To be built by the City and not a part of this Contract.)

Pavement Removed under E-1

Shiner in pole
Tack in cor. bldg. 70.30'
M Spike 61.85'
Tack in pole
3+08.25 SERVICE RD "A"
95 L.F. G. Rail
FACE OF INITIAL CURB IS FACE OF ULTIMATE MEDIAN

Tack in pole
66.64
50.32
Tack in pole
M Spike
59.79
Tack in lead plug
2+00 SERVICE RD. "A"
92.5 L.F. G. Rail

67.25'
M Spike under brick
49.78
81.39
Tack in cor. bldg.
Tack in pole
1+20.67 SERVICE RD. "A"

CURVE DATA
P.I. = STA. 1+20.67
Δ = 22°-03'-10"
D = 17°-00'
R = 337.03
T = 65.67
L = 129.72
E = 6.34
S_E = 0.02/ft.

CURVE DATA
P.I. = STA 58+07.26 (E.B)
Δ = 17°-32'-11"
D = 4°-30'
R = 1273.24
T = 196.58
L = 349.70
E = 15.08
D.S. = 35 m.p.h.
S_E = 0.04'/ft.

CURVE DATA
SERVICE ROAD "A"
P.I. = STA. 4+42.85
Δ = 33°-57'-40"
D = 13°-00'
R = 440.74
T = 134.58
L = 261.24
E = 20.09
Crown = 3/16"/ft.

P.I. 49+70.57
Δ = 16°-56'-30"
R = 4297.18
T = 640.94
L = 1272.50
E = 47.54

BENCH MARK NO. 9
Axle N.W. Corner Second & Fulton
Sta. 55+55 59' Rt. B-3/2
El. 742.23

BENCH MARK NO. 10
B.P. in mon. N.W. Corner Front & Fulton
Sta. 60+26 32' Lt. B-3/1
El. 737.05

Shiner in pole
Shiner in pole
41.91
54.63'
P.I. #7
60+64.11 E. Bound R.R. Spike E.P.
41.94
Shiner in pole

Shiner in pole
45.40
P.K. @ 6+21.86 Service Rd "A"
60.70
72.11'
Shiner in pole
Shiner in pole

P.I. Drill Hole Sta. 58+07.26 ℄ Fulton St.
90°
2.0'
I.P. 1.2' W. of Curb face
80'
I.P. 3.9' W. of W. Curb face Ludlow St.
30'
I.P. 4' W. of W. Curb face Ludlow St.

Tacked Hub Sta. 56+00 ℄ Survey
133°-11'-24"
N 44°-55'-56" E
74.91
S 86°-45'-28" E
B-3 W/2
B-3 E/2

See Sheet No 19 for Description of Points

NOTE
Proposed Pavement same as on Service Rd A and in Service Rd. A Quantities

6+00 WESTBOUND

Transition to standard from flat to standard ℄ gutter section

Corner of Wall

18 L.F. Type 6

Remove brick S.W. and Curb to here.

55+00 ℄ Ditch

EASTBOUND

56+00

SECOND ST.

TURN-AROUND DETAIL

PROFILE GRADE BACK ← 2' R. of ℄ FUTURE MEDIAN, 6" R. of LEFT CURB FACE
PROFILE GRADE AHEAD → ℄ 26.5' PAVEMENT

INITIAL EASTBOUND RAMP GRADE

+2.24% +1.12% +3.80% +2.60% -3.00%

200' V.C. P.V.I. STA. 56+00 EL. 741.64
200' V.C. P.V.I. STA. 59+35 EL. 754.37
450' V.C. P.V.I. STA. 61+00 EL. 729.86
450' V.C. P.V.I. STA. 56+90 EL. 743.96

Inv. 15" 735.36

℄ Second St. +70' ℄ Ludlow St. +18' ℄ Front St. +64.11

ULTIMATE EXPRESSWAY GRADE

	54	55	56	57	58	59	60	61
	138.81	139.35	139.81	140.20	140.52	140.84	141.26	141.74
	744.7	745.4	747.3	750.4	753.6	756.0		

768 764 760 756 752 748 744 740 736 732 728

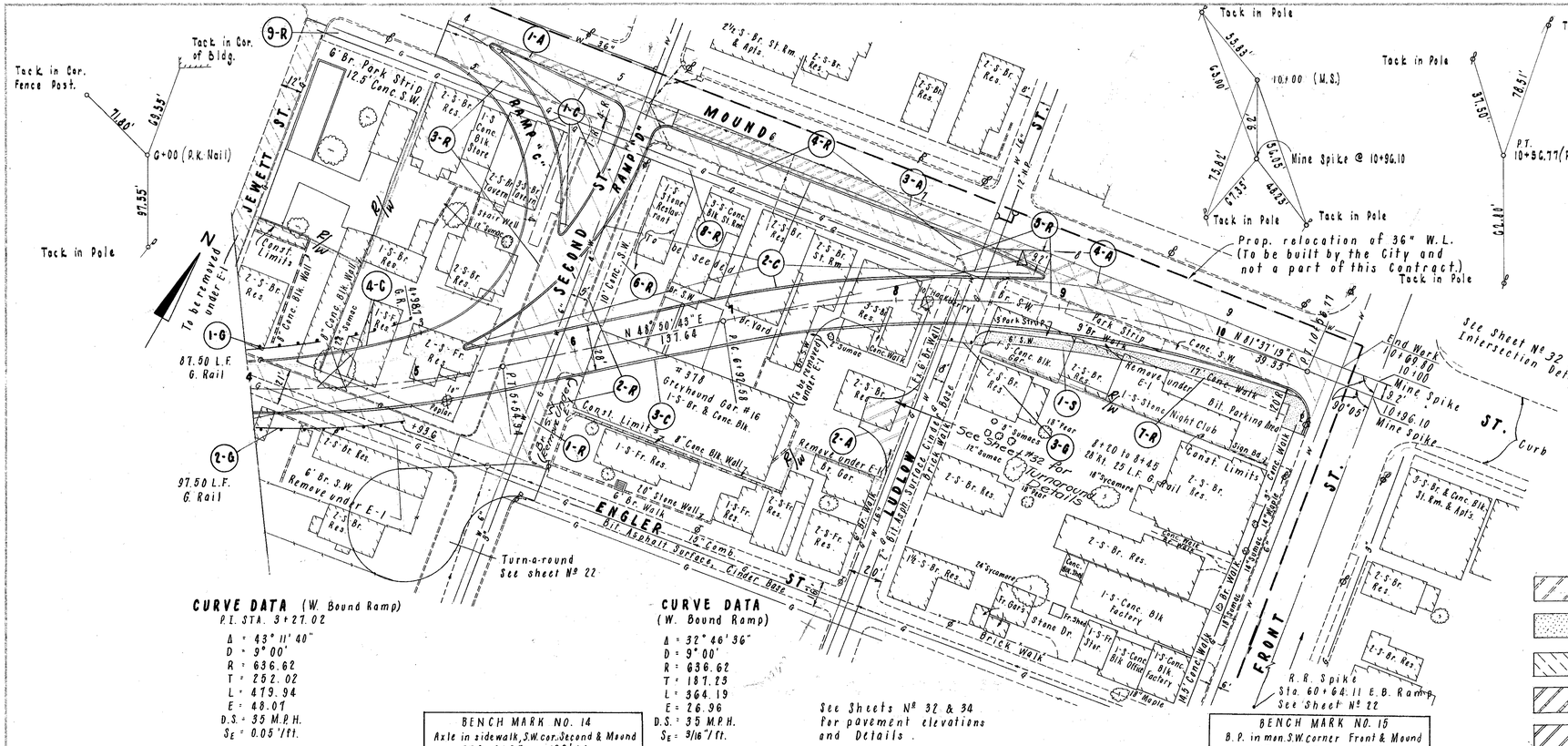
142.31 142.97 143.71 144.53 145.44 149.24 151.13 152.05 152.92 153.76 154.57 155.34 156.08 156.77 157.06

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

23
112

FRANKLIN COUNTY
FRA-40R-12.30

PLAN AND PROFILE
WEST BOUND RAMP



46.4' Exist. Mound St. Data
1½" Asph. Conc. Surface
4" Brick
6" Conc.

36' Exist. 2ND St. Pavement Data
4" Brick Surface
6" Conc. Base
4" Subdrains

20' Exist. Ludlow St. Pavement Data
2" Bit. Asph. Surface Course
Cinder Base

LEGEND

- 1¼" T-35, 0'-6" Variable Thickness B-35 & T-30 Tack Coat (On concrete & brick base courses)
- 4" Concrete Sidewalk.
- Removal of existing pavement.
- 1¼" T-35, 1½" B-35, T-30 Tack Coat 9" B-70.
- 2" T-35, 7" B-119 T-30 Prime Coat

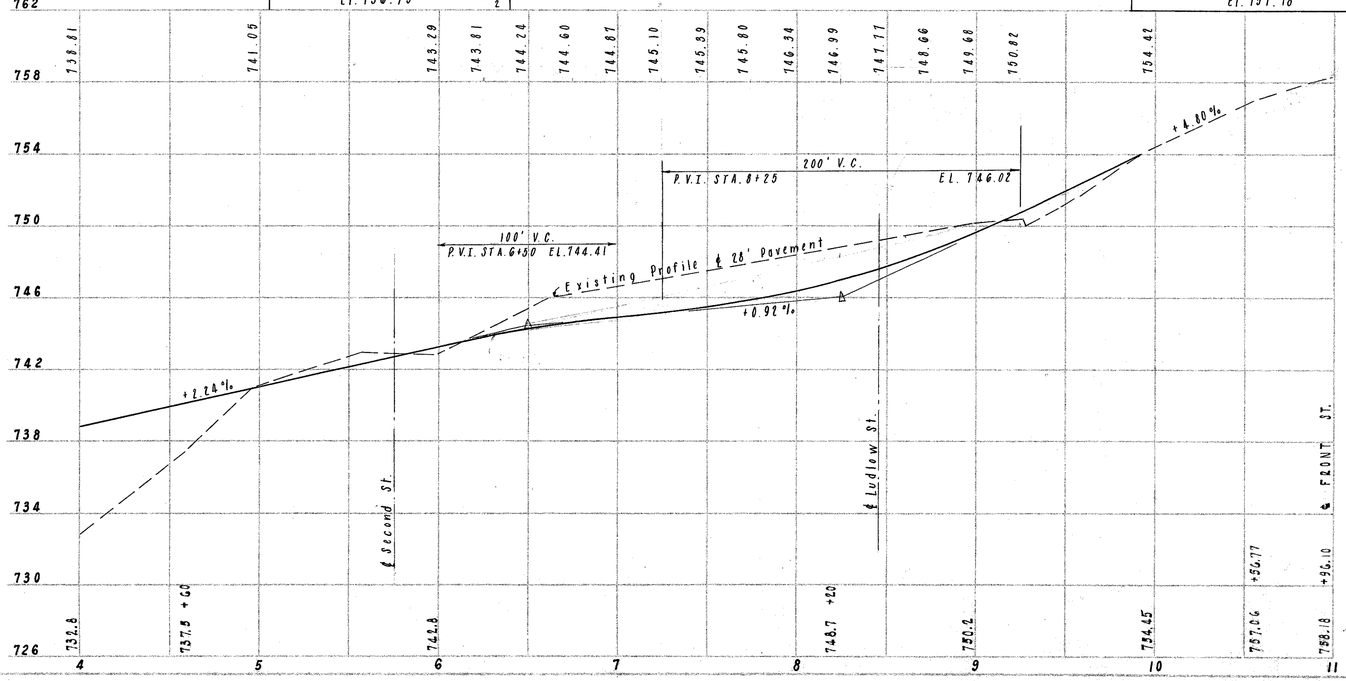
CURVE DATA (W. Bound Ramp)
P.I. STA. 3+27.02
Δ = 43° 11' 40"
D = 9° 00'
R = 636.62
T = 252.02
L = 479.94
E = 48.01
D.S. = 35 M.P.H.
S_E = 0.05'/ft.

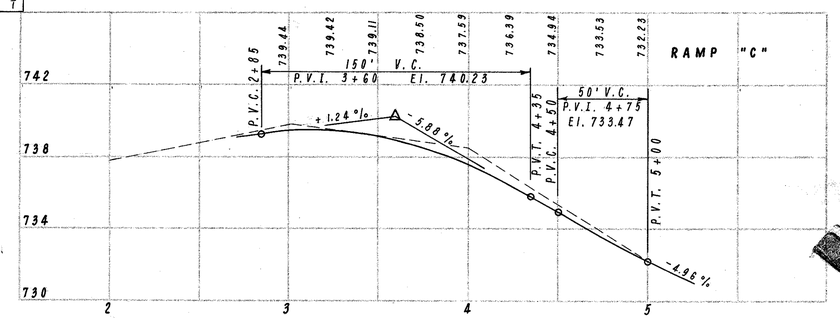
CURVE DATA (W. Bound Ramp)
Δ = 32° 46' 36"
D = 9° 00'
R = 636.62
T = 187.23
L = 364.19
E = 26.96
D.S. = 35 M.P.H.
S_E = 3/16"/ft.

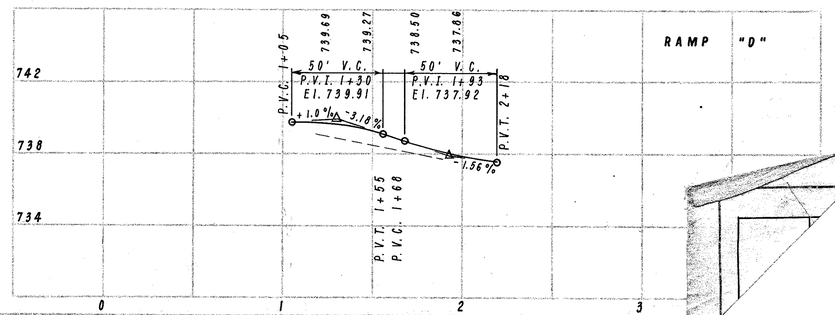
See Sheets No 32 & 34 For pavement elevations and Details.

BENCH MARK NO. 14
Axle in sidewalk, S.W. cor. Second & Mound
STA. 6+27 133' Lt.
El. 736.75 B-4/2

BENCH MARK NO. 15
B.P. in men. S.W. corner Front & Mound
STA. 10+57 23' Rt.
El. 757.18 B-4/1







FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS	24
2	OHIO			112

FRANKLIN COUNTY
FRA-40R-12.30

PLAN & PROFILE

SCIOTO RIVER

Prop. relocation of 8" W.L. (To be built by the City and not a part of this Contract.)

To be abandoned

MATCH LINE Sta. 11+50

R.R. Spike 23.69 30' I.P. on P/L

8+15.92 Furnace St. Tangent.

CURVE DATA (RAMP "B")
Δ = 150° 18' 24" Rt.
R = 130.00'
L = 341.04
D.S. = 25 M.P.H.
S_E = 0.049'/ft.

704.3 L.F. G. Rail

P.T. Sta 10+05.93

416' Spur Track to be removed by C & O Ry. Co.

MATCH LINE Sta. 7+50

Construction Limits

14+75.81 Ramp "B" 9'+09.82 Whittier St.

667.3 L.F. G. Rail

P.C. 9+05.88

3-5" Sumac
3-6" Maple
1-12" Sycamore

RAMP "B"

℄ Survey

1162.5 L.F. G. Rail

R/W

SERVICE ROAD "B"

N 79° 06' 16" E. 9

P.T. 9+93.16

Construction Limits Easement

R = 165.00'

S 26° 16' 55" E

Rail Mon. ℄ N 38° 36' 28" E

10+69.66 END WORK

To be abandoned by W. J. Maier, Jr.

EXIST. PAVEMENT DATA
3" Bit. on Cinder Base

Private Road

Prop. Warehouse (W. J. Maier, Jr.)

18'

Drive to be built by W. J. Maier, Jr.

Vacant Bldg. (Brick)

NOTE:
Total area between Prop. Warehouse & P/L to be Paved by others.

I.P. 3+50

51.17'
39.44'
54.85'

℄ Furnace St.

PRIVATE ROAD (Ginner Drive)

62.89'

R.R. Spike (P.I.) STA. 5+64.43 Service Rd. "B"

31.12'
Tack in corner of building
72.40'

℄ Furnace St.

Construction Limits

Stone Walk

Davis Cut Stone (Br.)

P.C. 4+86.80

P.I. STA. 5+44.43
Δ = 75° 58' 56"
R = 100'
T = 77.63
L = 132.62

See Sheet No. 33 for Profile & Typical Section

See Sheet No. 33 for Details of River St. & Sta. 3+00 to Sta. 6+50 (Service Rd. "B")

STA. 4+00
12' Type I Dr.
10' Rt. to 72' Rt.
2" T-35 7.0 c.y.
7" B-119 24.5 c.y.

STA 3+39.40
18' Drive as shown
14' Lt. to 41' Lt.
2" T-35 4.3 c.y.
7" B-119 15.1 c.y.
41' Lt. to 85' Lt.
9" I-18 22.0 c.y.

Remove under E-1

63.5' River St. 213.3' L.F.G. Rail. +67.3

℄ River St. +31.87 River St. +4+00 Furnace St.

RIVER ST.

N 86° 49' 46" W

Poplar 30" 15' 12' 16' 16" Twin Sumac 8" Sumac 12" Sumac 18" Sycamore 18" Sumac 10" Sumac 12" Sumac

℄ Survey

WHITTIER ST.

CURVE DATA (WHITTIER ST.)
P.T. STA 6+89.06
Δ = 21° 57' 18"
D = 5° 00'
R = 1145.92'
T = 222.28
L = 439.10
E = 21.36
D.S. 45 M.P.H.
S_E = 0.065'/ft. +01.2

℄ Furnace St. N 37° 40' E

6+00

℄ Survey

Construction Limits

Temporary Turn Around

Asphalt Drive

Easement

6+00

1-18

Type C

262.5 L.F. G. Rail

Gunard - Lang

Existing 30" Storm Sewer @ 0.64%

16" Poplar

Construction Limits

Ex. Whittier

Begin Work Sta. 2+00

P.C. 4+66.78 R/W

BEGIN WORK STA. 4+75

2½" Bit. surface on W.B. Base

Axle E. of E. edge Whittier St. pavement 450' ± S. of Mound St.

℄ Ex. Whittier St.

440.69'
16° 12'
58.16'

Brass plug in Conc. Mon. 858' S. of S.E. cor. of E. end Mound St. Bridge guard wall & 13' W. of Whittier St. pavement edge

CENTER PUNCHED MINE SPIKE

P.C. 4+66.78 (WHITTIER)

Shiner in 14" Tree
Shiner in 10" Tree
22.87'
86.66'
TACKED HUB
48.84'
Shiner in 24" Tree

P.I. STA. 6+89.06 (WHITTIER)

Ex. Whittier
Shinner in 6" Tree
16.20'
Shinner in 8" tree 54.40'
IRON PIN
39.48'
Shiner in cave of Garage behind Davis Cut Stone

P.I. STA. 9+05.88 (WHITTIER)

LEGEND

- 1¼" T-35, 0-6" Var. thick. B-35, T-30 Tack Coat.
- 12" - T-10, M-10, 1 Ton/50 c.y. of Aggregate
- Removal of existing pavement.
- Existing pavement to be scarified
- 1½" T-35 1½" B-35 T-30 Prime Coat 6" B-119 & 4" I-22 Subbase.

SERVICE RD. "B" SUPERELEVATION TABLE

STA	LT.	℄	RT.
6+75	713.21	713.05	712.89
9+00	712.60	712.60	712.46
+25	712.24	712.10	711.94
+50	711.80	711.64	711.48
+75	711.04	710.90	710.74
10+00	711.09	711.09	710.93
+25	710.84	711.00	710.84

BENCH MARK NO. 11
B.P. in mon. W. Side Whittier St. W. of Gunard-Lang Co. Sta. 4+18 36' Lt. B-3/10
El. 723.45

BENCH MARK NO. 12
Axle E. Side Whittier St. W. of Davis Cut Stone Sta. 8+56 8' Rt. B-3/9
El. 725.74

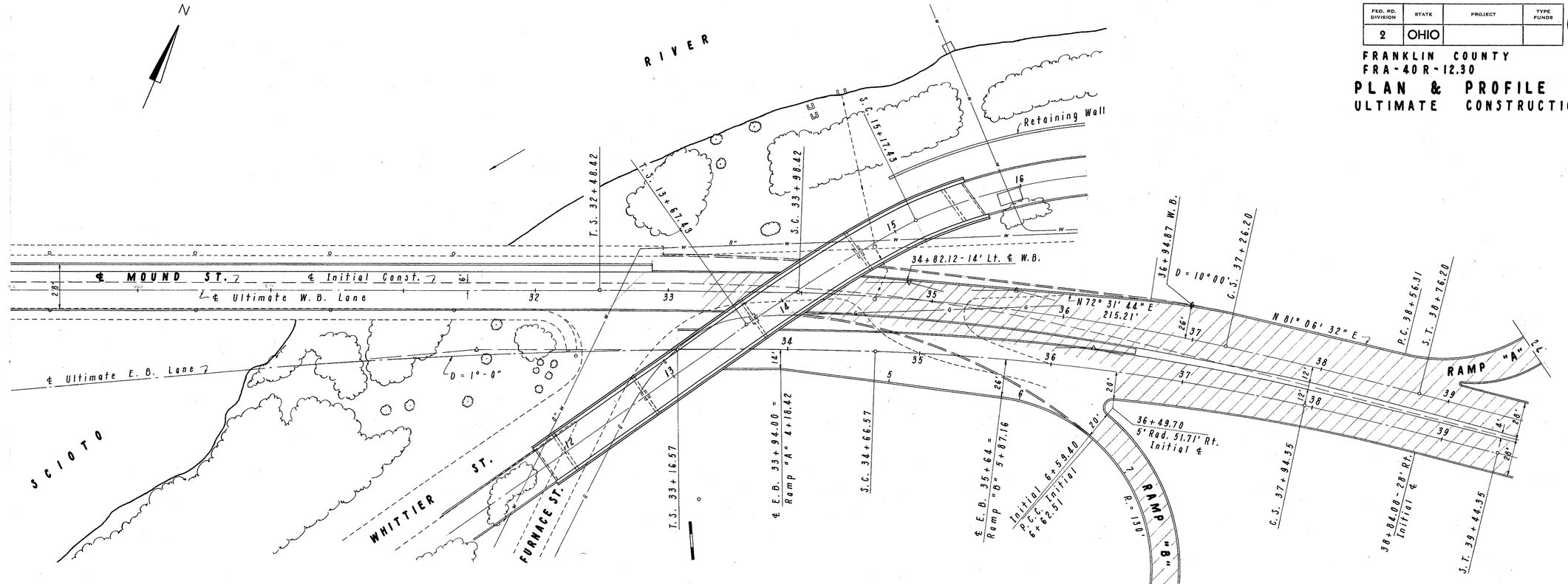
BENCH MARK NO. 13
B.P. in mon., 79' S.W. of S.W. Cor. of conc. pad in C & O Yd. Sta 8+69 114' Lt. B-3/7
El. 714.08

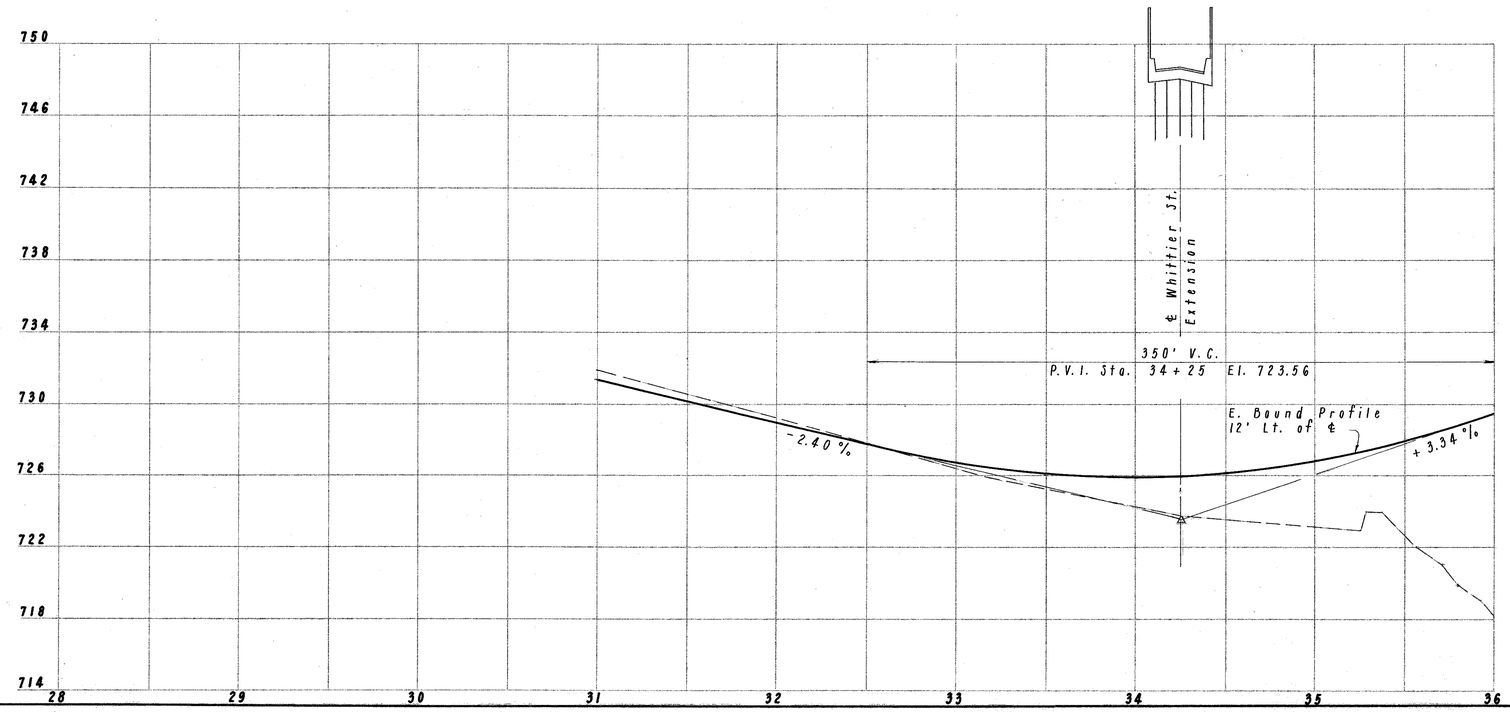
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

25
112

FRANKLIN COUNTY
FRA-40R-12.30

PLAN & PROFILE
ULTIMATE CONSTRUCTION





CURVE DATA
E. & W. BOUND ULTIMATE

Δ = 14°-20'
D = 3°-00'
Ls = 150'
Ts = 315.20'
Es = 15.53'
θs = 2°-15'
Yc = 1.96'
Xc = 149.98'
Lc = 327.78'

LEGEND

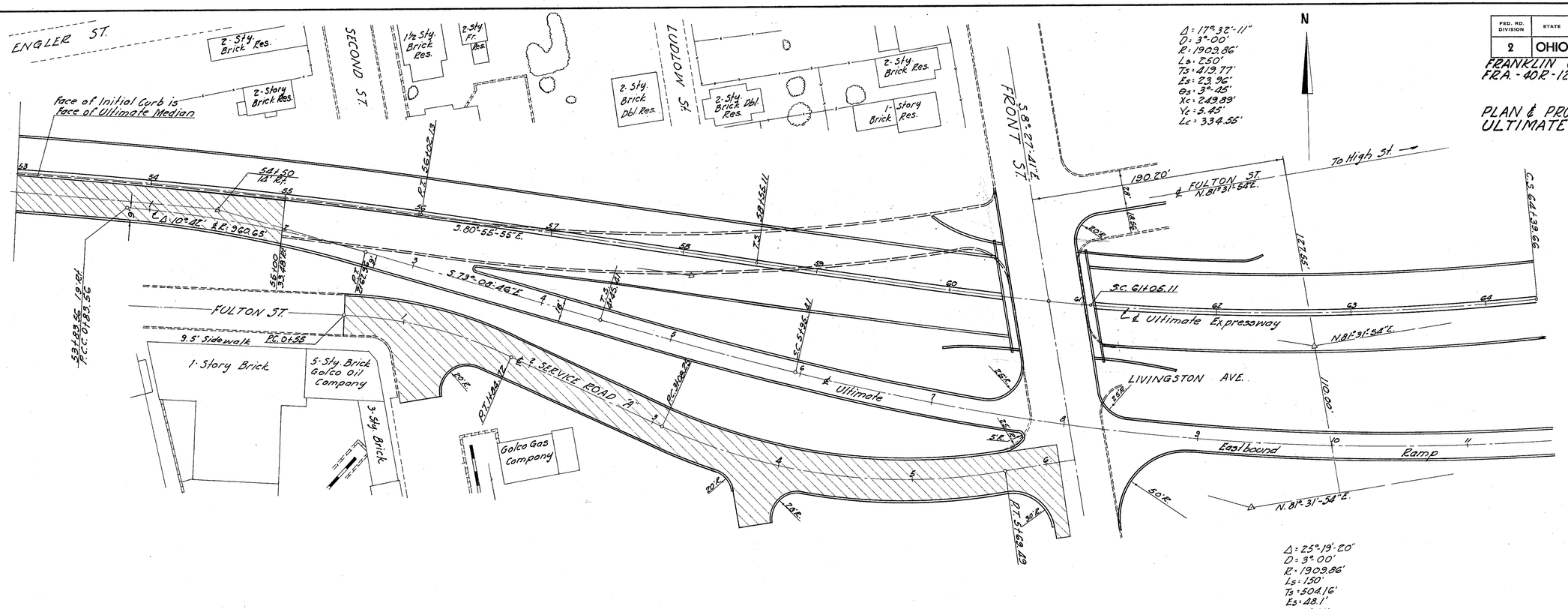
Ultimate Construction
Initial Construction
Initial Pav't. to be salvaged for Ultimate Construction.

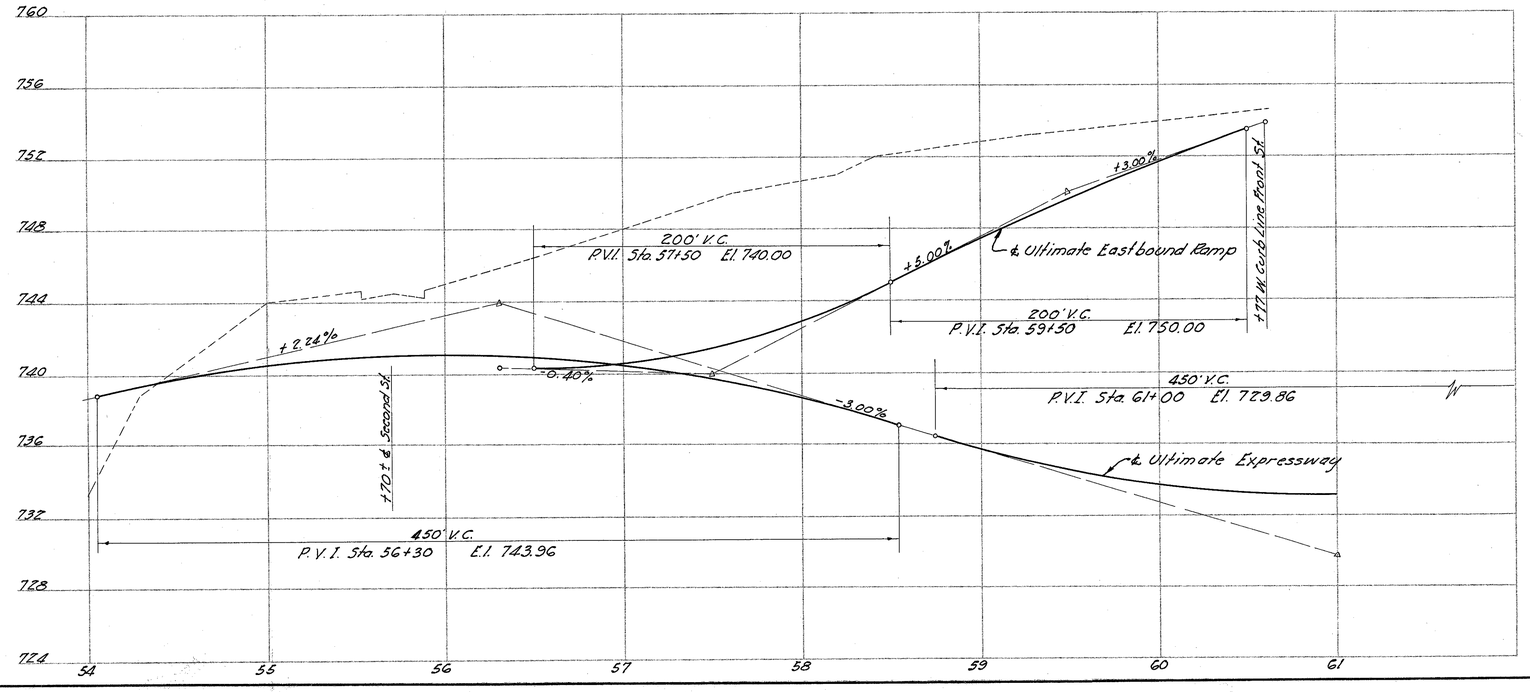
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

26
112

FRANKLIN COUNTY
F.R.A. - 40R - 12.30

PLAN & PROFILE ULTIMATE CONSTRUCTION





LEGEND

- Initial Pavement to be salvaged for Ultimate Construction.
- Initial Construction.
- Ultimate Construction.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
5 2	OHIO		

27
112

FRANKLIN COUNTY
FRA-40R-12.30
RAMP AND SERVICE ROAD PROFILE

WHITTIER ST.

RIVER ST.

RAMP "B"

SERVICE RD. "B"

RAMP "A"

SERVICE ROAD "A"

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

28
112

FRANKLIN COUNTY
FRA-40R-12.30

U.S. 40R ELEVATIONS AND WHITTIER ST. ELEVATIONS

N

MOUND

BLVD.

SCIOTO RIVER

SCIOTO

BEGIN WORK STA. 22+50

See Structure NºFRA-40R-123 for Quantities

ST.

Ex. MOUND ST. BRIDGE

BEGIN PROJECT STA. 23+27.90

U 1085 (1)

MOUND ST.

1.0 P.S. +2.5 2.5 P.S. 5'

40'

N 67°-46'-05" E

728.88 728.27 727.86 727.52 727.36 727.37 727.60 727.86 728.12 728.36

729.36 728.75 728.14 727.60 727.24 727.06 727.03 727.08 727.20 727.38

728.88 728.27 727.74 727.29 726.93 726.66 726.46 726.30 726.25 726.36

T.S. 32+28.82

32 33 34

E L E

Sta 32+09 to Sta 32+25 Tran. Curb from 10" to 6" on Ef.

3.C. 33+78.82

34+05.20 Rt. ± 4+23.29 Ramp "B"

MATCH LINE 13+50.

749.56 749.36 749.12 748.90 749.14 748.68 748.56 748.34 13 748.12 747.89 747.67 747.45 747.13 746.91 746.69 746.27 746.05 745.83 745.32 745.10 12 744.88 744.35 744.13 743.91 743.30 743.16 742.94 42

Conc. Bl. GENERAL HEATING & EQUIPMENT CO.

WHITTIER ST. (Exist Part to be Scarified)

MATCH LINE STA. 11+25.

FURNACE ST.

Begin App. Slab Sta. 11+97.50

End App. Slab Sta. 11+72.50

MATCH LINE 13+50.

749.94 750.25 750.56 750.80 750.93 750.95
749.72 749.99 750.15 750.22 750.19 750.05

749.50 749.73 749.73 749.64 749.45 749.15

T.S. 13+67.43

MATCH LINE 15+00.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

29
112

FRANKLIN COUNTY
FRA-40R-12.30

U.S. 40R, WHITTIER ST., RAMP "A" AND RAMP "B" ELEVATIONS

WHITTIER ST. CURVE DATA
Δ = 44°-40'
D = 14°-00'
Ls = 150'
Es = 35.66
θs = 10°-30'
Ts = 243.98
Xc = 149.50
Yc = 9.14
Lc = 169.05

N

WHITTIER ST.

N 77°-23'-58" E

Begin App. Slab Sta. 15+65.98

End App. Slab Sta. 15+100.00

MATCH LINE STA. 34+15

MATCH LINE STA. 21+25

NOTE; Park Strip Transition Sta. 34+65 to Sta. 35+00

Δ = 0°-38'-10"
D = 10°-00'
T = 33.22'

S.T. 18+36.48

C.S. 16+86.48

19+15.61 = 0+00
120 R

Δ = 45°-34'-16"
R = 120'

1+81.94 Ramp "A"
39+05.18 ℄

Pavement Elevations on Ramp "A" Stationing

Δ = 42°-59'-03"
R = 120'

38+56.31 = 2+23.07
39+33 - Lt.

P.C.C. 0+91.25

Begin App. Slab Sta. 20+33.54

End App. Slab Sta. 20+39.54

END WORK STA. 21+00

20+17.20
25' Rt. 5' Lt.

Ramp "A" Quantities
Sta. 0+91.25 to 1+81.94

RAMP "A"

End Conc. Median +25

W. BOUND

E. BOUND

N 82°-06'-05" E

39+05.18
30' Lt. 2' Lt.

Pavement Elevations on Ramp "B" Stationing

P.I. STA. 34+84.00
℄ EXPRESSWAY CURVE DATA
Δ = 14°-20'
D = 4°-00'
Ls = 150'
Ts = 255.18
θs = 3°-00'
Es = 11°-93'
Xc = 149.96
Yc = 2.62
Lc = 208.33

Δ = 86°-58'-57"
R = 374.31
L = 241.60

C.S. 35+87.15

C+39.10

P.O.C. C+64.89

Begin Ramp "B" Profile Grade

RAMP "B"

S.T. 37+37.15
P.I.
℄ Survey
N 82°-06'-05" E
140°-02'-48"
121.27
S 22°-08'-27" W
P.O.C. C+64.89 (Ramp "B")

S.T. 37+37.15

Δ = 9°-24'-47"
D = 4°-00"

C.S. 37+94.92
29.95 Rt.

38+84.08
28 Rt.

S.T. 39+44.35

Begin Appr. Slab Sta. 39+66.55

Sta. 39+20 to Sta. 39+45
Taper Median from 0" to 2" height.

Sta. 36+56 to 39+08
21 Precast Concrete Traffic Dividers, @ 12" ctr.

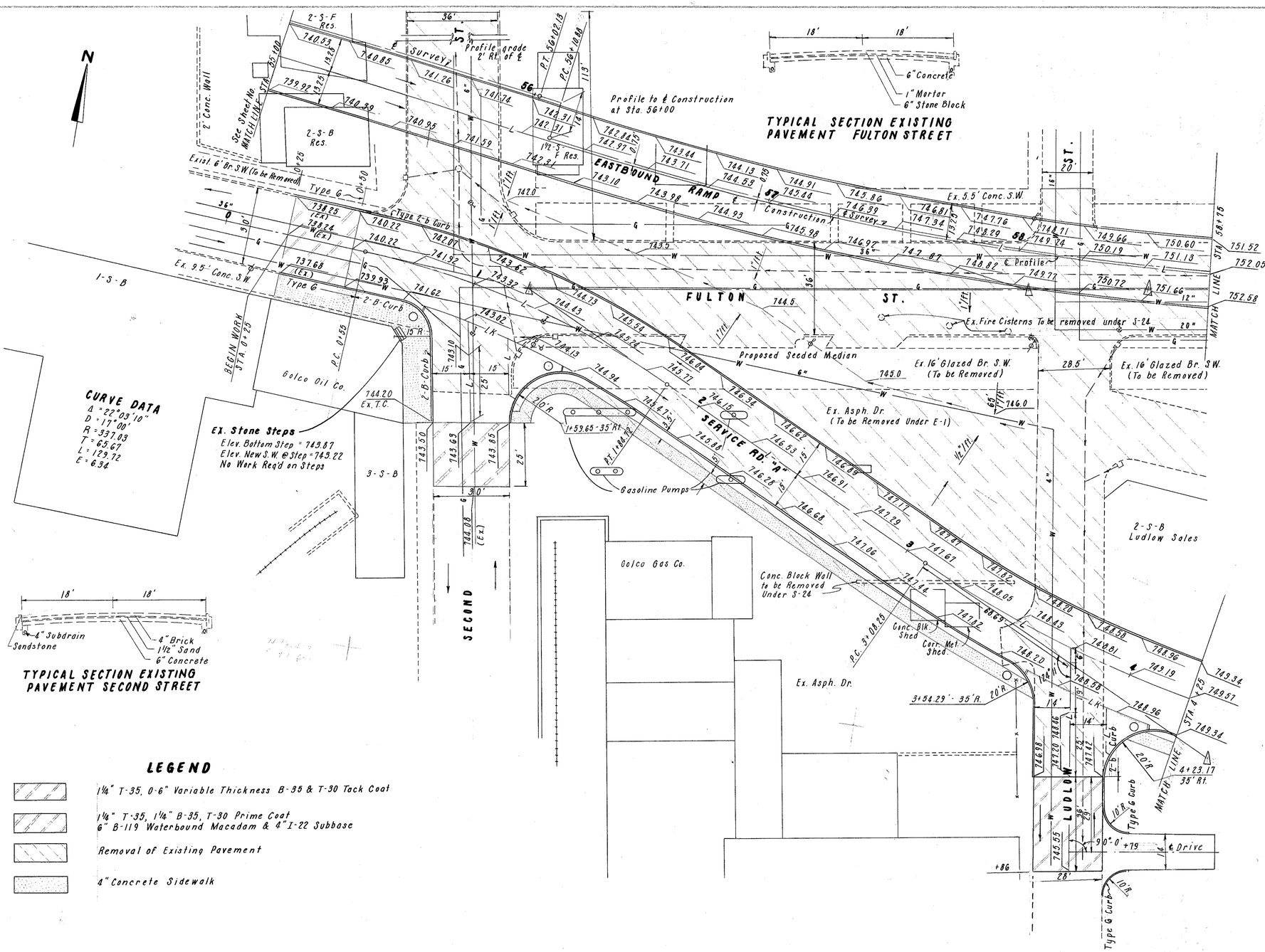
MATCH LINE STA. 8+00

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

30
112

FRANKLIN COUNTY
FRA-40R-12.30

SERVICE ROAD "A" INTERSECTIONS & EAST BOUND RAMP ELEVATIONS



TYPICAL SECTION EXISTING PAVEMENT SECOND STREET

TYPICAL SECTION EXISTING PAVEMENT FULTON STREET

LEGEND

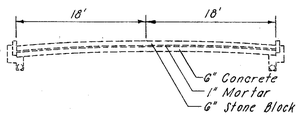
- 1¼" T-35, 0-6" Variable Thickness B-35 & T-30 Tack Coat
- 1¼" T-35, 1¼" B-35, T-30 Prime Coat; 6" B-119 Waterbound Macadam & 4" I-22 Subbase
- Removal of Existing Pavement
- 4" Concrete Sidewalk

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

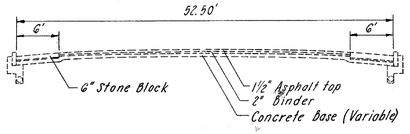
31
112

FRANKLIN COUNTY
FRA-40R-12.30
EAST BOUND RAMP AND SERVICE ROAD "A" INTERSECTIONS

CURVE DATA
Δ = 17°-32'-11"
D = 4°-30'
R = 1273.24
T = 196.38
L = 389.70
E = 15.08



TYPICAL SECTION EXISTING PAVEMENT FULTON STREET



TYPICAL SECTION EXISTING PAVEMENT FRONT STREET

LEGEND

Removal of existing Pavement

4" Concrete Sidewalk

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

32
112

FRANKLIN COUNTY
FRA-40R-12.30

WEST BOUND RAMP ELEVATIONS

N

MOUND ST.

2-S-Br. Res. | 2-S-Br. Res. | 2-S-Br. Res.

Feathered Joint

Concrete Median.

Concrete Median

2-b Curb

Face Exist. Curb

Slope

Prop. C.B.

NOTE: B-70 Course is extended under 2-b curb.

3-S-Conc. Blk. Store Rm.

2-S-Br. Double Res.

2-S-Br. Store Rm.

3-S-Br. Res.

2-S-Br. Res.

Ex. 10' Br. Walk

1-S-Stone Nite-club

Ex. Conc. Drive

2-S-Br. Res.

2-S-Br. Res.

2-S-Br. Res.

2-S-Br. Double Res.

2-R, 1-S-Conc. Blk.-Gar.

Existing 16' Br. S.W. (To be removed under)

Ditch

W. Bound Survey

P.C. 61+92.58

G. L. Greyhound Gar. 1-S-Br. & Conc. Blk.

MATCH LINE See sheet No STA 61+25

Existing 6' Brick S.W.

LUDLOW

Br.-Gar.

Existing 6' Brick S.W.

2-S-Br. Res.

P.K. Nail. 10+56.77

Spike 10+00

10+96.10 Spike

Butt Joint

10+49.46 34' Rt.

Conc. Drive

Br. Walk | Conc. Walk

FRONT ST.

3-S-Br. & Conc. Blk. St. Rm & Apts.

2-S-Br. Res.

CURVE DATA

Δ = 32° 46' 36"
D = 9° 00'
R = 636.62
T = 187.23
L = 364.19
E = 26.96

N 97,000
E 99,800

ST.

2+18.34 Ramp "D" = 5+35.00 Mound St.

Feathered Joint

Butt Joint

RAMP "C"

6' Br. Park Strip 12.5' Conc. S.W.

Remove S.W. & Park Strip & Seed Area from Curb to P/L

Remove under E-L

JEWETT

Berman Junk Yard

End Work 90' R P.T. 5+25.50 Ramp = 3+91.35 Mound St.

2-S-Br. Res.

1-S-Conc. Blk. Grocery

2-S-Br. Part of Tavern

3-S-Br. Tavern

Conc. Med.

RAMP "D"

SECOND

Profile Grade

Profile Grade

4+30 (W.B.) 116.69 Lt.

Δ = 144° 44' 29"
D = 63° 39' 43"
R = 90.0'
Lc = 227.36

Δ = 39° 41' 18"
D = 25° 00'
R = 229.18
T = 82.71'
Lc = 158.75

1+97.54

P.T. 1+94.73 5+35 Mound St.

1-S-Pertamone Restaur.

MATCH LINE

M.H.

LEGEND

- 1¼" T-35, 0'-6" Variable Thickness B-35 & T-30 Tack Coat (On concrete & brick base courses.)
- 4" Concrete Sidewalk.
- Removal of existing pavement.
- 1¼" T-35, 1¼" B-35, T-30 Tack Coat; 9" B-70 4" I-22
- 2" T-35, 7" B-119 T-30 Prime Coat

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

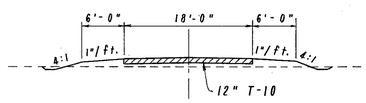
33
112

FRANKLIN COUNTY
FRA-40R-12.30

WHITTIER ST., SERVICE RD. "B", & RAMP "B" ELEVATIONS RIVER ST. INTERSECTIONS

EXISTING PAVEMENT DATA
(WHITTIER STREET)
2½" Bit. Surface on W.B. Base
Pavement Width Variable

TYPICAL SECTION OF RUN-AROUND



Prop. ℄ Elev. to be 18" (Min.) above exist. ground.

WHITTIER
Match Line 6+00
Transition Curb 6" to 2" in 8'
BEGIN WORK 0+15 (RIVER ST.)
BEGIN WORK STA. 4+75
P.C. 4+66.70
7+07.10 Whittier St. = 0+00 (River St.)
Match Line 5+00
0+46.5 50' R.
Edge Back Slope
Cinder Drive
Shed
0+95 50' R
RIVER ST.
CUNARD LANG CONC. CO.
DAVIS CUT STONE CO.
Transition Curb 6" to 2" in 8'
1+67.5 50' R.
1+70 50' R.
END WORK 2+21.87 (RIVER ST.)
Slope S.W.
Transition Curb 6" to 2" in 8'
BEGIN WORK 2+00
FURNACE
Temporary Runaround
3+00 50' R.
3+39.40
2+40.32 River St. = 4+00 Furnace St.
4+50 50' R.
20' R.
Remove Drive Under E-1
Exist. Bit. Mac. Drive to American Bitumuls & Asphalt Co.
℄ 100' R.
SERVICE RD. "B"
Exist. pav't. to be removed under E-1. (after detour is aband.)
14+67 20' R.
RAMP "B"
Slope Grass Median to curb, Min. Slope ¼"/ft.
2-B Curb
Whittier St. Ramp "B"
ST.
Ex. Bit. Pavement
13+39.73 50' R.
Match Line 13+00
11+19.71
Match Line 11+25
6+50 – For Elev's. on Service Rd. "B" See Sheet №

1¼" T-35, 1¼" B-35, T-30 Prime Coat, 6" B-119 Crushed Aggr. & Base Course & 41-22 Subbase.
1¼" T 35, 0" to 6" Var. thickness B-35, T-30 Tack Coat.
12" T-10, M-10, 1 Ton per 50 C.Y. of Aggr.
Removal of Existing Pav't.
Exist. Pav't. to be Scarified.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

34
112

FRANKLIN COUNTY
FRA-40R-12.30
PAV'T. ELEVATIONS

43+46.79 End Appr. Slab

43+25

W. BOUND

E. BOUND

43+72

44+22

49+53

49+03

49+18

49+47.68 End Appr. Slab

49+22.68 Begin Appr. Slab

49+27

50+95.26 End Appr. Slab

50+75 E.B. Ramp

E. B. RAMP

Profile Grade 2' Rt. of ℄

℄ Survey

51+01

51+16

51+66

P.C. 53+83.56
Ultimate E.B. Ramp

NOTE: Build for Ultimate E. Bound Lane.
Extend B-70 base course & I-22 only.
B-70 to be covered by shoulder.
Elevations are to the face of future curb & to the top of future T-35 & B-35 course.

Match Line 55+00
See Sheet №

See Sheet №
Match Line 6+25

Conc. Med.

P.T. 5+54.94

Δ = 27° 07' 13"
D = 12° 30'
R = 458.37'
T = 110.55'
Lc = 216.96

RAMP "C"

W. B. RAMP

P.R.C. 0+41.18 Ramp "C"

END PROJECT 50+75.00
= 0+75.00 W. B. RAMP

0+92.50

50+70.27 Begin Appr. Slab

1+08

1+58

Profile Grade

℄ Survey

Profile to ℄ at 2+00

Profile Grade 12' Rt. of ℄.

13' Rt.

13.5' Rt.

End Conc. Median

+57

50+95.27 End Appr. Slab

See Sheet №
Match Line 13+00

RAMP "B"

10+05.93

See Sheet №
Match Line 8+00

See sheet №32
MATCH LINE 3+50 Ramp "C"

P.C. 0+35.98

Nosing 0+21.70

P.R.C. 0+98.14

RAMP "C"

Conc. Med.

+40

℄ Survey Ramp W.B.

P.T. 5+54.94

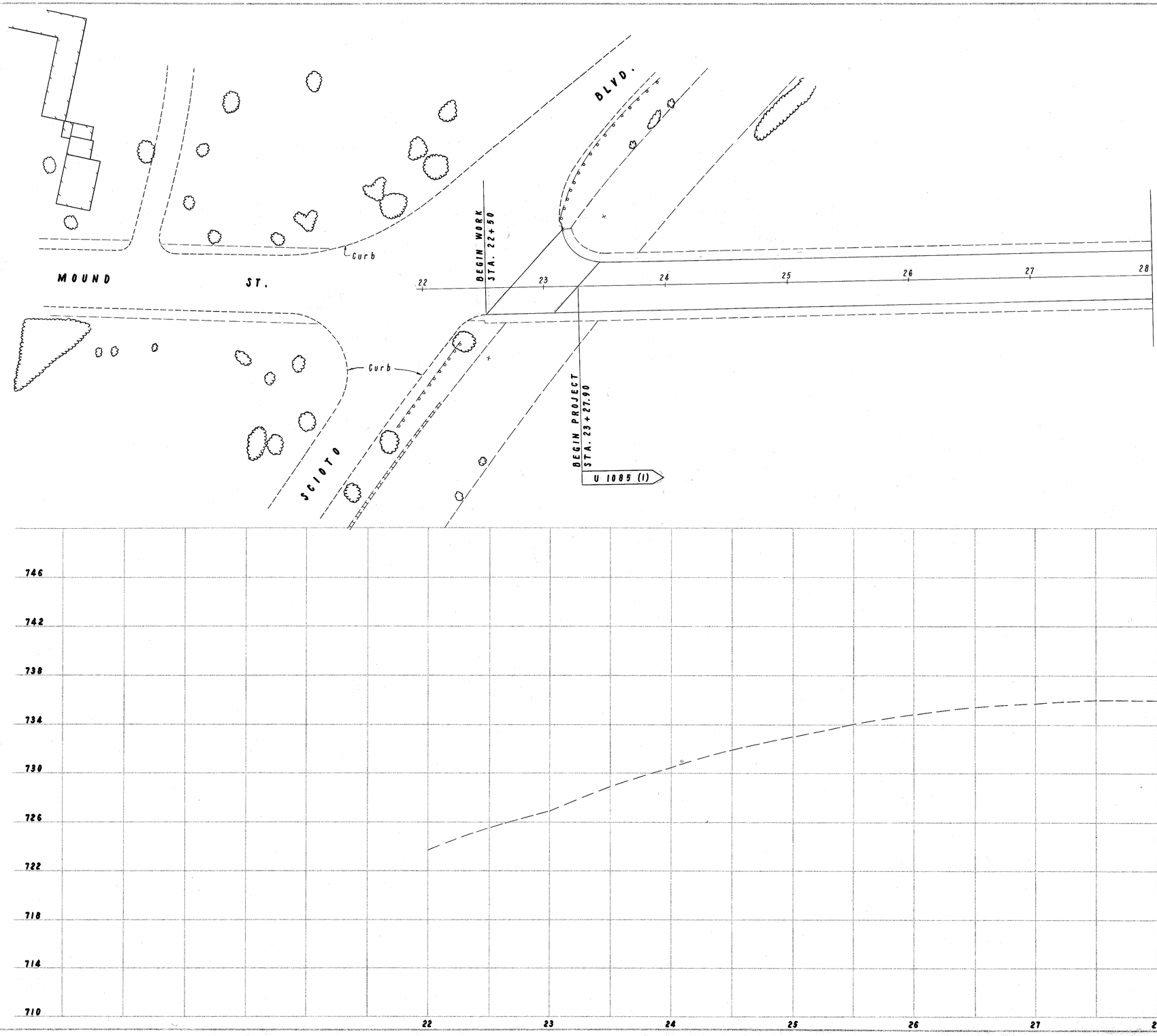
MATCH LINE Sta 3+00 W.B.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

35
112

FRANKLIN COUNTY
FRA-40R-12.30

DRAINAGE PLANS



PRD. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

36
112

FRANKLIN COUNTY
FRA-40R-12.30

DRAINAGE PLANS

RIVER

SCIOTO

MOUND

WHITTIER ST.

FURNACE ST.

ST.

Columbus & Southern Electric Power Lines

STA. 33+15 to 33+41
64 L.F. Type 3 (Mod.)
Paved gutter
Std. hdw'l
S-1 .85 c.y.
S-4 24 Lb
E-2 2.1 c.y.

NOTE: Entire slope from 1:1 to 2:1 to be riprapped

STA. 32+95 to 33+20
20 s.y. Type "A" Grouted Riprap

Flood Elev. 716.2
Weir Elev. 696.3

33+15
104 Lt.

33+41
45 Lt.

33+50
Top 728.10

21.8' Lt. Nº 1 M.H. (Mod.)
Inv. 15" N. 722.41
Inv. 12" W. 723.24
Inv. 15" S.E. 722.41
Inv. 12" S. 722.90

129 S.Y. SOD

Prop. Retaining Wall

SOD

Aband. C.B.
Remove 78' - 12"
Aband. C.B.

Inv. 717.97

30' 18" @ 2.00%

40' - 12" @ 1.00%

12" M.H.

15" @ 1.00%

724.0

723.0

714.0

721.6
150' Rt.

719.40
150' Rt.

718.8
150' Rt.

1"/ft.

3/4"/ft.

1/2"/ft.

1/4"/ft.

715.0

32+61, 20' Lt. Std. Nº 2-14 Inlet (Mod.)
Pav't. 727.56, Inv. 12" 724.13

33+50, 20' Rt. Std. Nº 2-6 Inlet (Mod.)
Pav't. 726.34, Inv. 15" N. 723.34

+00, 20' Rt. Std. Nº 2-6 (Mod.) Inlet, Pav't.
Inv. 12" E. 723.27 Inv. 15" N.W. 723.02

+30, 27' Rt. Std. Nº 2-6 (Mod.) Inlet, Pav't.
Inv. 12" W. 723.47

350' V.C.
P.V.I. 34+00 El. 724.13

Profile Grade is 12' Rt. of ℄ of ultimate W. bound lane

-2.40%

+3.00%

86' - 12" @ 1.00%

46' - 12" @ 0.4%

8" Water

12" Storm Sewer

℄ WHITTIER ST. EXTENSION

746
742
738
734
730
726
722
718
714
710

28 29 30 31 32 33 34 35 36

Ø's & Con. Finish P.G. & Prof. on 11

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

37
112

FRANKLIN COUNTY
FRA-40R-12.30
DRAINAGE PLANS

See Sheet Nº 42 for Drainage Profiles on Whittier St.

Not to Scale
See X-Section for Details & elevations

STA 18+60, 91' Lt. to 18+88, 17' Rt.
25 L.F. Type J (Mod.) Paved Gutter
Std. Hdw'l
S-1 = 1.0 c.y.
S-4 = 26 lb.
E-2 = 2.8 c.y.
67 L.F. Type 3 (Mod.) Paved gutter
I-2, 112"-18" M 6.6 (b)

38 S.Y. SOD

See X-Sections for details & elevations

18+50 Std. Nº 2-6 Inlet (Mod) Pav't 740.60
Inv. 12" 737.00

18+88 17' Rt. Nº 2 M.H. (Mod.)
Top 740.04 Inv. 18" N. 737.01
Inv. 15" E. 736.74 Inv. 15" S. 737.25
Inv. 12" W. 736.25
4.4 s.y. Sod

19+00 54' Rt. Type 1-2A C.B.
Top Flow Line 725.40 Inv. 15"
N & S 722.04

19+75 Std. Nº 2-6 Inlet (Mod) Pav't 739.27
Inv. 12" 735.72

20+20 Std. Nº 2-6 Inlet (Mod.) Pav't 739.41 Inv. 12" 735.95

0+88 Std. Nº 2-6 Inlet (Mod) Pav't 738.98 Inv. 12" N. 735.28 Inv. 15" W. 734.98

1+75 Std. Nº 2-6 Inlet (Mod) Pav't 738.66
Inv. 12" E. 735.24 Inv. 15" W. 734.99

44+43± 107' Lt. Nº 2-2A (Mod.)
Inv. 12", N & S. 709.34±
Top F.L. 711.3

4.7 s.y. Sod

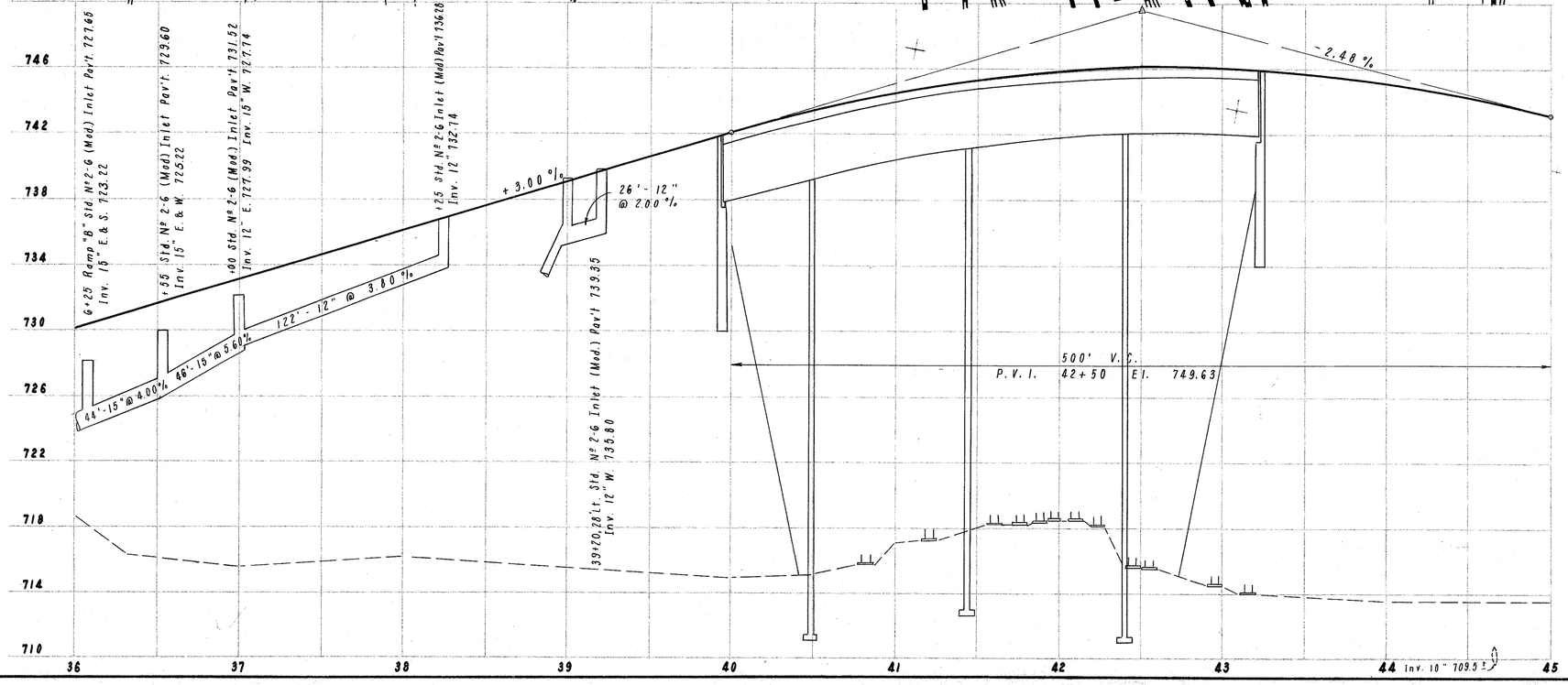
Note: Nº 2 M.H. (Mod) Rt 18+88 (Whittier St) to be constructed without drop pipe. If alternate Std. Drwg I-8 M.H. Nº 1-A is used the rings shall meet the strength requirements for reinforced concrete pipe Sec. 711-6.6 (c).

Abandon M.H. Remove existing 10" & 12" pipe from 107' Lt. to 105' Rt. Remove 12" pipe to West

44+73±, 105' Rt. Connect to Existing 10" Inv. 709.63±
1-10"x12" Reducer (Pipe Special)

STA. 6+25
1-2 32'-15"
1-14 10 L.F. Paved gutter Type "A"
1-Std. Hdw'l
S-1 = .85 c.y.
S-4 = 24 lb.
E-2 = 2.1 c.y.

MOUND ST.
WHITTIER ST. EXTENSION
RAMP "A"
RAMP "B"
C & O Ry.
N.Y.C. R.R.
COAL
Storm Sewer
MATCH LINE STA. 7+50



FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

38
112

FRANKLIN COUNTY
FRA-40R-12.30

DRAINAGE PLANS

N

1+65, 40' ± Lt. Std. Nº 2 M.H. (Mod.)
Inv. 15" E. 711.50, Inv. 60" 694.6, Top 727.0

1+67, 27' Lt. to 4+00, 10' Lt.
Remove 307'-15", Remove 1 Manhole.

3+30, 14' Lt. Std. Nº 2-6 Inlet (Mod.)
Pav't. 736.47, Inv. 15" W. 732.21
Inv. 15" E. 732.21

1+65, 40' ± Lt. to 4+75, 23' ± Rt.
307'-15" Pipe @ 5.00 %

3+50, 47' Rt. Nº 1-2A C.B.
Top FL. 726.8, Inv. 12", 724.30

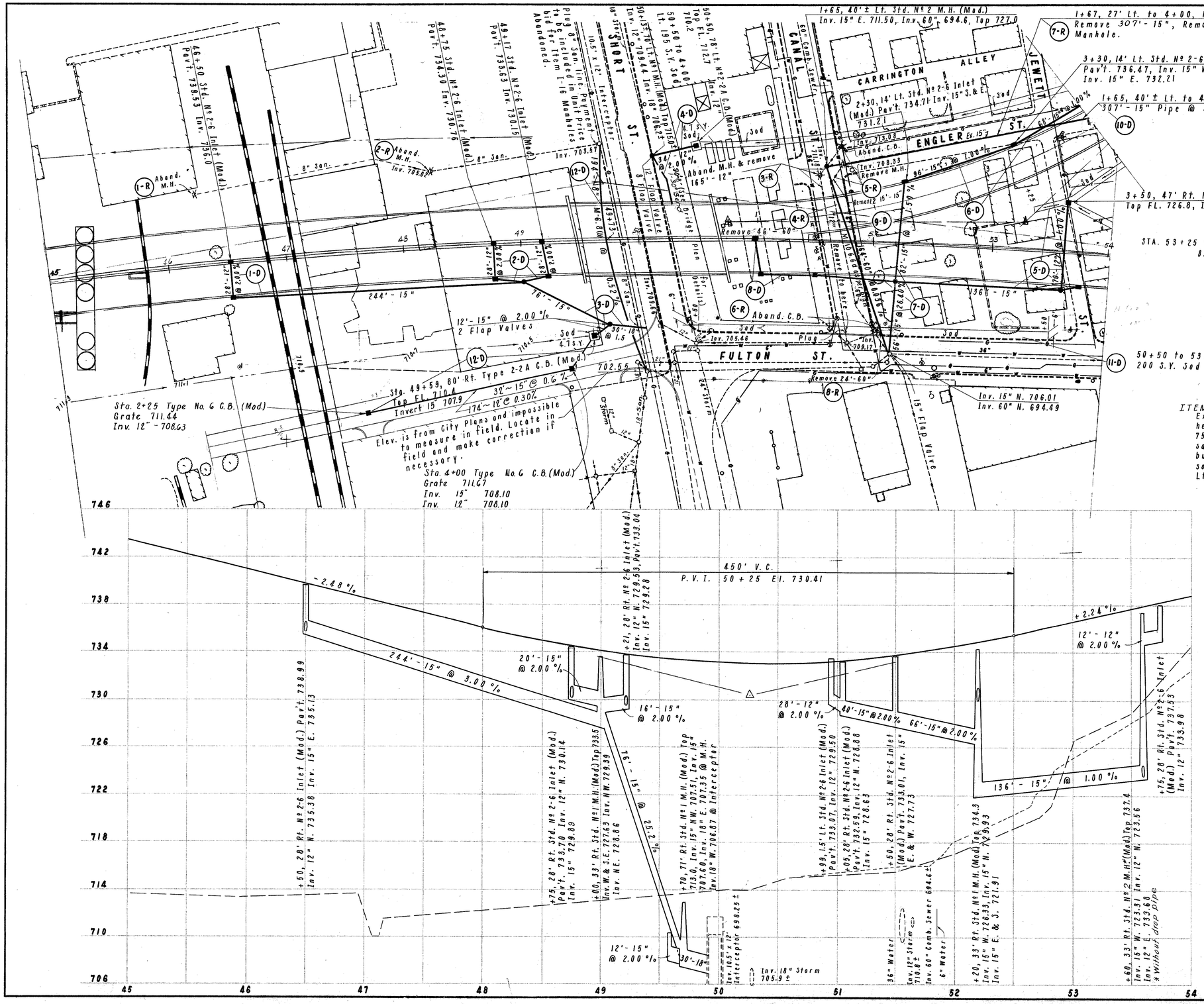
STA. 53+25 to STA. 4+00 W.B. & 54+00 E.B.
83 S.Y. sod

Note: Sta. 1+65 (W.B.) 40' Lt. to Sta. 52+19 Rt. 164 L.F. of 60" Heavy Duty R.C.C.P. Sec. M-M-106.6(d), As Per Plan, with full liner plates. See Sheet 16 for details of liner plates and concrete cradle. An alternate bid is required for the 164 L.F. of 60" M-106.6(d) pipe without full liner plates.

50+50 to 53+50 Rt
200 S.Y. Sod

ITEM SPECIAL~ ABANDONING EXIST. BRICK SEWER (See Note in Proposal)
Existing 60" 2-Ring Brick Combination Sewer is to be bulkheaded with a 2' thick brick wall 15' Lt. of main ℄ and 75' Rt. The pipe between bulkheads is to be filled with sand meeting the grading requirements of Sec. M-2.1-Sand, but it is not required that it meet the physical properties, soundness or sulfur limitations of this section. From 61' Lt. to 15' Lt. & from 75' Rt. to 92' Rt. remove 60" sewer.

Note: Nº 2 M.H. Lt. Sta. 1+65 (W.B.) if constructed in accordance with alternate Std. Drwg. I-8 M.H. Nº 1-A the precast reinforced concrete rings shall meet the strength requirements for Heavy Duty R.C.C.P. Sec. M-106.6(d).

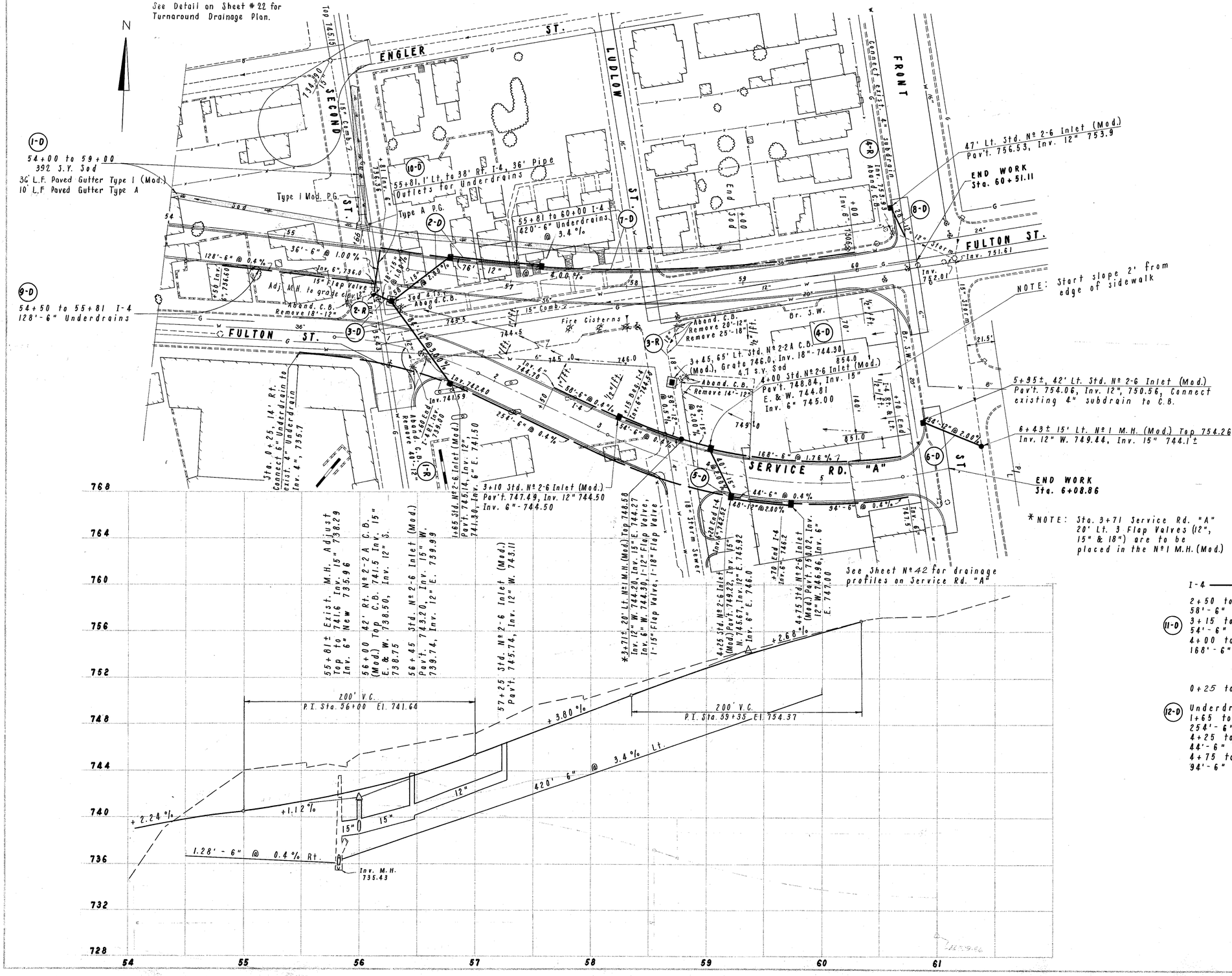


FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

39
112

FRANKLIN COUNTY
FRA-40R-12.30

DRAINAGE PLAN



I-4

2+50 to 3+10 Lt. I-4 58'-6" Underdrains.
(11-D) 3+15 to 3+71 Lt. I-4 54'-6" Underdrains.
4+00 to 5+70 Lt. I-4 168'-6" Underdrains.

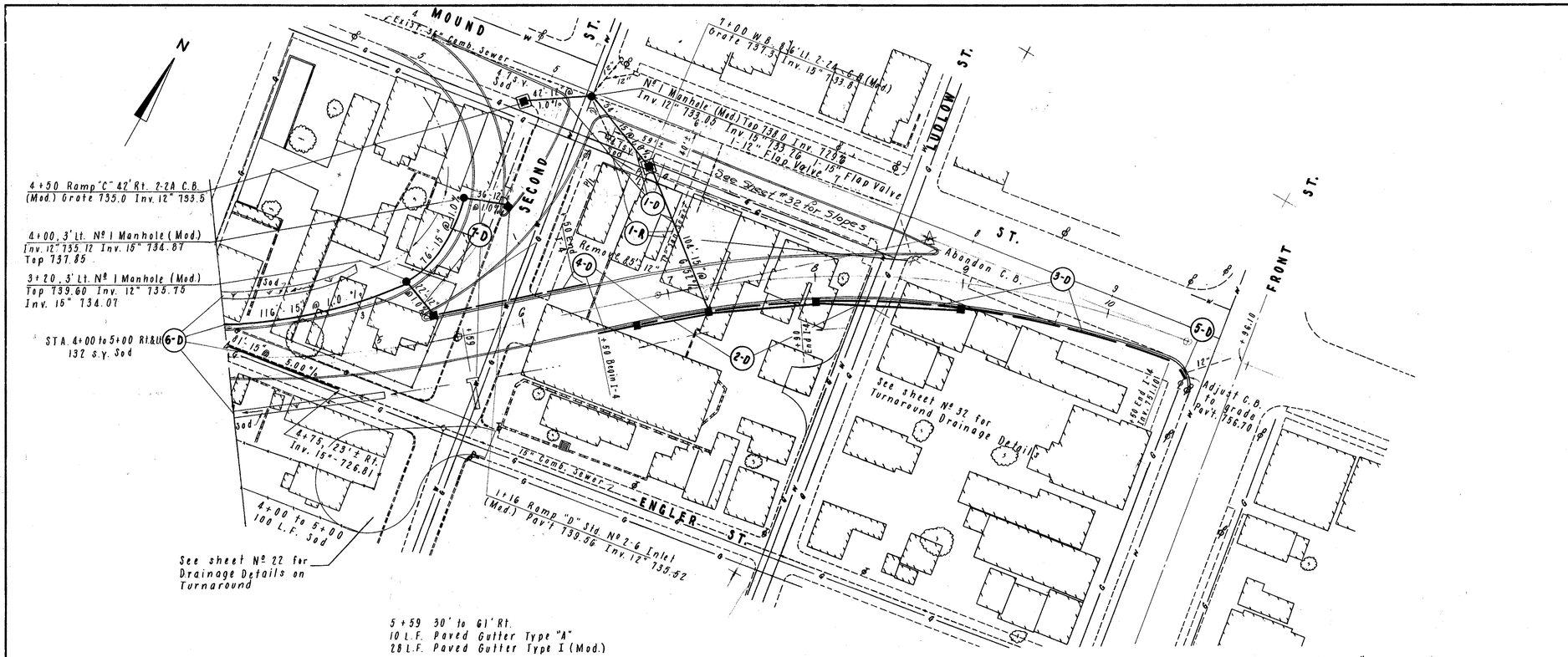
0+25 to 1+60, 195'-6"
(12-D) Underdrains.
1+65 to 4+20 Rt. I-4 254'-6" Underdrains.
4+25 to 4+70 Rt. I-4 44'-6" Underdrains.
4+75 to 5+70 Rt. I-4 94'-6" Underdrains.

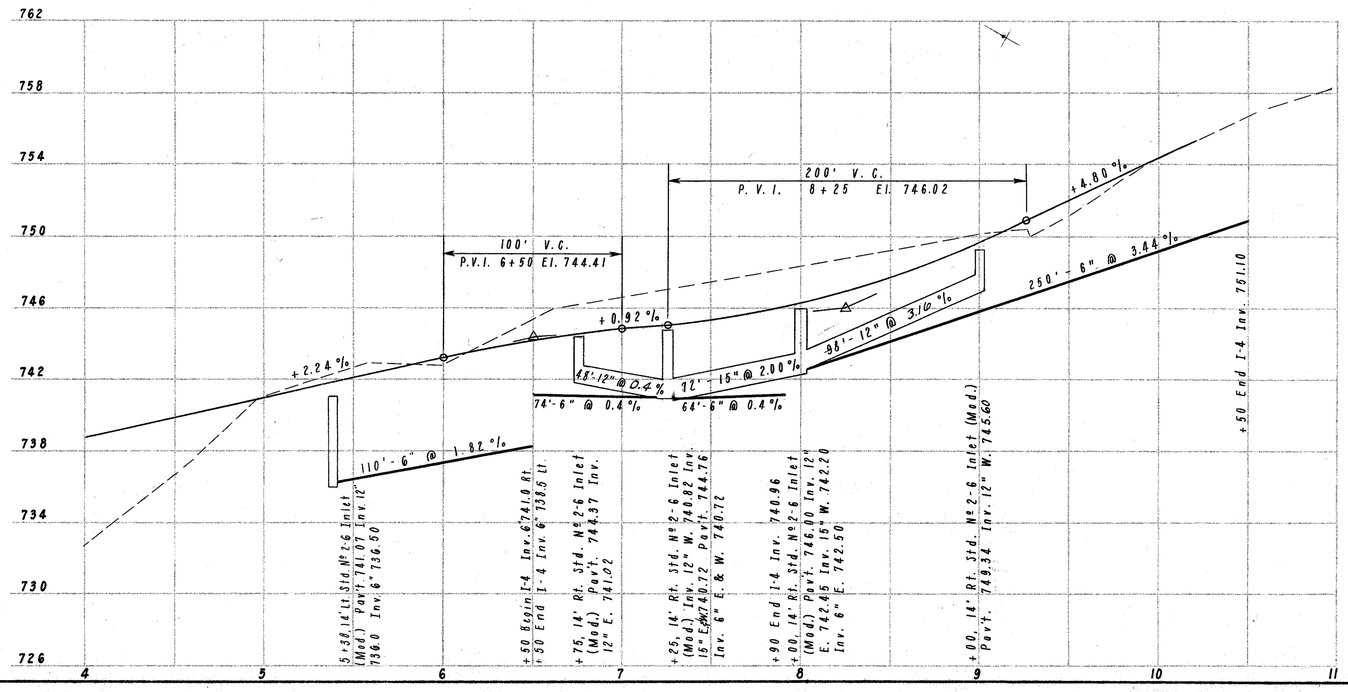
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

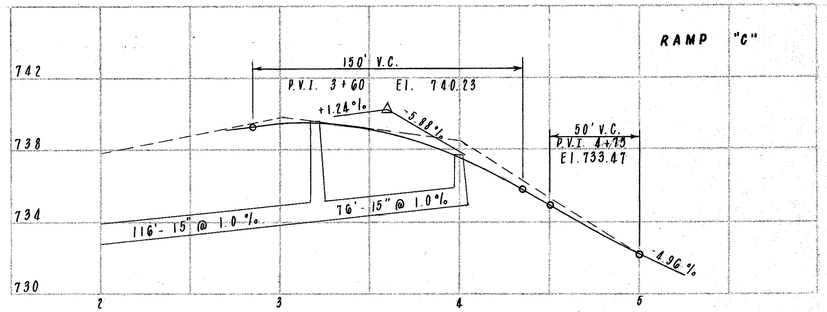
40
112

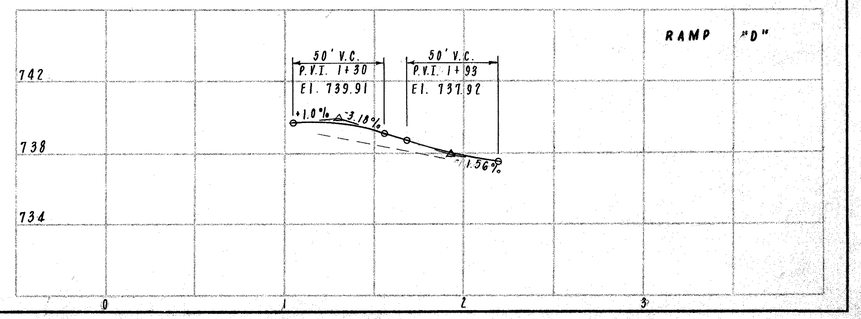
FRANKLIN COUNTY
FRA-40R-12.30.

DRAINAGE PLANS









FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

41
112

FRANKLIN COUNTY
FRA-40R-12.30
DRAINAGE PLAN

SCIOTO RIVER

WHITTIER ST.

FURNACE ST.

RAMP "B"

SERVICE RD. & "B"

Proposed R/W

MATCH LINE Sta. 11+50

MATCH LINE Sta. 7+50

Ditch Gr. 711.5

Proposed R/W

Exist. M.H.

Exist. 12" Tile Inlet

Existing 30" Storm Sewer @ 0.64%

Existing 12" C.I.P. cleanout. Connect existing 6" pipes to C.B. 8'-6" pipe.

10'-12" Dia. Paved & Coated C.M. Outlet Pipe Inv. 720.90

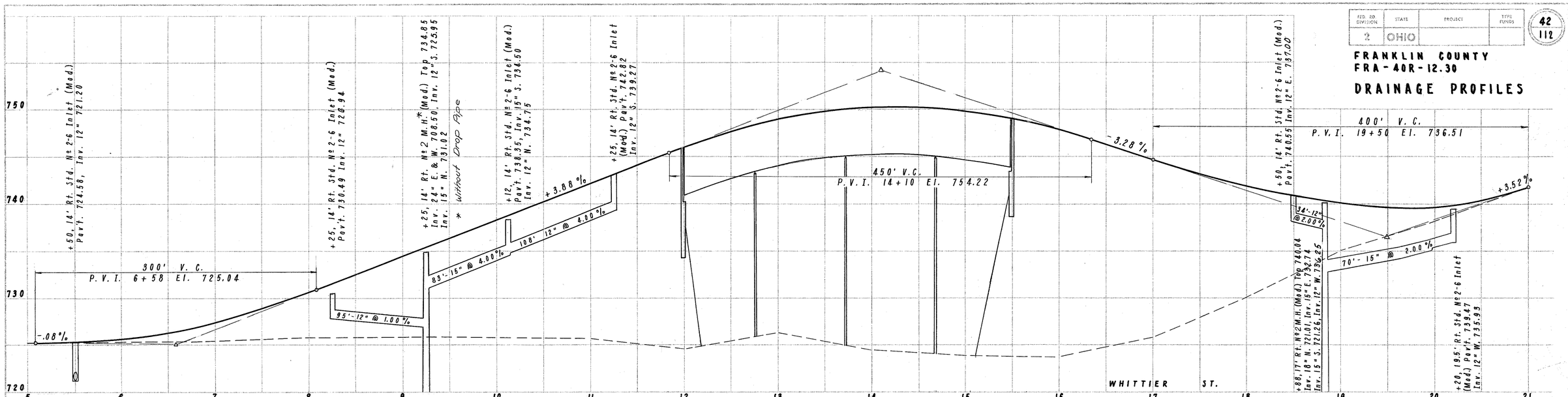
Riprap, Type "A" 2 S.Y. 3' x 6'

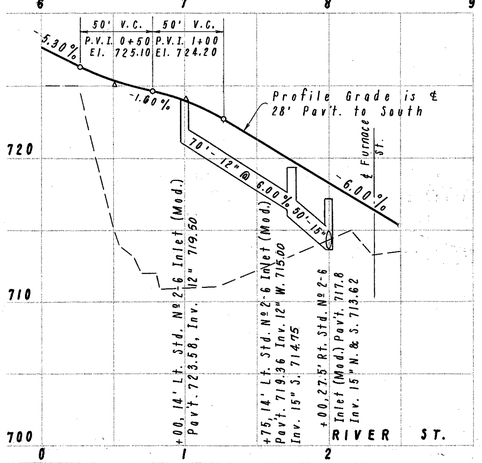
Note: No 2 Manhole 17' Rt. Sta. 9+25 (Whittier St.) shall be constructed without drop pipe also this M.H. if constructed in accordance with the alternate Std. Drwg. I-8 M.H. No 1-A the precast reinf. concrete rings shall meet the strength requirements for Heavy Duty R.C.C.P. Sec. M-106.6(d).

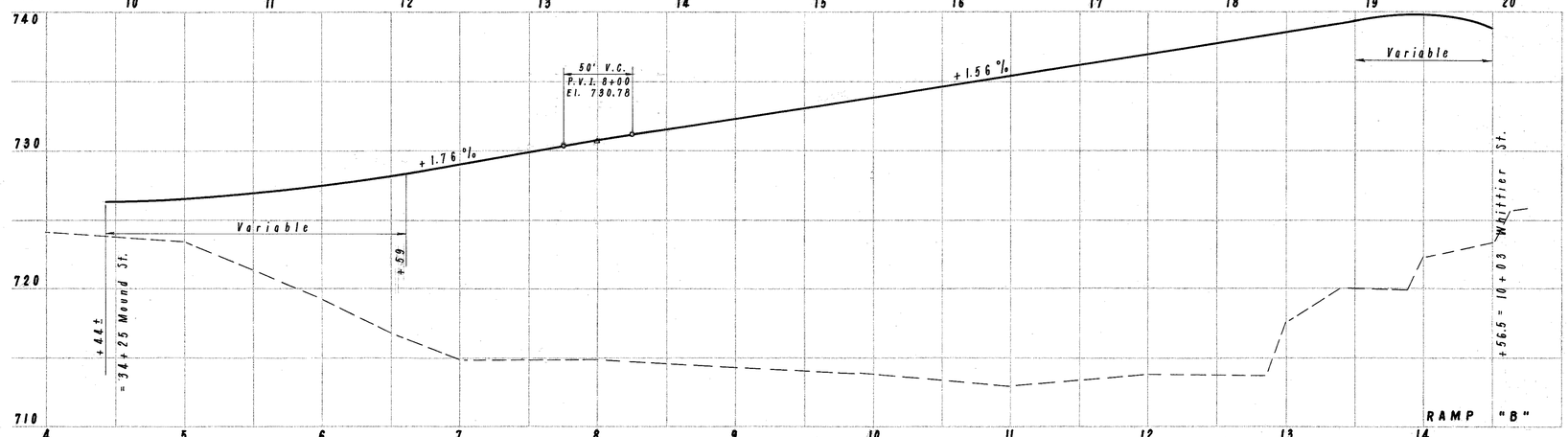
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

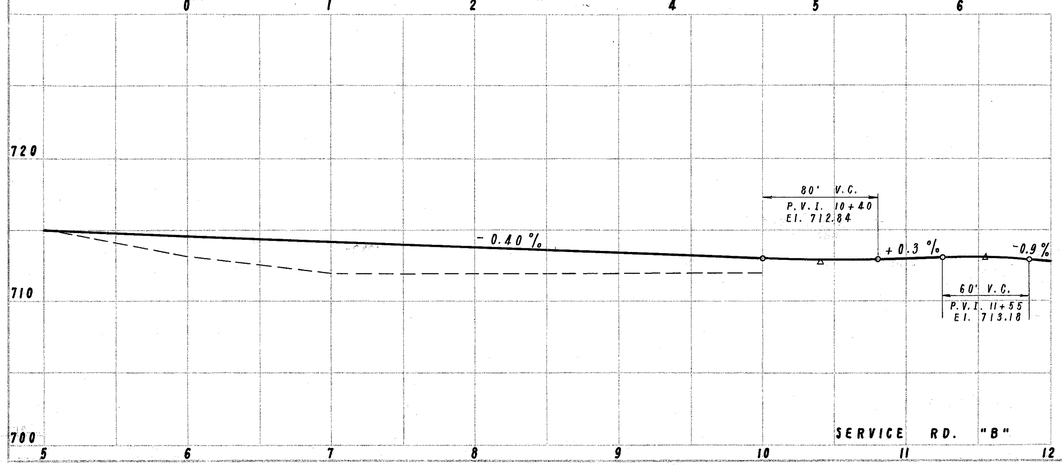
42
112

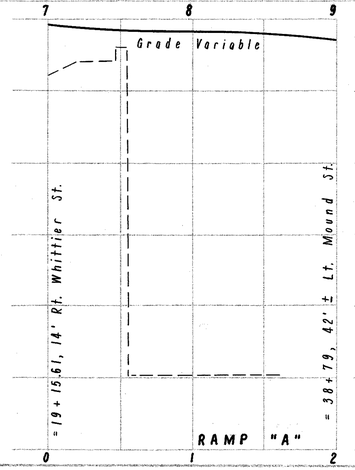
FRANKLIN COUNTY
FRA-40R-12.30
DRAINAGE PROFILES

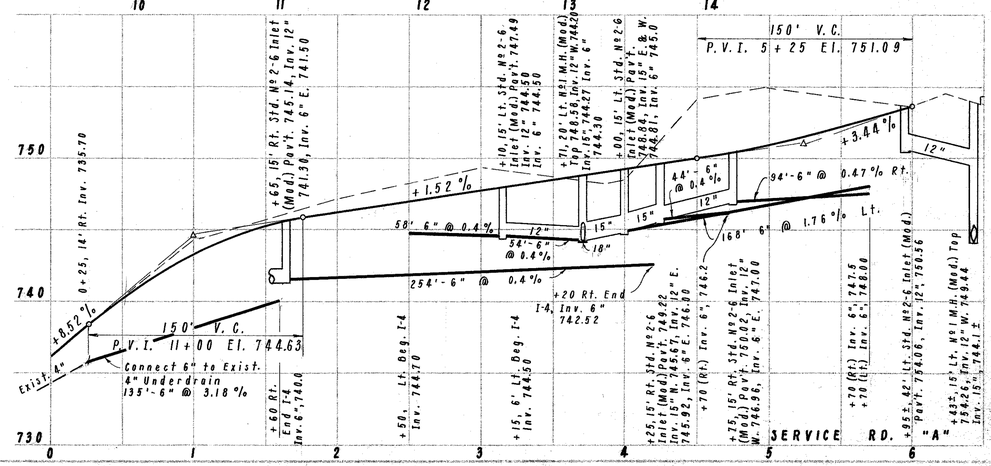












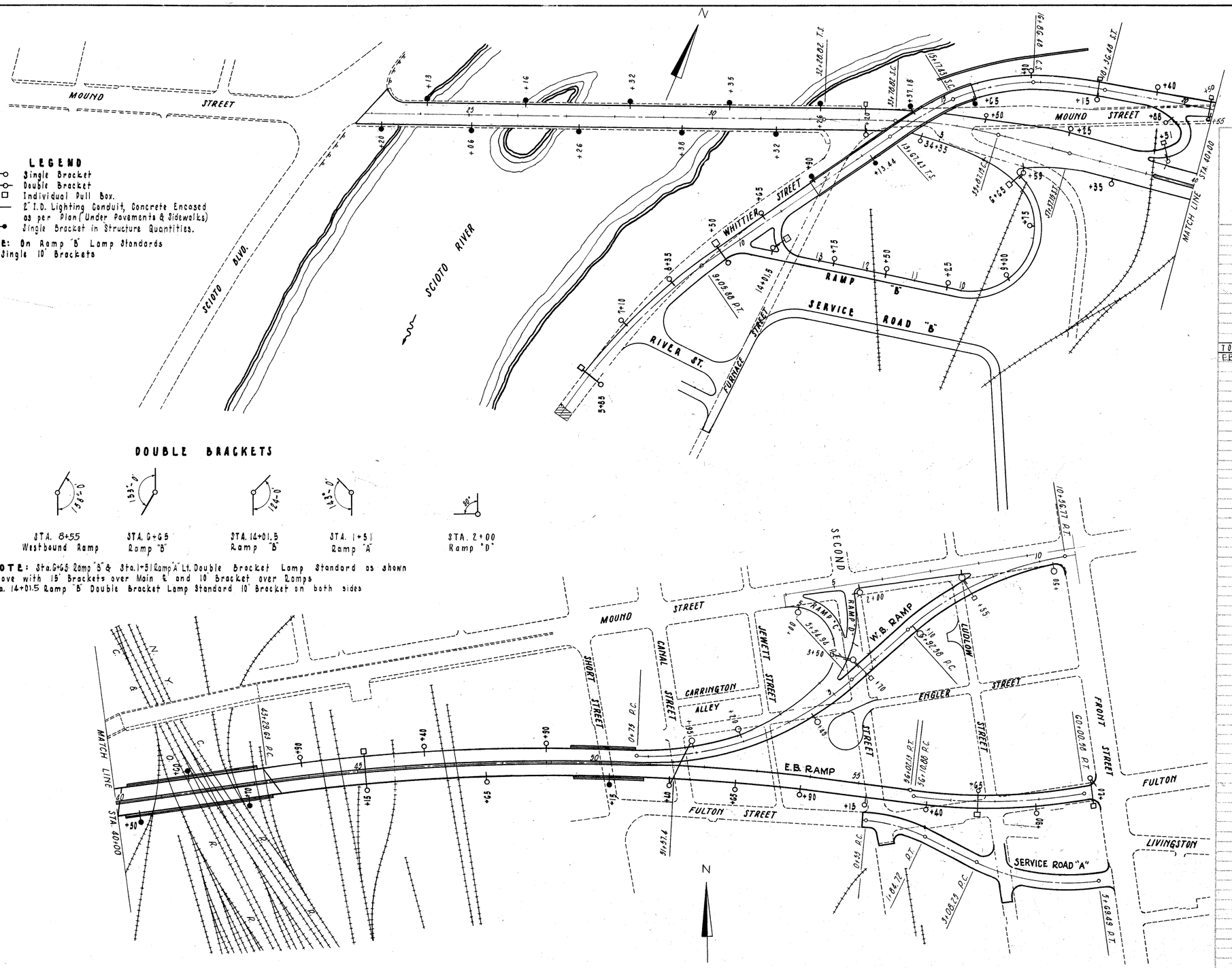
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

43
112

FRANKLIN COUNTY
FRA-40R-12.30
LIGHTING PLAN

LEGEND
- Single Bracket
- Double Bracket
- Individual Pull Box.
- 2" I.D. Lighting Conduit, Concrete Encased as per Plan (Under Pavements & Sidewalks)
- Single Bracket in Structure Quantities.

NOTE: On Ramp "B" Lamp Standards with Single 10' Brackets

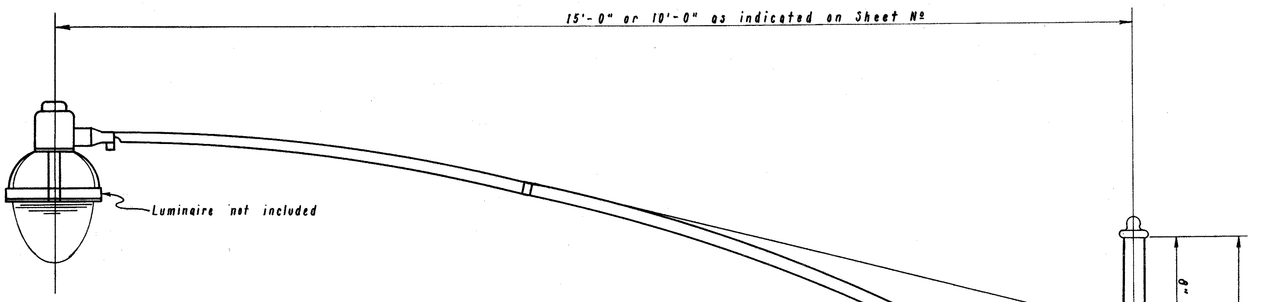


DOUBLE BRACKETS

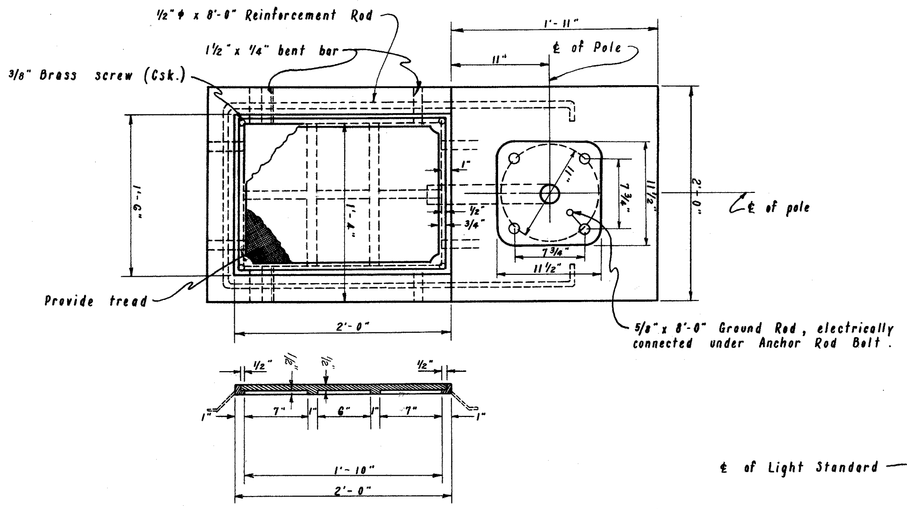
STA. 8+55 Westbound Ramp | STA. 0+65 Ramp "B" | STA. 14+01.5 Ramp "B" | STA. 1+51 Ramp "A" | STA. 2+00 Ramp "D"

NOTE: Sta. 0+65 Ramp "B" & Sta. 1+51 Ramp "A" Lt. Double Bracket Lamp Standard as shown above with 15' Brackets over Main & and 10' Bracket over Ramps
Sta. 14+01.5 Ramp "B" Double Bracket Lamp Standard 10' Bracket on both sides

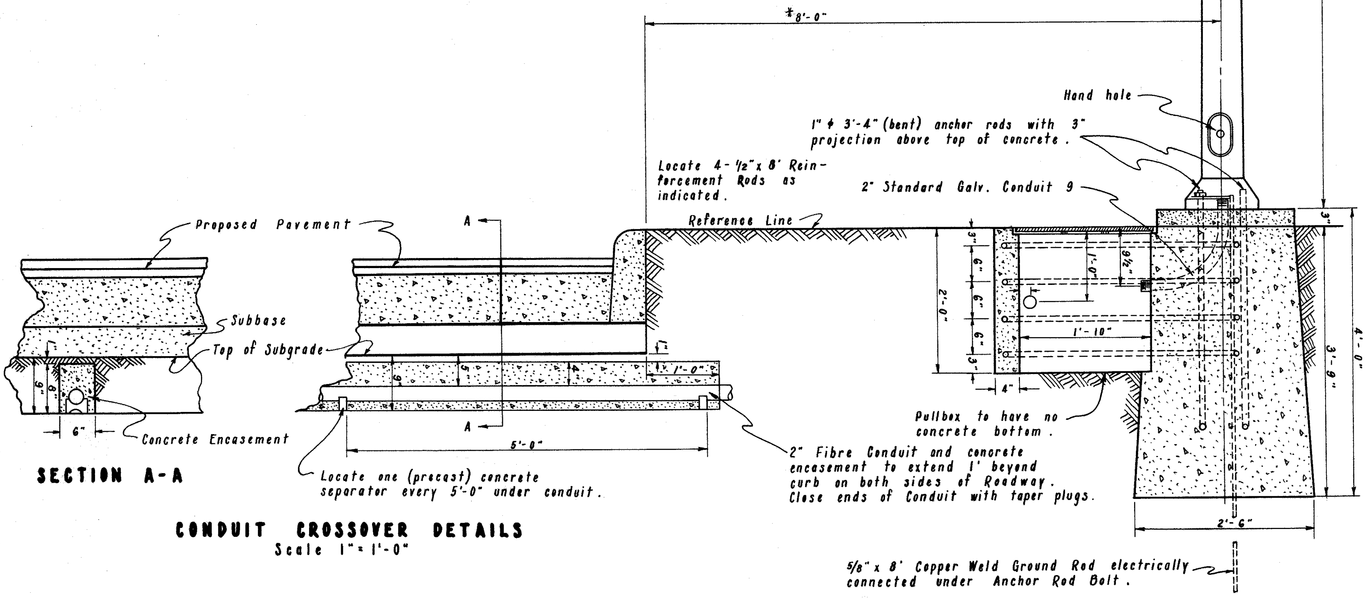
Station	5-25 Comb. Foundation & Pull Boxes as per plan.	5-25, 2" I.D. Fibre Conduit Concrete Encased as per plan.	5-25. Pull Box as per plan.	5-25. Lamp Standards with Single 15' Bracket	5-25 Lamp Standards Double brackets with 10' & 15' brackets	3-24. Lamp Standards with Single 10' Brackets.	3-25 Lamp Standards, double bracket (10')
UNITS	Ea	L.F	Ea.	Ea	Ea	Ea	Ea.
33+20 Rt.	1	43	1	1			
34+35 Rt.	1			1			
35+50 Lt.	1			1			
37+25 Lt.	1			1			
38+35 Rt.	1			1			
43+90 Lt.	1			1			
45+15		59	1				
46+40 Lt.	1			1			
47+65 Rt.	1			1			
48+90 Lt.	1			1			
TOTAL (Taken to Gen. Sum)	10	102	2	10			
E.B. Ramp 52+65 Rt.	1			1			
53+90 Rt.	1			1			
55+15 Rt.	1			1			
56+40 Rt.	1			1			
57+65 Lt.	1	29	1	1			
58+90 Rt.	1			1			
60+20	1	33	1				
51+40 Rt.	1	85		1			
WHITTIER ST. (NO PARTICIPATION BY FEDERAL & STATE)							
5+85 Rt.	1	31	1				
7+10 Lt.	1			1			
8+35 Lt.	1			1			
9+80	1	31	1				
10+65 Lt.	1			1			
12+90 Lt.	1			1			
18+15 Rt.	1	31	1				
19+40 Lt.	1			1			
20+55 Rt.	1	31	1				
RAMP "A"							
0+88 Rt.	1				1		
1+51		26	1				1
RAMP "B"							
0+65	1	23	1				1
7+75 Rt.	1				1		
9+00 Rt.	1				1		
10+25 Rt.	1				1		
11+50 Rt.	1				1		
12+75 Rt.	1				1		
14+01.5		23	1				1
WEST BOUND RAMP							
1+95 Lt.	1				1		
3+20 Lt.	1				1		
4+45 Rt.	1				1		
5+70	1	31	1		1		
7+10 Rt.	1				1		
8+65	1	31	1		1		
10+90	1				1		
RAMP "C"							
3+50	1	23	1				
5+00 Lt.	1					1	
RAMP "D"							
2+00 Rt.	1						1
TOTAL PARTICIPATION	26	304	8	14	4	6	2
TOTAL NO PARTICIPATION	9	124	4	9	0	0	0
TOTAL (Taken to Gen. Sum)	35	428	12	23	4	6	2



NOTE: Concrete for duct lines, lamp standard foundations & pullboxes shall be class "E" concrete using #4 Aggregate.
The finish paint shall be one coat of high grade weather resistant dark green paint, meeting supplemental Specification M-109.23.



PULLBOX FRAME, COVER (CAST ALUMINUM) AND BASE PLATE DETAILS
Scale 1½" = 1'-0"



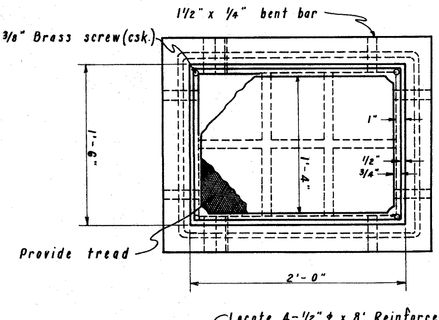
SECTION A-A

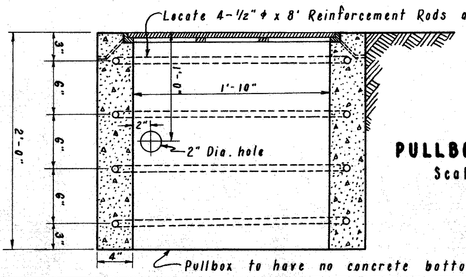
CONDUIT CROSSOVER DETAILS
Scale 1" = 1'-0"

LAMP STANDARD AND FOUNDATION DETAILS
Scale 1" = 1'-0"

* On Ramp B & C 6'-0"

On West Bound Sta 9+15 9'-6"





PULLBOX DETAILS
Scale 1½" = 1'-0"

Lamp Standards shall be Union Manufacturing Company's Round Monotube Steel Pendent Anchor Base Type Design Nº 404-300F-1 & D-1 with handhole, or an approved equal.

Conduit shall be Orangeburg 2" I.D. Fibre Conduit or an approved equal.

FRANKLIN COUNTY
FRA.-40R-12.30
LIGHTING DETAILS

HIGHWAY DIVISION	STATE	PROJECT	SHEET NO.
2	OHIO		44

112

SEEDING		I-22	
L.F.	S.Y.	L.F.	C.Y.
146			
	1800		
178			
135	1339		
135	1080		
135			

FRANKLIN COUNTY
FRA-40R-12.30.

15+65

SEE WHITTIER ST. FOR QUANTITIES

S.W.

272F

14F

481

+49.5

723.0

125C

718.8

1½"/Ft

1½"/Ft

10F

For Quantities See Ramp "B"

728.18
35+00
723.7

4:1

S.W.

175F

14F

+37.5

724.0

160C

1½"/Ft

1"/Ft

719.4

727.21
34+00
724.5

1:1

4:1

S.W.

43F

Type "A" Grouted Riprap
Sta. 32+95 to 33+20

30C

15F

+30.5

726.5

1½"/Ft.

154C

See Ramp "B" For Quantities

1"/Ft

2%F

721.6

727.24
33+00
726.5

Begin Quantities 32+28

STA 32+28

Sta. 32+28

AREA		VOLUME	
C.	F.	C.	F.
125	296		
		528	898
160	189		
		587	461
157	60		
		210	80
0	0		

STA. 33+00 TO STA. 35+

SEEDING		I-22	
L.F.	S.Y.	L.F.	C.Y.
103			
152			
	1750		
163			
	1300		
71			
234			
	1706		
73			
	1217		
146			

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

FRANKLIN COUNTY
FRA-40R-12.30

Ahead

140

14 F

S.W.

20 F

730

Back

3569 F

2:1

R/W

SEE WHITTIER ST.
FOR QUANTITIES

720

24C

3/8"/1'

4:1

712.1

710

739.14
39+00
714.4

Add for Ramp "A"

140

S.W.

20 F

730

726.5

2807 F

2:1

R/W

163

720

54C

3/8"/1'

4:1

711.8

710

736.10
38+00
716.2

Add for back Area

S.W.

20 F

Ahead

730

71

234

Back

121.0

452 F
Add for Area Ahead

1740 F

720

ADD AREA FROM Sta. 7+00 Ramp "B"
FOR QUANTITY BACK

710

733.17
37+00
715.6

730

S.W.

S.W.

20 F

728.2

SEE WHITTIER ST.
FOR QUANTITIES

979 F

2:1

720

32'-15" @ 30%

PAVED GUTTER TYPE "A" AS PER PLAN
10 LIN.FT.

714.0

73

1217

710

730.49
36+00
718.8

STD. HEADWALL
FOR 15" PIPE

146

Sta. 35+00

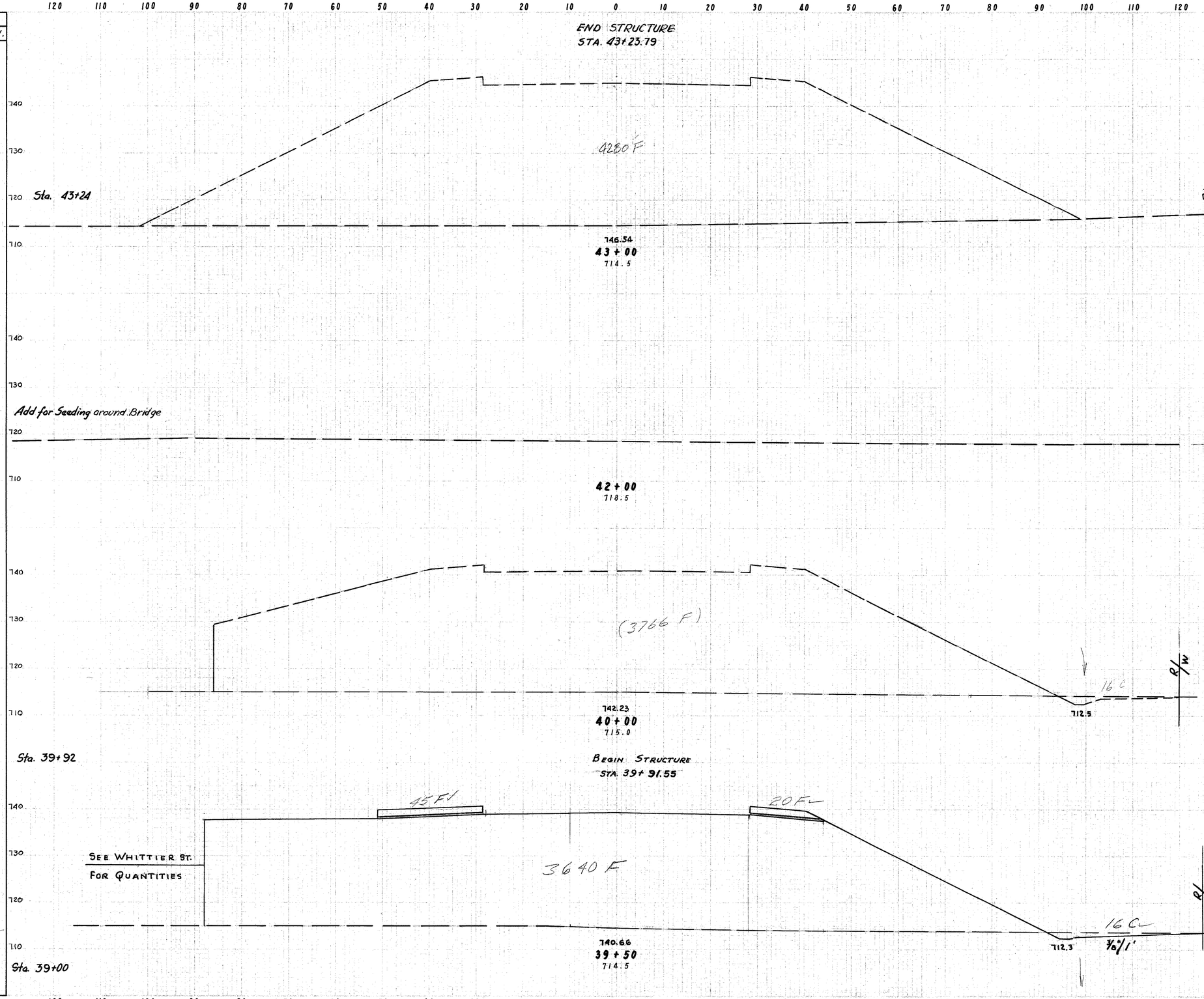
700

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

AREA		VOLUME	
C.	F.	C.	F.
24	3603		
			2497
		144	11,907
54	2827		
		100	9331
Area Ahead	0	2212	
Area Back	55	2618	
		128	6773
14	979		
		257	2361
Sta. 35+00	125	296	

STA. 36+00 To STA. 39+00

Seeding		I-22	
L. F.	S.Y.	L.F.	C.Y.
177			
	1446		
103			
	481		
103			
	572		
103			



Area		Volume	
C.	F.	C.	F.
17	4190		
		7	3764
0	4280		
		0	2299
0	0		
0	0		
		11	2995
14	3761		
		23	5444
16	3705		
		37	6767
24	3603		

Sta. 43+24

Sta. 42+71 Ahead

Sta. 40+35 Back

Sta. 39+92

Sta. 39+50

Sta. 39+00

FRANKLIN COUNTY
FRA-40R-12.30.

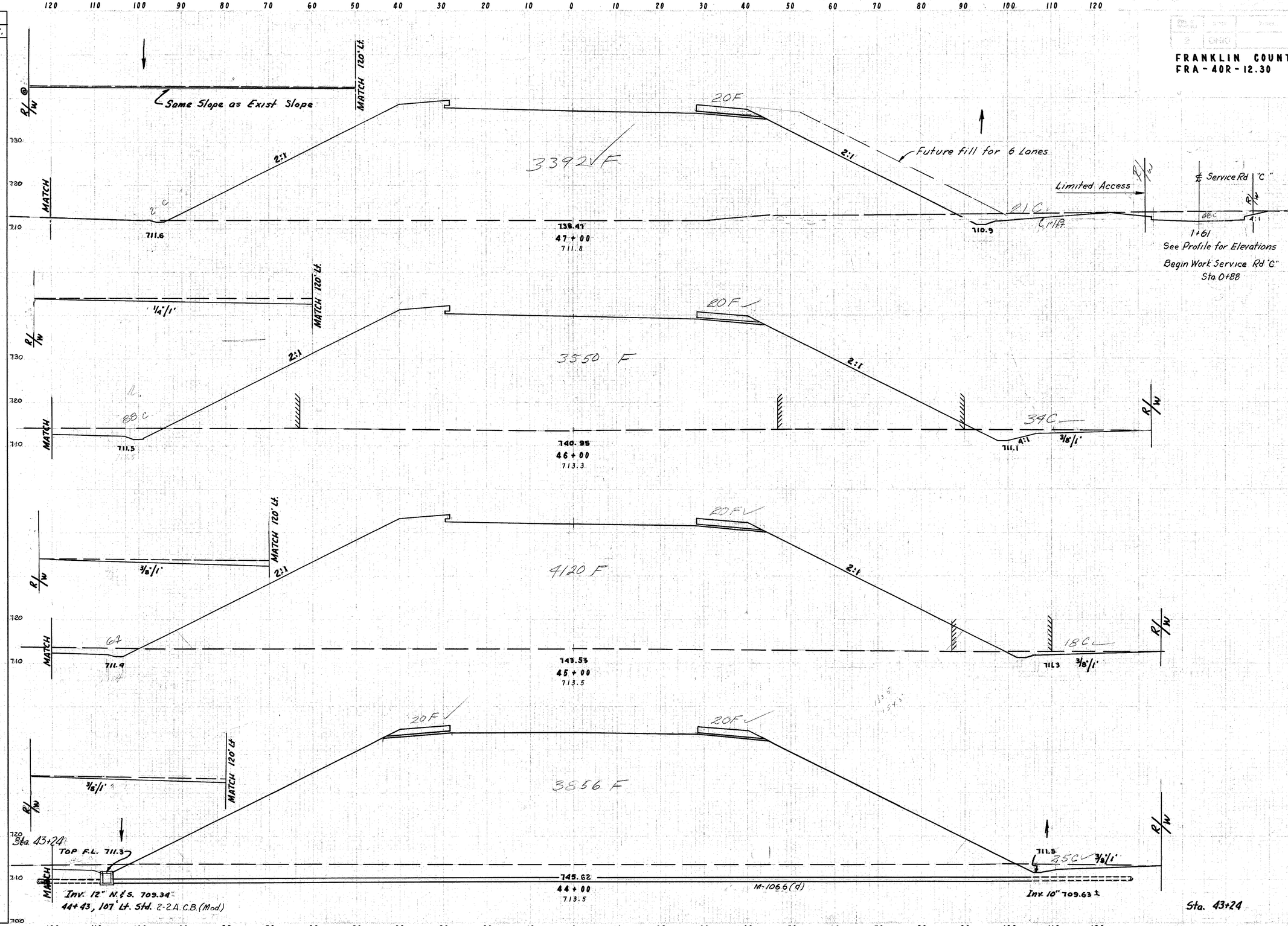
47
112

STA. 39+50 TO STA. 43+00

FRANKLIN COUNTY
FRA-40R-12.30

SEEDING		I-22	
L.F.	S.Y.	L.F.	C.Y.
268			
	3183		
305			
	3172		
266			
	2911		
258			
177	1837		

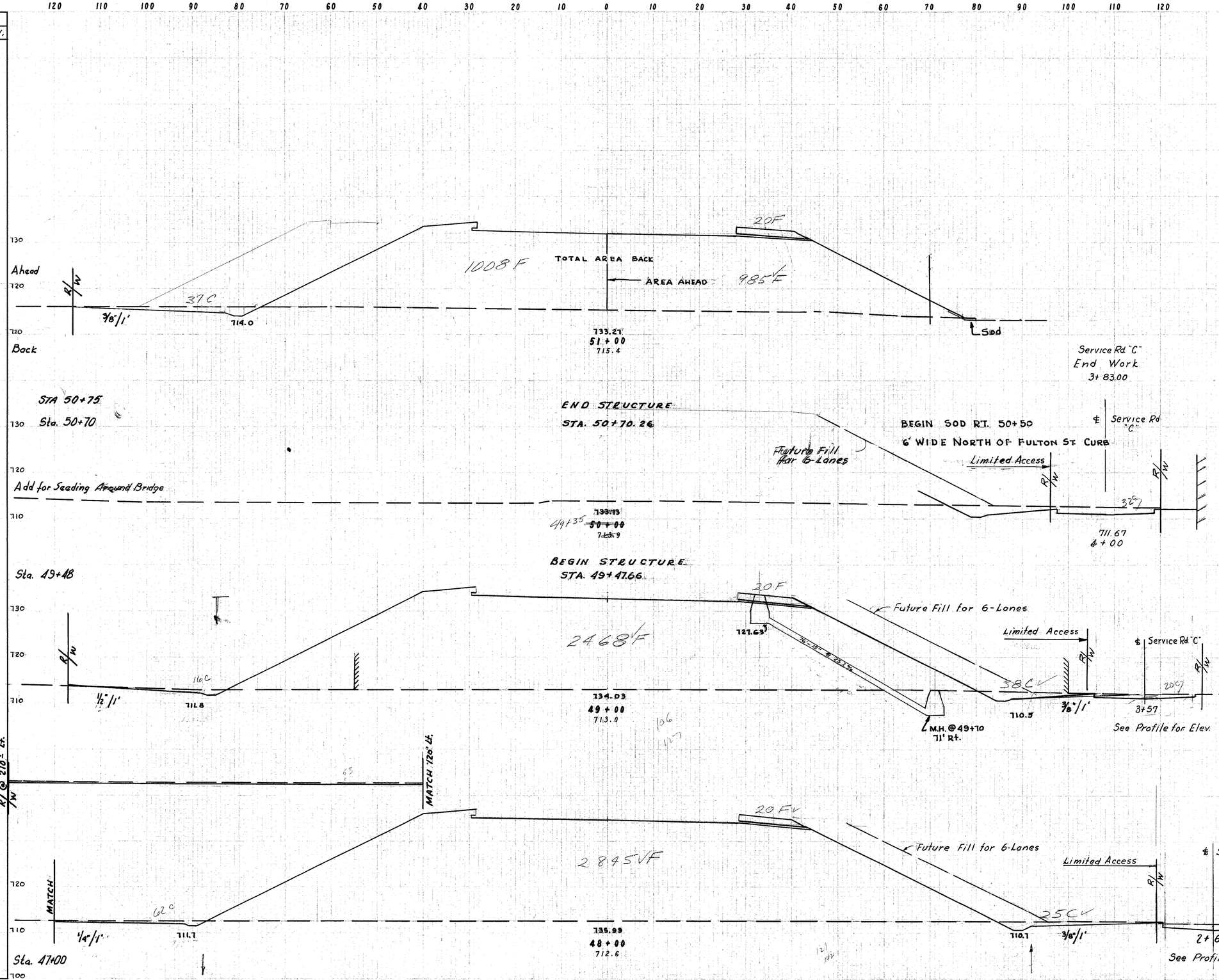
AREA		VOLUME	
C.	F.	C.	F.
23	3412		
		269	12,930
122	3570		
		378	14,278
82	4140		
		272	14,882
65	3896	116	11,380
17	4190		



STA. 44+00 To STA. 47+00.

FRANKLIN COUNTY
FRA - 40R - 12.30

SEEDING		I-22	
L.F.	S.Y.	L.F.	C.Y.
51			
143	398		
143	79		
	466		
187			
	997		
187			
	2133		
197			
	2583		
268			

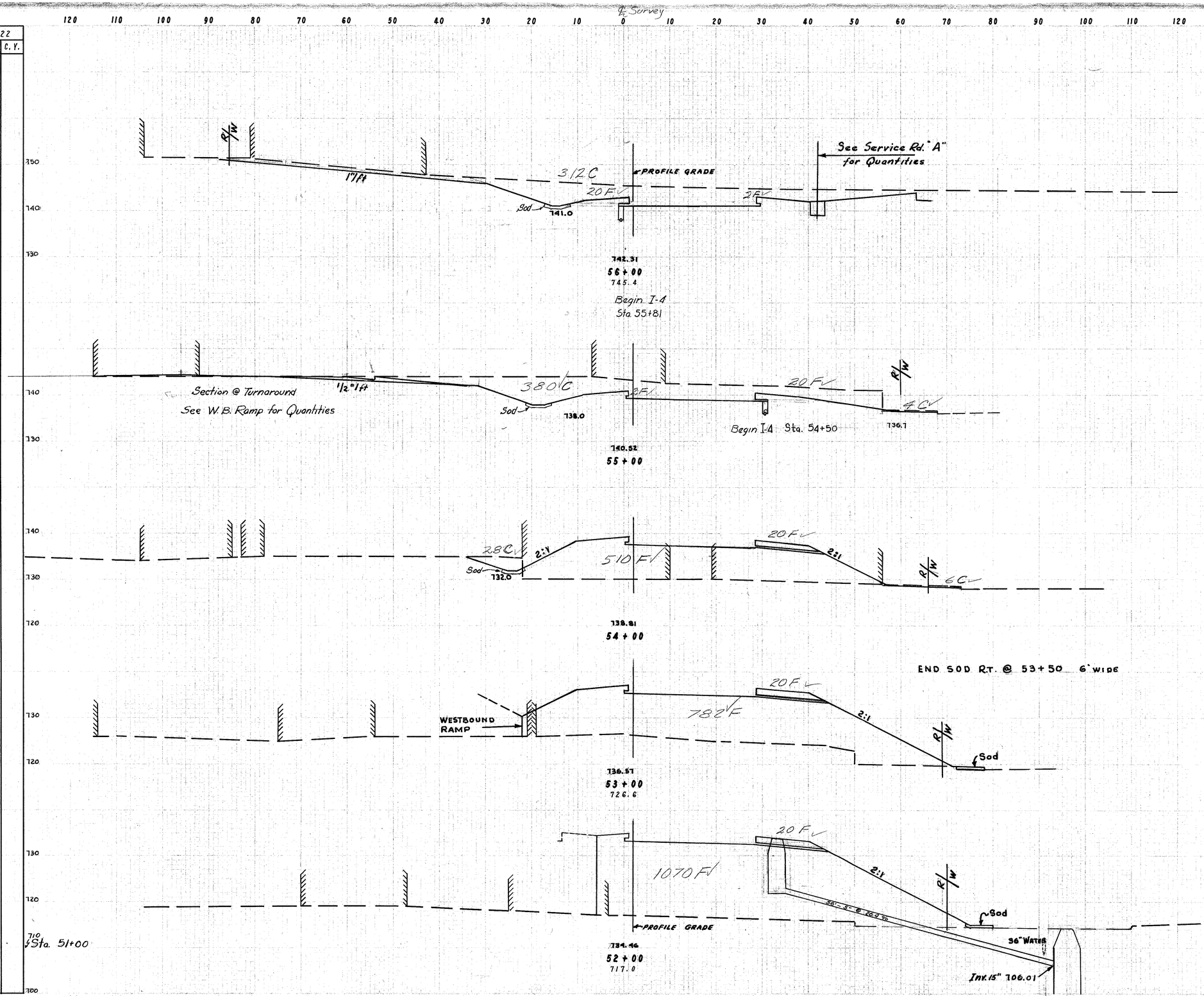


	AREA		VOLUME	
	C.	F.	C.	F.
Ahead	0	1005		
Back	37	2013	34	1864
STA 50+75	37	2013	7	373
Sta. 50+70	37	2013		
			29	1566
Sta. 50+28 Ahead	0	0		
Area within Service Rd C Right-of-way				
4+83	32		99	
4+00	32		411	
3+57	20		78	
2+60	23		130	
(Sheet #48) 1+61	48		129	
Begin Service Rd "C" 0+88	48			
Sta. 49+85 Back	0	0		
			37	1705
Sta. 49+48	54	2488		
			96	4423
	54	2488		
			261	9913
	87	2865		
			204	11,624
Sta. 47+00	23	3412		

STA. 48+00 To STA. 51+00

FRANKLIN COUNTY
FRA-40R-12.30.

Seeding		I-22	
L.F.	S.Y.	L.F.	C.Y.
101			
	1211		
117			
	1133		
87			
	867		
69			
	672		
52			
	572		
51			



Area		Volume	
C.	F.	C.	F.
312	22		
		1289	81
384	22		
		774	1022
34	530		
		63	2467
0	802		
		0	3504
0	1090		
		0	3880
0	1005		

Sta. 51+00 Ahead

STA. 52 + 00 To STA. 56 + 00

FRANKLIN COUNTY
FRA-40R-12.30

SEEDING		I-22	
L.F.	S.Y.	L.F.	C.Y.
235			
	992		
235			
	2678		
247			
	2333		
173			
	1722		
137			
	1322		
101			

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

END WORK
Sta. 60+51.11

STA. 60+38

760
750
740

R/W

103 C

S.W

6 F

½"/ft →

℄ 754.6

½"/ft

150.6

PROFILE GRADE

6 F

½"/ft.

416 C

½"/ft

End I.4
Sta 60+00

760.38
60 + 00
756.0

760
750
740

R/W

14 F

½"/ft

169 C

Sod

150.0

147.2

6 F

½"/ft.

300 C

½"/ft

749.0

Service Rd "A"

752.92
59 + 00
753.6

760
750
740

R/W

See Sheet Nº ___
(Service Rd. "A")

460 C

2F

14 F

½"/ft.

Sod

146.0

143.8

1%

½"/ft

146.0

749.24
58 + 00
750.4

760
750
740

R/W

See Sheet Nº ___

½"/ft.

4:1

655 C

14 F

PROFILE GRADE

2F

Sod

142.5

140.4

145.44
57 + 00
747.3

Sta. 56+00

730

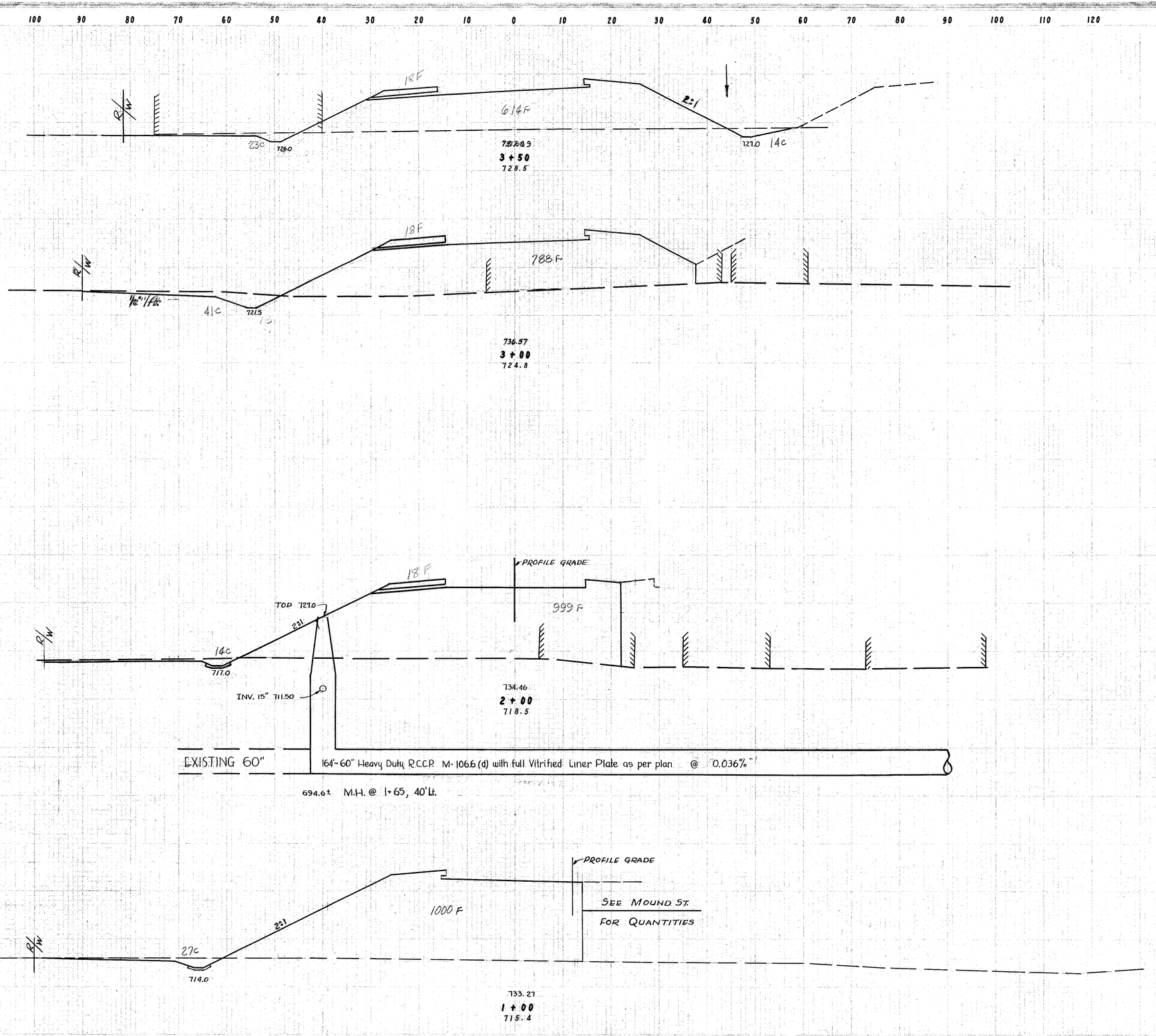
120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120

AREA		VOLUME	
C.	F.	C.	F.
0	0		
		365	8
519	12		
		1830	59
469	20		
		1720	67
460	16		
		2065	59
655	16		
		1791	70
312	22		

Sta. 56+00

STA. 57 + 00 To STA. 60 + 00.

SEEDING		I-22	
L.F.	S.Y.	L.F.	C.Y.
115			
	608		
104			
	1106		
95			
	1033		
91			



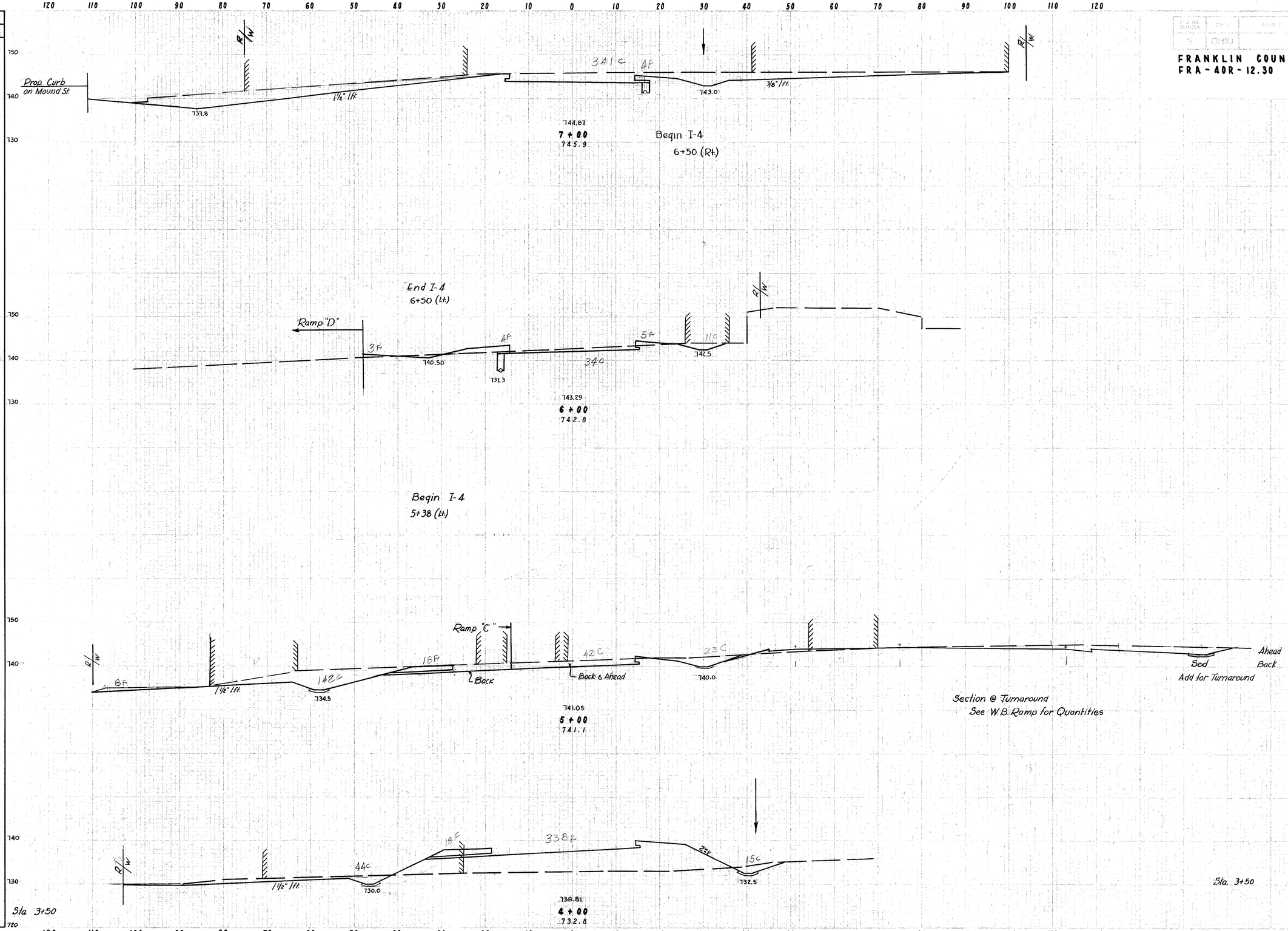
AREA		VOLUME	
C.	F.	C.	F.
37	632		
		72	1332
41	806		
		102	3376
14	1017		
		76	3735
27	1000		

FRANKLIN COUNTY
FRA-40R-12.30.

52
112

STA. 1+00 TO STA. 3+50. WESTBOUND RAMP

Seeding		I-22	
L.F.	S.Y.	L.F.	C.Y.
187			
	1389		
63			
1067			
1461			
129			
134	692		
115			



Area		Volume	
C.	F.	C.	F.
341	4		
		715	30
45	12		
		204	22
Ahead	65	0	
Back	207	26	
		70	500
		493	707
59	356		
		89	915
37	632		

Sod
Add for Turnaround

FRANKLIN COUNTY
FRA-40R-12.30

53
112

Sta. 4+00 To Sta. 7+00. Westbound Ramp

SEEDING		I-22	
L.F.	S.Y.	L.F.	C.Y.
61			
	572		
42			
	728		
89			
187	1533		

AREA		VOLUME	
C.	F.	C.	F.
47	6		
		228	19
76	4		
		463	63
174	30		
		954	89
341	18		
		90	

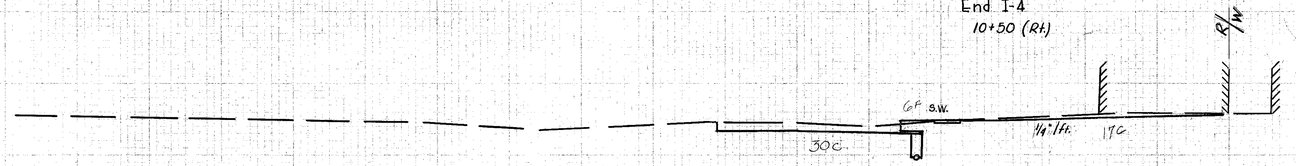
SEQ. NO. OF SHEETS	STATE	PROJECT	TYPE OF WORK
2	OHIO		

54
112

FRANKLIN COUNTY
FRA-40R-12.30

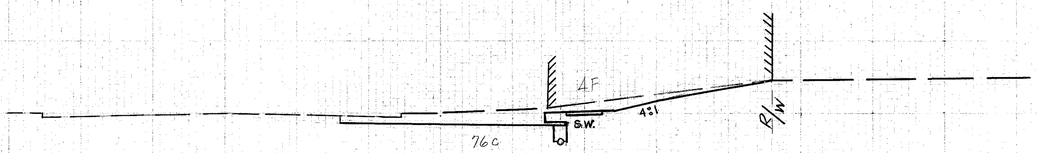
END WORK
Sta. 10+69.80

End I-4
10+50 (Rt.)



754.422
10 + 00
754.5

ADD AREA BETWEEN EDGE
OF 14' PAVEMENT & EDGE
OF NEW WORK FROM STA. 8+25
TO 9+75



749.68
9 + 00
750.2

END DITCH Rt. @ Sta. 8+00

746.34
8 + 00
746.9

Sta. 7+00

Sta. 7+00
Add for Turnaround

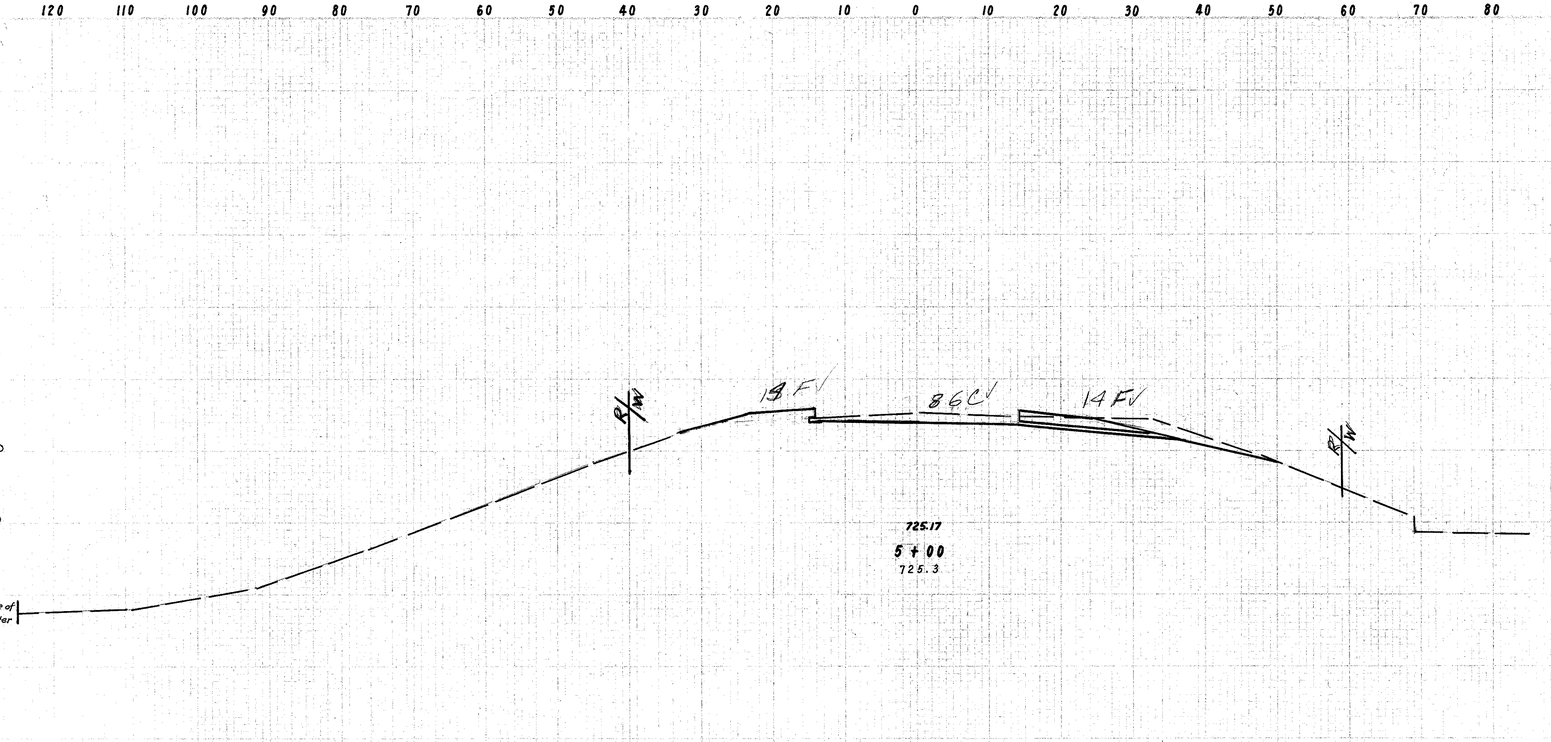
STA. 8+00 TO STA. 10+00. WESTBOUND RAMP

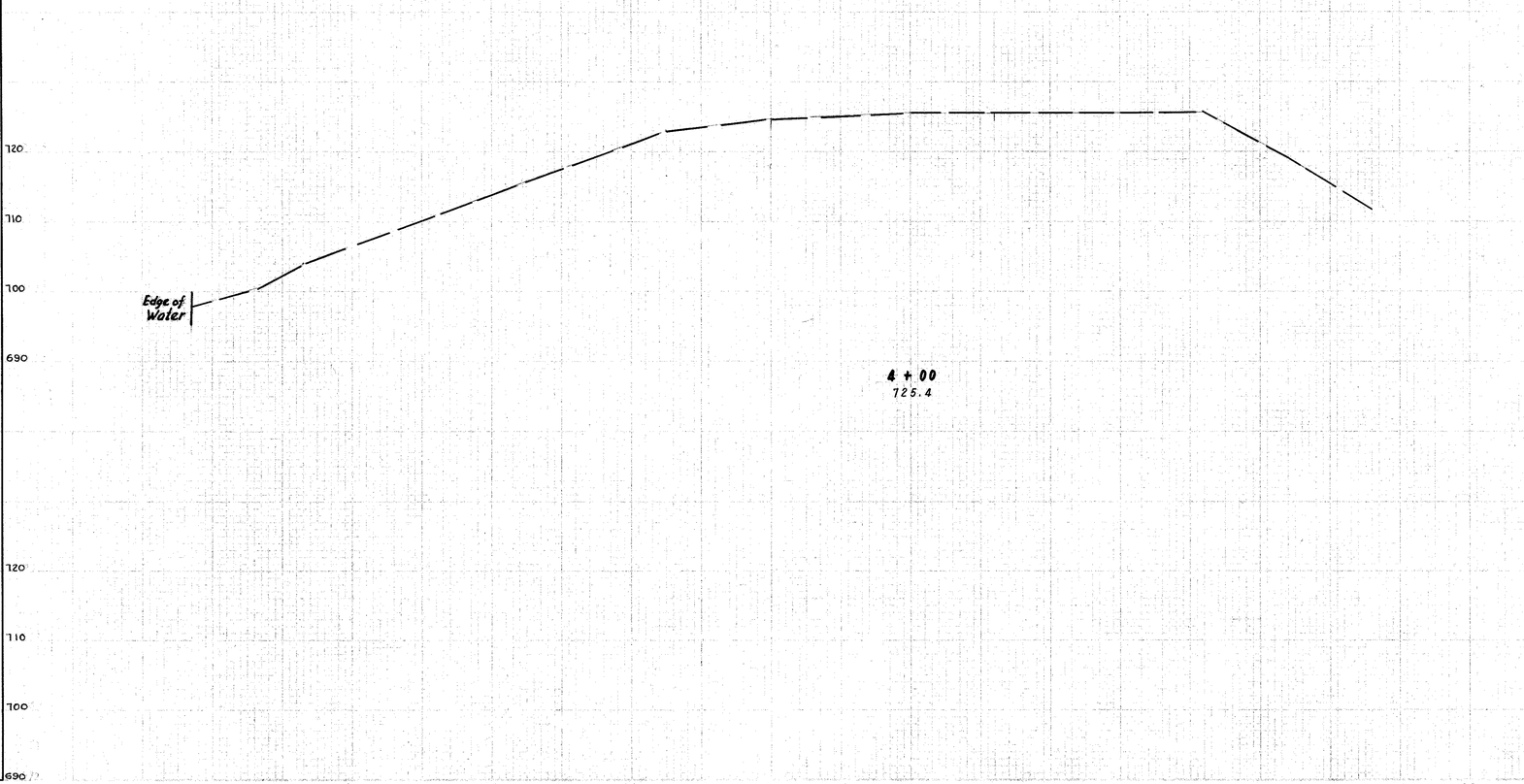
SEEDING		I-22	
L.F.	S.Y.	L.F.	C.Y.
73			

FED. ROAD DIV. NO.	STATE	PROJECT	TOTAL SHEETS
2	OHIO		

55
112

FRANKLIN COUNTY
FRA-40R-12.30.



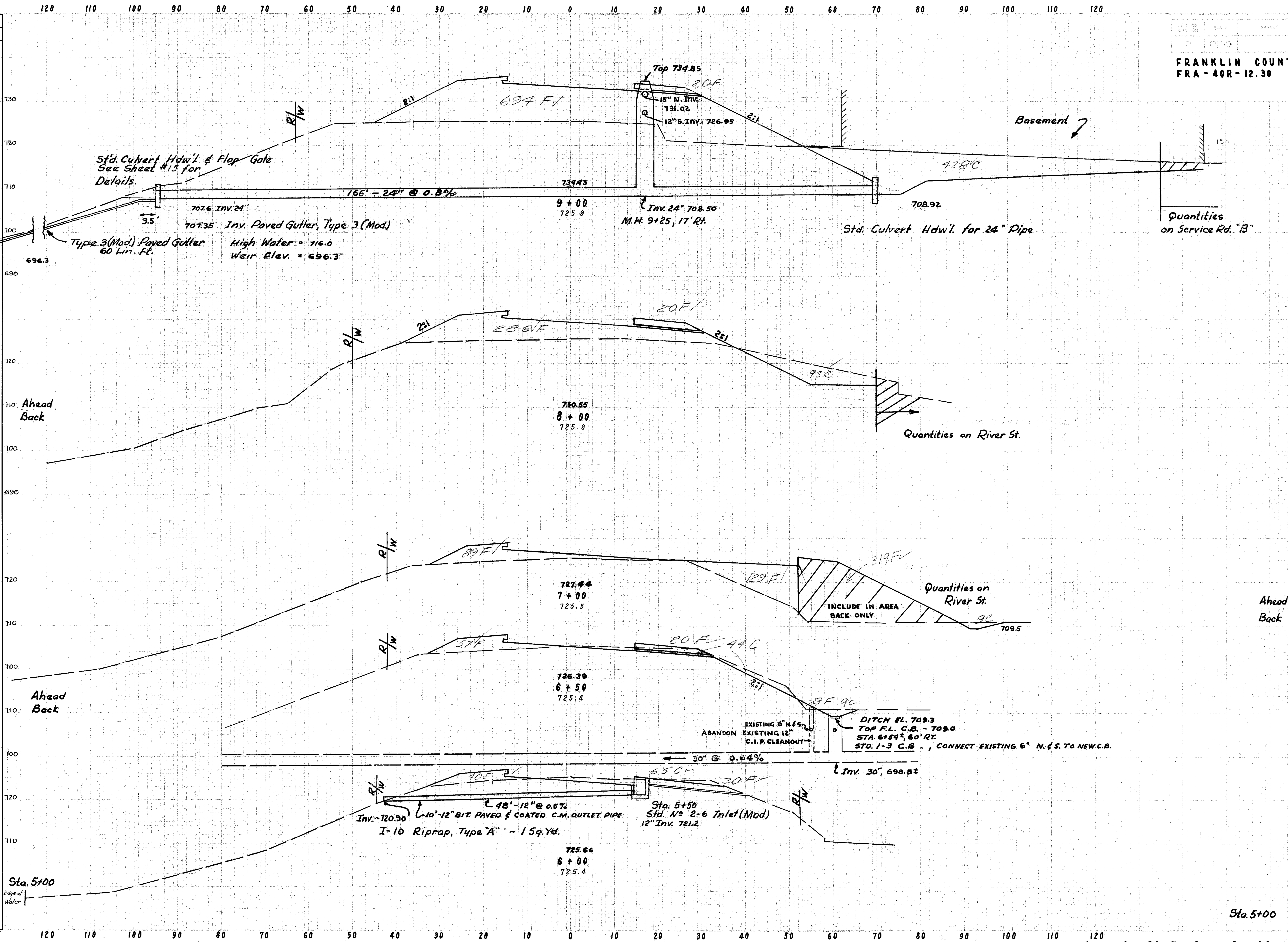


AREA		VOLUME	
C.	F.	C.	F.
86	28		
		40	13
Sta 4+75	0	0	

STA. 4+00 TO STA. 5+00. WHITTIER ST.

FRANKLIN COUNTY
FRA - 40R - 12.30

SEEDING		I-22	
L.F.	S.Y.	L.F.	C.Y.
167			
	1439		
92 35			
	361		
30			
	164		
29 94			
	444		
66			
	772		
73			

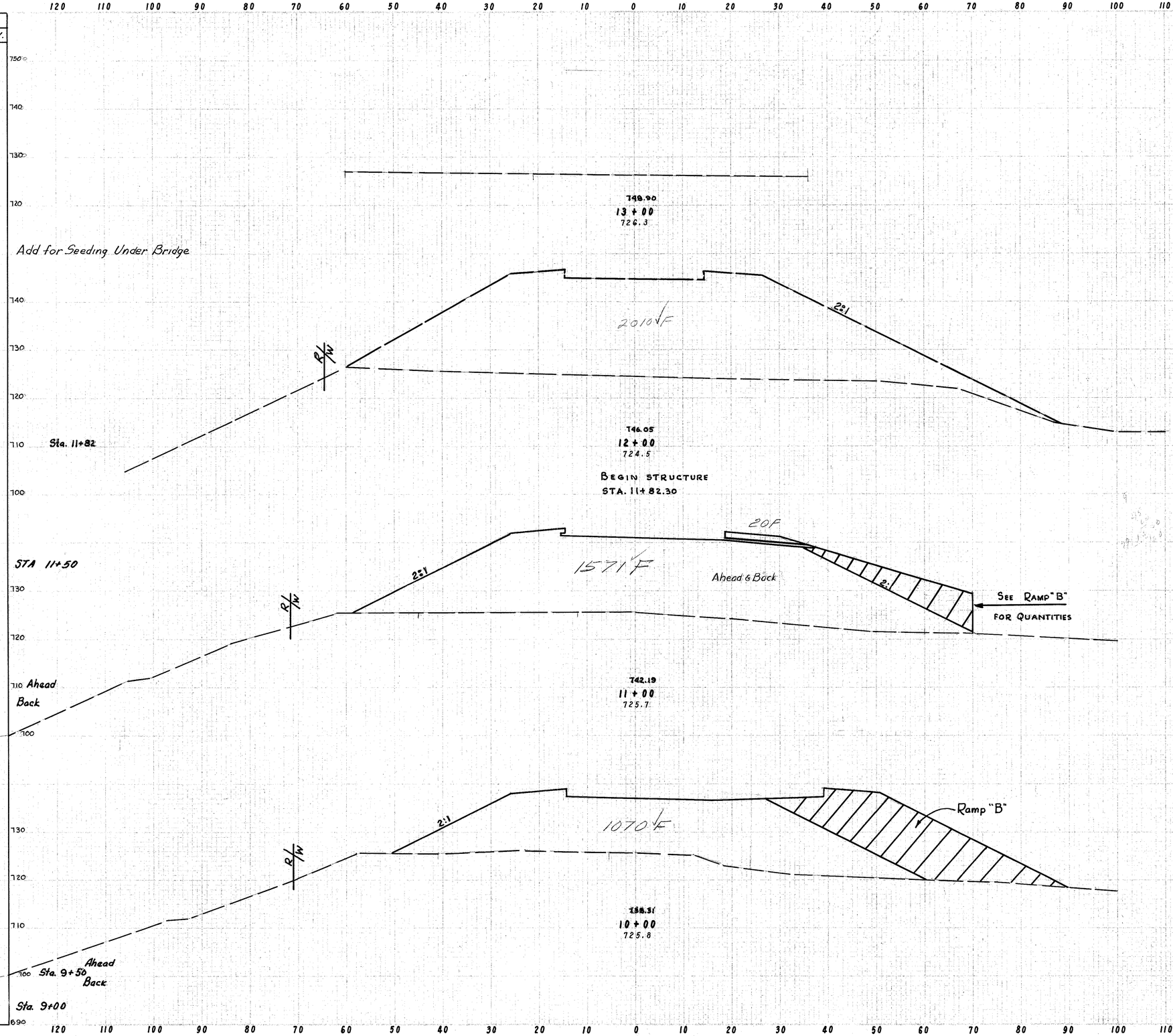


	AREA		VOLUME	
	C.	F.	C.	F.
	428	714		
			965	1889
	93	306		
			172	970
Ahead	0	218		
Back	9	537		
			58	572
	53	80		
			110	139
	65	70		
			280	181
Sta. 5+00	86	28		

STA. 6 + 00 TO STA. 9 + 00 WHITTIER ST.

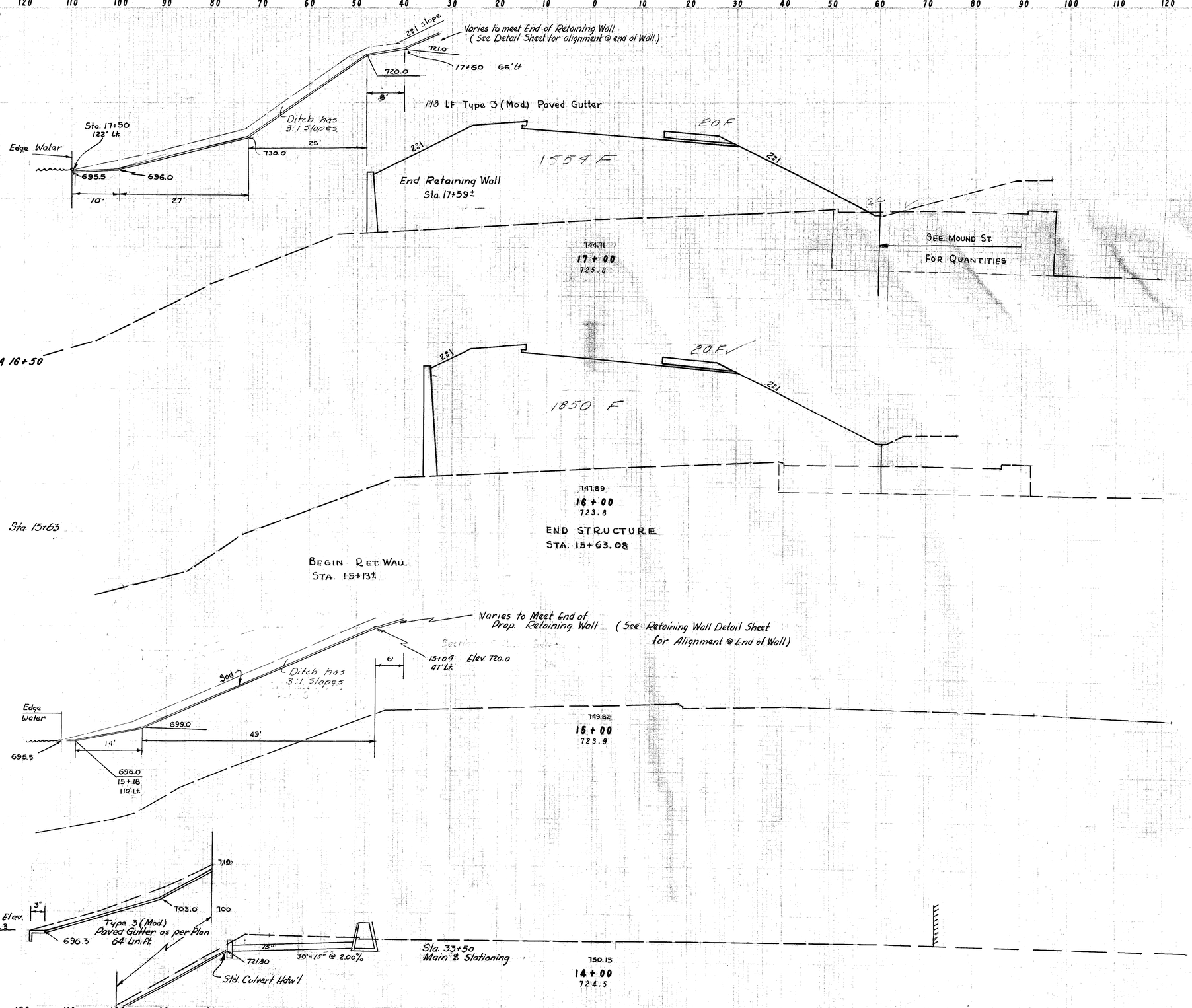
FRANKLIN COUNTY
FRA-40R-12.30.

Seeding		I-22	
L.F.	S.Y.	L.F.	C.Y.
	706		
142			
	747		
127			
	661		
111			
57			
	589		
49			
	272		
49			
115			
	783		
167			



	Area		Volume	
	C.	F.	C.	F.
Sta. 12+23	0	0		
			0	1526
Sta. 11+82	0	2010		
			0	3528
STA 11+50	0	1800		
			0	3140
Add for Ramp "B" Extras				60
	0	1591		
			0	4928
	0	1070		
			793	3304
Sta. 9+00	428	714		

SEEDING		I-22	
L.F.	S.Y.	L.F.	C.Y.
84			
	450		
78			
	417		
72			
	296		
72			



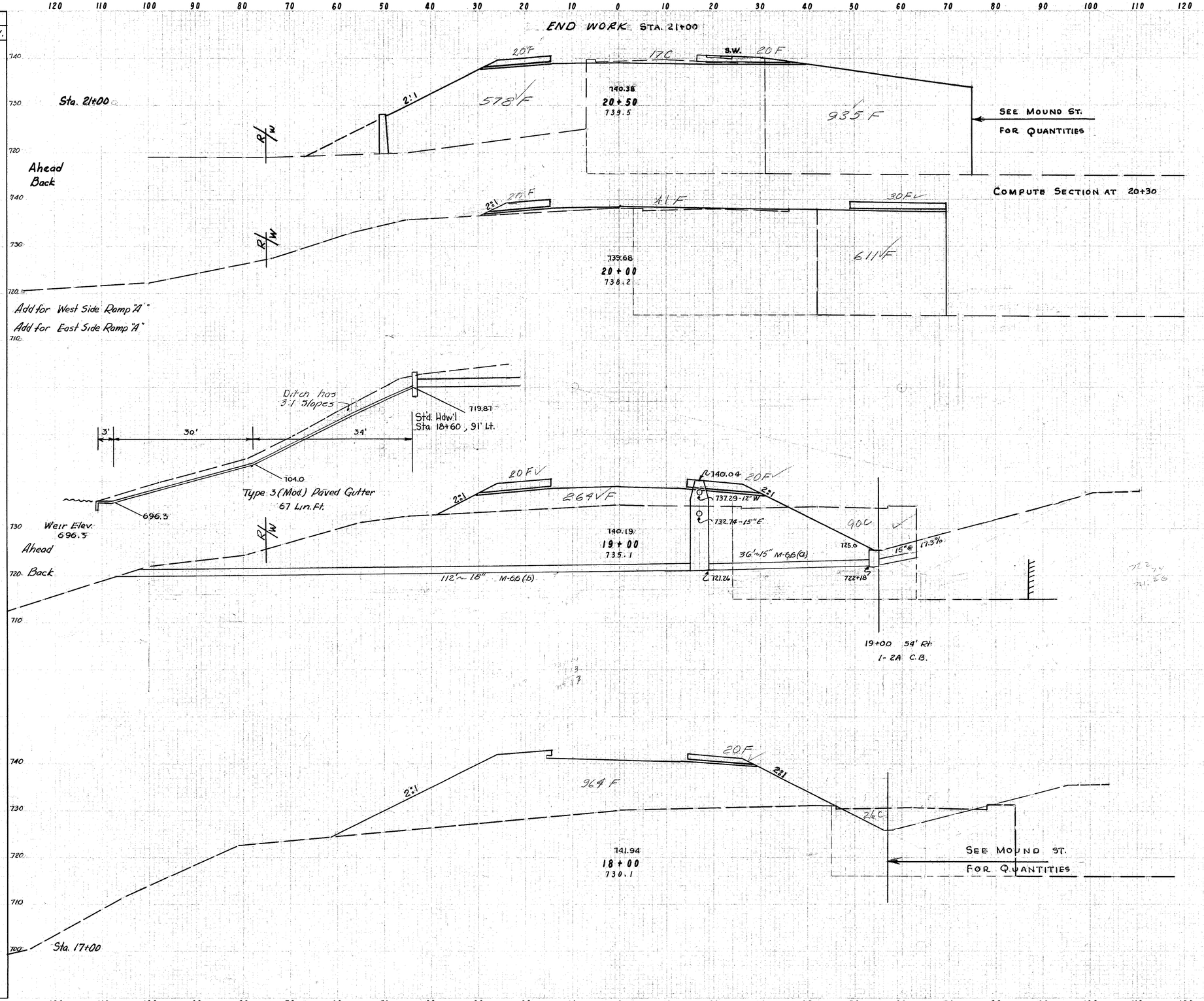
NO.	DATE	REVISION	DATE APPROVED
2	6/1/60		

58
112

FRANKLIN COUNTY
FRA-40R-12.30.

AREA		VOLUME	
C.	F.	C.	F.
2	1574		
		2	3052
STA 16+50	0	1722	
		0	3326
	0	1870	
		0	2563
Sta. 15+63	0	1870	
		0	1835
Sta. 15+10 Ahead	0	0	

SEEDING		I-22	
L. F.	S. Y.	L. F.	C. Y.
90			
	500		
90			
67			
	272		
31			
	569		
	542		
	372		
36			
80			
	989		
98			
	1011		
84			



AREA		VOLUME	
C.	F.	C.	F.
STA 21+00 0	107		
		13	1209
20+58 17	1553		
		5	460
20+50 17	1553		
		16	2088
20+00 0	702		
		167	1863
		90	304
		215	2385
		26	984
		52	4737
Sta. 17+00 2	1571		

				59
2	OHIO			112

FRANKLIN COUNTY
FRA-40R-12.30.

STA. 18+00 TO STA. 20+50. WHITTIER ST.

SEEDING		I-22	
L.F.	S.Y.	L.F.	C.Y.
241			
	2522		
213			
	2378		
215			
	1122		
189			
	978		
163			

			60
2	OHIO		112

FRANKLIN COUNTY
FRA-40R-12.30

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

730 720 710

R/W

15C

710.5

2:1

1640 F

14F

2:1

733.90

10+00

713.8

712.10

52'-12" @ 36%

22C

712.0

712.0

Type "A" Paved Gutter

117 F ½" /ft

See Main ℄ for Quantities

730 720 710

R/W

23C

711.1

2:1

1401 F

14F

2:1

732.34

9+00

714.3

20C

712.5

25F ¼" /ft

Quantities to Sta. 10+00 Ramp "B"

730 720 710

R/W

31C

711.5

2:1

1150 F

14F

2:1

730.77

8+00

714.9

14C

713.0

33F ¼" /ft

STA 7+50

730 720 710

2:1

872 F

14F

31C

729.02

7+00

714.9

713.5

¼" /ft 32F

Begin Quantities Ramp "B"

Quantities to Sta. 10+00 Ramp "B"

730 720 710 700

SEE MOUND ST FOR QUANTITIES

Do not use for Quantities

713.75

728.14

6+50

716.8

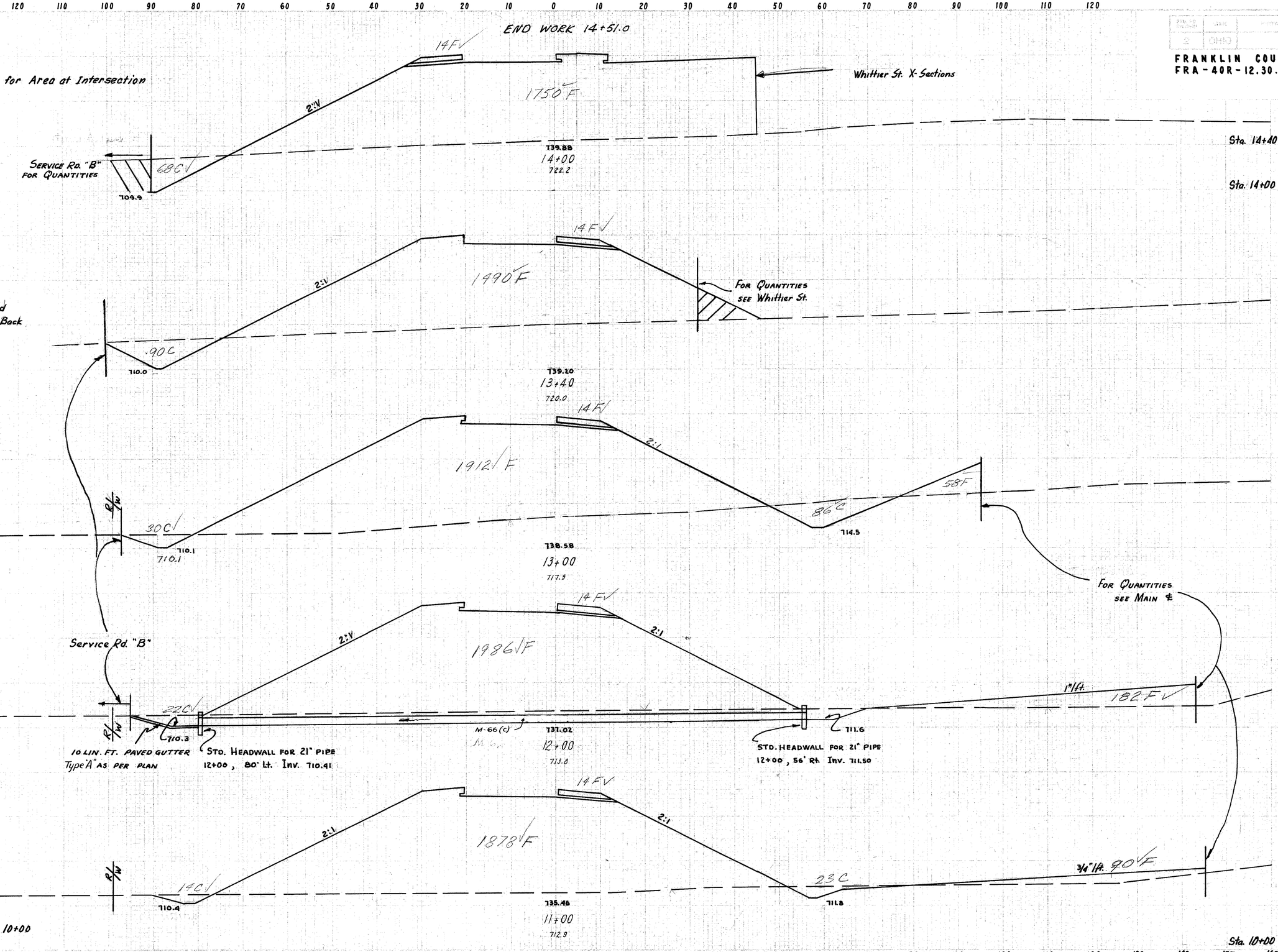
¼" /ft.

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

STA. 6+50 TO STA. 10+00 RAMP "B"

AREA		VOLUME	
C.	F.	C.	F.
37	1111		
		148	5947
43	1440		
		163	4884
45	1197		
		77	2088
STA 7+50 38	1058		
		64	1830
31	918		

SEEDING		I-22	
L.F.	S.Y.	L.F.	C.Y.
	858		
77			
	553		
	816		
89			
123			
	691		
188			
	2311		
228			
	2572		
235	2644		
241			



AREA		VOLUME	
C.	F.	C.	F.
		50	1307
		176	3631
		152	2584
		294	7714
		148	7711
		137	6950

Sta. 14+40 — 0 0
Sta. 14+00 — 68 1764
90 1504
116 1984
43 2182
37 1982
37 1771

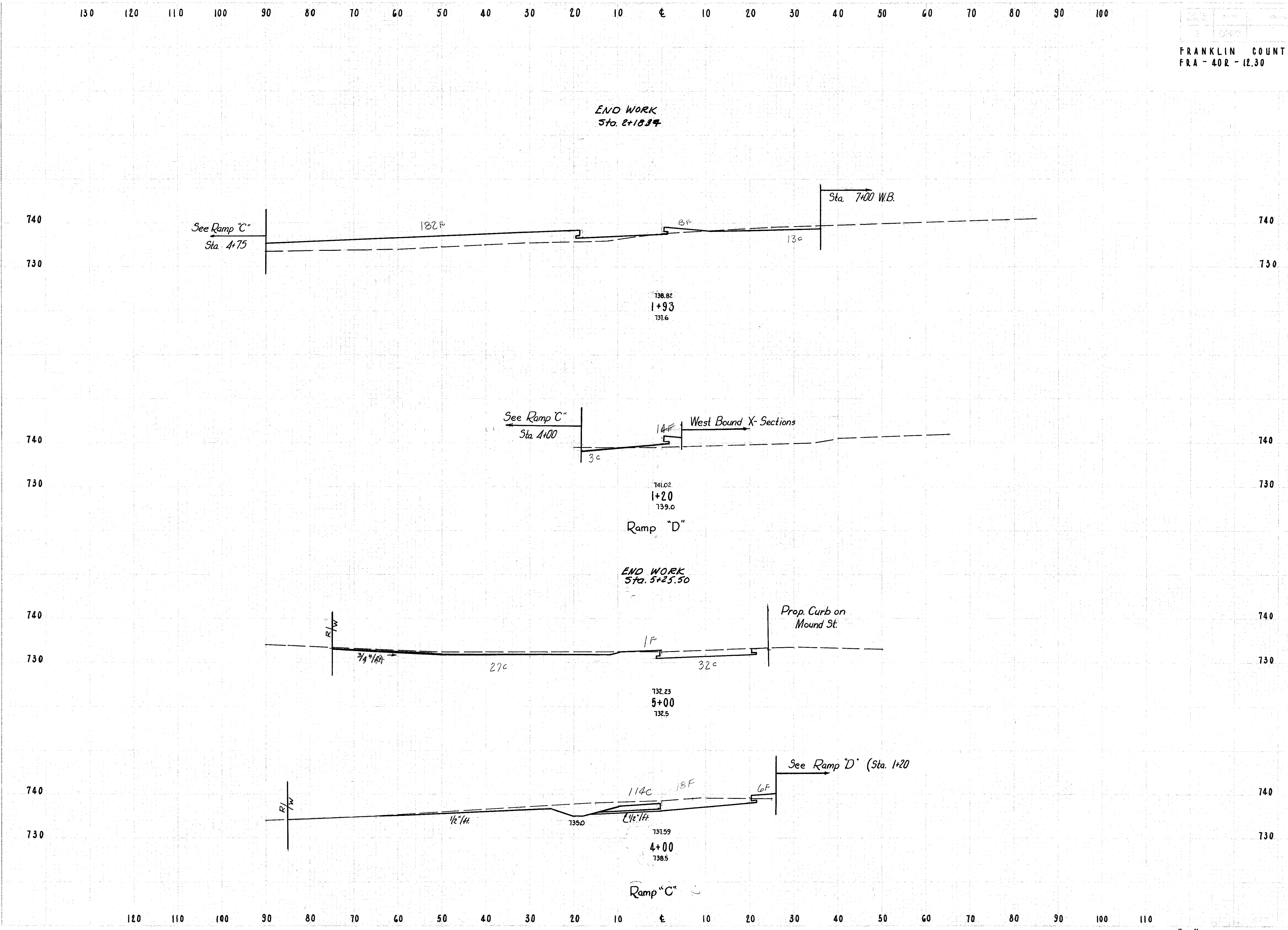
2	OHIO			

61
112

FRANKLIN COUNTY
FRA-40R-12.30.

FRANKLIN COUNTY
FRA - 40R - 12.30

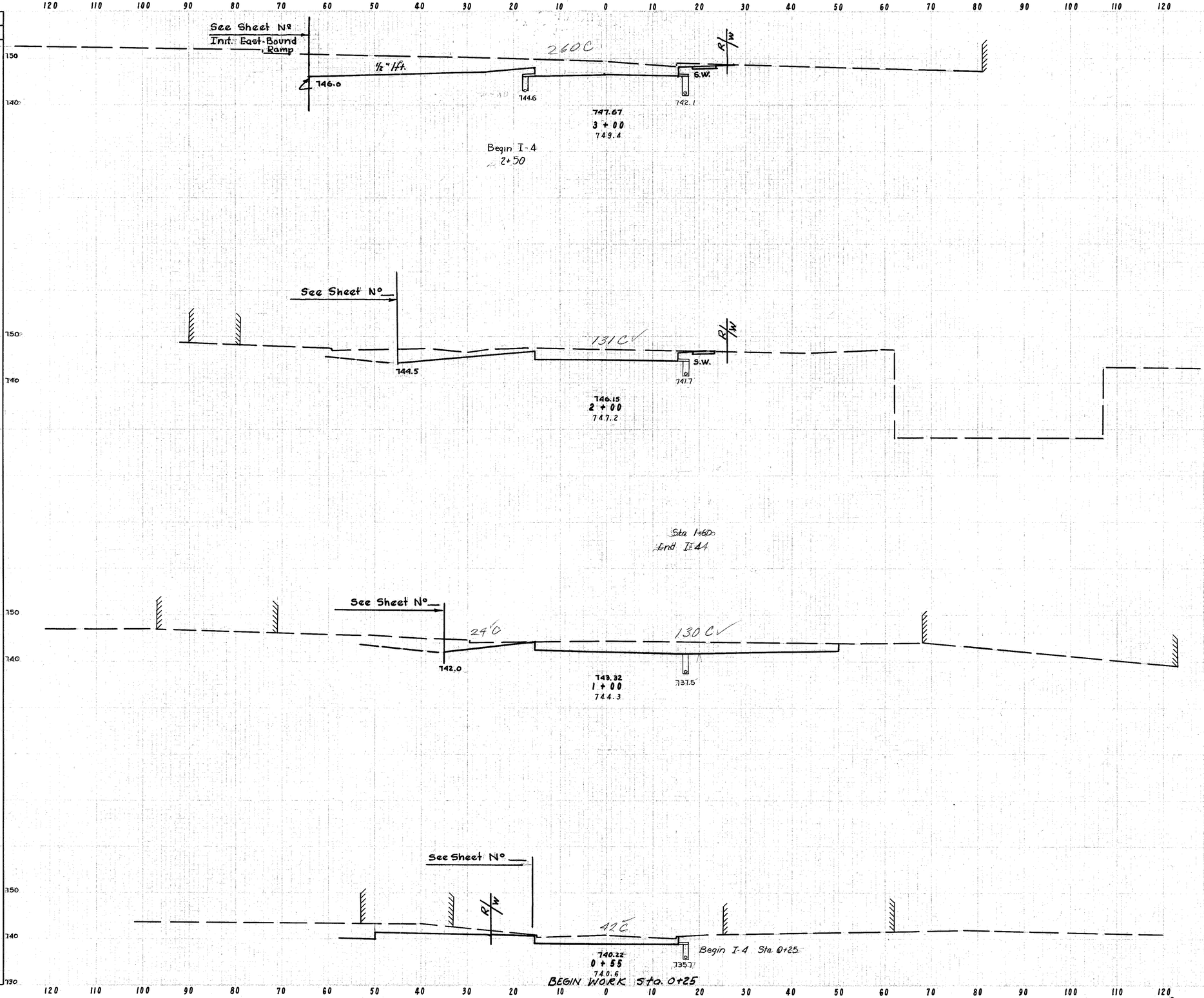
Seeding L.F.	Seeding SY	I-22 LF	I-22 CY
108			
	454		
4			
79			
	944		
91			



Area C	Area F	Volume C	Volume F
13	190		
		22	276
3	14		
59	1		
		320	46
114	24		

Ramp "C" & Ramp "D"

SEEDING		I-22	
L.F.	S.Y.	L.F.	C.Y.
54			
	500		
36			
	367		
30			
	125		
20			



AREA		VOLUME	
C.	F.	C.	F.
260	0		
		724	0
131	0		
		528	0
154	0		
		163	0
STA 0+55	42	0	

63
112

FRANKLIN COUNTY
FRA-40R-12.30

STA. 0+55 To STA. 3+00 SERVICE ROAD "A"

SEEDING		I-22	
L.F.	S.Y.	L.F.	C.Y.
20			
	233		
22			
	60		
21			
	292		
49			
	572		
54			

Checked by CAM
52.14
✓ 4W 2
← 1pg

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

END WORK Sta 6+08.86

31 C ✓

753.67
6 + 00
753.5

End I-4 +70 Rt & Lt

E. Bound Ramp Quantities

232 ✓

2:1

S.W.

743.3

747.1

750.81
5 + 00
754.9

E. Bound Ramp Quan.

244 C ✓

2:1

S.W.

746.3

750.37
4 + 75
754.2

59 C ✓

17 C ✓

4F

E. Bound Ramp Quantities

747.9 3/8"/1'

S.W.

No. 2-6 Inlet (Mod) 749.19

742.4

4 + 00
748.5

Sta. 3+00

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

64
112

FRANKLIN COUNTY
FRA-40R-12.30

AREA		VOLUME	
C.	F.	C.	F.
31	0		
		487	0
232	0		
		220	0
244	0		
		445	5
76	4		
		622	7
Sta. 3+00 260	0		

STA. 4+00 TO STA. 6+00. SERVICE ROAD "A"

Checked by Manat

SEEDING L.F.	SEEDING S.Y.	I-22 L.F.	I-22 C.Y.
50	397	52	539
45	489	43	478
43	467	41	550
58	489	118	32
161	26	167	34

Area C	Area F	Volume C	Volume F
140	2		
		372	5
147	2		
		380	17
58	7		
		126	63
10	27		
		33	120
8	38		
		39	107
13	20		
		233	48
Sta. 5+00 113	6		
		238	33
Sta. 4+50 144	30		
		133	57
Add for Drive STA. 3+39			80
Add for Drive Sta. 4+00			9
Sta. 4+00 0	31		

END WORK
STA. 10+69.66

720 / 710 — 140 C — 710.3 — 711.00 — 10+70 — 713.4 — 710.3

720 / 710 — 147 C — 710.8 — 711.09 — 10+00 — 713.6 — 710.4

720 / 710 — Ramp "B" — 6F 51C — 710.5 — 712.62 — 9+00 — 712.0 — 710.9

Ramp "B" Quantities

720 / 710 — 2C 4:1 — 6F 15F 6F 8C — 710.4 — 713.80 — 8+00 — 712.0 — 710.8

720 / 710 — 7+00, 21' LT. STD. HEADWALL FOR 15" PIPE INV. 710.28 — 6F 26F 6F 8C — 710.2 — 714.20 42'-15" @ 0.88% — 7+00 — 712.0 — 710.7 — 7+00, 21' RT. STD. HEADWALL FOR 15" PIPE INV. 710.65

Ramp "B" Quantities

720 / 710 — 54 C — 4F 10F 6F 13C — 710.0 — 714.60 — 6+00 — 713.2 — 711.1

720 / 710 — 37 C — 6F 7C — 715.0 — 5+00 — 715.2 — 711.7

Quantities on Whittier St.

720 / 710 — 142 C — 22F 6F 2F 2C — 715.55 — 4+50 — 714.3 — 711.8

Ahead
Back

715 — Drive Profile Sta. 3+39.40 — 120 F — 3+39.40

720 / 710 — 15 F 10F 6F 2 0 F — 716.0 — 4+00 — 714.8 — Sta. 3+50

Profile Drive 4+00

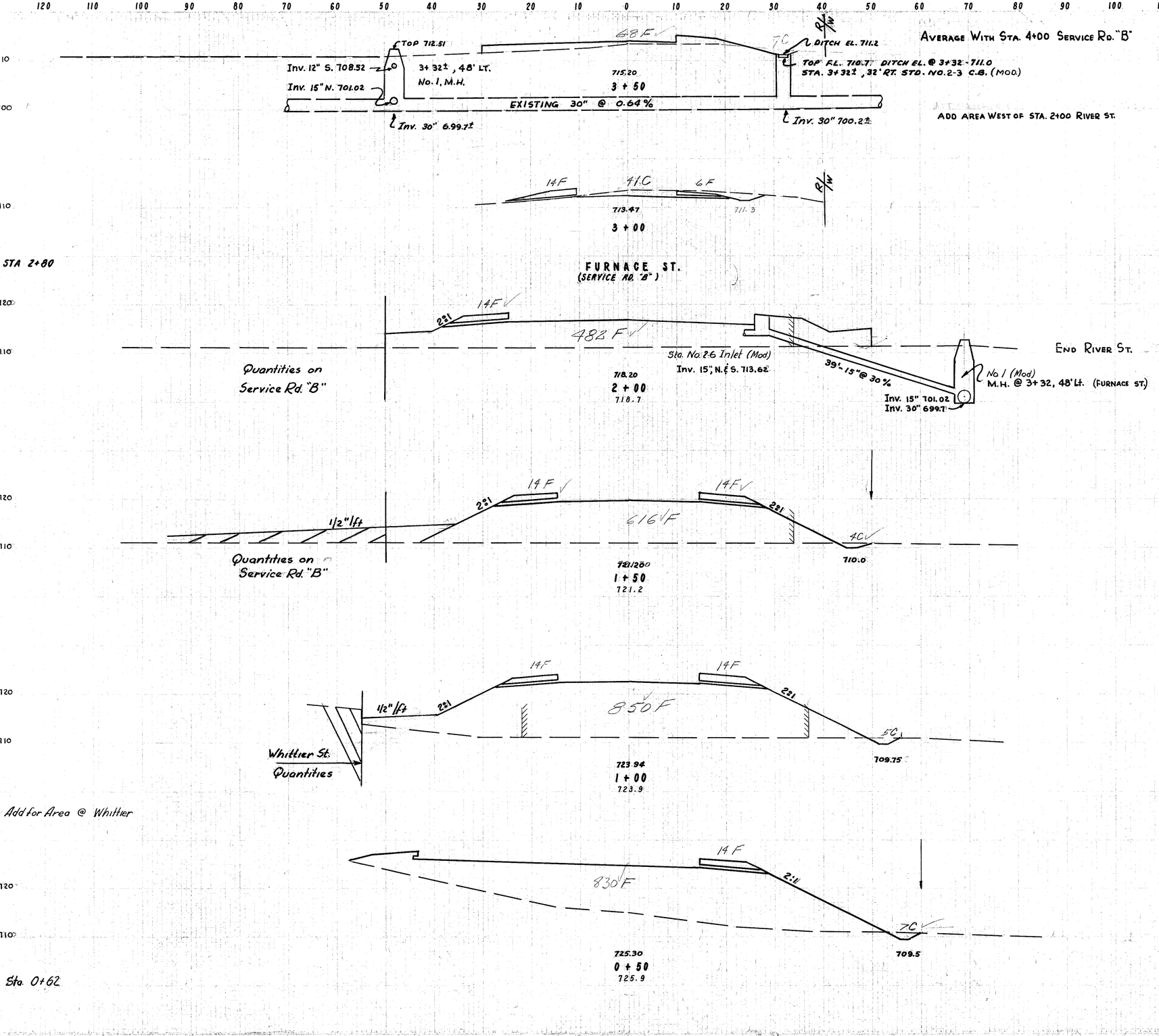
See Sheet 66 for X-Section @ 3+00 & 3+50

STA. 4+00 To STA. 10+70. SERVICE ROAD "B"

FRANKLIN COUNTY
FRA-40R-12.30

FRANKLIN COUNTY
FRA-40R-12.30

SEEDING L.F.	SEEDING S.Y.	I-22 L.F.	I-22 C.Y.
34			
	211		
42			
	69		
20			
49			
	344		
75			
	450		
87			
	398		
	321		
65			



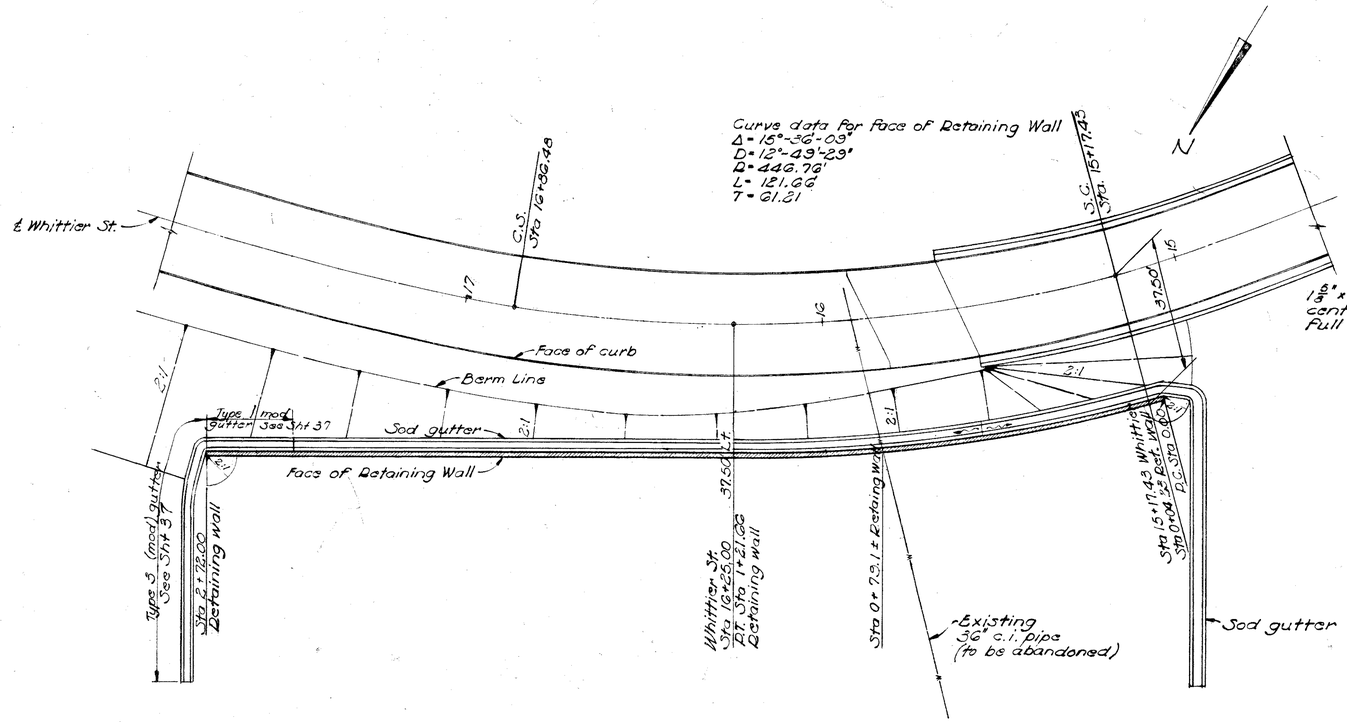
	AREA C.	AREA F.	VOLUME C.	VOLUME F.
Sta. 4+00 Service Rd "B"	0	31		
			7	92
Sta. 3+50 Furnace St.	7	68		
			45	81
Sta. 3+00 Furnace St.	41	20		
			15	7
Sta. 2+80 Furnace St	0	0		
Sta 2+00	0	496		
			4	1056
Sta. 1+50	4	644		
			8	1410
Sta 1+00	5	878		
			8	1219
Sta. 0+62	7	855		

STA. 0+50 TO STA. 2+00. RIVER ST.

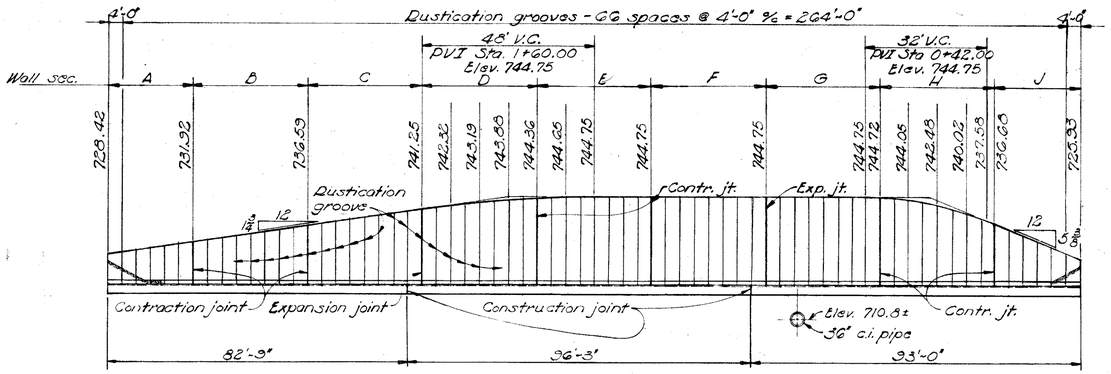
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

67
112

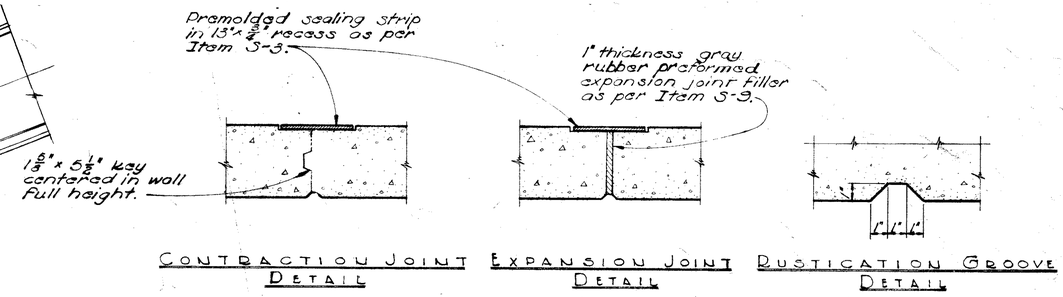
FRANKLIN COUNTY
FRA-40R-12.30



PLAN
Scale 1" = 20'



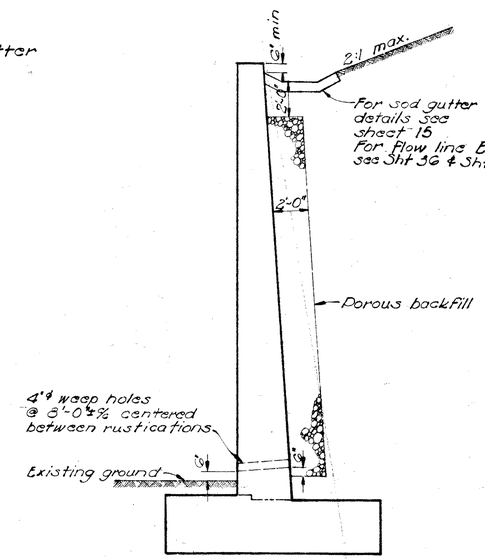
ELEVATION
(Developed view) 1" = 20'



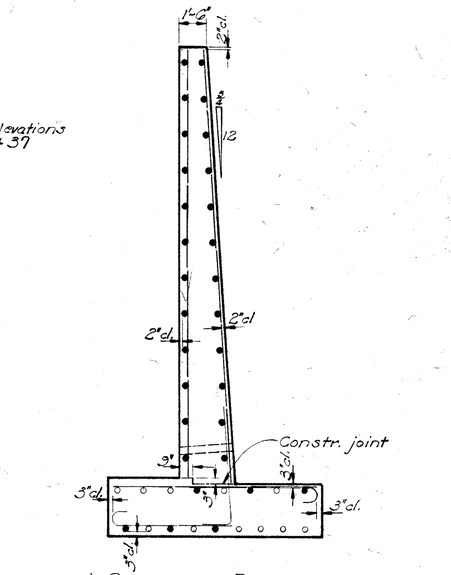
CONTRACTION JOINT DETAIL

EXPANSION JOINT DETAIL

RUSTICATION GROOVE DETAIL



DRAINAGE DETAIL



COMMON DETAILS
& REINFORCING STEEL CLEARANCE

Type 3 (mod.) gutter and sod gutter are included with Roadway Quantities.

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

RETAINING WALL
PLAN, ELEVATION AND TYPICAL DETAILS

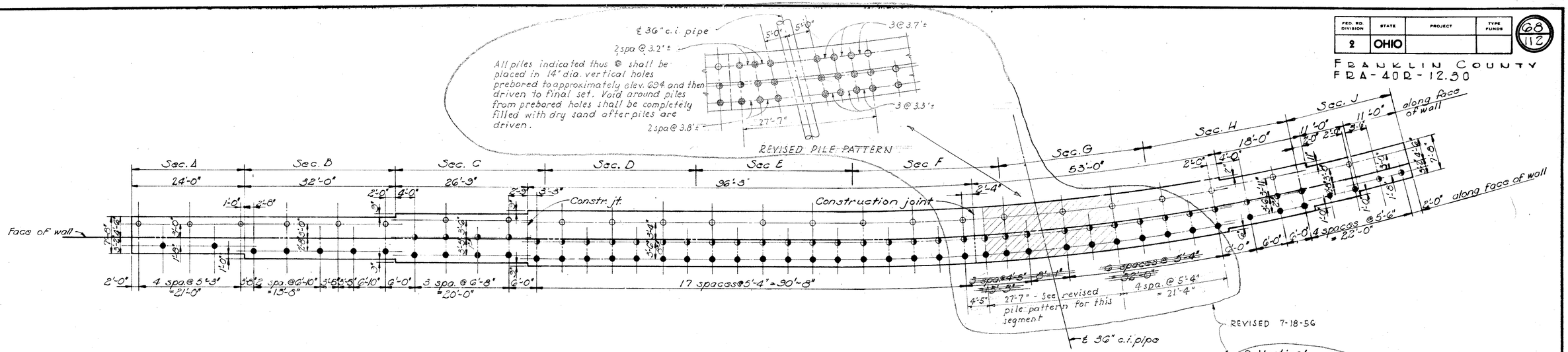
FRANKLIN COUNTY
SEC. FRA-40R-12.30

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
J.E.V.	J.E.V.		Wisse	WB	4-5-56

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

68
112

FRANKLIN COUNTY
FRA-40R-12.30



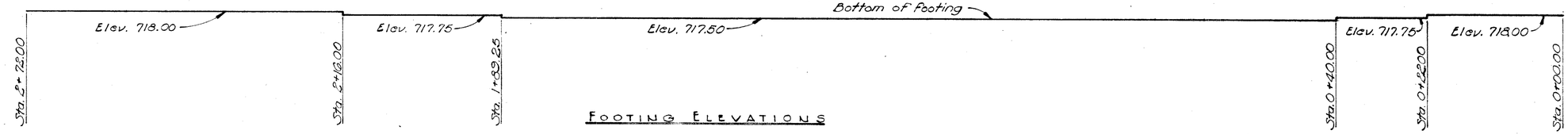
REVISED 7-18-56

○ Vertical
◐ 1:4 batter
● 1:3 batter
◎ Prebored vertical (see note)

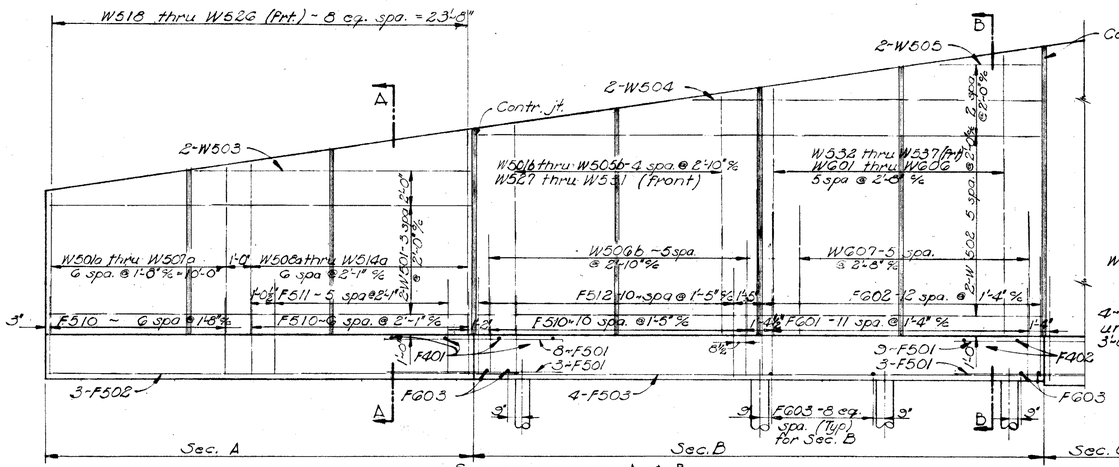
NOTE: All dimensions are on face of wall or normal to face of wall.

FOOTING PLAN

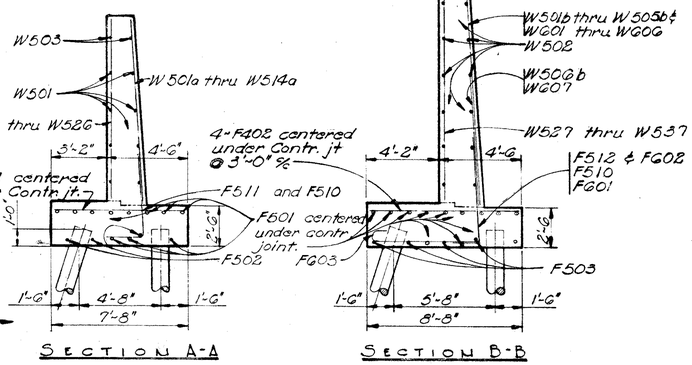
All piles shall be 12" cast-in-place reinforced concrete and shall extend 1'-0" into the footing. Estimated average pay length of piles = 46'



FOOTING ELEVATIONS



SECTIONS A & B



SECTION A-A

SECTION B-B

All reinforcing steel in wall is in back face unless otherwise shown.

REVISED 7-18-56

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

RETAINING WALL
SECTIONS A & B DETAILS
PILE & FOOTING PLAN

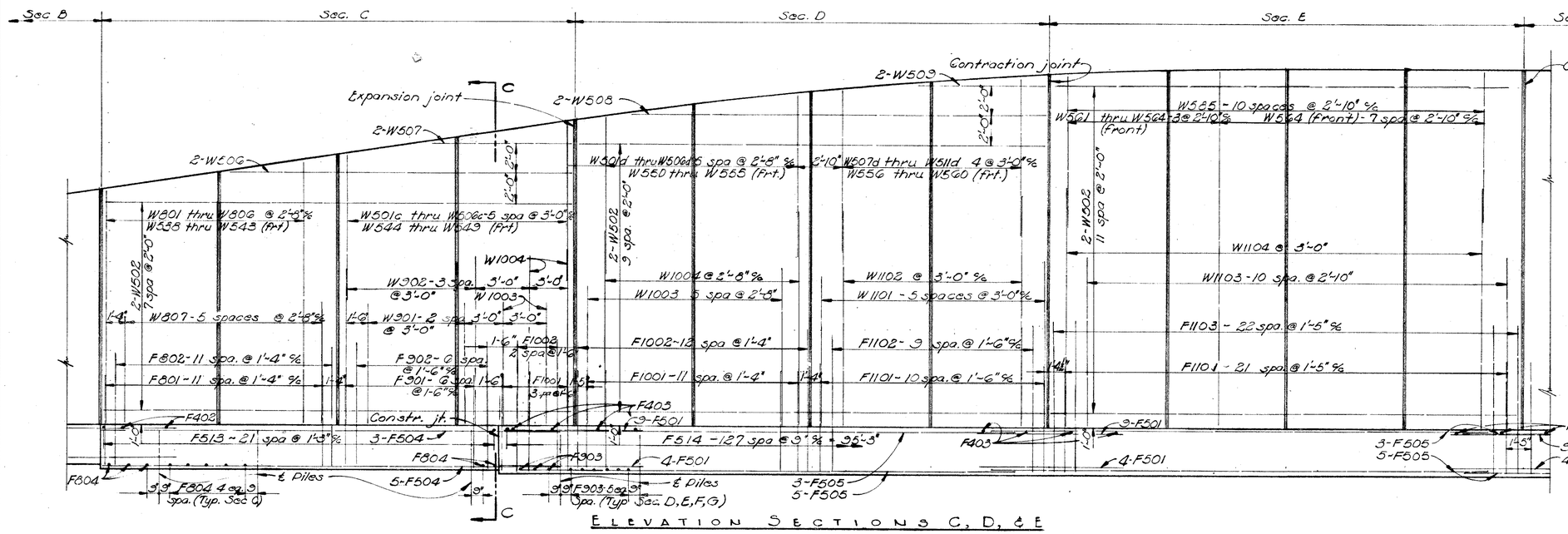
FRANKLIN COUNTY
Sec. FRA-40R-12.30

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.E.V.	J.E.V.		Wisse	WB	4-5-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

G3 112

FRANLIN COUNTY
FRA-40R-12.30



ELEVATION SECTIONS C, D, & E

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

RETAINING WALL

SECTIONS C, D, E, F, & G

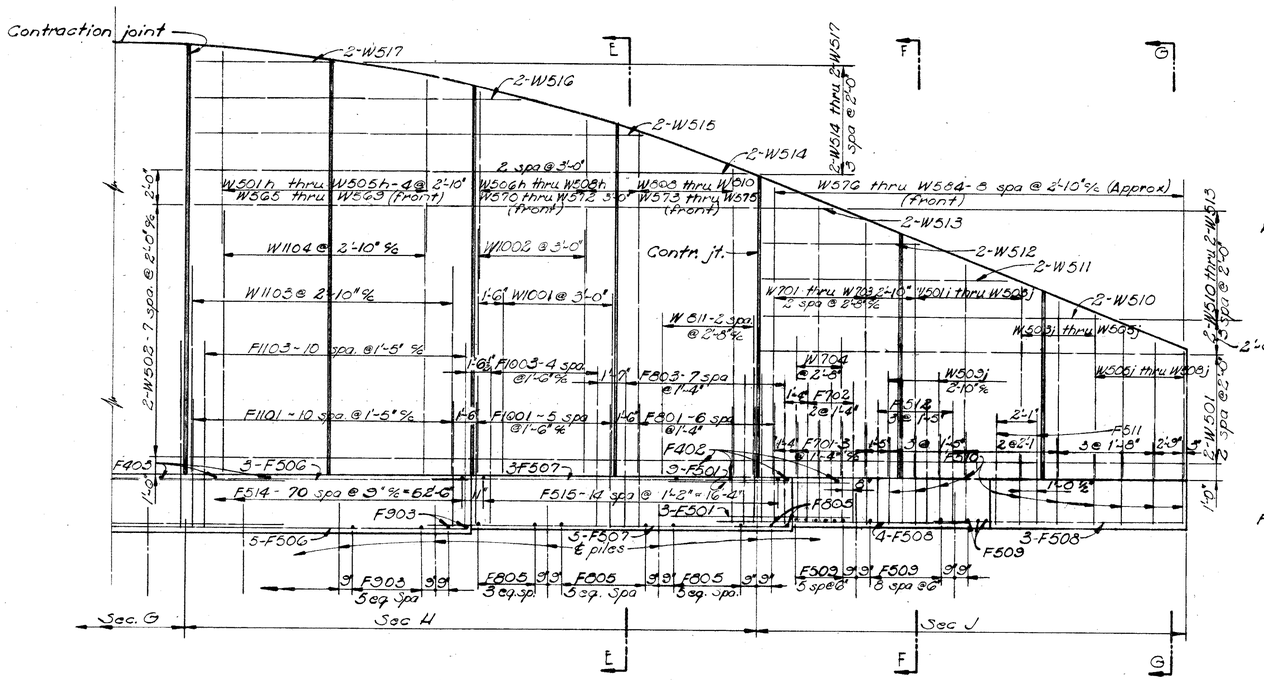
FRANKLIN COUNTY
SEC. FRA-40R-12.30

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.E.V.	J.E.V.		Wisse	WB	4-5-56	

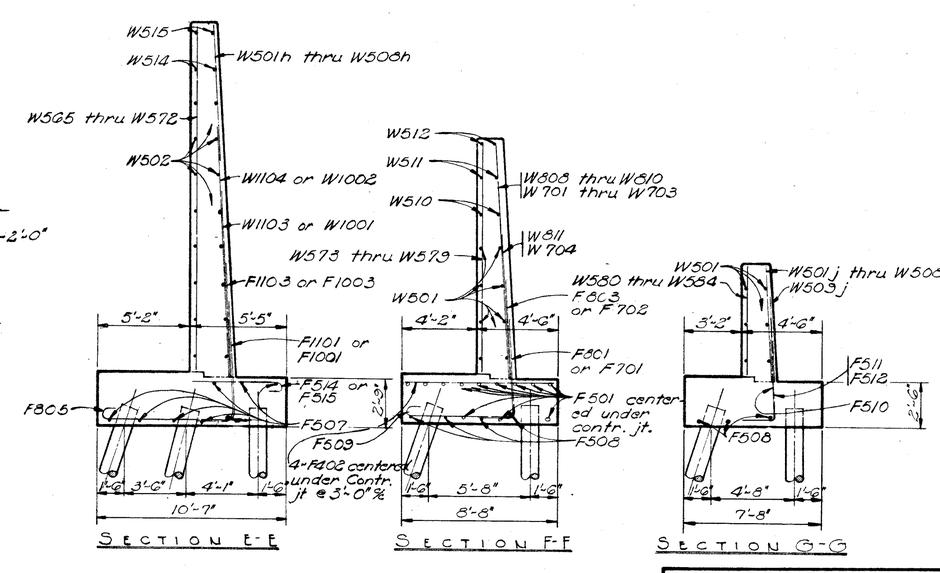
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

70
112

FRANKLIN COUNTY
FRA-40R-12.30



ELEVATION SECTIONS H & J



All reinforcing steel in wall is in back face unless otherwise shown.

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

RETAINING WALL
SECTIONS H & J

FRANKLIN COUNTY
SEC. FRA-40R-12.30

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.E.V.	J.E.V.		Wisse	WB	4-5-56	

REVISED 7-18-56

REINFORCING STEEL LIST

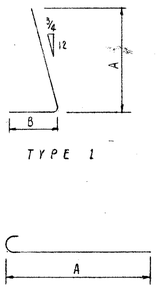
Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	Shp.
F501	~~100~~ 87	10-0	~~1043~~ 907						st
F502	3	25-7	80						st
F503	4	33-7	140						st
F504	8	28-4	236						st
F505	24	33-6	839						st
F506	~~29~~ 16	27-2	~~1153~~ 822						st
F507	8	19-7	163						st
F508	7	12-7	92						st
F509	18	6-1	114	2	5-6				bt
F510	35	4-9	173	1	3-10	1-1			bt
F511	8	6-3	52	1	5-4	1-1			bt
F512	15	6-11	108	1	6-0	1-1			bt
F513	22	4-7	105	2	4-0				bt
F514	199	5-2	1072	2	4-7				bt
F515	15	4-8	73	2	4-1				bt
F601	12	5-3	95	1	4-2	1-3			bt
F602	13	7-7	148	1	6-6	1-3			bt
F603	40	5-10	350	2	5-2				bt
F701	4	5-9	47	1	4-5	1-6			bt
F702	3	8-7	53	1	7-3	1-6			bt
F801	19	6-5	326	1	5-0	1-8			bt
F802	12	9-2	294	1	7-9	1-8			bt
F803	8	9-6	203	1	8-1	1-8			bt
F804	20	8-2	436	2	7-1				bt
F805	18	8-6	409	2	7-5				bt
F901	7	7-0	167	1	5-4	1-11			bt
F902	7	9-11	236	1	8-3	1-11			bt
F903	167	9-6	5394	2	8-3				bt
F1001	22	7-8	726	1	5-11	2-1			bt
F1002	16	11-0	757	1	9-3	2-1			bt
F1003	5	10-3	221	1	8-6	2-1			bt
F1101	89	8-3	3901	1	6-3	2-4			bt
F1102	10	11-7	615	1	9-7	2-4			bt
F1103	79	11-10	4967	1	9-10	2-4			bt
F401	4	7-2	19						st
F402	8	8-2	44						st
F403	20	11-2	149						st

Mark	Nº	Length	Weight	Shp.
W501	14	23-8	346	st
W502	136	31-8	4492	st
W503	2	15-0	31	st
W504	2	19-6	41	st
W505	2	6-0	13	st
W506	2	23-0	48	st
W507	2	9-6	20	st
W508	2	28-0	58	st
W509	2	8-6	18	st
W510	2	19-5	41	st
W511	2	15-0	31	st
W512	2	10-6	22	st
W513	2	6-0	13	st
W514	2	29-3	61	st
W515	2	24-0	50	st
W516	2	18-3	38	st
W517	2	8-6	18	st
W518	1	7-7	8	st
W519	1	8-0	8	st
W520	1	8-5	9	st
W521	1	8-10	9	st
W522	1	9-4	10	st
W523	1	9-9	10	st
W524	1	10-2	11	st
W525	1	10-7	11	st
W526	1	11-0	11	st
W527	1	11-4	12	st
W528	1	11-9	12	st
W529	1	12-2	13	st
W530	1	12-7	13	st
W531	1	13-0	14	st
W532	1	13-5	14	st
W533	1	13-10	14	st
W534	1	14-3	15	st
W535	1	14-7	15	st
W536	1	15-0	16	st
W537	1	15-5	16	st
W538	1	15-9	16	st
W539	1	16-2	17	st
W540	1	16-6	17	st
W541	1	16-11	18	st
W542	1	17-3	18	st
W543	1	17-8	18	st
W544	1	18-2	19	st
W545	1	18-7	19	st
W546	1	19-0	20	st
W547	1	19-5	20	st
W548	1	19-11	21	st
W549	1	20-4	21	st
W550	1	20-8	22	st
W551	1	21-0	22	st
W552	1	21-4	22	st
W553	1	21-8	23	st
W554	1	22-0	23	st
W555	1	22-3	23	st
W556	1	22-6	23	st
W557	1	22-9	24	st
W558	1	23-0	24	st
W559	1	23-3	24	st
W560	1	23-5	24	st
W561	1	23-7	25	st
W562	1	23-8	25	st
W563	1	23-9	25	st
W564	31	23-10	770	st
W565	1	23-9	25	st
W566	1	23-7	25	st
W567	1	23-3	24	st
W568	1	22-10	24	st
W569	1	22-3	23	st
W570	1	21-9	23	st
W571	1	20-9	22	st
W572	1	19-9	21	st
W573	1	18-9	20	st
W574	1	17-8	18	st
W575	1	16-7	17	st
W576	1	15-4	16	st
W577	1	14-1	15	st
W578	1	12-10	13	st

Mark	Nº	Length	Weight	Shp.
W579	1	11-7	12	st
W580	1	10-4	11	st
W581	1	9-1	9	st
W582	1	7-10	8	st
W583	1	6-7	7	st
W584	1	5-3	5	st
W585	34	9-5	334	st
W501a	1	7-10	8	st
W502a	1	8-1	8	st
W503a	1	8-4	9	st
W504a	1	8-7	9	st
W505a	1	8-9	9	st
W506a	1	9-0	9	st
W507a	1	9-3	10	st
W508a	1	9-5	10	st
W509a	1	9-9	10	st
W510a	1	10-0	10	st
W511a	1	10-4	11	st
W512a	1	10-7	11	st
W513a	1	10-11	11	st
W514a	1	11-3	12	st
W501b	1	11-7	12	st
W502b	1	12-0	13	st
W503b	1	12-5	13	st
W504b	1	12-10	13	st
W505b	1	13-3	14	st
W506b	6	5-10	36	st
W501c	1	8-3	9	st
W502c	1	8-8	9	st
W503c	1	9-1	9	st
W504c	1	9-6	10	st
W505c	1	7-4	8	st
W506c	1	7-9	8	st
W501d	1	8-1	8	st
W502d	1	8-5	9	st
W503d	1	8-9	9	st
W504d	1	9-1	9	st
W505d	1	9-5	10	st
W506d	1	9-8	10	st
W507d	1	8-8	9	st
W508d	1	8-11	9	st
W509d	1	9-2	10	st
W510d	1	9-4	10	st
W511d	1	9-7	10	st
W501h	1	9-4	10	st
W502h	1	9-2	10	st
W503h	1	8-10	9	st
W504h	1	8-5	9	st
W505h	1	7-10	8	st
W506h	1	9-9	10	st
W507h	1	8-11	9	st
W508h	1	8-0	8	st
W501j	1	11-11	12	st
W502j	1	10-8	11	st
W503j	1	9-8	10	st
W504j	1	8-10	9	st
W505j	1	8-1	8	st
W506j	1	7-4	8	st
W507j	1	6-7	7	st
W508j	1	5-4	6	st
W509j	2	5-10	12	st
W601	1	13-8	21	st
W602	1	14-1	21	st
W603	1	14-6	22	st
W604	1	14-10	22	st
W605	1	15-3	23	st
W606	1	15-8	24	st
W607	6	6-8	60	st

Mark	Nº	Length	Weight	Shp.
W701	1	15-7	32	st
W702	1	14-4	29	st
W703	1	13-2	27	st
W704	2	7-9	32	st
W801	1	16-0	43	st
W802	1	16-5	44	st
W803	1	16-9	45	st
W804	1	17-2	46	st
W805	1	17-6	47	st
W806	1	17-11	48	st
W807	6	8-3	132	st
W808	1	19-0	51	st
W809	1	17-11	48	st
W810	1	16-9	45	st
W811	3	8-8	69	st
W901	3	9-2	93	st
W902	4	11-9	160	st
W1001	3	10-2	131	st
W1002	3	13-8	176	st
W1003	8	10-8	367	st
W1004	8	14-5	496	st
W1101	6	11-2	356	st
W1102	5	15-7	414	st
W1103	39	11-7	2399	st
W1104	39	16-3	3367	st
REPLACEMENT BARS				
RE401	1	5-3	4	st
RE501	1	5-7	6	st
RE601	1	5-11	9	st
RE701	1	6-3	13	st
RE801	1	6-6	17	st
RE901	1	6-10	23	st
RE1001	1	7-3	31	st
RE1101	1	7-7	40	st

Bending Diagram



TYPE 1

TYPE 2

Note: In the reinforcing steel bar marks, the first digit where three digits are used and the first two where four are used is the bar number which indicates the size of the bar.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

71
112

FRANKLIN COUNTY
FRA - 40R - 12.30

ESTIMATED QUANTITIES

Item	Total	Unit	Description
E-2	Lump	Sum	COFFERDAMS, CRIBS, AND SHEETING
E-2	751	Cu.Yd.	UNCLASSIFIED EXCAVATION
S-1	315	Cu.Yd.	CLASS "E" CONCRETE, FOOTINGS
S-1	420	Cu.Yd.	CLASS "E" CONCRETE, WALL
S-3	182	Lin.Ft.	WATERPROOFING, PREMOLDED SEALING STRIP
S-4	41460	Lb.	REINFORCING STEEL
S-9	100	Sq.Ft.	1" GRAY RUBBER PREFORMED EXPANSION JOINT FILLER
S-16	Lump	Sum	FIRST TEST PILE
S-18	4830	Lin.Ft.	12" CAST-IN-PLACE REINFORCED CONCRETE PILES
S-29	278	Cu.Yd.	POROUS BACKFILL

GENERAL NOTES

DESIGN SPECIFICATIONS: THIS STRUCTURE CONFORMS TO THE REQUIREMENTS OF 'DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES' OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, DATED 10-1-51, TOGETHER WITH REVISIONS THEREOF DATED 7-15-52, 4-1-54, AND 2-1-55.

FOUNDATION SOUNDINGS: FOUNDATION DESIGN AND FOUNDATION QUANTITIES ARE BASED ON A STUDY OF BORINGS 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.

PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 35 TONS. THE LENGTH OF PENETRATION OF EVERY PILE SHALL BE AT LEAST 80% OF THE ESTIMATED AVERAGE PAY LENGTH UNLESS A LESSER PENETRATION IS APPROVED BY THE DIRECTOR.

SURFACE FINISH OF CONCRETE SHALL BE ACCORDING TO ITEM S-1.

CHAMFER ALL EXPOSED EDGES 1".

EXISTING CAST IRON WATER MAIN: IN ORDER TO PREVENT DAMAGE TO THE EXISTING 36" C. I. WATER MAIN DURING PILE DRIVING, THE AREA ADJACENT TO THE PIPE SHALL BE EXCAVATED AS SHOWN ON THE DRAWING. BEFORE PILING IS DRIVEN, THE CONTRACTOR SHALL VERIFY THAT THE WATER LINE RELOCATION HAS BEEN COMPLETED. AFTER PILING IS DRIVEN, THE EXCAVATED SPACE BELOW THE BOTTOM OF THE FOOTING SHALL BE BACKFILLED IN ACCORDANCE WITH SEC. E-2.04 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.

REVISED 7-18-56

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

RETAINING WALL
REINFORCING STEEL LIST
ESTIMATED QUANTITIES
AND GENERAL NOTES

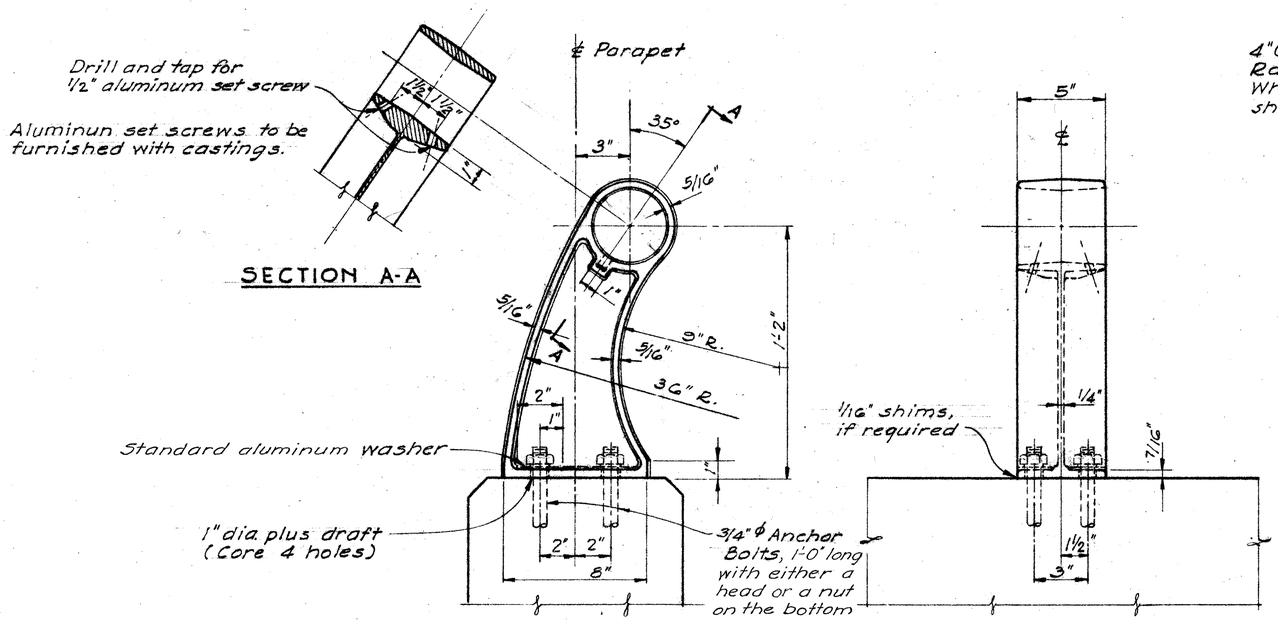
FRANKLIN COUNTY
SEC. FRA-40R-12.30

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.E.V.	J.E.V.		Wisse	JAB	4-5-56	

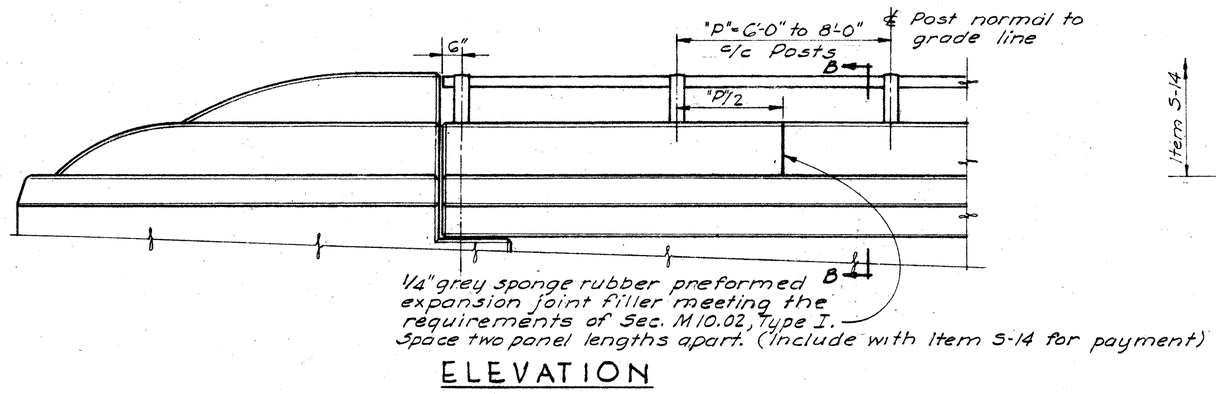
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

72
112

FRANKLIN COUNTY
FRA-40R-12.30

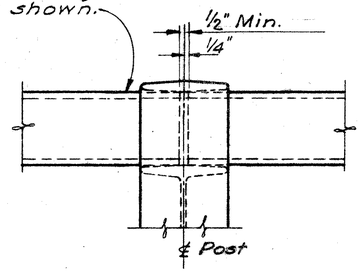


RAILING POST DETAIL
FOR CONCRETE PARAPET

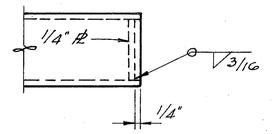


ELEVATION

4"O.D. x 3/16" wall aluminum tube.
Railing is generally continuous.
Where necessary, railing tube shall be joined as shown.

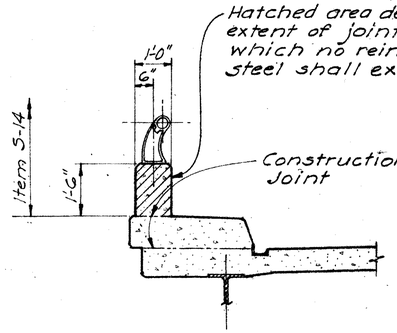


RAILING JOINT DETAIL



Pipe seals required only in the end of the end rails adjacent to the abutments.

PIPE SEAL DETAIL



SECTION B-B

REFERENCE shall be made to Supplemental Specification № S-114 Aluminum Bridge Railing.

SHIMS shall be used where necessary for vertical alignment. They shall be of aluminum alloy, 5" x 8" x 1/16" thick.

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

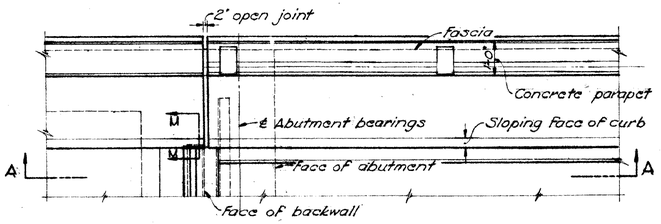
COMMON DETAILS
ALUMINUM RAILING
MOUND ST. EXPRESSWAY
FRANKLIN COUNTY
SEC. FRA-40R-12.30

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	INNES		Wisse	W.B	4-3-56	

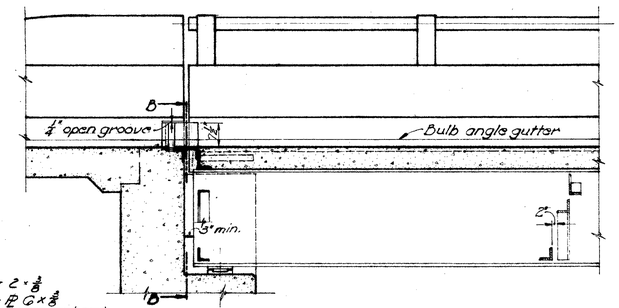
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

73
112

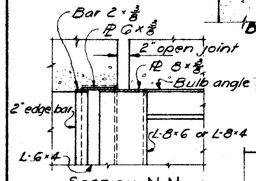
FRANKLIN COUNTY
FRA-40R-12.30



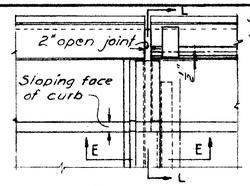
PLAN AT ABUTMENT
Showing Safety curb end finish



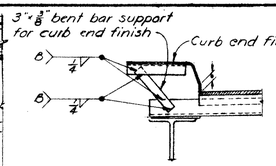
SECTION A-A
Showing safety curb end finish



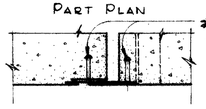
SECTION N-N
Showing safety curb end finish



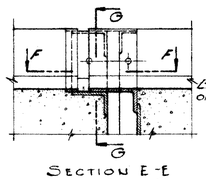
PART PLAN



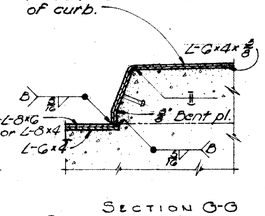
SECTION L-L



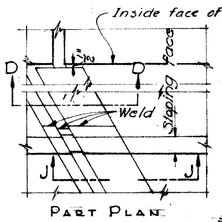
SECTION F-F



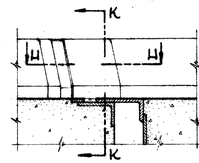
SECTION E-E
FOR SQUARE BRIDGES



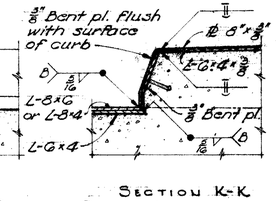
SECTION G-G
FOR SQUARE BRIDGES



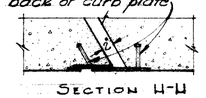
PART PLAN



SECTION J-J
FOR SKEWED BRIDGES



SECTION K-K
FOR SKEWED BRIDGES

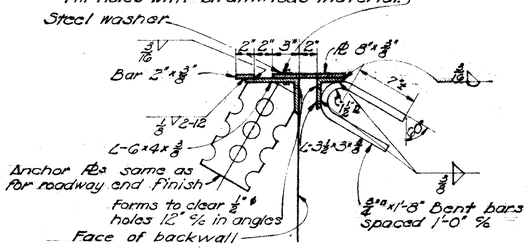


SECTION H-H

SIDEWALK CURB PLATE DETAILS

⅜"×2" bolts at not more than 2'-0" ℄, with nuts tack-welded to under side of lower angle. 1"⌀ holes in upper angle. Center ⅜" bolts in 1"⌀ holes. Apply flake graphite between washers and angle. Turn bolt tight and release one-half turn. Remove bolts as soon as concrete has sufficiently set, preferably within two hours. Fill holes with bituminous material.

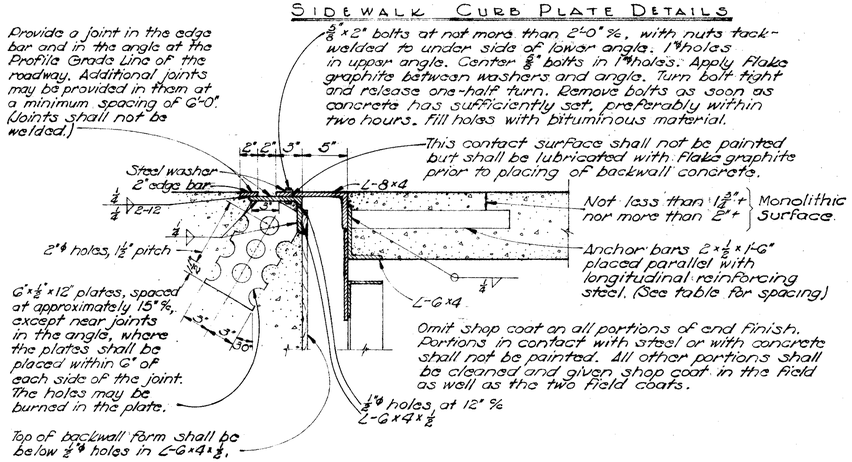
⅜"×1½" bolts at 1'-3" ℄, with nuts tack-welded to under side of angle. 1"⌀ holes in plate. Center ⅜" bolts in 1"⌀ holes. Apply flake graphite between washers and plate. Turn bolt tight and release one-half turn. Remove bolts as soon as concrete has sufficiently set, preferably within two hours. Fill holes with bituminous material.



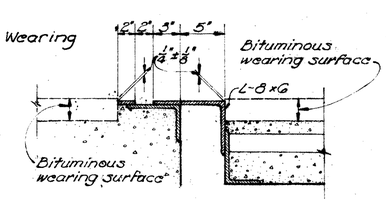
See Section C-C for the treatment of contact surface between L-6×4×⅜ and PL 8"×⅜" and the painting procedure of all portions of end finish.

SECTION D-D
SHOWING SIDEWALK CURB END FINISH

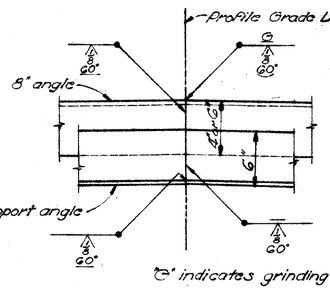
Provide a joint in the edge bar and in the angle at the Profile Grade Line of the roadway. Additional joints may be provided in them at a minimum spacing of 6'-0". (Joints shall not be welded.)



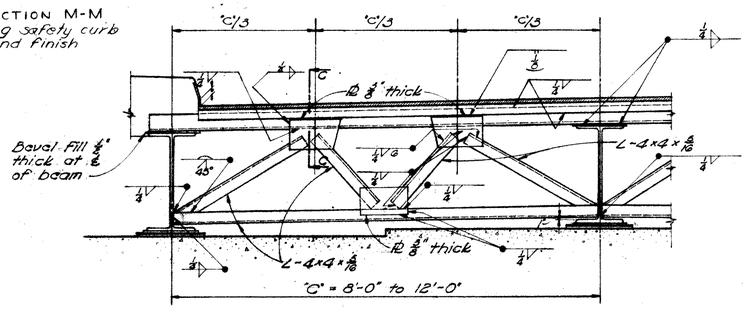
SECTION C-C
SHOWING ROADWAY END FINISH
FOR MONOLITHIC WEARING SURFACE



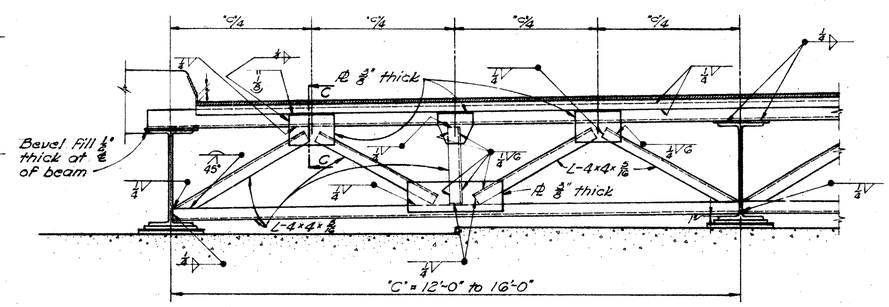
SECTION C-C
SHOWING ROADWAY END FINISH
FOR BITUMINOUS WEARING SURFACE
Same as SECTION C-C for monolithic wearing surface except as shown.



WELDED BUTT JOINT IN SUPERSTRUCTURE
END FINISH ANGLES AT PROFILE GRADE LINE OF ROADWAY

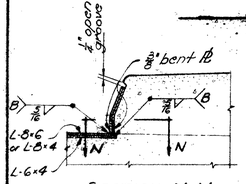


SECTION B-B
For beam spacing 8'-0" ℄ to 12'-0" ℄, measured parallel to end finish.



SECTION B-B
For beam spacing of 12'-0" ℄ to 16'-0" ℄, measured parallel to end finish.

SECTION B-B
For beam spacing 8'-0" ℄ to 8'-0" ℄ or less, measured parallel to end finish.



SECTION M-M
Showing safety curb end finish

ROADWAY END FINISH DATA				
MEMBER	Thickness or spacing of member for load frequency of			
	CF=30	CF=130	CF=400	CF=2000
Main angle: 6×4 or 8×6	⅜"	½"	⅞"	1"
2" edge bar	⅜"	½"	⅞"	1"
2×½×1'-6" anchor bars spacing	18" ℄	18" ℄	15" ℄	12" ℄
Supporting angle: 6×4	⅜"	½"	⅝"	¾"

NOTE: ** 2" for monolithic wearing surface
2¼" for bituminous wearing surface

MEDIAN END FINISH:
End finish at face of median shall be similar to that shown for safety curbs.

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

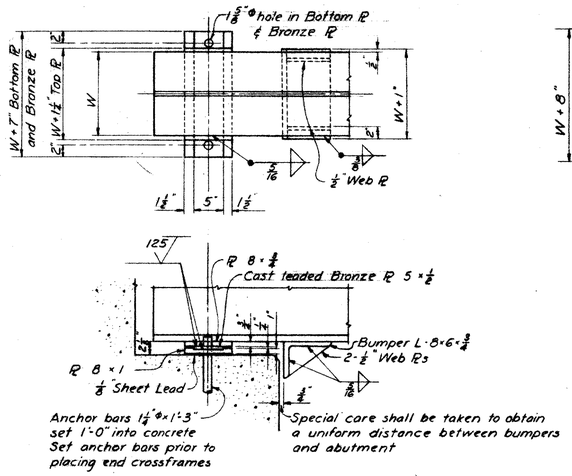
COMMON DETAILS
END FINISH & END CROSS FRAMES
MOUND ST. EXPRESSWAY
FRANKLIN COUNTY
SEC. FRA 40R 12.30

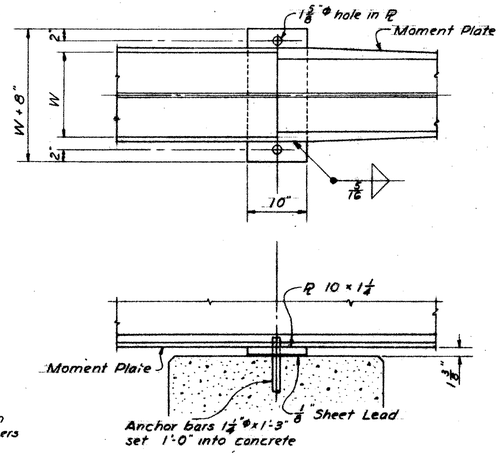
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	DIVISION
J.E.V.	J.E.V.		W.W.	W.B.	4-5-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

74
112

FRANKLIN COUNTY
FRA-40R-12.30





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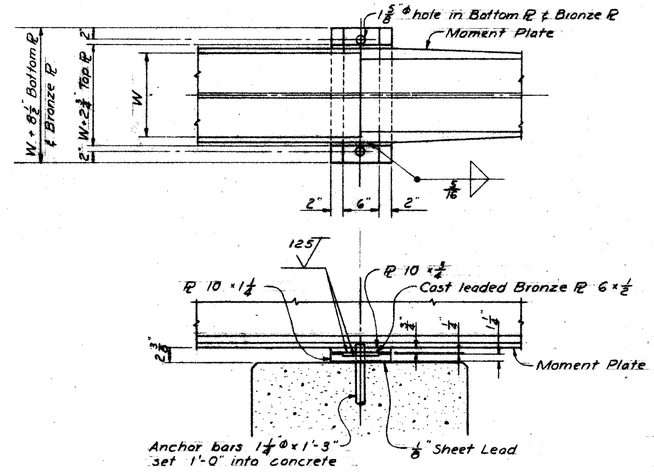
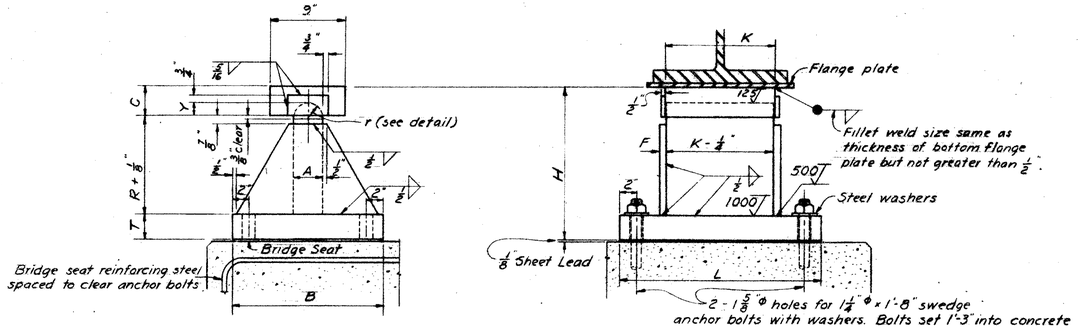


EXPANSION

ABUTMENT BEARING PLATES
Bumper angles shall be used only if called for on project plans

PIER BEARING PLATES

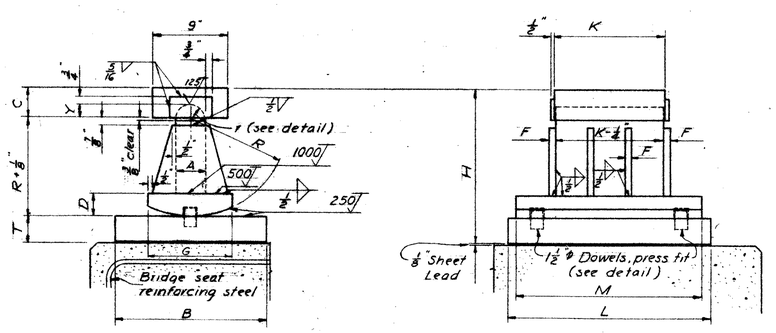
Note:
For a structure with plate bearings, on a gradient of 1 per cent or more, the plate at the fixed bearings and the upper plate at the expansion bearings shall be beveled to provide horizontal bearings.



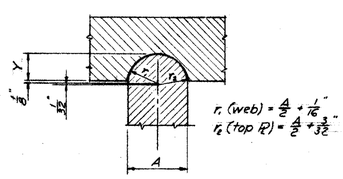
STRUCTURAL STEEL BOLSTER
see table for additional dimensions

Bolster No.	Rocker No.	Dimensions (inches) A	B	C	D	F	G	H	K	L	M	R	T	Y	Weight each(lb) Bolster	Rocker	Maximum Load (lb)
	R-75	2½	8	2½	1¾	½	7	9⅝	9	18	16	5½	1½	1 3/16		205	75,000
B-100	R-100	2½	10	2½	2	½	7½	10⅝	9	19	17	6½	1½	1 3/16	225	250	100,000
B-125	R-125	3	11	3	2	½	8	12⅛	10½	20	18	7½	1½	1 7/16	295	315	125,000
B-150	R-150	3	12	3	2¼	½	8½	13⅜	11½	22	19	8½	1¾	1 7/16	360	400	150,000
B-175	R-175	3	14	3½	2½	½	9	15⅛	12	23	20	9½	2	1 7/16	455	505	175,000
B-200	R-200	3	16	3½	2¾	⅝	9	16⅜	12	24	21	10½	2¼	1 7/16	540	605	200,000
B-225	R-225	3	17	3½	2¾	⅝	9	16⅞	13	25	22	11	2¼	1 7/16	590	665	225,000
B-250	R-250	3½	18	3½	2¾	¾	10	17⅝	13	26	23	11½	2½	1 11/16	695	775	250,000
B-275	R-275	3½	19	3½	3¼	¾	12	18⅜	14	27	24	12	2¾	1 11/16	800	945	275,000
B-300	R-300	3½	20	3½	3¼	¾	12	19⅛	14	28	25	12½	3	1 11/16	895	1050	300,000

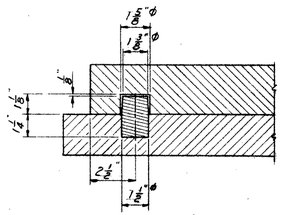
Weights given are for one rocker or bolster complete (including sheet lead, anchor bolts and washers).



STRUCTURAL STEEL ROCKER
see table for additional dimensions



TOP BEARING DETAIL



DOWEL DETAIL

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

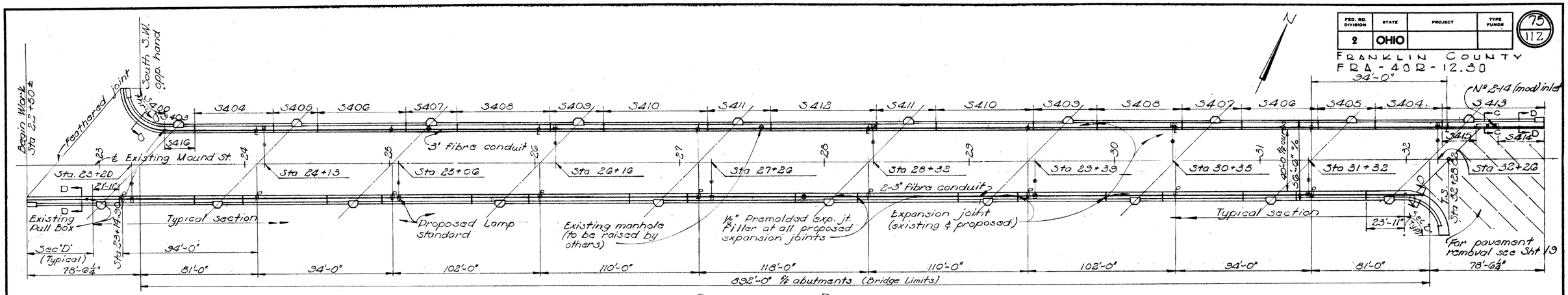
COMMON BEARING DETAILS
MOUND ST. EXPRESSWAY
FRANKLIN COUNTY
SEC. FRA-40R-12.30

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Wisse	Wisse		RAC	W.B.	4-3-56	

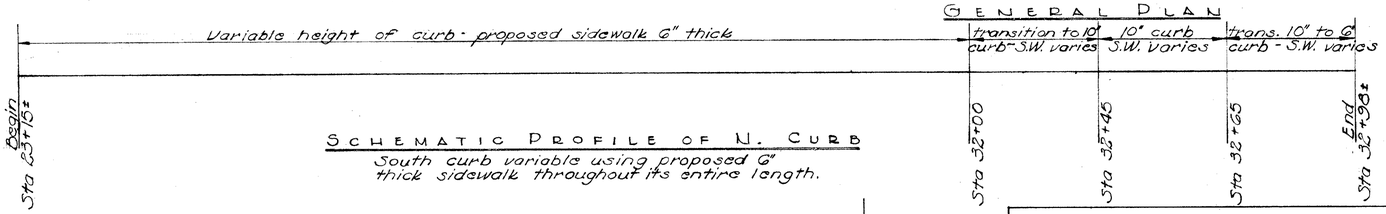
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

75
112

FRANKLIN COUNTY
FRA-40R-12.30



GENERAL PLAN



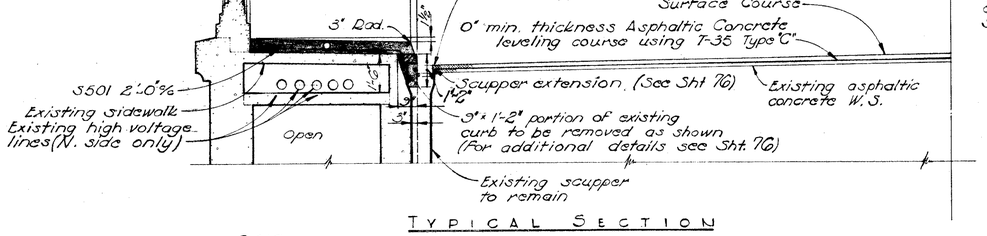
SCHEMATIC PROFILE OF N. CURB

South curb variable using proposed 6" thick sidewalk throughout its entire length.

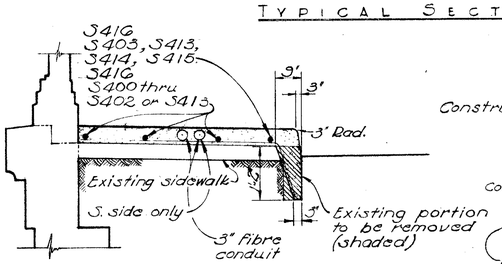
NOTE: Provide expansion jt. coupling for 3" conduit at all expansion joints.

All existing manholes and pull boxes shall be covered except as shown.

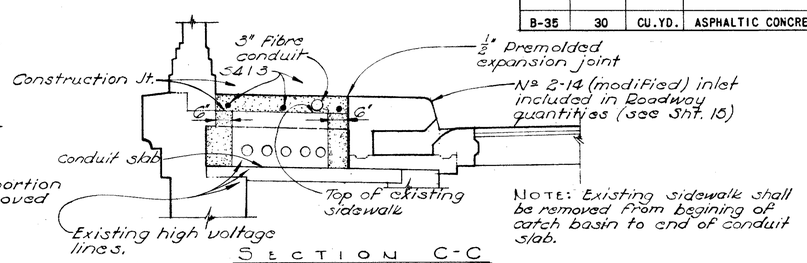
For proposed pavement elevations from Sta 32+00 forward, see sheet 28.



TYPICAL SECTION



SECTION D-D



SECTION C-C

NOTE: Existing sidewalk shall be removed from begining of catch basin to end of conduit slab.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION
S-1	279	CU.YD.	CLASS "C" CONCRETE (SIDEWALK & CURB)
S-4	12465	LB.	REINFORCING STEEL
S-9	136	SQ.FT.	½" PREMOLDED EXPANSION JOINT FILLER
S-22	LUMP	SUM	REMOVAL OF PORTIONS OF EXISTING STRUCTURE
S-25	LUMP	SUM	ELECTRIC LIGHTING SYSTEM (STANDARDS, CONDUIT AND PULL BOXES)
S-29	16	EA.	SCUPPERS INCLUDING PAINTING
T-35	176	CU.YD.	ASPHALTIC CONCRETE SURFACE COURSE, TYPE "C" (60-70)
B-35	30	CU.YD.	ASPHALTIC CONCRETE LEVELING COURSE (60-70) AS PER PLAN

GENERAL NOTES

REFERENCES: SUPPLEMENTAL SPECIFICATIONS S-114 DATED 8-30-55 M-109.23 REVISED 5-28-54.

REMOVAL OF PORTIONS OF EXISTING STRUCTURE SHALL INCLUDE THE REMOVAL OF ALL POLES AND PORTIONS OF CURB, SIDEWALK, AND SCUPPERS AS SHOWN ON THE PLANS. THE ABOVE ITEMS SHALL BECOME THE PROPERTY OF THE CONTRACTOR.

WELDING OF STRUCTURAL STEEL SHALL BE CLASS A.

SURFACE FINISH OF CONCRETE: CURB FACES SHALL RECEIVE A RUBBED SURFACE FINISH. ALL OTHER SURFACES SHALL BE GOVERNED BY ITEM S-1.

ELECTRIC LIGHTING SYSTEM: THIS CONTRACT INCLUDES FURNISHING AND INSTALLING OF LAMP STANDARDS, PULL BOXES, AND CONDUIT.

CONDUIT: FIBRE CONDUIT SHALL BE 3" FIBRE TYPE SIMILAR TO ORANGEBURG FIBRE CONDUIT, STANDARD TYPE I, OR APPROVED EQUAL, WITH FIBRE END BELLS AT ENDS OF EXISTING SUPERSTRUCTURE AND EXPANSION JOINT COUPLING AS PER PLAN. ENDS OF FIBRE CONDUIT AT PULL BOXES SHALL BE ROUNDED. THE COST OF FIBRE END BELLS AND EXPANSION JOINT COUPLING SHALL BE INCLUDED WITH THE LUMP SUM PRICE BID FOR ITEM S-25, ELECTRIC LIGHTING SYSTEM, FOR PAYMENT.

LAMP STANDARDS ON BRIDGE SHALL BE UNION METAL MANUFACTURING COMPANY'S ROUND MONOTUBE STEEL PENDENT ANCHOR BASE TYPE DESIGN NO. 40H-CATALOG NO. H-300-EL OR APPROVED EQUAL. THE COST OF LAMP STANDARD, BASE, PAINTING, AND FITTINGS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM S-25, ELECTRIC LIGHTING SYSTEM FOR PAYMENT.

UTILITIES: POWER LINES ON SOUTH SIDE OF BRIDGE TO BE RELOCATED BY CITY OF COLUMBUS FORCES. EXISTING MANHOLE AT STA. 27+56 TO BE RAISED BY C&SOE CO. EXISTING BRIDGE LIGHTING CIRCUIT TO BE REMOVED BY OTHERS.

DETAIL PLANS OF THE EXISTING STRUCTURE ARE AVAILABLE AT THE OFFICE OF THE COUNTY ENGINEER.

PROPOSED WORK:

(1) REMOVE PORTIONS OF EXISTING CURB AND SIDEWALK AS PER PLAN.
(2) REMOVE EXISTING LAMP STANDARDS.
(3) PROVIDE NEW SIDEWALK AND CURB AND SCUPPER EXTENSIONS AS PER PLAN.
(4) PROVIDE PRE-LEVELING AND NEW SURFACE COURSE AS PER PLAN.
(5) PROVIDE 3" FIBRE CONDUIT FOR RELOCATION OF EXISTING OVERHEAD WIRES.
(6) INSTALL NEW BRIDGE LIGHTING SYSTEM.

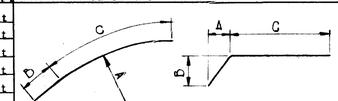
EXISTING STRUCTURE

Type: Spandrel filled reinforced concrete arches with reinforced concrete substructure.
Spans: 77'-66'-94'-102'-110'-102'-94'-66'-77' clear.
Roadway: 40' ℄ curbs with 6'-0" sidewalks and concrete railing.
Wearing Surface: Bituminous material.
Skew: 45° Lt. forward
Alignment: Tangent.

REINFORCING STEEL LIST

MARK	NO.	LENGTH	WEIGHT	TYPE	"A"	"B"	"C"	SHP
S400	4	22-1	59	1	26-6	1-3	20-10	bt
S401	4	23-5	63	1	28-2	1-3	22-2	bt
S402	4	24-8	66	1	29-10	1-3	23-5	bt
S403	4	26-0	69	1	31-6	1-3	24-9	bt
S404	32	26-10	574					st
S405	16	33-10	362					st
S406	32	29-6	631					st
S407	16	37-3	398					st
S408	32	31-8	677					st
S409	32	20-10	445					st
S410	32	34-6	737					st
S411	32	22-5	479					st

BENDING DIAGRAMS



TYPE 1 TYPE 2

IN THE REINFORCING STEEL BAR MARKS, THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO WHERE FOUR ARE USED IS THE BAR NUMBER WHICH INDICATES THE SIZE OF THE BAR.

MARK	NO.	LENGTH	WEIGHT	TYPE	"A"	"B"	"C"	SHP.
S412	16	36-8	392					st
S413	14	31-9	297					st
S414	1	35-2	23					st
S415	1	11-4	8					st
S416	8	21-0	112					st
S417	10	6-0	40					st
S501	1010	6-8	7023	2	0-6	1-3	6-6	bt

REPLACEMENT BARS

RE401	1	5-3	4					st
RE501	1	5-7	6					st

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

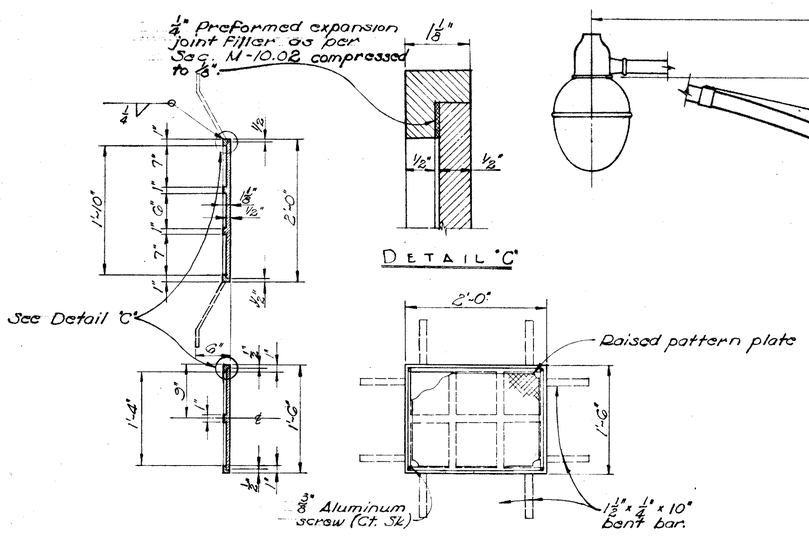
GENERAL PLAN, ESTIMATED QUANTITIES, REINFORCING STEEL LIST, AND NOTES
BRIDGE № FRA-40R-1230
OVER SCIOTO RIVER
FRANKLIN COUNTY
SEC FRA-40R-12.30

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.E.V.	J.E.V.		Wisse	WB	4-5-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

76
112

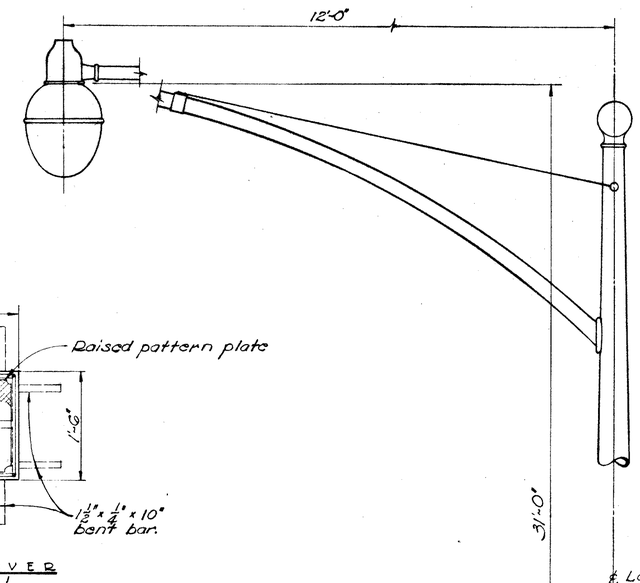
FRANKLIN COUNTY
FRA-40R-12.30

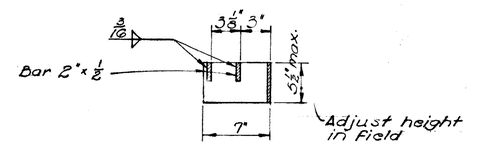


DETAIL 'C'

PULL BOX FRAME & COVER
(Cast Aluminum 10 Req'd)

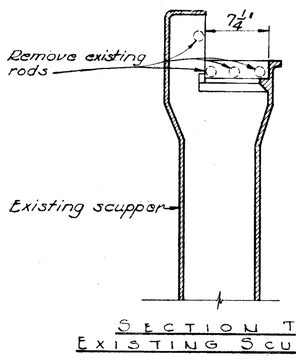
Pull box frame and cover assembly shall meet the pertinent sections of Supplemental Specification Nº S-114, Aluminum for Bridge Railing.



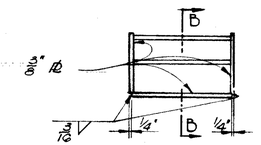


SECTION B-B

ELEVATION

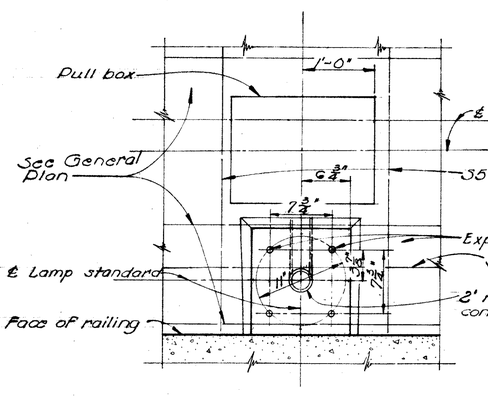


SECTION THRU EXISTING SCUPPER

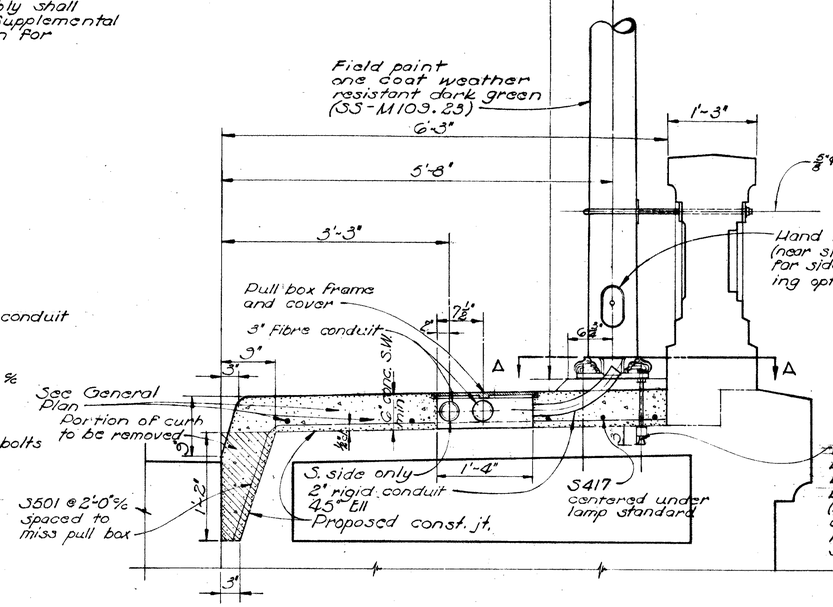


PLAN

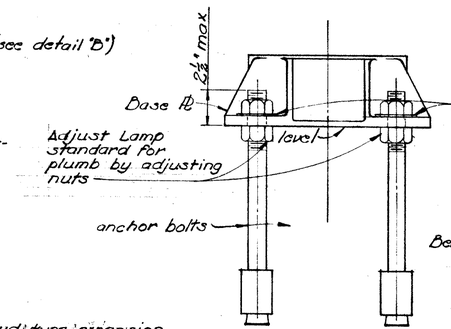
SCUPPER EXTENSION DETAILS



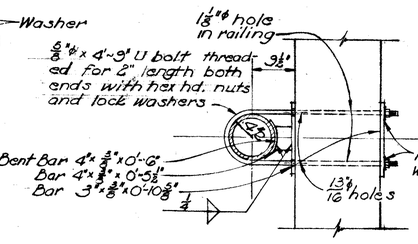
SECTION A-A
(Pole base not shown)



POST & SIDEWALK DETAILS



DETAIL A
(4 bolts, 4 washers, 8 nuts, and 4 drilled holes for each lamp standard shall be included in the lump sum price bid for Item S-25, Electrical Equipment, for payment)



DETAIL B

Cost of 1 5/8" ϕ holes and mounting assembly shall be included with Item S-25, Electrical Equip. for payment

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

PROPOSED LIGHTING
SIDEWALK & SCUPPER
EXTENSION DETAILS
BRIDGE Nº FRA-40R-1230

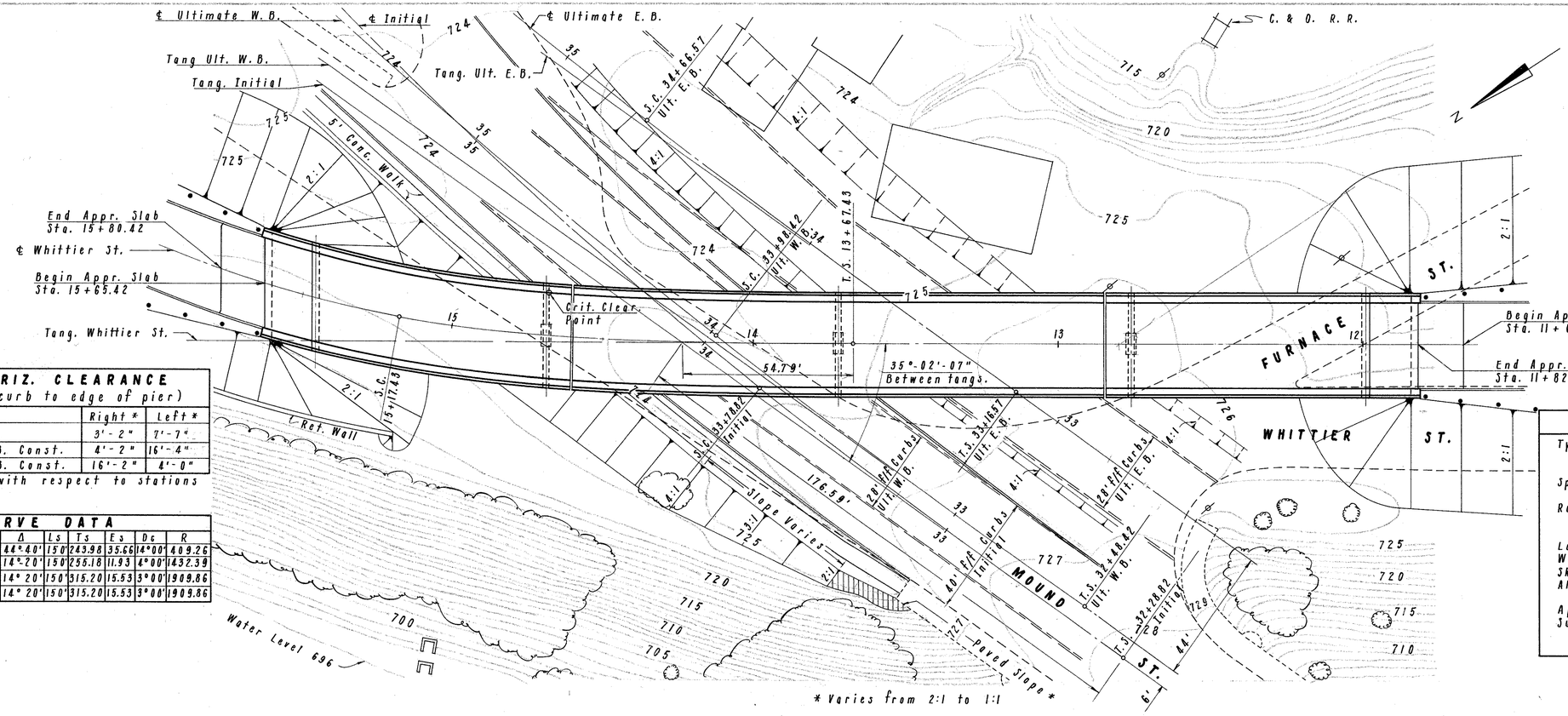
FRANKLIN COUNTY
SEC. FRA-40R-12.30

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.E.V.	J.E.V.		Wisse	W.B	4-5-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

77
112

FRANKLIN COUNTY
FRA-40R-12.30



PLAN

MIN. HORIZ. CLEARANCE
(Face of curb to edge of pier)

	Right *	Left *
Initial Const.	3'-2"	7'-7"
Ultimate W.B. Const.	4'-2"	16'-4"
Ultimate E.B. Const.	16'-2"	4'-0"

* Rt. or Lt. with respect to stations

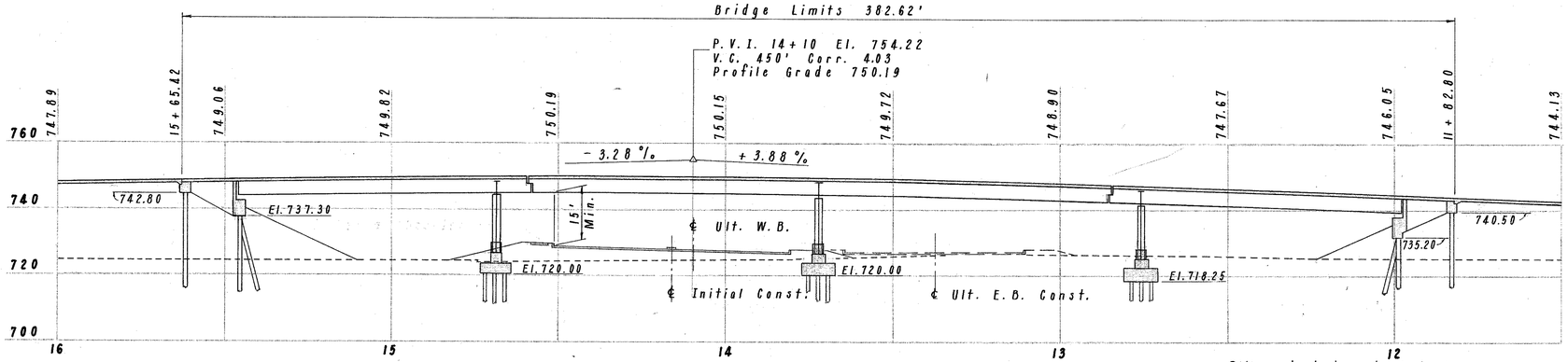
CURVE DATA

	Δ	Ls	Ts	Es	Dc	R
Whittier St.	44°40'	150'	243.98	35.66	4°00'	409.26
Initial Const.	14°20'	150'	255.18	11.93	4°00'	1432.39
Ult. W.B. Const.	14°20'	150'	315.20	15.53	3°00'	1909.86
Ult. E.B. Const.	14°20'	150'	315.20	15.53	3°00'	1909.86

PROPOSED STRUCTURE

Type: Continuous steel girder with reinf. conc. deck and abutments and steel piers.
Spans: 77.0', 96.0', 96.0', 77.0' along chords
Roadway: 28' f/f 2'-0" safety curbs with conc. parapet and aluminum railing.
Loading: C.F. 400
Wearing Surface: 2½" Asphaltic Conc.
Skew: 0°-00' with Whittier St. tangent.
Alignment: Tangent, spiral and 14°-00' curve.
Appr. Slabs: AS-1-54 (15' long)
Superelevation: Variable.

~ LEGEND ~
Initial Construction
Ultimate Construction
Existing Construction



PROFILE

NOTE: Piling at abutments to be 12", at Piers to be 14", C.I.P. Reinf. Conc. Piles. Estimated average length of piles is 60' at the North abutment, 56' at the South abutment and 53' at the piers.

NOTE:
Foundation Soundings:
Foundation design and foundation quantities are based on a study of borings 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.

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

SITE PLAN
BRIDGE Nº FRA-40R-1250
MOUND ST. EXPRESSWAY UNDER WHITTIER STREET
FRANKLIN COUNTY
SEC. FRA 40R 12.30 STA. 34+02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED DATE	REVISED
TLU	TLU		J.E.V.		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

77a
112

FRANKLIN COUNTY
FRA - 40R - 12.30

GENERAL NOTES

REFERENCES:

APPROACH SLAB DETAILS	AS-1-54 (12-1-54)
END FINISH AND END CROSS FRAME DETAILS	SHEET NO. 73
BEARING DETAILS	SHEET NO. 74
STANDARD DRAWINGS	
SUPPLEMENTAL SPECIFICATIONS	S-114, DATED 8-30-55, M-109.23 REV. 5-28-54
RAILING DETAILS	SHEET NO. 72

DESIGN SPECIFICATIONS:
THIS STRUCTURE CONFORMS TO THE REQUIREMENTS OF "DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES" OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, DATED 10-1-51, TOGETHER WITH REVISIONS, THEREOF DATED 7-15-52, 4-1-54, AND 2-1-55.

WELDED STEEL :
GIRDER WEBS AND FLANGES, PIER CAP WEBS AND FLANGES, COLUMNS AND COLUMN BASE PLATES SHALL CONFORM TO ASTM DESIGNATION A-373. ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO EITHER ASTM A-7 (AS PER SEC. M-7.4 (A) OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS) OR TO A-373.

GRAVEL — IF USED AS THE COARSE AGGHEGATE FOR CLASS 'C' CONCRETE SHALL BE ACCORDING TO SECTION M-3.93 INSTEAD OF M-3.91. GRAVEL MEETING THE REQUIREMENTS OF SECTION M-3.93 ALSO MAY BE USED FOR OTHER CONCRETE.

PILING — SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 30 TONS FOR THE ABUTMENTS AND 50 TONS FOR THE PIERS. THE LENGTH OF PENETRATION OF EVERY PILE SHALL BE AT LEAST 80% OF THE ESTIMATED AVERAGE PAY LENGTH OF THE PILES IN THE PERTINENT PIER OR ABUTMENT AS INDICATED ON THE PLANS UNLESS A LESSER PENETRATION IS APPROVED BY THE DIRECTOR.

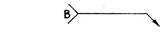
POROUS DRAINS — LOCATED AS SHOWN ON THE GENERAL PLAN SHALL EXTEND FROM FACE OF ABUTMENT TO 3 FEET BEYOND LAST SCUPPER. THEY SHALL BE 6 FEET WIDE AT THE LOW END TAPERING TO 4 FEET WIDE AT THE FACE OF ABUTMENT AND 1 FOOT THICK.

SURFACE FINISH OF CONCRETE:
PARAPET FACES, CURB FACES, FACIAS OF DECK SLAB AND EXPOSED SURFACES OF ABUTMENTS AND PIERS SHALL RECEIVE A RUBBED SURFACE FINISH. ALL OTHER EXPOSED SURFACES SHALL BE GOVERNED BY THE PROVISIONS OF ITEM S-1.

DECK CONSTRUCTION PROCEDURE:
THE DECK SLAB SHALL BE PLACED IN SECTIONS IN THE NUMERICAL ORDER AND THE DIRECTION INDICATED ON THE STEEL FRAMING PLAN.

REINFORCING STEEL:
ALL REINFORCING STEEL SHALL BE 2 INCHES CLEAR FROM THE SURFACE OF CONCRETE UNLESS OTHERWISE SHOWN. SPLICES SHALL NOT BE LESS THAN 30 TIMES THE BAR DIAMETER.

WELDING — OF STRUCTURAL STEEL SHALL BE CLASS 'A' EXCEPT AS OTHERWISE SHOWN. ANY WELDS SHOWN AS FIELD WELDS MAY, AT THE OPTION OF THE CONTRACTOR, BE MADE IN THE SHOP. CONTINUOUS MECHANICAL WELDS OF THE SUBMERGED ARC TYPE SHALL BE USED TO CONNECT FLANGES TO WEBS OF STRINGERS, PIER GIRDERS, AND COLUMNS. TYPE 'B' WELDS SHOWN THUS:



EXCAVATION QUANTITY INCLUDES THE REMOVAL OF FILL MATERIAL FROM FINISHED SLOPES TO BOTTOM OF ABUTMENT BEAMS, WINGWALLS, AND DIAPHRAMS.

PAINTING:
PAINT, BOTH SHOP AND FIELD, SHALL BE APPLIED BY BRUSHING. SPRAY APPLICATION WILL NOT BE PERMITTED.

PAVEMENT ELEVATIONS:
FOR PAVEMENT ELEVATION SEE SHEETS NO. 28 AND 29.

BRIDGE LIGHTING:
THIS CONTRACT INCLUDES FURNISHING AND INSTALLING OF LAMP STANDARDS, PULL BOXES, AND CONDUIT.

CONDUIT:
FIBER CONDUIT SHALL BE 3" FIBER TYPE SIMILAR TO ORANGEBURG FIBER CONDUIT, STANDARD TYPE 1, OR AN APPROVED EQUAL, WITH FIBER END BELLS AT PULL BOXES, ENDS OF SUPERSTRUCTURE AND FACES OF ABUTMENT BACKWALL. RIGID CONDUIT SHALL BE 2" METAL CONDUIT. THE COST OF BOTH FIBER AND RIGID CONDUIT INCLUDING END BELLS AND FITTINGS SHALL BE INCLUDED WITH THE LUMP SUM PRICE BID FOR ITEM S-25, BRIDGE LIGHTING, FOR PAYMENT.

LAMP STANDARD — SHALL BE UNION METAL MANUFACTURING COMPANY'S ROUND MONO-TUBE STEEL PENDENT ANCHOR BASE TYPE DESIGN NO. 404-CATALOG NO. H-300-E1 WITH HAND HOLE, OR APPROVED EQUAL. THE COST OF THE LAMP STANDARD BASE AND FITTINGS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM S-25, BRIDGE LIGHTING, FOR PAYMENT.

UTILITIES:
THE UTILITY COMPANY CONCERNED WILL PROVIDE ALL LABOR AND MATERIAL (INCLUDING EXPANSION SLEEVES IN ABUTMENTS) NECESSARY FOR THE INSTALLATION OF THE LINES AT THE POSITION SHOWN ON THE PLANS. HOWEVER, THE CONTRACTOR SHALL COOPERATE WITH THE UTILITY COMPANY IN THE MAKING OF THE INSTALLATION.

LAMP STANDARD PAINT:
THE FINISH PAINT SHALL BE ONE COAT OF PAINT MEETING THE REQUIREMENTS OF SUPPLEMENTAL SPECIFICATIONS M-109.23. COST OF PAINTING SHALL BE INCLUDED WITH ITEM S-25.

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

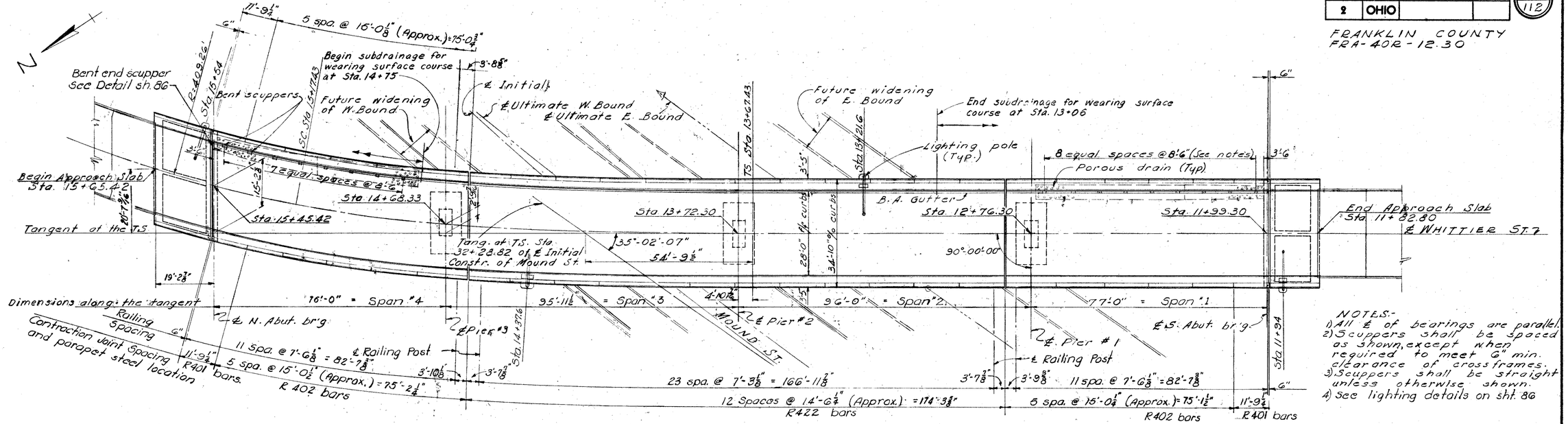
GENERAL NOTES
BRIDGE NO. FRA - 40R - 1250
MOUND ST. EXPRESSWAY UNDER WHITTIER ST.
FRANKLIN COUNTY
SEC. FRA - 40R - 12.30 STA. 34+02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
				W.E.B.	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

78
112

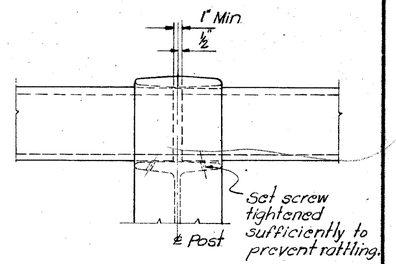
FRANKLIN COUNTY
FRA-40R-12.30



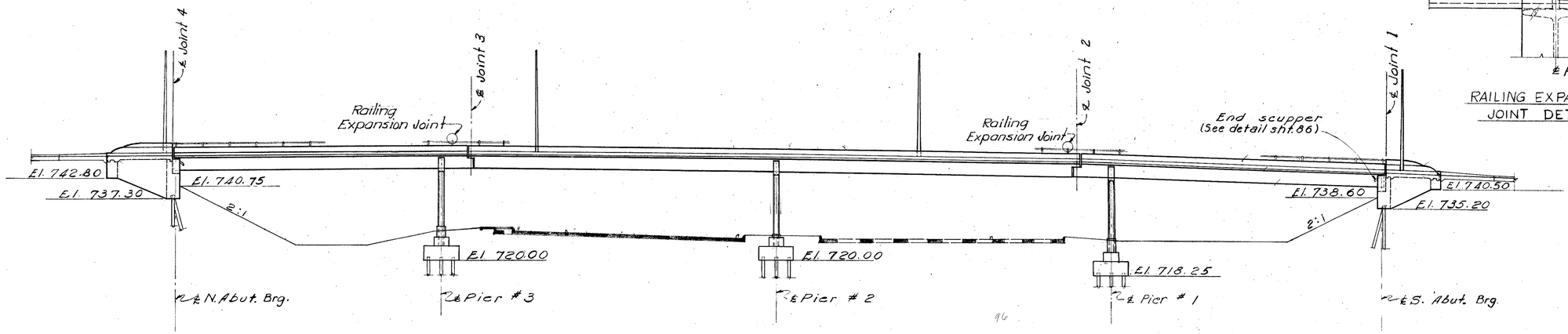
GENERAL PLAN

NOTES:-
1) All ℄ of bearings are parallel.
2) Scuppers shall be spaced as shown, except when required to meet 6" min. clearance of cross frames.
3) Scuppers shall be straight unless otherwise shown.
4) See lighting details on sht. 86

Note:
Contraction joint and Railing spacings are along edge of deck. Spacings on east side same as west except as shown.



RAILING EXPANSION JOINT DETAIL



GENERAL ELEVATION

96

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

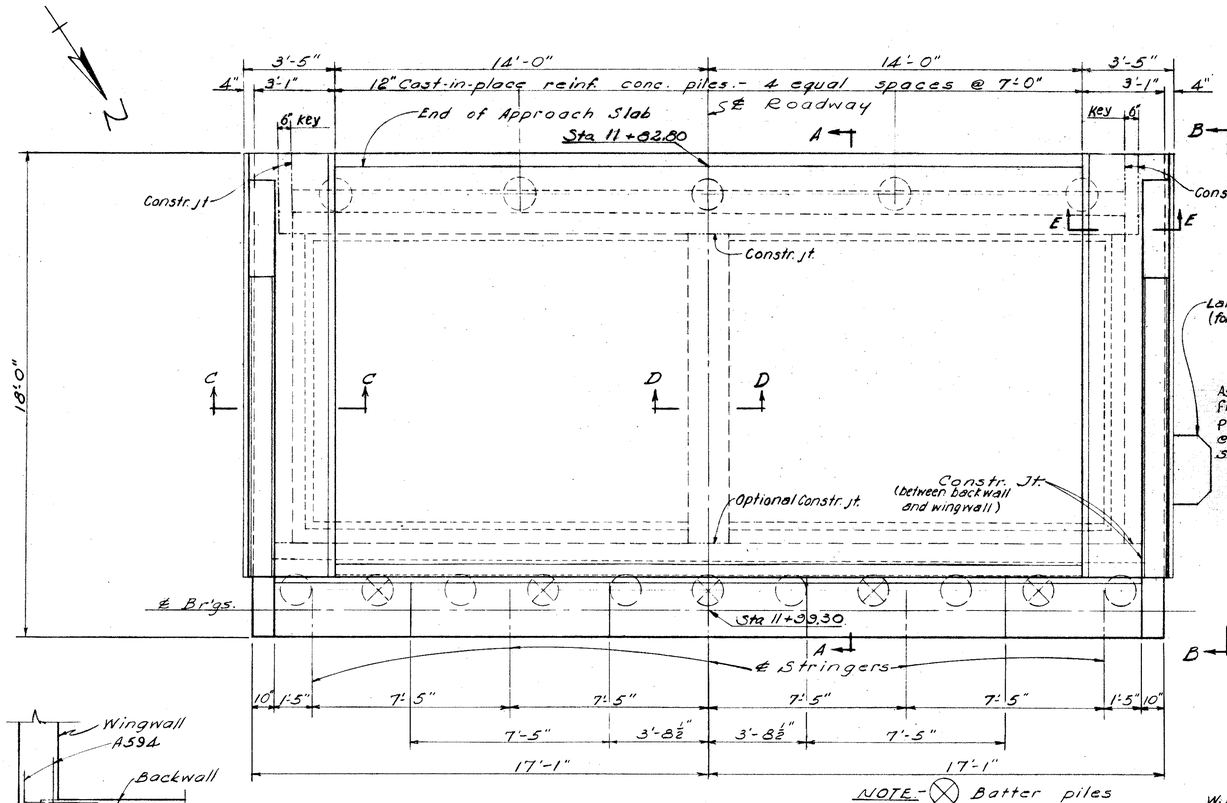
GENERAL PLAN & ELEVATION
BRIDGE N° FRA-40R-1250
MOUND ST. EXPRESSWAY UNDER WHITTIER STREET
FRANKLIN COUNTY
Sec. FRA-40R-12.30 Sta. 34+02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
COSIO	COSIO		RAC	FLU	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

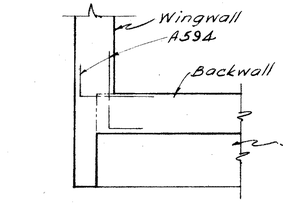
79
112

FRANKLIN COUNTY
FRA-40R-12.30

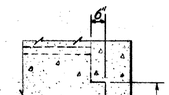


NOTE.- ⊗ Batter piles

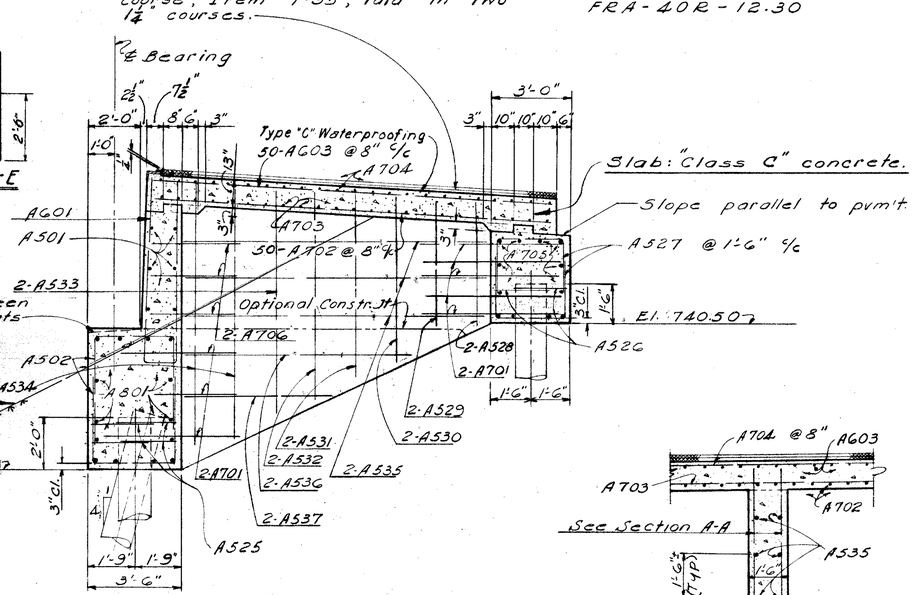
PLAN VIEW



DETAIL OF CORNER REINFORCEMENT

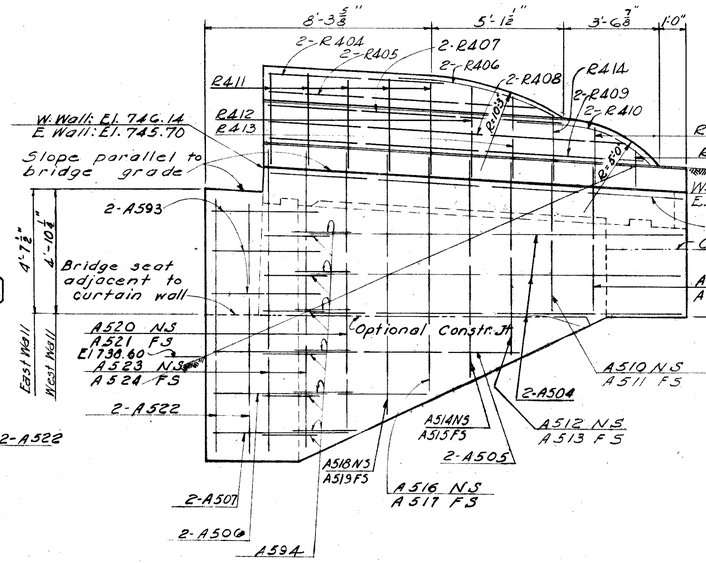


SECTION E-E
(Typical)

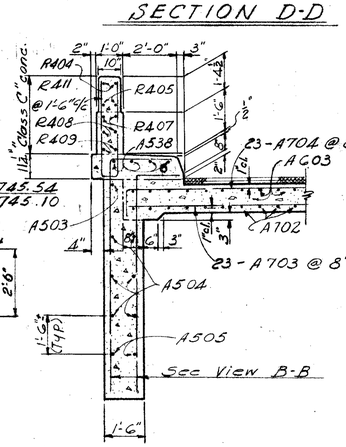


SECTION A-A

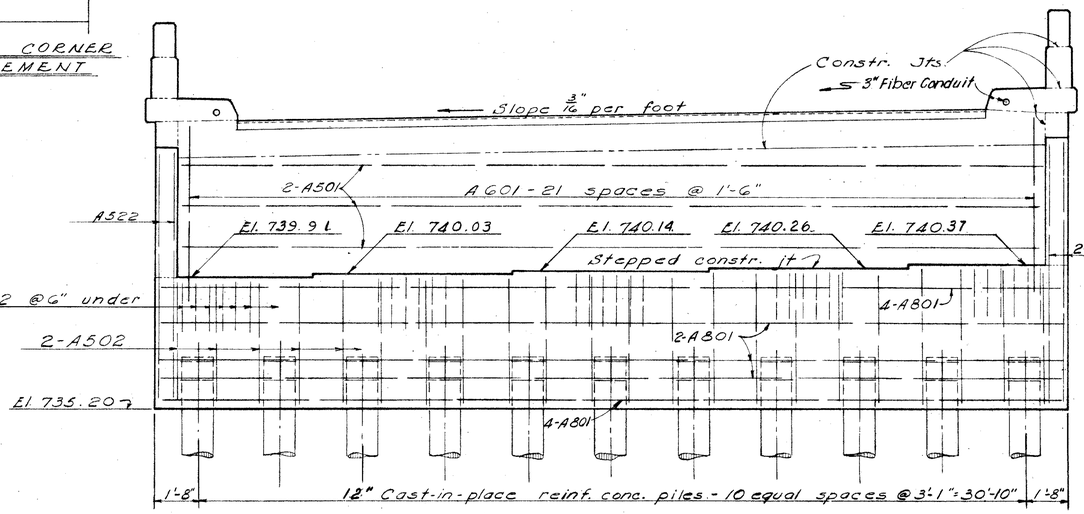
SECTION D-D



VIEW B-B



SECTION C-C



ELEVATION

Superseded by Sheet 79R Oct 26, 1956

NOTES.-

1) Reinforcing steel location.- NS indicates near side; FS indicates far side.
2) Embankment.- All earth fill around the abutment shall be made to subgrade elevation. Excavation shall then be made for the abutment crossbeams.
3) Backwall.- Concrete in backwall shall not be placed until after steel work is erected.
4) Concrete:- Shall be "Class E" unless otherwise noted.

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

SOUTH ABUTMENT DETAILS

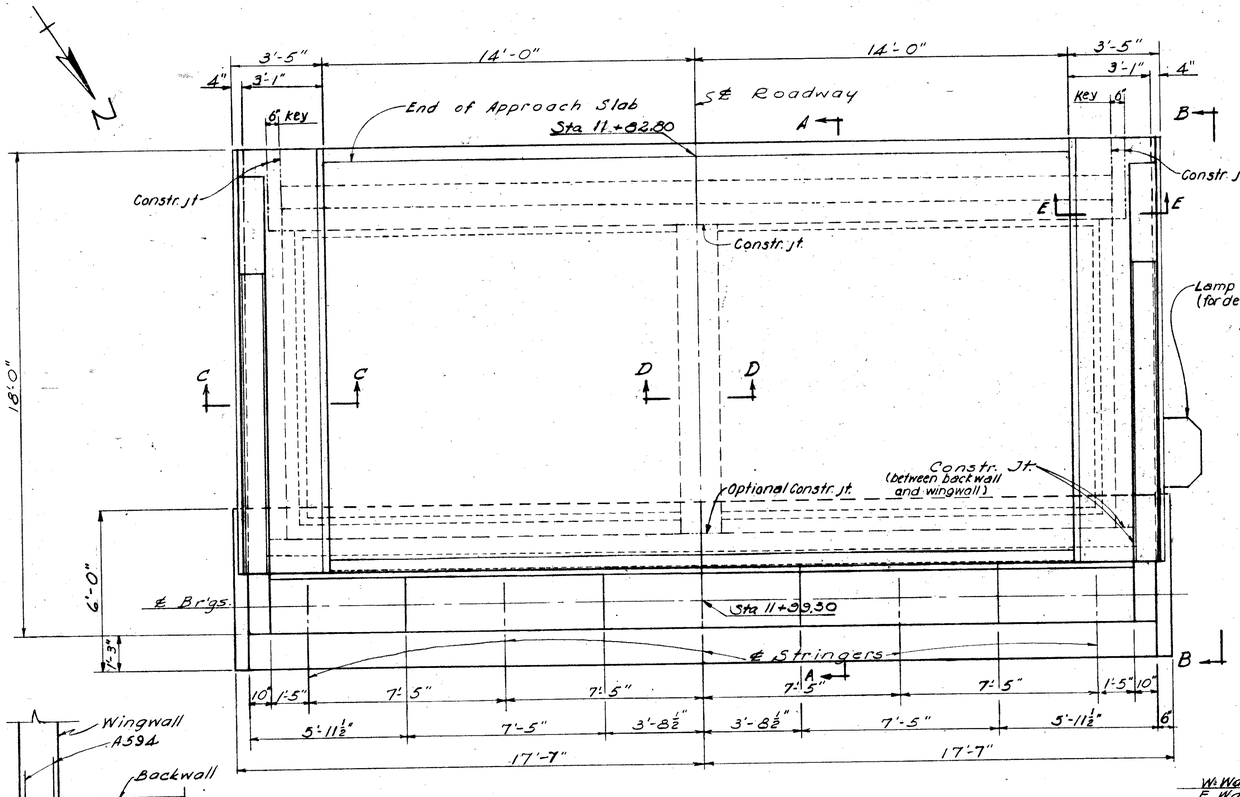
BRIDGE N° FRA-40R-1250
MOUND ST. EXPRESSWAY UNDER WHITTIER STREET
FRANKLIN COUNTY
Sec. FRA-40R-12.30 Sta 34+02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
COSIO	COSIO		RAC	TLU	4-3-56	

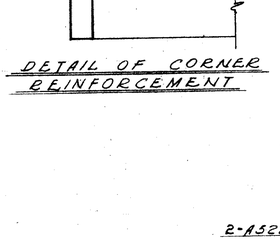
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

79R 112

FRANKLIN COUNTY
FRA-40R-12.30

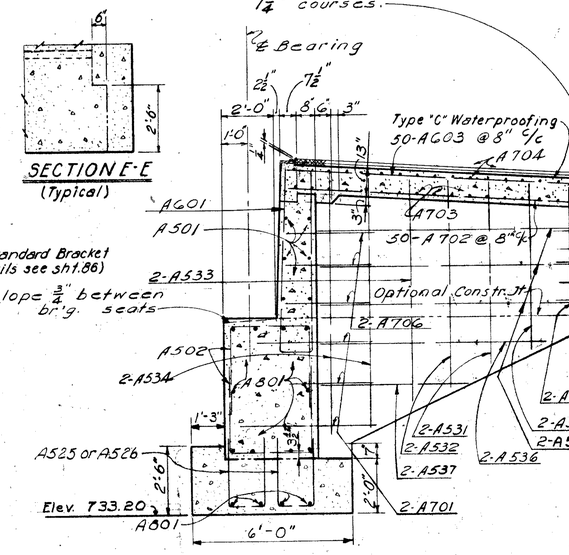


PLAN VIEW

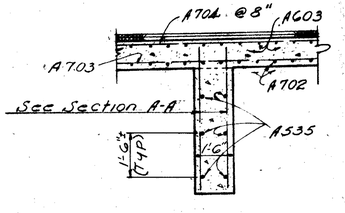


DETAIL OF CORNER REINFORCEMENT

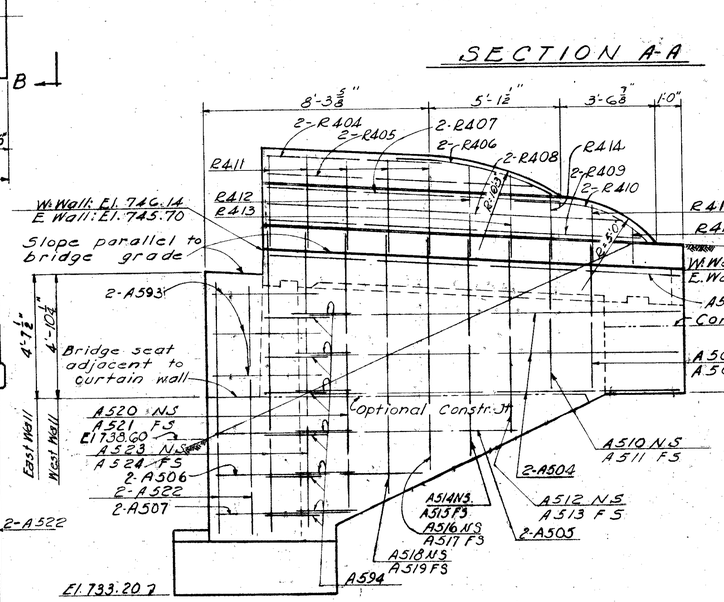
ELEVATION



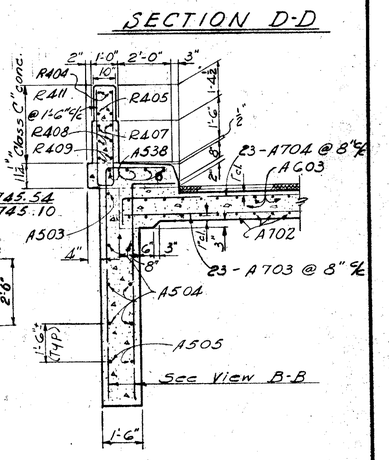
SECTION A-A



SECTION D-D



SECTION C-C



VIEW B-B

Supersedes Sheet 79 Oct. 26 1956

Revised 10-16-56

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

SOUTH ABUTMENT DETAILS

BRIDGE N° FRA-40R-1250
MOUND ST. EXPRESSWAY UNDER
WHITTIER STREET
FRANKLIN COUNTY

Sec. FRA-40R-12.30 Sta. 34+02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
COSIO	COSIO		RAC	TLU	4-3-56	

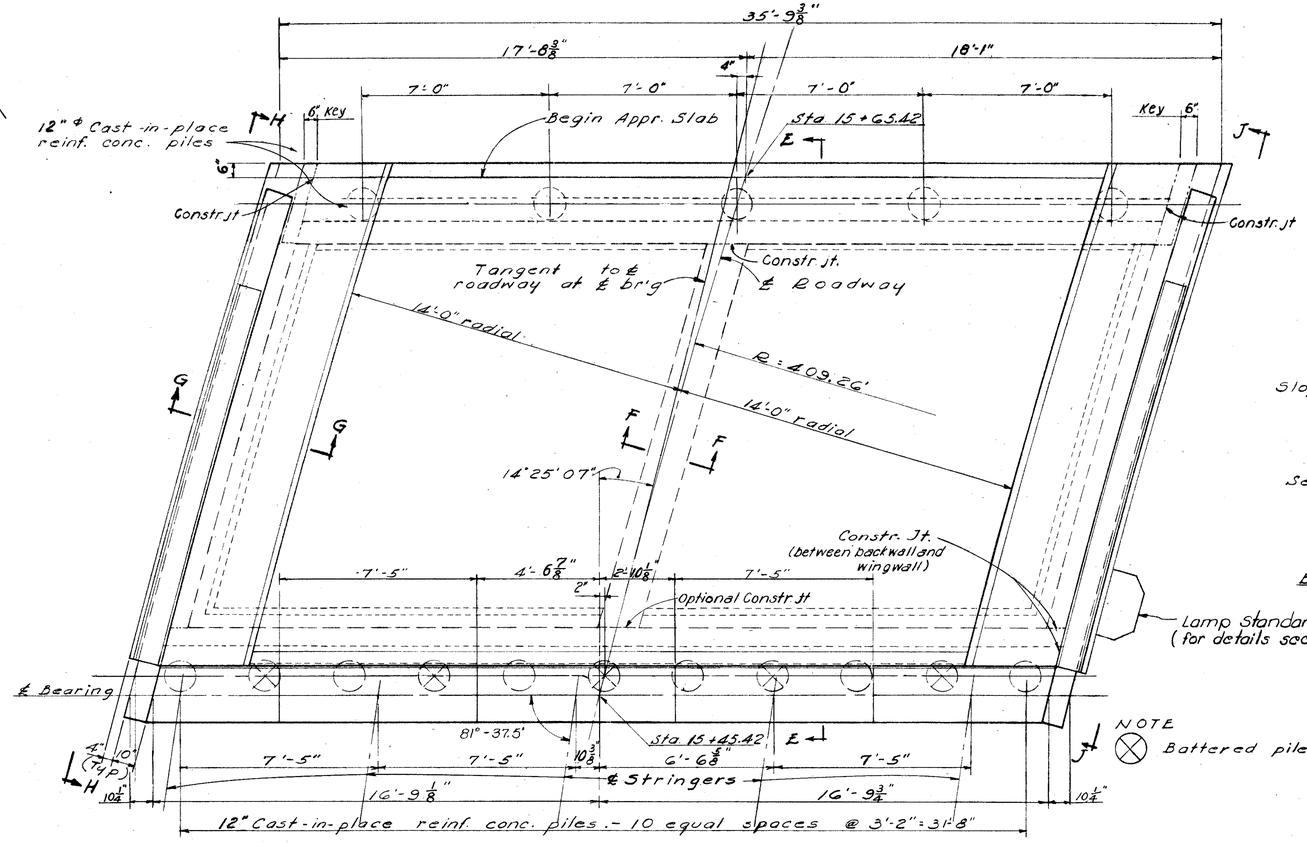
NOTES.-

1) Reinforcing steel location.- NS indicates near side; FS indicates far side.
2) Embankment.- All earth fill around the abutment shall be made to subgrade elevation. Excavation shall then be made for the abutment crossbeams.
3) Backwall.- Concrete in backwall shall not be placed until after steel work is erected.
4) Concrete:- Shall be "Class E" unless otherwise noted.

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

80
112

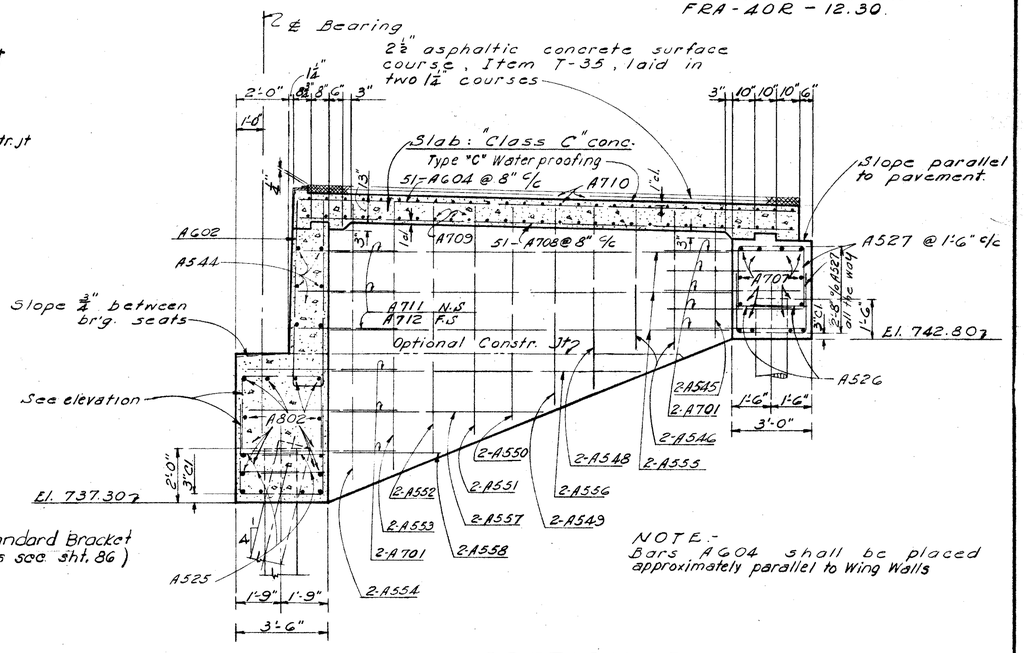
FRANKLIN COUNTY
FRA-40R-12.30



NOTE
⊗ Battered pile

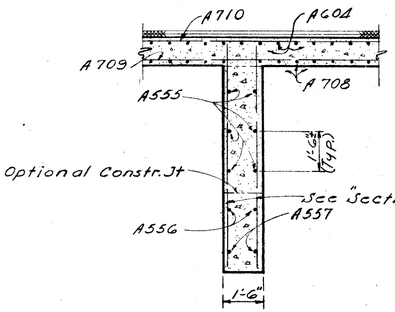
NOTE - See Section G-G & Views H-H & JJ on sht. 81

PLAN VIEW

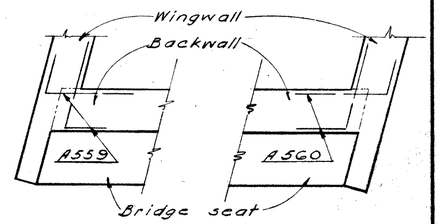


NOTE.- Bars AG04 shall be placed approximately parallel to Wing Walls

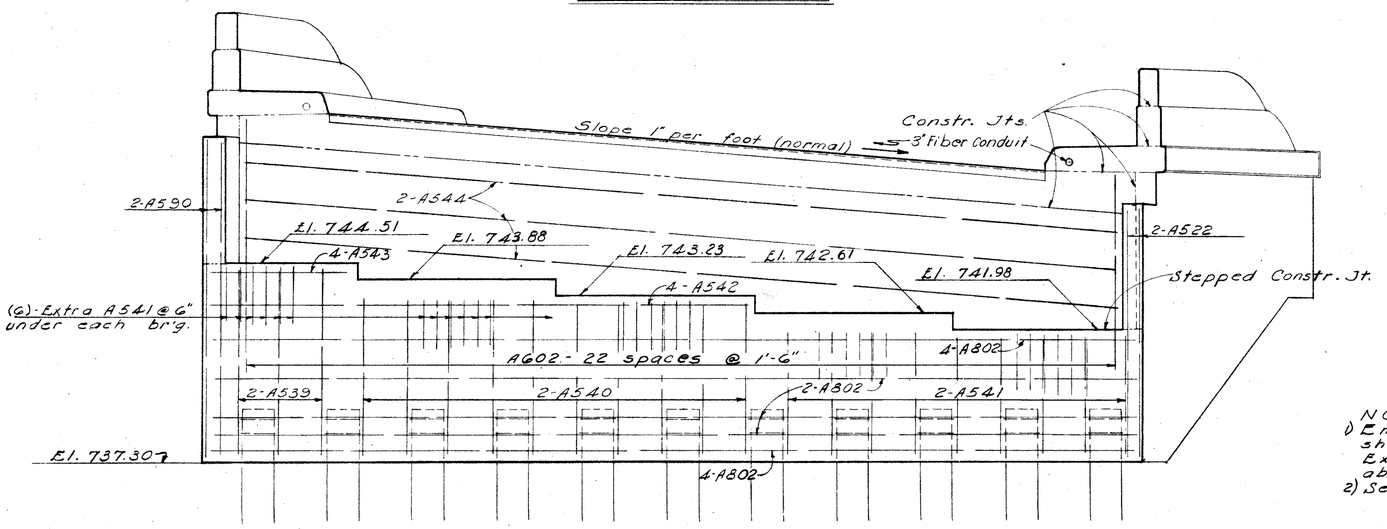
SECTION E-E



SECTION F-F



DETAIL OF CORNER REINFORCEMENT



ELEVATION

NOTES.-
1) Embankment.- All earth fill around the abutment shall be made to subgrade elevation. Excavation then shall be made for the abutment crossbeams
2) See notes 1), 3) & 4) of sht. 79

Superseded by Sheet 80R Oct. 26, 1956

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

NORTH ABUTMENT DETAILS

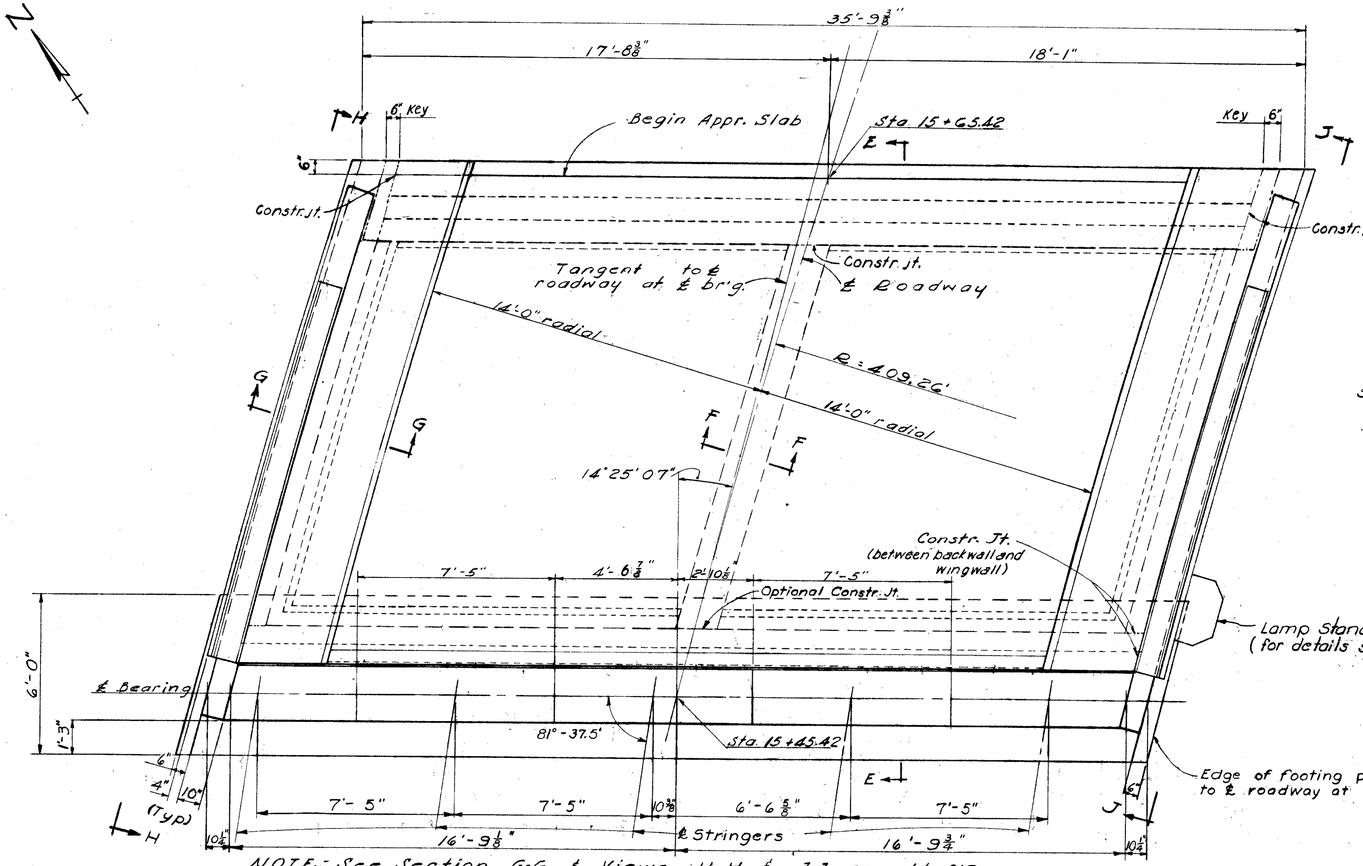
BRIDGE Nº FRA-40R-1250
MOUND ST. EXPRESSWAY UNDER
WHITTIER STREET
FRANKLIN COUNTY
Sec. FRA-40R-12.30 Sta. 34+02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
COSIO	COSIO		RAC	TLU	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

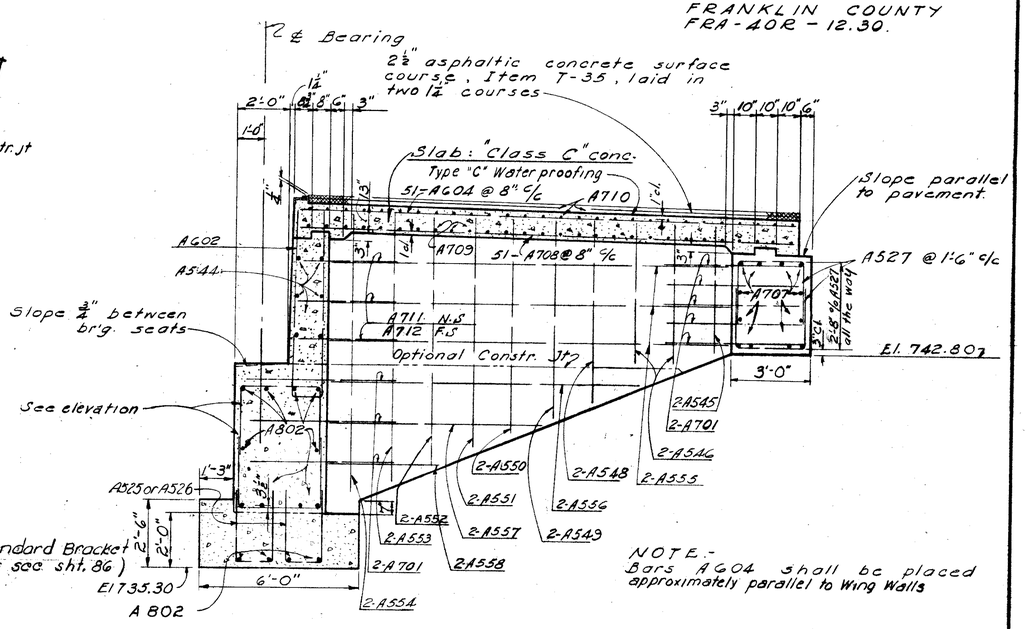
808 / 112

FRANKLIN COUNTY
FRA-40R-12.30.



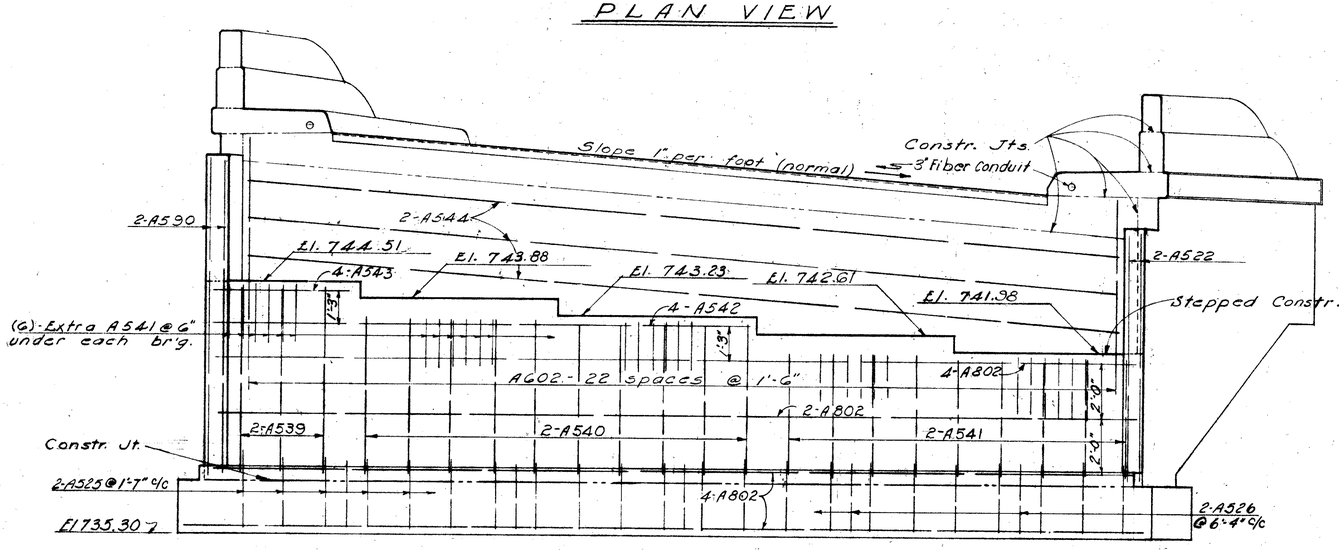
NOTE - See Section G-G & Views H-H & J-J on sht. 81R

PLAN VIEW

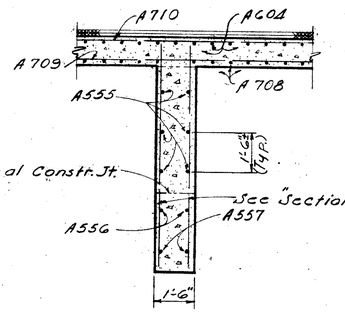


NOTE.-
Bars AG04 shall be placed approximately parallel to Wing Walls

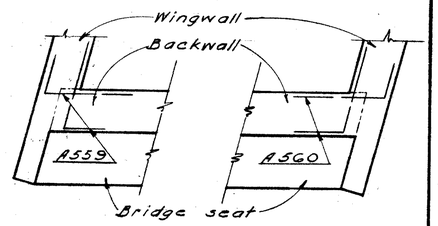
SECTION E-E



ELEVATION



SECTION F-F



DETAIL OF CORNER REINFORCEMENT

NOTES.-
1) Embankment.- All earth fill around the abutment shall be made to subgrade elevation. Excavation then shall be made for the abutment crossbeams.
2) See notes 1), 3) & 4) of sht. 79R

Revised 10-16-56

Supersedes Sheet 80 Oct 26 1956

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

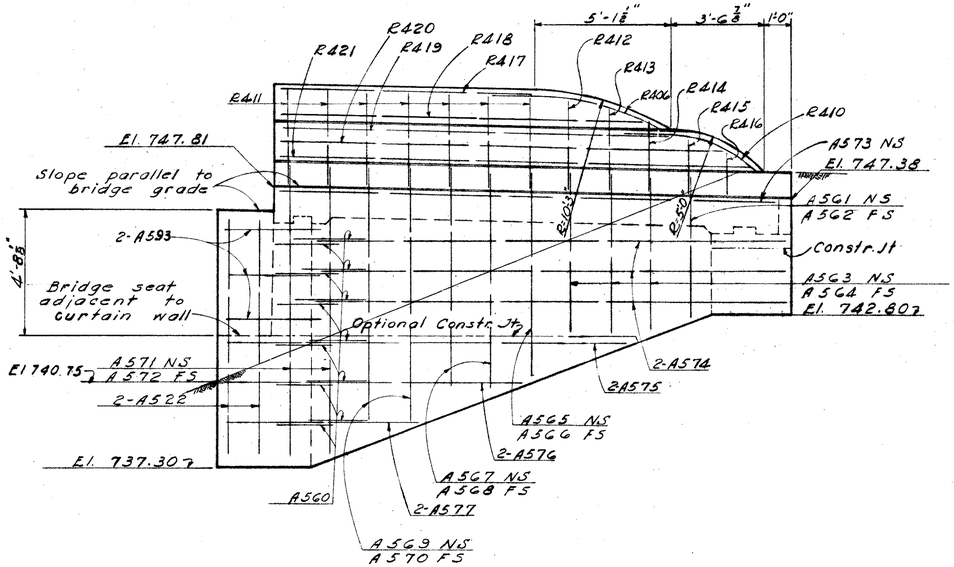
NORTH ABUTMENT DETAILS
BRIDGE N° FRA-40R-1250
MOUND ST. EXPRESSWAY UNDER
WHITTIER STREET
FRANKLIN COUNTY
Sec. FRA-40R-12.30 Sta. 34+02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
COSIO	COSIO		RAC	TLU	4-3-56	

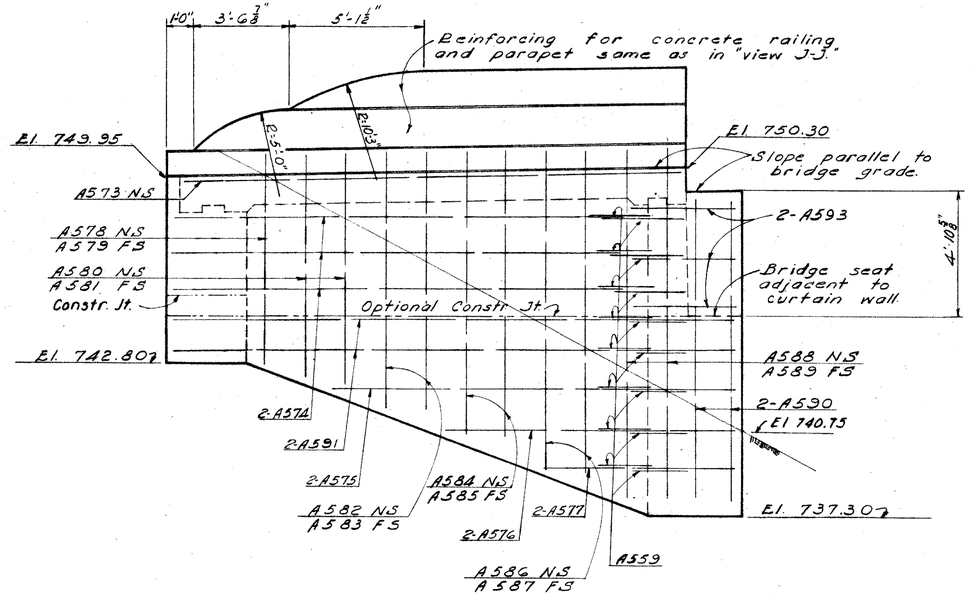
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

81
112

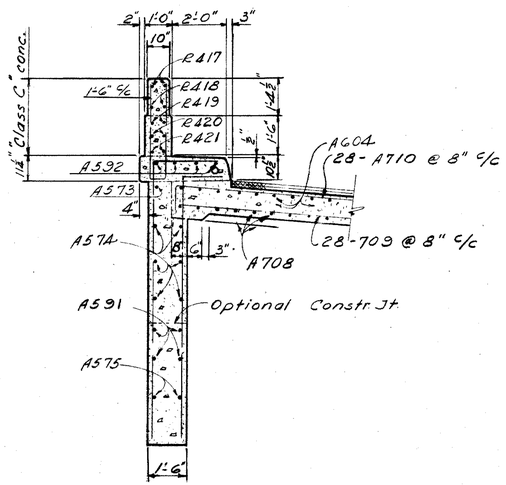
FRANKLIN COUNTY
FRA-40R-12.30



VIEW J-J
(EAST WINGWALL)



VIEW H-H
(WEST WINGWALL)



SECTION G-G

NOTES:-
See sht 80 for reference to section G-G and views H-H & J-J.
Reinforcing steel location:- N.S indicates "near side"; F.S. indicates "far side".-

Superseded by Sheet 81 R
Oct 26 1956

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

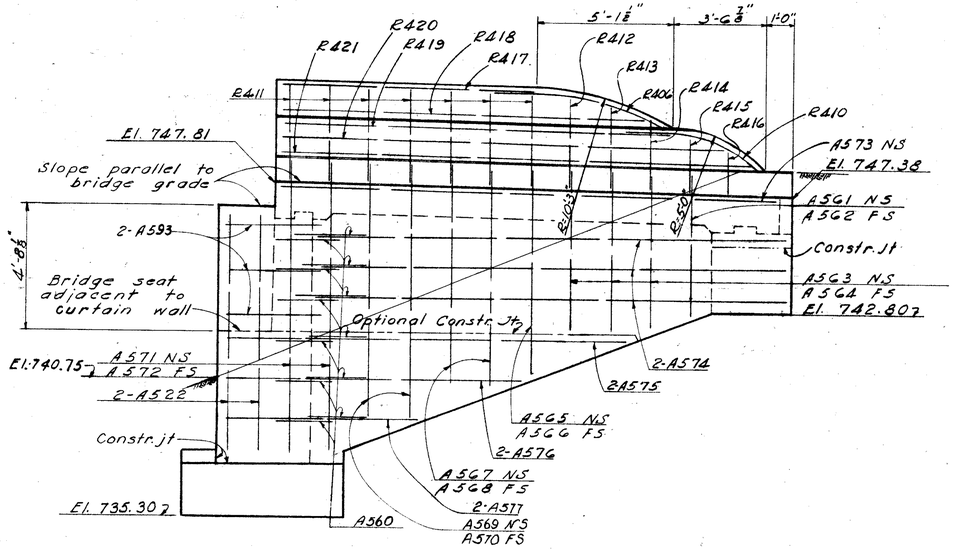
NORTH ABUTMENT DETAILS
BRIDGE N° FRA-40R-1250
MOUND ST EXPRESSWAY UNDER
WHITTIER STREET
FRANKLIN COUNTY
Sec. FRA-40R-12.30 Sta. 34+02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
CBSIO	COSIO		RAC	TLU	4-356	

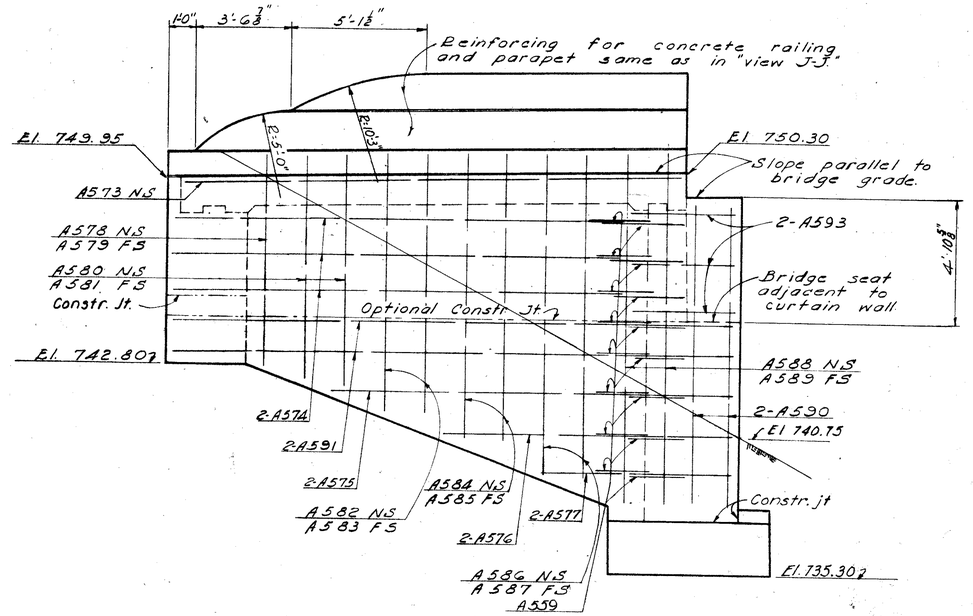
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

81E
112

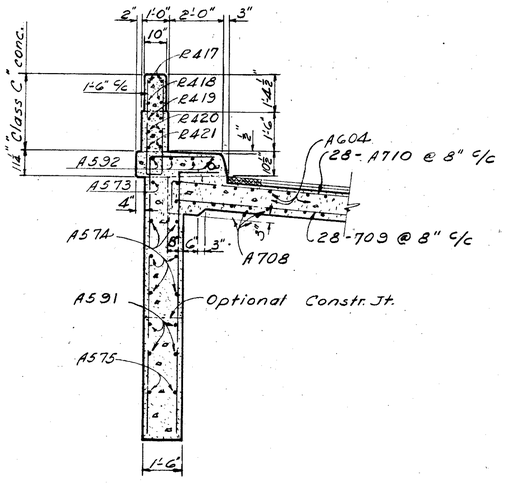
FRANKLIN COUNTY
FRA-40R-12.30



VIEW J-J
(EAST WINGWALL)



VIEW H-H
(WEST WINGWALL)



SECTION G-G

NOTES.-
See sht 80R. for reference to section G-G and views H-H & J-J.
Reinforcing steel location.- NS indicates "near side"; FS, indicates "far side".-

North and South Abutment Revisions to Estimated Quantities				
Estimated Quantities Additions or Deductions				
Item	Total Add	Total Deduct	Unit	Description
E-2	45		C.Y.	Excavation for Structures - Unclassified
S-1	33		C.Y.	Class "E" Concrete Abutments
S-18		1856	L.F.	12" Cast-in-place Reinforced Concrete Piles.

Revised 10-16-56

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

NORTH ABUTMENT DETAILS
BRIDGE Nº FRA-40R-1250
MOUND ST EXPRESSWAY UNDER
WHITTIER STREET
FRANKLIN COUNTY
Sec. FRA-40R-12.30 Sta. 34+02

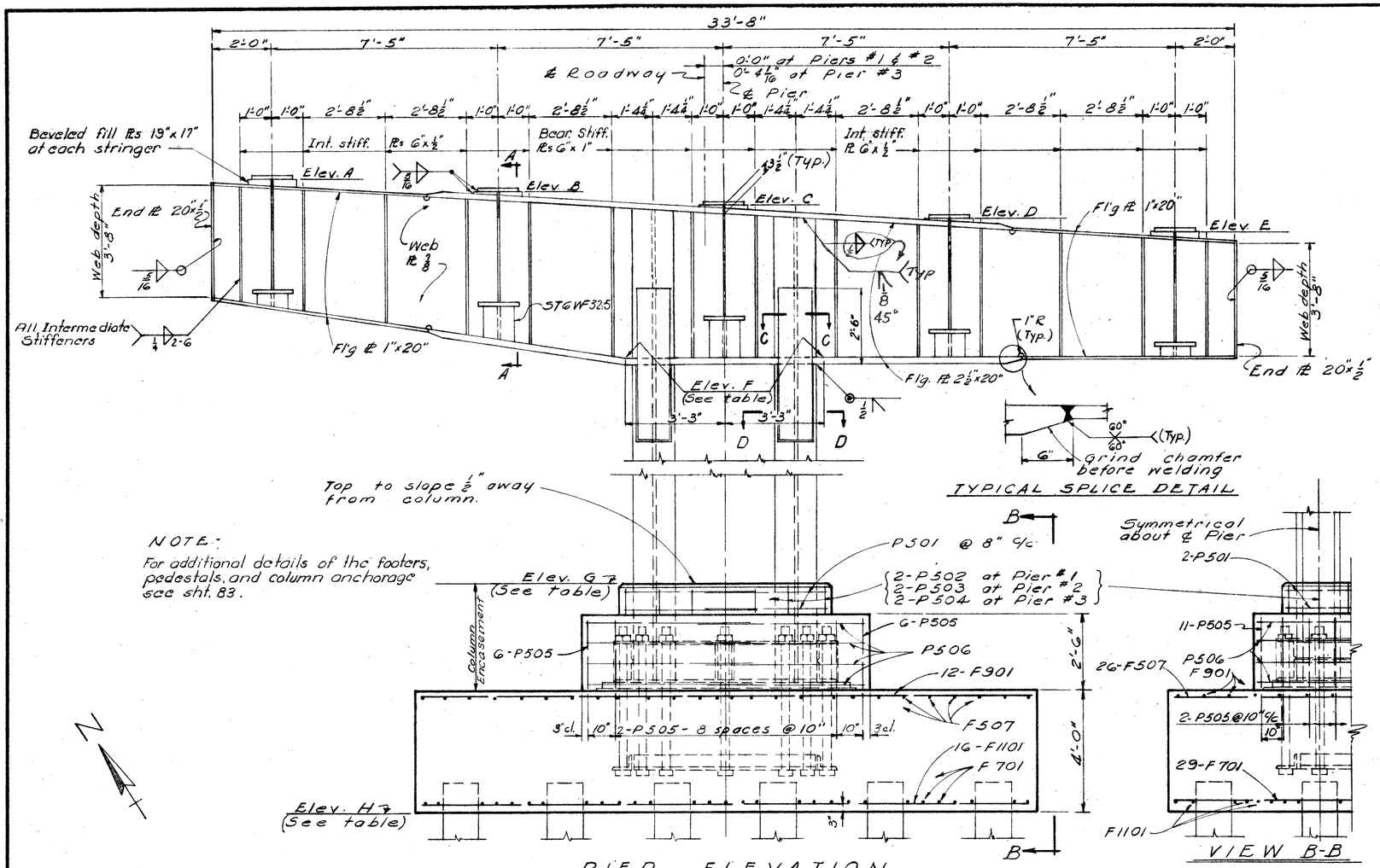
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
COSIO	COSIO		RAC	TLU	4-356	

Supersedes Sheet 81
Oct 26 1956

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

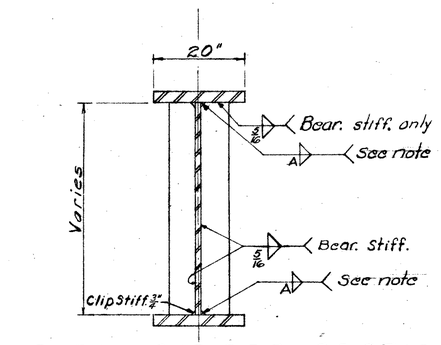
82/112

FRANKLIN COUNTY
FRA-40R-12.30



PIER ELEVATION

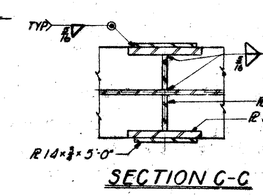
VIEW B-B



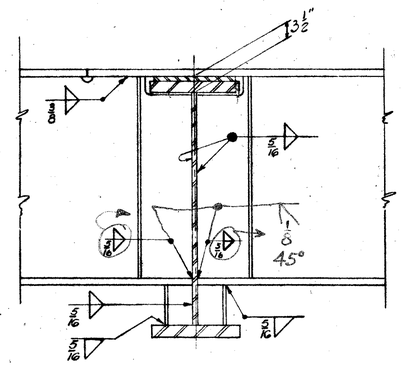
PIER GIRDER SECTION

Note: A = 1/2" for 2 1/2" flange Pls
A = 5/16" for 1" flange Pls

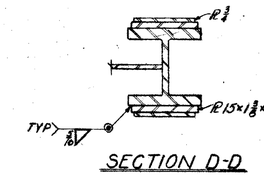
Continuous mechanical weld of submerged arc type shall be used to connect flanges to webs of pier girders and columns.



SECTION C-C

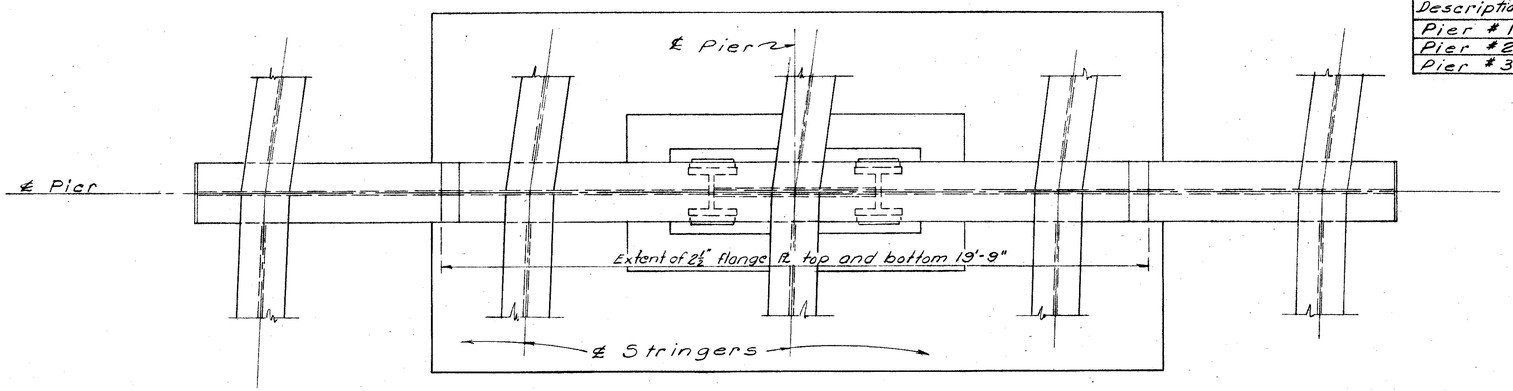


SECTION A-A

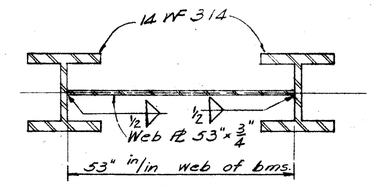


SECTION D-D

ELEVATIONS TABLE								
Description	Elev. A	Elev. B	Elev. C	Elev. D	Elev. E	Elev. F	Elev. G	Elev. H
Pier #1	747.60	747.49	747.37	747.25	747.14	742.38	727.25	718.25
Pier #2	749.23	749.10	748.97	748.84	748.7	743.98	728.00	720.00
Pier #3	749.91	749.45	748.99	748.54	748.08	744.09	730.50	720.00



PIER PLAN



COLUMN SECTION

For Revised Pier #3 Footing See Sheet 82A, Oct. 26, 1956

Rev. July 5, 1956

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

PIER DETAILS

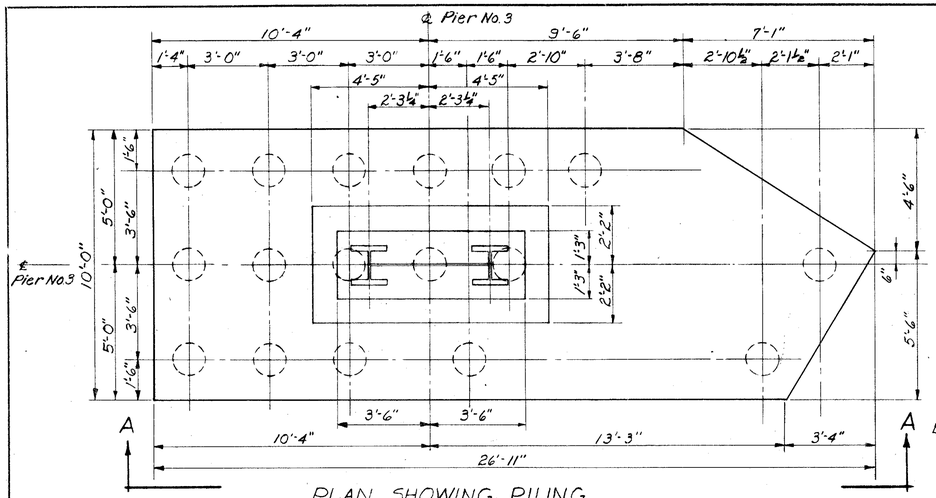
BRIDGE Nº FRA-40R-1250
MOUND ST. EXPRESSWAY UNDER WHITTIER STREET
FRANKLIN COUNTY
Sec. FRA-40R-12.30 Sta 34+02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
COSIO	COSIO		RAC	TLU	~~4-3-56~~	

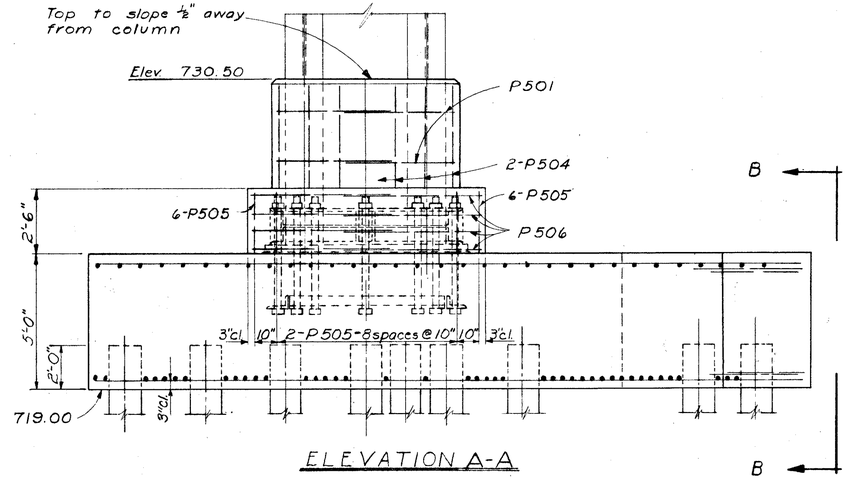
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

82A 112

FRANKLIN COUNTY
FRA-40R-12.30



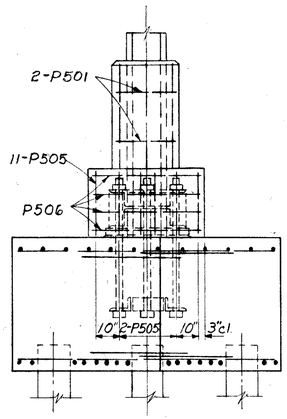
PLAN SHOWING PILING



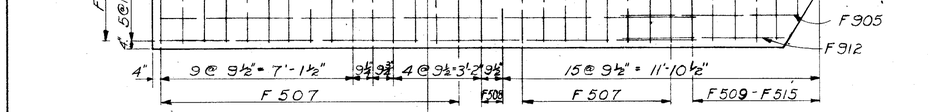
ELEVATION A-A

ORIGINAL PIER #3 FOOTING
REINFORCING STEEL LIST

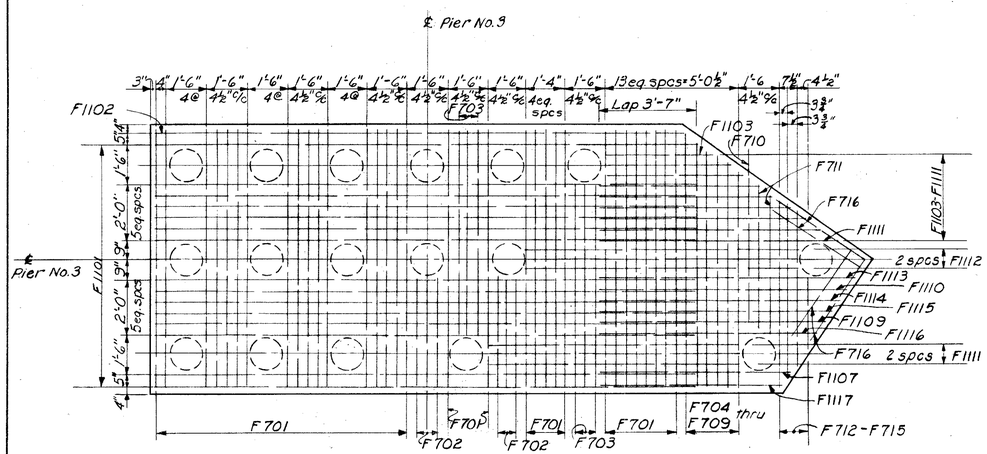
Mark	Nº	Length	Weight		Shp.
F 507	26	9-8	262		st.
F 701	29	9-8	573		st.
F 901	12	20-2	823		st.
F1101	16	20-2	1714		st.



ELEVATION B-B



PLAN SHOWING TOP REINFORCING



PLAN SHOWING BOTTOM REINFORCING

Estimated Quantities Additions or Deductions				
Item	Total Add	Total Deduct	Unit	Description
E-2	18		C.Y.	Excavation for Structure, Unclassified
S-1	15		C.Y.	Class "E" Concrete, Pier Footing
S-4	1736		LBS.	Reinforcing Steel
S-18		53	L.F.	14" Cast-in-place Reinforced Concrete Piles

REVISED PIER #3 FOOTING
REINFORCING STEEL LIST

Mark	Nº	Length	Weight		Shp.
F 507	23	9-8	232		st
F 508	4	3-6	15		st
F 509	1	9-6	10		st
F 510	1	9-0	9		st
F 511	1	8-5	9		st
F 512	1	7-11	8		st
F 513	1	7-5	8		st
F 514	1	6-0	6		st
F 515	5	4-0	21		st
F 701	32	9-8	632		st
F 702	6	4-0	49		st
F 703	6	7-6	92		st
F 704	1	9-6	19		st
F 705	1	9-3	19		st
F 706	1	9-0	18		st
F 707	1	8-9	18		st
F 708	1	8-6	17		st
F 709	1	8-3	17		st
F 710	1	6-0	12		st
F 711	2	5-6	22		st
F 712	1	7-3	15		st
F 713	1	6-6	13		st
F 714	1	5-9	12		st
F 715	1	2-9	6		st
F 716	4	4-0	33		st
F 901	11	20-2	754		st
F 902	1	19 11	68		st
F 903	1	4-0	14		st
F 904	1	5-4	18		st
F 905	2	6-8	45		st
F 906	1	8-0	27		st
F 907	1	9-2	31		st
F 908	1	8-8	29		st
F 909	1	8-4	28		st
F 910	1	7-7	26		st
F 911	1	7-2	24		st
F 912	1	6-2	21		st
F1101	15	20-2	1607		st
F1102	1	19-11	106		st
F1103	1	4-6	24		st
F1104	1	5-0	27		st
F1105	1	5-9	31		st
F1106	1	6-3	33		st
F1107	2	7-0	74		st
F1108	1	7-9	41		st
F1109	2	8-3	88		st
F1110	2	9-0	96		st
F1111	4	9-6	202		st
F1112	3	10-3	163		st
F1113	1	9-3	49		st
F1114	1	8-9	46		st
F1115	1	8-6	45		st
F1116	1	8-0	43		st
F1117	1	6-9	36		st

Supersedes Pier #3 Footing on Sheet 82 and 83 October 26 1956

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

REVISED FOOTING PIER #3
BRIDGE Nº FRA-40R-1250
MOUND ST. EXPRESSWAY UNDER
WHITTIER STREET
FRANKLIN COUNTY
Sec. FRA-40R-12.30 Sta. 34+02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
RAC	K.E.A.		JBE	TLV		

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

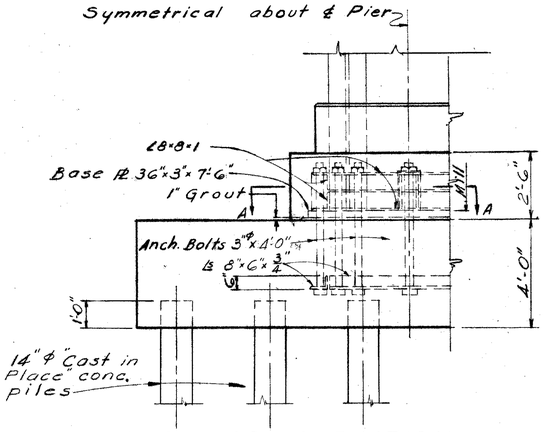
83/112

FRANKLIN COUNTY
FRA-40R-12.30

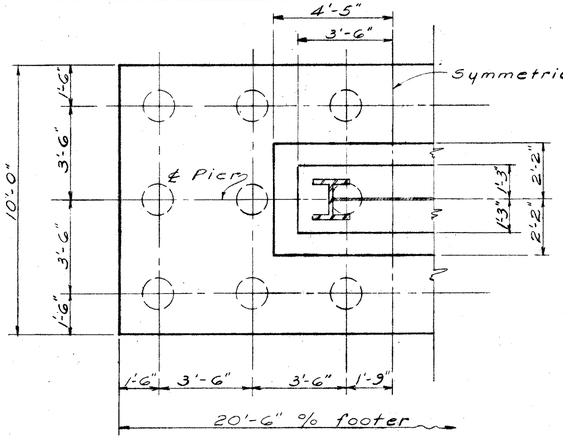
DEFLECTION AND CAMBER

LOCATION	SPAN #1		SPAN #2 & #3		JOINT #2 & #3		SPAN #4		
	INT.	EXT.	INT.	EXT.	INT.	EXT.	INT.	EAST EXT.	WEST EXT.
Deflection due to weight of steel	$\frac{1}{8}$"	$\frac{1}{8}$"	$\frac{1}{8}$"	$\frac{1}{8}$"	$-\frac{1}{16}$"	$-\frac{1}{16}$"	$\frac{1}{8}$"	$\frac{1}{8}$"	$\frac{1}{8}$"
Deflection due to remaining dead load	$\frac{11}{16}$"	1"	$\frac{11}{16}$"	$\frac{15}{16}$"	$-\frac{1}{4}$"	$-\frac{3}{8}$"	$\frac{11}{16}$"	$\frac{3}{8}$"	$1\frac{1}{16}$"
Convexity required for vertical curve.	$1\frac{7}{16}$"	$1\frac{7}{16}$"	$1\frac{3}{4}$"	$1\frac{3}{4}$"	$+\frac{1}{32}$"	$+\frac{1}{32}$"	$1\frac{7}{16}$"	$1\frac{7}{16}$"	$1\frac{7}{16}$"
Total	$2\frac{1}{4}$"	$2\frac{5}{8}$"	$2\frac{1}{2}$"	$2\frac{3}{4}$"	$-\frac{5}{16}$"	$-\frac{7}{16}$"	$2\frac{1}{4}$"	$2\frac{3}{8}$"	$2\frac{5}{8}$"
Shop Camber Required	$2\frac{1}{4}$"	$2\frac{5}{8}$"	$2\frac{1}{2}$"	$2\frac{3}{4}$"	0	0	$2\frac{1}{4}$"	$2\frac{3}{8}$"	$2\frac{5}{8}$"

Note:
Camber shown for spans 1, 2, 3, & 4 required at web splices.

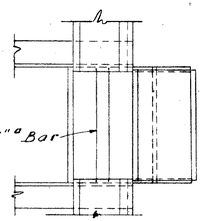


PIER FOOTER ELEVATION

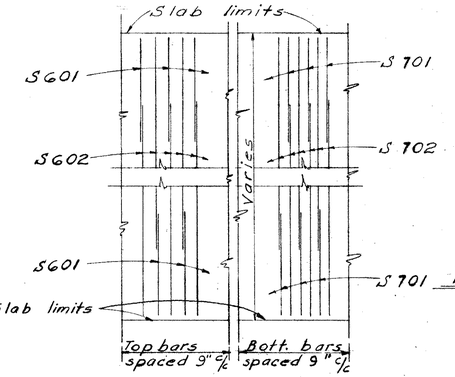


PIER FOOTER PLAN

NOTE.-
For gutter and support angle details not shown see sht. 86



PLAN



All transverse bars to be placed parallel to ℄ of piers

DETAIL OF TRANSVERSE BARS IN THE DECK

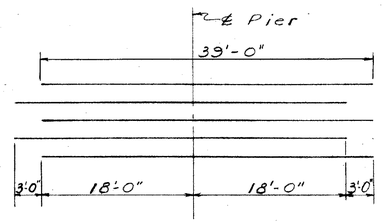
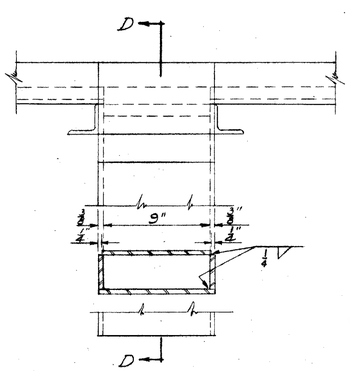
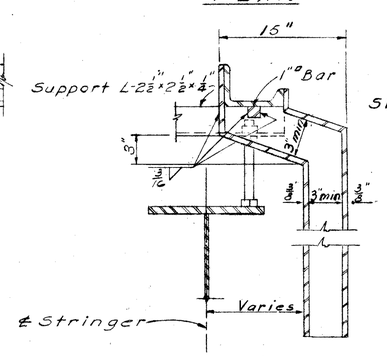


DIAGRAM SHOWING STAGGER OF S502 BARS

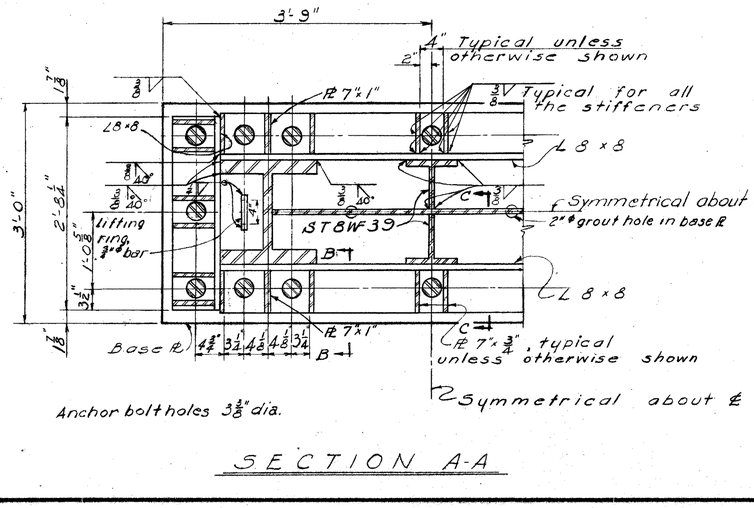


ELEVATION

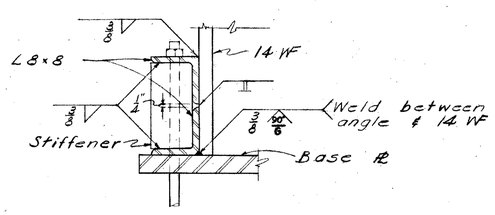


SECTION D-D

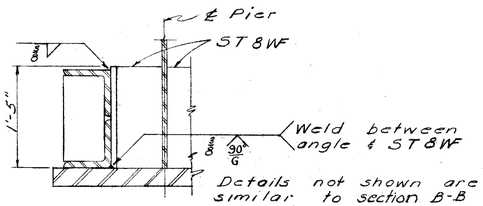
BENT SCUPPER DETAILS



SECTION A-A



SECTION B-B



SECTION C-C

For Revised Pier #3 Footing
See Sheet B2A, Oct 26, 1956

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

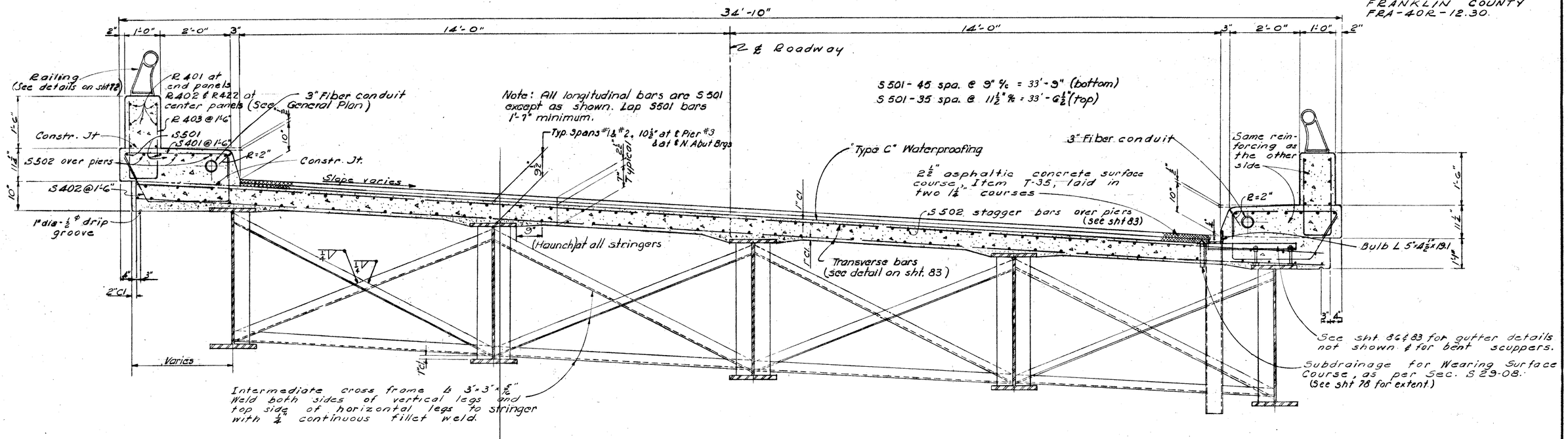
DETAILS
BRIDGE N° FRA-40R-1250
MOUND ST EXPRESSWAY UNDER
WHITTIER STREET
FRANKLIN COUNTY
Sec. FRA-40R-12.30 Sta 34+02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
COS10	COS10		RAC	TLO	4-3-56	

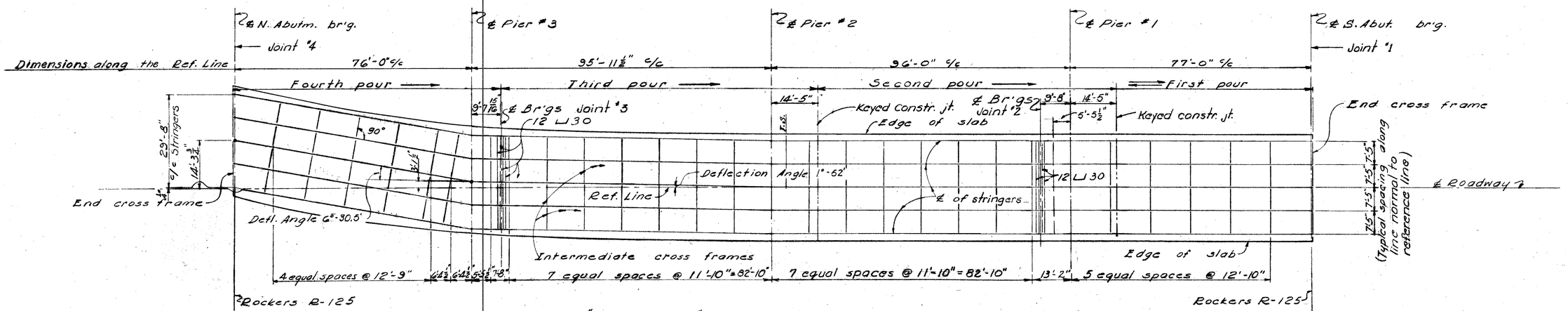
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

84/112

FRANKLIN COUNTY
FRA-40R-12.30.



TRANSVERSE SECTION



NOTES:- The "reference line" is the extended tangent to ℄ Roadway at the T.S.
Deflection angles shown are for ℄ of stringers
For stringer details see shts. 83, 85 & 85a.

FRAMING PLAN & CONCRETE POURING SEQUENCE

Note:
For details of joints 1 & 4 see sht. 73
For details of joints 2 & 3 see sht. 85a.

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

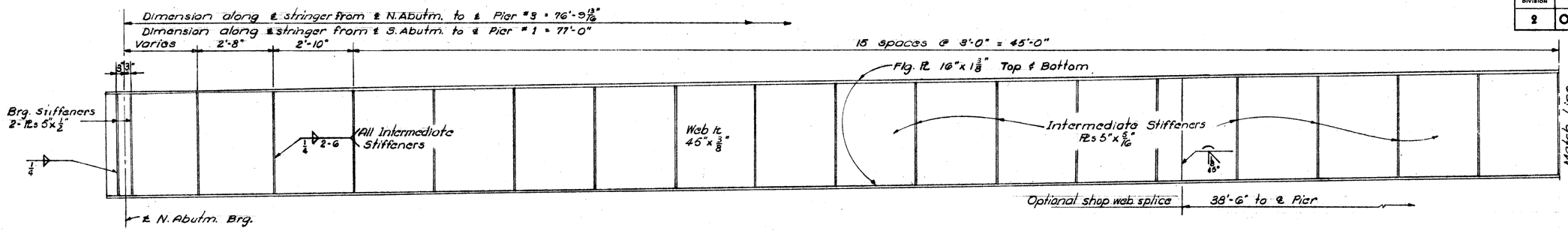
SUPERSTRUCTURE DETAILS
BRIDGE N° FRA-40R-1250
MOUND ST EXPRESSWAY UNDER
WHITTIER STREET
FRANKLIN COUNTY
Sect. FRA-40R-12.30 Sta 34+02.

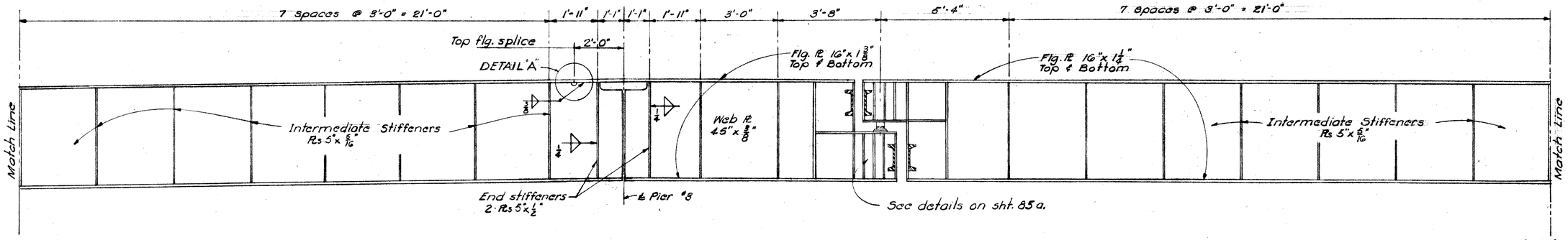
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
COSIO	COSIO		RAC	TLU	4-9-56	

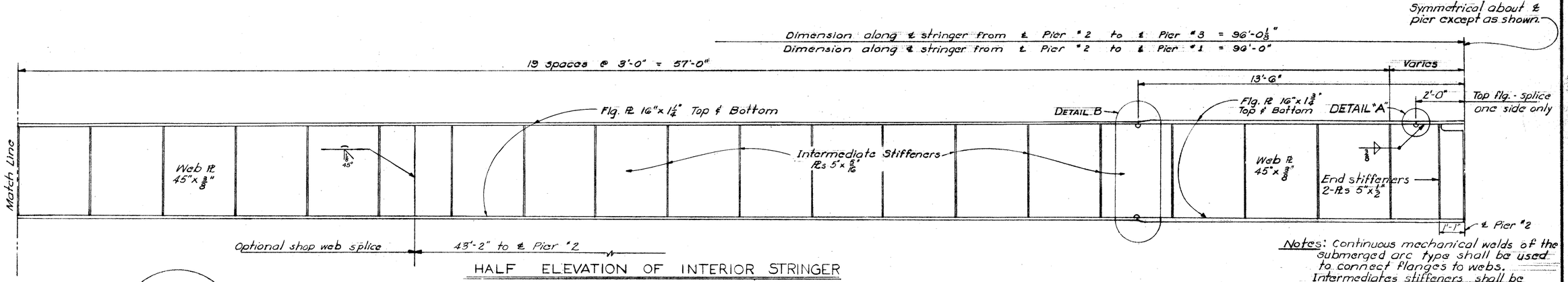
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

85
112

FRANKLIN COUNTY
FRA-40R-12.30

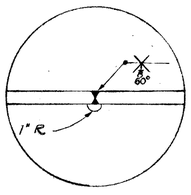




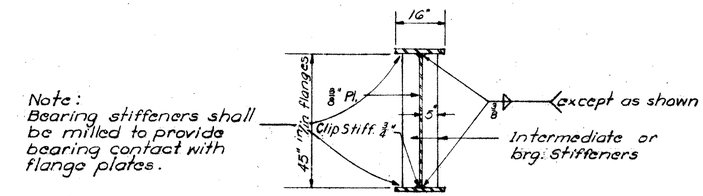


HALF ELEVATION OF INTERIOR STRINGER

Notes: Continuous mechanical welds of the submerged arc type shall be used to connect flanges to webs.
Intermediates stiffeners shall be omitted from fascia side of exterior stringers
See details of connection between stringers and piers on sht. 82.
See the table of deflection & camber on sht. 83.

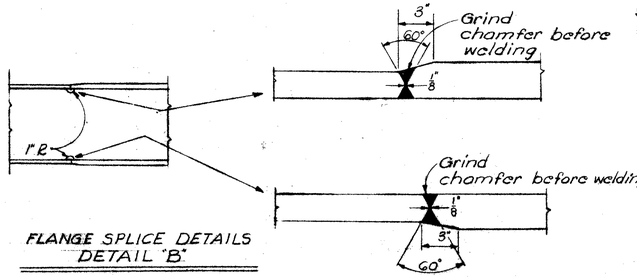


FLANGE SPLICE DETAIL
DETAIL "A"



Note:
Bearing stiffeners shall be milled to provide bearing contact with flange plates.

TYPICAL SECTION THRU STRINGER



FLANGE SPLICE DETAILS
DETAIL "B"

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

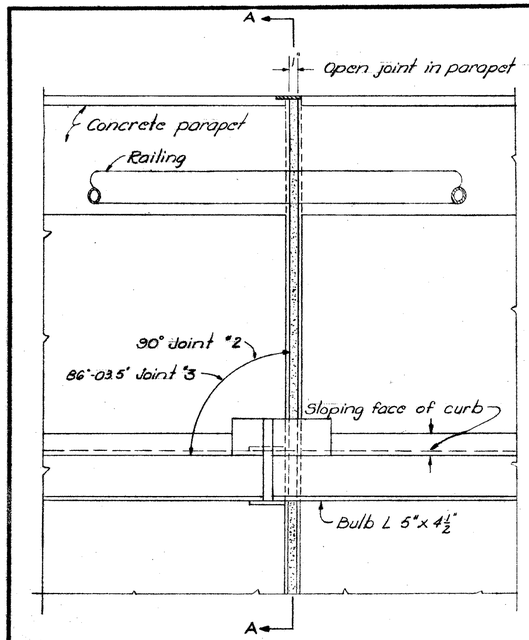
STRINGER DETAILS

BRIDGE NO. FRA-40R-1250
MOUND ST. EXPRESSWAY
UNDER WHITTIER ST.
FRANKLIN COUNTY
Sec. FRA.-40R-12.30 STA. 34+02

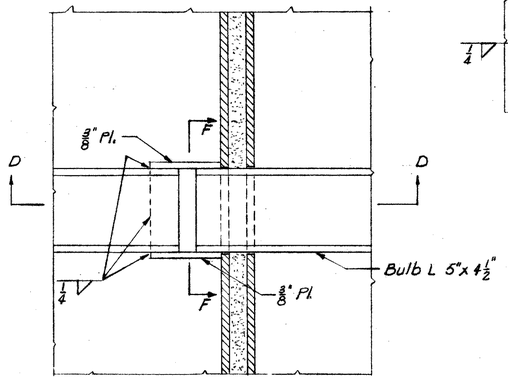
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
COSIO	E.D.A.		RAC	TAU	4-5-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

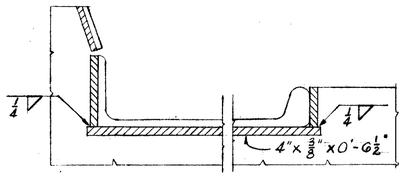
85a / 112



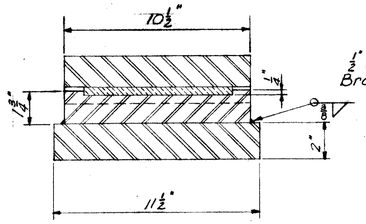
PART PLAN



SECTION E-E

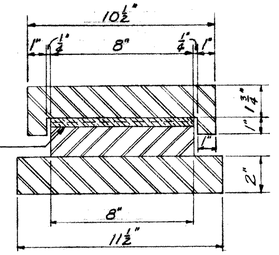


SECTION F-F

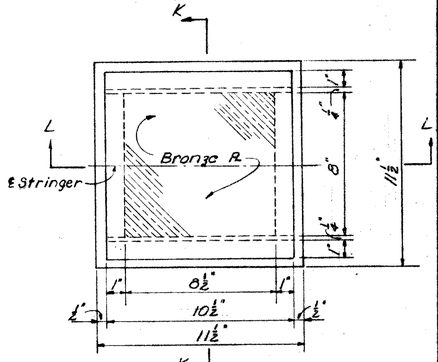


SECTION L-L

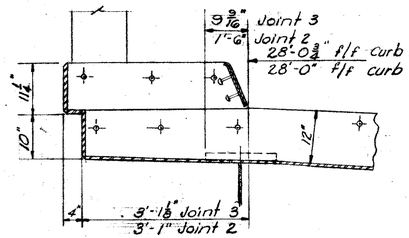
½" cast leaded Bronze Plate



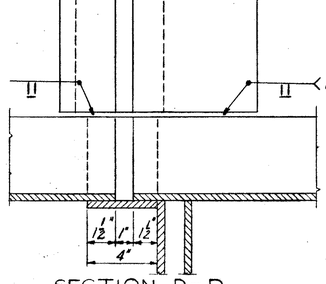
SECTION K-K



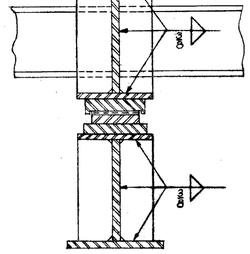
SHOE DETAILS



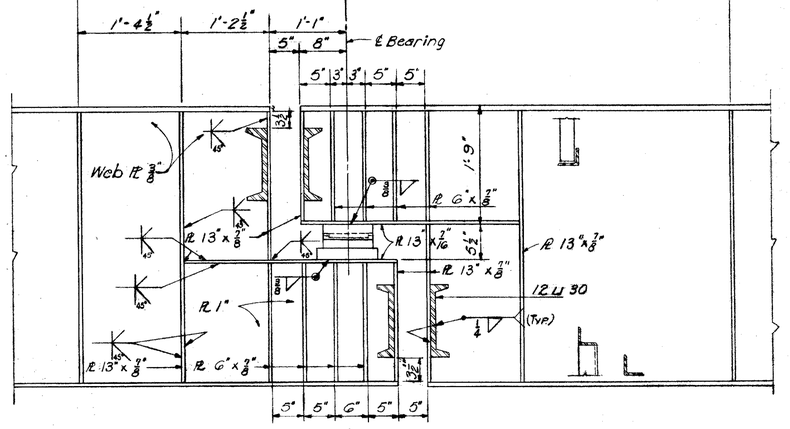
WEST SIDE



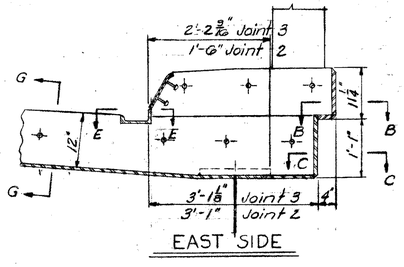
SECTION D-D



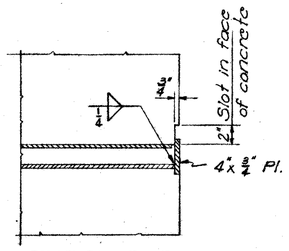
SECTION H-H



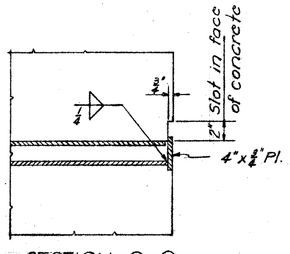
BEARING DETAIL



EAST SIDE

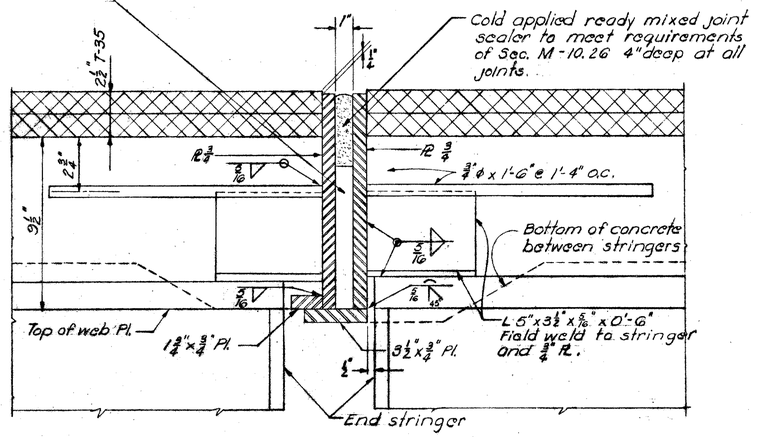


SECTION B-B

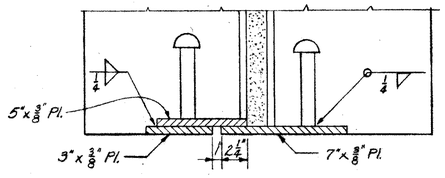


SECTION C C

Preformed expansion joint filler to meet requirements of Sec M-10.02, Type 1



SECTION G-G



DETAIL-CURB PLATES

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

DETAILS AT JOINTS #2 & #3
BRIDGE N° FRA-40R-1250
MOUND ST. EXPRESSWAY UNDER WHITTIER STREET
FRANKLIN COUNTY

Sec. FRA.-40R-12.30 STA. 34+02

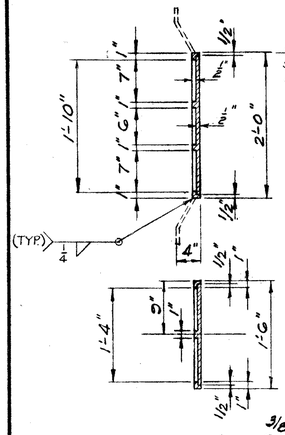
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
COSIO	E.D.A.		RAC	TLU	4-3-56	

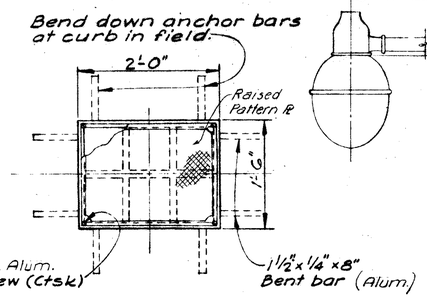
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

86
112

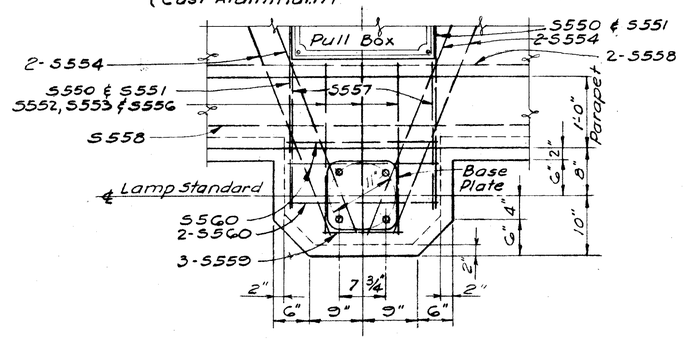
FRANKLIN COUNTY
FRA-40R-12.30

Pull Box Frame & Cover Assembly shall meet the pertinent sections of Supplemental Specification No. S-114, "Aluminum for Bridge Railing"

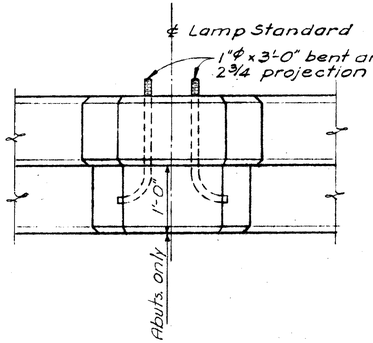




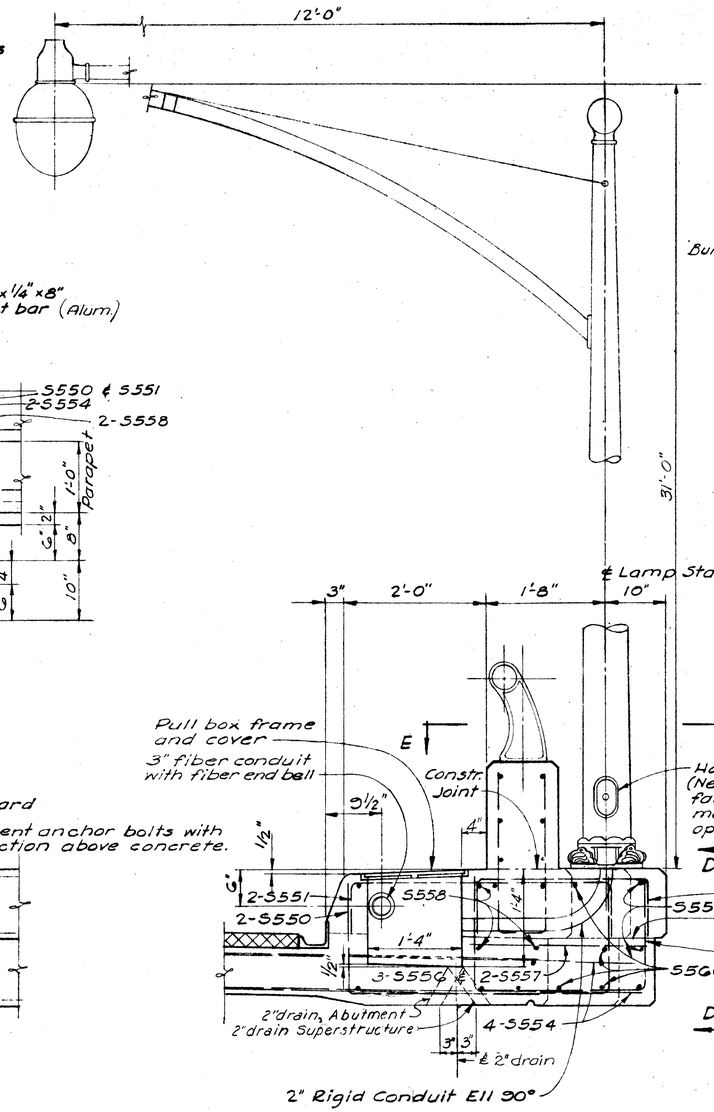
PULL BOX FRAME & COVER
(Cast Aluminum)



VIEW E-E

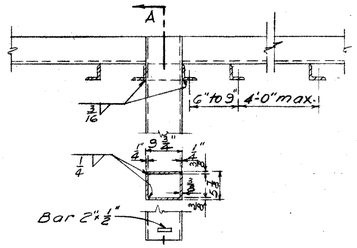


VIEW D-D

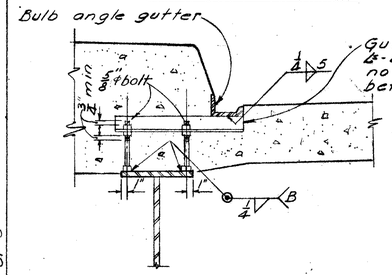


LAMP STANDARD DETAILS

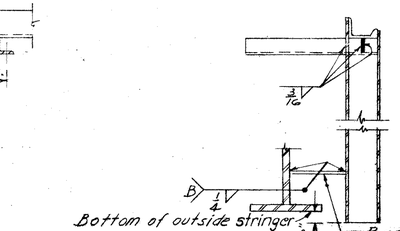
Marked reinforcing at lamp standard brackets only.



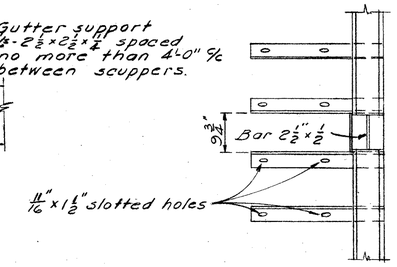
REAR ELEVATION



GUTTER SUPPORT



SECTION A-A



PART PLAN

GUTTER SUPPORT & SCUPPER DETAILS

GUTTER & SCUPPER NOTES

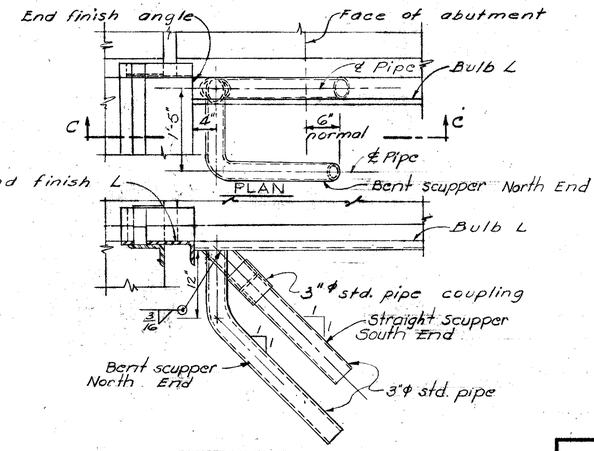
Scuppers shall be spaced as shown on General Plan except when required to meet 6" minimum clearance at Crossframes.

When scupper spacing exceeds 25 ft. milled joints will be permitted in bulb angles, but individual lengths shall be made as long as practicable.

Support angles shall be placed 6" to 9" on each side of joints.

Gutters shall be accurately adjusted for alignment and grade with allowance for dead load deflection, before concrete is placed.

For bent scupper details see sht. 83.



SECTION C-C

END SCUPPER DETAIL

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

MISCELLANEOUS DETAILS
BRIDGE No. FRA40R-1250
MOUND ST. EXPRESSWAY UNDER
WHITTIER STREET
FRANKLIN COUNTY
Sec. FRA-40R-12.30 Sta. 34+02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
STD.	D.W.I. J.H.C.		J.H.C. R.A.C.	T.L.U	4-3-52	

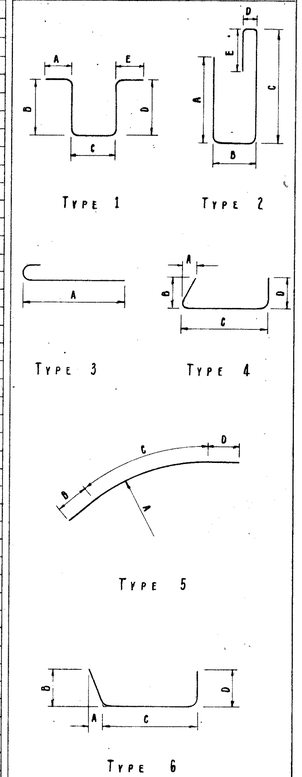
REINFORCING STEEL LIST

Mark	Nº	Length	Weight		Shp.
	ABUTMENTS				
R404	4	6-0	16		st
R405	4	10-0	27		st
R407	4	11-0	29		st
R408	4	13-4	36		st
R409	4	14-0	37		st
R417	4	9-6	25		st
R418	4	13-8	37		st
R419	4	14-6	39		st
R420	4	16-8	45		st
R421	4	17-6	47		st
S554	16	5-0	84		st
S556	6	2-4	15		st
S557	4	2-0	8		st
S558	6	6-6	41		st
S559	6	1-3	8		st
S560	8	1-10	15		st
A501	6	32-2	201		st
A503	2	15-5	32		st
A504	12	14-2	178		st
A505	4	11-3	59		st
A506	4	8-0	33		st
A507	4	5-0	21		st
A522	12	9-0	113		st
A528	2	4-6	9		st
A529	2	4-9	10		st
A530	2	6-0	13		st
A531	2	6-9	14		st
A532	2	7-6	16		st
A533	2	8-3	17		st
A534	4	9-0	38		st
A535	6	11-0	69		st
A536	2	8-6	18		st
A537	2	5-3	11		st
A538	8	15-3	127		st
A542	4	19-3	80		st
A543	4	4-3	18		st
A544	6	33-3	209		st
A545	2	5-4	11		st
A546	4	5-7	23		st
A548	2	7-1	15		st
A549	2	7-8	16		st
A550	2	8-3	17		st
A551	2	8-10	18		st
A552	2	9-5	20		st
A553	2	10-0	21		st
A554	2	10-6	22		st
A555	6	14-8	92		st
A556	2	11-6	24		st
A557	2	7-9	16		st
A558	2	4-0	8		st
A573	2	19-0	40		st
A574	12	17-6	220		st
A575	4	15-0	63		st
A576	4	11-0	46		st
A577	4	7-0	29		st
A590	4	11-9	49		st
A591	4	20-6	86		st
A592	8	18-6	154		st
A593	24	4-0	100		st
A603	50	14-9	1108		st
A604	51	18-6	1417		st
A701	32	4-6	294		st
A702	50	14-9	1507		st
A703	23	32-2	1512		st

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp.
			ABUTMENTS (CONTINUED)							
A705	12	33-10	830							st
A707	12	35-3	816							st
A708	51	18-6	1929							st
A709	28	33-5	1913							st
R406	8	6-3	33	5	10-0½		4-11	1-4		bt
R410	8	4-10	26	5	4-9½		3-7	1-3		bt
R411	24	7-1	114	1		3-5	0-6	3-5		bt
R412	4	6-9	18	1		3-3	0-6	3-3		bt
R413	4	6-1	16	1		2-11	0-6	2-11		bt
R414	4	4-11	13	1		2-4	0-6	2-4		bt
R415	4	4-3	11	1		2-0	0-6	2-0		bt
R416	4	3-1	8	1		1-5	0-6	1-5		bt
S550	4	5-11	25	1		1-2	3-10	1-2		bt
S551	4	4-9	20	1		0-7	3-10	0-7		bt
S552	6	4-5	28	1		1-2	2-4	1-2		bt
S553	6	3-3	20	1		0-7	2-4	0-7		bt
A502	74	9-5	727	1		3-3	3-2	3-3		bt
A508	2	7-8	16	1	2-6	5-4				bt
A509	2	6-2	13	1	1-6	4-10				bt
A510	2	7-7	16	1	2-6	5-3				bt
A511	2	6-1	13	1	1-6	4-9				bt
A512	2	9-4	19	1	2-6	7-0				bt
A513	2	7-10	16	1	1-6	6-6				bt
A514	2	10-1	23	1	2-6	7-9				bt
A515	2	8-7	18	1	1-6	7-3				bt
A516	2	10-10	23	1	2-6	8-6				bt
A517	2	9-4	20	1	1-6	8-0				bt
A518	2	11-7	24	1	2-6	9-3				bt
A519	2	10-1	21	1	1-6	8-9				bt
A520	2	12-4	26	1	2-6	10-0				bt
A521	2	10-10	23	1	1-6	9-6				bt
A523	4	13-1	55	1	2-6	10-9				bt
A524	4	11-7	48	1	1-6	10-3				bt
A525	88	6-3	574	1		2-7	1-4	2-7		bt
A526	20	5-9	120	1		2-4	1-4	2-4		bt
A527	92	6-9	648	1		2-2	2-8	2-2		bt
A539	6	11-7	72	1		4-4	3-2	4-4		bt
A540	20	10-5	218	1		3-9	3-2	3-9		bt
A541	48	9-5	471	1		3-3	3-2	3-3		bt
A559	16	5-1	85	4	0-6	2-0	3-3			bt
A560	12	5-1	64	6	0-6	2-0	3-3			bt
A561	1	7-10	8	1	2-6	5-6				bt
A562	1	6-4	7	1	1-6	5-0				bt
A563	3	8-4	26	1	2-6	6-0				bt
A564	3	6-10	21	1	1-6	5-6				bt
A565	1	10-2	11	1	2-6	7-10				bt
A566	1	8-8	9	1	1-6	7-4				bt
A567	2	10-8	22	1	2-6	8-4				bt
A568	2	9-2	19	1	1-6	7-10				bt
A569	2	11-10	25	1	2-6	9-6				bt
A570	2	10-4	22	1	1-6	9-0				bt
A571	2	12-10	27	1	2-6	10-6				bt
A572	2	11-4	24	1	1-6	10-0				bt
A578	1	10-4	11	1	2-6	8-0				bt
A579	1	8-10	9	1	1-6	7-6				bt
A580	2	10-10	23	1	2-6	8-6				bt
A581	2	9-4	20	1	1-6	8-0				bt
A582	2	11-10	25	1	2-6	9-6				bt
A583	2	10-4	22	1	1-6	9-0				bt
A584	2	13-0	27	1	2-6	10-8				bt
A585	2	11-6	24	1	1-6	10-2				bt
A586	2	14-2	29	1	2-6	11-10				bt
A587	2	12-8	26	1	1-6	11-4				bt
A588	2	15-4	32	1	2-6	13-0				bt
A589	2	13-10	29	1	1-6	12-6				bt

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shp.
			ABUTMENTS (CONTINUED)							
A594	24	5-1	127	1	2-0	3-3				bt
A601	22	14-4	474	4	0-2½	6-9	1-2	6-9		bt
A602	23	14-4	495	4	0-1½	6-9	1-2	6-9		bt
A704	23	33-10	1591	1		1-0	32-2	1-0		bt
A706	6	4-7	56	1	1-6	3-3				bt
A710	28	35-1	2008	1		1-0	33-5	1-0		bt
A711	3	4-7	28	6	0-4½	1-6	3-3			bt
A712	3	4-7	28	4	0-4½	1-6	3-3			bt
A801	14	33-10	1265							st
A802	14	34-11	1305							st
			SUPERSTRUCTURE							
R401	24	11-5	183							st
R402	120	14-8	1176							st
R403	466	4-5	1375	1		2-0	0-8	2-0		bt
R422	144	14-2	1363							st
S401	466	4-0	1245	4	0-2	0-8	2-10	0-8		bt
S402	466	4-7	1426	6	0-4	1-3	2-4	1-3		bt
S501	1080	30-3	34075							st
S502	108	39-0	4393							st
S550	4	5-11	25	1		1-2	3-10	1-2		bt
S551	4	4-9	20	1		0-7	3-10	0-7		bt
S552	6	4-5	28	1		1-2	2-4	1-2		bt
S553	6	3-3	20	1		0-7	2-4	0-7		bt
S554	16	5-0	84							st
S556	6	2-4	15							st
S557	4	2-0	8							st
S558	6	6-6	41							st
S559	6	1-3	8							st
S560	8	1-10	15							st
S601	551	12-6	10345							st
S602	551	24-6	20276							st
S701	551	12-6	14078							st
S702	551	24-6	27593							st
			PIERS							
P501	24	10-3	256	1		4-2	2-2	4-2		bt
P502	16	2-2	36							st
P503	16	1-2	19							st
P504	16	3-8	61							st
P505	78	2-2	176							st
P506	24	13-11	348	1		5-1	4-0	5-1		bt
F507	78	9-8	786							st
F701	87	9-8	1719							st
F901	36	20-2	2468							st
F1101	48	20-2	5143							st
			REPLACEMENT STEEL							
RE401	1	5-3	4							st
RE501	3	5-7	17							st
RE601	3	5-11	27							st
RE701	3	6-3	38							st
RE801	1	6-6	17							st
RE901	1	6-10	23							st
RE1101	1	7-7	40							st

Bending Diagram



NOTE:
In the reinforcing steel bar marks, the first digit where three digits are used and the first two where four are used is the bar number which indicates the size of the bar

SPIRALS - HOT ROLLED

Mark	Nº	Length	Core	Pitch	Turns	Spacers	Weight

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

87/112

FRANKLIN COUNTY
FRA - 40R - 12.30

ESTIMATED QUANTITIES

Item	Total	Unit	Description	Abut.	Pier	Supers.	General	
E-2	Lump	Sum	COFERDAMS, CRIBS, AND SHEETING				Lump	
E-2	357	Cu.Yd.	EXCAVATION FOR STRUCTURES, UNCLASSIFIED	184	173			
S-1	372	Cu.Yd.	CLASS'C' CONCRETE, SUPERSTRUCTURE			372		
S-1	54	Cu.Yd.	CLASS 'C' CONCRETE, ABUTMENTS (SLABS AND PARAPET)	54				
S-1	15	Cu.Yd.	CLASS 'E' CONCRETE, COLUMN ENCASEMENT		15			
S-1	×~~142~~ 81	Cu.Yd.	CLASS 'E' CONCRETE, PIER FOOTINGS		~~142~~ 81			
S-1	145	Cu.Yd.	CLASS 'E' CONCRETE, ABUTMENTS	145				
S-3	1175	Sq.Yd.	TYPE 'C' WATERPROOFING	107		1068		
S-3	70	Lin.Ft.	COLD APPLIED READY MIXED JOINT SEALER, SEC. M-10.26			70		
S-4	×~~144425~~ ~~154441~~	Lb.	REINFORCING STEEL	25771	11012	117792	166	
S-7	×~~564300~~ ~~559700~~	Lb.	STRUCTURAL STEEL		113800	435900		
S-8	×~~564300~~ ~~559700~~	Lb.	FIELD PAINTING OF STRUCTURAL STEEL		113800	435900		
S-9	58	Sq.Ft.	1" PREFORMED EXPANSION JOINT FILLER			58		
S-14	696	Lin.Ft.	RAILING (ALUMINUM RAIL AND SUPPORTS AND CONCRETE PARAPET)				696	
S-16	Lump	Sum	FIRST TEST PILE				Lump	
S-18	×~~2009~~ ~~2862~~	Lin.Ft.	14'' CAST-IN-PLACE REINFORCED CONCRETE PILING		2862			
S-18	×0 ~~1856~~	Lin.Ft.	12'' CAST-IN-PLACE REINFORCED CONCRETE PILING	1856				
S-25*	Lump	Sum	ELECTRIC LIGHTING SYSTEM (STANDARDS, PULLBOXES, AND CONDUIT)				Lump	
S-29	178	Lin.Ft.	SUBDRAINAGE FOR WEARING SURFACE COURSE			178		
S-29	25	Cu.Yd.	POROUS DRAINS ON EMBANKMENT SLOPES				25	
T-35	82	Cu.Yd.	ASPHALTIC CONCRETE SURFACE COURSE, TYPE 'C'(60-70)	8		74		

* Non-participating by State and Federal.

×Revised as Built 9-12-60

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

REINFORCING STEEL LIST AND ESTIMATED QUANTITIES
BRIDGE NO. FRA-40R-1250
MOUND STREET EXPRESSWAY UNDER
WHITTIER STREET FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA 34+02

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JHC	JHC		RAC	JLO	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

88
112

FRANKLIN COUNTY
FRA-40R-12.30

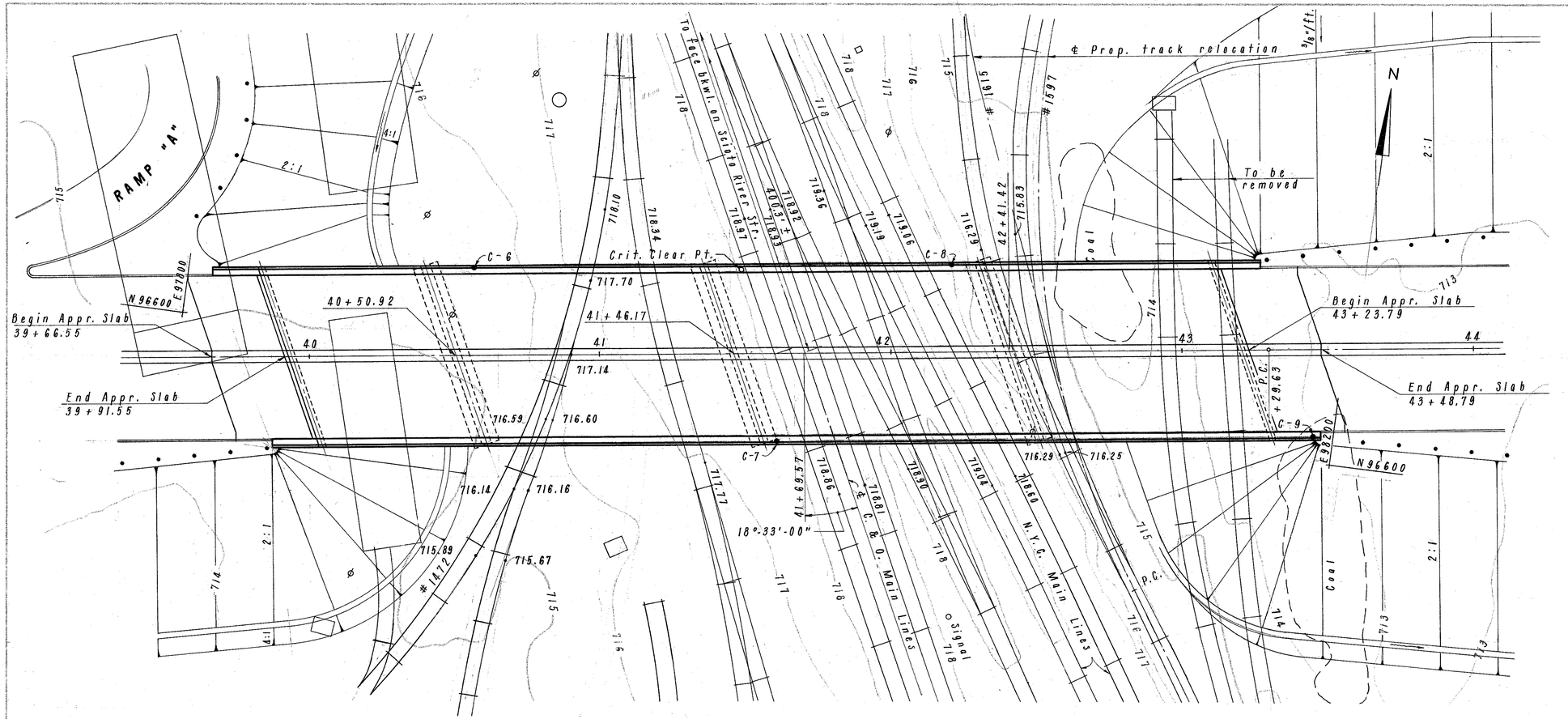
TRACK RELOCATION CURVE DATA

#1615 — D = 18° ±

#1597 — Δ = 52° 26'
D = 18° 00'
T = 157.39'

EXPRESSWAY CURVE DATA

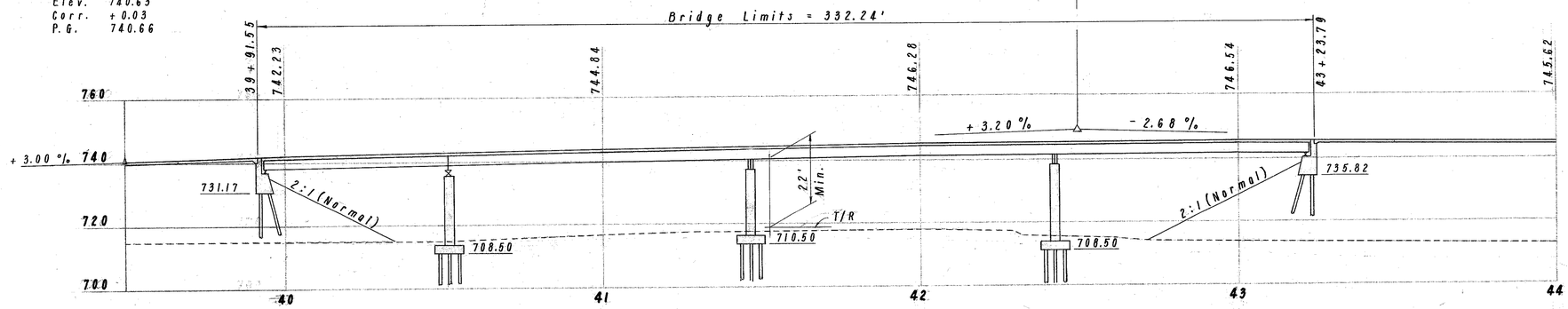
Δ = 16°-58'-00" Rt.
D = 1°-20'
R = 4297.18'
T = 640.94'
E = 47.56'
L = 1272.50'



PLAN

P.V.I. 39+50
V.C. 100'
Elev. 740.63
Corr. +0.03
P.G. 740.66

P.V.I. 42+50
V.C. 500'
Elev. 750.23
Corr. 3.68
Prof. Grade 746.55



PROFILE

NOTE: All piling to be 12" C.I.P. Reinf. Conc. piles. Estimated average length of pier pile is 30' and abutment piles 47'.

MIN. HORIZONTAL CLEARANCE				
Track	#1472	C. & O. Main Line	N. Y. C. Main Line	#1597
℄ Track to face of pier	10'-6"	13'-6"	10'-6"	9'-6"
℄ Track to face of footer	7'-6"	10'-6"	7'-3"	6'-6"

PROPOSED STRUCTURE

Type: Continuous Steel Beam with reinf. conc. deck and conc. and steel substructure.
Spans: 57.0', 95.25', 95.25', 80.0' c/c brgs.
Roadway: 56'-0" f/f 2'-0" safety curbs with 3' median, conc. parapet, and aluminum railing.
Loading: C.F 2000
Wearing Surface: 2½" Asphaltic Conc.
Skew: 18°-33' Rt. Fwd.
Alignment: Tangent
Appr. Slabs: (25' Long.) See Sheet №96

NOTE:
Foundation Soundings:
Foundation design and foundation quantities are based on a study of borings 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.

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

SITE PLAN
BRIDGE №FRA-40R-1255
MOUND ST. EXPRESSWAY OVER
C.&O. RY & N.Y.C. R.R.
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 41+57.67

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
TLV	TLV		J.E.V.	W.B.	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

89
112

FRANKLIN COUNTY
FRA-40R-12.30

ESTIMATED QUANTITIES

ITEM No.	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTRUCTURE	GENERAL
E-2	Lump	Sum.	Cofferdams, Cribs and Sheeting				
E-2	850	Cu. Yds.	Unclassified Excavation	160	690		
S-1	685	Cu. Yds.	Class "C" Concrete, Superstructure	5		680	
S-1	250	Cu. Yds.	Class "E" Concrete, Footings		250		
S-1	531	Cu. Yds.	Class "E" Concrete, Pier Walls		531		
S-1	200	Cu. Yds.	Class "E" Concrete, Abutments	200			
S-3	1,910	Sq. Yds.	Type "C" Waterproofing			1,910	
S-4	248,383	Lbs.	Reinforcing Steel	20,754	49,716	177,740	173
S-7	994,600	Lbs	Structural Steel		93,600	901,000	
S-8	994,600	Lbs.	Field Painting of Structural Steel, as per plan				
S-14	659	Lin. Ft.	Railing (Aluminum rail, supports & conc. parapet)			659	
S-16	Lump	Sum.	First Test Pile				
S-18	~~4,044~~ 4,464 X	Lin. Ft.	12" Cast-in-place Reinforced Concrete Piles.	1,974	5,490		
S-25	Lump	Sum.	Electric Lighting System (Stds, Conduits & Pull Boxes)				
S-29	658	Lin. Ft.	Subdrainage for Wearing Surface Course			658	
S-29	42	Cu. Yds.	Porous Drains on Embankment Slopes				42
T-35	135	Cu. Yds.	Asphaltic Concrete Surface Course Type "C" (60-70)			135	

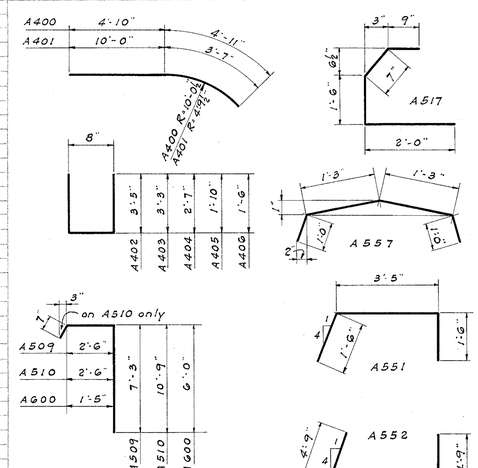
REINFORCING BAR LIST

ABUTMENTS

MARK	SHAPE	#REQ.	LENGTH	WEIGHTS
A400	Bt.	8	9'-9"	52
A401	Bt.	8	13'-7"	73
A402	Bt.	20	7'-6"	100
A403	Bt.	4	7'-2"	19
A404	Bt.	4	5'-10"	16
A405	Bt.	4	4'-4"	12
A406	Bt.	4	3'-8"	10
A407	Str.	8	13'-0"	69
A500	Str.	44	14'-5"	662
A501	"	8	13'-0"	109
A502	"	4	11'-6"	48
A503	"	8	12'-0"	100
A504	"	4	10'-4"	43
A505	Bt.	4	10'-2"	42
A506	"	4	12'-2"	51
A507	"	4	14'-2"	59
A508	"	4	16'-2"	68
A509	"	20	9'-9"	204
A510	"	8	13'-10"	116
A511	Str.	16	8'-8"	145
A512	Bt.	20	7'-2"	150
A513	"	16	4'-5"	74
A514	"	20	7'-7"	158
A515	Str.	8	7'-0"	59
A516	Bt	56	6'-8"	390
A517	"	36	4'-10"	182
A518	Str	20	7'-0"	146
A519	"	8	12'-6"	105
A550	"	44	33'-6"	1537
A551	Bt	112	6'-5"	750
A552	"	112	14'-1"	1645
A553	"	168	7'-5"	1301
A554	"	120	4'-6"	564
A555	Str.	16	8'-0"	134
A556	"	6	1'-0"	6
A557	Bt.	4	4'-6"	19
A558	Str.	24	4'-6"	113
AG00	Bt.	78	7'-5"	869
AG01	"	78	9'-11"	1162
A900	Str.	52	10'-8"	1885
A901	"	64	34'-6"	7507

Total Weight = 20,754 lbs

BAR BENDING DIAGRAM

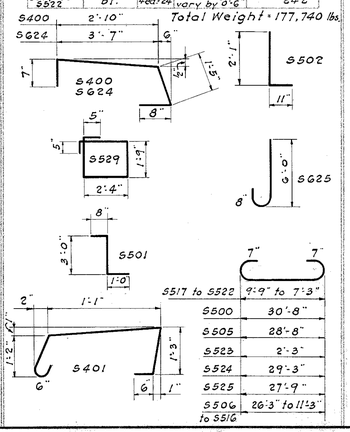

A400 4'-10"
A401 10'-0"
4'-11"
3'-7"
A400 R 10'-0"
A401 R 4'-9½"
8"
3'-5"
3'-3"
2'-7"
1'-10"
1'-6"
A402
A403
A404
A405
A406
3" 9"
1'-6"
6½"
7"
A517
2'-0"
1'-3"
1'-3"
1"
1'-0"
10"
A557
3"
on A510 only
A509 2'-6"
A510 2'-6"
AG00 1'-5"
7'-3"
10'-9"
6'-0"
A509
A510
AG00
3'-5"
4"
1'-6"
1'-6"
A551
4'-9"
4
A552
4'-9"
4'-7"
2'-6"
3'-0"
4'-0"
5'-0"
6'-0"
1'-8"
3'-6"
4'-6"
5'-6"
6'-6"
A505
A506
A507
A508
11"
2'-0"
7'-0"
AG01
3'-0"
1'-6"
3'-6"
2'-3"
A512 1'-2"
A513 1'-5"
A514 7"
A516 2'-2"
1'-0"
3'-0"
A554 2'-6"
A553 1'-6"

NOTE:
Bar size is indicated in the bar mark. The first digit where three digits are used and the first two where four are used indicate the bar size. For example A900 is a No.9 size bar and P1000 is a No.10 bar.

SUPERSTRUCTURE

MARK	SHAPE	#REQ.	LENGTH	WEIGHTS
S400	Bt.	442	5'-6"	1624
S401	Bt.	442	4'-6"	1330
S500	Str.	1274	31'-10"	42300
S501	"	442	4'-8"	2151
S502	"	442	3'-0"	1383
S503	Str.	192	40'-0"	8010
S504	"	1386	38'-0"	54933
S505	Bt.	2	29'-10"	63
S506 to S516	"	4ea:44	27'-8" to 12'-8" vary by 1'-6	916
S523	"	2	3'-5"	7
S524	"	2	30'-5"	64
S525	"	2	28'-11"	61
S526	Str.	208	11'-8"	2531
S527	"	9	2'-4"	22
S528	"	6	2'-1"	13
S529	Bt.	9	9'-0"	85
S530	Str.	9	1'-6"	14
S531	"	9	2'-0"	19
S532	"	16	9'-2"	153
S600	"	1274	30'-8"	58,682
S601	"	2	28'-6"	86
S602 to S618	"	4ea:44	26'-3" to 11'-3" vary by 1'-6	1240
S619	"	2	2'-3"	7
S620	"	2	29'-3"	88
S621	"	2	27'-9"	84
S622	"	36	15'-0"	810
S623	"	54	4'-3"	345
S624	Bt.	6	6'-3"	57
S625	"	6	6'-8"	60
S626	Str.	6	6'-0"	54
S503 to S504 & S626	Str.	4ea:24	9'-9" to 7'-3" vary by 0'-6"	306
S517 to S522	Bt.	4ea:24	10'-1" to 8'-5" vary by 0'-6"	242

Total Weight = 177,740 lbs.

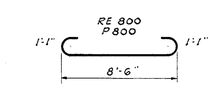


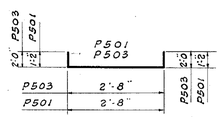
PIERS

MARK	SHAPE	#REQ.	LENGTH	WEIGHTS
P500	Str.	272	32'-0"	9078
P501	Bt.	140	5'-0"	730
P502	Str.	96	2'-8"	267
P503	Bt	230	6'-8"	1599
P701	Str.	40	37'-9"	3086
P702	"	408	6'-0"	5004
P703	"	136	23'-0"	6394
P704	"	136	22'-0"	6116
P705	"	136	24'-6"	6811
P706	"	60	32'-0"	3934
P707	"	20	34'-6"	1410
P800	Bt.	186	10'-8"	5297
			Total =	49,716

REPLACEMENT BARS

RE 400	Str.	1	5'-3"	4
RE 500	"	7	5'-7"	41
RE 600	"	4	6'-0"	36
RE 700	"	3	6'-3"	39
RE 800	Bt.	1	10'-8"	29
RE 900	Str.	1	6'-10"	24
			Total =	173





GENERAL NOTES

DESIGN SPECIFICATIONS:
This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways dated 10-1-51, together with revisions thereof dated T-15-52, 4-1-54 and 2-1-55.

DESIGN LOADING:
CF = 2000

REFERENCES:
Supplemental Specifications No. S-114 dated Aug. 30, 1955
Standard Drawing AS-1-54 revised Dec. 1, 1954
Railing Details Sheet No. 72
End Finish and End Cross Frames Sheet No. 73
Abutment Bearing Details Sheet No. 74

DECK CONSTRUCTION PROCEDURE:
The deck slab shall be placed in sections, between transverse construction joints, in the numerical order and in the direction indicated on the steel framing plan.

CONSTRUCTION CLEARANCE:
19'-0" vertically above the top of the railroad tracks & 8'-0" horizontally from the center of tracks shall be maintained at all times

SHEETING AND BRACING:
Before construction is started, nine 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 the Railroad Companies.

ALIGNING RAILROAD TRACKS:
After the Contractor has completed all excavation and backfill adjacent to the railroad tracks in compliance with Sec. E-2.04 and E-2.08 of the Construction and Material Specifications, subject to the supervision of the railroad company, nothing in Sec. E-2.04, E-2.08 or G-8.07 of the Specifications shall be construed to hold the Contractor liable for aligning and resurfacing the railroad tracks.

PILES:
All piles shall be 12" cast-in-place reinforced concrete piles. Piles shall be driven to a minimum bearing capacity of 30 tons for the abutments and 40 tons for the piers. The abutment piles shall be driven to a minimum penetration of 45 feet and if necessary to attain such penetration, preboring or other approved means shall be used. The length of penetration of the pier piles shall be at least 60% of the estimated average pay length of the piles in the pertinent pier as indicated on the plans unless a lesser penetration is approved by the Director.

EXCAVATION QUANTITY:
Includes the removal of fill material between Elev. 735.2 at the West Abut., Elev. 739.8 at the East Abut. and the bottom of the abutment and wing wall

WELDING:
Of structural steel shall be Class "A" except as otherwise shown. Welds shown as field may be made in the Shop at the option of the Contractor.

WELDED STEEL:
The steel for the 36 WF 230 beams, the pier cap beams, and all plates over 1" thick on beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec. M-7.4 (a) of the Construction and Material Spec's.) or to A-373.

PAINT:
Both Shop and Field shall be applied by brushing. Spray application will not be permitted. One additional field coat of paint, of the same kind as the Shop coat, shall be applied to the structural steel in the Track Spans.

REINFORCING STEEL:
All reinforcing steel shall be 2" clear from surface of concrete unless otherwise shown. Splices shall be not less than 30 times the bar diameter.

CHAMFER:
Chamfer all exposed edges ¾" unless otherwise shown.

GRAVEL,
If used as the coarse aggregate, shall be according to Sec. M-3.93 instead of M-3.91 for Class "C" concrete in the superstructure. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete in this structure.

SURFACE FINISH OF CONCRETE:
All faces of parapets, faces of curbs, fascias of deck and exposed surfaces of pier walls, abutments and wing walls shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of item S-1

POROUS DRAINS:
Extending from face of abutment to elevation 715.5 shall be provided at all four corners of the bridge. The drains shall be 8 ft. wide at the low end, tapering to 4 ft. wide at the face of the abutment and one foot thick, conforming to Sec. S-29

CONDUITS:
All labor and materials necessary to install the 6-4" Ø.D. conduits shall be furnished by the City of Columbus, Division of Electricity. The Contractor shall cooperate with the City in the installation of the conduits

FORCE ACCOUNT WORK BY THE NEW YORK CENTRAL RAILROAD CO.

Preliminary engineering
Construction engineering and inspection
Communication work temporary and permanent
Signal work temporary and permanent
Protection of traffic
Accounting
Insurance

FORCE ACCOUNT WORK BY THE CHESAPEAKE AND OHIO RAILWAY CO.

Engineering, preliminary and Construction
Install and remove tell-tale bridge warnings
Signal work

X Revised as Built 9-12-60

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

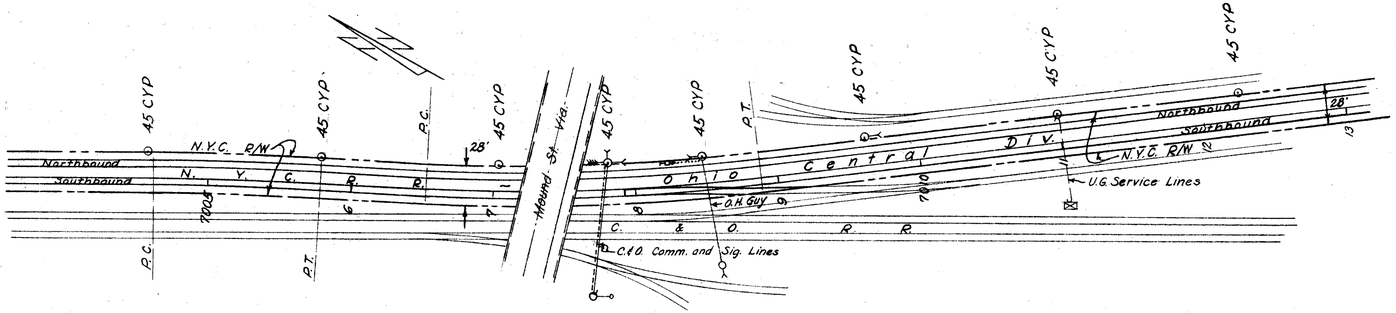
GENERAL NOTES, QUANTITIES & STEEL LIST
BRIDGE No. FRA-40R-1255
MOUND STREET EXPRESSWAY OVER
C. & O. RY & N.Y.C. R.R.
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 41+57.67

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
L.S.	T.A.B.	T.A.B.	P.C.	T.L.U.	4-3-56	

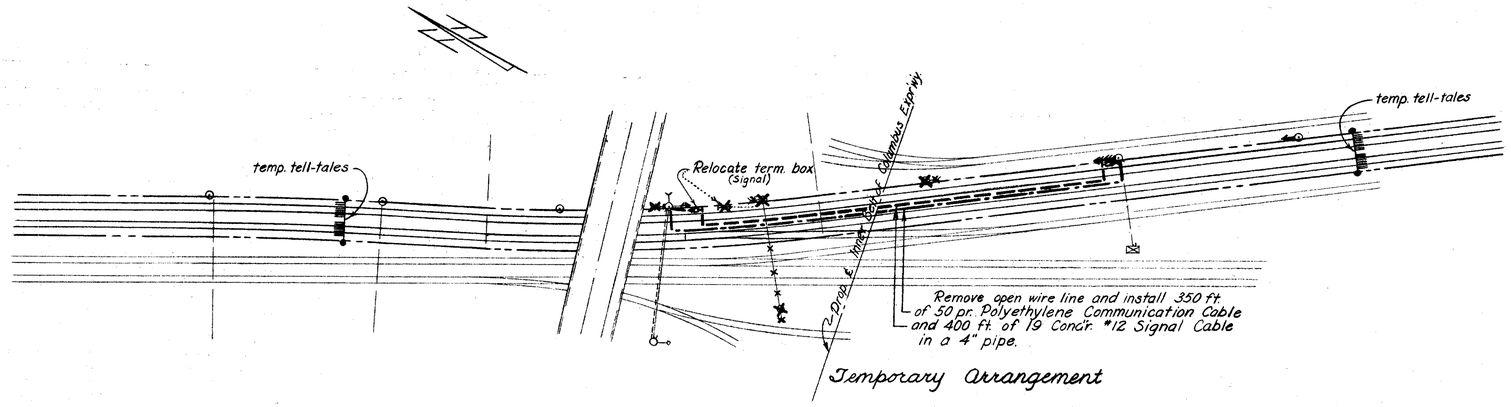
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

89A
112

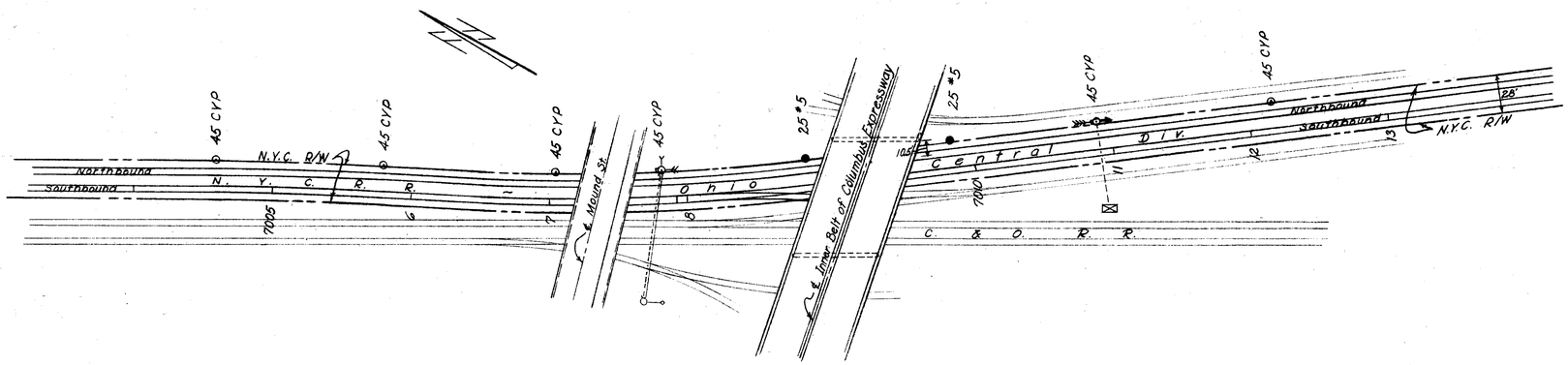
FRANKLIN COUNTY
FRA-40R-12.30



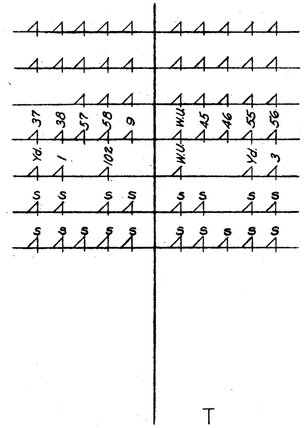
Existing Arrangement



Temporary Arrangement



Permanent Arrangement



T
Communication & Signal Lines Existing

Cable

T
Communication & Signal Lines Permanent

- ○ Existing Poles
- ⊠ Poles to be removed
- ● New Poles

Note:
All labor and the furnishing of all material in connection with changes as shown on this sheet and called for in the estimate will be performed by the N.Y.C.R.R. force account.

NYC System	Office of Chief Engineer	Chicago, Ill.

PROPOSED OVERPASS ~ Mound Street Section of
INNER BELT OF COLUMBUS EXPRESSWAY
Proposed Communication & Signal Line Changes
COLUMBUS, OHIO

Western District	Ohio Central Division	Plan No. 7000
Scale: 1"=50'	April 26, 1956	V.S. 302	File No. 121-65

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

90
112

FRANKLIN COUNTY
FRA-40R-12.30

N

RAMP "A"

Slope 2:1

18°-33'-00"

4:1

Slope 2:1

Porous Drain

5' Scuppers: 7 Spa @ 5'± space to miss cross frames

Approach Slab

El. 741.17 Profile Gr.

El. 741.96 Profile Gr.

Begin Approach Slab Sta. 39+66.55

El. 742.04 Profile Gr.

El. 743.71 Profile Gr.

2" Open Median 3'-0"

2'-0" Safety Curb

2'-0" 3'-3" 26'-6" 3'-0" 2'-0" Safety Curb

62'-10" O. to O.

Sta. 41+62.5 ℄ Lamp Post

El. 745.65 Profile Gr.

℄ MOUND STREET EXPRESSWAY

El. 746.53 Profile Gr.

Scuppers - 4 spaces @ 10'± (space to miss cross frames)

El. 746.43 Profile Gr.

El. 746.24 Profile Gr.

El. 746.44 Profile Gr.

End of Approach Slab Sta. 43+48.79

Approach Slab

Porous Drain

Slope 2:1

℄ Begins West Abutment

℄ Pier 1

℄ Pier 2

℄ Pier 3

Sta. 40+50.92

Sta. 40+56.0 ℄ Lamp Post

Sta. 41+46.17

Sta. 42+21.42

Sta. 42+69.5 ℄ Lamp Post

Sta. 43+21.42

Sta. 43+23.79 Begin Approach Slab

℄ Begins East Abutment

End Approach Slab Sta. 39+91.55 Sta. 39+93.92

57'-0"

95'-3"

95'-3"

80'-0"

Bridge Limits 332'-2⅜"

PLAN

P.V.I. Sta 39+50

P.V.I. Sta. 39+50 V.C. = 100 Elev. 740.63 Corr. +0.03 Profile Gr. 740.66

P.R.V.C. Sta. 40+00

El. 742.23

Gr. +3.00%

Gr. +3.20%

Grade +3.20%

P.V.I. Sta. 42+50 V.C. = 500' Elev. 750.23 Corr. -3.68 Profile Gr. 746.55

Grade -2.68%

Length of Railing = 329'-3¼"

6" 2"

Deflection Joints in parapet (see Dwg. #72); center between adjacent rail posts.

55 Spa's @ 5'-11⅛"

6" 2"

Rail Post Spacing

End Scupper

El. 731.17 West Abut.

Exp.

End Scupper

Porous Drain

Exp.

Fix.

22'-0" Min. Clearance

Exp.

Exp.

El. 735.82 East Abut.

El. 708.50 Pier No. 1

El. 710.50 Pier No. 2

El. 708.50 Pier No. 3

Porous Drain

ELEVATION

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

GENERAL PLAN and ELEVATION
BRIDGE No. FRA-40R-1255
MOUND STREET EXPRESSWAY OVER
C. & O. RY & N.Y.C. R.R.

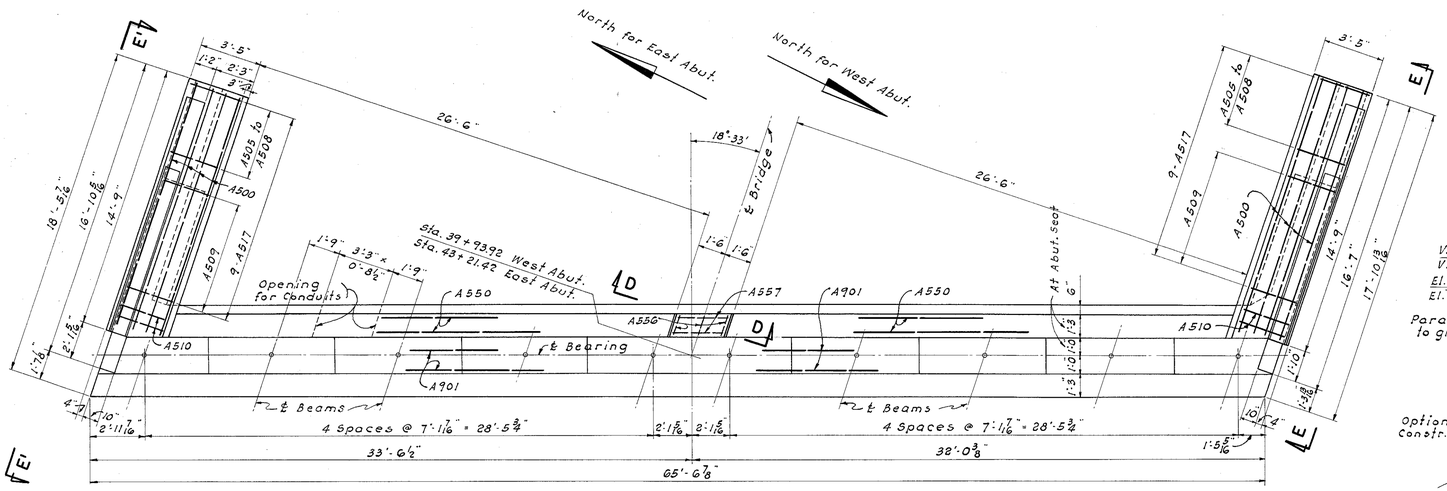
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA 41+57.67

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
V.B.	T.A.B.	T.A.B.	P.C.	T.L.U.	4-3-56	

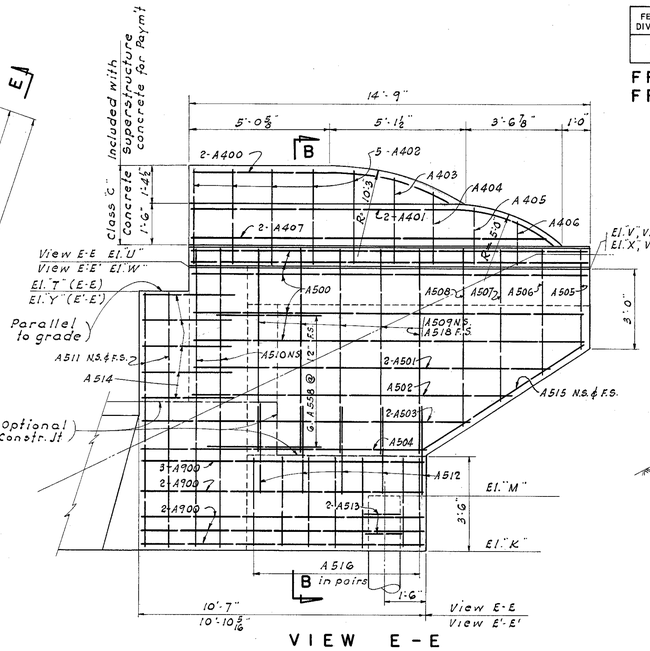
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

91
112

FRANKLIN COUNTY
FRA-40R-12.30

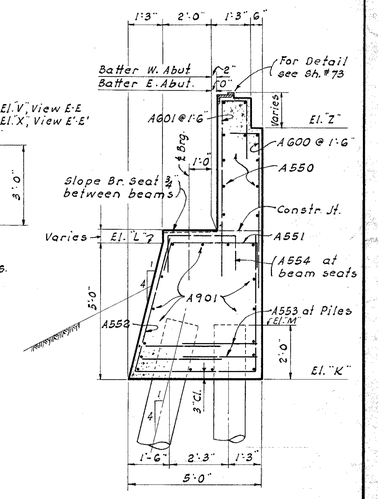


PLAN

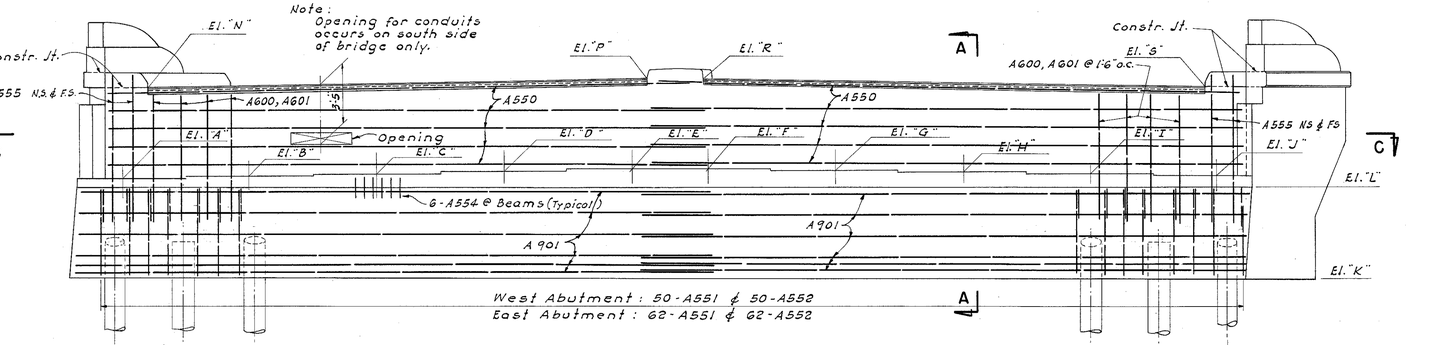


VIEW E-E

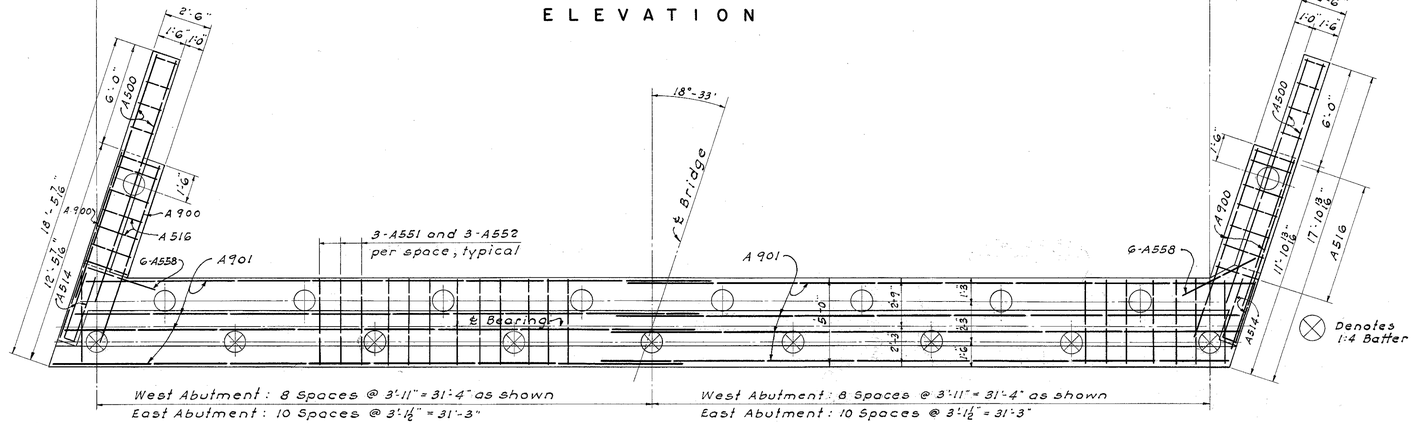
VIEW E'-E' OPPOSITE HAND & AS NOTED



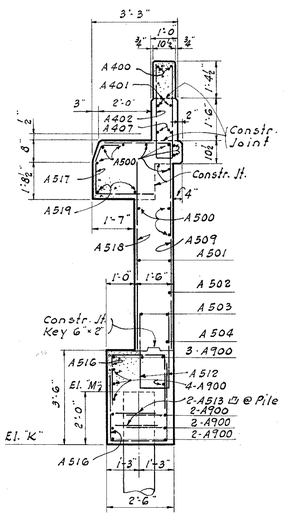
SECTION A-A



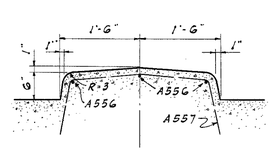
ELEVATION



SECTION C-C



SECTION B-B



SECTION D-D

ELEVATION TABLE FOR ABUTMENTS																								
LOCATION	EL. A	EL. B	EL. C	EL. D	EL. E	EL. F	EL. G	EL. H	EL. I	EL. J	EL. K	EL. L	EL. M	EL. N	EL. P	EL. R	EL. S	EL. T	EL. U	EL. V	EL. W	EL. X	EL. Y	EL. Z
EAST ABUTMENT	741.23	741.32	741.41	741.51	741.60	741.59	741.48	741.35	741.23	741.11	735.82	740.82	737.82	746.08	746.45	746.45	745.96	744.85	745.96	745.84	746.08	746.00	744.97	744.42
WEST ABUTMENT	737.08	737.11	737.15	737.18	737.21	737.17	737.00	736.82	736.64	736.46	731.17	736.17	733.17	741.90	742.03	742.00	741.30	740.21	741.27	740.81	741.86	741.45	740.86	739.75

NOTE

All earth fill around abutments shall be made to El. 735.2 at W.A. & El. 739.8 at E.A. Excavation shall then be made for abutment cap and wings, after which piling shall be driven.

Reinforcing steel to have 2" cover unless otherwise noted.

Sept 27-56 & 69 91R 917-56

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

ABUTMENT DETAILS
BRIDGE No. FRA-40R-1255
MOUND STREET EXPRESSWAY OVER
C. & O. RY & N.Y.C. R.R.

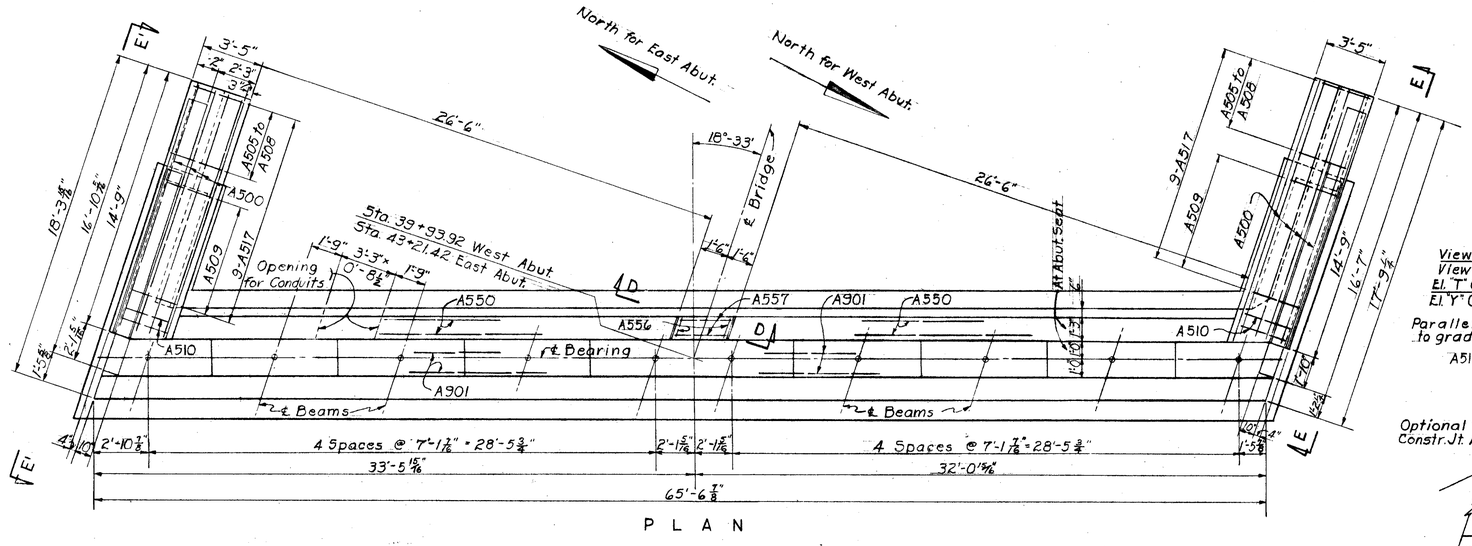
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 41+57.67

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.E.	R.E.	R.S.	P.C.	T.L.U.	4-3-56	

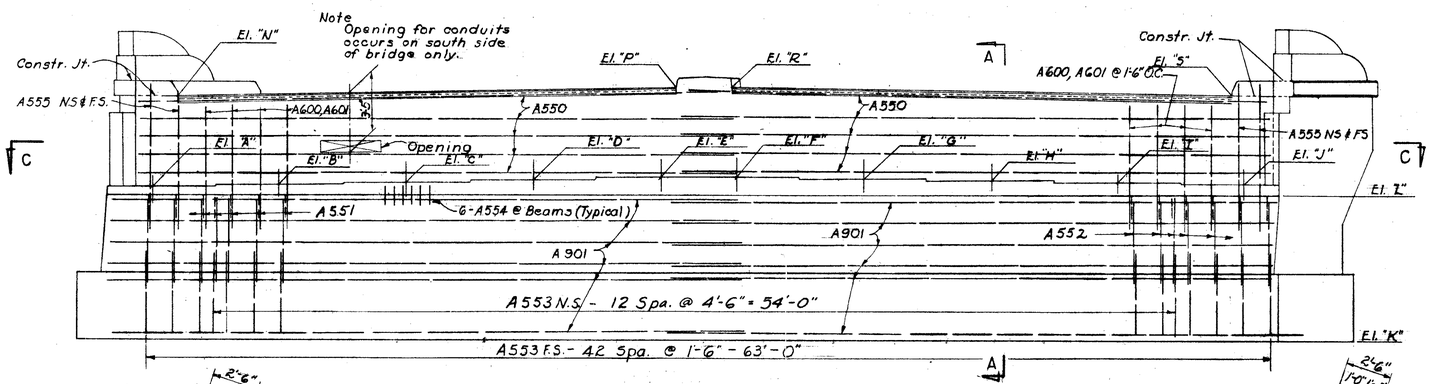
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

91-R / 112

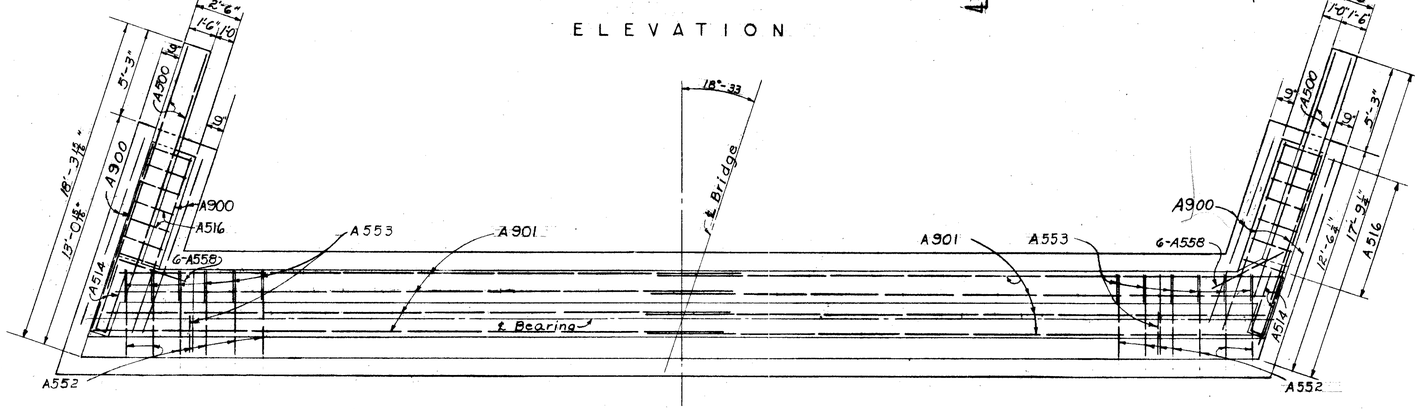
FRANKLIN COUNTY
FRA-40R-12.30



PLAN

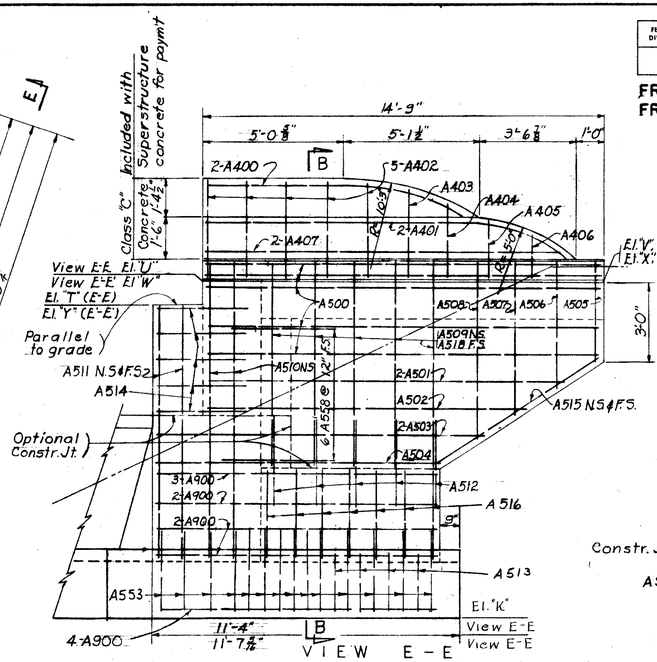


ELEVATION



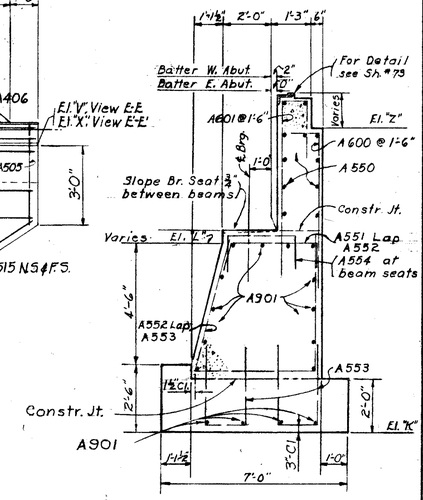
SECTION C-C

ELEVATION TABLE FOR ABUTMENTS																									
LOCATION	EL. A	EL. B	EL. C	EL. D	EL. E	EL. F	EL. G	EL. H	EL. I	EL. J	EL. K	EL. L	EL. N	EL. P	EL. R	EL. S	EL. T	EL. U	EL. V	EL. W	EL. X	EL. Y	EL. Z	
EAST ABUTMENT	741.23	741.32	741.41	741.51	741.60	741.59	741.48	741.35	741.23	741.11	739.82	740.82	746.08	746.45	746.45	745.96	744.85	745.96	745.84	746.08	746.00	744.97	744.42	
WEST ABUTMENT	737.08	737.11	737.15	737.18	737.21	737.17	737.00	736.82	736.64	736.46	729.17	736.17	741.90	742.03	742.00	741.30	740.21	741.27	740.81	741.86	741.45	740.86	739.75	

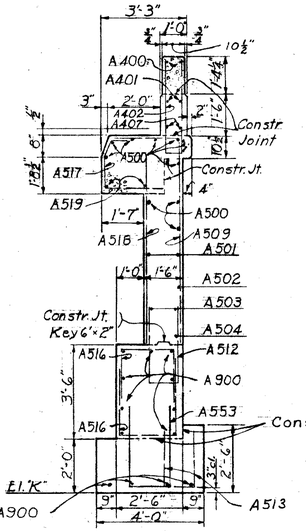


VIEW E'-E' OPPOSITE HAND & AS NOTED

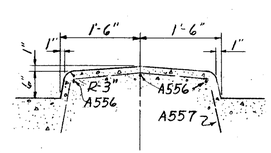
VIEW E-E



SECTION A-A



SECTION B-B



SECTION D-D

Estimated Quantities-Additions or Deductions				
Item	Total ADD	Total DEDUCT	Unit	Description
E-2	137		C.Y.	Unclassified Excavation
S-1	77		C.Y.	Class "E" Concrete, Footings
S-18		1974	L.F.	12" Cast-in-place Reinforced Concrete Piles

NOTE
All earth fill around abutments shall be made to El. 735.2 at W.A. & El. 739.8 at E.A. Excavation shall then be made for abutment

Reinforcing steel to have 2" cover unless otherwise noted.

SUPERSEDES SHEET 91
Revised 5-17-56

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

ABUTMENT DETAILS
BRIDGE No. FRA-40R-1255
MOUND STREET EXPRESSWAY OVER C.&O. and N.Y.C. RAILROADS

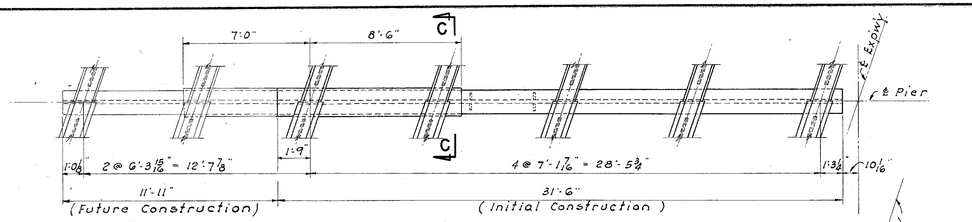
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 41+57.67

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
T.L.U.	K.A.		J.B.E.	WB	9-13-57	

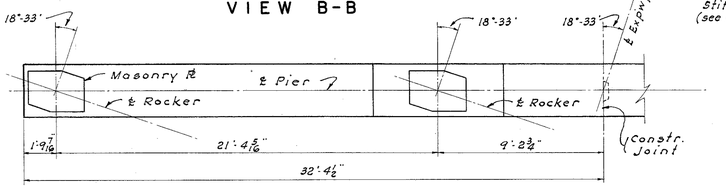
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

92
112

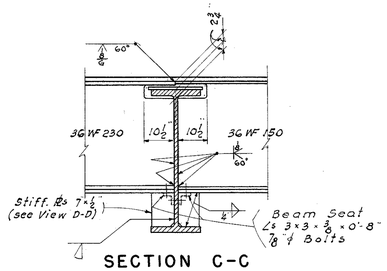
FRANKLIN COUNTY
FRA-40R - 12.30



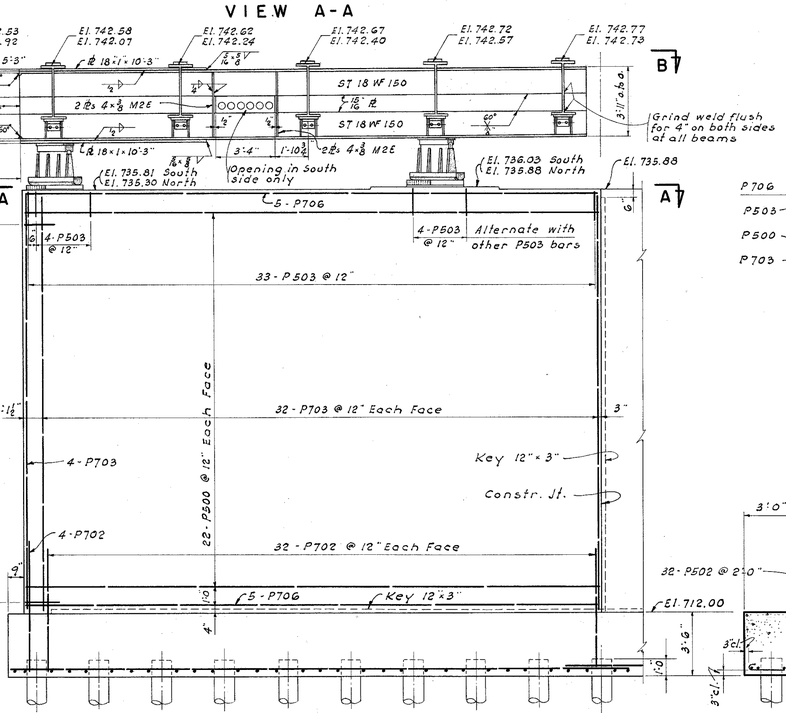
VIEW B-B



VIEW A-A

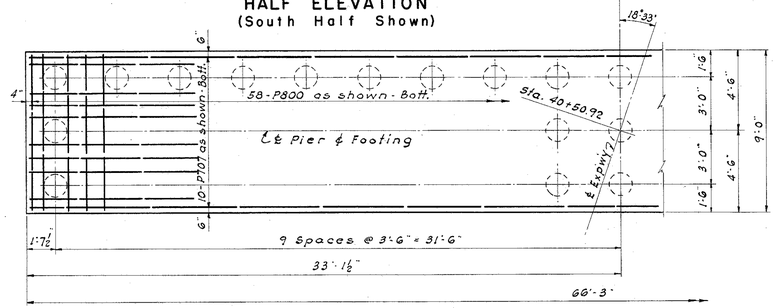


SECTION C-C



HALF ELEVATION
(South Half Shown)

SECTION

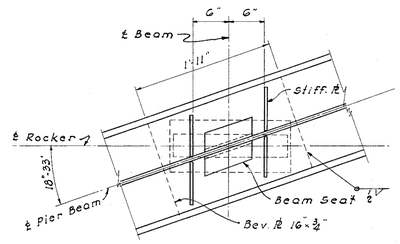


HALF FOOTING PLAN

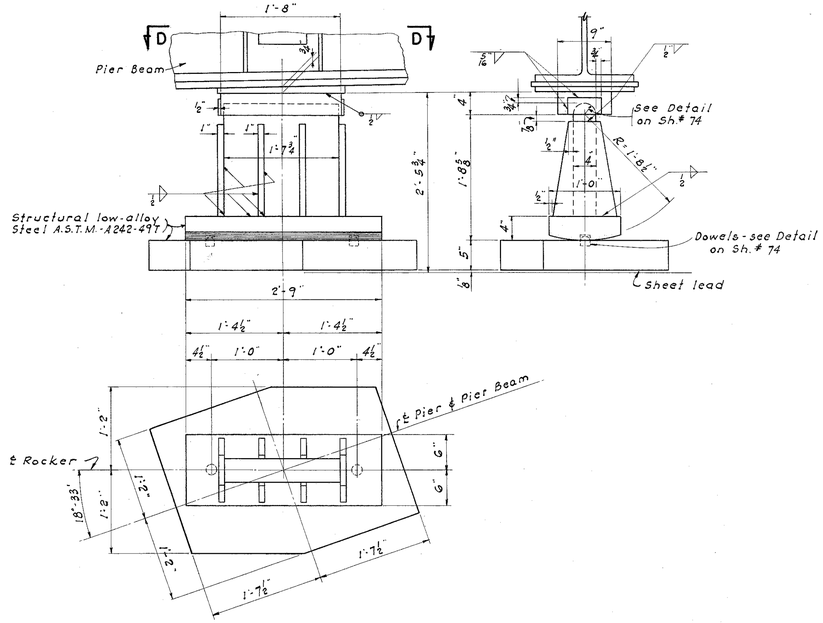
57 - 12¾ Cast-in-Place Concrete Piles
Maximum Loading per Pile 40 Tons

STEEL ERECTION PROCEDURE

1. Place pier beam at pier 1, blocking into position.
2. Erect beams in spans 1 and 2. Bolt lower beam flange to beam seat.
3. Raise beams at west abutment and 3" at Pier 2.
4. Weld beam flanges and web concurrently as suggested on Sheet #94. Lower beams



VIEW D-D



STRUCTURAL STEEL ROCKER at PIER No. 1

Material :- Carbon Steel except as noted

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

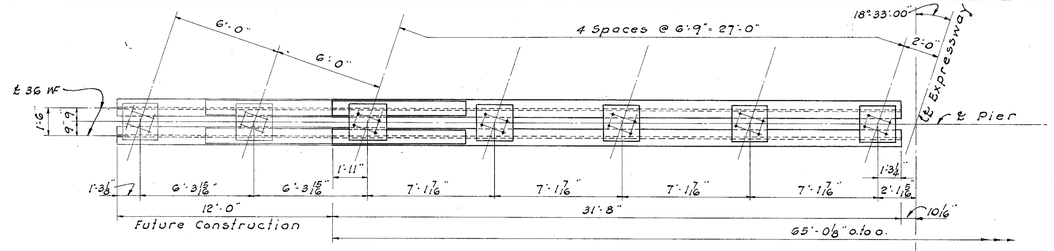
PIER No. 1
BRIDGE No. FRA-40R-1255
MOUND STREET EXPRESSWAY OVER
C. & O. RY & N.Y.C. R.R.
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 41+57.67

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
V.B.	P.C.	R.S.	R.D.M.	T.L.U.	4-3-56	

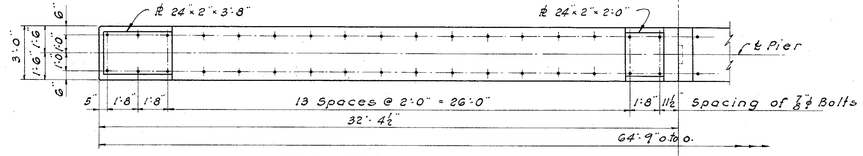
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

93
112

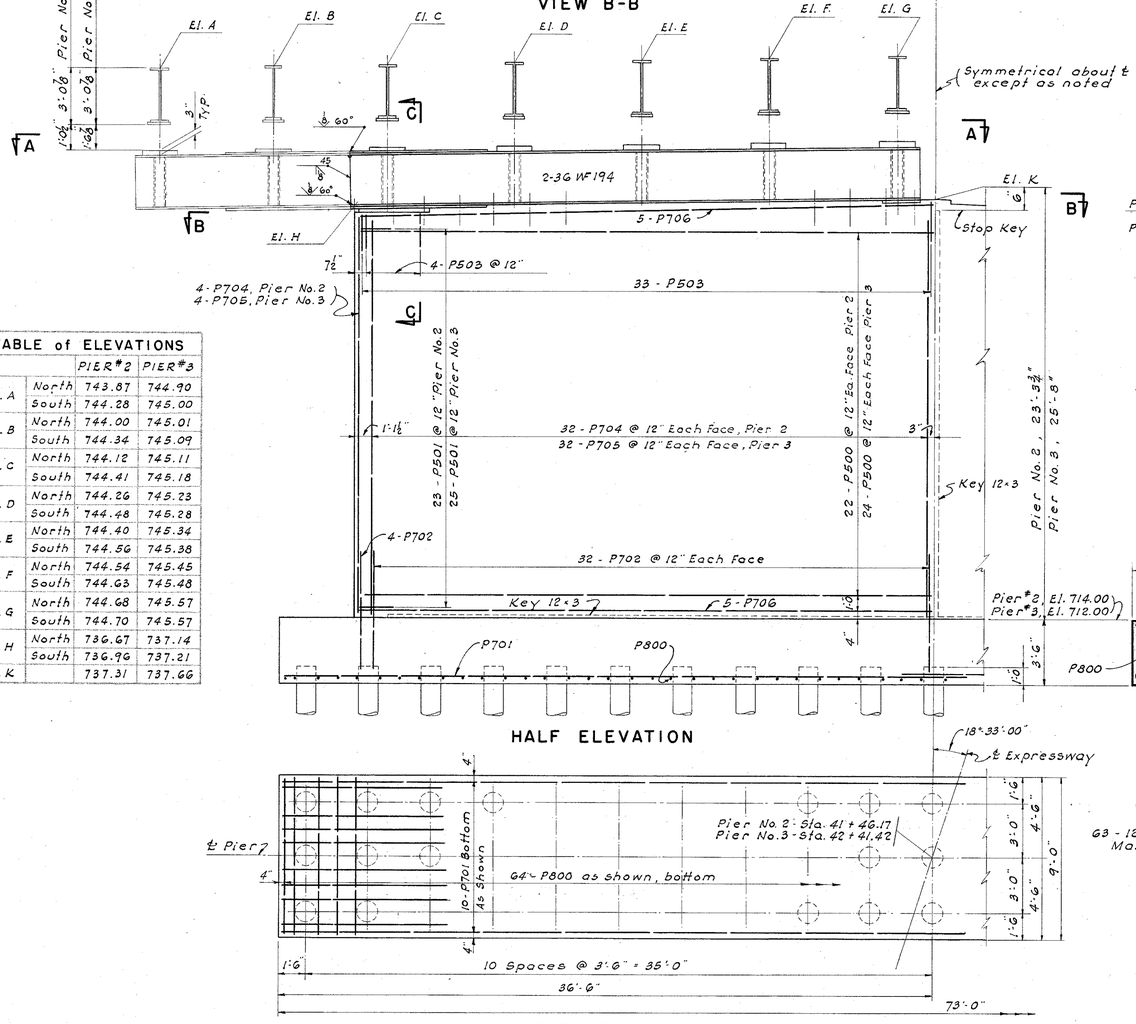
FRANKLIN COUNTY
FRA-40R-12.30



VIEW A-A



VIEW B-B



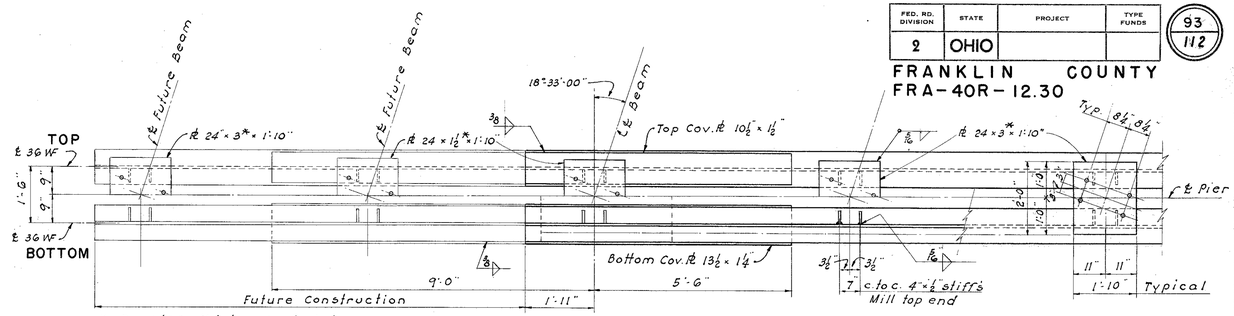
HALF ELEVATION

SECTION

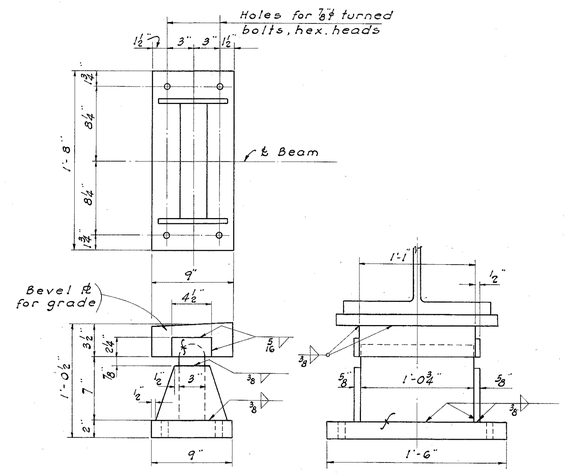
TABLE of ELEVATIONS			
		PIER #2	PIER #3
El. A	North	743.87	744.90
	South	744.28	745.00
El. B	North	744.00	745.01
	South	744.34	745.09
El. C	North	744.12	745.11
	South	744.41	745.18
El. D	North	744.26	745.23
	South	744.48	745.28
El. E	North	744.40	745.34
	South	744.56	745.38
El. F	North	744.54	745.45
	South	744.63	745.48
El. G	North	744.68	745.57
	South	744.70	745.57
El. H	North	736.67	737.14
	South	736.96	737.21
El. K		737.31	737.66

HALF FOOTING PLAN

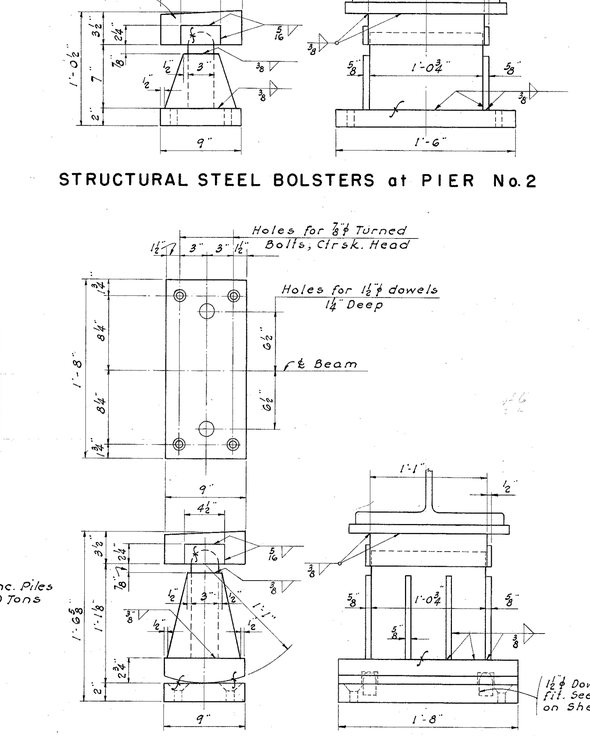
G3 - 12"ϕ Cast in place conc. Piles
Maximum Loading = 40 Tons



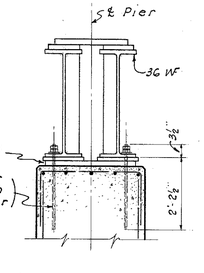
PARTIAL PLAN
PIER BEAM DETAILS



STRUCTURAL STEEL BOLSTERS at PIER No. 2



STRUCTURAL STEEL ROCKERS at PIER No. 3



SECTION C-C

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

PIERS No. 2 & 3
BRIDGE No. FRA-40R-1255
MOUND STREET EXPRESSWAY OVER
C. & O. RY & N.Y.C. R.R.

FRANKLIN COUNTY
SEC. FRA.-40R-12.30 STA. 41+57.67

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.P.	J.P.	R.S.	R.D.M.	T.L.U.	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

94
112

FRANKLIN COUNTY
FRA-40R-12.30

Note: All chamfers ¾". Cover on all reinf. to be 2" clear except as shown in slab

Symmetrical about ℄ of Expressway

43'-5" Future → To ℄ | 31'-5" | 28'-0"

See Sheet # T2 for Railing Details

Note: First copper drain tube at ends of bridge shall be placed within one foot of end finish. { Omit copper tubes from Sta. 40+85 to Sta. 42+62 on North gutter and from Sta. 40+65 to Sta. 42+72 on South gutter.

S503 bars staggered over piers (see Diagram)

38'-6" Future Roadway | 26'-6" Roadway

S526 in Interior panels
S532 in End panels

S501 @ 18"
S502 @ 18"
S503
S504
S400 @ 18"
Constr. Jt.
Bridge lighting conduit
Bulb L 5×4½×19.1
L 1½×1½×¼ full Length — slope ⅛" per ft.
2½" Asphaltic Concrete Surface Course Item 7-35 laid in two 1½" courses
Type "C" Waterproofing
7 equal spaces (Top) 8-S504
S500 @ 6" (normal to strs.
S500 @ 6"
Profile Grade
S401 @ 18"
S504
3"R.
(Cam) 1'-7"
(Drip Groove 1" Dia. ½ round
8" Conc. Slab
9" Haunch (all beams)
8 spaces @ 8½" (Bottom) 9-S504
Drip Groove 1" Dia. ½ round
(Copper Drain Tube see Sec. S29.08
2:1
1" Clear
11½

Note: Conduits and conduit supports on south side only.

L 4×4×⅜ in this bay only
6-4½ O.D. Conduits @ 6" c.c.

6'-0" | 6'-0" | 6'-9" | 6'-9" | 6'-9" | 6'-9" | 2'-0"

Intermediate cross frame Ls 3×3×5/16 Weld both sides of vert. leg and one side of hor. leg to beam webs with ¼" continuous fillet weld.

TRANSVERSE HALF SECTION

℄ Pier
21'-6" | 18'-6" | 18'-6" | 21'-6"

S503 BAR STAGGER DIAGRAM

Provide 2" separation between inclined and bottom cross frame Ls

SECTION A-A

327'-6"
57'-0" | 95'-3" | 95'-3" | 80'-0"
3 @ 14'-0" = 42'-0" | 6 @ 13'-4" = 80'-0" | 6 @ 13'-4" = 80'-0" | 5 @ 13'-0" = 65'-0"

Front Face of Abutment Backwall
N
Back ℄
18°-33' Skew
Field Splices
End Cross Frames see Sheet # T3
L 4×4×⅜ equal spaces between cross frames (supports for conduits)
℄ Bearing West Abutment Use Std. Rocker No. R-100 at all beams (Bevel Upper Plate for Grade)
3G WF 150 | 3G WF 230 | do.
℄ Pier #1 | ℄ Pier #2 | ℄ Pier #3
14'-6"
First Pour | Second Pour | Third Pour | Fourth Pour
Keyed constr. joint in deck slab (at end of all pours) Square off at parapet line.
℄ Bearing East Abutment Use Std. Rocker No. R-100 at all beams
2@6'-9" = 27'-0" Initial Construction
2@6'-0" = 12'-0" Future Constr.
2@6'-0" = 12'-0" Future Constr.

STEEL FRAMING PLAN
SHOWING SLAB POURING SEQUENCE

℄ Bearing
1-S523 Top
1-S619 Bott.
S517 to S522 as shown Top
S613 to S618 as shown Bottom
1-S525 Top
1-S621 Bott.
1-S524 Top
1-S620 Bott.
S506 to S516 @ 6" Top
S602 to S612 @ 6" Bott.
G37-S500 @ 6" Top
G37-S600 @ 6" Bott.
℄ Expressway
S517 to S522 as shown Top
S613 to S618 as shown Bott.
1-S505 Top
1-S601 Bott.
S506 to S516 @ 6" Top
S602 to S612 @ 6" Bott.
G37-S500 @ 6" Top
G37-S600 @ 6" Bott.

TRANSVERSE SLAB BARS
WEST END SHOWN
EAST END OPPOSITE

℄ Pier #1 ℄ Splice
No Welding
Bott. Fl.
Top Pl.
SECTION B-B
14'-6" | 14'-6"
Fl. 10½" × 1½" × 29'-0"
3G WF 150
See Section C-C on Sheet # T2
3G WF 230
Fl. 14"×1¼"
14'-6" | 14'-6"
℄ Pier ℄ Splice
Top Fl.
SECTION C-C
@ Pier #2
@ Pier #3
14'-6" | 14'-6" | 12'-0" | 14'-6" | 14'-6"
15"×⅞"×29'-0" @ Pier #2
15"×⅞"×26'-6" @ Pier #3
cope webs to 1" R.
45°
60°
18"×1"×29'-0" @ Pier #2
18"×1"×26'-6" @ Pier #3

SPLICE DETAILS

Beam Splicing Procedure

1. Raise end of beam ½" at west abutment & 3" at pier 2
2. Make splice at Pier 1 in the following manner: The flanges and web are to be welded concurrently by first making one pass in the flanges followed by one pass in the web, and then repeat this cycle as many times as necessary to complete the splice as detailed on this drawing. Since the web is the thinner part, the last passes will be in the flanges. After the butt weld is completed the moment plates will be welded. Lower beams.
3. Raise end of beam 4½" at Pier 3.
4. Make splice at Pier 2 in the same manner as at Pier 1
5. Lower end of beam at Pier 3.
6. Raise end of beam 3" at the East Abutment.
7. Make splice at Pier 3 in the same manner as at Pier 1.

DEFLECTION AND CAMBER

	INTERIOR BEAMS & BEAMS AT MEDIAN			EXTERIOR BEAMS UNDER SAFETY CURB		
Size of Beam	3GWF150	3GWF230	3GWF230	3GWF150	3GWF230	3GWF230
Length of Span	57'0"	95'3"	80'0"	57'0"	95'3"	80'0"
Deflection due to Dead Load of Beam	0.061	0.098	0.244	0.061	0.098	0.244
Deflection due to Remaining Dead Load	0.374	0.417	1.040	0.648	0.695	1.740
Sum of Deflections	0.435	0.515	1.334	0.709	0.793	1.984
Vertical Curve	0.403	1.492	1.051	0.403	1.492	1.051
Deflection + Vertical Curve	0.838	2.007	2.385	1.112	2.285	3.035
Required Shop Camber	⅞"	2"	2⅜"	1⅛"	2⅜"	3 1/16"

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE No. FRA-40R-1255
MOUND STREET EXPRESSWAY OVER C. & O. RY & N.Y.C. R.R.

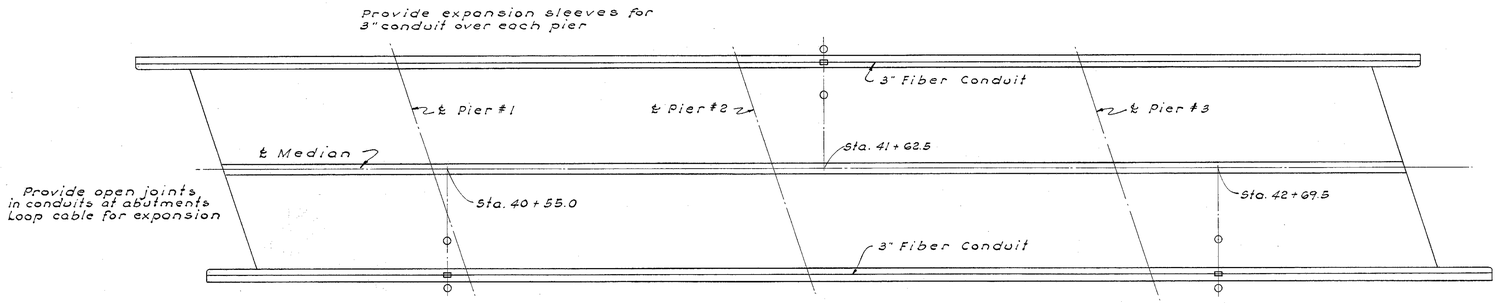
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 41+57.67

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
R.D.M.	P.C.	T.A.B.	V.B.	T.L.U.	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

95
112

FRANKLIN COUNTY
FRA-40R-12.30



GENERAL PLAN of CONDUIT and LAMP SPACING for BRIDGE LIGHTING

BRIDGE LIGHTING NOTES

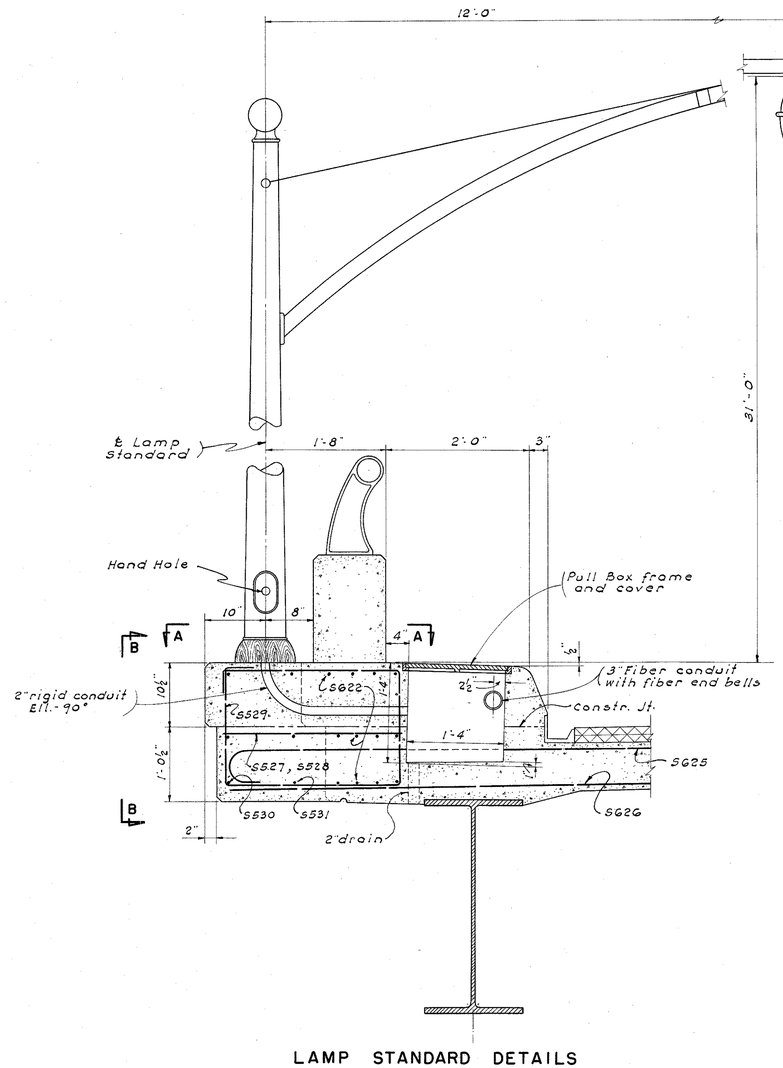
SCOPE OF CONTRACT :
This contract includes furnishing and installing of lamp standards, pull boxes & conduit.

CONDUIT :
Fiber conduit shall be 3" fiber type similar to Orangeburg Fiber Conduit, Standard Type I, or an approved equal, with fiber end bells at pull boxes, ends of superstructure and faces of backwall.

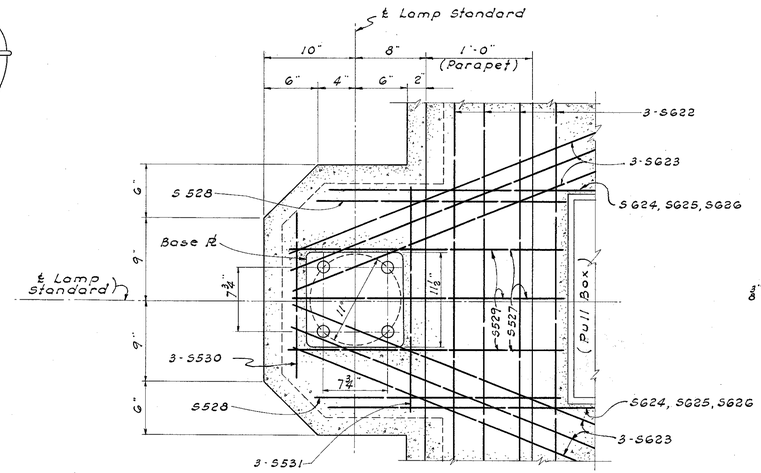
LAMP STANDARDS :
On bridge shall be Union Metal Mfg. Co's. Round Monotube Steel Pendent Anchor Base Type Design No. 404-H300-E1 with handhole, or an approved equal.

LAMP STANDARD PAINT :
The finish paint shall be one coat of paint meeting the requirements of Supplemental Specification M-109.23. Cost of painting shall be included with Item S-25.

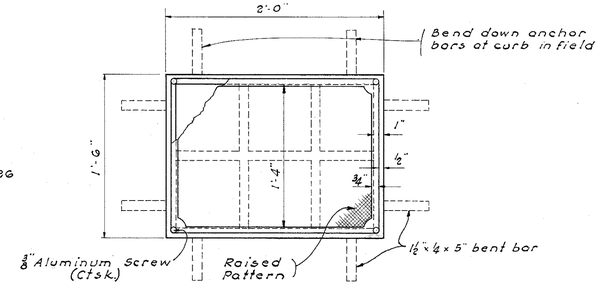
PULL BOX FRAME AND COVER ASSEMBLY :
shall meet the pertinent sections of Supplemental Specification No. S-114.

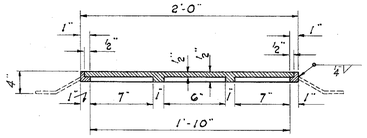


LAMP STANDARD DETAILS

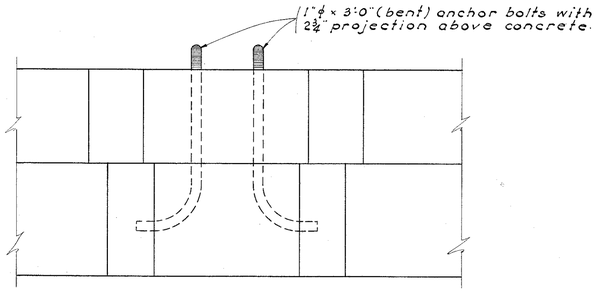


SECTION A-A





PULL BOX FRAME and COVER
Cast Aluminum 3 Req'd



VIEW B-B

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

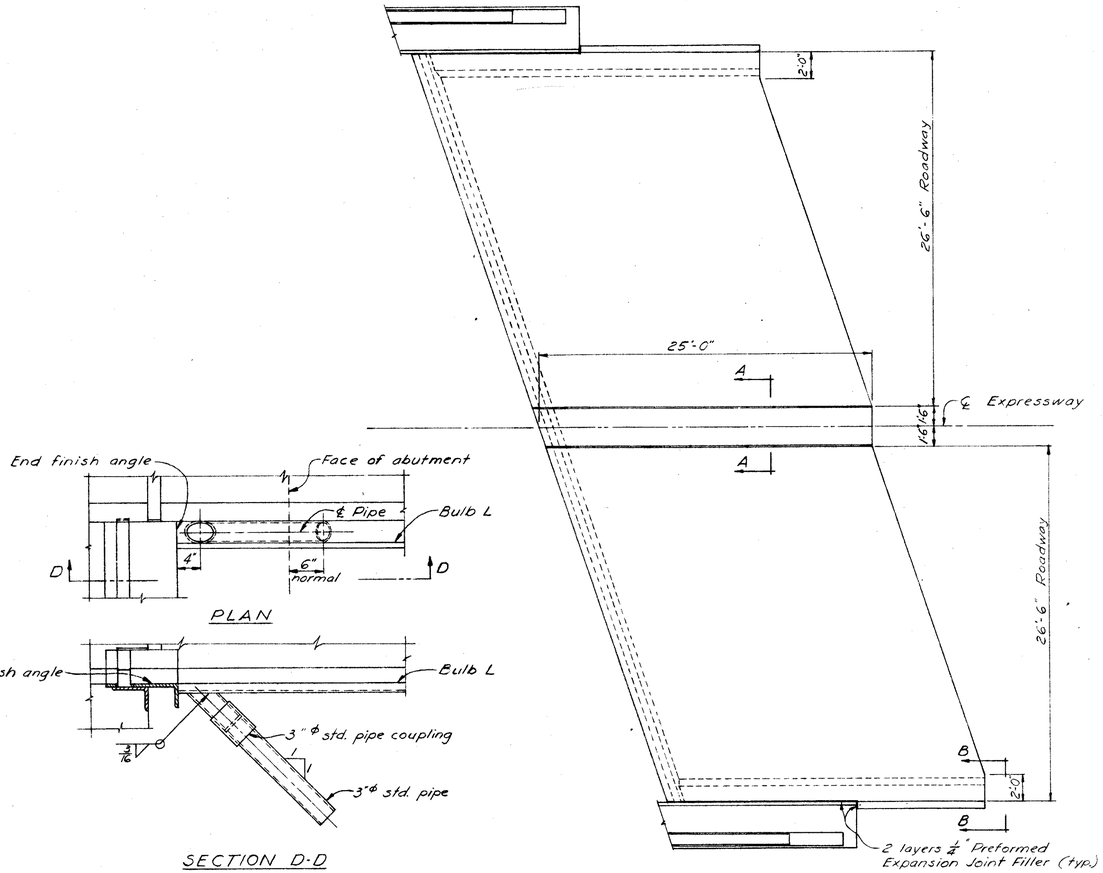
BRIDGE LIGHTING
BRIDGE No. FRA-40R-1255
MOUND STREET EXPRESSWAY OVER
C. & O. RY. & N.Y.C. R.R.
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 41+57.67

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
P.C.	P.C.	R.S.	R.D.M.	T.L.U.	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

96/112

FRANKLIN COUNTY
FRA-40R-12.30

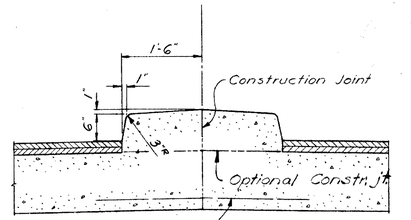


PLAN

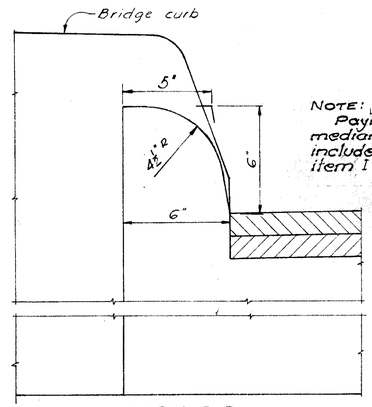
PLAN

SECTION D-D

END SCUPPER DETAILS



SECTION A-A

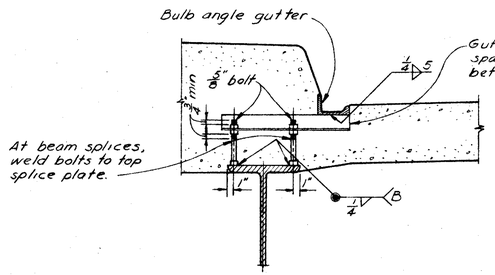


VIEW B-B

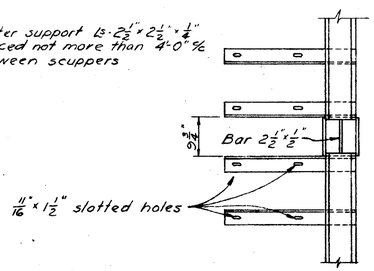
NOTE:
Payment for transition curb and thickened median section on approach slab shall be included in unit price bid per Sq. Yd. for item I-7.

Reference shall be made to Standard Drawing AS-1-54 Revised 12-1-54 for details not shown.

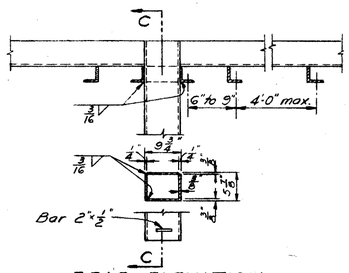
APPROACH SLAB DETAILS



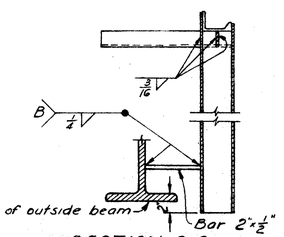
GUTTER SUPPORT



PART PLAN



REAR ELEVATION



SECTION C-C

GUTTER SUPPORT AND SCUPPER DETAILS

GUTTER AND SCUPPER NOTES

Scuppers shall be spaced as shown on General Plan except when required to meet 6" minimum clearance of cross-frames.

When scupper spacings exceed 25 ft., milled joints will be permitted in bulb angles, but individual lengths shall be made as long as practicable.

Support angles shall be placed 6" to 9" on each side of joints.

Gutters shall be accurately adjusted for alignment and grade, with allowance for dead load deflection, before concrete is placed.

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

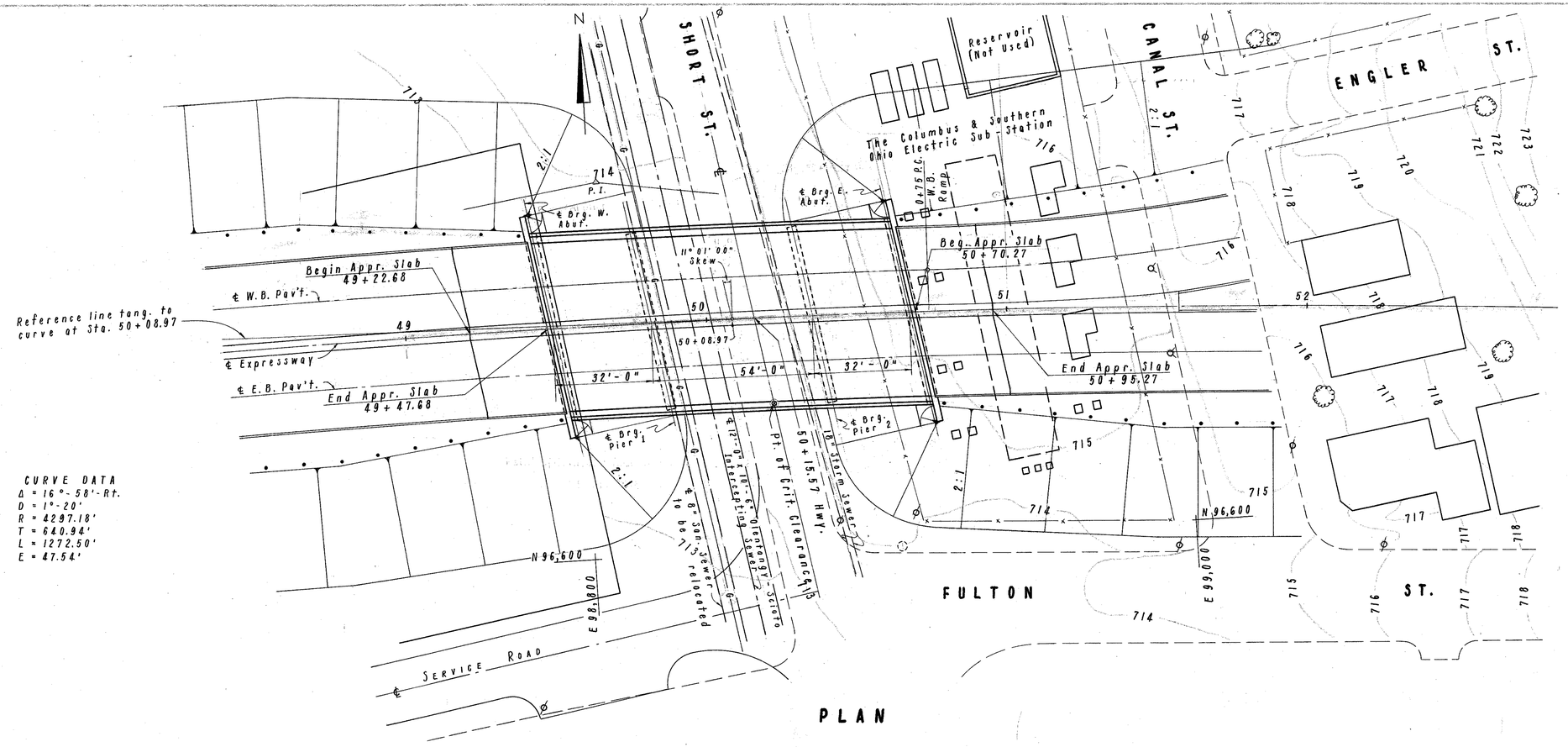
APPROACH SLAB & SCUPPER DETAILS.
BRIDGE NO. FRA-40R-1255
MOUND STREET EXPRESSWAY OVER
C. & O. RY. & N.Y.C. R.R.
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 41+57.67

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Wisse	Wisse		F.L.U.	W.B.	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

97
112

FRANKLIN COUNTY
FRA 40R 12.30



PLAN

CURVE DATA
Δ = 16°-58'-Rt.
D = 1°-20'
R = 4297.18'
T = 640.94'
L = 1272.50'
E = 47.54'

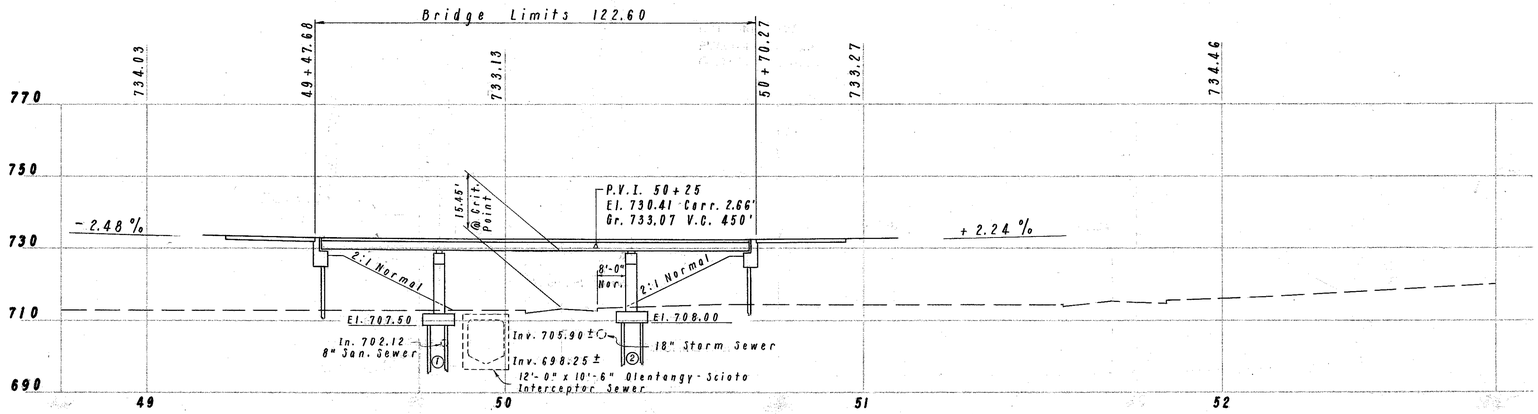
PROPOSED STRUCTURE

Type: Continuous Steel Beams with reinf. conc. deck and substructure.
Spans: 32'-0", 54'-0", 32'-0" c/c brgs. (Along tangent)
Roadway: 56' f/f 2'-0" safety curbs with median (3'-0" f/f curbs), conc. parapet and aluminum railing.
Loading: CF-2000
Wearing Surface: 2½" Asphaltic Conc.
Skew: 11° 01' 00" Rt. Fwd.
Alignment: 1° 20' Curve Rt.
Superelevation: .023'/ft.
Appr. Slabs: (25' long) See Sheet Nº 100

NOTES

Stringers to be placed parallel to tangent of curve at center of middle span.
Concrete work on curved alignment.

Foundation Soundings:
Foundation design and foundation quantities are based on a study of borings 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.



PROFILE

NOTE: All piling to be 12" Cast-in-Place Reinforced Conc. Piles. Estimated average pay length of abutment piles 50', Pier Nº 1 piles 55' and Pier Nº 2 piles 40'.

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

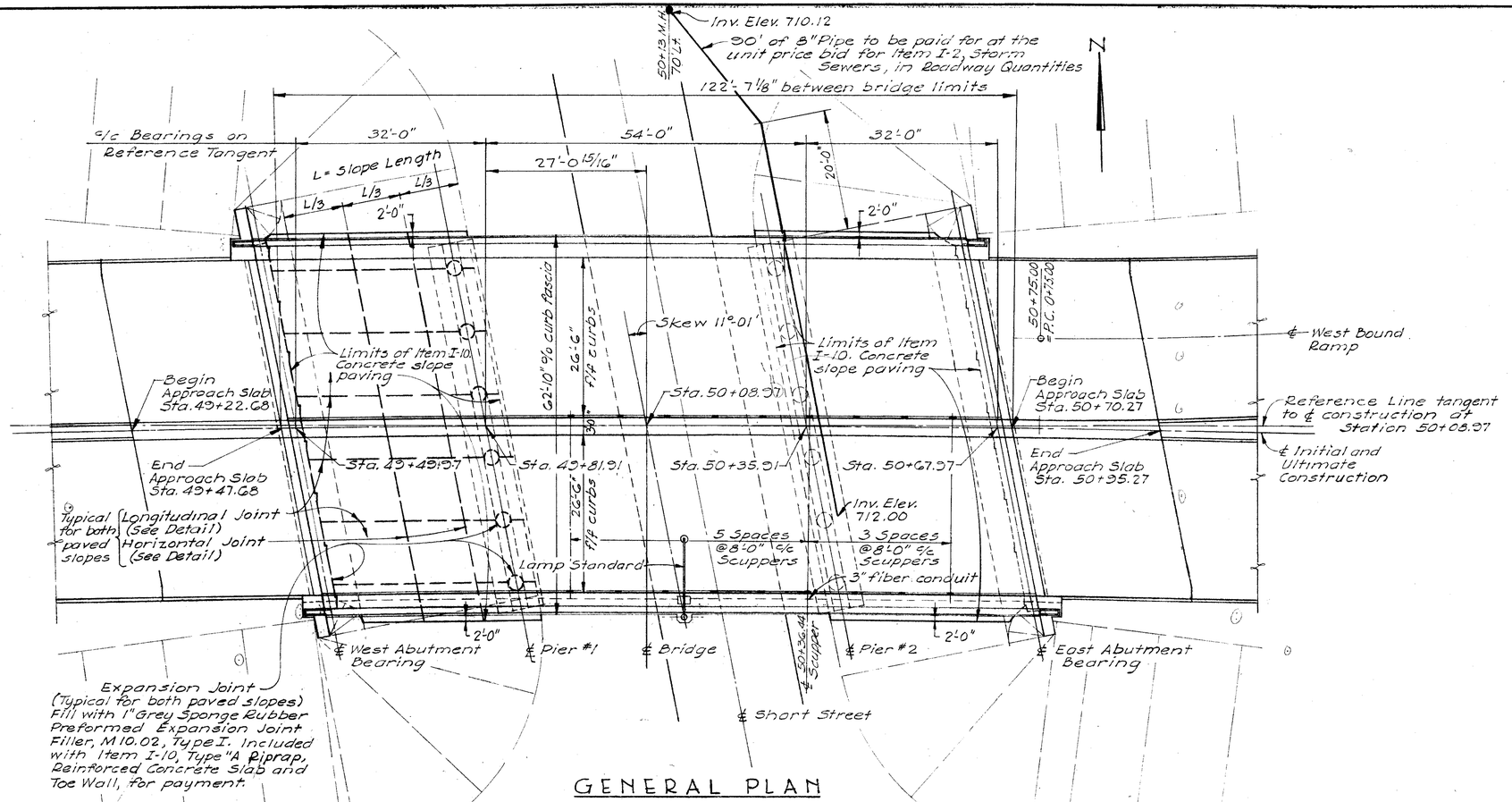
SITE PLAN
BRIDGE NºFRA-40R-1279
MOUND ST. EXPRESSWAY OVER SHORT ST.
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 50+15.57

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
G. Sch.	G. Sch.		C.E.H.	TLU	4-56	

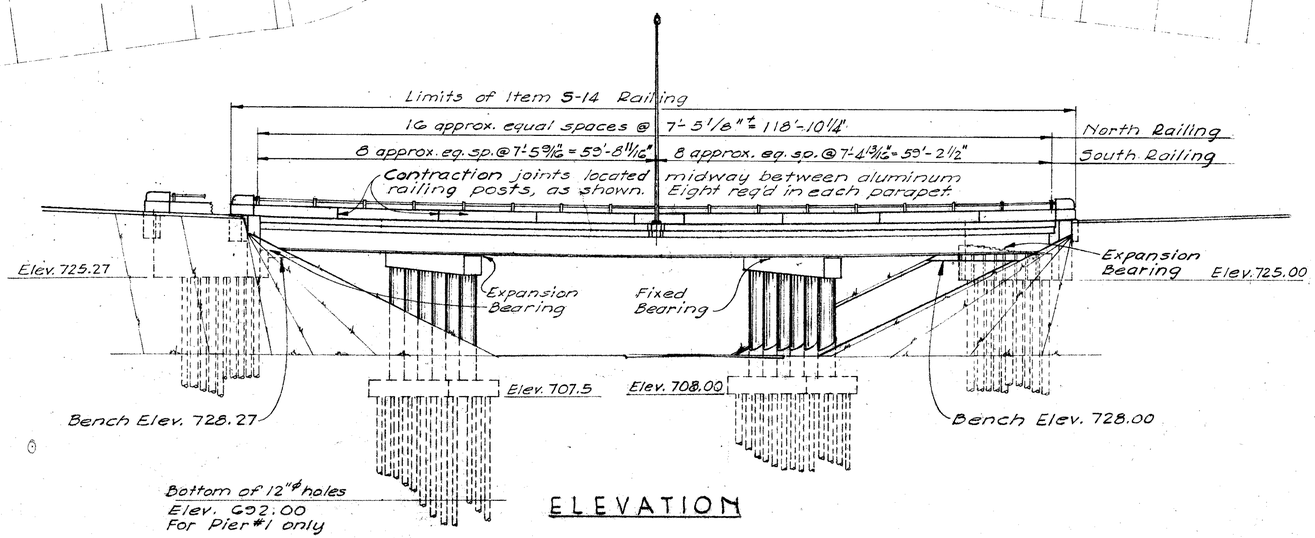
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

38
112

FRANKLIN COUNTY
FRA-40R-12.30

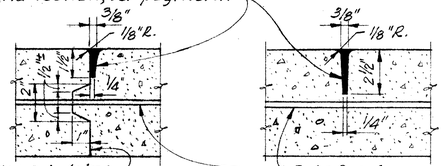


GENERAL PLAN



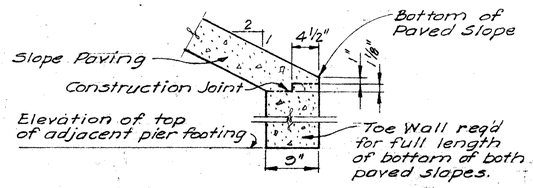
ELEVATION

Joint Sealer meeting the requirments of M 10.23 or M 10.26, included with Item I 10, Type "A" Riprap, Reinforced Concrete Slab and Toe Wall, for payment.



LONGITUDINAL JOINT DETAIL

HORIZONTAL JOINT DETAIL



TOE WALL DETAIL

DETAILS FOR ITEM I-10, TYPE "A" RIPRAP

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

GENERAL PLAN & ELEVATION

BRIDGE NO. FRA-40R-1279
OVER SHORT STREET
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 50+08.37

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
INNES	INNES		J.P.	T.L.U.	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

98 A
112

REFERENCES :

APPROACH SLAB ; STANDARD DRAWING AS-1-54
REVISED 12-1-54 AND AS MODIFIED

RAILING DETAILS ; SHEET No. 72 AND AS MODIFIED

END FINISH AND END CROSS FRAME DETAILS ; SHEET No. 73 EXCEPT AS NOTED.

BEARING DETAILS ; SHEET No. 74

SUPPLEMENTAL SPECIFICATIONS ; S-114 DATED 8-30-55
M-109.23 REVISED 5-28-54

DESIGN SPECIFICATIONS ;

This structure conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated 10-1-51, together with revisions thereof dated 7-15-52, 4-1-54, and 2-1-55.

STRUCTURAL STEEL QUANTITY

Structural steel quantity includes the weight of sheet lead, leaded bronze, wrought iron, (or wrought iron substitutes, namely "Mayari R" or "Corten").

BRIDGE LIGHTING ;

This contract includes furnishing and installing of lamp standards, pull boxes, and conduit.

EXCAVATION QUANTITY ;

Excavation quantity includes the removal of fill material of the abutments between the elevation of the earth bench in front of the abutment and the elevation of the bottom of the abutment.
Excavation for toe wall included with Item 1-10 Type "A" Riprap, reinforced concrete slab and toe wall, for payment.

GRAVEL ;

Gravel if used, as the coarse aggregate for Class "C" concrete shall be according to Section M-3.93 instead of M-3.91. Gravel meeting the requirements of section M-3.93 also may be used for other concrete.

PILING ;

Piling shall be driven to a minimum bearing capacity of 30 tons for the abutments and 40 tons for the piers. The length of penetration of every pile shall be at least 80% of the estimated average pay length of the piles in the pertinent pier or abutment as indicated on the plans unless a lesser penetration is approved by the Director.

PRE-BORING FOR PILES ;

All piles at Pier #1 shall be driven into 12" dia. pre-bored holes. The holes shall be bored to the elevations shown on the plans or to lower elevations, if necessary, to suit field conditions. The cost of pre-boring 12" diameter holes shall be paid for at the unit price bid per lineal foot for Item Special, "Pre-bored Holes for Piles".

SURFACE FINISH OF CONCRETE ;

Parapet faces, curb faces, fascias of deck slab and exposed surfaces of abutments and piers shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

DECK CONSTRUCTION PROCEDURE ;

The deck slab shall be placed in sections in the numerical order and the direction indicated on the steel framing plan.

REINFORCING STEEL

All reinforcing steel shall be 2 inches clear, from the surface of concrete unless otherwise shown.
Splices shall not be less then 30 times the bar diameter.

WELDED STEEL

The steel for the 30 WF 172 beams shall conform to ASTM Designation A-373. All other structural steel shall conform to either ASTM A-7 (as per Sec. M-7.4 (a) of the construction and material specifications) or to A-373.

WELDING ;

Welding of structural steel shall be class "A" except as otherwise shown. Any welds shown as field welds may, at the option of Contractor, be made in the shop.
Class "B" welds shown thus : B

PAINTING ;

Paint, both shop and field, shall be applied by brushing. Spray application will not be permitted.

UTILITIES ;

The utility company concerned will provide all labor and material (including expansion sleeves in abutments) necessary for installation of the lines at the position shown on the plans. However, the contractor shall cooperate with the utility company in the making of the installation.

CONDUIT ;

Fiber conduit shall be 3" fiber type similar to Orangeburg Fiber Conduit, Standard Type 1, or an approved equal, with fiber end bells at pull boxes, ends of superstructure and faces of abutment backwall. Rigid conduit shall be 2" metal conduit. The cost of both fiber and rigid conduit, including end bells and fittings, shall be included with the lump sum price bid for Item S-25, Bridge Lighting, for payment.

LAMP STANDARD ;

Lamp standard shall be Union Metal Manufacturing Company's Round Monotube Steel Pendent Anchor Base Type Design No. 404-Catalog No. H-300-E1 with hand hole, or approved equal. The cost of the lamp standard base and fittings shall be included in the lump sum price bid for Item S-25, Bridge Lighting, for payment.

LAMP STANDARD PAINT ;

The finish paint shall be one coat of paint meeting the requirements of Supplemental Specification M-109.23. Cost of painting shall be included with Item S-25.

TRAFFIC MAINTENANCE :

See sheet no. 5

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

GENERAL NOTES
BRIDGE NO. FRA-40R-1279
OVER SHORT STREET

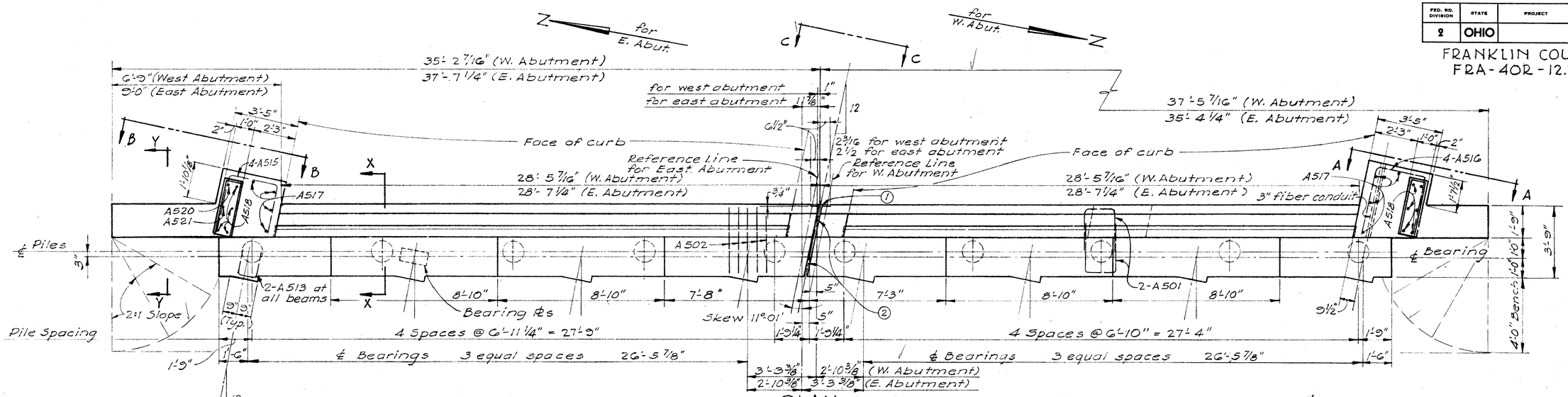
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 50+08.97

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	E.D.A.			TLU	4-5-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

112

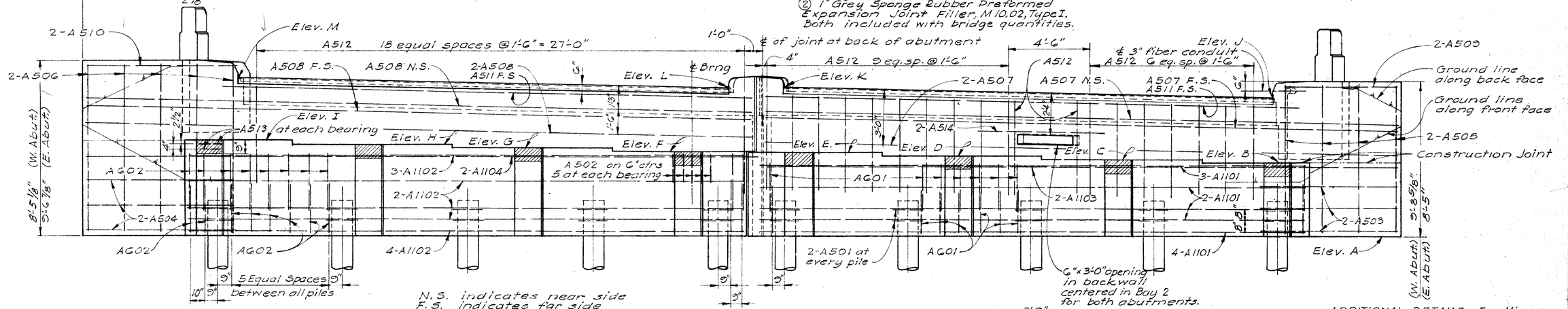
FRANKLIN COUNTY
FRA-40R-12.30



PLAN

① Premolded Sealing Strip to extend from bottom of abutment to height of approach slab seat.
② 1" Grey Sponge Rubber Preformed Expansion Joint Filler, M 10.02, Type I. Both included with bridge quantities.

3" fiber conduit to be provided in south curb only for both abutments.

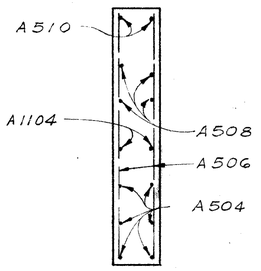


N.S. indicates near side
F.S. indicates far side

ELEVATIONS

Elev.	West Abutment	East Abutment
A	725.27	725.00
B	730.61	729.00
C	730.39	729.19
D	730.18	729.38
E	729.96	729.57
F	729.91	729.62
G	729.70	729.81
H	729.48	730.00
I	729.27	730.20
J	734.11	732.54
K	733.45	733.12
L	733.47	733.10
M	732.82	733.69

Elevations J, K, L and M are roadway elevations at face of curb and face of backwall.



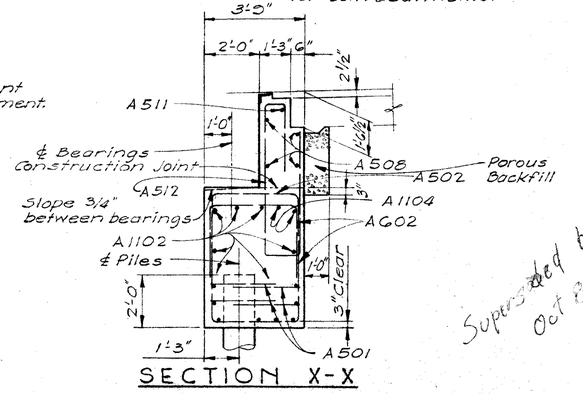
SECTION Y-Y

ELEVATION

East Abutment Shown
Bars shown for east abutment are opposite hand for west abutment.

EMBANKMENT & EXCAVATION: All earth fill at abutment locations shall be made to full height of the earth bench. Excavation shall then be made for the abutment, after which piling shall be driven.

POURING BACKWALL: Concrete for backwall shall not be placed until steel work is erected. Steel end finish shall be used as a template for the top of the backwall.



SECTION X-X

ADDITIONAL DETAILS: For Views A-A, B-B and C-C see sheet № 100.

SHADED AREAS on abutment face (9" x 1'-6" centered at each beam) shall be finished with particular care to provide plane surfaces at right angles with the grade of the structure and the centerline of the beams, insuring full bearing for bumper angles.

Superseded by 99R Oct 8, '56

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

ABUTMENT DETAILS
BRIDGE NO. FRA-40R-1279 OVER SHORT STREET

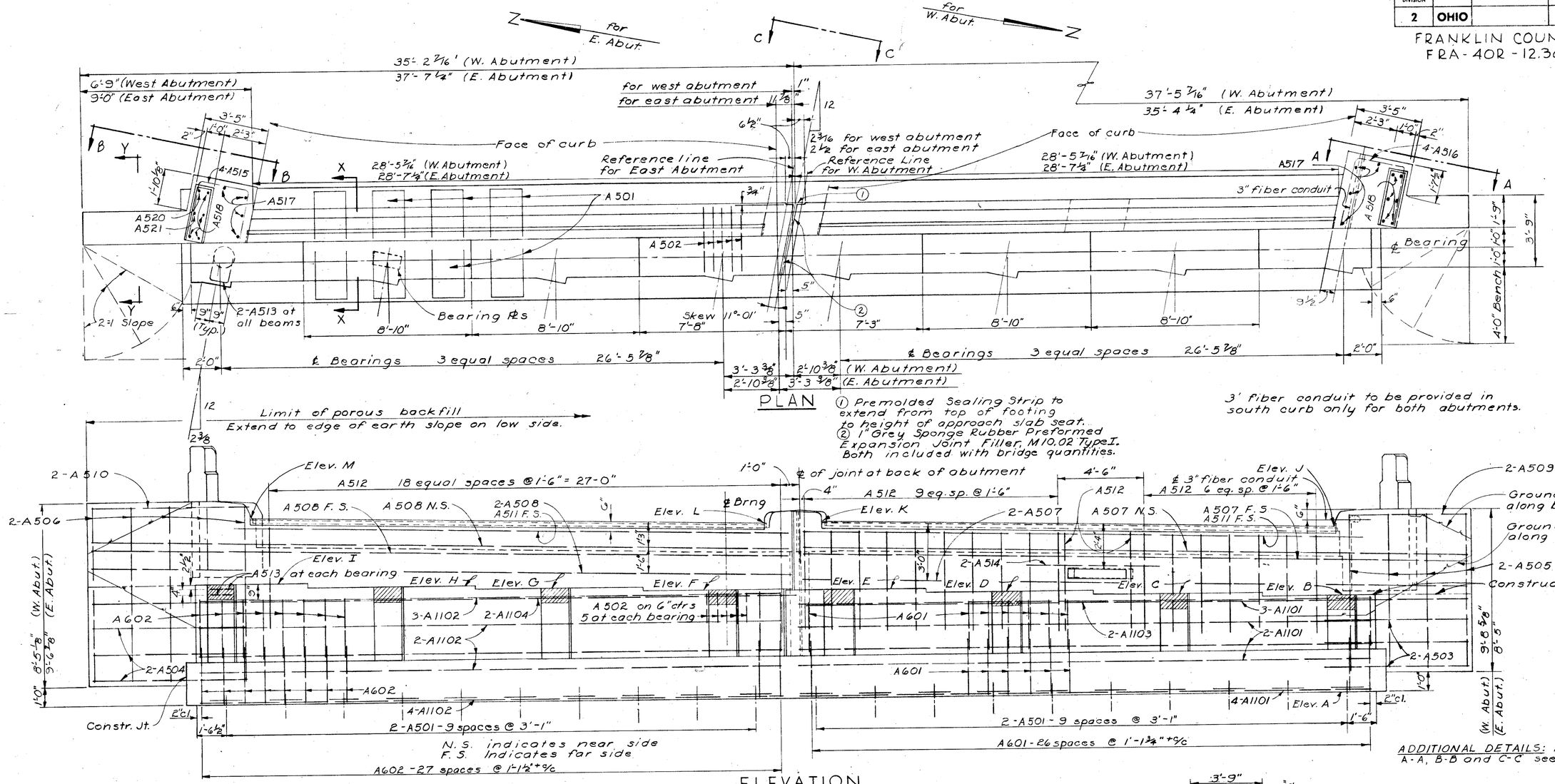
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 50+08.97

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
INNES	INNES		J.R.	T.L.D.	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

99 R 112

FRANKLIN COUNTY
FRA-40R-12.30



ELEVATION

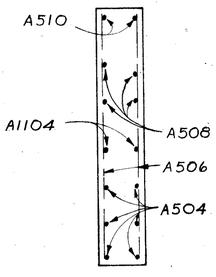
East Abutment Shown
Bars shown for east abutment are opposite hand for west abutment.

① Premolded Sealing Strip to extend from top of footing to height of approach slab seat.
② 1" Grey Sponge Rubber Preformed Expansion Joint Filler, M10.02 Type I.
Both included with bridge quantities.

3' fiber conduit to be provided in south curb only for both abutments.

ELEVATIONS		
Elev.	West Abutment	East Abutment
A	724.27	724.00
B	730.61	729.00
C	730.39	729.19
D	730.18	729.38
E	729.96	729.57
F	729.91	729.62
G	729.70	729.81
H	729.48	730.00
I	729.27	730.20
J	734.11	732.54
K	733.45	733.12
L	733.47	733.10
M	732.82	733.69

Elevations J, K, L and M are roadway elevations at face of curb and face of backwall.

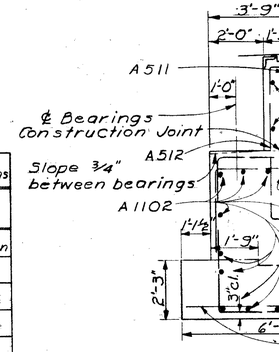


SECTION Y-Y

EMBANKMENT & EXCAVATION:
All earth fill at abutment locations shall be made to full height of the earth bench. Excavation shall then be made for the abutment footing.

POURING BACKWALL:
Concrete for backwall shall not be placed until steel work is erected. Steel end finish shall be used as a template for the top of the backwall.

Estimated Quantities Additions or Deductions				
Item	Total Add	Total Deduct	Unit	Description
E-2	72	..	C.Y.	Unclassified Excavation
S-1		20	C.Y.	Class 'E' Concrete, Abutments
S-1	60		C.Y.	Class 'E' Concrete, Footings
S-3		2	L.F.	Waterproofing, Premolded Sealing Strip
S-9		8	S.F.	1" Grey Sponge Rubber Preformed Expansion Joint Filler
S-18		1000	L.F.	12" Cast-in-place Reinforced Concrete Piles



SECTION X-X Revised 9-28-56

ADDITIONAL DETAILS: For Views A-A, B-B and C-C see sheet No 100.

SHADED AREAS on abutment face (3"×1'-6" centered at each beam) shall be finished with particular care to provide plane surfaces at right angles with the grade of the structure and the centerline of the beams, insuring full bearing for bumper angles.

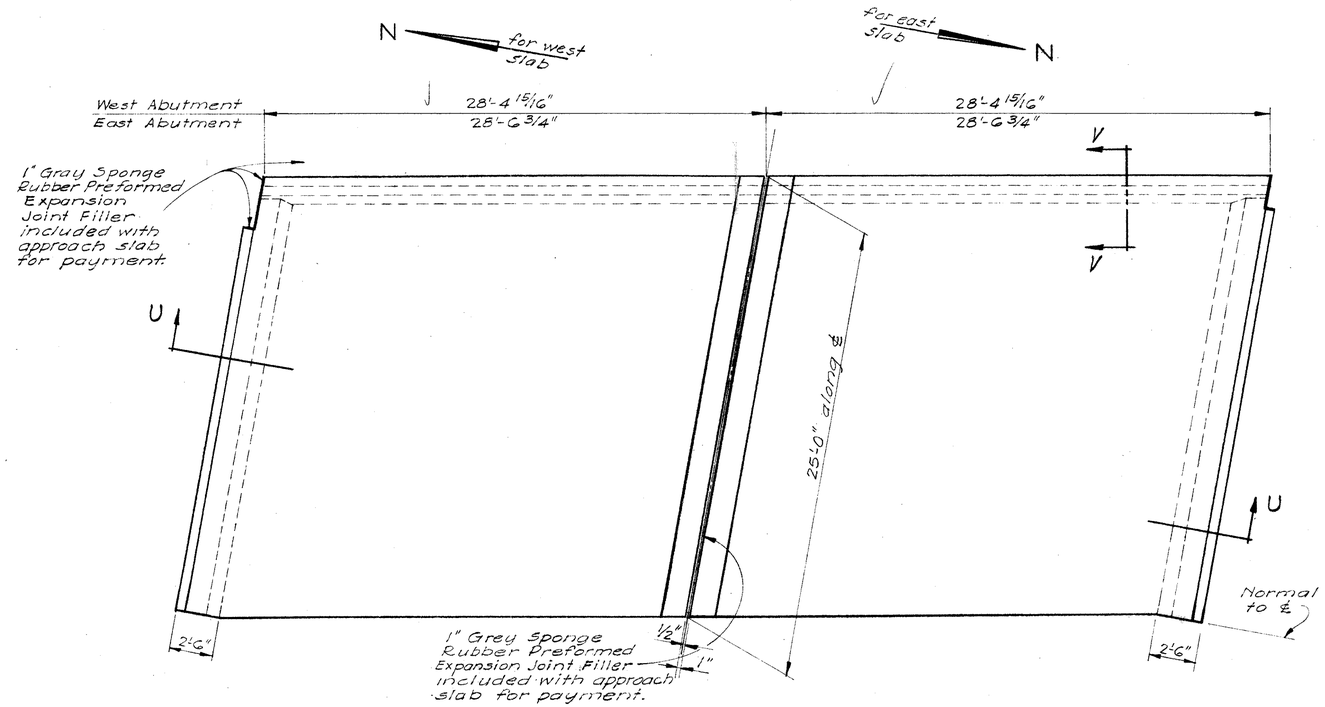
ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

SUPERSEDES SHEET 99 Oct 8, 1956

ABUTMENT DETAILS
BRIDGE NO. FRA-40R-1279 OVER SHORT STREET

FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 50+08.97

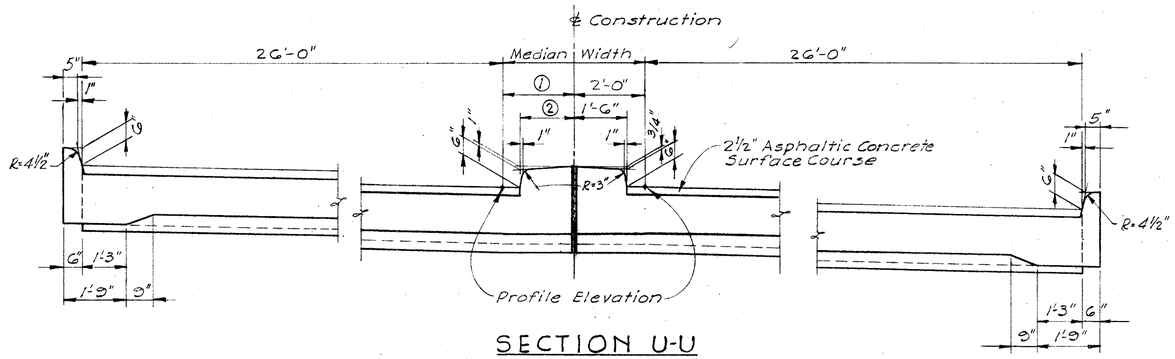
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.R.H.	K.E.A.		J.B.E.	T.L.U.		



PLAN

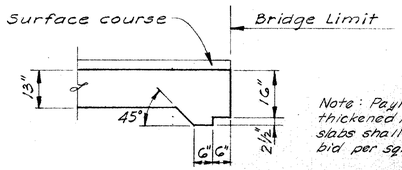
① 2'-0" for west approach slab and from Sta. 50+70.27 to Sta. 50+75.00 of east approach slab. Variable from Sta. 50+75.00 to Sta. 50+35.27 of east approach slab.

② 1'-6" for west approach slab and from Sta. 50+70.27 to Sta. 50+75.00 of east approach slab. Variable from Sta. 50+75.00 to Sta. 50+35.27 of east approach slab.



SECTION U-U

Looking fwd for both abutments



SECTION V-V

Note: Payment for transition curb and thickened median section on approach slabs shall be included in unit price bid per sq.yd. for Item 1-7.

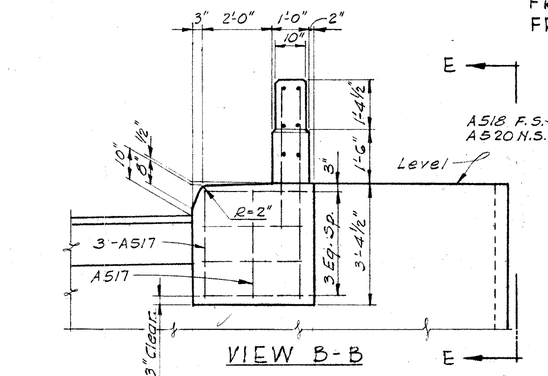
For reinforcing steel and other details not shown hereon, see Standard Drawing AS-1-54 (Rev. 12-1-54).

APPROACH SLAB

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

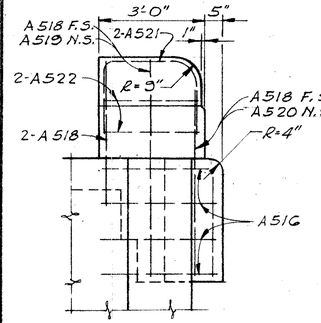
100
112

FRANKLIN COUNTY
FRA-40R-12.30



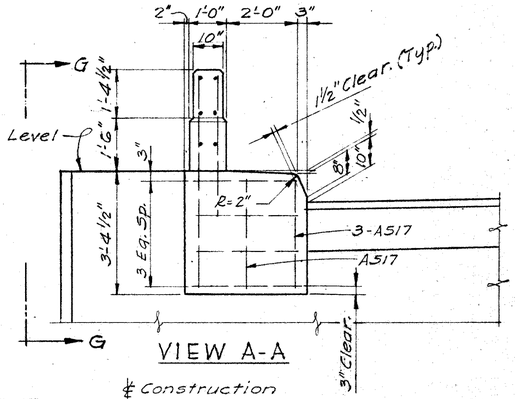
VIEW B-B

VIEW E-E

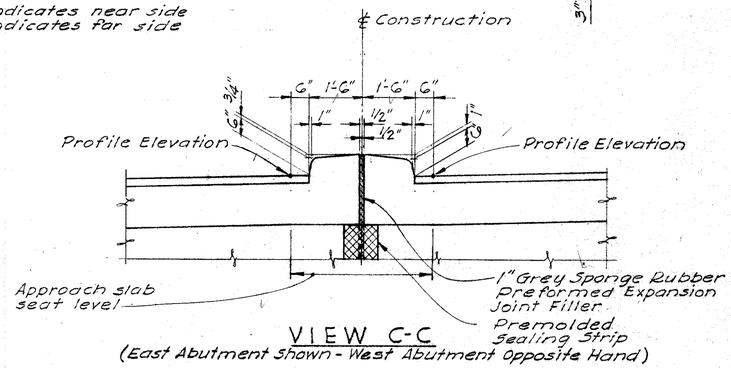


VIEW G-G

N.S. indicates near side
F.S. indicates far side



VIEW A-A



VIEW C-C

(East Abutment Shown - West Abutment Opposite Hand)

ABUTMENT DETAILS

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

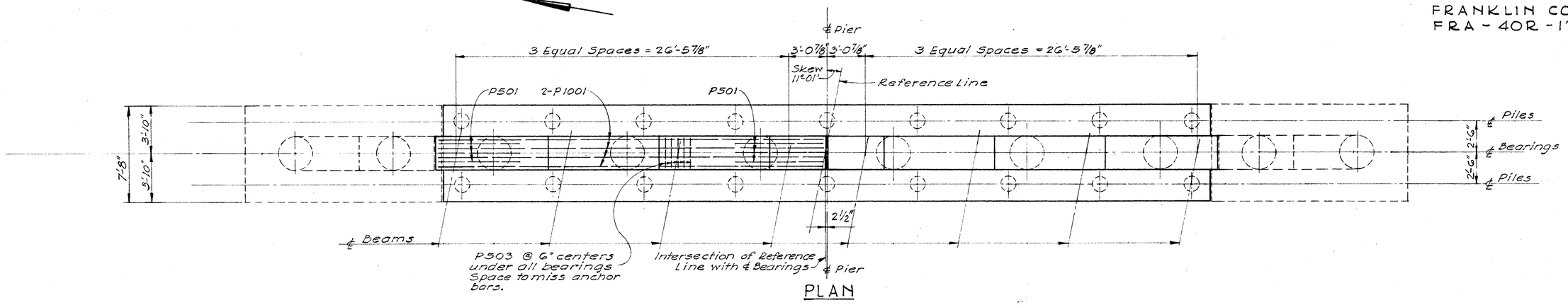
ABUTMENT DETAILS
℄ APPROACH SLABS
BRIDGE NO. FRA-40R-1279
OVER SHORT STREET
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 50+08.97

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
INNES	INNES		J.R	TLV	4-3-56	

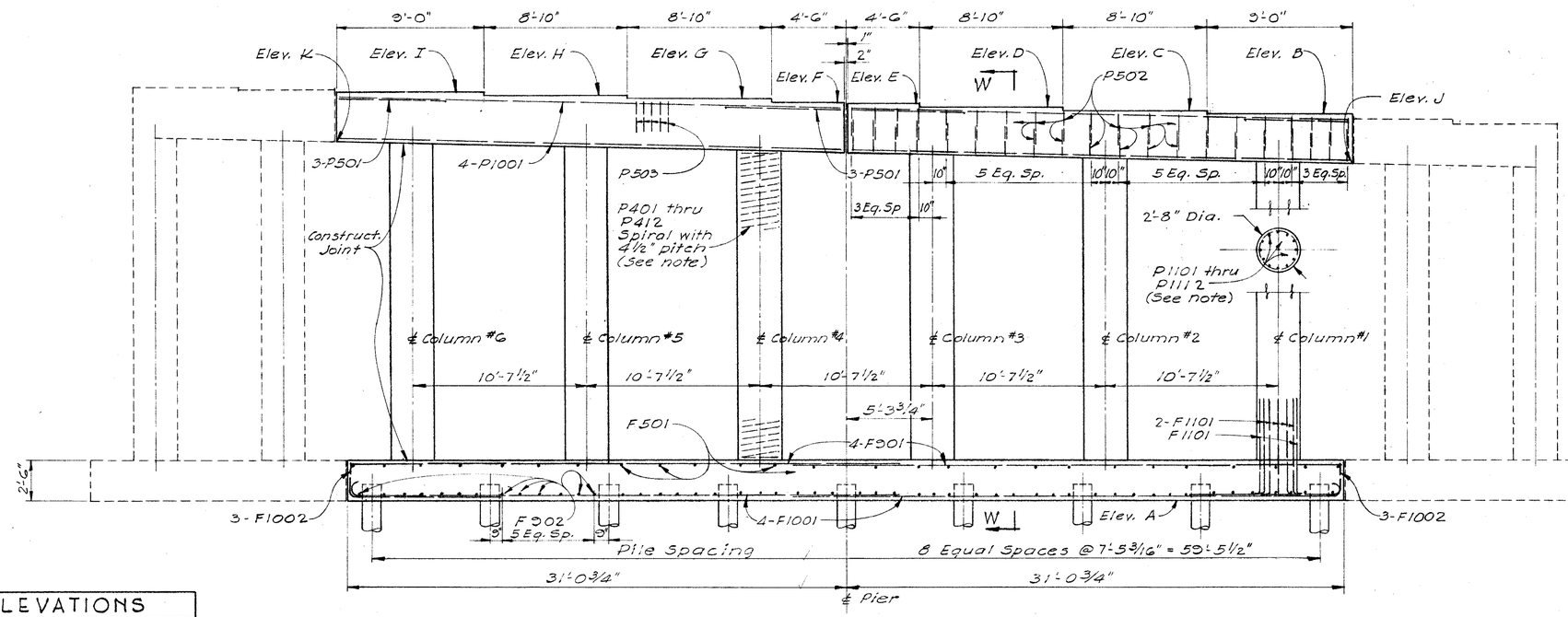
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

101
112

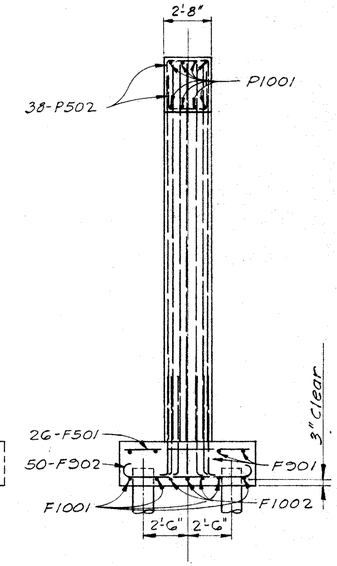
FRANKLIN COUNTY
FRA - 40R - 12.30



PLAN



ELEVATION



SECTION W-W

ELEVATIONS		
Elev	Pier #1	Pier #2
A	707.50	708.00
B	728.99	728.95
C	729.20	729.15
D	729.41	729.35
E	729.62	729.55
F	729.67	729.59
G	729.88	729.79
H	730.09	729.99
I	730.30	730.19
J	725.97	725.93
K	727.32	727.22

The piers are designed to facilitate future widening as shown by the dotted outlines to accommodate a future roadway width of 80'-0" f/f curbs.

DIMENSIONS AND BARS called for on only one side of the pier apply to the other side, unless otherwise noted.
COLUMN ANCHOR BARS, F1101, shall lap with P1100 series bars.
LOCATION OF COLUMN BARS AND SPIRALS

Column No	Pier No 1	Pier No 2
1	P1101 & P401	P1107 & P407
2	P1102 & P402	P1108 & P408
3	P1103 & P403	P1109 & P409
4	P1104 & P404	P1110 & P410
5	P1105 & P405	P1111 & P411
6	P1106 & P406	P1112 & P412

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

PIER DETAILS

BRIDGE NO. FRA-40R-1279
OVER SHORT STREET

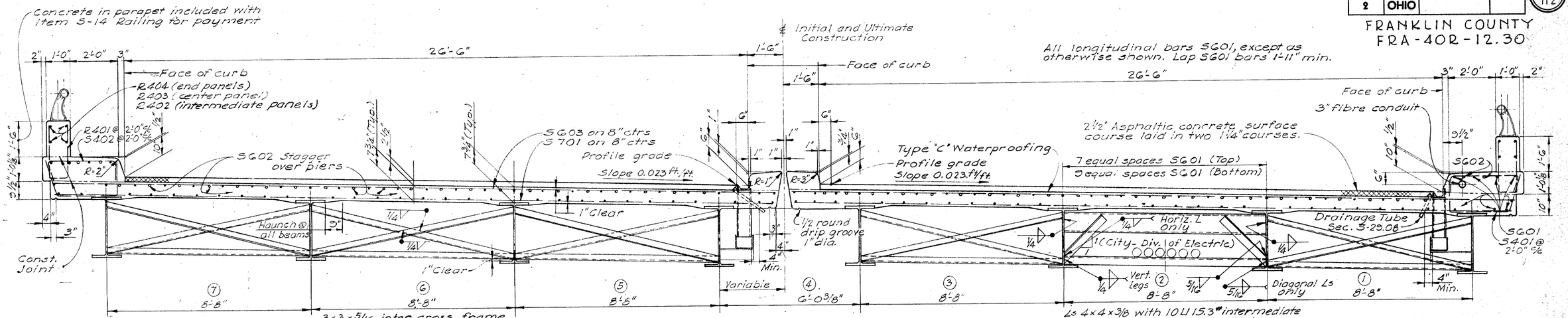
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 50+08.97

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
INNES	INNES		J.P.	TLV	4-5-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

102
112

FRANKLIN COUNTY
FRA-40R-12.30



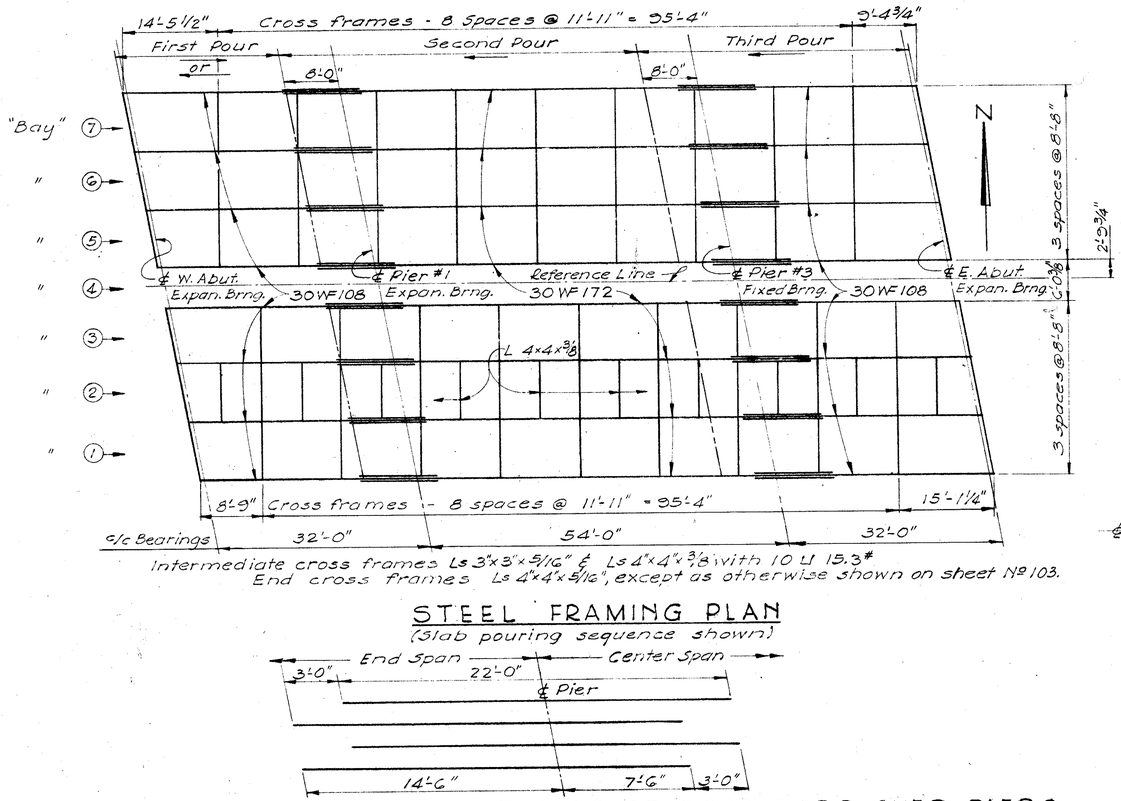
NOTE: Lap S401, S402 & R401 bars with S603 bars.

3 x 3 x 5/16 inter. cross frame Ls in all bays except 2 and 4. Weld both sides of vertical leg and top side of horizontal leg to beam with 1/4" continuous fillet weld.

Place S603 & S701 bars parallel with end finish.

Ls 4 x 4 x 3/8 with 10 U 15.3# intermediate crossframes in Bay 2. Weld as shown. Provide one 4 x 4 x 3/8 horiz. L between each line of cross frames as supplemental utility support.

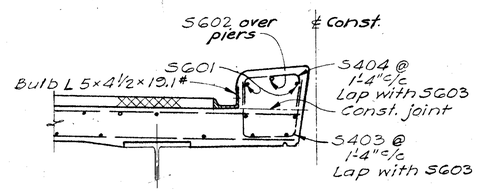
TRANSVERSE SECTION



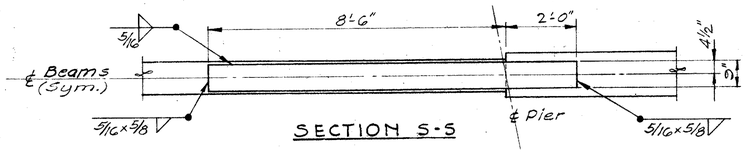
Intermediate cross frames Ls 3"x3"x5/16" & Ls 4"x4"x3/8" with 10 U 15.3#
End cross frames Ls 4"x4"x5/16", except as otherwise shown on sheet Nº 103.

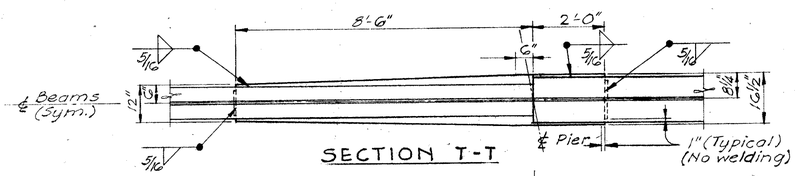
STEEL FRAMING PLAN
(Slab pouring sequence shown)

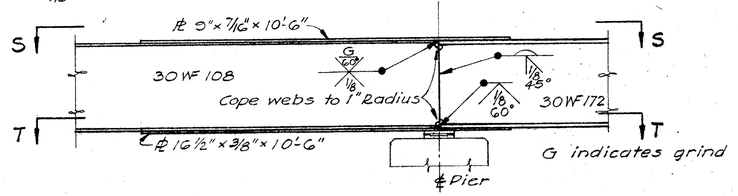
DIAGRAM SHOWING STAGGER OF S602 BARS OVER PIERS



ADDITIONAL MEDIAN DETAILS







BEAM SPLICE DETAILS

DEFLECTION & CAMBER

Location	Outside Beams Under Curbs		Interior Beams & Median Beams	
	End Spans	Middle Spans	End Spans	Middle Spans
Deflection due to weight of steel	0	+ 1/16"	0	+ 1/16"
Deflection due to remaining dead load	0	+ 1/2"	0	+ 3/8"
Camber required for vertical curve	- 3/16"	- 7/16	- 3/16"	- 7/16"
Sum of deflection and camber	- 3/16"	+ 1/8	- 3/16"	0
Required shop camber *	None	None	None	None

* All curved beams will be placed with the convex flange up.

BEAM SPLICE WELDING PROCEEDURE

1. Raise ends of beams 3/8" at abutments.
2. Butt-weld beam flanges and webs at both piers.
3. Weld top and bottom flange moment plates at both piers.
4. Lower ends of beams at abutments.

ADDITIONAL DETAILS:
For additional superstructure details see sheet Nº 103.
For bumper angles see Common Details, sheet Nº 74.
For Drainage Details see sheet Nº 104.

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE NO. FRA-40R-1275 OVER SHORT STREET

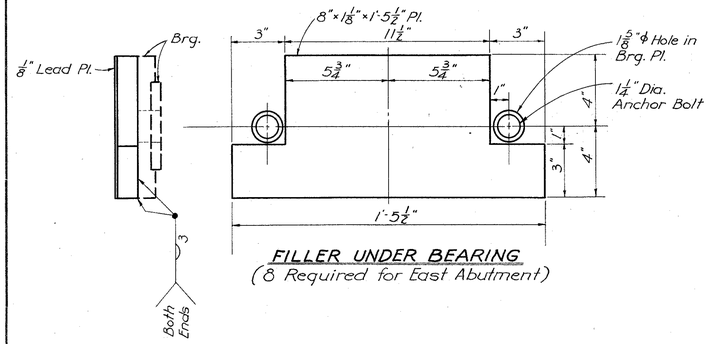
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 50+08.97

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
INNES	INNES		J.R	FLU	4-3-56	

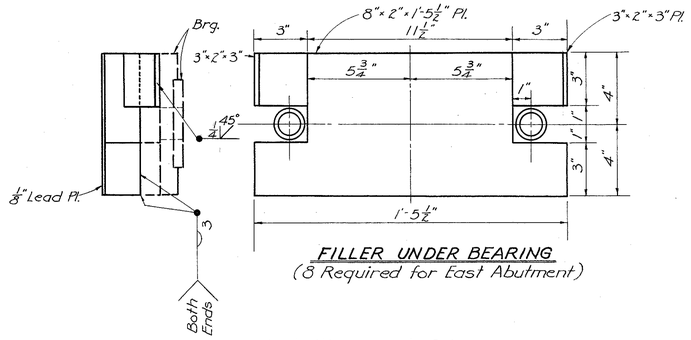
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

102A
112

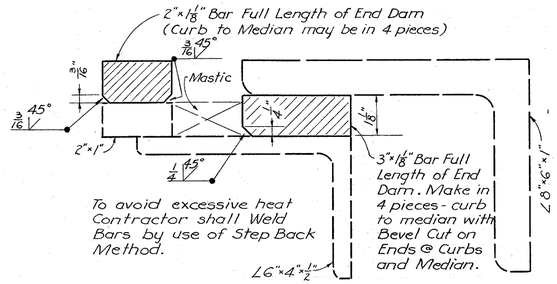
FRANKLIN COUNTY
FRA-40R-12.30



FILLER UNDER BEARING
(8 Required for East Abutment)

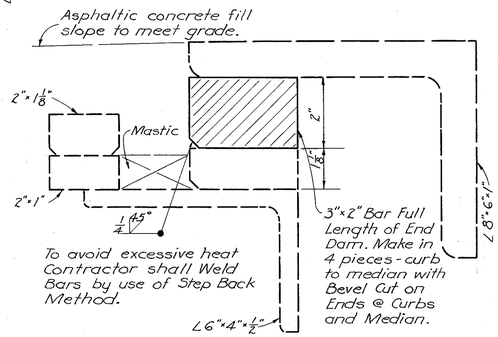


FILLER UNDER BEARING
(8 Required for East Abutment)



END FINISH

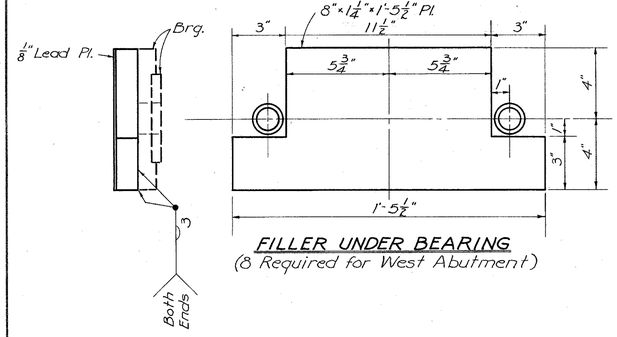
STAGE I
(Performed, July 1958)



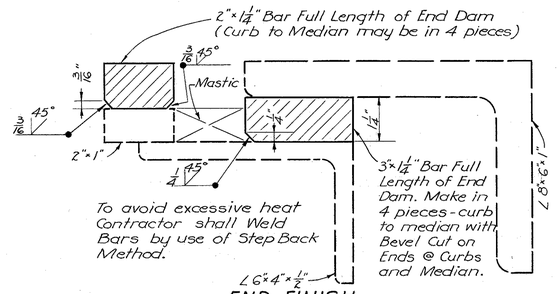
END FINISH

STAGE II
(To Be Performed)

~ EAST ABUTMENT ~



FILLER UNDER BEARING
(8 Required for West Abutment)



END FINISH

~ WEST ABUTMENT ~

(To Be Performed)

Added 10-23-58

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
DIVISION OF DESIGN AND CONSTRUCTION
BUREAU OF BRIDGES

END DAM & BEARING REVISIONS

BRIDGE No. FRA-40R-1279
OVER SHORT STREET
FRANKLIN COUNTY Sta. 50+08.97

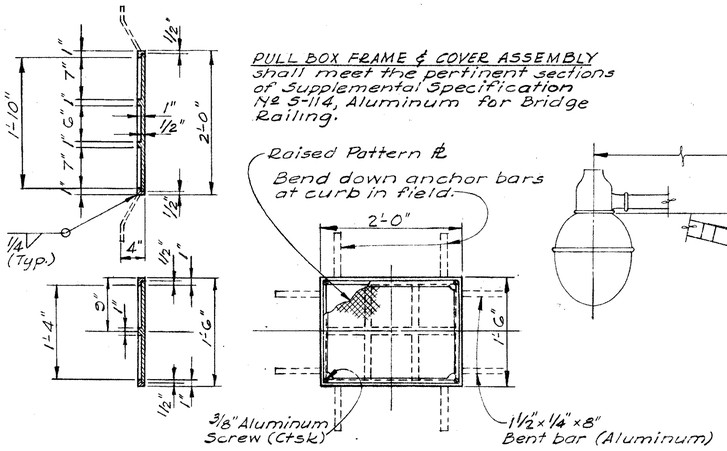
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
FHS		JGW	FHS	A.J.F.	10-23-58	

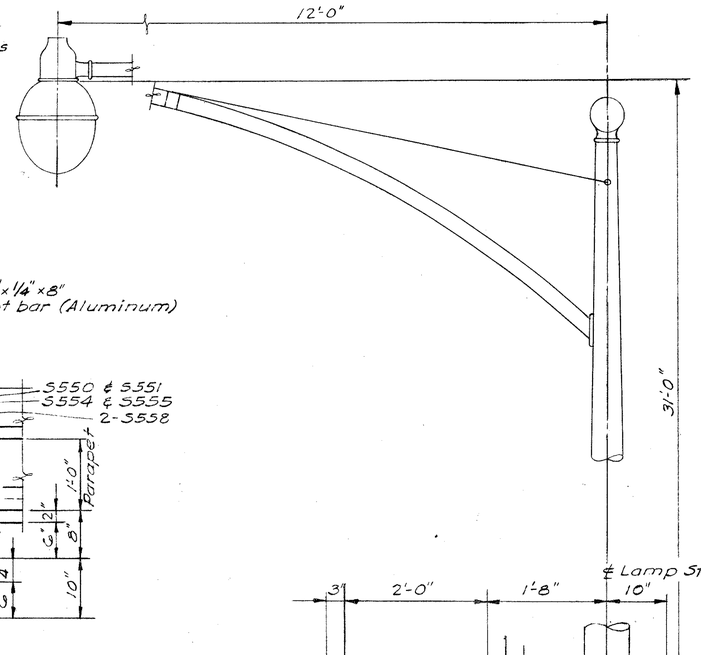
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

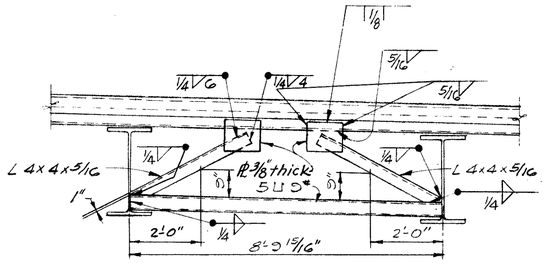
103
112

FRANKLIN COUNTY
FRA-40R-12.30

PULL BOX FRAME & COVER ASSEMBLY
shall meet the pertinent sections of Supplemental Specification Nº 5-114, Aluminum for Bridge Railing.

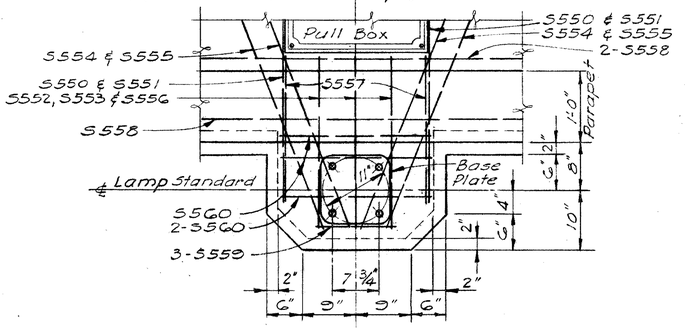




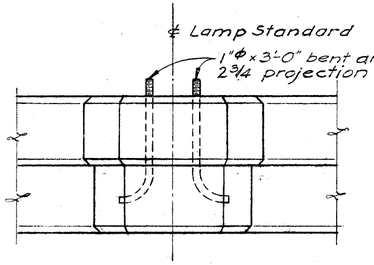


END CROSS FRAMES IN BAY 2
(Section parallel to end finish)

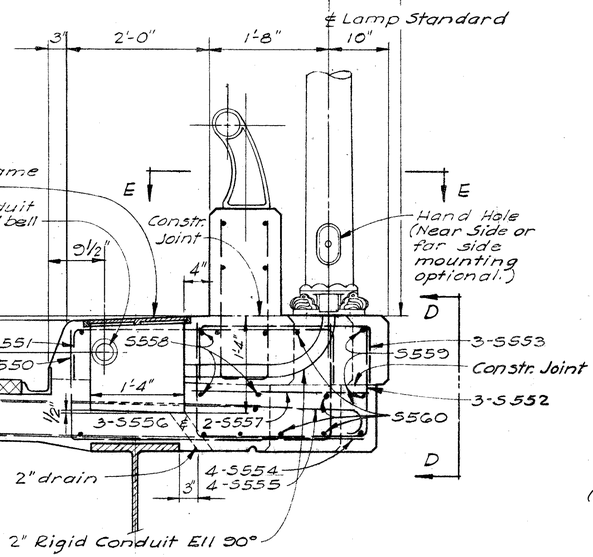
PULL BOX FRAME & COVER
(Cast Aluminum 1 Req'd)



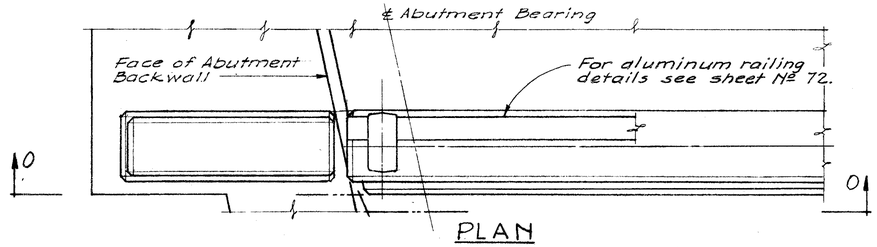
VIEW E-E



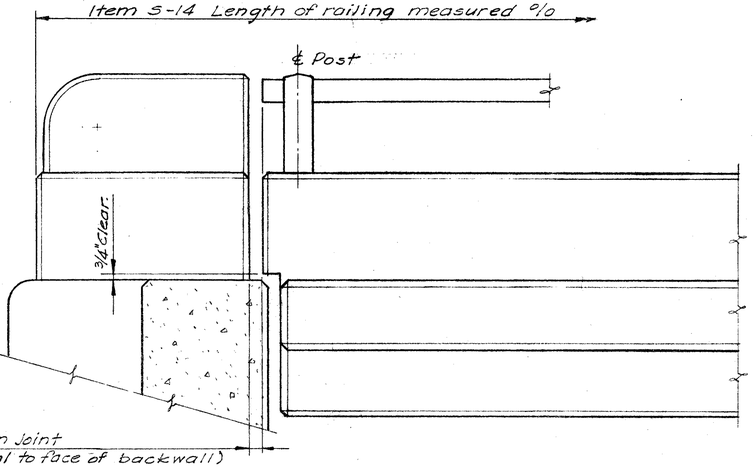
VIEW D-D



LAMP STANDARD DETAILS
Unmarked reinforcing steel shown on sheet No. 102.



PLAN



SECTION O-O

TREATMENT OF RAILING AT ABUTMENT

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

SUPERSTRUCTURE DETAILS
BRIDGE NO. FRA-40R-1279
OVER SHORT STREET

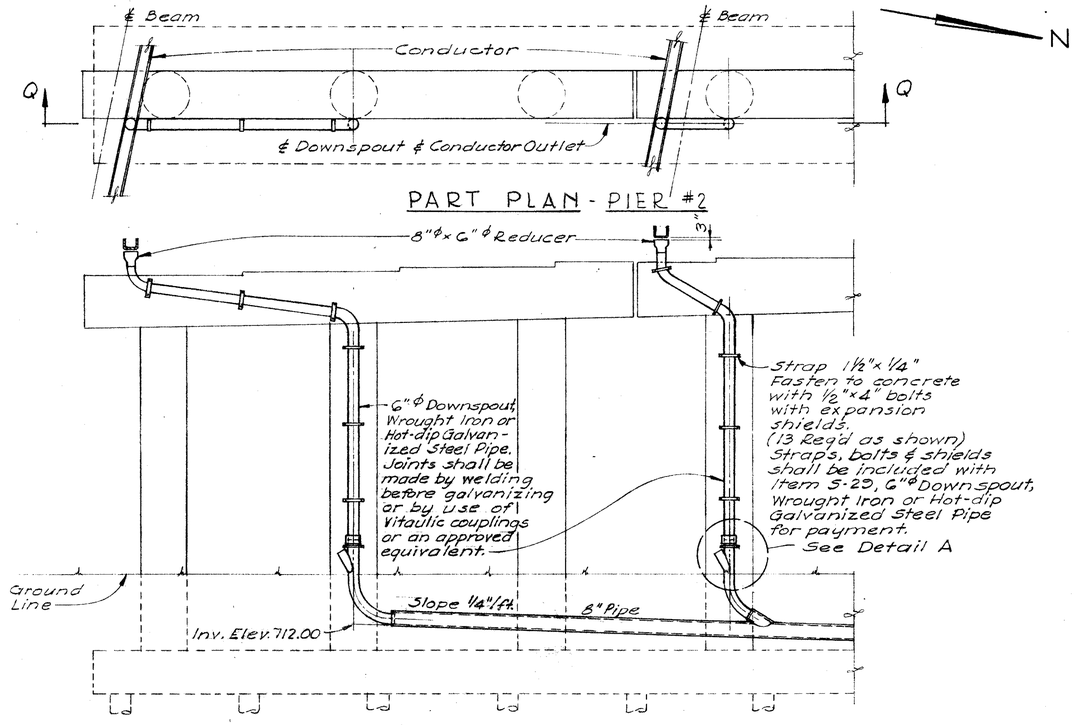
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 50+08.97

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
INNES	INNES		J.P.	TLV	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

104
112

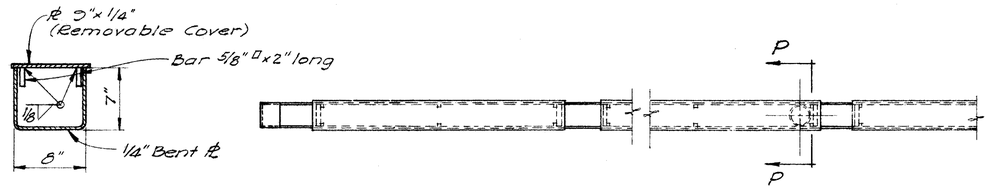
FRANKLIN COUNTY
FRA - 40R - 12.30



PART PLAN - PIER #2

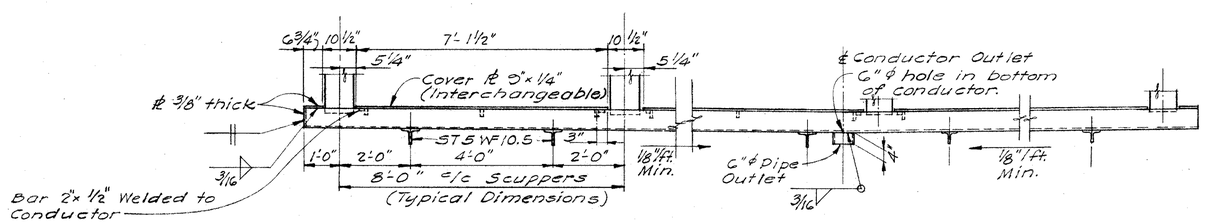
SECTION Q-Q

DOWNSPOUT DETAIL

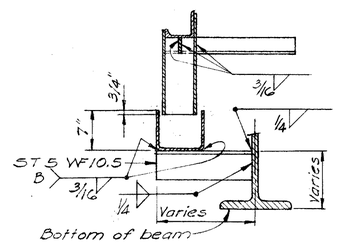


SECTION P-P

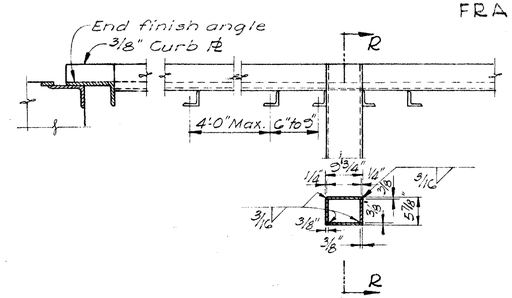
NOTE: Drainage Conductor may be made of wrought iron, "Mayari R" or "Corten".



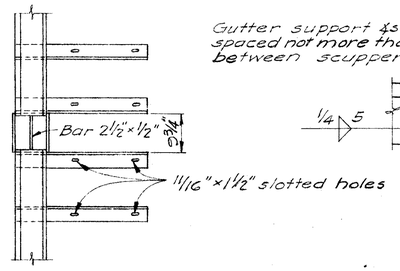
CONDUCTOR DETAILS



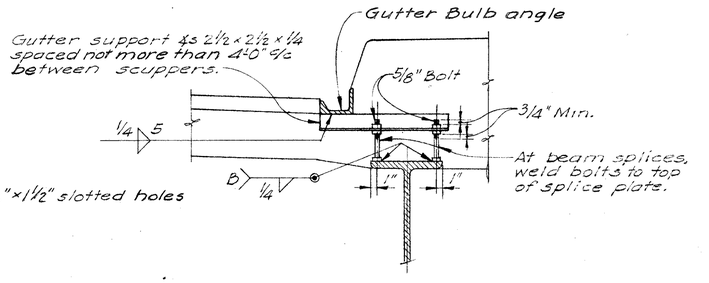
SECTION R-R



PART ELEVATION

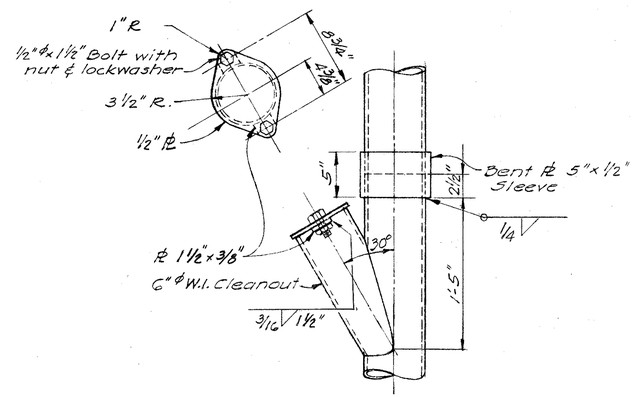


PART PLAN



GUTTER SUPPORT

GUTTER SUPPORT and SCUPPER DETAILS



DETAIL A

GALVANIZING shall be as specified in Sec. M-7.4 (d) except for the straps and bolts for mounting the downspout, the galvanizing called for in Sec. M-10.30 will be considered sufficient.

GUTTER & SCUPPER NOTES

Where gutters are continuous (unbroken by scuppers) for lengths exceeding 25 ft., milled joints will be permitted in bulb angles, but individual lengths shall be made as long as practicable.
Support angles shall be placed 6" to 9" on each side of joints.
Gutters shall be accurately adjusted for alignment and grade with allowance for dead load deflection, before concrete is placed.

GUTTERS, GUTTER SUPPORTS, SCUPPERS, CONDUCTORS & CONDUCTOR SUPPORTS shall be paid for at the unit price bid for Item S-7, Structural Steel.

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

DRAINAGE DETAILS

BRIDGE Nº FRA-40R-1279
OVER SHORT STREET

FRANKLIN COUNTY
SEC. FRA-40-12.30 STA. 50+08.97

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
INNES	INNES		J.P.	TLU	4-3-56	

FED. RD DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

105
112

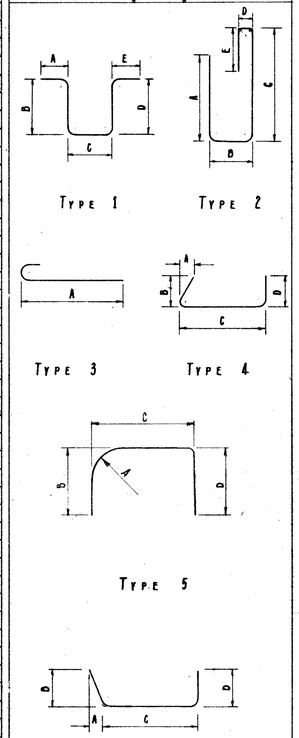
FRANKLIN COUNTY
FRA - 40R - 12.30

REINFORCING STEEL LIST

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
					SUPERSTRUCTURE					
S701	358	31-0	22684							st
S601	357	41-0	21985							st
S602	98	22-0	3238							st
S603	358	31-2	16159							st
S550	2	6-1	13	1		1-3	3-10	1-3		bt
S551	2	4-11	10	1		0-8	3-10	0-8		bt
S552	3	4-7	14	1		1-3	2-4	1-3		bt
S553	3	3-5	11	1		0-8	2-4	0-8		bt
S554	4	6-6	27							st
S555	4	7-1	30	3	6-6					bt
S556	3	2-4	7							st
S557	2	2-0	4							st
S558	3	5-2	16							st
S559	3	1-2	4							st
S560	4	2-2	9							st
S401	122	5-0	407	6	0-7½	1-5	2-4½	1-3		bt
S402	122	4-4	353	4	0-4	0-9½	3-0	0-8		bt
S403	180	3-2	381	6	0-3	1-2	0-10	1-1		bt
S404	180	2-1	250	4	0-1½	0-7	1-0	0-6		bt
R401	122	4-9	386	1		2-2	0-8	2-2		bt
R402	48	14-5	462							st
R403	8	7-1	38							st
R404	16	11-3	120							st
					PIERS					
F1101	144	6-11	5292	1	1-6	5-6				bt
F1001	16	33-8	2318	3	32-3					bt
F1002	12	11-2	577	1	2-1	9-5				bt
F901	16	32-3	1754							st
F802	100	9-10	3343	7	7-4					bt
F501	52	7-4	398							st
P1101	12	18-10	1201							st
P1102	12	19-0	1211							st
P1103	12	19-3	1227							st
P1104	12	19-6	1243							st
P1105	12	19-11	1270							st
P1106	12	20-1	1280							st
P1107	12	18-4	1169							st
P1108	12	18-6	1179							st
P1109	12	18-8	1190							st
P1110	12	18-11	1206							st
P1111	12	19-4	1233							st
P1112	12	19-6	1243							st

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
P1001	32	30-9	4234							st
P501	24	6-3	156							st
P502	160	5-9	960	1		1-10	2-4	1-10		bt
P503	80	5-1	424	1		1-6	2-4	1-6		bt
					ABUTMENTS					
A1101	26	30-3	4179							st
A1102	26	30-9	4248							st
A1103	4	34-10	740							st
A1104	4	37-1	790							st
A601	108	8-4	1352	1		2-8	3-4	2-8		bt
A602	112	9-2	1542	1		3-1	3-4	3-1		bt
A501	80	6-5	535	1		2-6	1-8	2-6		bt
A502	80	6-1	508	1		1-6	3-4	1-6		bt
A503	12	7-6	94							st
A504	12	8-3	103							st
A505	16	7-11	132							st
A506	20	9-1	189							st
A507	8	34-10	291							st
A508	8	37-1	309							st
A509	4	6-5	27							st
A510	4	8-3	34							st
A511	4	30-2	126							st
A512	76	13-5	1064	2	3-11	1-5	5-3	0-11	2-6	bt
A513	32	3-6	117	1		1-3	1-3	1-3		bt
A514	4	6-2	26							st
A515	8	8-3	69	1		2-7	2-9	3-2		bt
A516	8	9-1	76	1		3-0	2-9	3-7		bt
A517	16	2-11	48							st
A518	16	4-4	72							st
A519	4	5-10	24							st
A520	4	5-3	22							st
A521	8	5-10	49	5	0-6 3/8	2-0	2-8	2-0		bt
A522	16	2-8	45							st
					REPLACEMENT STEEL					
RE401	1	5-3	4							st
RE501	1	5-7	6							st
RE601	3	5-11	27							st
RE701	2	6-3	25							st
RE801	None									
RE901	1	6-10	23							st
RE1001	1	7-3	31							st
RE1101	2	7-7	81							st

Bending Diagram



NOTE:
In the reinforcing steel bar marks, the first digit where three digits are used and the first two where four are used is the bar number which indicates the size of the bar.

SPIRALS - HOT ROLLED

Mark	Nº	Length	Core	Pitch	Turns	Spacers	Weight
P401	1	16-1	28	4½	46	3	254
P402	1	16-4	28	4½	47	3	260
P403	1	16-6	28	4½	47	3	260
P404	1	16-9	28	4½	48	3	265
P405	1	17-0	28	4½	48	3	266
P406	1	17-3	28	4½	49	3	271

SPIRALS HOT-ROLLED

Mark	Nº	Length	Core	Pitch	Turns	Spacers	Weight
P407	1	15-6	28	4½	45	3	249
P408	1	15-9	28	4½	45	3	249
P409	1	16-0	28	4½	46	3	254
P410	1	16-2	28	4½	46	3	255
P411	1	16-5	28	4½	47	3	260
P412	1	16-7	28	4½	47	3	260

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	ABUT.	PIER	SUPERS.	GENERAL
E-2	374	Cu.Yd.	EXCAVATION FOR STRUCTURES	91	283		
E-2	Lump	Sum	COFFERDAMS, CRIBS AND SHEETING				Lump
S-1	215	Cu.Yd.	CLASS "C" CONCRETE, SUPERSTRUCTURE			215	
S-1	82	Cu.Yd.	CLASS "C" CONCRETE, PIER COLUMNS AND CAPS		82		
S-1	86	Cu.Yd.	CLASS "E" CONCRETE, PIER FOOTINGS		86		
S-1	120	Cu.Yd.	CLASS "E" CONCRETE, ABUTMENTS	120			
S-3	694	Sq.Yd.	TYPE "C" WATERPROOFING			694	
S-3	17	Lin.Ft.	WATERPROOFING, PREMOLDED SEALING STRIP	17			
S-4	120827	Lb.	REINFORCING STEEL	16811	37211	66608	197
S-7	176000	Lb.	STRUCTURAL STEEL			176000	
S-8	176000	Lb.	FIELD PAINTING OF STRUCTURAL STEEL			176000	
S-9	50	Sq.Ft.	1" GREY SPONGE RUBBER PREFORMED EXPANSION JOINT FILLER	50			
S-14	253.1	Lin.Ft.	RAILING (ALUMINUM RAIL AND SUPPORTS, CONCRETE PARAPET AND END POSTS)				253.1
S-16	Lump	Sum	FIRST TEST PILE				Lump
S-18	~~2996~~ 2918	Lin.Ft.	12" CAST-IN-PLACE REINFORCED CONCRETE PILES	1000	1710		
Special	270	Lin.Ft.	PREBORED HOLES FOR PILES		270		
S-25	Lump	Sum	ELECTRICAL LIGHTING SYSTEM (STANDARD, PULLBOX & CONDUIT)				Lump
S-29	240	Lin.Ft.	SUBDRAINAGE FOR WEARING SURFACE COURSE				240
S-29	58	Lin.Ft.	6" DIA. WROUGHT IRON OR GALVANIZED STEEL PIPE, INCLUDING SPECIALS				58
S-29	13	Cu.Yd.	POROUS BACKFILL				13
T-35	49	Cu.Yd.	ASPHALTIC CONCRETE SURFACE COURSE, TYPE C (60-70)			49	
I-10	573	Sq.Yd.	TYPE "A" RIPRAP, REINFORCED CONCRETE SLAB AND TOE WALL				573

SPIRALS:

THE "LENGTH" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE DISTANCE FROM THE TOP OF THE FOOTING TO THE BOTTOM OF THE PIER CAP. THE "NO. OF TURNS" SHOWN IN THE STEEL LIST FOR THE SPIRAL BARS IS THE "LENGTH" DIVIDED BY THE PITCH, PLUS 3 TURNS (TOTAL NUMBER OF CLOSED COILS), EXPRESSED AS THE NEAREST WHOLE NUMBER.

SPIRAL REINFORCING BARS SHALL NOT HAVE DEFORMATIONS BUT SHALL IN OTHER RESPECTS CONFORM TO ITEM S-4.

1-½ CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT.

THREE STEEL CHANNEL, TEE OR ANGLE SPACERS, WEIGHING APPROXIMATELY 0.68 LB. PER LIN. FT. OF SPACER, SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF THE COIL. THE NUMBER OF POUNDS OF THESE SPACERS, BASED ON 0.68 LB. PER LIN. FT., WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

*X Revised as Built 9-12-60

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

REINFORCING STEEL AND ESTIMATED QUANTITIES
BRIDGE NO. FRA-40R-1279
OVER SHORT STREET
FRANKLIN COUNTY
SEC. FRA - 40R - 12.30 STA. 50+08.97

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
INNES			J.P	TZU	4-3-56	April 24 '56

FED. HIGHWAY DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

106
112

FRANKLIN COUNTY
FRA-40R-12.30

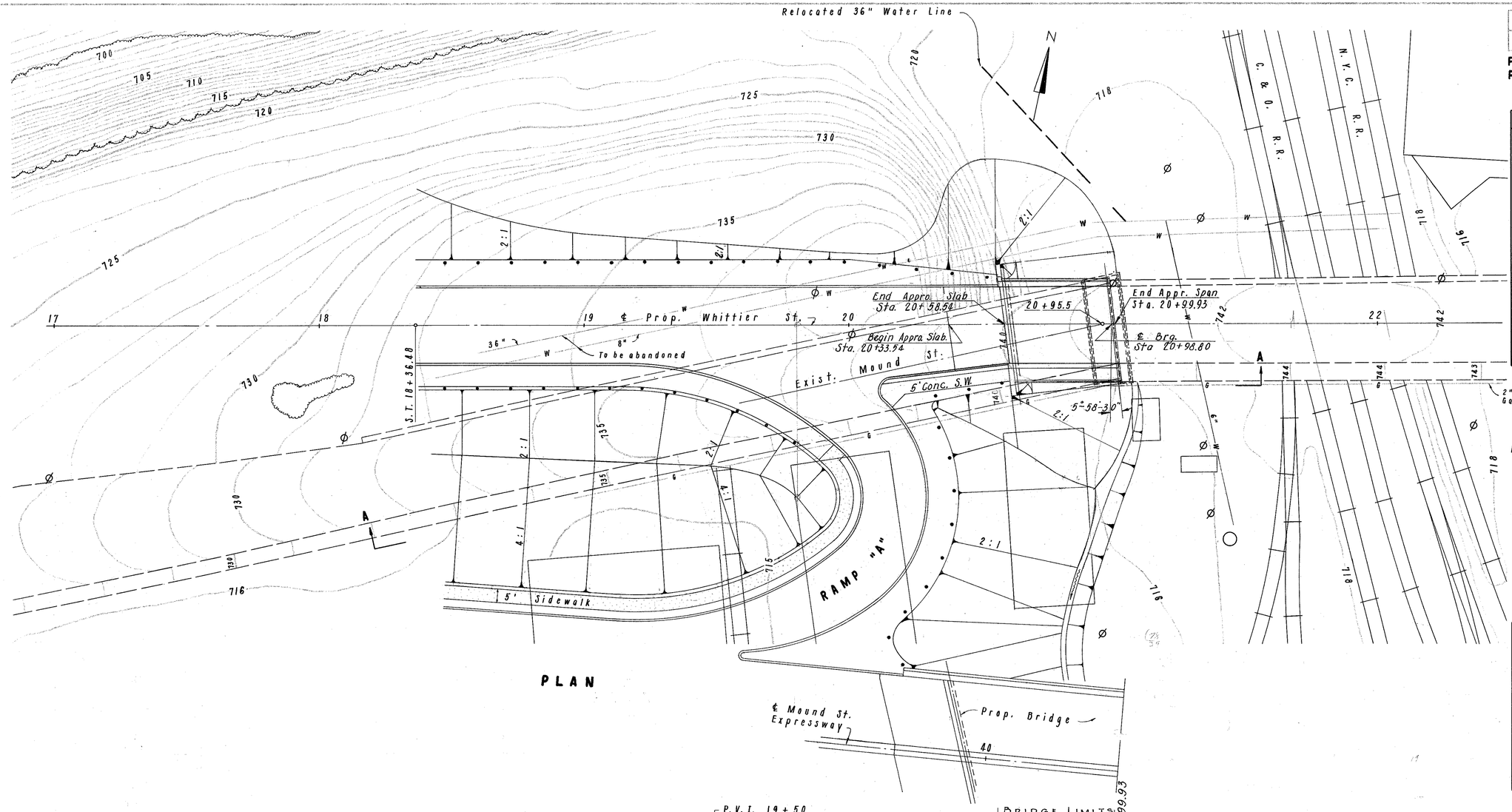
EXISTING STRUCTURE

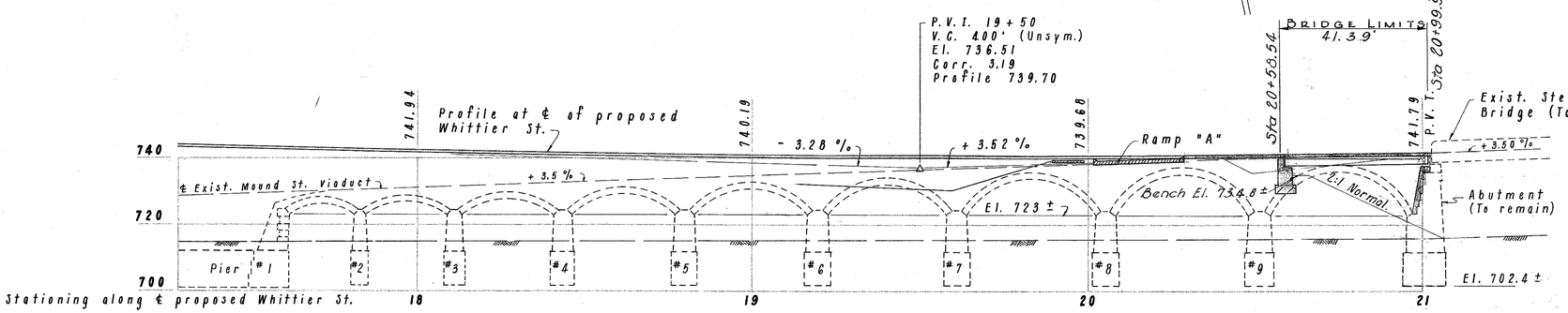
Main Span Type: Plate girder with encased transverse floor beams on concrete and steel piers and concrete and stone abutments.
Approach Span Type: Stone arches with concrete protection and earth fill on stone and concrete substructure.
Main Span: 49.70', 76.64', 71.25', 65.65' c/c brgs along ℄ roadway.
Approach Spans: 9 variable spans.
Roadway: 29'-4" f/f curbs with 4'-10" sidewalk on South side.
Skew: Variable.
Wearing Surface: Bituminous material over brick on conc. slab.
Loading: H-15

Foundation Soundings:
Foundation design and foundation quantities are based on a study of borings 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.

PROPOSED WORK

1. Remove all masonry above elev. 723 and to limits at abutment as per plan.
2. Remodel abutment at Sta. 21, as per plan.
3. Construct approach span as per plan.





ELEVATION A-A

PROPOSED STRUCTURE

Type: Steel beam with reinforced concrete deck and sub-structure.
Span: 38'-0" c/c brgs.
Roadway: 29'-4" f/f curbs with 4'-0" S.W. 1'-0" safety curb and steel railing
Loading: C-400.
Wearing Surface: 2½" Aspholtic conc.
Skew: 5° 58'-30" Rt forward.
Alignment: Tangent.
Approach Slab: As per plan. (25' long)

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

SITE PLAN

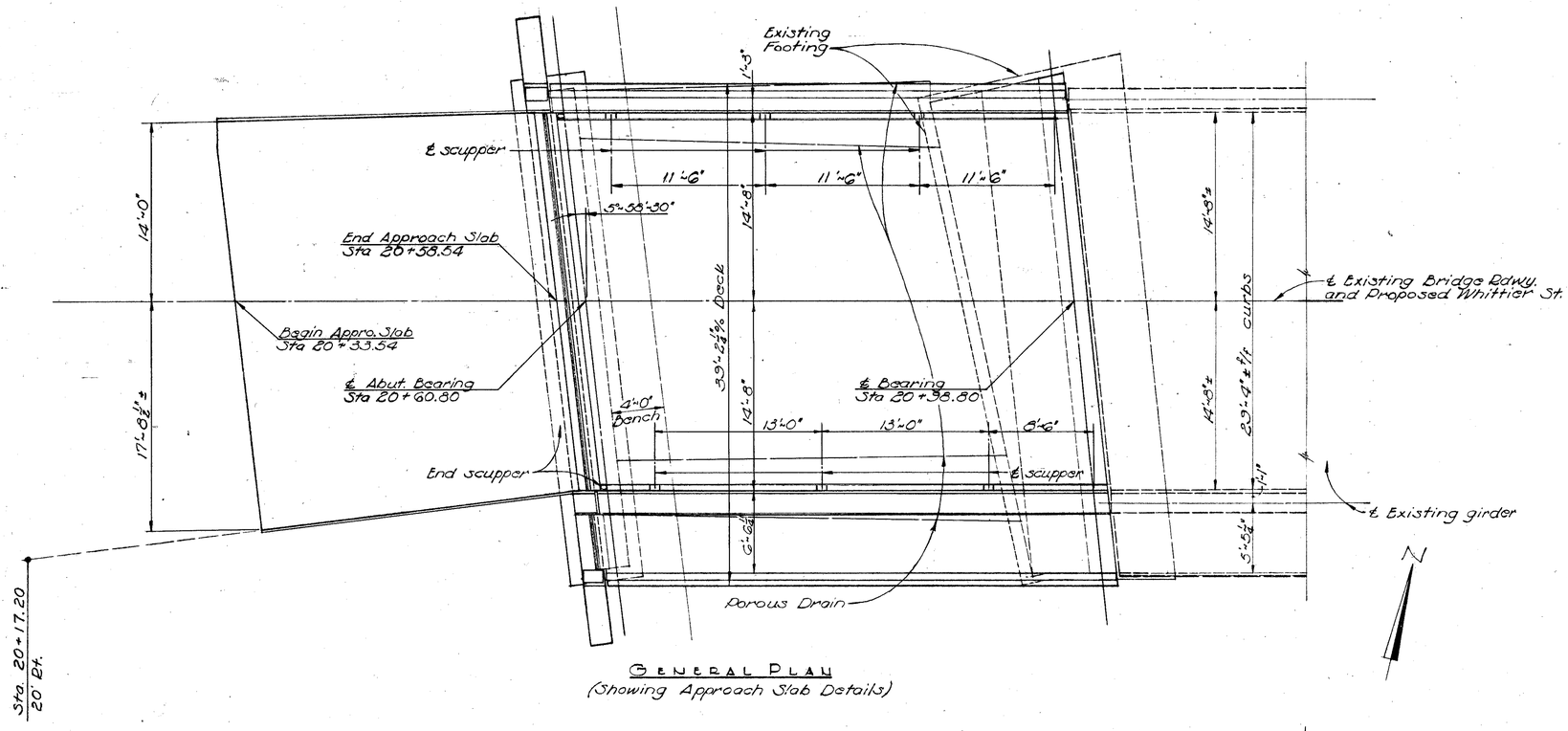
APPROACH SPAN TO EXISTING MOUND STREET BRIDGE OVER C&OR Y & N.Y.C. R.R.
FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 20+79.80

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.E.V.	J.E.V.		Wisse	T.L.L.	4-3-56	

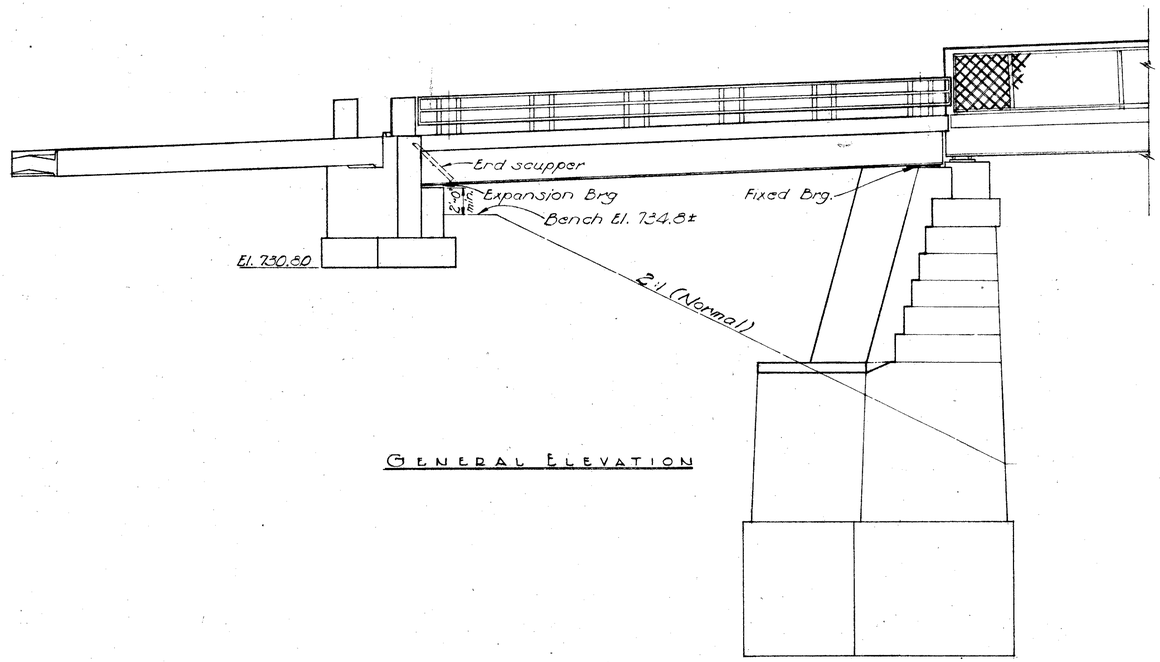
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

107
112

FRANKLIN COUNTY
FRA-40R-12.30



GENERAL PLAN
(Showing Approach Slab Details)



GENERAL ELEVATION

GENERAL NOTES

REFERENCES:

End finish and End Cross Frame Details	Sheet No. 73
Bearing Details	Sheet No. 74
Standard Drawings	AS-1-54 rev. 12-1-54
Patching Concrete	Supplemental Specification No. 5102 dated 6-15-49

DESIGN SPECIFICATIONS:
This structure conforms to the requirements of 'Design Specifications for Highway Structures' of the State of Ohio, Department of Highways, dated 10-1-54, together with revisions thereof dated 7-15-52, 4-1-54, and 2-1-55.

GRAVEL If used as the coarse aggregate for Class 'C' concrete shall be according to Sec. M-3.93 instead of M-3.91. Gravel meeting the requirements of Sec. M-3.93 also may be used for other concrete.

POROUS DRAINS located as shown on the general plan shall extend from face of west abutment to elevation 721.1. They shall be 5 feet wide at the low end tapering to 4 feet wide at the face of abutment and 1 foot thick.

REMOVAL OF PORTIONS OF EXISTING STRUCTURE:
When no longer needed to maintain traffic, portions of the existing structure as shown on the plans shall be removed and become the property of the Contractor. Waste masonry may be used as fill material as directed by the Engineer.

SURFACE FINISH OF CONCRETE:
Railing end posts, curb faces, facias of deck slab and exposed surfaces of west abutment and wingwalls shall receive a rubbed surface finish. All other exposed surfaces shall be governed by the provisions of Item S-1.

REINFORCING STEEL:
All reinforcing steel shall be 2 inches clear from the surface of concrete unless otherwise shown. Splices shall not be less than 30 times the bar diameter.

WELDING of structural steel shall be Class 'A' except as otherwise shown. Any welds shown as field welds may, at the option of the Contractor, be made in the shop. Class 'B' weld is shown thus: 8

EXCAVATION QUANTITY includes the removal of fill material at the west abutment between the top of the earth bench and the bottom of footing or wingwall.

PAINTING:
Paint, both shop and field, shall be applied by brushing. Spray application will not be permitted.

PLANS OF EXISTING STRUCTURE:
Detail plans of the existing structure are available in the office of the City Engineer, Columbus, Ohio.

APPROACH SLABS- NUMBER OF STEEL BARS REQUIRED BASED ON MINIMUM C.to C. DISTANCE SHALL BE DETERMINED FROM THE MAXIMUM DIMENSION IN EITHER DIRECTION. BARS SHALL BE PULLED IN AS DIRECTED BY THE ENGINEER AT OTHER END OF THE SLAB.

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

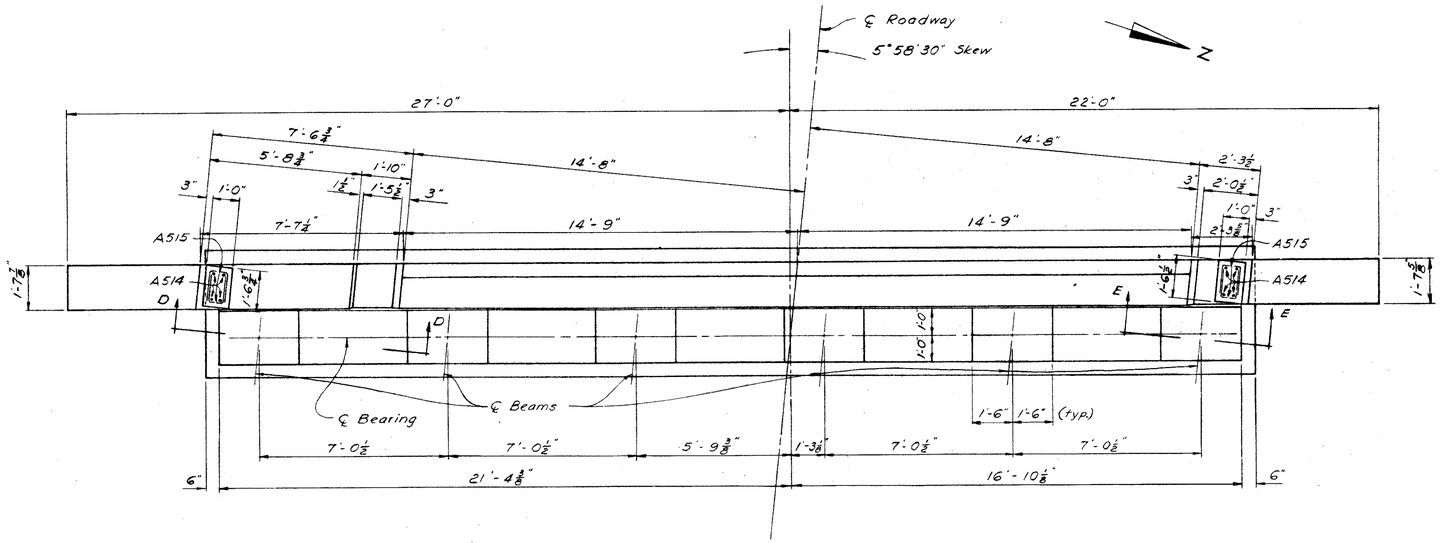
GENERAL PLAN, ELEVATION, APPROACH SLAB DETAILS, AND GENERAL NOTES
EXISTING MOUND ST. OVER C&O.RY & N.Y.C. R.R.
FRANKLIN COUNTY
SEC FRA-40R-12.30 STA 20+79.80

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Wisse	J.E.V.		Wisse	WB	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

108
112

FRANKLIN COUNTY
FRA-40R-12.30



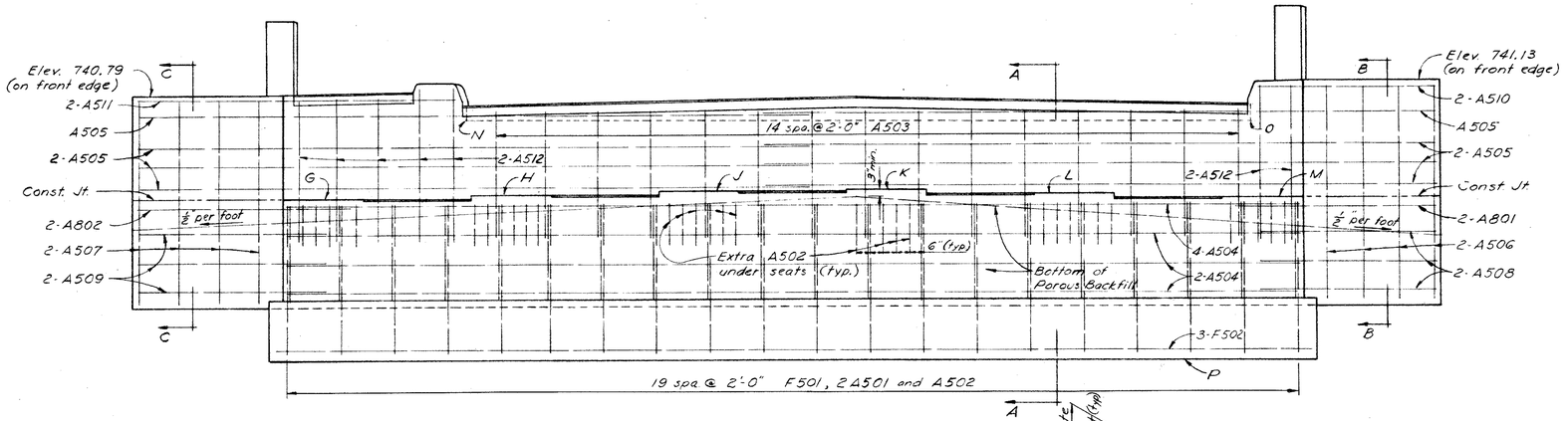
PLAN

EARTH EMBANKMENT shall be placed and compacted to the height of the earth bench after which excavation shall be made for the abutment footing.

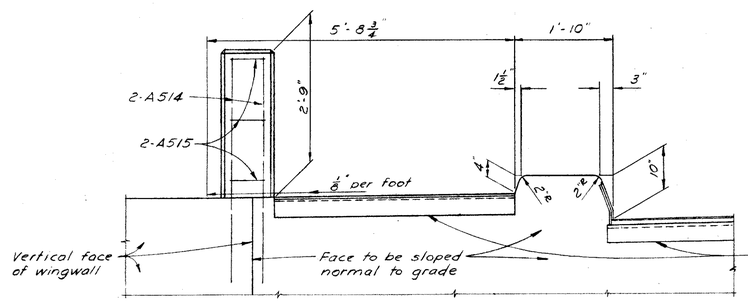
SLOPE OF CONCRETE: Tops of sidewalks, curbs, end posts, and wingwalls shall be sloped parallel to grade.

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 the construction of the footing, shall be considered as paid for in the bid price per cu. yd. paid for porous backfill.

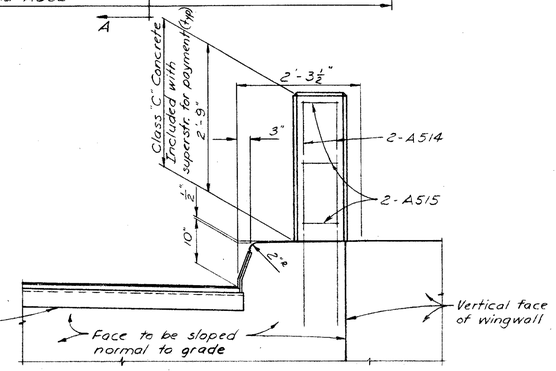
ELEVATIONS								
G	H	J	K	L	M	N	O	P
736.84	736.97	737.10	737.17	737.01	736.85	738.76	738.69	730.80



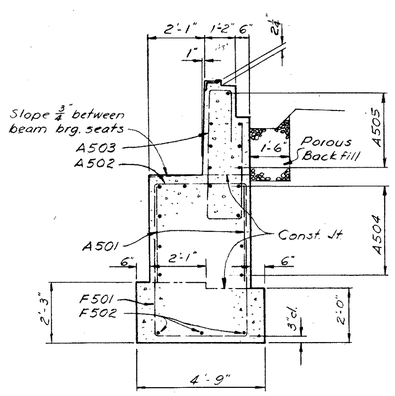
ELEVATION



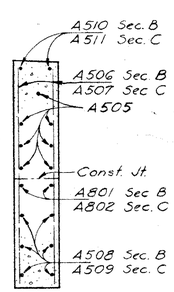
VIEW D-D



VIEW E-E



SECTION A-A



SECTION B-B or C-C

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

WEST ABUTMENT DETAILS

EXISTING MOUND ST. OVER C.&O.RY & N.Y.C. R.R.

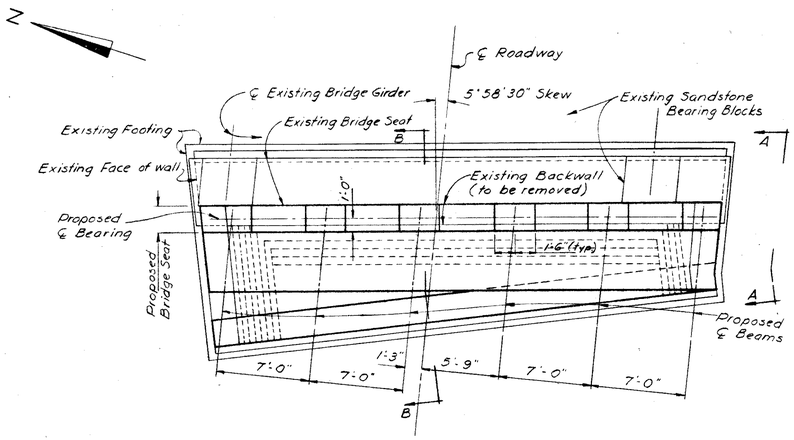
FRANKLIN COUNTY
SEC. FRA-40R-12.30 Sta. 20+79.80

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Wisse	Wisse		J.E.V.	WB	4-3-56	

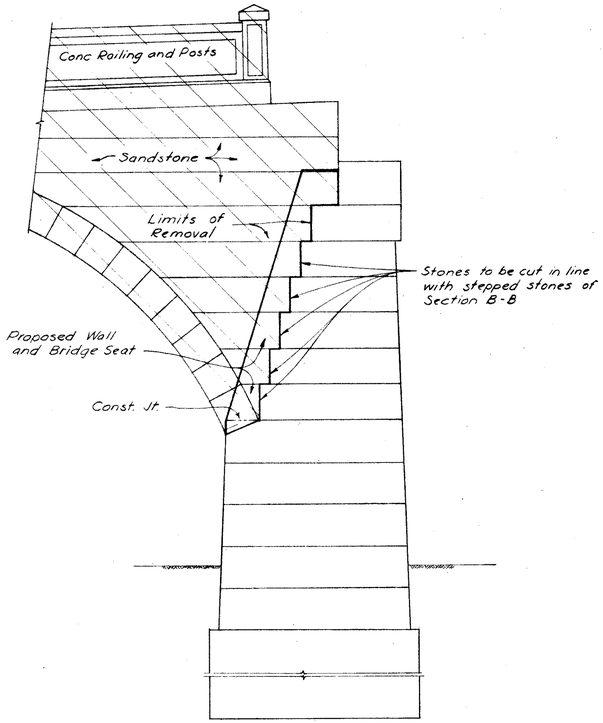
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

109
112

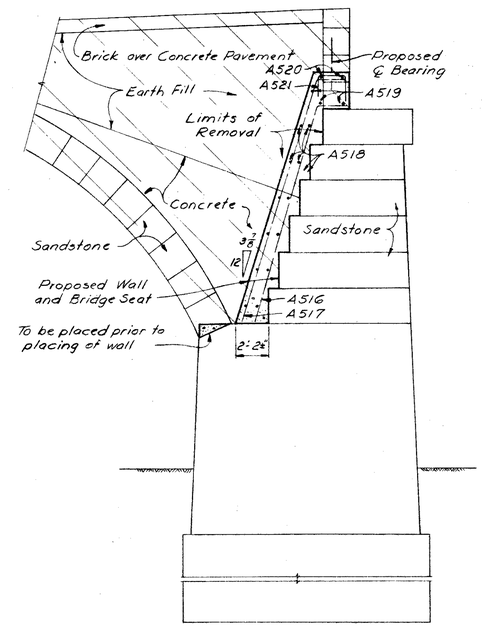
FRANKLIN COUNTY
FRA-40R-12.30



PLAN



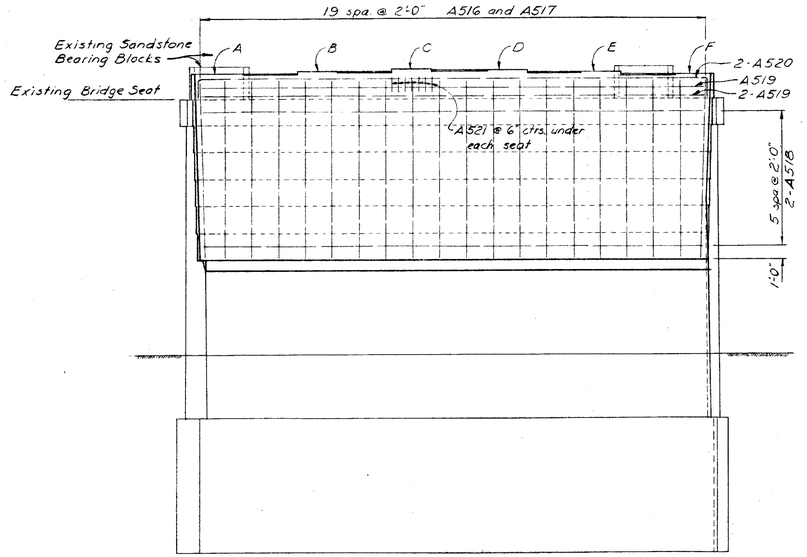
VIEW A-A



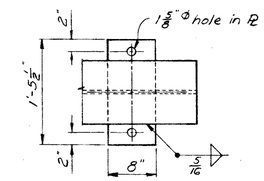
SECTION B-B

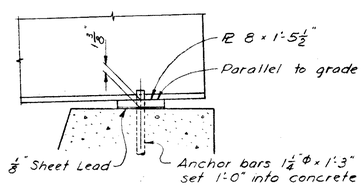
For end finish and additional bridge seat details see sheet # 109A

ELEVATIONS					
A	B	C	D	E	F
738.01	738.18	738.35	738.29	738.17	738.05



ELEVATION





FIXED BEARING DETAIL

For expansion bearing detail see sheet # 74

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

EXISTING ABUTMENT REMODELING AND BEARING DETAILS

EXISTING MOUND ST. OVER C&O.RY. & N.Y.C.R.R.

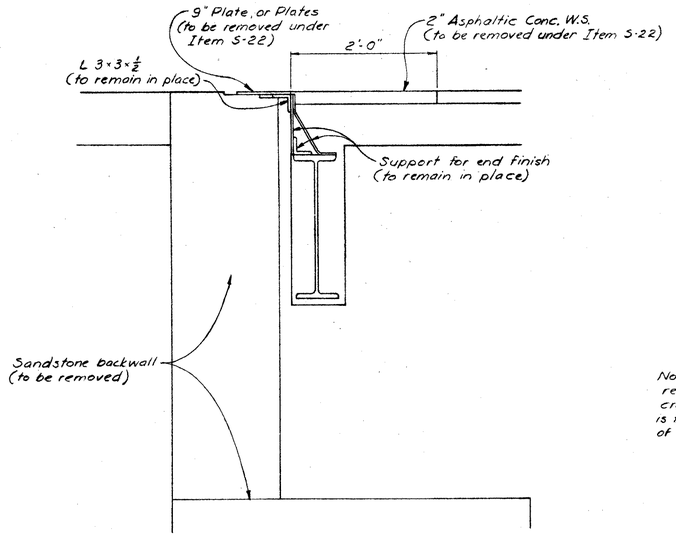
FRANKLIN COUNTY
FRA-40R-12.30 Sta. 20+79.80

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Wisse	Wisse		J.E.V.	NB	4-3-56	

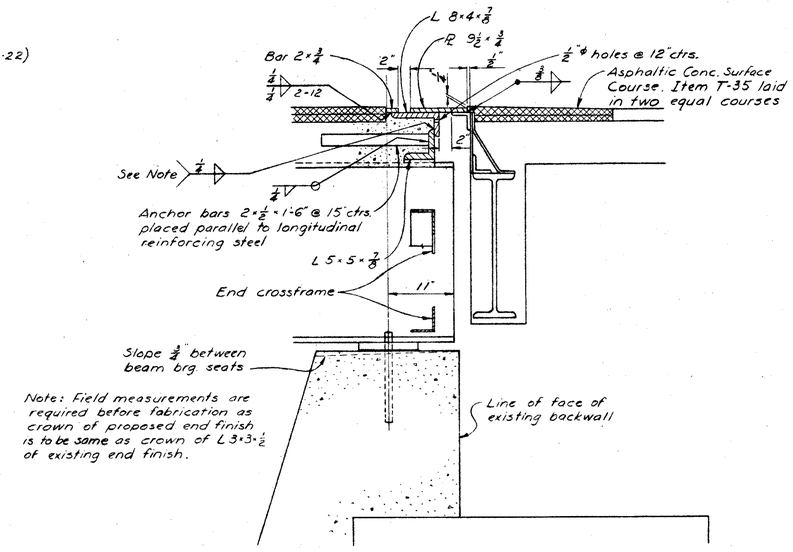
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

109A
112

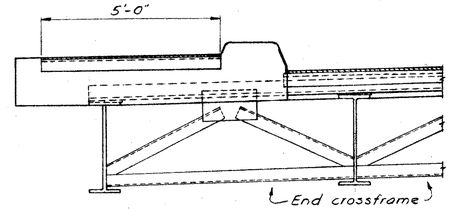
FRANKLIN COUNTY
FRA-40R-12.30



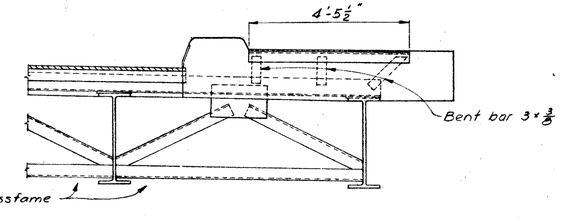
EXISTING ROADWAY END FINISH AT EXISTING ABUTMENT



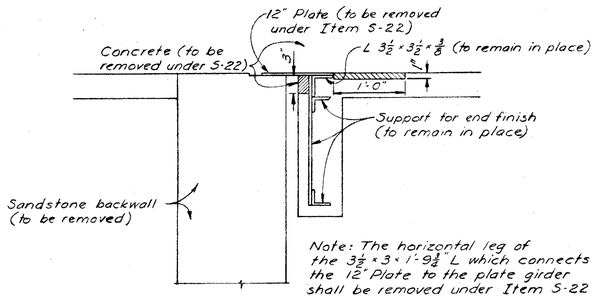
PROPOSED ROADWAY END FINISH AT EXISTING ABUTMENT



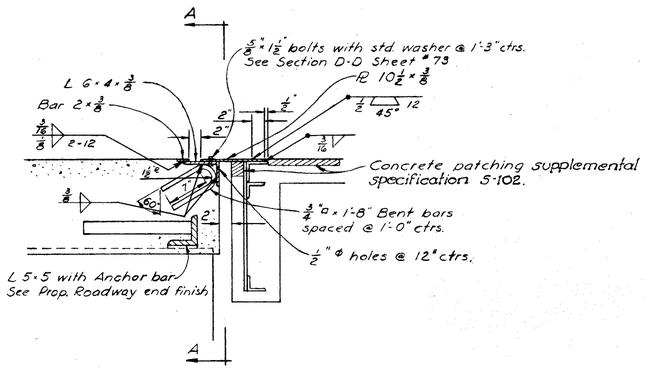
SECTION A-A



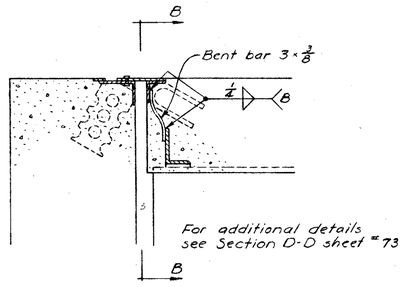
SECTION B-B



EXISTING SIDEWALK END FINISH AT EXISTING ABUTMENT



PROPOSED SIDEWALK END FINISH AT EXISTING ABUTMENT



PROPOSED SIDEWALK END FINISH AT WEST ABUTMENT

Note:

For details of end crossframes, safety curb end finish, and roadway end finish at West abutment see sheet # 73.

At the existing abutment, transition the proposed roadway and sidewalk cross section to meet the end finish

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

END FINISH DETAILS

EXISTING MOUND ST. OVER C&O RY & N.Y.C.R.R.

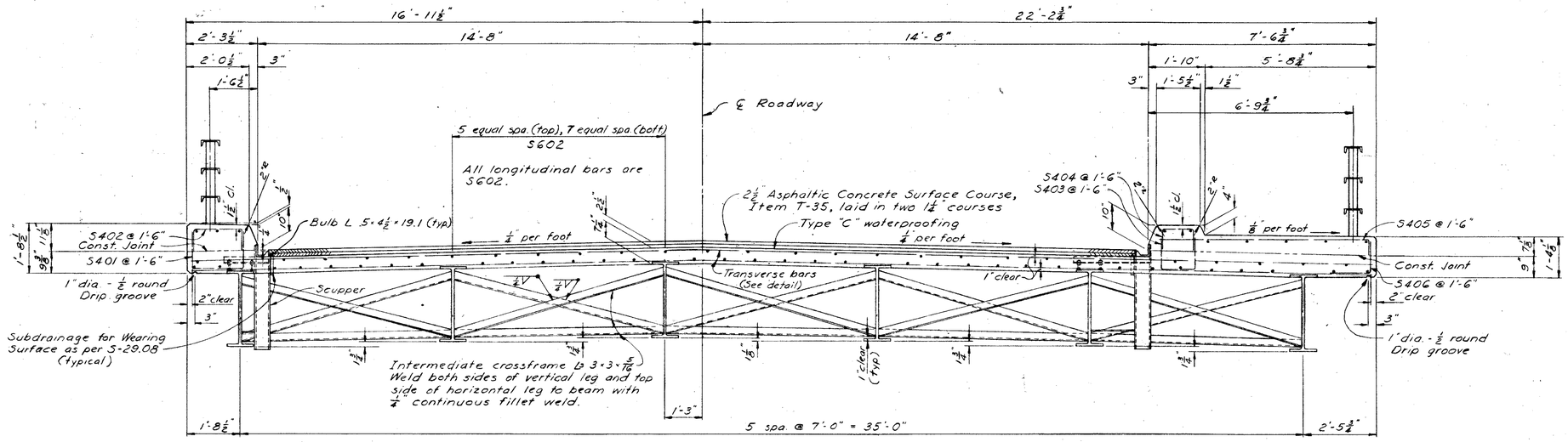
FRANKLIN COUNTY
FRA-40R-12.30 Sta. 20+79.80

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Wisse	Wisse		J.E.V.	WB	4-3-56	

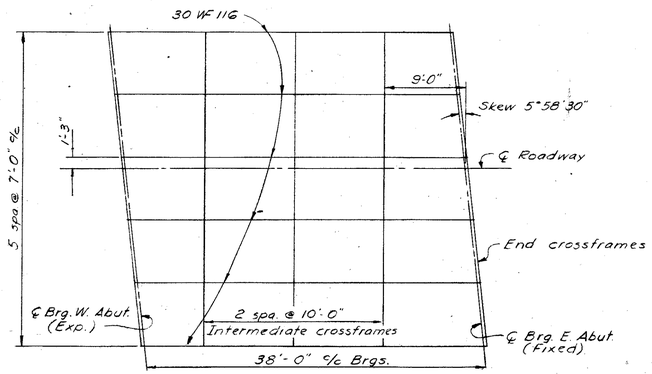
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

110
112

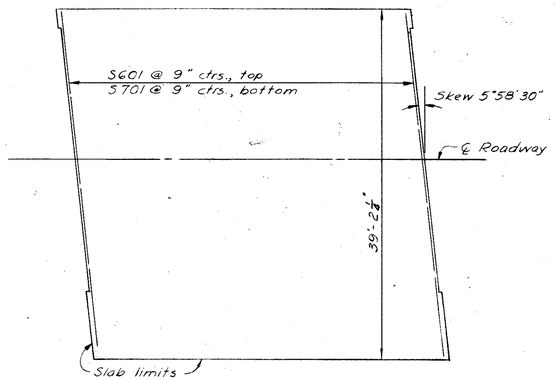
FRANKLIN COUNTY
FRA - 40R - 12.30



TRANSVERSE SECTION



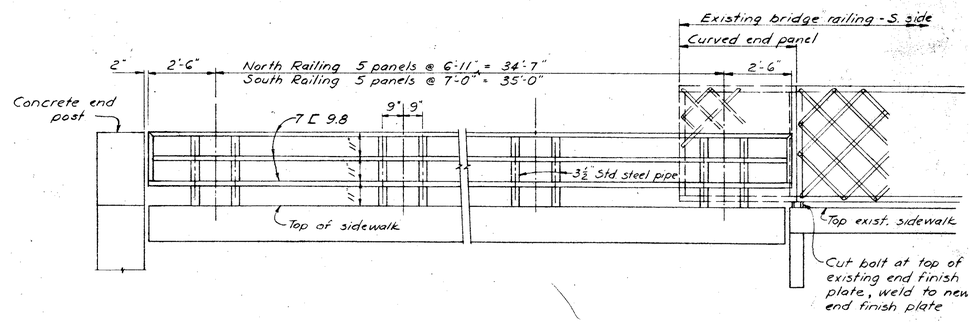
FRAMING PLAN



DETAIL OF TRANSVERSE BARS

CAMBER: No cambering is required but the beams shall be so fabricated that any curved beams will be placed with the convex flange down.

Note: Existing bridge railing on South side to remain in place except for curved end panel which is to be removed.



RAILING DETAIL

For embedment and other details not shown see sheet "110A"

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

SUPERSTRUCTURE AND RAILING DETAILS

EXISTING MOUND ST. OVER C&O RY & N.Y.C. R.R.

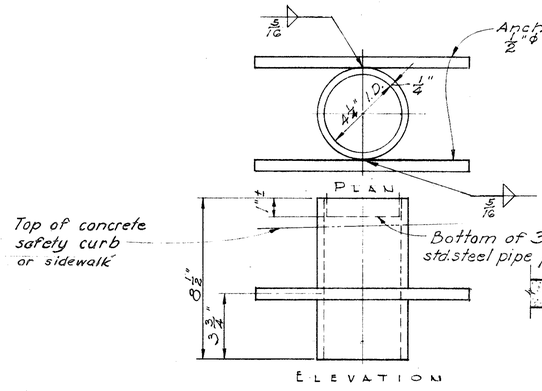
FRANKLIN COUNTY
SEC. FRA-40R-12.30 Sta. 20+79.80

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Wisse	Wisse		J.E.V.	[illegible]	4-3-56	

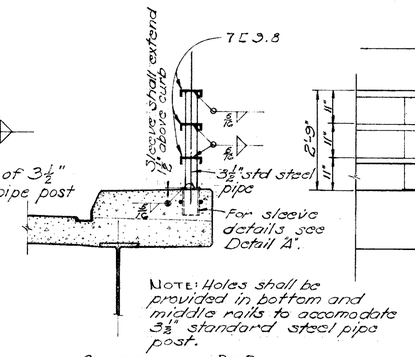
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

110A
112

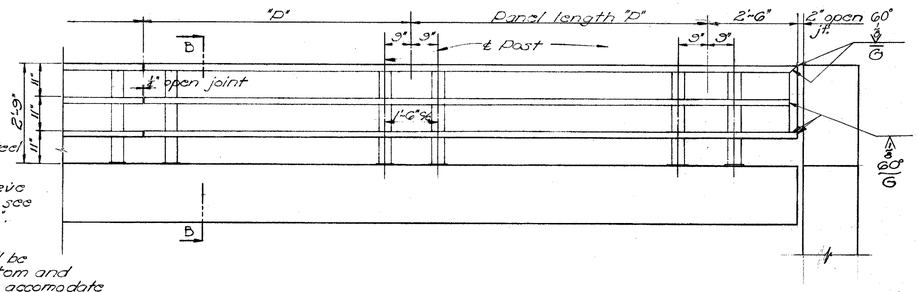
FRANKLIN COUNTY
FRA-40R-12.30



DETAIL "A"



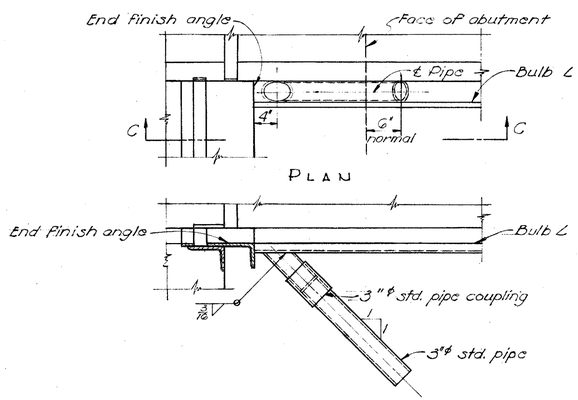
SECTION B-B



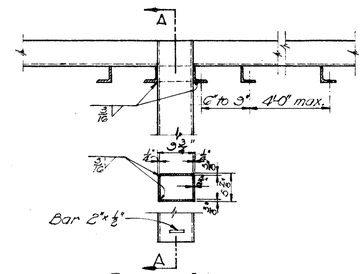
N. ELEVATION
(South side similar)

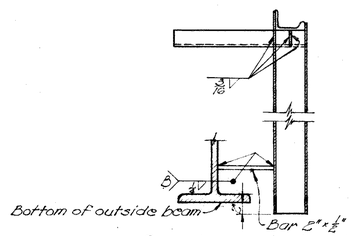
NOTE: For panel length "D" see Superstructure Details.
Railing shall be fabricated in at least two but not more than three panel lengths.
"G" indicates grinding

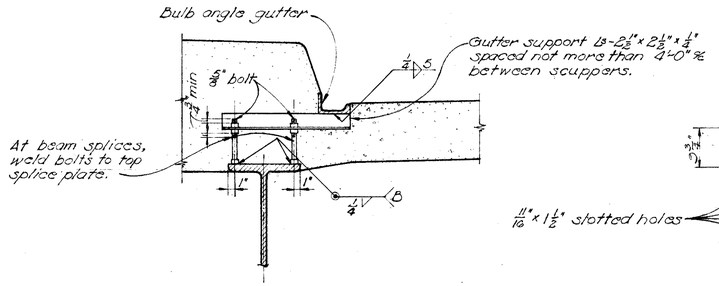
STEEL RAILING DETAILS



END SCUPPER DETAILS







GUTTER SUPPORT

PART PLAN

GUTTER SUPPORT AND SCUPPER DETAILS

GUTTER AND SCUPPER NOTES

Scuppers shall be spaced as shown on General Plan except when required to meet 6" minimum clearance of crossframes.

When scupper spacings exceed 25 Ft, milled joints will be permitted in bulb angles, but individual lengths shall be made as long as practicable

Support angles shall be placed 6" to 9" on each side of joints.

Gutters shall be accurately adjusted for alignment and grade, with allowance for dead load deflection, before concrete is placed

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

RAILING, GUTTER SUPPORT AND SCUPPER DETAILS

EXISTING MOUND ST. OVER C&ORY & N.Y.C. R.R.

FRANKLIN COUNTY
SEC. FRA-40R-12.30 STA. 20+79.80

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
J.E.V.	J.E.V.		Wisse.	W.B.	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	SHEET FUNDS
2	OHIO		

111
112

FRANKLIN COUNTY
FRA-40R-12.30

REINFORCING STEEL LIST

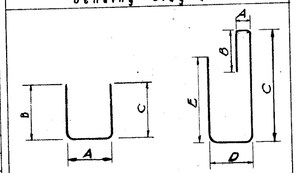
Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
SUPERSTRUCTURE										
S401	27	4-2	75	1	1-9	1-4	1-4			bt
S402	27	2-11	53	1	1-9	0-8	0-9			bt
S403	27	3-6	63	1	1-3	1-3	1-3			bt
S404	27	2-4	42	1	1-3	0-8	0-8			bt
S405	27	7-5	134	1	7-1	0-5				bt
S406	27	2-2	39	1	1-3	1-0				bt
S601	53	39-1	3111							st
S602	69	38-9	4016							st
S701	53	39-1	4234							st
EXISTING ABUTMENT										
A516	20	13-11	290	3	12-1	3-6	1-6			bt
A517	20	17-3	360	3	13-8	4-5	1-8	1-6		bt
A518	12	37-8	471							st
A519	3	38-7	121							st
A520	2	41-4	86	1	38-7	1-6	1-6			bt
A521	42	3-5	150	1	1-8	1-0	1-0			bt
WEST ABUTMENT										
F501	20	10-4	216	1	3-5	3-7	3-7			bt
F502	3	38-8	121							st
A501	40	3-7	149							st
A502	47	7-0	343	1	3-5	1-11	1-11			bt
A503	15	11-3	176	2	0-10	2-0	4-6	1-4	3-2	bt
A504	10	37-10	395							st
A505	14	25-2	368							st
A506	8	8-0	67							st
A507	8	7-8	64							st
A508	6	6-9	42							st
A509	6	7-3	45							st
A510	2	6-4	13							st
A511	2	12-0	25							st
A512	14	5-9	84							st
A514	8	4-2	35							st
A515	12	2-8	33	1	0-8	1-2	1-2			bt
A801	2	7-8	41							st
A802	2	8-2	44							st

Mark	Nº	Length	Weight	Type	"A"	"B"	"C"	"D"	"E"	Shape
REPLACEMENT										
RE401	1	5-3	4							st
RE501	1	5-7	6							st
RE601	1	5-11	9							st
RE701	1	6-3	13							st
RE801	1	6-6	17							st

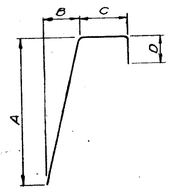
SPIRALS - HOT ROLLED

Mark	Nº	Length	Core	Pitch	Turns	Spacers	Weight

Bending Diagram



TYPE 1 TYPE 2



TYPE 3

NOTE:
In the reinforcing steel bar marks, the first digit where three digits are used and the first two where four are used is the bar number which indicates the size of the bar.

ESTIMATED QUANTITIES

ITEM	TOTAL	UNIT	DESCRIPTION	WEST ABUT.	EXISTING ABUT.	SUPERS.	GENERAL		
E-2	45	Cu.Yd.	UNCLASSIFIED EXCAVATION	45					
S-1	47	Cu.Yd.	CLASS 'C' CONCRETE, SUPERSTRUCTURE			47			
S-1	15	Cu.Yd.	CLASS 'E' CONCRETE, FOOTINGS	15					
S-1	71	Cu.Yd.	CLASS 'E' CONCRETE, ABUTMENTS	34	37				
S102	7	Sq.Ft.	PATCHING CONCRETE				7		
S-3	127	Sq.Yd.	TYPE 'C' WATERPROOFING			127			
S-4	15555	Lb.	REINFORCING STEEL	2261	1478	11767	49		
S-7	39900	Lb.	STRUCTURAL STEEL			39900			
S-8	39900	Lb.	FIELD PAINTING OF STRUCTURAL STEEL			39900			
S-14	80	Lin.Ft.	RAILING (STEEL)			80			
S-22	Lump	Sum	REMOVAL OF PORTIONS OF EXISTING STRUCTURE				Lump		
S-29	10	Cu.Yd.	POROUS BACKFILL	10					
S-29	78	Lin.Ft.	SUBDRAINAGE FOR WEARING SURFACE COURSE			78			
S-29	11	Cu.Yd.	POROUS DRAINS ON EMBANKMENT SLOPES				11		
T-35	9	Cu.Yd.	ASPHALTIC CONCRETE SURFACE COURSE, TYPE 'C' (60-70)			9			

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

REINFORCING STEEL LIST AND ESTIMATED QUANTITIES

EXISTING MOUND ST. OVER C&ORY & N.Y.C.R.R.

FRANKLIN COUNTY
FRA-40R-12.30

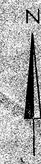
Sta 20+79.80

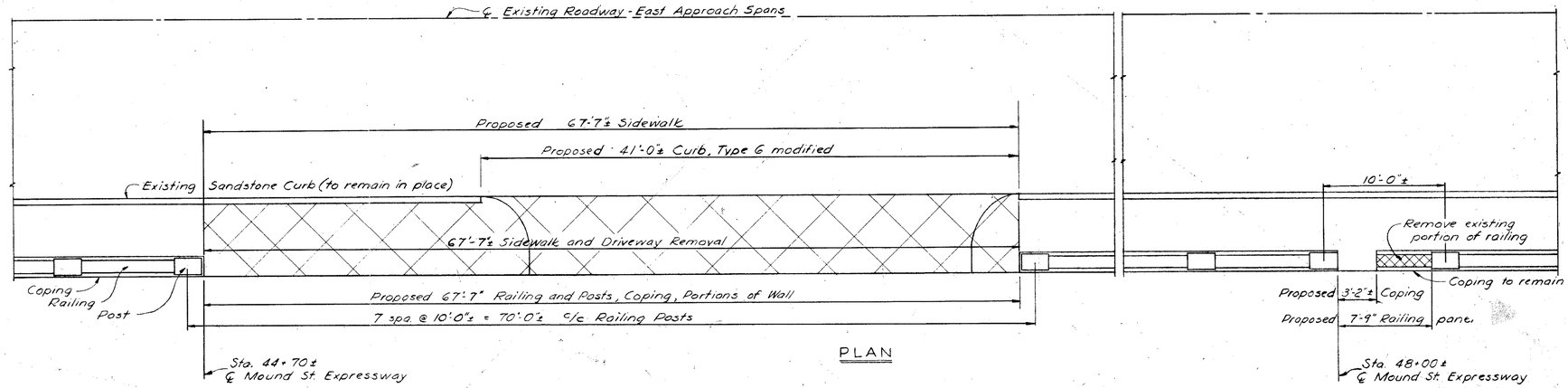
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
Wisse			J.E.V.	W.B.	4-3-56	

FED. ROAD DIVISION	STATE	PROJECT	FINAL FUNDS
2	OHIO		

FRANKLIN COUNTY
FRA-40R-12.30

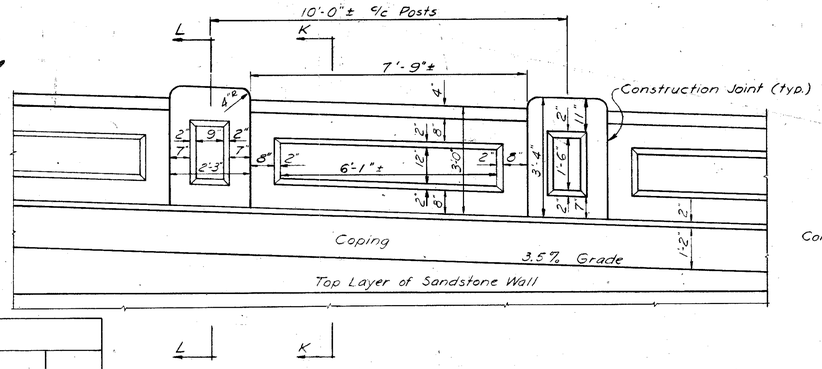
11
12





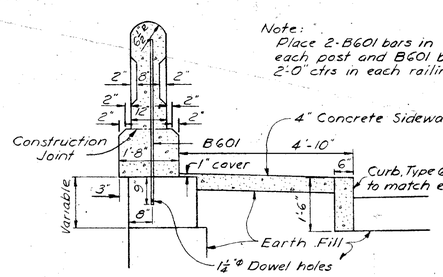
PLAN

REINFORCING STEEL LIST				
MARK	NO.	LENGTH	WEIGHT	SHAPE
B601	44	4'-8"	309	STRAIGHT

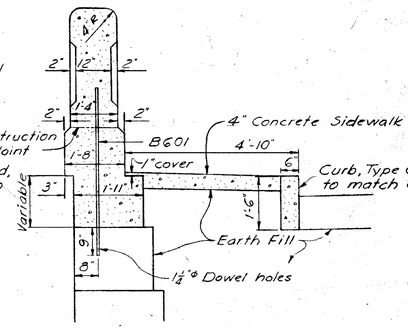


TYPICAL RAILING ELEVATION

ESTIMATED QUANTITIES					
ITEM	TOTAL	UNIT	DESCRIPTION		
S-4	309	LBS.	REINFORCING STEEL		
S-14	76	LIN. FT.	RAILING, CONCRETE (INCLUDING COPING AND TOP LAYER OF WALL)		
S-22	LumpSum	LumpSum	REMOVAL OF PORTIONS OF EXISTING STRUCTURE		
S-23	33	LIN. FT.	DOWEL HOLES		
I-12	41	LIN. FT.	HEADER CURB, TYPE 6 MODIFIED		
I-13	293	SQ. FT.	4" CONCRETE SIDEWALK		



SECTION K-K
showing typical construction when top layer of wall is in place



SECTION L-L
showing typical construction when top layer of wall is missing

ALDEN E. STILSON & ASSOCIATES, LIMITED
CONSULTING ENGINEERS
COLUMBUS, OHIO

SIDEWALK AND RAILING REPLACEMENT
EAST APPROACH SPANS
EXISTING MOUND ST. OVER C‹ORY AND NYCRR

FRANKLIN COUNTY
Sec. FRA-40R-12.30

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISE
Wisse	Wisse		J.E.V.	TLV	4-3-56	

FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO	U-1085-1	

FRANKLIN COUNTY
FRA-40R-12.30

SOIL PROFILE

SYMBOL	DESCRIPTION	S.H.T.O. CLASS	H.R.B. CLASS	% AGG.	% C. SAND	% F. SAND	% SILT & CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT	SAMPLES TESTED
	Gravel and / or Stone fragments with Sand.	A-1-b	A 1 b	40.8	22.5	16.3	20.5	24.7	4.1	13.4	2
	Gravel and / or Stone fragments with Sand and Silt.	A-2-4	A-2-4	39.9	14.9	14.2	31.0	30.0	6.2	20.1	6
	Gravel and / or Stone fragments with Sand, Silt, and Clay.	A-2-6	A-2-6	42.6	13.0	12.3	32.2	33.6	13.6	15.0	6
	Sandy Silt.	A-4-a	A-4	34.8	10.2	9.0	46.1	31.3	7.2	12.2	2
	Silt and Clay.	A-6-a	A-6	24.2	12.2	16.9	46.8	31.7	13.3	18.7	8
	Silty Clay.	A-6-b	A-6	23.5	11.0	14.1	51.4	36.3	17.4	16.0	5
	Clay.	A-7-6	A-7-6	2.3	3.3	13.8	80.5	43.8	22.6	23.7	5

Auger borings ; plotted to vertical scale only.

Cased Deep Borings, see structure sheet for additional information.

Free Water.