

MICROFILMED  
MAY 6 1968

MICROFILMED  
OCT 18 1978  
REPRODUCTION

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS

F-591(6)

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	F-591(6)

VAN WERT COUNTY  
VAN - 224 - 9.34

1  
99

VAN-224-9.34

VAN WERT COUNTY  
PLEASANT TOWNSHIP

GRADE SEPARATION WITH THE PENNA. RAIL ROAD

1965 SPECIFICATIONS

CONVENTIONAL SIGNS

RIGHT - OF - WAY	R/W
LIMITED ACCESS RIGHT-OF-WAY	L.A. R/W
STATE LINE	
COUNTY LINE	
TOWNSHIP LINE	
SECTION LINE	
CENTER LINE	
CORPORATION LINE	
PROPERTY LINE	
FENCE LINE	X X X X X X X
GUARD RAIL (EXISTING)	O O O O O O O
GUARD RAIL (PROPOSED)	• • • • • • •
RAILROAD	
POWER POLES	⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙
TELEPHONE POLES	⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙
TREES OR STUMPS (EXISTING)	⊙ ⊙ ⊙ ⊙ ⊙ ⊙ ⊙
TREES OR STUMPS (TO BE REMOVED)	⊗ ⊗ ⊗ ⊗ ⊗ ⊗ ⊗

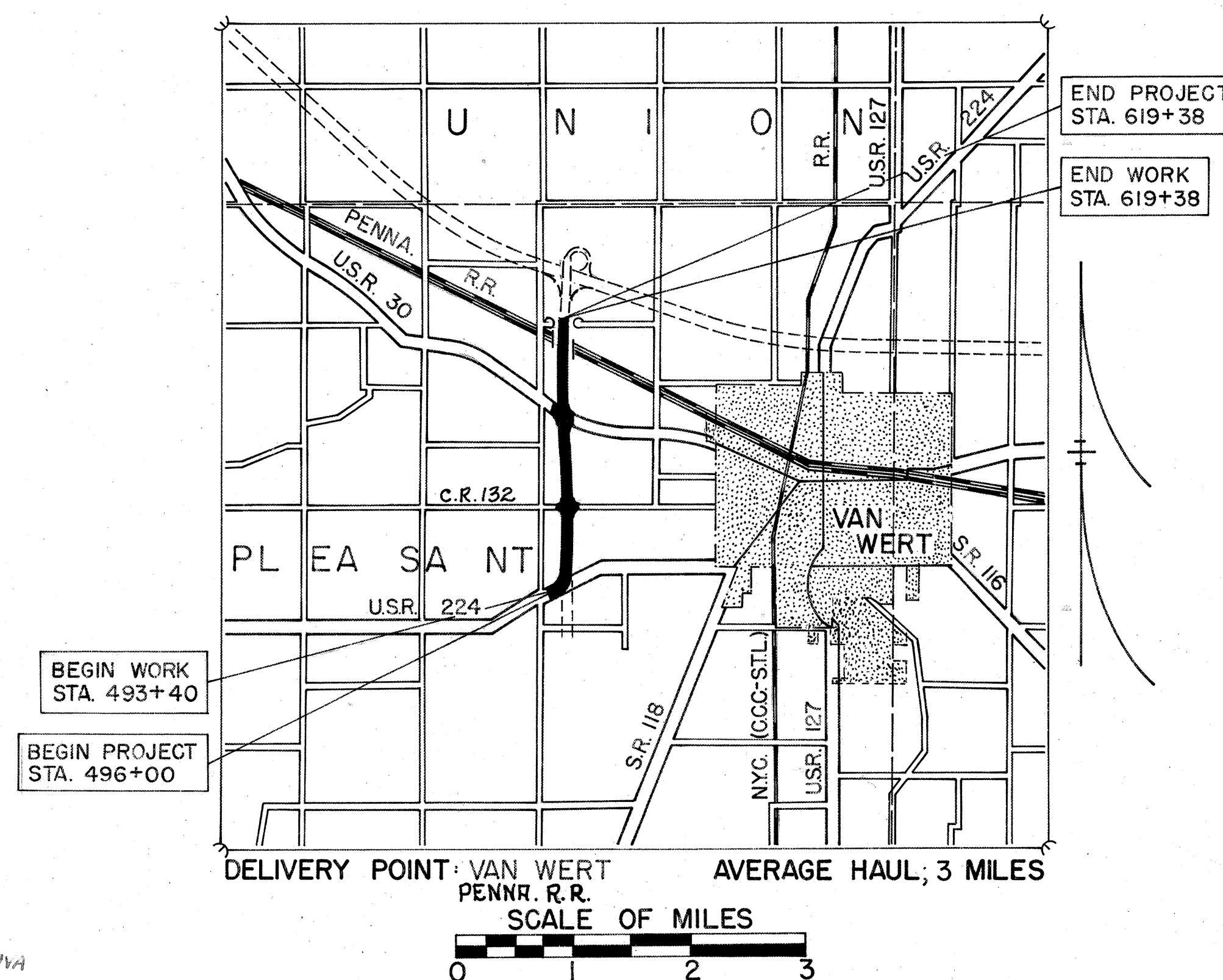
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Sheet 77 revised 8-4-66 JVA

LINE DATA

BEGIN PROJECT STA. 496+00	END PROJECT STA. 619+38
NO ADDITIONS OR DEDUCTIONS	
TOTAL LENGTH OF PROJECT	12,338.00 LIN. FT. OR 2.336 MILES
BEGIN WORK STA. 493+40	END WORK STA. 619+38
ADD FOR APPROACH	
STA. 0+12 TO STA. 3+75 (EXIST. 224)	= 363.00 LIN. FT.
TOTAL LENGTH OF WORK	12,961.00 LIN. FT. OR 2.454 MILES



LOCATION MAP

PORTION TO BE IMPROVED  
STATE HIGHWAYS  
OTHER ROADS

SCALE

PLAN  
PROFILE (HORIZONTAL)  
PROFILE (VERTICAL)  
CROSS SECTIONS

1 INCH = 50 FEET  
1 INCH = 50 FEET  
1 INCH = 5 FEET  
1 INCH = 10 FEET

STANDARD DRAWINGS

BP-1	G-1-65	MC-1	G-1-65	GR-1	G-1-65	RS-1-54	8-10-65
BP-2	G-1-65	MC-3	5-1-66	GR-2H	9-1-65	CS-1-65	6-1-65
BP-3	G-1-65	MC-4	G-1-65	L-1	G-1-65	P-1-54	11-8-65
BP-4	G-1-65	F-2	G-1-65			H-1-54	11-8-65
BP-5	G-1-65	F-3	G-1-65			SD-1-63 Sh. 2,3,4	11-12-63
BP-6	G-1-65	FRCI-1	G-1-65			FSB-1-62	1-15-63
BP-7	1-1-66	FRCI-2	G-1-65	BR-1-65, Sh. 1	11-24-65	SD-2-64	11-25-64

SUPPLEMENTAL SPECIFICATIONS

801	9-2-65	828	3-21-66
808	2-7-66	1001	3-21-66
811	3-29-65		
815	8-6-65		
816	8-6-65		
825	4-22-65		

LIMITED ACCESS:

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

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

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

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

APPROVED  
DATE 7-27-65 DIVISION DEPUTY DIRECTOR

APPROVED  
DATE 5-17-66 ENGINEER OF BRIDGES

APPROVED  
DATE 5-25-66 ENGINEER OF LOCATION AND DESIGN

APPROVED  
DATE 5-25-66 DEPUTY DIRECTOR OF DESIGN AND CONSTRUCTION

APPROVED  
DATE 6-7-66 DEPUTY DIRECTOR OF RIGHT-OF-WAY

APPROVED  
DATE 6-7-66 DEPUTY DIRECTOR OF PLANNING AND PROGRAMMING

APPROVED  
DATE FIRST ASSISTANT DIRECTOR

APPROVED  
DATE 6-7-66 DIRECTOR OF HIGHWAYS

DEPARTMENT OF COMMERCE  
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER

DATE

FILE NO.	VAN-224-9.34
DATE OF LETTING	19
CONTRACT NO.	



# LOCATION PLAN

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		



Project Location  
PID:109112

VAN-224-1124 L

VAN-224-1030 L

47.48  
3'-00" Rt.  
3'-00"  
0' 40  
3'  
7.67'

P.I. 632 + 64.81  
 $\Delta = 18^{\circ} 52' 30''$  R+  
 $D = 1^{\circ} 00' 00''$   
 $T = 952.38'$   
 $L = 1,887.50'$   
 $R = 5,729.58'$   
 $E = 78.61'$   
 $E_s = 0.032'$

Current ADT	1850
Design Year ADT	3320
DHV	490
D (directional distribution)	60 %
T (% B & C Trucks)	24 %
V (Design Speed)	70 MPH

Date: \_\_\_\_\_  
 \_\_\_\_\_ Board of Van  
 \_\_\_\_\_ Wert County  
 \_\_\_\_\_ Commissioners  
 \_\_\_\_\_  
 \_\_\_\_\_ Van Wert County Engineer

Location Plan (Relocated U.S. 224)



3  
99

TYPICAL SECTIONS



GENERAL NOTES

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		



VAN WERT COUNTY  
VAN-224-9.34

ROUNDING OF CORNERS SHOWN ON CROSS SECTIONS:  
THE ROUNDED CORNERS SHOWN ON STANDARD DRAWING MC-1  
APPLY TO ALL CROSS SECTIONS, EVEN THOUGH OTHER-  
WISE SHOWN ON THESE PLANS.

UTILITY ADJUSTMENT:  
ANY OR ALL WORK REQUIRED FOR PUBLIC OR PRIVATE UTILITIES WILL BE DONE  
BY AND AT THE EXPENSE OF THEIR RESPECTIVE OWNERS, UNLESS OTHERWISE  
NOTED ON THESE PLANS.

FIELD OFFICE:  
THE CONTRACTOR SHALL, IN ADDITION TO THE REQUIREMENTS OF  
105.152, PROVIDE A SUITABLE FIELD OFFICE HAVING A MIN-  
IMUM OF 500 SQ. FT. OF FLOOR SPACE. THE CONTRACTOR SHALL HAVE A  
TELEPHONE INSTALLED AND MAINTAINED IN THIS FIELD OFFICE DURING THE  
CONSTRUCTION OF THIS PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE AND  
INSTALL WIRING AND OUTLETS SUITABLE FOR CONNECTING ELECTRIC LIGHTS  
AND OFFICE EQUIPMENT IN THE FIELD OFFICE AND PROVIDE 110-VOLT ALTER-  
NATING CURRENT TO THE OFFICE DURING THE ENTIRE PERIOD OF CONSTRUCTION  
OF THIS PROJECT. THE CONTRACTOR SHALL ALSO PROVIDE AND MAINTAIN  
SANITARY PROVISIONS AS PER 107.06. ALL THE ABOVE IS INCLUDED IN THE  
LUMP SUM PRICE BID FOR FIELD OFFICE.

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

SUPERELEVATION:  
SUPERELEVATED CURVES SHALL BE BUILT WITHOUT CROWN. THE CROWN SHALL BE  
WORKED OUT OF THE PAVEMENT IN THE PORTION BETWEEN THE BEGINNING OF  
TRANSITION AND THE POINT WHERE THE SUPERELEVATION EQUALS TWICE THE  
CROWN.

CONTRACTOR'S MAINTENANCE RESPONSIBILITY:  
ON THIS PROJECT, THE CONTRACTOR'S RESPONSIBILITY FOR MAINTENANCE OF  
THE EXISTING PAVEMENT PER ITEM 614 SHALL BE LIMITED TO THOSE PORTIONS  
OF THE EXISTING PAVEMENT LYING WITHIN THE PROPOSED WORK LIMITS.

REMOVING OF EXISTING PIPE:  
THE REMOVAL OF ALL EXISTING PIPE DRAINS WITHIN THE LIMITS OF PROPOSED  
EXCAVATION ITEMS SHALL BE INCLUDED FOR PAYMENT IN THE UNIT PRICES BID  
FOR THE RESPECTIVE EXCAVATION ITEMS, UNLESS OTHERWISE ITEMIZED IN THE  
PLANS.

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

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

SIZES	NO. TREES	NO. STUMPS
18"	62	10
30"	35	3
48"	17	1
60"		

THE ABOVE ESTIMATE IS APPROXIMATE AND THE STATE OF OHIO RESERVES THE  
RIGHT TO ORDER THE REMOVAL OF ADDITIONAL TREES AND STUMPS OUTSIDE OF  
THE LIMITS OF CONSTRUCTION BUT WITHIN THE RIGHT-OF-WAY AND/OR EASE-  
MENT LINES. PAYMENT FOR THE REMOVAL OF THESE ADDITIONAL TREES OR  
STUMPS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR 201, CLEARING  
AND GRUBBING.

SEEDING:  
QUANTITIES FOR SEEDING ARE CALCULATED FOR THE SOIL AREAS BETWEEN  
RIGHT-OF-WAY LINES EXCEPT THOSE AREAS WHERE THE EXISTING COVER TEN  
(10) FEET BEYOND THE WORK LIMITS IS CONSIDERED TO BE ACCEPTABLE  
(SUCH AS WOODLANDS, GRASSLANDS, ETC.) AT THE TIME OF CONSTRUCTION,  
THE ENGINEER SHALL DETERMINE THE ACCEPTABLE AREAS THAT SHALL NOT BE  
SEEDED.

SEEDING FORMULA:  
THE FOLLOWING SEED MIXTURES SHALL, IN LIEU OF THE MIXTURES LISTED IN  
659.09, BE USED THROUGHOUT THE LIMITS OF THIS PROJECT:

2:1 SLOPE AREAS:	ALL OTHER AREAS:
100% KENTUCKY 31 FESCUE	60% KENTUCKY 31 FESCUE
	25% KENTUCKY BLUE GRASS
	15% RED TOP

(ANY STONE OR OTHER DEBRIS 2" OR OVER IN DIAMETER SHALL BE REMOVED  
FROM THE EXPOSED SURFACE OF THE SEED BED.)

ITEM 203 PROOF ROLLING

AN ESTIMATED QUANTITY FOR THIS ITEM HAS BEEN PROVIDED IN THE GENERAL  
SUMMARY FOR USE IN PROOF ROLLING OF SUBGRADE FOR THE MAINLINE AND RAMP  
PAVEMENTS, AND FOR PAVED SHOULDERS, IN ACCORDANCE WITH SUPPLE-  
MENTAL SPECIFICATION 801.

CONNECTIONS TO EXISTING PIPE:

AT PLACES WHERE THE PLANS PROVIDE FOR PROPOSED DRAINAGE PIPE TO BE  
CONNECTED TO EXISTING PIPES, IT SHALL BE THE RESPONSIBILITY OF THE  
CONTRACTOR TO LOCATE THE EXISTING PIPE BOTH AS TO LINE AND GRADE BE-  
FORE HE STARTS TO LAY THE PROPOSED PIPE. THE COST OF THIS OPERATION  
SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE PERTINENT PIPE ITEM.

ESTIMATED QUANTITIES TO BE USED AS DIRECTED:  
ALL FARM TILE WHICH ARE ENCOUNTERED DURING CONSTRUCTION SHALL BE  
PROVIDED WITH UNOBSTRUCTED OUTLETS UNDER THE DIRECTION OF THE ENGINEER.  
EXISTING COLLECTORS WHICH ARE LOCATED BELOW THE ROADWAY DITCH ELEV-  
ATIONS AND WHICH CROSS THE ROADWAY SHALL BE REPLACED WITHIN THE CON-  
STRUCTION LIMITS BY 603 TYPE B CONDUIT CLASS B BEDDING.

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

THE CONTRACTOR SHALL PROVIDE OUTLETS INTO THE ROADWAY DITCH FOR EXIST-  
ING AND PROPOSED FARM SURFACE DRAINAGE. THE BACKSLOPE OF THE ROADWAY  
DITCH SHALL BE SODDED WHERE THESE SURFACE DRAINS OUTLET INTO THE ROAD-  
WAY DITCH. THE LOCATION, SIZE AND FLOWLINE OF THESE DRAINS SHALL BE  
DETERMINED BY THE ENGINEER. PAYMENT FOR THE CU. YD. OF EXCAVATION FOR  
THE SURFACE DRAINS SHALL BE AT THE UNIT PRICE BID FOR 203 EXCAVATION.

A QUANTITY OF 601 AND 660 HAS BEEN INCLUDED FOR EROSION CONTROL.

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

603	8" CONDUIT, TYPE B WITH CLASS B BEDDING	100 LIN. FT.
603	6" CONDUIT, TYPE E	200 LIN. FT.
603	8" CONDUIT, TYPE E	200 LIN. FT.
603	6" CONDUIT, TYPE F	100 LIN. FT.
603	8" CONDUIT, TYPE F	100 LIN. FT.
601	CRUSHED AGGREGATE SLOPE PROTECTION	100 SQ. YD.
660	SODDING	300 SQ. YD.

THE LOCATION, TYPE, SIZE, GRADE, AND USAGE OF THE ESTIMATED QUANTITIES  
TO BE USED AS DIRECTED SHALL BE MADE A MATTER OF RECORD BY INCORPORATION  
INTO THE FINAL CHANGE ORDER GOVERNING COMPLETION OF THIS PROJECT.  
THESE QUANTITIES ARE NOT TO BE DELIVERED TO THE PROJECT UNTIL SO  
DIRECTED BY THE ENGINEER.

605 AGGREGATE DRAINS:

STONE UNDERDRAINS SHALL BE PLACED AT TRANSVERSE PAVEMENT JOINTS ON  
EACH SIDE OF NORMAL CROWNED SECTIONS AND AT TRANSVERSE PAVEMENT JOINTS  
AND CENTERED BETWEEN TRANSVERSE JOINTS ON THE LOW SIDE ONLY OF SUPER-  
ELEVATED SECTIONS, EXCEPT WHERE 605 PIPE UNDERDRAINS HAVE BEEN PROVIDED.

MAINTENANCE OF SEWER FLOWS:

THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO MAINTAIN AT ALL  
TIMES SEWER FLOWS THROUGH EXISTING FACILITIES TO REMAIN IN PLACE AND  
THROUGH EXISTING FACILITIES TO BE REPLACED UNTIL NEW FACILITIES ARE  
COMPLETED AND PLACED INTO USE.

PAYMENT FOR ANY ADDITIONAL COSTS INVOLVED IN MAINTAINING THESE FLOWS  
BY PUMPING OR BY ANY OTHER MEANS APPROVED BY THE ENGINEER SHALL BE  
INCLUDED IN THE UNIT PRICES BID FOR THE RESPECTIVE ITEMS OF 603 CONDUIT.

CONTRACTION AND EXPANSION JOINTS:

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN EXPANSION AND CONTRACTION JOINTS  
HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS  
INTENDED. PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES AND  
THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS SHALL IN ALL CASES BE  
IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-4.

ELEVATION DATUM:

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

DRIVEWAYS AND MAILBOX TURN OUTS:

UNLESS OTHERWISE SHOWN ON THESE PLANS, ALL DRIVEWAYS AND MAILBOX TURN-  
OUTS ON THIS PROJECT SHALL BE TYPE 1 STANDARD DRAWING BP-6, MODIFIED  
BY DELETING THE 12" OFFSET AT THE EDGE OF THE PAVEMENT. PAVEMENT  
COURSES AND THICKNESSES ARE AS FOLLOWS:

TYPE OF APPROACH:	DRIVE APRONS	OTHER AREAS
MAILBOX APPROACHES	404* 304	404* 304
RESIDENCE DRIVE	2" 5"	** 8"
COMMERCIAL DRIVE	2" 7"	** 9"
FIELD DRIVE	0" 6"	0" 6"

\*\* IF EXISTING DRIVE IS HARD-SURFACED THE SAME COURSES AND THICKNESSES  
SHALL BE USED BEYOND THE DRIVE APRONS AS WITHIN THE DRIVE APRONS.

\* TWO 1" COURSES.

COMMERCIAL FERTILIZER:

FORMULA 12-12-12 SHALL BE APPLIED AT THE RATE OF TWENTY (20) POUNDS  
PER THOUSAND (1000) SQUARE FEET TO ALL AREAS TO BE SEEDED OR SODDED.

ITEM 407 TACK COAT:

ALTHOUGH THIS ITEM HAS BEEN ESTIMATED FOR USE ON THE ENTIRE EXISTING  
BITUMINOUS PAVEMENT AREA TO BE RESURFACED, IT SHALL BE USED ONLY ON  
DRY OR CHECKED PAVEMENT AREAS WHERE SPECIFICALLY DIRECTED BY THE  
ENGINEER. PAYMENT WILL BE MADE ON FINAL MEASUREMENT.

CONSTRUCTION LAYOUT STAKES:

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

TRAFFIC AND CONSTRUCTION PROCEDURE:

THE CONTRACTOR SHALL SCHEDULE AND COORDINATE HIS CONSTRUCTION OPERATIONS  
SO THAT TRAFFIC ON INTERSECTING ROADS WILL BE MAINTAINED IN THE FOLLOWING  
MANNER:

EXISTING AND PROPOSED USR 224 INTERSECTION:

TRAFFIC SHALL BE MAINTAINED OVER THE CLASS "B" TEMPORARY PAVEMENT AS  
SHOWN ON SHEET NO. 7, WHILE THE CONNECTIONS BETWEEN THE EXISTING AND  
PROPOSED PAVEMENTS ARE MADE.

EXISTING USR 30 AND PROPOSED USR 224 INTERSECTION:

A CLASS "B" TEMPORARY PAVEMENT AS SHOWN ON SHEET NO. 15 SHALL BE PRO-  
VIDED FOR THE MAINTENANCE OF TRAFFIC WHILE THE EXISTING USR 30 - PRO-  
POSED USR 224 AT GRADE INTERSECTION IS CONSTRUCTED. IF RELOCATED USR  
30 FROM NORTH OF CONVOY TO EAST OF VAN WERT IS COMPLETED AND OPEN TO  
TRAFFIC PRIOR TO THE CONSTRUCTION OF THIS INTERSECTION, THE TEMPORARY  
PAVEMENT AND TEMPORARY ROAD ITEMS SHALL BE NON-PERFORMED AT THE  
DIRECTION OF THE ENGINEER.

AT NO TIME SHALL EXISTING USR 30 AND OLD TILE FACTORY ROAD BE CLOSED  
TO TRAFFIC DURING THE SAME PERIOD OF TIME.

LIGHTS AND SIGNS AT ADJACENT ROAD INTERSECTIONS:

THE CONTRACTOR SHALL, IN ADDITION TO THE GENERAL REQUIREMENTS OF ITEM  
614 ON THIS PROJECT PERFORM THE FOLLOWING:

PROVIDE, ERECT, AND MAINTAIN STANDARD 40" X 24" SIZE "ROAD CLOSED"  
SIGNS, SIGN SUPPORTS, AND LIGHTS AT THE FOLLOWING LOCATIONS DURING  
PERIODS IN WHICH THE AFFECTED ROADS ARE CLOSED TO TRAFFIC:

1. OLD TILE FACTORY ROAD JUST EAST OF LIBERTY UNION ROAD INTERSECTION.
2. OLD TILE FACTORY ROAD JUST WEST OF JOHN BROWN ROAD INTERSECTION.

SIGN SUPPORTS AND LIGHTS FOR "ROAD CLOSED" SIGNS SHALL BE AS DETAILED  
IN THE "OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

PAYMENT FOR PROVIDING, ERECTING, MAINTAINING, AND REMOVING LIGHTS,  
SIGNS, AND SIGN SUPPORTS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID  
FOR 614 MAINTAINING TRAFFIC.

TRAFFIC SIGN ERECTION:

THE CONTRACTOR SHALL ERECT SIGN PANELS FURNISHED BY OTHERS AS NOTED  
ON THE SCHEMATIC SIGNING LAYOUT SHEETS NO. 66, 67, and 68, INCLUSIVE.  
THE PANELS SHALL BE MOUNTED ON THE BRACKETS OR BEAM SUPPORTS PROVIDED  
IN THE PLANS.

A SCHEDULE FOR SIGN ERECTION SHALL BE SUBMITTED TO THE ENGINEER,  
BUREAU OF TRAFFIC, 450 EAST TOWN STREET, COLUMBUS, OHIO, 60 CALENDAR  
DAYS PRIOR TO THE START OF ANY SCHEDULED ERECTION WORK. THE SCHEDULE  
SHALL INCLUDE PROPOSED DATES, TIME, AND DELIVERY POINT.

THE PRICE BID PER SQUARE FOOT FOR, "ITEM 815 SIGN ERECTION BY TYPE, AS  
PER PLAN", SHALL INCLUDE ALL NECESSARY EQUIPMENT, MANPOWER, AND TOOLS  
TO ERECT THE SIGNS NOTED. ALL SIGN MATERIAL AND ACCESSORIES WILL BE  
FURNISHED AND TRANSPORTED TO A DESIGNATED DELIVERY POINT, ON OR NEAR  
THE SUBJECT PROJECT, BY OTHERS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE HANDLING AND STORAGE OF  
THE SIGN PANELS AND ACCESSORIES FROM THE TIME OF ARRIVAL AT THE DELIV-  
ERY POINT.

GALVANIZED SUPPORTS:

THE STRUCTURAL STEEL BEAM SUPPORTS INCLUDING THE 8 LB. AND 4 LB. BEAM,  
AND 4 LB., 2 LB. DRIVE POST SHALL BE GALVANIZED (AFTER PUNCHING) IN  
ACCORDANCE WITH ASTM A123. ALL BOLTS, NUTS PLAIN AND LOCKWASHERS  
SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A-153, EXCEPT WHERE ALUM-  
INUM OR STAINLESS STEEL IS REQUIRED.

816 CONCRETE FOR SIGN SUPPORT FOUNDATIONS, AS PER PLAN:  
PAYMENT FOR THIS ITEM SHALL BE BASED ON PLAN DIMENSIONS (OR DIMENSIONS  
AS MODIFIED BY THE ENGINEER) IN LIEU OF PLAN QUANTITIES AS SPECIFIED  
IN SUPPLEMENTAL SPECIFICATION 816.

STRUCTURAL SIGN SUPPORTS QUANTITIES:

QUANTITIES FOR ITEM 816 STRUCTURAL BEAM SUPPORTS APPEARING IN THE  
SUMMARY TABLES ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE  
FOR DETERMINING EXACT SUPPORT LENGTHS PRIOR TO FABRICATION AND GALVAN-  
IZING OF SUPPORTS. DETAILS FOR PLAN QUANTITIES AND ALTERNATE DETAILS  
ARE SHOWN ON SHEET NO. 70 and 71.

FEDERAL AID CONSTRUCTION IDENTIFICATION SIGNS:

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

1. STA. 493+40, RT.
2. STA. 52+20, LT. (EXISTING S.R. 224)

SIGN DETAILS SHALL BE AS SPECIFIED ON STANDARD DRAWING FACI-1, "CODE  
N-54(1)-96(2)".

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

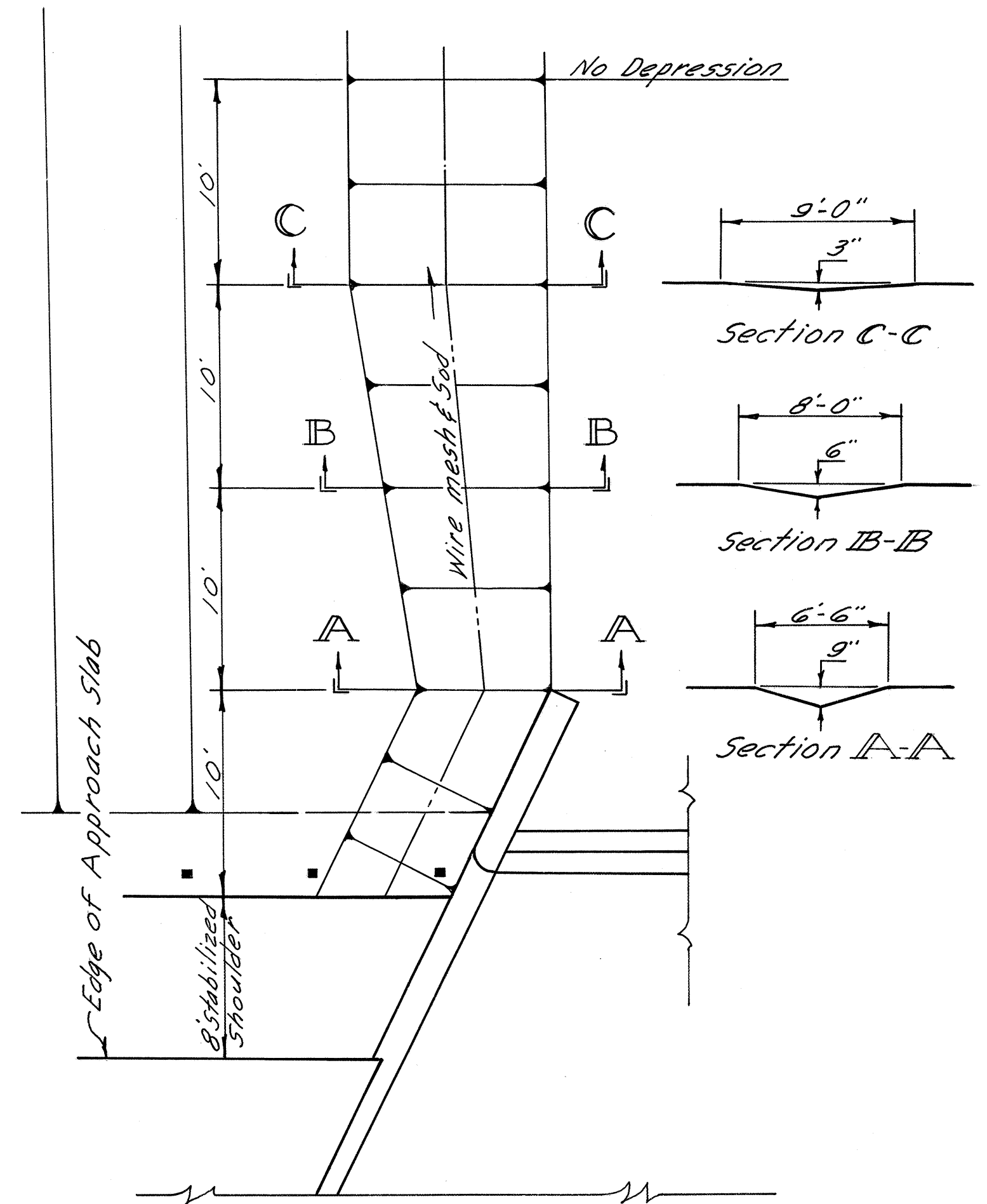
202, BUILDING REMOVALS

The buildings to be removed as a part of this project  
are located on existing USR 224, right of Sta. 55+50 on  
parcel no. 200-WL, and right of Sta. 56+75 on parcel  
no. 200-Y.



PAVEMENT COMPUTATIONS

					304	302	402	404	408	407	409		451	611	605	310	609		203	202
					Aggregate Base	Asphalt Concrete	Asphalt Concrete	Asphalt Concrete	Bituminous Prime Coat	Tack Coat	Seal Coat Bituminous Material	Seal Coat Cover Aggregate No. 8	Reinforced Portland Cement Conc. Pav't.	Reinf. Conc. Approach Slabs	Aggregate Drains	Subbase Graveling "A" or "B"	Asphaltic Concrete Curb	Concrete Curb Type 6	Subgrade Preparation (Excluding Slope Sides)	Pavement Removal
Station		Corr.	Lin. Ft.		Cu. Yds.	Cu. Yds.	Cu. Yds.	Cu. Yds.	Gals.	Gals.	Gals.	Cu. Yds.	Sq. Yds.	Sq. Yds.	Lin. Ft.	Cu. Yds.	Lin. Ft.	Lin. Ft.	Sq. Yds.	Sq. Yds.
From	To				Cu. Yds.	Cu. Yds.	Cu. Yds.	Gals.	Gals.	Gals.	Cu. Yds.	Sq. Yds.	Sq. Yds.	Lin. Ft.	Cu. Yds.	Lin. Ft.	Lin. Ft.	Sq. Yds.	Sq. Yds.	
496+00	543+38.13	-1.79	4,736.34		1,767.53				3,181		1,988	63.63	12,630.24			3,320.07			20,584	
543+38.13	543+63.13		25.00	Appr. Slab	9.88				18		11	.36			66.67				111	
543+63.13	544+36.37		73.24	Structure																
544+36.37	544+61.37		25.00	Appr. Slab	9.88				18		11	.36			66.67				111	
544+61.37	608+52.96	-0.32	6,391.27		2,525.07				4,545		2,841	90.90	17,043.39			4,576.33			28,405	
608+52.96	608+77.96		25.00	Appr. Slab	9.88				18		11	.36			66.67				111	
608+77.96	610+51.99		174.03	Structure											66.67					
610+51.99	610+76.99		25.00	Appr. Slab	9.88				18		11	.36			66.67				111	
610+76.99	619+38		861.01		340.17				612		383	12.25	2,296.02			616.51			3,827	
Intersection 1-P, Exist. U.S.R. 224					381.75	98.15	45.56	67.30	675	90	123	3.93	809.61			399.68	600		2,350	650
Intersection 2-P, Old Tile Factory Rd., C.R. 132					-23.40			7.40	9	9	-26	-.30	714.80			116.80			633	
Intersection 3-P, U.S.R. 30					12.00						14	40	1,302.0			228.00		143	1,481	800
					5,042.64	98.15	45.56	74.70	9,094	99	5,367	172.25	34,696.06	266.68		9,324.99	600	143	57,724	1,450



FENCE-607

Left of Centerline			Right of Centerline		
Station	Length		Station	Length	
From	To	Lin. Ft.	From	To	Lin. Ft.
497+91.53	510+84.64	1,231.63	52+20	505+97.01	184.84
510+84.64	511+49.24	67.00	505+97.01	511+54.93	557.92
511+49.24	537+02.00	2,552.92	511+54.93	511+54.52	15.00
537+02.00	537+02.00	687.00	511+54.52	530+00.00	1,845.48
537+02.00	537+02.00	105.00	530+00.00	532+00.00	200.56
537+02.00	539+50.00	134.00	532+00.00	537+22.00	522.00
539+50.00	543+14.00	360.20	537+22.00	540+51.13	28.60
543+14.00	544+02.00	3467.88	540+51.13	55+00	395.00
544+02.00	578+78.51	3,467.88	55+00	539+18.00	40.00
578+78.51	581+02.36	192.00	539+18.00	544+65.00	552.70
581+02.36	609+51.43	2,879.47	544+65.00	545+30.00	606.69
609+51.43	616+00	540.18	545+30.00	551+30.43	15.00
616+00			551+30.43	551+31.20	2,608.46
			551+31.20	577+38.63	105.00
			577+38.63	579+69.00	1,305.00
			579+69.00	592+83.61	1,414.00
			592+83.61	607+00.00	110.00
			607+00.00	607+98.13	705.18
			607+98.13	616+00	1,120.93
			616+00		
Total	13,005.36		Total		
Grand Total			24,214.79		

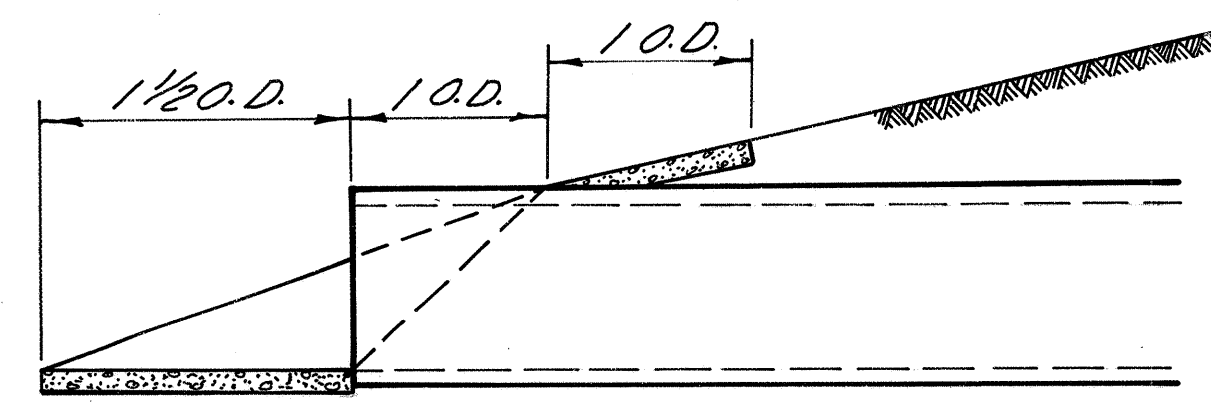
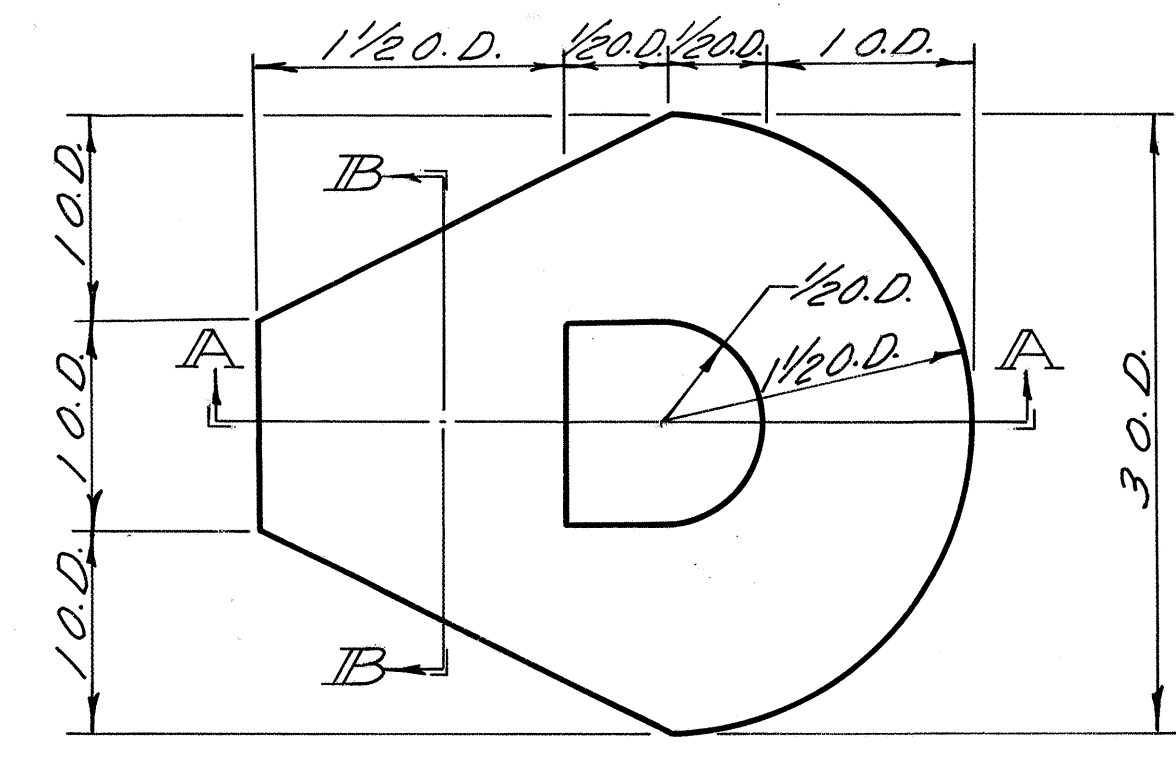
SEEDING-659

Sheet No.	Seeding Sq. Yd.	Sheet No.	Seeding Sq. Yd.
21	17,470	38	8,438
22	20,865	39	6,366
23	10,087	40	6,366
24	4,617	41	12,604
25	8,525	42	6,839
26	8,488	43	7,117
27	8,488	44	7,205
28	6,306	45	9,226
29	7,961	46	9,966
30	18,271	47	11,205
31	11,270	48	9,228
32	7,766	49	10,094
33	9,675	50	6,400
34	9,026	52	9,828
35	8,695	53	8,078
36	8,562	54	2,743
37	8,510		
Total			306,335
Less Sodding & Special			- 539
Less Riprap			- 45
Total			305,751

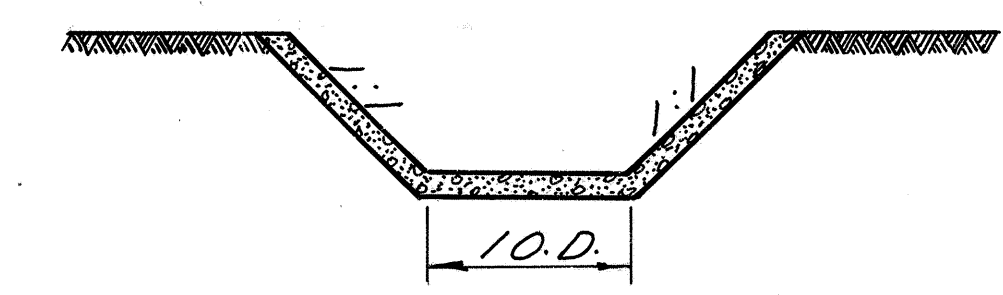
EARTHWORK-203

Station		Excava.	Embank.	Embank. +20%
From	To	Cu. Yd.	Cu. Yd.	Cu. Yd.
495+00	505+00	2,212	1,623	1,948
505+00	510+00	1,026	1,671	2,005
510+00	520+00	1,888	3,793	4,552
520+00	530+00	4,112	4,491	5,389
530+00	540+00	12,852	26,220	31,464
540+00	550+00	5,860	4,293	5,152
550+00	560+00	5,891	422	506
560+00	570+00	854	5,110	6,132
570+00	580+00	1,078	9,677	11,612
580+00	590+00	2,236	20,920	25,104
590+00	600+00	2,861	33,537	40,244
600+00	610+00	1,398	127,280	152,736
610+00	619+38	892	110,585	132,702
From Chan. Sect.		8,635	7,137	8,564
Totals		51,855	356,759	428,110
203-Borrow = 428,110 - 51,855 = 376,255 Cu. Yd.				

RIPRAP DETAIL FOR PIPE ENDS



Section A-A



Section B-B

JUTE MATTING-667

Sheet No.	Jute Matting Sq. Yd.	Sheet No.	Jute Matting Sq. Yd.
42	311	51	4,172
43	877	52	5,072
44	1,033	53	4,688
45	1,399	54	2,594
46	1,544		
47	4,567		
48	4,439		
49	4,934		
Total	35,630		

MISCELLANEOUS COMPUTATIONS

- 203 WATER Embankment 356,759 Cu. Yd. Subbase 9,325 Cu. Yd. 366,084 Cu. Yd. 366,084 x 5 ÷ 1,000 = 1,830 M. Gal.
- 203 PROOF ROLLING 57,699 Sq. Yd. Subgrade +2,000 = 28.85 Hrs.
- 304 WATER 304 Aggregate Base 5034 Cu. Yd. 5,034 x 5 ÷ 1,000 = 25 M. Gal.
- 605 AGGREGATE DRAINS 12,388 L.F. x 2' x 60 x 16 Ave Length = 6,068 L.F.
- 659 COMMERCIAL FERTILIZER Seeding 305,751 Sq. Yd. Sodding 385 Sq. Yd. Special Berm Sodding 152 Sq. Yd. 306,288 Sq. Yd. 306,288 x 9 x 20 ÷ 1,000 ÷ 5,000 = 27.57 Tons

SPECIAL BERM AND SLOPE PROTECTION

Prior to placement of sod in the berm and slope, galvanized poultry fence shall be placed on the finished grade in strands which shall be at right angles to the direction of flow. Each strand shall be staked securely on top and bottom with stakes spaced at four foot intervals and alternated in rows four feet apart.

Stakes shall be 1"x1"x8" wood stakes and shall be perpendicular to the ground and flush with the finished grade.

The fence shall be Straight Line Poultry Fence or equivalent with strand width of four feet, having a two inch mesh and all wires No. 20 Gauge.

Each strand of fencing shall be fastened together at twelve inch intervals by means of hog rings.

The fence shall be secured to the wood stakes by metal staples.

Sod shall be laid in accordance with Construction and Materials Specifications 660.06

Payment for all of the above shall be included in the unit price bid for 660 Sodding for special berm and slope protection, as per plan.



VAN WERT COUNTY  
VAN-224-934

## GENERAL SUMMARY

[illegible]

## GENERAL SUMMARY



VAN WERT COUNTY  
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SPIRAL CURVE DATA

P.I. Sta. 506+38.46  
D<sub>c</sub> = 4°00'  
L<sub>s</sub> = 400'  
T<sub>s</sub> = 1,036.94'  
E<sub>s</sub> = 230.7'  
θ<sub>s</sub> = 8°00'  
Δ = 60°26'24"  
L<sub>c</sub> = 1,111.00'  
P<sub>c</sub> = 1,432.39'

See Sheets # 58 & 59 for details  
1-P  
See Sheet # 8 for Approach  
Profile

SHEET SUMMARY									
Ref. No.	Station		Side	603		202		Inlet Removed	Specials
				Conduit Lin. Ft.					
				Type					
				F	E	F	E		
	From	To		8"	12"	8"	Each	Each	
1-D	497+38	497+60	Lt.	10		26			1
2-D	497+37		Lt.				1		
3-D	501+02		Rt.				1		
4-D	502+90		Rt.				1		
5-D	504+15	504+85	Rt.		70				
6-D	1+75		Rt.				1		
Totals				10	70	26	4		1
TEMPORARY ROAD 615									
	From	To	Side	Class B Temp. Pavt. 5.1		Temp. Rd.			
1-TR	35+75	43+50	Rt.	1,506.5				L. S.	
Totals				1,506.5				L. S.	

⊗ Type A, 706.01, 706.02, or 706.08 with Class B Bedding.

Begin Work  
Sta. 493+40

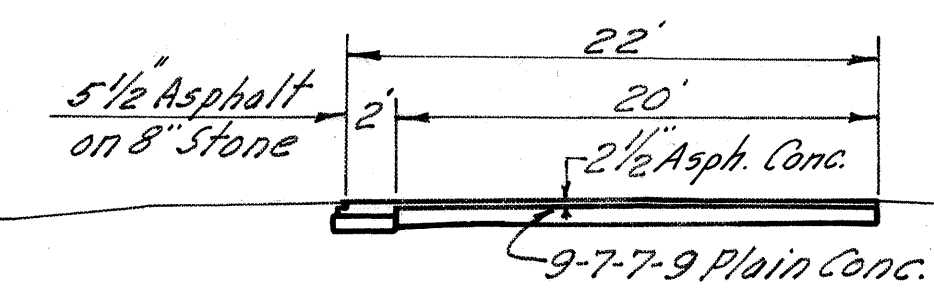
Begin Project  
Sta. 496+00

S.L.M. 934  
F-591(6)  
T.S. Sta. 496+01.54  
on Reloc. U.S.R. 224-  
Sta. 37+90.66 on  
Exist. U.S.R. 224

Note: See R/W Plans for future  
ramp curve data.

8" x 30" Bend  
8" FT. 7  
8" FT. 7 (Abon.)

Temporary Road, Class B Pavt. (22' Wide)  
Note: Grade for Temporary-Rundound  
shall be approx. the same as exist.  
Pavement.

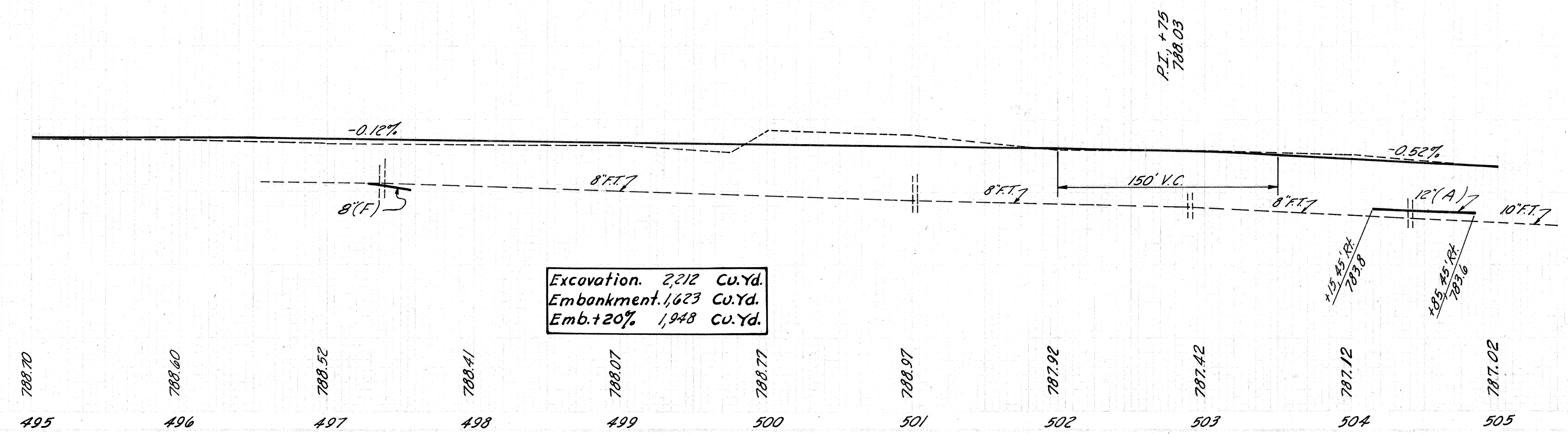


TYPICAL SECTION-ADJOINING PAVEMENT

Note:  
The Profile for 1,000' beyond the Begin  
of work is a maximum grade of -0.40%  
and the Alignment is a 0°30' Rt. Curve

Profile	Grade	Profile	Grade
At Edge	788.53	At Edge	788.70
	788.65		788.77
	788.77		788.85
	788.88		788.93
	788.90		788.93
	789.00		789.00
	789.10		789.10
	789.20		789.20
	789.28		789.28
	789.36		789.36
	789.45		789.45
	789.53		789.53
	789.61		789.61
	789.69		789.69
	789.78		789.78
	789.86		789.86
	789.95		789.95
	790.03		790.03
	790.12		790.12
	790.20		790.20
	790.28		790.28
	790.33		790.33
	790.30		790.30
	790.27		790.27
	790.24		790.24
	790.21		790.21
	790.18		790.18
	790.15		790.15
	790.12		790.12
	790.08		790.08
	790.03		790.03
	789.96		789.96
	789.87		789.87
	789.76		789.76
	789.64		789.64
	789.51		789.51
	789.38		789.38
	789.25		789.25
	789.12		789.12
	788.99		788.99
	788.86		788.86

795  
790  
785  
780



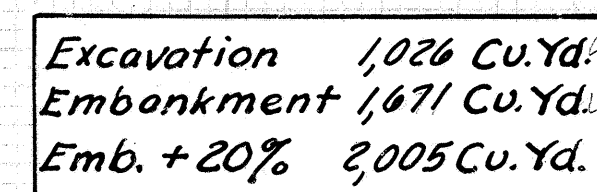
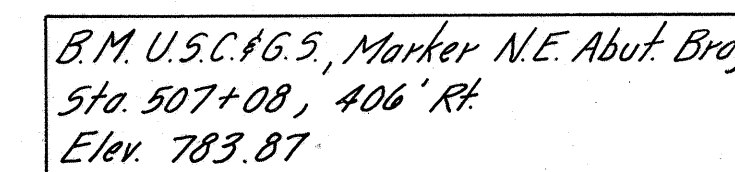
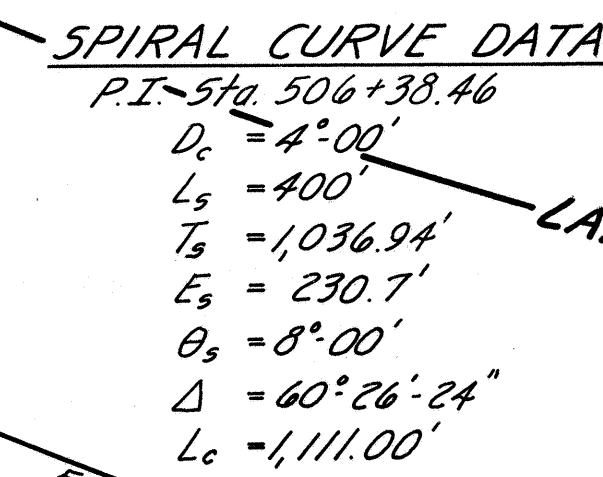
STA. 493+40 TO STA. 505+00



VAN WERT COUNTY  
VAN-224-934

Corner Post Assy.	C.P.A.
End Post Assy.	E.P.A.
Intermed. Anchor	
Post Assy.	I.A.P.A.

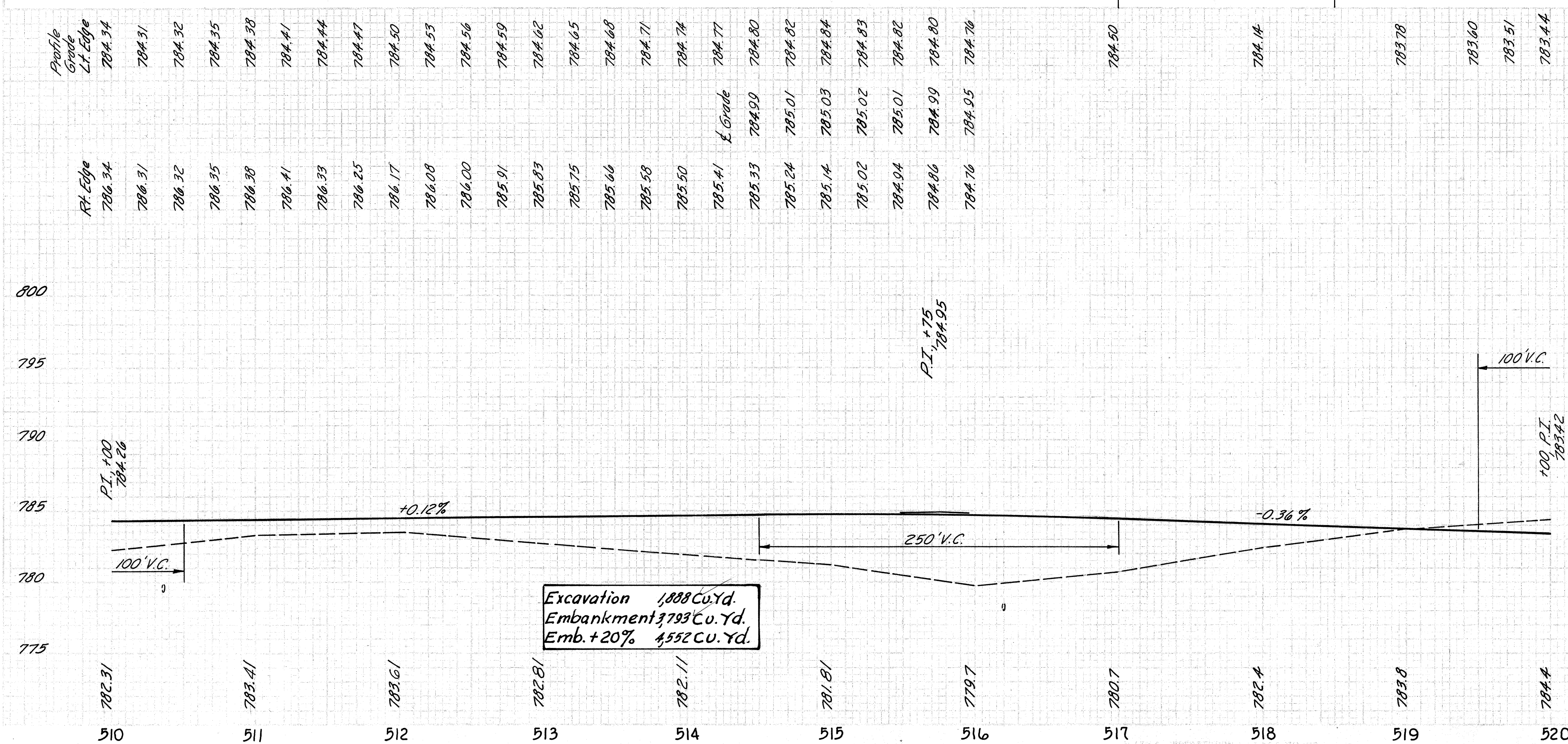
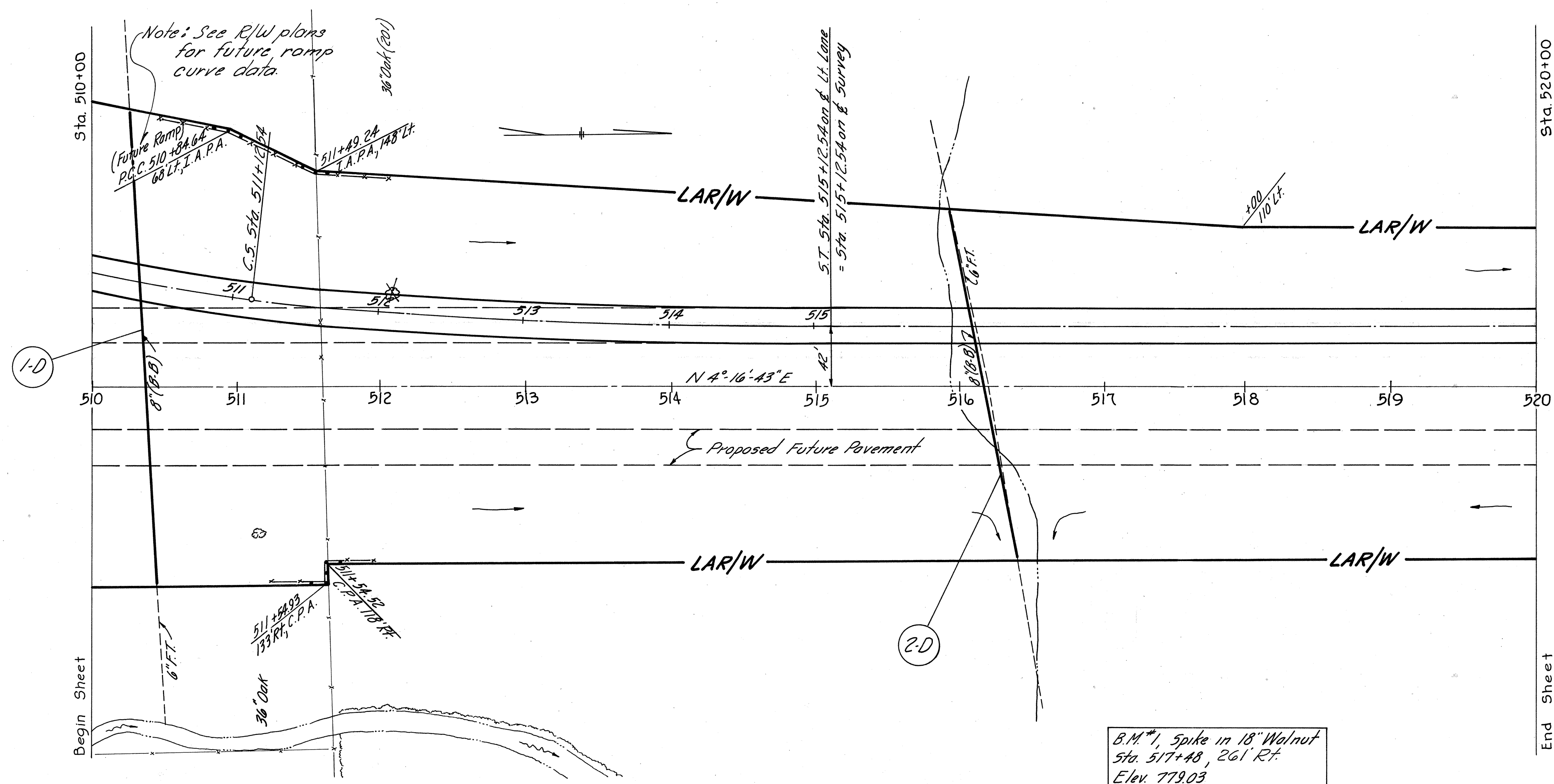
Ohio Power Co., Canton, O.  
Van Wert Tele. Co., Van Wert, O.  
Railroad - Pennsylvania Railroad Co.





VAN WERT COUNTY  
VAN-224-934

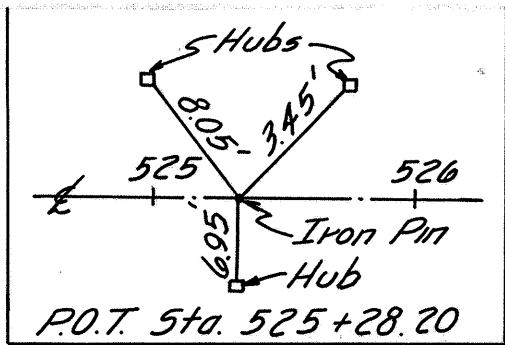
SHEET SUMMARY						
Ref. No.	Station		Side	603		
				Conduit		
				Lin. Ft		
				Type		
	From	To		B-B		
1-D	510+37		44' <del>44'</del>	325		
2-D	515+88	516+38	44' <del>44'</del>	242		
Totals				567		





FINAL SURVEY PLOTTED  
DATE: 10/1/99  
BY: J. W. WERT  
NO. 10

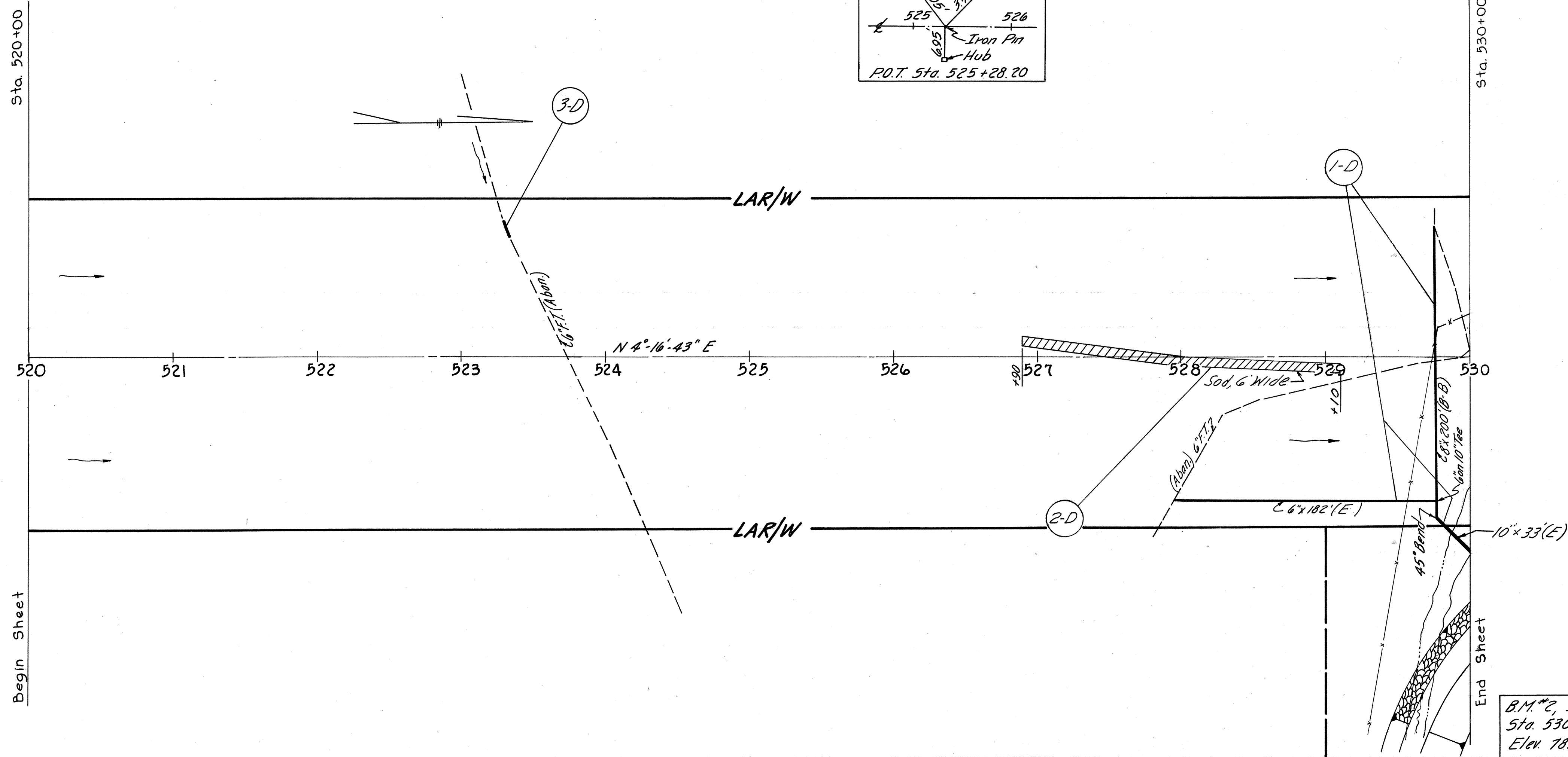
ORIGINAL SURVEY PLOTTED  
DATE: 10/1/99  
BY: J. W. WERT  
NO. 10



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

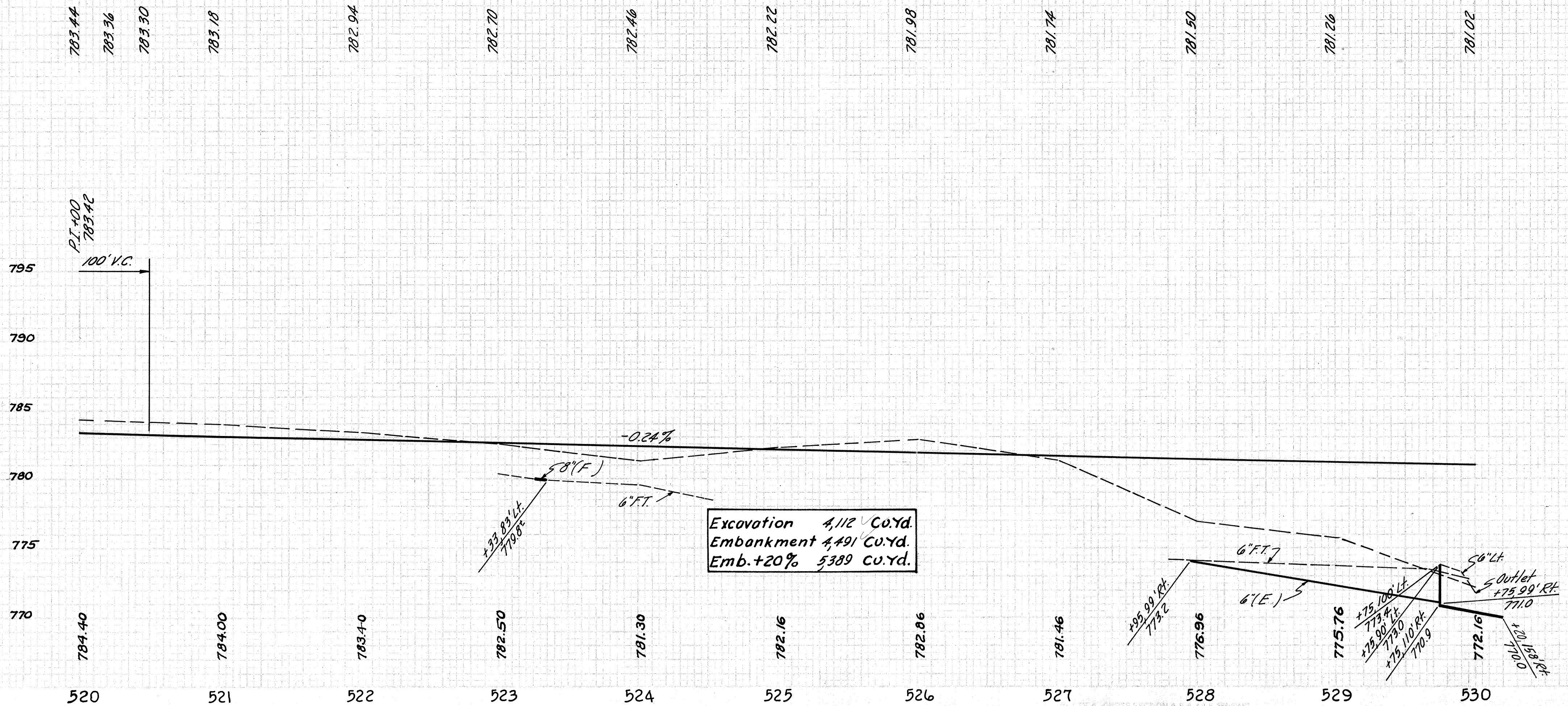
10  
99

VAN WERT COUNTY  
VAN-224-9.34



SHEET SUMMARY														
Ref. No.	Station		Side	603								660		
				Conduit						Specials			Saddling	
				Lin. Ft.										
				Type										
	From			To		E		B-B		F				
				6"	10"	8"	8"							
1-D	527+93	530+00	RL	182	33	200					2			5.Y.
2-D	526+90	529+10	RL											148
3-D	523+30	523+33	LT					10						
Totals				182	33	200	10			2				148

B.M. #2, Spike in 30" Oak  
Sta. 530+26, 208' RL  
Elev. 781.35

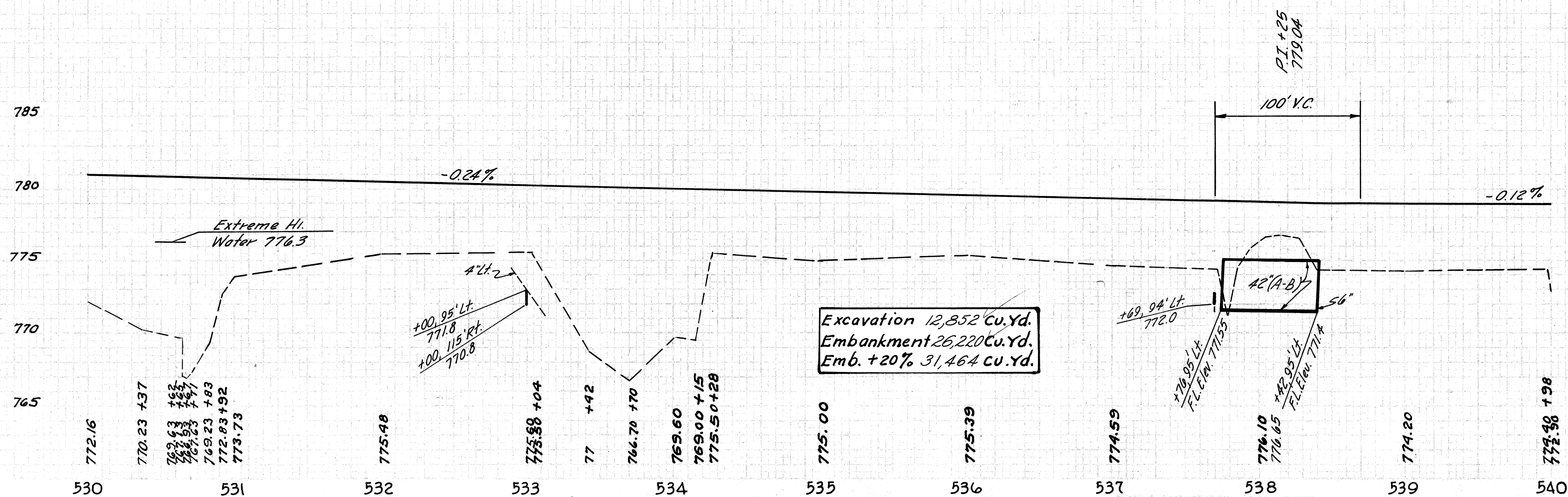
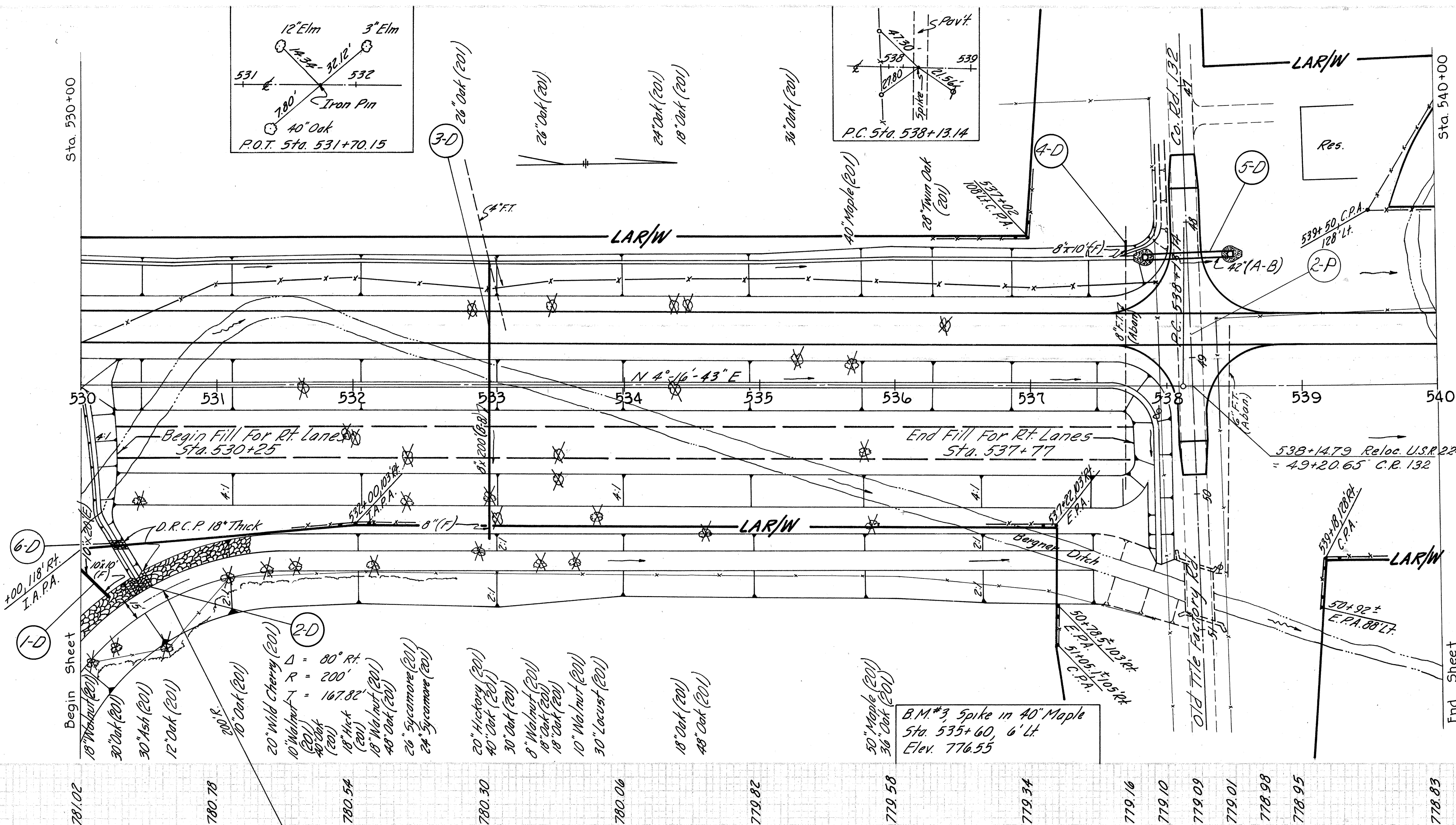


STA. 520+00 to STA. 530+00



SHEET SUMMARY										
Ref. No.	Station	Side	603					601		
			Conduit					Damp Rock		
			Lin. Ft.					Chan. Dist.		
			Type					C.P. Dist.		
	From	To								
			F	E	A-B	B-B				
1-D	530+00	530+20	RT	10	20					
2-D	529+50	531+10	RT							
3-D	533+00	533+10	RT	10			200			
4-D	537+70	537+70	LT	10						
5-D	537+75	538+41	LT			66				29.36
6-D	530+22	530+32	RT							3
Totals				20	10	20	66	200	173	29.36

5-D  
Drainage Area = 104 Acres  
 $Q_{10} = 190 \times .86 \times 4 \times .65 = 42 \text{ c.f.s.}$   
 $Q_{25} = 190 \times 1 \times 4 \times .65 = 49 \text{ c.f.s.}$





SHEET SUMMARY							
Ref. No.	Station		Side		606	601	
	From	To			Guard Rail L.F.	Dumped Rock Channel/ Protection	
I-D						Cv. Hd. #7	
1-G	542+45.59	545+34.59	Lt.		214.26		
2-G	542+71.70	545+59.66	Lt.		214.26		

to be 201

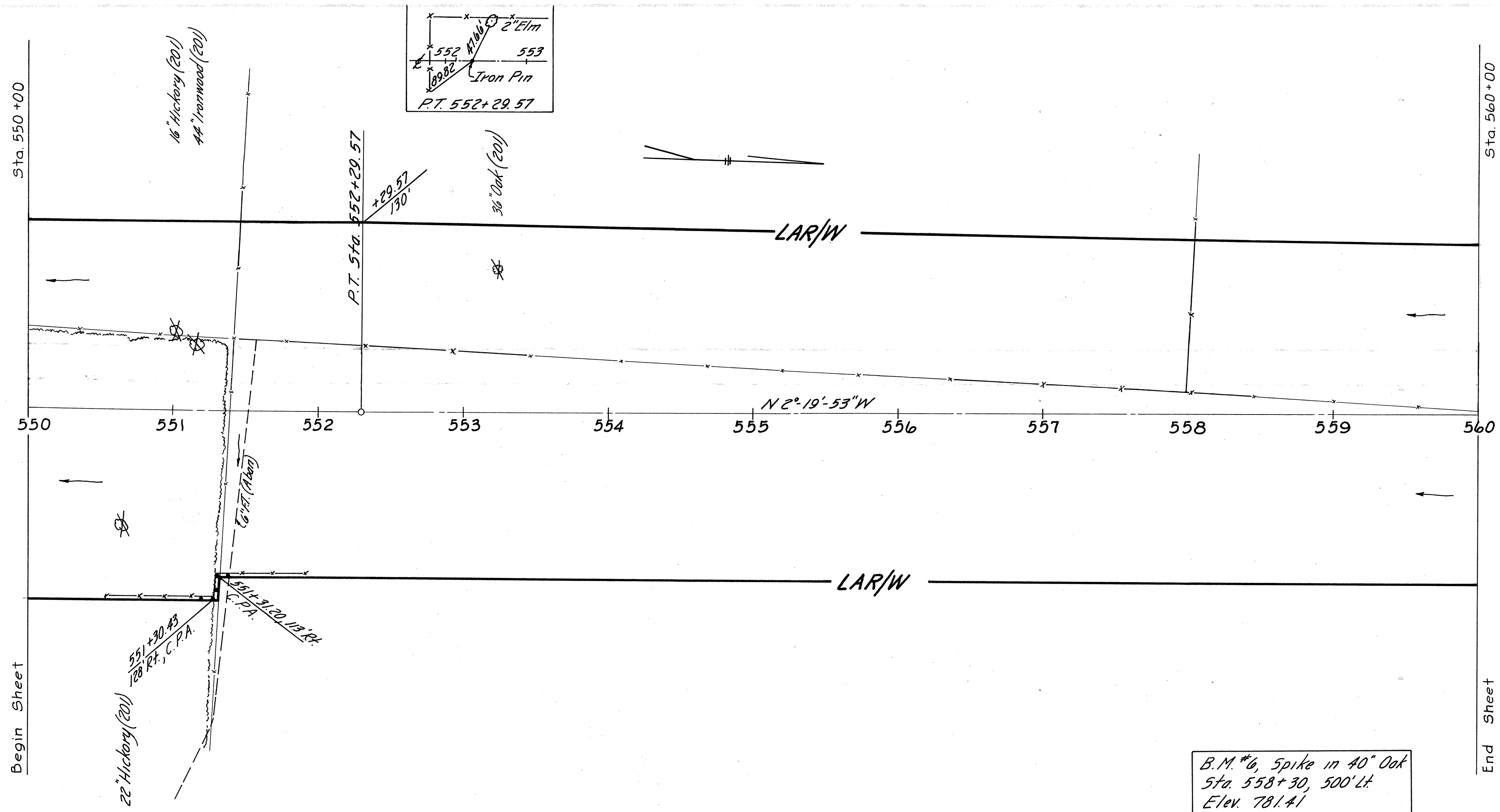
20" Lymn	26" Dead Elm	18" x 22" Locust	15" Oak	12" Ironwood	36" Oak	22" Hickory	18" Oak	18" Oak	17" Oak	24" Oak	24" Oak	37" Oak	24" Oak	29" Oak	14" Hickory	21" Oak	38" Oak	20" Oak	24" Oak	24" Oak	16" Hickory	18" Hickory
														B.M. #3, Spike in 36" Oak			Stn. 549+50, 150' Rk.					
														Elev. 732.47								

STA. 540+00 to STA. 550+00.

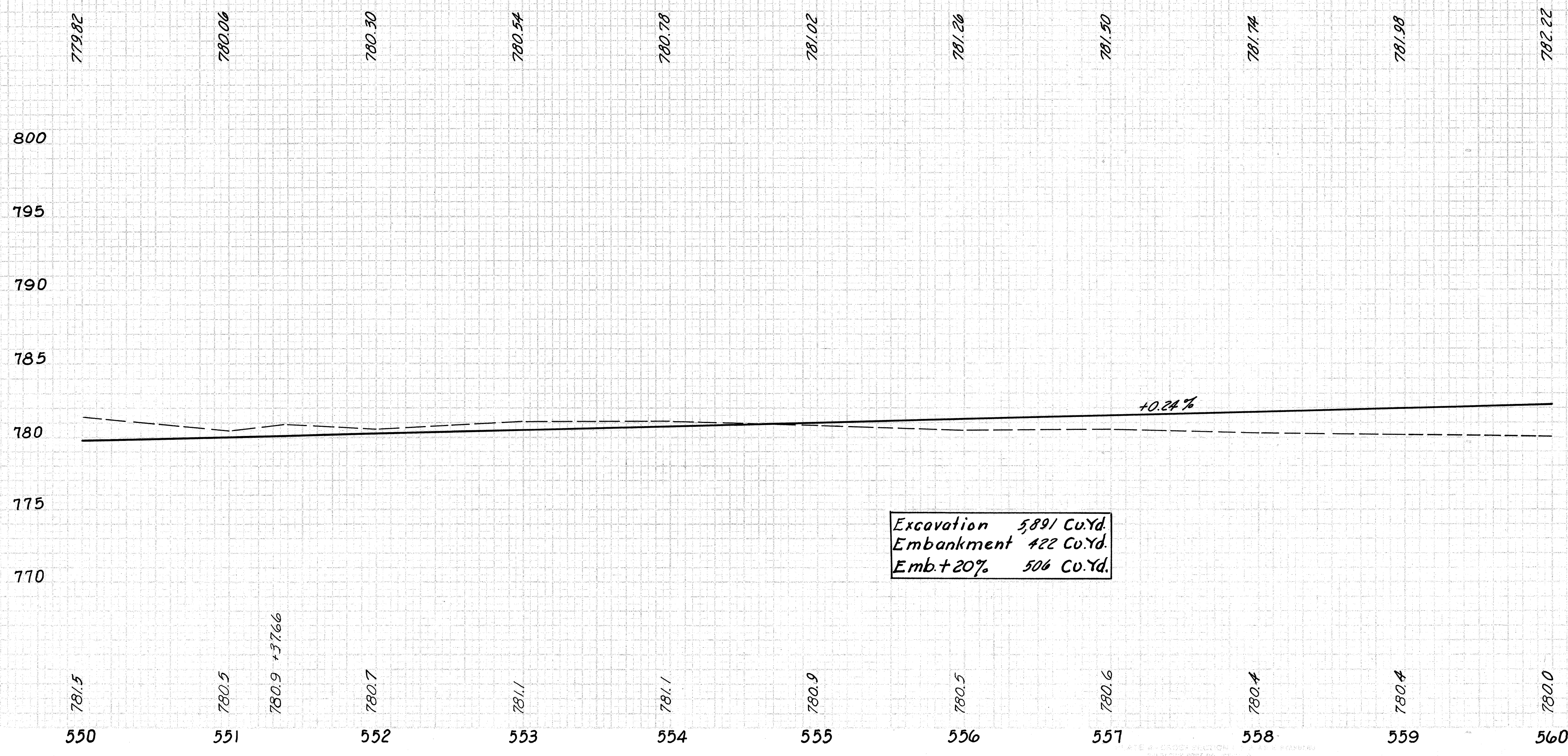


FINAL	DESIGNED	DATE
SURVEY	PLOTTED	
NOTED	REVISION	
NO.	BY	

ORIGINAL	DESIGNED	DATE
SURVEY	PLOTTED	
NOTED	REVISION	
NO.	BY	



B.M. #6, Spike in 40" Oak  
Sta. 558+30, 500' Lt.  
Elev. 781.41



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

13  
99

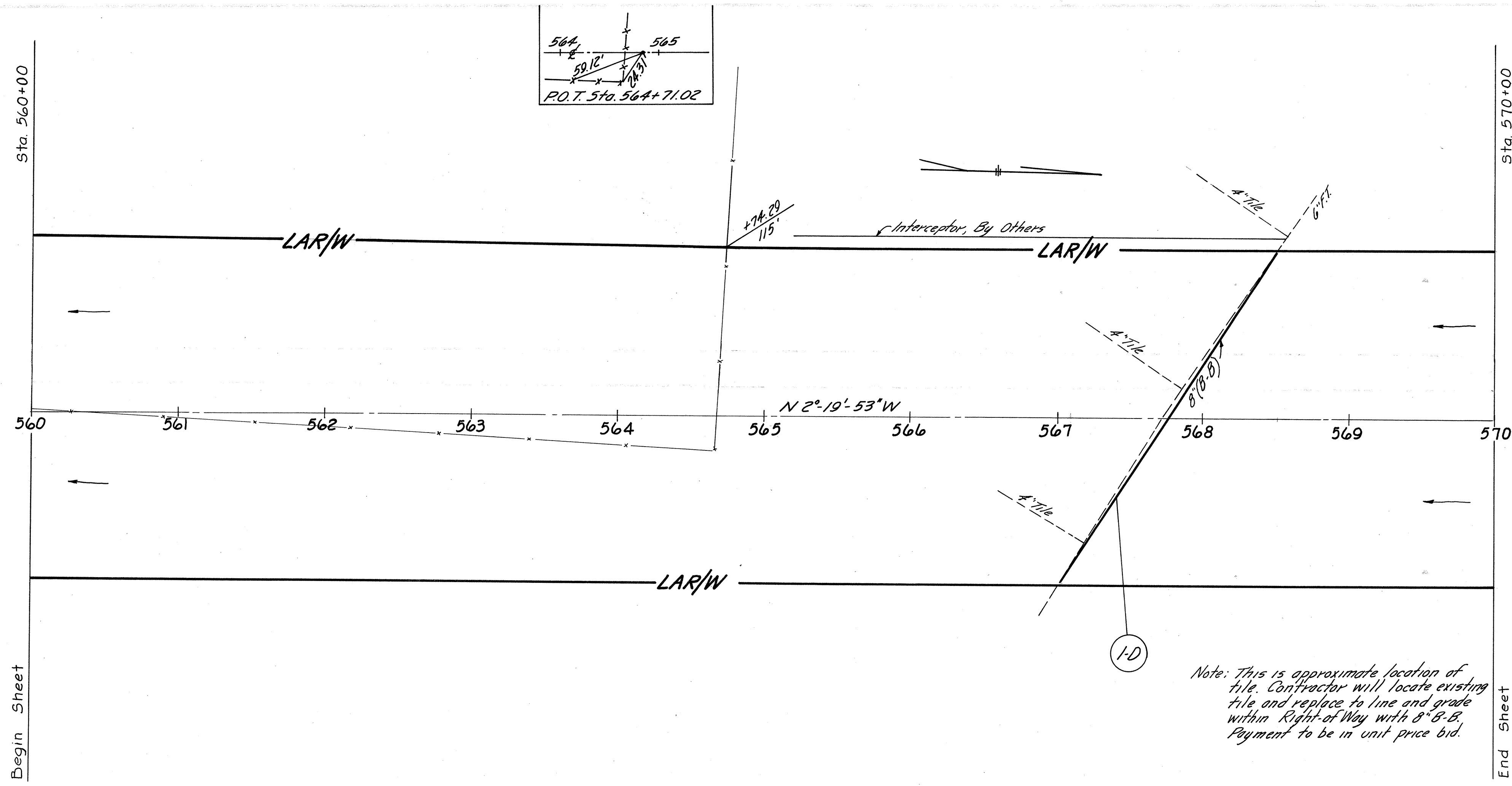
VAN WERT COUNTY  
VAN-224-934

Sta. 550+00 to Sta. 560+00

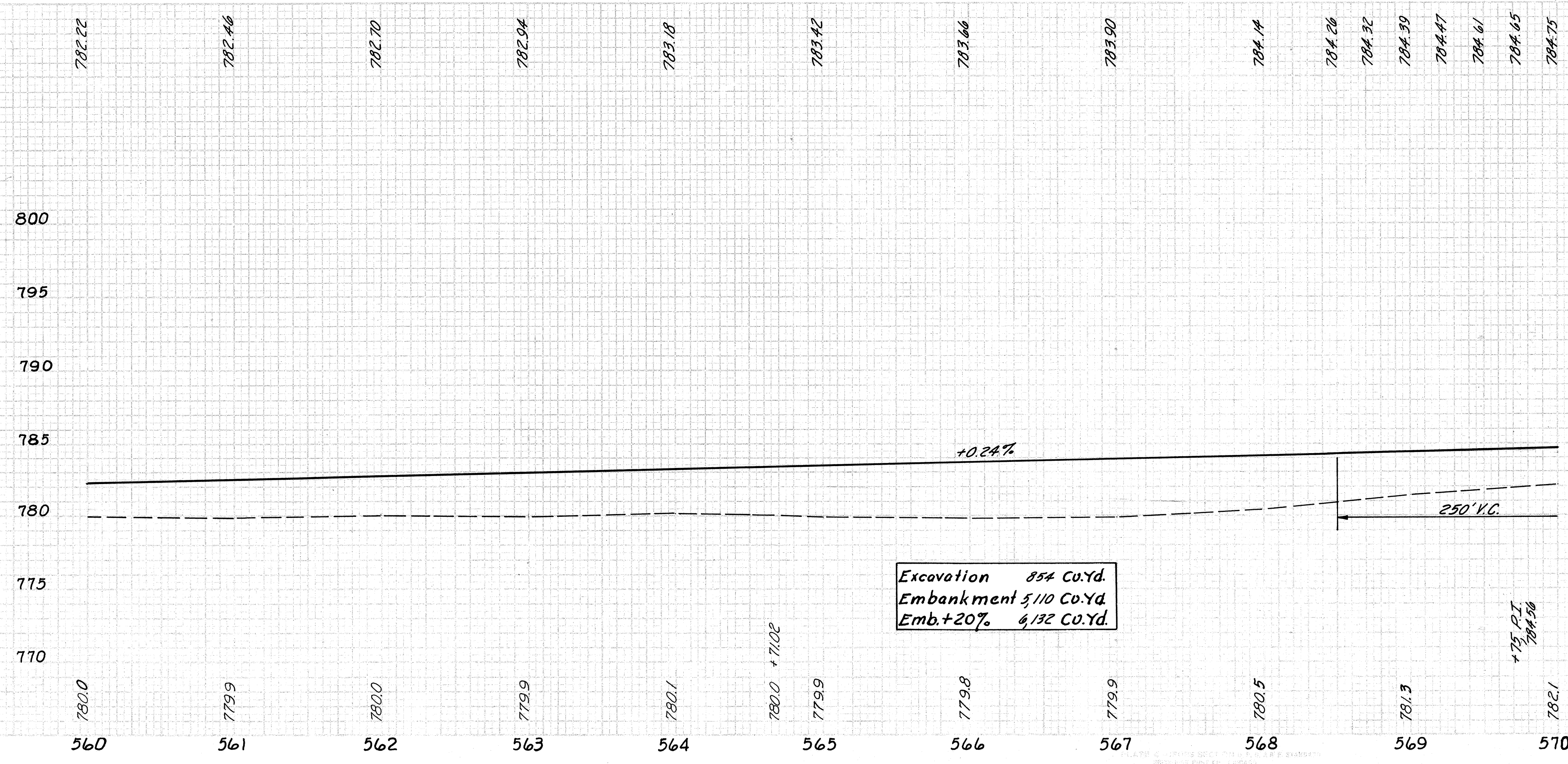


FINAL SURVEY  
 SURVEY PLOTTED  
 NOTE BOOK  
 NO. 480 AS CHECKED

ORIGINAL SURVEY  
 SURVEY PLOTTED  
 NOTE BOOK  
 NO. 480 AS CHECKED

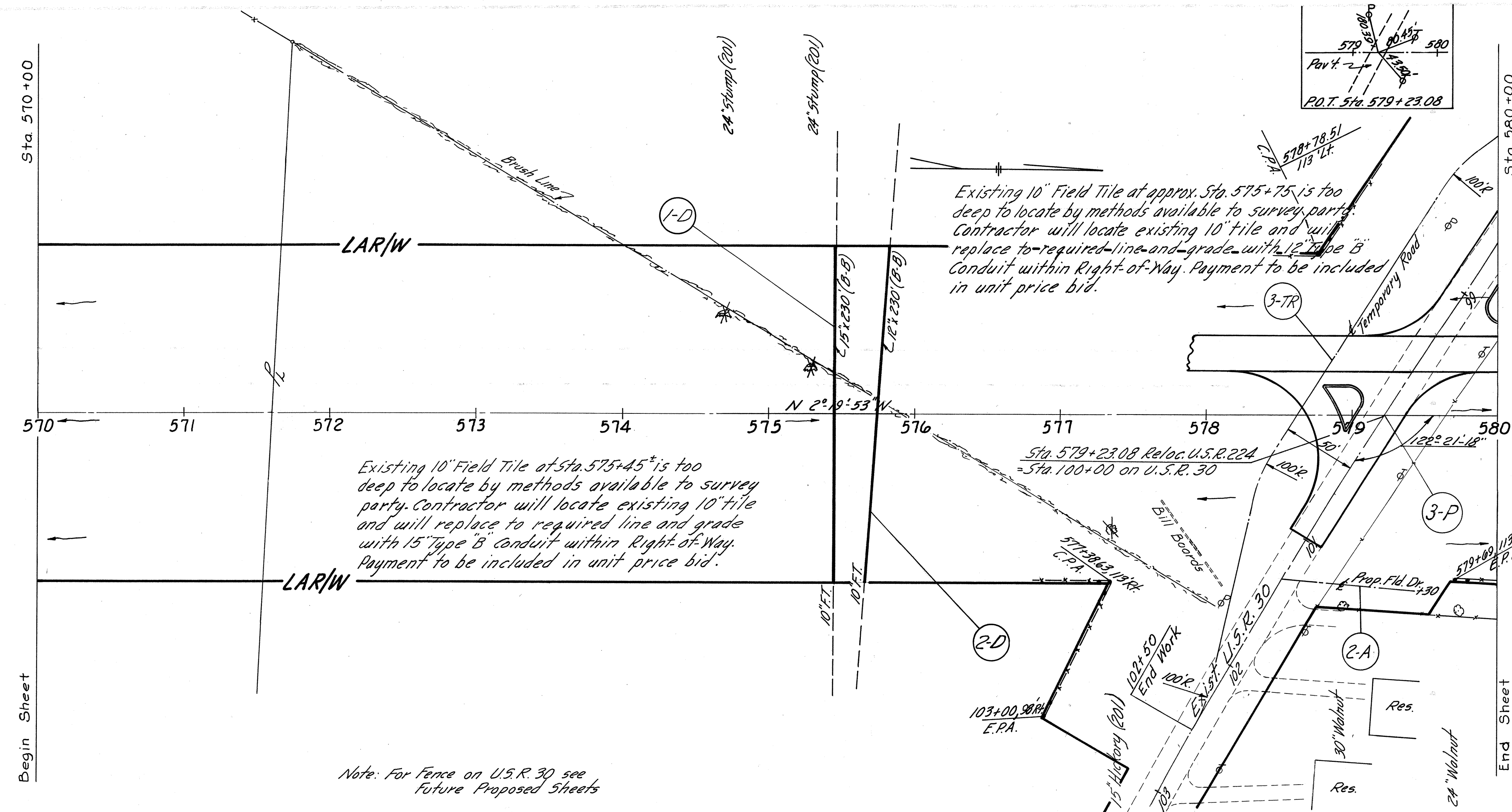


SHEET SUMMARY					
Ref. No.	Station		603		
			Conduit Lin. Ft.		
	From	To	Type B-B		
I-D	567+00±	568+30±	8"	274	
	Totals			274	



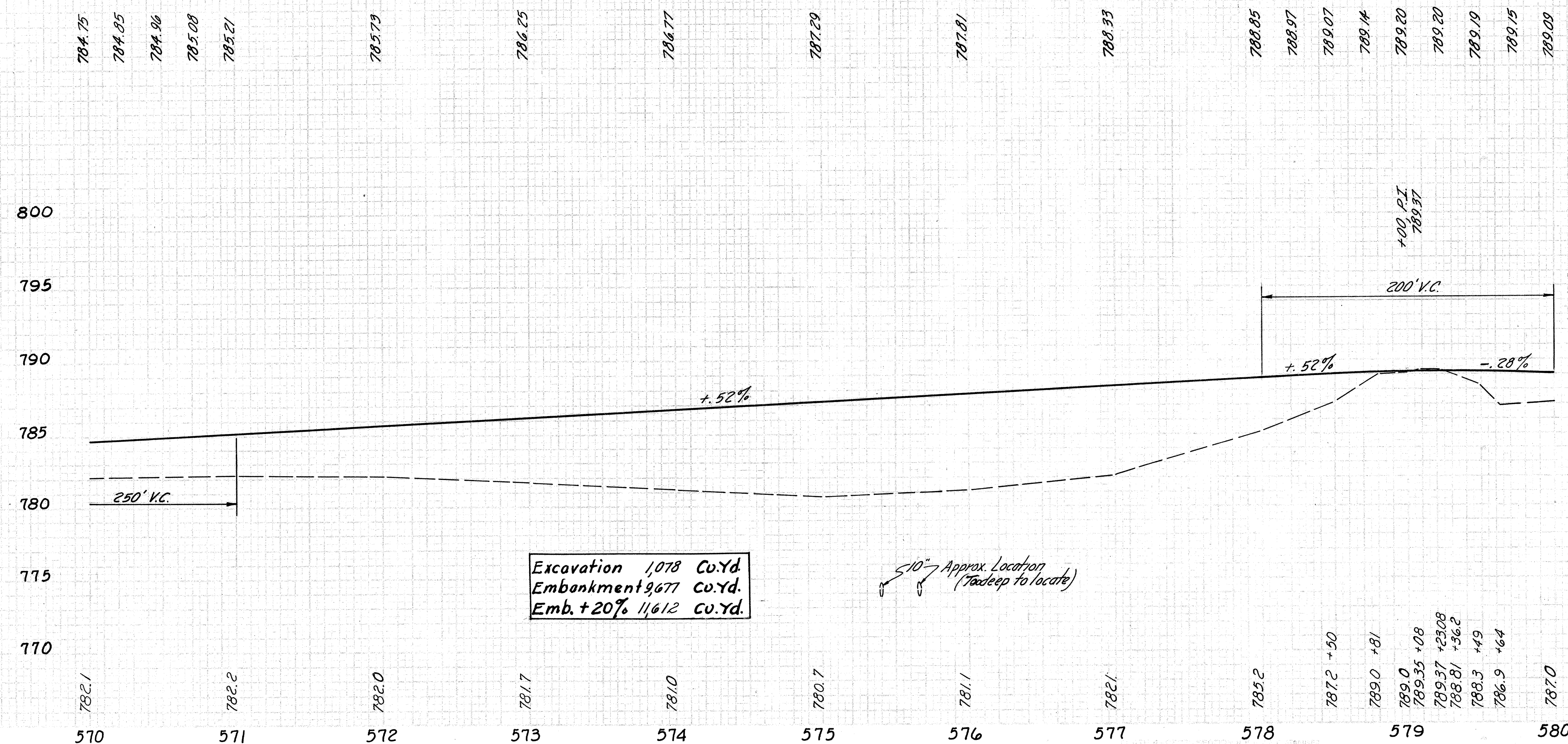


VAN WERT COUNTY  
VAN-224-934



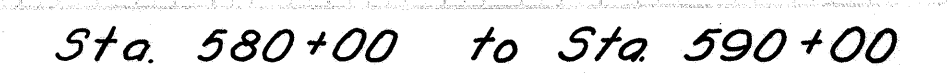
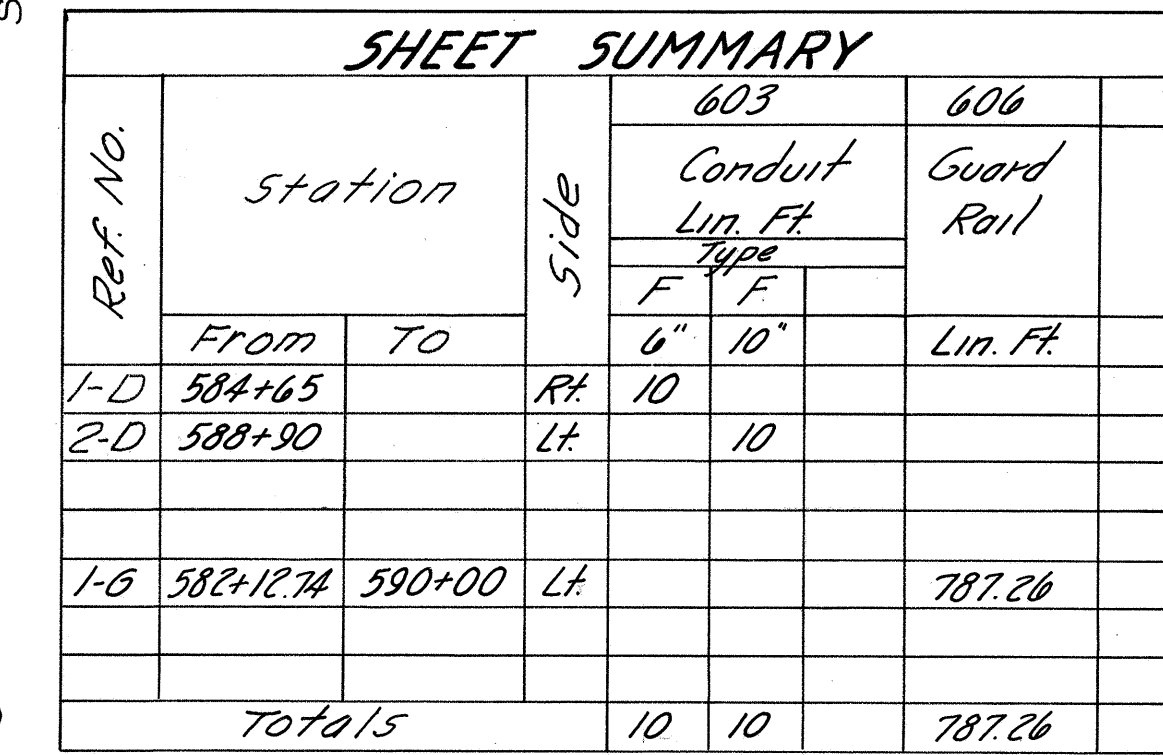
SHEET SUMMARY									
Ref. No.	Station		Side	603		*30A	615	61	
				Conduit		Appr. Base	Temp. Road	Temp. Pipe	
				Lin. Ft.					
				Type					
				B-B					Cu. Yd.
	From	To		12" 15"		6"			
1-D	575+45±		4± Rt.	230					
2-D	575+75±		4± Rt.	238					
1-A	91+15	U.S.R. 30	Rt.			14.7			
3-TR	578+63±		4± Rt.				Lump	14.	
2-A	101+30	U.S.R. 30	Lt.			28.3			
Totals				230	238	43.0	Lump	14.	

\* 12' Fld. Drives 304 to R/W  
 Ⓢ 706.02 Class III or 706.08





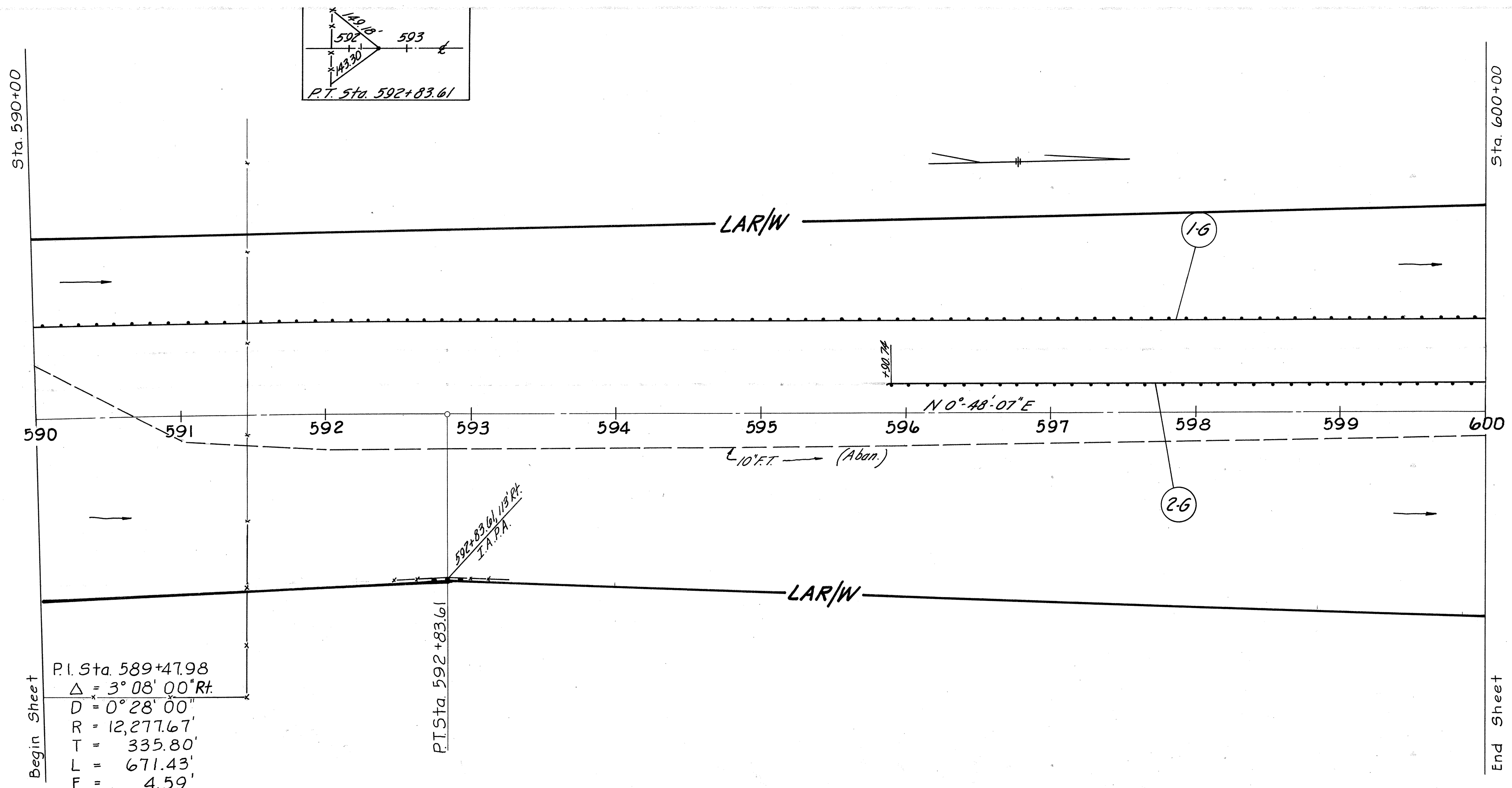
VAN WERT COUNTY  
VAN-224-934



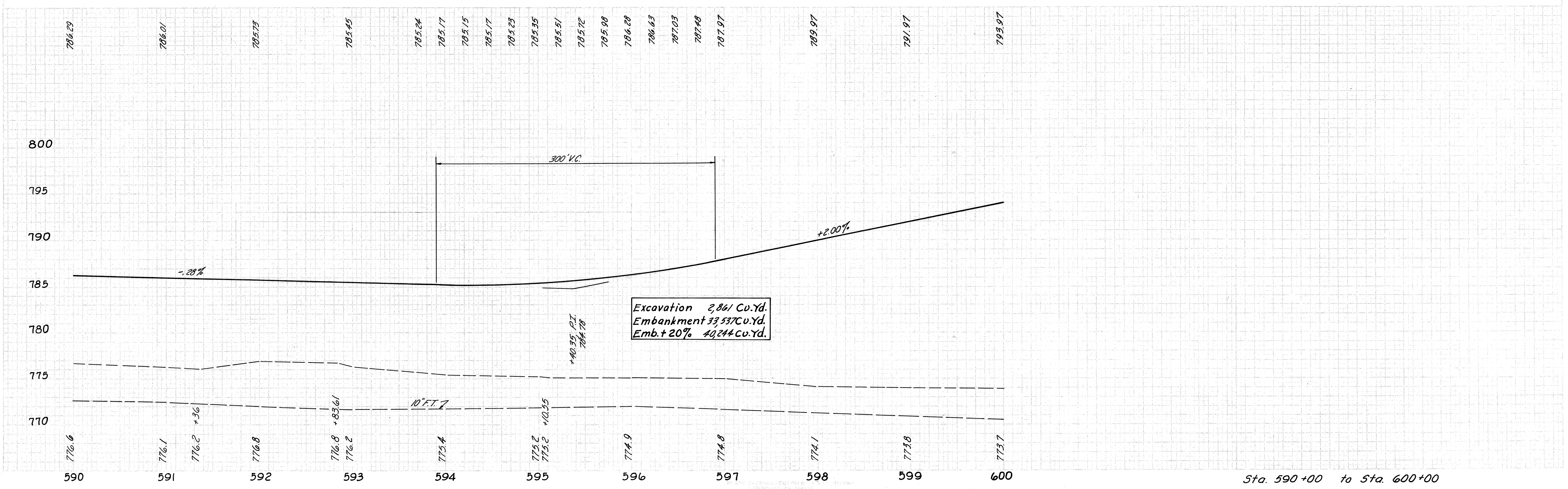


FINAL SURVEYED  
SURVEY PLOTTED  
NOTE BOOK  
NO.

ORIGINAL SURVEYED  
SURVEY PLOTTED  
NOTE BOOK  
NO.

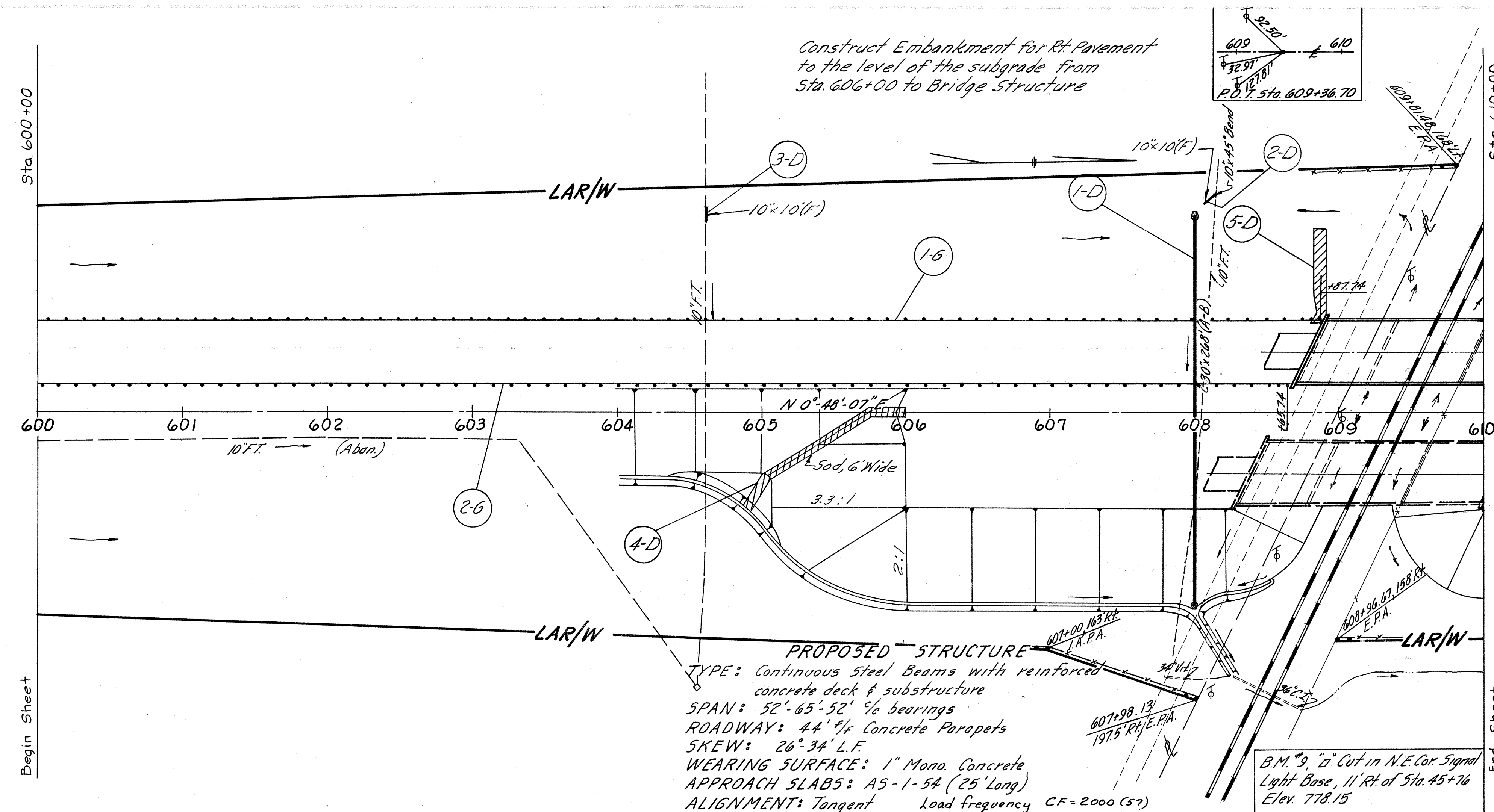


SHEET SUMMARY					
Ref. No.	Station		Side	606	
	From	To		Guard Rail	
				Lim. Ft.	
1-6	590+00	600+00	LT	1,000	
2-6	595+907A	600+00	LT	409.26	
Totals				1,409.26	





VAN WERT COUNTY  
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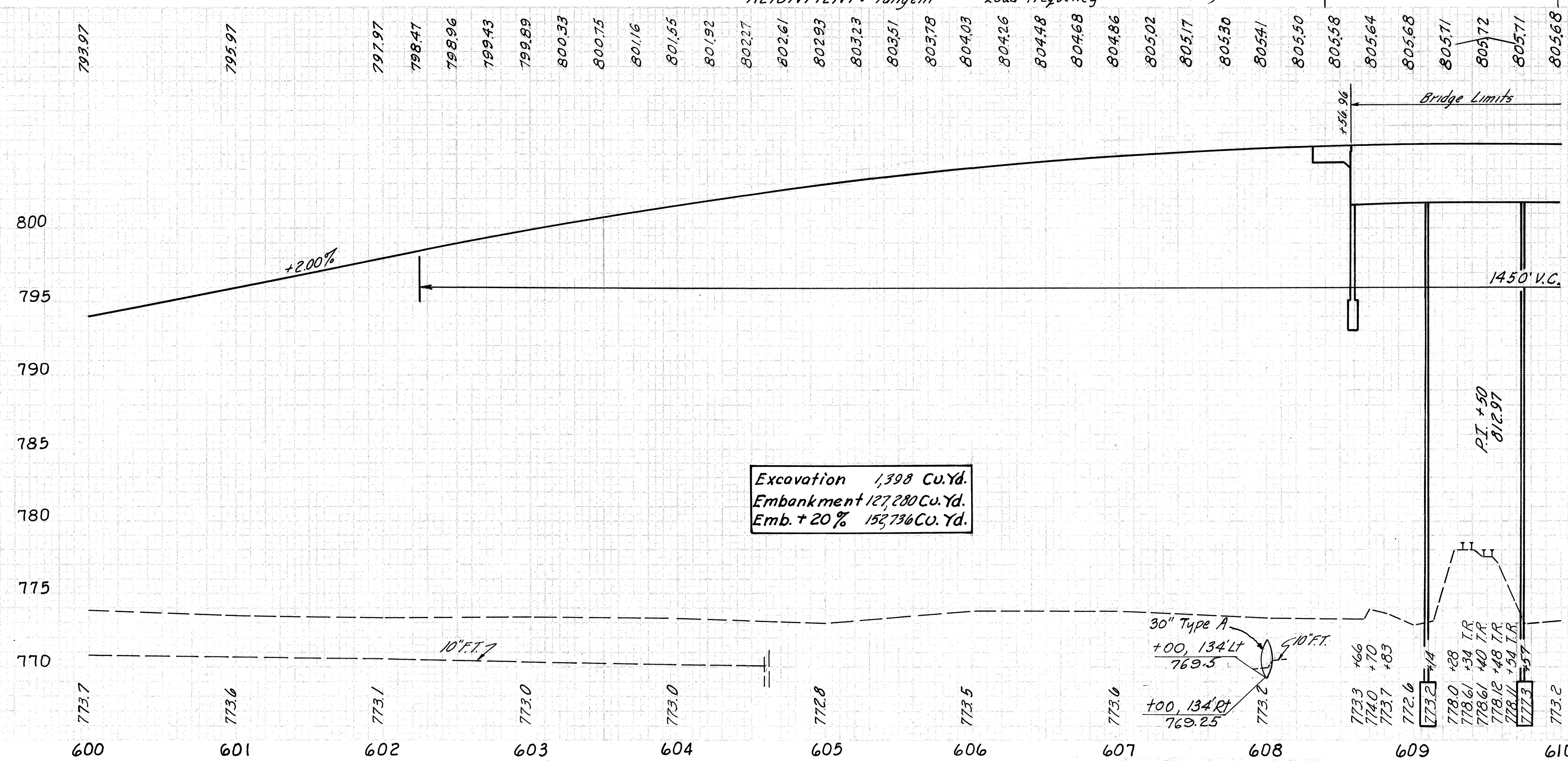


SHEET SUMMARY									
Ref. No.	Station	Side	603			Specs	606	601	660
			Conduit		Guard Rail		Conc. Pipe App	Sodding	Spec. Benm
			Lip. Ft						
			Type						
			*A-B	F					
From	To		30"	10"		Lim. Ft.	5X	5X	5X
1-D	608+00	LT	268				1544		
2-D	608+07	LT		10	1				
3-D	604+60	LT		10					
4-D	604+87	RT							92
5-D	608+75	LT							79
1-G	600+00	LT				887.74			
2-G	600+00	LT				865.74			
Total			268	20	1	1753.48	1544	92	79

\$ 707.05 12.60.

\* See Sheet No. 5 For Special Detail (Berm & Slope Protection)

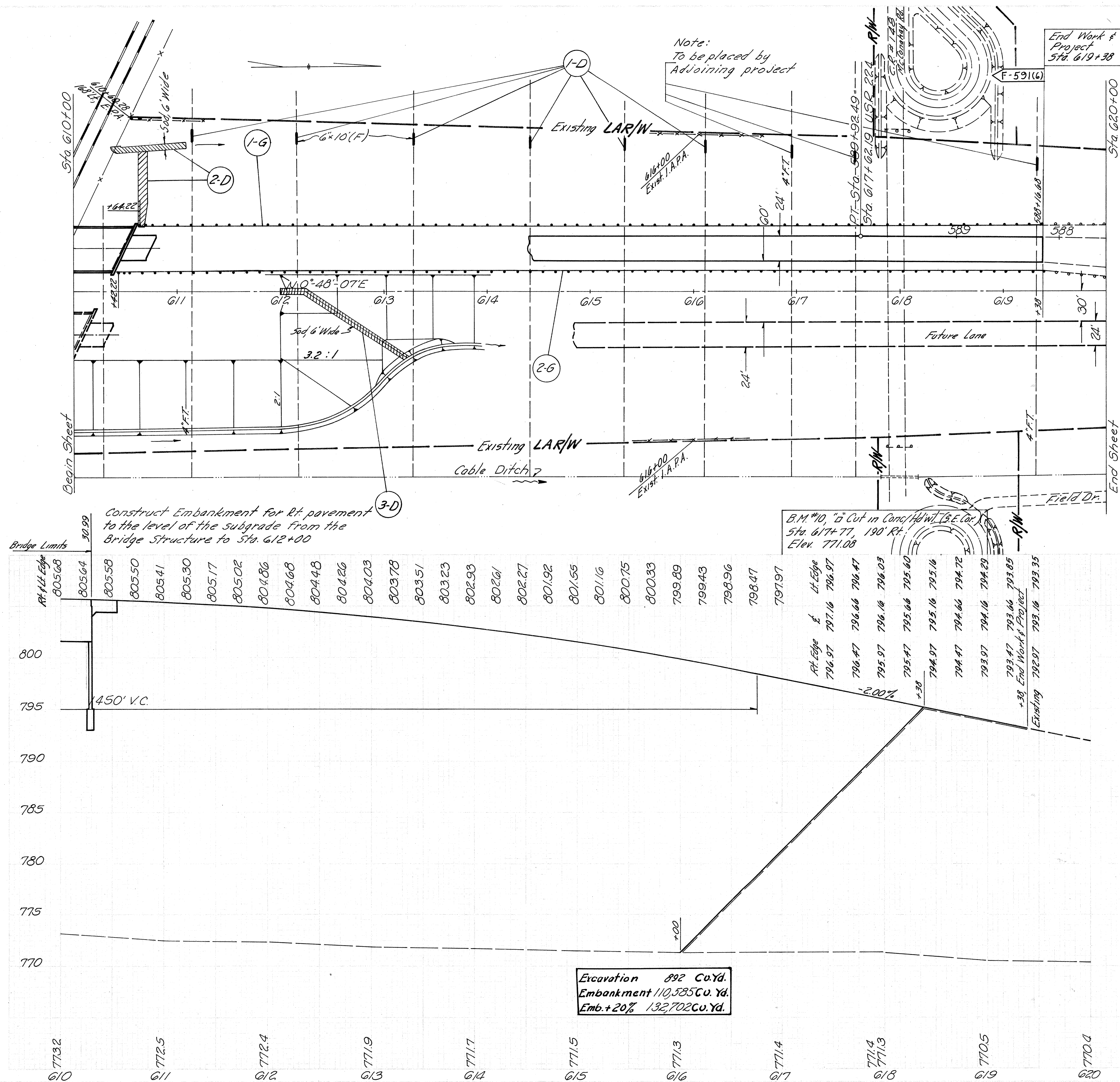
1-D  
Drainage Area = 55 Acres  
 $Q_{25} = .65 \times 1 \times .25 \times 130 = 21 \text{ c.f.s.}$



Excavation	1,398 Cu.Yd.
Embankment	127,280 Cu.Yd.
Emb. + 20 %	152,736 Cu.Yd.

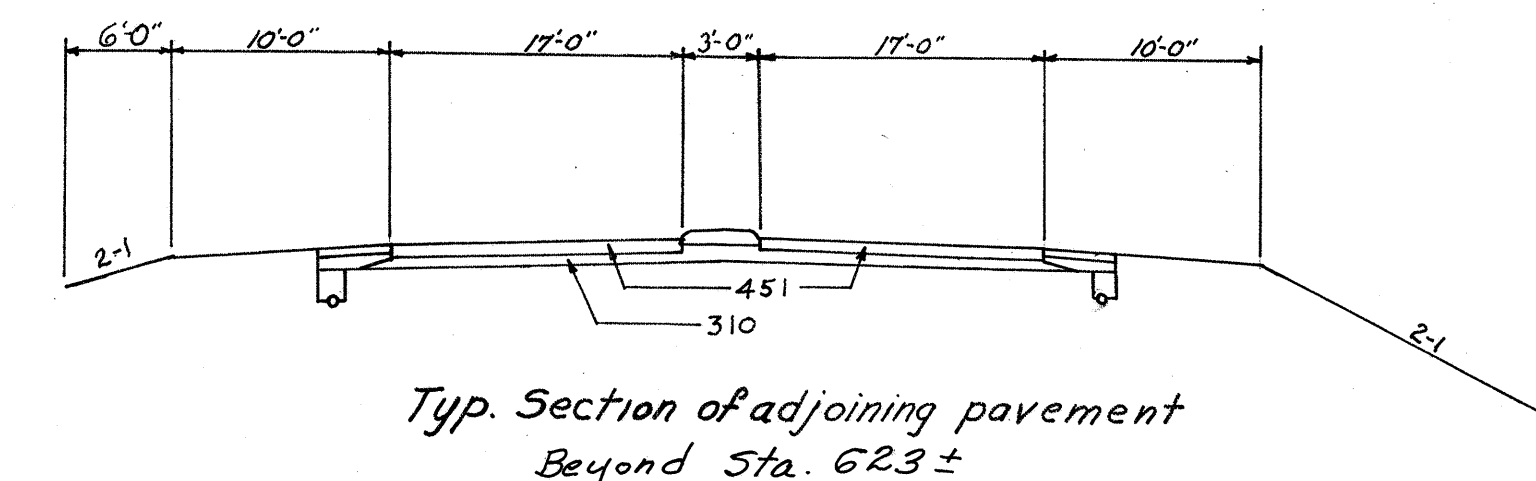


VAN WERT COUNTY  
VAN-224-934



SHEET SUMMARY							
Ref. No.	Station		Side	603		606	660
				Conduit		Guard Rail	Sodding
				Lim. Ft. Type			
	F						
				6"		Lim. Ft.	S.Y.
1-D	611+14	616+10	Lt.	60			
2-D	610+40	610+83	Lt.				50
3-D	612+00	613+25	Rt.				95
1-G	610+42.22	619+38	Lt.			875 ⊗	
2-G	610+42.22	619+38	Lt.			900 ⊗	
	Totals			60		1775 ⊗	145

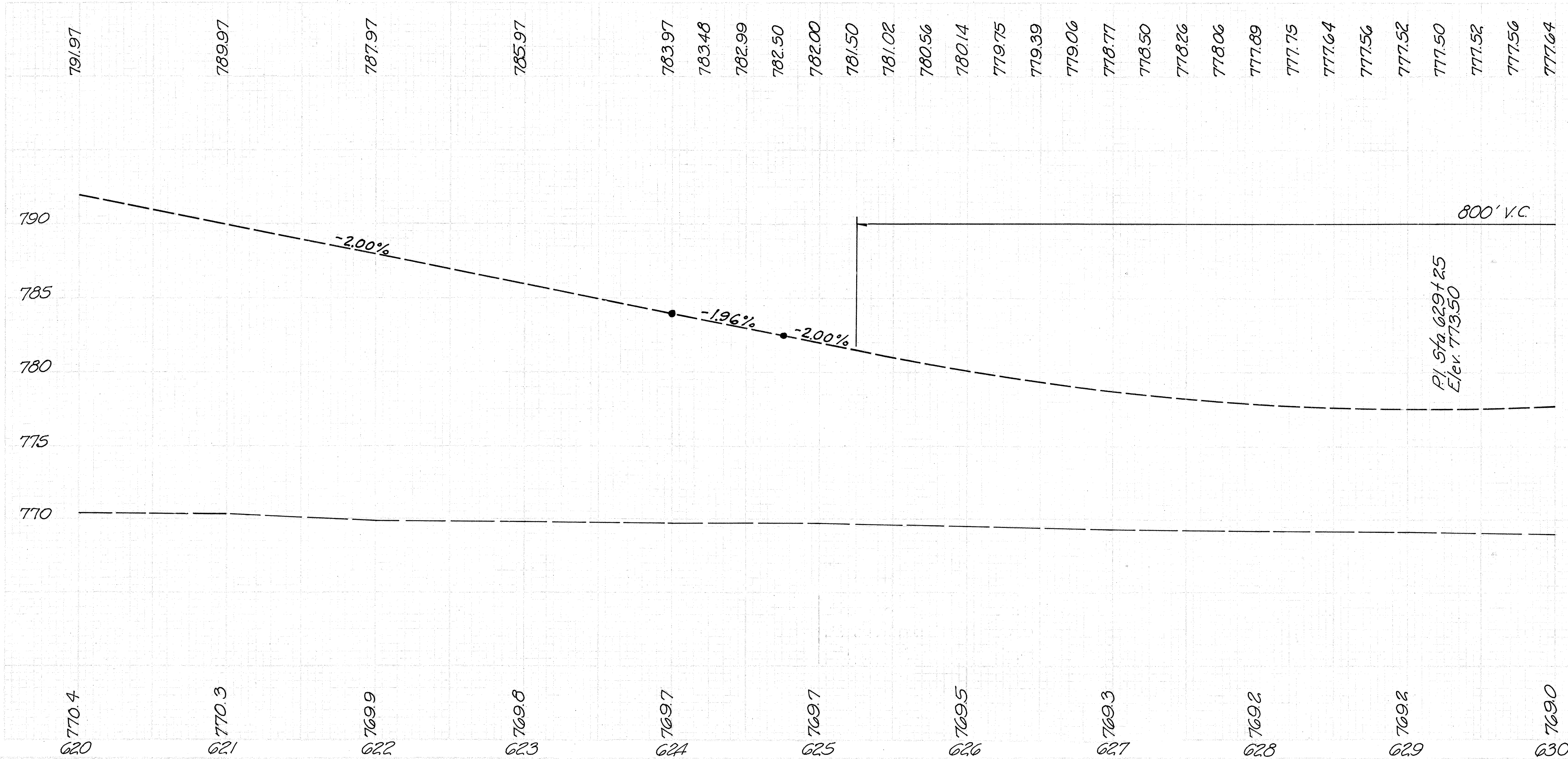
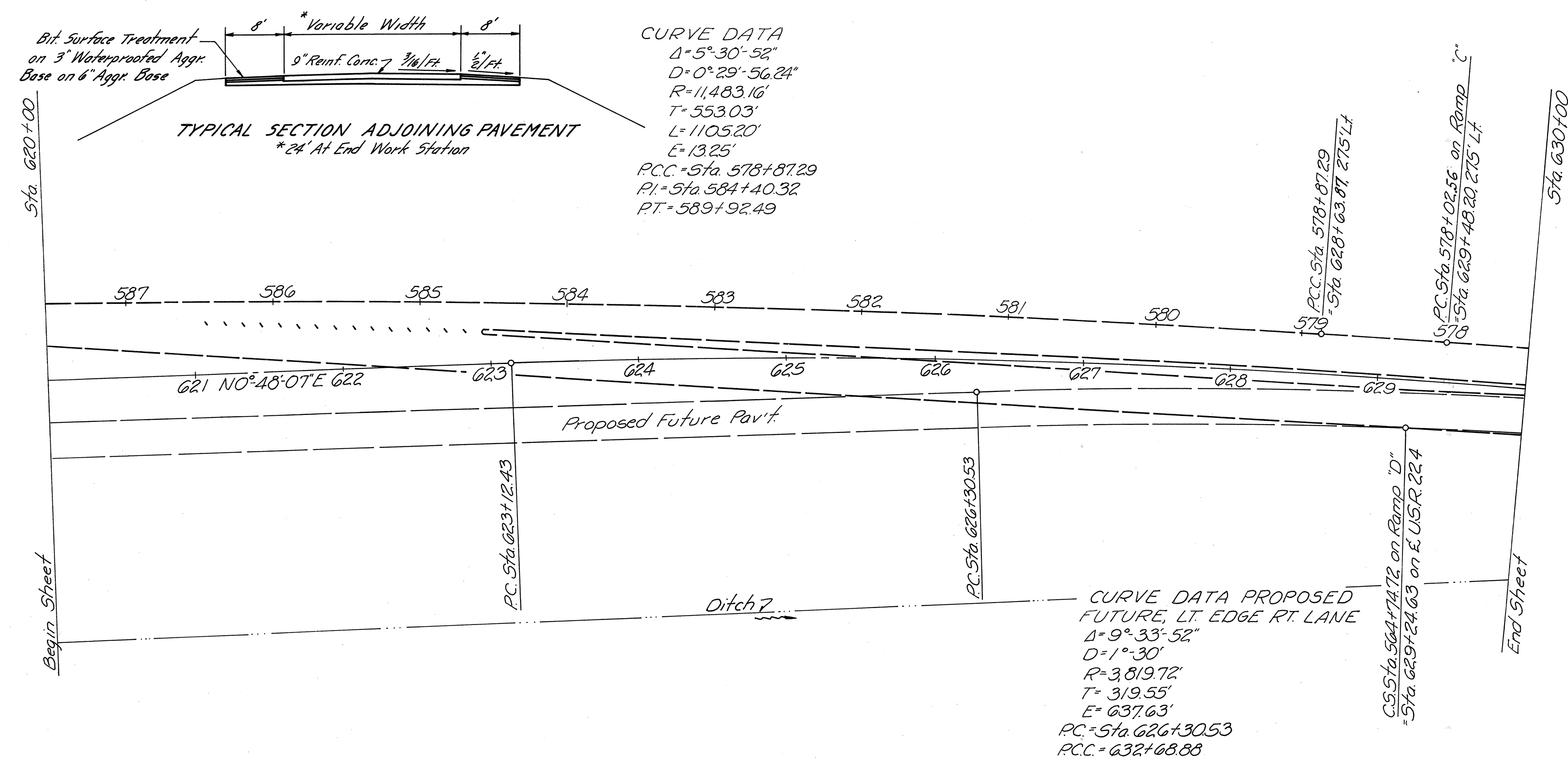
\* See Sheet No. 5 for Special Detail (Berm & Slope Protection)  
 ⊗ Length of "connecting panel" shall be adjusted in field.



From Sta. 610+00 to Sta. 620+00



VAN WERT COUNTY  
VAN-224-934

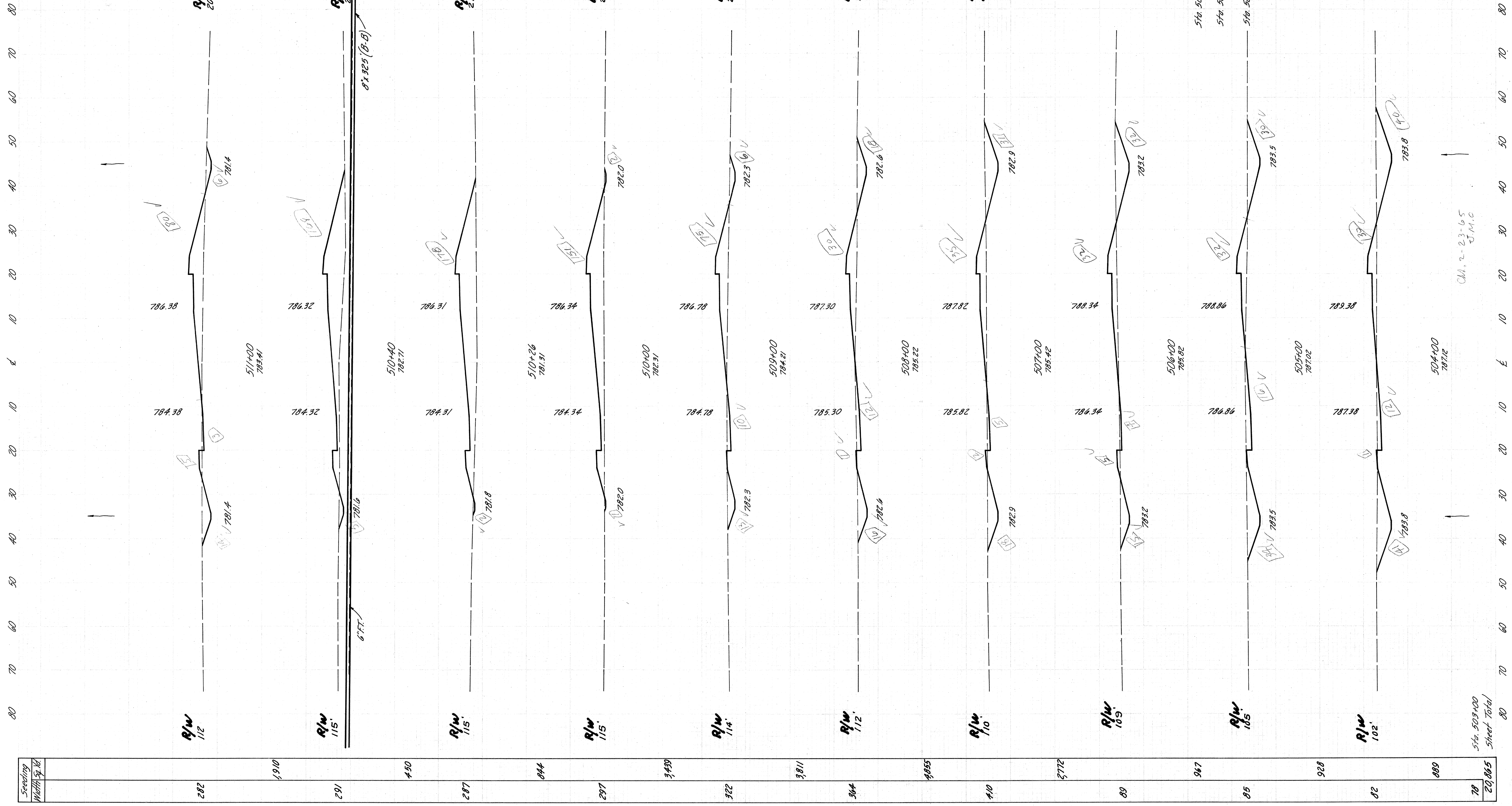


Sta. 620+00 to Sta. 630+00









End Area	Cu. Yds.	Cut	Fill
23	85	✓	✓
31	281	✓	✓
5	168	✓	✓
2	178	✓	✓
3	151	✓	✓
29	75	✓	✓
46	31	✓	✓
54	37	✓	✓
51	37	✓	✓
80	32	✓	✓
93	31	✓	✓
79	28	✓	✓

Seeding	Width	Sp. Rd.
282	1910	450
291	450	287
297	844	297
322	3439	322
381	3811	381
410	4855	410
489	2772	489
89	967	89
85	928	85
82	889	82
78	20,865	78

From Sta. 504+00 to Sta. 511+00

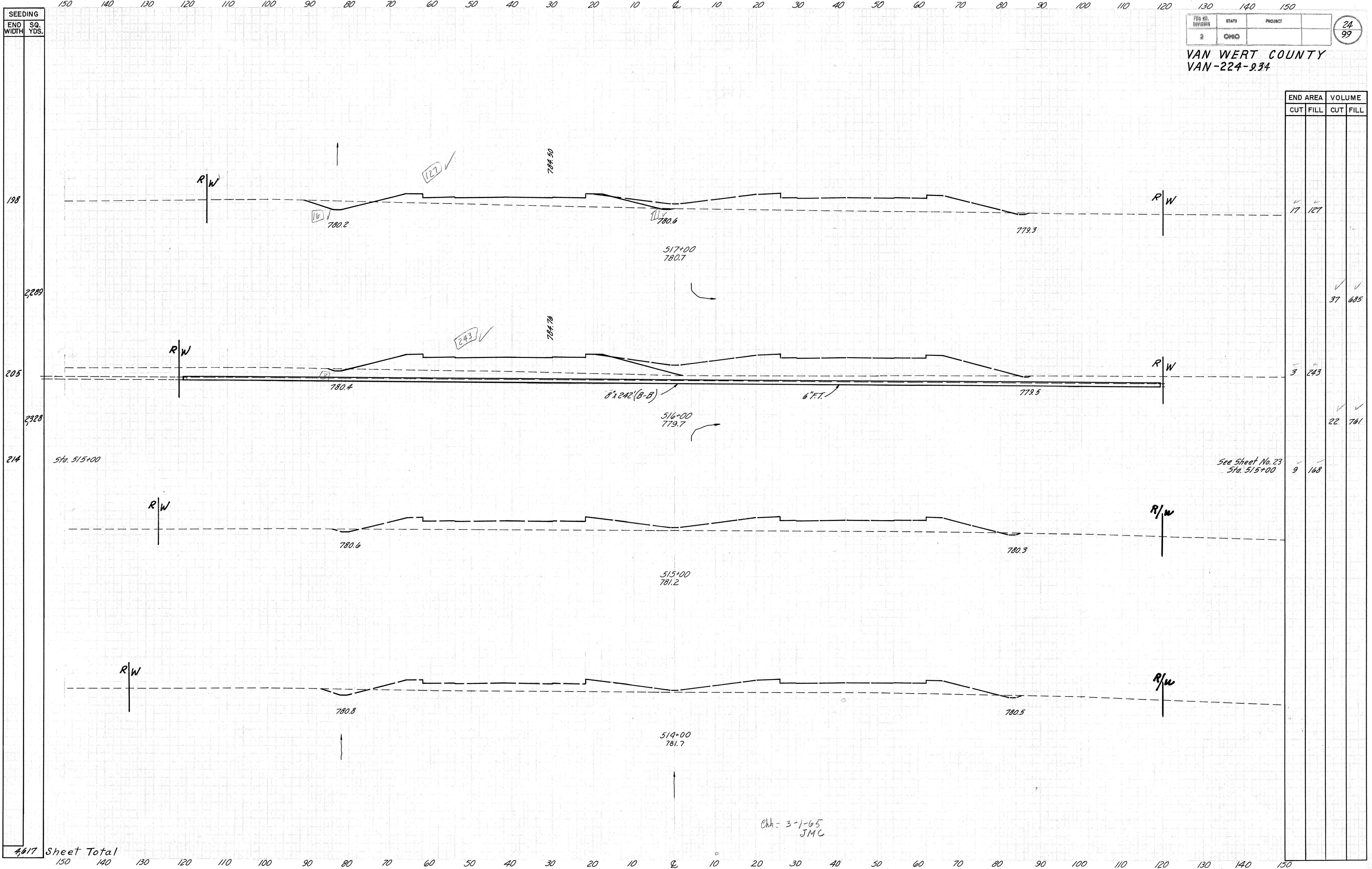
CH. 2-23-65  
J.M.C.

Sta. 503+00  
Sheet Total









SEEDING	
END WIDTH	SQ. YDS.
198	
2289	
205	
2328	
214	
Sheet Total	

FED. RD. DIVISION

2

STATE

OHIO

PROJECT

24

99

VAN WERT COUNTY

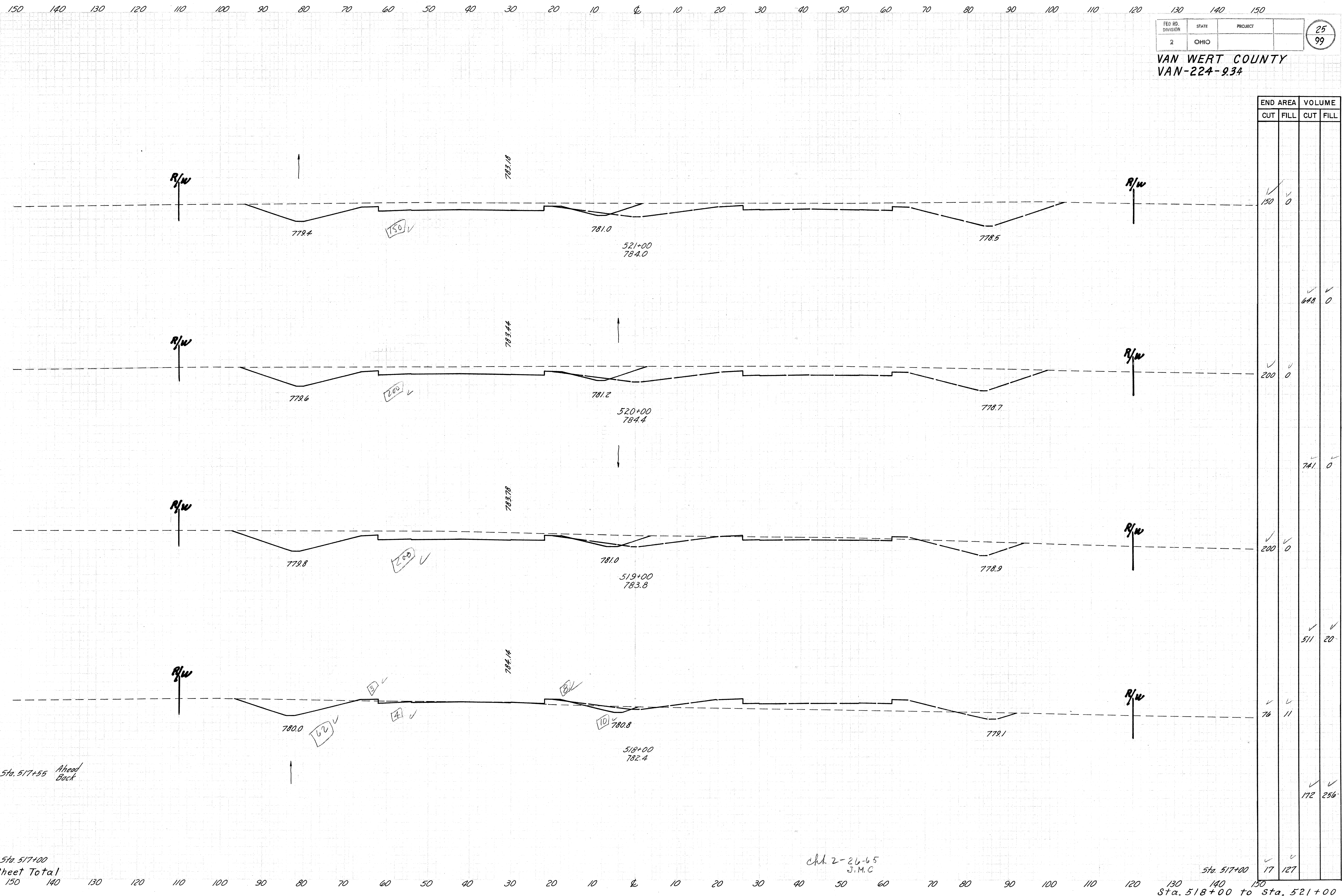
VAN-224-934

END AREA		VOLUME	
CUT	FILL	CUT	FILL
17	127		
3	243	37	685
22	761		
9	168		

chk - 3-1-65  
JMC



191	2,122
191	2,122
191	2,122
191	2,122
191	955
191 196	1,204
198	8,525





This figure is a technical drawing of a road cross-section profile, showing four distinct sections of the road. The horizontal axis at the top is labeled with stationing from 150 down to 10, and back up to 150. The vertical axis on the right is labeled with elevation from 780 down to 776.

The profile consists of four segments, each separated by a dashed line representing the ground surface. Each segment shows the proposed road grade as a solid line and the existing ground as a dashed line. Key features include:

- Segment 1 (Top):** Stationed from approximately 150+00 to 125+00. It shows a slight dip in the center. Elevation points are 778.6, 780.2, and 777.7. A boxed note "160" is present.
- Segment 2:** Stationed from approximately 125+00 to 100+00. It includes a section labeled "(Abandon)" and another labeled "Plug". Elevation points are 778.8, 780.4, and 777.9. Boxed notes "18" and "5" are present.
- Segment 3:** Stationed from approximately 100+00 to 75+00. It shows a more pronounced dip. Elevation points are 779.0, 780.6, and 778.1. Boxed notes "44", "20", and "14" are present.
- Segment 4 (Bottom):** Stationed from approximately 75+00 to 50+00. It shows a slight rise towards the end. Elevation points are 779.2, 780.8, and 778.3. A boxed note "140" is present.

On the right side, there is a table summarizing the area and volume of cut and fill for each segment:

END AREA		VOLUME	
CUT	FILL	CUT	FILL
160	0	✓	✓
72	6	✓	✓
78	2	✓	✓
140	0	✓	✓
150	0	✓	✓

At the bottom left, there is a handwritten note: "Sheet Total 150 140". At the bottom right, there is a handwritten note: "Sta. 521+00".

VAN WERT COUNTY  
VAN-224-934

END AREA		VOLUME	
CUT	FILL	CUT	FILL
✓ 180	✓ 0		
		✓ 430	✓ 11
✓ 72	✓ 6		
		✓ 278	✓ 15
✓ 78	✓ 2		
		✓ 404	✓ 4
✓ 140	✓ 0		
		✓ 537	✓ 0
✓ 150	✓ 0		

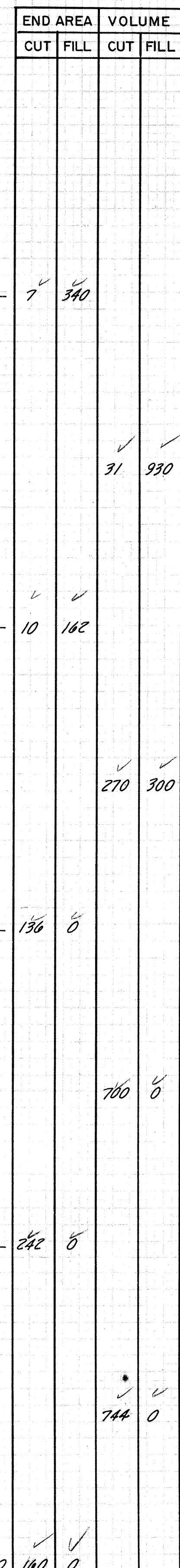


SEEDING	
END WIDTH	SQ. YDS.

[illegible]

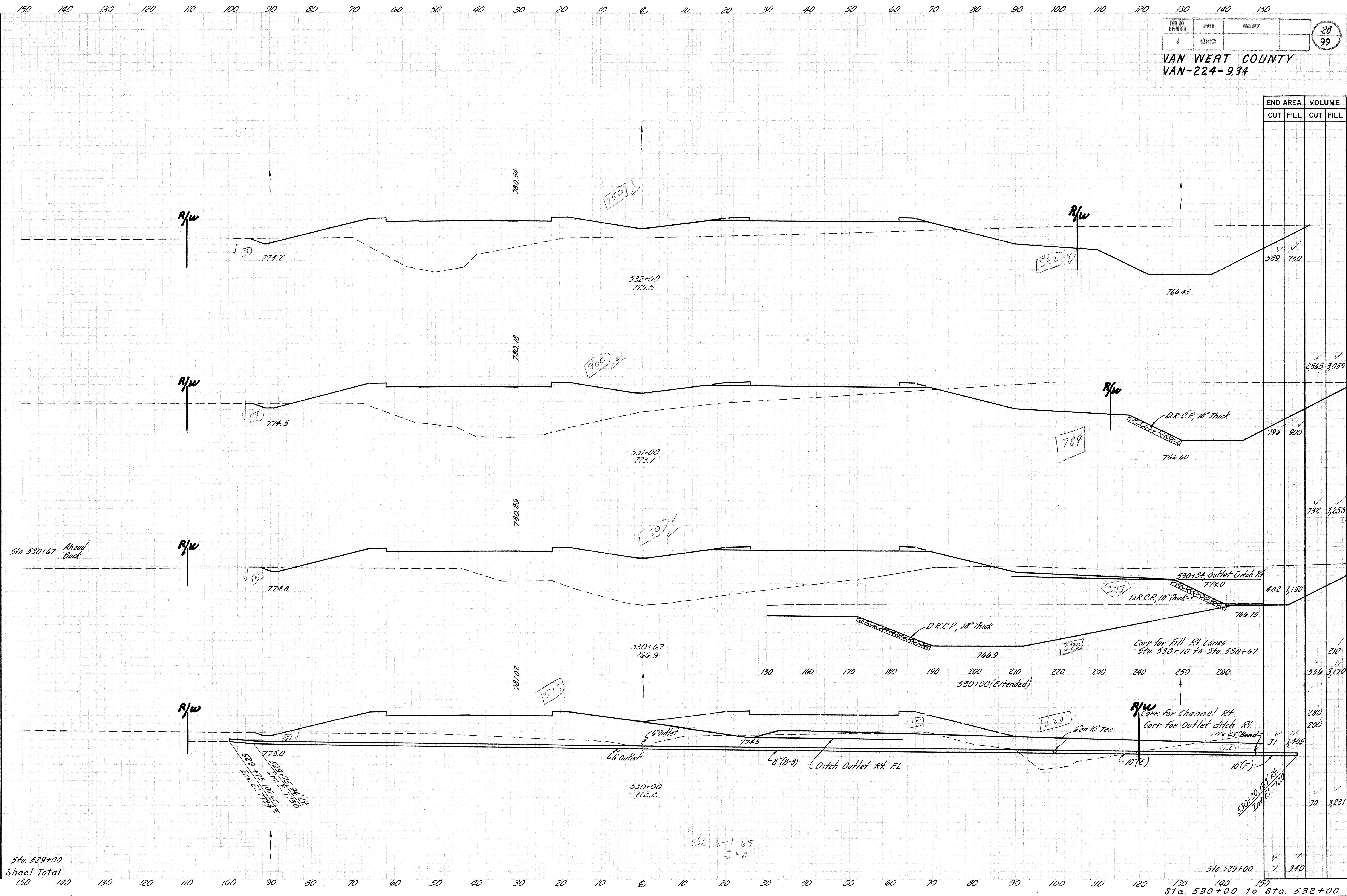
27  
99

✓	✓	
---	---	--





SEEDING	
END WIDTH	SQ. YDS.
180	3039
187	706
198	1,444
190	2,117
191	6,306



FED. RD. DIVISION	STATE	PROJECT	28
2	OHIO		99

VAN WERT COUNTY  
VAN-224-9.34

END AREA		VOLUME	
CUT	FILL	CUT	FILL
589	750	✓	✓
796	900	✓	✓
792	1,253	✓	✓
402	1,150	✓	✓
31	1,405	✓	✓
7	340	✓	✓
70	3,231	✓	✓

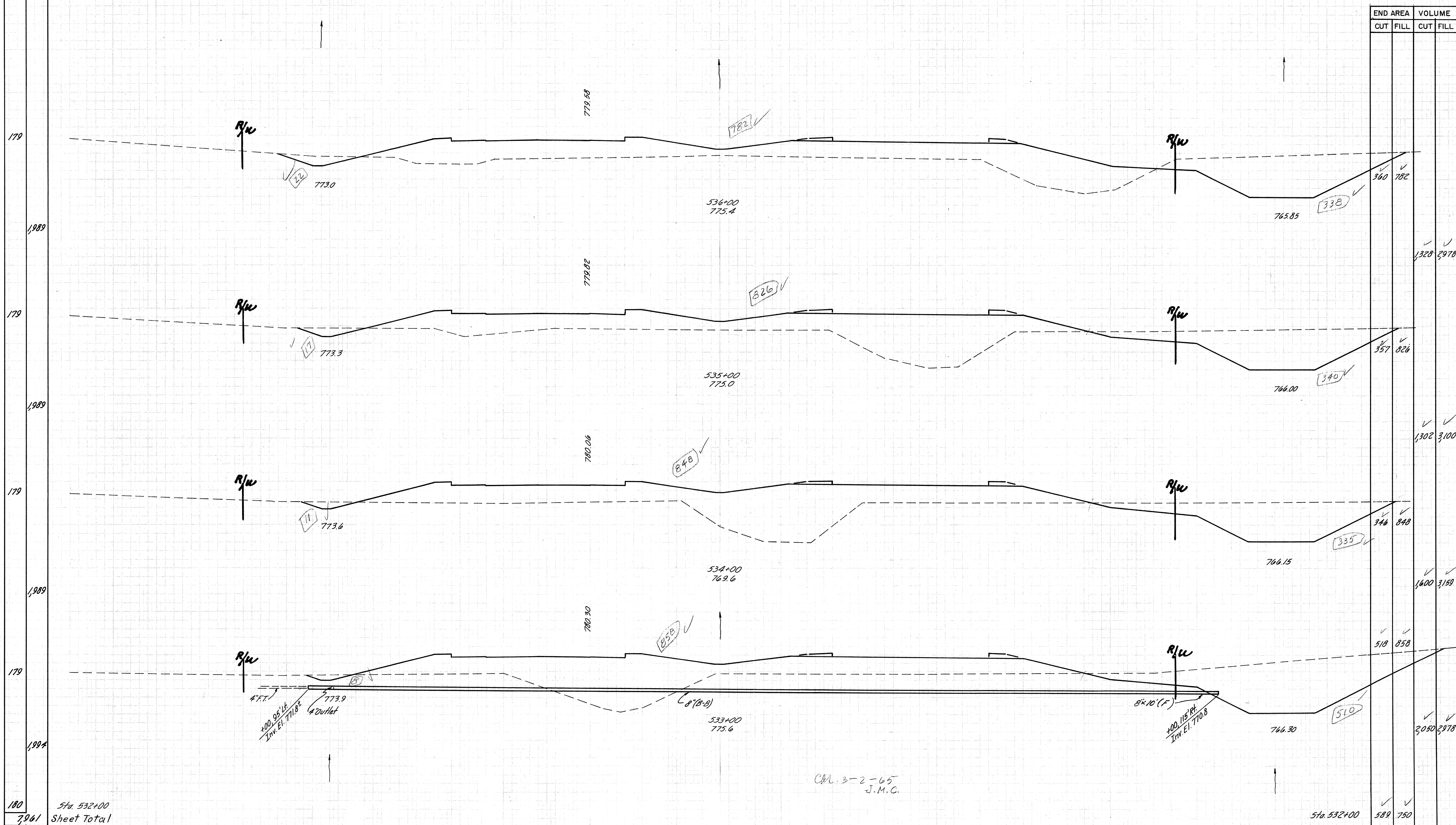
CH. 3-1-65  
J.M.O.



179	
	1,989
179	
	1,989
179	
	1,989
179	
	1,989
180	
	3,961

150	140	130	120	110	100	90	80	70	60	50	40	30	20	10	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
-----	-----	-----	-----	-----	-----	----	----	----	----	----	----	----	----	----	---	----	----	----	----	----	----	----	----	----	-----	-----	-----	-----	-----	-----

29  
99





SEEDING  
END  
WIDTH  
SQ.  
YDS.

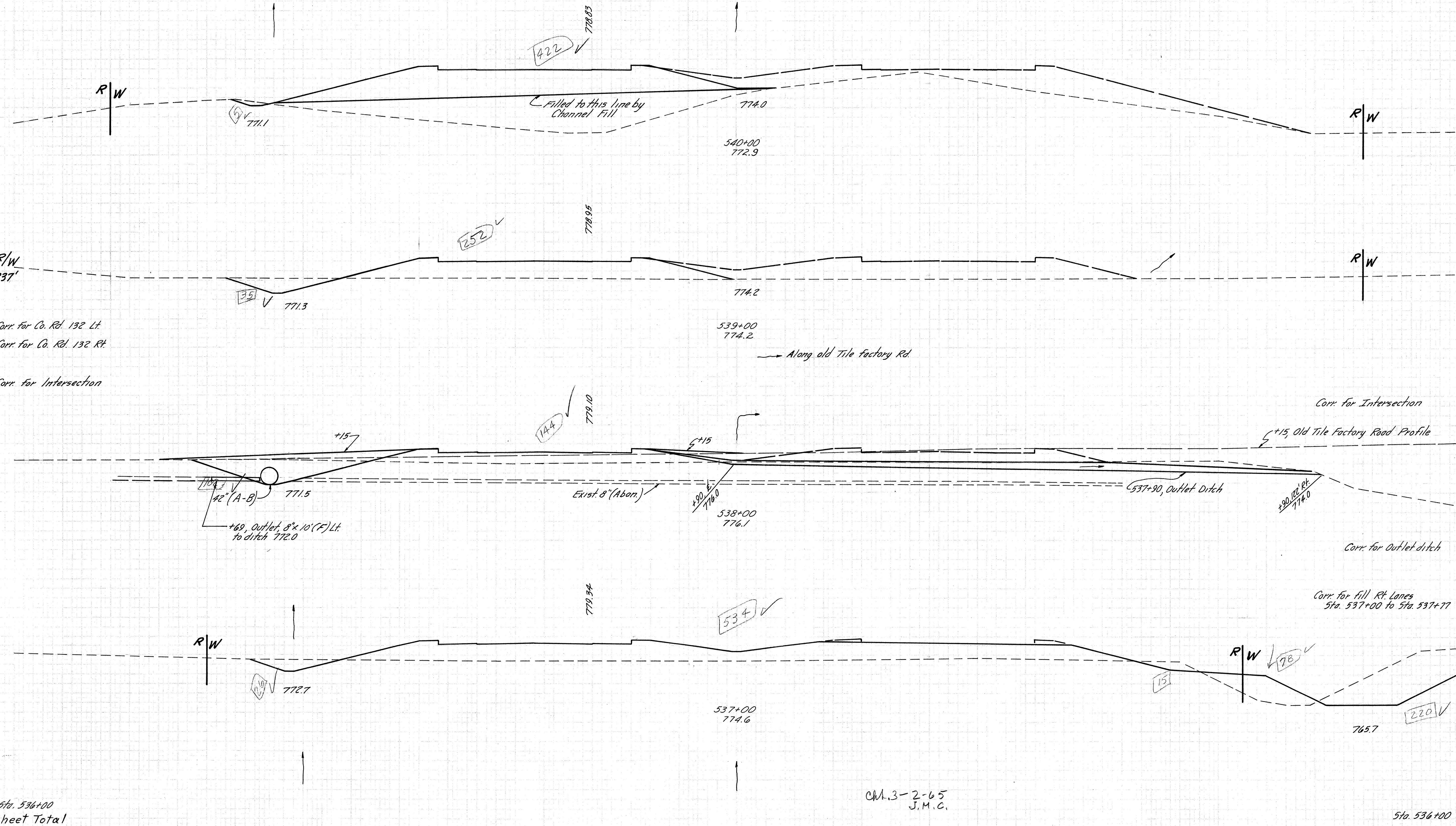
220	2439	219	6445	3634	-880	2333	201	3111	179	1,989	179	18,291
			Corr. for Co. Rd. 132 Lt.	Corr. for Co. Rd. 132 Rt.	Corr. for Intersection							Sta. 536+00 Sheet Total

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

RED RD. DIVISION	STATE	PROJECT	30 99
2	OHIO		

VAN WERT COUNTY  
VAN-224-934

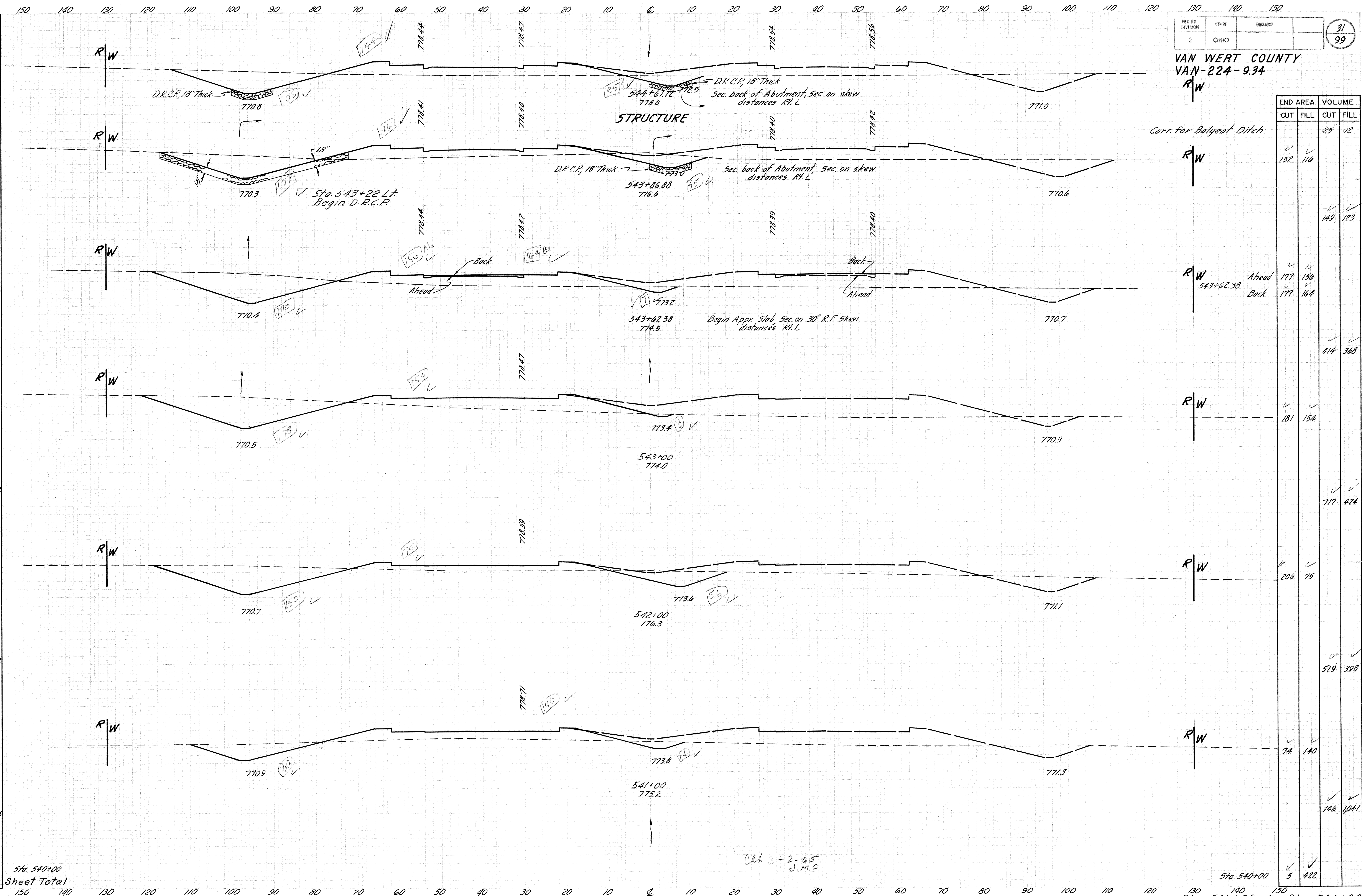
END AREA		VOLUME	
CUT	FILL	CUT	FILL
5	422	74	1,248
35	292	254	733
102	144	672	1,252
261	532	1,150	2,452
360	782		



CH. 3-2-65  
J.M.C.



SEEDING	
END WIDTH	SQ. YDS.
220	1,814
220	599
220	1,325
220	2,444
220	2,444
220	2,444
220	11,270



REG. RD. DIVISION	STATE	PROJECT	31 99
2	OHIO		

VAN WERT COUNTY  
VAN-224-9.34  
RW

END AREA		VOLUME	
CUT	FILL	CUT	FILL
✓ 152	✓ 116	25	12
✓ 177	✓ 156	✓ 149	✓ 123
✓ 177	✓ 164		
✓ 181	✓ 154	✓ 414	✓ 368
✓ 206	✓ 75	✓ 717	✓ 424
✓ 74	✓ 140	✓ 519	✓ 398
✓ 5	✓ 422	✓ 146	✓ 1041

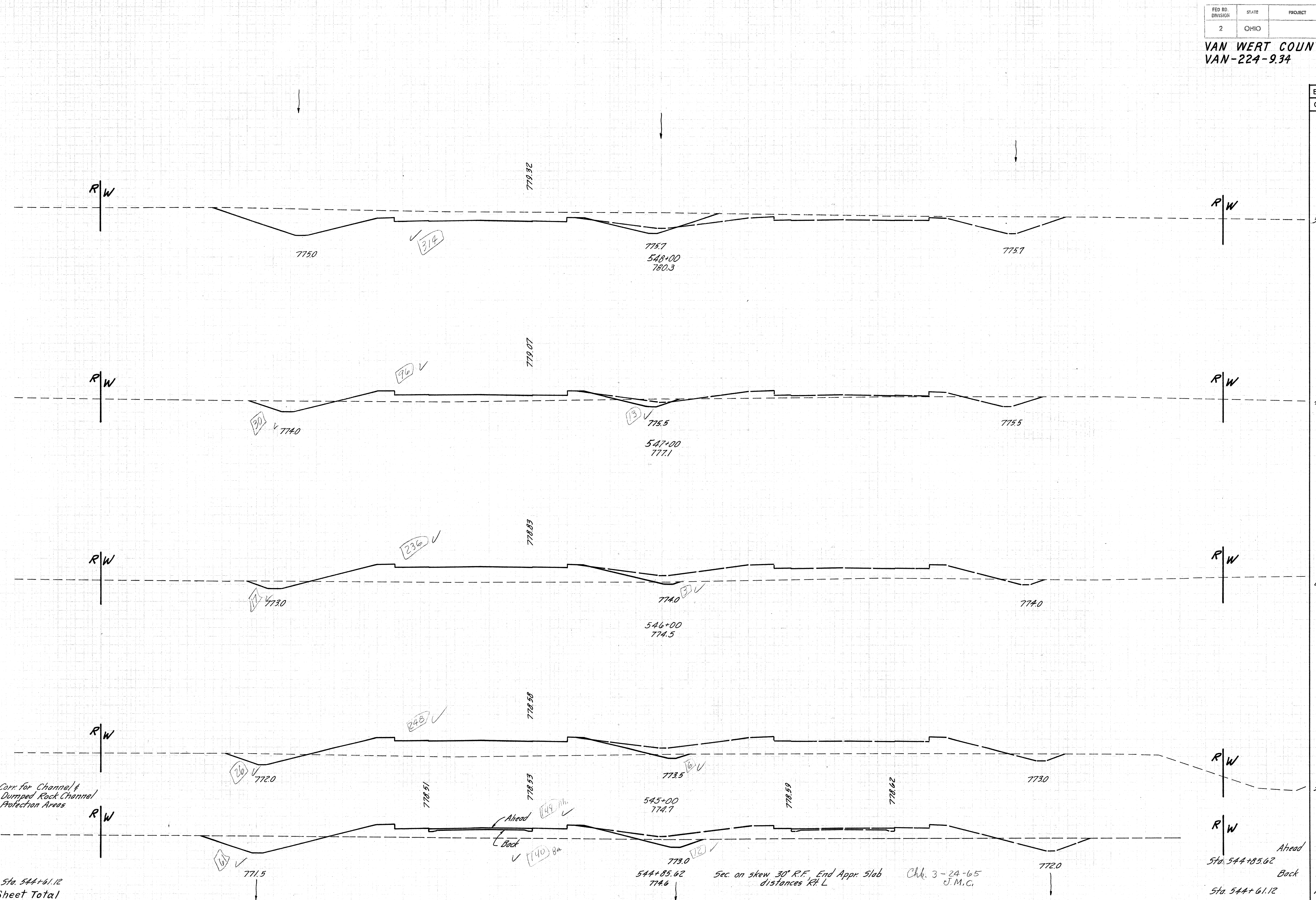
Sta. 540+00  
Sheet Total

CRK 3-2-65  
J.M.C.

Sta. 540+00  
Sta. 541+00 to Sta. 544+00



220	2,444	
222	2,444	
220	2,444	
220	2,444	
220	-540	320
180		544
220		7,766

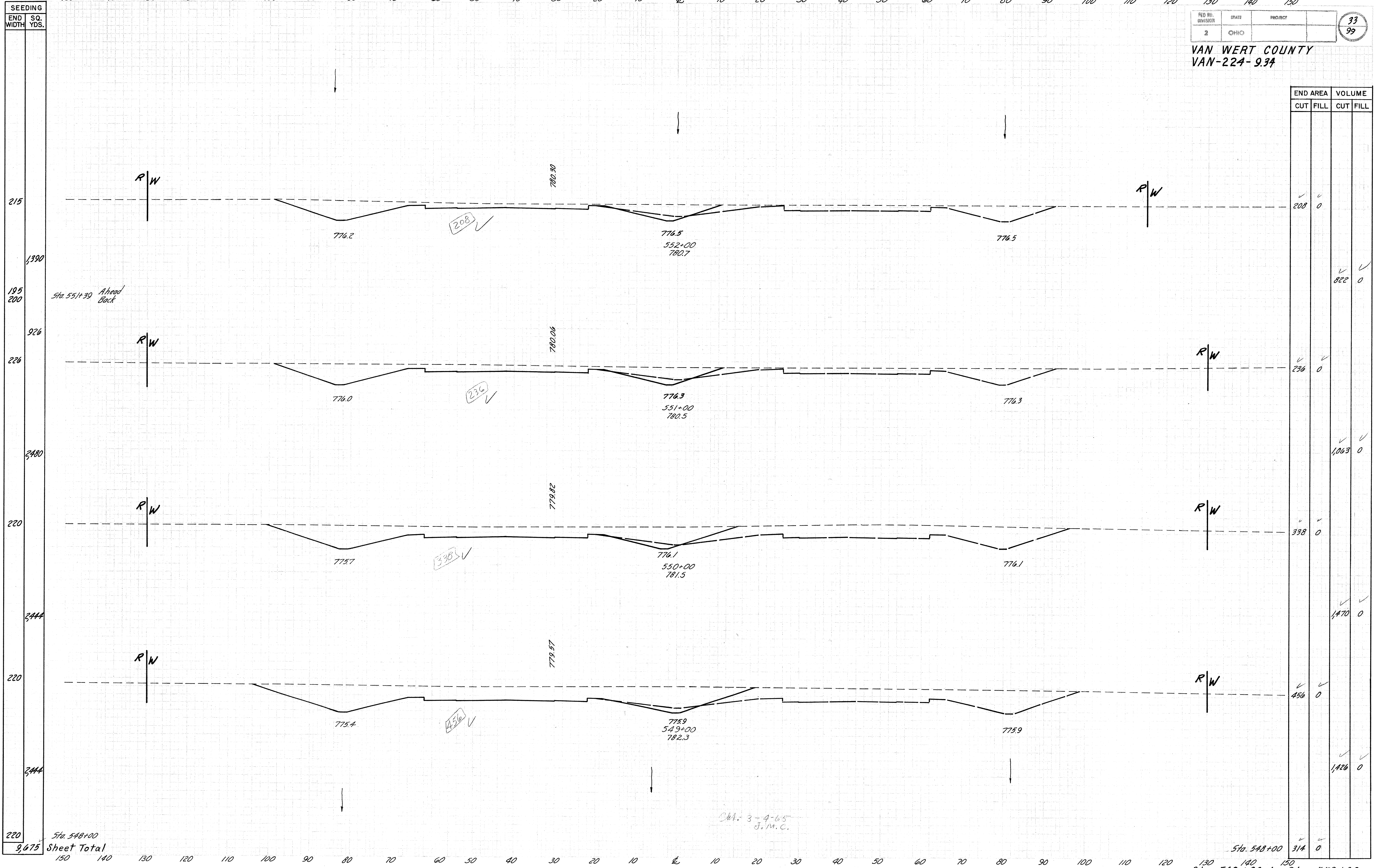
[illegible]

VAN WERT COUNTY  
VAN-224-934

END AREA		VOLUME	
CUT	FILL	CUT	FILL
✓ 314	✓ 0		
		✓ 661	✓ 170
✓ 43	✓ 96		
		✓ 117	✓ 612
✓ 20	✓ 236		
		✓ 96	✓ 890
✓ 32	✓ 248		
✓ 73	✓ 148	✓ 28	✓ 108
✓ 73	✓ 148		
✓ 130	✓ 144	✓ 92	✓ 130



SEEDING  
END  
WIDTH  
SQ.  
YDS.



FED. RD. DIVISION	STATE	PROJECT	33 99
2	OHIO		

VAN WERT COUNTY  
VAN-224-9.34

END AREA		VOLUME	
CUT	FILL	CUT	FILL
208	0	822	0
236	0	1,063	0
338	0	1,470	0
456	0	1,426	0
314	0		

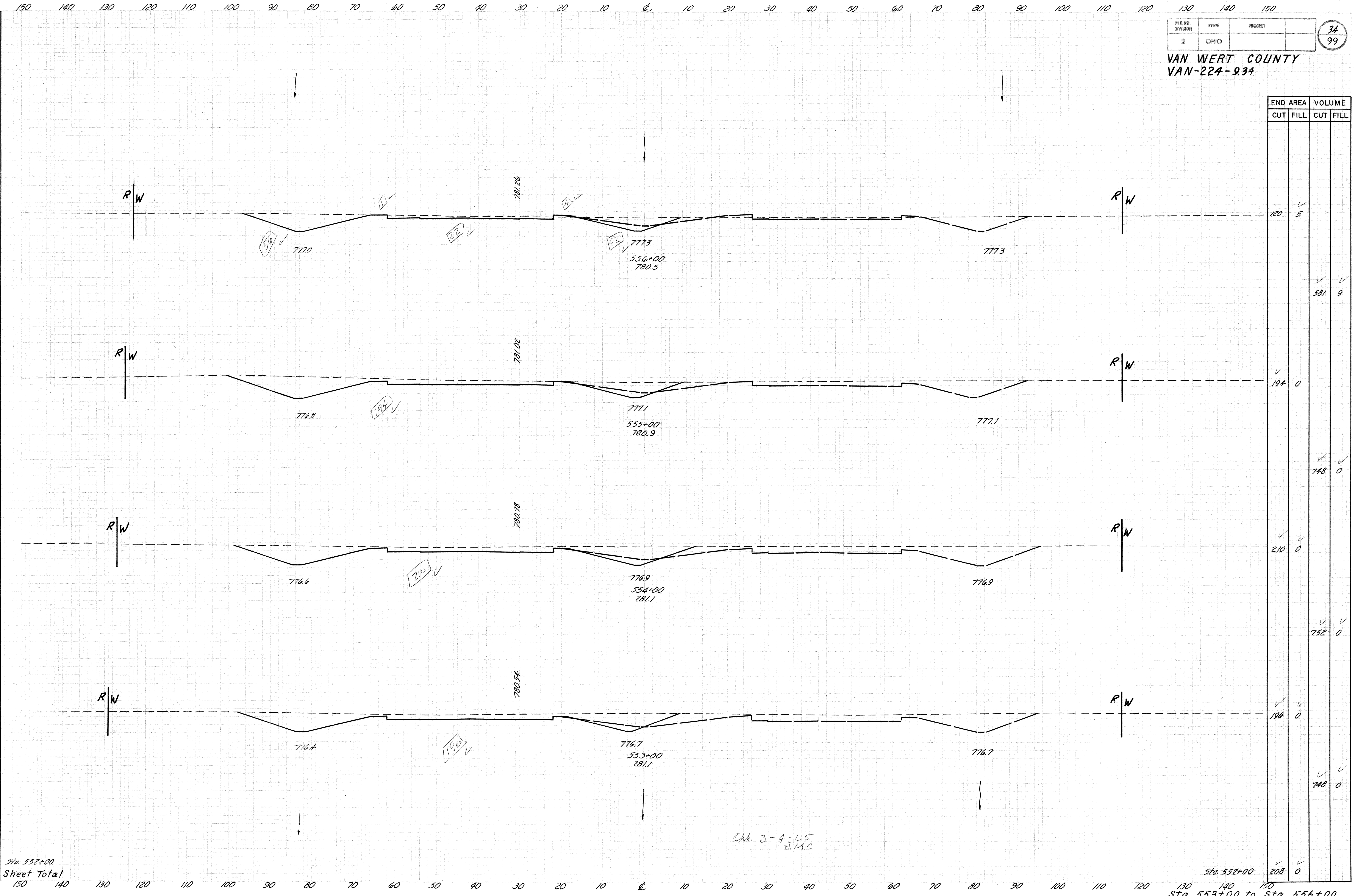
Sta. 548+00  
Sheet Total  
9,675

Sta. 3-4-65  
J.M.C.

Sta. 548+00  
Sta. 549+00 to Sta. 552+00



SEEDING	
END WIDTH	SQ. YDS.
198	2211
200	2233
202	2255
204	2327
215	9026





SEEDING  
END  
WIDTH

SQ.  
YDS.

195

3,167

195

3,167

195

3,172

196

3,189

198

8,695

Sta. 556+00  
Sheet Total

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

35  
99

VAN WERT COUNTY  
VAN-224-9.34

END AREA		VOLUME	
CUT	FILL	CUT	FILL
42	90		
		183	248
57	44		
		239	111
72	16		
		333	37
108	4		
		422	17
120	5		

Sta. 556+00  
Sta. 557+00 to Sta. 560+00

Chk. 3-4-65.  
J.M.C.



SEEDING  
END  
WIDTH

SQ.  
YDS.

190

2,117

191

2,134

193

2,150

194

2,161

195

8,562

Sta. 560+00

Sheet Total

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

FED. RD.  
DIVISION  
2

STATE  
OHIO

PROJECT

36  
99

VAN WERT COUNTY  
VAN-224-9.34

END AREA  
CUT FILL

VOLUME  
CUT FILL

25

130

26

92

29

85

32

84

42

90

94

411

102

328

113

313

137

322

Sta. 560+00  
Sta. 561+00 to Sta. 564+00

CH. 3-5-65  
J.M.C.



SEEDING  
END  
WIDTH

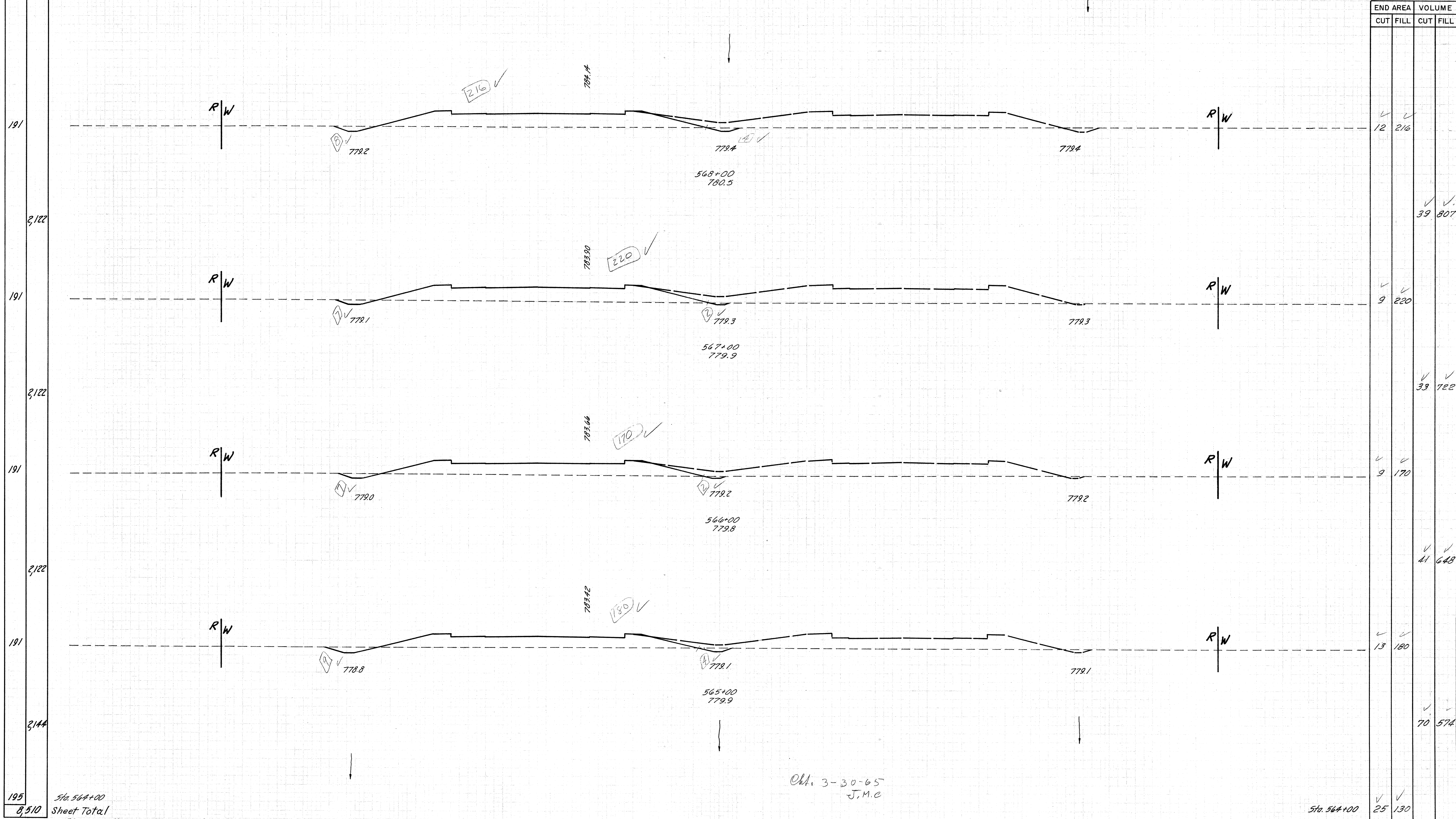
SQ.  
YDS.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

37  
99

VAN WERT COUNTY  
VAN-224-9.34

END AREA		VOLUME	
CUT	FILL	CUT	FILL



195  
8,510  
Sta 564+00  
Sheet Total

Sta 564+00  
Sta 565+00 to Sta 568+00







SEEDING  
END  
WIDTH

SQ.  
YDS.

191

2,122

191

2,122

191

2,122

191

4,366

Sta. 572+00  
Sheet Total

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

VAN WERT COUNTY  
VAN-224-934

39  
99

END AREA		VOLUME	
CUT	FILL	CUT	FILL

8	416		
---	-----	--	--

44	1,359		
----	-------	--	--

16	318		
----	-----	--	--

89	1,004		
----	-------	--	--

32	224		
----	-----	--	--

144	693		
-----	-----	--	--

46	150		
----	-----	--	--

Sta. 572+00

Ch. 3-8-65  
J.M.C.

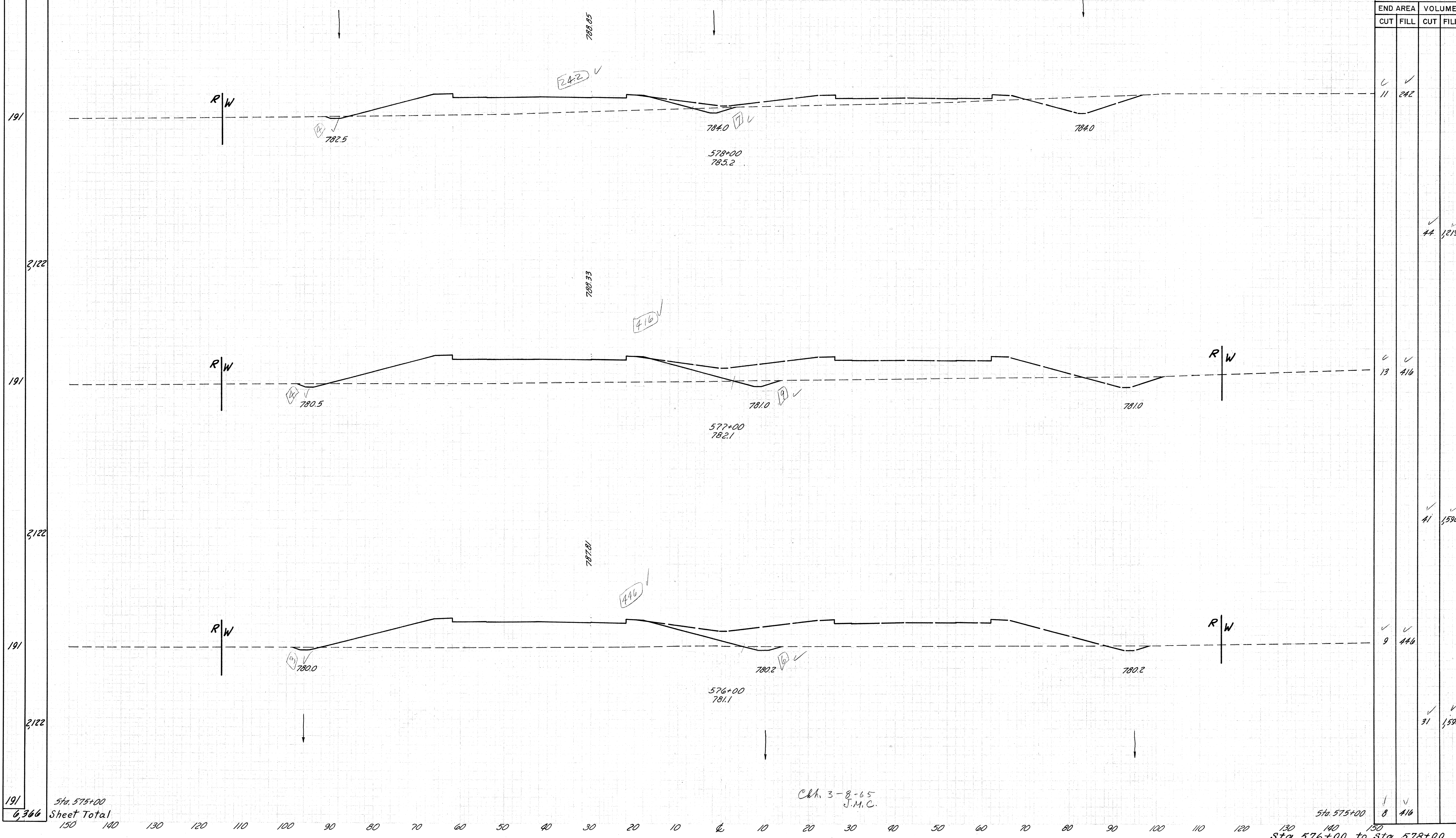


SEEDING  
END SQ.  
WIDTH YDS.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

40  
99

VAN WERT COUNTY  
VAN-224-9.34





SEEDING  
END  
WIDTH

SQ.  
YDS.

203

2,244

201

2,306

7,284

1,480

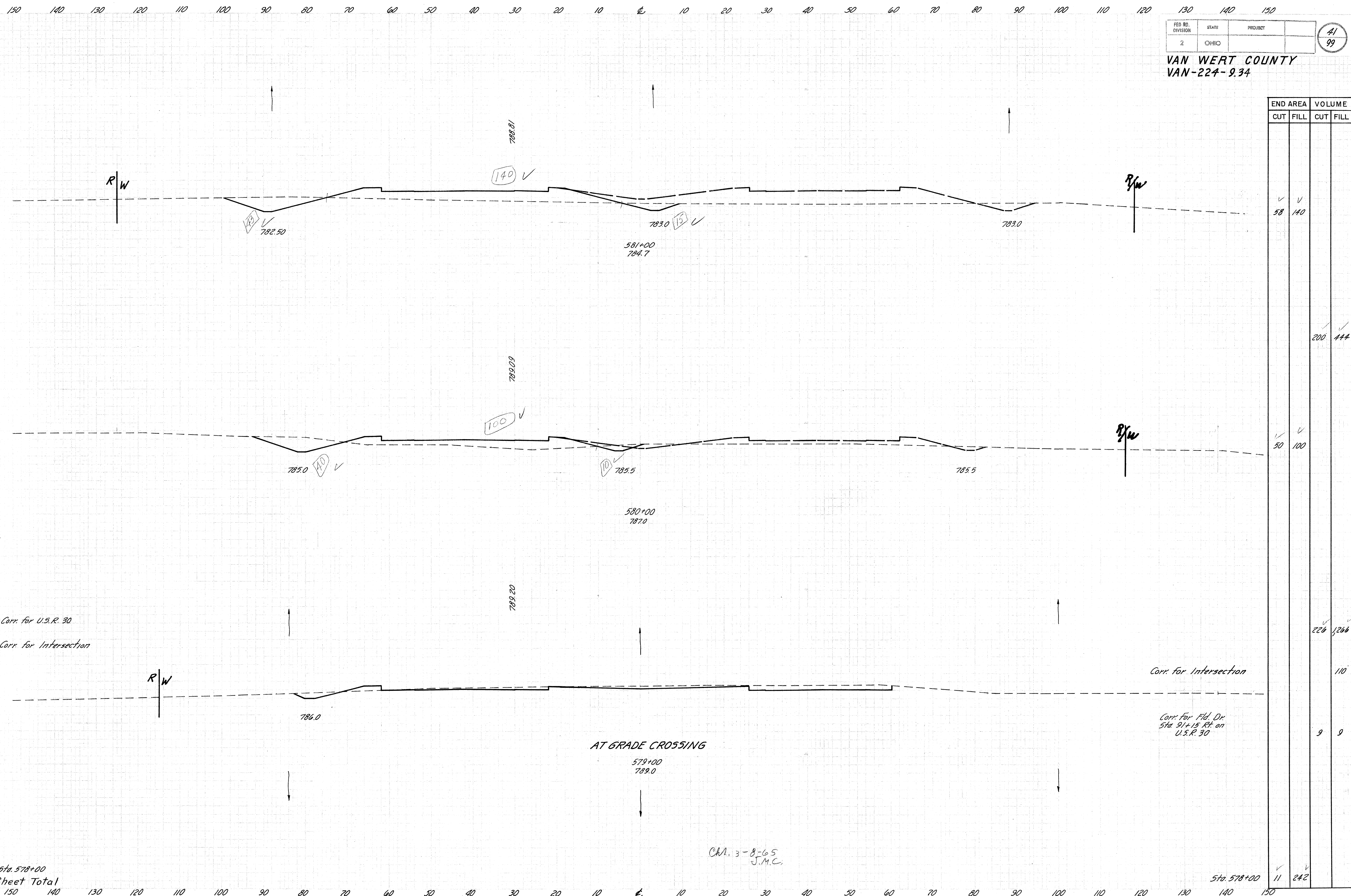
214

2,250

191

12,604

Sta. 578+00  
Sheet Total



FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

VAN WERT COUNTY  
VAN-224-9.34

END AREA		VOLUME	
CUT	FILL	CUT	FILL
58	140	200	444
50	100	226	1,266
		9	9
11	242		

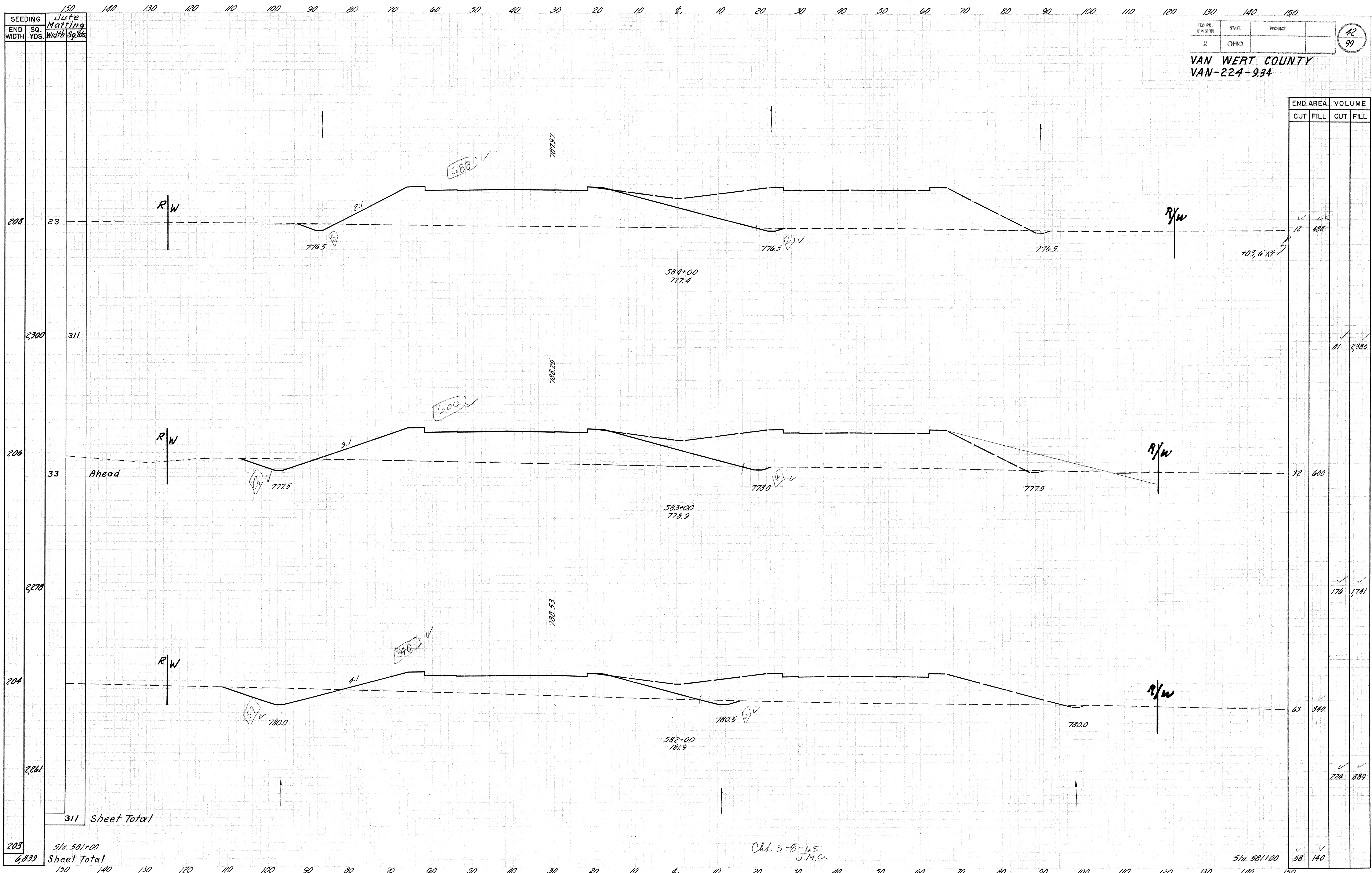
AT GRADE CROSSING

CH. 3-8-65  
J.M.C.

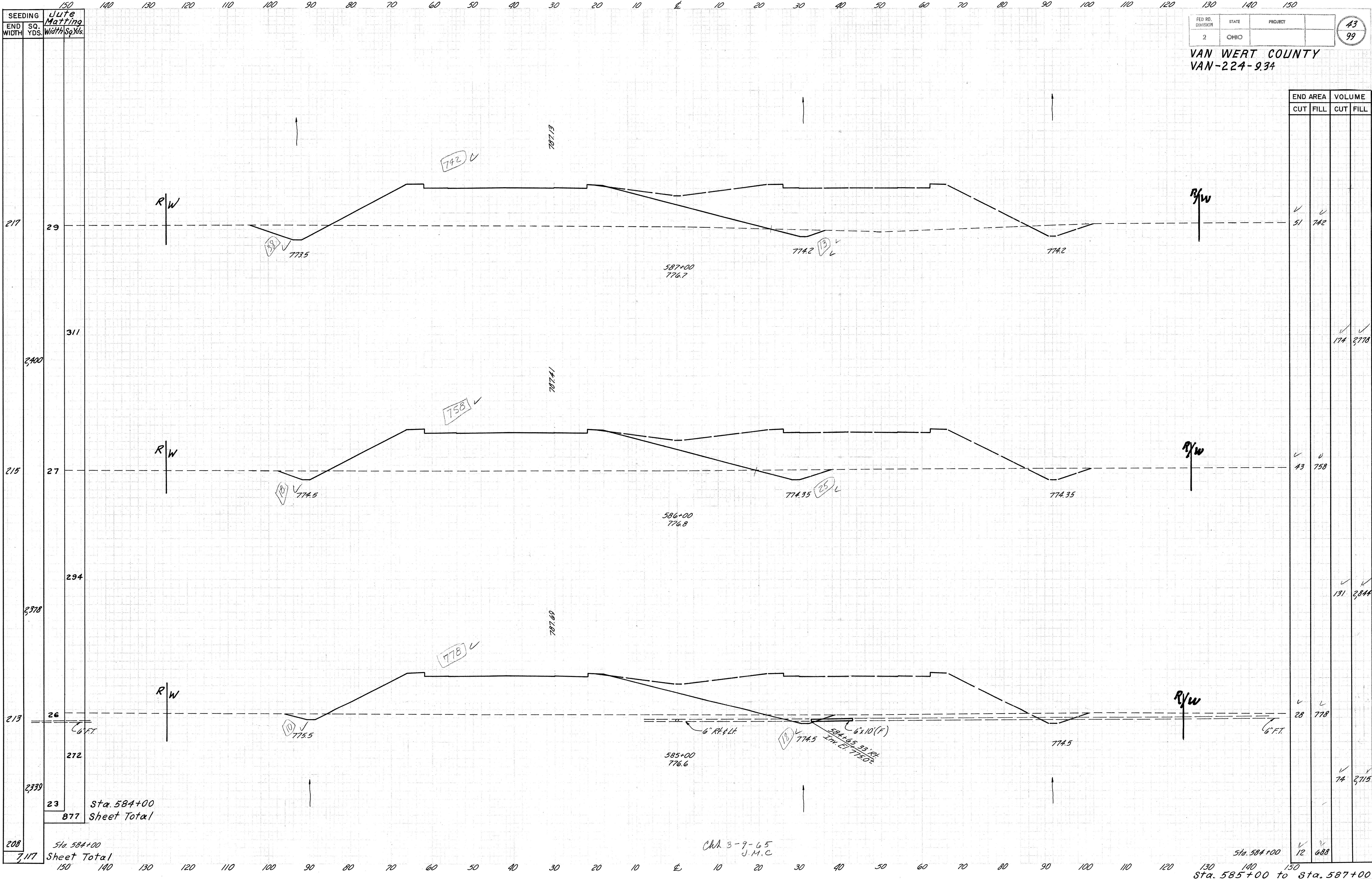
Corr. for Intersection

Corr. for Fld. Dr.  
Sta. 91+15 Rht. on  
U.S.R. 30









FED. RD. DIVISION	STATE	PROJECT	43
2	OHIO		99

VAN WERT COUNTY  
VAN-224-9.34

END AREA		VOLUME	
CUT	FILL	CUT	FILL
51	742		
43	758	174	2778
28	778	131	2844
12	688	74	2715

SEEDING	Jute Matting
END WIDTH	SQ. YDS.
217	29
215	27
213	26
208	23

Sta. 584+00  
Sheet Total

Sta. 584+00  
Sheet Total

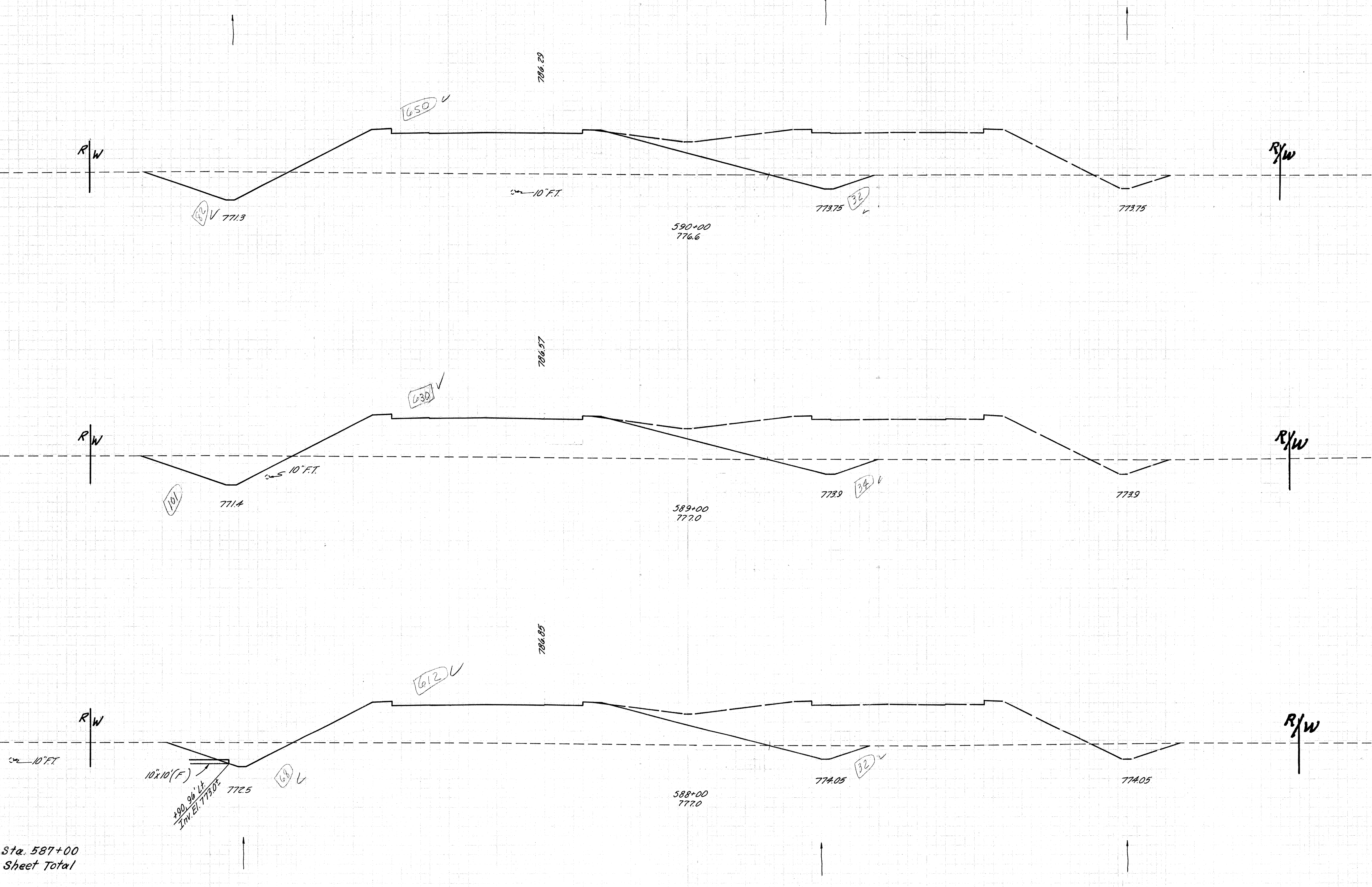
CH 3-9-65  
J.M.C.

Sta. 584+00  
Sta. 585+00 to Sta. 587+00



217	Sta. 587
7,205	Sheet T

VAN WERT COUNTY  
VAN-224-934

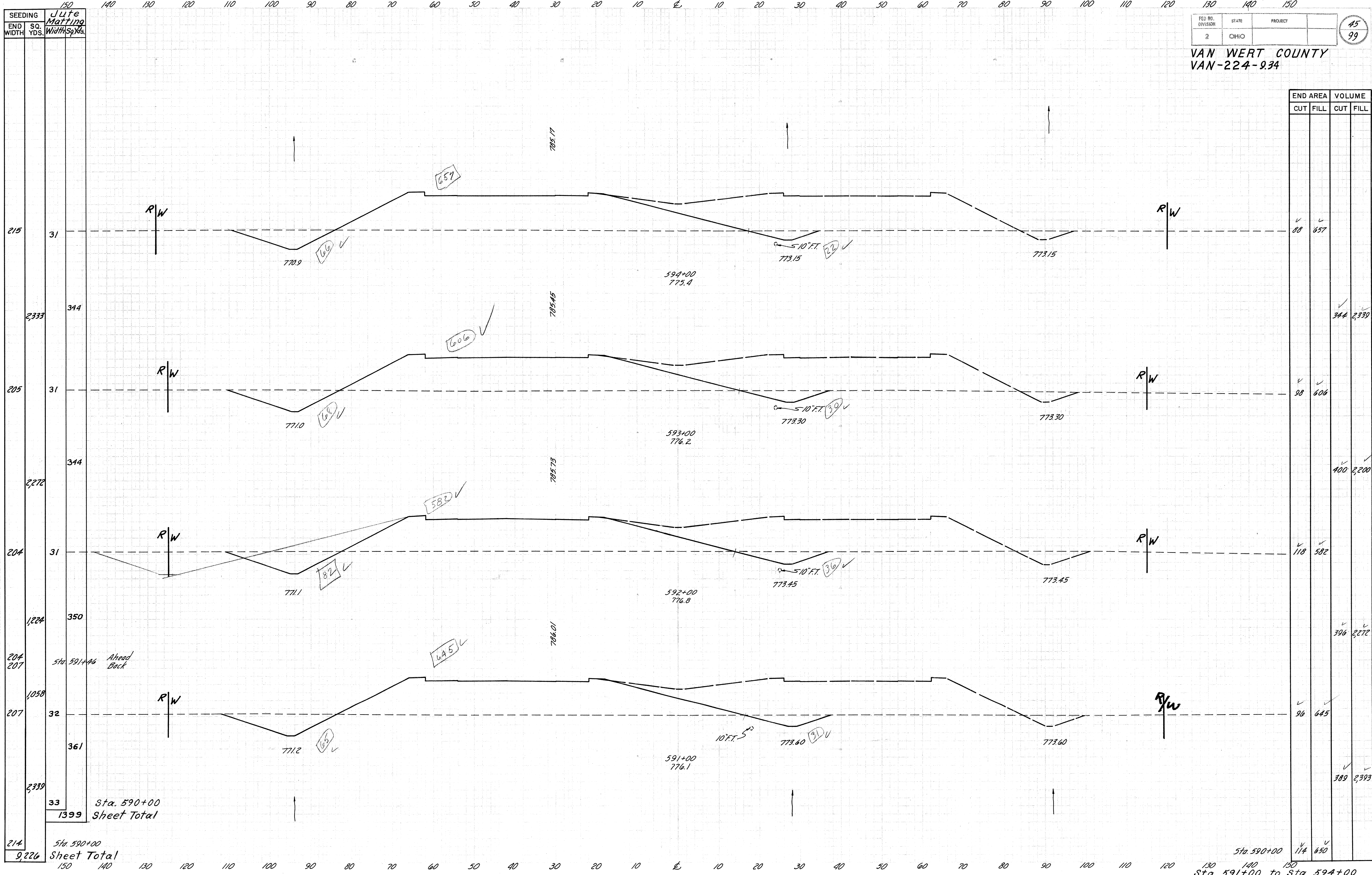


END AREA		VOLUME	
CUT	FILL	CUT	FILL
✓ 114	✓ 650	✓ 461	✓ 831
✓ 135	✓ 630	✓ 435	✓ 830
✓ 100	✓ 612	✓ 280	✓ 850
✓ 51	✓ 742		

LA 3-8-65  
J.M.C

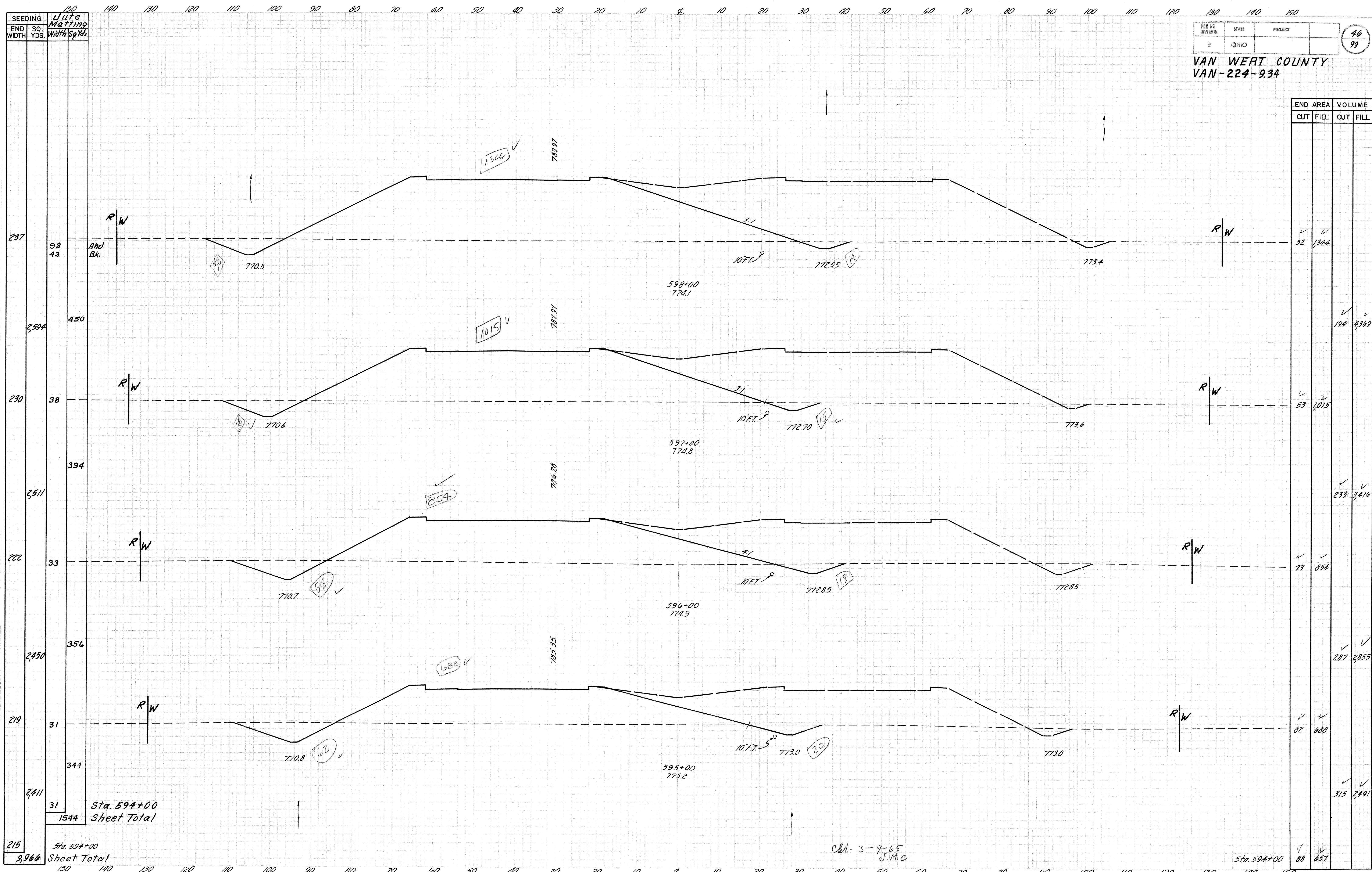
Sta. 587+00	51	742		
Sta. 588+00				





END AREA		VOLUME	
CUT	FILL	CUT	FILL
88	637		
98	606	344	2339
118	582	400	2200
96	645	396	2272
114	650	389	2393





VAN WERT COUNTY  
VAN-224-934

END AREA		VOLUME	
CUT	FILL	CUT	FILL
52	1344	194	4369
53	1015	233	3416
73	854	287	3855
82	688	315	3491
88	657		

Chd. 3-9-65  
J.M.C.



SEEDING END WIDTH SQ. YDS. 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

Van Wert County  
VAN-224-934

END AREA VOLUME  
CUT FILL CUT FILL

Sta. 598+00  
Sheet Total

Sta. 598+00  
Sheet Total

Chd. 3-9-65  
J.M.C.



SEEDING	150	140	130	120	110	100	90	80	70	60	50	40	30	20	10	0	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
END																															
WIDTH																															
SQ.																															
YDS.																															

FED RD  
DIVISION

2

STATE

OHIO

PROJECT

48

99

VAN WERT COUNTY

VAN-224-9.34

END AREA		VOLUME	
CUT	FILL	CUT	FILL
35	3332	130	11762
35	3020	124	10611
32	2710	113	9435
29	2385		

Sta. 602+00

Sheet Total

286

9,228

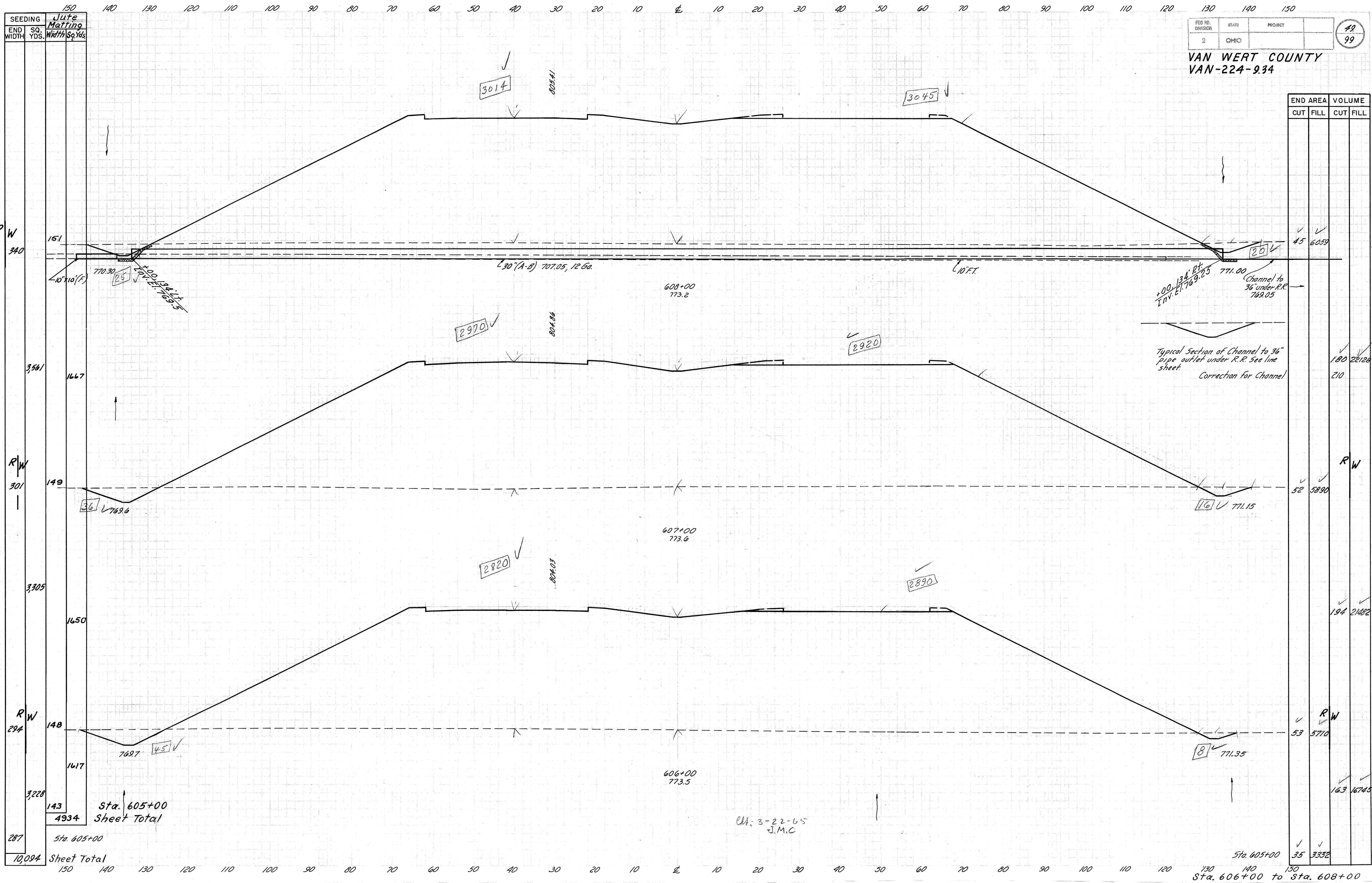
CHK. 3 - 9-65

J.M.C.

Sta. 602+00

Sheet Total





FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

VAN WERT COUNTY  
VAN-224-934

49  
99

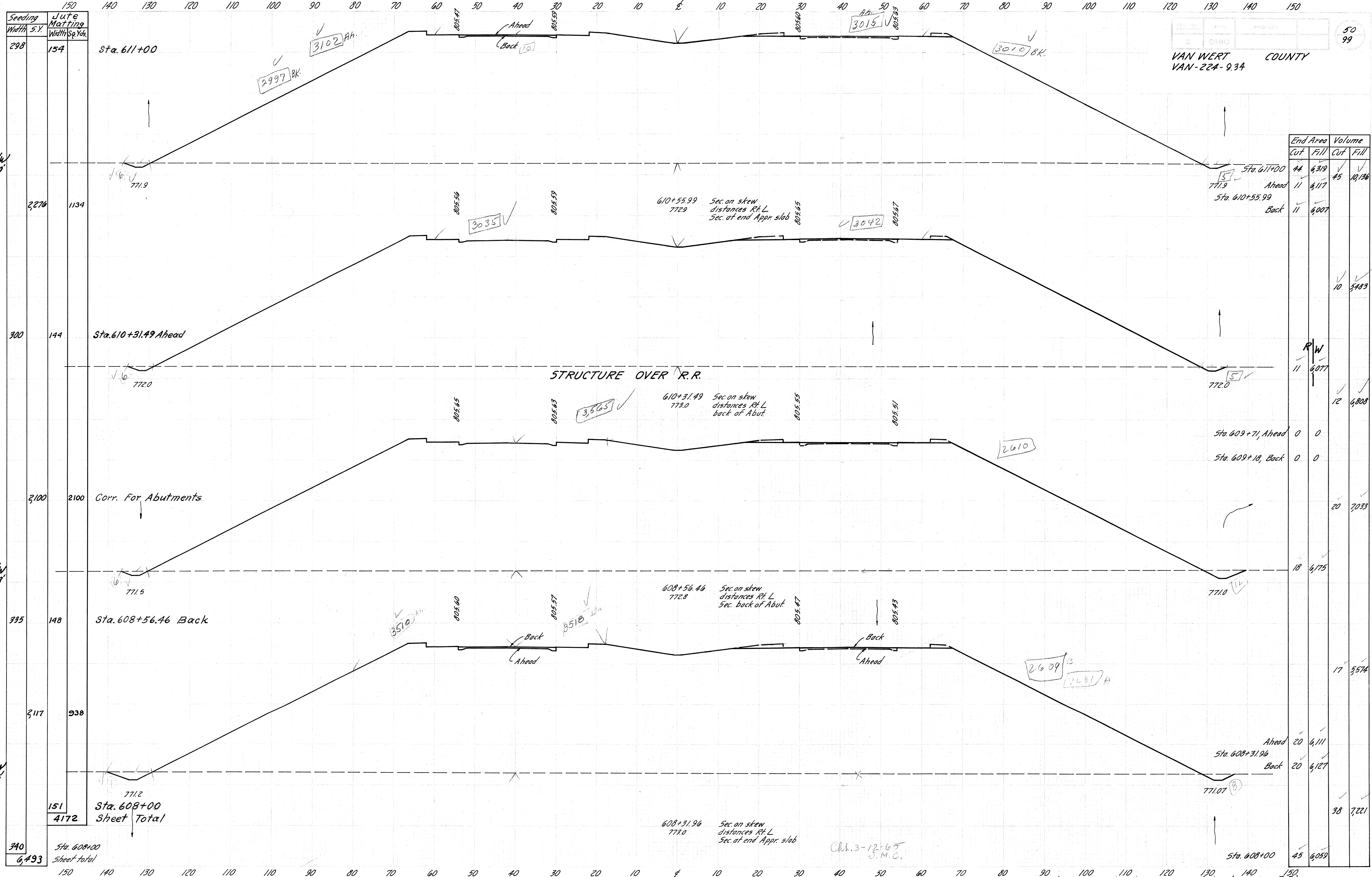
END AREA		VOLUME	
CUT	FILL	CUT	FILL
45	6059		
52	5890		
53	5710		
35	3332		

CH. 3-22-65  
J.M.C.

Sta. 605+00  
Sheet Total

Sheet Total





50 99  
VAN WERT COUNTY  
VAN-224-9.34

End Area	Cut	Fill	Volume	Cut	Fill
Sta. 611+00	44	6,319	45	✓	✓
Ahead	11	6,117	✓	✓	✓
Sta. 610+55.99	✓	6,007	✓	✓	✓
Back	✓	✓	✓	✓	✓
Sta. 610+31.49 Ahead	0	0	✓	✓	✓
Sta. 609+18, Back	0	0	✓	✓	✓
Corr. For Abutments	20	7,033	✓	✓	✓
Sta. 608+56.46 Back	18	6,175	✓	✓	✓
Sta. 608+31.96	20	6,111	✓	✓	✓
Ahead	20	6,127	✓	✓	✓
Back	✓	✓	✓	✓	✓
Sta. 608+00	45	6,059	✓	✓	✓

608+31.96  
773.0  
Sec. on skew  
distances Rt. L.  
Sec. at end Appr. slab

Ch. 3-12-65  
J. M. C.

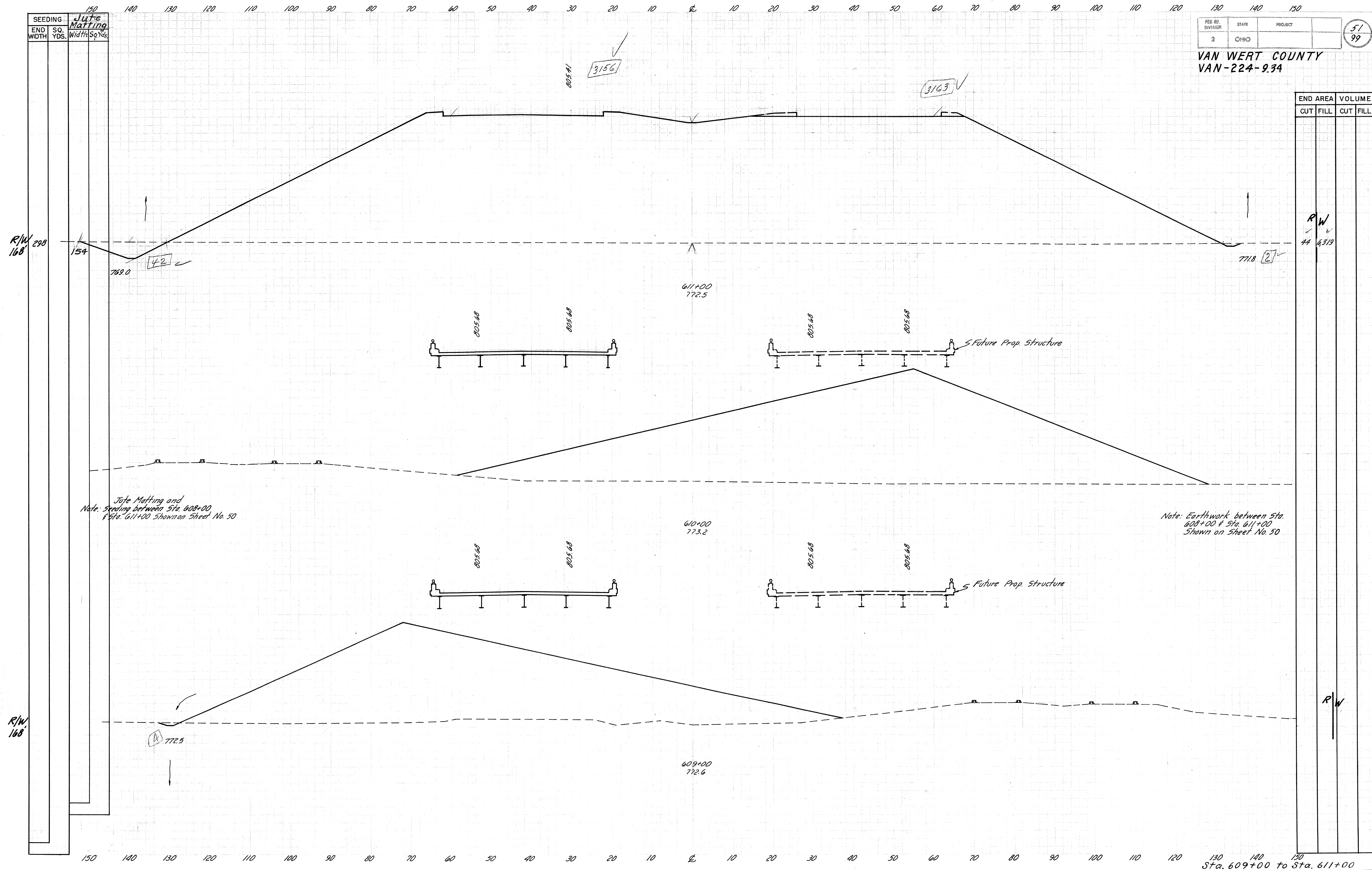


SEEDING		Jute Matting	
END WIDTH	SQ. YDS.	Width	Sq. Yds.

FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

VAN WERT COUNTY  
VAN-224-934

590





SEEDING  
END WIDTH  
SQ. YDS.

150  
140  
130  
120  
110  
100  
90  
80  
70  
60  
50  
40  
30  
20  
10  
0  
10  
20  
30  
40  
50  
60  
70  
80  
90  
100  
110  
120  
130  
140  
150

150  
140  
130  
120  
110  
100  
90  
80  
70  
60  
50  
40  
30  
20  
10  
0  
10  
20  
30  
40  
50  
60  
70  
80  
90  
100  
110  
120  
130  
140  
150

311  
147  
152  
154  
154  
298  
9,828

3328  
3222  
3278  
5072

1661  
1700  
1711

768.4  
768.6  
768.8

3360  
3525  
3045  
3070

802.93  
804.03  
804.86

614+00  
771.7  
613+00  
771.9  
612+00  
772.4

770.9  
771.2  
771.5

Sta. 611+00  
Sheet Total

Sta. 611+00  
Sheet Total

Sta. 611+00  
Sta. 612+00 to Sta. 614+00

3-15-65  
J.M.C.

52  
99

VAN WERT COUNTY  
VAN-224-9.34

END AREA		VOLUME	
CUT	FILL	CUT	FILL
34	3360	131	12,750
37	3525	161	17,852
50	6,115	174	23,027
44	6,319		



SEEDING  
END WIDTH SQ. YDS.  
144  
177  
272  
275  
311  
8,078

150  
Jute Matting  
Width Sq Yds.  
150  
1494  
1783  
1572  
3039  
1622  
147  
4688  
Sta. 614+00  
Sheet Total

140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

1250  
2915  
601.55  
3278

U.S. 30 (4.27) Built to here

617+00  
781.5  
616+00  
771.3  
615+00  
771.5

797.97  
799.89  
601.55

131  
138  
145

R W  
R W  
R W

769.9  
768.0  
768.2  
770.3  
770.6

Ahead  
Back

Sta. 614+00  
Sheet Total

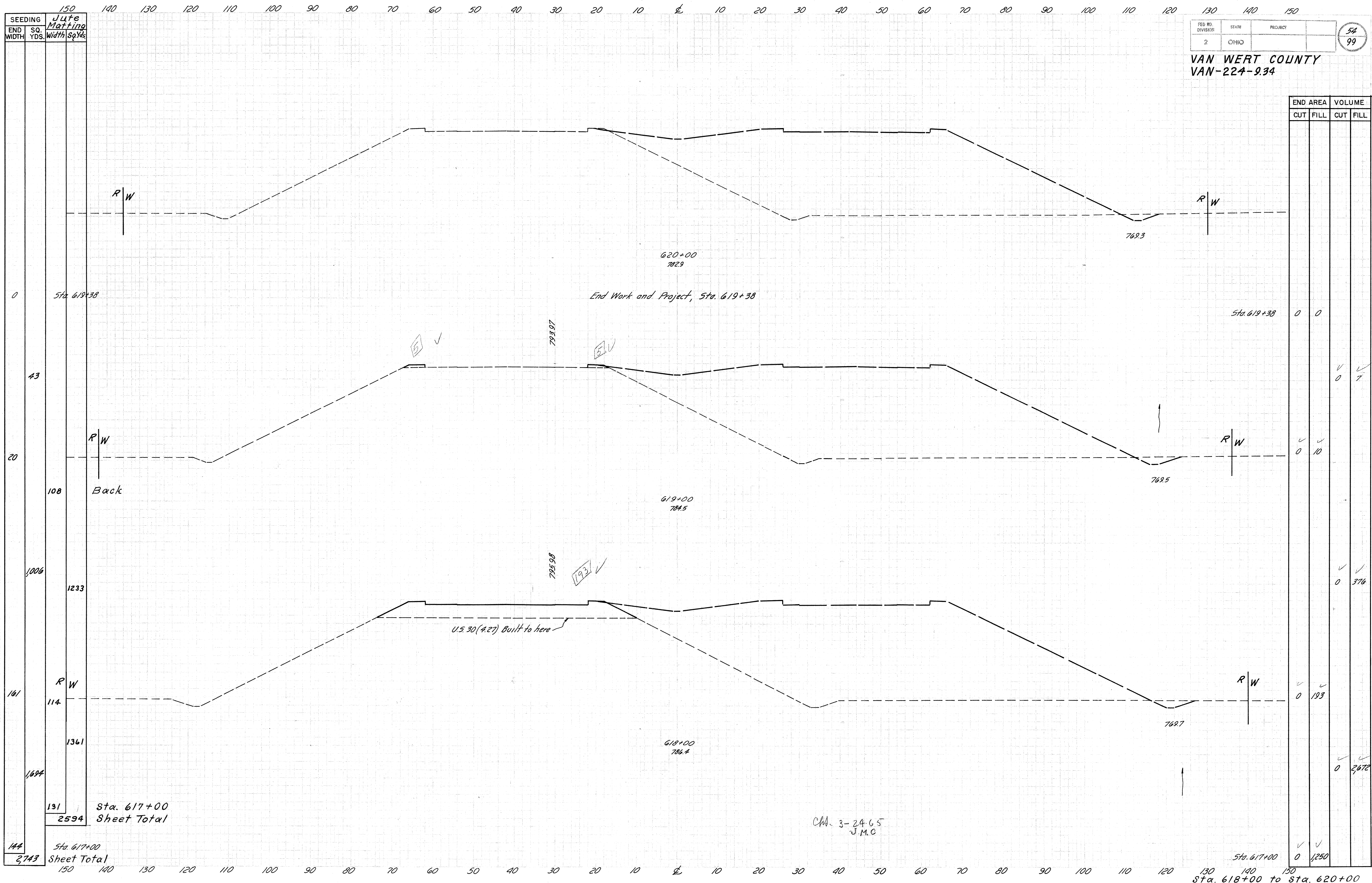
Sta. 614+00  
Sheet Total

Sta. 614+00 to Sta. 617+00

Chd. 3-18-65  
J.M.C.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
0	1,250	28	7,713
53	2,915	148	1,468
27	3,278	113	12,293
34	3,360		

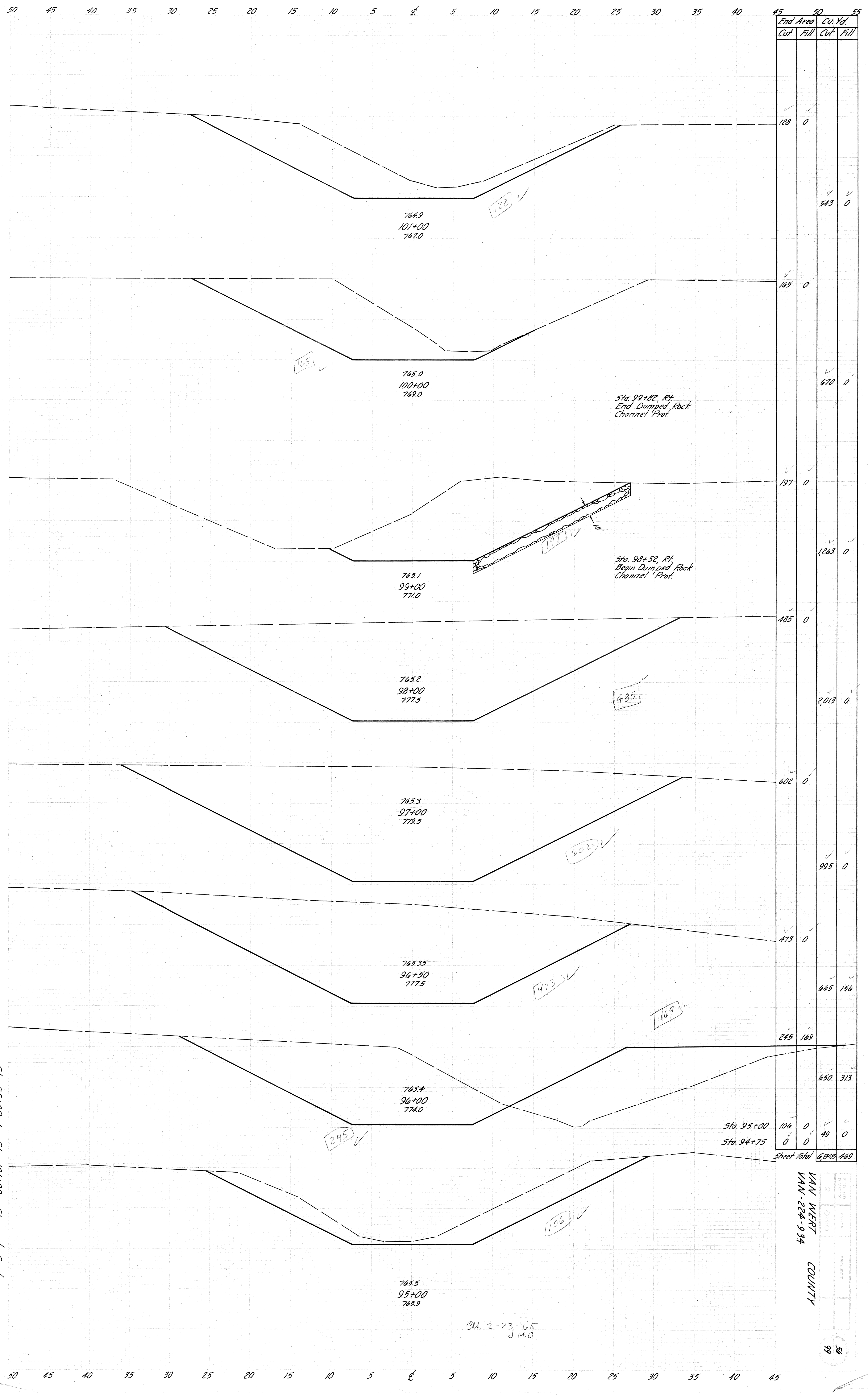










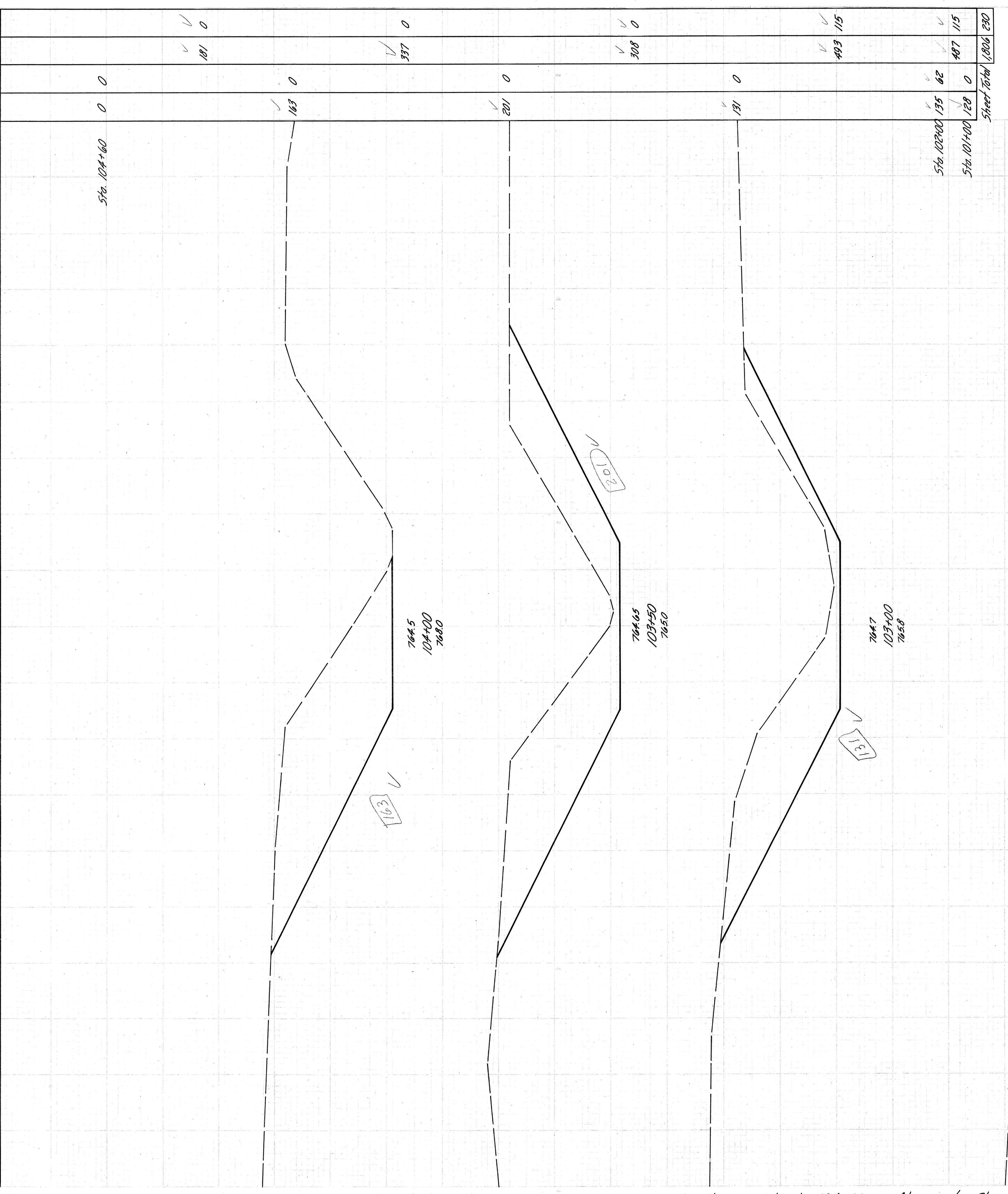
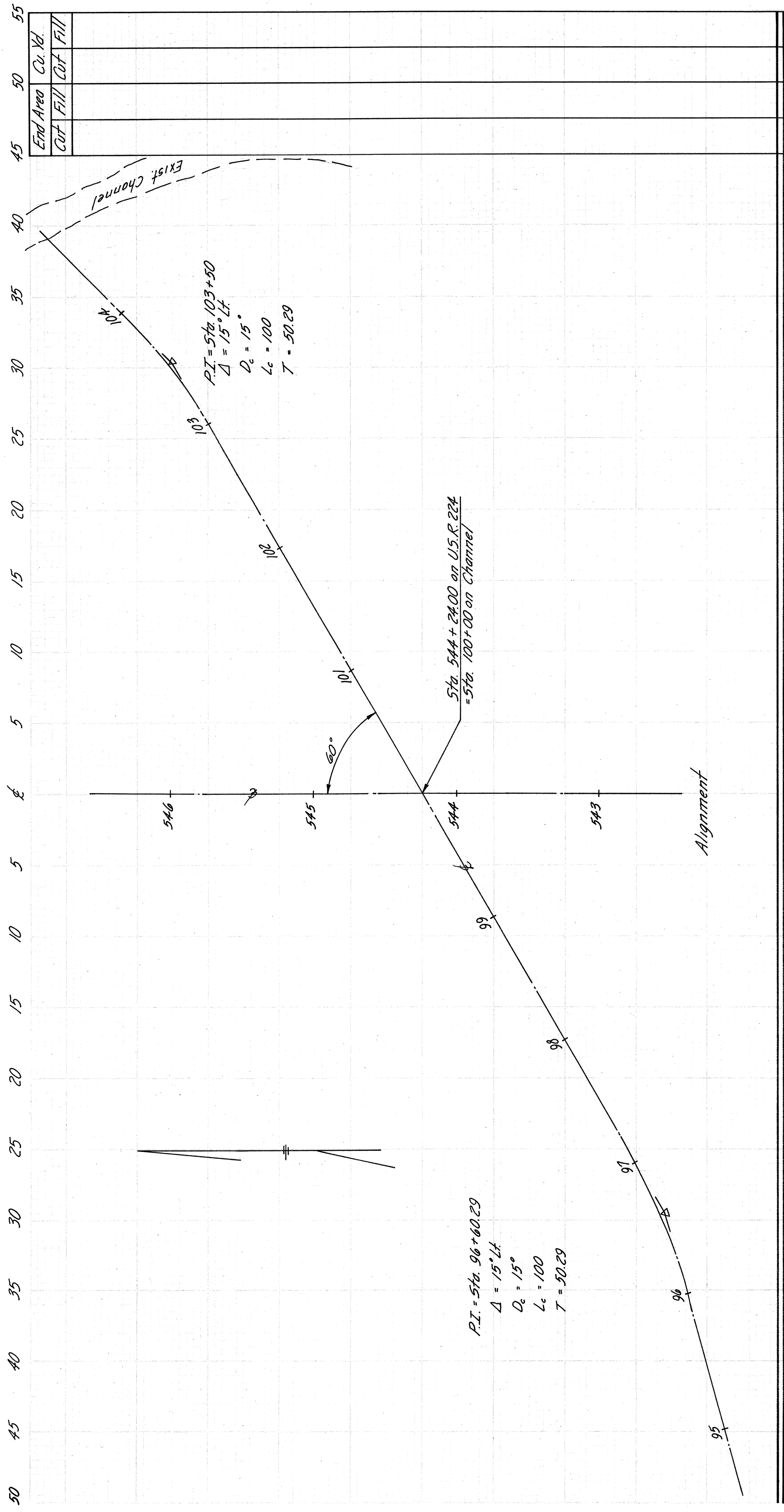


End Area		Cu. Yd.	
Cut	Fill	Cut	Fill
128	0	543	0
165	0	670	0
197	0	1263	0
485	0	2013	0
602	0	995	0
473	0	665	156
245	169	650	313
106	0	49	0
0	0		
Sheet Total		6848	469

VAN WERT COUNTY  
VAN-224-934

FILE NO.	2	DATE	CH 2-23-65
PROJECT			





Station	Area	Volume	Notes
Sta. 102+00	135	62	
Sta. 103+50	131	0	
Sta. 104+00	163	0	
Sta. 104+60	101	0	
<b>Total</b>	<b>493</b>	<b>115</b>	

Sheet No.	Cut	Fill
55	41	6439
56	638	460
57	1006	230
<b>Total</b>	<b>2185</b>	<b>7329</b>

Station	Area	Volume	Notes
Sta. 102+00	135	62	
Sta. 103+50	131	0	
Sta. 104+00	163	0	
Sta. 104+60	101	0	
<b>Total</b>	<b>493</b>	<b>115</b>	

Sta. 102+00 to Sta. 104+00 & Alignment, Channel Sections

CHK. 2-23-65  
J.M.C.

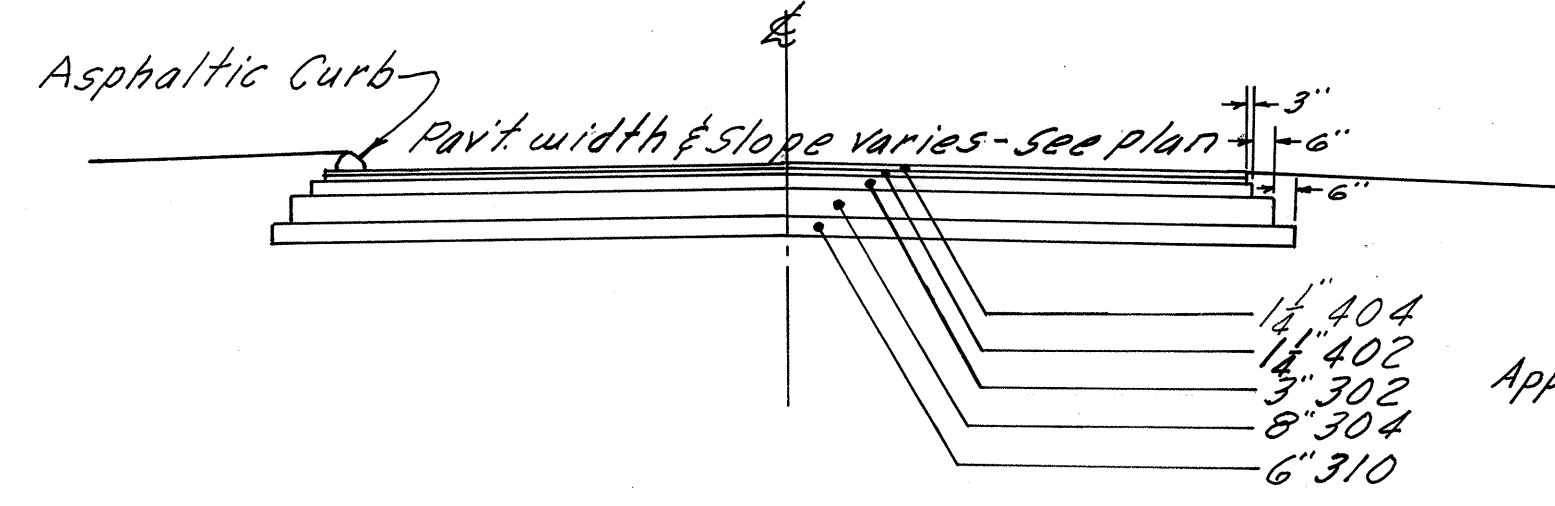
VAN WERT COUNTY  
VAN-224-9.34



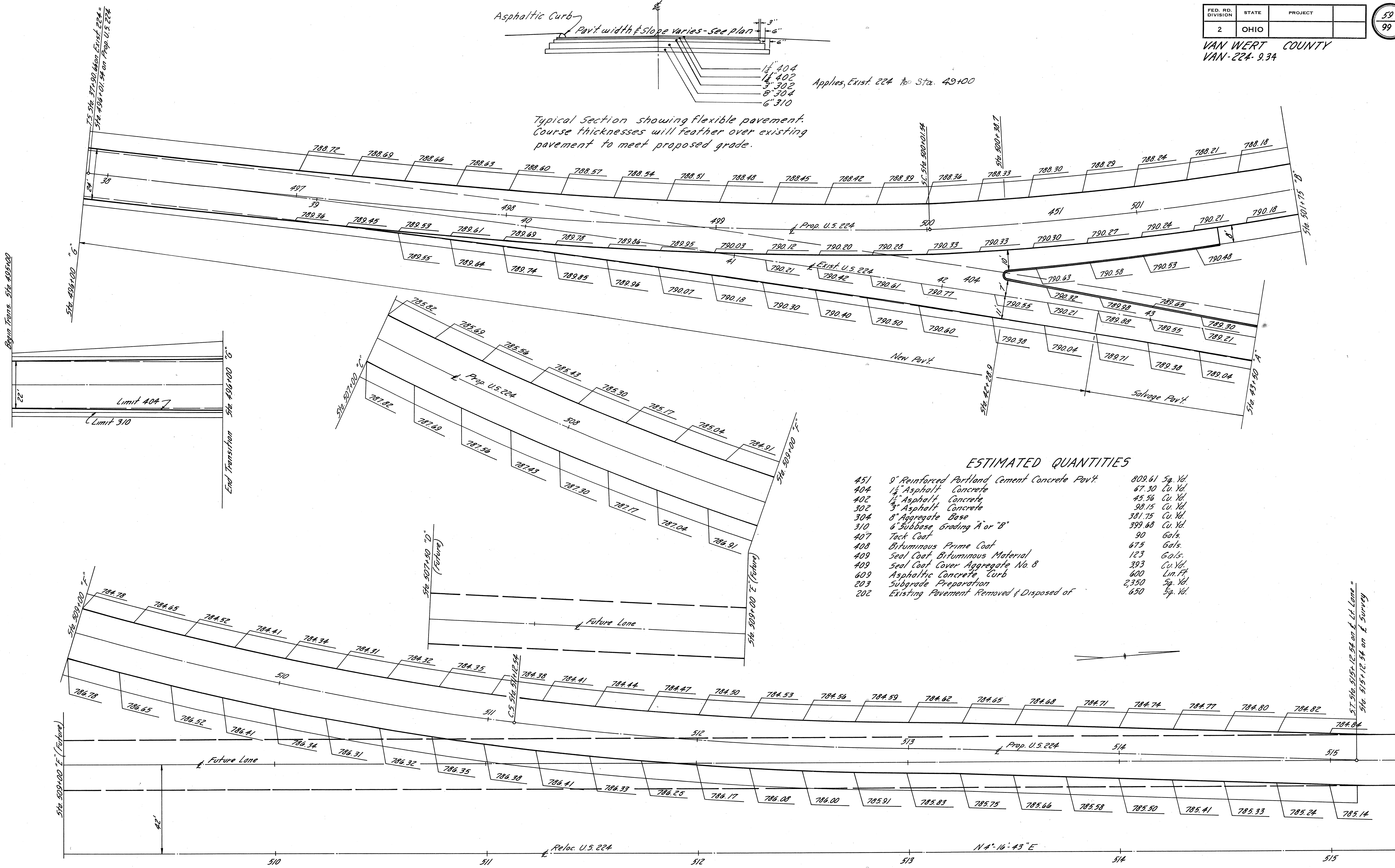




VAN WERT COUNTY  
VAN-224-9.34



Typical Section showing flexible pavement.  
Course thicknesses will feather over existing pavement to meet proposed grade.



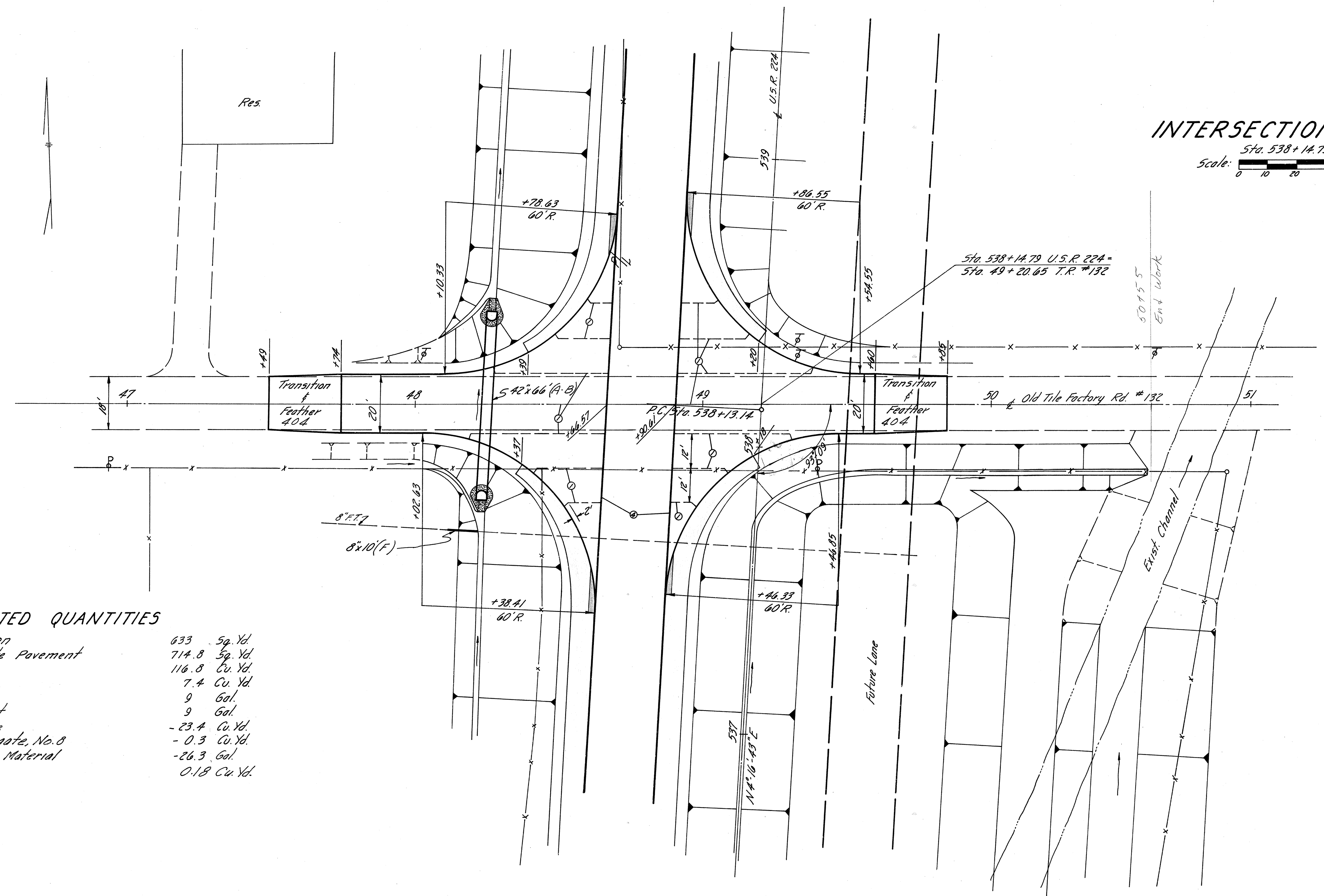
### ESTIMATED QUANTITIES

451	9" Reinforced Portland Cement Concrete Pav't.	809.61	Sq. Yd.
404	1 1/2" Asphalt Concrete	67.30	Cu. Yd.
402	1 1/2" Asphalt Concrete	45.56	Cu. Yd.
302	3" Asphalt Concrete	98.15	Cu. Yd.
304	8" Aggregate Base	381.75	Cu. Yd.
310	6" Subbase Grading "A" or "B"	399.68	Cu. Yd.
407	Tack Coat	90	Gals.
408	Bituminous Prime Coat	675	Gals.
409	Seal Coat Bituminous Material	123	Gals.
409	Seal Coat Cover Aggregate No. 8	393	Cu. Yd.
609	Asphaltic Concrete Curb	600	Lin. Ft.
203	Subgrade Preparation	2,350	Sq. Yd.
202	Existing Pavement Removed & Disposed of	650	Sq. Yd.



## INTERSECTION NO-2-P

Sta. 538+14.79  
Scale: 0 10 20 40 Feet

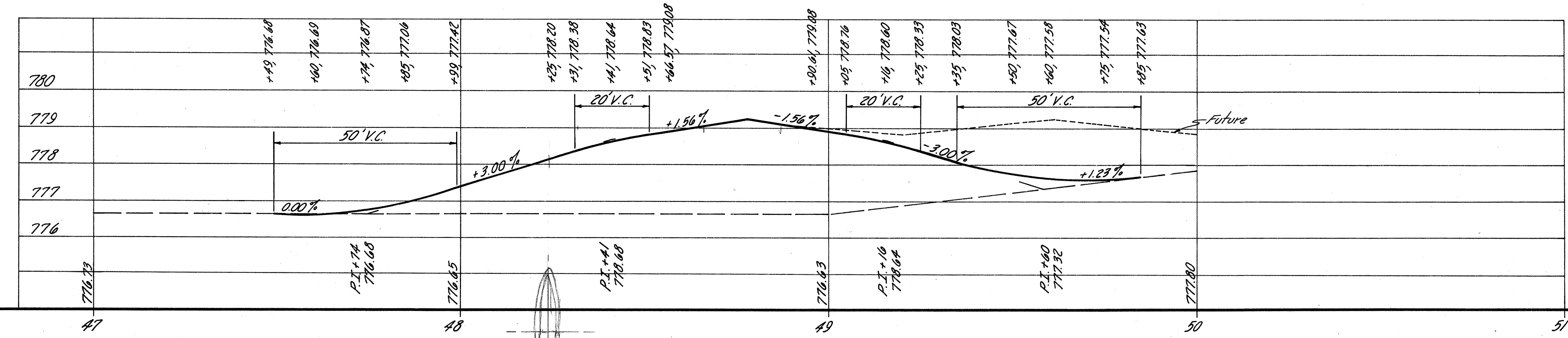


### ESTIMATED QUANTITIES

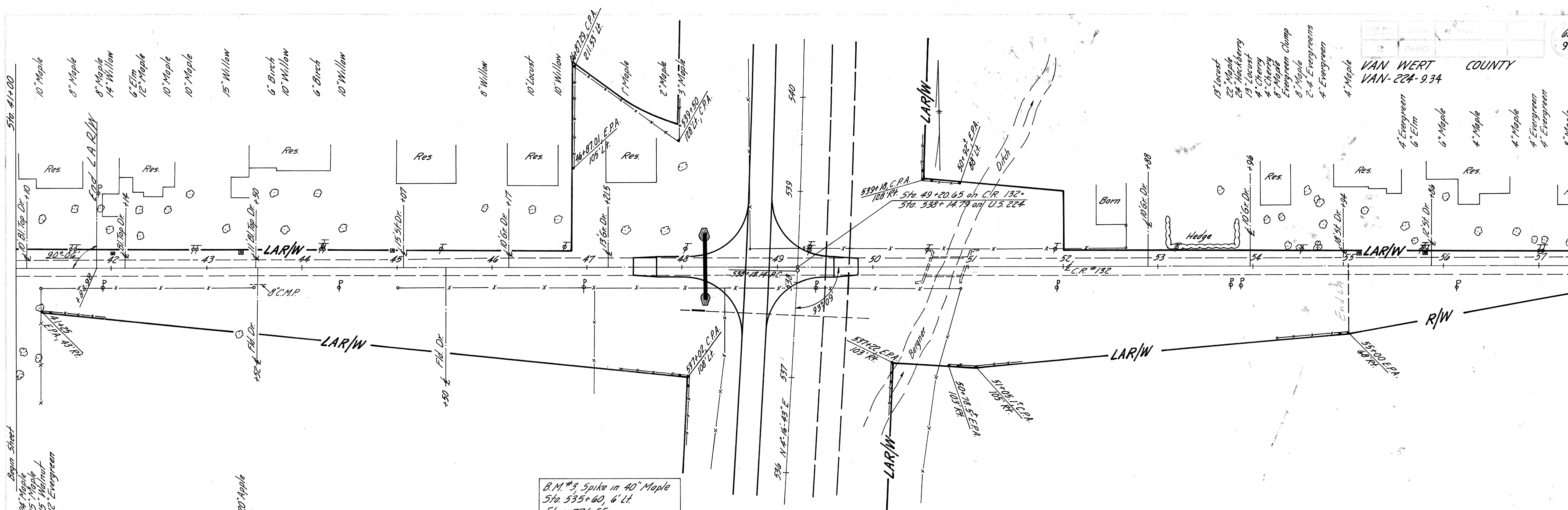
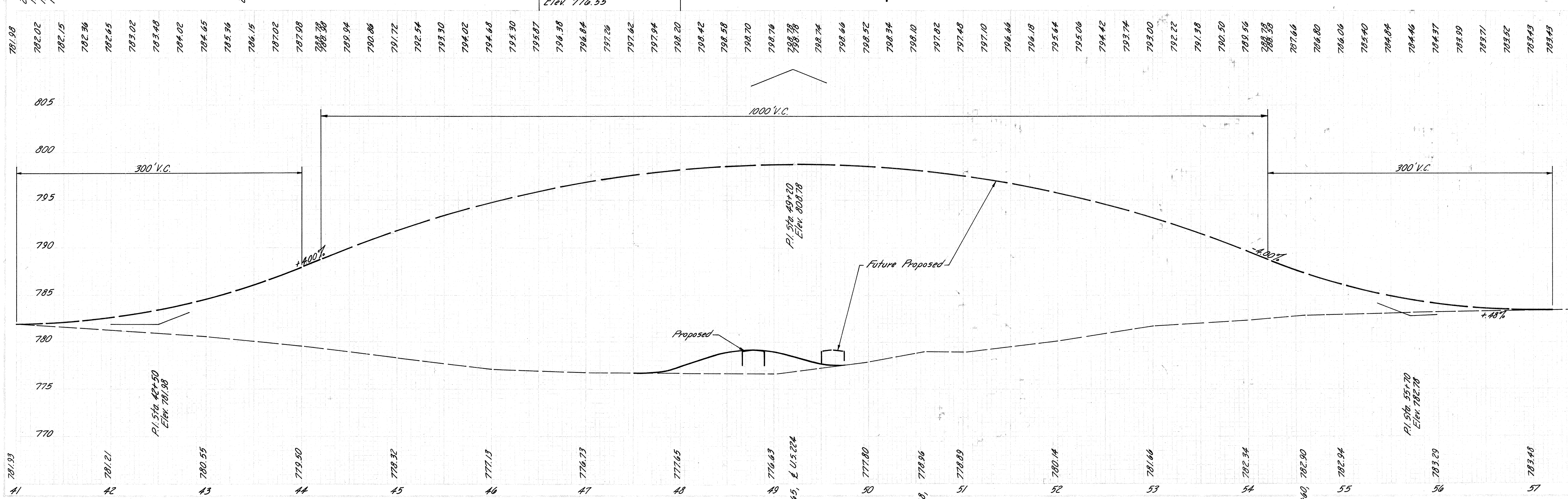
203 Subgrade Preparation	633	Sq. Yd.
451 9" Reinforced Concrete Pavement	714.8	Sq. Yd.
310 6" Subbase	116.8	Cu. Yd.
404 Asphaltic Concrete	7.4	Cu. Yd.
407 Tack Coat	9	Gal.
408 Bituminous Prime Coat	9	Gal.
* 304 8" Aggregate Base Course	-23.4	Cu. Yd.
* 409 Seal Coat Cover Aggregate, No. 8	-0.3	Cu. Yd.
* 409 Seal Coat Bituminous Material	-26.3	Gal.
** 408 Cover Aggregate	0.18	Cu. Yd.

**JOINT LEGEND**  
 (1) Standard Longitudinal Joint  
 (2) Key Joint without Dowels

\*\* To be used at the direction of the Project Engineer  
 \* These Quantities are adjustments to Main Line Computations.







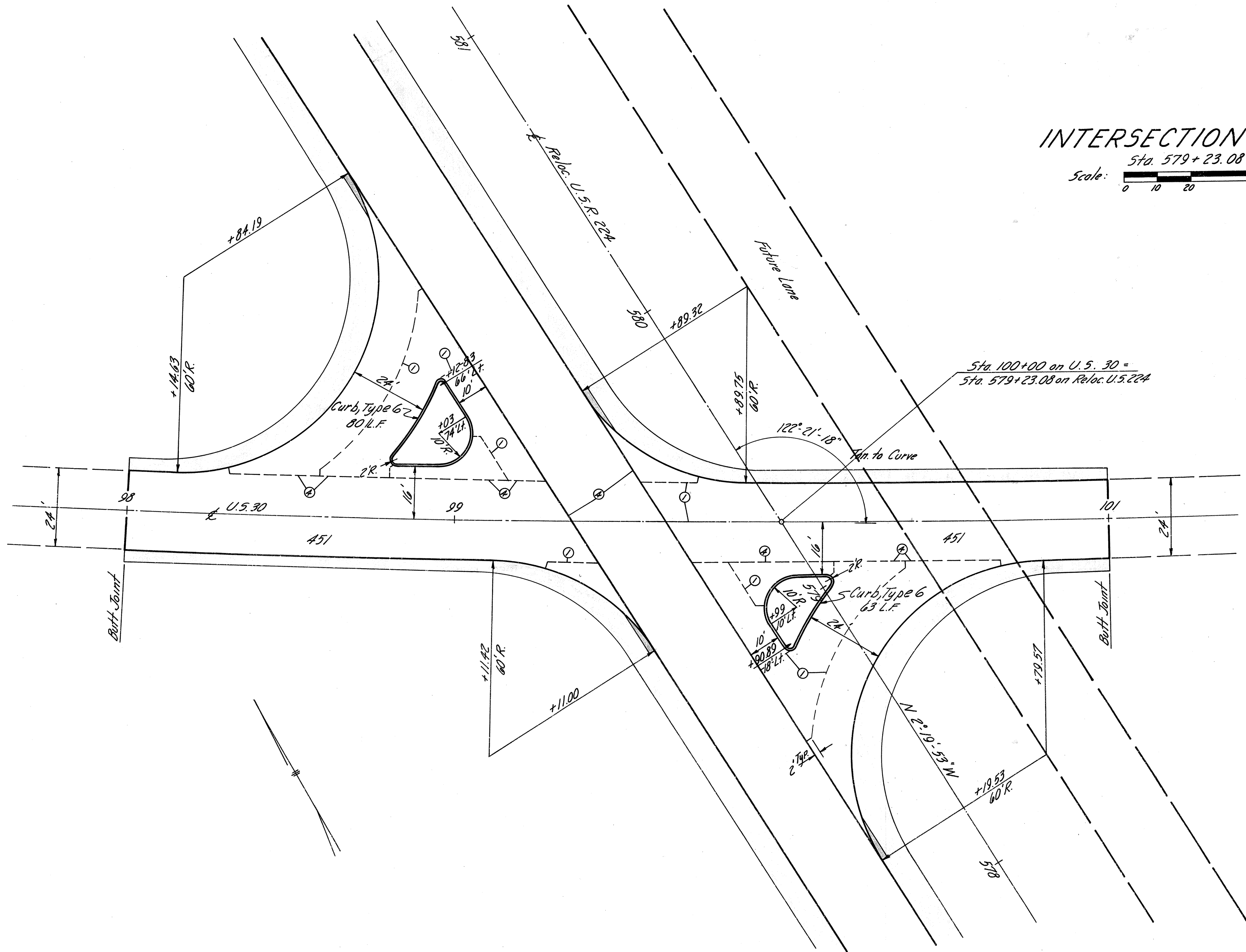
Begin Sheet  
End Sheet  
B.M. #3, Spike in 40" Maple  
Sta 535+60, 6' L.T.  
Elev 776.55



INTERSECTION NO. 3-P

Scale: Sta. 579+23.08  
0 10 20 40 Feet

See Sheets no. 15 and 16 for temporary run-around road.



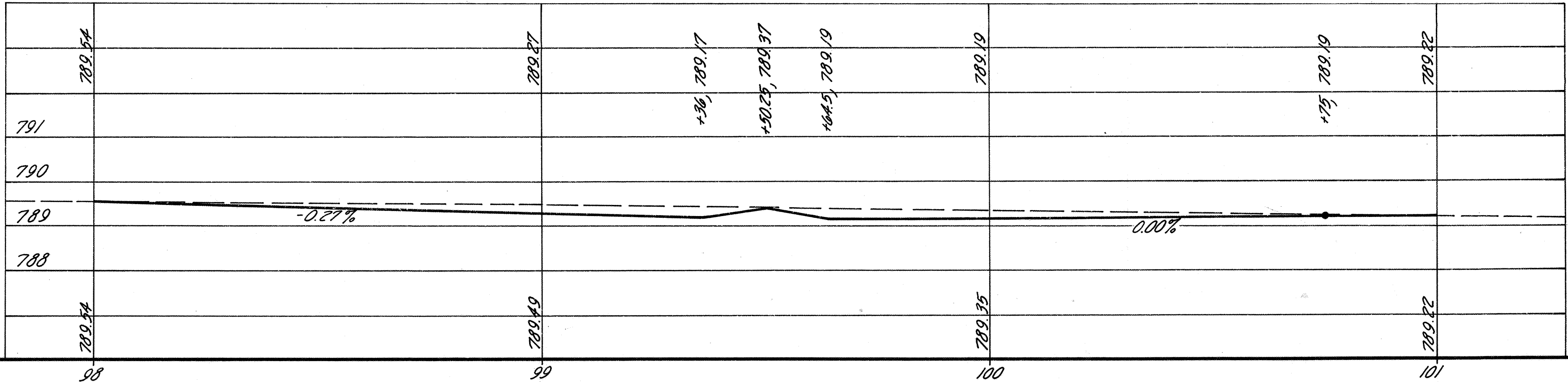
ESTIMATED QUANTITIES

203	Subgrade Preparation	1,481	Sq. Yd.
310	6" Subbase	228	Cu. Yd.
304	8" Aggregate Base Course	12	Cu. Yd.
451	9" Reinforced Concrete Pavement	1,302.0	Sq. Yd.
409	Seal Coat Cover Aggregate, No. 8	4	Cu. Yd.
409	Seal Coat Bituminous Material	14	Gal.
609	Curb, Type 6	143	Lin. Ft.
202	Existing Pavement Removed & Disposed of	800	Sq. Yd.

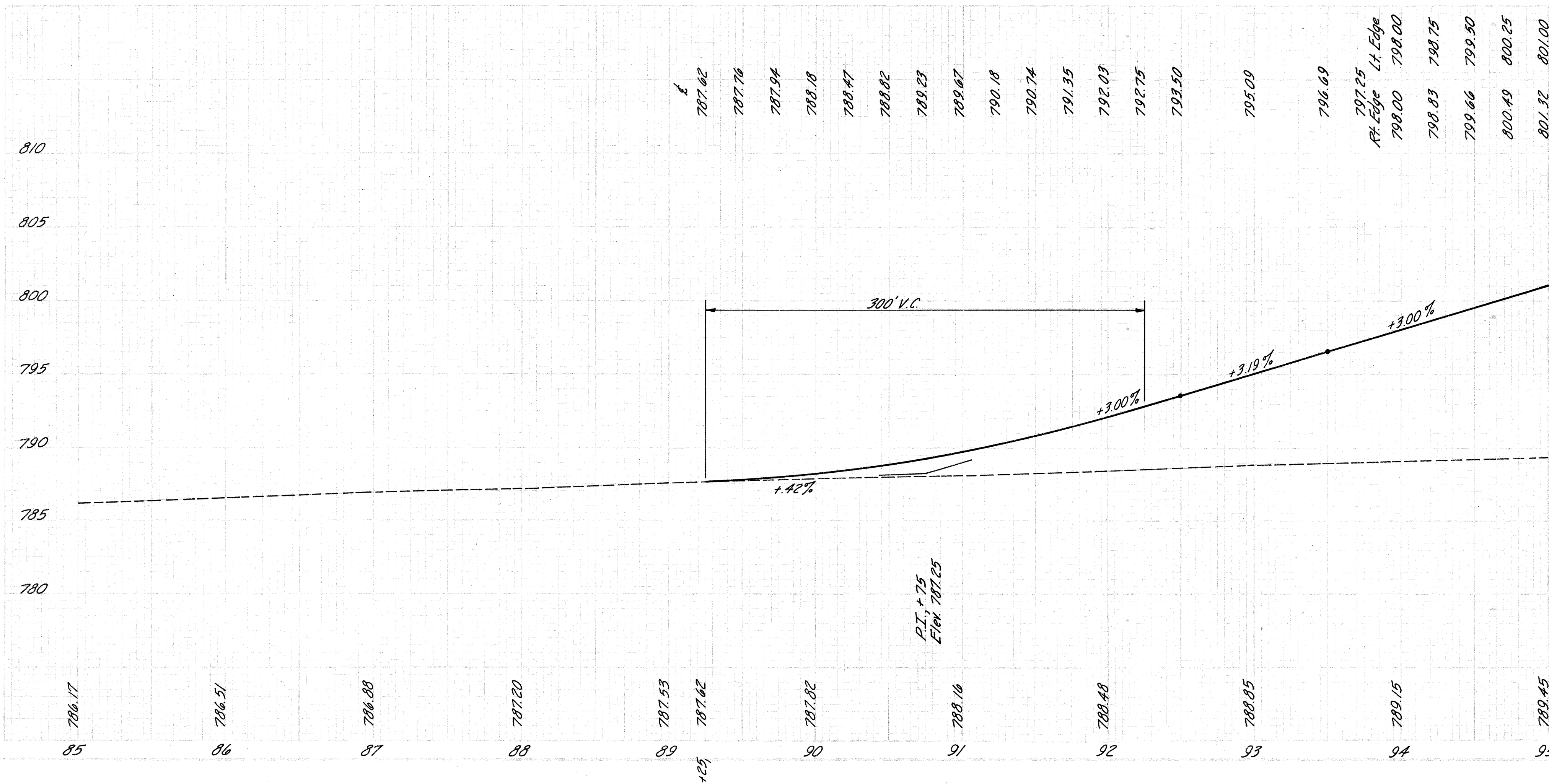
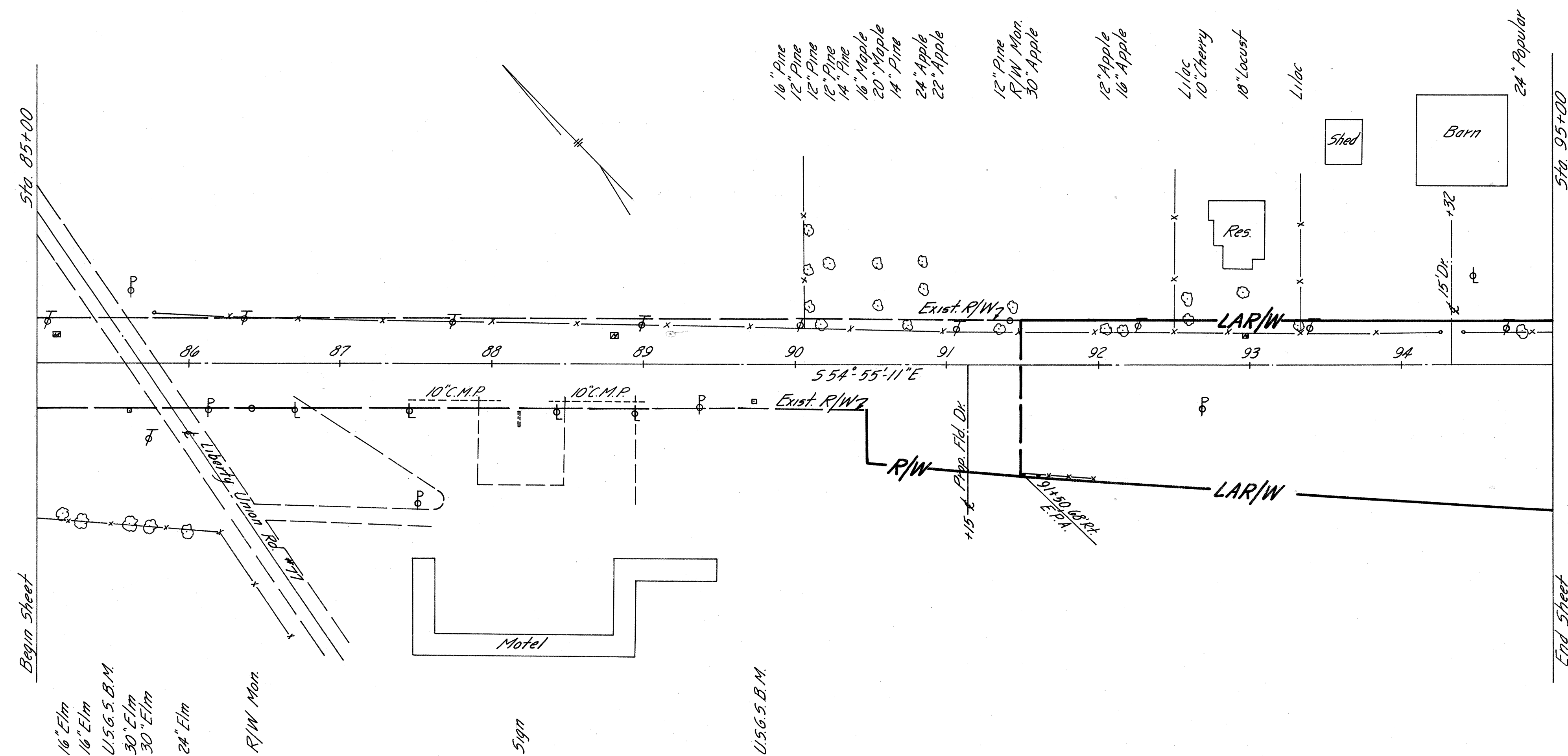
JOINT LEGEND  
① Standard Longitudinal Joint  
② Key Joint without Dowels

CURVE DATA Exist. U.S.R. 30

P.C. Sta. 95+68.53  
 $\Delta = 27^\circ 46' \text{ L.}$   
 $D = 1' - 08''$   
 $R = 5,055.51'$   
 $T = 1,249.55'$   
 $L = 2,450.00'$

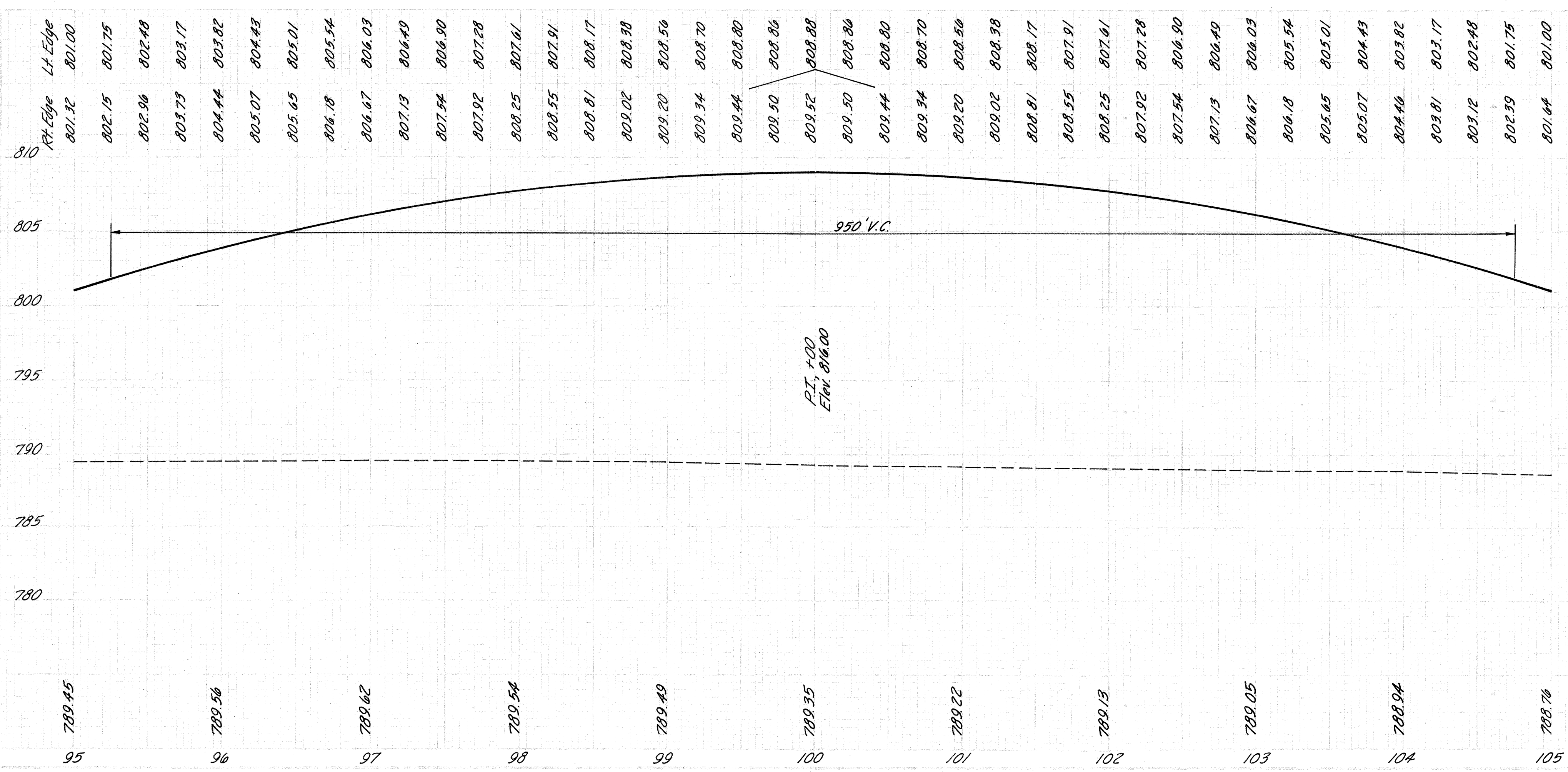
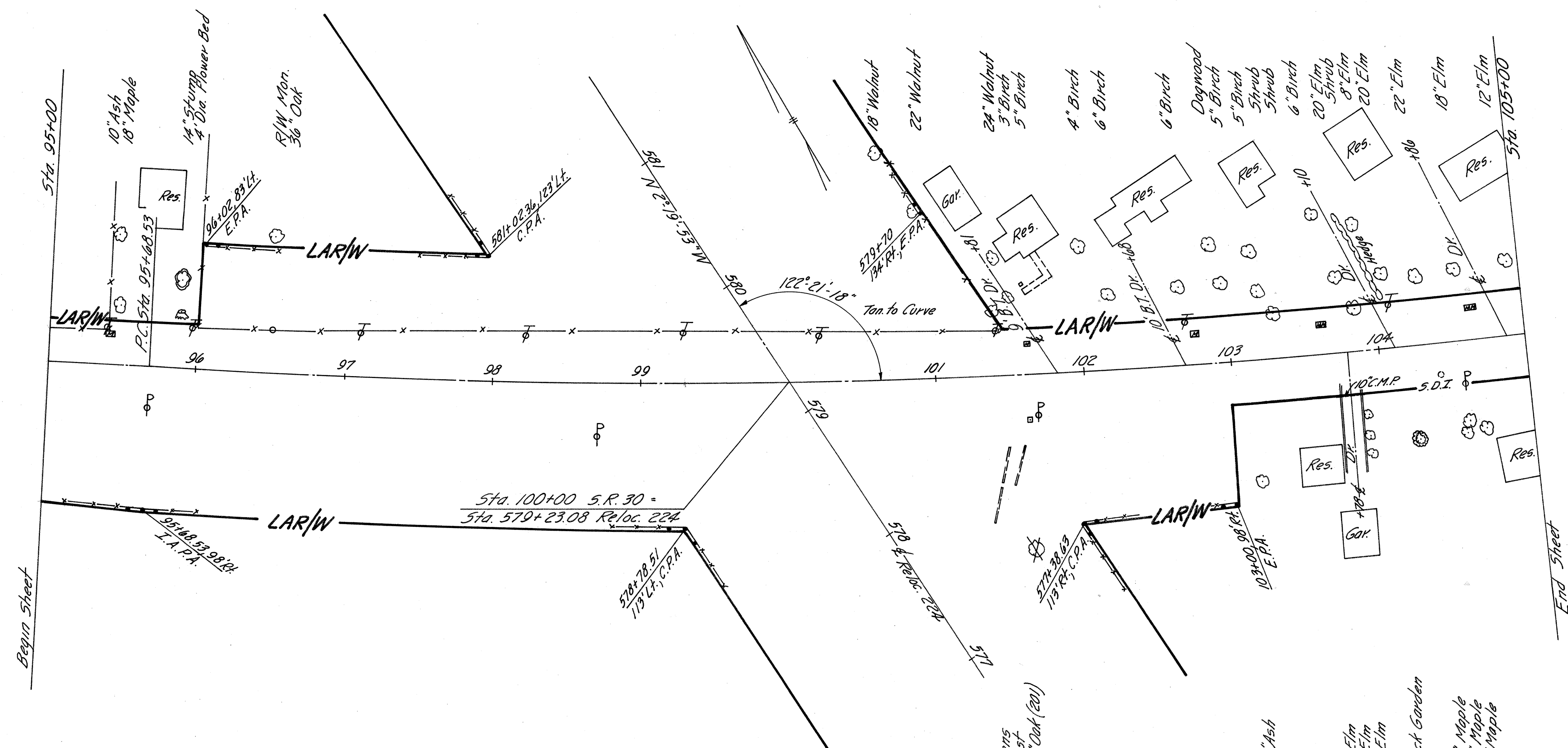




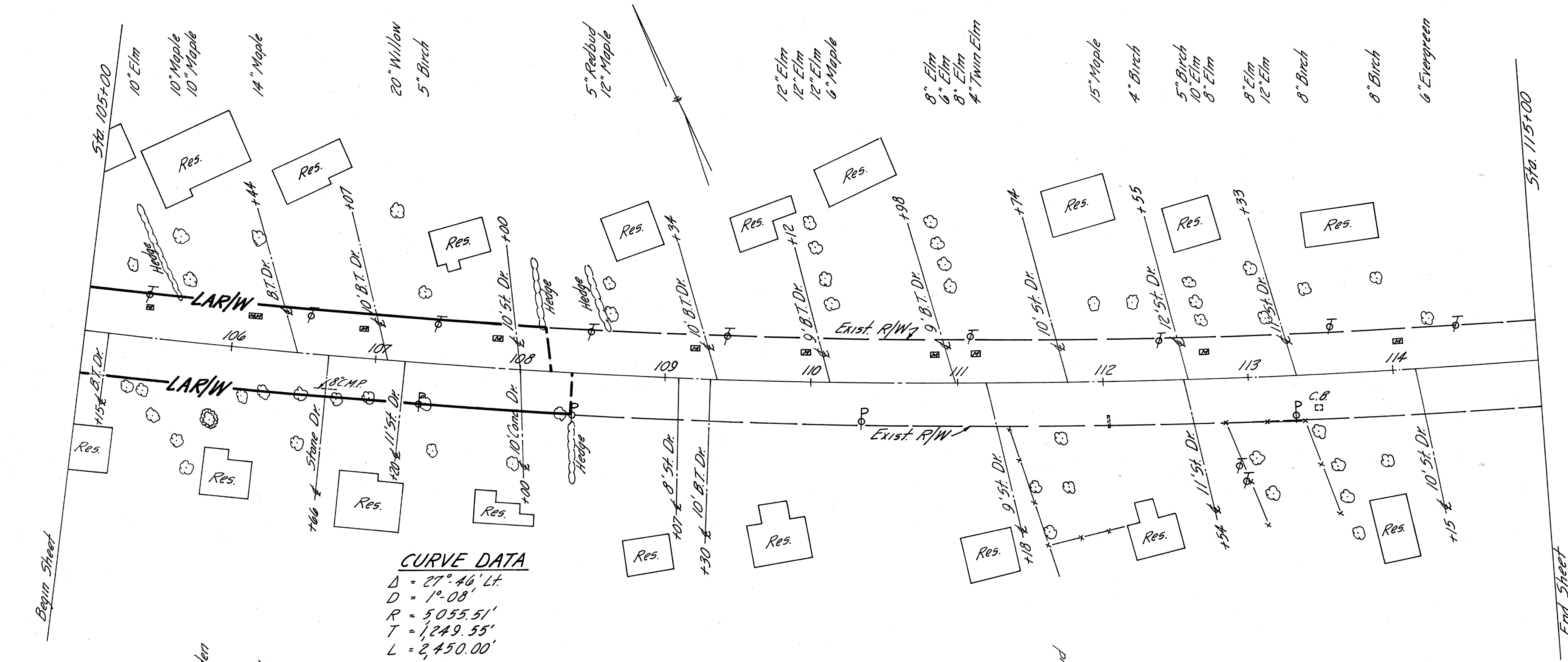


From Sta. 85+00 to Sta. 95+00 (Exist. U.S. 30 over Proposed U.S. 224)

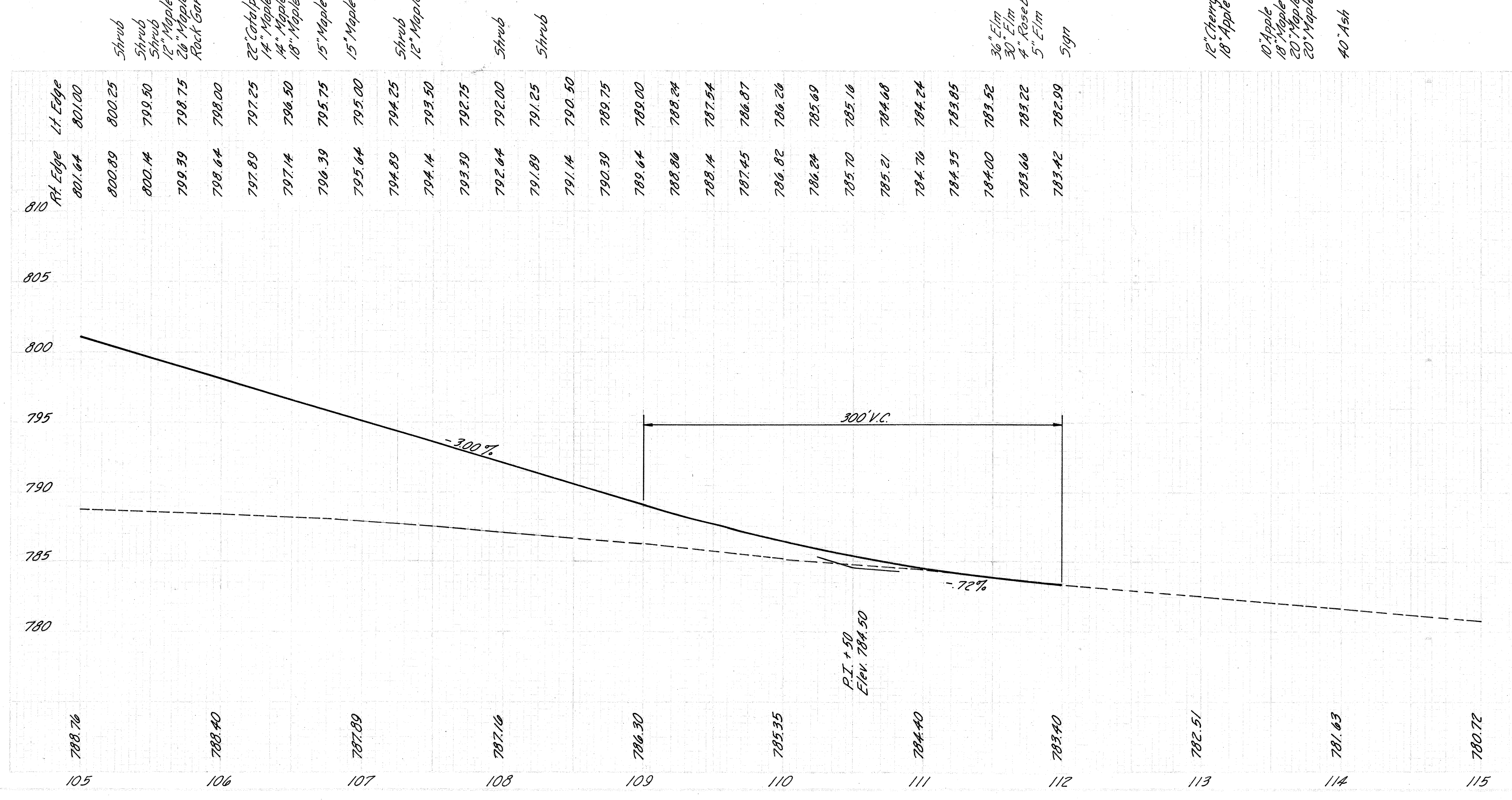








**CURVE DATA**  
 $\Delta = 27^\circ 46' \text{ Lt.}$   
 $D = 1^\circ 08'$   
 $R = 5055.51'$   
 $T = 1249.55'$   
 $L = 2450.00'$





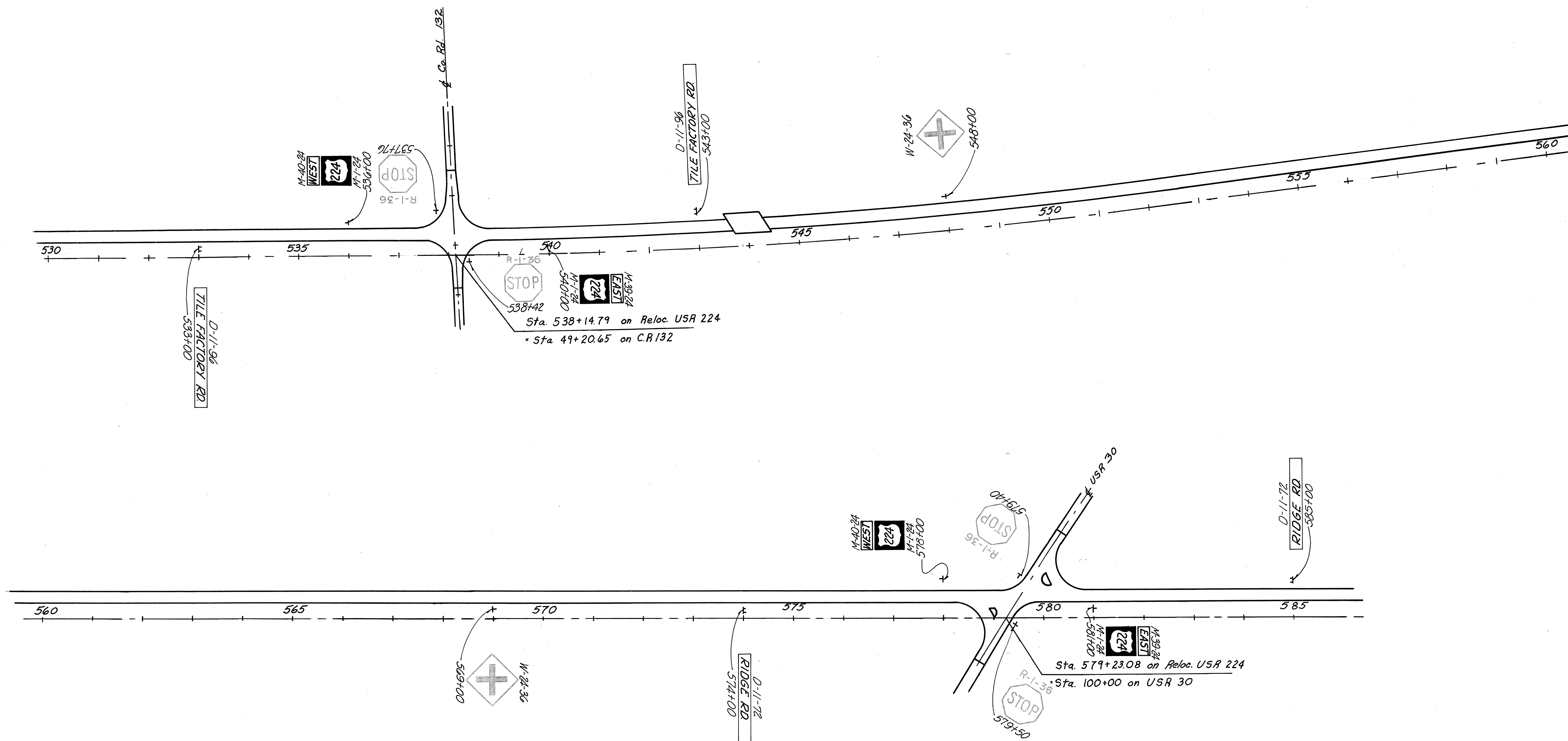




FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

67  
99

VAN WERT COUNTY  
VAN-224-9.3A

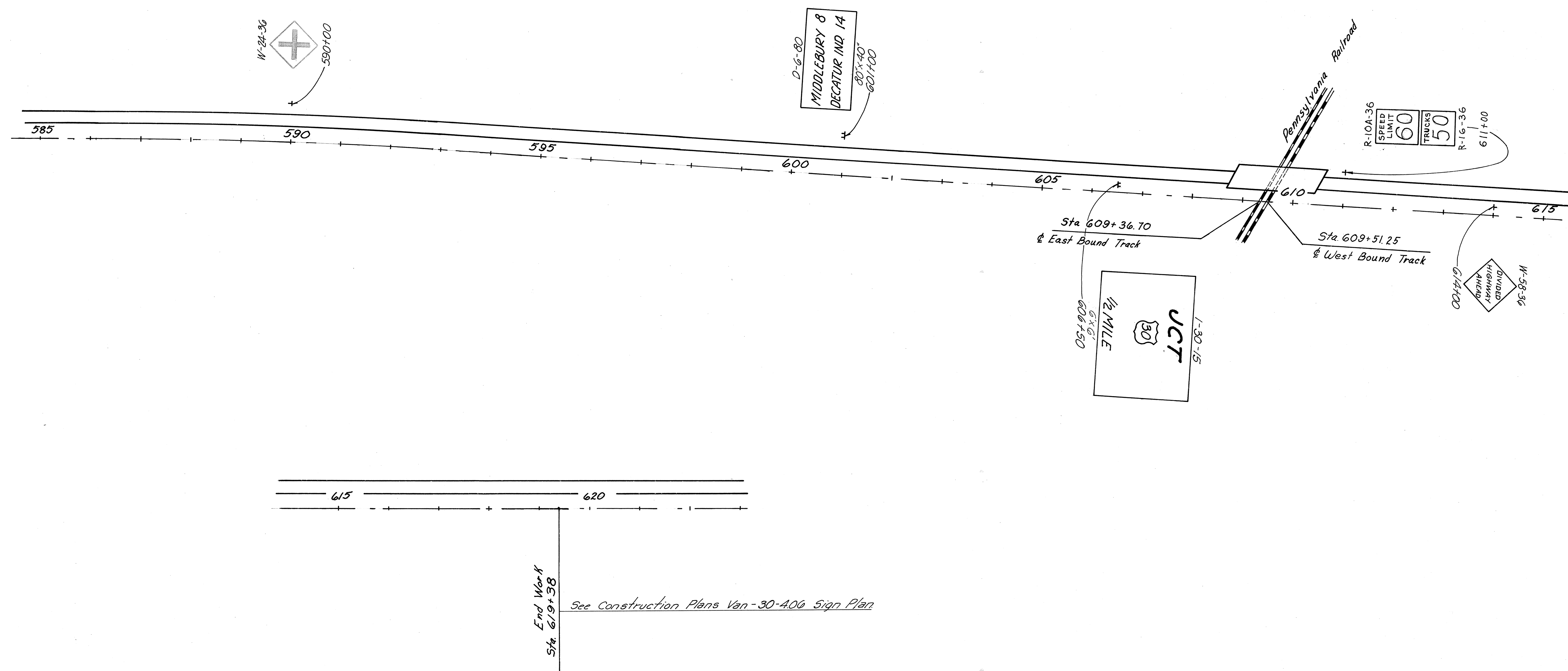




FED. RD. DIVISION	STATE	PROJECT	
2	OHIO		

68  
99

VAN WERT COUNTY  
VAN-224-934





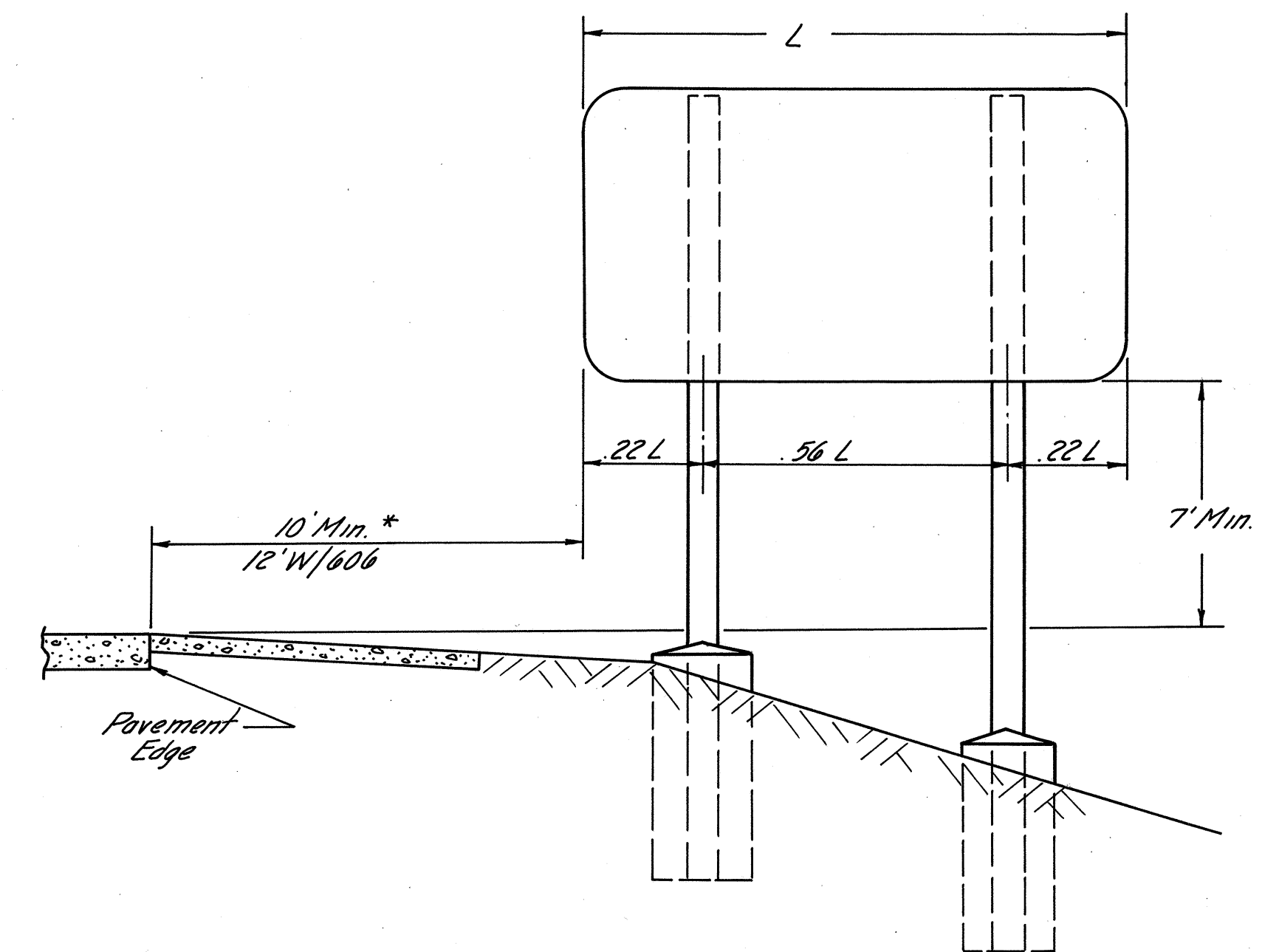
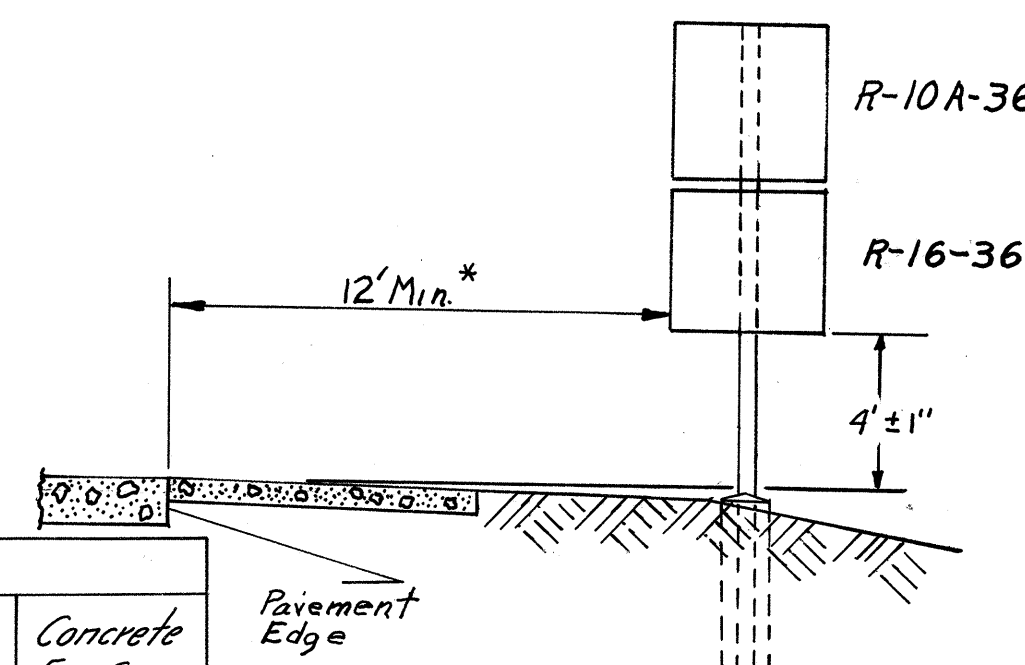
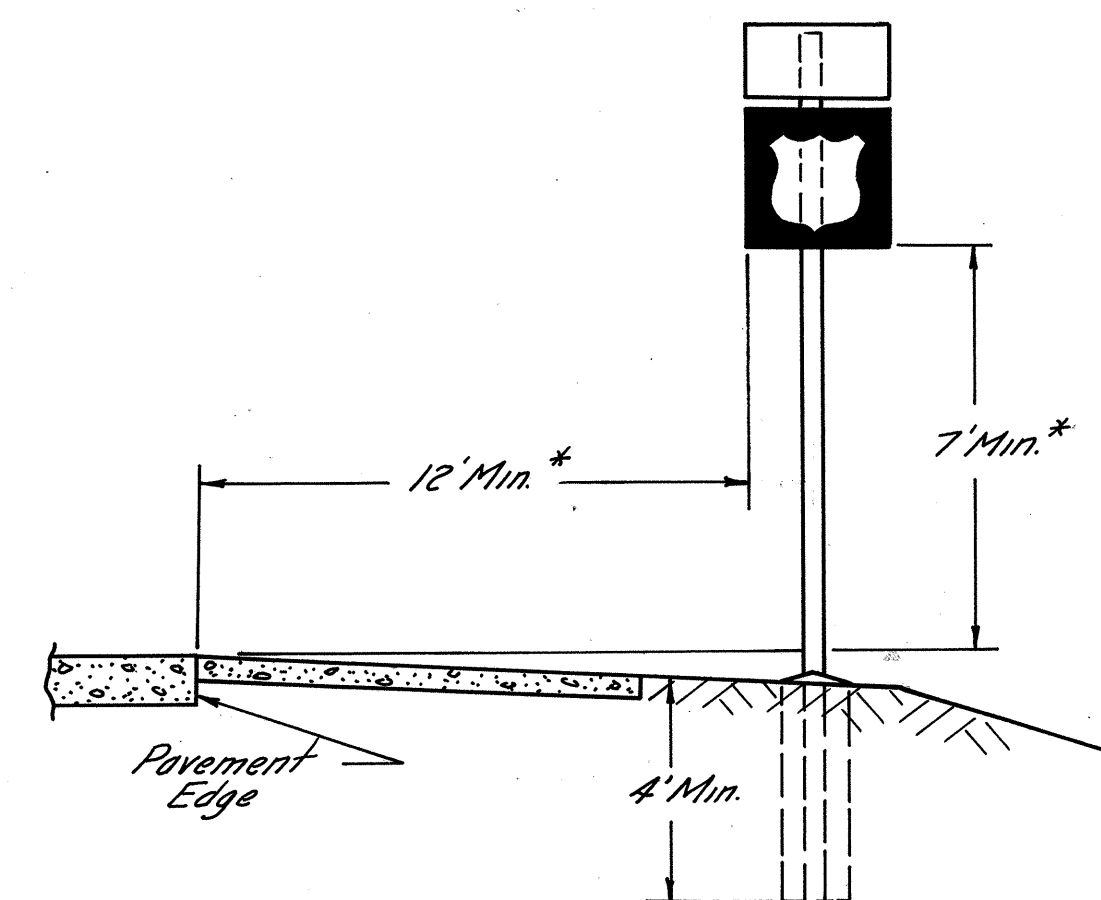
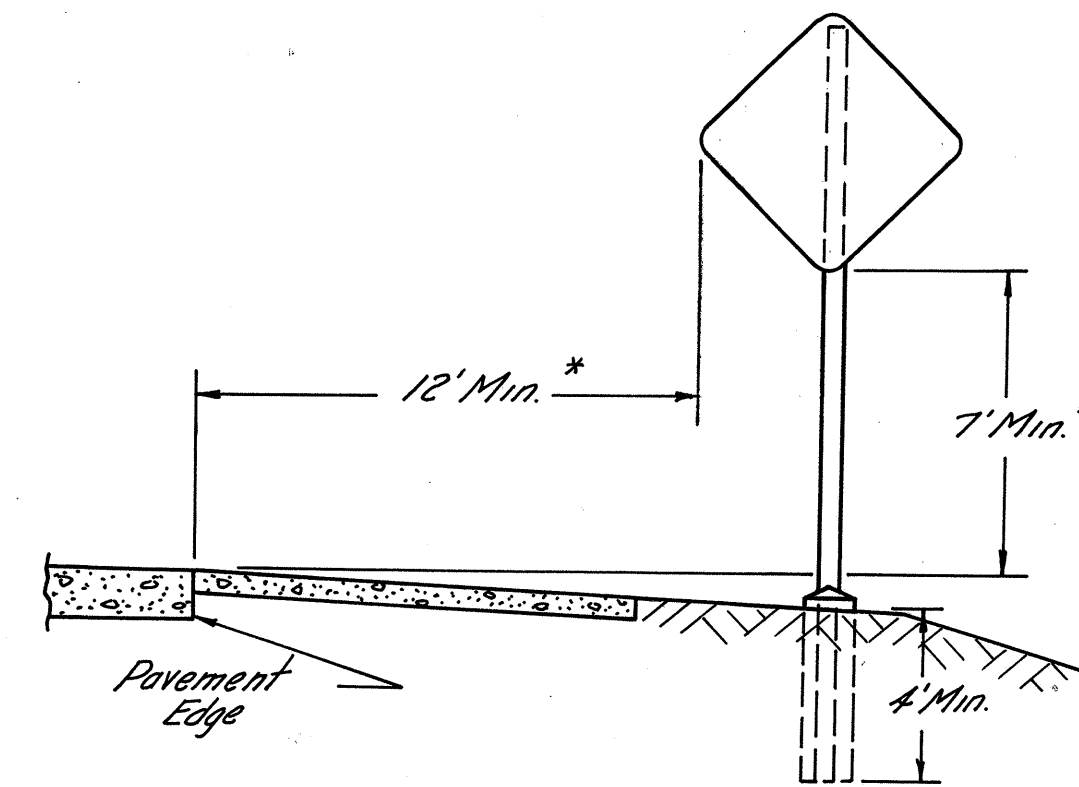
# NOTES

- Horizontal back bracing shall always be mounted on the front flange of the support except where signs are mounted back to back. Back bracing shall never extend above the top edge of uppermost sign plate and shall be attached to supports using  $\frac{3}{8}$  galvanized steel bolts.
- Screws, Nuts and Washers for sign erection shall be aluminum except as above noted. Truss head slotted machine screws with hexagon nuts shall be used. Washers shall be  $\frac{1}{2}$ " Washers used on the sign face only. These items will be provided by others.
- Sign installations shall be placed so that supports are not placed in drainage ditches.
- Horizontal clearances shown pertain to non-curbed sections. Sections with an unmountable curb shall have a horizontal clearance of 2'-0" minimum from the curb face to the sign edge. All signs shall be erected behind existing guard rail unless otherwise specified on the plans or by the Engineer.
- Vertical and Horizontal clearance between signs on one assembly shall be a maximum of 2'.
- Galvanized steel bearing plates shall be included between all sheet aluminum signs attached to vertical supports at each sign bolt location. Bearing plates will be provided by others.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

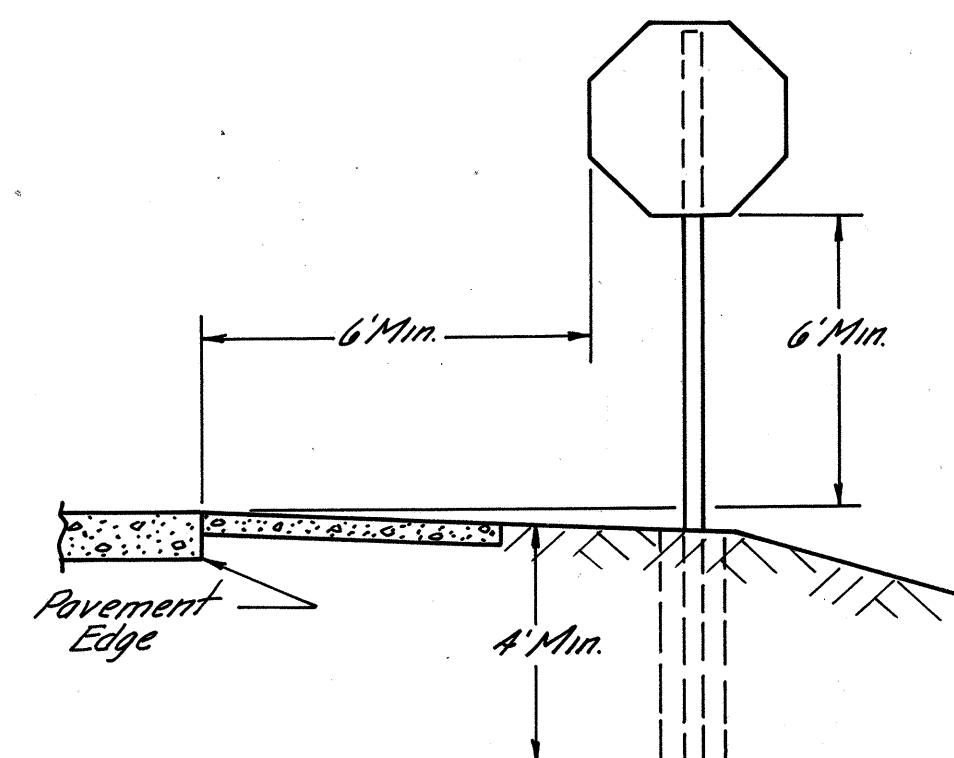
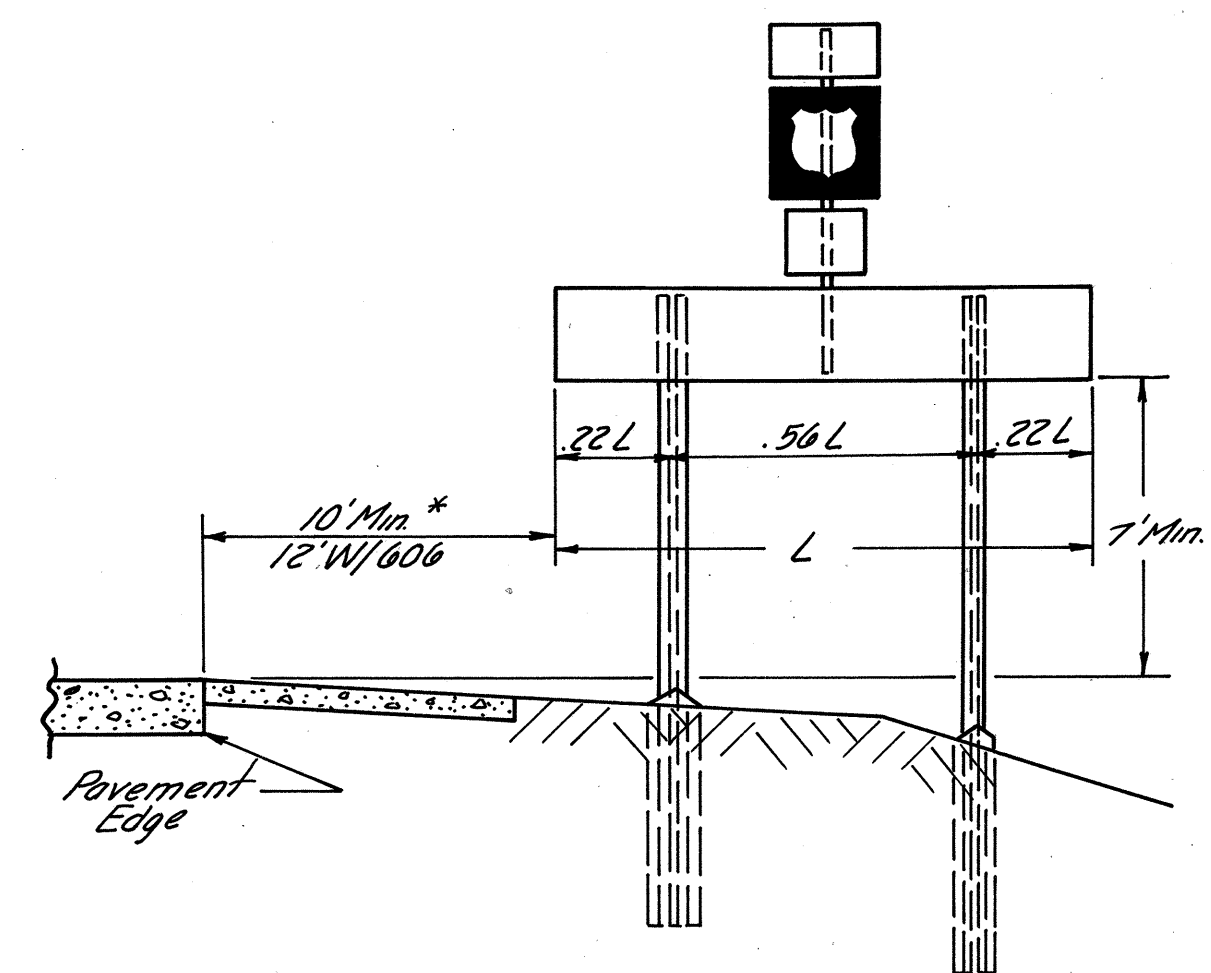
VAN WERT COUNTY  
VAN-224-9.34

69  
99

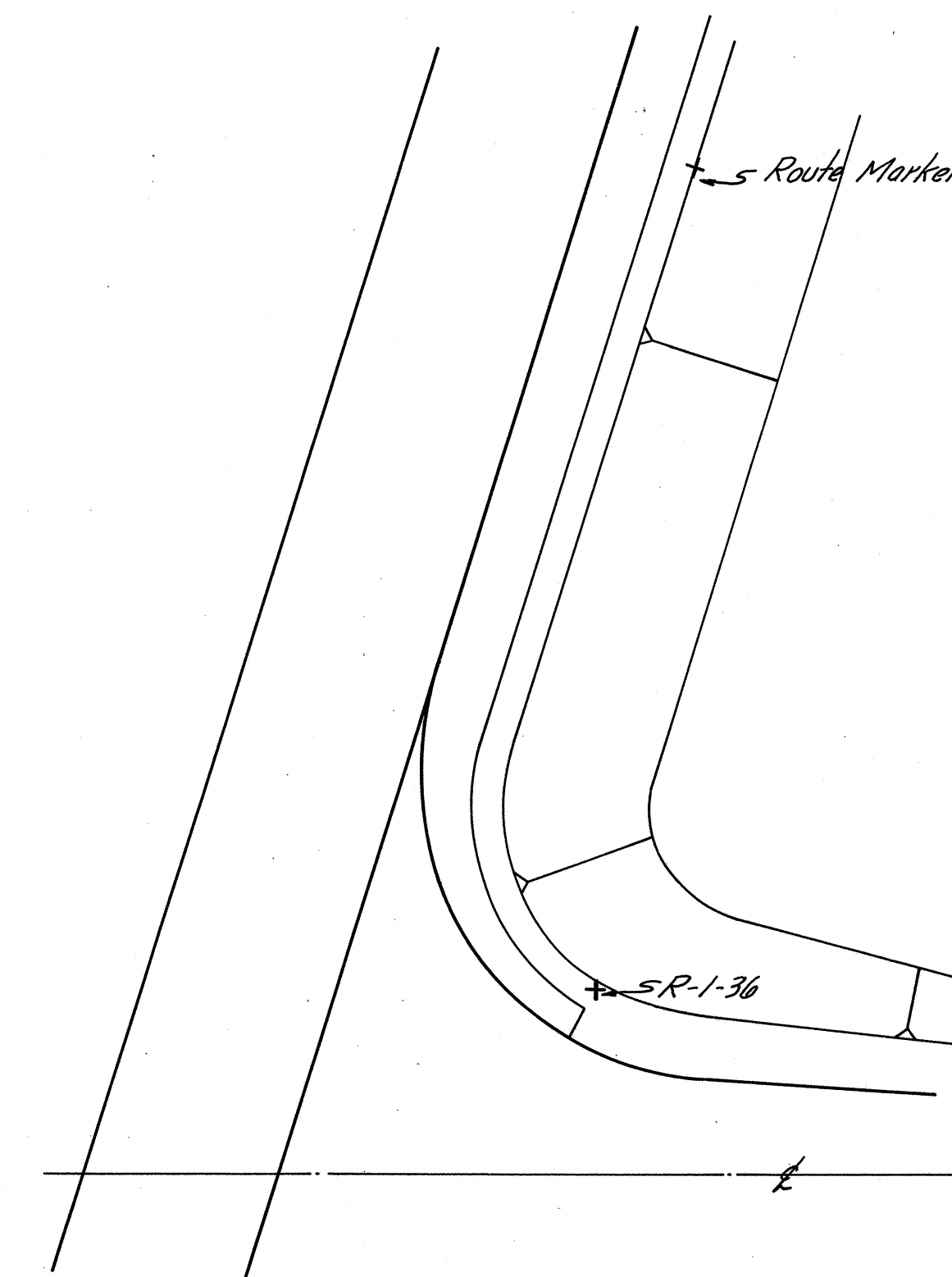


## TRAFFIC SIGNING

816													
Station	Side	Area		Steel Dr		Steel Dr		Struct.	Struct.	Struct.	Struct.	Diameter and Depth of Concrete Foundation for Sign Supports	Concrete for Sign Supports Foundation As Per Plan
				Post	Post	Supports	Supports	Supports	Supports				
		2 lbs. Per Ft.	4 lbs. Per Ft.	4 lb. Beam As Per Plan	8 lb. Beam As Per Plan	5 1/2" Beam 10 B 11.5 As Per Plan	5 1/2" Beam 12 B 22 As Per Plan	Cu. Yds.					
		Sq. Ft.											
		Flat	Extr.	Pos.	Length	Pos.	Length	Pos.	Length	Pos.	Length		
1+70 <sup>on</sup> <del>Exit</del>	RT.	9						1	14'-6"			1' x 4'	.1
497+00	RT.	12		2	5'-10"	1	13'-0"					1' x 4'	.2
501+00	RT.	12		1	4'-6"	2	12'-0"					1' x 4'	.2
503+50	Lt.	6				1	14'-6"					1' x 4'	.1
47+05	RT.	4				1	13'-0"					1' x 4'	.1
47+05	Lt.	8				1	13'-6"					1' x 4'	.1
504+57	RT.	9						1	14'-0"			1' x 4'	.1
506+00	RT.	6				1	14'-6"					1' x 4'	.1
509+50	Lt.	6		1	5'-10"	1	12'-6"					1' x 4'	.2
514+50	Lt.	9						1	15'-0"			1' x 4'	.1
528+00	RT.	9						1	15'-0"			1' x 4'	.1
533+00	Lt.	12		1	7'-10"	1	13'-0"					1' x 4'	.1
						1	14'-0"					1' x 4'	.1
536+00	Lt.	6				1	14'-6"					1' x 4'	.1
537+76 <sup>±</sup>	Lt.	9						1	14'-0"			1' x 4'	.1
538+42 <sup>±</sup>	RT.	9						1	14'-0"			1' x 4'	.1
540+00	Lt.	6				1	14'-6"					1' x 4'	.1
543+00	Lt.	12		1	7'-10"	1	13'-0"					1' x 4'	.1
						1	14'-0"					1' x 4'	.1
548+00	Lt.	9						1	15'-0"			1' x 4'	.1
569+00	Lt.	9						1	15'-0"			1' x 4'	.1
574+00	Lt.	9		1	5'-10"	1	12'-6"					1' x 4'	.1
						1	13'-0"					1' x 4'	.1
578+00	Lt.	6				1	14'-6"					1' x 4'	.1
579+40	RT.	9						1	14'-0"			1' x 4'	.1
579+50	Lt.	9						1	14'-0"			1' x 4'	.1
581+00	Lt.	6				1	14'-6"					1' x 4'	.1
585+00	Lt.	9		1	5'-10"	1	12'-6"					1' x 4'	.1
						1	13'-0"					1' x 4'	.1
590+00	Lt.	9						1	15'-0"			1' x 4'	.1
601+00	Lt.		22						1 15'-0"			1' x 4'	.1
									1 16'-0"			1' x 4'	.1
606+50	RT.		36						1 17'-6"			1' x 4'	.1
									1 18'-0"			1' x 4'	.1
611+00	Lt.	21							1 15'-6"			1' x 4'	.1
614+00	Lt.	9						1	14'-6"			1' x 4'	.1
514+00	RT.	21							1 15'-6"			1' x 4'	.1
Totals		270	58		49'-4"		281'-6"		174'-0"		97'-0"		4.0



\* This dimension to be 6 ft. minimum on Ramps and Secondary Roads.

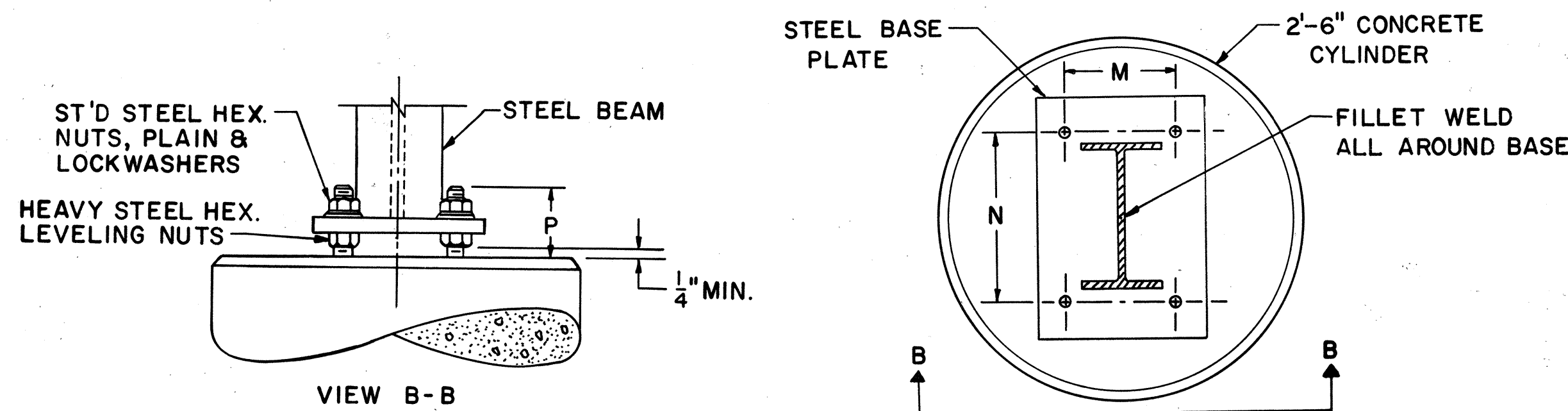


TYPICAL SIGN LOCATION AT AN INTERSECTION

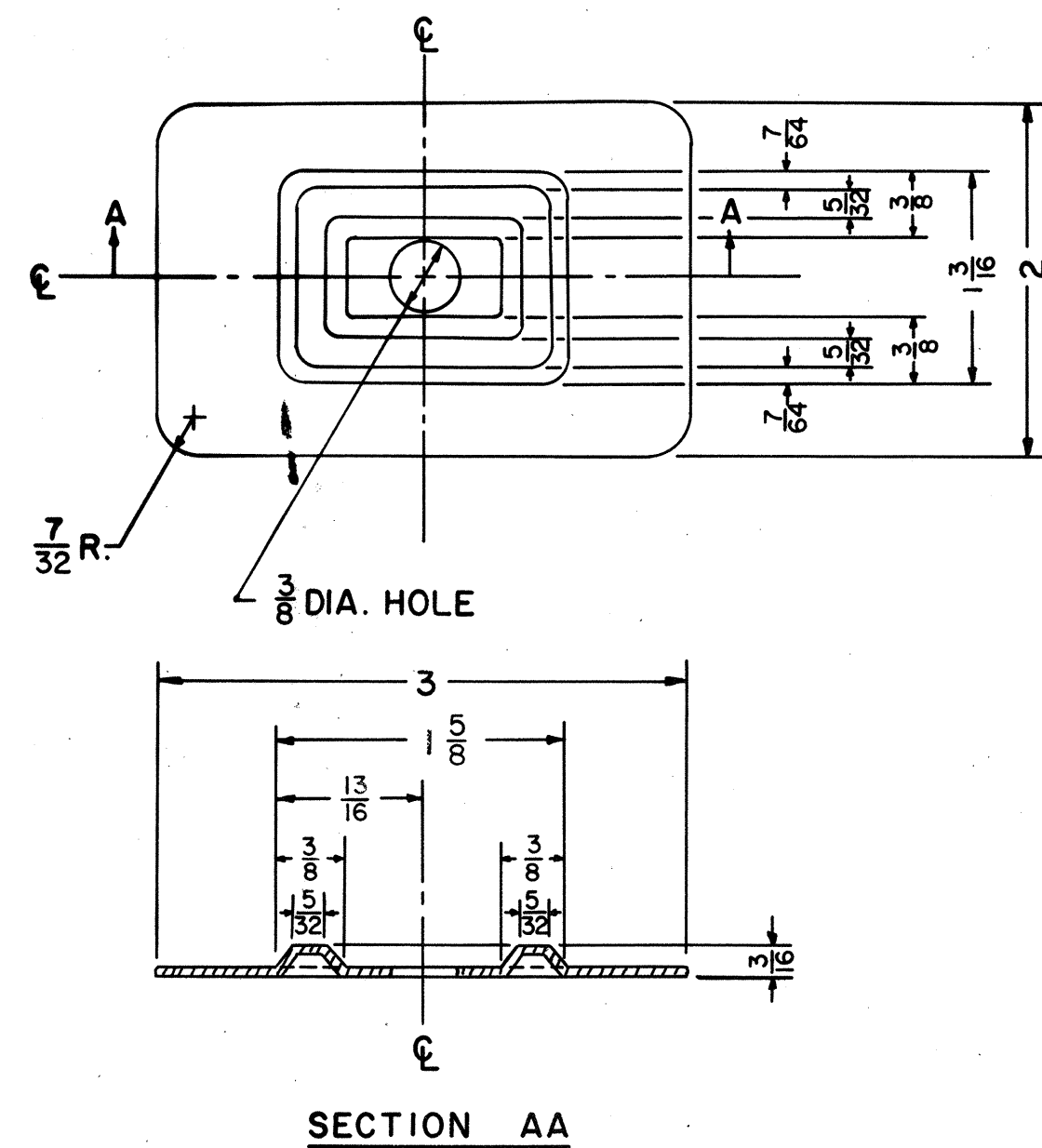
TYPICAL ERECTION AND PLACEMENT OF SIGNS



BEAM SIZE	ANCHOR BOLTS		BASE PLATE	HOLE SIZE	DIM. M	DIM. N	DIM. P	WELD SIZE	DIM. H	DIM. W	CU. YDS. FOR 2 POST	MARK	TYPE	NO.	LENGTH	WEIGHT FOR 1 POST
	DIA.	LENGTH														
10 B11.5	$\frac{3}{4}$ "	3'-0"	$\frac{7}{8}$ " x 6" x 18"	$\frac{7}{8}$ "	3 $\frac{1}{2}$ "	14"	3 $\frac{1}{2}$ "	$\frac{1}{4}$ "	5.25'	2'-6"	1.9	401	IOI	6	7'-6"	45
10 B17	1"	3'-6"	$\frac{7}{8}$ " x 6" x 18"	$\frac{1}{8}$ "	3 $\frac{3}{4}$ "	14"	4 $\frac{1}{4}$ "	$\frac{1}{4}$ "	6.0'	2'-6"	2.2	402	STR.	8	5'-0"	52
12 B22	1"	4'-0"	1" x 9" x 19"	$\frac{1}{8}$ "	5 $\frac{1}{2}$ "	15"	4 $\frac{1}{4}$ "	$\frac{1}{4}$ "	6.75'	2'-6"	2.5	401	IOI	8	7'-6"	61
12 WF27	$\frac{1}{4}$ "	4'-0"	1" x 9" x 19"	$\frac{3}{8}$ "	5 $\frac{1}{2}$ "	15"	5 $\frac{1}{4}$ "	$\frac{1}{4}$ "	8.0'	2'-6"	2.9	404	STR.	8	7'-0"	94
14 WF30	$\frac{1}{4}$ "	4'-0"	1" x 11" x 20"	$\frac{3}{8}$ "	7 $\frac{1}{2}$ "	16"	5 $\frac{1}{4}$ "	$\frac{5}{16}$ "	8.25'	2'-6"	3.0	501	STR.	8	8'-0"	101
14 WF34	$\frac{1}{4}$ "	4'-0"	1" x 12" x 22"	$\frac{3}{8}$ "	9"	18"	5 $\frac{1}{4}$ "	$\frac{5}{16}$ "	9.0'	2'-6"	3.3	401	IOI	10	7'-6"	103
16 WF36	$\frac{1}{2}$ "	5'-0"	$\frac{1}{4}$ " x 14" x 23"	$\frac{5}{8}$ "	10"	19"	6"	$\frac{5}{16}$ "	9.75'	2'-6"	3.5	503	STR.	8	9'-9"	145
16 WF40	$\frac{1}{2}$ "	5'-6"	$\frac{1}{4}$ " x 14" x 24"	$\frac{5}{8}$ "	10"	20"	6"	$\frac{5}{16}$ "	10.0'	2'-6"	3.6	401	IOI	11	7'-6"	148
16 WF45	$\frac{1}{2}$ "	6'-0"	$\frac{1}{4}$ " x 14" x 24"	$\frac{5}{8}$ "	10"	20"	6"	$\frac{5}{16}$ "	10.5'	2'-6"	3.8	601	STR.	8	9'-3"	155
18 WF50	$\frac{3}{4}$ "	7'-6"	$\frac{1}{2}$ " x 14" x 26"	$\frac{7}{8}$ "	10"	22"	6 $\frac{3}{4}$ "	$\frac{5}{16}$ "	11.5'	2'-6"	4.2	401	IOI	12	7'-6"	164
												604	STR.	8	10'-6"	

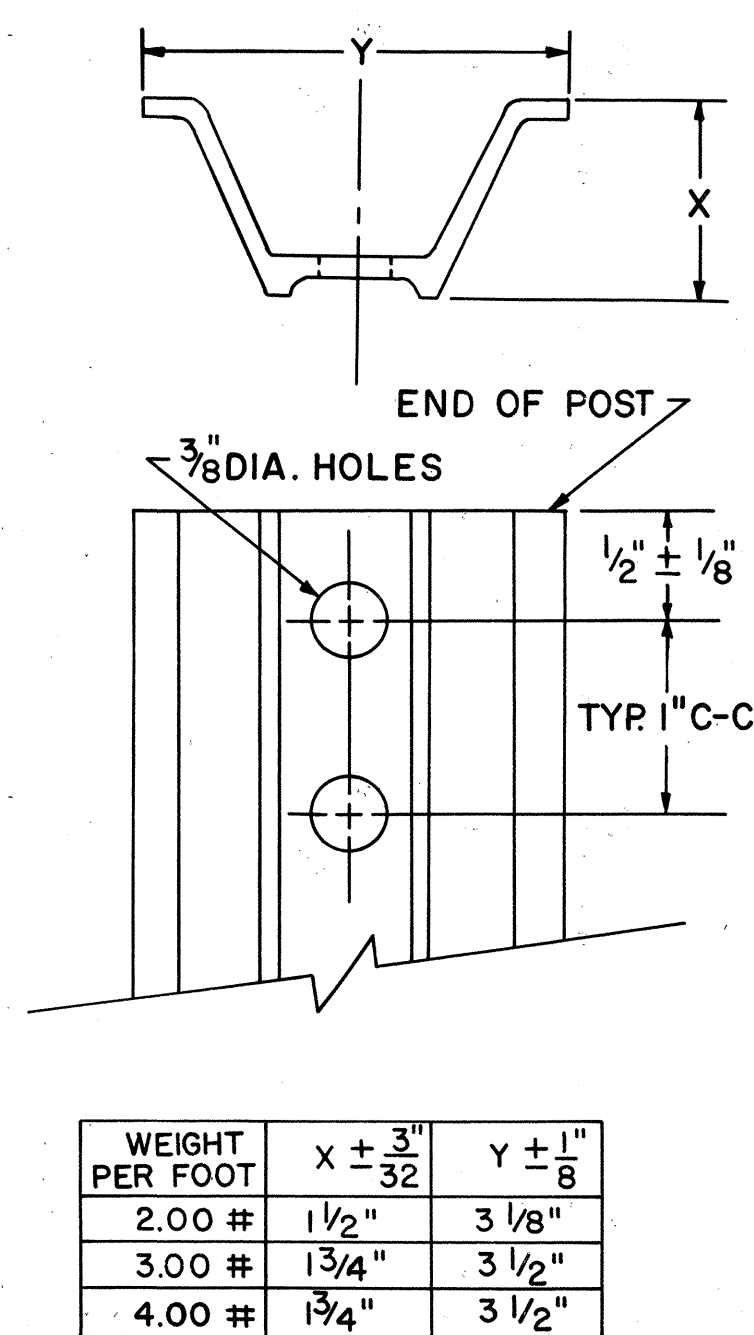


ALTERNATE ANCHOR BASE DETAILS

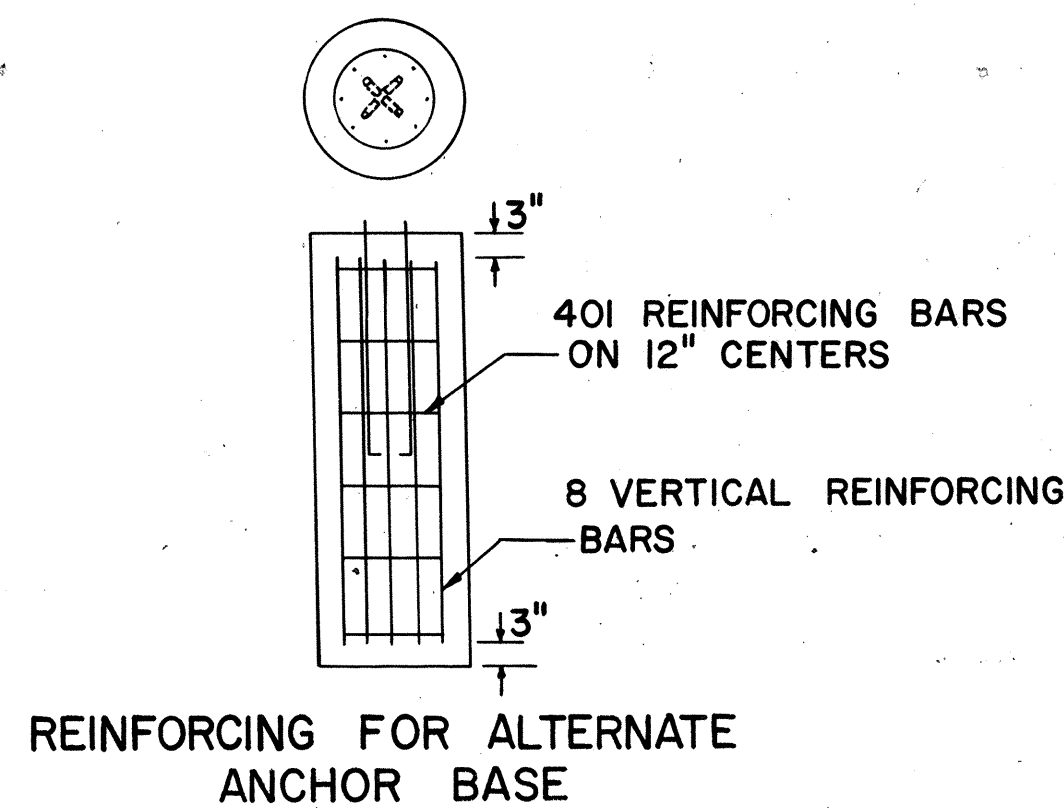


NOTE:  
THE PLATE IS SYMMETRICAL ABOUT EITHER CENTERLINE.  
METAL SHALL BE 16 GAUGE STEEL.  
ALL DIMENSIONS ARE IN INCHES.

BEARING PLATE DETAIL



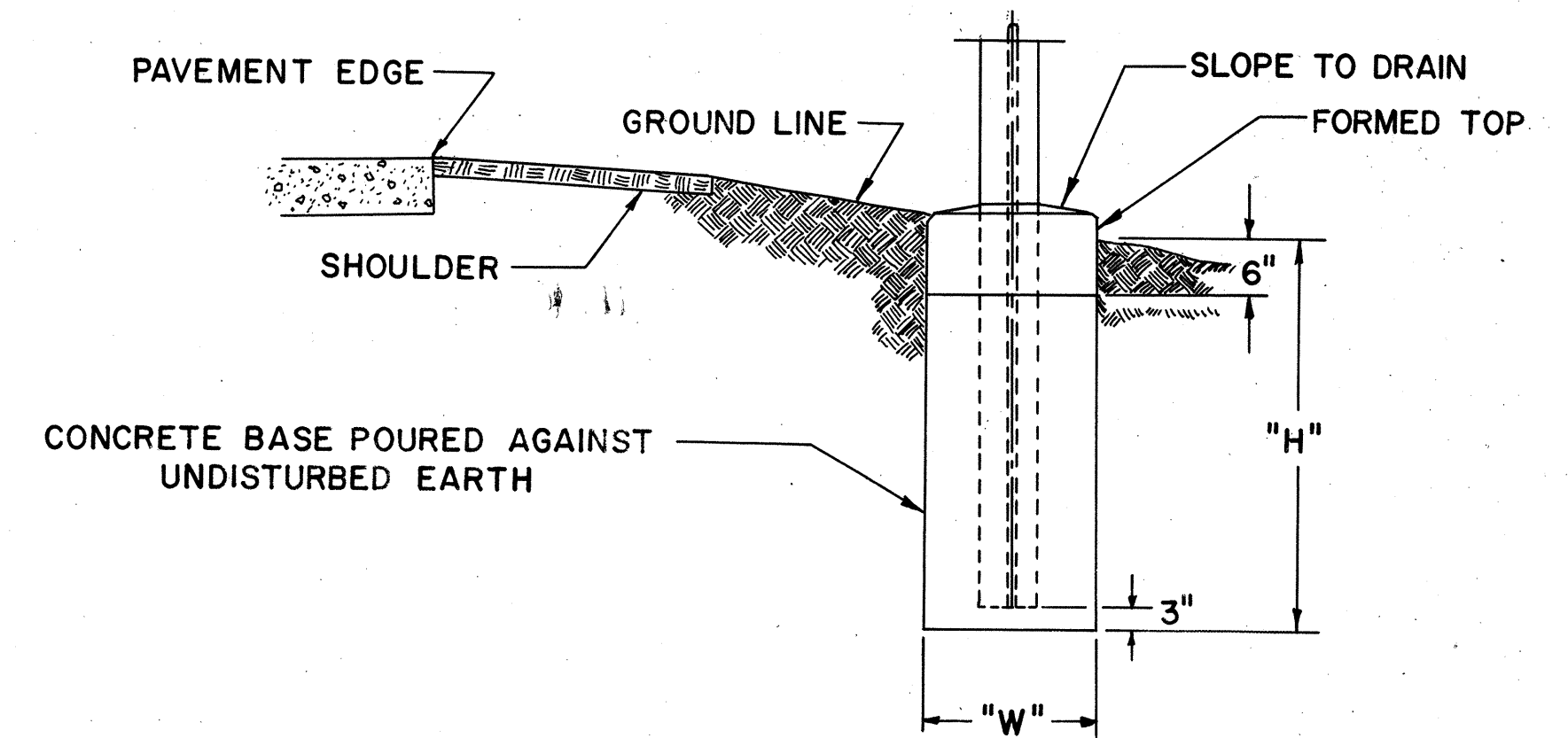
DRIVE POST DETAILS



REINFORCING FOR ALTERNATE ANCHOR BASE

BEAM SIZE	DIM. W	DIM. H	CU. YDS. CONC. 2 POST
4# POST	1'-0"	4.0'	0.2
4# BEAM	1'-0"	4.0'	0.2
8# BEAM	1'-0"	4.0'	0.2
6 B 8.5	1'-0"	4.0'	0.2
10 B 11.5	2'-6"	5.25'	1.9
10 B 17	2'-6"	6.0'	2.2
12 B 22	2'-6"	6.75'	2.5
12 WF 27	2'-6"	8.0'	2.9
14 WF 30	2'-6"	8.25'	3.0
14 WF 34	2'-6"	9.0'	3.3
16 WF 36	2'-6"	9.75'	3.5
16 WF 40	2'-6"	10.0'	3.6
16 WF 45	2'-6"	10.5'	3.8
18 WF 50	2'-6"	11.5'	4.2

FOUNDATION DETAILS FOR EMBEDDED POSTS AND BEAMS



#### NOTES

PLAN QUANTITIES FOR POSTS AND STRUCTURAL SUPPORTS ARE BASED UPON THE "FOUNDATION DETAILS FOR EMBEDDED POSTS AND BEAMS".

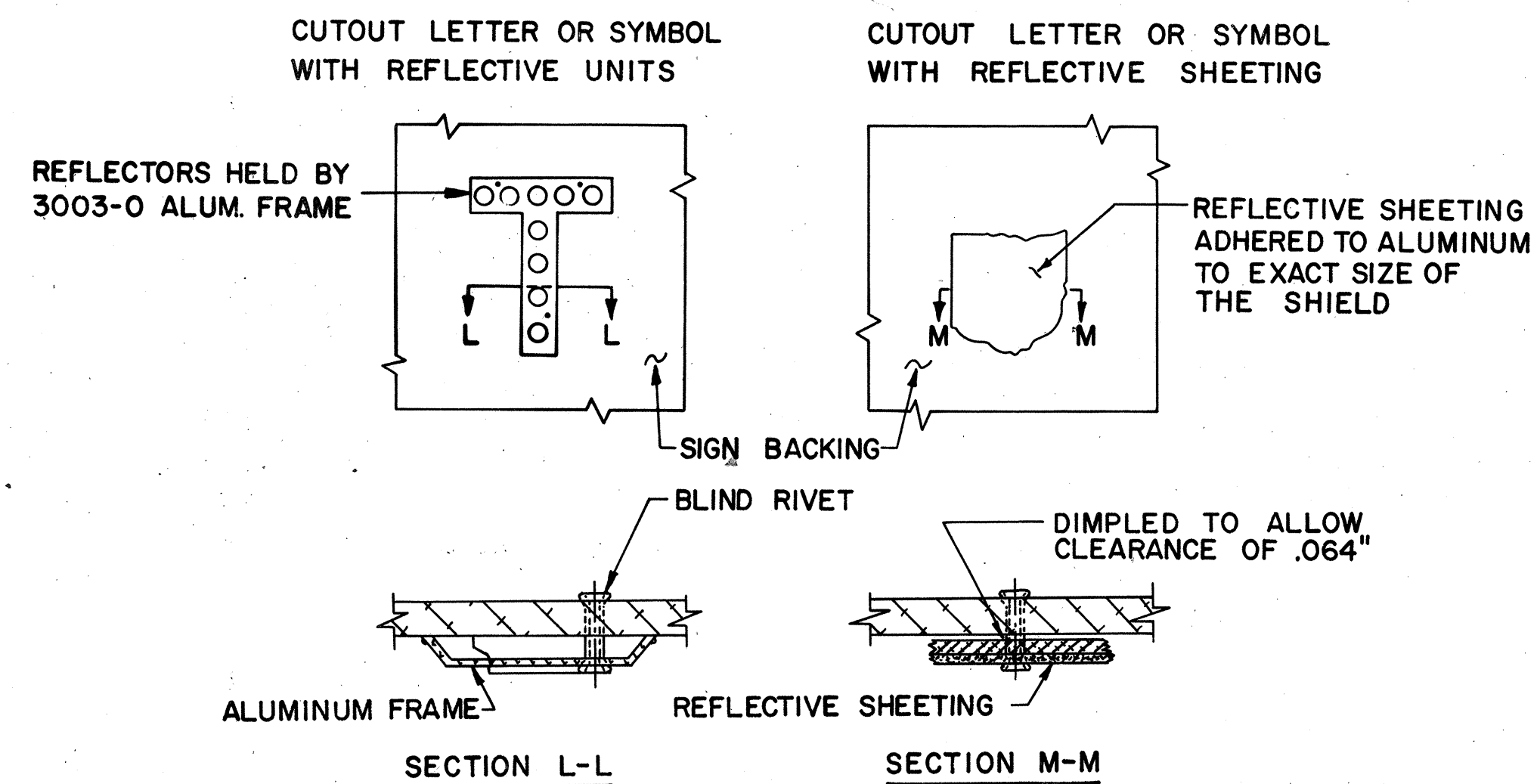
IF THE CONTRACTOR ELECTS TO USE THE METHOD SHOWN FOR "ALTERNATE ANCHOR BASE DETAILS", THE PLAN QUANTITY OF EMBEDDED BEAM ONLY WILL BE ALLOWED IN EXCHANGE AND FULL PAYMENT FOR THE BASE PLATE, ANCHOR BOLTS AND REINFORCING STEEL.

WHERE ANCHOR BASES ARE USED, THE BEAM SIZE SHALL DETERMINE THE ANCHOR BOLT AND BASE PLATE SIZE.

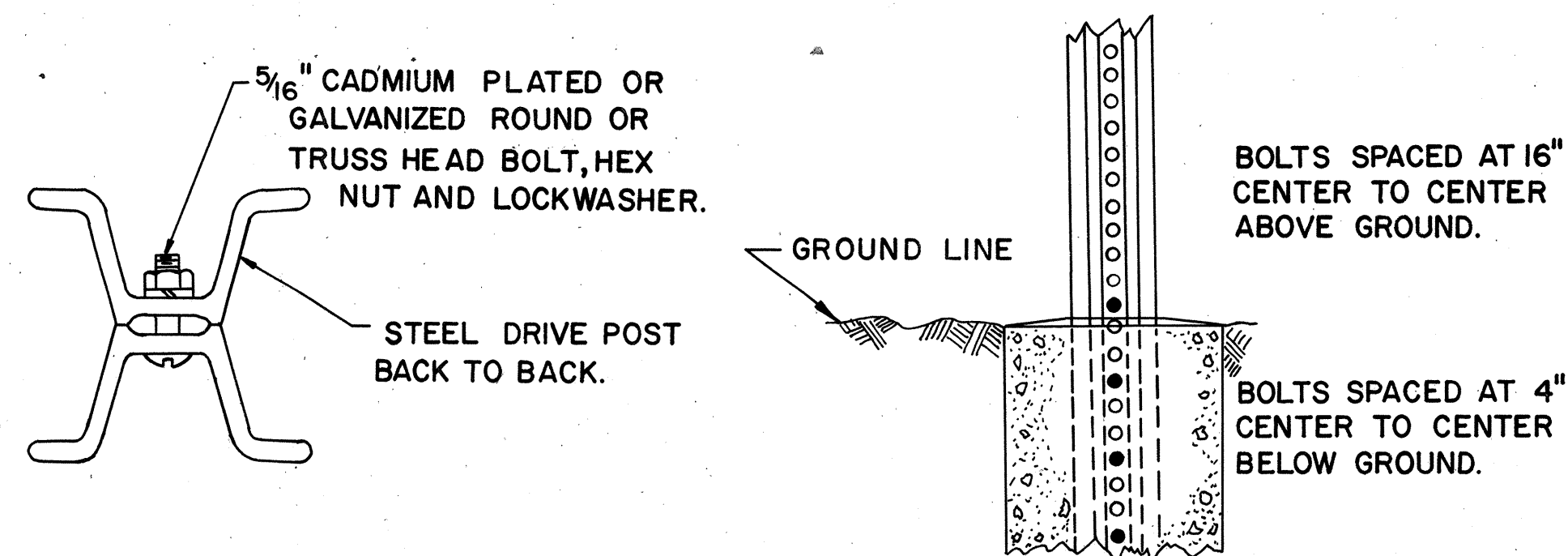
DEMOUNTABLE UNITS SHALL BE ATTACHED TO THE ALUMINUM PANELS WITH ALUMINUM BLIND RIVETS. CARE SHALL BE TAKEN TO INSURE THAT ALL SEGMENTS OF EACH LETTER OR SYMBOL ARE SECURELY AFFIXED TO THE BACKING. LETTERS CONTAINING REFLECTIVE UNITS SHALL BE FASTENED IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.

DEMOUNTABLE MARKERS OR SHIELDS SHALL BE SECURELY AFFIXED TO THE BACKING UTILIZING THE HOLES AS LOCATED ON SHEET.

IN LIEU OF THE .040" THICK FRAME SPECIFIED IN SUPPLEMENTAL SPECIFICATION 815, THE FRAMES FOR THE REFLECTIVE UNITS IN THE SIGN OUTLINES ONLY, MAY BE .032" THICK ALUMINUM. (A.S.T.M. B209GSI1A-T6)



DEMOUNTABLE LETTERS & SYMBOLS

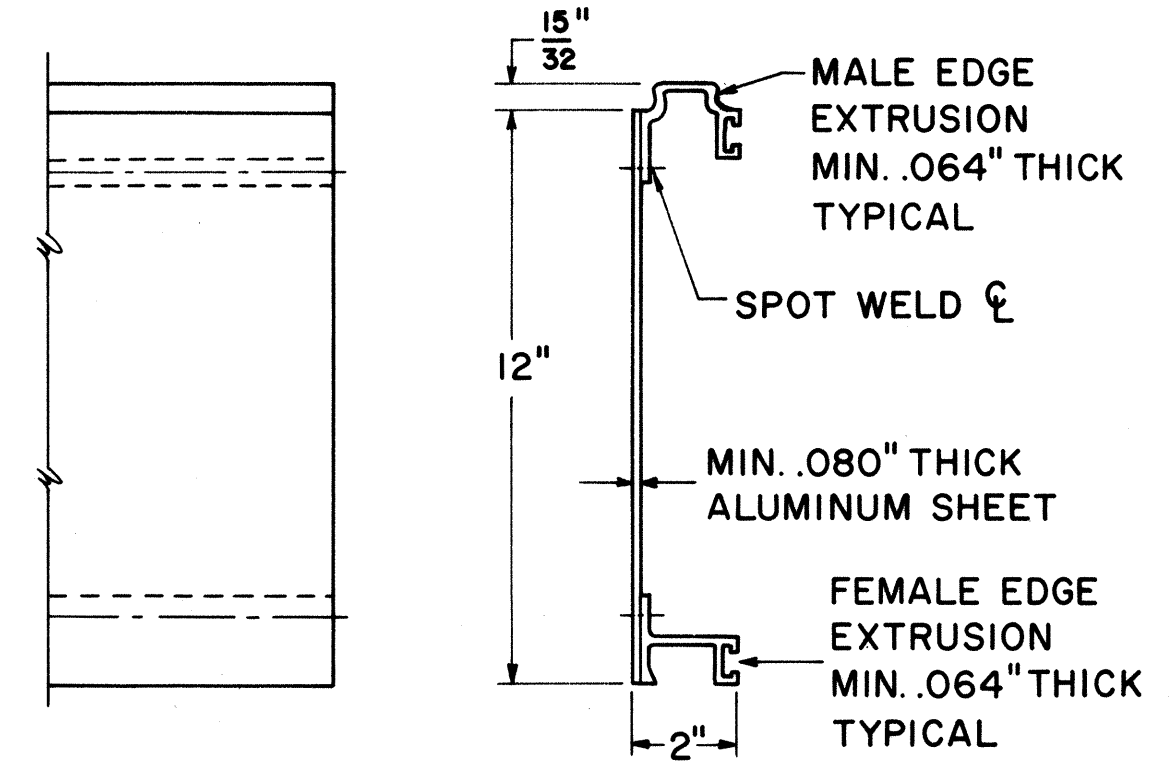


4# AND 8# BEAM DETAILS

BUREAU OF TRAFFIC OHIO DEPARTMENT OF HIGHWAYS		DATE 10-29-63 8-19-64
MISCELLANEOUS SIGNING ITEMS	MSI	
APPROVED _____ ENGINEER OF TRAFFIC		

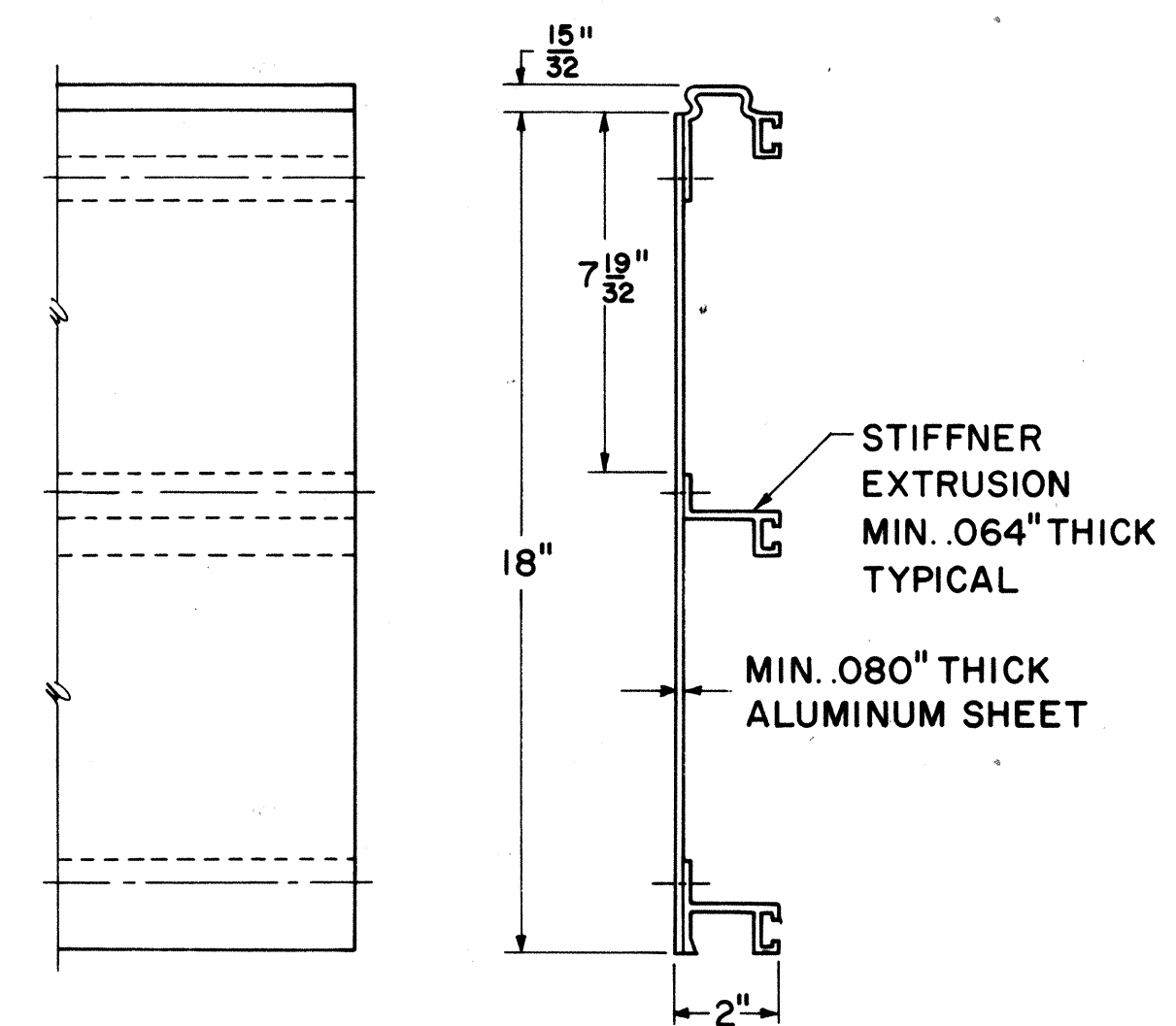


### 12" EXTRUSHEET PANEL



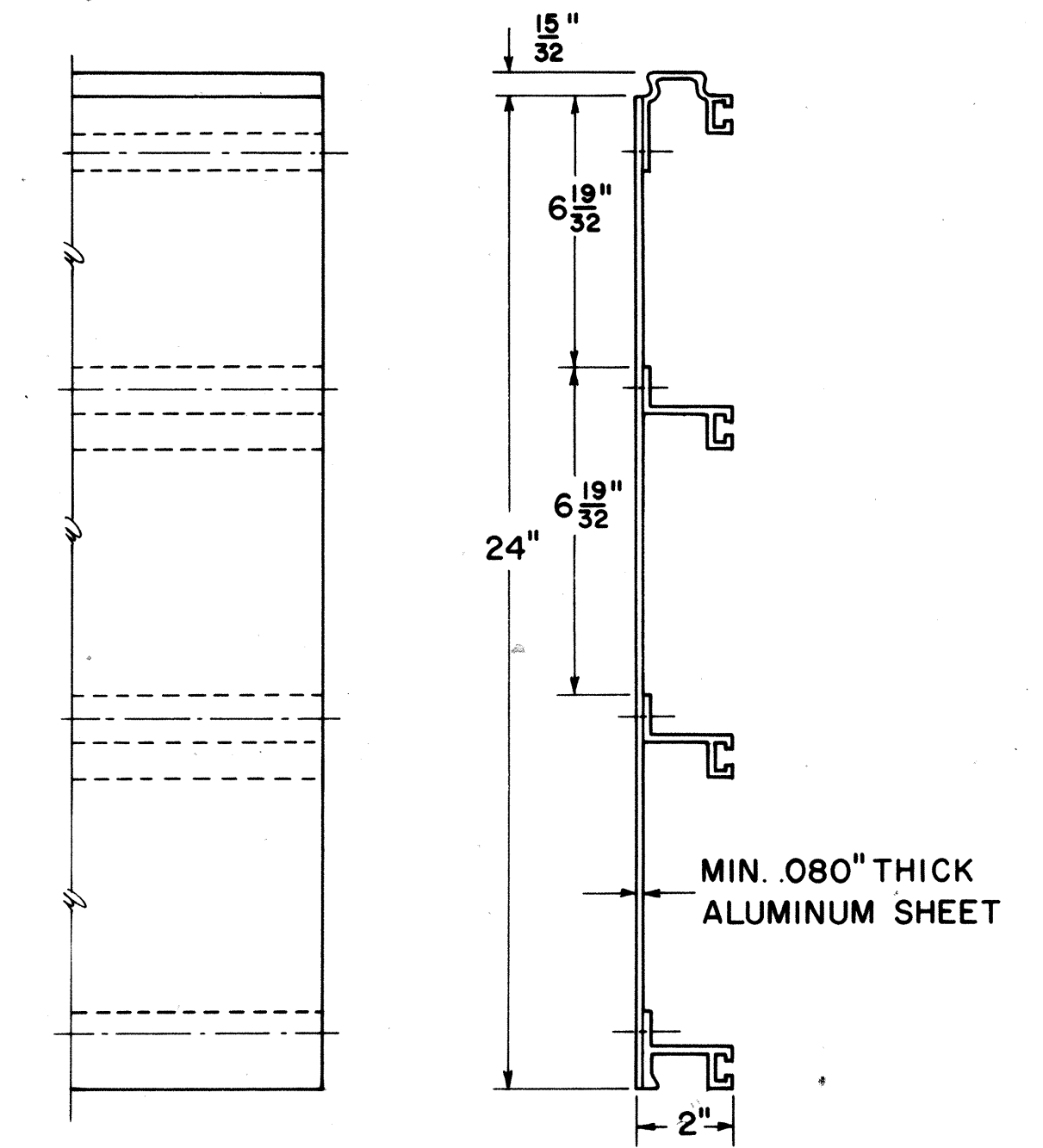
FRONT VIEW SIDE VIEW

### 18" EXTRUSHEET PANEL



FRONT VIEW SIDE VIEW

### 24" EXTRUSHEET PANEL



FRONT VIEW SIDE VIEW

#### NOTES:

EXTRUSHEET PANELS SHALL BE ALUMINUM; SPOT WELDING AND ALL MATERIALS SHALL CONFORM WITH SUPPLEMENTAL SPECIFICATION 8.15.

COMBINATIONS OF 12", 18", AND 24" PANELS ARE USED TO ATTAIN REQUIRED SIGN HEIGHT.

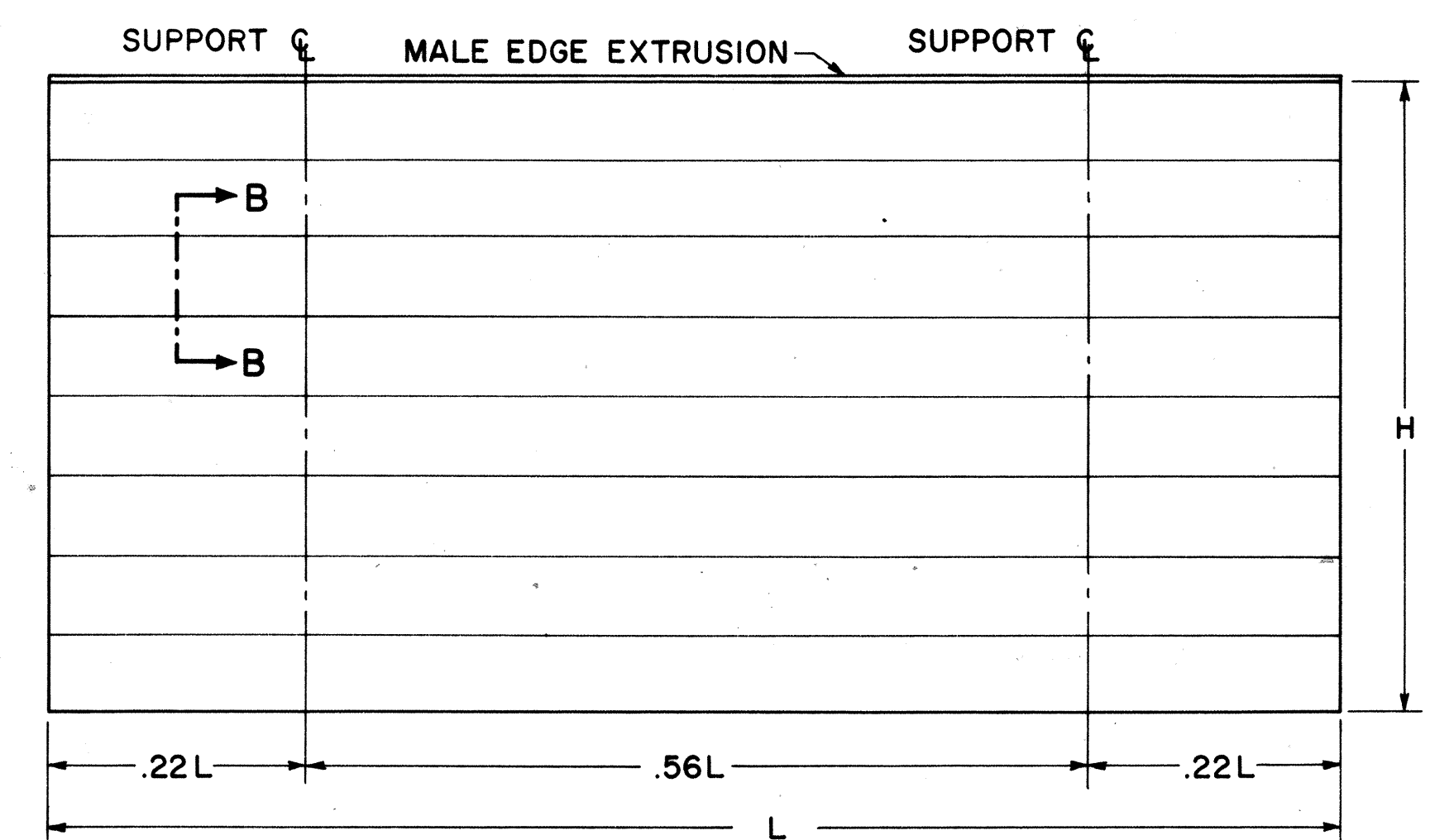
INDIVIDUAL PANELS SHALL BE THE SAME LENGTH AS THE HORIZONTAL LENGTH OF SIGN WITH NO SPLICES.

PANELS SHALL BE INTERLOCKED AND ERECTED WITH THE MALE EXTRUSION LOCATED AT THE TOP EDGE OF THE SIGN.

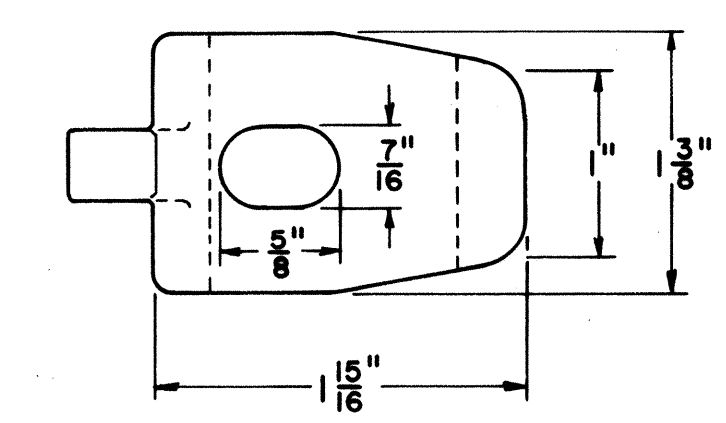
EXTRUSHEET PANELS SHALL BE FASTENED TO EACH VERTICAL SUPPORT MEMBER WITH MOUNTING CLIPS; ALTERNATELY AT EACH HORIZONTAL EXTRUSION; BOTH SIDES AT EACH JOINT, AND ON BOTH SIDES AT TOP AND BOTTOM EDGE OF SIGN.

THE PANELS SHALL BE DESIGNED TO WITHSTAND A WIND LOAD OF 35 POUNDS PER SQUARE FOOT.

### GENERAL ARRANGEMENT

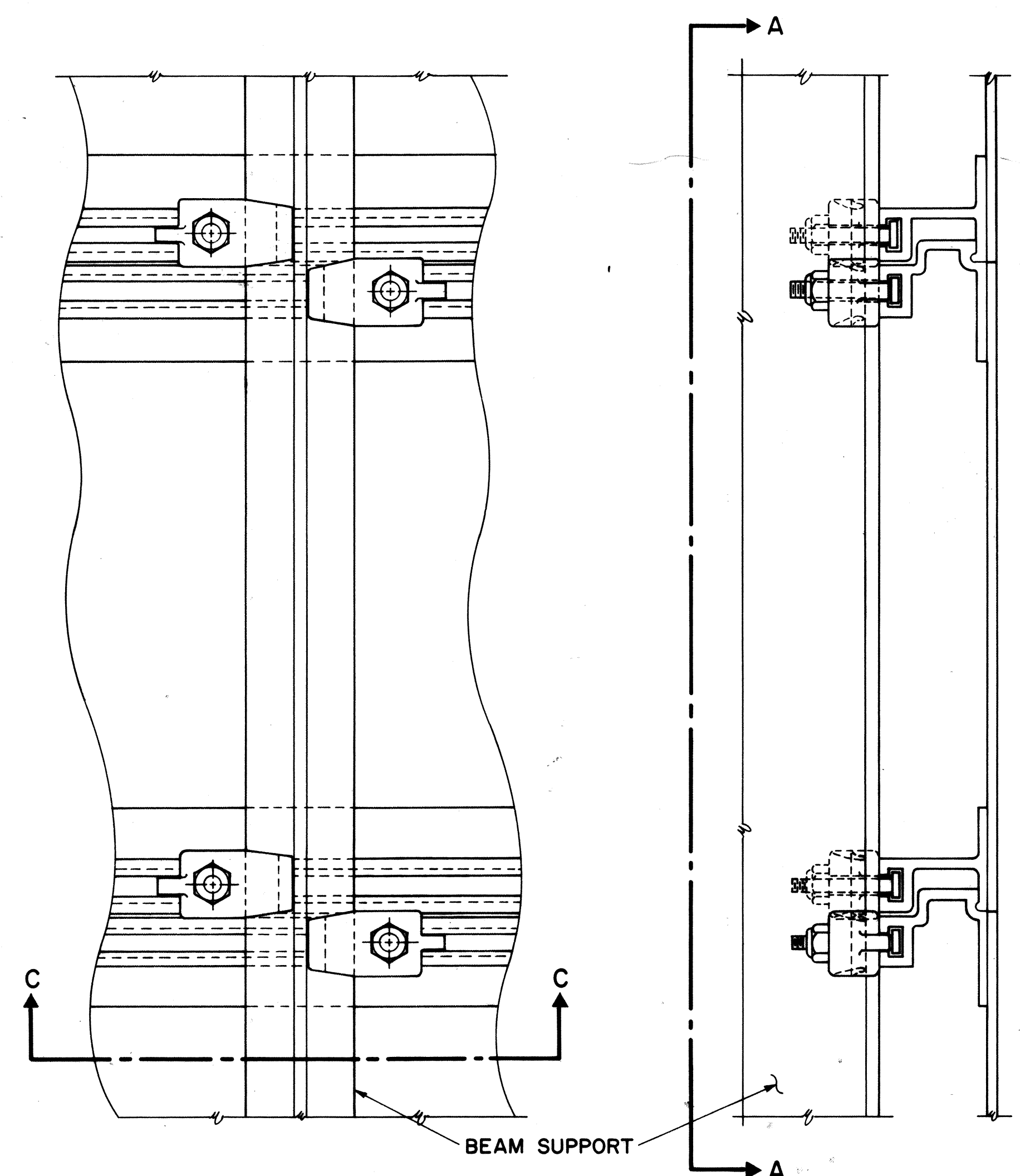


### CLIP DETAIL



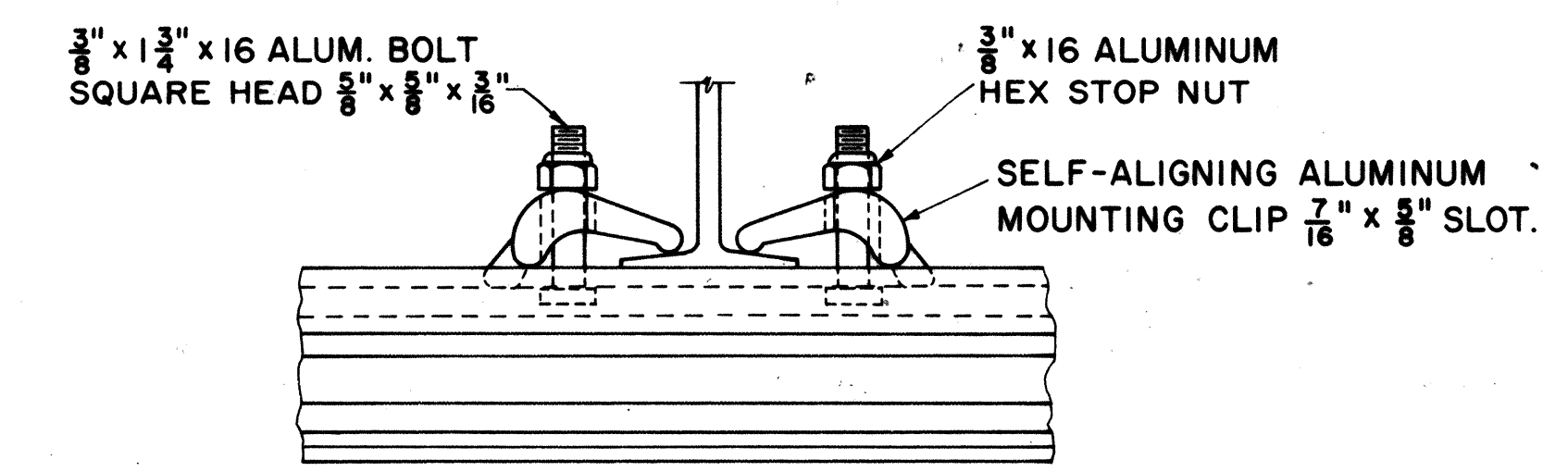
### SPOT WELDS

PANEL SIZE	MAXIMUM SPOT WELD SPACING CENTER TO CENTER BETWEEN ROWS	
12 INCH	4 INCH	10 INCH
18 & 24 INCH	4 INCH	8 INCH



SECTION A-A

SECTION B-B



SECTION C-C

BUREAU OF TRAFFIC OHIO DEPARTMENT OF HIGHWAYS	
ALUMINUM EXTRUSHEET PANEL SIGN	ECD
APPROVED ENGINEER OF TRAFFIC	DATE 9-25-63



MAY 6 1988

MADDOX CREEK & BALYEAT DITCH  
DRAINAGE AREA = 6,400 Ac. + 1,900 Ac. = 8,300 Ac.  
 $Q_{25} = 65 \times 44 \times 1 \times 3,400 = 972 \text{ c.f.s.}$   
Bull. 32 (OHIO) 25yr 900 c.f.s.  
50yr 1,055 c.f.s.

## UP STREAM STRUCTURES

MADDOX CREEK

TYPE: Steel Beam

SPAN: 36 Ft.

Waterway Area = 350 S.F.

BALYEAT DITCH

TYPE: 13'x8' Sec. Plate Arch

Waterway = 85 S.F.

## DOWN STREAM STRUCTURE

TYPE: Conc. Beam

SPAN: 48 Ft.

Waterway = 515 S.F.

Dumped Rock channel protection  
(As shown) (1.5' thick)Transition 4:1 to 2:1  
at all four corners

Fill to Elev. 775.0 and slope to drain

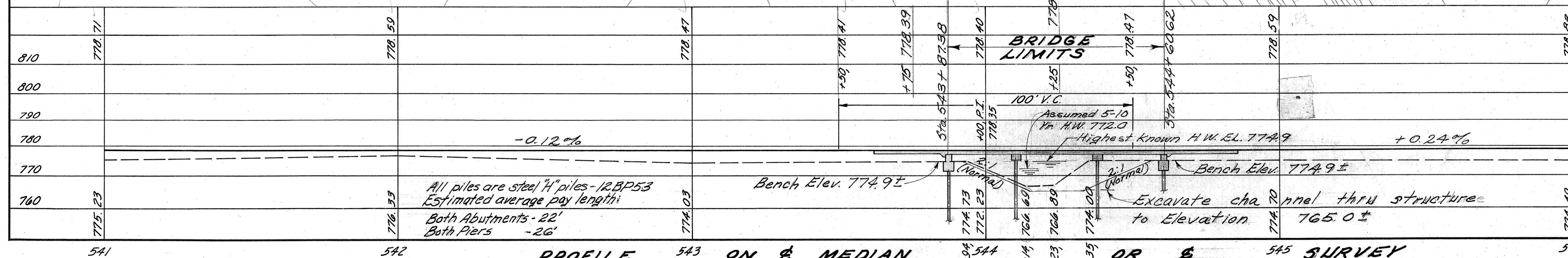
& Proposed West Bound Lanes  
(To be built now for 2-Directional traffic)& Survey & Median  
Relocated U.S.R. 224& Proposed Future East  
Bound LanesEARTHWORK limits shown are  
schematic. Actual slopes shall  
conform to plan cross-sections.

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

72  
99VAN WERT COUNTY  
VAN-224- 9.341.3 ± Miles West of  
Van Wert

## CURVE Data (U.S.R. 224)

P.T. = Sta. 545 + 22.17  
P.C. = Sta. 538 + 13.14  
P.T. = Sta. 552 + 29.57  
 $\Delta = 6^\circ - 36' - 36''$  Left  
 $D = 0^\circ - 28' - 00''$   
 $T = 709.00'$   
 $L = 1,410.63'$   
 $R = 12,277.67'$   
 $E = 20.45'$



**PROPOSED STRUCTURE**  
TYPE: Continuous Reinforced Concrete  
Slab with capped pile substructure  
SPANS: 22'-27.5'-22' 4% Bearings  
ROADWAY: 44'-0" w/ Guardrail  
LOAD FREQUENCY: CF-2000(57)  
SKEW: 30° Right Forward  
WEARING SURFACE: 1" Monolithic Concr.  
APPROACH SLABS: AS-1-54 (25' long)  
ALIGNMENT: 0°-28'-00" Curve Left  
SUPERELEVATION: None

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
BUREAU OF BRIDGES

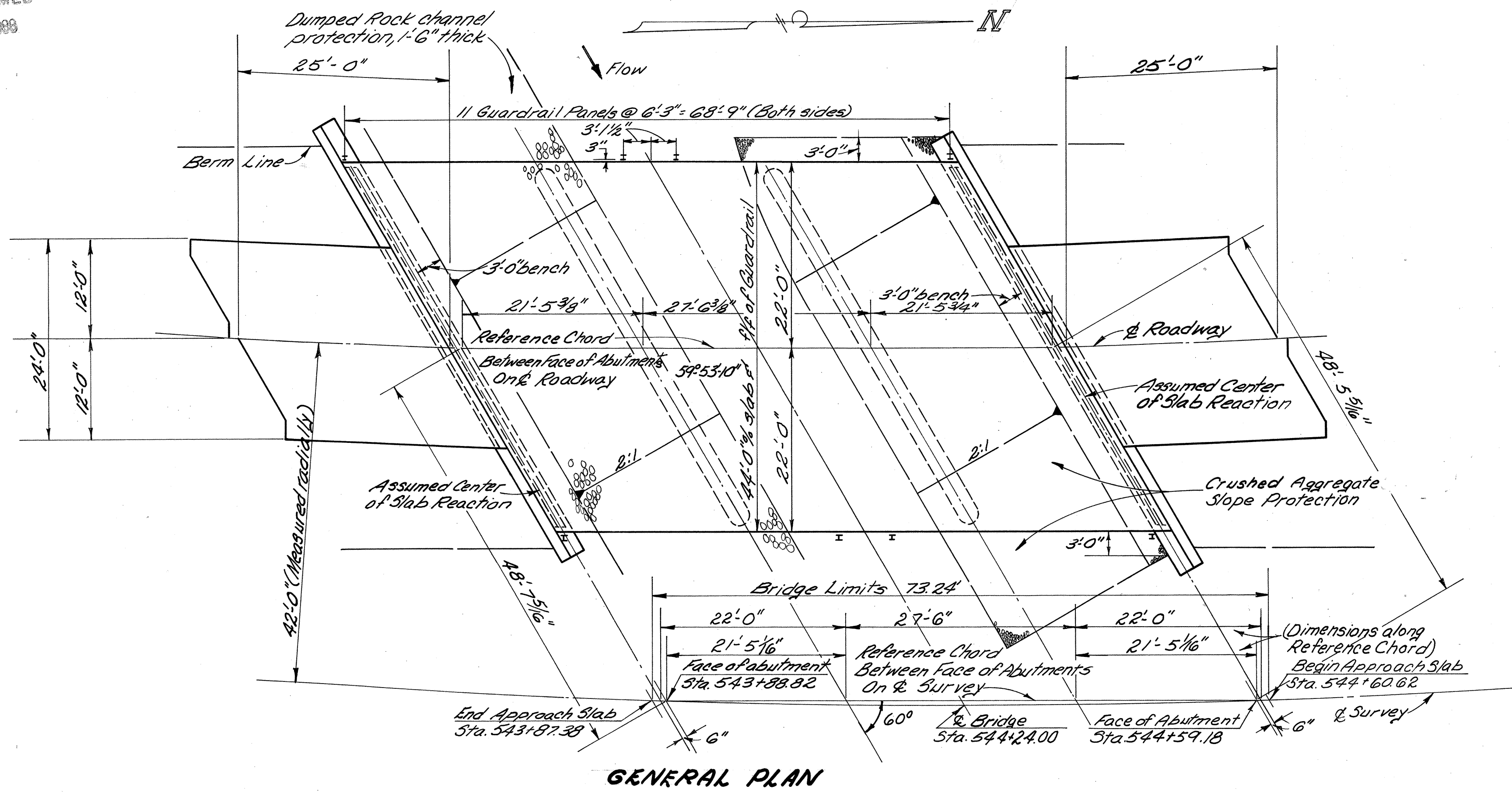
## SITE PLAN

BRIDGE NO. VAN-224-1030 L  
OVER BALYEAT DITCH  
VAN WERT COUNTY U.S.R. 224  
SEC. VAN-224-9.34 STA. 543 + 87.38  
SCALE 1"=20' STA. 544 + 60.62

PRESENT TOPOGRAPHY		PROPOSED WORK			
SURVEYED	DRAWN	DESIGNED	DRAWN	CHECKED	REVIEWED
		R.E.J.	R.E.J.	W.J.	G.E.S.

BFG 6-7-65





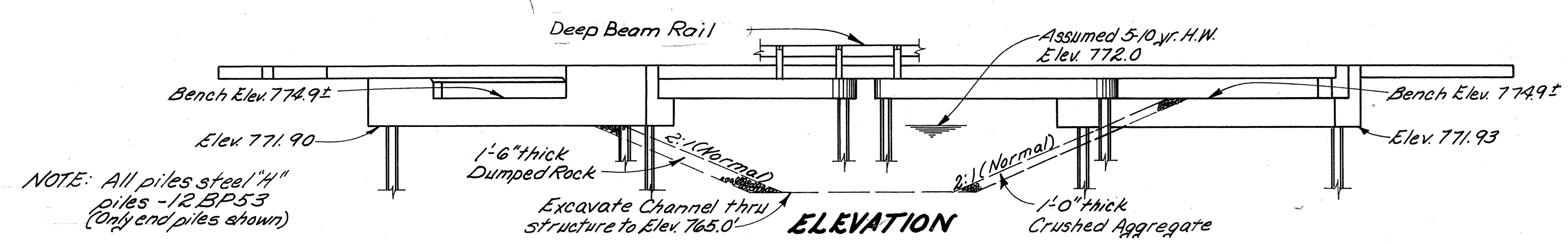
### GENERAL NOTES

REFERENCE shall be made to Standard Drawings CS-1-65 dated 6-1-65, P-1-54 revised 11-8-65, A-1-54 revised 11-8-65, and to Supplemental Specifications No. 808 dated 2-7-66, and 825 dated 4-22-65.

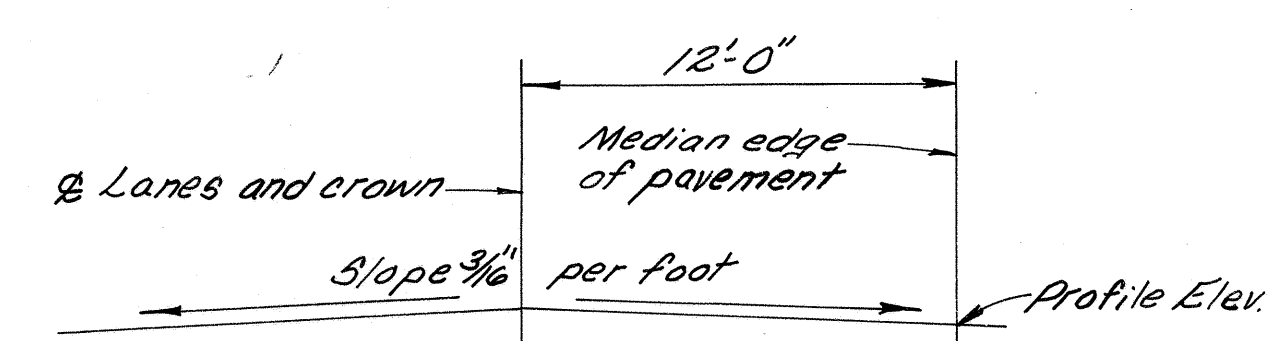
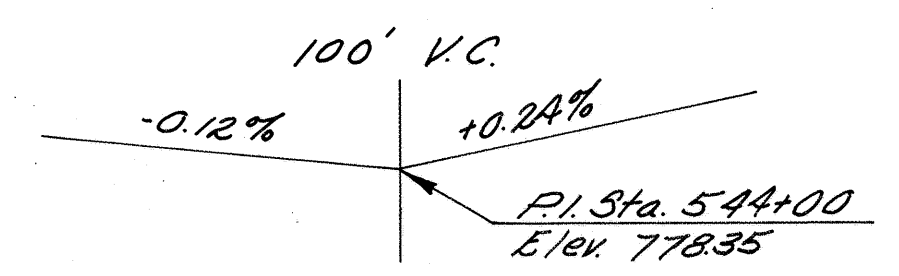
DESIGN DATA:  
Design Loading - CF-2000(57)  
Concrete Class C - basic unit stress 1,333 p.s.i.  
Concrete Class E - basic unit stress 1,133 p.s.i.  
Reinforcing Steel - ASTM A15, A16, A160, Deformed, Intermediate or Hard Grade. Basic unit stress 20,000 p.s.i.

PILES shall be driven to a minimum bearing capacity of 23 tons per pile for the abutments and 30 tons per pile for the piers.

PIER PILE ENCASEMENT as shown on Std. Dwg. P-1-54 is not required. The painting of the piles shall extend to low water elevation or, if the proposed surface of the ground is above low water, it shall extend to at least one foot below the proposed surface of the ground.



NOTE: All piles steel "H" piles - 12 BP53 (Only end piles shown)



ESTIMATED QUANTITIES							
Item	Total	Unit	Description	Super.	Abut.	Piers	Ben'l.
503	68	Cu.Yds.	Unclassified excavation	68			
511	163	Cu.Yds.	Class "C" concrete, superstructure and pier caps	146		17	
511	60	Cu.Yds.	Class "E" concrete, abutments		60		
509	47,739	Lbs.	Reinforcing steel	37,129	6,292	4,318	
517	146.48	Lin.Ft.	Railings (Deep beam rail with steel posts and bolts)	146.48			
505	Lump	Sum	First test pile				Lump
507	770	Lin.Ft.	Steel piles, 12 BP53		350	420	
518	19	Cu.Yds.	Porous backfill		19		
601	182	Sq.Yds.	Crushed Aggregate slope protection				182
601	212	Cu.Yds.	Dumped rock channel protection				212
808	163	Units	Water-reducing, set-retarding admixture	146		17	
825	581	Sq.Yds.	Concrete Surface Treatment	562	19		

BRIDGE ROADWAY CROWN

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
DIVISION OF DESIGN AND CONSTRUCTION  
BUREAU OF BRIDGES

GENERAL PLAN, ELEVATION,  
NOTES & ESTIMATED QUANTITIES

BRIDGE No. VAN-224-1030L  
OVER BALVEAT DITCH  
VAN WERT COUNTY STA 543+87.38  
544+60.62

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
JFS	JFS	JFS	CPD	BFG	6-7-65	





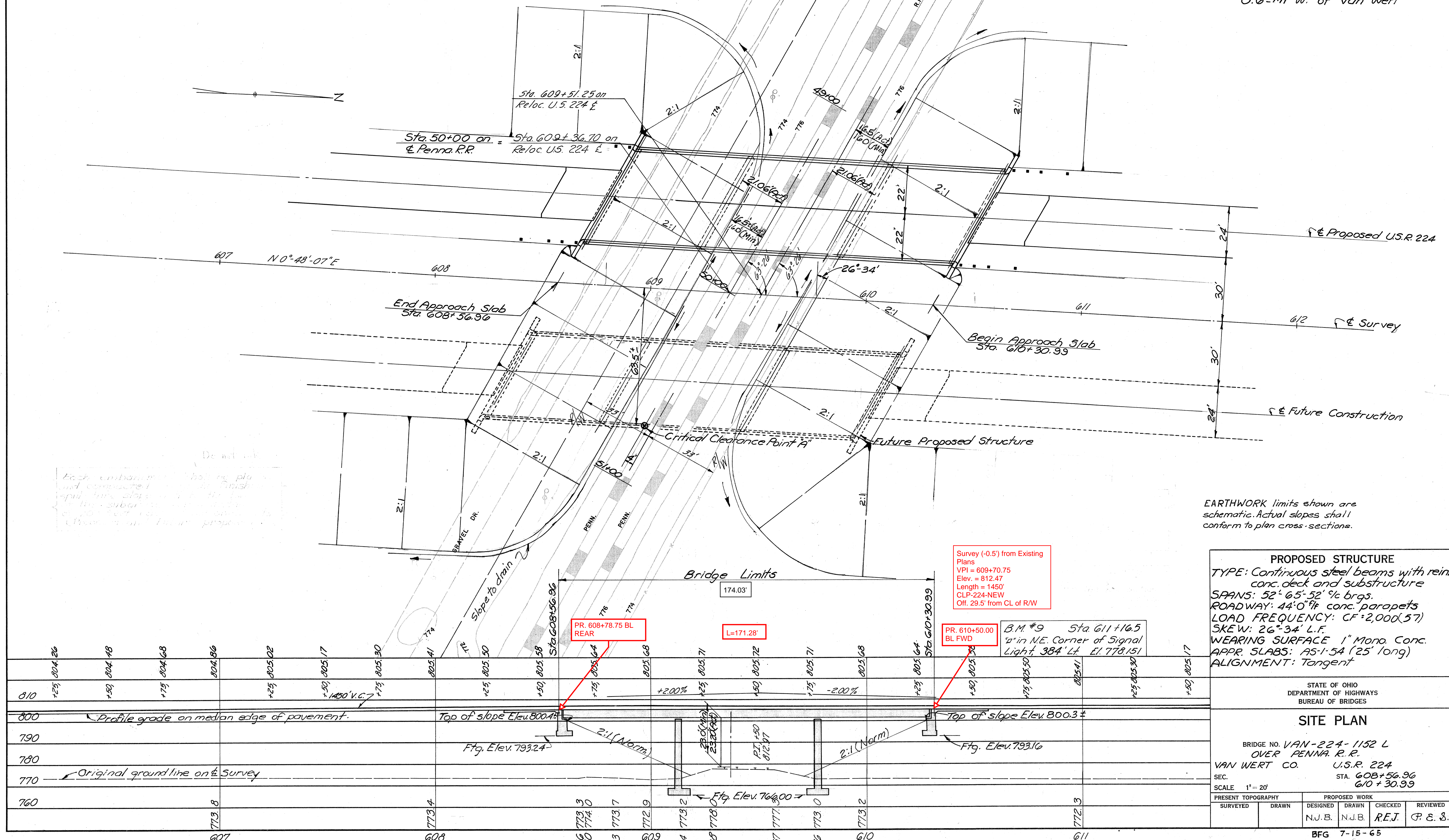


MICROFILMED  
MAY 6 1988

FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

75  
99

VAN WERT COUNTY  
VAN-224-9.34  
0.6± Mi W. of Van Wert









ESTIMATED QUANTITIES									
Item	Total	Unit	Description	Super	Abut	Piers	Gen'l	As Built	
503	Lump	Sum	Cofferdams, cribs and sheeting				Lump		
503	612	Cu.Yd.	Unclassified excavation		284	328			
511	238	Cu.Yd.	Class "C" concrete, superstructure	238					
511	181	Cu.Yd.	Class "C" concrete, piers above footings			181			
511	134	Cu.Yd.	Class "E" concrete, abutments above footings		134				
511	115	Cu.Yd.	Class "E" concrete, footings		53	62			
509	104,540	Lb.	Reinforcing steel	75,108	8,221	21,211			
513	211,500	Lb.	Structural steel	211,500					
514	211,500	Lb.	Field painting of structural steel	211,500					
517	340.17	Lin.Ft.	Railing (aluminum rail and supports, concrete parapet and end post)	340.17					
518	56	Cu.Yd.	Porous backfill		56				
518	12	Each	Scuppers, including supports.	12					
601	962	Sq.Yd.	Crushed aggregate slope protection				962		
808	238	Units	Water-reducing, set-retarding admixture.	238					
825	<del>1955</del>	Sq. Yd.	Concrete Surface Treatment	<del>1922</del>	33				
518	106	Lin. Ft.	6" Perforated C.M.P. Sec 707.06, including specials		106				
518	96	Lin. Ft.	6" C.M.P. Sec 707.06, non-perforated		96				
828	<del>188</del>	Lin. Ft.	Joint Sealer (end dam)		<del>188</del>				

## NOTES

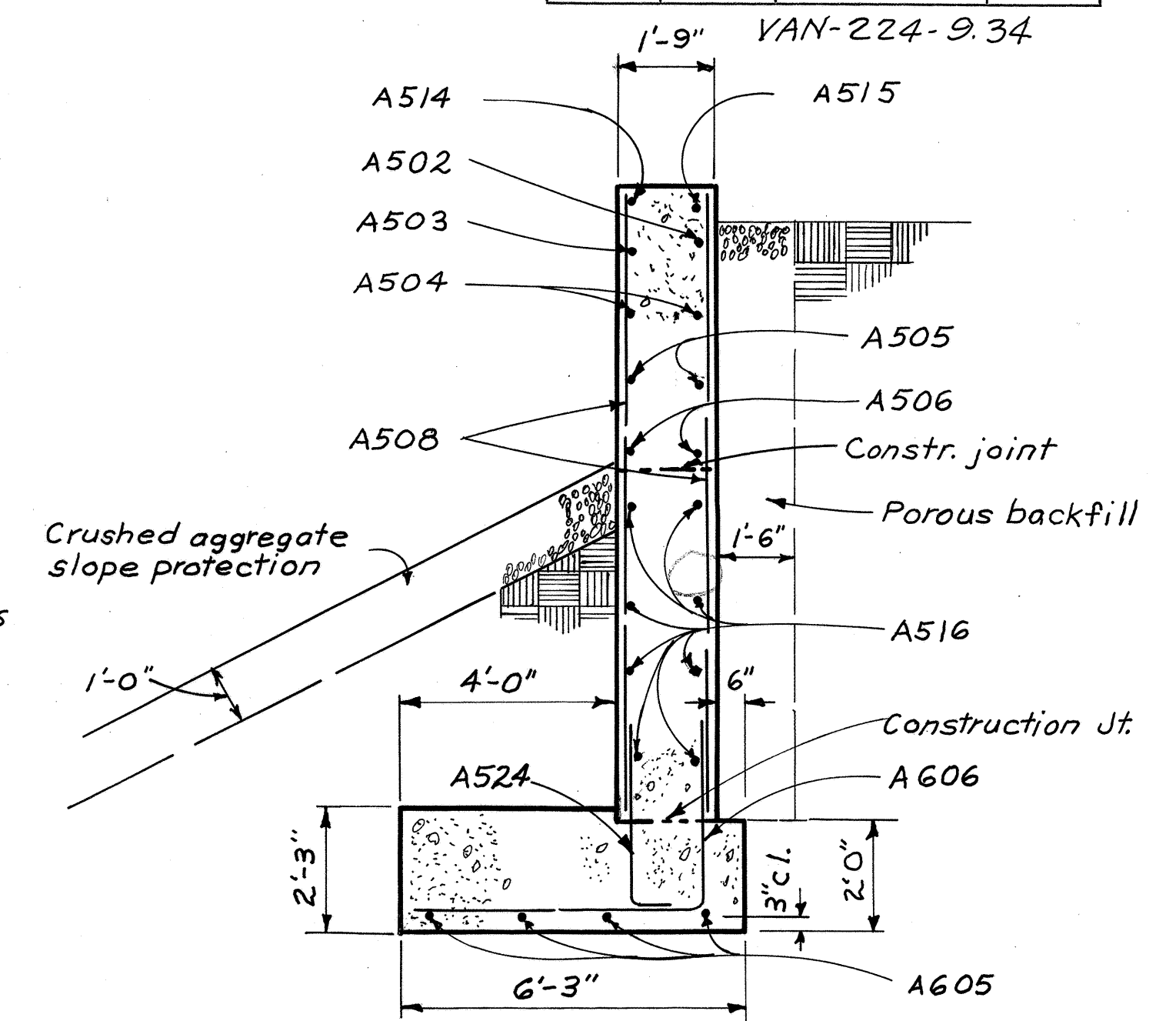
PROCEDURE: The embankment shall be placed and compacted up to the finish spill-thru slope and to the level of the subgrade for a distance of 200 feet back of the abutments, after which excavation shall be made for the abutments and piers.

BRIDGE SEAT REINFORCING: Special care shall be taken in placing reinforcing steel in the vicinity of the bridge seat so as to avoid interference with the drilling of anchor bar holes.

*REINFORCING STEEL: The S601, S604, S701 and S702 bars may be furnished in pairs of equal length, lapped 30 diameters at the centerline of roadway, or they may be furnished in pairs of different length in order to place the lap beyond a longitudinal construction joint at the centerline of roadway, at the option of the contractor. Determination of the pay quantity will be according to the number and length of bars as shown hereon.*

*BAR SIZE is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example, A700 is a No. 7 size bar and A1014 is a No. 10 size.*

**RAILROAD FORCE ACCOUNT WORK:**  
 1. *Engineering and Inspection*  
 2. *Communications and Signals*  
*Plans for this work may be seen at the Division Office in Lima, O., the Construction Bureau or Office of Contract Sales in Columbus, O.*



SECTION B  
B

[illegible]

SECTION A  
A

# REINFORCING STEEL LIST

## BENDING DIAGRAMS

Diagram showing bending shapes and dimensions for various reinforcement bars (S502, S501, S503, P1101, P1102, P901, P902, P801, P802, P803, P804, P501, P502, P503, P504, P505, P506, P507, P508, A518, A515, A522, A523, A524, A525, A526, A527, A528, A529, A530, A531, A532, A533, A534, A535, A536, A537, A538, A539, A540, A541, A542, A543, A544, A545, A546, A547, A548, A549, A550, A551, A552, A553, A554, A555, A556, A557, A558, A559, A560, A561, A562, A563, A564, A565, A566, A567, A568, A569, A570, A571, A572, A573, A574, A575, A576, A577, A578, A579, A580, A581, A582, A583, A584, A585, A586, A587, A588, A589, A590, A591, A592, A593, A594, A595, A596, A597, A598, A599, A600, A601, A602, A603, A604, A605, A606, A607, A608, A609, A610, A611, A612, A613, A614, A615, A616, A617, A618, A619, A620, A621, A622, A623, A624, A625, A626, A627, A628, A629, A630, A631, A632, A633, A634, A635, A636, A637, A638, A639, A640, A641, A642, A643, A644, A645, A646, A647, A648, A649, A650, A651, A652, A653, A654, A655, A656, A657, A658, A659, A660, A661, A662, A663, A664, A665, A666, A667, A668, A669, A670, A671, A672, A673, A674, A675, A676, A677, A678, A679, A680, A681, A682, A683, A684, A685, A686, A687, A688, A689, A690, A691, A692, A693, A694, A695, A696, A697, A698, A699, A700, A701, A702, A703, A704, A705, A706, A707, A708, A709, A710, A711, A712, A713, A714, A715, A716, A717, A718, A719, A720, A721, A722, A723, A724, A725, A726, A727, A728, A729, A730, A731, A732, A733, A734, A735, A736, A737, A738, A739, A740, A741, A742, A743, A744, A745, A746, A747, A748, A749, A750, A751, A752, A753, A754, A755, A756, A757, A758, A759, A760, A761, A762, A763, A764, A765, A766, A767, A768, A769, A770, A771, A772, A773, A774, A775, A776, A777, A778, A779, A780, A781, A782, A783, A784, A785, A786, A787, A788, A789, A790, A791, A792, A793, A794, A795, A796, A797, A798, A799, A800, A801, A802, A803, A804, A805, A806, A807, A808, A809, A810, A811, A812, A813, A814, A815, A816, A817, A818, A819, A820, A821, A822, A823, A824, A825, A826, A827, A828, A829, A830, A831, A832, A833, A834, A835, A836, A837, A838, A839, A840, A841, A842, A843, A844, A845, A846, A847, A848, A849, A850, A851, A852, A853, A854, A855, A856, A857, A858, A859, A860, A861, A862, A863, A864, A865, A866, A867, A868, A869, A870, A871, A872, A873, A874, A875, A876, A877, A878, A879, A880, A881, A882, A883, A884, A885, A886, A887, A888, A889, A890, A891, A892, A893, A894, A895, A896, A897, A898, A899, A900, A901, A902, A903, A904, A905, A906, A907, A908, A909, A910, A911, A912, A913, A914, A915, A916, A917, A918, A919, A920, A921, A922, A923, A924, A925, A926, A927, A928, A929, A930, A931, A932, A933, A934, A935, A936, A937, A938, A939, A940, A941, A942, A943, A944, A945, A946, A947, A948, A949, A950, A951, A952, A953, A954, A955, A956, A957, A958, A959, A960, A961, A962, A963, A964, A965, A966, A967, A968, A969, A970, A971, A972, A973, A974, A975, A976, A977, A978, A979, A980, A981, A982, A983, A984, A985, A986, A987, A988, A989, A990, A991, A992, A993, A994, A995, A996, A997, A998, A999, A1000).

MARK	NO.	LENGTH	WEIGHT	SHR	MARK	NO.	LENGTH	WEIGHT	SHR	MARK	NO.	LENGTH	WEIGHT	SHR	MARK	NO.	LENGTH	WEIGHT	SHR
Superstructure					Railing (Cont)					BENDING DIAGRAMS									
S701	221	45'-8"	20629	st	R504	8	5'-4"	*	Bt	Piers					Piers (Cont)				
	2	45'-0"			R505	12	4'-2"	*	Bt	Abutments					Abutments (Cont)				
S702	31	5'-0"	3168	st	P1101	28	28'-2"	4190	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P1102	28	26'-7"	3955	st	Abutments					Abutments (Cont)				
S703	6	5'-0"	61	st	P901	46	11'-8"	1825	st	Abutments					Abutments (Cont)				
S601	221	45'-8"	15159	st	P902	12	22'-8"	925	st	Abutments					Abutments (Cont)				
S602	425	35'-7"	27115	st	P801	22	32'-1"	1885	st	Abutments					Abutments (Cont)				
S603	68	26'-0"	2656	st	P802	22	32'-4	1899	st	Abutments					Abutments (Cont)				
	2	45'-0"			P803	44	16'-0	1880	st	Abutments					Abutments (Cont)				
S604	31	5'-0"	2328	st	P804	88	6'-2"	1449	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P501	40	4'-0"	167	Bt	Abutments					Abutments (Cont)				
S605	6	5'-0"	45	st	P502	8	25'-8"	214	st	Abutments					Abutments (Cont)				
	2	45'-0"			P503	4	36'-4"	152	st	Abutments					Abutments (Cont)				
S501	252	4'-11"	1292	Bt	P504	56	18'-0"	1051	st	Abutments					Abutments (Cont)				
S502	252	2'-6"	657	Bt	P505	60	7'-9"	485	Bt	Abutments					Abutments (Cont)				
S503	240	5'-7"	1398	Bt	P506	4	13'-9"			Abutments					Abutments (Cont)				
	4	13'-9"			P507	15	5'-7"	605	Bt	Abutments					Abutments (Cont)				
	15	5'-7"			P508	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
R501	16	16'-8"	*	st	P509	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
R502	64	15'-8"	*	st	P510	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
R503	8	7'-8"	*	st	P511	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	2	45'-0"			P512	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P513	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P514	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P515	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P516	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P517	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P518	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P519	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P520	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P521	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P522	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P523	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P524	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P525	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P526	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P527	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P528	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				
	31	5'-0"			P529	52	7'-0"	380	Bt	Abutments					Abutments (Cont)				

\*Included with railing for payment.

STATE OF OHIO  
DEPARTMENT OF HIGHWAYS  
DIVISION OF DESIGN AND CONSTRUCTION  
BUREAU OF BRIDGES

---

REINFORCING STEEL LIST  
ESTIMATED QUANTITIES  
& ABUTMENT DETAILS  
BRIDGE NO. VAN-224-1152L  
OVER PENNSYLVANIA R.R.  
VAN WERT COUNTY STA. 608+56.96  
STA. 610+30.99

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISION
H.E.N.	H.E.N.	<i>JWA</i>	<i>Innes</i>	BFG	7-15-65	3-4



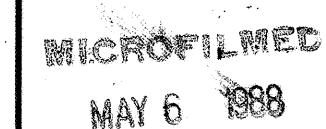
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF BRIDGE AND CONSTRUCTION BUREAU OF BRIDGES						
<div style="text-align: center; font-size: 2em; font-weight: bold; margin-bottom: 20px;">                     ABUTMENT DETAILS                 </div> <div style="text-align: center;">                     BRIDGE NO. VAN-22A-1152L                      OVER PENNSYLVANIA R. R.                      VAN WEET COUNTY                 </div> <div style="text-align: right; margin-top: 20px;">                     STA. 608+56.96                      STA. 610+30.99                 </div>						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
H.E.N.	H.E.N.	<i>Kenny</i>	<i>Innes</i>	BFG	7-15-65	



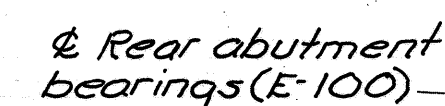
STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
<div style="text-align: right; font-size: 2em; margin-bottom: 10px;">5</div> <div style="text-align: center;"> <h2 style="margin: 0;">PIER DETAILS</h2> <h3 style="margin: 0;">BRIDGE NO. VAN-224-1152L</h3> <h3 style="margin: 0;">over PENNSYLVANIA R. R.</h3> <h3 style="margin: 0;">VAN WERT COUNTY STA. 608+56.96</h3> <h3 style="margin: 0;">STA. 610+30.99</h3> </div>					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
H.E.N.	H.E.N.	CAM	Innes	BFG	7-15-65



VAN-224-934



HALF TRANSVERSE SECTION



## FRAMING PLAN

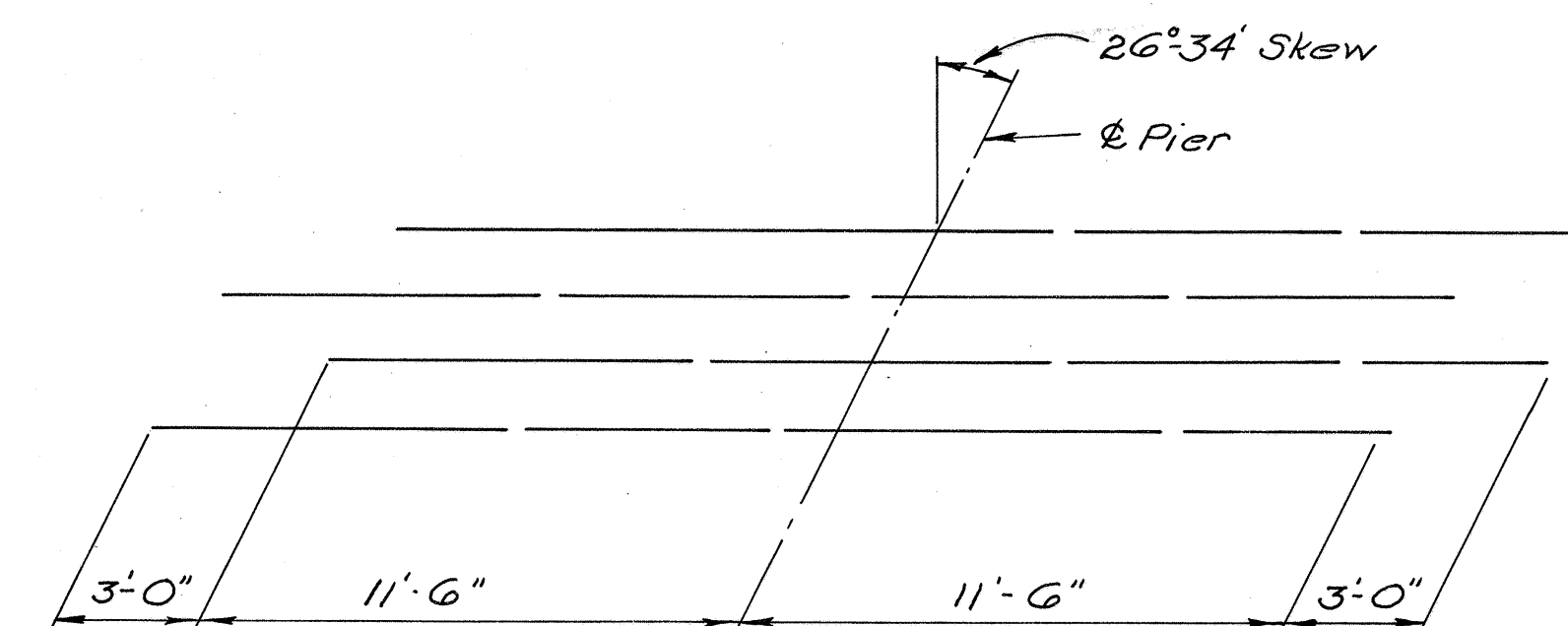
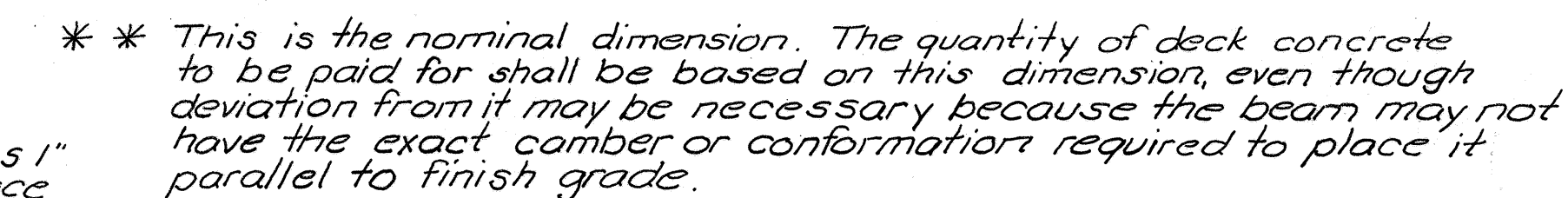
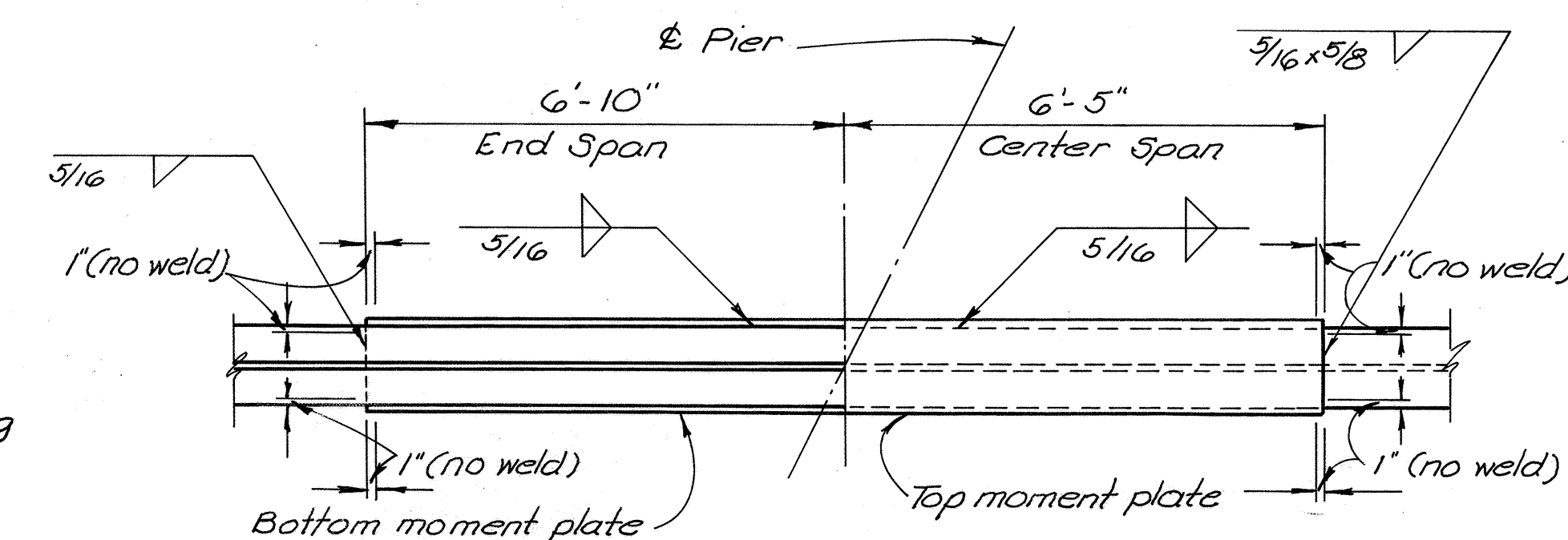
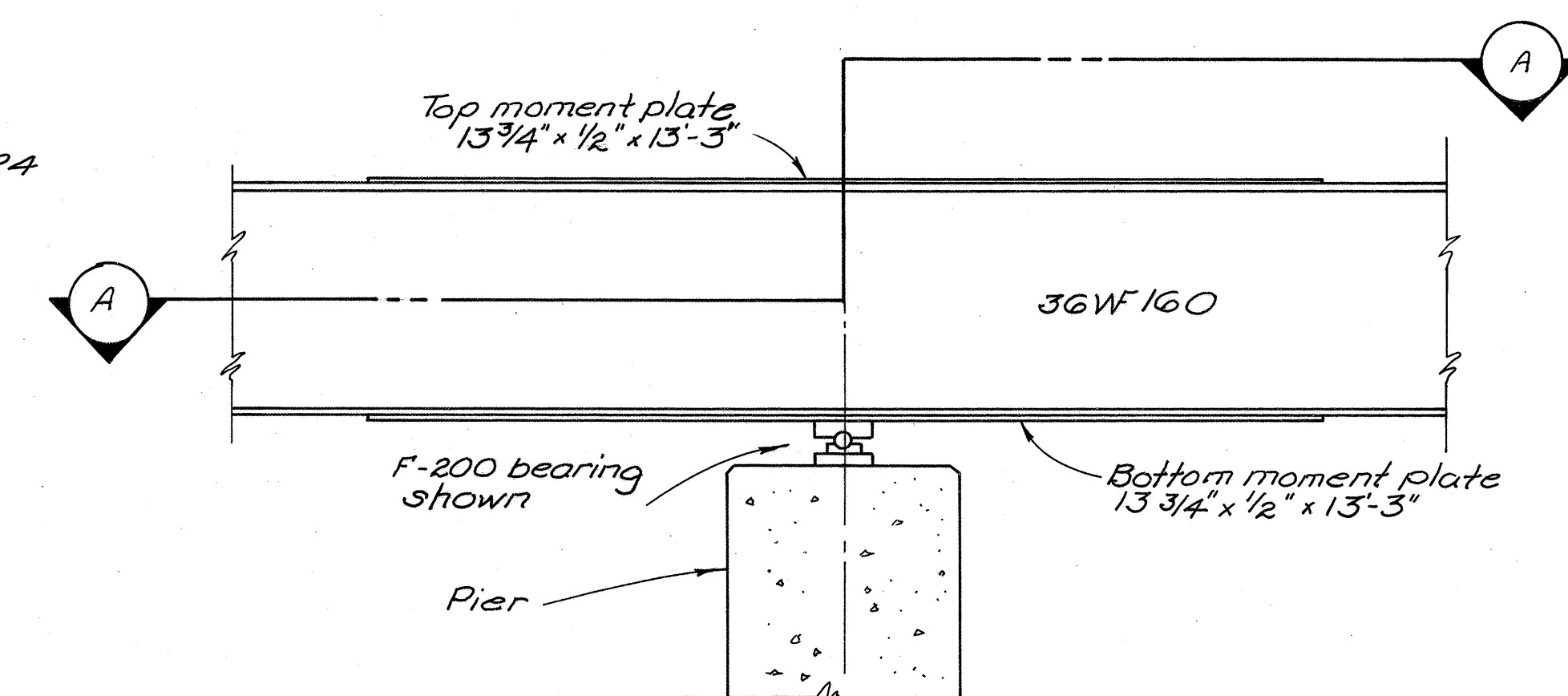
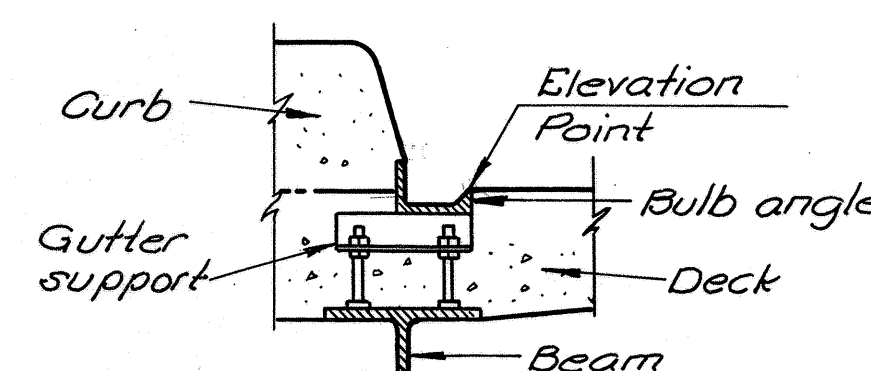


DIAGRAM SHOWING STAGGER  
OF S603 BARS OVER PIERS

SECTION A  
A

**BEAM MOMENT PLATE DETAIL**

BULB ANGLE GUTTER ELEVATIONS													
LOCATION	REAR SPAN				CENTER SPAN				FORWARD SPAN				
	ℳ Abut. Bearing	.25 Span	.50 Span	.75 span	ℳ Pier Bearing	.25 span	.50 Span	.75 Span	ℳ Pier Bearing	.25 Span	.50 Span	.75 Span	ℳ Abut. Bearing
Left Bulb Angle	805.54	805.53	805.59	805.59	805.59	805.61	805.61	805.53	805.54	805.53	805.51	805.47	805.42
Right Bulb Angle	805.50	805.54	805.57	805.57	805.53	805.60	805.62	805.60	805.57	805.56	805.56	805.52	805.48

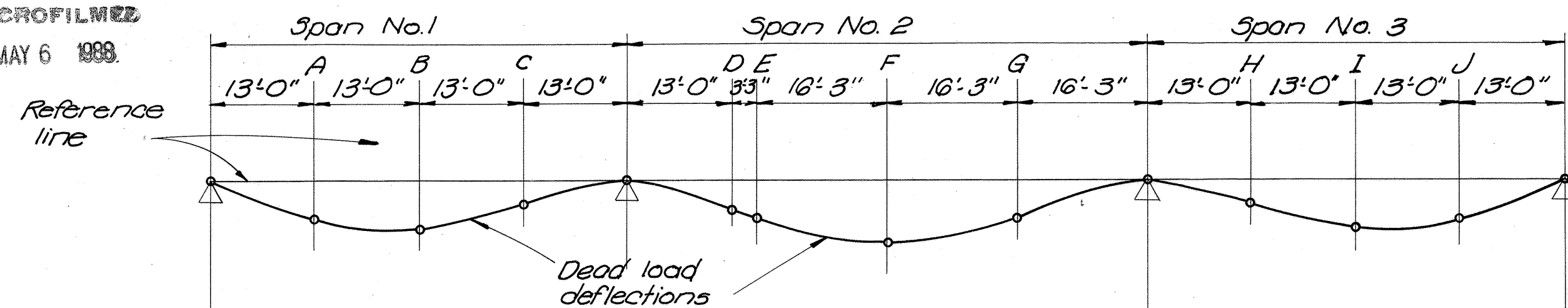


ADDITIONAL NOTES: For additional notes  
see Sheet No. 81

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION +-----+ BUREAU OF BRIDGES					
<h1 style="margin: 0;"><i><b>SUPERSTRUCTURE DETAILS</b></i></h1> <p style="margin: 10px 0;"><i>BRIDGE NO. VAN-224-1152L OVER PENNSYLVANIA R.R.</i></p> <p style="margin: 10px 0;"><i>VAN WERT COUNTY      STA. 608+56.96    STA. 610+30.99</i></p>					
<b>DESIGNED</b>	<b>DRAWN</b>	<b>TRACED</b>	<b>CHECKED</b>	<b>REVIEWED</b>	<b>DATE</b>
<i>H.E.N.</i>	<i>H.E.N.</i>	<i>P.K.I.</i>	<i>Innes</i>	<i>BFG</i>	<i>7-15-65</i>

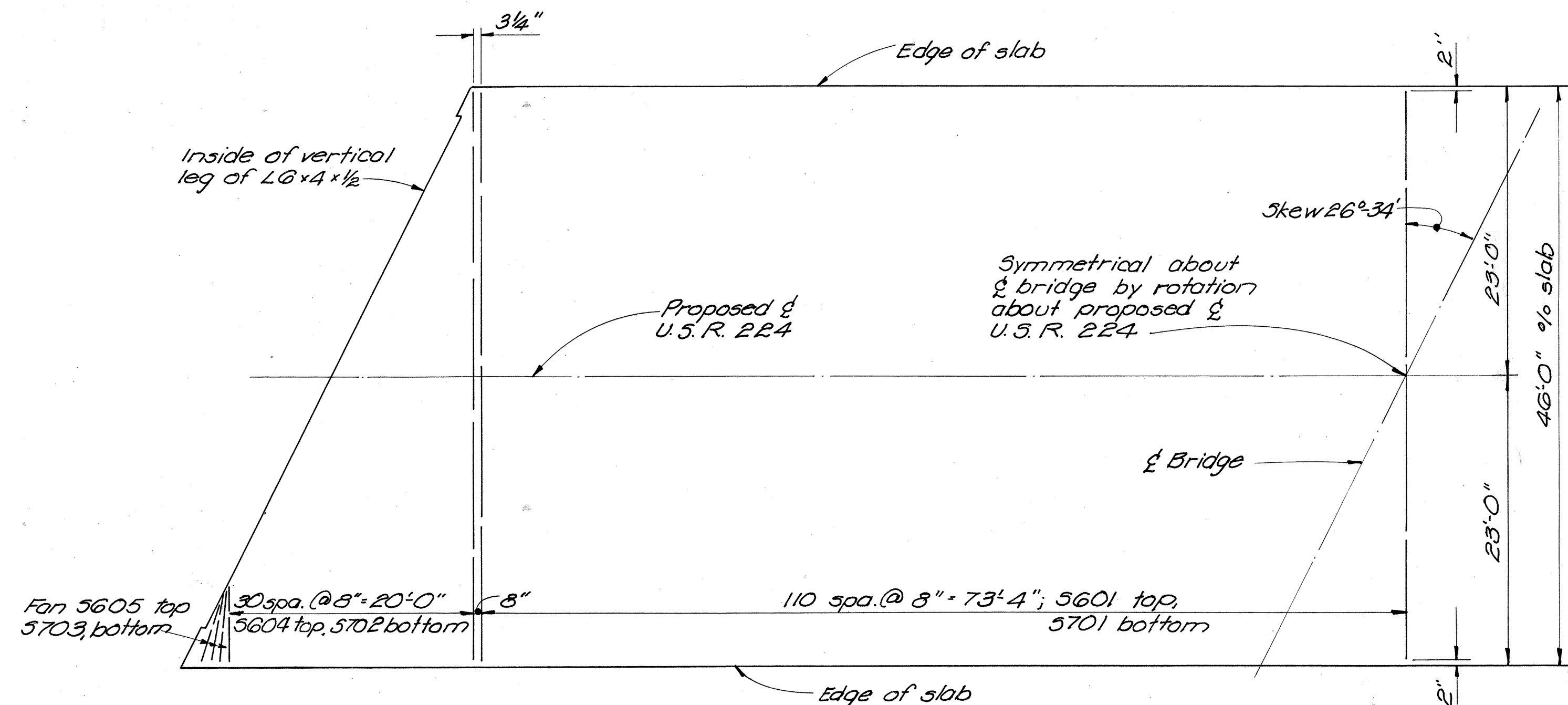


MAY 6 1968

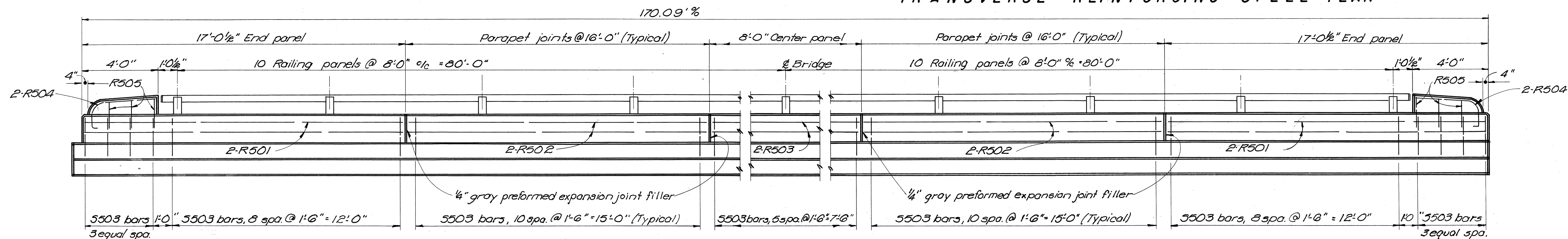


NOTE: Deflections and camber are shown with respect to Reference chords between adjacent bearings.

DEFLECTION AND CAMBER TABLE										
LOCATION	SPAN NO. 1			SPAN NO. 2			SPAN NO. 3			
EXTERIOR BEAM	1/4 Point A	1/2 Point B	3/4 Point C	Splice Pt. D	1/4 Point E	1/2 Point F	3/4 Point G	1/4 Point H	1/2 Point I	3/4 Point J
Deflection due to weight of steel	+ 1/16"	+ 1/16"	0	0	+ 1/16"	+ 1/16"	+ 1/16"	0	+ 1/16"	+ 1/16"
Deflection due to remaining dead load	+ 1/8"	+ 3/16"	+ 1/8"	+ 1/8"	+ 1/8"	+ 1/4"	+ 1/8"	+ 1/8"	+ 3/16"	+ 1/8"
Adjustment required for vertical curve	+ 1/16"	+ 1/8"	+ 1/16"	+ 1/16"	+ 1/8"	+ 3/16"	+ 1/8"	+ 1/16"	+ 1/8"	+ 1/16"
Required shop camber	+ 1/4"	+ 3/8"	+ 3/16"	+ 3/16"	+ 5/16"	+ 1/2"	+ 5/16"	+ 3/16"	+ 3/8"	+ 1/4"
INTERIOR BEAM	1/4 Point A	1/2 Point B	3/4 Point C	Splice Pt. D	1/4 Point E	1/2 Point F	3/4 Point G	1/4 Point H	1/2 Point I	3/4 Point J
Deflection due to weight of steel	+ 1/16"	+ 1/16"	0	0	+ 1/16"	+ 1/16"	+ 1/16"	0	+ 1/16"	+ 1/16"
Deflection due to remaining dead load	+ 3/16"	+ 1/4"	+ 1/8"	+ 1/8"	+ 3/16"	+ 3/16"	+ 3/16"	+ 1/8"	+ 1/4"	+ 3/16"
Adjustment required for vertical curve	+ 1/16"	+ 1/8"	+ 1/16"	+ 1/16"	+ 1/8"	+ 3/16"	+ 1/8"	+ 1/16"	+ 1/8"	+ 1/16"
Required shop camber	+ 5/16"	+ 7/16"	+ 3/16"	+ 3/16"	+ 3/8"	+ 9/16"	+ 3/8"	+ 3/16"	+ 7/16"	+ 5/16"



## TRANSVERSE REINFORCING STEEL PLAN



## RAILING AND PARAPET DETAILS

## NOTES

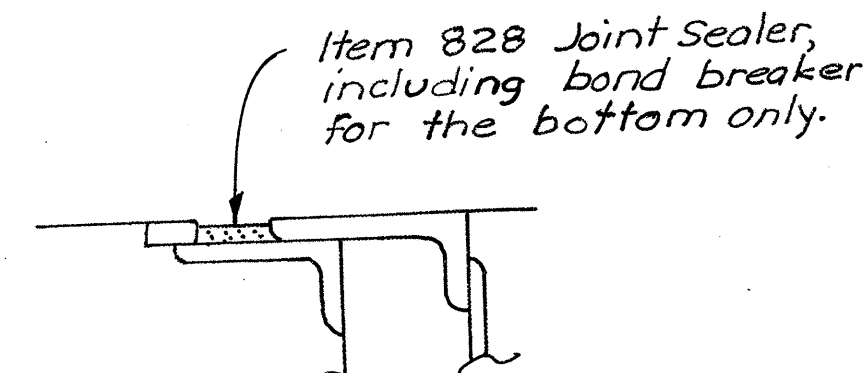
DECK SLAB HAUNCH: The haunch in the deck slab adjacent to the top of steel beams, which is shown as 9" wide, may vary from this dimension between the limits of 6" and 12", except that the maximum slope shall not exceed 3" inches per foot. Payment for deck slab concrete shall be based on the 9" width.

REFER TO STANDARD DRAWING SD-1-63 for the following

1. Curb plate details
2. Scuppers, gutters and supports.
3. End crossframes and end dam details.

REFER TO STANDARD DRAWING BR-1-65 for railing and parapet details not shown.

REFER TO STANDARD DRAWING SD-2-64 for beam field splice details.



FED. RD. DIVISION	STATE	PROJECT
2	OHIO	

VAN-224-9.34

81  
99

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES					
SUPERSTRUCTURE DETAILS					
BRIDGE NO. VAN-224-1152 L over PENNSYLVANIA RR					
VAN WERT COUNTY STA. 608+56.96 STA. 610+30.99					
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE
H.E.N.	H.E.N.	CAM	Innes	BFG	7-15-65



**GENERAL:** This drawing provides design and construction details. The Project plans shall show the location of splices plus a reference to this drawing where applicable. For splicing beams of different sizes, the project plans shall also include a splice detail showing splice plates, bolts, and fills.

**DESIGN SPECIFICATIONS:** This standard drawing conforms to the requirements of "Design Specifications for Highway Structures" of the State of Ohio, Department of Highways, dated September 1, 1957, together with current revisions thereof, except; strength of splice is based on Section 1.6.31 of the A.A.S.H.O. "Standard Specifications for Highway Bridges" dated 1961, together with current revisions thereof.

# **DESIGN UNIT STRESSES:**

Structural Steel	ASTM A-36	20,000 psi	bending
		12,000 psi	shear
High Strength Bolts	ASTM A-325	15,500 psi	shear
		40,000 psi	bearing

**DESIGN:** The splice details shown are based on 75% of the strength of the beam. For each structure, the designer shall determine the splice location and calculate the maximum total stresses (moment and shear) at the splice. As required by the above Specifications, the splice strength shall be based on the average of the calculated stresses and the strength of the beam, but not less than 75% of the strength of the beam. For splices located near points of contraflexure, the latter requirement will generally govern and the splices shown herein may be used. Where a splice strength exceeding 75% of the beam strength is required, the splice design shall be special. For splicing beams of different sizes, the design of the splice shall be based on the strength of the lighter weight beam. Beam strength at the splice, as noted above, is based on the net section for bending and gross section for shear.

**MATERIAL:** Splice plates, bolts, and fills shall be in accordance with the Construction and Material Specifications. Bolts shall be 1" diameter, high strength. The splice weight shown herein, plus the weight of fills, where required, shall be included with the structural steel quantity for payment.

**FILLS** shown on the project plans and shop drawings shall be dimensioned to the nearest 1/8 inch in thickness, but not less than 1/8 inch thick, based on the dimensions for detailing and intended relative position of the abutting flanges and webs to be spliced. However, in the final shop assembly, fills shall be furnished with thicknesses sufficient to compensate for any misalignment of abutting flanges and webs due to standard rolling mill tolerances. The clamping together of splice plates over material (including fills) that vary by more than 1/8 inch in thickness or relative position at the centerline of the splice, will not be permitted.

**VERTICAL CLEARANCE:** For grade separation structures an allowance of 3/4 inches plus the thickness of the outside flange splice plate shall be used in computing the actual vertical clearance under a beam splice.

**ERECTION:** In the field erection of beams with bolted field splices, the beams shall be positioned to facilitate the placing of drift pins. Drifting done during erection shall be only such as to align the parts to be bolted and not to enlarge the holes or distort the metal. Heavy driving of drift pins will not be permitted.

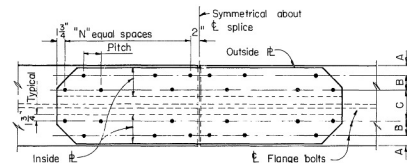
**FIELD ASSEMBLY:** In the final assembly of the parts to be bolted, drift pins shall be placed in a sufficient number of holes (not less than 25 percent for field erection) to provide and maintain accurate alignment of holes and parts, and sufficient bolts shall be installed and brought to a snug tight condition to bring the parts into complete contact. Bolts shall then be installed in any remaining open holes and tightened to a snug tight fit, after which all bolts shall be tightened completely by calibrated wrenches or by the turn-of-nut method. Drift pins shall then be replaced with bolts, tightened in the same manner.

## **BEAM SPLICE DATA**

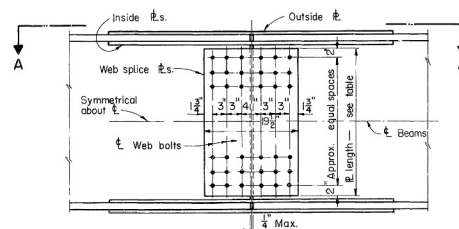
		DETAILS										DESIGN	
Beam	TYPE	Flange Splice					Web Splice					Beam Strength	
		Flange Plates		Flange Bolts			Web Plates		Web Bolts			Moment ft.-kips	Shear kips
		Outside 2 required	Inside 4 required	Number of bolts	N Pitch	Dimensions (inches) A B C	2 required	No.	2 required	No.	Weight of splice material lbs.		
36 WF	280 B	16 1/8 x 6'-3"	6 1/2 x 13/16 x 6'-3"	60	9	3 3/4 2 1/8 3	6	6	19 1/2 x 3/8 x 2'-7"	60	1210	1455	354
	260 B	16 1/8 x 5'-0"	6 1/2 x 3/4 x 5'-0"	64	7	3 3/4 2 3/8 3	6	6	19 1/2 x 3/8 x 2'-7"	60	950	1338	338
	245 B	16 1/8 x 5'-0"	6 1/2 x 3/8 x 5'-0"	64	7	3 3/4 2 3/8 3	6	6	19 1/2 x 3/8 x 2'-7"	54	880	1261	321
	230 B	16 1/8 x 5'-0"	6 1/2 x 3/8 x 5'-0"	64	7	3 3/4 2 3/8 3	6	6	19 1/2 x 3/8 x 2'-7"	54	840	1180	306
	194 A	11 x 3/8 x 2'-11 1/2"	4 1/2 x 3/8 x 2'-11 1/2"	40	4	3 1/2 2 3/8 2 1/2	7	7	19 1/2 x 3/8 x 2'-7"	54	540	891	314
	182 A	11 x 3/8 x 2'-11 1/2"	4 1/2 x 3/8 x 2'-11 1/2"	40	4	3 1/2 2 3/8 2 1/2	7	7	19 1/2 x 3/8 x 2'-7"	48	490	838	295
	170 A	11 x 3/8 x 2'-11 1/2"	4 1/2 x 3/8 x 2'-11 1/2"	40	4	3 1/2 2 3/8 2 1/2	7	7	19 1/2 x 3/8 x 2'-7"	48	460	782	277
	160 A	11 x 3/8 x 2'-4 1/2"	4 1/2 x 3/8 x 2'-4 1/2"	32	3	3 1/2 2 3/8 2 1/2	7	7	19 1/2 x 3/8 x 2'-7"	48	400	729	266
	150 A	11 x 3/8 x 2'-4 1/2"	4 1/2 x 3/8 x 2'-4 1/2"	32	3	3 1/2 2 3/8 2 1/2	7	7	19 1/2 x 3/8 x 2'-7"	40	340	670	255
	135 A	11 x 3/8 x 2'-4 1/2"	4 1/2 x 3/8 x 2'-4 1/2"	32	3	3 1/2 2 3/8 2 1/2	7	7	19 1/2 x 3/8 x 2'-7"	40	320	583	244
33 WF	240 B	15 x 3/8 x 4'-8 1/2"	6 x 3/8 x 4'-8 1/2"	64	7	3 1/2 2 3/8 2 1/2	6 1/2	6 1/2	19 1/2 x 3/8 x 2'-4"	54	870	1140	306
	220 B	15 x 3/8 x 4'-8 1/2"	6 x 3/8 x 4'-8 1/2"	64	7	3 1/2 2 3/8 2 1/2	6 1/2	6 1/2	19 1/2 x 3/8 x 2'-4"	54	790	1040	286
	200 B	15 x 3/8 x 3'-6 1/2"	6 x 3/8 x 3'-6 1/2"	48	5	3 1/2 2 3/8 2 1/2	6 1/2	6 1/2	19 1/2 x 3/8 x 2'-4"	48	580	943	264
	152 A	10 x 3/8 x 2'-4 1/2"	4 x 3/8 x 2'-4 1/2"	32	3	3 1/2 2 3/8 2 1/2	6 1/2	6 1/2	19 1/2 x 3/8 x 2'-4"	42	380	655	239
	141 A	10 x 3/8 x 2'-4 1/2"	4 x 3/8 x 2'-4 1/2"	32	3	3 1/2 2 3/8 2 1/2	6 1/2	6 1/2	19 1/2 x 3/8 x 2'-4"	36	320	595	228
	130 A	10 x 3/8 x 2'-4 1/2"	4 x 3/8 x 2'-4 1/2"	32	3	3 1/2 2 3/8 2 1/2	6 1/2	6 1/2	19 1/2 x 3/8 x 2'-4"	36	310	539	218
	118 A	10 x 3/8 x 1'-9 1/2"	4 x 3/8 x 1'-9 1/2"	24	2	3 1/2 2 3/8 2 1/2	6 1/2	6 1/2	19 1/2 x 3/8 x 2'-4"	36	250	476	208
	132 A	10 x 3/8 x 2'-4 1/2"	4 x 3/8 x 2'-4 1/2"	32	3	3 1/2 2 3/8 2 1/2	6	6	19 1/2 x 3/8 x 2'-1"	42	350	501	209
	124 A	10 x 3/8 x 2'-4 1/2"	4 x 3/8 x 2'-4 1/2"	32	3	3 1/2 2 3/8 2 1/2	6	6	19 1/2 x 3/8 x 2'-1"	32	300	464	199
	116 A	10 x 3/8 x 1'-9 1/2"	4 x 3/8 x 1'-9 1/2"	24	2	3 1/2 2 3/8 2 1/2	6	6	19 1/2 x 3/8 x 2'-1"	32	240	430	192
30 WF	108 A	10 x 3/8 x 1'-9 1/2"	4 x 3/8 x 1'-9 1/2"	24	2	3 1/2 2 3/8 2 1/2	6	6	19 1/2 x 3/8 x 2'-1"	32	230	392	186
	99 A	10 x 3/8 x 1'-9 1/2"	4 x 3/8 x 1'-9 1/2"	24	2	3 1/2 2 3/8 2 1/2	6	6	19 1/2 x 3/8 x 2'-1"	32	220	353	177
	114 A	9 1/2 x 3/8 x 1'-9 1/2"	4 x 3/8 x 1'-9 1/2"	24	2	3 1/2 2 3/8 2 1/2	6	6	19 1/2 x 3/8 x 1'-11"	36	270	390	174
	102 A	9 1/2 x 3/8 x 1'-9 1/2"	4 x 3/8 x 1'-9 1/2"	24	2	3 1/2 2 3/8 2 1/2	6	6	19 1/2 x 3/8 x 1'-11"	28	220	345	158
	94 A	9 1/2 x 3/8 x 1'-9 1/2"	4 x 3/8 x 1'-9 1/2"	24	2	3 1/2 2 3/8 2 1/2	6	6	19 1/2 x 3/8 x 1'-11"	28	220	315	150
	84 A	9 1/2 x 3/8 x 1'-9 1/2"	4 x 3/8 x 1'-9 1/2"	24	2	3 1/2 2 3/8 2 1/2	6	6	19 1/2 x 3/8 x 1'-11"	28	210	273	141
	110 A	10 x 7/16 x 2'-4 1/2"	4 1/2 x 3/8 x 2'-4 1/2"	32	3	3 1/2 2 3/8 2 1/2	6 1/2	6 1/2	19 1/2 x 3/8 x 1'-8"	30	300	373	138
	100 A	10 x 7/16 x 2'-4 1/2"	4 1/2 x 3/8 x 2'-4 1/2"	32	3	3 1/2 2 3/8 2 1/2	6 1/2	6 1/2	19 1/2 x 3/8 x 1'-8"	30	300	338	126
	94 A	8 1/2 x 3/8 x 1'-9 1/2"	3 1/2 x 3/8 x 1'-9 1/2"	24	2	3 1/2 2 3/8 2 1/2	5	5	19 1/2 x 3/8 x 1'-8"	30	230	282	140
	84 A	8 1/2 x 3/8 x 1'-9 1/2"	3 1/2 x 3/8 x 1'-9 1/2"	24	2	3 1/2 2 3/8 2 1/2	5	5	19 1/2 x 3/8 x 1'-8"	30	230	250	127
27 WF	76 A	8 1/2 x 3/8 x 1'-9 1/2"	3 1/2 x 3/8 x 1'-9 1/2"	24	2	3 1/2 2 3/8 2 1/2	5	5	19 1/2 x 3/8 x 1'-8"	30	230	223	119
	68 A	8 1/2 x 3/8 x 1'-9 1/2"	3 1/2 x 3/8 x 1'-9 1/2"	24	2	3 1/2 2 3/8 2 1/2	5	5	19 1/2 x 3/8 x 1'-8"	24	200	195	112
	68 A	8 1/2 x 3/8 x 1'-2 1/2"	3 1/2 x 3/8 x 1'-2 1/2"	16	1	3 1/2 1 3/8 2 1/2	4 1/2	4 1/2	19 1/2 x 3/8 x 1'-5"	24	170	175	102
	68 A	8 1/2 x 3/8 x 1'-2 1/2"	3 1/2 x 3/8 x 1'-2 1/2"	16	1	3 1/2 1 3/8 2 1/2	4 1/2	4 1/2	19 1/2 x 3/8 x 1'-5"	24	170	175	102

\*Trim plates as required to fit beam flails.

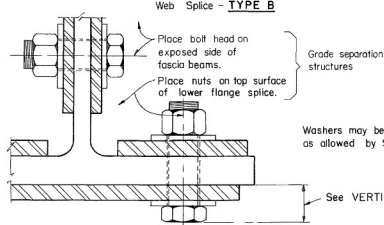
# Includes an allowance for weight of bolts and washers.



VIEW A-A  
Flange Splice - TYPE B



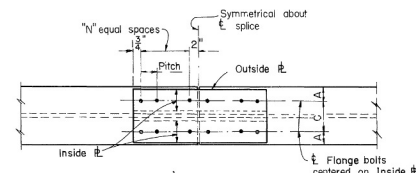
BEAM SPLICE DETAIL  
Web Splice - TYPE B



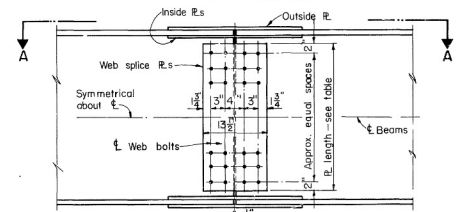
PARTIAL SECTION  
(at t of beam splice)

Washers may be omitted as allowed by Specifications.

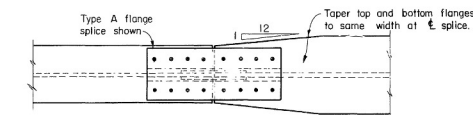
See VERTICAL CLEARANCE NOTE.



VIEW A-A  
Flange Splice - TYPE A



BEAM SPLICE DETAIL  
Web Splice - TYPE A

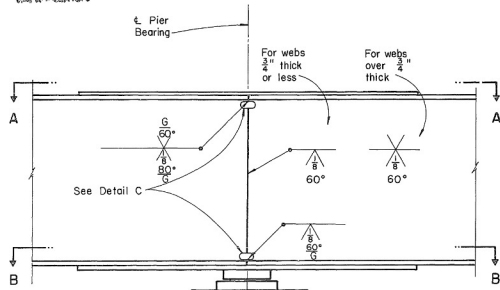


VIEW A-A  
Splice detail for beams having different flange widths

REVISIONS		STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES	
STANDARD BOLTED BEAM SPLICE DETAILS FOR STEEL BEAM BRIDGES		DRAWING NUMBER SD-2-64	
APPROVED DATE: 11-25-64 MPS	DESIGNED BY C.A. Alkhatib	CHECKED BY CAM	REVIEWED BY RVL

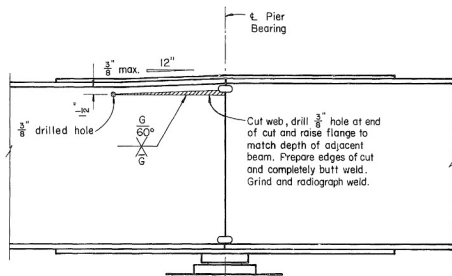


MICROFILMED  
MAR 6 1983  
ENCLOSURE



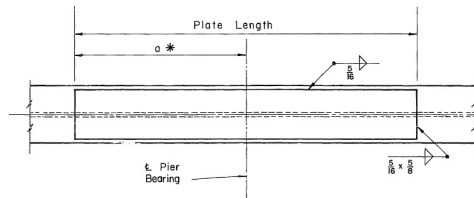
BEAM SPLICE DETAIL A

For splicing beams having depths differing by  $\frac{1}{8}$ " or less.



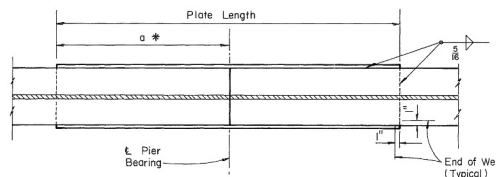
BEAM SPLICE DETAIL B

For splicing beams having depths differing by more than  $\frac{1}{8}$ "



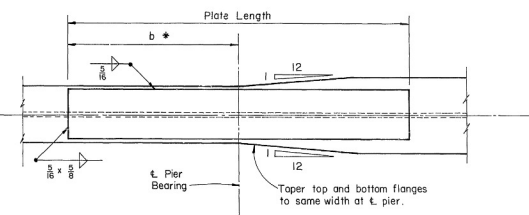
VIEW A-A

For splicing beams having the same flange width.



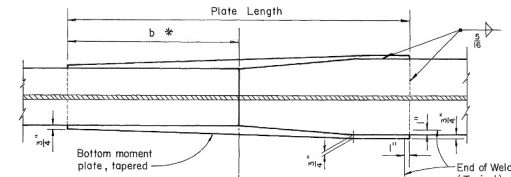
SECTION B-B

For splicing beams having the same flange width.



VIEW A-A

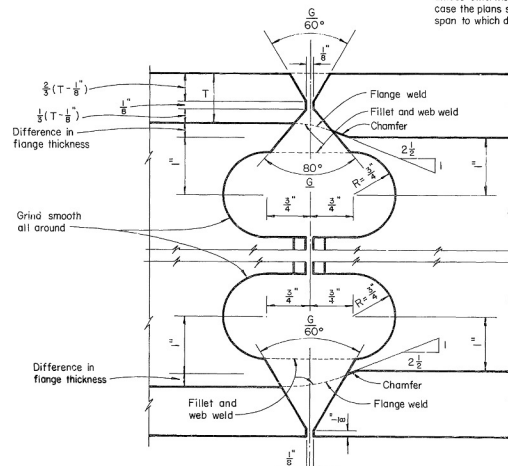
For splicing beams having different flange widths.



SECTION B-B

For splicing beams having different flange widths.

\* See Standard Drawings or project plans for dimensions "a" and "b". Dimension "a" equals  $\frac{1}{2}$  plate length unless otherwise shown, in which case the plans shall indicate the span to which dimension "a" applies.



DETAIL C

END PREPARATION OF ROLLED BEAMS FOR FIELD WELDING

# BEAM SPLICE WELDING PROCEDURE: (For 3 spans)

1. Raise the abutment ends of the beams the amount tabulated on Standard Drawings or project plans.

2. Butt-weld the beam flanges and web, using the following sequence: make two passes on the web, then two on each flange; repeat, using one or two passes at each location, until welds are completed.

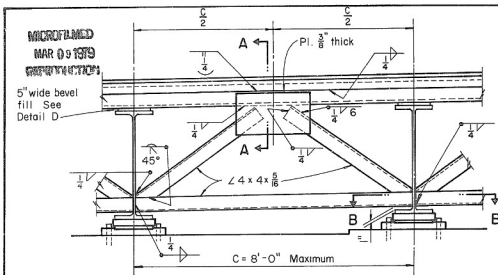
3. Weld the bottom and top moment plates.

4. Lower the beam ends to final position.

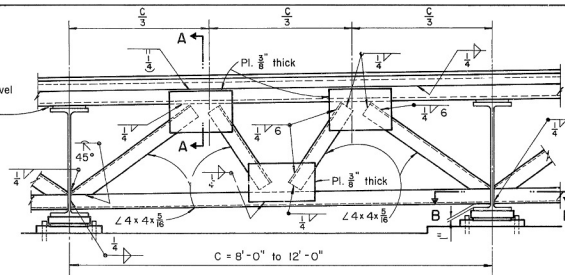
For 4 or more spans see project plans.

REVISIONS		U. S. OF CALIF. DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES			
		STANDARD SUPERSTRUCTURE DETAILS FOR STEEL BEAM BRIDGES			
APPROVED	DATE	ENGINEER OF BRIDGES	DRAWING NUMBER		
PREPARED	TRACED	CHECKED	REVIEWED		
BYE	JTK	FFE	MCA		
				SHEET NO. 1 OF 4 SHEETS	

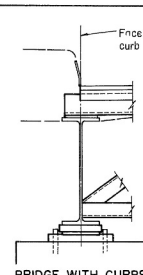




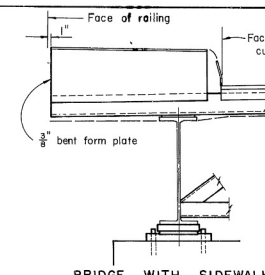
**END CROSSFRAME**  
For beam spacing of 8'-0" or less measured parallel to end dam.



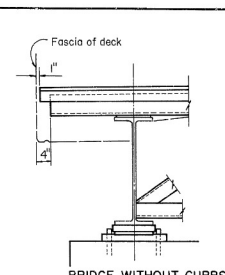
**END CROSSFRAME**  
For beam spacing of 8'-0" to 12'-0" measured parallel to end dam.



**BRIDGE WITH CURBS OR SAFETY CURBS**

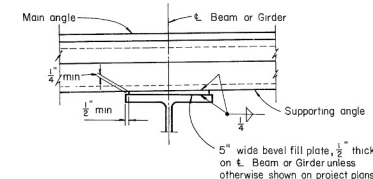


**BRIDGE WITH SIDEWALK**

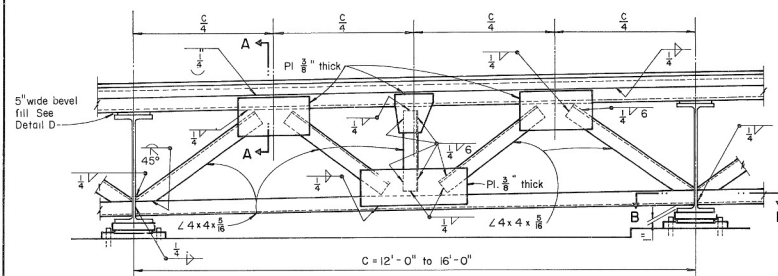


**BRIDGE WITHOUT CURBS**

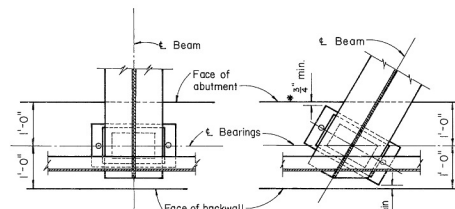
**END DAM DETAILS AT FASCIA BEAM**  
(For additional details see Sheet No. 4)



**DETAIL D**



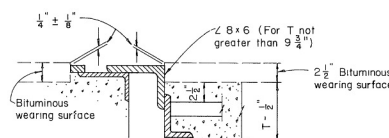
**END CROSSFRAME**  
For beam spacing of 12'-0" to 16'-0" measured parallel to end dam.



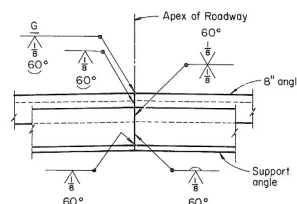
**FOR SQUARE BRIDGES**

**SECTION B - B**

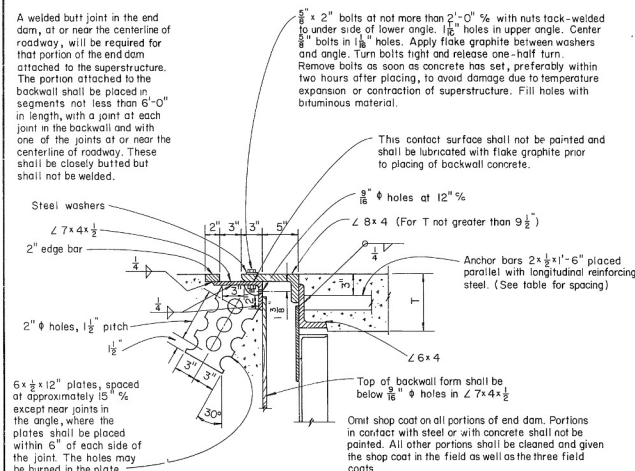
\* Where necessary, cope corner of masonry plate in order to maintain  $\frac{3}{4}$ " clearance.



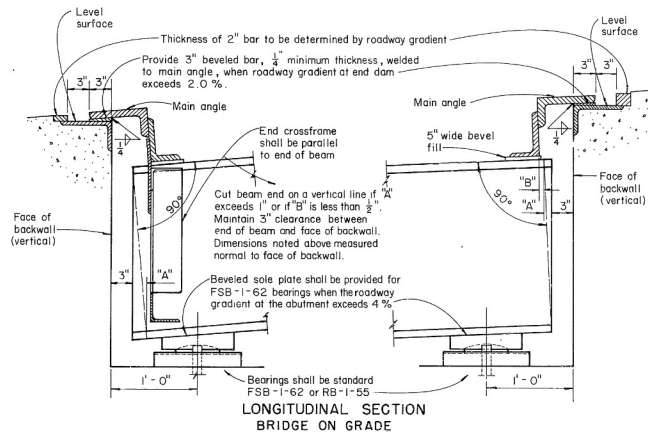
**SECTION A - A**  
SHOWING ROADWAY END DAM FOR BITUMINOUS WEARING SURFACE  
Same as SECTION A-A for monolithic wearing surface except as shown.



**WELDED BUTT JOINT IN SUPERSTRUCTURE END DAM**



**SECTION A - A**  
SHOWING ROADWAY END DAM FOR MONOLITHIC WEARING SURFACE



**LONGITUDINAL SECTION BRIDGE ON GRADE**

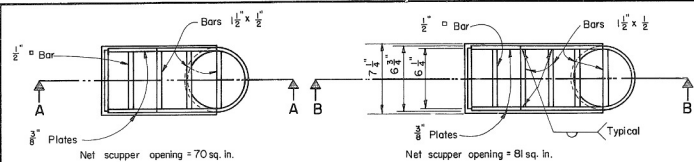
ROADWAY END DAM DATA			
Member	Thickness or spacing of member for frequency of:		
	CF = 130	CF = 400	CF = 2000
Main angle: 8x4 or 8x6 ±	$\frac{3}{4}$ "	$\frac{1}{2}$ "	1"
2" edge bar ±			
2x 1/2 x 1'-6" anchor bars - Spacing	18" Sp.	15" Sp.	12" Sp.
Supporting angle: 6x4	$\frac{1}{2}$ "	$\frac{3}{8}$ "	$\frac{3}{4}$ "

± See Sections A-A

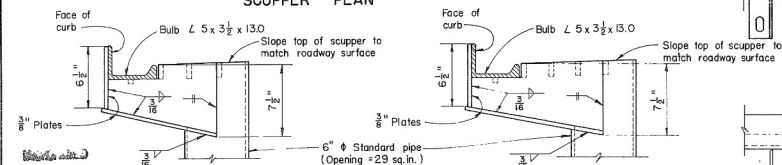
\* Modify thickness of bar as required for structures on grades exceeding 2 %

STATE OF OHIO DEPARTMENT OF HIGHWAYS DIVISION OF DESIGN AND CONSTRUCTION BUREAU OF BRIDGES			
STANDARD SUPERSTRUCTURE DETAILS FOR STEEL BEAM AND GIRDER BRIDGES			
APPROVED: <i>[Signature]</i> DATE: 11-12-63	DRAWING NUMBER: SD-1-63	SHEET NO. 2 OF 4 SHEETS	
PREPARED: FFE	CHECKED: JTK	REVIEWED: BFC, CDR, MFS, NCK, WSH	TRACED: WLL, JTK

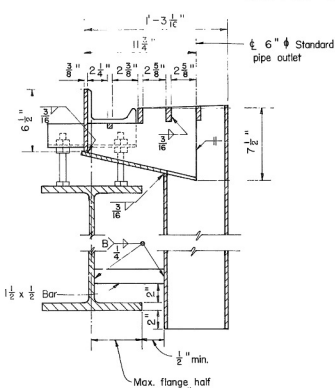




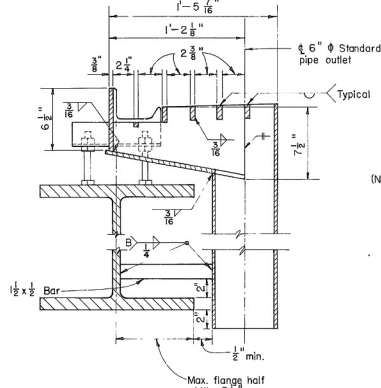
SCUPPER PLAN



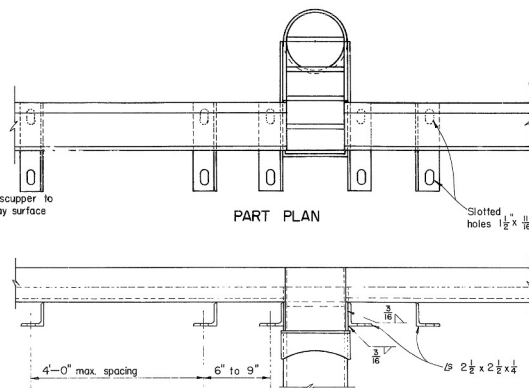
SCUPPER ELEVATION



SECTION A-A  
TYPE 1 SCUPPER



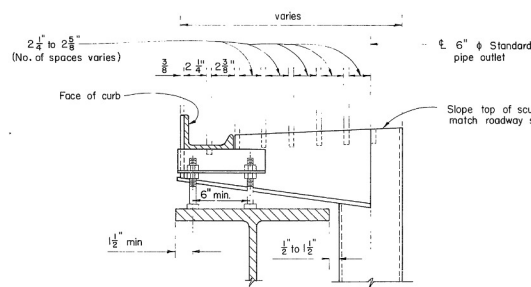
SECTION B-B  
TYPE 2 SCUPPER



PART PLAN

ELEVATION

GUTTER AND SCUPPER DETAILS



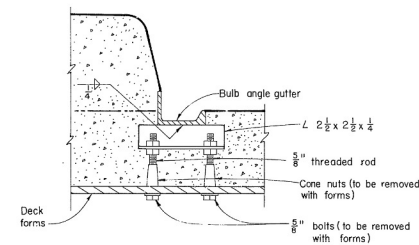
DETAIL "A"

Scupper elevation, showing method of widening scupper where necessary to clear flanges.

Gutter supports  $L 2 \frac{1}{2} \times 2 \frac{1}{2} \times \frac{1}{4}$  spaced at not more than 4'-0" centers between scuppers.

$\frac{3}{8}$ " bolts or end-welded studs  
Weld bolts or studs to top of moment plates at piers.

GUTTER SUPPORT A



GUTTER SUPPORT B

For bridges on which gutters are at considerable distance from beam or girder flange.

# NOTES

Scuppers shall be furnished in sufficient number to provide one square inch of net scupper opening for each 12 to 15 square feet of deck area to be drained. The downspout shall have, at least one square inch of opening for each five square inches of net scupper opening, with a minimum nominal diameter of 6 inches.

Scuppers should clear crossframes by at least 6 inches, piers by at least 5'-0", and abutments by 2'-6".

The first support angle each side of scupper is included with scupper for payment.

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

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

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	CAM	WICK HHH	



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STANDARD SUPERSTRUCTURE DETAILS FOR STEEL BEAM AND GIRDER BRIDGES					
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FFE	GM	WJ	SFG CDB MBS		