MICROFILMED
AUG 27 1987

- LIMITED ACCESS -

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR OF HIGHWAYS IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE REVISED CODE OF OHIO.

CONVENTIONAL SIGNS

State Line
County Line
Township Line
Section Line
Center Line
Corporation Line
Fence Line
Guard Rail (existing)
Guard Rail (proposed)
Railroad
Power Poles
Telephone Poles
Power or Telephone Poles with guys
Tower Line
Trees or Stumps (existing)
Limited Access — L/A
Right of Way — R/W
Limited Access & Right of Way — L/A & R/W

STATE OF OHIO
DEPARTMENT OF HIGHWAYS

SUM - 271 - 7.65
SUMMIT COUNTY
BOSTON TOWNSHIP

GRADE SEPARATION WITH
THE BALTIMORE AND OHIO RAILROAD CO.

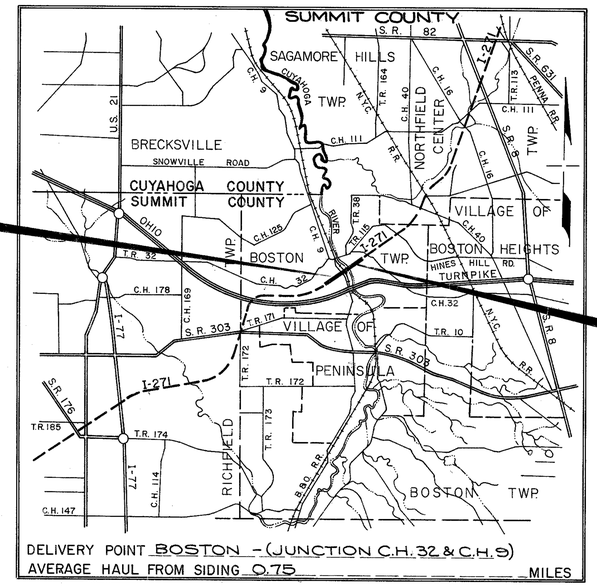
FED. RD.	STATE	PROJECT	
2	OHIO	I-271-6(20)236	

1/72

SUM-271-7.65

MICROFILMED
AUG 27 1987

I-271-6(20)236
LIMITED ACCESS
1965 SPECIFICATIONS



BEGIN PROJECT STA. 405+00.00

END PROJECT STA. 438+00.00

DELIVERY POINT BOSTON - (JUNCTION C.H. 32 & C.H. 9)
AVERAGE HAUL FROM SIDING 0.75 MILES

LOCATION MAP

SCALE OF MILES 0 1 2

PORTION TO BE IMPROVED
STATE ROADS
OTHER ROADS

LINE DATA

BEGIN PROJECT SUM 271 - 7.65 STA. 405+00.00
END PROJECT SUM 271 - 7.65 STA. 438+00.00
NET LENGTH OF PROJECT = 3300.00 LIN.FT. = 0.625 MILE
ADD FOR APPROACHES (SHEET NO. 5) = 400.00 LIN.FT. = 0.075 MILE
TOTAL LENGTH OF WORK = 3700 LIN.FT. = 0.700 MILE

INDEX	SHEET NO.
TITLE SHEET	1
SCHEMATIC PLAN	2
TYPICAL SECTIONS	3-4
GENERAL NOTES & MAINTENANCE OF TRAFFIC	5
GENERAL SUMMARY	6
SUPERELEVATION DIAGRAM AND TABLES	7
PLAN AND PROFILE	8-11
CROSS SECTIONS	12-33-33A
ROADWAY DETAILS	34-36
STRUCTURES 20' SPAN AND UNDER	37
STRUCTURES SUM-271-0802 DETAILS	38-63, 63-A
R.R. Force Account Plan	63B
Right-of-Way	64-72

Sheet No. 37A revised 6-17-66, Sheet No. 37, 6-17-66
Sheet No. 54 revised 3-10-66
Sheet No. 71 revised 3-15-66

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

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

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

APPROVED Clifton M. Shurtleff
DATE 1-10-66 DIVISION DEPUTY DIRECTOR

APPROVED C.W. Albrecht
DATE 3-7-66 ENGINEER OF BRIDGES

APPROVED R.N. Ricketts
DATE 3-22-66 ENGINEER OF LOCATION AND DESIGN

APPROVED R.E. Shultz
DATE 3-22-66 DEPUTY DIRECTOR OF DESIGN AND CONSTRUCTION

APPROVED D.H. Bovard
DATE 3-29-66 DEPUTY DIRECTOR OF RIGHT OF WAY

APPROVED J.W. Wilson
DATE 3-28-66 DEPUTY DIRECTOR OF PLANNING AND PROGRAMMING

APPROVED
DATE FIRST ASSISTANT DIRECTOR

APPROVED P.S. Mashuda
DATE 3/29/66 DIRECTOR OF HIGHWAYS

DESIGN DESIGNATION
CURRENT A.D.T. NONE
DESIGN YEAR A.D.T. 1975 7430
D.D.H.V. 820
D. (directional distribution) 55%
T. (percent B. & C. trucks) 4%
V. (design speed) 70

SCALE

PLAN	1" = 50'
PROFILE: HORIZONTAL	1" = 50'
PROFILE: VERTICAL	1" = 5' & 1" = 10'
CROSS SECTIONS: HORIZONTAL & VERTICAL	1" = 10'

PREPARED AND RECOMMENDED BY
BEISWENGER, HOCH & ARNOLD, CONSULTING ENGINEERS
AKRON OHIO CLEVELAND

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

MC-1	6-1-65	BR-1-65 Sht. 1	2-1-65	
MC-3	6-1-65			
MC-4	6-1-65	SD-1-65 Sht. 1, 2 & 3	11-8-65	
GR-1	6-1-65	AS-1-54	8-10-65	
GR-2A	3-1-65			
FACI-1	6-1-65			
FACI-2	6-1-65			
HW-3	6-1-65			
HW-5	6-1-65			
CB-5	6-1-65			
L-1	6-1-65			

SUPPLEMENTAL SPECIFICATIONS

608	7-12-65
811	3-29-65
825	4-22-65
828	7-21-65
1001	9-2-65

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER DATE

FILE NO.	SUMMIT COUNTY SUM - 271 - 7.65
	DATE OF LETTING 196
	CONTRACT NO.

MICROFILMED
AUG 27 1967

FED. RD.	STATE	PROJECT	
2	OHIO		

2/72

SUM - 271 - 7.65

℄ CURVE DATA
P.I. STA. 397+73.97
Δ = 28° 53' 34"
Dc = 0° 45'
R = 7,639.44'
L = 3,852.37'
T = 1,968.07'
E = 249.43'

N. 55° 07' 56" E.

P.C. STA. 379+05.90

BOSTON MILLS ROAD

C.H. 32

C.H. 5

RIVER VIEW RD.

℄ B. & O. R.R.

RIVER

CANAL

C.H. 32

P.T. STA. 416+58.27

I-271-6(16) 231
STA. 421+49.75

FACI SIGN
77.00

STA. 427+84.69 I-271
STA. 1112+77.21 B. & O. R.R.
STRUCTURE No. SUM.-271-0802 LT. ℄ RT.

I-271-6(27)237
STA. 436+98.25

350 360 370 380 390 400 410 420 430 440

N. 54° 14' 22" E.

425+49.26
72+99.30

DELINEATORS SEE NOTE:

S.L.M. 7.65
BEGIN PROJECT
STA. 405+00.00
I-271-6(20) 236

BEGIN WORK
STA. 403+00

FACI SIGN
70+00

END PROJECT
STA. 438+00.00
S.L.M. = 8.28
I-271-6(20)236

END WORK
STA. 440+00

CUYAHOGA

OHIO

NOTE:
PLACE (14) TYPE A-1 MONO-DIRECTIONAL DELINEATORS, BRACKET MOUNTED, AT THE FOLLOWING LOCATIONS ON STRUCTURE SUM-271-0802.

STATION	LOCATION
423 + 00	L.H. ℄ RT.
425 + 00	L.H. ℄ RT.
427 + 00	L.H. ℄ RT.
429 + 00	L.H. ℄ RT.
431 + 00	L.H. ℄ RT.
433 + 00	L.H. ℄ RT.
435 + 00	L.H. ℄ RT.

SCALE: 1" = 200'

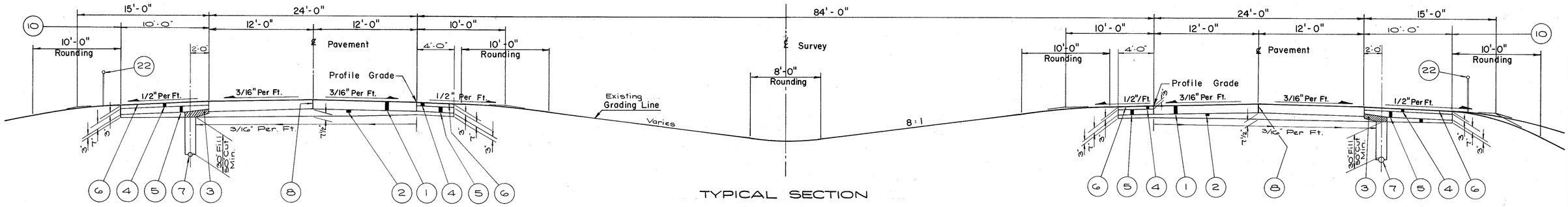
SCHEMATIC PLAN

TYPICAL SECTIONS

FED. RD.	STATE	PROJECT	
2	OHIO		

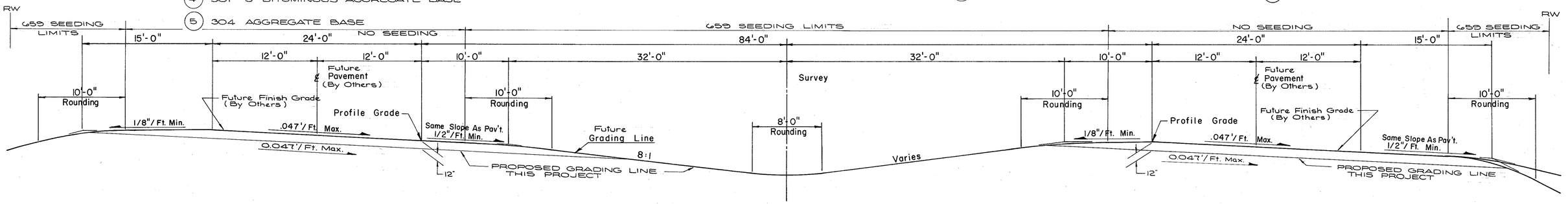
3/72

SUM - 271 - 7.65

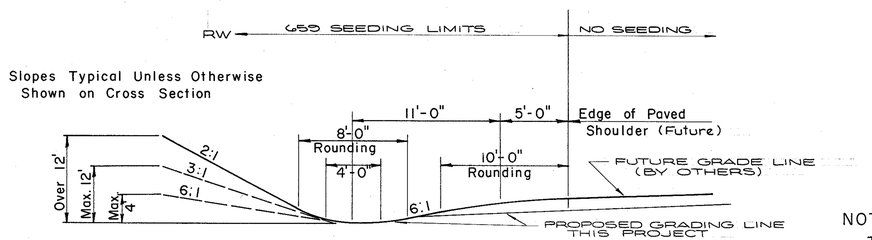


TYPICAL SECTION
PROPOSED PAVEMENT
ADJOINING PROJECTS
SUM-271-2.98 & SUM-271-8.29

(1) 451 10" REINFORCED CONCRETE PAVEMENT
(2) 310 SUBBASE
(3) SPECIAL Nº 8 AGGREGATE
(4) 301 3" BITUMINOUS AGGREGATE BASE
(5) 304 AGGREGATE BASE
(6) 409 SEAL COAT COVER
(7) 605 6" PIPE UNDERDRAIN
(8) STANDARD LONGITUDINAL JOINT
(9) 606 GUARD RAIL, TYPE 4
(10) 659 SEEDING AND MULCHING
(22) 620 MONO-DIRECTIONAL DELINEATORS

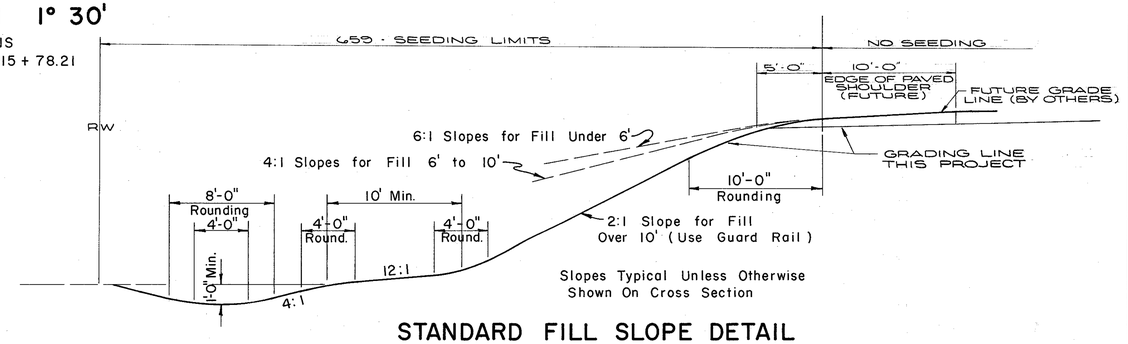


SUPERELEVATED SECTION
CURVE LESS THAN 1° 30'
LIMITING STATIONS
STA. 404+00.00 TO STA. 415+78.21



STANDARD CUT SLOPE DETAIL

NOTE:
This Typical for Grading Only



STANDARD FILL SLOPE DETAIL

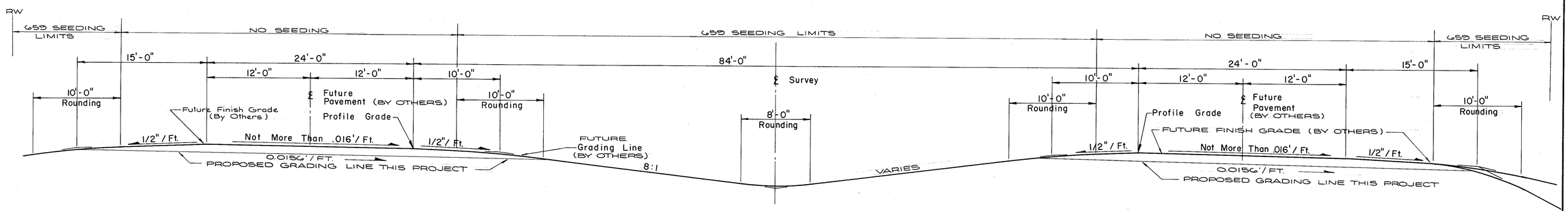
TYPICAL SECTION

TYPICAL SECTIONS

FED. RD.	STATE	PROJECT	
2	OHIO		

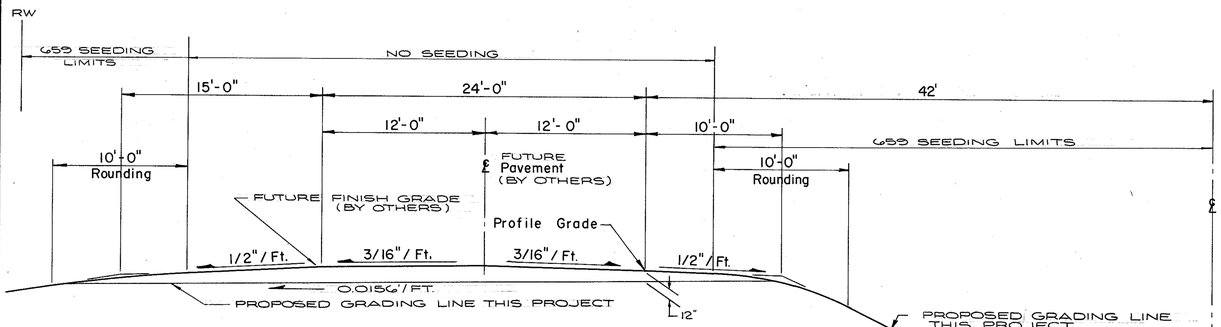
4/72

SUM - 271 - 7.65



TRANSITION SECTION

LIMITING STATIONS
EASTBOUND & WESTBOUND LANES
STA. 415 + 78.21 TO STA 418 + 53.21



NORMAL SECTION INDEPENDENT GRADE

LIMITING STATIONS

WESTBOUND LANE	EASTBOUND LANE
STA. 417 + 50.00 TO STA. 421 + 97.75	STA. 417 + 50.00 TO STA. 421 + 49.75
STA. 436 + 98.25 TO STA. 438 + 00.00	STA. 436 + 07.25 TO STA. 438 + 00.00

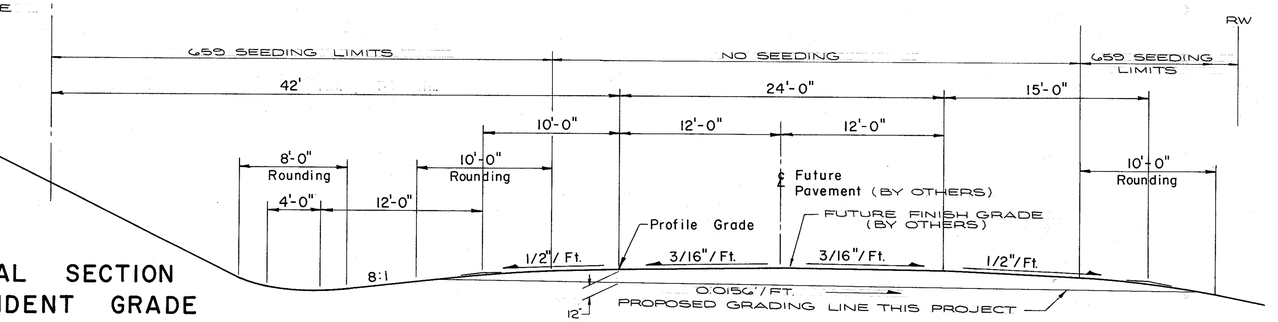
BRIDGE LIMITS (SUM - 271 - 0802)

WESTBOUND LANE	EASTBOUND LANE
STA. 421 + 97.75 TO STA. 436 + 98.25	STA. 421 + 49.75 TO STA. 436 + 07.25

NOTES:

This Typical for Grading Only.

See Sheet Nº 3 For Standard Cut & Fill Slope Details.



TYPICAL SECTION

K&E

GENERAL NOTES

FED. RD.	STATE	PROJECT	
2	OHIO		

5/72

SUM - 271 - 7.65

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS

THE ROUNDED CORNERS SHOWN ON STANDARD DRAWING MC-1, AS MODIFIED BY THE TYPICAL SECTIONS, APPLY TO ALL CROSS SECTIONS, EVEN THOUGH OTHERWISE SHOWN ON THESE PLANS.

WORK INVOLVING RAILROAD
See Note in Proposal.

FIELD OFFICE

THE CONTRACTOR SHALL, IN ADDITION TO THE REQUIREMENTS OF 105.152, PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 500 SQ. FT. OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A TELEPHONE INSTALLED AND MAINTAINED IN THIS FIELD OFFICE DURING THE CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE AND MAINTAIN SANITARY PROVISIONS AS PER 107.06. ALL THE ABOVE IS INCLUDED IN THE LUMP SUM PRICE BID FOR FIELD OFFICE.

DESIGN SPEED

THE GEOMETRICS FOR THIS PROJECT HAVE BEEN PLANNED FOR A DESIGN SPEED OF 70 MILES PER HOUR.

REMOVAL OF TREES AND STUMPS

ALL TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS OF THIS PROJECT SHALL BE REMOVED UNDER THE LUMP SUM PRICE BID FOR ITEM 201 CLEARING AND GRUBBING, EXCEPT THAT THOSE TREES FOR WHICH PROTECTION AND PRESERVATION WORK IS INDICATED ELSEWHERE IN THESE PLANS SHALL NOT BE REMOVED.

THE FOLLOWING IS AN APPROXIMATE ESTIMATE OF THE NUMBER OF TREES AND STUMPS TO BE REMOVED.

SIZES	No. TREES	No. STUMPS
18"	531	5
30"	123	3
48"	11	1
60"	1	0

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

FARM DRAINS

ALL FARM DRAINS WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE PROVIDED WITH UNOBSTRUCTED OUTLETS UNDER THE DIRECTION OF THE ENGINEER. EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEVATION AND WHICH CROSS THE ROADWAY SHALL BE REPLACED WITHIN THE RIGHT-OF-WAY CONSTRUCTION LIMITS BY ITEM 603 CONDUIT TYPE B WITH CLASS B BEDDING.

EXISTING COLLECTORS AND ISOLATED FARM DRAINS WHICH ARE ENCOUNTERED BY THE ELEVATION OF THE ROADWAY DITCHES SHALL BE OUTLETTED INTO THE ROADWAY DITCH. THE OPTIMUM OUTLET ELEVATION SHALL BE, IF POSSIBLE, ONE FOOT ABOVE THE FLOW LINE ELEVATION OF THE DITCH. LATERAL TILE FIELDS WHICH CROSS THE ROADWAY SHALL BE INTERCEPTED BY 603 TYPE E CONDUIT AND CARRIED IN A LONGITUDINAL DIRECTION TO AN ADEQUATE OUTLET OR ROADWAY CROSSING.

THE LOCATION, TYPE, SIZE AND GRADE OF REQUIRED REPLACEMENTS SHALL BE DETERMINED BY THE ENGINEER DURING CONSTRUCTION AND PAYMENT SHALL BE MADE ON FINAL MEASUREMENTS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

ITEM 603	6" CONDUIT TYPE B WITH CLASS "B" BEDDING	100 L.F.
ITEM 603	8" CONDUIT TYPE B WITH CLASS "B" BEDDING	100 L.F.
ITEM 603	6" CONDUIT TYPE E	100 L.F.
ITEM 603	8" CONDUIT TYPE E	100 L.F.
ITEM 603	6" CONDUIT TYPE F	20 L.F.
ITEM 603	8" CONDUIT TYPE F	20 L.F.
ITEM 601	DUMP ROCK CHANNEL PROTECTION	5 C.Y.

THE ABOVE ESTIMATED QUANTITIES SHALL NOT BE ORDERED WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.

SPECIAL DITCHES

FOR SPECIAL DITCH GRADES, SEE CROSS SECTIONS.

ITEM SPECIAL, DRILLED WELL ABANDONED

THE EXISTING CONCRETE OR STONE SLAB WELL COVER AND PUMPING EQUIPMENT SHALL BE REMOVED AND DISPOSED OF. THE CASING SHALL BE CUT OFF AT LEAST TWO (2) FEET BELOW THE PROPOSED FINISHED GRADE OUTSIDE PROPOSED PAVEMENT AREAS OR AT LEAST TWO (2) FEET BELOW THE PROPOSED SUBGRADE ELEVATION INSIDE PROPOSED PAVEMENT AREAS AND CAPPED WITH CLASS "E" CONCRETE OR A STANDARD THREADED PIPE CAP.

THE UNIT PRICE BID FOR EACH "DRILLED WELL ABANDONED" SHALL INCLUDE PAYMENT FOR ALL LABOR, TOOLS, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

SPRING DRAINS

REFERENCE IS MADE TO THE DETAILED DRAWING ON SHEET No. 34 SHOWING THE METHOD OF DRAINING ANY SPRING THAT MAY BE SHOWN ON THE PLANS OR ENCOUNTERED DURING CONSTRUCTION AS DETERMINED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS PURPOSE:

ITEM 605 - 6" UNCLASSIFIED PIPE UNDERDRAIN, 707.06 or 707.12, AS PER PLAN 200 L.F.
ITEM 605 - AGGREGATE DRAIN FOR SPRING , AS PER PLAN 15 L.F.

THE CONTRACTOR SHALL NOT ORDER MATERIALS FOR "SPRING DRAINS" UNTIL AUTHORIZED BY THE ENGINEER AND IN THE EVENT NO SPRINGS ARE ENCOUNTERED, THE ITEM SHALL BE NON-PERFORMED.

UNDERGROUND UTILITIES

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

ESTIMATED QUANTITIES

SPECIFIC LOCATIONS AND USAGE OF ESTIMATED QUANTITIES SET UP ON THIS PLAN TO BE USED "AS DIRECTED BY THE ENGINEER" SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

CONSTRUCTION LAYOUT STAKES

SEE NOTE IN PROPOSAL DESCRIBING THE WORK INCLUDED IN THIS LUMP SUM PAY ITEM.

CENTERLINE REFERENCE MONUMENTS, AS PER PLAN

MONUMENTS SHALL BE CONSTRUCTED OF CLASS "C" CONCRETE, CAST-IN-PLACE IN A CIRCULAR HOLE EIGHT (8) INCHES IN DIAMETER AND FORTY-FOUR (44) INCHES IN DEPTH. TOP OF CONCRETE SHALL BE FINISHED AT A DEPTH OF TWO (2) INCHES BELOW GROUND LEVEL AND THE UPPER SIX (6) INCH PORTION OF THE CONCRETE SHALL BE FORMED. A ONE-HALF (1/2) INCH STEEL ROD SIX (6) INCHES LONG SHALL BE EMBEDDED IN THE WET CONCRETE AS DIRECTED BY THE ENGINEER TO MARK THE CENTERLINE AND STATION. PAYMENT SHALL BE PER ITEM 604 EACH, CENTERLINE REFERENCE MONUMENTS, AS PER PLAN.
FOR LOCATIONS, SEE PLAN AND PROFILE SHEETS.

R/W MONUMENTS, FEDERAL PROJECT MARKERS, AND SECTION MARKERS

EXISTING R/W MONUMENTS, BENCH MARKS, FEDERAL PROJECT MARKERS AND SECTION MARKERS THAT WILL BE REMOVED BY CONSTRUCTION, SHALL BE PROTECTED BY THE CONTRACTOR AS PER SECTION 107.12 UNTIL THEY CAN BE WITNESSED, REFERENCED AND RESET BY THE CONTRACTOR.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM.

DUST CONTROL
The Contractor shall furnish and apply water or calcium chloride for dust control as directed by the Engineer.
The following quantities have been included in the General Summary for dust control-
Item 616 Calcium Chloride 3 Tons
Item 616 Water 100 M.Gals.

PUBLIC UTILITIES

THE FOLLOWING IS A LIST OF THE UTILITIES WITHIN THE LIMITS OF THIS PROJECT:

EAST OHIO GAS COMPANY	AKRON, OHIO
OHIO EDISON COMPANY	AKRON, OHIO
OHIO BELL TELEPHONE CO.	AKRON, OHIO

SEQUENCE OF CONSTRUCTION

GRADING ON THIS PROJECT SHALL BE COMPLETED BY THE END OF THE FIRST CALENDAR YEAR OF THE CONTRACT.

LINE DATA CALCULATIONS

SUM 271 - 7.65

MAINLINE APPROACHES
BEGIN WORK STATION 403 + 00.00
BEGIN PROJECT STATION 405 + 00.00
APPROACH LENGTH = 200.00 LINEAL FEET
END WORK STATION = 440+00.00
END PROJECT STATION = 438 + 00.00
APPROACH LENGTH = 200.00 LINEAL FEET
TOTAL APPROACH LENGTH = 400.00 LINEAL FEET

FEDERAL AID IDENTIFICATION SIGNS

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS AT EACH OF THE FOLLOWING LOCATIONS:

(1) C.H. 9 RIVERVIEW ROAD STATION 70 + 00 RT.
(2) C.H. 9 RIVERVIEW ROAD STATION 77 + 00 LT.

SIGN DETAILS SHALL BE AS SPECIFIED ON STANDARD DRAWING FACI-1 "CODE N-55 (1) - 120 (2)

THE SIGNS SHALL BE ERECTED IN ACCORDANCE WITH STANDARD DRAWING FACI-2. ADDITIONAL REQUIREMENTS SHALL BE IN ACCORDANCE WITH NOTES IN THE PROPOSAL.

SEPTIC TANKS
Septic tanks shall be cleaned and removed or filled as conditions require and included for payment in the unit price bid for Item 203, Excavation Not Including Embankment Construction, as per plan.

REMOVAL OF EXISTING PIPE
The removal of all existing pipe drains which would normally be removed in VARIOUS EXCAVATION ITEMS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICES BID FOR THE RESPECTIVE EXCAVATION ITEMS, UNLESS OTHERWISE ITEMIZED IN THE PLANS.

PLUGGING GAS WELLS

THE GAS WELL LOCATED WITHIN THE LIMITS OF THE RIGHT-OF-WAY SHALL BE PLUGGED BY THE CONTRACTOR BEFORE ANY OTHER CONSTRUCTION IS STARTED IN THE VICINITY OF THE WELL. THE WELL SHALL BE FILLED SOLID FROM BOTTOM TO TOP AND ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE OF OHIO DIVISION OF MINES. ALL WORK CONNECTED WITH PLUGGING OF THE WELL MUST BE PERFORMED UNDER THE SUPERVISION OF A REPRESENTATIVE OF THE DIVISION OF MINES. THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE DIVISION OF MINES AT LEAST 14 DAYS IN ADVANCE OF THE DATE ON WHICH HE INTENDS TO BEGIN WORK.

PAYMENT FOR THE WORK SHALL BE MADE PER EACH UNDER ITEM SPECIAL PLUGGING GAS WELL, WHICH PRICE AND PAYMENT SHALL CONSTITUTE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, TOOLS AND EQUIPMENT, AND ALL INCIDENTALS NECESSARY TO COMPLETE THIS ITEM.

PIPE BENDS AND BRANCHES

PIPE BENDS AND BRANCHES WHERE SHOWN THROUGHOUT THE PLANS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

EROSION CONTROL AT STANDARD HW-3 HEADWALLS

AN EIGHTEEN INCH (18") WIDE SOD STRIP SHALL BE PLACED ALONG THE BACK AND BOTH ENDS OF THE HEADWALLS TO PREVENT EROSION. THE QUANTITY OF SODDING REQUIRED IS INCLUDED IN THE ESTIMATED QUANTITIES SHOWN ON EACH OF THOSE CULVERT DETAILS WHERE THESE HEADWALLS HAVE BEEN USED.

SEEDING AND MULCHING
Quantities for Seeding and Mulching are calculated for soil areas as follows:
In median area between edges of inside shoulders.
Outside areas from edges of outside shoulders to the Right-of-Way lines, and within the work limits for areas outside the Right-of-Way lines covered by work agreement or slope easement.
The limits of Seeding and Mulching shall be from Sta. 403+00 to Sta. 422+58; from Sta. 435+50 to Sta. 440+00 disturbed areas at bridge piers, and other construction, all as directed by the Engineer.
Commercial Fertilizer (12-12-12) and Agricultural Liming shall be applied in accordance with Item 659.

ESTIMATED QUANTITIES

659 9.47 Ton, Commercial Fertilizer, (12-12-12)
659 47.33 Ton, Agricultural Liming
659 105,190 Sq. Yd. Seeding and Mulching.
Payment for all items will be made on final measurement.

EXCAVATION - STA. 403+00 TO STA. 411+00 = 312,850
STA. 411+00 TO STA. 422+58 = 134,772
STA. 422+58 TO STA. 440+00 = 13,800
ITEM 203 EXCAVATION TOTAL = 461,422 CU.YDS.

EMBANKMENT - STA. 403+00 TO STA. 411+00 = 0
STA. 411+00 TO STA. 422+58 = 362,139
STA. 422+58 TO STA. 440+00 = 11,499
ITEM 203 EMBANKMENT = 373,638 CU.YDS.

ITEM 203 WATER (373,638 × .005) = 1868 M. GAL.

GRADING ELEVATIONS
PROFILE GRADE ELEVATIONS RECORDED ON PLAN AND PROFILE AND CROSS SECTION SHEETS ARE FUTURE FINISHED PAVEMENT PROFILE GRADE ELEVATIONS. THE FINISHED GRADE ELEVATION FOR THIS PROJECT IS ONE (1') FOOT BELOW THESE ELEVATIONS AS SHOWN ON TYPICAL SECTIONS SHEETS 3 AND 4.

MAINTAINING TRAFFIC

Two way traffic shall be maintained on Riverview Road, C.H. No. 9 at all times, through the work area.

MAINTAINING LOCAL TRAFFIC

THE FOLLOWING QUANTITIES ARE INCLUDED FOR MAINTAINING TRAFFIC AND ARE TO BE USED AS DIRECTED BY THE ENGINEER:

ITEM 410, TRAFFIC COMPACTED SURFACE TYPE A OR B..... 50 CU.YDS.
ITEM 616, CALCIUM CHLORIDE..... 1 TON

See Note on Sheet 10 for Reconstruction of Drive.

PAYMENT FOR TEMPORARY ROADWAYS

PAYMENT FOR CONSTRUCTION, MAINTENANCE, AND SUBSEQUENT REMOVAL, WHENEVER REQUIRED, OF TEMPORARY ROADWAYS EXCEPT FOR FURNISHING AND PLACING OF ITEMS 616 CALCIUM CHLORIDE AND 410 TRAFFIC COMPACTED SURFACE TYPE A OR B, SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

MAINTENANCE OF TRAFFIC
GENERAL NOTES

QUANTITY SUMMARY

TYPE CODE 0010 - UNLESS OTHERWISE SHOWN.

FED.RD.	STATE	PROJECT	
	OHIO		

SUM - 271 - 7.65

6/72

* TYPE CODE Y 005

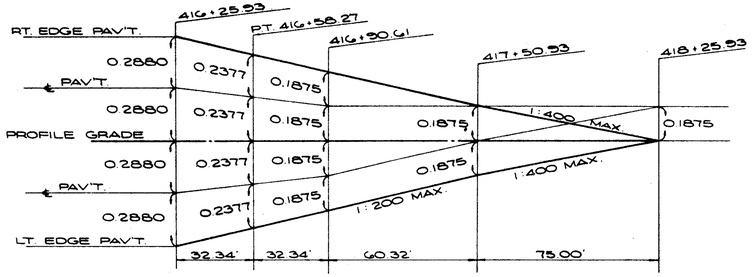
ITEM	2	5	8	9	10	11	37	ITEM	QUANTITY	UNIT	DESCRIPTION
											ROADWAY
201		LUMP						201	LUMP	LUMP	CLEARING AND GRUBBING
203		461422						203	461,422	CU. YD.	EXCAVATION NOT INCLUDING EMBANKMENT CONSTRUCTION AS PER PLAN
203		373638						203	373638	CU. YD.	EMBANKMENT
203		1868						203	1868	M. GAL.	WATER
304					50			304	50	CU. YD.	AGGREGATE BASE
410		50						410	50	CU. YD.	TRAFFIC COMPACTED SURFACE, TYPE A OR B
604			2	3		1		604	6	EACH	CENTERLINE REFERENCE MONUMENTS, AS PER PLAN
616		4						616	4	TON	CALCIUM CHLORIDE
616		100						616	100	M. GAL.	WATER
620	14							620	14	EACH	MONO-DIRECTIONAL DELINEATOR TYPE A-1 - BRACKET MOUNTED
606				112.5				606	112.5	LIN. FT.	GUARD RAIL TYPE 4
* 601							47	* 601	47	SQ. YD.	RIP RAP *Using 6" Reinforced Concrete Slab, as per plan*
* 660							8	* 660	8	SQ. YD.	SODDING
* 660				313		57		* 660	370	SQ. YD.	SODDING FOR SPECIAL BERM AND SLOPE PROTECTION, AS PER PLAN
* 667			813	855				* 667	1668	SQ. YD.	JUTE MATTING
SPECIAL				1				SPECIAL	1	EACH	DRILLED WELL ABANDONED
SPECIAL				1				SPECIAL	1	EACH	PLUGGING OF GAS WELL
659		9.47						X 659	9.47	TON	COMMERCIAL FERTILIZER (12-12-12)
659		47.33						X 659	47.33	TON	AGRICULTURAL LIMING
659		105,190						X 659	105,190	SQ. YD.	SEEDING AND MULCHING
202								202	LUMP	LUMP	PAR. #43 WL REMOVAL OF ONE SWIMMING POOL, *One Frame Cabin &* ONE FRAME BATH HOUSE
202								202	Lump	Lump	*Parcel No. 50 WL Removal of one 1 Story Frame House, one 1 Story Frame Tavern, one Frame Garage & one Frame Shed*
202								202	Lump	Lump	*Parcel No. 54 WL Removal of one 1 Story Frame House*
											DRAINAGE
* 601		5		299			38	* 601	343	CU. YD.	DUMPED ROCK CHANNEL PROTECTION
602				0.5			22	602	22.5	CU. YD.	CONCRETE MASONRY
603							430	603	430	LIN. FT.	54" CONDUIT, TYPE-A 707.05 GAGE B - SHOP ELONGATED AND SHOP STRUTTED, WITH CLASS B BEDDING
603		100						603	100	LIN. FT.	6" CONDUIT, TYPE B W/CLASS B BEDDING
603		100						603	100	LIN. FT.	8" CONDUIT, TYPE B W/CLASS B BEDDING
603				154				603	154	LIN. FT.	15" CONDUIT, TYPE B W/CLASS B BEDDING
603		100						603	100	LIN. FT.	6" CONDUIT, TYPE E
603		100						603	100	LIN. FT.	8" CONDUIT, TYPE E
603		20		10				603	30	LIN. FT.	6" CONDUIT, TYPE F
603		20						603	20	LIN. FT.	8" CONDUIT, TYPE F
603				29				603	29	LIN. FT.	15" CONDUIT, TYPE F
604				2				604	2	EACH	STANDARD Nº 5 CATCH BASIN
605		200						605	200	LIN. FT.	6" UNCLASSIFIED PIPE UNDERDRAIN, 707.06 OR 707.12, AS PER PLAN
605		15						605	15	LIN. FT.	AGGREGATE DRAIN FOR SPRINGS, AS PER PLAN
											STRUCTURES OVER 20' SPAN FOR ESTIMATED QUANTITIES SUM - 271 - 0802 ~ SEE SHEETS 41 & 43
		LUMP							LUMP	LUMP	FIELD OFFICE
		LUMP							LUMP	LUMP	CONSTRUCTION LAYOUT STAKES
614		LUMP						614	LUMP	LUMP	MAINTAINING TRAFFIC

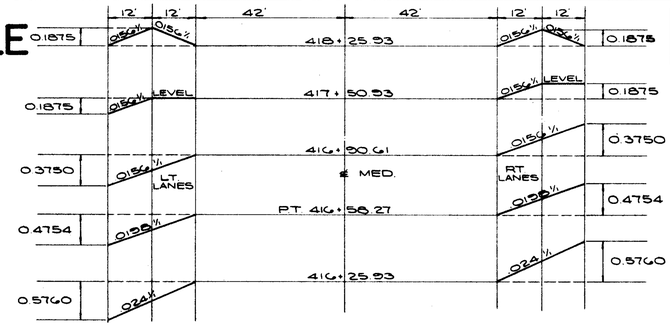
GENERAL SUMMARY

SUPERELEVATION TABLE

CURVE 5

Δ = 28° 53' 34" (LT.)
e = .024 FT. PER FT.





PED. RD.	STATE	PROJECT	
2	OHIO		

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WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
840.69	840.98	841.27	405 + 25	831.19	831.48	831.77
841.44	841.73	842.02	405 + 00	831.94	832.23	832.52
842.19	842.48	842.77	404 + 75	832.69	832.98	833.27
842.94	843.23	843.52	404 + 50	833.44	833.73	834.02
843.69	843.98	844.27	404 + 25	834.19	834.48	834.77
844.44	844.73	845.02	404 + 00	834.94	835.23	835.52
845.19	845.48	845.77	403 + 75	835.69	835.98	836.27
845.94	846.23	846.52	403 + 50	836.44	836.73	837.02
846.69	846.98	847.27	403 + 25	837.19	837.48	837.77
847.44	847.73	848.02	403 + 00	837.94	838.23	838.52
848.19	848.48	848.77	402 + 75	838.69	838.98	839.27
848.94	849.23	849.52	402 + 50	839.44	839.73	840.02
849.69	849.98	850.27	402 + 25	840.19	840.48	840.77
850.44	850.73	851.02	402 + 00	840.94	841.23	841.52
851.19	851.48	851.77	401 + 75	841.69	841.98	842.27
851.94	852.23	852.52	401 + 50	842.44	842.73	843.02
852.69	852.98	853.27	401 + 25	843.19	843.48	843.77
853.44	853.73	854.02	401 + 00	843.94	844.23	844.52
854.19	854.48	854.77	400 + 75	844.69	844.98	845.27
854.94	855.23	855.52	400 + 50	845.44	845.73	846.02
855.69	855.98	856.27	400 + 25	846.19	846.48	846.77
856.44	856.73	857.02	400 + 00	846.94	847.23	847.52
857.19	857.48	857.77	399 + 75	847.69	847.98	848.27
857.94	858.23	858.52	399 + 50	848.44	848.73	849.02
858.69	858.98	859.27	399 + 25	849.19	849.48	849.77
859.44	859.73	860.02	399 + 00	849.94	850.23	850.52
860.19	860.48	860.77	398 + 75	850.69	850.98	851.27
860.94	861.23	861.52	398 + 50	851.44	851.73	852.02
861.69	861.98	862.27	398 + 25	852.19	852.48	852.77

WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
818.94	819.23	819.52	412 + 50	809.44	809.73	810.02
819.69	819.98	820.27	412 + 25	810.19	810.48	810.77
820.44	820.73	821.02	412 + 00	810.94	811.23	811.52
821.19	821.48	821.77	411 + 75	811.69	811.98	812.27
821.94	822.23	822.52	411 + 50	812.44	812.73	813.02
822.69	822.98	823.27	411 + 25	813.19	813.48	813.77
823.44	823.73	824.02	411 + 00	813.94	814.23	814.52
824.19	824.48	824.77	410 + 75	814.69	814.98	815.27
824.94	825.23	825.52	410 + 50	815.44	815.73	816.02
825.69	825.98	826.27	410 + 25	816.19	816.48	816.77
826.44	826.73	827.02	410 + 00	816.94	817.23	817.52
827.19	827.48	827.77	409 + 75	817.69	817.98	818.27
827.94	828.23	828.52	409 + 50	818.44	818.73	819.02
828.69	828.98	829.27	409 + 25	819.19	819.48	819.77
829.44	829.73	830.02	409 + 00	819.94	820.23	820.52
830.19	830.48	830.77	408 + 75	820.69	820.98	821.27
830.94	831.23	831.52	408 + 50	821.44	821.73	822.02
831.69	831.98	832.27	408 + 25	822.19	822.48	822.77
832.44	832.73	833.02	408 + 00	822.94	823.23	823.52
833.19	833.48	833.77	407 + 75	823.69	823.98	824.27
833.94	834.23	834.52	407 + 50	824.44	824.73	825.02
834.69	834.98	835.27	407 + 25	825.19	825.48	825.77
835.44	835.73	836.02	407 + 00	825.94	826.23	826.52
836.19	836.48	836.77	406 + 75	826.69	826.98	827.27
836.94	837.23	837.52	406 + 50	827.44	827.73	828.02
837.69	837.98	838.27	406 + 25	828.19	828.48	828.77
838.44	838.73	839.02	406 + 00	828.94	829.23	829.52
839.19	839.48	839.77	405 + 75	829.69	829.98	830.27
839.94	840.23	840.52	405 + 50	830.44	830.73	831.02

WESTBOUND LANES				EASTBOUND LANES		
LEFT EDGE	CROWN	PROFILE GRADE	STATION	PROFILE GRADE	CROWN	RIGHT EDGE
802.24	802.43	802.24	418 + 25.93	792.16	792.35	792.16
802.27	802.46	802.27	418 + 25	792.19	792.38	792.19
802.96	803.15	803.02	418 + 00	792.94	793.13	793.00
803.64	803.83	803.77	417 + 75	793.69	793.88	793.82
804.30	804.49	804.49	417 + 50.93	794.41	794.60	794.60
804.33	804.52	804.52	417 + 50	794.44	794.63	794.63
805.00	805.19	805.27	417 + 25	795.19	795.38	795.46
805.67	805.86	806.02	417 + 00	795.94	796.13	796.29
805.92	806.11	806.30	416 + 90.61	796.22	796.41	796.60
806.35	806.56	806.77	416 + 75	796.69	796.90	797.11
806.75	807.03	807.27	416 + 58.27	797.19	797.43	797.67
807.02	807.27	807.52	416 + 50	797.44	797.69	797.94
807.66	807.95	808.24	416 + 25.93	798.16	798.45	798.74
807.69	807.98	808.27	416 + 25	798.19	798.48	798.77
808.44	808.73	809.02	416 + 00	798.94	799.23	799.52
809.10	809.39	809.68	415 + 78.21	799.60	799.89	800.18
809.19	809.48	809.77	415 + 75	799.69	799.98	800.27
809.94	810.23	810.52	415 + 50	800.44	800.73	801.02
810.69	810.98	811.27	415 + 25	801.19	801.48	801.77
811.44	811.73	812.02	415 + 00	801.94	802.23	802.52
812.19	812.48	812.77	414 + 75	802.69	802.98	803.27
812.94	813.23	813.52	414 + 50	803.44	803.77	804.02
813.69	813.98	814.27	414 + 25	804.19	804.48	804.77
814.44	814.73	815.02	414 + 00	804.94	805.23	805.52
815.19	815.48	815.77	413 + 75	805.69	805.98	806.27
815.94	816.23	816.52	413 + 50	806.44	806.73	807.02
816.69	816.98	817.27	413 + 25	807.19	807.48	807.77
817.44	817.73	818.02	413 + 00	807.94	808.23	808.52
818.19	818.48	818.77	412 + 75	808.69	808.98	809.27

CURVE Nº 5
SUPERELEVATION TABLE

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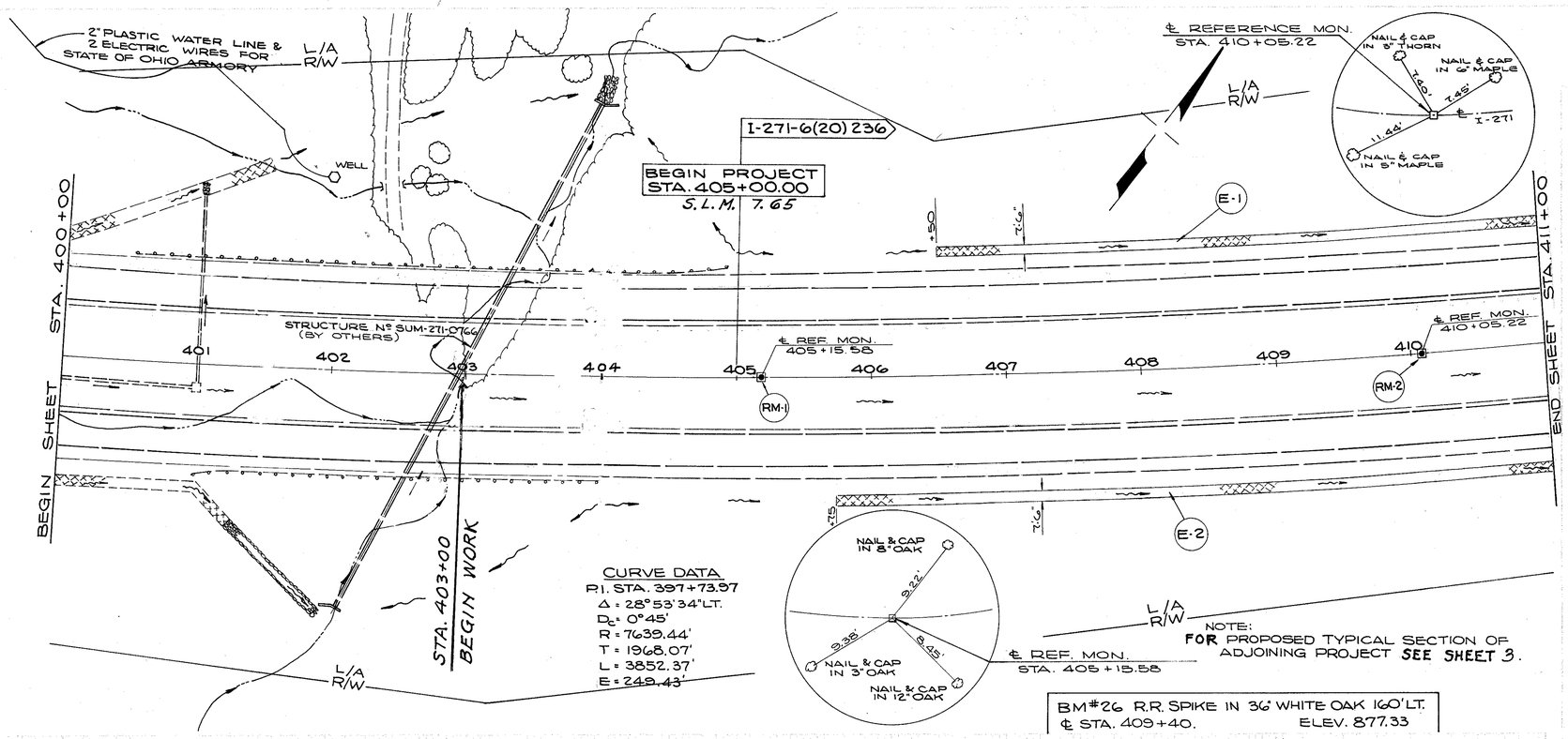
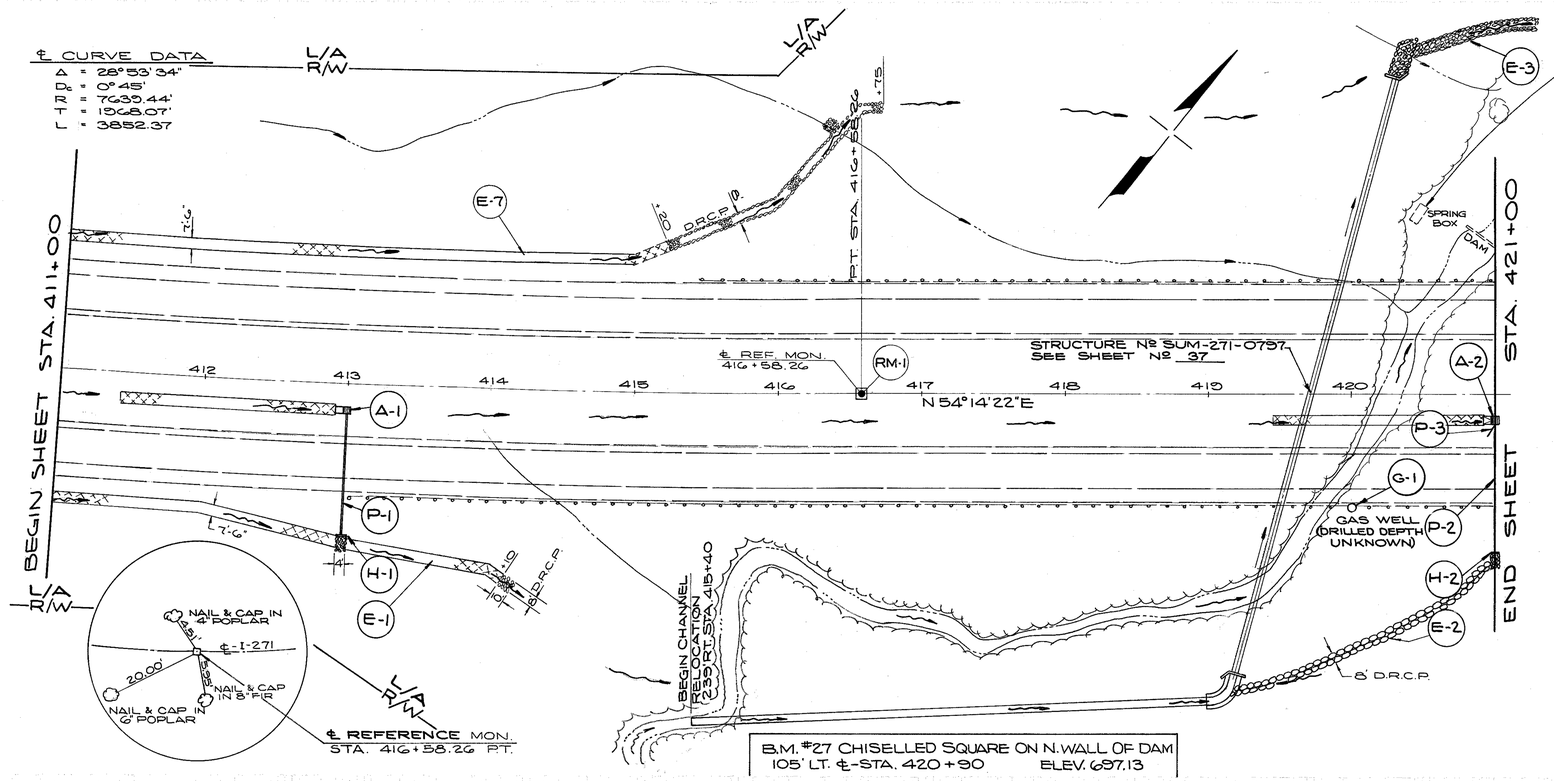
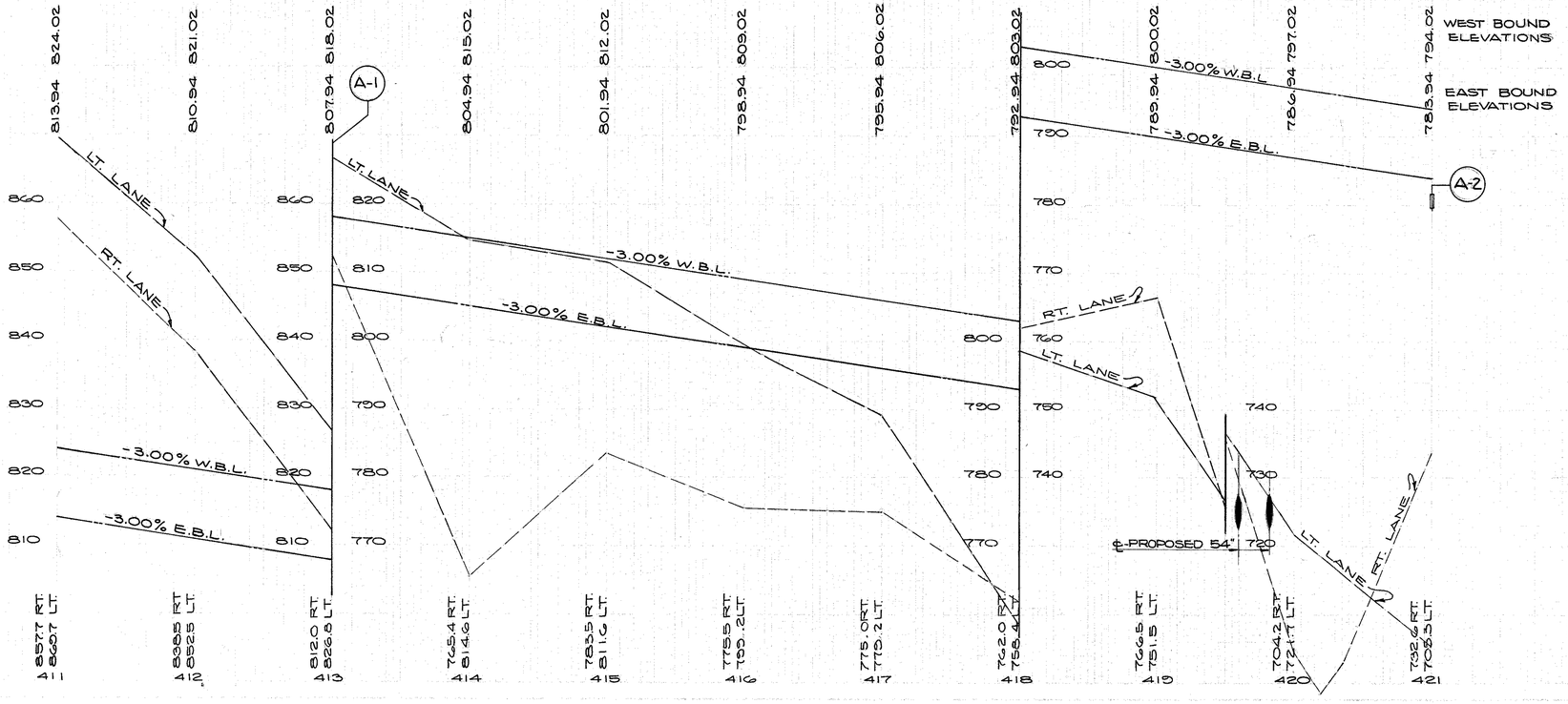


604	℄ REF MON. EACH	2
667	JUTE MATTING SQ. YD.	813
RM-1 405+15.58	℄	1
RM-2 410+05.22	℄	1
E-1 404+50 - 411+00	LT.	375
E-2 405+75 - 411+00	RT.	438

I-271 STA. 400+00 TO STA. 411+00


℄ CURVE DATA
Δ = 28° 53' 34"
D_c = 0° 45'
R = 7639.44'
T = 1968.07'
L = 3852.37
L/A R/W
BEGIN SHEET STA. 411+00
END SHEET STA. 421+00
PT STA. 416+58.26
E-7
20 D.R.C.P.
SPRING BOX
DAM
E-3
SEE SHEET Nº 34 FOR DETAILS OF DRAINING SPRINGS
℄ REF. MON. 416+58.26
RM-1
N 54°14'22"E
STRUCTURE Nº SUM-271-0757 SEE SHEET Nº 37
A-1
A-2
P-1
P-2
P-3
G-1
GAS WELL (DRILLED DEPTH UNKNOWN)
H-1
H-2
E-1
E-2
8' D.R.C.P.
BEGIN CHANNEL RELOCATION 235 FT. STA. 415+40
NAIL & CAP IN 4" POPLAR
℄-I-271
NAIL & CAP IN 8" FIR
NAIL & CAP IN 6" POPLAR
℄ REFERENCE MON. STA. 416+58.26 PT.
B.M. #27 CHISELLED SQUARE ON N. WALL OF DAM
105' LT. ℄-STA. 420+90 ELEV. 697.13


WEST BOUND ELEVATIONS
EAST BOUND ELEVATIONS
LT. LANE
RT. LANE
-3.00% W.B.L.
-3.00% E.B.L.
℄-PROPOSED 54"
A-1
A-2
813.94 824.02
810.94 821.02
807.94 815.02
804.94 815.02
801.94 812.02
798.94 809.02
795.94 806.02
792.94 803.02
789.94 800.02
786.94 797.02
783.94 794.02
Δ 857.7 RT. = 845.7 LT.
838.5 RT. 832.5 LT.
812.0 RT. 826.8 LT.
765.4 RT. 814.6 LT.
783.5 RT. 811.6 LT.
775.5 RT. 795.2 LT.
775.0 RT. 775.2 LT.
762.0 RT. 758.4 LT.
766.5 RT. 751.5 LT.
704.2 RT. 721.7 LT.
732.6 RT. 705.5 LT.

| | | |

MICROFILMED
AUG 27 1987

FED. RD.	STATE	PROJECT	
2	OHIO		

10/72

SUM - 271 - 7.65

B.M. # 29 R.R. SPIKE IN 34" SYCAMORE
225' LT. ℄ STA. 434 +45 - ELEV. 664.92

BEGIN SHEET STA. 421+00

END SHEET STA. 437+00

I-271-6(16) 231
STA. 421+49.75

I-271-6(27) 237
STA. 436+98.25

E-3, E-4, E-5, E-6

A-2

N 54° 14' 22" E

℄ REF. MON.
425+21.51

RM-2, RM-3

℄ REF. MON.
433+54.71

STA. 425+49.26 ℄ I-271
STA. 72+99.30 ℄ RW CH.'S

POINT OF ACCESS

PRIVATE DRIVE

RESIDENTIAL DRIVE

ABANDONED

CUYAHOGA RIVER

OHIO BELL TEL. & TEL. CABLE

OHIO EDISON 7 WIRE 12.5 KV

OHIO EDISON WIRE 12.5 KV

GAS WELL

WA-1

DRILLED WELL

SEPTIC TANK

R-1

P.T. STA. 1113+04
(48' RT. ℄ B&O. RR.

END PROP. DITCH
STA. 1112+60
(31' RT. ℄ B&O. RR.

STA. 427+84.69 M.L.
STA. 1112+77.21 B&O.

BEGIN PROP. DITCH
(13' RT. ℄ STA. 1114+03
B&O. R.R.)

PC STA. 1113+61
43' RT. ℄ B&O. RR.

R.R. STA. 1114
1118 B&O

EXIST. TYPICAL - RIVERVIEW RD.

14'-6"
4' 4' 21'-0" 4' 4'
℄ - R/W
1'-0"
3" BITUMINOUS MAT
3" SLAG
6" BANK RUN GRAVEL
PROPOSED GUARD RAIL

NOTE:
THE CONTRACTOR SHALL ADJUST AS REQUIRED, THE EXISTING PRIVATE DRIVEWAY RIGHT OF STA. 422+50 AROUND PIER Nº 1 AS DIRECTED BY THE ENGINEER.
A MINIMUM 12' DRIVEWAY SHALL BE MAINTAINED IN THE VICINITY OF PIER Nº 1 OF THE EASTBOUND STRUCTURE SUM-271-0802 AND THE DRIVEWAY RESTORED UPON THE COMPLETION OF CONSTRUCTION.
THE FOLLOWING QUANTITIES HAVE BEEN PROVIDED FOR THIS PURPOSE
ITEM 304 AGGREGATE BASE = 50 CU. YDS.

NAIL & CAP IN POWER POLE
NAIL & CAP IN 4" STUMP
26.74'
S 68°
℄ I-271
13.44'
NAIL & CAP IN 4" WALNUT
℄ REFERENCE MON.
STA. 425+21.51

TYPICAL R.R. DITCH RELOCATION
STA. 1112+60 TO 1114+03
ITEM 203 EXCAVATION 84 CU. YD.
4' 4' 4'
2:1
2' MIN
2:1

BRIDGE Nº SUM - 271 - 0802 LT. & RT.

TYPE: CONTINUOUS WELDED STEEL PLATE GIRDERS WITH REINFORCED CONC. DECK AND SUBSTRUCTURE
SKEW: 0° 00' 00"
SPANS: LT. 120'-0" - 5 @ 170'-0" - 2 @ 188'-0" - 150'-0"
RT. 105'-0" - 2 @ 165'-0" - 4 @ 170'-0" - 188'-0" - 150'-0"
ROADWAY: LT. & RT. : 34'-0" F/F PARAPETS - 2' CURBS
LOAD FREQUENCY: CF = 2000 ADEQUATE FOR A.A.S.H.O. LOADING
WEARING SURFACE: 1" MONOLITHIC
ALIGNMENT: TANGENT
APPROACH SLABS: 25' LONG (AS-1-54)
SUPERELEVATION: NONE

FOR ESTIMATED QUANTITIES, SEE SHEET Nº 9

NAIL & CAP IN 5" ELM
NAIL & CAP IN 40" SYCAMORE
35.35'
30.48'
℄ I-271
25.44'
NAIL & CAP IN 3" ELM
℄ REFERENCE MON.
STA. 433+54.71

WEST BOUND ELEVATIONS
EAST BOUND ELEVATIONS

-3.00% W.B.L.
-3.00% E.B.L.

℄ CH 9

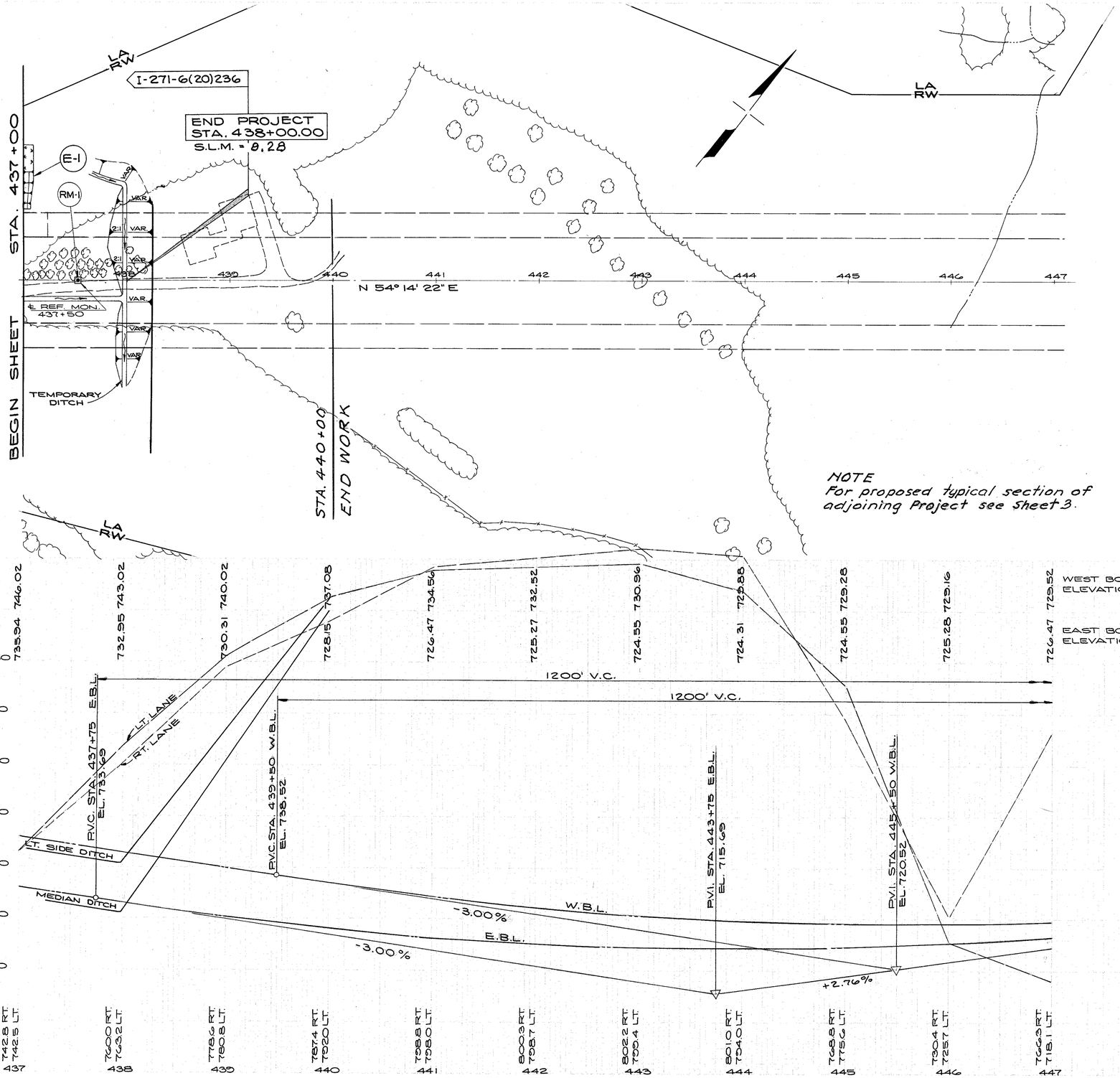
LT. LANE
RT. LANE

STA. 421+97.75
STA. 421+49.75
STA. 436+07.25
STA. 436+98.25

LT. BRIDGE LIMITS 1500.50
RT. BRIDGE LIMITS 1457.50

| | | |

SUM - 271 - 7.65



GEO. SPECIAL BERM & SLOPE PROT. SQYD.	LT: 57	℄	1
604 ℄ REF. MON. EACH			1

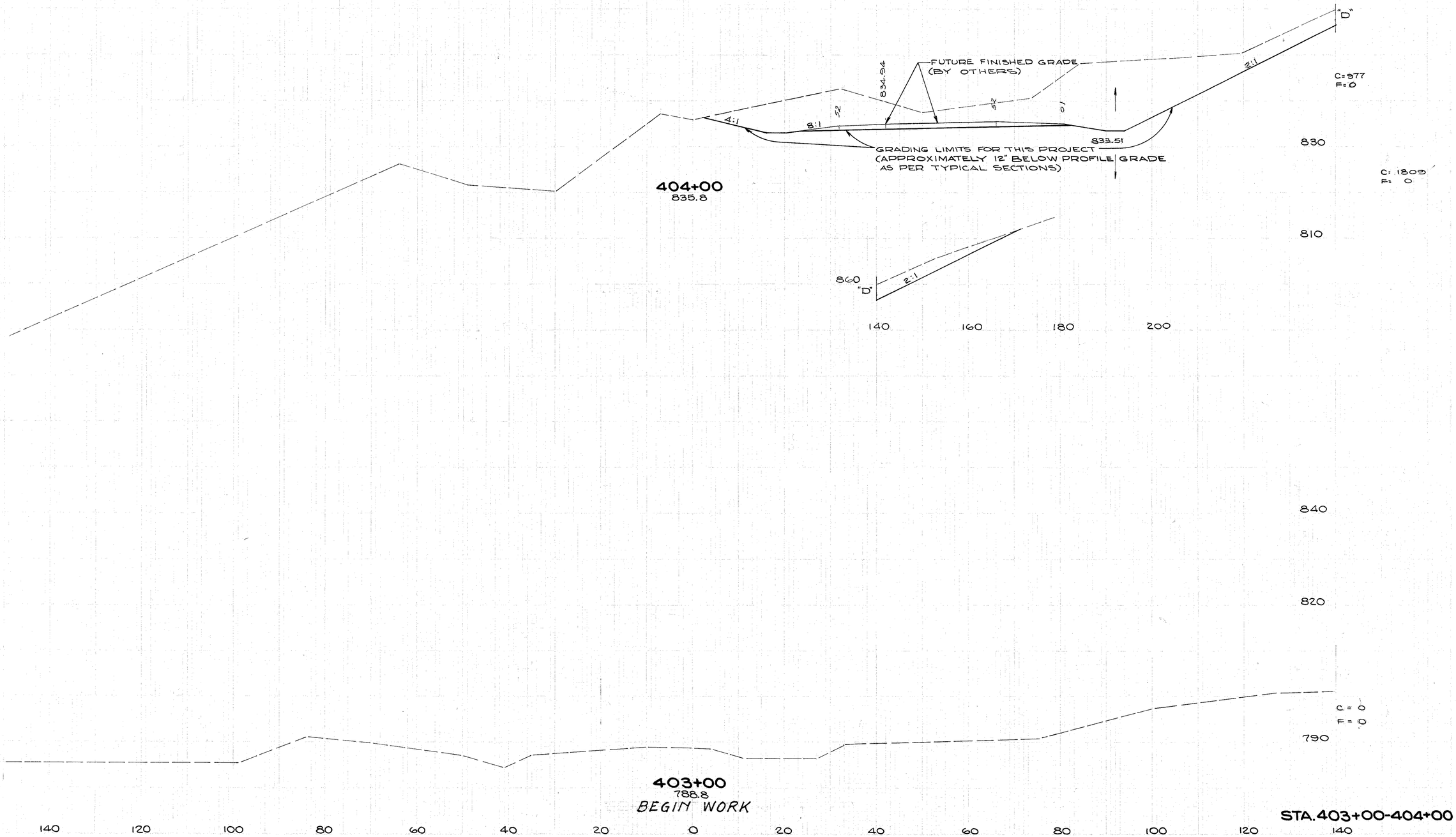
E-1	437+03	LT: 57
RM-1	437+50	℄

57 1

I-271 STA. 437+00 TO STA. 447+00

SUM-271-7.65

END AREA CU. YDS.



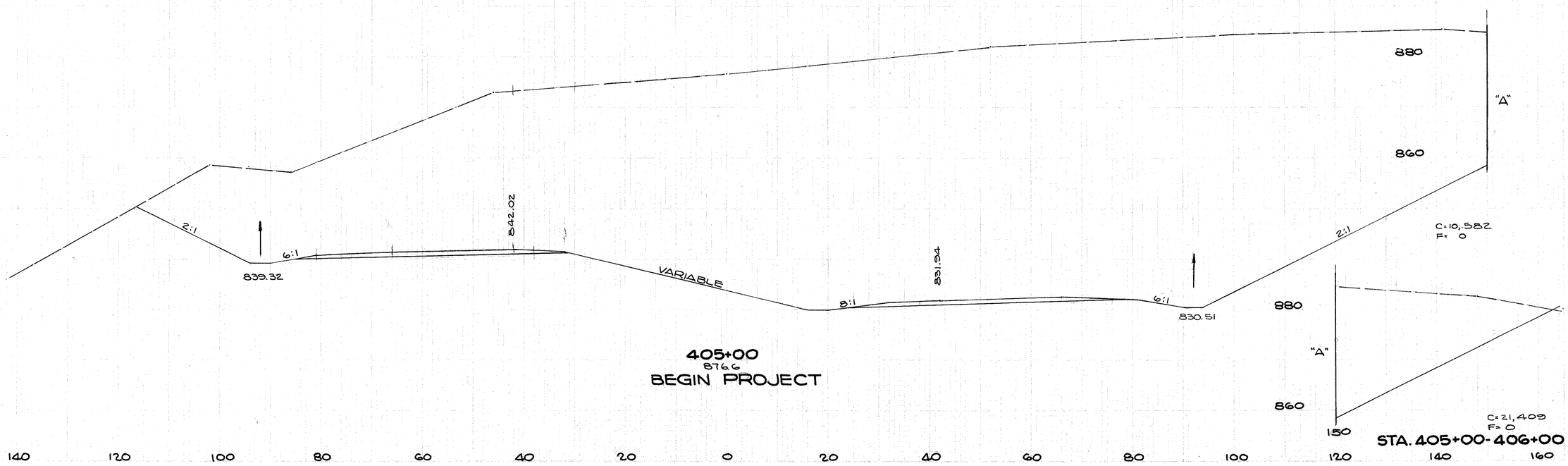
STA. 403+00-404+00

SUM·271-7.65

END AREA CU. YDS.

406+00
881.6

C=41,812
F= 0

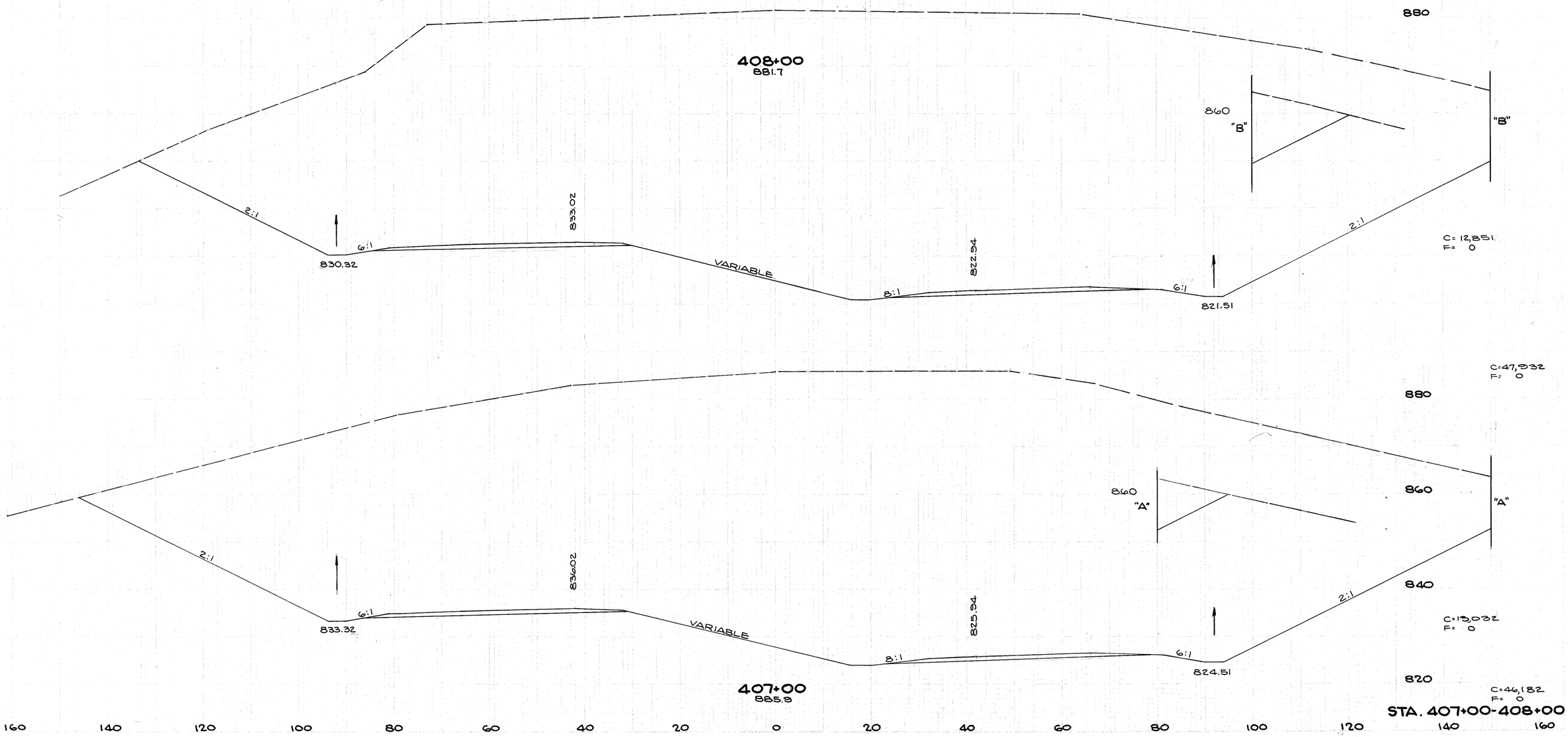


405+00
876.6
BEGIN PROJECT

STA. 405+00-406+00

SUM·271 - 7.65

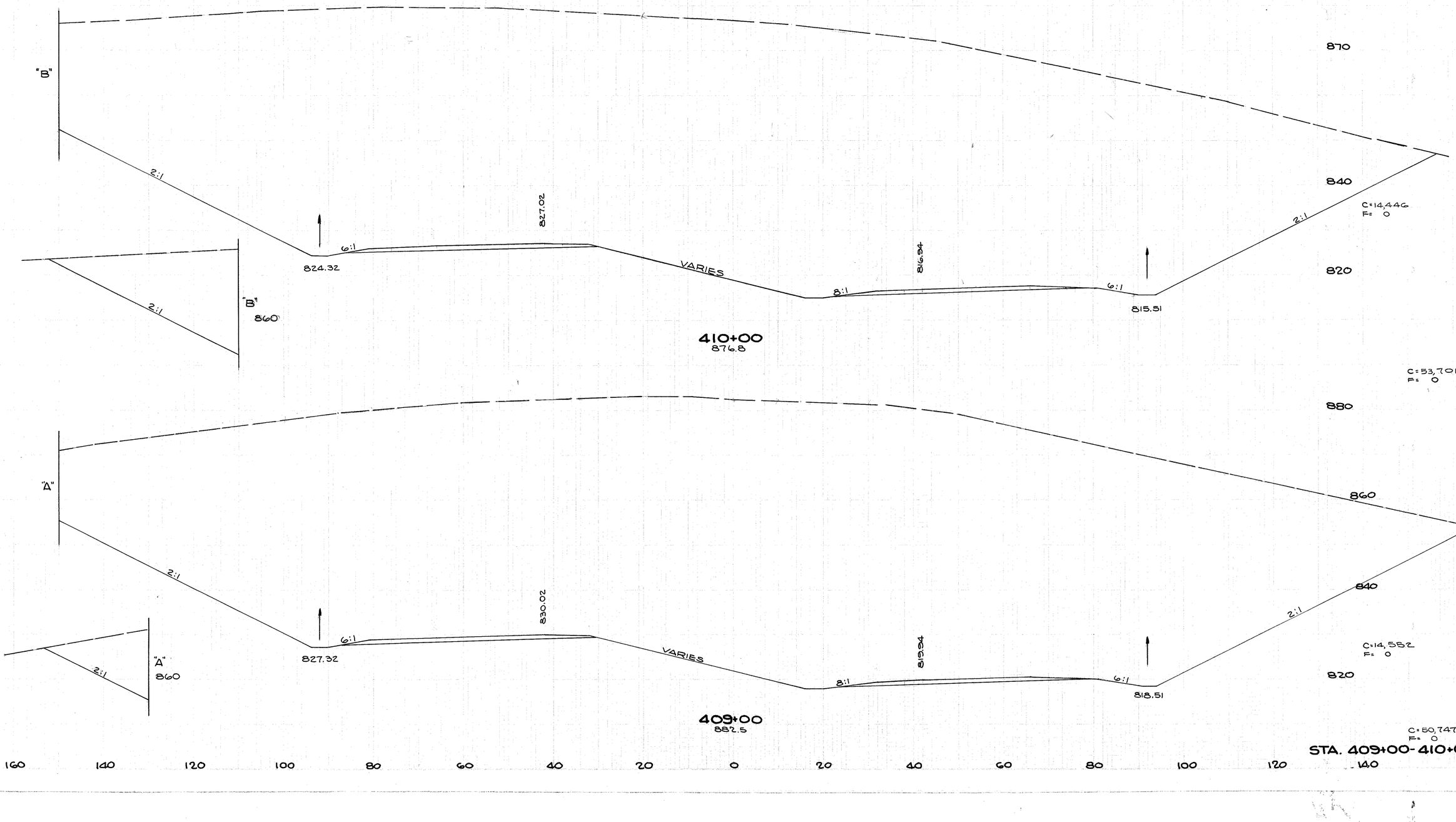
END AREA CU. YDS.



STA. 407+00-408+00

SUM·271 - 7.65

END AREA CU. YDS.



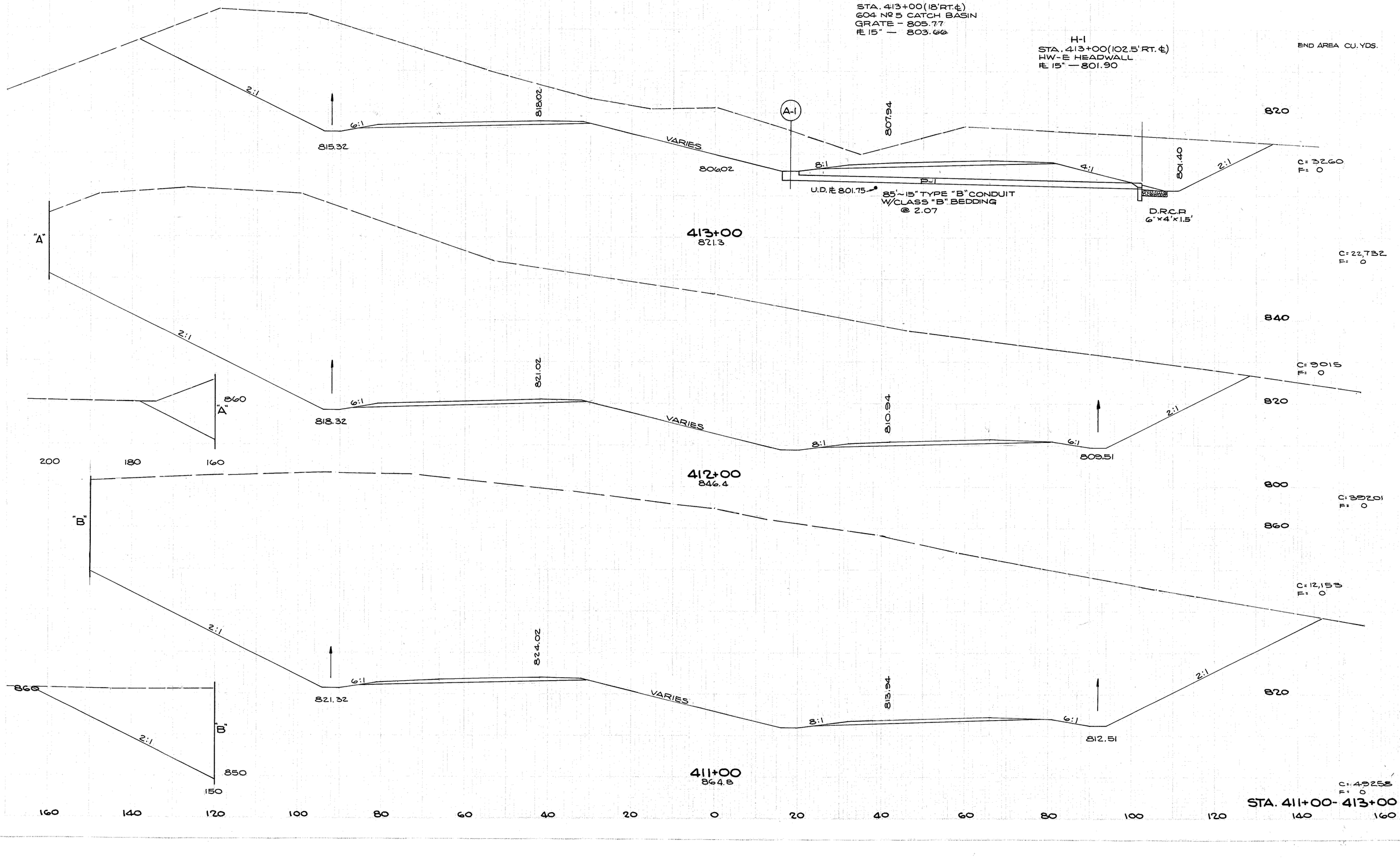
STA. 409+00- 410+00

SUM. 271 - 7.65

A-1
STA. 413+00 (18' RT. ℄)
604 Nº 5 CATCH BASIN
GRATE - 805.77
℄ 15" — 803.66

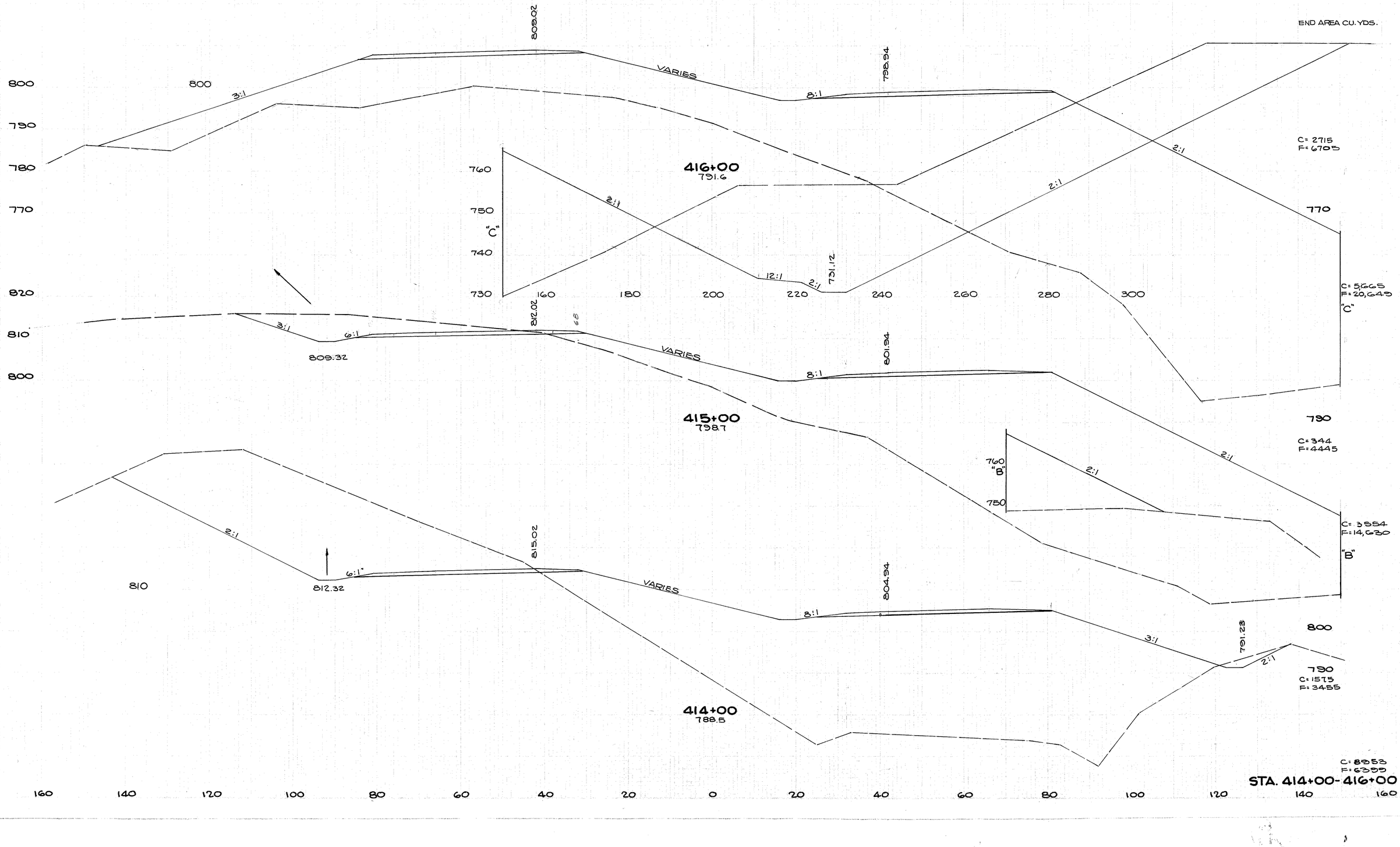
H-1
STA. 413+00 (102.5' RT. ℄)
HW-E HEADWALL
℄ 15" — 801.90

END AREA CU. YDS.



STA. 411+00 - 413+00

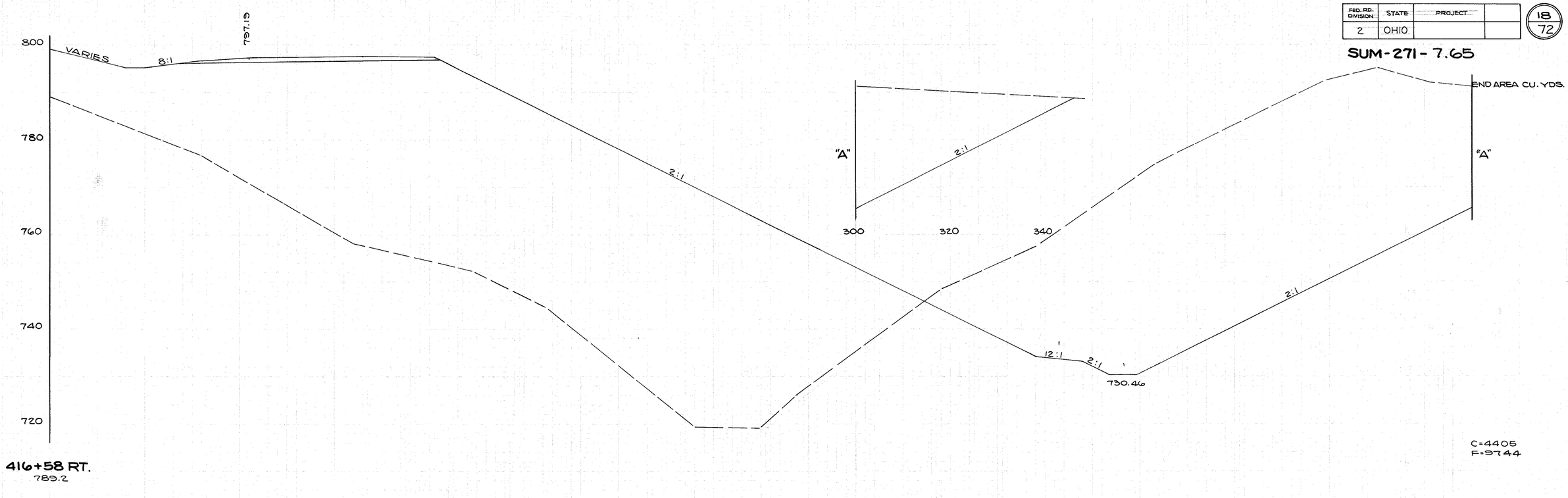
SUM·271 - 7.65

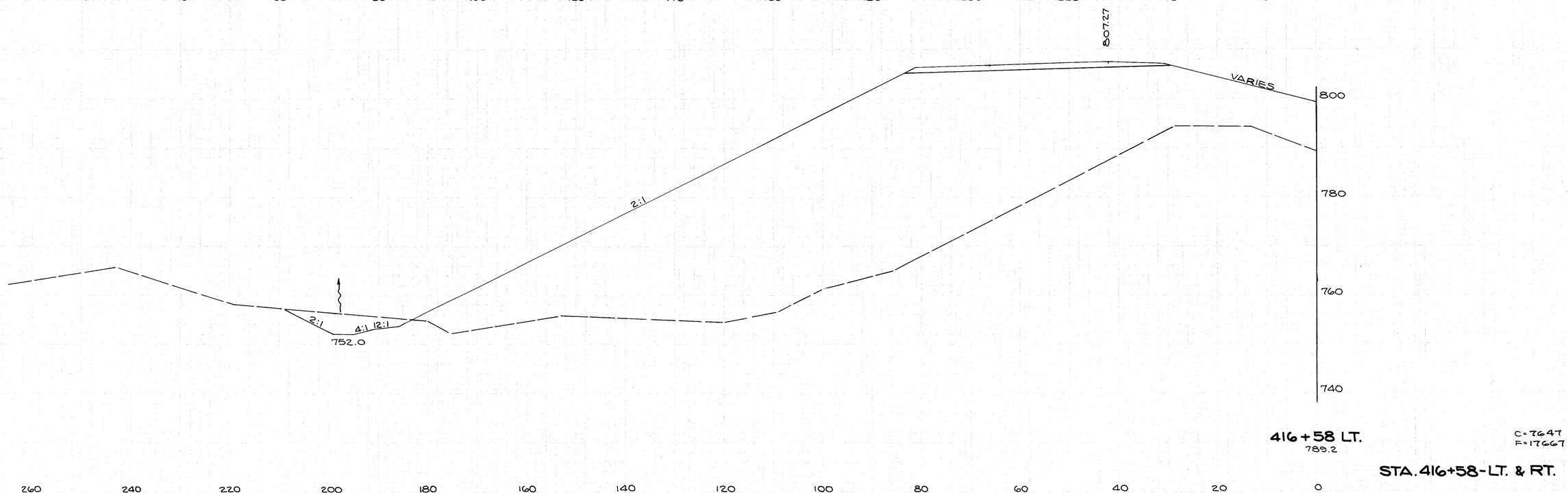

END AREA CU. YDS.
809.02
798.94
VARIES
8:1
3:1
800
800
790
780
770
2:1
C= 2715
F= 6705
416+00
791.6
760
750
740
730
"C"
2:1
2:1
12:1
2:1
791.12
770
820
810
800
812.02
809.32
3:1
6:1
VARIES
8:1
801.94
C= 5665
F= 20,649
"C"
160
180
200
220
240
260
280
300
415+00
798.7
790
C= 344
F= 4445
760
"B"
750
2:1
2:1
C= 3554
F= 14,630
"B"
815.02
812.32
810
6:1
VARIES
8:1
804.94
3:1
791.23
800
2:1
790
C= 1575
F= 3455
414+00
788.5
C= 8552
F= 6399
160
140
120
100
80
60
40
20
0
20
40
60
80
100
120
140
160
STA. 414+00- 416+00

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

18
72

SUM-271-7.65





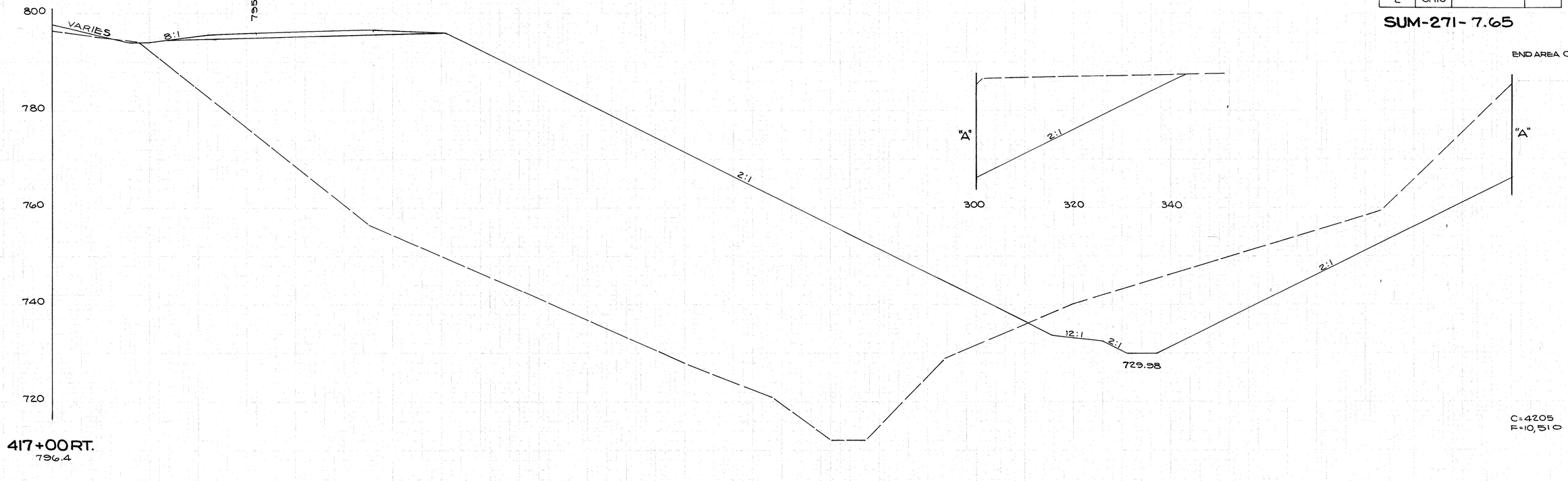
STA. 416+58-LT. & RT.

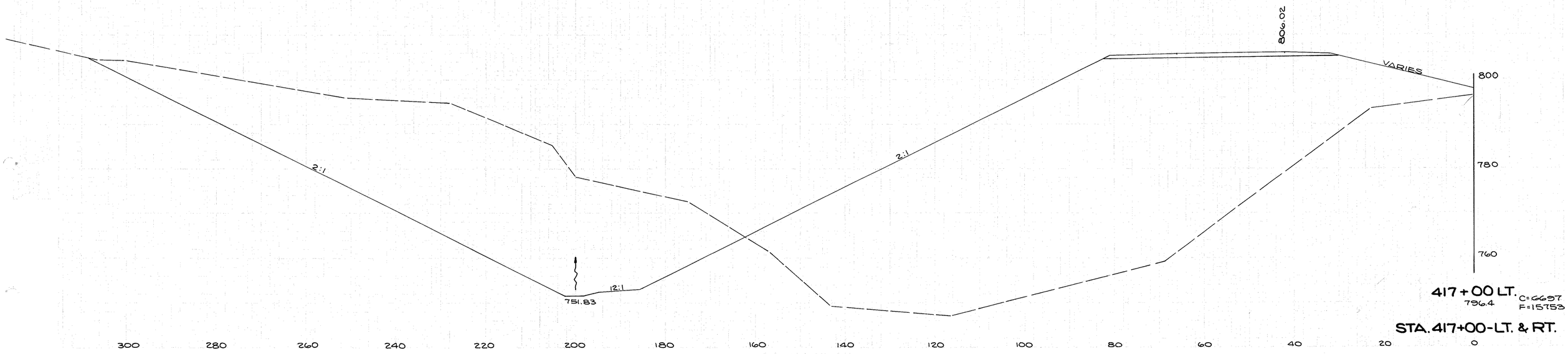
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

19
72

SUM-271-7.65

END AREA CU. YDS.



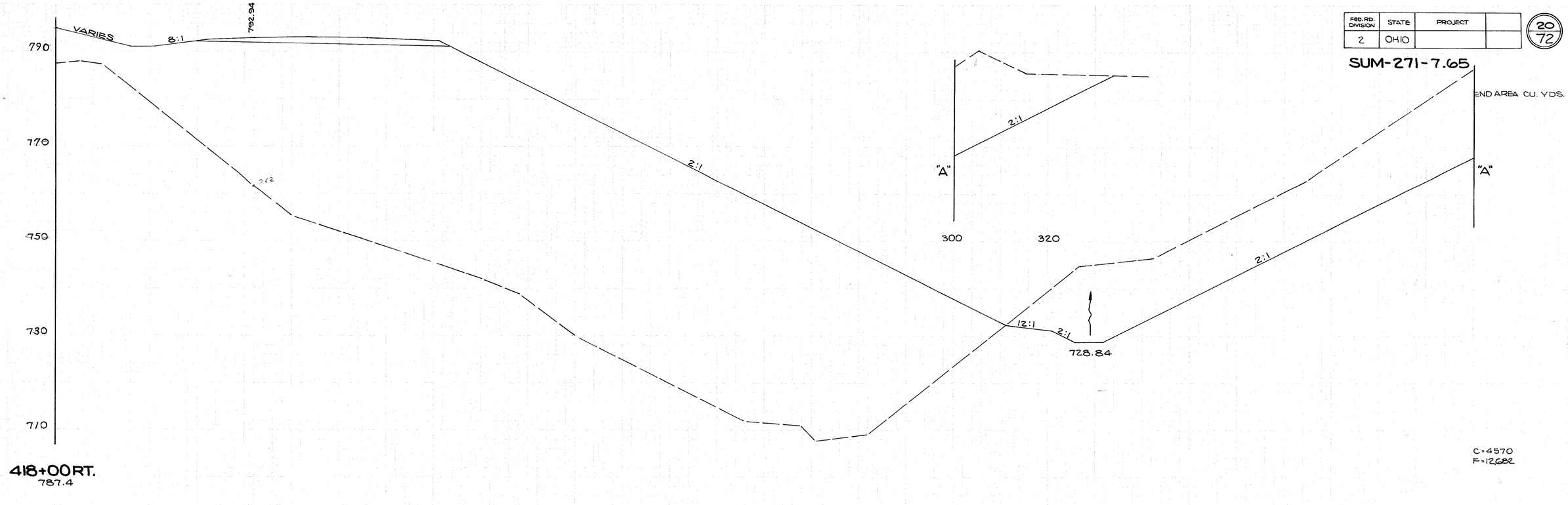


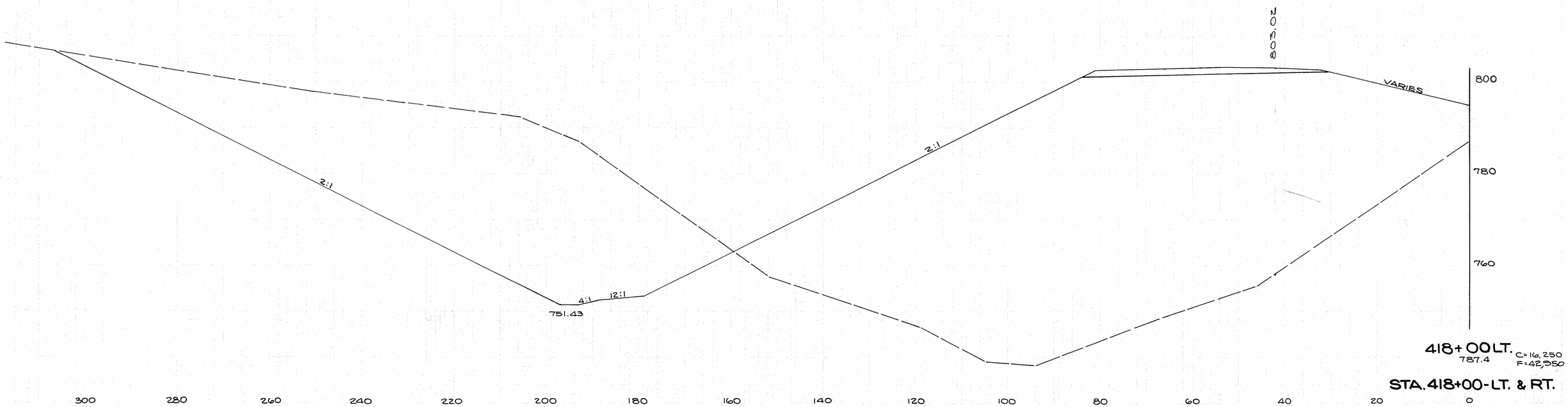
STA. 417+00-LT. & RT.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

20
72

SUM-271-7.65



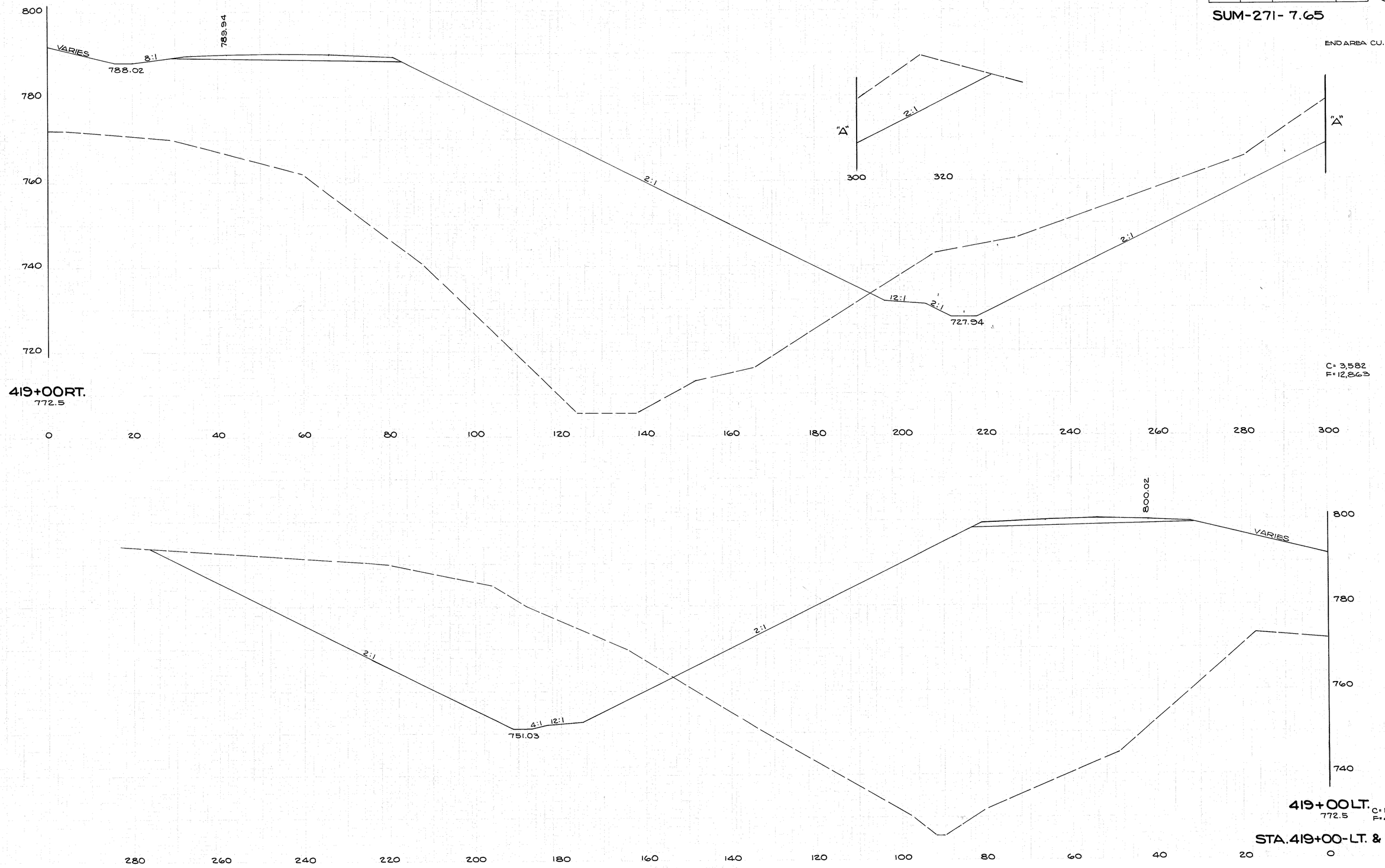


FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

21
72

SUM-271- 7.65

END AREA CU. YDS.



419+00RT.
772.5

C= 3,582
F= 12,863

419+00LT.
772.5

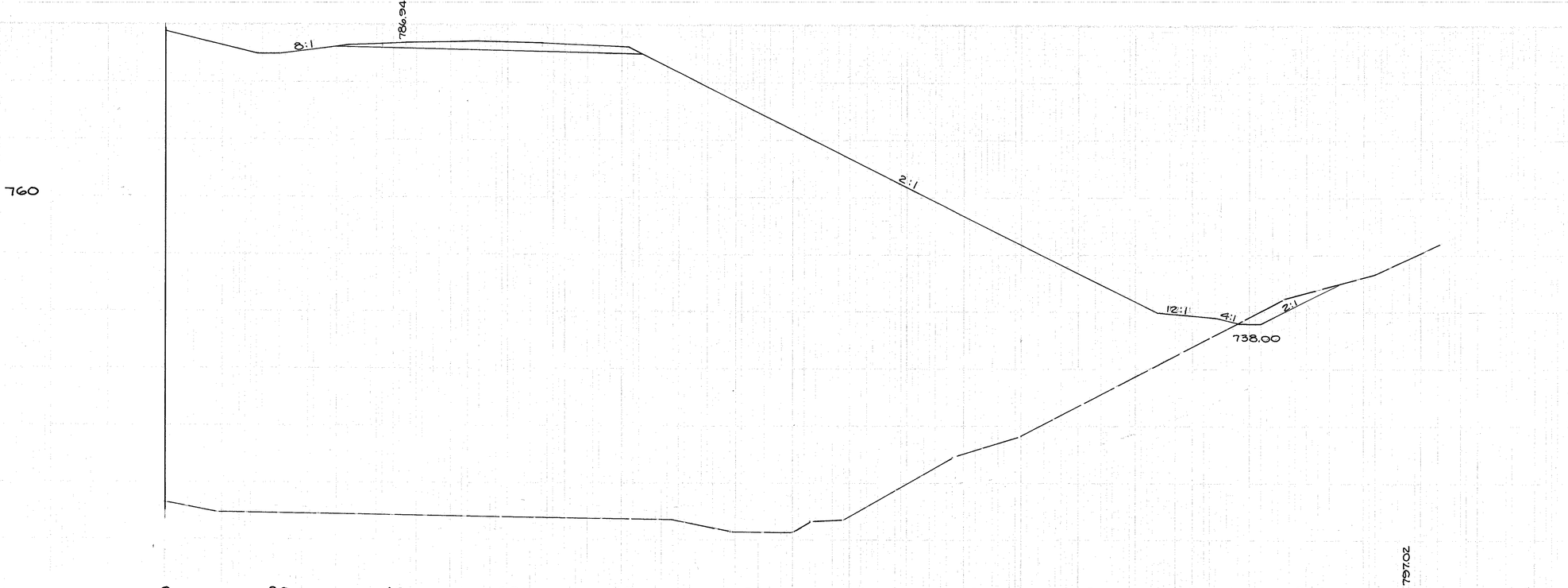
C= 15,096
F= 47,306

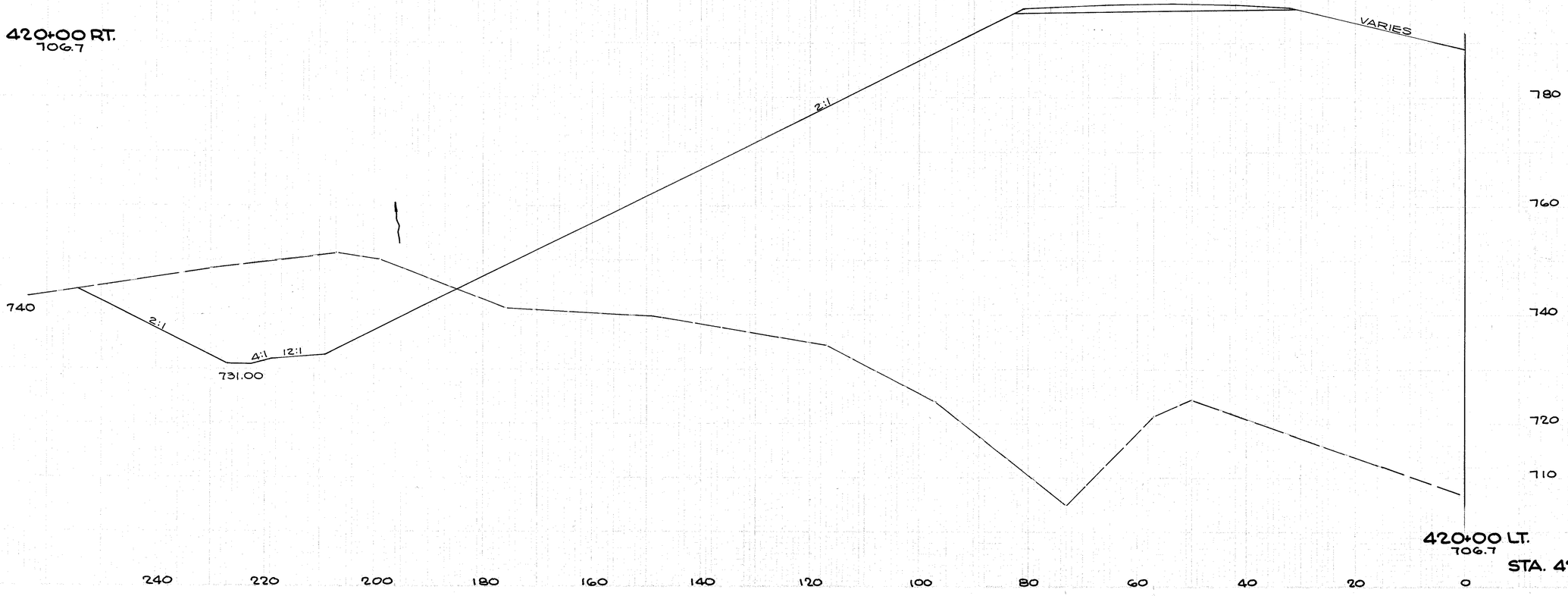
STA. 419+00-LT. & RT.

22
72

SUM·271 - 7.65

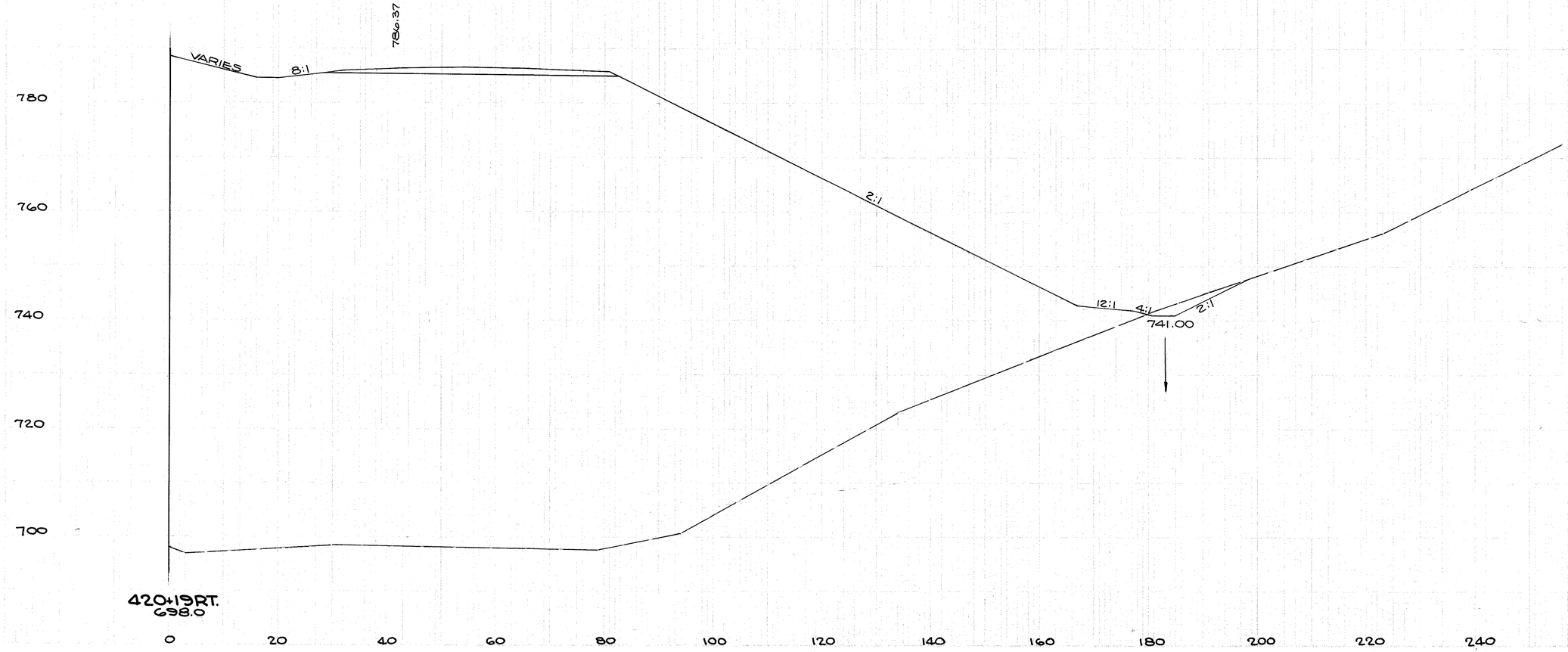
END AREA CU. YDS.





SUM·271-7.65

END AREA CU.YDS.



(LT.& RT.) C= 320
F= 23,335

C= 408
F= 15,791

STA. 420+19 RT.

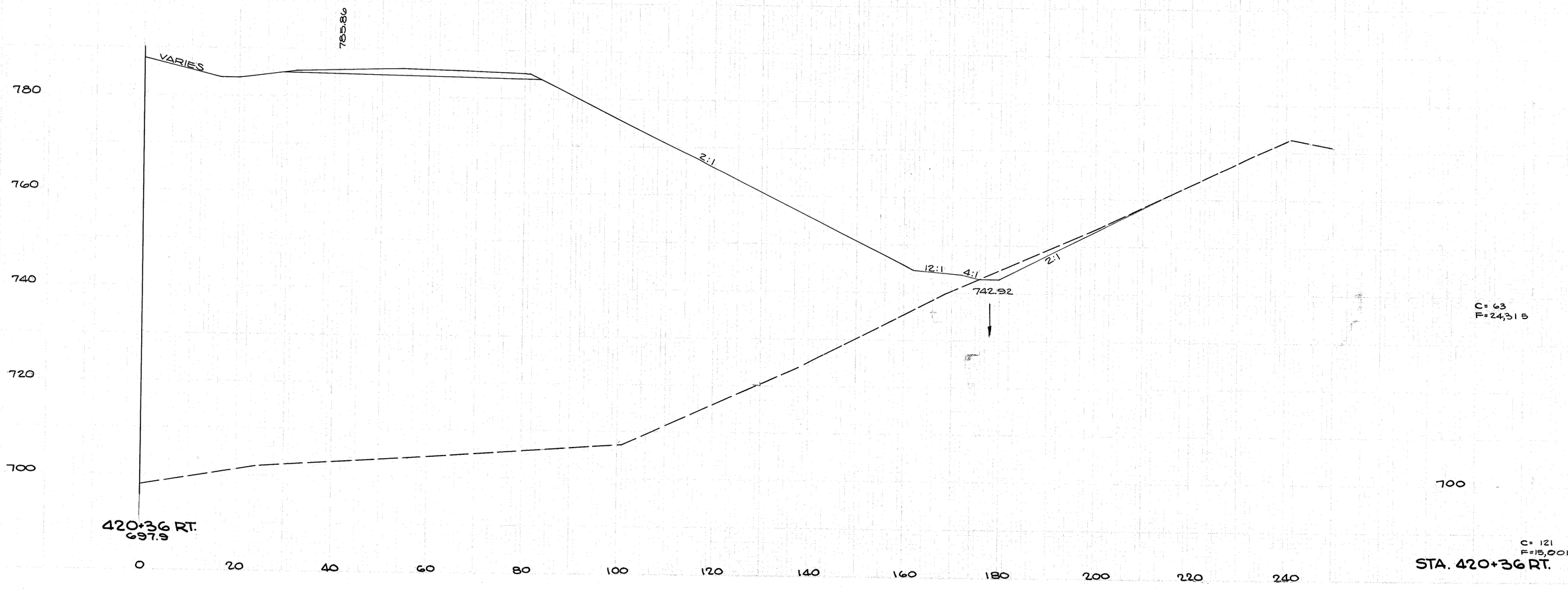
SUM·271 - 7.65

END AREA CU.YDS.
(SEE SHEET 196)

25
72

SUM·271 - 7.65

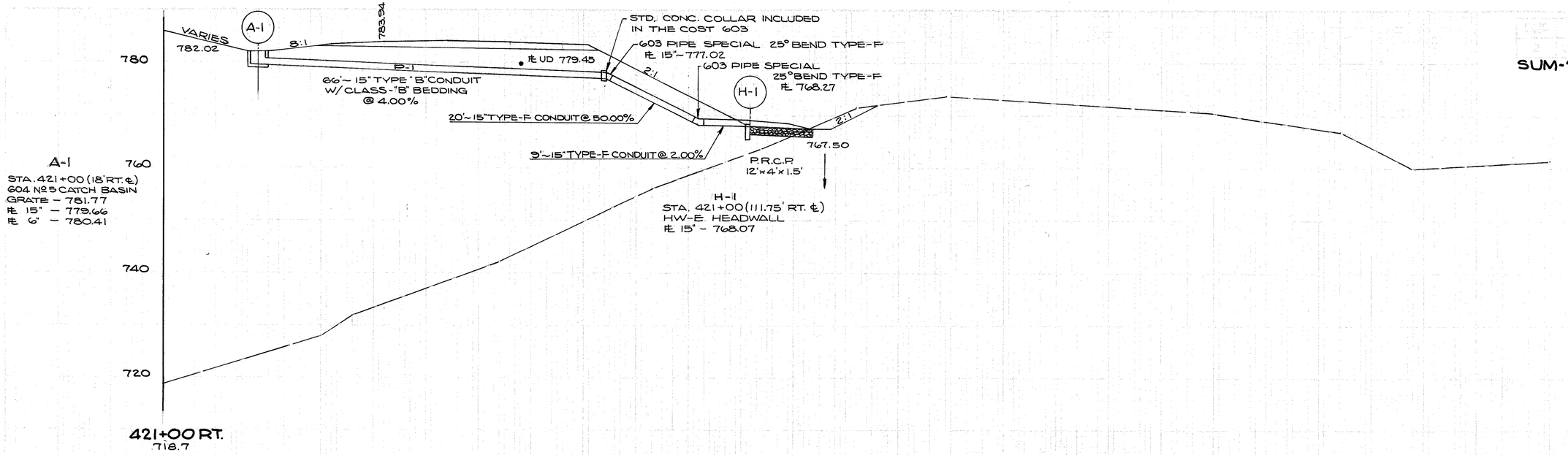
END AREA CU. YDS.



SUM·271 - 7.65

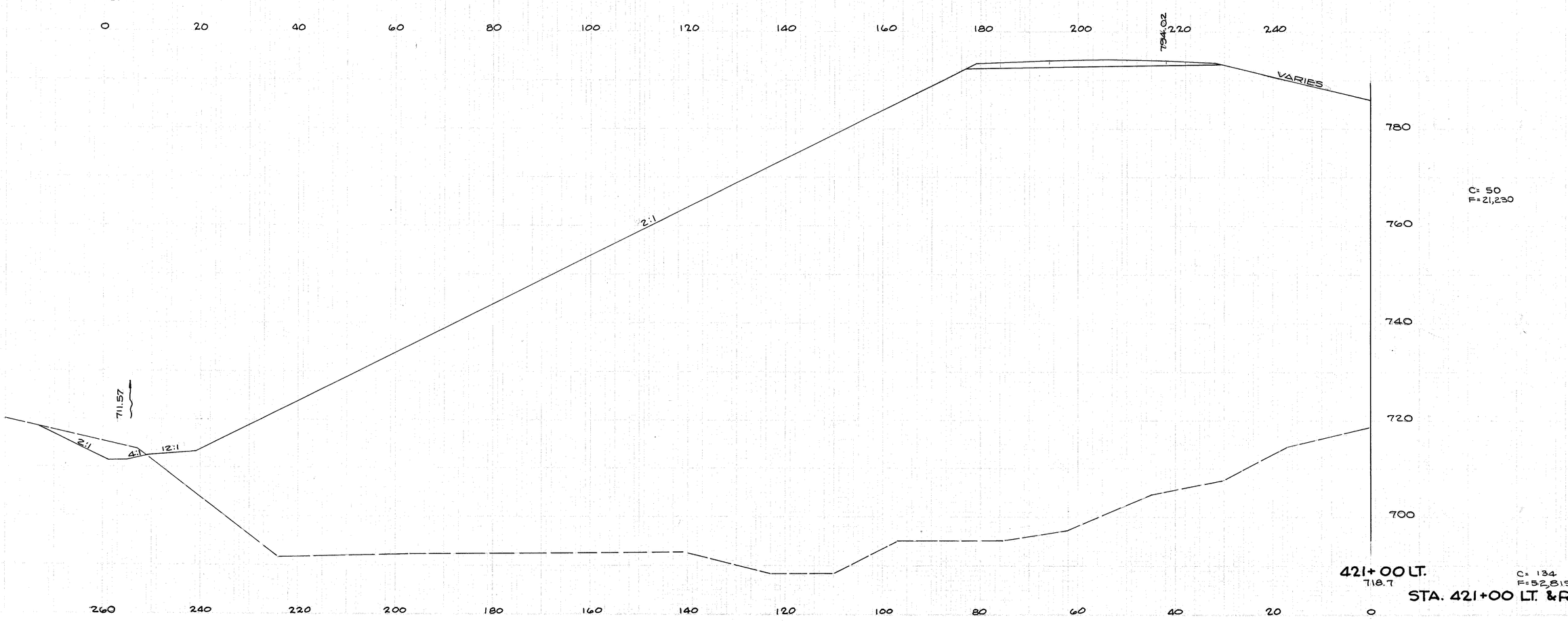
END AREA CU. YDS.
(SEE SHEET 198)

SUM-271- 7.65



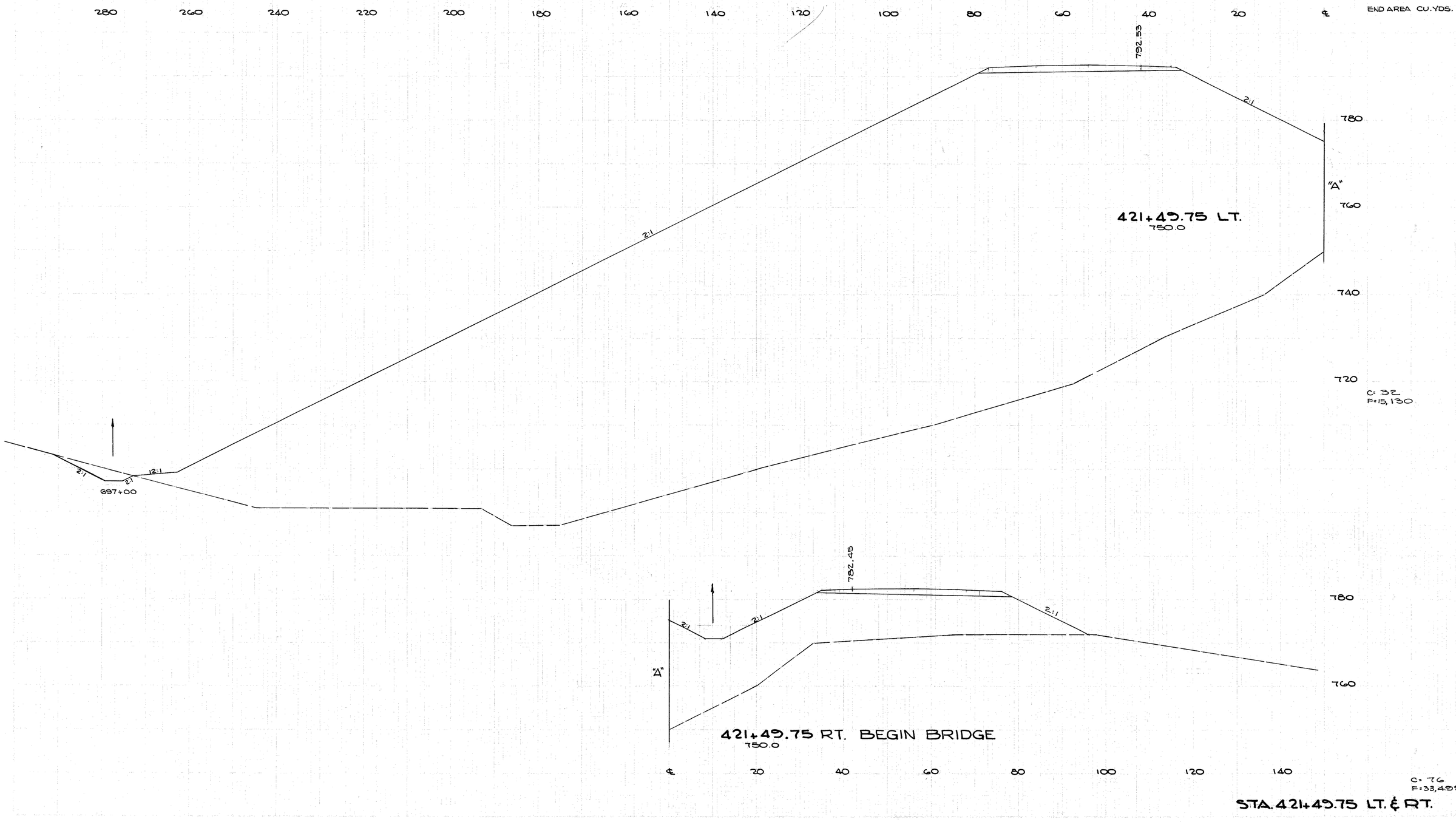
END AREA CU.YDS

720



STA. 421+00 LT. &RT.

SUM · 271 - 7.65



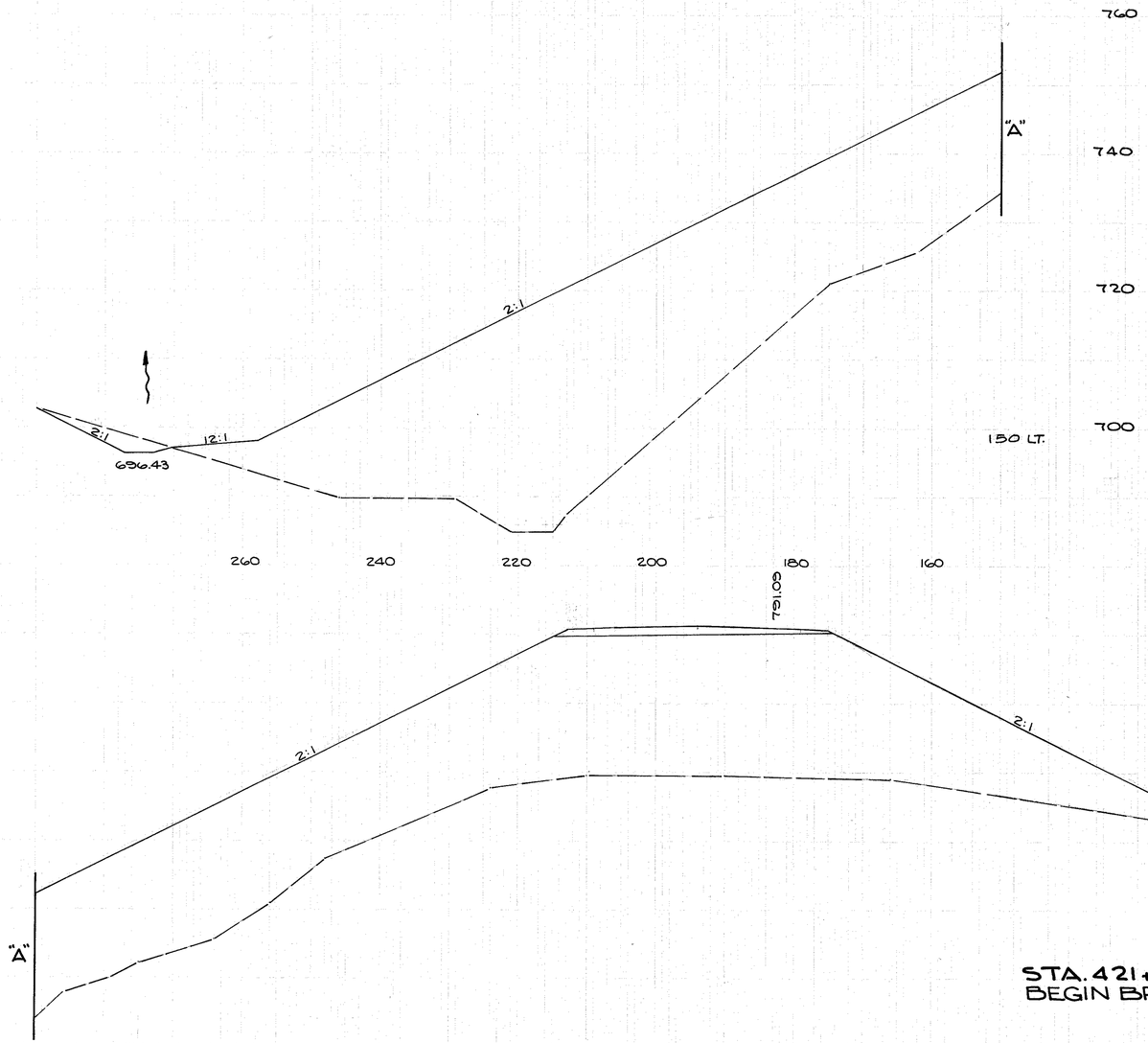
STA. 421+49.75 LT. & RT.

SUM-271-7.65

ZERO SECTION
STA. 422+58 LT.

END AREA CU.YDS.

C= 39
F=14.06



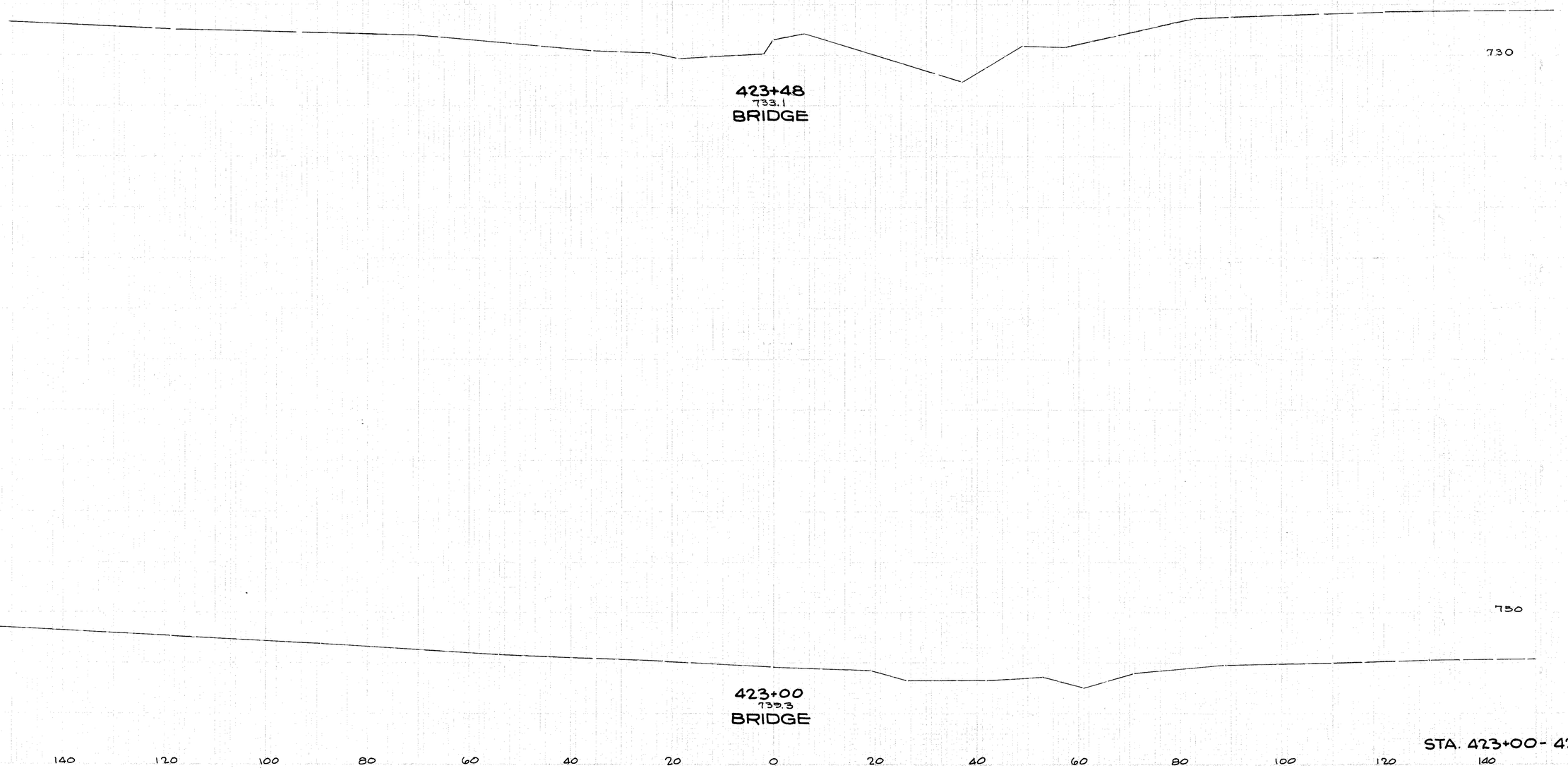
STA. 421+97.75
BEGIN BRIDGE LT.

C= 35
F=12.60

C= 60
F=13,565

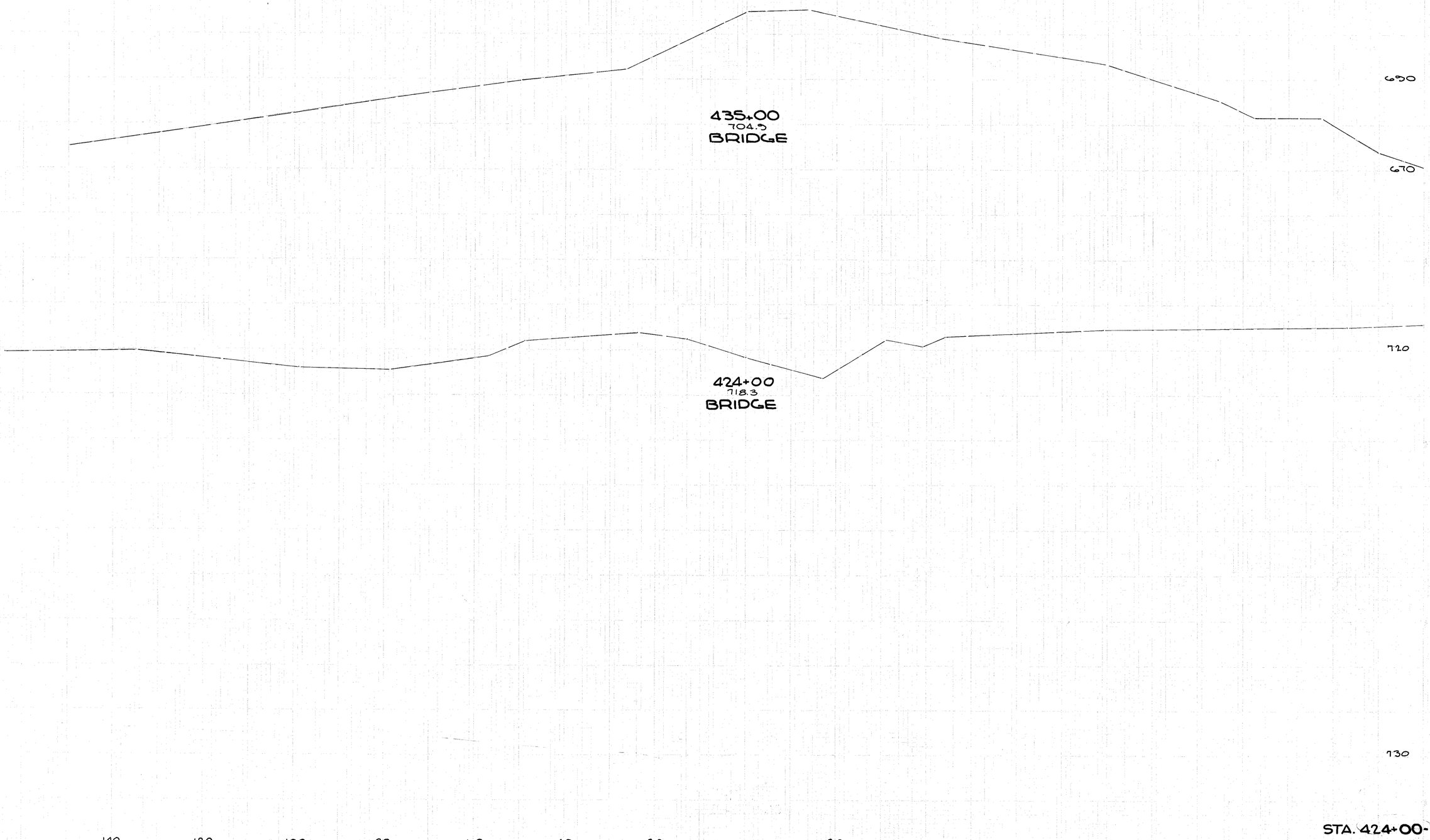
STA. 421+97.75 - 422+58

SUM-271- 7.65



STA. 423+00- 423+48

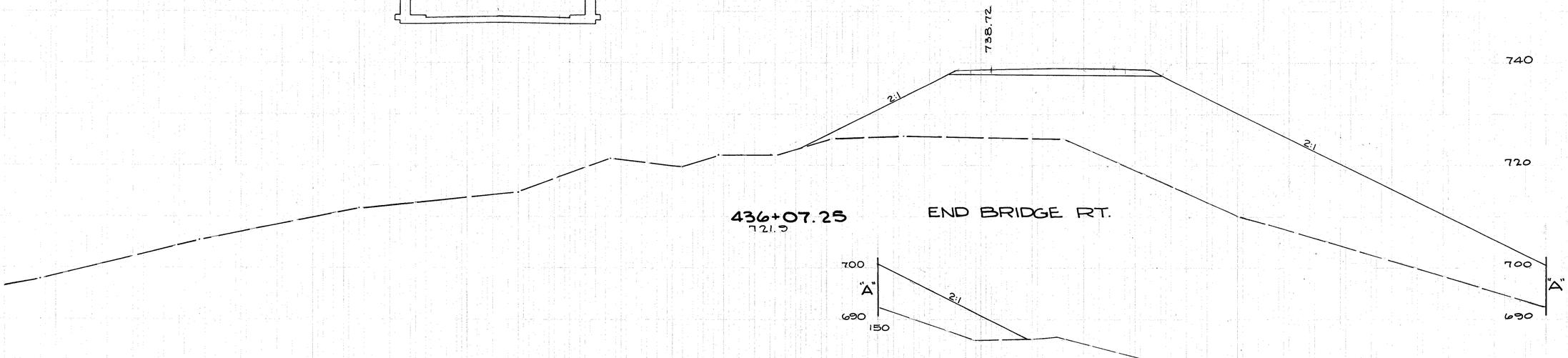
SUM-271- 7.65



STA. 424+00-435+00

SUM-271- 7.65

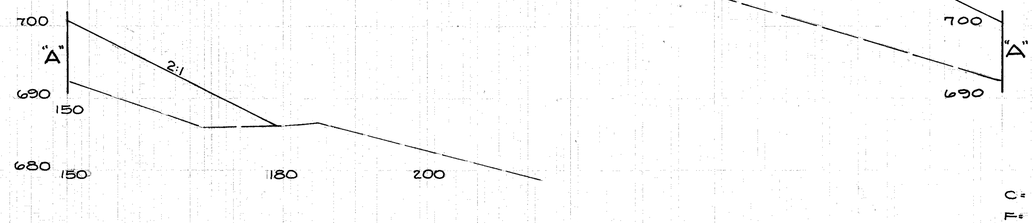
END AREA CU. YDS.



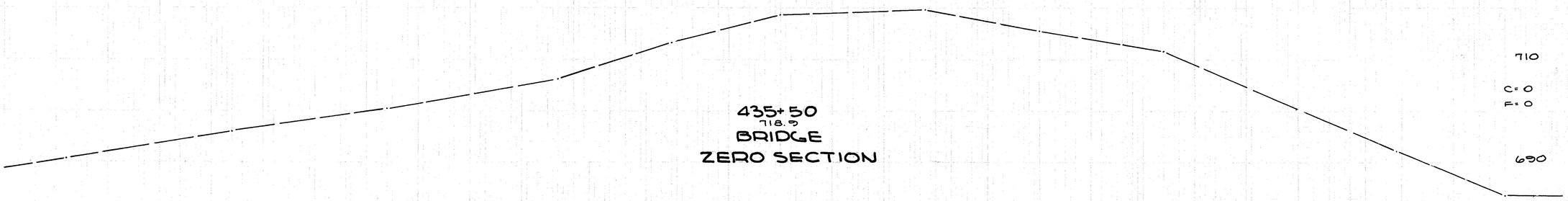
436+07.25
721.9

END BRIDGE RT.

C = 0
F = 1959



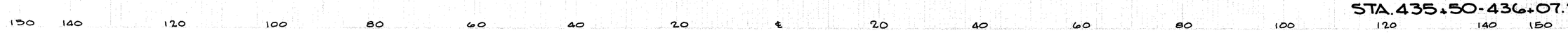
C = 0
F = 2,070



435+50
718.9

BRIDGE
ZERO SECTION

C = 0
F = 0

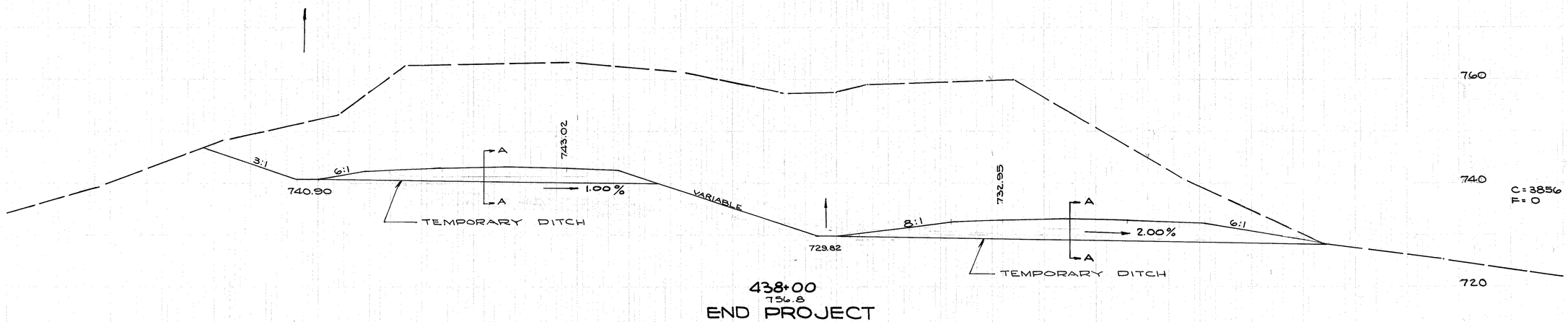


STA. 435+50-436+07.25

SUM-271- 7.65

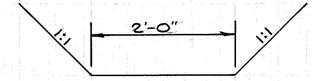
END AREA CU.YDS.

C = 44.00
F = 0



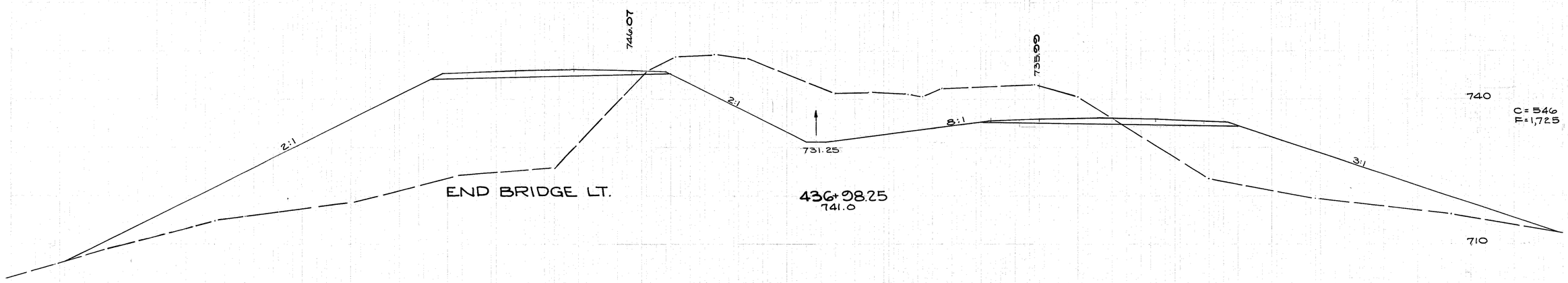
C = 3856
F = 0

438+00
756.8
END PROJECT



A-A
TYPICAL SECTION
TEMPORARY DITCH

C = 8,395
F = 32.20



C = 546
F = 1,725

END BRIDGE LT.

436+98.25
741.0

C = 320
F = 62.09

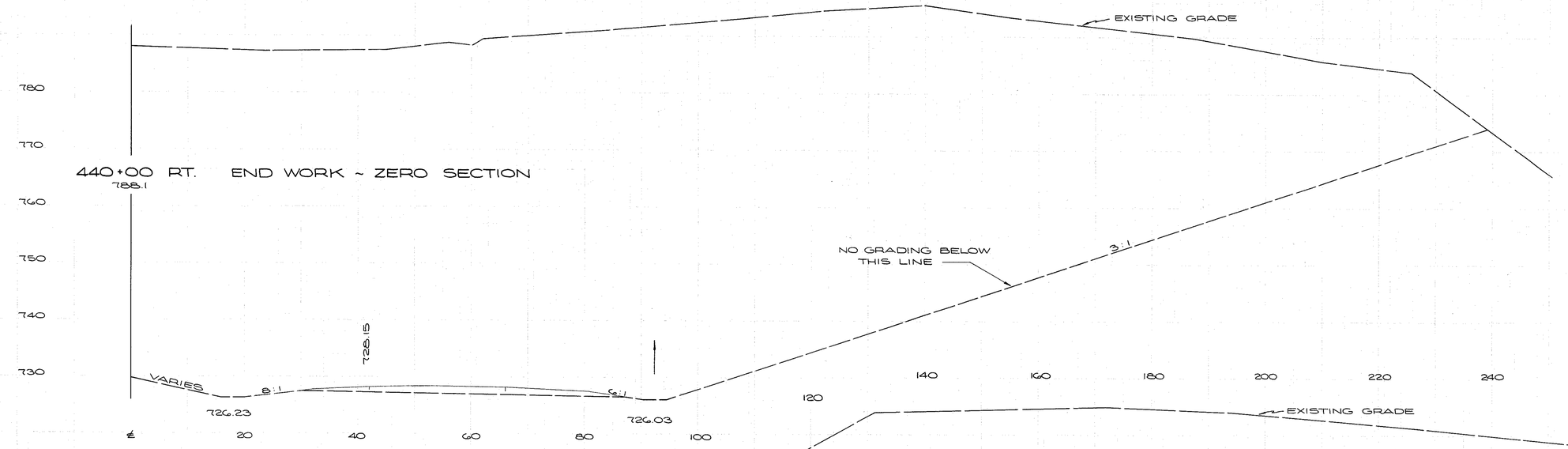
STA. 437+00 - 438+00

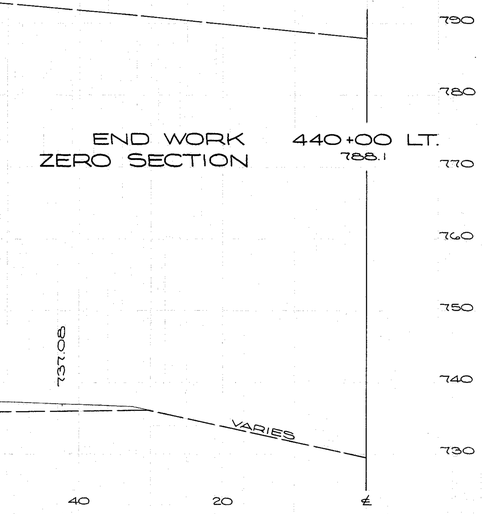
150 140 120 100 80 60 40 20 ℄ 20 40 60 80 100 120 140 150

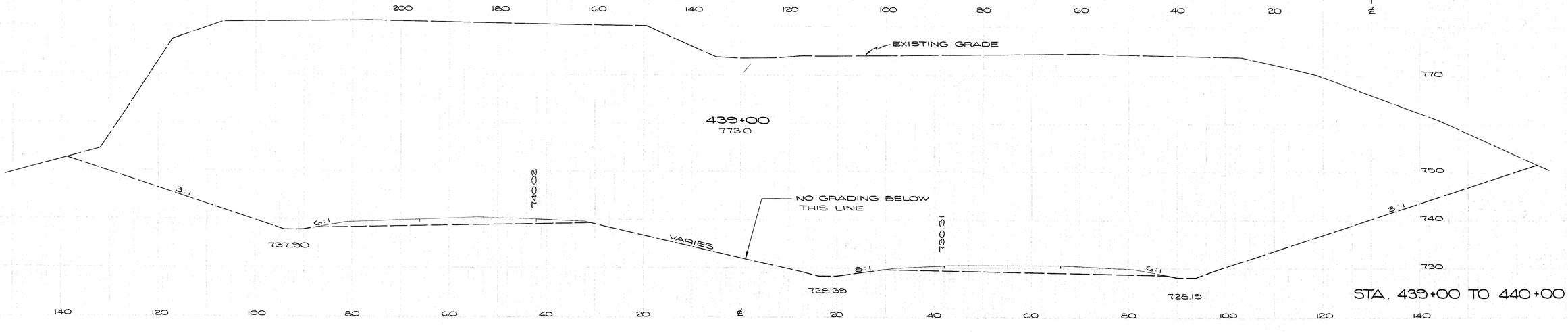
33A
72

SUM - 271 - 7.65

END AREA CU. YDS.



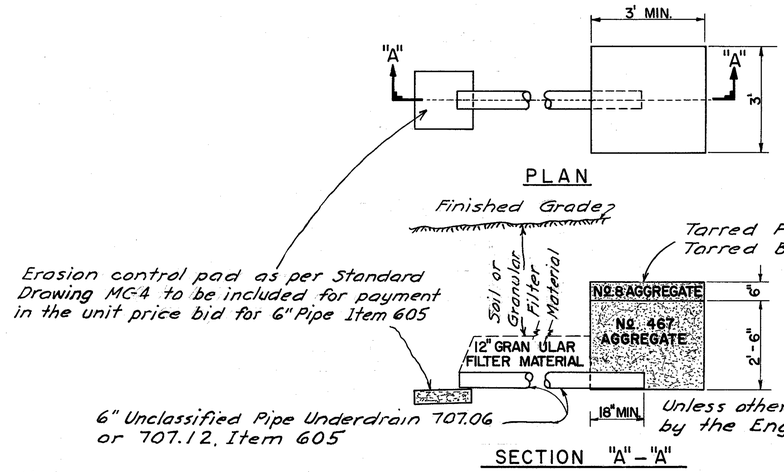




STA. 439+00 TO 440+00

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-7.65



Note:

Aggregates, tarred paper or tarred burlap, and necessary excavation for spring drains shall be included for payment in the unit price bid per Lin. Ft. for Item 605, Aggregate Drains for Springs, as per plan.

The 6" pipe 707.06 or 707.12 shall be covered with granular filter material 605.03 (c) to a height of one (1) foot above the top of the pipe. The remainder of the backfill for this item shall be soil or granular filter material placed in accordance with 603.08.

Spring drains shall be built in reasonably close conformity with the detail shown above. The lengths and exact locations of the drains shall be determined by the Engineer.

See note on Sheet 5.

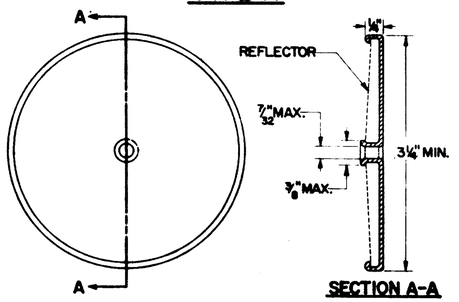
SPRING DRAIN DETAIL

KAB

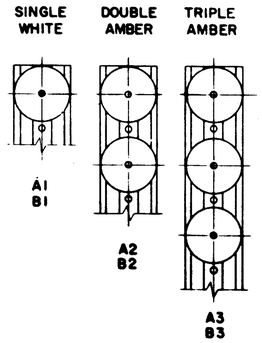
FED. RD. DIVISION	STATE	PROJECT		35 / 72
2	OHIO			

SUM-271-7.65

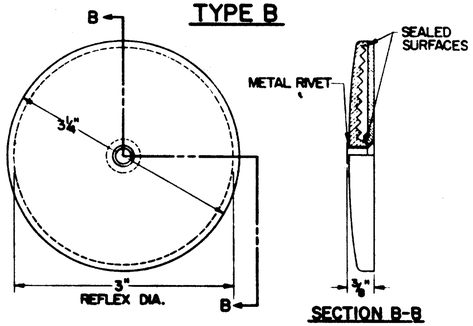
TYPE A



SECTION A-A

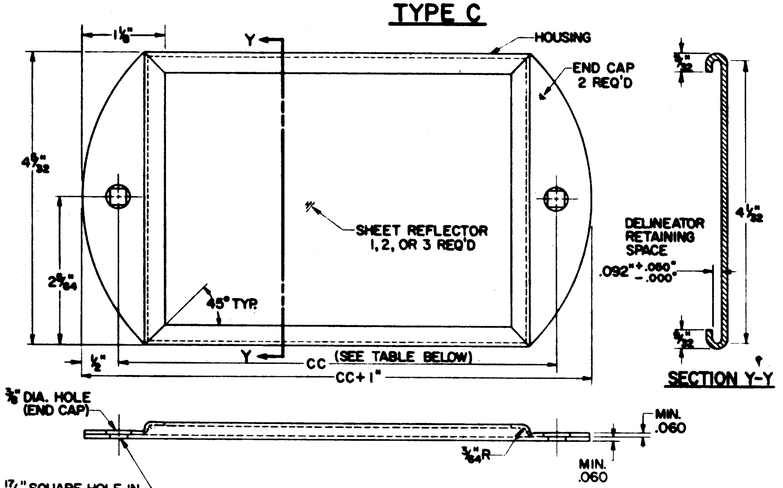


TYPE B



SECTION B-B

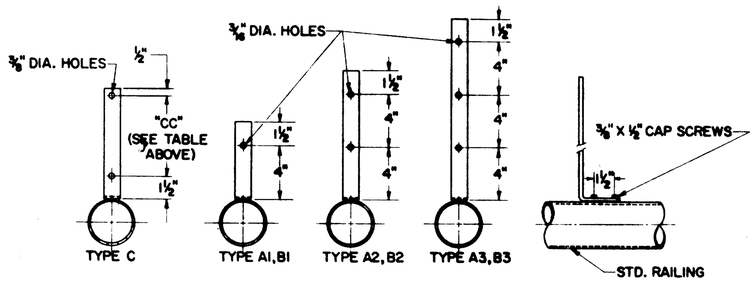
TYPE C



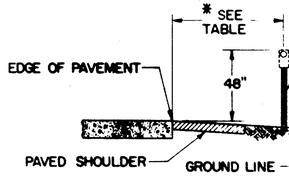
SECTION Y-Y

TYPE	DIM. CC
C1- SINGLE WHITE	6"
C2- DOUBLE AMBER	11"
C3- TRIPLE AMBER	16"

ALL BRACKETS 1/4" X 1 1/4" STAINLESS STEEL



BRIDGE RAIL BRACKET

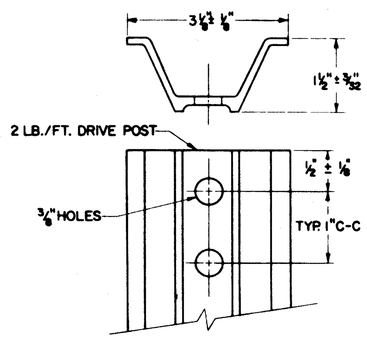


LATERAL PLACEMENT OF DELINEATORS

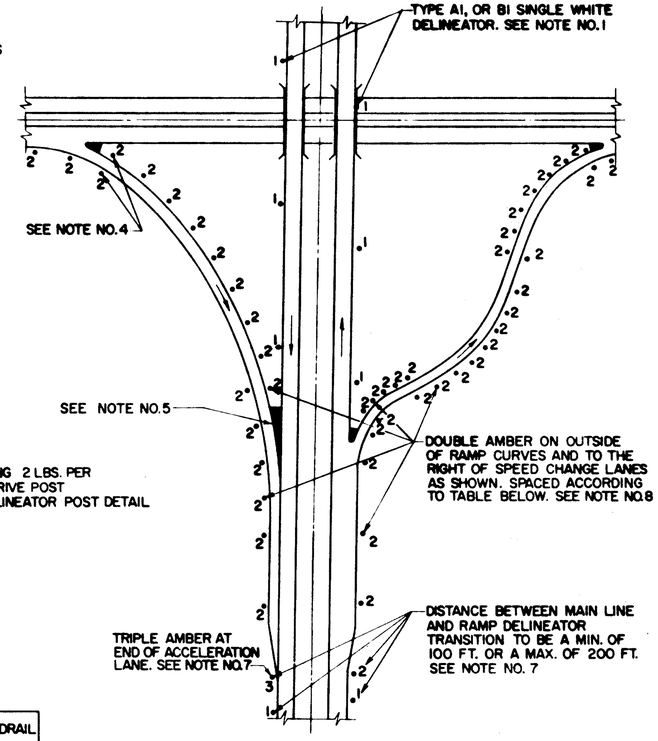
* TABLE

TYPE DELINEATOR	NO GUARDRAIL	GUARDRAIL
SINGLE WHITE	12'-6"	6" OUTSIDE
DOUBLE AMBER RIGHT SIDE	** 8'-6"	6" OUTSIDE
DOUBLE AMBER LEFT SIDE	4'-6"	6" OUTSIDE
TRIPLE AMBER	12'-6"	6" OUTSIDE

** THIS DIMENSION SHALL VARY ON SPEED CHANGE LANES TO MAINTAIN MINIMUM DISTANCE OF 2'-6" FROM EDGE OF PAVED SHOULDER.



DELINEATOR POST



TYPICAL DELINEATOR PLACEMENT

NOTES

1. TYPE A1 OR B1 DELINEATORS ON THE RIGHT OF THE THROUGH ROADWAY ARE TO BE SPACED AT 200 FT. INTERVALS THROUGHOUT, REGARDLESS OF CURVES, BEGINNING AT STA. +00, +25, +50, OR +75.
2. DELINEATORS SHALL BE FURNISHED AND ERECTED IN ACCORDANCE WITH SPECIFICATION NO. 620
3. PAYMENT FOR SUPPORTS (DRIVEPOST OR BRACKET) SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR "ITEM 620 DELINEATORS".
4. WHEN CROSSING FROM LEFT TO RIGHT OR FROM RIGHT TO LEFT ON THE RAMPS THE DELINEATORS AT THE POINT OF CROSSOVER ARE TO BE AT THE SAME STATION ON EACH SIDE.
5. NO DELINEATORS ARE TO BE PLACED IN PAVED BERM
6. WHEN RADII OF CURVE ON RAMPS REQUIRE 100' SPACING THE DELINEATORS SHALL BE PLACED ON THE RIGHT IN RELATION TO THE FLOW OF TRAFFIC.
7. RAMP DELINEATOR AT END OF ACCELERATION & BEGINNING OF DECELERATION LANES TO BE A MAXIMUM OF 5' FROM POINT OF TANGENCY AT MAIN LINE.
8. ALL RAMP DELINEATORS SHALL BE PLACED TO THE NEAREST 5' INCREMENTS, SUCH AS +05, +10, +15, +20 AND SO ON.
9. DELINEATORS ARE NOT TO BE PLACED IN SECTIONS OF ROADWAY THAT ARE LIGHTED.

DELINEATOR SPACING ON RAMP HORIZONTAL CURVES

RADII, FT. FROM	RADII, FT. TO	SPACING ON CURVE	* TRANSITION SPACING	
TANGENT	1,801	100'	100'	100'
1,800	1,401	80'	100'	100'
1,400	1,001	70'	100'	100'
1,000	751	60'	100'	100'
750	551	50'	80'	100'
550	326	40'	70'	100'
325	——	30'	60'	100'

* SUCH AS 40' TO 70' TO 100' OR 100' TO 80' TO 50' OR ANY OTHER COMBINATION SHOWN ABOVE.

BUREAU OF TRAFFIC
OHIO DEPARTMENT OF HIGHWAYS

DELINEATOR DETAILS	620	DATE 9-25-62 3-15-62

APPROVED Robert L. Lamar
ENGINEER OF TRAFFIC

FED. RD.	STATE	PROJECT	
2	OHIO		

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SUM - 271 - 7.65

SPECIAL BERM AND SLOPE PROTECTION

PRIOR TO PLACEMENT OF SOD IN THE BERM & SLOPE, GALVANIZED POULTRY FENCE SHALL BE PLACED ON THE FINISHED GRADE IN STRANDS WHICH SHALL BE AT RIGHT ANGLES TO THE DIRECTION OF FLOW. EACH STRAND SHALL BE STAKED SECURELY ON TOP & BOTTOM WITH STAKES AT FOUR FOOT INTERVALS & ALTERNATED IN ROWS FOUR FEET APART.

STAKES SHALL BE 1" x 1" x 8" WOOD STAKES AND SHALL BE PERPENDICULAR TO THE GROUND & FLUSH WITH THE FINISHED GRADE.

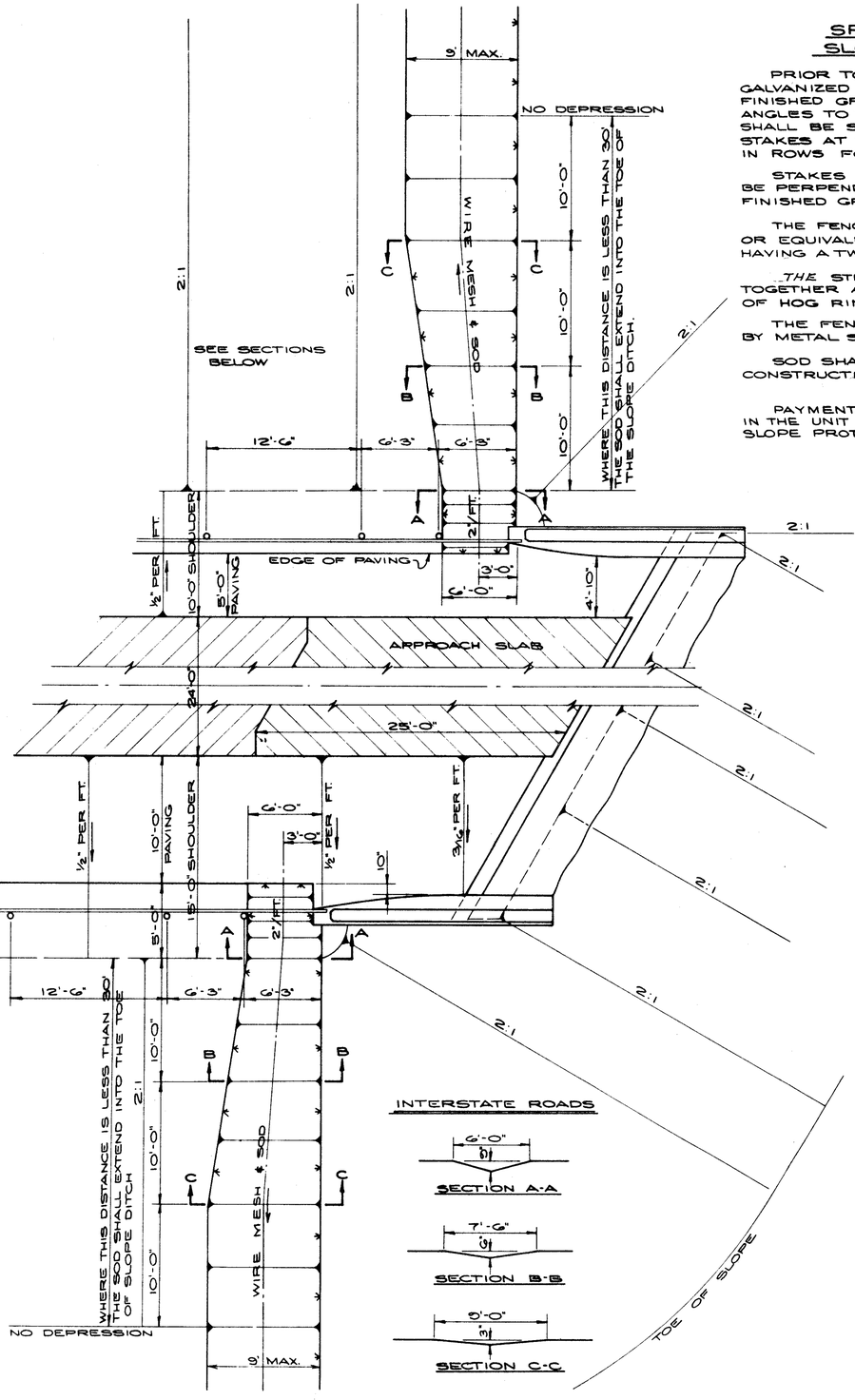
THE FENCE SHALL BE STRAIGHT LINE POULTRY FENCE OR EQUIVALENT WITH STRAND WIDTH OF FOUR FEET HAVING A TWO INCH MESH AND ALL WIRES Nº 20 GAUGE.

THE STRANDS OF FENCING SHALL BE FASTENED TOGETHER AT TWELVE INCH INTERVALS BY MEANS OF HOG RINGS.

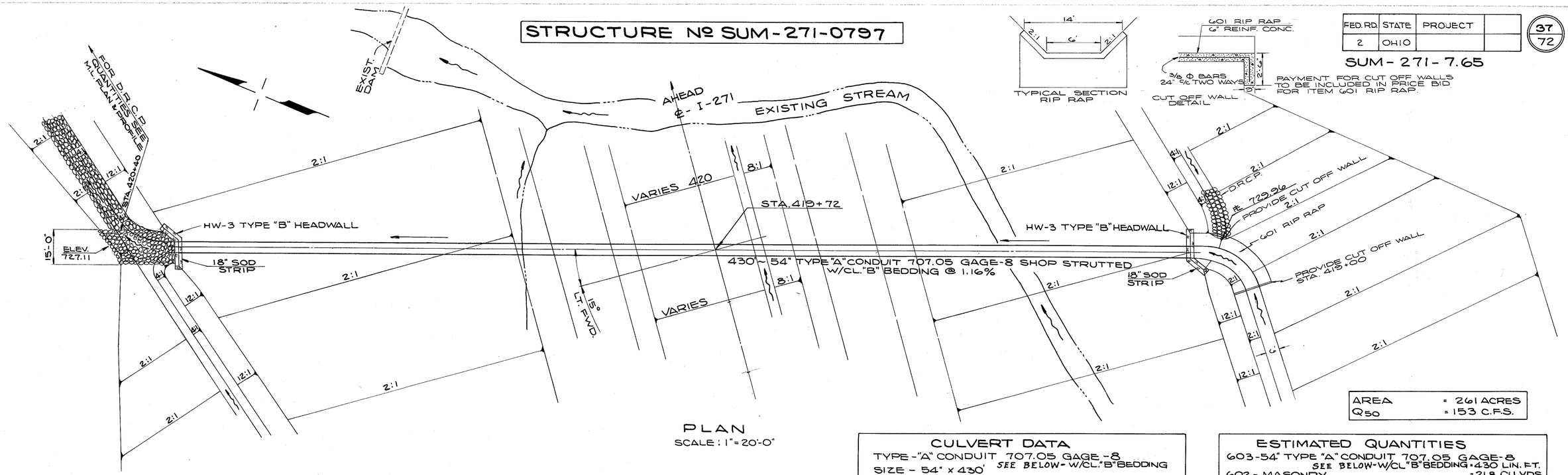
THE FENCE SHALL BE SECURED TO THE WOOD STAKES BY METAL STAPLETS.

SOD SHALL BE LAID IN ACCORDANCE WITH CONSTRUCTION & MATERIALS SPECIFICATION 660.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 660, SOD, SPECIAL BERM AND SLOPE PROTECTION.


9' MAX.
NO DEPRESSION
WIRE MESH & SOD
10'-0"
10'-0"
10'-0"
WHERE THIS DISTANCE IS LESS THAN 30' THE SOD SHALL EXTEND INTO THE TOE OF THE SLOPE DITCH.
SEE SECTIONS BELOW
2:1
2:1
C
C
B
B
12'-6"
6'-3"
6'-3"
A
A
2" PER FT.
EDGE OF PAVING
10'-0" SHOULDER
5'-0" PAVING
6'-0"
3'-0"
4'-10"
APPROACH SLAB
24'-0"
25'-0"
2:1
2:1
2:1

STRUCTURE Nº SUM-271-0797



PLAN
SCALE: 1"=20'-0"

TYPICAL SECTION RIP RAP

CUT OFF WALL DETAIL

PAYMENT FOR CUT OFF WALLS TO BE INCLUDED IN PRICE BID FOR ITEM 601 RIP RAP.

FED.RD.	STATE	PROJECT	
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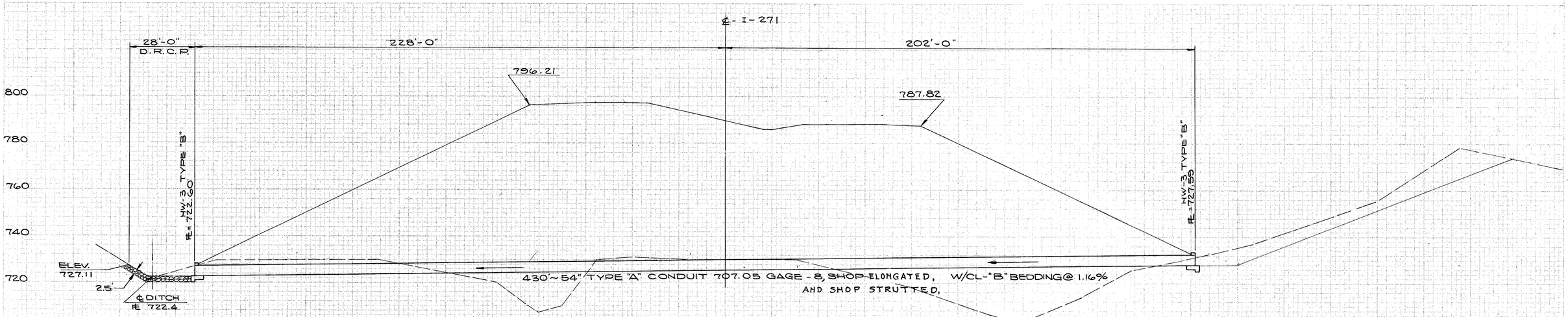
AREA	= 261 ACRES
Q_{50}	= 153 C.F.S.

CULVERT DATA

TYPE - "A" CONDUIT 707.05 GAGE-8
SIZE - 54" x 430' *SEE BELOW-* W/CL."B" BEDDING
SKEW - 15° LT. FWD.
WORK REQ'D. - BUILD NEW 54" DIA. CONDUIT AS SHOWN.

ESTIMATED QUANTITIES

603-54" TYPE "A" CONDUIT 707.05 GAGE-8 *SEE BELOW-W/CL"B"BEDDING*	= 430 LIN. FT.
602 - MASONRY	= 21.8 CU.YDS.
660 - SODDING	= 8 SQ.YDS.
601 - DUMP ROCK CHANNEL PROT.	= 38.9 CU.YDS.
601 - RIP RAP *USING 6" REINFORCED CONC. SLAB*	= 46.7 SQ.YDS.



PROFILE

STR. Nº SUM-271-0797
CULVERT DETAILS
STA. 419 + 72

PLATE ACROSS SECTION O. P. R. & A. E. STANDARD
EUGENE DIETZGEN CO. - CHICAGO

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STRUCTURAL GENERAL NOTES

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DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO THE REQUIREMENTS OF " DESIGN SPECIFICATIONS FOR HIGHWAY STRUCTURES " OF THE STATE OF OHIO, DEPARTMENT OF HIGHWAYS, DATED 9/1/57, TOGETHER WITH CURRENT REVISIONS THEREOF

DESIGN LOADING - SEE SITE PLANS

CONCRETE CLASS C — BASIC UNIT STRESS 1,333 p.s.i.
CONCRETE CLASS E — BASIC UNIT STRESS 1,133 p.s.i.

STRUCTURAL STEEL — ALL STRUCTURAL STEEL SHALL BE ASTM A36 & A441, ASTM A36-BASIC UNIT STRESS 20,000 p.s.i. ASTM A441 SEE AASHO SPEC. SEC 1.47

REINFORCING STEEL — ASTM A15, A16, A160, DEFORMED, INTERMEDIATE OR HARD GRADE. BASIC UNIT STRESS 20,000 p.s.i. EXCEPT, SPIRAL REINFORCEMENT MAY BE PLAIN, STRUCTURAL GRADE WITH BASIC UNIT STRESS OF 18,000 p.s.i.

REFERENCE

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

BR-1-65	SHEET 1 DATED	2/1/65
SD-1-65	SHEETS 1, 2, & 3 DATED	11/8/65
AS-1-54	REVISED	8-10-65
808	SUPPLEMENTAL SPEC. DATED	7/14/65
811	SUPPLEMENTAL SPEC. DATED	3/29/65
825	SUPPLEMENTAL SPEC. DATED	4/22/65.
828	SUPPLEMENTAL SPEC. DATED	7/21/65.

FOOTINGS INTO ROCK P*2L, P*3L&R, P*4L&R, P*5L&R, P*6L&R

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

FOUNDATION BEARING PRESSURE

FOOTINGS ARE DESIGNED FOR A MAXIMUM BEARING PRESSURE OF 5 TONS PER SQ. FT. FOR PIERS.

EXCAVATION QUANTITY

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

SLAB DEPTH OVER BEAMS OR GIRDERS

THE DIMENSION SHOWN FROM THE TOP OF THE DECK SLAB TO THE TOP FLANGE OF THE BEAMS OR TOP OF THE GIRDER WEBS **IS THE NOMINAL DIMENSION. THE QUANTITY OF DECK CONCRETE TO BE PAID FOR SHALL BE BASED UPON THIS DIMENSION, EVEN THOUGH DEVIATION FROM IT MAY BE NECESSARY BECAUSE THE TOP FLANGE OF THE GIRDER** OR BEAM **MAY NOT HAVE THE EXACT CAMBER OR CONFORMATION REQUIRED TO PLACE IT PARALLEL TO THE FINISHED GRADE. DEDUCTION SHALL BE MADE FOR VOLUME OF ENCASED STEEL PLATES, AS PER ITEM 511.19 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS.**

SLAB THICKNESS

SLAB THICKNESS SHOWN INCLUDES 1" FOR MONOLITHIC WEARING SURFACE.

DECK SLAB HAUNCH AT STRINGERS

A TYPICAL HAUNCH WIDTH OF 9" SHALL BE USED FOR COMPUTING QUANTITY OF CONCRETE. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6" AND 12" PROVIDED THAT THE SLOPE SHALL BE NOT MORE THAN 1:4 FOR A HAUNCH LESS THAN 9" IN WIDTH.

MACHINE FINISH

THE CONCRETE DECK SHALL BE FINISHED BY THE USE OF A FINISHING MACHINE.

POROUS BACKFILL

POROUS BACKFILL 1'-6" THICK, FULL LENGTH OF ABUTMENTS, SHALL EXTEND UP TO THE UNDERSIDE OF THE APPROACH SLAB, OR TO THE FINISHED GROUND SURFACE UNLESS OTHERWISE SHOWN. EXCAVATION THEREFORE, IN EXCESS OF THAT REQUIRED FOR CONSTRUCTION OF THE ABUTMENT, SHALL BE CONSIDERED AS PAID FOR IN THE BID PRICE PER CU. YD. PAID FOR POROUS BACKFILL

CONSTRUCTION CLEARANCE

CONSTRUCTION CLEARANCE OF 20' VERTICALLY ABOVE THE TOP OF THE RAILROAD RAILS AND 8' HORIZONTALLY FROM THE CENTER OF TRACKS SHALL BE MAINTAINED AT ALL TIMES.

SHEETING AND BRACING

BEFORE CONSTRUCTION IS STARTED, EIGHT (8) SETS OF PRINTS SHOWING DETAILS OF THE SHEETING AND BRACING TO BE USED FOR EXCAVATION ADJACENT TO THE RAILROAD TRACKS SHALL BE SUBMITTED TO THE DIRECTOR FOR APPROVAL BY THE DEPARTMENT OF HIGHWAYS AND BY THE RAILROAD COMPANY.

ALIGNING RAILROAD TRACKS

AFTER THE CONTRACTOR HAS COMPLETED ALL EXCAVATION AND BACKFILL ADJACENT TO THE RAILROAD TRACKS IN COMPLIANCE WITH ITEM 503.04 AND 503.09 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, SUBJECT TO THE SUPERVISION OF THE RAILROAD COMPANY, NOTHING IN ITEM 503.04, 503.09, OR 108.04 OF THE SPECIFICATIONS SHALL BE CONSTRUED TO HOLD THE CONTRACTOR LIABLE FOR ALIGNING AND RESURFACING THE RAILROAD TRACKS.

PILES

PILES SHALL BE DRIVEN WITH A HAMMER OF NOT LESS THAN 11,000 FT. LBS, PER BLOW TO FIRM CONTACT WITH ROCK. IF THE LENGTH OF PENETRATIONS IS APPROXIMATELY EQUAL TO THE DEPTH TO ROCK ACCORDING TO THE BRIDGE FOUNDATION INVESTIGATION REPORT, THE FIRM CONTACT SHALL BE CONSIDERED AS ATTAINED WHEN THE CAPACITY ACCORDING TO THE FORMULA IN ITEM 507.05 IS NOT LESS THAN THE FOLLOWING VALUE FOR A PILE HAMMER OF THE INDICATED ENERGY RATING.

"A" TONS PER PILE USING A 11,000 FT. LB. HAMMER
"B" TONS PER PILE USING A 15,000 FT. LB. HAMMER

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

	PIER 1 R&L	PIER 2 R& 7L
A	40	40
B	40	40
C	40	40

C.I.P. PILES:
PILES SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 40 TONS PER PILE FOR THE ABUTMEMTS AND 40 TONS PER PILE FOR PIERS* 8 L & R.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER & HOCH, Consulting Engineers
AKRON, OHIO

STRUCTURAL GENERAL NOTES

PROJECT SUM 271-7.65

SUMMIT COUNTY

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WP			BMC	RBH	12/21/65	

04699

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FED. RD.	STATE	PROJECT	
2	OHIO		

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SUM-271-7.65

END APPROACH SLAB
STA. 421+97.75

RIVER VIEW DR (CR. 9)

STA. 427+57.00

STA. 427+84.63 - I-271
STA. 1112+77.21 B & O.R.R.

℄ HINGES

℄ LEFT LANES

℄ SURVEY I-271

℄ RIGHT LANES

STA. 425+42.26
STA. 72+99.30 CH. 9

76°-56'-15"

90° TYP.

STA. 428+30.00

HORIZONTAL CLEARANCE: 6.00' REQ'D. 8.09' ACTUAL

HORIZONTAL CLEARANCE 18.00' REQD. 19.29' ACTUAL

END APPROACH SLAB
STA. 421+49.75

BEGIN APPROACH SLAB
STA. 436+98.25

BEGIN APPROACH SLAB
STA. 436+07.25

CUYAHOGA RIVER

B & O. R.R.

EXISTING GROUND AT ℄ LEFT LANES

APPROX. ROCK LINE

VERT. CLEARANCE: 92'±

HINGE

PROPOSED -3.00% PROFILE GRADE

TYPE "1" RAILING

EL. (665) 50 YR. HIGH WATER

EXISTING GROUND ℄ RIGHT LANES

APPROX. ROCK LINE

VERT. CLBAR. 82'±

HINGE

PROPOSED -3.00% PROFILE GRADE

TYPE "1" RAILING

B & O. R.R CURVE DATA

P.C. STA. 1111+68.60
Δ = 20°-19'-30" RT.
D_c = 3°-00'-00"
T = 342.39'
L_c = 677.50'
R = 1910.08' (CHORD DEF.)

ELEVATION OF LEFT STRUCTURE

ELEVATION OF RIGHT STRUCTURE

TYPICAL SECTION

1'-2" x ½" WEB PL.

PROPOSED STRUCTURE

TYPE: CONTINUOUS WELDED STEEL PLATE GIRDERS WITH REINFORCED CONC. DECK AND SUBSTRUCTURE.
SKEW: 0°-00'-00"
SPANS: LT.: 180'-0" - 5@ 170'-0" - 2@ 188'-0" - 150'-0"
RT.: 105'-0" - 2@ 165'-0" - 4@ 170'-0" - 188'-0" - 150'-0"
ROADWAY: LT. & RT.: 34'-0" F/F PARAPETS - 2' CURBS.
LOAD FREQUENCY: CF. 2000 ADEQU. FOR H.S.S.M.O. ALT. LOADING.
WEARING SURFACE: 1" MONOLITHIC.
ALIGNMENT: TANGENT
APPROACH SLABS: 25' LONG (9S-1-54)
SUPERELEVATION: NONE.
SLOPE PROTECTION: CRUSHED AGGREGATE.

AVERAGE ESTIMATED PAY LENGTH FOR PILING

ABUT. #1 L/R = 12" Ø C.I.P. PILES — 30' LG.
PIER #1 L — = 12" BP-53 PILES — 34' LG.
PIER #1 R — = 12" BP-53 PILES — 27' LG.
PIER #2 R = 12 BP-53 PILES (20' LG. RT. COL. 17' LG. LT. COL.)
PIER #2 L = 12" BP-53 PILES — 22' LG.
PIER #3 & 4 L/R = 12" Ø C.I.P. PILES — 40' LG.
PIER #5 & 6 L/R = 12" Ø C.I.P. PILES — 50' LG.
ABUT. #2 L/R = 12" Ø C.I.P. PILES — 60' LG.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

SITE PLAN

BRIDGE NO. SUM-271-0802 L & R
OVER C.R. #9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 TO STA 436+98.25 L.
STA. 421+49.75 TO STA 436+07.25 R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WP	REVISED		QJR	RBH	12-21-65	

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AUG 27 1987

FED. RD.	STATE	PROJECT	
2	OHIO		

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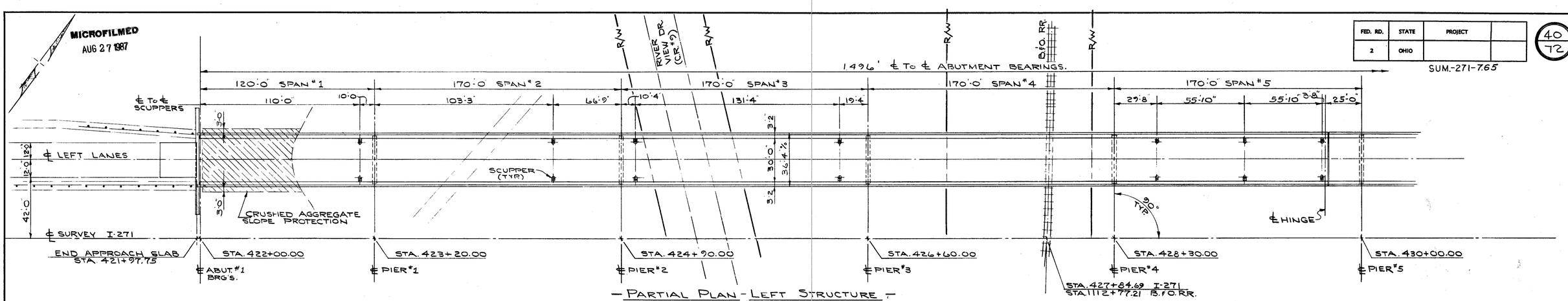
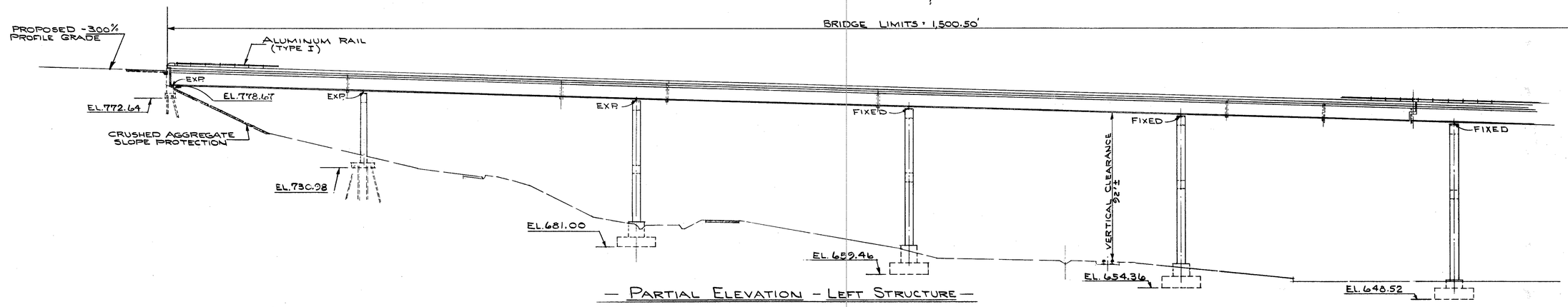
SUM.-271-7.65



— PARTIAL PLAN - LEFT STRUCTURE —



— PARTIAL ELEVATION - LEFT STRUCTURE —

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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GENERAL PLAN & ELEVATION

BRIDGE Nº SUM. 271-0802-L.
OVER CR 9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25-L.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WP	JNP		BHC	EDH	12-21-62	

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2	OHIO		

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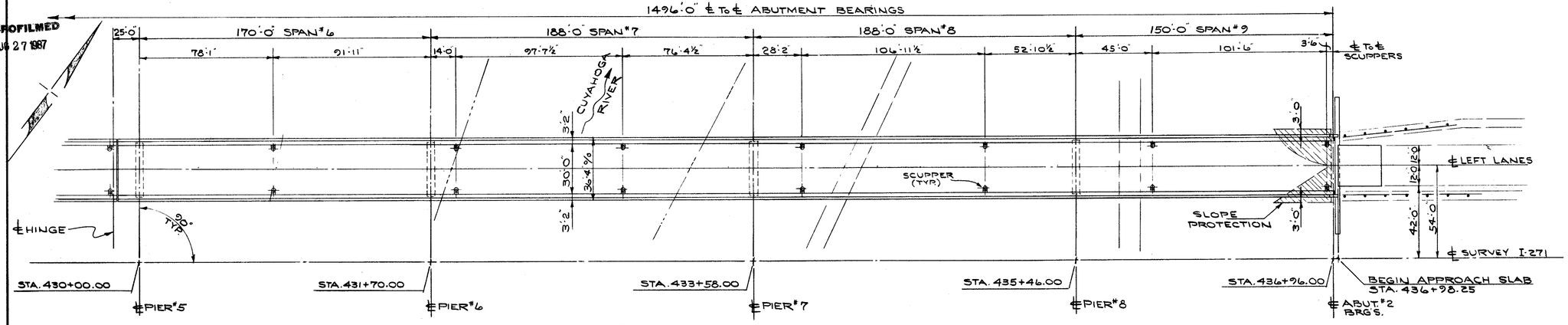
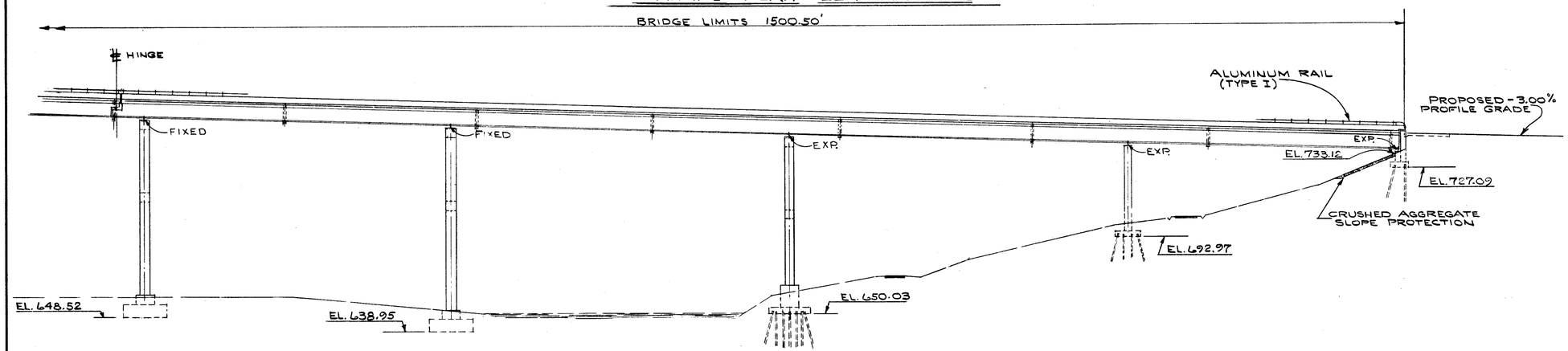


— PARTIAL PLAN — LEFT STRUCTURE —



— PARTIAL ELEVATION - LEFT STRUCTURE —

FIRST TEST PILE: PAYMENT WILL BE MADE FOR ONLY ONE FIRST TEST PILE, ITEM 505. IT MAY BE DRIVEN AT EITHER SUM-271-0802 L OR SUM-271-0802 R AND MAY BE EITHER A 12 ϕ C.I.P. OR 12 BP 53

* STRUCTURAL STEEL TO INCLUDE 2,782,246 LBS. OF A-36 STEEL, 12,720 " OF LEAD, 25,680 " OF A-441 STEEL,

ANCHOR BOLTS AND INCIDENTALS INCLUDED WITH ITEM 513 FOR PAYMENT

— ESTIMATED QUANTITIES (LEFT STRUCTURE) —

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN			ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN			ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN		
503	2410	CU.YDS.	UNCLASSIFIED EXCAVATION		309	2101				512	30	LIN.FT.	PREMOLD SEALING STRIP		30					825	6800	S.Y	CONCRETE SURFACE TREATMENT				6800		
503	296	CU.YDS.	ROCK EXCAVATION			296														828	90	LIN.FT.	JOINT SEALER	90					
503	LUMP	SUM	COFFERDAMS, CRIBS, AND SHEETING				LUMP													518	99	CU.YDS.	POROUS BACKFILL		99				
505	LUMP	SUM	FIRST TEST PILE (SEE NOTE)				LUMP			513	2820,646	LBS.	* STRUCTURAL STEEL	2820,646						518	28	EACH	SCUPPERS (INCLUDING SUPPORTS)	28					
507	4270	LIN.FT.	12" ϕ CAST-IN-PLACE REINF. CONC. PILES		2430	1840				514	2820,646	LBS.	FIELD PAINTING OF STRUCT. STEEL	2820,646						518	128.67	LIN.FT.	6" PERFORATED HELICAL C.M.P. 707.06 INCLUDING SPECIALS		128.67				
507	2810	LIN.FT.	12-BP-53 STEEL "H" PILES			2810														518	85	LIN.FT.	6" HELICAL C.M.P. 707.06 NON-PERF.		85				
509	888,791	LBS.	REINFORCING STEEL	481,123	18,248	389,420																							
511	1944	CU.YDS.	CLASS C" CONC. SUPERSTRUCTURE	1944																601	410	SQ.YDS.	CRUSHED AGGREGATE SLOPE PROTECTION		410				
511	159	CU.YDS.	CLASS E CONC. ABUTS. ABOVE FTG'S.		159					517	3003.18	LIN.FT.	RAILING (TYPE I)	3003.18															
511	1829	CU.YDS.	CLASS C CONC. PIERS ABOVE FTG'S.			1829																							
511	618	CU.YDS.	CLASS E CONC. PIER & ABUT. FTG'S.		95	523														808	1944	EACH	WATER RED., SET RET. ADMIXTURE	1944					

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION

BRIDGE № SUM-271-0802 — L.
OVER C.R. 9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 L.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WP	LNP		GWC	RBH	12/21/65	

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AUG 26 1987

FED. RD.	STATE	PROJECT	
2	OHIO		

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42/72

℄ABUT.*1 BRG'S.
℄PIER*1
℄PIER*2
R/W
RIVER DR. (C.R.*9)
R/W
℄PIER*3
R/W
℄PIER*4
R/W
℄PIER*5
END APPROACH SLAB STA. 421+49.75
STA. 421+52.00
STA. 422+57.00
STA. 424+22.00
STA. 425+87.00
STA. 427+57.00
STA. 429+27.00
℄SURVEY I-271
STA. 427+89.69 I-271
STA. 1112+77.21 B/O RR
℄HINGE
90° TYP.
54'-0"
42'-0"
30'-0"
℄RIGHT LANES
SCUPPER (TYP.)
B/O RR
℄TO ℄ SCUPPERS
2'-6"
102'-4½"
53'-1½"
53'-1½"
111'-10½"
2'-8"
93'-7"
66'-9"
61'-0"
80'-4"
3'-8"
25'-0"
105'-0" SPAN*1
165'-0" SPAN*2
165'-0" SPAN*3
170'-0" SPAN*4
170'-0" SPAN*5
1453'-0" ℄ TO ℄ ABUTMENT BEARINGS.

— PARTIAL PLAN RIGHT STRUCTURE —

BRIDGE LIMITS = 1457.50'

PROPOSED -3.00% PROFILE GRADE
ALUMINUM RAIL (TYPE I)
EL. 764.02
EXP.
EL. 744.05
EXP.
EXP.
FIXED
FIXED
℄HINGE
FIXED
CRUSHED AGGREGATE SLOPE PROTECTION
EL. 734.01
EL. 709.00 NEAR SIDE FOOTING
EL. 704.00 FAR SIDE FOOTING
EL. 672.43
VERTICAL CLEARANCE 82'±
EL. 654.47
EL. 649.46

— PARTIAL ELEVATION - RIGHT STRUCTURE —

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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GENERAL PLAN & ELEVATION

BRIDGE Nº SUM-271-0802-R.
OVER C.R.*9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+49.75 To STA. 436+07.25-R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WP	JAP		GJH²	RDH	12-21-65	

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AUG 28 1987

FED. RD.	STATE	PROJECT	
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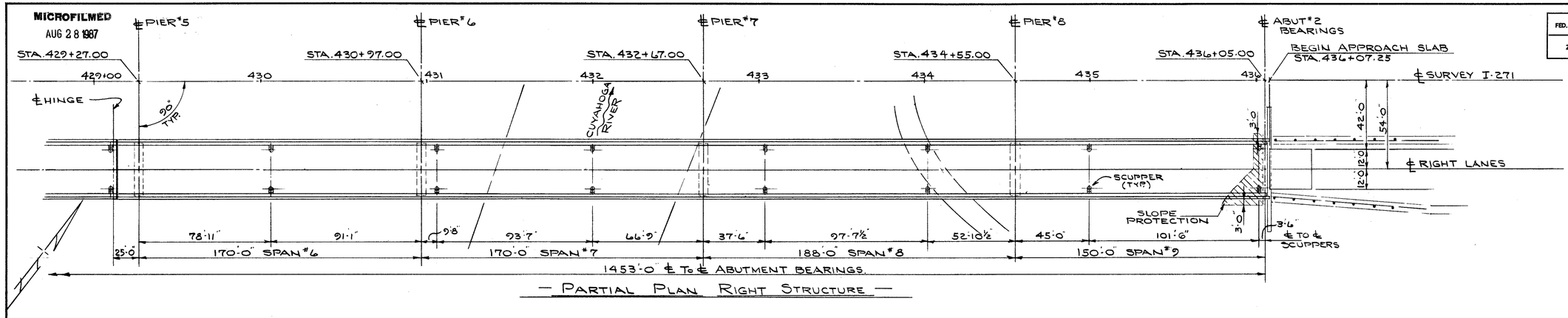
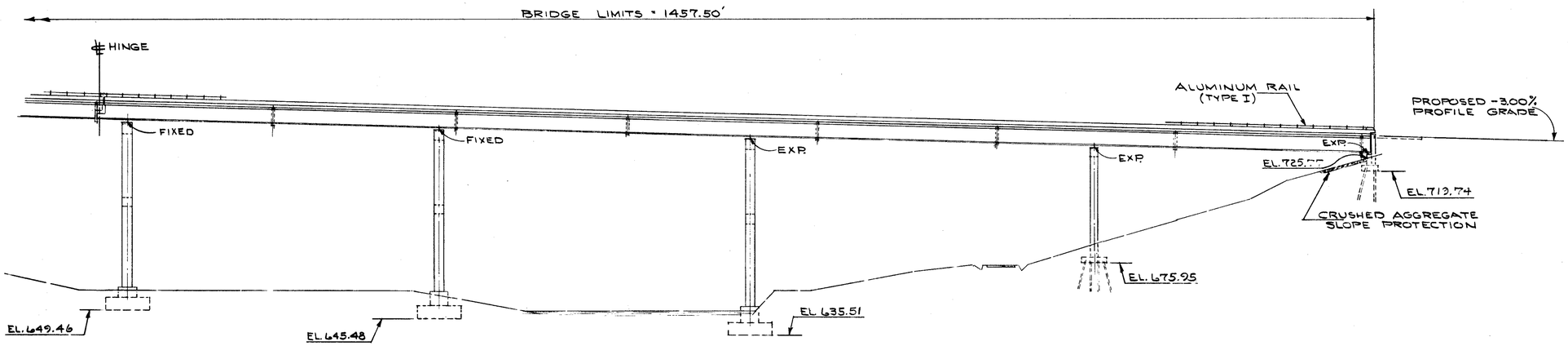


— PARTIAL PLAN RIGHT STRUCTURE —



— PARTIAL ELEVATION - RIGHT STRUCTURE —

FIRST TEST PILE: ITEM 505 IN ESTIMATED QUANTITIES FOR SUM-271-0802 L. MAY BE DRIVEN AT EITHER SUM-271-0802 L. OR SUM-271-0802 R.

⊛ - STRUCTURAL STEEL TO INCLUDE 2,711,843 LBS. OF A-36 STEEL, 12,720* OF LEAD, 25,680* OF A-441 STEEL,

ANCHOR BOLTS AND INCIDENTALS INCLUDED WITH ITEM 513 FOR PAYMENT

— ESTIMATED QUANTITIES - (RIGHT STRUCTURE) —

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
503	2402	CU. YDS.	UNCLASSIFIED EXCAVATION		309	2,093	
503	183	CU. YDS.	ROCK EXCAVATION			183	
503	LUMP	SUM	COFFERDAMS, CRIBS, AND SHEETING				LUMP
507	3,810	LIN. FT.	12" ϕ CAST-IN-PLACE REINF. CONC. PILES.		2430	1380	
507	1,720	LIN. FT.	12 BP 53 STEEL "H" PILES			1720	
509	840,700	LBS.	REINFORCING STEEL	467,794	18,248	354,658	
511	1889	CU. YDS.	CLASS "C" CONC. SUPERSTRUCTURE	1889			
511	159	CU. YDS.	CLASS "E" CONC. ABUTS. ABOVE FTG'S		159		
511	1639	CU. YDS.	CLASS "C" CONC. PIERS ABOVE FTG'S.			1639	
511	567	CU. YDS.	CLASS "E" CONC. PIER & ABUT. FTG'S.		95	472	

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS.	PIERS	GEN.
512	30	LIN. FT.	PREMOLDED SEALING STRIP		30		
513	2,750,263	LBS.	STRUCTURAL STEEL ⊛	2,750,263			
514	2,750,263	LBS.	FIELD PAINTING OF STRUCT. STL.	2,750,263			
517	2917.15	LIN. FT.	RAILING (TYPE I)	2917.15			

ITEM	TOTAL	UNIT	DESCRIPTION	SUPER	ABUTS	PIERS	GEN.
825	6600	SQ. YDS.	CONCRETE SURFACE TREATMENT				6600
828	90	LIN. FT.	JOINT SEALER	90			
518	99	CU. YDS.	POROUS BACKFILL		99		
518	28	EACH	SCUPPERS (INCLUDING SUPPORTS)	28			
518	128.67	LIN. FT.	6" PERFORATED HELICAL C.M.P. 707.06 INCLUDING SPECIALS		128.67		
518	85	LIN. FT.	6" HELICAL C.M.P. 707.06 NON-PERF.		85		
601	380	SQ. YDS.	CRUSHED AGGREGATE SLOPE PROTECTION		380		
808	1889	EACH	WATER RED. SET RET. ADMIXTURE	1889			

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

GENERAL PLAN & ELEVATION

BRIDGE № SUM 271-0802-R.
OVER C.R. 9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+49.75 To STA. 436+07.25-R.

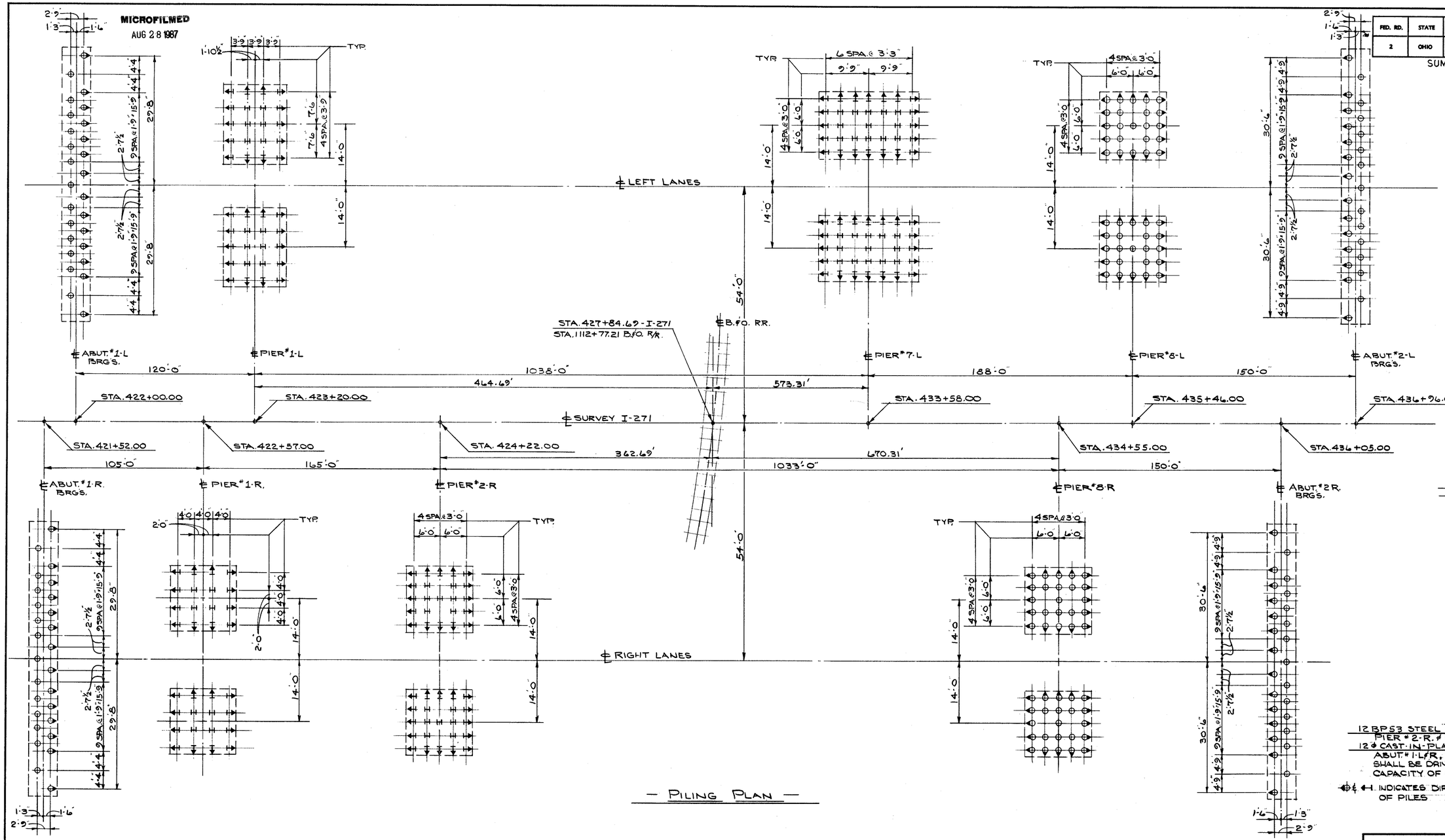
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
	LNP			RBH	12-21-65	

MICROFILMED
AUG 28 1987

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-7.65

44
72



— PILING PLAN —

PILE CUT-OFF ELEVATIONS

LOCATION	ELEVATION
ABUT.#1-L	774.64
PIER#1-L	731.98
PIER#7-L	651.03
PIER#8-L	693.97
ABUT.#2-L	729.09
ABUT.#1-R	766.02
PIER#1-R	735.01
PIER#2-R	705.00 LT. FTG. 710.00 RT. FTG.
PIER#8-R	676.95
ABUT.#2-R	721.74

12 BP53 STEEL H PILES AT PIER#1-L & R, PIER#2-R & PIER#7-L.
12 Ø CAST-IN-PLACE CONCRETE PILES AT ABUT.#1-L & R, PIER#8-L & R & ABUT.#2-L & R, SHALL BE DRIVEN TO A MINIMUM BEARING CAPACITY OF 40 TONS PER PILE.

℄ ⟷ INDICATES DIRECTION OF 1:4 BATTER OF PILES

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PILING PLAN

BRIDGE Nº SUM 271-0802 L & R.
OVER C.R.#9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 L.
STA. 421+49.75 To STA. 436+07.25 R.

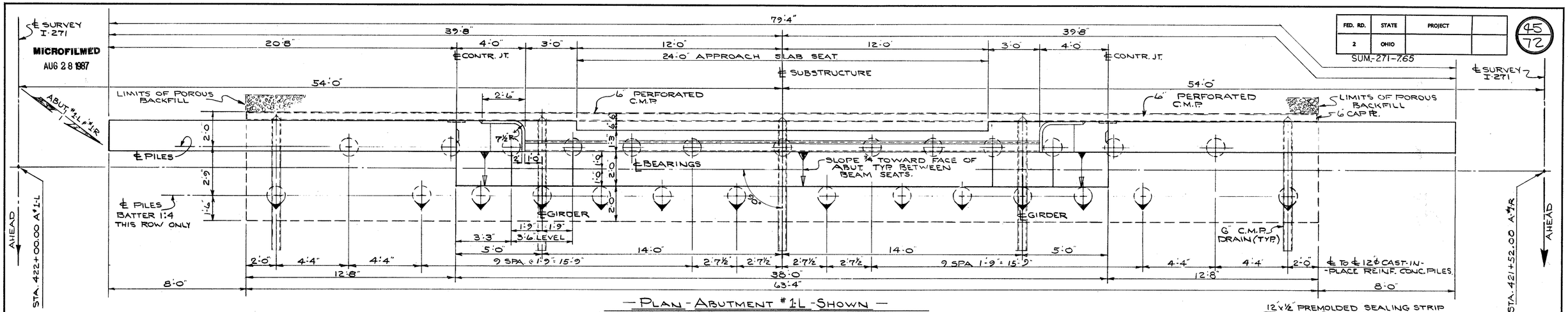
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ					12-21-65	

MICROFILMED
AUG 28 1987

FED. RD.	STATE	PROJECT	
2	OHIO		

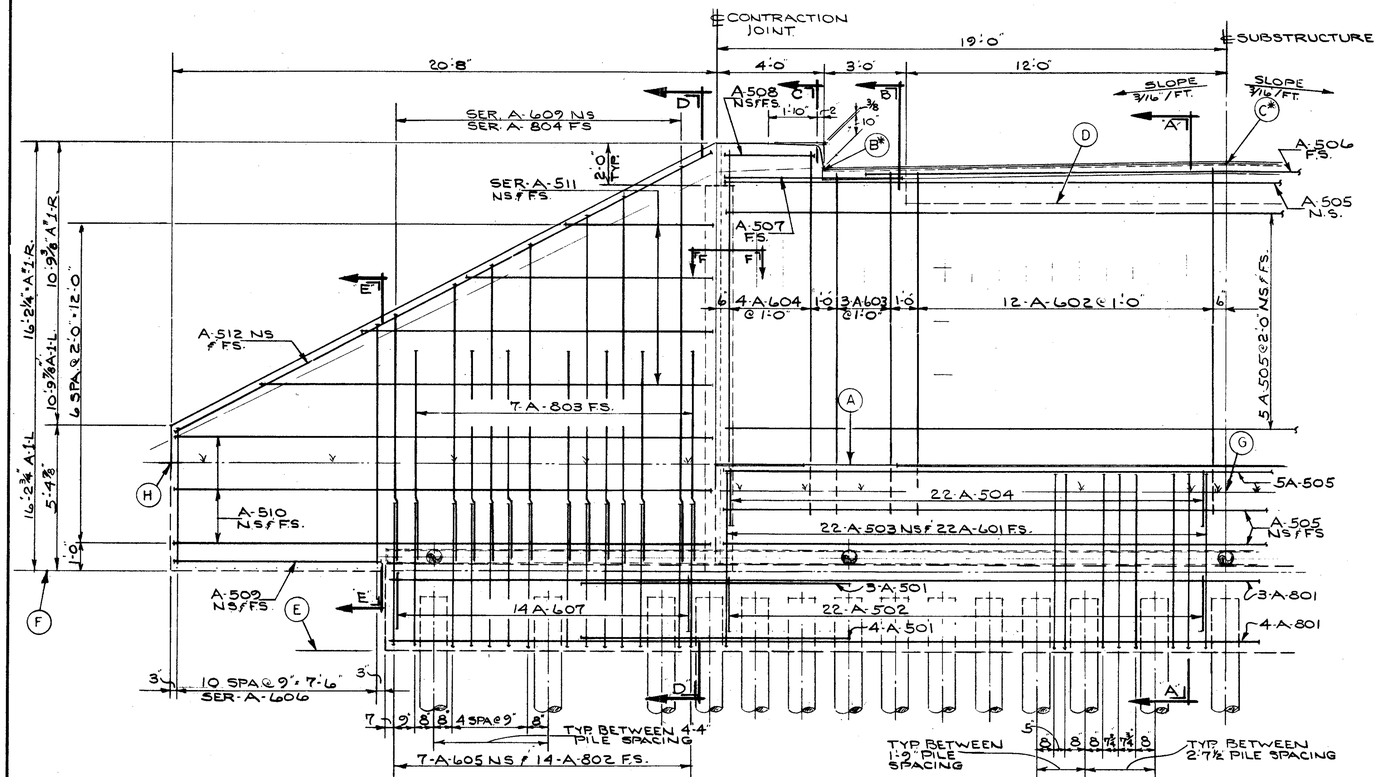
SUM-271-765

45/72



— PLAN - ABUTMENT #1-L SHOWN —

— ABUT. #1-R SIMILAR EXCEPT AS SHOWN OR NOTED —



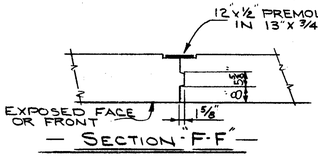
— PARTIAL ELEVATION — SYMMETRICAL ABOUT ℄ SUBSTRUCTURE —

— ABUT. #1-L SHOWN — ABUT. #1-R SIMILAR EXCEPT AS SHOWN OR NOTED —

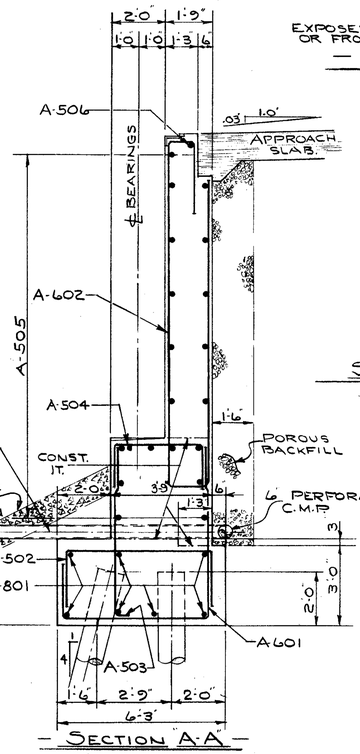
— ELEVATIONS —

ABUTMENT №	A	B*	C*	D	E	F	G	H
1-LEFT	779.81	790.90	791.14	789.75	772.64	775.64	778.67	779.67
1-RIGHT	771.19	782.26	782.50	781.11	764.02	767.02	770.05	771.05

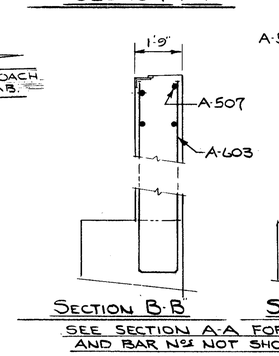
*INDICATES ELEVATIONS GIVEN TO HEEL OF L



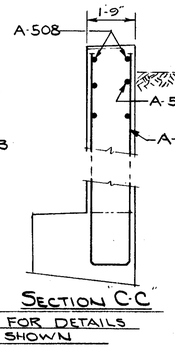
— SECTION F-F —



— SECTION A-A —

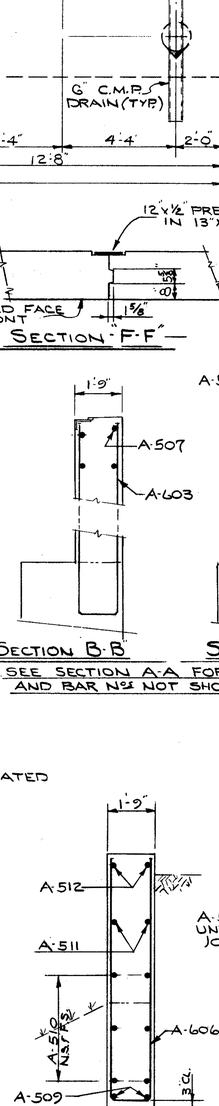


SECTION B-B

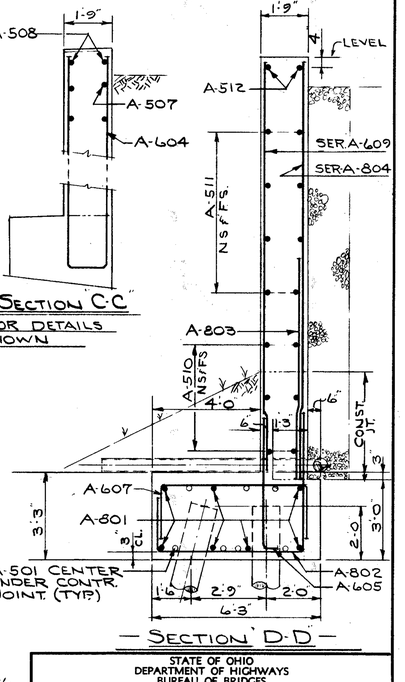


SECTION C-C

SEE SECTION A-A FOR DETAILS AND BAR NOS NOT SHOWN



— SECTION E-E —



— SECTION D-D —

EMBANKMENT PROCEDURE

THE EMBANKMENT SHALL BE PLACED AND COMPACTED UP TO THE FINISHED SPILL-THRU SLOPE AND TO THE LEVEL OF THE SUBGRADE FOR A DISTANCE OF 200 FEET BACK OF THE ABUTMENTS, AFTER WHICH EXCAVATION SHALL BE MADE FOR THE ABUTMENT AND PILES DRIVEN

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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Consulting Engineers — Akron, Ohio

ABUTMENT #1 L & R DETAILS

BRIDGE № SUM 271-0802 L & R.
OVER C.R. #9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 - L.
STA. 421+49.75 To STA. 436+07.25 - R.

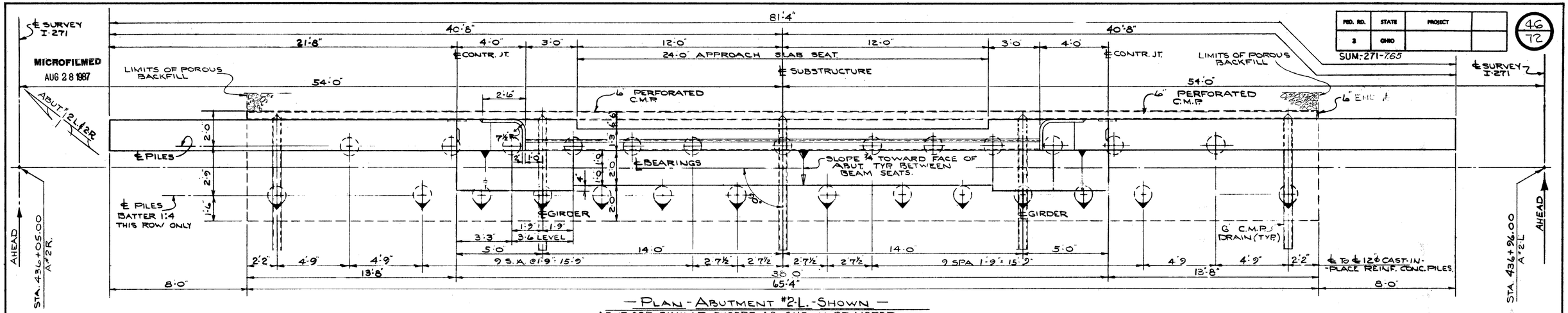
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	LNP		[illegible]	RDA	12-21-65	

MICROFILMED
AUG 28 1987

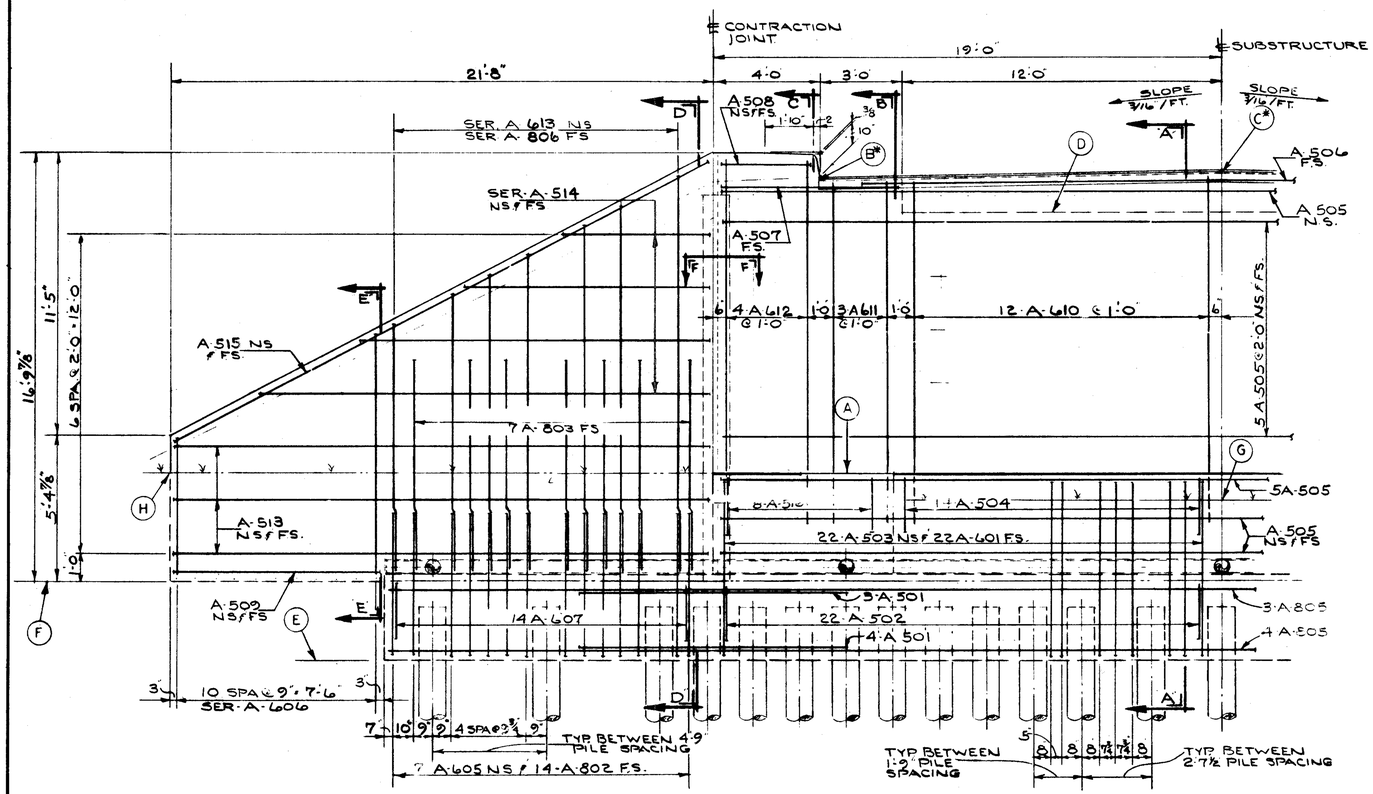
FED. RD.	STATE	PROJECT	
3	OHIO		

SUM-271-7.65

46/72



— PLAN - ABUTMENT #2-L. SHOWN —
— ABUT. #2R SIMILAR EXCEPT AS SHOWN OR NOTED —

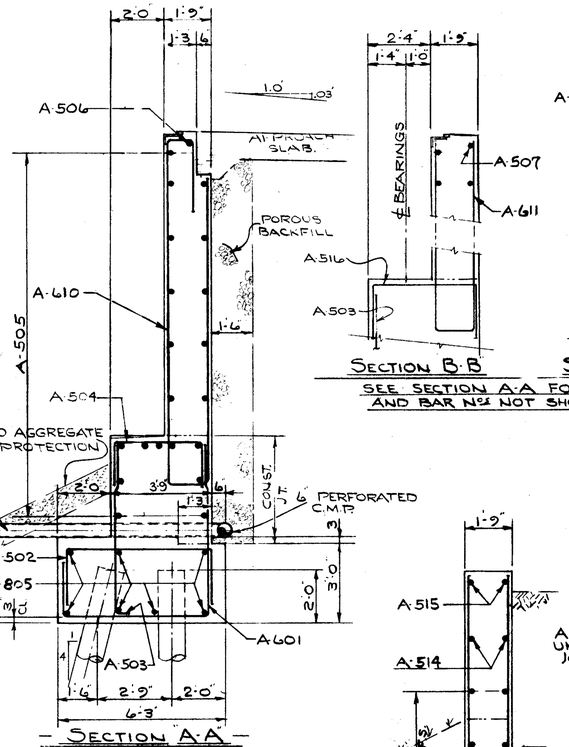


— PARTIAL ELEVATION — SYMMETRICAL ABOUT ℄ SUBSTRUCTURE —
— ABUT. #2 L SHOWN — ABUT. #2-R SIMILAR EXCEPT AS SHOWN OR NOTED —

— ELEVATIONS —

ABUTMENT №	A	B*	C*	D	E	F	G	H
2-LEFT	734.13	745.96	746.19	744.72	727.09	730.09	733.12	734.12
2-RIGHT	726.78	738.61	738.84	737.37	719.74	722.74	725.77	726.77

* INDICATES ELEVATIONS GIVEN TO HEEL OF L



EMBANKMENT PROCEDURE:
THE EMBANKMENT SHALL BE PLACED AND COMPACTED UP TO THE FINISHED SPILL-THRU SLOPE AFTER WHICH EXCAVATION SHALL BE MADE FOR THE ABUTMENT AND PILES DRIVEN

SEE ABUT #1-L&R DETAILS FOR SECTION "F-F"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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Consulting Engineers — Akron, Ohio

ABUTMEMT #2 L & R DETAILS

BRIDGE №s SUM 271-0802 L & R.
OVER C.R. 9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 L.
STA. 421+49.75 To STA. 436+07.25 R.

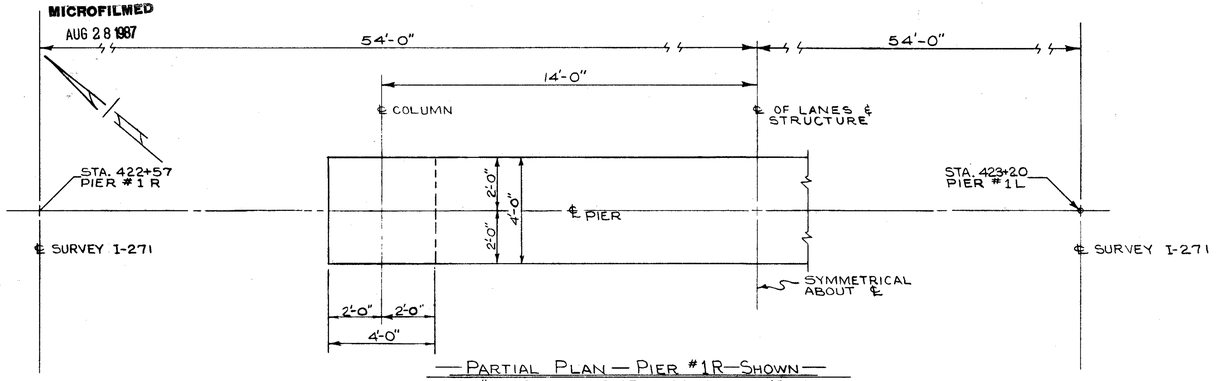
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	LNF		RWC	RBH	12-21-65	

MICROFILMED
AUG 28 1987

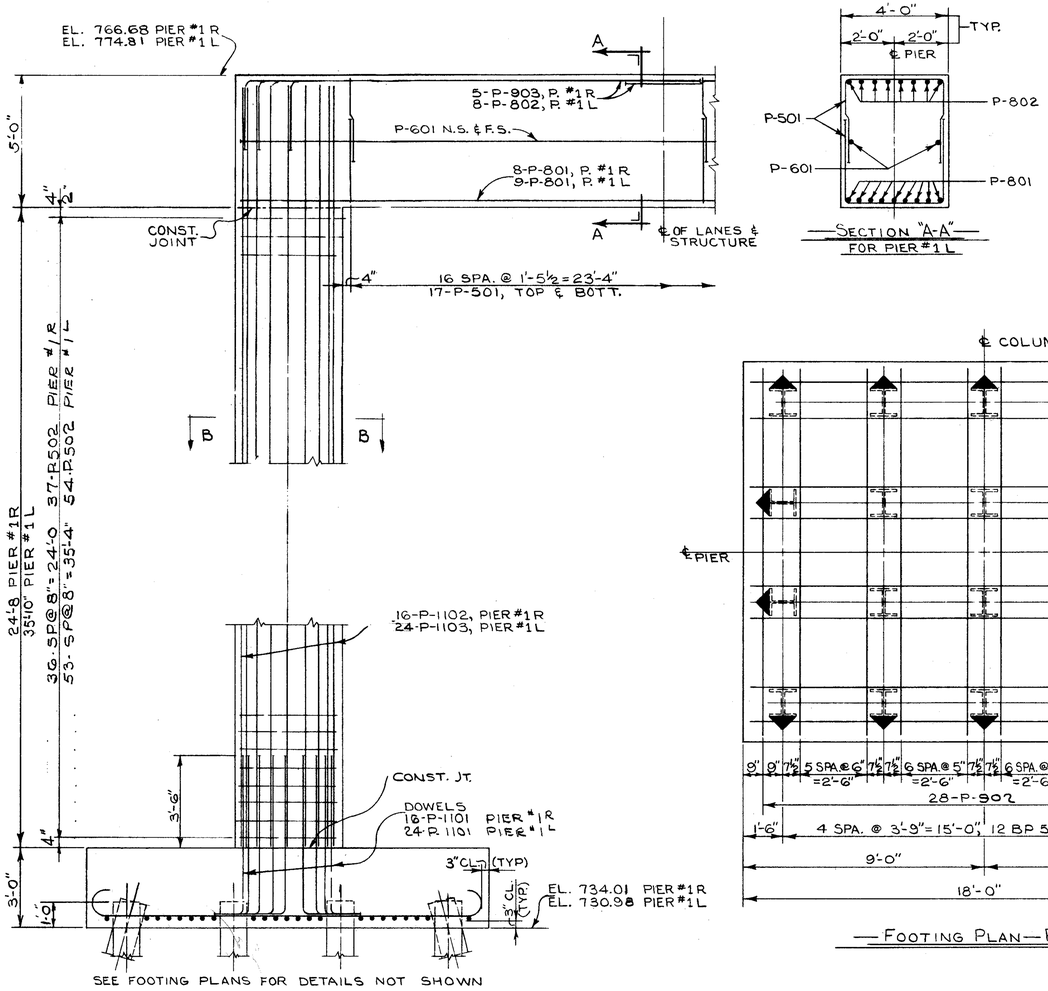
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-7.65

47
72

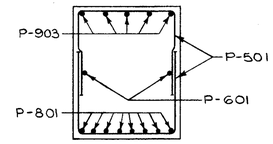


—PARTIAL PLAN—PIER #1R—SHOWN—
—PIER #1L SIMILAR EXCEPT AS SHOWN OR NOTED—

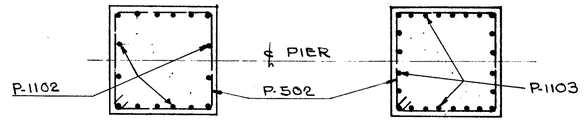


—PARTIAL ELEVATION—PIER #1R—SHOWN—
—PIER #1L SIMILAR EXCEPT AS SHOWN OR NOTED—

—SECTION "A-A"—
FOR PIER #1L

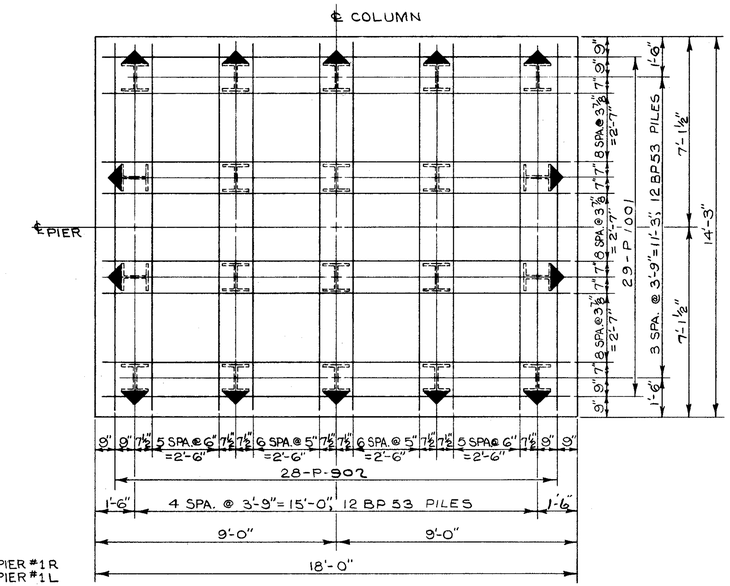


—SECTION "A-A"—
FOR PIER #1R

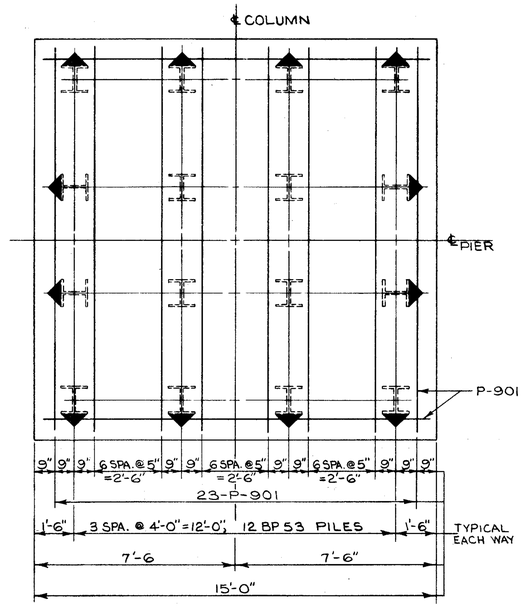


—SECTION BB—
PIER #1R

—SECTION BB—
PIER #1L



—FOOTING PLAN—PIER #1L—



—FOOTING PLAN—PIER #1R—

PIERS NO 1R & 1L

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER DETAILS

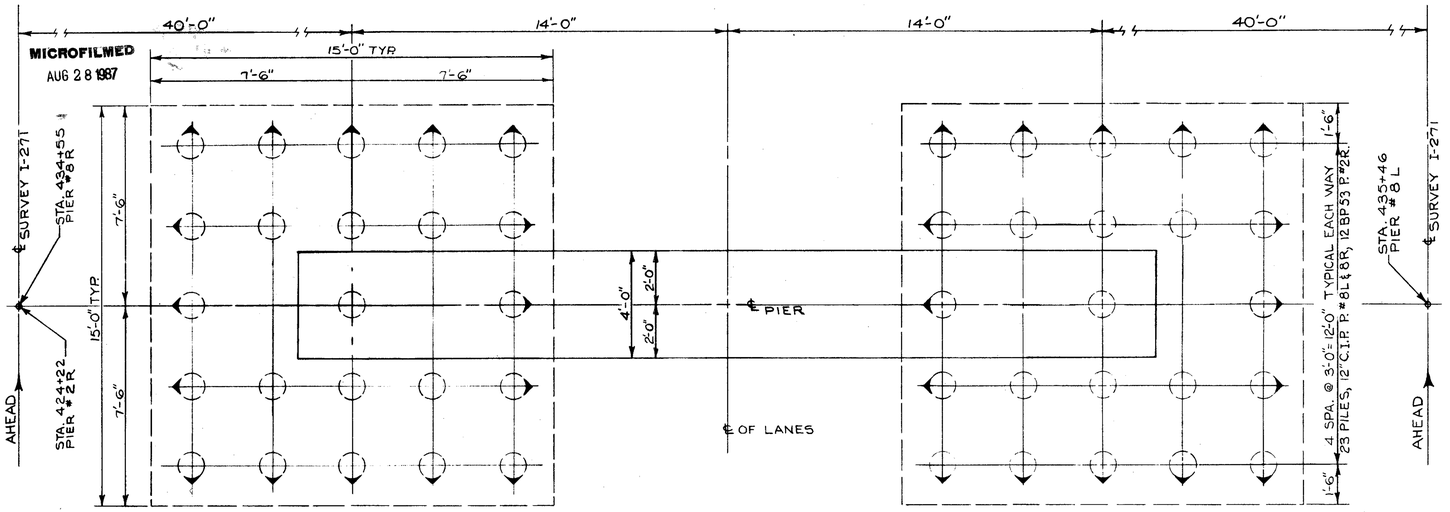
BRIDGE Nº SUM-271-0802-L.& R.
OVER C.R.9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 L.
STA. 421+49.75 To STA. 436+07.25 R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR			RDH	12-21-65	

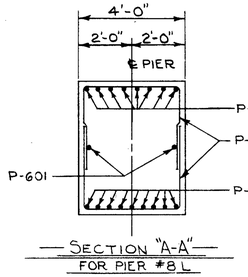
MICROFILMED
AUG 28 1967

FED. RD.	STATE	PROJECT	
2	OHIO		

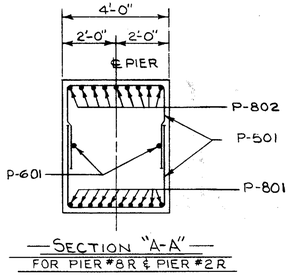
SUM.-271-7.65



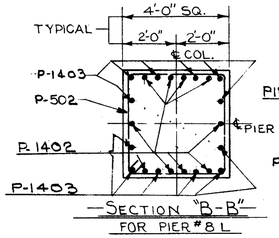
PLAN PIER #8L SHOWN
PIER #8R & PIER #2R SIMILAR EXCEPT AS SHOWN OR NOTED



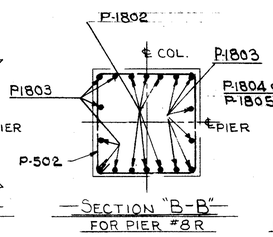
SECTION "A-A"
FOR PIER #8L



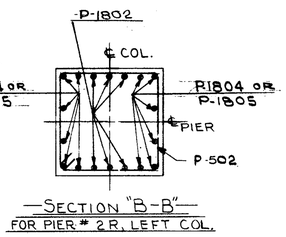
SECTION "A-A"
FOR PIER #8R & PIER #2R



SECTION "B-B"
FOR PIER #8L

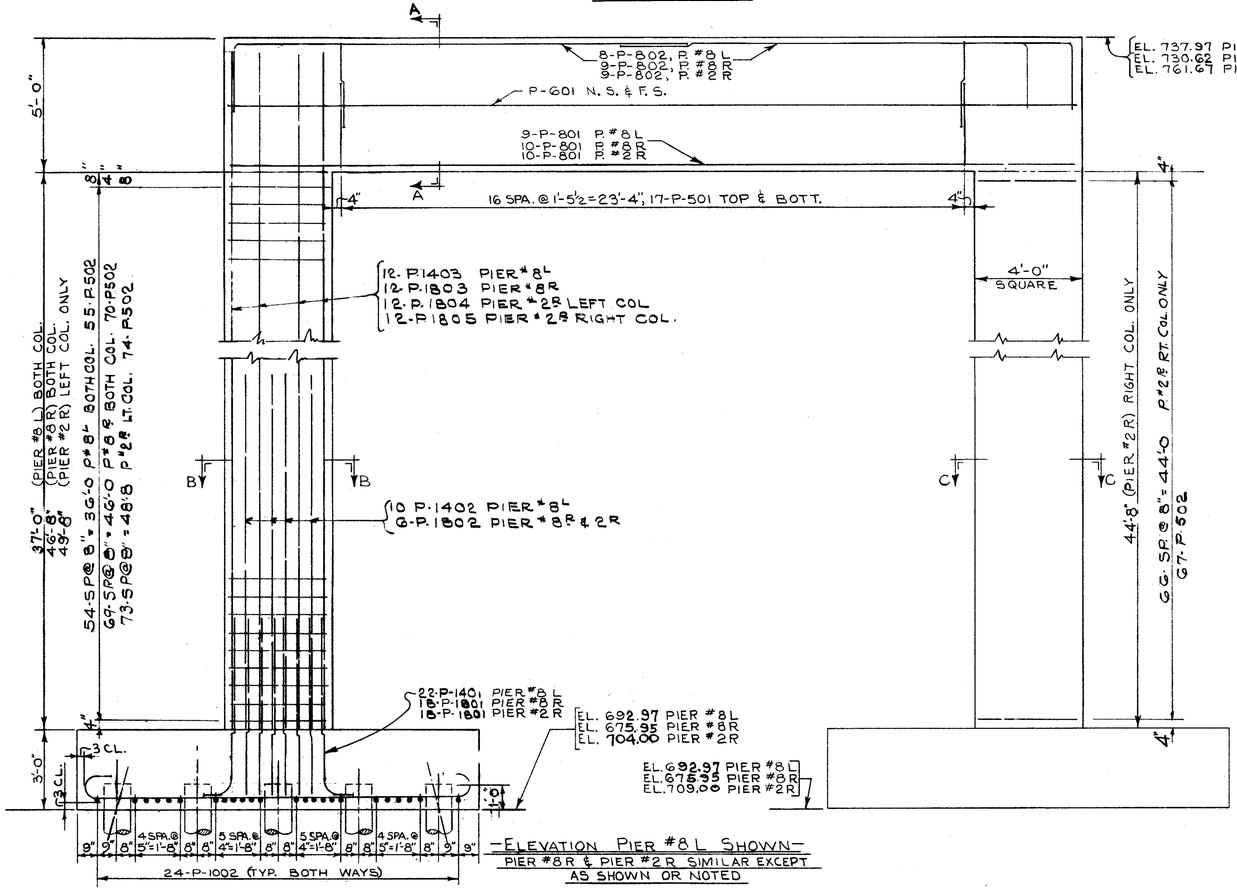


SECTION "B-B"
FOR PIER #8R

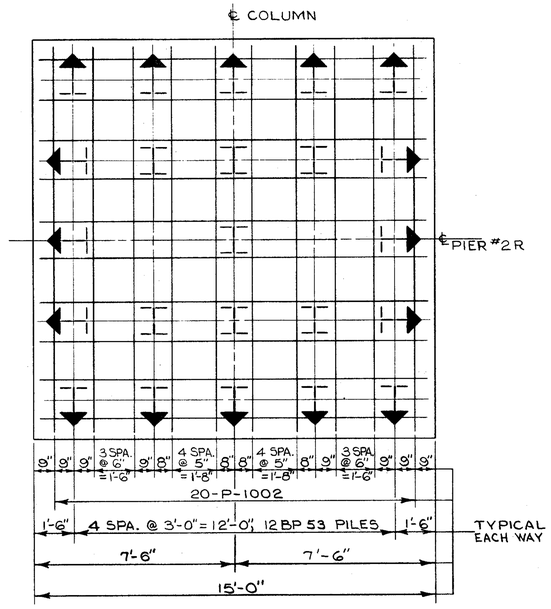


SECTION "B-B"
FOR PIER # 2R, LEFT COL.

SECTION "C-C"
FOR PIER # 2R RIGHT COL.



ELEVATION PIER #8L SHOWN
PIER #8R & PIER #2R SIMILAR EXCEPT AS SHOWN OR NOTED



FOOTING PLAN—PIER #2R

PIERS NO. 2R, 8L & 8R

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER DETAILS

BRIDGE № SUM-271-0802-L.& R.
OVER C.R.№9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 L.
STA. 421+49.75 To STA. 436+07.25 R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	BMR		WHC	RDH	12-2-65	

MICROFILMED
AUG 28 1967

℄ COLUMN & GIRDER

℄ PIER & ROADWAY SYMMETRICAL ABOUT ℄

14'-0" 54'-0"

P-501

℄ PIER

STA. 430+00 (PIER # 5-L)
STA. 433+58 (PIER # 7-L)

℄ SURVEY I-271

HALF PLAN

5'-0"

SP.501

TYP. UNLESS NOTED

3"

P-1119

℄ PIER

5'-0"

SECTION H-H

ELEVATION 754.60

7-P1004 HOOK TO LAP WITH OUTSIDE COL STEEL

A

P.602 NS & FS

A

7-P803

1'-6 6 SP @ 1'-6" = 9'-0 9"
3" P.501 TOP & BOTTOM

24-P.1119 LAP WITH P.1118

CONSTRUCTION JOINTS

37'-0" SPIRAL SP.501

PITCH 3½ TYP

8"

3'-6"

24-P.1118

3" 1'-3

C

10-P 904

P.501

P.602 NS & FS

P.501

J J

5'-0"

5" 4" @ 5 SP @ 8"
7-P.506
4-SP @ 1'-0
5-R505

5'-0"

5" K K

5-P-803

36-P.1121 LAP WITH P.1109 3'-6" MIN LAP

C

"M"

46'-1" P.504

CONSTRUCTION JOINTS

36 P.1109 LAP WITH P.1101

8" 6"

83-SP @ 8" = 55'-4"

2'-0"

L L

R1107

P.503

3 @ 2'-0" = 6'-0"

14'-4"

G4-P.1101

4"

3'-0"

22-P.702

ELEV. G48.52

5½" 26-SP @ 6½" = 14'-1" P.1104 5½"

15'-0"

"M"

PARTIAL ELEVATION

5'-6"

P.504

℄ PIER

5'-6"

P.506

P.505

P.904

5'-6"

P.501

P.1121

P.1118

SECTION K K

SECTION J J

10'-0"

1'-6 6 SP @ 1'-2" ± = 7'-0" 1'-6

28-P.1107

2"

P.503

P.504

P.1109

ALTERNATE

1'-11"

4-SP @ 1'-6½" = 6'-0"

10'-0"

1'-11"

SECTION L-L

P.1109

P.503

P.1107

P.504

P.1101

27-P.1104

3" CL

6" 21-SP @ 1'-0 = 21'-0 P.702 6"

22'-0"

PARTIAL ELEVATION M M'

PIER 5L

22'-6"

11'-3 11'-3

33-12" B P 53#

1'-6 6 SP @ 3'-3" = 19'-6 1'-6

32-P.703

8-7½ 4 SP @ 7½ TYP

6"

℄ PIER

15'-0"

1'-6

7'-6"

4 SP @ 3'-0 = 12'-0

26 P.1105

7'-6"

8-7½ 5 SP @ 7½ TYP @ 42

1'-6

℄ COLUMN

SECTION N-N
(DOWELS NOT SHOWN)

6'-0"

N

3'-0

3" CL

P1105

P.703

N

4

ELEVATION

FOR DETAILS & BAR MARKS NOT SHOWN SEE SHEET № 51

FOOTING DETAILS FOR PIER № 7L

FOR SECTION A-A, ℄ C-C" SEE SHEET № 51

PIER 5L & 7L

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers Akron, Ohio

PIER DETAILS
BRIDGE № SUM. 271-0802-L
OVER C.R. 9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97 75 To STA. 436+98 25-L

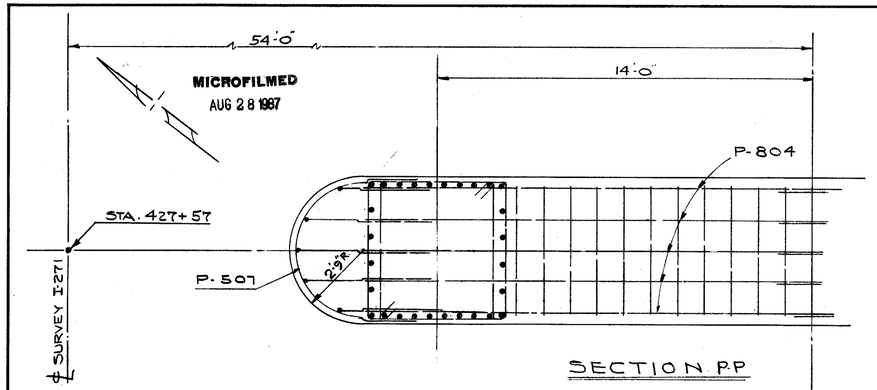
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KJJ				RBH	12-21-65	

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-7.65

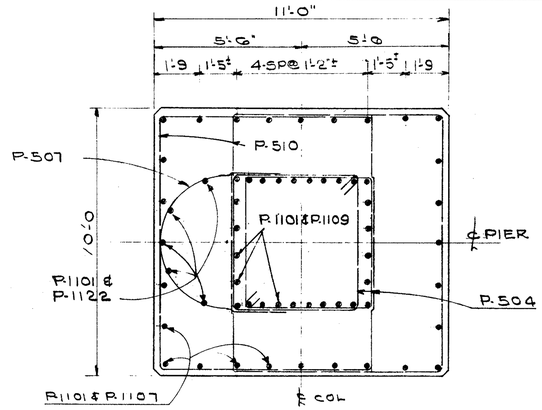
50
72

MICROFILMED
AUG 28 1987

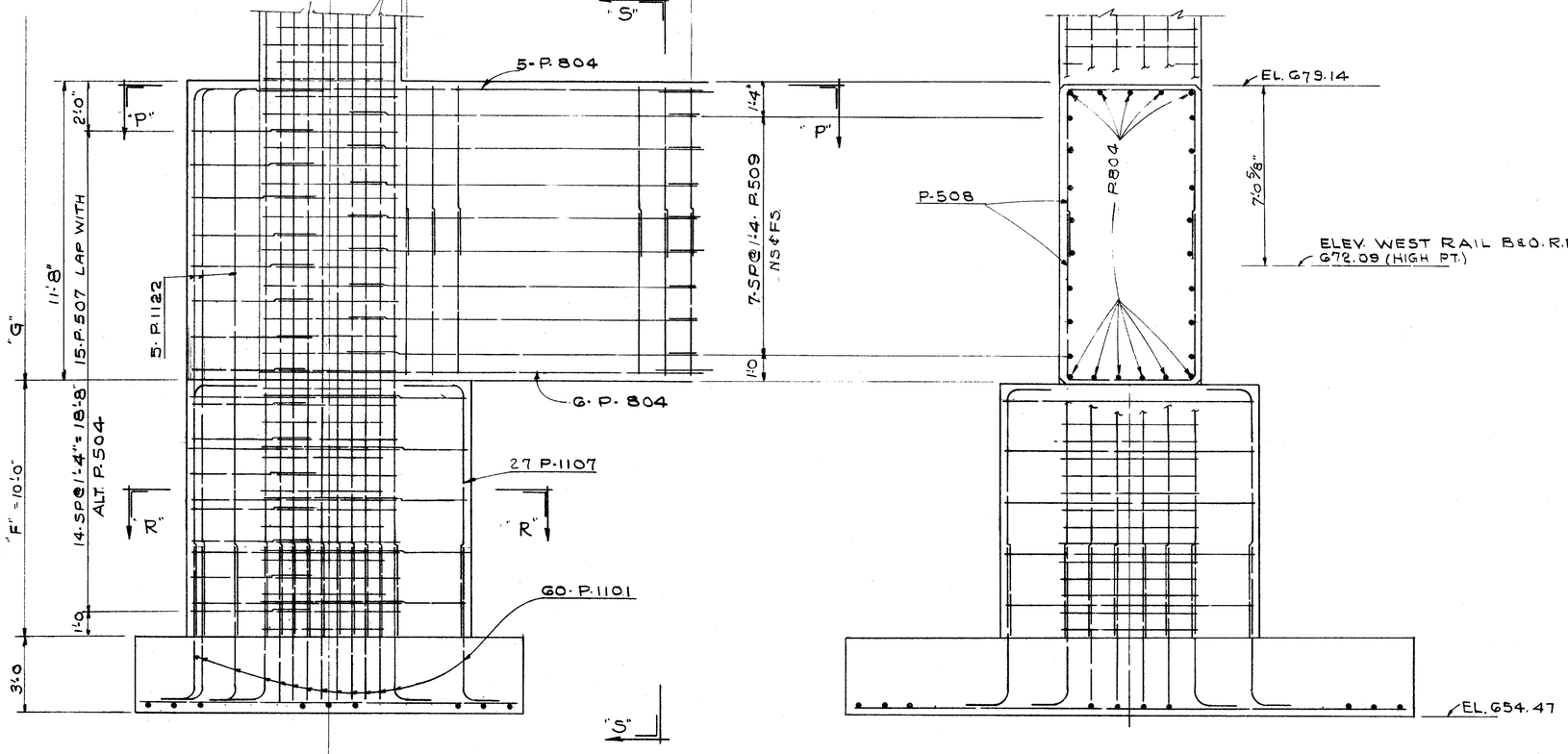


SECTION P-P

SYMMETRICAL ABOUT ℄ OF PIER



SECTION R-R



PARTIAL ELEVATION

SECTION S-S

PIER Nº 4 R

NOTE: FOR DETAILS AND BAR MKS NOT SHOWN SEE SHEET Nº 51

PIER Nº 4 R

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER DETAILS

BRIDGE Nº SUM-271-0802 R,
OVER C.R. 9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+49.75 To STA. 436+07.25 R

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K S J				RDH	12-21-65	

MICROFILMED
AUG 28 1987

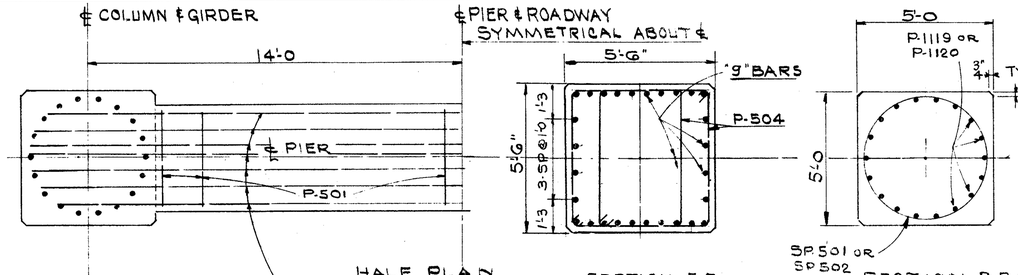
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-765

51/72

℄ COLUMN & GIRDER

℄ PIER & ROADWAY SYMMETRICAL ABOUT ℄

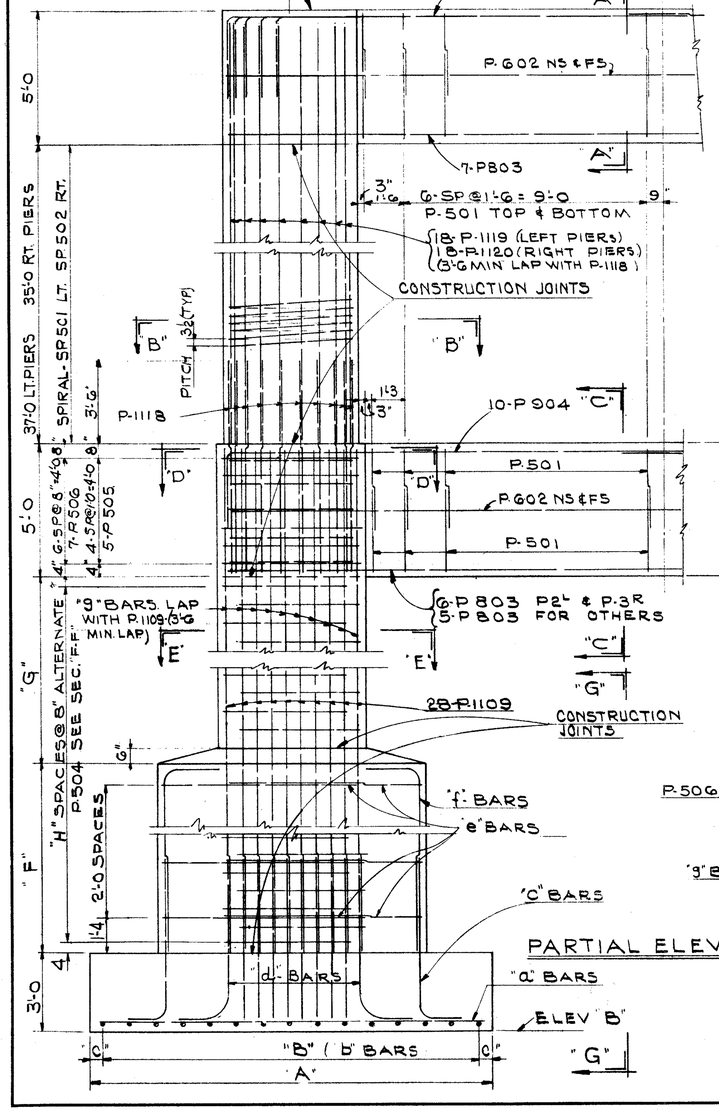


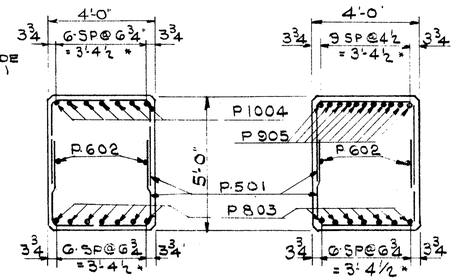
HALF PLAN

SECTION E E

SECTION B B

ELEVATION "A"

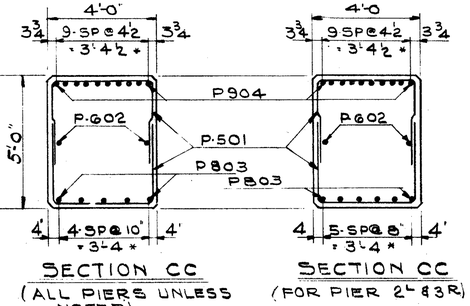




SECTION A-A
(ALL PIERS UNLESS NOTED)

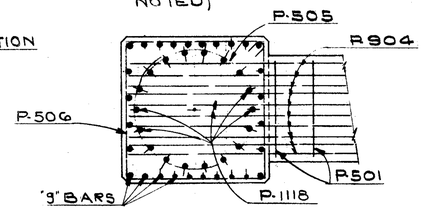
SECTION A A
(FOR PIER 2L & 3R)

* MAY VARY TO CLEAR VERT. STEEL IN COLS.



SECTION C C
(ALL PIERS UNLESS NOTED)

SECTION C C
(FOR PIER 2L & 3R)

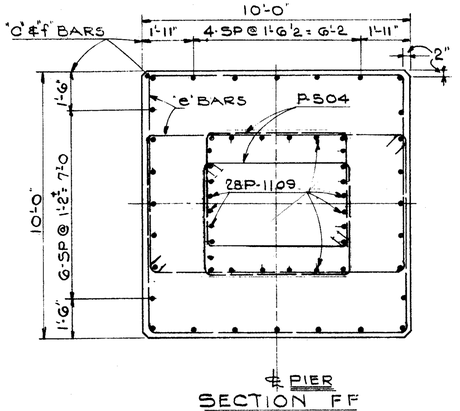


SECTION D-D

PARTIAL ELEVATION

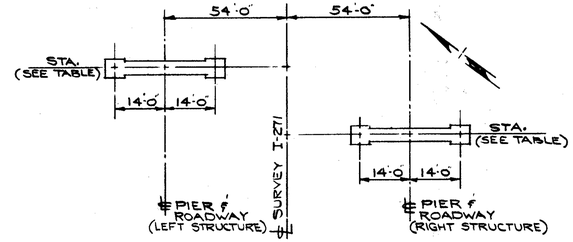
* FOR ADDITIONAL DETAILS AND STEEL SEE SHEET Nº 50

PIER Nº	STATION	PIER DIMENSIONS (163.43) ELEV A'	ELEV B	A	B	C	D	E	F	G"	H	REINFORCING STEEL QUANTITIES SHOWN FOR 1 COL. ONLY a-BARS Nº	a-BARS MK Nº	b-BARS Nº	b-BARS MK Nº	c-BARS Nº	c-BARS MK Nº	d-BARS	d-BARS MK Nº
P-2L	424+90.00	769.66	681.00	13'-0	23-SP@6"	9"	20'-0	19-SP@1'-0	4'-0	34'-8	57	20	P-701	24	P-1003	28	P-1101	28	P-1101
P-3R	425+87.00	756.85	672.43	13'-0	23-SP@6"	9"	20'-0	19-SP@1'-0	4'-0	32'-5	54	20	P-701	24	P-1003	28	P-1101	28	P-1101
P-3L	426+60.00	764.71	659.46	13'-0	24-SP@6"	6"	22'-0	21-SP@1'-0	10'-0	45'-3	82	22	P-701	25	P-1104	28	P-1101	28	P-1101
P-4R	427+57.00	751.72	654.47	15'-0	26-SP@6½"	5½"	22'-0	21-SP@1'-0	10'-0	39'-3	73	22	P-702	27	P-1104	—	———	—	———
P-4L	428+30.00	759.61	654.36	15'-0	26-SP@6½"	5½"	22'-0	21-SP@1'-0	10'-0	45'-3	82	22	P-702	27	P-1104	28	P-1101	28	P-1101
P-5R	429+27.00	746.71	649.46	13'-0	24-SP@6"	6"	22'-0	21-SP@1'-0	10'-0	39'-3	73	22	P-701	25	P-1104	28	P-1101	28	P-1101
P-6R	430+97.00	741.48	645.48	13'-0	24-SP@6"	6"	22'-0	21-SP@1'-0	10'-0	38'-0	71	22	P-701	25	P-1104	28	P-1101	28	P-1101
P-6L	431+70.00	749.37	638.95	15'-0	26-SP@6½"	5½"	22'-0	21-SP@1'-0	10'-0	50'-5	90	22	P-702	27	P-1104	28	P-1101	28	P-1101
P-7R	432+67.00	736.26	635.51	13'-0	26-SP@5½"	6½"	22'-0	21-SP@1'-0	10'-0	42'9	78	22	P-701	27	P-1104	28	P-1101	28	P-1101
P-7L	433+58.00	743.61	650.08	SEE DETAIL SHT. Nº 49					6'-0	37'-7	64	32	P-703	26	P-1105	28	P-1101	28	P-1101

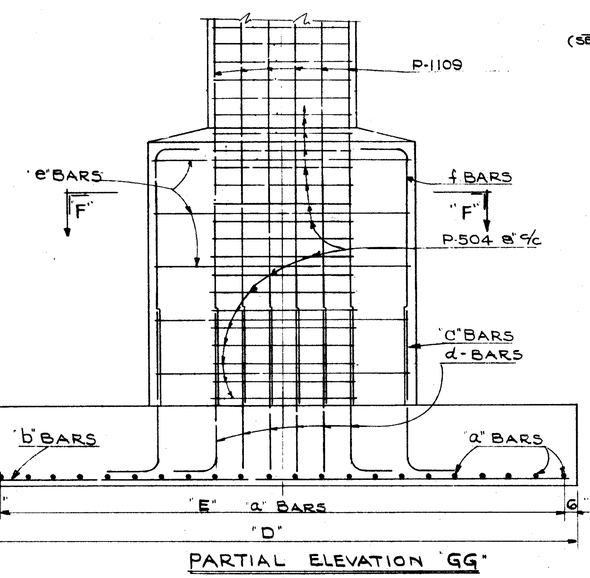


SECTION F F

REINFORCING STEEL (CONT.) PIER Nº	e-BARS Nº	e-BARS MK Nº	f-BARS Nº	f-BARS MK Nº	g-BARS Nº	g-BARS MK Nº
P-2L	4	P-503	28	P-1106	28	P-1110
P-3R	4	P-503	28	P-1106	28	P-1111
P-3L	10	P-503	28	P-1107	28	P-1112
P-4R	10	P-510	—	———	28	P-1113
P-4L	10	P-503	28	P-1107	28	P-1112
P-5R	10	P-503	28	P-1107	28	P-1113
P-6R	10	P-503	28	P-1107	28	P-1114
P-6L	10	P-503	28	P-1107	28	P-1115
P-7R	10	P-503	28	P-1107	28	P-1116
P-7L	6	P-503	28	P-1108	28	P-1117



PIER LOCATION DIAGRAM



PARTIAL ELEVATION "GG"

PIERS Nº P-2L, P-3R&L, P-4R&L P-5R, P-6R&L & P-7R&L

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER DETAILS

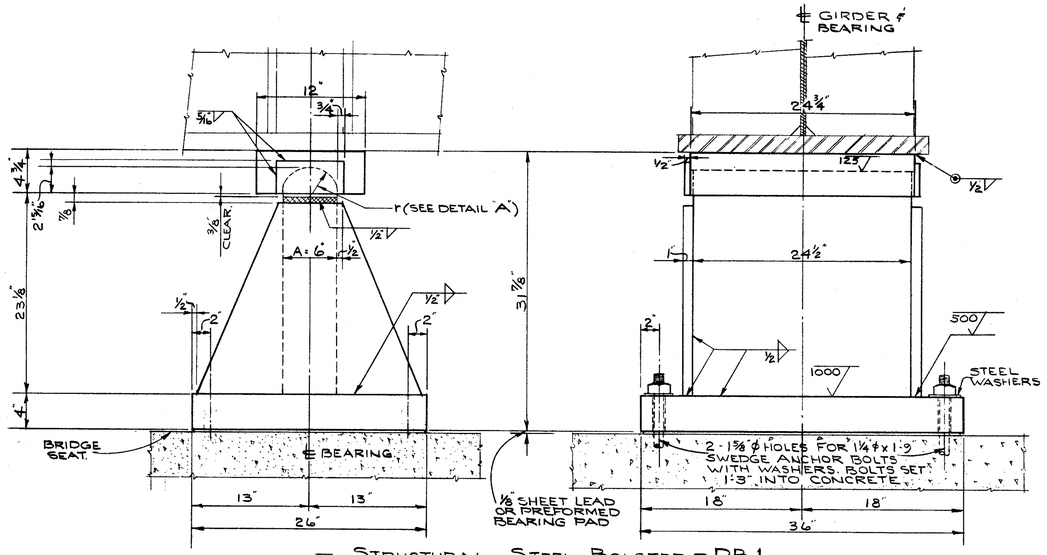
BRIDGE Nº SUM-271-0802 L & R.
OVER C.R. 9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 L.
STA. 421+49.75 To STA 436+07.25 R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KSJ	ww			RDH	12-21-65	3-10-66

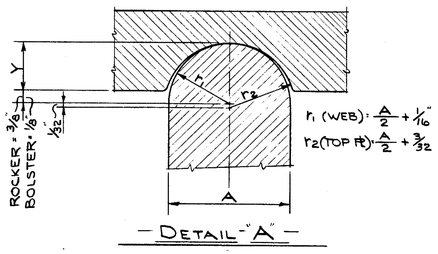
MICROFILMED
AUG 28 1987

FED. RD.	STATE	PROJECT	
2	OHIO		

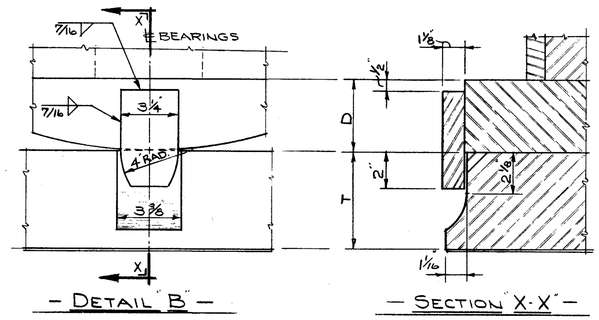
SUM.-271-765



— STRUCTURAL STEEL BOLSTER - PB1 —

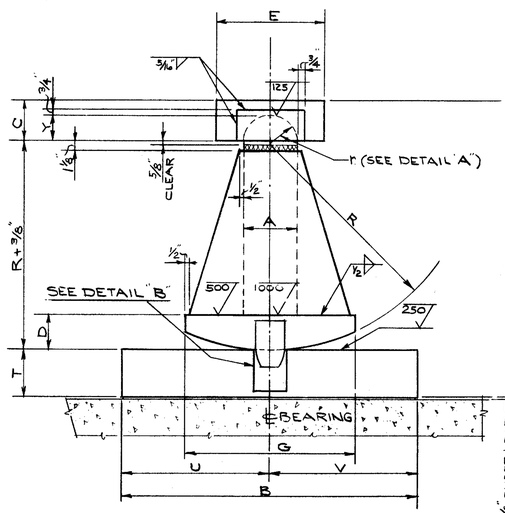


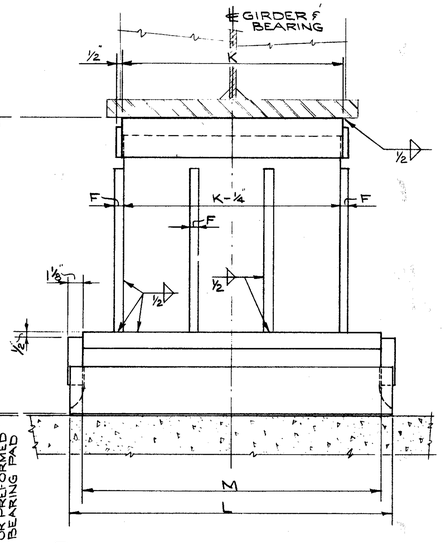
— DETAIL "A" —



— DETAIL "B" —

— SECTION "X-X" —





— STRUCTURAL STEEL ROCKER —
— PR-1, AR-1 AND AR-2 —

ROCKER №	DIMENSIONS (INCHES)															
	A	B	C	D	E	F	G	H	K	L	M	R	T	U	V	Y
PR-1	6"	33	4½	4	12	1"	19	33⅜	24¾	36	34	23	5½	16½	16½	2 11/16
AR-1	3"	18	3¼	3¼	9	¾	12	18⅛	20¾	28½	26½	12	2½	9	9	1 3/16
AR-2	3¼	24	4	3¼	9	1⅛	14	26⅞	24¾	36	34	19	3½	1'-1"	11"	1 5/16

ALL STEEL TO BE A-441

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

BEARING DETAILS

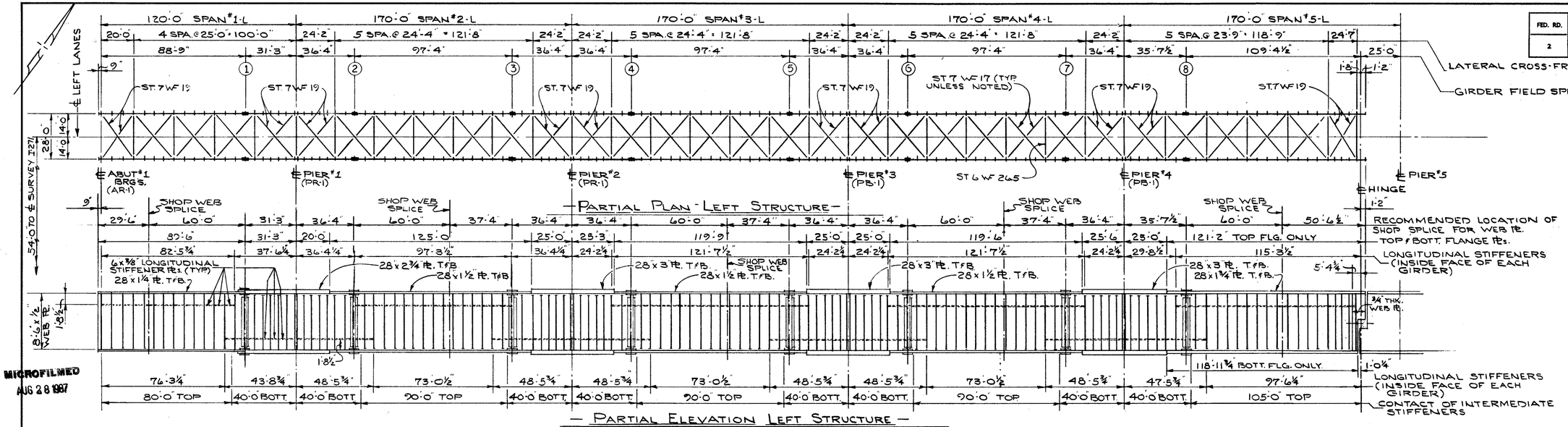
BRIDGE № SUM-271-0802 L.& R.
OVER C.R. 9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 - L.
STA. 421+49.75 To STA. 436+07.25 R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
[illegible]	JAP		N.F.W.	[illegible]	12-21-65	

FED. RD.	STATE	PROJECT	
2	OHIO		

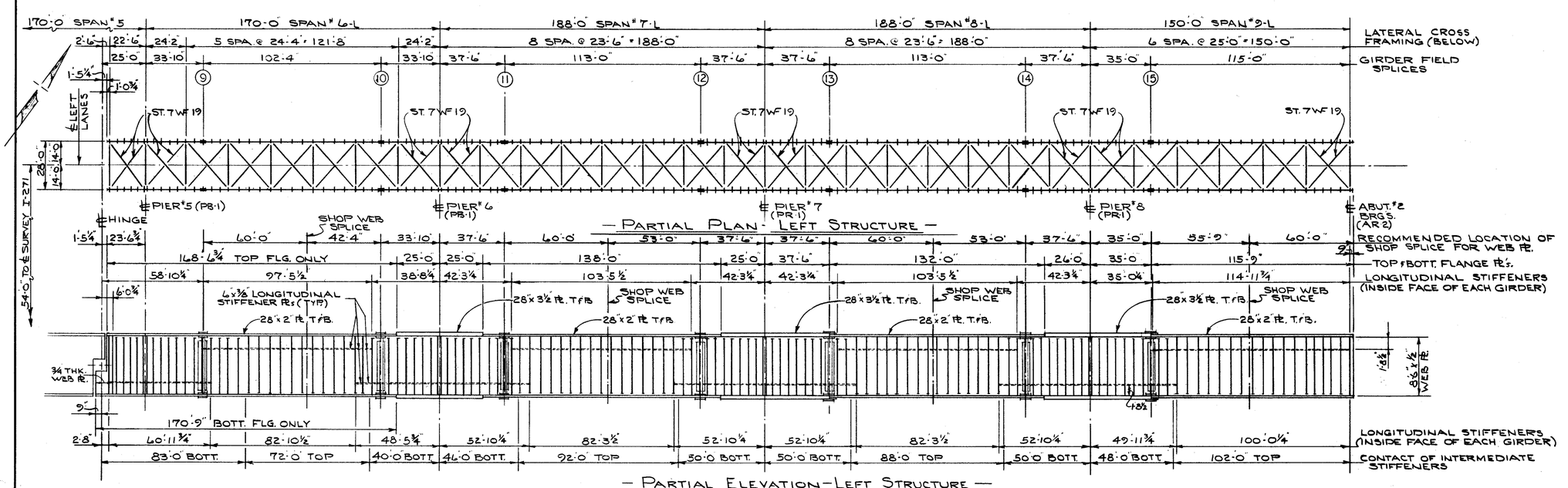
53
72

SUM-271-7.65



— PARTIAL ELEVATION LEFT STRUCTURE —

MICROFILMED
AUG 28 1967



— PARTIAL ELEVATION - LEFT STRUCTURE —

A-36-STEEL UNLESS OTHERWISE NOTED.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING PLAN

BRIDGE No. SUM-271-0802-L.
OVER C.R. 9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 - L.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WP	JNP		GPC	RBH	12-21-65	

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AUG 28 1967

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-7.65

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72

105'-0" SPAN #1-R | 165'-0" SPAN #2-R | 165'-0" SPAN #3-R | 170'-0 SPAN #4-R | 170'-0" SPAN #5-R

5 SPA. @ 21'-0" = 105'-0" | 23'-9" | 5 SPA. @ 23'-6" = 117'-6" | 23'-9" | 23'-9" | 5 SPA. @ 23'-6" = 117'-6" | 23'-9" | 24'-2" | 5 SPA. @ 24'-4" = 121'-8" | 24'-2" | 5 SPA. @ 23'-9" = 118'-9" | 24'-7" | 1'-8"

70'-0" | 35'-0" | 35'-6" | 94'-0" | 35'-6" | 35'-6" | 94'-0" | 35'-6" | 36'-4" | 97'-4" | 36'-4" | 35'-7½" | 109'-4½" | 25'-0" | 1'-8" | 1'-2"

LATERAL CROSS FRAMING (BELOW)
GIRDER FIELD SPLICES

54'-0" To ℄ SURVEY I-271
28'-0" = 14'-0" + 14'-0"
℄ RIGHT LANES

ST. 7 WF 19 | ST. 7 WF 19 | ST. 7 WF 19 | ST. 7 WF 19 | ST 7 WF 17 (TYP UNLESS NOTED) | ST. 7 WF 17 | ST. 7 WF 17

℄ ABUT #1 BRG'S. (AR 1) | ℄ PIER #1 (PR 1) | ℄ PIER #2 (PR-1) | ℄ PIER #3 (PB-1) | ST 6 WF 26.5 | ℄ PIER #4 (PB-1) | ℄ PIER #5 | ℄ HINGE

— PARTIAL PLAN - RIGHT STRUCTURE —

9" | 10'-9" | SHOP WEB SPLICE | SHOP WEB SPLICE | SHOP WEB SPLICE | SHOP WEB SPLICE | 1'-2"

60'-0" | 35'-0" | 35'-6" | 60'-0" | 34'-0" | 35'-6" | 35'-6" | 60'-0" | 34'-0" | 35'-6" | 36'-4" | 60'-0" | 37'-4" | 36'-4" | 35'-7½" | 60'-0" | 50'-6½"

RECOMMENDED LOCATION OF SHOP SPLICE FOR WEB PL.

TOP & BOTT. FLANGE PLs. — 70'-9" | 35'-0" | 15'-0" | 127'-6" | 22'-6" | 22'-6" | 117'-6" | 25'-0" | 25'-0" | 117'-6" | 27'-6" | 25'-0" | 121'-2 TOP FLG. ONLY

LONGITUDINAL STIFFENERS (INSIDE FACE OF EACH GIRDER) — 76'-11¾" | 28'-0¼" | 29'-7¾" | 105'-8½" | 29'-7¾" | 41'-4¾" | 82'-2½" | 41'-4¾" | 42'-5¼" | 85'-1½" | 42'-5¼" | 29'-8½" | 115'-3½"

6"x⅜" LONGITUDINAL STIFFENER PLs (TYP.)
28"x1 PL. T/B | 28"x2 PL. | 28"x1⅝ PL. T/B | 28"x2¾ PL. T/B | SHOP WEB SPLICE | 28"x1½ T/B | 28"x2¾ PL. T/B | 28"x1½ PL. T/B | 28"x3 PL. T/B | 28"x1¾ PL. T/B | 5 4¾"

84"x½" WEB PL. | 1'-8½" | 34" THK. WEB PL.

LONGITUDINAL STIFFENERS (INSIDE FACE OF EACH GIRDER) — 118'-11¾" BOTT. FLG. ONLY | 1'-0¼"

63'-0¼" | 41'-11¾" | 41'-4¼" | 82'-3½" | 41'-4¾" | 47'-2¾" | 70'-6½" | 47'-2¾" | 48'-5¾" | 73'-0½" | 48'-5¾" | 47'-5¾" | 97'-6¾"

73'-0 TOP | 32'-0 BOTT. | 40'-0 BOTT. | 85'-0 TOP | 40'-0 BOTT. | 50'-0 BOTT. | 75'-0 TOP | 40'-0 BOTT. | 45'-0 BOTT. | 80'-0 TOP | 45'-0 BOTT. | 40'-0 BOTT. | 105'-0 TOP

CONTACT OF INTERMEDIATE STIFFENERS

— PARTIAL ELEVATION - RIGHT STRUCTURE —

170'-0" SPAN #5-R | 170'-0" SPAN #6-R | 170'-0" SPAN #7-R | 188'-0" SPAN #8-R | 150'-0" SPAN #9-R

2'-6" | 22'-6" | 24'-2" | 5 SPA @ 24'-4" = 121'-8" | 24'-2" | 24'-2" | 5 SPA. @ 24'-4" = 121'-8" | 24'-2" | 8 SPA. @ 23'-6" = 188'-0" | 6 SPA @ 25'-0" = 150'-0"

25'-0" | 33'-10" | 102'-4" | 33'-10" | 33'-10" | 102'-4" | 33'-10" | 37'-6" | 113'-0" | 37'-6" | 35'-0" | 115'-0"

LATERAL CROSS FRAMING (BELOW)
GIRDER FIELD SPLICES

1'-5¼" | 1'-0¾"

54'-0" To ℄ SURVEY I-271
28'-0" = 14'-0" + 14'-0"
℄ RIGHT LANES

ST. 7 WF 19 | ST. 7 WF 19 | ST. 7 WF 19 | ST. 7 WF 19 | ST. 7 WF 19

℄ RIGHT LANES

℄ HINGE | ℄ PIER #5 (PB1) | ℄ PIER #6 (PB1) | ℄ PIER #7 (PR1) | ℄ PIER #8 (PR1) | ℄ ABUT. #2 BRG'S (AR 2)

— PARTIAL PLAN - RIGHT STRUCTURE —

1'-5¼" | 23'-6¾" | 33'-10" | 60'-0" | 42'-4" | 33'-10" | 33'-10" | 60'-0" | 42'-4" | 33'-10" | 37'-6" | 60'-0" | 53'-0" | 37'-6" | 35'-0" | 55'-9" | 9" | 60'-0"

RECOMMENDED LOCATION OF SHOP SPLICE FOR WEB PL.

168'-6¾" TOP FLG. ONLY | 25'-0" | 25'-0" | 120'-0" | 25'-0" | 37'-6" | 124'-10" | 26'-0" | 35'-0" | 115'-9"

TOP & BOTT. FLANGE PLs.

63'-8¼" | 92'-7½" | 38'-8¼" | 38'-8¼" | 92'-7½" | 38'-8¼" | 42'-3¼" | 103'-5½" | 42'-3¼" | 35'-0¼" | 114'-11¾"

LONGITUDINAL STIFFENERS (INSIDE FACE OF EACH GIRDER)

6'-0¾"
6"x⅜" LONGITUDINAL STIFFENER PLs (TYP.)
28"x2 PL. T/B SHOP WEB SPLICE | 1'-8⅛" | 28"x3½ PL. T/B | 28"x2 PL. T/B | SHOP WEB SPLICE | 28"x3½ PL. T/B | 28"x2 PL. T/B | 28"x3½ PL. T/B | 28"x2 PL. T/B SHOP WEB SPLICE

84"x½" WEB PL.

¾" THK WEB PL. | 2" | 1'-8¾" | 170'-9" BOTT. FLG. ONLY | 2'-8"

LONGITUDINAL STIFFENERS (INSIDE FACE OF EACH GIRDER)

65'-9¾" | 78'-0½" | 48'-5¾" | 48'-5¾" | 73'-0½" | 48'-5¾" | 52'-10¼" | 82'-3½" | 52'-10¼" | 49'-11¾" | 100'-0¼"

83'-0 BOTT. | 72'-0 TOP | 40'-0 BOTT. | 40'-0 BOTT. | 90'-0 TOP | 40'-0 BOTT. | 50'-0 BOTT. | 88'-0 TOP | 50'-0 BOTT. | 48'-0 BOTT. | 102'-0 TOP

CONTACT OF INTERMEDIATE STIFFENERS

— PARTIAL ELEVATION - RIGHT STRUCTURE —

A-36 STEEL UNLESS OTHERWISE NOTED.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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Consulting Engineers — Akron, Ohio

FRAMING PLAN

BRIDGE Nº SUM-271-0802 R.
OVER C.R.№ 9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+49.75 To STA. 436+07.25-R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
EP	JNP		[illegible]	ROH	12-21-65	

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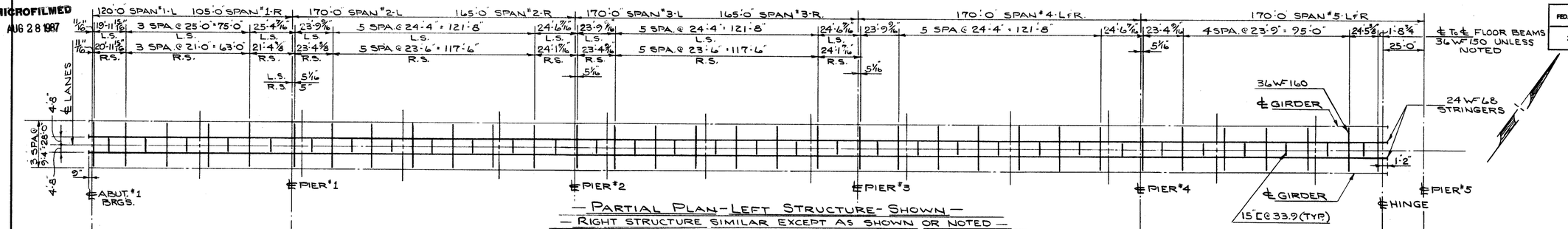
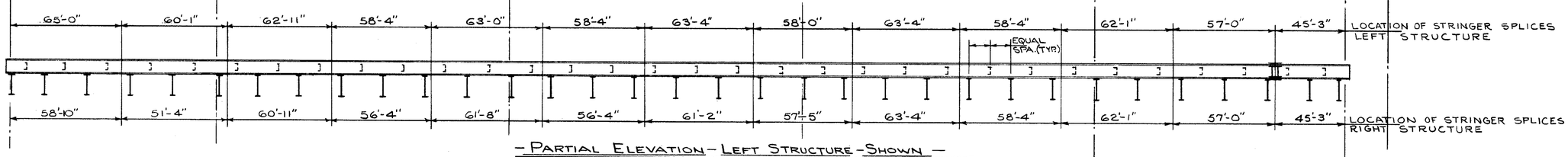
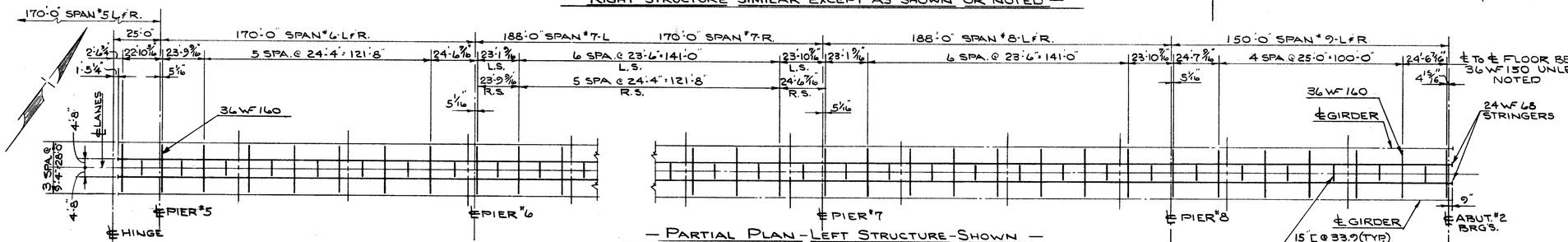
AUG 2 8 1987



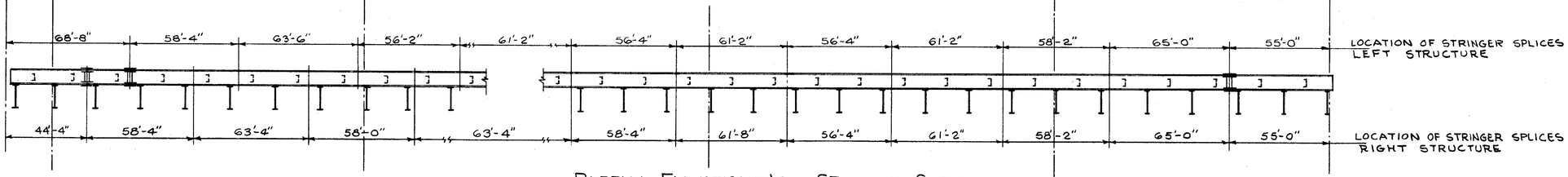
— PARTIAL PLAN - LEFT STRUCTURE - SHOWN —
— RIGHT STRUCTURE SIMILAR EXCEPT AS SHOWN OR NOTED —



— PARTIAL ELEVATION - LEFT STRUCTURE - SHOWN —
— RIGHT STRUCTURE SIMILAR EXCEPT AS SHOWN OR NOTED —



— PARTIAL PLAN - LEFT STRUCTURE - SHOWN —
— RIGHT STRUCTURE SIMILAR EXCEPT AS SHOWN OR NOTED —



— PARTIAL ELEVATION - LEFT STRUCTURE - SHOWN —
— RIGHT STRUCTURE SIMILAR EXCEPT AS SHOWN OR NOTED —

FOR STRINGER SPLICE DETAILS SEE STD. DWG. SD-1-65 SHT. 3

L.S. DENOTES LEFT STRUCTURE
R.S. DENOTES RIGHT STRUCTURE

A-36 STEEL UNLESS OTHERWISE NOTED

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-765

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STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING PLAN

BRIDGE Nº SUM.-271-0802 L & R.
OVER CR Nº 9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 - L.
STA. 421+49.75 To STA. 436+07.25 R.

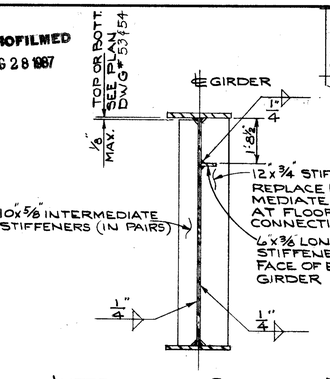
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WP	WP			RBH	12-21-65	

MICROFILMED
AUG 28 1967

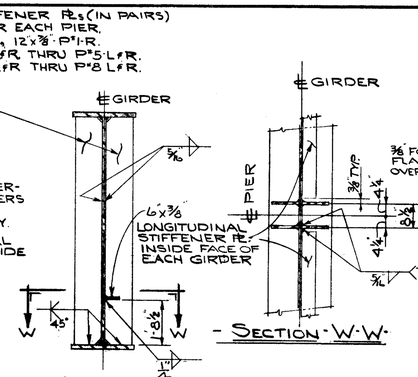
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-7.65

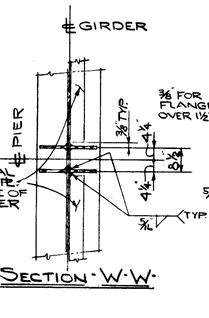
56
72



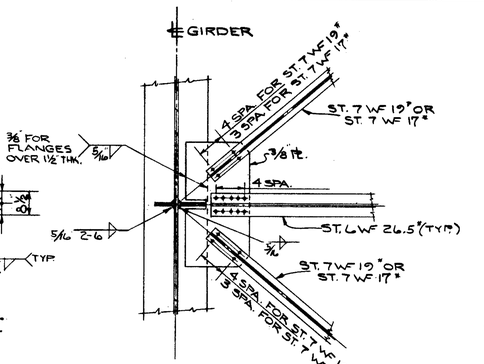
— INTERMEDIATE STIFFENER PL. —
— DETAIL —



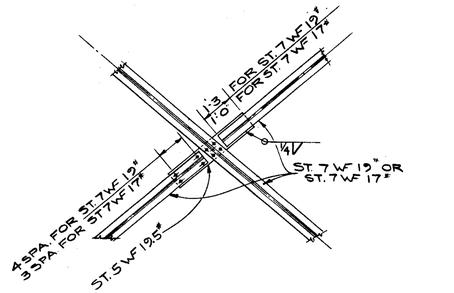
— STIFFENER PLATE DETAIL —
— AT PIERS —



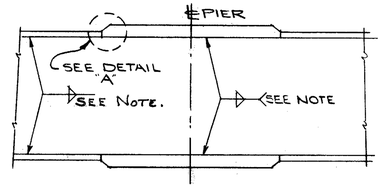
— SECTION W-W —



— LATERAL BRACING & STRUT TO —
— GIRDER CONNECTION DETAIL —
ALL BOLTS TO BE ⅞" ϕ HIGH STRENGTH (A-325)

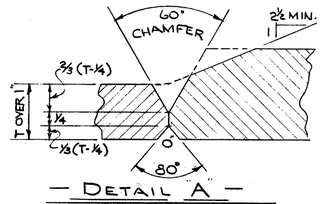


— LATERAL BRACING SPLICE DETAIL —
ALL BOLTS TO BE ⅞" ϕ HIGH STRENGTH (A-325)

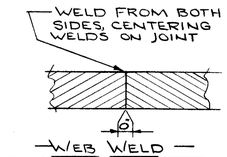


— DETAIL OF FLANGE WELDS —

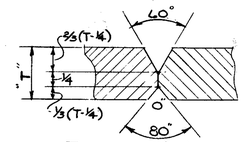
NOTE: ALL FLANGES WITH THICKNESS:
UP TO 1½" INCLUSIVE = 5/16" WELD
OVER 1½" TO 2¼" - - - - = ⅜" WELD
OVER 2¼" - - - - = ½" WELD.



— DETAIL A —



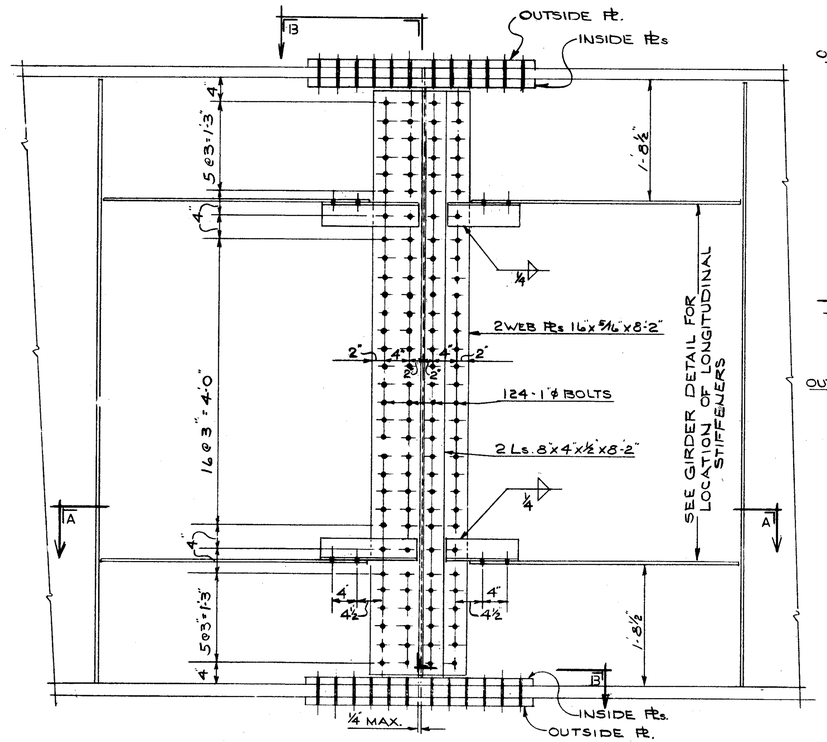
— WEB WELD —



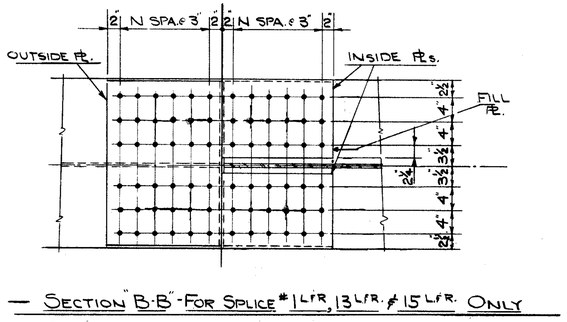
— FLANGE WELD —

DETAIL OF SHOP WELDS FOR FLANGE & WEB PLATES (OPTIONAL)

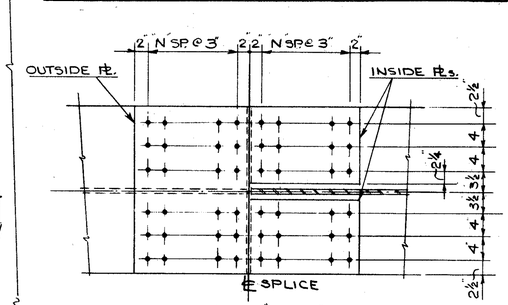
JOINT PREPARATION FOR SUBMERGED ARC WELDMENTS
ALL OF THE ABOVE FULL PENETRATION WELDS SHALL BE BACK-GOUGED AND WELDED AFTER WELDING FAR SIDE.
BUTT WELDS ON GIRDER FLANGE PLATES SHALL BE GROUND FLUSH; FINISH GRINDING BEING PARALLEL TO THE DIRECTION OF STRESS



— TYPICAL DETAIL OF GIRDER SPLICE —
— NOTE: FOR UNEQUAL FLANGE THICKNESS, SEE FILL DETAIL —

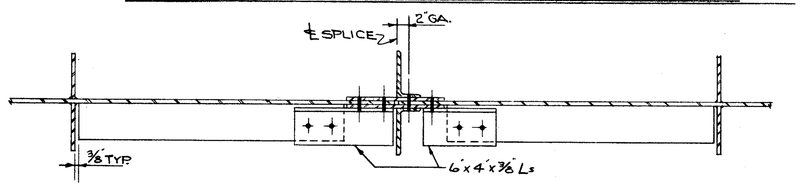


— SECTION "B-B" - FOR SPLICE # 1 L&R, 13 L&R & 15 L&R. ONLY



— SECTION "B-B" —

— TYPICAL FILL PLATE DETAIL —



— SECTION "A-A" —

— FLANGE SPLICES —

SPLICE Nº	OUTSIDE PL. 2-REQ'D.	INSIDE PLs. 4-REQ'D.	N SPACES	Nº BOLTS REQ'D. (EA.)	FILL PLs. 2 REQ'D.
1L	27"x⅞"x3'-2"	12¾"x⅞"x3'-2"	5	144	27"x1½"x1'-7"
1R	27"x¾"x2'-8"	12¾"x⅞"x2'-8"	4	120	27"x1"x1'-4"
2L THRU 7L, 4R THRU 7R	28"x⅞"x3'-2"	12¾"x1"x3'-2"	5	144	—
8L, 2R, 3R & 8R	28"x1"x3'-8"	12¾"x1⅛"x3'-8"	6	168	—
9 L&R THRU 12 L&R. & 14 L&R	28"x1⅛"x4'-2"	12¾"x1¼"x4'-2"	7	192	—
13 L&R & 15 L&R.	27"x1⅛"x5'-2"	12¾"x1¼"x5'-2"	9	240	27"x1½"x2'-7"

ALL BOLTS 1" ϕ HIGH STRENGTH (A-325) UNLESS OTHERWISE NOTED.
ALL STEEL A-36 UNLESS OTHERWISE NOTED.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING DETAILS

BRIDGE Nº SUM. 271-0802 L & R.
OVER C.R. 9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 - L.
STA. 421+49.75 To STA. 436+07.25 - R.

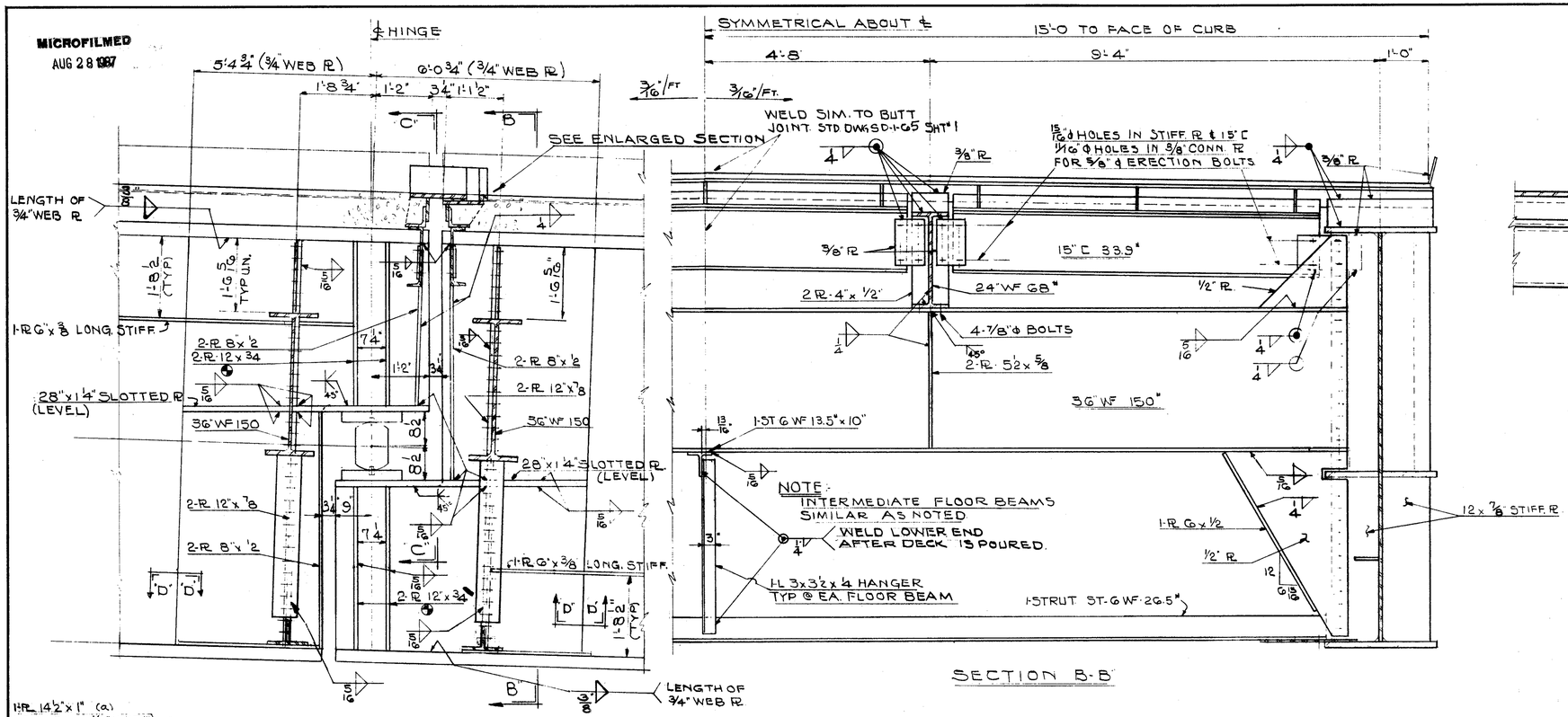
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WP	JAP		ϕ M C	R.B.H.	12-21-65	

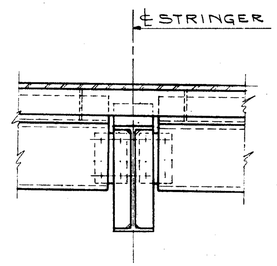
MICROFILMED
AUG 28 1987

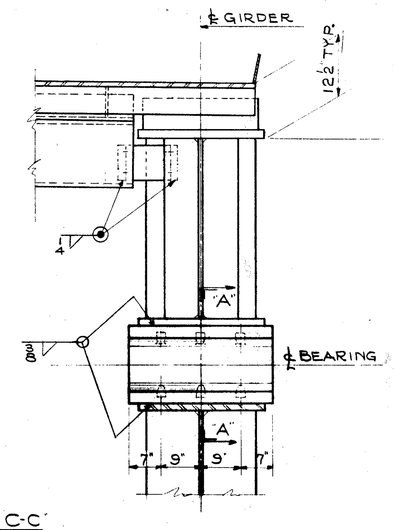
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-7.65

57/72

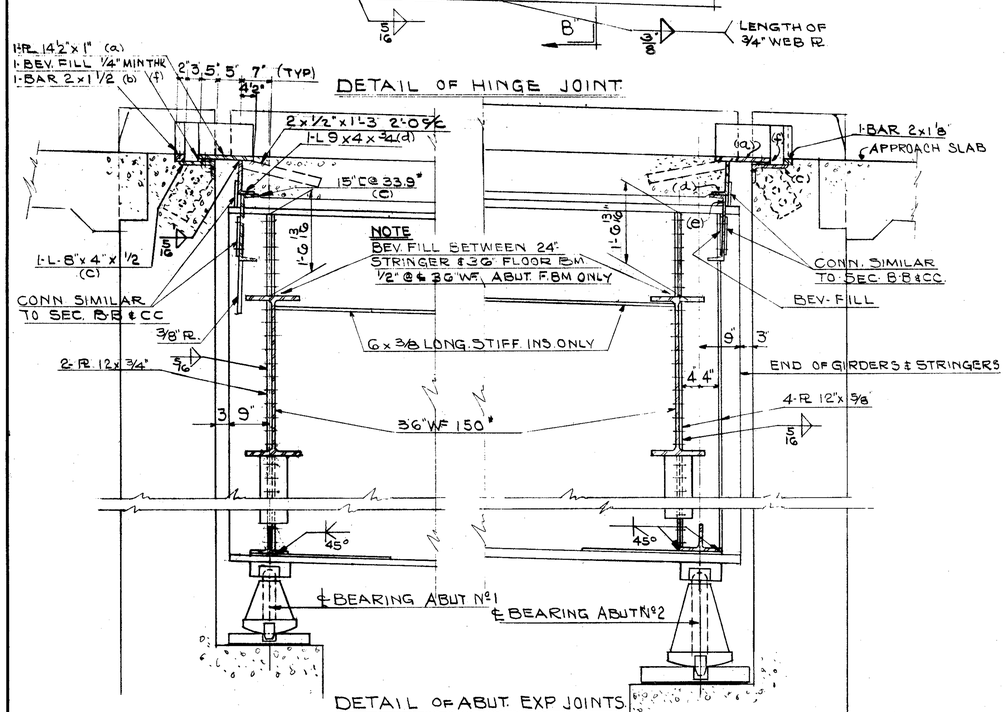


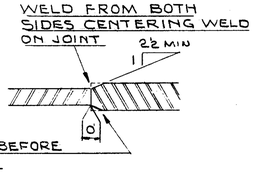




SECTION C-C

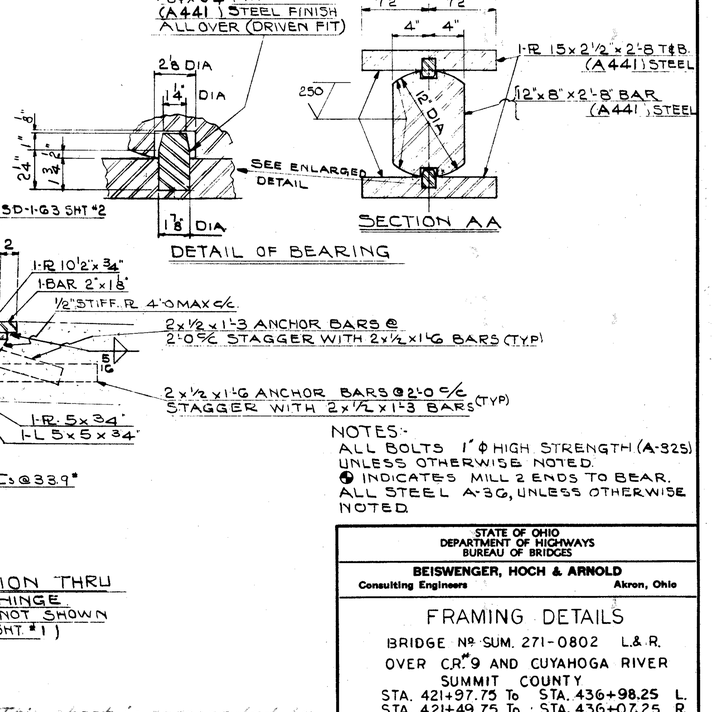
DETAILS NOT SHOWN SAME AS SECTION B-B





SECTION D-D

THE ABOVE FULL PENETRATION WELD SHALL BE BACK-GOUGED AND WELDED AFTER WELDING FAR SIDE.



NOTES:-
ALL BOLTS 1" ϕ HIGH STRENGTH (A-325) UNLESS OTHERWISE NOTED.
● INDICATES MILL 2 ENDS TO BEAR.
ALL STEEL A-36, UNLESS OTHERWISE NOTED.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING DETAILS

BRIDGE Nº SUM. 271-0802 L & R.
OVER C.R. "9" AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 L.
STA. 421+49.75 To STA. 436+07.25 R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WF	DW		WF	RDH	12-21-65	

This sheet is superseded by Sheet no. 5 T.N. 6-17-66

MICROFILMED
AUG 28 1987

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-8.01

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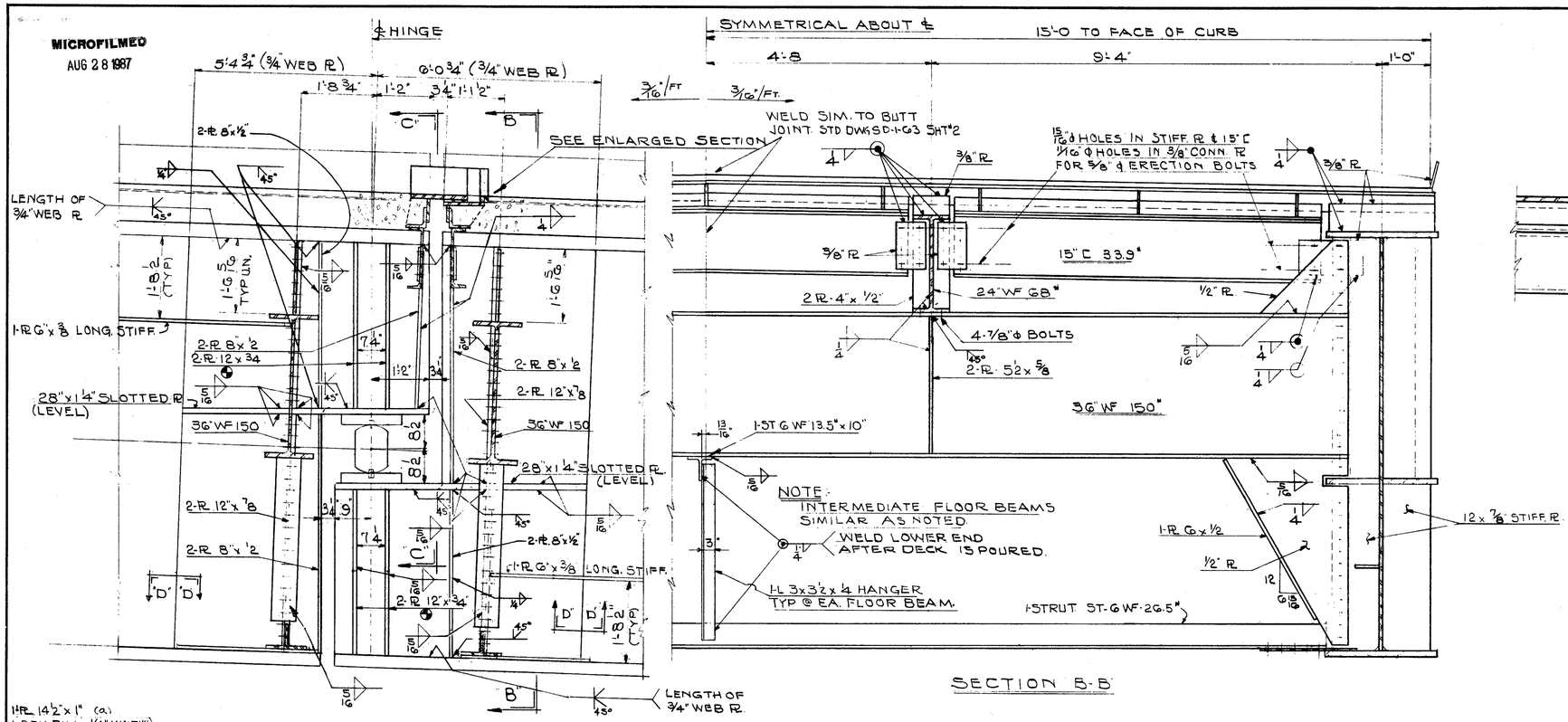
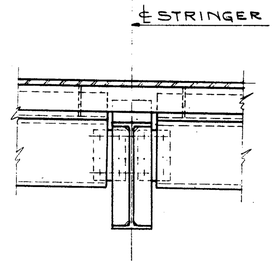
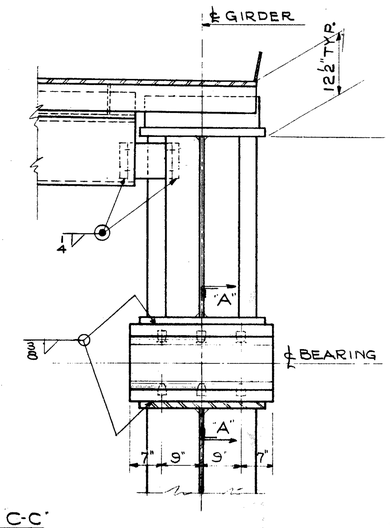
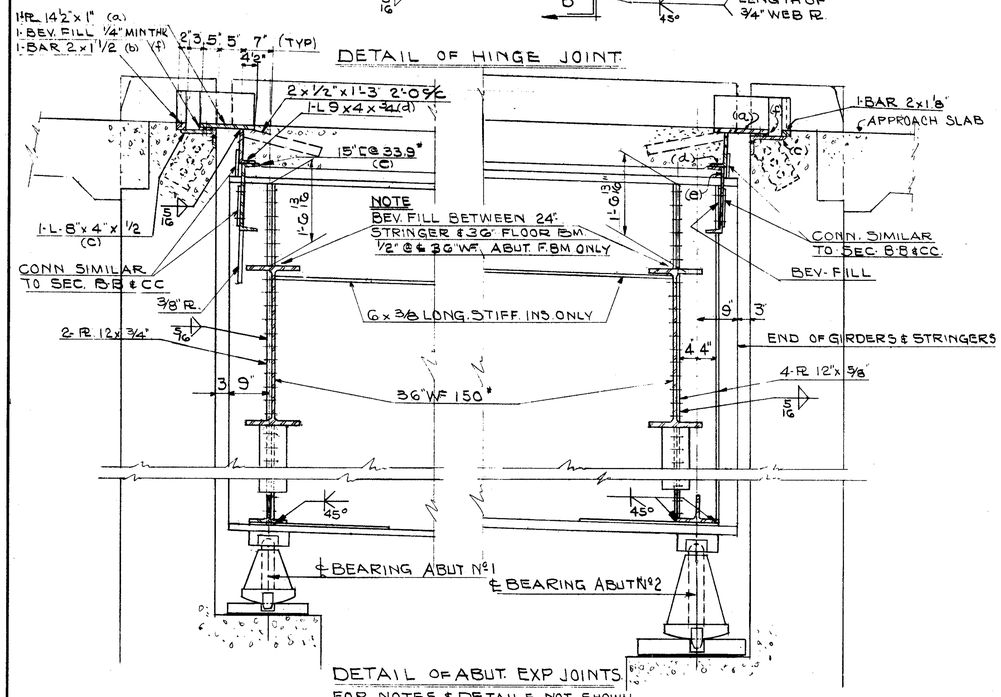
72



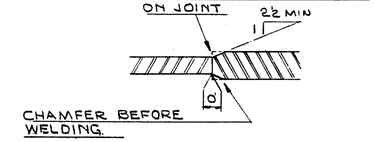




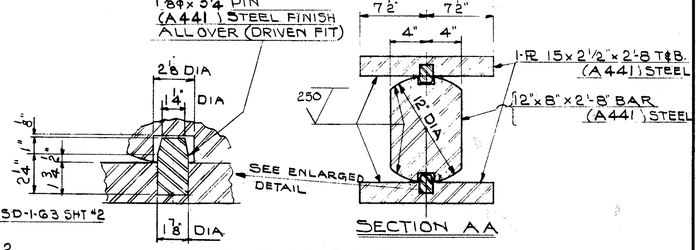
SECTION C-C
DETAILS NOT SHOWN SAME AS SECTION B-B



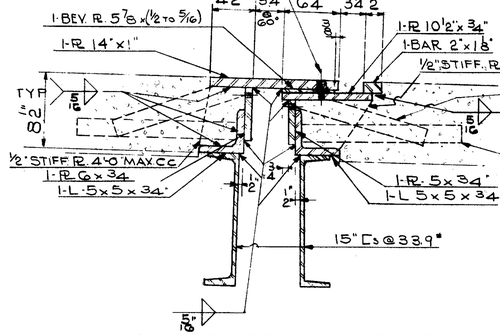
DETAIL OF ABUT. EXP JOINTS
FOR NOTES & DETAILS NOT SHOWN SEE STD. DWG. SD-1-G5 SHT.#1.



SECTION D-D
THE ABOVE FULL PENETRATION WELD SHALL BE BACK-GOUGED AND WELDED AFTER WELDING FAR SIDE.



DETAIL OF BEARING.



ENLARGED SECTION THRU EXPANSION JOINT @ HINGE
(FOR NOTES & DETAILS NOT SHOWN SEE STD. DWG. SD-1-G5 SHT. # 1.)

NOTES:
ALL BOLTS 1" ϕ HIGH STRENGTH (A-325) UNLESS OTHERWISE NOTED.
● INDICATES MILL 2 ENDS TO BEAR.
ALL STEEL A-36, UNLESS OTHERWISE NOTED.

This sheet supersedes sheet no. 57 6-17-66

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

FRAMING DETAILS

BRIDGE Nº SUM. 271-0802 L.& R.
OVER CR. "9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 L.
STA. 421+49.75 To STA. 436+07.25 R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WP	SW		RDH	RDH	12-21-65	

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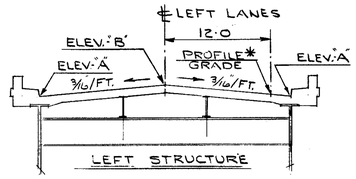
AUG 28 1987

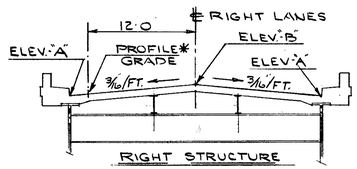
— ELEVATIONS —

STATION	LEFT STRUCTURE			RIGHT STRUCTURE		
	PROFILE GRADE *	ELEV. "A"	ELEV. "B"	PROFILE GRADE *	ELEV. "A"	ELEV. "B"
421+50	—	—	—	—	—	—
+75	—	—	—	781.69	781.66	781.90
422+00	791.02	790.97	791.21	780.94	780.91	781.15
+25	790.27	790.25	790.49	780.19	780.15	780.38
+50	789.52	789.51	789.74	779.44	779.39	779.62
+75	788.77	788.74	788.98	778.69	778.67	778.91
423+00	788.02	787.97	788.21	777.94	777.96	778.20
+25	787.27	787.23	787.46	777.19	777.24	777.47
+50	786.52	786.50	786.74	776.44	776.49	776.73
+75	785.77	785.78	786.02	775.69	775.71	775.95
424+00	785.02	785.05	785.29	774.94	774.91	775.15
+25	784.27	784.29	784.53	774.19	774.14	774.38
+50	783.52	783.50	783.74	773.44	773.41	773.64
+75	782.77	782.73	782.96	772.69	772.71	772.94
425+00	782.02	781.97	782.21	771.94	771.97	772.20
+25	781.27	781.24	781.48	771.19	771.20	771.43
+50	780.52	780.52	780.75	770.44	770.42	770.66
+75	779.77	779.79	780.02	769.69	769.65	769.88
426+00	779.02	779.02	779.26	768.94	768.90	769.13
+25	778.27	778.24	778.48	768.19	768.18	768.41
+50	777.52	777.48	777.71	767.44	767.42	767.70

STATION	LEFT STRUCTURE			RIGHT STRUCTURE		
	PROFILE GRADE *	ELEV. "A"	ELEV. "B"	PROFILE GRADE *	ELEV. "A"	ELEV. "B"
426+75	776.77	776.73	776.96	766.69	766.72	766.95
427+00	776.02	775.99	776.23	765.94	765.95	766.18
+25	775.27	775.27	775.50	765.19	765.16	765.39
+50	774.52	774.53	774.76	764.44	764.39	764.63
+75	773.77	773.76	773.99	763.69	763.65	763.89
428+00	773.02	772.98	773.22	762.94	762.94	763.18
+25	772.27	772.22	772.46	762.19	762.22	762.45
+50	771.52	771.49	771.72	761.44	761.47	761.70
+75	770.77	770.77	771.00	760.69	760.68	760.92
429+00	770.02	770.05	770.28	759.94	759.88	760.12
+25	769.27	769.30	769.54	759.19	759.14	759.38
+50	768.52	768.51	768.75	758.44	758.43	758.67
+75	767.77	767.71	767.95	757.69	757.72	757.96
430+00	767.02	766.97	767.21	756.94	757.00	757.23
+25	766.27	766.26	766.49	756.19	756.24	756.47
+50	765.52	765.54	765.77	755.44	755.45	755.69
+75	764.77	764.81	765.04	754.69	754.67	754.90
431+00	764.02	764.05	764.28	753.94	753.89	754.13
+25	763.27	763.26	763.50	753.19	753.14	753.37
+50	762.52	762.48	762.72	752.44	752.41	752.65
+75	761.77	761.72	761.96	751.69	751.67	751.90

STATION	LEFT STRUCTURE			RIGHT STRUCTURE		
	PROFILE GRADE *	ELEV. "A"	ELEV. "B"	PROFILE GRADE *	ELEV. "A"	ELEV. "B"
432+00	761.02	760.99	761.23	750.94	750.91	751.15
+25	760.27	760.28	760.51	750.19	750.15	750.38
+50	759.52	759.55	759.79	749.44	749.38	749.62
+75	758.77	758.80	759.03	748.69	748.65	748.89
433+00	758.02	758.03	758.26	747.94	747.93	748.17
+25	757.27	757.24	757.48	747.19	747.21	747.45
+50	756.52	756.47	756.71	746.44	746.49	746.72
+75	755.77	755.73	755.96	745.69	745.73	745.96
434+00	755.02	755.00	755.24	744.94	744.95	745.18
+25	754.27	754.28	754.52	744.19	744.17	744.40
+50	753.52	753.55	753.78	743.44	743.40	743.63
+75	752.77	752.79	753.02	742.69	742.64	742.88
435+00	752.02	752.01	752.24	741.94	741.93	742.17
+25	751.27	751.23	751.47	741.19	741.21	741.45
+50	750.52	750.47	750.71	740.44	740.47	740.70
+75	749.77	749.74	749.97	739.69	739.70	739.93
436+00	749.02	749.03	749.26	738.94	738.90	739.14
+25	748.27	748.30	748.53	—	—	—
+50	747.52	747.55	747.78	—	—	—
+75	746.77	746.77	747.00	—	—	—





ELEVATIONS "A" & "B" ARE ELEVATIONS BEFORE DECK CONCRETE HAS BEEN PLACED.

* PROFILE GRADE ELEVATIONS ARE ACTUAL FINISHED PROFILE GRADE ELEVATIONS.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-765

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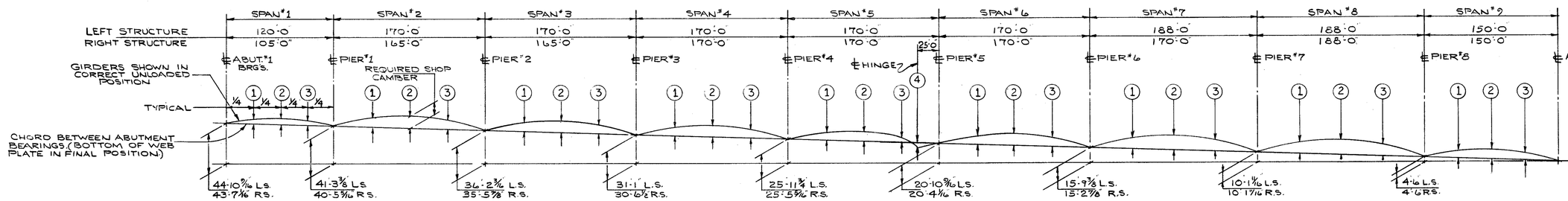

— DEFLECTION, CAMBER & LAYOUT DIAGRAM —

— L.S.: LEFT STRUCTURE & R.S.: RIGHT STRUCTURE —

— DEFLECTION & CAMBER —

| STRUCTURE | LEFT STRUCTURE | | |

MICROFILMED
AUG 26 1997

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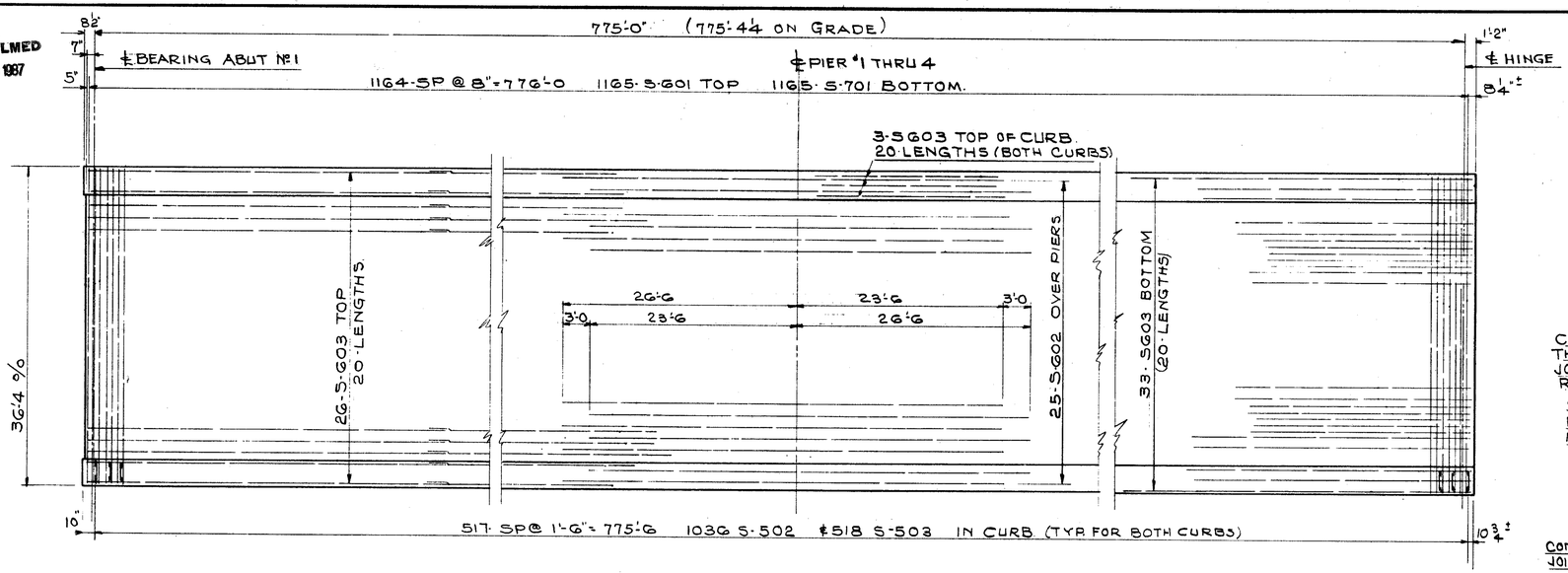
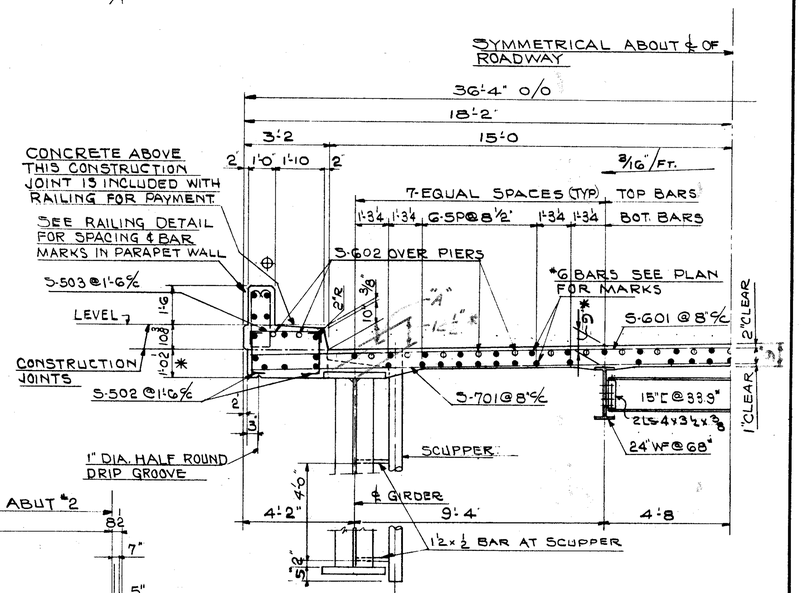
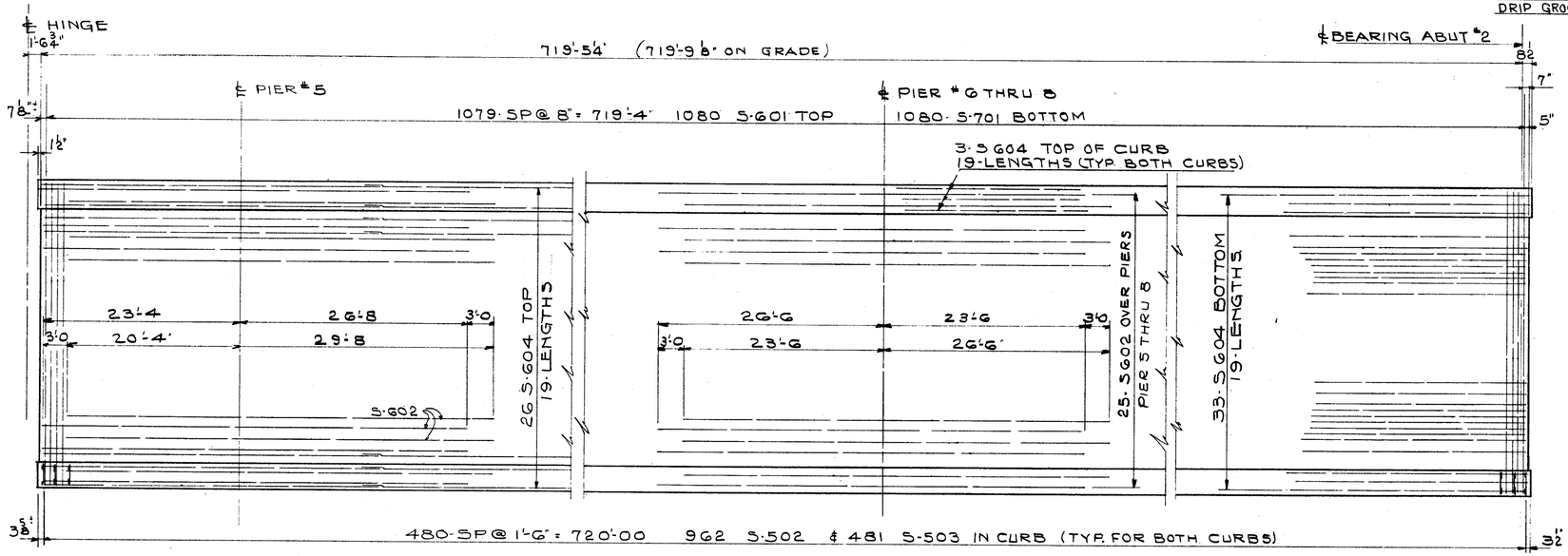


PARTIAL SLAB REINFORCING PLAN SPAN-1 THRU 5 LEFT STRUCTURE



HALF TRANSVERSE SECTION

* SEE SHEET "3B FOR" SLAB DEPTH OVER BEAMS OR GIRDERS" NOTE.



PARTIAL SLAB REINFORCING PLAN - SPAN 6 THRU 9 LEFT STRUCTURE

TABLE OF SLAB THICKNESS

FILLING THICKNESS	SLAB THICKNESS "A"
1"	11"
1½"	11½"
2"	12"
2½"	12½"
3"	13"
3½"	13½"
4"	14"
4½"	14½"
5"	15"

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
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SLAB DETAILS

BRIDGE № SUM. 271-0802 L
OVER C.R. #9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25-L.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WP	aw			RHA	12-21-65	

MICROFILMED
AUG 28 1967

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-765

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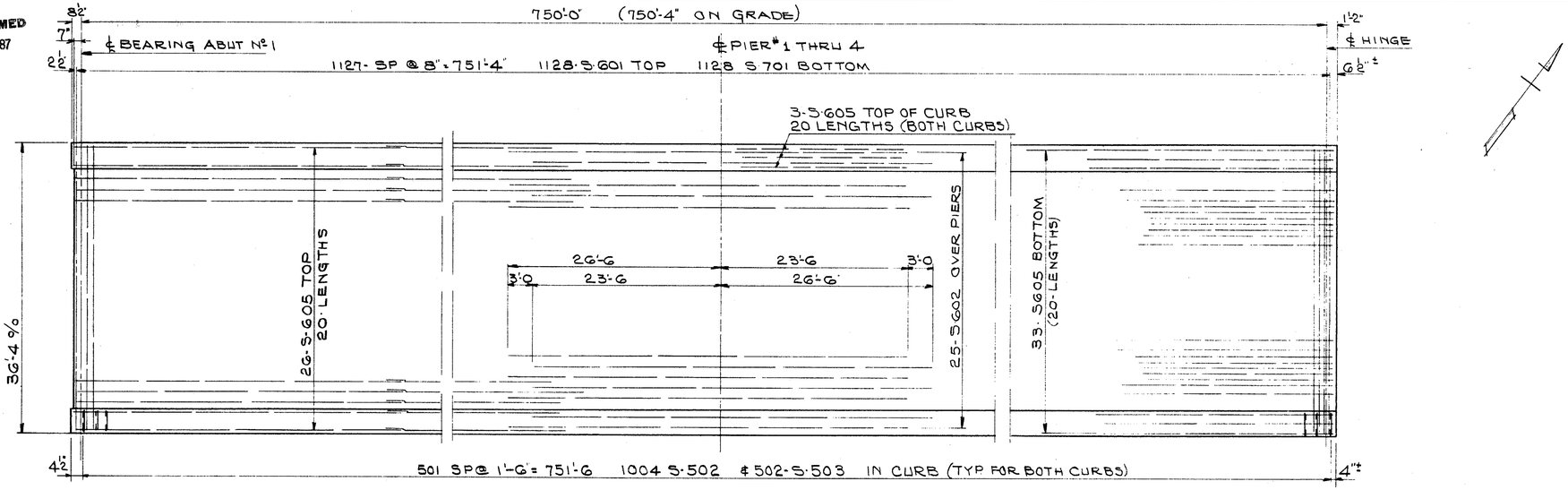
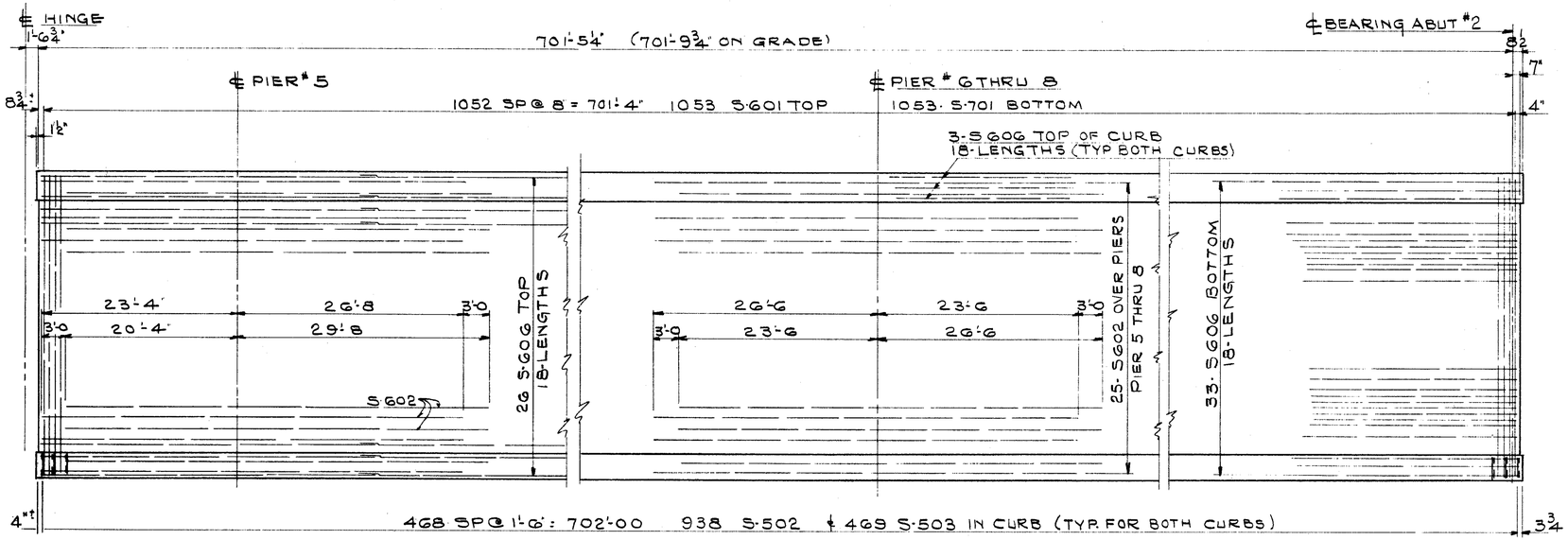


PARTIAL SLAB REINFORCING PLAN SPAN-1 THRU 5 RIGHT STRUCTURE



PARTIAL SLAB REINFORCING PLAN - SPAN 6 THRU 9 RIGHT STRUCTURE

NOTE
FOR TRANSVERSE SECTION
SEE SLAB DETAIL FOR LEFT
STRUCTURE

STATE OF OHIO
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SLAB DETAILS

BRIDGE Nº SUM. 271-0802- R.
OVER C.R.#9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA.- 421+49.75 To STA-436+07.25 - R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
WP				RBH	12-21-65	

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2	OHIO		

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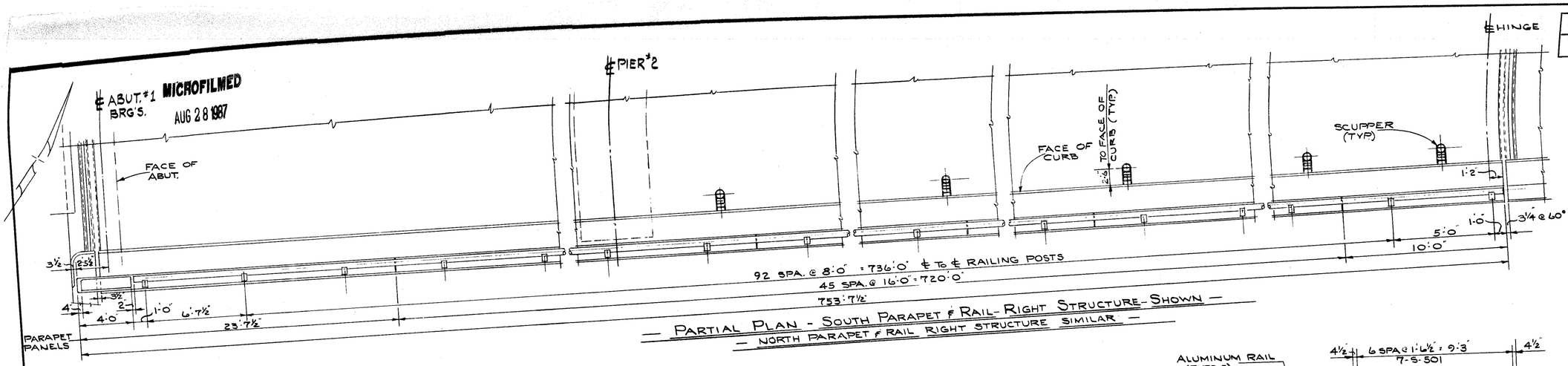
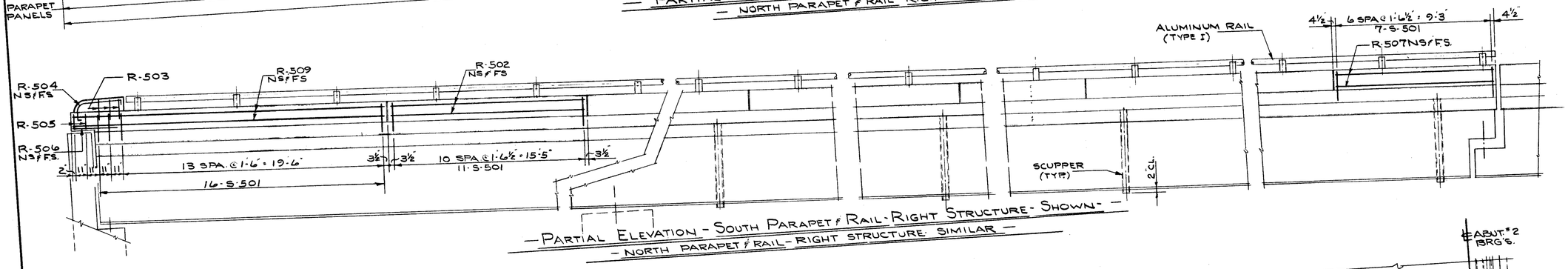
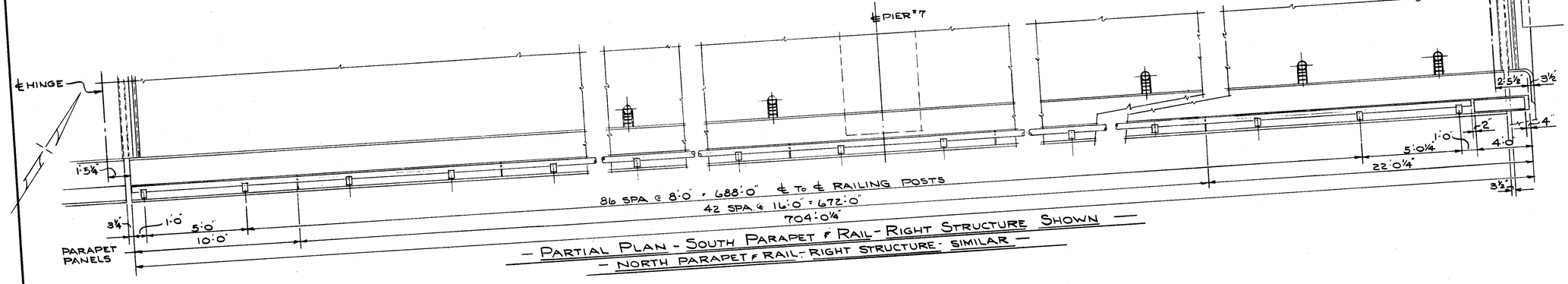
72



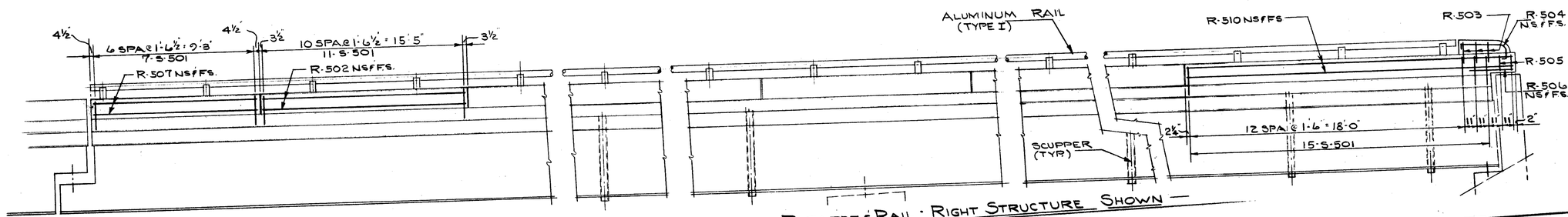
— PARTIAL PLAN - SOUTH PARAPET & RAIL - RIGHT STRUCTURE SHOWN —
— NORTH PARAPET & RAIL RIGHT STRUCTURE SIMILAR —



— PARTIAL ELEVATION - SOUTH PARAPET & RAIL - RIGHT STRUCTURE SHOWN —
— NORTH PARAPET & RAIL - RIGHT STRUCTURE SIMILAR —



— PARTIAL PLAN - SOUTH PARAPET & RAIL - RIGHT STRUCTURE SHOWN —
— NORTH PARAPET & RAIL - RIGHT STRUCTURE SIMILAR —



— PARTIAL ELEVATION - SOUTH PARAPET & RAIL - RIGHT STRUCTURE SHOWN —
— NORTH PARAPET & RAIL - RIGHT STRUCTURE SIMILAR —

NOTE:
FOR LOCATION OF SCUPPERS SEE GENERAL PLAN & ELEVATION

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

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RAILING & DRAINAGE DETA

BRIDGE № SUM-271-0802 - R.
OVER CR.9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA.- 421+49.75 To STA.- 436+07.2

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
WP	JAP			RDH	12-21-65

MICROFILMED
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FED. RD.	STATE	PROJECT	
2	OHIO		

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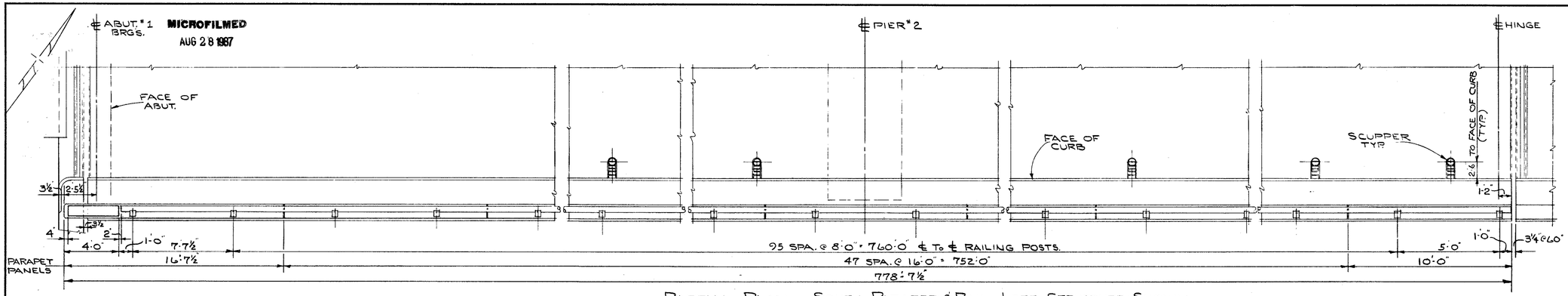
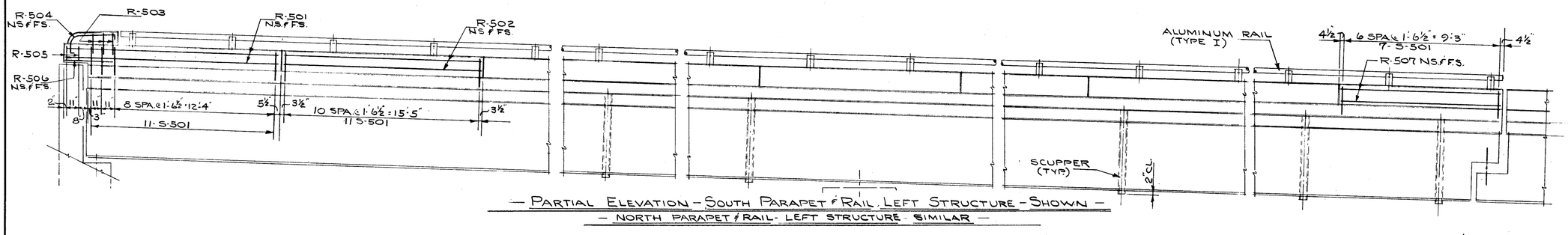
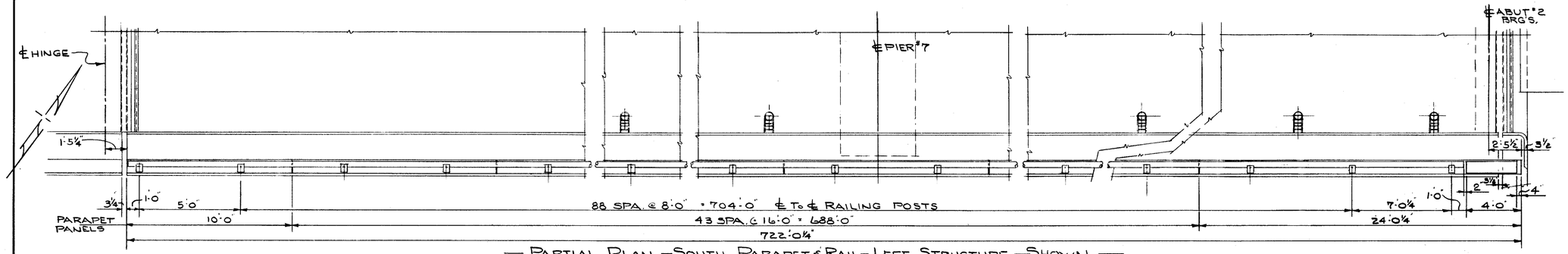
SUM-271-765



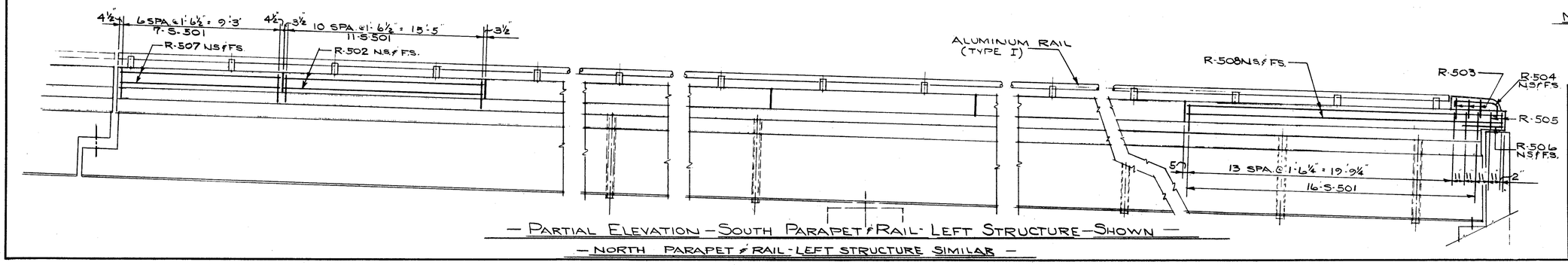
— PARTIAL PLAN – SOUTH PARAPET & RAIL, LEFT STRUCTURE SHOWN —
— NORTH PARAPET & RAIL LEFT STRUCTURE SIMILAR —



— PARTIAL ELEVATION – SOUTH PARAPET & RAIL, LEFT STRUCTURE – SHOWN —
— NORTH PARAPET & RAIL - LEFT STRUCTURE SIMILAR —



— PARTIAL PLAN – SOUTH PARAPET & RAIL, LEFT STRUCTURE – SHOWN —
— NORTH PARAPET & RAIL, LEFT STRUCTURE SIMILAR —



— PARTIAL ELEVATION – SOUTH PARAPET & RAIL - LEFT STRUCTURE – SHOWN —
— NORTH PARAPET & RAIL - LEFT STRUCTURE SIMILAR —

NOTE:
FOR LOCATION OF SCUPPERS SEE GENERAL PLAN & ELEVATION

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

RAILING & DRAINAGE DETAILS

BRIDGE Nº SUM-271-0802 - L.
OVER C.R.º 9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 L.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
W.P.	JW		[illegible]	RBH	12-21-65	

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AUG 28 1987

SUM-271-765

FED. RD.	STATE	PROJECT	
2	OHIO		

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MARK Nº	LEFT STRUCTURE Nº REQUIRED									WEIGHT	RIGHT STRUCTURE Nº REQUIRED									WEIGHT	LENGTH	TYPE	DIMENSIONS		
	P.1L	P.2L	P.3L	P.4L	P.5L	P.6L	P.7L	P.8L	TOTAL		P.1R	P.2R	P.3R	P.4R	P.5R	P.6R	P.7R	P.8R	TOTAL				A	B	C
P-501	34	64	64	64	64	64	64	34	452	4597	34	34	64	64	64	64	64	34	422	4291	9'-9"	3	3'-8"	3'-2"	
P-502	108							110	218	3449	74	141						140	355	5616	15'-2"	4	3'-8"	3'-8"	5"
P-503		8	20	20	20	20	12		100	3616			8		20	20	20		68	2459	34'-8"	4	7'-5"	9'-8"	5"
P-504		116	166	166	168	182	130		928	18,713			110	148	148	144	158		708	14,277	19'-4"	4	5'-2"	4'-3"	5"
P-505		10	10	10	10	10	10		60	1012			10	10	10	10	10		50	843	16'-2"	5	2'-4"		
P-506		14	14	14	14	14	14		84	1854			14	14	14	14	14		70	1545	21'-2"	4	5'-2"	5'-2"	5"
P-507									0	—				30					30	391	12'-6"	6	2'-3"	8'-0"	2'-7"
P-508									0	—				46					46	848	17'-8"	3	4'-11"	6'-6"	
P-509									0	—				32					32	462	13'-10"	ST.			
P-510									0	—				20					20	744	35'-8"	4	7'-11"	9'-8"	5"
P-601	2							2	4	190	2	2						2	6	285	31'-8"	ST.			
P-602		4	4	4	4	4	4		24	1178			4	4	4	4	4		20	981	32'-8"	ST.			
P-701		40	44						84	2146			40		44	44	44		172	4395	12'-6"	ST.			
P-702				44	44	44			132	3912				44					44	1304	14'-6"	ST.			
P-703							64		64	2115									0	—	16'-2"	2	10	14'-6"	
P-801	9							9	18	1522	8	10						10	28	2367	31'-8"	ST.			
P-802	16							16	32	1687		18						18	36	1898	19'-9"	1	2'-10"	17'-1"	
P-803		13	12	12	12	12	12		73	6367			13	12	12	12	12		61	5320	32'-8"	ST.			
P-804									0	—				22					22	1057	18'-0"	ST.			
P-901									0	—	92								92	5318	17'-0"	2	1'-3"	14'-6"	
P-902	56								56	3094									0	—	16'-3"	2	1'-3"	13'-9"	
P-903									0	—	10								10	472	19'-9"	1	2'-10"	17'-2"	
P-904		20	20	20	20	20	20		120	8398			20	20	20	20	20		100	6998	20'-7"	1	2'-10"	18'-0"	
P-905		20							20	1383			20						20	1383	20'-4"	1	2'-10"	17'-9"	
P-1001	58								58	5075									0	—	20'-4"	2	1'-5"	17'-6"	
P-1002								96	96	7160		80						96	176	13127	17'-4"	2	1'-5"	14'-6"	
P-1003		48							48	4028			48						48	4028	19'-6"	ST.			
P-1004			14	14	14	14	14		70	6275				14	14	14	14		56	5020	20'-10"	1	3'-2"	17'-11"	

MARK Nº	LEFT STRUCTURE Nº REQUIRED									WEIGHT	RIGHT STRUCTURE Nº REQUIRED									WEIGHT	LENGTH	TYPE	DIMENSIONS		
	P.1L	P.2L	P.3L	P.4L	P.5L	P.6L	P.7L	P.8L	TOTAL		P.1R	P.2R	P.3R	P.4R	P.5R	P.6R	P.7R	P.8R	TOTAL				A	B	C
P-1101	48	112	112	112	128	112	112		736	27373	32		112	120	112	112	112		600	22315	7'-0"	1	1'-0"	6'-8"	
P-1102									0	——	32								32	4959	29'-2"	ST.			
P-1103	48								48	10,286									0	——	40'-4"	ST.			
P-1104			50	54	54	54			212	29,217				54	50	50	54		208	23,760	21'-6"	ST.			
P-1105							52		52	6953									0	—	25'-2"	2	1'-7"	22'-0"	
P-1106		56							56	2430			56						56	2430	8'-2"	1	4'-7"	3'-10"	
P-1107			56	56	56	56			224	16860				54	56	56	56		222	16709	14'-2"	1	4'-7"	9'-10"	
P-1108							56		56	3025									0	—	10'-2"	1	4'-7"	5'-10"	
P-1109		56	56	56	72	56	56		352	56,105			56	56	56	56	56		280	44,629	30'-0"	ST.			
P-1110		56							56	4959									0	—	16'-8"	ST.			
P-1111									0	—			56						56	4289	14'-5"	ST.			
P-1112			56	56					112	19786									0	—	33'-3"	ST.			
P-1113									0	—				56	56				112	16215	27'-3"	ST.			
P-1114									0	—						56			56	7736	26'-0"	ST.			
P-1115						56			56	11430									0	—	38'-5"	ST.			
P-1116									0	—							56		56	9149	30'-9"	ST.			
P-1117							56		56	6422									0	—	21'-7"	ST.			
P-1118		36	36	36	48	36	36		228	10297			36	36	36	36	36		180	8129	8'-6"	ST.			
P-1119		36	36	36	48	36	36		228	50,272									0	—	41'-6"	ST.			
P-1120									0	—			36	36	36	36	36		180	37775	39'-6"	ST.			
P-1121					72				72	13038									0	—	34'-1"	ST.			
P-1122									0	—				10					10	1417	26'-8"	1	5'-3"	21'-8"	
P-1401								44	44	2721									0	—	8'-1"	1	1'-6"	7'-0"	
P-1402								20	20	3060									0	—	20'-0"	ST.			
P-1403								24	24	7619									0	—	41'-6"	ST.			
P-1801									0	—			36						36	72	9874	10'-1"	1	2'-0"	8'-6"
P-1802									0	—			12						12	24	6528	20'-0"	ST.		
P-1803									0	—									24	24	16701	51'-2"	ST.		
P-1804									0	—			12							12	8840	54'-2"	ST.		
P-1805									0	—			12							12	8024	49'-2"	ST.		

TOTAL WT. LEFT STRUCT. (INCL. SPIRALS) = 389,420 LBS. | TOTAL WT. RIGHT STRUCT (INCL. SPIRALS) = 354,658 LBS.

SPIRAL REINFORCING

LEFT STRUCTURE MARK Nº	Nº REQ'D.	LENGTH	CORE DIA.	PITCH	Nº OF TURNS	WEIGHT
SP-501	12	37'-0"	4'-8"	3½"	130	23,588
SPACERS = 48						1208

RIGHT STRUCTURE MARK Nº	Nº REQ'D.	LENGTH	CORE DIA.	PITCH	Nº OF TURNS	WEIGHT
SP-502	10	35'-0"	4'-8"	3½"	123	18,598
SPACERS = 40						952

TYPE 1 — TYPE 2 — TYPE 3 — TYPE 4 — TYPE 5 — TYPE 6

REINFORCING NOTES:

THE LENGTH SHOWN IN THE STEEL SCHEDULE FOR THE SPIRAL BARS IS THE DISTANCE AS SHOWN ON THE PIER DETAILS. THE NUMBER OF TURNS SHOWN IN THE STEEL SCHEDULE FOR SPIRAL BARS IS THE LENGTH DIVIDED BY THE PITCH PLUS THREE 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 509. ONE AND ONE HALF CLOSED COILS SHALL BE PROVIDED AT THE ENDS OF EACH SPIRAL UNIT. FOUR (4) STEEL CHANNEL, TEE OR ANGLE SPACERS SHALL BE PROVIDED FOR EACH SPIRAL UNIT. THEY SHALL BE EQUALLY SPACED ALONG THE PERIPHERY OF EACH COIL. THE NUMBER OF POUNDS OF THESE SPACERS BASED ON 0.68 LBS. PER LINEAL FT. WILL BE PAID FOR AS REINFORCING STEEL AND IS INCLUDED IN THE TABULATED QUANTITY OF SPIRAL BARS.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

PIER REINFORCING SCHEDULE

BRIDGE Nº SUM-271-0802 - L & R.
OVER CR. Nº 9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25 - L.
STA. 421+49.75 To STA 436+07.25 - R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
K.S.J.	J.N.P.				12-21-65	

MICROFILMED
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MARK	NUMBER REQUIRED				LENGTH	TYPE	DIMENSIONS				SERIES INCRE-MENTS	WEIGHT	
	LEFT STRUCT.		RIGHT STRUCT.				A	B	C	D		LEFT STRUCT.	RIGHT STRUCT.
	ABUT.#1	ABUT.#2	ABUT.#1	ABUT.#2								ABUT.#1 & #2	ABUT. #1 & #2
ABUTMENTS													
A-501	14	14	14	14	10'-0"	ST.						292	292
A-502	44	44	44	44	9'-2"	3	5'-5"	2'-0"				841	841
A-503	44	44	44	44	6'-11"	1	6"	6'-6"				635	635
A-504	44	28	44	28	7'-2"	3	3'-5"	2'-0"				538	538
A-505	20	20	20	20	37'-8"	ST.						1,571	1,571
A-506	1	1	1	1	27'-3"	ST.						57	57
A-507	2	2	2	2	6'-8"	ST.						28	28
A-508	4	4	4	4	3'-3"	ST.						27	27
A-509	4	4	4	4	7'-9"	ST.						65	65
A-510	12	—	12	—	20'-4"	ST.						254	254
SERIES OF A-511	4 SETS OF 4 = 16 BARS	—	4 SETS OF 4 = 16 BARS	—	5'-11" To 17'-2"	ST.					3'-9"	193	193
A-512	4	—	4	—	22'-10"	ST.						95	95
A-513	—	12	—	12	21'-4"	ST.						267	267
SERIES OF A-514	—	4 SETS OF 4 = 16 BARS	—	4 SETS OF 4 = 16 BARS	6'-11" TO 18'-2"	ST.					3'-9"	209	209
A-515	—	4	—	4	24'-0"	ST.						100	100
A-516	—	16	—	16	7'-6"	3	3'-9"	2'-0"				125	125
A-601	44	44	44	44	13'-8"	4	6'-6"	5'-5"	2'-0"			1,806	1,806
A-602	24	—	24	—	30'-0"	7	12'-0"	1'-5"	13'-6"	11"		1,081	1,081
A-603	6	—	6	—	27'-6"	3	1'-5"	13'-2"				248	248
A-604	8	—	8	—	28'-10"	3	1'-5"	13'-10"				346	346
A-605	14	14	14	14	5'-5"	1	6"	5'-0"				228	228
SERIES OF A-606	2 SETS OF 11 = 22 BARS	2 SETS OF 11 = 22 BARS	2 SETS OF 11 = 22 BARS	2 SETS OF 11 = 22 BARS	11'-2 To 18'-8	3	1'-5"	5'-0 TO 8'-9'8 4½ INC.			9"	986	986
A-607	28	28	28	28	9'-2"	3	5'-5"	2'-0"				771	771
A-608	OPEN												
SERIES OF A-609	2 SETS OF 7 = 14 BARS	—	2 SETS OF 7 = 14 BARS	—	9'-6" TO 15'-0"	ST.					11"	258	258
A-610	—	24	—	24	31'-0"	7	12'-6"	1'-5"	14'-0"	11"		1,117	1,117
A-611	—	6	—	6	28'-6"	3	1'-5"	13'-8"				257	257
A-612	—	8	—	8	29'-10"	3	1'-5"	14'-4"				358	358
SERIES OF A-613	—	2 SETS OF 7 = 14 BARS	—	2 SETS OF 7 = 14 BARS	9'-6" TO 15'-6"	ST.					1'-0"	263	263
A-801	14	—	14	—	32'-9"	ST.						1,224	1,224
A-802	28	28	28	28	12'-4"	4	5'-4"	5'-5"	2'-0"			1,844	1,844
A-803	14	14	14	14	8'-3"	ST.						617	617
SERIES OF A-804	2 SETS OF 7 = 14 BARS	—	2 SETS OF 7 = 14 BARS	—	9'-9" TO 15'-3"	ST.					11"	467	467
A-805	—	14	—	14	33'-9"	ST.						1,262	1,262
SERIES OF A-806	—	2 SETS OF 7 = 14 BARS	—	2 SETS OF 7 = 14 BARS	9'-9" TO 15'-9"	ST.					1'-0"	476	476
TOTAL ABUT'S.#1-L & #2-L = 18,248 LBS.													
TOTAL ABUT'S.#1-R & #2-R = 18,248 LBS.													

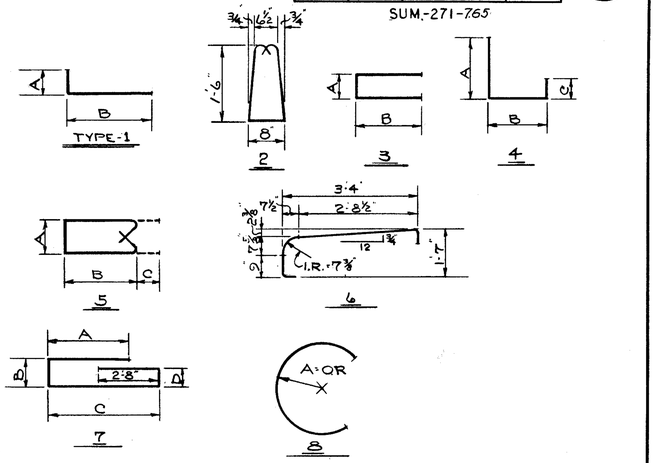
MARK	Nº REQUIRED		LENGTH	TYPE	DIMENSIONS				WEIGHT	
	LEFT STRUCT.	RIGHT STRUCT.			A	B	C	D	LEFT STRUCT.	RIGHT STRUCT.
SLAB										
S-501	2062	2004	5'-7"	5	8"	2'-2"	5"		12,008	11,670
S-502	3996	3884	2'-4"	3	1'-4"	7½"			9,725	9,452
S-503	1998	1942	3'-6"	3	2'-6"	7½"			7,294	7,089
S-601	2245	2181	35'-8"	ST.					120,268	116,839
S-602	200	200	50'-0"	ST.					15,020	15,020
S-603	1300	—	40'-8"	ST.					79,406	
S-604	1235	—	39'-9"	ST.					73,735	
S-605	—	1300	39'-5"	ST.						76,965
S-606	—	1170	40'-10"	ST.						71,758
S-701	2245	2181	35'-8"	ST.					163,667	159,001
SLAB TOTAL, LEFT STRUCTURE: 481,123 LBS.										
SLAB TOTAL RIGHT STRUCTURE = 467,794 LBS.										

MARK	Nº REQUIRED		LENGTH	TYPE	DIMENSIONS		
	LEFT STRUCT	RIGHT STRUCT			A	B	C
⊛RAILING							
R-501	8	—	16'-3"	ST.			
R-502	720	696	15'-8"	ST.			
R-503	12	12	4'-2"	2	SEE DIAGRAM		
R-504	8	8	5'-4"	6	SEE DIAGRAM		
R-505	8	8	3'-5"	5	8"	1'-1"	5"
R-506	8	8	3'-0"	ST.			
R-507	16	16	9'-8"	ST.			
R-508	8	—	23'-8"	ST.			
R-509	—	8	23'-3"	ST.			
R-510	—	8	21'-8"	ST.			
— REPLACEMENT BARS —							
RE-501	2	1	5'-7"	8	2'-4"		
RE-502	4	4	5'-7"	ST.			
RE-601	15	15	5'-11"	ST.			
RE-701	9	9	6'-2"	ST.			
RE-801	1	1	6'-6"	ST.			
RE-901	1	1	6'-10"	ST.			
RE-1001	2	2	7'-2"	ST.			
RE-1101	14	10	7'-6"	ST.			
RE-1401	2	—	9'-1"	ST.			
RE-1801	—	3	10'-9"	ST.			

FED. RD.	STATE	PROJECT	
2	OHIO		

63A
72

SUM.-271-765



⊛-RAILING REINFORCEMENT BARS WILL BE INCLUDED AS PART OF ITEM 517 FOR PAYMENT.

BAR SIZE IS INDICATED IN THE BAR MARK Nº. THE FIRST DIGIT WHERE THREE DIGITS ARE USED AND THE FIRST TWO DIGITS WHERE FOUR ARE USED INDICATE THE BAR SIZE NUMBER. FOR EXAMPLE A-601 IS A Nº 6 SIZE BAR AND P-1001 IS A Nº 10 SIZE BAR

TOTAL THIS SHEET LEFT STRUCTURE: 499,371 LBS.
TOTAL THIS SHEET RIGHT STRUCTURE: 486,042 LBS.
GRAND TOTAL LEFT STRUCTURE: 888,791 LBS.
GRAND TOTAL RIGHT STRUCTURE: 840,700 LBS.

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
BUREAU OF BRIDGES

BEISWENGER, HOCH & ARNOLD
Consulting Engineers — Akron, Ohio

REINFORCING SCHEDULE

BRIDGE Nº SUM.-271-0802-L & R.
OVER C.R.#9 AND CUYAHOGA RIVER
SUMMIT COUNTY
STA. 421+97.75 To STA. 436+98.25-L.
STA. 421+49.75 To STA. 436+07.25-R.

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
KJJ	JAP			RDH	12-21-65	

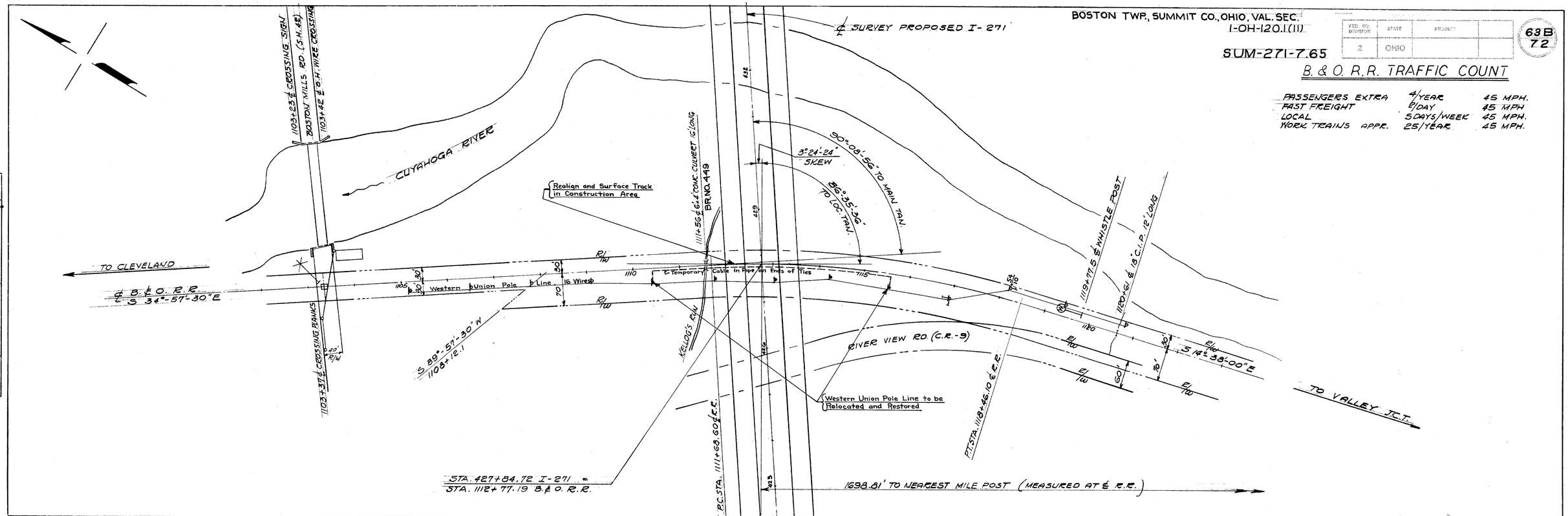
BOSTON TWP., SUMMIT CO., OHIO, VAL. SEC.
I-OH-120.1(11)
SUM-271-7.65

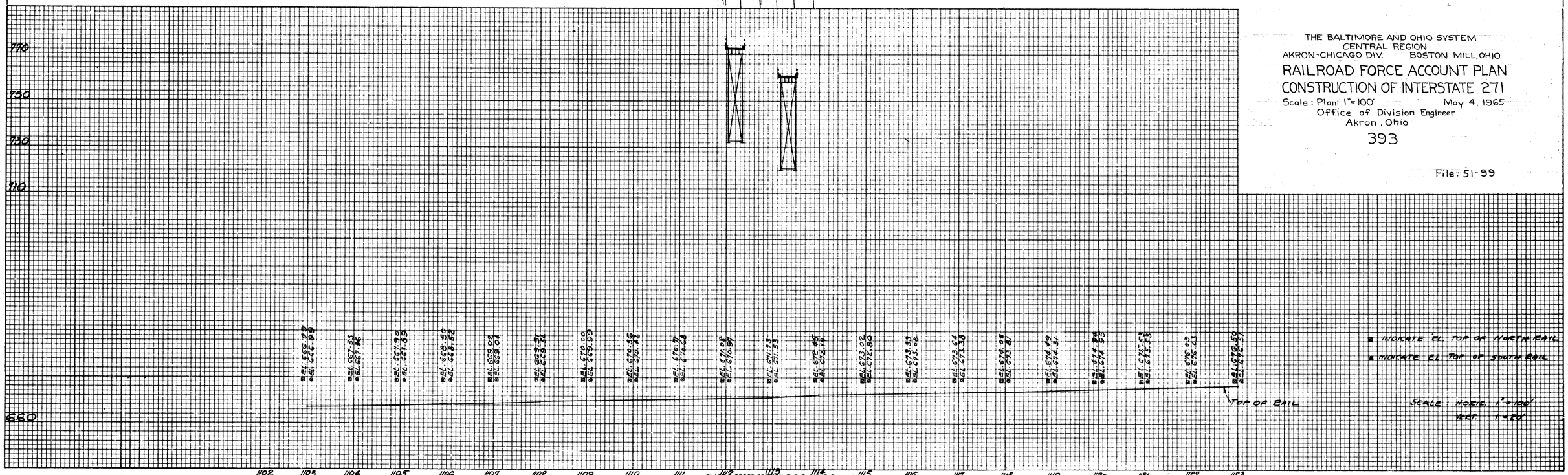
FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

63B
72

B. & O. R.R. TRAFFIC COUNT

PASSENGERS EXTRA	4/YEAR	45 MPH.
FAST FREIGHT	6/DAY	45 MPH
LOCAL	5 DAYS/WEEK	45 MPH.
WORK TRAINS APPR.	25/YEAR	45 MPH.





THE BALTIMORE AND OHIO SYSTEM
CENTRAL REGION
AKRON-CHICAGO DIV. BOSTON MILL, OHIO

RAILROAD FORCE ACCOUNT PLAN
CONSTRUCTION OF INTERSTATE 271

Scale: Plan: 1"=100' May 4, 1965
Office of Division Engineer
Akron, Ohio

393

File: 51-99

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

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

PLATE 122 CROSS SECTION B. P. R. & E. STANDARD EUGENE DIETZGEN CO. CHICAGO NEW YORK

SUPPLEMENTAL SITE PLAN - B. & O. RAILROAD - BRIDGE NO. SUM-271-0802

Printed in U.S.A.
On DIETZGEN DRAFTEX MOISTURE PROOF Cloth

Best 1519 TNN 9-23-65

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 421+49.75 TO STATION 436+98.25 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 952, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

CENTER LINE SURVEY PLAT

SUMMIT - 271 - 8.01 (7.98)

SUMMIT COUNTY, OHIO

BOSTON TOWNSHIP - LOTS 44 & 45

BOSTON TOWNSHIP - TRACT 1, LOT 2

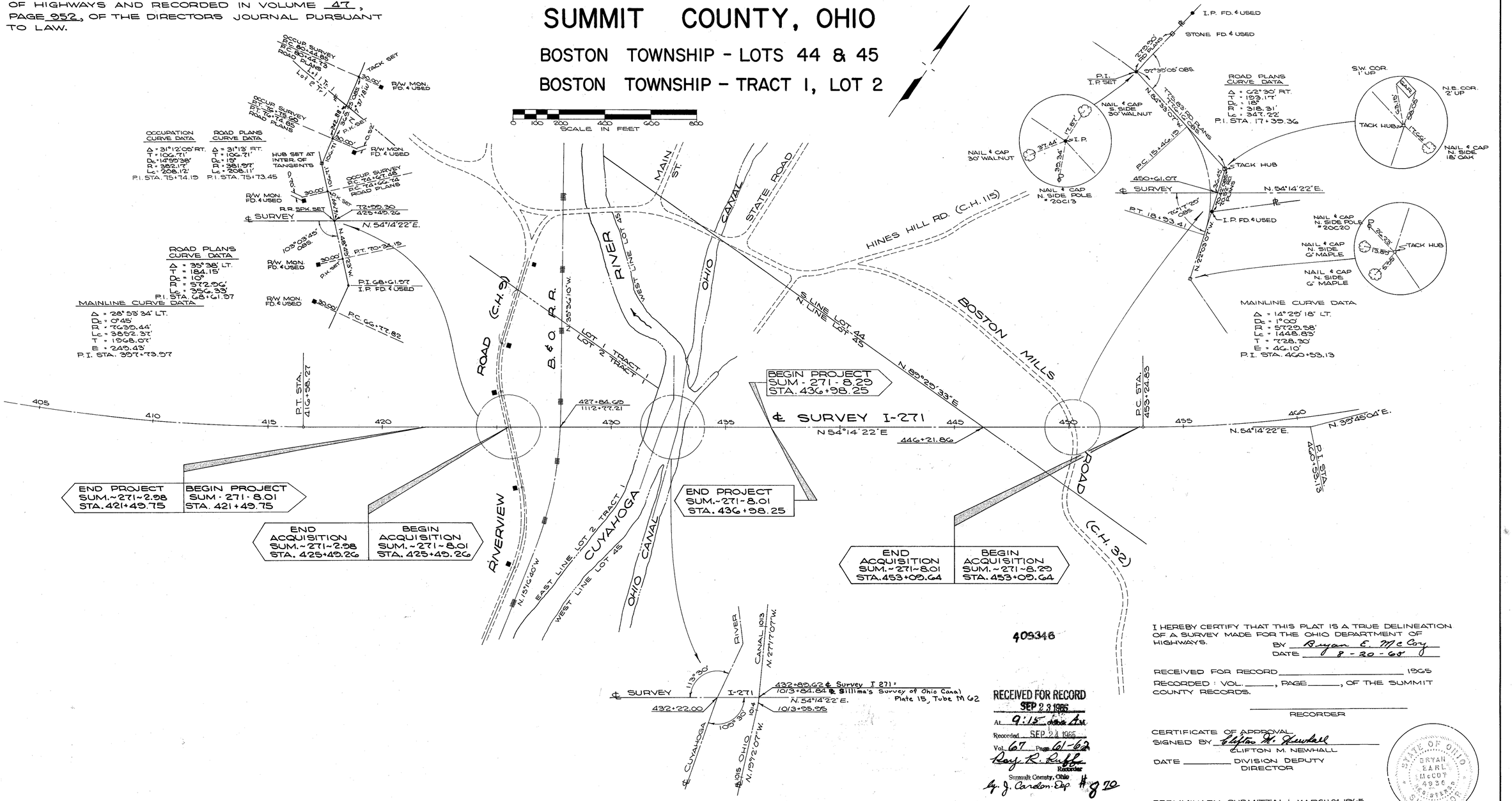
INDEXED

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.- 271- 8.01

RIGHT-OF-WAY SHEET 1/9

(7.98)



■ EXISTING MONUMENTS

409346

RECEIVED FOR RECORD
SEP 23 1965
At 9:15 o'clock A.M.
Recorded SEP 23 1965
Vol. 67 Page 61-62
Roy R. Ruffner
Recorder
Summit County, Ohio
by J. Carolon Dep #870

TRANSFER NOT NECESSARY
SEP 23 1965
C. L. Baxter, County Auditor

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.

BY Bryan E. McCoy

DATE 8-20-65

RECEIVED FOR RECORD _____ 1965

RECORDED : VOL. _____, PAGE _____, OF THE SUMMIT COUNTY RECORDS.

_____ RECORDER

CERTIFICATE OF APPROVAL

SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DIVISION DEPUTY DIRECTOR

DATE _____

PRELIMINARY SUBMITTAL : MARCH 24, 1965

RIGHT-OF-WAY COMPLETION DATE : AUG. 20, 1965

STATE OF OHIO BRYAN EARL McCOY 4936 REGISTERED SURVEYOR

SURVEYORS SEAL

CENTER LINE SURVEY PLAT

FED. RD.	STATE	PROJECT	
2	OHIO		

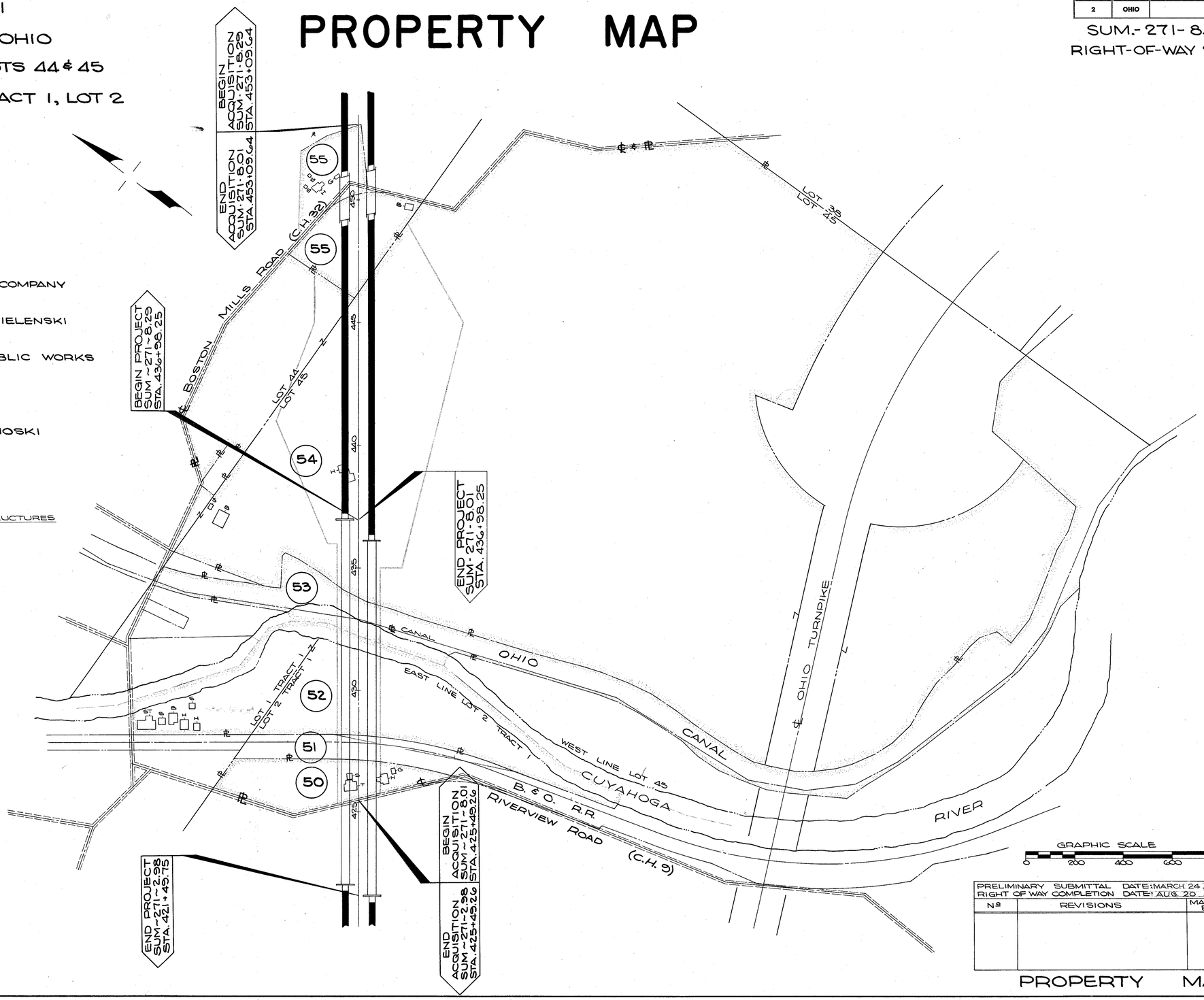
SUM.-271-8.01
RIGHT-OF-WAY SHEET 2/9

SUMMIT -271-8.01
SUMMIT COUNTY, OHIO
BOSTON TOWNSHIP- LOTS 44 & 45
BOSTON TOWNSHIP - TRACT 1, LOT 2

PROPERTY MAP

(50) LILLIAN OPATRNY
(51) BALTIMORE & OHIO RAILROAD COMPANY
(52) CHESTER ZIELENSKI & JULIA ZIELENSKI
(53) STATE OF OHIO ~ DEP'T OF PUBLIC WORKS
(54) EDNA A. MABRY
(55) BEN G. LAHOSKI & ANN M. LAHOSKI

CODE FOR EXISTING STRUCTURES
H : HOUSE
B : BARN
T : TAVERN
ST : STORE
SH : SHED
G : GARAGE



GRAPHIC SCALE
0 200 400 600 800

AFFECTED UTILITY COMPANIES

OHIO EDISON
47 N. MAIN ST.
AKRON, OHIO

OHIO BELL TELEPHONE CO.
50 W. BOWERY ST.
AKRON, OHIO

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965

No	REVISIONS	MADE BY	DATE

PROPERTY MAP

K&E

SUMMARY OF RIGHT-OF-WAY REQUIRED

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM. 271-8.01
RIGHT-OF-WAY SHEET 3/3

TOTAL NUMBER AFFECTED OWNERS WITH STRUCTURES - 3

PARCEL Nº	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA CORRECTION (ACRES)	P.R.O. (ACRES)	TO BE ACQUIRED LAND (ACRES)	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	SHEET Nº	REMARKS
* 50WL	LILLIAN OPATRNY	4014	16	3.241		0.123	0.660	5	1.882	0.576	4	
* 50WA												
* 51 AERIAL	BALTIMORE & OHIO RAILROAD						0.365				4 & 5	TOTAL ACRES UNKNOWN
* 51A	BALTIMORE & OHIO RAILROAD						0.036				4 & 5	TOTAL ACRES UNKNOWN
* 51T							0.141				4 & 5	FOR CHANNEL RELOCATION
* 52WL	CHESTER & JULIA ZIELENSKI	1047 1742	362 638	0.450 8.607	12.828		1.639		6.090	5.099	4 & 6	
* 53WL	STATE OF OHIO, DEPT. OF PUBLIC WORKS						0.636				6	TOTAL ACRES UNKNOWN
* 54WL	EDNA A. MABRY	3919	471	115.00			15.518	1	11.565	87.917	~~6~~ 5 & 9	
* 55WL	BEN G. & ANN M. LAHOSKI	3398	329	4.82	4.816	0.680	4.137	6			9	
		2005	146									

* ALL PARCELS - TYPE-I FUNDS

NOTE:
P.P.O. - PORTION ROAD OCCUPIES

TOTAL NUMBER AFFECTED OWNERS - 6

PARCEL Nº	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA PORTION ROAD OCCUPIES	DEED AREA CORRECTION (ACRES)	TO BE ACQUIRED LAND (ACRES)	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	LAND ISOLATED (ACRES)	SHEET Nº	REMARKS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965

Nº	REVISIONS	MADE BY	DATE
1	Deleted Pcl. 55 IWL, Combined With 55 WL.		11-9-65

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-8.01
RIGHT OF WAY SHEET 4/9

BOSTON MILLS ROAD C.H. 32 (60')

℄ EXISTING R/W

BEARING BREAK

N 64°46'32" E 602.55' TO PROPERTY CORNER

164.40'

335.60' (D)

N 66°44'02" E

333.31' (D) TO ANGLE BREAK
N 44°24'02" E (CALC FROM DEED)

PARKING AREA

OUTHOUSE

BAT PARK WALKS

N 88°56'05" E

142.50' TO PROPERTY CORNER (D)
900.00' TO PROPERTY CORNER (D)

THE STATE OF OHIO

42 WL.

3-24"BEECH 5-15"BEECH
1-24"OAK 9-15"OAK
4-15"BEECH 3-18"POPLAR
3-18"OAK

FIELD DRIVE

WAREHOUSE & MAINTENANCE BLDG.

1 STY. BLOCK BLDG.

1 STY. BLOCK BLDG.

STORAGE AREA

WOODS

THE STATE OF OHIO

42 WL.

TBA. 89.95 Ac

2-24"POPLAR
2-15"BEECH
6-24"OAK
1-12"ELM
3-12"OAK

4-18"POPLAR
5-18"OAK
3-15"BEECH

HARRY HORVITZ

41 WL.

TBA. 9.713 Ac

5-12"OAK
13-18"OAK
1-12"BEECH

7-18"OAK
4-12"OAK

1-15"BEECH
10-18"OAK
1-12"POPLAR
11-12"OAK

3-15"BEECH
6-18"OAK
6-12"OAK

3-18"BEECH
1-36"OAK
1-12"BEECH
6-18"OAK

2 PLASTIC WATER LINES & 2 ELECTRIC WIRES

MON. FD. 156.0'

STA. 390+00

STA. 405+00

355+00.78
209.82

N 70°22'18" E 540.35'

LA RW

N 70°22'18" E 388.57'

398+00 100.00

N 60°57'05" E 590.51'

CONSTRUCTION LIMITS

FIELD DRIVE (ABANDONED)

ARTESIAN WELL (BORED)

227.15'

141.5' (CALC.)

WOODS

42 WL.

STRUCTURE NO. 0.00 SUM-271-42.21

BEGIN WORK SUM-271-8.01 STA. 404+00

395

398+89.03

℄ - SURVEY (I-271)

400

STA 402+09

402+35
50.00 CULV.

405+04.18

MATCH TO R/W SHEET 5 OF 9

BEGIN SHEET

390+00
2.00

LA RW

WOODS

N 71°05'06" E 630.68'

396+41.62
131.39

CONSTRUCTION LIMITS

℄ 193.53'

398+18.83
155.45

S 89°22'55" W
C 650.00'
Δ 4°47'00"
(D)
(CALC.)

515.23'
N 71°05'06" E

LA RW

HARRY HORVITZ

41 WL.

4-20"OAK
4-18"BEECH
7-12"BEECH
1-15"POPLAR

30' N 1°22'11" E TO PROPERTY CORNER

1-20"POPLAR

403+17.76
249.95

957.47'
N 55°57'38" E

41-1 WL.

HARRY HORVITZ

41-1 WL.

END SHEET

GRAPHIC SCALE
0 50 100 150 200

CENTERLINE SURVEY
CURVE DATA

P.I. STA. 397+73.97
Δ = 25°53'34" LT.
Dc = 0°45'
R = 7639.44'
Lc = 3852.37'
T = 1968.07'
E = 249.43'

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

5-12"BEECH
2-20"OAK
4-15"OAK

1-20"CHERRY
4-20"OAK
1-20"MAPLE
3-12"OAK

1-18"BEECH
6-20"OAK
1-20"POPLAR
4-12"BEECH
2-12"OAK

5-12"BEECH
3-12"OAK
1-20"OAK

3-12"OAK

1-12"BEECH
4-20"OAK
1-15"CHERRY
3-12"OAK

3-20"OAK
22-12"-18" OAK

10-18"OAK
13-12"OAK

1-18"BEECH
1-12"BEECH
18-15"-20"OAK

3-18"OAK
2-20"POPLAR
4-12"BEECH
1-12"CHERRY
5-20"OAK
5-18"BEECH

6-12"BEECH
5-18"OAK
2-24"POPLAR
7-12"OAK
1-15"BEECH

2-20"POPLAR
1-15"CHERRY
2-12"POPLAR
2-15"OAK

■ = MONUMENT FOUND
◉ = PROPOSED MONUMENTS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965			
Nº	REVISIONS	MADE BY	DATE
1	Added Leader line Pl. 41 WL	Irwk	4-3-67

STA. 390+00 TO STA. 405+00

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-8.01
RIGHT OF WAY SHEET 5 OF 9

MATCH TO R/W SHEET 4 OF 9

MATCH TO R/W SHEET 6 OF 9

3-18"BEECH
1-24"OAK
3-15"OAK

10-15"OAK

5-15"OAK
1-24"OAK

1-12"CHERRY
1-15"OAK
1-24"OAK

2-24"OAK
2-12"APPLE
1-12"OAK
4-15"ASH

1-24"OAK
5-15"OAK

1-24"BEECH
4-15"OAK
3-15"POPLAR

2-18"CHERRY
2-24"OAK
3-12"BEECH
4-18"OAK
2-24"BEECH

2-12"BEECH
6-24"OAK
2-24"BEECH
1-18"STUMP
5-12"POPLAR

8-12"OAK
1-12"MAPLE
1-15"PINE
10-12"POPLAR
1-24"POPLAR

4-12"PINE
10-12"POPLAR
14-15"OAK

5-12"POPLAR
2-18"OAK
1-12"BEECH
3-12"OAK

4-15"POPLAR
7-15"OAK
2-12"PINE

8-15"OAK
1-15"OAK
7-12"PINE
1-12"BEECH
1-15"CHERRY
4-12"OAK

THE STATE OF OHIO
42 WL

205.68' TO PROPERTY CORNER (OCC)
(205.82' (D))
N 20°14'06" E

205.10' GS
243.27'

MON. FD.

STA. 405+00

42 WL
THE STATE OF OHIO

156.0'
404+50.07
179.44

MON. FD.

℄ SURVEY CURVE DATA
P.I. STA. 387+73.97
Δ = 28°53'34" LT.
Dc = 0°45'
R = 7639.44'
Lc = 3852.37'
Tc = 1968.07'
E = 249.43'

CONSTRUCTION LIMITS

LA RW N 55°21'44" E 920.04'

224.33'(CALC.)
N 11°42'11" E
TO PROPERTY CORNER (OCC)
700.00' (D)

41-1 WL

325.11' (OCC)

405+06.15

410

℄-SURVEY (I-271)

415

409+79.11

RE 100.0 350.0

FIRST METHODIST CHURCH OF BEDFORD, OHIO

43 WL

TBA = 16.863 Ac
PRO = 0.123 Ac
TOTAL = 16.986 Ac

416+00
220

N 64°45'56" E
140.05'

417+00
320

LA RW N 54°14'22" E 650.00'

HEAVY TIMBER

PT. STA. 416+58.26

STA. 420+00

419+72

75'

GAS WELL (DRILLED)

43 WL
(SEE ABOVE)

430-54 TYPE 4A STRUCTURE No SUM-271-0757

HEAVY TIMBER

END SHEET

BEGIN SHEET

357.47'
N 55°57'38" E
LA RW
CONSTRUCTION LIMITS

2-12"OAK

7-12"OAK
1-18"OAK
1-12"WALNUT
1-20"HICKORY

HARRY HORVITZ

41-1 WL
TBA = 4.038 Ac

412.47' (C)
162.88'

1569.77' TO PROPERTY CORNER (D)
1569.33'
N 88°56'05" E
360.00' (D)

415+56.45
308.62'

LA RW N 52°56'21" E 348.55'

N 1°57'15" E
405.51'

413+00
360

3-15"OAK
1-15"POPLAR
1-20"BEECH
1-24"PINE
2-15"PINE
1-24"OAK

7-12"PINE
8-12"BEECH
4-12"OAK
1-12"POPLAR

4-12"ELM
1-20"ELM
2-12"POPLAR
4-12"OAK

3-15"OAK
2-12"OAK
7-12"PINE
1-20"OAK

1-12"OAK
4-20"OAK
2-15"OAK
6-12"PINE

GRAPHIC SCALE
0 50 100 150 200

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965			
Nº	REVISIONS	MADE BY	DATE
1	Added Leader lines Pcls 41-1WL & 43WL	J rick	4-3-67

1-12"CHERRY
1-15"OAK
1-12"WALNUT
1-20"HICKORY

5-18"OAK
11-12"OAK
1-12"HICKORY

6-18"OAK
4-12"OAK

1-18"OAK
2-12"POPLAR

3-12"POPLAR
1-12"CHERRY
8-12"OAK
1-18"POPLAR

5-12"OAK
1-12"CHERRY
1-24"OAK
3-18"POPLAR
1-12"HICKORY

5-15"OAK
8-18"POPLAR
1-20"BEECH
1-20"OAK

■ = MONUMENT FOUND
◉ = PROPOSED MONUMENTS

STA. 405+00 TO STA. 420+00

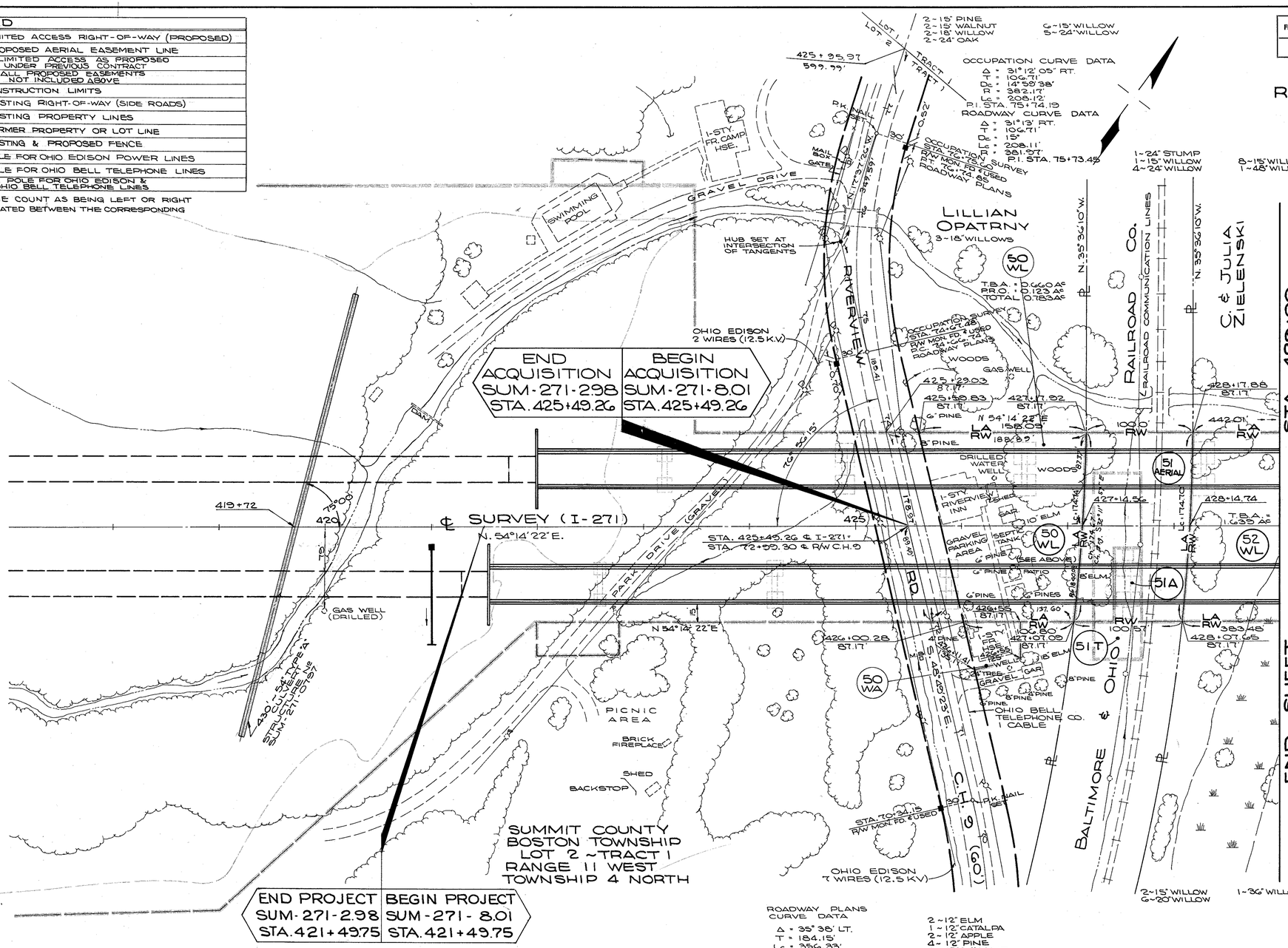
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-8.01
RIGHT-OF-WAY SHEET

6 / 9

LEGEND	
LA RW	LIMITED ACCESS RIGHT-OF-WAY (PROPOSED)
RW	PROPOSED AERIAL EASEMENT LINE
LA RW	LIMITED ACCESS AS PROPOSED UNDER PREVIOUS CONTRACT
	ALL PROPOSED EASEMENTS NOT INCLUDED ABOVE
	CONSTRUCTION LIMITS
	EXISTING RIGHT-OF-WAY (SIDE ROADS)
℄	EXISTING PROPERTY LINES
	FORMER PROPERTY OR LOT LINE
x x x	EXISTING & PROPOSED FENCE
	POLE FOR OHIO EDISON POWER LINES
	POLE FOR OHIO BELL TELEPHONE LINES
	POLE FOR OHIO EDISON & OHIO BELL TELEPHONE LINES

THE TREES, AS SHOWN, REPRESENT THE COUNT AS BEING LEFT OR RIGHT OF THE CENTER LINE SURVEY AND LOCATED BETWEEN THE CORRESPONDING 100 FOOT STATIONS.



ROADWAY PLANS CURVE DATA
Δ = 35° 38' LT.
T = 184.15'
Lc = 356.33'
Dc = 10°
(CORROBORATED BY CONSULTANTS SURVEY)
P.I. STA. 68+61.97

2 ~ 12" ELM
1 ~ 12" CATALPA
2 ~ 12" APPLE
4 ~ 12" PINE
1 ~ 15" WALNUT
1 ~ 18" CATALPA

2~15" WILLOW
6~20" WILLOW
1~36" WILLOW

GRAPHIC SCALE
0 50 100 150 200

TYPE-I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965

Nº	REVISIONS	MADE BY	DATE
1	Added Leader Line P.I. 50 WL	Irick	4-3-67

STA. 417+00 TO STA. 429+00

E.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-8.01

RIGHT OF WAY SHEET 7/9

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

LILLIAN OPATRNY

C. & JULIA ZIELENSKI

RIVERVIEW ROAD

C.H. 9

RAILROAD COMPANY

OHIO BALTIMORE

TO CLEVELAND

TO VALLEY JCT.

N. 48°49'23" W.

N. 35°36'10" W.

N 54°14'22" E

188.89'

70.00'

30.00'

T.C. 1111+68.60

1111+88.37 (B.&O.)
427+87.89
(87.17' LT.)

427+17.22
1111+30.56 (67.17')
(70.00')

428+17.68 (67.17')
1111+85.54 (30.00')

100.00' RW

L 30'

15.00'

72.17'

Lc = 174.74'
R = 1840.08'

Lc = 174.70'
R = 1940.08'

427+25(50')
1112+25.26(50')

427+69(50')
1112+27.75(18.00')

51 AERIAL

T.B.A. 0.365 Ac

106.54'

1111.2

427+14.56
1112+81.55 (70.00')

427+84.69
1113+11.22

71.00'

427+87.77

428+14.74
1112+75.48 (30.00')

425 426 ℄ SURVEY (I-271) 427 428 429

N. 54°14'22"E.

T.C. 49°36'15"

425+49.26

178.97'

175.00'

90°09'28"

N54°14'22"E

Lc = 174.70'
R = 1940.08'

N 35°45'38" W

Brg. N 32°11'57" W
174.67'

Brg. N 32°23'48" W
174.64'

51 A
T.B.A.
0.036 A.

66.17'

137.60'

37.91'

38.09'

100.57'

427+07.09 (67.17')
1113+72.57 (70.00')

1113+64.66
427+77.47
87.17' RT.

51 T
T.B.A.=0.141 AC.

31.83'

44.00'

N 54°14'22"E

427+25 (125')
1114+08.91 (47.79')

427+69 (125')
1114+03.25 (4.06')

P.T.	I-271 STA. & OFFSET	B. & O. STA. & OFFSET
A	427+45.00 21.00' RT.	1113+01.00 38.22' RT.
B	427+69.00 21.00' RT.	1112+99.26 14.28'
C	427+45.00 87.17' RT.	1113+65.14 32.29'
D	427+69.00 87.17' RT.	1113+65.55 8.43'

PARCEL NUMBER	EASEMENT REQUIRED	TOTAL AREA	AREA OF OVERLAP		
			HIGHWAY	AERIAL	TEMPORARY
51 AERIAL	AERIAL	17,473 S.F.	1,588 S.F.		4,447 S.F.
51 A	HIGHWAY	1,588 S.F.		1,588 S.F.	
51 T	TEMPORARY FOR CHANNEL RELOCATION	6,112 S.F.		4,447 S.F.	

GRAPHIC SCALE
0 20 40 60 80 100

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965

Nº	REVISIONS	MADE BY	DATE
1	Added Dimensions & Overlap Revised.		10-29-65

BALTIMORE & OHIO RAILROAD PLAT

K & E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-8.01
RIGHT-OF-WAY SHEET 8/9

MATCH TO R/W SHEET 4 OF 7

1~36" STUMP
3~18" ELM
3~36" ELM

1~24" STUMP
4~15" ELM
1~15" SYCAMORE
1~24" WILLOW

2~12" ELM
1~15" APPLE
6~20" SYCAMORE

2~12" ELM
1~15" APPLE
1~15" SYCAMORE

1~12" CHERRY
1~12" ELM
1~15" APPLE
2~18" WILLOW

2~18" HICKORY
3~18" WALNUT

3~18" HICKORY

3~12" POPLAR

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 1 ~ TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

C. & JULIA ZIELENSKI

LOT 1
LOT 2

VEGETATION LINE 7

EAST LINE LOT 1

RIVER

WEST LINE LOT 45

CANAL

VEGETATION LINE 1

GRAVEL DRIVE

POINT OF ACCESS
STA. 430+40 LT.
12' WIDTH
(UNDER BRIDGE ONLY)

POINT OF ACCESS
STA. 434+34 LT.
12' WIDTH
(UNDER BRIDGE ONLY)

END PROJECT
SUM.~271-8.01
STA. 436+98.25

BEGIN PROJECT
SUM.~271-8.29
STA. 436+98.25

3~18" WILLOWS
1~24" HICKORY
1~36" MAPLE
1~48" OAK

8~15" WILLOW
2~18" SYCAMORE
1~24" OAK

1~18" SYCAMORE

441+00
340

STA. 429+00

STA. 441+00

N. 54°14' 22" E.

N. 30°58' 15" E.
544.27'

CONSTRUCTION LIMITS

1 STY. FRAME HSE.

GAR.

GRAVEL

PINE TREES

RESIDENCE DRIVE (ABANDONED)

52 WL
T.B.A.
1.639 Ac

53 WL
T.B.A.
0.636 Ac

℄ SURVEY (I-271)

432+89.62 ℄ Survey I-271
1013+84.84 ℄ Sillima's Survey of Ohio Canal
1013+55.35

END WORK
SUM.~271-8.01
STA. 438+00

54 WL
EDNA A. MABRY
T.B.A. = 15.518 Ac

BEGIN SHEET

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 ~ TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

EAST LINE LOT 2

CUYAHOGA

VEGETATION LINE 1

OHIO

POINT OF ACCESS
STA. 434+34 RT.
12' WIDTH
(UNDER BRIDGE ONLY)

PASTURE

BARBED WIRE FENCE

FIELD DRIVE

1032'
N 68° 32' 42" E

LA RW

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 45
RANGE 11 WEST
TOWNSHIP 4 NORTH

END SHEET

MATCH TO R/W SHEET 7 OF 7

1~24" OAK

4~12" ELM
3~18" ELM
2~36" SYCAMORE

1~18" HICKORY
1~18" WALNUT

2~12" OAK
3~12" APPLE
2~15" ELM
1~30" ELM

2~12" SYCAMORE
3~15" CHERRY
4~20" CHERRY
2~24" HICKORY

5~12" ELM
1~12" SYCAMORE
1~24" HICKORY

3~12" ELM
1~18" ELM
2~20" HICKORY
1~30" HICKORY
1~30" OAK

2~12" CHERRY
1~12" APPLE
2~18" OAK
1~18" SYCAMORE

GRAPHIC SCALE
0 50 100 150 200

TYPE - I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965			
No.	REVISIONS	MADE BY	DATE

STA. 429+00 TO STA. 441+00

E & E

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-8.01
RIGHT-OF-WAY SHEET 9/9

MATCH TO R/W SHEET 6 OF 7

BEGIN SHEET

STA. 441+00

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 44
RANGE 11 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 45
RANGE 11 WEST
TOWNSHIP 4 NORTH

EDNA A. MABRY
54 WL
T.B.A. = 15.518 Ac

BEN G. & ANN M. LAHOSKI
55 WL
T.B.A. = 4.137 Ac
P.R.O. = 0.680 Ac

BEN G. & ANN M. LAHOSKI
55 WL
T.B.A. = 4.137 Ac
P.R.O. = 0.680 Ac

5~12" APPLE
5~15" APPLE
1~24" SYCAMORE
1~24" WALNUT
1~24" HICKORY

2~15" WALNUT
1~18" SYCAMORE
2~24" MAPLE
1~60" OAK

5~15" BEECH
4~15" OAK
1~18" HICKORY
4~24" BEECH
1~24" CHERRY

1~24" STUMP
5~18" ELM

1~15" MAPLE
2~18" ELM
2~24" OAK
4~25" BEECH

2~20" OAK
2~24" BEECH
2~24" POPLAR
3~24" ELM

6~18" ELM
1~24" BEECH
2~24" SYCAMORE

2~18" MAPLE

1~15" ELM
1~15" PINE
1~18" OAK

5~12" APPLE
5~15" APPLE
1~24" SYCAMORE
1~24" WALNUT
1~24" HICKORY

4~12" APPLE
2~15" POPLAR
5~20" OAK

5~12" BEECH
5~12" OAK
3~20" OAK

3~12" ELM
5~20" OAK
1~30" POPLAR
1~36" POPLAR

5~12" BEECH
2~12" CHERRY
9~15" ELM
1~15" MAPLE
2~15" POPLAR

4~15" BEECH
2~20" BEECH

2~12" OAK
4~12" BEECH
1~18" BEECH
2~20" ASH

8~12" BEECH
4~15" OAK
4~15" ELM

1~12" CHERRY
1~12" SYCAMORE
2~12" OAK
1~20" OAK

441+00
330
LOT 44
LOT 45
LA RW
430.81'
N 74°02'27" E
445+00
150
204.03'
N 54°14'22" E
N 89°25'33" E.
CONSTRUCTION LIMITS
154.48'
445
N. 54°14'22"E.
445+00
230
1032'
N 68°32'42" E
LA RW
443.12'
N 23°58'30" E
LA RW
445+00
230

℄ SURVEY (I-271)
448+50
446+21.86
STA. 450+23.50 ℄ I-271 =
STA. 17+39.69 ℄ R/W C.H. #32
450
453+09.64
261.73' (D)
N 49°54'53" E
I.P. FD.
I.P. FD.
I.P. FD.
I.P. FD.
379.12' (D)
N 56°55'53" E
452+05.44
237.21'
448+26.48 (248.40)
14+16.06
STR. #271.0852
328+36
458.75'
485.43' LAHOSKI DEED
484.43' MABRY DEED
BOSTON MILLS RD.
(C.H. 32)
N 68°38'07" W
447+73.48 (293.09)
13+48.23
BOSTON MILLS RD.
(C.H. 32)
66' R/W
24" MAPLE
12" MAPLE
24" ELM
BARBED WIRE
FENCE
N 32°07'W.
133.73'
N 32°07'W.
328.41'
447+04.03
13+78.65
BARN
WELL
SHED
SHED
SHED
135'±
DRILLED WATER WELL
18" MAPLE
TWIN GRAVEL DRIVE
GRAVEL (ABANDONED)
WELL (DRILLED)
SEPTIC TANK
OUTHOUSE
BARN
16" STY
16" MAPLE
D.C. 15.46 ROADWAY PLANS
OHIO EDISON 4 WIRES 1 CABLE
RT 18°33.4' ROADWAY PLANS
BARBED WIRE
FENCE
SWING BARN
GATE
N. 22°03'07" W.
113.83
122.25
449+00
196.59
449+96.48 (264.77')
20+09.24
BOSTON MILLS RD. (C.H. 32)
76°02'20" TO LOC. TAN OF E-R/W
CONSTRUCTION LIMITS
13°57'40" SKEW (ROADWAY)
S 23°58'07" E
147.45' (D)
S 23°58'07" E
127.10' (D)
SCALE: 1"=100'
CONSTRUCTION LIMITS

ROADWAY PLANS
CURVE DATA
Δ = 62°30' RT.
T = 193.17'
Lc = 347.22'
Dc = 18°
(CORROBORATED BY CONSULTANTS SURVEY)
P.I. STA. 17+39.36

END ACQUISITION	BEGIN ACQUISITION
SUM-271-8.01	SUM-271-8.29
STA. 453+09.64	STA. 453+09.64

GRAPHIC SCALE
0 50 100 150 200

TYPE - I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965

No.	REVISIONS	MADE BY	DATE
1	Deleted Pcl. 55 WL, Combined with 55 WL.		11-9-65

STA. 441+00 TO STA. 453+00

K.S.E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM - 271 - 8.01

STATE OF OHIO
DEPARTMENT OF HIGHWAYS
SUM-271-8.01
SUMMIT COUNTY
BOSTON TOWNSHIP
GRADE SEPARATION WITH BALTIMORE & OHIO R.R.
RIGHT - OF - WAY

- LIMITED ACCESS -

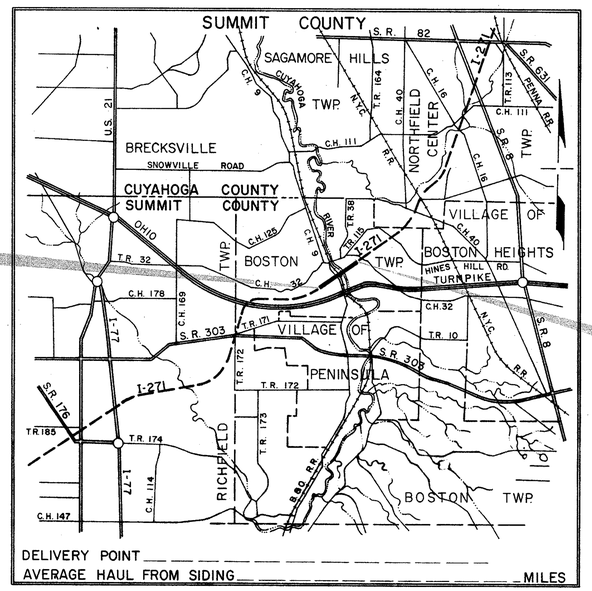
THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR OF HIGHWAYS IN ACCORDANCE WITH PROVISIONS OF SECTION 5511.02 REVISED CODE OF OHIO.

CONVENTIONAL SIGNS

State Line
County Line
Township Line
Section Line
Center Line
Corporation Line
Fence Line
Guard Rail (existing)
Guard Rail (proposed)
Railroad
Power Poles
Telephone Poles
Power or Telephone Poles with guys
Tower Line
Trees or Stumps (existing)
Limited Access
Right of Way
Limited Access & Right of Way

INDEX OF SHEETS

1. Centerline Survey Plat
2. Property Map
3. Summary
4-5-6. I-271 Sta. 390+00 to Sta. 429+00
7. Baltimore & Ohio R.R. Plat
8-9. I-271 Sta. 429+00 to Sta. 453+00



LOCATION MAP

SCALE OF MILES 0 1 2

PORTION TO BE IMPROVED
STATE ROADS
OTHER ROADS

PLAN 1" = 50'
PROFILE: HORIZONTAL 1" = 50'
PROFILE: VERTICAL 1" = 5' & 1" = 10'
CROSS SECTIONS: HORIZONTAL & VERTICAL 1" = 10'

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

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

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

APPROVED _____
DATE 3-17-66 DIVISION DEPUTY DIRECTOR

APPROVED _____
DATE _____ ENGINEER OF BRIDGES

APPROVED _____
DATE _____ ENGINEER OF LOCATION AND DESIGN

APPROVED _____
DATE _____ DEPUTY DIRECTOR OF DESIGN AND CONSTRUCTION

APPROVED _____
DATE _____ DEPUTY DIRECTOR OF RIGHT OF WAY

APPROVED _____
DATE _____ DEPUTY DIRECTOR OF PLANNING AND PROGRAMMING

APPROVED _____
DATE _____ FIRST ASSISTANT DIRECTOR

APPROVED _____
DATE _____ DIRECTOR OF HIGHWAYS

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS			

SUPPLEMENTAL SPECIFICATIONS

PREPARED AND RECOMMENDED BY
BEISWENGER, HOCH & ARNOLD, CONSULTING ENGINEERS
AKRON OHIO CLEVELAND

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER _____ DATE _____

FILE NO.	DATE OF LETTING _____ 196
	CONTRACT NO. _____

Best 1519 TNN 9-23-65

~ LIMITED ACCESS ~

THIS IMPROVEMENT HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY FROM STATION 421+49.75 TO STATION 436+98.25 BY ACTION OF THE DIRECTOR OF HIGHWAYS AND RECORDED IN VOLUME 47, PAGE 952, OF THE DIRECTORS JOURNAL PURSUANT TO LAW.

CENTER LINE SURVEY PLAT

SUMMIT - 271 - 8.01 (7.98)

SUMMIT COUNTY, OHIO

BOSTON TOWNSHIP - LOTS 44 & 45

BOSTON TOWNSHIP - TRACT 1, LOT 2

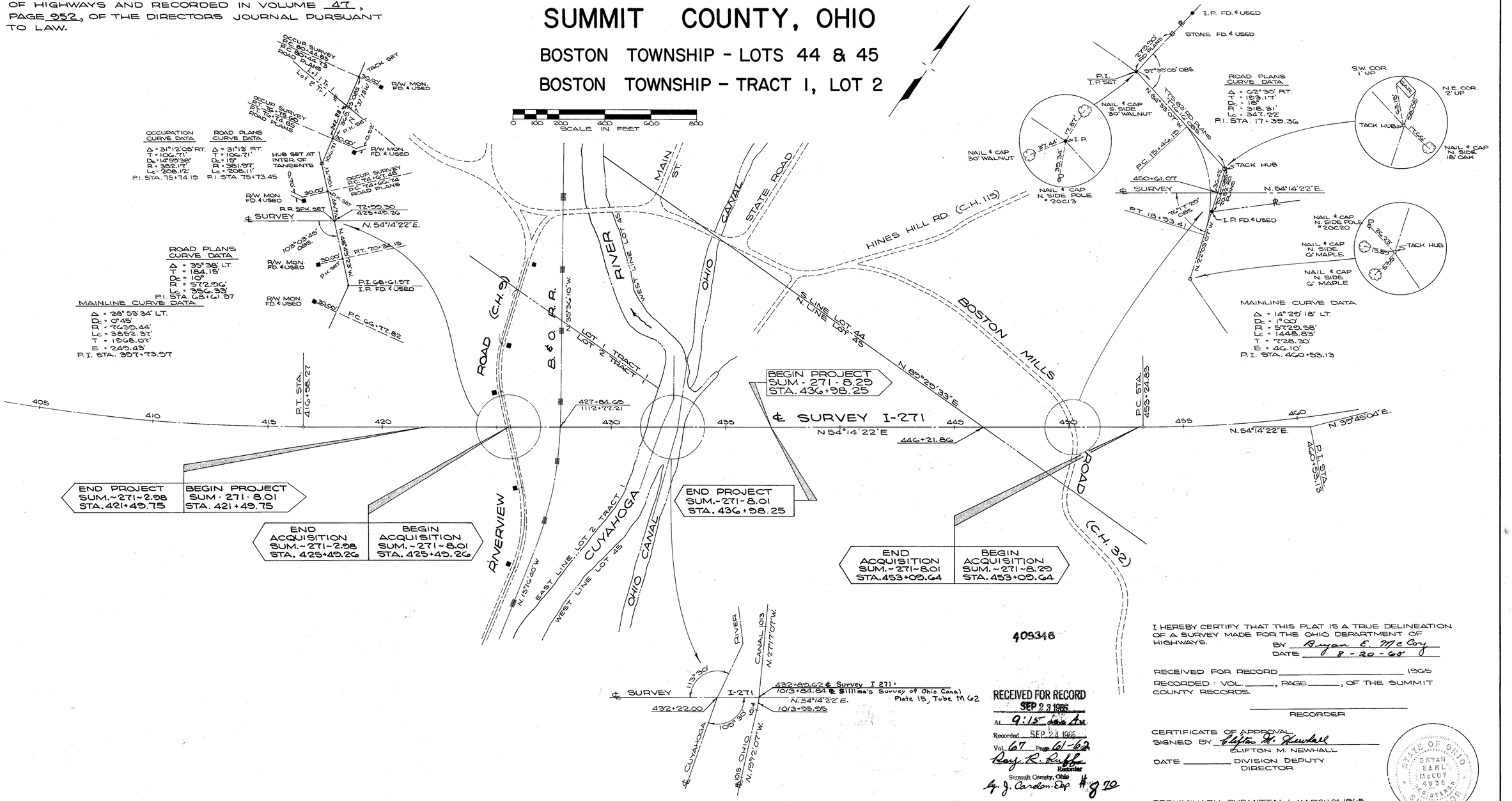
INDEXED

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.- 271- 8.01

RIGHT-OF-WAY SHEET 1/9

(7.98)



409346

RECEIVED FOR RECORD
SEP 23 1965
At 9:15 o'clock A.M.
Recorded SEP 23 1965
Vol. 67 Page 61-62
Ray R. Ruffner
Recorder
Summit County, Ohio
by J. Carolon Dep #870

TRANSFER NOT NECESSARY
SEP 23 1965
C. L. Baxter, County Auditor

I HEREBY CERTIFY THAT THIS PLAT IS A TRUE DELINEATION OF A SURVEY MADE FOR THE OHIO DEPARTMENT OF HIGHWAYS.
BY Bryan E. McCoy
DATE 8-20-65

RECEIVED FOR RECORD _____ 1965
RECORDED : VOL. _____, PAGE _____, OF THE SUMMIT COUNTY RECORDS.
_____
RECORDER

CERTIFICATE OF APPROVAL
SIGNED BY Clifton M. Newhall
CLIFTON M. NEWHALL
DATE _____ DIVISION DEPUTY DIRECTOR

PRELIMINARY SUBMITTAL : MARCH 24, 1965
RIGHT-OF-WAY COMPLETION DATE : AUG. 20, 1965

STATE OF OHIO BRYAN EARL McCOY 4936 REGISTERED SURVEYOR
SURVEYORS SEAL

■ EXISTING MONUMENTS

CENTER LINE SURVEY PLAT

FED. RD.	STATE	PROJECT	
2	OHIO		

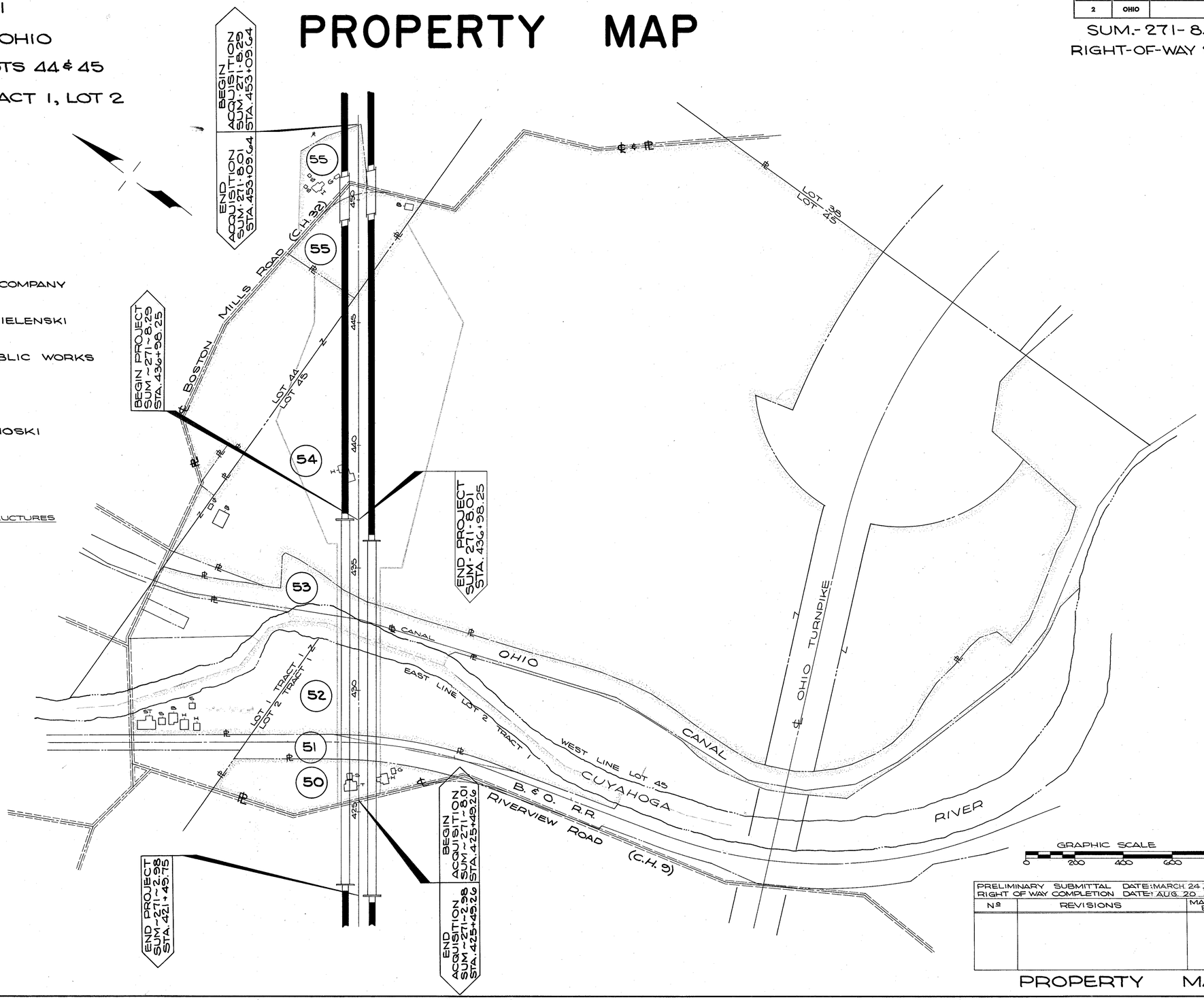
SUM.-271-8.01
RIGHT-OF-WAY SHEET 2/9

SUMMIT -271-8.01
SUMMIT COUNTY, OHIO
BOSTON TOWNSHIP- LOTS 44 & 45
BOSTON TOWNSHIP - TRACT 1, LOT 2

PROPERTY MAP

(50) LILLIAN OPATRNY
(51) BALTIMORE & OHIO RAILROAD COMPANY
(52) CHESTER ZIELENSKI & JULIA ZIELENSKI
(53) STATE OF OHIO ~ DEP'T OF PUBLIC WORKS
(54) EDNA A. MABRY
(55) BEN G. LAHOSKI & ANN M. LAHOSKI

CODE FOR EXISTING STRUCTURES
H : HOUSE
B : BARN
T : TAVERN
ST : STORE
SH : SHED
G : GARAGE



GRAPHIC SCALE
0 200 400 600 800

AFFECTED UTILITY COMPANIES

OHIO EDISON
47 N. MAIN ST.
AKRON, OHIO

OHIO BELL TELEPHONE CO.
50 W. BOWERY ST.
AKRON, OHIO

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965

No	REVISIONS	MADE BY	DATE

PROPERTY MAP

K&E

SUMMARY OF RIGHT-OF-WAY REQUIRED

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM. 271-8.01
RIGHT-OF-WAY SHEET 3/3

TOTAL NUMBER AFFECTED OWNERS WITH STRUCTURES - 3

PARCEL Nº	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA CORRECTION (ACRES)	P.R.O. (ACRES)	TO BE ACQUIRED LAND (ACRES)	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	SHEET Nº	REMARKS
* 50WL	LILLIAN OPATRNY	4014	16	3.241		0.123	0.660	5	1.882	0.576	4	
* 50WA												
* 51 AERIAL	BALTIMORE & OHIO RAILROAD						0.365				4 & 5	TOTAL ACRES UNKNOWN
* 51A	BALTIMORE & OHIO RAILROAD						0.036				4 & 5	TOTAL ACRES UNKNOWN
* 51T							0.141				4 & 5	FOR CHANNEL RELOCATION
* 52WL	CHESTER & JULIA ZIELENSKI	1047 1742	362 638	0.450 8.607	12.828		1.639		6.090	5.099	4 & 6	
* 53WL	STATE OF OHIO, DEPT. OF PUBLIC WORKS						0.636				6	TOTAL ACRES UNKNOWN
* 54WL	EDNA A. MABRY	3919	471	115.00			15.518	1	11.565	87.917	~~6~~ 5 & 9	
* 55WL	BEN G. & ANN M. LAHOSKI	3398	329	4.82	4.816	0.680	4.137	6			9	
		2005	146									

* ALL PARCELS - TYPE-I FUNDS

NOTE:
P.P.O. - PORTION ROAD OCCUPIES

TOTAL NUMBER AFFECTED OWNERS - 6

PARCEL Nº	OWNER	DEED RECORD BOOK	DEED RECORD PAGE	DEED AREA TOTAL ACRES	DEED AREA PORTION ROAD OCCUPIES	DEED AREA CORRECTION (ACRES)	TO BE ACQUIRED LAND (ACRES)	TO BE ACQUIRED BLDGS.	RESIDUE LEFT	RESIDUE RIGHT	LAND ISOLATED (ACRES)	SHEET Nº	REMARKS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965

Nº	REVISIONS	MADE BY	DATE
1	Deleted Pcl. 55 IWL, Combined With 55 WL.		11-9-65

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-8.01
RIGHT OF WAY SHEET 4/9

BOSTON MILLS ROAD C.H. 32 (60')

℄ EXISTING R/W

BEARING BREAK

N 64°46'32" E 602.55' TO PROPERTY CORNER

164.40'

335.60' (D)

N 66°44'02" E

333.31' (D) TO ANGLE BREAK
N 44°24'02" E (CALC FROM DEED)

PARKING AREA

OUTHOUSE

BAT PARK WALKS

N 88°56'05" E

142.50' TO PROPERTY CORNER (D)
900.00' TO PROPERTY CORNER (D)

THE STATE OF OHIO

42 WL.

3-24"BEECH 5-15"BEECH
1-24"OAK 9-15"OAK
4-15"BEECH 3-18"POPLAR
3-18"OAK

FIELD DRIVE

WAREHOUSE & MAINTENANCE BLDG.

1 STY. BLOCK BLDG.

1 STY. BLOCK BLDG.

STORAGE AREA

WOODS

THE STATE OF OHIO

42 WL.

TBA. 89.95 Ac

2-24"POPLAR
2-15"BEECH
6-24"OAK
1-12"ELM
3-12"OAK

4-18"POPLAR
5-18"OAK
3-15"BEECH

HARRY HORVITZ

41 WL.

TBA. 9.713 Ac

5-12"OAK
13-18"OAK
1-12"BEECH

7-18"OAK
4-12"OAK

1-15"BEECH
10-18"OAK
1-12"POPLAR
11-12"OAK

3-15"BEECH
6-18"OAK
6-12"OAK

3-18"BEECH
1-36"OAK
1-12"BEECH
6-18"OAK

2 PLASTIC WATER LINES & 2 ELECTRIC WIRES

MON. FD. 156.0'

STA. 390+00

STA. 405+00

355+00.78
209.82

N 70°22'18" E 540.35'

LA RW

N 70°22'18" E 388.57'

398+00 100.00

N 60°57'05" E 590.51'

CONSTRUCTION LIMITS

FIELD DRIVE (ABANDONED)

ARTESIAN WELL (BORED)

227.15'

141.5' (CALC.)

WOODS

42 WL.

STRUCTURE NO. 0.00 SUM-271-42.21

BEGIN WORK SUM-271-8.01 STA. 404+00

395

398+89.03

℄ - SURVEY (I-271)

400

STA 402+09

402+35
50.00 CULV.

405+04.18

MATCH TO R/W SHEET 5 OF 9

BEGIN SHEET

390+00
2.00

LA RW

WOODS

N 71°05'06" E 630.68'

396+41.62
131.39

CONSTRUCTION LIMITS

℄ 193.53'

398+18.83
155.45

S 89°22'55" W
C 650.00'
Δ 4°47'00"
(D)
(CALC.)

515.23'
N 71°05'06" E

LA RW

HARRY HORVITZ

41 WL.

4-20"OAK
4-18"BEECH
7-12"BEECH
1-15"POPLAR

30' N 1°22'11" E TO PROPERTY CORNER

1-20"POPLAR

403+17.76
249.95

957.47'
N 55°57'38" E

41-1 WL.

HARRY HORVITZ

41-1 WL.

END SHEET

GRAPHIC SCALE
0 50 100 150 200

CENTERLINE SURVEY
CURVE DATA

P.I. STA. 397+73.97
Δ = 25°53'34" LT.
Dc = 0°45'
R = 7639.44'
Lc = 3852.37'
T = 1968.07'
E = 249.43'

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

5-12"BEECH
2-20"OAK
4-15"OAK

1-20"CHERRY
4-20"OAK
1-20"MAPLE
3-12"OAK

1-18"BEECH
6-20"OAK
1-20"POPLAR
4-12"BEECH
2-12"OAK

5-12"BEECH
3-12"OAK
1-20"OAK

3-12"OAK

1-12"BEECH
4-20"OAK
1-15"CHERRY
3-12"OAK

3-20"OAK
22-12"-18" OAK

10-18"OAK
13-12"OAK

1-18"BEECH
1-12"BEECH
18-15"-20"OAK

3-18"OAK
2-20"POPLAR
4-12"BEECH
1-12"CHERRY
5-20"OAK
5-18"BEECH

6-12"BEECH
5-18"OAK
2-24"POPLAR
7-12"OAK
1-15"BEECH

2-20"POPLAR
1-15"CHERRY
2-12"POPLAR
2-15"OAK

■ = MONUMENT FOUND
◉ = PROPOSED MONUMENTS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965			
Nº	REVISIONS	MADE BY	DATE
1	Added Leader line Pl. 41 WL	Irwk	4-3-67

STA. 390+00 TO STA. 405+00

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-8.01
RIGHT OF WAY SHEET 5 OF 9

MATCH TO R/W SHEET 4 OF 9

MATCH TO R/W SHEET 6 OF 9

3-18"BEECH
1-24"OAK
3-15"OAK

10-15"OAK

5-15"OAK
1-24"OAK

1-12"CHERRY
1-15"OAK
1-24"OAK

2-24"OAK
2-12"APPLE
1-12"OAK
4-15"ASH

1-24"OAK
5-15"OAK

1-24"BEECH
4-15"OAK
3-15"POPLAR

2-18"CHERRY
2-24"OAK
3-12"BEECH
4-18"OAK
2-24"BEECH

2-12"BEECH
6-24"OAK
2-24"BEECH
1-18"STUMP
5-12"POPLAR

8-12"OAK
1-12"MAPLE
1-15"PINE
10-12"POPLAR
1-24"POPLAR

4-12"PINE
10-12"POPLAR
14-15"OAK

5-12"POPLAR
2-18"OAK
1-12"BEECH
3-12"OAK

4-15"POPLAR
7-15"OAK
2-12"PINE

8-15"OAK
1-15"OAK
7-12"PINE
1-12"BEECH
1-15"CHERRY
4-12"OAK

THE STATE OF OHIO
42 WL

205.68' TO PROPERTY CORNER (OCC)
(205.82' (D))
N 20°14'06" E

205.10' GS
243.27'

MON. FD.

STA. 405+00

42 WL
THE STATE OF OHIO

156.0'
404+50.07
179.44

MON. FD.

℄ SURVEY CURVE DATA
P.I. STA. 387+73.97
Δ = 28°53'34" LT.
Dc = 0°45'
R = 7639.44'
Lc = 3852.37'
Tc = 1968.07'
E = 249.43'

CONSTRUCTION LIMITS

LA RW N 55°21'44" E 920.04'

224.33'(CALC.)
N 11°42'11" E
TO PROPERTY CORNER (OCC)
700.00' (D)

41-1 WL

325.11' (OCC)

405+06.15

410

℄-SURVEY (I-271)

415

409+79.11

RE 100.0 350.0

FIRST METHODIST CHURCH OF BEDFORD, OHIO

43 WL

TBA = 16.863 Ac
PRO = 0.123 Ac
TOTAL = 16.986 Ac

416+00
220

N 64°45'56" E
140.05'

417+00
320

LA RW N 54°14'22" E 650.00'

HEAVY TIMBER

PT. STA. 416+58.26

STA. 420+00

419+72

75'

GAS WELL (DRILLED)

43 WL
(SEE ABOVE)

430-54 TYPE 4A STRUCTURE No SUM-271-0757

HEAVY TIMBER

END SHEET

BEGIN SHEET

357.47'
N 55°57'38" E
LA RW
CONSTRUCTION LIMITS

2-12"OAK

7-12"OAK
1-18"OAK
1-12"WALNUT
1-20"HICKORY

HARRY HORVITZ

41-1 WL
TBA = 4.038 Ac

412.47' (C)
162.88'

1569.77' TO PROPERTY CORNER (D)
1569.33'
N 88°56'05" E
360.00' (D)

415+56.45
308.62'

LA RW N 52°56'21" E 348.55'

N 1°57'15" E
405.51'

413+00
360

3-15"OAK
1-15"POPLAR
1-20"BEECH
1-24"PINE
2-15"PINE
1-24"OAK

7-12"PINE
8-12"BEECH
4-12"OAK
1-12"POPLAR

4-12"ELM
1-20"ELM
2-12"POPLAR
4-12"OAK

3-15"OAK
2-12"OAK
7-12"PINE
1-20"OAK

1-12"OAK
4-20"OAK
2-15"OAK
6-12"PINE

GRAPHIC SCALE
0 50 100 150 200

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965			
Nº	REVISIONS	MADE BY	DATE
1	Added Leader lines Pcls 41-1WL & 43WL	J rick	4-3-67

1-12"CHERRY
1-15"OAK
1-12"WALNUT
1-20"HICKORY

5-18"OAK
11-12"OAK
1-12"HICKORY

6-18"OAK
4-12"OAK

1-18"OAK
2-12"POPLAR

3-12"POPLAR
1-12"CHERRY
8-12"OAK
1-18"POPLAR

5-12"OAK
1-12"CHERRY
1-24"OAK
3-18"POPLAR
1-12"HICKORY

5-15"OAK
8-18"POPLAR
1-20"BEECH
1-20"OAK

■ = MONUMENT FOUND
◉ = PROPOSED MONUMENTS

STA. 405+00 TO STA. 420+00

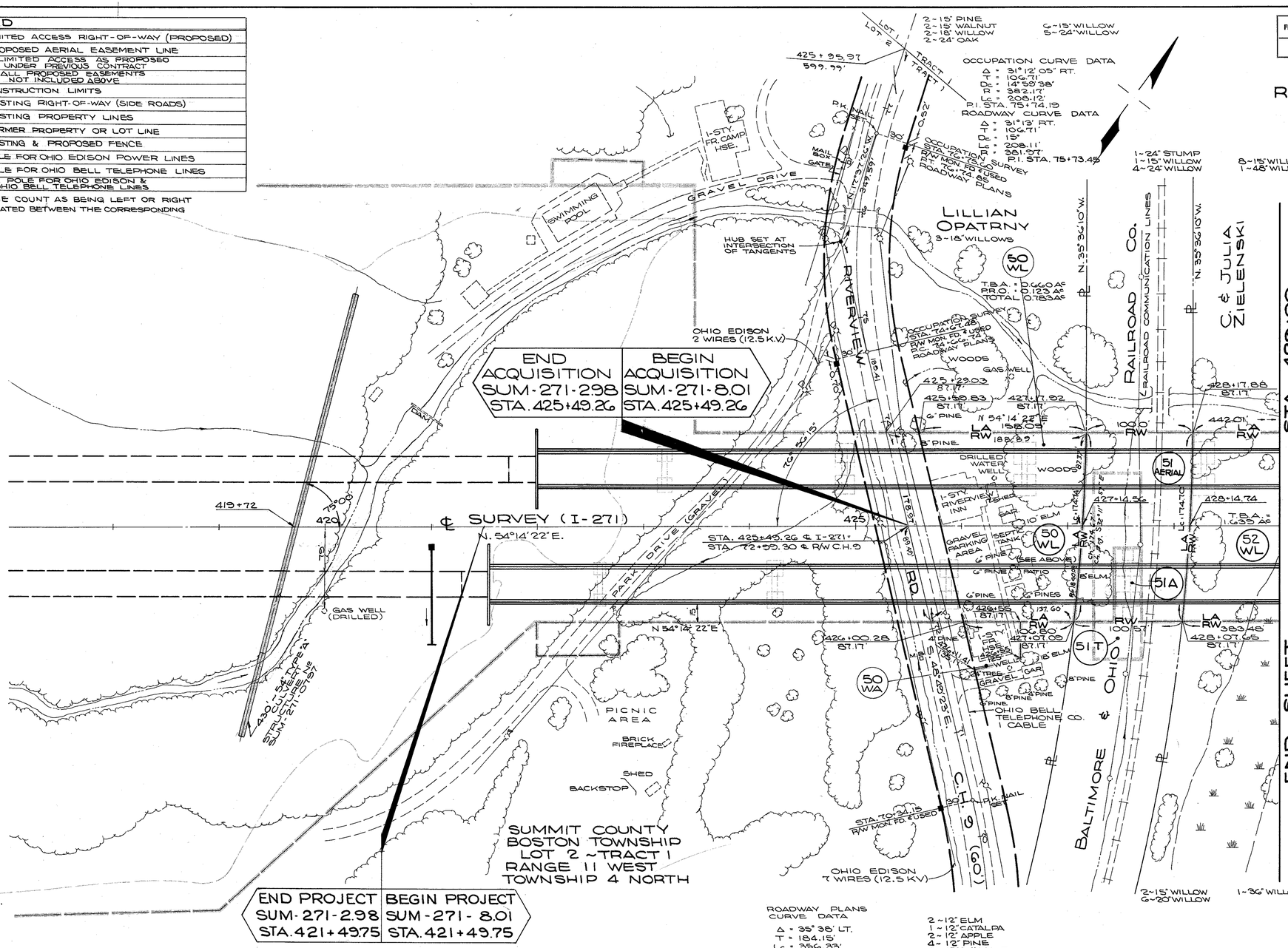
FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-8.01
RIGHT-OF-WAY SHEET

6 / 9

LEGEND	
LA RW	LIMITED ACCESS RIGHT-OF-WAY (PROPOSED)
RW	PROPOSED AERIAL EASEMENT LINE
LA RW	LIMITED ACCESS AS PROPOSED UNDER PREVIOUS CONTRACT
	ALL PROPOSED EASEMENTS NOT INCLUDED ABOVE
	CONSTRUCTION LIMITS
	EXISTING RIGHT-OF-WAY (SIDE ROADS)
℄	EXISTING PROPERTY LINES
	FORMER PROPERTY OR LOT LINE
x x x	EXISTING & PROPOSED FENCE
	POLE FOR OHIO EDISON POWER LINES
	POLE FOR OHIO BELL TELEPHONE LINES
	POLE FOR OHIO EDISON & OHIO BELL TELEPHONE LINES

THE TREES, AS SHOWN, REPRESENT THE COUNT AS BEING LEFT OR RIGHT OF THE CENTER LINE SURVEY AND LOCATED BETWEEN THE CORRESPONDING 100 FOOT STATIONS.



ROADWAY PLANS CURVE DATA
Δ = 35° 38' LT.
T = 184.15'
Lc = 356.33'
Dc = 10°
(CORROBORATED BY CONSULTANTS SURVEY)
P.I. STA. 68+61.97

2 ~ 12" ELM
1 ~ 12" CATALPA
2 ~ 12" APPLE
4 ~ 12" PINE
1 ~ 15" WALNUT
1 ~ 18" CATALPA

2~15" WILLOW
6~20" WILLOW
1~36" WILLOW

GRAPHIC SCALE
0 50 100 150 200

TYPE-I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965

Nº	REVISIONS	MADE BY	DATE
1	Added Leader Line P.I. 50 WL	Irick	4-3-67

STA. 417+00 TO STA. 429+00

E.&E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM-271-8.01

RIGHT OF WAY SHEET 7/9

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

LILLIAN OPATRNY

C. & JULIA ZIELENSKI

RIVERVIEW ROAD

C.H. 9

RAILROAD COMPANY

OHIO BALTIMORE

TO CLEVELAND

TO VALLEY JCT.

N. 48°49'23" W.

N. 35°36'10" W.

N 54°14'22" E

188.89'

70.00'

30.00'

T.C. 1111+68.60

1111+88.37 (B.&O.)
427+87.89
(87.17' LT.)

427+17.22
1111+30.56 (67.17')
(70.00')

428+17.68 (67.17')
1111+85.54 (30.00')

100.00' RW

L 30'

15.00'

72.17'

Lc = 174.74'
R = 1840.08'

Lc = 174.70'
R = 1940.08'

427+25(50')
1112+25.26(50')

427+69(50')
1112+27.75(18.00')

51 AERIAL

T.B.A. 0.365 Ac

106.54'

1111.2

427+14.56
1112+81.55 (70.00')

427+84.69
1113+11.22

71.00'

427+87.77

428+14.74
1112+75.48 (30.00')

425 426 ℄ SURVEY (I-271) 427 428 429

N. 54°14'22"E.

T.C. 49°36'15"

425+49.26

178.97'

175.00'

90°09'28"

N54°14'22"E

Lc = 174.70'
R = 1940.08'

N 35°45'38" W

Brg. N 32°11'57" W
174.67'

Brg. N 32°23'48" W
174.64'

51 A
T.B.A.
0.036 A.

66.17'

137.60'

37.91'

38.09'

100.57'

427+07.09 (67.17')
1113+72.57 (70.00')

1113+64.66
427+77.47
87.17' RT.

51 T
T.B.A.=0.141 AC.

31.83'

44.00'

N 54°14'22"E

427+25 (125')
1114+08.91 (47.79')

427+69 (125')
1114+03.25 (4.06')

P.T.	I-271 STA. & OFFSET	B. & O. STA. & OFFSET
A	427+45.00 21.00' RT.	1113+01.00 38.22' RT.
B	427+69.00 21.00' RT.	1112+99.26 14.28'
C	427+45.00 87.17' RT.	1113+65.14 32.29'
D	427+69.00 87.17' RT.	1113+65.55 8.43'

PARCEL NUMBER	EASEMENT REQUIRED	TOTAL AREA	AREA OF OVERLAP		
			HIGHWAY	AERIAL	TEMPORARY
51 AERIAL	AERIAL	17,473 S.F.	1,588 S.F.		4,447 S.F.
51 A	HIGHWAY	1,588 S.F.		1,588 S.F.	
51 T	TEMPORARY FOR CHANNEL RELOCATION	6,112 S.F.		4,447 S.F.	

GRAPHIC SCALE
0 20 40 60 80 100

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965

Nº	REVISIONS	MADE BY	DATE
1	Added Dimensions & Overlap Revised.		10-29-65

BALTIMORE & OHIO RAILROAD PLAT

K & E.

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-8.01
RIGHT-OF-WAY SHEET 8/9

MATCH TO R/W SHEET 4 OF 7

1~36" STUMP
3~18" ELM
3~36" ELM

1~24" STUMP
4~15" ELM
1~15" SYCAMORE
1~24" WILLOW

2~12" ELM
1~15" APPLE
6~20" SYCAMORE

2~12" ELM
1~15" APPLE
1~15" SYCAMORE

1~12" CHERRY
1~12" ELM
1~15" APPLE
2~18" WILLOW

2~18" HICKORY
3~18" WALNUT

3~18" HICKORY

3~12" POPLAR

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 1 ~ TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

C. & JULIA ZIELENSKI

LOT 1
LOT 2

VEGETATION LINE 7

EAST LINE LOT 1

RIVER

WEST LINE LOT 45

CANAL

VEGETATION LINE 1

GRAVEL DRIVE

POINT OF ACCESS
STA. 430+40 LT.
12' WIDTH
(UNDER BRIDGE ONLY)

POINT OF ACCESS
STA. 434+34 LT.
12' WIDTH
(UNDER BRIDGE ONLY)

END PROJECT
SUM.~271-8.01
STA. 436+98.25

BEGIN PROJECT
SUM.~271-8.29
STA. 436+98.25

3~18" WILLOWS
1~24" HICKORY
1~36" MAPLE
1~48" OAK

8~15" WILLOW
2~18" SYCAMORE
1~24" OAK

1~18" SYCAMORE

441+00
340

STA. 429+00

STA. 441+00

N. 54°14' 22" E.

N. 30°58' 15" E.
544.27'

CONSTRUCTION LIMITS

1 STY. FRAME HSE.

GAR.

GRAVEL

PINE TREES

RESIDENCE DRIVE (ABANDONED)

52 WL
T.B.A.
1.639 Ac

53 WL
T.B.A.
0.636 Ac

℄ SURVEY (I-271)

432+89.62 ℄ Survey I-271
1013+84.84 ℄ Sillima's Survey of Ohio Canal
1013+55.35

END WORK
SUM.~271-8.01
STA. 438+00

54 WL
EDNA A. MABRY
T.B.A. = 15.518 Ac

BEGIN SHEET

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 2 ~ TRACT 1
RANGE 11 WEST
TOWNSHIP 4 NORTH

EAST LINE LOT 2

CUYAHOGA

VEGETATION LINE 1

OHIO

POINT OF ACCESS
STA. 434+34 RT.
12' WIDTH
(UNDER BRIDGE ONLY)

PASTURE

BARBED WIRE FENCE

FIELD DRIVE

1032'
N 68° 32' 42" E

LA RW

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 45
RANGE 11 WEST
TOWNSHIP 4 NORTH

END SHEET

MATCH TO R/W SHEET 7 OF 7

1~24" OAK

4~12" ELM
3~18" ELM
2~36" SYCAMORE

1~18" HICKORY
1~18" WALNUT

2~12" OAK
3~12" APPLE
2~15" ELM
1~30" ELM

2~12" SYCAMORE
3~15" CHERRY
4~20" CHERRY
2~24" HICKORY

5~12" ELM
1~12" SYCAMORE
1~24" HICKORY

3~12" ELM
1~18" ELM
2~20" HICKORY
1~30" HICKORY
1~30" OAK

2~12" CHERRY
1~12" APPLE
2~18" OAK
1~18" SYCAMORE

GRAPHIC SCALE
0 50 100 150 200

TYPE - I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965 RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965			
No.	REVISIONS	MADE BY	DATE

STA. 429+00 TO STA. 441+00

E & E

FED. RD.	STATE	PROJECT	
2	OHIO		

SUM.-271-8.01
RIGHT-OF-WAY SHEET 9/9

MATCH TO R/W SHEET 6 OF 7

BEGIN SHEET

STA. 441+00

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 44
RANGE 11 WEST
TOWNSHIP 4 NORTH

SUMMIT COUNTY
BOSTON TOWNSHIP
LOT 45
RANGE 11 WEST
TOWNSHIP 4 NORTH

EDNA A. MABRY
54 WL
T.B.A. = 15.518 Ac

BEN G. & ANN M. LAHOSKI
55 WL
T.B.A. = 4.137 Ac
P.R.O. = 0.680 Ac

BEN G. & ANN M. LAHOSKI
55 WL
T.B.A. = 4.137 Ac
P.R.O. = 0.680 Ac

5~12" APPLE
5~15" APPLE
1~24" SYCAMORE
1~24" WALNUT
1~24" HICKORY

2~15" WALNUT
1~18" SYCAMORE
2~24" MAPLE
1~60" OAK

5~15" BEECH
4~15" OAK
1~18" HICKORY
4~24" BEECH
1~24" CHERRY

1~24" STUMP
5~18" ELM

1~15" MAPLE
2~18" ELM
2~24" OAK
4~25" BEECH

2~20" OAK
2~24" BEECH
2~24" POPLAR
3~24" ELM

6~18" ELM
1~24" BEECH
2~24" SYCAMORE

2~18" MAPLE

1~15" ELM
1~15" PINE
1~18" OAK

5~12" APPLE
5~15" APPLE
1~24" SYCAMORE
1~24" WALNUT
1~24" HICKORY

4~12" APPLE
2~15" POPLAR
5~20" OAK

5~12" BEECH
5~12" OAK
3~20" OAK

3~12" ELM
5~20" OAK
1~30" POPLAR
1~36" POPLAR

5~12" BEECH
2~12" CHERRY
9~15" ELM
1~15" MAPLE
2~15" POPLAR

4~15" BEECH
2~20" BEECH

2~12" OAK
4~12" BEECH
1~18" BEECH
2~20" ASH

8~12" BEECH
4~15" OAK
4~15" ELM

1~12" CHERRY
1~12" SYCAMORE
2~12" OAK
1~20" OAK

441+00
330
LOT 44
LOT 45
LA RW
430.81'
N 74°02'27" E
445+00
150
204.03'
N 54°14'22" E
N 89°25'33" E.
CONSTRUCTION LIMITS
154.48'
445
N. 54°14'22"E.
445+00
230
1032'
N 68°32'42" E
LA RW
443.12'
N 23°58'30" E
LA RW
445+00
230

℄ SURVEY (I-271)
448+50
446+21.86
STA. 450+23.50 ℄ I-271 =
STA. 17+39.69 ℄ R/W C.H. #32
450
453+09.64
261.73' (D)
N 49°54'53" E
I.P. FD.
I.P. FD.
I.P. FD.
I.P. FD.
379.12' (D)
N 56°55'53" E
452+05.44
237.21'
448+26.48 (248.40)
14+16.06
STR. #271.0852
328+36
458.75'
485.43' LAHOSKI DEED
484.43' MABRY DEED
BOSTON MILLS RD.
(C.H. 32)
N 68°38'07" W
447+73.48 (293.09)
13+48.23
BOSTON MILLS RD.
(C.H. 32)
66' R/W
24" MAPLE
12" MAPLE
24" ELM
BARBED WIRE
FENCE
N 32°07'W.
133.73'
N 32°07'W.
328.41'
447+04.03
13+78.65
BARN
WELL
SHED
SHED
SHED
135'±
DRILLED WATER WELL
18" MAPLE
TWIN GRAVEL DRIVE
GRAVEL (ABANDONED)
WELL (DRILLED)
SEPTIC TANK
OUTHOUSE
BARN
16" STY
16" MAPLE
D.C. 15.46 ROADWAY PLANS
OHIO EDISON 4 WIRES 1 CABLE
RT 18°33.4' ROADWAY PLANS
BARBED WIRE
FENCE
SWING BARN
GATE
N. 22°03'07" W.
113.83
122.25
449+00
196.59
449+96.48 (264.77')
20+09.24
BOSTON MILLS RD. (C.H. 32)
76°02'20" TO LOC. TAN OF E-R/W
CONSTRUCTION LIMITS
13°57'40" SKEW (ROADWAY)
S 23°58'07" E
147.45' (D)
S 23°58'07" E
127.10' (D)
SCALE: 1"=100'
CONSTRUCTION LIMITS

ROADWAY PLANS
CURVE DATA
Δ = 62°30' RT.
T = 193.17'
Lc = 347.22'
Dc = 18°
(CORROBORATED BY CONSULTANTS SURVEY)
P.I. STA. 17+39.36

END ACQUISITION	BEGIN ACQUISITION
SUM-271-8.01	SUM-271-8.29
STA. 453+09.64	STA. 453+09.64

GRAPHIC SCALE
0 50 100 150 200

TYPE - I FUNDS

PRELIMINARY SUBMITTAL DATE: MARCH 24, 1965
RIGHT OF WAY COMPLETION DATE: AUG. 20, 1965

No.	REVISIONS	MADE BY	DATE
1	Deleted Pcl. 55 WL, Combined with 55 WL.		11-9-65

STA. 441+00 TO STA. 453+00

K.S.E.

MICROFILMED
AUG 28 1987

GENERAL INFORMATION

INTRODUCTION

The project consists of the construction of 0.6 miles of I.R. 271 - 8.01, beginning approximately 1.0 mile east of the intersection of the Ohio Turnpike and proposed Sum I.R. 271 - 2.98, extending easterly and terminating 0.2 miles west of the intersection of Boston Mills Road and proposed Sum I.R. 271 - 8.29. Included in this report are soil profiles and plan views showing location of exploratory borings.

Proposed grade indicates a maximum of 60 feet and a maximum fill of 100 feet.

GEOLOGY AND OBSERVATIONS OF THE PROJECT

The alignment traverses a glaciated, rolling and deeply dissected portion of the Allegheny Plateau, where thin to deep glacial drift overlies shale and sandstone bedrock, of upper Mississippian and Pennsylvanian age.

EXPLORATION

Exploratory borings were made by means of truck-mounted mechanical soil auger, hand auger (in areas of difficult access), and rotary type drilling rig, between September 2 and December 20, 1964.

INVESTIGATIONAL FINDINGS

Materials occurring immediately below proposed grade are predominantly comprised of sandy silts (A-4a and A-4b) and silt clays (A-6a), generally having low moisture contents and moisture contents in the lower portion of the plastic range.

Frost susceptible silts were encountered within three feet below proposed grade at mainline station 406+00.

Wet materials occasionally containing various amounts of organic material were encountered at mainline stations 403 + 00, 406 + 00, 417 + 20, 439 + 00, and 442 + 00.

Elastic clays were encountered at mainline stations 403 + 00 and 417 + 20.

LEGEND FOR PROJECT

DESCRIPTION	H.R.B. CLASS	OHIO CLASS	% AGG	% C. SAND	% F. SAND	% SILT	% CLAY	LIQUID LIMIT	PLASTICITY INDEX	WATER CONTENT
Gravel and/or stone fragments	A-1-a(0)	A-1-a	64	18	8	- 10 -		NP	NP	10
Gravel and/or stone fragments with sand	A-1-b(0)	A-1-b	38	28	21	6	7	NP	NP	10
Coarse and fine sand	-----	A-3a	0	45	27	10	18	NP	NP	8
Gravel and/or stone fragments with sand and silt	A-2-4(0)	A-2-4	57	5	6	16	16	30	8	17
Gravel and/or stone fragments with sand, silt, and clay	A-2-6(0)	A-2-6	48	14	16	10	12	31	13	14
Sandy silt	A-4(4)	A-4a	24	5	15	32	24	25	5	15
Silt	A-4(8)	A-4b	1	1	4	62	32	27	3	22
Silt and clay	A-6(9)	A-6a	6	3	5	37	49	33	12	18
Silty clay	A-6(10)	A-6b	2	3	5	31	59	38	16	18
Elastic clay	A-7-5(10)	A-7-5	19	2	7	35	37	45	15	32
Clay	A-7-6(11)	A-7-6	4	2	3	36	55	42	16	21
Weathered indurated clay			VISUAL CLASSIFICATION							
Weathered shale			VISUAL CLASSIFICATION							
Weathered sandstone			VISUAL CLASSIFICATION							
Shale			VISUAL CLASSIFICATION							
Sandstone			VISUAL CLASSIFICATION							
Various other materials			VISUAL CLASSIFICATION							

Sod and/or Topsoil=X'=Approximate depth.

Auger boring - plan view.

Drive sample and or core boring - plan view.

Auger boring plotted to vertical scale only.

Drive sample and or core boring plotted to vertical scale only.

NOTE: Figures beside borings indicate water content in percent. e.g. 15

● Water content nearly equal to or greater than liquid limit.

⊖ Indicates a non-plastic material with a high water content.

——W Free water.

Number of blows for "Standard Penetration" test.
X=number of blows for first 6 inches.
Y=number of blows for second 6 inches.

B Indicates broken rock interval.

SUMMARY OF SOIL TEST DATA (Cont'd)

NOTE: NP shown in Liquid Limit and Plasticity Index columns incicates that the material is non-plastic.
*Denotes sample taken at or near grade.

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
403+00	CL	0.4-3.0	0	3	12	60	25	47	8	51	A-4b
		3.0-5.0	38	5	19	25	13	42	10	40	A-7-5
406+00	100'Rt	5.0-6.0	11	5	10	34	40	28	11	17	A-6a
		10.0-11.0	0	4	10	58	28	28	7	18	A-4b
		15.0-16.0	14	5	8	42	31	30	11	17	A-6a
		20.0-21.0	0	8	8	58	26	29	9	22	A-4b
		25.0-26.0	7	5	8	51	29	42	11	20	A-6a
		30.0-31.0	19	4	6	36	35	27	11	15	A-6a
		35.0-36.0	7	2	4	43	44	30	11	20	A-6a
		40.0-41.0	27	2	3	36	32	28	11	20	A-6a
		45.0-46.0	0	1	1	82	16	28	N	22	A-4b
		50.0-51.0	0	2	2	80	16	28	7	18	A-4b
		55.0-56.0	0	1	0	71	28	NP	NP	25	A-4b
		60.0-61.0	0	2	1	58	37	29	6	23	A-4b
		65.0-66.0	0	0	2	70	28	NP	NP	9	A-4b
		70.0-71.0	Gray Sand and Silt							24	Visual
		75.0-76.0	0	2	4	75	19	NP	NP	21	A-4b
		80.0-81.0	0	1	1	82	17	NP	NP	21	A-4b
		85.0-86.0	0	2	6	75	17	NP	NP	16	A-4b
408+00	CL.	0.0-4.0	0	8	13	27	52	47	23	19	A-7-6
411+00	CL.	0.0-3.0	Light-Brown Clay								Visual
414+00	43'Lt	0.0-3.0	Brown Clay								Visual *
417+00	CL.	0.3-3.5	Brown Clay								Visual *
417+20	115'Lt	0.0-4.0	10	1	17	59	23	73	25	62	A-7-5

STATION & OFFSET		DEPTH FROM-TO	% AGG.	% C.S.	% F.S.	% SILT	% CLAY	L.L.	P.I.	% W.C.	SHTL CLASS.
439+00	CL	0.0-4.0	41	8	7	21	23	26	7	12	A-4a
		4.0-7.0	0	1	3	55	41	33	12	20	A-6a
		7.0-11.0	0	0	1	87	12	NP	NP	26	A-4b
		11.0-17.0	0	1	0	61	38	NP	NP	24	A-4b
		17.0-22.0	0	0	1	50	49	30	9	24	A-4b
		22.0-28.0	0	1	0	73	26	NP	NP	23	A-4b
		28.0-30.0	0	0	11	77	12	NP	NP	16	A-4b
442+00	160'Lt	0.5-4.0	50	29	14	- 7 -		NP	NP	4	A-1-a
		4.0-9.0	0	3	6	27	64	37	15	16	A-6a
		9.0-11.5	0	1	3	39	57	36	11	18	A-6a
		11.5-13.0	0	46	27	10	18	NP	NP	8	A-2a
		13.0-15.5	0	1	1	79	19	NP	NP	24	A-4b
		15.5-21.0	0	1	1	31	67	37	15	26	A-6a
		21.0-27.0	0	0	1	36	63	34	12	23	A-6a
		27.0-30.0	0	1	2	39	58	32	11	26	A-6a
442+00	220'Rt	0.0-4.0	0	4	9	51	36	28	6	17	A-4b
		4.0-7.0	0	9	45	22	24	NP	NP	17	A-4a
		7.0-10.0	56	23	11	- 10 -		NP	NP	9	A-1-a
		10.0-13.0	0	2	4	61	33	NP	NP	20	A-4b
		13.0-18.0	0	1	2	29	68	36	12	19	A-6a
		18.0-21.0	15	3	14	48	20	NP	NP	23	A-4a
		21.0-25.0	0	0	2	77	21	NP	NP	20	A-4b
		25.0-30.0	0	0	1	25	74	36	11	27	A-6a

SOIL PROFILE

SUMMIT COUNTY
SUM- 271-7.65

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

1/11

NOTE: INFORMATION SHOWN BY THIS SUBGRADE PROFILE WAS OBTAINED SOLELY FOR USE IN ESTABLISHING DESIGN CONTROLS FOR THE PROJECT. THE STATE OF OHIO DOES NOT GUARANTEE THE ACCURACY OF THIS DATA AND IT IS NOT TO BE CONSTRUED AS A PART OF THE PLANS GOVERNING CONSTRUCTION OF THE PROJECT.

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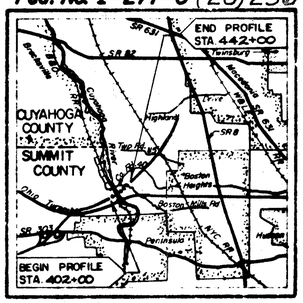

LOCATION MAP

Recon - P.D.B. - 10/27/64
Drilling - Auger - L.M.D., A.J.P. - 11/1/64 to 11/13/64, 12/11/64 to 12/20/64.
Core - D.W.B., K.J.F. - 11/13/64 to 12/9/64.
Drafting - R.L.M., R.E.L., C.L.I. - 2/16/65

SOIL PROFILE

SUMMIT COUNTY

SUM- 271- 7.65

OHIO STATE HIGHWAY TESTING LABORATORY
1620 W. BROAD ST. COLUMBUS 23, OHIO

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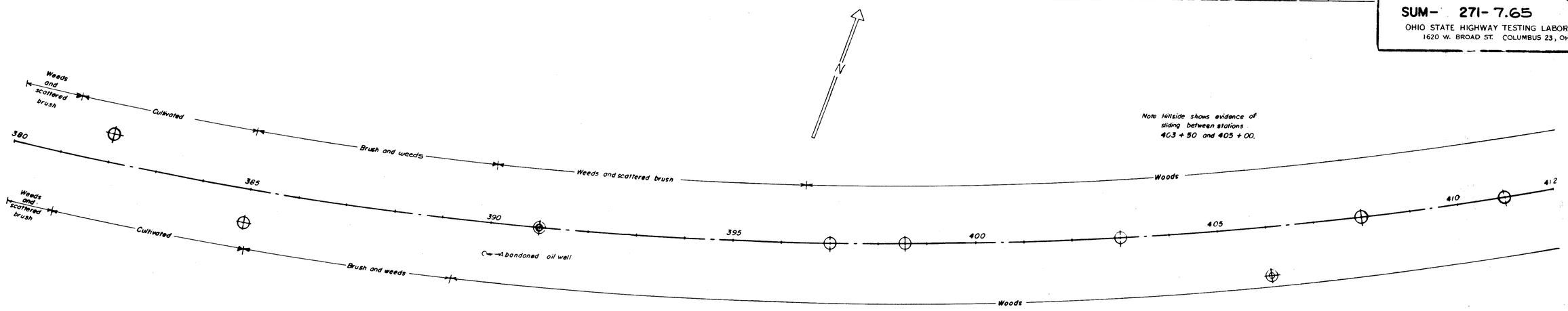
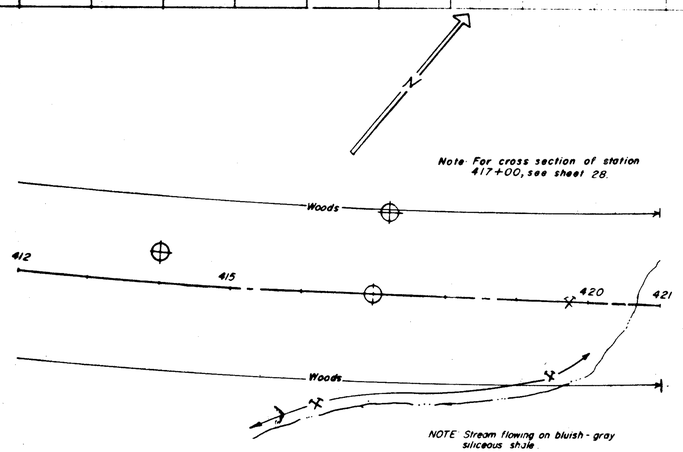
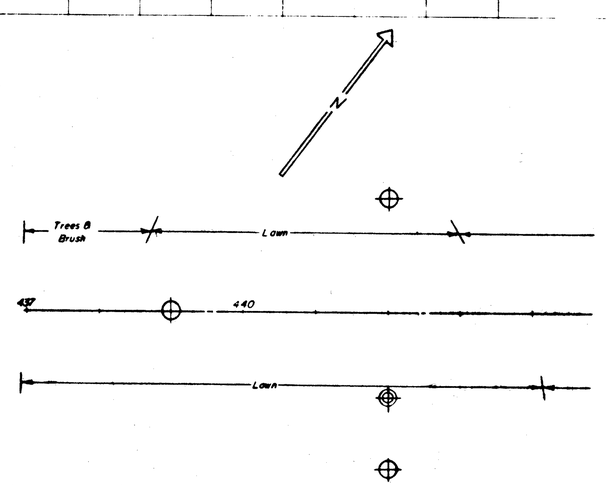




NOTE:
For profile and soil investigation results, Sta. 421+00 to Sta. 437+00, refer to - Structure Foundation Report.



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SUMMIT COUNTY
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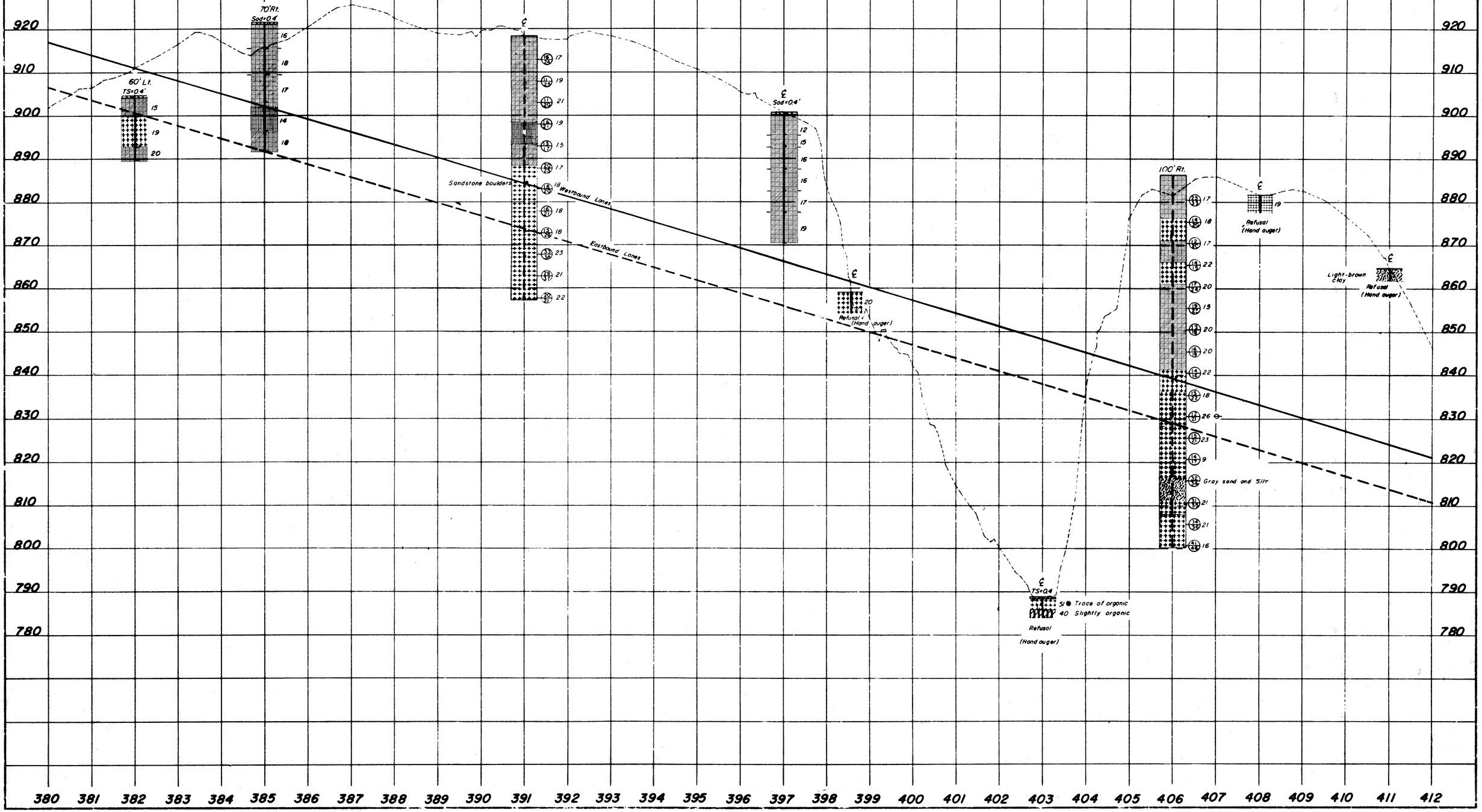

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SUM- 271-7.65

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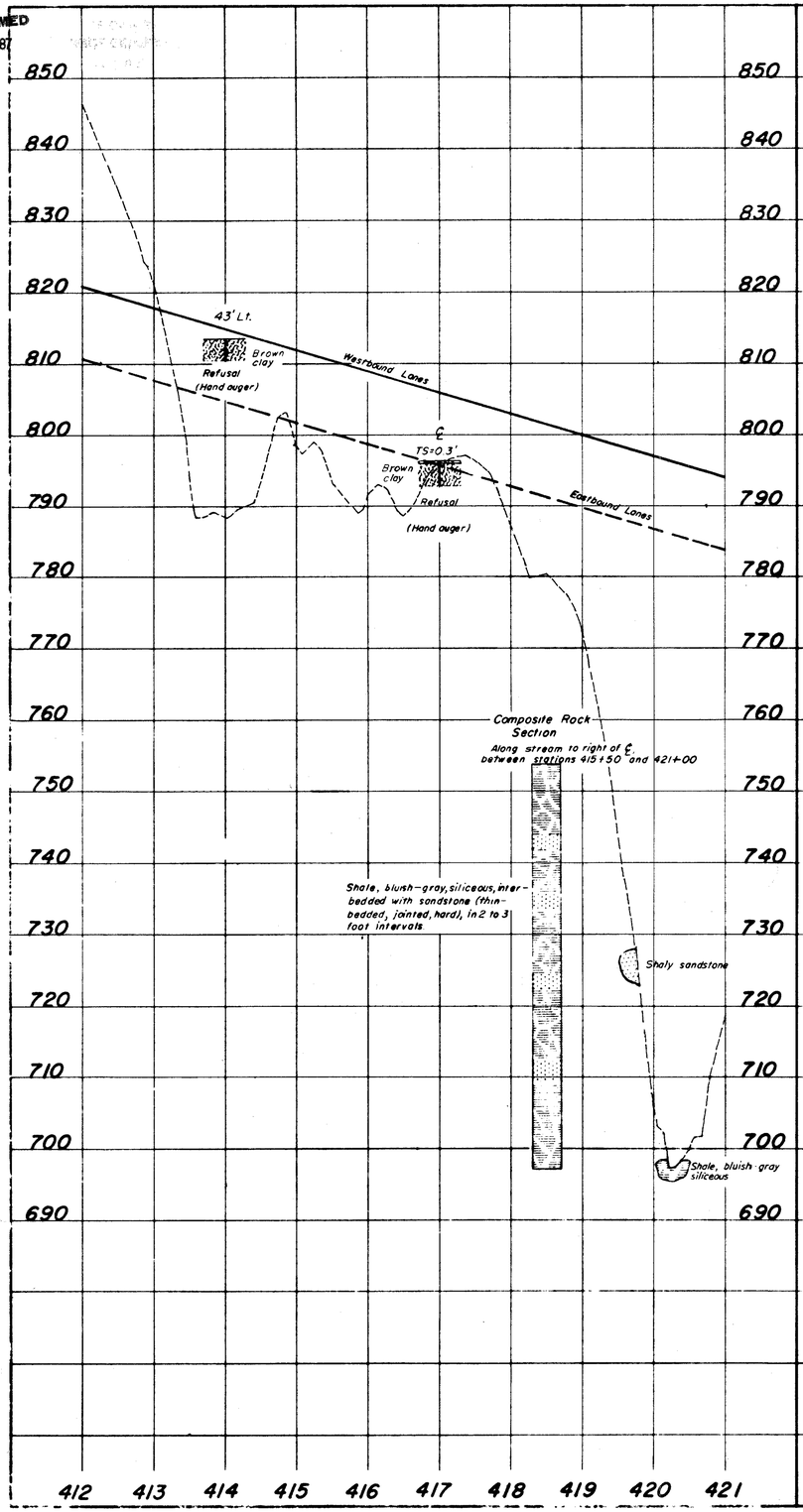
1620 W. BROAD ST. COLUMBUS 23, OHIO



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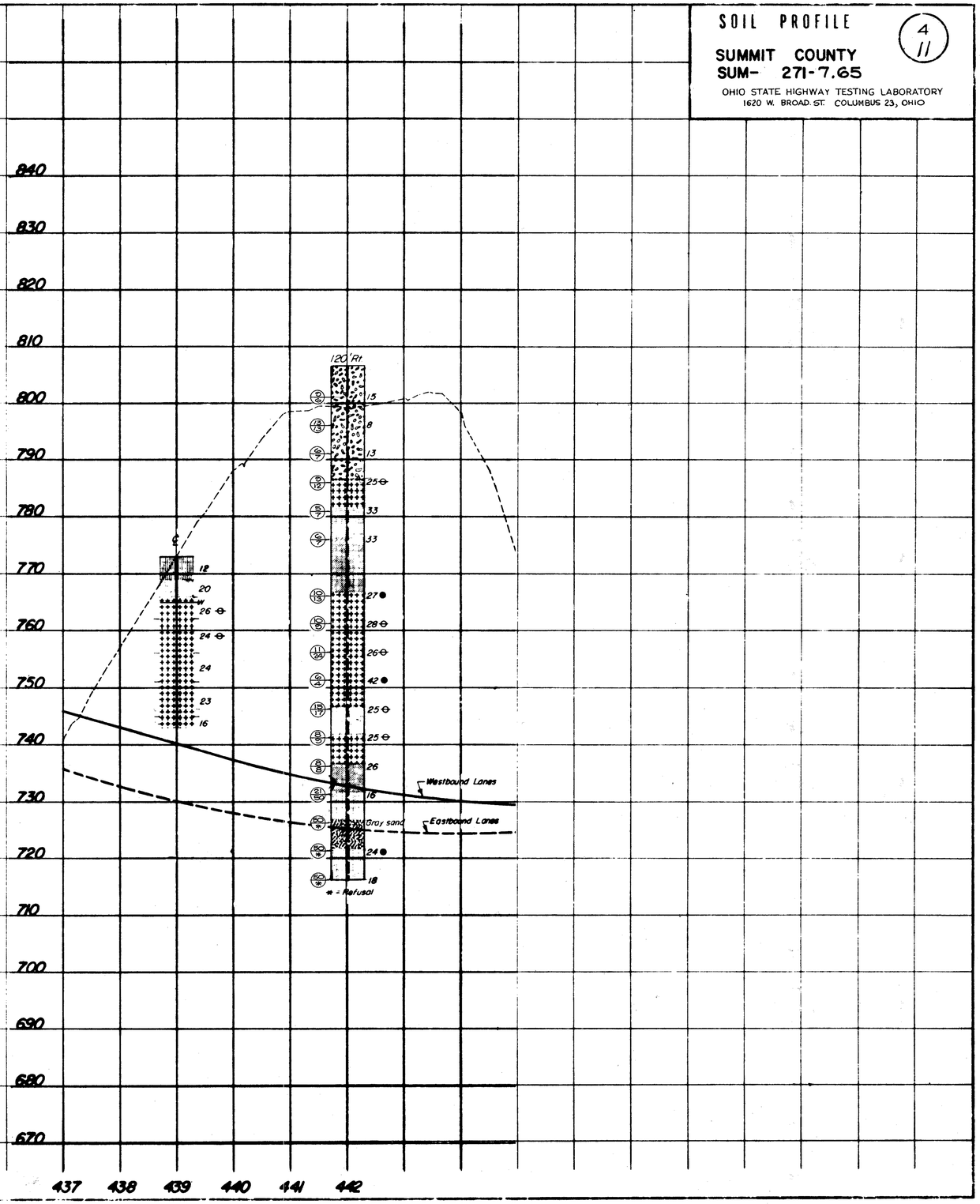

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GEOLOGY OF THE SITE

The structure site is located between the Cuyahoga River valley walls, on the flood plain, and over the Cuyahoga River. Moderately deep and deep glacial-derived soils overlie bedrock, of Mississippian age.

EXPLORATION

The exploration consisted of one drive sample boring, five drive sample-core borings, and twenty-five drive rod penetration tests, made between August 11 and September 4, 1964.

INVESTIGATIONAL FINDINGS

Borings encountered dense to very dense unstratified silts with scattered intervals of gravels, sands, clays and boulders. The borings were terminated from 20 to 43-foot depths, elevations 707 to 619 feet, after penetrating in excess of 5 feet below bedrock surface, with the exception of boring number B-13, which terminated at 81-foot depth, elevation 632 feet, after penetrating in excess of 20 feet of material requiring in excess of 50 blows per foot in the standard penetration test.

Following is a table listing the substructure units, as shown on the site plan, and the approximate elevation of bedrock below each unit - as determined by tests.

Substructure Unit	Approximate Elevation of Bedrock Surface Left Structure	Right Structure
Rear Abutment	710'	below 740'
First Pier	700'	710'
Second Pier	685'	700'
Third Pier	665'	685'
Fourth Pier	656'	665'
Fifth Pier	650'	650'
Sixth Pier	645'	650'
Seventh Pier	633'	645'
Eighth Pier	below 640'	633'
Ninth Pier	--	below 640'
Forward Abutment	below 630'	below 630'

Rod soundings met very gradual increase in penetration resistance with increase in depth and were terminated upon encounter with medium-high resistance and refusal to penetration at 7 to 43-foot depths, elevations 740 to 630 feet, considered to be on dense or very dense intervals of gravels, sands, or silts, as revealed by the borings.

Rock points encountered in rod sounding holes numbers 14 and 15, at elevations 654 and 653 feet.

LEGEND

- Auger Boring Location - Plan View.
- Press and/or Drive Sample and/or Core Boring Location - Plan View.
- Drive Rod Penetration Resistance Sounding Location - Plan View.
- (R) Electrical Resistivity Probe Location - Plan View.
- Footing / Capped Pile
- Footing on Pile
- (R) Electrical Resistivity Probe - Profile.
- TR Top of Rock
- Interval of Relatively High Moisture.
- TD Total Depth
- Horizontal Bar on Boring Log Indicates the Depth the Sample Was Taken.
- X/Y Figures Beside the Boring Log in Profile Indicate the Number of Blows For Standard Penetration Test. X = Number of Blows for First 6 Inches. Y = Number of Blows for Second 6 Inches.
- Drive Rod Penetration Resistance Sounding Log - Profile.
- Casing
- Resistance "R" < 10,000 lbs.
- Resistance "R" > 10,000 lbs.
- Z Indicates Final Measurement of Penetration, in Inches.
- W Indicates Free Water Elevation.
- Indicates Static Water Elevation.

SYMBOLS OF ROCK TYPES

- Coal
- Weathered Indurated Clay
- Indurated Clay
- Weathered Shale
- Shale
- Weathered Sandstone
- Sandstone
- Leached Dolomite
- Dolomite
- Leached Limestone
- Limestone

GENERAL INFORMATION

Drive Rod Penetration Sounding Tests

Drive rod penetration resistance tests constitute driving a 1.315-inch diameter steel rod, with a 45° cone point, into the ground, using a 122-pound drop-hammer with a free fall of five feet. At one or two-foot depth intervals, a measurement is taken to determine the amount of penetration achieved in three hammer drops. This reading is converted to an empirical value for capacity "R", in thousands of pounds (which is a measure of both the point resistance and frictional resistance on the rod), by using charts prepared by the Ohio Department of Highways, Bureau of Bridges, on the basis of correlation study of rod penetration with past performance of pile driving. For interpretation, a graph is prepared by plotting the value R against the depth at which the reading was taken, and connecting the plotted points. The curve so obtained reflects the density of subsurface materials in a manner that can be readily compared with data from similar tests at other locations on the structure site. From this comparison, the overall uniformity of subsurface condition may be evaluated.

Drive Sample Borings - Drive - Press Sample Borings

Drive sample borings are made by means of a rotary-type drill rig, employing a 2" O.D., 1-3/8" I.D. sampler, at 2-1/2 and/or 5-foot depth intervals, driven by means of a 140-pound drop-hammer, with a free fall of 30 inches. The number of blows required to drive the sampler 12 inches is considered the standard penetration test.

Drive-press sample borings are made by means of a rotary-type drill rig employing a 2" O.D., 1-3/8" I.D. drive sampler, and 3" O.D. thin-wall press sampler. The press sampler is advanced by continuous uniform pressure, applied by the drill rig.

The boring log sheets show a graphic plot of the information obtained, including depth and elevation of the sample, number of blows for the standard penetration tests in two 6-inch increments, depth of press samples, field sample number, sample description - based on laboratory tests and the Casagrande AC classification system - and gradation, plasticity, and moisture content determinations. Results of strength and consolidation testing appear on separate enclosures.

At depths where materials are bouldery or gravelly to the extent that the sampler can not be driven, a wash sample is procured for visual classification, in order to determine the general character of the material. These samples are not considered sufficiently representative to warrant laboratory testing.

Particle Size Definitions

Boulders	Cobbles	Gravel	Coarse Sand	Fine Sand	Silt	Clay
	8" 3"	2.0mm (No. 10 sieve)	0.42mm (No. 40 sieve)	0.074mm (No. 200 sieve)	0.005mm	

LOG OF BORING

Date Started 9-3-64 — Sampler Type SS — Dia. 1 3/8" — Water Elev. ---
Date Completed 9-4-64 — Casing: Length 30' — Dia. 3 1/2" — Surface Elev. 751.7'
Boring No. B-4 — Station & Offset 422+50, 40' Lt (REAR ABUTMENT)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTC Class.
751.7	0														
	2														
746.7	4														
	6	7/13			Brown Silt and Clay	1	0	4	7	51	38	35	14	22	
744.2	8	15/21			Brown and Gray Silt and Clay	2	0	2	4	62	32	31	11	17	
741.7	10	11/16			Gray Silt and Clay	3	0	3	5	47	45	26	11	19	
739.2	12	9/14			Gray Clayey Silt	4	0	4	9	49	38	29	10	21	
736.7	14	12/19			Gray Silt	5	0	1	3	48	48	24	5	17	
734.2	16	9/20			Brown and Gray Clayey Silt	6	0	4	5	41	50	32	10	19	
731.7	18	15/23			Gray Clayey Silt	7	7	6	6	37	44	26	7	17	
	20														
726.7	22														
	24	17/31			Gray Gravelly Silt	8	19	5	4	36	36	26	8	18	
721.7	26														
	28														
	30	14/21			Gray Clayey Silt	9	5	3	4	39	49	28	8	16	
716.7	32														
	34	50*													
	36	(0.4')			Gray Gravelly Silt	10	16	6	6	39	33	NP	NP	9	
711.7	38														
711.3	40	50* (0.2')			Gray Silt and Shale Fragments	11	32	2	1	18	47	29	6	14	
	42				TOP OF ROCK										
	44		4.7	0.3	Shale, gray, siliceous, argillaceous, fissile, medium-firm, with few sandstone stringers. Core loss 2%.										
706.7					BOTTOM OF BORING										

*REFUSAL

LOG OF BORING

Date Started 8-28-64 — Sampler Type SS — Dia. 1 3/8" — Water Elev. ---
Date Completed 9-1-64 — Casing: Length --- — Dia. ---
Boring No. B-9 — Station & Offset 424+90, 71' Rt (THIRD PIER) — Surface Elev. 694.4'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTC Class.
694.4	0														
	2														
689.4	4														
	6	10/12			Brown Silt	1	0	3	13	53	31	23	2	18	
686.9	8	50/*			Brown Clay Shale Fragments	2	V	I	S	U	A	L		14	
684.4	10														
	12				TOP OF ROCK										
	14		4.8	0.2											
	16				Shale, gray, siliceous, argillaceous, fissile, medium-firm, slightly weathered and broken intervals. Core loss 2%.										
	18														
	20		5.0	0.0											
674.4					BOTTOM OF BORING										

*REFUSAL

LOG OF BORING

Date Started 9-8-64 — Sampler Type SS — Dia. 1 3/8" — Water Elev. ---
Date Completed 9-9-64 — Casing: Length 13' — Dia. 3 1/2" — Surface Elev. 668.9'
Boring No. B-12 — Station & Offset 428+10, 41' Lt (FOURTH PIER)

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	% Agg	% C.S.	% F.S.	% Silt	% Clay	L.L.	P.I.	W.C.	SHTC Class.
668.9	0														
	2														
663.9	4														
	6	3/5			Brown and Gray Gravelly Sandy Silt	1	25	7	19	23	26	27	6	24	
658.9	8														
	10	5/6			Brown Silty Sandy Gravel	2	35	9	18	22	16	22	5	17	
656.4	12														
	14				TOP OF ROCK										
	16		1.8	0.2											
	18				Shale, gray, slightly siliceous, argillaceous, fissile, medium-firm, with slightly weathered intervals. Core loss 3%.										
	20														
	22		4.8	0.2											
	24		5.0	0.0											
643.9					BOTTOM OF BORING										

*REFUSAL

NOTE: Information shown by this subsurface investigation was obtained solely for the use in establishing design controls for the project. The State of Ohio does not guarantee the accuracy of this data and it is not to be construed as a part of the plans governing construction of the project.

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD STREET, COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-271-0802 L&R
OVER CO. RD. 9 & CUYAHOGA RIVER
SEC. SUM-271-7.65

CHECKED BY	REVIEWED BY	DATE
L.N.L.	R.D.R.	9/23/64

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SUM-271-7.65

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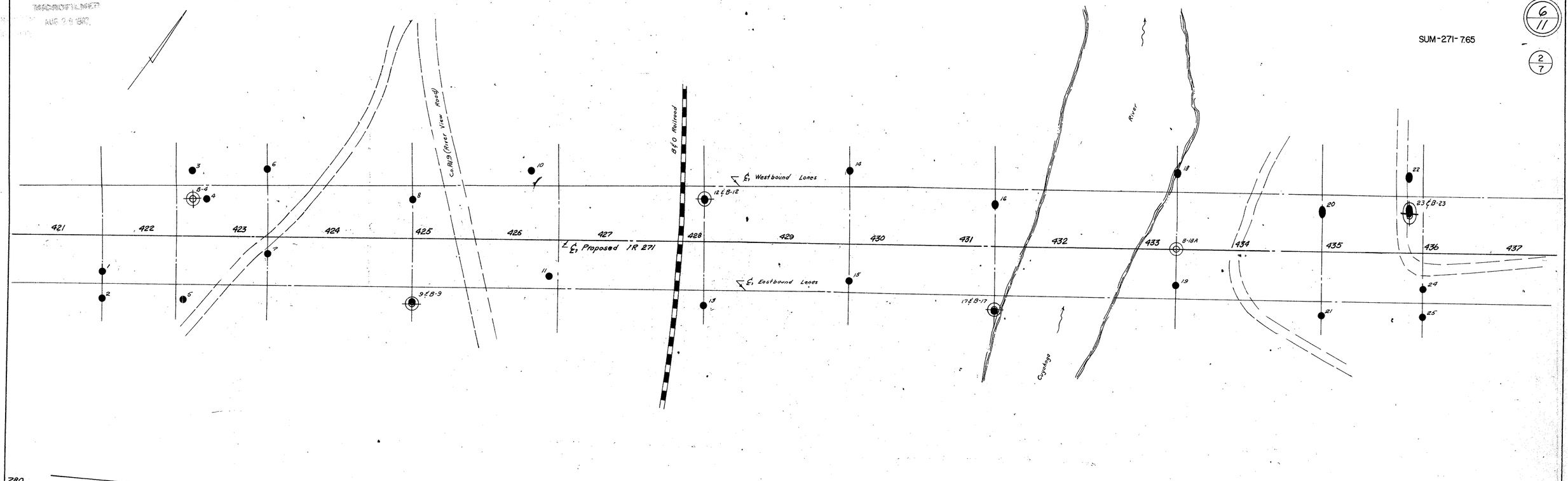

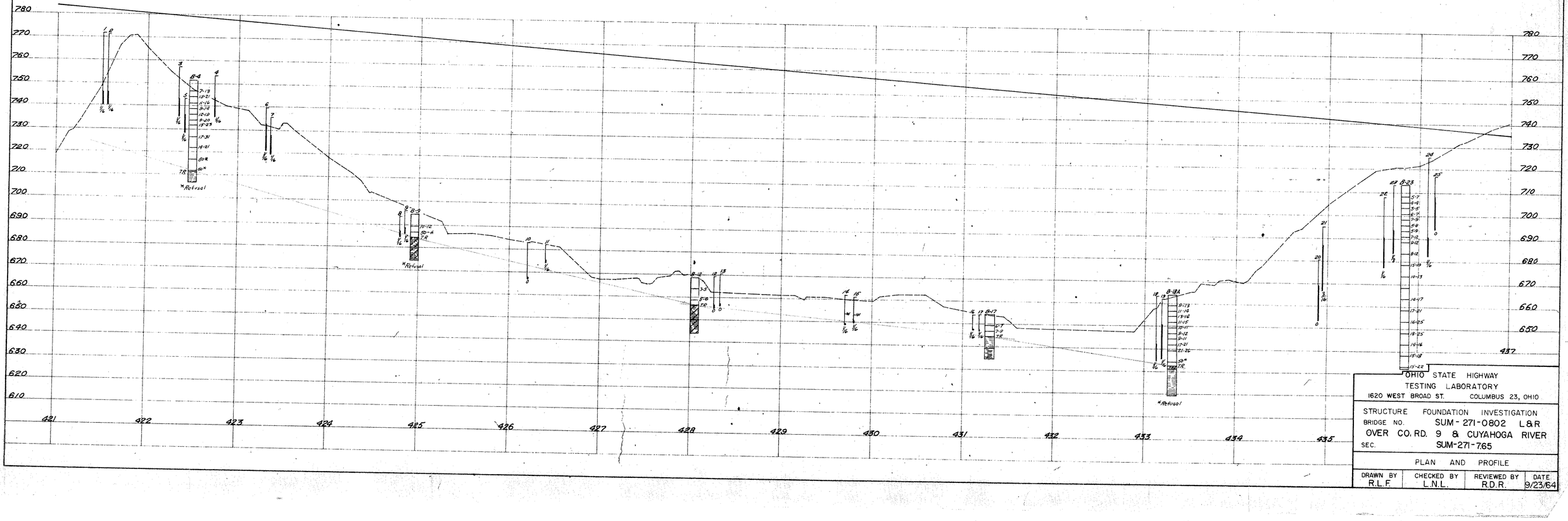

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-271-0802 L&R
OVER CO. RD. 9 & CUYAHOGA RIVER
SEC. SUM-271-7.65

PLAN AND PROFILE

DRAWN BY	CHECKED BY	REVIEWED BY	DATE
R.L.F.	L.N.L.	R.D.R.	9/23/64

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LOG OF BORING

Date Started [illegible] Sampler Type [illegible] Dia. [illegible]
Date Completed [illegible] Casing: Length [illegible] Dia. [illegible]
Boring No. [illegible] Station & Offset [illegible] Water Elev. [illegible]
Surface Elev. [illegible]

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
[illegible]	0														
	2														
	4														
[illegible]	6	6/7			Brown Sandy Gravel	1	73	13	5	-0-	-	NP	NP	16	
[illegible]	8	7/9			Gray and Brown Silty Sandy Gravel	2	V	I	S	U	A	L		6	
[illegible]	10														
	12				TOP OF ROCK										
	14		4.0'	0.0	Shale, gray, slightly siliceous, argillaceous, fissile, medium-firm, with										
	16				thin thin clay seams. Core loss 0%.										
	18		5.0	0.0											
[illegible]	20				BOTTOM OF BORING										

LOG OF BORING

Date Started 5-21-63 Sampler Type SS Dia. 2 1/2"
Date Completed 5-21-63 Casing: Length [illegible] Dia. [illegible]
Boring No. 2-SUM Station & Offset [illegible] Water Elev. [illegible]
Surface Elev. 684.2'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
684.2	0														
	2														
	4														
679.2	6	9/13			Gray Silt	1	0	0	0	77	23	NP	NP	28	
676.7	8	11/14			Gray Silt	2	0	1	1	73	25	NP	NP	24	
674.2	10	13/16			Gray Silt	3	0	1	1	82	16	NP	NP	25	
671.7	12	11/15			Gray Silt	4	0	0	1	78	21	NP	NP	20	
669.2	14	10/11			Gray Silt	5	0	1	1	72	26	NP	NP	32	
666.7	16	9/12			Gray Silt	6	0	0	0	79	21	NP	NP	32	
664.2	18	9/11			Gray Silt	7	0	2	2	68	28	NP	NP	29	
661.7	20	17/21			Gray Gravelly Silt	8	28	5	5	44	18	NP	NP	14	
659.2	22	21/26			Gray Gravelly Silt	9	32	2	3	39	24	NP	NP	12	
	24														
	26														
654.2	28	50/ (0.8')													
653.7	30				Gray Clay Shale TOP OF ROCK	10	V	I	S	U	A	L		9	
651.2	32		3.2	0.8	Clay shale, gray, non-fissile, soft, slightly weathered. Core loss 20%.										
	34														
	36														
	38		4.8	0.0											
	40														
	42		5.0	0.0	Shale, gray, fissile, thin, with few thin clay seams. Core loss 0%.										
619.2	44				BOTTOM OF BORING										

*REFUSAL

LOG OF BORING

Date Started 5-22-63 Sampler Type SS Dia. 2 1/2"
Date Completed 5-23-63 Casing: Length [illegible] Dia. [illegible]
Boring No. 3-SUM Station & Offset [illegible] Water Elev. [illegible]
Surface Elev. 748.3'

Elev.	Depth	Std. Pen. (N)	Rec. ft.	Loss ft.	Description	Sample No.	Physical Characteristics: % Agg.	% C.S.	% F.S.	% Silt	% Clay	L.L.	Pl.	W.C.	SHTL Class.
748.3	0														
	2														
	4														
738.3	6	5/7			Brown Gravelly Silt	1	7	1	8	4	31	8	22		
735.8	8	4/4			Brown Silt	2	0	0	13	70	17	NP	NP	23	
733.3	10	3/5			Brown and Gray Clayey Silt	3	0	0	0	58	42	30	7	25	
730.8	12	6/7			Brown and Gray Clayey Silt	4	0	0	0	49	51	32	9	31	
728.3	14	7/9			Gray Silt	5	0	1	1	49	49	28	4	27	
725.8	16	5/8			Gray Silt and Clay	6	0	0	1	48	37	31	11	25	
723.3	18	5/9			Gray Silt	7	0	1	1	54	44	26	6	24	
720.8	20	7/12			Gray Silt	8	0	0	0	64	36	NP	NP	21	
718.3	22	9/12			Gray Silt	9	0	1	1	66	32	NP	NP	23	
	24														
	26														
713.3	28	8/12			Gray Silt	10	0	1	0	64	35	NP	NP	20	
	30														
	32														
708.3	34	15/19			Gray Silt	11	0	0	0	65	35	NP	NP	21	
	36														
	38														
703.3	40	10/13			Gray Clayey Silt	12	0	2	6	48	44	27	8	23	
	42														
	44														
698.3	46				No Sample Recovered - Boulder										
	48														
693.3	50	14/17			Gray Silt	13	0	0	0	60	40	29	10	25	
	52														
	54														
688.3	56	17/21			Gray Silt	14	0	1	1	62	36	29	10	25	
	58														
683.3	60	16/25			Gray Silt	15	0	0	0	75	25	28	10	25	
	62														
	64														
678.3	66	18/25			Gray Silt	16	0	4	1	59	36	28	10	27	
	68														
673.3	70	14/16			Gray Silt	17	0	2	0	70	28	28	10	25	
	72														
	74														
668.3	76	15/18			Gray Silt	18	0	1	0	79	20	28	10	27	
	78														
	80														
[illegible]	[illegible]	20/28			Gray Silt BOTTOM OF BORING	19	0	0	0	64	36	28	10	27	

OHIO STATE HIGHWAY
TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-271-0802 L&R
OVER CO RDS 5 & CLYDE CR. RIVER
SEC. SUM-271-765

BORING DATA

TYPED BY	CHECKED BY	REVIEWED BY	DATE
JAC	RC	RDR	9/23/64

TD-114
1000-1-64

MICROFILMED
AUG 28 1967

SUM-271-765

Test Location No. 1
Station & Offset 421+50 40' RT REAR ABUTMENT
Surface Elev. 771.9' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No. 2
Station & Offset 421+50 70' RT REAR ABUTMENT
Surface Elev. 771.6 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No. 3
Station & Offset 422+50 70' LT REAR ABUTMENT
Surface Elev. 737.2 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No. 4
Station & Offset 422+65 40' LT REAR ABUTMENT
Surface Elev. 739.8' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No. 5
Station & Offset 422+40 70' RT FIRST PIER
Surface Elev. 743.5 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No. 6
Station & Offset 423+30 70' LT FIRST PIER
Surface Elev. 739.7' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No. 7
Station & Offset 423+30 20' RT SECOND PIER
Surface Elev. 735.5' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
Capacity "R" in Thousands of Pounds

Test Location No.
Station & Offset
Surface Elev. Water Elev.
Piling
Hammer
Formula
Reference
Rod Condition
Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-271-0802 L & R
OVER CO. RD. 9 & CUYAHOGA RIVER
SEC. SUM-271-7.65

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	L.N.L.	R.D.R.	9/23/64

TR-114
1000-1-64

MICROFILMED
AUG 28 1967

Test Location No. 8
Station & Offset 424+90, 40' LT
SECOND PIER
Surface Elev. 693.3' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition
700 696 692 688 684 680 676 672 668 664 660 656 652 648
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 9
Station & Offset 424+90, 70' RT
THIRD PIER
Surface Elev. 696.0' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 10
Station & Offset 426+20, 70' LT
THIRD PIER
Surface Elev. 683.1' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 11
Station & Offset 426+40, 40' RT
FOURTH PIER
Surface Elev. 682.9 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 12
Station & Offset 428+10, 40' LT
FOURTH PIER
Surface Elev. 660.4' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
692 688 684 680 676 672 668 664 660 656 652 648
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 13
Station & Offset 428+10, 70' RT
FIFTH PIER
Surface Elev. 670.4' Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 14
Station & Offset 429+70, 70' LT
FIFTH PIER
Surface Elev. 661.9' Water Elev. 653.9'
Piling
Hammer
Formula
Reference
Rod Condition GOOD
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 15
Station & Offset 429+70, 40' RT
SIXTH PIER
Surface Elev. 661.0' Water Elev. 653.1'
SUM-271-765
Piling
Hammer
Formula
Reference
Rod Condition GOOD
692 688 684 680 676 672 668 664 660 656 652 648
TEST ROD
10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

9/11/5/7

OHIO STATE HIGHWAY TESTING LABORATORY
1620 WEST BROAD ST. COLUMBUS 23, OHIO

STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-271-0802 L&R
OVER CO. RD. 9 & CUYAHOGA RIVER
SEC. SUM-271-765

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	L.N.L.	R.D.R.	9/23/64

TC-114
3000-1-64

MICROFILMED
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Test Location No. 16
Station & Offset 431+30, 40' LT
SIXTH PIER
Surface Elev. 654.1 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No. 17
Station & Offset 431+30, 70' RT
SEVENTH PIER
Surface Elev. 654.2 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No. 18
Station & Offset 433+30, 70' LT
SEVENTH PIER
Surface Elev. 663.3 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No. 19
Station & Offset 433+30, 40' RT
EIGHTH PIER
Surface Elev. 662.5 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No. 20
Station & Offset 434+90, 40' LT
EIGHTH PIER
Surface Elev. 680.3 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No. 21
Station & Offset 434+90, 70' RT
NINTH PIER
Surface Elev. 695.1 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No. 22
Station & Offset 435+85, 70' LT
FORWARD ABUTMENT
Surface Elev. 708.3 Water Elev. DRY
Piling
Hammer
Formula
Reference
Rod Condition GOOD

Test Location No. 23
Station & Offset 435+85, 41' LT
FORWARD ABUTMENT
Surface Elev. 713.5 Water Elev.
SUM-271-7.65
Piling
Hammer
Formula
Reference
Rod Condition GOOD

10
11
6
7

714 710 706 702 698 694 690 686 682 678 674 670 666 662 658 654 650 646 642 638 634

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

OHIO STATE HIGHWAY TESTING LABORATORY
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STRUCTURE FOUNDATION INVESTIGATION
BRIDGE NO. SUM-271-0802 L & R
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SEC. SUM-271-7.65

DRIVE ROD PENETRATION RESISTANCE DATA

PLOTTED BY	CHECKED BY	REVIEWED BY	DATE
R.C.	L.N.L.	R.D.R.	9/23/64

TE-114
1000-1-64

MICROFILMED
AUG 28 1967

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

726 722 718 714 710 706 702 698 694 690 686 682

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

718 714 710 706 702 698 694 690 686 682

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. _____
Station & Offset _____
Surface Elev. _____ Water Elev. _____
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition _____

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 24
Station & Offset 436+00 40' RT FORWARD ABUTMENT
Surface Elev. 725.8' Water Elev. DRY
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition GOOD

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

Test Location No. 25
Station & Offset 436+00 70' RT FORWARD ABUTMENT
Surface Elev. 716.9' Water Elev. DRY
SUM-271-7.65
Piling _____
Hammer _____
Formula _____
Reference _____
Rod Condition GOOD

718 714 710 706 702 698 694 690 686 682

TEST ROD

10 20 30 40 50 60 70 80 90 100
Capacity "R" in Thousands of Pounds

11
11
7
7

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