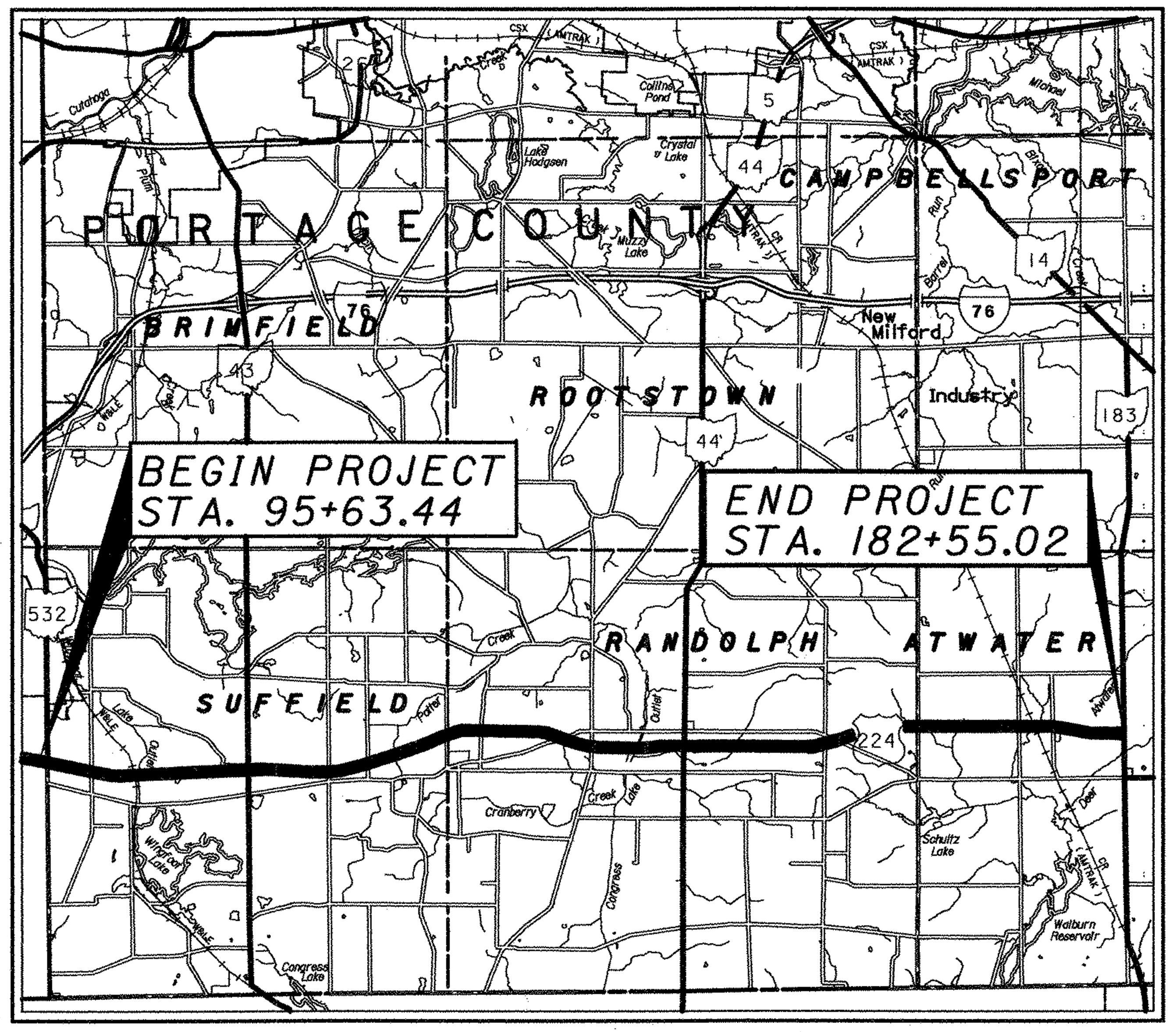

LOCATION MAP

LATITUDE: 40°40'45"   LONGITUDE: 81°16'20"

SCALE IN MILES

0 1 2 3 4 5 6

N

PORTION TO BE IMPROVED
INTERSTATE & DIVIDED HIGHWAY
UNDIVIDED STATE & FEDERAL ROUTES
OTHER ROADS

DESIGN DESIGNATION	WEST OF SR 44	EAST OF SR 44
CURRENT ADT (2001)	11,000	3,960
DESIGN YEAR ADT (2021)	13,480	5,260
DESIGN HOURLY VOLUME	1,348	526
DIRECTIONAL DISTRIBUTION	0.55	0.55
TRUCKS (24 HOUR B&C)	8%	10.5%
DESIGN SPEED	60	60
LEGAL SPEED	55	55

DESIGN FUNCTIONAL CLASSIFICATION - RURAL ARTERIAL

DESIGN EXCEPTIONS : APPROVED DATE
SHOULDER WIDTH .... OCTOBER 9, 2001

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

POR-224-0.00

SUFFIELD, RANDOLPH & ATWATER TOWNSHIPS

PORTAGE COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION

MILLING AND FILLING OF 13 MILES OF EX. US ROUTE 224 FROM 300 FEET WEST OF SR 532 EASTERLY TO SR 183, AND WIDENING OF US ROUTE 224 AT THREE INTERSECTIONS TO ACCOMODATE THE ADDITION OF A LEFT TURN LANE. UPGRADING GUARDRAIL AND TERMINAL ASSEMBLIES, CONSTRUCTING NEW FENCE AND REHABILITATING THREE MAINLINE US-224 STRUCTURES.

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 IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

1997 SPECIFICATIONS

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

THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE PART TIME CLOSING OF THE HIGHWAY TO TRAFFIC, AS NOTED ON SHEETS 20 & 21 DURING WHICH TIME DETOURS WILL BE PROVIDED AS SHOWN HEREIN. PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH IN THE PLANS AND ESTIMATES.

UNDERGROUND UTILITIES
TWO WORKING DAYS
BEFORE YOU DIG
CALL 1-800-362-2764 (TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

PLAN PREPARED BY:

BURGESS & NIPLE
100 WEST ERIE STREET
PAINESVILLE, OH 44077

ENGINEERS SEAL:

STATE OF OHIO
ERIC N. FORSBERG
41317
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Eric N. Forsberg
DATE: 3/21/03

STANDARD CONSTRUCTION DRAWINGS

BP-2.1	07-28-00	GR-1.1M	10-21-97	MT-101.60M	04-25-94	TC-65.10	10-19-01
BP-2.3	07-28-00	GR-1.2M	01-03-96	MT-105.10M	04-25-94	TC-65.11	10-19-01
BP-2.5	07-28-00	GR-2.1M	04-14-98	MT-105.11M	04-25-94	TC-65.12	10-19-01
BP-3.1	07-28-00	GR-3.1M	10-21-97			TC-71.10M	09-01-93
BP-5.1	07-28-00	GR-3.4M	10-21-97	RM-4.1M	10-21-97	TC-73.10	01-19-01
				RM-4.2M	10-21-97	TC-81.10	05-01-00
DM-1.1	07-20-01	MT-35.10	04-20-01			TC-82.10	01-19-01
DM-4.3	07-20-01	MT-95.30M	04-25-94	TC-17.10	01-19-01	TC-83.10	05-01-00
DM-4.4	07-20-01	MT-96.11M	01-30-95	TC-21.20	01-19-01	TC-84.20	05-01-00
		MT-96.20M	01-30-95	TC-41.20	01-19-01	TC-85.20	05-01-00
F-2.1	07-28-00	MT-96.21M	01-30-95	TC-41.40M	03-31-94		
F-3.1	07-28-00	MT-96.25	04-20-01	TC-41.41	01-19-01	AS-1-81	10-25-94
F-3.3	07-28-00	MT-97.10M	04-25-94	TC-41.50	01-19-01	CS-1-93	06-30-95
F-3.4	07-28-00	MT-97.11M	01-30-95	TC-42.20	04-20-01	EXJ-4-87	04-20-01
		MT-99.20M	01-30-95	TC-52.10	04-20-01	SBR-1-91	01-12-99
MH-1.1	07-20-01	MT-101.20M	03-01-96	TC-52.20	04-20-01		

SUPPLEMENTAL SPECIFICATIONS

806	09-09-97	863	10-12-99	905	04-01-98
814	06-02-98	870	08-10-99	906	05-05-98
842	01-06-99	877	04-13-99	907	10-21-98
843	05-05-98	885	08-10-99	908	11-07-00
844	01-06-99	892	09-14-99	910	07-11-00
846	09-09-97	894	10-12-99	911	07-10-97
847	06-30-98	899	10-21-98	953	06-14-95
848	06-30-98			954	09-09-97
858	11-07-00				

SPECIAL PROVISIONS

WHEELING AND LAKE ERIE RAILWAY AGREEMENT	4/03/2001
NORFOLK SOUTHERN RAILWAY AGREEMENT	4/27/2001

FEDERAL PROJECT NO. TE21-GOOO (644)

PID NO. 19854

CONSTRUCTION PROJECT NO. 3010-01

RAILROAD INVOLVEMENT
WHEELING & LAKE ERIE R.R.
NORFOLK SOUTHERN R.R.

POR-224-0.00

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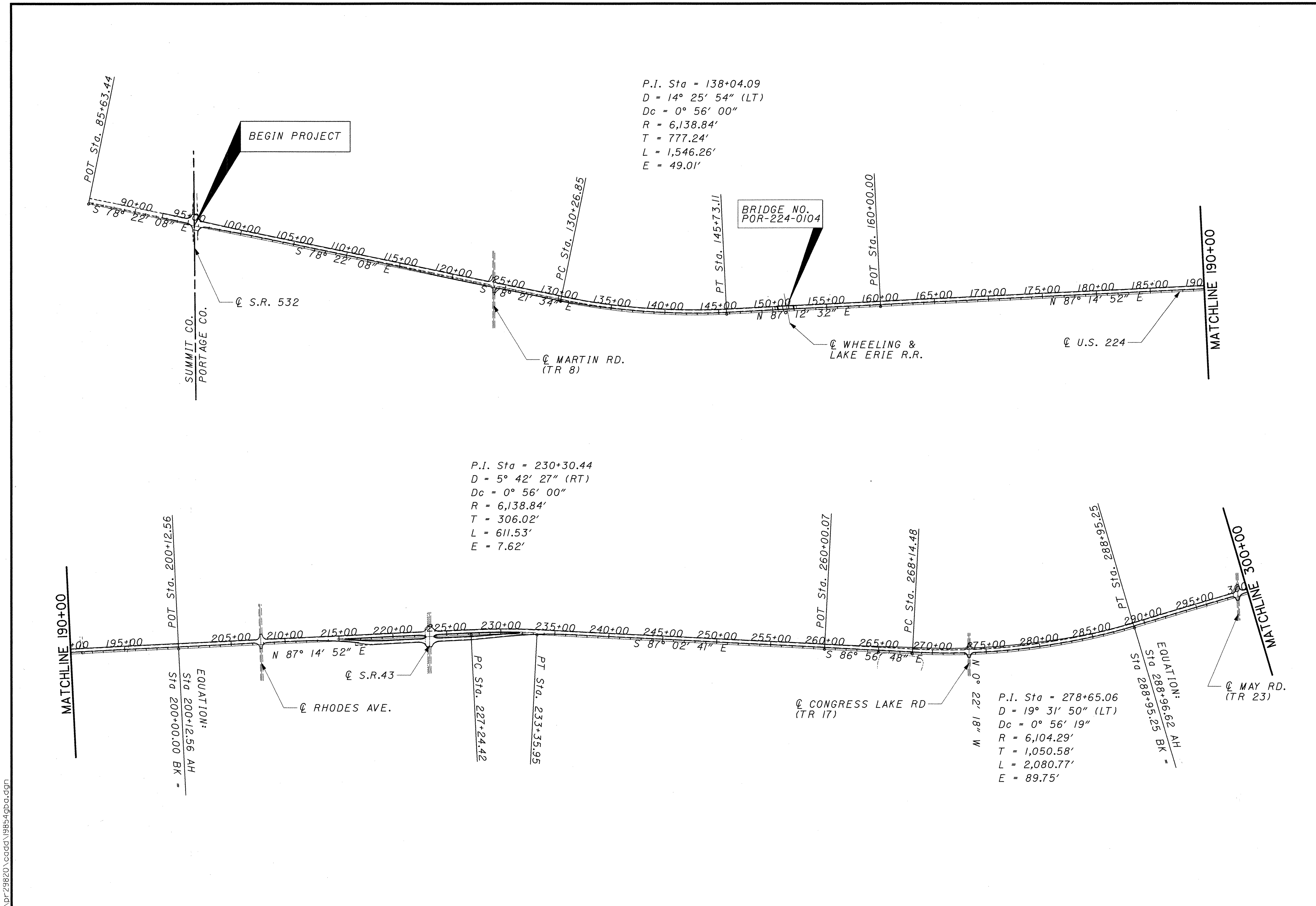

N

0 200 400 800
HORIZONTAL
SCALE IN FEET

SCHEMATIC PLAN

POR-224-0.00

SCHEMATIC PLAN

POR-224-0.00

3/169

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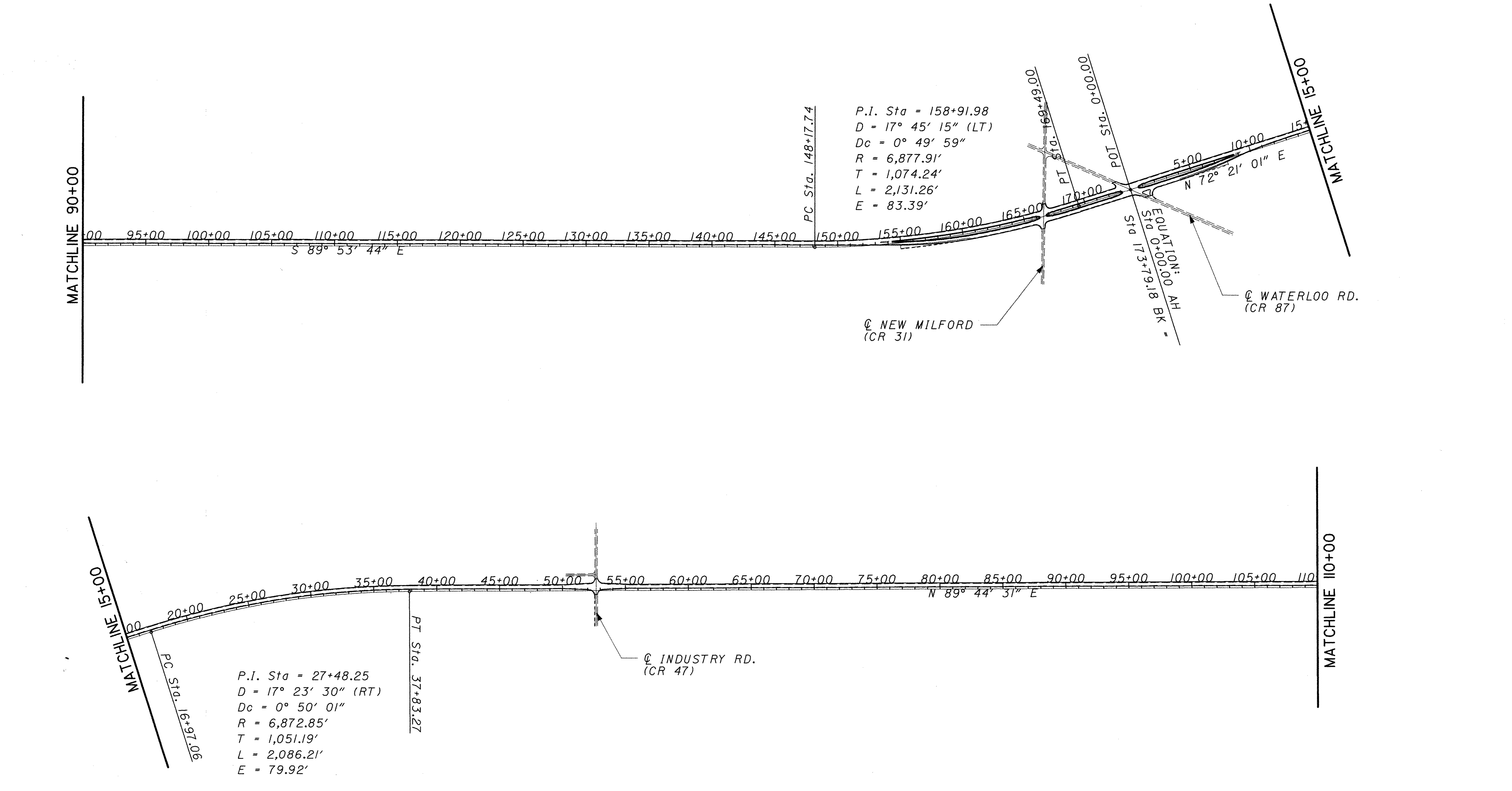

0 200 400 800
HORIZONTAL SCALE IN FEET

SCHEMATIC PLAN

POR-224-0.00

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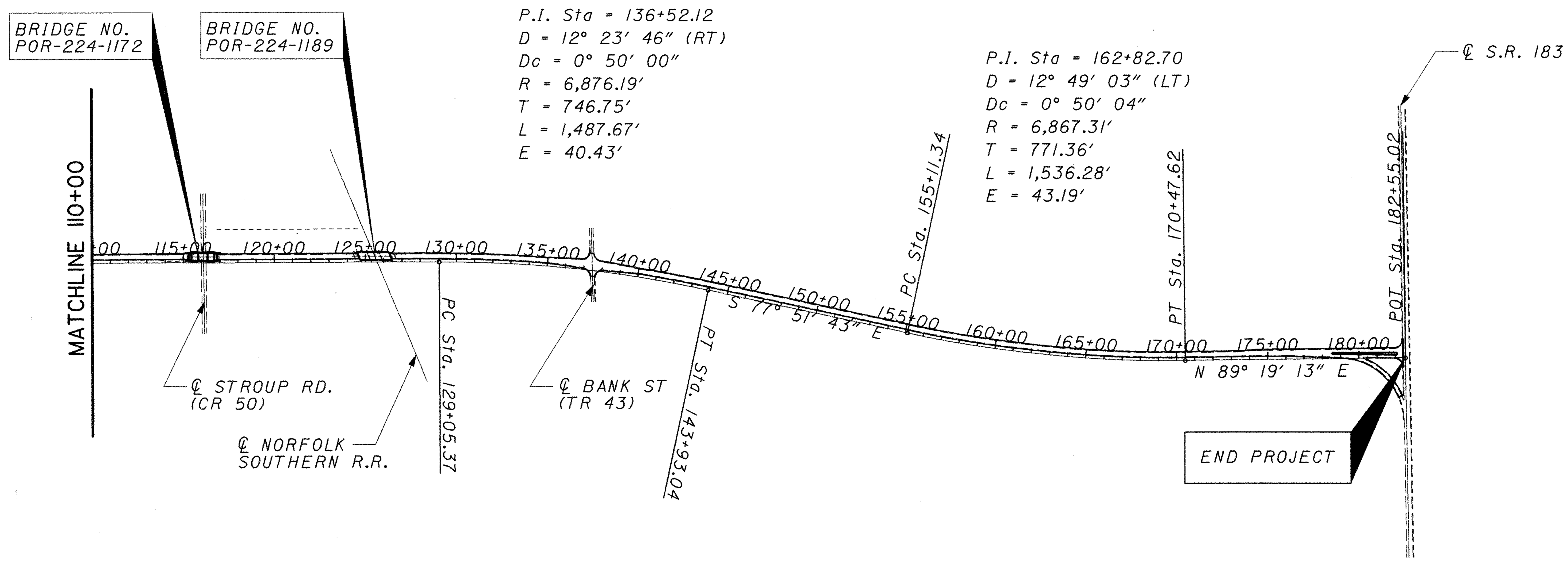

HORIZONTAL
SCALE IN FEET
0 200 400 800

SCHEMATIC PLAN

POR-224-0.00

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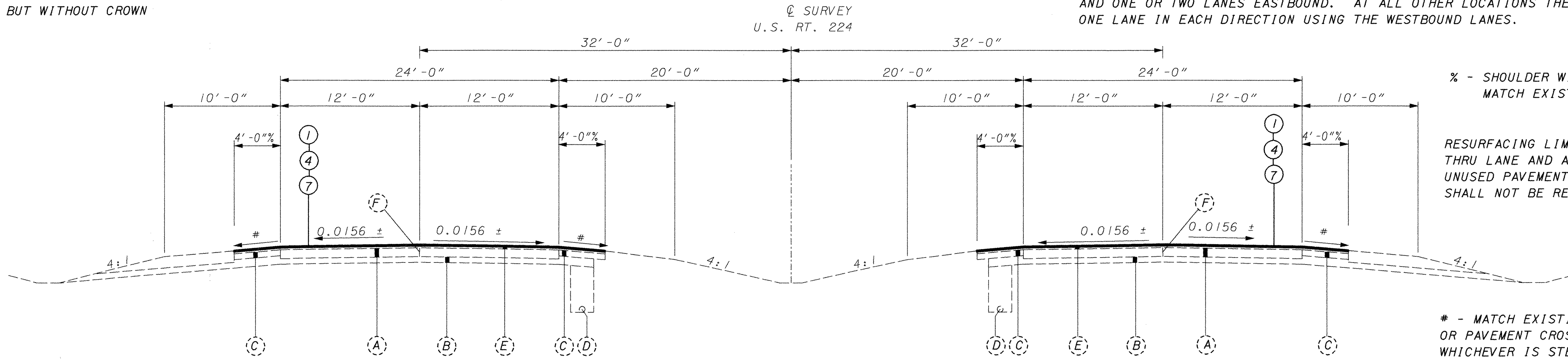
NORMAL CROWN SHOWN, SUPERELEVATED SECTIONS EAST OF STA. 60+00 (SLM 7.35±) SIMILAR (0.0156 CROSS SLOPE), BUT WITHOUT CROWN

* - WHERE EASTBOUND LANES EXIST, THERE ARE TWO LANES WESTBOUND AND ONE OR TWO LANES EASTBOUND. AT ALL OTHER LOCATIONS THERE IS ONE LANE IN EACH DIRECTION USING THE WESTBOUND LANES.



% - SHOULDER WIDTH MAY VARY, MATCH EXISTING WIDTH

RESURFACING LIMITS SHALL BE TO THE THRU LANE AND ADJACENT SHOULDER. UNUSED PAVEMENT BEYOND SAID LIMIT SHALL NOT BE RESURFACED.

- MATCH EXISTING CROSS SLOPE OR PAVEMENT CROSS SLOPE, WHICHEVER IS STEEPER

WESTBOUND *

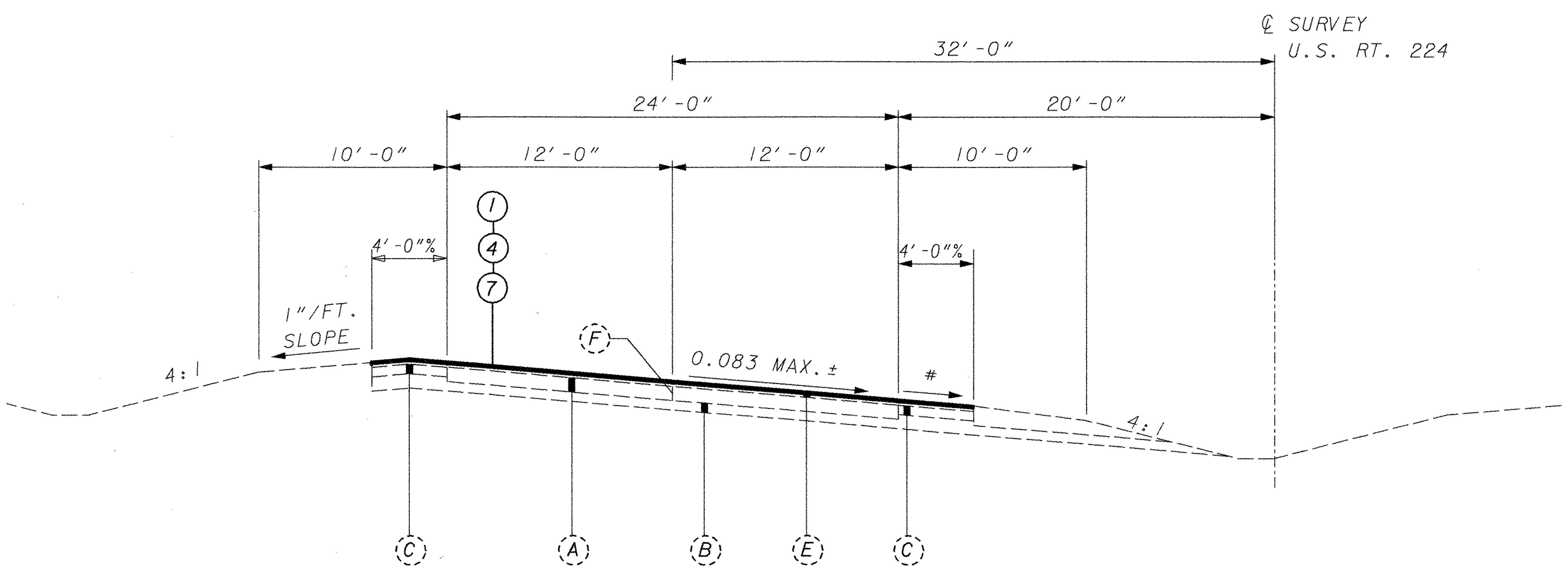
STA. 94+50.00	TO STA. 130+28.50	-	3578.50	LIN.FT.
STA. 145+67.79	TO STA. 150+52.46	-	484.67	LIN.FT.
STA. 152+00.00	TO STA. 200+00(BK)	-	4800.00	LIN.FT.
STA. 200+12.56(AH)	TO STA. 227+27.39	-	2714.83	LIN.FT.
STA. 233+50.60	TO STA. 268+14.48	-	3463.88	LIN.FT.
STA. 288+96.62(AH)	TO STA. 323+13.47	-	3416.85	LIN.FT.
STA. 331+07.22	TO STA. 352+24.50	-	2117.28	LIN.FT.
STA. 363+82.27	TO STA. 400+00(BK)	-	3617.73	LIN.FT.
STA. 400+08.28(AH)	TO STA. 406+65.23	-	659.95	LIN.FT.
	TOTAL	-	24853.69	LIN.FT.

WESTBOUND *

STA. 418+48.56	TO STA. 425+12.44(BK)	-	663.88	LIN.FT.
STA. 0+00.00(AH)	TO STA. 73+94.00(BK)	-	7394.00	LIN.FT.
STA. 73+99.17(AH)	TO STA. 173+79.18(BK)	-	9980.01	LIN.FT.
STA. 0+00.00(AH)	TO STA. 115+20.30	-	11520.30	LIN.FT.
STA. 116+99.30	TO STA. 124+78.26	-	778.96	LIN.FT.
STA. 126+52.14	TO STA. 182+45.32	-	5593.18	LIN.FT.
	TOTAL	-	35930.33	LIN.FT.

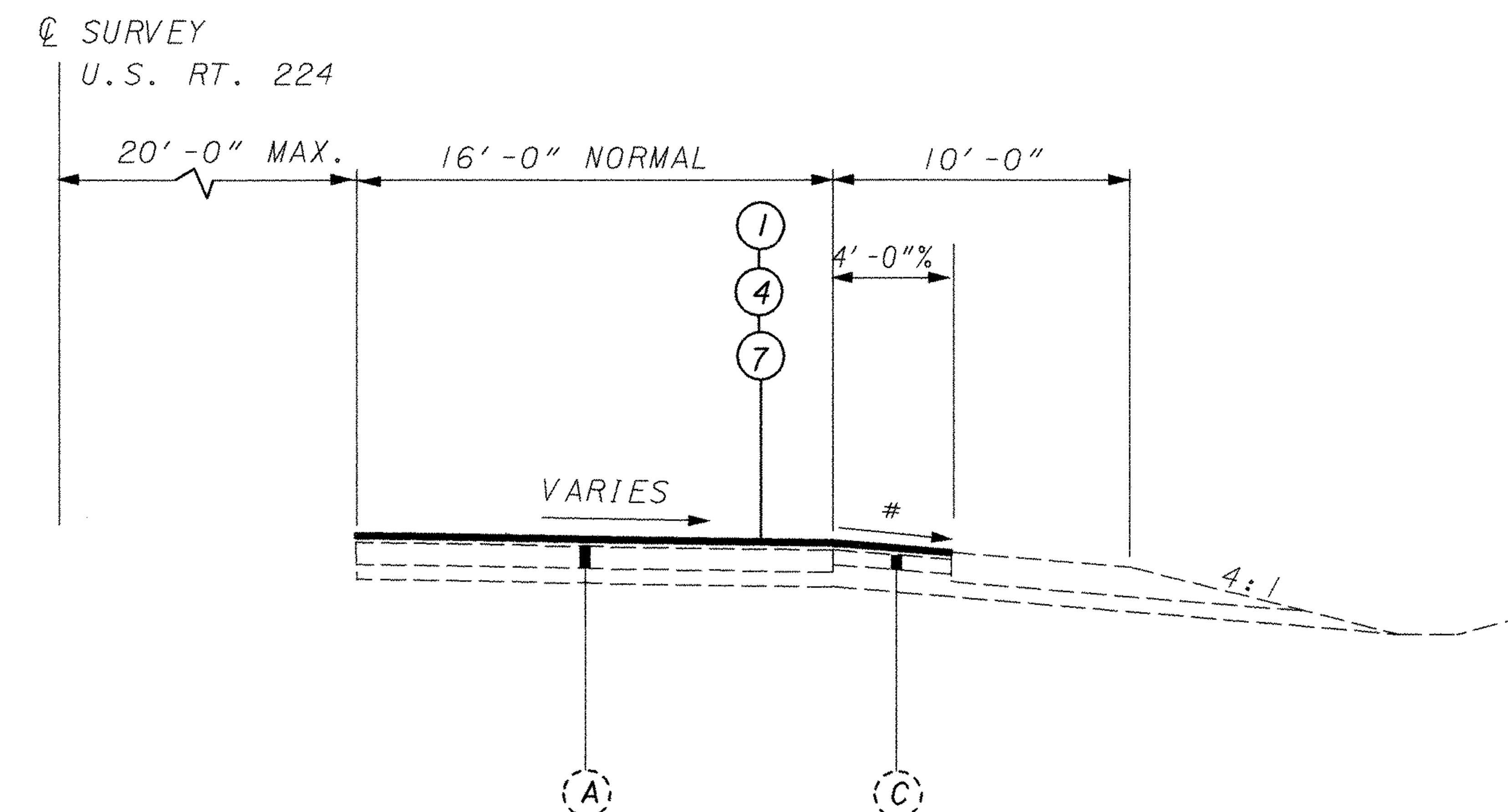
EASTBOUND *

STA. 218+95.00	TO STA. 226+50.00	-	755.00	LIN.FT
STA. 72+50.00	TO STA. 73+94.00(BK)	-	144.00	LIN.FT.
STA. 73+99.17(AH)	TO STA. 80+00.00	-	600.83	LIN.FT.
STA. 160+50.00	TO STA. 173+79.18(BK)	-	1329.18	LIN.FT.
STA. 0+00.00(AH)	TO STA. 4+00.00	-	400.00	LIN.FT.
	TOTAL	-	2330.01	LIN.FT.



SUPERELEVATED SECTION (>0.0156 CROSS SLOPE)

STA. 130+28.50	TO STA. 145+67.79	-	1539.29	LIN.FT.
STA. 227+27.39	TO STA. 233+50.60	-	623.21	LIN.FT.
STA. 268+14.48	TO STA. 288+95.25(BK)	-	2080.77	LIN.FT.
STA. 323+13.47	TO STA. 331+07.22	-	793.75	LIN.FT.
STA. 352+24.50	TO STA. 363+82.27	-	1157.77	LIN.FT.
STA. 406+65.23	TO STA. 418+48.56	-	1183.33	LIN.FT.
	TOTAL	-	7378.12	LIN.FT.



CROSSOVER TRANSITION

STA. 211+25.00	TO STA. 218+95.00	-	770.00	LIN.FT
STA. 226+50.00	TO STA. 235+75.00	-	925.00	LIN.FT
STA. 60+00.00	TO STA. 72+50.00	-	1250.00	LIN.FT.
STA. 80+00.00	TO STA. 89+00.00	-	900.00	LIN.FT.
STA. 148+14.62	TO STA. 160+50.00	-	1235.38	LIN.FT.
STA. 4+00.00	TO STA. 13+50.00	-	950.00	LIN.FT
	TOTAL	-	6030.38	LIN.FT.

FOR LEGEND SEE SHEET 8

MAINLINE TYPICAL SECTIONS

POR-224-0.00

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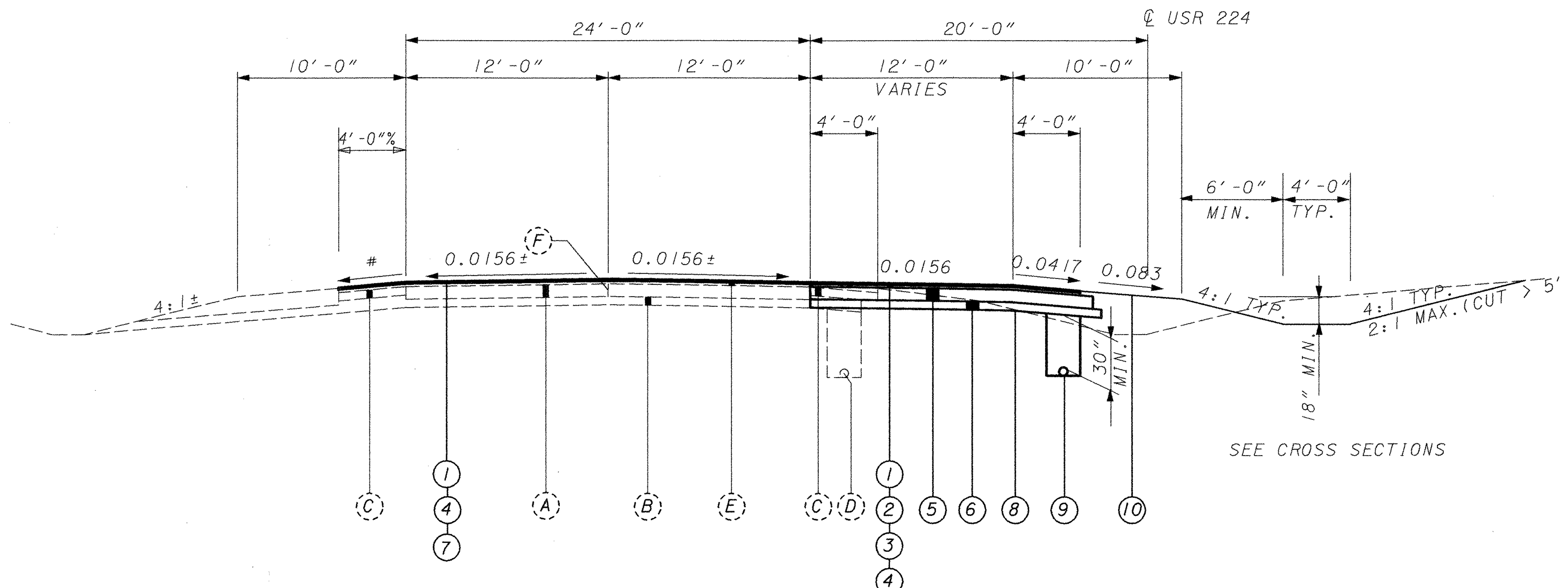
\# - MATCH EXISTING CROSS SLOPE OR PAVEMENT CROSS SLOPE, WHICHEVER IS STEEPER

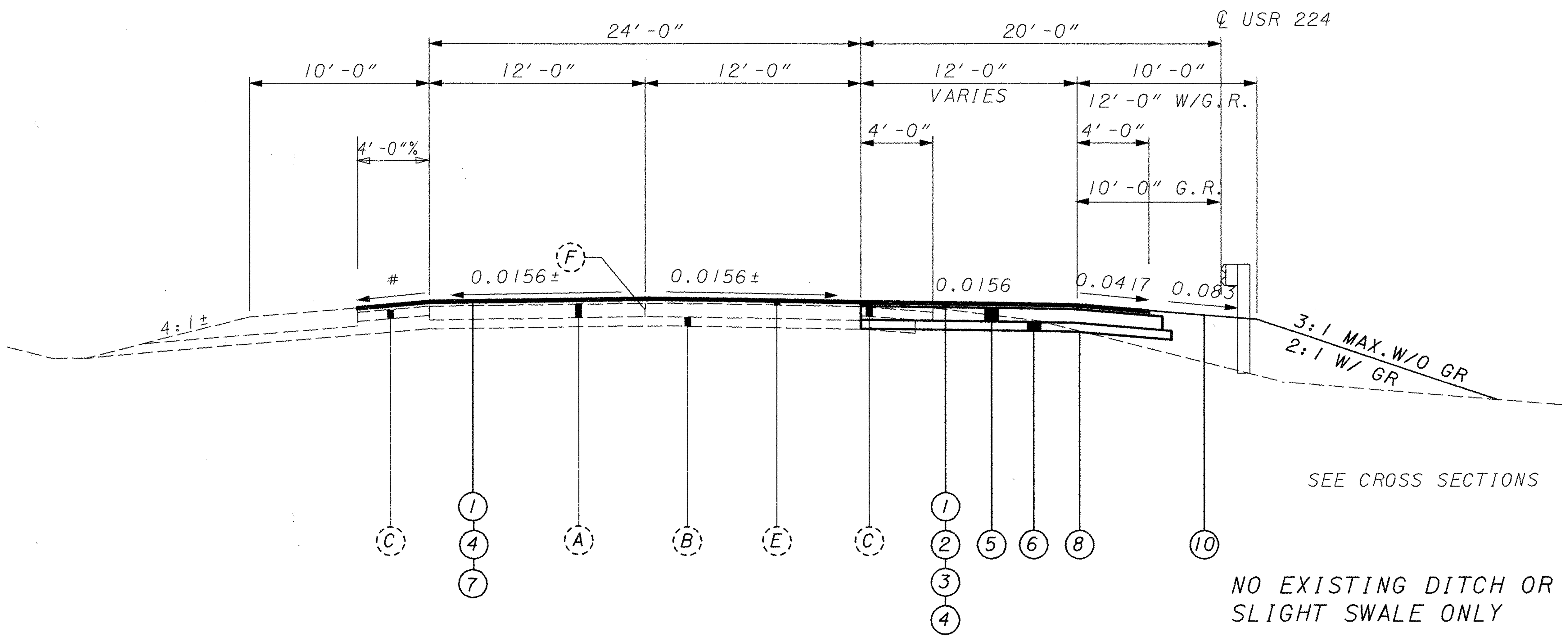
% - SHOULDER WIDTH MAY VARY, MATCH EXISTING WIDTH



TYPICAL WIDENING IN CUT

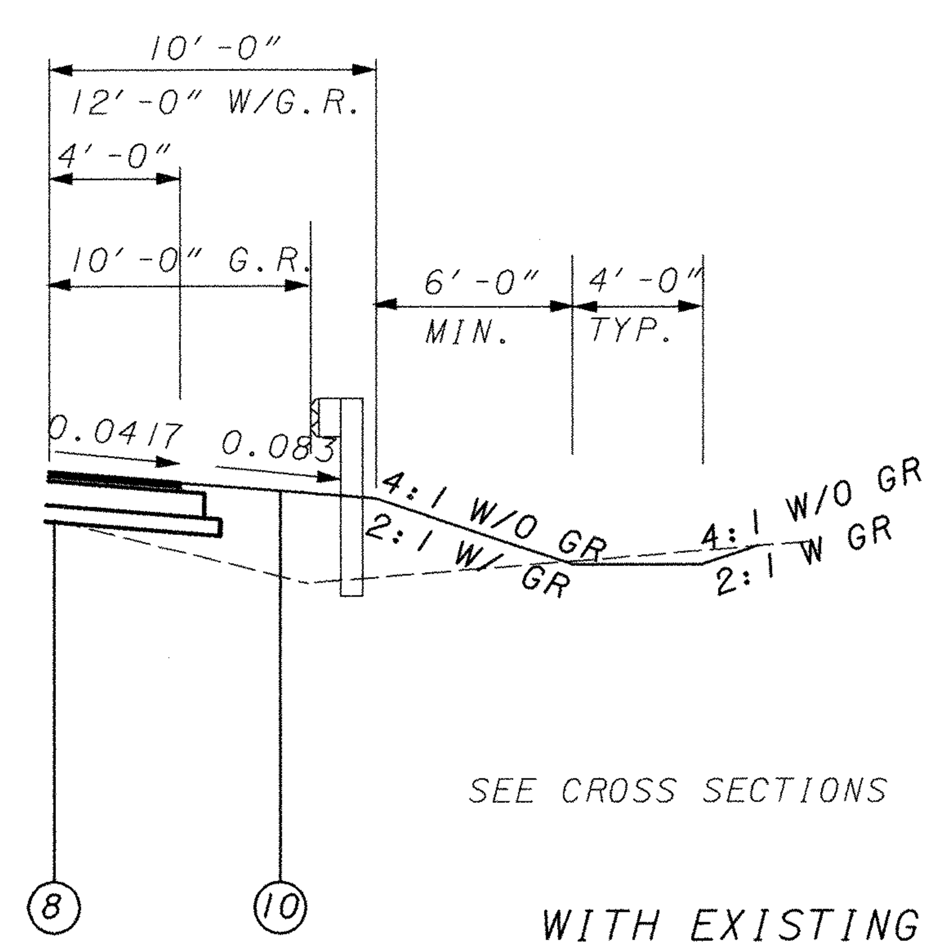
INTERSECTION WIDENING LOCATIONS

STA. 111+80 TO STA. 123+90± = 1210.00± LIN.FT.		
STA. 124+13± TO STA. 136+20 = 1207.00± LIN.FT.		MARTIN ROAD
TOTAL = 2417.00 LIN.FT.		
STA. 261+30 TO STA. 273+30± = 1200.00± LIN.FT.		CONGRESS LAKE ROAD
STA. 273+50± TO STA. 285+60 = 1210.00± LIN.FT.		
TOTAL = 2410.00 LIN.FT.		
STA. 412+40 TO STA. 424+40± = 1200.00± LIN.FT.		WATERLOO ROAD
STA. 0+20± TO STA. 12+50 = 1230.00± LIN.FT.		
TOTAL = 2430.00 LIN.FT.		



NO EXISTING DITCH OR SLIGHT SWALE ONLY

TYPICAL WIDENING IN FILL



WITH EXISTING DITCH

FOR LEGEND SEE SHEET 8

WIDENING TYPICAL SECTIONS

POR-224-0.00

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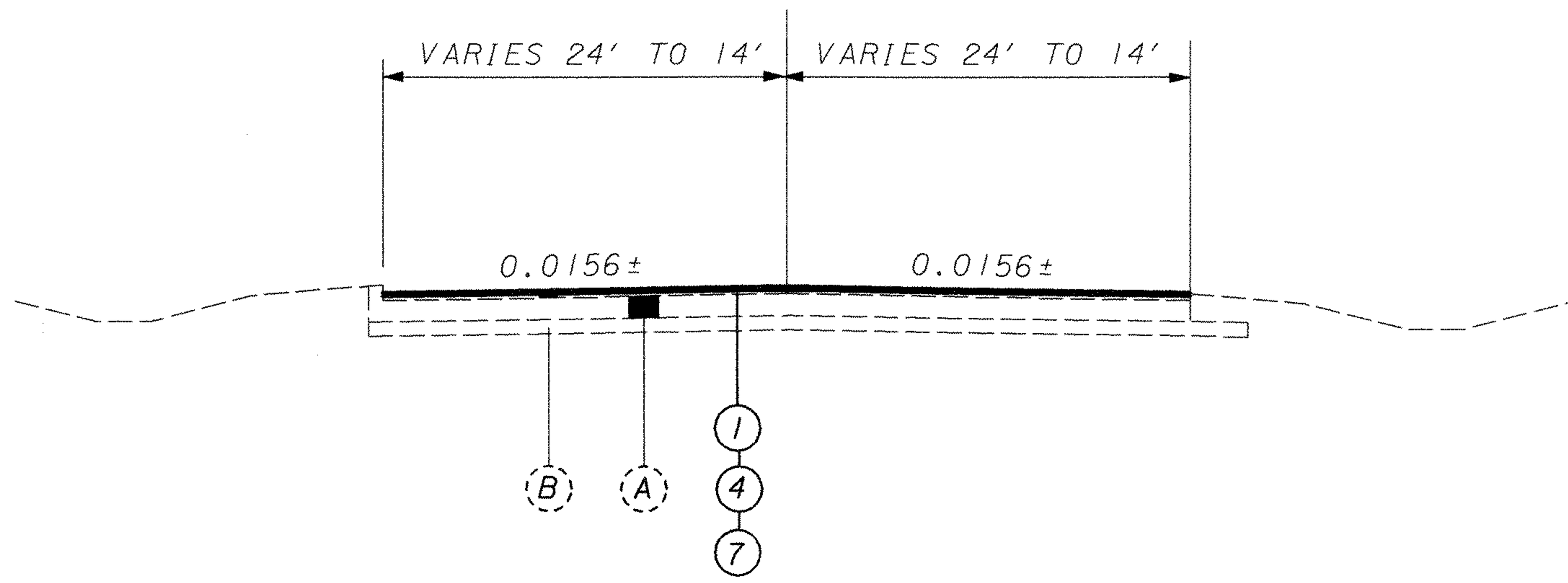
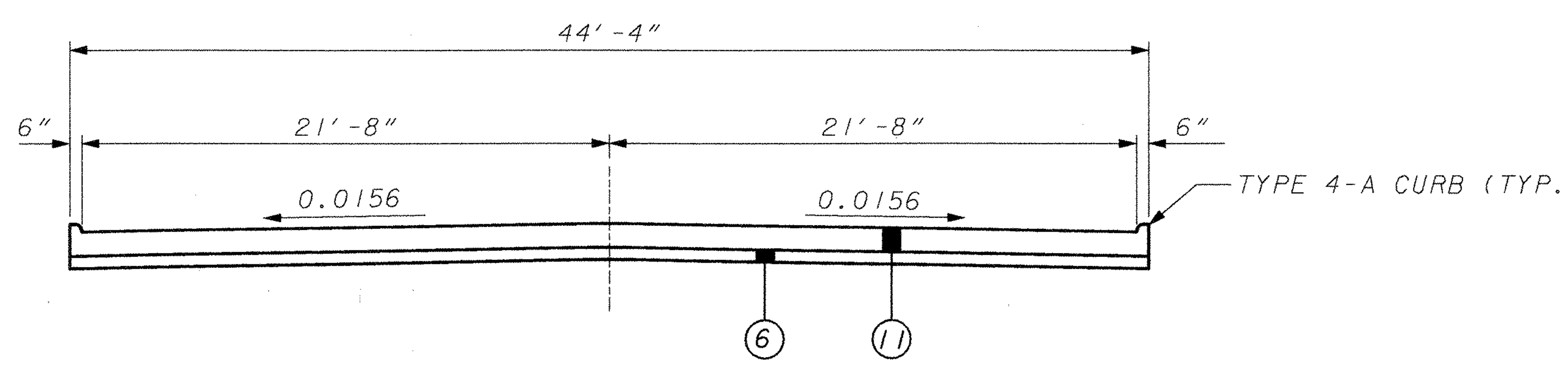


SR 44
STA. 1+00 TO STA. 3+00 = 200 LIN.FT.
TOTAL = 200 LIN.FT.



APPROACH SLAB
STA. 115+32.30 TO STA. 115+47.30 = 15 LIN.FT.
STA. 116+72.30 TO STA. 116+87.30 = 15 LIN.FT.
TOTAL = 30 LIN.FT.

PROPOSED

1 ITEM 446 - 1½" ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN
2 ITEM 448 - 1¾" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
3 ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE
4 ITEM 407 - TACK COAT
5 ITEM 301 - 9" BITUMINOUS AGGREGATE BASE
6 ITEM 304 - 6" AGGREGATE BASE
7 ITEM 254 - 1" PAVEMENT PLANING, BITUMINOUS
8 ITEM 203 - SUBGRADE COMPACTION
9 ITEM 605 - 6" UNDERDRAIN
10 ITEM 870 - SEEDING AND MULCHING
11 ITEM 611 - 12" REINFORCED CONCRETE APPROACH SLAB

EXISTING

A 9" REINFORCED CONCRETE PAVEMENT
B 6" AGGREGATE BASE
C 6" STABILIZED AGGREGATE SHOULDERS
D 6" UNDERDRAIN
E 3"± ASPHALT CONCRETE
F STANDARD LONGITUDINAL JOINT
G 9" CRUSHED AGGREGATE BASE

APPROACH SLAB AND SR 44 TYPICAL SECTIONS

POR-224-0.00

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GENERAL NOTES

GENERAL

UTILITIES

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

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE CONTACTS:

AMERITECH
50 W. BOWERY STREET, 4TH FL.
AKRON, OHIO 44308
(330) 384-8057
ATTN: RICK DELAGRANGE

TIME WARNER CABLE
5520 WHIPPLE AVE. N.W.
NORTH CANTON, OHIO 44720
(330) 494-9200
ATTN: STEVE WEAVER

OHIO EDISON
1910 WEST MARKET STREET
AKRON, OHIO 44313
(330) 384-4750
ATTN: STEVE VANCHOFF

EDCO PRODUCING, INC.
P.O. BOX 329
MOUNT GILEAD, OHIO 43338
(419) 947-2515
ATTN: ERIC BROWN

DOMINION / EAST OHIO GAS
1000 WEST WILBETH RD.
AKRON, OHIO 44314
(330) 798-7104
ATTN: GEORGE TURNER

ORION PETRO
P.O. BOX 5569
EVANSVILLE, IN 47715
(812) 479-0853
ATTN: OLIVER HARRIS

GREAT LAKES ENERGY PARTNERS
P.O. BOX. 550
HARTVILLE, OHIO 44632
(330) 877-6747
ATTN: SUE BARCLAY

BP OIL COMPANY
4421 BRADLEY ROAD
CLEVELAND, OHIO 44109
(216) 586-2050
ATTN: TOM COYNE

OHIO DEPARTMENT OF TRANSPORTION
DISTRICT 4
705 OAKWOOD STREET
RAVENNA, OHIO 44266
(330) 297-0801 EXT. 305
ATTN: KEN GREENE

CABLE ONE
535 EAST TURKEYFOOT LAKE RD.
AKRON, OHIO 44319
(800) 896-9088
ATTN: RICK RICHARDSON

CALL OHIO UTILITIES PROTECTION SERVICE (TOLL FREE TELEPHONE: 800-362-2764) AND THE OIL AND GAS PRODUCERS UNDERGROUND PROTECTION SERVICE (TOLL FREE TELEPHONE: 800-925-0988) TWO (2) WORKING DAYS BEFORE YOU DIG.

ANY AND ALL WORK REQUIRED FOR REMOVING, RELOCATING AND CONSTRUCTION OF NEW FACILITIES FOR PRIVATE OR PUBLIC UTILITIES WILL BE DONE BY AND AT THE EXPENSE OF THE RESPECTIVE OWNERS UNLESS OTHERWISE NOTED ON THE PLANS. THE CONTRACTOR SHALL COORDINATE HIS OPERATIONS WITH THE WORK OF THE UTILITY OWNERS OR OTHERS WHO MAY BE MAKING THE RELOCATIONS.

RIGHT OF WAY

ALL WORK SHALL BE PERFORMED WITHIN THE EXISTING RIGHT OF WAY OR EASEMENTS.

CONTRACTORS EQUIPMENT AND OPERATION

THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAFFIC. A QUALIFIED FLAGGER SHALL BE EMPLOYED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT. PAVERS, ROLLERS AND OTHER EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY WHEN PAVING OPERATIONS ARE SCHEDULED TO CONTINUE WITHIN THE NEXT WORKDAY: OTHERWISE THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA OUTSIDE THE R/W, THE LOCATION OF WHICH SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. WHEN PARKING ALONG THE HIGHWAY THE EQUIPMENT SHALL BE PLACED AND DELINEATED AS PER 614.03. NO EQUIPMENT SHALL BE PARKED IN THE MEDIAN OF THE HIGHWAY. ADEQUATE BARRICADES AND LIGHTS SHALL BE PLACED ON THE PAVEMENT SIDE OF THE EQUIPMENT TO IDENTIFY THE LIMITS OF THE EQUIPMENT. ALL OTHER EQUIPMENT, INCLUDING PRIVATE VEHICLES, SHALL BE STORED AT THE APPROVED CONTRACTOR'S STORAGE AREA. NO EQUIPMENT SHALL BE PARKED ON PRIVATE PROPERTY UNLESS PRIOR APPROVAL OF THE OWNER AND THE PROJECT ENGINEER / SUPERVISOR HAS BEEN GRANTED.

ELEVATION DATUM

ALL ELEVATIONS ARE BASED ON U.S.G.S. DATUM. (NAVD88)

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. THE INSTALLATION AND OPERATION OF ALL TEMPORARY TRAFFIC CONTROL AND TEMPORARY TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS SHALL BE PROVIDED BY THE CONTRACTOR WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS OPERATION WITH THE CONTRACTOR'S ON OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THIS CONTRACT. NO WAIVER OF ANY PROVISIONS OF 105.07 OF THE CONSTRUCTION AND MATERIAL SPECIFICATION IS INTENDED.

CONVERSION OF STANDARD DRAWINGS

THE METRIC STANDARD DRAWINGS REFERENCED IN THIS PLAN SHALL BE CONVERTED TO ENGLISH UNITS USING THE SI (METRIC) TO ENGLISH CONVERSION FACTORS PROVIDED IN SECTION 109.011 OF THE 1997 CONSTRUCTION AND MATERIALS SPECIFICATIONS. THE APPENDIX OF ASTM E 380 SHALL BE UTILIZED FOR ANY ADDITIONAL CONVERSION FACTORS REQUIRED. CONVERSIONS SHALL BE APPROPRIATELY PRECISE AND SHALL REFLECT STANDARD INDUSTRY ENGLISH VALUES WHERE SUITABLE.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLY TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

FIELD OFFICE

FIELD OFFICE, TYPE B, AS REQUIRED BY SUPPLEMENTAL SPECIFICATION 806, SHALL BE AVAILABLE AND COMPLETELY FUNCTIONAL NO LATER THAT 1 WEEK PRIOR TO THE START OF CONSTRUCTION WORK.

ENVIRONMENTAL AVOIDANCE

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN ANY STREAMS OR WETLANDS UNLESS THE REQUIRED STATE AND/OR FEDERAL PERMITS HAVE BEEN OBTAINED IN ACCORDANCE WITH ALL APPLICABLE STATE AND/OR FEDERAL LAWS AND REGULATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY STREAMS OR WETLANDS.

GENERAL NOTES

ROADWAY

ITEM 201 - CLEARING AND GRUBBING

CLEAR BRUSH, TREES AND OVERHANGING BRANCHES ALONG THE ENTIRE PROJECT THAT ARE WITHIN 20 FEET OF THE EDGE LINE OF US 224. AT EACH INTERSECTION , BRUSH AND TREES ON THE NORTH SIDE OF US 224 SHALL BE CLEARED TO THE RIGHT OF WAY ON US 224 FOR A DISTANCE OF 100 FEET EAST AND WEST OF EACH SIDE ROAD CENTERLINE. BRUSH AND TREES ON THE SOUTH SIDE OF US 224 SHALL BE CLEARED TO THE RIGHT OF WAY ON US 224 FOR A DISTANCE OF 65 FEET EAST AND WEST OF EACH SIDE ROAD CENTERLINE.

IN ORDER TO MITIGATE HABITAT DESTRUCTION OF THE INDIANA BAT, LIVING OR STANDING DEAD TREES OR SNAGS WITH EXFOLIATING, PEELING OR LOOSE BARK, SPLIT TRUNKS AND/OR BRANCHES, OR CAVATIES SHALL ONLY BE REMOVED BEFORE APRIL 15 OR AFTER SEPTEMBER 15 WHEN THE SPECIES WOULD NOT BE USING THE HABITAT.

ITEM 606 - RAISING GUARDRAIL

GUARDRAIL WITH A HEIGHT OF LESS THAN 24" AFTER RESURFACING SHALL BE RAISED IN ACCORDANCE WITH GR-2.1M.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

WHEN IT IS NECESSARY TO SPLICE PROPOSED GUARDRAIL TO EXISTING GUARDRAIL, ONLY THE EXISTING GUARDRAIL SHALL BE CUT, DRILLED, OR PUNCHED. THE CONNECTION SHALL BE MADE USING A "W-BEAM RAIL SPLICE" AS SHOWN IN AASHTO M 180. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

ITEM FENCE, TYPE 47

NEW RIGHT OF WAY FENCING SHALL BE INSTALLED FROM THE EASTERN-MOST WATERLOO ROAD INTERSECTION (SLM 9.54, STA. 0+00±) TO S.R. 183, (STA. 182+00±). EXISTING FENCE IN THIS AREA, SHALL BE REMOVED. ALL COSTS SHALL BE INCLUDED UNDER ITEM SPECIAL - FENCE.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE ET-2000 (1997) MANUFACTURED BY SYRO, INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF TWO 25'-0" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS265	MET-2000 (1997) PLAN, ELEVATION AND SECTIONS	6/20/97	3/6/98

2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917).

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0", INCLUSIVE OF FOUR 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SKT-4M	SEQUENTIAL KINKING TERMINAL (SKT-350) ASSEMBLY WITH 4 FOUNDATION TUBES	12/11/97	3/6/98

THE FACE OF THE TYPE E-98 IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" X 18".

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED UNDER THE LUMP SUM PRICE BID FOR ITEM 606E99000 SPECIAL - GUARDRAIL, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 606 - ANCHOR ASSEMBLY, TYPE B-98

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS.

1) THE SRT-350, GUARDRAIL END TERMINAL AS MANUFACTURED BY SYRO INC., 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 37'-6", INCLUSIVE OF THREE 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
SS444	SLOTTED RAIL TERMINAL POST LAYOUT AND ERECTION DETAILS SRT-350 (12.5, 8 POST)	7/12/99 Rev. 1	8/27/99
SS425M	SLOTTED RAIL TERMINAL SRT-350 POST LAYOUT AND ERECTION DETAILS (12.5, 9 POST)	6/21/97 Rev. 1	3/6/98

2) THE FLEAT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 7631 NEW CASTLE DRIVE, FRANKFORT, IL 60423 (TELEPHONE: 815-464-5917).

THE LENGTH OF THE FLEAT-350 IS CONSIDERED TO BE 37'-6", INCLUSIVE OF THREE 12'-6" LONG RAIL ELEMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AS DETAILED ON THE FOLLOWING PRE-APPROVED SHOP DRAWINGS:

DWG. NO.	DRAWING NAME	DWG./ REV. DATE	ODOT APPROVAL DATE
FLT-M	FLARED ENERGY ABSORBING TERMINAL (FLEAT-350) ASSEMBLY	4/16/98	7/31/98

GRADING SHALL BE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING GR-4.3.

THE FACE OF THE TYPE B-98 IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19: APPROXIMATELY 36" W X 12" H FOR THE SRT-350 AND 14" W X 20" H FOR THE FLEAT.

PAYMENT FOR THE ABOVE WORK SHALL BE INCLUDED UNDER THE LUMP SUM PRICE BID FOR ITEM 606E99000 SPECIAL- GUARDRAIL, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

GENERAL NOTES

PAVEMENT

ALIGNMENT AND PROFILE

THE PROPOSED PAVEMENT RESURFACING SHALL FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. THE PROPOSED ASPHALT CONCRETE OVERLAY SHALL HAVE A UNIFORM THICKNESS OF 1½" WHICH SHALL BE APPROXIMATELY ½" ABOVE THAT OF THE EXISTING PAVEMENT OF US 224.

ITEM 250 - SPECIAL - PAVEMENT REPAIRS AS PER CONCEPTUAL DOCUMENT

THE CONSTRUCTION ENGINEER SHALL DETERMINE THE NEED FOR ANY FULL DEPTH PAVEMENT REPAIRS AND PARTIAL DEPTH PAVEMENT REPAIRS THAT MAY BE REQUIRED FOR THE EXISTING PAVEMENT. THE EXISTING DETERIORATED PAVEMENT SHALL BE REMOVED TO A MINIMUM OF 3¼" OR AS DIRECTED BY THE ENGINEER (SEE DETAIL ON SHEET 26/47) AND REPLACED WITH CONCRETE OR ASPHALT PAVEMENT IN ACCORDANCE WITH ITEM 252 OR 255. AN ESTIMATED QUANTITY OF 100 CU. YDS. OF FULL DEPTH PAVEMENT REPAIRS AND 120 CU. YDS. OF PARTIAL DEPTH PAVEMENT REPAIRS, HAVE BEEN PROVIDED FOR ESTIMATING PURPOSES ONLY. PAYMENT FOR ALL REPAIR WORK, REQUIRED UNDER ITEM 250, BOTH PARTIAL AND FULL DEPTH, SHALL BE INDLUDED IN THIS LUMP SUM BID ITEM.

ITEM 407 - TACK COAT

THE RATE OF APPLICATION OF THE 407 TACK COAT SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.10 GALLONS PER SQUARE YARD OF TACK COAT FOR ESTIMATING PURPOSES ONLY.

ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE

THE RATE OF APPLICATION OF THE 407 TACK COAT FOR INTERMEDIATE COURSE SHALL BE SUBJECT TO ADJUSTMENT AS DIRECTED BY THE ENGINEER. PLAN QUANTITIES INDICATE AN AVERAGE APPLICATION RATE OF 0.05 GALLONS PER SQUARE YARD OF TACK COAT FOR INTERMEDIATE COURSE FOR ESTIMATING PURPOSES ONLY.

ITEM 413 - SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS

THIS ITEM SHALL BE PERFORMED OVER THE EXISTING UNDERLYING TRANSVERSE PORTLAND CEMENT CONCRETE PAVEMENT JOINTS IN ACCORDANCE WITH ITEM 413.

ALL COSTS SHALL BE INCLUDED UNDER ITEM 446E99000 - SPECIAL - FLEXIBLE PAVEMENT.

ITEM 446 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22, AS PER PLAN

THE REQUIREMENTS OF 441 AND 446 SHALL APPLY; DEVIATIONS FROM THESE ARE AS FOLLOWS:

ANY PERCENTAGE OF RECLAIMED MATERIAL PROPOSED FOR USE SHALL BE INCLUDED IN THE MIX DESIGN PROCESS TO ESTABLISH THE JOB MIX FORMULA (JMF) IN ACCORDANCE WITH 441.02.

ITEM 604 - MONUMENT BOX ADJUSTED TO GRADE

ALL MONUMENT BOXES WITHIN THE RESURFACING LIMITS SHALL BE ADJUSTED TO THE NEW PAVEMENT GRADE.

GENERAL NOTES

DRAINAGE

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCES SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT DRAINAGE OR EROSION CONTROL ITEMS.

EROSION CONTROL

EROSION CONTROL

ITEM 601 IS PROVIDED IN THE PLANS FOR EROSION CONTROL. ROCK OF A STABLE NATURE SHALL NOT BE REMOVED IN ORDER TO PLACE THIS ITEM.

THE ENGINEER SHALL CHECK AND NON-PERFORM QUANTITIES OR ADJUST LOCATIONS AND QUANTITIES OF THIS ITEM WHERE INDICATED BY FIELD CONDITIONS DURING CONSTRUCTION. IN ADDITION, THESE ITEMS SHALL MEET THE REQUIREMENT OF 108.04.

TEMPORARY EROSION CONTROL

INSTALLATION OF SEDIMENT BASINS/DAMS, PERIMETER FILTER FABRIC FENCE, AND DITCH CHECKS SHALL BE CONCURRENT WITH CLEARING AND GRUBBING AND/OR GRADING OPERATIONS.

ALL REASONABLE ATTEMPTS SHOULD BE MADE TO MINIMIZE THE TOTAL AREA OF DISTURBED LAND.

AREAS TO REMAIN DORMANT FOR MORE THAN 45 DAYS SHOULD BE IMMEDIATELY STABILIZED WITH TEMPORARY SEEDING AND MULCHING, EROSION CONTROL MATTING OR OTHER APPROPRIATE EROSION CONTROL MEASURES.

ITEMS TO BE USED FOR TEMPORARY SOIL EROSION AND SEDIMENT CONTROL ITEMS ARE LISTED IN THE GENERAL NOTES.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE FOLLOWING ITEMS ARE TO BE PLACED BY THE CONTRACTOR WITH THE ENGINEER'S CONCURRENCE FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES:

877 TEMPORARY SEEDING AND MULCHING
877 TEMPORARY INLET PROTECTION FILTER FABRIC FENCE
877 TEMPORARY DITCH CHECK FILTER FABRIC FENCE
877 TEMPORARY PERIMETER FILTER FABRIC FENCE
877 SEDIMENT REMOVAL
870 COMMERCIAL FERTILIZER
870 REPAIR SEEDING AND MULCHING
870 WATER

SEEDING AND MULCHING

THE FOLLOWING ITEMS SHALL BE USED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

870, SEEDING AND MULCHING		
870, SOIL ANALYSIS TEST	(IF NEEDED)	
870, TOPSOIL	111 CU. YD. / 1000 SQ. YDS.	OF S&M AREA
870, COMMERCIAL FERTILIZER	1 TON / 7410 SQ. YDS.	OF S&M AREA
870, AGRICULTURAL LIME	1 TON / 2420 SQ. YDS.	OF S&M AREA
870, WATER	2.7 M. GAL./1000 SQ. YDS.	OF S&M AREA

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT.

CALCULATED CHECKED

GENERAL NOTES

POR-224-0.00

MAINTENANCE OF TRAFFIC

GENERAL CONSTRUCTION SEQUENCE

THE CONTRACTOR IS REMINDED THAT, IN THE CONDUCT OF THIS PROJECT, HIS SEQUENCE OF OPERATIONS SHALL BE PLANNED AND EXECUTED IN SUCH A WAY AS TO MINIMIZE THE NUMBER OF LANE REDUCTIONS AND/OR LANE WIDTH RESTRICTIONS REQUIRED TO MAINTAIN TRAFFIC THROUGH THE PROJECT.

BOTH DETOURS, SHORT TERM CLOSURES AND LONG TERM TRAFFIC SHIFTS WILL BE UTILIZED TO PERFORM THE WORK.

ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC BETWEEN NOVEMBER 15 AND APRIL 1. NOVEMBER 14 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND LIQUIDATED DAMAGES AS SPECIFIED IN 108.07 SHALL BE ASSESSED FOR EACH CALENDAR DAY THAT THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT. THE CONTRACTOR MAY CLOSE LANES PRIOR TO APRIL 1 WITH WRITTEN APPROVAL FROM THE DISTRICT CONSTRUCTION ENGINEER. NO MILLED SURFACES WILL BE PERMITTED DURING THE WINTER LIMITATION PERIOD.

LANE CLOSURES

SHORT TERM LANE CLOSURES SHALL BE IMPLEMENTED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWINGS MT-97.10M OR MT-97.11M. LONG TERM LANE CLOSURES (DETOURS) AND LONG TERM TRAFFIC SHIFTS SHALL BE AS DETAILED ON THE MAINTENANCE OF TRAFFIC SHEETS.

MINIMUM 10 FT. LANE(S) SHALL BE MAINTAINED AT ALL TIMES. A MINIMUM CLEARANCE OF 1 FOOT SHALL BE MAINTAINED BETWEEN TRAFFIC AND CHANNELIZING DEVICES.

DETOUR NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE ODOT DISTRICT OFFICE (330-297-0801 EXT. 339) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR SHOULD BE IN EFFECT. ALL TRAFFIC CONTROL DEVICES REQUIRED FOR THIS PROJECT, INCLUDING FOR THE DETOUR, SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR.

PAVEMENT REPAIRS

ALL PAVEMENT REPAIRS SHALL BE COMPLETED BY NOVEMBER 15, 2001.

MAINTENANCE OF TRAFFIC RESPONSIBILITY

ALL DETOUR ROUTES SHALL BE SIGNED BY THE CONTRACTOR.

GENERAL NOTES

GENERAL

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THRU VEHICULAR ACCESS IN BOTH DIRECTIONS AT ALL TIMES THROUGHOUT THE PROJECT AREA USING THE EXISTING PAVEMENT OR DETOURS. THE PROJECT SHALL BE CONSTRUCTED IN MAJOR PHASES IN ORDER TO MINIMIZE TRAFFIC DISRUPTION AND INCONVENIENCE TO THE GENERAL PUBLIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL EQUIPMENT, MATERIALS AND MANPOWER NEEDED TO ADEQUATELY MAINTAIN TRAFFIC AS PROVIDED FOR IN THE PLANS AND SPECIFICATIONS.

MAJOR WORK ITEMS

THE FOLLOWING MAJOR WORK ITEMS WILL REQUIRE TRAFFIC MAINTENANCE PROCEDURES WHICH SHALL BE INCORPORATED INTO THE CONTRACTOR'S SEQUENCE OF OPERATIONS:

A. PAVEMENT WIDENING AT INTERSECTIONS
B. BRIDGE DECK OVERLAYS OR REPLACEMENT
C. INSTALLATION AND/OR REPAIR OF GUARDRAIL
D. ASPHALT SURFACE PLANING AND PAVEMENT REPAIRS
E. ASPHALT CONCRETE OVERLAYS
F. PAVEMENT MARKINGS

DETOUR DURATION

THE MAXIMUM LENGTH OF TIME FOR THE DETOUR TO BE IN EFFECT SHALL BE SIXTY (60) CONSECUTIVE DAYS. CONSTRUCTION WORK MAY BE PERFORMED BEFORE AND AFTER THE DETOUR LIMITATION DATES, BUT THERE SHALL BE NO NIGHTTIME RESTRICTIONS (LANE WIDTH REDUCTIONS, TEMPORARY ROADWAYS, OR ONE WAY TRAFFIC) TO THROUGH OR LOCAL TRAFFIC. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE AND PERFORM THE CONSTRUCTION WORK WITHIN THE DETOUR LIMITATION TIME. THE FAILURE OF THE CONTRACTOR TO MEET THE DETOUR LIMITATION DATES WILL CAUSE SEPARATE LIQUIDATED DAMAGES AS PER 108.07 PER CALENDAR DAY OF OVERRUN OF DETOUR LIMITATION TIME TO BE ASSESSED. THE CONTRACTOR WILL COMPLY WILL ALL PROVISIONS OF 108.07 OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS.

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC NOTES

POR-224-0.00

GENERAL NOTES

MAINTENANCE OF TRAFFIC

BRIDGE STAGE CONSTRUCTION

THE CONTRACTOR SHALL REFER TO THE TYPICAL CROSS SECTIONS AND TRANSVERSE SECTIONS IN THE STRUCTURE PLANS FOR DETAILS ON THE STAGE CONSTRUCTION OF EACH BRIDGE.

WORKSITE TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL, OTHER THAN THE SUPERINTENDENT, AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT
ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL MAY HAVE OTHER CONSTRUCTION RELATED DUTIES. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

FULL DEPTH PAVEMENT REPAIRS (EXCEPT DETOUR AREA)

ALL FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT OPERATIONS SHALL BE COMPLETED THE SAME DAY THE EXCAVATION IS MADE. IF THE CONTRACTOR CANNOT COMPLETE THE WORK, THE EXCAVATION SHALL BE BACKFILLED (EXCEPT WITHIN STRUCTURE REPAIR WORK ZONES).

ITEM 614 - BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC

THIS ITEM SHALL BE USED TO PROVIDE TEMPORARY ASPHALT RAMPS. TEMPORARY ASPHALT RAMPS SHALL BE REMOVED AS PART OF THIS ITEM. THIS ITEM IS TYPICALLY REQUIRED WHERE TRAFFIC MUST CROSS FROM OLD PAVEMENT TO NEWLY RESURFACED PAVEMENT. ALL COSTS INCLUDED UNDER ITEM 614 - MAINTAINING TRAFFIC.

GUARDRAIL REPLACEMENT (EXCEPT DETOUR AREA OR PAV'T WIDENING AREAS)

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

MAINTAINING VEHICULAR TRAFFIC

MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS SHALL BE MAINTAINED IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (OMUTCD OR THE "MANUAL"), CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (330-297-0801 EXT. 209), EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.

2. LANE RESTRICTIONS OR LANE REDUCTIONS SHALL NOT BE PERMITTED AFTER NORMAL WORKING HOURS EXCEPT AT PAVEMENT WIDENING ZONES, AT STRUCTURE POR-224-0104, AT STRUCTURE POR-224-1172 AND AT STRUCTURE POR-224-1189. NORMAL WORKING HOURS SHALL BE THOSE HOURS DURING WHICH THE CONTRACTOR HAS A FULL COMPLEMENT OF EMPLOYEES AND EQUIPMENT ACTIVELY REMOVING AND/OR PLACING PAVEMENT MATERIALS.

3. ONLY DURING OFF-PEAK PERIODS (I.E. ANY PERIOD OTHER THAN 6-8 A.M. AND 4-6 P.M.) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR MAINTAINING TRAFFIC FOR EACH CONSTRUCTION PHASE.

4. CONES SHALL NOT BE ACCEPTABLE TRAFFIC CONTROL DEVICES FOR LANE RESTRICTIONS OR LANE REDUCTIONS THAT ARE IN OPERATION ONE-HALF HOUR AFTER SUNSET OR ONE HALF-HOUR BEFORE SUNRISE. ALL NIGHTTIME LANE RESTRICTIONS SHALL REQUIRE DRUMS OR BARRICADES AT A MAXIMUM SPACING OF FIFTY (50) FEET.

5. THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE ALL FLAGS, BARRICADES, SIGNS, SIGN SUPPORTS AND FURNISH AND MAINTAIN ALL FLAGGERS, WATCHERS AND INCIDENTALS RELATED HERETO.

6. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES GREATER THAN 1 INCH.

7. ITEM 622 - PORTABLE CONRETE BARRIER, BRIDGE MOUNTED 32" AND ITEM 622 PORTABLE CONCRETE BARRIER, 32" SHALL BE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH S.C.D. MT-96.11M.

8. IN ADDITION TO THE REQUIREMENTS OF 614 WORK ZONE PAVEMENT MARKINGS (614.10), AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE (WITH TEMPORARY MARKINGS) ALL LANE, CENTER LINE, STOP OR CHANNELIZING LINES THAT WERE REMOVED OR COVERED DURING THE PAVEMENT REMOVAL OR PLACEMENT OPERATIONS.

MAINTAINING VEHICULAR TRAFFIC (CON'T)

9. ITEM 614 WORK ZONE MARKING SIGNS SHALL BE PROVIDED FOR THIS PROJECT. THESE SIGNS SHALL INCLUDE, BUT NOT BE LIMITED TO, THE FOLLOWING: OW-62 (BUMP), OW-167 (NO EDGE LINES), R-33 (DO NOT PASS), R-34 (PASS WITH CARE), AND OW-171 (UNEVEN LANES SYMBOL).

10. WORK ZONES SHALL BE NO LONGER THAN THE LIMIT OF MILLING AND/OR PAVING WORK THAT CAN BE COMPLETED IN A SINGLE DAY. A MINIMUM CLEARANCE OF 1 FOOT SHALL BE MAINTAINED BETWEEN TRAFFIC AND CHANNELIZING DEVICES (DRUMS, PCB, ETC.).

PAYMENT FOR ALL ITEMS REQUIRED BY THE OMUTCD, THE SCD'S, THE C&M SPECIFICATION BOOK, THE PROPOSAL AND THESE NOTES SHALL BE INCLUDED IN THE LUMP SUM PAYMENT FOR ITEM 614 - MAINTAINING TRAFFIC AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE REQUIRED WORK.

GUARDRAIL RELOCATION IN PAVEMENT WIDENING AREAS

UNLESS PCB IS INSTALLED, THE EXISTING GUARDRAIL SHALL BE LEFT IN PLACE AS LONG AS POSSIBLE DURING THE REGRADING OPERATION. (SEE PHASE 1 REGRADING ON SHEET--) 2:1 SLOPES REQUIRE GUARDRAIL WHEN THEY ARE WITHIN THE CLEAR ZONE. DURING CONSTRUCTION, A MIN. CONSTRUCTION CLEAR ZONE OF 20 FEET SHALL BE PROVIDED EXCEPT DURING ACTUAL GUARDRAIL CONSTRUCTION OPERATIONS. WHEN THE DISTANCE FROM THRU TRAFFIC TO THE SHOULDER BREAK IS LESS THAN 20 FEET AND 2:1 FILL SLOPES ARE EXPOSED, PORTABLE CONCRETE BARRIER SHALL BE INSTALLED TO PROTECT THE EXPOSED FILL SLOPE.

THE WIDENED ROADWAY SHALL NOT BE OPEN TO TRAFFIC UNTIL AFTER THE NEW GUARDRAIL IS INSTALLED.

COVERING OF SIGNS

IF A PERMANENT SIGN IS ERECTED BEFORE IT APPLIES, IT SHALL BE COVERED, THE CONTRACTOR SHALL DO SO IN SUCH A MANNER AS TO AVOID DAMAGING THE PERMANENT SIGN WHEN THE COVER IS REMOVED. THE COVER SHALL BE TOTALLY OPAQUE. THE USE OF ADHESIVE TAPE APPLIED DIRECTLY TO A SIGN FACE IS STRICTLY PROHIBITED.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND CALCIUM CHLORIDE FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING CONTINGENCY QUANTITIES HAVE BEEN INCLUDED FOR DUST CONTROL PURPOSES:

616, WATER	3 M. GAL.
616, CALCIUM CHLORIDE	3 TONS

GENERAL NOTES

ITEM 614 - BARRIER REFLECTOR, TYPE A
ITEM 614 - BARRIER REFLECTOR, TYPE B

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL NEW GUARDRAIL INSTALLATIONS IN ACCORDANCE WITH ITEM 626 SPACING REQUIREMENTS. BARRIER REFLECTORS SHALL ALSO BE PLACED ON EXISTING GUARDRAIL AND BRIDGE PARAPETS ADJACENT TO TRAFFIC LANES WHICH HAVE BEEN SHIFTED GREATER THAN 2 FEET FROM THE NORMAL DRIVING LANE. THEIR MOUNTINGS SHALL CONFORM TO ITEM 626 EXCEPT THAT SPACING OF THE REFLECTORS SHALL BE HALF THE DISTANCE SPECIFIED IN ITEM 626.

THE REFLECTOR COLOR SHALL MATCH THE COLOR OF THE EDGE LINE.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, AND REMOVE, WHEN NO LONGER NEEDED, 2 DIESEL POWERED CHANGEABLE MESSAGE SIGNS, ON SITE, FOR THE DURATION OF THE PROJECT. EACH SIGN SHALL BE EITHER A WINK-O-MATIC GENERATION 3, 4, 6, 10 OR 12, AMERICAN SIGNAL CO. CMS-T3000 OR AN ADDCO DIGI-DOT SIGN OR A TELE-SPOT SENTINAL SIGN OR AN APPROVED EQUAL.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE PCMS SHOULD NOT BE LOCATED IN THE MEDIAN OF THE HIGHWAY UNLESS IT IS PROTECTED FROM BOTH DIRECTIONS OF TRAFFIC. THE PCMS SHOULD BE LOCATED BEHIND GUARDRAIL WHENEVER POSSIBLE. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE THE VISIBILITY OR ACCOMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE HIGH INTENSITY YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE DBT AND APPROVED BY THE ENGINEER. A LIST OF PROPOSED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE ENGINEER PRIOR TO ANY CONSTRUCTION. THE SIGN SHALL HAVE TWO DIFFERENT MEMORIES (PROM AND RAM) AND CAPABILITY TO STORE UP TO 99 MESSAGES IN EACH MEMORY. SIGN MESSAGES SHALL BE LEGIBLE FROM 650 FEET MINIMUM. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. IN ORDER TO CONVEY A MAXIMUM OF INFORMATION AT A SINGLE GLANCE, ONLY THREE LINE PRESENTATION FORMATS WITH A MAXIMUM OF SIX MESSAGE PHASES WILL BE PERMITTED. NORMALLY, ONLY A MAXIMUM OF THREE MESSAGE PHASES SHOULD BE EMPLOYED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST ONCE.

PORTABLE CHANGEABLE MESSAGE SIGN (CON'T)

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DE-ACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNITS SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.03(C). THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC AND THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 104.04.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUEL, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

LOOP DETECTOR REPLACEMENT

THE CONTRACTOR SHALL CONTACT THE DISTRICT OFFICE (330-297-0801 EXT. 386) THREE WORKING DAYS PRIOR TO ANY PLANING OR TRENCHING AT THE INTERSECTIONS OF US 224/SR44 AND US 224/SR43. LOOP DETECTORS DISTURBED BY PAVEMENT PLANING OR TRENCHING SHALL BE ABANDONED IN PLACE. THE LOOP DETECTOR WIRE WILL BE CUT INTO THE PAVEMENT AFTER THE PROPOSED SURFACE COURSE HAS BEEN PLACED. EACH DETECTOR SHALL BE REPLACED IN KIND, AT THE SAME LOCATION AS EXISTING. THE NEW LOOP DETECTOR WIRES SHALL BE RUN INTO THE EXISTING CONTROL BOX OR THE EXISTING PULLBOX. INCLUDED IN THIS ITEM IS THE POURED EPOXY TYPE CABLE SPLICE KIT (CONFORMING TO 713.15) THAT MUST BE USED IN MAKING THESE CONNECTIONS.

ALL NECESSARY MATERIAL, LABOR, SPLICE KITS AND EQUIPMENT SHALL BE INCLUDED IN THE LUMP SUM BID ITEM 632 - SPECIAL - TRAFFIC SIGNAL.

ADVANCE WARNING SIGNS

EXTRA ADVANCE WARNING SIGN GROUPS AS PER THE STANDARD DRAWINGS SHALL BE INSTALLED, PAYMENT FOR THESE SIGNS SHALL BE UNDER ITEM 614 - MAINTAINING TRAFFIC.

CALCULATED
CHECKED

MAINTENANCE OF TRAFFIC NOTES

POR-224-0.00

GENERAL NOTES

TRAFFIC CONTROL MATERIALS

ALL TEMPORARY MOT DEVICES SHALL COMPLY WITH THE NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM (NCHRP) 350 HARDWARE REPORT.

SIGNS

SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES, SHALL BE AS PROVIDED IN THE "MANUAL", OR IN SIGN DESIGN DRAWINGS PROVIDED BY THE DEPARTMENT OF TRANSPORTATION. THE SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER PRIOR TO THE START OF THE PROJECT.

ALL SIGNS SHALL HAVE A REFLECTORIZED BACKGROUND OF REFLECTIVE MATERIALS AS DESCRIBED IN THE "MANUAL".

SIGN SUPPORTS

ERECT SIGNS ON SUPPORTS CONFORMING TO STANDARD DRAWINGS MT-105.10M AND MT-105.11M AT SPACINGS CONFORMING TO TC-52.10, TC-52.20 AND DETAILS CONFORMING TO TC-41.20, EXCEPT THAT CLASS C SUPPORTS ON MT-105.11M ARE NOT ALLOWED.

THE FOLLOWING DEVICES MUST MEET NCHRP 350 AND ACCEPTABLE WRITTEN MANUFACTURER CERTIFICATION SUBMITTED TO THE ENGINEER BEFORE THE DEVICES ARE INSTALLED ON THE PROJECT. ONLY BALLASTING SPECIFIED BY THE MANUFACTURER IS ALLOWED.

- DRUMS, WITH OR WITHOUT LIGHTS
- CONES, WITH OR WITHOUT LIGHTS
- VERTICAL PANELS, WITH OR WITHOUT LIGHTS, AND THE PANEL SUPPORT.
- PORTABLE SIGN SUPPORTS
- TEMPORARY IMPACT ATTENUATORS
- TEMPORARY CONCRETE BARRIER AFTER OCTOBER 1, 2002
- BARRICADES

THIS CERTIFICATION SUBMISSION REQUIREMENT IS WAIVED IF THE DEVICE IS SPECIFIED IN THE PLANS OR OTHER BID DOCUMENTS BY MANUFACTURER AND PRODUCT NUMBER, OR IF THE DEVICE APPEARS ON THE FHWA WEB PAGE, HTTP://SAFETY.FHWA.DOT.GOV/PROGRAMS/ROADSIDE HARDWARE.HTM, LISTING ROADWAY HARDWARE MEETING NCHRP 350.

CONTRACTORS ARE ALLOWED TO USE THE FOLLOWING DEVICES IN THEIR INVENTORY, THAT ARE NOT CERTIFIED TO MEET NCHRP 350, FOR THEIR USEFUL LIFE OR UNTIL JANUARY 1, 2005, IF THEY WERE PURCHASED BEFORE OCTOBER 1, 2000. CONTRACTOR CERTIFICATION OF PURCHASE OR FABRICATION DATES WILL BE ACCEPTABLE IN LIEU OF PURCHASE INVOICES.

- PORTABLE SIGN SUPPORTS
- BARRICADES (INCLUDING BARRICADES MADE BY THE CONTRACTOR BEFORE OCTOBER 1, 2000
- VERTICAL PANELS WITH LIGHTS AND SUPPORTS
- DRUMS WITH LIGHTS

TRAFFIC CONTROL MATERIALS (CON'T)

CONTRACTORS ARE ALLOWED TO USE GREAT CZ IMPACT ATTENUATORS, MANUFACTURED BY ENERGY ABSORPTION SYSTEMS., IN THEIR INVENTORY FOR THEIR USEFUL LIFE UNTIL JANUARY 1, 2007, IF THEY WERE PURCHASED BEFORE OCTOBER 1, 1998.

CONTRACTORS ARE ALLOWED TO USE PORTABLE CONCRETE BARRIER IN THEIR INVENTORY FOR ITS USEFUL LIFE OR UNTIL JANUARY 1, 2008, PROVIDED THAT IT WAS MANUFACTURED ACCORDING TO CONSTRUCTION STANDARD DRAWING MC-9.1 OR MC-9.2 (OR SUBSEQUENTLY RM-4.1M OR RM-4.2M) AND PURCHASED BEFORE OCTOBER 1, 2002.

NIGHT VESTS

ALL OF THE CONTRACTOR'S AND SUB CONTRACTOR'S PERSONNEL WORKING DURING THE HOURS OF DARKNESS SHALL WEAR A 100% SILVER REFLECTIVE SAFETY VEST. THE SAFETY VEST SHALL BE PROVIDED BY THE CONTRACTOR. THE VEST MAY HAVE SEVERAL LIME OR ORANGE STRIPES ON IT.

FLASHING LIGHTS

ALL WORK VEHICLES AND EQUIPMENT THAT ENTER THE WORK ZONE MORE THAN ONCE A DAY MUST BE EQUIPPED WITH AT LEAST ONE FLASHING, ROTATING , OR OSCILLATING AMBER LIGHT THAT IS VISIBLE IN ALL DIRECTIONS OF TRAFFIC FOR AT LEAST ONE QUARTER OF A MILE, DAY OR NIGHT.

PERMANENT PAVEMENT MARKINGS

AFTER PLACING THE SURFACE COURSE, THE CONTRACTOR MAY PLACE PERMANENT PAVEMENT MARKINGS AT LOCATIONS SHOWN IN THE TYPICALS AND THE TRAFFIC CONTROL SHEETS INSTEAD OF PLACING TEMPORARY PAVEMENT MARKINGS, WHICH SHALL BE NON-PERFORMED AT THESE LOCATIONS.

APPLICATION FOR USE OF WEIGHTED CHANNELIZER

THE WEIGHTED CHANNELIZER MAY BE USED ON ODOT MAINTAINED HIGHWAYS IN ACCORDANCE WITH THIS SECTION. THE WEIGHTED CHANNELIZER SHALL BE PREDOMINANTLY ORANGE IN COLOR AND SHALL BE MADE OF A LIGHTWEIGHT, FLEXIBLE, AND DEFORMABLE MATERIAL. THEY SHALL BE AT LEAST 42 INCHES IN HEIGHT WITH A WEIGHTED BASE. THEY MAY HAVE A HANDLE OR LIFTING DEVICE WHICH EXTENDS ABOVE THE 42" MINIMUM HEIGHT.

THE MARKINGS ON THE WEIGHTED CHANNELIZER SHALL BE HORIZONTAL, CIRCUMFERENTIAL, ALTERNATING ORANGE AND WHITE RETROREFLECTIVE STRIPES, 6 INCHES WIDE. EACH WEIGHTED CHANNELIZER SHALL HAVE A MINIMUM OF TWO ORANGE AND TWO WHITE STRIPES. ANY NON-RETRO-REFLECTIVE SPACES BETWEEN THE HORIZONTAL ORANGE AND WHITE STRIPES, SHALL NOT EXCEED 2 INCHES WIDE. THE WEIGHTED CHANNELIZER SHALL HAVE A MINIMUM 4 INCH WIDTH, REGARDLESS OF ORIENTATION.

USE OF WEIGHTED CHANNELIZERS ON FREEWAYS AND MULTILANE HIGHWAYS SHALL BE LIMITED TO SHORT-TERM OPERATION, GENERALLY TWELVE HOURS OR LESS, FOR EITHER DAY OR NIGHT. UPON COMPLETION OF WORK WITHIN THE ABOVE NOTED TIME PERIOD, THE WEIGHTED CHANNELIZERS SHALL BE REMOVED. THE WEIGHTED CHANNELIZERS MAY AGAIN BE PLACED ON THE HIGHWAY WHEN THE WORK IS TO RESUME ON THE FOLLOWING DAY OR NIGHT. ANY LANE CLOSURE USING CHANNELIZATION DEVICES, EXPECTED TO REMAIN FOR MORE THAN TWELVE HOURS, SHALL REQUIRE THE USE OF DRUMS.

WHEN USED AT NIGHT, WEIGHTED CHANNELIZERS SHALL ONLY BE PLACED IN THE "TANGENT AREA". THE "TANGENT AREA" IS DEFINED AS THE AREA AFTER THE TRANSITION TAPER WHERE THE WORK TAKES PLACE. DRUMS SHALL BE USED IN THE TRANSITION TAPERS FOR NIGHT OPERATIONS.

MAXIMUM SPACING OF THE WEIGHTED CHANNELIZER SHALL BE 40 FEET.

STEPS SHOULD BE TAKEN TO ENSURE THAT THE WEIGHTED CHANNELIZERS WILL NOT BE BLOWN OVER OR DISPLACED BY WIND OR MOVING TRAFFIC. BALLASTS SHOULD NOT PRESENT A HAZARD IF THE WEIGHTED CHANNELIZERS ARE INADVERTENTLY STRUCK, NOR SHOULD THEY AFFECT THE VISIBILITY OF THE WEIGHTED CHANNELIZERS. ALL BALLASTS USED SHOULD BE IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

GENERAL NOTES

1. It is intended that this drawing be used for treatment of drop-offs that develop during construction operations, and that are not otherwise provided for in the construction plans. Where the plans do not provide specific items for labor, equipment, or materials to implement the drop-off treatments specified herein, they shall be included for payment in the lump sum bid for Item 614 - Maintaining Traffic.

2. While the need for certain advisory signing is noted herein, it is not intended that this be indicative of all signing that may be required to advise or warn motorist, and all requirements of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) must be fulfilled.

3. In urban or otherwise heavily developed areas where pedestrians and/or bicyclists may be present in significant numbers, additional signing and protective measures other than those shown herein may be required.

4. The drop-off treatment selected for use at any given location shall be appropriate for the prevailing conditions at the site.

5. Where concrete barrier is specified, it shall be in accordance with Item 622.

6. When drums are specified for a drop-off condition, a minimum number of four drums shall be used. Spacing shall be as indicated in the plans or as specified in the OMUTCD.

7. When OW-151 (Low Shoulder) signs or OW-171 (Uneven Lanes symbol), OWP-171 (uneven lane plaque), and OC-53 (Maintain Present Lane) signs are required, they shall be placed 750′ in advance of the condition, on all intersecting entrance ramps within the limits of the condition and immediately beyond all intersecting roadways within the limits of the condition. When the drop-off condition extends more than one-half mile, additional signs shall be erected at intervals of a maximum of one mile.

8. For locations, such as at ramps, lane shifts, lane closures, etc., where traffic is required to negotiate any difference in elevation between pavements, the Optional Wedge Treatment shall be provided.

9. Portable concrete barrier shall be placed on the same level as the traffic surface and shall not encroach on lane width(s) designated as the minimum required for traffic use. Where drums are used, and their presence would reduce traveled lane widths to less than 10′, drums may be placed on the opposite level from that of traffic provided the drop-off depth does not exceed 5″ and approval is granted by the Project Engineer.

10. Pavement Repairs (or similar work):

   a. Lengths greater than 60 feet - utilize appropriate treatment from Condition I.

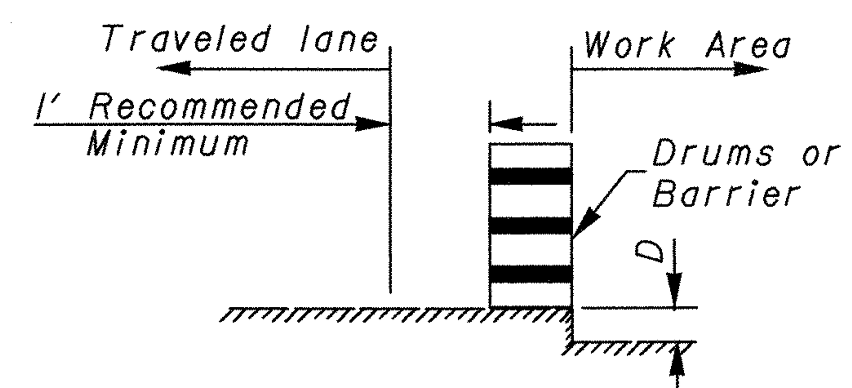
   b. Lengths of 60 feet or less - repairs shall be affected in accordance with Item 255.08. Drums may be used as a separator adjacent to the traveled lane.

CONDITION I

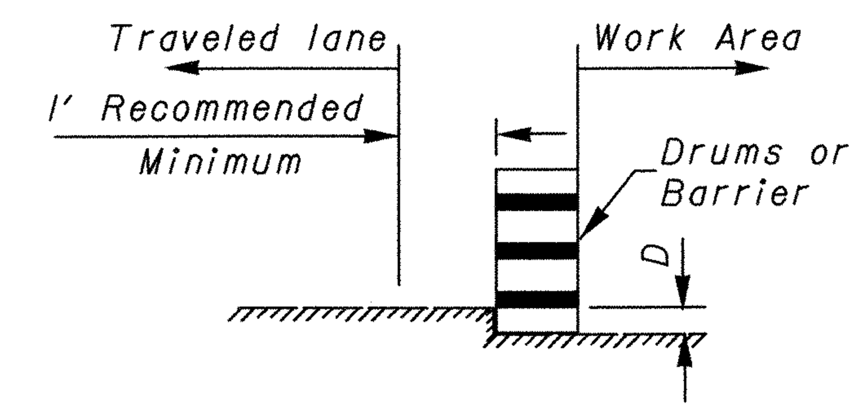
1. These treatments are to be used for resurfacing, pavement planing excavation, etc., between, beside or within traveled lanes.

Distance From Traveled Lane	D (in)	Treatment
1FT-12FT	< 1½	Erect OW-171, AND OWP-171.
1FT-12FT	1½-3	1. Lane closure utilizing drums* as shown below. (use only on 3 or more lanes) - or - 2. Optional Wedge Treatment.
1FT-12FT	3 - 5	Lane closure utilizing drums as shown below
1FT-12FT	5 - 12	Lane closure utilizing portable concrete barrier as shown below.
>12FT-20FT	12 - 24	Lane closure utilizing drums as shown below
>12FT-20FT	>24	Lane closure utilizing portable concrete barrier as shown below.

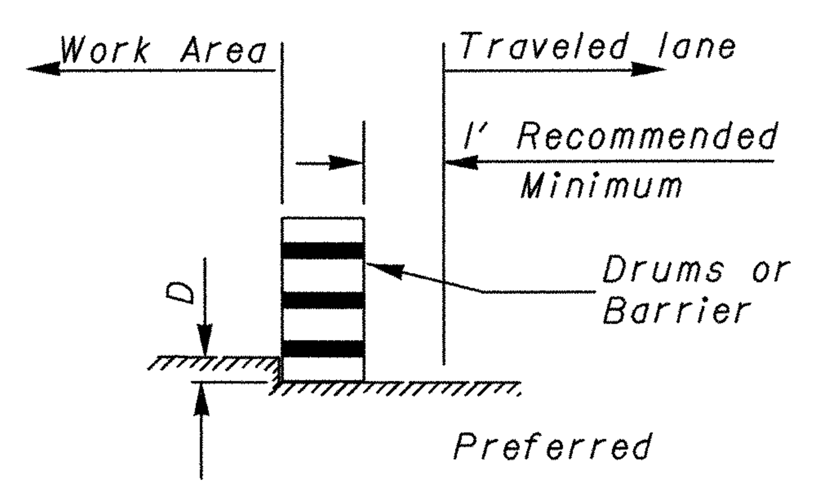
*Cones may be used for daytime only conditions.



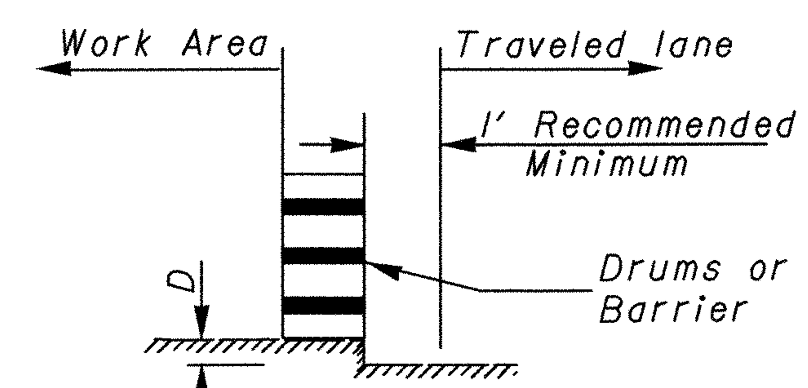
Preferred



Acceptable
(see note #9)



Preferred



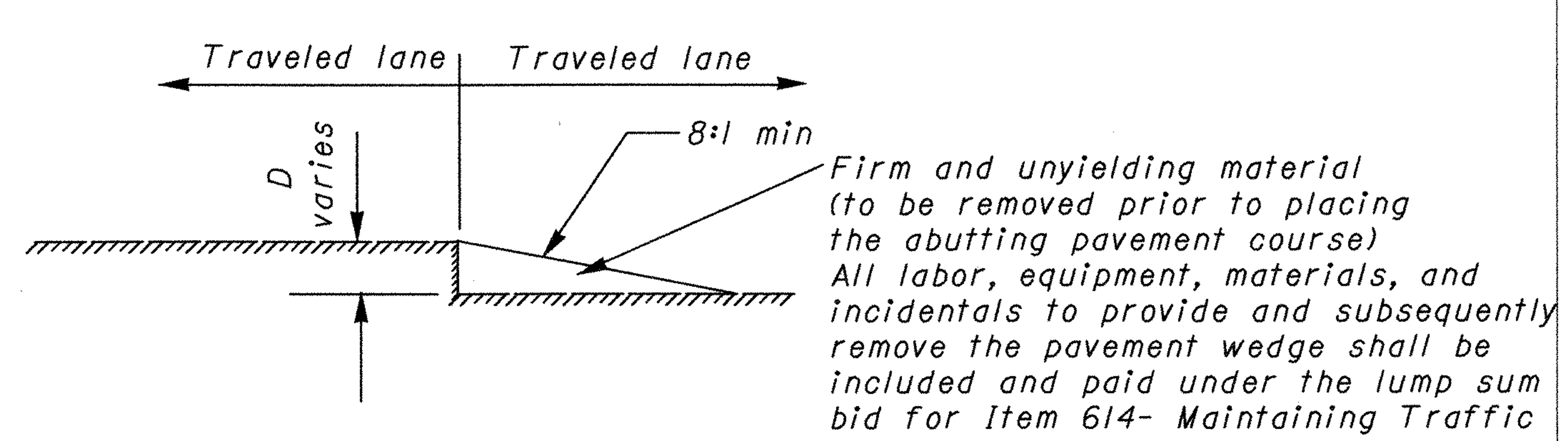
Acceptable
(see note #9)

OPTIONAL WEDGE TREATMENT

(MILLING OR RESURFACING)

1. This treatment may be used when permitted for Condition I only.

2. OW-171, OWP-171, and OC-53 signs required.



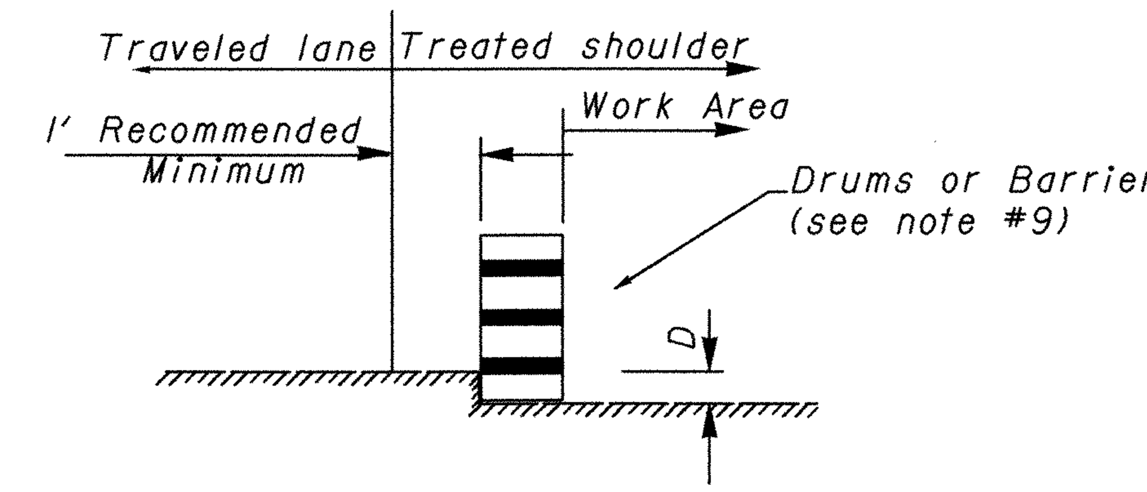
CONDITION II

DROPOFFS WITHIN GRADED SHOULDER AREA
[except for linear grading areas]

The treatments indicated below are for use in conjunction with resurfacing, planing, or excavation within the graded shoulder area.

Distance From Traveled Lane	D (in)	Treatment
1FT-12FT	< 1½	1.) If edgelines are present, no treatment necessary. or 2.) Erect OW-171, OWP-171, and OC-53 signs
1FT-12FT	1½- 5	1) If min. lane widths* requirements can be met, maintain lanes utilizing drums as shown below. - or - 2) If min. lane width* requirements cannot be met, close adjacent lane utilizing drums. (use only on 3 or more lanes) - or - 3) Optional shoulder treatment
>12FT-30FT	<= 24	Shoulder closure utilizing drums as shown below
>12FT-30FT	>24	Shoulder closure utilizing portable concrete barrier as shown below.

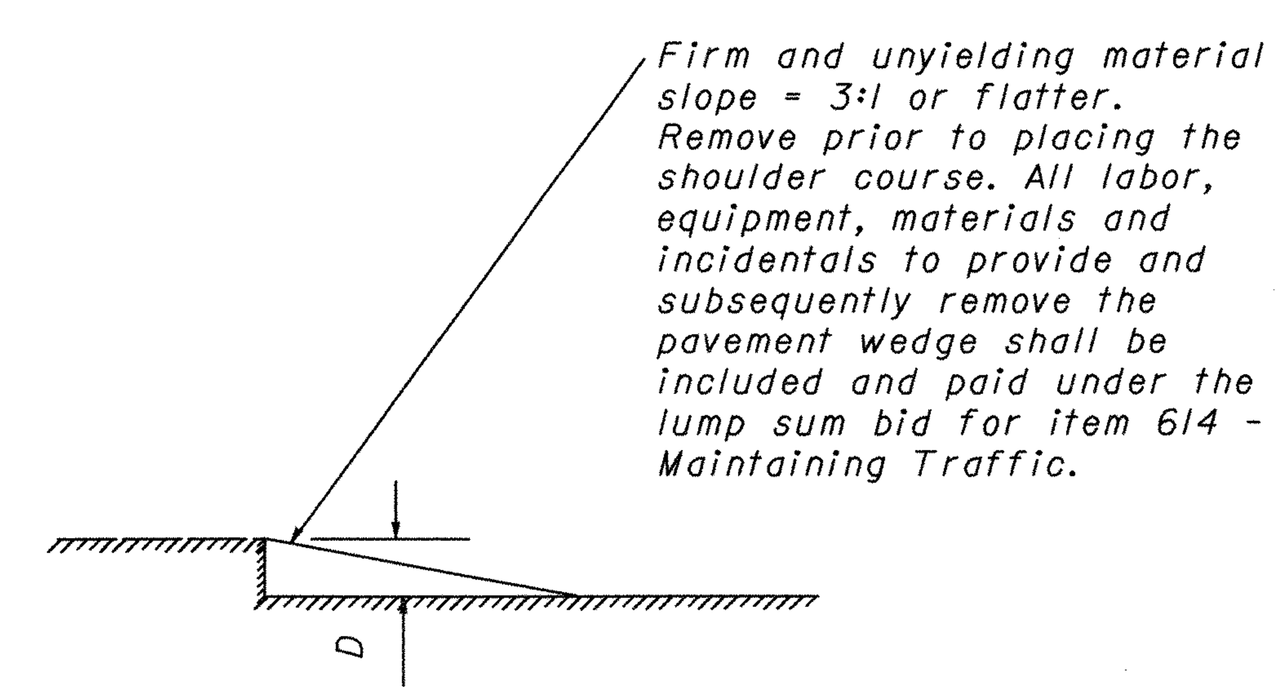
*Minimum lane widths shall be 10′ unless otherwise specified in the plans.



OPTIONAL SHOULDER TREATMENT

1. This treatment shall not be used within a bituminous shoulder where a hot longitudinal joint per 401.15 is required.

2. OW-151 signs required.



DROPOFFS IN WORK ZONES

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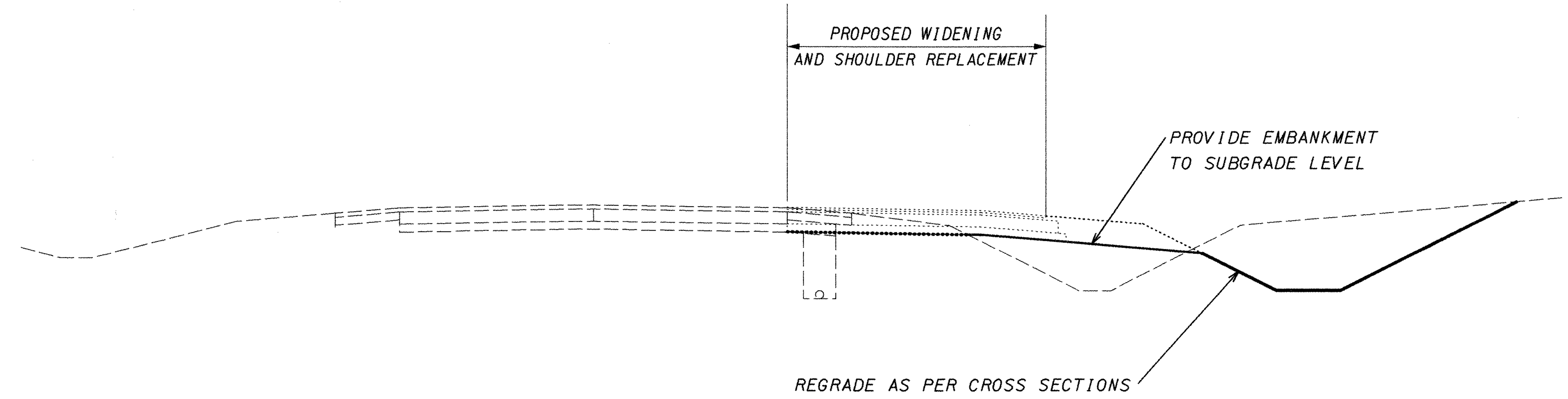
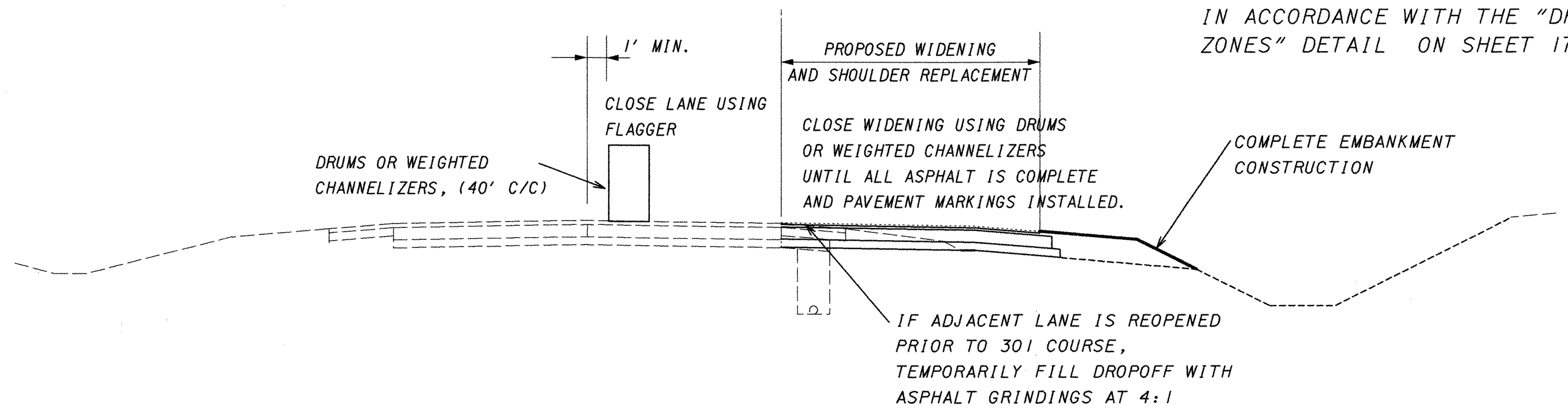
REVISED 4/27/99
I:/04STD/TRAFFIC/MOT/DROPOFF.DGN



PROVIDE SIGNAGE AND/OR CONES
AS PER THE OMUTCD, PART 7 (CONSTRUCTION)
PLATES C-11 AND C-12 AS APPLICABLE.

PHASE 1 - REGRADING

WORK AREA DROPOFFS SHALL BE PROTECTED
IN ACCORDANCE WITH THE "DROPOFFS IN WORK
ZONES" DETAIL ON SHEET 17/--.



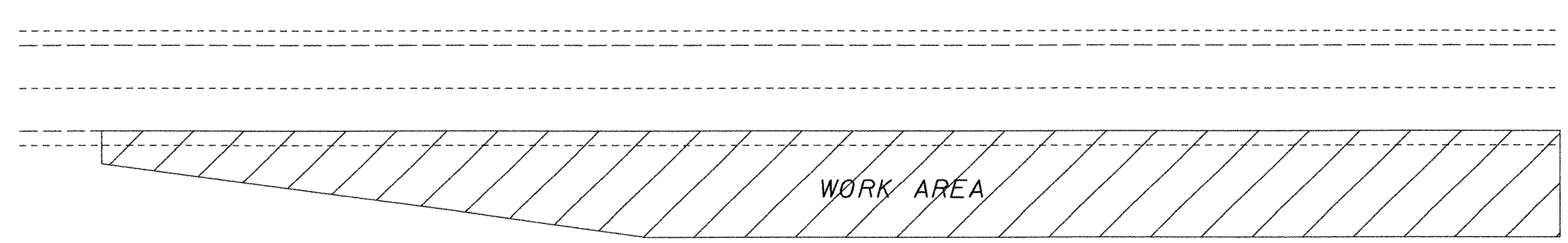
WIDENED AREA TO REMAIN CLOSED
TO TRAFFIC UNTIL FINAL EMBANKMENT
CONSTRUCTION AND GUARDRAIL (IF
SPECIFIED) IS INSTALLED.

SEE "GUARDRAIL REPLACEMENT IN PAVEMENT
WIDENING AREAS" GENERAL NOTE ON
SHEET 14/--.

PHASE 2 - CONSTRUCT WIDENING

THIS LANE CLOSURE USING FLAGGERS SHALL
BE LIMITED TO DAYTIME CLOSURES ONLY.

PROVIDE SIGNING AS
PER MT-97.10M DURING
PHASE 2



WIDENING FOR TURN LANE

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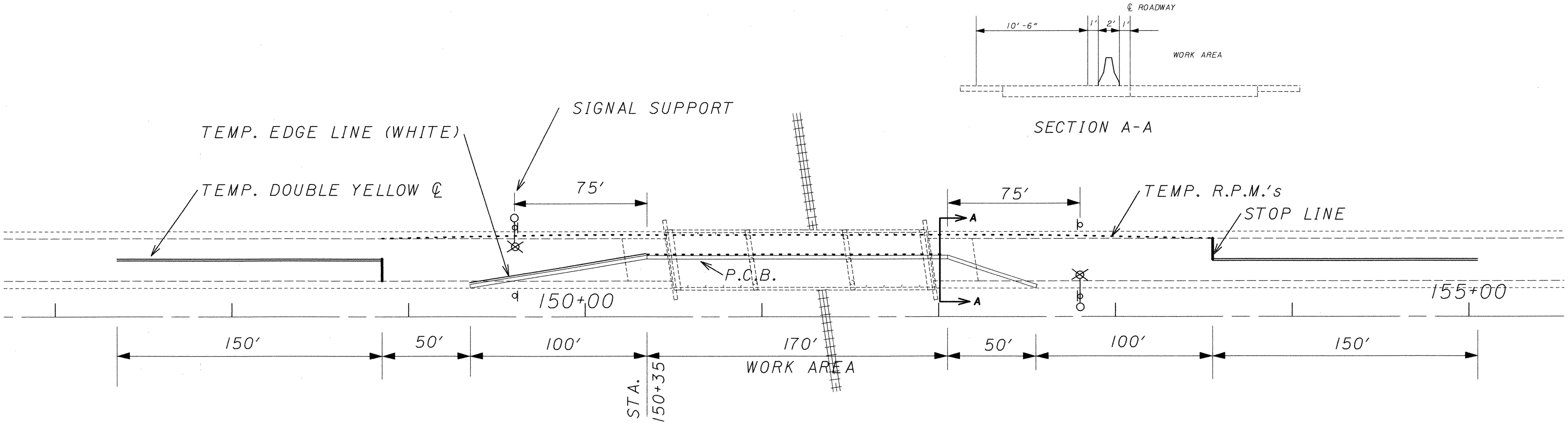
CALCULATED
CHECKED

TEMPORARY LANE CLOSURE - WIDENING AT INTERSECTIONS

POR-224-0.00



TYPICAL SIGNALIZED CLOSURE

E.B. SHOWN, W.B. SIMILAR

FOR ADDITIONAL DETAILS SEE MT-96.11M, MT-96.20M, MT-96.21M & MT-96.25

614 MULTI-DIAL, TIME OF DAY OPERATION OF TEMPORARY SIGNAL

THE TEMPORARY SIGNAL CONTROL REQUIRED FOR THIS PROJECT AS SHOWN ABOVE AND STANDARD DRAWINGS; MT-96.11M, 96.20M AND MT-96.25 SHALL BE CAPABLE OF PROVIDING MULTIPLE TIMING PATTERNS CHOSEN ON A TIME OF DAY (TOD) BASIS.

CONTROL EQUIPMENT SHALL OPERATE IN A MANNER SIMILAR TO THAT DESCRIBED IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SECTIONS NOTED:

CONTROLLERS - 733.01
TIME BASED COORDINATORS - 733.08
TIME SWITCH AND WEEKLY PROGRAMMER - 733.10

THE INITIAL TIMING PLANS AND THEIR PERIODS OF OPERATION SHALL BE:

	TIMING PLAN (SECONDS)		
	A	B	C
EASTBOUND GREEN	29	47	23
EASTBOUND YELLOW	4	4	4
EASTBOUND ALL RED (INTERNAL CLEARANCE)	18	18	18
WESTBOUND GREEN	47	29	23
WESTBOUND YELLOW	4	4	4
WESTBOUND ALL RED (INTERNAL CLEARANCE)	18	18	18
TOTAL CYCLE LENGTH	120	120	90

TIME OF DAY	SUN	MON	TUE	WED	THU	FRI	SAT
MIDNIGHT - 7:00 A.M.	C	C	C	C	C	C	C
7:00 A.M. - 9:00 A.M.	C	A	A	A	A	A	C
9:00 A.M. - 4:00 P.M.	C	C	C	C	C	C	C
4:00 P.M. - 6:00 P.M.	C	B	B	B	B	B	C
6:00 P.M. - MIDNIGHT	C	C	C	C	C	C	C

614 - TEMPORARY SIGNAL

SIGNALS SHALL BE MOUNTED IN ACCORDANCE WITH THE DETAILS SHOWN ON STANDARD DRAWING MT-96.20M OR MT-96.21M

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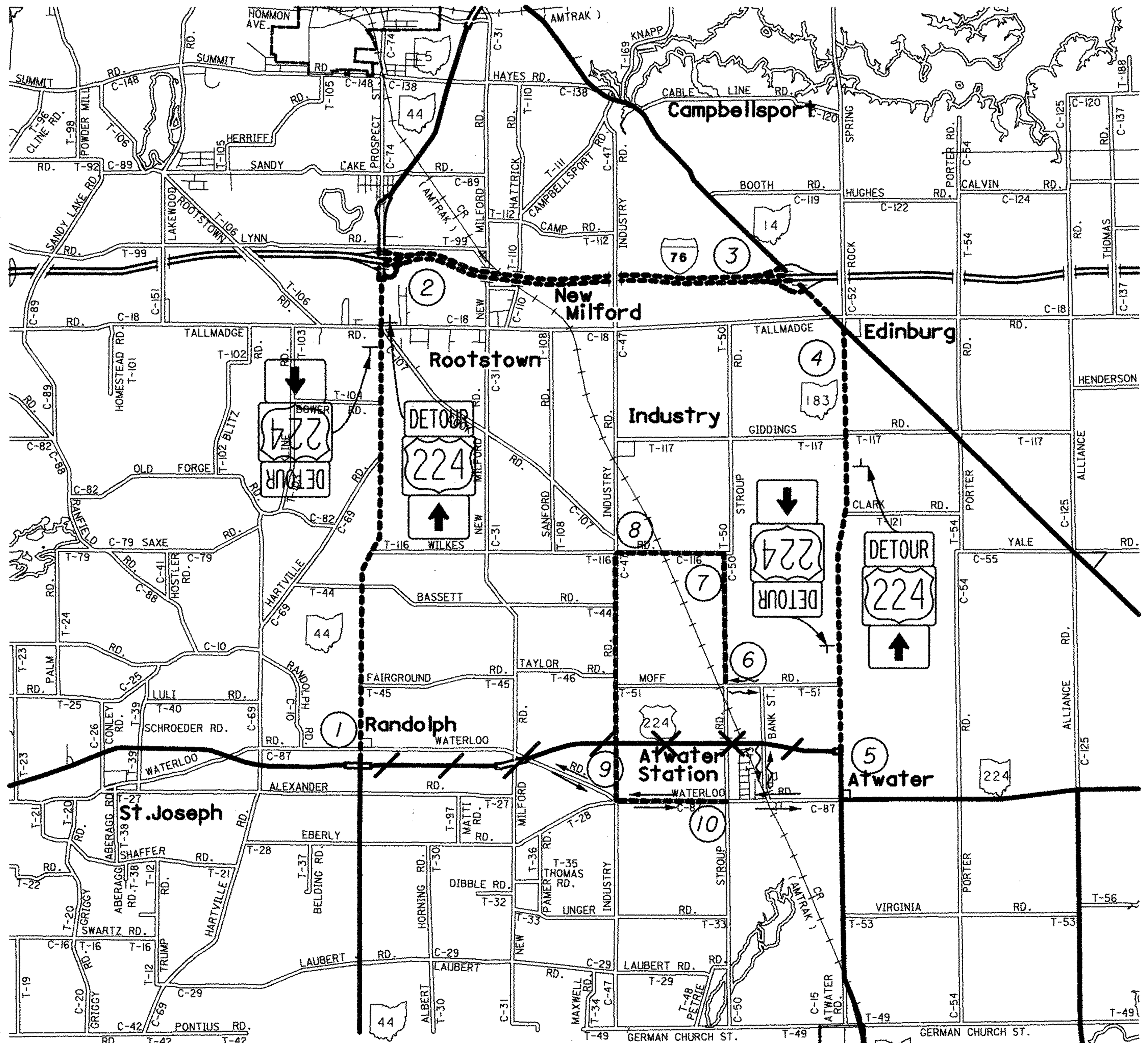
CALCULATED
CHECKED

SIGNALIZED CLOSURE DETAIL -- BR. NO. POR-224-0104

POR-224-0.00



OFFICIAL DETOUR ROUTE
ROAD CLOSED (TO THRU TRAFFIC)
ROAD CLOSED
LOCAL DETOUR ROUTE
LOCAL DETOUR (NO SIGNING NEEDED)

FOR FIGURES 6-10 SEE SHEET 13/47 .

TYPICAL INSTALLATION AT COUNTY/TOWNSHIP ROUTES CROSSING US 224	WATERLOO RD. INTERSECTION	INDUSTRY RD. INTERSECTION	BANK ST. INTERSECTION
US 224 A B	A - NONE	A - NONE	A - TYPE III BARRICADE ROAD CLOSED R-75-48
	B - TYPE III BARRICADE ROAD CLOSED 1.0 MILES AHEAD LOCAL TRAFFIC ONLY R-76A-60	B - TYPE III BARRICADE ROAD CLOSED R-75-48	B - NONE

FIGURE 1

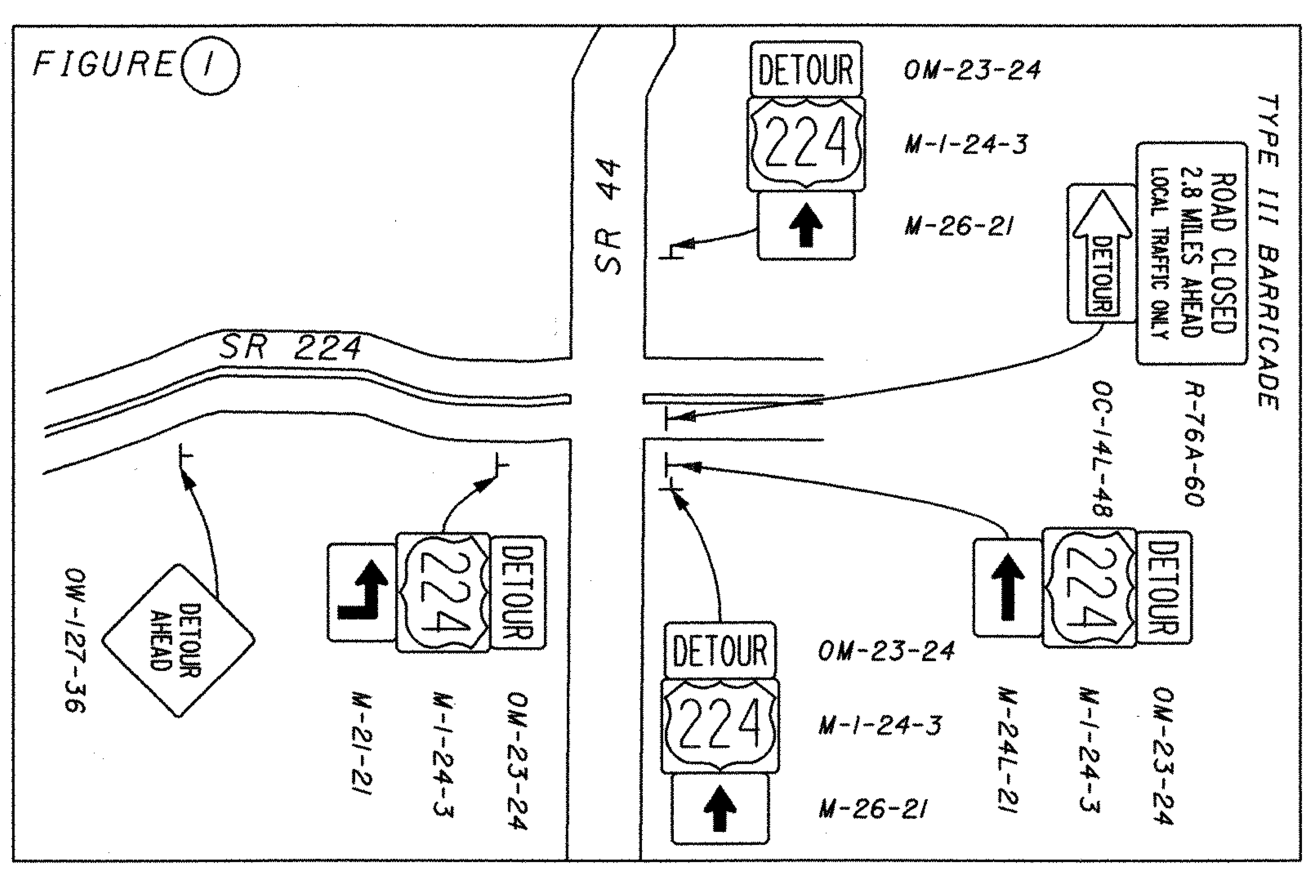


FIGURE 2

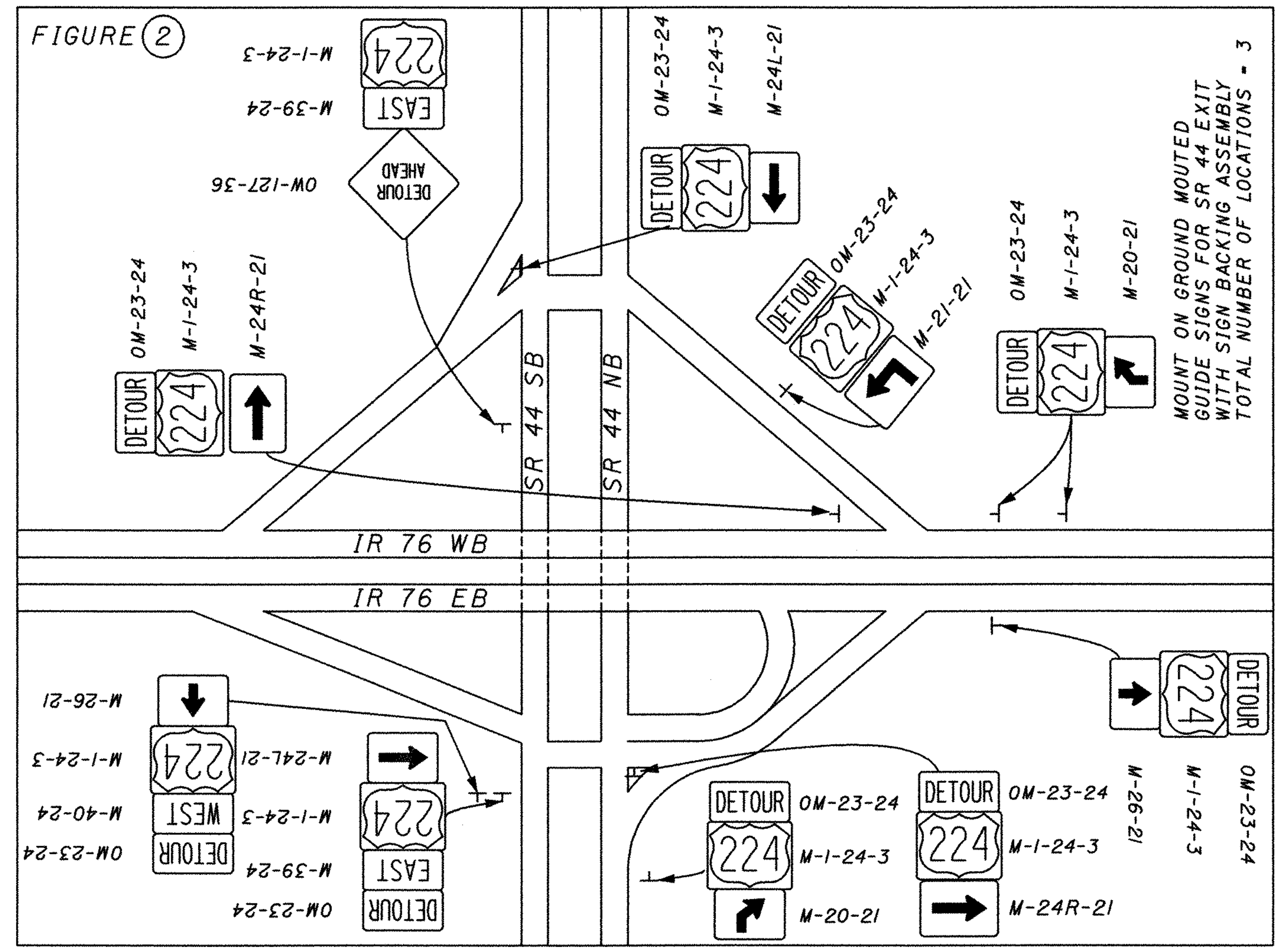


FIGURE 3

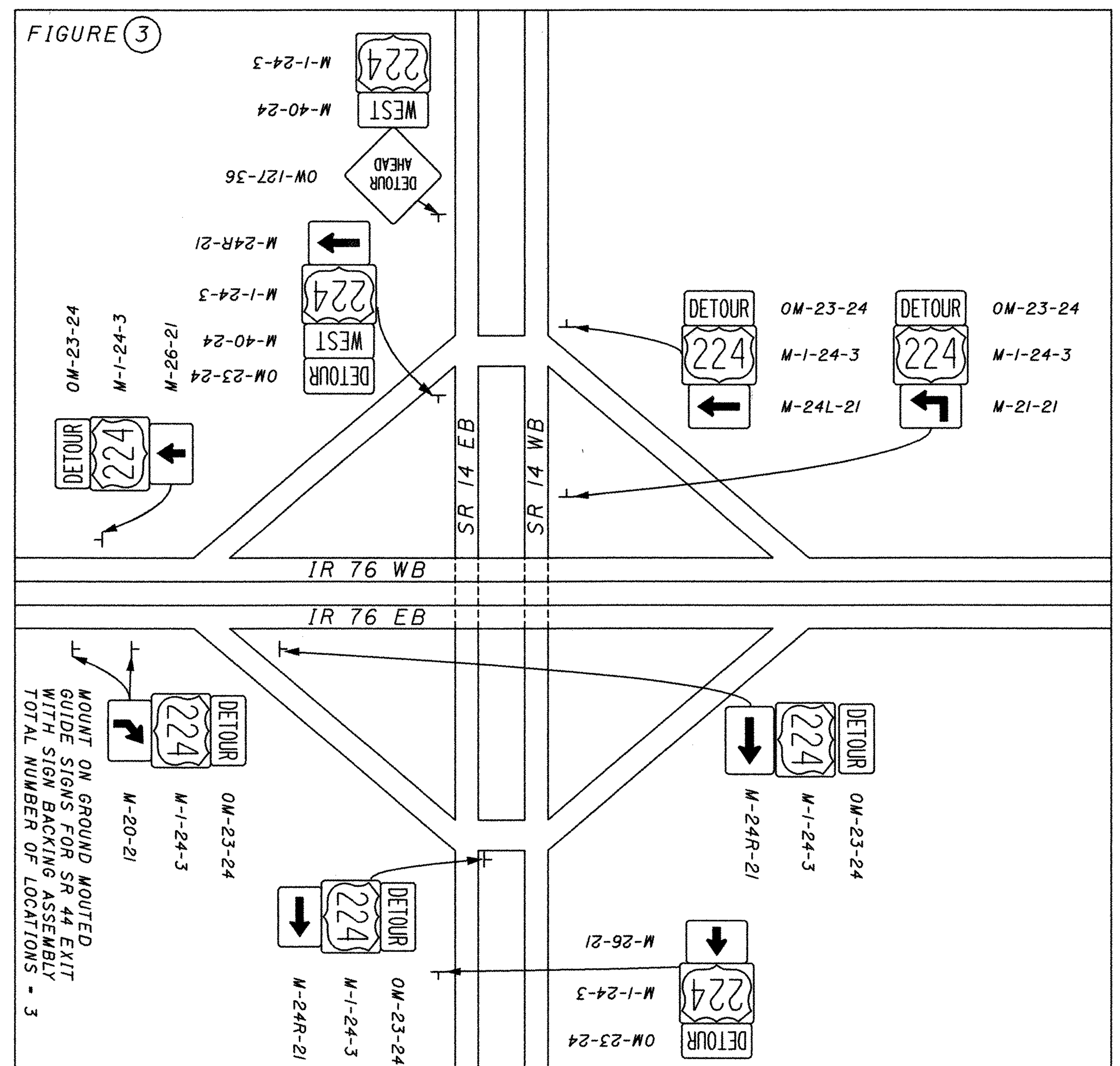


FIGURE 4

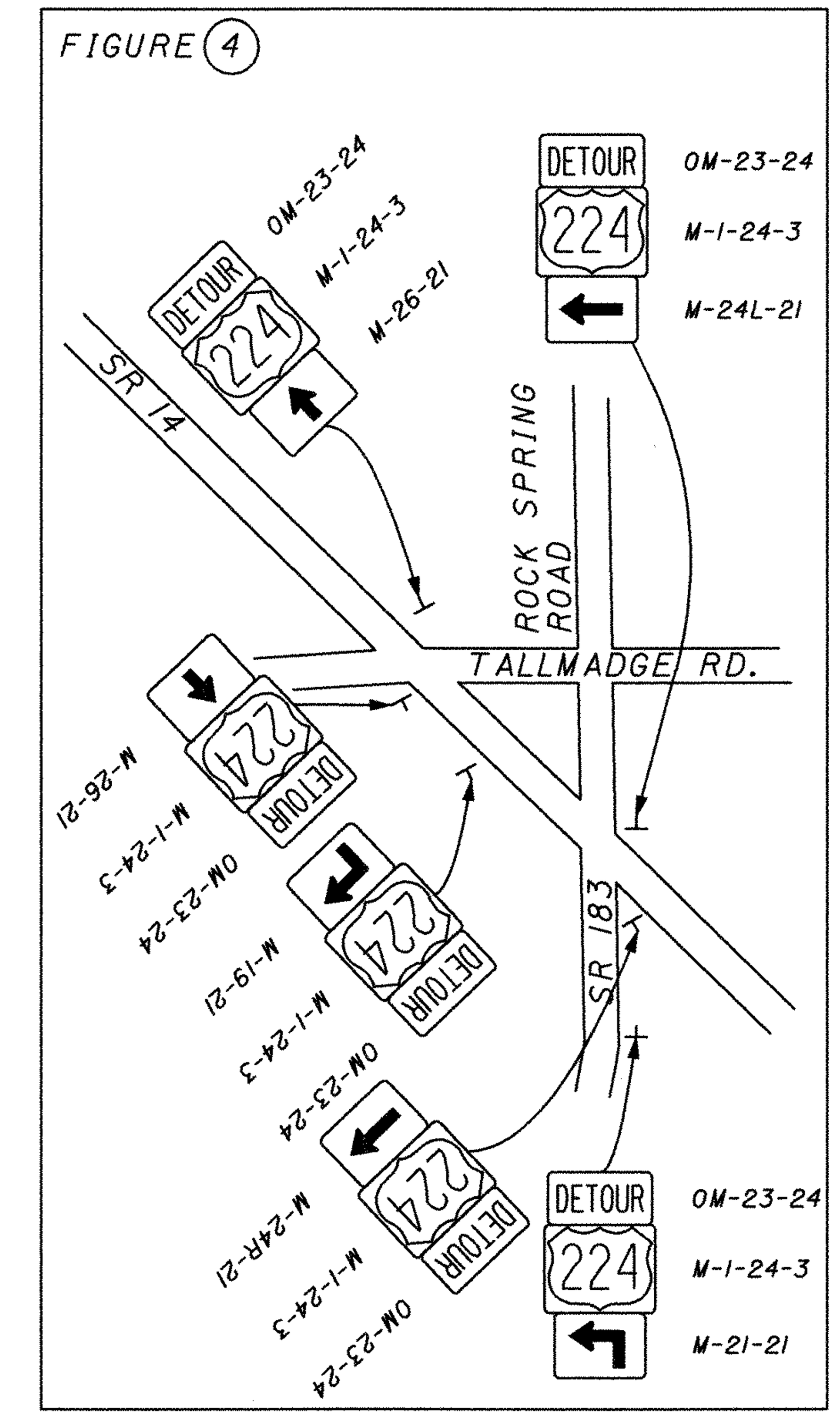
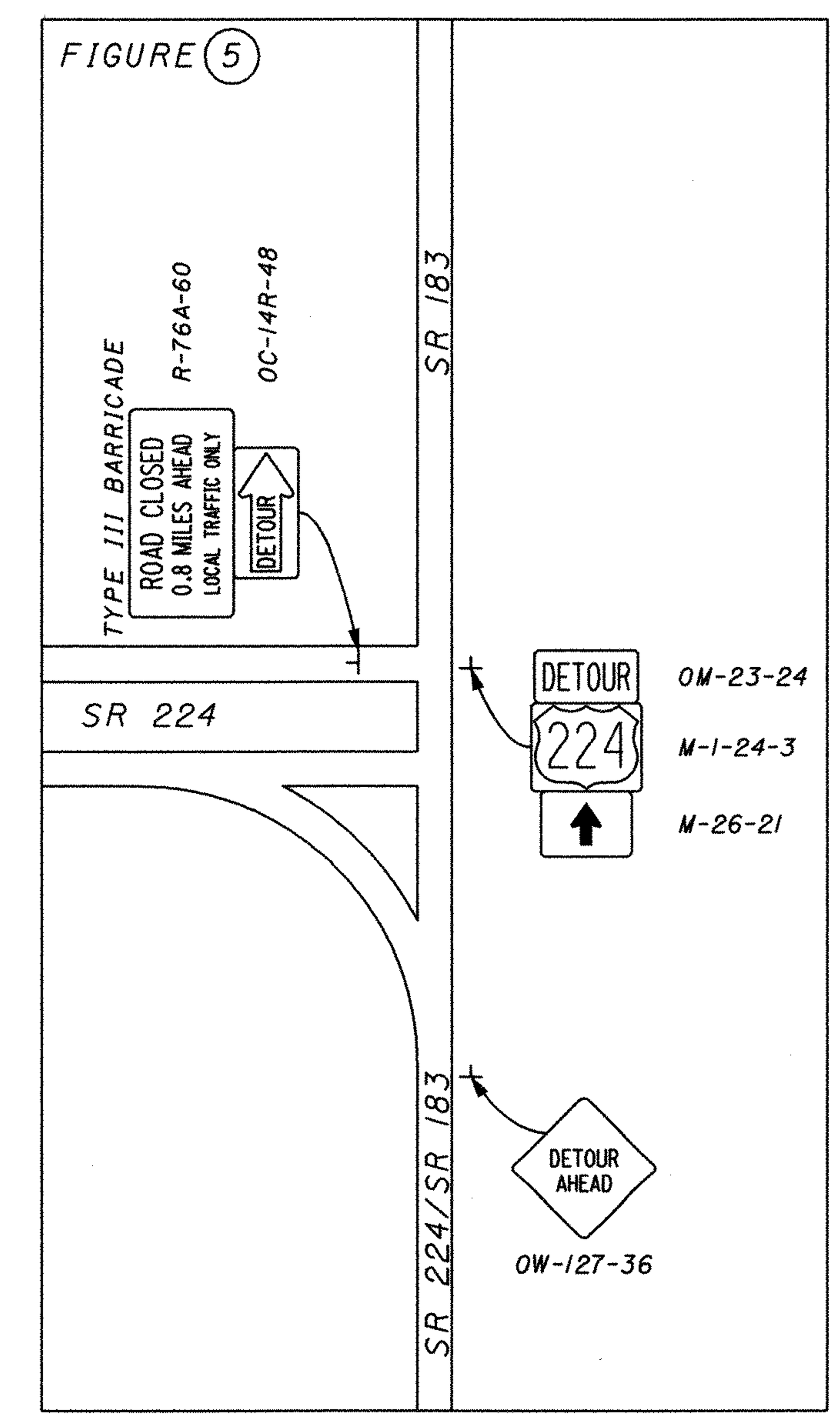


FIGURE 5



CALCULATED
CHECKED

DETOUR PLAN

POR-224-0.00

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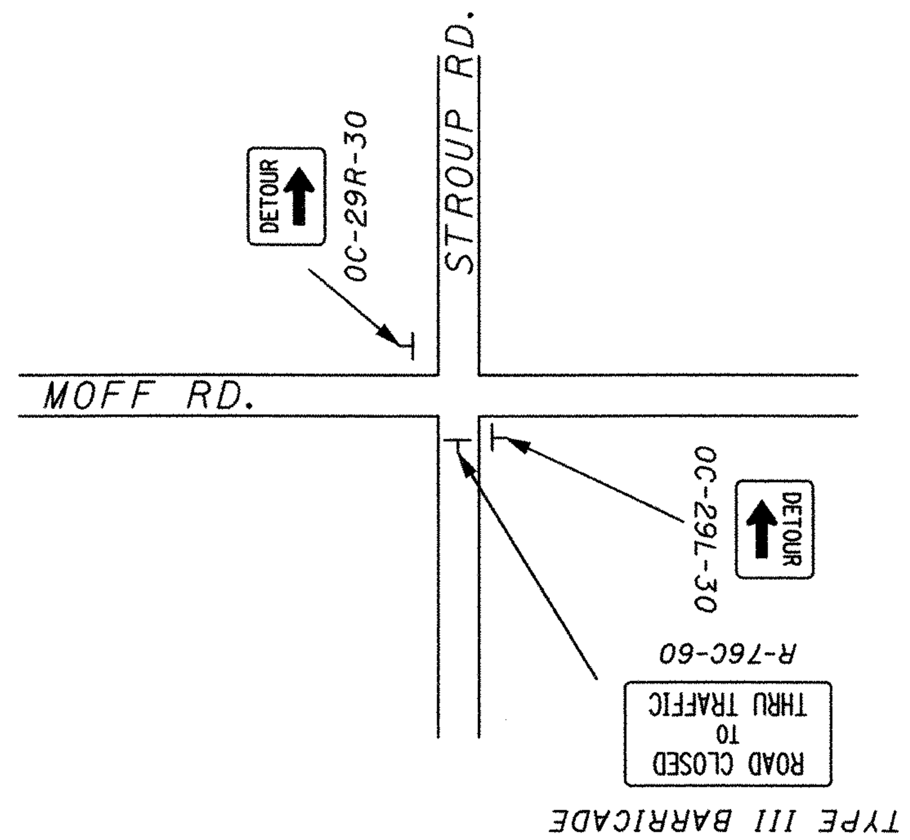
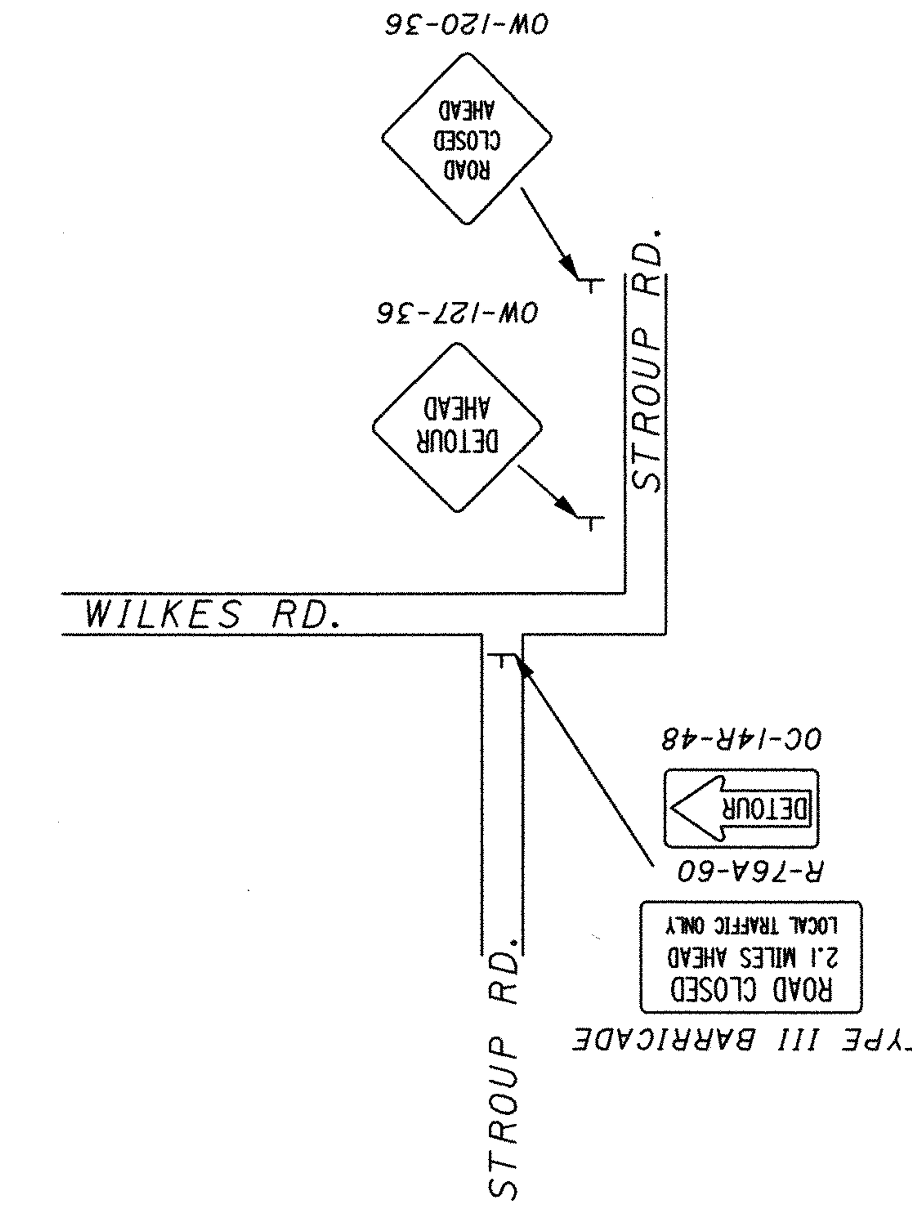
FIGURE 6



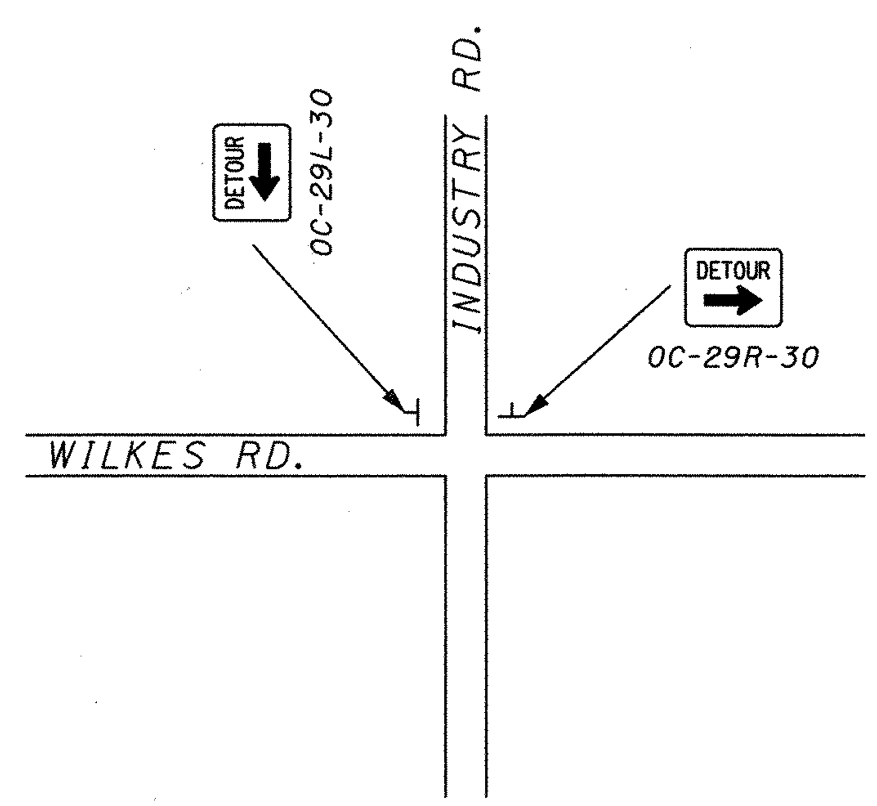
OHIO MANUAL OF TRAFFIC CONTROL FOR
CONSTRUCTION MAINTENANCE OPERATIONS
FIGURE C-28

FIGURE 7



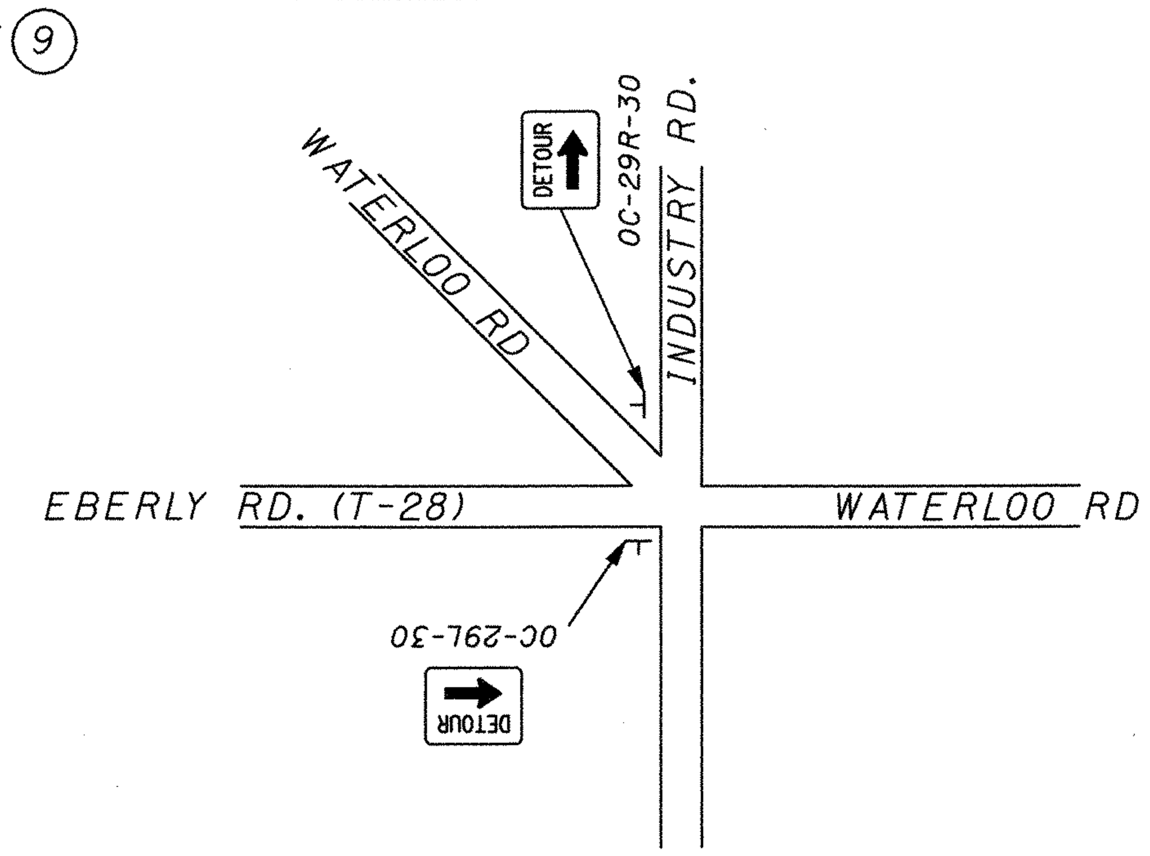
OHIO MANUAL OF TRAFFIC CONTROL FOR
CONSTRUCTION MAINTENANCE OPERATIONS
FIGURE C-28

FIGURE 8



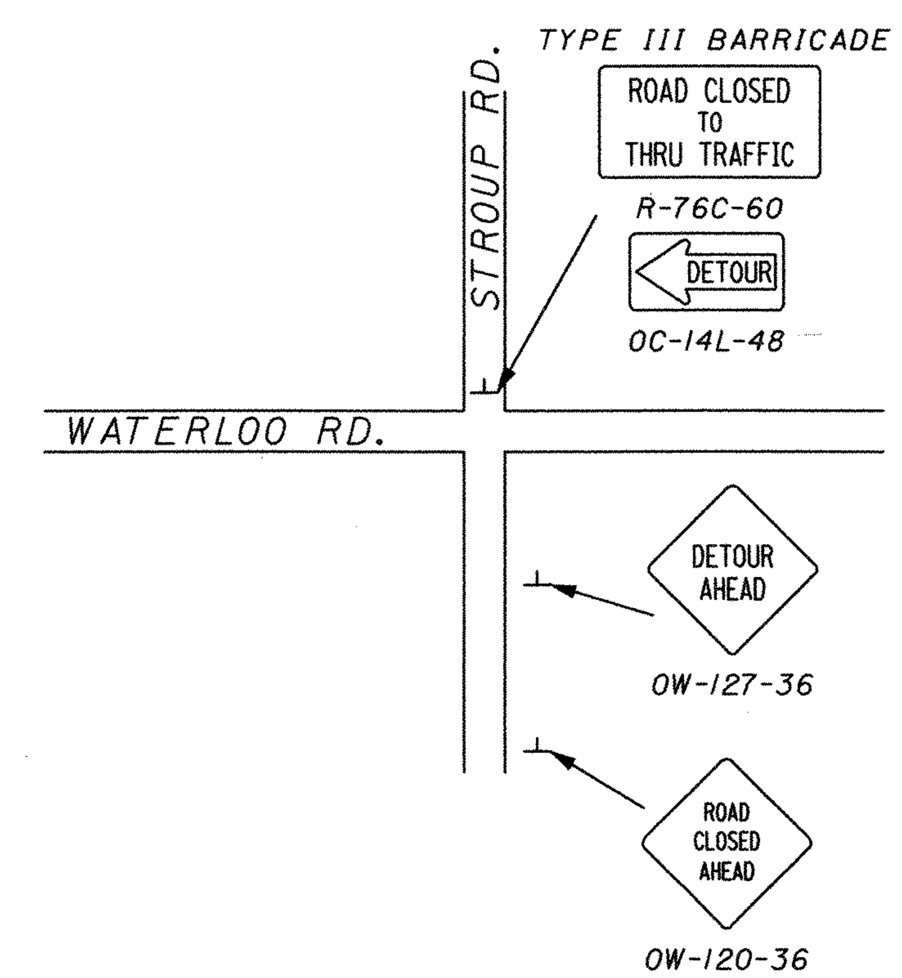
OHIO MANUAL OF TRAFFIC CONTROL FOR
CONSTRUCTION MAINTENANCE OPERATIONS
FIGURE C-28

FIGURE 9



OHIO MANUAL OF TRAFFIC CONTROL FOR
CONSTRUCTION MAINTENANCE OPERATIONS
FIGURE C-28

FIGURE 10



OHIO MANUAL OF TRAFFIC CONTROL FOR
CONSTRUCTION MAINTENANCE OPERATIONS
FIGURE C-28

CALCULATED
CHECKED

DETOUR PLAN

POR-224-0.00

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ROADWAY MATERIALS

ITEM NUMBER	DESCRIPTION	ITEM NUMBER	DESCRIPTION
		621	RAISED PAVEMENT MARKER, INSTALLATION ONLY
203	EMBANKMENT	625	GROUND ROD
203	EXCAVATION	630	GROUND MOUNTED SUPPORT, NO. 3 POST
251	PARTIAL DEPTH PAVEMENT REPAIR	632	STRAIN POLE FOUNDATION
252	FULL DEPTH PAVEMENT REPAIR	632	STRAIN POLE, TYPE TC-81.10, DESIGN 6
301	BITUMINOUS AGGREGATE BASE	632	MESSENGER WIRE, 7 STRAND
407	TACK COAT	632	VEHICULAR SIGNAL HEAD, 1 SECTION, 12" LENS
413	SAWING AND SEALING ASPHALT CONCRETE PAVEMENT JOINTS	632	SIGNAL CABLE, 3 CONDUCTOR, NO. 14 AWG
446	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	632	POWER SERVICE
448	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2	632	POWER CABLE, 3 CONDUCTOR, NO. 6 AWG
451	APPROACH SLAB PRESSURE RELIEF JOINT	632	DETECTOR LOOP
603	6" CONDUIT, TYPE F		
603	15" CONDUIT, TYPE C	633	FLASHER CONTROLLER
603	18" CONDUIT, TYPE C	633	CONTROLLER WORK PAD
604	MANHOLE		
605	6" SHALLOW PIPE UNDERDRAIN	644	EDGE LINE
606	GUARDRAIL, TYPE 5	644	CENTER LINE
606	BRIDGE TERMINAL ASSEMBLY, TYPE 1	644	STOP LINE
606	BRIDGE TERMINAL ASSEMBLY, TYPE 4	644	TRANSVERSE LINE
606	ANCHOR ASSEMBLY, TYPE B-98	660	SODDING
606	ANCHOR ASSEMBLY, TYPE E-98	670	DITCH EROSION PROTECTION
607	FENCE, TYPE 47		
		870	SEEDING AND MULCHING
611	REINFORCED CONCRETE APPROACH SLAB	870	TOPSOIL
614	BARRIER REFLECTOR	870	COMMERCIAL FERTILIZER
614	PORTABLE CHANGEABLE MESSAGE SIGN	870	AGRICULTURAL LIME
614	BITUMINOUS CONCRETE FOR MAINTAINING TRAFFIC	870	WATER
614	TEMPORARY PAVEMENT MARKINGS	877	TEMPORARY SEEDING AND MULCHING
614	TEMPORARY RAISED PAVEMENT MARKER	877	TEMPORARY INLET PROTECTION FILTER FABRIC FENCE

BRIDGE MATERIALS - POR-224-0104

ITEM NUMBER	DESCRIPTION
512	SEALING OF CONCRETE
516	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC COMPRESSION SEAL
518	SCUPPER, LENGTHENING, AS PER PLAN
519	PATCHING CONCRETE STRUCTURE, AS PER CONCEPTUAL DOCUMENTS
601	CRUSHED AGGREGATE SLOPE PROTECTION
885	SPECIAL - SURFACE PREPARATION, FIELD PAINTING OF EX. STEEL W/PRIME, INTERMEDIATE & FINISH COATS W/WARRANTY AS PER SS885
892	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY WITH WARRANTY

BRIDGE MATERIALS - POR-224-1172

ITEM NUMBER	DESCRIPTION
512	SEALING OF CONCRETE
519	PATCHING CONCRETE STRUCTURE, AS PER CONCEPTUAL DOCUMENTS
601	CRUSHED AGGREGATE SLOPE PROTECTION
894	HIGH PERFORMANCE CONCRETE WITH WARRANTY

BRIDGE MATERIALS - POR-224-1189

ITEM NUMBER	DESCRIPTION
512	SEALING OF CONCRETE
516	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC COMPRESSION SEAL
519	PATCHING CONCRETE STRUCTURE, AS PER CONCEPTUAL DOCUMENTS
601	CRUSHED AGGREGATE SLOPE PROTECTION
885	SPECIAL - SURFACE PREPARATION, FIELD PAINTING OF EX. STEEL W/PRIME, INTERMEDIATE & FINISH COATS W/WARRANTY AS PER SS885
892	MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY WITH WARRANTY
894	HIGH PERFORMANCE CONCRETE WITH WARRANTY

CALCULATED JAA
CHECKED ENF

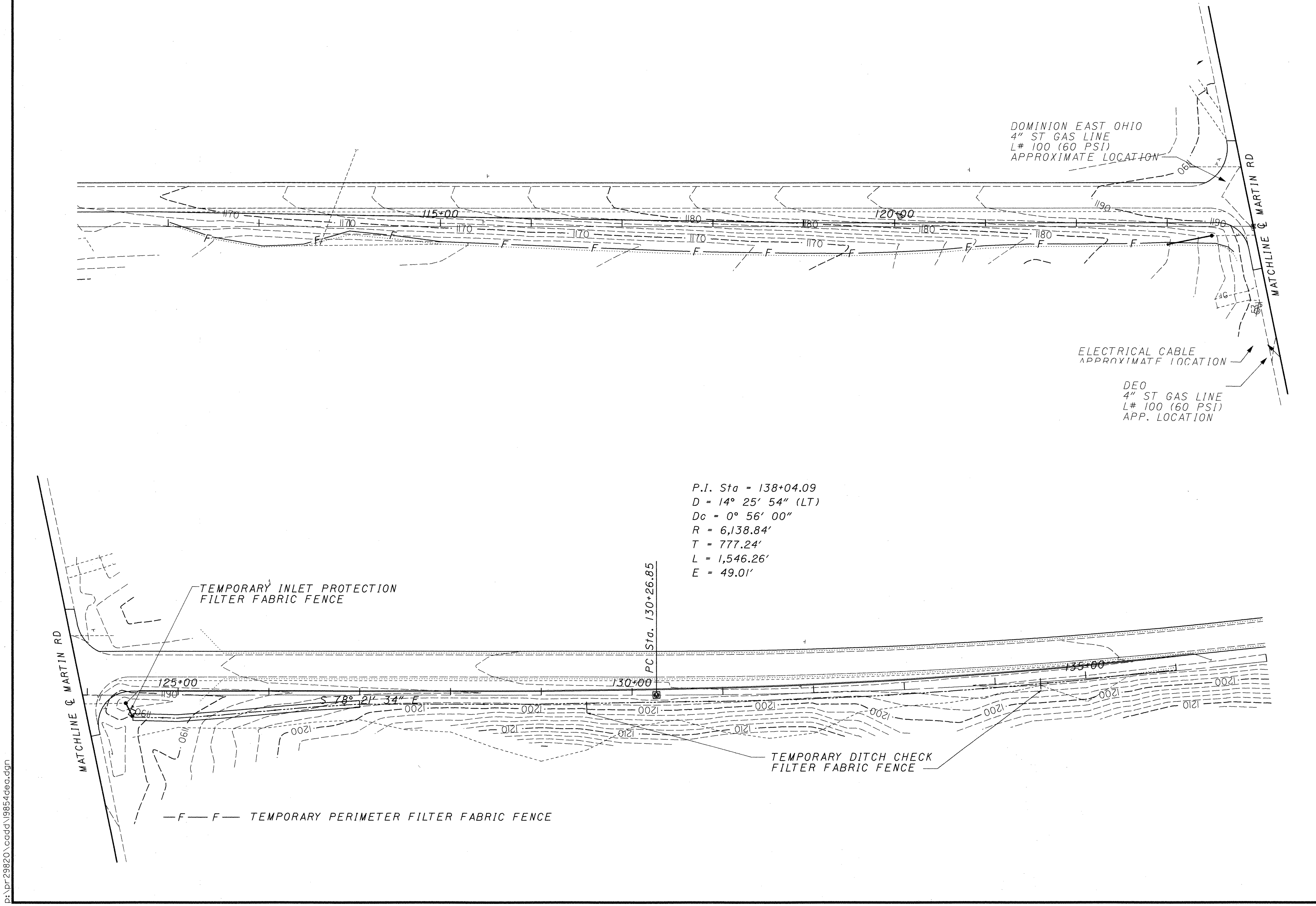
MATERIAL LIST

POR-224-0.00

p:\pr29820\cadd\19854gl.dgn

FOR ADDITIONAL DETAILS SEE DM-4.3 AND DM-4.4

ALL WORK SHALL BE IN ACCORDANCE WITH SS877



HORIZONTAL SCALE IN FEET

CALCULATED

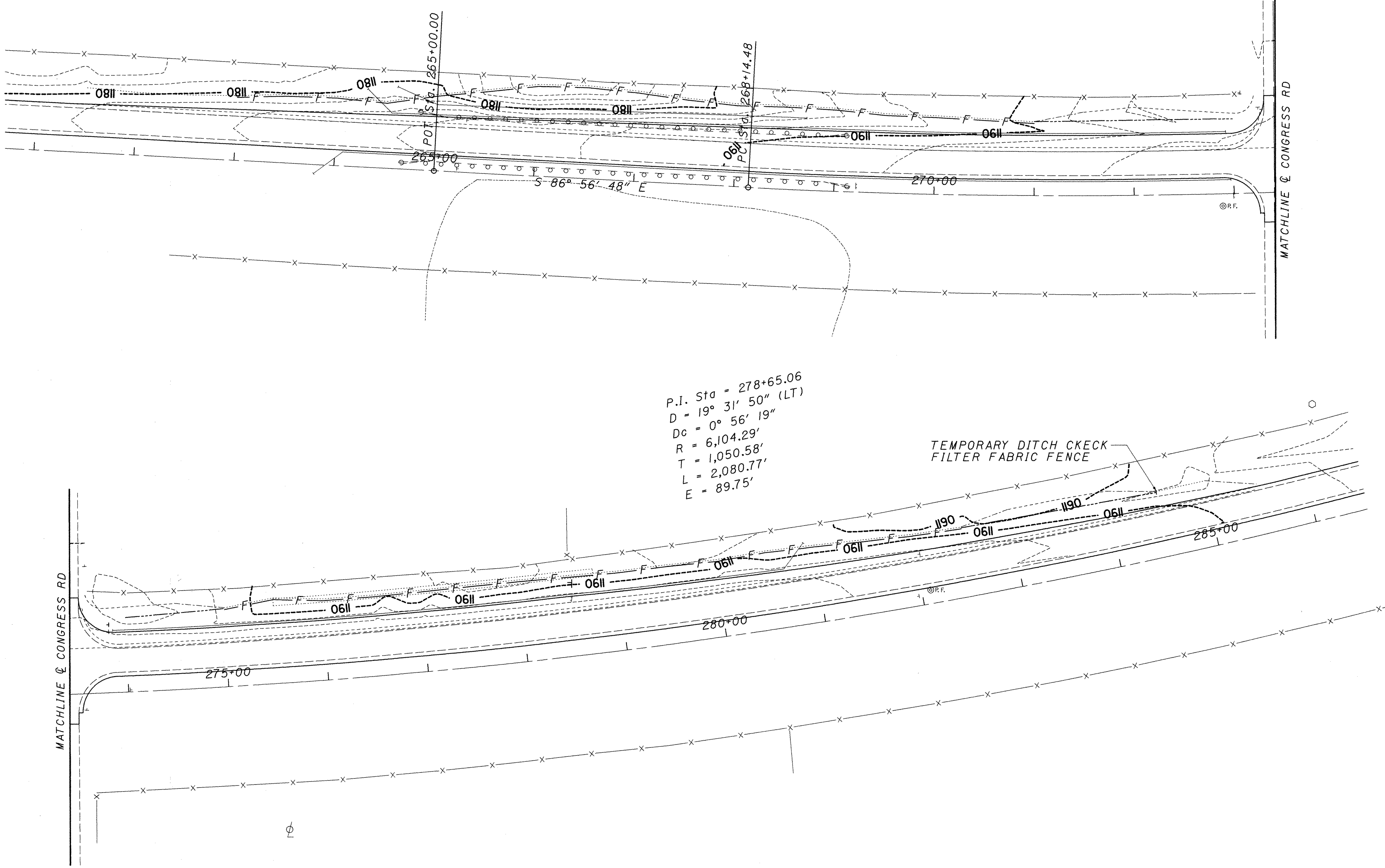
CHECKED

TEMPORARY EROSION CONTROL DETAILS
MARTIN RD INTERSECTION

POR-224-0.00

FOR ADDITIONAL DETAILS SEE DM-4.3 AND DM-4.4

ALL WORK SHALL BE IN ACCORDANCE WITH SS877



—F—F— TEMPORARY PERIMETER FILTER FABRIC FENCE

HORIZONTAL SCALE IN FEET

CALCULATED

CHECKED

TEMPORARY EROSION CONTROL DETAILS CONGRESS LAKE RD INTERSECTION

POR-224-0.00

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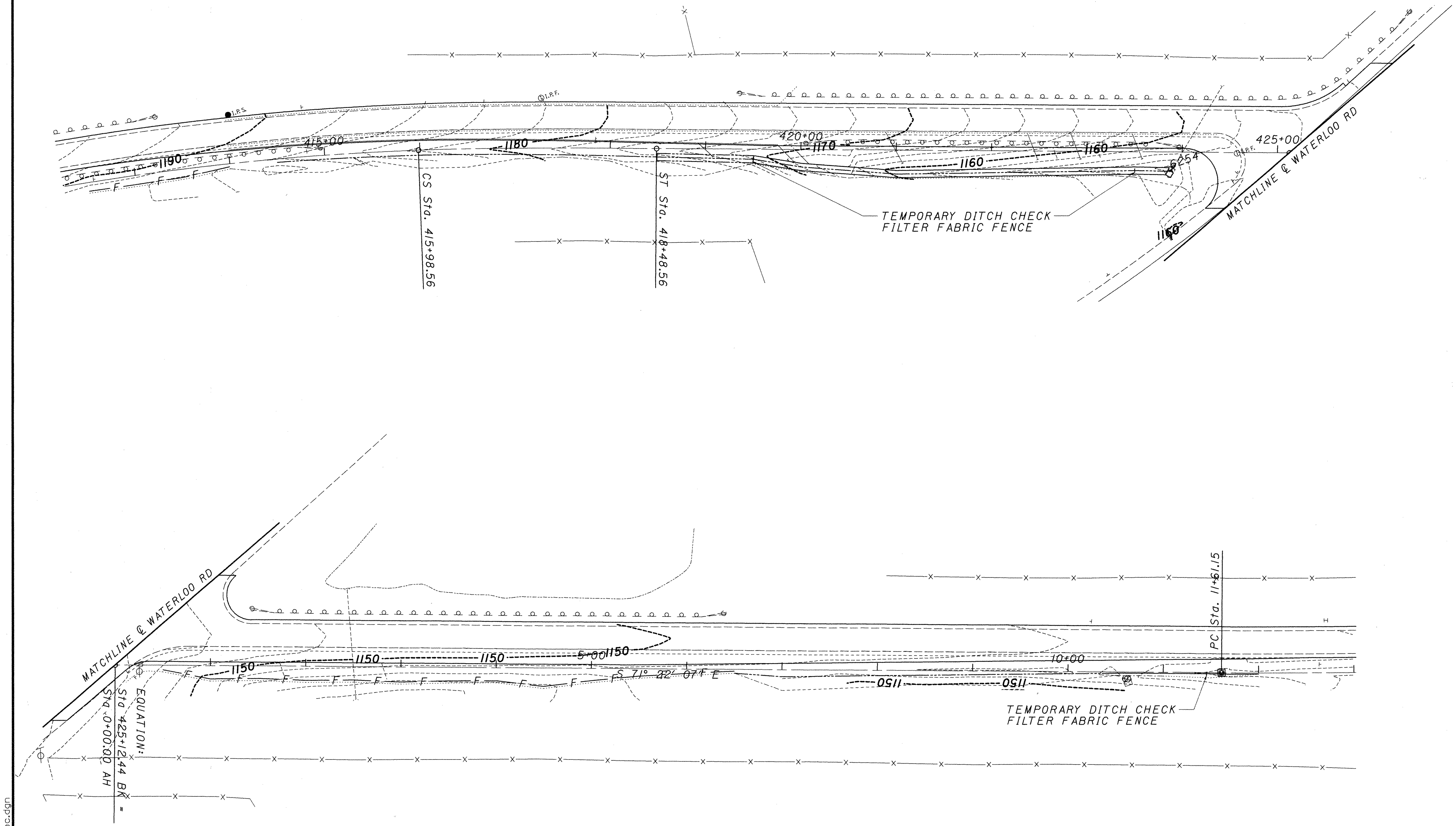
FOR ADDITIONAL DETAILS SEE DM-4.3 AND DM-4.4

ALL WORK SHALL BE IN ACCORDANCE WITH SS877



—F—F— TEMPORARY PERIMETER FILTER FABRIC FENCE

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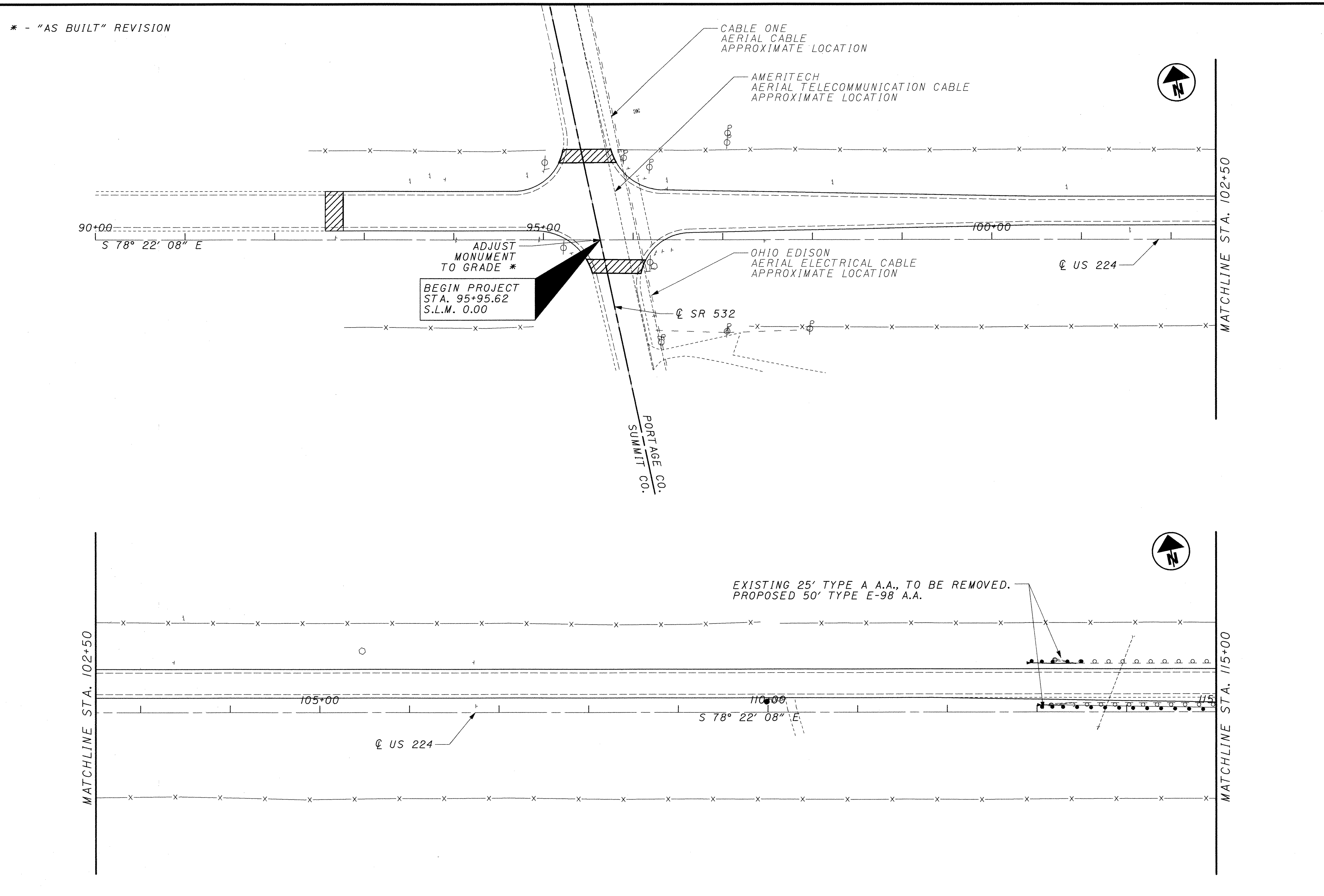
HORIZONTAL SCALE IN FEET

CALCULATED

CHECKED

TEMPORARY EROSION CONTROL DETAILS
WATERLOO RD INTERSECTION

POR-224-0.00



0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED

CHECKED

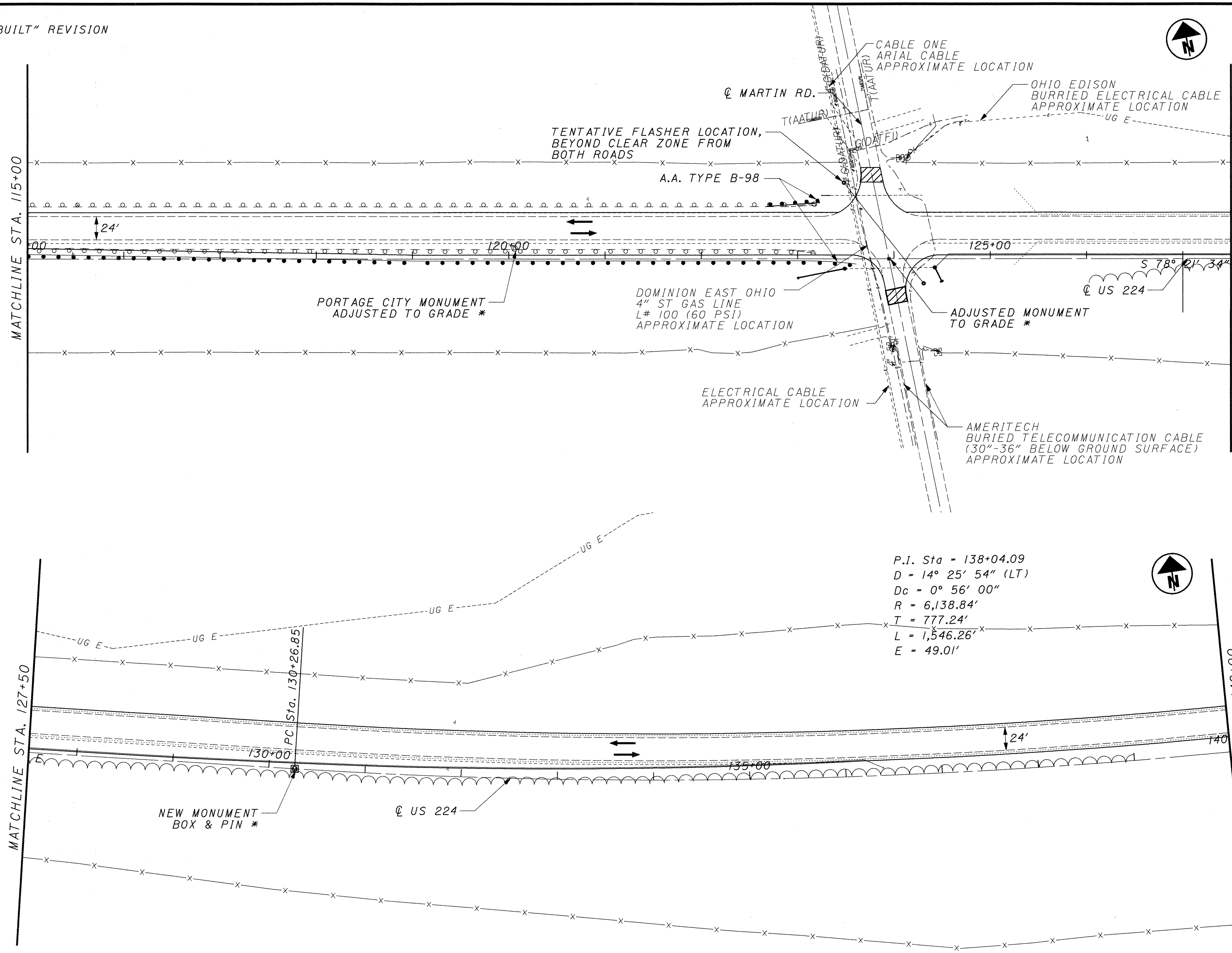
PLAN SHEET - S.R. 224
STA. 90+00 TO STA. 115+00

POR-224-0.00

AS BUILT
DECEMBER 16, 2002

p:\pr29820\cadd\19854gpl.dgn

* - "AS BUILT" REVISION



HORIZONTAL SCALE IN FEET

CALCULATED

CHECKED

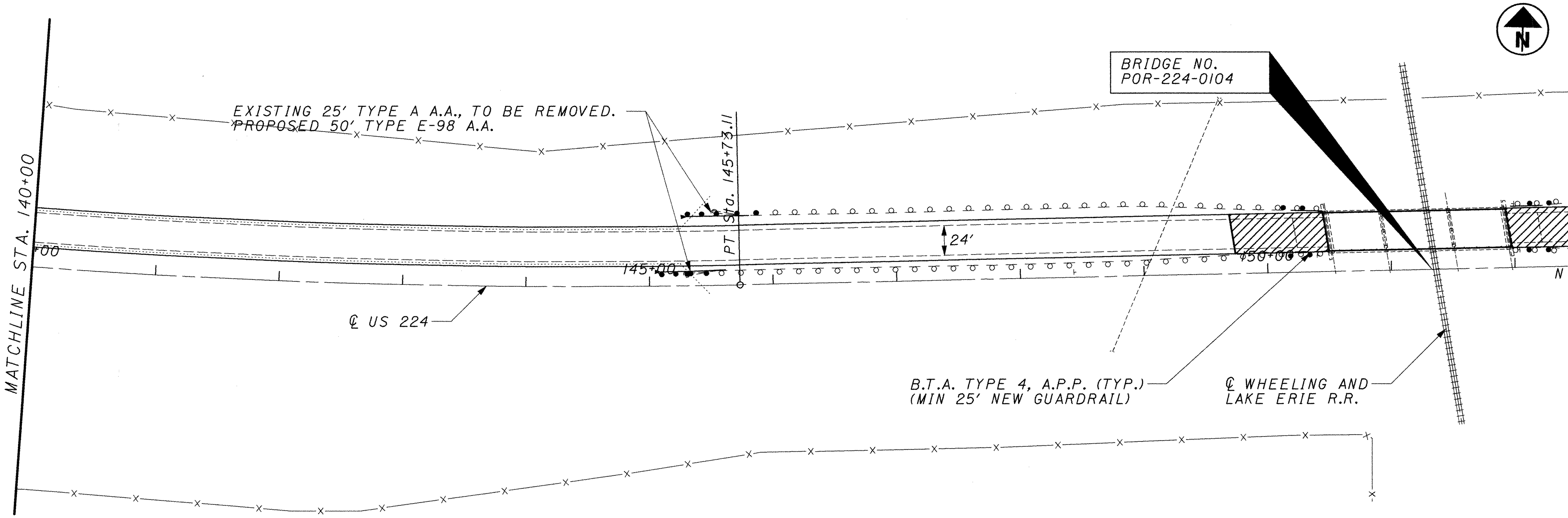
PLAN SHEET - S.R. 224
STA. 115+00 TO STA. 140+00

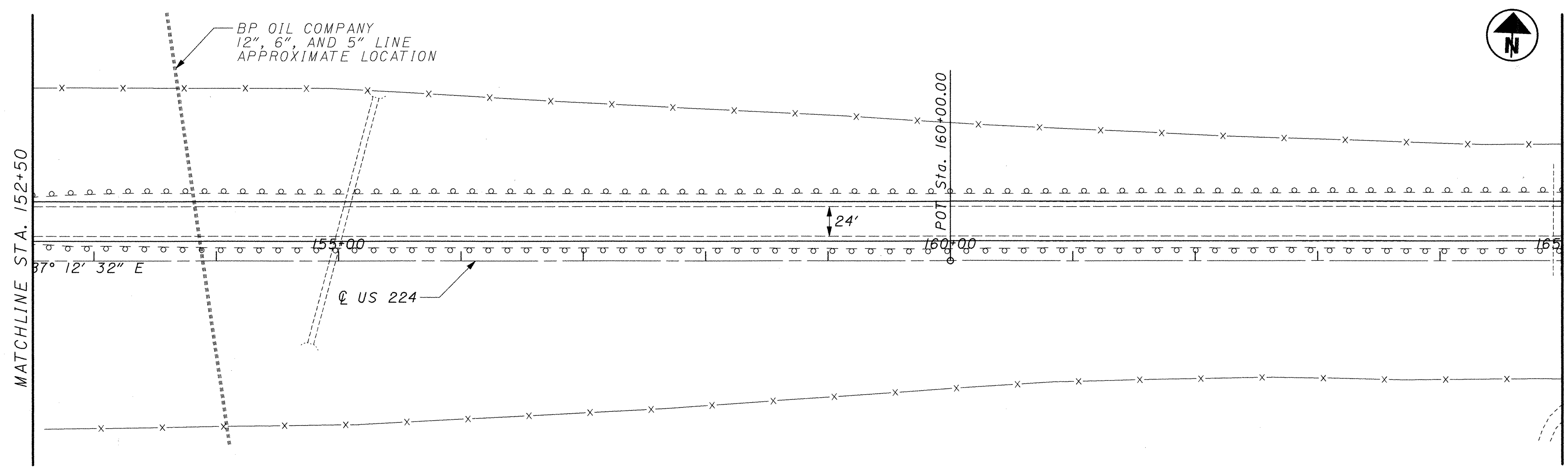
POR-224-0.00

AS BUILT

DECEMBER 16, 2002

p:\pr29820\cadd\19854gp2.dgn





0 25 50 100
HORIZONTAL
SCALE IN FEET

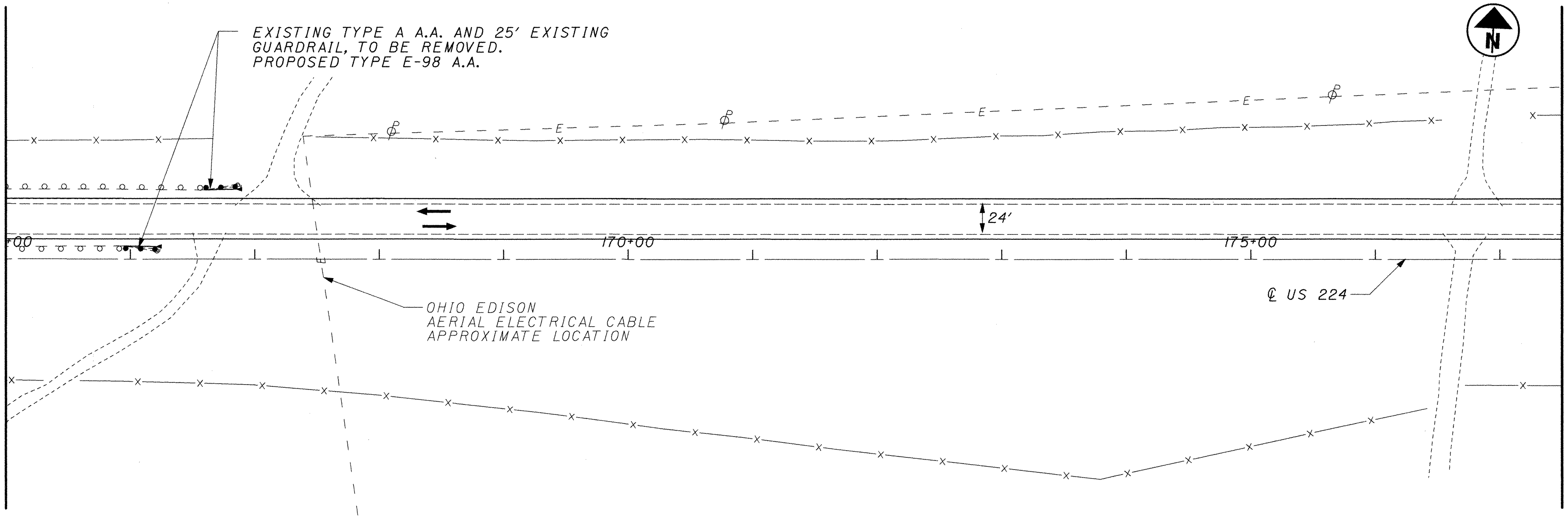
CALCULATED

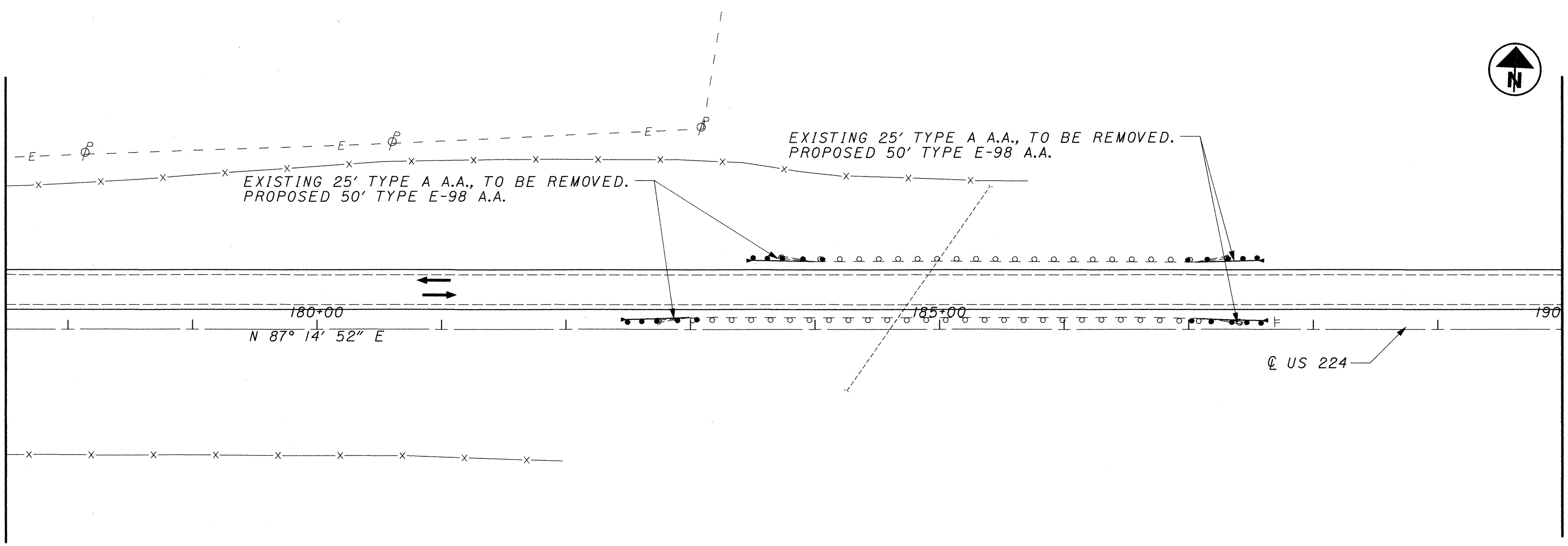
CHECKED

PLAN SHEET - S.R. 224
STA. 140+00 TO STA. 165+00

POR-224-0.00

p:\pr29820\cadd\19854gp3.dgn





0 25 50 100
HORIZONTAL
SCALE IN FEET

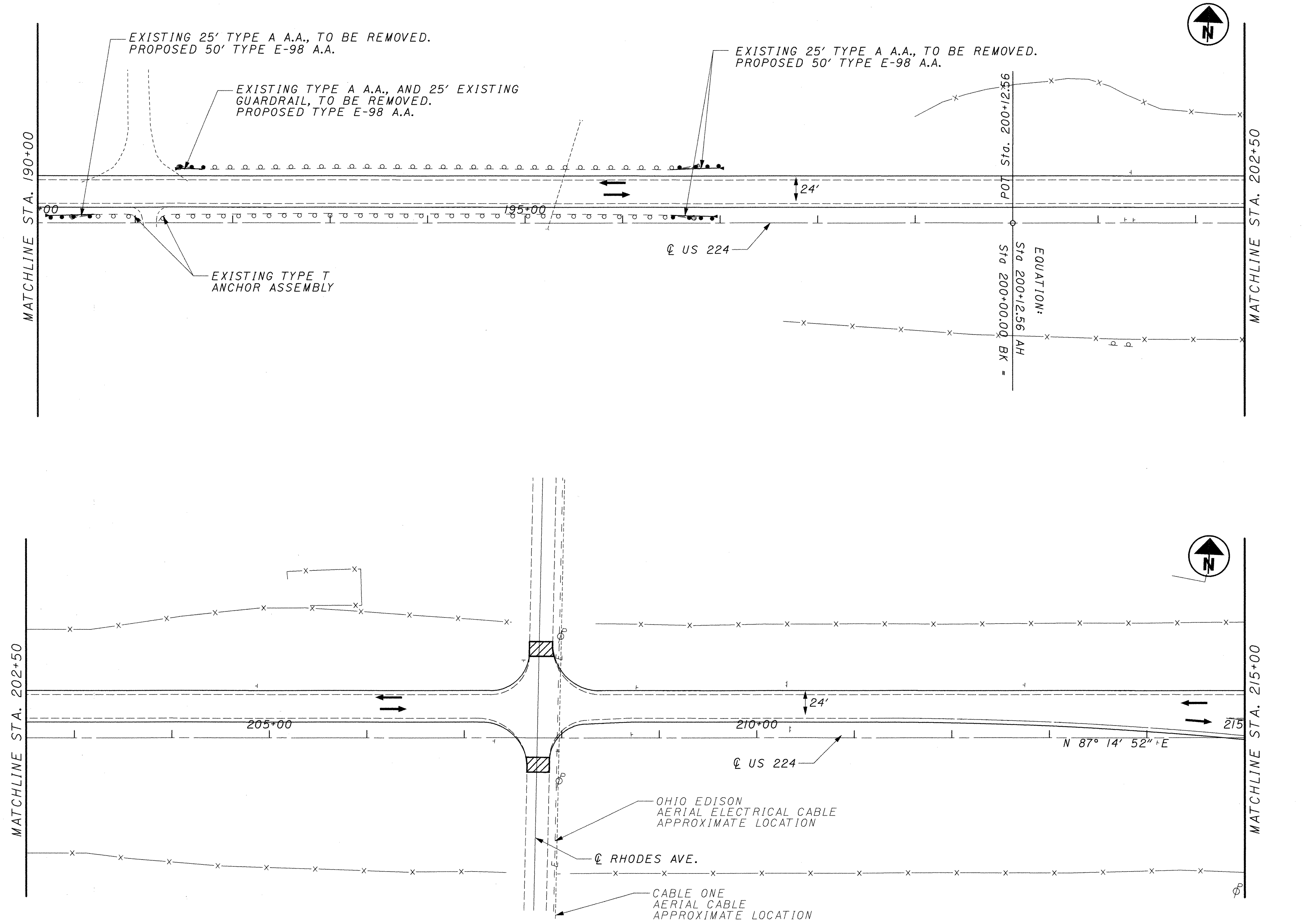
CALCULATED

CHECKED

PLAN SHEET - S.R. 224
STA. 165+00 TO STA. 190+00

POR-224-0.00

p:\pr29820\cadd\19854gp4.dgn



0 25 50 100
HORIZONTAL
SCALE IN FEET

CALCULATED

CHECKED

PLAN SHEET - S.R. 224
STA. 190+00 TO STA. 215+00

POR-224-0.00

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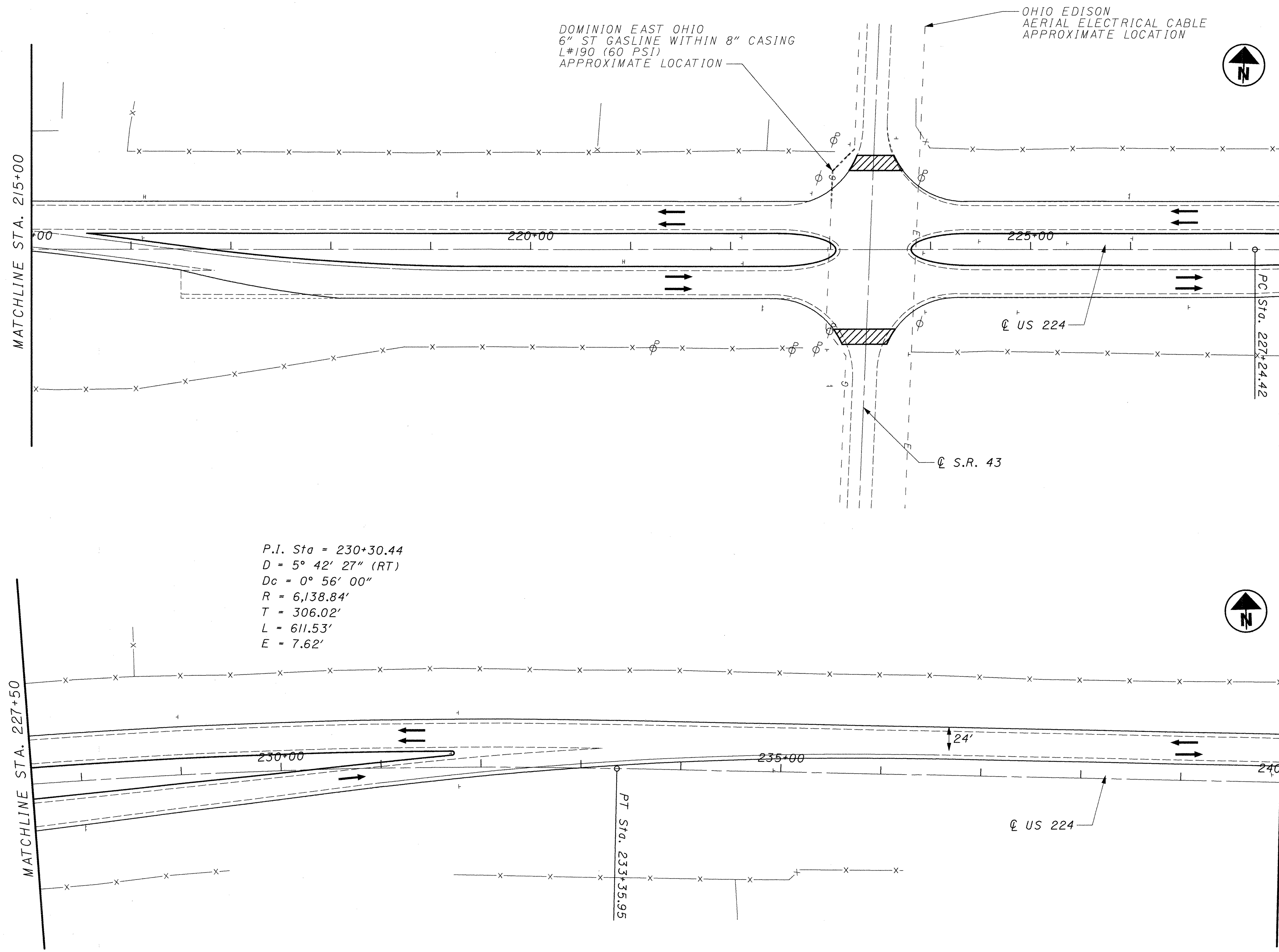


0 25 50 100
HORIZONTAL
SCALE IN FEET

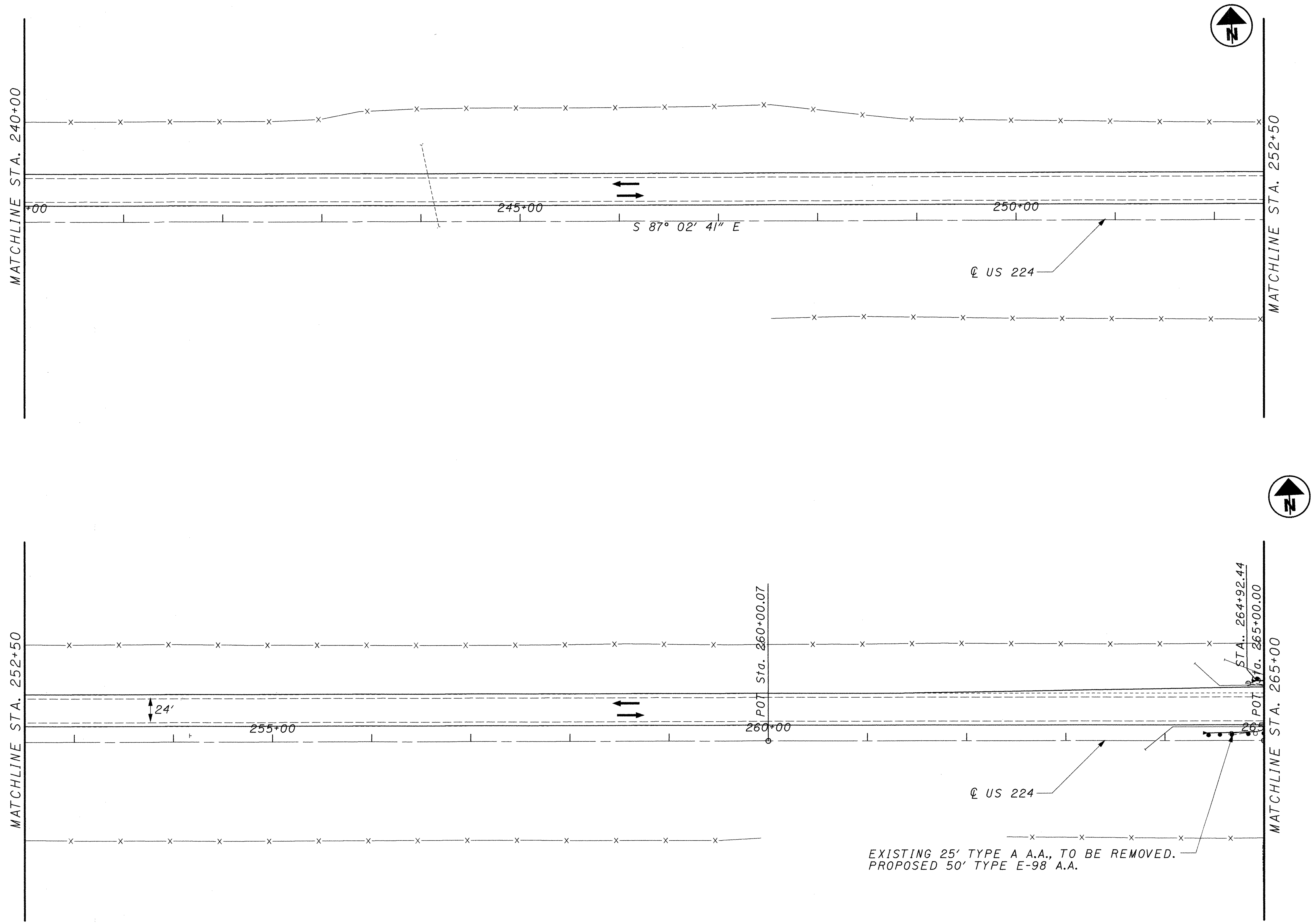
CALCULATED

CHECKED

PLAN SHEET - S.R. 224
STA. 215+00 TO STA. 240+00

POR-224-0.00

p:\pr29820\cadd\19854gp6.dgn



0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 240+00 TO STA. 265+00

POR-224-0.00

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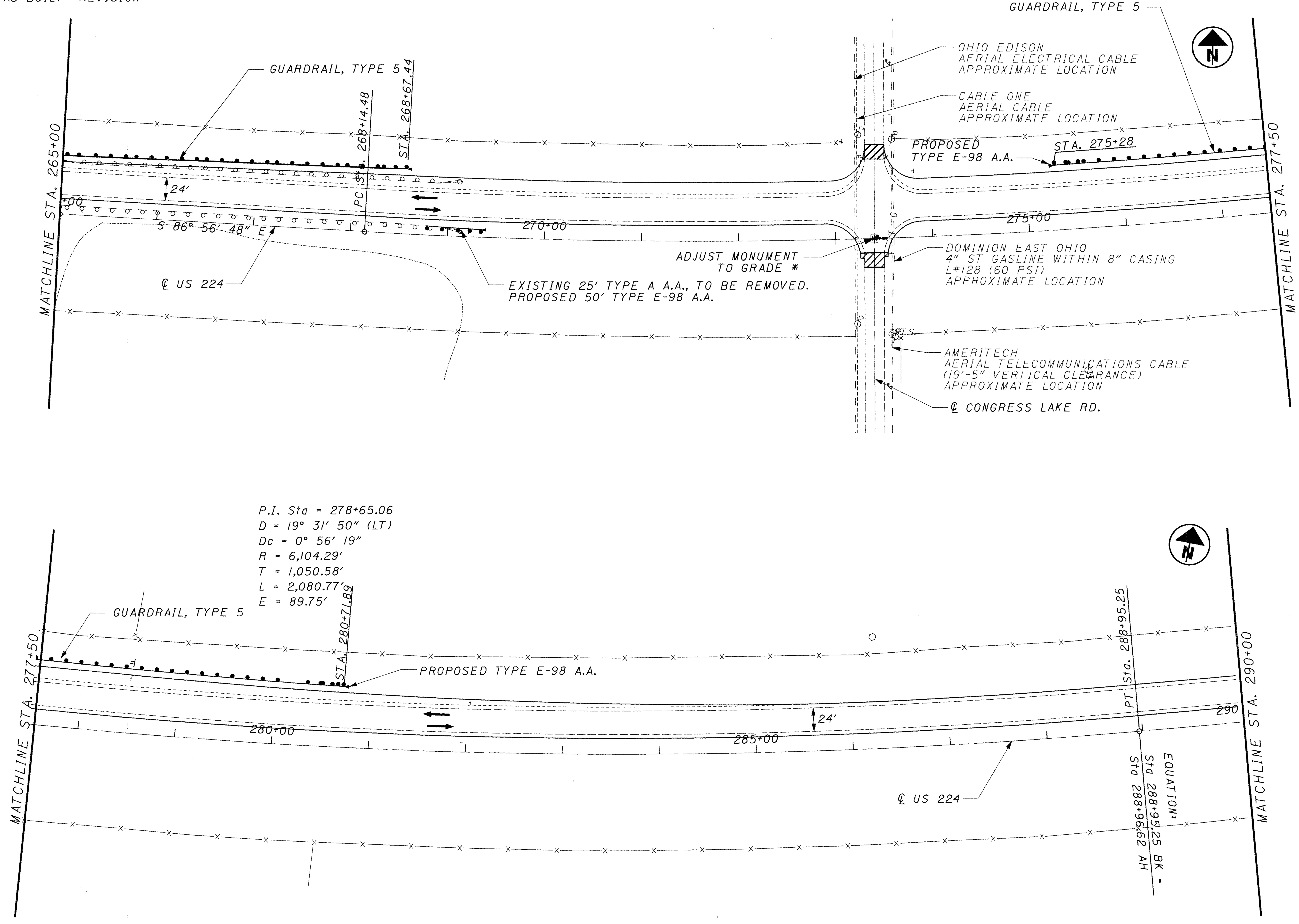
* - "AS BUILT" REVISION



HORIZONTAL SCALE IN FEET
0 25 50 100

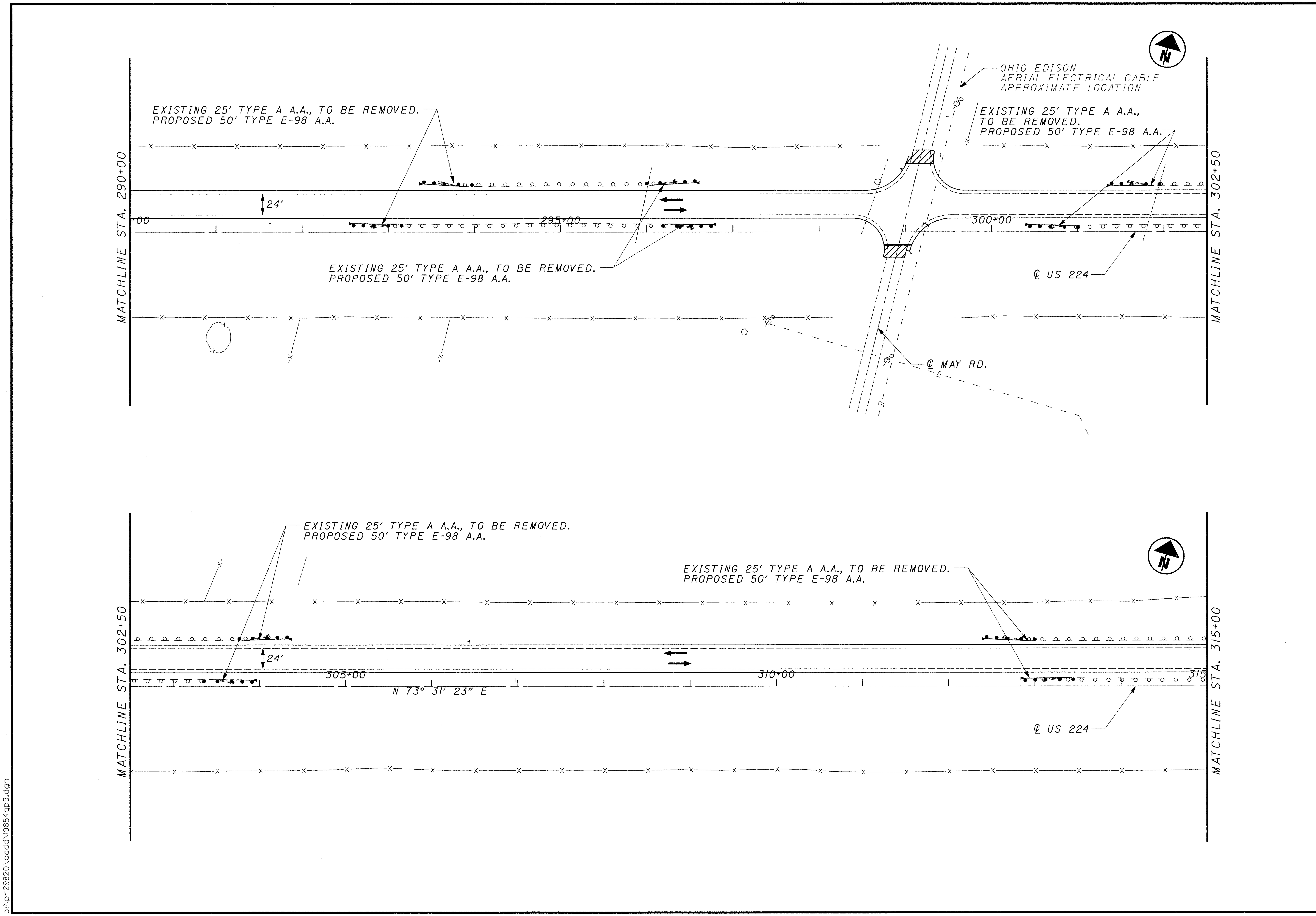
CALCULATED | CHECKED

PLAN SHEET - S.R. 224
STA. 265+00 TO STA. 290+00

POR-224-0.00

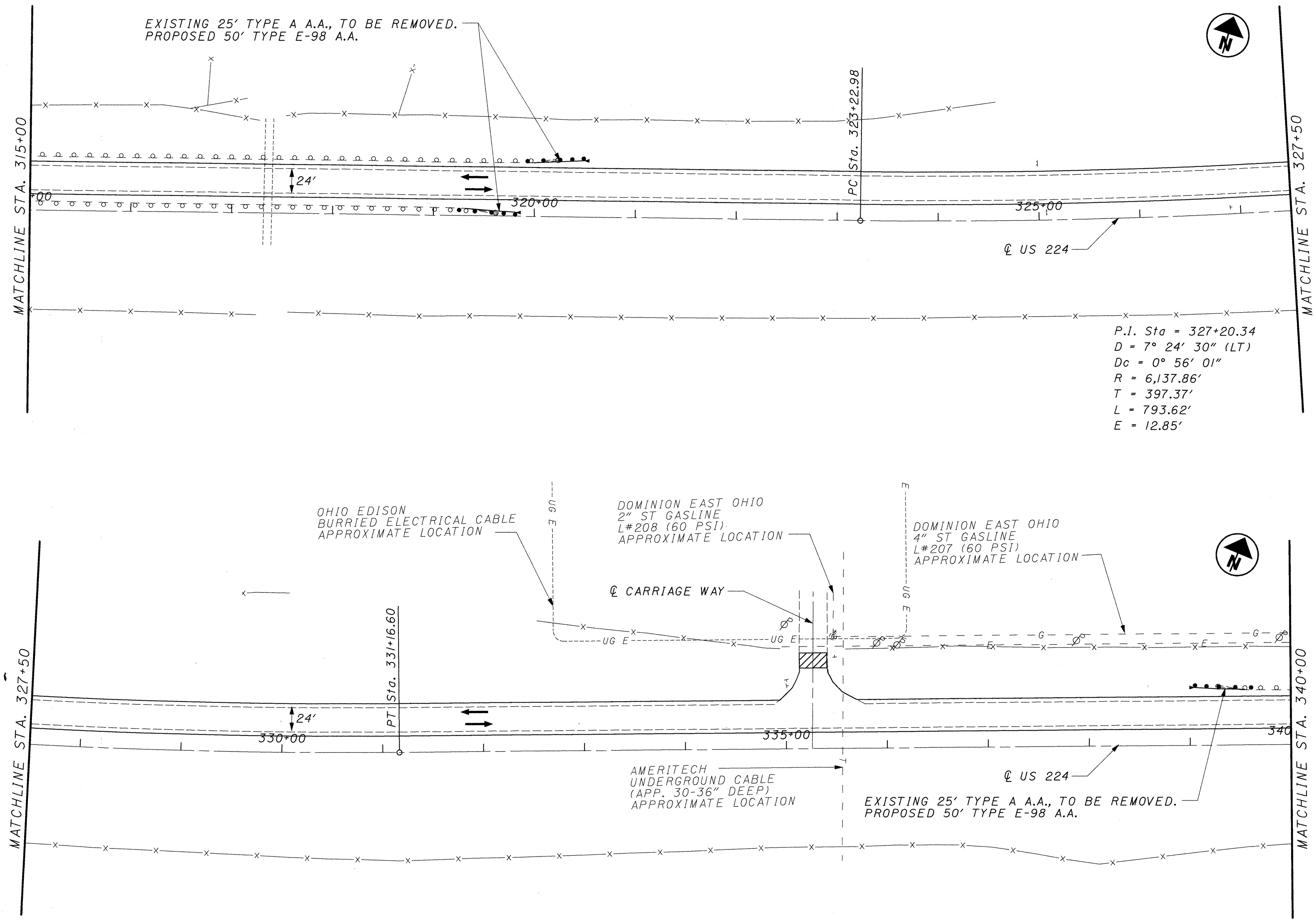
AS BUILT
DECEMBER 16, 2002

p:\pr29820\cadd\19854gp8.dgn



PLAN SHEET - S.R. 224
STA. 290+00 TO STA. 315+00

POR-224-0.00



HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 315+00 TO STA. 340+00

POR-224-0.00

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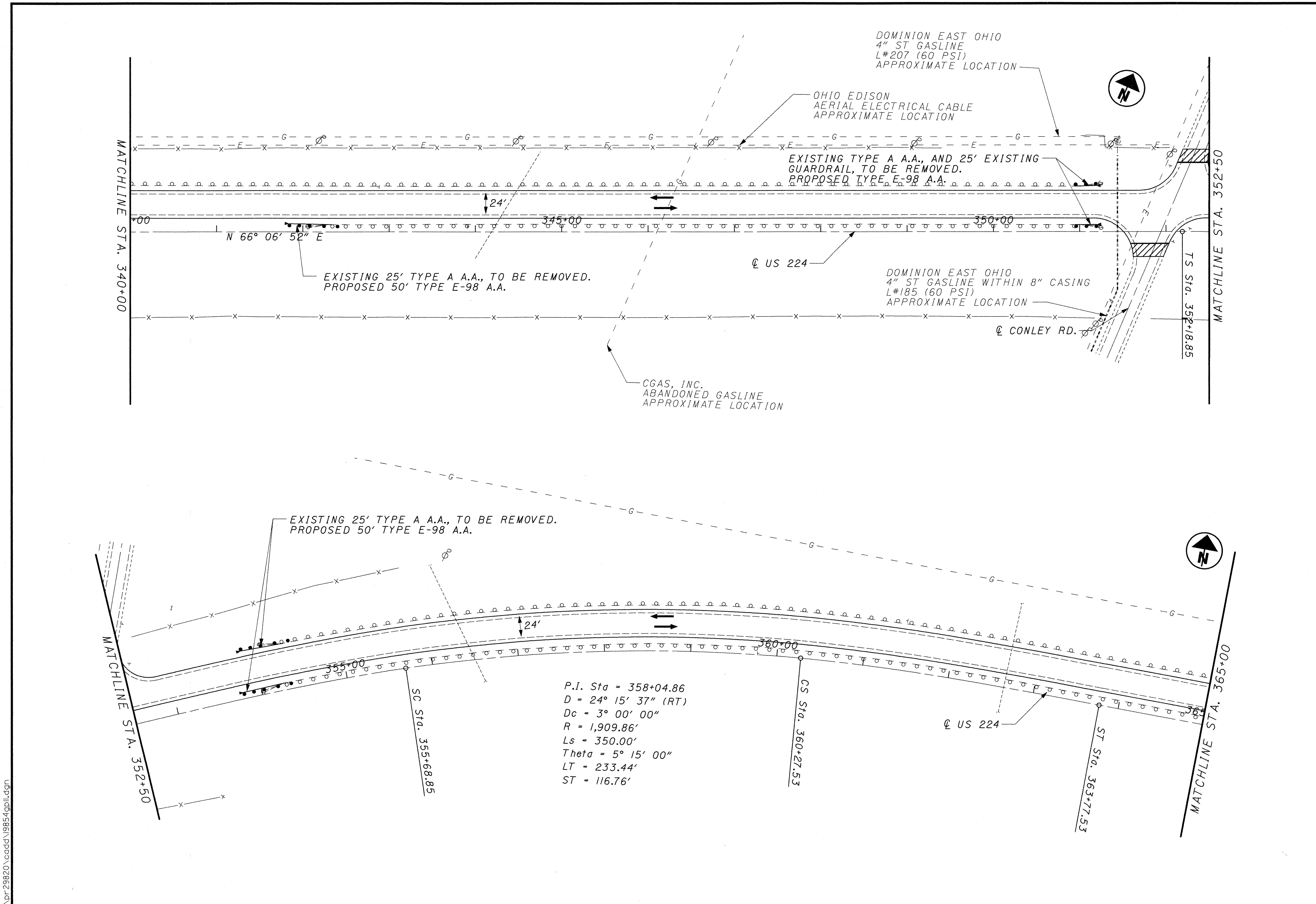
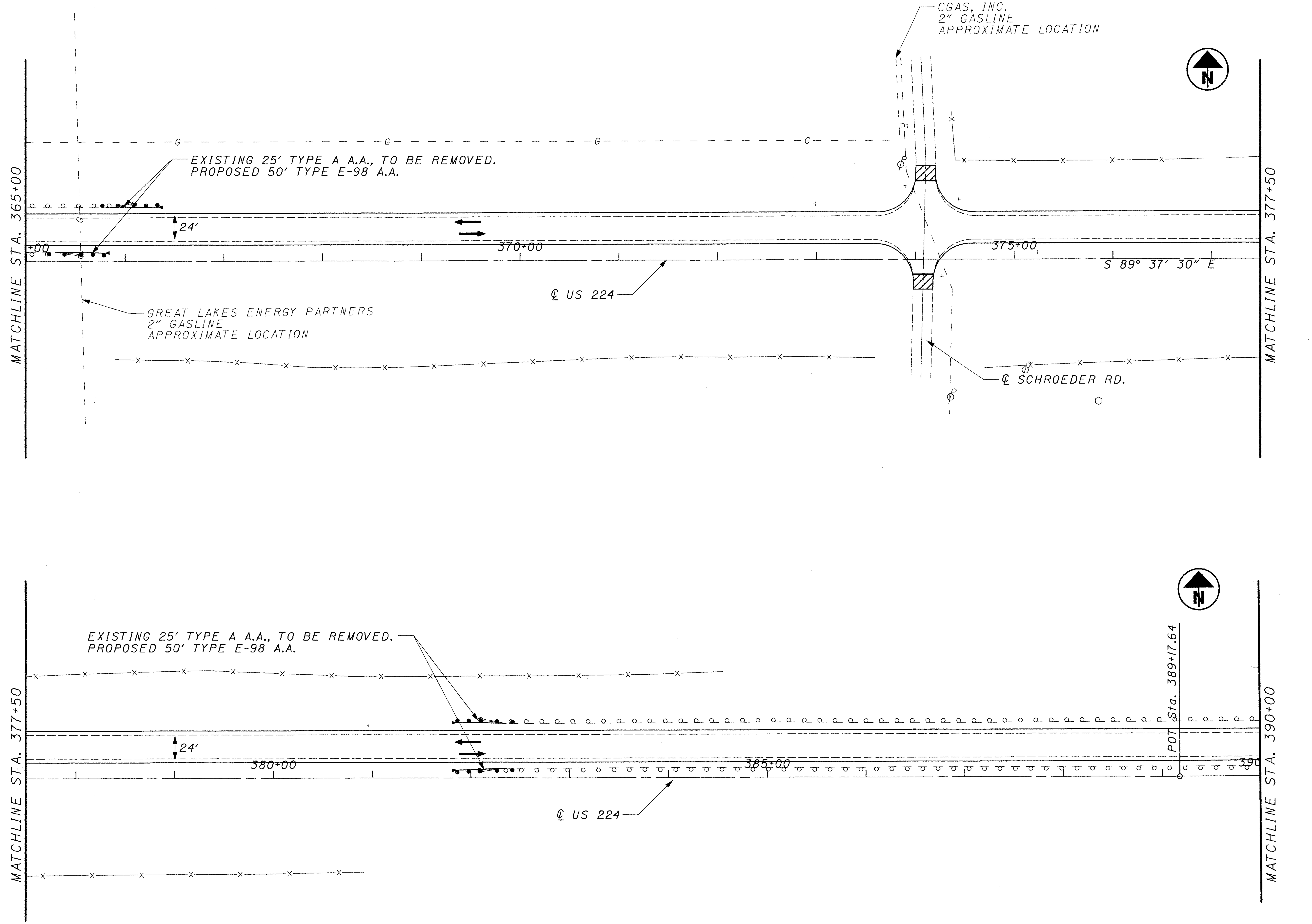


CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 340+00 TO STA. 365+00

POR-224-0.00



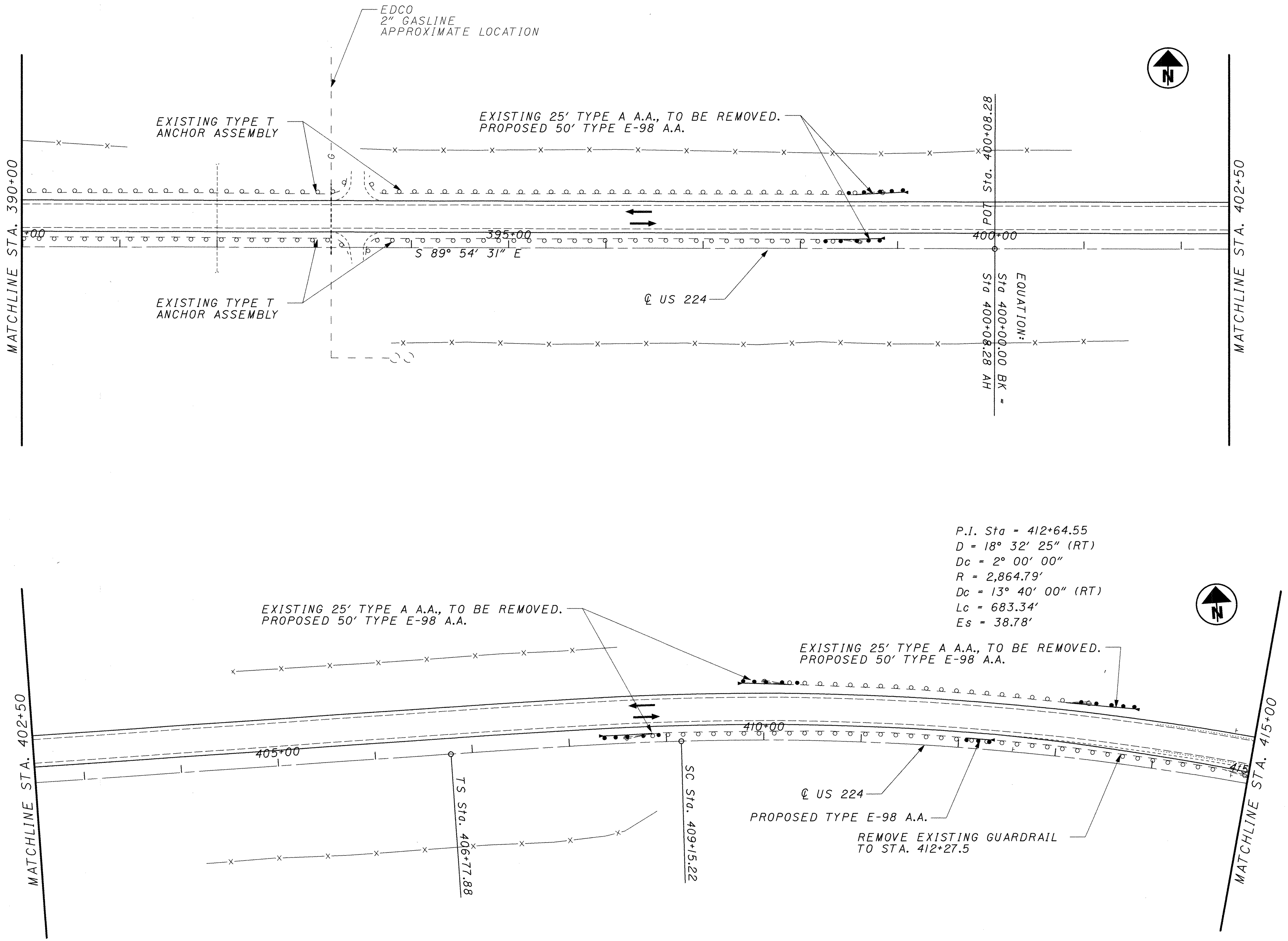
0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 365+00 TO STA. 390+00

POR-224-0.00

p:\pr29820\cadd\19854gpl2.dgn



0 25 50 100
HORIZONTAL
SCALE IN FEET

CALCULATED

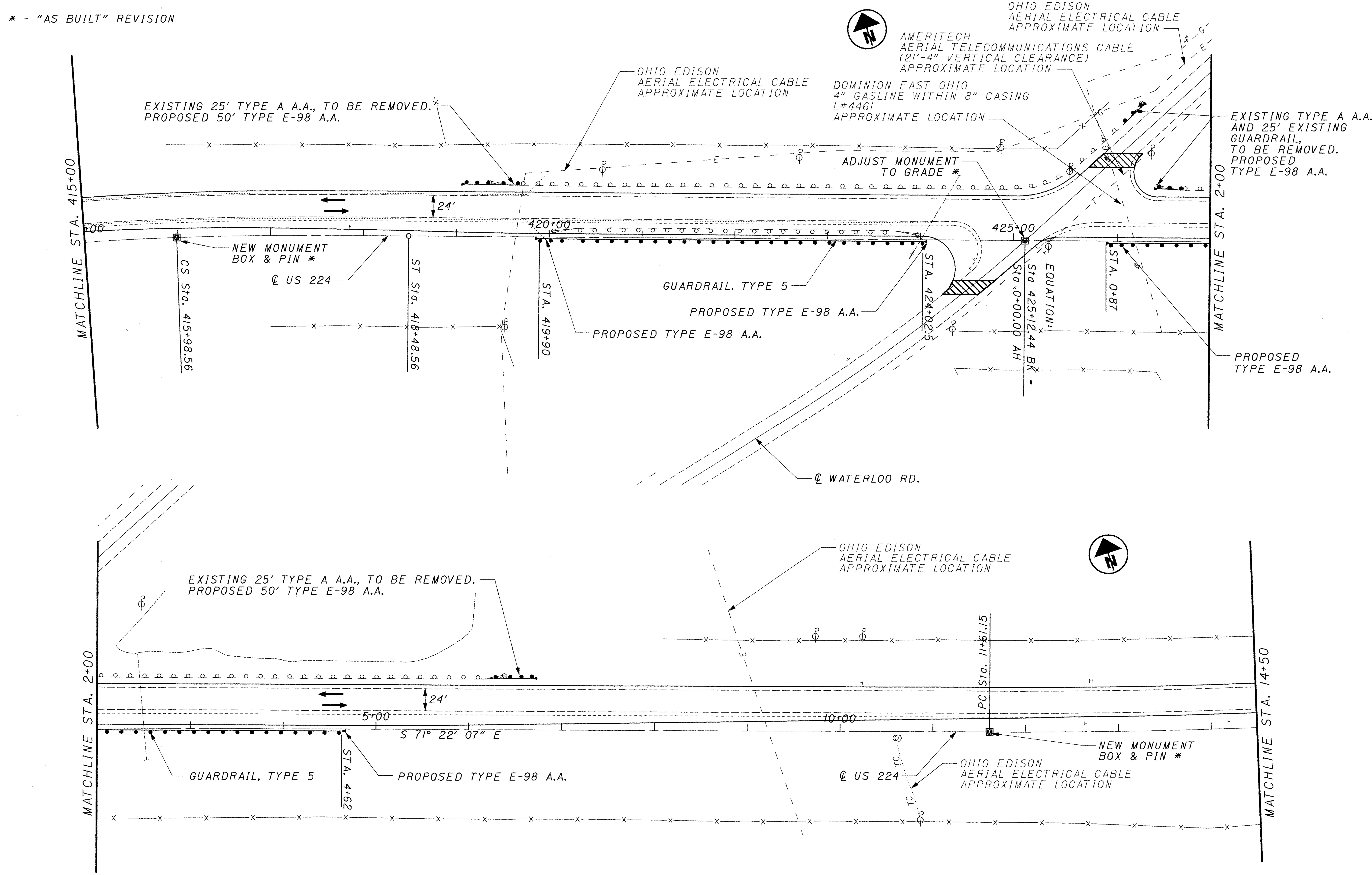
CHECKED

PLAN SHEET - S.R. 224
STA. 390+00 TO STA. 415+00

POR-224-0.00

p:\pr29820\cadd\19854gp13.dgn

* - "AS BUILT" REVISION



CALCULATED

CHECKED

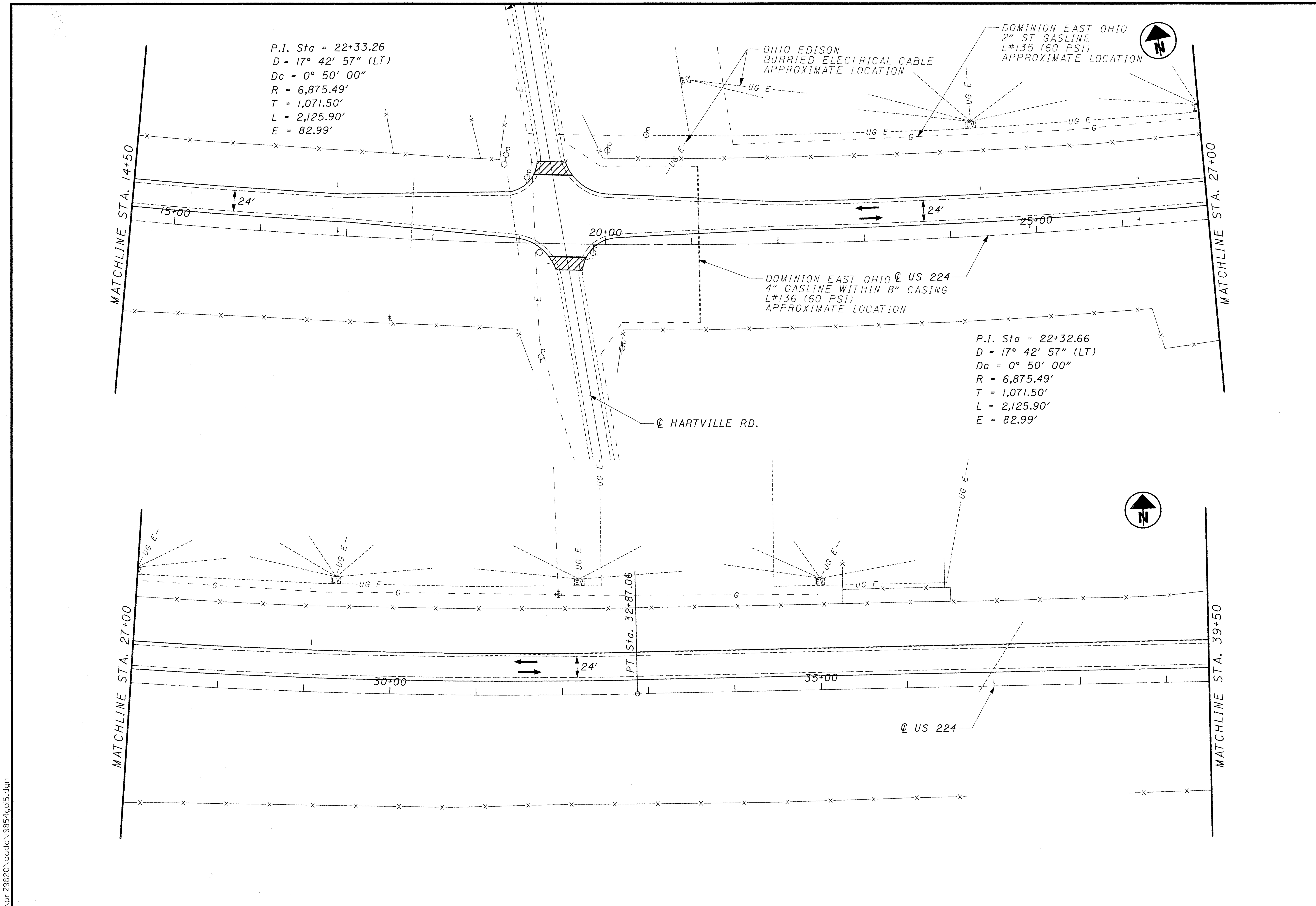
PLAN SHEET - S.R. 224
STA. 415+00 TO STA. 14+50

POR-224-0.00

AS BUILT

DECEMBER 16, 2002

p:\pr29820\cadd\19854gpl4.dgn

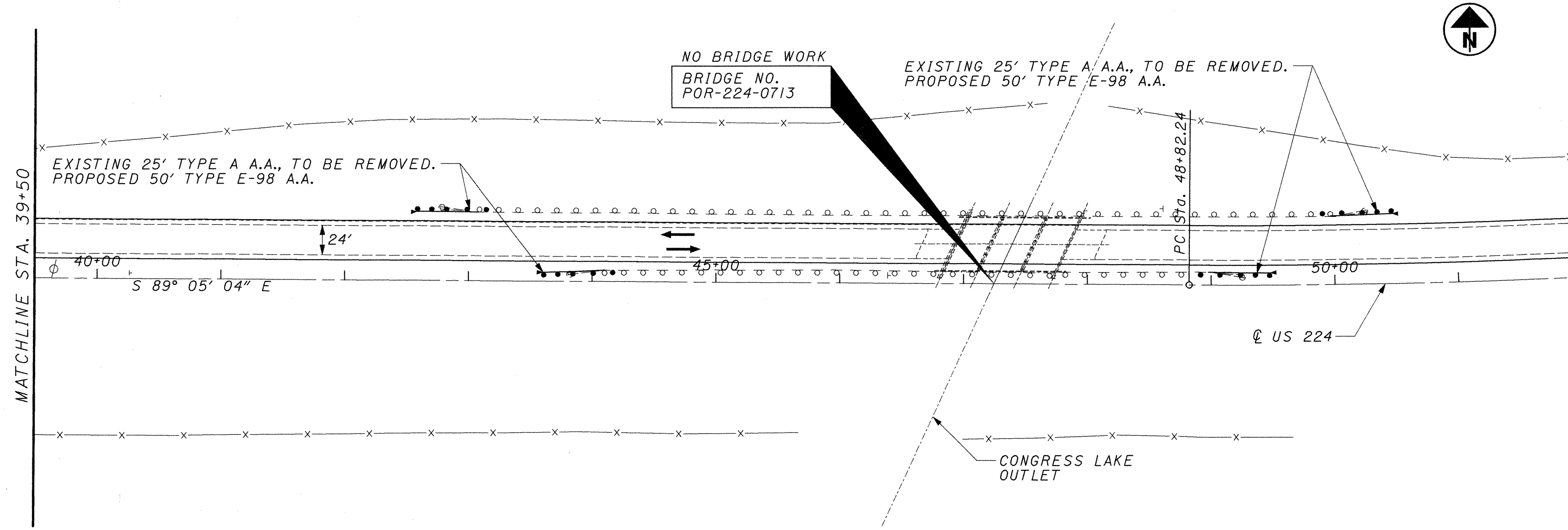


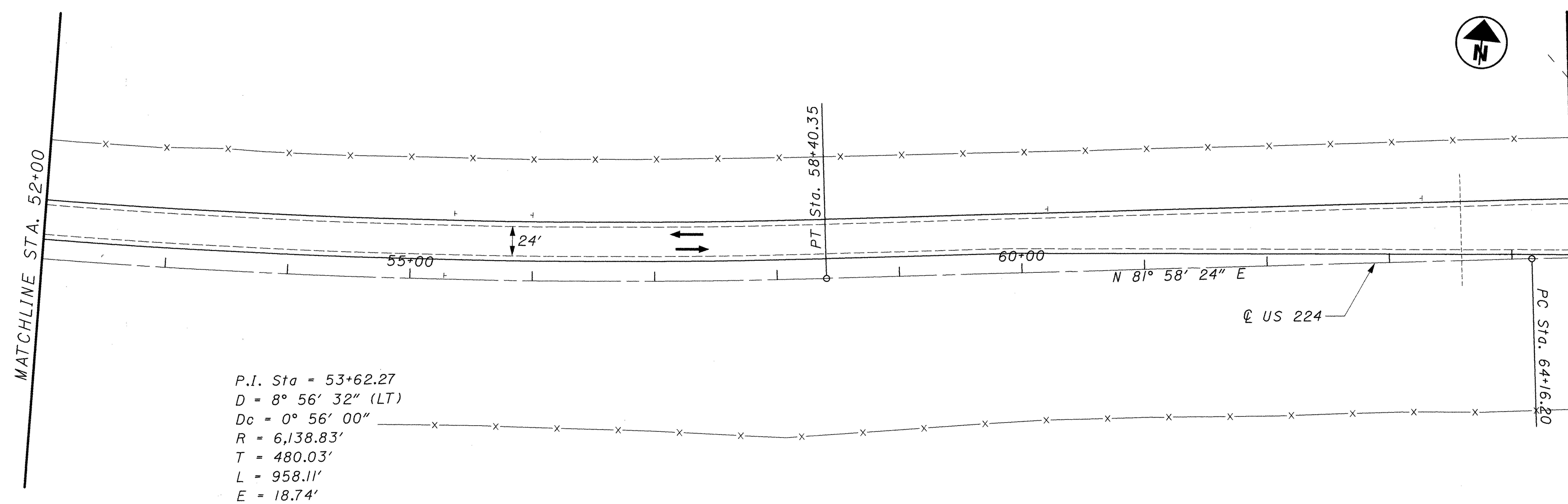
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 14+50 TO STA. 39+50

POR-224-0.00





0 25 50 100
HORIZONTAL
SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 39+50 TO STA. 64+50

POR-224-0.00

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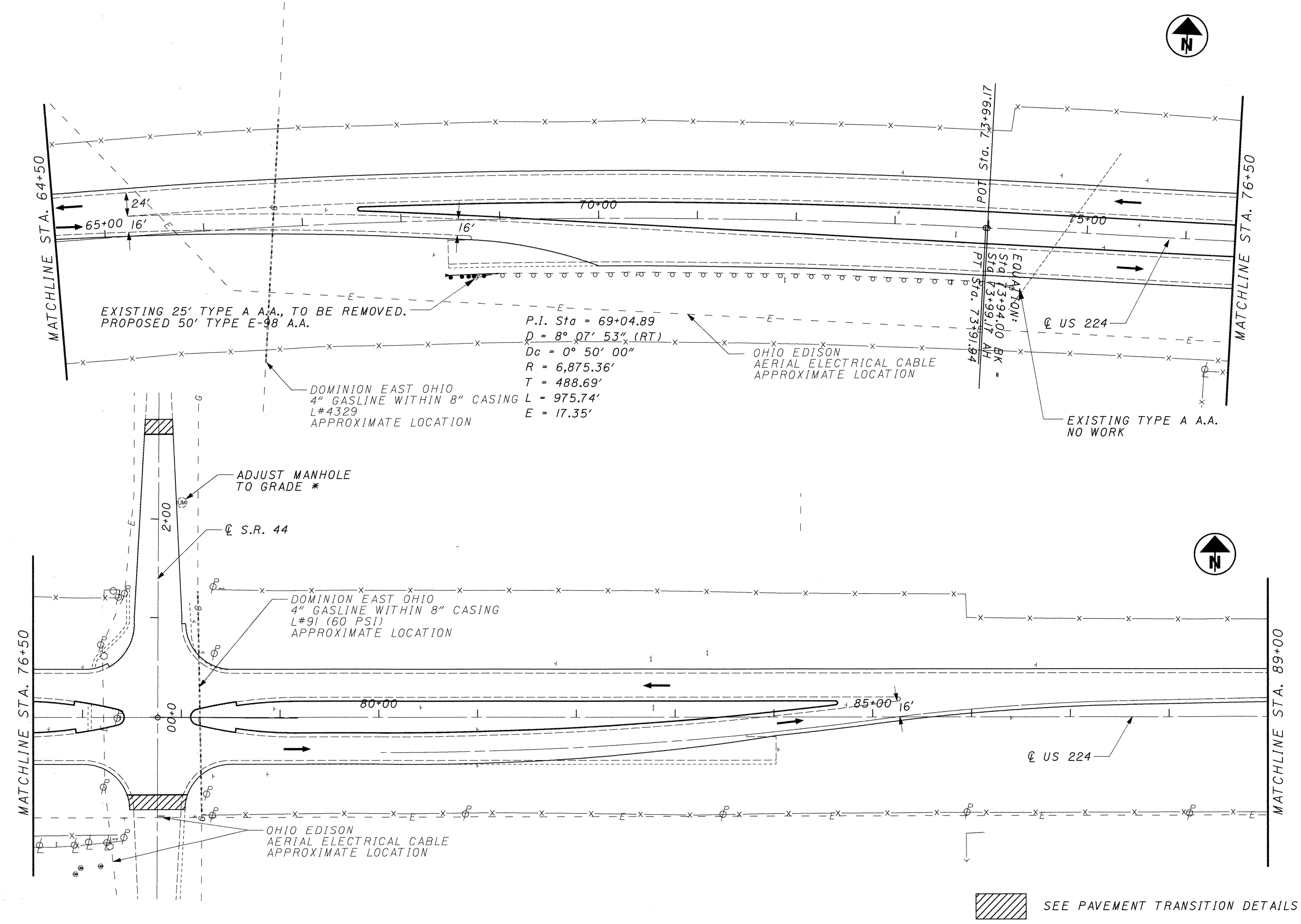
* - "AS BUILT" REVISION



SEE PAVEMENT TRANSITION DETAILS

0 25 50 100
HORIZONTAL SCALE IN FEET

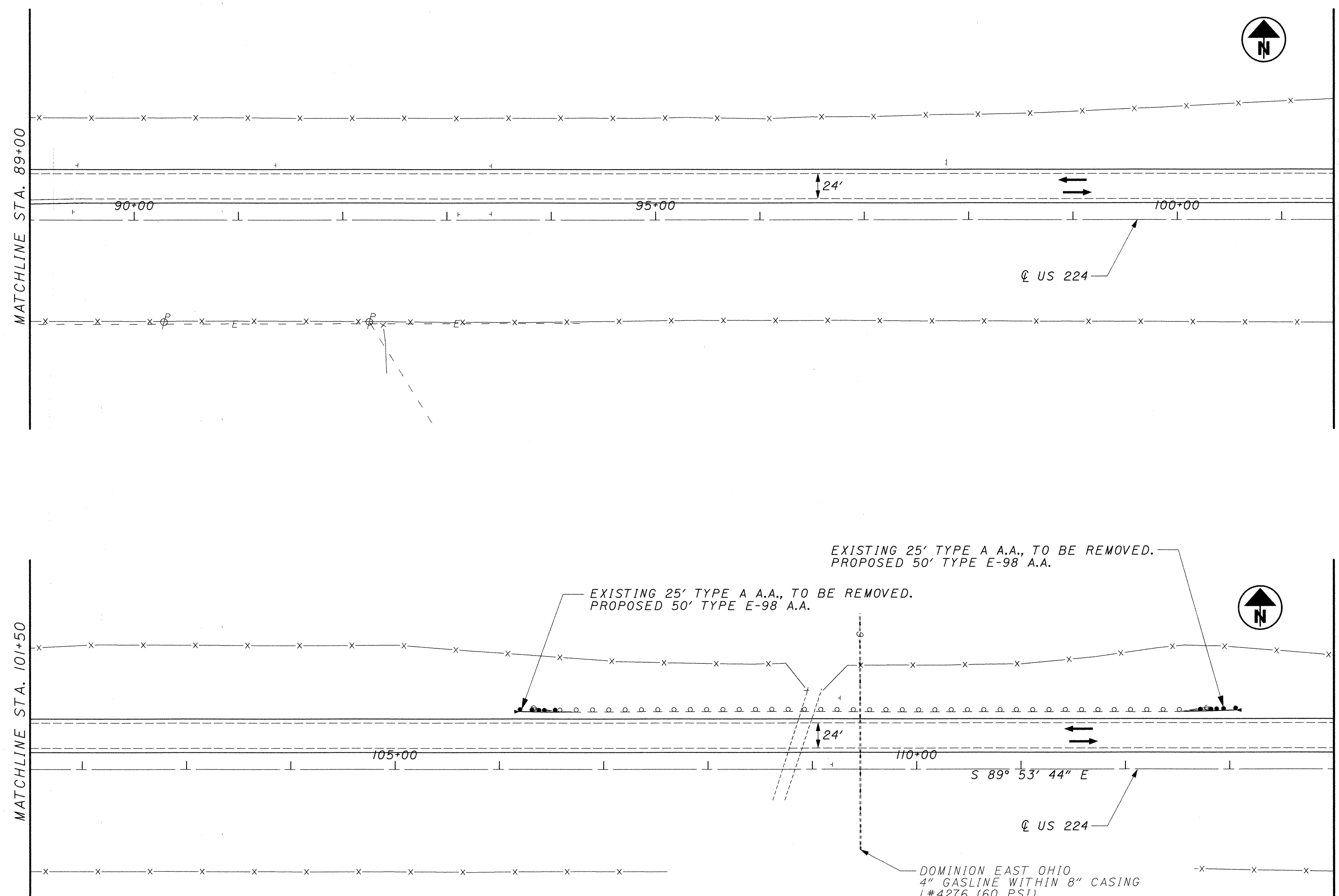
CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 64+50 TO STA. 89+00

POR-224-0.00

AS BUILT
DECEMBER 16, 2002

p:\pr29820\cadd\19854gpl7.dgn



0 25 50 100
HORIZONTAL
SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 89+00 TO STA. 114+00

POR-224-0.00

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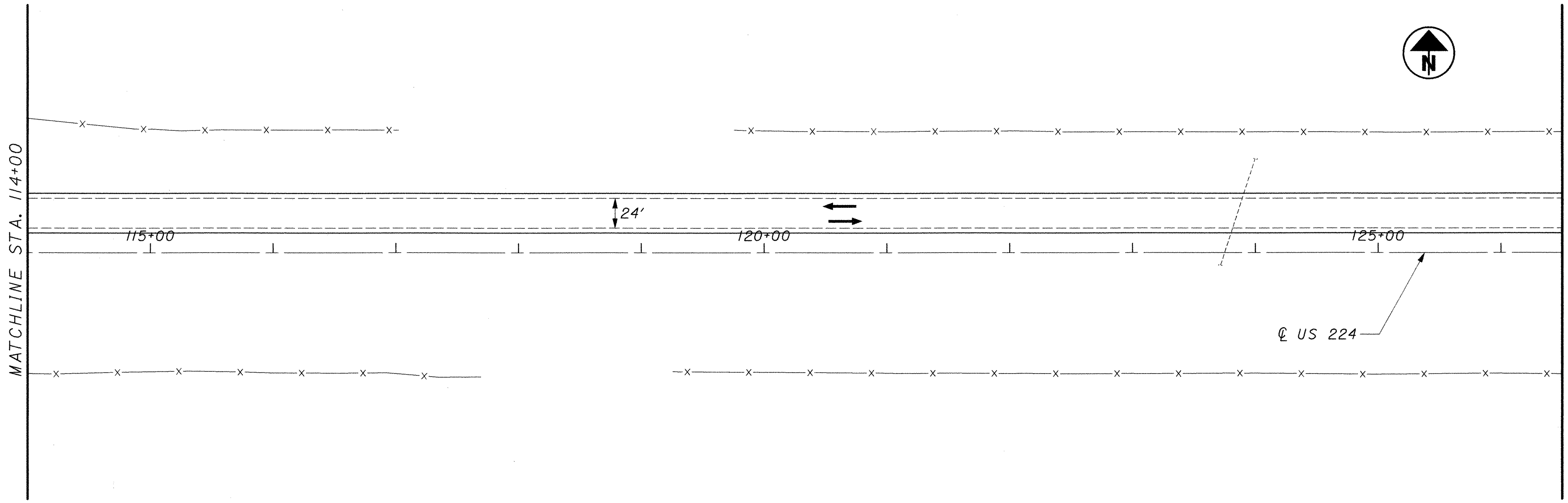
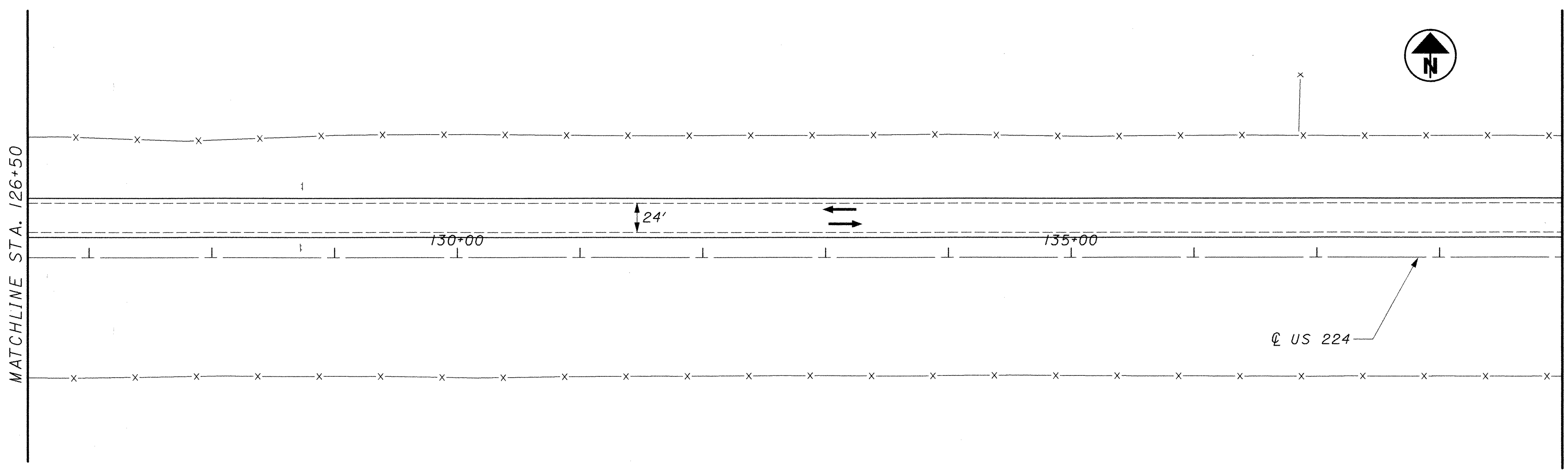




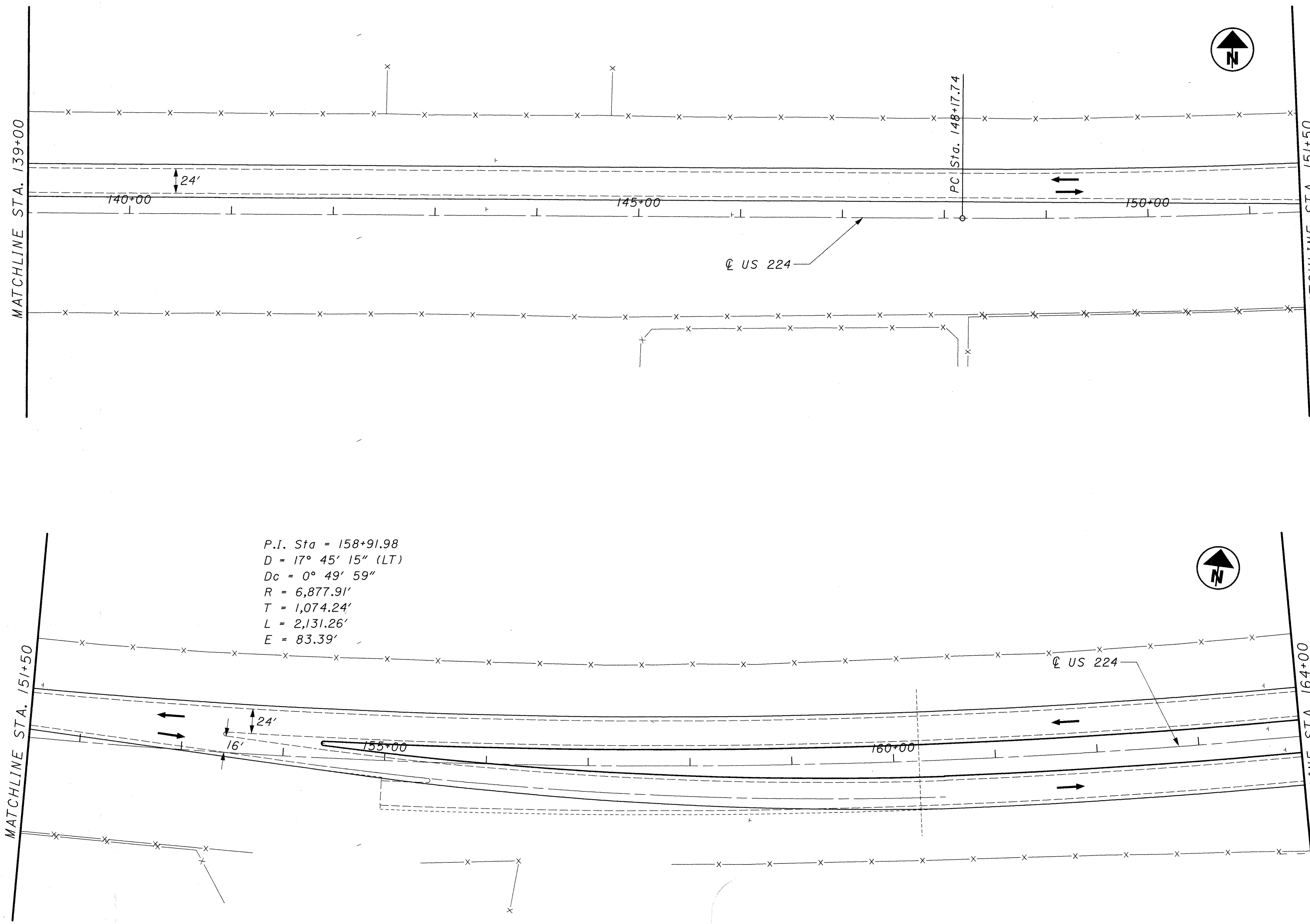
0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 114+00 TO STA. 139+00

POR-224-0.00

p:\pr29820\cadd\19854gp19.dgn



HORIZONTAL SCALE IN FEET

0 25 50 100

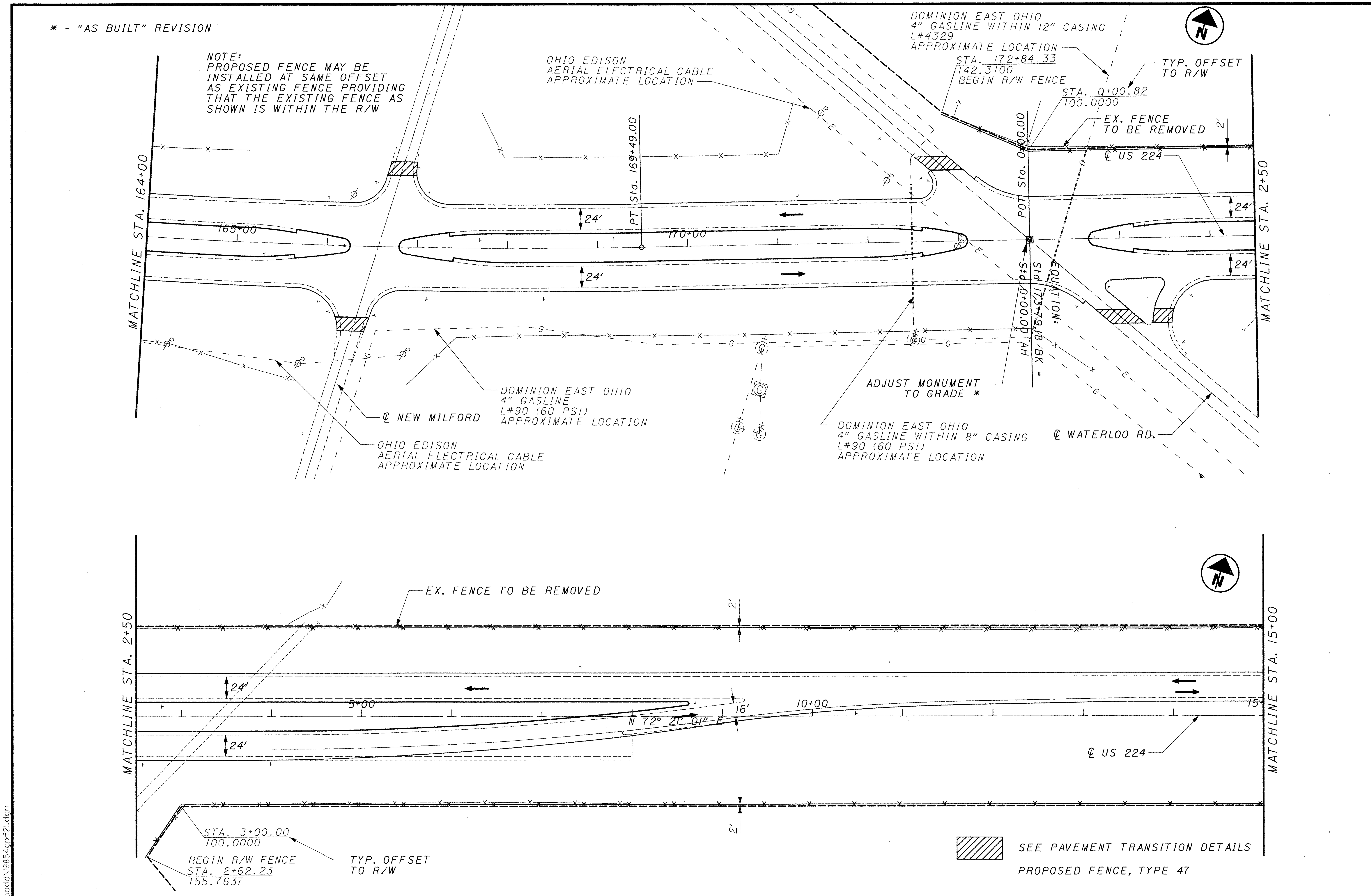
CALCULATED

CHECKED

PLAN SHEET - S.R. 224
STA. 139+00 TO STA. 164+00

POR-224-0.00

p:\pr29820\cadd\19854gp20.dgn



CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 164+00 TO STA. 15+00

POR-224-0.00

AS BUILT
DECEMBER 16, 2002

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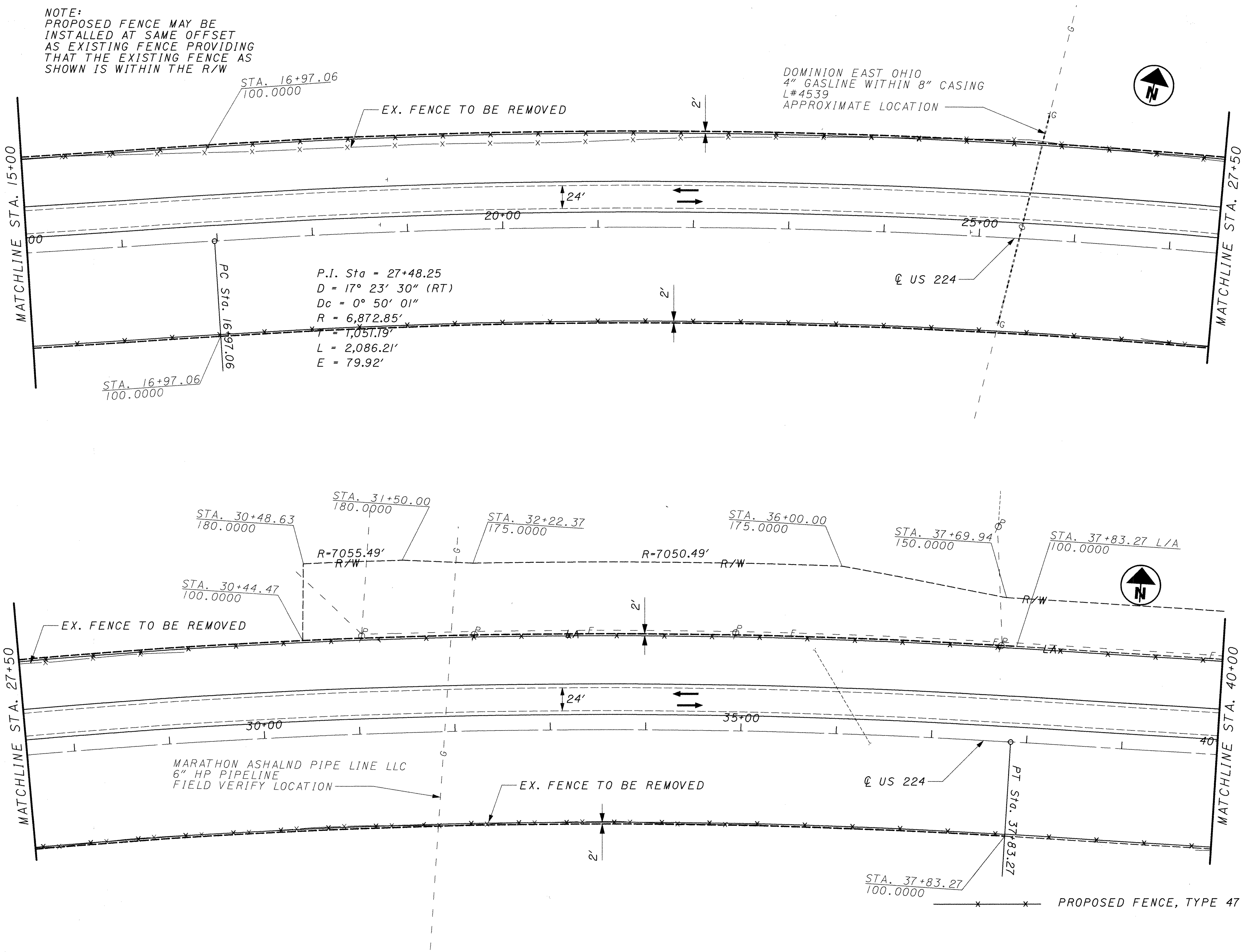

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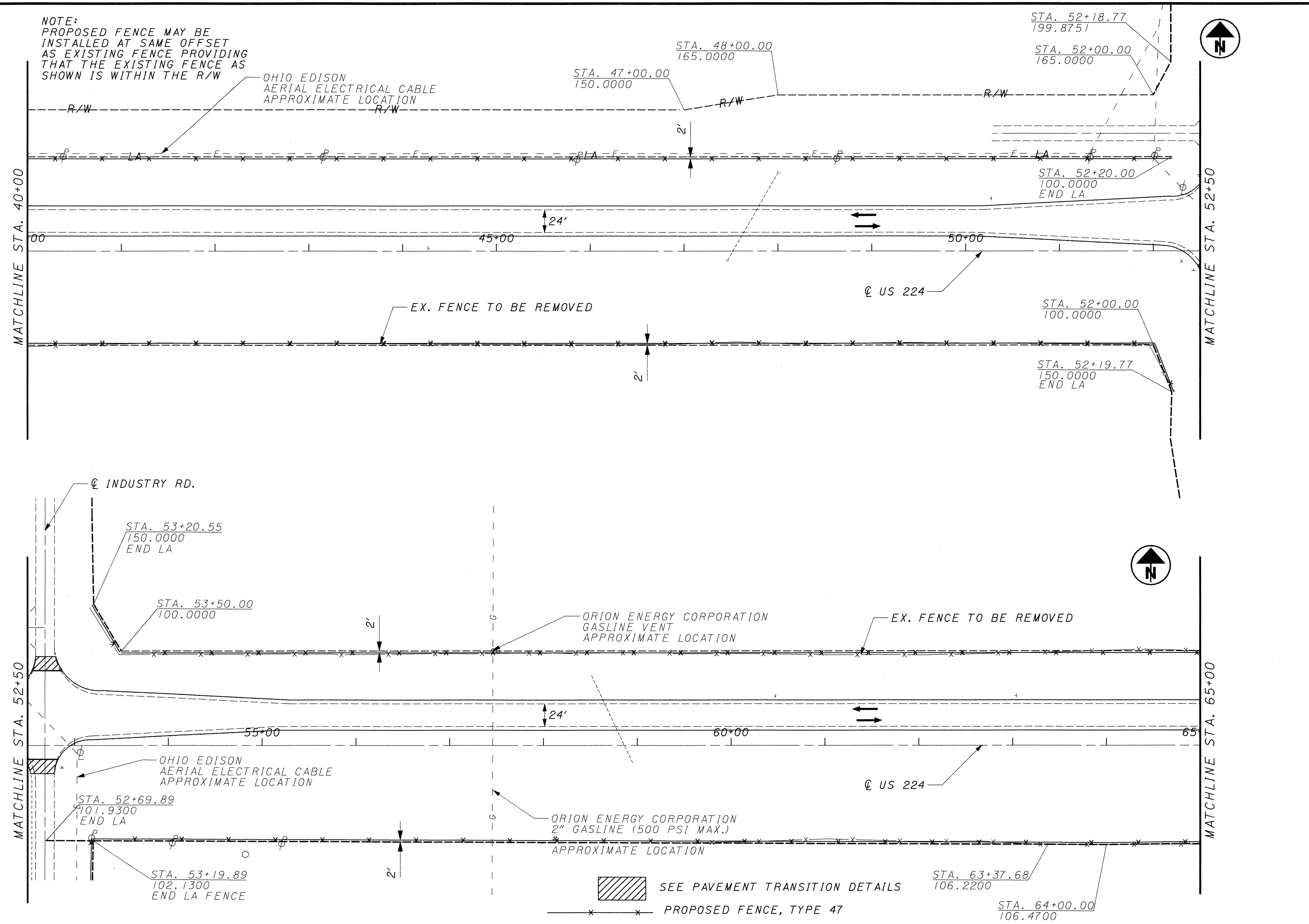
0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 15+00 TO STA. 40+00

POR-224-0.00



0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 40+00 TO STA. 65+00

POR-224-0.00

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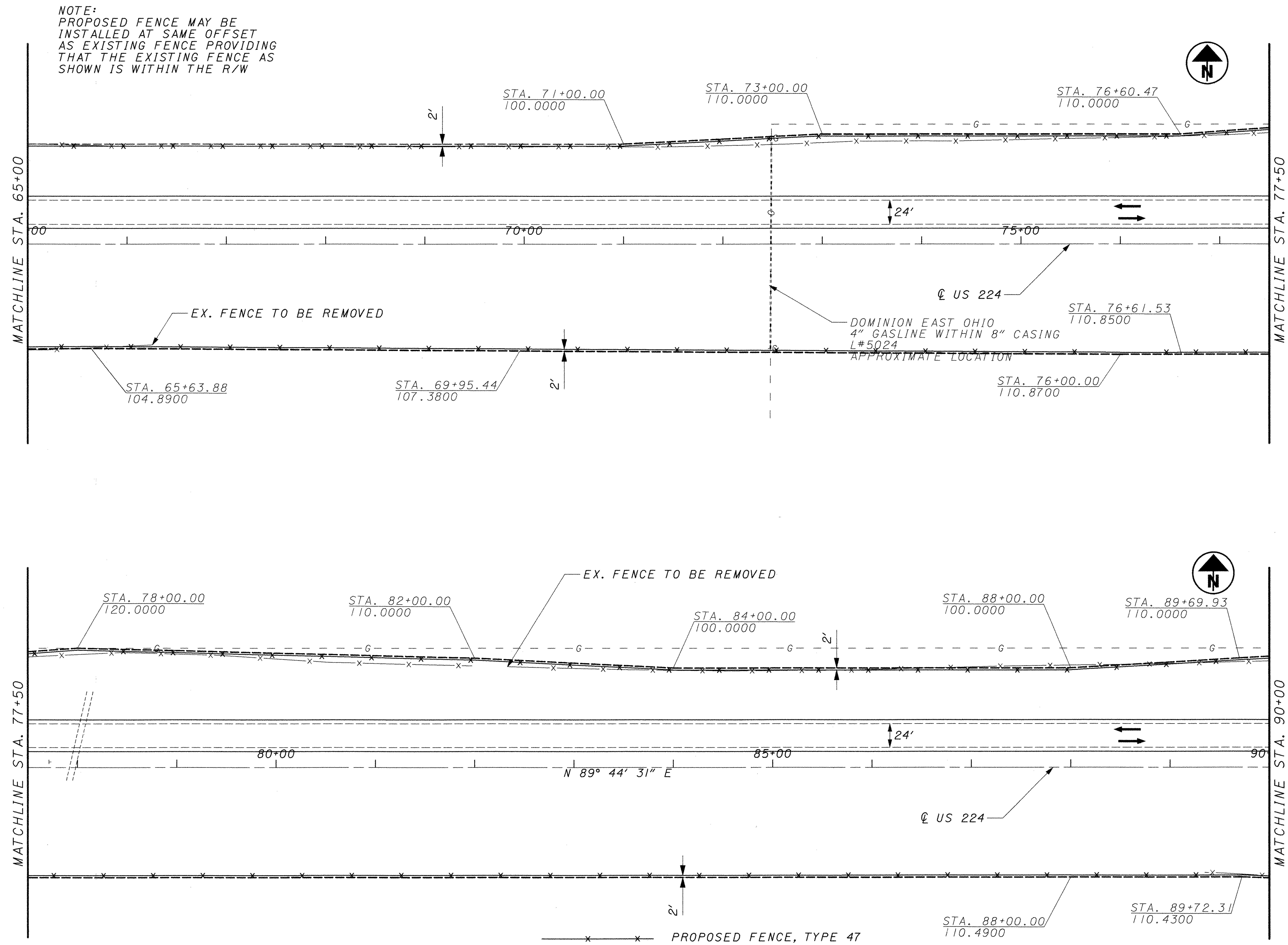

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 65+00 TO STA. 90+00

POR-224-0.00

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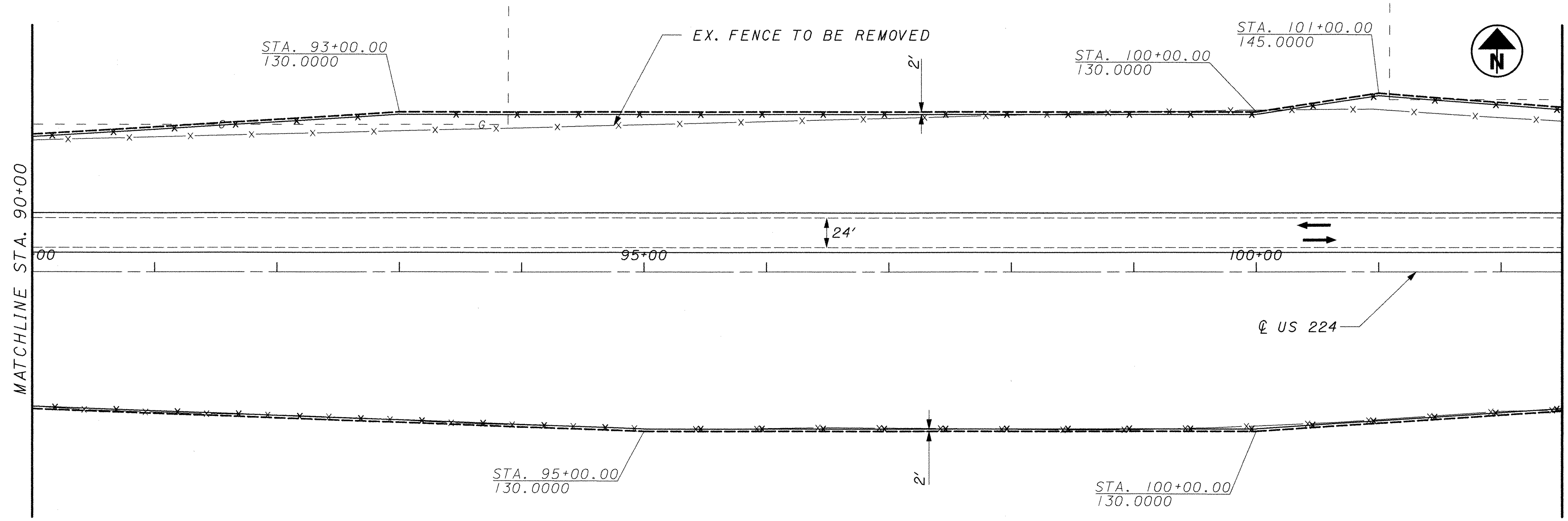
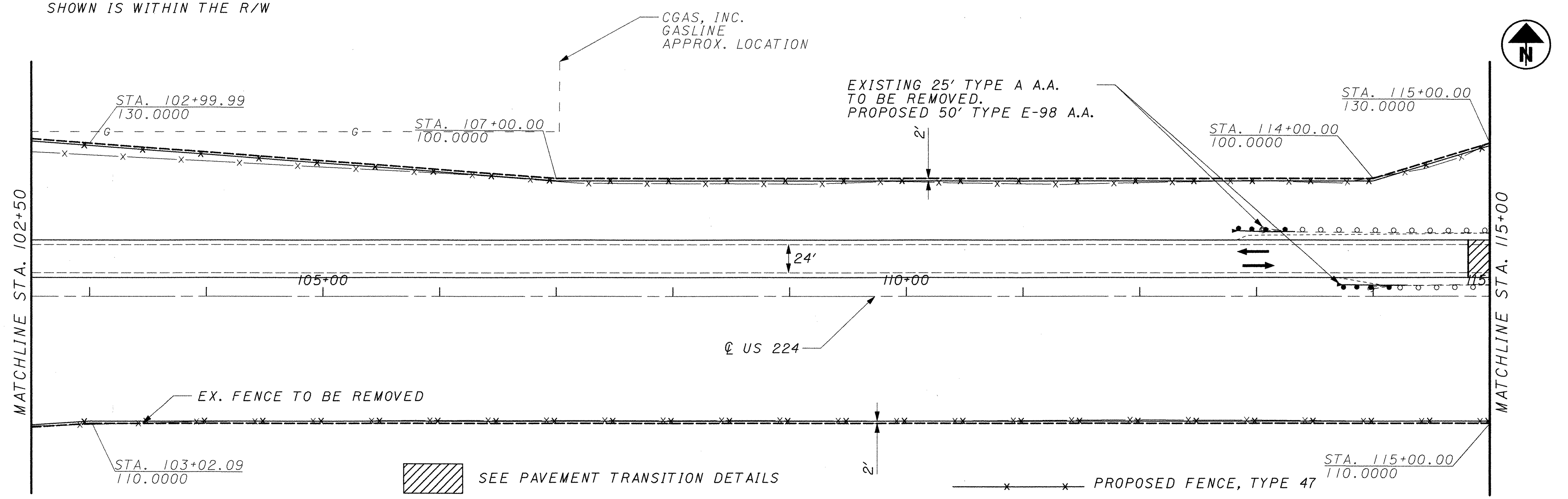


NOTE:
PROPOSED FENCE MAY BE INSTALLED AT SAME OFFSET AS EXISTING FENCE PROVIDING THAT THE EXISTING FENCE AS SHOWN IS WITHIN THE R/W



0 25 50 100
HORIZONTAL
SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 90+00 TO STA. 115+00

POR-224-0.00

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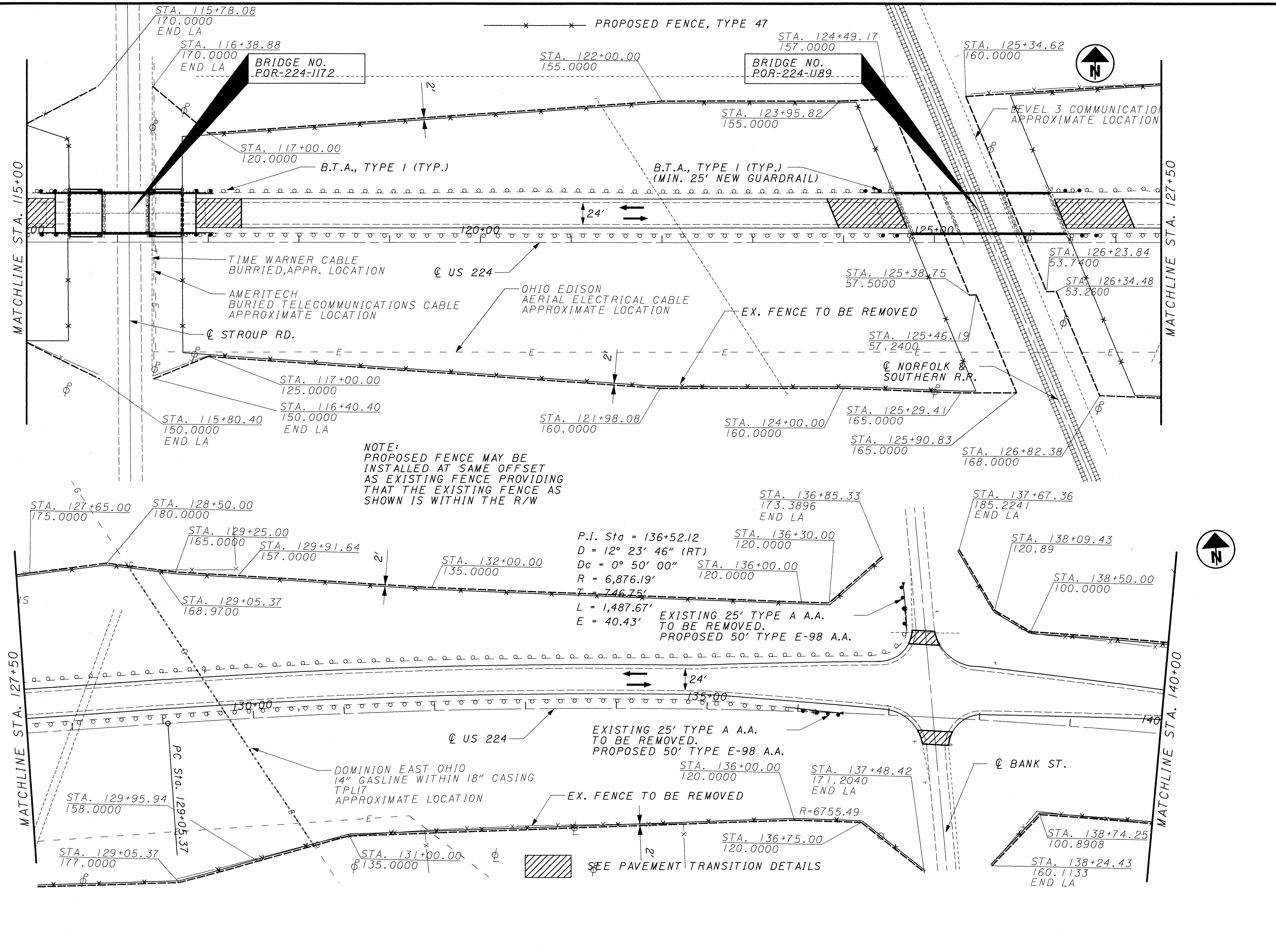


0 25 50 100
HORIZONTAL
SCALE IN FEET

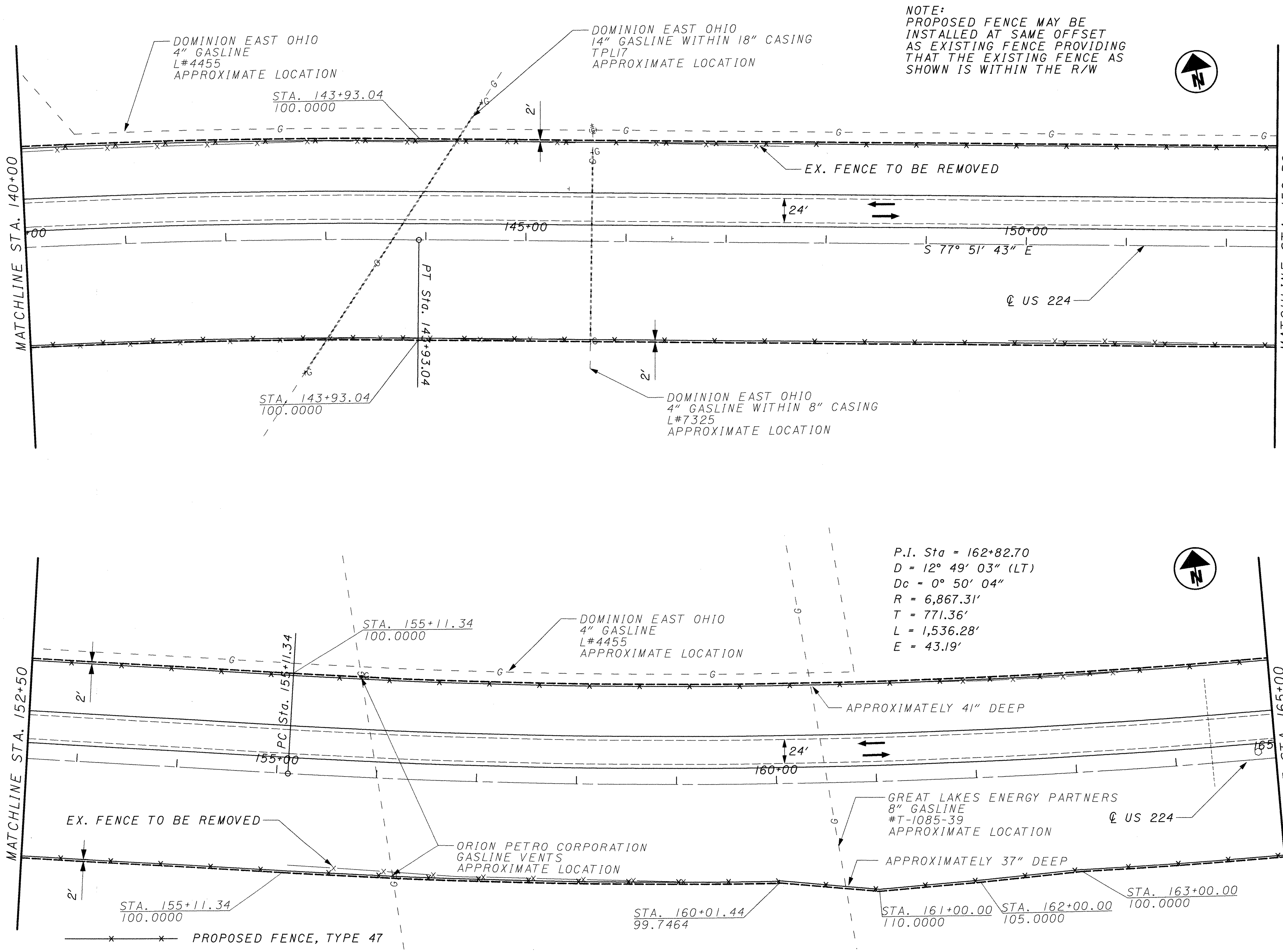
CALCULATED

CHECKED

PLAN SHEET - S.R. 224
STA. 115+00 TO STA. 140+00

POR-224-0.00

p:\pr29820\cadd\19854gpf26.dgn



0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 140+00 TO STA. 165+00

POR-224-0.00

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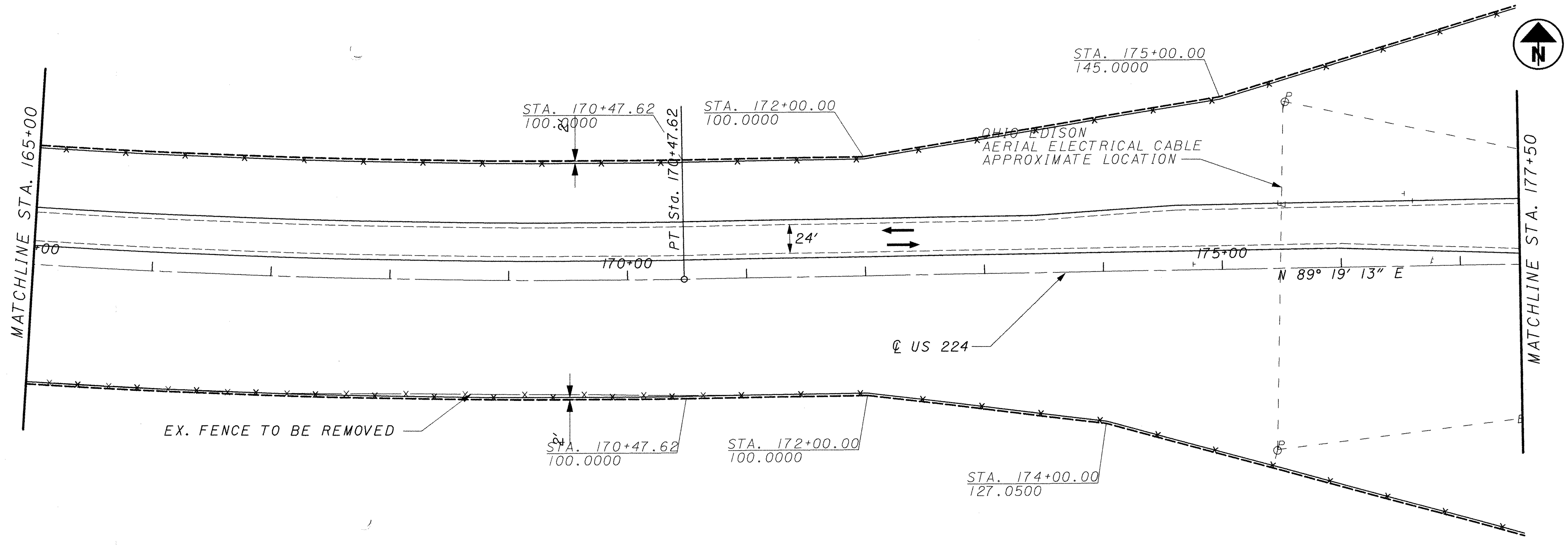


NOTE:
PROPOSED FENCE MAY BE INSTALLED AT SAME OFFSET AS EXISTING FENCE PROVIDING THAT THE EXISTING FENCE AS SHOWN IS WITHIN THE R/W

—x—x— PROPOSED FENCE, TYPE 47

SEE PAVEMENT TRANSITION DETAILS

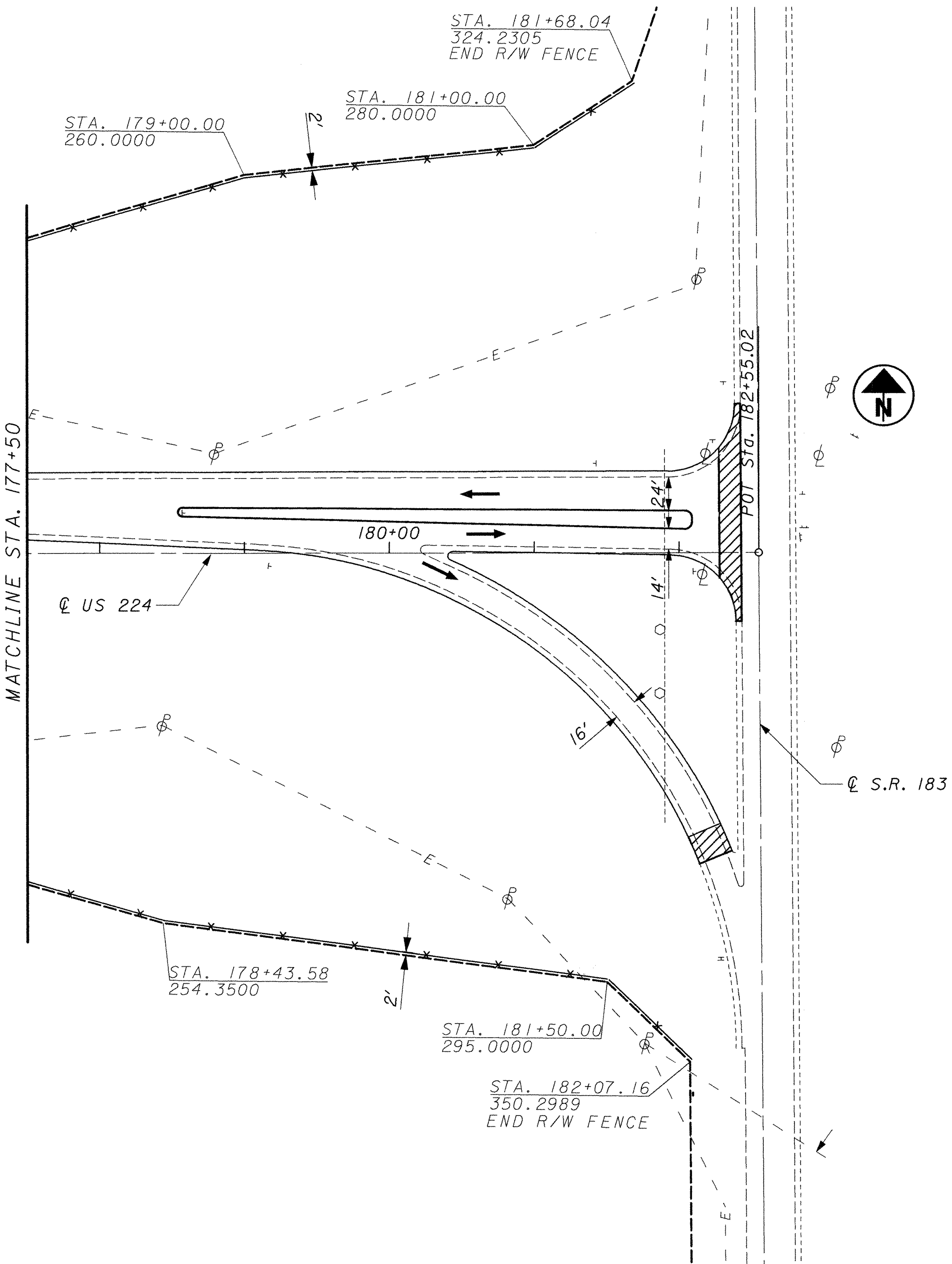
p:\pr29820\cadd\19854gpf28.dgn

HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED CHECKED

PLAN SHEET - S.R. 224
STA. 165+00 TO STA. 177+50

POR-224-0.00



NOTE:
PROPOSED FENCE MAY BE
INSTALLED AT SAME OFFSET
AS EXISTING FENCE PROVIDING
THAT THE EXISTING FENCE AS
SHOWN IS WITHIN THE R/W

PROPOSED FENCE, TYPE 47

SEE PAVEMENT TRANSITION DETAILS

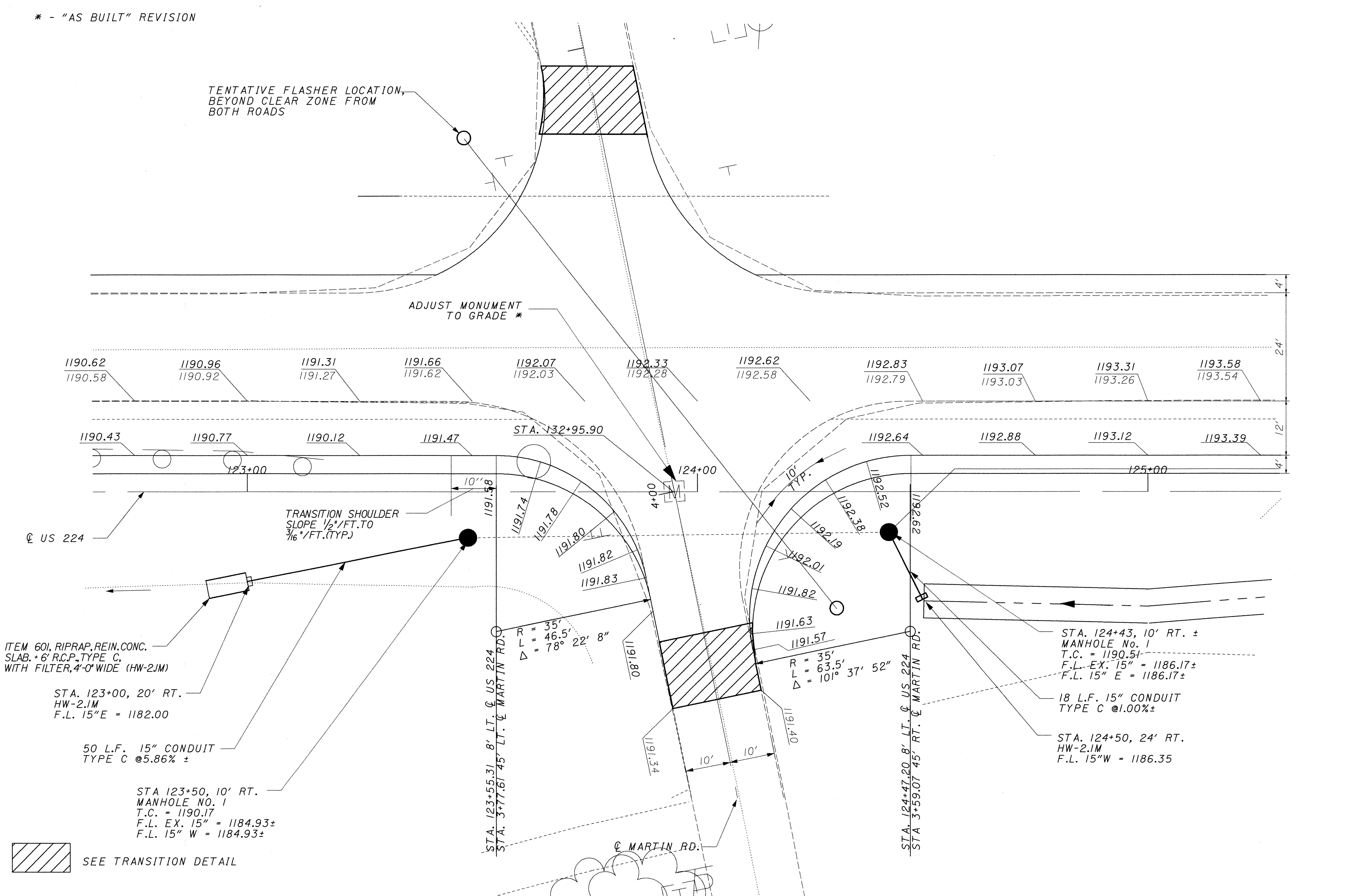
0 25 50 100
HORIZONTAL
SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 177+50 TO STA. 182+55.02

POR-224-0.00

p:\pr29820\cadd\19854gpf29.dgn



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N

0 10 20
HORIZONTAL SCALE IN FEET

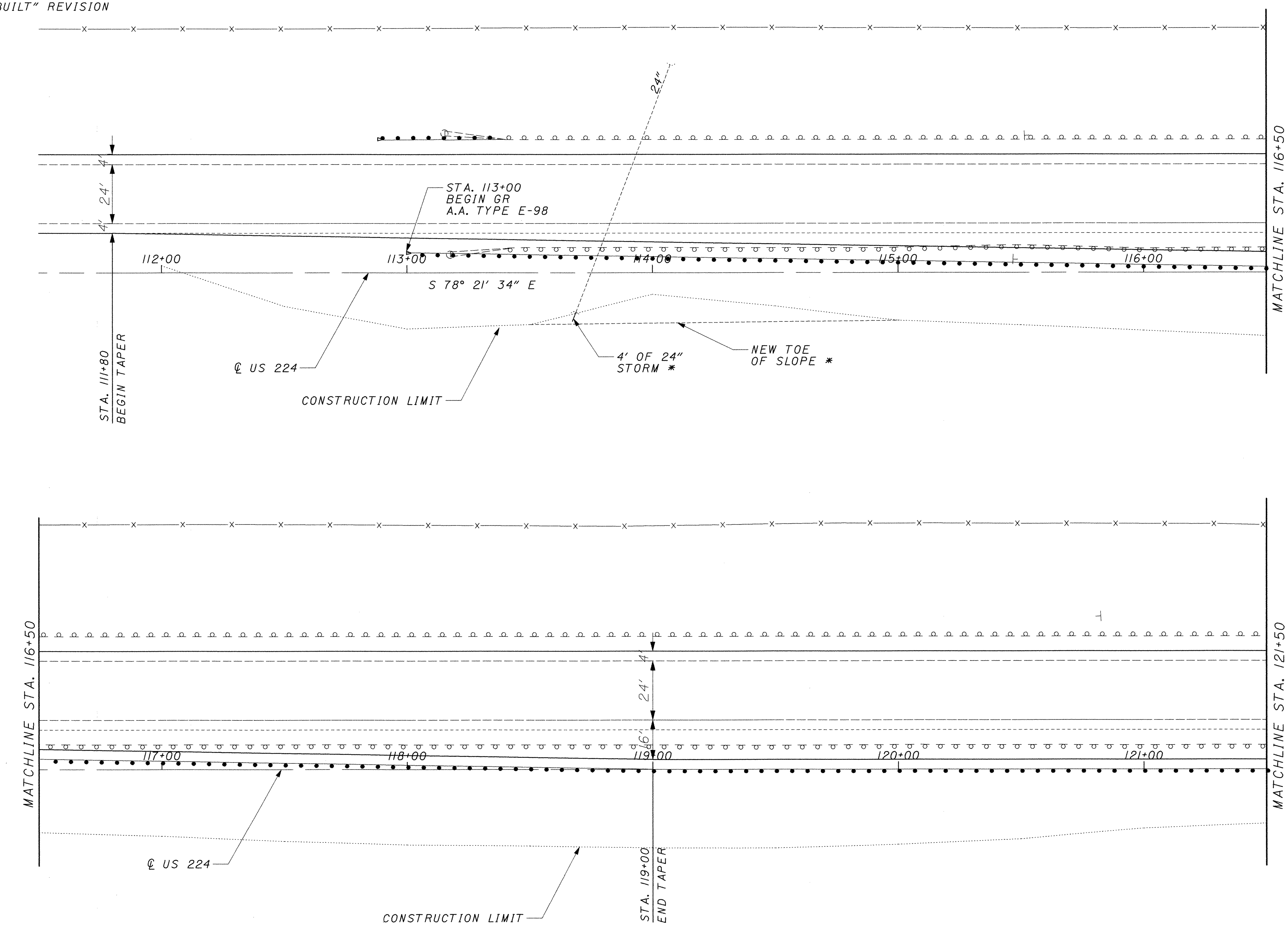
CALCULATED
CHECKED

MARTIN RD. INTERSECTION WIDENING DETAIL

POR-224-0.00

AS BUILT
DECEMBER 16, 2002

* - "AS BUILT" REVISION



HORIZONTAL SCALE IN FEET

0 10 20 40

CALCULATED

CHECKED

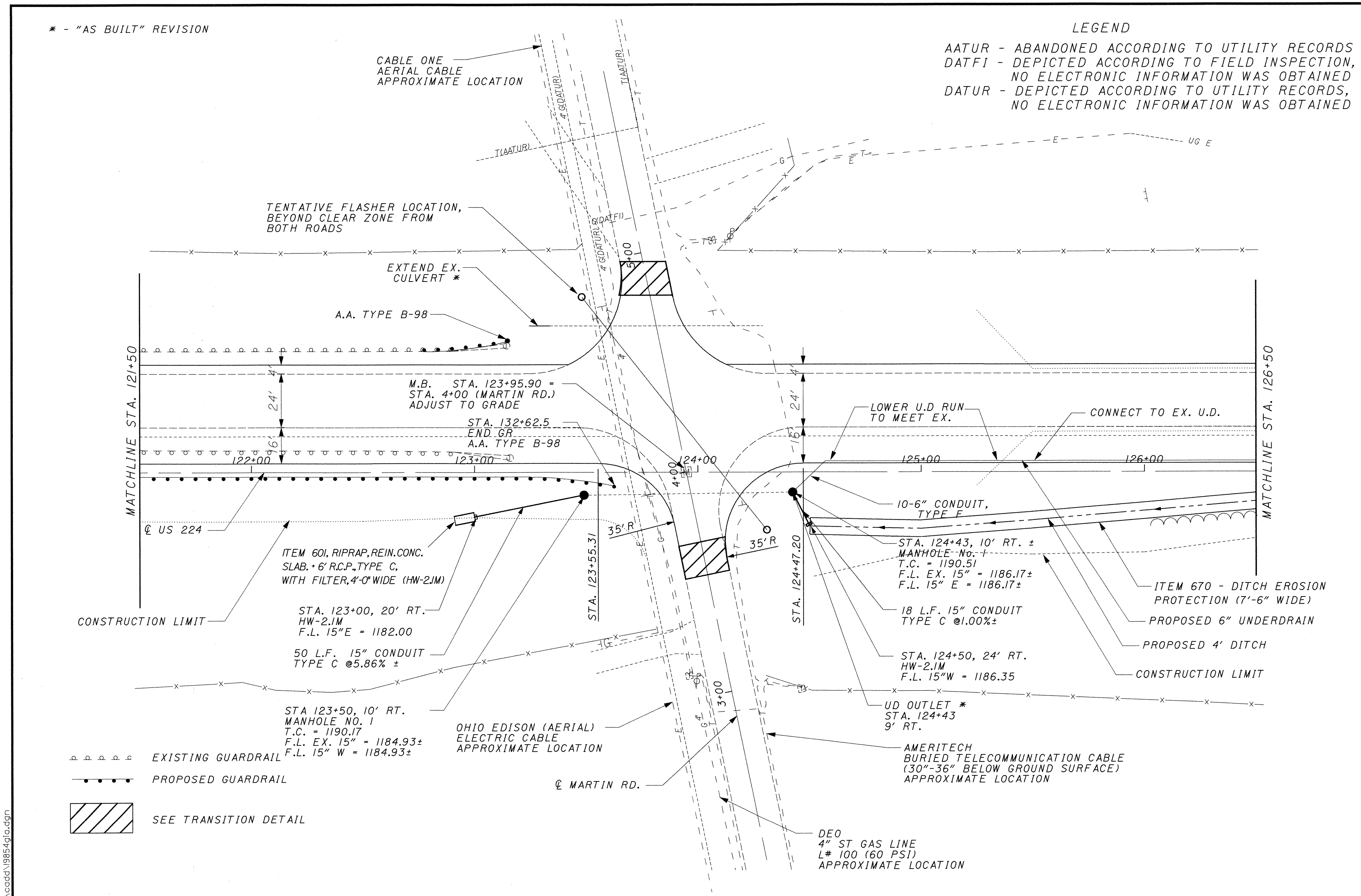
USR 224 PAVEMENT WIDENING AT MARTIN RD.

POR-224-0.00

AS BUILT

DECEMBER 16, 2002

p:\pr29820\cadd\19854gib.dgn



USR 224 PAVEMENT WIDENING AT MARTIN RD.

POR-224-0.00

AS BUILT

DECEMBER 16, 2002

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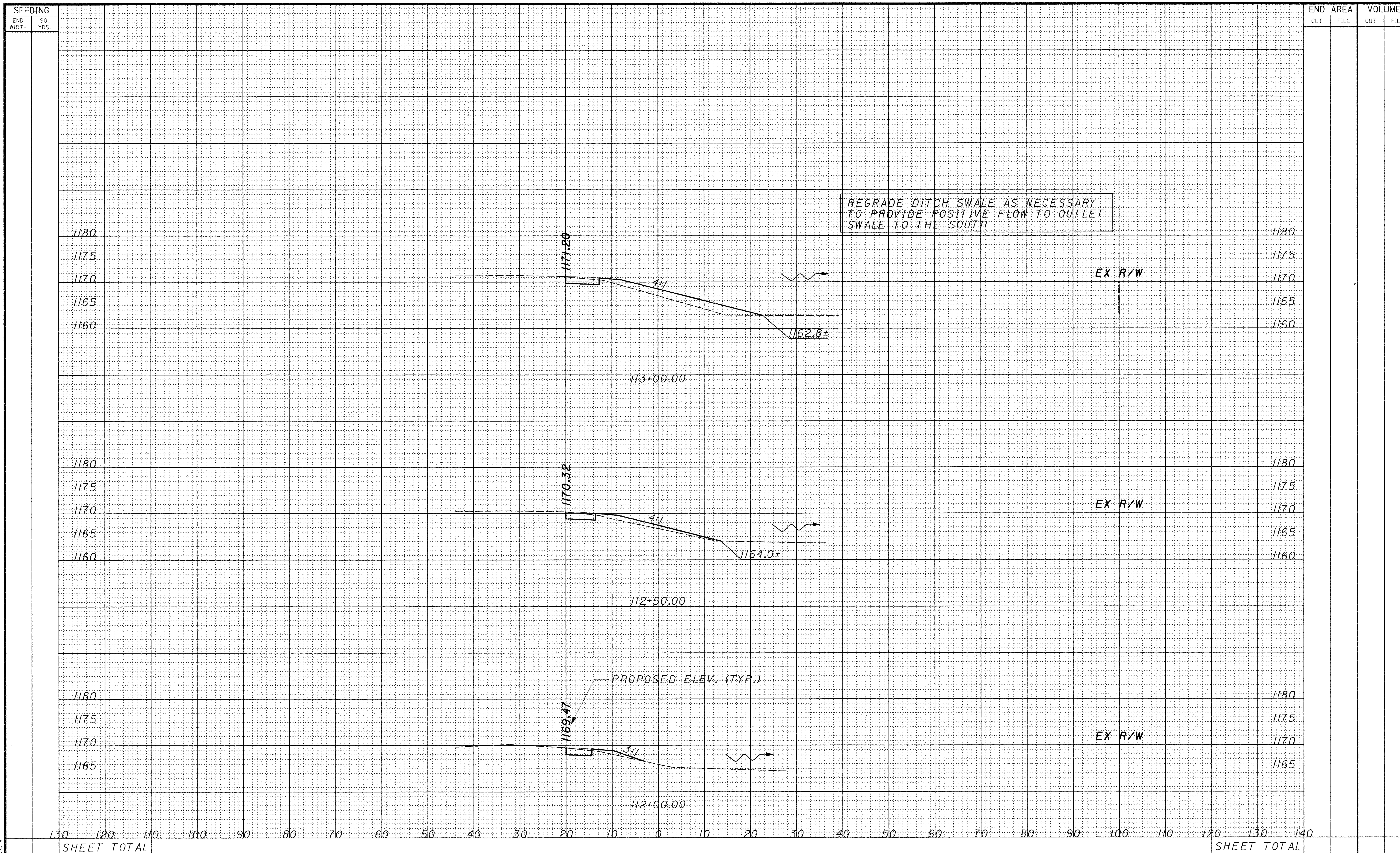
USR 224 PAVEMENT WIDENING AT
MARTIN RD.

POR-224-0.00

AS BUILT

DECEMBER 16, 2002

p:\pr29820\cadd\19854glc.dgn



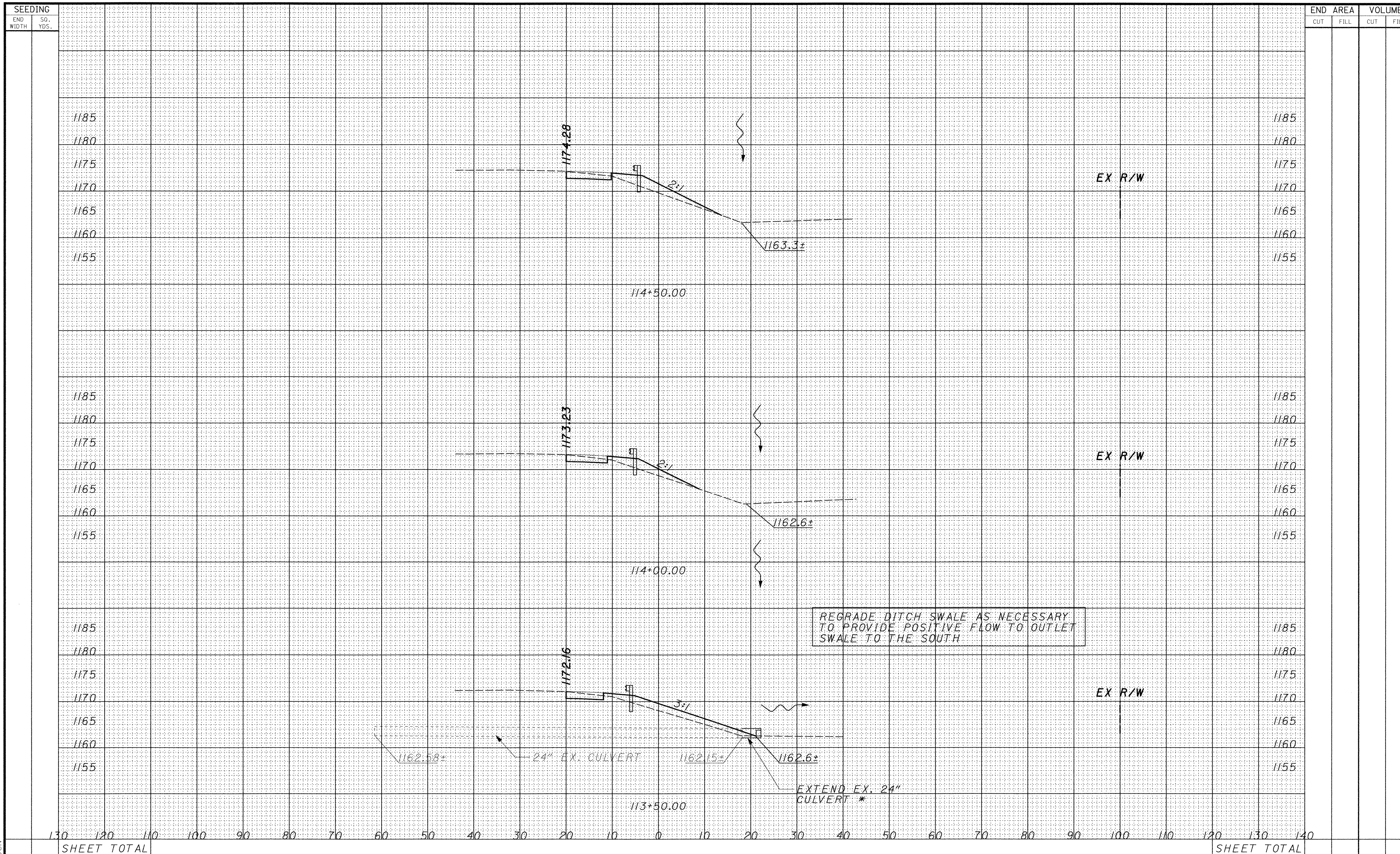
CALCULATED

CHECKED

CROSS SECTIONS
STA 112+00.00 TO 113+00.00

POR-224-0.00

P:\PR29820\cadd\19854GX.DGN



CROSS SECTIONS
STA. 113+50.00 TO 114+50.00

POR-224-0.00

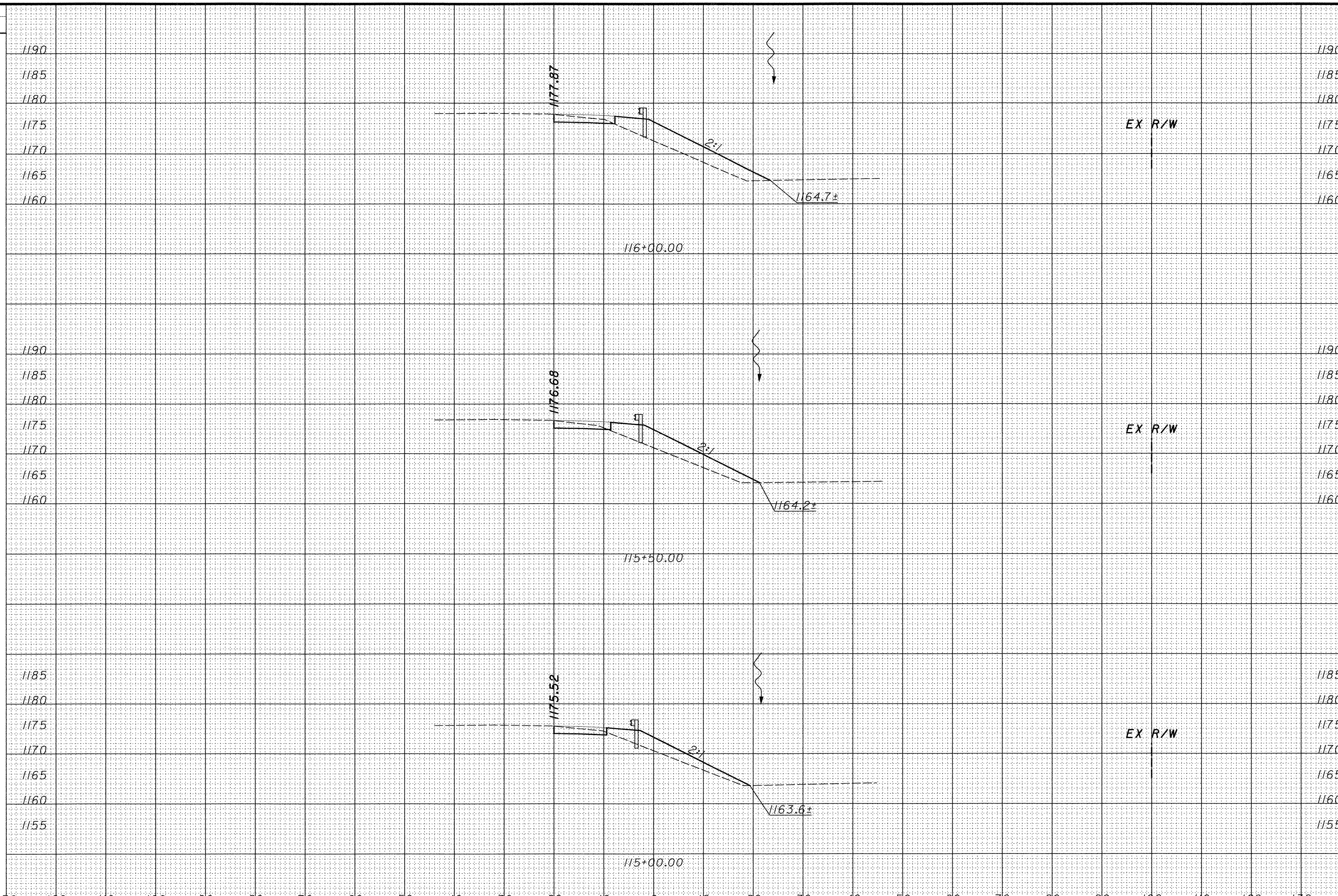
* - "AS BUILT" REVISION

AS BUILT

DECEMBER 16, 2002

P:\PR29820\cadd\19854GX.DGN

SEEDING	
END WIDTH	SQ. YDS.



SHEET TOTAL

SHEET TOTAL

END AREA		VOLUME	
CUT	FILL	CUT	FILL

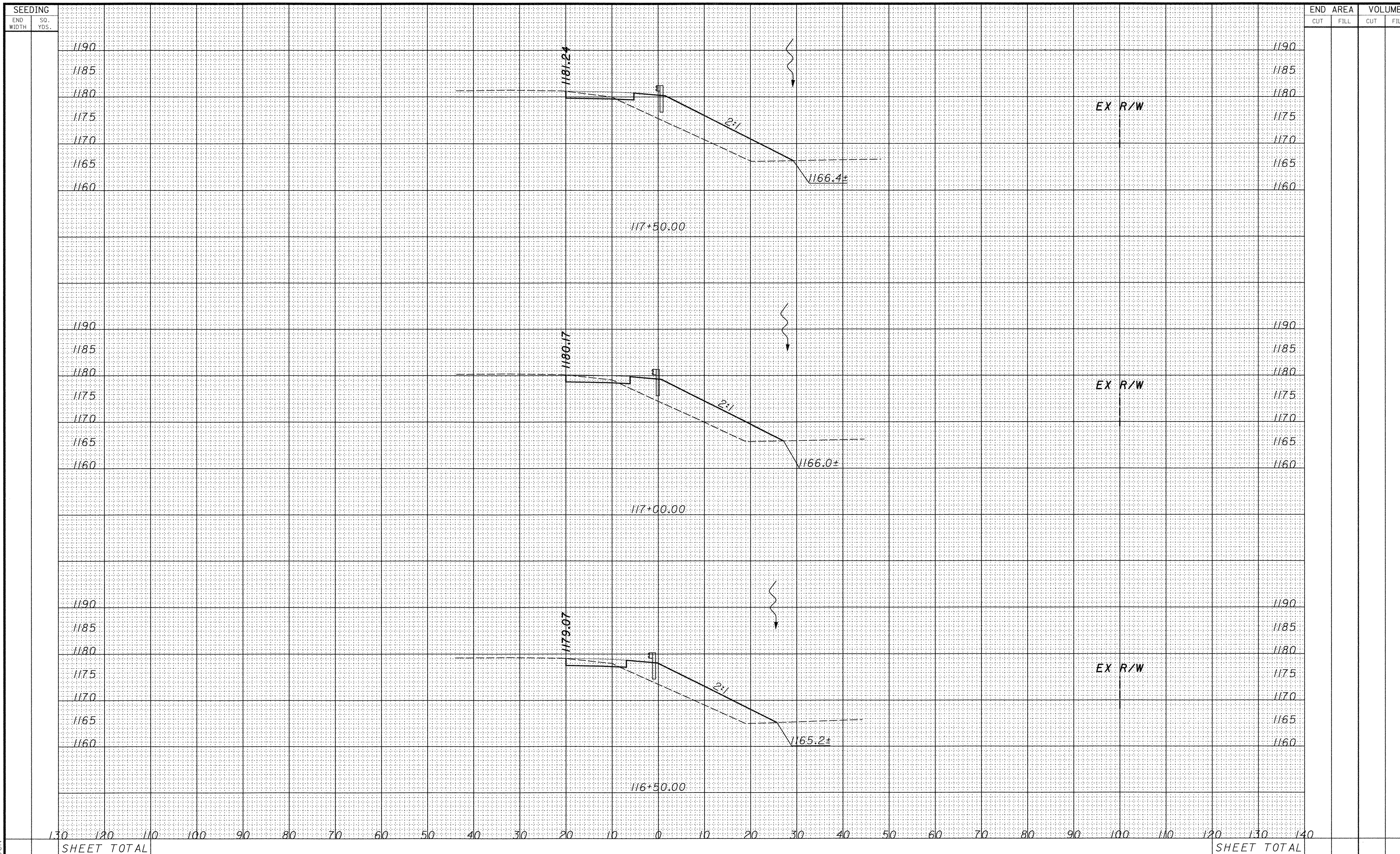
CALCULATED

CHECKED

CROSS SECTIONS
STA. 115+00.00 TO 116+00.00

POR-224-0.00

P:\PR29820\cadd\I9854GX.DGN

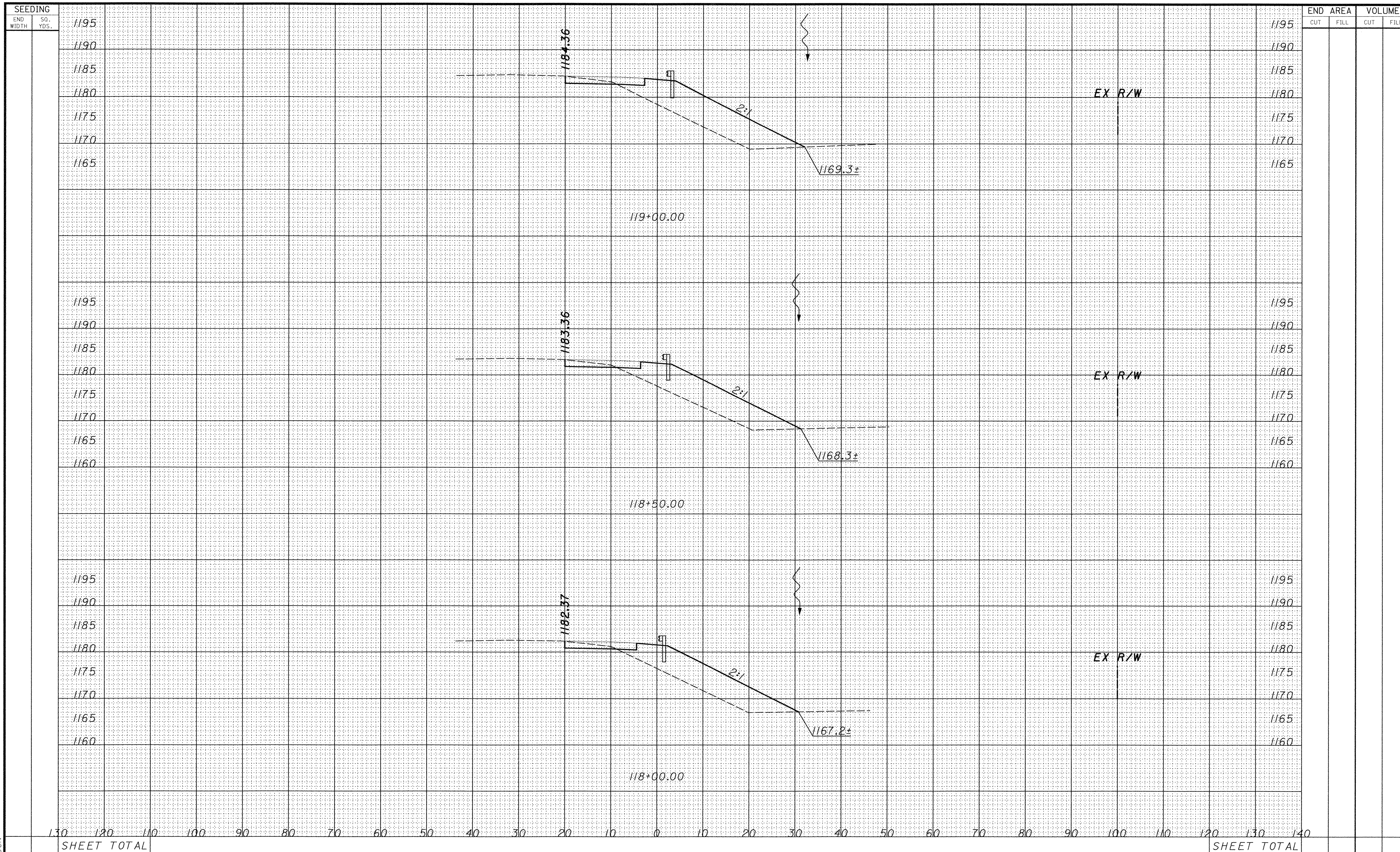


CALCULATED

CHECKED

CROSS SECTIONS
STA. 116+50.00 TO 117+50.00

POR-224-0.00



CALCULATED

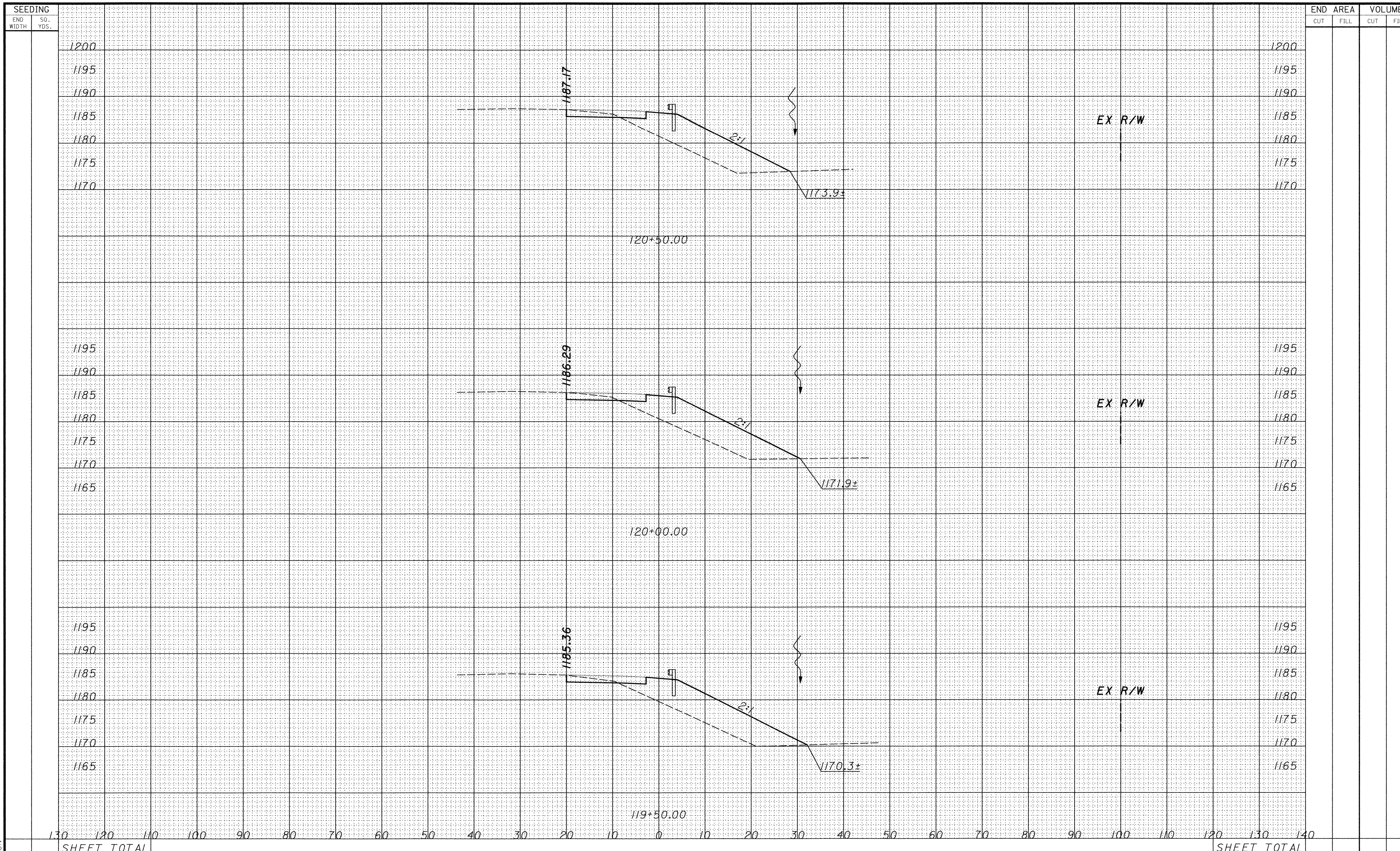
CHECKED

CROSS SECTIONS

STA. 118+00.00 TO 119+00.00

POR-224-0.00

P:\PR29820\cadd\19854GX.DGN



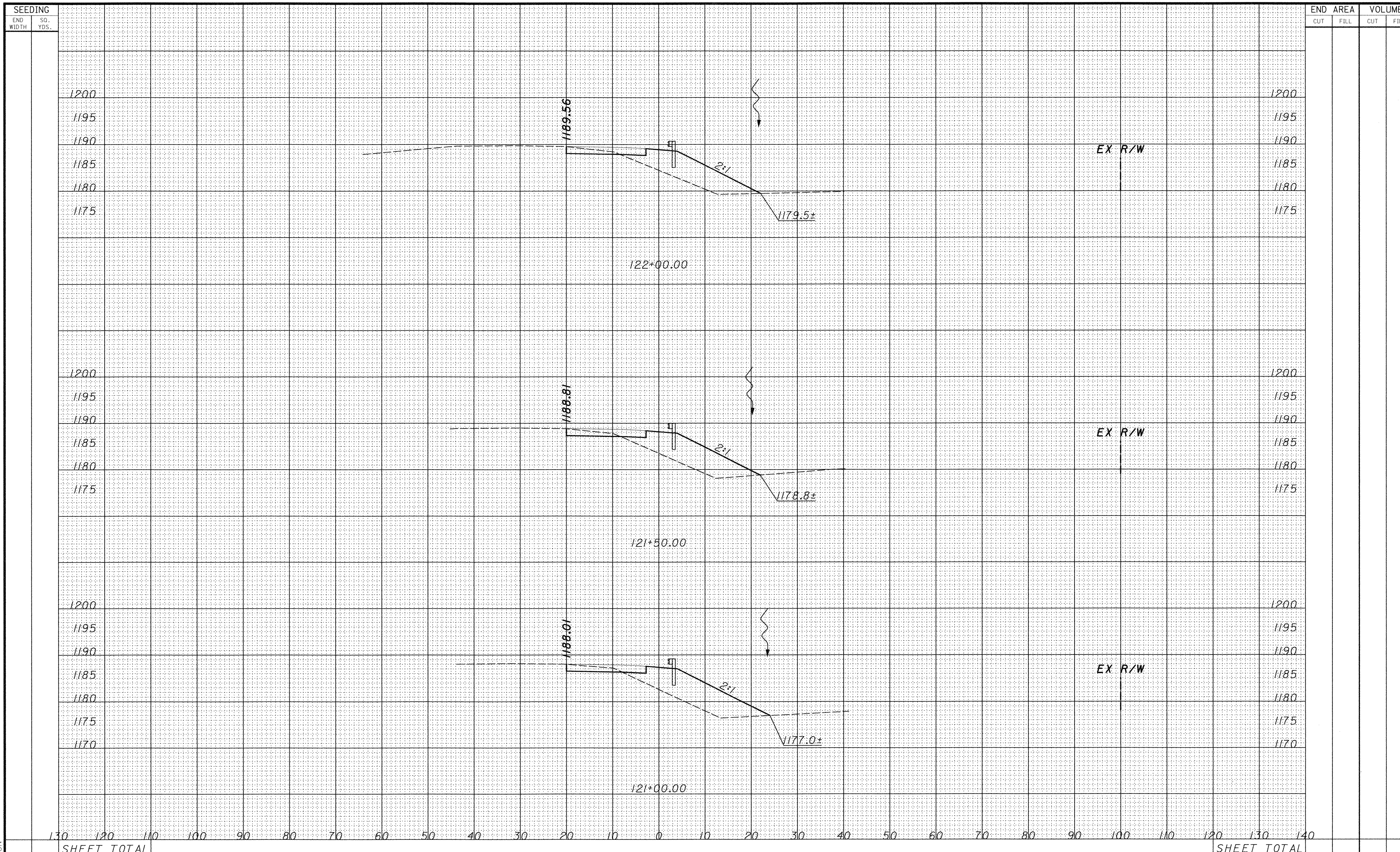
CALCULATED

CHECKED

CROSS SECTIONS STA. 119+50.00 TO 120+50.00

POR-224-0.00

P:\PR29820\cadd\19854GX.DGN



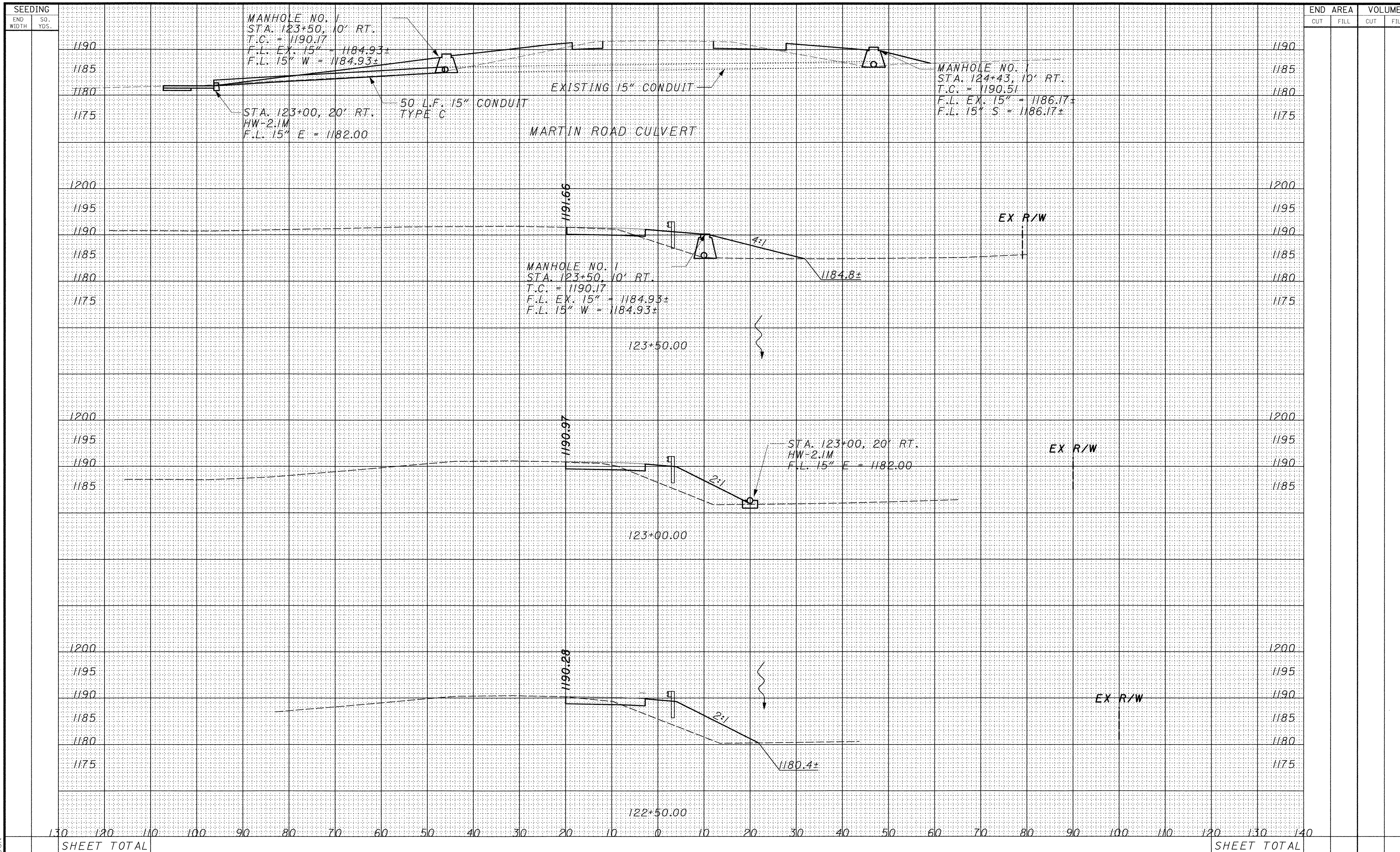
CALCULATED

CHECKED

CROSS SECTIONS
STA. 121+00.00 TO 122+00.00

POR-224-0.00

P:\PR29820\cadd\19854GX.DGN



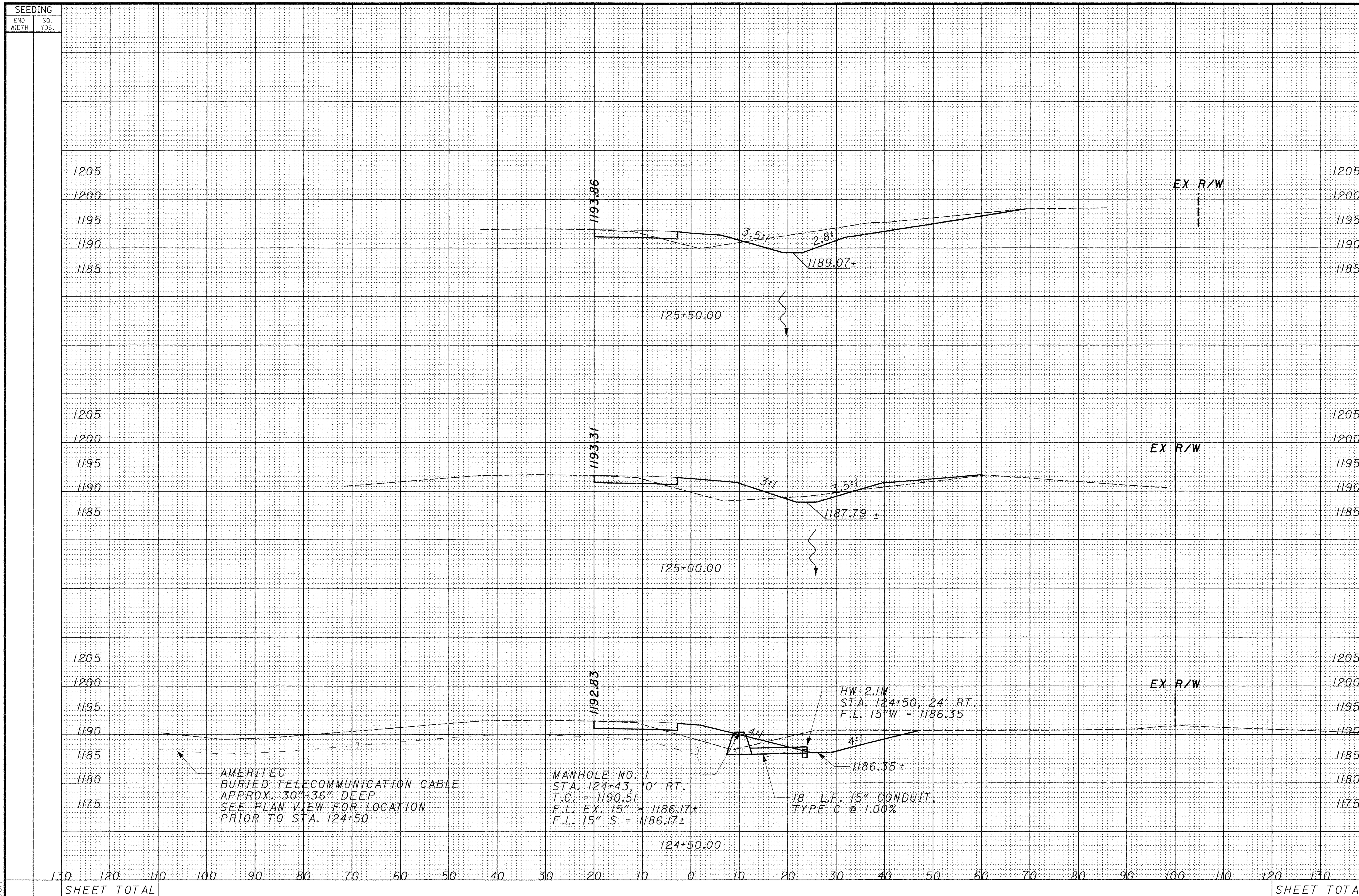
CALCULATED

CHECKED

CROSS SECTIONS
STA. 122+50.00 TO 123+50.00

POR-224-0.00

P:\PR29820\cadd\198546X.DGN



CALCULATED

CHECKED

CROSS SECTIONS
STA. 124+50.00 TO 125+50.00

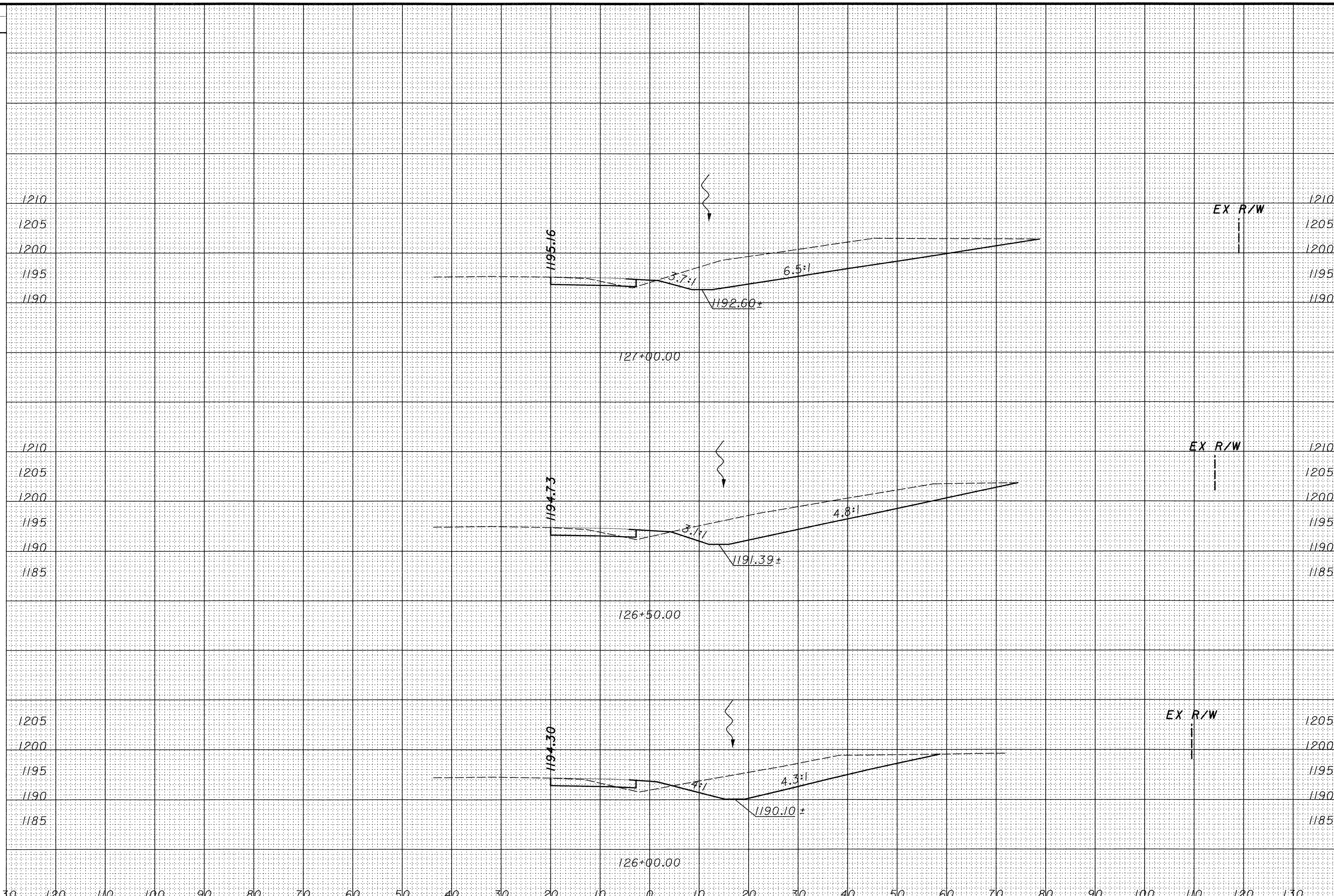
POR-224-0.00

P:\PR29820\cadd\19854GX.DGN

"AS BUILT" REVISION TO OUTSIDE GRADING

AS BUILT
MARCH 20, 2003

SEEDING	
END WIDTH	SQ. YDS.
SHEET TOTAL	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
SHEET TOTAL			

CALCULATED
CHECKED

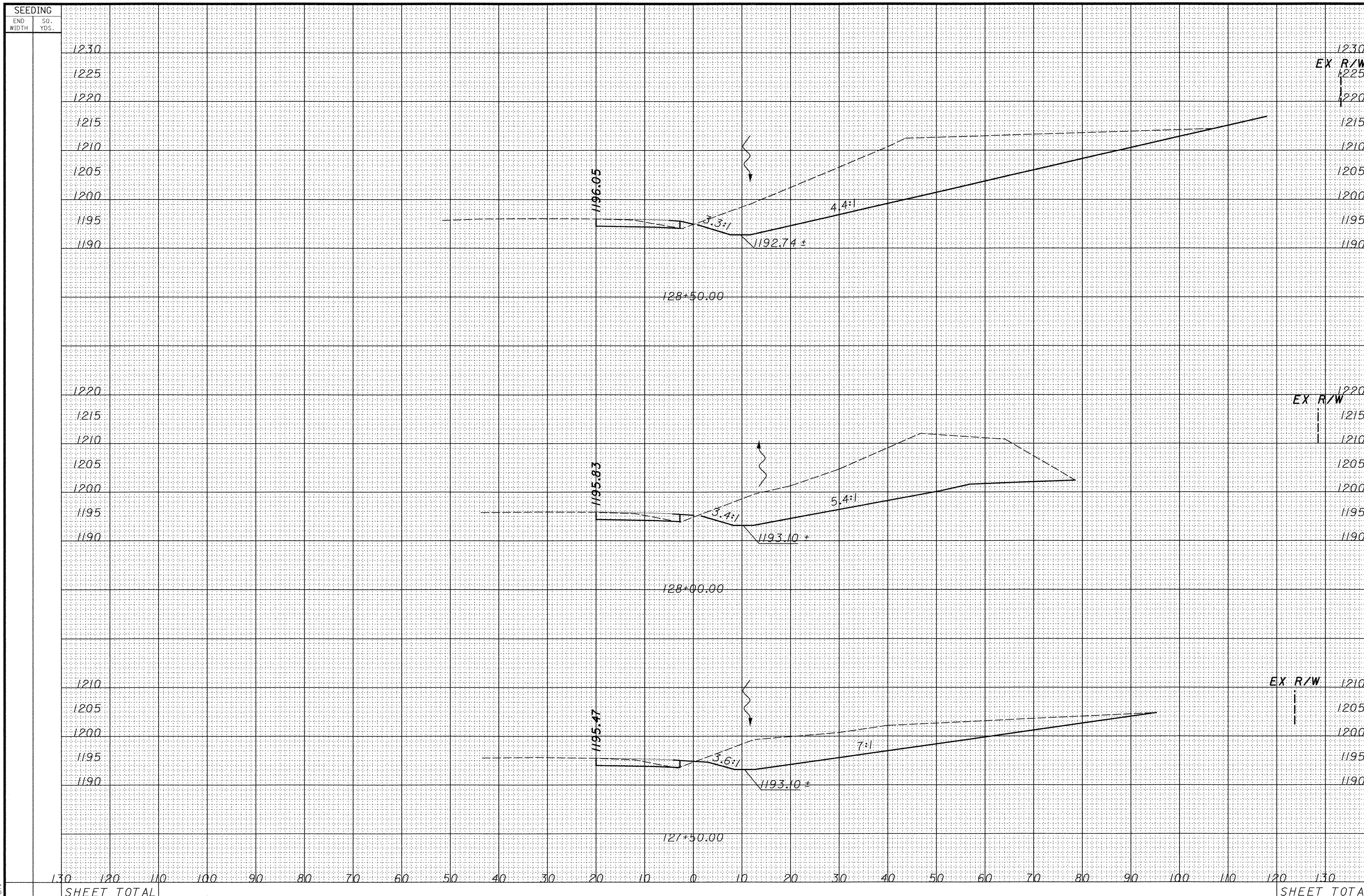
CROSS SECTIONS
STA. 126+00.00 TO 127+00.00

POR-224-0.00

"AS BUILT" REVISION TO OUTSIDE GRADING

AS BUILT
MARCH 20, 2003

P:\PR29820\cadd\19854GX.DGN



CALCULATED

CHECKED

CROSS SECTIONS
STA. 127+50.00 TO 128+50.00

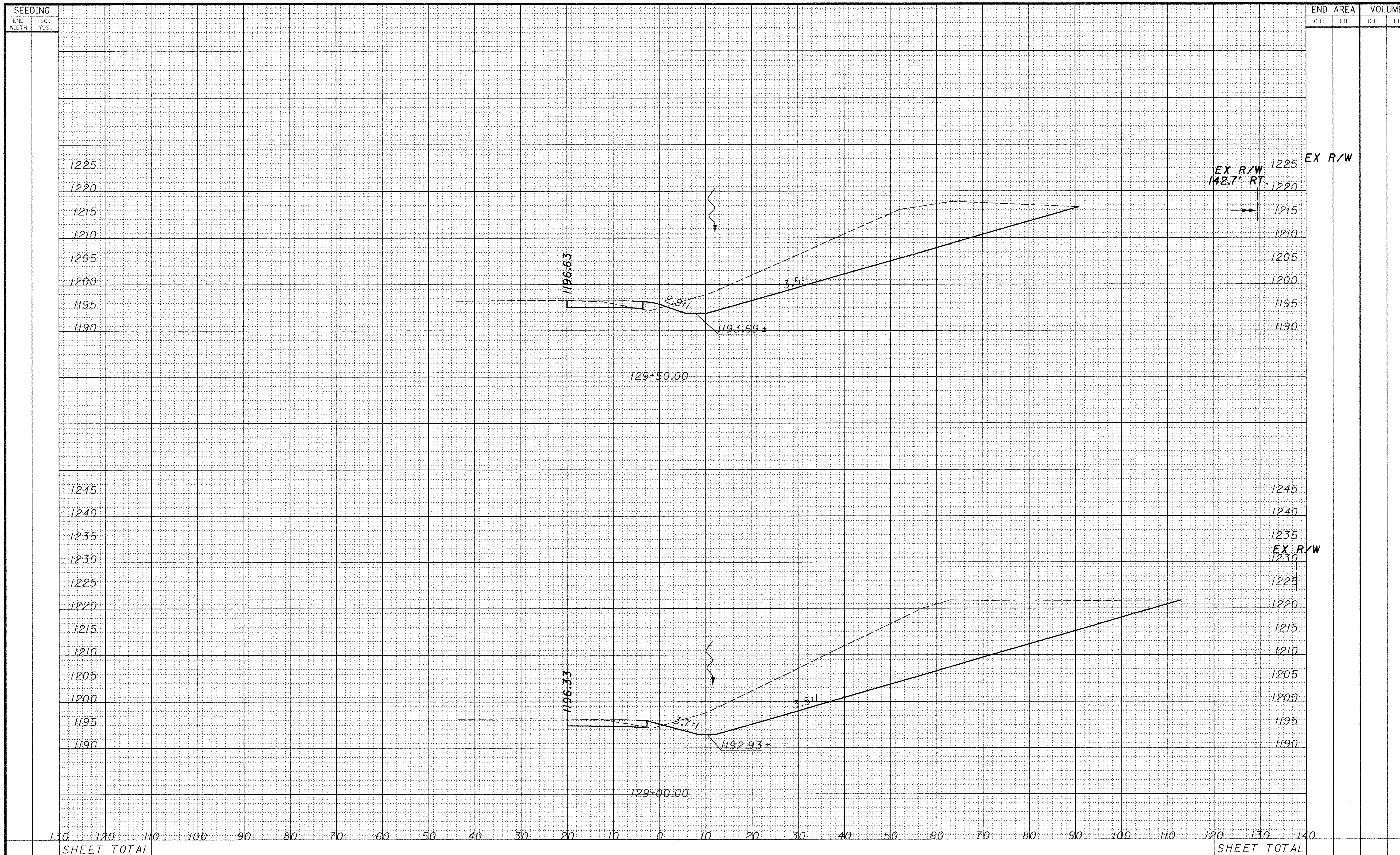
POR-224-0.00

"AS BUILT" REVISION TO OUTSIDE GRADING

AS BUILT

MARCH 20, 2003

P:\PR29820\cadd\9854GX.DGN



CALCULATED

CHECKED

CROSS SECTIONS
STA. 129+00.00 TO 129+50.00

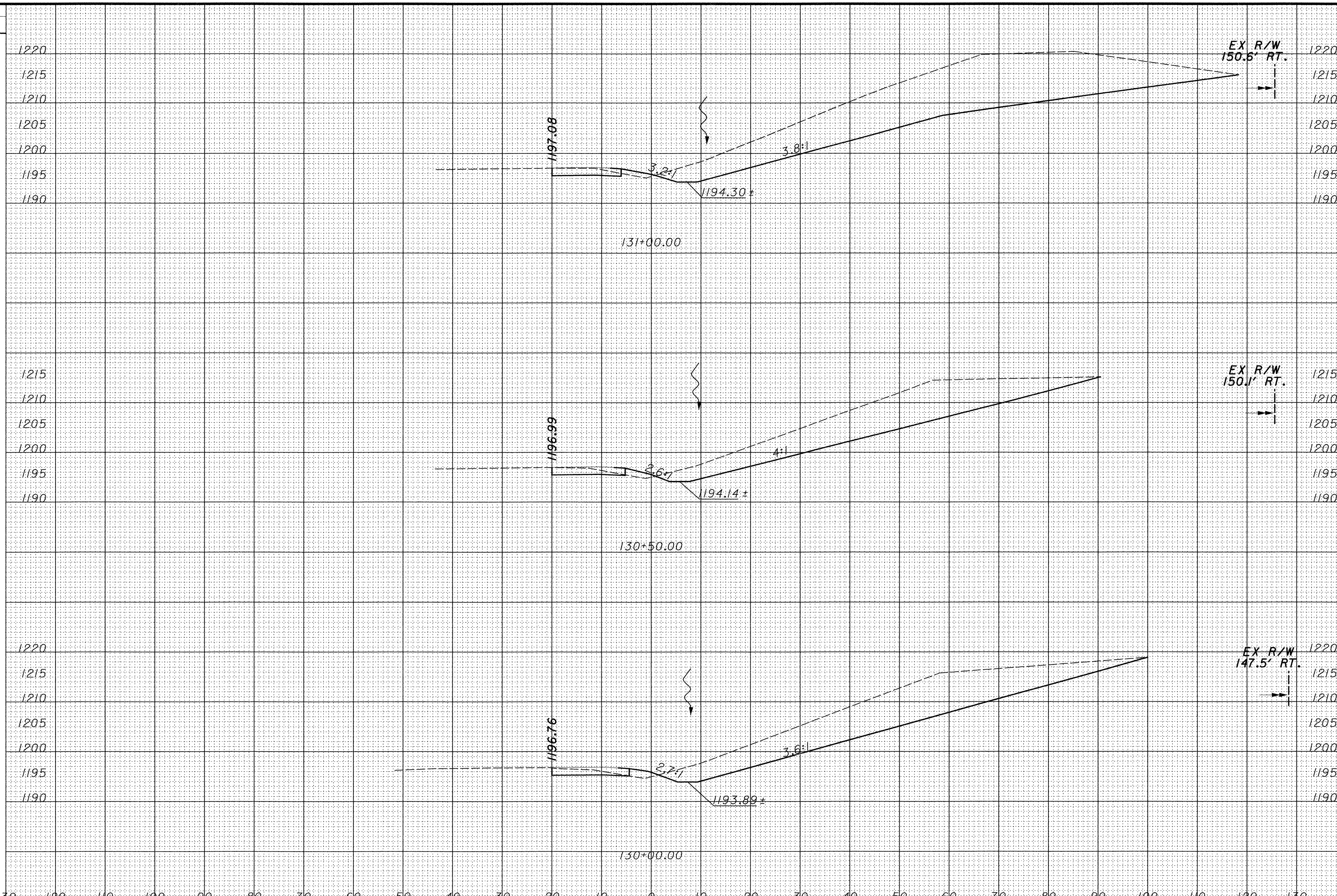
POR-224-0.00

"AS BUILT" REVISION TO OUTSIDE GRADING

AS BUILT

MARCH 20, 2003

SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL		
	SHEET TOTAL						



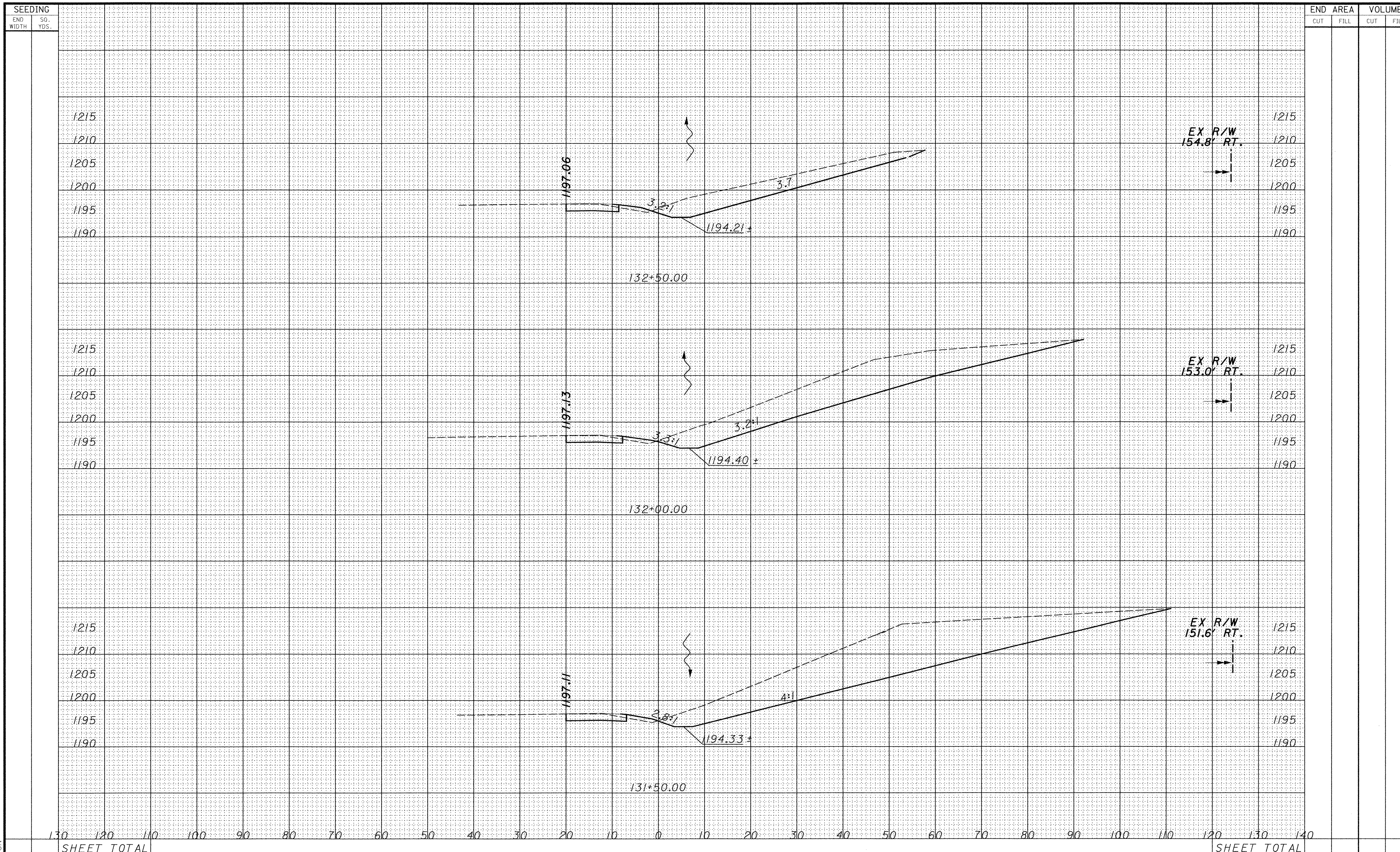
CROSS SECTIONS
STA. 130+00.00 TO 131+00.00

POR-224-0.00

"AS BUILT" REVISION TO OUTSIDE GRADING

AS BUILT
MARCH 20, 2003

P:\PR29820\cadd\19854GX.DGN



CALCULATED

CHECKED

CROSS SECTIONS
STA. 131+50.00 TO 132+50.00

POR-224-0.00

"AS BUILT" REVISION TO OUTSIDE GRADING

AS BUILT

MARCH 20, 2003

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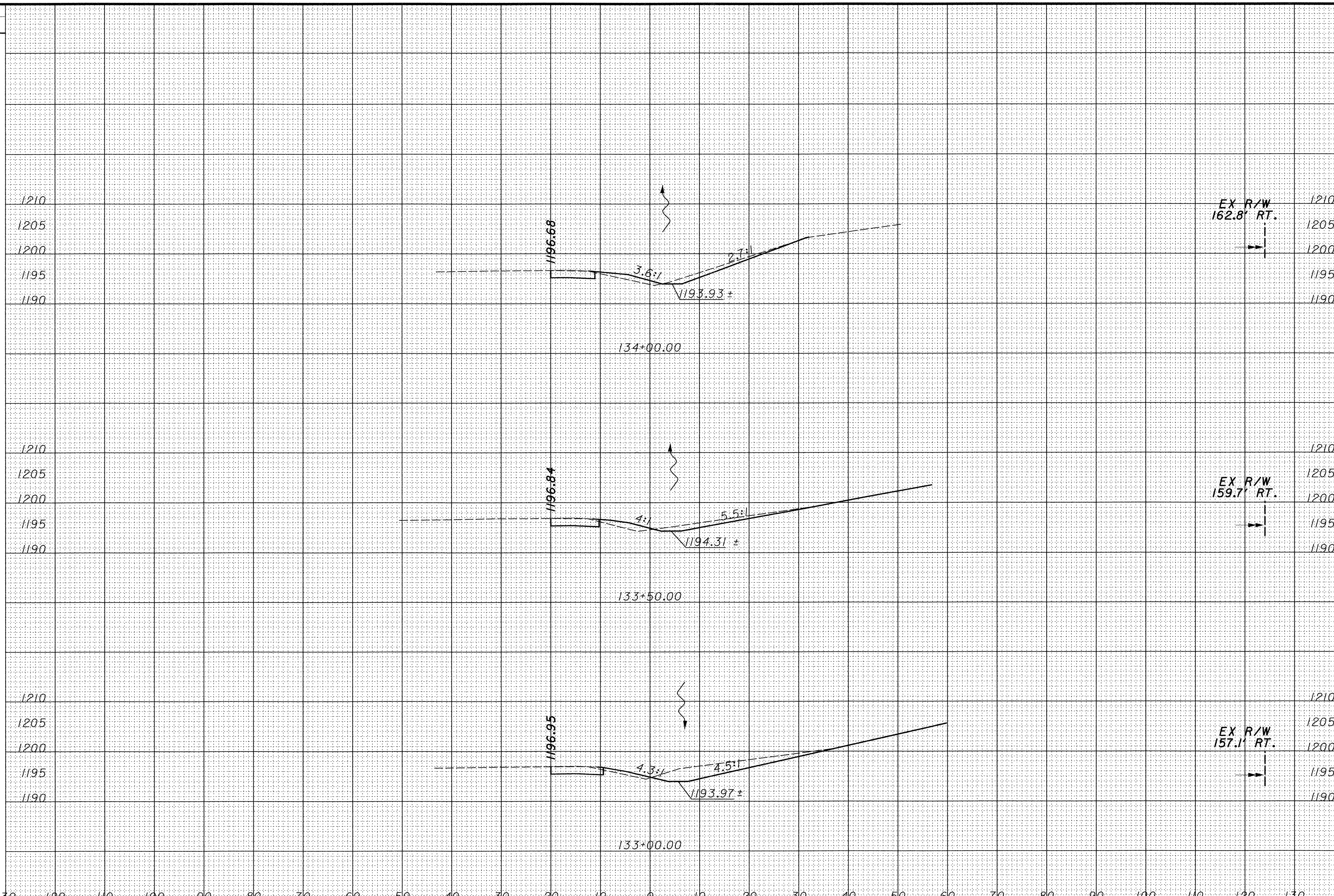
SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL		
	SHEET TOTAL	SHEET TOTAL					



CROSS SECTIONS
STA. 133+00.00 TO STA. 134+00.00

POR-224-0.00

"AS BUILT" REVISION TO OUTSIDE GRADING

AS BUILT

MARCH 20, 2003

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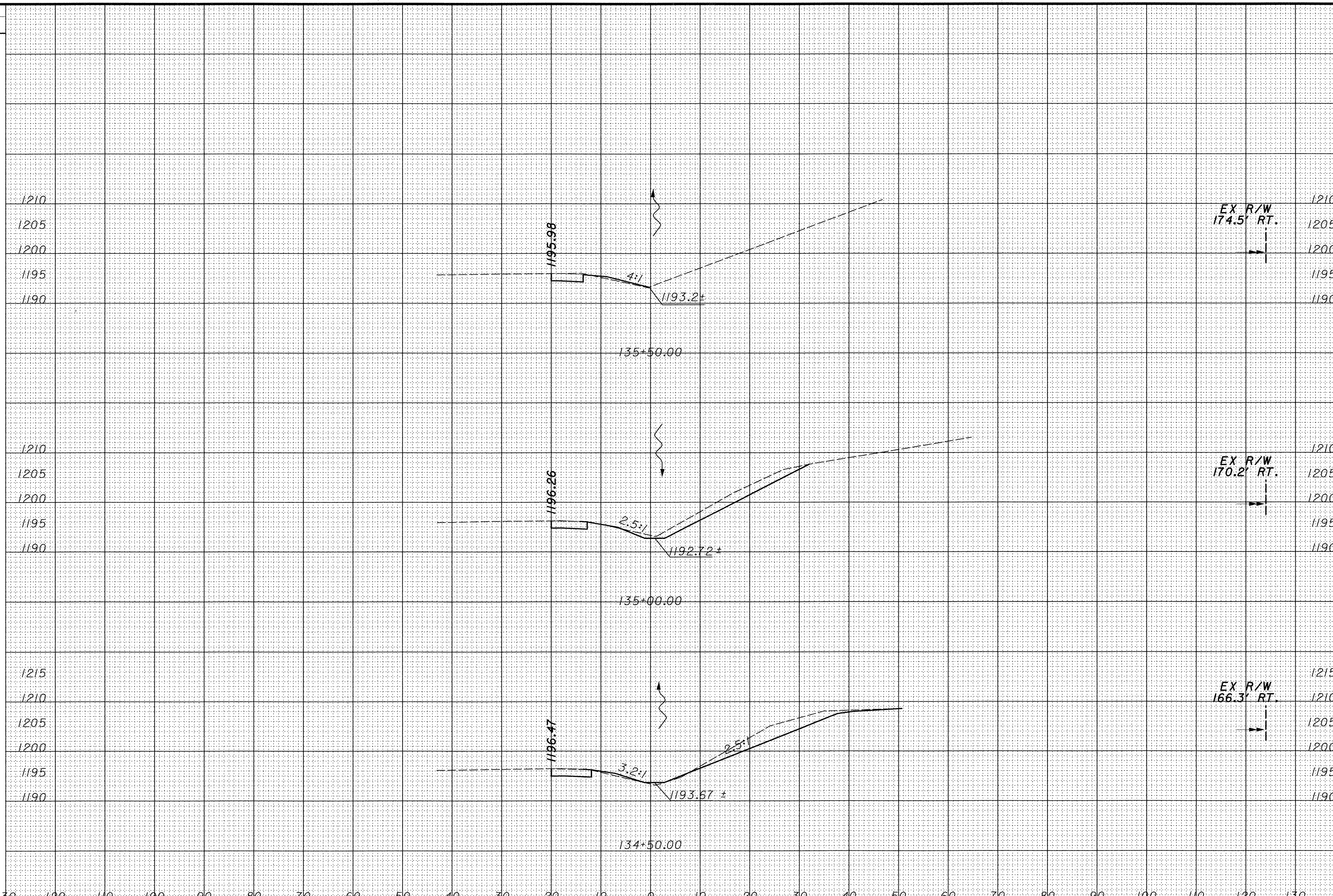
SEEDING	
END WIDTH	SQ. YDS.
	SHEET TOTAL



END AREA		VOLUME	
CUT	FILL	CUT	FILL
SHEET TOTAL			

CALCULATED

CHECKED

CROSS SECTIONS
STA. 134+50.00 TO STA. 135+50.00

POR-224-0.00

"AS BUILT" REVISION TO OUTSIDE GRADING

AS BUILT

MARCH 20, 2003

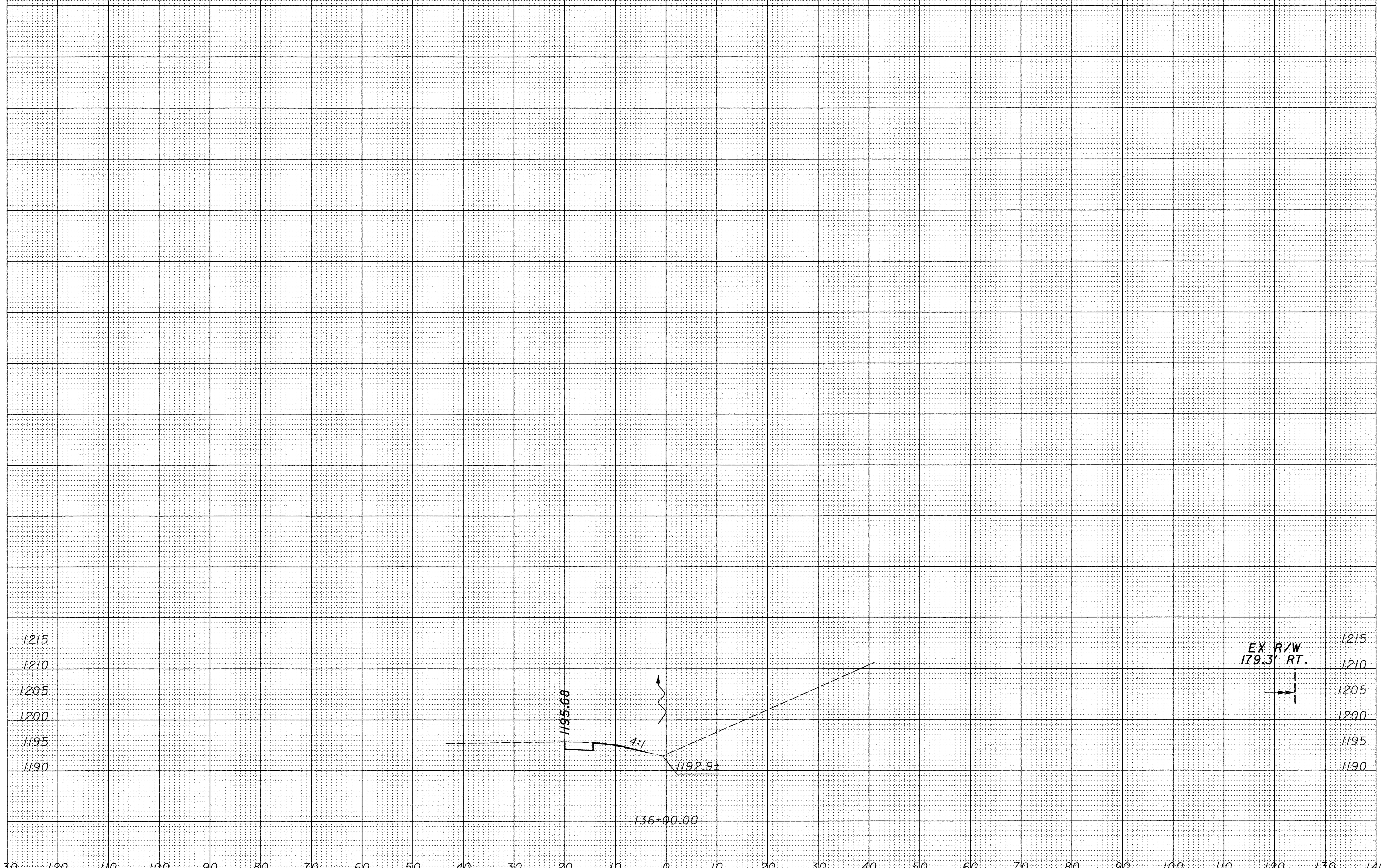
P:\PR29820\cadd\19854GX.DGN

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED

CHECKED



SHEET TOTAL

SHEET TOTAL

CROSS SECTIONS
STA. 136+00.00

POR-224-0.00

P:\PR29820\cadd\19854GX.DGN

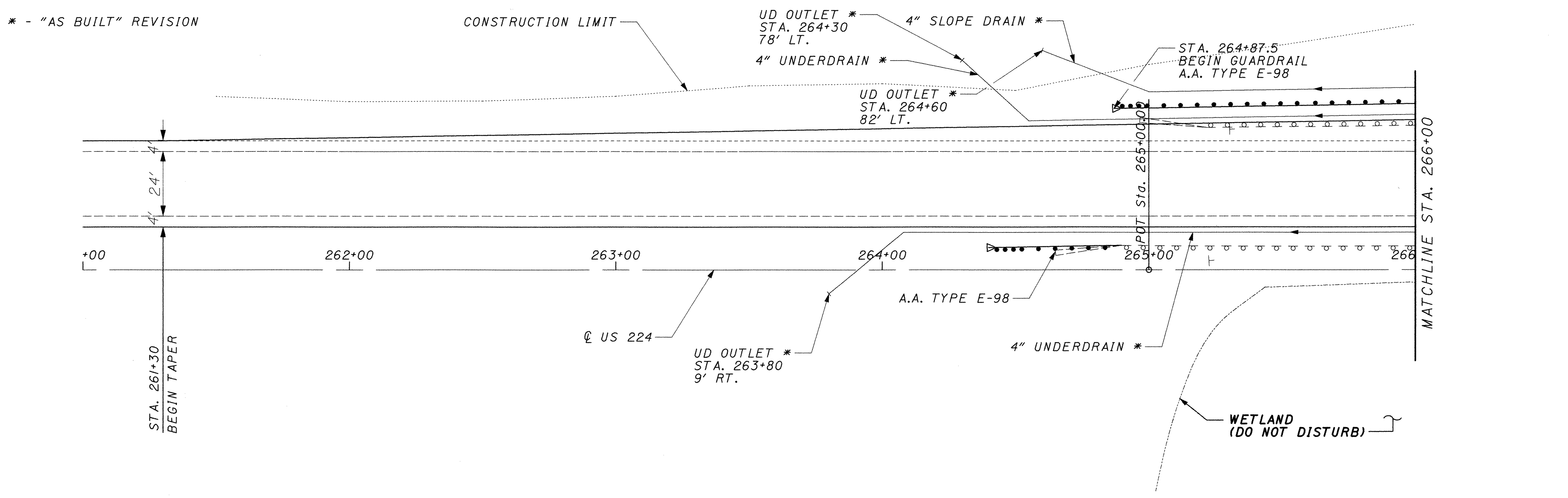
CONGRESS LAKE RD. INTERSECTION DETAIL

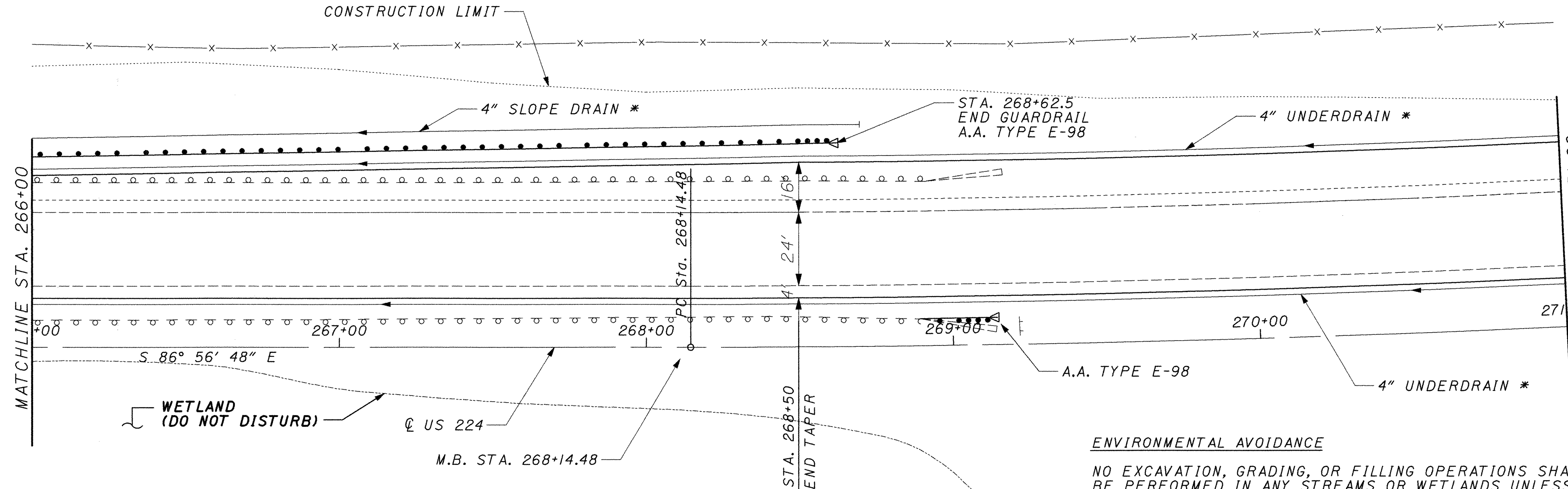
POR-224-0.00

AS BUILT

DECEMBER 16, 2002

* - "AS BUILT" REVISION





EXISTING GUARDRAIL

PROPOSED GUARDRAIL

ENVIRONMENTAL AVOIDANCE

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN ANY STREAMS OR WETLANDS UNLESS THE REQUIRED STATE AND/OR FEDERAL PERMITS HAVE BEEN OBTAINED IN ACCORDANCE WITH ALL APPLICABLE STATE AND/OR FEDERAL LAWS AND REGULATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY STREAMS OR WETLANDS.

N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED | CHECKED

USR 224 PAVEMENT WIDENING AT CONGRESS LAKE RD.

POR-224-0.00

AS BUILT

DECEMBER 16, 2002

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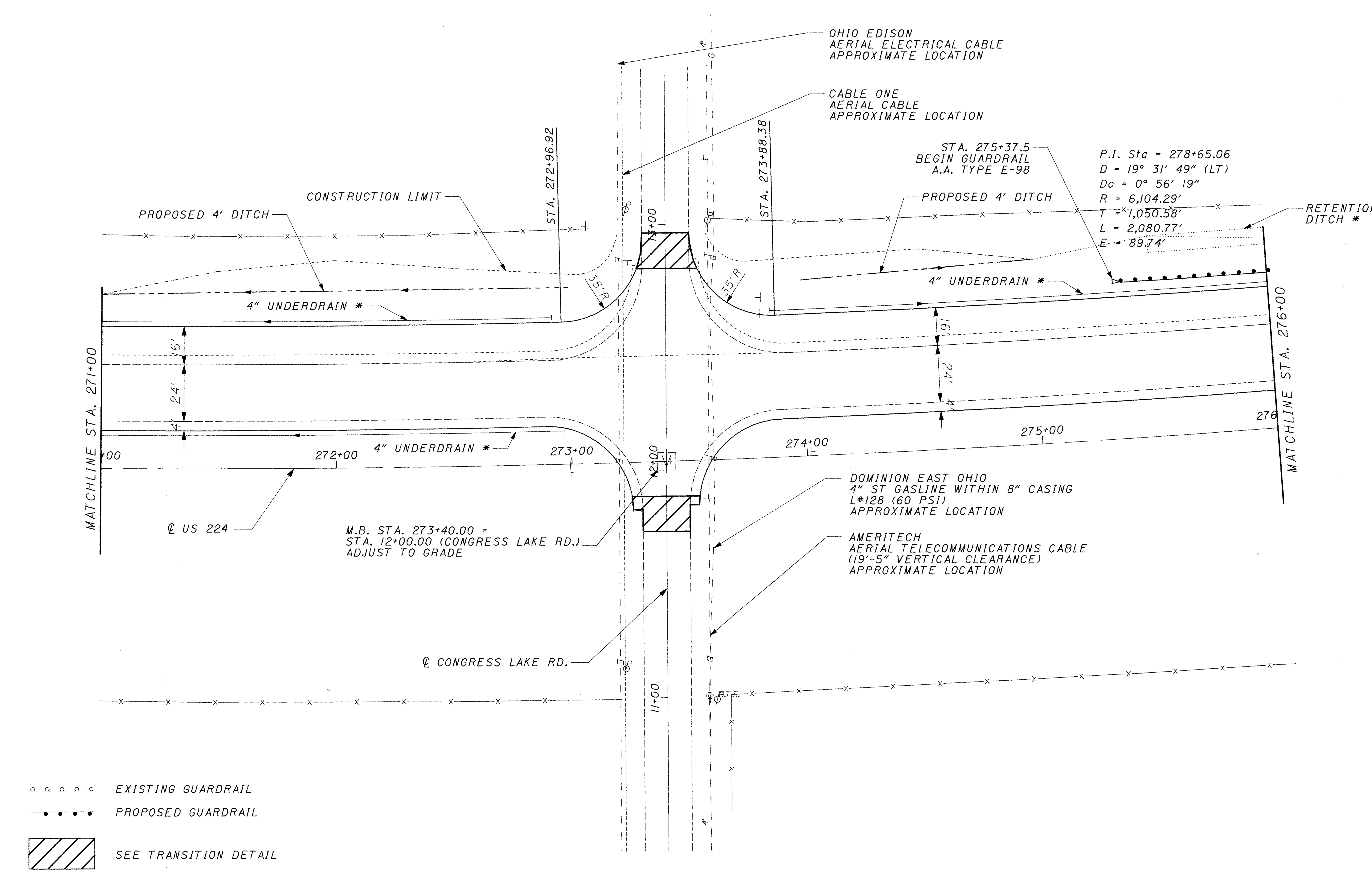
* - "AS BUILT" REVISION



N

0 10 20 40
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

USR 224 PAVEMENT WIDENING AT CONGRESS LAKE RD.

POR-224-0.00

AS BUILT

DECEMBER 16, 2002

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CALCULATED
CHECKED

USR 224 PAVEMENT WIDENING AT CONGRESS LAKE RD.

POR-224-0.00

AS BUILT

DECEMBER 16, 2002

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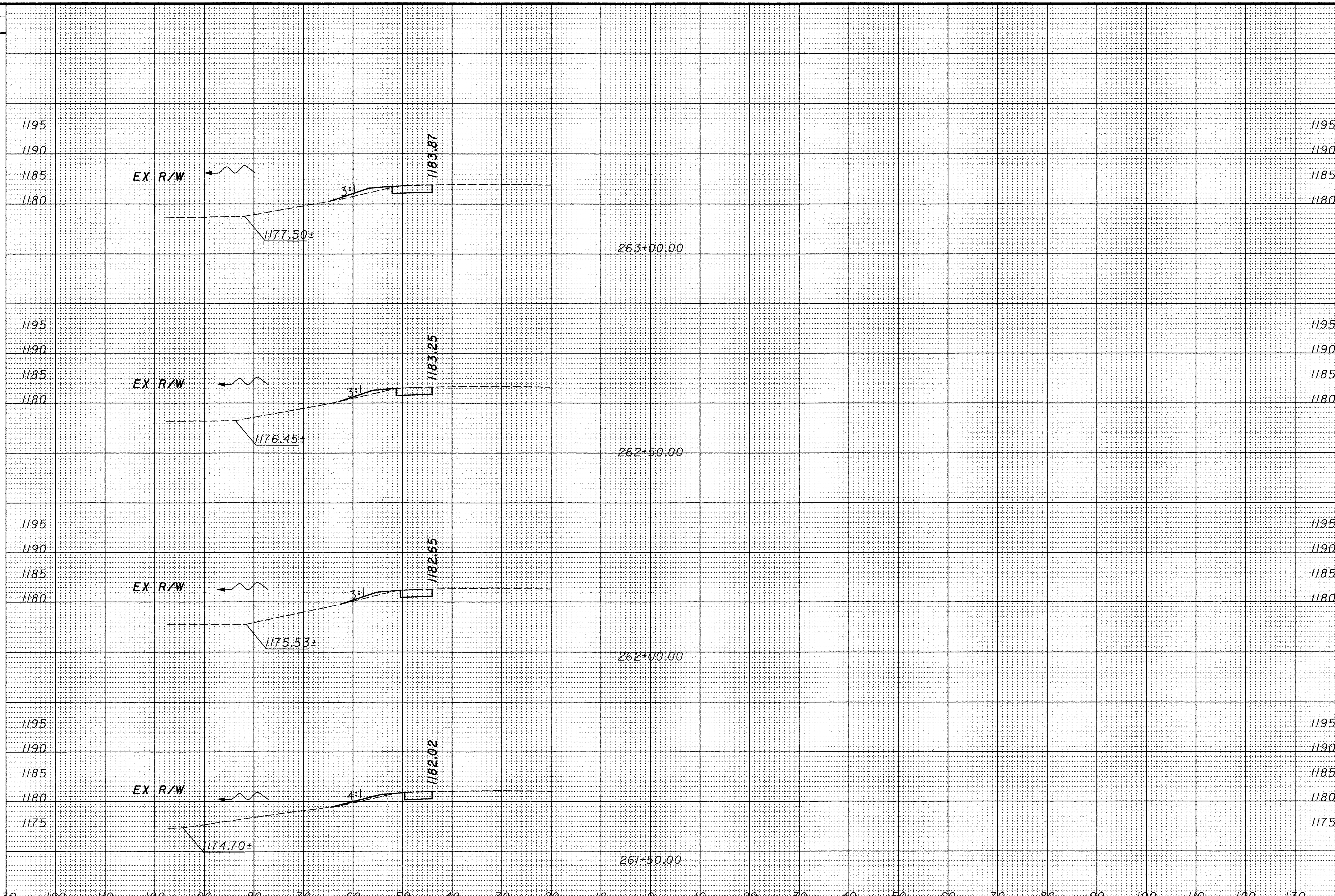
SEEDING			END AREA		VOLUME			
END WIDTH	SQ. YDS.		CUT	FILL	CUT	FILL	CALCULATED	CHECKED

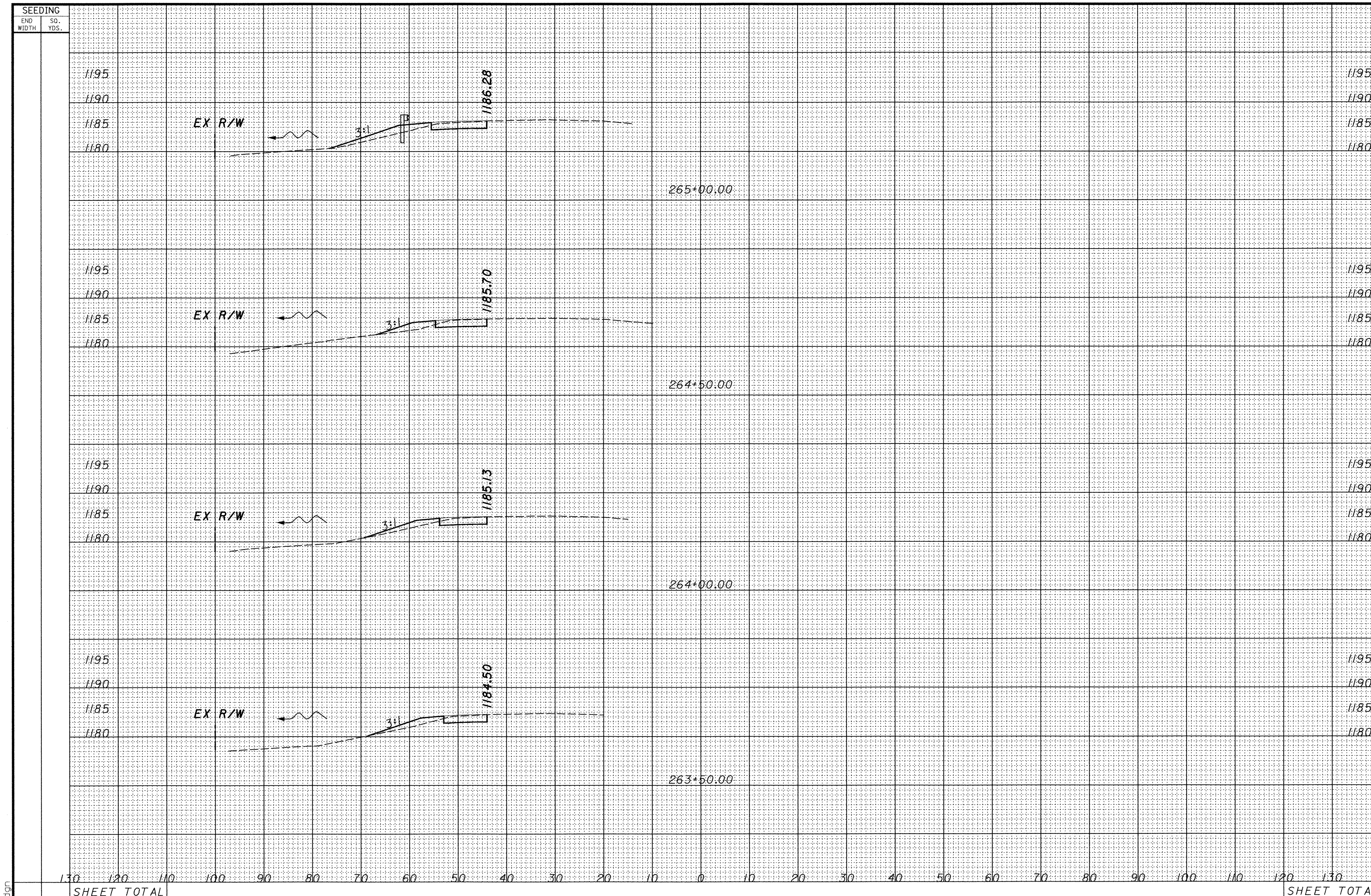


SHEET TOTAL

SHEET TOTAL

CROSS SECTIONS
STA 261+50.00 TO 263+00.00

POR-224-0.00



CALCULATED

CHECKED

CROSS SECTIONS
STA. 263+50.00 TO 265+00.00

POR-224-0.00

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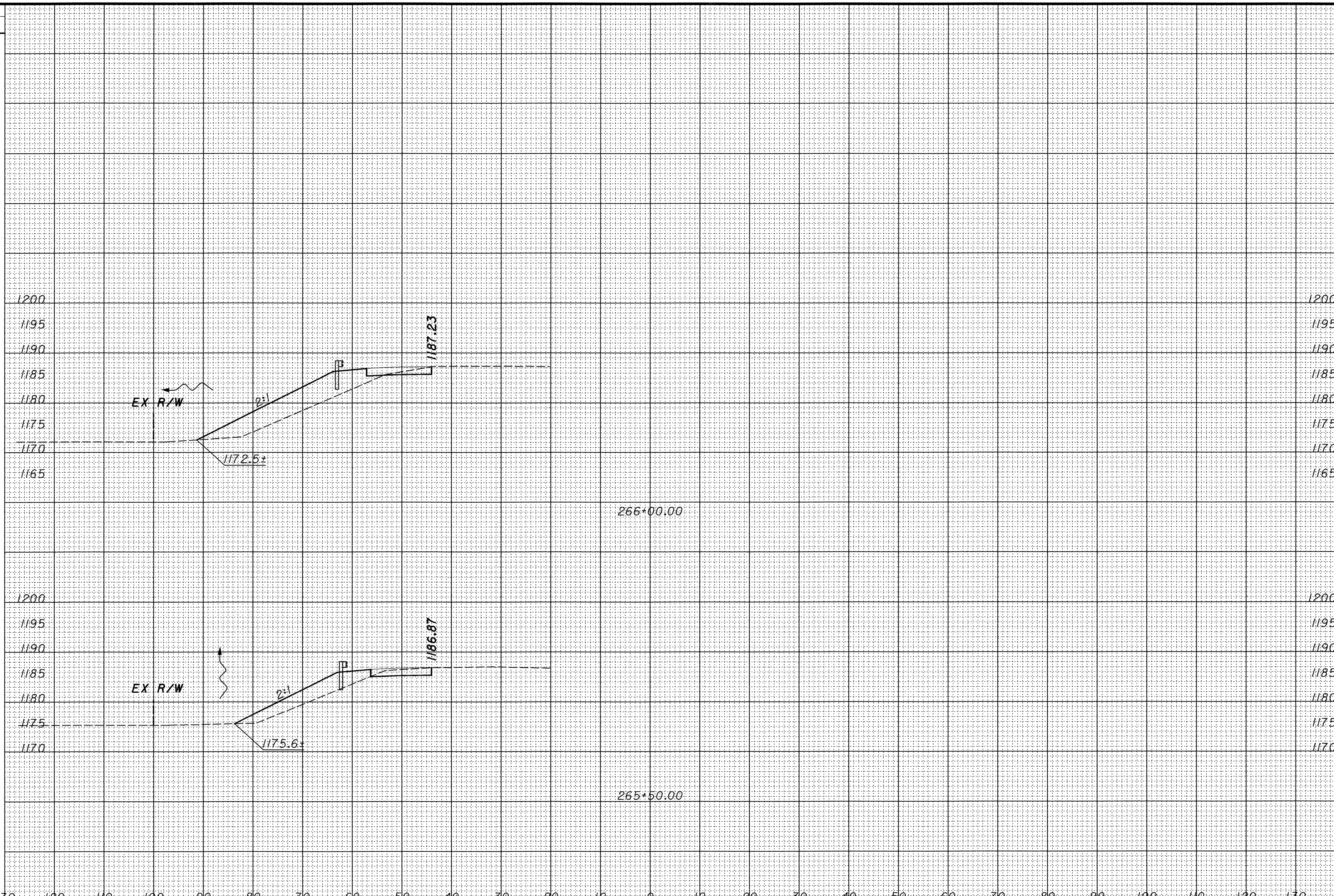
SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL		
	SHEET TOTAL	SHEET TOTAL					

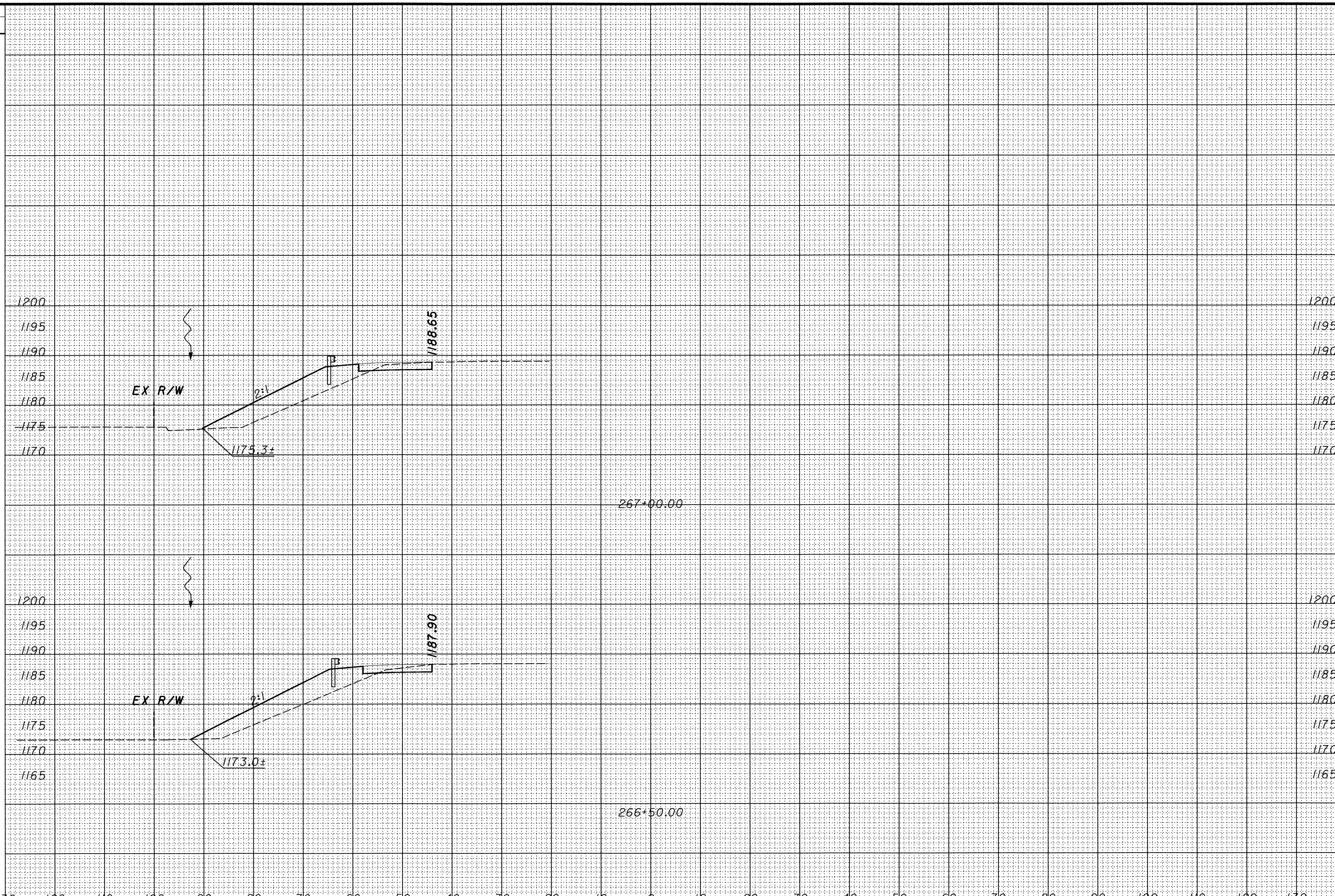


CROSS SECTIONS
STA. 265+50.00 TO 266+00.00

POR-224-0.00

P:\PR29820\cadd\19854GX1.dgn

SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL		



SHEET TOTAL

SHEET TOTAL

CROSS SECTIONS
STA. 266+50.00 TO 267+00.00

POR-224-0.00

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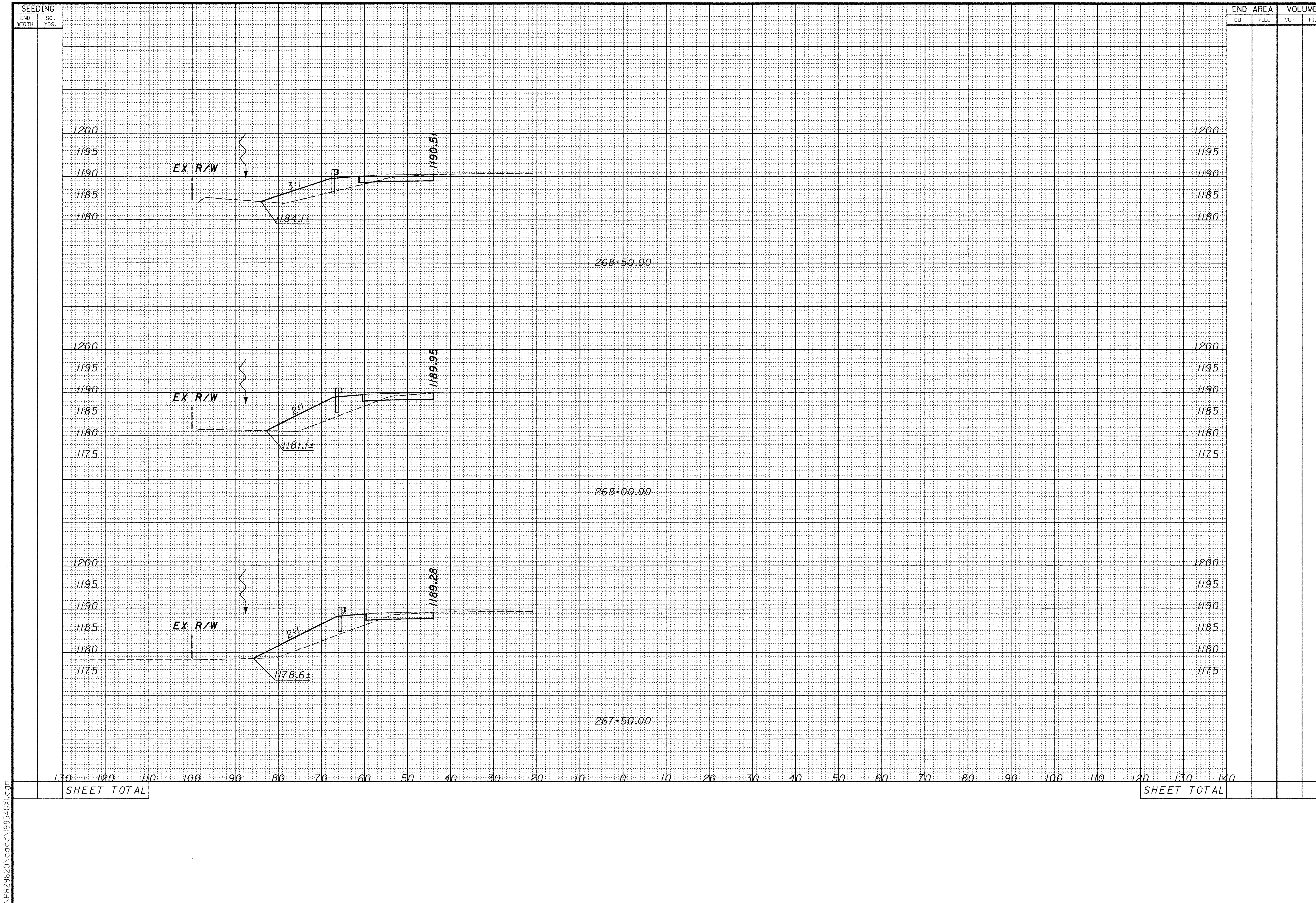
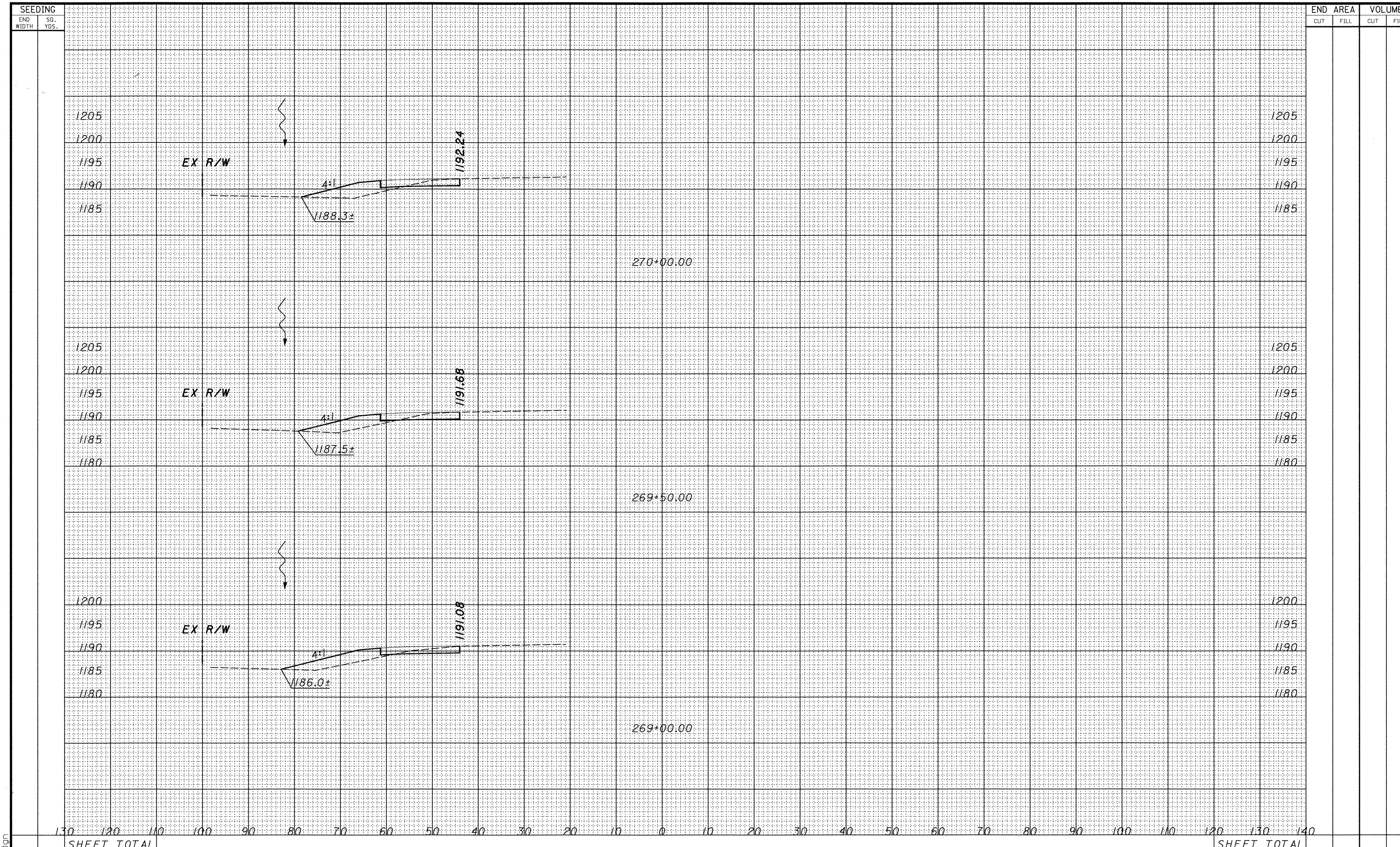


CALCULATED

CHECKED

CROSS SECTIONS
STA. 267+50.00 TO 268+50.00

POR-224-0.00



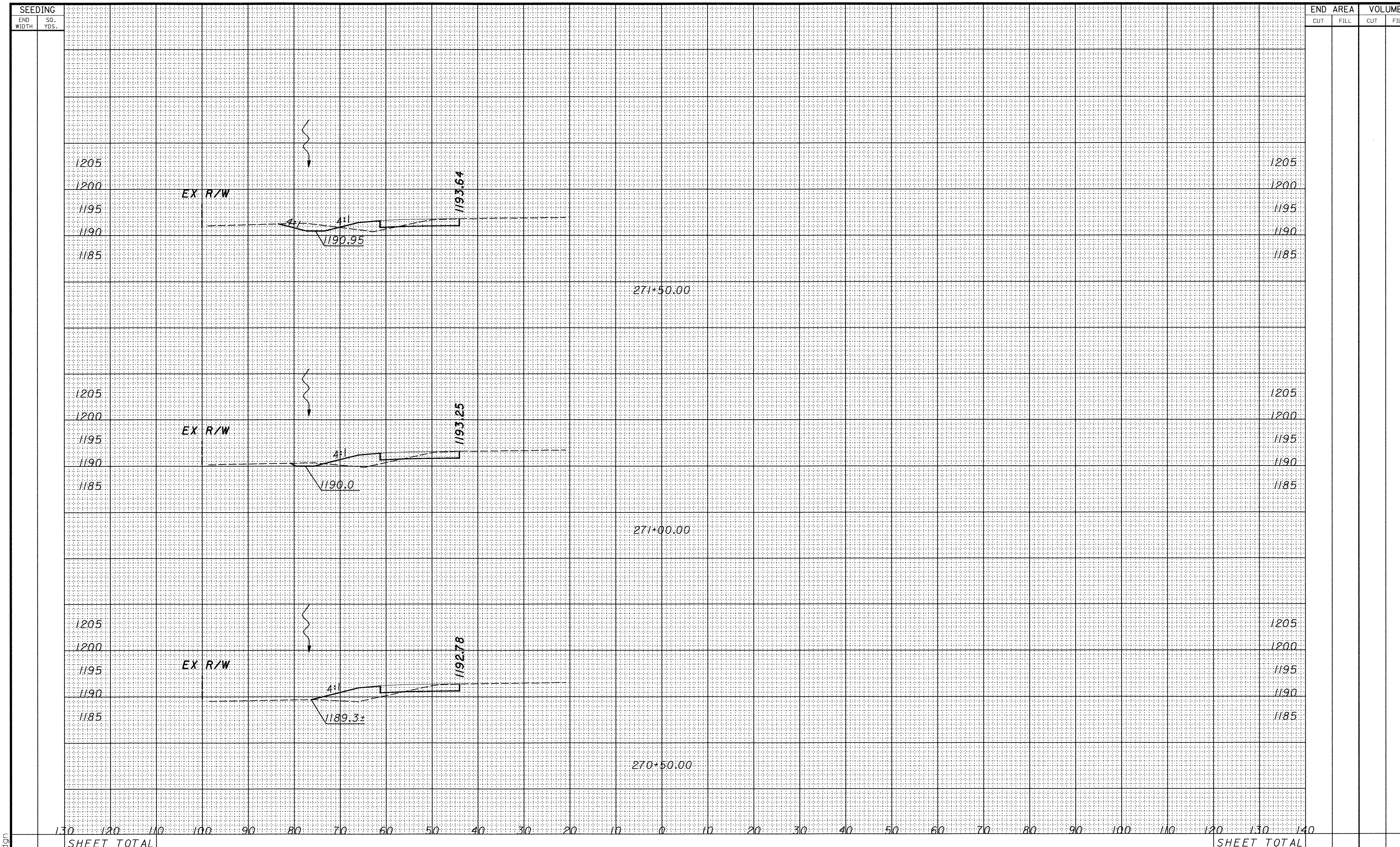
CALCULATED

CHECKED

CROSS SECTIONS
STA. 269+00.00 TO 270+00.00

POR-224-0.00

P:\PR29820\cadd\19854GX1.dgn



CALCULATED

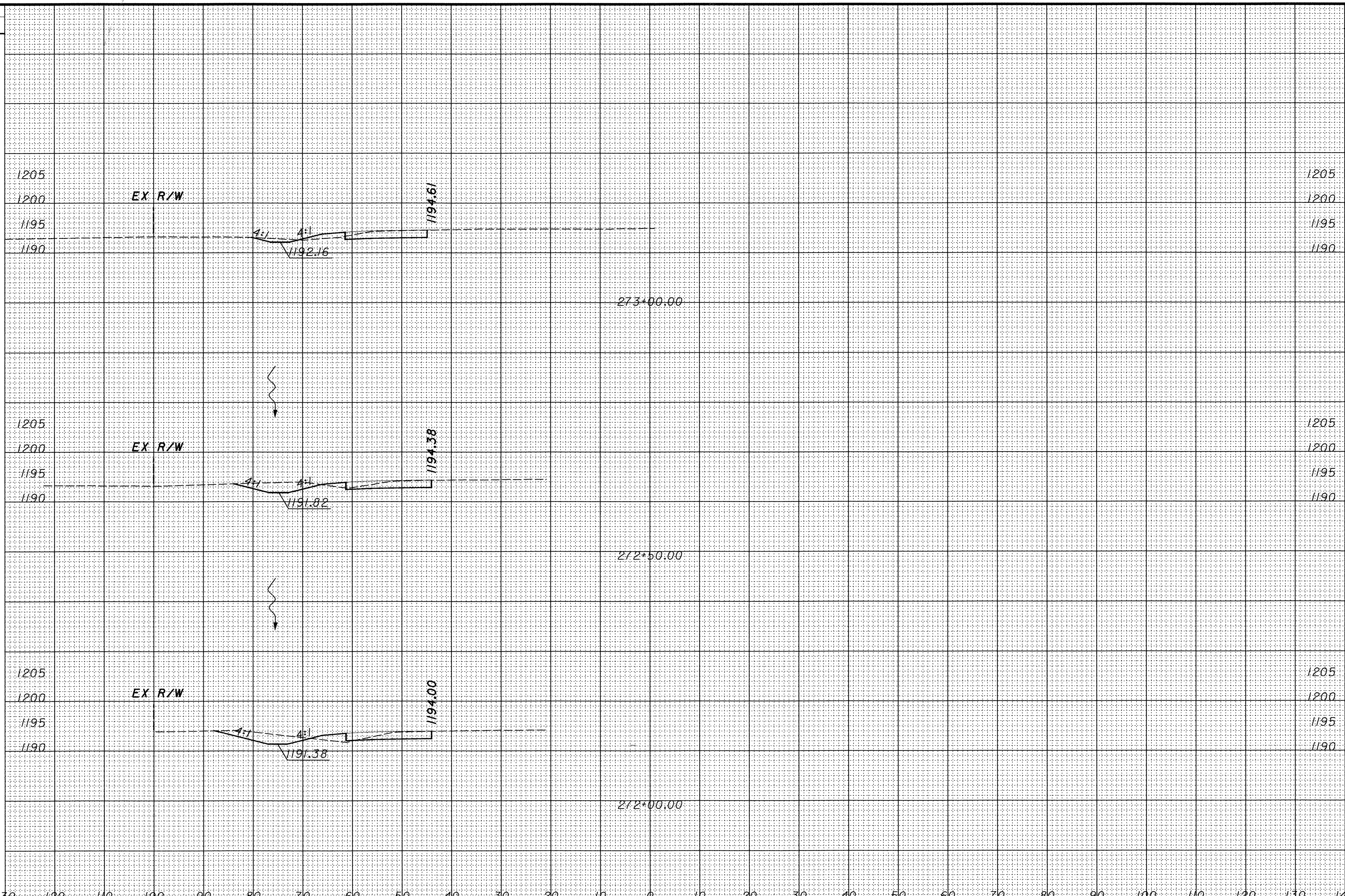
CHECKED

CROSS SECTIONS
STA. 270+50.00 TO 271+50.00

POR-224-0.00

P:\PR29820\cadd\19854GX1.dgn

SEEDING	
END WIDTH	SQ. YDS.



SHEET TOTAL

SHEET TOTAL

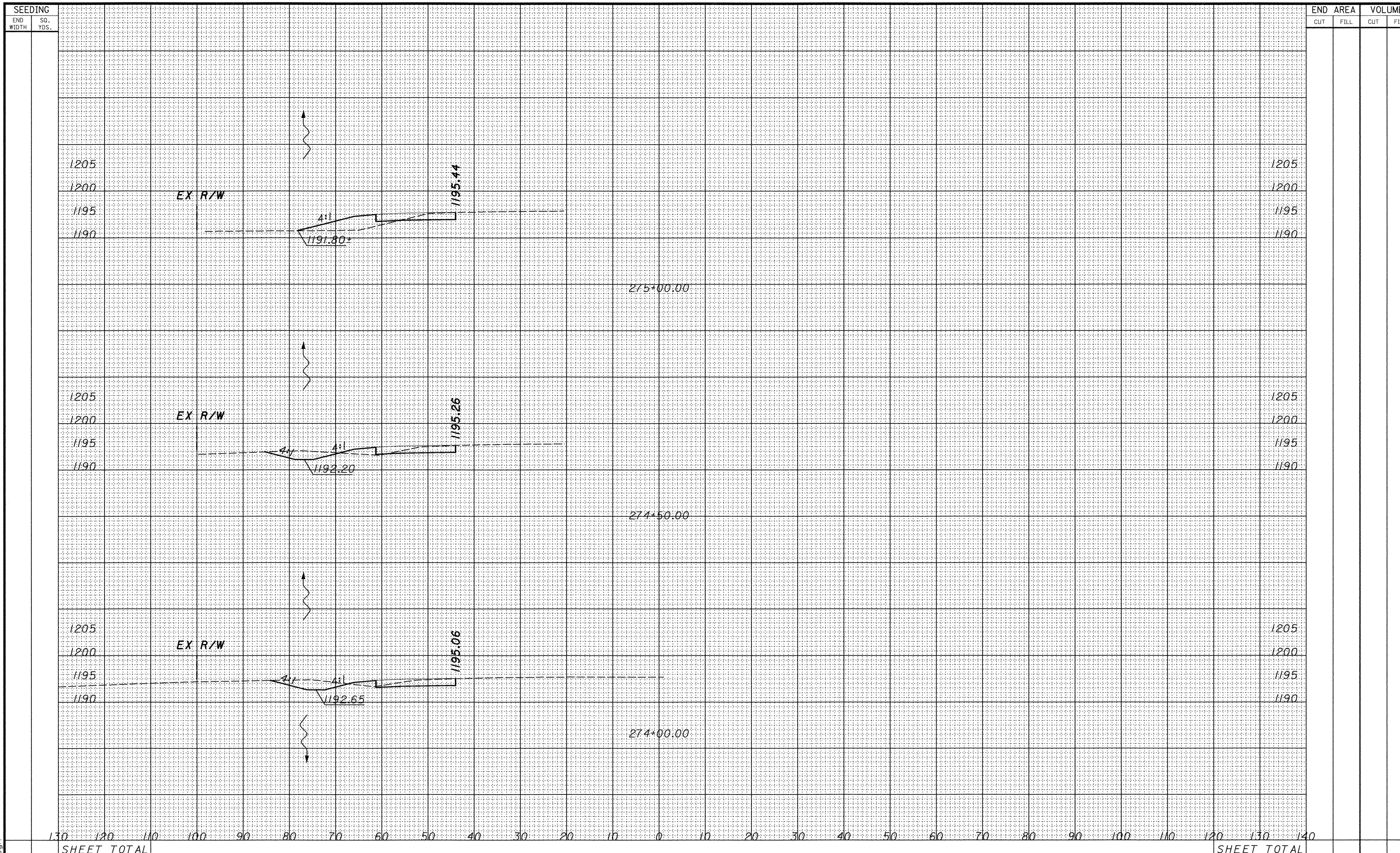
END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED

CHECKED

CROSS SECTIONS
STA. 272+00.00 TO 273+00.00

POR-224-0.00



CALCULATED

CHECKED

CROSS SECTIONS
STA. 274+00.00 TO 275+00.00

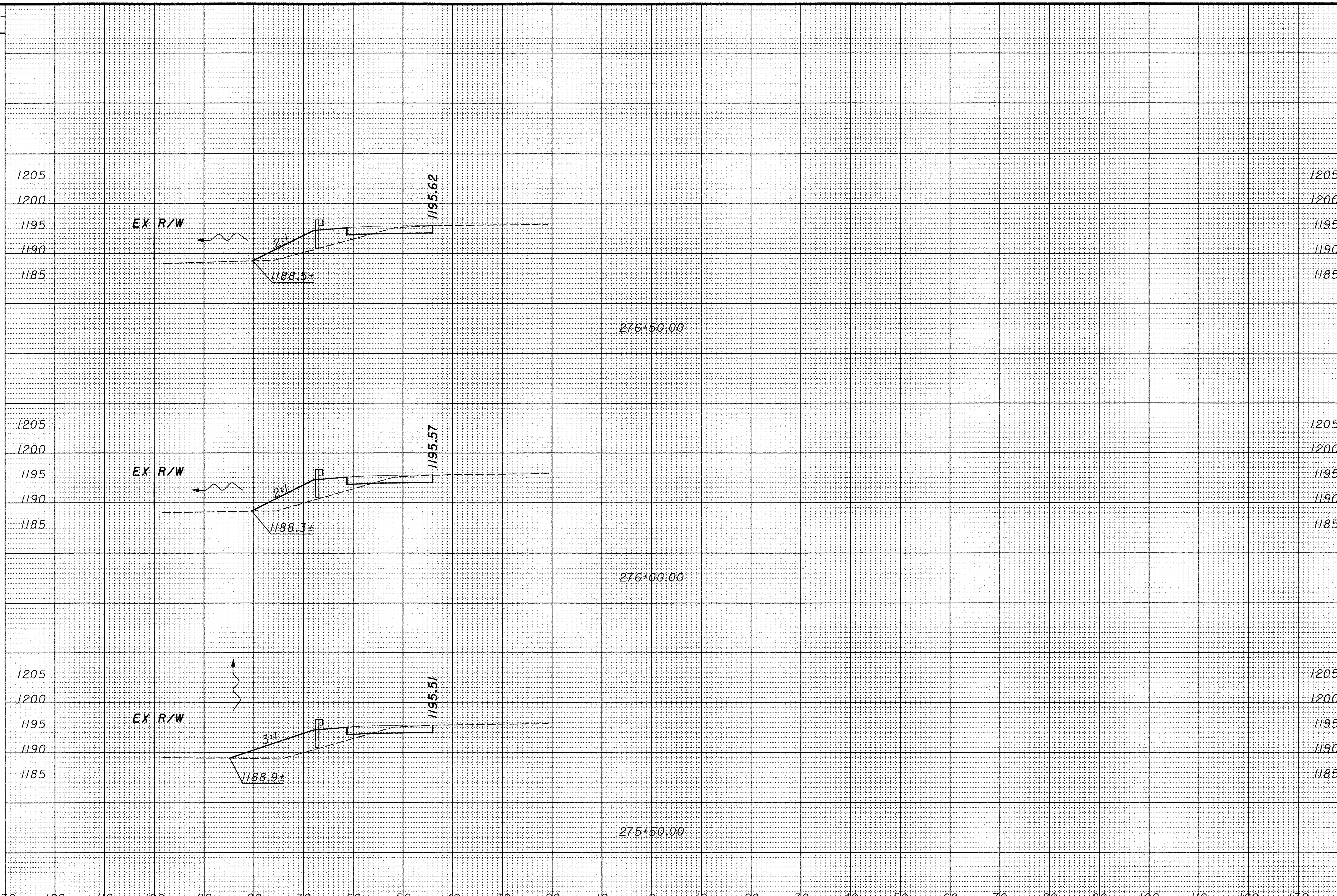
POR-224-0.00

P:\PR29820\cadd\19854GXI.dgn

SEEDING
END WIDTH | SQ. YDS.

END AREA: CUT | FILL
VOLUME: CUT | FILL

CALCULATED
CHECKED



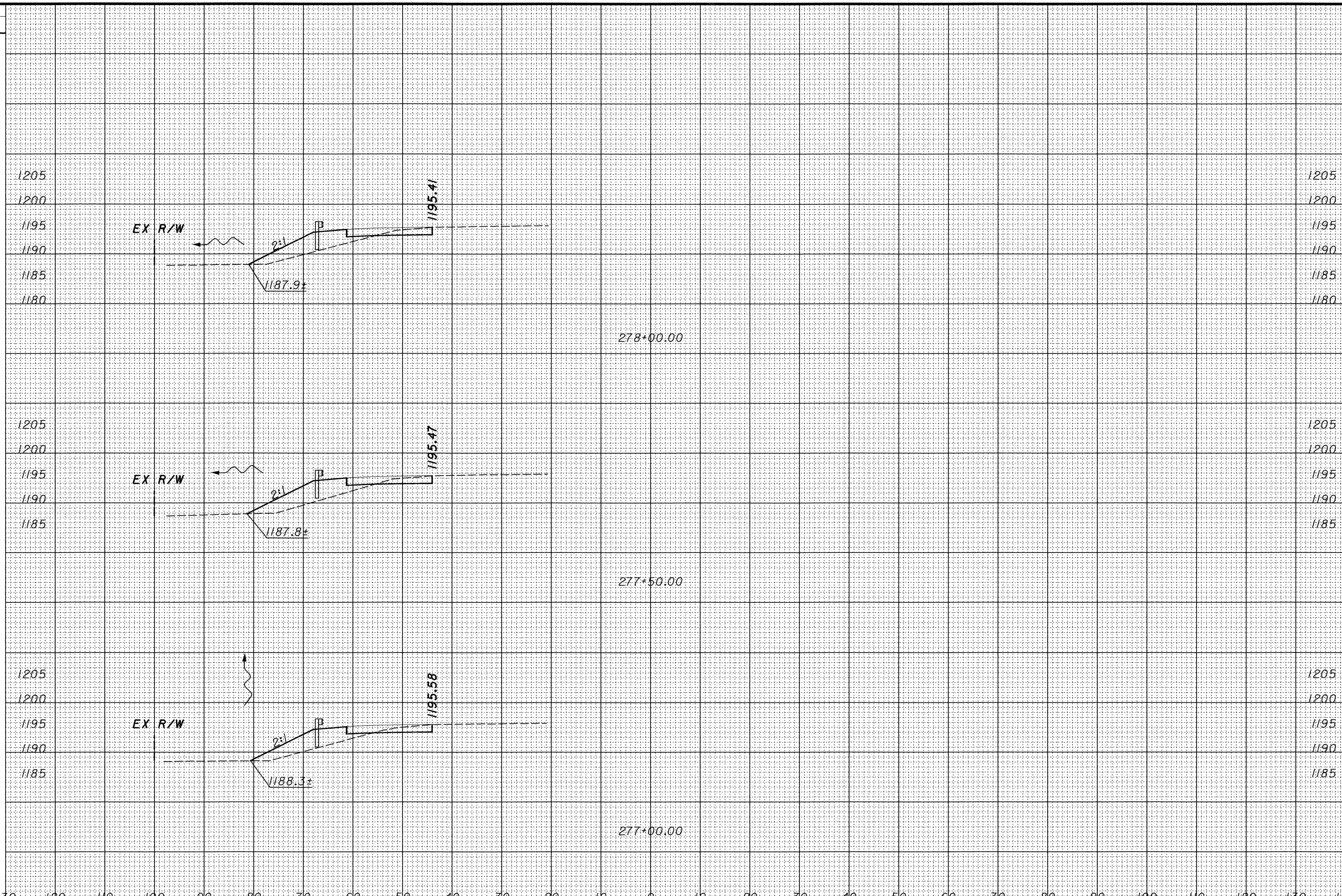
SHEET TOTAL

SHEET TOTAL

CROSS SECTIONS
STA. 275+50.00 TO 276+50.00

POR-224-0.00

SEEDING	
END WIDTH	SQ. YDS.
SHEET TOTAL	



END AREA		VOLUME	
CUT	FILL	CUT	FILL
SHEET TOTAL			

CALCULATED

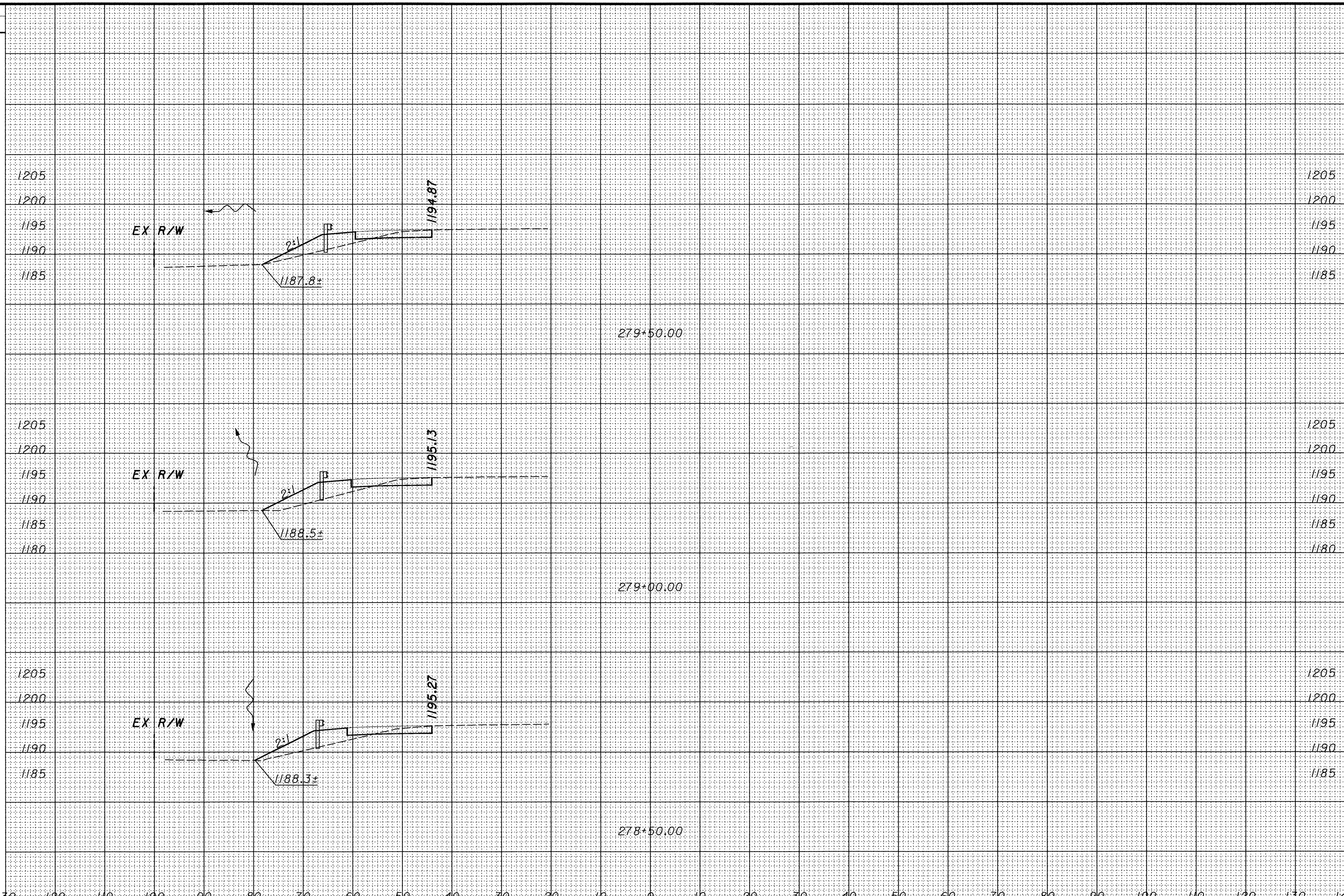
CHECKED

CROSS SECTIONS
STA. 277+00.00 TO 278+00.00

POR-224-0.00

P:\PR29820\cadd\19854GX1.dgn

SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL		



SHEET TOTAL

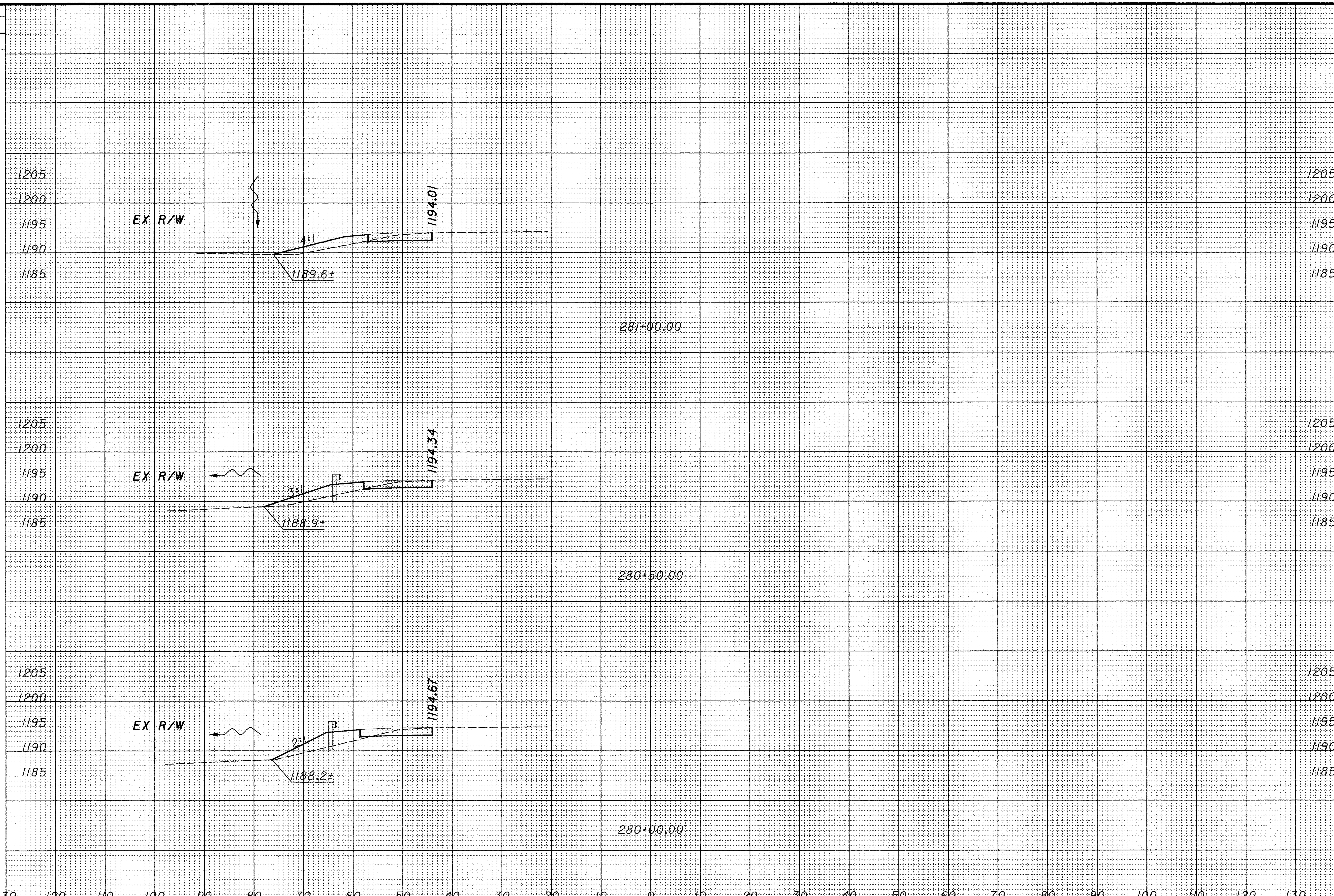
SHEET TOTAL

CROSS SECTIONS
STA. 278+50.00 TO 279+50.00

POR-224-0.00

P:\PR29820\cadd\19854GX1.dgn

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL



SHEET TOTAL

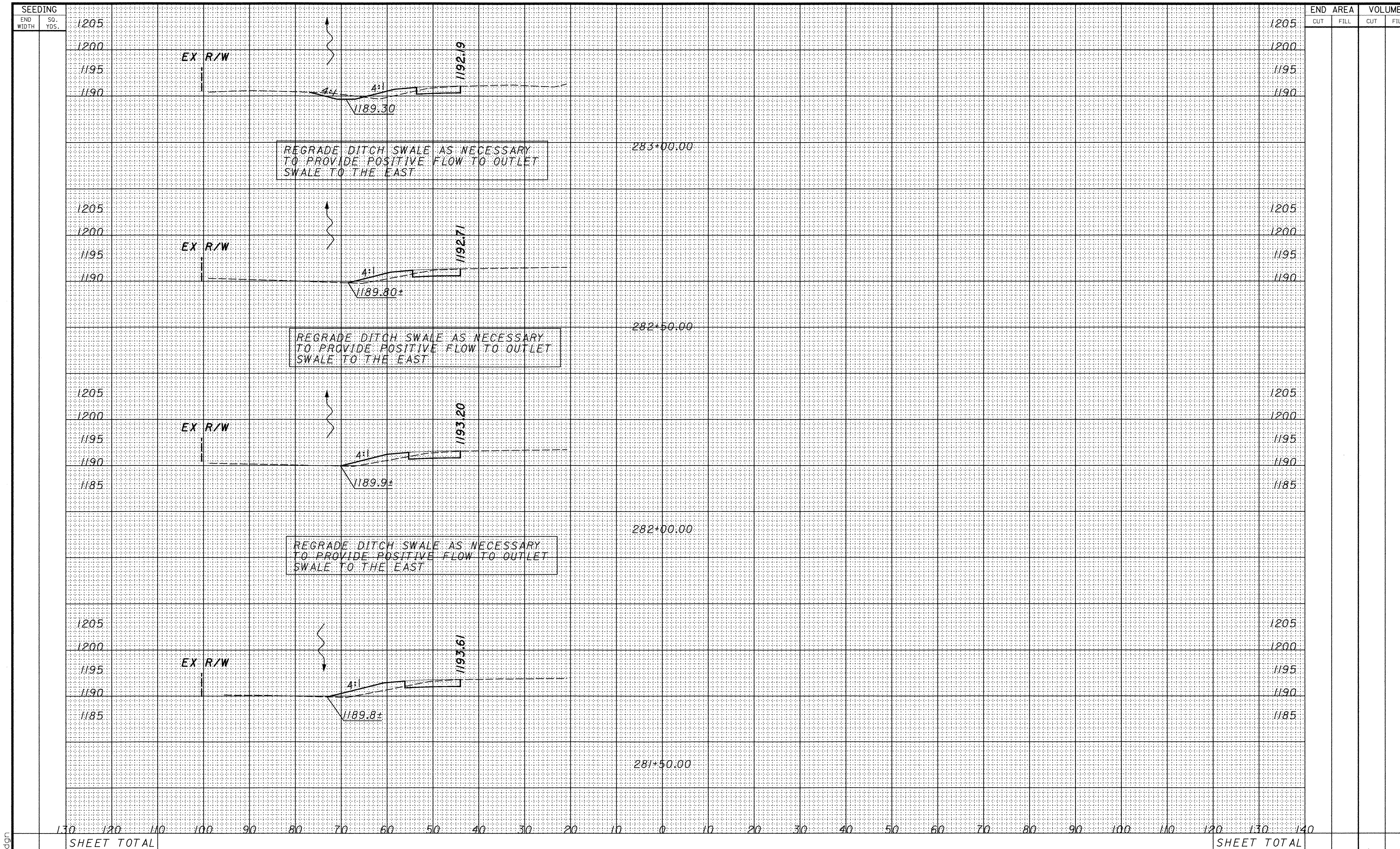
SHEET TOTAL

CALCULATED

CHECKED

CROSS SECTIONS
STA. 280+00.00 TO 281+00.00

POR-224-0.00



CALCULATED

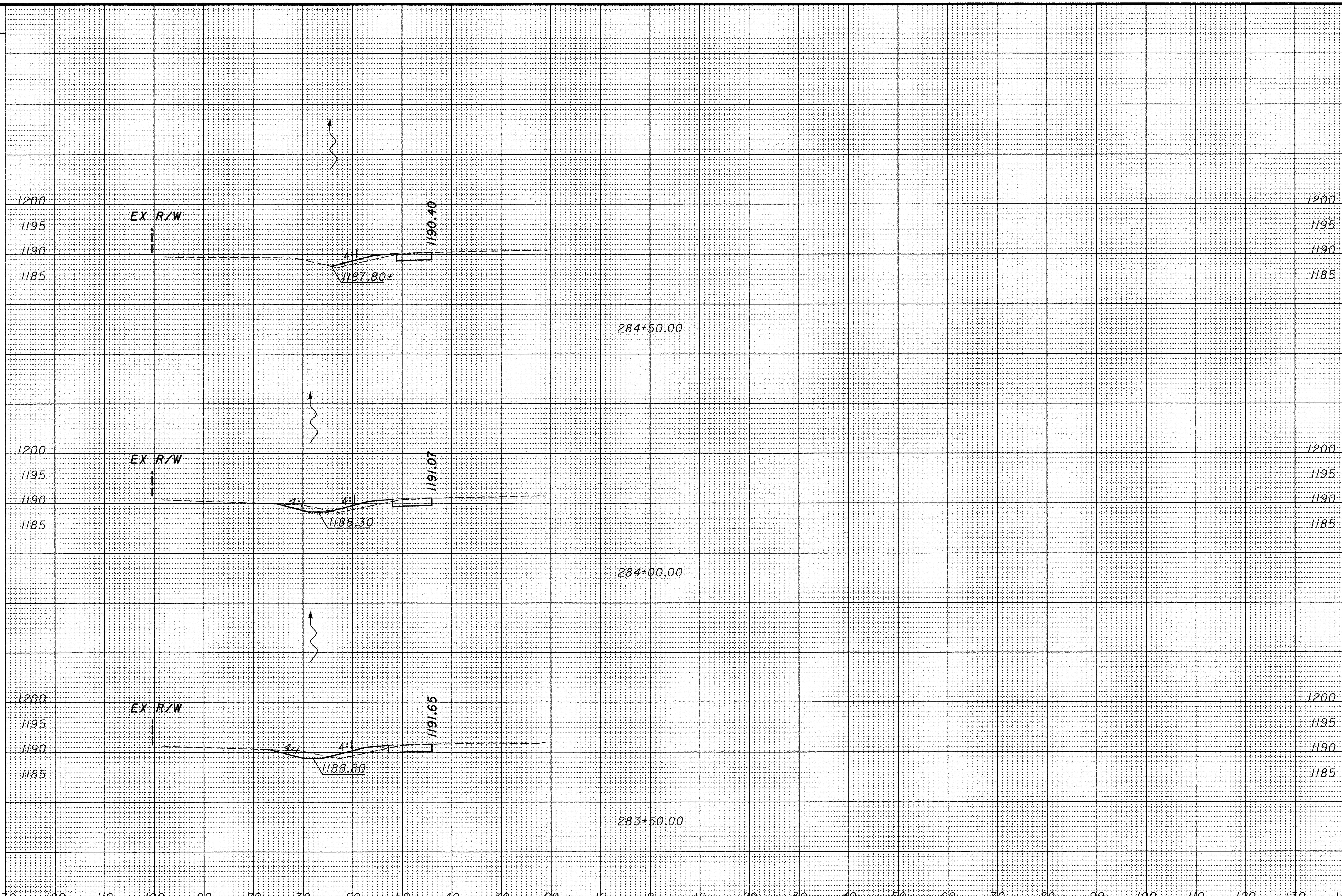
CHECKED

CROSS SECTIONS
STA. 281+50.00 TO 283+00.00

POR-224-0.00

P:\PR29820\cadd\19854GX1.dgn

SEEDING	
END WIDTH	SQ. YDS.



SHEET TOTAL

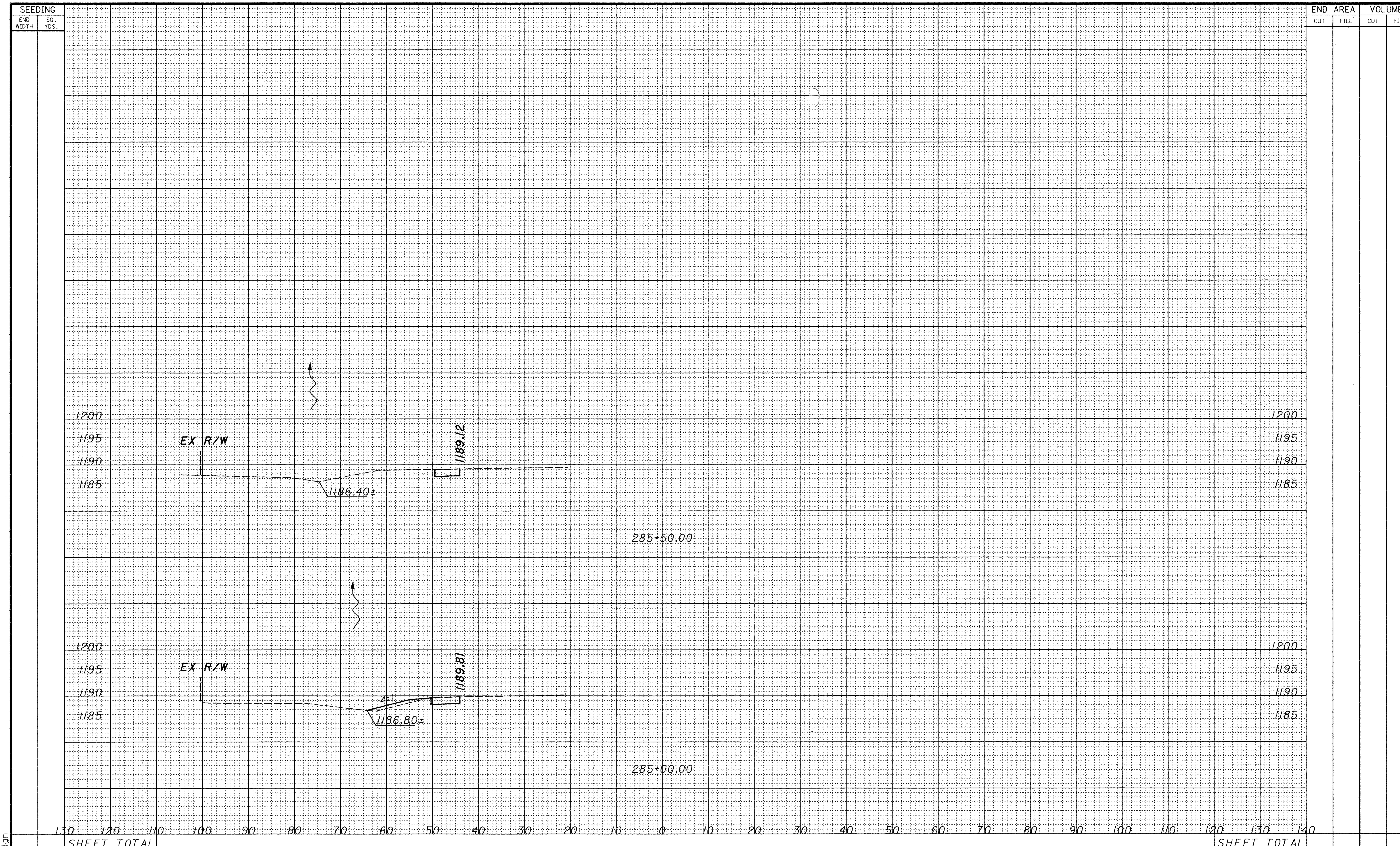
END AREA		VOLUME		CALCULATED	CHECKED
CUT	FILL	CUT	FILL		

SHEET TOTAL

CROSS SECTIONS
STA. 283+50.00 TO 284+50.00

POR-224-0.00

P:\PR29820\cadd\19854GX1.dgn



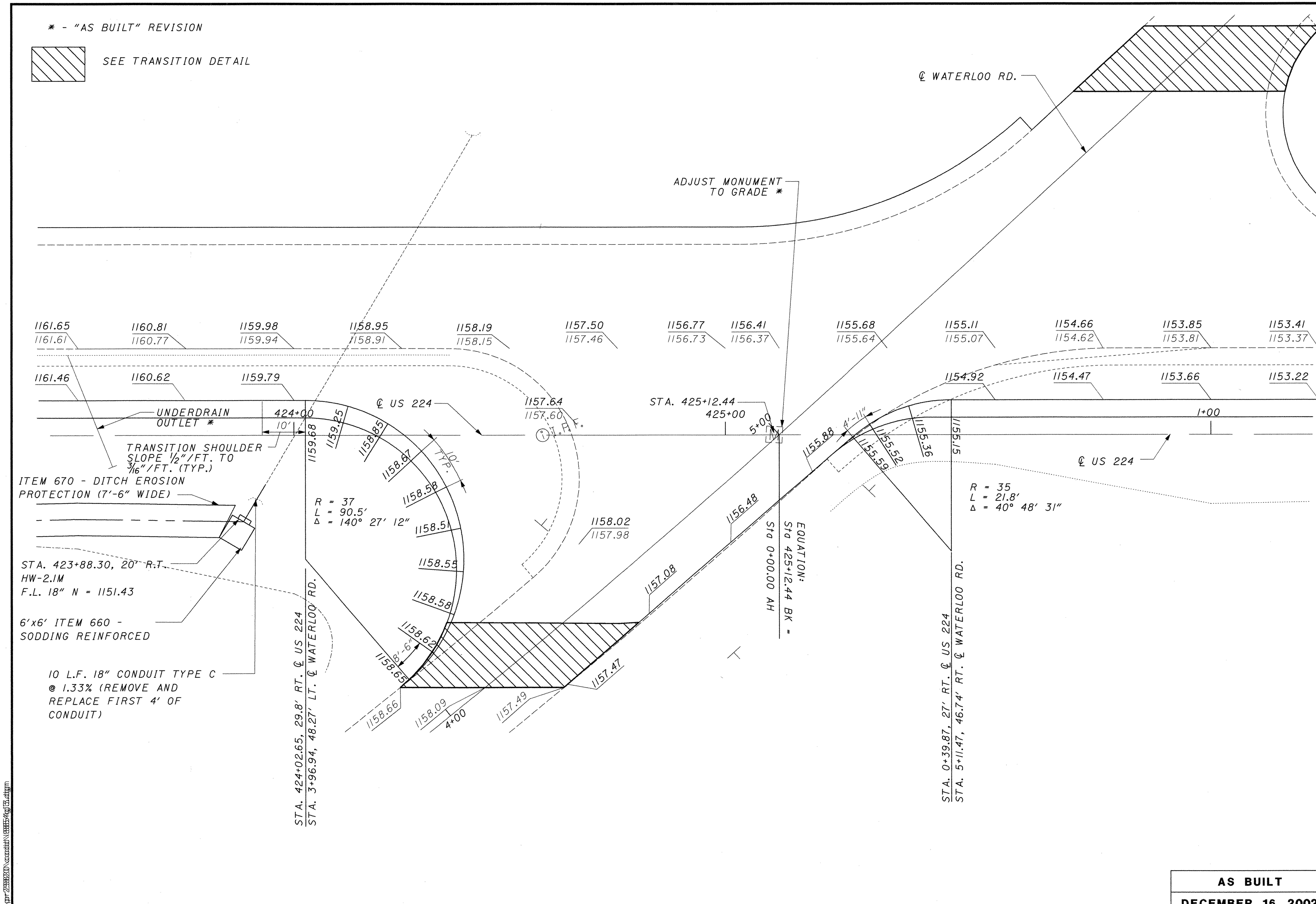
CALCULATED

CHECKED

CROSS SECTIONS
STA. 285+00.00 TO 285+50.00

POR-224-0.00

P:\PR29820\cadd\19854GX1.dgn



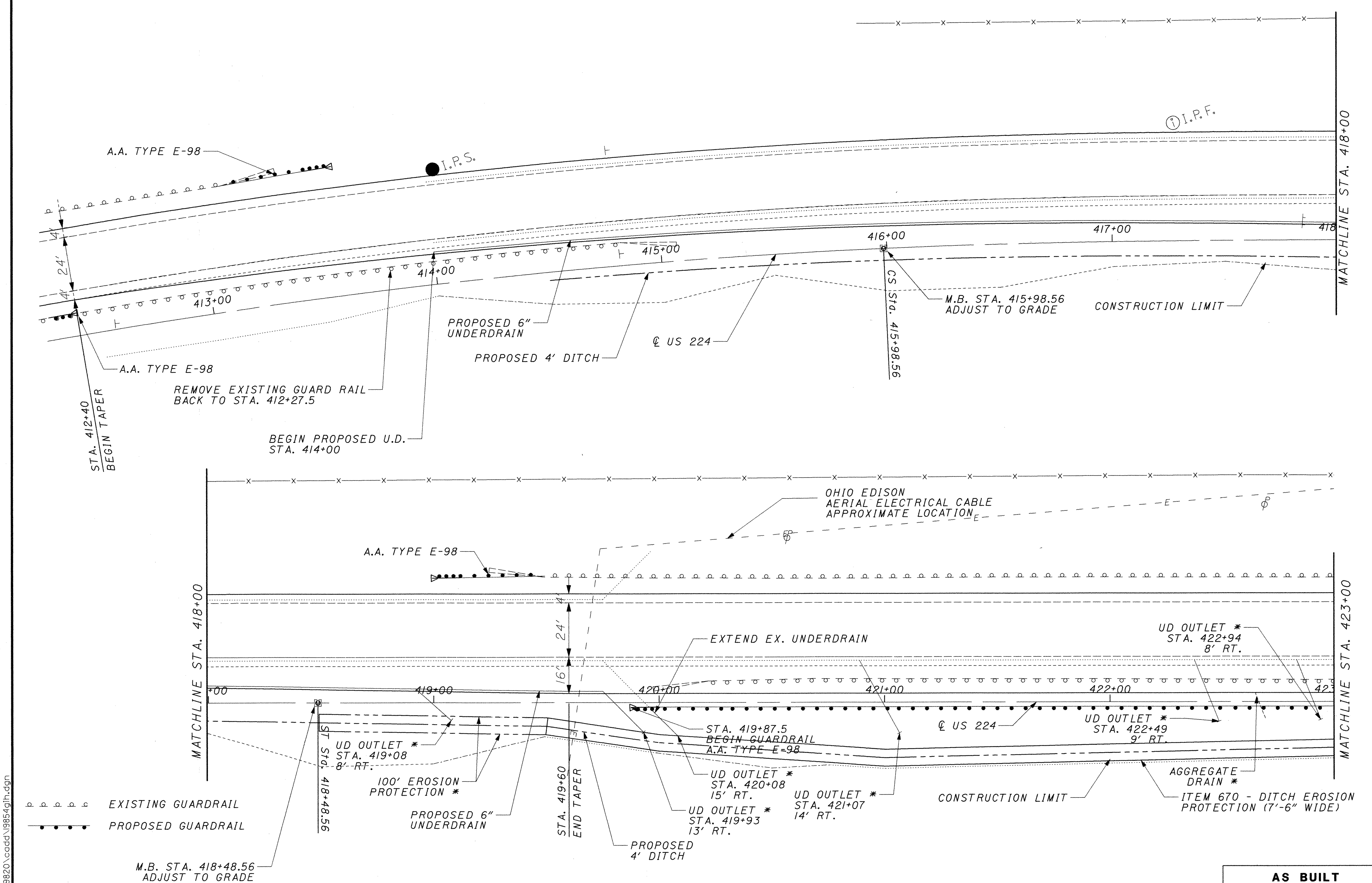
WATERLOO RD. INTERSECTION DETAIL

POR-224-0.00

AS BUILT

DECEMBER 16, 2002

* - "AS BUILT" REVISION



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0 10 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
CHECKED

USR 224 PAVEMENT WIDENING AT WATERLOO RD.

POR-224-0.00

AS BUILT

DECEMBER 16, 2002

* - "AS BUILT" REVISION

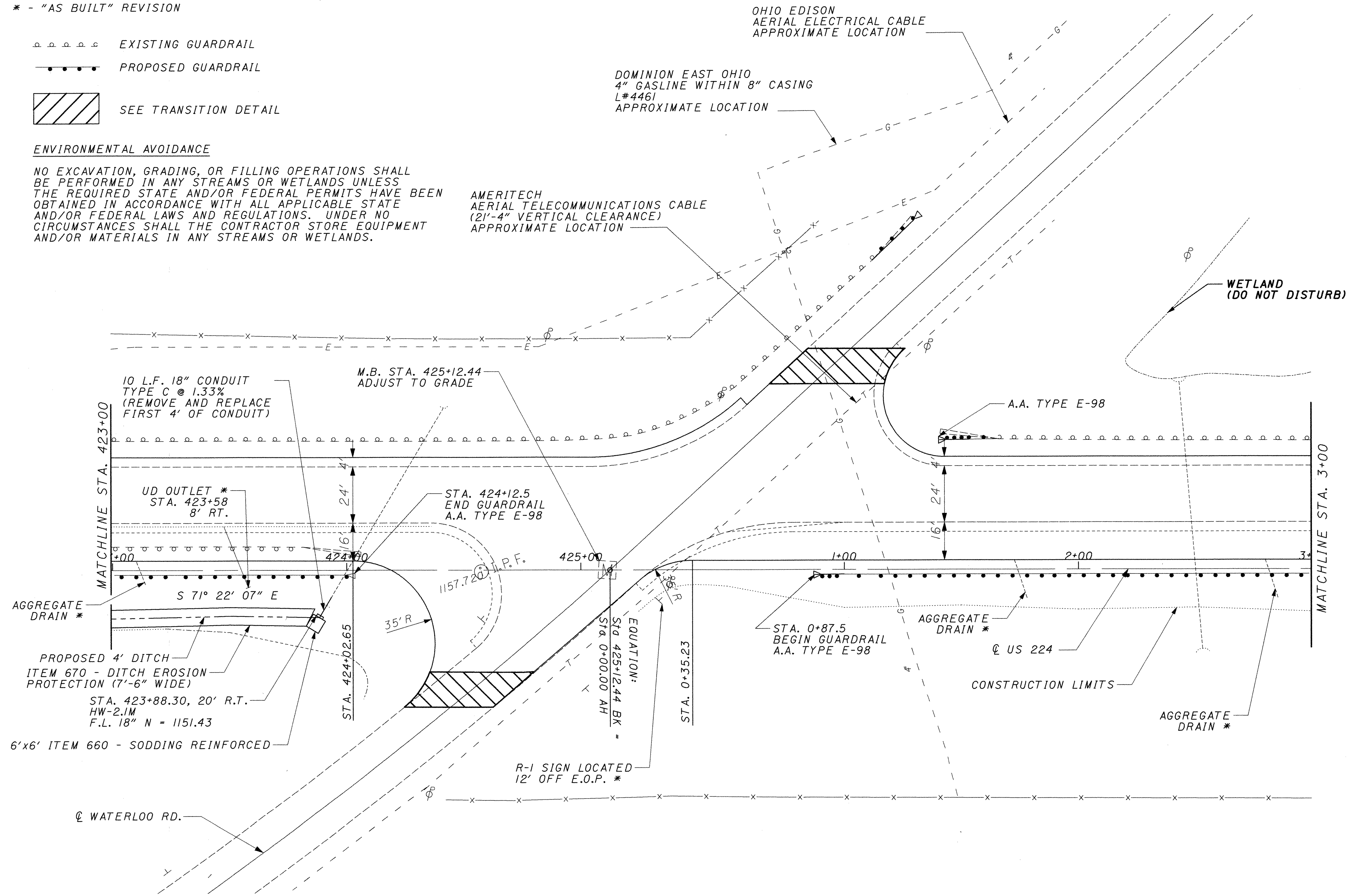
EXISTING GUARDRAIL

PROPOSED GUARDRAIL

SEE TRANSITION DETAIL

ENVIRONMENTAL AVOIDANCE

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN ANY STREAMS OR WETLANDS UNLESS THE REQUIRED STATE AND/OR FEDERAL PERMITS HAVE BEEN OBTAINED IN ACCORDANCE WITH ALL APPLICABLE STATE AND/OR FEDERAL LAWS AND REGULATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY STREAMS OR WETLANDS.



p:\pr29820\cadd\19854gig.dgn

0 10 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED
CHECKED

USR 224 PAVEMENT WIDENING AT WATERLOO RD.

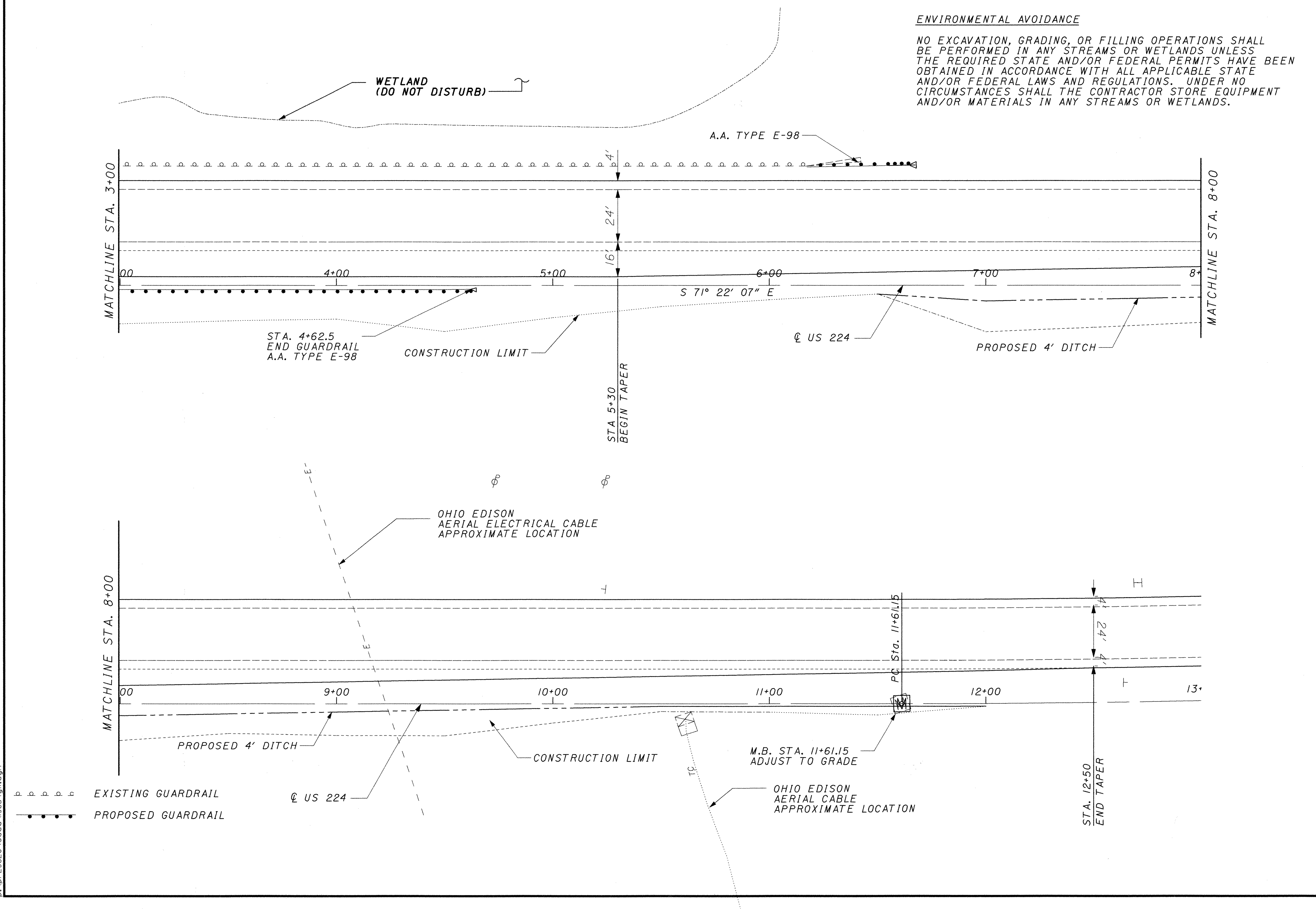
AS BUILT

DECEMBER 16, 2002

POR-224-0.00

ENVIRONMENTAL AVOIDANCE

NO EXCAVATION, GRADING, OR FILLING OPERATIONS SHALL BE PERFORMED IN ANY STREAMS OR WETLANDS UNLESS THE REQUIRED STATE AND/OR FEDERAL PERMITS HAVE BEEN OBTAINED IN ACCORDANCE WITH ALL APPLICABLE STATE AND/OR FEDERAL LAWS AND REGULATIONS. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR STORE EQUIPMENT AND/OR MATERIALS IN ANY STREAMS OR WETLANDS.



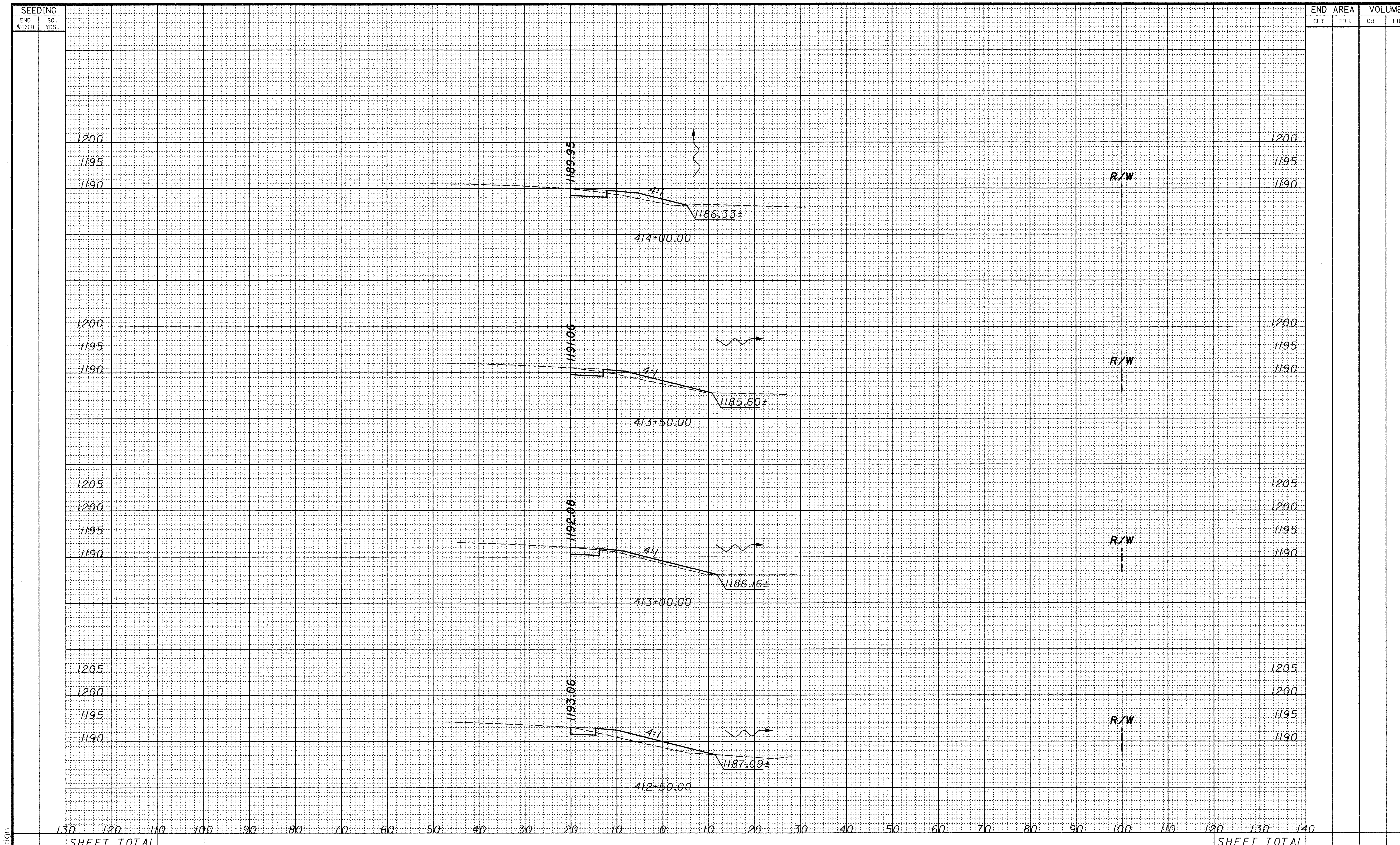
HORIZONTAL SCALE IN FEET: 0 10 20 40

CALCULATED | CHECKED

USR 224 PAVEMENT WIDENING AT WATERLOO RD.

POR-224-0.00

p:\pr29820\cadd\19854gll.dgn



CALCULATED
CHECKED

CROSS SECTIONS
STA 412+50.00 TO 414+00.00

POR-224-0.00

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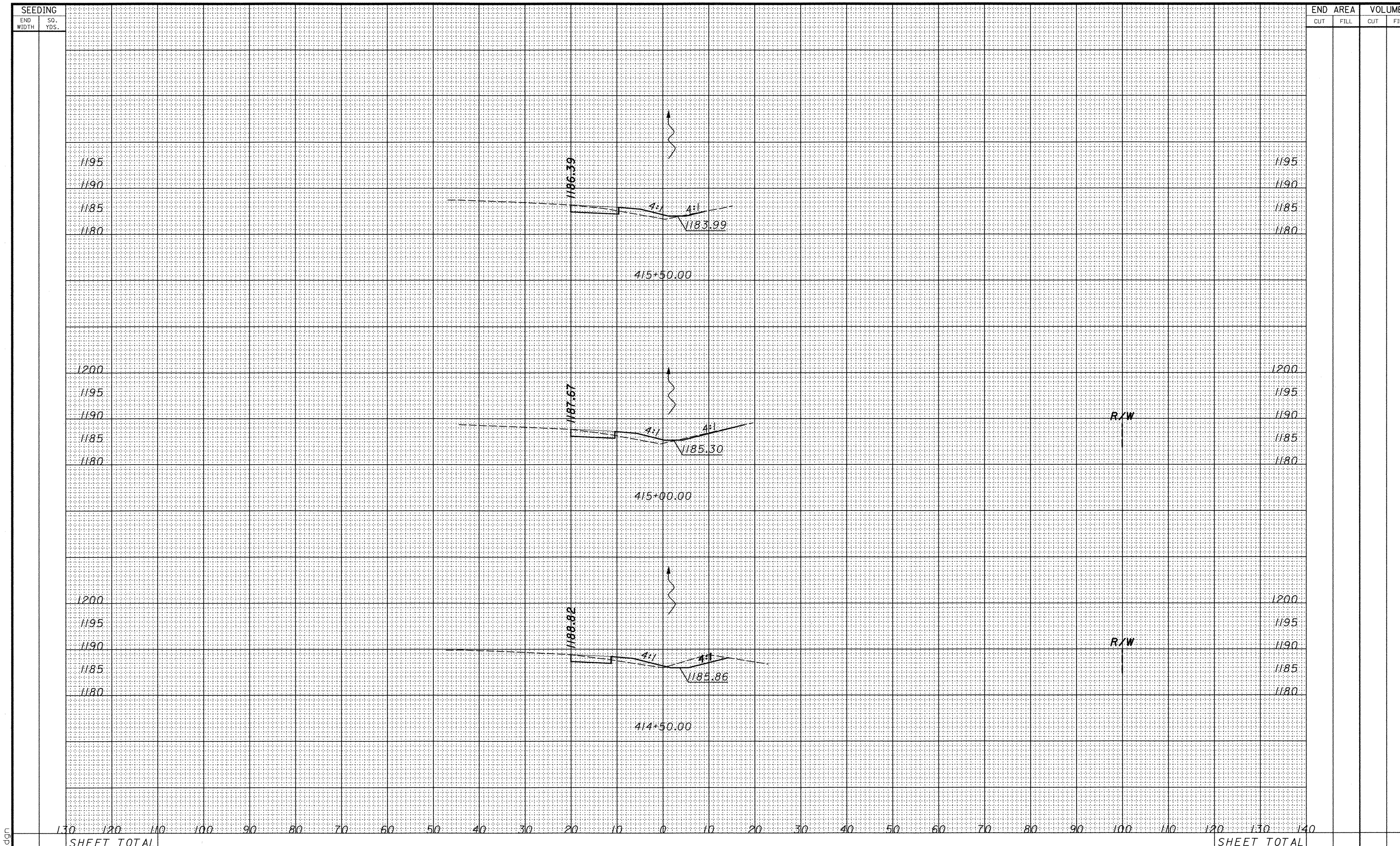


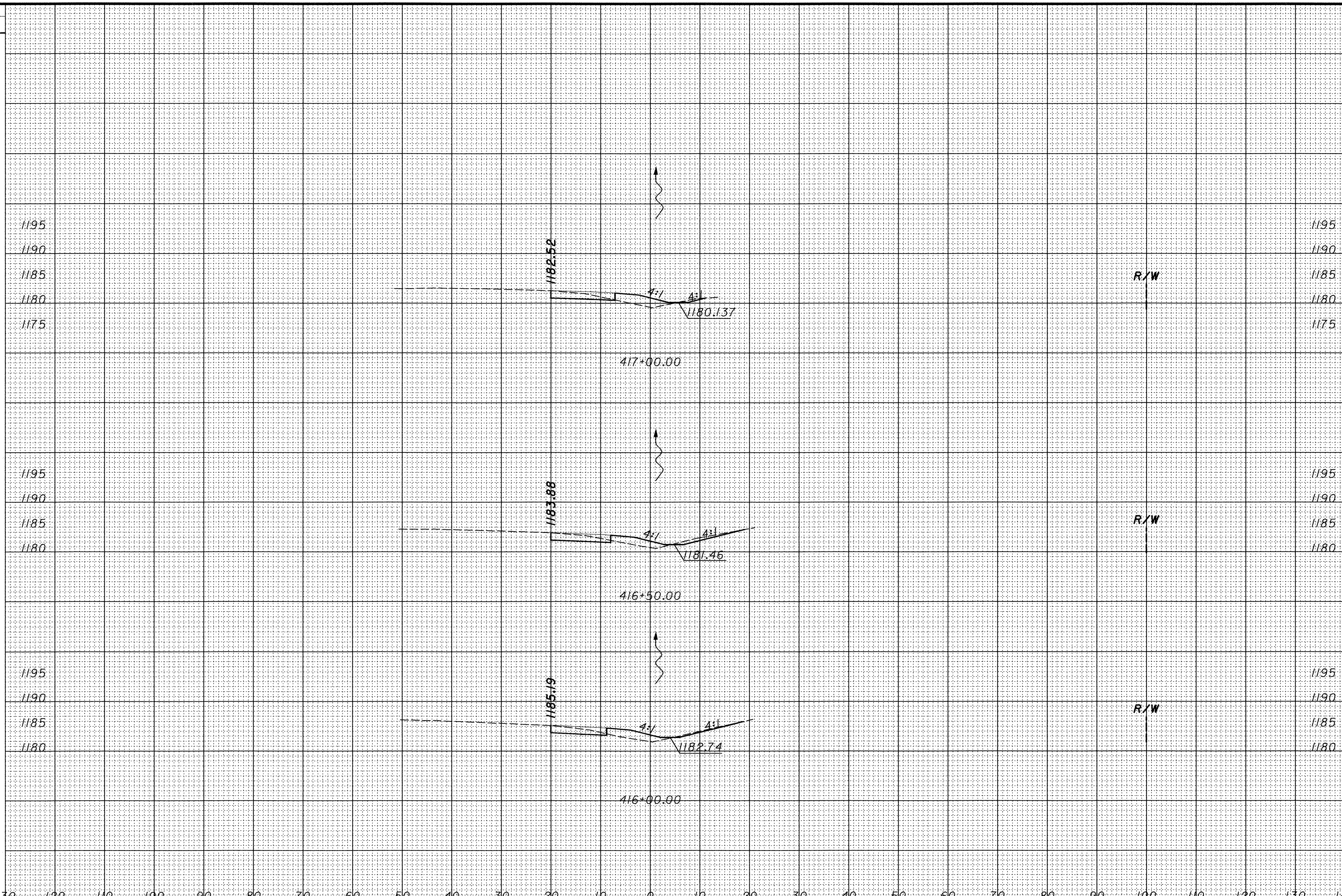
CALCULATED

CHECKED

CROSS SECTIONS
STA. 414+50.00 TO 415+50.00

POR-224-0.00

SEEDING	
END WIDTH	SQ. YDS.
SHEET TOTAL	



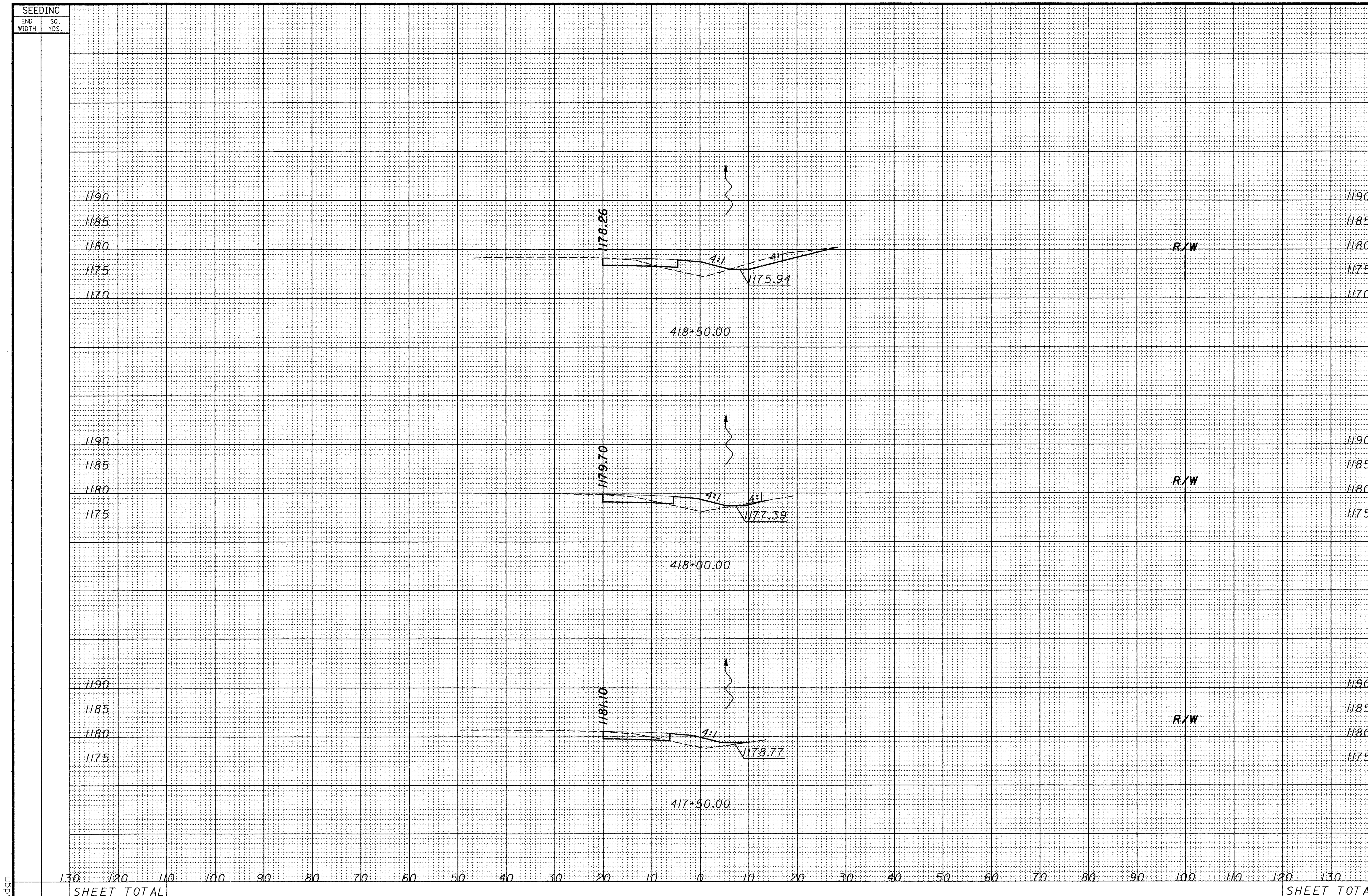
END AREA		VOLUME	
CUT	FILL	CUT	FILL
SHEET TOTAL			

CALCULATED

CHECKED

CROSS SECTIONS
STA. 416+00.00 TO 417+00.00

POR-224-0.00



CALCULATED

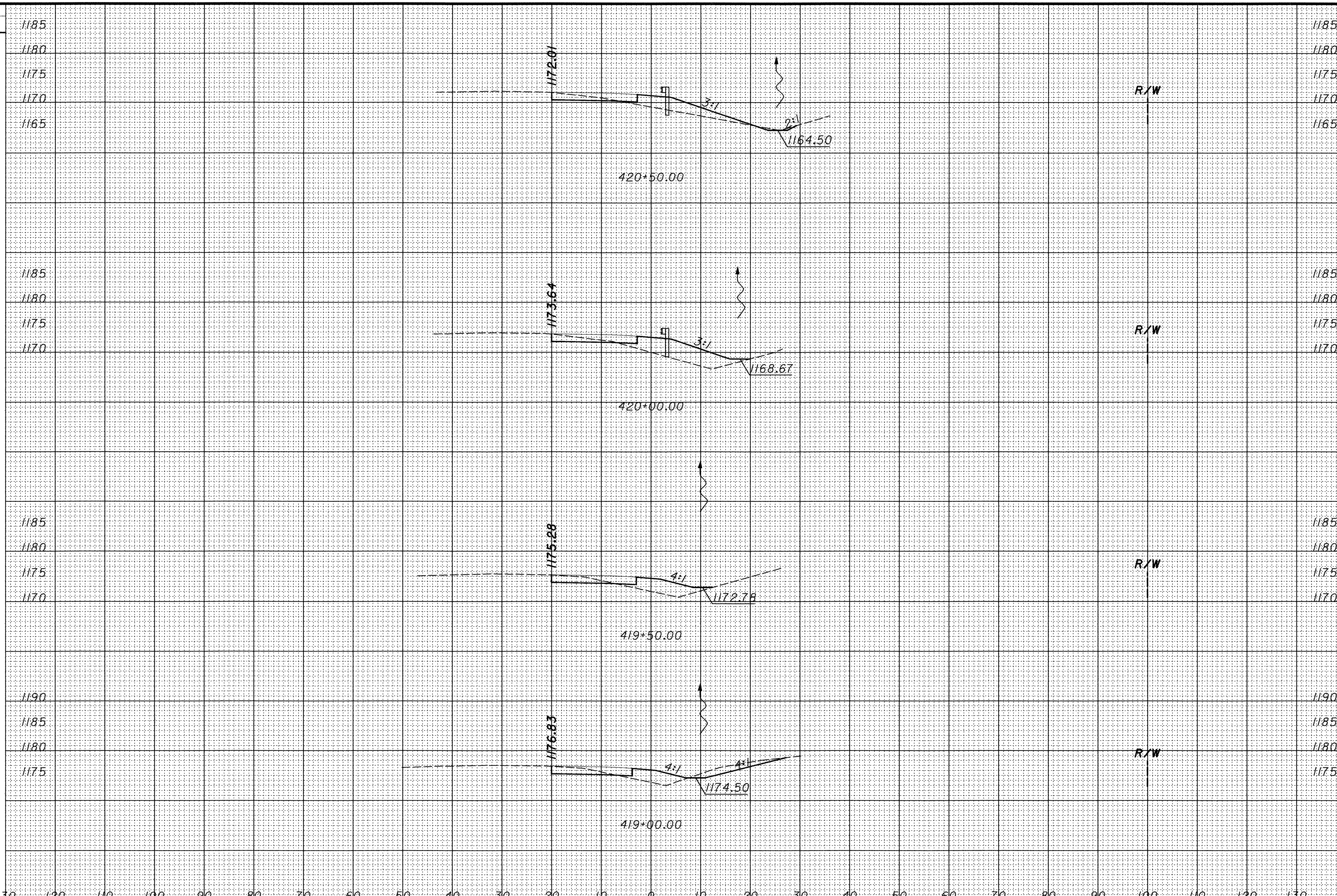
CHECKED

CROSS SECTIONS
STA. 417+50.00 TO 418+50.00

POR-224-0.00

p:\pr29820\cadd\19854gx2.dgn

SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL		



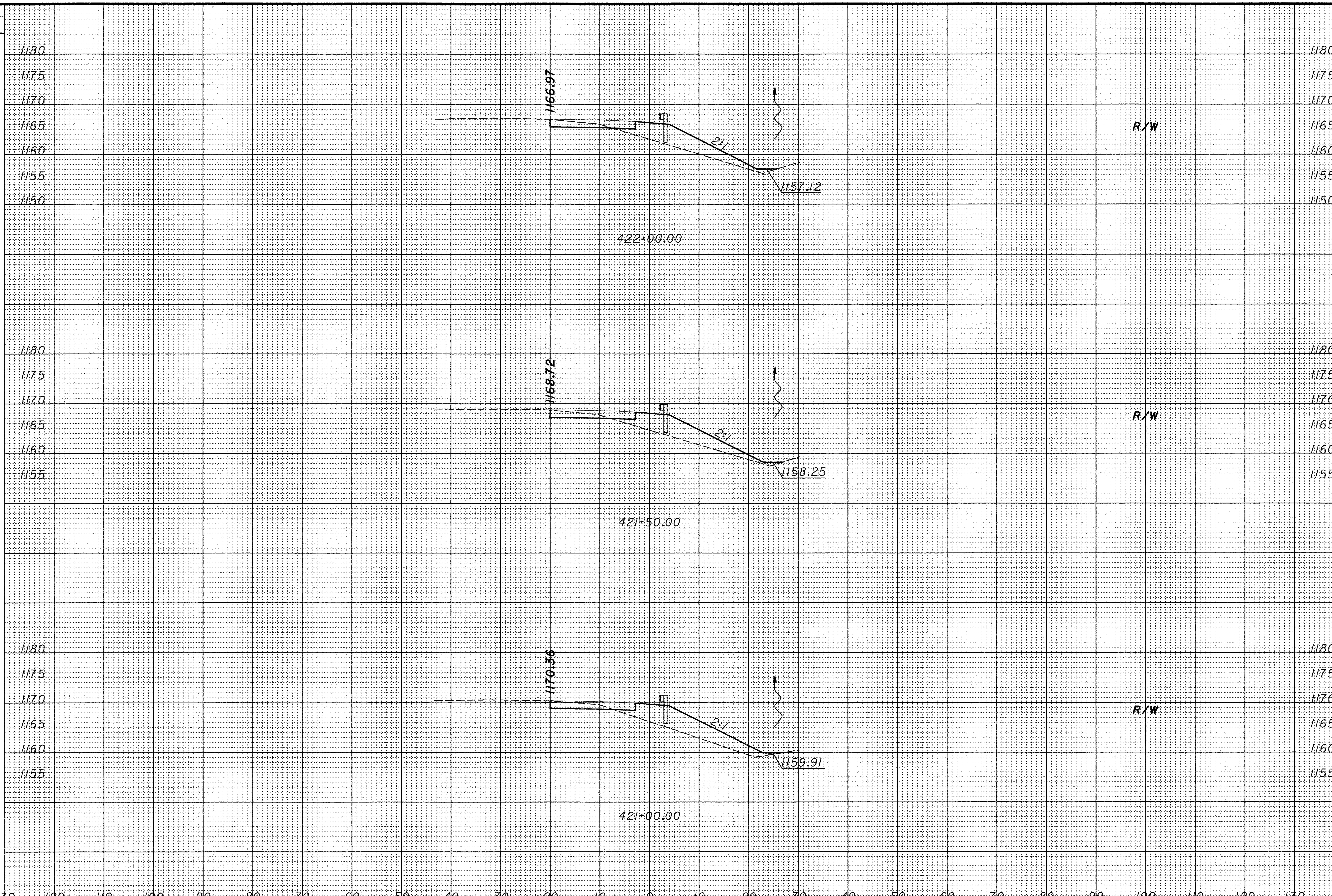
SHEET TOTAL

SHEET TOTAL

CROSS SECTIONS
STA. 419+00.00 TO 420+50.00

POR-224-0.00

SEEDING		END AREA		VOLUME	
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL



SHEET TOTAL

SHEET TOTAL

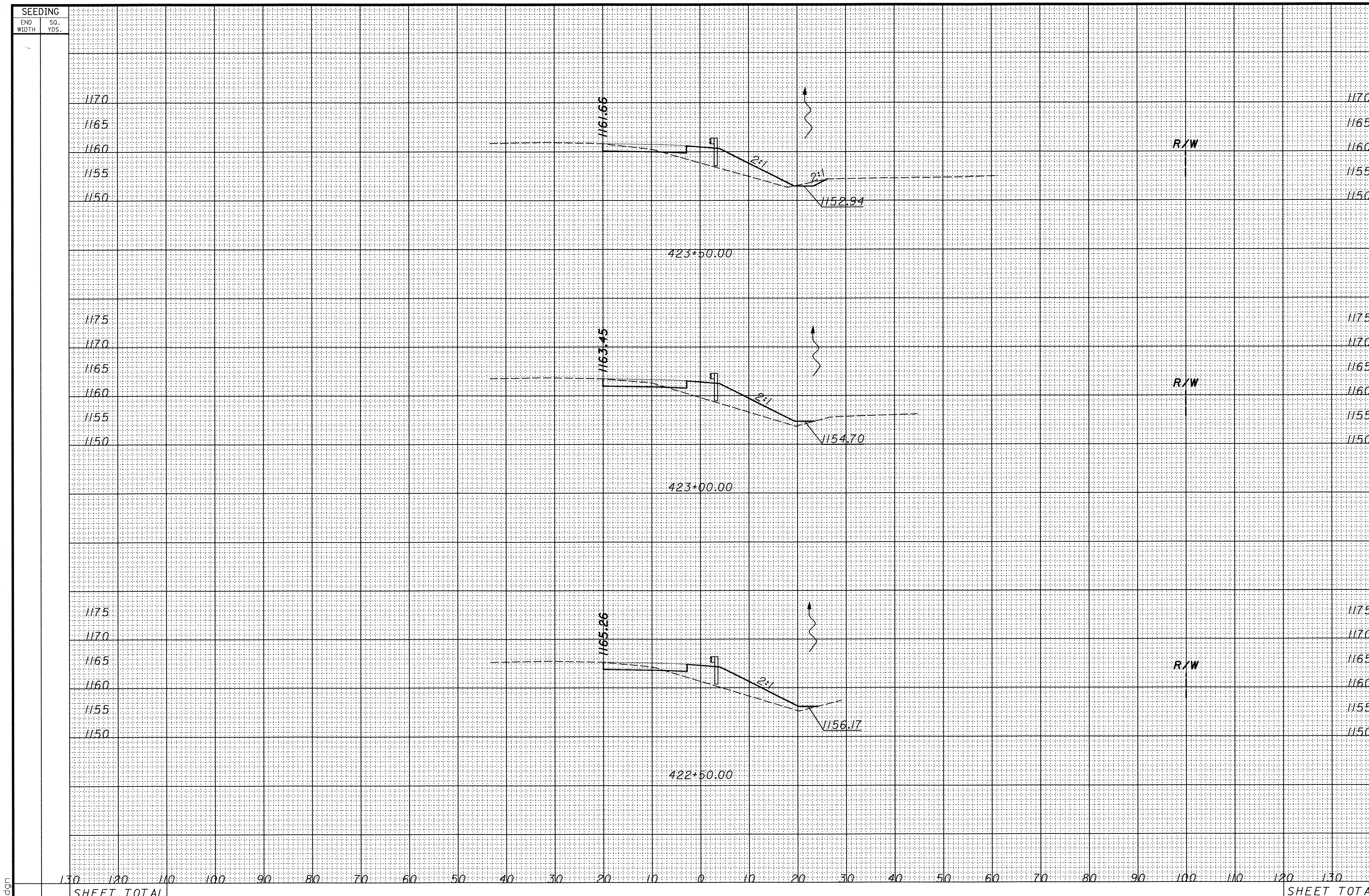
CALCULATED

CHECKED

CROSS SECTIONS
STA. 421+00.00 TO 422+00.00

POR-224-0.00

p:\pr29820\cadd\19854gx2.dgn



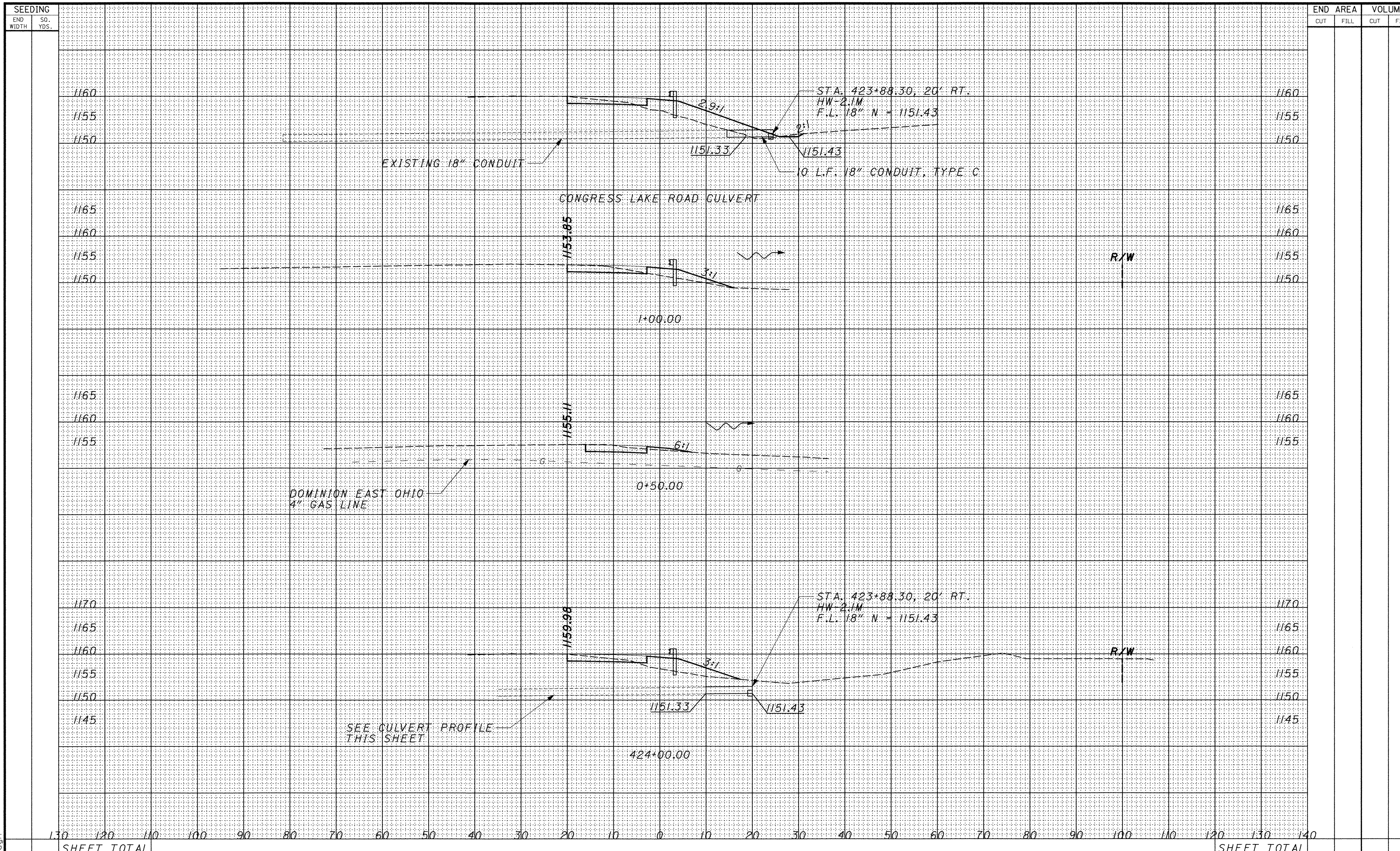
CALCULATED

CHECKED

CROSS SECTIONS
STA. 422+50.00 TO 423+50.00

POR-224-0.00

p:\pr29820\cadd\19854gx2.dgn



CALCULATED

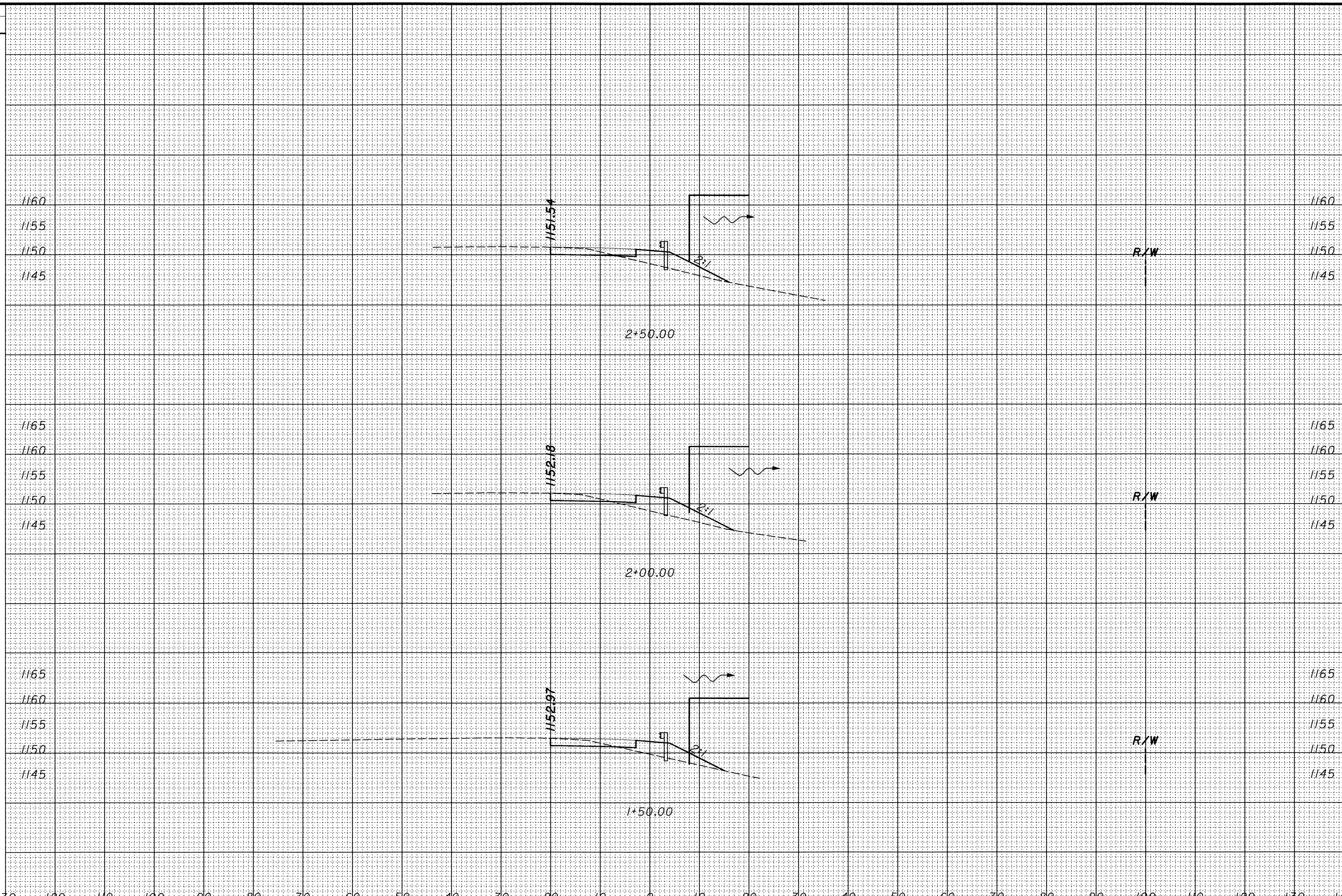
CHECKED

CROSS SECTIONS
STA. 424+00.00 TO 1+00.00

POR-224-0.00

p:\pr29820\cadd\19854gx2.dgn

SEEDING	
END WIDTH	SQ. YDS.



SHEET TOTAL

END AREA		VOLUME	
CUT	FILL	CUT	FILL

SHEET TOTAL

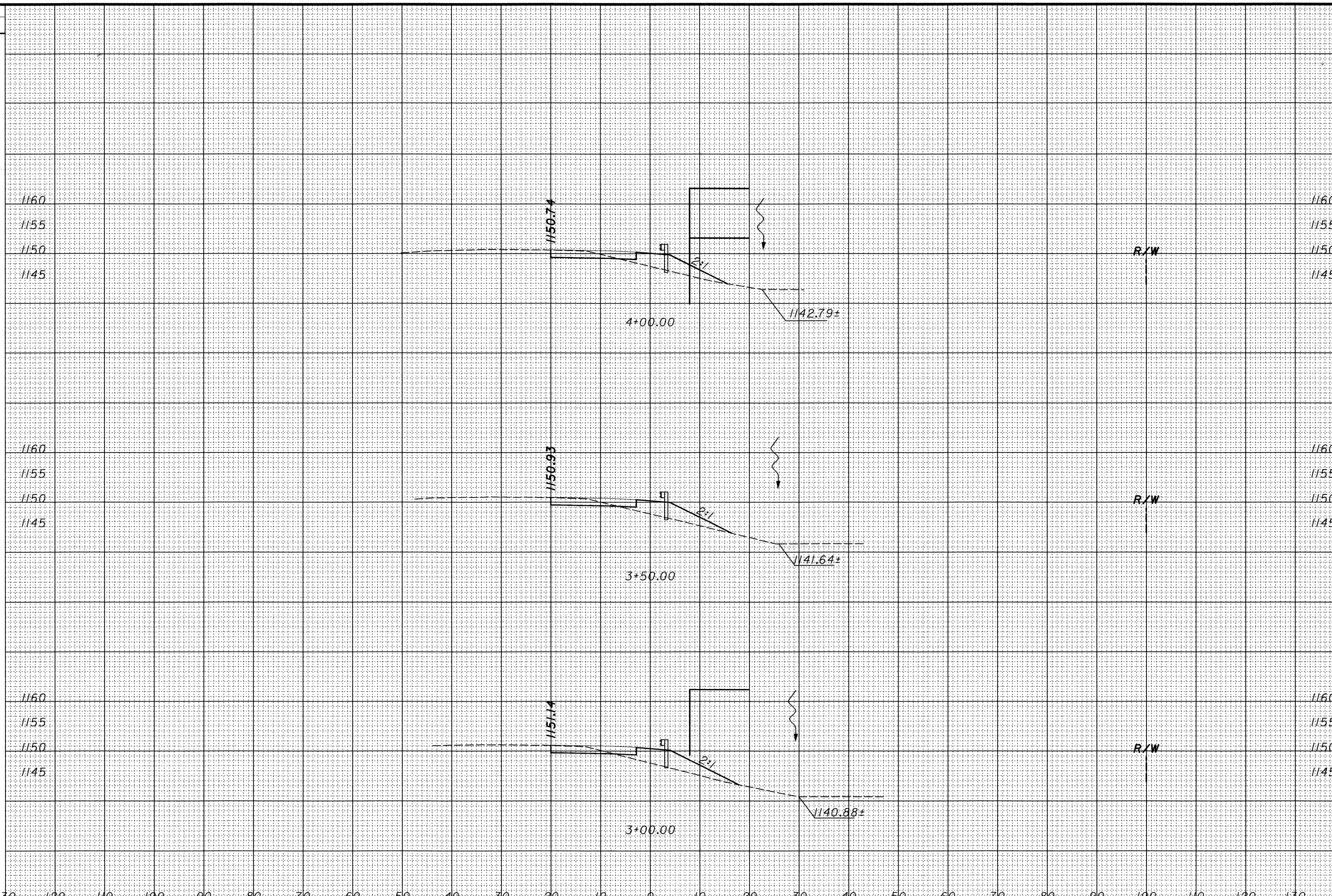
CALCULATED
CHECKED

CROSS SECTIONS
STA. 1+50.00 TO 2+50.00

POR-224-0.00

p:\pr29820\cadd\19854gx2.dgn

SEEDING	
END WIDTH	SQ. YDS.



SHEET TOTAL

SHEET TOTAL

END AREA		VOLUME	
CUT	FILL	CUT	FILL

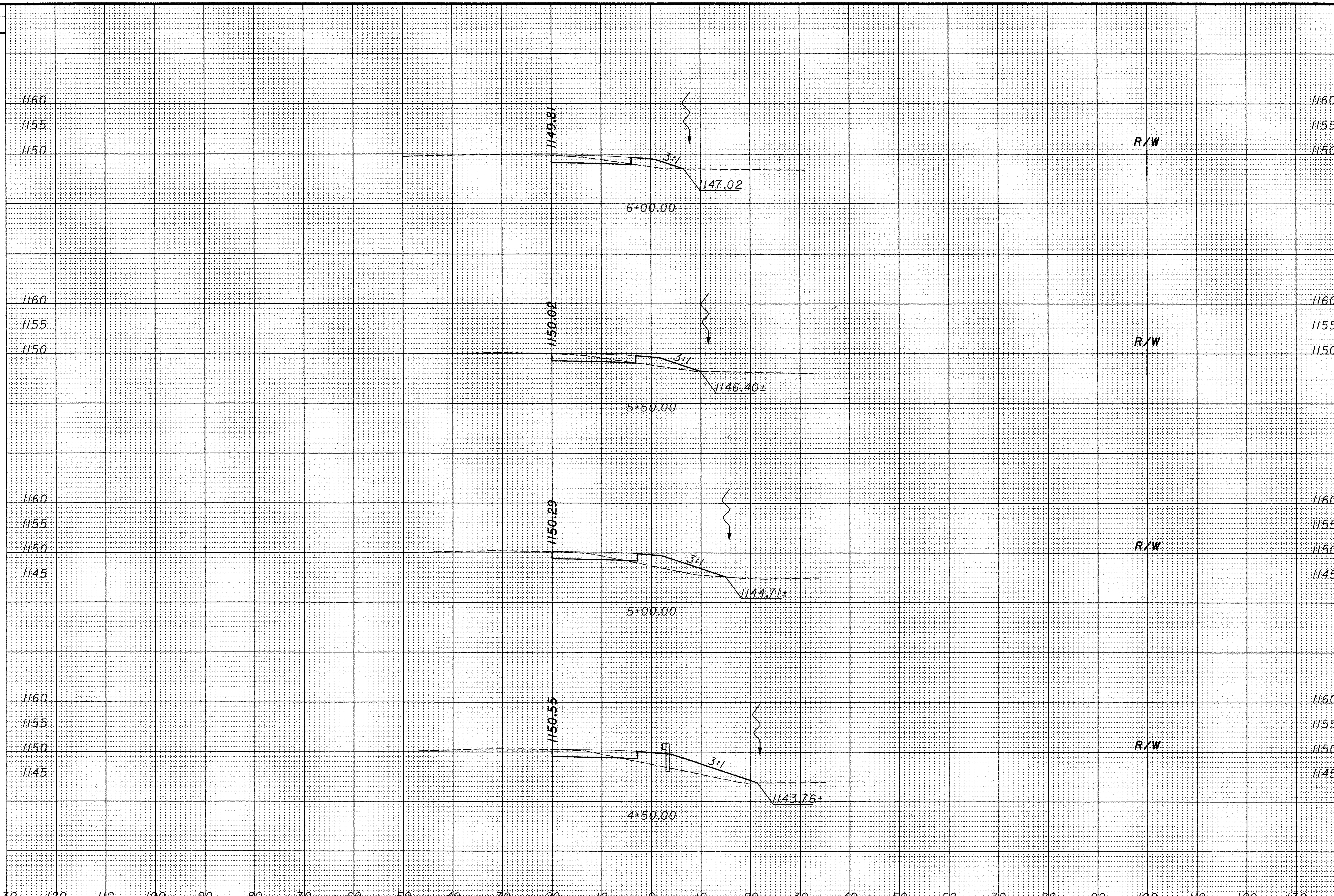
CALCULATED

CHECKED

CROSS SECTIONS
STA. 3+00.00 TO 4+00.00

POR-224-0.00

SEEDING	
END WIDTH	SQ. YDS.



SHEET TOTAL

END AREA		VOLUME	
CUT	FILL	CUT	FILL

SHEET TOTAL

CALCULATED

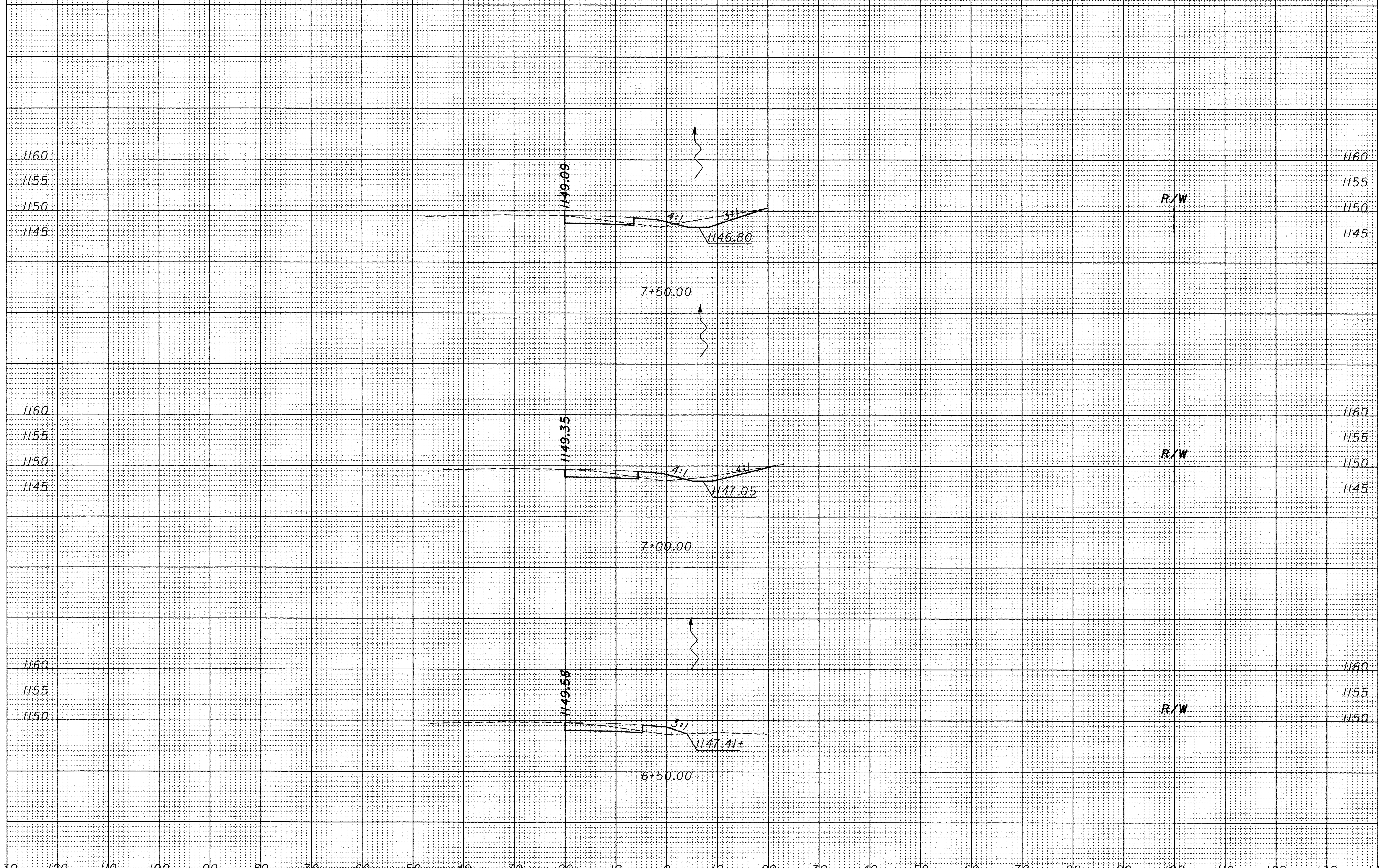
CHECKED

CROSS SECTIONS
STA. 4+50.00 TO 6+00.00

POR-224-0.00

p:\pr29820\cadd\19854gx2.dgn

SEEDING		END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL		



SHEET TOTAL

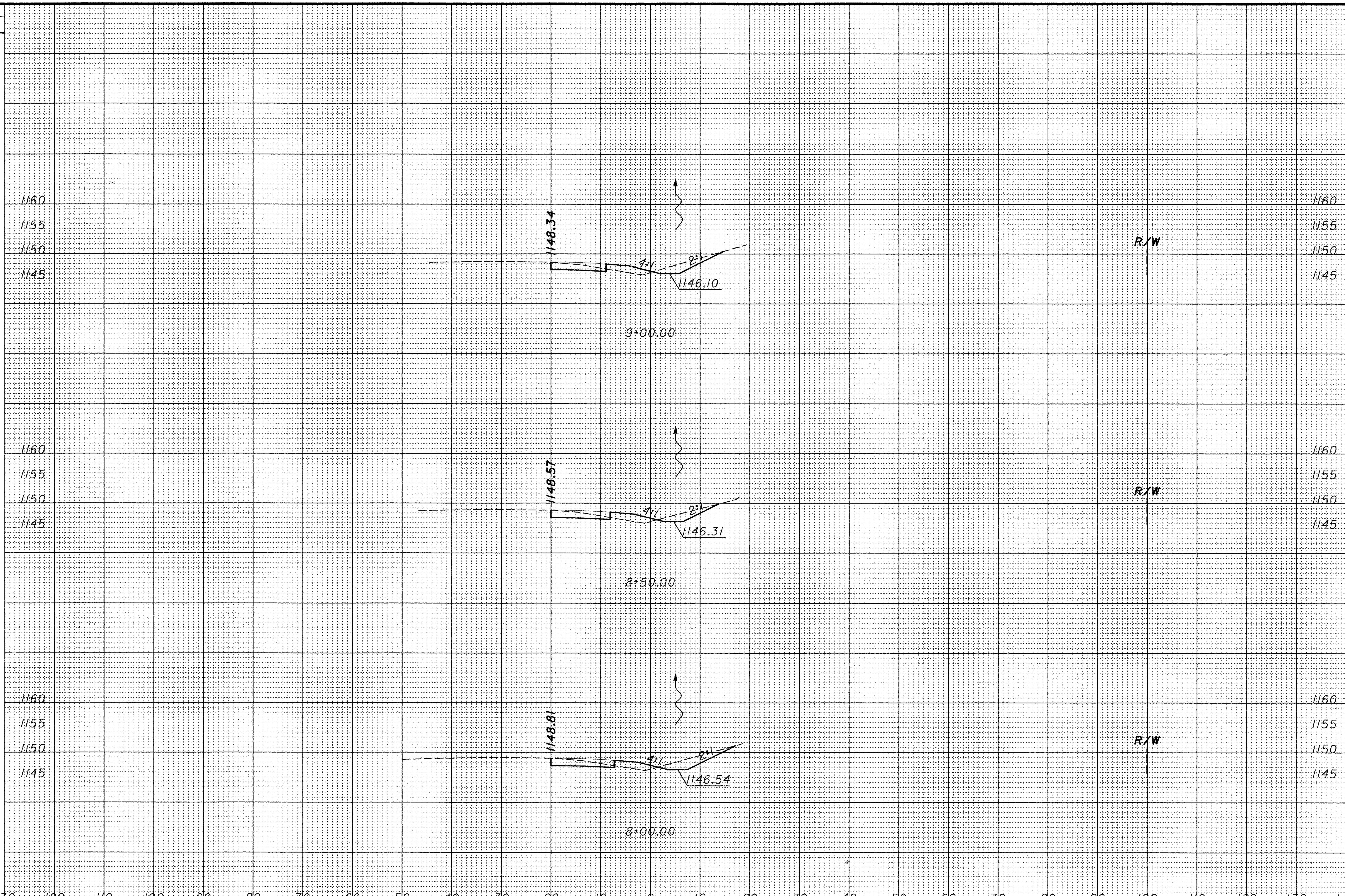
SHEET TOTAL

CROSS SECTIONS STA. 6+50.00 TO 7+50.00

POR-224-0.00

p:\pr29820\cadd\19854gx2.dgn

SEEDING	
END WIDTH	SQ. YDS.
	SHEET TOTAL



END AREA		VOLUME	
CUT	FILL	CUT	FILL
SHEET TOTAL			

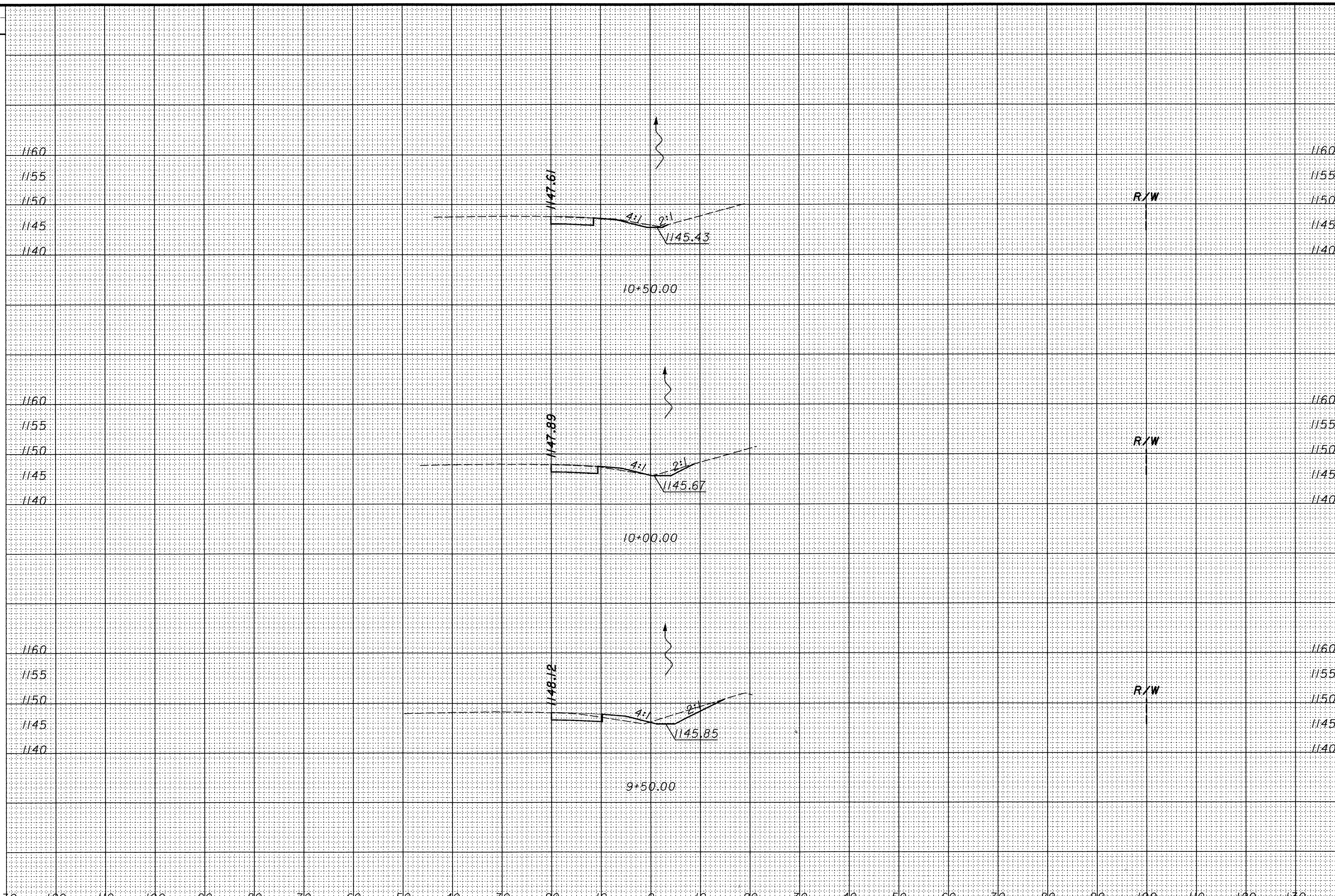
CALCULATED
CHECKED

CROSS SECTIONS
STA. 8+00.00 TO 9+00.00

POR-224-0.00

p:\pr-29820\cadd\19854gx2.dgn

SEEDING			END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. YDS.		CUT	FILL	CUT	FILL		



SHEET TOTAL

SHEET TOTAL

CROSS SECTIONS
STA. 9+50.00 TO 10+50.00

POR-224-0.00

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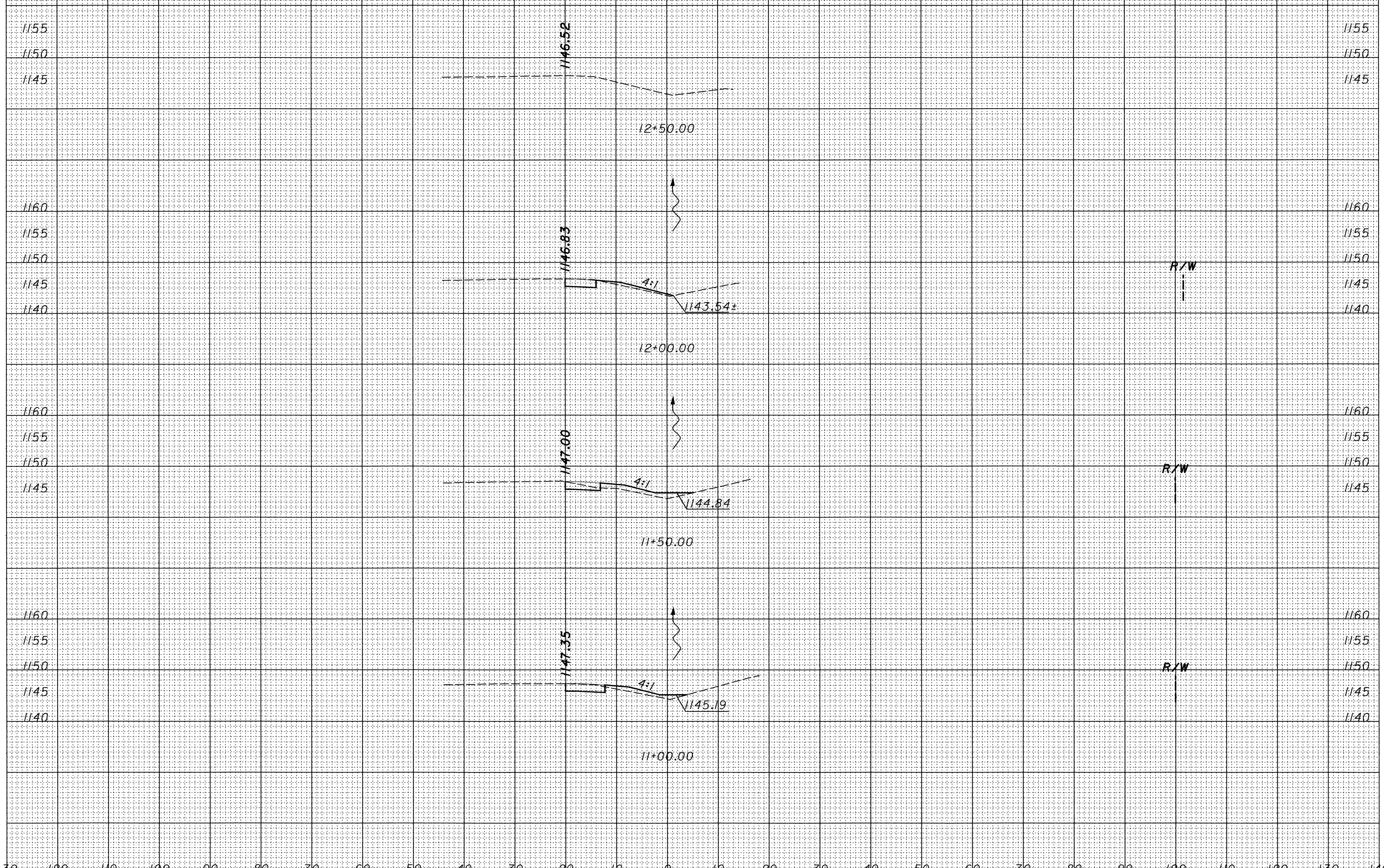
SEEDING			END AREA		VOLUME		CALCULATED	CHECKED
END WIDTH	SQ. YDS.		CUT	FILL	CUT	FILL		



SHEET TOTAL

SHEET TOTAL

CROSS SECTIONS
STA. 11+00.00 TO STA. 12+50.00

POR-224-0.00

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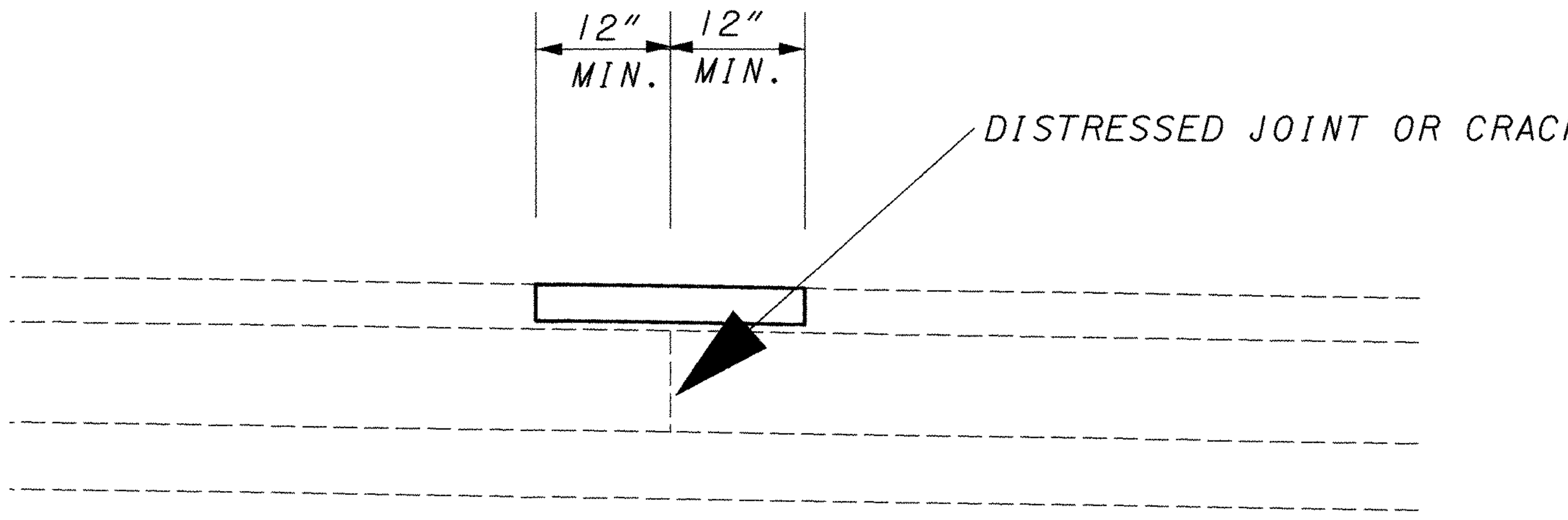


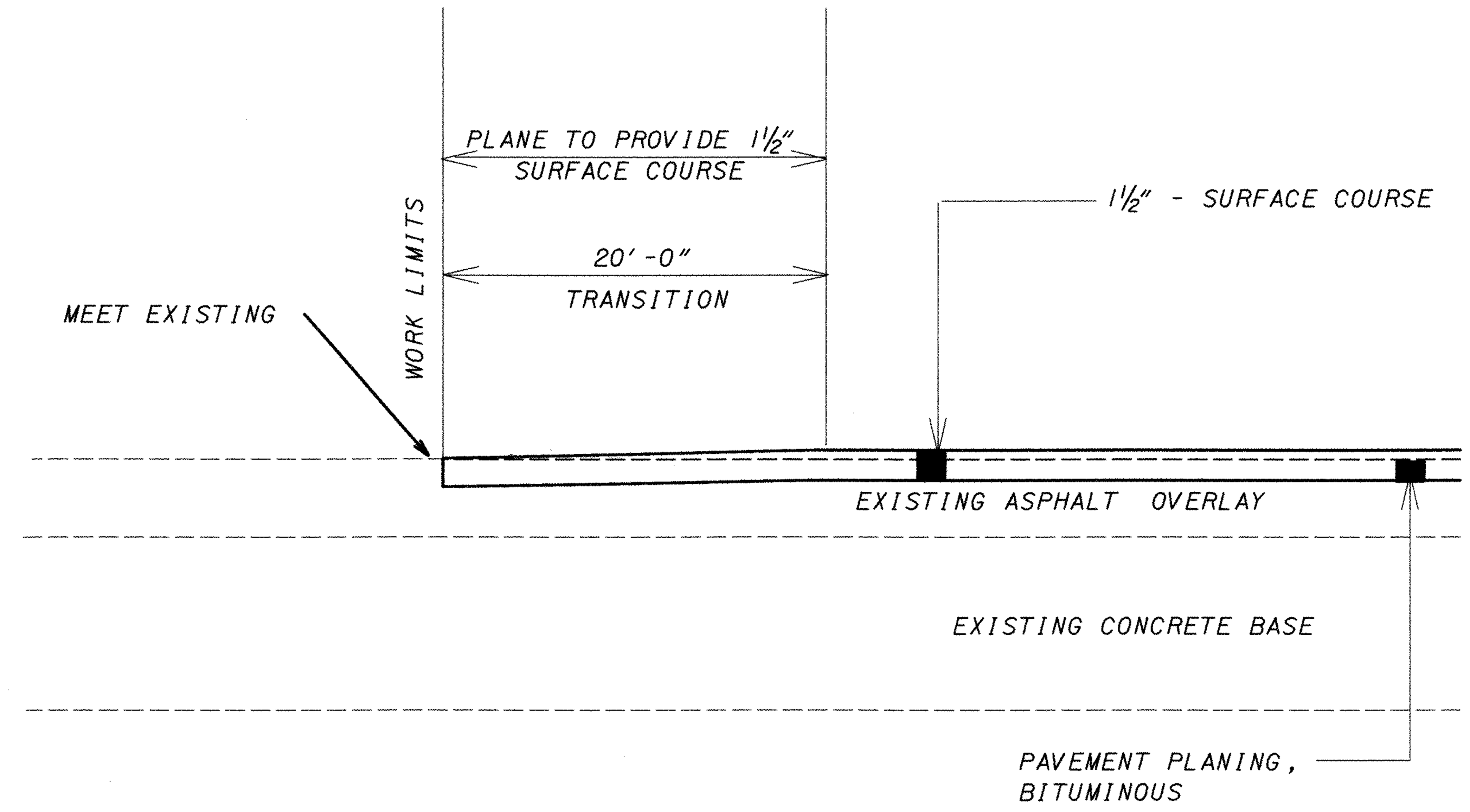
ITEM 251 - PARTIAL DEPTH
PAVEMENT REPAIR

MINIMUM DEPTH OF REPAIR SHALL BE 3.25" TYPICAL, WHERE SOUND CONCRETE IS CLOSER THAN 3.25 INCHES, REPAIR TO SOUND CONCRETE ONLY.

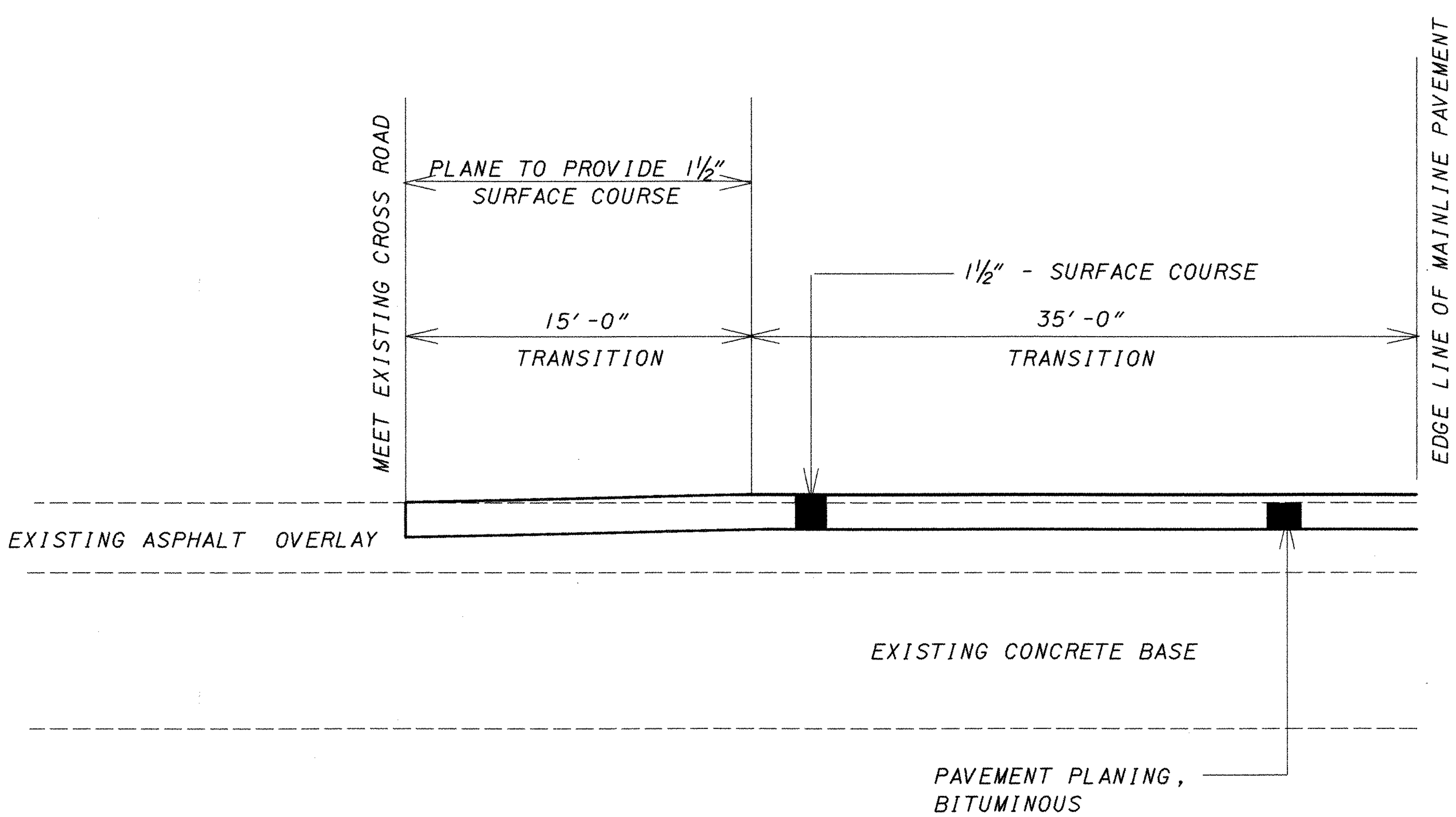
CALCULATED
CHECKED

MISCELLANEOUS DETAILS

POR-224-0.00



OVERLAY TRANSITION AT MAINLINE PROJECT LIMITS

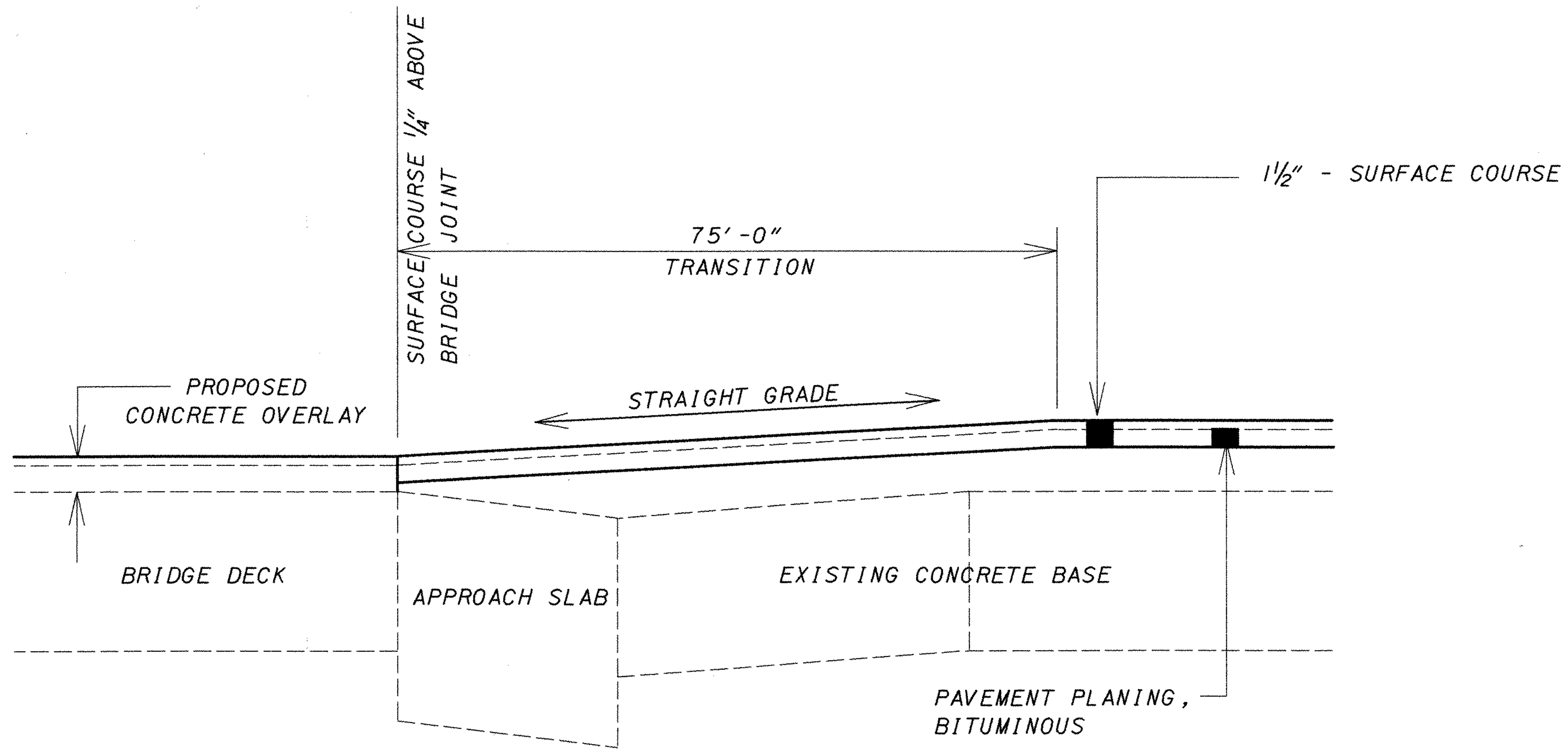


OVERLAY TRANSITION AT CROSS ROADS

CALCULATED
CHECKED

PAVEMENT TRANSITION DETAILS

POR-224-0.00



OVERLAY TRANSITION AT STRUCTURES

POR-224-0104 & POR-224-1189

OVERLAY TRANSITION AT STRUCTURE

POR-224-1172

SEE SHEET No. 29/47
FOR TRANSITION DETAILS

CALCULATED | CHECKED

PAVEMENT TRANSITION DETAILS

POR-224-0.00

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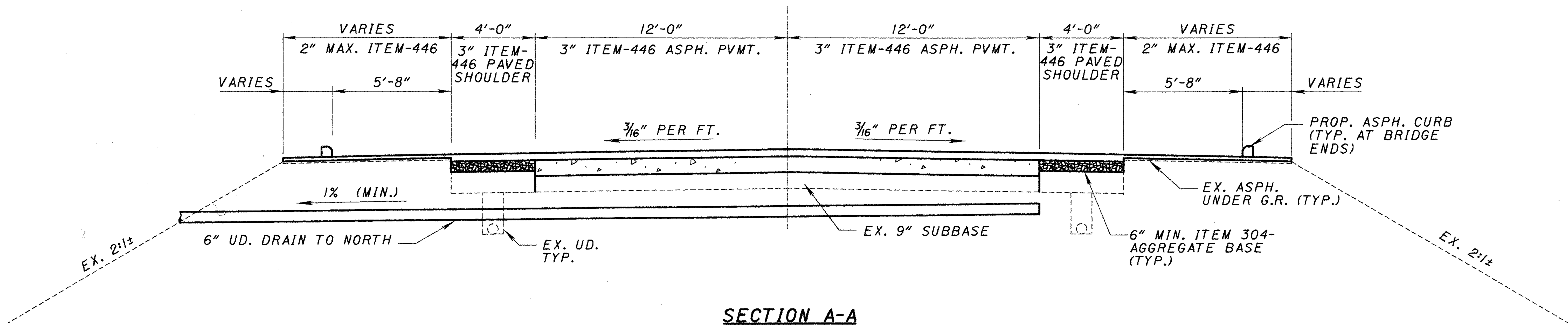
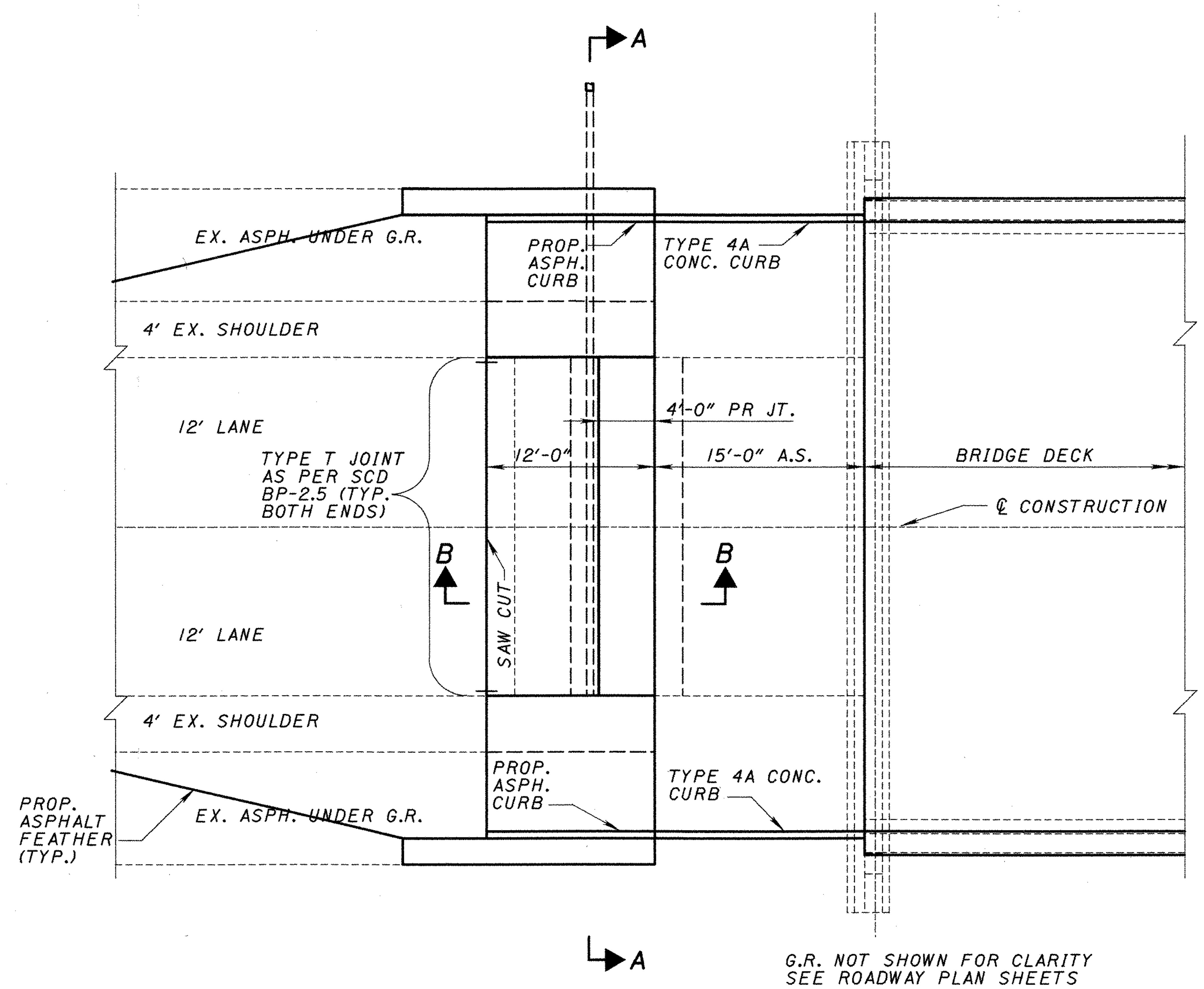


SECTION A-A

LEGEND

A.S. - APPROACH SLAB
ASPH. - ASPHALT
CONC. - CONCRETE
EL. - ELEVATION
EX. - EXISTING
FT. - FOOT
G.R. - GUARD RAIL
MAX. - MAXIMUM
MIN. - MINIMUM
PR JT. - PRESSURE RELIEF JOINT
PROP. - PROPOSED
PVMT. - PAVEMENT
SCD - STANDARD CONSTRUCTION DRAWING
TYP. - TYPICAL
UD. - UNDERDRAIN

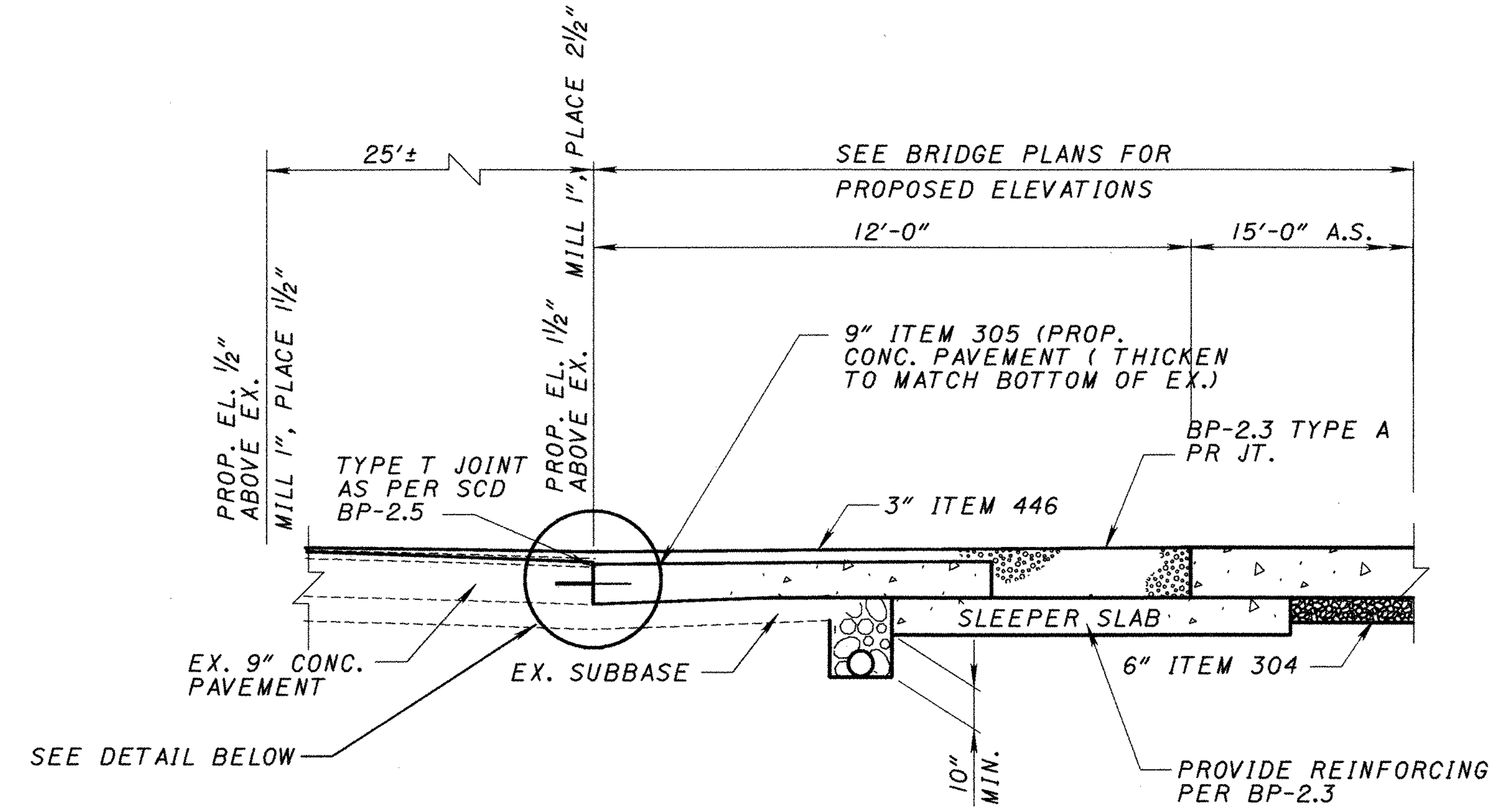
SEE BP-2.3 FOR DETAILS NOT SHOWN



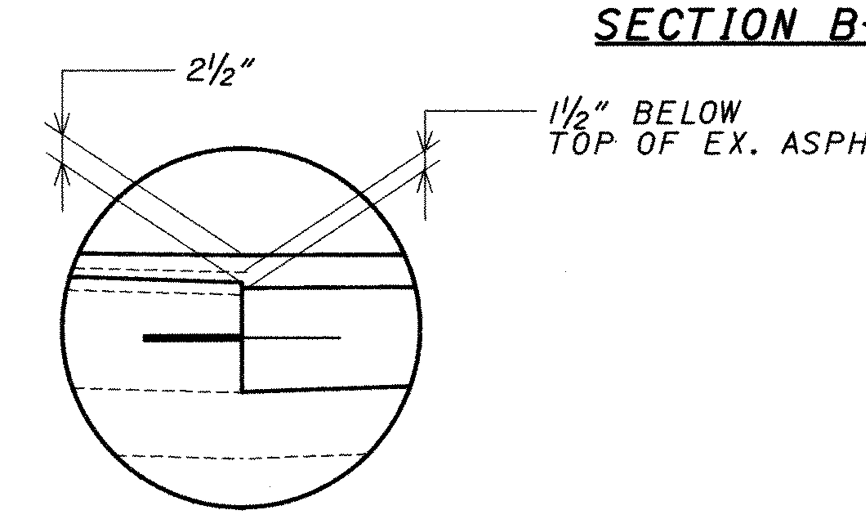
G.R. NOT SHOWN FOR CLARITY
SEE ROADWAY PLAN SHEETS

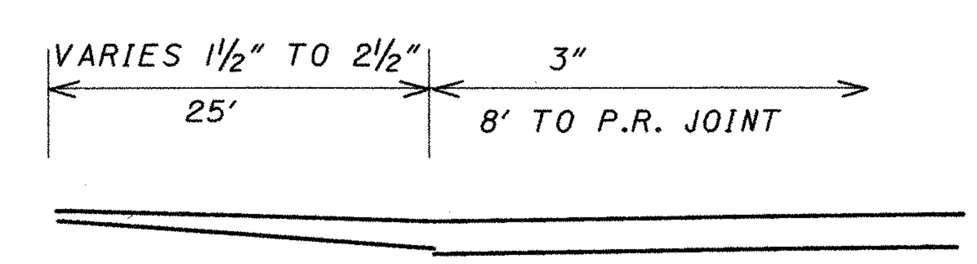
PLAN

WEST END OF BRIDGE SHOWN
EAST END SIMILAR



SECTION B-B

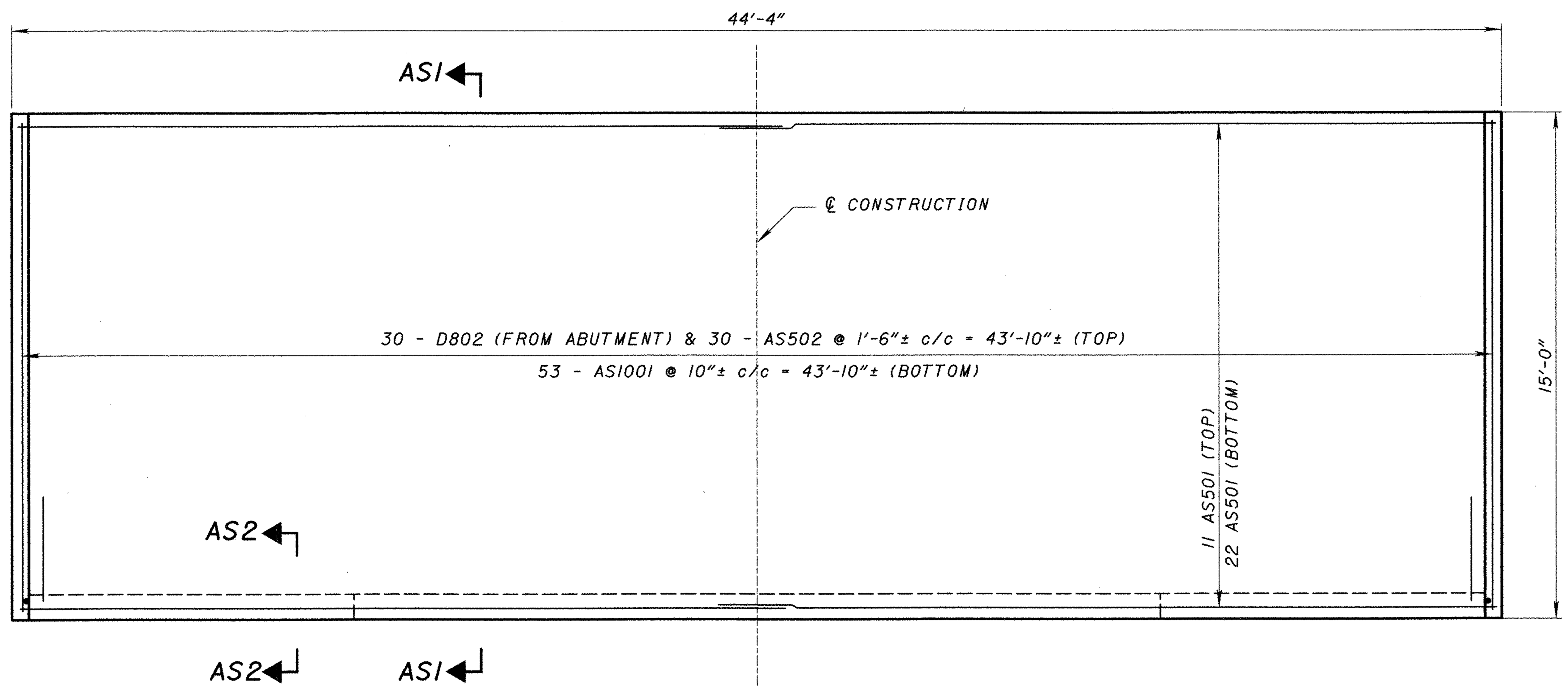




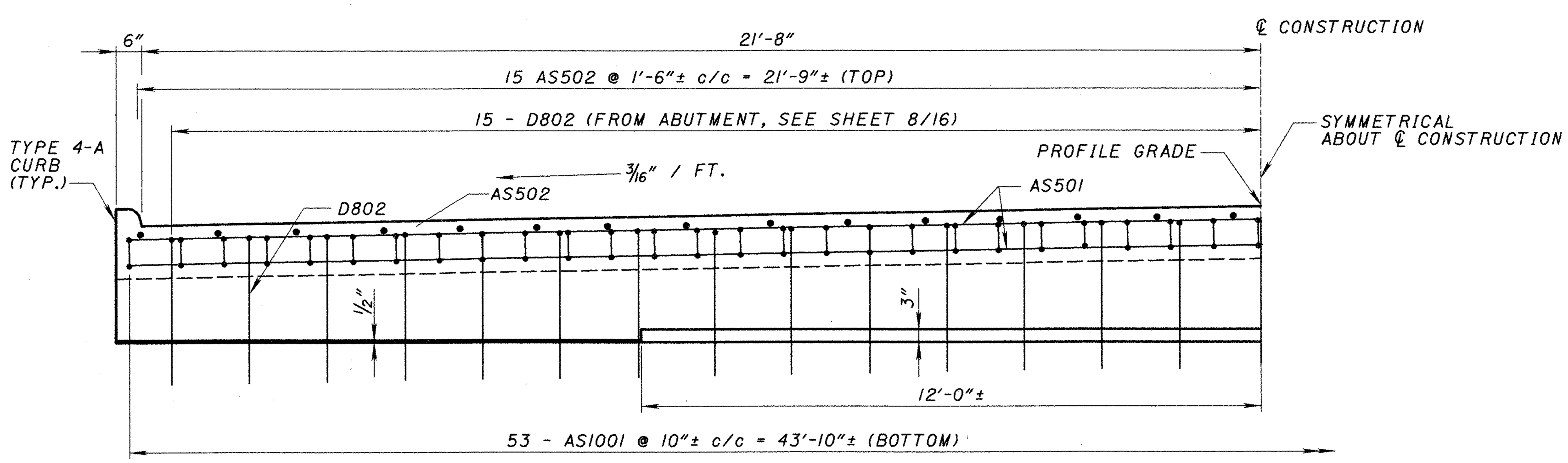
ASPHALT FEATHER DETAIL

PRESSURE RELIEF JOINT POR-224-1172

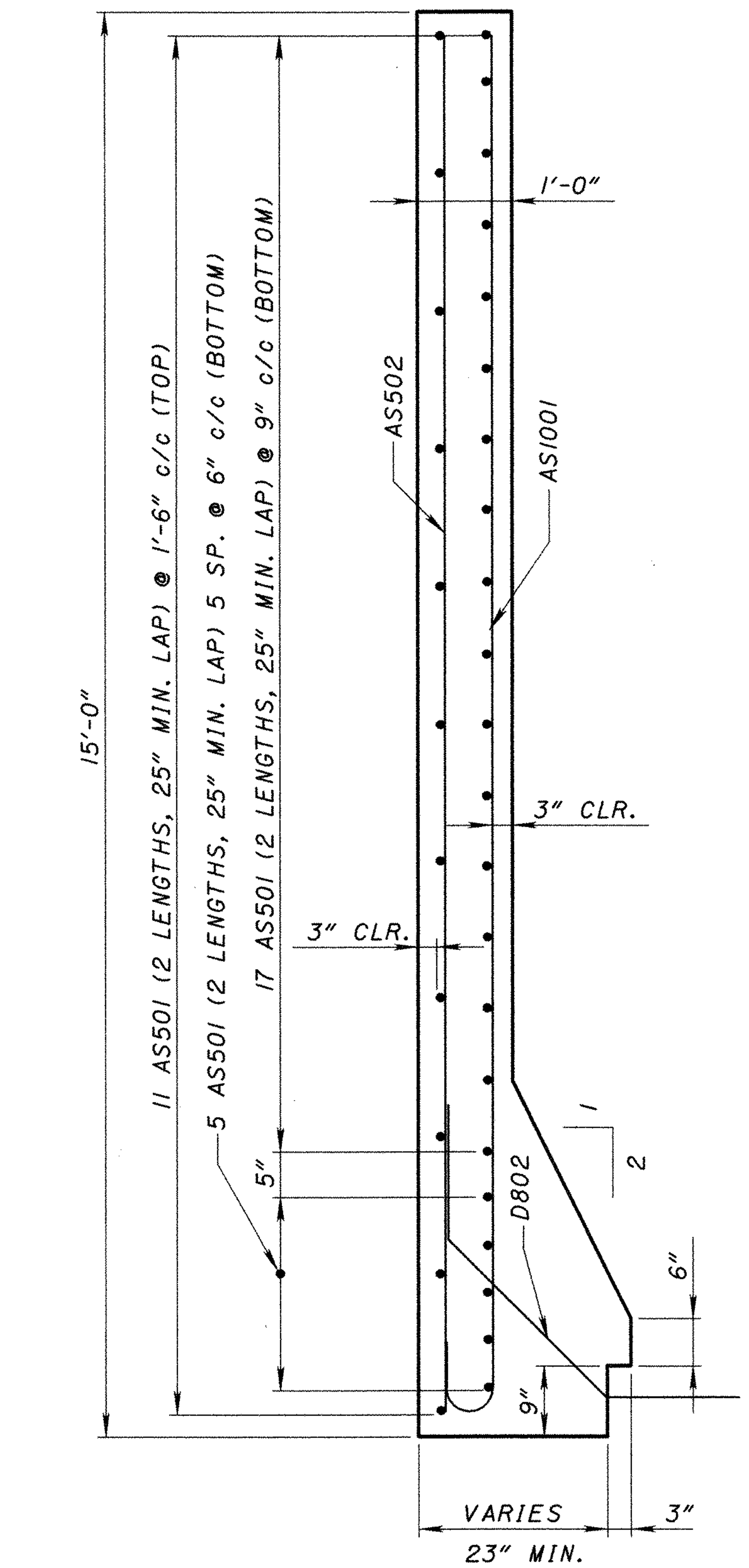
POR-224-0.00



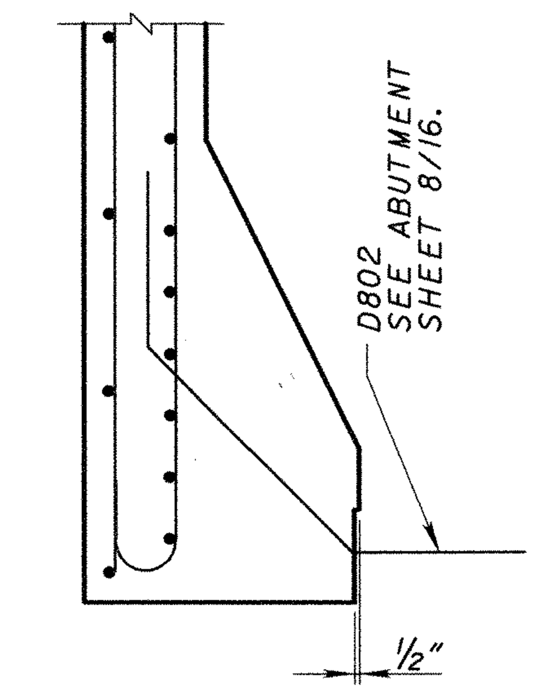
PLAN



TRANSVERSE SECTION



SECTION AS1



SECTION AS2

NOTES:

SEE STANDARD DRAWINGS AS-1-81 AND BP-5.1M FOR DETAILS NOT SHOWN.

LEGEND

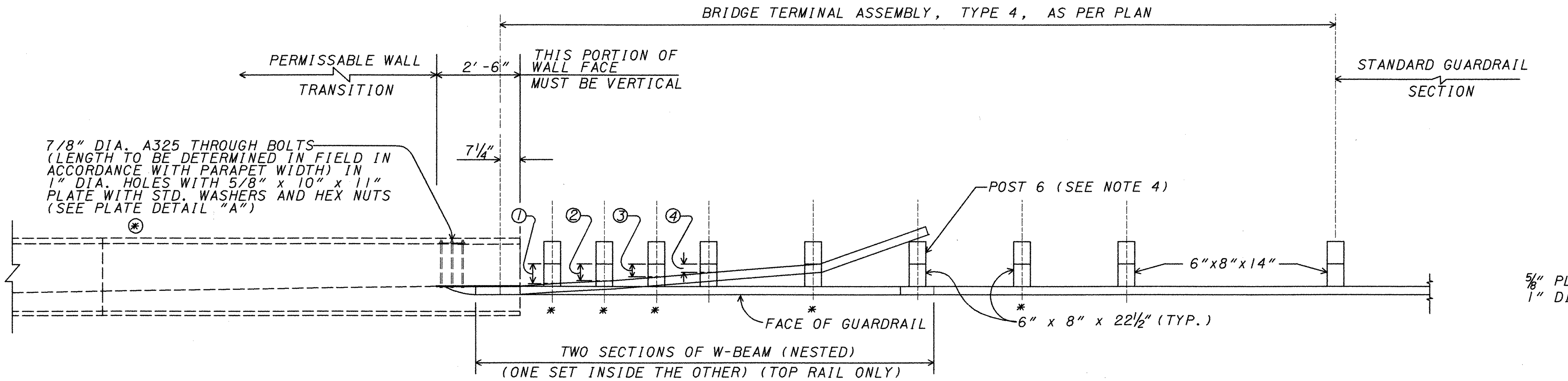
c/c. - CENTER TO CENTER
CLR. - CLEARANCE
MIN. - MINIMUM
SP. - SPACES
TYP. - TYPICAL

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED DCF
CHECKED MAR

APPROACH SLAB DETAILS
BRIDGE NO. POR-224-1172 OVER C.H. 50

POR-224-0.00



(*) FOR ATTACHMENT TO ABUTMENT WALLS, THIS ITEM REQUIRES THE USE OF POLYESTER RESIN ANCHORS WITH FEMALE THREADED INSERTS (10" LONG) TO ACCEPT 7/8" DIAMETER BOLTS. (PLATE DETAIL NOT REQUIRED)

PLAN

* GUARDRAIL NOT ATTACHED TO POSTS. BLOCKOUT FASTENED TO POST WITH STD. POST BOLT.

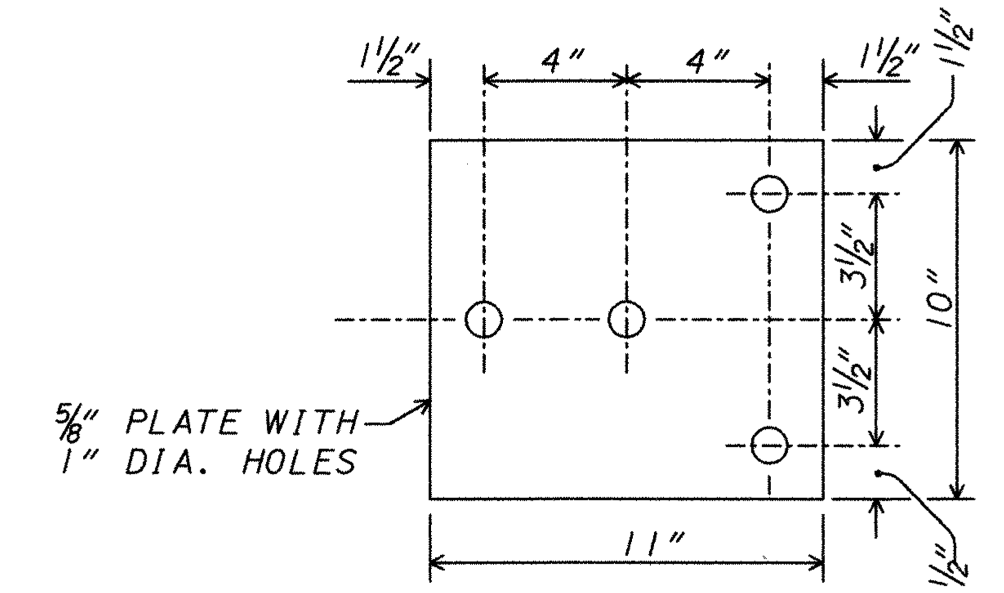
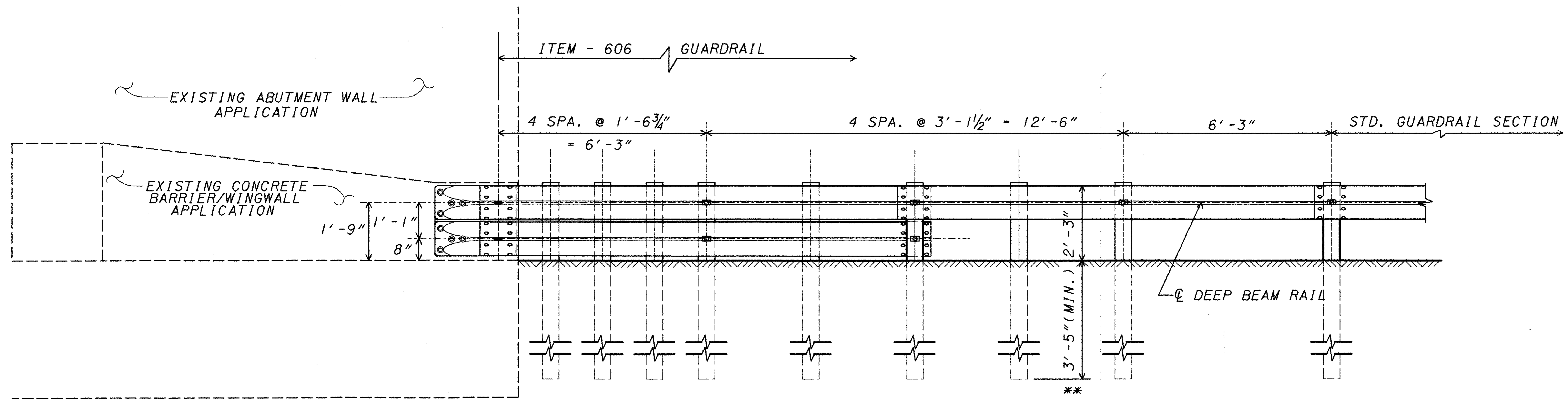


PLATE DETAIL "A"



ELEVATION

** SEE STD. CONSTRUCTION DRAWING GR-1.2 FOR ADDITIONAL POST EMBEDMENT DETAILS.

THIS DETAIL MODIFIES A BRIDGE TERMINAL ASSEMBLY, TYPE 4 FOR CONNECTION TO A VERTICAL WALL.
ALL DIMENSIONS AND DETAILS SHOWN ARE IN AGREEMENT WITH THE APPROVED CRASHWORTHY GUARDRAIL TRANSITION FOUND IN "FHWA TECHNICAL ADVISORY T 5040.26" AND THE "ROADSIDE DESIGN GUIDE"

GENERAL NOTES

1. THIS GUARDRAIL TRANSITION IS APPROPRIATE FOR CONNECTION TO A VERTICAL CONCRETE SHAPE AND AND SHOULD NOT BE CONNECTED DIRECTLY TO A CONCRETE SAFETY SHAPE. CONCRETE SAFETY SHAPE BARRIERS SHOULD BE TRANSITIONED TO A VERTICAL SHAPE AT THE GUARDRAIL CONNECTION.
2. THE RUBRAIL MAY BE SHOP BENT IN THE LAST 3 FEET TO FACILITATE INSTALLATION.
3. BOTTOM WOOD BLOCKS, LOCATED ON POSTS 1,2,3, AND 4 ARE CENTER DRILLED AND SECURED WITH 5/8" CARRIAGE BOLTS.
4. POSTS 1,2,3,4, AND 6 REQUIRE AN ADDITIONAL HOLE TO ATTACH LOWER BLOCKS AND/OR LOWER BEAM.
5. SEE STANDARD CONSTRUCTION DRAWINGS GR-1.2M AND GR-3.4M FOR ADDITIONAL DETAILS.

BLOCKOUT CHART
BOTTOM BEAM WOOD BLOCKS
1'-2" X 6"

POST	THICKNESS
1	7"
2	6"
3	4.5"
4	3"

BRIDGE ASSEMBLY, TYPE 4

POR-224-0.00

REMOVAL OF EXISTING ITEMS

ALL 630 REMOVAL ITEMS NOT SPECIFICALLY INCLUDING STORAGE OR REERECTION SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF BY THE CONTRACTOR.

SIGN, FLAT SHEET, AS PER PLAN [D-8G-SPE]

IN ADDITION TO THE REQUIREMENTS OF ITEM 630 SIGN, FLATSHEET, THIS ITEM SHALL HAVE SIX [6] INCH LETTERING AND A ONE [1] INCH BORDER INSTEAD OF THE FOUR [4] INCH LETTERING AND TWO [2] INCH BORDER SHOWN IN THE SIGN DESIGN MANUAL.

ONE-WAY SUPPORT SHALL BE USED INSTEAD OF STREET NAME SIGN SUPPORTS

PAVEMENT MARKINGS

ALL PAVEMENT MARKINGS SHALL BE AS PER ITEM 644, THERMOPLASTIC PAVEMENT MARKINGS.

PAYMENT FOR ALL PAVEMENT MARKINGS SHALL BE INCLUDED UNDER ITEM SPECIAL - PAVEMENT MARKING.

ITEM 630 - FLAT SHEET SIGN REPLACEMENT

ALL FLATSHEET SIGNS SHOWN ON THE PLANS FOR REPLACEMENT, SHALL BE PROVIDED BY ODOT FOR ERECTION BY THE CONTRACTOR AS PER THE OMUTCD AND THE PLANS.

SIGN LOCATIONS OF EXISTING AND PROPOSED SIGNS ON THE PLANS ARE APPROXIMATE. THE CONTRACTOR PRIOR TO THE ERECTION OF ALL POST SIGN SUPPORTS SHALL STAKE THE PROPOSED LOCATIONS IF THEY ARE DIFFERENT FROM THE EXISTING LOCATION. THE ENGINEER SHALL APPROVE ALL SUPPORT LOCATIONS AND MAY ADJUST THE LOCATION TO CORRECT SLOPE AND SUB-SURFACE DIFFICULTIES, SIGN SIGHT DISTANCE OBSTRUCTIONS, IMPROVE SAFETY AND ELIMINATE OVERHEAD OBSTACLES.

#4 U-CHANNEL POSTS SHALL NOT BE USED.

PAYMENT FOR ALL FLAT SHEET SIGN REPLACEMENT WORKSHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM SPECIAL - SIGNS AND SUPPORTS

CONTRACTOR SHALL PICK-UP SIGNS AT ODOT DISTRICT OFFICE IN RAVENNA. ARRANGEMENTS FOR PICK-UP SHALL BE MADE AT LEAST TWO DAYS IN ADVANCE AT 330-297-0801 EX.-305

CONTRACTOR SHALL PROVIDE A SUMMARY LIST OF REQUIRED SIGNS TO ODOT A MINIMUM OF 30 DAYS PRIOR TO EXPECTED PICK-UP DATE. PROVIDE LIST TO: ODOT D-4, 705 OAKWOOD ST RAVENNA, OHIO 44266 ATTN:KEN GREENE.

MILE MARKER LOCATION

THE LOCATION OF MILE MARKERS ON THE PLANS ARE APPROXIMATE AND A MORE PRECISE LOCATION WILL BE PROVIDED BY THE DEPARTMENT. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 30 DAYS IN ADVANCE OF PLANNED DATE OF MARKER INSTALLATION. THE ENGINEER WILL CONTACT THE OFFICE OF TECHNICAL SERVICES WHICH WILL LOCATE THE LONGITUDINAL POSITION OF MILE MARKERS BY MEANS OF A PAINT MARK ON THE PAVEMENT EDGE. ALTERNATE MARKS WILL NOT BE PROVIDED ON DIVIDED HIGHWAYS AND THE CONTRACTOR SHALL SET MARKERS FOR THE OPPOSITE ROADWAY ACROSS FROM THE PROVIDED MARK. DELINEATORS WHOSE NORMAL POSITION FALLS WITHIN 50 FEET OF A MILE MARKER SHALL BE OMITTED.

MAINTENANCE OF TRAFFIC SIGNAL /FLASHER INSTALLATIONS

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

A) EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.

B) NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE MAINTAINING AGENCY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION.

IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION, THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE OR THE COUNTY OF PORTAGE FOR POLICE SERVICES AND MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM,

WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 4 HOURS AND SHALL NOT INCLUDE THE HOURS OF 6:00 AM TO 8:00 AM AND 4:00 PM TO 6:00 PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS,

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.24.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

1. TIME OF NOTIFICATION OF MALFUNCTION;
2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;
5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM SPECIAL - TRAFFIC SIGNALS

CALCULATED
CHECKED

TRAFFIC CONTROL NOTES

POR-224-0.00

RAISED PAVEMENT MARKERS

EXISTING RAISED PAVEMENT MARKERS ARE TO BE REMOVED FOR STORAGE. RECYCLED RPM'S ARE TO BE PLACED ON SR-224 AND THE RAMPS. THE RPM'S WILL BE SUPPLIED BY THE STATE AND INSTALLED BY THE CONTRACTOR IN ACCORDANCE WITH ITEMS 202, 621 AND 721 AND SUPPLEMENTAL SPECIFICATION 1082. ALL RAISED PAVEMENT WORK SHALL BE PAID FOR UNDER ITEM SPECIAL - RAISED PAVEMENT MARKERS.

ITEM 202 - RAISED PAVEMENT MARKERS REMOVED FOR STORAGE, AS PER PLAN

RAISED PAVEMENT MARKERS SHALL BE REMOVED FROM THE ROADWAY IN A MANNER THAT PREVENTS DAMAGE TO THE CASTINGS. REMOVED MARKERS SHALL BE COLLECTED, STORED IN 55 GALLON DRUMS (WITH AMOUNT CLEARLY MARKED) AND THEN DELIVERED TO THE ODOT DISTRICT OFFICE AT 705 OAKWOOD STREET, RAVENNA, OHIO 44266. THE CONTRACTOR SHALL CONTACT THE DISTRICT (LUKE NAGLE, 330-297-0801 EXT. 329) TO ARRANGE DELIVERY. ALL COSTS ASSOCIATED WITH THE REMOVAL, STORAGE, AND DELIVERY OF THESE MARKERS SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM SPECIAL - RAISED PAVEMENT MARKERS.

RAISED PAVEMENT MARKER MATERIAL AND INSTALLATION

FOR THIS PROJECT, THE RPM CASTINGS SUPPLIED BY O.D.O.T. WILL COME WITH REFLECTORS ATTACHED.

ALL MATERIALS ARE TO BE CONTRACTOR FURNISHED, EXCEPT THAT THE DEPARTMENT SHALL SUPPLY RPM CASTINGS WITH REFLECTORS IN THE QUANTITIES SHOWN HEREIN TO THE CONTRACTOR. PAY ITEMS FOR THE DEPARTMENT SUPPLIED MATERIALS SHALL BE INDICATED AS "INSTALLATION ONLY". THE TYPE OF DEPARTMENT SUPPLIED MATERIAL SHALL BE RAISED PAVEMENT MARKER CASTINGS.

THE CONTRACTOR SHALL PICK UP THE DEPARTMENT SUPPLIED RPM MATERIALS AT THE OPI WAREHOUSE IN COLUMBUS, OHIO.

THE CONTRACTOR SHALL PICK UP DEPARTMENT SUPPLIED RPM MATERIALS AT THE SPECIFIED LOCATION(S) FOR TRANSPORT TO THE WORK SITE OR TO THE CONTRACTOR'S STORAGE FACILITY. THE RECYCLED RAISED PAVEMENT MARKER (RPM) AUTHORIZATION FORM IS TO BE SIGNED BY THE DISTRICT CONSTRUCTION ENGINEER PRIOR TO PICK UP OF THE RPMS. THE CONTRACTOR SHALL NOTIFY THE DISTRICT AND / OR THE PARTIES LISTED ON THE AUTHORIZATION FORM IN WRITING AT LEAST FIVE (5) CALENDAR DAYS PRIOR TO PICK UP OF THE DEPARTMENT SUPPLIED MATERIALS. THE CONTRACTOR SHALL STORE THE RPMS WITHOUT DAMAGE OR CONTAMINATION WITH FOREIGN MATTER. A DEDUCTION IN THE AMOUNT OF THE ACTUAL COST TO THE DEPARTMENT SHALL BE MADE FOR MATERIALS DAMAGED BY THE CONTRACTOR OR FOR CASTINGS RECEIVED BY THE CONTRACTOR WHICH WERE NOT INSTALLED AND WERE NOT RETURNED TO THE DEPARTMENT.

RETURN OF NON-PERFORMED RAISED PAVEMENT MARKER MATERIALS SUPPLIED BY THE DEPARTMENT

RAISED PAVEMENT MARKER MATERIALS SUPPLIED BY THE DEPARTMENT, THAT ARE NON-PERFORMED SHALL BE CAREFULLY REPACKED OR PACKED IN THE BOXES IN THE SAME STYLE AND QUANTITY AS ORIGINALLY RECEIVED FROM THE DEPARTMENT. CASTING STYLES SHALL NOT BE MIXED WITHIN ANY ONE CONTAINER. THE CONTRACTOR SHALL CLEARLY MARK ON THE OUTSIDE OF EACH CONTAINER THE COLOR OF THE PRISMATIC RETRO-REFLECTOR AND THE STYLE OF CASTING. BOXES SHALL BE PLACED ON SKIDS OR PALLETS IN THE SAME STYLE (LOW PROFILE OR CONVENTIONAL, REFLECTORISED OR NON REFLECTORISED) AND NO MORE THAN 420 RPMS (OR 21 BOXES) ON ONE SKID.

ONLY USE THE BOXES SUPPLIED BY THE RAISED PAVEMENT MARKER RECYCLER. BOXES MUST BE MARKED WITH THE RECYCLER'S PART OR CATALOG NUMBER AND THE PROJECT NUMBER. THE RECYCLER'S CATALOG OR PART NUMBERS MAY BE OBTAINED FROM THE OFFICE OF TRAFFIC ENGINEERING IN COLUMBUS, OHIO OR FROM THE RECYCLER. BOXES NOT MARKED WITH THE PROPER RECYCLER'S CATALOG OR PART NUMBERS, AND THE DEPARTMENT'S PROJECT NUMBER WILL NOT BE ACCEPTED AT THE RECYCLER'S WAREHOUSE. NON PERFORMED MATERIALS WILL BE RETURNED TO THE LOCATION AS SPECIFIED BY THE DISTRICT CONSTRUCTION ENGINEER WITHIN 30 DAYS OF THE COMPLETION OF THE PROJECT.

THE ABOVE WORK INCLUDING ALL LABOR, EQUIPMENT AND MATERIAL NEEDED TO PERFORM THE WORK, SHALL BE CONSIDERED INCIDENTAL TO THE RESPECTIVE PAY ITEM.

IF THE DEPARTMENT HAS TO REPACKAGE THE RPMS CORRECTLY, THE CONTRACTOR WILL BE ASSESSED THE ACTUAL COST FOR REPACKAGING THE MATERIALS BY THE DEPARTMENT'S FORCES.

SEE SUPPLEMENTAL SPECIFICATION 1082.

THE FOLLOWING ESTIMATED QUANTITIES ARE SHOWN FOR INFORMATION ONLY.

ITEM 621-RAISED PAVEMENT MARKER, INSTALLATION ONLY....1152 EACH

MATERIAL FURNISHED BY THE DEPARTMENT (INSTALLATION ONLY)

	ONE-WAY WHITE		ONE-WAY YELLOW		TWO-WAY WHITE		TWO-WAY YELLOW		TWO-WAY WHITE-RED		TWO-WAY YELLOW-RED	
DESCRIPTION	COLS.	DIST.	COLS.	DIST.	COLS.	DIST.	COLS.	DIST.	COLS.	DIST.	COLS.	DIST.
RAISED PAVEMENT MARKER	20	----	24	----	----	----	826	----	278	----	4	----
	----	----	----	----	----	----	----	----	----	----	----	----
	----	----	----	----	----	----	----	----	----	----	----	----
	----	----	----	----	----	----	----	----	----	----	----	----
TOTAL BY COLOR												

	TOTAL	NUMBER OF CONVENTIONAL HIGH PROFILE	NUMBER OF TAPERED LOW PROFILE	DISTRICT STORED	COLUMBUS STORED
ITEM 621 - RAISED PAVEMENT MARKER, INSTALLATION ONLY	1152	----	----	----	1152
ITEM 621 - RAISED PAVEMENT MARKER CASTING, INSTALLATION ONLY	----	----	----	----	----
ITEM 621 - PRISMATIC RETRO-REFLECTORS, INSTALLATION ONLY	----	----	----	----	----
ITEM 621 - RAISED PAVEMENT MARKER MISC., REPLACEMENT OF RAISED PAVEMENT MARKER	----	----	----	----	----

CALCULATED ENF CHECKED

TRAFFIC CONTROL NOTES

POR-224-0.00

$DATE$ $FILE$

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC CONTROL SYSTEM INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 90 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER THE FOLLOWING ITEMS OF THE TRAFFIC CONTROL SYSTEM: CONTROLLERS AND ASSOCIATED EQUIPMENT.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR THE FOREGOING ITEMS SHALL BE TURNED OVER TO THE STATE OR THE MAINTAINING AGENCY FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC CONTROL SYSTEM WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

UTILITY CONFLICTS

THE OVERHEAD ELECTRIC LINES CROSSING US 244 AT MARTIN ROAD ARE TO BE MOVED "BY OTHERS".

NO WORK ON THE FLAHER INSTALLATION AT INTERSECTION OF US 224 AND MARTIN ROAD SHALL BE PERMITTED UNTIL THE UTILITY LINES HAVE BEEN MOVED.

PAYMENT FOR FLASHER ITEMS

ITEM 625 - GROUND ROD, ITEM 632 - SIGNAL CABLE, POWER CABLE STRAIN POLE FOUNDATION AND STRAIN POLE, ITEM 633 - FLASHER CONTROLLER AND CONTROLLER WORKPAD.

PAYMENT SHALL BE MADE UNDER THE LUMP SUM BID FOR ITEM SPECIAL - TRAFFIC SIGNALS.

ITEM 632 - MESSENGER WIRE

THE MESSENGER WIRE SHALL BE AS PER SPECIFICATION 632 AND STANDARD CONSTRUCTION DRAWING TC - 84.20 EXCEPT THE "ALTERNATE MESSENGERWIRE ASSEMBLY" SHALL NOT BE USED.

PAYMENT SHALL BE MADE UNDER THE LUMP SUM BID FOR ITEM SPECIAL -TRAFFIC SIGNALS.

ITEM 632 - POWER SERVICE, AS PER PLAN

POWER SERVICE SHALL BE AS PER SPECIFICATION 632 AND STANDARD CONSTRUCTION DRAWING TC-83.10 WITH THE FOLLOWING EXCEPTIONS:

1. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN FIVE (5) FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND.
2. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES.
3. ALL POWER SERVICES SHALL BE METERED. THE METER SHALL HAVE A LEVER OPERATED BYPASS.
4. THE POWER SERVICE BLIND HALF COUPLING SHALL BE TWENTY-SEVEN [27] INCHES ABOVE THE BOTTOM OF THE STRAIN POLE BASE PLATE AND SHALL BE WELDED TO THE STRAIN POLE.
5. CONDUIT FROM THE BOTTOM OF THE DISCONNECT SWITCH ENCLOSURE INTO THE BOTTOM OF THE CONTROLLER CABINET WILL NOT BE PERMITTED. POWER SERVICE WIRES FROM THE DISCONNECT SWITCH ENCLOSURE TO THE CONTROLLER CABINET SHALL BE ROUTED THROUGH THE STRAIN POLE.

DISCONNECT SWITCH ENCLOSURES FURNISHED IN ACCORDANCE WITH ITEM 632, POWER SERVICE, AS PER PLAN, SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNON 660, WITH LOCK BODY OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER (WILSON-BOHANNON 'A').

THE CONTRACTOR SHALL CONTACT THE METER SECTION OF THE POWER COMPANY FOR INFORMATION REGARDING THE METER BASE INSTALLATION PRIOR TO ORDERING POLES. THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120 VOLTS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE SIGNAL IS ACCEPTED BY THE MAINTAINING AGENCY.

PAYMENT SHALL BE MADE UNDER THE LUMP SUM BID FOR ITEM SPECIAL - TRAFFIC SIGNALS.

ITEM 632 - VEHICULAR SIGNAL HEAD, BY TYPE, AS PER PLAN

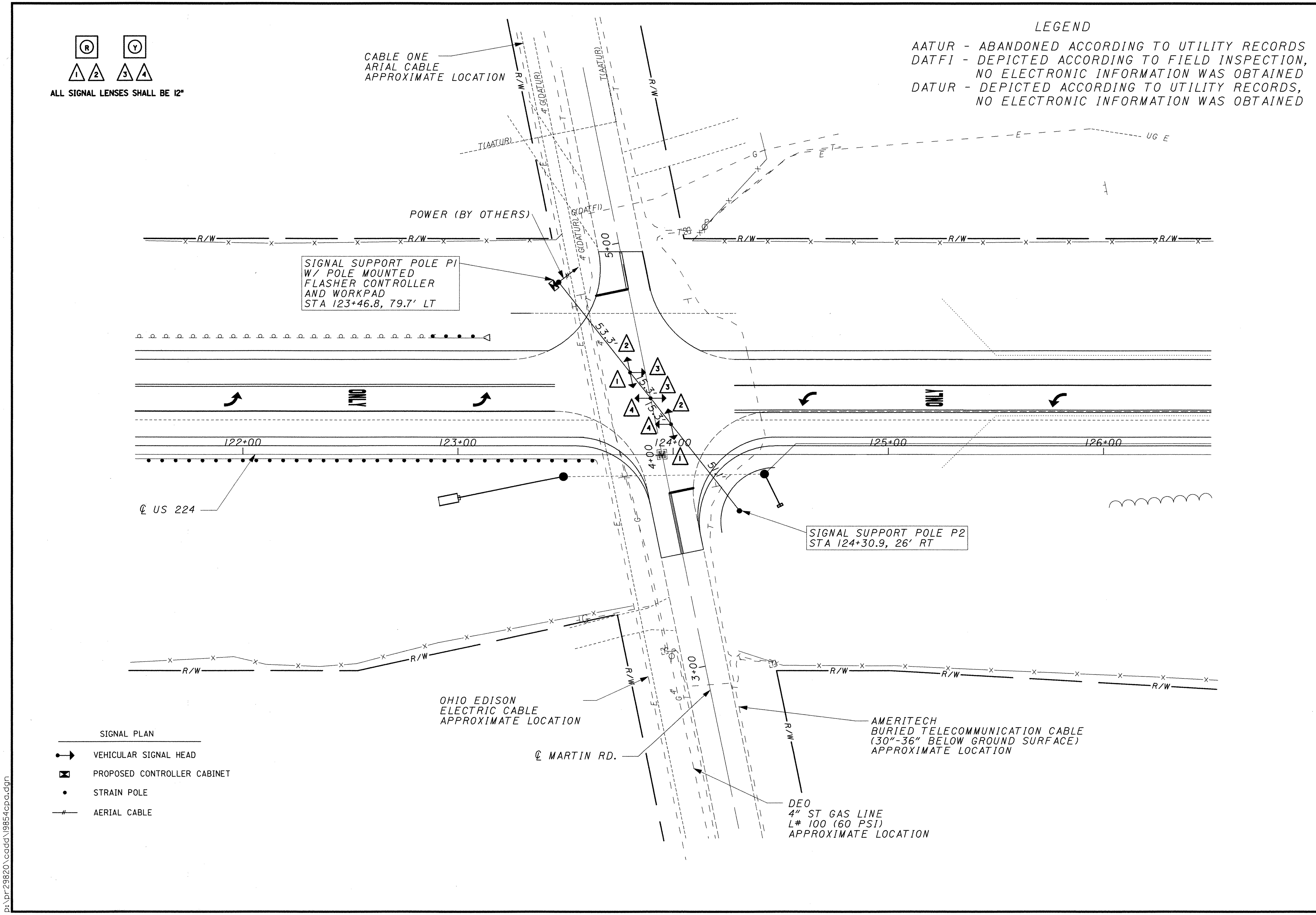
THIS ITEM SHALL CONSIST OF THE FURNISHING AND PLACING OF A SIGNAL HEAD. THIS ITEM SHALL CONFORM TO 632.05, 732.01 AND 732.04 EXCEPT THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE LOCKING. BALANCE ADJUSTERS SHALL ONLY BE USED WHERE NECESSARY. BALANCE ADJUSTERS SHALL NOT BE USED ON ONE-WAY HEADS.

PAYMENT SHALL BE MADE UNDER THE LUMP SUM BID FOR ITEM SPECIAL - TRAFFIC SIGNALS.

CALCULATED CHECKED

TRAFFIC CONTROL NOTES

POR-224-0.00

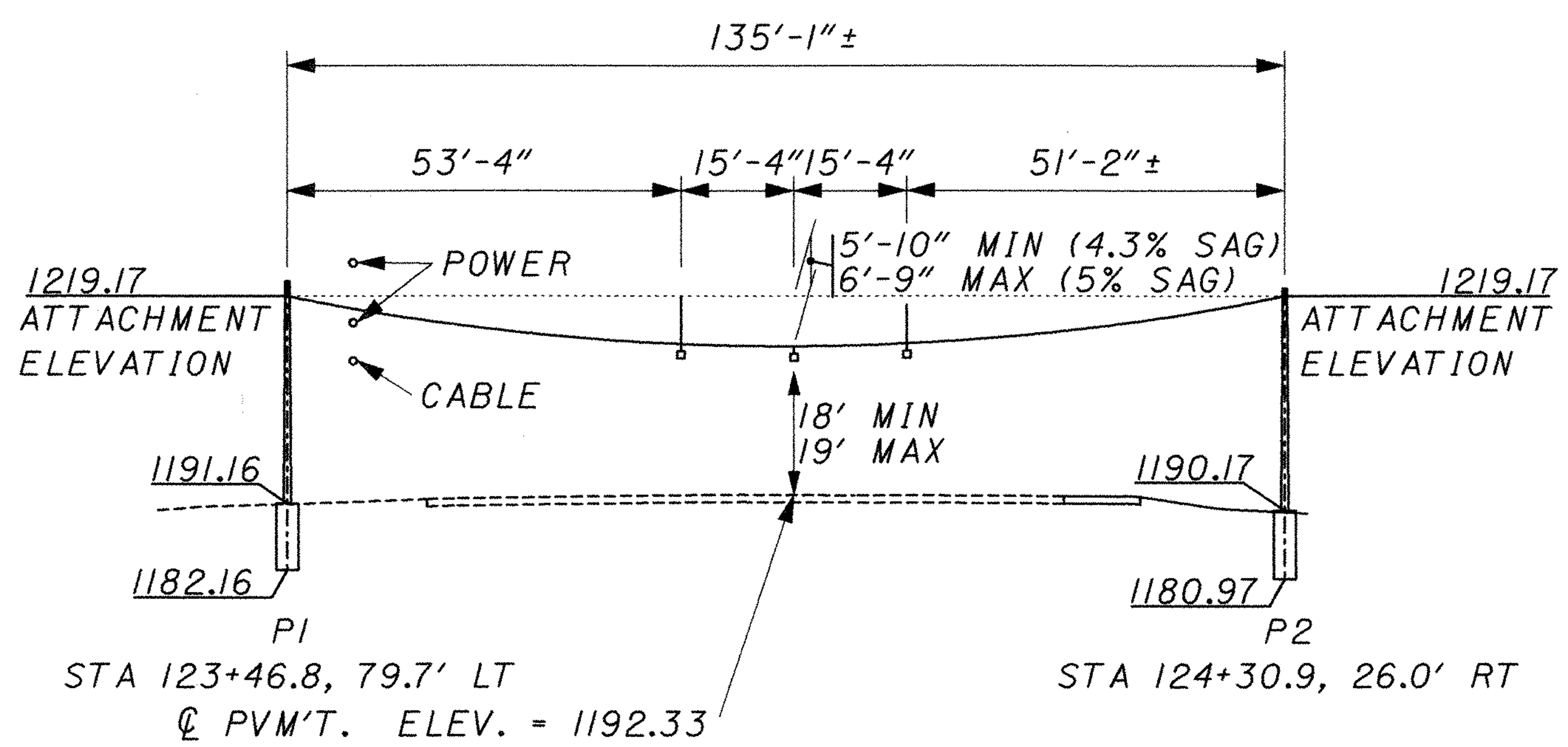


HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED CHECKED

SIGNAL PLAN
US 224 AT MARTIN ROAD

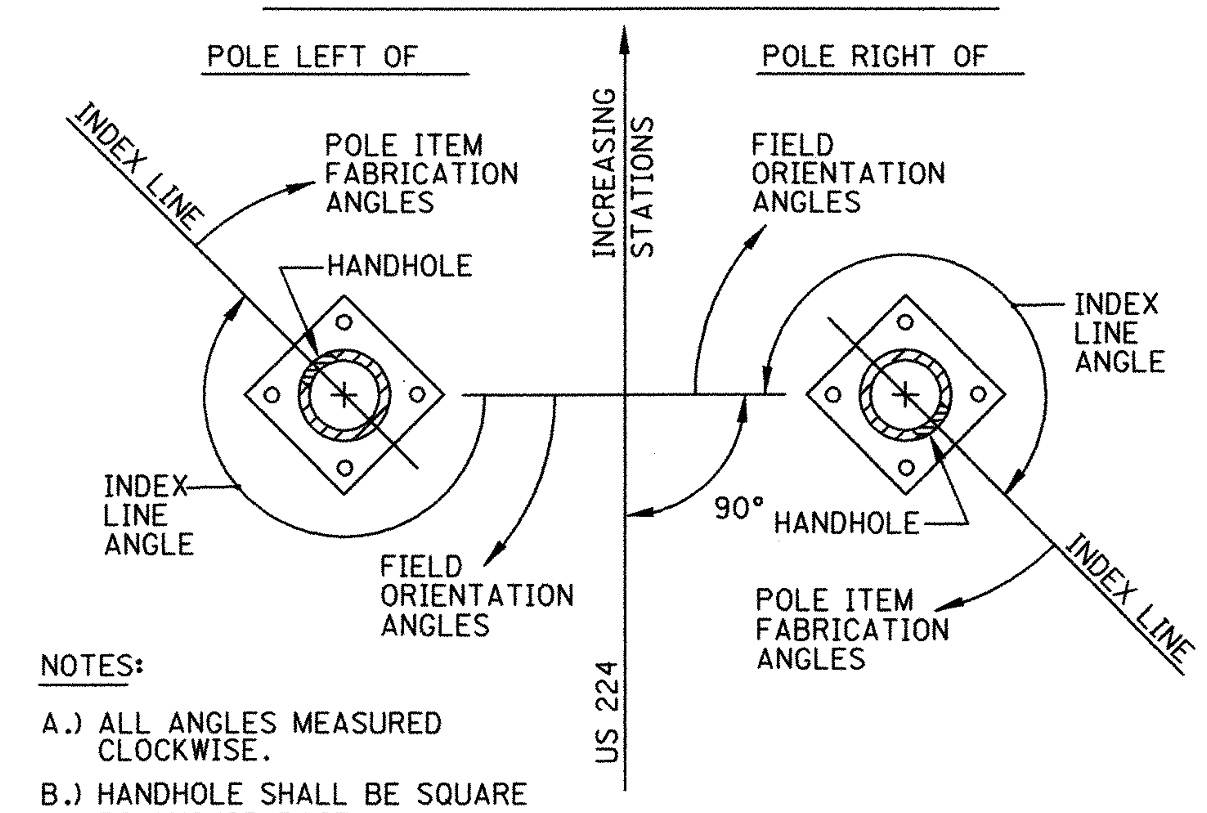
POR-224-0.00



NOTE: POWER CABLE TO BE MOVED BY OTHERS

ELEVATION VIEW

SIGNAL POLE ORIENTATION DETAIL



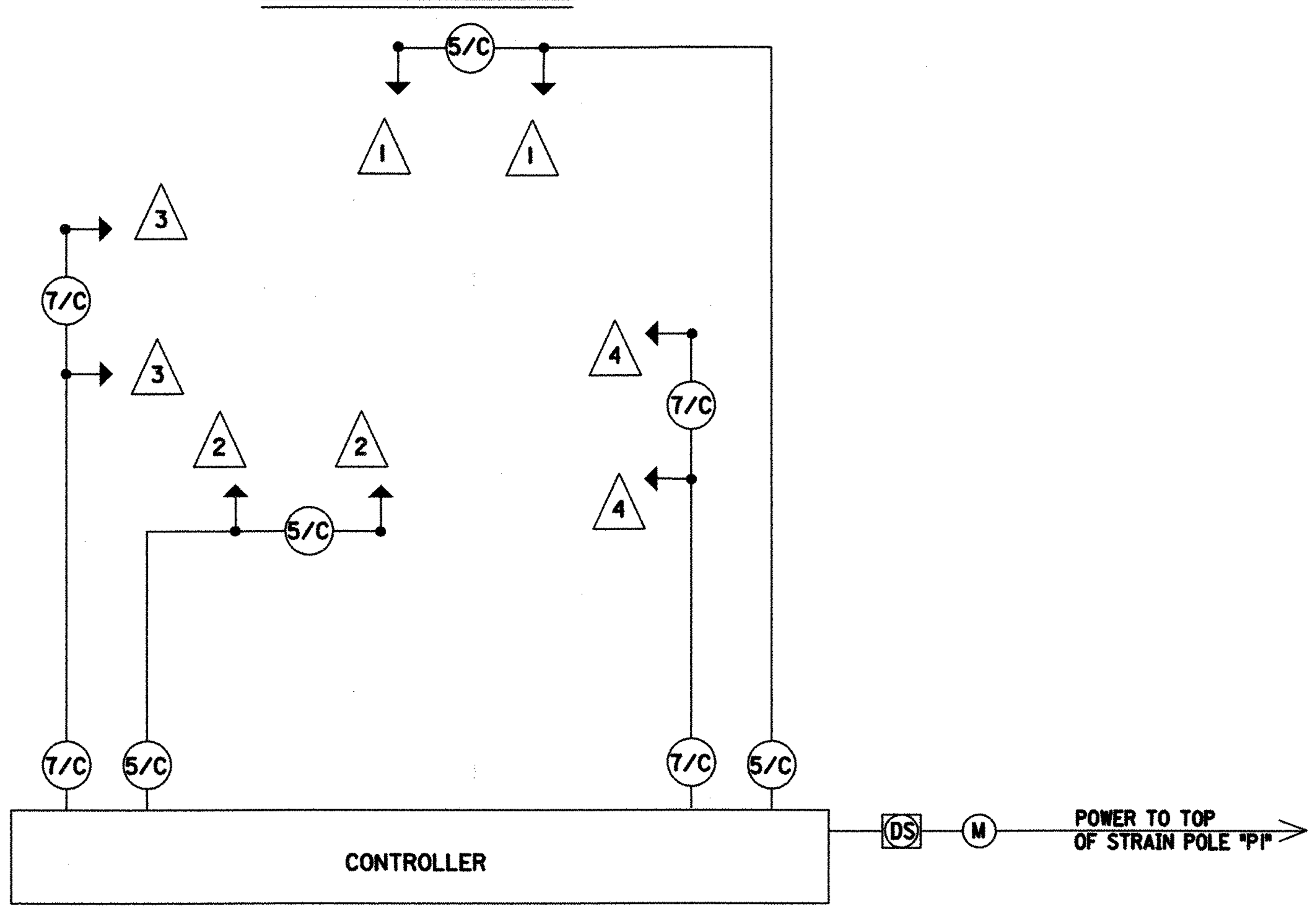
NOTES:

A.) ALL ANGLES MEASURED CLOCKWISE.

B.) HANDHOLE SHALL BE SQUARE TO ANCHOR BASE.

QUANTITIES			
ITEM	QUAN.	UNITS	DESCRIPTION
625		EACH	GROUND ROD
632		EACH	VEHICULAR SIGNAL HEAD, 1 SECTION, 12" LENS, 2-WAY, AS PER PLAN
632		EACH	VEHICULAR SIGNAL HEAD, 1 SECTION, 12" LENS, 4-WAY, AS PER PLAN
632		EACH	COVERING OF VEHICULAR SIGNAL HEAD
632		LF	MESSENGER WIRE, 7 STRAND, 3/8" DIAMETER WITH ACCESSORIES
632		LF	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG
632		LF	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG
632		EACH	STRAIN POLE FOUNDATION
632		LF	POWER CABLE, 3 CONDUCTOR, NO. 4 AWG
632		EACH	POWER SERVICE
632		EACH	STRAIN POLE, TYPE TC-81.10, DESIGN 6
633		EACH	FLASHER CONTROLLER
633		SQ. FT.	CONTROLLER WORKPAD

WIRING DIAGRAM



WIRING DIAGRAM LEGEND

PROPOSED VEHICULAR SIGNAL HEAD

SIGNAL HEAD I.D. NUMBER

5/C — 5/C #14 AWG.

7/C — 7/C #14 AWG.

DS — DISCONNECT SWITCH

M — METER

SUPPORT NO.	SIGNAL SUPPORT TYPE TC-81.10: POLE DESIGN NO.	POLE HEIGHT (FT)							INDEX LINE ANGLE (DEG.)	ORIENTATION ANGLES (DEG.) FROM INDEX LINE: METER AND DISCONNECT SWITCH		CABLE ENTRANCE 12" FROM TOP	POWER SERVICE	CONTROLLER	HANDHOLE	2" CAPPED CONDUIT ELL (FUTURE USE)	
P1	6	30							135	90		180	90	270	0	135	
P2	6	30							135			180			0	135	

FOR ADDITIONAL SIGNAL INFORMATION SEE SHEET __.

CALCULATED

CHECKED

SIGNAL DETAILS
US 224 AT MARTIN ROAD

POR-224-0.00

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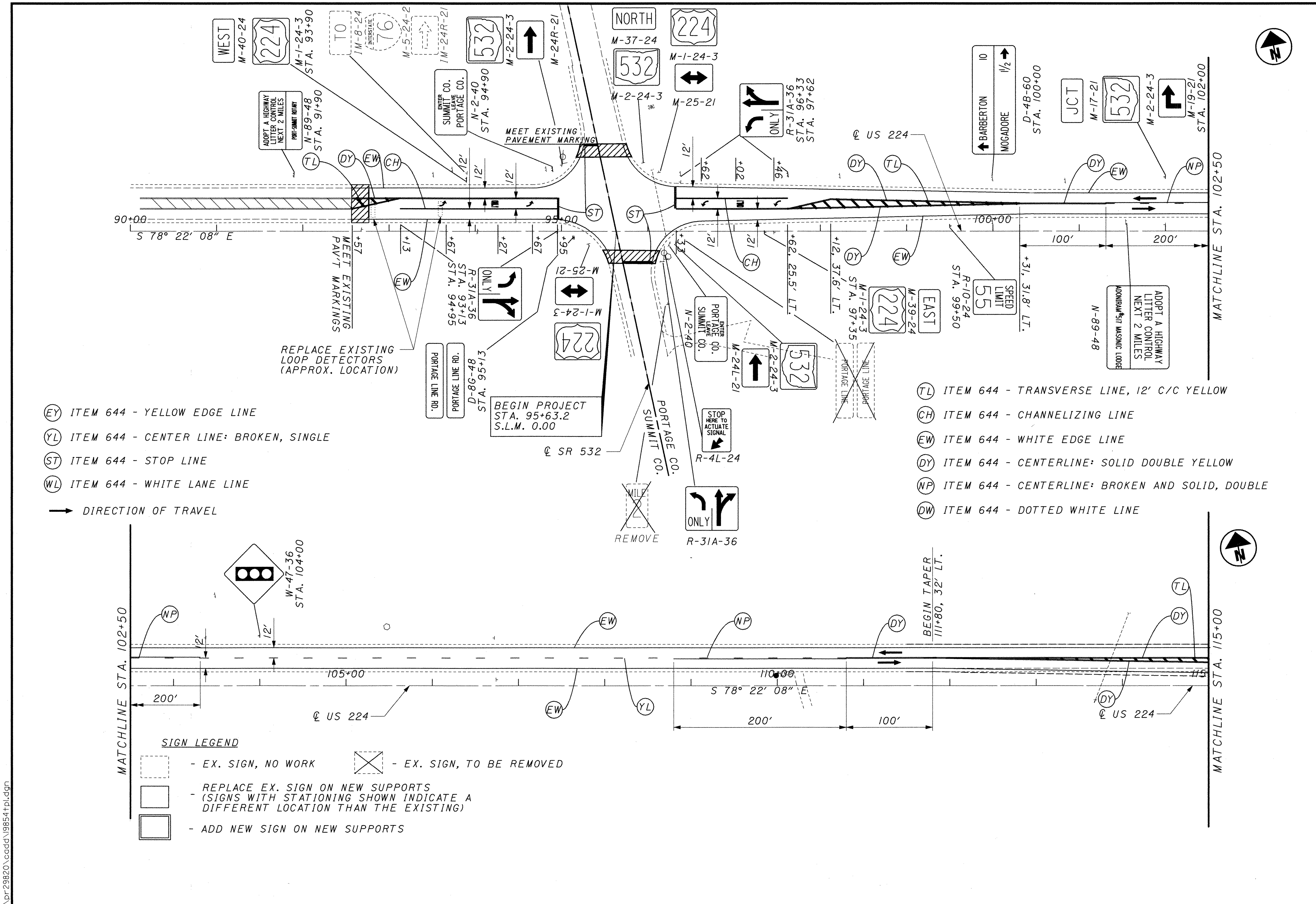

CALCULATED

CHECKED

PLAN SHEET - S.R. 224
STA. 90+00 TO STA. 115+00

POR-224-0.00

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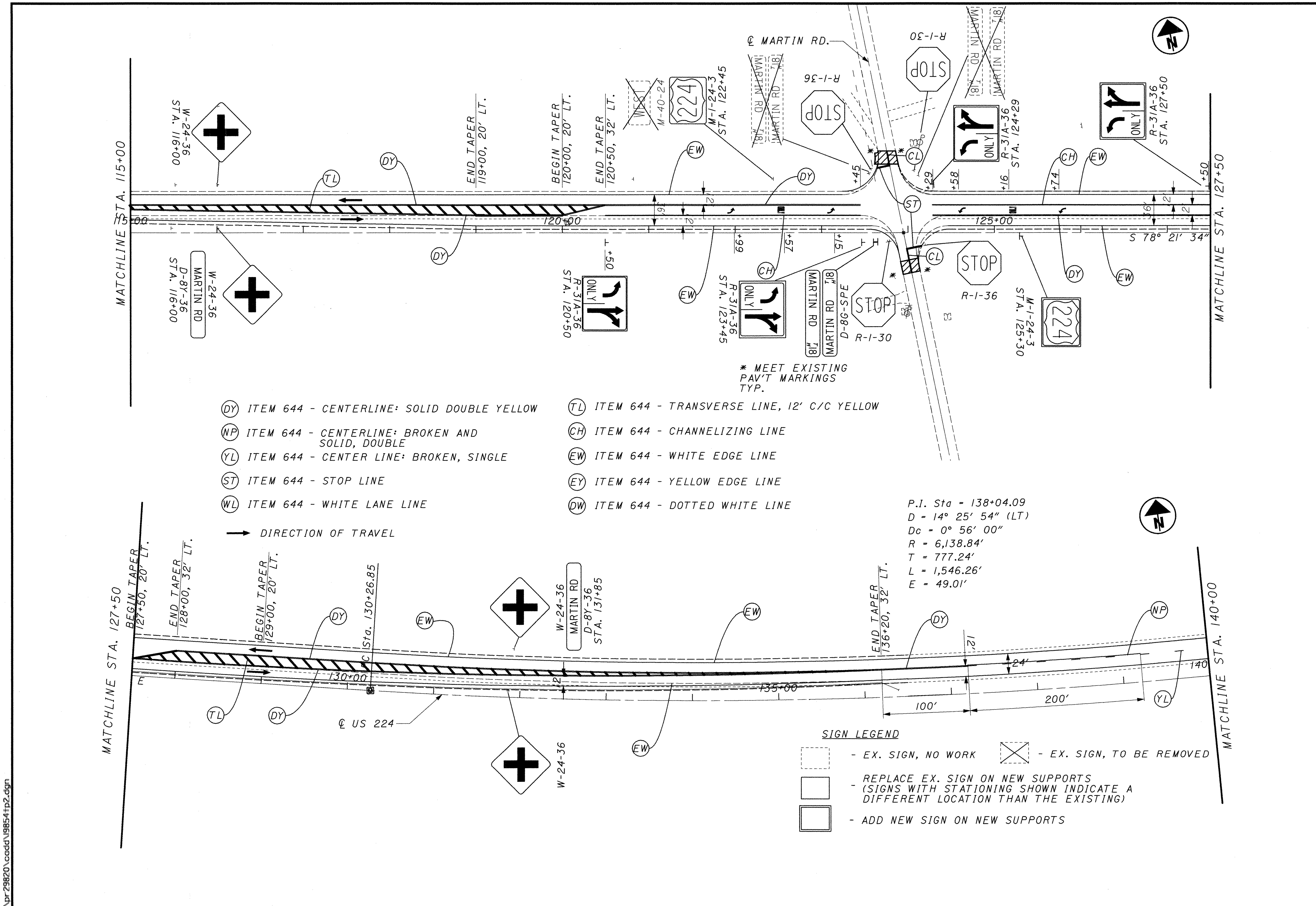

PLAN SHEET - S.R. 224
STA. 115+00 TO STA. 140+00

POR-224-0.00

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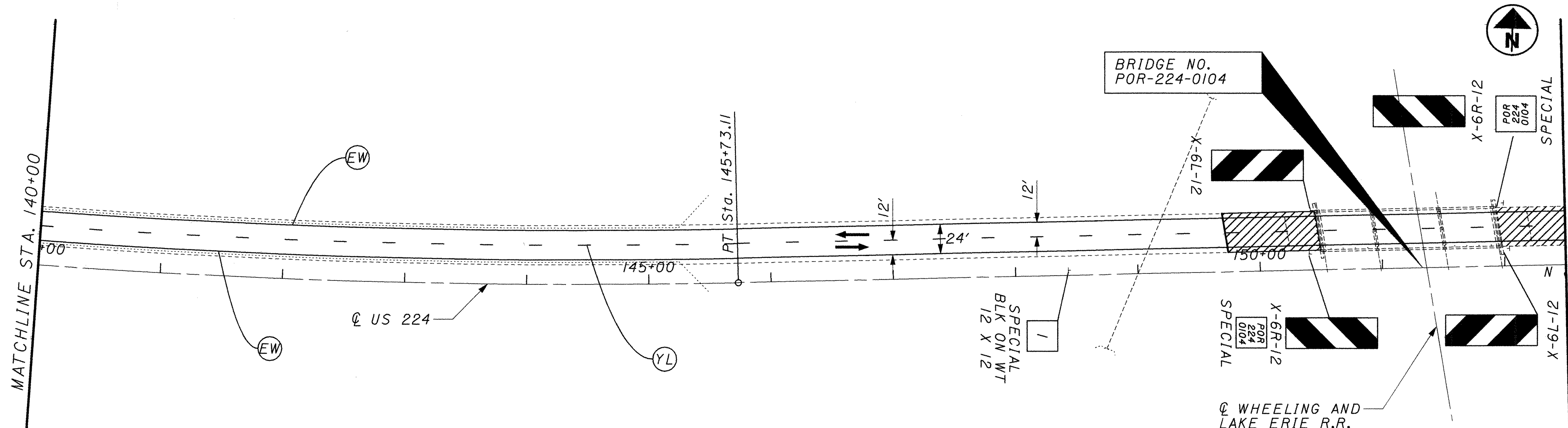


(DY) ITEM 644 - CENTERLINE: SOLID DOUBLE YELLOW

(NP) ITEM 644 - CENTERLINE: BROKEN AND SOLID, DOUBLE

(YL) ITEM 644 - CENTER LINE: BROKEN, SINGLE

(ST) ITEM 644 - STOP LINE

(WL) ITEM 644 - WHITE LANE LINE

→ DIRECTION OF TRAVEL

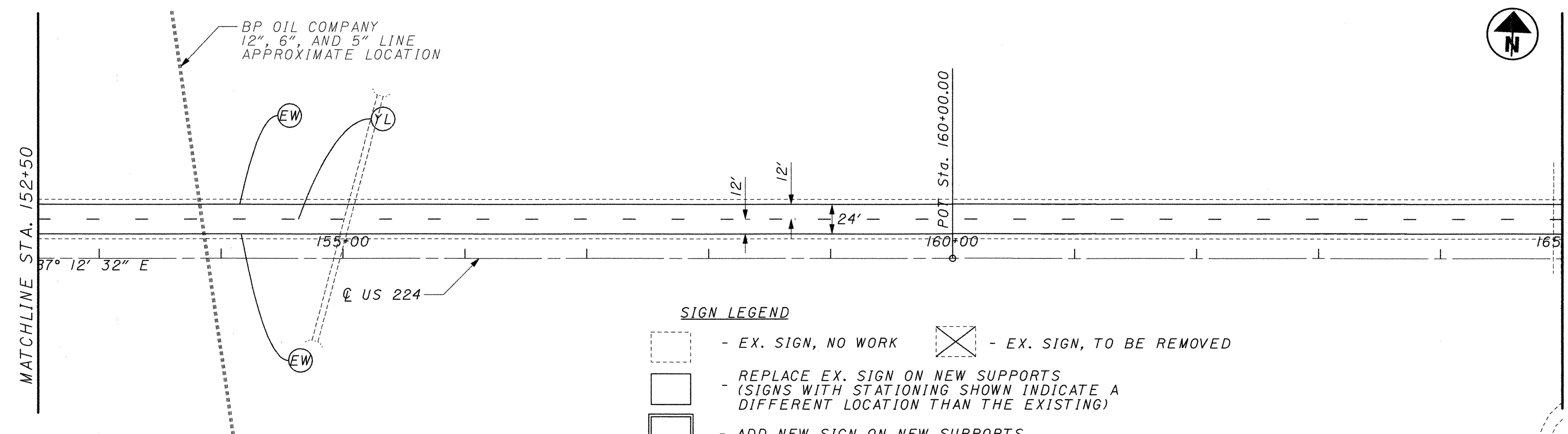
(TL) ITEM 644 - TRANSVERSE LINE, 12' C/C YELLOW

(CH) ITEM 644 - CHANNELIZING LINE

(EW) ITEM 644 - WHITE EDGE LINE

(EY) ITEM 644 - YELLOW EDGE LINE

(DW) ITEM 644 - DOTTED WHITE LINE



SIGN LEGEND

- EX. SIGN, NO WORK
- EX. SIGN, TO BE REMOVED
- REPLACE EX. SIGN ON NEW SUPPORTS (SIGNS WITH STATIONING SHOWN INDICATE A DIFFERENT LOCATION THAN THE EXISTING)
- ADD NEW SIGN ON NEW SUPPORTS

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 140+00 TO STA. 165+00

POR-224-0.00

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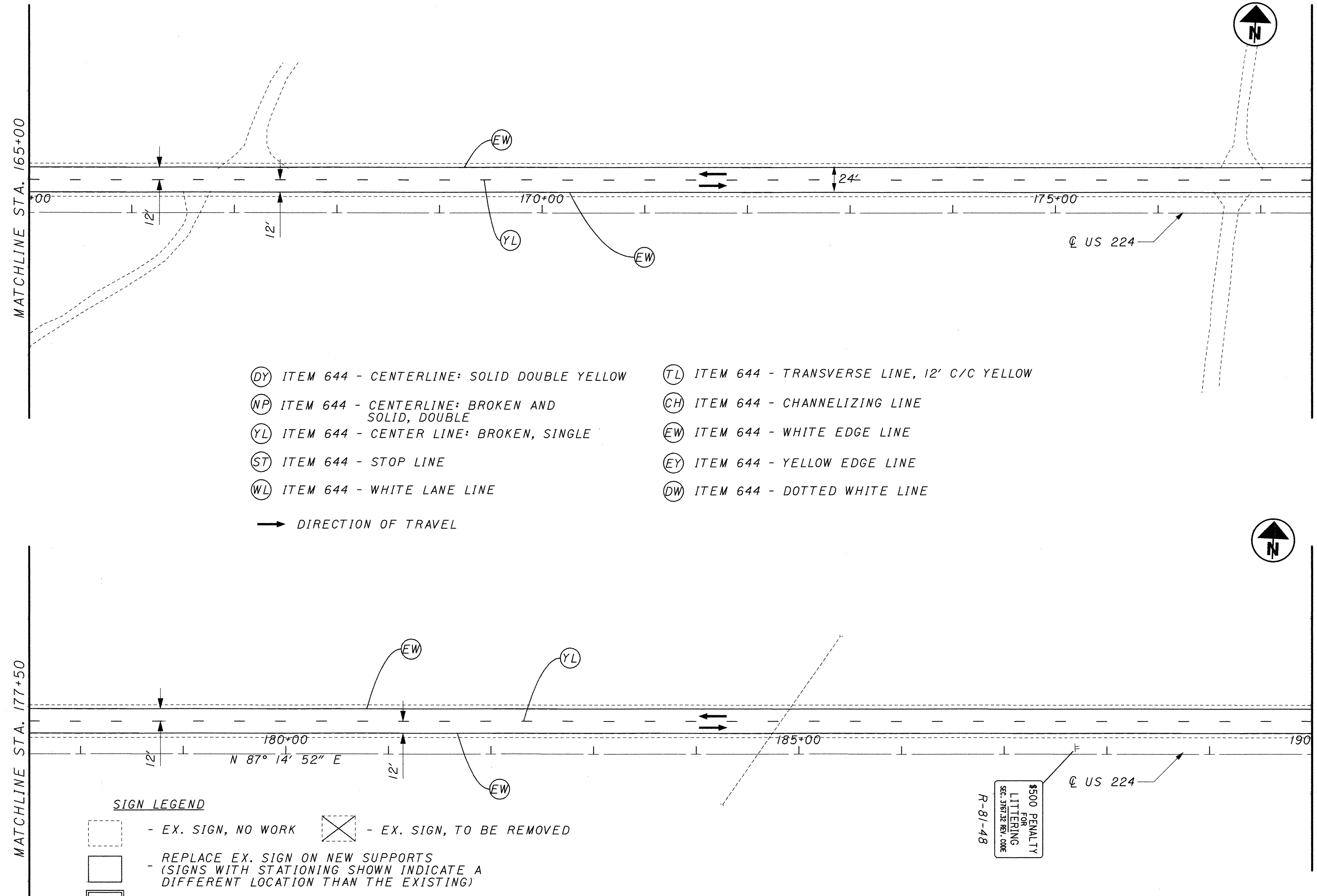

(DY) ITEM 644 - CENTERLINE: SOLID DOUBLE YELLOW
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(YL) ITEM 644 - CENTER LINE: BROKEN, SINGLE
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(DW) ITEM 644 - DOTTED WHITE LINE

→ DIRECTION OF TRAVEL

SIGN LEGEND

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- EX. SIGN, TO BE REMOVED
- REPLACE EX. SIGN ON NEW SUPPORTS (SIGNS WITH STATIONING SHOWN INDICATE A DIFFERENT LOCATION THAN THE EXISTING)
- ADD NEW SIGN ON NEW SUPPORTS

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 165+00 TO STA. 190+00

POR-224-0.00

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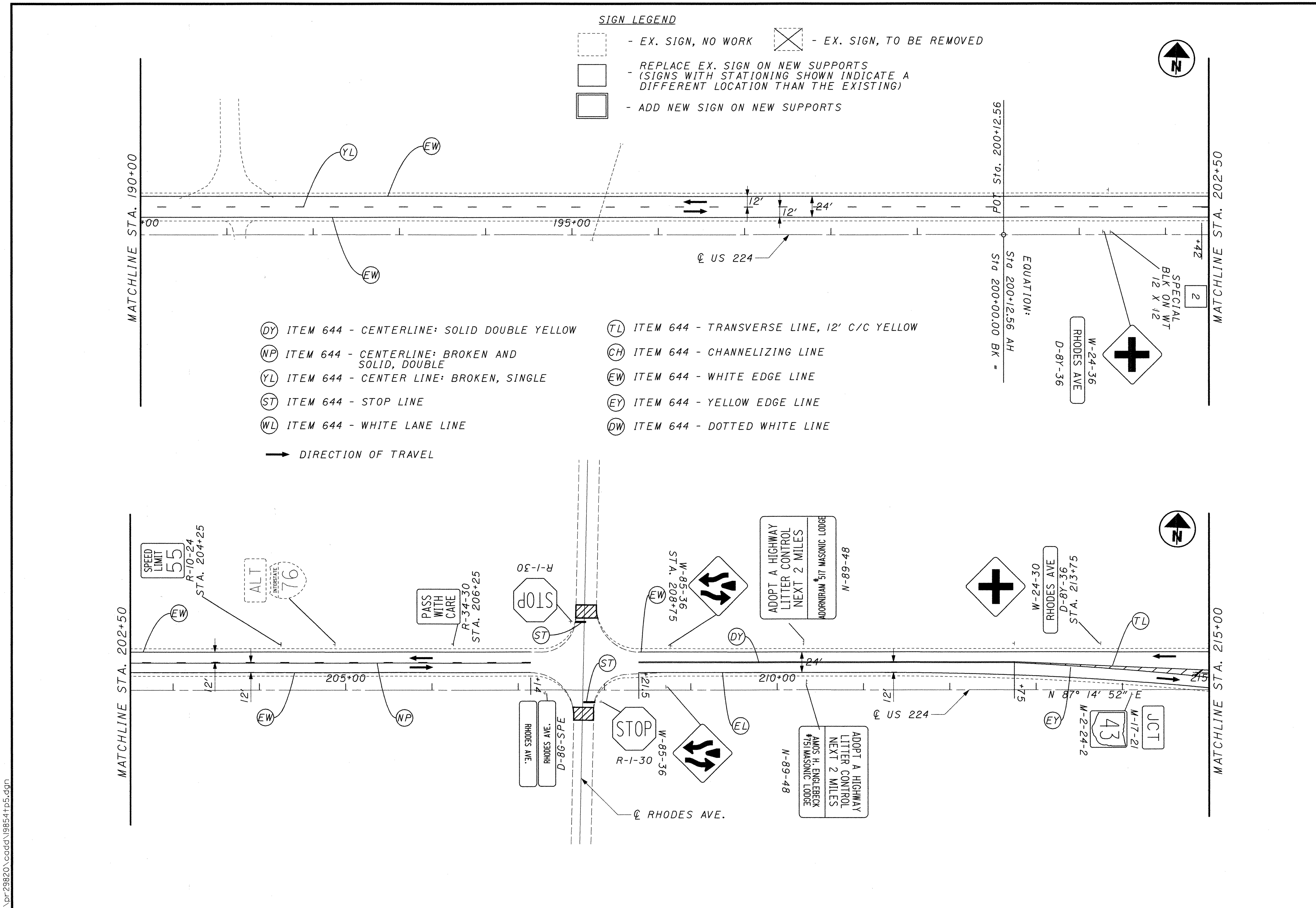


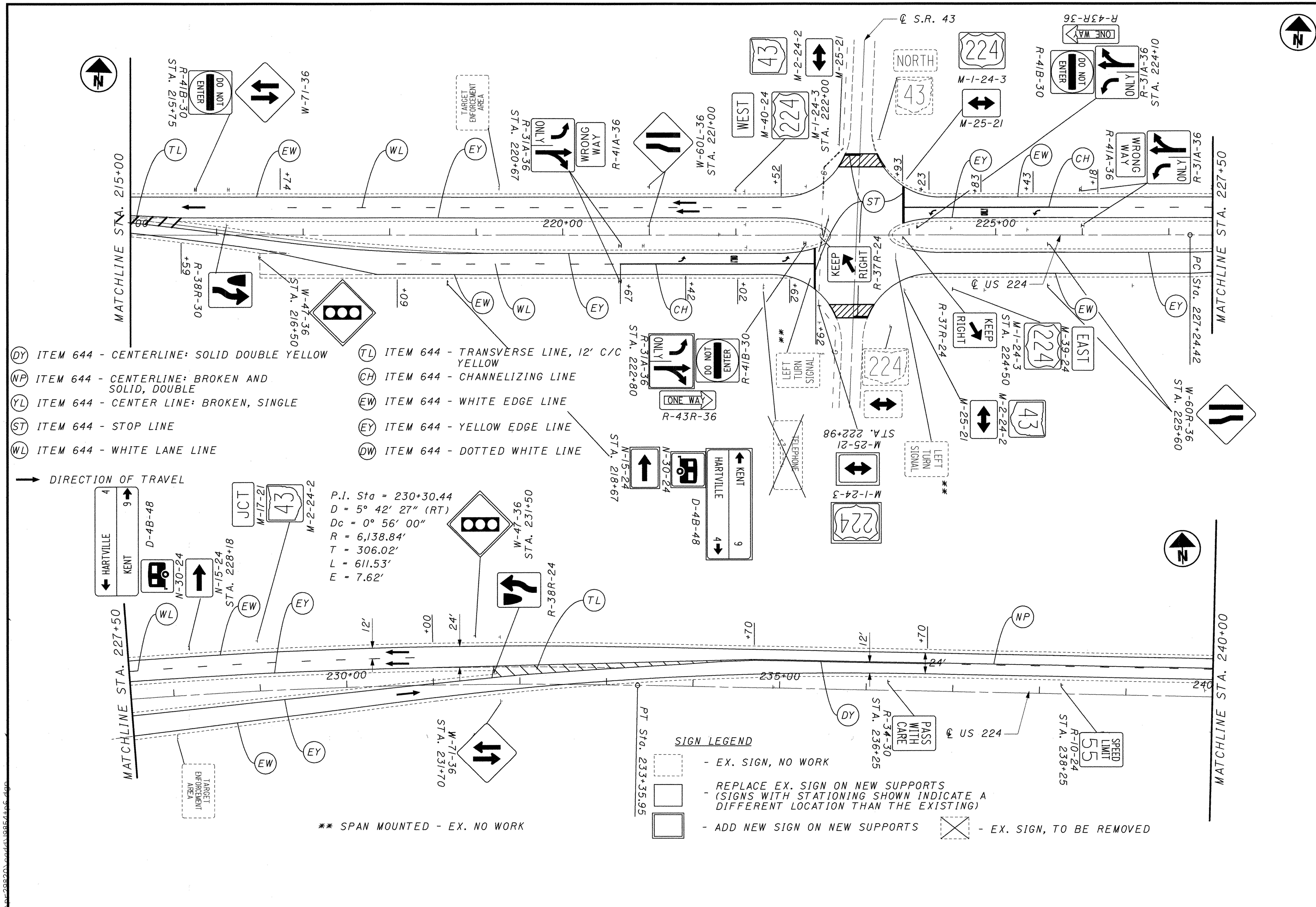
0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED

CHECKED

PLAN SHEET - S.R. 224
STA. 190+00 TO STA. 215+00

POR-224-0.00



DY ITEM 644 - CENTERLINE: SOLID DOUBLE YELLOW

NP ITEM 644 - CENTERLINE: BROKEN AND SOLID, DOUBLE

YL ITEM 644 - CENTER LINE: BROKEN, SINGLE

ST ITEM 644 - STOP LINE

WL ITEM 644 - WHITE LANE LINE

TL ITEM 644 - TRANSVERSE LINE, 12' C/C YELLOW

CH ITEM 644 - CHANNELIZING LINE

EW ITEM 644 - WHITE EDGE LINE

EY ITEM 644 - YELLOW EDGE LINE

DW ITEM 644 - DOTTED WHITE LINE

→ DIRECTION OF TRAVEL

P.I. Sta = 230+30.44
D = 5° 42' 27" (RT)
Dc = 0° 56' 00"
R = 6,138.84'
T = 306.02'
L = 611.53'
E = 7.62'

SIGN LEGEND

- EX. SIGN, NO WORK
- REPLACE EX. SIGN ON NEW SUPPORTS (SIGNS WITH STATIONING SHOWN INDICATE A DIFFERENT LOCATION THAN THE EXISTING)
- ADD NEW SIGN ON NEW SUPPORTS
- EX. SIGN, TO BE REMOVED

** SPAN MOUNTED - EX. NO WORK

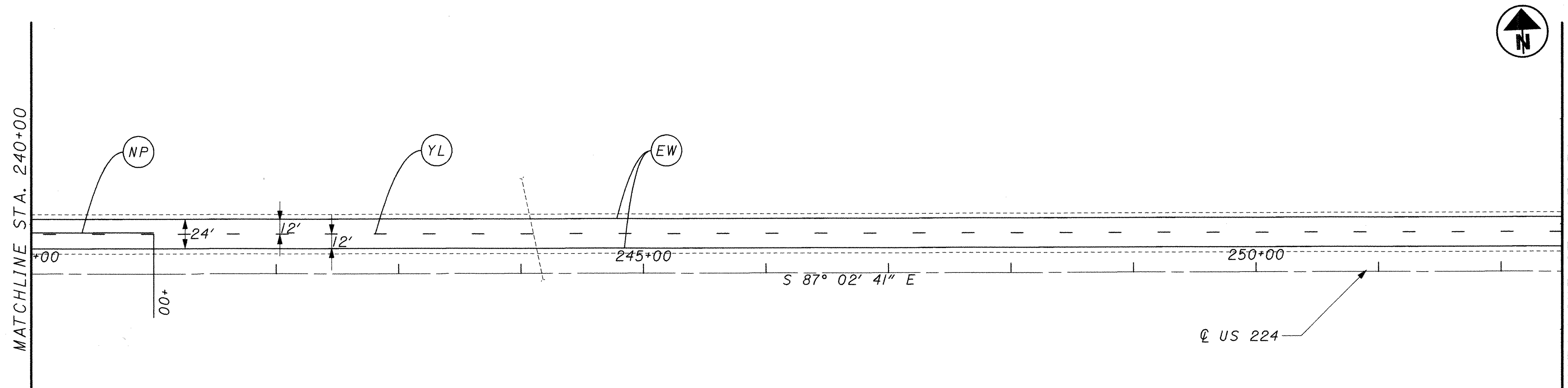
HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED

CHECKED

PLAN SHEET - S.R. 224
STA. 215+00 TO STA. 240+00

POR-224-0.00



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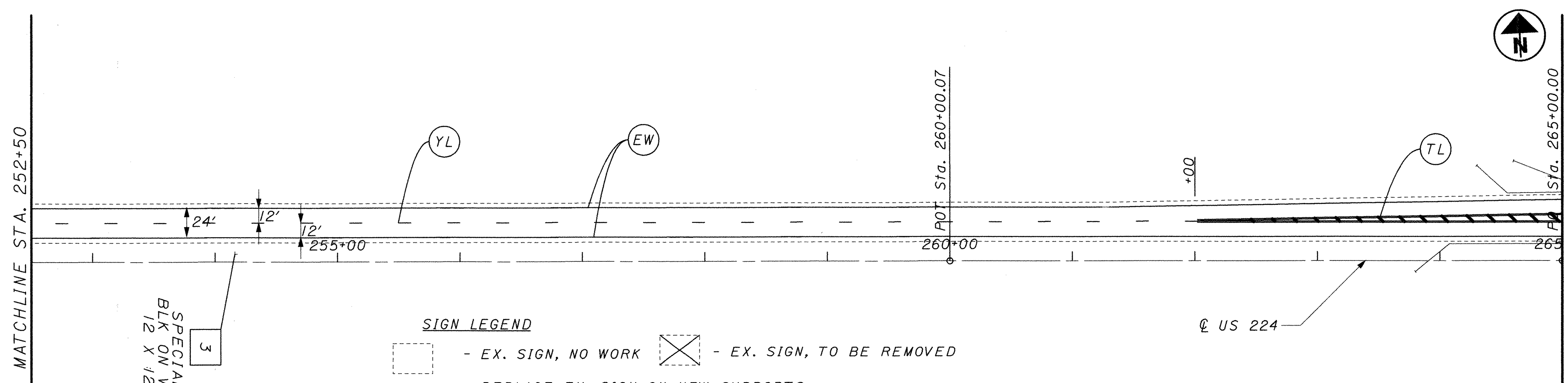
→ DIRECTION OF TRAVEL



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- ADD NEW SIGN ON NEW SUPPORTS

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 240+00 TO STA. 265+00

POR-224-0.00

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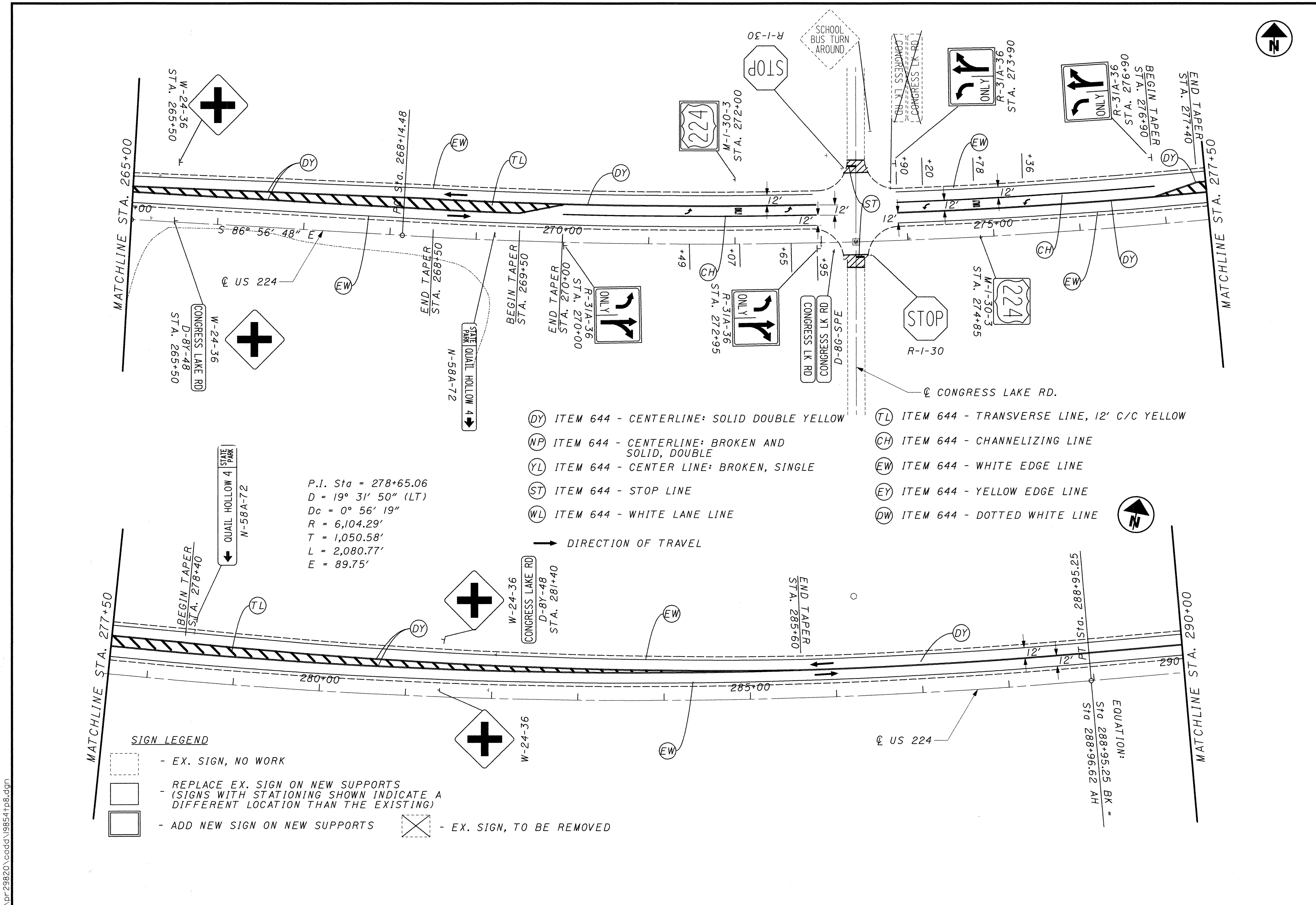

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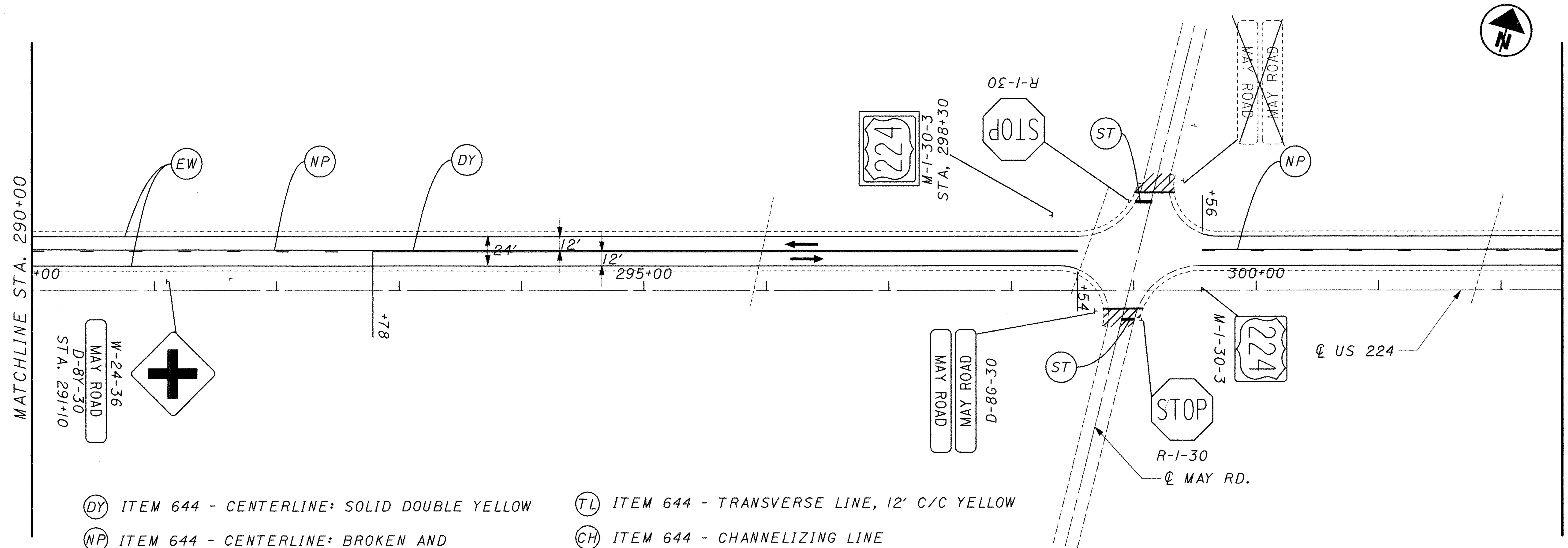
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED

CHECKED

PLAN SHEET - S.R. 224
STA. 265+00 TO STA. 290+00

POR-224-0.00



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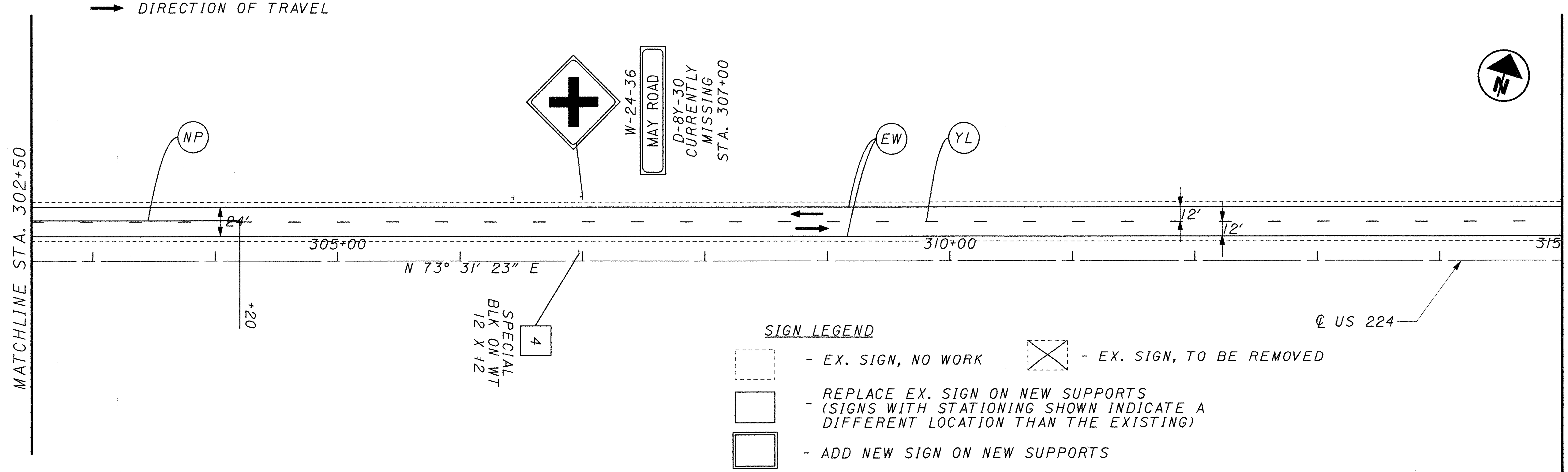


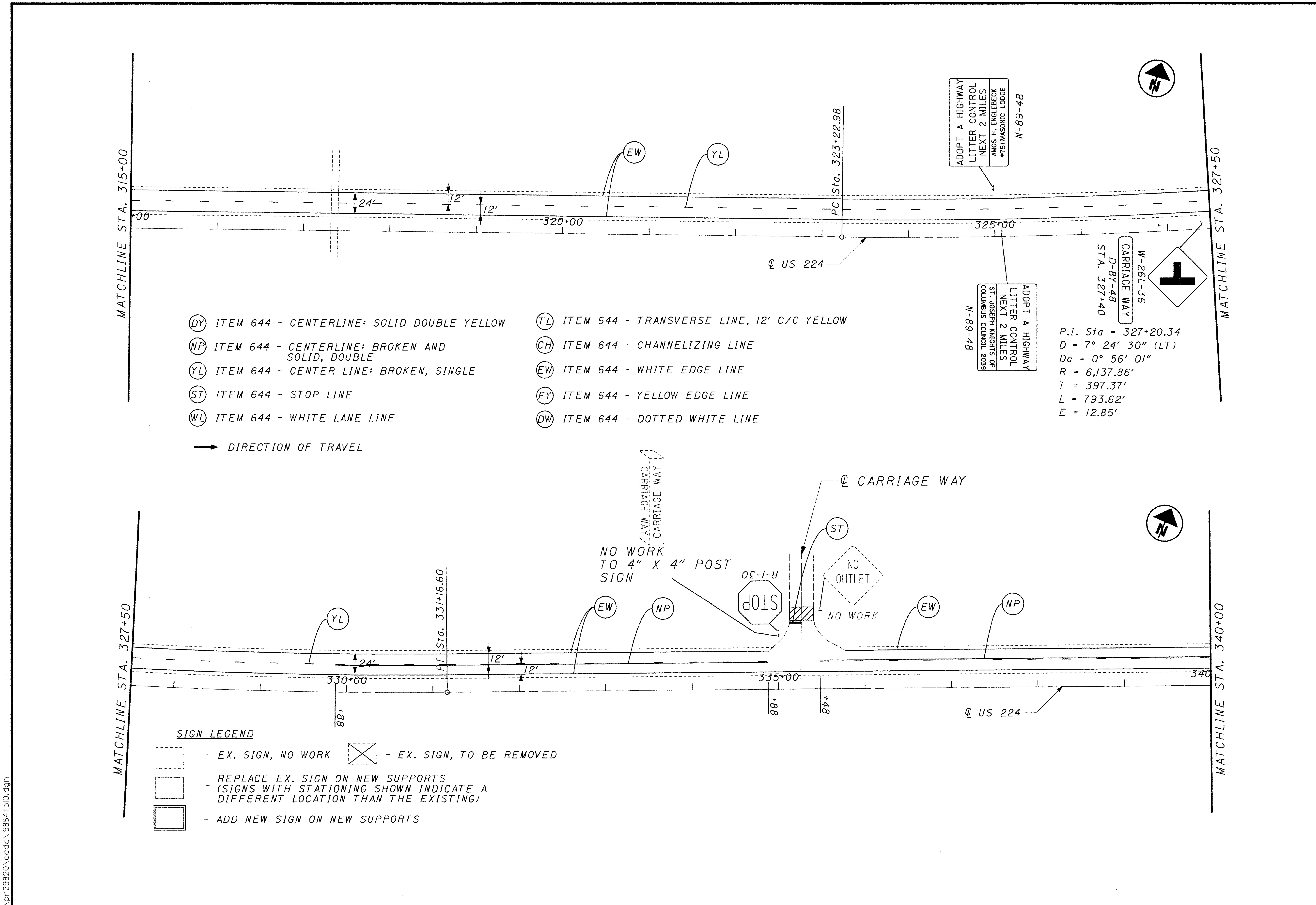
0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 290+00 TO STA. 315+00

POR-224-0.00

p:\pr29820\cadd\19854tp9.dgn



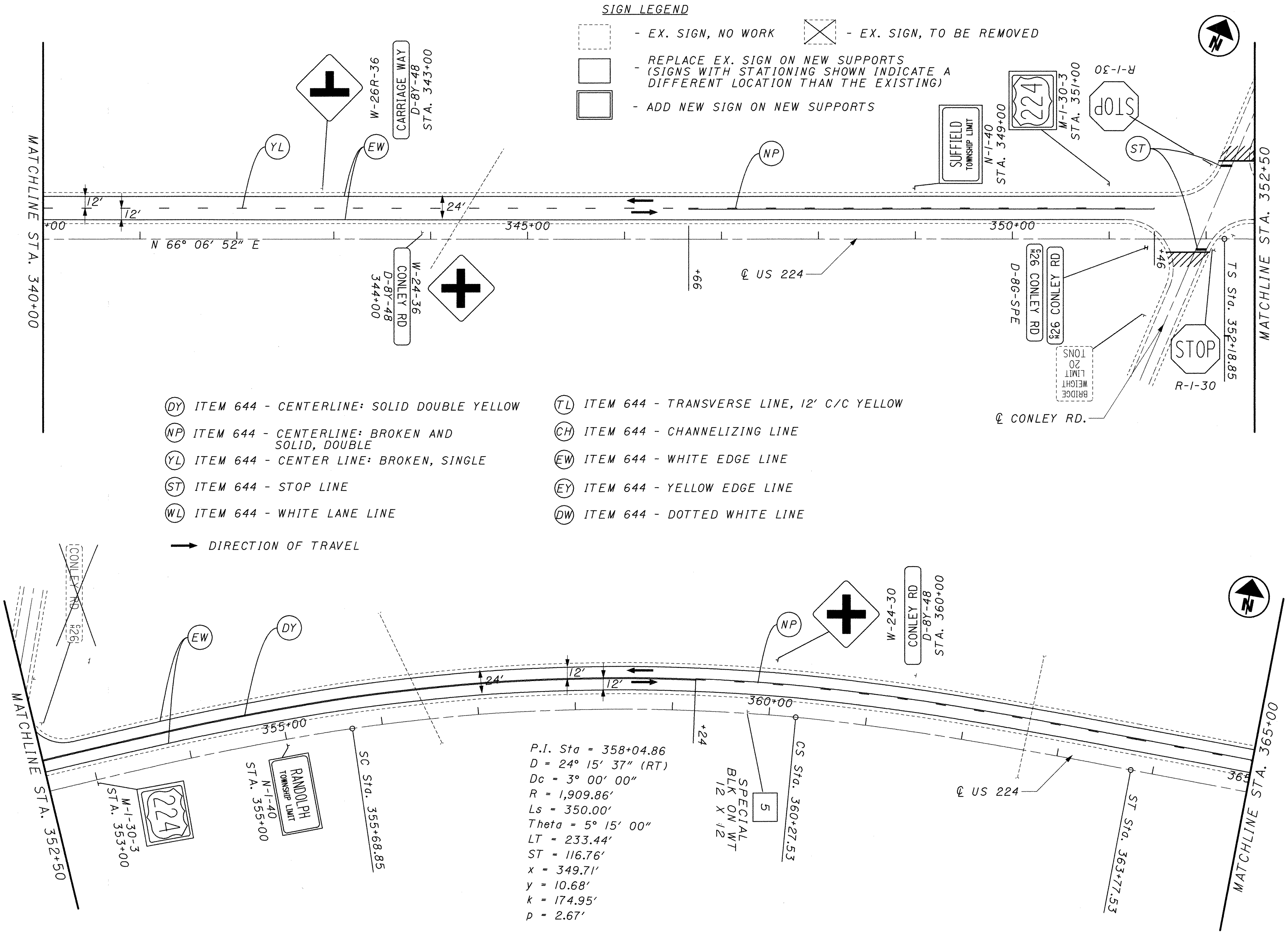
0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED

CHECKED

PLAN SHEET - S.R. 224
STA. 315+00 TO STA. 340+00

POR-224-0.00



P.I. Sta = 358+04.86
D = 24° 15' 37" (RT)
Dc = 3° 00' 00"
R = 1,909.86'
Ls = 350.00'
Theta = 5° 15' 00"
LT = 233.44'
ST = 116.76'
x = 349.71'
y = 10.68'
k = 174.95'
p = 2.67'

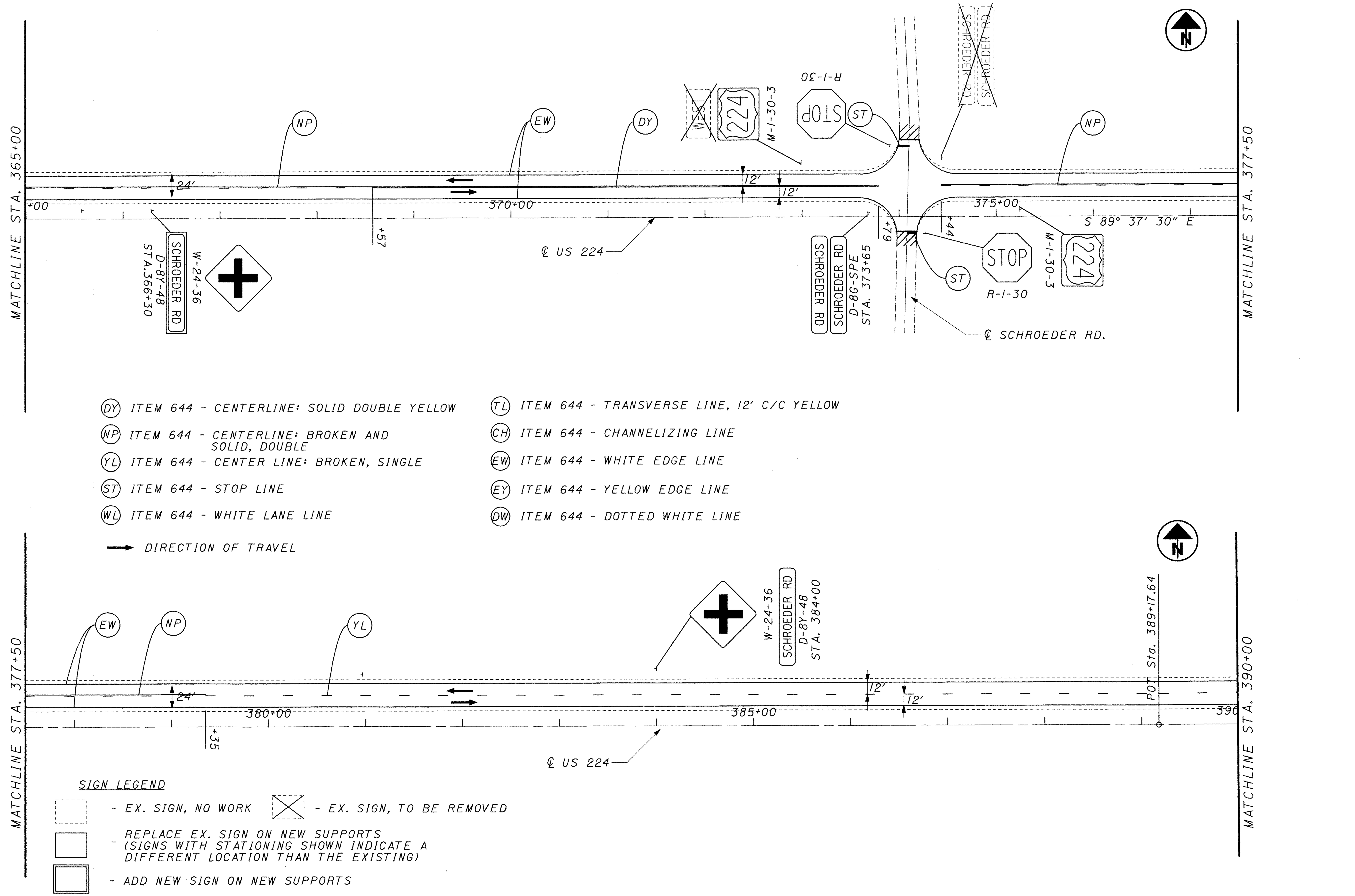
HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED CHECKED

PLAN SHEET - S.R. 224
STA. 340+00 TO STA. 365+00

POR-224-0.00

p:\pr29820\cadd\9854+pll.dgn



CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 365+00 TO STA. 390+00

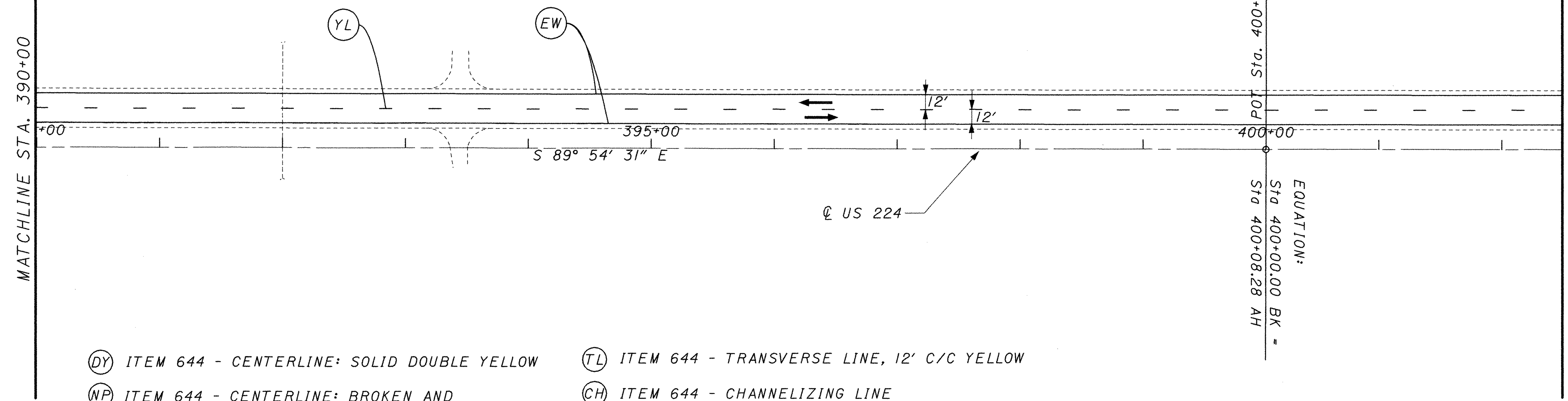
POR-224-0.00

137
169

p:\pr29820\cadd\19854tpl2.dgn

SIGN LEGEND

- EX. SIGN, NO WORK
- EX. SIGN, TO BE REMOVED
- REPLACE EX. SIGN ON NEW SUPPORTS (SIGNS WITH STATIONING SHOWN INDICATE A DIFFERENT LOCATION THAN THE EXISTING)
- ADD NEW SIGN ON NEW SUPPORTS



(DY) ITEM 644 - CENTERLINE: SOLID DOUBLE YELLOW

(NP) ITEM 644 - CENTERLINE: BROKEN AND SOLID, DOUBLE

(YL) ITEM 644 - CENTER LINE: BROKEN, SINGLE

(ST) ITEM 644 - STOP LINE

(WL) ITEM 644 - WHITE LANE LINE

(TL) ITEM 644 - TRANSVERSE LINE, 12' C/C YELLOW

(CH) ITEM 644 - CHANNELIZING LINE

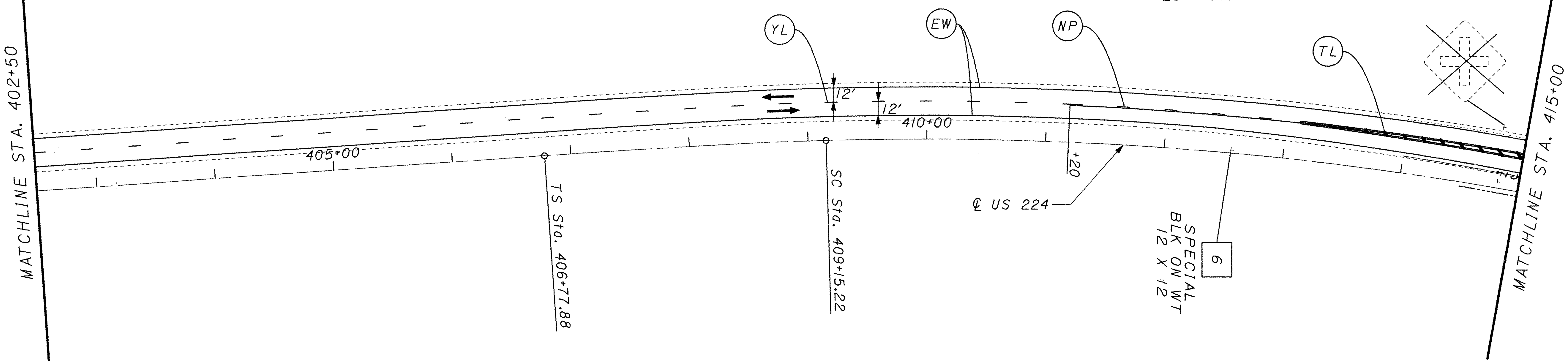
(EW) ITEM 644 - WHITE EDGE LINE

(EY) ITEM 644 - YELLOW EDGE LINE

(DW) ITEM 644 - DOTTED WHITE LINE

→ DIRECTION OF TRAVEL

P.I. Sta = 412+64.55
D = 18° 32' 25" (RT)
Dc = 2° 00' 00"
R = 2,864.79'
Dc = 13° 40' 00" (RT)
Lc = 683.34'
Es = 38.78'



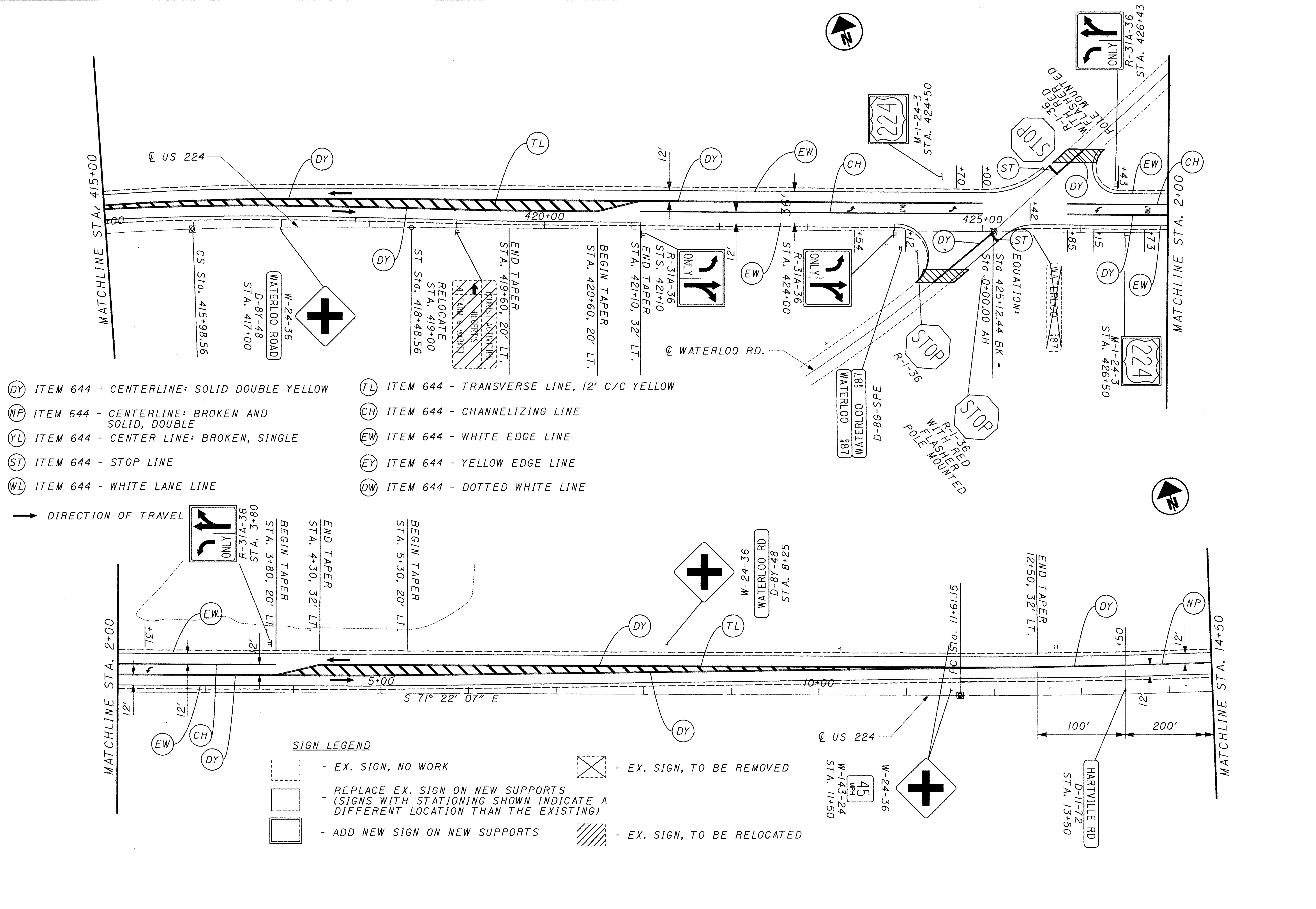
0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 390+00 TO STA. 415+00

POR-224-0.00

p:\pr29820\cadd\19854tpl3.dgn

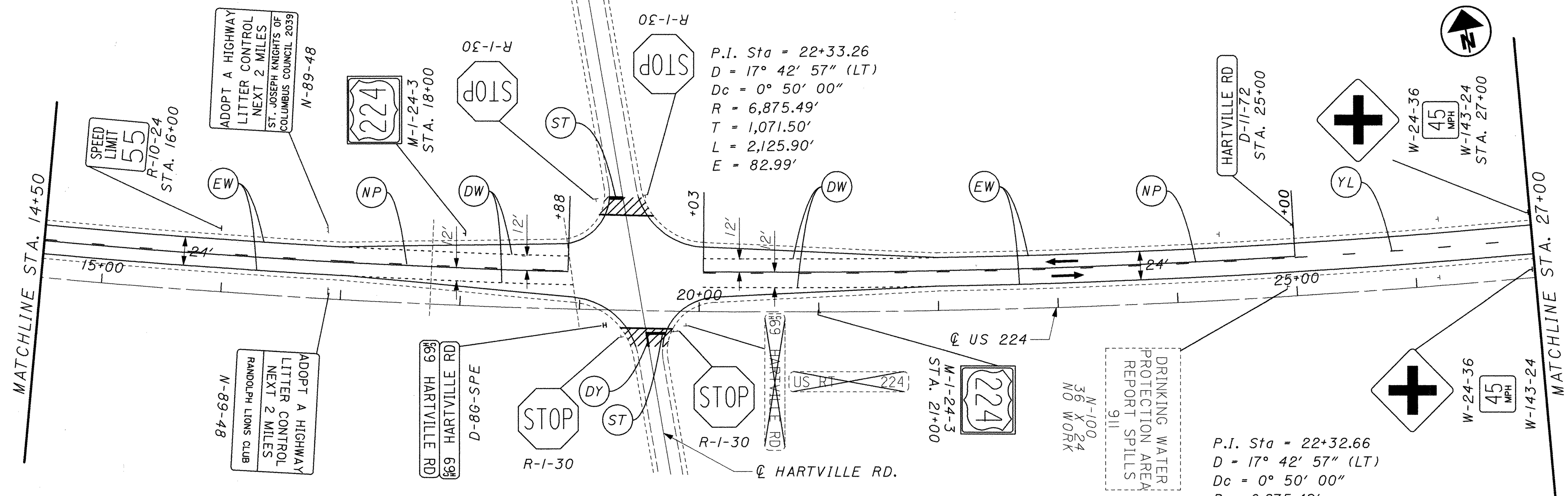


CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 415+00 TO STA. 14+50

POR-224-0.00

p:\pr29820\cadd\19854tpl4.dgn



(DY) ITEM 644 - CENTERLINE: SOLID DOUBLE YELLOW

(NP) ITEM 644 - CENTERLINE: BROKEN AND SOLID, DOUBLE

(YL) ITEM 644 - CENTER LINE: BROKEN, SINGLE

(ST) ITEM 644 - STOP LINE

(WL) ITEM 644 - WHITE LANE LINE

(TL) ITEM 644 - TRANSVERSE LINE, 12′ C/C YELLOW

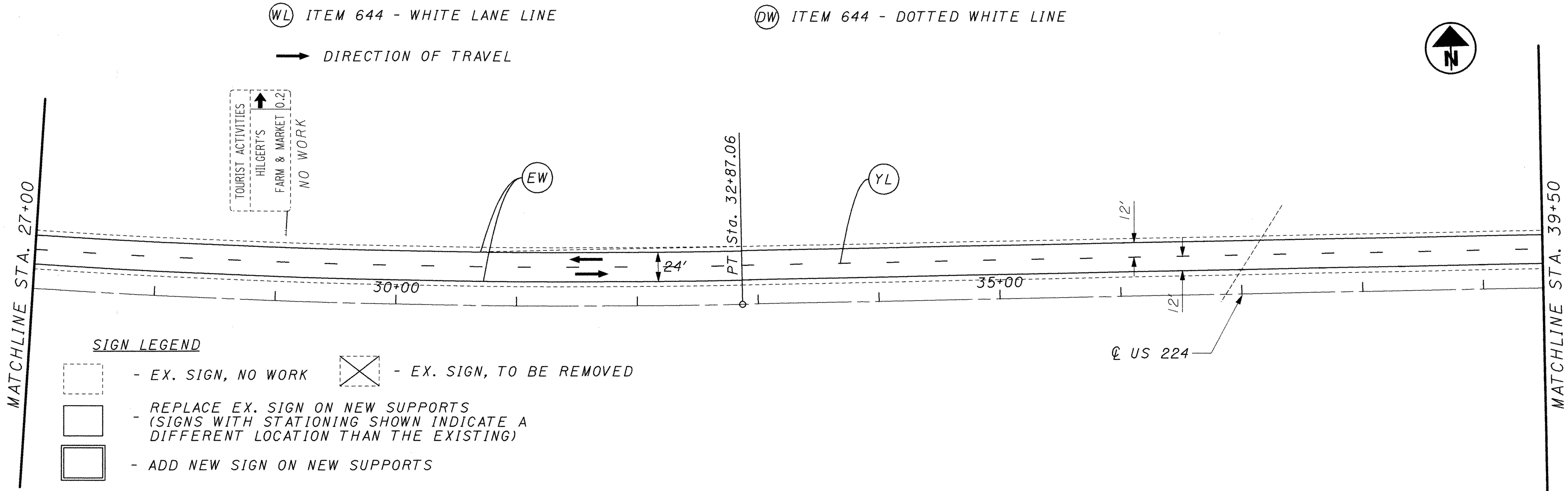
(CH) ITEM 644 - CHANNELIZING LINE

(EW) ITEM 644 - WHITE EDGE LINE

(EY) ITEM 644 - YELLOW EDGE LINE

(DW) ITEM 644 - DOTTED WHITE LINE

→ DIRECTION OF TRAVEL



SIGN LEGEND

- EX. SIGN, NO WORK
- EX. SIGN, TO BE REMOVED
- REPLACE EX. SIGN ON NEW SUPPORTS (SIGNS WITH STATIONING SHOWN INDICATE A DIFFERENT LOCATION THAN THE EXISTING)
- ADD NEW SIGN ON NEW SUPPORTS

p:\pr29820\cadd\19854tpl5.dgn

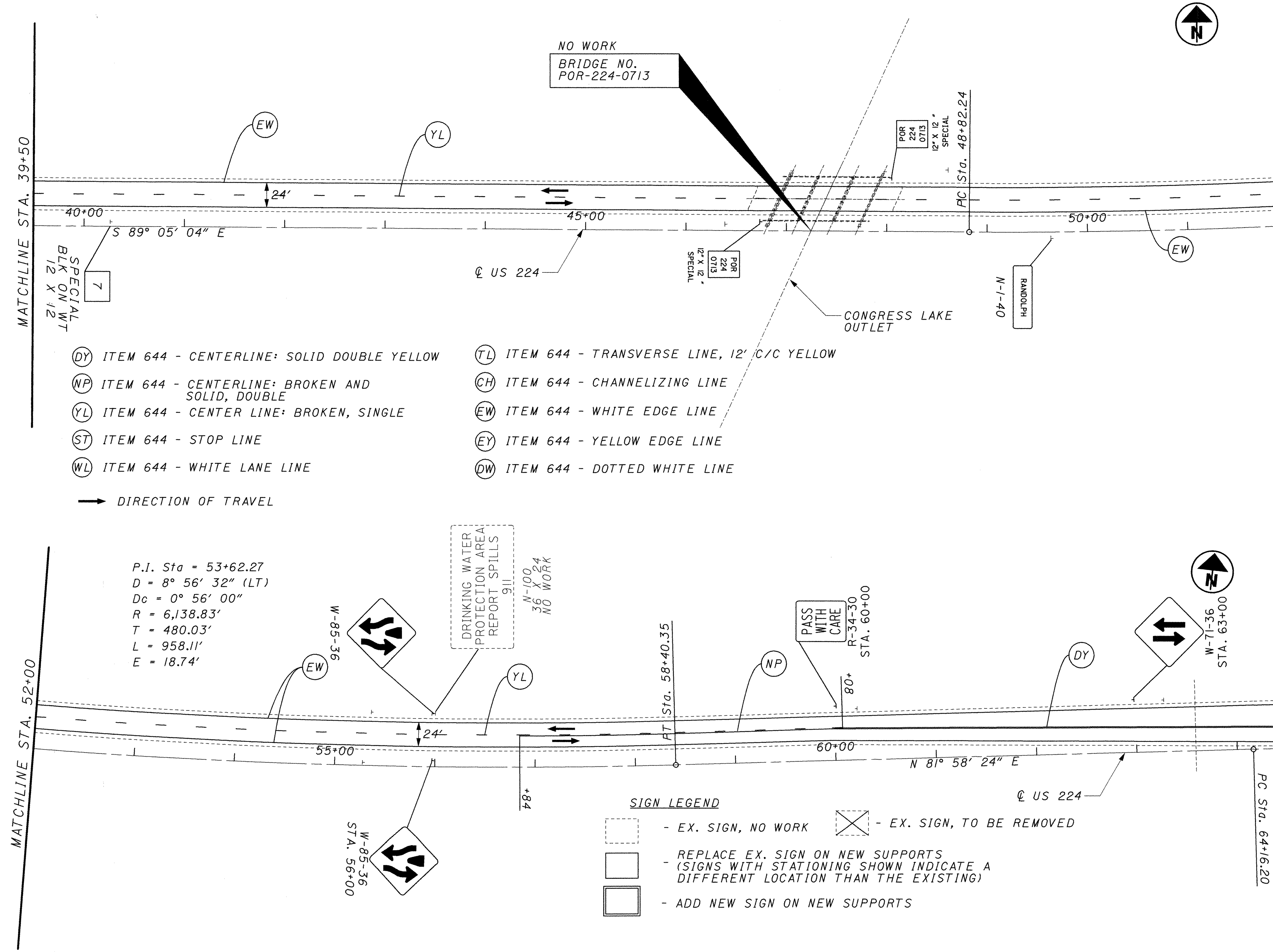
HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED

CHECKED

PLAN SHEET - S.R. 224
STA. 14+50 TO STA. 39+50

POR-224-0.00



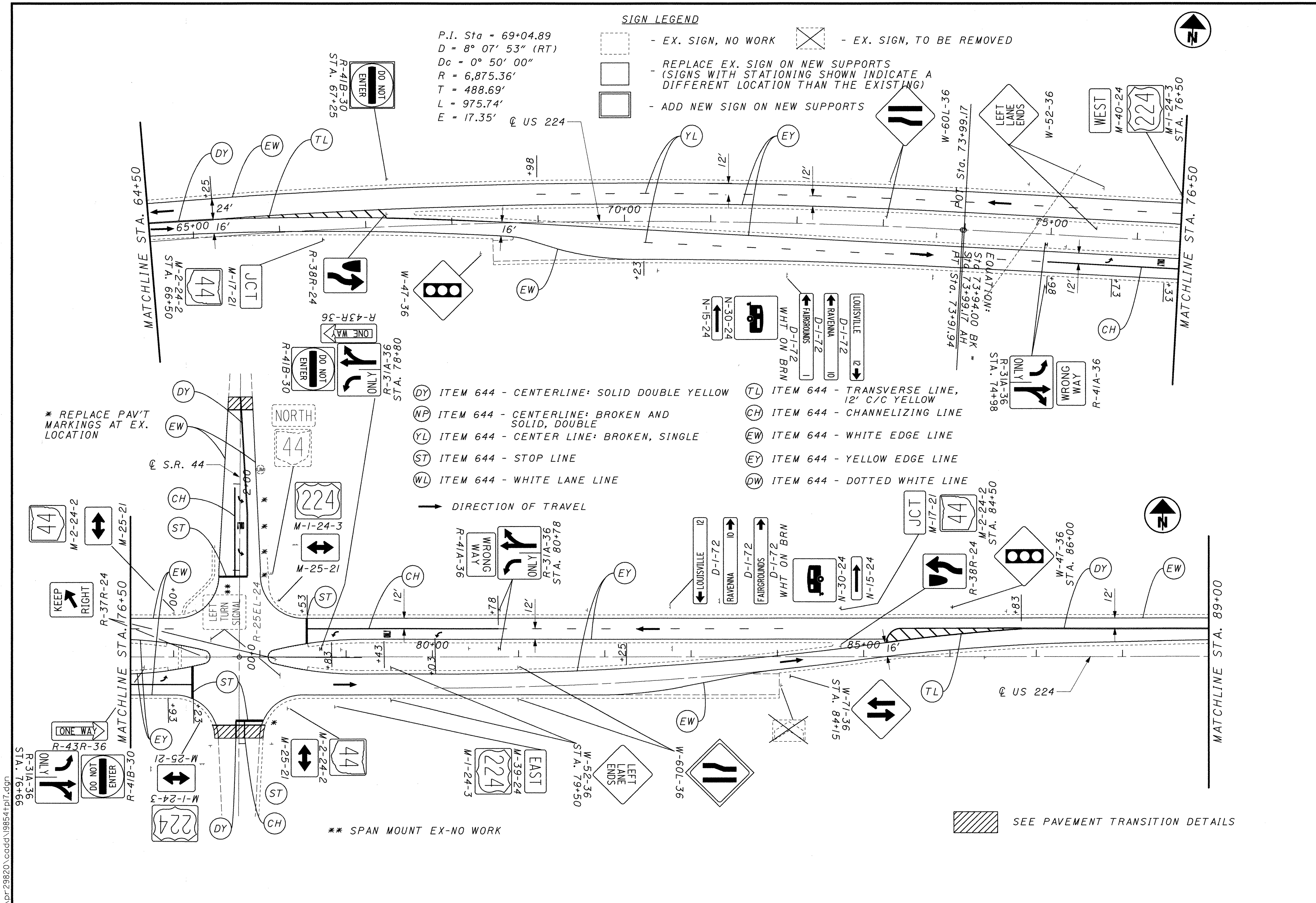
0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 39+50 TO STA. 64+50

POR-224-0.00

p:\pr29820\cadd\19854+p16.dgn

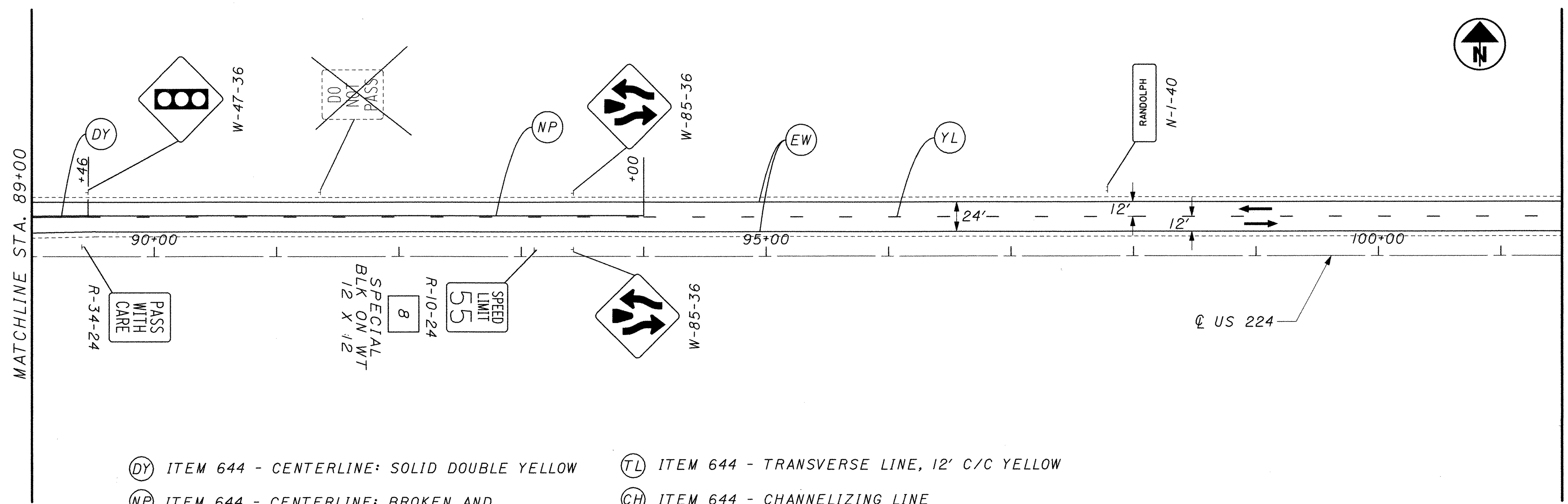


PLAN SHEET - S.R. 224
STA. 64+50 TO STA. 89+00

CALCULATED
CHECKED

POR-224-0.00

p:\pr29820\cadd\19854tp17.dgn



(DY) ITEM 644 - CENTERLINE: SOLID DOUBLE YELLOW

(NP) ITEM 644 - CENTERLINE: BROKEN AND SOLID, DOUBLE

(YL) ITEM 644 - CENTER LINE: BROKEN, SINGLE

(ST) ITEM 644 - STOP LINE

(WL) ITEM 644 - WHITE LANE LINE

(TL) ITEM 644 - TRANSVERSE LINE, 12' C/C YELLOW

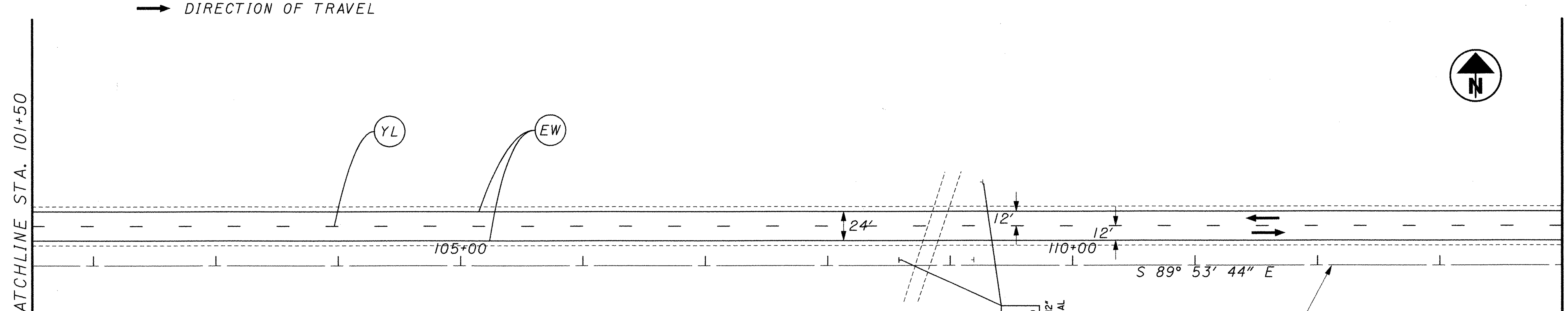
(CH) ITEM 644 - CHANNELIZING LINE

(EW) ITEM 644 - WHITE EDGE LINE

(EY) ITEM 644 - YELLOW EDGE LINE

(DW) ITEM 644 - DOTTED WHITE LINE

→ DIRECTION OF TRAVEL



SIGN LEGEND

- EX. SIGN, NO WORK
- EX. SIGN, TO BE REMOVED
- REPLACE EX. SIGN ON NEW SUPPORTS (SIGNS WITH STATIONING SHOWN INDICATE A DIFFERENT LOCATION THAN THE EXISTING)
- ADD NEW SIGN ON NEW SUPPORTS

0 25 50 100
HORIZONTAL SCALE IN FEET

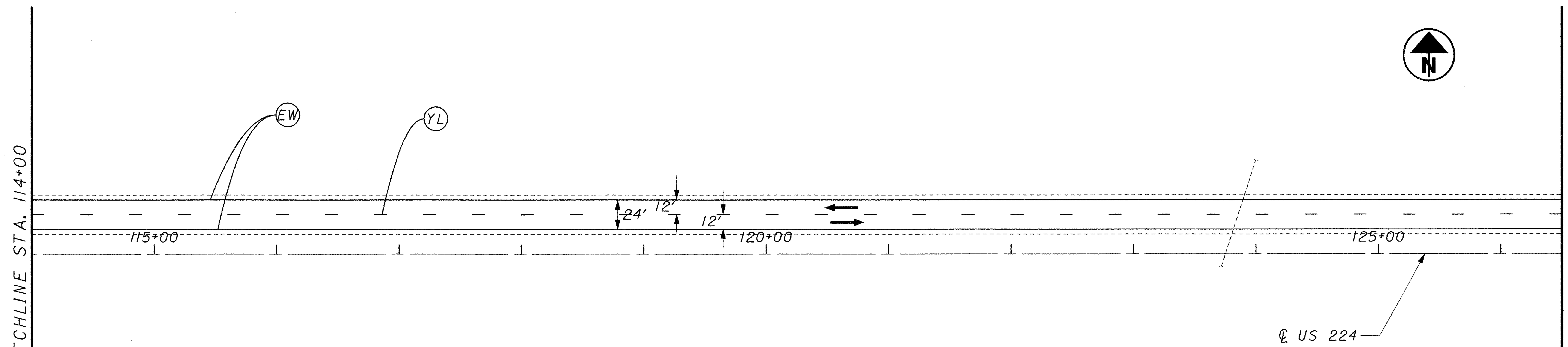
CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 89+00 TO STA. 114+00

POR-224-0.00

143/169

p:\pr29820\cadd\9854tpl8.dgn



(DY) ITEM 644 - CENTERLINE: SOLID DOUBLE YELLOW

(NP) ITEM 644 - CENTERLINE: BROKEN AND SOLID, DOUBLE

(YL) ITEM 644 - CENTER LINE: BROKEN, SINGLE

(ST) ITEM 644 - STOP LINE

(WL) ITEM 644 - WHITE LANE LINE

(TL) ITEM 644 - TRANSVERSE LINE, 12' C/C YELLOW

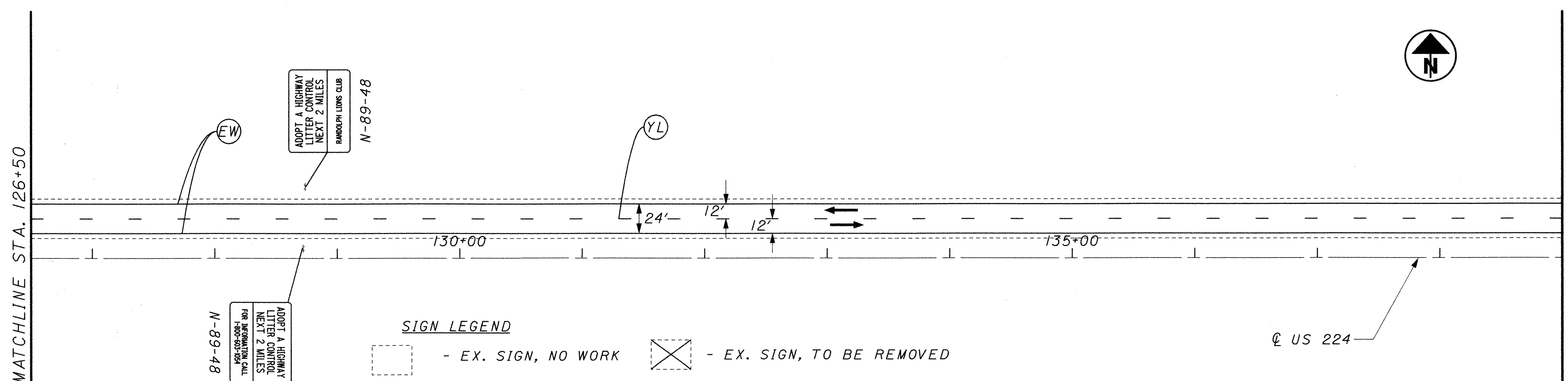
(CH) ITEM 644 - CHANNELIZING LINE

(EW) ITEM 644 - WHITE EDGE LINE

(EY) ITEM 644 - YELLOW EDGE LINE

(DW) ITEM 644 - DOTTED WHITE LINE

→ DIRECTION OF TRAVEL



SIGN LEGEND

- EX. SIGN, NO WORK
- EX. SIGN, TO BE REMOVED
- REPLACE EX. SIGN ON NEW SUPPORTS (SIGNS WITH STATIONING SHOWN INDICATE A DIFFERENT LOCATION THAN THE EXISTING)
- ADD NEW SIGN ON NEW SUPPORTS

0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

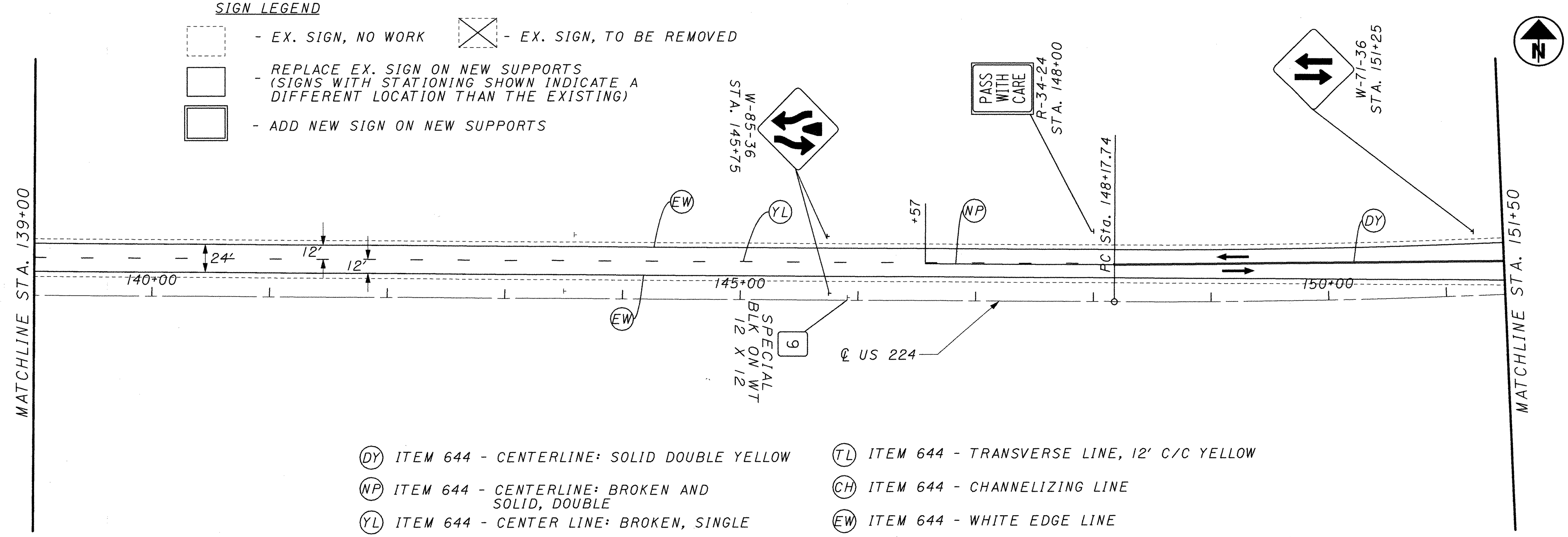
PLAN SHEET - S.R. 224
STA. 114+00 TO STA. 139+00

POR-224-0.00

p:\pr29820\cadd\19854tp19.dgn

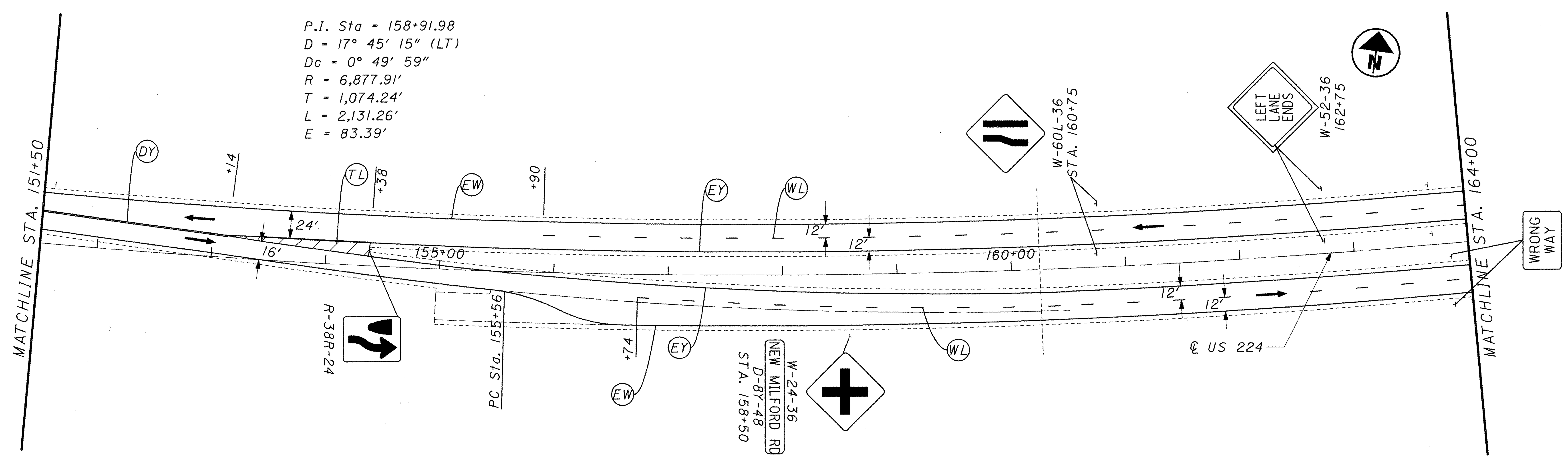
SIGN LEGEND

- EX. SIGN, NO WORK
- EX. SIGN, TO BE REMOVED
- REPLACE EX. SIGN ON NEW SUPPORTS (SIGNS WITH STATIONING SHOWN INDICATE A DIFFERENT LOCATION THAN THE EXISTING)
- ADD NEW SIGN ON NEW SUPPORTS



- (DY) ITEM 644 - CENTERLINE: SOLID DOUBLE YELLOW
- (NP) ITEM 644 - CENTERLINE: BROKEN AND SOLID, DOUBLE
- (YL) ITEM 644 - CENTER LINE: BROKEN, SINGLE
- (ST) ITEM 644 - STOP LINE
- (WL) ITEM 644 - WHITE LANE LINE
- (TL) ITEM 644 - TRANSVERSE LINE, 12' C/C YELLOW
- (CH) ITEM 644 - CHANNELIZING LINE
- (EW) ITEM 644 - WHITE EDGE LINE
- (EY) ITEM 644 - YELLOW EDGE LINE
- (DW) ITEM 644 - DOTTED WHITE LINE

→ DIRECTION OF TRAVEL



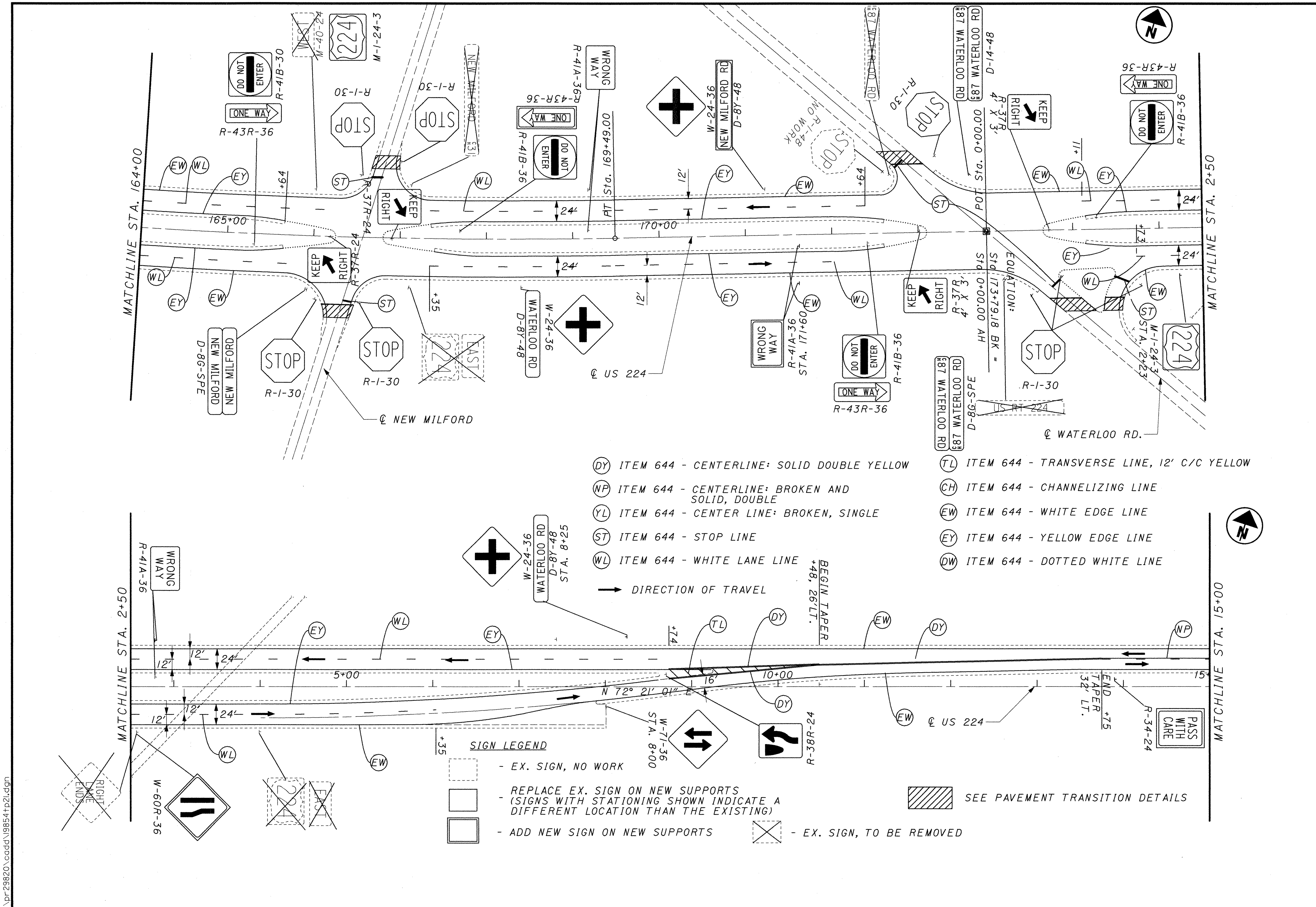
HORIZONTAL SCALE IN FEET 0 25 50 100

CALCULATED CHECKED

PLAN SHEET - S.R. 224
STA. 139+00 TO STA. 164+00

POR-224-0.00

p:\pr29820\cadd\9854+p20.dgn

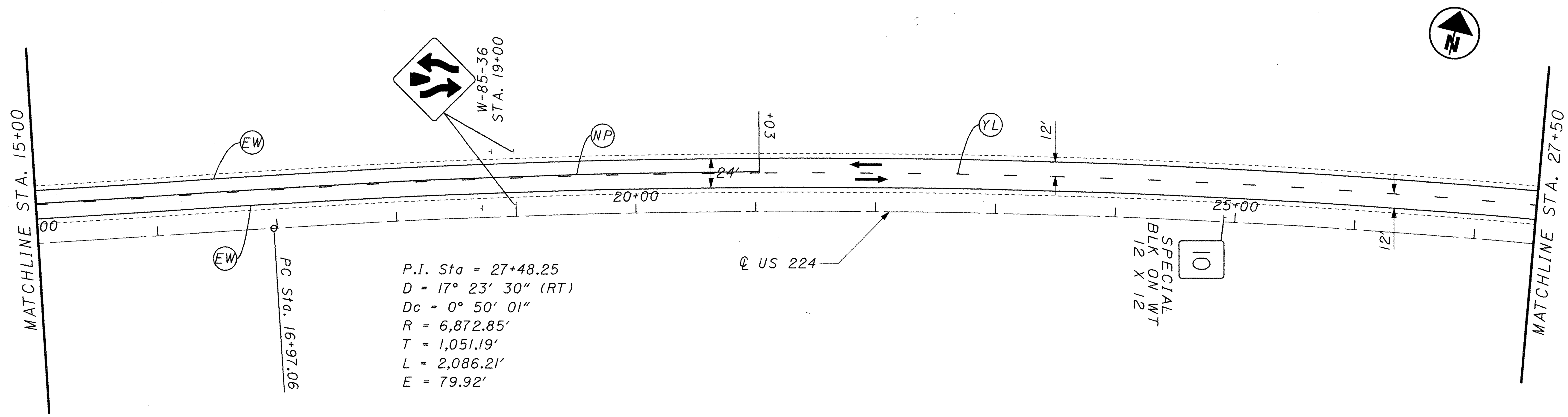


PLAN SHEET - S.R. 224
STA. 164+00 TO STA. 15+00

POR-224-0.00

146
169

p:\pr29820\cadd\9854tp2l.dgn



DY ITEM 644 - CENTERLINE: SOLID DOUBLE YELLOW

NP ITEM 644 - CENTERLINE: BROKEN AND SOLID, DOUBLE

YL ITEM 644 - CENTER LINE: BROKEN, SINGLE

ST ITEM 644 - STOP LINE

WL ITEM 644 - WHITE LANE LINE

TL ITEM 644 - TRANSVERSE LINE, 12' C/C YELLOW

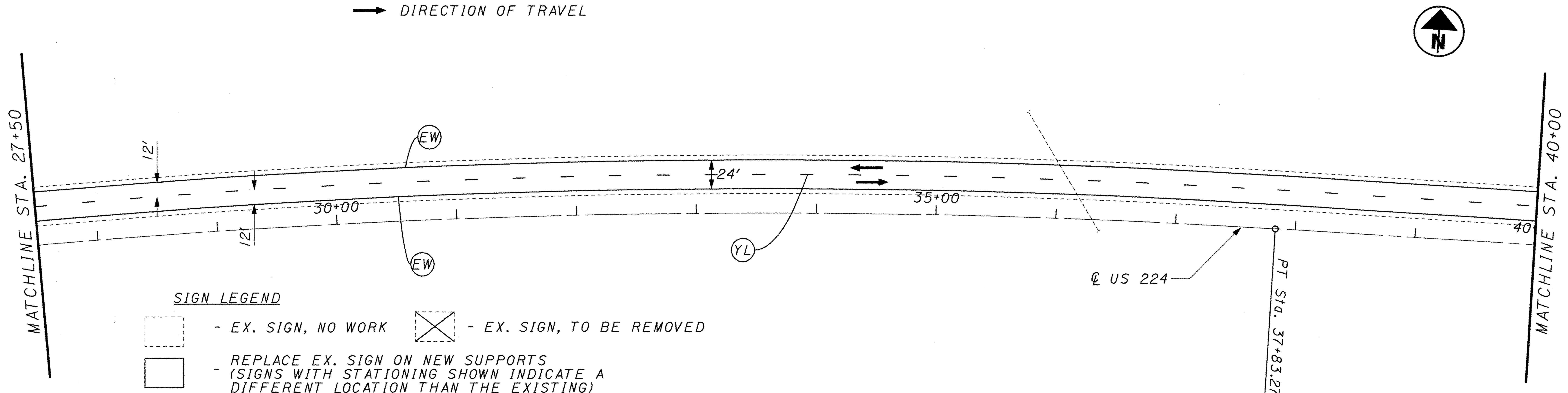
CH ITEM 644 - CHANNELIZING LINE

EW ITEM 644 - WHITE EDGE LINE

EY ITEM 644 - YELLOW EDGE LINE

DW ITEM 644 - DOTTED WHITE LINE

→ DIRECTION OF TRAVEL



SIGN LEGEND

- EX. SIGN, NO WORK
- EX. SIGN, TO BE REMOVED
- REPLACE EX. SIGN ON NEW SUPPORTS (SIGNS WITH STATIONING SHOWN INDICATE A DIFFERENT LOCATION THAN THE EXISTING)
- ADD NEW SIGN ON NEW SUPPORTS

HORIZONTAL SCALE IN FEET 0 25 50 100

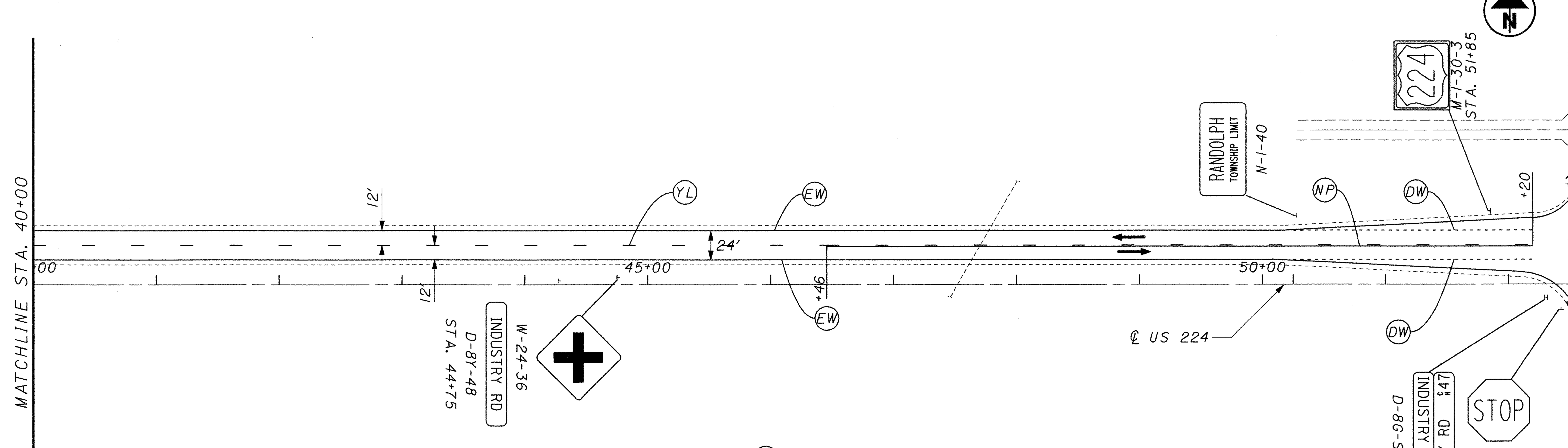
CALCULATED

CHECKED

PLAN SHEET - S.R. 224
STA. 15+00 TO STA. 40+00

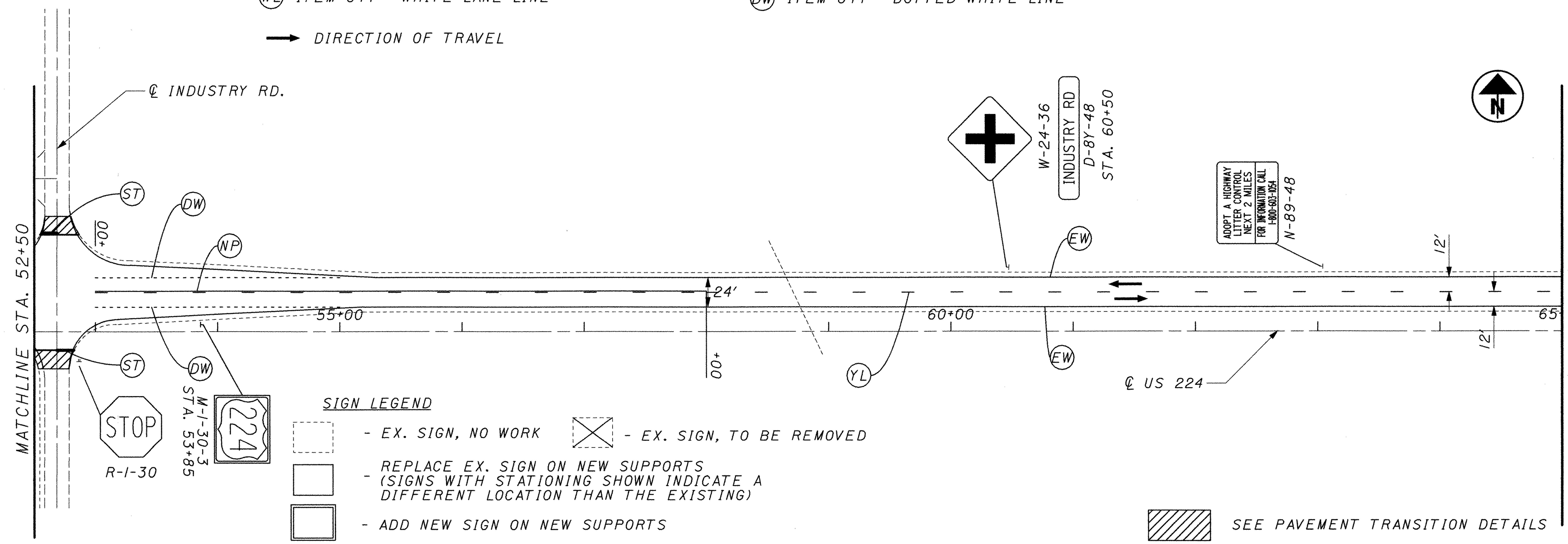
POR-224-0.00

p:\pr29820\cadd\19854tp22.dgn



DY ITEM 644 - CENTERLINE: SOLID DOUBLE YELLOW
NP ITEM 644 - CENTERLINE: BROKEN AND SOLID, DOUBLE
YL ITEM 644 - CENTER LINE: BROKEN, SINGLE
ST ITEM 644 - STOP LINE
WL ITEM 644 - WHITE LANE LINE
TL ITEM 644 - TRANSVERSE LINE, 12' C/C YELLOW
CH ITEM 644 - CHANNELIZING LINE
EW ITEM 644 - WHITE EDGE LINE
EY ITEM 644 - YELLOW EDGE LINE
DW ITEM 644 - DOTTED WHITE LINE

→ DIRECTION OF TRAVEL



SIGN LEGEND

- EX. SIGN, NO WORK
- EX. SIGN, TO BE REMOVED
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- ADD NEW SIGN ON NEW SUPPORTS

SEE PAVEMENT TRANSITION DETAILS

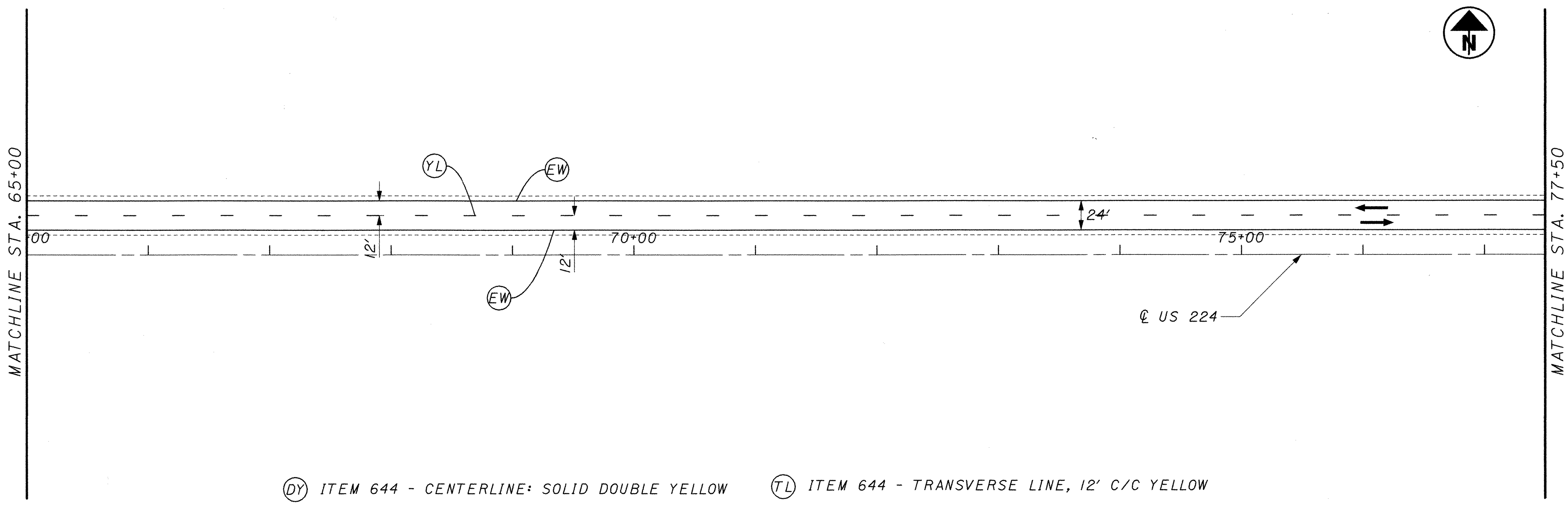
HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 40+00 TO STA. 65+00

POR-224-0.00

p:\pr29820\cadd\19854tp23.dgn



(DY) ITEM 644 - CENTERLINE: SOLID DOUBLE YELLOW

(NP) ITEM 644 - CENTERLINE: BROKEN AND SOLID, DOUBLE

(YL) ITEM 644 - CENTER LINE: BROKEN, SINGLE

(ST) ITEM 644 - STOP LINE

(WL) ITEM 644 - WHITE LANE LINE

(TL) ITEM 644 - TRANSVERSE LINE, 12' C/C YELLOW

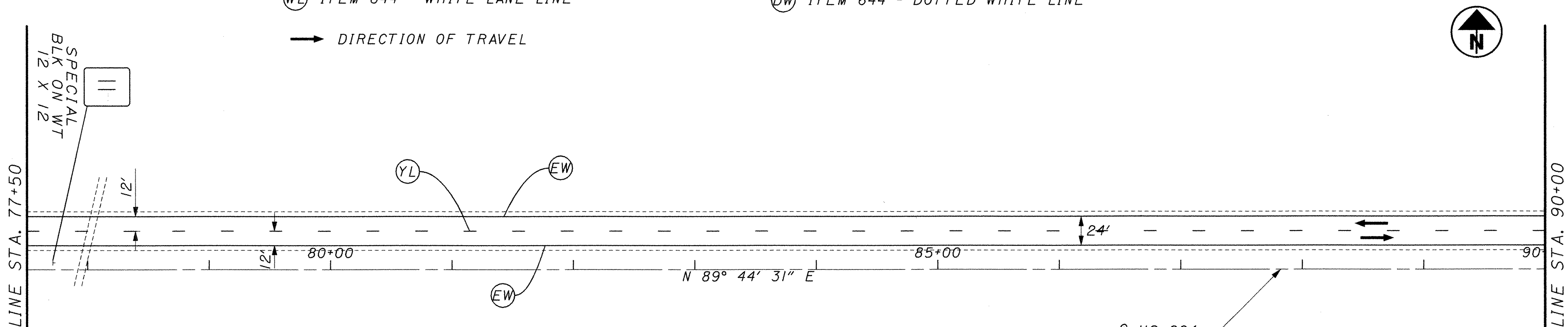
(CH) ITEM 644 - CHANNELIZING LINE

(EW) ITEM 644 - WHITE EDGE LINE

(EY) ITEM 644 - YELLOW EDGE LINE

(DW) ITEM 644 - DOTTED WHITE LINE

→ DIRECTION OF TRAVEL



SIGN LEGEND

- EX. SIGN, NO WORK
- EX. SIGN, TO BE REMOVED
- REPLACE EX. SIGN ON NEW SUPPORTS (SIGNS WITH STATIONING SHOWN INDICATE A DIFFERENT LOCATION THAN THE EXISTING)
- ADD NEW SIGN ON NEW SUPPORTS

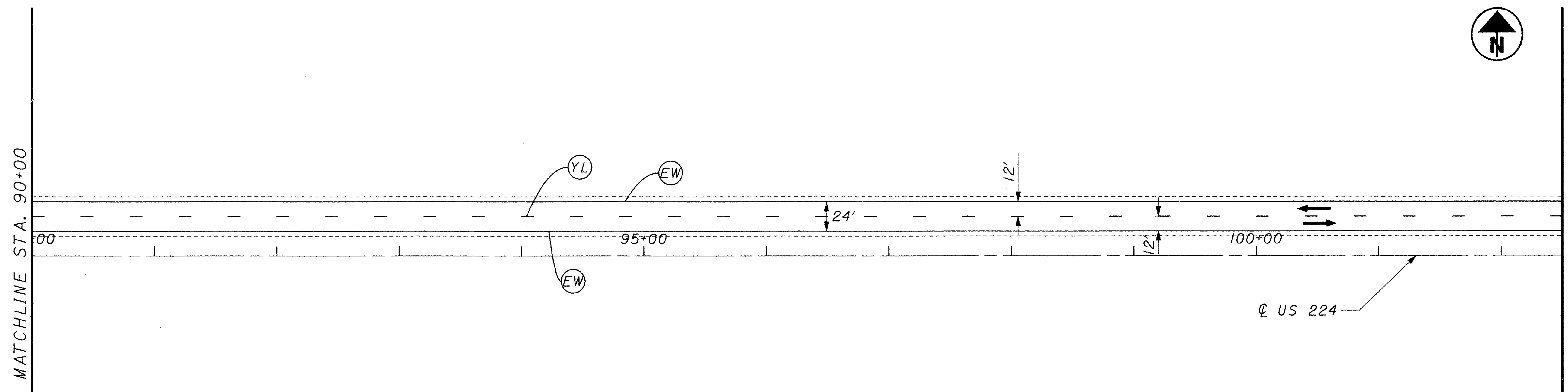
0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 65+00 TO STA. 90+00

POR-224-0.00

p:\pr29820\cadd\19854tp24.dgn



(DY) ITEM 644 - CENTERLINE: SOLID DOUBLE YELLOW

(NP) ITEM 644 - CENTERLINE: BROKEN AND SOLID, DOUBLE

(YL) ITEM 644 - CENTER LINE: BROKEN, SINGLE

(ST) ITEM 644 - STOP LINE

(WL) ITEM 644 - WHITE LANE LINE

(TL) ITEM 644 - TRANSVERSE LINE, 12' C/C YELLOW

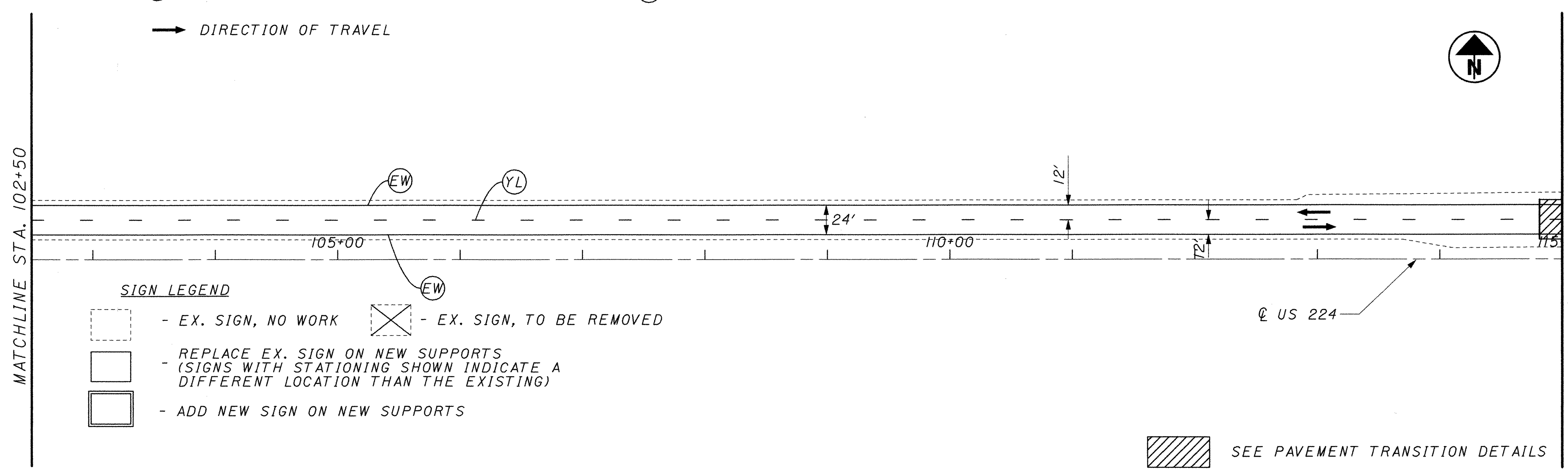
(CH) ITEM 644 - CHANNELIZING LINE

(EW) ITEM 644 - WHITE EDGE LINE

(EY) ITEM 644 - YELLOW EDGE LINE

(DW) ITEM 644 - DOTTED WHITE LINE

→ DIRECTION OF TRAVEL



SIGN LEGEND

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- ADD NEW SIGN ON NEW SUPPORTS

SEE PAVEMENT TRANSITION DETAILS

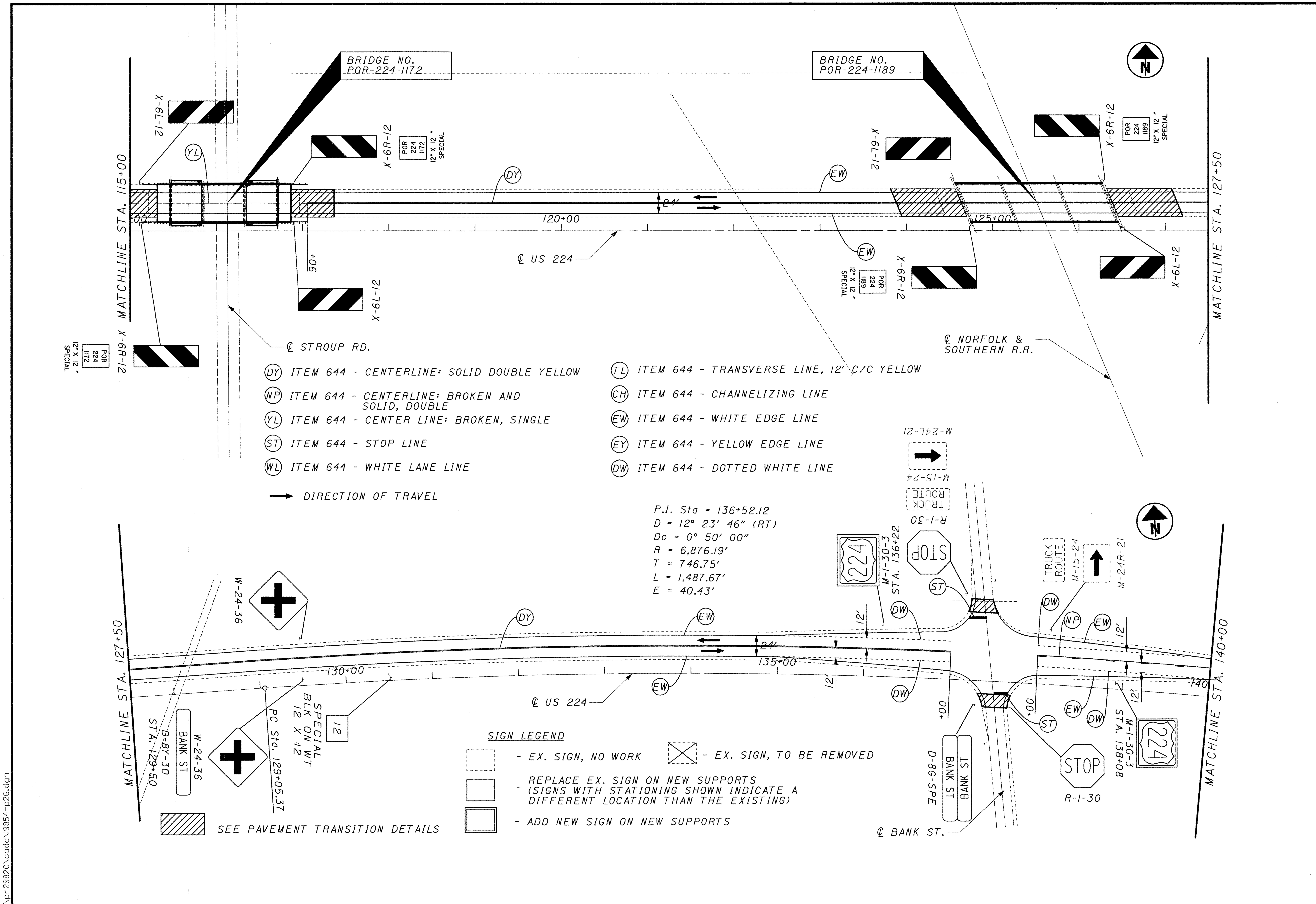
HORIZONTAL SCALE IN FEET: 0 25 50 100

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 90+00 TO STA. 115+00

POR-224-0.00

p:\pr29820\cadd\19854+p25.dgn



HORIZONTAL SCALE IN FEET

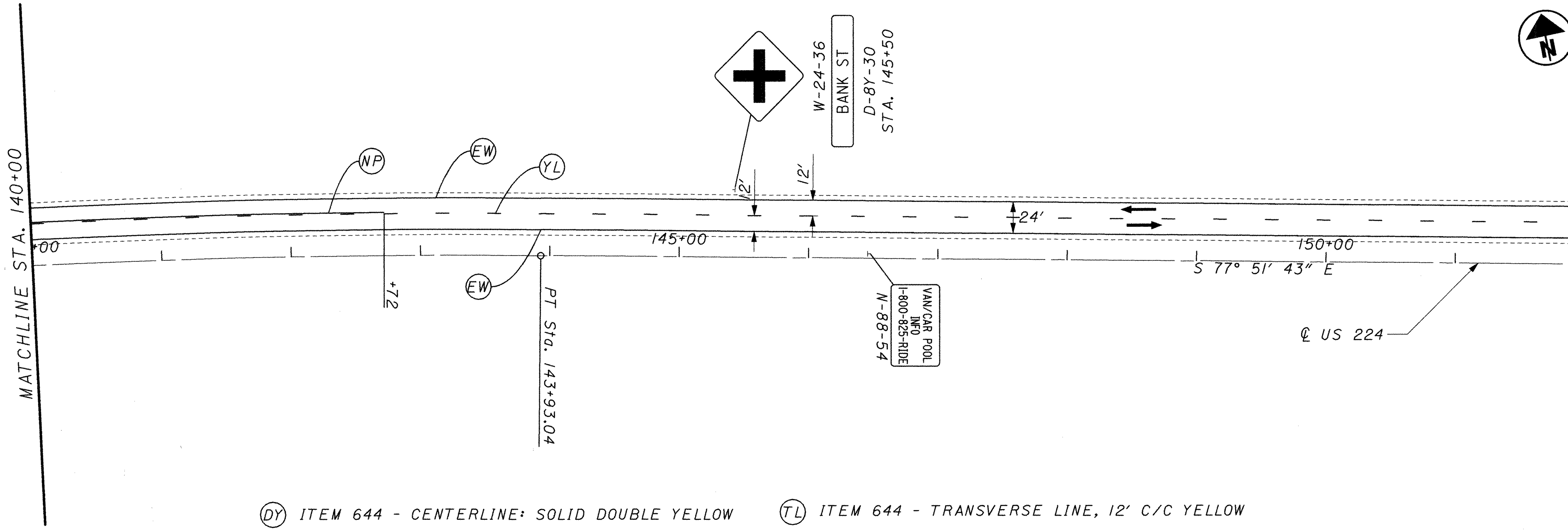
CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 115+00 TO STA. 140+00

POR-224-0.00

151/169

p:\pr29820\cadd\19854+p26.dgn



(DY) ITEM 644 - CENTERLINE: SOLID DOUBLE YELLOW

(NP) ITEM 644 - CENTERLINE: BROKEN AND SOLID, DOUBLE

(YL) ITEM 644 - CENTER LINE: BROKEN, SINGLE

(ST) ITEM 644 - STOP LINE

(WL) ITEM 644 - WHITE LANE LINE

→ DIRECTION OF TRAVEL

(TL) ITEM 644 - TRANSVERSE LINE, 12' C/C YELLOW

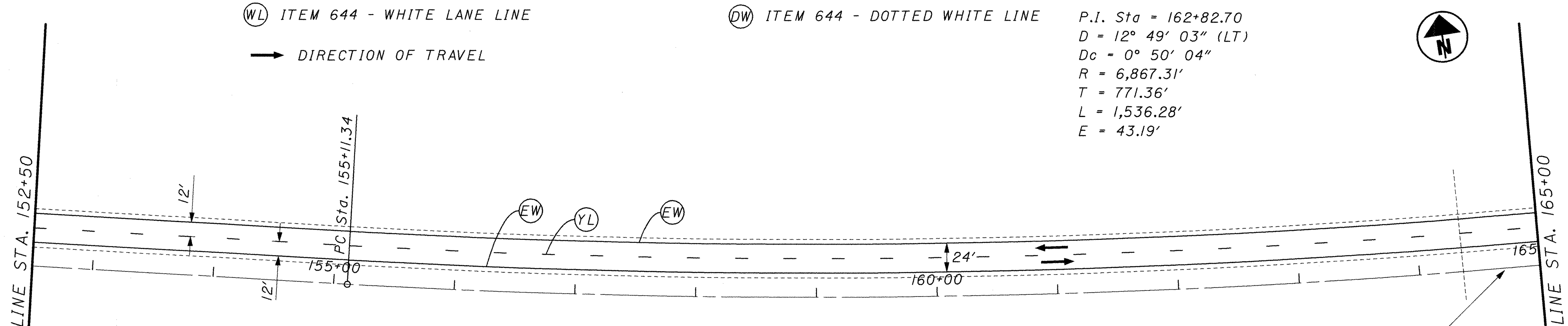
(CH) ITEM 644 - CHANNELIZING LINE

(EW) ITEM 644 - WHITE EDGE LINE

(EY) ITEM 644 - YELLOW EDGE LINE

(DW) ITEM 644 - DOTTED WHITE LINE

P.I. Sta = 162+82.70
D = 12° 49' 03" (LT)
Dc = 0° 50' 04"
R = 6,867.31'
T = 771.36'
L = 1,536.28'
E = 43.19'



SIGN LEGEND

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- ADD NEW SIGN ON NEW SUPPORTS

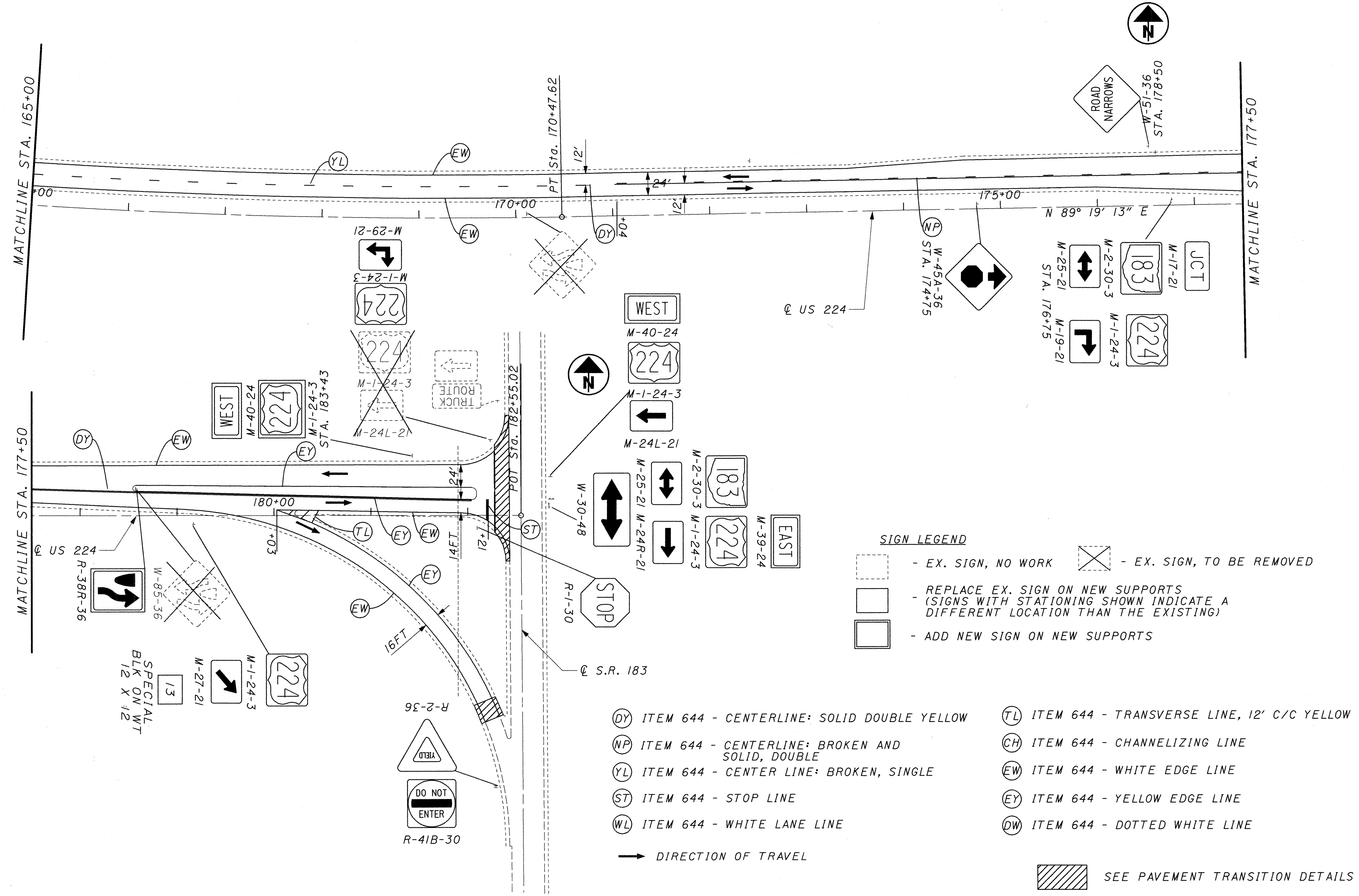
0 25 50 100
HORIZONTAL SCALE IN FEET

CALCULATED
CHECKED

PLAN SHEET - S.R. 224
STA. 140+00 TO STA. 165+00

POR-224-0.00

p:\pr29820\cadd\19854tp27.dgn



SIGN LEGEND

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- EX. SIGN, TO BE REMOVED
- REPLACE EX. SIGN ON NEW SUPPORTS (SIGNS WITH STATIONING SHOWN INDICATE A DIFFERENT LOCATION THAN THE EXISTING)
- ADD NEW SIGN ON NEW SUPPORTS

DY ITEM 644 - CENTERLINE: SOLID DOUBLE YELLOW

NP ITEM 644 - CENTERLINE: BROKEN AND SOLID, DOUBLE

YL ITEM 644 - CENTER LINE: BROKEN, SINGLE

ST ITEM 644 - STOP LINE

WL ITEM 644 - WHITE LANE LINE

→ DIRECTION OF TRAVEL

TL ITEM 644 - TRANSVERSE LINE, 12' C/C YELLOW

CH ITEM 644 - CHANNELIZING LINE

EW ITEM 644 - WHITE EDGE LINE

EY ITEM 644 - YELLOW EDGE LINE

DW ITEM 644 - DOTTED WHITE LINE

SEE PAVEMENT TRANSITION DETAILS

CALCULATED

CHECKED

PLAN SHEET - S.R. 224
STA. 165+00 TO STA. 182+55.02

POR-224-0.00

p:\pr29820\cadd\19854tp28.dgn

STRUCTURE NOTES

PROPOSAL NOTES:

COOPERATION WITH RAILROADS - NORFOLK SOUTHERN RAILROAD.

COOPERATION WITH RAILROADS - WHEELING AND LAKE ERIE RAILWAY COMPANY.

SEALING OF CONCRETE STRUCTURES

STANDARD DRAWINGS:

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-81 REVISED 10-25-94
CS-1-93 REVISED 06-30-95
EXJ-4-87 REVISED 04-20-01
SBR-1-91 DATED 01-12-99

AND TO SUPPLEMENTAL SPECIFICATION(S):

842 DATED 01-06-99
843 DATED 05-05-98
844 DATED 01-06-99
846 DATED 09-09-97
847 DATED 06-30-98
848 DATED 06-30-98
863 DATED 10-12-99
885 DATED 08-10-99
892 DATED 09-14-99
894 DATED 10-12-99
899 DATED 10-21-98
910 DATED 07-11-00
953 DATED 06-14-95
954 DATED 09-09-97

SPECIAL PROVISIONS:

WHEELING AND LAKE ERIE RAILWAY COMPANY AGREEMENT DATED 04-03-01

NORFOLK SOUTHERN RAILROAD AGREEMENT DATED 04-27-01

THE FOLLOWING DESIGN INFORMATION APPLIES TO POR-224-1172:

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 1996, INCLUDING THE 1997 TO 1999 INTERIM SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL 2000 EDITION.

DESIGN LOADING:

HS20, CASE II AND THE ALTERNATE MILITARY LOADING.
FUTURE WEARING SURFACE (FWS) OF 60 PSF.

DESIGN DATA:

CONCRETE
HIGH PERFORMANCE CONCRETE HPC SS 844 -
COMPRESSIVE STRENGTH 4,500 PSI (SUPERSTRUCTURE).

REINFORCING STEEL
ASTM A615, A616 OR A617 GRADE 60
MINIMUM YIELD STRENGTH 60,000 PSI.

STRUCTURAL STEEL
ASTM A36/A709, GRADE 36
YIELD STRENGTH 36,000 PSI.

DECK PROTECTION METHOD:

EPOXY COATED REINFORCING STEEL.
2½ INCH CONCRETE COVER.

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

UTILITY LINES:

ALL EXPENSE INVOLVED IN RELOCATION (INSTALLING)THE AFFECTED UTILITY LINES SHALL BE BORNE BY THE UTILITY(IES). THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

MAINTENANCE OF TRAFFIC:

SEE THE ROADWAY NOTES FOR MAINTENANCE OF TRAFFIC REQUIREMENTS.

FINISH COLORS:

THE TOP COAT COLOR FOR ITEM SPECIAL - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) SHALL BE 595B-27778, NEUTRAL, IN ACCORDANCE WITH FEDERAL STANDARD NUMBER 595.

THE TOP COAT COLOR FOR ITEM 885 - FIELD PAINTING OF EXISTING STEEL, WITH WARRANTY, SHALL BE 595B-25526, BLUE, IN ACCORDANCE WITH FEDERAL STANDARD NUMBER 595.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND/OR FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. REFERENCE SHALL BE MADE TO CMS SECTIONS 102.05, 105.02 AND 863.07.

CONTRACT BID PRICES SHALL BE BASED UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, ALL PROJECT WORK SHALL BE BASED UPON ACTUAL DETAILS AND DIMENSIONS WHICH HAVE BEEN VERIFIED BY THE CONTRACTOR IN THE FIELD.

ITEM SPECIAL - DOWEL HOLES

THIS ITEM SHALL INCLUDE THE DRILLING OR FORMING OF HOLES INTO CONCRETE OR MASONRY AND THE FURNISHING AND PLACING OF GROUT INTO HOLES. NON-SHRINK EPOXY GROUT SHALL BE USED IN ACCORDANCE WITH CMS 510 AND CMS 705.20. DEPTH OF HOLES SHALL BE SHOWN IN PLANS.

PAYMENT FOR DRILLING OR FORMING HOLES AND FURNISHING AND PLACING MATERIALS SHALL BE INCLUDED IN THE CONTRACT PRICES FOR ITEM SPECAIL - STRUCTURE REHABILITATION.

CONCRETE PARAPETS

AS SOON AS A CONCRETE SAW CAN BE OPERATED WITHOUT DAMAGING THE FRESHLY PLACED CONCRETE, 1¼" DEEP CONTROL JOINTS SHALL BE SAWED INTO THE PERIMETER OF THE CONCRETE PARAPET. THE SAW CUT SHALL BE MADE IN THE COMPLETE CIRCUMFERENCE OF THE PARAPET, STARTING AND ENDING AT THE ELEVATION OF THE CONCRETE DECK. THE SAWCUTS SHALL BE PLACED AT A MINIMUM OF 6 FEET AND A MAXIMUM OF 10 FEET CENTERS. THE USE OF AN EDGE GUIDE, FENCE, OR JIG IS REQUIRED TO INSURE THAT THE CUT JOINT IS STRAIGHT, TRUE, AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH SHALL BE THE WIDTH OF THE SAW BLADE, A NOMINAL ¼ INCH. THE PERIMETER OF THE DEFLECTION CONTROL JOINT SHALL BE SEALED WITH A CAULKING MATERIAL CONFORMING TO FEDERAL SPECIFICATION, TT-S-00227E, TO A MINIMUM DEPTH OF 1 INCH. THE BOTTOM ½ INCH OF THE INSIDE AND OUTSIDE FACES SHOULD BE LEFT UNSEALED TO ALLOW WATER TO ESCAPE.

ASBESTOS NOTIFICATION

AN ASBESTOS SURVEY OF THE US ROUTE 224 BRIDGE OVER STROUP ROAD (CH 50) SCHEDULED FOR RENOVATION WAS CONDUCTED BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO:

AKRON REGIONAL AIR QUALITY MANAGEMENT DISTRICT
146 S. HIGH ST. SUITE 904
AKRON, OH 44308
LYNN M. MALCOLM, ADMIN.
(330) 375-2480
FAX: (330) 375-2402

AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF THE DEMOLITION OF THE BRIDGE. THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER. INFORMATION REQUIRED ON THE FORM WILL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL, AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. A COPY OF THE OEPA FORM IS AVAILABLE FOR INSPECTION AT THE ODOT DISTRICT 4 OFFICE, 705 OAKWOOD STREET, RAVENNA, OHIO, 44266.

REPAIR OF PARAPET

WORK SHALL BE IN ACCORDANCE WITH ITEM 519 EXCEPT IN LIEU OF 519.05, THE REPAIR SHALL BE DOWELLED 8" INTO THE EXISTING CONCRETE USING NO. 5 BARS AT A MAXIMUM SPACING OF 18" C/C.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:

THIS WORK SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER.

THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. ALL WORK SHALL BE DONE IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS EXCEPT AS NOTED BELOW. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

ITEM 847 - WEARING COURSE REMOVED, ASPHALT:

THIS WORK IS THE REMOVAL OF THE ASPHALT WEARING SURFACE ON THE TOP SURFACE OF THE BACKWALLS PER ODOT SUPPLEMENTAL SPECIFICATION 847.

ITEM 894 HIGH PERFORMANCE CONCRETE WITH WARRANTY, AS PER PLAN:
ITEM 894 HIGH PERFORMANCE CONCRETE WITH WARRANTY, AS PER PLAN:

THE PROVISIONS OF 844 SHALL APPLY EXCEPT AS NOTED BELOW.

MIX OPTIONS.
ALL DECK CONCRETE AND PARAPET CONCRETE SHALL BE MIX 4, AS PER PLAN
ALL OTHER CONCRETE SHALL BE MIX 4, AS PER PLAN OR MIX 2 CONCRETE.
THE FOLLOWING PROPORTIONS WILL USED AS A STARTING MIX DESIGN.

CONCRETE TABLE
QUANTITIES PER CUBIC YARD
AGGREGATES (SSD)

MIX 4, AS PER PLAN (GGBF SLAG + MICROSILICA)

AGGREGATE TYPE	FINE AGGR. (LB)	#8 COARSE AGGR. (LB)	#57 COARSE AGGR. (LB)	TOTAL (LB)	CEMENT CONTENT (LB)	GGBF SLAG (LB)	MICRO-SILICA (LB)	WATER TO CEMENTITIOUS RATIO MAX	AIR CONTENT ±2%
GRAVEL	1245	360	1315	2920	400	170	30	0.42	7
LIMESTONE	1245	360	1335	2940	400	170	30	0.42	7
SLAG	1245	315	1155	2715	400	170	30	0.42	7

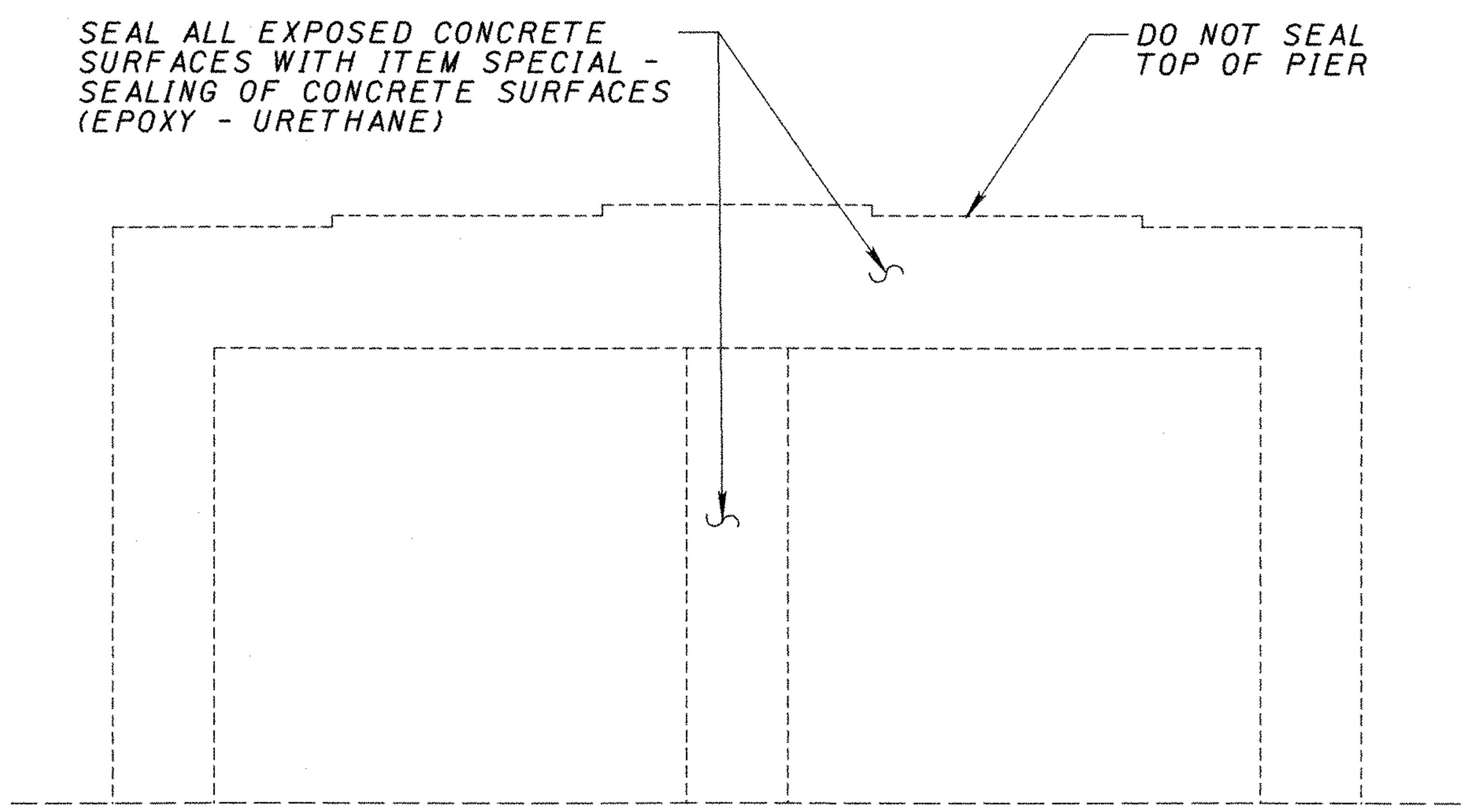
THE WEIGHTS SPECIFIED IN THE CONCRETE TABLE WERE CALCULATED FOR MATERIALS OF THE FOLLOWING BULK SPECIFIC GRAVITIES (SSD): NATURAL SAND AND GRAVEL 2.62, LIMESTONE SAND 2.68, LIMESTONE 2.65, SLAG 2.30, FLY ASH 2.65, GGBF SLAG 2.90, MICROSILICA SOLIDS 2.20, AND PORTLAND CEMENT 3.15. FOR AGGREGATES OF SPECIFIC GRAVITIES DIFFERING MORE THAN PLUS OR MINUS 0.02 FROM THESE, THE WEIGHTS IN THE TABLE WILL BE CORRECTED.

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

DESIGNED MAR | DRAWN MAR | REVIEWED DWL | DATE 6-28-01
CHECKED JAA | REVISED | STRUCTURE FILE NUMBER 6703755, 6703900, 6706933

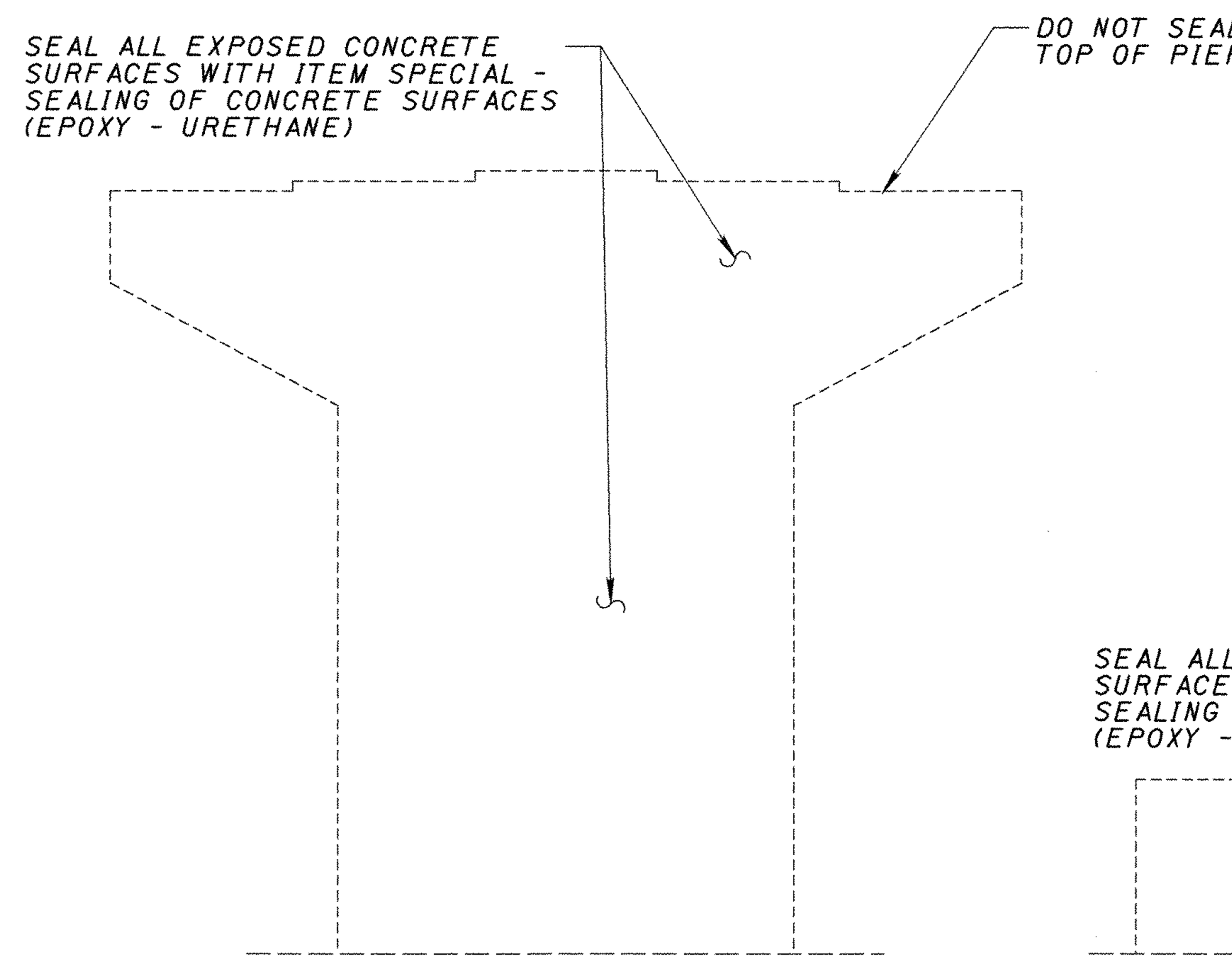
COMMON STRUCTURE NOTES
BRIDGE NO. POR-224-0104, BRIDGE NO. POR-224-1172, AND BRIDGE NO. POR-224-1190

POR-224-0.00



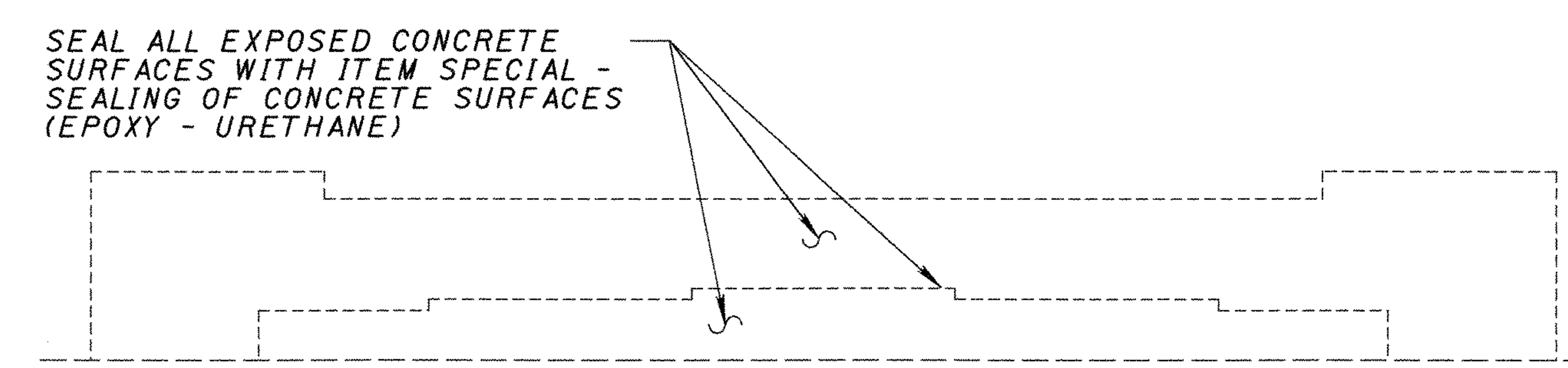
TYPICAL CAP AND COLUMN PIER ELEVATION

POR-224-0104, POR-224-1172



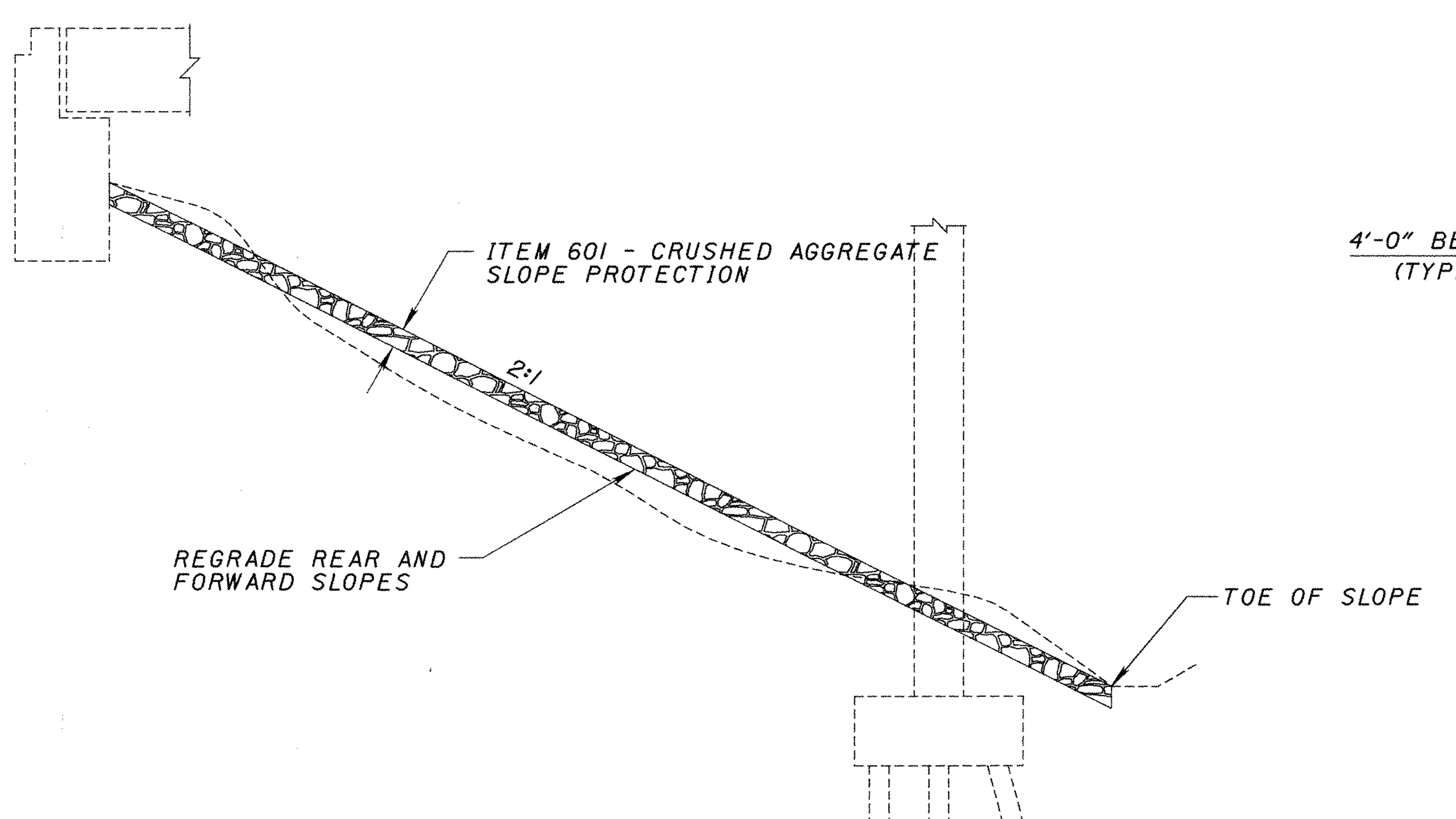
TYPICAL HAMMERHEAD PIER ELEVATION

POR-224-1189



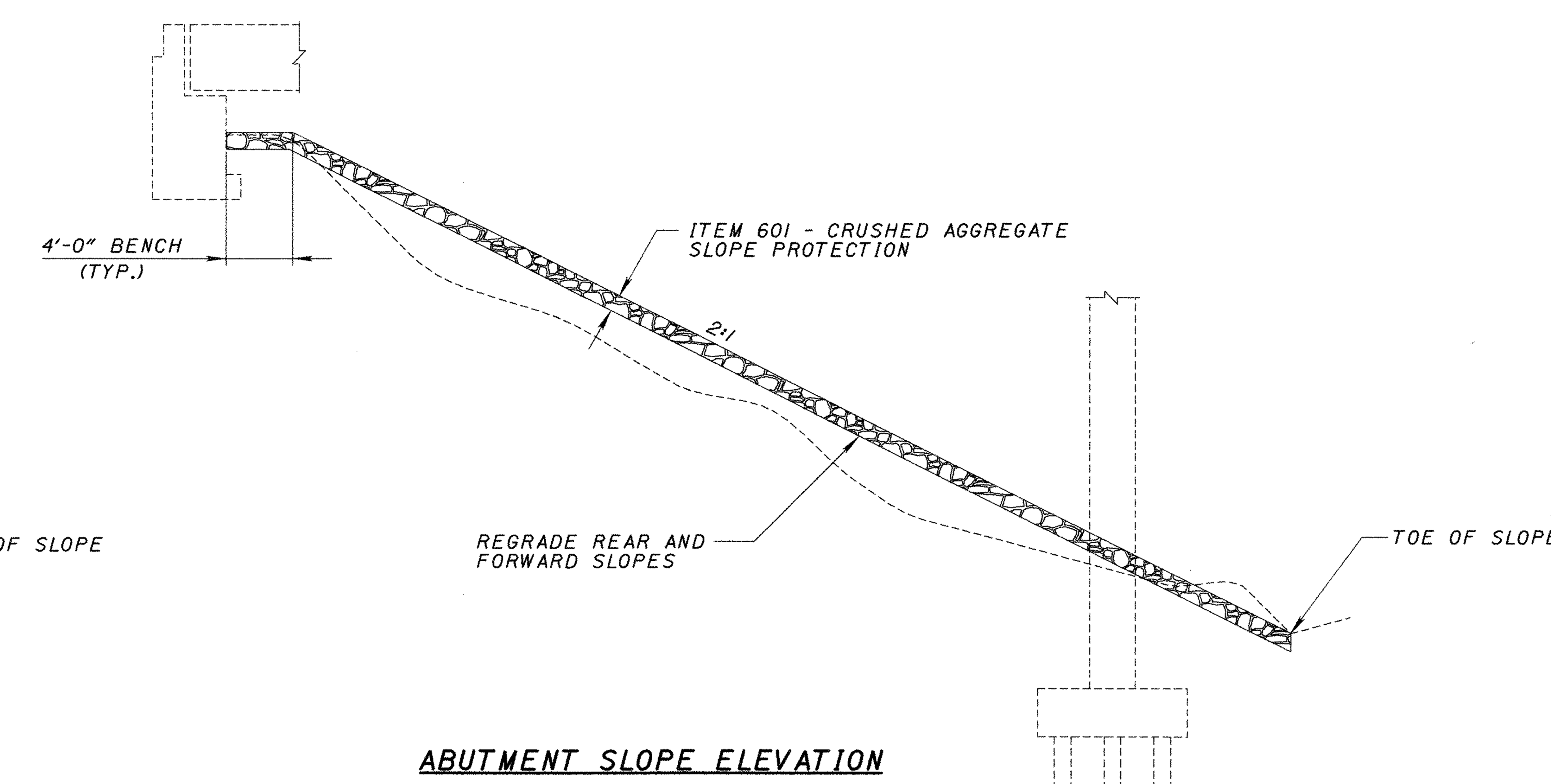
TYPICAL ABUTMENT ELEVATION

POR-224-0104, POR-224-1172, POR-224-1189



ABUTMENT SLOPE ELEVATION

POR-224-0104



ABUTMENT SLOPE ELEVATION

POR-224-1172, POR-224-1189

LEGEND

TYP. = TYPICAL

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

DESIGNED	DRAWN	REVIEWED	DATE
MPH	MPH	DWL	6-28-01
CHECKED MAR	REVISED	STRUCTURE FILE NUMBER 6703755, 6703900, 6706933	

COMMON SUBSTRUCTURE ELEVATIONS
BRIDGE NO. POR-224-0104, BRIDGE NO. POR-224-1172, AND BRIDGE NO. POR-224-1189

POR-224-0.00

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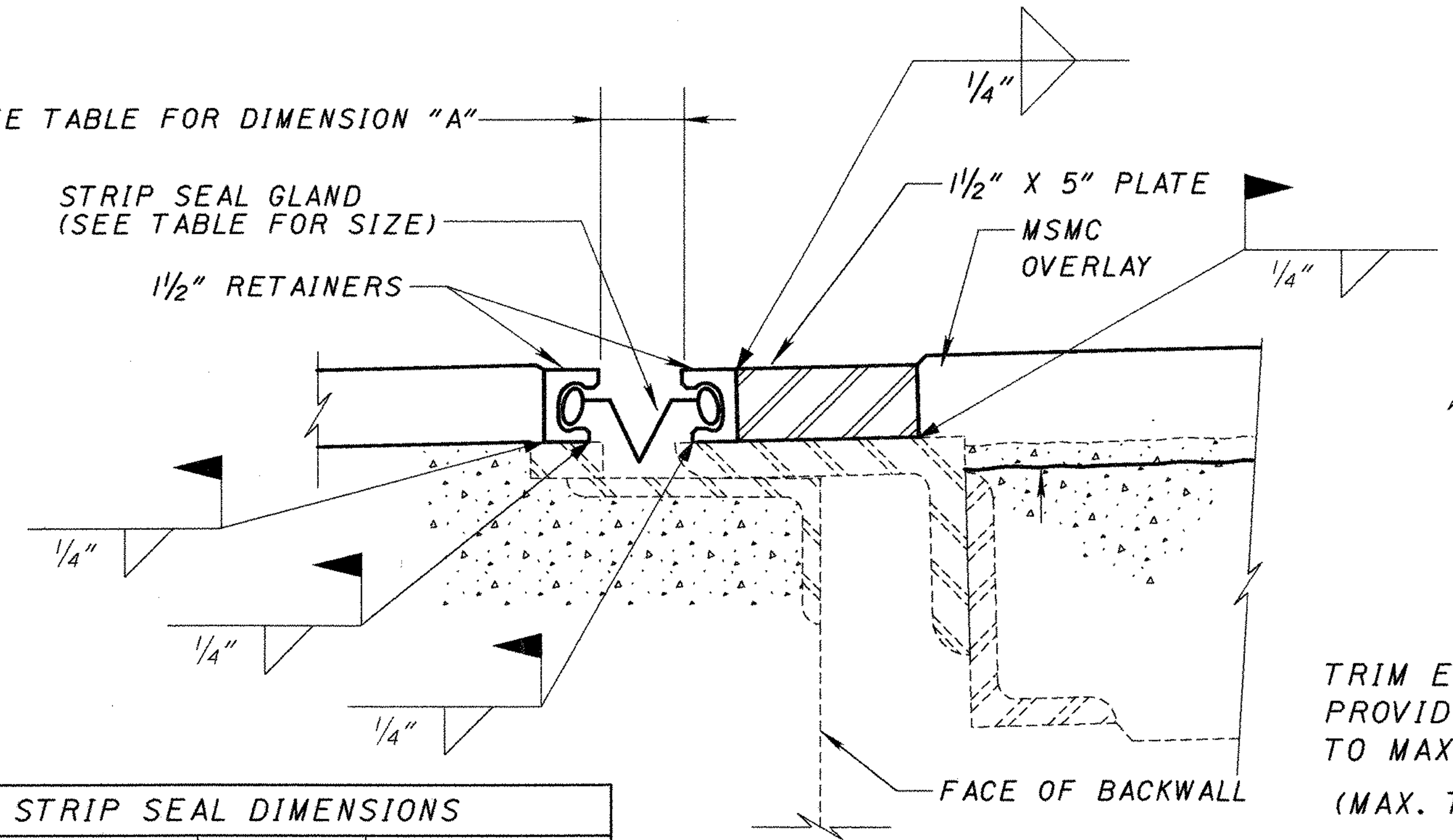
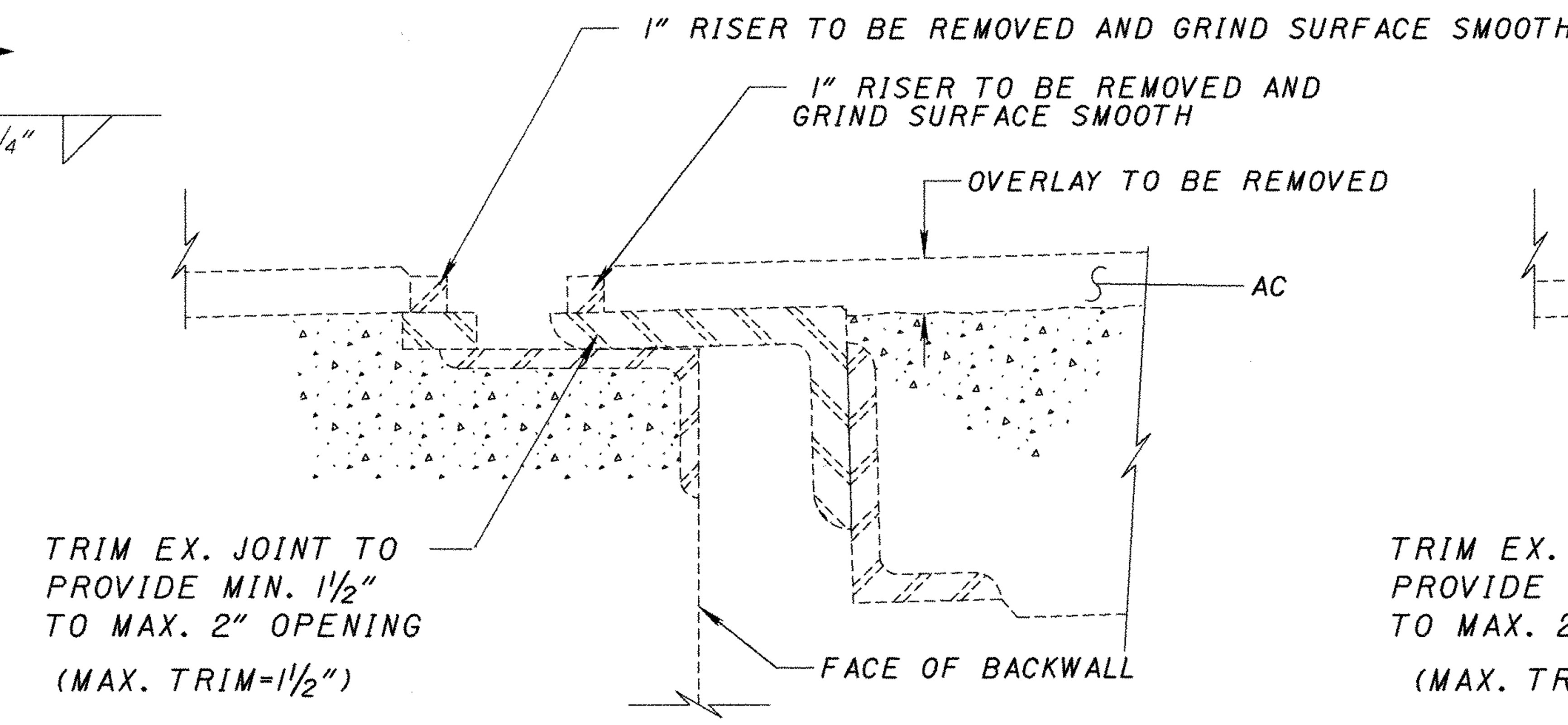


STRIP SEAL DIMENSIONS		
BRIDGE NO.	A **	GLAND SIZE
POR-224-0104	2½"	300
POR-224-1189	2½"	300

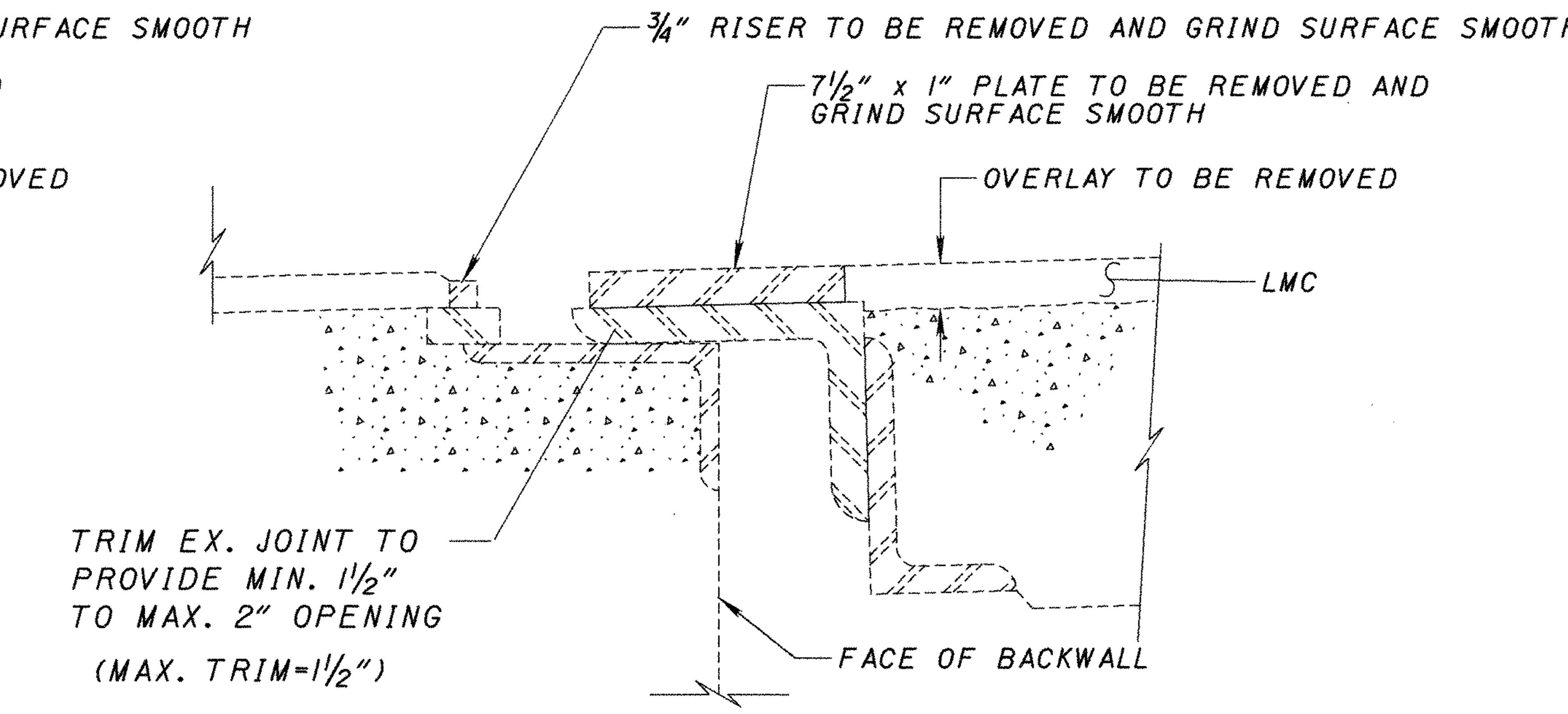
** MEASURED AT 70° F. CHECK WITH DESIGNER IF TEMPERATURE IS BELOW 60°F OR ABOVE 80°F.

EXPANSION JOINT RETROFIT DETAIL



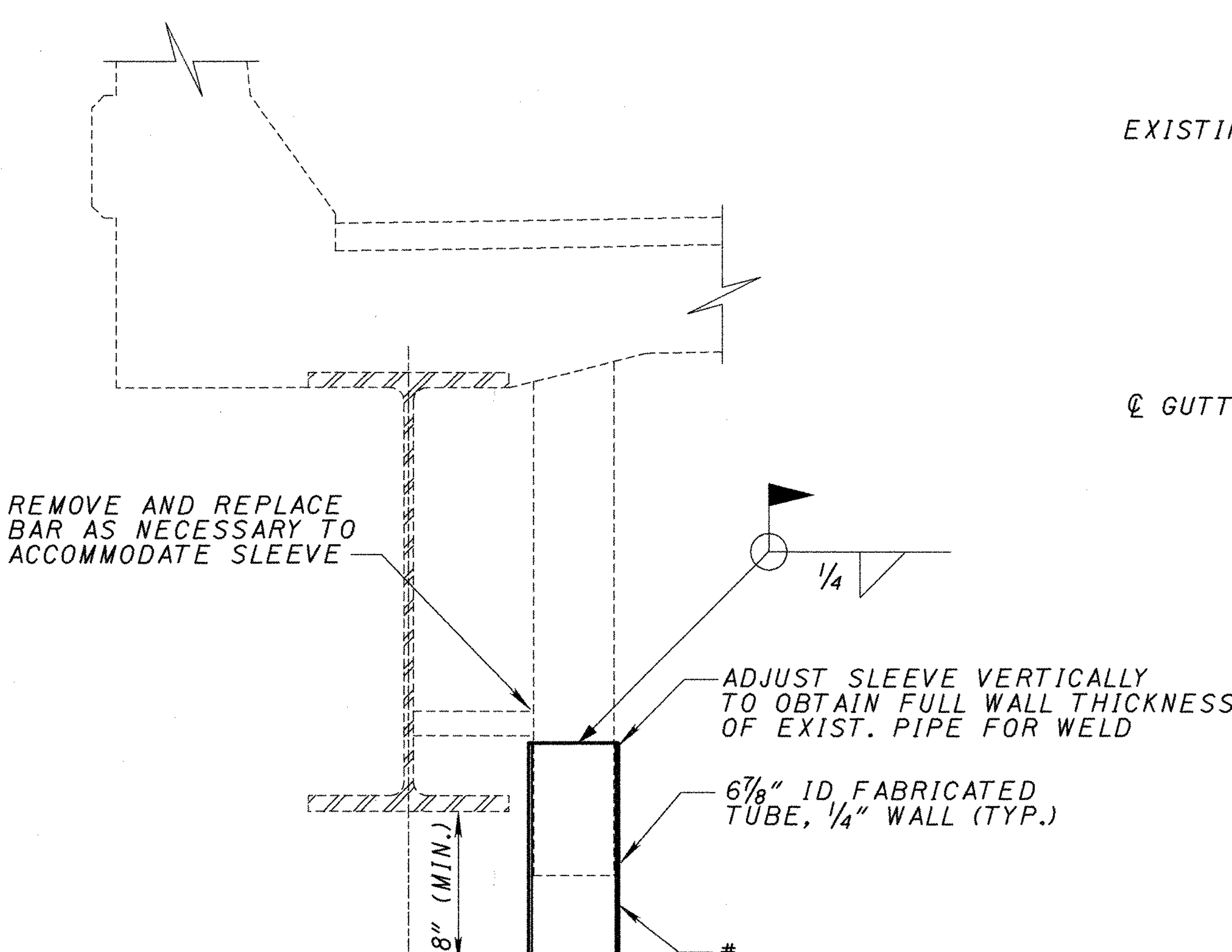
REMOVAL DETAIL

POR-224-0104



REMOVAL DETAIL

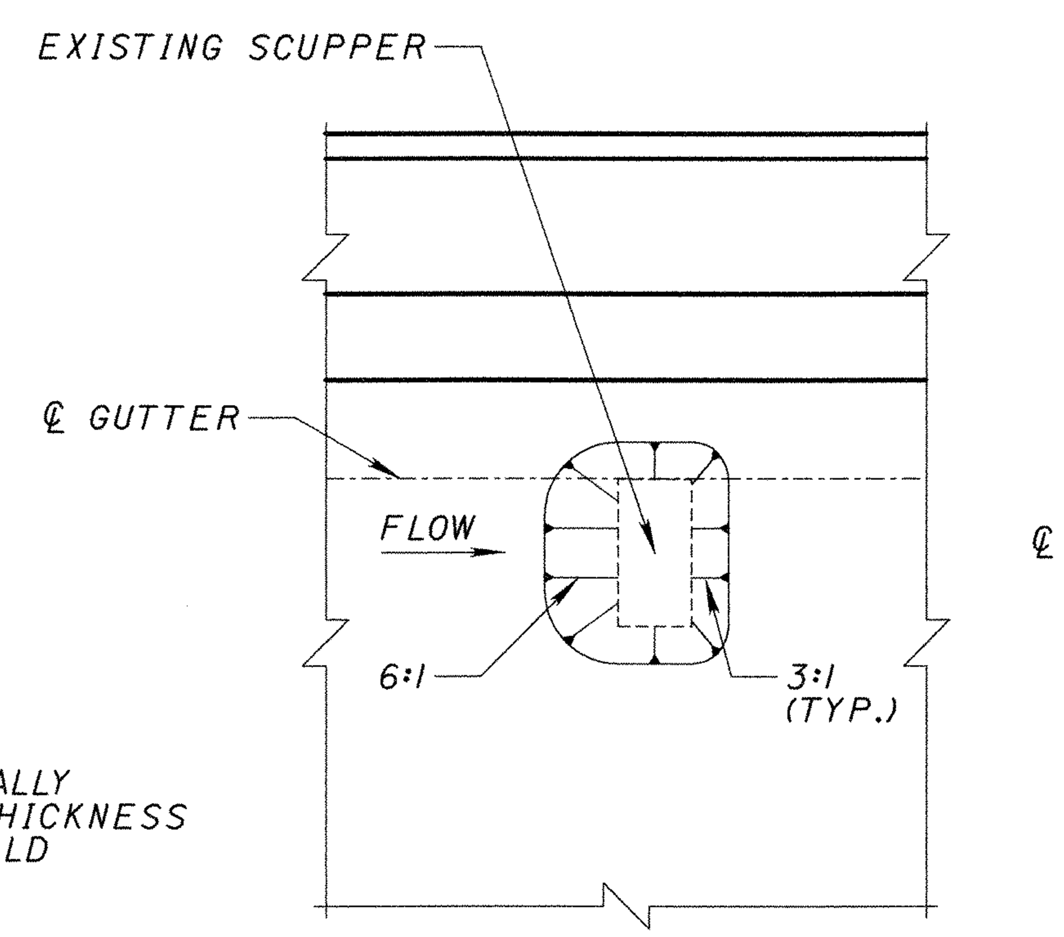
POR-224-1189



SCUPPER DOWNSPOUT EXTENSION

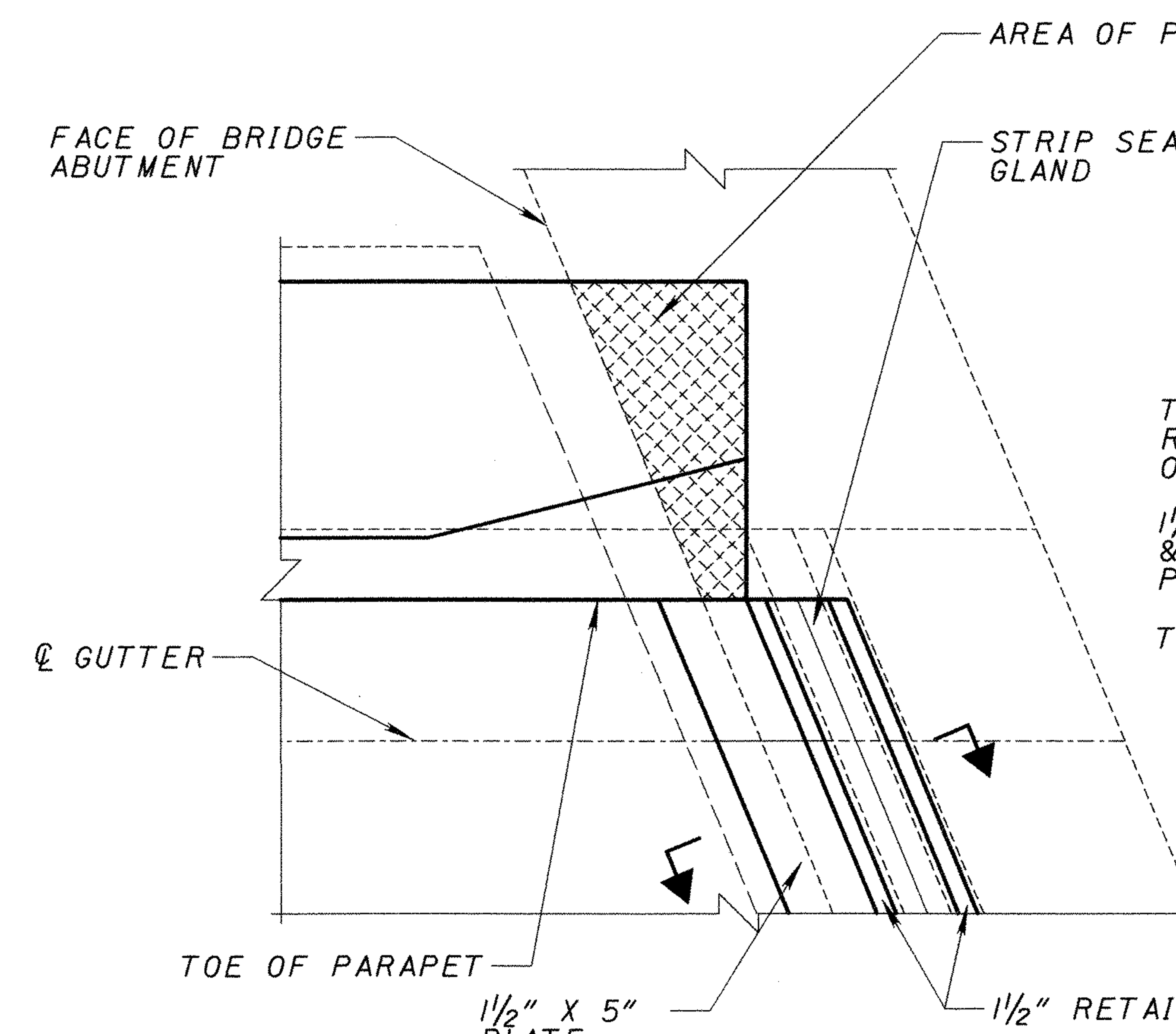
BRIDGE NO. POR-224-0104

OR USE A STANDARD 6" EXTENSION TO MATCH EXISTING AND BUTT WELD TO EXISTING SCUPPER



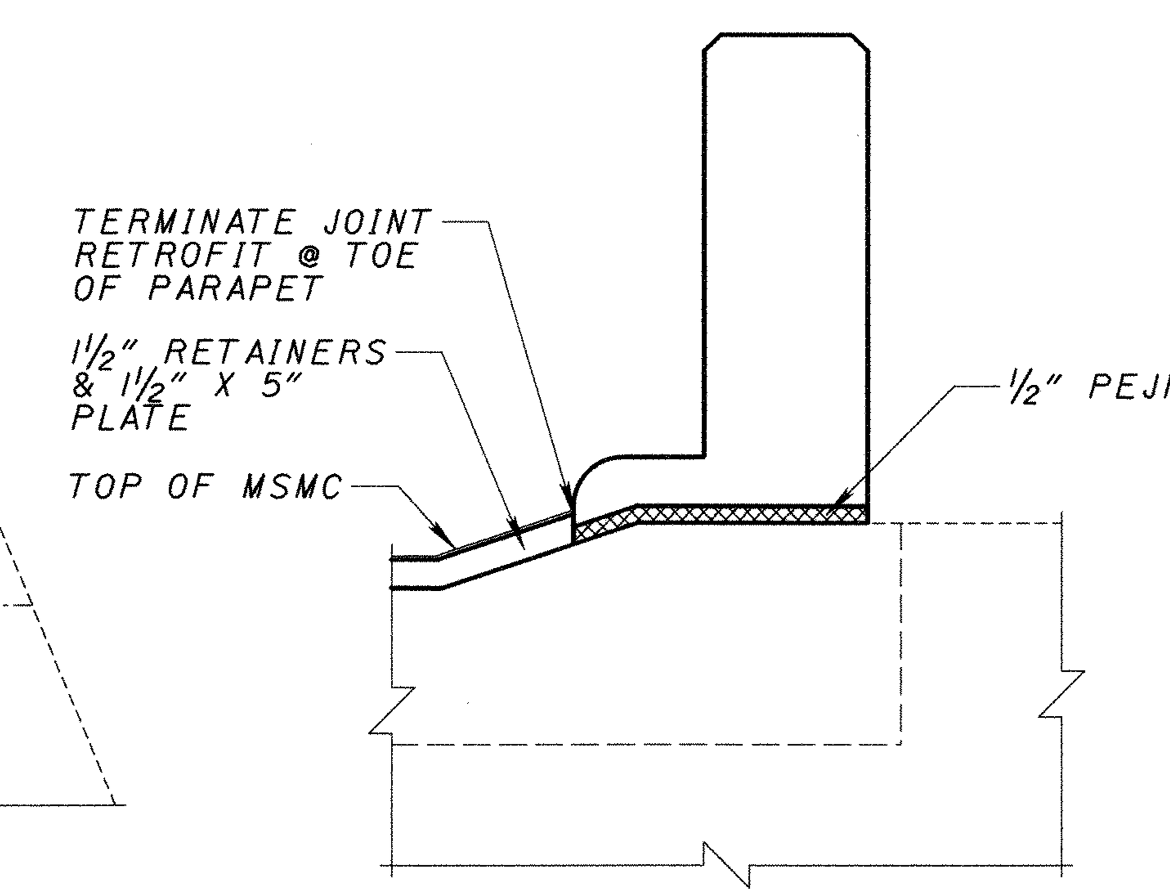
TYPICAL DECK PLAN AT SCUPPER

BRIDGE NO. POR-224-1189 AND BRIDGE POR-224-0104



TYPICAL EXPANSION JOINT PLAN DETAIL

BRIDGE NO. POR-224-1189



TYPICAL EXPANSION JOINT ELEVATION DETAIL

BRIDGE NO. POR-224-1189

LEGEND:

AC - ASPHALT CONCRETE
EXIST. - EXISTING
ID - INSIDE DIAMETER
LMC - LATEX MODIFIED CONCRETE
MSMC - MICROSILICA MODIFIED CONCRETE
TYP. - TYPICAL
PEJF - PREFORMED EXPANSION JOINT FILLER

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

DESIGNED JAA | CHECKED MAR | DRAWN MPH | REVISED | REVIEWED DWL | DATE 6-28-01 | STRUCTURE FILE NUMBER 6703755, 6706933

COMMON JOINT & SCUPPER EXTENSION DETAILS
BRIDGE NO. POR-224-0104 AND POR-224-1189

POR-224-0.00

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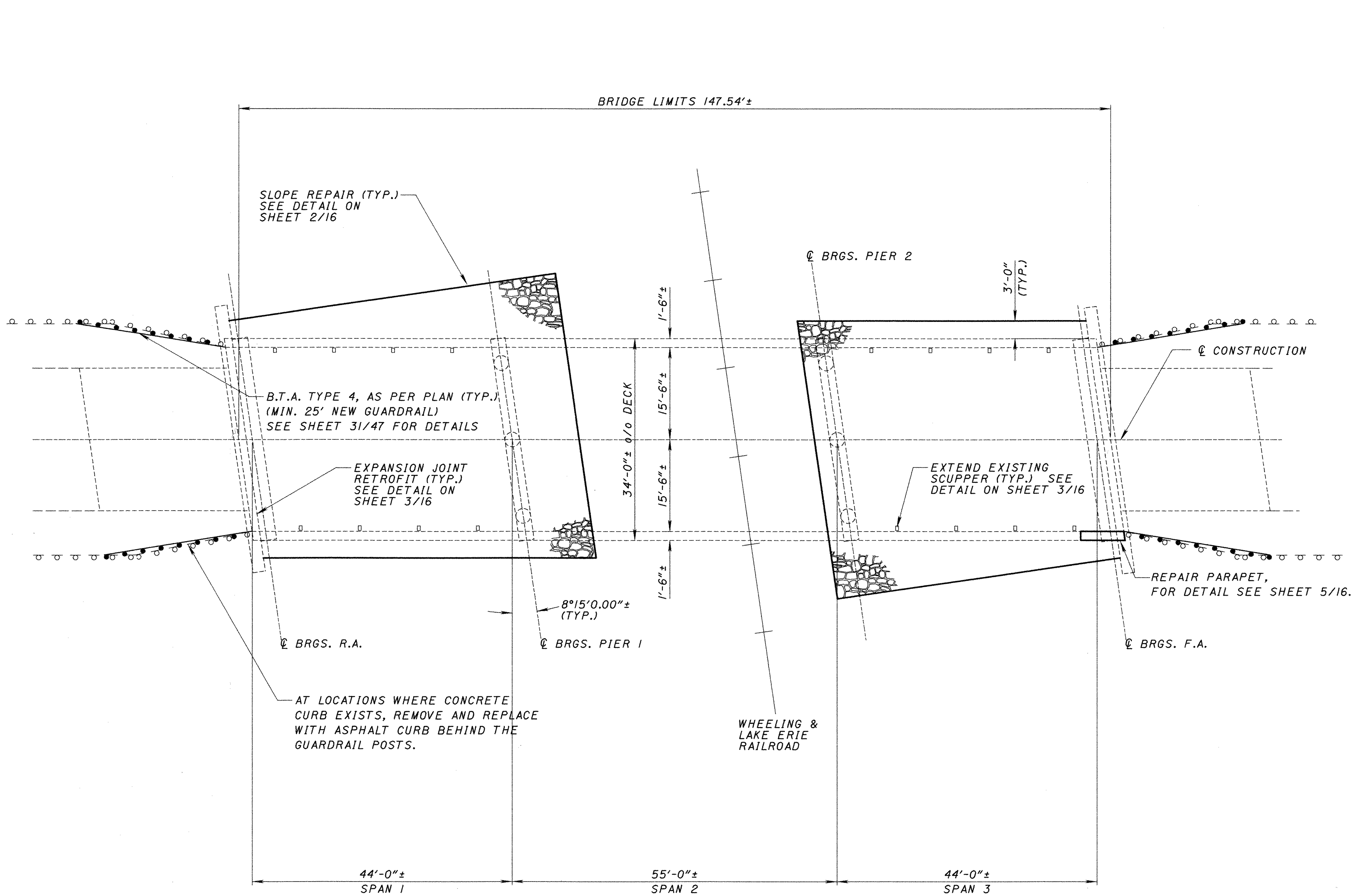
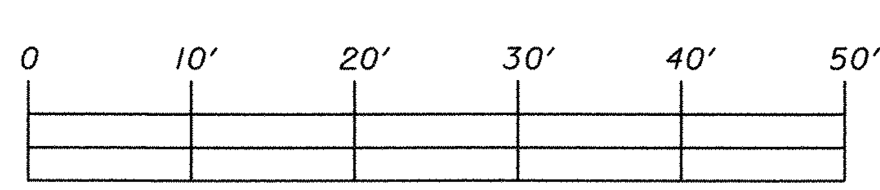


PLAN



LEGEND

F.A.	- FORWARD ABUTMENT
R.A.	- REAR ABUTMENT
TYP.	- TYPICAL
R.F.	- RIGHT FORWARD
BRGS.	- BEARINGS
c/c	- CENTER TO CENTER
f/f	- FACE TO FACE
o/o	- OUT TO OUT
MSMC	- MICROSILICA MODIFIED CONCRETE

PROPOSED WORK

1. REMOVE EXISTING ASPHALT CONCRETE AND REPLACE THE OVERLAY WITH 2¾" MSMC OVERLAY PER SUPPLEMENTAL SPECIFICATION 892. EXISTING ASPHALT CONCRETE OVERLAY SHALL BE REMOVED USING CONVENTIONAL SCARIFYING EQUIPMENT PER SUPPLEMENTAL SPECIFICATION 847. PERFORM CONSTRUCTION UNDER THE GUIDANCE OF SUPPLEMENTAL SPECIFICATION 848 - BRIDGE DECK REPAIR AND OVERLAY WITH CONCRETE USING HYDRO-DEMOLITION.
2. PROVIDE FOR ELASTOMERIC STRIP SEAL JOINTS AT EACH END OF THE STRUCTURE. THIS INCLUDES MODIFICATION OR REMOVAL OF THE EXISTING RISER.
3. PAINT EXISTING STRUCTURAL STEEL WITH SYSTEM OZEU PER SUPPLEMENTAL SPECIFICATION 885.
4. SOUND, MARK, AND PATCH SUBSTRUCTURE USING ITEM 519 OR SS 843.
5. SEAL CONCRETE SURFACES INCLUDING PARAPETS, WINGWALLS, ABUTMENTS AND PIERS USING EPOXY-URETHANE SEALER (SEE PROPOSAL NOTE).
6. REGRADE SLOPES AND PLACE CRUSHED AGGREGATE SLOPE PROTECTION AT THE REAR AND FORWARD ABUTMENTS.
7. EXTEND SCUPPERS TO 8" BELOW THE BEAMS.

UTILITY DISPOSITION

THE PROPOSED WORK REQUIRES NO UTILITY INVOLVEMENT.

EXISTING STRUCTURE

SFN: 6703755

DATE BUILT: 1955

TYPE: CONTINUOUS ROLLED STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 44±, 55±, 44± c/c BRGS.

ROADWAY: 31'-0"± f/f CURBS

SKEW: 8°15'00" R.F.

LOADING: CF-2000 (51)

APPROACH SLABS: AS-1-54 (25' LONG)

WEARING SURFACE: ASPHALT CONCRETE

ALIGNMENT: TANGENT

SUPERELEVATION: NONE

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

DESIGNED	CHECKED	DRAWN	REVISED	REVIEWED	DATE	STRUCTURE FILE NUMBER
MPH	MAR	MPH		DWL	6-28-01	6703755

STRUCTURE PLAN
BRIDGE NO. POR-224-0104
OVER WHEELING AND LAKE ERIE RAILROAD

POR-224-0.00

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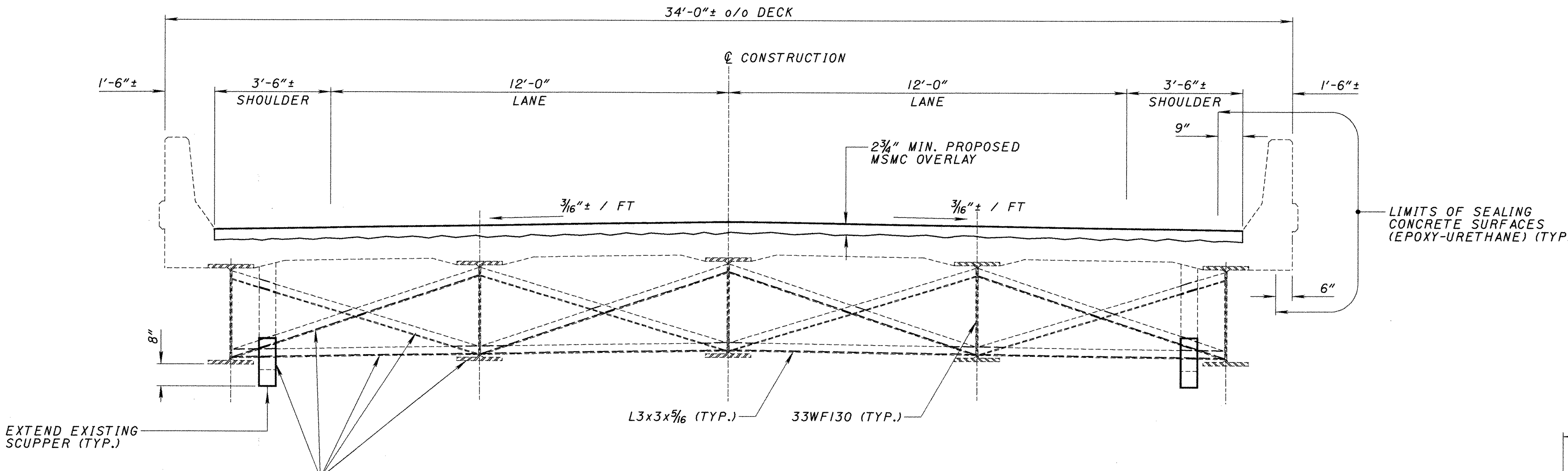
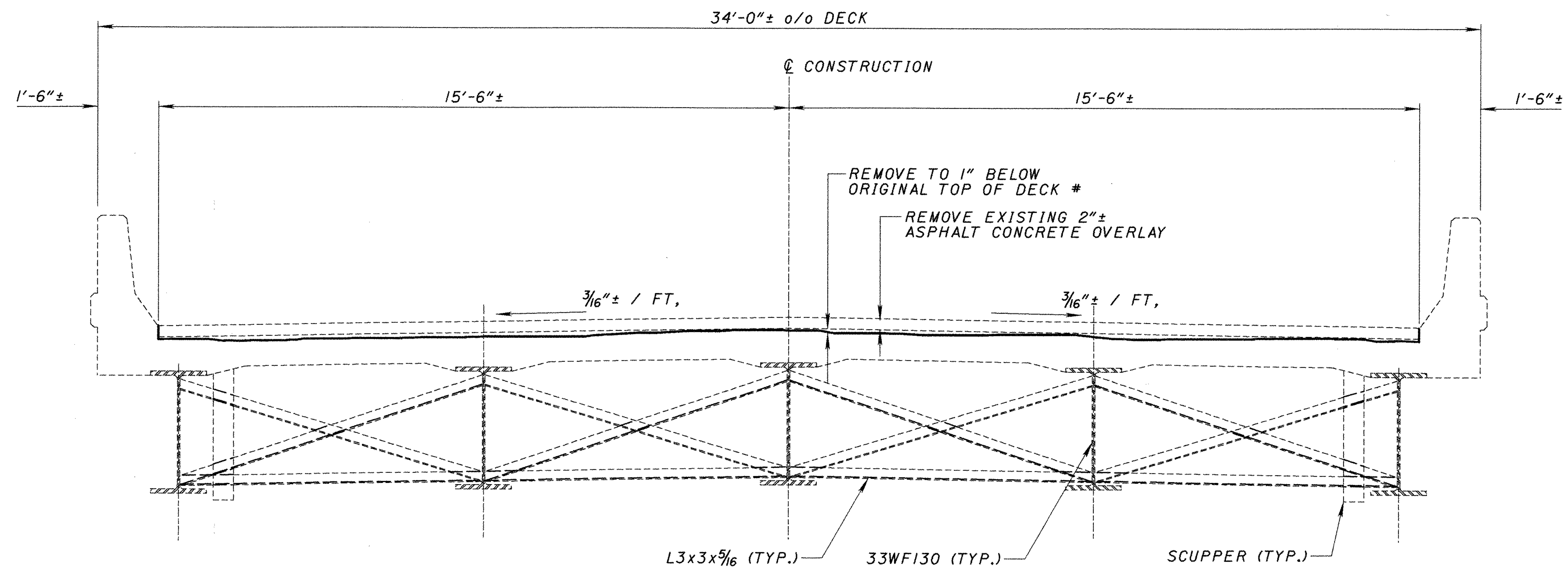
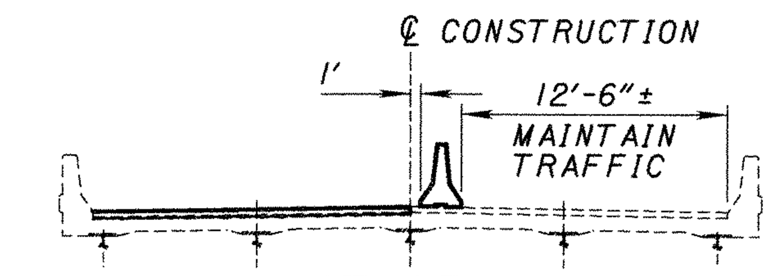


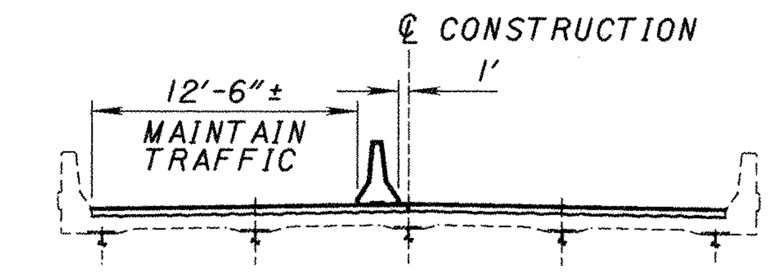
PROPOSED TRANSVERSE SECTION



EXISTING TRANSVERSE SECTION

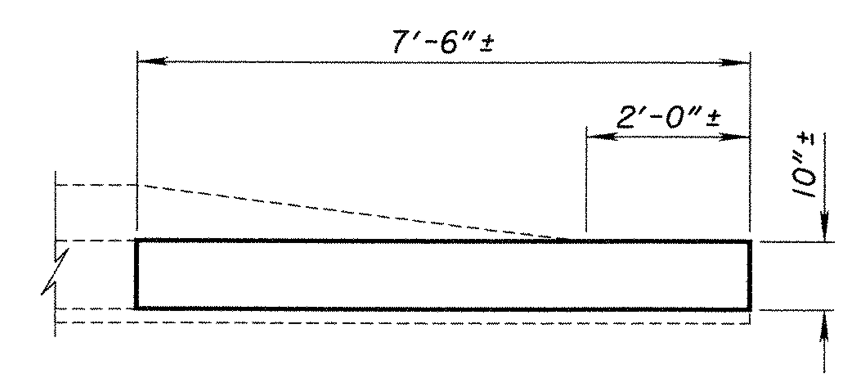


STAGE I

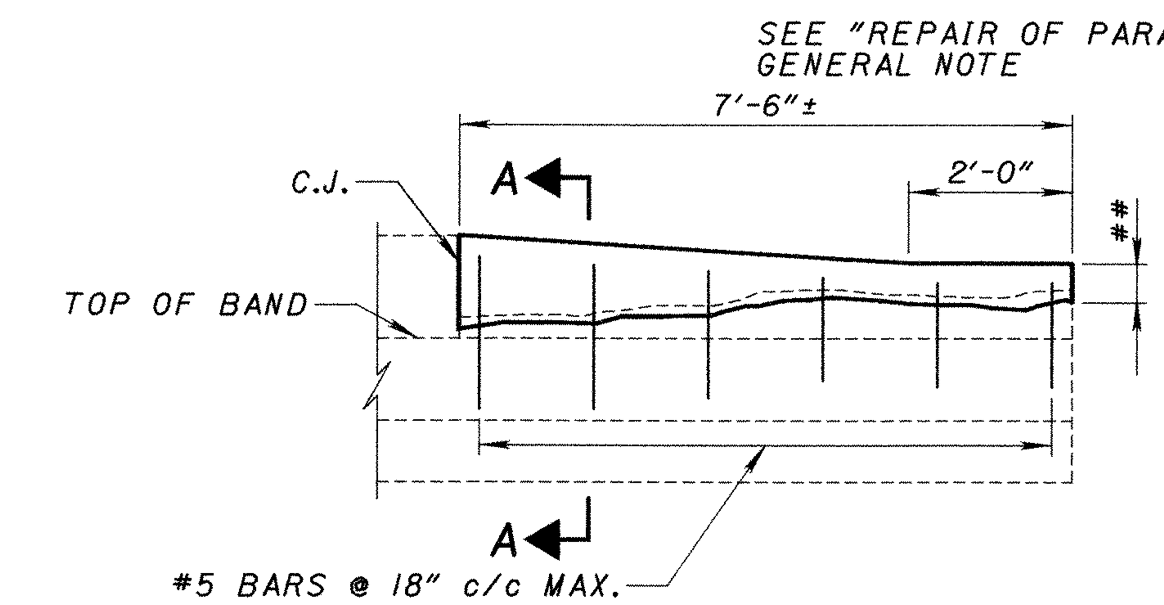


STAGE II

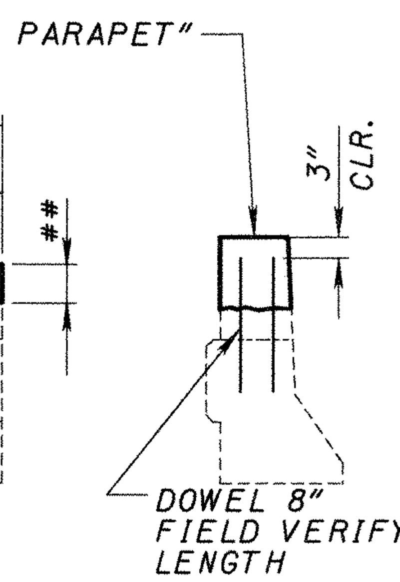
STAGE CONSTRUCTION DETAIL



PLAN



ELEVATION



SECTION A-A

PARAPET REPAIR DETAIL

NOTES:

\# BY MILLING AND HYDRO-DEMOLITION

** DIMENSION TO BE FIELD VERIFIED. NEEDS TO EXTEND BELOW THE BOTTOM OF THE BROKEN CONCRETE.

LEGEND:

o/o - OUT TO OUT
c/c - CENTER TO CENTER
TYP. - TYPICAL
MSMC - MICROSILICA MODIFIED CONCRETE
CLR. - CLEAR
C.J. - CONSTRUCTION JOINT
MIN. - MINIMUM

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

REVIEWED DWL	DATE 6-28-01	STRUCTURE FILE NUMBER 6703755	
DRAWN MPH	REVISED		
DESIGNED MPH	CHECKED MAR		

TRANSVERSE DECK SECTIONS
BRIDGE NO. POR-224-0104
OVER WHEELING AND LAKE ERIE R.R.

POR-224-0.00

5/16

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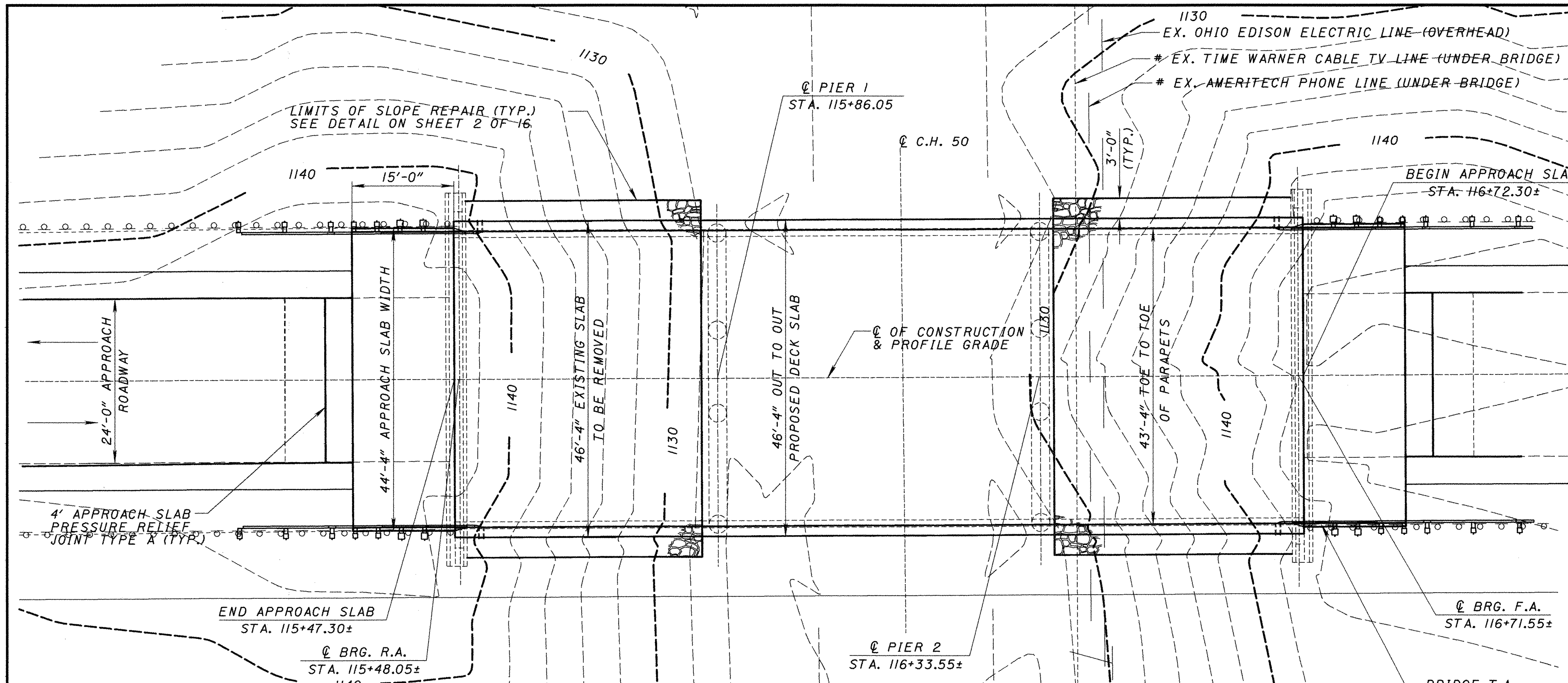
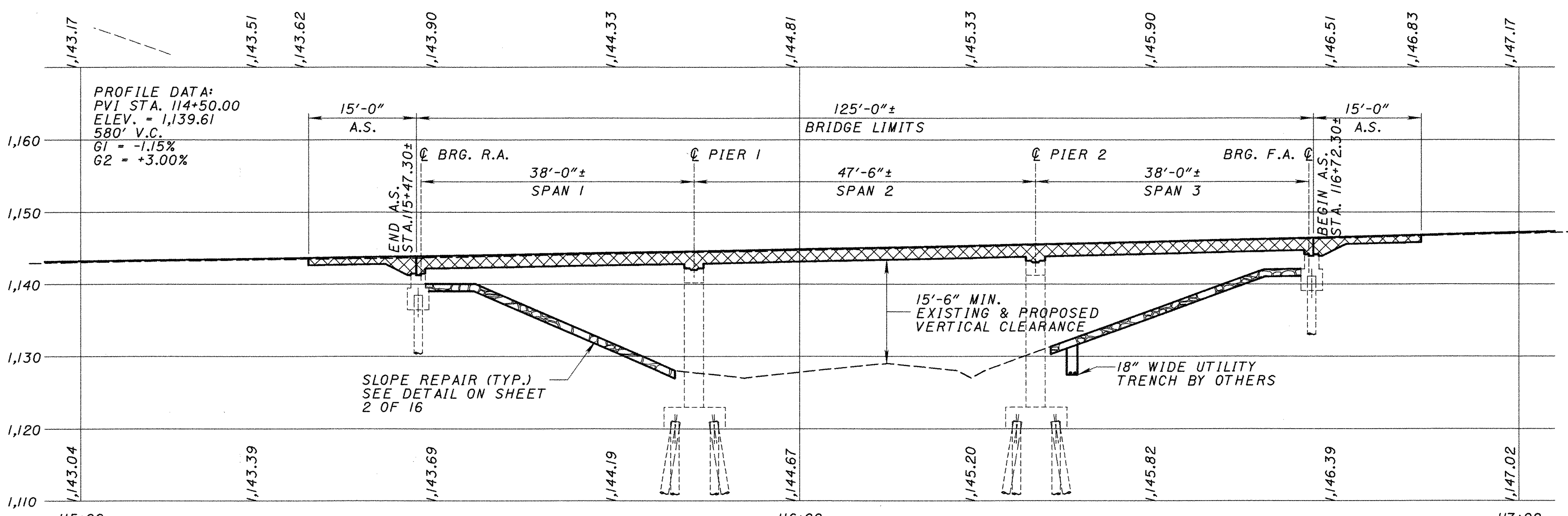


PLAN



PROFILE ALONG SR 224

UTILITY DISPOSITION

UTILITY TO BE RELOCATED BY OTHERS

LEGEND

A.S.	-	APPROACH SLAB
T/T	-	TOE TO TOE
TYP.	-	TYPICAL
F/F	-	FACE TO FACE
BRG.	-	BEARINGS
R.A.	-	REAR ABUTMENT
F.A.	-	FORWARD ABUTMENT
T.A.	-	TERMINAL ASSEMBLY

PROPOSED WORK

1. REMOVE EXISTING 21½"± REINFORCED CONCRETE SLAB AND CONSTRUCT NEW 23" REINFORCED CONCRETE SLAB WITH A 36" PARAPET PER ODOT SBR-1-99.
2. REMOVE EXISTING 25'± APPROACH SLABS AND CONSTRUCT NEW FULL WIDTH 15' APPROACH SLABS, SLEEPER SLABS AND PRESSURE RELIEF JOINTS.
3. SOUND, MARK, AND PATCH SUBSTRUCTURE USING ITEM 519 OR SS 843.
4. SEAL CONCRETE SURFACES INCLUDING PARAPETS, WINGWALLS, ABUTMENTS AND PIERS USING EPOXY-URETHANE SEALER (SEE PROPOSAL NOTE).
5. REGRADE SLOPES AND PLACE CRUSHED AGGREGATE SLOPE PROTECTION AT THE REAR AND FORWARD ABUTMENTS.

TRAFFIC DATA

CURRENT YEAR ADT (2001) 3960
DESIGN YEAR ADT (2021) 5260
DESIGN YEAR ADTT (2021) 553

ALL TRAFFIC IS FOR BOTH DIRECTIONS

EXISTING STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB ON CAPPED COLUMN SUBSTRUCTURE

SPANS: 38'-0"±, 47'-6"±, 38'-0"± C/C BRGS.

ROADWAY: 44'-0" F/F PARAPET

LOADING: CF 2000(51)

WEARING SURFACE: LATEX MODIFIED CONCRETE

ALIGNMENT: TANGENT

APPROACH SLABS: 25' LONG (AS-1-54)

SFN: 6703900

SKEW: 0°

DATE BUILT: 1957

PROPOSED STRUCTURE

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB ON CAPPED COLUMN SUBSTRUCTURE

SPANS: 38'-0"±, 47'-6"±, 38'-0"± C/C BRGS.

ROADWAY: 43'-4" T/T PARAPETS

LOADING: HS-20-44 CASE II AND ALTERNATE MILITARY LOADING

WEARING SURFACE: 1" MONOLITHIC CONCRETE

ALIGNMENT: TANGENT

APPROACH SLABS: 15' LONG (AS-1-81)

SKEW: 0°

CROWN: 3/16" PER FOOT

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

DESIGNED MPH | CHECKED MAR | DRAWN MPH | REVISED | REVIEWED DWL | DATE 6-28-01 | STRUCTURE FILE NUMBER 6703900

SITE PLAN

BRIDGE NO. POR-224-1172 OVER COUNTY HIGHWAY 50

POR-224-0.00

6/16

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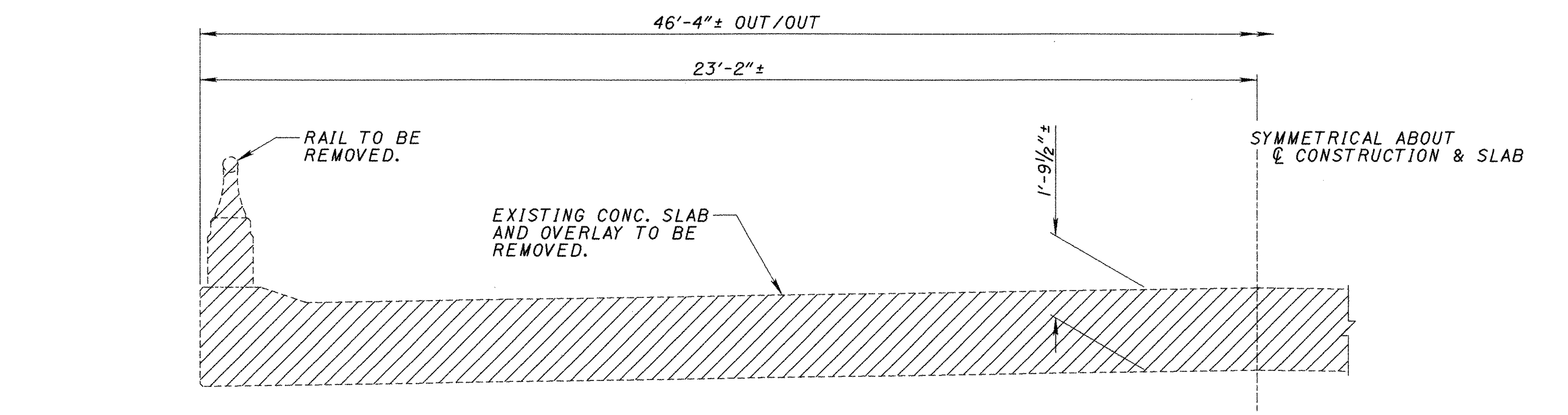
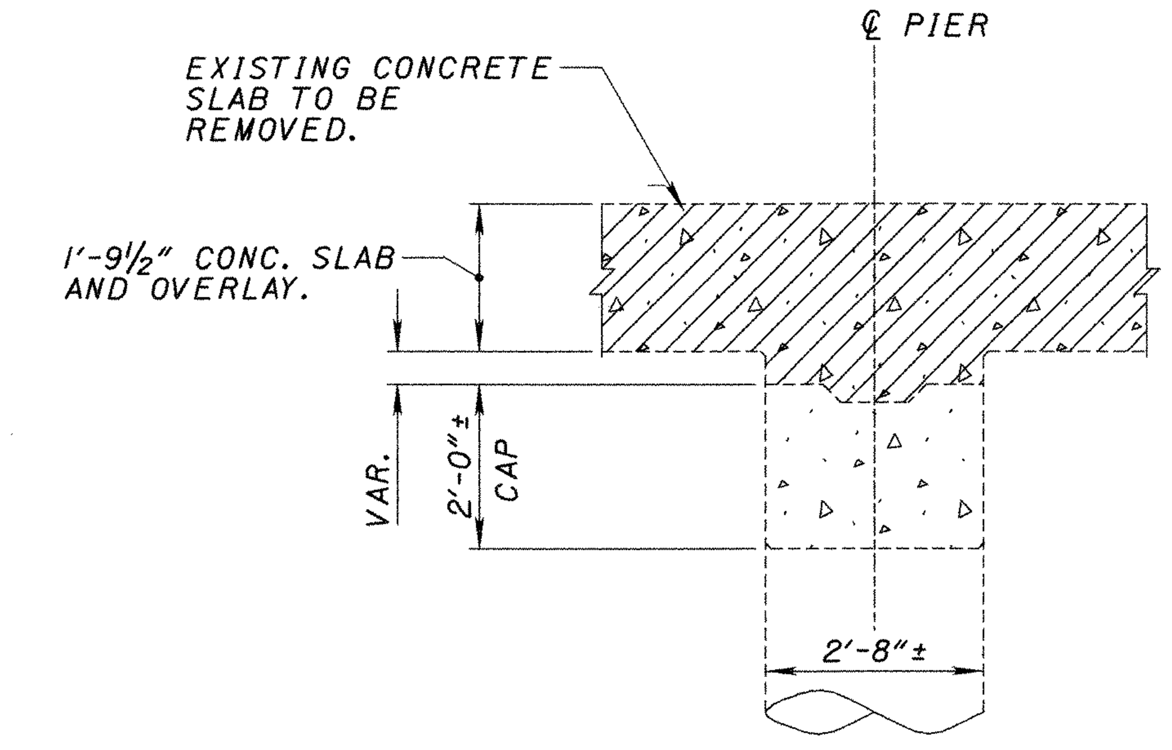
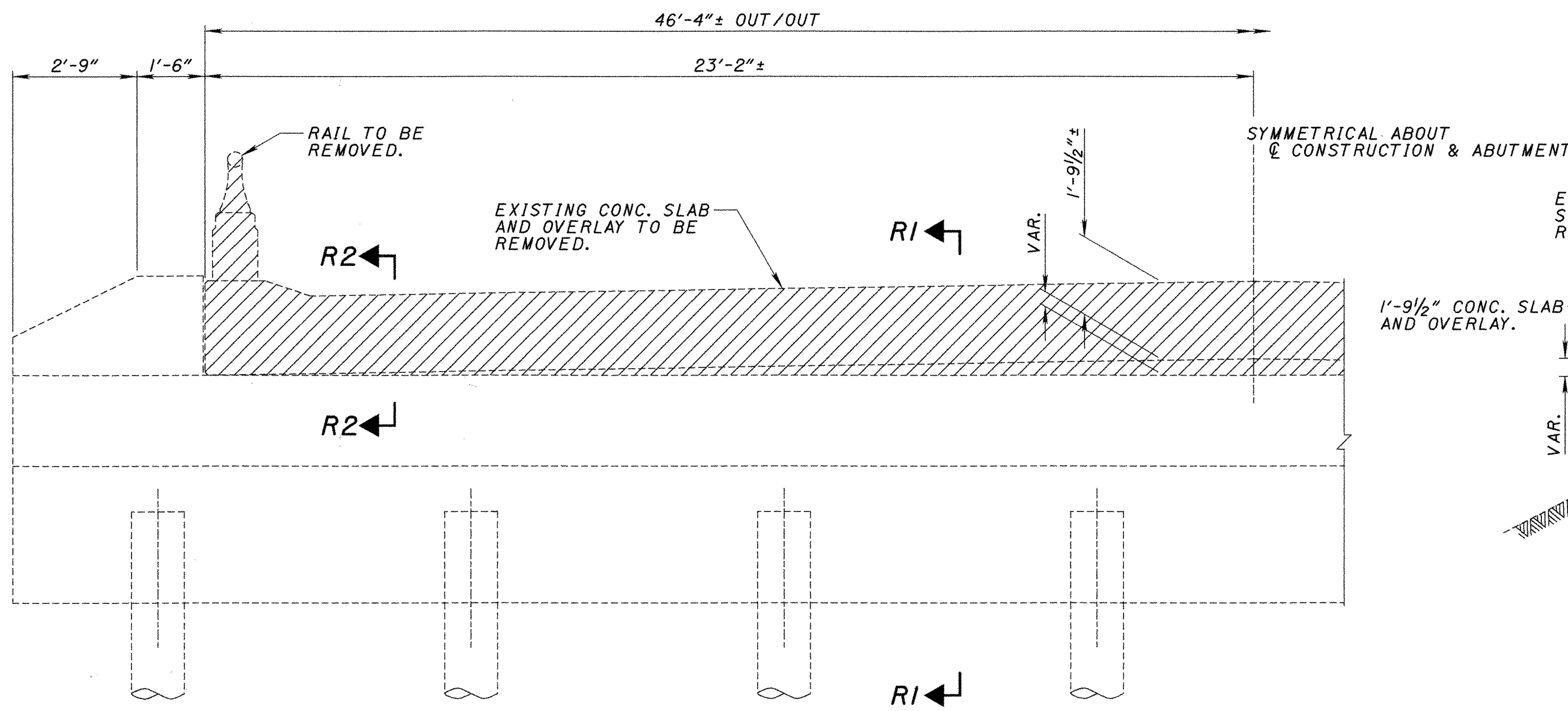


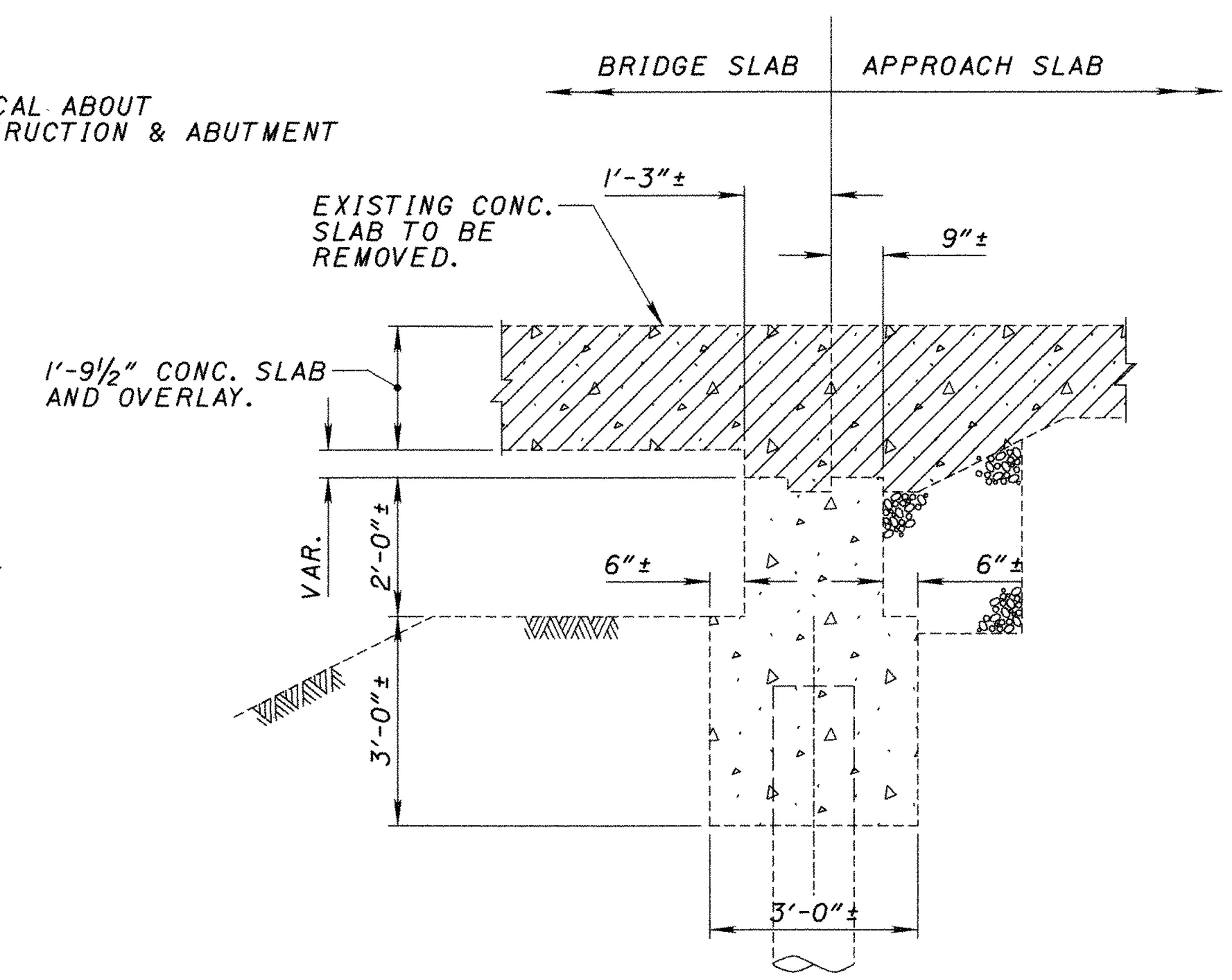
EXISTING TRANSVERSE SECTION



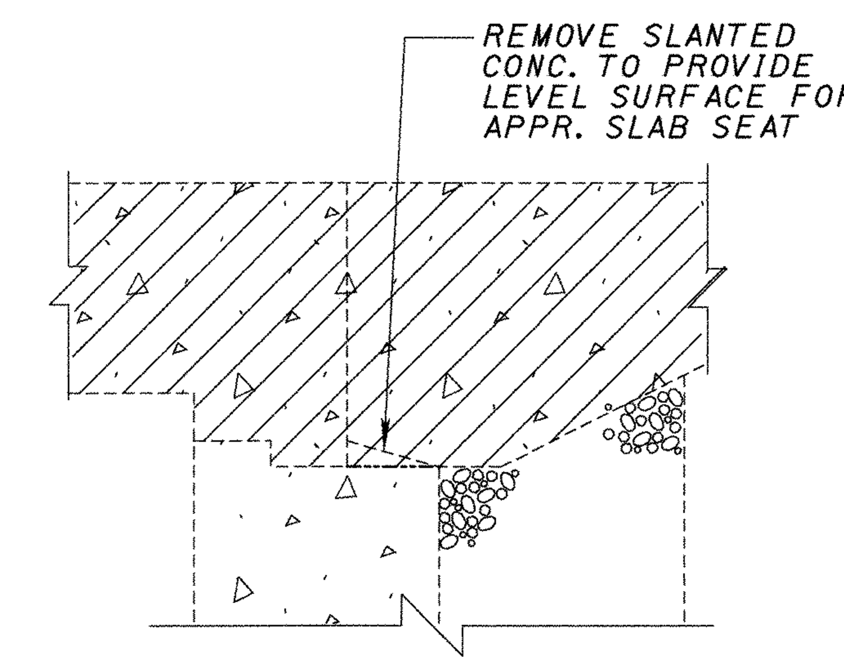
EXISTING PIER SECTION



EXISTING ABUTMENT ELEVATION



SECTION R1



SECTION R2

LEGEND

LIMITS OF STRUCTURE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED.

APPR. - APPROACH
CONC. - CONCRETE
VAR. - VARIES

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

DESIGNED	DRAWN	REVIEWED	DATE
MAR	MAR	DWL	6-28-01
CHECKED JAA	REVISED	STRUCTURE FILE NUMBER 6703900	

REMOVAL DETAILS
BRIDGE NO. POR-224-1172
OVER COUNTY HIGHWAY 50

POR-224-0.00

7/16

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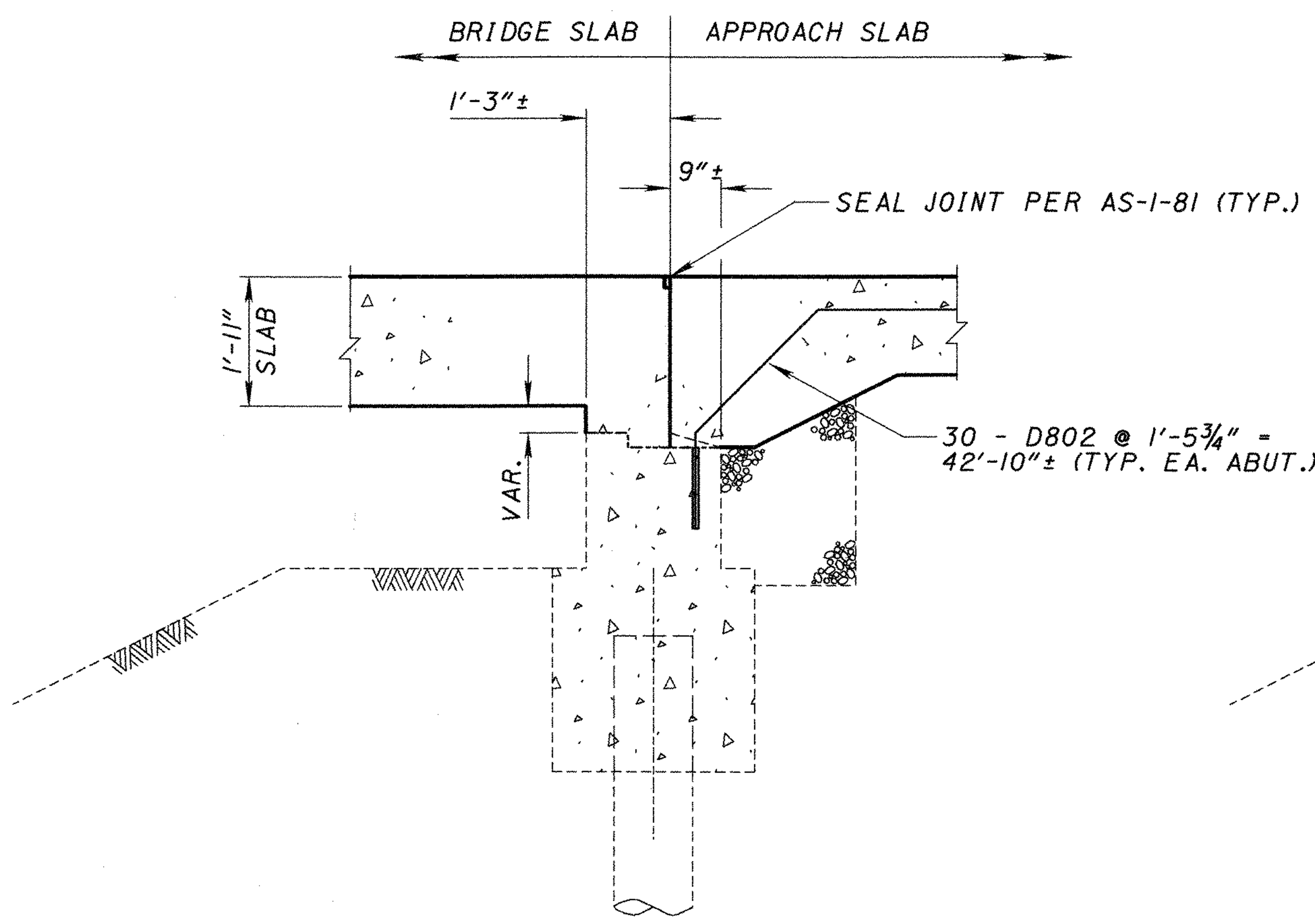
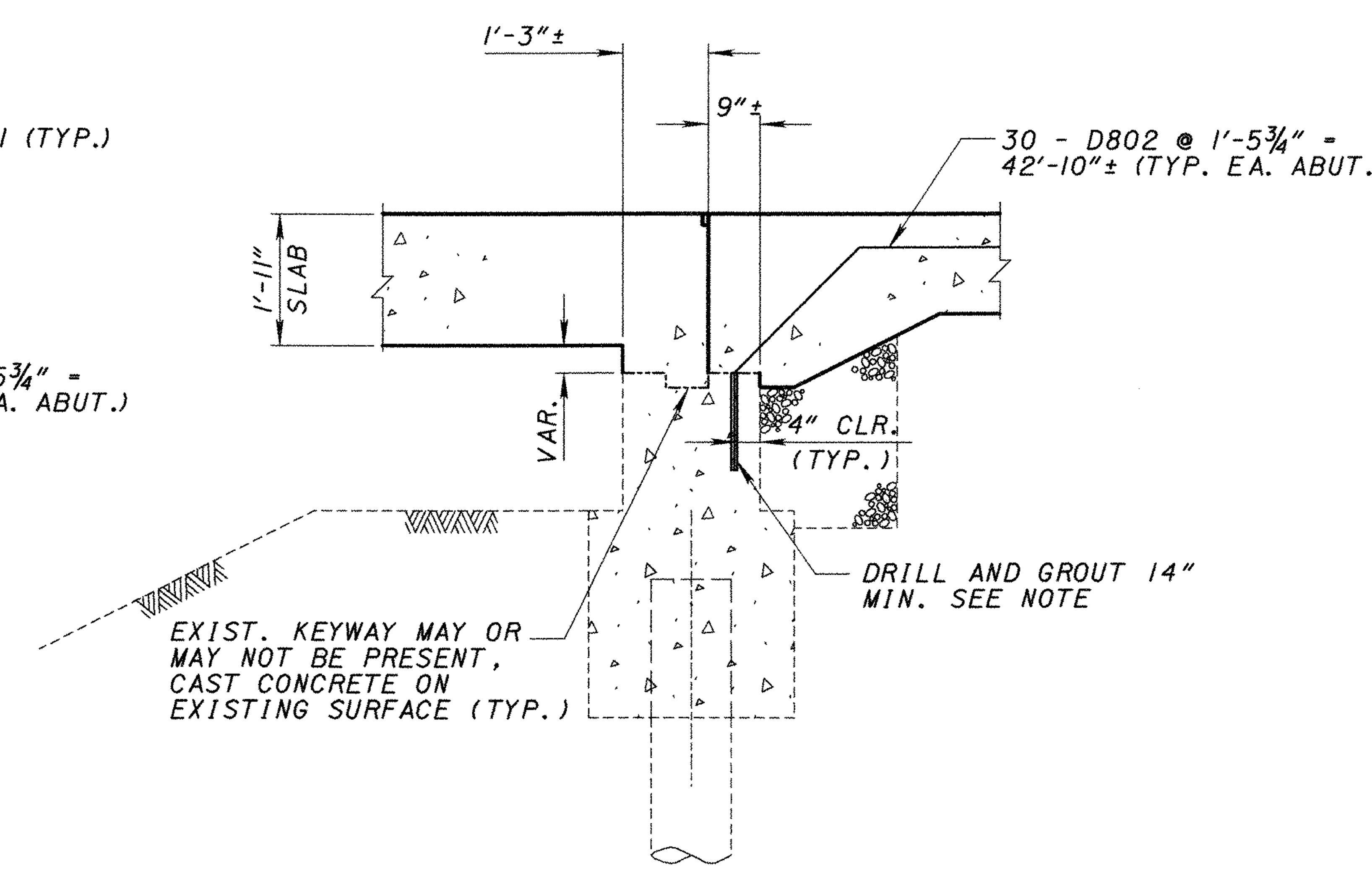
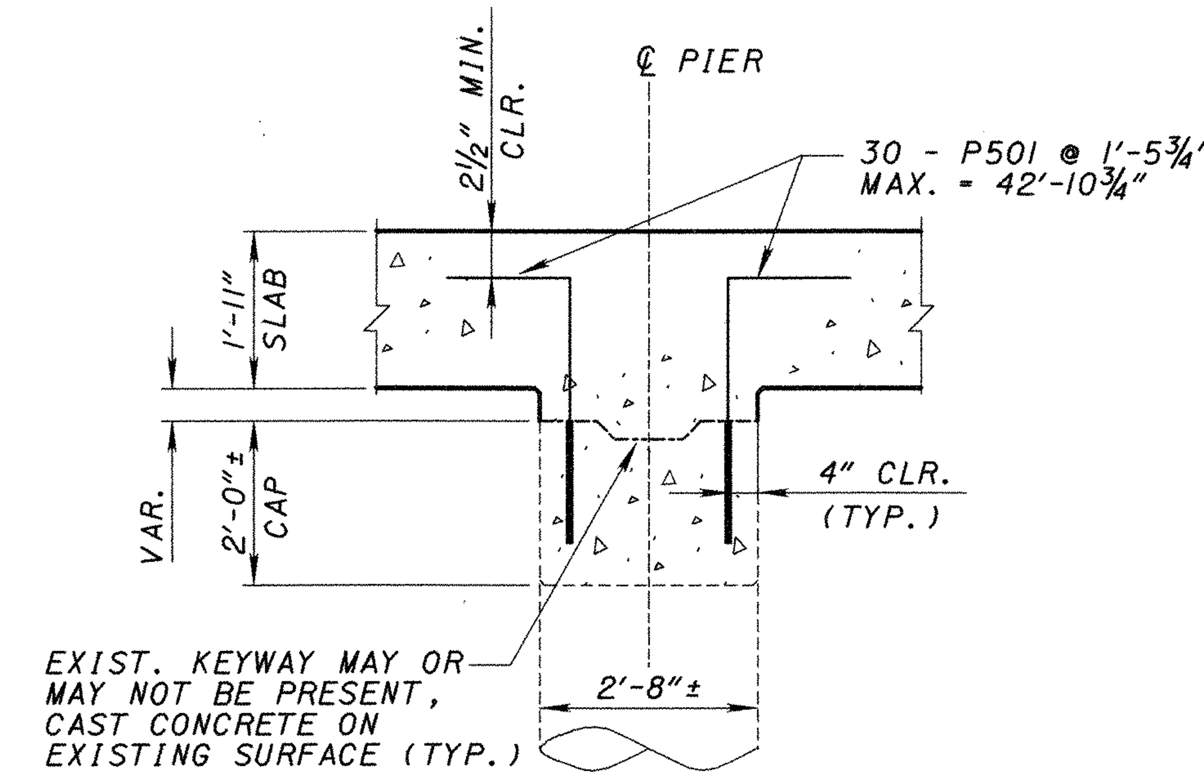


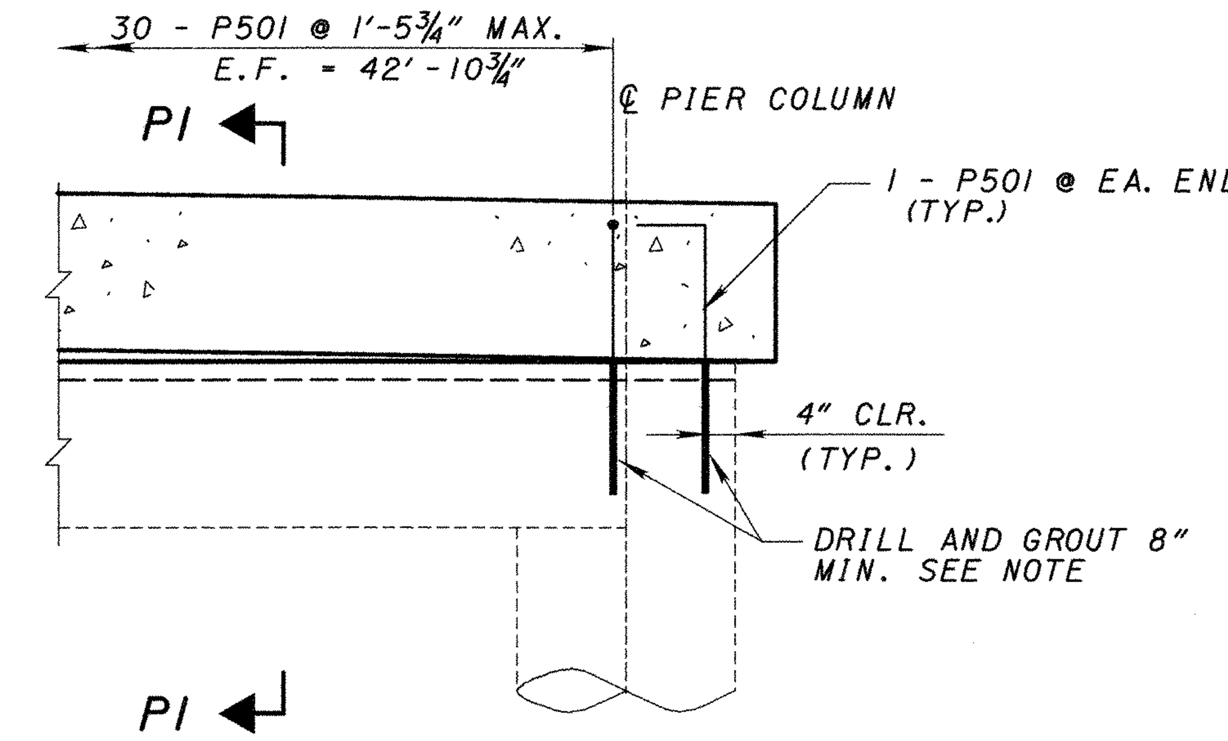
SECTION A2



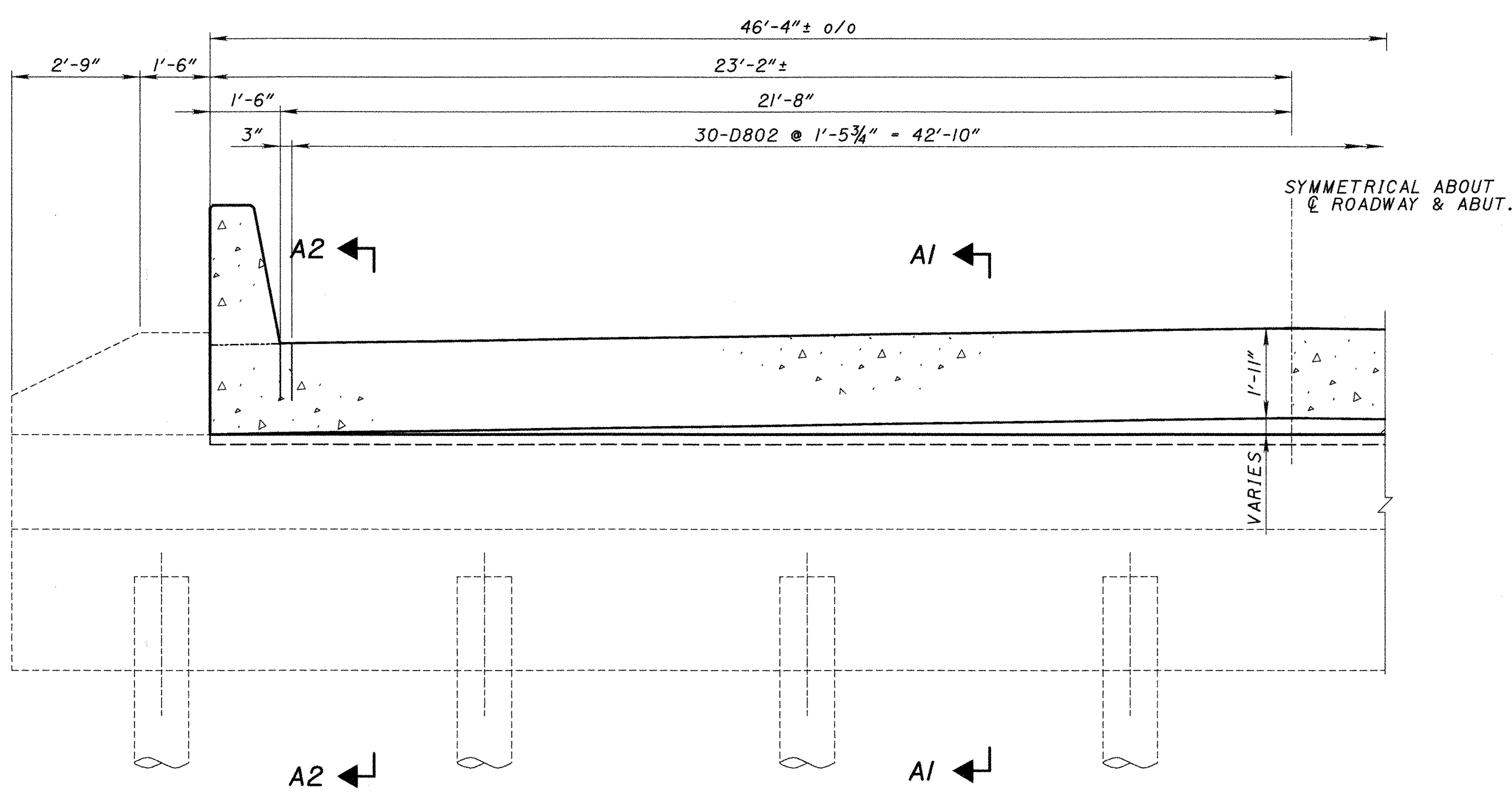
SECTION A1



SECTION P1



PIER END DETAIL



PROPOSED ABUTMENT ELEVATION

NOTES:

DOWEL BARS SHALL BE DRILLED AND GROUTED WITH AN EPOXY RESIN NON-SHRINK, NON-METALLIC GROUT PER CMS 510.

SEE SHEET 2 / 16 FOR SUBSTRUCTURE SEALING LIMITS AND SLOPE PROTECTION DETAIL.

LEGEND

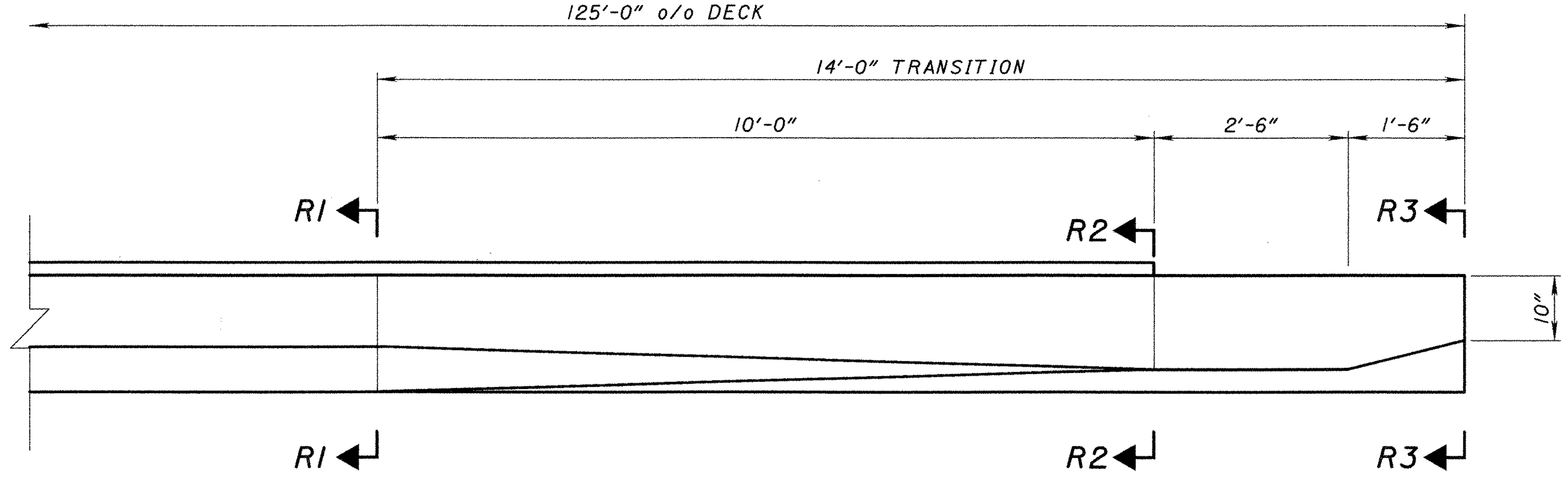
ABUT.	-	ABUTMENT
CLR.	-	CLEAR
EA.	-	EACH
E.F.	-	EACH FACE
MAX.	-	MAXIMUM
MIN.	-	MINIMUM
o/o	-	OUT TO OUT
TYP.	-	TYPICAL
VAR.	-	VARIES

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

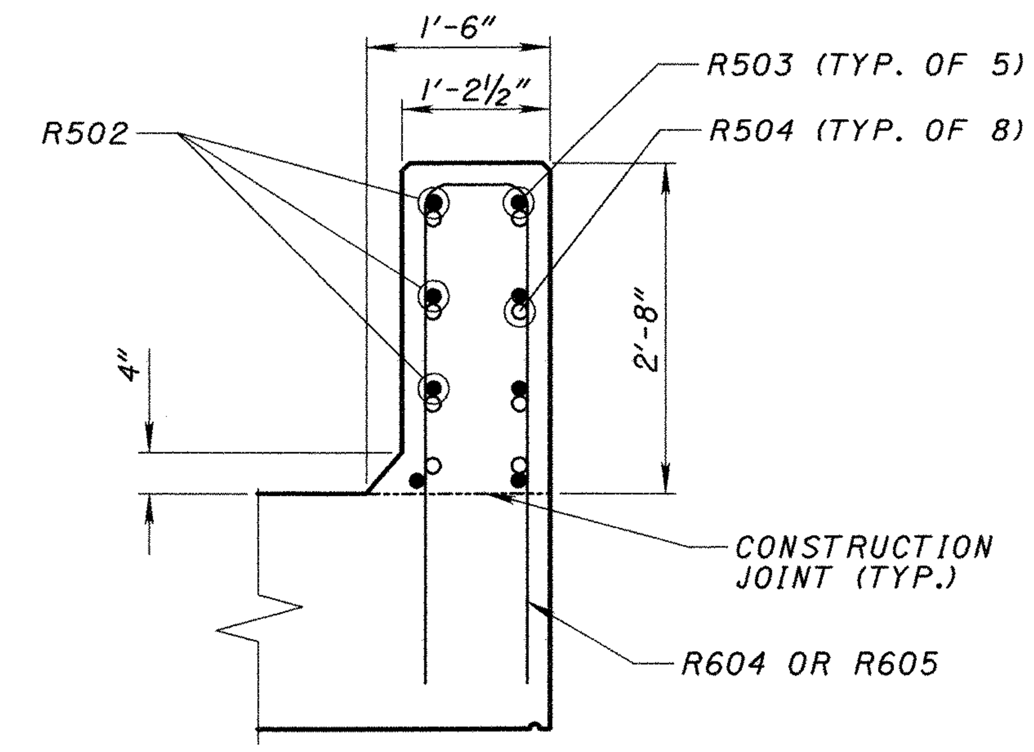
DESIGNED DCF | CHECKED MAR | DRAWN DCF | REVISED | REVIEWED DWL | DATE 6-28-01 | STRUCTURE FILE NUMBER 6703900

ABUTMENT AND PIER DETAILS
BRIDGE NO. POR-224-1172
OVER COUNTY HIGHWAY 50

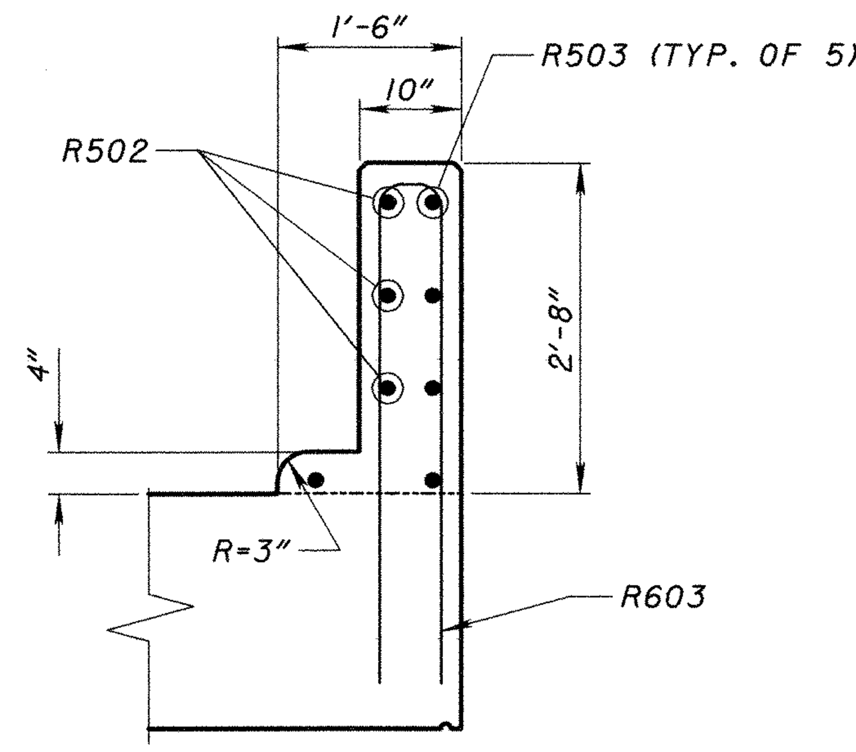
POR-224-0.00



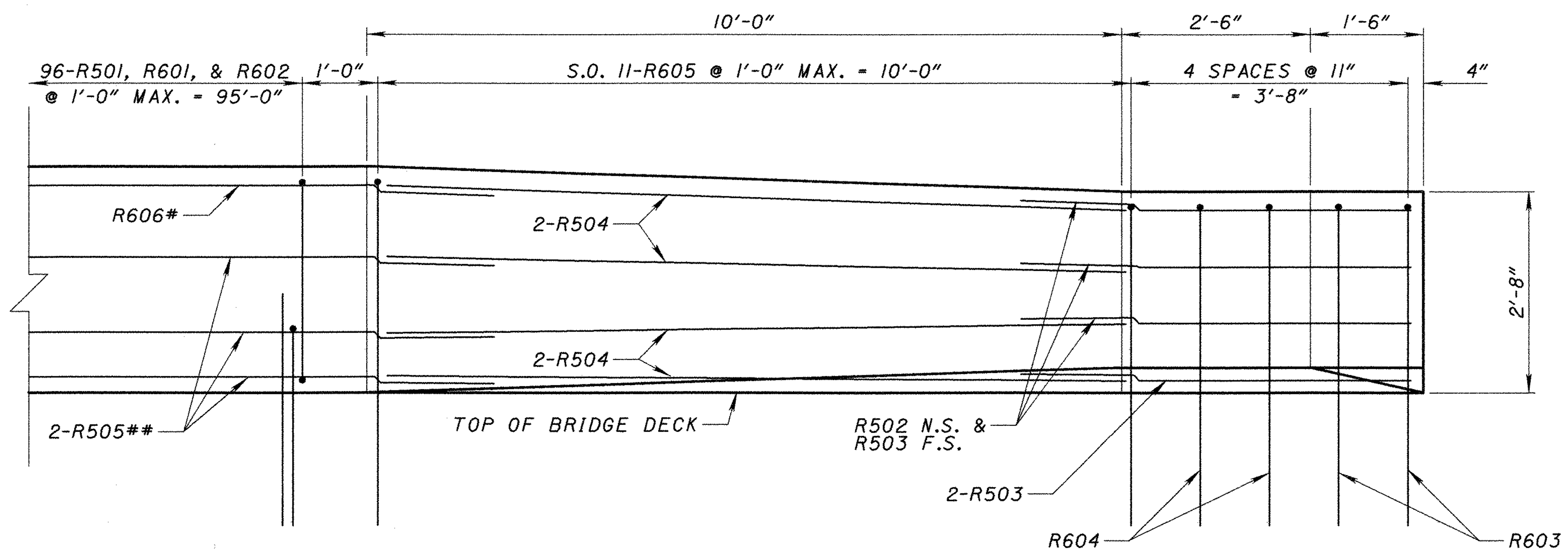
TYPICAL PARAPET PLAN



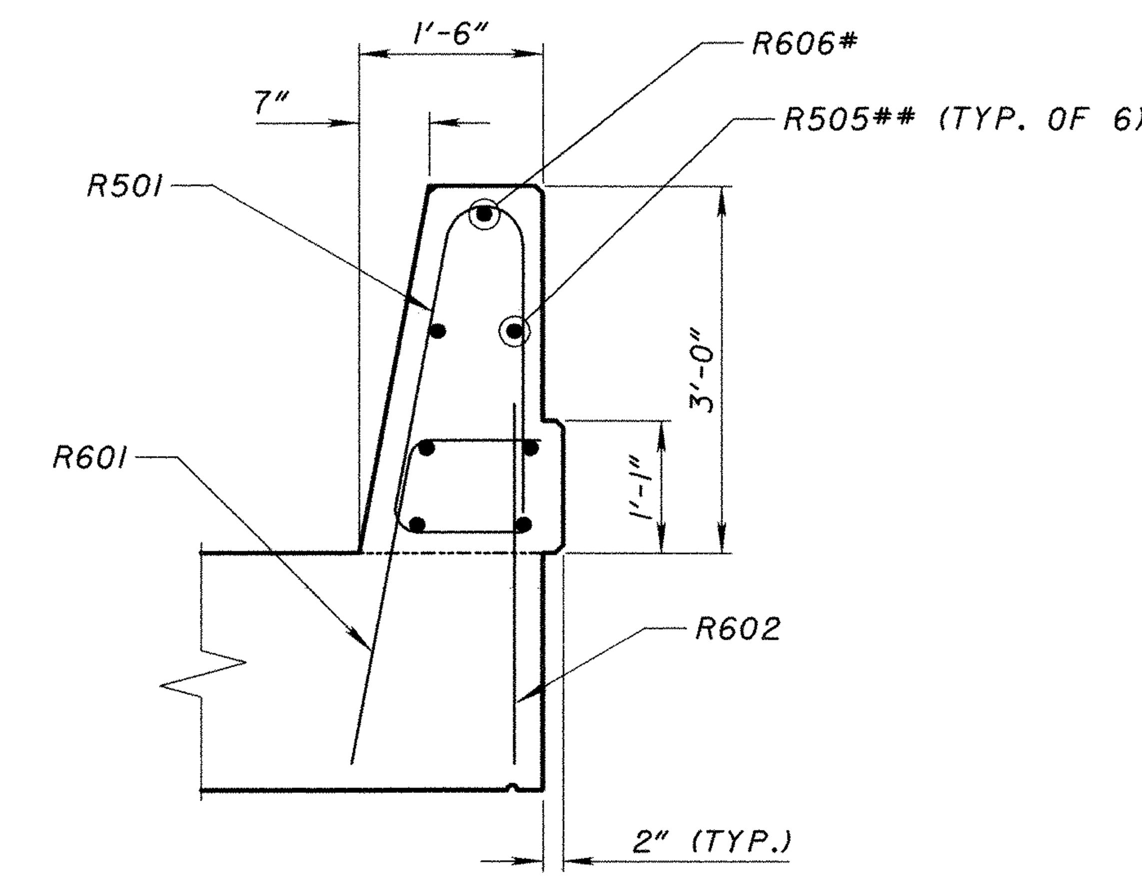
SECTION R2



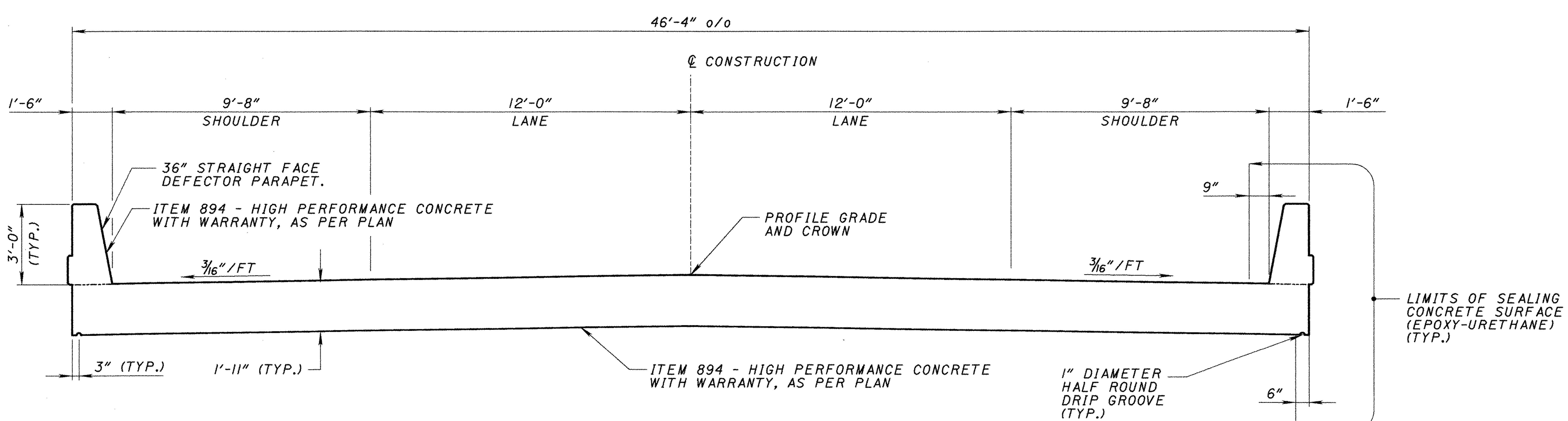
SECTION R3



TYPICAL PARAPET ELEVATION



SECTION R1



TRANSVERSE SECTION

NOTES

FOR ADDITIONAL DETAILS, SUCH AS CRACK CONTROL JOINT SPACING, SEE STANDARD DRAWING SBR-1-99.

#- 4 LENGTHS OF R606 BARS, 40" MIN. LAP.

##- 4 LENGTHS OF R505 BARS, 25" MIN. LAP.

LEGEND

TYP. - TYPICAL
O/O - OUT TO OUT
N.S. - NEAR SIDE
F.S. - FAR SIDE

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

REVIEWED DWL	DATE 6-28-01	STRUCTURE FILE NUMBER 6703900	
DRAWN MPH	REVISED		
DESIGNED MPH	CHECKED MAR		

TRANSVERSE DECK SECTION AND PARAPET DETAILS

BRIDGE NO. POR-224-1172
OVER COUNTY HIGHWAY 50

POR-224-0.00

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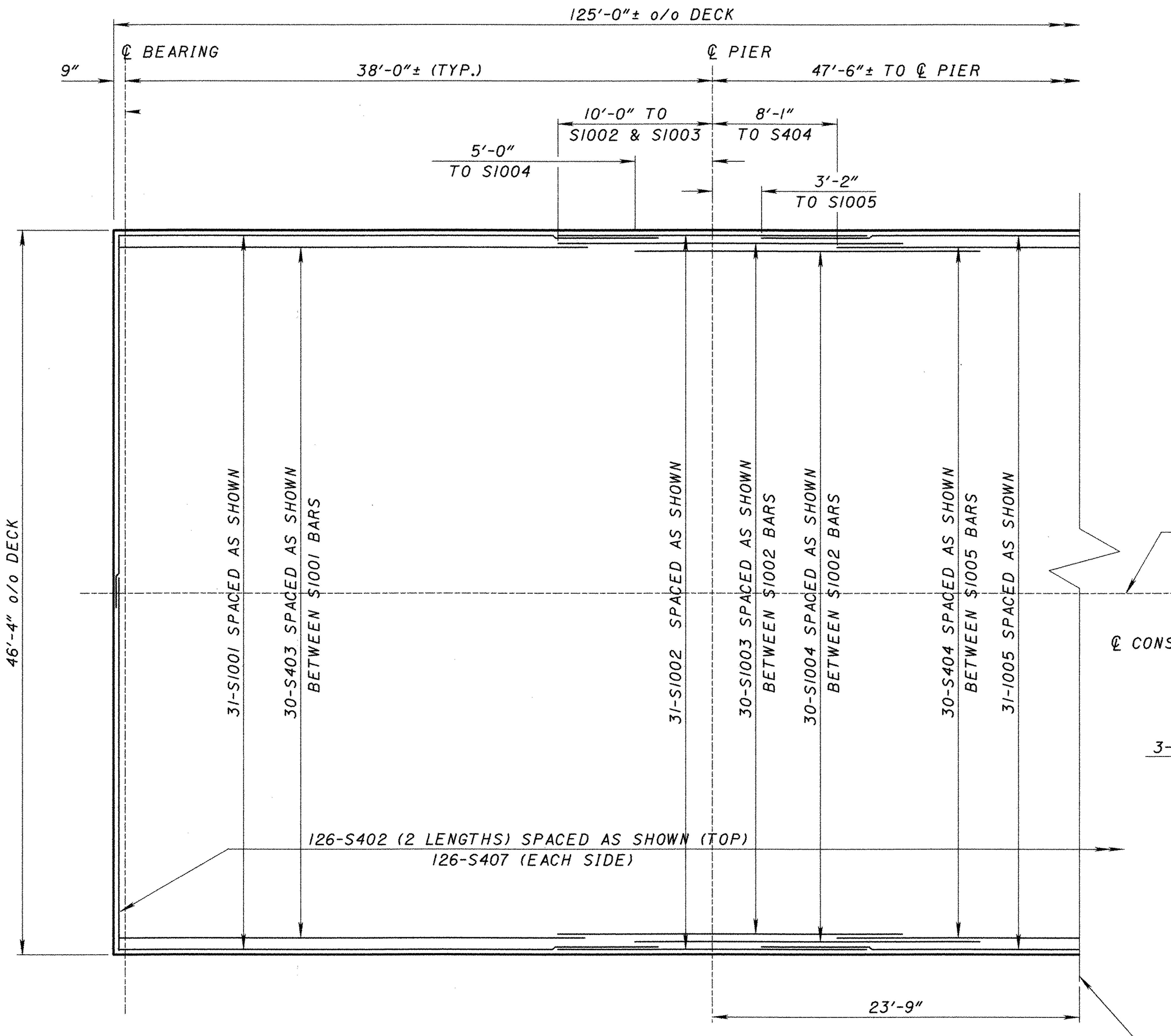
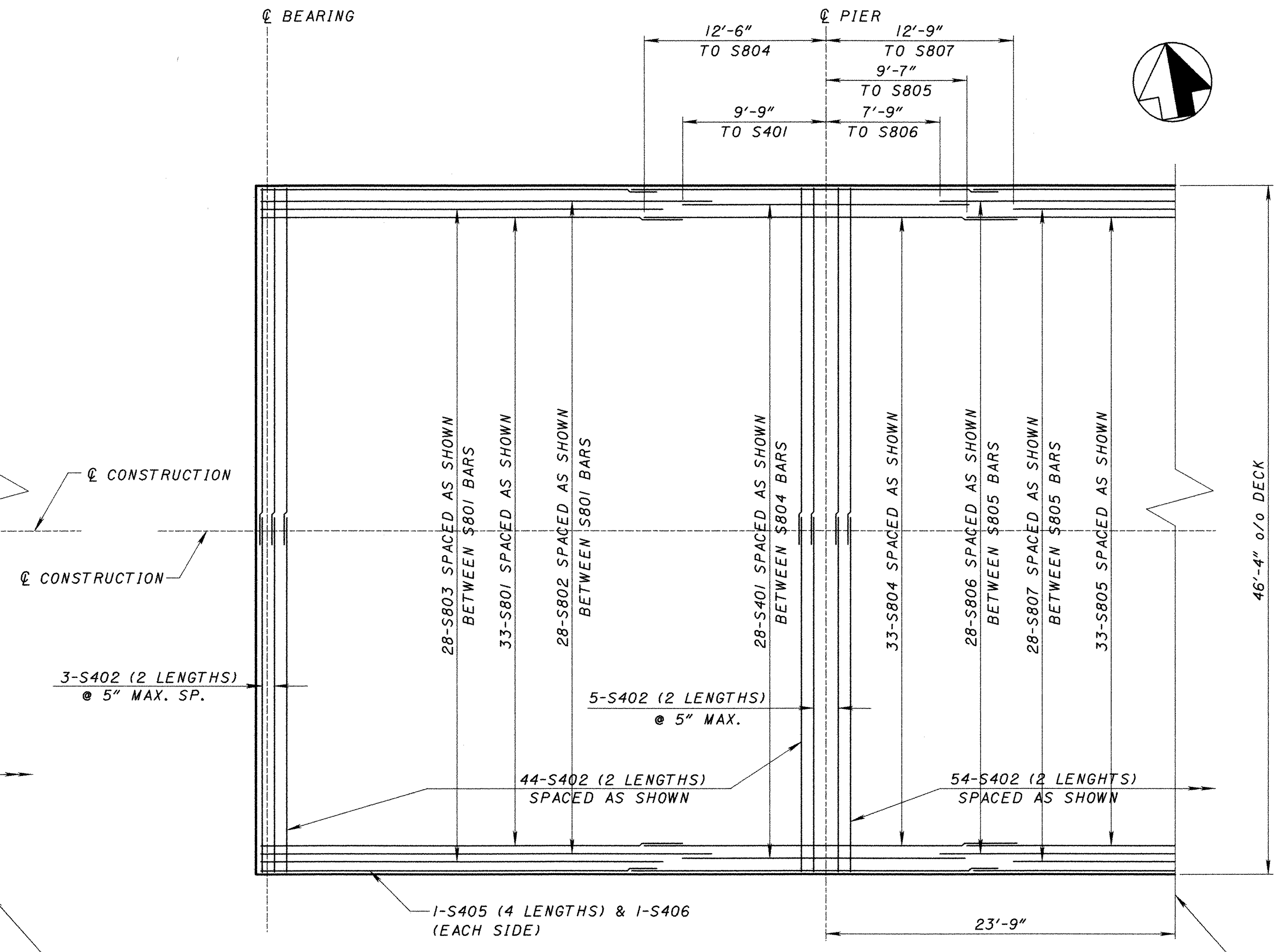


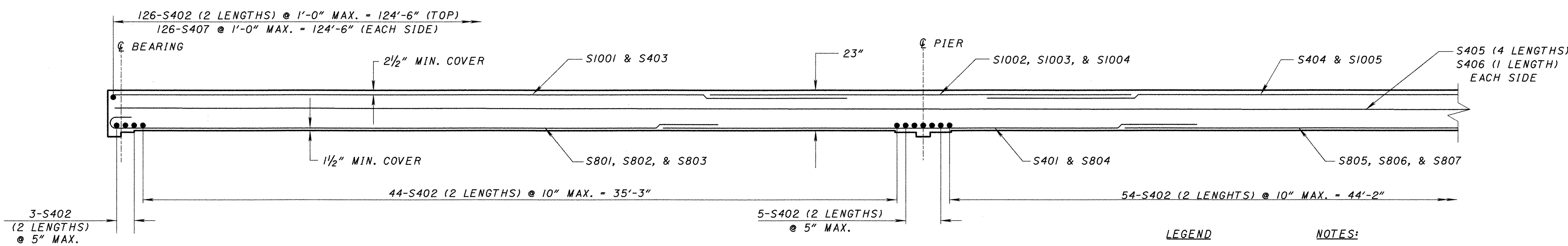
TOP REINFORCEMENT

WEST HALF OF DECK SHOWN
EAST HALF OPPOSITE HAND



BOTTOM REINFORCEMENT

WEST HALF OF DECK SHOWN
EAST HALF OPPOSITE HAND



LONGITUDINAL SECTION

LEGEND

MAX. - MAXIMUM
MIN. - MINIMUM

NOTES:

FOR ADDITIONAL DETAILS SEE STD. DWG. CS-1-93.

MIN. LAP LENGTH FOR #4 BARS SHALL BE 20".

FOR TRANSVERSE SECTIONS SEE SHEET 11/16.

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

DESIGNED MPH | CHECKED MAR | DRAWN MPH | REVISED | REVIEWED DWL | DATE 6-28-01 | STRUCTURE FILE NUMBER 6703900

DECK PLAN AND LONGITUDINAL SECTION

BRIDGE NO. POR-224-1172
OVER COUNTY HIGHWAY 50

POR-224-0.00

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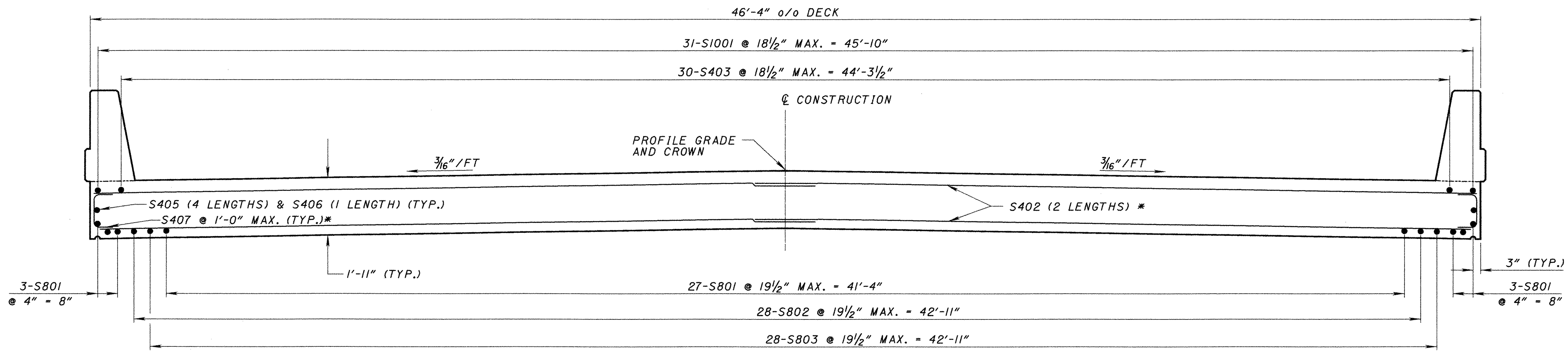
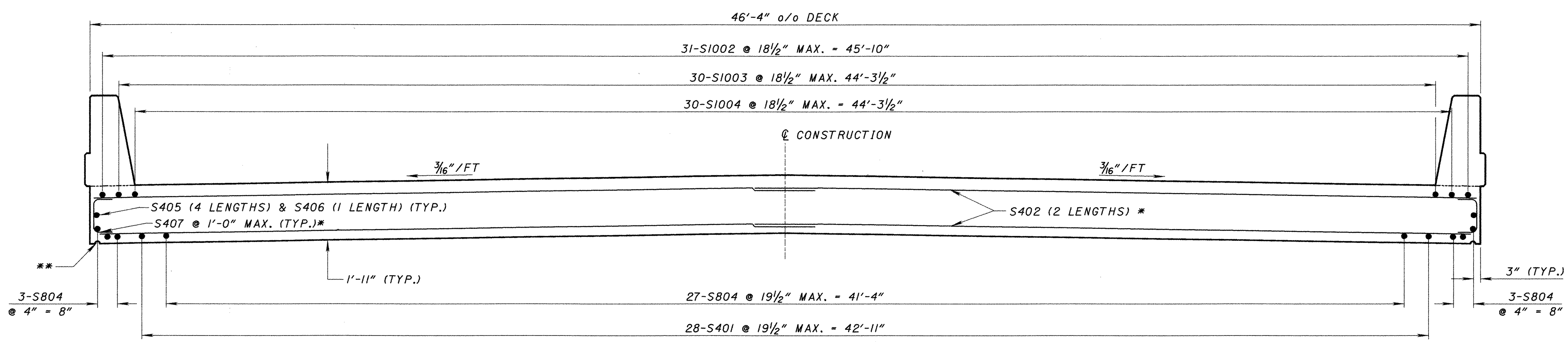
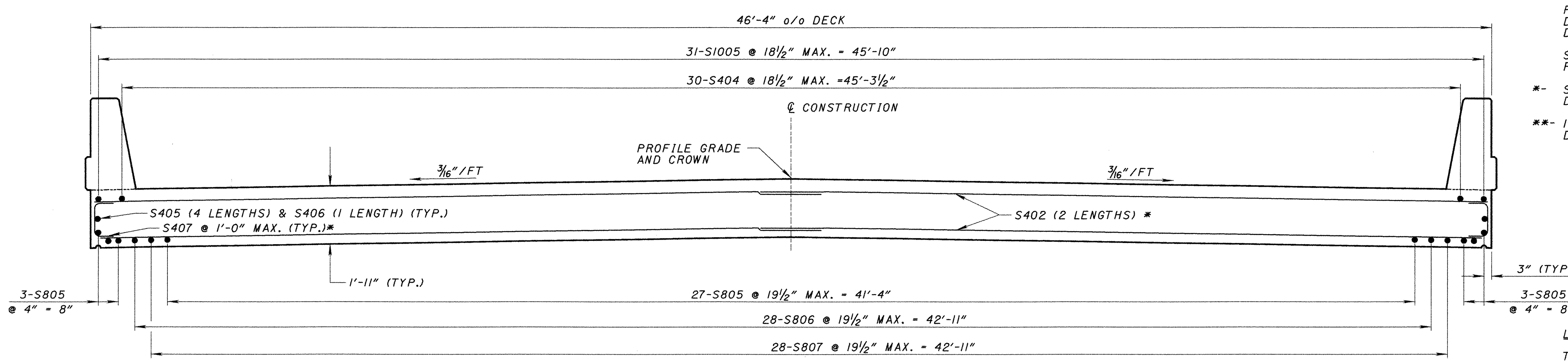


TRANSVERSE SECTION AT END SPAN



TRANSVERSE SECTION AT PIER



TRANSVERSE SECTION AT INTERIOR SPAN

NOTES:

FOR ADDITIONAL SUPERSTRUCTURE DETAILS SEE STANDARD DRAWING CS-1-93.

SEE SHEET 9 / 16 FOR DEFLECTOR PARAPET DETAILS.

*- SPACE BARS AS SHOWN IN DECK PLAN.

**- 1" DIA. HALF ROUND DRIP GROOVE (TYP.)

LEGEND

TYP. - TYPICAL
O/O - OUT TO OUT
MAX. - MAXIMUM

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

REVIEWED DWL | DATE 6-28-01 | STRUCTURE FILE NUMBER 6703900
DRAWN MPH | REVISED
DESIGNED MPH | CHECKED MAR

TRANSVERSE DECK SECTIONS

BRIDGE NO. POR-224-1172
S.R.224 OVER COUNTY HIGHWAY 50

POR-224-0.00

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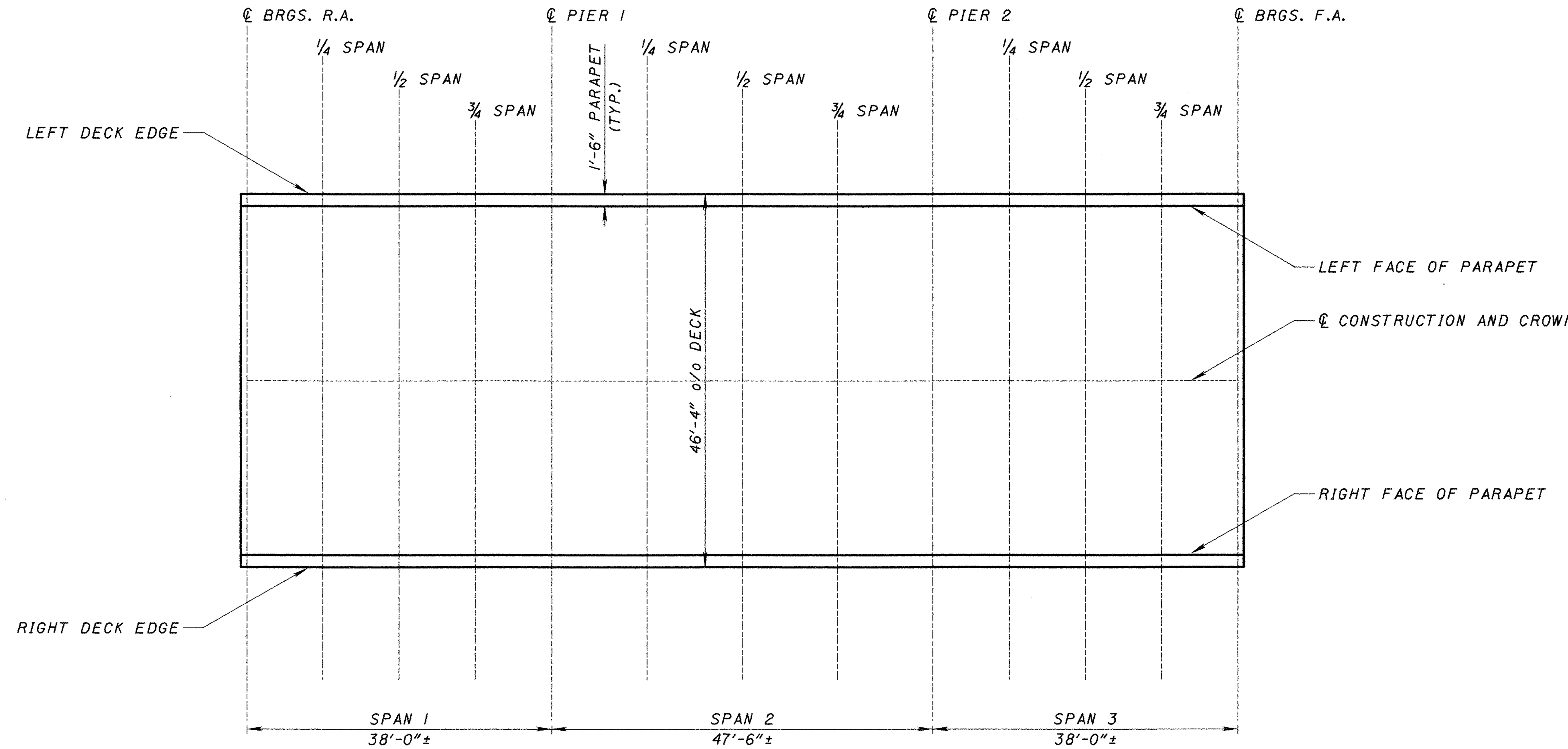

SCREED ELEVATION PLAN

DECK SCREED ELEVATION TABLE

	SPAN 1					SPAN 2				SPAN 3			
ELEVATION LINE	℄ BRGS. R. A.	¼ SPAN	½ SPAN	¾ SPAN	℄ BRGS. PIER 1	¼ SPAN	½ SPAN	¾SPAN	℄ BRGS. PIER 2	¼ SPAN	½ SPAN	¾SPAN	℄ BRGS. F.A.
LEFT DECK EDGE	1,143.50	1,143.71	1,143.88	1,144.03	1,144.17	1,144.46	1,144.73	1,144.96	1,145.15	1,145.41	1,145.65	1,145.87	1,146.05
LEFT FACE OF PARAPET	1,143.52	1,143.73	1,143.91	1,144.06	1,144.19	1,144.48	1,144.75	1,144.98	1,145.18	1,145.43	1,145.68	1,145.90	1,146.08
℄ CONST. AND CROWN	1,143.86	1,144.07	1,144.25	1,144.40	1,144.53	1,144.83	1,145.09	1,145.32	1,145.52	1,145.77	1,146.02	1,146.23	1,146.42
RIGHT FACE OF PARAPET	1,143.52	1,143.73	1,143.91	1,144.06	1,144.19	1,144.49	1,144.75	1,144.98	1,145.18	1,145.43	1,145.68	1,145.90	1,146.08
RIGHT DECK EDGE	1,143.50	1,143.71	1,143.89	1,144.04	1,144.17	1,144.46	1,144.73	1,144.96	1,145.15	1,145.41	1,145.65	1,145.87	1,146.06

NOTES:

SCREED ELEVATIONS SHOWN ARE FOR THE DECK SLAB SURFACE PRIOR TO CONCRETE PLACEMENT. ALLOWANCE HAS BEEN MADE FOR ANTICIPATED CALCULATED DEAD LOAD DEFLECTIONS.

LEGEND:

BRGS. = BEARINGS
R.A. = REAR ABUTMENT
F.A. = FORWARD ABUTMENT
o/o = OUT TO OUT
CONST. = CONSTRUCTION

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

REVIEWED DWL | DATE 6-28-01 | STRUCTURE FILE NUMBER 6703900
DRAWN MPH | REVISED
DESIGNED MAR | CHECKED JAA

SCREED PLAN AND ELEVATIONS
BRIDGE NO. POR-224-1172
OVER COUNTY HIGHWAY 50

POR-224-0.00

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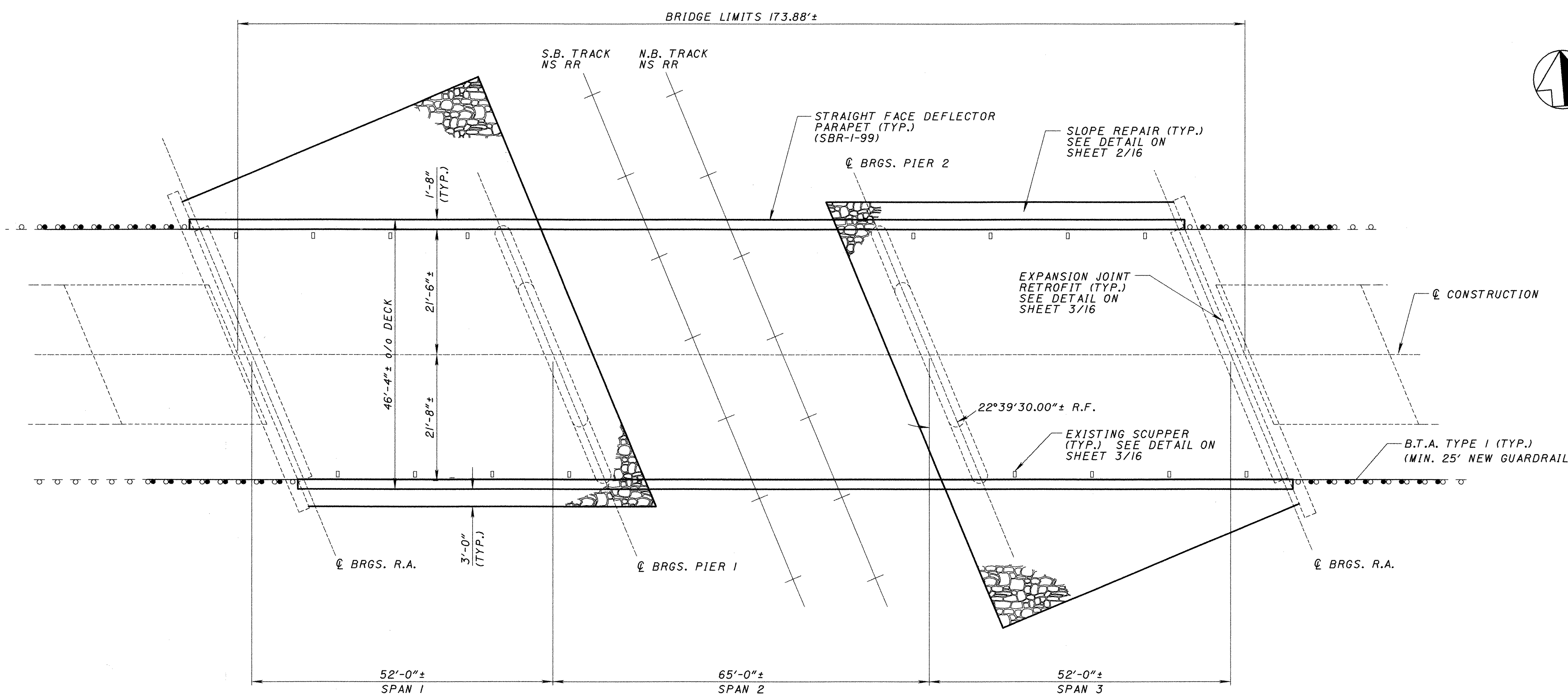
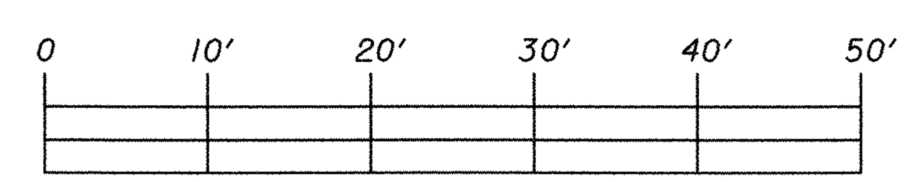


PLAN



LEGEND

BRGS. - BEARINGS
F.A. - FORWARD ABUTMENT
R.A. - REAR ABUTMENT
TYP. - TYPICAL
NS RR - NORFOLK SOUTHERN RAILROAD
o/o - OUT TO OUT
A.S. - APPROACH SLAB
R.F. - RIGHT FORWARD
N.B. - NORTH BOUND
S.B. - SOUTH BOUND
LMC - LATEX MODIFIED CONCRETE

PROPOSED WORK

1. REMOVE EXISTING LMC OVERLAY AND REPLACE THE OVERLAY WITH 2¾" MSMC OVERLAY PER SUPPLEMENTAL SPECIFICATION 892. EXISTING LMC OVERLAY SHALL BE REMOVED USING CONVENTIONAL SCARIFYING EQUIPMENT PER SUPPLEMENTAL SPECIFICATION 847. PERFORM CONSTRUCTION UNDER THE GUIDANCE OF SUPPLEMENTAL SPECIFICATION 848- BRIDGE DECK REPAIR AND OVERLAY WITH CONCRETE USING HYDRO-DEMOLITION.
2. PROVIDE FOR ELASTOMERIC STRIP SEAL JOINTS AT EACH END OF THE STRUCTURE. THIS INCLUDES REMOVAL OF THE EXISTING RISERS.
3. PAINT EXISTING STRUCTURAL STEEL WITH SYSTEM OZEU PER SUPPLEMENTAL SPECIFICATION 885.
4. SOUND, MARK, AND PATCH SUBSTRUCTURE USING ITEM 519 OR SS 843.
5. SEAL CONCRETE SURFACES INCLUDING PARAPETS, WINGWALLS, ABUTMENTS AND PIERS USING EPOXY-URETHANE SEALER (SEE PROPOSAL NOTE).
6. REMOVE EXISTING BRIDGE BARRIER AND CONSTRUCT NEW 36" PARAPET PER ODOT SBR-1-99.
7. REGRADE SLOPES AND PLACE CRUSHED AGGREGATE SLOPE PROTECTION AT THE REAR AND FORWARD ABUTMENTS.

UTILITY DISPOSITION

THE PROPOSED WORK REQUIRES NO UTILITY INVOLVEMENT.

EXISTING STRUCTURE

SFN: 6706933

DATE BUILT: 1957

TYPE: CONTINUOUS ROLLED STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 52±, 65±, 52± c/c BRGS.

ROADWAY: 43'-4"± f/f CURBS

SKEW: 22°39'30" R.F.

LOADING: CF-2000 (51)

APPROACH SLABS: AS-1-54 (25' LONG)

WEARING SURFACE: LMC

ALIGNMENT: TANGENT

SUPERELEVATION: NONE

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

DESIGNED	DRAWN	REVIEWED	DATE
MPH	MPH	DWL	6-28-01
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MAR		6706933	

STRUCTURE PLAN

BRIDGE NO. POR-224-1189
OVER NORFOLK SOUTHERN RAILROAD

POR-224-0.00

13/16

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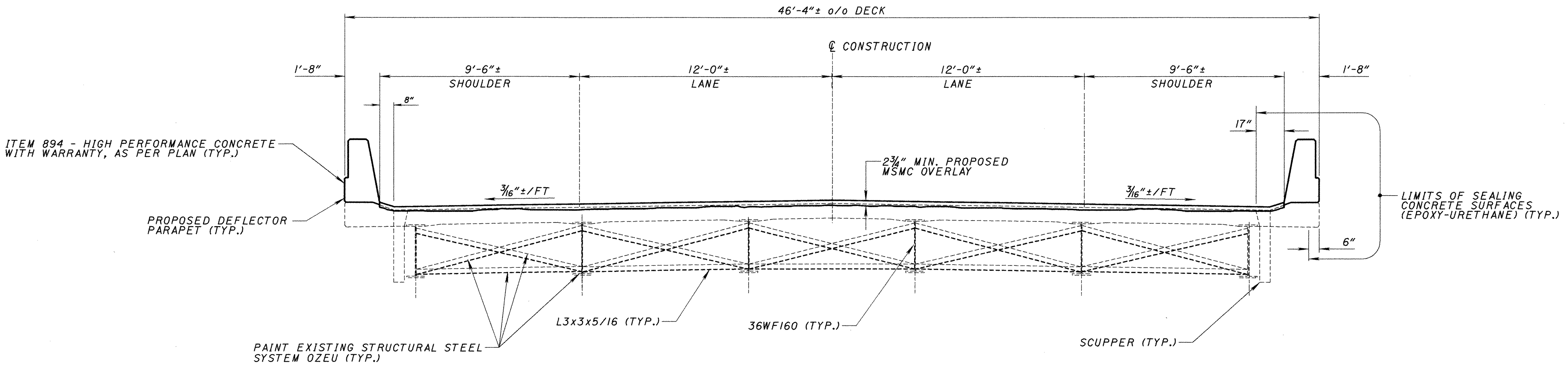
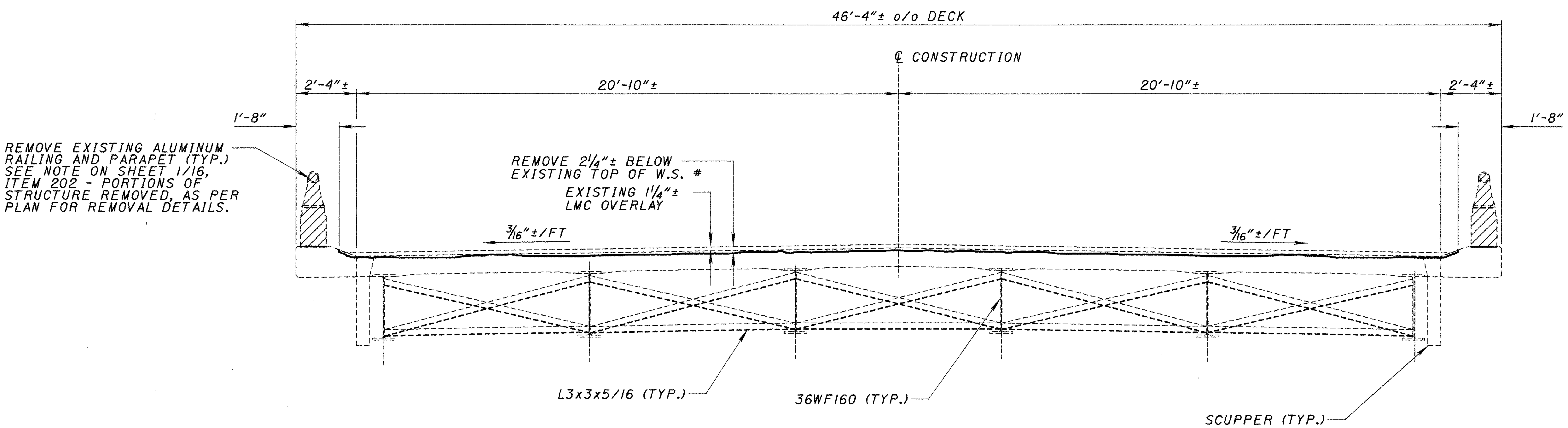


PROPOSED TRANSVERSE SECTION



EXISTING TRANSVERSE SECTION

NOTES

FOR DEFLECTOR PARAPET DETAILS SEE SHEET 15/16.

BY MILLING AND HYDRO-DEMOLITION

LEGEND

TYP. - TYPICAL
MIN. - MINIMUM
MSMC - MICROSILICA MODIFIED CONCRETE
LMC - LATEX MODIFIED CONCRETE
W.S. - WEARING SURFACE

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

DESIGNED MPH | CHECKED MAR | DRAWN MPH | REVISED | REVIEWED DWL | DATE 6-28-01 | STRUCTURE FILE NUMBER 6706933

TRANSVERSE DECK SECTIONS
BRIDGE NO. POR-224-1189
OVER NORFOLK SOUTHERN RAILROAD

POR-224-0.00

14/16

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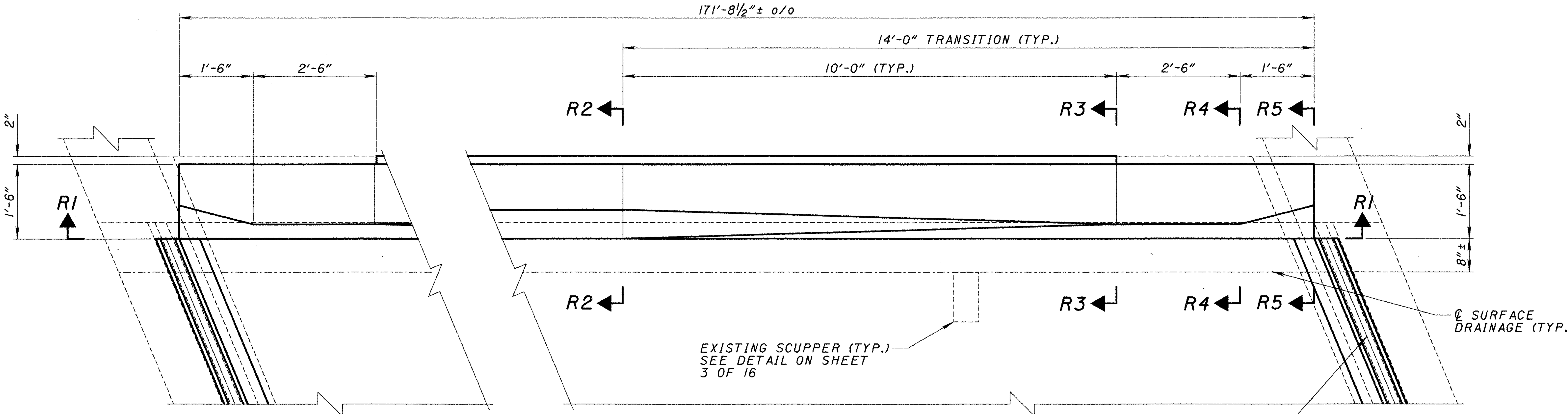
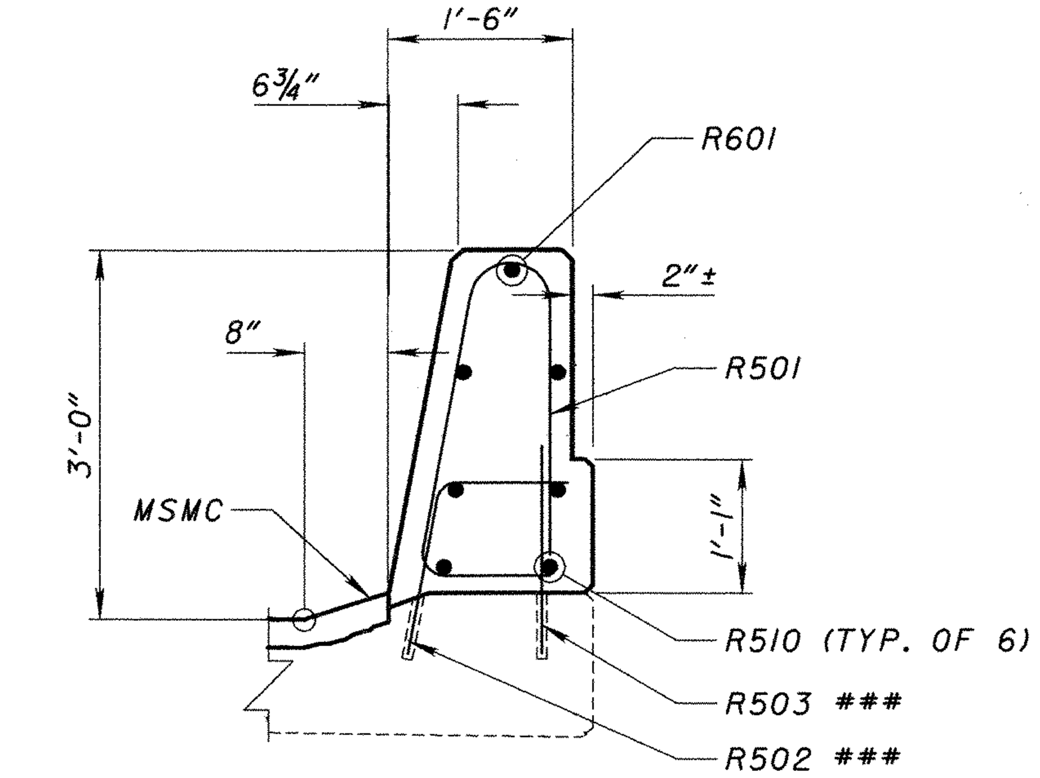
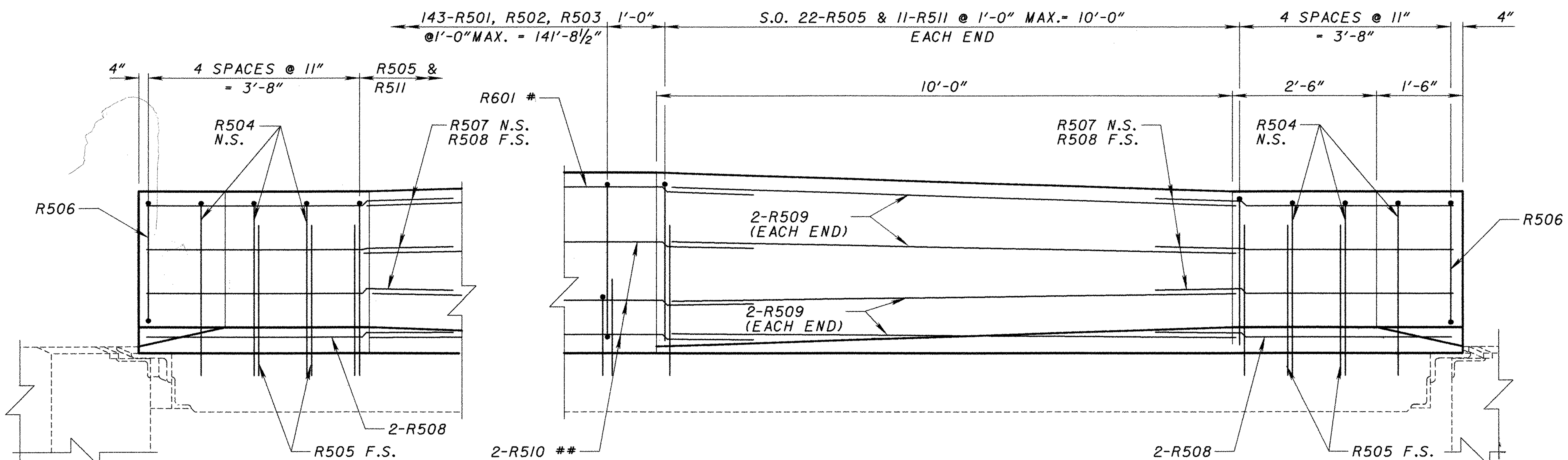


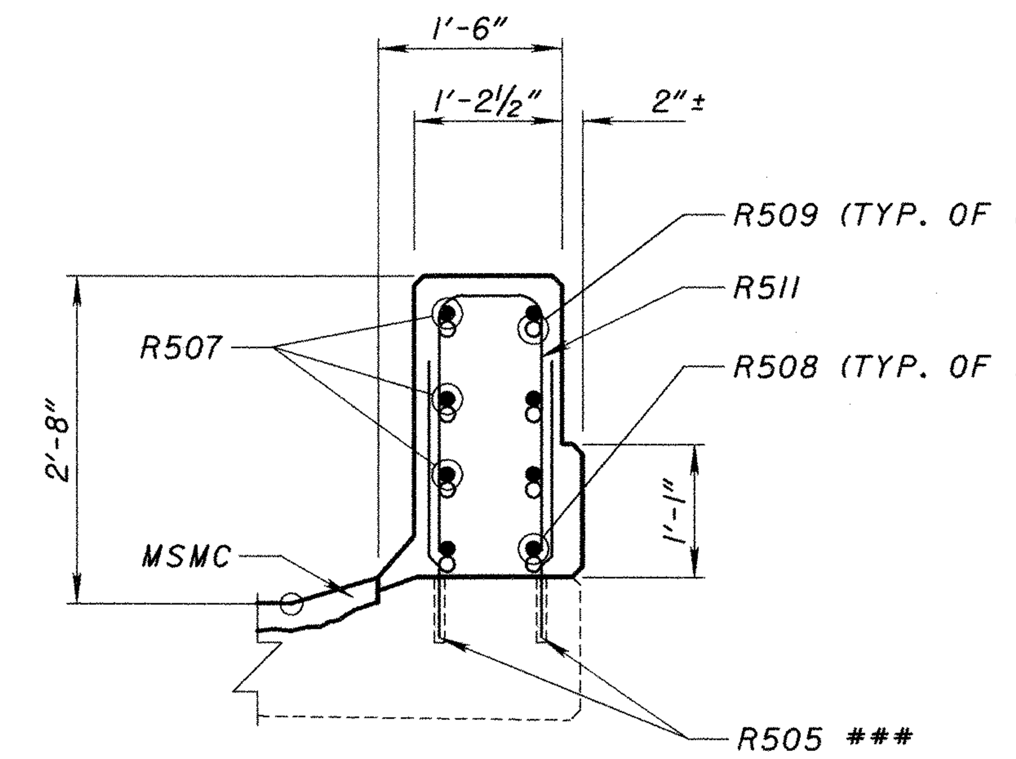
TYPICAL PARAPET PLAN



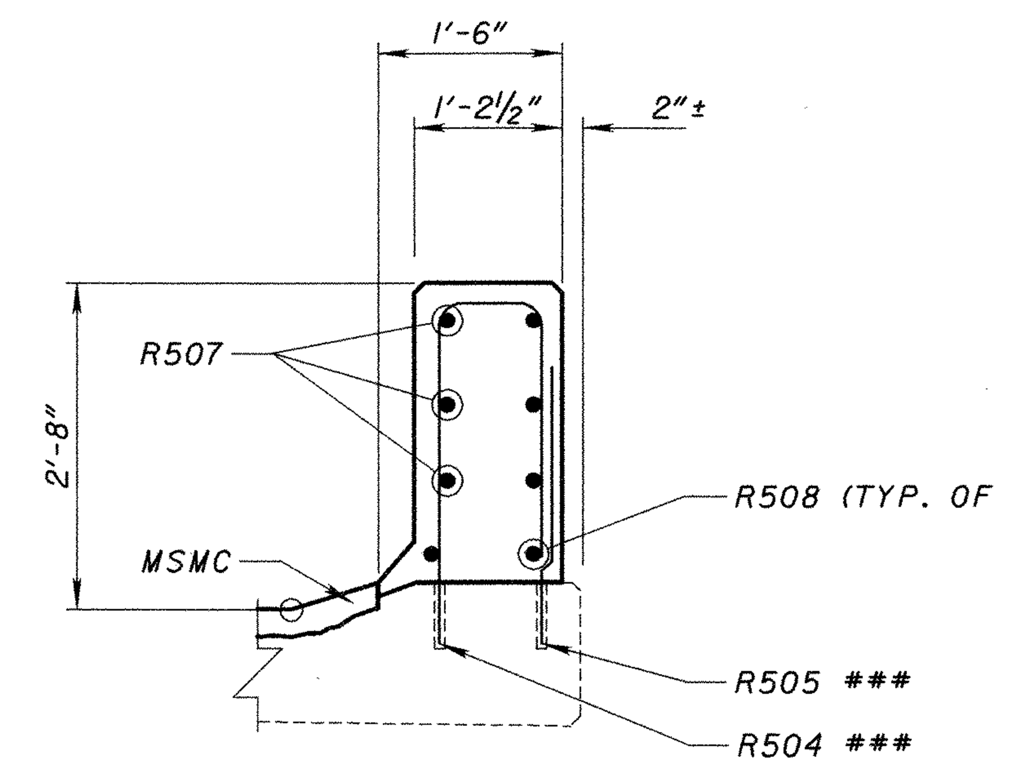
SECTION R2



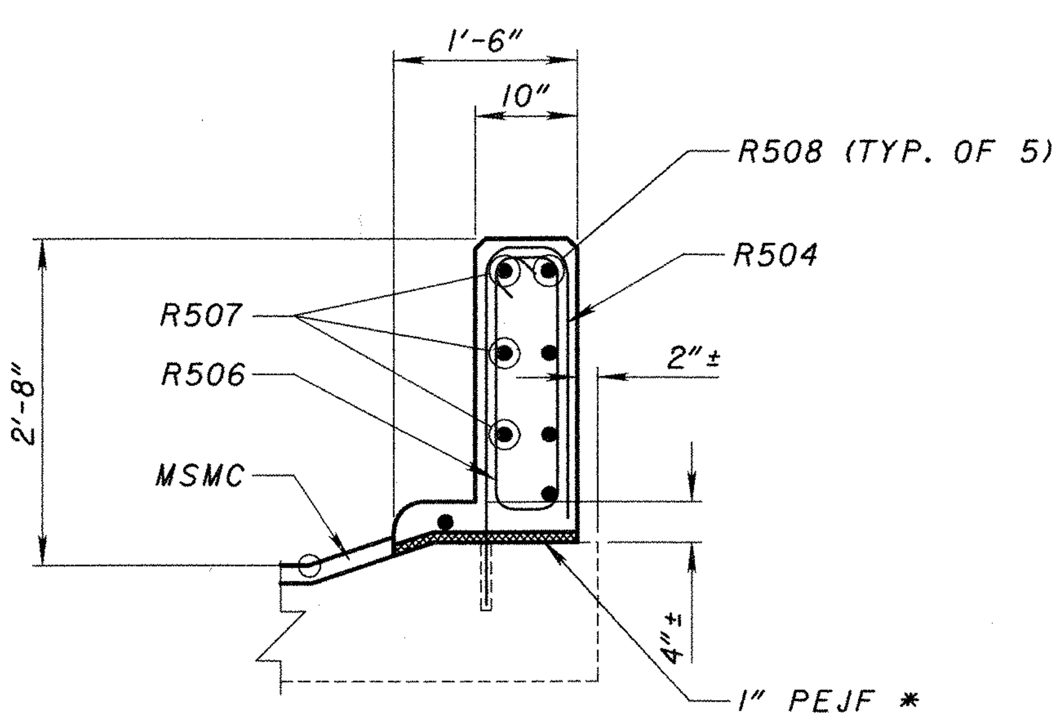
SECTION R1



SECTION R3



SECTION R4



SECTION R5

NOTES

* - 1" PEJF BETWEEN BOTTOM OF PARAPET AND TOP OF NEW 1½" JOINT PLATE AND ABUTMENT WALL AS REQUIRED.

#- 6 LENGTHS OF R601 BARS, 40" MIN. LAP.

\##- 6 LENGTHS OF R510 BARS, 25" MIN. LAP.

\###- DRILL AND GROUT 8" WITH AN EPOXY RESIN NONSHRINK, NONMETALIC GROUT PER CMS 510.

FOR ADDITIONAL DETAILS, SUCH AS CRACK CONTROL JOINT SPACING, SEE STANDARD DRAWING SBR-1-99.

LEGEND

TYP. - TYPICAL
o/o - OUT TO OUT
N.S. - NEAR SIDE
F.S. - FAR SIDE
MSMC - MICROSILICA MODIFIED CONCRETE
PEJF - PREFORMED EXPANSION JOINT FILLER

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

DATE 6-28-01
STRUCTURE FILE NUMBER 6706933
REVIEWED DWL
DRAWN MPH
REVISED
DESIGNED MPH
CHECKED MAR

PARAPET DETAILS
BRIDGE NO. POR-224-1189
OVER NORFOLK SOUTHERN RAILROAD

POR-224-0.00

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POR-224-1172 APPROACH SLABS

MARK	NUMBER			LENGTH	TYPE	DIMENSIONS						
	REAR	FWD	TOTAL			A	B	C	D	E	R	INC.
AS501	66	66	132	22′-5″	STR							
AS502	30	30	60	14′-6″	STR							
AS1001	53	53	106	15′-11″	19	14′-6″						
D802	30	30	60	5′-7″	26	12″	12″	2′-4″	12″	12″		

POR-224-1172 PIERS

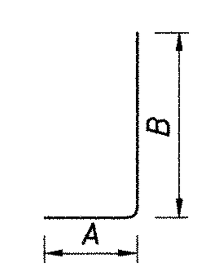
MARK	NUMBER			LENGTH	TYPE	DIMENSIONS						
	PIER 1	PIER 2	TOTAL			A	B	C	D	E	R	INC.
P501	62	62	124	3′-1″	1	10½″	2′-4″					

POR-224-1172 DECK

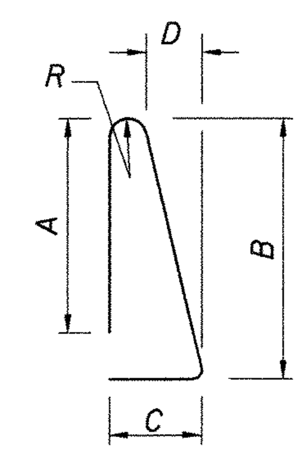
MARK	NUMBER	LENGTH	TYPE	DIMENSIONS						
	TOTAL			A	B	C	D	E	R	INC.
S401	28	19′-3″	STR							
S402	568	24′-1″	STR							
S403	30	30′-4″	STR							
S404	30	31′-4″	STR							
S405	8	30′-0″	STR							
S406	2	13′-0″	STR							
S407	252	3′-9″	18	1′-5″	1′-3″	1′-3″				
S801	33	28′-8″	STR							
S802	28	30′-6″	STR							
S803	28	27′-10″	19	26′-11″						
S804	33	25′-6″	STR							
S805	33	27′-10″	STR							
S806	28	27′-0″	STR							
S807	28	27′-0″	STR							
S1001	31	35′-3″	STR							
S1002	31	20′-0″	STR							
S1003	30	22′-4″	STR							
S1004	30	22′-4″	STR							
S1005	31	41′-2″	STR							
R501	192	6′-4″	2	2′-6″	2′-8″	1′-1″	6⅛″		2¾″	
R502	12	5′-7″	26	5″	1′-5″	2′-5″	1′-8″	1½″		
R503	20	5′-6″	STR							
R504	32	10′-0″	STR							
R505	48	26′-10″	STR							
R601	192	3′-6″	20	2′-7″	5⅞″	1′-1″				
R602	192	2′-10″	STR							
R603	8	8′-6″	18	6″	4′-2″	4′-2″				
R604	8	8′-10″	18	10″	4′-2″	4′-2″				
	4	8′-6″			4′-2″	4′-2″				
R605	S.O.	TO	18	6″	TO	TO				¾″
	11	9′-2″			4′-6″	4′-6″				
R606	8	28′-6″	STR							

POR-224-1189 PARAPETS

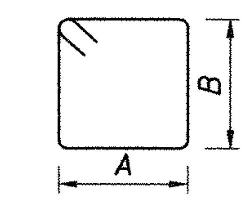
MARK	NUMBER			LENGTH	TYPE	DIMENSIONS						
	RIGHT	LEFT	TOTAL			A	B	C	D	E	R	INC.
R501	143	143	286	5′-9″	2	2′-2¾″	2′-4¾″	1′-0″	5½″		2″	
R502	143	143	286	2′-8″	20	1′-8″	3¾″	1′-1″				
R503	143	143	286	2′-6″	STR							
R504	6	6	12	5′-3″	18	5″	2′-11¾″	1′-11¾″				
R505	48	48	96	3′-0″	STR							
R506	2	2	4	5′-5½″	16	5″	2′-0¾″					
R507	6	6	12	5′-6″	26	5″	1′-5″	2′-5″	1′-8″	1½″		
R508	10	10	20	5′-6″	STR							
R509	16	16	32	10′-0″	STR							
R510	36	36	72	26′-6″	STR							
			4	4′-9¼″		6⅜″	2′-3″	2′-3″				
R511			S.O.	TO	18							⁵⁄₁₆″
			11	5′-0¼″		9½″	2′-3″	2′-3″				
R512	22	22	44	3′-0″	STR							
R601	6	6	12	27′-11″	STR							



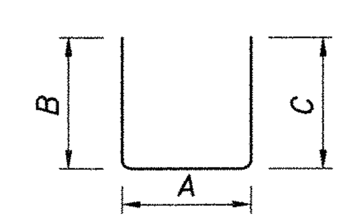
TYPE 1



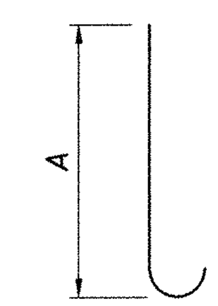
TYPE 2



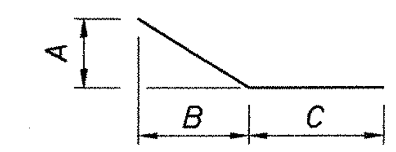
TYPE 16



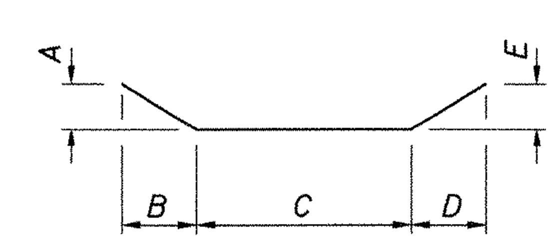
TYPE 18



TYPE 19



TYPE 20



TYPE 26

NOTES:

BAR SIZE: THE BAR SIZE IS INDICATED IN THE BAR MARK. THE MARK BEGINS WITH LETTERS THAT IDENTIFY THE BAR LOCATION (ONE OR TWO LETTERS). THE NEXT ONE OR TWO DIGITS INDICATE THE BAR SIZE , AND THE REMAINING TWO DIGITS ARE THE SEQUENCE NUMBER.

EXAMPLE: S1001
- S = BAR LOCATION IN SUPERSTRUCTURE
- 10 = BAR SIZE #10
- 01 = BAR SEQUENCE NUMBER 1

BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED.

IF SHOWN, WEIGHT OF REINFORCING STEEL IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

STD. WRITTEN IN PLACE OF A DIMENSION INDICATES A STANDARD BEND AT THE END OF THE BAR.

STR. IN THE BAR TYPE COLUMN INDICATES A STRAIGHT BAR.

R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.

INC INDICATES THE LENGTH INCREMENT FOR SERIES BARS.

ALL REINFORCING STEEL TO BE EPOXY COATED.

DESIGN AGENCY
BURGESS & NIPLE
100 WEST ERIE STREET PAINESVILLE, OHIO 44077

DESIGNED	DRAWN	REVIEWED	DATE
MPH/DCF	MPH	YSS	7-10-01
CHECKED	REVISED	STRUCTURE FILE NUMBER	
MAR		6703900/6706933	

REINFORCING STEEL SCHEDULE

BRIDGE NO. POR-224-1172 OVER COUNTY HIGHWAY 50 & BRIDGE NO. POR-224-1189 OVER NS R.R.

POR-224-0.00