STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

AUG-33-6.63

NOBLE TOWNSHIP
MOULTON TOWNSHIP
AUGLAIZE COUNTY

AUGLAIZE COUNTY	OHIO
AUG-33-6.63	FHWA REGION 5
F-11 (90)	FEDERAL PROJECT

1 / 88

MICROFILMED JUL 31 1992

DESIGN DESIGNATION

STA 330+00 TO STA 469+35.29
CURRENT ADT (1987) = 7250
DESIGN YEAR ADT. . . = 8700
DHV . . . . . = 610
D . . . . . = 52%
T . . . . . = 22%
V . . . . . = 60 M.P.H.

STA 469+35.29 TO STA 657+80.00
CURRENT ADT (1987) . . . . = 7050
DESIGN YEAR ADT (2007) = 8480
DHV . . . . . = 594
D . . . . . = 52%
T . . . . . = 22%
V . . . . . = 60 M.P.H.

STA 657+80 TO STA 680+00
CURRENT ADT (1987) . . . = 6550
DESIGN YEAR ADT (2007) 7870
DHV . . . . . = 550
D . . . . . = 52%
T . . . . . = 22%
V . . . . . = 60 M.P.H.

CONVENTIONAL SIGNS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (existing) (proposed)
Center Line 352 353
Trees, Stumps, (to be removed)
Utility Poles: Telephone, Power, Light.

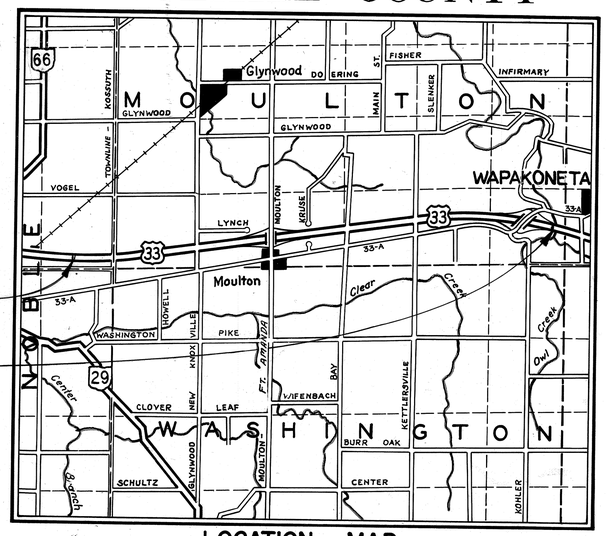
Limited Access (only) LA
Right of Way (only) RW
Limited Access & Right of Way LA & RW
Existing Right of Way
Property Line (in existing fence)
Railroad or
Guardrail (existing) (proposed)

INDEX OF SHEETS

SLM EQUATION
13.25 BACK =
13.43 AHEAD

BEGIN PROJECT STA. 330+00.00 AUG-33-6.63

END PROJECT STA. 680+00.00 AUG-33-13.44



LOCATION MAP

SCALE IN MILES
0 1 2 3 4

Portion to be improved
State & Federal Routes
Other Roads

SCALES

Plan 0 50 100
Profile: Horizontal, Vertical
Cross Section: Horizontal, Vertical

LINE DATA

BEGIN WORK STA. 321+00.00
BEGIN PROJECT STA. 330+00.00
END PROJECT STA. 680+00.00
END WORK STA. 681+00.00
LENGTH OF WORK 36000 LIN. FT. 6.818 MILE
LENGTH OF PROJECT 35000 LIN. FT. 6.629 MILE

UNDERGROUND UTILITIES
2 WORKING DAYS
BEFORE YOU DIG
Call---800-362-2764 (Toll free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

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

1987 SPECIFICATIONS

The standard specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

SUPPLEMENTAL SPECIFICATIONS		
845	2-25-86	
846	11-24-86	
847	10-17-83	
853	6-26-78	
947	10-17-83	
956	6-26-78	
932	3-25-85	

Approved G. Kenneth Cobella, P.E.
Date 8/6/87 District Deputy Director of Transportation

Approved Walter J. Jastinger
Date 9-8-87 Engineer, Bureau of Bridges and Structural Design

Approved Wayne H. Kauble
Date 11-3-87 Chief Engineer, PLANNING AND DESIGN

Approved Warren J. Smith
Date 11-3-87 Director, Department of Transportation

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS									
BP-2	1-11-85								
BP-5	1-11-85	GR-6	2-5-82	AS-1-67	6-12-69	MT-99.10	11-14-86	TC-52.10	4-3-79
BP-7	12-6-76	GR-6A	2-5-82	HW-4B	4-1-80	MT-99.20	11-14-86	TC-52.20	4-3-79
CB-2-2-A3B	5-1-79	HW-4A	4-1-80			TC-41.10	8-29-84	TC-72.20	2-26-82
BP-3	12-6-76							TC-61.10	4-5-82
CB-4	11-10-83	MC-4	7-26-76			TC-41.20	3-26-79	TC-35.10	8-29-84
CB-8	11-10-83	MC-5	6-12-75			TC-41.50	3-26-79		
GR-1	1-11-85	MC-9A	1-11-85			TC-42.10	8-19-77		
GR-2B	2-5-82	MC-9	1-30-84						
GR-3	1-21-85	BR-1	5-29-79			TC-42.20	3-26-79		
GR-4	2-5-82	DBR-2-73	4-10-73			TC-51.10	1-20-84		
GR-4B	2-5-82	AS-1-81	11-27-81			TC-51.11	1-20-84		
GR-5	2-5-82								

Plan Prepared By:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT SEVEN
PLANNING AND DESIGN DEPARTMENT

SEAL

Project: AUG-33-6.63
Date of Letting ____ 19__, Contract No. ____

LD0300 Rev. 1-1-81

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

APPROVED:

DIVISION ADMINISTRATOR DATE

SCHEMATIC PLAN

FHWA REGION	STATE	PROJECT	
5	OHIO		

2 / 88

AUGLAIZE COUNTY
AUG-33-6.63

0 50 100 150
SCALE IN FEET

BEGIN WORK
STA 321+00

F-11(90)
BEGIN PROJECT
STA. 330+00.00
S.L.M. 6.63

NOBLE TOWNSHIP

MOULTON TOWNSHIP

PC Sta. 351+45.83

PT Sta. 372+46.82

FOR PAVEMENT TRANSITION DETAILS
SEE DETAIL "A"
SHEET No. 14

FOR PAVEMENT TRANSITION
SEE DETAIL "E"
SHEET No. 14

FOR ROADSIDE REST AREA (WESTBOUND)
DETAILS. SEE SHEET No. 36 & 37

FOR PAVEMENT TRANSITION
SEE DETAIL "E"
SHEET No. 14

S 88°-56'-45"E

N 84°-07'-05"E

Ramp "A"

Ramp "B"

Ramp "C"

Ramp "D"

U.S. 33 Sta. 354+81.77
= Townline - Kossuth Rd.
Sta. 20+00

FOR APPROACH ROAD DETAILS
SEE SHEET No. 33

Townline - Kossuth Rd.

PI Sta. 364+47.34
Δ = 6°-56'-10" Lt.

FOR ROADSIDE REST AREA (EASTBOUND)
DETAILS. SEE SHEET No. 34 & 35

Glynwood - New Knoxville Rd.

U.S. 33 Sta. 416+06.29
= Glynwood - New Knoxville
Road Sta. 30+00

FOR APPROACH ROAD DETAILS
SEE SHEET No. 38

CURVE DATA

PI Sta. 364+47.34
Δ = 6°-56'-10" Lt. T = 1308.11'
D = 0°-16' L = 2601.04'
R = 21,485.93' E = 39.42'

MOULTON TOWNSHIP

Moulton - Ft. Amanda Rd.

Krause Rd.

Kettlersville Rd.

Bay Rd.

FOR PAVEMENT TRANSITION
SEE DETAIL "E"
SHEET No. 14

FOR PAVEMENT TRANSITION
SEE DETAIL "E"
SHEET No. 14

FOR APPROACH ROAD
DETAILS - SEE SHEET No. 45
U.S. 33 Sta. 577+04.71
= Kettlersville Road
Sta. 50+00

FOR PAVEMENT TRANSITIONS
SEE DETAIL "E"
SHEET No. 14

FOR PAVEMENT TRANSITIONS
SEE DETAIL "E"
SHEET No. 14

U.S. 33 Sta. 526+86.37
= Bay Rd. Sta. 30+00

FOR APPROACH ROAD DETAILS
SEE SHEET No. 44

U.S. 33 Sta. 469+35.29
= Moulton - Ft. Amanda Road
Sta. 112+35.68

STR. No. AUG-33-0926
Ex. CL. 15'-3"
Prop CL. 15'-1"
FOR INTERCHANGE DETAILS
SEE SHEET NOS. 39 THRU 43

SCHEMATIC PLAN

SCHEMATIC PLAN

FHWA REGION	STATE	PROJECT	
5	OHIO		

3/88

AUGLAIZE COUNTY
AUG-33-6.63

0 50 100 150
SCALE IN FEET

N

MOULTON TOWNSHIP

FOX RANCH RD.

P.I. STA. 639+66.68

N84°07'-05"E

S67°16'-20"E

For Pavement Transition See Detail "D" Sheet No. 14

U.S. 33 Sta. 657+80.00 = C.R. 33A Sta. 686+33.98

STR. No. AUG-33-1281
EX. CL. 15°-7"
PROP. CL. 14°-11"
FOR INTERCHANGE DETAILS. SEE SHEET No. 46 THRU 51

F-11(90)
END PROJECT
STA. 680+00.00
S.L.M. 13.44

AUGLAIZE RIVER

C.R.-33A

PEASOR RD.

600 610 620 630 640 650 660 670 680 690 700

Ramp "A"
Ramp "B"
Ramp "C"
Ramp "D"

For Pavement Transition See Detail "E" Sheet No. 14

For Pavement Transition See Detail "C" Sheet No. 14

For Pavement Transition See Detail "B" Sheet No. 14

STA. 681+00 END WORK

P.T. STA. 669+66.62

STR. No. AUG-33-1310

OWL CREEK

PUSHETA CREEK

KOHLER RD.

PENN-CENTRAL R.R.

CANNING FACTORY RD.

NOTE:
S.L.M. EQUATION
13.25 BACK =
13.43 AHEAD

CURVE DATA

P.I. Sta. 639+66.68
Δ = 28°-36'-35" Rt. T = 3,130.71'
D_c = 0°-28' L = 6,130.62'
R = 12,277.67' E = 398.85'

SCHEMATIC PLAN

TYPICAL SECTIONS

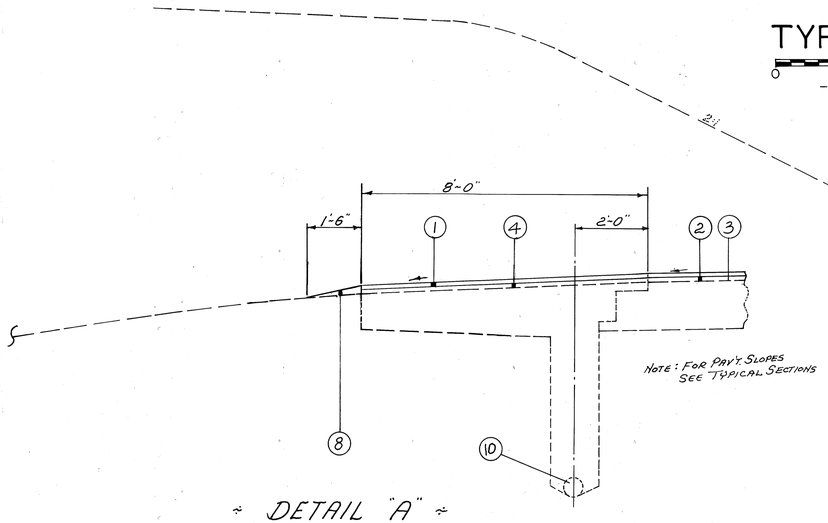
FHWA REGION	STATE	PROJECT	
5	OHIO		

4 / 88

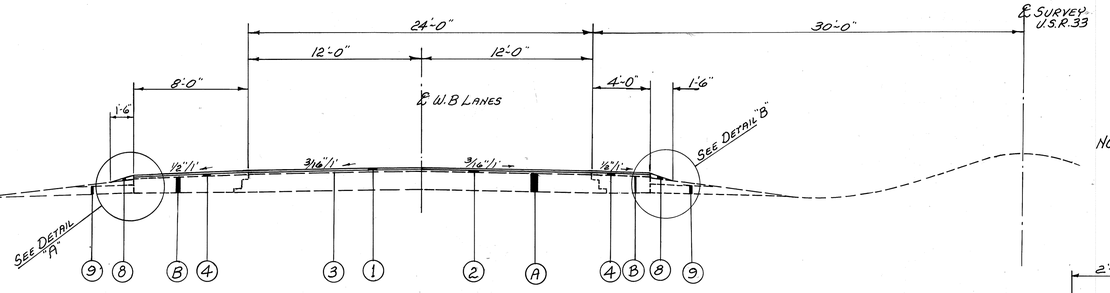
AUGLAIZE COUNTY
AUG-33-6.63

TYPE 846

0 5 10
- SCALE -



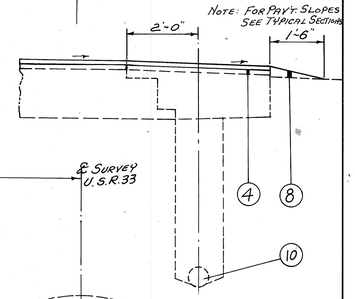
≈ DETAIL "A" ≈



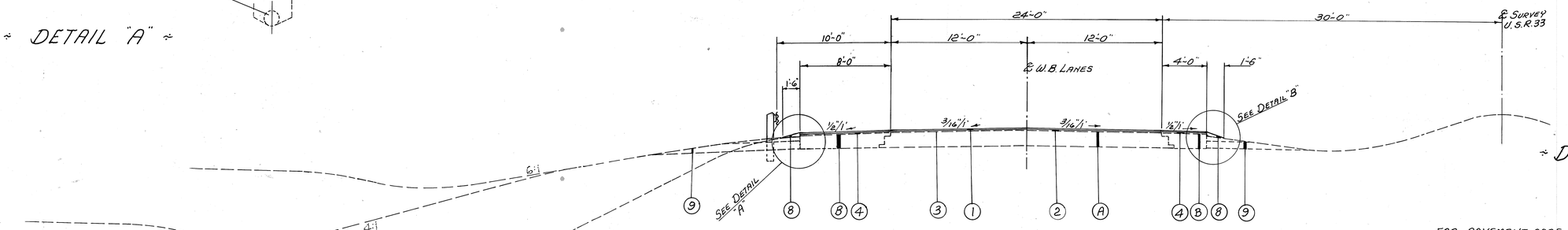
SECTION IN CUT

NOTE: FOR E.B. LANES, FROM TYPICAL SECTION Nº 1 - USE OPPOSITE HAND

NOTE: @ STA. 608+35.97 ℄ SURVEY SHIFTS 42' LEFT TO BECOME ℄ WESTBOUND LANES



≈ DETAIL "B" ≈



SECTION IN FILL

FOR PAVEMENT CODE - SEE SHEET Nº 5

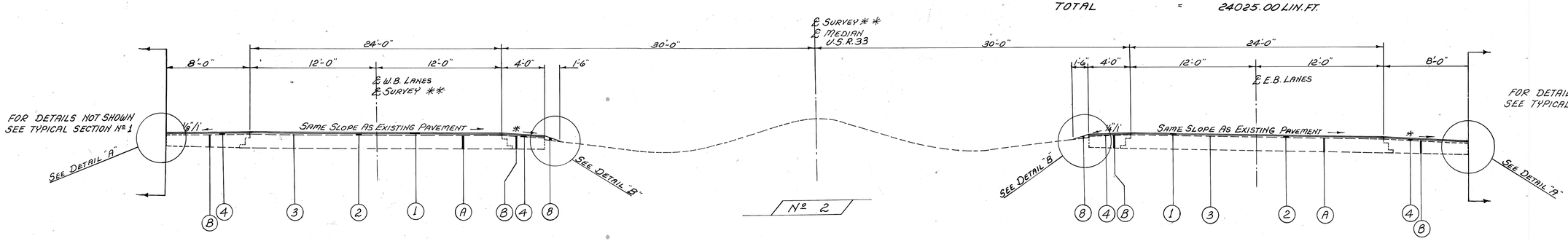
Nº 1

~ LIMITING STATIONS ~

STATION 330+00.00	TO	STATION 350+25.00	=	2025.00 LIN.FT.
STATION 387+50.00	TO	STATION 607+50.00	=	22000.00 LIN.FT.
		TOTAL	=	24025.00 LIN.FT.

** NOTE: AT STA 608+35.97 ℄ SURVEY SHIFTS 42' LEFT TO BECOME ℄ WESTBOUND LANES.

* ¾"/1' OR SAME SLOPE AS PAVEMENT WHICHEVER IS GREATER



Nº 2

≈ LIMITING STATIONS ≈

STATION 350+25.00	TO	STATION 387+50.00	=	3725.00 LIN.FT.
STATION 607+50.00	TO	STATION 666+00.00	=	5850.00 LIN.FT.
		TOTAL	=	9575.00 LIN.FT.

FOR DETAILS NOT SHOWN SEE TYPICAL SECTION Nº 1.

TYPICAL SECTIONS

FHWA REGION	STATE	PROJECT	
5	OHIO		

5
88

TYPICAL SECTIONS

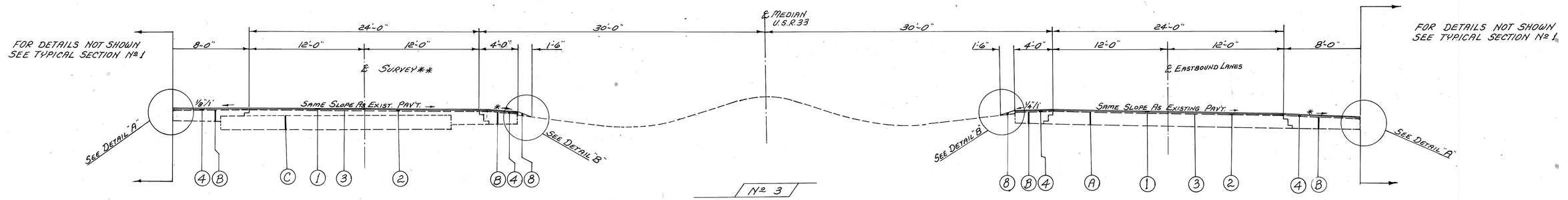
TYPE 846

0 5 10
-SCALE-

** NOTE: AT STA. 608+35.97 ℄ SURVEY SHIFTS 42' LEFT TO BECOME ℄ WESTBOUND LANES

* 3/4" PER FOOT OR SAME SLOPE AS PAVEMENT WHICHEVER IS GREATER

AUGLAIZE COUNTY
AUG-33-6.63

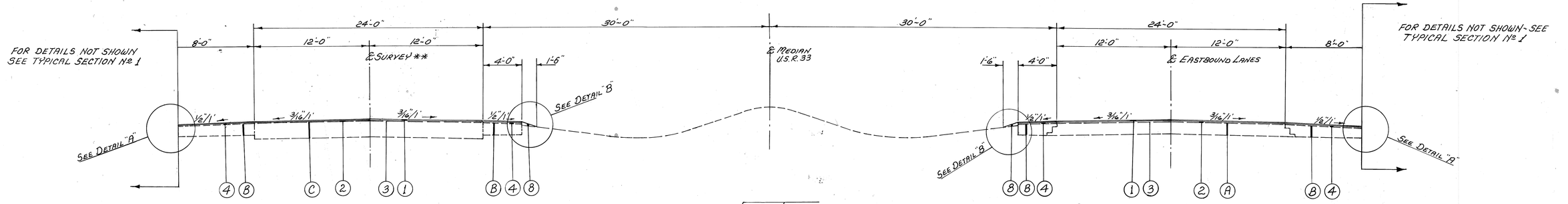


Nº 3

~ LIMITING STATIONS ~

STATION 666+00.00 TO STA. 669+66.62 = 366.62 LIN. FT.

TOTAL = 366.62 LIN. FT.

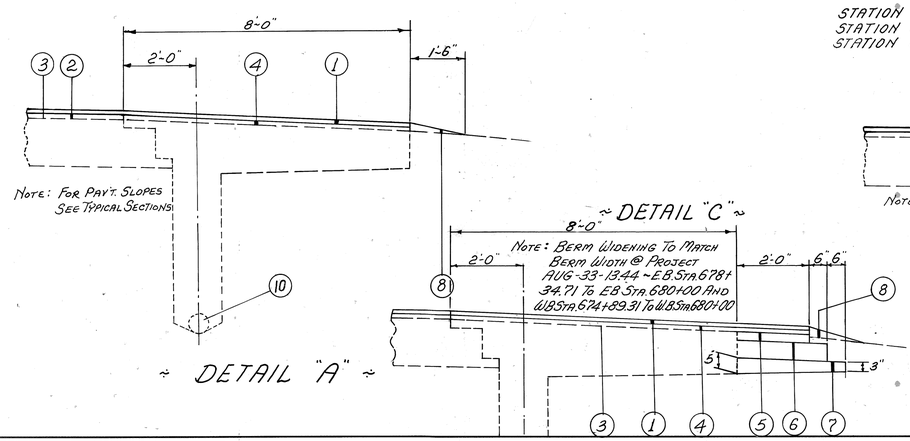


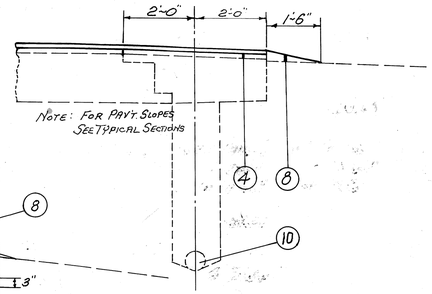
Nº 4

~ LIMITING STATIONS ~

STATION 669+66.62 TO STATION 671+23.41 = 156.79 LIN. FT.
STATION 671+23.41 TO STATION 673+01.87 = BRIDGE AND APPROACH SLABS
STATION 673+01.87 TO STATION 680+00.00 = 698.13 LIN. FT.

TOTAL = 854.92 LIN. FT.





~ CODE ~

(1)	ITEM 846	1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20	(9)	EXISTING AGGREGATE DRAINS
(2)	ITEM 448	0" MINIMUM ASPHALT CONC. INTERMEDIATE COURSE, TYPE 1, AC-20. (¾" AVE. THICKNESS USED FOR PAVEMENT CALCULATIONS)	(10)	EXISTING PIPE UNDERDRAINS
(3)	ITEM 407	TACK COAT, AS PER PLAN.	(A)	12½" BITUMINOUS ON 3" AGGREGATE BASE
(4)	ITEM 448	0" MINIMUM ASPHALT CONC. INTERMEDIATE COURSE, TYPE 1, AC-20. (1" AVE. THICKNESS USED FOR PAVEMENT CALCULATIONS)	(B)	3" BITUMINOUS ON 8¾" (AVE. THICKNESS) AGGREGATE BASE
(5)	ITEM 301	3" BITUMINOUS AGGREGATE BASE, AC-20	(C)	1½" BITUMINOUS ON 17" TRAFFIC BOUND BASE
(6)	ITEM 304	6" AGGREGATE BASE		
(7)	ITEM 310	SUBBASE, TYPE II ~ FOR THICKNESS DIMENSIONS, SEE DETAIL "C".		
(8)	ITEM 617	COMPACTED AGGREGATE, TYPE A		

TYPICAL SECTIONS

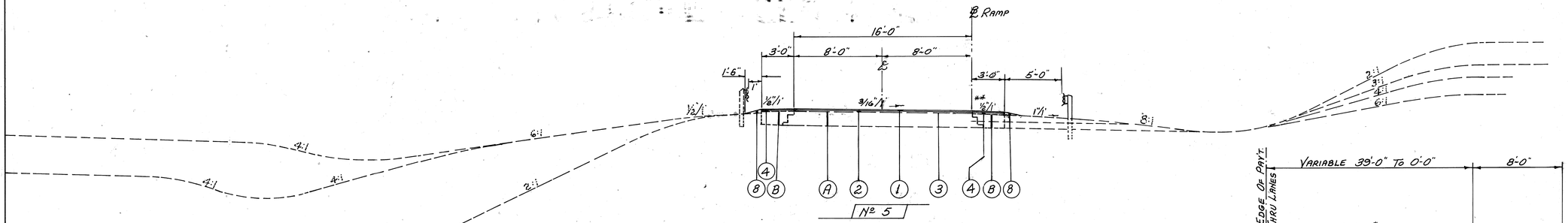
RAMP AND ROADSIDE REST AREA ~ TYPICAL SECTIONS

TYPE 846

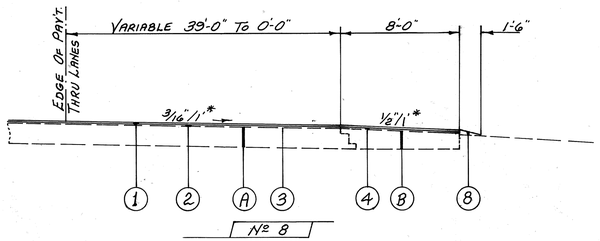
FHWA REGION	STATE	PROJECT	
5	OHIO		

6
88

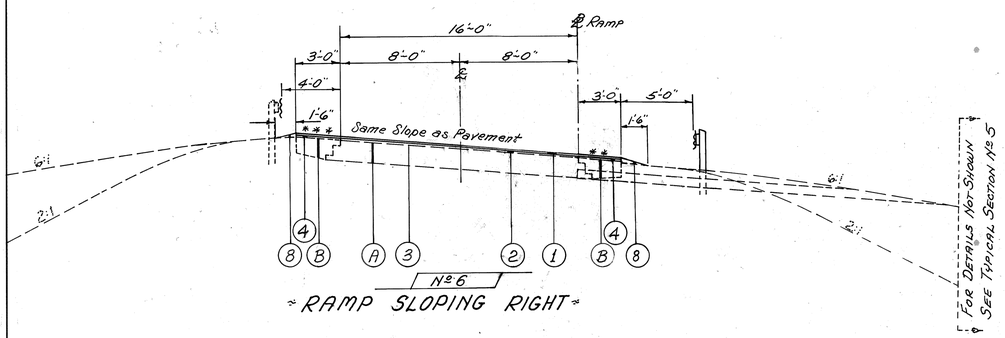
AUGLAIZE COUNTY
AUG~33~6.63



≈ NORMAL RAMP SECTION ≈



ACCELERATION ~ DECELERATION LANE DETAILS



≈ RAMP SLOPING RIGHT ≈

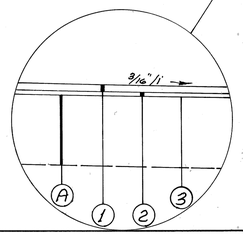
FOR DETAILS NOT SHOWN SEE TYPICAL SECTION № 5

≈ EASTBOUND ROADSIDE REST AREA ≈

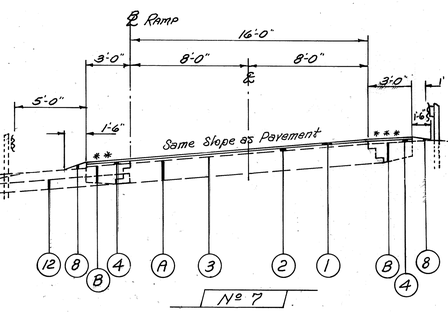
STATION 378 + 11.63 "A" TO STATION 383 + 23.51 "C"

≈ WESTBOUND ROADSIDE REST AREA ≈

STATION 384 + 16.13 "B" TO STATION 389 + 34.58 "D"



RAMP	FROM	TO	TYPICAL SECTION NUMBER
	ROADSIDE REST AREA		
A	360 + 99.34	368 + 99.34	8
A	368 + 99.34	376 + 75.00	7
A	376 + 75.00	378 + 11.63	5
B	363 + 50.00	373 + 50.00	8
B	373 + 50.00	382 + 50.00	6
B	382 + 50.00	384 + 16.13	5
C	383 + 23.51	385 + 50.00	5
C	385 + 50.00	391 + 54.07	6
C	391 + 54.07	403 + 54.07	8
D	389 + 34.58	391 + 00.00	5
D	391 + 00.00	398 + 00.00	7
D	398 + 00.00	406 + 00.00	8
	MOULTON-FT. AMANDA RD. INTERCHANGE		
A	453 + 42.59	461 + 41.24	8
A	461 + 41.24	467 + 00.00	6
A	467 + 00.00	468 + 88.45	5
B	449 + 23.88	459 + 23.88	8
B	459 + 23.88	466 + 00.00	6
B	466 + 00.00	469 + 84.69	7
C	470 + 01.89	471 + 75.00	5
C	471 + 75.00	477 + 29.34	6
C	477 + 29.34	485 + 28.38	8
D	469 + 33.54	472 + 50.00	7
D	472 + 50.00	479 + 46.70	6
D	479 + 46.70	489 + 46.70	8
	COUNTY ROAD 33-A INTERCHANGE		
A	639 + 31.96	647 + 28.98	8
A	647 + 28.98	653 + 53.38	6
B	635 + 64.19	645 + 64.19	8
B	645 + 64.19	652 + 75.00	6
B	652 + 75.00	664 + 03.45	5
BB	651 + 99.37	657 + 34.00	8
BB	657 + 34.00	659 + 78.21	7
BB	659 + 78.21	660 + 41.83	5
C	660 + 41.33	667 + 88.74	6
C	667 + 88.74	675 + 89.31	8
D	654 + 55.14	659 + 50.00	7
D	659 + 50.00	669 + 14.71	6
D	669 + 14.71	679 + 14.71	8



≈ RAMP SLOPING LEFT ≈

FOR DETAILS NOT SHOWN SEE TYPICAL SECTION № 5

NOTE: 1. TYPICAL SECTIONS ARE SHOWN IN DIRECTION OF TRAVEL ON THE RAMP

2. BASELINE USED FOR MOULTON-FT. AMANDA INTERCHANGE CENTERLINE USED FOR COUNTY ROAD 33-A INTERCHANGE

** ½"/1' OR SAME SLOPE AS PAVEMENT WHICHEVER IS GREATER
*** SAME SLOPE AS PAVEMENT

FOR PAVEMENT CODE ~ SEE SHEET № 5

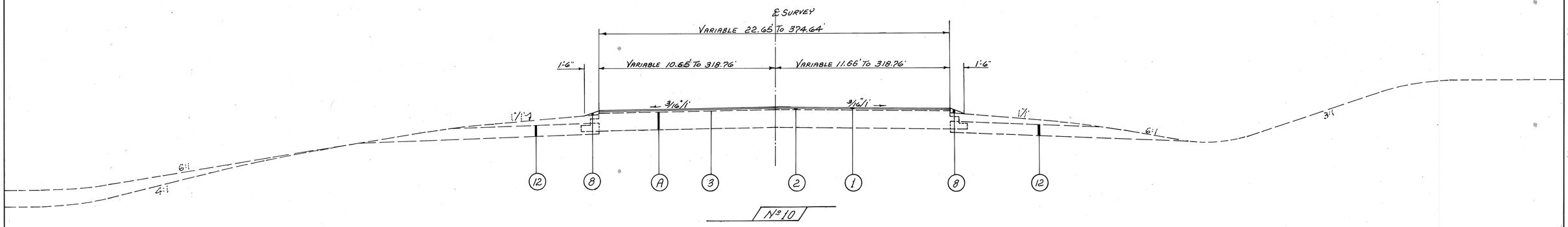
RAMP AND ROADSIDE REST AREA ~ TYPICAL SECTIONS

FHWA REGION	STATE	PROJECT	
5	OHIO		

7
88

AUGLAIZE COUNTY
AUG-33-6.63

TOWNLINE, GLYNWOOD, BAY, KETTLERSVILLE ROADS
TYPICAL SECTION
TYPE 846



Nº 10

≈ LIMITING STATIONS ≈

TOWNLINE-KOSSUTH ROAD

STA. 18+92.54 TO STA. 19+45.99 = 53.45 LIN. FT.
STA. 20+54.01 TO STA. 21+07.13 = 53.12 LIN. FT.
TOTAL = 106.57 LIN. FT.

BAY ROAD

STA. 28+84.61 TO STA. 29+45.51 = 60.90 LIN. FT.
STA. 30+54.49 TO STA. 31+15.82 = 61.33 LIN. FT.
TOTAL = 123.23 LIN. FT.

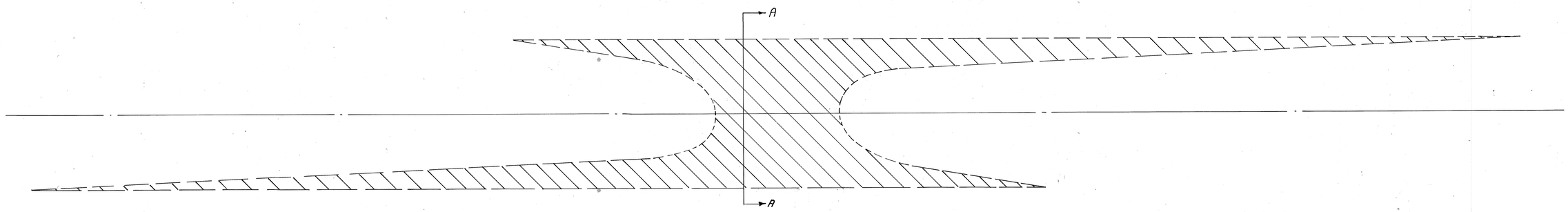
GLYNWOOD ROAD

STA. 28+84.18 TO STA. 29+45.47 = 61.29 LIN. FT.
STA. 30+54.53 TO STA. 31+15.82 = 61.29 LIN. FT.
TOTAL = 122.58 LIN. FT.

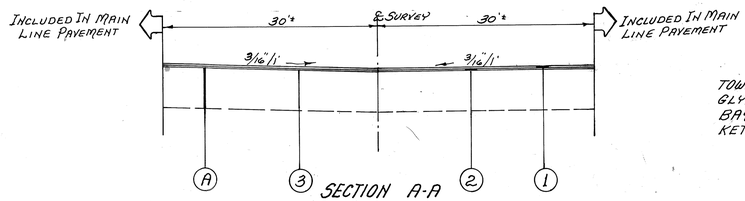
KETTLERSVILLE ROAD

STA. 28+50.00 TO STA. 29+45.58 = 95.58 LIN. FT.
STA. 30+54.42 TO STA. 31+50.00 = 95.58 LIN. FT.
TOTAL = 191.16 LIN. FT.

NOTE: FOR PAVEMENT CODE SEE SHEET Nº 5



APPROACH ROAD - MEDIAN CROSSOVER - TYPICAL SECTION



Nº 11

≈ LIMITING STATIONS ≈

TOWNLINE-KOSSUTH	STA. 351+72.56	TO	STA. 357+92.43 - SHEET Nº 33
GLYNWOOD	STA. 413+04.45	TO	STA. 419+08.13 - SHEET Nº 38
BAY	STA. 523+83.36	TO	STA. 529+87.38 - SHEET Nº 44
KETTLERSVILLE	STA. 574+02.92	TO	STA. 580+06.50 - SHEET Nº 45

TYPICAL SECTIONS

GENERAL NOTES

FIELD OFFICE

THE CONTRACTOR SHALL PROVIDE A SUITABLE FIELD OFFICE HAVING A MINIMUM OF 300 SQ. FT. OF FLOOR SPACE. PAYMENT SHALL BE AT THE LUMP SUM PRICE BID FOR ITEM 619, FIELD OFFICE.

UNDERGROUND UTILITIES

THE LOCATIONS OF UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS OF THE UTILITY AS REQUIRED BY SECTION 153.64 ORC.

UTILITY OWNERSHIP

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT:

ELECTRIC	OHIO POWER CO. 301 CLEVELAND AVE., S.W. P.O. BOX 400 CANTON, OHIO 44701 ATTN: JOHN SHRADE, JR. (216) 438-7040
	OHIO DEPT. OF HIGHWAYS ST. MARYS AVE. SIDNEY, OHIO 45365 ATTN: TRAFFIC ENGINEER (513) 492-1141 EXT. 291
GAS	WEST OHIO GAS 150 S. JACKSON STREET LIMA, OHIO 45801 ATTN: VERN SCHULTE (419) 224-2065
	SOHIO PIPELINE CO. P. O. BOX 188 VANDALIA, OHIO 45377 ATTN: JOHN FRAYLICK (513) 898-8113
TELEPHONE	GENERAL TELEPHONE CO. 6464 WESTBROOK ROAD CLAYTON, OHIO 45315 ATTN: DON HITE (513) 833-0456
	BUCKLAND TELEPHONE CO. P.O. BOX 65 105 SOUTH MAIN STREET BUCKLAND, OHIO 45819 ATTN: RUSSELL MOON (419) 657-2221
CABLE TV	WARNER AMEX CABLE 120 WEST AUGLAIZE STREET WAPAKONETA, OHIO 45895 ATTN: BILL LAMBERT (419) 738-4728

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK LISTED IN THE GENERAL SUMMARY FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED AT THE ENGINEER'S DISCRETION SHALL BE MADE A MATTER OF RECORD BY INCORPORATION INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.

ITEM 407 TACK COAT, AS PER PLAN

THE RATE OF APPLICATION OF 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. WHEN COVER AGGREGATE IS NEEDED, IT SHALL BE USED AS DIRECTED BY THE ENGINEER, AND IT SHALL BE CONSIDERED INCIDENTAL TO AND BE INCLUDED FOR PAYMENT IN: ITEM 407 TACK COAT, AS PER PLAN. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.1 GALLONS PER SQUARE YARD OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

GUARDRAIL REPLACEMENT

NO HAZARD SHALL BE LEFT UNPROTECTED EXCEPT FOR ACTUAL TIME NECESSARY TO REMOVE, GRADE, AND REINSTALL GUARDRAIL IN A CONTINUOUS OPERATION. THE REMOVAL OF ALL GUARDRAIL SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER. NO GUARDRAIL SHALL BE REMOVED UNTIL THE REPLACEMENT MATERIAL IS ON THE SITE, READY FOR INSTALLATION. FAILURE TO COMPLY WITH THIS REQUIREMENT SHALL BE DEEMED SUFFICIENT CAUSE TO ORDER WORK SUSPENDED ON THIS PROJECT UNTIL SUCH TIME THAT THE ENGINEER IS ASSURED OF SAID COMPLIANCE.

LOCATION OF GUARDRAIL

THE LOCATIONS OF GUARDRAIL RUNS, AS SHOWN IN THESE PLANS, ARE SUBJECT TO ADJUSTMENT PRIOR TO FINAL ACCEPTANCE. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

CONNECTION TO EXISTING PIPE

WHERE THE PLANS PROVIDE FOR PROPOSED CONDUIT TO BE CONNECTED TO, OR TO CROSS EITHER OVER OR UNDER AN EXISTING SEWER, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BEFORE HE STARTS TO LAY THE PROPOSED CONDUIT.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT 603 CONDUIT ITEMS.

PROPOSED CATCH BASINS, INLETS AND MANHOLES

PROPOSED GRATE AND LID ELEVATIONS AND HORIZONTAL LOCATIONS WERE DEVELOPED FROM THE BASE FIELD INFORMATION. TO ENSURE THAT THE ELEVATIONS AND LOCATIONS BLEND TO THE FIELD CONDITIONS AND PROVIDE A FUNCTIONAL SYSTEM, THE ENGINEER SHALL RE-EVALUATE THE LAYOUT BEFORE ANY PROPOSED WORK PROCEEDS.

REPAIR OF GRASS AREAS

WHERE OPERATIONS RESULT IN DISTURBING GRASS AREAS, THEY SHALL BE REPAIRED IN ACCORDANCE WITH ITEM 659, SEEDING AND MULCHING. LIMITS OF REPAIR AREAS ARE TO BE DETERMINED BY THE ENGINEER. PAYMENT FOR ALL OPERATION DESCRIBED ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 659 REPAIR SEEDING & MULCHING -- 20 SQ.YD.

ITEM 846

THIS WORK SHALL CONSIST OF CONSTRUCTING A SURFACE COURSE IN ACCORDANCE WITH THE SPECIFICATIONS FOR HEAVY TRAFFIC VOLUMES AS PER SUPPLEMENTAL SPECIFICATION 846, ASPHALT CONCRETE.

ITEM 448

ASPHALT CONCRETE IS PROVIDED FOR USE BY THE ENGINEER AT AN ESTIMATED THICKNESS OF 1/2" TO CORRECT MINOR DEPRESSIONS AND CORRECTION OF EXISTING PAVED BERMS.

ITEM 448 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1., AC-20 1258 CU. YDS.

ITEM 617 COMPACTED AGGREGATE

THIS ITEM SHALL BE USED AS DIRECTED BY THE ENGINEER TO TRANSITION FROM THE EDGE OF THE PROPOSED PAVED BERM TO THE EXISTING SOD OR SEEDED BERM AND TO CORRECT MINOR DEPRESSIONS AT THE EDGE OF THE PAVED BERM.

PROFILE AND ALIGNMENT

THE PROPOSED PAVEMENT RESURFACING COURSE SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PREVIOUS CONSTRUCTION PLANS SHOWING THE ORIGINAL ALIGNMENT AND PROFILE GRADE ARE ON FILE FOR INSPECTION IF NECESSARY AT THE O.D.O.T. DISTRICT 7 OFFICE AS PROJECT NO. AUG-33-6.63. THE PROPOSED ASPHALT CONCRETE OVERLAYS VARY AS SHOWN ON THE TYPICAL SECTIONS.

CONTRACTOR CO-ORDINATION

THE CONTRACTOR SHALL CO-ORDINATE HIS WORK WITH THE CONTRACTORS FOR THE POSSIBLE CONCURRENT REST AREA UP-GRADING PROJECTS. WORK FOR THOSE PROJECTS INCLUDES MOTORIST SERVICE BUILDINGS AND APPURTENANCES, ELECTRICAL, SANITARY SEWERS AND TREATMENT PLANT AND WATER LINES.

TRAFFIC CONTROL STANDARD CONSTRUCTION DRAWINGS
References to Supplemental Specifications 857, 858, 861, 957, 958 and 961 on the Traffic Control Standard Construction Drawings in these plans shall be considered to read as respective references to Items 630, 631, 633, 730, 731 and 733.

MAINTENANCE OF TRAFFIC

MAINTENANCE OF TRAFFIC

IT IS THE INTENTION TO PERFORM THE REQUIRED WORK WITH MINIMUM INCONVENIENCE AND THE MAXIMUM SAFETY TO THE CONTRACTOR AND THE TRAVELING PUBLIC. IF THE CONTRACTOR SO ELECTS, HE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE BELOW PROVISIONS ARE FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PLACED INTO EFFECT UNTIL APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE DIRECTOR.

TRAFFIC IS TO BE MAINTAINED IN A UNIFORM PATTERN THROUGHOUT THE ENTIRE LENGTH OF THE PROJECT AND IS NOT TO BE SUBJECTED TO CONSTANT LANE SHIFTS. THE MINIMUM LENGTH BETWEEN LANE CLOSURES SHALL BE 2 MILES.

ALL VEHICLES, EQUIPMENT, PERSONNEL AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO ONE SIDE OF THE PAVEMENT UNLESS OTHERWISE APPROVED BY THE ENGINEER.

THE USE OF BERMS TO MAINTAIN TRAFFIC, UNLESS OTHERWISE INDICATED, IS PROHIBITED. SHOULD ANY EXISTING OR NEW BERM AREAS BECOME DAMAGED OR DESTROYED DUE TO THE CONTRACTOR'S NEGLIGENCE OR FAILURE TO PROVIDE ADEQUATE SIGNS, BARRICADES, CONES, FLAGMEN, OR OTHER TRAFFIC CONTROL DEVICES, THE RESTORATION OF THE BERMS WILL BE AT THE CONTRACTORS EXPENSE.

EXISTING SPEED LIMIT SIGN LEGENDS IN AREAS WHERE TRAFFIC IS RESTRICTED TO LESS THAN TWO LANES SHALL BE COVERED AND ADVISORY SPEED LIMITS SHALL BE PLACED. THE PROJECT ENGINEER SHALL RECORD COVERED SIGNS IN THE PROJECT DIARY. ADVISORY SPEED SHALL BE USED IN CONJUNCTION WITH STANDARD ORANGE WARNING SIGNS MOUNTED BELOW THE WARNING SIGN ON THE SAME SUPPORT.

DURING ALL HOURS WHEN TRAFFIC IS RESTRICTED TO LESS THAN TWO LANES IN THE SAME DIRECTION OF FLOW THE CONTRACTOR SHALL EMPLOY AT LEAST ONE QUALIFIED PERSON TO CONTINUOUSLY PATROL THE RESTRICTED AREA, 24 HOURS A DAY, TO MAINTAIN LIGHTS, SIGNS, BARRICADES, CONES, DRUMS, ETC., SO AS TO PROVIDE A SAFE FACILITY FOR THE TRAVELING PUBLIC. HE SHALL HAVE AVAILABLE ALL TOOLS AND MATERIALS NECESSARY TO PERFORM THIS FUNCTION AT ALL TIMES.

A MINIMUM LANE WIDTH OF 11 FEET SHALL BE PROVIDED.

BEFORE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAMES AND TELEPHONE NUMBERS OF A PERSON OR PERSONS WHO CAN BE CONTACTED 24 HOURS A DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES TO MAINTAIN THE TRAVELED PAVEMENT SAFELY.

THE STANDARD DEVICE FOR CLOSING ANY LANES TO TRAFFIC SHALL BE WEIGHTED, PROPERLY REFLECTORIZED DRUMS. STEEL DRUMS PLACED ON A NEWLY PAVED SURFACE COURSE SHALL BE PLACED ON 1/2" PLYWOOD. CONES MAY BE USED IN THE DAYTIME IN LIEU OF DRUMS IF APPROVED BY THE ENGINEER. CONES MUST BE WEIGHTED TO INCREASE STABILITY BY DOUBLE STACKING, SAND BAGS, OR AS APPROVED BY THE ENGINEER. METAL RINGS OF ANY TYPE OVER THE CONE WILL NOT BE PERMITTED.

LAW ENFORCEMENT OFFICER(S) WITH PATROL CAR(S) SHALL BE PRESENT WHEN ANY LANES ARE TO BE CLOSED. THEY SHALL BE PRESENT DURING THE SETUP AND TAKE DOWN PERIODS.

WHEN THE BEGINNING POINT OF A LANE CLOSURE OPERATION IS SHIFTED SUBSTANTIALLY, OR A NEW LANE CLOSURE ARRANGEMENT IS INITIATED IN ANOTHER PART OF THE PROJECT AREA THE LAW ENFORCEMENT OFFICER WITH PATROL CAR SHALL ALSO BE PRESENT CONSISTANT WITH PRECEEDING PARAGRAPH.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER 48 HOURS IN ADVANCE OF ANY LANE CLOSURE. INFORMATION REGARDING ARRANGEMENTS BY THE CONTRACTOR FOR LAW ENFORCEMENT OFFICER WITH PATROL CAR MAY BE OBTAINED BY CONTACTING OHIO HIGHWAY PATROL, 660 EAST MAIN STREET, COLUMBUS, OHIO TELEPHONE NUMBER (614) 466-2660. AN ESTIMATED QUANTITY HAS BEEN PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER. ITEM SPECIAL -LAW ENFORCEMENT OFFICER WITH PATROL CAR - 300 HOURS

THE CONTRACTOR SHALL FURNISH AND INSTALL TWO (2) "ROAD CONSTRUCTION NEXT MILES" SIGN (OC-6) AT BEGINNING AND END OF PROJECT.

NO LANE OR SHOULDER CLOSURES WILL BE PERMITTED FROM 2:00 P.M. ON THE DAY PRECEDING A HOLIDAY TO 6:00 A.M. ON THE DAY FOLLOWING A HOLIDAY. WHENEVER A SATURDAY OR SUNDAY FALLS WITHIN THIS PERIOD THE HOLIDAY SHALL BE CONSIDERED TO BE A THREE DAY HOLIDAY INCLUDING BOTH SATURDAY AND SUNDAY.

ON THIS PROJECT THE ABOVE SHALL BE PLACED INTO EFFECT ON THE FOLLOWING HOLIDAYS:

NEW YEARS DAY
MEMORIAL DAY
INDEPENDENCE DAY
LABOR DAY
THANKSGIVING DAY
CHRISTMAS DAY

UNINTERRUPTED TWO-LANE TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON USR 33 DURING THE ABOVE MENTIONED PERIODS. TRAFFIC TO AND FROM USR 33 AT ALL INTERCHANGES SHALL BE MAINTAINED AT ALL TIMES OVER EXISTING AND PROPOSED PAVEMENTS. FOR SPECIFIC DETAILS SEE SHEET NOS. 74 THRU 86.

FOR SHORT PERIODS OF TIME CONSISTANT WITH THE REQUIREMENTS FOR THE COMPLETION OF ASPHALT CONCRETE COURSES, THE PAVED BERMS ALONG THE RAMPS MAY BE USED TO MAINTAIN RAMP TRAFFIC WHILE THE RAMPS ARE BEING RESURFACED. A MINIMUM LANE WIDTH OF 11' SHALL BE PROVIDED FOR RAMP TRAFFIC.

BRIDGE AND DECK WORK

STRUCTURE NO. AUG-33-13 10 L&R

A MINIMUM OF ONE LANE TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AS PER PROVISIONS OUTLINED ON SHEET NO. 74, "CLOSING ONE LANE OF A FOUR-LANE DIVIDED HIGHWAY"; SHEET NO. 75, "LANE CLOSURE BEFORE EXIT GORE"; SHEET NO. 76, "LANE CLOSURE IN DECELERATION LANE"; SHEET NO. 77, "LANE CLOSURE AT EXIT GORE"; SHEET NO; 78, "LANE CLOSURE AT ENTRANCE RAMP, PLAN B"; SHEET NO. 79, "LANE CLOSURE AT ENTRANCE RAMP, PLAN A"; SHEET NO. 80, "TRAFFIC CONTROL FOR WORK IN GORE AREAS"; OR SHEET NOS. 85 AND 86, "TEMPORARY CONCRETE BARRIER TRAFFIC CONTROL DETAILS", WHICHEVER IS APPLICABLE.

STRUCTURE NO. AUG-33-12 81

ONE LANE TRAFFIC WILL BE PERMITTED IN THE IMMEDIATE AREA OF THE STRUCTURE IN THE MANNER DETAILED ON "SIGNALIZED CLOSING ONE LANE OF A TWO LANE HIGHWAY", SHEET NOS. 81 THRU 84 OF THE PLANS.

ITEM SPECIAL - REPLACEMENT SIGNS

FLAT SHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS, AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC, FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR, SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE BID PRICE PER SQUARE FOOT FOR "ITEM SPECIAL - REPLACEMENT SIGNS", AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED SIGNS HARDWARE, SUPPORTS, ETC. REPLACEMENT SIGNS SHALL BE NEW, BUT OTHER MATERIALS MAY BE USED, SUBJECT TO APPROVAL BY THE ENGINEER.

ITEM SPECIAL	REPLACEMENT SIGNS	98 SQ.FT.

QUANTITIES CARRIED TO SHEET NO. 10

ITEM SPECIAL - REPLACEMENT DRUMS

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLAN, SPECIFICATIONS, AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER AND PAID FOR UNDER "ITEM SPECIAL - REPLACEMENT DRUMS". PAYMENT FOR EACH NEW DRUM SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM AND PROVIDING AND MAINTAINING NEW DRUMS IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUMS.

ITEM SPECIAL	REPLACEMENT DRUMS	98 EACH

QUANTITIES CARRIED TO SHEET NO. 10

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TRAFFIC CONTROL AND TRAFFIC CONTROL DEVICES REQUIRED BY THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" LATEST EDITION, SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

PAYMENT

PAYMENT FOR ALL THE ABOVE, EXCEPT FOR ITEMS DESIGNATED AS TEMPORARY PAVEMENT MARKING ITEMS, ITEM SPECIAL LAW ENFORCEMENT OFFICER WITH PATROL CAR, ITEM SPECIAL REPLACEMENT SIGNS AND ITEM SPECIAL REPLACEMENT DRUMS SHALL BE INCLUDED IN THE LUMP SUM ITEM 614 MAINTAINING TRAFFIC.

GENERAL SUMMARY

ITEM	8	9	13	15	16	17	18	19	20	33	34	35	36	37	38	40	41	42	43	44	45	47	48	49	50	51	85	86	ITEM	QUANT.	UNIT	DESCRIPTION
																																~ ROADWAY ~
202				2393																									202	2393	LIN.FT.	CURB REMOVED
202				1208																									202	1208	EACH	RAISED PAVEMENT MARKERS REMOVED FOR STORAGE
202			800						772	148					150	300	260	277	249	151	145	222	288	320	288	272			202	4642	SQ.YD.	WEARING COURSE REMOVED
202				2175.00																									202	2175.00	LIN.FT.	GUARDRAIL REMOVED
202				30																									202	30	SQ.YD.	CONCRETE APRON REMOVED
203				19																									203	19	CU.YD.	EMBANKMENT
604				2																									604	2	EACH	MONUMENT BOX, ADJUSTED TO GRADE
606				1112.50																									606	1112.50	LIN.FT.	GUARDRAIL, TYPE 5
606				150.00																									606	150.00	LIN.FT.	GUARDRAIL, TYPE 5, BARRIER DESIGN
606				2																									606	2	EACH	BRIDGE TERMINAL ASSEMBLY, STANDARD TYPE A
606				8																									606	8	EACH	BRIDGE TERMINAL ASSEMBLY, STANDARD TYPE B
606				8																									606	8	EACH	ANCHOR ASSEMBLY, STANDARD TYPE A
606				2																									606	2	EACH	ANCHOR ASSEMBLY, STANDARD TYPE A, BARRIER DESIGN
620				15																									620	15	EACH	DELINEATOR, TYPE C, FLEXIBLE POST MOUNTED
																																~ EROSION CONTROL
601				7																									601	7	CU.YD.	ROCK CHANNEL PROTECTION, TYPE "B" WITH FILTER
659	20																												659	20	Sq.Yd.	Repair Seeding and Mulching
660				163							9		9																660	181	SQ.YD.	SODDING
601				30																									601	30	SQ.YD.	CONCRETE APRON
																																~ DRAINAGE ~
603				100																									603	100	LIN.FT.	6" CONDUIT, TYPE "F"
603				16																									603	16	LIN.FT.	12" CONDUIT, TYPE "F"
603											112		120																603	232	LIN.FT.	12" CONDUIT, TYPE "B"
603											240		240																603	480	LIN.FT.	12" CONDUIT, TYPE "B", 707.05, (0.079)" AS PER PLAN
605				100																									605	100	LIN.FT.	6" UNCLASSIFIED PIPE UNDERDRAIN
602											0.21		0.21																602	0.42	CU.YD.	CONCRETE MASONRY
																			FOR TRAFFIC CONTROL QUANTITIES ~ SEE SHEET № 52													TRAFFIC CONTROL SEE SHT. No. 52
																																÷ PAVEMENT ÷
																											240	240	622	480	Lin.Ft.	TEMPORARY CONCRETE BARRIER, MODIFIED As Per Plan.
301			11	67																									301	78	CU.YD.	BITUMINOUS AGGREGATE BASE, AC-20
304			27																										304	27	CU.YD.	AGGREGATE BASE
407			267							299	655	909	655	924	307	420	520	423	525	308	318	44	407	881	408	567			407	35326	GAL.	TACK COAT, AS PER PLAN
310			22																										310	22	CU.YD.	SUBBASE, TYPE II
622				850																									622	850	LIN.FT.	CONCRETE BARRIER, TYPE "D", STANDARD
448	1258		6104							64	137	208	137	213	65	89	113	90	114	66	68		87	187	83	119			448	9202	CU.YD.	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, AC-20
622																											1240	760	622	2000	LIN.FT.	TEMPORARY CONCRETE BARRIER
617			1092							14		43		44	14	20	27	20	25	14	15	2	21	41	19	29			617	1440	CU.YD.	COMPACTED AGGREGATE, TYPE "A"
846			9319							104	228	316	228	321	107	146	181	147	183	107	111	14	142	307	143	198			846	12,302	CU.YD.	ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20
611					176																								611	176	SQ.YD.	REINFORCED CONCRETE APPROACH SLABS, MODIFIED, AS PER PLAN-T=13"
202					Lump																								202	LUMP	LUMP	PORTIONS OF STRUCTURES REMOVED
202						250	267.32																						202	517.32	LIN.FT.	RAILING REMOVED, AS PER PLAN
845								1472	1486																				845	2958	SQ.YD.	LATEX MODIFIED CONCRETE OVERLAY (1¼" THICK)
845								36	54																				845	90	CU.YD.	LATEX MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)
845								10	10																				845	20	CU.YD.	FULL DEPTH REPAIR
SPEC.								649	193																				SPECIAL	842	SQ.YD.	SEALING OF CONCRETE SURFACES (SEE PROPOSAL NOTE)
SPEC.									283																				SPECIAL	283	SQ.FT.	STEEL DRIP STRIP
510					444																								510	444	EACH	DOWEL HOLES, AS PER PLAN
509					2429																								509	2429	POUND	REINFORCING STEEL
517						250	262.5																						517	512.50	LIN.FT.	RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP & TYPE 2 STEEL POSTS) AS PER PLAN
517							4.82																						517	4.82	LIN.FT.	RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP & TYPE 2 STEEL POSTS) MODIF., AS PER PLAN
SPEC.		300																											SPECIAL	300	HRS.	LAW ENFORCEMENT OFFICER WITH PATROL CAR
SPEC.		98																											SPECIAL	98	SQ.FT.	REPLACEMENT SIGNS
SPEC.		98																											SPECIAL	98	EACH	REPLACEMENT DRUMS
619	Lump																												619	LUMP	LUMP	FIELD OFFICE
614		Lump																											614	LUMP	LUMP	MAINTAINING TRAFFIC
624																													624	LUMP	LUMP	MOBILIZATION
623																													623	LUMP	LUMP	CONSTRUCTION LAYOUT STAKES

Structures Repair (bracket: items 202 LUMP through 517 4.82)

MISCELLANEOUS (bracket: items SPECIAL 300 through 623)

CALCULATIONS

AUGLAIZE COUNTY
AUG – 33 – 6.63

FHWA REGION	STATE	PROJECT		11
5	OHIO			88

USR 33 MAINLINE CALCULATIONS

STA. 329+00.00 TO STA. 330+00.00 – TRANSITION AREA
ITEM 846 – 18'–0" X 72'–0" X 1 1/4" / 27 = 5.00 CU. YDS.
ITEM 846 – 32'–0" X 72'–0" X (1 1/4" + 1 3/4" /2) / 27 = 10.67 CU. YDS.
ITEM 846 – 50'–0" X 72'–0" X 1 1/4" / 27 = 13.89 CU. YDS.
ITEM 448 – 18'–0" X 72'–0" X (3/4" + 1/2" / 2) / 27 = 2.50 CU. YDS.
ITEM 407 – 100'–0" X 72'–0" / 9 X 0.10 = 80.00 GALS.
ITEM 617 – 100'–0" X 4 X 1'–6" X (0 + 3 1/2" / 2) / 27 = 3.24 CU. YDS.
ITEM 202 – 50'–0" X 72'–0" / 9 = 400.00 SQ.YDS.

STA. 330+00.00 TO STA. 351+72.05 = 2172.05 LIN. FT. – WIDTH 72'–0"
ITEM 846 – 2172.05' X 72'–0" X 1 1/4" / 27 = 603.54 CU. YDS.
ITEM 448 – 2172.05' X 48'–0" X 3/4" / 27 = 241.34 CU. YDS.
ITEM 448 – 2172.05' X 24'–0" X 1" / 27 = 160.83 CU. YDS.
ITEM 407 – 2172.05' X 72'–0" / 9 X 0.10 =1737.64 GALS.
ITEM 617 – 2172.05' X 4 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 70.40 CU. YDS.

STA.351+72.05 TO STA. 351+79.99 =7.94 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 7.94' X 64'–0" X 1 1/4" / 27 = 1.96 CU. YDS.
ITEM 448 – 7.94' X 48'–0" X 3/4" / 27 = 0.88 CU. YDS.
ITEM 448 – 7.94' X 16'–0" X 1" / 27 = 0.39 CU. YDS.
ITEM 407 – 7.94' X 64'–0" / 9 X 0.10 = 5.65 GALS.
ITEM 617 – 7.94' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.19 CU. YDS.

STA. 351+79.99 TO STA. 353+84.88 = 204.89 LIN. FT. – WIDTH 60'–0"
ITEM 846 – 204.89' X 60'–0" X 1 1/4" / 27 = 47.44 CU. YDS.
ITEM 448 – 204.89' X 48'–0" X 3/4" / 27 = 22.77 CU. YDS.
ITEM 448 – 204.89' X 12'–0" X 1" / 27 = 7.59 CU. YDS.
ITEM 407 – 204.89' X 60'–0" / 9 X 0.10 = 136.59 GALS.
ITEM 617 – 204.89' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 3.32 CU. YDS.

STA. 353+84.88 TO STA. 354+26.14 = 41.26 LIN. FT. – WIDTH 56'–0"
ITEM 846 – 41.26' X 56'–0" X 1 1/4" / 27 = 8.92 CU. YDS.
ITEM 448 – 41.26' X 48'–0" X 3/4" / 27 = 4.58 CU. YDS.
ITEM 448 – 41.26' X 8'–0" X 1" / 27 = 1.02 CU. YDS.
ITEM 407 – 41.26' X 56'–0" / 9 X 0.10 = 25.67 GALS.
ITEM 617 – 41.26' X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.33 CU. YDS.

STA. 354+26.14 TO STA. 355+ 45.70 = 119.56 LIN. FT. – WIDTH 48'–0"
ITEM 846 – 119.56' X 48'–0" X 1 1/4" / 27 = 22.15 CU. YDS.
ITEM 448 – 119.56' X 48'–0" X 3/4" / 27 = 13.28 CU. YDS.
ITEM 407 – 119.56' X 48'–0" / 9 X 0.10 = 63.77 GALS.

STA. 355+45.70 TO STA. 355+87.54 = 41.84 LIN. FT. – WIDTH 56'–0"
ITEM 846 – 41.84' X 56'–0" X 1 1/4" / 27 = 9.04 CU. YDS.
ITEM 448 – 41.84' X 48'–0" X 3/4" / 27 = 4.65 CU. YDS.
ITEM 448 – 41.84' X 8'–0" X 1" / 27 = 1.03 CU. YDS.
ITEM 407 – 41.84' X 56'–0" / 9 X 0.10 = 26.03 GALS.
ITEM 617 – 41.84' X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.34 CU. YDS.

STA. 355+87.54 TO STA. 357+92.43 = 204.89 LIN. FT. – WIDTH 60'–0"
ITEM 846 – 204.89' X 60'–0" X 1 1/4" / 27 = 47.44 CU. YDS.
ITEM 448 – 204.89' X 48'–0" X 3/4" / 27 = 22.77 CU. YDS.
ITEM 448 – 204.89' X 12'–0" X 1" / 27 = 7.59 CU. YDS.
ITEM 407 – 204.89' X 60'–0" / 9 X 0.10 = 136.59 GALS.
ITEM 617 – 204.89' X 2 X 1'–6" X (0" + 3 1/2" /2) / 27 = 3.32 CU. YDS.

STA. 357+92.43 TO STA. 358+00.78 = 8.35 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 8.35' X 64'–0" X 1 1/4" / 27 = 2.06 CU. YDS.
ITEM 448 – 8.35' X 48'–0" X 3/4" / 27 = 0.93 CU. YDS.
ITEM 448 – 8.35' X 16'–0" X 1" / 27 = 0.41 CU. YDS.
ITEM 407 – 8.35' X 64'–0" / 9 X 0.10 = 5.94 GALS.
ITEM 617 – 8.35' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.20 CU. YDS.

STA. 358+00.78 TO STA. 361+00.00 = 299.22 LIN. FT. – WIDTH 72'–0"
ITEM 846 – 299.22' X 72'–0" X 1 1/4" / 27 = 83.14 CU. YDS.
ITEM 448 – 299.22' X 48'–0" X 3/4" / 27 = 33.25 CU. YDS.
ITEM 448 – 299.22' X 24'–0" X 1" / 27 = 22.16 CU. YDS.
ITEM 407 – 299.22' X 72'–0" / 9 X 0.10 = 239.38 GALS.
ITEM 617 – 299.22' X 4 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 9.70 CU. YDS.

STA. 361+00.00 TO STA. STA. 363+50.00 = 250.00 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 250.00' X 64'–0" X 1 1/4" / 27 = 61.75 CU. YDS.
ITEM 448 – 250.00' X 48'–0" X 3/4" / 27 = 27.78 CU. YDS.
ITEM 448 – 250.00' X 16'–0" X 1" / 27 = 4.34 CU. YDS.
ITEM 407 –250.00' X 64'–0" / 9 X 0.10 = 177.78 GALS.
ITEM 617 –250.00' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 6.08 CU. YDS.

STA. 363+50.00 TO STA. 368+99.34 = 549.34 LIN. FT. – WIDTH 56'–0"
ITEM 846 – 549.34' X 56'–0" X 1 1/4" / 27 = 118.72 CU. YDS.
ITEM 448 – 549.34' X 48'–0" X 3/4" / 27 = 61.04 CU. YDS.
ITEM 448 – 549.34' X 8'–0" X 1" / 27 = 13.56 CU. YDS.
ITEM 407 – 549.34' X 56'–0" / 9 X 0.10 = 341.81 GALS.
ITEM 617 – 549.34' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 8.90 CU. YDS.

ADDITIONAL AREA STA. 373+50.00 TO STA. 375+84.00 = 234'–0" AVE. WIDTH 14 LIN. FT.
ITEM 846 – 234.00' X 14'–0" X 1 1/4" / 27 = 12.64 CU. YDS.
ITEM 448 – 234.00' X 14'–0" X 1" / 27 = 10.11 CU. YDS.
ITEM 407 – 234.00' X 14'–0" /9 X 0.10 = 36.4 GALS.

STA. 368+99.34 TO STA. 375+84.00 = 684.66 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 684.66' X 64'–0" X 1 1/4" / 27 = 169.11 CU. YDS.
ITEM 448 – 684.66' X 48'–0" X 3/4" / 27 = 76.07 CU. YDS.
ITEM 448 – 684.66' X 16'–0" X 1" / 27 = 33.80 CU. YDS.
ITEM 407 – 684.66' X 64'–0" / 9 X 0.10 = 486.87 GALS.
ITEM 617 –684.66' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 16.64 CU. YDS.

STA. 375+84.00 TO STA. 391+54.07 = 1570.07 LIN. FT. – WIDTH 72'–0"
ITEM 846 – 1570.07' X 72'–0" X 1 1/4" / 27 = 436.27 CU. YDS.
ITEM 448 – 1570.07' X 48'–0" X 3/4" / 27 = 174.45 CU. YDS.
ITEM 448 – 1570.07' X 24'–0" X 1" / 27 = 116.25 CU. YDS.
ITEM 407 – 1570.07' X 72'–0" / 9 X 0.10 = 1256.06 GALS.
ITEM 617 – 1570.07' X 4 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 50.89 CU. YDS.

STA. 391+54.07 TO STA. 398+00.00 = 645.93 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 645.93' X 64'–0" X 1 1/4" / 27 = 159.54 CU. YDS.
ITEM 448 – 645.93' X 48'–0" X 3/4" / 27 = 71.77 CU. YDS.
ITEM 448 – 645.93' X 16'–0" X 1" / 27 = 31.89 CU. YDS.
ITEM 407 – 645.93' X 64'–0" / 9 X 0.10 = 459.33 GALS.
ITEM 617 – 645.93' X 3 X 1'–6" X (0" + 3 1/2") / 27 = 15.70 CU. YDS.

ADDITIONAL AREA STA 391+54.07 TO STA 393+54.07 = 200 LIN FT AVE WIDTH 14 LIN FT
ITEM 846 – 200.00' X14'–0" X 1 1/4" / 27 = 10.80 CU. YDS.
ITEM 448 – 200.00' X14'–0" X 1" / 27 = 8.64 CU. YDS.
ITEM 407 – 200.00' X14'–0" / 9 X 0.10 = 31.11 GALS.

STA. 398+00.00 TO STA. 403+54.07 = 554.07 LIN. FT. – WIDTH 56'–0"
ITEM 846 – 554.07' X 56'–0" X 1 1/4" / 27 = 119.74 CU. YDS.
ITEM 448 – 554.07' X 48'–0" X 3/4" / 27 = 61.56 CU. YDS.
ITEM 448 – 554.07' X 8'–0" X 1" / 27 = 13.68 CU. YDS.
ITEM 407 – 554.07' X 56'–0" / 9 X 0.10 = 344.75 GALS.
ITEM 617 – 554.07' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 8.98 CU. YDS.

STA. 403+54.07 TO STA. 406+00.00 = 245.93 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 245.93' X 64'–0" X 1 1/4" / 27 = 62.97 CU. YDS. 60.73
ITEM 448 – 245.93' X 48'–0" X 3/4" / 27 = 28.33 CU. YDS. 27.33
ITEM 448 – 245.93' X 16'–0" X 1" / 27 = 12.58 CU. YDS. 12.14
ITEM 407 – 245.93' X 64'–0" / 9 X 0.10 = 181.28 GALS. 176.88
ITEM 617 – 245.93' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 6.20 CU. YDS.

STA. 406+00.00 TO STA. 412+77.43 = 677.43 LIN. FT. – WIDTH 72'–0"
ITEM 846 – 677.43' X 72'–0" X 1 1/4" / 27 = 188.24 CU. YDS.
ITEM 448 – 677.43' X 48'–0" X 3/4" / 27 = 75.27 CU. YDS.
ITEM 448 – 677.43' X 24'–0" X 1" / 27 = 50.16 CU. YDS.
ITEM 407 – 677.43' X 72'–0" / 9 X 0.10 = 541.94 GALS.
ITEM 617 – 677.43' X 4 X 1'–6" X (0" + 3 1/2 / 2) / 27 = 21.96 CU. YDS.

STA. 412+77.43 TO STA. 413+04.45 = 27.02 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 27.02' X 64'–0" X 1 1/4" / 27 = 6.67 CU. YDS.
ITEM 448 – 27.02' X 48'–0" X 3/4" / 27 = 3.00 CU. YDS.
ITEM 448 – 27.02' X 16'–0" X 1" / 27 = 1.33 CU. YDS.
ITEM 407 – 27.02' X 64'–0" / 9 X 0.10 = 19.21 GALS.
ITEM 617 – 27.02 X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.66 CU. YDS.

STA. 413+04.45 TO STA. 414+99.95 = 195.50 LIN. FT. – WIDTH 60'–0"
ITEM 846 – 195.50' X 60'–0" X 1 1/4" / 27 = 45.27 CU. YDS.
ITEM 448 – 195.50' X 48'–0" X 3/4" / 27 = 21.72 CU. YDS.
ITEM 448 – 195.50' X 12'–0" X 1" / 27 = 7.24 CU. YDS.
ITEM 407 – 195.50' X 60'–0" / 9 X 0.10 = 130.33 GALS.
ITEM 617 – 195.50' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 3.17 CU. YDS.

STA. 414+99.95 TO STA. 415+58.25 = 58.30 LIN. FT. – WIDTH 56'–0"
ITEM 846 – 58.30' X 56'–0" X 1 1/4" / 27 = 12.60 CU. YDS.
ITEM 448 – 58.30' X 48'–0" X 3/4" / 27 = 6.48 CU. YDS.
ITEM 448 – 58.30' X 8'–0" X 1" / 27 = 1.44 CU. YDS.
ITEM 407 – 58.30' X 56'–0" / 9 X 0.10 = 36.28 GALS.
ITEM 617 – 58.30' X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.47 CU. YDS.

STA. 415+58.25 TO STA. 416+51.80 = 93.55 LIN. FT. – WIDTH 48'–0"
ITEM 846 – 93.55' X 48'–0" X 1 1/4" / 27 = 17.33 CU. YDS.
ITEM 448 – 93.55' X 48'–0" X 3/4" / 27 = 10.39 CU. YDS.
ITEM 407 – 93.55' X 48'–0" / 9 X 0.10 = 49.89 GALS.

STA. 416+51.80 TO STA. 417+ 12.63 = 60.83 LIN. FT. WIDTH 56'–0"
ITEM 846 – 60.83' X 56'–0" X 1 1/4" / 27 = 13.15 CU. YDS.
ITEM 448 – 60.83' X 48'–0" X 3/4" / 27 = 6.76 CU. YDS.
ITEM 448 – 60.83' X 8'–0" X 1" / 27 = 1.50 CU. YDS.
ITEM 407 – 60.83' X 56'–0" / 9 X 0.10 = 37.85 GALS.
ITEM 617 – 60.83' X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.49 CU. YDS.

STA. 417+12.63 TO STA. 419+08.13 = 195.50 LIN. FT. – WIDTH 60'–0"
ITEM 846 – 195.50' X 60'–0" X 1 1/4" / 27 = 45.27 CU. YDS.
ITEM 448 – 195.50' X 48'–0" X 3/4" / 27 = 21.72 CU. YDS.
ITEM 448 – 195.50' X 12'–0" X 1" / 27 = 7.24 CU. YDS.
ITEM 407 – 195.50' X 60'–0" / 9 X 0.10 = 130.33 GALS.
ITEM 617 – 195.50' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 3.17 CU. YDS.

STA. 419+08.13 TO STA. 419+32.62 = 24.49 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 24.49' X 64'–0" X 1 1/4" / 27 = 6.05 CU. YDS.
ITEM 448 – 24.49' X 48'–0" X 3/4" / 27 = 2.72 CU. YDS.
ITEM 448 – 24.49' X 16'–0" X 1" / 27 = 1.21 CU. YDS.
ITEM 407 – 24.49' X 64'–0" / 9 X 0.10 = 17.42 GALS.
ITEM 617 – 24.49' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.60 CU. YDS.

STA. 419+32.63 TO STA. 449+23.88 =2991.26 LIN. FT. – WIDTH 72'–0"
ITEM 846 – 2991.26' X 72'–0" X 1 1/4" / 27 = 831.17 CU. YDS.
ITEM 448 – 2991.26' X 48'–0" X 3/4" / 27 = 332.36 CU. YDS.
ITEM 448 – 2991.26' X 24'–0" X 1" / 27 = 221.49 CU. YDS.
ITEM 407 – 2991.26' X 72'–0" / 9 X 0.10 = 2393.01 GALS.
ITEM 617 – 2991.26' X 4 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 96.95 CU. YDS.

STA. 449+23.88 TO STA. 453+42.59 = 418.71 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 418.71' X 64'–0" X 1 1/4" / 27 = 103.42 CU. YDS.
ITEM 448 – 418.71' X 48'–0" X 3/4" / 27 = 46.52 CU. YDS.
ITEM 448 – 418.71' X 16'–0" X 1" / 27 = 20.67 CU. YDS.
ITEM 407 – 418.71' X 64'–0" / 9 X 0.10 = 297.75 GALS.
ITEM 617 – 418.71' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 10.18 CU. YDS.

CALCULATIONS

USR 33 MAINLINE CALCULATIONS CONT.

STA. 453+42.59 TO STA. 459+23.88 = 581.29 LIN. FT. – WIDTH 56'–0"
ITEM 846 – 581.29' X 56'–0" X 1 1/4" / 27 = 125.63 CU. YDS.
ITEM 448 – 581.29' X 48'–0" X 3/4" / 27 = 64.59 CU. YDS.
ITEM 448 – 581.29' X 8'–0" X 1" / 27 = 14.35 CU. YDS.
ITEM 407 – 581.29' X 56'–0" / 9 X 0.10 = 361.69 GALS.
ITEM 617 – 581.29' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 9.42 CU. YDS.

STA. 459+23.88 TO STA. 461+42.59 = 218.71 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 218.71' X 64'–0" X 1 1/4" / 27 = 54.02 CU. YDS.
ITEM 448 – 218.71' X 48'–0" X 3/4" / 27 = 24.30 CU. YDS.
ITEM 448 – 218.71' X 16'–0" X 1" / 27 = 10.80 CU. YDS.
ITEM 407 – 218.71' X 64'–0" / 9 X 0.10 = 155.53 GALS.
ITEM 617 – 218.71' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 3.54 CU. YDS.

ADDITIONAL AREA STA. 459+23.88 TO STA. 461+43.00 = 219.12' AVE. WIDTH = 6'–0"
ITEM 846 – 219.12' X 6'–0" X 1 1/4" / 27 = 5.07 CU. YDS.
ITEM 448 – 219.12' X 6'–0" X 1" / 27 = 4.06 CU. YDS.
ITEM 407 – 219.12' X 6'–0" / 9 X 0.10 = 14.61 GALS.

STA. 461+42.59 TO STA. 477+27.99 = 1585.40 LIN. FT. – WIDTH 72'–0"
ITEM 846 – 1585.40' X 72'–0" X 1 1/4" / 27 = 440.53 CU. YDS.
ITEM 448 – 1585.40' X 48'–0" X 3/4" / 27 = 176.16 CU. YDS.
ITEM 448 – 1585.40' X 24'–0" X 1" / 27 = 117.39 CU. YDS.
ITEM 407 – 1585.40' X 72'–0" / 9 X 0.10 = 1268.32 GALS.
ITEM 617 – 1585.40' X 4 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 51.38 CU. YDS.

STA. 477+27.99 TO STA. 479+46.70 = 218.71 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 218.71' X 64'–0" X 1 1/4" / 27 = 54.02 CU. YDS.
ITEM 448 – 218.71' X 48'–0" X 3/4" / 27 = 24.30 CU. YDS.
ITEM 448 – 218.71' X 16'–0" X 1" / 27 = 10.80 CU. YDS.
ITEM 407 – 218.71' X 64'–0" / 9 X 0.10 = 155.53 GALS.
ITEM 617 – 218.71' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 5.32 CU. YDS.

ADDITIONAL AREA STA. 477+56.00 TO STA. 479+46.70 = 190.70' AVE. WIDTH 6'–0"
ITEM 846 – 190.70' X 6'–0" X 1 1/4" / 27 = 4.42 CU. YDS.
ITEM 448 – 190.70' X 6'–0" X 1" / 27 = 3.53 CU. YDS.
ITEM 407 – 190.70' X 6'–0" / 9 X 0.10 = 12.71 GALS.

STA. 479+46.70 TO STA. 485+28.38 = 581.68 LIN. FT. – WIDTH 56'–0"
ITEM 846 – 581.68' X 56'–0" X 1 1/4" / 27 = 125.71 CU. YDS.
ITEM 448 – 581.68' X 48'–0" X 3/4" / 27 = 64.63 CU. YDS.
ITEM 448 – 581.68' X 8'–0" X 1" / 27 = 14.36 CU. YDS.
ITEM 407 – 581.68' X 56'–0" / 9 X 0.10 = 361.93 GALS.
ITEM 617 – 581.68' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 9.43 CU. YDS.

STA. 485+28.38 TO STA. 489+46.72 = 418.34 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 418.34' X 64'–0" X 1 1/4" / 27 = 103.33 CU. YDS.
ITEM 448 – 418.34' X 48'–0" X 3/4" / 27 = 46.48 CU. YDS.
ITEM 448 – 418.34' X 16'–0" X 1" / 27 = 20.65 CU. YDS.
ITEM 407 – 418.34' X 64'–0" / 9 X 0.10 = 297.49 GALS.
ITEM 617 – 418.34' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 10.17 CU. YDS.

STA. 489+46.72 TO STA. 523+59.63 = 3412.91 LIN. FT. – WIDTH 72'–0"
ITEM 846 – 3412.91' X 72'–0" X 1 1/4" / 27 = 948.33 CU. YDS.
ITEM 448 – 3412.91' X 48'–0" X 3/4" / 27 = 379.21 CU. YDS.
ITEM 448 – 3412.91' X 24'–0" X 1" / 27 = 252.71 CU. YDS.
ITEM 407 – 3412.91' X 72'–0" / 9 X 0.10 = 2730.33 GALS.
ITEM 617 – 3412.91' X 4 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 110.62 CU. YDS.

STA.523+59.63 TO STA. 523+83.36 = 23.73 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 23.73' X 64'–0" X 1 1/4" / 27 = 5.86 CU. YDS.
ITEM 448 – 23.73' X 48'–0" X 3/4" / 27 = 2.64 CU. YDS.
ITEM 448 – 23.73' X 16'–0" X 1" / 27 = 1.17 CU. YDS.
ITEM 407 – 23.73' X 64'–0" / 9 X 0.10 = 16.87 GALS.
ITEM 617 – 23.73' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.58 CU. YDS.

STA. 523+83.36 TO STA. 525+79.28 = 195.92 LIN. FT. – WIDTH 60'–0"
ITEM 846 – 195.92' X 60'–0" X 1 1/4" / 27 = 45.37 CU. YDS.
ITEM 448 – 195.92' X 48'–0" X 3/4" / 27 = 21.77 CU. YDS.
ITEM 448 – 195.92' X 12'–0" X 1" / 27 = 7.25 CU. YDS.
ITEM 407 – 195.92' X 60'–0" / 9 X 0.10 = 130.61 GALS.
ITEM 617 – 195.92' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 3.17 CU. YDS.

STA. 525+79.28 TO STA. 526+29.55 = 50.27 LIN. FT. – WIDTH 56'–0"
ITEM 846 – 50.27' X 56'–0" X 1 1/4" / 27 = 10.86 CU. YDS.
ITEM 448 – 50.27' X 48'–0" X 3/4" / 27 = 5.59 CU. YDS.
ITEM 448 – 50.27' X 8'–0" X 1" / 27 = 1.24 CU. YDS.
ITEM 407 – 50.27' X 56'–0" / 9 X 0.10 = 31.28 GALS.
ITEM 617 – 50.27' X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.41 CU. YDS.

STA. 526+29.55 TO STA. 527+33.93 = 104.38 LIN. FT. – WIDTH 48'–0"
ITEM 846 – 104.38' X 48'–0" X 1 1/4" / 27 = 19.33 CU. YDS. 19.33
ITEM 448 – 104.38' X 48'–0" X 1" / 27 = 15.46 CU. YDS. 15.46
ITEM 407 – 104.38' X 48'–0" / 9 X 0.10 = 55.67 GALS. 35.67

STA. 527+33.93 TO STA. 527+91.46 = 57.53 LIN. FT. – WIDTH 56'–0"
ITEM 846 – 57.53' X 56'–0" X 1 1/4" / 27 = 12.43 CU. YDS.
ITEM 448 – 57.53' X 48'–0" X 3/4" / 27 = 6.39 CU. YDS.
ITEM 448 – 57.53' X 8'–0" X 1" / 27 = 1.42 CU. YDS.
ITEM 407 – 57.53' X 56'–0" / 9 X 0.10 = 35.80 GALS.
ITEM 617 – 57.53' X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.47 CU. YDS.

STA. 527+91.46 TO STA. 529+87.38 = 195.92 LIN. FT. – WIDTH 60'–0"
ITEM 846 – 195.92' X 60'–0" X 1 1/4" / 27 = 45.37 CU.YDS.
ITEM 448 – 195.92' X 48'–0" X 3/4" / 27 = 21.77 CU. YDS.
ITEM 448 – 195.92' X 12'–0" X 1" / 27 = 7.25 CU. YDS.
ITEM 407 – 195.92' X 60'–0" / 9 X 0.10 = 130.61 GALS.
ITEM 617 – 195.92' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 3.17 CU. YDS.

STA. 529+87.38 TO STA. 530+11.11 = 23.73 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 23.73' X 64'–0" X 1 1/4" / 27 = 5.86 CU. YDS.
ITEM 448 – 23.73' X 48'–0" X 3/4" / 27 = 2.64 CU. YDS.
ITEM 448 – 23.73' X 16'–0" X 1" / 27 = 1.17 CU. YDS.
ITEM 407 – 23.73' X 64'–0" / 9 X 0.10 = 16.87 GALS.
ITEM 617 – 23.73' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.58 CU. YDS.

STA. 530+11.11 TO STA. 573+80.74 = 4369.63 LIN. FT.– WIDTH 72'–0"
ITEM 846 – 4369.63' X 72'–0" X 1 1/4" / 27 = 1214.17 CU. YDS.
ITEM 448 – 4369.63' X 48'–0" X 3/4" / 27 = 485.51 CU. YDS.
ITEM 448 – 4369.63' X 24'–0" X 1" / 27 = 323.55 CU. YDS.
ITEM 407 – 4369.63' X 72'–0" / 9 X 0.10 = 3495.70 GALS.
ITEM 617 – 4369.63' X 4 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 141.62 CU. YDS.

STA. 573+80.74 TO STA. 574+02.92 = 22.18 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 22.18' X 64'–0" X 1 1/4" / 27 = 5.48 CU. YDS.
ITEM 448 – 22.18' X 48'–0" X 3/4" / 27 = 2.46 CU. YDS.
ITEM 448 – 22.18' X 16'–0" X 1" / 27 = 1.09 CU. YDS.
ITEM 407 – 22.18' X 64'–0" /9 X 0.10 = 15.77 GALS.
ITEM 617 – 22.18' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.54 CU. YDS.

STA. 574+02.92 TO STA. 576+00.92 = 197.30 LIN. FT. – WIDTH 60'–0"
ITEM 846 – 197.30' X 60'–0" X 1 1/4" / 27 = 45.69 CU. YDS.
ITEM 448 – 197.30' X 48'–0" X 3/4" / 27 = 21.92 CU. YDS.
ITEM 448 – 197.30' X 12'–0" X 1" / 27 = 7.30 CU. YDS.
ITEM 407 – 197.30' X 60'–0" / 9 X 0.10 = 131.53 GALS.
ITEM 617 – 197.30' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 3.20 CU. YDS.

STA.576+00.22 TO STA. 576+55.19 = 54.97 LIN. FT. – WIDTH 56'–0"
ITEM 846 – 54.97' X 56'–0" X 1 1/4" / 27 = 11.88 CU. YDS.
ITEM 448 – 54.97' X 48'–0" X 3/4" / 27 = 6.11 CU. YDS.
ITEM 448 – 54.97' X 8'–0" X 1" / 27 = 1.36 CU. YDS.
ITEM 407 – 54.97' X 56'–0" / 9 X 0.10 = 34.20 GALS.
ITEM 617 – 54.97' X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.45 CU. YDS.

STA. 576+55.19 TO STA. 577+54.23 = 99.04 LIN. FT. – WIDTH 48'–0"
ITEM 846 – 99.04' X 48'–0" X 1 1/4" / 27 = 18.35 CU. YDS.
ITEM 448 – 99.04' X 48'–0" X 1" / 27 = 14.67 CU. YDS.
ITEM 407 – 99.04' X 48'–0" / 9 X 0.10 = 52.82 GALS.

STA. 577+54.23 TO STA. 578+09.20 = 54.97 LIN. FT. – WIDTH 56'–0"
ITEM 846 – 54.97' X 56'–0" X 1 1/4" / 27 = 11.88 CU. YDS.
ITEM 448 – 54.97' X 48'–0" X 3/4" / 27 = 6.11 CU. YDS.
ITEM 448 – 54.97' X 8'–0" X 1" / 27 = 1.36 CU. YDS.
ITEM 407 – 54.97' X 56'–0" / 9 X 0.10 = 34.20 GALS.
ITEM 617 – 54.97' X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.45 CU. YDS.

STA. 578+09.20 TO STA. 580+06.50 = 197.30 LIN. FT. – WIDTH 60'–0"
ITEM 846 – 197.30' X 60'–0" X 1 1/4" / 27 = 45.69 CU. YDS.
ITEM 448 – 197.30' X 48'–0" X 3/4" / 27 = 21.92 CU. YDS.
ITEM 448 – 197.30' X 12'–0" X 1" / 27 = 7.30 CU. YDS.
ITEM 407 – 197.30' X 60'–0" / 9 X 0.10 = 131.53 GALS.
ITEM 617 – 197.30' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 3.20 CU. YDS.

STA. 580+06.50 TO STA. 580+23.68 = 17.18 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 17.18' X 64'–0" X 1 1/4" / 27 = 4.24 CU. YDS.
ITEM 448 – 17.18' X 48'–0" X 3/4" / 27 = 1.91 CU. YDS.
ITEM 448 – 17.18' X 16'–0" X 1" / 27 = 0.85 CU. YDS.
ITEM 407 – 17.18' X 64'–0" / 9 X 0.10 = 12.22 GALS.
ITEM 617 – 17.18' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.42 CU. YDS.

STA. 580+23.68 TO STA. 635+64.19 = 5540.51 LIN. FT. – WIDTH 72'–0"
ITEM 846 – 5540.51' X 72'–0" X 1 1/4" / 27 = 1539.52 CU. YDS.
ITEM 448 – 5540.51' X 48'–0" X 3/4" / 27 = 615.61 CU. YDS.
ITEM 448 – 5540.51' X 24'–0" X 1" / 27 = 410.24 CU. YDS.
ITEM 407 – 5540.51' X 72'–0" / 9 X 0.10 = 4432.41 CU. YDS.
ITEM 617 – 5540.51' X 4 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 179.57 CU. YDS.

STA. 635+64.19 TO STA. 639+31.96 = 367.77 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 367.77' X 64'–0" X 1 1/4" / 27 = 90.84 CU. YDS.
ITEM 448 – 367.77' X 48'–0" X 3/4" / 27 = 40.86 CU. YDS.
ITEM 448 – 367.77' X 16'–0" X 1" / 27 = 18.15 CU. YDS.
ITEM 407 – 367.77' X 64'–0" / 9 X 0.10 = 261.53 GALS.
ITEM 617 – 367.77' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 8.94 CU. YDS.

STA. 639+31.96 TO STA. 647+31.96 = 800.00 LIN. FT. – WIDTH 56'–0"
ITEM 846 – 800.00' X 56'–0" X 1 1/4" / 27 = 172.89 CU. YDS.
ITEM 448 – 800.00' X 48'–0" X 3/4" / 27 = 88.89 CU. YDS.
ITEM 448 – 800.00' X 8'–0" X 1" / 27 = 19.75 CU. YDS.
ITEM 407 – 800.00' X 56'–0" / 9 X 0.10 = 497.78 GALS.
ITEM 617 – 800.00' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 12.96 CU. YDS.

STA. 647+31.96 TO STA. 647+64.19 = 32.23 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 32.23' X 64'–0" X 1 1/4" / 27 = 7.96 CU. YDS.
ITEM 448 – 32.23' X 48'–0" X 3/4" / 27 = 3.58 CU. YDS.
ITEM 448 – 32.23' X 16'–0" X 1" / 27 = 1.59 CU. YDS.
ITEM 407 – 32.23' X 64'–0" / 9 X 0.10 = 22.92 GALS.
ITEM 617 – 32.23' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.52 CU. YDS.

ADDITIONAL AREA STA. 645+64.19 TO STA. 647+64.19 = 200.00' – AVE. WIDTH 14'–0"
ITEM 846 – 200.00' X 14'–0" X 1 1/4" / 27 = 10.81 CU. YDS.
ITEM 448 – 200.00' X 14'–0" X 1" / 27 = 8.64 CU. YDS.
ITEM 407 – 200.00' X 14'–0" / 9 X 0.10 = 31.11 GALS.

STA. 647+64.19 TO STA. 667+89.31 = 2025.12 LIN. FT. – WIDTH 72'–0"
ITEM 846 – 2025.12' X 72'–0" X 1 1/4" / 27 = 562.71 CU. YDS.
ITEM 448 – 2025.12' X 48'–0" X 3/4" / 27 = 225.01 CU. YDS.
ITEM 448 – 2025.12' X 24'–0" X 1" / 27 = 149.95 CU. YDS.
ITEM 407 – 2025.12' X 72'–0" / 9 X 0.10 = 1620.10 GALS.
ITEM 617 – 2025.12' X 4 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 65.64 CU. YDS.

CALCULATIONS

AUGLAIZE COUNTY
AUG – 33 – 6.63

USR 33 MAINLINE CALCULATIONS CONT.

STA. 667+89.31 TO STA. 669+14.71 = 125.40 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 125.40' X 64'–0" X 1 1/4" / 27 = 30.97 CU. YDS.
ITEM 448 – 125.40' X 48'–0" X 3/4" / 27 = 13.93 CU. YDS.
ITEM 448 – 125.40' X 16'–0" X 1" / 27 = 6.19 CU. YDS.
ITEM 407 – 125.40' X 64'–0" / 9 X 0.10 = 89.17 GALS.
ITEM 617 – 125.40' X 2 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 2.03 CU. YDS.

ADDITIONAL AREA STA. 666+47.00 TO STA. 669+14.71 = 267.71' – AVE. WIDTH 6'–0"
ITEM 846 – 267.71' X 6'–0" X 1 1/4" / 27 = 6.20 CU. YDS.
ITEM 448 – 267.71' X 6'–0" X 1" / 27 = 4.96 CU. YDS.
ITEM 407 – 267.71' X 6'–0" / 9 X 0.10 = 17.85 GALS.

STA. 669+14.71 E.B. TO STA. 671+61.44 E.B. = 246.73 LIN. FT. – WIDTH 28'–0"
STA. 669+14.71 W.B. TO STA. 671+23.41 W.B. = 208.70 LIN. FT. – WIDTH 28'–0"
ITEM 846 – 12752.04 SQ. FT. X 1 1/4" / 27 = 49.21 CU. YDS.
ITEM 448 – 10930.32 SQ. FT. X 3/4" / 27 = 25.30 CU. YDS.
ITEM 448 – 455.43' X 4'–0" X 1" / 27 = 5.62 CU. YDS.
ITEM 407 – 12752.04 SQ. FT. / 9 X 0.10 = 141.69 GALS.
ITEM 617 – 455.43' X 1'–6" X (0" + 3 1/2" / 2) / 27 = 3.69 CU. YDS.

STA. 671+61.44 E.B. TO STA. 671+86.44 E.B. – TRANS. AREA = 700.00 SQ. FT.
STA. 671+ 23.41 W.B. TO STA. 671+48.41 W.B. – TRANS. AREA = 700.00 SQ. FT.
ITEM 846 – 1400.00 SQ. FT. X (1" + 2" / 2) / 27 = 6.48 CU. YDS.
ITEM 407 – 1400.00 SQ. FT. / 9 X 0.10 = 15.56 GALS.
ITEM 617 – 50'–0" X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.41 CU. YDS.

STA. 673+05.56 E.B. TO STA. 673+30.56 E.B. – TRANS. AREA = 700.00 SQ. FT.
STA. 672+76.87 W.B. TO STA. 673+01.87 W.B. – TRANS. AREA = 700.00 SQ. FT.
ITEM 846 – 1400.00 SQ. FT. X (1" + 2" / 2) / 27 = 6.48 CU. YDS.
ITEM 407 – 1400.00 SQ. FT. / 9 X 0.10 = 15.56 GALS.
ITEM 617 – 50'–0" X 1'–6" X (0" + 3 1/2" / 2) / 27 = 0.41 CU. YDS.

STA. 673+ 30.56 E.B. TO STA. 675+89.31 E.B. = 258.75 LIN. FT. – WIDTH 28'–0"
STA. 673+01.87 W.B. TO STA. 675+89.31 W.B. = 287.44 LIN. FT. – WIDTH 28'–0"
ITEM 846 – 15293.32 SQ. FT. X 1 1/4" / 27 = 59.02 CU. YDS.
ITEM 448 – 13108.56 SQ. FT. X 3/4" / 27 = 30.34 CU. YDS.
ITEM 448 – 546.19' X 4'–0" X 1" / 27 = 6.74 CU. YDS.
ITEM 407 – 15293.32 SQ. FT. / 9 X 0.10 = 169.93 GALS.
ITEM 617 – 546.19' X 1'–6" X (0" + 3 1/2" / 2) / 27 = 4.43 CU. YDS.

STA. 675+89.31 TO STA. 679+14.71 = 325.40 LIN. FT. – WIDTH 64'–0"
ITEM 846 – 325.40' X 64'–0" X 1 1/4" / 27 = 80.37 CU. YDS.
ITEM 448 – 325.40' X 48'–0" X 3/4" / 27 = 36.16 CU. YDS.
ITEM 448 – 325.40' X 16'–0" X 1" / 27 = 16.06 CU. YDS.
ITEM 407 – 325.40' X 64'–0" / 9 X 0.10 = 231.40 GALS.
ITEM 617 – 325.40' X 3 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 7.91 CU. YDS.

STA. 679+14.71 TO STA. 680+00.00 = 85.29 LIN. FT. – WIDTH 72–0"
ITEM 846 – 85.29' X 72'–0" X 1 1/4" / 27 = 23.70 CU. YDS.
ITEM 448 – 85.29' X 48'–0" X 3/4" / 27 = 9.48 CU. YDS.
ITEM 448 – 85.29' X 24'–0" X 1" / 27 = 6.32 CU. YDS.
ITEM 407 – 85.29' X 72'–0" / 9 X 0.10 = 68.23 GALS.
ITEM 617 – 85.29' X 4 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 2.76 CU. YDS.

STA. 680+00.00 TO STA. 681+00.00 – TRANSITION AREA
ITEM 846 – 18'–0" X 72'–0" X 1 1/4" / 27 = 5.00 CU. YDS.
ITEM 846 – 32'–0" X 72'–0" X (1 1/4" + 1 3/4" / 2) / 27 = 10.67 CU. YDS.
ITEM 846 – 50'–0" X 72'–0" X 1 1/4" / 27 = 13.89 CU. YDS.
ITEM 448 – 18'–0" X 72'–0" X (1/2" + 3/4" / 2) / 27 = 2.50 CU. YDS.
ITEM 407 – 100'–0" X 72'–0" / 9 X 0.10 = 80.00 GALS.
ITEM 617 – 100'–0" X 4 X 1'–6" X (0" + 3 1/2" / 2) / 27 = 3.24 CU. YDS.
ITEM 202 – 50'–0" X 72'–0" / 9 = 400.00 SQ. FT.

ADDITIONAL BERM WIDENING:
E.B. AREA – STA. 678+34.71 TO STA. 680+00.00 = 165.29 LIN. FT.
W.B. AREA – STA. 674+89.31 TO STA. 680+00.00 = 510.69 LIN. FT.
TOTAL = 675.98 LIN. FT.
NOTE: 80.00 LIN. FT. E.B. AND 100.00 LIN.FT. W.B. TRANS. 2' TO 0'
ITEM 846 – 495.98' X 2'–0" X 1 1/4" / 27 = 3.83 CU. YDS.
ITEM 846 – 180.00' X (0' + 2' / 2) X 1 1/4" / 27 = 0.69 CU. YDS.
ITEM 448 – 495.98' X 2'–0" X 1" / 27 = 3.06 CU. YDS.
ITEM 448 – 180.00' X (0' + 2' / 2) X 1" / 27 = 0.56 CU. YDS.
ITEM 301 – 495.98' X 2'–0" X 3" / 27 = 9.18 CU. YDS.
ITEM 301 – 180.00' X (0' + 2' / 2) X 3" / 27 = 1.67 CU. YDS.
ITEM 304 – 495.98' X 2'–6" X 6" / 27 = 22.96 CU. YDS.
ITEM 304 – 180.00' X (0" + 2'–6" / 2) X 6" / 27 = 4.17 CU. YDS.
ITEM 310 – 495.98' X 3'–0" X (3" + 5" / 2) / 27 = 18.35 CU. YDS.
ITEM 310 – 180.00' X (0' + 3' / 2) X [3" + 5" / 2] / 27 = 3.33 CU. YDS.

GRAND TOTALS

ITEM 846 – ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20 = 9319 CU. YDS.
ITEM 448 – ASPHALT CONC INTERMEDIATE COURSE, TYPE 1, AC-20 = 6117 CU. YDS.
ITEM 407 – TACK COAT, AS PER PLAN = 26799 GALS.
ITEM 617 – COMPACTED AGGREGATE, TYPE A = 1092 CU. YDS. - (INCLUDES 10% FOR IRREGULARITIES)
ITEM 202 – WEARING COURSE REMOVED = 800 SQ. YDS.
ITEM 301 – BITUMINOUS AGGREGATE BASE, AC-20 = 11 CU. YDS.
ITEM 304 – AGGREGATE BASE = 27 CU. YDS.
ITEM 310 – SUBBASE, TYPE II = 22 CU. YDS.

QUANTITIES CARRIED TO THE GENERAL SUMMARY

PAVEMENT TRANSITION DETAILS

FHWA REGION	STATE	PROJECT	
5	OHIO		

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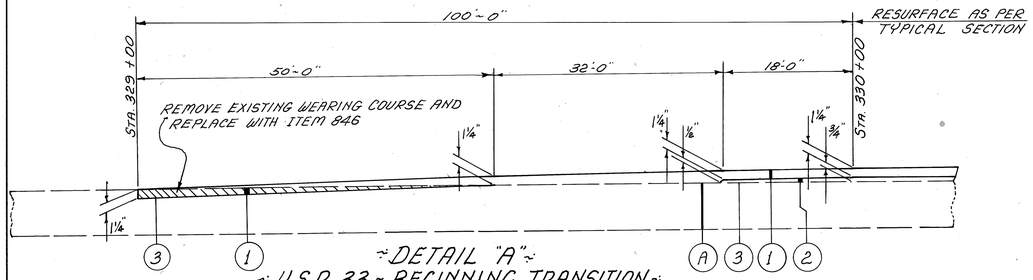
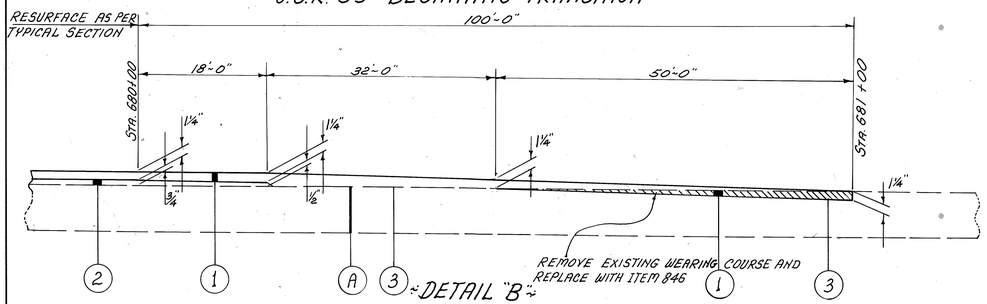
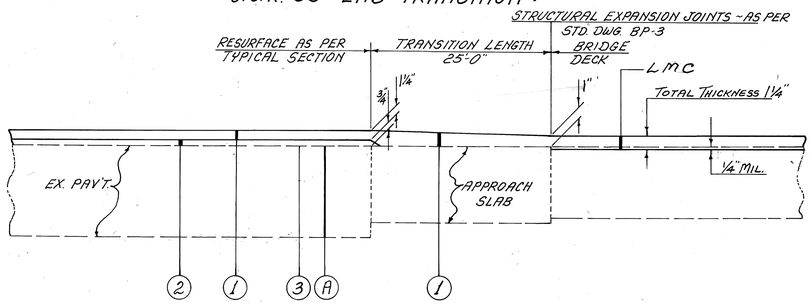
AUGLAIZE COUNTY
AUG-33-6.63



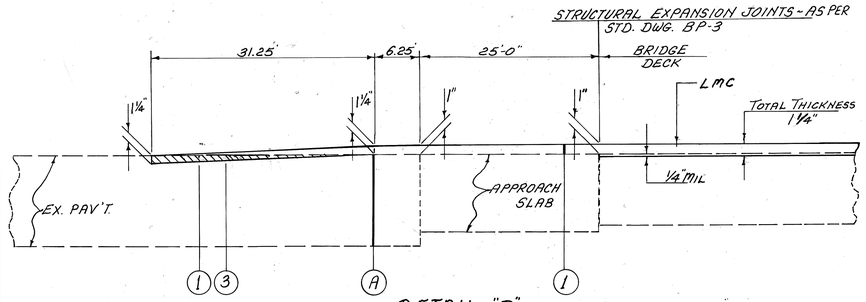
≈ DETAIL "A" ≈
≈ U.S.R. 33 - BEGINNING TRANSITION ≈



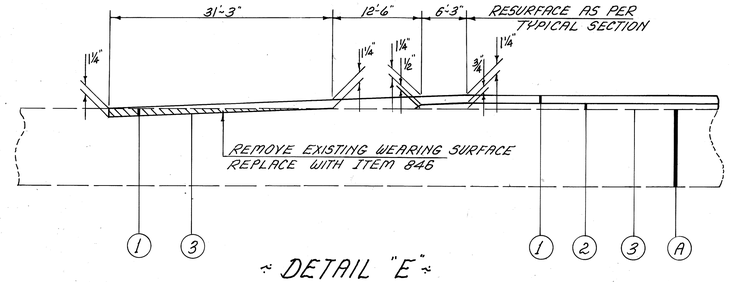
≈ DETAIL "B" ≈
≈ U.S.R. 33 - END TRANSITION ≈



≈ DETAIL "C" ≈
BRIDGE Nº AUG-33-1310 (WESTBOUND)



≈ DETAIL "D" ≈
BRIDGE Nºs. AUG-33-1281



≈ DETAIL "E" ≈

APPROACH ROADS: TOWNLINE, GLYNWOOD, BAY AND KETTLERSVILLE

INTERCHANGES: U.S.R. 33 AND MOULTON-FT. AMANDA-RAMPS A, B, C, D

U.S.R. 33 AND COUNTY ROAD 33-A-RAMPS A, B, BB, C, D

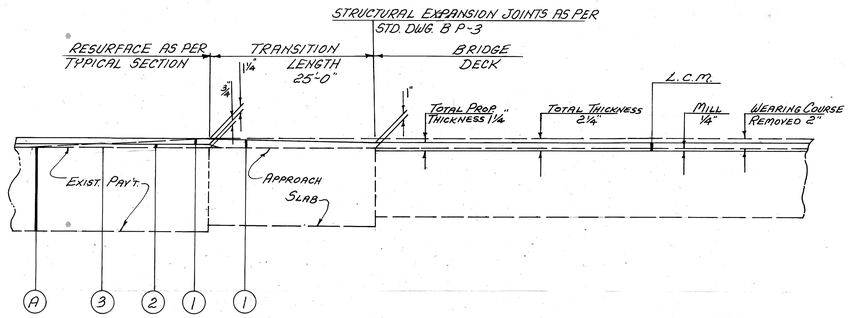
≈ CODE ≈

(1) ITEM 846 - 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20

(2) ITEM 448 - 0" MINIMUM ASPHALT CONC. INTERMEDIATE COURSE, TYPE 1, AC-20 (¾" AVE. THICKNESS USED FOR PAYEMENT CALCULATIONS)

(3) ITEM 407 - TACK COAT, AS PER PLAN

(A) EXISTING PAVEMENT - 12½" BITUMINOUS ON 3" AGGREGATE



≈ DETAIL "F" ≈
BRIDGE Nº AUG-33-13 10 (EASTBOUND)

≈ SYMBOLS ≈

Indicates Pavement Thickness As Shown On Code - Sheet Nº 5.

Indicates All Pavement Transitions For Details - See Sheet Nº 14.

PAVEMENT TRANSITION DETAILS

FHWA REGION	STATE	PROJECT	
5	OHIO		

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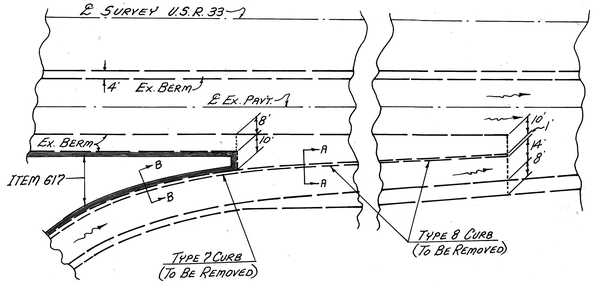
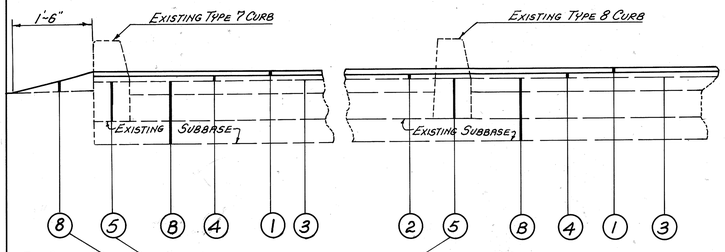
AUGLAIZE COUNTY
AUG-33-6.63

~ CURB REMOVAL DETAILS ~

~ PLAN ~





~ CODE ~

(1) ITEM 846 1¼" ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20
(2) ITEM 448 0" MINIMUM ASPHALT CONC. INTERMEDIATE COURSE, TYPE I, AC-20 (¾" AVE. THICKNESS USED FOR PAY'T. CALCULATIONS)
(3) ITEM 407 TACK COAT, AS PER PLAN
(4) ITEM 448 0" MINIMUM ASPHALT CONC. INTERMEDIATE COURSE, TYPE I, AC-20 (1" AVE. THICKNESS USED FOR PAY'T. CALCULATIONS)
(5) ITEM 301 BITUMINOUS AGGREGATE BASE
(8) ITEM 617 COMPACTED AGGREGATE, TYPE A
(B) EXISTING BERM: 3" BITUMINOUS ON 8¾" AGGREGATE BASE (AVE. THICKNESS)

CURB REMOVAL TABLE

REFERENCE SHEET Nº	REFERENCE INDICATOR	STATION FROM	STATION TO	202 CURB REMOVED LIN. FT.	301 BITUMINOUS AGGREGATE BASE AC-20 CU. YDS.
22	1-C	373+50 "B"	378+20 "B"	472	13.11
23	1-C	389+25 "C"	393+55 "C"	431	11.97
25	1-C	459+24 "B"	462+55 "B"	332	9.22
25	2-C	476+35 "D"	479+47 "D"	312	8.67
31	1-C	645+64 "C"	648+37 "C"	273	7.58
31	2-C	665+35 "D"	669+15 "D"	389	10.81
49	1-C	657+31.88	659+15.88	184	5.11
TOTALS CARRIED TO GENERAL SUMMARY				2393	67

GUARD POSTS, GUARDRAIL AND RAISED PAY'T. MARKER TABLE

REFERENCE SHEET Nº	REFERENCE INDICATOR	STATION FROM	STATION TO	SIDE	202 RAISED PAY'T. MARKERS REMOVED FOR STORAGE EACH	202 GUARDRAIL REMOVED LIN. FT.	622 CONCRETE BARRIER TYPE "D" REMOVED LIN. FT.	606 BRIDGE TERMINAL ASSEMBLY TYPE A EACH	606 BRIDGE TERMINAL ASSEMBLY TYPE B EACH	606 GUARD RAIL TYPE 5 LIN. FT.	606 GUARD RAIL TYPE 5 BARRIER LIN. FT.	606 ANCHOR ASSEMBLY STD. TYPE "A" EACH	606 ANCHOR ASSEMBLY STD. TYPE "A" BARRIER EACH
25	1-G	468+65.00	470+02.50	LT.		225.00							
25	2-G	467+83.50	470+05.00	RT.		225.00							
25	1-CB	467+64.50	469+77.00	RT.			212.50						
25	2-CB	468+95.00	471+07.50	LT.			212.50						
31	1-CB	655+24.00	657+36.50	RT.			212.50						
31	2-CB	657+45.00	659+57.50	LT.			212.50						
31	1-G	670+79.65	671+29.65	W.B. LT.		50.00			1	25.00		1	
31	2-G	671+05.79	671+55.79	W.B. RT.		50.00			1	25.00		1	
31	3-G	672+65.72	674+15.72	W.B. LT.		150.00			1	125.00		1	
31	4-G	672+87.04	675+12.04	W.B. RT.		225.00			1	125.00	75.00		1
31	5-G	669+51.95	671+76.95	E.B. RT.		225.00			1	125.00	75.00		1
31	6-G	670+46.84	671+96.84	E.B. RT.		150.00			1	125.00		1	
31	7-G	673+01.95	673+51.95	E.B. RT.		50.00			1	25.00		1	
31	8-G	673+21.84	673+71.84	E.B. RT.		50.00			1	25.00		1	
31	9-G	655+24.50	657+62.00	RT.		237.50							
31	10-G	657+20.00	659+57.50	LT.		237.50							
47	1-G	683+78 C.R. 33-A	686+25 C.R. 33-A	RT.		150.00			1	262.50		1	
47	2-G	689+28 C.R. 33-A	691+55 C.R. 33-A	LT.		150.00			1	250.00		1	
		330+00.00	680+00.00	E.B. & W.B.	1208								
TOTALS CARRIED TO GENERAL SUMMARY					1208	2175.00	850.00	2	8	1112.50	150.00	8	2

CATCH BASIN TABLE

REFERENCE SHEET Nº	REFERENCE INDICATOR	STATION	TYPE EXISTING CATCH BASIN	GRATE FLOWLINE ELEVATION	BOTTOM FLOWLINE ELEVATION	LOCATION	202 CONCRETE APRON REMOVED SQ. YDS.	601 CONCRETE APRON SQ. YDS.	601 ROCK CHANNEL PROTECTION TYPE "B" W/ FILTER CU. YDS.	203 EMBANKMT. CU. YDS.	660 SODDING SQ. YDS.
21	1-D	353+75	Nº 4A	913.4	907.8	MED.	2.96	2.96		0.25	2.6
23	1-D	414+80	Nº 4	895.24	891.04	MED.	2.96	2.96		0.25	2.6
24	1-D	442+65	Nº 8	885.6	883.0	MED.	2.96	2.96		0.25	2.6
24	2-D	442+65	Nº 8	885.6	883.1	MED.	2.96	2.96		0.25	2.6
26	1-D	500+04	Nº 22A	903.30	901.51	RT.	2.96	2.96		3.00	16.1
27	1-D	525+75	Nº 4	909.10	904.8	MED.	2.96	2.96		3.00	16.1
29	1-D	583+50	Nº 22B	906.9	904.42	LT.	2.96	2.96		5.00	15.1
30	1-D	634+00	Nº 8	893.3	890.22	MED.	2.96	2.96		0.25	2.6
30	2-D	634+00	Nº 8	893.3	889.92	MED.	2.96	2.96		0.25	2.6
31	1-D	665+00	Nº 4	877.0	873.5	LT.	2.96	2.96	6	6.00	29.6
TOTALS CARRIED TO GENERAL SUMMARY							30	30	6	19	93

MONUMENT ASSEMBLY AND UNDERDRAIN TABLE

REFERENCE SHEET Nº	REFERENCE INDICATOR	STATION	SIDE	FLOWLINE ELEVATION AT OUTLET END	603 6" CONDUIT TYPE "F" LIN. FT.	603 12" CONDUIT TYPE "F" LIN. FT.	601 ROCK CHANNEL PROTECTION TYPE "B" WITH FILTER CU. YDS.	660 SODDING SQ. YDS.	620 DELINEATOR TYPE "C" FLEXIBLE POST MOUNTED EACH	604 MONUMENT ASSEMBLY ADJUSTED TO GRADE EACH
24	1-UD	451+50	LT.	884.60	10			4	1	
25	1-UD	466+05	LT.	892.75	10			4	1	
25	2-UD	473+05	LT.	896.12	10			4	1	
25	3-UD	482+05	RT.	899.80	10			4	1	
30	1-UD	617+90	RT.	904.20					1	
31	1-UD	663+45	RT.	873.90	10			4	1	
31	2-UD	669+60	RT.	871.60					1	
31	3-UD	669+75	RT.	871.60					1	
31	4-UD	*671+72	MED.	871.50		16	1	30		
31	5-UD	674+95	RT.	870.50					1	
31	6-UD	675+05	RT.	870.50					1	
		U.S.R. 33 AND C.R. 33-A INTERCHANGE								
50	1-UD	667+00 "C"	LT.	867.50	10			4	1	
51	1-UD	664+20 "D"	RT.	875.50	10			4	1	
51	2-UD	668+95 "D"	RT.	872.00	10			4	1	
		MOULTON-FT. AMANDA AND U.S.R. 33 INTERCHANGE								
40	1-UD	463+25 "A"	RT.	892.50	10			4	1	
43	1-UD	475+10 "D"	RT.	898.60	10			4	1	
26	1-MA	496+08.35	57.86 RT.							1
		TOWNLINE-KOSSUTH ROAD APPROACH								
21 & 33	1-MA	18+86.93	℄							1
TOTALS CARRIED TO GENERAL SUMMARY					100	16	1	70	15	2

NOTE:
100 LIN. FT. OF ITEM 605-6" UNCLASSIFIED PIPE UNDERDRAIN IS INCLUDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER FOR UNDERDRAIN REPAIR.

*USE STD. CONCRETE COLLAR WHEN ADJOINING CONDUITS AND USE OUTLET CONCRETE PADS AS REQUIRED BY STD. DRAWING MC-4, 7-26-96.

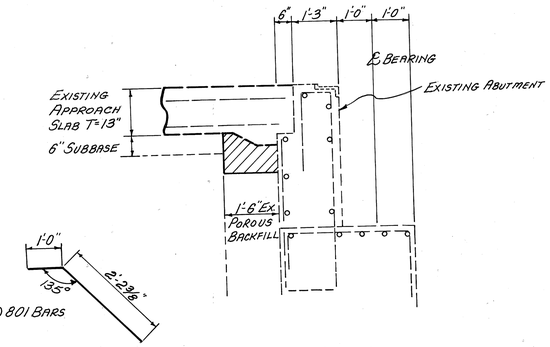
DETAILS AND QUANTITIES

APPROACH SLAB DETAILS

FHWA REGION	STATE	PROJECT	
5	OHIO		

16
88

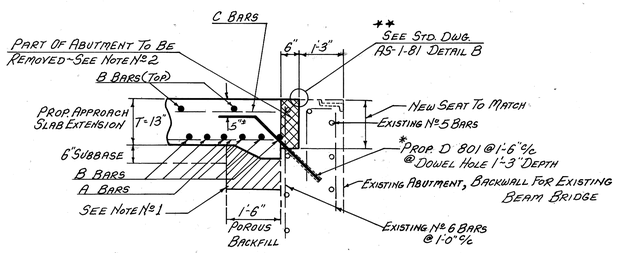
AUGLAIZE COUNTY
AUG~33~6.63



SECTION A-A

TYPICAL ALL ABUTMENTS
(AT EX. APPROACH SLABS,
STEEL BEAM BRIDGE SHOWN)

* THE D 801 BARS SHOWN SHALL BE USED IN PLACE OF THE D801 BARS ON STANDARD DRAWING AS-1-81. THE D801 BARS SHALL BE PLACED IN DOWEL HOLES AND ANCHORED WITH A NON-SHRINKING EPOXY MORTAR, AS PER SUPLEMENTAL SPECIFICATION 956. THE COST OF THE EPOXY MORTAR SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 510, DOWEL HOLES. ALL "A", "B", AND "C" BARS COST SHALL BE INCLUDED IN ITEM 611 REINFORCED CONCRETE APPROACH SLABS, MODIFIED AS PER PLAN, T= 13".

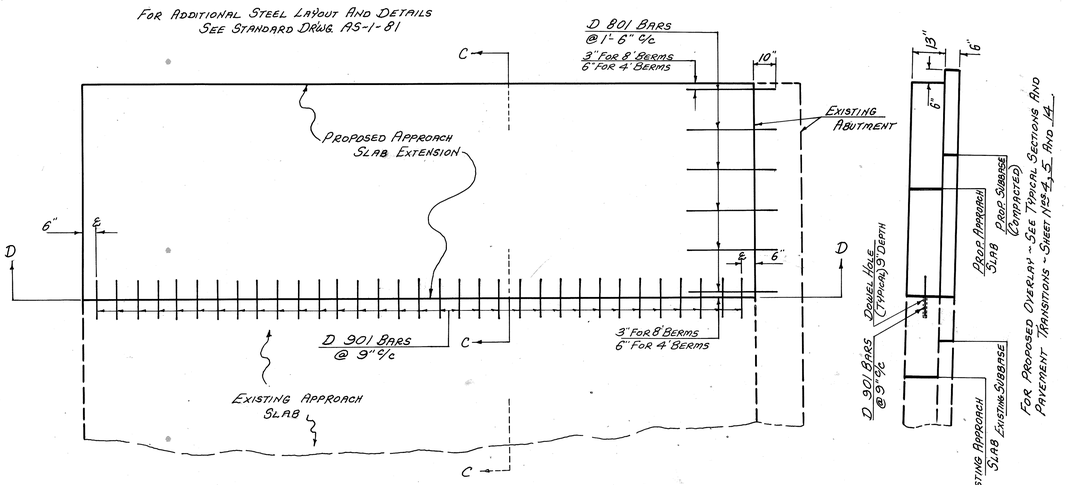


~SECTION B-B~

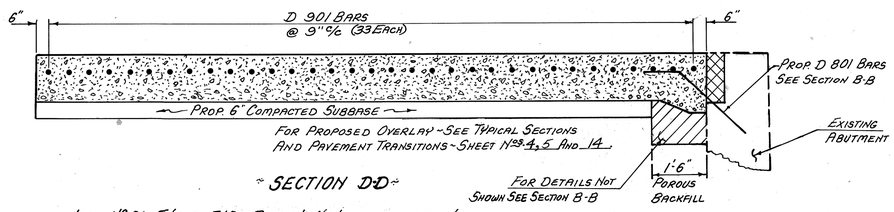
TYPICAL ALL ABUTMENTS
(AT EXISTING BERMS,
STEEL BEAM BRIDGE SHOWN)

** COST OF PREFORMED ELASTOMERIC JOINT SEALER AND TYPE A WATERPROOFING SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 611 ~ REINFORCED CONCRETE APPROACH SLABS, MODIFIED AS PER PLAN, T= 13".

FOR ADDITIONAL STEEL LAYOUT AND DETAILS SEE STANDARD DRWG. AS-1-81



~SECTION C-C~



~SECTION D-D~

NOTE Nº 3: Item 510 - Dowel Holes, as per plan.
THE PROPOSED D 901 BARS SHALL BE ANCHORED IN THE PROPOSED DOWEL HOLES WITH A NON-SHRINKING EPOXY MORTAR, AS PER SUPPLEMENTAL SPECIFICATION 956. THE COST OF THE EPOXY MORTAR SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 510, DOWEL HOLES. THE PROPOSED DOWEL HOLES SHALL BE DRILLED USING AN ELECTRIC or a HYDRAULIC DRILL. AFTER DRILLING THE PROPOSED HOLES, THEY SHALL BE CLEANED TO ENSURE THE HOLES ARE FREE OF DUST AND DIRT. A PORTION OF EPOXY MORTAR SHALL THEN BE INSERTED INTO THE PROPOSED HOLE BEFORE INSERTING THE D 901 BAR TO ENSURE A POSITIVE FIT.

REINFORCING STEEL LIST

STRUCTURE NUMBER	MARK BAR NUMBER	NUMBER REQUIRED	LENGTH	SPACING	POUNDS PER FOOT	POUNDS
1281	D 801 (BACK)	6	3'-2 3/8"	1'-6" c/c	2.670	51
1281	D 801 (AHEAD)	6	3'-2 3/8"	1'-6" c/c	2.670	51
1310	D 801 (BACK)	18	3'-2 3/8"	1'-6" c/c	2.670	154
1310	D 801 (AHEAD)	18	3'-2 3/8"	1'-6" c/c	2.670	154
1281	D 901	132	1'-6"	9" c/c	3.400	673
1310	D 901	264	1'-6"	9" c/c	3.400	1346
SUB TOTAL						2429

ITEM 611 REINFORCED CONCRETE APPROACH SLABS (MODIFIED AS PER PLAN)

SIDE	STRUCTURE NUMBER	QUANTITY~SQ. YDS.
LT.	AUG~33~1281	
RT.	AUG~33~1281	22
LT.	AUG~33~1281	
RT.	AUG~33~1281	22
RT.	AUG~33~1310~EASTBOUND	
LT.	AUG~33~1310~EASTBOUND	33
RT.	AUG~33~1310~EASTBOUND	
LT.	AUG~33~1310~EASTBOUND	33
RT.	AUG~33~1310~WESTBOUND	
LT.	AUG~33~1310~WESTBOUND	33
RT.	AUG~33~1310~WESTBOUND	
LT.	AUG~33~1310~WESTBOUND	33
SUB TOTAL		176

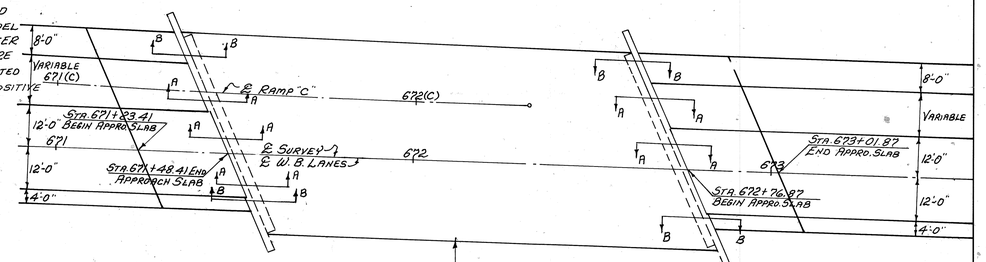
~ESTIMATED QUANTITIES~

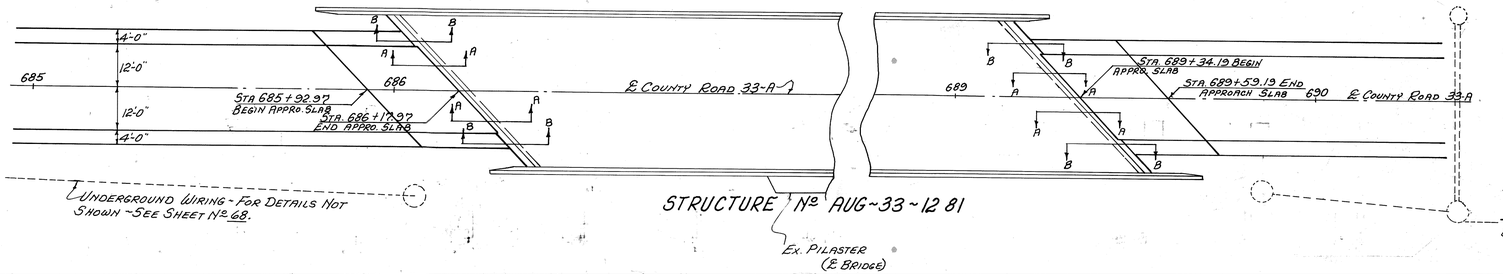
ITEM 202	PORTIONS OF STRUCTURES REMOVED	LUMP LUMP
ITEM 510	DOWEL HOLES	444 EACH
ITEM 509	REINFORCING STEEL	2429 POUNDS
ITEM 611	REINFORCED CONCRETE APPROACH SLABS, MODIFIED AS PER PLAN, T=13"	176 SQ.YDS.

QUANTITIES CARRIED TO GENERAL SUMMARY

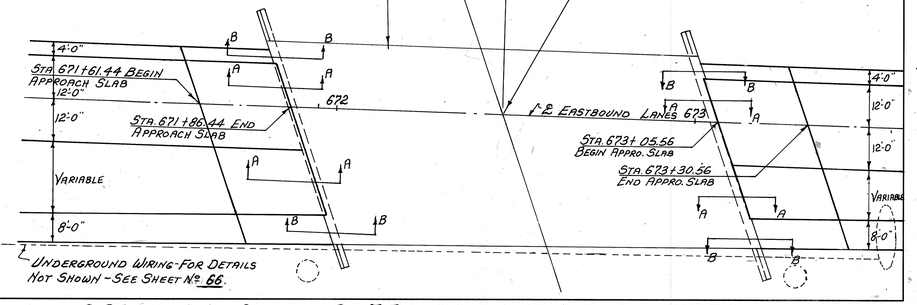
NOTE Nº 1: BEFORE PLACING PROP APPROACH SLAB EXTENSIONS OR BACKFILL FOR ABUTMENT REPAIR, ANY CONTAMINATED POROUS BACKFILL SHALL BE REPLACED WITH NEW POROUS BACKFILL. THE COST SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 611 ~ REINFORCED CONCRETE APPROACH SLABS, MODIFIED AS PER PLAN, T= 13".

NOTE Nº 2: THE EXISTING APPROACH SLAB WILL REMAIN SEATED INTO THE EXISTING ABUTMENT AS SHOWN. THE EXISTING ABUTMENT IN THE AREA OF THE EXISTING BERMS SHALL BE NEATLY REMOVED AS SHOWN ON SECTION B-B, BY THE CONTRACTOR. THE TOTAL COST OF EQUIPMENT AND LABOR SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 202~PORTIONS OF STRUCTURES REMOVED. THE EXISTING Nº 6 BARS THAT WILL BE EXPOSED SHALL EITHER BE NEATLY CUT OFF AT THE SEAT OR CLEANED AND LEFT IN PLACE.





STRUCTURE Nº AUG~33~13 10



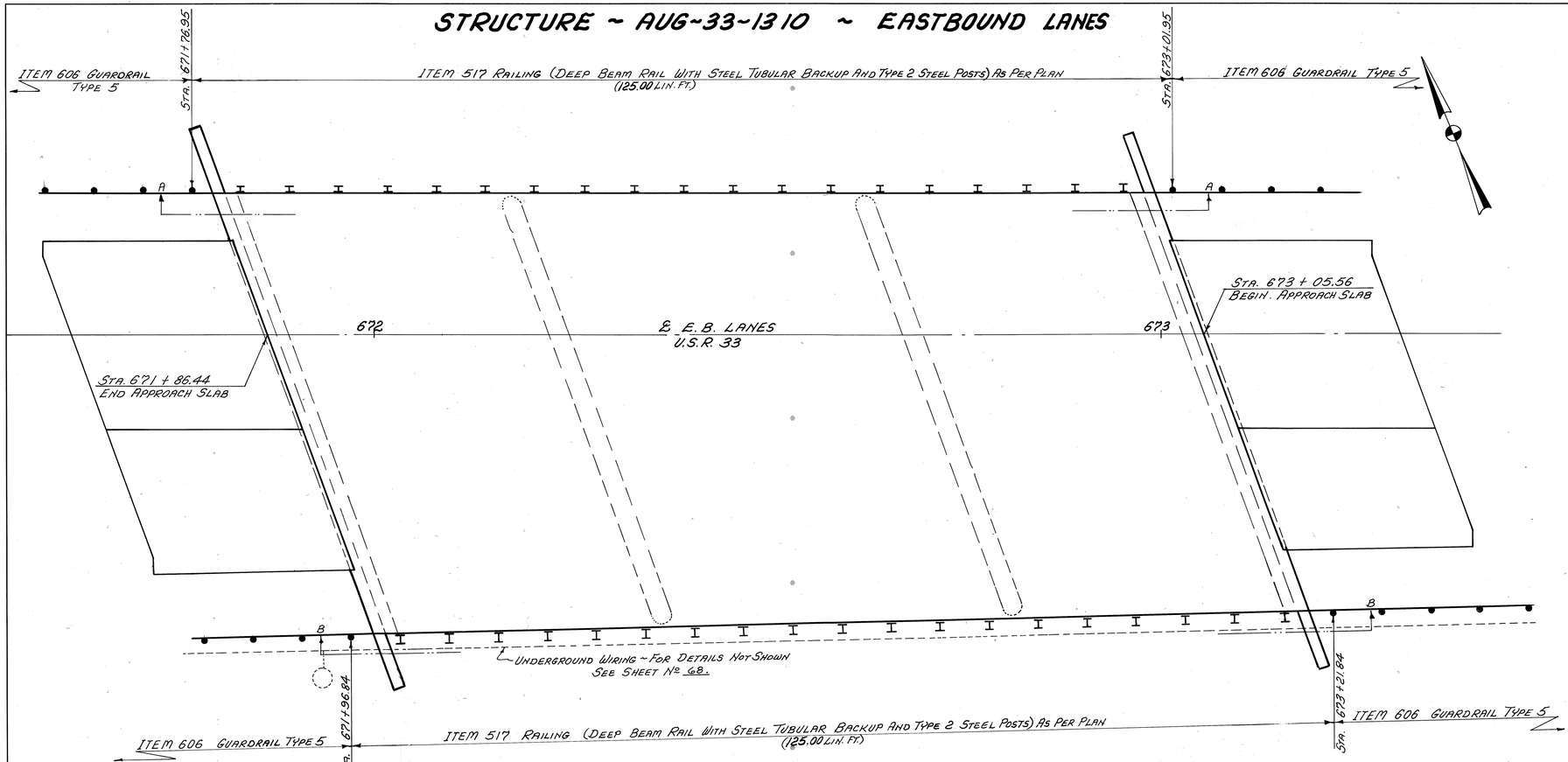
APPROACH SLAB DETAILS AND QUANTITIES

FHWA REGION	STATE	PROJECT	
5	OHIO		

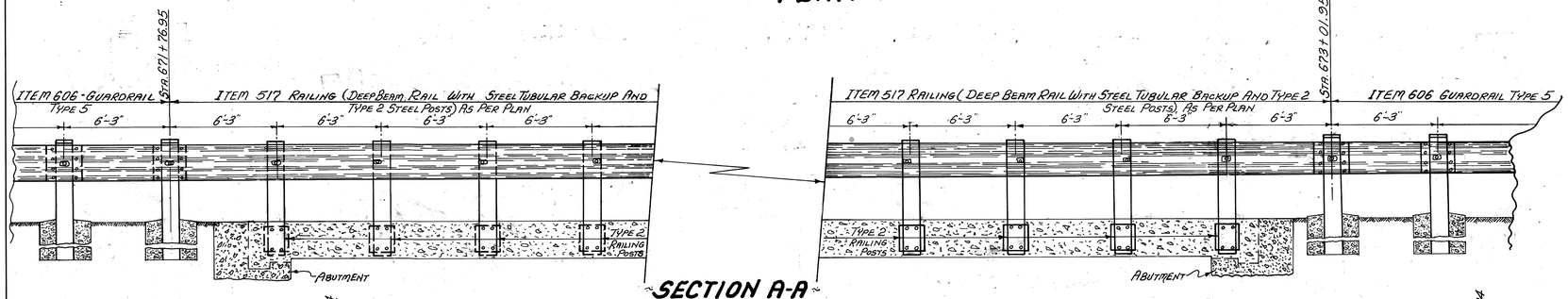
17
88

AUGLAIZE COUNTY
AUG-33-6.63

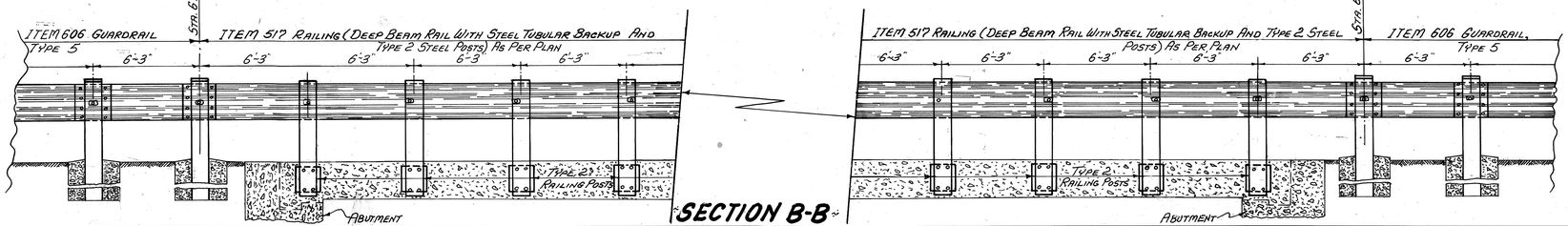
STRUCTURE ~ AUG-33-1310 ~ EASTBOUND LANES



~ PLAN ~

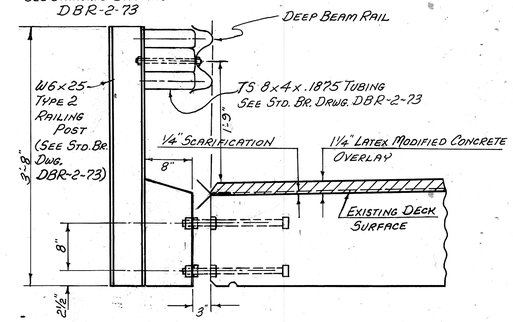


~ SECTION A-A ~



~ SECTION B-B ~

Note: For Details Not Shown See Standard Drawing DBR-2-73



~ BLOCKOUT DETAIL ~

~ NOTES ~

ITEM 517 ~ RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS) AS PER PLAN :

This Item Shall Include All The Material, Except The Anchors, Which Is Required For Deep Beam Bridge Guardrail With Tubular Backup Using Type 2 Posts As Shown On Standard Drawing DBR-2-73. All Material Shall Be Galvanized In Accordance With ASTM A123 Or ASTM A153. This Item Shall Also Include The Necessary Labor To Construct And Erect The Completed Railing On The Existing Anchors. The Method Of Measurement Shall Be As Per 517.06. Payment Will Be Made At The Contract Price For Item 517 Railing (Deep Beam Rail With Steel Tubular Backup And Type 2 Steel Posts) As Per Plan.

ITEM 202 ~ RAILING REMOVED AS PER PLAN:

This Item Shall Consist Of The Removal And Satisfactory Disposal Of All Parts Of The Existing Railing Except The Anchors Which Are To Remain In Place. Payment Will Be Made At The Contract Price For Item 202 Railing Removed As Per Plan.

~ ESTIMATED QUANTITIES ~

ITEM 517 Railing (Deep Beam Rail With Steel Tubular Backup And Type 2 Steel Posts) As Per Plan	250.00 Lin. Ft.
ITEM 202 Railing Removed As Per Plan	250.00 Lin. Ft.
ITEM 606 Guardrail, Type 5 } For Details And Quantities	
ITEM 606 Bridge Terminal Assembly, Type B } See Sheet Nº 15 And 31.	

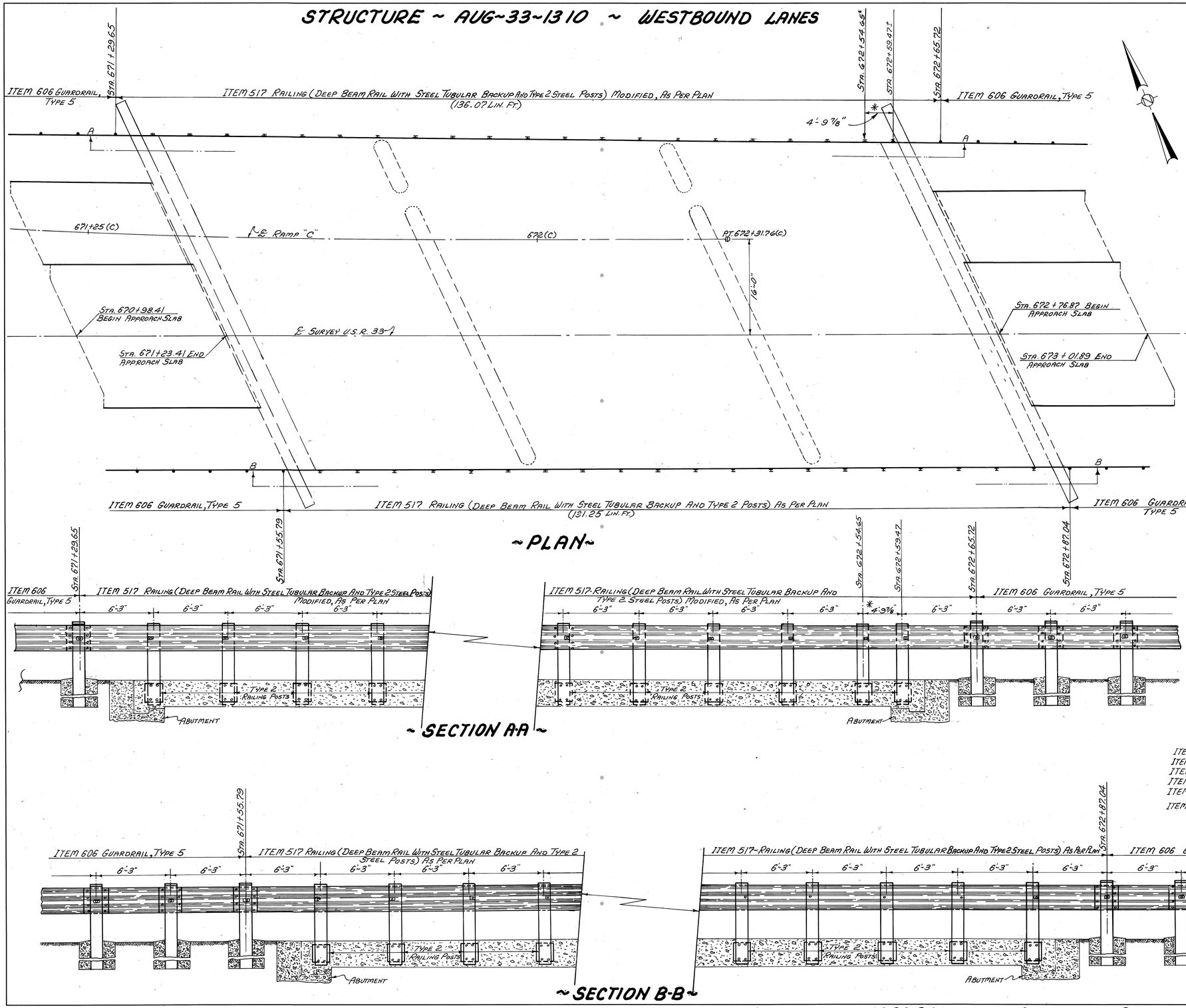
ITEM Special Sealing Concrete Surfaces (See Proposal Note) For Quantity, See Sheet 20.
Quantities Carried To General Summary

FHWA REGION	STATE	PROJECT	
5	OHIO		

18
88

AUGLAIZE COUNTY
AUG~33~6.63

STRUCTURE ~ AUG~33~13.10 ~ WESTBOUND LANES

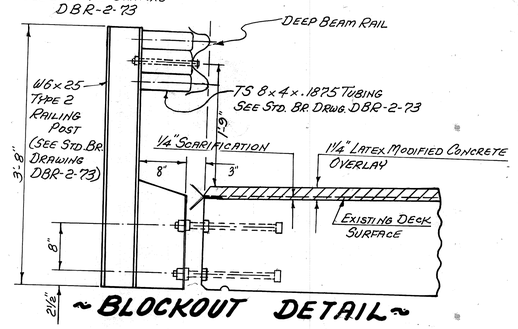


~PLAN~

~SECTION A-A~

~SECTION B-B~

NOTE: FOR DETAILS NOT SHOWN SEE STANDARD DRAWING DBR-2-73



~BLOCKOUT DETAIL~

~NOTES~

ITEM 517 ~ RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS) MODIFIED, AS PER PLAN:

THIS ITEM SHALL INCLUDE ALL THE MATERIAL, EXCEPT THE ANCHORS, WHICH IS REQUIRED FOR DEEP BEAM BRIDGE GUARDRAIL WITH TUBULAR BACKUP USING TYPE 2 POSTS AS SHOWN ON STANDARD DRAWING DBR-2-73. ALL MATERIAL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 OR ASTM A153. * THE EXISTING ANCHORS LOCATED AT THE NORTHEAST CORNER OF THE WESTBOUND BRIDGE (AS SHOWN ON THE PLAN ABOVE), HAVE A MEASUREMENT OF LESS THAN 6'-3" BETWEEN EXISTING ANCHORS. THE CONTRACTOR SHALL CUT A SECTION OF RAIL AND DRILL HOLES TO FIT THE EXISTING ANCHORS. THIS ITEM SHALL ALSO INCLUDE THE NECESSARY LABOR TO CONSTRUCT AND ERECT THE COMPLETED RAILING ON THE EXISTING ANCHORS. THE METHOD OF MEASUREMENT SHALL BE AS PER 517.06. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 517 RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS) MODIFIED, AS PER PLAN.

ITEM 517 ~ RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS) AS PER PLAN:

THIS ITEM SHALL INCLUDE ALL THE MATERIAL, EXCEPT THE ANCHORS, WHICH IS REQUIRED FOR DEEP BEAM BRIDGE GUARDRAIL WITH TUBULAR BACKUP USING TYPE 2 POSTS AS SHOWN ON STANDARD DRAWING DBR-2-73. ALL MATERIAL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A123 OR ASTM A153. THIS ITEM SHALL ALSO INCLUDE THE NECESSARY LABOR TO CONSTRUCT AND ERECT THE COMPLETED RAILING ON THE EXISTING ANCHORS. THE METHOD OF MEASUREMENT SHALL BE AS PER 517.06. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 517 RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 STEEL POSTS) AS PER PLAN.

ITEM 202 ~ RAILING REMOVED AS PER PLAN:

THIS ITEM SHALL CONSIST OF THE REMOVAL AND SATISFACTORY DISPOSAL OF ALL PARTS OF THE EXISTING RAILING EXCEPT THE ANCHORS WHICH ARE TO REMAIN IN PLACE. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 202 RAILING REMOVED AS PER PLAN.

~ESTIMATED QUANTITIES~

ITEM 517 RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 POSTS) AS PER PLAN	131.25 LIN. FT.
ITEM 517 RAILING (DEEP BEAM RAIL WITH STEEL TUBULAR BACKUP AND TYPE 2 POSTS) MODIFIED, AS PER PLAN	136.07 LIN. FT.
ITEM 202 RAILING REMOVED, AS PER PLAN	267.32 LIN. FT.
ITEM 606 GUARDRAIL, TYPE 5	
ITEM 606 BRIDGE TERMINAL ASSEMBLY, TYPE B	
ITEM SPECIAL SEALING CONCRETE SURFACES (SEE PROPOSAL NOTE)	

FOR DETAILS AND QUANTITIES SEE SHEET Nº 15 AND 31.

FOR QUANTITY - SEE SHEET Nº 20.

QUANTITIES CARRIED TO GENERAL SUMMARY

GUARDRAIL AND PARAPET DETAILS

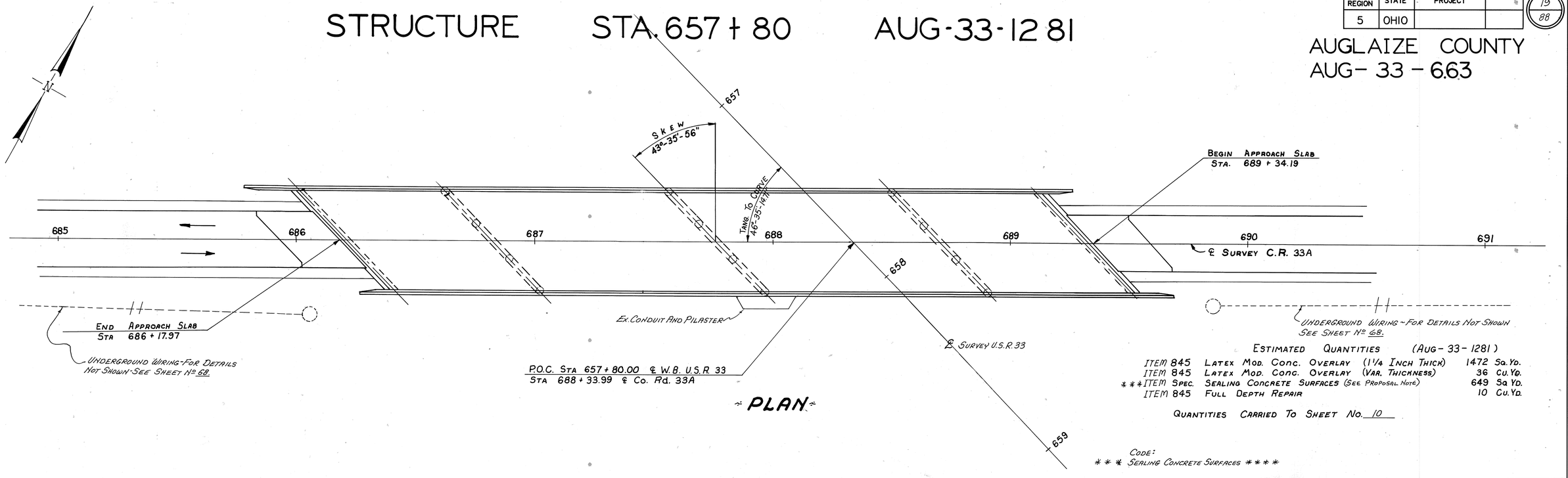
AUG~33~13.10 WESTBOUND LANES

FHWA REGION	STATE	PROJECT	
5	OHIO		

19
88

STRUCTURE STA. 657 + 80 AUG-33-1281

AUGLAIZE COUNTY
AUG- 33 - 6.63



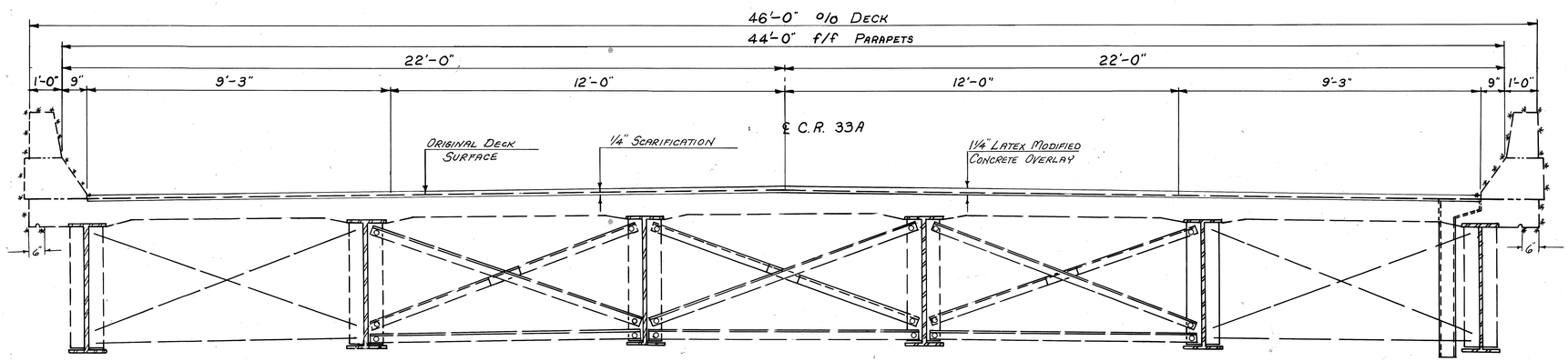
~ PLAN ~

ESTIMATED QUANTITIES (AUG- 33- 1281)

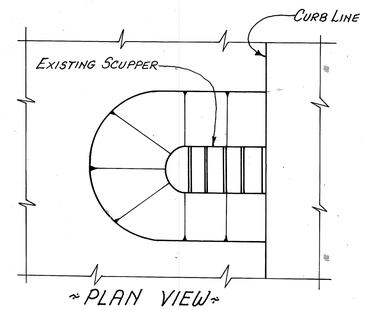
ITEM 845	LATEX MOD. CONC. OVERLAY (1¼ INCH THICK)	1472	SQ. YD.
ITEM 845	LATEX MOD. CONC. OVERLAY (VAR. THICKNESS)	36	CU. YD.
***ITEM SPEC.	SEALING CONCRETE SURFACES (SEE PROPOSAL NOTE)	649	SQ. YD.
ITEM 845	FULL DEPTH REPAIR	10	CU. YD.

QUANTITIES CARRIED TO SHEET No. 10

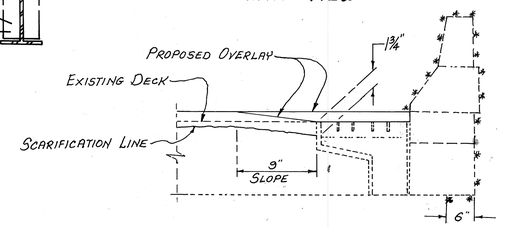
CODE:
*** SEALING CONCRETE SURFACES ***



~ BRIDGE DECK SECTION ~



~ PLAN VIEW ~



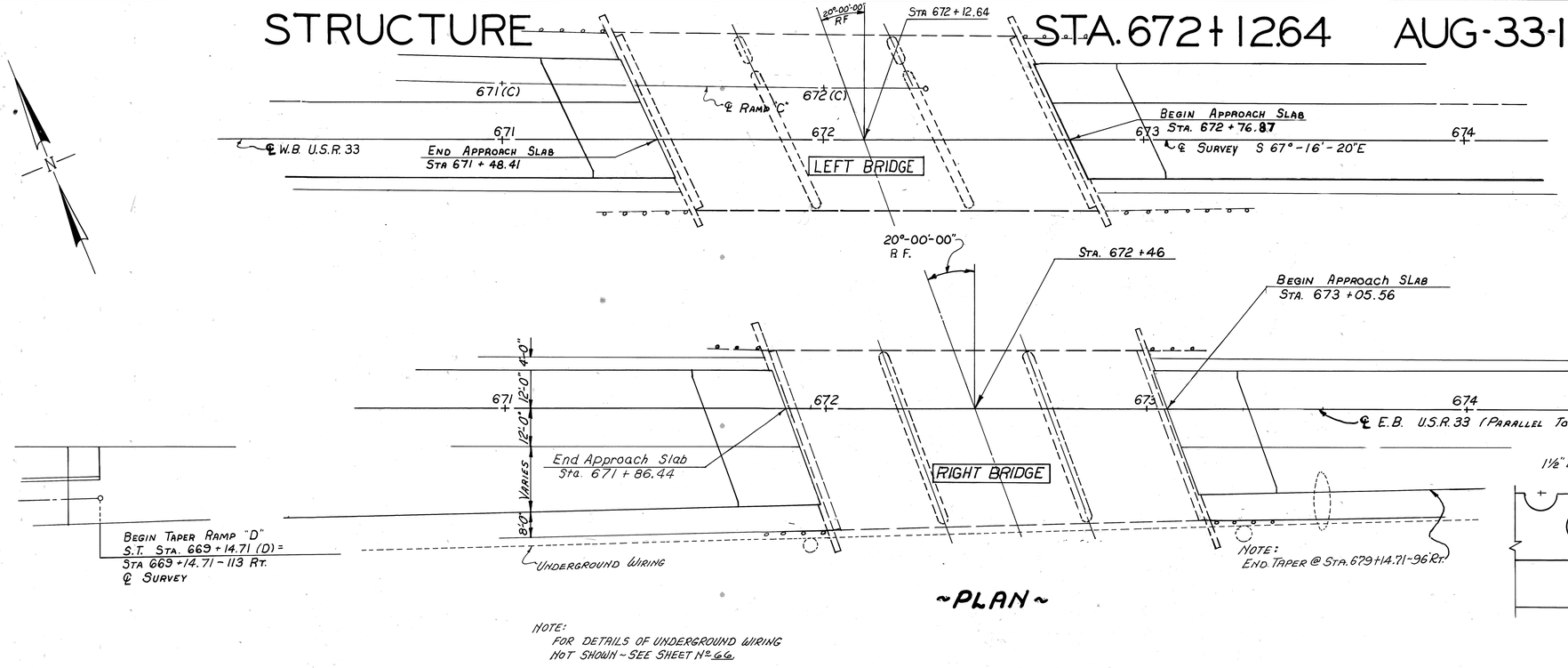
~ TYPICAL OVERLAY DETAIL AT SCUPPERS ~

STA. 657 + 80.00 STRUCTURE NO. AUG- 33- 1281

STRUCTURE STA. 672+1264 AUG-33-1310

FHWA REGION	STATE	PROJECT		20 / 88
5	OHIO			

AUGLAIZE COUNTY
AUG-33-6.63

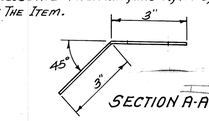


~PLAN~

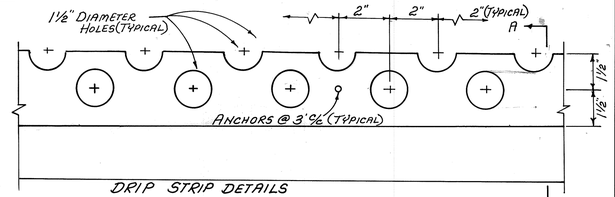
NOTE:
FOR DETAILS OF UNDERGROUND WIRING NOT SHOWN - SEE SHEET Nº 66.

NOTE:
DRIP STRIP FOR BRIDGES WITH CONCRETE OVERLAY:

AFTER THE DECK IS SCARIFIED AND BEFORE THE CONCRETE OVERLAY IS PLACED, A STEEL DRIP STRIP, AS DETAILED, SHALL BE INSTALLED ALONG THE FULL LENGTH OF EACH SIDE OF THE BRIDGE. THE STRIPS SHALL BE FASTENED AT 3' ℄ MAXIMUM WITH POWER DRIVEN PINS OR Nº 10 GALVANIZED SCREWS AND EXPANSION ANCHORS. WHERE SPLICES ARE REQUIRED, THE INDIVIDUAL PIECES SHALL BE BUTTED TIGHTLY TOGETHER, NOT LAPPED. STEEL FOR GALVANIZED STRIPS SHALL BE 0.105" THICK AND SHALL MEET THE REQUIREMENTS OF ASTM A568 WITH GALVANIZING IN ACCORDANCE WITH 711.02. STAINLESS STEEL SHALL BE 20 GAUGE ASTM A167, TYPE 304 MILL FINISH. AN ADDITIONAL DRIP STRIP, 12" LONG, SHALL BE CENTERED AT ALL RAILING POSTS. PAYMENT SHALL BE AT THE CONTRACT PRICE BID FOR ITEM SPECIAL, Sq. Ft., STEEL DRIP STRIP, ... AND SHALL INCLUDE ALL MATERIALS, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THE ITEM.



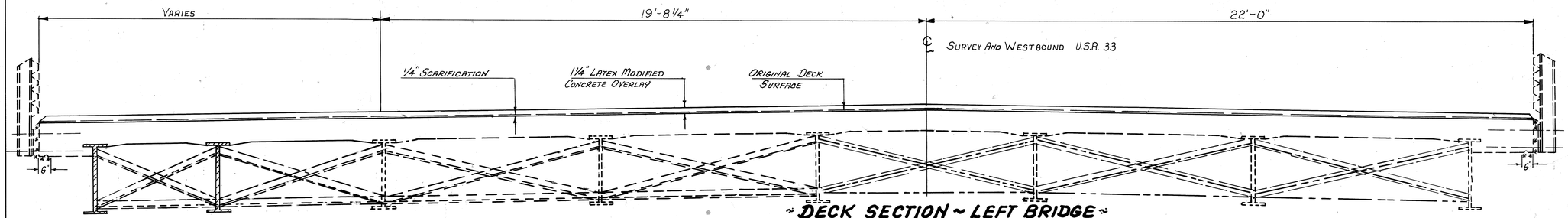
SECTION A-A



DRIP STRIP DETAILS

~PLAN~

**** CODE: SEALING CONCRETE SURFACES ****



~DECK SECTION ~ LEFT BRIDGE~

ESTIMATED QUANTITIES

(WEST BOUND)

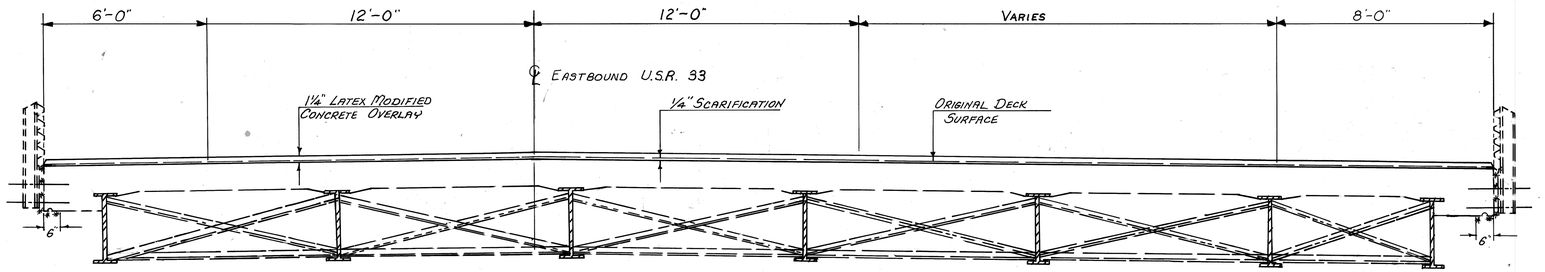
ITEM 845	LATEX MOD. CONC. OVERLAY (1¼ INCH THICK)	772	Sq. Yd.
ITEM 845	LATEX MOD. CONC. OVERLAY (VAR. THICKNESS)	43	Cu. Yd.
***ITEM SPEC.	SEALING CONCRETE SURFACES (SEE PROPOSAL NOTE)	97	Sq. Yd.***
ITEM 845	FULL DEPTH REPAIR	5	Cu. Yd.
ITEM SPEC.	STEEL DRIP STRIP, AS PER PLAN	196.83	Sq. Ft.
ITEM 202	WEARING COURSE REMOVED (2" INCHES THICK)	772	Sq. Yd.

QUANTITIES CARRIED TO SHEET No. 10

(EAST BOUND)

ITEM 845	LATEX MOD. CONC. OVERLAY (1¼ INCH THICK)	714	Sq. Yd.
ITEM 845	LATEX MOD. CONC. OVERLAY (VAR. THICKNESS)	11	Cu. Yd.
***ITEM SPEC.	SEALING CONCRETE SURFACES (SEE PROPOSAL NOTE)	96	Sq. Yd.***
ITEM 845	FULL DEPTH REPAIR	5	Cu. Yd.
ITEM SPEC.	STEEL DRIP STRIP, AS PER PLAN	188	Sq. Ft.

QUANTITIES CARRIED TO SHEET No. 10



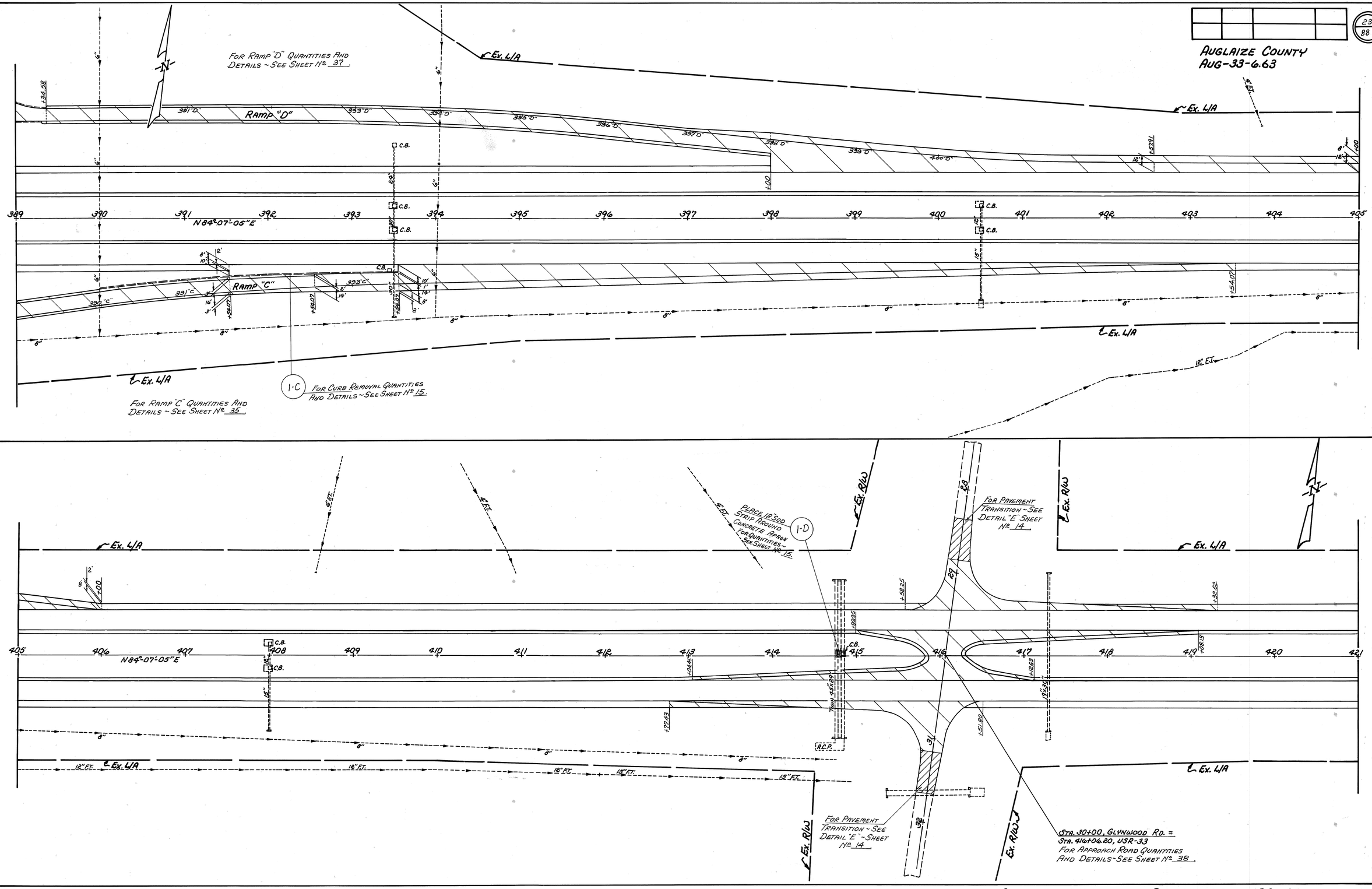
~DECK SECTION ~ RIGHT BRIDGE~

STA. 672+1264 STRUCTURE NO. AUG-33-1310 WESTBOUND AND EASTBOUND LANES

PLAN STA. 325+00 TO STA. 357+00 U.S.R.~33

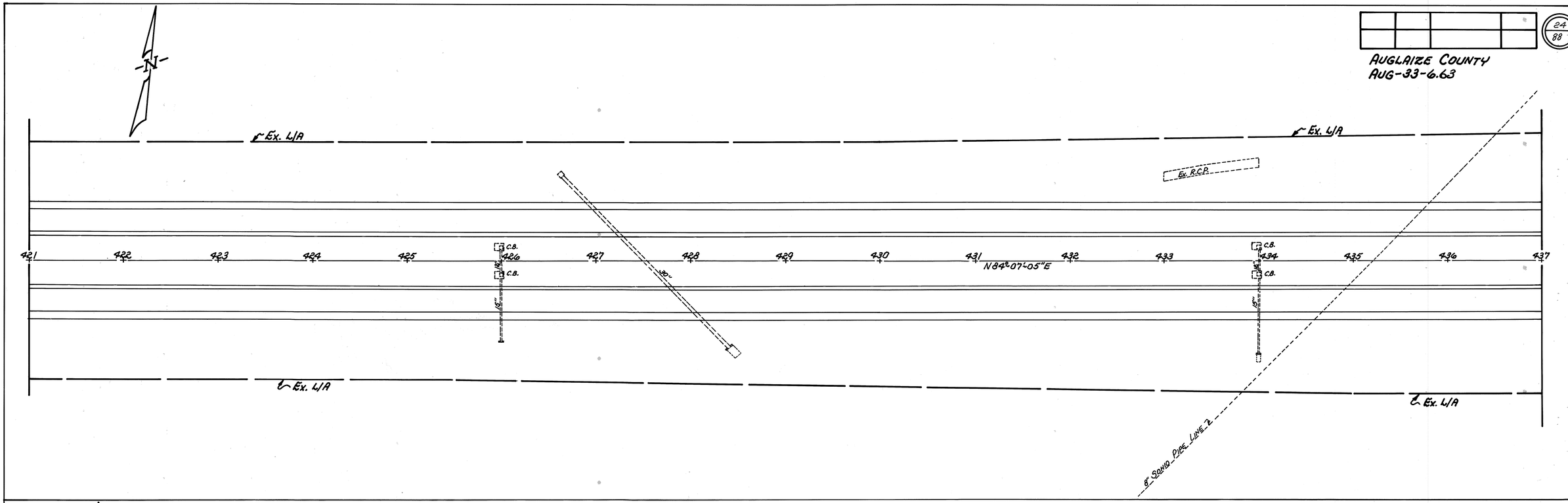
PLAN STA. 357+00 TO STA. 389+00 U.S.R.~33

AUGLAIZE COUNTY
AUG-33-6.63



PLAN STA. 389+00 TO STA. 421+00 U.S.R.~33

AUGLAIZE COUNTY
AUG-33-6.63



PLAN STA. 421+00 TO STA. 453+00 U.S.R.-33

AUGLAIZE COUNTY
AUG-33-6.63

N

Ex. L/A

For Ramp "B" Quantities And Details ~ See Sheet No. 41.

1-C For Curb Removal Quantities And Details ~ See Sheet No. 15.

1-UD For Underdrain Table See Sheet No. 15

Ramp "B"

Ramp "A"

For Ramp "A" Quantities And Details ~ See Sheet No. 40

453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469

N 84°-07'-05" E

C.B.

R.C.P.

+95.00

164.50

For End Terminal See Std. Drwg. MC-9

125' Flare

1-CB

For Guardrail Table ~ See Sheet No. 15.

1-G

For Interchange Layout Details ~ See Sheet No. 39

2-CB

125' Flare

For End Terminal See Std. Drwg. MC-9

+07.50

For Underdrain Table See Sheet No. 15.

2-UD

Ramp "C"

For Ramp "C" Quantities And Details ~ See Sheet No. 42.

Ex. R.C.P.

Ramp "D"

For Ramp "D" Quantities And Details ~ See Sheet No. 43

2-C For Curb Removal Quantities And Details ~ See Sheet No. 15.

3-UD For Underdrain Table See Sheet No. 15.

For Underground Wiring In This Area See Sheet No. 67.

2-G

For Guardrail Table ~ See Sheet No. 15.

Sta. 469+35.29, U.S.R.-33 = Sta. 118+35.68, Moulton-Ft. Amanda Rd.
Str. No. AUG-33-09.26
Ex. CL 15°-3"
Prop. CL 15°-1"

469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485

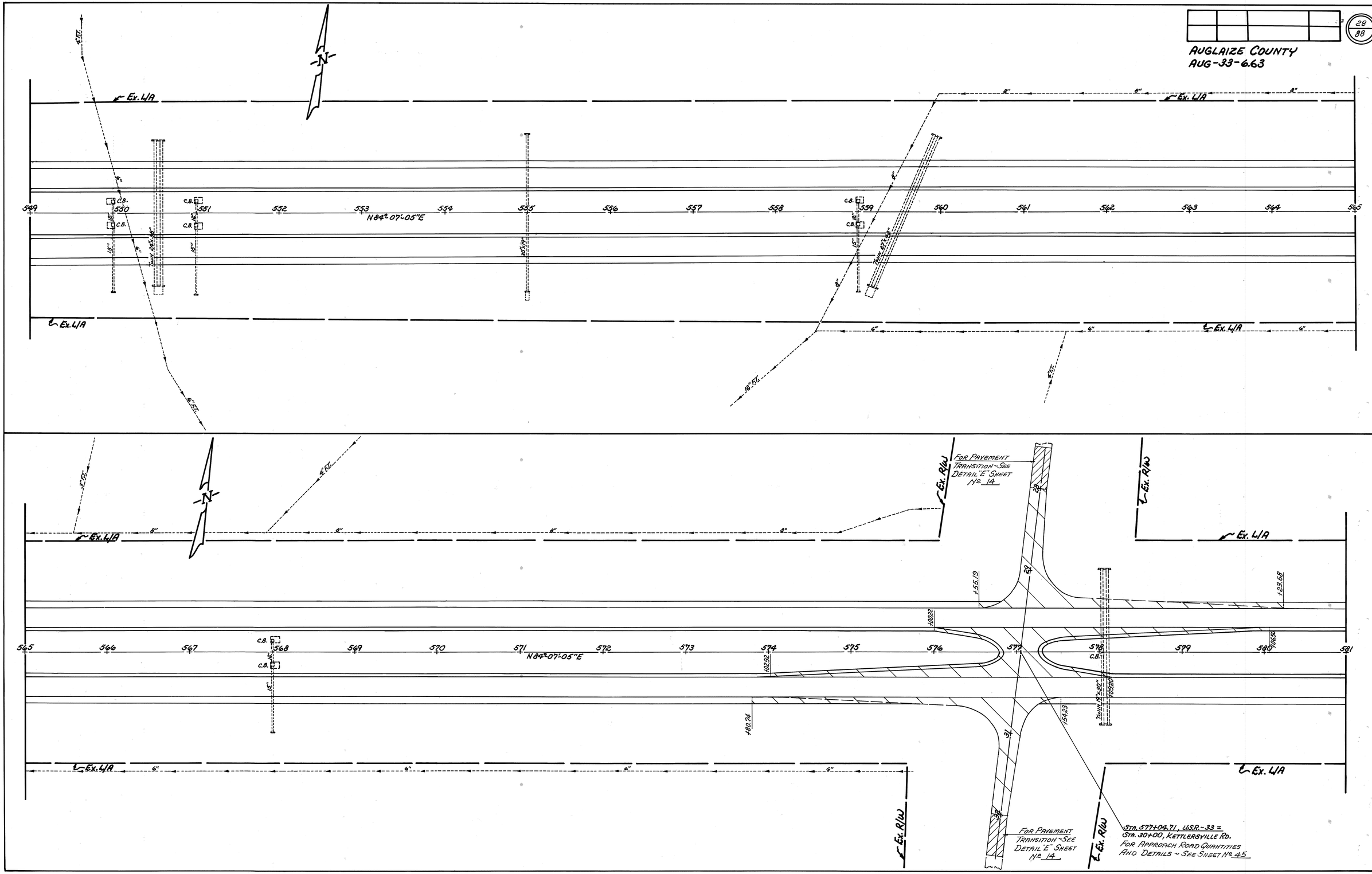
N 84°-07'-05" E

PLAN STA. 453+00 TO STA. 485+00 U.S.R.-33

AUGLAIZE COUNTY
AUG-33-6.63
26
88
N
Ex. L/A
FOR RAMP "C" QUANTITIES
AND DETAILS ~ SEE SHEET Nº 42
+28.38
FOR RAMP "D" QUANTITIES
AND DETAILS ~ SEE SHEET Nº 43
+46.72
C.B.
N 84°-07'-05"E
1-MA
FOR TABLE ~ SEE SHEET Nº 15.
KRUSE RD.
PLACE 18" SOD STRIP
AROUND CONC. APRON
FOR QUANTITIES SEE
SHEET Nº 15
1-D
485
486
487
488
489
490
491
492
493
494
495
496
497
498
499
500
501
502
503
504
505
506
507
508
509
510
511
512
513
514
515
516
517
EX. R.C.P.

PLAN STA. 517+00 TO STA. 549+00 U.S.R.-33

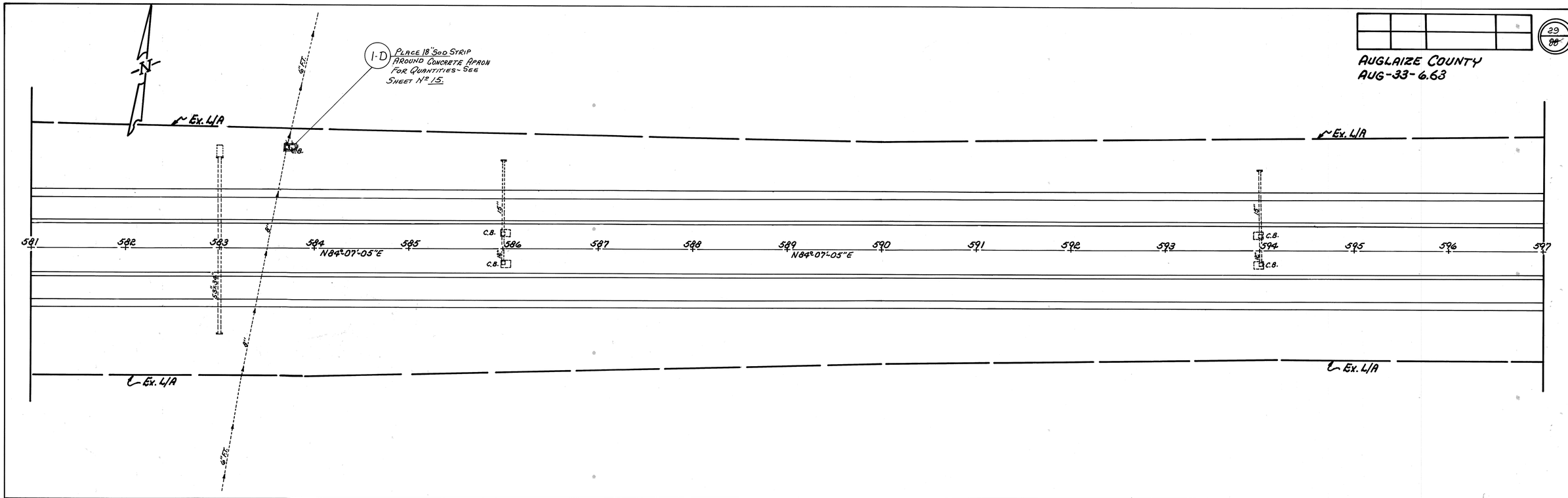
AUGLAIZE COUNTY
AUG-33-6.63

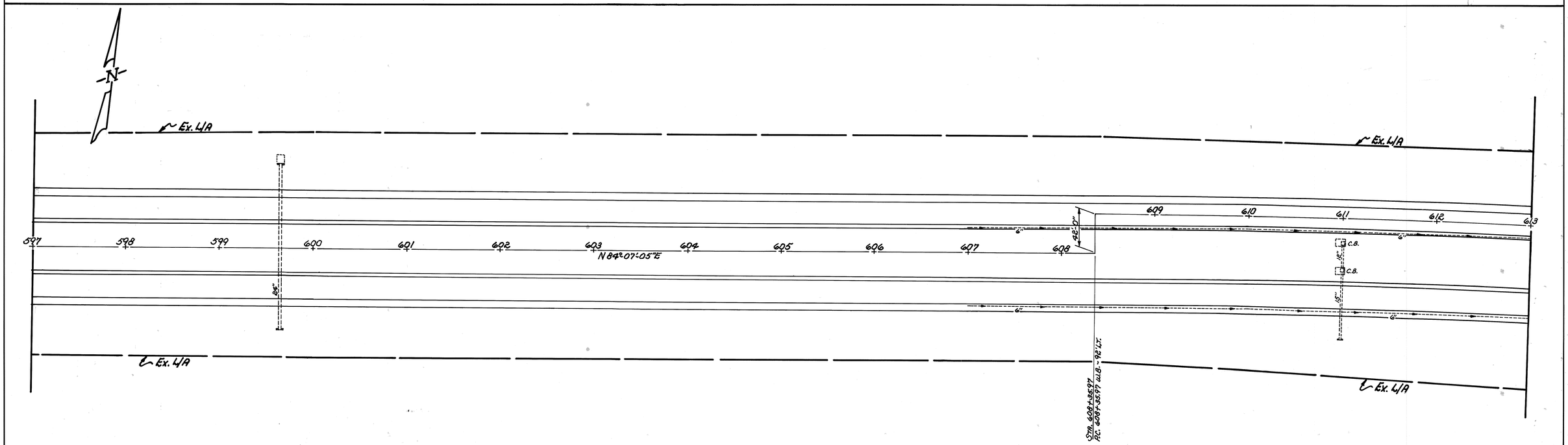


PLAN STA. 549+00 TO STA. 581+00 U.S.R.-33

AUGLAIZE COUNTY
AUG-33-6.63

29
~~98~~





PLAN STA. 581+00 TO STA. 613+00 U.S.R.-33

AUGLAIZE COUNTY
AUG-33-6.63

PLAN STA. 613+00 TO STA. 645+00 U.S.R.~33

AUGLAIZE COUNTY
AUG-33-6.63

For Curb Removal Details And Quantities See Sheet No. 15

Ex. L/A

For Ramp "B" Quantities And Details - See Sheet No. 49

Ramp "B"

1-C

Tangent S 67°-16'-20" E

Note: For details of underground wiring not shown - see Sheet No. 68.

Underground Wiring

Sta. 657+14.5

10-G

For Pavement Transition See Detail "D" - Sheet No. 14

2-CB

125' Flare

659+57.50

For End Terminal See Std. Drw's. MC-9

C.B.

Ex. Conduit And Pilaster

For Interchange Layout Details - See Sheet No. 46
For C.R.-33A Details And Quantities - See Sheet No. 47

For End Terminal See Std. Dwg. MC-9

125' Flare

1-CB

For Pavement Transition See Detail "D" Sheet No. 14

9-G

657+36.5

C.R.-33A

Underground Wiring

For Guardrail Table See Sheet No. 15

POC. 657+80.00, USR.-33 = Sta. 688+33.99, C.R.-33A
Bridge No. AUG-33-1281

Ramp "A"

For Ramp "A" Quantities And Details - See Sheet No. 48

Ex. L/A

Ex. L/A

Ramp "C"

Ex. RCP

Place 18" Sod Strip Around Conc. Apron For Quantities - See Sheet No. 15.

1-D

C.B.

For Ramp "C" Quantities And Details - See Sheet No. 50

Str. No. AUG-33-13.10 For Pavement Transitions Westbound Lanes - See Detail "C" Sheet No. 14

Ex. L/A

1-G

2-G

R.C.P.

CREEK

3-G

S 67°-16'-20" E

5-G

4-UD

7-G

4-G

1-UD

Ramp "D"

2-C

For Curb Removal Quantities And Details - See Sheet No. 15.

2-UD

At Sta. 669+66.92

3-UD

Underground Wiring

6-G

Str. No. AUG-33-13.10 For Pavement Transitions Eastbound Lanes - See Detail "F" Sheet No. 14

8-G

5-UD

6-UD

Ex. L/A

Ex. L/A

For Underdrain Table See Sheet No. 15

For Guardrail Table See Sheet No. 15

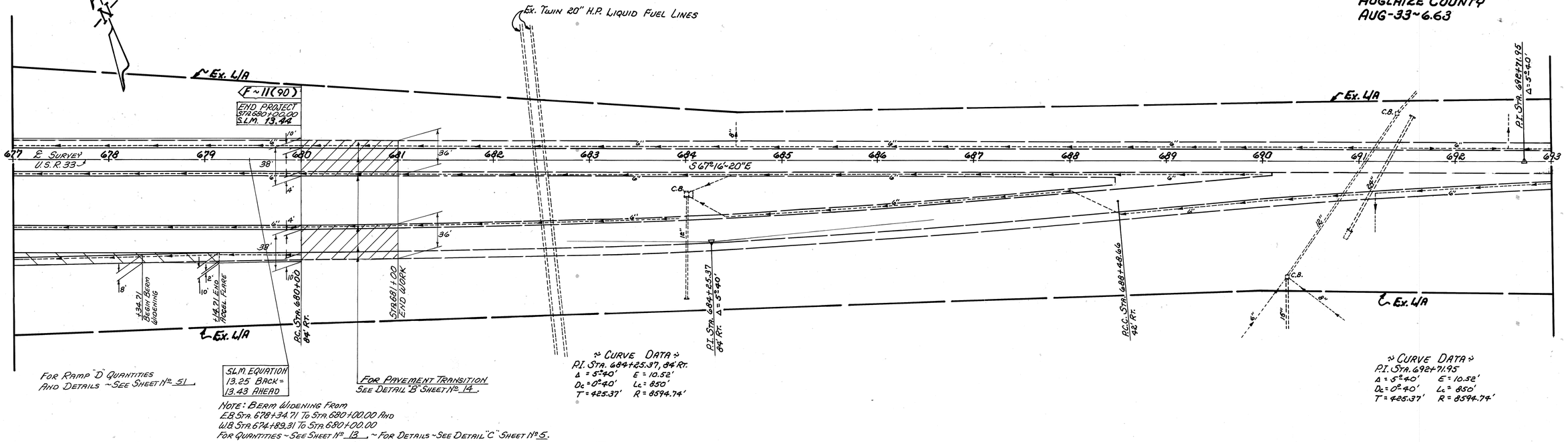
For Ramp "D" Quantities And Details - See Sheet No. 51

Note: For details of underground wiring not shown - see Sheet No. 66.

PUSHETA

PLAN STA. 645+00 TO STA. 677+00 U.S.R.-33

AUGLAIZE COUNTY
AUG-33~6.63



For Ramp "D" Quantities
And Details ~See Sheet No. 51

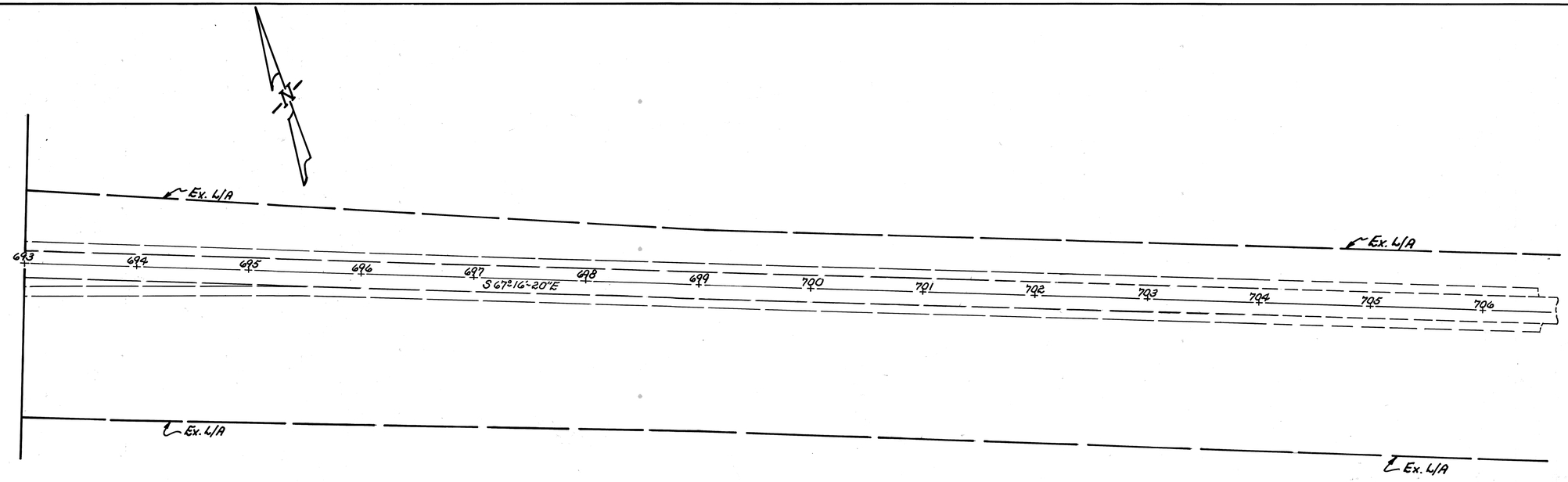
S.L.M. EQUATION
13.25 BACK =
13.43 AHEAD

For Pavement Transition
See Detail "B" Sheet No. 14.

Note: Berm Widening From
E.B. Sta. 678+34.71 To Sta. 680+00.00 And
W.B. Sta. 674+89.31 To Sta. 680+00.00
For Quantities ~See Sheet No. 13 ~ For Details ~See Detail "C" Sheet No. 5.

℄ Curve Data ℄
P.I. Sta. 684+25.37, 84' Rt.
Δ = 5°40' E = 10.52'
Dc = 0°40' Lc = 850'
T = 425.37' R = 8594.74'

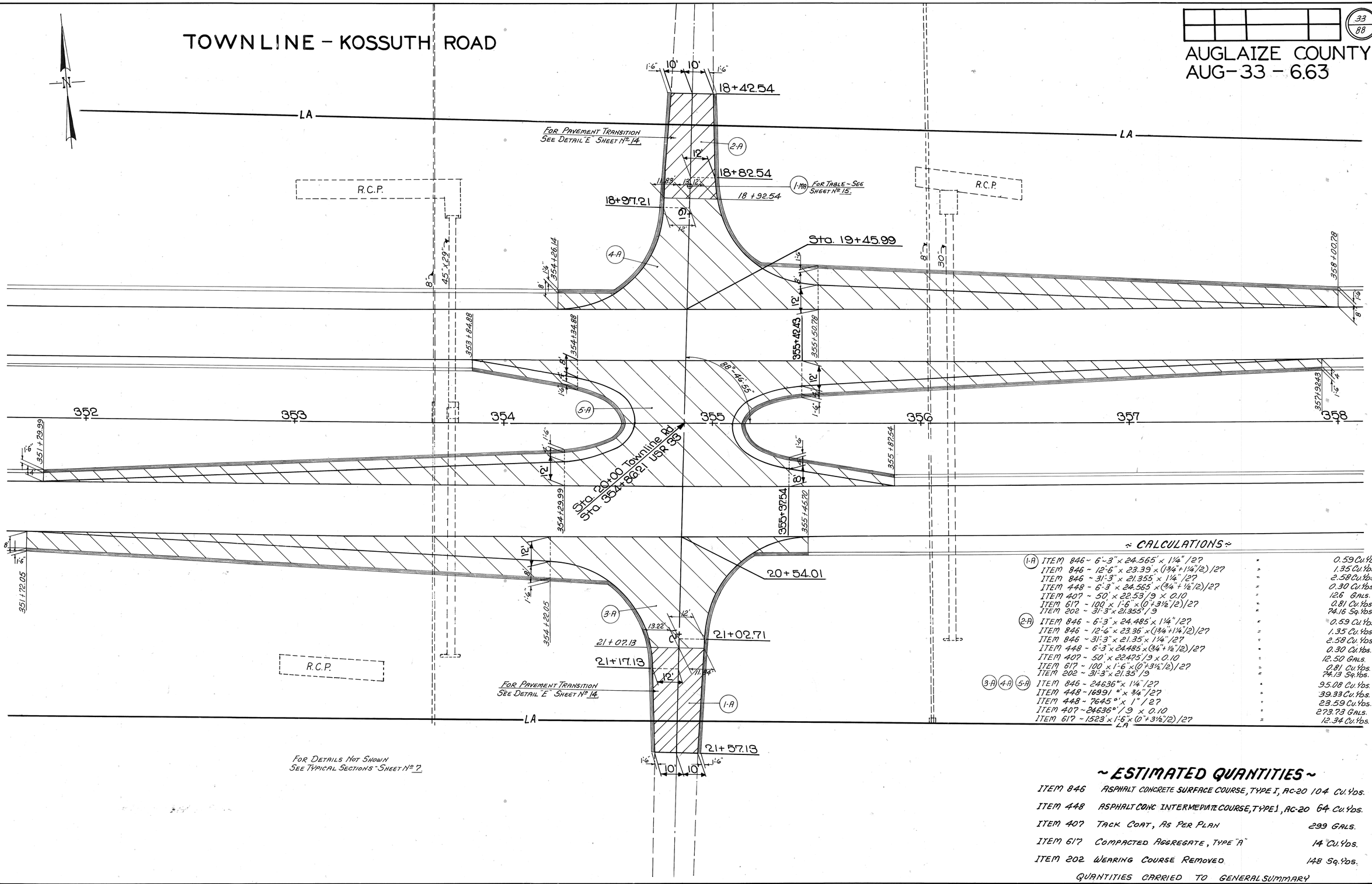
℄ Curve Data ℄
P.I. Sta. 692+71.95
Δ = 5°40' E = 10.52'
Dc = 0°40' Lc = 850'
T = 425.37' R = 8594.74'



PLAN STA. 677+00 TO STA. 706+00 U.S.R.~33

TOWNLINE – KOSSUTH ROAD

AUGLAIZE COUNTY
AUG-33-6.63



~ CALCULATIONS ~

(1-A)	ITEM 846 ~ 6'-3" x 24.565' x 1¼" / 27	=	0.59 Cu.Yds.
	ITEM 846 ~ 12'-6" x 23.39' x (¾"+1¼"/2) / 27	=	1.35 Cu.Yds.
	ITEM 846 ~ 31'-3" x 21.355' x 1¼" / 27	=	2.58 Cu.Yds.
	ITEM 448 ~ 6'-3" x 24.565' x (¾"+½"/2) / 27	=	0.30 Cu.Yds.
	ITEM 407 ~ 50' x 22.53'/9 x 0.10	=	12.6 Gals.
	ITEM 617 ~ 100' x 1'-6" x (0"+3½"/2) / 27	=	0.81 Cu.Yds.
	ITEM 202 ~ 31'-3" x 21.355' / 9	=	74.16 Sq.Yds.
(2-A)	ITEM 846 ~ 6'-3" x 24.485' x 1¼" / 27	=	0.59 Cu.Yds.
	ITEM 846 ~ 12'-6" x 23.36' x (¾"+1¼"/2) / 27	=	1.35 Cu.Yds.
	ITEM 846 ~ 31'-3" x 21.35' x 1¼" / 27	=	2.58 Cu.Yds.
	ITEM 448 ~ 6'-3" x 24.485' x (¾"+½"/2) / 27	=	0.30 Cu.Yds.
	ITEM 407 ~ 50' x 22.475'/9 x 0.10	=	12.50 Gals.
	ITEM 617 ~ 100' x 1'-6" x (0"+3½"/2) / 27	=	0.81 Cu.Yds.
	ITEM 202 ~ 31'-3" x 21.35' / 9	=	74.13 Sq.Yds.
(3-A) (4-A) (5-A)	ITEM 846 ~ 24636°" x 1¼" / 27	=	95.08 Cu.Yds.
	ITEM 448 ~ 16991 °" x ¾" / 27	=	39.33 Cu.Yds.
	ITEM 448 ~ 7645 °" x 1" / 27	=	23.59 Cu.Yds.
	ITEM 407 ~ 24636°" / 9 x 0.10	=	273.73 Gals.
	ITEM 617 ~ 1523' x 1'-6" x (0"+3½"/2) / 27	=	12.34 Cu.Yds.

~ ESTIMATED QUANTITIES ~

ITEM 846	ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20	104 Cu.Yds.
ITEM 448	ASPHALT CONC INTERMEDIATE COURSE, TYPE I, AC-20	64 Cu.Yds.
ITEM 407	TACK COAT, AS PER PLAN	299 GALS.
ITEM 617	COMPACTED AGGREGATE, TYPE "A"	14 Cu.Yds.
ITEM 202	WEARING COURSE REMOVED	148 Sq.Yds.

QUANTITIES CARRIED TO GENERAL SUMMARY

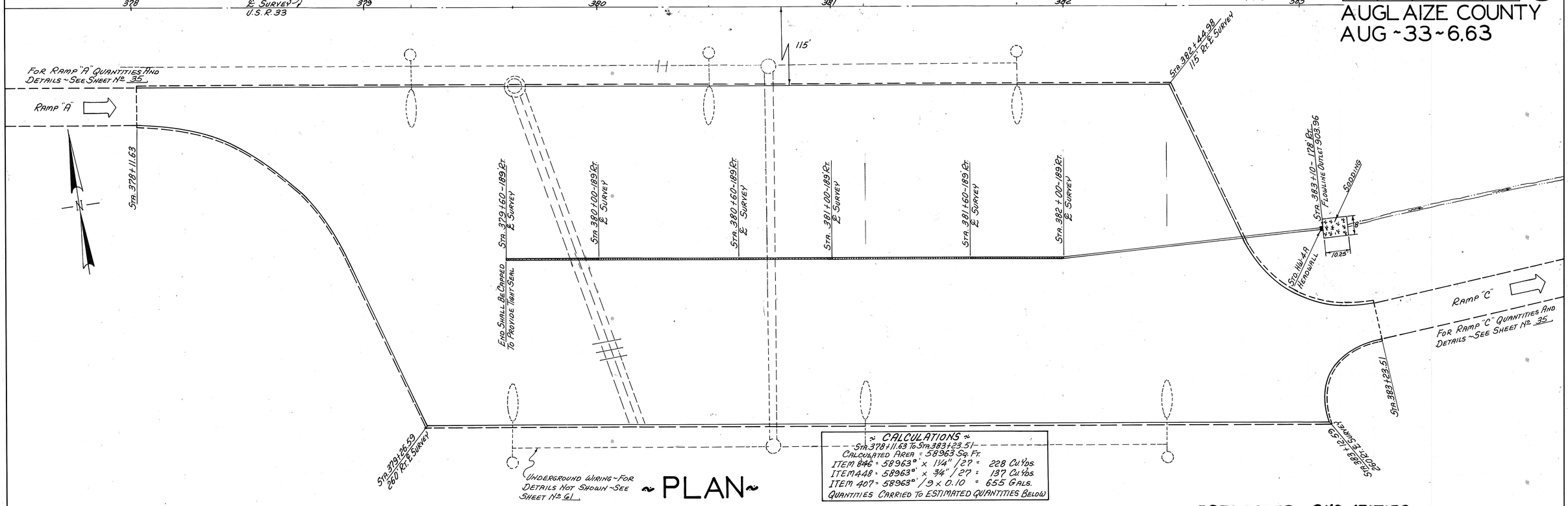
TOWNLINE – KOSSUTH ROAD

EASTBOUND REST AREA

FHWA REGION	STATE	PROJECT	
5	OHIO		

34
88

AUGLAIZE COUNTY
AUG-33-6.63



~ PLAN ~

~ CALCULATIONS ~

Sta. 378+11.63 To Sta. 383+23.51
Calculated Area = 58963 Sq. Ft.
ITEM 846 = 58963 Sq. Ft. x 1 1/4" / 27 = 228 Cu. Yds.
ITEM 448 = 58963 Sq. Ft. x 3/4" / 27 = 137 Cu. Yds.
ITEM 407 = 58963 Sq. Ft. / 9 x 0.10 = 655 Gals.
Quantities Carried To Estimated Quantities Below

~ESTIMATED QUANTITIES~

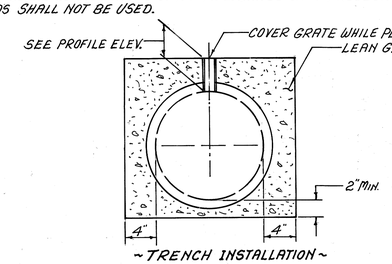
ITEM 602	Concrete Masonry	0.21 Cu. Yds.
ITEM 660	Sodding	9.11 Sq. Yds.
ITEM 603	12" Conduit, Type B, 707.05 (0.079) As Per Plan	240 Lin. Ft.
ITEM 603	12" Conduit, Type B	112 Lin. Ft.
ITEM 846	Asphalt Conc Surface Course, Type 1, AC-20	228 Cu. Yds.
ITEM 448	Asphalt Concrete Intermed. Course, Type 1, AC-20	137 Cu. Yds.
ITEM 407	Tack Coat, As Per Plan	655 Gals.

Quantities Carried To General Summary

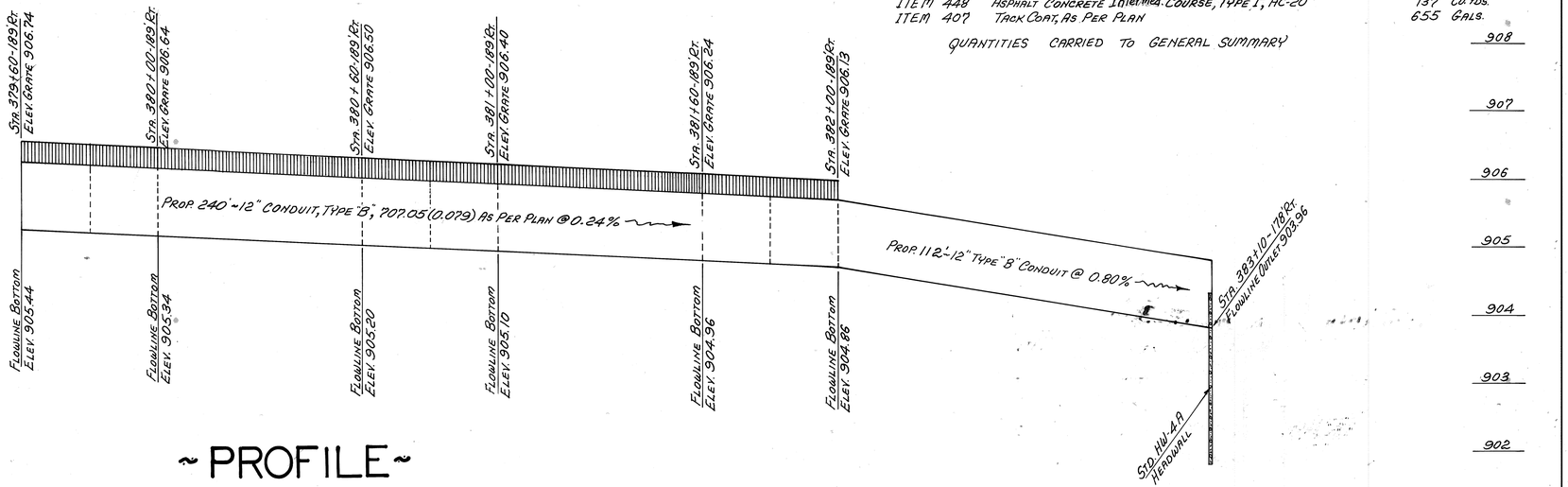
ITEM 603 - CONDUIT, AS PER PLAN

THIS ITEM SHALL CONSIST OF 12" DIAMETER SLOTTED DRAIN BITUMINOUS COATED STEEL CONDUIT 707.05 (0.079) WITH 6" x 3/16" GALVANIZED SOLID BAR GRATE AS APPROVED BY THE ENGINEER. ALL COSTS FOR LABOR AND MATERIALS INCLUDING BEDDING AND BACKFILLING AS DETAILED SHALL BE INCLUDED IN THE PRICE BID FOR ITEM 603, 12" CONDUIT, TYPE B, 707.05(0.079) AS PER PLAN.

THE CONDUIT SHALL BE PROVIDED WITH AT LEAST TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END OF EACH PIPE LENGTH. THE PIPE LENGTHS SHALL BE JOINTED WITH COUPLING BANDS WHICH HAVE AT LEAST ONE CIRCUMFERENTIAL CORRUGATION THAT INDEXS INTO THE INBOARD CORRUGATIONS OF THE PIPE. BANDS WITH PROJECTIONS, i.e. DIMPLE BANDS SHALL NOT BE USED.



~ TRENCH INSTALLATION ~



~ PROFILE ~

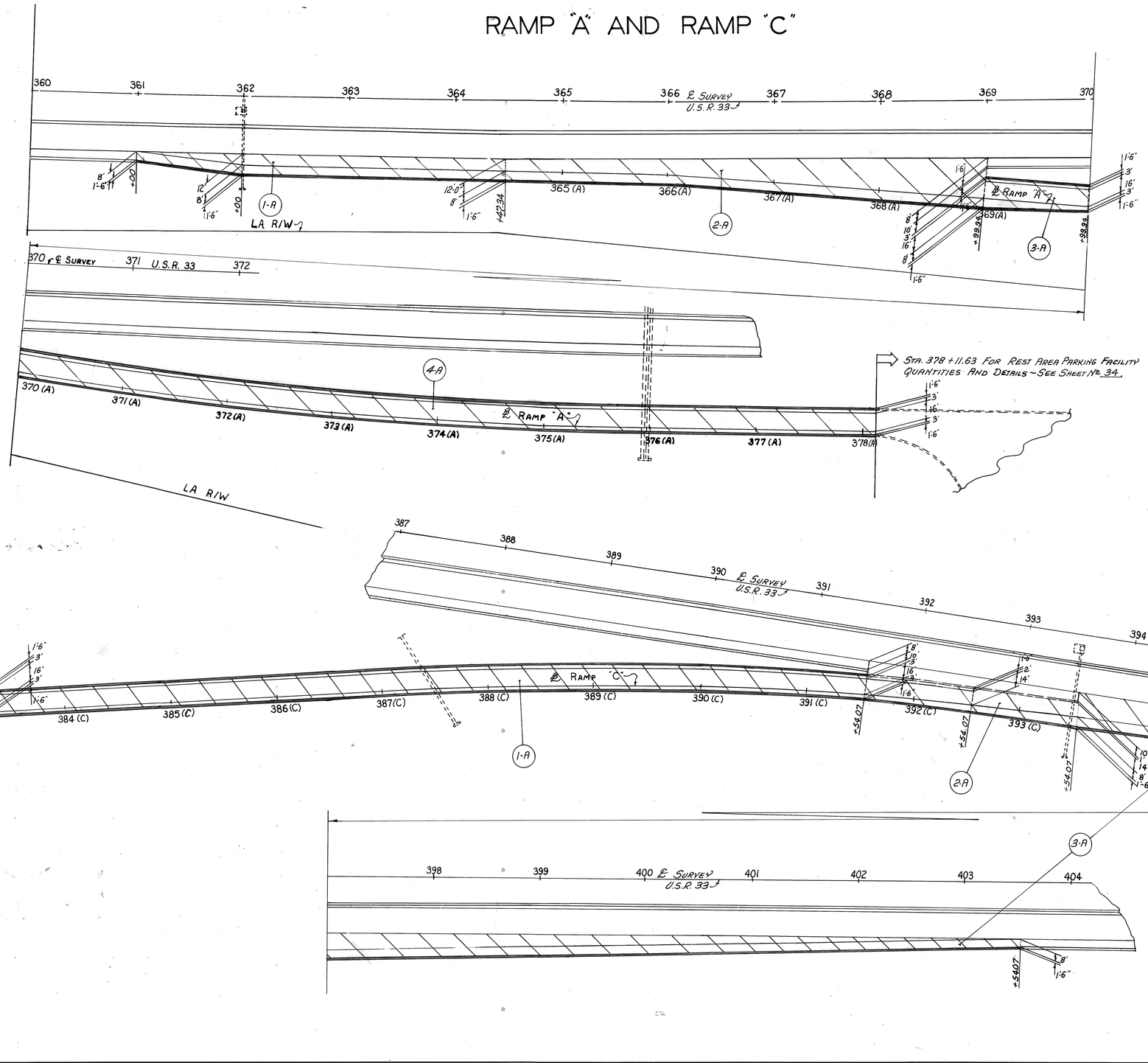
EASTBOUND REST AREA ~ DETAILS AND QUANTITIES

EASTBOUND REST AREA
RAMP "A" AND RAMP "C"

AUGLAIZE COUNTY
AUG-33 -6.63

FHWA REGION	STATE	PROJECT	
5	OHIO		

35
88



~ CALCULATIONS ~

~ RAMP "A" ~

1-A STA. 361+00.00 "A" TO STA. 364+37.34 "A" = 337.34 LIN. FT.

ITEM 846 ~ 100'x(20'+8/2)+237.34'x20'-0"x1¼"/27	=	24.49 CU. YDS.
ITEM 448 ~ 100'x(12'+0/2)+237.34'x12'-0"x¾"/27	=	8.26 CU. YDS.
ITEM 407 ~ 100'x(20'+8/2)+237.34'x20'-0"/9x0.10	=	70.52 GALS.
ITEM 617 ~ 337.34'x1'-6"x(0'+3½/2)/27	=	2.81 CU. YDS.
ITEM 448 ~ 337.34'x8'-0"x1"/27	=	8.57 CU. YDS.

2-A STA. 364+47.34 "A" TO STA. 368+99.34 "A" ~ CALCULATED AREA = 14075 SQ. FT.

ITEM 846 ~ 14075 SQ. FT. x 1¼"/27	=	54.32 CU. YDS.
ITEM 448 ~ 10459 SQ. FT. x ¾"/27	=	24.21 CU. YDS.
ITEM 407 ~ 14075 SQ. FT. / 9 x 0.10	=	156.39 GALS.
ITEM 617 ~ 452'x1'-6"x(0'+3½/2)/27	=	3.66 CU. YDS.
ITEM 448 ~ 452'x8'-0"x1"/27	=	11.16 CU. YDS.

3-A STA. 369+99.34 "A" TO STA. 370+99.34 "A" ~ CALCULATED AREA = 2525 SQ. FT.

ITEM 846 ~ 2525 SQ. FT. x 1¼"/27	=	9.74 CU. YDS.
ITEM 448 ~ 1675 SQ. FT. x ¾"/27	=	3.88 CU. YDS.
ITEM 407 ~ 2525 SQ. FT. / 9 x 0.10	=	8.06 GALS.
ITEM 617 ~ 100'x2x1'-6"x(0'+3½/2)/27	=	1.62 CU. YDS.
ITEM 448 ~ 100'x(3'+8/2)+300 SQ. FT. x 1"/27	=	2.62 CU. YDS.

4-A STA. 370+99.34 "A" TO STA. 378+11.63 "A" = 712.29 LIN. FT. ~ WIDTH 22'-0"

ITEM 846 ~ 712.29' x 22'-0" x 1¼"/27	=	60.48 CU. YDS.
ITEM 448 ~ 712.29' x 16'-0" x ¾"/27	=	26.38 CU. YDS.
ITEM 407 ~ 712.29' x 22'-0" / 9 x 0.10	=	174.12 GALS.
ITEM 617 ~ 712.29'x2x1'-6"x(0'+3½/2)/27	=	11.54 CU. YDS.
ITEM 448 ~ 712.29'x2x3'x1"/27	=	13.19 CU. YDS.

~ RAMP "C" ~

1-A STA. 383+23.51 "C" TO STA. 391+54.07 "C" = 830.56 LIN. FT. ~ WIDTH 22'-0"

ITEM 846 ~ 830.56' x 22'-0" x 1¼"/27	=	70.52 CU. YDS.
ITEM 448 ~ 830.56' x 16'-0" x ¾"/27	=	30.76 CU. YDS.
ITEM 407 ~ 830.56' x 22'-0"/9 x 0.10	=	203.03 GALS.
ITEM 617 ~ 830.56'x2x1'-6"x(0'+3½/2)/27	=	13.46 CU. YDS.
ITEM 448 ~ 830.56'x2x3'x1"/27	=	15.37 CU. YDS.

2-A STA. 391+54.07 "C" TO STA. 393+54.07 "C" = 200 LIN. FT. ~ AVE. WIDTH 22'-0"

ITEM 846 ~ 200' x 22'-0" x 1¼"/27	=	16.98 CU. YDS.
ITEM 448 ~ 200' x 15'-0" x ¾"/27	=	6.94 CU. YDS.
ITEM 407 ~ 200' x 22'-0"/9 x 0.10	=	48.89 GALS.
ITEM 617 ~ 200'x1'-6"x(0'+3½/12)/27	=	1.62 CU. YDS.
ITEM 448 ~ 200'x(3'+8/2)x1"/27	=	3.39 CU. YDS.

3-A STA. 393+54.07 "C" TO STA. 403+54.07 "C" = 1000 LIN. FT. ~ AVE. WIDTH 20'-6"

ITEM 846 ~ 1000 x 20'-6" x 1¼"/27	=	29.11 CU. YDS.
ITEM 448 ~ 1000' x 12'-6" x ¾"/27	=	28.94 CU. YDS.
ITEM 407 ~ 1000' x 20'-6"/9 x 0.10	=	227.78 GALS.
ITEM 617 ~ 1000'x1'-6"x(0'+3½/2)/27	=	8.10 CU. YDS.
ITEM 448 ~ 1000' x 8'-0" x 1"/27	=	24.68 CU. YDS.

~ ESTIMATED QUANTITIES ~

ITEM 846 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20	316 CU. YDS.
ITEM 448 ASPHALT CONC. INTERMEDIATE COURSE, TYPE 1, AC-20	208 CU. YDS.
ITEM 407 TACK COAT, AS PER PLAN	909 GALS.
ITEM 617 COMPACTED AGGREGATE, TYPE "A"	43 CU. YDS.

QUANTITIES CARRIED TO GENERAL SUMMARY

WESTBOUND REST AREA

FHWA REGION	STATE	PROJECT	
5	OHIO		

36
88

AUGLAIZE COUNTY
AUG-33-6.63

Sta. 384+02.41
260 Lt. ℄ Survey

Ramp "B"

For Ramp "B" Quantities And Details ~ See Sheet No. 37

Sta. 384+16.13

Sta. 384+95.02
115 Lt. ℄ Survey

Sta. 385+10-210 Lt.
℄ Survey

Sta. 385+50-210 Lt.
℄ Survey

Sta. 386+10-210 Lt.
℄ Survey

Sta. 386+50-210 Lt.
℄ Survey

Sta. 387+10-210 Lt.
℄ Survey

Sta. 387+50-210 Lt.
℄ Survey

End Shall Be Capped To Provide Tight Seal

Underground Wiring ~ For Details Not Shown ~ See Sheet No. 61.

@115'

Sta. 388+13.41
260 Lt. ℄ Survey

Sta. 388+64-185 Lt.
℄ Survey

Sodding

10'

7.25'

Sta. HW 4A
Headwall

E Existing 10" Manhole Drive-2

Existing 15" Conduit

Ramp "D"

For Ramp "D" Quantities And Details See Sheet No. 37

Sta. 389+34.58

~ CALCULATIONS ~

Sta. 384+16.13 To Sta. 389+34.58
Calculated Area = 58915 Sq. Ft.
Item 846 = 58915 ft² x 1¼" / 27 = 228 Cu. Yds.
Item 448 = 58915 ft² x ¾" / 27 = 137 Cu. Yds.
Item 407 = 58915 ft² / 9 x 0.10 = 655 Gals.
Quantities Carried To Estimated Quantities Below

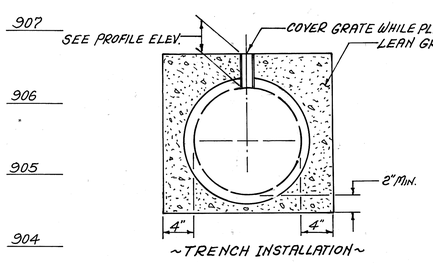
384 | 385 | 386 | 387 | ℄ Survey U.S.R. 33 | 388 | 389 | 390

~ PLAN ~

ITEM 603 ~ CONDUIT, AS PER PLAN

This item shall consist of 12" diameter slotted drain bituminous coated steel conduit, 707.05 (0.079) with 6" x 3/16" galvanized solid bar grate as approved by the Engineer. All costs for labor and materials including bedding and backfilling as detailed shall be included in the price bid for Item 603, 12" Conduit, Type B, 707.05 (0.079) as per plan.

The conduit shall be provided with at least two circumferential corrugations at each end of each pipe length. The pipe lengths shall be jointed with coupling bands which have at least one circumferential corrugation that indexs into the inboard corrugations of the pipe. Bands with projections, i.e. dimple bands shall not be used.



~ Trench Installation ~

~ ESTIMATED QUANTITIES ~

Item 602	Concrete Masonry	0.21 Cu. Yds.
Item 660	Sodding	9.11 Sq. Yds.
Item 603	12" Conduit, Type B, 707.05 (0.079) As Per Plan	240 Lin. Ft.
Item 603	12" Conduit, Type B	120 Lin. Ft.
Item 846	Asphalt Concrete Surface Course, Type 1, AC-20	228 Cu. Yds.
Item 448	Asphalt Conc. Intermediate Course, Type 1, AC-20	137 Cu. Yds.
Item 407	Tack Coat, As Per Plan	655 Gals.

Quantities Carried To General Summary

908
907
906
905
904
903
902

Sta. 385+10-210 Lt.
Elev. Grate 907.34
Flowline Bottom
Elev. 906.04

Sta. 385+50-210 Lt.
Elev. Grate 907.23
Flowline Bottom
Elev. 905.93

Sta. 386+10-210 Lt.
Elev. Grate 907.06
Flowline Bottom
Elev. 905.76

Sta. 386+50-210 Lt.
Elev. Grate 906.95
Flowline Bottom
Elev. 905.65

Sta. 387+10-210 Lt.
Elev. Grate 906.78
Flowline Bottom
Elev. 905.48

Sta. 387+50-210 Lt.
Elev. Grate 906.67
Flowline Bottom
Elev. 905.37

Prop. 240'-12" Conduit, Type B, 707.05 (0.079) As Per Plan @ 0.28%

Prop. 120'-12" Type "B" Conduit @ 0.60%

Sta. 388+64-185 Lt.
Flowline Duct E 904.65

Sta. HW 4A
Headwall

~ PROFILE ~

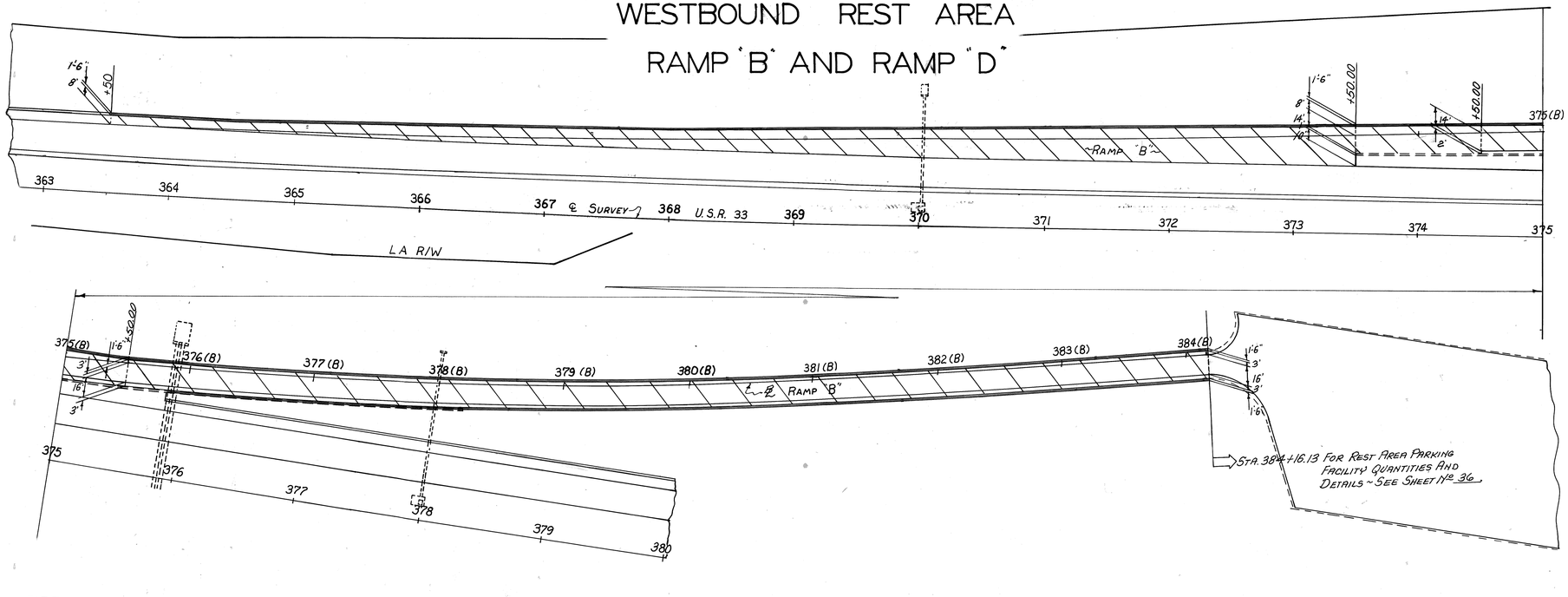
WESTBOUND REST AREA ~ DETAILS AND QUANTITIES

WESTBOUND REST AREA
RAMP "B" AND RAMP "D"

FHWA REGION	STATE	PROJECT	
5	OHIO		

37
88

AUGLAIZE COUNTY
AUG – 33 – 6.63



~ CALCULATIONS ~

~RAMP "B"~

(1-A) STA. 363+50.00 To STA. 373+50.00 = 1000 LIN. FT. AVE. WIDTH 20'-6"

ITEM 846 ~ 1000' x (33+8/12) x 1¼" / 27	=	79.11 Cu Yds.
ITEM 448 ~ 1000' x (25+0/12) x ¾" / 27	=	28.94 Cu Yds.
ITEM 407 ~ 1000' x (33+8/12) / 9 x 0.10	=	227.78 Gals.
ITEM 617 ~ 1000' x 1'-6" x (0"+3½"/12) / 27	=	8.10 Cu Yds.
ITEM 448 ~ 1000' x 8'-0" x 1" / 27	=	24.68 Cu Yds.

(2-A) STA. 373+50.00 To STA. 375+50.00 ~ CALCULATED AREA = 4350 SQ. FT.

ITEM 846 ~ 4350 ⁿ x 1¼" / 27	=	16.79 Cu Yds.
ITEM 448 ~ 3250 ⁿ x ¾" / 27	=	2.52 Cu Yds.
ITEM 407 ~ 4350 ⁿ / 9 x 0.10	=	48.33 Gals.
ITEM 617 ~ 200' x 1'-6" x (0"+3½"/12) / 27	=	1.62 Cu Yds.
ITEM 448 ~ 200' x (3'+8/12) x 1" / 27	=	3.39 Cu Yds.

(3-A) STA. 375+50.00 To STA. 384+16.13 = 866.13 LIN. FT. ~ WIDTH 22'-0"

ITEM 846 ~ 866.13' x 22'-0" x 1¼" / 27	=	23.54 Cu Yds.
ITEM 448 ~ 866.13' x 16'-0" x ¾" / 27	=	32.08 Cu Yds.
ITEM 407 ~ 866.13' x 22'-0" / 9 x 0.10	=	211.72 Gals.
ITEM 617 ~ 832.13' x 2 + 34'-0" x 1'-6" x (0"+3½"/12) / 27	=	13.76 Cu Yds.
ITEM 448 ~ 866.13' x 6'-0" x 1" / 27	=	16.03 Cu Yds.

~RAMP "D"~

(1-A) STA. 389+34.58 To STA. 397+00.00 = 765.42 LIN. FT. ~ WIDTH 22'-0"

ITEM 846 ~ 765.42' x 22'-0" x 1¼" / 27	=	64.99 Cu Yds.
ITEM 448 ~ 765.42' x 16'-0" x ¾" / 27	=	28.35 Cu Yds.
ITEM 407 ~ 765.42' x 22'-0" / 9 x 0.10	=	187.10 Gals.
ITEM 617 ~ 765.42' x 2 x 1'-6" x (0"+3½"/12) / 27	=	12.40 Cu Yds.
ITEM 448 ~ 765.42' x 6'-0" x 1" / 27	=	14.17 Cu Yds.

(2-A) STA. 397+00.00 To STA. 398+00.00 = 100.00 LIN. FT. AVE. WIDTH 24'-0"

ITEM 846 ~ 100' x 24'-6" x 1¼" / 27	=	9.46 Cu Yds.
ITEM 448 ~ 100' x 16'-0" x ¾" / 27	=	3.70 Cu Yds.
ITEM 407 ~ 100' x 24'-6" / 9 x 0.10	=	27.22 Gals.
ITEM 617 ~ 100' x 2 x 1'-6" x (0"+3½"/12) / 27	=	1.62 Cu Yds.
ITEM 448 ~ 100' x (3'+8/12) + 300" x 1" / 27	=	2.62 Cu Yds.

(3-A) STA. 398+00.00 To STA. 402+57.91 ~ CALCULATED AREA = 13675 SQ. FT.

ITEM 846 ~ 13675 ⁿ x 1¼" / 27	=	52.78 Cu Yds.
ITEM 448 ~ 10012 ⁿ x ¾" / 27	=	23.18 Cu Yds.
ITEM 407 ~ 13675 ⁿ / 9 x 0.10	=	151.94 Gals.
ITEM 617 ~ 457.91' x 1'-6" x (0"+3½"/12) / 27	=	3.91 Cu Yds.
ITEM 448 ~ 3663 ⁿ x 1" / 27	=	11.30 Cu Yds.

(4-A) STA. 402+57.91 To STA. 405+00.00 = 242.09 LIN. FT. ~ WIDTH 20'-0"
STA. 405+00.00 To STA. 406+00.00 = 100.00 LIN. FT. AVE. WIDTH 14'-0"

ITEM 846 ~ 242.09 x 20'-0" + 100 x 14'-0" x 1¼" / 27	=	24.09 Cu Yds.
ITEM 448 ~ 242.09 x 12'-0" + 100 x (0+12/12) x ¾" / 27	=	8.11 Cu Yds.
ITEM 407 ~ 242.09 x 20'-0" + 100'-0" x 14'-0" / 9 x 0.10	=	69.35 Gals.
ITEM 617 ~ 342.09' x 1'-6" x (0"+3½"/2) / 27	=	2.77 Cu Yds.
ITEM 448 ~ 342.09 x 8'-0" x 1" / 27	=	8.44 Cu Yds.

~ ESTIMATED QUANTITIES ~

ITEM 846	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20	321 CU YDS.
ITEM 448	ASPHALT CONC. INTERMEDIATE COURSE, TYPE 1, AC-20	213 CU YDS.
ITEM 407	TACK COAT, AS PER PLAN.	924 GALS.
ITEM 617	COMPACTED AGGREGATE, TYPE "A"	44 CU YDS.

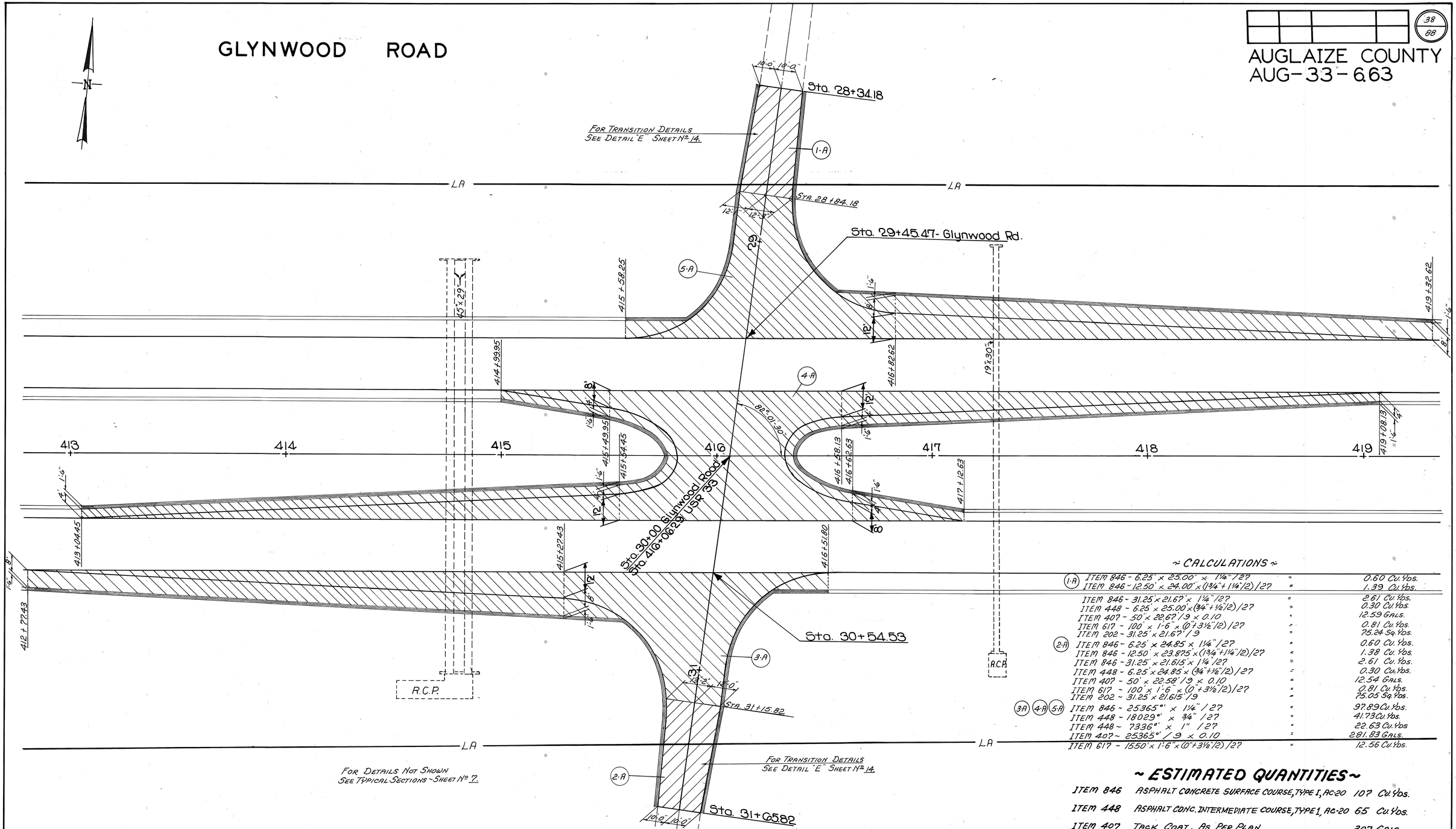
QUANTITIES CARRIED TO GENERAL SUMMARY

WESTBOUND REST AREA RAMP "B" AND RAMP "D"

GLYNWOOD ROAD

AUGLAIZE COUNTY
AUG-33-6.63

38
88



~ CALCULATIONS ~

1-A	ITEM 846 - 6.25' x 25.00' x 1¼" / 27	=	0.60 Cu. Yds.
	ITEM 846 - 12.50' x 24.00' x (1¾" + 1¼"/2) / 27	=	1.39 Cu. Yds.
	ITEM 846 - 31.25' x 21.67' x 1¼" / 27	=	2.61 Cu. Yds.
	ITEM 448 - 6.25' x 25.00' x (¾" + ½"/2) / 27	=	0.30 Cu. Yds.
	ITEM 407 - 50' x 22.67' / 9 x 0.10	=	12.59 Gals.
	ITEM 617 - 100' x 1'-6" x (0" + 3½"/2) / 27	=	0.81 Cu. Yds.
	ITEM 202 - 31.25' x 21.67' / 9	=	75.24 Sq. Yds.
2-A	ITEM 846 - 6.25' x 24.85' x 1¼" / 27	=	0.60 Cu. Yds.
	ITEM 846 - 12.50' x 23.875' x (1¾" + 1¼"/2) / 27	=	1.38 Cu. Yds.
	ITEM 846 - 31.25' x 21.615' x 1¼" / 27	=	2.61 Cu. Yds.
	ITEM 448 - 6.25' x 24.85' x (¾" + ½"/2) / 27	=	0.30 Cu. Yds.
	ITEM 407 - 50' x 22.58' / 9 x 0.10	=	12.54 Gals.
	ITEM 617 - 100' x 1'-6" x (0" + 3½"/2) / 27	=	0.81 Cu. Yds.
	ITEM 202 - 31.25' x 21.615' / 9	=	75.05 Sq. Yds.
3-A 4-A 5-A	ITEM 846 - 25365'' x 1¼" / 27	=	97.89 Cu. Yds.
	ITEM 448 - 18029'' x ¾" / 27	=	41.73 Cu. Yds.
	ITEM 448 - 7336'' x 1" / 27	=	22.63 Cu. Yds.
	ITEM 407 - 25365° / 9 x 0.10	=	281.83 Gals.
	ITEM 617 - 1550' x 1'-6" x (0" + 3½"/2) / 27	=	12.56 Cu. Yds.

~ ESTIMATED QUANTITIES ~

ITEM 846	ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20	107 Cu. Yds.
ITEM 448	ASPHALT CONC. INTERMEDIATE COURSE, TYPE 1, AC-20	65 Cu. Yds.
ITEM 407	TACK COAT, AS PER PLAN	307 GALS.
ITEM 617	COMPACTED AGGREGATE, TYPE "A"	14 Cu. Yds.
ITEM 202	WEARING COURSE REMOVED	150 Sq. Yds.

QUANTITIES CARRIED TO GENERAL SUMMARY

GLYNWOOD ROAD

PROP USR-33 & MOULTON-FT AMANDA RD INTERCHANGE

AUGLAIZE COUNTY
AUG-33-6.63

105
110
115
120
465 (B)
460 (B)
470 (C)
475 (C)
480 (C)
460 (A)
465 (A)
470 (D)
475 (D)
455
460
465
470
475
480
485
STA. 469+84.69
STA. 470+32.90
STA. 470+50.67
STA. 469+16.15
STA. 469+28.52
STA. 469+82.13
STA. 469+35.29 ℄ U.S.R. 33
STA. 112+35.68 ℄ MOULTON-FT. AMANDA RD.
BRIDGE NO. AUG-33-0926
FOR RAMP TRANSITION DETAILS
SEE DETAIL "E" SHEET NO. 14
STA. 468+88.45
STA. 469+41.86
STA. 469+54.43
STA. 468+19.91
STA. 468+36.68
STA. 468+85.89

USR 33 & MOULTON-FT. AMANDA RD. INTERCHANGE

U.S.R. 33 - MOULTON - FT. AMANDA ROAD INTERCHANGE

RAMP "A"

FHWA REGION	STATE	PROJECT	
5	OHIO		

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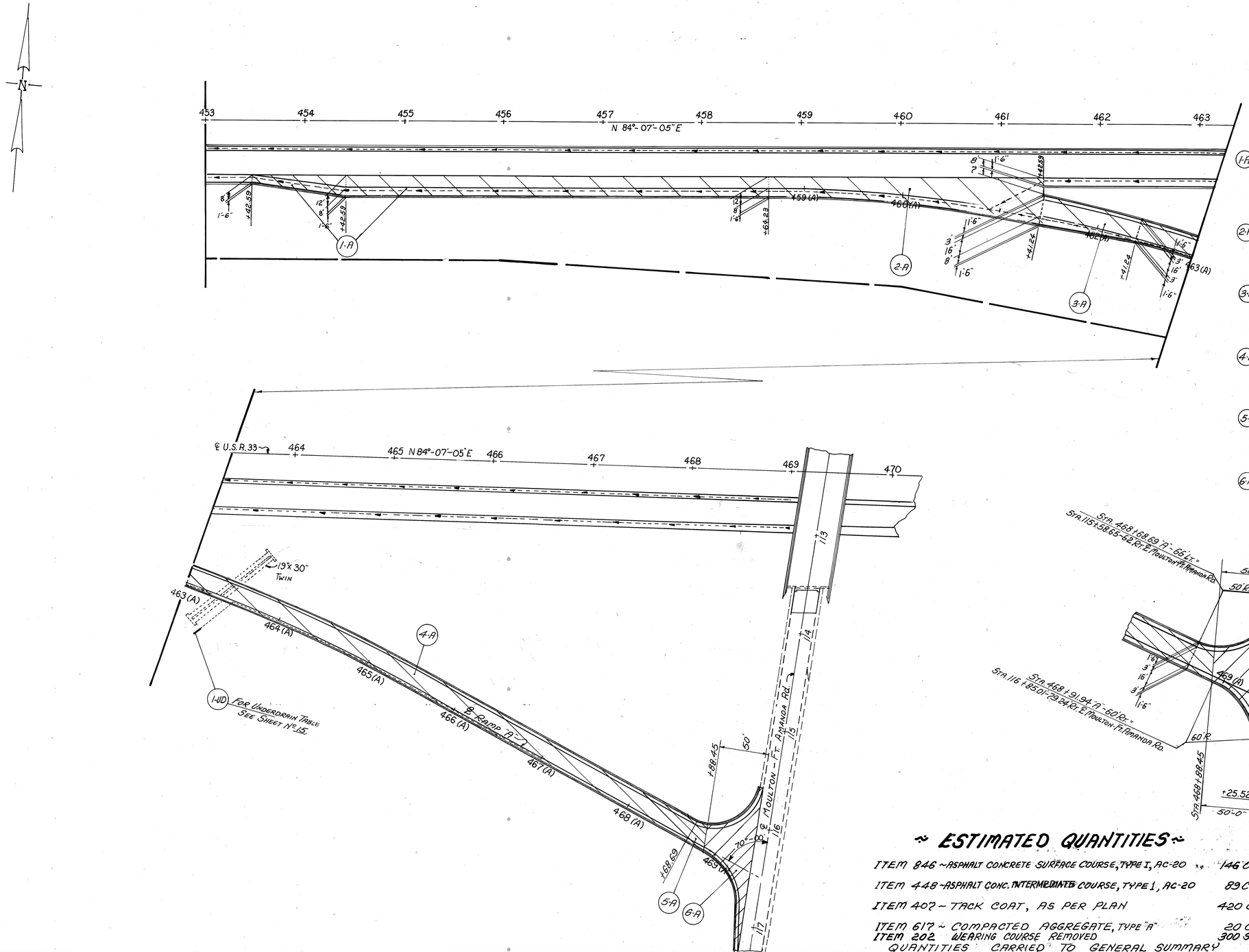
88

AUGLAIZE COUNTY
AUG - 33 - 6.63



~ CALCULATIONS ~

1-A Sta. 453+42.59 To Sta. 454+42.59 = 100 Lin. Ft. Ave. Width 14'-0"
Sta. 454+42.59 To Sta. 458+64.23 = 421.64 Lin. Ft. Width 22'-0"
ITEM 846 - 100 x 14 + 421.64 x 20 x 1¼"/27 = 37.95 Cu. Yds.
ITEM 448 - 100 x 6" + 421.64 x 12 x 1¼"/27 = 13.10 Cu. Yds.
ITEM 407 - 100 x 14 + 421.64 x 20 / 9 x 0.10 = 109.25 Gals.
ITEM 617 - 100 + 421.64 x 1'-6" x (0 + 3½"/2)/27 = 4.23 Cu. Yds.
ITEM 448 - 100 x 8" + 421.64 x 8" x 1"/27 = 12.87 Cu. Yds.

2-A Sta. 458+64.23 To Sta. 461+41.24 = Calculated Area
ITEM 846 - 8000° x 1¼"/27 = 308.7 Cu. Yds.
ITEM 448 - 5783.92° x ¾"/27 = 133.9 Cu. Yds.
ITEM 407 - 8000° / 9 x 0.10 = 88.89 Cu. Yds.
ITEM 617 - 278 x 1'-6" x (0 + 3½"/2)/27 = 2.25 Cu. Yds.
ITEM 448 - 278 x 8" x 1"/27 = 6.86 Cu. Yds.

3-A Sta. 461+41.24 To Sta. 462+41.24 = 100 Lin. Ft. Ave. Width 24.5'
ITEM 846 - 100 x 24.5 x 1¼"/27 = 9.46 Cu. Yds.
ITEM 448 - 100 x 16.0" x ¾"/27 = 3.70 Cu. Yds.
ITEM 407 - 100 x 24.5 / 9 x 0.10 = 2.722 Cu. Yds.
ITEM 617 - 100 x 2 x 1'-6" x (0 + 3½"/2)/27 = 1.62 Cu. Yds.
ITEM 448 - 100 x (8 + 3/2) + 300° x 1"/27 = 2.62 Cu. Yds.

4-A Sta. 462+41.24 To Sta. 468+68.69 = 627.45 Lin. Ft. Width 22'-0"
ITEM 846 - 13803.90° x 1¼"/27 = 532.7 Cu. Yds.
ITEM 448 - 10039.20° x ¾"/27 = 232.4 Cu. Yds.
ITEM 407 - 13803.90° / 9 x 0.10 = 153.38 Gals.
ITEM 617 - 627.45 x 2 x 1'-6" x (0 + 3½"/2)/27 = 10.17 Cu. Yds.
ITEM 448 - 627.45 x 6" x 1"/27 = 11.61 Cu. Yds.

5-A Sta. 468+68.69 To Sta. 468+88.45 = Calculated Area = 448°
ITEM 846 - 448° x 1¼"/27 = 1.73 Cu. Yds.
ITEM 448 - 334° x ¾"/27 = 0.77 Cu. Yds.
ITEM 407 - 448° / 9 x 0.10 = 4.98 Gals.
ITEM 617 - 38 x 1'-6" x (0 + 3½"/2)/27 = 0.31 Cu. Yds.
ITEM 448 - 38" x 3" x 1"/27 = 0.35 Cu. Yds.

6-A Sta. 468+88.45 To Sta. 469+41.66 = Transition Area
ITEM 846 - 178° x 1¼"/27 = 0.69 Cu. Yds.
ITEM 846 - 400° x (1¼" + 1¾"/2)/27 = 1.85 Cu. Yds.
ITEM 846 - 2702° x 1¼"/27 = 10.43 Cu. Yds.
ITEM 448 - 1405° x (½" + ¾"/2)/27 = 0.27 Cu. Yds.
ITEM 407 - 3280° / 9 x 0.10 = 36.44 Gals.
ITEM 617 - 185 x 1'-6" x (0 + 3½"/2)/27 = 1.50 Cu. Yds.
ITEM 202 - 2702° / 9 = 300 Sq. Yds.
ITEM 448 - 12.5 x 3'-0" x 1"/27 = 0.12 Cu. Yds.

~ ESTIMATED QUANTITIES ~

ITEM 846 ~ ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20	146 CU. YDS.
ITEM 448 ~ ASPHALT CONC. INTERMEDIATE COURSE, TYPE 1, AC-20	89 CU. YDS.
ITEM 407 ~ TACK COAT, AS PER PLAN	420 GALS.
ITEM 617 ~ COMPACTED AGGREGATE, TYPE "A"	20 CU. YDS.
ITEM 202 WEARING COURSE REMOVED	300 SQ. YDS.

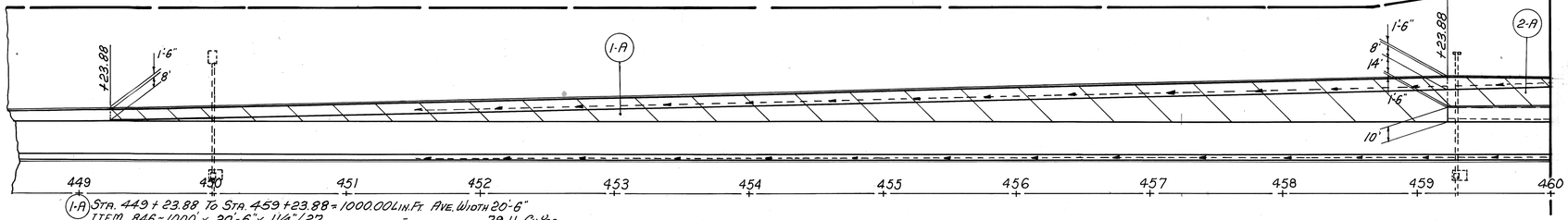
QUANTITIES CARRIED TO GENERAL SUMMARY

U.S.R. 33 - MOULTON - FT. AMANDA ROAD INTERCHANGE
RAMP "B"

FHWA REGION	STATE	PROJECT	
5	OHIO		

41
88

AUGLAIZE COUNTY
AUG - 33 - 6.63



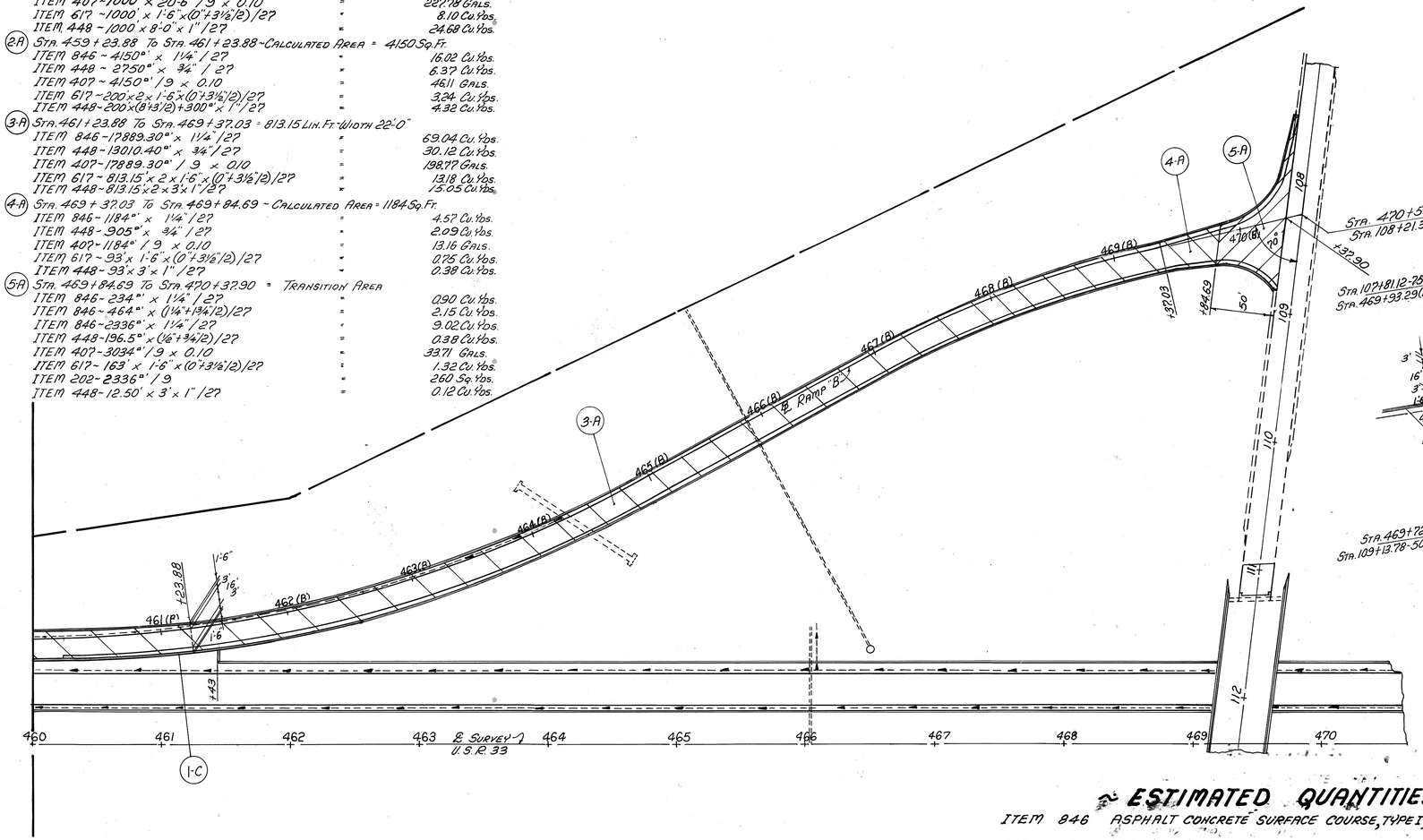
(1-A) STA. 449 + 23.88 TO STA. 459 + 23.88 = 1000.00 LIN. FT. AVE. WIDTH 20'-6"
ITEM 846 - 1000' x 20'-6" x 1 1/4" / 27 = 79.11 CU. YDS.
ITEM 448 - 1000' x (0" + 25 1/2") / 2) x 3/4" / 27 = 28.94 CU. YDS.
ITEM 407 - 1000' x 20'-6" / 9 x 0.10 = 227.78 GALS.
ITEM 617 - 1000' x 1'-6" x (0" + 3 1/2") / 2) / 27 = 8.10 CU. YDS.
ITEM 448 - 1000 x 8'-0" x 1" / 27 = 24.68 CU. YDS.

(2-A) STA. 459 + 23.88 TO STA. 461 + 23.88 - CALCULATED AREA = 4150 SQ. FT.
ITEM 846 - 4150 SQ. YDS. x 1 1/4" / 27 = 16.02 CU. YDS.
ITEM 448 - 2750 SQ. YDS. x 3/4" / 27 = 6.37 CU. YDS.
ITEM 407 - 4150 SQ. YDS. / 9 x 0.10 = 46.11 GALS.
ITEM 617 - 200 x 2 x 1'-6" x (0" + 3 1/2") / 2) / 27 = 3.24 CU. YDS.
ITEM 448 - 200 x (8" + 3") / 2) + 300 SQ. YDS. x 1" / 27 = 4.32 CU. YDS.

(3-A) STA. 461 + 23.88 TO STA. 469 + 37.03 = 813.15 LIN. FT. WIDTH 22'-0"
ITEM 846 - 17889.30 SQ. YDS. x 1 1/4" / 27 = 69.04 CU. YDS.
ITEM 448 - 13010.40 SQ. YDS. x 3/4" / 27 = 30.12 CU. YDS.
ITEM 407 - 17889.30 SQ. YDS. / 9 x 0.10 = 198.77 GALS.
ITEM 617 - 813.15' x 2 x 1'-6" x (0" + 3 1/2" / 2) / 27 = 13.18 CU. YDS.
ITEM 448 - 813.15 x 2 x 3" x 1" / 27 = 15.05 CU. YDS.

(4-A) STA. 469 + 37.03 TO STA. 469 + 84.69 - CALCULATED AREA = 1184.5 SQ. FT.
ITEM 846 - 1184 SQ. YDS. x 1 1/4" / 27 = 4.57 CU. YDS.
ITEM 448 - 905 SQ. YDS. x 3/4" / 27 = 2.09 CU. YDS.
ITEM 407 - 1184 SQ. YDS. / 9 x 0.10 = 13.16 GALS.
ITEM 617 - 93' x 1'-6" x (0" + 3 1/2" / 2) / 27 = 0.75 CU. YDS.
ITEM 448 - 93 x 3" x 1" / 27 = 0.38 CU. YDS.

(5-A) STA. 469 + 84.69 TO STA. 470 + 37.90 = TRANSITION AREA
ITEM 846 - 234 SQ. YDS. x 1 1/4" / 27 = 0.90 CU. YDS.
ITEM 846 - 464 SQ. YDS. x (1 1/4" + 1 3/4" / 2) / 27 = 2.15 CU. YDS.
ITEM 846 - 2336 SQ. YDS. x 1 1/4" / 27 = 9.02 CU. YDS.
ITEM 448 - 196.5 SQ. YDS. x (1 1/2" + 3 3/4" / 2) / 27 = 0.38 CU. YDS.
ITEM 407 - 3034 SQ. YDS. / 9 x 0.10 = 33.71 GALS.
ITEM 617 - 163' x 1'-6" x (0" + 3 1/2" / 2) / 27 = 1.32 CU. YDS.
ITEM 202 - 2336 SQ. YDS. / 9 = 260 SQ. YDS.
ITEM 448 - 12.50' x 3' x 1" / 27 = 0.12 CU. YDS.



ESTIMATED QUANTITIES

ITEM 846	ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20	181 CU. YDS.
ITEM 448	ASPHALT CONC. INTERMEDIATE COURSE, TYPE 1, AC-20	113 CU. YDS.
ITEM 407	TACK COAT, AS PER PLAN	520 GALS.
ITEM 617	COMPACTED AGGREGATE, TYPE "A"	27 CU. YDS.
ITEM 202	WEARING COURSE REMOVED	260 SQ. YDS.

QUANTITIES CARRIED TO GENERAL SUMMARY

U.S.R. 33 - MOULTON-FT. AMANDA ROAD INTERCHANGE
RAMP "C"

FHWA REGION	STATE	PROJECT	
5	OHIO		

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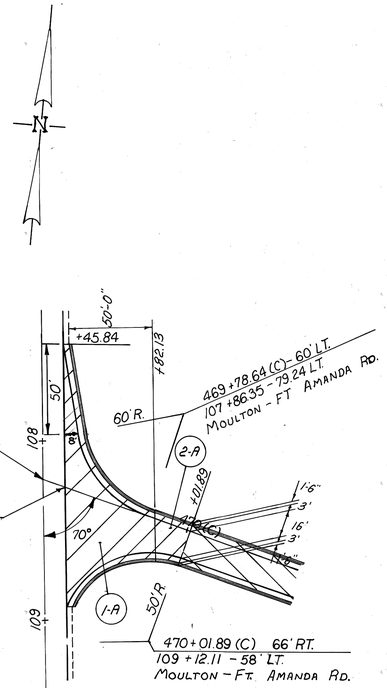
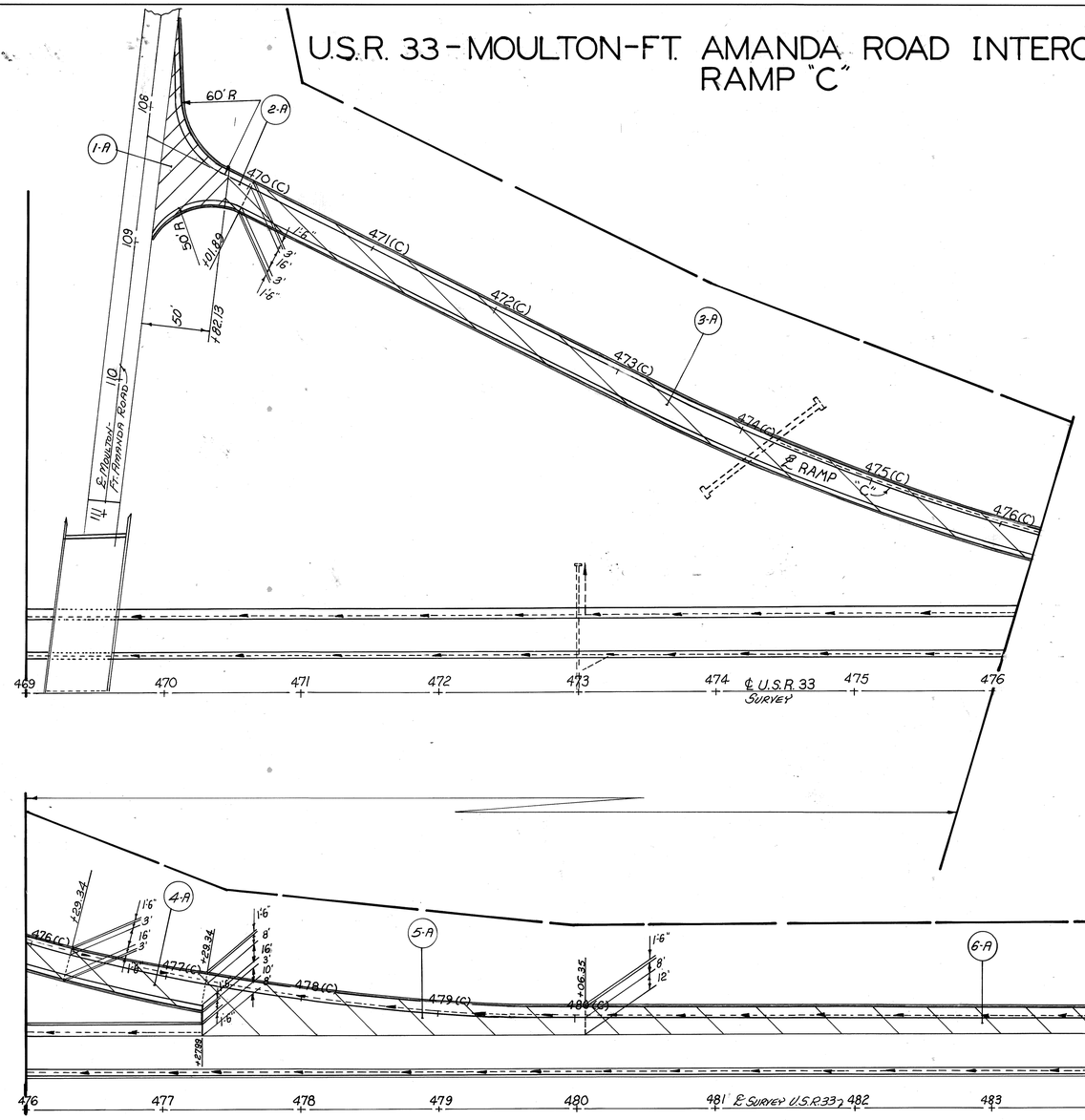
88

AUGLAIZE COUNTY
AUG - 33 - 6.63





~ CALCULATIONS ~

(1-A) STA. 469+28.92 TO STA. 469+82.13 - TRANSITION AREA
- ITEM 846 - 176" x 1¼" / 27 = 068 CU.YDS.
- ITEM 846 - 400° x (1¼"+1¾")/2) / 27 = 1.85 CU.YDS.
- ITEM 846 - 2496° x 1¼" / 27 = 9.63 CU.YDS.
- ITEM 448 - 138.50° x (½"+¾")/2) / 27 = 0.27 CU.YDS.
- ITEM 407 - 3072° / 9 x 0.10 = 34.13 GALS.
- ITEM 617 - 18'-0" x 1'-6" x (0+3½")/2) / 27 = 1.52 CU.YDS.
- ITEM 202 - 2496° / 9 = 277.33 SQ.YDS.
- ITEM 448 - 12'-6" x 3'-0" x 1" / 27 = 0.12 CU.YDS.

(2-A) STA. 469+82.13 TO STA. 470+01.89 - CALCULATED AREA = 832 SQ.FT.
- ITEM 846 - 832° x 1¼" / 27 = 3.21 CU.YDS.
- ITEM 448 - 709° x ¾" / 27 = 1.64 CU.YDS.
- ITEM 407 - 832° / 9 x 0.10 = 9.24 GALS.
- ITEM 617 - 41'-0" x 1'-6" x (0+3½")/2) / 27 = 0.33 CU.YDS.
- ITEM 448 - 41'-0" x 3'-0" x 1" / 27 = 0.38 CU.YDS.

(3-A) STA. 470+01.89 TO STA. 476+29.34 = 627.45 LIN.FT. - WIDTH 22'-0"
- ITEM 846 - 627.45' x 22' x 1¼" / 27 = 53.27 CU.YDS.
- ITEM 448 - 627.45' x 16' x ¾" / 27 = 23.24 CU.YDS.
- ITEM 407 - 627.45' x 22' / 9 x 0.10 = 153.38 GALS.
- ITEM 617 - 627.45 x 2 x 1'-6" x (0+3½"/2) / 27 = 10.17 CU.YDS.
- ITEM 448 - 627.45 x 2 x 3' x 1" / 27 = 11.61 CU.YDS.

(4-A) STA. 476+29.34 TO STA. 477+29.34 = 100.00 LIN.FT. AVE. WIDTH 24'-6"
- ITEM 846 - 100' x 24'-6" x 1¼" / 27 = 9.46 CU.YDS.
- ITEM 448 - 100' x 16'-0" x ¾" / 27 = 3.70 CU.YDS.
- ITEM 407 - 100' x 24'-6" / 9 x 0.10 = 27.22 GALS.
- ITEM 617 - 100' x 2 x 1'-6" x (0+3½"/2) / 27 = 1.62 CU.YDS.
- ITEM 448 - 100' x (8'+3/2) + 300° x 1" / 27 = 2.62 CU.YDS.

(5-A) STA. 477+29.34 TO STA. 480+06.35 - CALCULATED AREA = 8050 SQ.FT.
- ITEM 846 - 8050° x 1¼" / 27 = 31.07 CU.YDS.
- ITEM 448 - 5833.92° x ¾" / 27 = 13.50 CU.YDS.
- ITEM 407 - 8050° / 9 x 0.10 = 89.44 GALS.
- ITEM 617 - 277.01' x 1'-6" x (0+3½"/2) / 27 = 2.24 CU.YDS.
- ITEM 448 - 277.01' x 8'-0" x 1" / 27 = 6.84 CU.YDS.

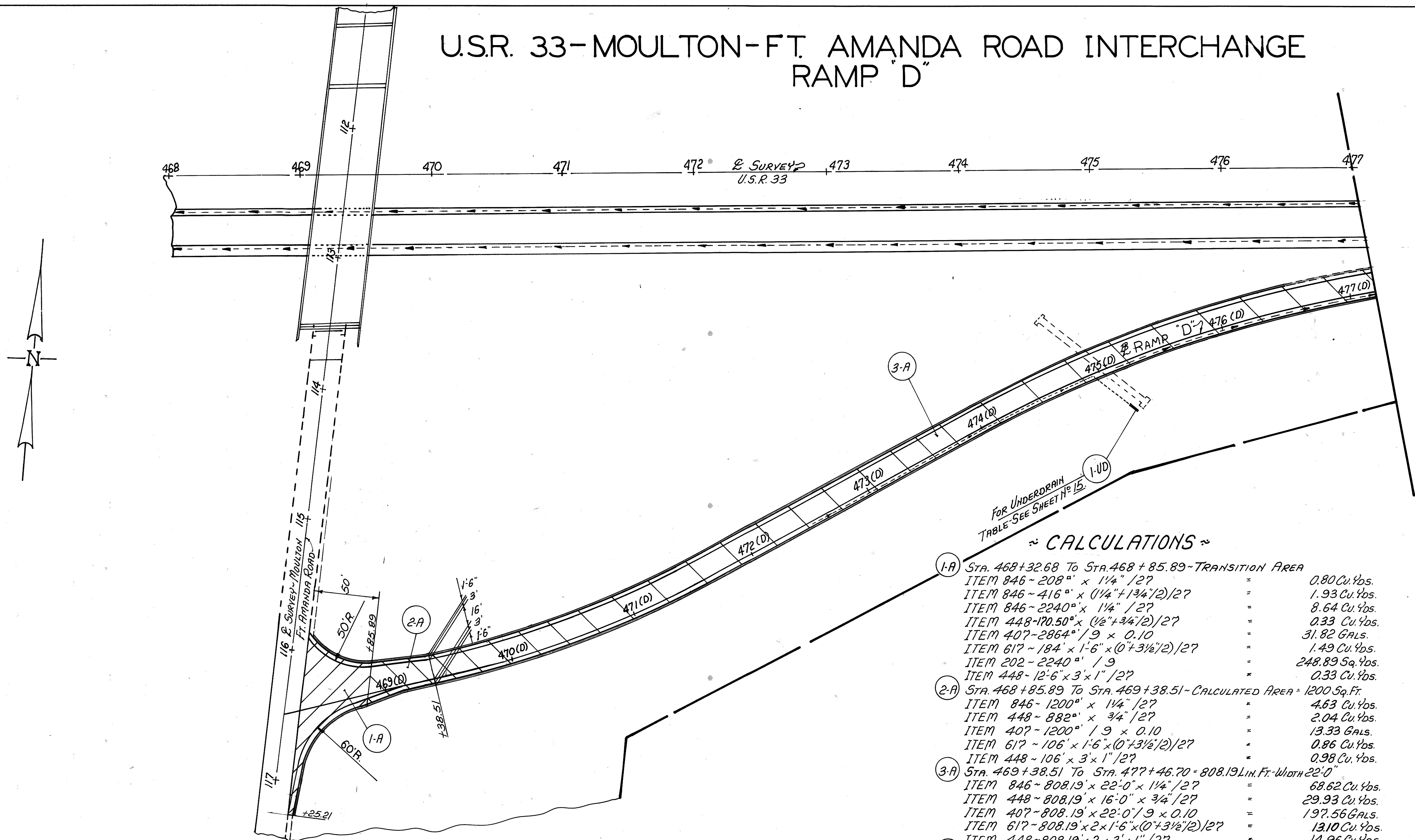
(6-A) STA. 480+06.35 TO STA. 484+28.38 = 422.03 LIN.FT. - WIDTH 22'-0"
STA. 484+28.38 TO STA. 485+28.38 = 100.00 LIN.FT. AVE. WIDTH 14'-0"
- ITEM 846 - 9840.60° x 1¼" / 27 = 37.98 CU.YDS.
- ITEM 448 - 5664.36° x ¾" / 27 = 13.11 CU.YDS.
- ITEM 407 - 9840.60° / 9 x 0.10 = 109.34 GALS.
- ITEM 617 - 522.03' x 1'-6" x (0+3½"/2) / 27 = 4.32 CU.YDS.
- ITEM 448 - 522.03' x 8'-0" x 1" / 27 = 12.88 CU.YDS.

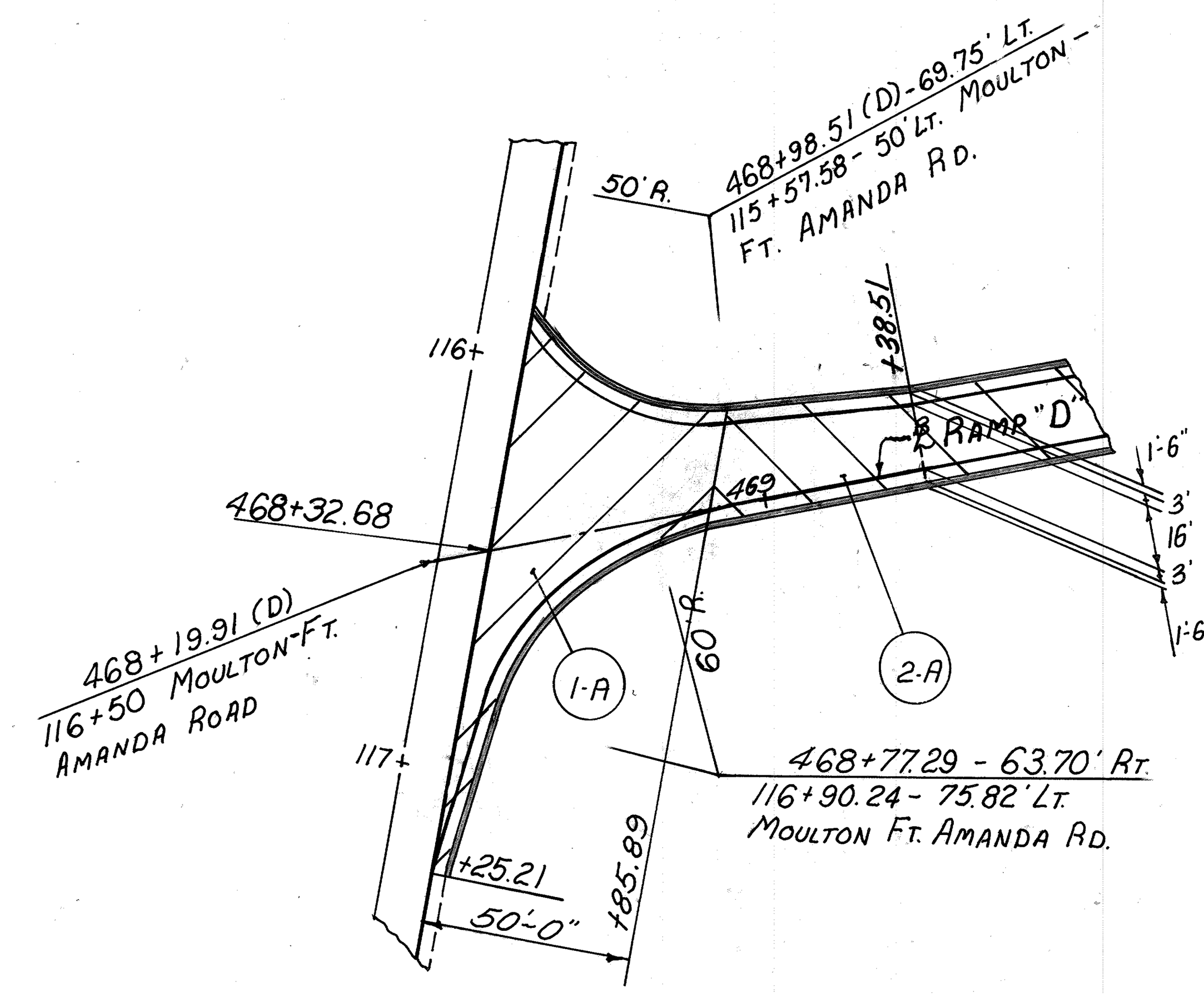
~ ESTIMATED QUANTITIES ~

ITEM 846	ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20	147 CU.YDS.
ITEM 448	ASPHALT CONC. INTERMEDIATE COURSE, TYPE 1, AC-20	90 CU.YDS.
ITEM 407	TACK COAT, AS PER PLAN	423 GALS.
ITEM 617	COMPACTED AGGREGATE, TYPE "A"	20 CU.YDS.
ITEM 202	WEARING COURSE REMOVED	277 SQ.YDS.

QUANTITIES CARRIED TO GENERAL SUMMARY

U.S.R. 33-MOULTON-FT. AMANDA ROAD INTERCHANGE
RAMP "D"





~ CALCULATIONS ~

(1-A) STA. 468+32.68 TO STA. 468+85.89 ~ TRANSITION AREA

ITEM 846 ~ 208□' × 1¼" / 27	=	0.80 CU. YDS.
ITEM 846 ~ 416□' × (1¼"+1¾"/2)/27	=	1.93 CU. YDS.
ITEM 846 ~ 2240□' × 1¼" / 27	=	8.64 CU. YDS.
ITEM 448 ~ 170.50□' × (½"+¾"/2)/27	=	0.33 CU. YDS.
ITEM 407 ~ 2864□' / 9 × 0.10	=	31.82 GALS.
ITEM 617 ~ 184' × 1'-6" × (0"+3½"/2)/27	=	1.49 CU. YDS.
ITEM 202 ~ 2240□' / 9	=	248.89 SQ. YDS.
ITEM 448 ~ 12'-6" × 3' × 1" / 27	=	0.33 CU. YDS.

(2-A) STA. 468+85.89 TO STA. 469+38.51 ~ CALCULATED AREA = 1200 SQ. FT.

ITEM 846 ~ 1200□' × 1¼" / 27	=	4.63 CU. YDS.
ITEM 448 ~ 882□' × ¾" / 27	=	2.04 CU. YDS.
ITEM 407 ~ 1200□' / 9 × 0.10	=	13.33 GALS.
ITEM 617 ~ 106' × 1'-6" × (0"+3½"/2)/27	=	0.86 CU. YDS.
ITEM 448 ~ 106' × 3' × 1" / 27	=	0.98 CU. YDS.

(3-A) STA. 469+38.51 TO STA. 477+46.70 = 808.19 LIN. FT. - WIDTH 22'-0"

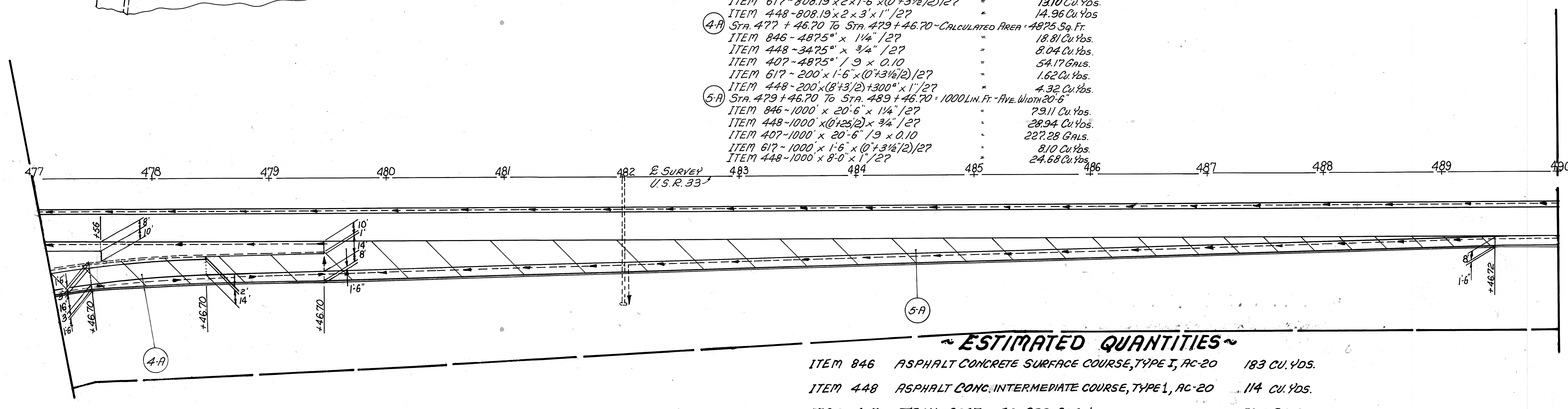
ITEM 846 ~ 808.19' × 22'-0" × 1¼" / 27	=	68.62 CU. YDS.
ITEM 448 ~ 808.19' × 16'-0" × ¾" / 27	=	29.93 CU. YDS.
ITEM 407 ~ 808.19' × 22'-0" / 9 × 0.10	=	197.56 GALS.
ITEM 617 ~ 808.19' × 2 × 1'-6" × (0"+3½"/2)/27	=	13.10 CU. YDS.
ITEM 448 ~ 808.19' × 2 × 3' × 1" / 27	=	14.96 CU. YDS

(4-A) STA. 477+46.70 TO STA. 479+46.70 ~ CALCULATED AREA = 4875 SQ. FT.

ITEM 846 ~ 4875□' × 1¼" / 27	=	18.81 CU. YDS.
ITEM 448 ~ 3475□' × ¾" / 27	=	8.04 CU. YDS.
ITEM 407 ~ 4875□' / 9 × 0.10	=	54.17 GALS.
ITEM 617 ~ 200' × 1'-6" × (0"+3½"/2)/27	=	1.62 CU. YDS.
ITEM 448 ~ 200' × (8'+3'/2) + 300□' × 1" / 27	=	4.32 CU. YDS.

(5-A) STA. 479+46.70 TO STA. 489+46.70 = 1000 LIN. FT. ~ AVE. WIDTH 20'-6"

ITEM 846 ~ 1000' × 20'-6" × 1¼" / 27	=	79.11 CU. YDS.
ITEM 448 ~ 1000' × (0'+25/2) × ¾" / 27	=	28.94 CU. YDS.
ITEM 407 ~ 1000' × 20'-6" / 9 × 0.10	=	227.28 GALS.
ITEM 617 ~ 1000' × 1'-6" × (0"+3½"/2)/27	=	8.10 CU. YDS.
ITEM 448 ~ 1000' × 8'-0" × 1" / 27	=	24.68 CU. YDS.



~ ESTIMATED QUANTITIES ~

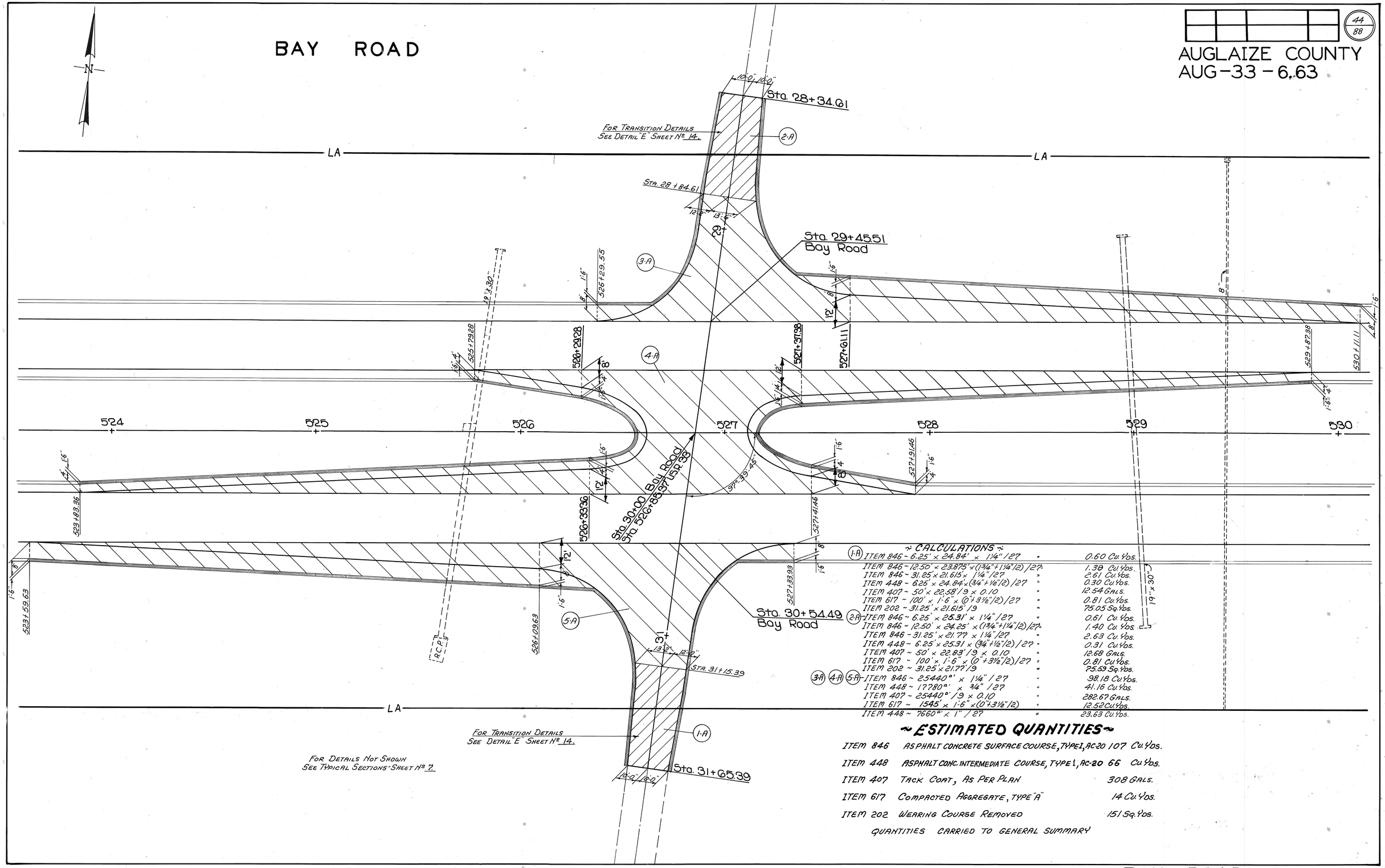
ITEM 846	ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20	183 CU. YDS.
ITEM 448	ASPHALT CONC. INTERMEDIATE COURSE, TYPE 1, AC-20	114 CU. YDS.
ITEM 407	TACK COAT, AS PER PLAN	525 GALS.
ITEM 617	COMPACTED AGGREGATE, TYPE "A"	25 CU. YDS.
ITEM 202	WEARING COURSE REMOVED	249 SQ. YDS.

QUANTITIES CARRIED TO GENERAL SUMMARY

BAY ROAD

AUGLAIZE COUNTY
AUG-33-6.63

44
88



~ CALCULATIONS ~

1-A	ITEM 846 ~ 6.25' x 24.84' x 1¼" / 27	= 0.60 Cu Yds.
	ITEM 846 ~ 12.50' x 23.875' x ((¾"+1¼")/2) / 27	= 1.38 Cu Yds.
	ITEM 846 ~ 31.25' x 21.615' x 1¼" / 27	= 2.61 Cu Yds.
	ITEM 448 ~ 6.25' x 24.84' x (¾"+1½")/2) / 27	= 0.30 Cu Yds.
	ITEM 407 ~ 50' x 22.58' / 9 x 0.10	= 12.54 Gals.
	ITEM 617 ~ 100' x 1'-6" x (0"+3½")/2) / 27	= 0.81 Cu Yds.
	ITEM 202 ~ 31.25' x 21.615' / 9	= 75.05 Sq. Yds.
2-A	ITEM 846 ~ 6.25' x 25.31' x 1¼" / 27	= 0.61 Cu Yds.
	ITEM 846 ~ 12.50' x 24.25' x ((¾"+1¼")/2) / 27	= 1.40 Cu Yds.
	ITEM 846 ~ 31.25' x 21.77' x 1¼" / 27	= 2.63 Cu Yds.
	ITEM 448 ~ 6.25' x 25.31' x (¾"+1½")/2) / 27	= 0.31 Cu Yds.
	ITEM 407 ~ 50' x 22.83' / 9 x 0.10	= 12.68 Gals.
	ITEM 617 ~ 100' x 1'-6" x (0"+3½")/2) / 27	= 0.81 Cu Yds.
	ITEM 202 ~ 31.25' x 21.77' / 9	= 75.59 Sq. Yds.
3-A 4-A 5-A	ITEM 846 ~ 25440 ft² x 1¼" / 27	= 98.18 Cu Yds.
	ITEM 448 ~ 17780 ft² x ¾" / 27	= 41.16 Cu Yds.
	ITEM 407 ~ 25440 ft² / 9 x 0.10	= 282.67 Gals.
	ITEM 617 ~ 1545' x 1'-6" x (0"+3½")/2)	= 12.52 Cu Yds.
	ITEM 448 ~ 7660 ft² x 1" / 27	= 23.63 Cu Yds.

~ ESTIMATED QUANTITIES ~

ITEM 846	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20	107 Cu Yds.
ITEM 448	ASPHALT CONC. INTERMEDIATE COURSE, TYPE 1, AC-20	66 Cu Yds.
ITEM 407	TACK COAT, AS PER PLAN	308 GALS.
ITEM 617	COMPACTED AGGREGATE, TYPE "A"	14 Cu Yds.
ITEM 202	WEARING COURSE REMOVED	151 Sq. Yds.

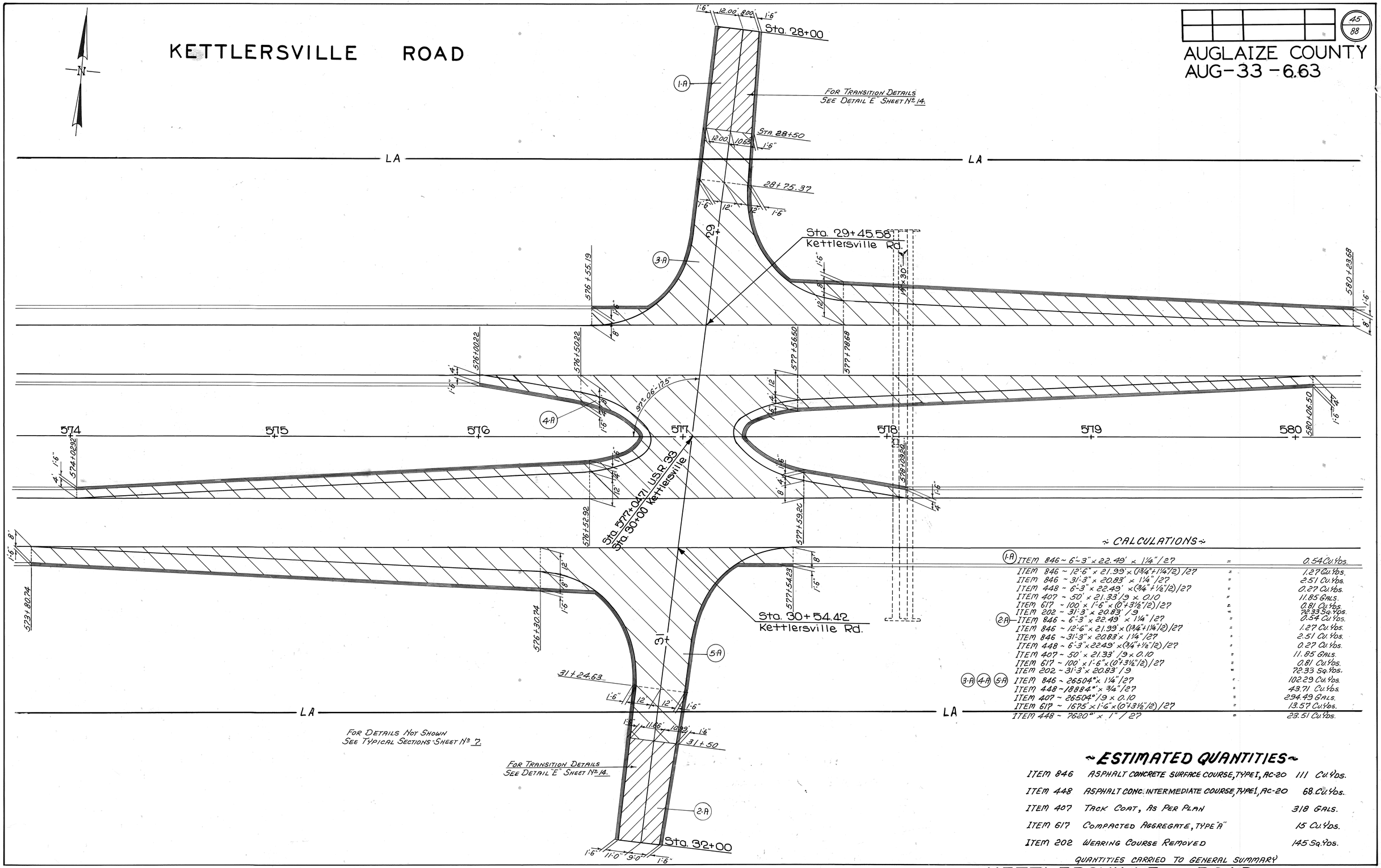
QUANTITIES CARRIED TO GENERAL SUMMARY

BAY ROAD

KETTLERSVILLE ROAD

45/88

AUGLAIZE COUNTY
AUG-33-6.63



~ CALCULATIONS ~

1-A	ITEM 846 ~ 6'-3" x 22.49' x 1¼" / 27	=	0.54 Cu Yds.
	ITEM 846 ~ 12'-6" x 21.99' x (¾"+1¼"/2) / 27	=	1.27 Cu Yds.
	ITEM 846 ~ 31'-3" x 20.83' x 1¼" / 27	=	2.51 Cu Yds.
	ITEM 448 ~ 6'-3" x 22.49' x (¾"+1½"/2) / 27	=	0.27 Cu Yds.
	ITEM 407 ~ 50' x 21.33' / 9 x 0.10	=	11.85 GALS.
	ITEM 617 ~ 100' x 1'-6" x (0'+3½"/2) / 27	=	0.81 Cu Yds.
	ITEM 202 ~ 31'-3" x 20.83' / 9	=	72.33 Sq. Yds.
2-A	ITEM 846 ~ 6'-3" x 22.49' x 1¼" / 27	=	0.54 Cu Yds.
	ITEM 846 ~ 12'-6" x 21.99' x (¾"+1¼"/2) / 27	=	1.27 Cu Yds.
	ITEM 846 ~ 31'-3" x 20.83' x 1¼" / 27	=	2.51 Cu Yds.
	ITEM 448 ~ 6'-3" x 22.49' x (¾"+1½"/2) / 27	=	0.27 Cu Yds.
	ITEM 407 ~ 50' x 21.33' / 9 x 0.10	=	11.85 GALS.
	ITEM 617 ~ 100' x 1'-6" x (0'+3½"/2) / 27	=	0.81 Cu Yds.
	ITEM 202 ~ 31'-3" x 20.83' / 9	=	72.33 Sq. Yds.
3-A 4-A 5-A	ITEM 846 ~ 26504" x 1¼" / 27	=	102.29 Cu Yds.
	ITEM 448 ~ 18884" x ¾" / 27	=	43.71 Cu Yds.
	ITEM 407 ~ 26504" / 9 x 0.10	=	294.49 GALS.
	ITEM 617 ~ 1625" x 1'-6" x (0'+3½"/2) / 27	=	13.57 Cu Yds.
	ITEM 448 ~ 7620" x 1" / 27	=	23.51 Cu Yds.

~ ESTIMATED QUANTITIES ~

ITEM 846	ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20	111 Cu Yds.
ITEM 448	ASPHALT CONC. INTERMEDIATE COURSE, TYPE I, AC-20	68 Cu Yds.
ITEM 407	TACK COAT, AS PER PLAN	318 GALS.
ITEM 617	COMPACTED AGGREGATE, TYPE "A"	15 Cu Yds.
ITEM 202	WEARING COURSE REMOVED	145 Sq. Yds.

QUANTITIES CARRIED TO GENERAL SUMMARY

KETTLERSVILLE ROAD

U.S.R. 33 & EXIST CO. RD. 33A INTERCHANGE

AUGLAIZE COUNTY
AUG- 33 -6.63

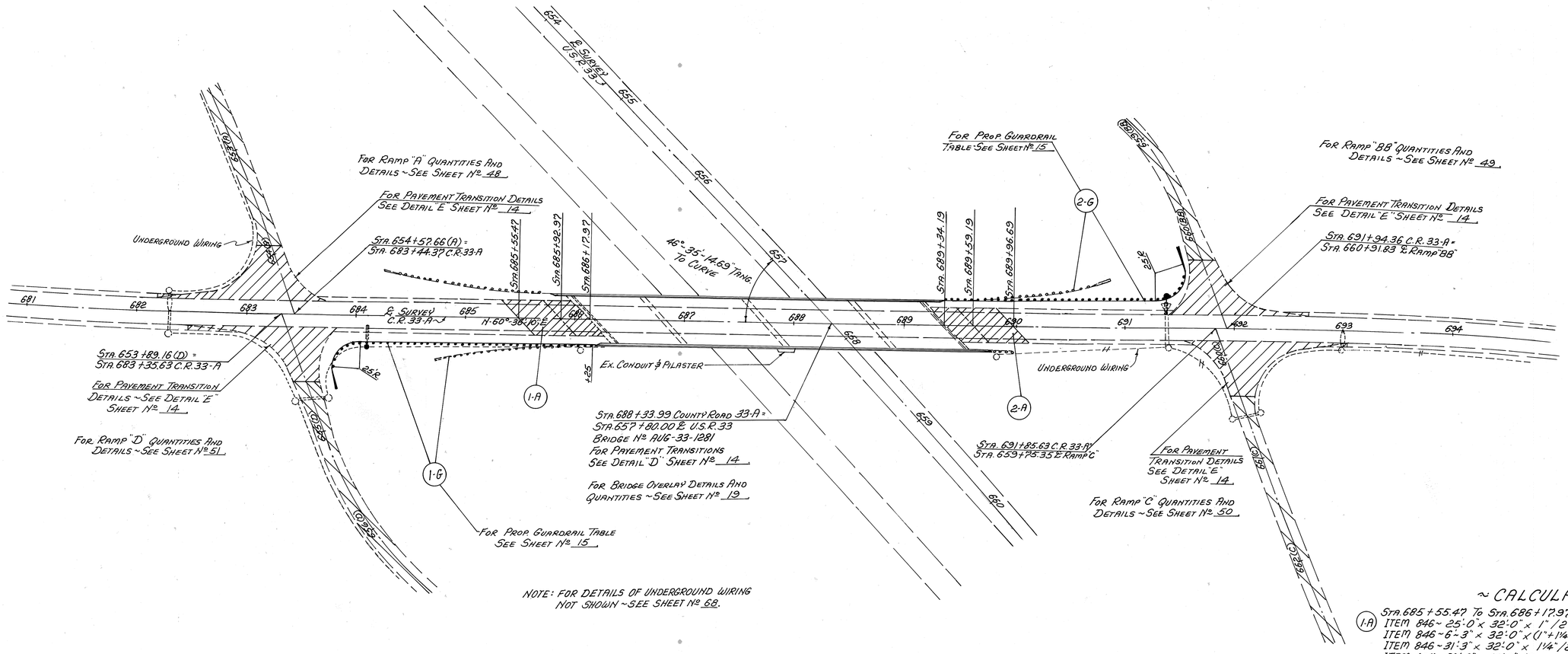
U.S.R.-33 & C.R.-33A INTERCHANGE

COUNTY ROAD 33-A

FHWA REGION	STATE	PROJECT	
5	OHIO		

47
88

AUGLAIZE COUNTY
AUG - 33 - 6.63



NOTE: FOR DETAILS OF UNDERGROUND WIRING NOT SHOWN ~ SEE SHEET No. 68.

~ CALCULATIONS ~

(1-A) Sta. 685+55.47 To Sta. 686+17.97 ~ Transition Area

Item 846 ~ 25'-0" x 32'-0" x 1" / 27	=	2.47 Cu. Yds.
Item 846 ~ 6'-3" x 32'-0" x (1" + 1¼") / 2) / 27	=	0.69 Cu. Yds.
Item 846 ~ 31'-3" x 32'-0" x 1¼" / 27	=	3.86 Cu. Yds.
Item 407 ~ 62'-6" x 32'-0" / 9 x 0.10	=	22.22 Gals.
Item 617 ~ 62'-6" x 2 x 1'-6" x (0" + 3½") / 2) / 27	=	1.01 Cu. Yds.
Item 202 ~ 31'-3" x 32'-0" / 9	=	111.11 Sq. Yds.

(2-A) Sta. 689+34.19 To Sta. 689+96.69 ~ Transition Area

Item 846 ~ 25'-0" x 32'-0" x 1" / 27	=	2.47 Cu. Yds.
Item 846 ~ 6'-3" x 32'-0" x (1" + 1¼") / 2) / 27	=	0.69 Cu. Yds.
Item 846 ~ 31'-3" x 32'-0" x 1¼" / 27	=	3.86 Cu. Yds.
Item 407 ~ 62'-6" x 32'-0" / 9 x 0.10	=	22.22 Gals.
Item 617 ~ 62'-6" x 2 x 1'-6" x (0" + 3½") / 2)	=	1.01 Cu. Yds.
Item 202 ~ 31'-3" x 32'-0" / 9	=	111.11 Sq. Yds.

~ ESTIMATED QUANTITIES ~

Item 846	Asphalt Concrete Surface Course, Type I, AC-20	14 Cu. Yds.
Item 407	Tack Coat, As Per Plan	44 Gals.
Item 617	Compacted Aggregate, Type 'A'	2 Cu. Yd.
Item 202	Wearing Course Removed	222 Sq. Yds.

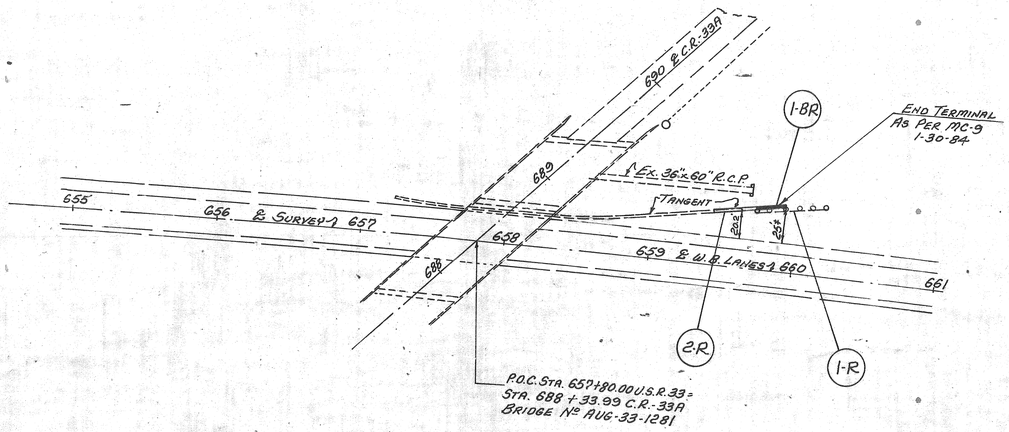
Quantities Carried To General Summary

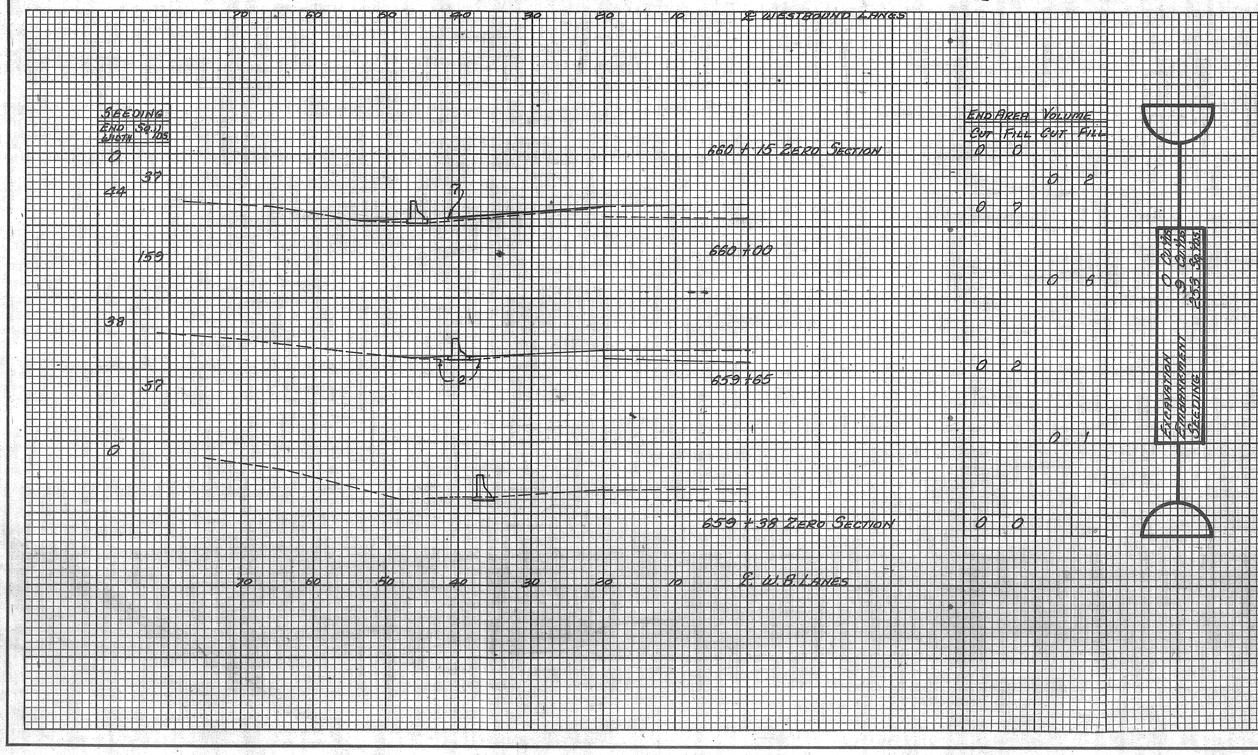
COUNTY ROAD 33-A

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

AUGLAIZE COUNTY
AUG-33-6.63

CHANGE ORDER NO.___





~ ESTIMATED QUANTITIES ~

REFERENCE INDICATOR	STATION	202 GUARD RAIL REMOVED LIN. FT.	202 CONCRETE BARRIER END TERMINAL REMOVED LIN. FT.	203 EMBANKMENT CU. YDS.	622 CONCRETE BARRIER TYPE D LIN. FT.	659 SEEDING AND MULCHING SQ. YDS.	659 COMMERCIAL FERTILIZER TONS
FROM TABLE	659+38 660+15			9		253	0.02
1-BR	659+61 660+11				50		
1-R	660+00 660+50	50					
2-R	659+41 659+61		20				
NET ADDITIONS		50	20	9	50	253	0.02
NET DELETIONS		~	~	~	~	~	~

CHANGE ORDER NO.___

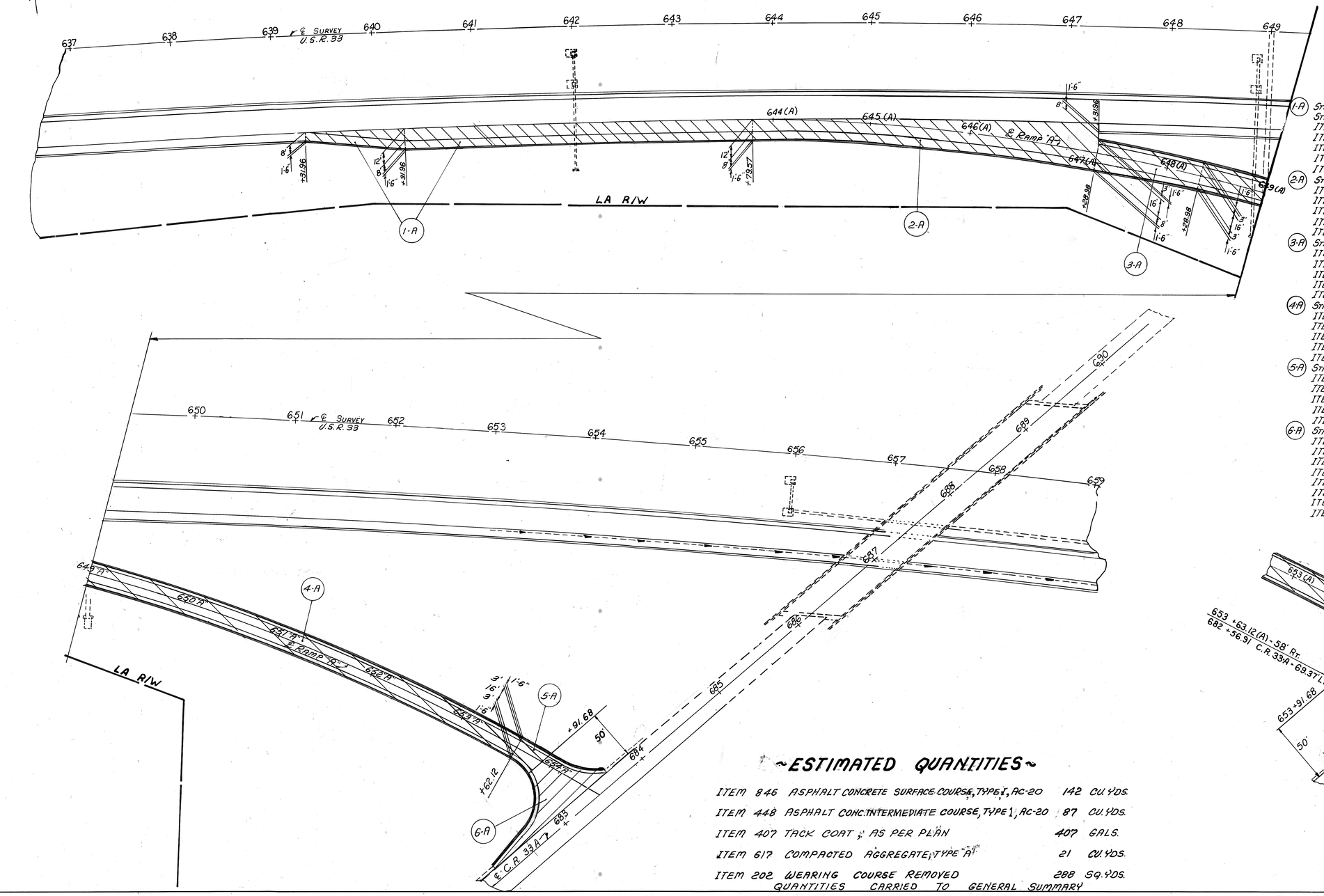
U.S.R. 33 – COUNTY ROAD 33-A INTERCHANGE

RAMP "A"

FHWA REGION	STATE	PROJECT	
5	OHIO		

48/88

AUGLAIZE COUNTY
AUG – 33 – 6.03



~ CALCULATIONS ~

(1-A) Sta. 639+31.96 To Sta. 640+31.96 = 100 Lin. Ft. - Ave. Width 14'-0"
Sta. 640+31.96 To Sta. 643+79.57 = 347.61 Lin. Ft. - Width 20'-0"
ITEM 846 - 100 x (20'+8'/2) + 347.61' x 20' x 1¼"/27 = 32.23 Cu Yds.
ITEM 448 - 100 (0'+12'/2) + 347.61' x 12' x ¾"/27 = 11.04 Cu Yds.
ITEM 407 - 100 x (20'+8'/2) + 347.61' x 20'/9 x 0.10 = 92.80 Gals.
ITEM 617 - 100 + 347.61' x 1'-6" x (0'+3½"/2)/27 = 3.63 Cu Yds.
ITEM 448 - 100 + 347.61' x 8' x 1"/27 = 11.05 Cu Yds.

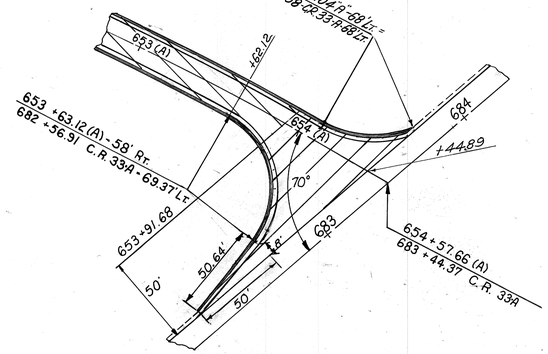
(2-A) Sta. 643+79.57 To Sta. 647+28.98 - Calculated Area = 10100 Sq. Ft.
ITEM 846 - 10100 ft² x 1¼"/27 = 38.98 Cu Yds.
ITEM 448 - 5704.72 ft² x ¾"/27 = 13.21 Cu Yds.
ITEM 407 - 10100 ft²/9 x 0.10 = 112.22 Gals.
ITEM 617 - 549.41' x 1'-6" x (0'+3½"/2)/27 = 4.45 Cu Yds.
ITEM 408 - 549.41' x 8'-0" x 1"/27 = 13.56 Cu Yds.

(3-A) Sta. 647+28.98 To Sta. 648+28.98 = 100 Lin. Ft.
ITEM 846 - 100' x (27'+22'/2) x 1¼"/27 = 9.46 Cu Yds.
ITEM 448 - 100' x 16' x ¾"/27 = 3.70 Cu Yds.
ITEM 407 - 100' x (27'+22'/2)/9 x 0.10 = 27.22 Gals.
ITEM 617 - 100' x 2 x 1'-6" x (0'+3½"/2)/27 = 1.62 Cu Yds.
ITEM 448 - 100' x (8'+3'/2) + 300 in² x 1"/27 = 2.62 Cu Yds.

(4-A) Sta. 648+28.98 To Sta. 653+62.12 = 533.14 Lin. Ft. Width 22'-0"
ITEM 846 - 533.14' x 22'-0" x 1¼"/27 = 45.27 Cu Yds.
ITEM 448 - 533.14' x 16'-0" x ¾"/27 = 19.75 Cu Yds.
ITEM 407 - 533.14' x 22'-0"/9 x 0.10 = 130.32 Gals.
ITEM 617 - 533.14' x 2 x 1'-6" x (0'+3½"/2)/27 = 8.84 Cu Yds.
ITEM 448 - 533.14' x 2 x 3" x 1"/27 = 9.87 Cu Yds.

(5-A) Sta. 653+62.12 To Sta. 653+91.68 - Calculated Area = 688 Sq. Ft.
ITEM 846 - 688 in² x 1¼"/27 = 2.66 Cu Yds.
ITEM 448 - 484 in² x ¾"/27 = 1.12 Cu Yds.
ITEM 407 - 688 in²/9 x 0.10 = 7.64 Gals.
ITEM 617 - 68' x 1'-6" x (0'+3½"/2)/27 = 0.55 Cu Yds.
ITEM 448 - 68' x 3" x 1"/27 = 0.63 Cu Yds.

(6-A) Sta. 653+91.68 To Sta. 654+44.89 = Transition Area
ITEM 846 - 240 in² x 1¼"/27 = 0.93 Cu Yds.
ITEM 846 - 480 in² x (1¼"+1¾"/2)/27 = 2.22 Cu Yds.
ITEM 846 - 2590 in² x 1¼"/27 = 10.00 Cu Yds.
ITEM 448 - 20250 in² x (½"+¾"/2)/27 = 0.39 Cu Yds.
ITEM 407 - 3910 in²/9 x 0.10 = 36.78 Gals.
ITEM 617 - 229' x 1'-6" x (0'+3½"/2)/27 = 1.86 Cu Yds.
ITEM 202 - 2590 in²/9 = 288 Sq. Yds.
ITEM 448 - 12'-6" x 3" x 1"/27 = 0.12 Cu Yds.



~ ESTIMATED QUANTITIES ~

ITEM 846	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, AC-20	142	CU. YDS.
ITEM 448	ASPHALT CONC. INTERMEDIATE COURSE, TYPE 1, AC-20	87	CU. YDS.
ITEM 407	TACK COAT, AS PER PLAN	407	GALS.
ITEM 617	COMPACTED AGGREGATE, TYPE "A"	21	CU. YDS.
ITEM 202	WEARING COURSE REMOVED	288	SQ. YDS.

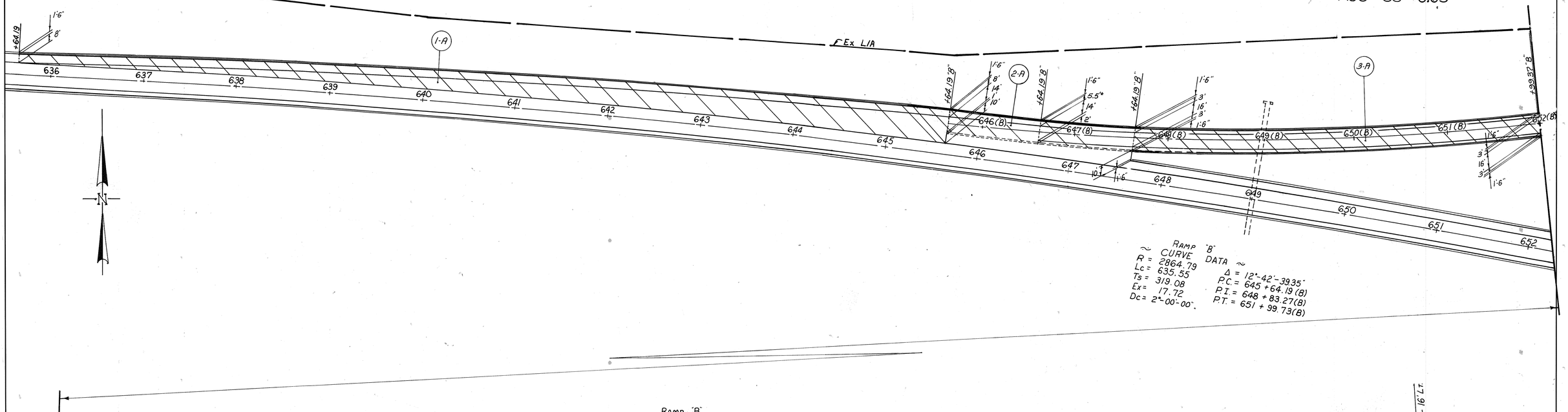
QUANTITIES CARRIED TO GENERAL SUMMARY

U.S.R. 33 COUNTY ROAD 33A INTERCHANGE
RAMP "B" RAMP "BB"

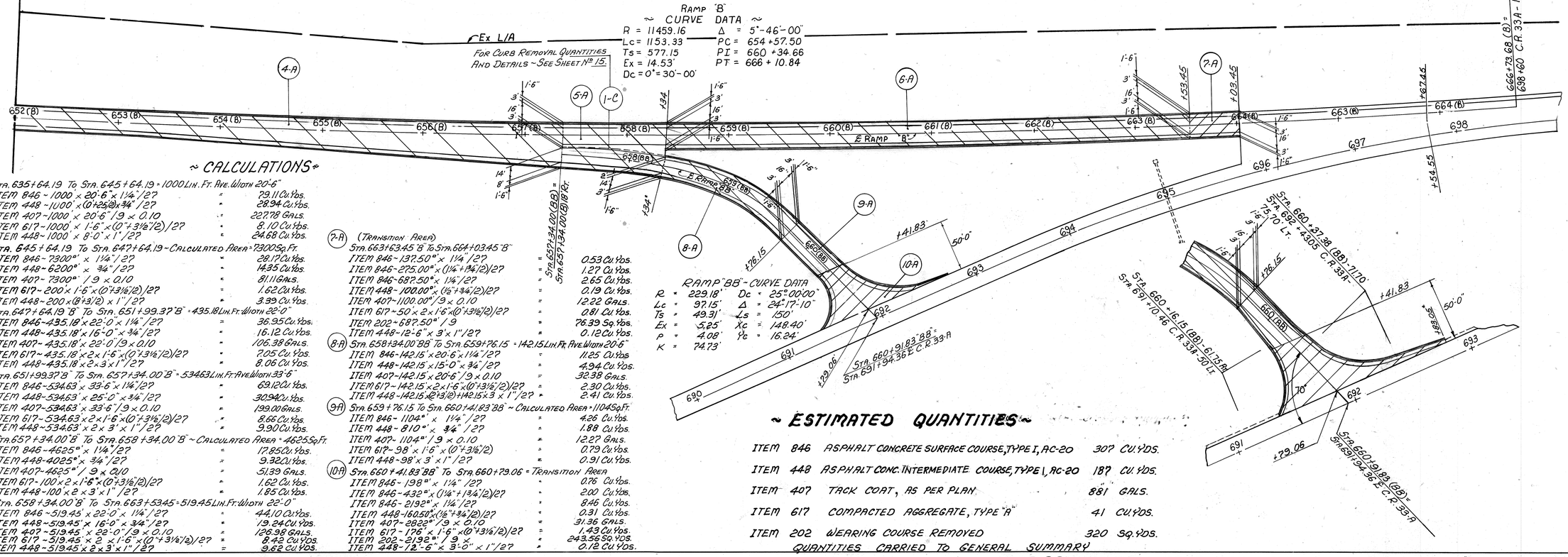
FHWA REGION	STATE	PROJECT	
5	OHIO		

49
88

AUGLAIZE COUNTY
AUG-33-6.63



Ramp "B" ~ Curve Data ~
R = 2864.79
Lc = 635.55
Ts = 319.08
Ex = 17.72
Dc = 2°-00'-00"
Δ = 12°-42'-39.35"
P.C. = 645 + 64.19 (B)
P.I. = 648 + 83.27 (B)
P.T. = 651 + 99.73 (B)



Ramp "BB" - Curve Data
R = 229.18'
Lc = 97.15'
Ts = 49.31'
Ex = 5.25'
P = 4.08'
K = 74.73
Dc = 25°00'00"
Δ = 24°17'-10"
Ls = 150'
Xc = 148.40'
Yc = 16.24'

~ CALCULATIONS ~

(1-A) Sta. 635+64.19 To Sta. 645+64.19 = 1000 Lin. Ft. Ave. Width 20'-6"
- Item 846 - 1000 x 20.6' x 1¼" / 27 = 29.11 Cu. Yds.
- Item 448 - 1000' x (0'+25/2) x ¾" / 27 = 28.94 Cu. Yds.
- Item 407 - 1000' x 20.6' / 9 x 0.10 = 227.78 Gals.
- Item 617 - 1000' x 1'-6" x (0'+3½"/2) / 27 = 8.10 Cu. Yds.
- Item 448 - 1000' x 8'-0" x 1" / 27 = 24.68 Cu. Yds.

(2-A) Sta. 645+64.19 To Sta. 647+64.19 - Calculated Area = 730.0 Sq. Ft.
- Item 846 - 730.0" x 1¼" / 27 = 28.17 Cu. Yds.
- Item 448 - 6200" x ¾" / 27 = 14.35 Cu. Yds.
- Item 407 - 7300" / 9 x 0.10 = 81.11 Gals.
- Item 617 - 200 x 1'-6" x (0'+3½"/2) / 27 = 1.62 Cu. Yds.
- Item 448 - 200 x (8'+3/2) x 1" / 27 = 3.39 Cu. Yds.

(3-A) Sta. 647+64.19 "B" To Sta. 651+99.37 "B" = 435.18 Lin. Ft. Width 22'-0"
- Item 846 - 435.18' x 22'-0" x 1¼" / 27 = 36.95 Cu. Yds.
- Item 448 - 435.18' x 16'-0" x ¾" / 27 = 16.12 Cu. Yds.
- Item 407 - 435.18' x 22'-0" / 9 x 0.10 = 106.38 Gals.
- Item 617 - 435.18' x 2 x 1'-6" x (0'+3½"/2) / 27 = 7.05 Cu. Yds.
- Item 448 - 435.18' x 2 x 3" x 1" / 27 = 8.06 Cu. Yds.

(4-A) Sta. 651+99.37 "B" To Sta. 657+34.00 "B" = 534.63 Lin. Ft. Ave. Width 33'-6"
- Item 846 - 534.63' x 33'-6" x 1¼" / 27 = 69.12 Cu. Yds.
- Item 448 - 534.63' x 25'-0" x ¾" / 27 = 30.94 Cu. Yds.
- Item 407 - 534.63' x 33'-6" / 9 x 0.10 = 199.00 Gals.
- Item 617 - 534.63' x 2 x 1'-6" x (0'+3½"/2) / 27 = 8.66 Cu. Yds.
- Item 448 - 534.63' x 2 x 3" x 1" / 27 = 9.90 Cu. Yds.

(5-A) Sta. 657+34.00 "B" To Sta. 658+34.00 "B" - Calculated Area = 462.5 Sq. Ft.
- Item 846 - 4625" x 1¼" / 27 = 17.85 Cu. Yds.
- Item 448 - 4025" x ¾" / 27 = 9.32 Cu. Yds.
- Item 407 - 4625" / 9 x 0.10 = 51.39 Gals.
- Item 617 - 100 x 2 x 1'-6" x (0'+3½"/2) / 27 = 1.62 Cu. Yds.
- Item 448 - 100' x 2 x 3' x 1" / 27 = 1.85 Cu. Yds.

(6-A) Sta. 658+34.00 "B" To Sta. 663+53.45 = 519.45 Lin. Ft. Width 22'-0"
- Item 846 - 519.45' x 22'-0" x 1¼" / 27 = 44.10 Cu. Yds.
- Item 448 - 519.45' x 16'-0" x ¾" / 27 = 19.24 Cu. Yds.
- Item 407 - 519.45' x 22'-0" / 9 x 0.10 = 126.98 Gals.
- Item 617 - 519.45' x 2 x 1'-6" x (0'+3½"/2) / 27 = 8.42 Cu. Yds.
- Item 448 - 519.45' x 2 x 3' x 1" / 27 = 9.62 Cu. Yds.

(7-A) (Transition Area)
Sta. 663+63.45 "B" To Sta. 664+03.45 "B"
- Item 846 - 137.50" x 1¼" / 27 = 0.53 Cu. Yds.
- Item 846 - 275.00" x (1¼"+¾"/2) / 27 = 1.27 Cu. Yds.
- Item 846 - 687.50" x 1¼" / 27 = 2.65 Cu. Yds.
- Item 448 - 100.00" x (½"+¾"/2) / 27 = 0.19 Cu. Yds.
- Item 407 - 1100.00" / 9 x 0.10 = 12.22 Gals.
- Item 617 - 50 x 2 x 1'-6" x (0'+3½"/2) / 27 = 0.81 Cu. Yds.
- Item 202 - 687.50" / 9 = 76.39 Sq. Yds.
- Item 448 - 12'-6" x 3' x 1" / 27 = 0.12 Cu. Yds.

(8-A) Sta. 658+34.00 BB To Sta. 659+76.15 = 142.15 Lin. Ft. Ave. Width 20'-6"
- Item 846 - 142.15' x 20.6' x 1¼" / 27 = 11.25 Cu. Yds.
- Item 448 - 142.15' x 15'-0" x ¾" / 27 = 4.94 Cu. Yds.
- Item 407 - 142.15' x 20.6' / 9 x 0.10 = 32.38 Gals.
- Item 617 - 142.15' x 2 x 1'-6" x (0'+3½"/2) / 27 = 2.30 Cu. Yds.
- Item 448 - 142.15' x (2'+3/2) + 142.15' x 3' x 1" / 27 = 2.41 Cu. Yds.

(9-A) Sta. 659+76.15 To Sta. 660+41.83 BB - Calculated Area = 1104 Sq. Ft.
- Item 846 - 1104" x 1¼" / 27 = 4.26 Cu. Yds.
- Item 448 - 810" x ¾" / 27 = 1.88 Cu. Yds.
- Item 407 - 1104" / 9 x 0.10 = 12.27 Gals.
- Item 617 - 98' x 1'-6" x (0'+3½"/2) = 0.79 Cu. Yds.
- Item 448 - 98' x 3' x 1" / 27 = 0.91 Cu. Yds.

(10-A) Sta. 660+41.83 BB To Sta. 660+79.06 = Transition Area
- Item 846 - 198" x 1¼" / 27 = 0.76 Cu. Yds.
- Item 846 - 432" x (1¼"+¾"/2) / 27 = 2.00 Cu. Yds.
- Item 846 - 2192" x 1¼" / 27 = 8.46 Cu. Yds.
- Item 448 - 160.50" x (½"+¾"/2) / 27 = 0.31 Cu. Yds.
- Item 407 - 2828" / 9 x 0.10 = 31.36 Gals.
- Item 617 - 176' x 1'-6" x (0'+3½"/2) / 27 = 1.43 Cu. Yds.
- Item 202 - 2192" / 9 = 243.56 Sq. Yds.
- Item 448 - 12'-6" x 3'-0" x 1" / 27 = 0.12 Cu. Yds.

~ ESTIMATED QUANTITIES ~

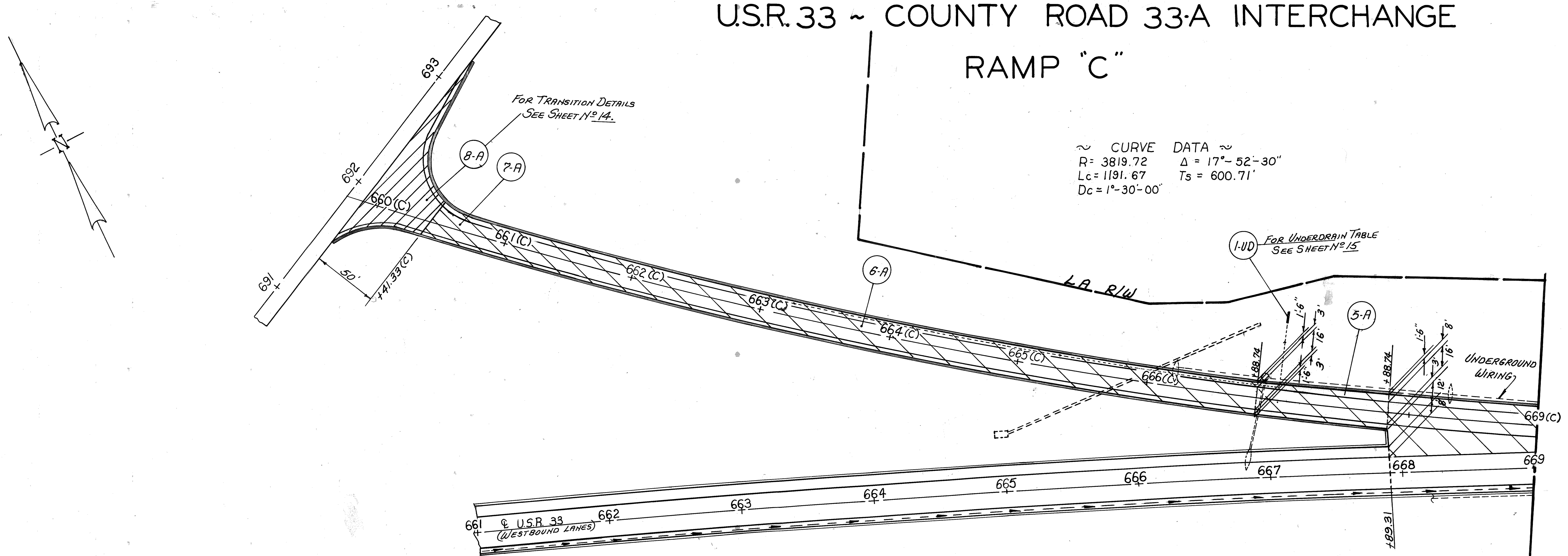
ITEM 846	ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20	307	CU. YDS.
ITEM 448	ASPHALT CONC. INTERMEDIATE COURSE, TYPE I, AC-20	187	CU. YDS.
ITEM 407	TACK COAT, AS PER PLAN	881	GALS.
ITEM 617	COMPACTED AGGREGATE, TYPE "A"	41	CU. YDS.
ITEM 202	WEARING COURSE REMOVED	320	SQ. YDS.

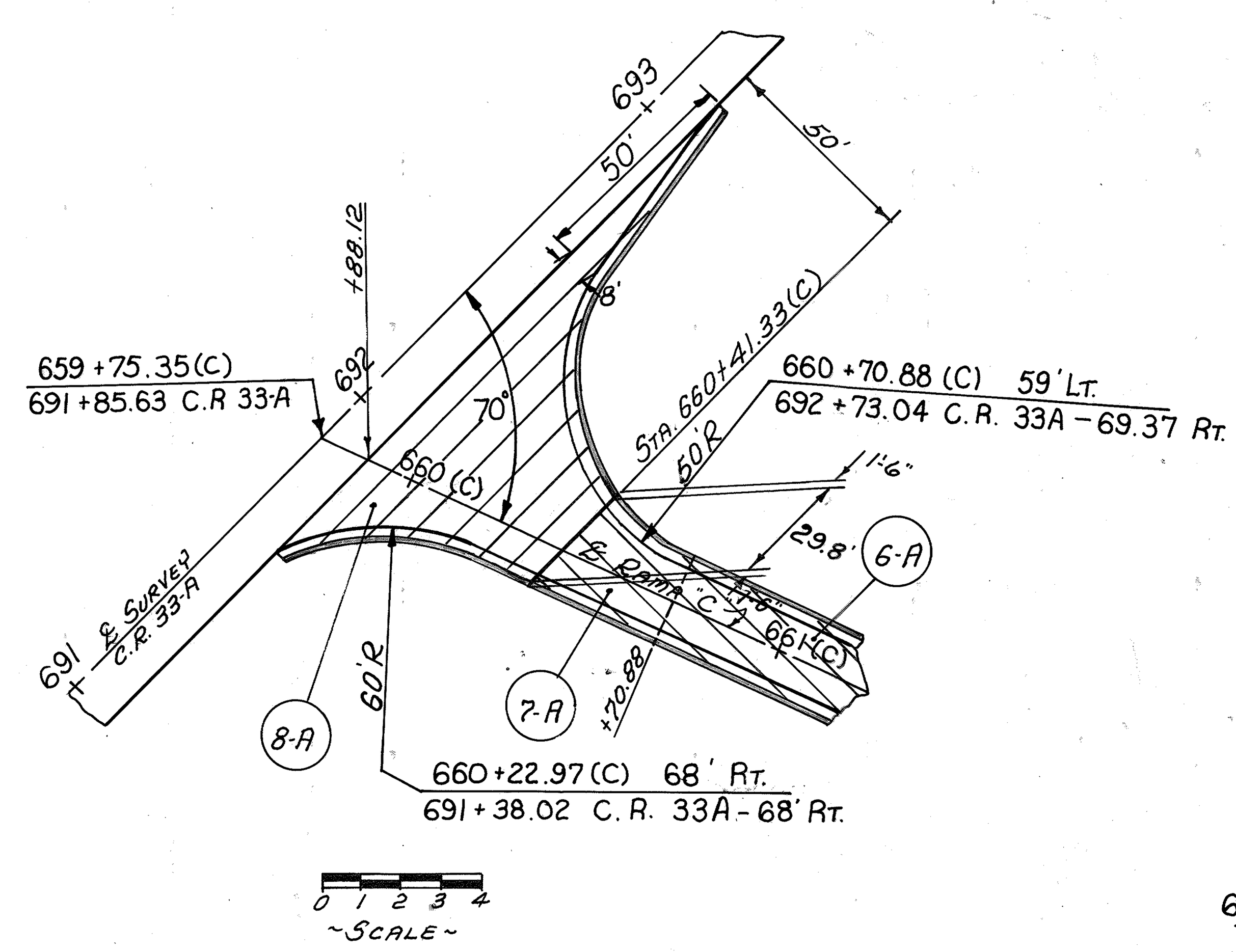
QUANTITIES CARRIED TO GENERAL SUMMARY

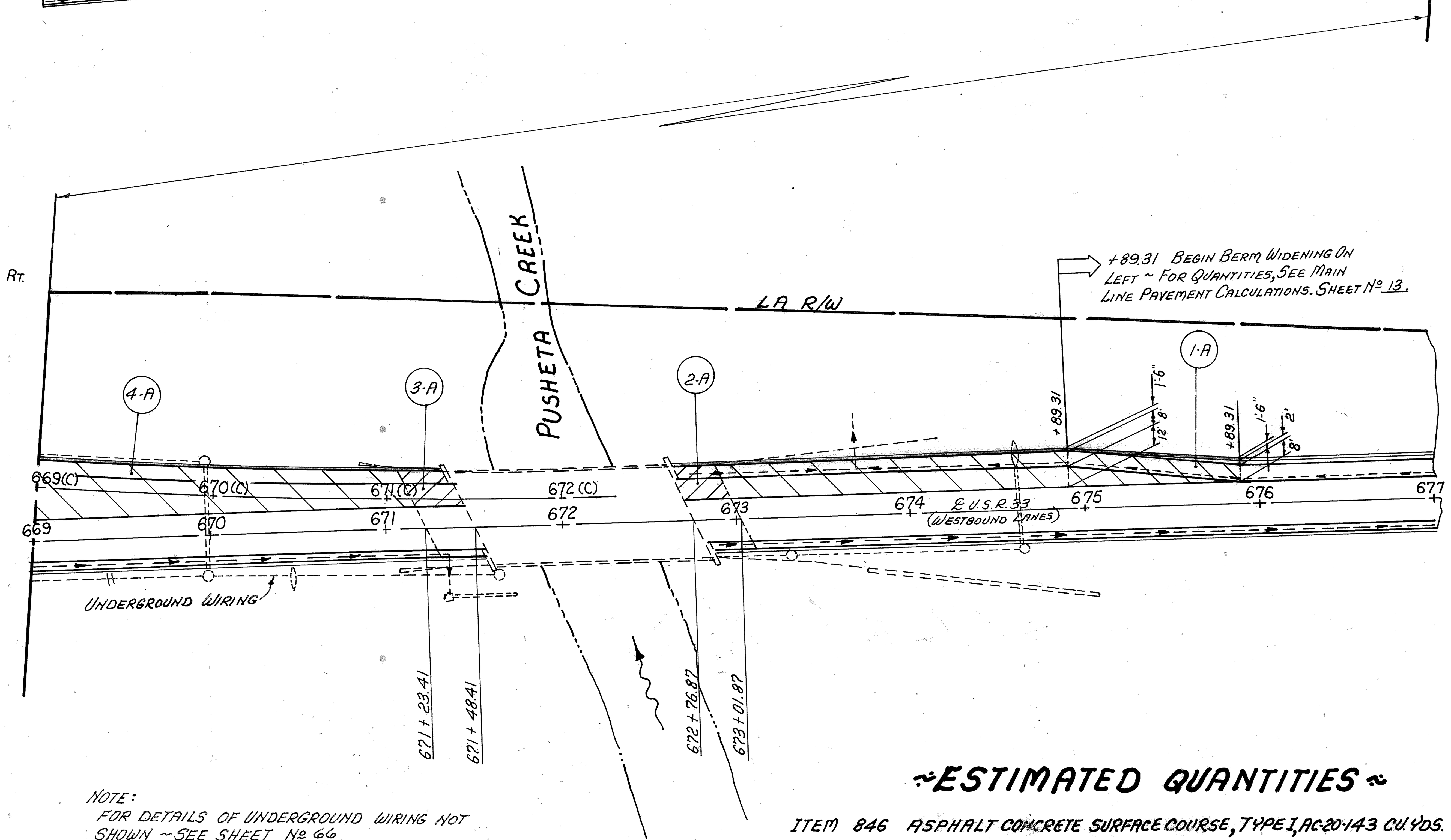
FHWA REGION	STATE	PROJECT			50/88
5	OHIO				

AUGLAIZE COUNTY
AUG - 33 - 6.63

U.S.R. 33 ~ COUNTY ROAD 33-A INTERCHANGE
RAMP "C"







NOTE:
FOR DETAILS OF UNDERGROUND WIRING NOT SHOWN ~ SEE SHEET No 66.

~ESTIMATED QUANTITIES~

ITEM 846	ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20	143 CU. YDS.
ITEM 448	ASPHALT CONC. INTERMEDIATE COURSE, TYPE 1, AC-20	83 CU. YDS.
ITEM 407	TACK COAT, AS PER PLAN	408 GALS.
ITEM 617	COMPACTED AGGREGATE, TYPE "A"	19 CU. YDS.
ITEM 202	WEARING COURSE REMOVED	288 SQ. YDS.

QUANTITIES CARRIED TO GENERAL SUMMARY

~CALCULATIONS~

(1-A)
STA. 674 + 89.31 TO STA. 675 + 89.31 = 100.00'
100.00 × (20' + 8'/2) = 1400.00 SQ. FT.
STA. 672 + 91.50 TO STA. 674 + 89.31 = 197.81'
197.81' × (20.50 + 20.00/2) = 4005.65 SQ. FT.
TOTAL = 5405.65 SQ. FT.
ITEM 846 ~ 5405.65□' × 1¼"/27 = 20.86 CU. YDS.
ITEM 448 ~ 3023.17□' × ¾"/27 = 7.00 CU. YDS.
ITEM 407 ~ 5405.65□'/9 × 0.10 = 60.06 GALS.
ITEM 617 ~ 297.81' × 1'-6" × (0" + 3½"/2)/27 = 2.41 CU. YDS.
ITEM 448 ~ 297.81' × 8'-0" × 1"/27 = 7.35 CU. YDS.

(2-A)
STA. 672 + 66.50 TO STA. 672 + 91.50 = 25.00'
25.00' × (20.71' + 20.5'/2) = 515.13 SQ. FT.
ITEM 846 ~ 515.13□' × (2" + 1"/2)/27 = 2.38 CU. YDS.
ITEM 407 ~ 515.13□'/9 × 0.10 = 5.72 GALS.
ITEM 617 ~ 25.00' × 1'-6" × (0" + 3½"/2)/27 = 0.20 CU. YDS.

(3-A)
STA. 671 + 12.67 TO STA. 671 + 37.67 = 25.00'
25.00' × (22'-0" + 21.79'/2) = 547.38 SQ. FT.
ITEM 846 ~ 547.38□' × (2" + 1"/2)/27 = 2.53 CU. YDS.
ITEM 407 ~ 547.38□'/9 × 0.10 = 6.08 GALS.
ITEM 617 ~ 25.00' × 1'-6" × (0" + 3½"/2)/27 = 0.20 CU. YDS.

(4-A)
STA. 667 + 88.74 TO STA. 671 + 12.67 (CALCULATED AREA = 10158 SQ. FT.)
ITEM 846 ~ 10158□' × 1¼"/27 = 39.20 CU. YDS.
ITEM 448 ~ 7566□' × ¾"/27 = 17.51 CU. YDS.
ITEM 407 ~ 10158□'/9 × 0.10 = 112.87 GALS.
ITEM 617 ~ 324' × 1'-6" × (0" + 3½"/2)/27 = 2.63 CU. YDS.
ITEM 448 ~ 324' × 8'-0" × 1"/27 = 8.00 CU. YDS.

(5-A)
STA. 666 + 88.74 TO STA. 667 + 88.74 = 100.00'
100.00' × (27' + 22'/2) = 2450.00 SQ. FT.
ITEM 846 ~ 2450□' × 1¼"/27 = 9.46 CU. YDS.
ITEM 448 ~ 1600□' × ¾"/27 = 3.70 CU. YDS.
ITEM 407 ~ 2450□'/9 × 0.10 = 27.22 GALS.
ITEM 617 ~ 200' × 1'-6" × (0" + 3½"/2)/27 = 1.62 CU. YDS.
ITEM 448 ~ 100' × (8' + 3'/2) + 300□' × 1"/27 = 2.62 CU. YDS.

(6-A)
STA. 660 + 70.88 TO STA. 666 + 88.74 = 617.86'
617.86' × 22'-0" = 13592.92 SQ. FT.
ITEM 846 ~ 13592.92□' × 1¼"/27 = 52.46 CU. YDS.
ITEM 448 ~ 9885.76□' × ¾"/27 = 22.88 CU. YDS.
ITEM 407 ~ 13592.92□'/9 × 0.10 = 151.03 GALS.
ITEM 617 ~ 1235.72' × 1'-6" × (0" + 3½"/2)/27 = 10.01 CU. YDS.
ITEM 448 ~ 1235.72' × 3'-0" × 1"/27 = 11.44 CU. YDS.

(7-A)
STA. 660 + 41.33 TO STA. 660 + 70.88 = 29.55'
29.55' × (22'-0" + 29.80'/2) = 765.35□'
ITEM 846 ~ 765.35□' × 1¼"/27 = 2.95 CU. YDS.
ITEM 448 ~ 588.05□' × ¾"/27 = 1.36 CU. YDS.
ITEM 407 ~ 765.35□'/9 × 0.10 = 8.50 GALS.
ITEM 617 ~ 59.10' × 1'-6" × (0" + 3½"/2)/27 = 0.48 CU. YDS.
ITEM 448 ~ 59.10' × 3'-0" × 1"/27 = 0.55 CU. YDS.

(8-A)
STA. 659 + 88.12 TO STA. 660 + 41.33 ~ TRANSITION AREA
ITEM 202 ~ 31'-3" × 82.94 = 2592□'/9 = 288 SQ. YDS.
ITEM 846 ~ 6'-3" × 33.28' = 208□' × 1¼"/27 = 0.80 CU. YDS.
ITEM 846 ~ 12'-6" × 35.84' = 448□' × (1¾" + 1¼"/2)/27 = 2.07 CU. YDS.
ITEM 846 ~ 31'-3" × 82.94' = 2592□' × 1¼"/27 = 10.00 CU. YDS.
ITEM 448 ~ 6'-3" × 27.28' = 170.50□' × (½" + ¾"/2)/27 = 0.33 CU. YDS.
ITEM 407 ~ 3248□'/9 × 0.10 = 36.09 GALS.
ITEM 617 ~ 173' × 1'-6" × (0" + 3½"/2)/27 = 1.40 CU. YDS.
ITEM 448 ~ 12'-6" × 3'-0" × 1"/27 = 0.12 CU. YDS.

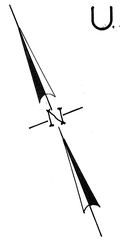
U.S.R. 33 - COUNTY ROAD 33A INTERCHANGE

RAMP "D"

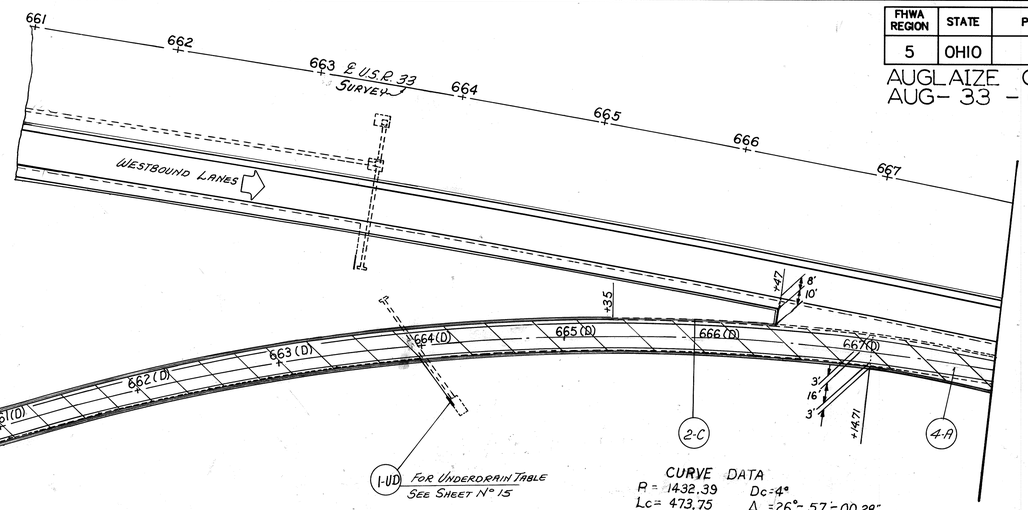
FHWA REGION	STATE	PROJECT	
5	OHIO		

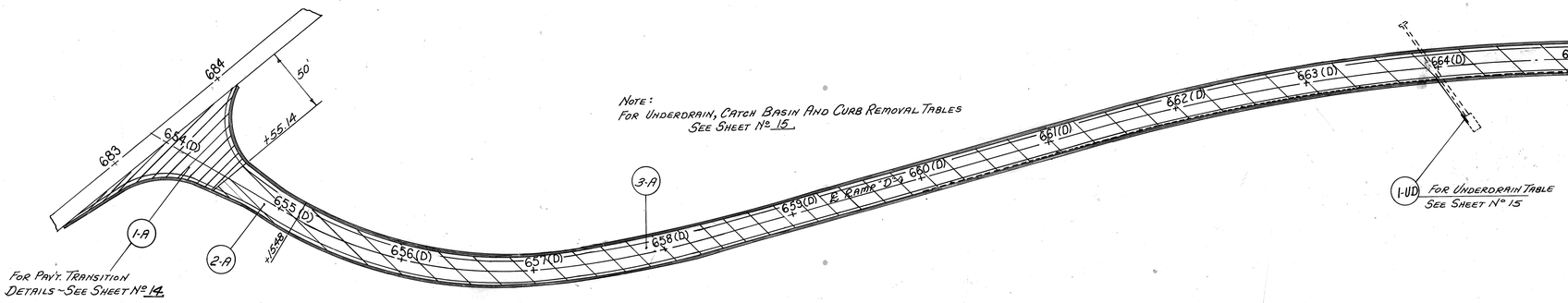
51
88

AUGLAIZE COUNTY
AUG- 33 - 6.63



~ CURVE DATA ~
R = 318.31' Dc = 18°
Lc = 158.33' Δc = 28°-31'-00"
Tc = 80.84' Ls = 200'





FOR PAVT. TRANSITION DETAILS - SEE SHEET N° 14

Note:
For Underdrain, Catch Basin And Curb Removal Tables
See Sheet N° 15

CURVE DATA
R = 1432.39 Dc = 4°
Lc = 473.75 Δ = 26°-57'-00.28"
Tc = 443.49 Δc = 18°-57'-00.28"

~ CALCULATIONS ~

1-A Sta. 654+01.93 To Sta. 654+55.14 (Transition Area)
- ITEM 846 - 224°× 1¼"/27 = 0.86 Cu.Yds.
- ITEM 846 - 496°× (1¼"+1¾"/2)/27 = 2.30 Cu.Yds.
- ITEM 846 - 2448°× 1¼"/27 = 9.45 Cu.Yds.
- ITEM 448 - 186.50°× (⅛"+¾"/2)/27 = 0.36 Cu.Yds.
- ITEM 407 - 3168°/9 × 0.10 = 35.80 Gals.
- ITEM 617 - 178'× 1'-6"× (0"+3½"/2)/27 = 1.44 Cu.Yds.
- ITEM 202 - 2448°/9 = 272.00 Sq.Yds.
- ITEM 448 - 12'-6"× 3'-0"× 1"/27 = 0.12 Cu.Yds.

2-A Sta. 654+55.14 To Sta. 655+15.48 (Calculated Area = 129.65 Sq.Ft.)
- ITEM 846 - 1296°× 1¼"/27 = 5.00 Cu.Yds.
- ITEM 448 - 933.96°× ¾"/27 = 2.16 Cu.Yds.
- ITEM 407 - 1296°/9 × 0.10 = 14.40 Gals.
- ITEM 617 - 121'× 1'-6"× (0"+3½"/2)/27 = 0.98 Cu.Yds.
- ITEM 448 - 120.68'× 3'× 1"/27 = 1.12 Cu.Yds.

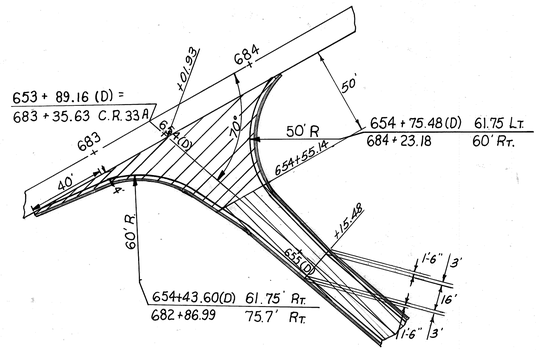
3-A Sta. 655+15.48 To Sta. 667+14.71 = 1199.23 Lin.Ft.
1199.23'× 22'-0" = 26383.06 Sq.Ft.
- ITEM 846 - 26383.06°× 1¼"/27 = 101.82 Cu.Yds.
- ITEM 448 - 19187.68°× ¾"/27 = 44.42 Cu.Yds.
- ITEM 407 - 26383.06°/9 × 0.10 = 293.15 Gals.
- ITEM 617 - 2398.46'× 1'-6"× (0"+3½"/2)/27 = 19.43 Cu.Yds.
- ITEM 448 - 2398.46'× 3'× 1"/27 = 22.20 Cu.Yds.

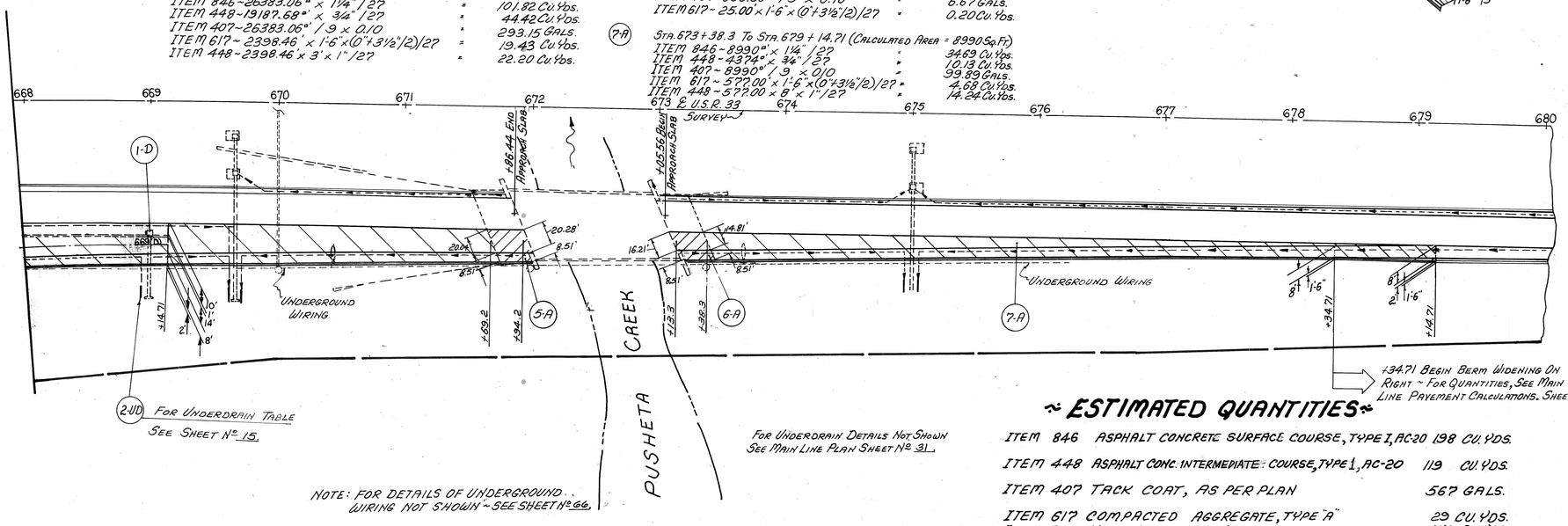
4-A Sta. 667+14.71 To Sta. 671+69.2 (Calculated Area = 984.85 Sq.Ft.)
- ITEM 846 - 3948°× 1¼"/27 = 38.01 Cu.Yds.
- ITEM 448 - 831.08°× ¾"/27 = 19.24 Cu.Yds.
- ITEM 407 - 9848°/9 × 0.10 = 109.42 Gals.
- ITEM 617 - 254.49'× 1'-6"× (0"+3½"/2)/27 = 2.06 Cu.Yds.
- ITEM 448 - 200'× (3"+8"/2)+5449×8×1"/27 = 4.74 Cu.Yds.

5-A Sta. 671+69.2 To Sta. 671+94.2 = 25.00 (Transition Area)
25.00'× (28.55'+28.79'/2) = 717.00 Sq.Ft.
- ITEM 846 - 717.00°× (2"+1"/2)/27 = 3.32 Cu.Yds.
- ITEM 407 - 717.00°/9 × 0.10 = 7.97 Gals.
- ITEM 617 - 25.00'× 1'-6"× (0"+3½"/2)/27 = 0.20 Cu.Yds.

6-A Sta. 673+13.3 To Sta. 673+38.3 = 25.00' (Transition Area)
25.00'× (24.72'+23.32/2) = 600.50 Sq.Ft.
- ITEM 846 - 600.50°× (2"+1"/2)/27 = 2.78 Cu.Yds.
- ITEM 407 - 600.50°/9 × 0.10 = 6.67 Gals.
- ITEM 617 - 25.00'× 1'-6"× (0"+3½"/2)/27 = 0.20 Cu.Yds.

7-A Sta. 673+38.3 To Sta. 679+14.71 (Calculated Area = 899.05 Sq.Ft.)
- ITEM 846 - 8990°× 1¼"/27 = 34.69 Cu.Yds.
- ITEM 448 - 4374°× ¾"/27 = 10.13 Cu.Yds.
- ITEM 407 - 8990°/9 × 0.10 = 99.89 Gals.
- ITEM 617 - 577.00'× 1'-6"× (0"+3½"/2)/27 = 4.62 Cu.Yds.
- ITEM 448 - 577.00'× 8"× 1"/27 = 14.24 Cu.Yds.





NOTE: FOR DETAILS OF UNDERGROUND WIRING NOT SHOWN - SEE SHEET N° 66

For Underdrain Details Not Shown See Main Line Plan Sheet N° 31

~ ESTIMATED QUANTITIES ~

ITEM 846 ASPHALT CONCRETE SURFACE COURSE, TYPE I, AC-20	198 CU. YDS.
ITEM 448 ASPHALT CONC. INTERMEDIATE COURSE, TYPE I, AC-20	119 CU. YDS.
ITEM 407 TACK COAT, AS PER PLAN	567 GALS.
ITEM 617 COMPACTED AGGREGATE, TYPE "A"	29 CU. YDS.
ITEM 202 WEARING COURSE REMOVED	272 SQ. YDS.

QUANTITIES CARRIED TO GENERAL SUMMARY

TRAFFIC CONTROL SUMMARY

CALC. BY		AUGLAIZE COUNTY	OHIO
DATE		AUG – 33 – 6.63	FHWA REGION 5
CHKD. BY			FEDERAL PROJECT
DATE			

52/88

ITEM	SHEET NUMBER 53	54	55	56	57	58	59	60	73	ITEM	QUANT.	UNIT	DESCRIPTION
													PAVEMENT MARKING
621							27.39	4.15		621	31.54	MILES	EDGE LINES, AS PER PLAN
621							0.24	13.44		621	13.68	MILES	LANE LINES, AS PER PLAN
621							2243	3214		621	5457	LIN. FT.	CHANNELIZING LINES, AS PER PLAN
621							757	520		621	1277	LIN. FT.	TRANSVERSE LINES, AS PER PLAN
621							20	180		621	200	LIN. FT.	STOP LINES, AS PER PLAN
621									4262	621	4262	LIN. FT.	4" PARKING LOT STALL MARKINGS, AS PER PLAN
621									4	621	4	EACH	HANDICAPPED SYMBOL MARKINGS, AS PER PLAN
614							1566	3756		614	5322	LIN.FT.	TEMPORARY CHANNELIZING LINE, CLASS I
614								26.19		614	26.19	MILES	TEMPORARY LANE LINE CLASS II
614							2920	2672		614	5592	LIN. FT.	TEMPORARY GORE MARKINGS CLASS II
614							40	360		614	400	LIN. FT.	TEMPORARY STOP LINE CLASS I
614							10	4		614	14	EACH	WORK ZONE MARKING SIGN
													TRAFFIC SIGNS
630	199.26	181.40	136.52	74.00	56.25					630	648	SQ.FT.	SIGNS, FLAT SHEET TYPE F SHEETING
630	196.50	732.50	357.00	489.00	402.00					630	2177	SQ.FT.	SIGNS, EXTRU SHEET TYPE F SHEETING
630	138.00	108.00	108.00	96.00	114.93					630	565	SQ. FT.	SIGNS, FLAT SHEET TYPE G SHEETING
630						872.00				630	872	SQ. FT.	SIGNS, EXTRU SHEET TYPE G SHEETING
630	206.50	192.00	216.00		76.00					630	691	LIN.FT.	GROUND MOUNTED SUPPORTS, NO. 2 POST
630	62.00	50.00	24.00	48.00	24.00					630	208	LIN.FT.	GROUND MOUNTED SUPPORTS, NO. 3 POST
630	416.00	377.00	349.00	144.00	116.00					630	1402	LIN.FT.	GROUND MOUNTED SUPPORTS, NO. 4 POST
630				30.00	30.00					630	60	LIN.FT.	ONE-WAY SUPPORTS, NO. 4 POST
630	93.00	90.00		182.0	152.0					630	517	LIN.FT.	GROUND MOUNTED SUPPORTS, S4 X 7.7 BEAM
630	34.00	42.00	31.0	70.0	138.0					630	315	LIN.FT.	GROUND MOUNTED SUPPORTS, W6 X 9 BEAM
630	44.00	207.00	38.0		40.0					630	329	LIN.FT.	GROUND MOUNTED SUPPORTS, W10 X 12 BEAM
630	4.48	13.28	2.86	4.56	7.54					630	32.72	CU.YD.	CONCRETE FOR EMBEDDED FOUNDATIONS
630	10	18	4	16	20					630	68	EACH	BREAKAWAY BEAM CONNECTION
630	47	41	32	30	28					630	178	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL
630	2	5	4	4	3					630	18	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL
630					2					630	2	EACH	REMOVAL OF GROUND MOUNTED BEAM SUPPORT AND DISPOSAL
630	53	53	44	30	25					630	205	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
630						10				630	10	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL

TRAFFIC CONTROL QUANTITIES

CALC. BY T. K. DATE 5-87
CHKD. BY L. H. DATE 5-87

AUGLAIZE COUNTY
AUG – 33 – 6.63

OHIO
FHWA REGION 5
FEDERAL PROJECT

53
88

DETAILS GROUND MOUNTED SIGNS

SHT. NO.	REF. NO.	STATION	SIDE	SIGN	SIGN SIZE	FLAT SHEET TYPE F SHEETING	EXTRU SHEET TYPE F SHEETING	FLAT SHEET TYPE G SHEETING	NO. 2 POST	NO. 3 POST	NO. 4 POST	S4 X 7.7	W6 X 9	W10 X 12		CONCRETE FOR EMBEDDED FOUNDATION	BREAKAWAY BEAM CONNECTION		REMOVAL OF GRD. MTD. SIGN AND DISPOSAL	REMOVAL OF GRD. MTD. MAJOR SIGN AND DISPOSAL	REMOVAL OF GRD. MTD. BEAM SUPPORT	REMOVAL OF GRD. MTD. POST SUPPORT	
						SQ. FT.	SQ. FT.	SQ. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.		CU. FT.	EACH		EACH	EACH	EACH	EACH	
USR	33	MAINLINE																					
61	1	321+00	LT	GSF-1	5' X 1'-6"	7.50		ERECT NEW SIGN ON EXISTING BEAMS															
				RA-1				DO NOT DISTURB															
61	1A	340+00	LT	GJ	12' X 4'		48.00						34.00			0.66	2			1		2	
61	2	345+00	RT	W-24-48	4' X 4'	16.00					32.00								1			1	
61	3	347+00	RT	GSC	8' X 3'		24.00					32.00				0.54	2		1			2	
61	4	350+00	RT	D-11	7' X 2.5'		17.50				28.00								1			2	
				R-41A-36	3' X 2'			6.00											1				
61	5	354+49	MED	R-43R-48	4' X 1.5'			6.00	24.00										1			2	
61	6	354+49	RT	R-43L-48	4' X 1.5'			6.00	24.00										1			2	
61	7	353+45	LT	M-40-30	2.5' X 1.25'	3.13					14.00								1			1	
				M-1-30	2.5' X 2.5'	6.25													1				
61	8	18+45	RT	D-7-72	6' X 1'	6.00			25.00										1			2	
61	9	354+49	RT	R-41B-36	3' X 3'			9.00			14.00								1			1	
61	10	19+35	RT	R-1-36	3' X 3'			9.00			15.00								1			1	
				R-107A-24	2' X 1.5'	3.00													1				
61	11	354+75	LT	R-15A	3' X 3'	9.00				14.00									1			1	
61	12	354+50	LT	N-16A-72	DO NOT DISTURB																		
61	13	354+50	MED	R-37R-36	3' X 4'	12.00					30.00								1			1	
61	14	355+21	MED	R-37R-36	3' X 4'	12.00					30.00								1			1	
61	15	355+21	RT	N-30	2' X 2'	4.00			12.50										1			1	
				N-15	2' X 0.5'	1.00													1				
61	16	355+21	LT	R-41B-36	3' X 3'			9.00			14.00								1			1	
61	17	355 +21	MED	R-43R-48	4' X 1.5'			6.00	24.00										1			2	
61	18	355+21	LT	R-43L-48	4' X 1.5'			6.00	24.00										1			2	
61	19	20+66	LT	R-1-36	3' X 3'			9.00			15.00								1			2	
				R-107A-24	2' X 1.5'	3.00													1				
61	20	356+30	RT	M-39-30	2.5' X 1.25'	3.13					14.00												
				M-1-30	2.5' X 2.5'	6.25													1			1	
61	21	21+45	LT	D-7-72	6' X 1'	6.00			25.00										1			2	
61	22	360+00	LT	D-11	7' X 2.5'		17.50				26.00								1			2	
				R-41A-36	3' X 2'			6.00											1				
61	23	361+00	RT	RA-2	9' X 4.5'		40.50							44.00		2.20	2			1		2	
				GSF-1				REMOVAL ONLY											1				
				N-61	2' X 2'	4.00																	
61	24	361+00	LT	N-29	2' X 2'	4.00						33.00				0.54	2		1			2	
				IM-21	2' X 2.5'	5.00													1				
				GSC	8' X 3'		24.00												1				
61	25	365+00	LT	W-24-48	4' X 4'	16.00					32.00								1			1	
61	26	369+12	RT	RA-4	5' X 5'		25.00					28.00				0.54	2		1			2	
				N-61				REMOVAL ONLY											1				
61	27	376+50 A	RT	R-41A-36	3' X 2'			6.00		12.00									1			1	
			LT	R-41A-36	3' X 2'			6.00		12.00									1			1	
61	28	378+00 A	LT	R-41B-36	3' X 3'			9.00			13.00								1			1	
			RT	R-41B-36	3' X 3'			9.00											1				
61	29	378+00 A	RT	RA-74-48	4' X 5'	20.00					31.00								1			2	
61	30	378+50	LT	W-49R-48	4' X 4'	16.00					32.00								1			1	
61	31	383+20 C	LT	R-43R-36	3' X 1'			3.00	24.00										1			1	
61	32	384+25 B	RT	R-43R-36	3' X 1'			3.00	24.00										1			1	
62	33	388+50	RT	W-49R-48	4' X 4'	16.00					32.00								1			1	
62	34	389+40 D	RT	R-41B-36	3' X 3'			9.00			13.00								1			1	
			LT	R-41B-36	3' X 3'			9.00			31.00								1			2	
62	35	389+40 D	LT	RA-74-48	4' X 5'	20.00													1				
62	36	390+85 D	LT	R-41A-36	3' X 2'			6.00		12.00									1			1	
			RT	R-41A-36	3' X 2'			6.00		12.00									1			1	
TOTALS						199.26	196.50	138.00	206.50	62.00	416.00	93.00	34.00	44.00		4.48	10		47	2		53	

TOTALS CARRIED TO TRAFFIC CONTROL SUMMARY

GROUND MOUNTED SIGN QUANTITIES

TRAFFIC CONTROL QUANTITIES

CALC. BY I. K. DATE 5-87
CHKD. BY L. H. DATE 5-87
AUGLAIZE COUNTY
AUG – 33 – 6.63
OHIO
FHWA REGION 5
FEDERAL PROJECT
54/88

DETAILS GROUND MOUNTED SIGNS

SHT. NO.	REF. NO.	STATION	SIDE	SIGN	SIGN SIZE	FLAT SHEET TYPE F SHEETING	EXTRU SHEET TYPE F SHEETING	EXTRU SHEET TYPE G SHEETING	NO. 2 POST	NO. 3 POST	NO. 4 POST	S4 X 7.7	W6 X 9	W10 X 12		CONCRETE FOR EMBEDDED FOUNDATION	BREAKAWAY BEAM CONNECTION		REMOVAL OF GRD. MTD. SIGN AND DISPOSAL	REMOVAL OF GRD. MTD. MAJOR SIGN AND DISPOSAL	REMOVAL OF GRD. MTD. BEAM SUPPORT AND DISPOSAL	REMOVAL OF GRD. MTD. POST SUPPORT AND DISPOSAL	
						SQ. FT.	SQ. FT.	SQ. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.		CU. FT.	EACH		EACH	EACH	EACH	EACH	
USR	33	MAINLINE CONT.																					
62	37	397+88	LT	RA–4	5' X 5'		25.00					30.00				0.54	2		1			2	
				N–61	2' X 2'			REMOVAL ONLY											1				
62	38	406+00	LT	RA–2	9' X 4.5'		40.50							44.00		2.20	2			1		2	
				N–61	2' X 2'	4.00																	
62	39	406+00	RT	W–24–48	4' X 4'	16.00					32.00								1			1	
62	40	411+00	RT	D–11	9' X 2.5'		22.50					32.00				0.54	2		1			2	
				R–41A–36	3' X 2'			6.00											1				
62	41	414+75	LT	M–40–30	2.5' X 1.25'	3.13					15.00												
				M–1–30	2.5' X 2.5'	6.25													1			1	
62	42	415+68	RT	R–43L–48	4' X 1.5'			6.00	24.00										1			1	
62	43	415+68	MED	R–43R–48	4' X 1.5'			6.00	24.00										1			1	
62	44	415+68	RT	R–41B–36	3' X 3'			9.00			15.00								1			1	
62	45	415+68	MED	R–37R–36	3' X 4'	12.00					30.00								1			1	
		416+44	MED	R–37R–36	3' X 4'	12.00					28.00								1			1	
62	46	29+38	RT	R–1–36	3' X 3'			9.00			15.00								1			2	
				R–107A–24	2' X 1.5'	3.00													1				
62	47	30+66	LT	R–1–36	3' X 3'			9.00			15.00								1			2	
				R–107A–24	2' X 1.5'	3.00													1				
62	48	416+44	MED	R–43R–48	4' X 1.5'			6.00	24.00										1			1	
62	49	416+44	LT	R–41B–36	3' X 3'			9.00			14.00								1			1	
62	50	28+75	RT	D–7–72	6' X 1'	6.00			24.00										1			2	
62	51	416+44	LT	R–43L–48	4' X 1.5'			6.00	24.00										1			1	
62	52	31+25	RT	D–7–72	6' X 1'	6.00			24.00										1			2	
62	53	421+00	LT	D–11	9' X 2.5'		22.50					28.00				0.54	2		1			2	
				R–41A–36	3' X 2'			6.00											1				
62	55A	422+00	RT	GB	15' X 7'		105.00							39.00		2.20	2						
62	55B	429+00	RT	GCA	13' X 5.5'		71.50							41.00		2.20	2						
62	54	417+25	RT	M–39–30	2.5' X 1.25'	3.13					15.00												
				M–1–30	2.5' X 2.5'	6.25													1			1	
62	55	426+00	LT	W–24–48	4' X 4'	16.00					32.00								1			1	
62	56	436+00	RT	GB	16' X 7'		112.00	ERECT NEW SIGN ON EXISTING BEAMS												1			
62	57	443+00	RT	GCA				REMOVAL ONLY												1		3	
62	58	443+00	LT	RA–1	9' X 4'		36.00						42.00			0.66	2		1			2	
				GSF–1	5' X 1.5'	7.50																	
63	59	448+00	LT	M–40–30	2.5' X 1.25'	3.13					15.00								1				
				M–1–30	2.5' X 2.5'	6.25													1			1	
63	60	495+00	RT	M–39–30	2.5' X 1.25'	3.13					15.00								1			1	
				M–1–30	2.5' X 2.5'	6.25													1				
63	61	496+50	LT	GCA				REMOVAL ONLY												1		3	
64	62	515+10	LT	GB	16' X 7'		112.00	ERECT NEW SIGN ON EXISTING BEAMS												1			
63	61A	501+00	LT	GB	15' X 7'		105.00							44.00		2.20	2						
64	61B	508+00	LT	GCA	13' X 5.5'		71.50							39.00		2.20	2						
64	63	516+85	RT	W–24–48	4' X 4'	16.00					32.00								1			1	
64	64	521+85	RT	D–11	6' X 1.5'		9.00			24.00									1			2	
				R–41A–36	3' X 2'			6.00											1				
64	65	525+00	LT	M–40–30	2.5' X 1.25'	3.13					15.00												
				M–1–30	2.5' X 2.5'	6.25													1			1	
64	66	526+47	MED	R–43R–48	4' X 1.5'			6.00	24.00										1			2	
64	67	526+47	RT	R–43L–48	4' X 1.5'			6.00	24.00										1			2	
64	68	526+47	RT	R–41B–36	3' X 3'			9.00			14.00								1			1	
64	69	29+34	RT	R–1–36	3' X 3'			9.00			15.00								1			2	
				R–107A–24	2' X 1.5'	3.00													1				
64	70	28+65	RT	D–7–72	6' X 1'	6.00				26.00									1			2	
64	71	526+47	MED	R–37R–36	3' X 4'	12.00					30.00								1			1	
		527+23	MED	R–37R–36	3' X 4'	12.00					30.00								1			1	
TOTALS						181.40	732.50	108.00	192.00	50.00	377.00	90.00	42.00	207.00		13.28	18		41	5		53	

TOTALS CARRIED TO TRAFFIC CONTROL SUMMARY

GROUND MOUNTED SIGN QUANTITIES

TRAFFIC CONTROL QUANTITIES

CALC. BY T. K. DATE 5-87
CHKD. BY L. H. DATE 5-87
AUGLAIZE COUNTY
AUG – 33 – 6.63
OHIO
FHWA REGION 5
FEDERAL PROJECT
55/88

DETAILS GROUND MOUNTED SIGNS

SHT. NO.	REF. NO.	STATION	SIDE	SIGN	SIGN SIZE	FLAT SHEET TYPE F SHEETING SQ. FT.	EXTRU SHEET TYPE F SHEETING SQ. FT.	FLAT SHEET TYPE G SHEETING SQ. FT.	NO. 2 POST LIN. FT.	NO. 3 POST LIN. FT.	NO. 4 POST LIN. FT.	S4 X 7.7 LIN. FT.	W6 X 9 LIN. FT.	W10 X 12 LIN. FT.		CONCRETE FOR EMBEDDED FOUNDATION CU. FT.	BREAKAWAY BEAM CONNECTION EACH		REMOVAL OF GRD. MTD. SIGN AND DISPOSAL EACH	REMOVAL OF GRD. MTD. MAJOR SIGN AND DISPOSAL EACH	REMOVAL OF GRD. MTD. BEAM SUPPORT AND DISPOSAL EACH	REMOVAL OF GRD. MTD. POST SUPPORT AND DISPOSAL EACH	
USR	33	MAINLINE CONT.																					
64	72	527+23	RT	R-41B-36	3' X 3'			9.00			14.00								1			1	
64	73	30+67	LT	R-1-36	3' X 3'			9.00			15.00								1			1	
				R-107A-24	2' X 1.5'	3.00													1				
64	74	31+25	LT	D-7-72	6' X 1'	6.00			24.00										1			2	
64	75	528+10	RT	M-39-30	2.5' X 1.25'	3.13					14.00												
				M-1-30	2.5' X 2.5'	6.25													1			1	
64	76	527+23	MED	R-43R-48	4' X 1.5'			6.00	24.00										1			2	
64	77	527+23	LT	R-43L-48	4' X 1.5'			6.00	24.00										1			2	
64	78	531+85	LT	D-11	6' X 1.5'		9.00			24.00									1			2	
				R-41A-36	3' X 2'			6.00											1				
64	80	545+00	RT	GJ	13' X 4'		52.00							38.00		2.20	2			1		2	
64	79	536+85	LT	W-24-48	4' X 4'	16.00					32.00								1			1	
65	81	567+00	RT	W-24-48	4' X 4'	16.00					32.00								1			1	
65	82	572+00	RT	D-11	8' X 1.5'		12.00				25.00								1			2	
				R-41A-36	3' X 2'			6.00											1				
65	83	575+00	LT	M-40-30	2.5' X 1.25'	3.13					14.00												
				M-1-30	2.5' X 2.5'	6.25													1			1	
65	84	28+65	RT	D-7-72	6' X 1'	6.00			24.00										1			2	
65	85	576+64	RT	R-43L-48	4' X 1.5'			6.00	24.00										1			2	
65	86	576+64	MED	R-43R-48	4' X 1.5'			6.00	24.00										1			2	
65	87	576+64	RT	R-41B-36	3' X 3'			9.00			14.00								1			1	
65	88	29+33	RT	R-1-36	3' X 3'			9.00			15.00								1			2	
				R-107-24	2' X 1.5'	3.00																	
65	89	576+64	MED	R-37R-36	3' X 4'	12.00					30.00								1			1	
		577+35	MED	R-37R-36	3' X 4'	12.00					30.00								1			1	
65	90	29+15	LT	R-41B-36	3' X 3'			9.00			14.00								1			1	
65	90A	30+66	RT	R-1-36	3' X 3'			9.00			15.00								1			2	
				R-107A-24	2' X 1.5'	3.00													1				
65	91	30+30	RT	D-7-72	6' X 1'	6.00			24.00													2	
65	92	577+70	LT	R-43L-48	4' X 1.5'			6.00	24.00										1			1	
65	93	578+40	RT	M-39-30	2.5' X 1.25'	3.13					14.00												
				M-1-30	2.5' X 2.5'	6.25													1			1	
65	94	577+70	MED	R-43R-48	4' X 1.5'			6.00	24.00										1			2	
65	95	582+00	LT	D-11	8' X 1.5'		12.00				25.00								1			2	
				R-41A-36	3' X 2'			6.00											1				
65	96	587+00	LT	W-24-48	4' X 4'	16.00					32.00								1			1	
65	97	590+00	RT	W-55	DO NOT DISTURB																		
65	99	610+00	LT	GJ	12' X 4'		48.00						31.00			0.66	2			1		2	
65	100	607+00	RT	GB	16' X 7'		112.00	ERECT NEW SIGN ON EXISTING BEAMS												1			
66	101	626+00	RT	GB	16' X 7'		112.00	ERECT NEW SIGN ON EXISTING BEAMS												1			
66	102	631+00	LT	M-40-30	2.5' X 1.25'	3.13					14.00								1			1	
				M-1-30	2.5' X 2.5'	6.25													1				
66	103	673+50	RT	W-54		DO NOT DISTURB																	
66	104	677+50	RT	W-60D-36		DO NOT DISTURB																	
TOTALS						136.52	357.00	108.00	216.00	24.00	349.00		31.00	38.00		2.86	4		32	4		44	
TOTALS CARRIED TO TRAFFIC CONTROL SUMMARY																							

GROUND MOUNTED SIGN QUANTITIES

TRAFFIC CONTROL QUANTITIES

CALC. BY T. K. DATE 5-87
CHKD. BY L. H. DATE 5-87

AUGLAIZE COUNTY
AUG – 33 – 6.63

OHIO
FHWA REGION 5
FEDERAL PROJECT

56
88

DETAILS GROUND MOUNTED SIGNS

SHT. NO.	REF. NO.	STATION	SIDE	SIGN	SIGN SIZE	FLAT SHEET TYPE F SHEETING	EXTRU SHEET TYPE F SHEETING	FLAT SHEET TYPE G SHEETING	NO. 2 POST	NO. 3 POST	NO. 4 POST	S4 X 7.7	W6 X 9	W10 X 12	ONE WAY SUPPORTS NO. 4 POST	CONCRETE FOR EMBEDDED FOUNDATION	BREAKAWAY BEAM CONNECTION		REMOVAL OF GRD. MTD. SIGN AND DISPOSAL	REMOVAL OF GRD. MTD. MAJOR SIGN AND DISPOSAL	REMOVAL OF GRD. MTD. BEAM SUPPORT	REMOVAL OF GRD. MTD. POST SUPPORT	
						SQ. FT.	SQ. FT.	SQ. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	CU. FT.	EACH		EACH	EACH	EACH	EACH	
USR	33 & COUNTY ROAD 91																						
67	105	453+40	RT	GE	16' X 7'		112.00	ERECT NEW SIGN ON EXISTING BEAMS												1			
67	106	461+47	RT	GF-72	6' X 5'		30.00					30.00				0.54	2		1			2	
67	107	465+00	RT	D-4B	9' X 4'		36.00					33.00				0.54	2		1			2	
67	108	467+00	RT	R-41A-36	3' X 2'			6.00		12.00									1			1	
			LT	R-41A-36	3' X 2'			6.00		12.00									1			1	
67	109	469+05	RT	R-1-36	3' X 3'			9.00			14.00								1			1	
				R-41B-36	3' X 3'			9.00											1				
67	110	469+00	LT	R-1-36	3' X 3'			9.00							15.00				1			1	
				R-41B-36	3' X 3'			9.00											1				
				R-43L-36	3' X 1'			3.00											1				
				R-43R-36	3' X 1'			3.00											1				
67	111	126+00	LT	M-17-24	2' X 1'	2.00					14.00								1			1	
				M-1-24	2' X 2'	4.00													1				
67	112	123+00	LT	M-52A	9' X 2.5'		22.50					28.00				0.54	2		1			2	
67	113	119+00	LT	D-4B	11' X 4'		44.00						35.00			0.66	2			1		2	
67	115	116+95	LT	N-60	3' X 3'	9.00					14.00								1			1	
67	116	474+50	RT	W-49R-48	4' X 4'	16.00					30.00								1			1	
67	117	485+30	LT	GE	16' X 7'		112.00	ERECT NEW SIGN ON EXISTING BEAMS												1			
67	118	477+25	LT	GF-72	6' X 5'		30.00					30.00				0.54	2		1			2	
67	119	474+00	LT	D-4B	9' X 4'		36.00					33.00				0.54	2		1			2	
67	120	472+00	LT	R-41A-36	3' X 2'	6.00				12.00									1			1	
			RT	R-41A-36	3' X 2'	6.00				12.00									1			1	
67	121	469+67	LT	R-1-36	3' X 3'			9.00			14.00								1			1	
67				R-41B-36	3' X 3'			9.00											1				
67	122	469+75	RT	R-1-36	3' X 3'			9.00							15.00				1			1	
				R-41B-36	3' X 3'			9.00											1				
				R-43R-36	3' X 1'			3.00											1				
				R-43L-36	3' X 1'			3.00											1				
67	123	98+50	RT	M-17-24	2' X 1'	2.00					14.00								1			1	
				M-1-24	2' X 2'	4.00													1				
67	124	101+50	RT	M-52A	9' X 2.5'		22.50					28.00				0.54	2		1			2	
67	125	105+50	RT	D-4B	11' X 4'		44.00						35.00			0.66	2			1		2	
67	127	107+90	RT	N-60	3' X 3'	9.00					14.00								1			1	
67	128	464+25	LT	W-49R-48	4' X 4'	16.00					30.00								1			1	
TOTALS						74.00	489.00	96.00		48.00	144.00	182.00	70.00		30.00	4.56	16		30	4		30	

TOTALS CARRIED TO TRAFFIC CONTROL SUMMARY

GROUND MOUNTED SIGN QUANTITIES

TRAFFIC CONTROL QUANTITIES

CALC. BY T. K. DATE 5-87
CHKD. BY L. H. DATE 5-87
AUGLAIZE COUNTY
AUG – 33 – 6.63
OHIO
FHWA REGION 5
FEDERAL PROJECT
57/88

DETAILS GROUND MOUNTED SIGNS

SHT. NO.	REF. NO.	STATION	SIDE	SIGN	SIGN SIZE	FLAT SHEET TYPE F SHEETING SQ. FT.	EXTRU SHEET TYPE F SHEETING SQ. FT.	FLAT SHEET TYPE G SHEETING SQ. FT.	NO. 2 POST LIN. FT.	NO. 3 POST LIN. FT.	NO. 4 POST LIN. FT.	S4 X 7.7 LIN. FT.	W6 X 9 LIN. FT.	W10 X 12 LIN. FT.	ONE WAY SUPPORTS NO. 4 POST LIN. FT.	CONCRETE FOR EMBEDDED FOUNDATION CU. FT.	BREAKAWAY BEAM CONNECTION EACH		REMOVAL OF GRD. MTD. SIGN AND DISPOSAL EACH	REMOVAL OF GRD. MTD. MAJOR SIGN AND DISPOSAL EACH	REMOVAL OF GRD. MTD. BEAM SUPPORT AND DISPOSAL EACH	REMOVAL OF GRD. MTD. POST SUPPORT AND DISPOSAL EACH	
USR	33 & COUNTY ROAD			33A INT.																			
68	130	647+31	RT	GF-72	6' X 5'		30.00					30.00				0.54	2		1			2	
68	131	650+50	RT	D-4B	11' X 4'		44.00						35.00			0.66	2			1		2	
				R-41A-36	3' X 2'			6.00											1				
68	132	650+50	LT	R-41A-36	3' X 2'			6.00		12.00									1			1	
68	133	653+94	RT	R-1-36	3' X 3'			9.00			14.00								1			1	
				R-41B-36	3' X 3'			9.00											1				
68	134	654+10	LT	R-1-36	3' X 3'			9.00							15.00				1			1	
				R-41B-36	3' X 3'			9.00											1				
				R-43R-36	3' X 1'			3.00											1				
				R-43L-36	3' X 1'			3.00											1				
68	135	674+10	RT	M-17-24	2' X 1'	2.00					14.00												
				M-1-24	2' X 2'	4.00																	
68	136	677+00	RT	M-17-24		REMOVAL ONLY													1			1	
				M-1-30	2.5' X 2.5'	6.25													1				
68	137	677+10	RT	M-52A	9' X 2.5'		22.50					31.00				0.54	2						
68	138	681+10	RT	D-4B	11' X 4'		44.00						34.00			0.66	2						
68	140	644+10	RT	W-49R-48	4' X 4'	16.00					30.00								1			1	
68	141	675+90	LT	GE	13' X 7'		91.00							40.00		2.20	2			1	2		
68	142	667+75	LT	GF-72	6' X 5'		30.00					30.00				0.54	2		1			2	
68	143	663+00	LT	D-4B	11' X 4'		44.00						35.00			0.66	2			1		2	
				R-41A-36	3' X 2'			6.00											1				
68	144	663+00	RT	R-41A-36	3' X 2'			6.00		12.00									1			1	
68	145	660+39	LT	R-1-36	3' X 3'			9.00			14.00								1			1	
				R-41B-36	3' X 3'			9.00											1				
68	146	660+23	RT	R-1-36	3' X 3'			9.00							15.00				1			1	
				R-41B-36	3' X 3'			9.00											1				
				R-43R-36	3' X 1'			3.00											1				
				R-43L-36	3' X 1'			3.00											1				
68	147	708+00	LT	M-17-24	2' X 1'	2.00					14.00												
				M-1-24	2' X 2'	4.00																	
68	148	705+00	LT	M-52A	9' X 2.5'		22.50					31.00				0.54	2						
68	149	701+00	LT	D-4B	11' X 4'		44.00						34.00			0.66	2						
68	151	695+80	LT	GF-72	6' X 5'		30.00					30.00				0.54	2		1			2	
68	152	657+85	LT	R-2-48	4' X 4' X 4'			6.93	28.00										1			2	
68	154	651+00	LT	W-49R-48	4' X 4'	16.00					30.00								1			1	
REST AREAS																							
73	155	386+50 W.B.	LT	R-59B	1' X 1.5'	1.50			12.00										1			1	
73	157	386+85 W.B.	LT	R-59B	1' X 1.5'	1.50			12.00										1			1	
73	156	381+46 E.B.	RT	R-59B	1' X 1.5'	1.50			12.00										1			1	
73	158	381+83 E.B.	RT	R-59B	1' X 1.5'	1.50			12.00										1			1	
TOTALS						56.25	402.00	114.93	76.00	24.00	116.00	152.00	138.00	40.00	30.00	7.54	20		28	3	2	25	

TOTALS CARRIED TO TRAFFIC CONTROL SUMMARY

GROUND MOUNTED SIGN QUANTITIES

TRAFFIC CONTROL QUANTITIES

CALC. BY ____ DATE ____
CHKD. BY ____ DATE ____

AUGLAIZE COUNTY
AUG – 33 – 6.63

OHIO
FHWA REGION 5
FEDERAL PROJECT

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DETAILS OVERHEAD MOUNTED SIGNS

SHT. NO.	REF. NO.	STATION	SIDE	SIGN	SIGN SIZE	ITEM 630 SIGNS EXTRU SHEET TYPE G	ITEM 630 SIGN ATTACH. ASSEM.	ITEM 630 LUMINAIRE SUPPORT ASSEM. TYPE T. C. 31.21	ITEM 630 REMOVAL OVERHEAD MOUNTED SIGN AND DISPOSAL			ITEM 631 SIGNS WIRED OVERPASS STRUCTURE MOUNT	ITEM 631 SIGNS WIRED	ITEM 631 BALLAST TYPE CMRI–175 (480)	ITEM 631 BALLAST WIRING ENCLOSURE TYPE A	ITEM 631 BALLAST WIRING ENCLOSURE MOUNTING BRACKET	ITEM 631 MERCURY VAPOR LUMINAIRE TYPE TC 31.21 WITH 175 WATT LAMP	ITEM 631 REMOVAL OF LUMINAIRE AND STORAGE	ITEM 631 REMOVAL OF LUMINAIRE AND RE–ERECTION	ITEM 631 REMOVAL OF BALLAST AND STORAGE			
						SQ. FT.	EACH	EACH	EACH			EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH			
USR 33 & COUNTY ROAD 91 INTERCHANGE																							
67	120	109+10	RT	GH–1	11' X 8'	88.00			1														
				GH–1	11' X 8'	88.00			1														
67	114	115+70	LT	GH–1	11' X 8'	88.00			1														
				GH–1	11' X 8'	88.00			1														
68	139	684+10	RT	GH–1	11' X 8'	88.00			1														
				GH–1	11' X 8'	88.00			1														
68	150	697+10	LT	GE	11' X 8'	88.00			1														
68	153	691+40	LT	GH–1	11' X 8'	88.00			1														
68	129	654+70	RT	W–54B		DO NOT DISTURB																	
				GE	11' X 8'	88.00			1														
				GE	16' X 5'	80.00			1														
		NOTE: ALL GLARE SHIELDS, LUMINAIRES, SUPPORT ARM, SIGN BRACKETS ARE BEING REUSED.																					
TOTALS						872.00			10														
TOTALS CARRIED TO TRAFFIC CONTROL SUMMARY																							

OVERHEAD SIGN SUPPORT QUANTITIES

PAVEMENT MARKING SUB-SUMMARY

CALC. BY T. K. DATE 5-87	AUGLAIZE COUNTY AUG - 33 - 6.63	OHIO
CHKD. BY L. H. DATE 5-87		FHWA REGION 5
		FEDERAL PROJECT

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PAVEMENT	LOCATION AND STATION FROM	TO	SIDE	614 TEMPORARY EDGE LINE CLASS I WHITE	614 TEMPORARY EDGE LINE CLASS I YELLOW	614 TEMPORARY GORE MARKINGS CLASS II	614 TEMPORARY STOP LINES CLASS II WHITE	614 TEMPORARY CHANNELIZING LINE SIGNS CLASS I OM1-47	614 WORK ZONE MARKING SIGNS OM1-48	621 4 EDGE LINES WHITE	621 4 EDGE LINES YELLOW	621 8 CHANNELIZING LINES WHITE	621 24 TRANSVERSE LINES WHITE	621 4 LANE LINES WHITE	621 24 STOP LINES
				LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	LIN.FT.	EACH	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.	LIN. FT.
E.B.									5						
E. B.	330+00	354+22	RT	4844		4860				2422					
E. B.	354+22	21+58	RT	280		80				140					
E. B.	21+58	355+46	RT	280		80				140					
E. B.	355+46	361+00	RT	1108		80				554					
E. B.	368+99	395+43	RT	5288		12034				2644					
E. B.	403+00	415+28	RT	2456		80				1228					
E. B.	415+28	31+66	RT	290		80				145					
E. B.	31+66	416+52	RT	290		80				145					
E. B.	416+52	453+43	RT	7382		21942				3691					
E. B.	461+41	481+47	RT	4012		80				2006					
E. B.	489+47	526+10	RT	7326		80				3663					
E. B.	526+10	31+66	RT	290		80				145					
E. B.	31+66	527+33	RT	290		9822				145					
E. B.	527+33	576+31	RT	9796		80				4898					
E. B.	576+31	32+00	RT	290		80				145					
E. B.	32+00	577+54	RT	290		80				145					
E. B.	577+54	639+32	RT	12356		20482				6178					
E. B.	647+32	671+15	RT	4766						2383					
?	?	?	?												
E. B.	330+00	354+30	LT		4852				5		2430				
E. B.	354+30	354+57	LT		280						40				
E. B.	355+15	355+38	LT		280						40				
E. B.	355+38	415+55	LT		1600						6017				
E. B.	415+55	415+81	LT		5220						40				
E. B.	416+31	416+63	LT		1916						40				
E. B.	416+63	526+34	LT		280						10971				
E. B.	526+34	526+60	LT		280						40				
E. B.	527+10	527+42	LT		280						40				
E. B.	527+42	576+53	LT		6484						4911				
E. B.	576+53	576+80	LT		4008						40				
E. B.	577+30	577+59	LT		8204						40				
E. B.	577+59	680+00	LT		280						10241				
w.B.															
W. B.	330+00	354+26	LT		4870					2426					
W. B.	354+26	18+42	LT		80					140					
W. B.	18+42	355+50	LT		80					140					
W. B.	355+50	398+00	LT		12016					800					
W. B.	371+90	406+00	LT		80					2610					
W. B.	406+00	415+58	LT		80					958					
W. B.	415+58	28+84	LT		80					140					
W. B.	28+84	416+82	LT		21942					140					
W. B.	416+82	449+24	LT		80					3242					
W. B.	457+24	477+28	LT		80					2004					
W. B.	485+28	526+30	LT		9826					4102					
W. B.	526+30	28+35	LT		80					140					
W. B.	28+35	527+61	LT		80					140					
W. B.	527+61	576+55	LT		20488					4894					
W. B.	576+55	28+00	LT		80					140					
W. B.	28+00	577+79	LT		80					140					
W. B.	577+79	635+64	LT		80					5785					
W. B.	643+64	667+89	LT		80					2425					
W. B.	675+89	680+00	LT		20488					411					
W. B.	330+00	354+35	RT		3424						2435				
W. B.	354+35	354+57	RT		1826						40				
W. B.	355+15	355+42	RT		1108						40				
W. B.	355+42	415+50	RT								6008				
W. B.	415+50	415+81	RT								40				
W. B.	416+31	416+58	RT								40				
W. B.	416+58	526+29	RT								10971				
W. B.	526+29	526+60	RT								40				
W. B.	527+10	527+37	RT								40				
W. B.	527+37	576+50	RT								4913				
W. B.	576+50	576+80	RT								40				
W. B.	577+30	577+56	RT								40				
W. B.	577+56	680+00	RT								10244				
USR 33	REST AREA RAMPS														
RAMP A	361+00	378+12	RT							1712					
RAMP A	368+99	378+12	LT								913				
RAMP A	366+22	368+99	LT									554			
RAMP A	366+22	368+99	LT										325		
RAMP A	366+22	364+11	LT											211	
RAMP C	383+23	403+00	RT							1977					
RAMP C	383+23	391+54	LT								831				
RAMP C	391+54	395+43	LT									389			
RAMP C	395+43	397+70	LT											227	
RAMP B	384+16	363+50	LT							2066					
RAMP B	384+16	375+84	RT								832				
RAMP B	375+84	371+90	RT									394			
RAMP B	371+90	369+38	RT											252	
RAMP D	389+34	406+00	LT							1666					
RAMP D	389+34	398+00	RT								866				
RAMP D	398+00	400+83	RT									566			
RAMP D	398+00	400+83	RT										271		
RAMP D	400+83	403+42	RT											259	
USR 33 & COUNTY ROAD 91 INT.															
RAMP A	453+43	469+43	RT			1600									
RAMP A	461+41	469+43	LT								802				
RAMP A	459+71	461+41	LT									340			
RAMP A	459+71	461+41	LT										161		
RAMP A	456+57	459+71	LT											314	
RAMP A	469+05		LT												20
SUB TOTALS										70615	74025	2243	757	1263	20
										MILES		LIN. FT.	LIN. FT.	LIN. FT.	
TOTALS TO TRAFFIC CONTROL SUMMARY										27.39		2243	757	0.24	20

				141230	148850	2920	1566	10							
				MILES		LIN. FT.	LIN. FT.	EACH							
				54.78		2920	1566	10							

PAVEMENT MARKING SUB-SUMMARY

PAVEMENT MARKING SUB-SUMMARY

CALC. BY T. K. DATE 5-87	AUGLAIZE COUNTY AUG - 33 - 6.63	OHIO
CHKD. BY L. H. DATE 5-87		FHWA REGION 5
		FEDERAL PROJECT

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PAVEMENT	LOCATION AND STATION FROM	LOCATION AND STATION TO	SIDE	614 TEMPORARY EDGE LINE CLASS I WHITE LIN. FT.	614 TEMPORARY EDGE LINE CLASS I YELLOW LIN. FT.	614 TEMPORARY GORE MARKINGS CLASS II LIN. FT.	614 TEMPORARY STOP LINE CLASS I WHITE LIN. FT.	614 TEMPORARY LANE LINE CLASS II WHITE LIN. FT.	614 TEMPORARY CHANNELIZING LINE CLASS I LIN. FT.	614 WORK ZONE MARKING SIGNS OM-W7.48 EACH
USR 33 & COUNTY ROAD 91 INT.										
RAMP D	468+32	489+47	RT	4230						1
RAMP D	468+32	477+56	LT		1848					
RAMP D	471+56	481+47	LT						782	
RAMP D	481+47	483+87	LT							
RAMP B	470+38	449+24	LT	4228	1790					1
RAMP B	470+38	461+43	RT						838	
RAMP B	461+43	457+24	RT							
RAMP B	457+24	454+84	RT							
RAMP C	469+29	485+28	LT	3198	1598	684				
RAMP C	469+29	477+28	RT				40			
RAMP C	477+28	478+99	RT							
RAMP C	477+28	478+99	RT	3026	1426	916				
RAMP C	478+99	482+14	RT							
RAMP C	469+67		RT				40			
USR 33 & COUNTY ROAD 33A INT.										
RAMP A	639+32	654+45	RT	5196	2490					1
RAMP A	654+45	647+32	LT						936	
RAMP A	647+32	645+03	LT							
RAMP A	647+32	645+03	LT							
RAMP A	645+03	642+17	LT							
RAMP A	654+15		LT							
RAMP D	680+00	654+02	RT	5680	2530	1072				1
RAMP D	654+02	666+47	LT						800	
RAMP D	666+47	671+15	LT							
RAMP D	671+15	673+55	LT							
RAMP B	635+64	664+04	LT	3202	1602					
RAMP B	647+64	660+79 BB	RT						200	
RAMP B	647+64	643+64	RT							
RAMP B	643+64	641+24	RT							
RAMP B	657+34	658+34	RT	1140	570					
RAMP B	658+34	664+04	RT							
RAMP BB	657+34	658+34	LT	490	245				200	
RAMP BB	658+34	660+79	LT							
RAMP C	675+89	659+88	LT	3202	1602	1072	40			
RAMP C	667+89	659+88	RT							
RAMP C	667+89	670+57	RT		801			4870		
RAMP C	667+89	670+57	RT					12000		
RAMP C	670+57	673+23	RT					21956		
RAMP C	660+18		RT					9840		
E. B.	330+00	354+35	RT					20482		
E. B.	355+50	415+50	RT							
E. B.	416+52	526+30	LT							
E. B.	527+33	576+53	RT							
E. B.	577+59	680+00	RT							
W. B.	330+00	354+35	LT					4870		
W. B.	355+50	415+50	LT					12000		
W. B.	416+52	526+30	LT					21956		
W. B.	527+33	576+53	LT					9840		
W. B.	577+59	680+00	LT					20482		
TOWNLINE-KOSSUTH ROAD										
T-K. RD.	20+66		LT				30			
T-K. RD.	19+35		RT				30			
GLYNWOOD-NEW KNOXVILLE ROAD										
G-NK. RD.	30+66		LT				30			
G-NK. RD.	29+38		RT				30			
BAY ROAD										
BAY RD.	30+67		LT				30			
BAY RD.	29+34		RT				30			
KETTLERVILLE ROAD										
KETT. RD.	30+66		LT				30			
KETT. RD.	29+33		RT				30			
SUB TOTALS				28760	15014	2672	360	138296	3756	4
				MILES		LIN. FT.	LIN. FT	MILES	LIN. FT.	EACH
TOTALS TO TRAFFIC CONTROL SUMMARY				8.30		2672	360	26.19	3756	4

PAVEMENT	LOCATION AND STATION FROM	LOCATION AND STATION TO	SIDE	621 4 EDGE LINES WHITE LIN. FT.	621 4 EDGE LINES YELLOW LIN. FT.	621 8 CHANNELIZING LINES WHITE LIN. FT.	621 4 LANE LINES WHITE LIN. FT.	621 24 TRANSVERSE LINES WHITE LIN. FT.	621 24 STOP LINES LIN. FT.
USR 33 & COUNTY ROAD 91 INT. CONT.									
RAMP D	468+32	489+47	RT	2115					
RAMP D	468+32	477+56	LT		924				
RAMP D	471+56	481+47	LT			391			
RAMP D	481+47	483+87	LT				240		
RAMP B	470+38	449+24	LT	2114					
RAMP B	470+38	461+43	RT		895				
RAMP B	461+43	457+24	RT			419			
RAMP B	457+24	454+84	RT				240		
RAMP C	469+29	485+28	LT	1599					
RAMP C	469+29	477+28	RT		799				
RAMP C	477+28	478+99	RT			342			
RAMP C	477+28	478+99	RT					170	
RAMP C	478+99	482+14	RT				315		
RAMP C	469+67		RT						20
USR 33 & COUNTY ROAD 33A INT.									
RAMP A	639+32	654+45	RT	1513					
RAMP A	654+45	647+32	LT		713				
RAMP A	647+32	645+03	LT			458			
RAMP A	647+32	645+03	LT					170	
RAMP A	645+03	642+17	LT				286		
RAMP A	654+15		LT						20
RAMP D	680+00	654+02	RT	2598					
RAMP D	654+02	666+47	LT		1245				
RAMP D	666+47	671+15	LT			468			
RAMP D	671+15	673+55	LT				240		
RAMP B	635+64	664+04	LT	2840					
RAMP B	647+64	660+79 BB	RT		1315				
RAMP B	647+64	643+64	RT			400			
RAMP B	643+64	641+24	RT				240		
RAMP B	657+34	658+34	RT			100			
RAMP B	658+34	664+04	RT		570				
RAMP BB	657+34	658+34	LT			100			
RAMP BB	658+34	660+79	LT		245				
RAMP C	675+89	659+88	LT	1601					
RAMP C	667+89	659+88	RT						
RAMP C	667+89	670+57	RT		801				
RAMP C	667+89	670+57	RT			536			
RAMP C	670+57	673+23	RT					180	
RAMP C	660+18		RT				266		20
E. B.	330+00	354+35	RT				2435		
E. B.	355+50	415+50	RT				6000		
E. B.	416+52	526+30	RT				10978		
E. B.	527+33	576+53	RT				4920		
E. B.	577+59	680+00	RT				10241		
W. B.	330+00	354+35	LT				2435		
W. B.	355+50	415+50	LT				6000		
W. B.	416+52	526+30	LT				10978		
W. B.	527+33	576+53	LT				4920		
W. B.	577+59	680+00	LT				10241		
TOWNLINE-KOSSUTH ROAD									
T-K. RD.	20+66		LT					15	
T-K. RD.	19+35		RT					15	
GLYNWOOD-NEW KNOXVILLE ROAD									
G-NK. RD.	30+66		LT					15	
G-NK. RD.	29+38		RT					15	
BAY ROAD									
BAY RD.	30+67		LT					15	
BAY RD.	29+34		RT					15	
KETTLERVILLE ROAD									
KETT. RD.	30+66		LT					15	
KETT. RD.	29+33		RT					15	
SUB TOTALS				14380	7507	3214	70975	520	180
				MILES		LIN. FT.	MILES	LIN. FT.	LIN. FT
TOTALS TO TRAFFIC CONTROL SUMMARY				4.15		3214	13.44	520	180

PAVEMENT MARKING SUB-SUMMARY

FHWA REGION	STATE	PROJECT
5	OHIO	

AUGLAIZE COUNTY
AUG-33-6.63

FHWA REGION	STATE	PROJECT	
5	OHIO		

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AUGLAIZE COUNTY
AUG-33-6.63

FOR MATCH LINE SEE SHEET Nº 61

FOR MATCH LINE SEE SHEET Nº 63

NOTE: FOR CONTINUED LIGHTING SEE SHEET Nº 63

NOTE: FOR LIGHTING SYMBOLS SEE SHEET Nº 63

AUG-33-6.63 SIGNING PLAN

FHWA REGION	STATE	PROJECT	
5	OHIO		

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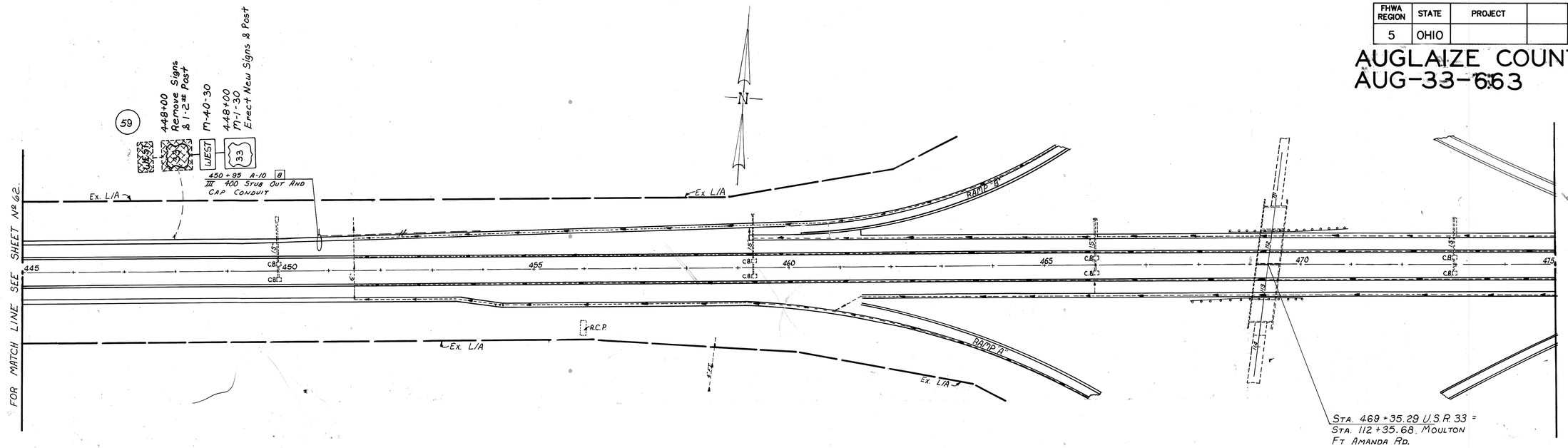
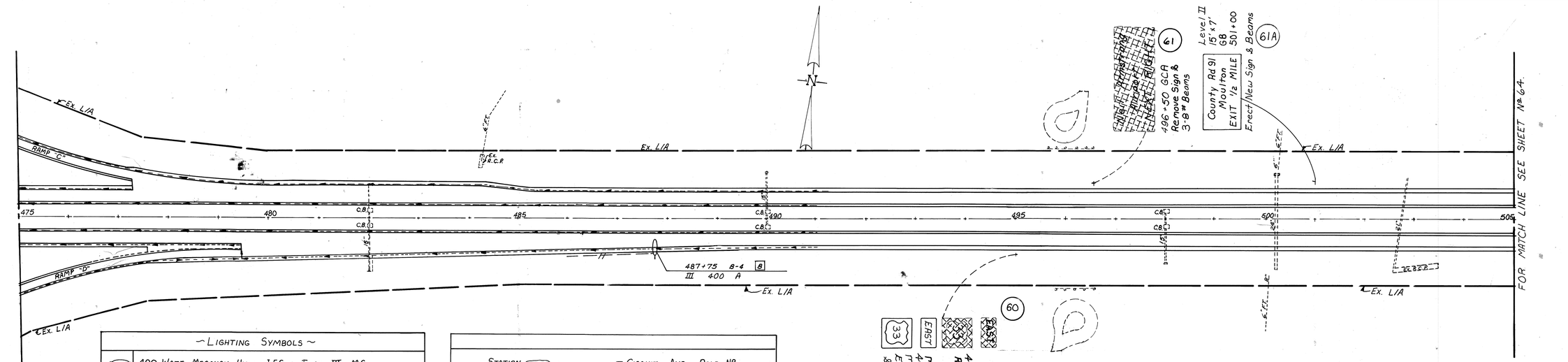
AUGLAIZE COUNTY
AUG-33-6.63



NOTE: For Signs On U.S.R. 33 & County Rd. 91 See Sheet Nº. 67.



~ Lighting Symbols ~

- 400 Watt Mercury Unit I.E.S. Type III MC
- 400 Watt Mercury Unit I.E.S. Type II MC
- Light And Sign Support
- Overhead Sign Support
- Pullbox – 18" I.D.
- 3" Conduit
- 2" Conduit
- Duct Cable
- Service Pole And Control Center
- Bridge Structure Pilaster

Station 454+45 — I.E.S. Pattern III — Circuit And Pole Nº. A7 — Base-Bracket & Base Reference B — Wattage 400

NOTE: For Continued Lighting See Sheet No. 66

NOTE: For Lighting Symbols See Sheet Nº. 63

AUG-33-6.63 SIGNING PLAN

FHWA REGION	STATE	PROJECT		
5	OHIO			

AUGLAIZE COUNTY
AUG-33-663

AUG-33-663 SIGNING PLAN

FHWA REGION	STATE	PROJECT	
5	OHIO		

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AUGLAIZE COUNTY
AUG-33-6.63

AUG-33-6.63 SIGNING PLAN

FHWA REGION	STATE	PROJECT	
5	OHIO		

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AUGLAIZE COUNTY
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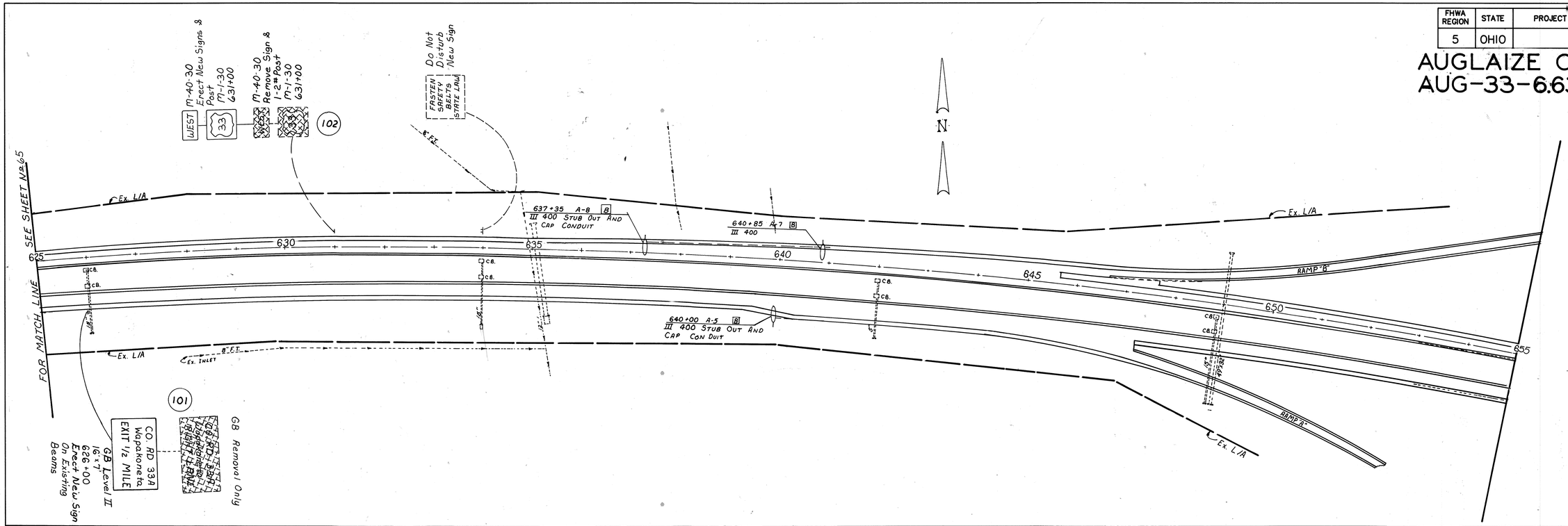

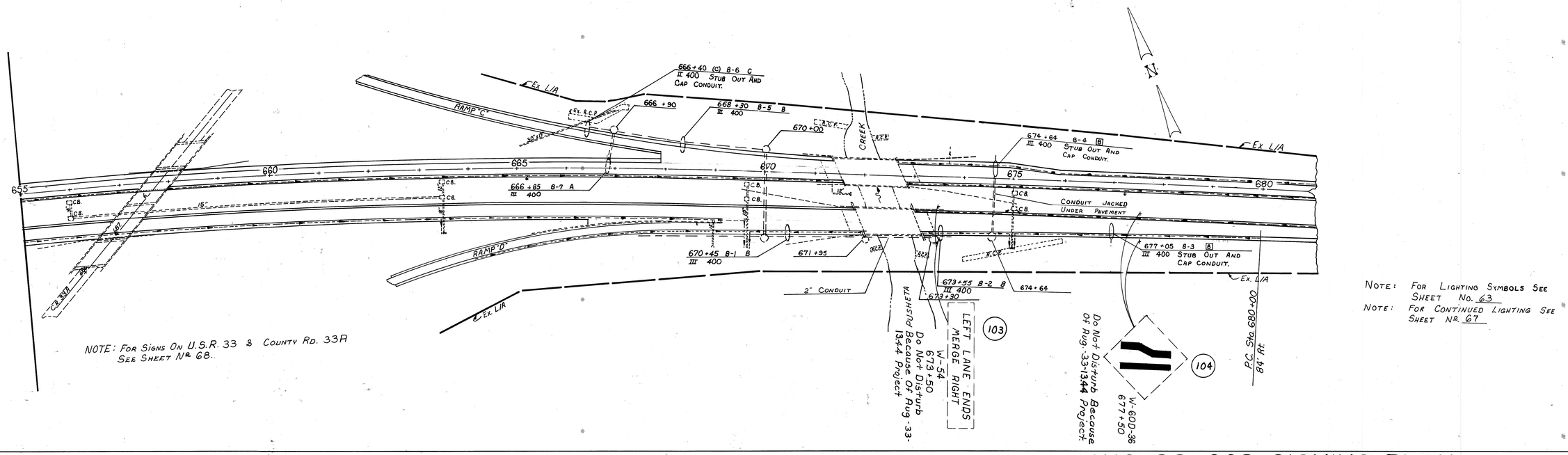

NOTE: FOR LIGHTING SYMBOLS SEE SHEET No. 63

NOTE: FOR CONTINUED LIGHTING SEE SHEET Nº 67

AUG-33-6.63 SIGNING PLAN

PROP. U.S.R.-33 & MOULTON-FT. AMANDA RD. INTERCHANGE

AUGLAIZE COUNTY
AUG-33-6.63

PROP. U.S.R. 33 & MOULTON-FT. AMANDA RD. INTERCHANGE

U.S.R. 33 & EXIST CO. RD. 33A INTERCHANGE

AUGLAIZE
AUG-33-663

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Note: All Overhead Signs On This Sheet Have 12" Glare Shields

Note: For Continued Lighting See Sheet No. 66

Note: For Lighting Symbols See Sheet No. 63

U.S.R. 33 & C.R. 33A INTERCHANGE

FHWA REGION	STATE	PROJECT	
5	OHIO		

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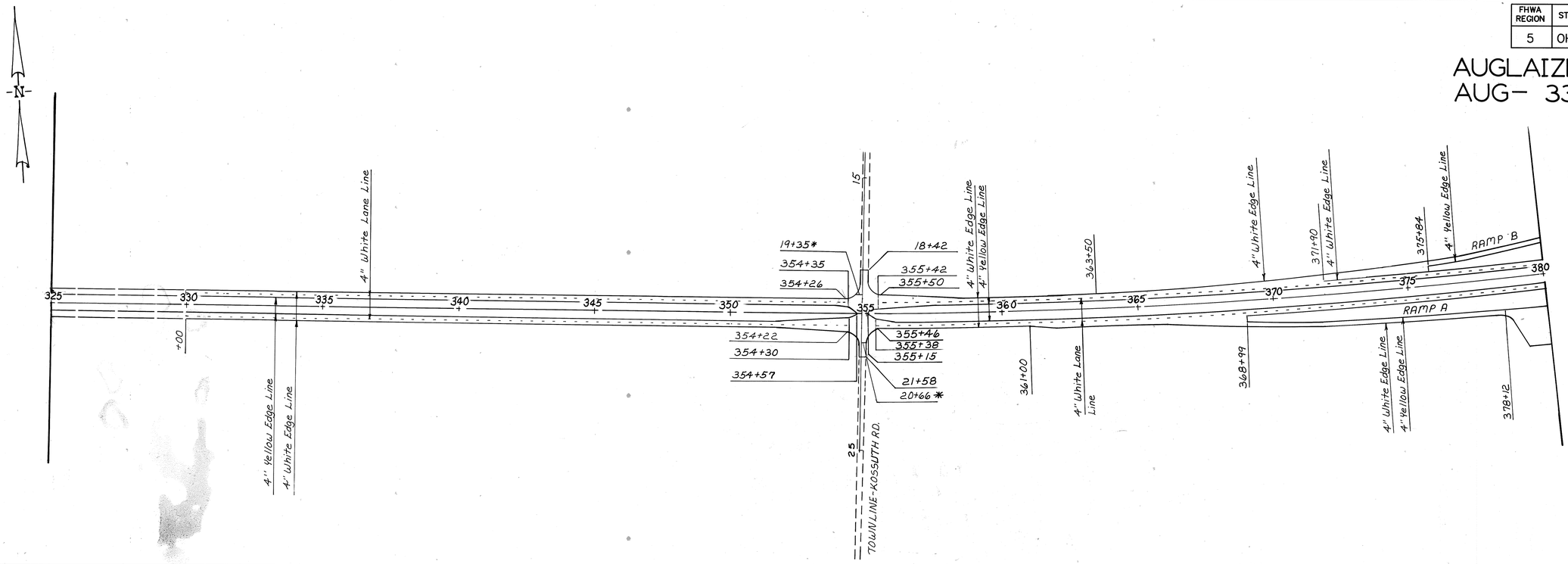
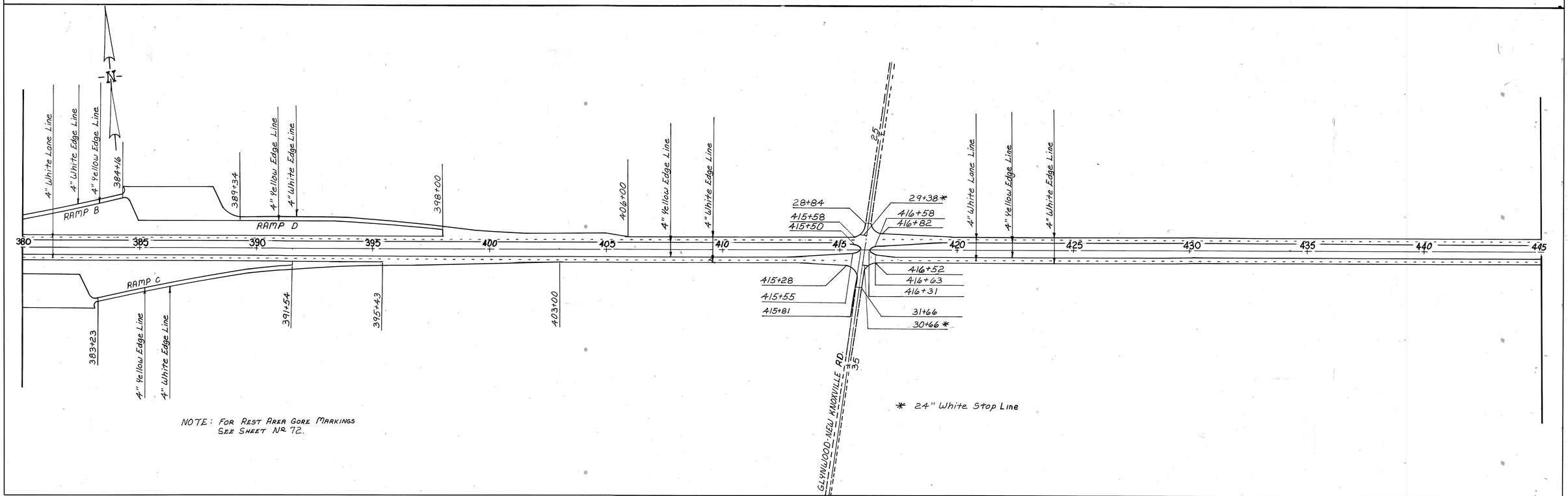
AUGLAIZE COUNTY
AUG- 33-6.63





PAVEMENT MARKING PLANS STA 325+00 TO STA 445+00

FHWA REGION	STATE	PROJECT	
5	OHIO		

70
88

AUGLAIZE COUNTY
AUG-33 -6.63

4" Yellow Edge Line
4" White Edge Line
449+24
4" White Edge Line
457+24
4" White Edge Line
461+43
4" Yellow Edge Line
460(B)
465(B)
470+38
470(B)
105
469+67 *
470(C)
469+28
4" Yellow Edge Line
475(C)
477+28
480(C)
4" White Edge Line
485+28
20
25
4" White Lane Line
4" White Edge Line
453+43
4" White Edge Line
460(A)
461+41
4" Yellow Edge Line
465(A)
115
469+43
470(D)
468+32
469+05 *
120
4" Yellow Edge Line
475(D)
477+54
4" White Edge Line
481+47
4" White Edge Line
489+47
35
40
4" White Edge Line
4" Yellow Edge Line
445 450 455 460 465 470 475 480 485 490 495 500 505 510

NOTE: FOR USR 33 AND COUNTY RD. 91 GORE MARKINGS SEE SHEET N2 72.

20
25
4" White Lane Line
4" Yellow Edge Line
28+35
526+29
526+30
29+34 *
527+37
527+61
4" White Lane Line
4" Yellow Edge Line
510 515 520 525 530 535 540 545 550 555 560 565 570 575
526+10
526+34
526+60
31+66
527+42
527+33
527+10
30+67 *
4" White Edge Line
4" White Edge Line
35
40 BAY ROAD

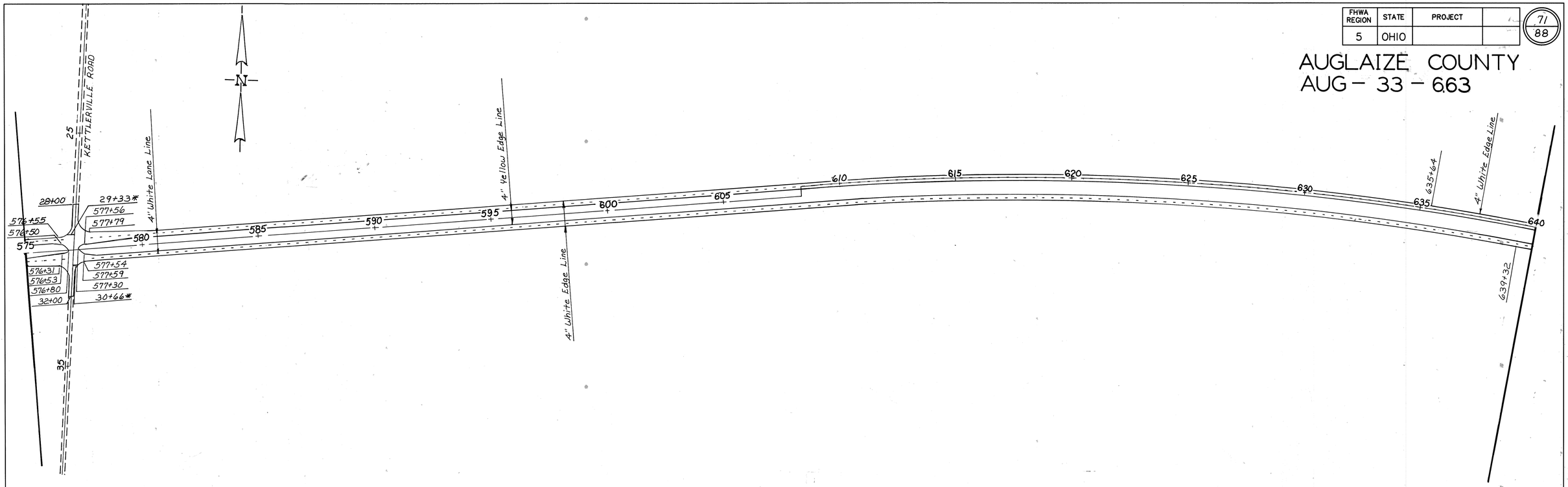
* 24" White Stop Line

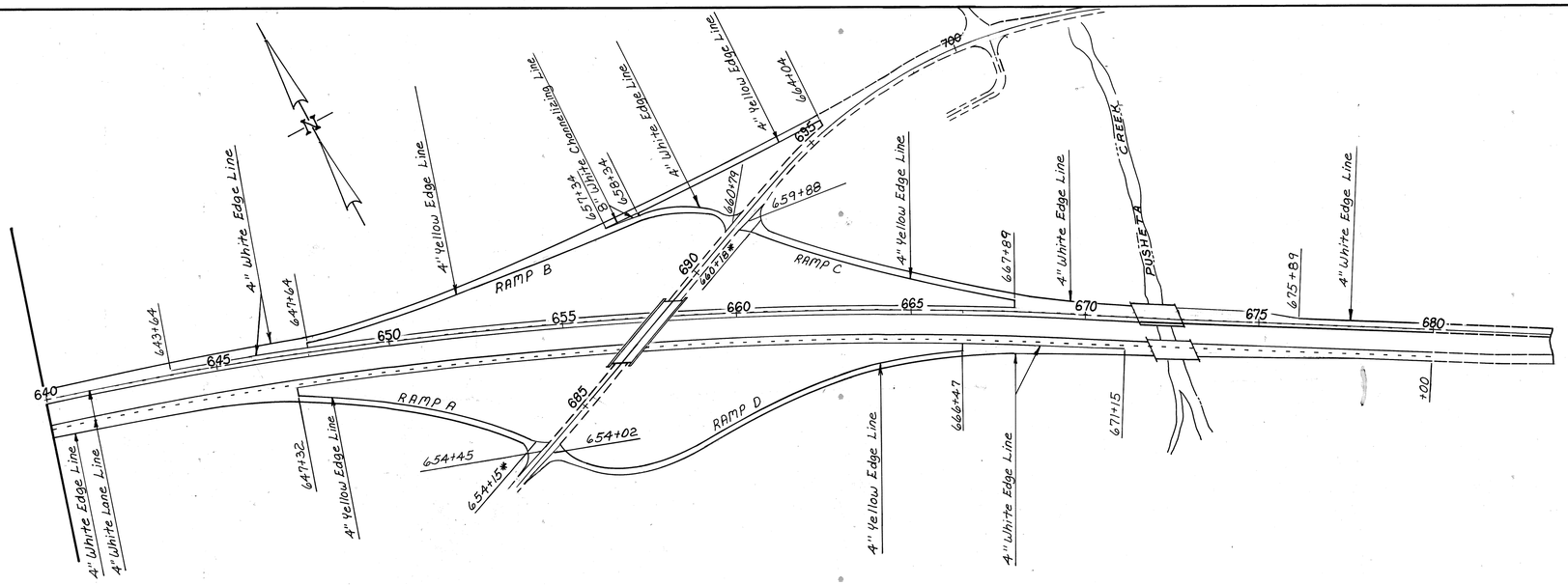
PAVEMENT MARKING PLANS STA 445+00 TO STA 575+00

FHWA REGION	STATE	PROJECT	
5	OHIO		

71
88

AUGLAIZE COUNTY
AUG – 33 – 6.63





* 24" White Stop Line

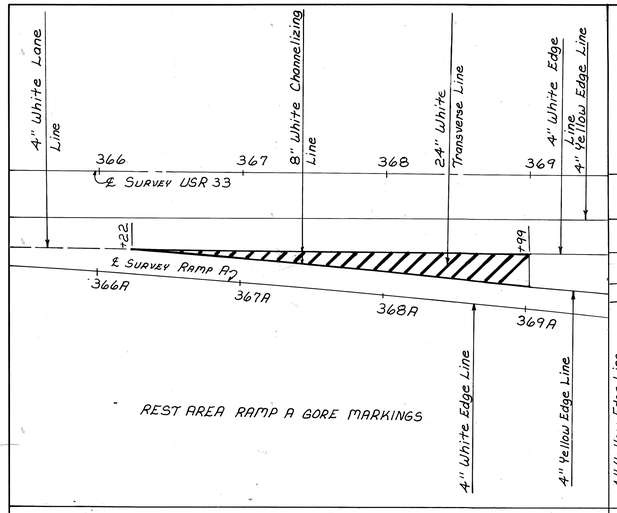
NOTE : FOR USR 33 & COUNTY RD. 33A GORE MARKINGS SEE SHEET Nº 72.

PAVEMENT MARKING PLANS - STA. 575+00 TO STA. 680+00

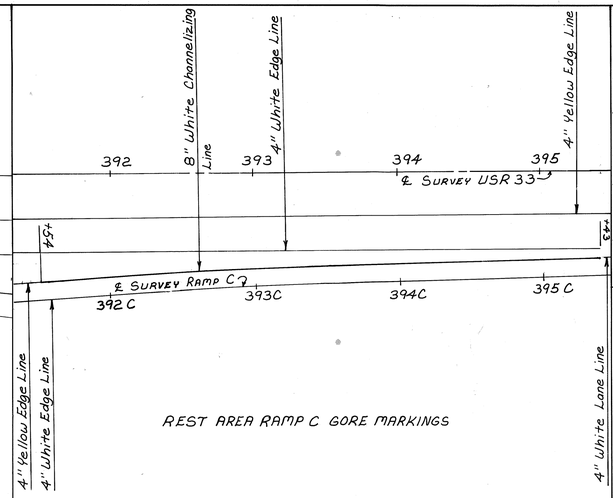
FHWA REGION	STATE	PROJECT	
5	OHIO		

72
88

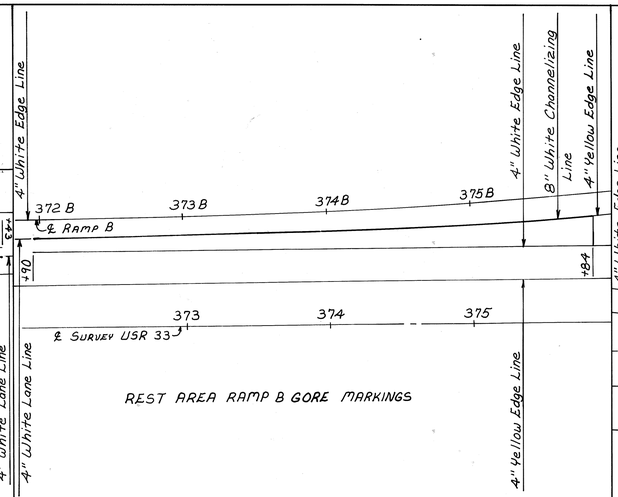
AUGLAIZE COUNTY
AUG-33-6.63



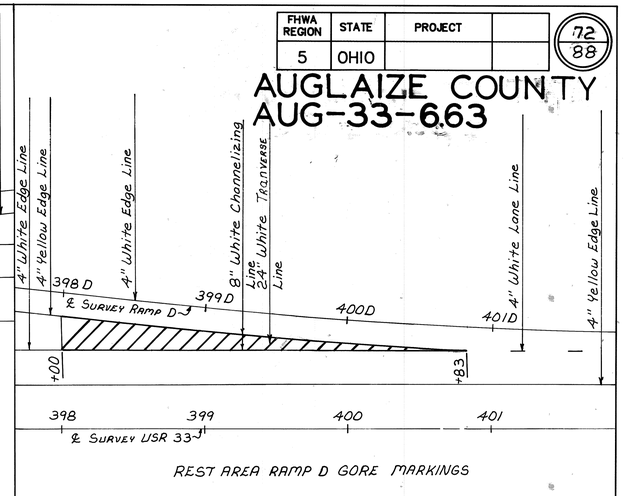
REST AREA RAMP A GORE MARKINGS



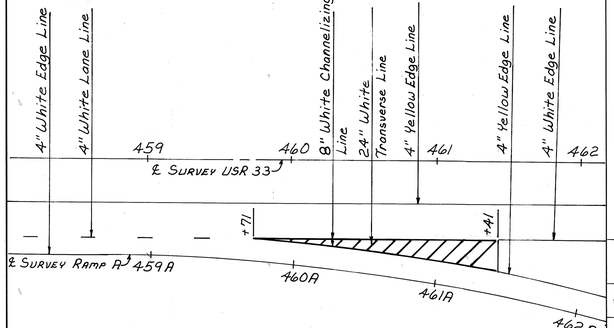
REST AREA RAMP C GORE MARKINGS



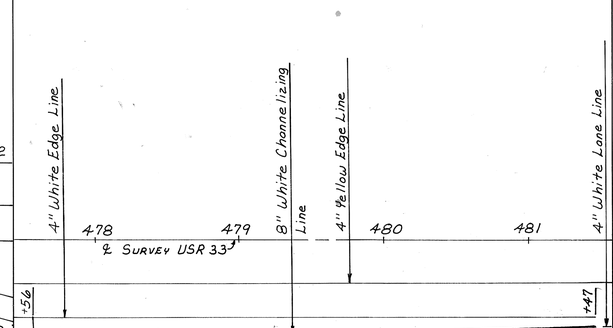
REST AREA RAMP B GORE MARKINGS



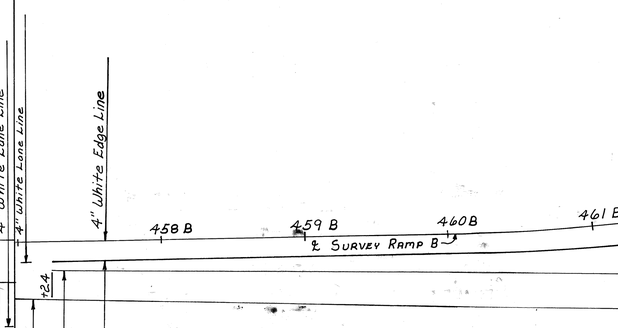
REST AREA RAMP D GORE MARKINGS



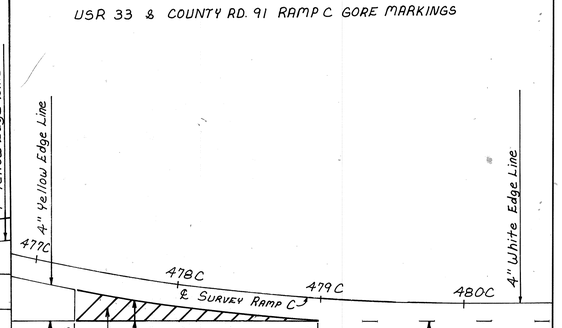
USR 33 & COUNTY RD. 91 RAMP A GORE MARKINGS



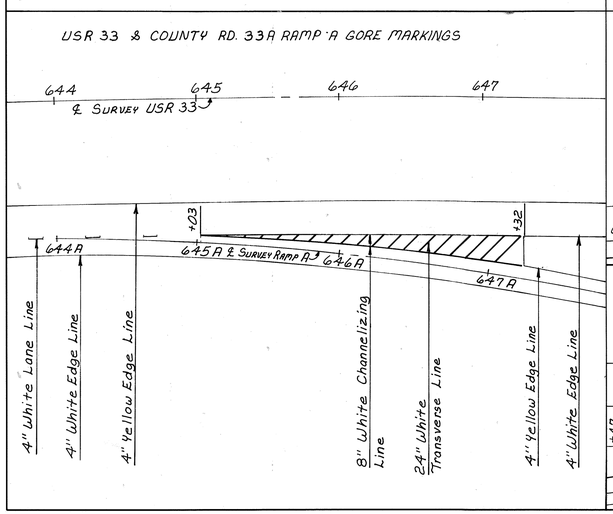
USR 33 & COUNTY RD. 91 RAMP D GORE MARKINGS



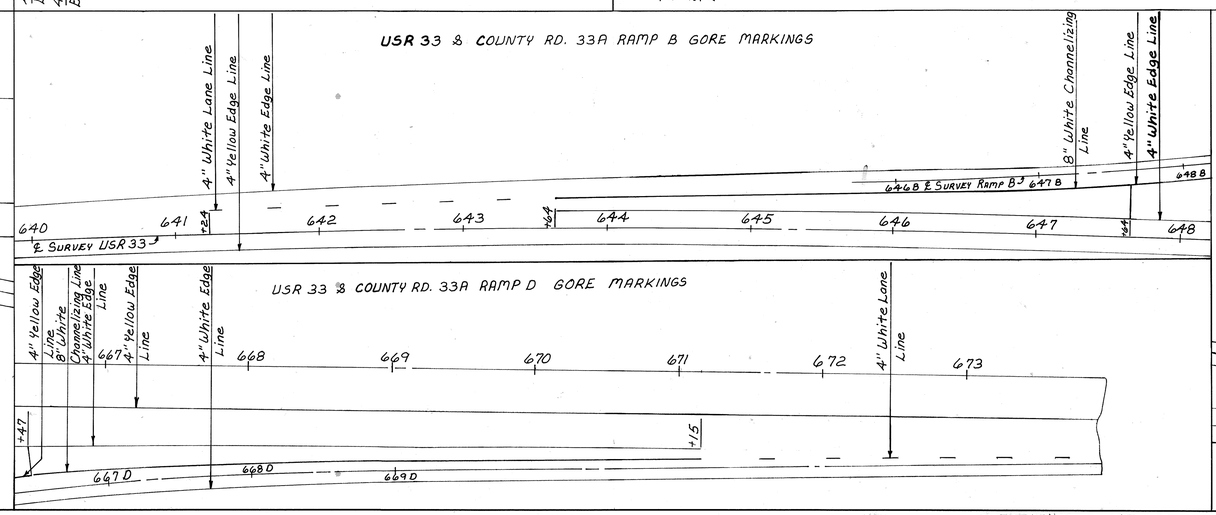
USR 33 & COUNTY RD. 91 RAMP B GORE MARKINGS



USR 33 & COUNTY RD. 91 RAMP C GORE MARKINGS

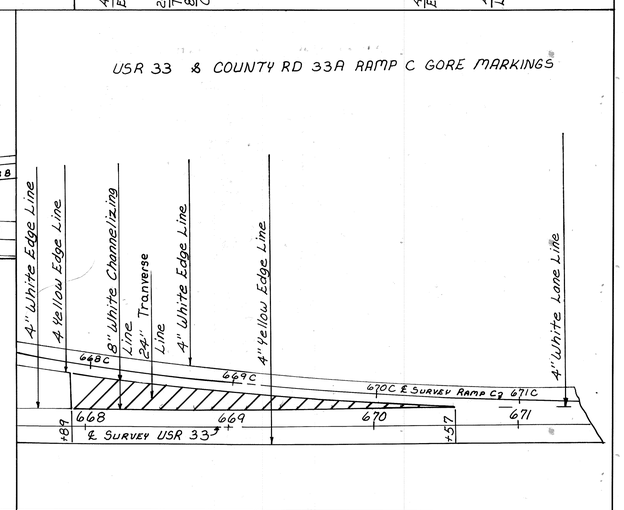


USR 33 & COUNTY RD. 33A RAMP A GORE MARKINGS



USR 33 & COUNTY RD. 33A RAMP B GORE MARKINGS

USR 33 & COUNTY RD. 33A RAMP D GORE MARKINGS



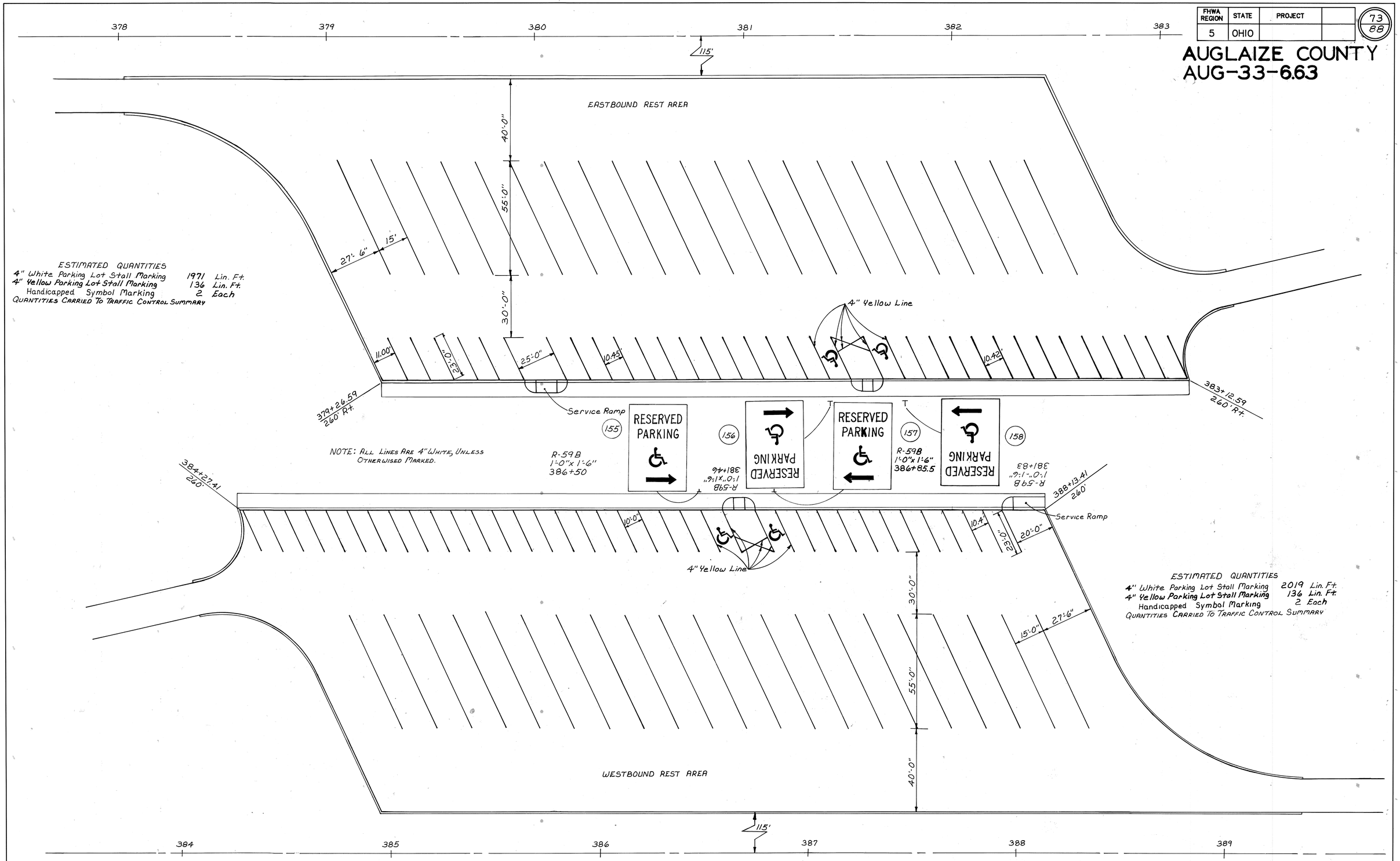
USR 33 & COUNTY RD 33A RAMP C GORE MARKINGS

PAVEMENT MARKING DETAILS

FHWA REGION	STATE	PROJECT	
5	OHIO		

73
88

AUGLAIZE COUNTY
AUG-33-6.63



NOTE: ALL LINES ARE 4" WHITE, UNLESS OTHERWISED MARKED.

ESTIMATED QUANTITIES

4" White Parking Lot Stall Marking	1971	Lin. Ft.
4" Yellow Parking Lot Stall Marking	136	Lin. Ft.
Handicapped Symbol Marking	2	Each

QUANTITIES CARRIED TO TRAFFIC CONTROL SUMMARY

ESTIMATED QUANTITIES

4" White Parking Lot Stall Marking	2019	Lin. Ft.
4" Yellow Parking Lot Stall Marking	136	Lin. Ft.
Handicapped Symbol Marking	2	Each

QUANTITIES CARRIED TO TRAFFIC CONTROL SUMMARY

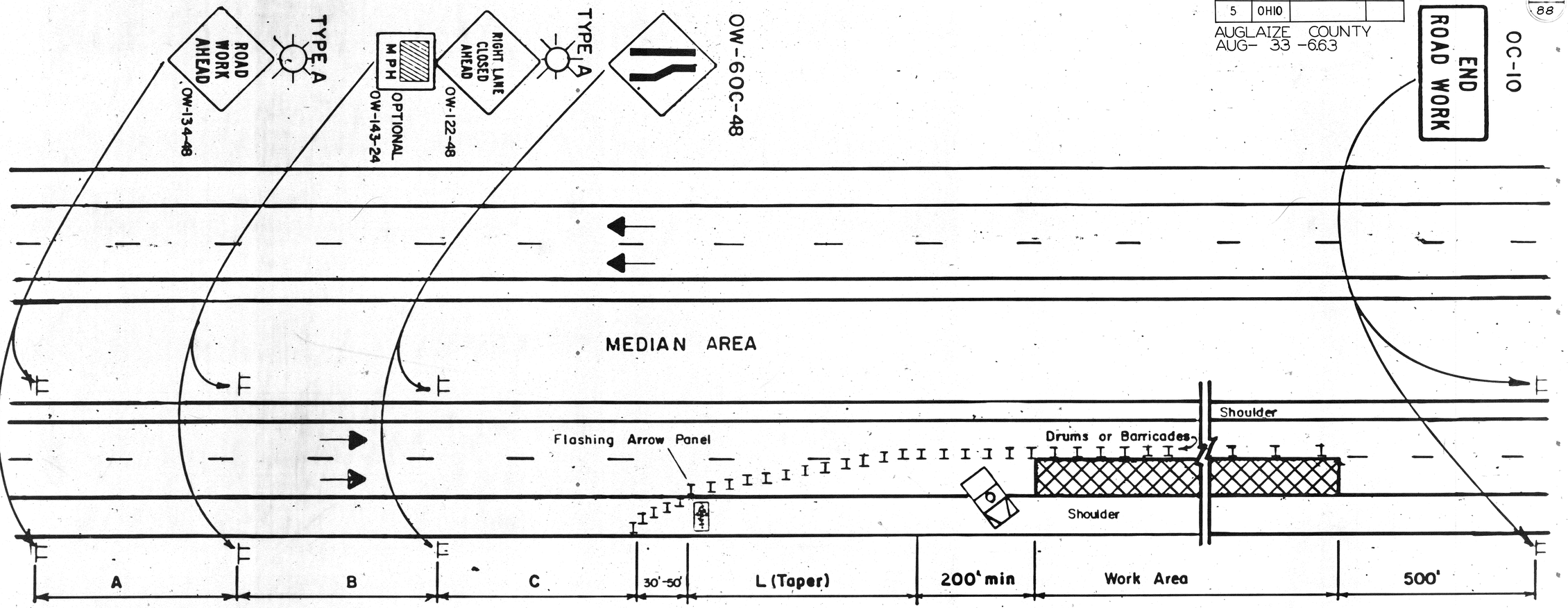
REST AREAS PARKING LOT PAVEMENT MARKING

FHWA REGION	STATE	PROJECT	
5	OHIO		

AUGLAIZE COUNTY
AUG- 33 -6.63

74
88

OC-10



GENERAL NOTES:

1. The taper length (L) shall be in accordance with Section 7F-17 of the OMUTCD. The location of the transition taper and location of the advance warning signs should be adjusted to provide for adequate sight distance for the existing vertical and horizontal roadway alignment. In order to determine the minimum number of channelizing devices for the transition taper see Table 7-5 OMUTCD. For a 55 MPH prevailing speed and a 12 ft. lane, not less than thirteen (13) drums or barricades shall be used to form the lane transition taper in advance of the work area. Not less than five (5) drums or barricades shall be used to form the taper on the shoulder. Drums or barricades shall be spaced approximately 50' to 60' center to center for the first 1000 feet of the work area and at a maximum of 100 to 120 feet for the balance of the work area. Cones may be substituted for barricades or drums for short term lane closures during daylight hours only.

2. The major standard level warning sign sizes may be used on divided streets or highways that are not classified as freeways or expressways.

3. When work is being performed in the lane adjacent to the median on a divided highway an OW-123-48 sign(s) shall be substituted for the OW-122-48 sign(s) and an OW-60D-48 sign(s) shall be substituted for the OW-60C sign(s).

4. The work vehicle shown at the beginning of the work area shall be in place and unoccupied whenever workers are in the work area. This work vehicle shall be removed from the pavement whenever workers are not in the work area. Other protective devices may be used in lieu of the work vehicle shown when approved by the Engineer. The vehicle shall be equipped with a 360° rotating or flashing amber beacon clearly visible a minimum of a ¼ mile.

5. The flashing arrow panel shall meet requirements contained in Standard Drawing TC-35.10

6. Type C steady burning barricade warning lights shall be erected on ALL DRUMS OR BARRICADES FOR NIGHT LANE CLOSURES.

MINIMUM DISTANCE	A	B	C
MAJOR STANDARD	500'	500'	500'
URBAN FREEWAY & EXPRESSWAY	500' TO 1000'	500' TO 1000'	500' TO 1000'
RURAL FREEWAY & EXPRESSWAY	2600'	1600'	1000'

7. Type A flashing barricade warning lights shown on the "Road Work Ahead" and the "Right Lane Closed Ahead" signs are required whenever a night lane closure is necessary.

8. Some work area locations may require more than just static or conventional signs to enhance communication with the driver. At these locations Portable Changeable Message Signs (PCMS) units are recommended. These devices should be located approximately 2000 TO 4000 FT. IN ADVANCE OF A LANE CLOSURE or other point of required action. See Section 7G-8.1, OMUTCD for further guidance on use of PCMS units.

OHIO DEPARTMENT OF TRANSPORTATION

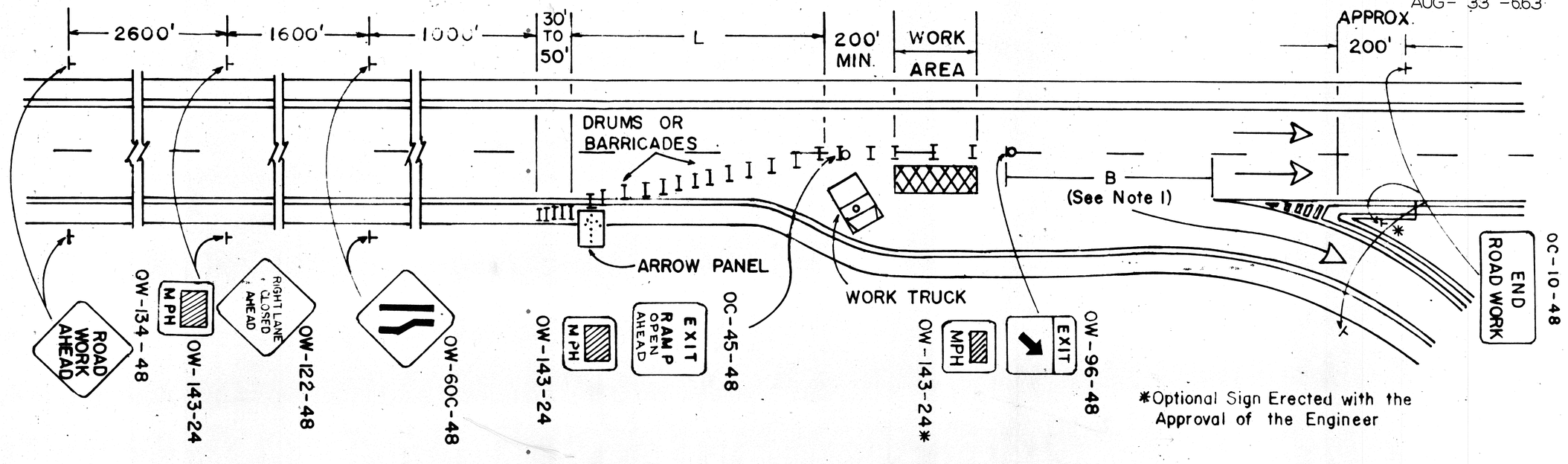
CLOSING ONE LANE OF A FOUR LANE DIVIDED HIGHWAY

DATE 12/82

FHWA REGION	STATE	PROJECT	
5	OHIO		

75/88

AUGLAIZE COUNTY
AUG- 33 -6.63



GENERAL NOTES

1. THIS WORK AREA TRAFFIC CONTROL APPLICATION SHALL ONLY BE USED WHEN THE DISTANCE "B" IS 100 FEET OR GREATER. WHEN "B" IS LESS THAN 100 FEET, THE TRAFFIC CONTROL SHOWN ON THE "LANE CLOSURE AT EXIT GORE" DETAIL SHOULD BE USED, OR THE EXIT SHOULD BE CLOSED, OR THE TRAFFIC CONTROL ON THIS DRAWING MAY BE USED WITH APPROVAL OF THE ENGINEER. WHEN THE EXIT IS CLOSED, APPROPRIATE DETOUR SIGNS SHALL BE PROVIDED.

2. WHEN WORK IS BEING PERFORMED IN THE LANE ADJACENT TO THE MEDIAN ON A DIVIDED HIGHWAY, REFER TO THE TYPICAL WORK AREA TRAFFIC CONTROL SHOWN IN FIGURE C-21 OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

3. THE WORK TRUCK SHOWN AT THE BEGINNING OF THE WORK AREA SHALL BE IN PLACE AND UNOCCUPIED WHENEVER MEN ARE WORKING WITHIN THE WORK AREA. THIS TRUCK SHALL BE MOVED FROM THE PAVEMENT WHENEVER WORKMEN ARE NOT IN THE WORK AREA. OTHER PROTECTIVE DEVICES MAY BE USED IN LIEU OF THE WORK TRUCK SHOWN WHEN APPROVED BY THE ENGINEER. WORK VEHICLES SHALL BE EQUIPPED WITH A 360° ROTATING OR FLASHING AMBER LIGHT BEACON CLEARLY VISIBLE A MINIMUM OF 1/4 MILE.

4. THE FLASHING ARROW PANEL SHALL BE IN ACCORDANCE WITH TC-35.10.

5. THIRTEEN (13) DRUMS OR BARRICADES SHALL BE USED TO FORM THE LANE TRANSITION TAPER IN ADVANCE OF THE WORK AREA. FIVE (5) CHANNELIZING DEVICES SHALL BE USED TO FORM THE TAPER ON THE SHOULDER. DRUMS OR BARRICADES SHALL BE SPACED AT 50 FOOT CENTERS. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS FOR THE LANE CLOSURES DURING DAYLIGHT HOURS ONLY.

6. TYPE C STEADY BURNING BARRICADE WARNING LIGHTS SHALL BE ERECTED ON ALL DRUMS OR BARRICADES FOR NIGHT LANE CLOSURES.

7. TAPER FORMULAE:

   $L = S \times W$ FOR SPEEDS OF 45 OR MORE.
   $L = WS^2/60$ FOR SPEEDS OF 40 OR LESS.

   WHERE:

   L = MINIMUM LENGTH OF TAPER.
   S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85 PERCENTILE SPEED.
   W = WIDTH OF OFFSET.

8. THE SPACINGS BETWEEN CONSTRUCTION AND MAINTENANCE SIGNS SHOWN ON THIS DETAIL MAY REQUIRE ADJUSTMENTS (INCREASES OR DECREASES) TO ASSURE THAT THEY ARE POSITIONED NO CLOSER THAN 200 FEET TO EXISTING SIGNS AS DETERMINED BY THE ENGINEER.

9. FOR NIGHT CLOSURES, EACH OF THE FIRST TWO SIGNS IN THE SEQUENCE (ROAD WORK AHEAD AND RIGHT LANE CLOSED AHEAD) IS REQUIRED TO BE SUPPLEMENTED BY A TYPE A FLASHING BARRICADE WARNING LIGHT.

OHIO DEPARTMENT OF TRANSPORTATION

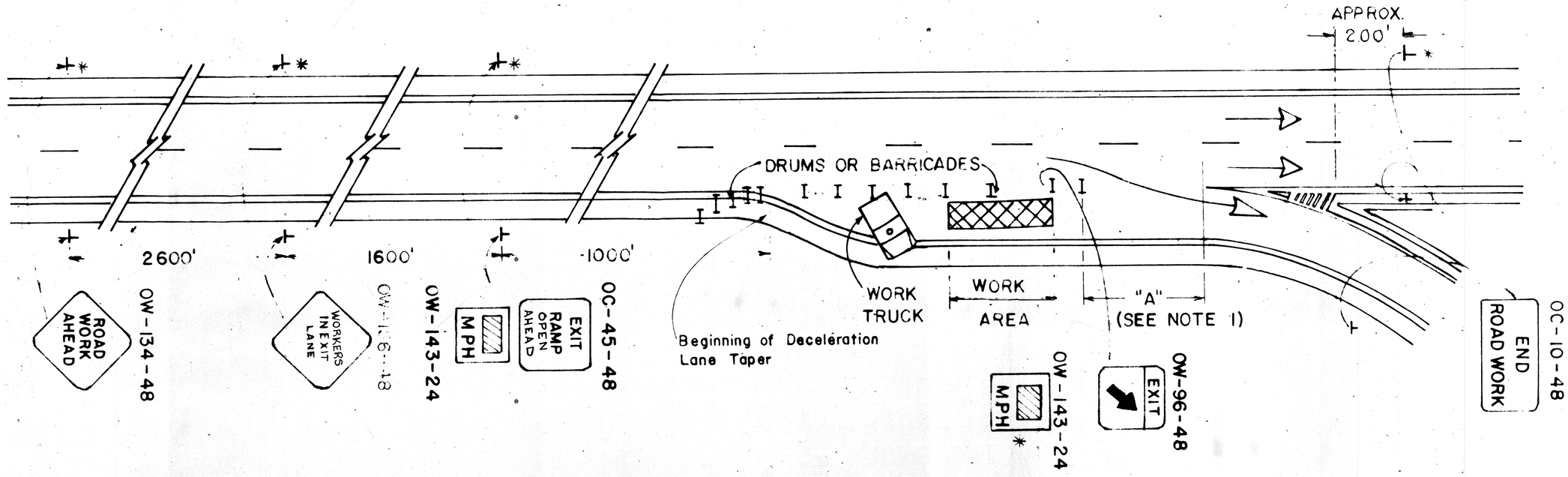
LANE CLOSURE BEFORE EXIT GORE

DATE 8-3-79

FHWA REGION	STATE	PROJECT	
5	OHIO		

76
88

AUGLAIZE COUNTY
AUG- 33-6.63



*OPTIONAL SIGN ERECTED WITH THE APPROVAL OF THE ENGINEER.

GENERAL NOTES.

1. THIS WORK AREA TRAFFIC CONTROL APPLICATION SHALL ONLY APPLY WHEN THE DISTANCE "A" IS GREATER THAN 100'. WHEN DISTANCE "A" IS LESS THAN 100', THE RAMP SHALL BE CLOSED. WHEN THE RAMP IS CLOSED, THE TRAFFIC CONTROL SHALL INCLUDE DETOUR SIGNING FOR EXIT RAMP CLOSURES IN ACCORDANCE WITH OMUTCD.

2. DRUMS OR BARRICADES SHALL BE SPACED AT 50 FOOT CENTERS. CONES MAY BE SUBSTITUTED FOR BARRICADES OR DRUMS FOR THE LANE CLOSURES DURING DAYLIGHT HOURS ONLY.

3. TYPE C STEADY BURNING BARRICADE WARNING LIGHTS SHALL BE ERECTED ON ALL DRUMS OR BARRICADES FOR NIGHT LANE CLOSURES.

4. THE WORK TRUCK SHOWN AT THE BEGINNING OF THE WORK AREA SHALL BE IN PLACE AND UNOCCUPIED WHENEVER MEN ARE WORKING WITHIN THE WORK AREA. THIS TRUCK SHALL BE MOVED FROM THE PAVEMENT WHENEVER WORKMEN ARE NOT IN THE WORK AREA. OTHER PROTECTIVE DEVICES MAY BE USED IN LIEU OF THE WORK TRUCK SHOWN WHEN APPROVED BY THE ENGINEER.

5. THE SPACINGS BETWEEN CONSTRUCTION AND MAINTENANCE SIGNS SHOWN ON THIS DETAIL MAY REQUIRE ADJUSTMENTS (INCREASES OR DECREASES) TO ASSURE THAT THEY ARE POSITIONED NO CLOSER THAN 200 FEET TO EXISTING SIGNS AS DETERMINED BY THE ENGINEER.

6. WORK VEHICLES SHALL BE EQUIPPED WITH A 360° ROTATING OR FLASHING AMBER BEACON CLEARLY VISIBLE A MINIMUM OF 1/4 MILE.

7. FOR NIGHT CLOSURES, EACH OF THE FIRST TWO SIGNS IN SEQUENCE (ROAD WORK AHEAD AND WORKERS IN EXIT LANE) IS REQUIRED TO BE SUPPLEMENTED BY A TYPE A FLASHING BARRICADE WARNING LIGHT.

OHIO DEPARTMENT OF TRANSPORTATION

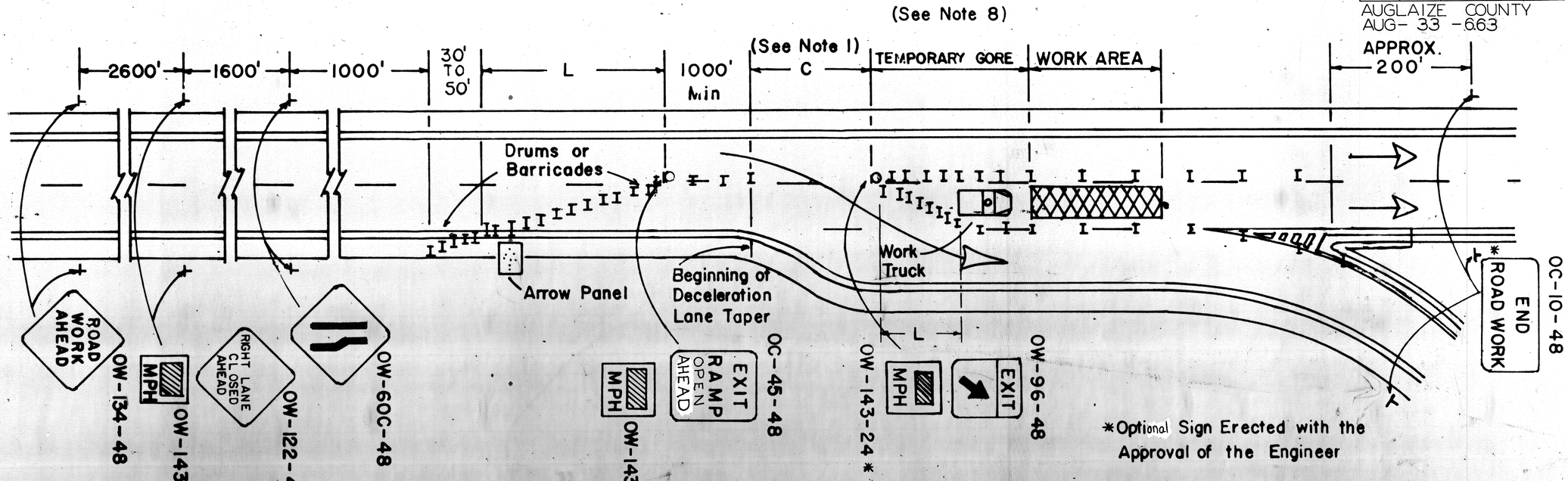
LANE CLOSURE IN DECELERATION LANE

DATE 8-3-79

FHWA REGION	STATE	PROJECT	
5	OHIO		

77
88

AUGLAIZE COUNTY
AUG- 33 -6.63



*Optional Sign Erected with the Approval of the Engineer

GENERAL NOTES

1. **THIS WORK AREA TRAFFIC CONTROL APPLICATION SHALL ONLY BE USED WHEN THE DISTANCE "C" IS 100 FEET OR GREATER. WHEN "C" IS LESS THAN 100 FEET, THE TRAFFIC CONTROL SHOWN ON THE "LANE CLOSURE BEFORE EXIT GORE" DETAIL SHOULD BE USED, OR THE EXIT SHOULD BE CLOSED, OR THE TRAFFIC CONTROL ON THIS DRAWING MAY BE USED WITH APPROVAL OF THE ENGINEER. WHEN THE EXIT IS CLOSED, APPROPRIATE DETOUR SIGNS SHALL BE PROVIDED.**

2. WHEN WORK IS BEING PERFORMED IN ONLY THE LANE ADJACENT TO THE MEDIAN ON A DIVIDED HIGHWAY, REFER TO THE TYPICAL WORK AREA TRAFFIC CONTROL SHOWN IN FIGURE C-21 OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

3. THE WORK TRUCK SHOWN AT THE BEGINNING OF THE WORK AREA SHALL BE IN PLACE AND UNOCCUPIED WHENEVER MEN ARE WORKING WITHIN THE WORK AREA. THIS TRUCK SHALL BE MOVED FROM THE PAVEMENT WHENEVER WORKMEN ARE NOT IN THE WORK AREA. OTHER PROTECTIVE DEVICES MAY BE USED IN LIEU OF THE WORK TRUCK SHOWN WHEN APPROVED BY THE ENGINEER. A TRUCK MOUNTED IMPACT ATTENUATOR MAY BE EMPLOYED. WORK VEHICLES SHALL BE EQUIPPED WITH A 360° ROTATING OR FLASHING AMBER BEACON CLEARLY VISIBLE A MINIMUM OF 1/4 MILE.

4. THE FLASHING [redacted] ARROW PANEL SHALL BE IN ACCORDANCE WITH TC-35.10. [redacted]

5. THIRTEEN (13) DRUMS OR BARRICADES SHALL BE USED TO FORM THE LANE TRANSITION TAPER IN ADVANCE OF THE WORK AREA. FIVE (5) CHANNELIZING DEVICES SHALL BE USED TO FORM THE TAPER ON THE SHOULDER. [redacted] DRUMS OR BARRICADES SHALL BE SPACED AT 50 FOOT CENTERS. CONES MAY BE SUBSTITUTED FOR BARRICADES OR **DRUMS FOR THE LANE** CLOSURES DURING DAYLIGHT HOURS ONLY.

6. TYPE C STEADY BURNING BARRICADE WARNING LIGHTS SHALL BE ERECTED ON ALL DRUMS OR BARRICADES FOR NIGHT LANE CLOSURES.

7. TAPER FORMULAE:

   $L = S \times W$ FOR SPEEDS OF 45 OR MORE.
   $L = WS^2/60$ FOR SPEEDS OF 40 OR LESS.

   WHERE:

   L = MINIMUM LENGTH OF TAPER.
   S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85 PERCENTILE SPEED.
   W = WIDTH OF OFFSET.

8. WHEN CREATING A TEMPORARY GORE, CHANNELIZING DEVICES SHOULD BE SPACED 25' CENTER TO CENTER SO AS TO CREATE A "SOLID GORE" **EFFECT.**

9. THE SPACINGS BETWEEN CONSTRUCTION AND MAINTENANCE SIGNS SHOWN ON THIS DETAIL MAY REQUIRE ADJUSTMENTS (INCREASES OR DECREASES) TO ASSURE THAT THEY ARE POSITIONED NO CLOSER THAN 200 FEET TO EXISTING SIGNS AS DETERMINED BY THE ENGINEER.

10. FOR NIGHT CLOSURE, EACH OF THE FIRST TWO SIGNS IN THE SEQUENCE (ROAD WORK AHEAD AND RIGHT LANE CLOSED AHEAD) IS REQUIRED TO BE SUPPLEMENTED BY A TYPE A FLASHING BARRICADE WARNING LIGHT.

OHIO DEPARTMENT OF TRANSPORTATION.

LANE CLOSURE AT EXIT GORE

DATE 8-3-79

FHWA REGION	STATE	PROJECT	
5	OHIO		

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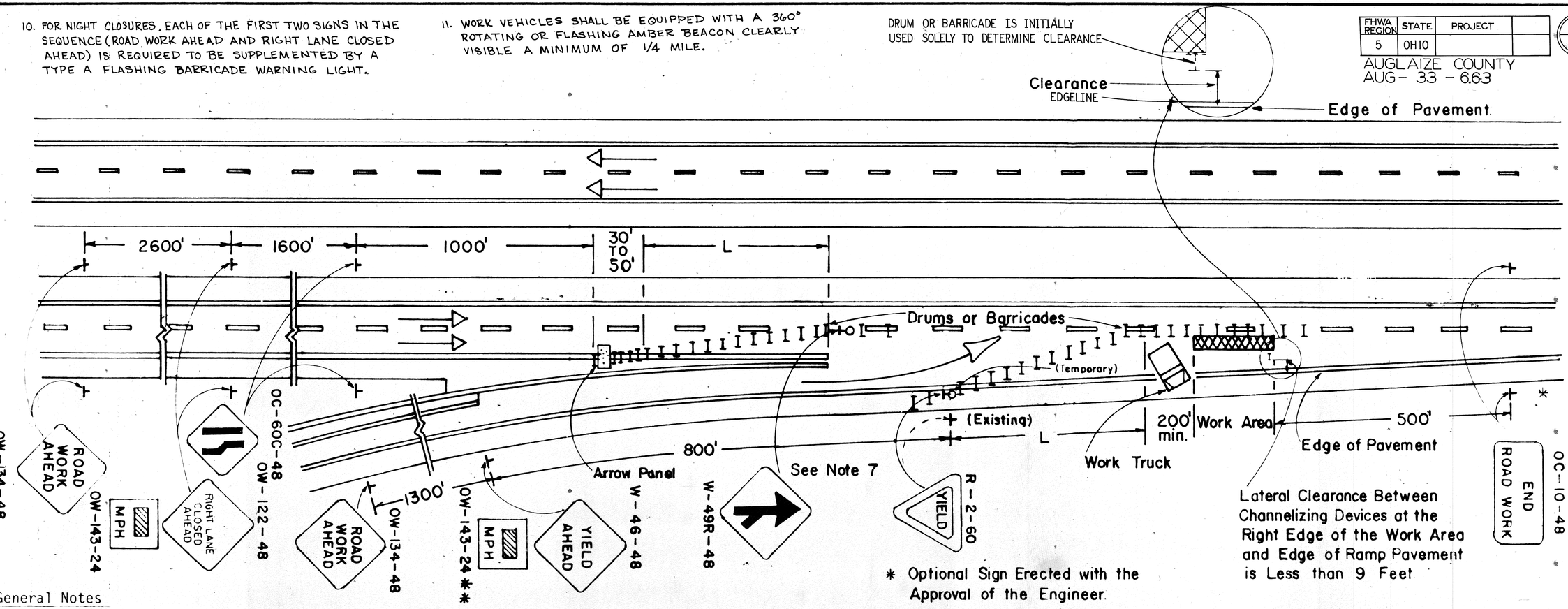
AUGLAIZE COUNTY
AUG - 33 - 6.63

10. FOR NIGHT CLOSURES, EACH OF THE FIRST TWO SIGNS IN THE SEQUENCE (ROAD WORK AHEAD AND RIGHT LANE CLOSED AHEAD) IS REQUIRED TO BE SUPPLEMENTED BY A TYPE A FLASHING BARRICADE WARNING LIGHT.

11. WORK VEHICLES SHALL BE EQUIPPED WITH A 360° ROTATING OR FLASHING AMBER BEACON CLEARLY VISIBLE A MINIMUM OF 1/4 MILE.

DRUM OR BARRICADE IS INITIALLY USED SOLELY TO DETERMINE CLEARANCE



Lateral Clearance Between Channelizing Devices at the Right Edge of the Work Area and Edge of Ramp Pavement is Less than 9 Feet

* Optional Sign Erected with the Approval of the Engineer.

General Notes

1. This work area traffic control application shall be employed when the lateral clearance between channelizing devices at the right edge of the work area and the edge of the ramp pavement is less than 9 feet. When the clearance is more than 9 feet, the traffic control on "Lane Closure at Entrance Ramp: Plan A" should be used, or the ramp should be closed. When the ramp is closed, appropriate detour signs shall be provided.

2. Thirteen (13) drums or barricades shall be used to form the lane transition taper in advance of the work area. Five (5) channelizing devices shall be used to form the taper on the shoulder. Drums or barricades shall be spaced at 50 foot centers. Cones may be substituted for barricades or drums for the lane closures during daylight hours only.

3. Ramp signs shall be dual mounted on multi-lane ramps. When the ramp is not long enough to allow placement as specified above, the signs may be spaced proportionately within the space available as determined by the Engineer (a 200' minimum spacing must be maintained).

4. The flashing arrow panel shall be in accordance with TC-35.10.

5. The work truck shown at the beginning of the work area shall be in place and unoccupied whenever men are working within the work area. This truck shall be moved from the pavement whenever workmen are not in the work area. Other protective devices may be used in lieu of work truck shown when approved by the Engineer.

6. Type C steady burning barricade warning lights shall be erected on all drums or barricades for night lane closures.

7. It may be necessary to move the location of an existing Yield condition. In these cases, the permanent R-2 sign installation shall be covered and the temporary installation shall be mounted upon a drive post which shall be banded to a drum with stainless steel strapping material or other techniques subject to the approval of the Engineer.

8. Taper Formulae:

   $L = S \times W$ for Speeds of 45 or more.
   $L = WS^2/60$ for Speeds 40 or less.

   Where:

   L = Minimum length of taper.
   S = Numerical value of posted speed limit prior to work or 85 percentile speed.
   W = Width of offset.

9. THE SPACINGS BETWEEN CONSTRUCTION AND MAINTENANCE SIGNS SHOWN ON THIS DETAIL MAY REQUIRE ADJUSTMENTS (INCREASES OR DECREASES) TO ASSURE THAT THEY ARE POSITIONED NO CLOSER THAN 200 FEET TO EXISTING SIGNS AS DETERMINED BY THE ENGINEER.

OHIO DEPARTMENT OF TRANSPORTATION

LANE CLOSURE AT ENTRANCE RAMP PLAN B	DATE 8-3-79

FHWA REGION	STATE	PROJECT	
5	OHIO		

AUGLAIZE COUNTY
AUG-33 -6.63

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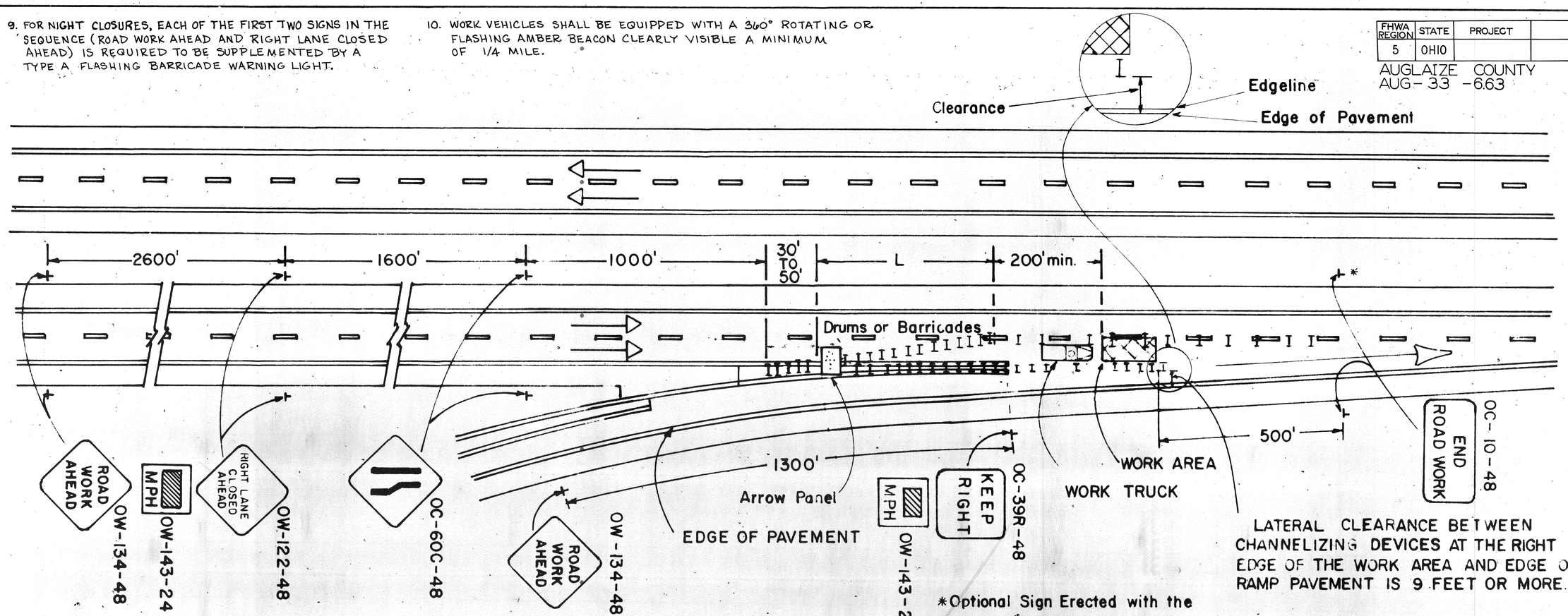
88

9. FOR NIGHT CLOSURES, EACH OF THE FIRST TWO SIGNS IN THE SEQUENCE (ROAD WORK AHEAD AND RIGHT LANE CLOSED AHEAD) IS REQUIRED TO BE SUPPLEMENTED BY A TYPE A FLASHING BARRICADE WARNING LIGHT.

10. WORK VEHICLES SHALL BE EQUIPPED WITH A 360° ROTATING OR FLASHING AMBER BEACON CLEARLY VISIBLE A MINIMUM OF 1/4 MILE.



LATERAL CLEARANCE BETWEEN CHANNELIZING DEVICES AT THE RIGHT EDGE OF THE WORK AREA AND EDGE OF RAMP PAVEMENT IS 9 FEET OR MORE.

*Optional Sign Erected with the Approval of the Engineer

GENERAL NOTES

1. THIS WORK AREA TRAFFIC CONTROL APPLICATION SHALL BE EMPLOYED WHEN THE LATERAL CLEARANCE BETWEEN THE CHANNELIZING DEVICES AT THE RIGHT EDGE OF THE WORK AREA AND THE EDGE OF THE RAMP PAVEMENT IS 9 FEET OR MORE. WHEN THE CLEARANCE IS LESS THAN 9 FEET, THE TRAFFIC CONTROL ON "LANE CLOSURE AT ENTRANCE RAMP: PLAN B" SHOULD BE USED, OR THE RAMP SHOULD BE CLOSED, OR ALLOWING RAMP TRAFFIC TO USE THE BERM SHOULD BE CONSIDERED PROVIDED THE OPERATION IS "SHORT" IN DURATION. WHEN THE RAMP IS CLOSED, APPROPRIATE DETOUR SIGNS SHALL BE PROVIDED.

2. THIRTEEN (13) DRUMS OR BARRICADES SHALL BE USED TO FORM THE LANE TRANSITION TAPER IN ADVANCE OF THE WORK AREA. FIVE (5) CHANNELIZING DEVICES SHALL BE USED TO FORM THE TAPER ON THE SHOULDER. DRUMS OR BARRICADES SHALL BE SPACED AT 50 FOOT CENTERS. CONES MAY BE SUBSTITUTED FOR BARRICADES OR **DRUMS FOR** THE LANE CLOSURES DURING DAYLIGHT HOURS ONLY.

3. RAMP SIGNS SHALL BE DUAL MOUNTED ON MULTILANE RAMPS.

4. THE FLASHING ARROW PANEL SHALL BE IN ACCORDANCE WITH TC-35.10.

5. THE WORK TRUCK SHOWN AT THE BEGINNING OF THE WORK AREA SHALL BE IN PLACE AND UNOCCUPIED WHENEVER MEN ARE WORKING WITHIN THE WORK AREA. THIS TRUCK SHALL BE MOVED FROM THE PAVEMENT WHENEVER WORKMAN ARE NOT IN THE WORK AREA. OTHER PROTECTIVE DEVICES MAY BE USED IN LIEU OF WORK TRUCK SHOWN WHEN APPROVED BY THE ENGINEER. A TRUCK MOUNTED IMPACT ATTENUATOR MAY BE EMPLOYED.

6. TYPE C STEADY BURNING BARRICADE WARNING LIGHTS SHALL BE ERECTED ON ALL DRUMS OR BARRICADES FOR NIGHT LANE CLOSURES.

7. TAPER FORMULAE:

$L = S \times W$ FOR SPEEDS OF 45 OR MORE.
$L = WS^2/60$ FOR SPEEDS OF 40 OR LESS.

WHERE:

L = MINIMUM LENGTH OF TAPER.
S = NUMERICAL VALUE OF POSTED SPEED LIMIT PRIOR TO WORK OR 85 PERCENTILE SPEED.
W = WIDTH OF OFFSET.

8. THE SPACINGS BETWEEN CONSTRUCTION AND MAINTENANCE SIGNS SHOWN ON THIS DETAIL MAY REQUIRE ADJUSTMENTS (INCREASES OR DECREASES) TO ASSURE THAT THEY ARE POSITIONED NO CLOSER TNAN 200 FEET TO EXISTING SIGNS AS DETERMINED BY THE ENGINEER.

OHIO DEPARTMENT OF TRANSPORTATION

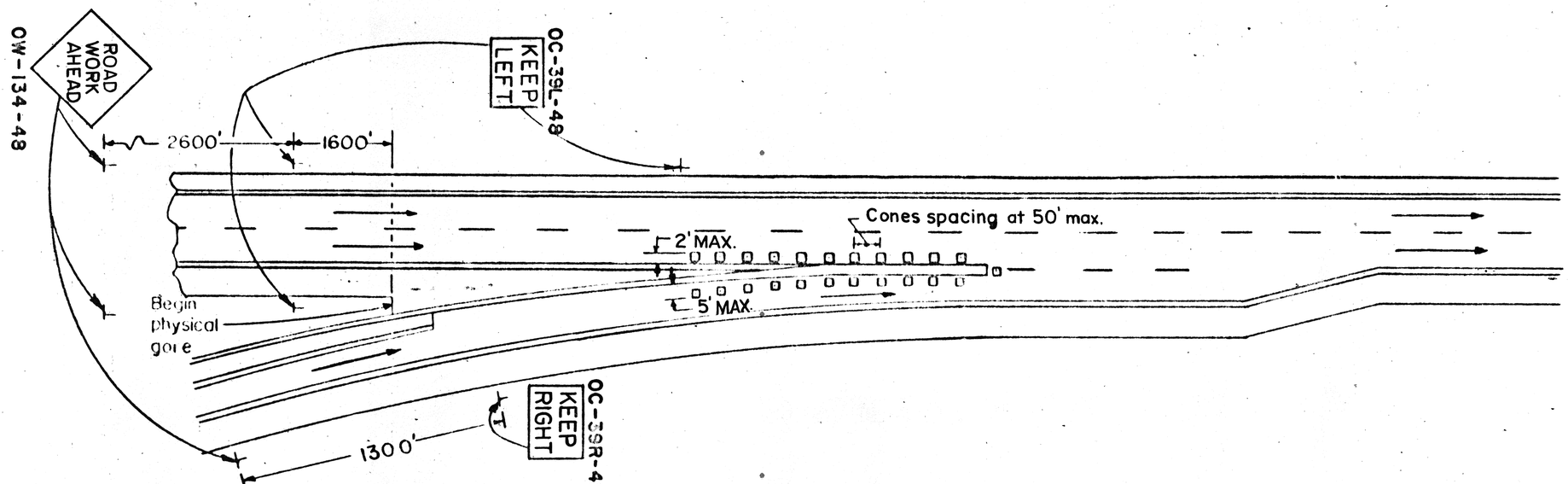
LANE CLOSURE AT ENTRANCE RAMP: PLAN A

DATE 8-3-79

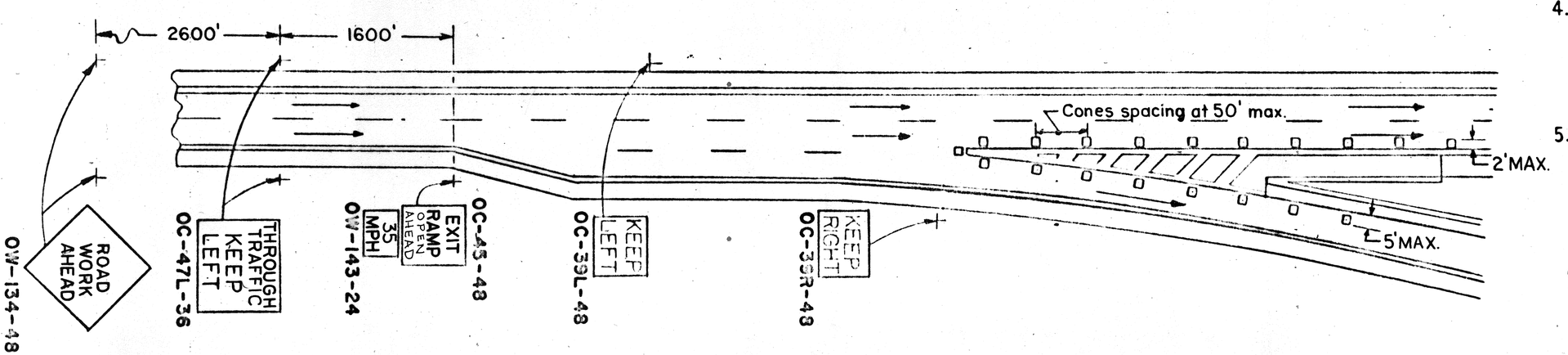
FHWA REGION	STATE	PROJECT		80/88
5	OHIO			

AUGLAIZE COUNTY
AUG-33-6.63

ENTRANCE GORE TRAFFIC CONTROL



EXIT GORE TRAFFIC CONTROL



GENERAL NOTES

1. WHERE THE ONLY WORK IN THE GORE AREA CONSISTS OF APPLICATION OF EDGELINE MARKINGS WITH FAST DRY PAVEMENT MARKING MATERIALS, THE TRAFFIC CONTROL FOR "LONGLINE PAVEMENT MARKING OPERATIONS" SHOULD BE EMPLOYED.
2. WHERE THE WORK IN THE GORE AREA REQUIRES MORE POSITIVE TRAFFIC CONTROL OR OVERNIGHT WORK AREA PROTECTION, THE TRAFFIC CONTROL FOR "LANE CLOSURE AT THE ENTRANCE RAMP" OR "LANE CLOSURE AT EXIT GORE" SHOULD BE EMPLOYED.
3. THE SPACING BETWEEN SIGNS SHOWN ON THIS DETAIL MAY BE ADJUSTED (INCREASED OR DECREASED) WITH THE APPROVAL OF THE ENGINEER TO POSITION THEM NO CLOSER THAN 200 FEET TO EXISTING SIGNS WHICH MUST REMAIN IN USE.
4. AT AN ISOLATED ENTRANCE GORE AREA, A FLASHING ARROW PANEL CONFORMING TO REQUIREMENTS IN TC-35.10 MAY BE SUBSTITUTED FOR THE ADVANCE OC-39-48 SIGNS.
5. AT AN INTERCHANGE WHERE BOTH EXITS AND ENTRANCES ARE MARKED WITH TRAFFIC CONTROL IN PLACE AT THE SAME TIME, THE OW-134-48 SIGN ON THE ENTRANCE RAMP IS NOT REQUIRED.
6. CONES MAY BE SUBSTITUTED FOR DRUMS OR BARRICADES DURING DAYLIGHT HOURS ONLY.
7. FOR NIGHT CLOSURES, EACH OF THE FIRST TWO SIGNS IN THE SEQUENCE (ROAD WORK AHEAD AND THROUGH TRAFFIC KEEP LEFT) IS REQUIRED TO BE SUPPLEMENTED BY A TYPE A FLASHING BARRICADE WARNING LIGHT.

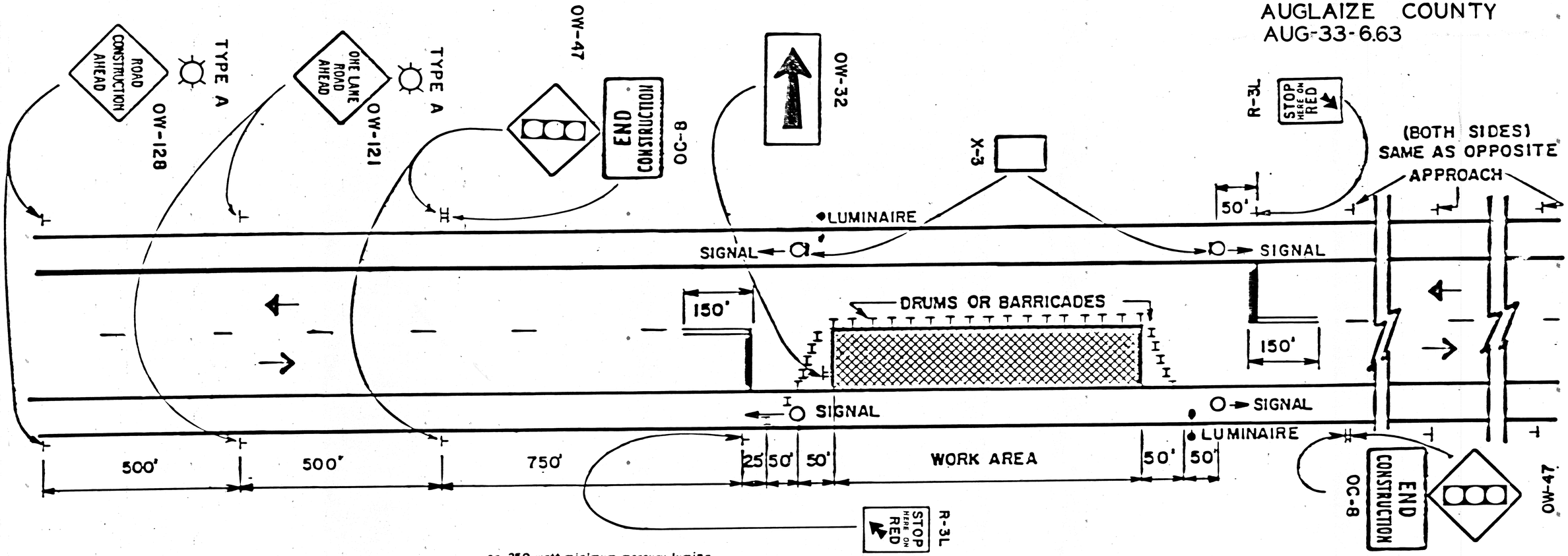
OHIO DEPARTMENT OF TRANSPORTATION

TRAFFIC CONTROL FOR WORK IN GORE AREAS	DATE 1/81
DR	CK

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

81/88

AUGLAIZE COUNTY
AUG-33-6.63



GENERAL NOTES.

1. The maximum length of work area for one way traffic signal control is determined by the capacity required to handle the peak hour demand. Practical maximum length is 400 feet. Signal timing changes shall be approved by the Engineer.
2. Signals shall be installed and operated in accordance with the requirements of Part 6 of the Ohio Manual of Uniform Traffic Control Devices.
3. Drums or barricades shall be spaced at 50' to 60' center to center within the work area. Drums or barricades on the advance and return tapers shall be spaced at 10' center to center.
4. Adequate area illumination to clearly identify both ends of the work area at night for long term operations shall be provided by using 150 watt minimum high pressure sodium luminaires or 250 watt minimum mercury luminaires. Luminaires shall be located adjacent to one signal for each direction of traffic. The mounting height for temporary luminaires shall be a minimum of 27 feet above the pavement and the overhead conductor clearance shall be a minimum of 18 feet above the pavement. Lighting material shall comply with Specification 625.
5. Twenty-four (24) inch stop lines shall be installed and where no passing lines are not already in place they shall be added. Removable pavement markings may be used. Existing conflicting pavement markings and raised pavement marker reflectors between the work area and the stop line shall be removed. After completion of the work the stop lines and added no passing lines shall be removed in accordance with 621.134 and the raised pavement marker reflectors shall be replaced in kind.
6. The Type A flashing barricade warning lights shown on the "Road Construction Ahead" and the "One Lane Road Ahead" signs are required whenever a night lane closure is necessary.
7. Type C steady burning barricade warning lights shall be erected on drums or barricades for night lane closures. The maximum spacing shall be identical to the channelizing device spacing requirements described in Note 3.
8. The horizontal or vertical alignment of the roadway may require adjustments in the location of the advance warning signs (the distances shown for advance warning sign spacing; are minimums). The vertical alignment of the roadway may require adjustments in the height of the signal heads within the range specified in the Typical Pole Supported Signal Detail.
9. All traffic signals and equipment used in this traffic signal installation, such as a signal cable and signal heads, shall be in conformance with Specifications 632 and 732. However, the performance test provision noted in Specification 632.27, paragraph 6 and the working drawing requirements of 632.03 are waived. The controller, flashers, load switches, conflict monitor and other controller accessories shall comply with Specifications 633 and 733, except that the requirements of 633.03 and 633.05 are waived, as well as the requirements of 733.01 for expansible three dial units and twelve circuits for pretimed controllers. Used equipment meeting current ODOT Specifications is acceptable.

   Conflict monitors shall be furnished at all locations unless an electromechanical pretimed controller with camshaft is provided.
10. When the signal is changed to a flash condition either manually or automatically, red shall be flashed to both approaches.

OHIO DEPARTMENT OF TRANSPORTATION

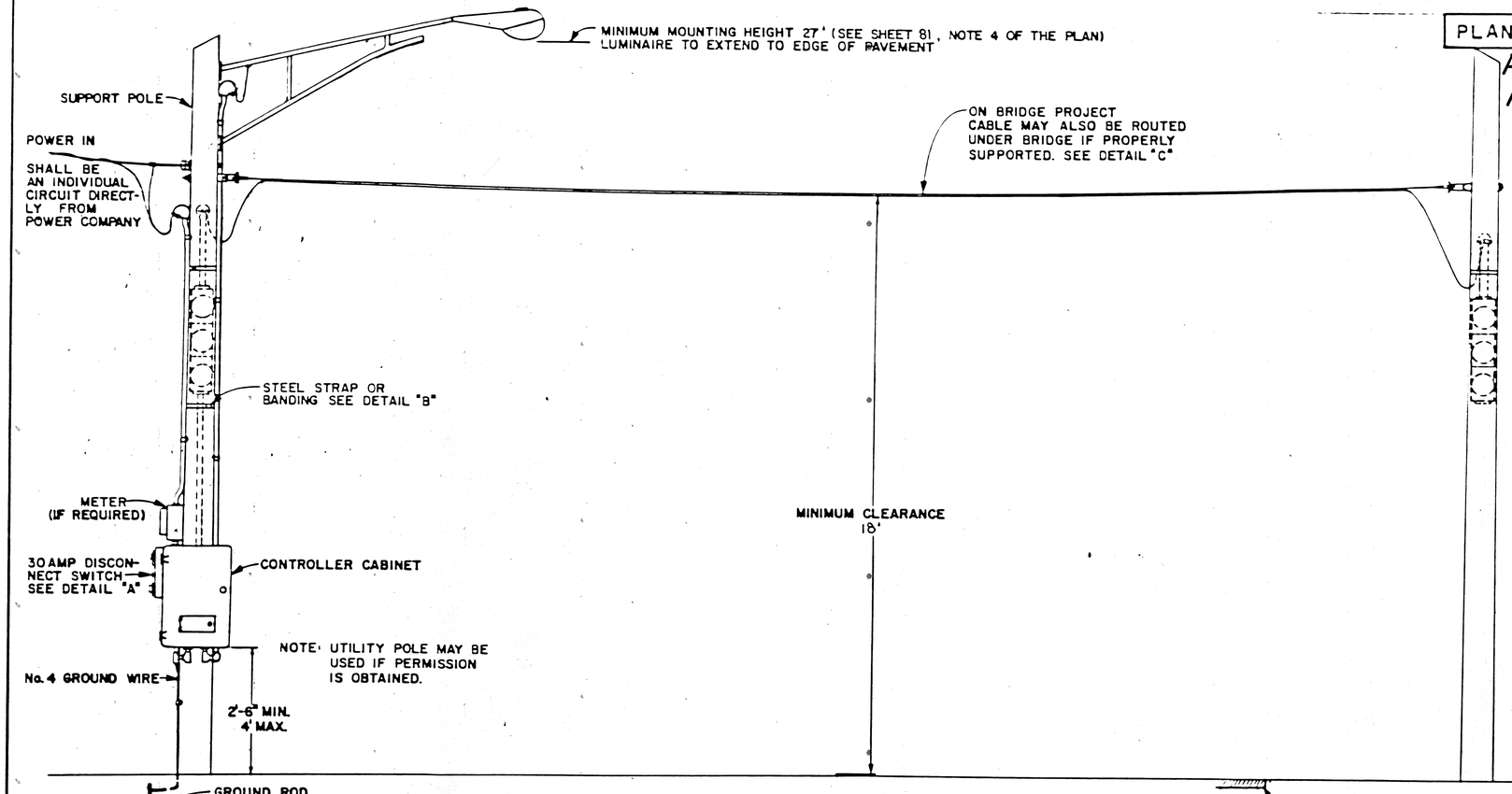
SIGNALIZED CLOSING
1 LANE OF A 2 LANE
HIGHWAY (A)

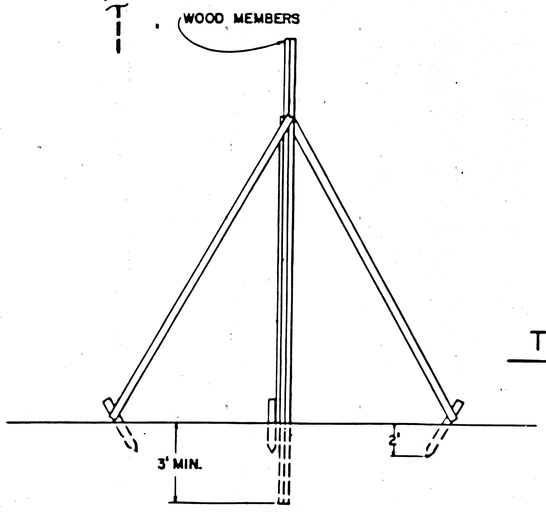
DATE
12/82
3/84
4/85

DR. | CK.

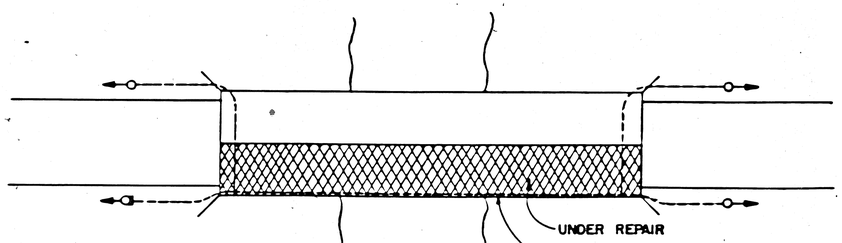
7G-2A

PLAN NO.	FED. RD. DIVISION	STATE	PROJECT		82/88
AUGLAIZE COUNTY AUG-33-6.63	5	OHIO			



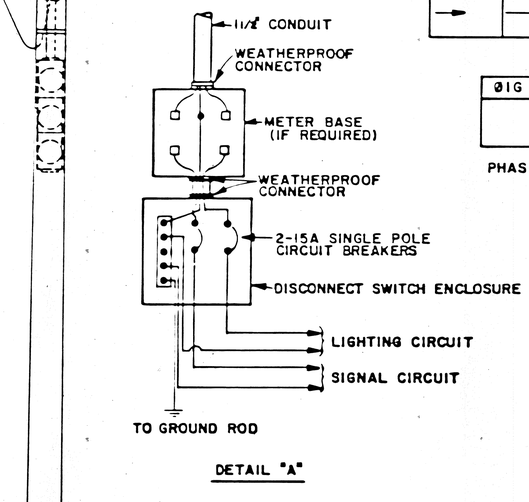


ALTERNATE SUPPORT POLE METHOD

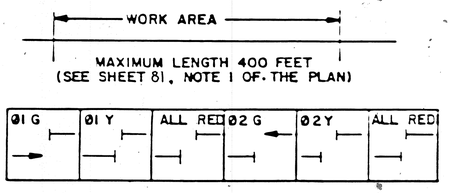


ALTERNATE CABLE ROUTING
DETAIL "C"

CABLE RUNS WITHOUT CONDUIT SHALL BE SUPPORTED BY INSULATOR SPACED NOT MORE THAN 10' APART.



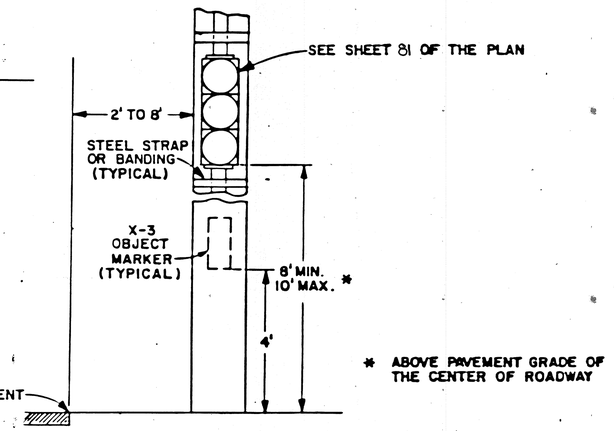
DETAIL "A"



Ø1 G	Ø1 Y	ALL RED	Ø2 G	Ø2 Y	ALL RED

Ø1G	Ø1Y	ALL RED	Ø2G	Ø2Y	ALL RED

PHASING AND INITIAL TIMING SETTINGS



* ABOVE PAVEMENT GRADE OF THE CENTER OF ROADWAY

DETAIL "B"

TYPICAL SERVICE, LUMINAIRE, SIGNAL HEAD AND CONTROLLER CABINET INSTALLATION

OHIO DEPARTMENT OF TRANSPORTATION	
SIGNALIZED CLOSING I LANE OF A 2 LANE HIGHWAY (B)	DATE: 4/85
DR.	CK.

7G-2B

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

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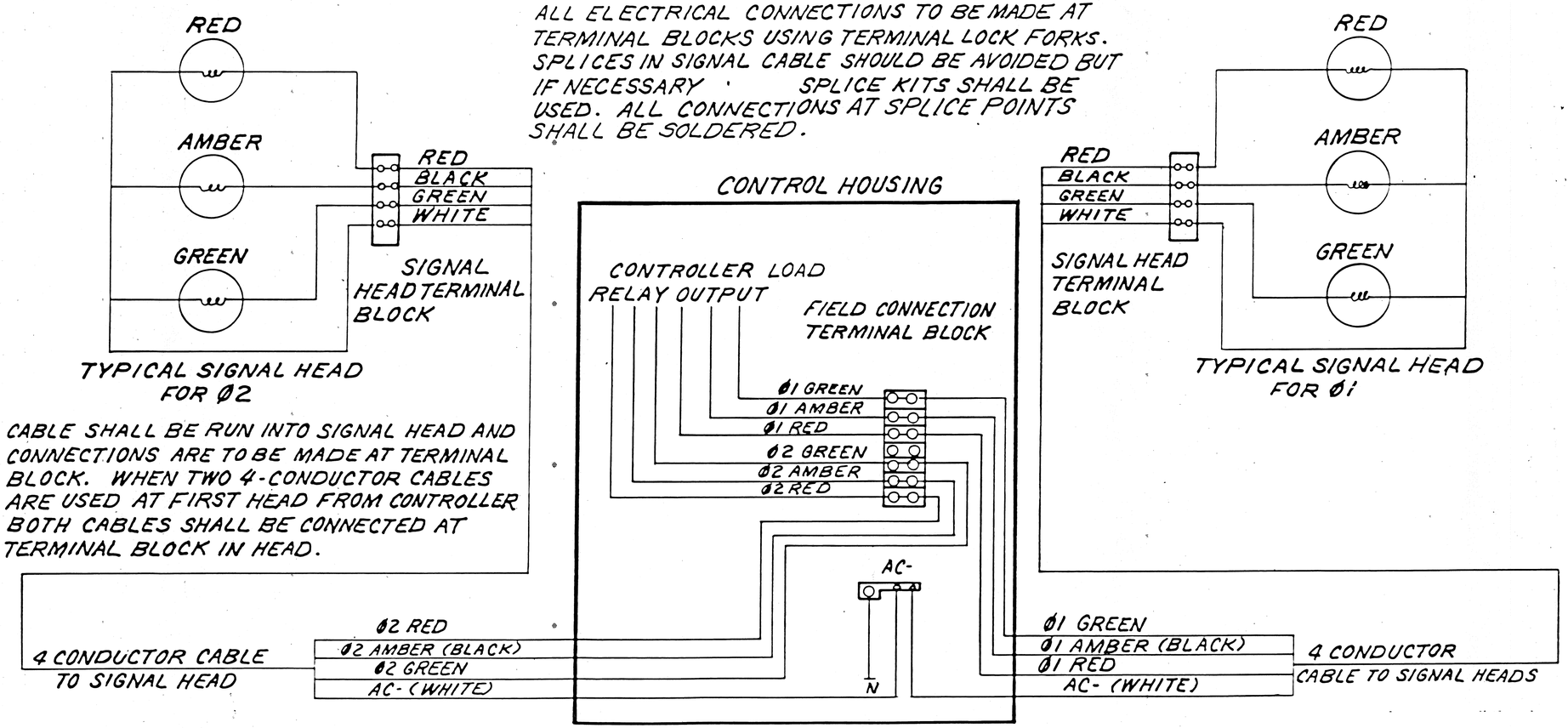
88

AUGLAIZE COUNTY
AUG-33-6.63

CABLE SHALL BE 4-CONDUCTOR No. 14 COPPER SIGNAL CABLE, COLOR CODED AND STRANDED. ALL ELECTRICAL CONNECTIONS TO BE MADE AT TERMINAL BLOCKS USING TERMINAL LOCK FORKS. SPLICES IN SIGNAL CABLE SHOULD BE AVOIDED BUT IF NECESSARY · SPLICE KITS SHALL BE USED. ALL CONNECTIONS AT SPLICE POINTS SHALL BE SOLDERED.



TYPICAL SIGNAL HEAD HOOK-UP

OHIO DEPARTMENT OF TRANSPORTATION

SIGNALIZED CLOSING I LANE OF A 2 LANE HIGHWAY (C)

DATE 4/85

DR. | CK.

TG-2C

MAINTENANCE OF TRAFFIC

FED RD DIVISION	STATE	PROJECT	
5	OHIO		

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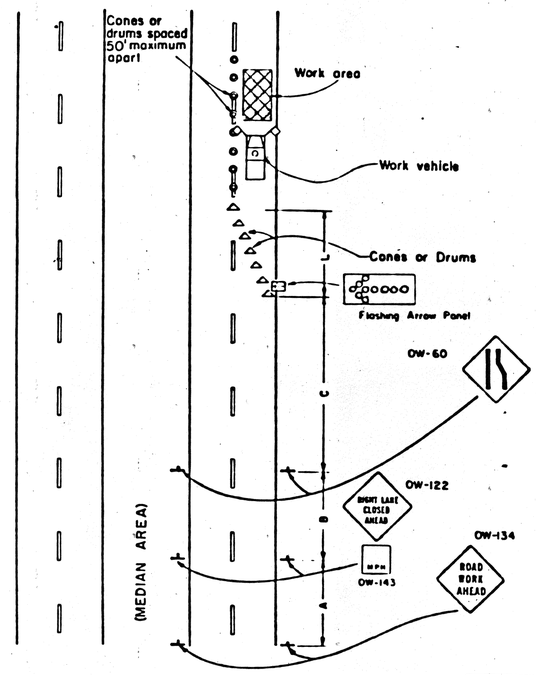
88

PLAN NO.
AUGLAIZE COUNTY
AUG- 33-6.63

TYPICAL APPLICATIONS OF TRAFFIC CONTROL DEVICES FOR CLOSING ONE LANE ON A 4-LANE DIVIDED HIGHWAY



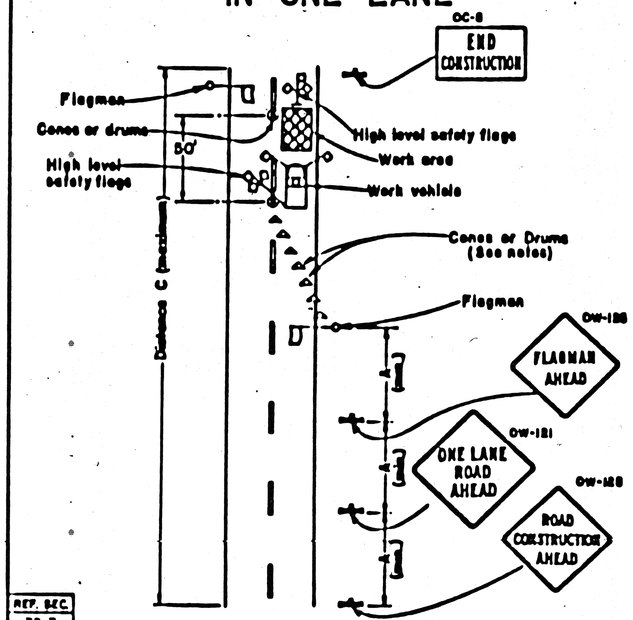
NOTE. See Section 7F-17 for taper lengths.

DISTANCE	A	B	C
Urban	200'	200'	200'
Major Standard	500'	500'	500'
Expressway & Freeway	1500'	600'	1000'

REF SEC
7D-6

C-21

TYPICAL APPLICATIONS OF TRAFFIC CONTROL DEVICES FOR STATIONARY OPERATIONS IN ONE LANE



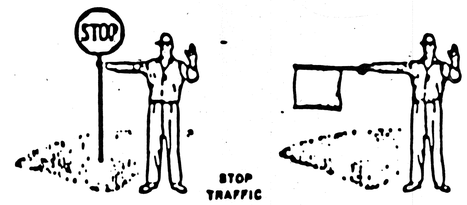
REF. SEC.
7D-7
7D-8
7D-9
7D-10

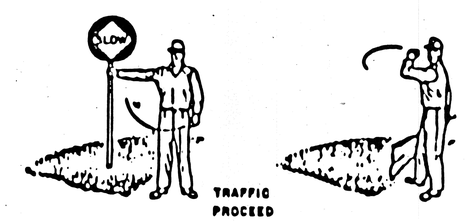
NOTES:
1. See Table 7-5 for taper lengths.
2. Use the same warning signs on the opposite approach.
3. Space the cones at 50' max. on tangent.

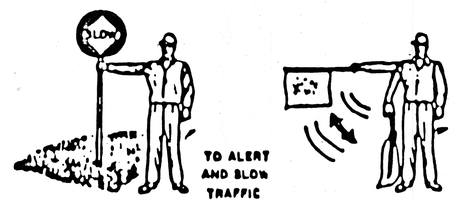
TYPE OF ROADWAY	DISTANCES A-FL	C-mi
Urban	200	0.5
Standard	500	1.0

C-18

PROCEDURES FOR FLAGMAN







REF. SEC.
7H-3
7H-4

C-10

Cones or drums shall be placed so that the Contractor's workmen and equipment are totally within the channelized area when working.

12-82

TRAFFIC CONTROL FOR BRIDGE WORK ON AUG-33-13.10 MEDIAN SIDE

FHWA REGION	STATE	PROJECT	
5	OHIO		

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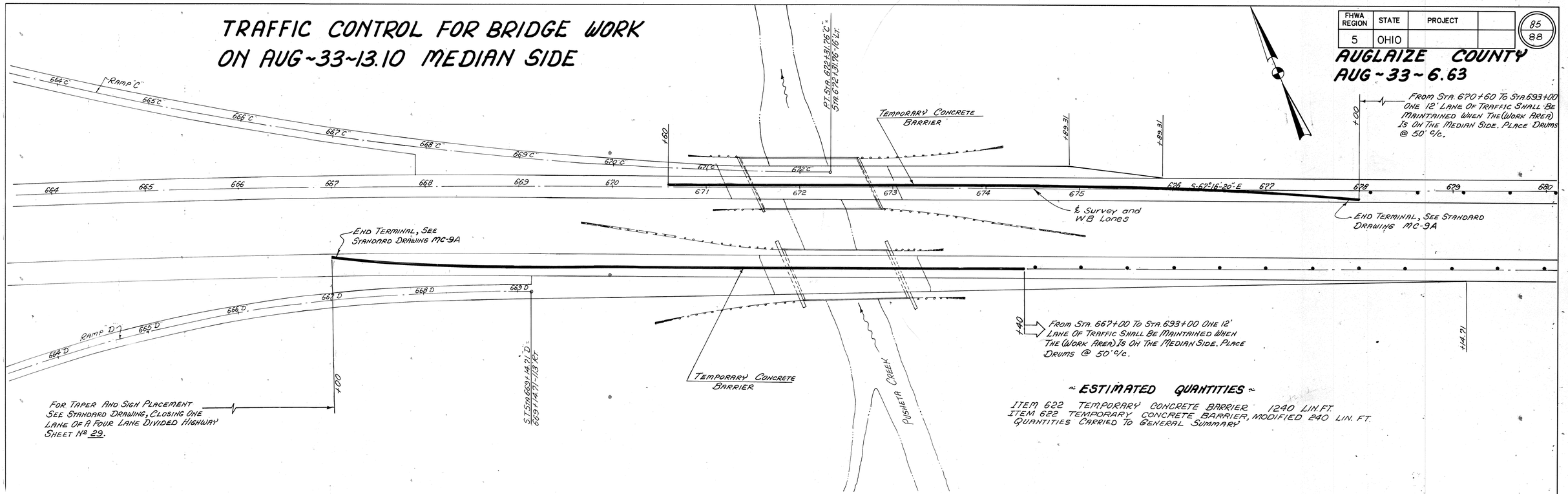
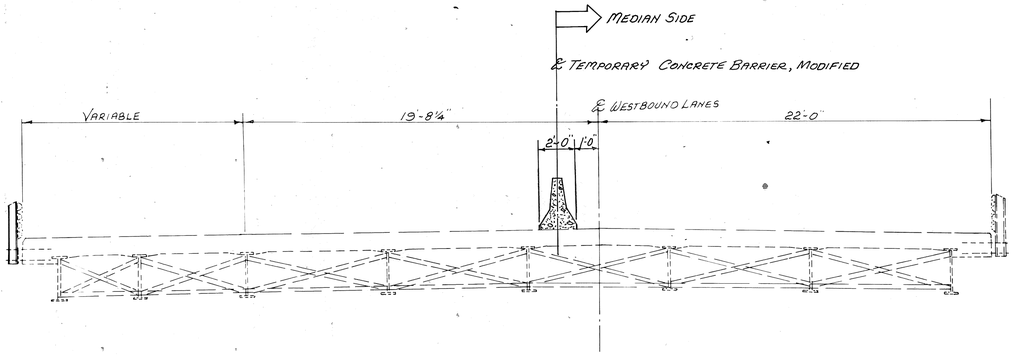
AUGLAIZE COUNTY
AUG-33-6.63

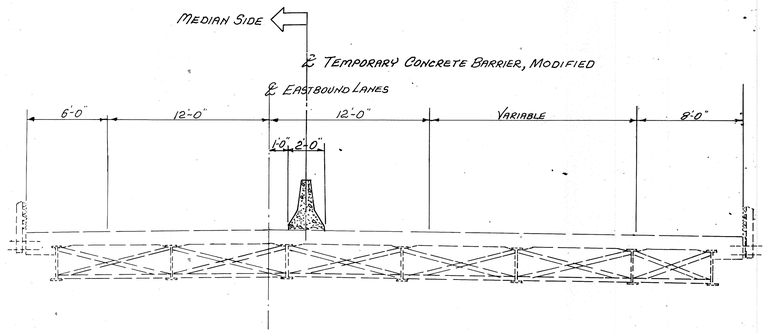


For Taper And Sign Placement See Standard Drawing, Closing One Lane Of A Four Lane Divided Highway Sheet No 29.

~ ESTIMATED QUANTITIES ~

ITEM 622 TEMPORARY CONCRETE BARRIER 1240 LIN.FT.
ITEM 622 TEMPORARY CONCRETE BARRIER, MODIFIED 240 LIN. FT.
Quantities Carried To General Summary



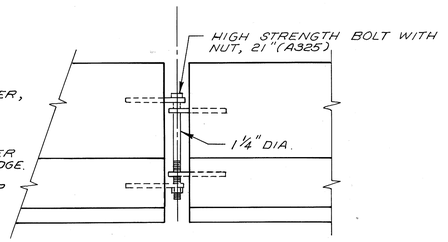


Notes: ITEM 622 - TEMPORARY CONCRETE BARRIER, MODIFIED ON THE BRIDGE IS CARRIED IN THE ROADWAY QUANTITIES.

ITEM 622 TEMPORARY CONCRETE BARRIER IS BARRIER THAT IS LOCATED OFF THE BRIDGE.

SNUG NUT TO UNDERSIDE OF BOTTOM LOOP

FOR ADDITIONAL DETAILS, SEE STD. DRWG. MC-9A.



ELEVATION

TEMPORARY CONCRETE BARRIER (MODIFIED)

TRAFFIC CONTROL ~ BRIDGE No AUG-33-13.10 ~ MEDIAN SIDE

TRAFFIC CONTROL FOR BRIDGE WORK ON AUG-33-13.10 OUTSIDE AREA

FHWA REGION	STATE	PROJECT	
5	OHIO		

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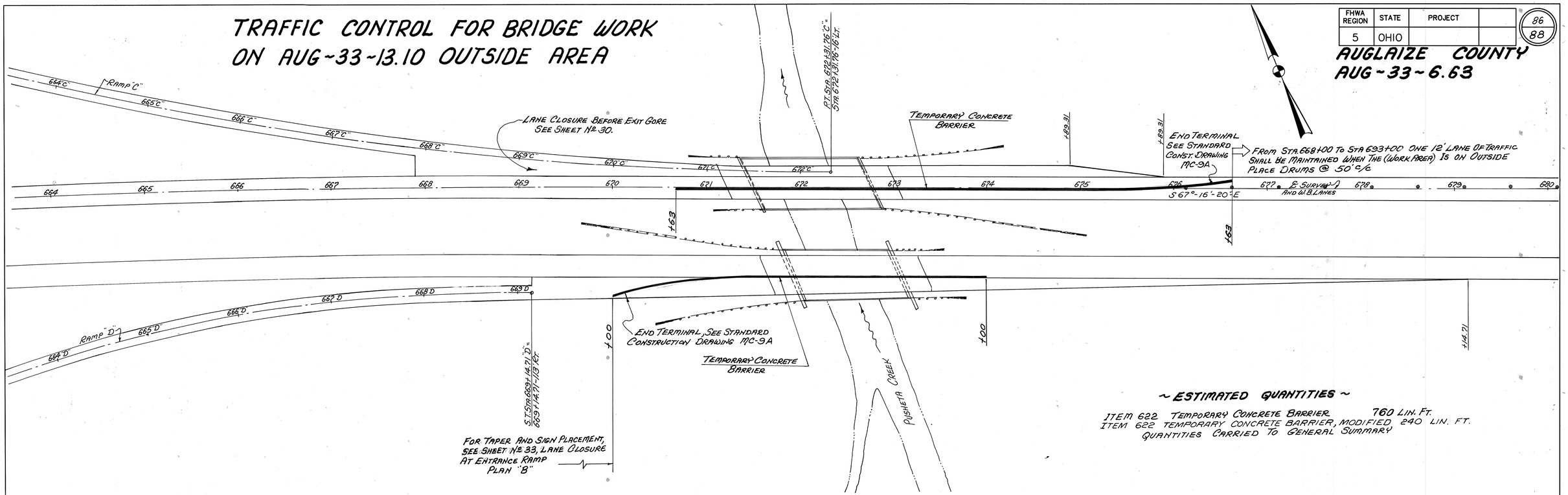
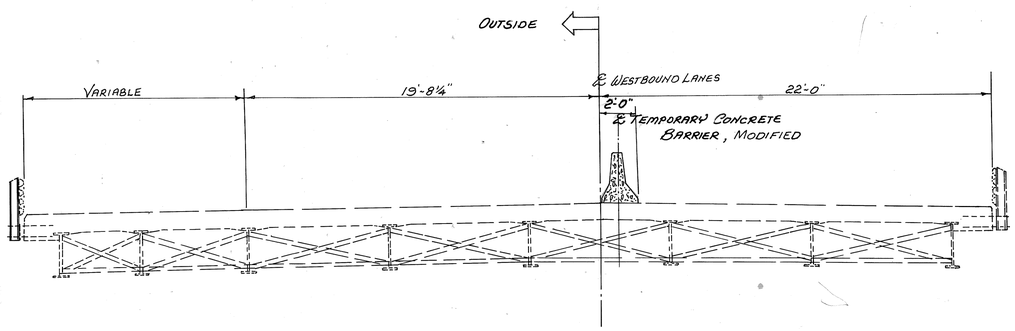
AUGLAIZE COUNTY
AUG-33-6.63

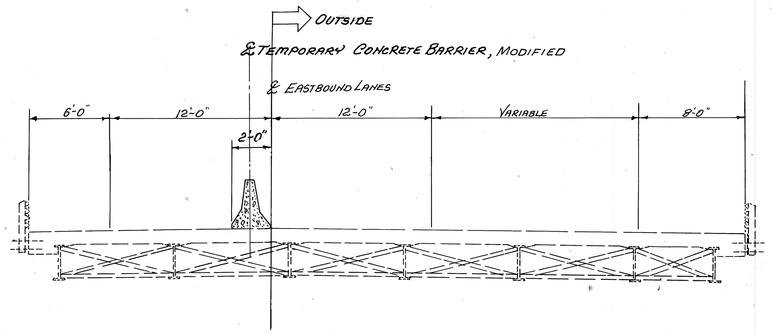


~ ESTIMATED QUANTITIES ~

ITEM 622 TEMPORARY CONCRETE BARRIER	760 LIN. FT.
ITEM 622 TEMPORARY CONCRETE BARRIER, MODIFIED	240 LIN. FT.

QUANTITIES CARRIED TO GENERAL SUMMARY





TRAFFIC CONTROL ~ BRIDGE Nº AUG-33-13.10 ~ OUTSIDE AREA

PAVEMENT MARKING TYPICAL DETAILS

FED.RD DIV.	STATE	PROJECT	
5	OHIO		

AUGLAIZE COUNTY
AUG – 33 – 6.63

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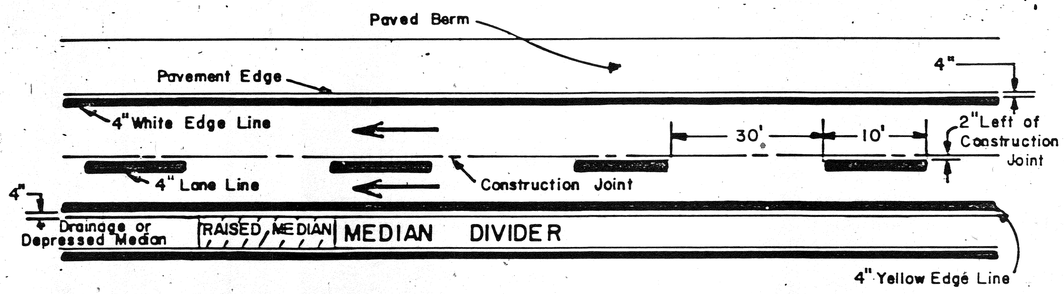
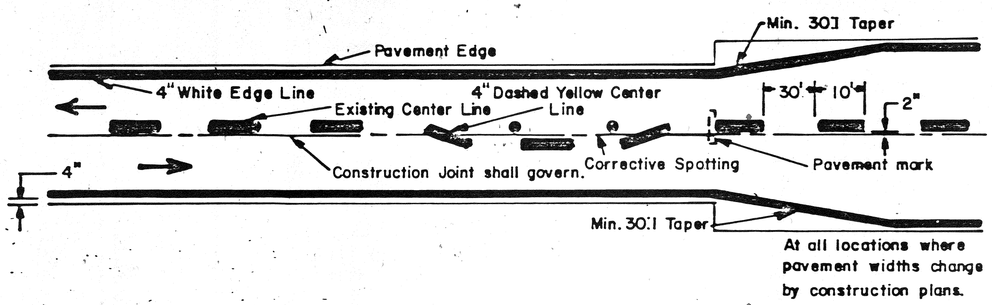
FREEWAY & EXPRESSWAY MAINLINE MARKINGS

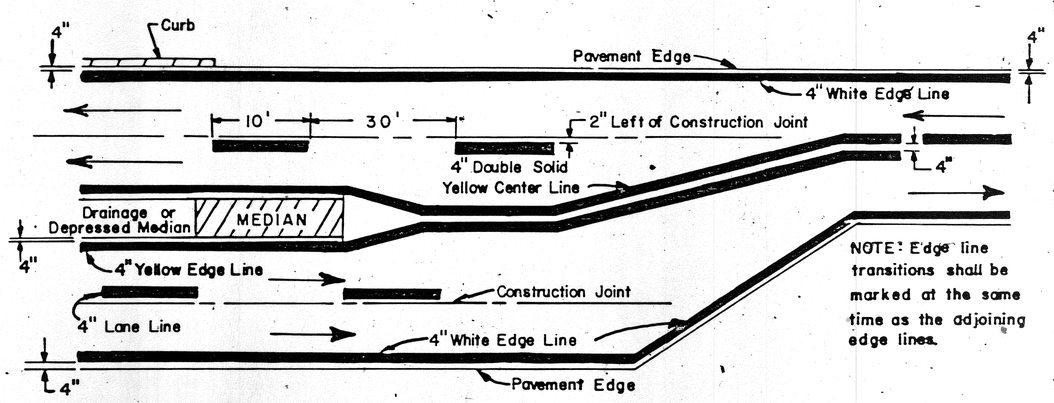


TWO LANE MARKINGS



At all locations where pavement widths change by construction plans.

MULTILANE DIVIDED & UNDIVIDED HIGHWAY MARKINGS



NOTE: Edge line transitions shall be marked at the same time as the adjoining edge lines.

NOTES:

1. THE DISTANCE FROM THE PAVEMENT EDGE TO THE NEARSIDE EDGE OF THE EDGELINE MAY BE INCREASED WITH THE APPROVAL OF THE ENGINEER IN ORDER TO MAINTAIN UNIFORM LANE WIDTH.
2. SEE TC 72.20 FOR PAVEMENT ENTRANCE AND EXIT RAMP TERMINALS.
3. THE WIDTH OF LINE APPLIED SHALL BE THE WIDTH SPECIFIED PLUS OR MINUS 1/4".

OHIO DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING TYPICAL DETAILS

DATE 11/80

J.D.L. CK CDR.I

12/81

FED. RD. DIVISION	STATE	PROJECT	
5	OHIO		

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88

AUGLAIZE COUNTY
AUG - 33 - 6.63

INITIAL PAVEMENT MARKINGS FOR RESURFACED SECTIONS

GENERAL NOTES

In addition to the requirements of 621 and 847 the following shall apply:

621 Materials

Glass beads shall be kept dry during storage and prior to use.

621 SPECIAL EQUIPMENT

The Contractor's striper shall be equipped with an odometer graduated to 1/100 of a mile. The Engineer will determine the degree of accuracy of the Contractor's odometer and establish an adjustment factor as may be required to accurately determine the pay item quantities. The Engineer will periodically check the odometer's operation to assure maintenance of accurate measurements.

Failure of the odometer to function properly shall be cause to stop the work until the odometer is made to function properly. On short projects the Engineer may approve alternate methods to accurately measure the length of the various types of markings applied. If measurement of the work has to be done by the Department, the cost of the Department labor and equipment plus 10 percent shall be deducted from payment due the Contractor for the work. When measuring lane, edge and center line marking the odometer shall be started at the first marked line and remain in operation, until the end of the section being marked, where it shall be shut off and the reading of the odometer recorded.

Electrical foot counters shall be provided and installed in the striper. The counters shall individually tabulate the amount of footage applied by each striping gun on the center line carriage and lane line carriage, whether solid or dashed. The counters shall be 6 digit type with a reset feature.

The pavement marking equipment shall be equipped with a pressure regulated air jet which shall remove all debris from the pavement in advance of the applicator gun. The air jet shall operate when marking material is being applied and shall be synchronized with marking material application or remain "on" at all times.

The Contractor shall use an accurate dashing mechanism, capable of being easily adjusted

Provision for the above special equipment by the Contractor shall be incidental to the application.

847 LAYOUT AND PREMARKING

In addition to the requirements of 847 premarking for auxiliary markings shall be located from schematic forms provided at the pre-construction conference.

621 MATERIAL QUANTITY MEASUREMENT

The quantity of marking material or glass beads per unit of measurement will be computed by the Engineer at the end of each day's work. A day's applied mileage of less than 2 miles may be included in the next day's applied markings for the purpose of computing marking material and bead application rates.

The Contractor shall provide a calibrated measuring device acceptable to the Engineer for measuring material in the striper tanks.

The quantity of marking material used shall be determined by measuring the marking material in the tanks before and after marking material is applied. The Contractor shall cooperate with the Engineer in providing measurements whenever requested. The marking material application rate shall be determined by dividing the total gallons used by the appropriate marking length as determined from the foot counter as described within the Special Equipment Section of these notes. Any determination of pay deduction resulting from shortages in marking quantities shall be based on the measurements obtained by this method. The amount of glass beads applied will be ascertained by the Engineer by observation and from information supplied by the Contractor as to quantity used.

847 AUXILIARY PAVEMENT MARKING

For this project auxiliary markings shall be defined as: stop lines, crosswalk lines, transverse lines, railroad symbol markings, lane arrows, word on pavement and dotted lines except when used to extend edge lines.

STANDARD CONSTRUCTION DRAWING TC 71.10

The dimensions shown on Standard Construction Drawing TC 71.10 are nominal. Letters, numerals and symbols conforming to the requirements of section 3B-17 of the 1978 National Manual On Uniform Traffic Control Devices may also be used. Any of the following standards for letters, numeral or symbol dimensioning may be used; A.) Standard dimensions shown on this detail or B.) Standard dimensions (either metric or their hard converted English unit equivalents) in accord with the 1977 Metric Edition Standard Alphabets For Highway Signs and Pavement Marking with Errata or C.) Standard dimensions shown in figures 3-17, 3-18, 7-2, 7-3, 8-2 or 9-6 of the 1978 National Manual On Uniform Traffic Contol Devices.