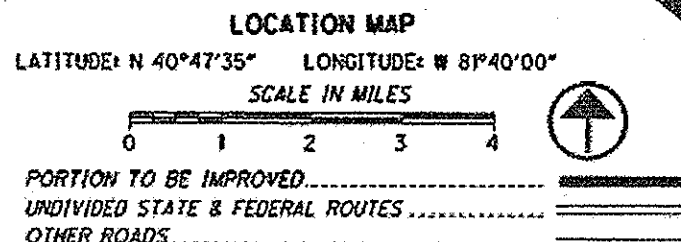
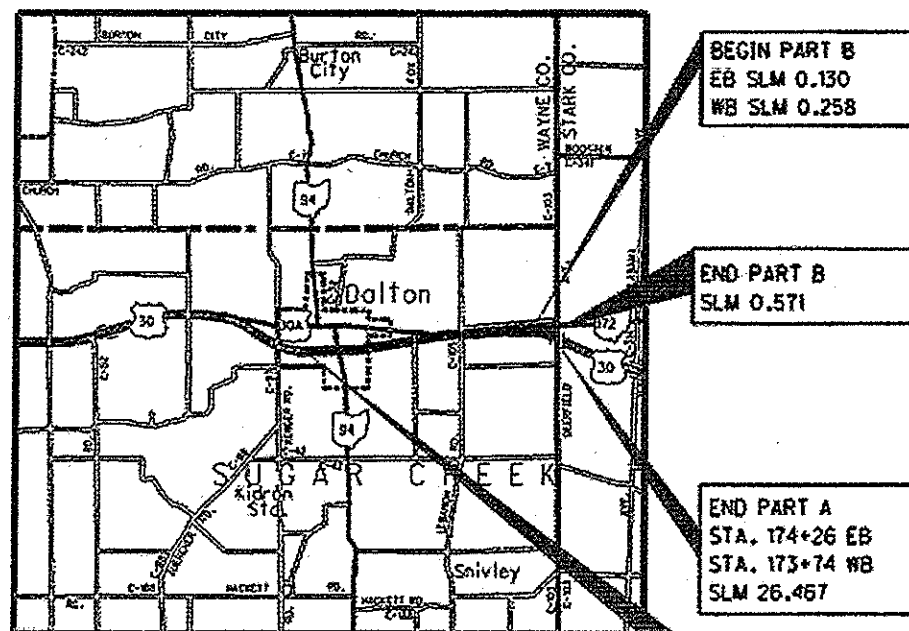


WAY - US-30-19.81; WAY-172-0.00
110180 PID - 77449
Dist 3 3/24/2011

DESIGN FILE: projects\77449\77449
WORKSTATION: sjuzwik
DATE: 12/23/10



DESIGN DESIGNATION
SEE SHEET NO. 3.

DESIGN EXCEPTIONS
3R PROJECT

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION
WAY-30-19.81
WAY-172-0.00
SUGAR CREEK TWP.
EAST UNION TWP.
VILLAGE OF DALTON
WAYNE COUNTY

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ROADWAY ENGINEERS SEAL:	STRUCTURE ENGINEERS SEAL:
SIGNED: <i>Bruce A. Dalton</i>	SIGNED: <i>Charles A. Laughrey</i>
DATE: 12/23/10	DATE: 12/23/10

STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS
BP-2.5	7/18/08	DM-1.1	4/21/06			GSD-1-95	7/18/02			800 1/21/11
BP-3.1	10/18/07	DM-1.4	4/21/06			FB-1-92	5/10/82			832 5/5/09
BP-9.1	4/15/05	DM-4.3	4/17/09			RB-1-55	2/2/53			847 7/16/10
GB-1.1	7/16/04	DM-4.4	4/17/09			TBR-91	7/19/02			
GR-2.1	1/16/04									
GR-3.1	10/16/09	MT-35.10	4/20/01							
GR-3.2	10/16/09	MT-95.30	7/17/09	TC-41.20	1/19/01					
GR-3.3	10/16/09	MT-95.31	7/17/09	TC-42.20	7/16/04					
GR-4.1	4/18/03	MT-95.50	4/17/09	TC-52.10	1/19/07					
GR-4.2	1/19/07	MT-97.10	10/15/10	TC-52.20	1/19/07					
GR-5.1	4/16/10	MT-98.29	7/17/09	TC-61.30	4/16/10					
		MT-101.60	4/17/09	TC-65.10	1/21/05					
		MT-101.90	1/16/09	TC-65.11	1/21/05					
CB-2.3	7/15/05	MT-105.10	1/16/09	TC-71.10	1/15/10					
CB-3.2	7/15/05			TC-73.10	1/19/01					
CB-3.4	7/15/05									

PROJECT DESCRIPTION

THIS PROJECT IS X MILES LONG AND WILL INCLUDE PAVEMENT PLANING, PAVEMENT REPAIRS, RESURFACING WITH ASPHALT CONCRETE, PLACEMENT OF PAVEMENT MARKINGS & BRIDGE REPAIRS.

PROJECT EARTH DISTURBED AREA: N/A ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: N/A ACRES

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.

2010 SPECIFICATIONS

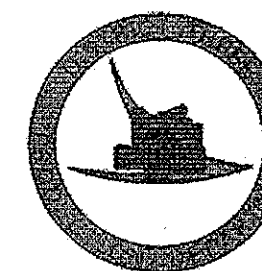
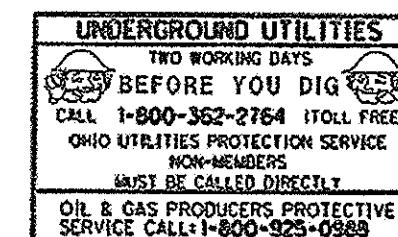
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

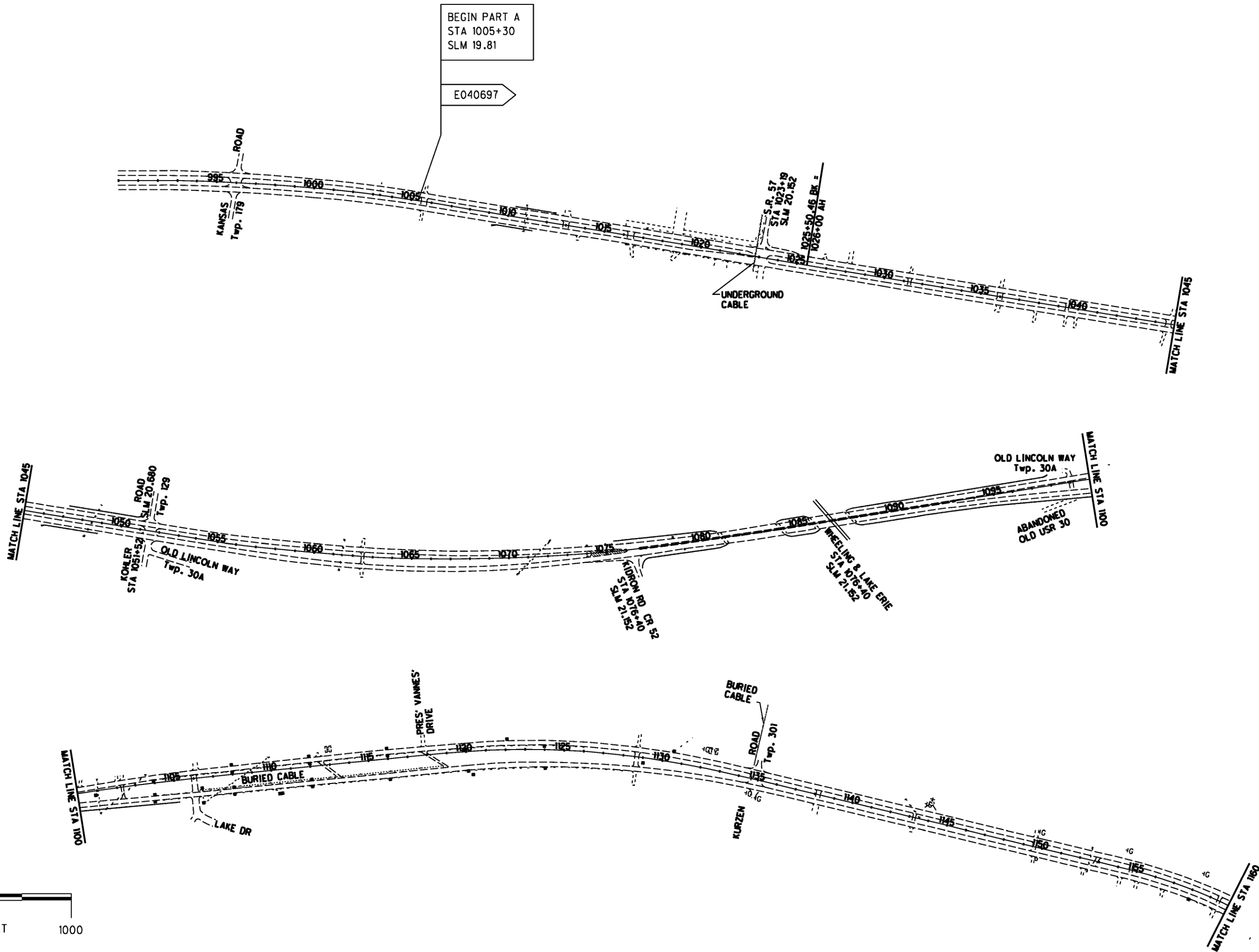
UNDER AUTHORITY OF SECTION 4511.21, DIVISION (H) OF THE OHIO REVISED CODE, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OR LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

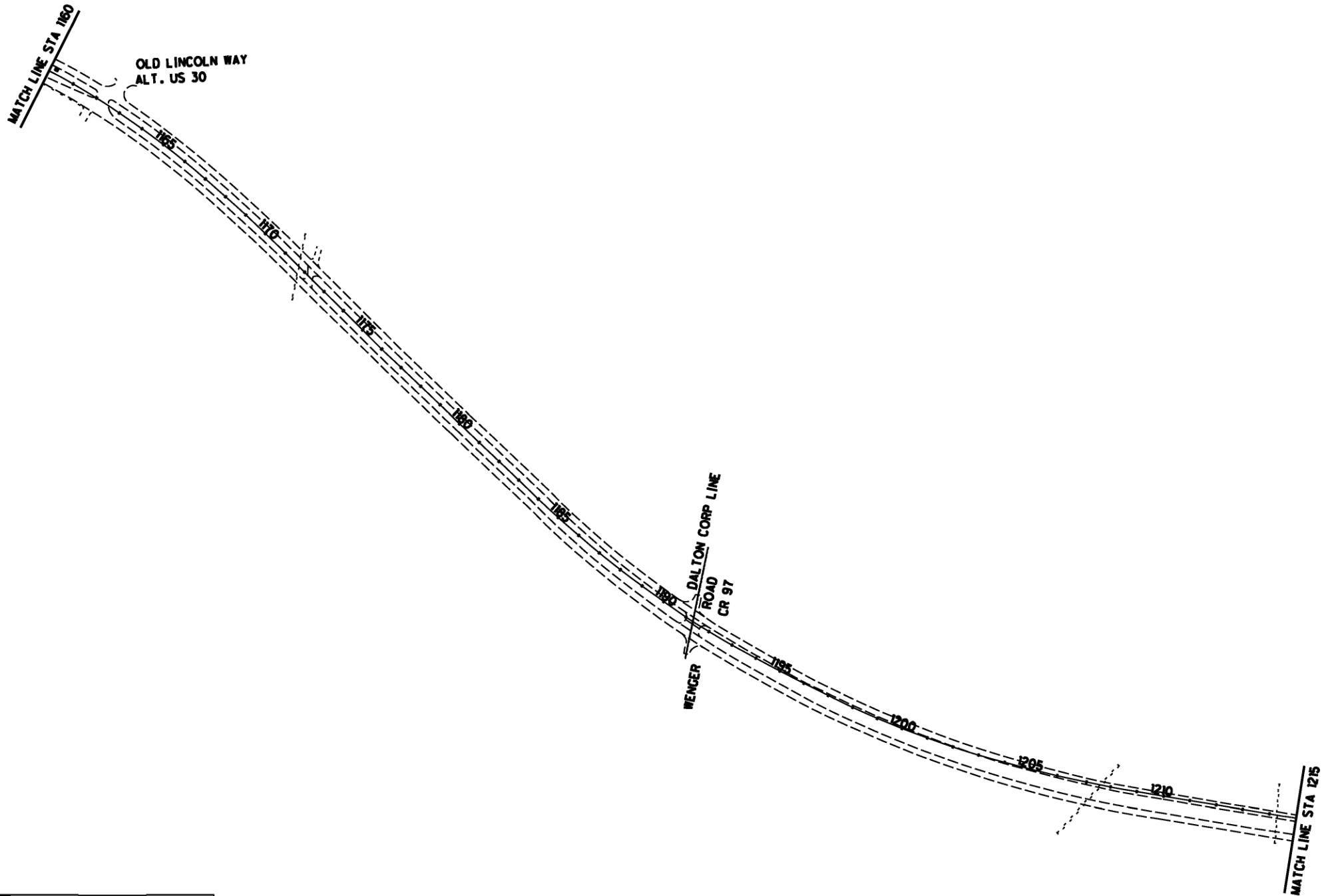
APPROVED: *John Hart, P.E.*
DATE: 12/23/10 DISTRICT DEPUTY DIRECTOR

APPROVED: *Saline M. Malinich*
DATE: 1-5-11 DIRECTOR, DEPARTMENT OF TRANSPORTATION

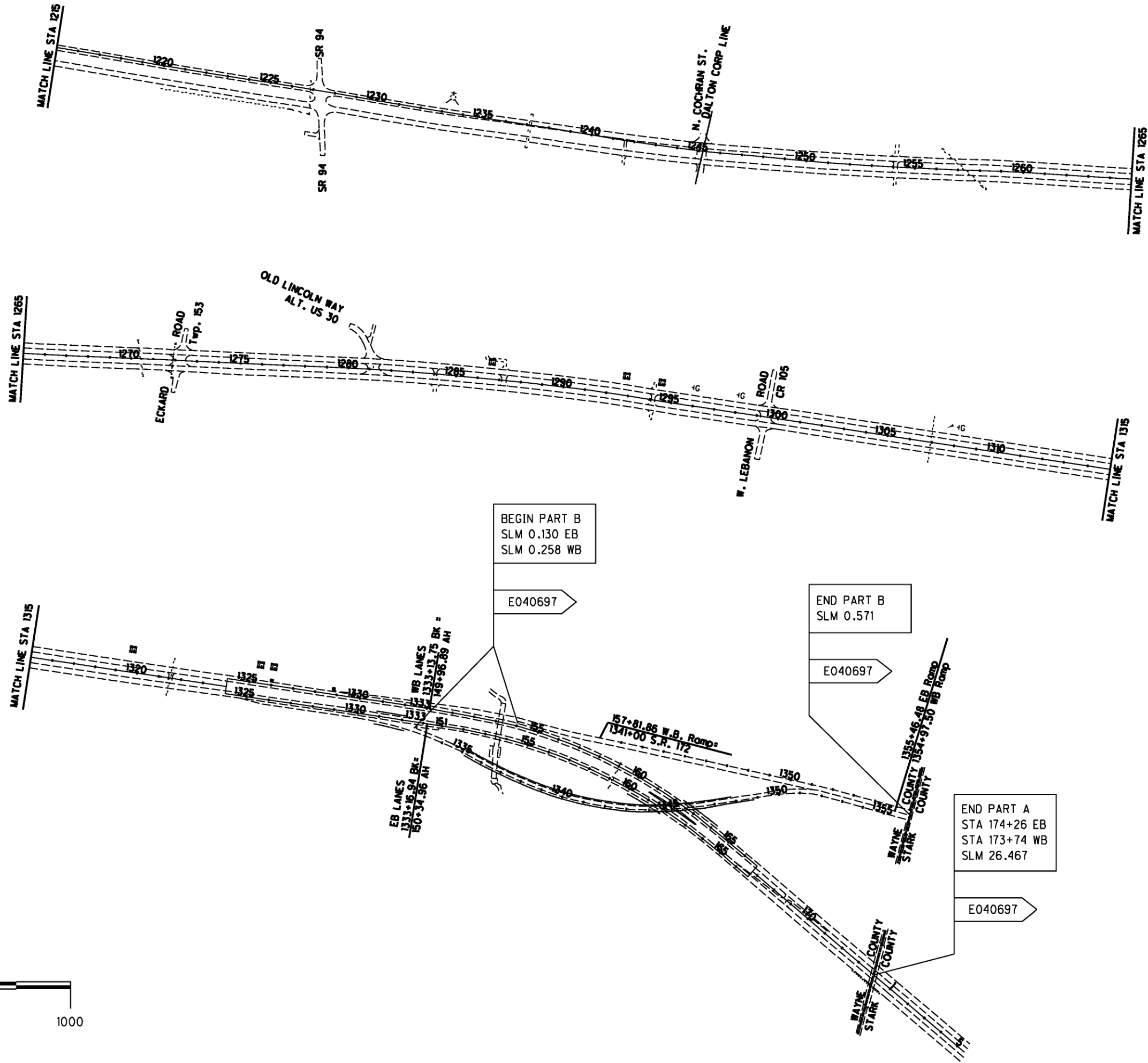


FEDERAL PROJECT NO. E040697
PID NO. 77449
CONSTRUCTION PROJECT NO. WHEELING & LAKE ERIE
WAY-30-19.81
WAY-172-0.00
70





	US-30	US-30	US-30	US-30	US-30	US-30	US-30	SR-172	SR-172
DESIGN DESIGNATION	19.81	20.15	22.79	23.34	24.02	24.46	24.48	25.04	26.02
CURRENT ADT (2011)	19,480	20,460	18,720	18,720	19,390	19,390	19,390	19,550	15,270
DESIGN YEAR ADT (2023)	21,080	22,590	21,530	21,530	22,310	22,310	22,310	22,100	18,200
DESIGN HOURLY VOLUME (2023)	2110	2260	2150	2150	2230	2230	2230	2210	1820
DIRECTIONAL DISTRIBUTION	54%	56%	55%	55%	55%	55%	55%	55%	50%
TRUCKS (24 HOUR B&C)	21%	18%	19%	19%	18%	18%	18%	17%	22%
SPEED LIMIT IN MPH	55	55	55	50	50	55	55	55	55
SR-2 NHS (NON-INTERSTATE)									

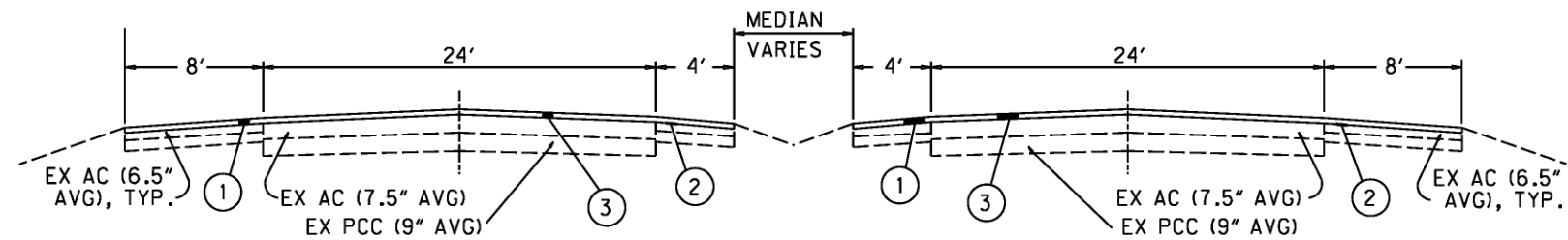


PROJECT GROUND COORDINATES - US SURVEY FEET						
PROPERTY MONUMENTS & EXISTING RIGHT of WAY POINTS						
PROJECT COORDINATES (FEET) ARE RELATIVE TO STATE PLANE GRID COORDINATES (METERS)						
BY A PROJECT ADJUSTMENT FACTOR (PAF) MULTIPLIER OF				3.28114379		
CENTERLINE R/W US 30			PLAN WAY-30-17.03 USED FOR ALIGNMENT			
NAME	STATION	OFFSET(FT)	NORTH(FT)	EAST(FT)	ELEVATION(FT)	FEATURE
RE01	1063+00.00	-100.00	412681.7391	2176022.8308	0	
RE02	1063+00.00	110.00	412472.9714	2176045.5472	0	
RE03	1067+00.00	130.00	412507.6595	2176450.7938	0	
RE04	1071+00.00	130.00	412583.2512	2176850.4685	0	
RE05	1071+00.00	-100.00	412808.0483	2176801.8245	0	
RE06	1077+00.00	-100.00	412955.8717	2177375.0652	0	
RE07	1076+33.00	130.00	412716.2783	2177375.8488	0	
RE08	1077+00.00	130.00	412735.5841	2177441.1966	0	
RE09	1079+37.91	130.00	412808.7457	2177671.8020	0	
RE10	1079+37.91	-120.00	413045.8442	2177592.5284	0	
RE11	1082+00.00	-140.00	413147.9193	2177834.7511	0	
RE12	1082+00.00	138.00	412884.2658	2177922.9033	0	
RE13	1088+50.00	-140.00	413354.0306	2178451.2072	0	
RE14	1091+24.00	-120.00	413421.9465	2178717.4091	0	
RE15	1093+00.00	-130.00	413487.2390	2178881.1555	0	
RE16	1093+00.00	140.00	413231.1727	2178966.7709	0	
RE17	1099+07.53	140.00	413423.7920	2179542.8777	0	
RE18	1093+43.72	-129.00	413500.1540	2178922.9364	0	
RE19	1104+00.00	-74.00	413768.8969	2179951.5387	0	
RE20	1104+00.00	140.00	413561.9614	2180006.0703	0	
RE21	1106+02.00	-80.00	413825.4643	2180145.8954	0	
RE22	1107+59.50	-80.00	413864.9186	2180298.3736	0	
RE23	1106+00.00	140.00	413611.9778	2180199.0699	0	
RE24	1112+00.00	155.00	413747.7582	2180783.6969	0	
RE25	1115+00.00	-80.00	414050.4164	2181015.2633	0	
RE26	1115+00.00	161.00	413817.1005	2181075.6346	0	

STATE PLANE GRID COORDINATES - METERS				
PROPERTY MONUMENTS & EXISTING RIGHT of WAY POINTS				
HORIZONTAL DATUM - NAD83(1995), OHIO NORTH ZONE (3401) FROM CORS				
VERTICAL DATUM - NAVD88 (GPS DERIVED FROM CORS)				
NAME	NORTH(m)	EAST(m)	ORTHO HT(m)	DESCRIPTION
RE01	125773.7438	663190.3284	0.000	EXISTING RIGHT OF WAY
RE02	125710.1173	663197.2517	0.000	EXISTING RIGHT OF WAY
RE03	125720.6893	663320.7594	0.000	EXISTING RIGHT OF WAY
RE04	125743.7275	663442.5690	0.000	EXISTING RIGHT OF WAY
RE05	125812.2393	663427.7437	0.000	EXISTING RIGHT OF WAY
RE06	125857.2917	663602.4512	0.000	EXISTING RIGHT OF WAY
RE07	125784.2704	663602.6901	0.000	EXISTING RIGHT OF WAY
RE08	125790.1543	663622.6062	0.000	EXISTING RIGHT OF WAY
RE09	125812.4518	663692.8882	0.000	EXISTING RIGHT OF WAY
RE10	125884.7128	663668.7279	0.000	EXISTING RIGHT OF WAY
RE11	125915.8224	663742.5505	0.000	EXISTING RIGHT OF WAY
RE12	125835.4682	663769.4168	0.000	EXISTING RIGHT OF WAY
RE13	125978.6393	663930.4289	0.000	EXISTING RIGHT OF WAY
RE14	125999.3381	664011.5598	0.000	EXISTING RIGHT OF WAY
RE15	126019.2374	664061.4650	0.000	EXISTING RIGHT OF WAY
RE16	125941.1957	664087.5582	0.000	EXISTING RIGHT OF WAY
RE17	125999.9006	664263.1393	0.000	EXISTING RIGHT OF WAY
RE18	126023.1736	664074.1987	0.000	EXISTING RIGHT OF WAY
RE19	126105.0788	664387.6876	0.000	EXISTING RIGHT OF WAY
RE20	126042.0107	664404.3073	0.000	EXISTING RIGHT OF WAY
RE21	126122.3190	664446.9221	0.000	EXISTING RIGHT OF WAY
RE22	126134.3435	664493.3931	0.000	EXISTING RIGHT OF WAY
RE23	126057.2543	664463.1281	0.000	EXISTING RIGHT OF WAY
RE24	126098.6363	664641.3059	0.000	EXISTING RIGHT OF WAY
RE25	126190.8780	664711.8809	0.000	EXISTING RIGHT OF WAY
RE26	126119.7699	664730.2803	0.000	EXISTING RIGHT OF WAY

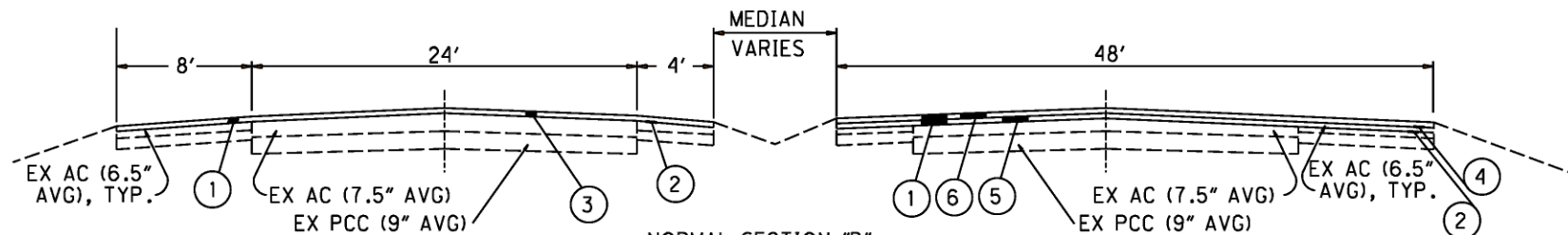
UNITLESS FACTOR =	1.00009463	(Grid to Project Ground)		
	Degrees	Minutes	Seconds	
MEAN PROJECT LATITUDE =	40	47	46	
MEAN PROJECT ELEVATION (FT)=	1050			

State Plane Grid Coordinates derived through a series of Static, Rapid Static, & VRS RTK GPS observations. Points having prefix 'CP' are project control points. Point CPI (Project Base Point) located by means of averaging multiple 2+ hour Static GPS sessions solved through the National Geodetic Survey's Online Positioning User Service (OPUS). Subsequent control points positioned by overlapping Rapid Static GPS observations with Static base sessions processed through Trimble Geomatics Office (TGO) software radiating vectors from CPI to all control points. Points with prefix 'MB' and 'MN' are centerline & reference monuments located. Points with prefix 'RE' are existing Right of Way corners and points with prefix 'RP' are Right of Way Pin Monuments set this project. Grid coordinates and distances (meters) values are multiplied by the PAF to obtain Project ground values in feet.

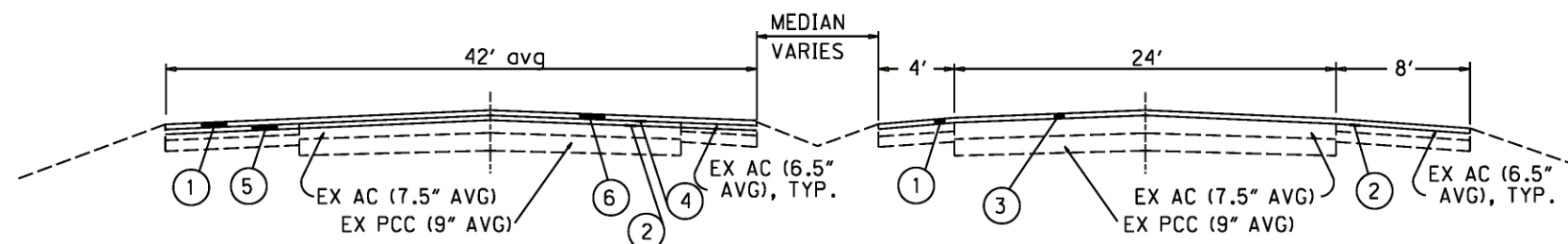


NORMAL SECTION "A"
US-30

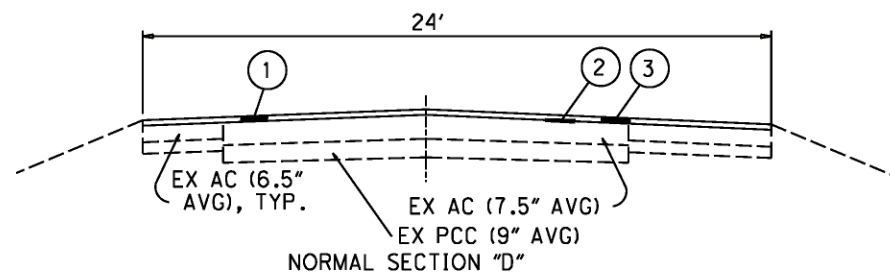
STA. 1005+30 to STA. 1018+90
STA. 1025+26 to STA. 1223+94.93
STA. 1230+80.60 to STA. 1333+16.94BK
STA. 150+34.96AH to STA. 173+87.58



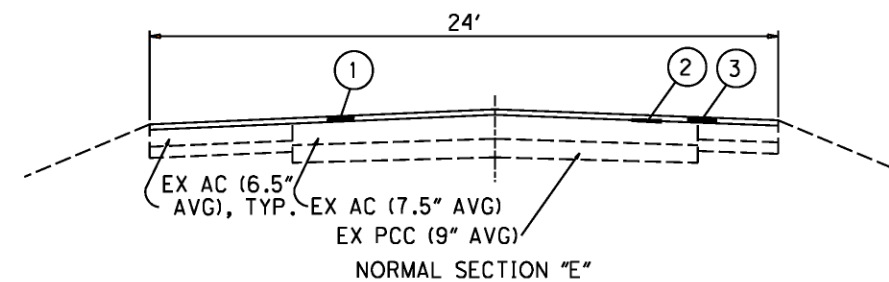
NORMAL SECTION "B"
US-30 at SR-57
STA. 1018+90 to STA. 1022+62



NORMAL SECTION "C"
US-30 at SR-57
STA. 1025+26 to STA. 1023+82



SR-172, EB RAMP
SLM 0.130 to SLM 0.330
SLM 0.395 to SLM 0.503

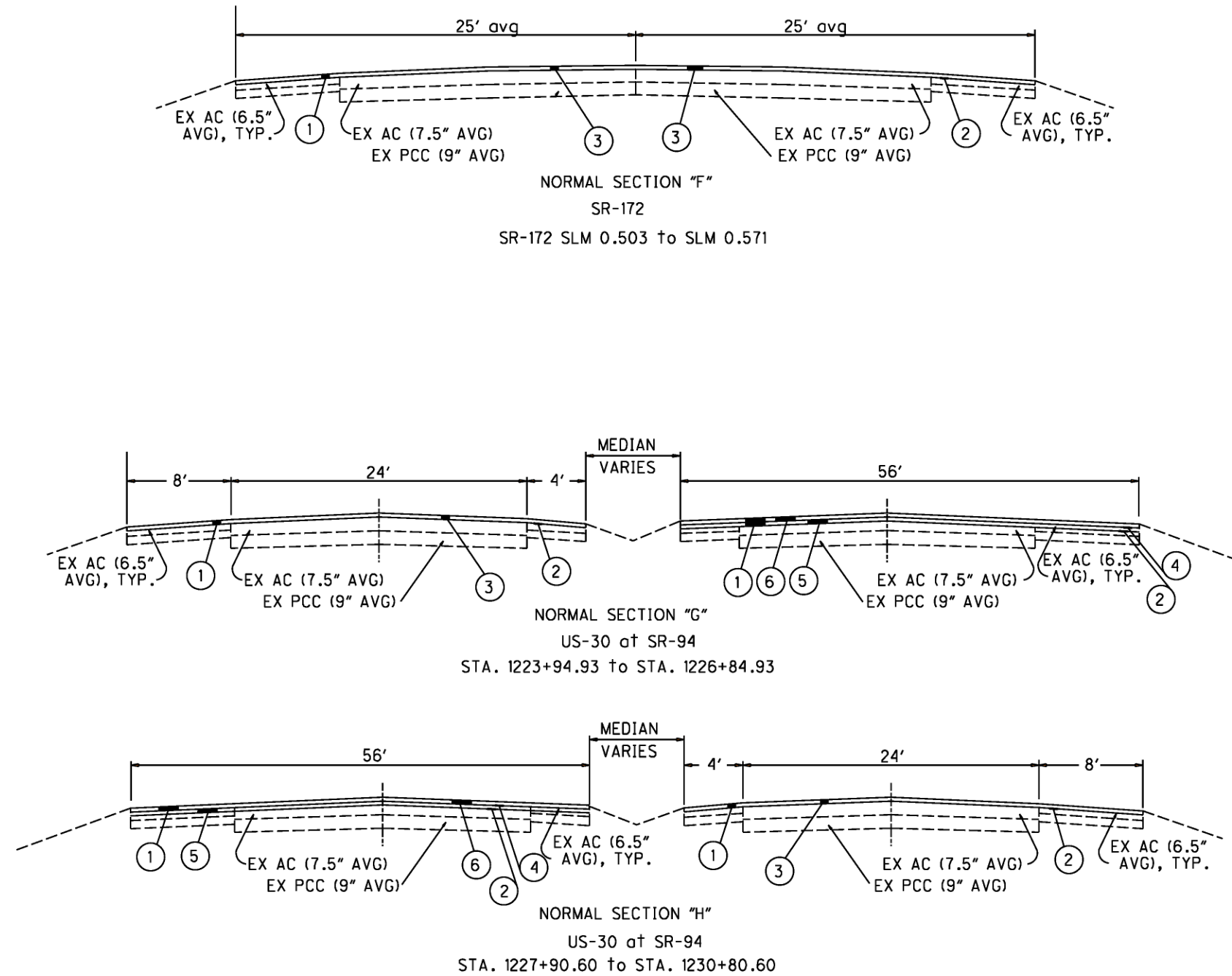


SR-172, WB RAMP
SLM 0.258 to SLM 0.503

LEGEND

- ① ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (SEE PAV DATA SHEET FOR DEPTH)
- ② ITEM 407 - TACK COAT, TRACKLESS TACK INTERMEDIATE COURSE
- ③ ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) (1.75")
- ④ ITEM 407 - TACK COAT, TRACKLESS TACK SURFACE COURSE
- ⑤ ITEM 446 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG76-22M (1.75")
- ⑥ ITEM 446 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, PG76-22M (1.5")

NOTE: FROM STA. 1352+63.00 TO STA. 1355+80.00 THE PAVEMENT
WIDTH FOR S.R. 172 EB AND WB RAMP IS 48 FEET.



CURBED SECTIONS:
1018+45 TO 1024+60
1046+77 TO 1047+30

CURBED SECTIONS:
1017+49 TO 1024+76
1035+80 TO 1037+91
1159+50 TO 1163+20

LEGEND

- ① ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (SEE PAV DATA SHEET FOR DEPTH)
- ② ITEM 407 - TACK COAT. TRACKLESS TACK INTERMEDIATE COURSE
- ③ ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446) (1.75")
- ④ ITEM 407 - TACK COAT, TRACKLESS TACK SURFACE COURSE
- ⑤ ITEM 446 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG76-22M (1.75")
- ⑥ ITEM 446 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1H, PG76-22M (1.5")

GENERAL ITEMS

PROGRESSION OF WORK

GUARDRAIL SHALL BE REMOVED PRIOR TO ANY EMBANKMENT WORK AT THE GUARDRAIL RUN. GUARDRAIL WORK SHALL BE DONE AFTER RESURFACING AND BERM WORK SO AS TO ESTABLISH PROPER GRADES FROM WHICH TO CONSTRUCT THE RAIL.

ROUTINE MAINTENANCE

BETWEEN THE TIME THAT BIDS ARE TAKEN AND THE START OF CONSTRUCTION, THE MAINTAINING AGENCY MAY ENTER UPON THE PROJECT AND PERFORM ROUTINE MAINTENANCE SUCH AS CRACK SEALING, PATCHING, AND BERM AND SHOULDER REPAIR. THE EFFECTS, IF ANY, OF THE PERFORMANCE OF ROUTINE MAINTENANCE SHALL BE CONSIDERED AS INHERENT IN WORK OF THE CHARACTER PROVIDED FOR IN THE PLAN AND THE RESULTING CONDITIONS SHALL NOT BE CONSIDERED AS DIFFERING MATERIALLY FROM THOSE EXISTING AT THE TIME BIDS WERE TAKEN.

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.

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS.

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

CABLE T.V.
CLEAR PICTURE INC.
P.O. BOX 917
WOOSTER, OHIO 44691
330-345-5110 EXT 226 OR 202

TELEPHONE
FRONTIER
6223 NORWALK ROAD
MEDINA, OHIO 44256
330-722-9453

TELEPHONE
CENTURYLINK
2025 AKRON ROAD
WOOSTER, OHIO 44691
330-262-1107

ODOT
906 N. CLARK ST.
ASHLAND, OHIO 44805
419 281-0513

CABLE T.V.
P.O. BOX 1000
MASSILLON, OHIO 44648-1000
330 833-4134

WATER
CITY OF ORVILLE
1115 PERRY STREET
ORVILLE, OHIO 44667
330-684-5149

WATER
WAYNE COUNTY ENGINEER
3151 WEST OLD LINCOLN WAY
WOOSTER, OHIO 44691
330-287-5500

THE AFOREMENTIONED UTILITY COMPANIES AND AGENCIES HAVE VARIOUS FACILITIES IN THE AREA THAT WILL REMAIN IN PLACE DURING CONSTRUCTION.

ROADWAY ITEMS

ROAD WEATHER INFORMATION SYSTEM (RWIS) SENSORS

THERE IS A WEATER STATION AND EXISTING WEATHER SENSORS LOCATED IN THE PAVEMENT AND BRIDGE DECK AT THE EAST END OF THE BRIDGE OVER THE RAILROAD TRACKS (WAY-30-2135). THE CONTRACTOR IS TO NOTIFY ODOT DISTRICT 3 ROADWAY SERVICES MANAGER IN WRITING AT LEAST 14 CALENDAR DAYS ADVANCE NOTICE BEFORE DISTURBING THE PAVEMENT AND/OR BRIDGE DECK IN THE AREA OF THIS BRIDGE SO THAT ODOT CAN ADDRESS THESE SENSORS. THE SENSORS WILL BE REMOVED, RECONDITIONED, AND RE-INSTALLED BY OTHERS.

ROADWAY ITEMS

ITEM 209 - LINEAR GRADING

THE CONTRACTOR IS REQUIRED TO PERFORM LINEAR GRADING ON THE GRADED SHOULDER. IT IS ANTICIPATED THAT THERE ARE AREAS WHERE THE GRADED SHOULDER IS AT A HIGHER ELEVATION THAN THE ADJACENT PROPOSED PAVEMENT. A 10:1 SLOPE SHALL BE ESTABLISHED, OR AS DIRECTED BY THE ENGINEER, WHEN PERFORMING ITEM 209 LINEAR GRADING. THE INTENT IS TO PROVIDE AN UNOBSTRUCTED AND POSITIVE FLOW OF STORM WATER FROM THE PAVEMENT TO THE DITCH. THE LINEAR GRADING SHALL BE PERFORMED AFTER THE PAVEMENT PLANING HAS BEEN COMPLETED AND BEFORE THE SURFACE COURSE IS PLACED. ALL LABOR AND EQUIPMENT NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER MILE FOR ITEM 209 LINEAR GRADING.

DRIVEWAYS

THE INTENT IS TO NOT DO ANY WORK ON DRIVEWAYS, BECAUSE WE ARE REMOVING AND REPLACING THE SAME DEPTH OF ASPHALT CONCRETE MATERIAL ON THE MAINLINE.

DRAINAGE ITEMS

ITEM 604 - CASTINGS ADJUSTED TO GRADE

THE CASTING TO BE ADJUSTED MAY OR MAY NOT HAVE AN EXISTING FRAME. THE WORK SHALL CONSIST OF ADJUSTING THE EXISTING CASTING TO THE SATISFACTION OF THE ENGINEER. IT IS NOT INTENDED TO PLACE NEW FRAMES WHERE NONE CURRENTLY EXIST. THE CONTRACTOR IS REMINDED TO FIELD CHECK ALL ADJUSTMENT TO GRADE ITEMS PRIOR TO BIDDING, AS NO ADDITIONAL COMPENSATION WILL BE GRANTED FOR LABOR AND MATERIALS REQUIRED TO SATISFACTORILY ADJUST CASTINGS WITHOUT FRAMES.

THERE ARE CATCH BASINS AT THE FOLLOWING LOCATIONS:

EAST BOUND - 1017+49, 1020+00

WEST BOUND - 1076+08, 1079+78, 1109+19, 1113+41, 1117+06, 1302+54

BECAUSE THE PROPOSED ASPHALT CONCRETE IS THE SAME DEPTH AS THE ASPHALT CONCRETE BEING MILLED, THERE IS NO ITEM FOR CATCH BASIN ADUSTED TO GRADE. POSITIVE DRAINAGE SHALL BE MAINTAINED INTO ALL CATCH BASINS WHEN PLACING THE PROPOSED ASPHALT CONCRETE.

PAVEMENT ITEMS

ITEM 622. CONCRETE BARRIER. SINGLE SLOPE. TYPE D. AS PER PLAN
ITEM 622. CONCRETE BARRIER END SECTION. TYPE D. REINFORCED. AS PER PLAN
ITEM 622. CONCRETE BARRIER. END ANCHOR. REINFORCED. TYPE D. AS PER PLAN

THESE ITEMS SHALL CONFORM TO THE STANDARD CONSTRUCTION DRAWINGS AND SPECIFICATIONS. ALSO SEE CONCRETE BARRIER STD. DWG. DETAILS FOR BARRIER FOUNDATION.

IN ADDITION, THE CONTRACTOR SHALL CONSTRUCT DRAINAGE SLOTS AT THE BASE OF THE BARRIER AT INTERVALS NOT EXCEEDING 50 FEET. THE SLOTS WILL BE LOCATED FLUSH WITH THE BASE OF THE BARRIER AND BE 4" HIGH AND 2' LENGTH FOR THE FULL WIDTH OF THE BARRIER.

PAYMENT FOR THE ABOVE DESCRIBED ITEMS SHALL BE AT THE CONTRACT UNIT BID PRICE PER FEET FOR ITEM 622, CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN, AT THE CONTRACT UNIT BID PRICE PER EACH FOR ITEM 622, CONCRETE BARRIER END SECTION, TYPE D, REINFORCED, AS PER PLAN, AND AT THE CONTRACT UNIT BID PRICE PER EACH FOR ITEM 622, CONCRETE BARRIER, END ANCHOR, REINFORCED, TYPE D, AS PER PLAN. THESE ITEMS SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO PERFORM THE WORK.

AT ALL TIMES TRAFFIC SHALL BE PROTECTED FROM ANY HAZARD WITHIN THE CLEAR ZONE (30 FEET). QUANTITIES FOR THIS PURPOSE HAVE BEEN INCLUDED ON SHEET 16 UNDER "ESTIMATED QUANTITIES-MAINTENANCE OF TRAFFIC".

ITEM 442 ASPHALT CONCRETE INTERMEDIATE COURSE. 19 MM. TYPE A (448). AS PER PLAN

SINCE THE QUANTITY FOR THIS ITEM IS SO SMALL, THE CONTRACTOR MAY SUBSTITUTUTE AND USE ITEM 446 ASPHALT CONCRETE, TYPE 2, PG 76-22M.

PAVEMENT ITEMS

ITEM 253. PAVEMENT REPAIR. MISC.: PARTIAL DEPTH

THIS ITEM OF WORK SHALL BE PERFORMED AFTER THE ITEM 254 PAVEMENT PLANING. THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL AND REPLACEMENT OF THE EXISTING REMAINING ASPHALT CONCRETE ON TOP OF THE CONCRETE PAVEMENT, IN AREAS OF EXISTING ASPHALT CONCRETE PAVEMENT FAILURE. THIS PAY ITEM IS NOT TO BE USED WHERE ITEM 255 CONCRETE REPAIRS WILL BE DONE. THESE REPAIRS ARE ESTIMATED TO BE MOSTLY TRANSVERSE REPAIRS, NOT LONGITUDINAL REPAIRS.

THE ENGINEER SHALL DESIGNATE THE LOCATIONS AND LIMITS OF THE AREAS TO BE REPAIRED. THE REPAIR AREAS SHALL BE SAW CUT AND EXCAVATED TO PROVIDE STRAIGHT AND VERTICAL SURFACES AROUND THE PERIMETER OF THE REPAIR AREA. PAVEMENT PLANING MAY BE USED AS AN ALTERNATIVE TO SAW CUTTING AND EXCAVATING. THE PAVEMENT SHALL BE REMOVED WITHIN THE DESIGNATED AREAS BY METHODS WHICH WILL NOT DAMAGE ADJACENT PAVEMENT. THE MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17.

THE CONTRACTOR SHALL BE CAPABLE OF PERFORMING PARTIAL DEPTH PAVEMENT REPAIRS 2 FEET WIDE.

REPLACEMENT MATERIAL SHALL BE ITEM 301 ASPHALT CONCRETE BASE, PG 64-22, AS PER PLAN OR ITEM 448 TYPE 2 MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 3" AND 12" WITH A MAXIMUM PAVEMENT LIFT OF 6". ITEM 448 TYPE 2 CAN BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 1.5" AND 5" WITH A MAXIMUM PAVEMENT LIFT OF 3". THE CONTRACTOR HAS THE OPTION OF USING EITHER ITEM 301 ASPHALT CONCRETE BASE, PG 64-22, AS PER PLAN OR ITEM 448 TYPE 2 MATERIAL WHEN THE PAVEMENT REPAIR IS BETWEEN 3" AND 5" DEEP. ITEM 448 TYPE 2 MATERIAL SHALL BE PG64-22 FOR MEDIUM MIX DESIGN PAVEMENTS AND PG64-28 FOR HEAVY MIX DESIGN PAVEMENTS. ALL EXISTING PAVEMENT AREAS WHICH WILL BE IN CONTACT WITH THE PAVEMENT REPAIR SHALL BE CLEANED AND COATED PER CMS 401.14, USING AN ASPHALT MATERIAL COMPLYING WITH 407.02. ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO THE SATISFACTION OF THE ENGINEER.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PARTIAL DEPTH PAVEMENT REPAIR. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER CUBIC YARD, (BY TICKET WEIGHT CONVERSION), OF ITEM 253 PAVEMENT REPAIR, MISC.: PARTIAL DEPTH.

BEGIN TO SR-57: EB -- 12 JTS, WB -- 14 JTS

SR-57 TO E OF KIDRON RD.: EB -- 36 JTS, WB -- 33 JTS

E OF KIDRON RD TO OLD LIN. WAY: EB -- 42 JTS, WB -- 38 JTS

OLD LIN. WAY TO SR-94: EB -- 39 JTS, WB -- 43 JTS

SR-94 TO STARK CO.: EB -- 46 JTS, WB -- 56 JTS

TOTAL JOINTS (24'x 6'x 7") ON US-30 = 359 (1117 CU YD)

SR-172: EB -- 2 JTS (24'), WB -- 3 JTS (24'), AND 4 JTS (12')

TOTAL JOINTS (6' WIDE x 7") ON SR-172 = 7 (22 CU YD)

ITEM 301 ASPHALT CONCRETE BASE. PG 64-22. AS PER PLAN

ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN SHALL BE USED FOR ASPHALT CONCRETE REPLACEMENT ABOVE RIGID REPAIRS (MAINLINE AND RAMPS), AND FOR PARTIAL DEPTH REPAIRS. ITEM 302 SHALL BE USED AT THE PAVEMENT REPLACEMENT SECTIONS AT THE BRIDGE APPROACHES.

ON THIS PROJECT ITEM 301 AND 302 COARSE AGGREGATE SHALL HAVE A TWO FACE CRUSH COUNT OF 75% PER ASTM D 5821. MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT WILL BE 30%. ENSURE THAT A MINIMUM OF 50% OF THE VIRGIN FINE AGGREGATE USED IN THE ITEM 301 AND 302 IS SAND MANUFACTURED FROM STONE OR AIR COOLED SLAG.

ITEM 301, ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN AND ITEM 302 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. ALL EXISTING PAVEMENT AREAS WHICH WILL BE IN CONTACT WITH ITEM 301 AND 302 SHALL BE CLEANED AND COATED PER CMS 401.14, USING AN ASPHALT MATERIAL COMPLYING WITH 407.02. ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO THE SATISFACTION OF THE ENGINEER.

ALL OF THE ABOVE COSTS SHALL BE INCLUDED IN ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AS PER PLAN 900 CU YD

ITEM SPECIAL. BERM REPAIR. FLEXIBLE

THIS ITEM OF WORK SHALL BE PERFORMED AFTER THE ITEM 254 PAVEMENT PLANING. THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL AND REPLACEMENT OF THE ASPHALT CONCRETE PAVED SHOULDERS, IN AREAS OF EXISTING ASPHALT CONCRETE PAVEMENT FAILURE. THESE REPAIRS ARE ESTIMATED TO BE MOSTLY LONGITUDINAL REPAIRS, NOT TRANSVERSE REPAIRS. SEE THE PAVEMENT REPAIR QUANTITY SHEET FOR LOCATIONS AND DEPTHS.

THE ENGINEER SHALL DESIGNATE THE LOCATIONS AND LIMITS OF THE AREAS TO BE REPAIRED. THE REPAIR AREAS SHALL BE SAW CUT AND EXCAVATED TO PROVIDE STRAIGHT AND VERTICAL SURFACES AROUND THE PERIMETER OF THE REPAIR AREA. PAVEMENT PLANING MAY BE USED AS AN ALTERNATIVE TO SAW CUTTING AND EXCAVATING. THE PAVEMENT SHALL BE REMOVED WITHIN THE DESIGNATED AREAS BY METHODS WHICH WILL NOT DAMAGE ADJACENT PAVEMENT. THE MATERIALS REMOVED SHALL BE DISPOSED OF IN ACCORDANCE WITH 105.16 AND 105.17.

THE CONTRACTOR SHALL BE CAPABLE OF PERFORMING PAVEMENT REPAIRS 2 FEET WIDE.

REPLACEMENT MATERIAL SHALL BE ITEM 301, AS PER PLAN OR ITEM 448 TYPE 2 MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. ITEM 301 ASPHALT CONCRETE, PG64-22 SHALL BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 3" AND 12" WITH A MAXIMUM PAVEMENT LIFT OF 6". ITEM 448 TYPE 2 SHALL BE USED WHEN THE DEPTH OF THE REPAIR IS BETWEEN 0" AND 5" WITH A MAXIMUM PAVEMENT LIFT OF 3". THE CONTRACTOR HAS THE OPTION OF USING EITHER ITEM 301 OR ITEM 448 TYPE 2 MATERIAL WHEN THE PAVEMENT REPAIR IS BETWEEN 3" AND 5" DEEP. ITEM 448 TYPE 2 MATERIAL SHALL BE PG64-28 FOR HEAVY MIX DESIGN PAVEMENTS. ALL EXISTING PAVEMENT AREAS WHICH WILL BE IN CONTACT WITH THE PAVEMENT REPAIR SHALL BE CLEANED AND COATED PER CMS 401.14, USING AN ASPHALT MATERIAL COMPLYING WITH 407.02. ALL COMPACTION SHALL BE ACHIEVED BY MECHANICAL METHODS TO THE SATISFACTION OF THE ENGINEER.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT REPAIR. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER CUBIC YARD, (BY TICKET WEIGHT CONVERSION), OF ITEM SPECIAL BERM REPAIR, FLEXIBLE, ESTIMATED 500 CU. YD.

ITEM 254. PAVEMENT PLANING. ASPHALT CONCRETE (1.75")
ITEM 254. PAVEMENT PLANING. ASPHALT CONCRETE (3.25")

THE INTENT OF THE PLANING IS TO MILL THE DEPTH AS SHOWN IN THE PLANS.

SPECIAL ATTENTION SHALL BE GIVEN TO SUPER-ELEVATED CURVES. THE SUPER-ELEVATION SHALL BE MAINTAINED AND/OR RESTORED, IF NECESSARY, AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE INTO ALL CATCH BASINS AND INLETS.

THE PROGRESSION OF THE PLANING SHALL PROCEED IN SUCH A MANNER THAT NORMAL TRAFFIC WILL NOT BE REQUIRED TO RUN OVER THE PLANED ROADWAY SURFACE MORE THAN FIVE (5) CALENDAR DAYS. THE 5 CALENDAR DAYS SHALL BE CONSIDERED AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 5 DAYS THAT NORMAL TRAFFIC IS RUNNING OVER THE PLANED SURFACE, THE CONTRACTOR WILL BE ASSESSED A DISINCENTIVE OF \$2000 PER CALENDAR DAY.

ITEM 254 PATCHING PLANED SURFACE

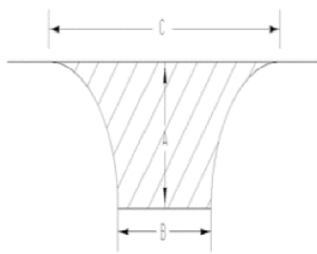
AN ESTIMATED QUANTITY OF ITEM 254, PATCHING PLANED SURFACE HAS BEEN SET UP TO BE USED AS DIRECTED BY THE ENGINEER AS DESCRIBED IN CMS 254.04. THE LIMIT OF THE PATCHING DEPTH IS 0 TO 2 IN.

ITEM 442. ASPHALT CONCRETE SURFACE COURSE. 12.5 MM. TYPE A (446)

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W-8-I-36) SHALL BE ERECTED ON EACH SIDE OF TRANSVERSE JOINTS LEFT OPEN OVER NIGHT, INCLUDING A SPEED ADVISORY SIGN. THESE SIGNS SHALL BE REMOVED IMMEDIATELY AFTER JOINT HAS BEEN CLOSED. PLACEMENT OF SIGNS SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

CARE SHALL BE TAKEN TO MATCH EXISTING PAVEMENT ELEVATIONS AT EXISTING INTERCHANGES, ETC.

INTERSECTION AREA INFORMATION



Intersection Name	A (ft.)	B (ft.)	C (ft.)	Area (sy)
SR-57	77	35	95	1871
S. Kohler Rd. (EB)	24	36	85	140
S. Kohler Rd. (WB)	25	27	70	115
Kidron Rd. (East)	48	43	82	299
Old Lincoln Way (EB)	12	44	75	72
Lake Dr. (EB)	17	33	64	82
Pres' Vannes (EB)	9	24	36	28
Kurzen Rd. (EB)	56	23	51	201
Kurzen Rd. (WB)	15	36	72	80
Old Lincoln Way (WB)	8	67	84	65
Wenger Rd. (EB)	47	25	80	226
Wenger Rd. (WB)	22	35	67	112
SR-94 (North)	24	68	119	227
SR-94 (South)	67	29	59	290
S. Cochran (WB)	14	41	67	77
Eckard Rd (EB)	24	26	61	100
Eckard Rd (WB)	20	26	56	80
Old Lincoln Way (East)	20	57	102	160
Lebanon Rd. (EB)	21	32	69	103
Lebanon Rd. (WB)	22	31	65	103
MEDIAN AREAS				1161

PAVEMENT CORING INFORMATION

BELOW IS PAVEMENT CORING INFORMATION TO HELP DETERMINE THE EXISTING PAVEMENT COMPOSITION.

ROUTE	COUNTY	SLM	LANE	ASPHALT (IN.)	CONCRETE (IN.)	DIRECTION
30	WAY	20.50	Inside	7.50	9.50	EB
30	WAY	20.50	Outside	7.00	9.00	EB
30	WAY	20.50	Shoulder	8.25		EB
30	WAY	20.50	Inside	7.50	8.75	WB
30	WAY	20.50	Outside	7.25	9.00	WB
30	WAY	20.50	Shoulder	7.00		WB
30	WAY	22.00	Inside	8.00	9.00	EB
30	WAY	22.00	Outside	7.25	9.00	EB
30	WAY	22.00	Shoulder	6.75		EB
30	WAY	22.00	Inside	7.50	9.25	WB
30	WAY	22.00	Outside	6.75	9.25	WB
30	WAY	22.00	Shoulder	7.00		WB
30	WAY	23.75	Inside	6.50	9.25	EB
30	WAY	23.75	Outside	6.00	9.25	EB
30	WAY	23.75	Shoulder	6.25		EB
30	WAY	23.75	Inside	7.00	9.25	WB
30	WAY	23.75	Outside	6.75	9.25	WB
30	WAY	23.75	Shoulder	7.00		WB
30	WAY	25.75	Inside	8.00	9.25	EB
30	WAY	25.75	Outside	7.00	9.50	EB
30	WAY	25.75	Shoulder	6.00		EB
30	WAY	25.75	Inside	9.00	9.00	WB
30	WAY	25.75	Outside	8.50	9.00	WB
30	WAY	25.75	Shoulder	6.75		WB

ITEM 407 - TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE
ITEM 407 - TACK COAT, TRACKLESS TACK, SURFACE COURSE

DESCRIPTION: THIS WORK CONSISTS OF PREPARING AND TREATING A PAVED SURFACE WITH NTSS-IHM TRACKLESS TACK PRODUCED BY BLACKLIDGE EMULSIONS, INC. MEET ALL REQUIREMENTS OF CONSTRUCTION AND MATERIAL SPECIFICATIONS ITEM 407 TACK COAT EXCEPT AS NOTED BELOW.

MATERIAL: CONFORM TO THE FOLLOWING TYPICAL PHYSICAL PROPERTIES:

PARAMETER	TEST METHOD	MIN.	MAX.
SAYBOLT FUROL VISCOSITY, SFS @ 25°C	ASTM D88	15	100
STORAGE STABILITY, 24 HRS, %	ASTM D244	--	1
STORAGE STABILITY, 5 DAYS, %	ASTM D244	--	5
RESIDUE BY DISTILLATION, %	ASTM D244	50	--
OIL DISTILLATE, %	ASTM D244	--	1
SIEVE TEST, %	ASTM D244	--	0.3

TEST ON RESIDUE

PENETRATION, @ 25°C,	ASTM D5	--	20
SOFTENING POINT RANGE DEG C	ASTM D36	65	--
SOLUBILITY, %	ASTM D2042	97.5	--
ORIGINAL BINDER DSR @ 82°C			
G*/SIN Δ,10 RAD/SEC	AASHTO T111	1	--

NOTE: PRODUCT SHOULD NOT CONTAIN FILLER SUCH AS CLAY, ETC. KEEP FROM FREEZING.
SUPPLY CERTIFIED TEST DATA TO THE ENGINEER SHOWING THE MATERIAL SUPPLIED WAS TESTED FOR AND MEETS THE ABOVE PROPERTIES.

EQUIPMENT: ALL REQUIREMENTS OF 407.03 SHALL APPLY. SEE MANUFACTURER'S REPRESENTATIVE FOR CORRECT DISTRIBUTOR SETTINGS. THOROUGHLY CLEAN ALL EQUIPMENT IF CATIONIC EMULSION WAS PREVIOUSLY USED.

WEATHER LIMITATIONS: ALL REQUIREMENTS OF 407.04 APPLY.

PREPARATION OF SURFACE: ALL REQUIREMENTS OF 407.05 APPLY.

APPLICATION OF ASPHALT MATERIAL: UNIFORMLY APPLY THE ASPHALT MATERIAL WITH A DISTRIBUTOR PER THE REQUIREMENTS OF 407.06 EXCEPT AS NOTED.

IF PRODUCT IS STORED FOR AN EXTENDED PERIOD OF TIME, PRIOR TO APPLICATION, AGITATE OR GENTLY CIRCULATE THE MATERIAL.

ALL NOZZLES AND SPRAY PATTERNS SHALL BE IDENTICAL TO ONE ANOTHER ALONG THE DISTRIBUTOR SPRAY BAR. THE ANGLE OF THE NOZZLE SHOULD BE PLACED AT A 15 TO 30 DEGREE ANGLE TO THE SPRAY BAR AXIS TO MAXIMIZE OVERLAP OR AS RECOMMENDED BY THE NOZZLE MANUFACTURER. CONTACT THE MANUFACTURER'S REPRESENTATIVE FOR REQUIRED SPRAY NOZZLE SIZE, AND DISTRIBUTOR AND NOZZLE SETTINGS.

APPLY AT A RATE OF 0.04 TO 0.08 GALLONS PER SQUARE YARD. RECOMMENDED APPLICATION TEMPERATURE IS 160°F TO 180°F. DO NOT EXCEED 180°F.

DILUTION IS NOT ALLOWED.

THE ENGINEER AND MANUFACTURER'S REPRESENTATIVE WILL APPROVE RATE OF APPLICATION, TEMPERATURE, DISTRIBUTOR SETTINGS, AND AREAS TO BE TREATED BEFORE APPLICATION OF THE TACK COAT. THE ENGINEER WILL DETERMINE THE ACTUAL APPLICATION IN GALLONS PER SQUARE YARD BY A CHECK ON THE PROJECT.

THE APPLICATION IS CONSIDERED SATISFACTORY WHEN THE MATERIAL IS APPLIED UNIFORMLY WITH NO VISIBLE EVIDENCE OF STREAKING OR RIDGING AND THE APPLICATION RATE IS ±10% OF THE SPECIFIED RATE.

METHOD OF MEASUREMENT: ALL REQUIREMENTS OF 407.07 APPLY.

BASIS OF PAYMENT: ALL REQUIREMENTS OF 407.08 APPLY. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
407	GALLON	TACK COAT, TRACKLESS TACK, INTERMEDIATE COURSE
407	GALLON	TACK COAT, TRACKLESS TACK, SURFACE CORSE

TRAFFIC CONTROL

ITEM 630. SIGNING.MISC.: SIGN DATA COLLECTION

THIS ITEM OF WORK SHALL CONSIST OF COLLECTING AND RECORDING INFORMATION FOR ANY WORK INVOLVING PERMANENT SIGNING INCLUDING SIGN REMOVAL, SIGN REMOVAL AND RE-ERECTION, SIGN RELOCATION OR NEW SIGN INSTALLATION ON THIS PROJECT. DISTRICT THREE HAS A SIGN INVENTORY SYSTEM IN OPERATION. WORK PERFORMED ON EXISTING SIGNS AND INSTALLATION OF NEW SIGNS WILL AFFECT THE ACCURACY OF THE INVENTORY. ALL EXISTING SIGNS REMOVED ON THE PROJECT SHALL BE RECORDED COMPLETELY AND ACCURATELY SO THEY CAN BE REMOVED FROM THE INVENTORY. THE BAR CODE STICKER NUMBER FOR ANY SIGNS THAT ARE NEW, REMOVED AND RE-ERECTED OR RELOCATED SHALL ALSO BE RECORDED COMPLETELY AND ACCURATELY. NEW SIGNS REQUIRE NEW BAR CODE STICKERS WHICH WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRECONSTRUCTION MEETING. ANY STICKERS NOT USED ARE TO BE RETURNED TO ODOT DISTRICT THREE TRAFFIC DEPARTMENT.

THE INFORMATION SHALL BE COLLECTED FROM ALL SIGNS REMOVED, REMOVED AND RE-ERECTED, RELOCATED OR INSTALLED ON THE PROJECT AND RECORDED COMPLETELY AND ACCURATELY BY A PERSON FAMILIAR WITH SIGNING TERMINOLOGY. THE INFORMATION REQUIRED APPEARS ON A FORM WHICH WILL BE SUPPLIED TO THE CONTRACTOR AT THE PRECONSTRUCTION MEETING. ALL SECTIONS OF THE FORM SHALL BE COMPLETED FROM THE INFORMATION COLLECTED FOR EACH SIGN. NOTE THAT THE STRAIGHT LINE MILEAGE LOG POINT OF THE SIGN REMOVAL, REMOVAL AND RE-ERECTION, RELOCATION OR INSTALLATION IS TO BE PROVIDED. PROJECT STATIONING IS NOT ACCEPTABLE. AFTER THE FORM IS COMPLETED, IT SHALL BE RETURNED TO ODOT DISTRICT THREE TRAFFIC DEPARTMENT. A COPY OF THIS FORM IS AVAILABLE UPON REQUEST FOR THE CONTRACTOR TO REVIEW FOR BIDDING PURPOSES. FOR A COPY OF THIS FORM PLEASE CALL 1-800-276-4188, EXTENSION 207-7045 - ROADWAY SERVICES MANAGER. ALL COMPLETED FORMS FOR THE PROJECT ARE TO BE PROVIDED TO THE ENGINEER NOT LATER THAN 30 CALENDAR DAYS AFTER COMPLETION OF SIGNING WORK ITEMS.

PAYMENT FOR THE LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PERFORM THE ABOVE WORK WHICH INCLUDES COLLECTION OF INFORMATION, COMPLETION OF THE FORMS SUPPLIED TO THE CONTRACTOR, INSTALLATION OF BAR CODE STICKERS, MEASURING OF THE SIGNS AND ANY OTHER WORK IN ORDER TO COMPLETE THE FORM SHALL BE INCLUDED IN THE COST OF ITEM 630 - SIGNING, MISC.:SIGN DATA COLLECTION PER EACH. A QUANTITY OF 2 EACH HAS BEEN CARRIED TO THE GENERAL SUMMARY.

BUTT JOINTS

BUTT JOINTS SHALL NOT BE CUT AND LEFT OPEN TO TRAFFIC. THEY SHALL BE FILLED IN WITH A TEMPORARY ASPHALT CONCRETE WEDGE USING ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC.

CONSTRUCTION "BUMP" (W8-I-36) AND "ADVISORY SPEED" (W13-I-24) SIGNS SHALL BE ERECTED AND MAINTAINED DURING THE PERIOD THE BUTT JOINT IS LEFT OPEN. THESE SIGNS SHALL BE PAID FOR UNDER THE LUMP SUM ITEM FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 614. ASPHALT CONCRETE FOR MAINTAINING TRAFFIC

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO CONSTRUCT A TEMPORARY ASPHALT WEDGE FROM THE EXISTING PAVEMENT TO THE PLANED SURFACE AT THE END OF RAMPS, APPROACH SLABS, BRIDGE DECKS AND AT OTHER LOCATIONS THAT RESULT IN A DROP-OFF IN EXCESS OF 1.5 INCHES. THIS QUANTITY SHALL ALSO BE USED AT PLANED SURFACES WHERE A TEMPORARY ASPHALT WEDGE IS NEEDED AROUND CASTINGS. BEFORE RESURFACING OF THE PAVEMENT, THE TEMPORARY WEDGE SHALL BE REMOVED AND THE COST SHALL BE CONSIDERED INCIDENTAL TO ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC.

ITEM 614, ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 100 CU YD

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR MAINTENANCE OF TRAFFIC.

ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC 50 CU YD

ITEM 614. MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS)

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF THE WEEK	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES IN ACCORDANCE WITH CMS 108.07.

ITEM 614. WORK ZONE MARKING SIGN

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR TEMPORARY WORK ZONE MARKING SIGNS PER THE REQUIREMENTS OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS, 614.04.

US-30 WORK ZONE MARKING SIGN: (W8-H13-36) NO EDGE LINE = 21 EACH
SR-172 WORK ZONE MARKING SIGN: (W8-H13-36) NO EDGE LINE = 4 EACH

ITEM 614. MAINTAINING TRAFFIC

ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHEN THEY ARE NOT APPLICABLE, WITH THE APPROVAL OF THE ENGINEER.

THE CONTRACTOR SHALL NOT HAVE A WORK ZONE SETUP LONGER THAN 3.5 MILES IN LENGTH.

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE OMTCD, AND SUCH FAILURE RESULTS IN A CONDITION AT THE WORK SITE WHICH IS UNSAFE FOR TRAFFIC, THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

ALL MAINTENANCE OF TRAFFIC SIGNS ARE PAID UNDER ITEM 614 MAINTAINING TRAFFIC.

ITEM 614. MAINTAINING TRAFFIC: GENERAL

AS A MINIMUM, ONE 11' LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES ON US30. ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH ITEM 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, PLAN DETAILS, STANDARD DRAWINGS, AND AS OUTLINED IN THE CONSTRUCTION AND MAINTENANCE SECTION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES CURRENT EDITION WITH THE LATEST REVISIONS. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED ON THIS PLAN.

THE FOLLOWING REQUIREMENTS SHALL ALSO APPLY:
THE CONTRACTOR SHALL SUBMIT, IN WRITING, A SCHEDULE OF OPERATIONS TO THE ENGINEER AND RECEIVE APPROVAL BEFORE WORK IS STARTED ON THE PROJECT. PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL COORDINATE THE MAINTENANCE OF TRAFFIC OPERATIONS WITH THE LOCAL STATE HIGHWAY PATROL.

THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL PAVEMENT THROUGHOUT THE PROJECT UNDER ITEM 614 ASPHALT CONCRETE FOR MAINTAINING TRAFFIC DURING THE PERIOD FROM THE START OF WORK TO THE COMPLETION OF ALL WORK.

WORK OPERATIONS

IN ADDITION TO THE REQUIREMENTS OF SECTION 614 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS THE FOLLOWING SHALL APPLY:

THE CONTRACTOR'S EQUIPMENT SHALL BE OPERATED IN THE DIRECTION OF TRAVEL WHERE PRACTICAL. A FLAGGER SHALL BE USED WHERE THE CONTRACTOR'S EQUIPMENT MUST MERGE WITH THE TRAFFIC STREAM. THE CONTRACTOR'S VEHICLES AND EQUIPMENT SHALL BE EQUIPPED WITH AT LEAST ONE AMBER FLASHING LIGHT. AMBER LIGHT SHALL BE VISIBLE TO ALL DIRECTIONS OF TRAFFIC A MINIMUM OF 0.25 MILE.

THE CONTRACTOR SHALL ARRANGE CONSTRUCTION OPERATIONS SO AS TO PREVENT ANY INTERFERENCE TO THE CONTINUOUS FLOW OF TRAFFIC. ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES ARE RESTRICTED AT ALL TIMES TO THE CLOSED LANES UNLESS OTHERWISE APPROVED BY THE ENGINEER.

THE CONTRACTOR IS PERMITTED TO WORK AT NIGHT. FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHT TIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE HIGHWAY. TO INSURE THE ADEQUACY OF THE FLOODLIGHTING PLACEMENT PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

EQUIPMENT MAY BE PARKED IN AREAS ALONG THE HIGHWAY A MIN. OF 6 FT BEHIND GUARDRAIL OR 30 FT FROM THE NEAREST EDGE OF PAVEMENT WHEN VARIOUS OPERATIONS ARE SCHEDULED TO CONTINUE THE NEXT WORKDAY. ON WEEKENDS OR AT OTHER TIMES OF SUSPENSION OF WORK, THE EQUIPMENT SHALL BE STORED AT A STORAGE AREA OUTSIDE OF THE ROADWAY RIGHT-OF-WAY. THE LOCATION SHALL HAVE PRIOR APPROVAL OF THE ENGINEER. 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.

ALTERNATE METHODS

IF THE CONTRACTOR SO ELECTS, THE CONTRACTOR MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLAN SHALL BE PUT INTO EFFECT UNTIL THE APPROVAL HAS BEEN GRANTED, IN WRITING, BY THE ENGINEER.

MAINTENANCE OF TRAFFIC SCHEME

THE CONTRACTOR SHALL SCHEDULE THEIR WORK AND METHODS IN ORDER TO MEET THE INTENT OF THE PLANS. THE PAVEMENT SURFACES TO BE USED BY THE TRAVELING PUBLIC SHALL BE ABLE TO DRAIN FREELY. ALL COSTS TO MAINTAIN THE ROADWAY AS PER THE CONSTRUCTION AND MATERIALS SPECIFICATIONS AND THE PLANS SHALL BE INCLUDED IN ITEM 614 LUMP SUM MAINTAINING TRAFFIC UNLESS SEPARATELY ITEMIZED.

614 WORK ZONE INCREASED PENALTIES SIGN

R11-H5a SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR.

THE SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

THE SIGNS SHALL BE DUAL MOUNTED ON THE MAINLINE US30 AND PLACED PER STANDARD CONSTRUCTION DRAWING MT-95.50.

THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 730.19.

WORK ZONE INCREASED PENALTIES SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGN AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE, IN PLACE WILL BE MADE AT THE CONTRACT UNIT BID PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK AND REMOVAL OF THE SIGN AND SUPPORT.

US-30 ITEM 614, WORK ZONE INCREASED PENALTIES SIGN 21 EACH
SR-172 ITEM 614, WORK ZONE INCREASED PENALTIES SIGN 4 EACH

ITEM 614. REPLACEMENT DRUM

DRUMS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT DRUMS SHALL BE NEW.

PAYMENT FOR THE NEW DRUMS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT DRUM, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF THE DAMAGED DRUM, AND PROVIDING AND MAINTAINING THE REPLACEMENT DRUM IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS FOR THE ORIGINAL DRUM.

AN ESTIMATED QUANTITY OF 20 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614. REPLACEMENT SIGN

FLAT SHEET SIGNS FURNISHED BY THE CONTRACTOR IN ACCORDANCE WITH THE REQUIREMENTS OF THE PLANS, SPECIFICATIONS AND PROPOSAL WHICH BECOME DAMAGED BY TRAFFIC FOR REASONS BEYOND THE CONTROL OF THE CONTRACTOR SHALL BE REPLACED IN KIND WHEN ORDERED BY THE ENGINEER. REPLACEMENT SIGNS SHALL BE NEW. OTHER MATERIALS MAY BE IN USED, BUT GOOD, CONDITION SUBJECT TO APPROVAL BY THE ENGINEER.

PAYMENT FOR THE NEW SIGNS SHALL BE MADE AT THE CONTRACT PRICE PER EACH FOR ITEM 614, REPLACEMENT SIGN, AND SHALL INCLUDE THE COST OF REMOVING AND DISPOSING OF DAMAGED SIGNS, HARDWARE AND SUPPORTS, AND PROVIDING THE NECESSARY REPLACEMENT HARDWARE, SUPPORTS, ETC.

AN ESTIMATED QUANTITY OF 5 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

ITEM 614. PORTABLE CHANGEABLE MESSAGE SIGN. AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN, ON SITE, FOR THE DURATION OF THE PROJECT. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS MAINTAINED BY THE DIRECTOR (OFFICE OF MATERIALS MANAGEMENT). THE APPROVED LIST OF PORTABLE CHANGEABLE MESSAGE SIGNS CAN BE FOUND ON THE ODOT WEBSITE BY CLICKING ON THE SERVICES MENU, THEN CLICKING ON MATERIALS MANAGEMENT. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 650 FT. AND 475 FT., RESPECTIVELY.

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. PCMS TRAILERS SHALL BE DELINEATED ON A PERMANENT BASIS BY AFFIXING CONSPICUITY TAPE CONFORMING TO CMS 614.03, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) ----- OF THE PLAN. 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 CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE YELLOW RETROREFLECTIVE 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 ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN -- HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PREPRO- GRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE- PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

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

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.)

ITEM 614. PORTABLE CHANGEABLE MESSAGE SIGN. AS PER PLAN
CONTINUED

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 614.07. 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. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

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

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK. THE CONTRACTOR SHALL ONLY BE PAID FOR PCMS UNITS WHEN THEY ARE IN OPERATION ON THE PROJECT AS SPECIFIED IN THE PLANS OR BY THE ENGINEER.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 300 DAYS

SEQUENCE OF CONSTRUCTION (US 30 MAINLINE PAVEMENT WORK)

CONTRACTOR IS REQUIRED TO PERFORM THE FOLLOWING WORK WHILE THE LANE AND SHOULDER IS CLOSED OFF TO TRAFFIC:

1. MILL 1.75" OF THE ASPHALT CONCRETE FOR THE MAINLINE LANE AND SHOULDER.
2. PERFORM THE PARTIAL AND FULL DEPTH PAVEMENT REPAIRS ON MAINLINE LANE AND SHOULDER.
3. TACK COAT AND PLACE THE 1.75" SURFACE COURSE.

SEQUENCE OF CONSTRUCTION (SR-172 RAMPS - PAVEMENT WORK)

THE DEFINITION OF THE RAMP LIMITS ARE FROM THE INTERSECTION WITH THE SIDE ROAD AT THE SIDE ROAD'S EDGE LINE AND DOWN THE RAMP TO THE GORE AREA WHERE THE COMMON PAVEMENT BETWEEN THE RAMP AND THE MAINLINE BEGINS IN THE GRASSY AREA. THE SEQUENCE OF CONSTRUCTION FOLLOWS:

- PART WIDTH CONSTRUCTION PHASE:
SETUP PART WIDTH CONSTRUCTION OF THE WESTBOUND ENTRANCE RAMP AND PERFORM THE FOLLOWING WORK:
1. MILL 3.25" OF THE ASPHALT CONCRETE FOR THE FULL WIDTH OF THE RAMP.
 2. PERFORM THE PARTIAL AND FULL DEPTH PAVEMENT REPAIRS IF APPLICABLE.
 3. TACK COAT AND PLACE THE 1.75" SURFACE COURSE.

FULL WIDTH CONSTRUCTION PHASE WHEN EASTBOUND EXIT RAMP IS CLOSED FOR THE BRIDGE CLOSURE:

1. MILL 1.75" OF THE ASPHALT CONCRETE FOR THE FULL WIDTH OF THE RAMP.
2. PERFORM THE PARTIAL AND FULL DEPTH PAVEMENT REPAIRS IF APPLICABLE.
3. TACK COAT AND PLACE THE 1.75" SURFACE COURSE.

MAINTENANCE OF TRAFFIC FOR CONCRETE BARRIER WORK
ON US-30

MAINTENANCE OF TRAFFIC FOR CONCRETE BARRIER WORK SHALL FOLLOW THE DRAWING ON SHEET 15 FOR CLOSING ONE LANE OF A DIVIDED HIGHWAY WITH PORTABLE CONCRETE BARRIER. THE FOLLOWING QUANTITIES WILL BE CARRIED TO THE GENERAL SUMMARY FOR THIS WORK:

ITEM 614 BARRIER REFLECTOR, TYPE B	12 EACH
ITEM 614 OBJECT MARKER, ONE-WAY	24 EACH
ITEM 614 WORK ZONE IMPACT ATTENUATOR (UNIDIRECTIONAL)	3 EACH
ITEM 622 PORTABLE CONCRETE BARRIER, 32"	750 FT

SR-172 EASTBOUND RAMP CLOSED SIGNING

THERE IS A RAMP CLOSING OF SR-172 EASTBOUND DUE TO WORK ON A STRUCTURE DECK. THE DETAILS FOR THIS CLOSING ARE SHOWN ON SHEET 56. FOR SIGNING WHEN THE RAMP WILL BE CLOSED, THE CONTRACTOR IS TO REFER TO STANDARD CONSTRUCTION DRAWING MT-98.29, EXIT RAMP CLOSURE. ALL SIGNING, BARRELS, BARRICADES, PORTABLE CONCRETE BARRIER (IF USED), AND WORK ZONE EDGE LINE SHALL BE INCLUDED WITH THE LUMP SUM UNIT BID PRICE FOR ITEM 614 MAINTAINING TRAFFIC.

ITEM 614. BARRIER REFLECTORS AND/OR OBJECT MARKERS

BARRIER REFLECTORS AND/OR OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE CONCRETE BARRIER USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO CMS 626, EXCEPT THAT THE SPACING SHALL BE 50 FEET.

614 WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND SUBSEQUENTLY REMOVE WORK ZONE SPEED LIMIT SIGNS (50 MPH) AND SUPPORTS (R2-1) WITHIN THE WORK LIMITS OF THIS PROJECT ON US30.

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SPEED LIMIT OR MINIMUM SPEED LIMIT SIGNS WITHIN THE REDUCED SPEED ZONE. THESE SIGNS SHALL BE RESTORED DURING SUSPENSION OR TERMINATION OF THE REDUCED SPEED LIMIT. THE EXPENSE OF COVERING OR REMOVAL AND RESTORATION OF EXISTING SPEED LIMIT OR MINIMUM SPEED LIMIT SIGNS SHALL BE INCLUDED IN THE PAY ITEM FOR THE WORK ZONE SPEED LIMIT SIGNS.

THE WORK ZONE SPEED LIMIT SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING RESTORATION OF ALL LANES TO TRAFFIC WITH NO RESTRICTIONS, OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY LANE RESTORATIONS SHALL BE GUIDED BY THE FOUR-HOUR LIMITATIONS STATED ABOVE. SUCH LANE RESTORATIONS SHOULD BE EXPECTED TO REMAIN IN EFFECT FOR 30 OR MORE DAYS, SUCH AS DURING WINTER SHUT-DOWNS.

SPEED REDUCTION SIGNS (W3-5) SHALL BE ERECTED IN ADVANCE OF THE SPEED REDUCTION AS SHOWN ON STANDARD CONSTRUCTION DRAWING MT-95.50. A SIGN TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE, TYPICALLY AT THE POINT WHERE ROADWAY AND SHOULDER WIDTHS RETURN TO NORMAL. ON DIVIDED HIGHWAYS WHERE THE SPEED LIMIT VARIES BY VEHICLE TYPE, THE R2-1 (SPEED LIMIT) SIGN AND THE R2-H2a (TRUCK SPEED LIMIT) SIGNS SHALL BE MOUNTED SIDE-BY-SIDE ON SEPARATE SUPPORTS. THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD, CONDITION PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 730.19.

THE WORK ZONE SPEED LIMIT SIGNS SHALL BE DUAL MOUNTED ON THE MAINLINE, BE MOUNTED ON TWO (2) ITEM 630 GROUND MOUNTED SUPPORTS, NO. 3 POSTS, AND PLACED PER STANDARD CONSTRUCTION DRAWING MT-95.50.

WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGNS AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION WITHIN THE PROJECT DUE TO CHANGES IN THE SPEED ZONE DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

PAYMENT FOR ACCEPTED QUANTITIES, COMPLETE IN PLACE, WILL BE MADE AT THE CONTRACT UNIT BID PRICE. PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIALS, LABOR, INCIDENTALS AND EQUIPMENT FOR FURNISHING, ERECTING, MAINTAINING, COVERING DURING SUSPENSION OF WORK, AND REMOVING OF THE SIGNS AND SUPPORTS. SPEED LIMIT SIGNING FOR THE POINT OF RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE PAID FOR AS WORK ZONE SPEED LIMIT SIGNS. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

US-30 614	WORK ZONE SPEED LIMIT SIGN	31 EACH
SR-172 614	WORK ZONE SPEED LIMIT SIGN	4 EACH
US-30 614	SPEED ZONE AHEAD SYMBOL SIGN	8 EACH
SR-172 614	SPEED ZONE AHEAD SYMBOL SIGN	2 EACH

CONSTRUCTION EQUIPMENT MEDIAN CROSSING

CONSTRUCTION EQUIPMENT SHALL CROSS THE MEDIAN ONLY AT THE EXISTING INTERSECTIONS AND U-TURN CROSSOVERS AND AT OTHER ADDITIONAL LOCATIONS APPROVED BY THE ENGINEER. A MAXIMUM OF TWO (2) ADDITIONAL EQUIPMENT CROSSINGS MAY BE ALLOWED.

THE CONTRACTOR SHALL BE RESPONSIBLE, AT HIS EXPENSE, FOR THE RESTORATION OF THE ADDITIONAL EQUIPMENT CROSSINGS TO A CONDITION AT LEAST EQUAL TO THAT EXISTING PRIOR TO HIS WORK OPERATIONS.

ITEM 614. WORKSITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A CERTIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS MAY BE CERTIFIED FROM ONE OF THE FOLLOWING ORGANIZATIONS:

1. AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA), PHONE NUMBER 1-800-272-8772, CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS).
2. NATIONAL HIGHWAY INSTITUTE, DESIGN AND OPERATION OF WORK ZONE TRAFFIC CONTROL, PHONE NUMBER 1-703- 235-0528.
3. THE OHIO CONTRACTORS ASSOCIATION, TRAFFIC CONTROL SUPERVISOR (OCA/TCS) WORK ZONE CLASS, ONLY IF TAKEN AFTER MAY 5, 2004, PHONE NUMBER 1-614-599-7915.
4. OHIO LABORERS TRAINING, TRAFFIC CONTROL SUPERVISORS CLASS, PHONE NUMBER 1-740-599-7915.

A COPY OF EACH WTS'S CERTIFICATION AND 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7) THE CONTRACTOR MAY DESIGNATE AN ALTERNATE WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY. EACH WTS SHALL HAVE A CURRENT WTS CERTIFICATION (WITH AN EXPIRATION DATE NO MORE THAN 5 YEARS FROM THE DATE OF ISSUE) FROM ANY OF THE APPROVED ORGANIZATIONS.

THE WTS POSITION HAS THE RESPONSIBILITY OF MONITORING TRAFFIC CONTROL DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS, AND BE ABLE TO BE ON SITE FOR ALL EMERGENCY TRAFFIC CONTROL NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF AND BE PREPARED TO EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TRAFFIC CONTROL DEVICES.
2. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TRAFFIC CONTROL MANAGEMENT IS DISCUSSED.
3. BE AVAILABLE FOR MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST OR WITHIN 36 HOURS.
4. BE AWARE OF, AND COORDINATE IF NECESSARY, ALL TRAFFIC CONTROL OPERATIONS, INCLUDING THOSE OF SUBCONTRACTORS AND SUPPLIERS.
5. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). A WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEO'S WHILE THEY ARE ON THE PROJECT.
6. COORDINATE MEETINGS WITH ODOT PERSONNEL, LEO'S AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS WORK ZONE TRAFFIC CONTROL.
7. ENSURE COMPLIANCE WITH THE CONTRACT DOCUMENTS FOR SIGNS, BARRICADES, TEMPORARY CONCRETE BARRIER, PAVEMENT MARKINGS, PORTABLE MESSAGE SIGNS, AND OTHER TRAFFIC CONTROL DEVICES ON A DAILY BASIS; AND FACILITATE ANY CORRECTIVE ACTION NECESSARY.
8. NOTIFY THE CONTRACTOR OF THE NEED FOR CLEANING AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES, INCLUDING THE COVERING AND REMOVAL OF INAPPLICABLE SIGNS.

9. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TRAFFIC CONTROL DEVICES AND/OR TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, A WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:

- A. INITIAL TRAFFIC CONTROL SETUP (DAY AND NIGHT REVIEW).
- B. DAILY TRAFFIC CONTROL SETUP AND REMOVAL.
- C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TRAFFIC CONTROL SETUP.
- D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA.
- E. REMOVAL OF TRAFFIC CONTROL DEVICES AT THE END OF A PHASE OR PROJECT.
- F. ALL OTHER EMERGENCY TRAFFIC CONTROL NEEDS.

10. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 9 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORK DAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TRAFFIC CONTROL MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THIS DOCUMENT CAN BE FOUND IN THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION INSPECTION FORMS MANUAL DATED 10/15/06 OR CURRENT REVISION.

11. VERIFY THAT ALL FLAGGING OPERATIONS ARE BEING CONDUCTED PER THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

ITEM 614. WORKSITE TRAFFIC SUPERVISOR (CONTINUED)

12. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND APPLICABLE STANDARDS AND SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

THE DEPARTMENT WILL NOT PAY THE UNIT PRICE BID FOR THE WTS FOR ANY DAY ON WHICH THE CONTRACTOR FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. SHOULD THE CONTRACTOR'S FAILURE TO PERFORM ANY OF THE DUTIES DESCRIBED ABOVE RESULT IN A MAINTENANCE OF TRAFFIC SAFETY ISSUE, THE DEPARTMENT WILL DEDUCT THE PRORATED DAILY AMOUNT FOR ITEM 614 MAINTENANCE OF TRAFFIC FROM THE CONTRACTOR'S NEXT SCHEDULED ESTIMATE.

IF THREE OR MORE FAILURES TO PERFORM THE DUTIES SET FORTH ABOVE OCCUR, THE WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR THE WORKSITE TRAFFIC SUPERVISOR:

US-30 ITEM 614 WORKSITE TRAFFIC SUPERVISOR	2 MONTHS
SR-172 ITEM 614 WORKSITE TRAFFIC SUPERVISOR	1 MONTHS

ITEM 614. LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE LATEST EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD), A UNIFORMED LAW ENFORCEMENT OFFICER (AND OFFICIAL PATROL CAR WITH MOUNTED EMERGENCY FLASHING LIGHTS) SHALL BE PROVIDED FOR CONTROLLING TRAFFIC FOR THE FOLLOWING TASKS AS DIRECTED BY THE ENGINEER:

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED.

DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.

DURING A TRAFFIC SIGNAL INSTALLATION.

LAW ENFORCEMENT OFFICERS (LEO'S) SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. THE LEO'S ARE CONSIDERED TO BE EMPLOYED BY THE CONTRACTOR AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR THEIR ACTIONS. ALTHOUGH THEY ARE EMPLOYED BY THE CONTRACTOR, THE PROJECT ENGINEER SHALL HAVE CONTROL OVER THEIR PLACEMENT. THE OFFICIAL PATROL CAR SHALL BE A PUBLIC SAFETY VEHICLE AS REQUIRED BY THE OHIO REVISED CODE. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEO'S SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE CONTRACTOR SHALL MAKE ARRANGEMENTS FOR THESE SERVICES AND PROVIDE 72 HOURS ADVANCE NOTICE AS REQUIRED BY THE HIGHWAY PATROL LISTED BELOW:

STATE HIGHWAY PATROL
1786 DOVER RD.
WOOSTER, OH 44691
330 264-0575

LAW ENFORCEMENT OFFICERS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614-LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

US-30 ITEM 614 LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	100 HOURS
SR-172 ITEM 614 LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	20 HOURS

THE HOURS PAID SHALL INCLUDE MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

IF THE CONTRACTOR WISHES TO UTILIZE LEO'S FOR FLAGGING AND TRAFFIC CONTROL OTHER THAN FOR THAT REQUIRED IN THESE PLANS, THEY MAY DO SO AT THEIR OWN EXPENSE.

ITEM 614. WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ONE OF THE FOLLOWING IMPACT ATTENUATORS:

1. THE QUADGUARD CZ, (24 INCHES WIDE SIX-BAY) WORK ZONE IMPACT ATTENUATOR MANUFACTURED BY ENERGY ABSORPTION SYSTEMS, INC., 35 EAST WACKER DRIVE, CHICAGO, IL 60601 (TELEPHONE: 312-467-6750).

THE LENGTH OF THE SIX-BAY QUADGUARD CZ IS 20'-9". 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:

DRAWING NUMBER: OSCZCVR-T4
DRAWING NAME: QUADGUARD CZ SYSTEM FOR CONSTRUCTION ZONES
REVISION DATE: 5/13/99 REV. J
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-10
DRAWING NAME: QUADGUARD SYSTEM CONCRETE PAD, CZ, OG
REVISION DATE: 11/19/97 REV. D
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-16
DRAWING NAME: QUADGUARD SYSTEM BACKUP ASSEMBLY, CZ, OG
REVISION DATE: 7/30/99 REV. F
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 354051Z
DRAWING NAME: QUADGUARD CZ SYSTEM NOSE ASSEMBLY, CZ, OG, 24, 30, 36
REVISION DATE: 5/17/99
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35-40-18
DRAWING NAME: TRANSITION ASSEMBLY, 4 OFFSET, OG
REVISION DATE: 6/25/99 REV. F
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: 35400260
DRAWING NAME: QUADGUARD SYSTEM PCMB ANCHOR ASSEMBLY
REVISION DATE: 11/19/97 REV. C
ODOT APPROVAL DATE: 8/27/99

2. THE TRACC (TRINITY ATTENUATING CRASH CUSHION) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE TRACC IS 21'-0" LONG AND 2'-7" WIDE. 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:

DRAWING NUMBER: SS450
DRAWING NAME: CRASH-CUSHION ATTENUATING TERMINAL PLAN, ELEVATION & SECTIONS
REVISION DATE: 3/12/99 REV. 1
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS455
DRAWING NAME: TRACC TRANSITION TO W-BEAM MEDIAN BARRIER PLAN, ELEVATION & SECTIONS
REVISION DATE: 2/18/99
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS461
DRAWING NAME: TRACC TRANSITION TO CONCRETE SAFETY SHAPE BARRIER PLAN, ELEVATION & SECTIONS
REVISION DATE: 6/30/99 REV. 1
ODOT APPROVAL DATE: 8/27/99

DRAWING NUMBER: SS462
DRAWING NAME: TRACC TRANSITION TO CONCRETE BARRIER SINGLE SLOPE PLAN, ELEVATION & SECTIONS
REVISION DATE: 6/30/99
ODOT APPROVAL DATE: 8/27/99

3. THE BARRIER SYSTEMS, INC. TAU-II IMPACT ATTENUATOR, DISTRIBUTED BY ROAD SYSTEMS INC., SALES SUPPORT, 2183 ELM TRACE, AUSTINTOWN, OH 44515, (TELEPHONE 330-799-9291)

THE TAU-II FOR THIS NOTE IS A PARALLEL 8-BAY UNIT (24' LONG AND 35" WIDE). 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:

DRAWING NUMBER: A040416
DRAWING NAME: UNIVERSAL TAU-II PARTS LIST
REVISION DATE: 4/22/04
ODOT APPROVAL DATE: 10/16/04

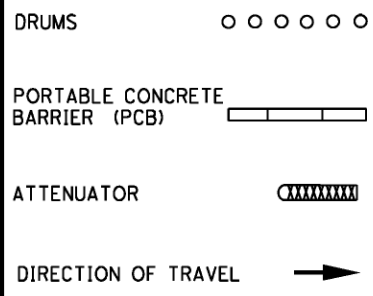
DRAWING NUMBER: A040420
DRAWING NAME: UNIVERSAL TAU-II FOUNDATION, FLUSH MOUNT BACKSTOP
REVISION DATE: 4/28/04
ODOT APPROVAL DATE: 10/16/04

DRAWING NUMBER: A040105
DRAWING NAME: UNIVERSAL TAU-II FOUNDATION, PCB BACKSTOP (REFERENCED ON A04020)
REVISION DATE: 1/07/04
ODOT APPROVAL DATE: 10/16/04

DRAWING NUMBER: B040239
DRAWING NAME: APPLICATION, FLUSH MOUNT BACKSTOP (TYPICAL FOR PARALLEL 60 MPH UNIT)
REVISION DATE: 4/21/04
ODOT APPROVAL DATE: 10/16/04

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS. PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

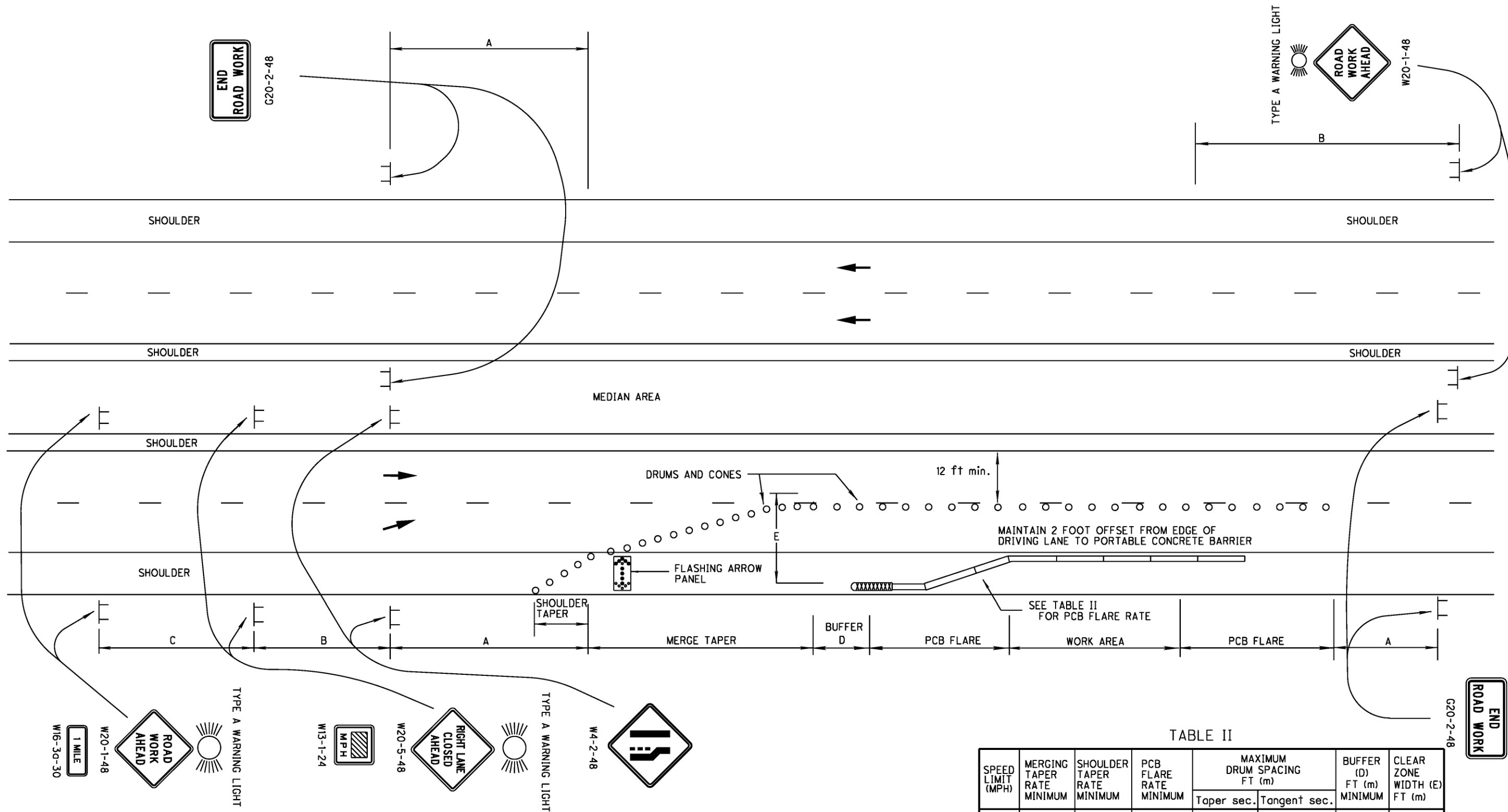


ADDITIONAL SIGNS REQUIRED FOR SHOULDER CLOSURE:
SEE PAGE 6H-15 OF (OMUTCD) "TEMPORARY TRAFFIC CONTROL MANUAL"

SEE STD. DWG. MT-95.40 FOR ADDITIONAL DETAILS

ROAD TYPE	DISTANCE BETWEEN SIGNS FT(m)		
	A	B	C
MAJOR CONVENTIONAL	500 (150)	500 (150)	500 (150)
FREEWAY & EXPRESSWAY	1000 (300)	1500 (450)	2640 (800)

SPEED LIMIT (MPH)	MERGING TAPER RATE MINIMUM	SHOULDER TAPER RATE MINIMUM	PCB FLARE RATE MINIMUM	MAXIMUM DRUM SPACING FT (m)		BUFFER (D) FT (m) MINIMUM	CLEAR ZONE WIDTH (E) FT (m)
				Taper sec.	Tangent sec.		
25	11:1	4:1	8:1	25 (7.5)	40 (12)	155 (45)	15 (5)
30	15:1	5:1	8:1	30 (9)	40 (12)	200 (60)	15 (5)
35	21:1	7:1	10:1	35 (10.5)	40 (12)	250 (75)	15 (5)
40	27:1	9:1	11:1	40 (12)	80 (24)	305 (95)	15 (5)
45	45:1	15:1	13:1	45 (13.5)	80 (24)	360 (110)	19 (6)
50	50:1	17:1	14:1	50 (15)	80 (24)	425 (130)	19 (6)
55	55:1	18:1	16:1	55 (16.5)	80 (24)	495 (150)	23 (7)
60	60:1	20:1	17:1	60 (18)	120 (36)	570 (175)	30 (9)
65	65:1	22:1	19:1	65 (19.5)	120 (36)	645 (200)	30 (9)



ITEM SPECIAL. MAILBOX SUPPORT SYSTEM

THIS ITEM OF WORK SHALL CONSIST OF THE REMOVAL OF EXISTING NON-STANDARD MAILBOX SUPPORTS AND FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED HARDWARE IN ACCORDANCE WITH THE DETAILS SHOWN, AND ATTACHING AN OWNER SUPPLIED MAILBOX, AT LOCATIONS DETERMINED BY THE ENGINEER.

IN ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE BOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL SUPPLY ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION. SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO MAILBOXES MAY BE MOUNTED ON A SINGLE POST. [HARDWARE SHALL BE COMMERCIAL GRADE GALVANIZED STEEL.]

WOOD POSTS SHALL BE NOMINAL 4 IN. x 4 IN. (S4S) OR 4 1/2 IN. DIAMETER ROUND, AND CONFORM TO 710.14. STEEL POSTS SHALL BE NOMINAL PIPE SIZE 2 IN. I.D., AND CONFORM TO AASHTO M 181.

POSTS SHALL BE SET AS PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WORK WITH THE LOCAL POST MASTER AND NOTIFYING THE PROPERTY OWNERS PRIOR TO WORK.

GROUP MAILBOX SUPPORTS SHALL BE PLACED ON 3 FT. CENTERS AND THE TURNOUT LENGTHENED TO ACCOMMODATE THE GROUPING.

WHERE GUARDRAIL EXISTS, MAILBOXES AND THEIR SUPPORTS SHALL BE PLACED BEHIND THE GUARDRAIL. SUPPORTS MUST STILL MEET THE BREAKAWAY REQUIREMENTS LISTED ABOVE.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS DESCRIBED ABOVE.

ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, SINGLE	
- U.S. 30	7 EACH
ITEM SPECIAL-MAILBOX SUPPORT SYSTEM, DOUBLE	
- U.S. 30	2 EACH

MAILBOX APPROACHES

THE MAILBOX APPROACHES SHALL BE PAVED WITH 1.50" ITEM 442 INTERMEDIATE COURSE AND 1.00" ITEM 442 SURFACE COURSE. THEY SHALL CONFORM AS MUCH AS PRACTICAL TO STANDARD DRAWING BP-4.1 OR AS DIRECTED BY THE ENGINEER.

GRADING SHALL BE PERFORMED IN THESE AREAS TO OBTAIN A BASE WHICH WILL ALLOW THE FINISHED GRADE TO BE FLUSH WITH ADJACENT PAVEMENT. A QUANTITY OF ITEM 617 COMPACTED AGGREGATE, AS PER PLAN HAS BEEN PROVIDED FOR AREAS WHERE THE SHOULDER IS LOW PRIOR TO GRADING AND/OR LOW AREAS CAUSED BY THE REMOVAL OF UNSUITABLE MATERIAL. QUANTITIES TO PERFORM THIS WORK HAVE BEEN INCLUDED IN THE GENERAL SUMMARY AND ARE ESTIMATED AS FOLLOWS.

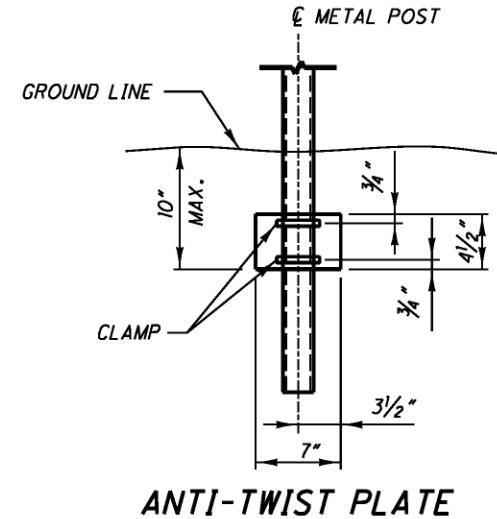
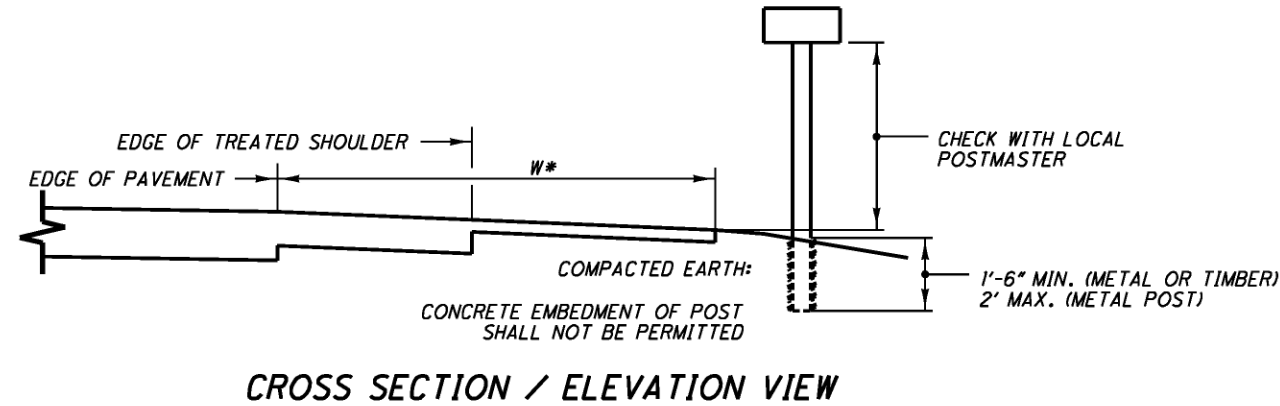
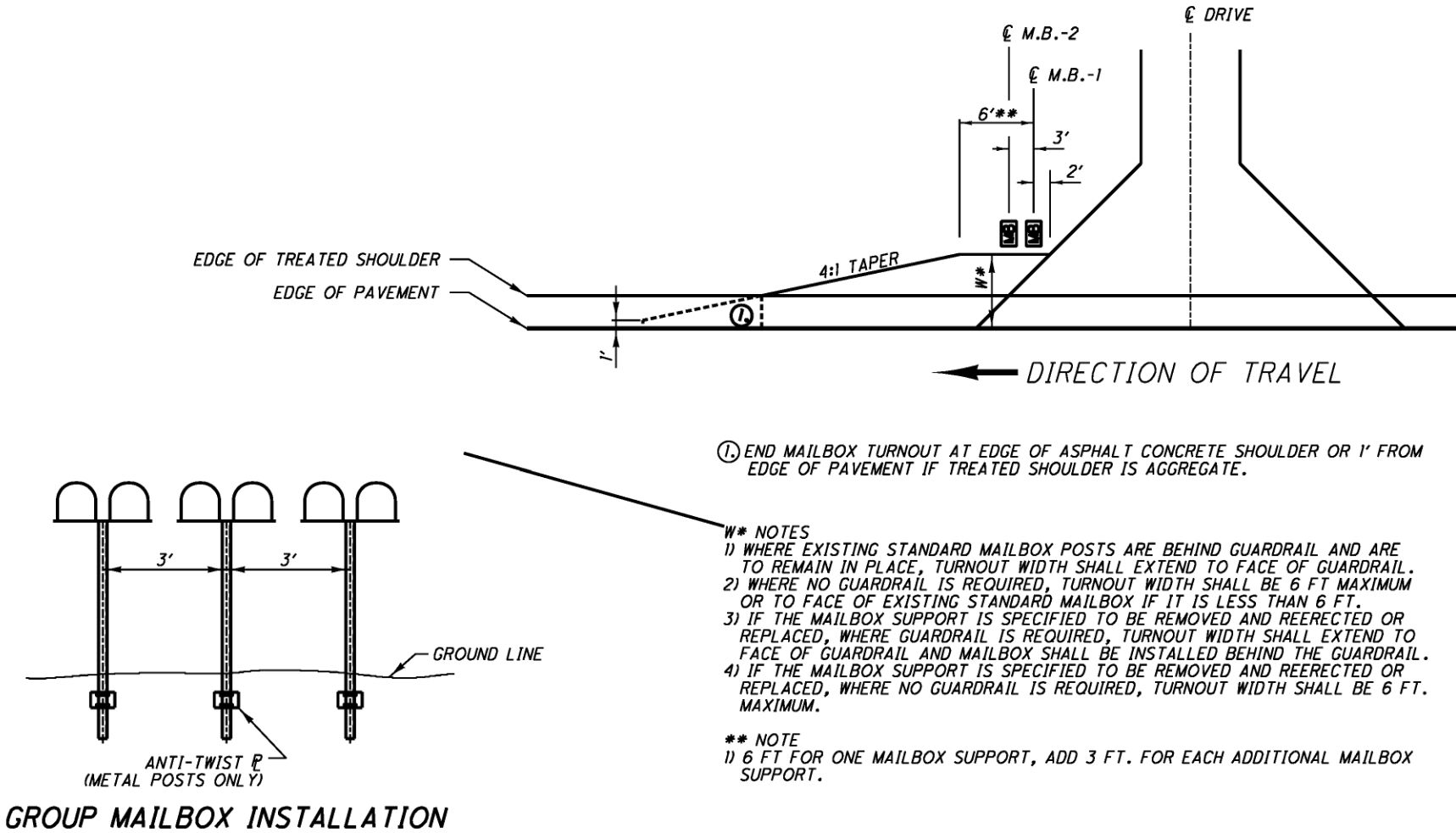
ITEM 209 - GRADING MAILBOX APPROACHES:	
- US-30	(NONE) EACH
ITEM 617 - COMPACTED AGGREGATE, AS PER PLAN	
- SR-172	(NONE) CU YD

LOCATIONS OF MAILBOX SUPPORT SYSTEM TO BE REPLACED

ADDRESSES AND/OR LOCATIONS OF MAILBOX SUPPORT SYSTEM TO BE REPLACED:

- #11611 US-30 - SLM 19.841 EB SINGLE
- #14767 US-30 - SLM 22.594 EB DOUBLE
- #14767 US-30 - SLM 22.594 EB SINGLE
- #14811 US-30 - SLM 22631 EB SINGLE
- ##### US-30 - SLM 25.099 EB DOUBLE
- ##### US-30 - SLM 25.099 EB SINGLE
- #13914 US-30 - SLM 21.841 WB SINGLE
- ##### US-30 - SLM 20.262 WB SINGLE
- ##### US-30 - SLM 19.830 WB SINGLE

FOR DETAILS NOT SHOWN SEE STANDARD DRAWING BP-4.1



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SHEET NUMBER													US-30	L050	SR-172	L250	ITEM	ITEM	TOTAL	UNIT	DESCRIPTION	REF.
8	16	20	20	32	33	34	37	37	43				US-30	L050	SR-172	L250	ITEM	ITEM	TOTAL	UNIT	DESCRIPTION	SHEET
US-30	US-30	US-30	SR-172	US-30	US-30	US-30	US-30	SR-172	US-30									EXT.				
									LUMP				LUMP		0		201	11000	LUMP		ROADWAY	
						6							6		0		202	35100	6	FT	PIPE REMOVED, 24" AND UNDER	
						12							12		0		202	35200	12	FT	PIPE REMOVED, OVER 24"	
							714	1,775					714		1,775		202	38000	2,489	FT	GUARDRAIL REMOVED	
							4,839	0					4,839		0		202	38200	4,839	FT	GUARDRAIL REMOVED FOR REUSE	
							0	2					0		2		202	42000	2	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A	35
							9	2					9		2		202	42040	11	EACH	ANCHOR ASSEMBLY REMOVED, TYPE T	
							1	0					1		0		202	42600	1	EACH	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE A	
							1	0					1		0		202	42610	1	EACH	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE B-98	
							4	0					4		0		202	42620	4	EACH	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98	
							8	4					8		4		202	47000	12	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
						1							1		0		202	58100	1	EACH	CATCH BASIN REMOVED	
				19	1		11	0					1		0		202	58500	1	EACH	CATCH BASIN ABANDONED	
									489				30		0		203	10000	30	CU YD	EXCAVATION	
													489		0		203	20000	489	CU YD	EMBANKMENT	
				48									48		0.0		204	10000	48	SQ YD	SUBGRADE COMPACTION	
							59	19					59		19		209	15000	78	STA	RESHAPING UNDER GUARDRAIL	
							63	19					63		19		209	60201	82	STA	LINEAR GRADING, AS PER PLAN	36
		27.3	1.2										27.3		1.2		209	60500	28.5	MILE	LINEAR GRADING	
							575	0					575		0		606	13000	575	FT	GUARDRAIL, TYPE 5	
								1,775					0		1,775		606	13001	1,775	FT	GUARDRAIL, TYPE 5, AS PER PLAN	
							4,639	0					4,639		0		606	16500	4,639	FT	GUARDRAIL REBUILT, TYPE 5	
							175						175		0		606	16501	175	FT	GUARDRAIL REBUILT, TYPE 5, AS PER PLAN	35
							25	0					25		0		606	16701	25	FT	GUARDRAIL REBUILT, TYPE 5A, AS PER PLAN	35
							16	0					16		0		606	17900	16	EACH	GUARDRAIL POST	
							2	2					2		2		606	26100	4	EACH	ANCHOR ASSEMBLY, TYPE E	
							8	2					8		2		606	26500	10	EACH	ANCHOR ASSEMBLY, TYPE T	
							1	0					1		0		606	27800	1	EACH	ANCHOR ASSEMBLY REBUILT, TYPE A	
							1	0					1		0		606	27840	1	EACH	ANCHOR ASSEMBLY REBUILT, TYPE B	36
							5	0					5		0		606	27850	5	EACH	ANCHOR ASSEMBLY REBUILT, TYPE E	35
							3	0					3		0		606	35000	3	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 1	
							4	0					4		0		606	35100	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 2	
							0	4					0		4		606	35120	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 3	
							4	0					4		0		606	35170	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE BR-1	
							91	0					91		0		622	10161	91	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN	8
							3	0					3		0		622	25011	3	EACH	CONCRETE BARRIER END SECTION, TYPE D, REINFORCED, AS PER PLAN	8
							3	0					3		0		622	25051	3	EACH	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	8
	7												7		0		SPECIAL	69050100	7	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	16
	2												2		0		SPECIAL	69050200	2	EACH	MAILBOX SUPPORT SYSTEM, DOUBLE	16
									1,000				1,000		0		659	10001	1,000	SQ YD	EROSION CONTROL	
																					SEEDING AND MULCHING, AS PER PLAN	43
					124								124		0		603	04400	124	FT	DRAINAGE	
						6							6		0		603	04600	6	FT	12" CONDUIT, TYPE C, 706.02	
						12							12		0		603	13600	12	FT	30" CONDUIT, TYPE C, 706.02	
						1							1		0		604	01804	1	EACH	CATCH BASIN, NO. 5A WITHOUT APRON	
					1								1		0		604	02000	1	EACH	CATCH BASIN, NO. 6	
8													8		0		604	09000	8	EACH	CATCH BASIN ADJUSTED TO GRADE	

GENERAL SUMMARY

WAY-30-19.81
WAY-172-0.00

[illegible]

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SHEET NUMBER																US-30	L050	SR-172	L250	ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	REF. SHEET	GENERAL SUMMARY	WAY-30-19.81 WAY-172-0.00																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
		11	11	12	12	13	13	21	21	22	22		31	37	37													43																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		US-30	SR-172	US-30	SR-172	US-30	SR-172	US-30	SR-172	US-30	SR-172		US-30	US-30	SR-172	US-30																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		</

3/9/11 9:30 AM										* - FOR TYPICALS, SEE SHEETS 6-7										ODOT D-03 CADD WorkStation: sjuzwik										i:/projects/77449/77449gq001.xls										CALC BY SCJ	
COUNTY / LOCATION	ROUTE	LOG POINT TO LOG POINT		LENGTH		WIDTH FEET AVG.		PAVEMENT AREA	254			407	407	442		446		446		618	604	638	AGGREGATE SHOULDER PROPOSED WIDTH		AGGREGATE SHOULDER AREA	209 LINEAR GRADING	408 PRIME COAT @ 0.40 GAL/SY	617 COMPACTED AGGREGATE	617 SHOULDER PREPARATION	CHKD BY BAD											
				MILE	FEET				PAVEMENT PLANING, ASPHALT CONCRETE (1.75")	PAVEMENT PLANING, ASPHALT CONCRETE (3.25")	PATCHING PLANED SURFACE	TACK COAT, TRACKLESS TACK SURFACE COURSE @ 0.08 GAL/SY	TACK COAT, TRACKLESS TACK, INTERM. COURSE @ 0.04 GAL/SY	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) (1.75" AVG)		ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (PG 76-22M)		ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE 1H, (PG 76-22M)		RUMBLE STRIP (ASPHALT CONCRETE)	MONUMENT ASSEMBLY ADJUSTED TO GRADE	WATER VALVE BOX ADJUSTE D TO GRADE	SL	SR						1 INCH AVG. THICKNESS											
SQ YD	SQ.YD	SQ.YD	SQ.YD	GALLON	GALLON	INCH	CU.YD.	INCH	CU.YD.	INCH	CU.YD.	MILE	EACH	EACH	FT	FT	SQ YD	MILE	GALLON	CU YD	SQ.YD																				
WAY	30 eb	1005+30	1333+17	6.21	32787	36.0		131,148	131,148		1,311	10,492		1.75	6,375					12.42			2.0	2.0	14,572	12.42	5,829	405	14,572	PAVEMENT & SHOULDER DATA											
WAY	30 wb	1005+30	1333+14	6.21	32784	36.0		131,136	131,136		1,311	10,491		1.75	6,375					12.42			2.0	2.0	14,571	12.42	5,828	405	14,571												
WAY	30 eb	150+35	174+26	0.45	2391	36.0		9,564	9,564		96	765		1.75	465					0.90			2.0	2.0	1,063	0.90	425	30	1,063												
WAY	30 wb	149+97	173+74	0.45	2377	36.0		9,508	9,508		95	761		1.75	462					0.90			2.0	2.0	1,056	0.90	423	29	1,056												
WAY	US-30	** DEDUCT FOR HIGH STRESS PAVING AT SR-57 AND SR-94						-6,264	-6,264		-63	-501		1.75	-305																										
(DEDUCT FOR 3 BRIDGE DECKS)																																									
WAY	US-30	SLM 21.26			279	72.0		-2,232	-2,232		-22	-179		1.75	-109					-0.11			2.0	2.0	-124		-50	-3	-124												
WAY	US-30	SLM 21.35			188	72.0		-1,504	-1,504		-15	-120		1.75	-73					-0.07			2.0	2.0	-84		-33	-2	-84												
EB-LT	SR-57	1018+90	1022+62	0.07	372	48		1,984 **		1,984	20	159	79			1.75	96	1.5	83																						
WB-LT	SR-57	1025+26	1023+82	0.03	144	42 avg		672 **		672	7	54	27			1.75	33	1.5	28																						
EB-LT	Kidron	1072+22	1076+40			12		624	624		6	50		1.75	30																										
WB-LT	Kidron	1079+73	1072+36			12		692	692		7	55		1.75	34																										
EB-LT	30 Alt	1160+40	1162+20			12		206	206		2	16		1.75	10																										
eb-lt-rt	SR-94	1223+95	1226+85	0.05	290	56		1,804 **		1,804	18	144	72			1.75	88	1.5	75																						
wb-lt-rt	SR-94	1230+81	1227+91	0.05	290	56		1,804 **		1,804	18	144	72			1.75	88	1.5	75																						
Median	US-30	All Median Access Drives						7,800	7,800		78	624		1.75	379							2.0	2.0	22		9	1	22													
Ramp	EB																																								
at 172	Decel	1324+60	1332+70	0.15	810	26		2,340	2,340		23	187		1.75	114							2.0	2.0	360	0.30	144	10	360													
Ramp	WB																																								
at 172	Accel	1329+00	1333+14	0.08	414	26		1,196	1,196		12	96		1.75	58							2.0	2.0	184	0.16	74	5	184													
	Accel	149+97	154+00	0.08	403	26		1,164	1,164		12	93		1.75	57							2.0	2.0	179	0.16	72	5	179													
	EXTRA AREA FOR INTERSECTIONS AND MEDIAN AREAS							5592	5592		56	447	224	1.75	272	1.75	272																								
US-30 TOTAL TO GEN. SUM.									290,970	6,264	2,972	23,778	474		14,144		577		261	26.46						27.26	12,721	885	31,799												
Median	SR-172	All Median Access Drives						328	328		3	26		1.75	16																										
WAY	172 WB	0.258	0.503	0.24	1291	36		5,166	5,166		52	413		1.75	251				0.49			2.0	2.0	574	0.49	230	16	574													
WAY	172 EB	0.130	0.330	0.20	1056	36		4,224	4,224		42	338		1.75	205				0.40			2.0	2.0	469	0.40	188	13	469													
WAY	172 EB	0.395	0.503	0.11	569	36		2,277	2,277		23	182		1.75	111				0.22			2.0	2.0	253	0.22	101	7	253													
WAY	172 Both	0.503	0.571	0.07	360	58 avg		2,317	2,317		23	185		1.75	113				0.14			2.0	2.0	160	0.14	64	4	160													
SR-172 TOTAL TO GEN. SUM.									14,312	0	143	1,144	0		696		0		0	1.24						1.24	583	40	1,456												
	TOTAL								305,282	6,264	3,115	24,922	474		14,840		577		261	27.70						28.50	13,304	925	33,255												
																												20													
																												70													

PAVEMENT & SHOULDER DATA

WAY-30-19.81
WAY-172-0.00

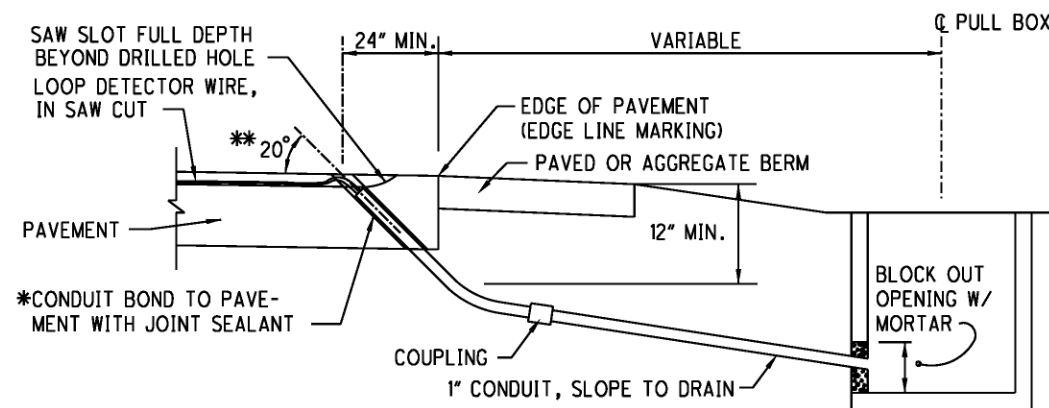
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AUXILIARY & LONG LINE MARKINGS																																CALC BY				
																																SCJ				
ROUTE / LOCATION (WAY. CO.)	DIRECTION	STATION		614												644			644										646					CHKD BY		
				WORK ZONE LANE LINE, CLASS I, 642 PAINT	WORK ZONE LANE LINE, CLASS III, 642 PAINT	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	WORK ZONE EDGE LINE, CLASS I, 642 PAINT	WORK ZONE EDGE LINE, CLASS III, 642 PAINT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS II, 642 PAINT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS III, 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS I, 642 PAINT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	EDGE LINE		LANE LINE	CENTER LINE		AUXILIARY MARKINGS (740.04)										EDGE LINE					BAD
																TOTAL (PAY QUANTITY) (WHITE)	TOTAL (PAY QUANTITY) (YELLOW)		SOLID LINE EQUIVALENT	TOTAL (PAY QUANTITY)	CHANNELIZING LINE	STOP LINE	TRANSVERSE/DIAGONAL LINE (WHITE)	TRANSVERSE/DIAGONAL LINE (YELLOW)	PARKING LOT STALL MARKING	HANDICAP SYMBOL MARKING	LANE ARROW (LEFT)	LANE ARROW (RIGHT)	YIELD LINE	TOTAL (PAY QUANTITY) (WHITE)	TOTAL (PAY QUANTITY) (YELLOW)	LANE LINE	CHANNELIZING LINE	PARKING LOT STALL MARKING		
		FROM	TO	MILE	MILE	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	FT	MILE	MILE	MILE	MILE	MILE	FT	FT	FT	FT	FT	EACH	EACH	FT		MILE	MILE	MILE	FT	FT		
US-30	EB	1005+30	1333+17	6.21	6.21			12.42	12.42							6.21	6.21	6.21	0.019	0.019		105					2	5								NOTES: 1) LANES ON US-30 & SR-172 SHALL BE STRIPED AT 12' WIDTHS. 2) FOR ALL WORK ZONE MARKINGS PLACED ON THE SURFACE COURSE, THEY SHALL BE CLASS III. 3) FOR ALL WORK ZONE PAVEMENT MARKINGS, THE 642 PAINT USED SHALL BE TYPE 1. 4) ALL DIAGONAL / TRANSVERSE LINES SHALL BE THE CHEVRON TYPE AT THE GORE AREAS.
US-30	WB	1005+30	1333+14	6.21	6.21			12.42	12.42							6.21	6.21	6.21	0.019	0.019		105														
US-30	EB	150+35	174+26	0.45	0.45			0.90	0.90							0.45	0.45	0.45																		
US-30	WB	149+97	173+74	0.45	0.45			0.90	0.90							0.45	0.45	0.45																		
SR-57	EB-LT	1018+90	1022+62									259	259	36	36						259	36					4									
SR-57	WB-LT	1025+26	1023+82			0.02	0.02	0.04	0.04	38	38	200	200	60	60	0.042				0.022	200	60	38				2									
Kidron Rd.	EB-LT	1072+22	1076+40			0.01	0.01	0.02	0.02	119	119	200	200	15	15	0.015			0.012	0.012	200	15	119				3									
Kidron Rd.	WB-LT	1079+73	1072+36							115	115	630	630							630			115													
30-Alt	EB-LT	1160+40	1162+20																0.011	0.003	60	15				2										
SR-94	EB-LT	1223+08	1227+32			0.01	0.01			38	38	678	678	65	65	0.019			0.010	0.010	678	65	38			4	4									
SR-94	WB-LT	1231+08	1227+32			0.01	0.01			38	38	750	750	70	70				0.010	0.010	750	70	38			4	4									
Kurzen Rd	EB - RT	SIGNAL IS ON FLASH MODE- NO STOP BARS ON US 30																	390	15					4											
Kurzen Rd	WB - LT	SIGNAL IS ON FLASH MODE- NO STOP BARS ON US 30																	304	15					4											
Decel Lane	EB	1325+00	1332+70	0.06	0.06					73	73	344	344					0.06			344		73													
Accel Lane	WB	1333+14	1337+03	0.03	0.03			0.05	0.05			100	100					0.05	0.03		100															
US-30 TOTAL TO GEN SUM				13.41	13.41	0.05	0.05	26.75	26.75	421	421	3161	3161	246	246	13.40	13.37	13.41		0.10	3915	501	306	115			20	22								
WB Exit from 30		0.258	0.503					1.00	1.00							0.50	0.50																			
EB Entry to 30		0.130	0.503					1.50	1.50							0.75	0.75																			
SR-172 3-Ln	Both	0.503	0.571			0.10	0.10	0.28	0.28	138	138	158	158			0.14	0.14		0.100	0.100	158		138			3										
SR-172 TOTAL TO GEN SUM				0.00	0.00	0.10	0.10	2.78	2.78	138	138	158	158	0	0	1.39	1.39	0.00		0.10	158	0	138	0			3	0								
TOTAL				13.41	13.41	0.15	0.15	29.53	29.53	559	559	3,319	3,319	246	246	14.79	14.76	13.41	0.00	0.20	4073	501	444	115			23	22				Revised: 3/25/11				
																																21				
																																70				

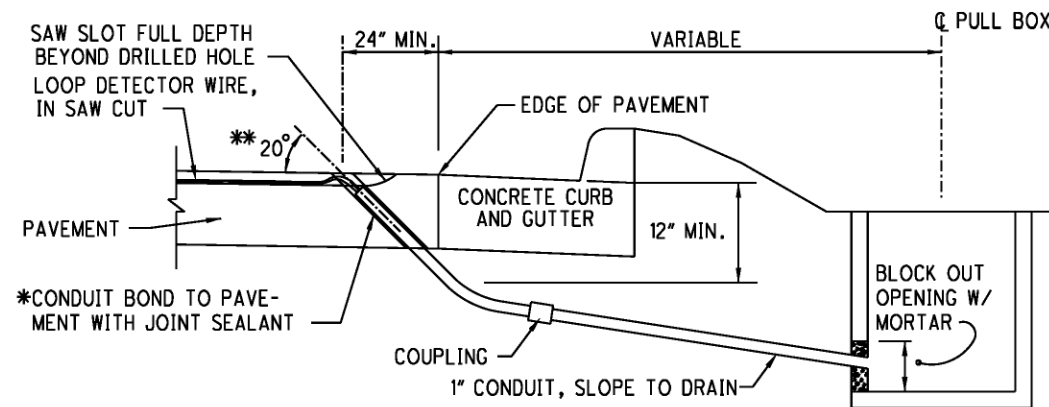
PAVEMENT MARKING SUMMARY

WAY-30-19.81
WAY-172-0.00

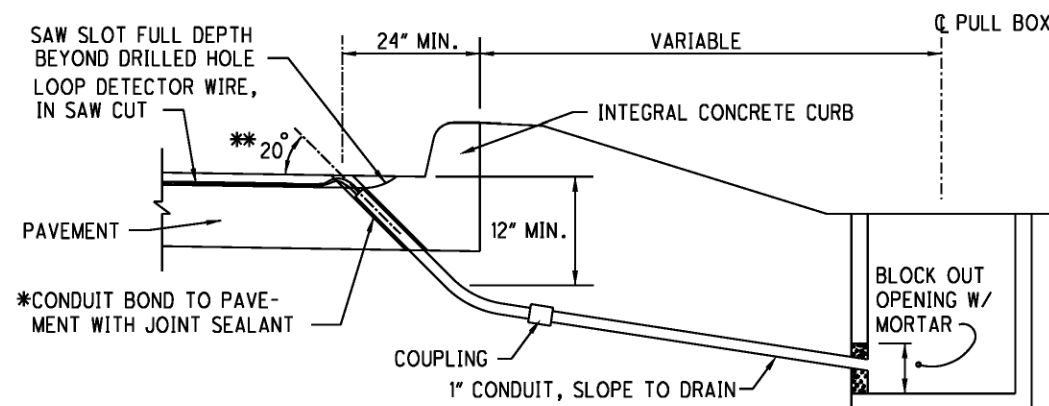
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DRILLED HOLE LOCATION DETAIL WITH PAVED OR AGGREGATE BERM



DRILLED HOLE LOCATION DETAIL WITH CONCRETE CURB AND GUTTER



DRILLED HOLE LOCATION DETAIL WITH INTEGRAL CONCRETE CURB

* CONDUIT SHALL BE 1" DIAMETER 725.04.

** THE RANGE OF THIS ANGLE SHALL BE FROM 15 TO 30 DEGREES.

NOTE: SEE STANDARD DRAWING TC-82.10 FOR ADDITIONAL NOTES AND DETAILS

ITEM 632 - SIGNALIZATION, MISC.: REMOVE AND REINSTALL LASHING RODS

THIS WORK WILL REQUIRE THE CONTRACTOR TO CAREFULLY REMOVE THE LASHING RODS ACROSS AN EXISTING SIGNAL SPAN SO THAT CABLE(S) CAN BE INSTALLED. THE NEW CABLE(S) SHALL BE CAREFULLY LASHED WITH OTHER EXISTING CABLES UTILIZING THE REMOVED LASHING RODS.

PAYMENT FOR THIS ITEM OF WORK WILL BE IN FEET OF LASHING ROD REMOVED AND REINSTALLED AND WILL INCLUDE ALL LABOR AND EQUIPMENT, INCLUDING TRAFFIC CONTROL, TO PERFORM THE WORK DESCRIBED ABOVE.

ITEM 632- DETECTOR LOOP, AS PER PLAN

AN ESTIMATED QUANTITY OF ITEM 632, DETECTOR LOOP, AS PER PLAN, HAS BEEN PROVIDED FOR THE PURPOSE OF REPLACING DAMAGED DETECTOR LOOPS AND/OR UPGRADING DETECTOR LOOPS TO IMPROVE MOTORCYCLE DETECTION. IT IS IMPERATIVE THAT REPLACEMENT OF DETECTOR LOOPS BE INSTALLED AND FULLY FUNCTIONAL IN THE SHORTEST POSSIBLE TIME. THE CONTRACTOR SHALL HAVE REPLACEMENT DETECTOR LOOPS INSTALLED AND FULLY FUNCTIONAL WITHIN 7 CALENDAR DAYS OF DESTRUCTION OF THE EXISTING DETECTOR LOOPS.

THE CONTRACTOR SHALL NOTIFY MATT BLANKENSHIP, ODOT DISTRICT 3 ROADWAY SERVICES MANAGER, (PHONE 419-207-7045) 5 WORKING DAYS IN ADVANCE OF ANY PLANING OPERATIONS OR PAVEMENT REPAIR WORK THAT WILL DAMAGE DETECTOR LOOP INSTALLATIONS. THIS NOTIFICATION IS NEEDED FOR DISTRICT 3 TO SCHEDULE TEMPORARY SIGNAL TIMING MODIFICATIONS FOR THE TIME PERIOD WHEN THE DETECTOR LOOPS ARE OUT OF OPERATION. THE CONTRACTOR SHALL THEN RENOTIFY MR. BLANKENSHIP WITHIN 2 WORKING DAYS AFTER THE DAMAGED DETECTOR LOOPS ARE REPLACED SO THAT HE CAN RESCHEDULE DISTRICT CREWS TO RESTORE SIGNAL TIMINGS TO THE ORIGINAL SETTINGS.

FAILURE TO COMPLY WITH THE ABOVE STATED REQUIREMENTS WILL RESULT IN THE ASSESSMENT OF LIQUIDATED DAMAGES ACCORDING TO SECTION 108.07 OF THE CMS FOR EACH CALENDAR DAY BEYOND THE SPECIFIED LIMIT.

THE NEW DETECTOR LOOPS SHALL BE PLACED PER THE PLAN DETAILS AFTER THE PLANING AND PAVEMENT REPAIR OPERATIONS ARE COMPLETED WITHIN THE AFFECTED AREAS. THE DETECTOR LOOPS SHALL NOT BE CUT INTO THE SURFACE COURSE.

IN ADDITION TO THE REQUIREMENTS OF CMS 632.11, THE CONTRACTOR SHALL PROVIDE A POSITIVE AND EFFECTIVE MEANS FOR REMOVAL OF SOLID RESIDUE RESULTING FROM THE DRY SAW BLADE CUTTING OF LOOP DETECTOR SLOTS IN THE PAVEMENT. THE RESIDUE SHALL BE REMOVED BY VACUUM OR OTHER EFFECTIVE MEANS, BEFORE IT IS BLOWN BY TRAFFIC ACTION OR WIND.

LOOP DETECTOR WIRE TO LEAD-IN CABLE SPLICES WITHIN EPOXY ENCAPSULATED SPLICE ENCLOSURES SHALL BE JOINED BY AN APPROVED CONNECTOR AND SOLDERED PER CMS 632.23 & 725.15. ALL COSTS ASSOCIATED WITH THE SOLDERED SPLICE CONNECTION AND EPOXY SPLICE KIT SHALL BE INCLUDED WITH THE DETECTOR LOOP.

IF THE PULL BOX IS NOT SPECIFIED IN THE PLANS, THE SPLICE SHALL BE MADE IN THE FIRST ENTERED POLE OR PEDESTAL, EXCEPT WHERE THE CONTROLLER CABINET IS MOUNTED ON THE POLE OR PEDESTAL, IN WHICH CASE THE LOOP WIRES SHALL BE ROUTED DIRECTLY INTO THE CABINET UNLESS SPECIFIED DIFFERENTLY IN THE PLANS. LOOP DETECTOR WIRE ROUTED THROUGH CONDUIT, PULL BOXES, POLES, AND PEDESTALS SHALL BE TWISTED PER CMS 632.23.

FURNISH ALL MATERIALS ACCORDING TO THE DEPARTMENT'S QUALIFIED PRODUCTS LIST (OPL).

SEE DETAILS ON THIS SHEET FOR ADDITIONAL REQUIREMENTS.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR ITEM 632, DETECTOR LOOP, AS PER PLAN.

ITEM 632- LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 632, 732.07, PART A, NEMA TS-1, AND 732.08, LOOP DETECTOR UNITS SHALL HAVE THE FOLLOWING REQUIREMENTS OR FEATURES:

- 1) THE OUTPUT DEVICE SHALL BE AN ELECTROMECHANICAL RELAY AND ALL CONTACTS SHALL BE INCLUDED IN THE WIRING HARNESS.
- 2) THE UNIT SHALL BE SELF TUNING.
- 3) THE UNIT'S ELECTRICAL CONNECTION PLUGS OR WIRING HARNESS SHALL ALLOW READY REPLACEMENT WITH SINGLE CHANNEL AMPLIFIERS AS DESCRIBED IN CMS 732.07.

IN ADDITION TO THE REQUIREMENTS LISTED ABOVE, THE DETECTOR UNIT SHALL BE A SINGLE CHANNEL UNIT AND HAVE EASILY ADJUSTABLE TIMERS INCORPORATED IN THE UNIT THAT ARE CAPABLE OF BOTH EXTEND CALL AND DELAY CALL OUTPUTS. THESE ADJUSTMENTS SHALL BE SEPARATE AND CONTROLLABLE BY CALIBRATED SWITCHES OR KNOBS ON THE OUTSIDE OF THE DETECTOR UNIT. THE EXTEND CALL TIMER SHALL BE CAPABLE OF HOLDING THE CALL OF A VEHICLE FOR A PERIOD OF TIME BEGINNING AT THE INSTANT THE VEHICLE LEAVES THE DETECTION AREA. THE DELAY CALL TIMER SHALL BE SUCH THAT IT DOES NOT ISSUE AN OUTPUT UNTIL THE DETECTION ZONE HAS BEEN OCCUPIED FOR A PERIOD OF TIME THAT HAS BEEN SET ON THE ADJUSTABLE TIMER. WHEN TIMES ARE SET ON BOTH THE DELAY AND EXTEND TIMERS, THE UNIT SHALL BE DESIGNED TO INHIBIT THE EXTEND FUNCTION UNTIL THE DELAY TIME HAS BEEN MET. WHEN THE LOOP BECOMES UNOCCUPIED, THE DELAY OUTPUT IS REMOVED. WHEN THE VEHICLE GAP EXCEEDS THE EXTEND TIME, THE ENTIRE DELAY-EXTEND OPERATION BECOMES EFFECTIVELY RESET FOR THE NEXT CYCLE - DELAY TO TIME OUT, ETC.

WORK SHALL INCLUDE ALL CONTROLLER / CABINET MODIFICATIONS AND CONNECTIONS NEEDED TO INSTALL THE LOOP DETECTOR UNIT AND TO MAKE IT FULLY OPERATIONAL.

PAYMENT FOR ITEM 632 - LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE BID PER EACH AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS.

ITEM 632 - SIGNALIZATION, MISC.: REMOVE CABLE

THIS WORK WILL REQUIRE THE CONTRACTOR TO CAREFULLY REMOVE EXISTING LOOP LEAD-IN CABLE IN AREAS DESIGNATED IN THE PLAN AND AS DIRECTED BY ENGINEER. THE CONTRACTOR SHALL TAKE CARE IN NOT DAMAGING OTHER EXISTING CABLES THAT ARE TO REMAIN IN PLACE. CABLE REMOVED SHALL BE FOR DISPOSAL.

PAYMENT FOR THIS ITEM OF WORK WILL BE AT AN EACH INTERSECTION BASIS FOR CABLE REMOVED AND SHALL INCLUDE ALL LABOR AND EQUIPMENT TO PERFORM THE WORK DESCRIBED ABOVE.

ITEM 632 - SIGNALIZATION, MISC.: REUSE EXISTING LOOP DETECTOR UNIT

THIS WORK WILL REQUIRE THE CONTRACTOR TO MODIFY THE WIRING HOOK-UP OF AN EXISTING LOOP DETECTOR UNIT. THE LOOP DETECTOR UNIT SHALL BE REWIRED TO OPERATE WITH A NEW DETECTOR LOOP AND ASSOCIATED PHASE AS DETAILED IN THE PLAN AND AS DIRECTED BY ENGINEER.

PAYMENT FOR THIS ITEM OF WORK WILL BE AT AN EACH BASIS AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO PERFORM THE WORK DESCRIBED ABOVE.

ITEM 633 - ADVANCE/DILEMMA ZONE DETECTION SYSTEM

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING AN ADVANCE/DILEMMA ZONE DETECTION SYSTEM CAPABLE OF INTERSECTION ADVANCE DETECTION CONTROL UTILIZING ABOVE GROUND DIGITAL WAVE RADAR DETECTION TECHNIQUES. THE SYSTEM SHALL BE NON-INTRUSIVE AND SHALL DETECT VEHICLES FROM 100 FEET (30 M) UP TO 500 FEET (150 M) FROM THE SENSOR. THE SYSTEM SHALL DETECT VEHICLE PRESENCE, SPEED AND SHALL IDENTIFY VEHICLES WITHIN THE DILEMMA ZONE AND SHALL PROVIDE UP TO 8 DETECTION ZONES SIMULTANEOUSLY FOR INTERSECTION CONTROL. ONE SENSOR SHALL BE PROVIDED PER APPROACH, COVERING MULTIPLE LANES WHERE ADVANCE DETECTION IS REQUIRED. THE SYSTEM SHALL BE INSTALLED FOR THE EB AND WB APPROACHES ON US 30 AT SR 94 INTERSECTION. THE DETECTION SYSTEM SHALL INCLUDE THE FOLLOWING LIST OF FEATURES AND CAPABILITIES:

THE SYSTEM SHALL PROVIDE ACCURATE PRESENCE-DETECTION OF MOVING VEHICLES OR CLUSTER OF VEHICLES. THE SENSOR SHALL BE MOUNTED IN A FORWARD-FIRE POSITION, LOOKING AT EITHER APPROACHING OR DEPARTING TRAFFIC AND SHALL ONLY DETECT VEHICLES IN ONE DIRECTION OF TRAVEL. IT SHALL MAINTAIN ACCURATE PERFORMANCE IN ALL WEATHER CONDITIONS AND SHALL BE TESTED TO MEET NEMA TS2 ENVIRONMENTAL STANDARDS.

THE SYSTEM SHALL DYNAMICALLY TRACK THE SPEED, ARRIVAL TIME AND RANGE OF ALL VEHICLES AS THEY APPROACH THE STOP LINE. THE SYSTEM SHALL CALCULATE ON A CONTINUOUS BASIS WHICH VEHICLES ARE WITHIN THE PREDETERMINED DILEMMA ZONE AND PLACE A CALL TO THE CONTROLLER. GAPS WITHIN THE DILEMMA ZONE SHALL THEN BE IDENTIFIED SUCH THAT THE CORRESPONDING PHASE CALL WILL BE DROPPED AND THE PHASE SAFELY TERMINATED.

THE SYSTEM SHALL INCLUDE A SIMPLE SETUP ROUTINE THAT WILL AUTOMATICALLY CONFIGURE AND CALIBRATE THE SENSOR FOR PROPER OPERATION DURING INSTALLATION. THE SENSOR SHALL ALSO BE CAPABLE OF BEING PROGRAMMED AND UPDATED FROM A LAPTOP COMPUTER OR OTHER PORTABLE PROGRAMMING DEVICE SUCH AS A POCKET PC. SOFTWARE SHALL BE PROVIDED. THE GRAPHICAL USER INTERFACE SHALL OPERATE ON A WINDOWS PLATFORM.

THE SENSOR SHALL BE MOUNTED DIRECTLY TO A POLE OR MAST ARM AS RECOMMENDED BY THE MANUFACTURER. CABLE SHALL BE PROVIDED AS REQUIRED AND RECOMMENDED BY THE MANUFACTURER.

SURGE PROTECTION DEVICES AS RECOMMENDED BY THE MANUFACTURER SHALL BE INCLUDED BOTH AT THE POLE WHERE THE SENSOR IS LOCATED TO PROTECT THE SENSOR AND IN THE TRAFFIC CABINET TO PROTECT THE CABINET ELECTRONICS.

POWER SHALL BE PROVIDED FROM THE TRAFFIC CABINET. THE SENSOR SHALL CONSUME LESS THAN 10 WATTS AND OPERATE FROM A DC INPUT BETWEEN 12VDC AND 28VDC. COMPLETE AND AUTOMATIC RECOVERY FROM A POWER FAILURE SHALL BE WITHIN 15 SECONDS AFTER RESUMPTION OF NORMAL POWER.

ALL REQUIRED INPUTS CARDS SHALL BE INCLUDED IN THE TRAFFIC CABINET THAT ARE COMPATIBLE WITH I70, 2070, NEMA TS1 AND NEMA TS2 DETECTOR RACKS. THE CARDS SHALL PROVIDE TRUE PRESENCE DETECTOR CALLS OR CONTACT CLOSURE TO THE TRAFFIC CONTROLLER.

THE MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE A 6-HOUR TRAINING COURSE ON THE SETUP, OPERATION AND MAINTENANCE OF THE SYSTEM.

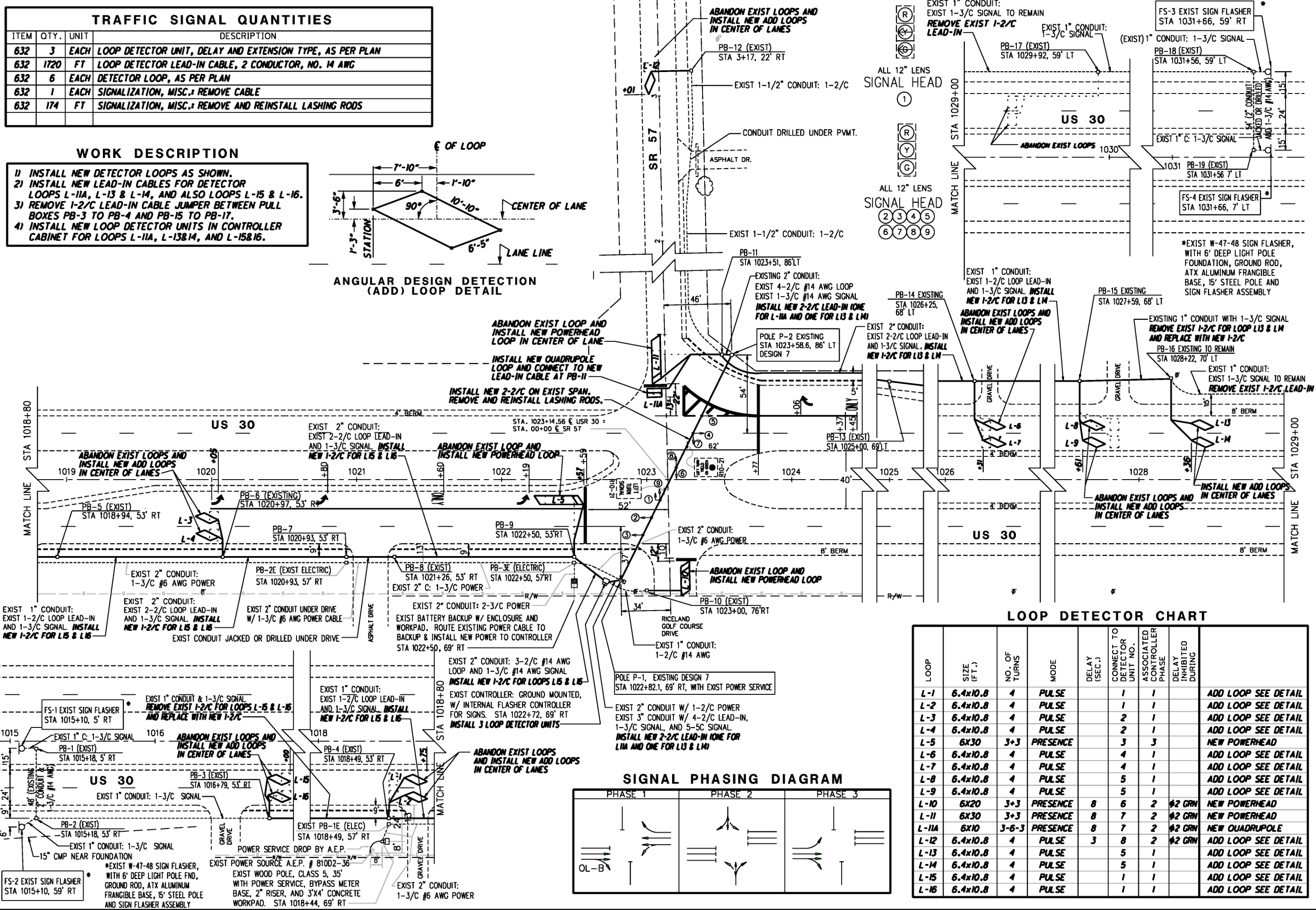
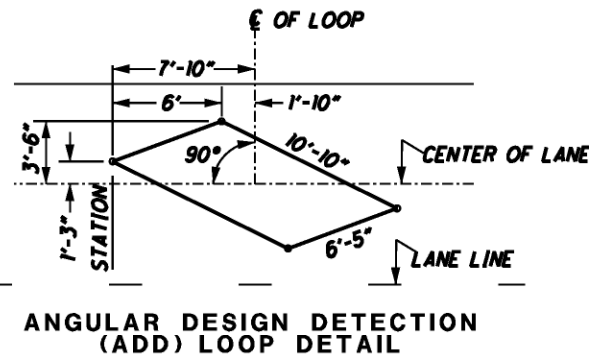
PAYMENT FOR ITEM 633 ADVANCE/DILEMMA ZONE DETECTION SYSTEM SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH, COMPLETE AND IN PLACE INCLUDING ALL REQUIRED CABINET HARDWARE, MOUNTING BRACKETS, CABLES, CONNECTIONS TESTED AND ACCEPTED.

TRAFFIC SIGNAL QUANTITIES

ITEM	QTY.	UNIT	DESCRIPTION
632	3	EACH	LOOP DETECTOR UNIT, DELAY AND EXTENSION TYPE, AS PER PLAN
632	1720	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG
632	6	EACH	DETECTOR LOOP, AS PER PLAN
632	1	EACH	SIGNALIZATION, MISC.: REMOVE CABLE
632	174	FT	SIGNALIZATION, MISC.: REMOVE AND REINSTALL LASHING RODS

WORK DESCRIPTION

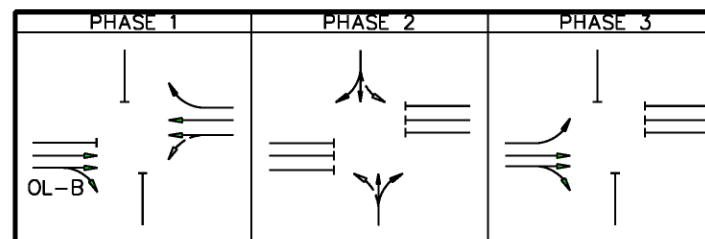
- 1) INSTALL NEW DETECTOR LOOPS AS SHOWN.
- 2) INSTALL NEW LEAD-IN CABLES FOR DETECTOR LOOPS L-11A, L-13 & L-14, AND ALSO LOOPS L-15 & L-16.
- 3) REMOVE 1-2/C LEAD-IN CABLE JUMPER BETWEEN PULL BOXES PB-3 TO PB-4 AND PB-15 TO PB-17.
- 4) INSTALL NEW LOOP DETECTOR UNITS IN CONTROLLER CABINET FOR LOOPS L-11A, L-13&14, AND L-15&16.



LOOP DETECTOR CHART

LOOP	SIZE (F.T.)	NO. OF TURNS	MODE	DELAY (SEC.)	CONNECT TO DETECTOR UNIT NO.	ASSOCIATED CONTROLLER PHASE	DELAY INHIBITED DURING	
L-1	6.4x10.8	4	PULSE		1	1		ADD LOOP SEE DETAIL
L-2	6.4x10.8	4	PULSE		1	1		ADD LOOP SEE DETAIL
L-3	6.4x10.8	4	PULSE		2	1		ADD LOOP SEE DETAIL
L-4	6.4x10.8	4	PULSE		2	1		ADD LOOP SEE DETAIL
L-5	6x30	3+3	PRESENCE		3	3		NEW POWERHEAD
L-6	6.4x10.8	4	PULSE		4	1		ADD LOOP SEE DETAIL
L-7	6.4x10.8	4	PULSE		4	1		ADD LOOP SEE DETAIL
L-8	6.4x10.8	4	PULSE		5	1		ADD LOOP SEE DETAIL
L-9	6.4x10.8	4	PULSE		5	1		ADD LOOP SEE DETAIL
L-10	6x20	3+3	PRESENCE	8	6	2	#2 GRN	NEW POWERHEAD
L-11	6x30	3+3	PRESENCE	8	7	2	#2 GRN	NEW POWERHEAD
L-11A	6x10	3-6-3	PRESENCE	8	7	2	#2 GRN	NEW QUADRUPOLE
L-12	6.4x10.8	4	PULSE	3	8	2	#2 GRN	ADD LOOP SEE DETAIL
L-13	6.4x10.8	4	PULSE		5	1		ADD LOOP SEE DETAIL
L-14	6.4x10.8	4	PULSE		5	1		ADD LOOP SEE DETAIL
L-15	6.4x10.8	4	PULSE		1	1		ADD LOOP SEE DETAIL
L-16	6.4x10.8	4	PULSE		1	1		ADD LOOP SEE DETAIL

SIGNAL PHASING DIAGRAM



ITEM	QTY.	UNIT	DESCRIPTION
632	284	FT	LOOP DETECTOR LEAD-IN CABLE, 2 CONDUCTOR, NO. 14 AWG
632	6	EACH	DETECTOR LOOP, AS PER PLAN
632	4	EACH	REMOVAL OF MISC. TRAFFIC SIGNAL ITEM, LOOP DETECTOR UNIT
632	1	EACH	SIGNALIZATION, MISC.: REMOVE CABLE
633	2	EACH	SIGNALIZATION, MISC.: REUSE EXISTING LOOP DETECTOR UNIT
632	217	FT	SIGNALIZATION, MISC.: REMOVE AND REINSTALL LASHING RODS
633	1	EACH	ADVANCE/DILEMMA ZONE DETECTION SYSTEM

- 1) INSTALL ADVANCE DILEMMA ZONE DETECTION SYSTEM TO REPLACE EXISTING DILEMMA ZONE LOOPS ON US 30.
- 2) INSTALL NEW DETECTOR LOOPS AS SHOWN.
- 3) INSTALL NEW LEAD-IN CABLE ACROSS SPAN FOR DETECTOR LOOP L-17.
- 4) REWIRE EXISTING LOOP LEAD-IN CABLE CURRENTLY WIRED TO LOOPS L-7 & L-8 TO NEW LOOP L-16.
- 5) REMOVE EXISTING LOOP LEAD-IN CABLES FROM LOOPS L-1 THRU L-6 AND L-9 THRU L-12 TO CONTROLLER.
- 6) REMOVE EXISTING LEAD-IN CABLE WIRED TO LOOPS L-7 AND L-8 (FROM PB-10 TO PB-14).
- 7) REMOVE LOOP DETECTOR UNITS WIRED TO LOOP PAIRS L-182, L-384, L-586, L-11812.
- 8) MODIFY HOOKUP OF LOOP DETECTOR UNITS CURRENTLY WIRED TO EXISTING LOOP PAIRS L-788 AND L-9810 TO WORK WITH NEW LOOPS L-16 AND L-17 RESPECTIVELY.

LOOP	SIZE (FT.)	NO. OF TURNS	MODE	DELAY (SEC.)	CONNECT TO DETECTOR UNIT NO.	ASSOCIATED CONTROLLER PHASE	
L-1	6X8	3	PULSE		1	6	ABANDON LOOP
L-2	6X8	3	PULSE		1	6	ABANDON LOOP
L-3	6X8	3	PULSE		2	6	ABANDON LOOP
L-4	6X8	3	PULSE		2	6	ABANDON LOOP
L-5	6X8	3	PULSE		3	6	ABANDON LOOP
L-6	6X8	3	PULSE		3	6	ABANDON LOOP
L-7	6X8	3	PULSE		4	2	ABANDON LOOP
L-8	6X8	3	PULSE		4	2	ABANDON LOOP
L-9	6X8	3	PULSE		5	2	ABANDON LOOP
L-10	6X8	3	PULSE		5	2	ABANDON LOOP
L-11	6X8	3	PULSE		6	2	ABANDON LOOP
L-12	6X8	3	PULSE		6	2	ABANDON LOOP
L-13	6X20	2	PRESENCE		7	1	NEW POWERHEAD
L-14	6X20	2	PRESENCE		8	5	NEW POWERHEAD
L-15	6X30	2	PRESENCE	10*	9	4	NEW POWERHEAD
L-16	8X12	2	PRESENCE	10*	4	4	NEW QUADRUPOLE
L-17	8X12	2	PRESENCE	10*	5	8	NEW QUADRUPOLE
L-18	6X30	2	PRESENCE	10*	10	8	NEW POWERHEAD

PHASING IDENTIFICATION

		<i>FUTURE USE</i>	
PHASE 1	PHASE 2	PHASE 3	PHASE 4
		<i>FUTURE USE</i>	
PHASE 5	PHASE 6	PHASE 7	PHASE 8

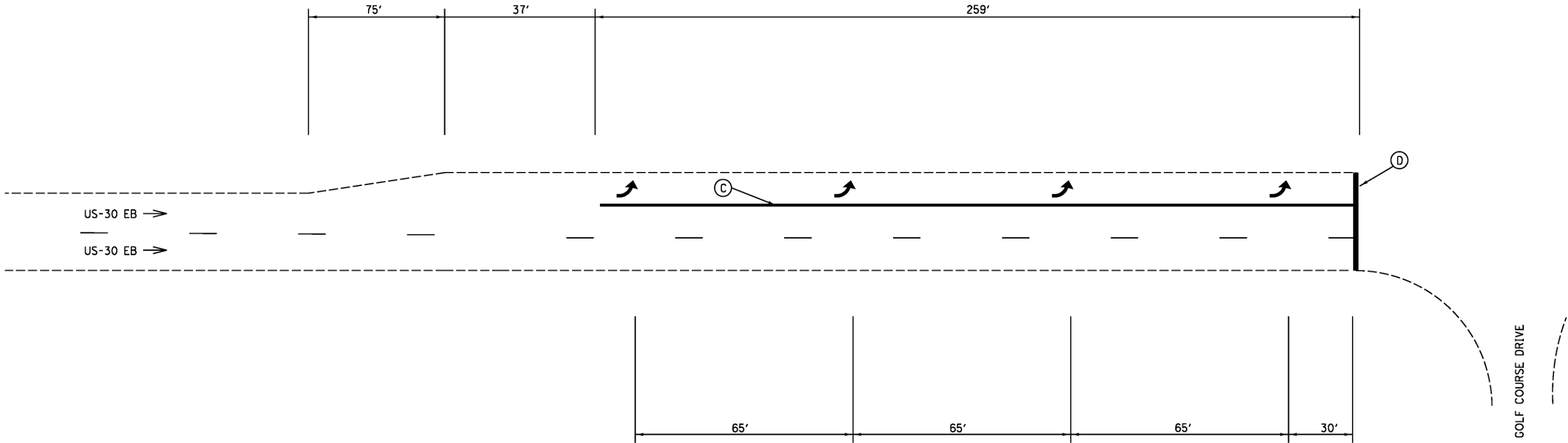
SIGNAL PHASING DIAGRAM

LEFT TURN

R
Y
G

R
Y
G

[illegible]



REPLACE THE STOP LINES AT THEIR ORIGINAL LOCATIONS
PROVIDE 12' THROUGH LANES AND TURN LANES.

BALLOON	ITEM	DESCRIPTION	UNIT	TOTAL
C	644	CHANNELIZING LINE	FT	259
D	644	STOP LINE	FT	36
↗	644	LANE ARROW	EACH	4

QUANTITIES CARRIED TO PAVEMENT MARKING SUB-SUMMARY, SHEET 21.

26
70

WAY - 30-19.81
WAY - 172-0.00

US-30 (WEST APPROACH) AND SR-57
PAVEMENT MARKINGS

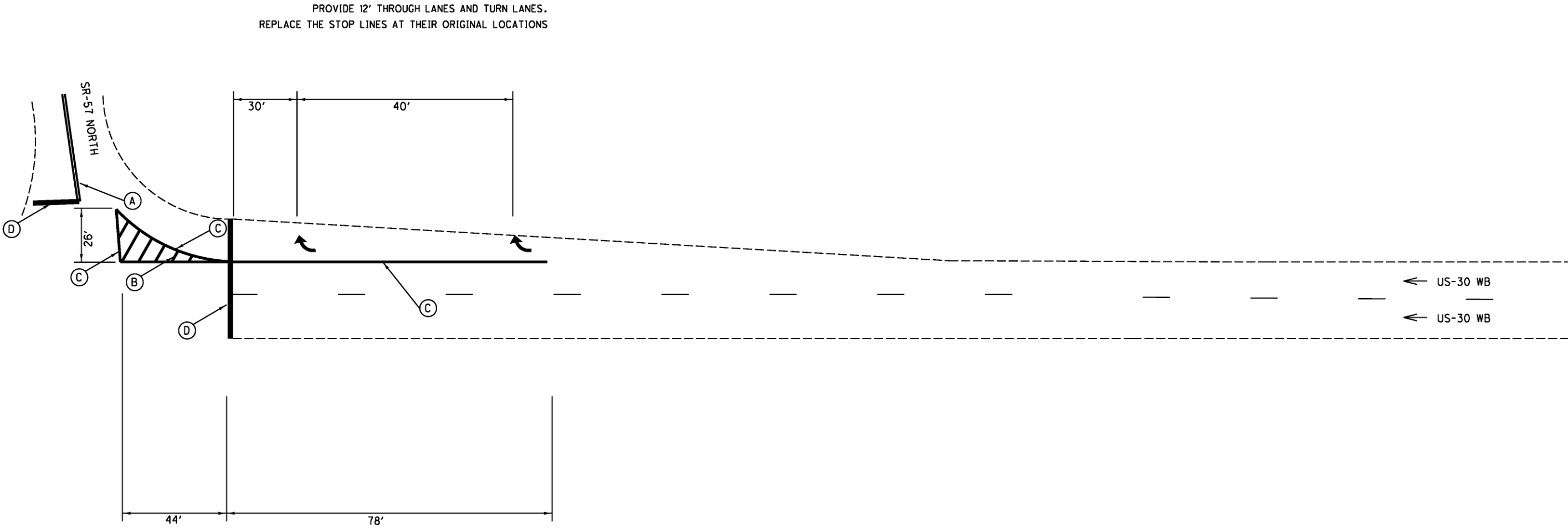
CALCULATED
SCJ

CHECKED
BAD

HORIZONTAL
SCALE IN FEET
0 20 40

DESIGN FILE: I:\projects\77449\77449tc000.dgn
WORKSTATION: sjuzwik

DATE: 12/23/2010



BALLOON	ITEM	DESCRIPTION	UNIT	TOTAL
A	642	CENTERLINE	MILE	0.022
B	642	TRANSVERSE/DIAGONAL LINE	FT	38
C	644	CHANNELIZING LINE	FT	200
D	644	STOP LINE	FT	60
	644	LANE ARROW	EACH	2

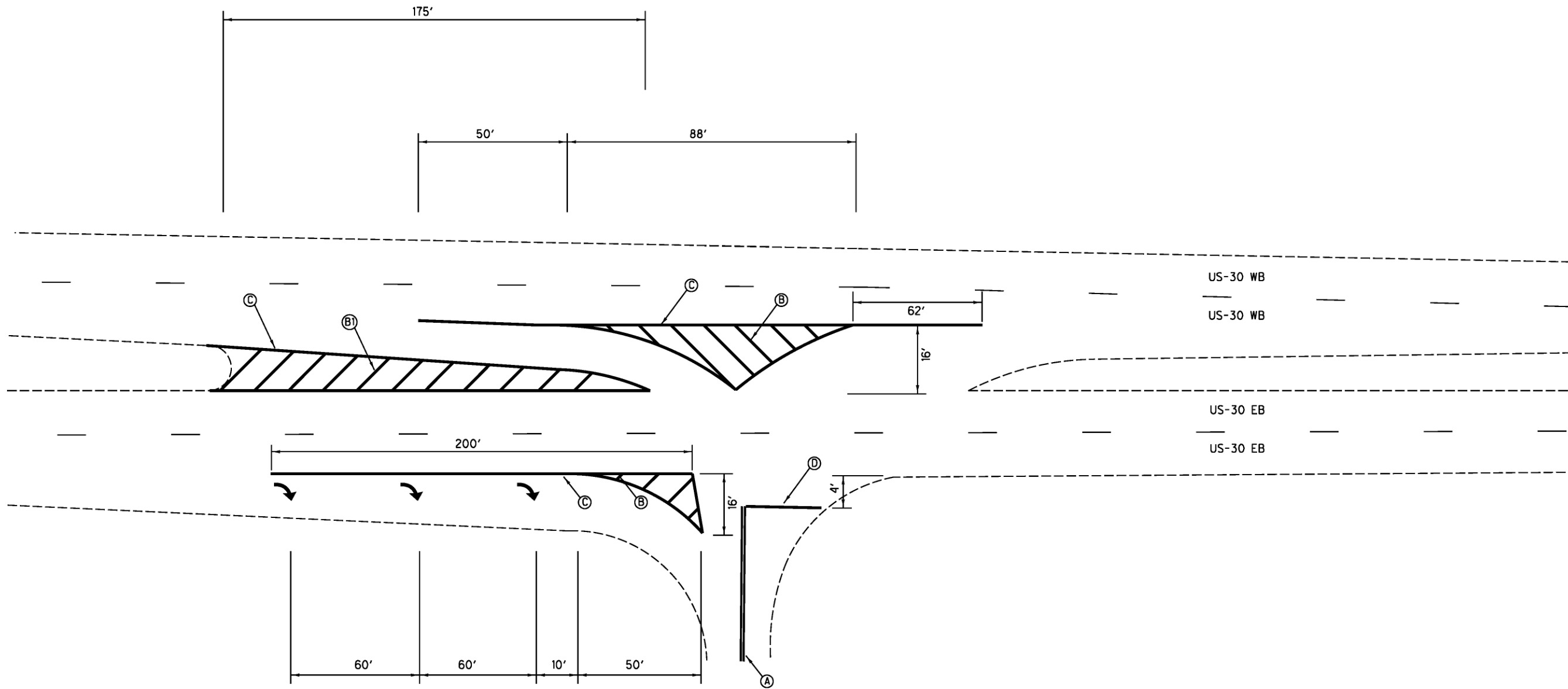
QUANTITIES CARRIED TO PAVEMENT MARKING SUB-SUMMARY, SHEET 21.



CALCULATED
CJ
CHECKED
BAD

SR-57 & US-30 (EAST APPROACH)
PAVEMENT MARKINGS

WAY-30-19.81
WAY-172-0.00



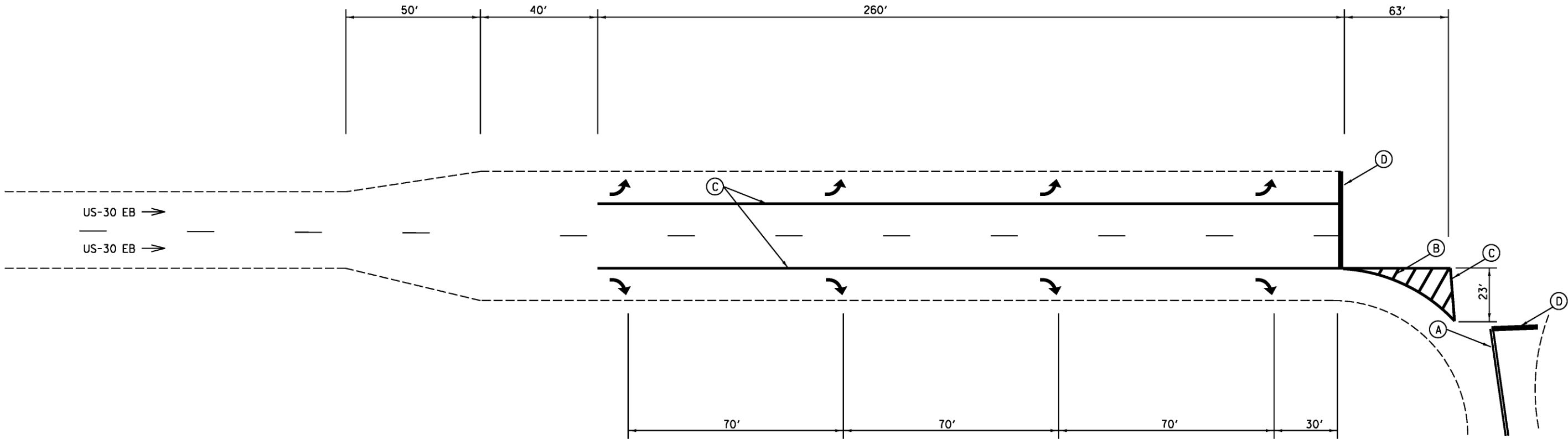
REPLACE THE STOP LINES AT THEIR ORIGINAL LOCATIONS
PROVIDE MINIMUM 12' THROUGH LANES AND MINIMUM 12' TURN LANES.

BALLOON	ITEM	DESCRIPTION	UNIT	TOTAL
A	642	CENTERLINE	MILE	0.012
B	642	TRANSVERSE/DIAGONAL LINE (WHITE)	FT	119
BI	642	TRANSVERSE/DIAGONAL LINE (YELLOW)	FT	115
C	644	CHANNELIZING LINE (COLOR SAME AS ADJ. TRANS/DIAG)	FT	830
D	644	STOP LINE	FT	15
↩	644	LANE ARROW	EACH	3

QUANTITIES CARRIED TO PAVEMENT MARKING SUB-SUMMARY, SHEET 21.

DESIGN FILE: I:\projects\77449\77449tc000.dgn
WORKSTATION: sjuzwik

DATE: 12/23/2010



REPLACE THE STOP LINES AT THEIR ORIGINAL LOCATIONS
PROVIDE 12' THROUGH LANES AND TURN LANES.

BALLOON	ITEM	DESCRIPTION	UNIT	TOTAL
A	642	CENTERLINE	MILE	0.01
B	642	TRANSVERSE/DIAGONAL LINE	FT	38
C	644	CHANNELIZING LINE	FT	678
D	644	STOP LINE	FT	65
	644	LANE ARROW	EACH	4
	644	LANE ARROW	EACH	4

QUANTITIES CARRIED TO PAVEMENT MARKING SUB-SUMMARY, SHEET 21.

CALCULATED
CJ

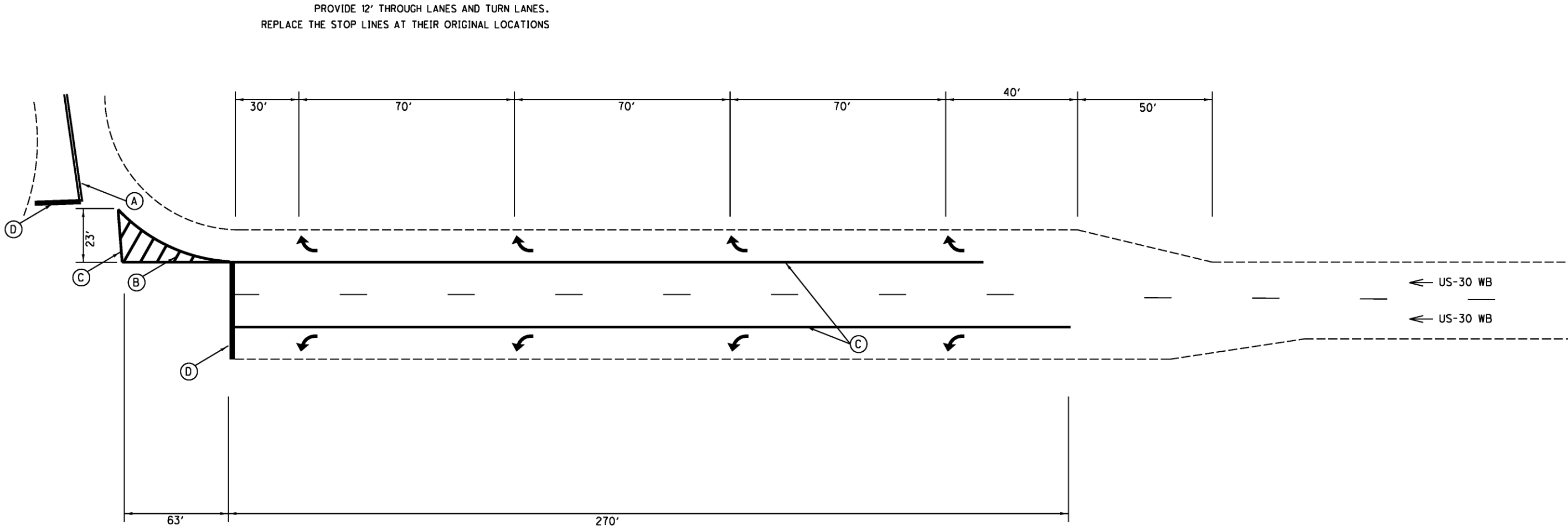
CHECKED
BAD

US-30 AND SR-94 (SOUTH APPROACH)
PAVEMENT MARKINGS

WAY-30-19.81
WAY-172-0.00

29
70

HORIZONTAL
SCALE IN FEET
0 20 40



BALLOON	ITEM	DESCRIPTION	UNIT	TOTAL
A	642	CENTERLINE	MILE	0.01
B	642	TRANSVERSE/DIAGONAL LINE	FT	38
C	644	CHANNELIZING LINE	FT	750
D	644	STOP LINE	FT	70
↩	644	LANE ARROW	EACH	4
↪	644	LANE ARROW	EACH	4

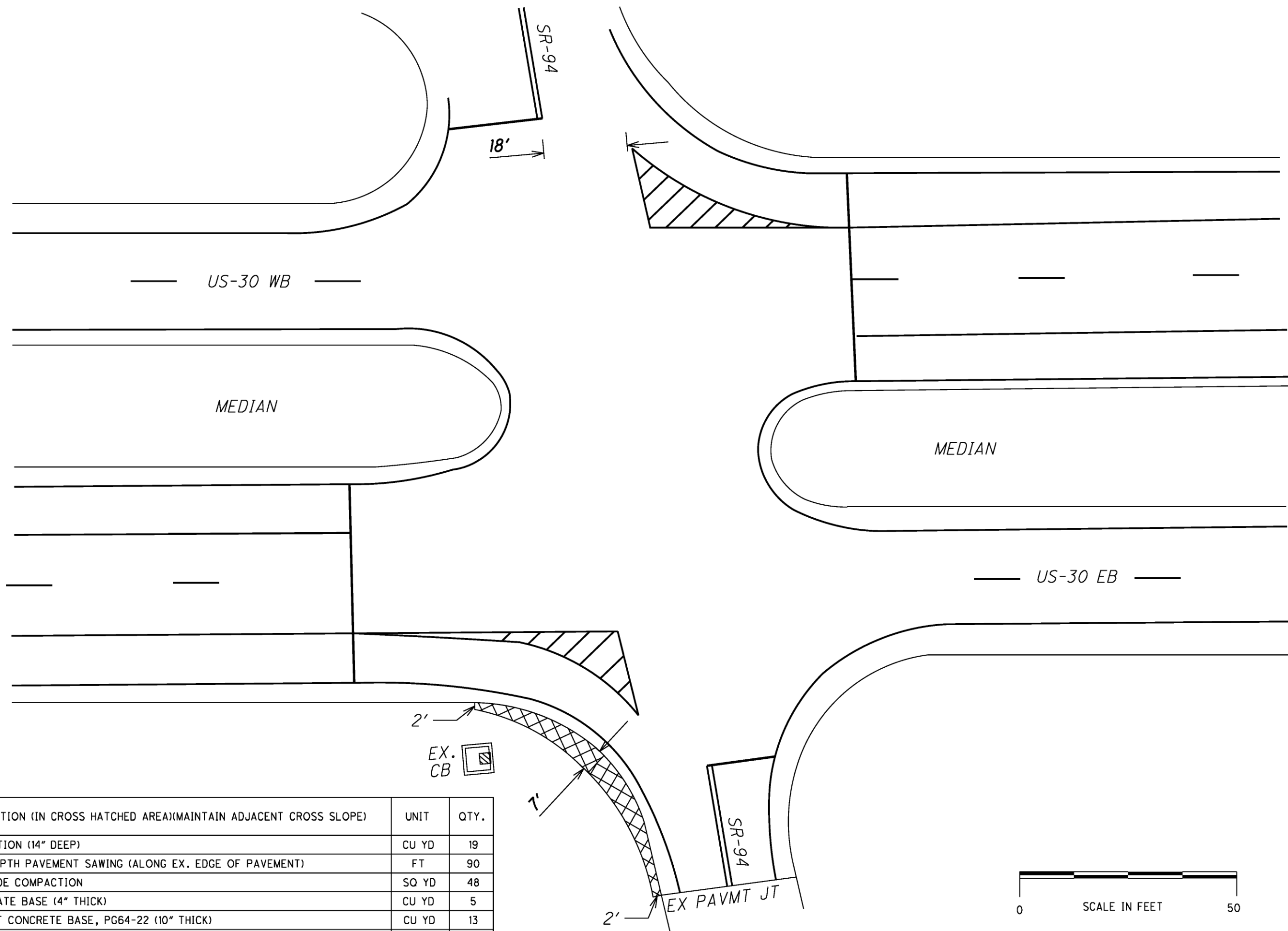
QUANTITIES CARRIED TO PAVEMENT MARKING SUB-SUMMARY, SHEET 21.

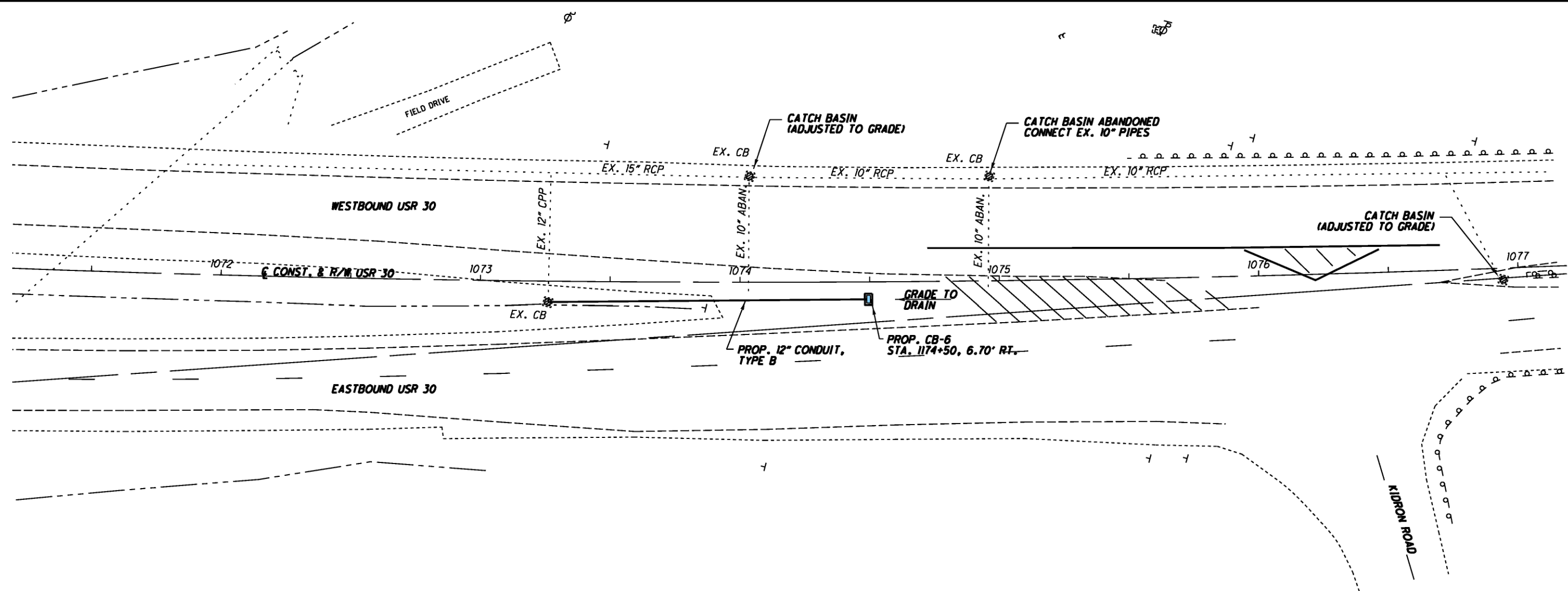


QUANTITIES CARRIED TO PAVEMENT MARKING SUB-SUMMARY, SHEET 21.
EDGE LINES MARKED NORMALLY TO ACCOMODATE LANE WIDTHS SHOWN.

DESIGN FILE: I:\projects\77449\77449gp001.dgn
WORKSTATION: sjuzwik
DATE: 12/22/2010

ITEM	DESCRIPTION (IN CROSS HATCHED AREA)(MAINTAIN ADJACENT CROSS SLOPE)	UNIT	QTY.
203	EXCAVATION (14" DEEP)	CU YD	19
252	FULL DEPTH PAVEMENT SAWING (ALONG EX. EDGE OF PAVEMENT)	FT	90
204	SUBGRADE COMPACTION	SQ YD	48
304	AGGREGATE BASE (4" THICK)	CU YD	5
301	ASPHALT CONCRETE BASE, PG64-22 (10" THICK)	CU YD	13
QTY'S CARRIED TO GEN. SUM.			





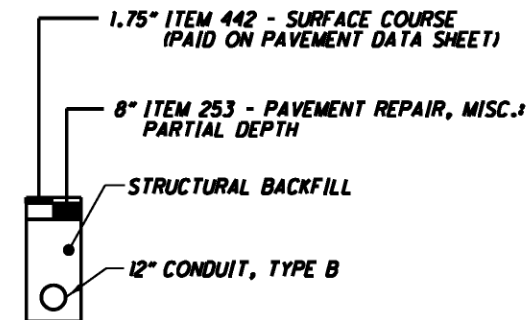
EX. CB
STA. 1173+26.0, 8.0' RT.
GRATE ELEV. = 1020.75
E 12" N = 1016.35
E 12" E = 1016.35

1.75" SURFACE COURSE
8" PAVEMENT REPAIR
2.25' x W x 60' x L x 8" D = 3 CY

PROP. CB-6
STA. 1174+50, 6.70' RT.
GRATE ELEV. = 1022.20
E 12" W = 1017.60

124' - 12" CONDUIT, TYPE B @ 1.0%

PROFILE



X-SECTION

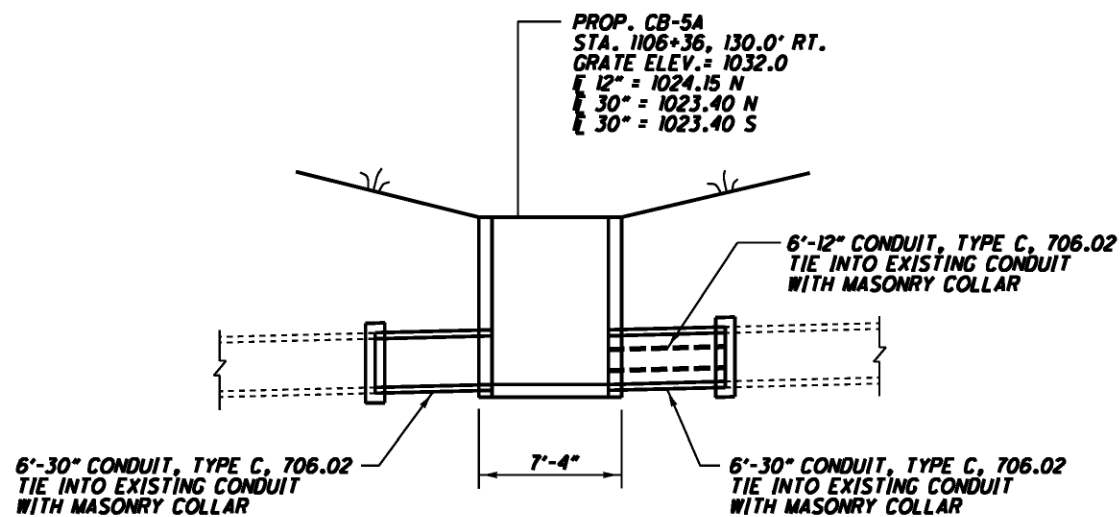
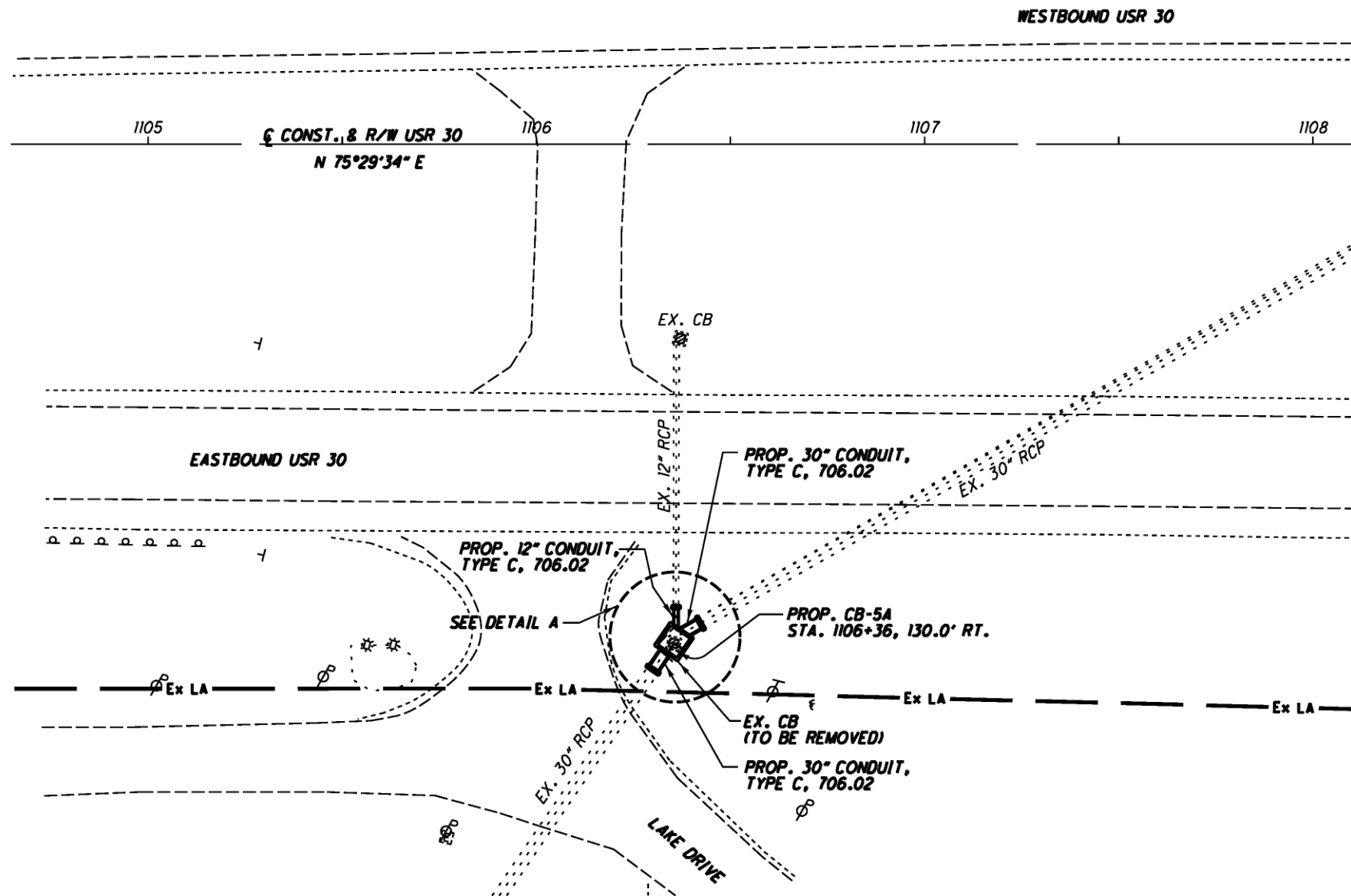
ESTIMATED QUANTITIES

(CARRIED TO THE GENERAL SUMMARY)

- ITEM 202 - CATCH BASIN ABANDONED - 1 EACH
- ITEM 253 - PAVEMENT REPAIR, MISC. PARTIAL DEPTH - 3 CY
- ITEM 603 - 12" CONDUIT, TYPE B - 124 FT
- ITEM 604 - CATCH BASIN, NO. 6 - 1 EACH

NOTES:

1. THE PROPOSED CATCH BASIN AND CONDUIT SHALL BE PLACED PRIOR TO THE RESURFACING OF USR 30.
2. FOR COORDINATE CONTROL TABLE, SEE SHEET 5.



PROFILE DETAIL A

6'-12" CONDUIT, TYPE C, 706.02
TIE INTO EXISTING CONDUIT
WITH MASONRY COLLAR
6'-12" PIPE REMOVED

PROP. CB-5A
STA. 1106+36, 130.0' RT.

6'-30" CONDUIT, TYPE C, 706.02
TIE INTO EXISTING CONDUIT
WITH MASONRY COLLAR
6'-30" PIPE REMOVED

DETAIL A

NOTES:

1. REFERENCING SCD CB-3.4, THE PROPOSED CB-5A CONFORMS TO THE 60" PIPE DIAMETER DIMENSIONS.
2. THE PROPOSED CB-5A SHALL BE ORIENTED TO AVOID ANY CONDUIT BEING PUNCHED OUT THROUGH A CORNER.
3. REFERENCING SCD CB-3.2 & CB-3.4, THE 150' DITCH PROTECTION SHALL BE NON-PERFORMED.
4. SEED, MULCH, FERTILIZE AND WATER TO RE-ESTABLISH GRASS AND PROMOTE GROWTH AS PER CMS 659. COST OF THIS WORK IS CONSIDERED INCIDENTAL AND INCLUDED IN ITEM 604 CATCH BASIN, NO. 5A WITHOUT APRON.
5. FOR COORDINATE CONTROL TABLE, SEE SHEET 5.

ESTIMATED QUANTITIES

(CARRIED TO THE GENERAL SUMMARY)

- ITEM 202 - PIPE REMOVED, 24" AND UNDER - 6 FT
ITEM 202 - PIPE REMOVED, OVER 24" - 12 FT
ITEM 202 - CATCH BASIN REMOVED - 1 EACH
ITEM 603 - 12" CONDUIT, TYPE C, 706.02 - 6 FT
ITEM 603 - 30" CONDUIT, TYPE C, 706.02 - 12 FT
ITEM 604 - CATCH BASIN, NO. 5A WITHOUT APRON - 1 EACH



HORIZONTAL
SCALE IN FEET

CAL
CHECKED
BAD

DETAIL AT LAKE DRIVE

WAY-30-19.81
WAY-172-0.00

34
70

ITEM 202 - ANCHOR ASSEMBLY REMOVED. TYPE A

THIS ITEM SHALL INCLUDE THE REMOVAL OF THE EXISTING TYPE A, ANCHOR ASSEMBLY INCLUDING ALL POSTS, HARDWARE, RAIL ELEMENTS, AND CONCRETE ANCHORS. ALL ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE PROPERLY DISPOSED OF.

THE EXISTING CONCRETE ANCHOR AND CONCRETE AT POSTS SHALL BE REMOVED ENTIRELY. ALL HOLES REMAINING AFTER REMOVAL SHALL BE FILLED WITH GRANULAR MATERIAL OR EXCESS MATERIAL RESULTING FROM GUARDRAIL CONSTRUCTION. ALL FILL MATERIAL SHALL BE THOROUGHLY COMPACTED AND LEVELED, AS DIRECTED BY THE ENGINEER.

PAYMENT FOR ALL OF THE ABOVE SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 202, ANCHOR ASSEMBLY REMOVED, TYPE A.

SUGGESTED SEQUENCE OF GUARDRAIL WORK

1. GUARDRAIL WORK IS TO BEGIN AFTER THE LINEAR GRADING IS COMPLETED AND THE 617 MATERIAL IS PLACED.
2. REMOVE THE GUARDRAIL.
3. PERFORM THE EMBANKMENT, AS PER PLAN.
4. REBUILD/CONSTRUCT THE GUARDRAIL RUN.
5. INSTALL BARRIER REFLECTORS.

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 ON STANDARD CONSTRUCTION DRAWING GR-1.1. PAYMENT SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE RESPECTIVE GUARDRAIL ITEMS.

CONNECTING GUARDRAIL TO EXISTING RAIL

IN LOCATIONS WHERE TYPE 5 GUARDRAIL, TERMINAL ASSEMBLIES, ETC. ARE TO BE CONNECTED TO EXISTING RAIL SOME MODIFICATIONS MAY BE REQUIRED, INCLUDING EXTRA POSTS, DRILLING HOLES AND POSSIBLY PARTIAL SECTIONS OF ADDITIONAL RAIL ELEMENTS. THE COST OF THIS ADDITIONAL WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR TYPE 5 GUARDRAIL. IF ADDITIONAL PORTIONS OF RAIL ELEMENT ARE USED THE LINEAL MEASUREMENT OF THIS ADDITIONAL PORTION SHALL BE ADDED FOR PAYMENT.

ITEM 202 - ANCHOR ASSEMBLY REMOVED FOR REUSE. TYPE E
ITEM 202 - ANCHOR ASSEMBLY REMOVED FOR REUSE. TYPE T
ITEM 202 - ANCHOR ASSEMBLY REMOVED FOR REUSE. TYPE B
ITEM 202 - ANCHOR ASSEMBLY REMOVED FOR REUSE. TYPE A

THIS ITEM CONSISTS OF REMOVING AN EXISTING ANCHOR ASSEMBLY, AND SALVAGING FOR REUSE AT A LOCATION SHOWN ON THE PLANS. THE RESULTING HOLES SHALL BE BACKFILLED WITH GRANULAR MATERIAL AND COMPACTED. ELEMENTS THAT ARE NOT SALVAGEABLE SHALL BE DISPOSED OF PER 202.02.

LOCATIONS OF GUARDRAIL

THE GUARDRAIL PROTECTION PROVIDED IN THIS PLAN SHALL BE LOCATED IN THE FIELD TO ASSURE THAT THE INSTALLATION WILL AFFORD THE MAXIMUM PROTECTION FOR TRAFFIC. THIS LOCATION SHALL BE POSITIONED AS FAR AS POSSIBLE FROM THE EDGE OF PAVEMENT WHILE MAINTAINING PROPER GRADE IN FRONT OF GUARDRAIL AS PER STANDARD DRAWINGS AND PLAN DETAILS.

ITEM 606 GUARDRAIL REBUILT. TYPE 5, AS PER PLAN
ITEM 606 GUARDRAIL REBUILT. TYPE 5A, AS PER PLAN

USE STEEL POSTS AND THE BLOCKOUT SHALL BE OTHER THAN WOOD.

ITEM 606 - ANCHOR ASSEMBLY. TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING EITHER OF THE FOLLOWING GUARDRAIL END TERMINALS, OR AN APPROVED EQUAL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE AT WWW.DOT.STATE.OH.US/DRRC/ UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS.

- 1) THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE ST., GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50 FEET (15.24 m), INCLUSIVE OF TWO 25 FOOT (7.62 m) 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. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS142	ET2000 PLUS 50'-0" PLAN, ELEVATION AND SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00
SS141	ET-2000 PLUS PLAN, ELEVATION & SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET-2000 PLUS 50'-0" WITH 12'-6" PANELS & HBA POSTS 1-4 PLAN, ELEVATION & SECTION	5/22/00	7/31/00
SS330	ET-2000 PLUS 50'-0" WITH FOUR FOUNDATION TUBES AND FOUR CRT POSTS	3/28/06	3/29/06
SS373	ET-2000 PLUS 50'-0" WITH 7 SYT POSTS AND ONE HBA POST	6/20/09	1/20/09

- 2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO 44224 (TELEPHONE: 330-346-0721)

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0" (15.24 m), INCLUSIVE OF FOUR 12'-6" (3.81m) 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. #	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
SKT HINGED CRT	SEQUENTIAL KINKING TERMINAL (SKT-350) FOUR POSTS ARE STEEL HINGED AND FIVE POSTS ARE CRT	4/30/06	5/23/06
SKT-SP	SEQUENTIAL KINKING TERMINAL (SKT-350) A SEVEN POST OPTION USING STANDARD STEEL POST	3/30/09	3/4/09

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" x 18", OR 12" x 18" IF APPLIED TO A RECTANGULAR ET-2000 "PLUS" EXTRUDER HEAD.

THE CONTRACTOR MAY USE A SALVAGED EXTRUDER WHEN ASSEMBLING THE ITEM 606 ANCHOR ASSEMBLY, TYPE E. ALL WELDS ON THE EXTERIOR OF THE SALVAGED EXTRUDER SHALL NOT BE DAMAGED AND THE FEEDER SHUTE SHALL NOT BE BENT.

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES (100mm) ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27¾ INCHES (706mm) FROM THE EDGE OF THE SHOULDER.

ON SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES NOT PROJECT MORE THAN 4 INCHES (100mm) ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE E, EACH, 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 REBUILT. TYPE E

THIS ITEM SHALL CONSIST OF REUSING SALVAGED ELEMENTS FROM AN EXISTING ANCHOR ASSEMBLY, AND CONSTRUCTING A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY AT A LOCATION SHOWN IN THE PLANS.

THE ANCHOR ASSEMBLY SHALL BE RECONSTRUCTED AS PER THE FOLLOWING GUARDRAIL END TERMINALS, OR AN APPROVED EQUAL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE AT WWW.DOT.STATE.OH.US/DRRC/ UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS.

- 1) THE ET-2000 (1997) MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE ST., GIRARD, OHIO 44420 (TELEPHONE: 330-545-4373).

THE LENGTH OF THE ET-2000 (1997) SYSTEM IS CONSIDERED TO BE 50 FEET (15.24 m), INCLUSIVE OF TWO 25 FOOT (7.62 m) 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. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS142	ET2000 PLUS 50'-0" PLAN, ELEVATION AND SECTION 25'-0" RAIL, SLEEVE W/PL POSTS 1-4	4/12/00	7/31/00
SS141	ET-2000 PLUS PLAN, ELEVATION & SECTION 25'-0" RAIL, HBA POSTS 1-4	2/29/00	7/31/00
SS158	ET-2000 PLUS 50'-0" WITH 12'-6" PANELS & HBA POSTS 1-4 PLAN, ELEVATION & SECTION	5/22/00	7/31/00
SS330	ET-2000 PLUS 50'-0" WITH FOUR FOUNDATION TUBES AND FOUR CRT POSTS	3/28/06	3/29/06
SS373	ET-2000 PLUS 50'-0" WITH 7 SYT POSTS AND ONE HBA POST	6/20/09	1/20/09

- 2) THE SKT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO 44224 (TELEPHONE: 330-346-0721)

THE LENGTH OF THE SKT-350 SYSTEM IS CONSIDERED TO BE 50'-0" (15.24 m), INCLUSIVE OF FOUR 12'-6" (3.81m) 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. #	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
SKT HINGED CRT	SEQUENTIAL KINKING TERMINAL (SKT-350) FOUR POSTS ARE STEEL HINGED AND FIVE POSTS ARE CRT	4/30/06	5/23/06
SKT-SP	SEQUENTIAL KINKING TERMINAL (SKT-350) A SEVEN POST OPTION USING STANDARD STEEL POST	3/30/09	3/4/09

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19, APPROXIMATELY 18" x 18", OR 12" x 18" IF APPLIED TO A RECTANGULAR ET-2000 "PLUS" EXTRUDER HEAD.

THE CONTRACTOR MAY USE A SALVAGED EXTRUDER WHEN ASSEMBLING THE ITEM 606 ANCHOR ASSEMBLY, TYPE E. ALL WELDS ON THE EXTERIOR OF THE SALVAGED EXTRUDER SHALL NOT BE DAMAGED AND THE FEEDER SHUTE SHALL NOT BE BENT.

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES (100mm) ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27¾ INCHES (706mm) FROM THE EDGE OF THE SHOULDER.

ON SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES NOT PROJECT MORE THAN 4 INCHES (100mm) ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY REBUILT, TYPE E, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO RECONSTRUCT 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 REBUILT, TYPE B

THIS ITEM SHALL CONSIST OF REUSING SALVAGED ELEMENTS FROM AN EXISTING ANCHOR ASSEMBLY, AND CONSTRUCTING A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY AT A LOCATION SHOWN IN THE PLANS.

THE ANCHOR ASSEMBLY SHALL BE RECONSTRUCTED AS PER THE FOLLOWING GUARDRAIL END TERMINALS, OR AN APPROVED EQUAL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE AT WWW.DOT.STATE.OH.US/DRRC/ UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS.

1) THE SRT-350, GUARDRAIL END TERMINAL AS MANUFACTURED BY TRINITY INDUSTRY, 1170 N. STATE STREET, GIRARD, OHIO 44420 (TELEPHONE: 330.545.4373).

THE LENGTH OF THE SRT-350 SYSTEM IS CONSIDERED TO BE 37'-6" (11.43 m), INCLUSIVE OF THREE 12'-6" (3.81 m) 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. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
SS444 SS444M	SLOTTED RAIL TERMINAL POST LAYOUT AND ERECTION DETAILS SRT-350 (12.5, 8 POST)	7/12/99 Rev. 1 7/12/99	08/27/99
SS425M	SLOTTED RAIL TERMINAL SRT-350 POST LAYOUT AND ERECTION DETAILS (12.5, 9 POST)	6/21/97 Rev. 1	03/6/98

2) THE FLEAT-350 MANUFACTURED BY ROAD SYSTEMS, INC., 2516 MALLORY LANE, STOW, OHIO, 44224 (TELEPHONE: 330.346.0721).

THE LENGTH OF THE FLEAT-350 IS CONSIDERED TO BE 37'-6" (11.43 m), INCLUSIVE OF THREE 12'-6" (3.81 m) 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. #	DRAWING NAME	DWG./REV. DATE	ODOT APPROVAL DATE
FLT-M	FLARED ENERGY ABSORBING TERMINAL (FLEAT-350) ASSEMBLY	04/16/98	07/31/98
FLT HINGED CRT	FLARED ENERGY ABSORBING TERMINAL (POSTS 1 AND 2 ARE STEEL HINGED)	5/4/06	05/23/06
FLT-SP	FLARED ENERGY ABSORBING TERMINAL (A SEVEN POST OPTION USING STANDARD STEEL POSTS)	03/30/09	03/4/09

REFER TO THE MANUFACTURER'S INSTRUCTION REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES (100mm) ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27 3/4 INCHES (706mm) FROM THE EDGE OF THE SHOULDER.

ON SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES NOT PROJECT MORE THAN 4 INCHES (100mm) ABOVE THE GROUND LINE.

THE FACE OF THE TYPE B IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19: APPROXIMATELY 36 IN. WIDE x 12 IN. HIGH (915 mm W x 305 mm H) FOR THE SRT-350 AND 14 IN. WIDE x 20 IN. HIGH (350 mm W x 500 mm H) FOR THE FLEAT.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY REBUILT, TYPE B, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO RECONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING REFLECTIVE SHEETING AND ALL RELATED HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 209 LINEAR GRADING, AS PER PLAN

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING ITEM 209, LINEAR GRADING, AS PER PLAN IN ORDER TO PREPARE FOR PAVING UNDER THE GUARDRAIL USING ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG 64-22, AS PER PLAN.

ITEM 209, LINEAR GRADING, AS PER PLAN SHALL CONSIST OF EXCAVATING EXISTING MATERIAL TO THE DEPTH AND WIDTH AS PER THE LIMITS SHOWN ON THE DETAIL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17. BACKFILL AREAS GRADED IN EXCESS OF THE DEPTH SHOWN ON THE DETAIL WITH ITEM 617 COMPACTED AGGREGATE AT NO EXPENSE TO THE DEPARTMENT.

COMPACT THE SUBGRADE USING EITHER HAND OR MECHANICAL METHODS IN ORDER TO PROVIDE A FIRM SUBBASE TO THE SATISFACTION OF THE ENGINEER. THE INTENT OF THE FIRM SUBBASE IS TO BE COMPACTED SUCH THAT IT WILL BE SUITABLE FOR THE PLACEMENT AND COMPACTION OF THE ASPHALT MATERIAL.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 209, LINEAR GRADING, AS PER PLAN.

ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG 64-22, AS PER PLAN

AFTER THE ITEM 209 LINEAR GRADING, AS PER PLAN HAS BEEN COMPLETED, PAVE UNDER GUARDRAIL USING ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL PG 64-22, AS PER PLAN.

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 448 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A (GUARDRAIL ALREADY IN PLACE):

1. PERFORM THE LINEAR GRADING, AS PER PLAN
2. PLACE AND COMPACT ITEM 448.
3. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN WATER AWAY FROM THE POSTS.

METHOD B:

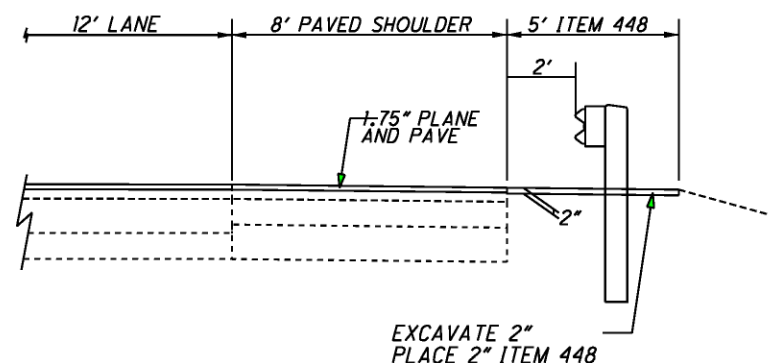
1. REMOVE THE GUARDRAIL.
2. PERFORM THE LINEAR GRADING, AS PER PLAN.
3. PLACE ITEM 448.
4. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED).
5. CONSTRUCT THE GUARDRAIL POSTS AND RAIL.
6. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN WATER AWAY FROM THE POSTS.

FOR GUARDRAIL THAT IS NOT ORIGINALLY INTENDED TO BE REPLACED OR RECONSTRUCTED AND IS TO REMAIN, THE CONTRACTOR MAY USE METHOD B IN ORDER TO COMPLETE THE INTENT OF THE WORK. PROVIDE NEW HARDWARE AND REPLACE BLOCKOUTS AS NEEDED. THE COST TO REMOVE AND RE-ERECT THE GUARDRAIL WILL BE CONSIDERED INCIDENTAL IN THE COST OF ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG 64-22, AS PER PLAN.

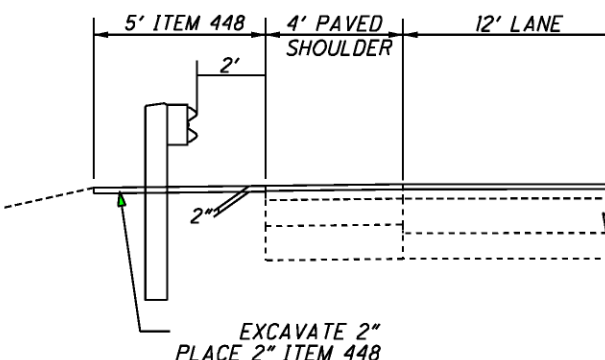
THE CONTRACTOR HAS THE OPTION TO USE OTHER ASPHALT CONCRETE MIX DESIGNS WHICH ARE CURRENTLY A PAY ITEM IN THIS PLAN, HOWEVER, THE OPTIONAL MIX WILL STILL BE PAID FOR UNDER THE UNIT BID PRICE FOR ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG 64-22, AS PER PLAN.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 448, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, UNDER GUARDRAIL, PG 64-22, AS PER PLAN.

PAVING UNDER GUARDRAIL
 MAINLINE US 30 OUTSIDE
 TYPICAL SECTION

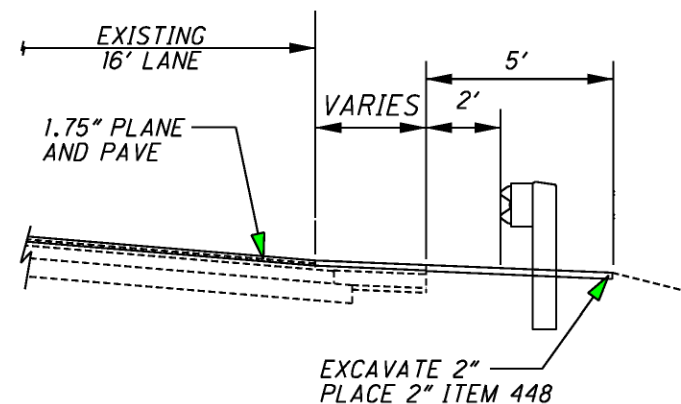


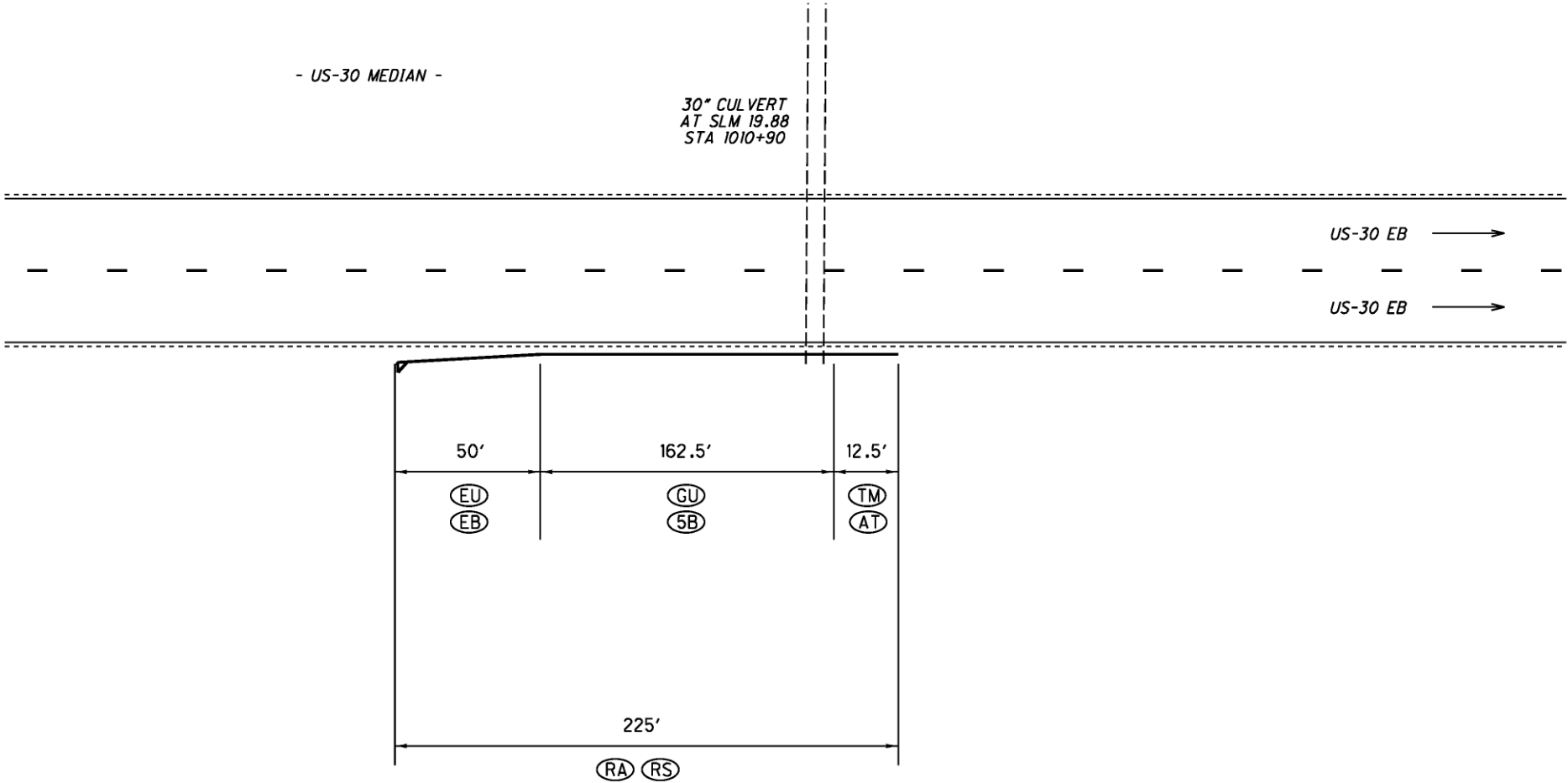
PAVING UNDER GUARDRAIL
 MAINLINE US 30 INSIDE
 TYPICAL SECTION



NOTE: AT GUARDRAIL RUNS THAT ARE PROTECTING PIERS IN THE MEDIAN OF US30, THE CONTRACTOR SHALL PAVE UNDER GUARDRAIL AT 5 FT WIDE.

PAVING UNDER GAURDRAIL
 SR-172
 TYPICAL SECTION

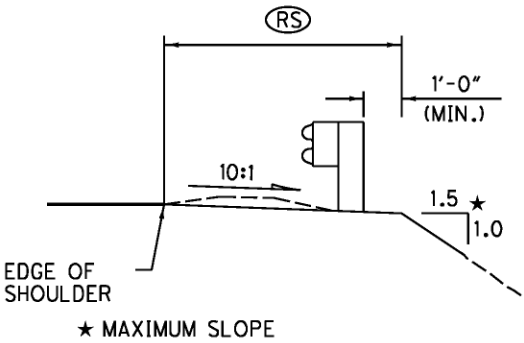




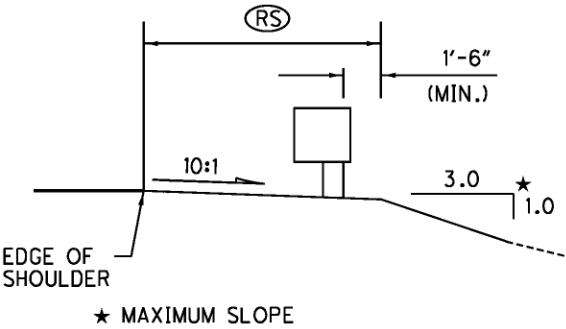
ALL QUANTITIES
CARRIED TO GUARDRAIL
SUMMARY SHEET.

LOCATION	ITEM	DESCRIPTION	UNIT	EB	WB	TOTAL
(EU)	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98	EACH	1		1
(GU)	202	GUARDRAIL REMOVED FOR REUSE	FT	162.5		162.5
(EB)	606	ANCHOR ASSEMBLY REBUILT, TYPE E-98	EACH	1		1
(5B)	606	GUARDRAIL REBUILT, TYPE 5	FT	162.5		162.5
(TM)	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH	1		1
(AT)	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
(RS)	209	RESHAPING UNDER GUARDRAIL	STA	2.25		2.25
(RA)	626	BARRIER REFLECTOR	EACH	4		4

TYPICAL SECTION "TYPE 5"



TYPICAL SECTION "E-98"



NOT TO SCALE

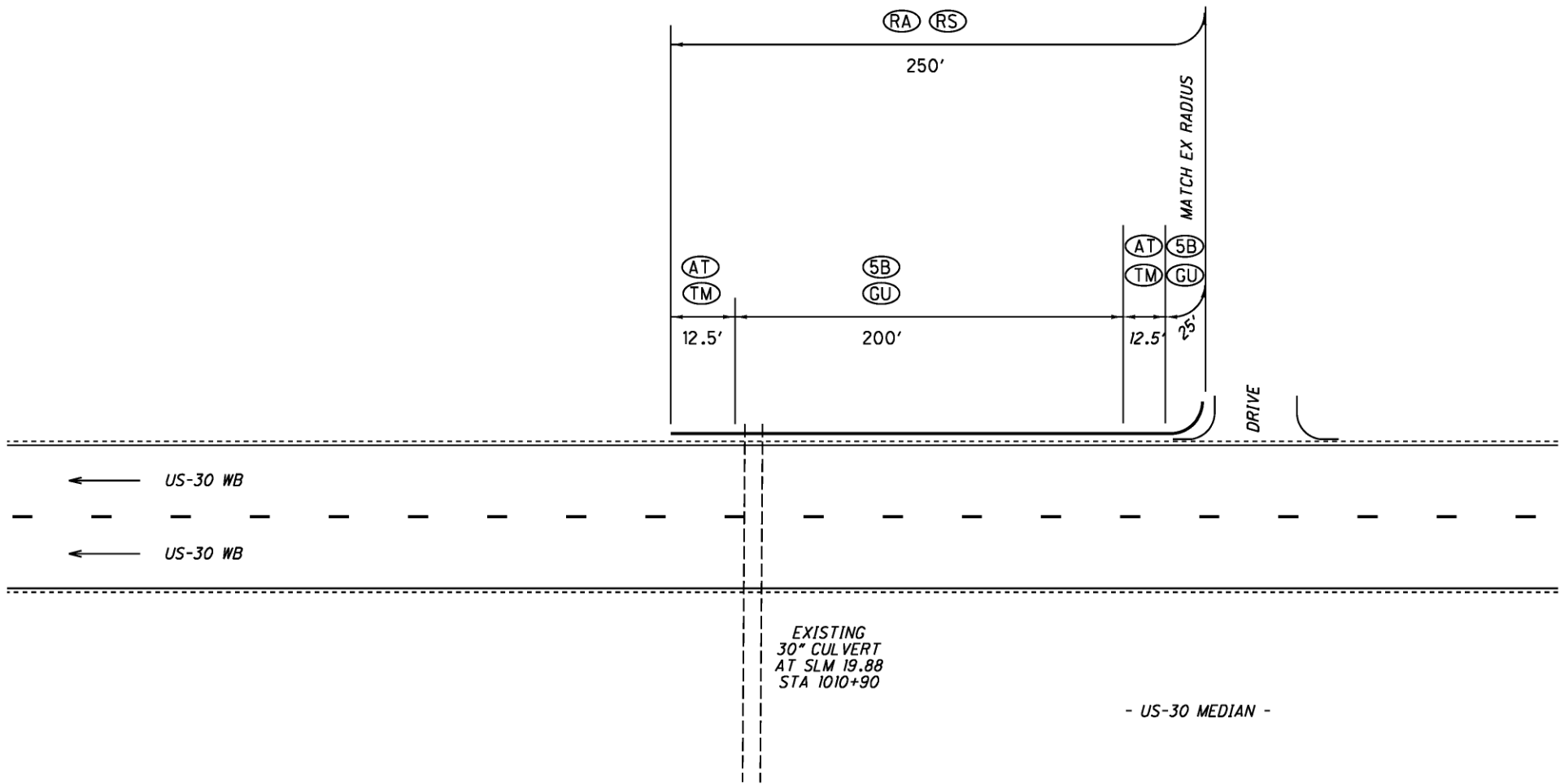
CALCULATED
SCJ
CHECKED
BAD

GUARDRAIL DETAIL 1009+20 TO 1011+30 EB RT

WAY -30-19.81
WAY -172-0.00

38
70

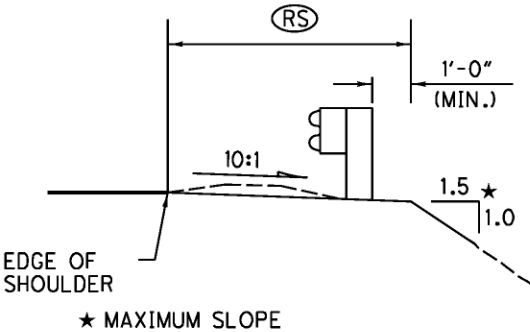
DESIGN FILE: I:\projects\77449\77449gr000.dgn
WORKSTATION: sjuzwik DATE: 12/23/2010



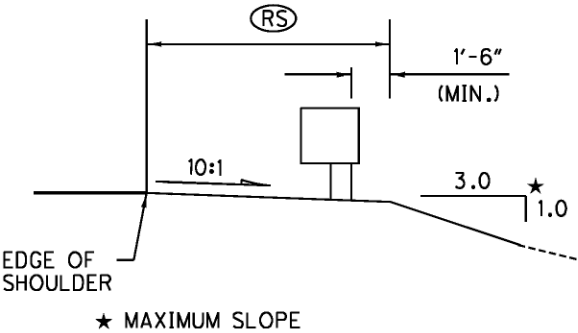
ALL QUANTITIES
CARRIED TO GUARDRAIL
SUMMARY SHEET.

LOCATION	ITEM	DESCRIPTION	UNIT	EB	WB	TOTAL
(GU)	202	GUARDRAIL REMOVED FOR REUSE	FT		225	225
(5B)	606	GUARDRAIL REBUILT, TYPE 5	FT		225	225
(TM)	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH		2	2
(AT)	606	ANCHOR ASSEMBLY, TYPE T	EACH		2	2
(RS)	209	RESHAPING UNDER GUARDRAIL	STA		2.5	2.5
(RA)	626	BARRIER REFLECTOR	EACH		4	4

TYPICAL SECTION "TYPE 5"



TYPICAL SECTION "E-98"



DESIGN FILE: I:\projects\77449\77449gr000.dgn
WORKSTATION: sjuzwik DATE: 12/23/2010

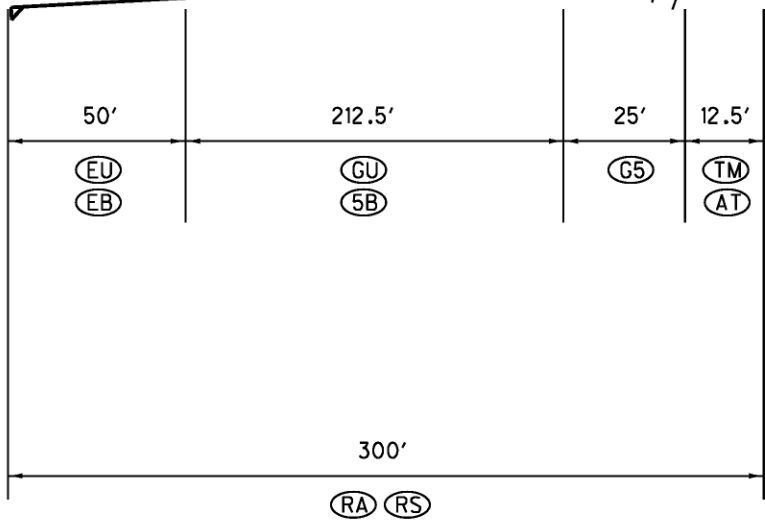
- US-30 MEDIAN -

EXISTING
21" CULVERT
AT SLM 20.58
STA 1049+50

US-30 EB

US-30 EB

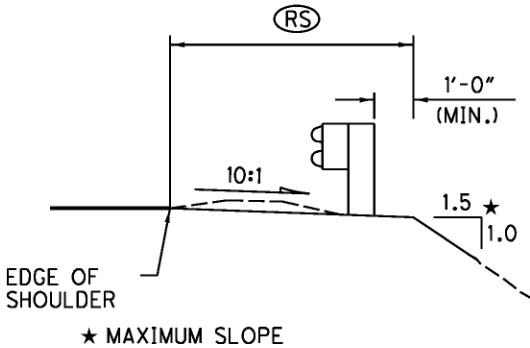
KOHLER RD.



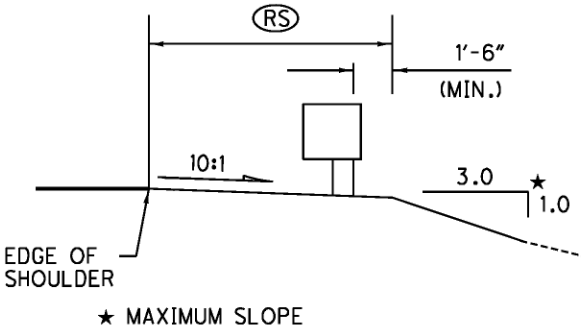
ALL QUANTITIES
CARRIED TO GUARDRAIL
SUMMARY SHEET.

LOCATION	ITEM	DESCRIPTION	UNIT	EB	WB	TOTAL
(EU)	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98	EACH	1		1
(GU)	202	GUARDRAIL REMOVED FOR REUSE	FT	212.5		212.5
(EB)	606	ANCHOR ASSEMBLY REBUILT, TYPE E-98	EACH	1		1
(5B)	606	GUARDRAIL REBUILT, TYPE 5	FT	212.5		212.5
(G5)	606	GUARDRAIL, TYPE 5	FT	25		25
(TM)	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH	1		1
(AT)	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
(RS)	209	RESHAPING UNDER GUARDRAIL	STA	3.0		3.0
(RA)	626	BARRIER REFLECTOR	EACH	4		4

TYPICAL SECTION "TYPE 5"

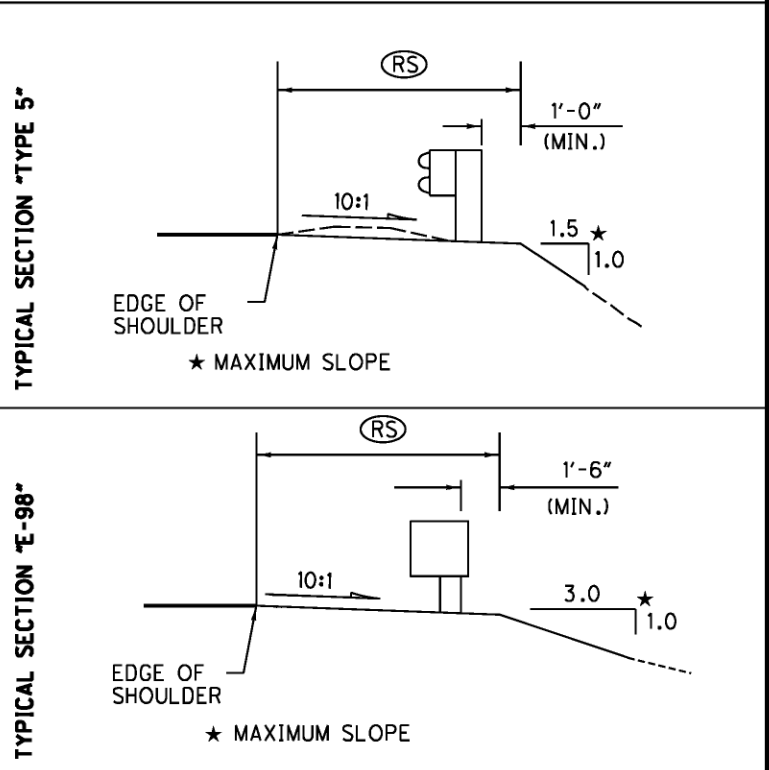
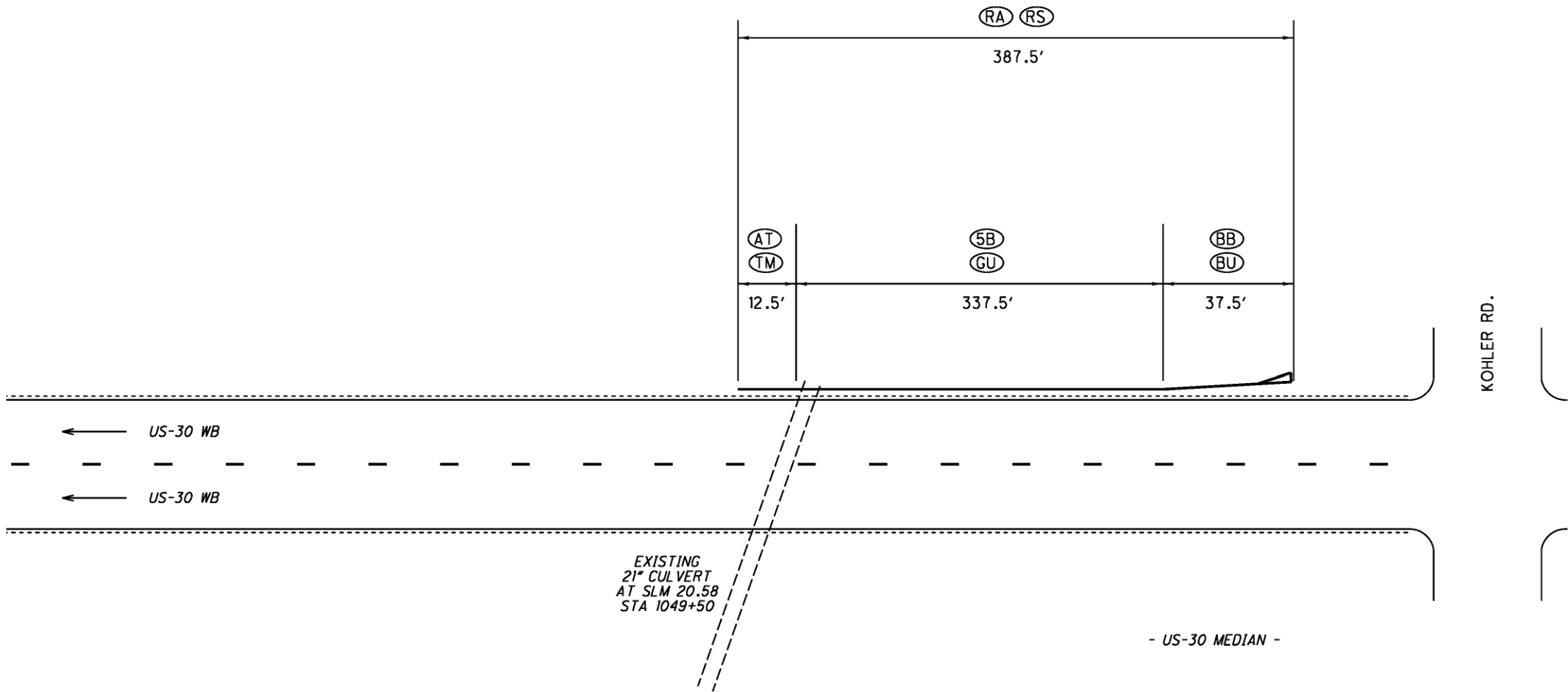


TYPICAL SECTION "E-98"



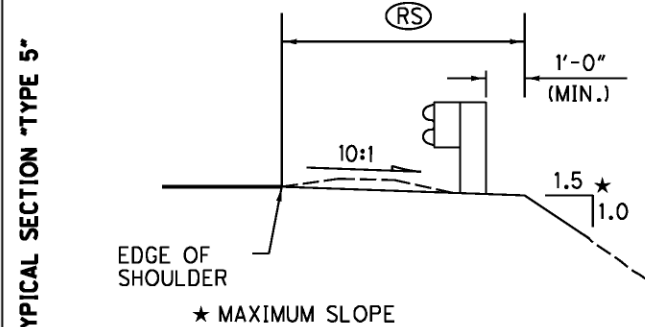
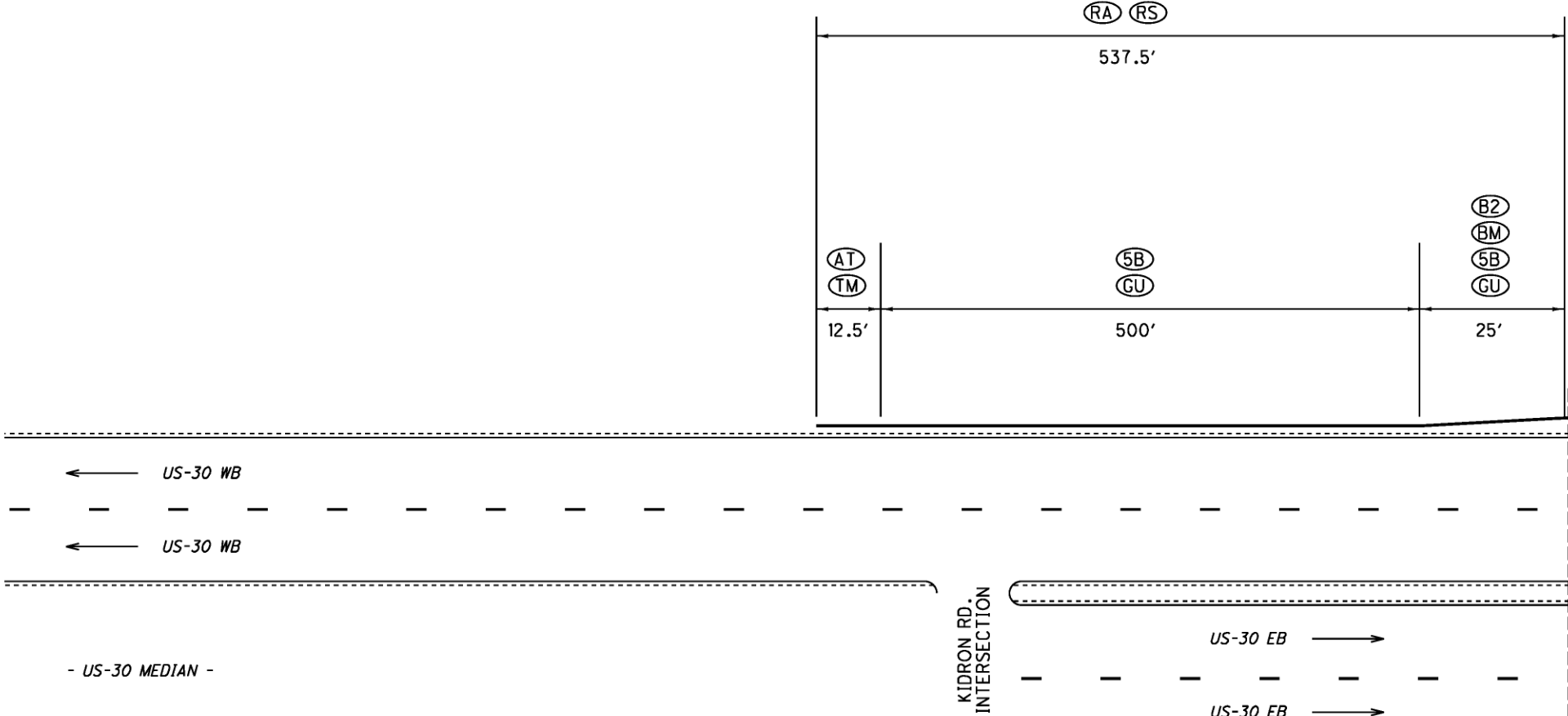
ALL QUANTITIES
CARRIED TO GUARDRAIL
SUMMARY SHEET.

LOCATION	ITEM	DESCRIPTION	UNIT	EB	WB	TOTAL
(BU)	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE B-98	EACH		1	1
(GU)	202	GUARDRAIL REMOVED FOR REUSE	FT		337.5	337.5
(BB)	606	ANCHOR ASSEMBLY REBUILT, TYPE B-98	EACH		1	1
(5B)	606	GUARDRAIL REBUILT, TYPE 5	FT		337.5	337.5
(TM)	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH		1	1
(AT)	606	ANCHOR ASSEMBLY, TYPE T	EACH		1	1
(RS)	209	RESHAPING UNDER GUARDRAIL	STA		3.88	3.88
(RA)	626	BARRIER REFLECTOR	EACH		5	5



ALL QUANTITIES
CARRIED TO GUARDRAIL
SUMMARY SHEET.

LOCATION	ITEM	DESCRIPTION	UNIT	EB	WB	TOTAL
(BM)	202	BRIDGE TERMINAL ASSEMBLY REMOVED	EACH		1	1
(GU)	202	GUARDRAIL REMOVED FOR REUSE	FT		525	525
(B2)	606	BRIDGE TERMINAL ASSEMBLY, TYPE 2	EACH		1	1
(5B)	606	GUARDRAIL REBUILT, TYPE 5	FT		525	525
(TM)	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH		1	1
(AT)	606	ANCHOR ASSEMBLY, TYPE T	EACH		1	1
(RS)	209	RESHAPING UNDER GUARDRAIL	STA		5.38	5.38
(RA)	626	BARRIER REFLECTOR	EACH		7	7



NOT TO SCALE

CALCULATED
SCJ
CHECKED
BAD

GUARDRAIL DETAIL 1075+40 TO 1080+80 WB RT

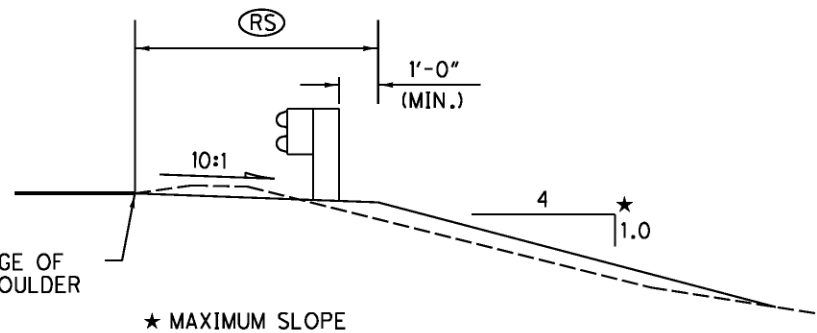
WAY-30-19.81
WAY-172-0.00

42
70

ALL QUANTITIES CARRIED TO GUARDRAIL SUMMARY SHEET,
EXCEPT * (CARRIED TO GENERAL SUMMARY).

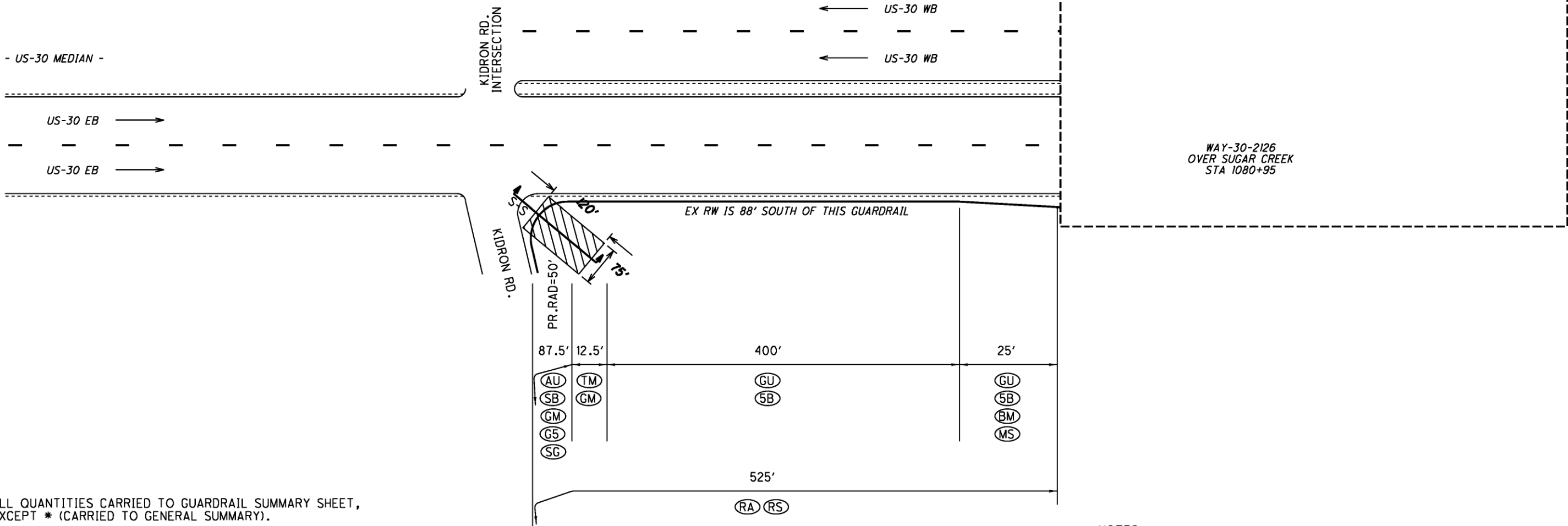
LOCATION	ITEM	DESCRIPTION	UNIT	EB	WB	TOTAL
(GM)	202	GUARDRAIL REMOVED	FT	62.5		62.5
(BM)	202	BRIDGE TERMINAL ASSEMBLY REMOVED	EACH	1		1
(GU)	202	GUARDRAIL REMOVED FOR REUSE	FT	425		425
(G5)	606	GUARDRAIL, TYPE 5	FT	62.5		62.5
(MS)	606	BRIDGE TERMINAL ASSEMBLY, TYPE BR-1	EACH	1		1
(SB)	606	GUARDRAIL REBUILT, TYPE 5	FT	425		425
(AU)	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE A	EACH	1		1
(TM)	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH	1		1
(SB)	606	ANCHOR ASSEMBLY REBUILT, TYPE A	EACH	1		1
(Hatched)	203 *	EMBANKMENT	CU YD	489		489
(Hatched)	659 *	SEEDING AND MULCHING, AS PER PLAN	SQ YD	1000		1000
(Hatched)	201 *	CLEARING AND GRUBBING		LUMP		LUMP
(SG)	630 *	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	EACH	3		3
(RS)	209	RESHAPING UNDER GUARDRAIL	STA	5.25		5.25
(RA)	626	BARRIER REFLECTOR	EACH	7		7

TYPICAL SECTION "TYPE 5" AT S-S



NOTES:

- 1.THE EMBANKMENT QUANTITY SHALL BE USED OVER THE AREA SHOWN TO AN ESTIMATED LENGTH OF 120', AN ESTIMATED WIDTH OF 75', AND TO A MAXIMUM DEPTH OF 2'. THE EMBANKMENT SHALL BE INCORPORATED INTO THE ADJACENT SLOPES AS PER CMS 203.05, CREATING A 4:1 SLOPE ALONG THE MIDLINE OF THE EMBANKMENT AREA IN THE 120' LONG DIRECTION.
- 2.CALCULATION FOR EMBANKMENT VOLUME (TRAPIZOID ALONG LENGTH):
VOLUME = $(120 \times 2 \times (35 + 75)/2)/27 = 489$ CY
- 3.CALCULATION FOR SEEDING AND MULCHING:
AREA = $(120 \times 75)/9 = 1000$ SY
- 4.ITEM 659 SEEDING AND MULCHING, AS PER PLAN SHALL INCLUDE WATER AND COMMERCIAL FERTILIZER APPLIED PER CMS 659.
- 5.THREE (3) SIGNS BEHIND EXISTING GUARDRAIL RADIUS SHALL BE REMOVED FOR REUSE AND REERECTED IN THE SAME LOCATIONS.



NOT TO SCALE

CALCULATED
SCJ
CHECKED
BAD

GUARDRAIL DETAIL 1075+40 TO 1080+80 EB RT

WAY -30-19.81
WAY -172-0.00

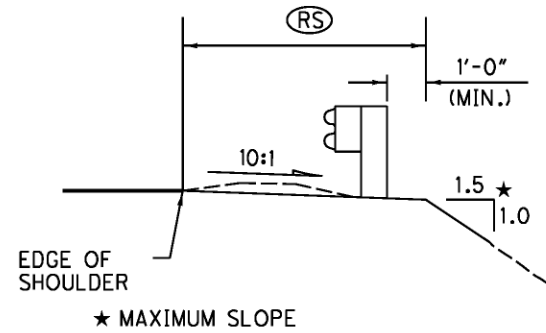
43
70

DESIGN FILE: I:\projects\77449\77449gr000.dgn
WORKSTATION: sjuzwik DATE: 12/23/2010

ALL QUANTITIES
CARRIED TO GUARDRAIL
SUMMARY SHEET.

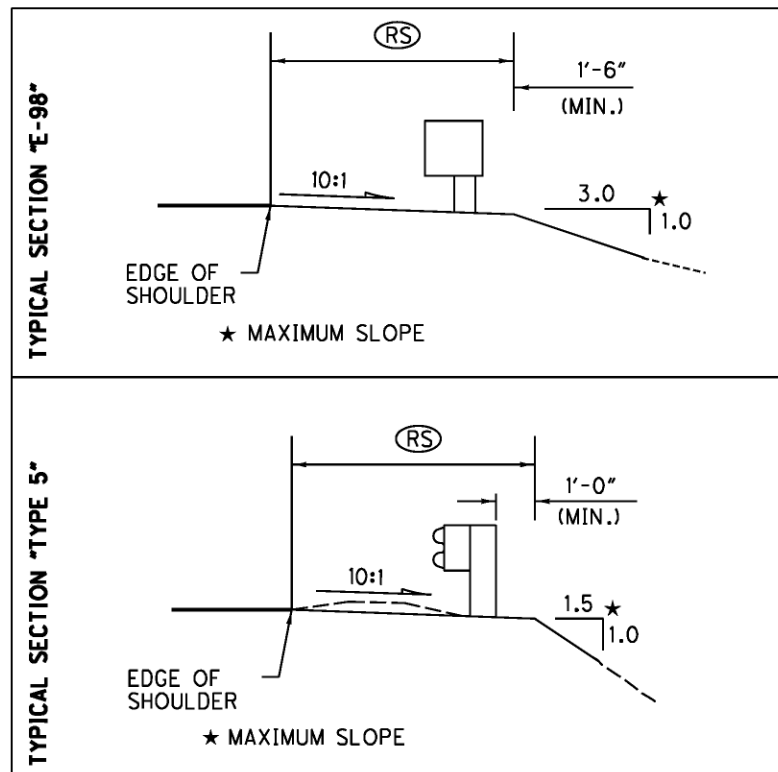
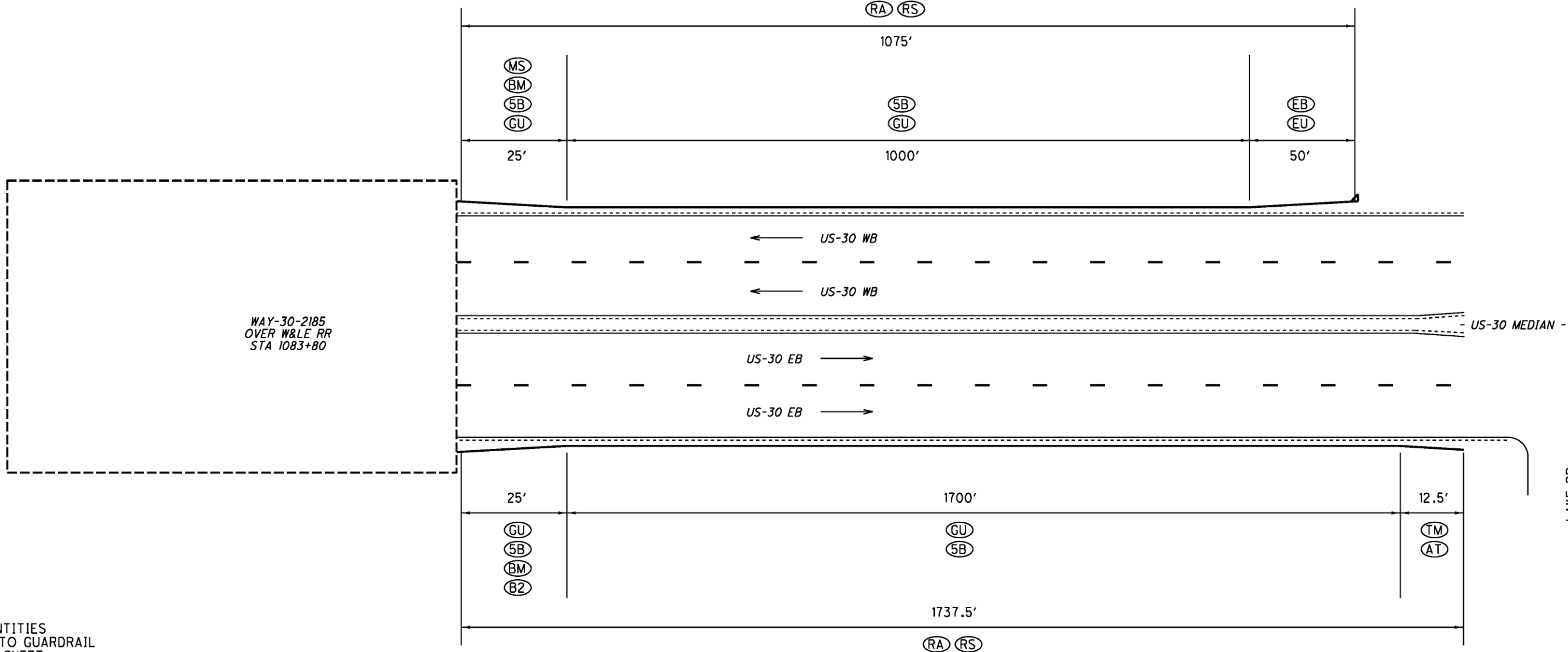
LOCATION	ITEM	DESCRIPTION	UNIT	EB	WB	TOTAL
(BM)	202	BRIDGE TERMINAL ASSEMBLY REMOVED	EACH	2	2	4
(GM)	202	GUARDRAIL REMOVED	FT	175	187.5	362.5
(B2)	606	BRIDGE TERMINAL ASSEMBLY, TYPE 2	EACH	1	1	2
(MS)	606	BRIDGE TERMINAL ASSEMBLY, TYPE BR-1	EACH	1	1	2
(G5)	606	GUARDRAIL, TYPE 5	FT	175	187.5	362.5
(RS)	209	RESHAPING UNDER GUARDRAIL	STA	1.75	1.88	3.63
(RA)	626	BARRIER REFLECTOR	EACH	3	3	6

TYPICAL SECTION "TYPE 5"

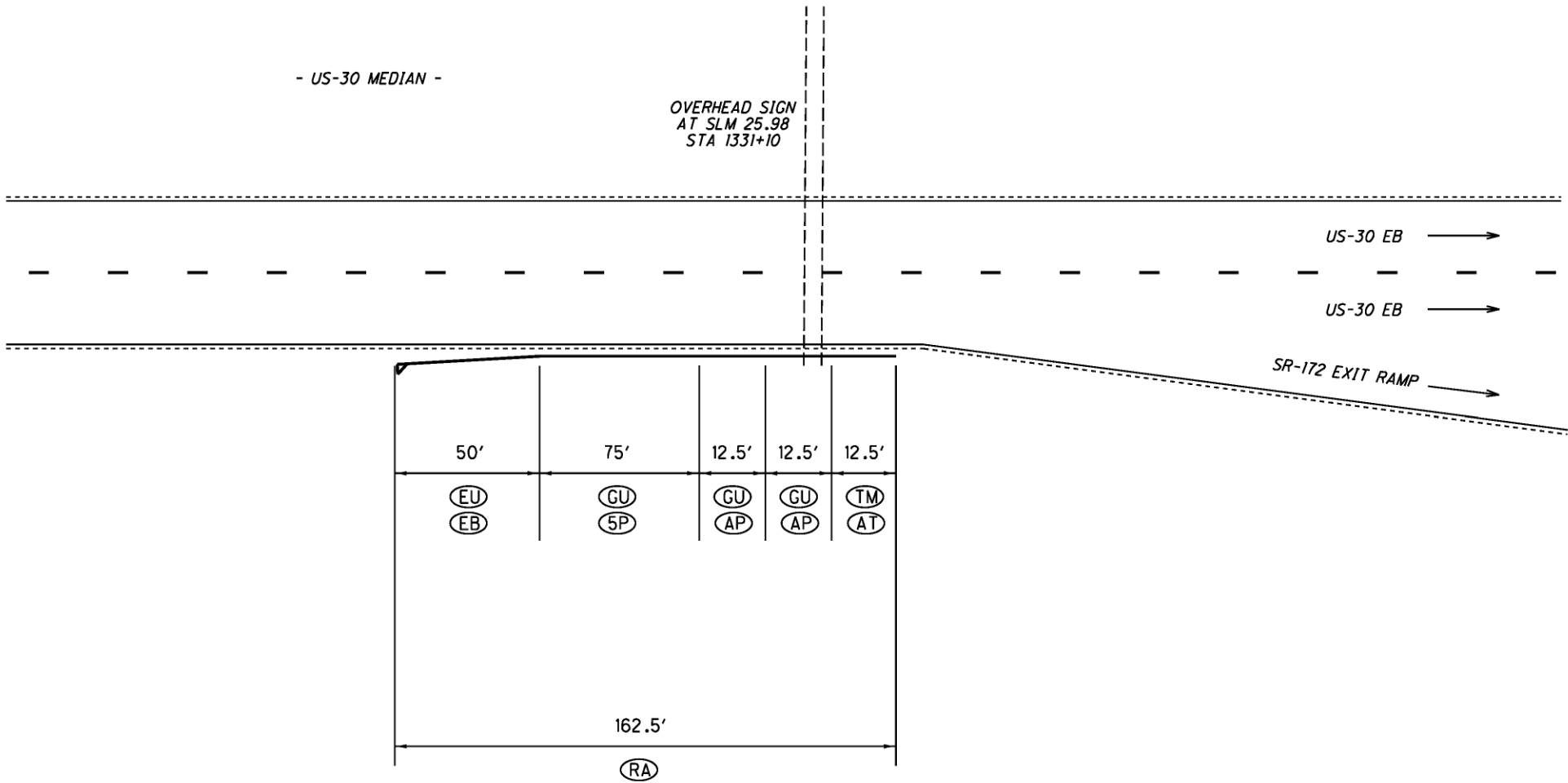


ALL QUANTITIES
CARRIED TO GUARDRAIL
SUMMARY SHEET.

LOCATION	ITEM	DESCRIPTION	UNIT	EB	WB	TOTAL
(BM)	202	BRIDGE TERMINAL ASSEMBLY REMOVED	EACH	1	1	2
(GU)	202	GUARDRAIL REMOVED FOR REUSE	FT	1725	1025	2750
(B2)	606	BRIDGE TERMINAL ASSEMBLY, TYPE 2	EACH	1		1
(MS)	606	BRIDGE TERMINAL ASSEMBLY, TYPE BR-1	EACH		1	1
(5B)	606	GUARDRAIL REBUILT, TYPE 5	FT	1725	1025	2750
(EU)	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98	EACH		1	1
(EB)	606	ANCHOR ASSEMBLY REBUILT, TYPE E-98	EACH		1	1
(TM)	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH	1		1
(AT)	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
(RS)	209	RESHAPING UNDER GUARDRAIL	STA	17.38	10.75	28.13
(RA)	626	BARRIER REFLECTOR	EACH	19	12	31



DESIGN FILE: I:\projects\77449\77449gr000.dgn
WORKSTATION: sjuzwik DATE: 12/23/2010

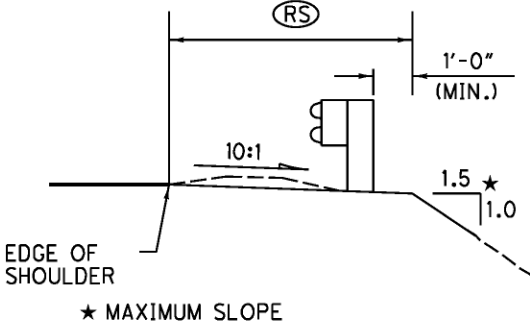


ALL QUANTITIES
CARRIED TO GUARDRAIL
SUMMARY SHEET.

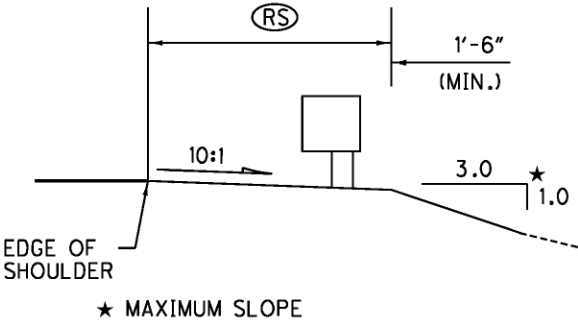
LOCATION	ITEM	DESCRIPTION	UNIT	EB	WB	TOTAL
(EU)	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98	EACH	1		1
(GU)	202	GUARDRAIL REMOVED FOR REUSE	FT	100		100
(AP)	606	GUARDRAIL REBUILT, TYPE 5A, AS PER PLAN	FT	25		25
(EB)	606	ANCHOR ASSEMBLY REBUILT, TYPE E-98	EACH	1		1
(SP)	606	GUARDRAIL REBUILT, TYPE 5, AS PER PLAN	FT	75		75
(TM)	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH	1		1
(AT)	606	ANCHOR ASSEMBLY, TYPE T	EACH	1		1
(RS)	209	RESHAPING UNDER GUARDRAIL	STA	1.63		1.63
(RA)	626	BARRIER REFLECTOR	EACH	3		3

- NOTES:
1. PROVIDE A DISTANCE OF 4' MEASURED FROM FACE OF GUARDRAIL TO FACE OF SIGNAL POLE.

TYPICAL SECTION "TYPE 5"



TYPICAL SECTION "E-98"



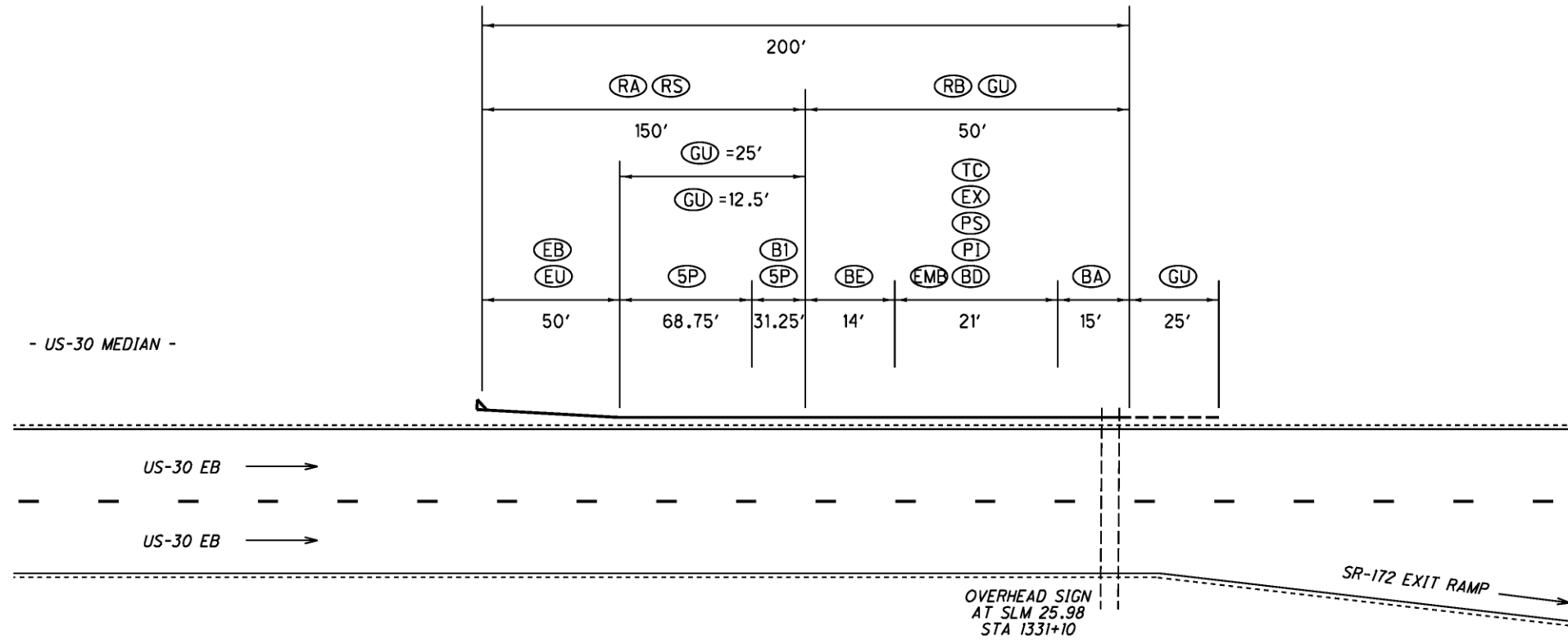
NOT TO SCALE

CALCULATED
SCJ
CHECKED
BAD

GUARDRAIL DETAIL 1330+90 TO 1332+60 EB RT

WAY -30-19.81
WAY -172-0.00

46
70

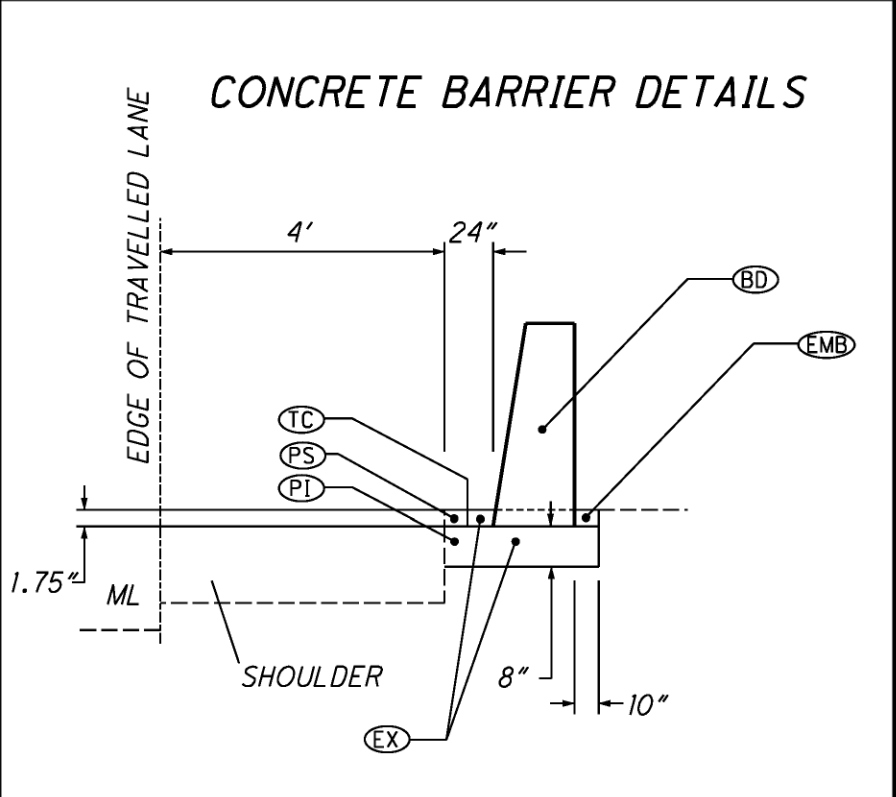


NOTES: THE DISTANCE FROM THE
FACE OF GUARDRAIL AND
CONCRETE BARRIER TO THE
EDGE LINE SHALL BE 6'-0".

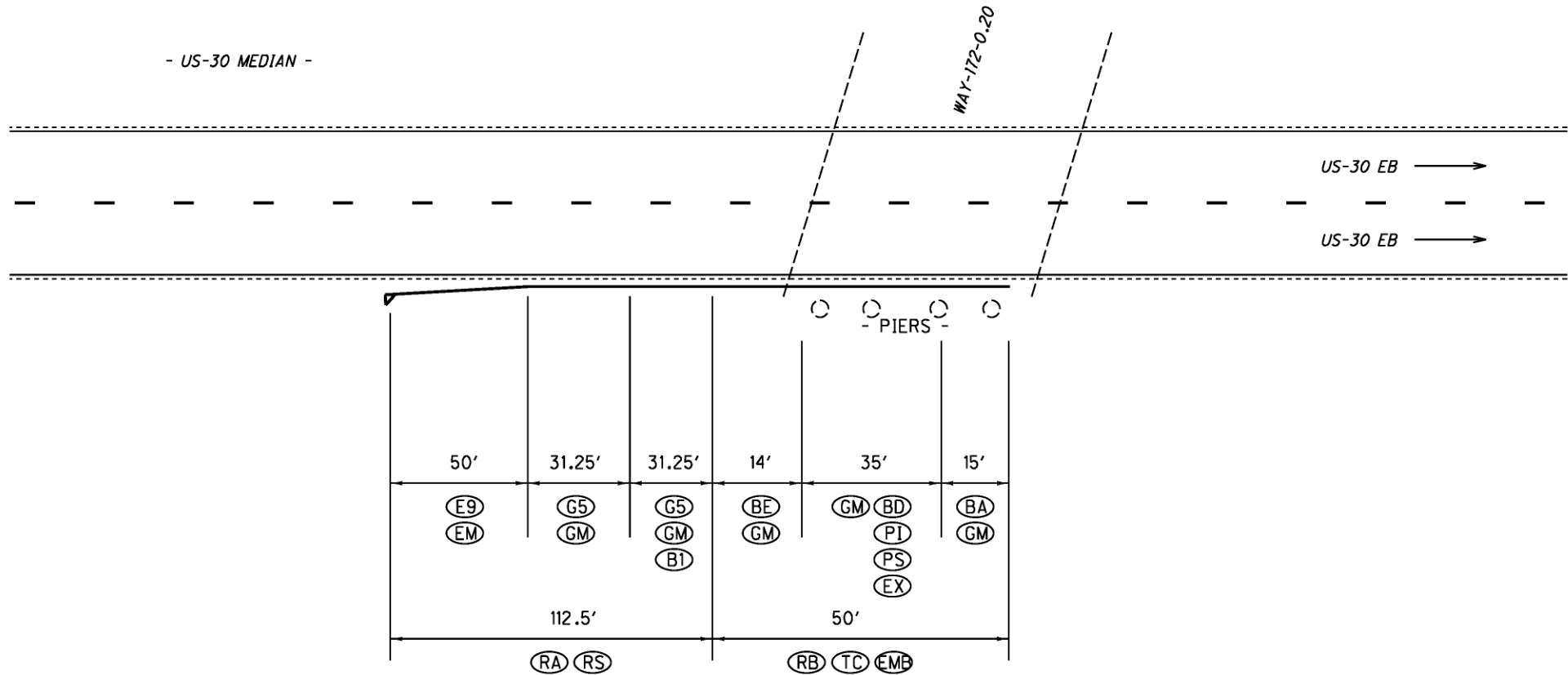
ALL QUANTITIES
CARRIED TO GUARDRAIL
SUMMARY SHEET.

LOCATION	ITEM	DESCRIPTION	UNIT	EB	WB	TOTAL
(EU)	202	ANCHOR ASSEMBLY REMOVED FOR REUSE, TYPE E-98	EACH	1		1
(EB)	606	ANCHOR ASSEMBLY REBUILT, TYPE E-98	EACH	1		1
(GM)	202	GUARDRAIL REMOVED	FT	12.5		12.5
(5P)	606	GUARDRAIL REBUILT, TYPE 5, AS PER PLAN	FT	100		100
(GU)	202	GUARDRAIL REMOVED FOR REUSE	FT	100		100
(B1)	606	BRIDGE TERMINAL ASSEMBLY, TYPE 1	EACH	1		1
(BD)	622	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN	FT	21		21
(BE)	622	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN	EACH	1		1
(BA)	622	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	EACH	1		1
(PI)	442	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448), A.P.P.(8" x 5' x 21')	CY	2.6		2.6
(PS)	442	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), A.P.P. (1.75" x 2' x 21')	CY	0.2		0.2
(EX)	203	EXCAVATION (9.75" x 5' x 21')	CY	3.1		3
(TC)	407	TACK COAT FOR SURFACE COURSE (AT 0.03 GAL PER SY) (2' x 21')	GALLON	0.2		0.2
(RS)	209	RESHAPING UNDER GUARDRAIL	STA	1.25		1.25
(EMB)		EMBANKMENT INCLUDED IN ITEM 622 FOR PAYMENT				
(RA)	626	BARRIER REFLECTOR TYPE A	EACH	3		3
(RB)	626	BARRIER REFLECTOR TYPE B	EACH	2		2

NOTE:
THE CONTRACTOR MAY INSTALL CONCRETE BASE UNDER ITEM 622 CONCRETE
BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN IN PLACE OF THE
PROPOSED ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A
(448) AT NO ADDITIONAL COST TO STATE.



DESIGN FILE: I:\projects\77449\77449gr000.dgn
WORKSTATION: sjuzwik DATE: 12/23/2010

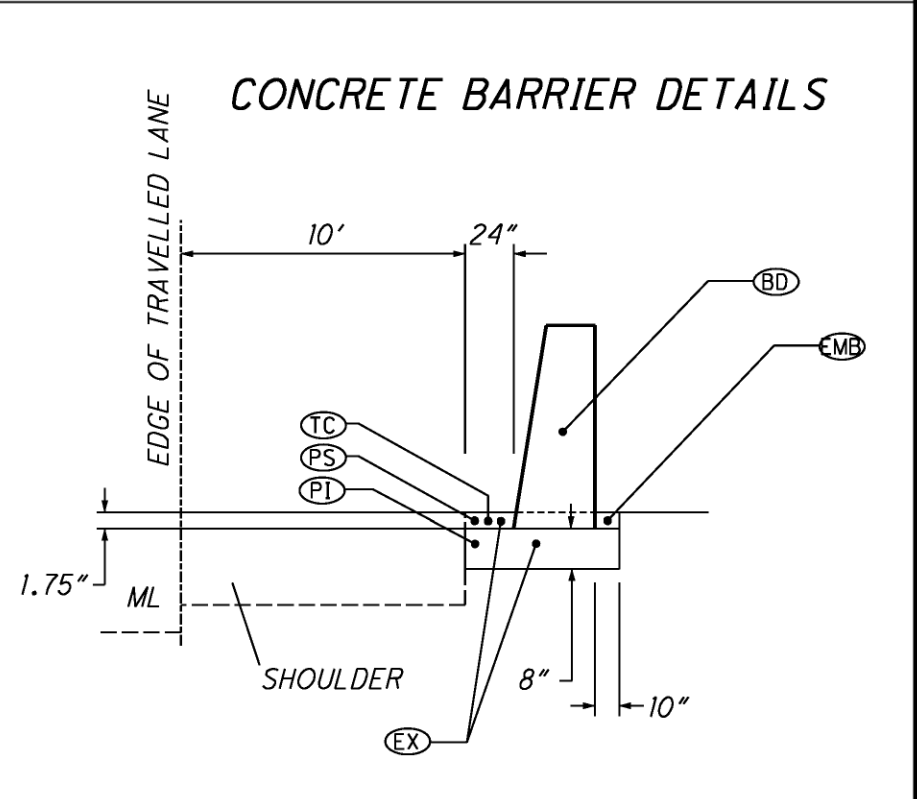


ALL QUANTITIES
CARRIED TO GUARDRAIL
SUMMARY SHEET.

LOCATION	ITEM	DESCRIPTION	UNIT	EB	WB	TOTAL
(EM)	202	ANCHOR ASSEMBLY REMOVED, TYPE E-98	EACH	1		1
(GM)	202	GUARDRAIL REMOVED	FT	125		125
(E9)	606	ANCHOR ASSEMBLY, TYPE E-98	EACH	1		1
(G5)	606	GUARDRAIL, TYPE 5	FT	62.5		62.5
(B1)	606	BRIDGE TERMINAL ASSEMBLY, TYPE 1	EACH	1		1
(BD)	622	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN	FT	35		35
(BE)	622	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN	EACH	1		1
(BA)	622	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	EACH	1		1
(PI)	442	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448), A.P.P.(6" x 5' x 35')	CY	3.2		3.2
(PS)	442	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) (1.25" x 2' x 35')	CY	0.4		0.4
(EX)	203	EXCAVATION (8" x 5' x 35')	CY	4.3		4.3
(TC)	407	TACK COAT FOR SURFACE COURSE (AT 0.03 GAL PER SY) (2' x 35')	GALLON	0.2		0.2
(RS)	209	RESHAPING UNDER GUARDRAIL	STA	1.13		1.13
(EMB)		INCLUDED FOR PAY WITH 622 BARRIER ITEMS				
(RA)	626	BARRIER REFLECTOR TYPE A	EACH	3		3
(RB)	626	BARRIER REFLECTOR TYPE B	EACH	2		2

NOTE: THE DETAILS ONLY REFLECT THE PROPOSED
GUARDRAIL AND CONCRETE BARRIER.

NOTE:
THE CONTRACTOR MAY INSTALL CONCRETE BASE UNDER ITEM 622 CONCRETE
BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN IN PLACE OF THE
PROPOSED ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A
(448) AT NO ADDITIONAL COST TO STATE.



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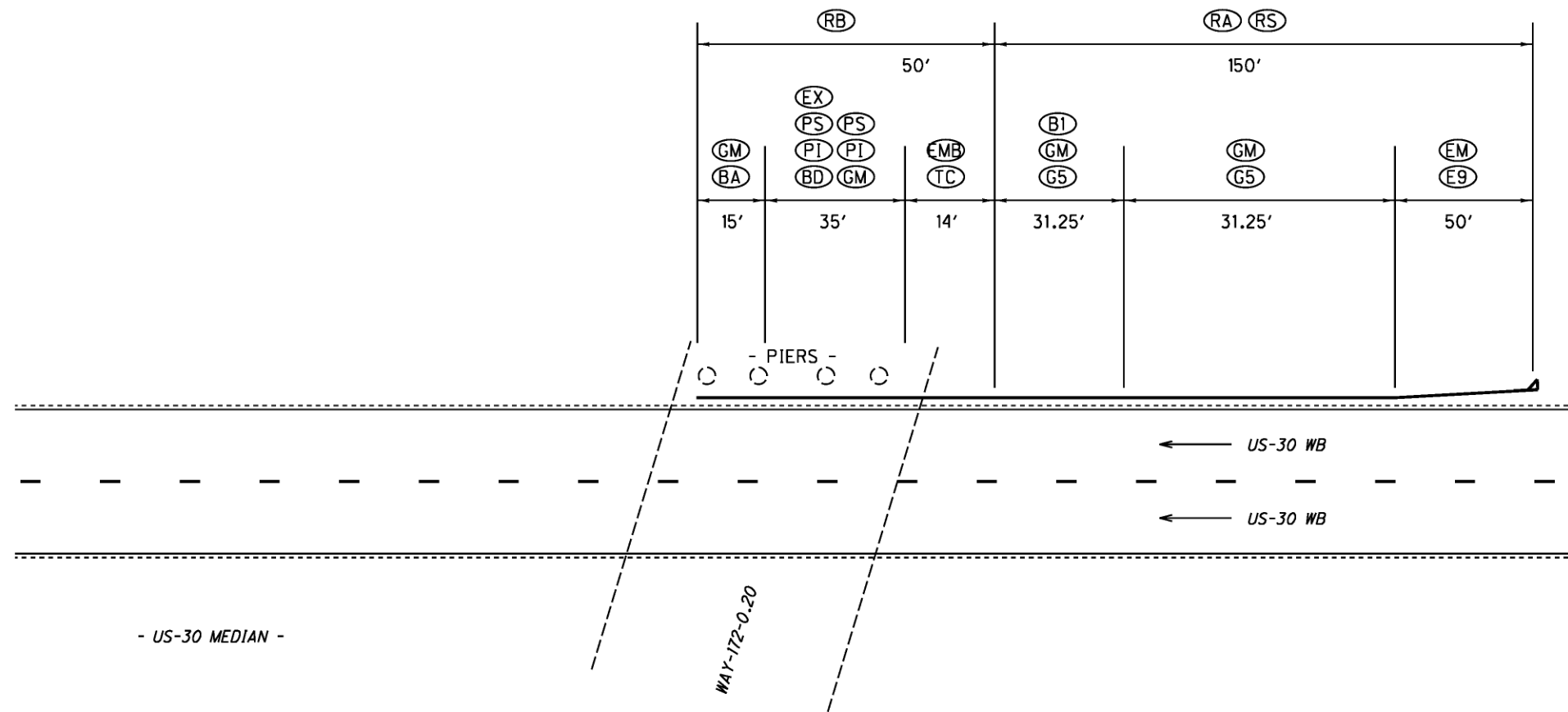
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WORKSTATION: sjuzwik
DATE: 12/23/2010

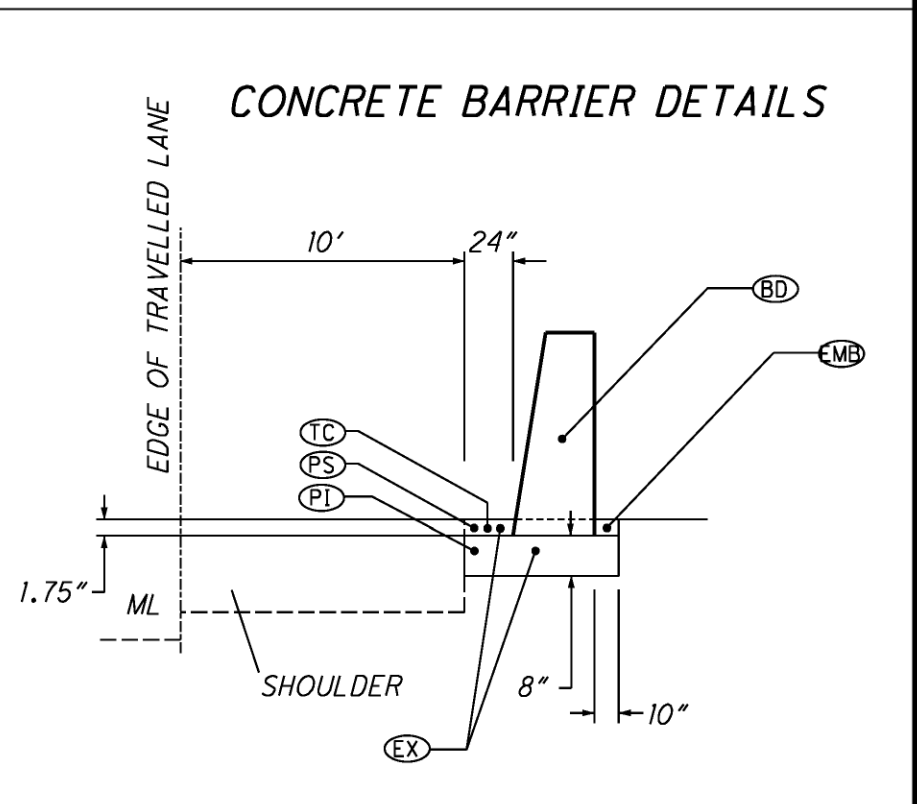
ALL QUANTITIES
CARRIED TO GUARDRAIL
SUMMARY SHEET.

LOCATION	ITEM	DESCRIPTION	UNIT	EB	WB	TOTAL
(EM)	202	ANCHOR ASSEMBLY REMOVED, TYPE E-98	EACH		1	1
(GM)	202	GUARDRAIL REMOVED	FT		150	150
(E9)	606	ANCHOR ASSEMBLY, TYPE E-98	EACH		1	1
(G5)	606	GUARDRAIL, TYPE 5	FT		62.5	62.5
(B1)	606	BRIDGE TERMINAL ASSEMBLY, TYPE 1	EACH		1	1
(BD)	622	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN	FT		35	35
(BE)	622	CONCRETE BARRIER END SECTION, TYPE D, AS PER PLAN	EACH		1	1
(BA)	622	CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN	EACH		1	1
(PI)	442	ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A (448), A.P.P.(6" x 5' x 35')	CY		3.2	3.2
(PS)	442	ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446) (1.75" x 2' x 35')	CY		0.4	0.4
(EX)	203	EXCAVATION (8" x 5' x 35')	CY		4.3	4.3
(TC)	407	TACK COAT FOR SURFACE COURSE (AT 0.03 GAL PER SY) (2' x 35')	GALLON		0.2	0.2
(RS)	209	RESHAPING UNDER GUARDRAIL	STA		1.13	1.13
(EMB)		INCLUDED FOR PAY WITH 622 BARRIER ITEMS				
(RA)	626	BARRIER REFLECTOR TYPE A	EACH		3	3
(RB)	626	BARRIER REFLECTOR TYPE B	EACH		2	2



NOTE: THE DETAILS ONLY REFLECT THE PROPOSED
GUARDRAIL AND CONCRETE BARRIER.

NOTE:
THE CONTRACTOR MAY INSTALL CONCRETE BASE UNDER ITEM 622 CONCRETE
BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN IN PLACE OF THE
PROPOSED ASPHALT CONCRETE INTERMEDIATE COURSE, 19 MM, TYPE A
(448) AT NO ADDITIONAL COST TO STATE.



NOT TO SCALE

CALCULATED
SCJ
CHECKED
BAD

GUARDRAIL DETAIL 164+20 TO 162+25 WB RT

WAY -30-19.81
WAY -172-0.00

49
70

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CALCULATED	CHECKED
SCJ	BAD

WAY-30-19.81
WAY-172-0.00



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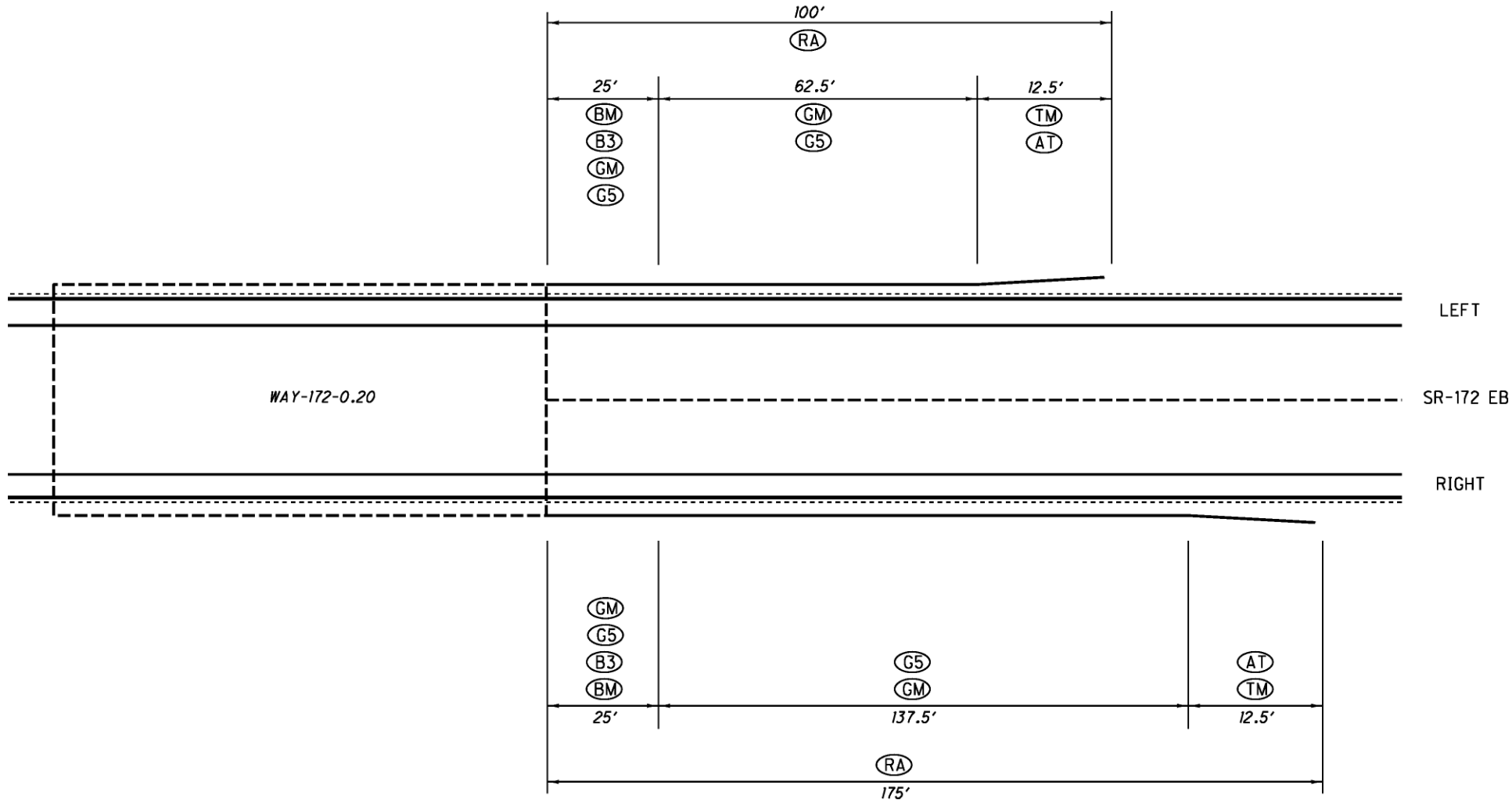


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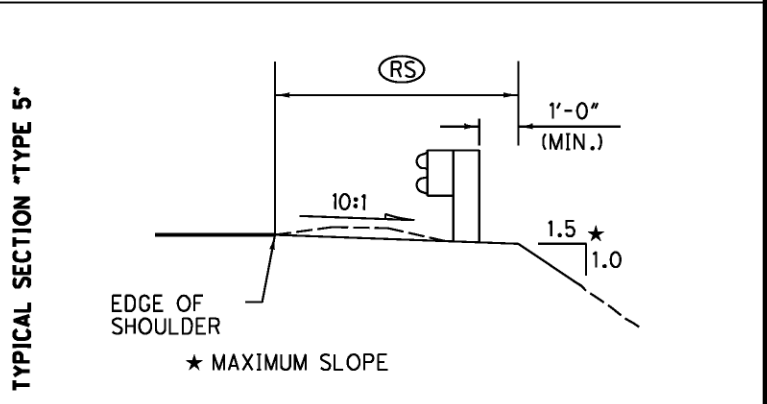
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WORKSTATION: sjuzwik DATE: 12/23/2010



LOCATION	ITEM	DESCRIPTION	UNIT	LEFT	RIGHT	TOTAL
GM	202	GUARDRAIL REMOVED	FT	87.5	162.5	250
TM	202	ANCHOR ASSEMBLY REMOVED, TYPE T	EACH	1	1	2
G5	606	GUARDRAIL, TYPE 5, AS PER PLAN	FT	87.5	162.5	250
AT	606	ANCHOR ASSEMBLY, TYPE T	EACH	1	1	2
BM	202	BRIDGE TERMINAL ASSEMBLY REMOVED	EACH	1	1	2
B3	606	BRIDGE TERMINAL ASSEMBLY, TYPE 3	EACH	1	1	2
RS	209	RESHAPING UNDER GUARDRAIL	STA	1.0	1.75	2.75
RA	626	BARRIER REFLECTOR, TYPE A	EACH	2	3	5

ALL QUANTITIES
CARRIED TO GUARDRAIL
SUMMARY SHEET.



REFERENCES SHALL BE MADE TO STANDARD DRAWINGS:

BP-3.1	DATED	10/19/07
GSD-1-96	DATED	7/19/02
FB-1-82	DATED	5/10/82
RB-1-55	DATED	2/2/59
TBR-91	DATED	7/19/02

REFERENCES SHALL BE MADE TO SUPPLEMENTAL SPECIFICATION:

847	DATED	7/16/10
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DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, INCLUDING THE 2003, 2004, 2005 AND 2006 SPECIFICATIONS AND THE ODOT BRIDGE DESIGN MANUAL.

EXISTING STRUCTURE VERIFICATION:

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURES AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO CMS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE BID EXAMINATION OF THE EXISTING STRUCTURES. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

EXISTING PLANS:

THE ORIGINAL CONSTRUCTION PLANS OF THE EXISTING BRIDGES ARE AVAILABLE UPON REQUEST AT THE DISTRICT 3 OFFICE OF THE OHIO DEPARTMENT OF TRANSPORTATION, ASHLAND, OH.

STRUCTURE #	PLAN NAME	DATE
WAY-30-2126	WAY-30-17.03	1950
WAY-30-2135	WAY-30-17.03	1950
WAY-172-0200	WAY-30-25.23	1964

THE FOLLOWING PLANS ARE ALSO AVAILABLE:

PLAN NAME	DATE
WAY-30-16.72	1983

DESIGN DATA:

CONCRETE CLASS C - COMPRESSIVE STRENGTH 4,000 PSI
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI
STRUCTURAL STEEL - ASTM A709 GRADE 50W OR GRADE 50 - YIELD STRENGTH 50,000 PSI
A709 GRADE 36 - YIELD STRENGTH 36,000 PSI

DECK PROTECTION METHOD:

SUPERPLASTICIZED DENSE CONCRETE OVERLAY
TREATING OF CONCRETE BRIDGE DECKS WITH SRS

PLACING ASPHALT CONCRETE FEATHERING ON APPROACHES TO BRIDGES:

SPECIAL CARE SHALL BE TAKEN, WHEN PLACING THE ASPHALT CONCRETE BUTT JOINT TO EFFECT A SMOOTH TRANSITION FROM THE EXISTING APPROACH PAVEMENT TO THE BRIDGE DECK THE CONTRACTOR'S ATTENTION IS CALLED TO STANDARD DRAWING BP-3.1 FOR REQUIRED TOLERANCES.

CUT LINE CONSTRUCTION JOINT PREPARATION:

SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL IN PLACE. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

CONSTRUCTION CLEARANCE: WAY-30-2135

MAINTAIN A CONSTRUCTION CLEARANCE OF 13'-0" FEET HORIZONTALLY FROM THE CENTER OF TRACKS AND 22'-0" FEET VERTICALLY FROM A POINT LEVEL WITH THE TOP OF THE HIGHER RAIL.

ITEM 202 - REMOVAL MISC.: RUBBER SEAL

THIS ITEM SHALL BE USED AT LOCATIONS IN THE PLAN TO REMOVE THE EXISTING ELASTOMERIC COMPRESSION SEAL.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR THE ABOVE ITEM, WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS ITEM SHALL BE USED AT LOCATIONS IN THE PLAN.

THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED.

THE EXISTING REINFORCING STEEL SHALL BE PRESERVED AS INDICATED IN THE PLANS. EXISTING CONCRETE SHALL BE REMOVED IN A MANNER THAT WILL NOT CUT, ELONGATE, OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS NO HEAVIER THAN THE 90 POUND CLASS. IF THE EXISTING REINFORCING STEEL DESIGNATED FOR PRESERVATION IS DAMAGED DURING REMOVAL OPERATIONS, DOWELLED REINFORCING STEEL SHALL BE ADDED AT THE CONTRACTOR'S EXPENSE.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR THE ABOVE ITEM, WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

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WORKSTATION: sjuzwik
DATE: 12/23/2010

ITEM 511 - CONCRETE, MISC.: BACKWALL REPAIR

THIS ITEM SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN.

THE CONCRETE SHALL BE THE SAME TYPE AS USED IN THE SUPERPLASTICIZED DENSE CONCRETE OVERLAY AS PER 847.06.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR THE ABOVE WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 511 - CLASS S CONCRETE, MISC.: REPAIR

ITEM 511 - CONCRETE, MISC.: CLASS C CONCRETE, MEDIAN WALL

THESE ITEMS SHALL BE USED AT LOCATIONS INDICATED IN THE PLAN.

THE COARSE AGGREGATE SHALL BE LIMESTONE.

THE COST OF THE EXPANSION MATERIAL, DOWEL HOLES, CEMENT GROUT AND #4 REBAR DOWEL IS INCLUDED IN THIS ITEM.

AT THE SPECIFIED LOCATIONS IN THE PLANS, SEAL THE JOINTS WITH HMWM RESIN.

ALL EXISTING SURFACES TO WHICH THE CONCRETE IS TO BOND SHALL BE CLEANED BY ABRASIVE BLASTING. THESE SURFACES SHALL BE MADE FREE OF SPALLS, LAITANCE, AND OTHER CONTAMINANTS DETRIMENTAL TO ACHIEVING AN ADEQUATE BOND.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER CUBIC YARD FOR EACH OF THE ABOVE WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM SPECIAL - BRIDGE DECK GROOVING

THE BRIDGE DECK GROOVING SHALL MEET CMS 511.20.

PAYMENT FOR ALL OF THE ABOVE WORK SHALL BE AT THE UNIT PRICE BID WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

THIS WORK CONSISTS OF RAISING OR REPOSITIONING EXISTING STRUCTURE TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05.

IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 516 - RESET BEARINGS, AS PER PLAN

ITEM 516 - RESET BEARINGS, AS PER PLAN (R-200)

ITEM 516 - RESET BEARINGS, AS PER PLAN (NORTH PIER 2)

ITEM 516 - RESET BEARINGS, AS PER PLAN (SOUTH PIER 2)

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN THE BRIDGE BEARING. REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PAD (711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARING TO PROVIDE A SNUG FIT, AND RELOCATING THE BEARING ALONG THE ABUTMENT SEAT OR PIER CAP SO THAT THE BEARING IS VERTICALLY ALIGNED AT 60° F (15° C), LUBRICATING SLIDING SURFACES, AND RESETTING OF THE BEARING. ASSURE THE BEARING IS SHIMMED ADEQUATELY AND THAT NO BEAMS AND/ OR BEARING DEVICES ARE "FLOATING".

RIVET HEADS THAT CONFLICT WITH THE PROPOSED LOCATION OF THE NEW STIFFENER OR RELOCATED BEARING SHALL BE REMOVED. RIVET HEADS THAT ARE REMOVED SHALL BE COVERED WITH A METAL WELD TO MAKE WATER TIGHT.

PAYMENT FOR ALL OF THE ABOVE LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516-RESET BEARINGS, AS PER PLAN.

ITEM 517 - RAILING (THRIE BEAM RETROFIT), AS PER PLAN

THE RAILING SHOULD BE INSTALLED TO AVOID PLACING THE RAILING SUPPORT BRACKET ASSEMBLY OVER THE BRIDGE PARAPET AND THE APPROACH PARAPET JOINT. THE ASSEMBLY NEAREST THE JOINT MAY NEED TO BE ADJUSTED TO ENSURE THE ANCHORS CAN BE SECURLEY PLACED.

THE EXISTING BRIDGE RAILING AND POSTS SHALL BE REMOVED. THE EXISTING ANCHOR BOLTS SHALL BE CUT FLUSH WITH THE TOP OF THE PARAPET WALL.

PAYMENT FOR ALL OF THE ABOVE LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 517-RAILING (THRIE BEAM RETROFIT), AS PER PLAN.

ITEM 847 - EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (2" NOMINAL THICKNESS)

THIS ITEM SHALL BE USED TO REMOVE THE EXISTING OVERLAY AS PER DETAILS IN THE PLANS.

THE THICKNESS OF THE EXISTING CONCRETE OVERLAY TO BE REMOVED SHALL BE AS SPECIFIED IN THE PLANS.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE YARD FOR THE ABOVE ITEMS WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 847 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY, AS PER PLAN (2" THICK)

ITEM 847 - SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN

THE COARSE AGGREGATE SHALL BE LIMESTONE.

NON-PERFORM THE TEXTURED GROOVING AS SPECIFIED IN 847.22.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID OF THE ABOVE ITEM WHICH WILL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ROAD WEATHER INFORMATION SYSTEM (RWIS) SENSORS

THERE IS A WEATHER STATION AND EXISTING WEATHER SENSORS LOCATED IN THE PAVEMENT AND BRIDGE DECK AT THE EAST END OF THE BRIDGE OVER THE RAILROAD TRACKS (WAY-30-2135). THE CONTRACTOR IS TO NOTIFY ODOT DISTRICT 3 ROADWAY SERVICES MANAGER IN WRITING AT LEAST 14 CALENDAR DAYS ADVANCE NOTICE BEFORE DISTURBING THE PAVEMENT AND/OR BRIDGE DECK IN THE AREA OF THIS BRIDGE SO THAT ODOT CAN ADDRESS THESE SENSORS. THE SENSORS WILL BE REMOVED, RECONDITIONED AND REINSTALLED BY OTHERS.

DESIGN AGENCY
DISTRICT THREE
OFFICE OF PRODUCTION

DATE
04/10
REVIEWED
RDN
STRUCTURE FILE NUMBER

DRAWN
GTS
CHECKED
CAL
REVISED

STRUCTURE NOTES

WAY-30-19.81
WAY-172-0.00

55
70

MAINTAINING TRAFFIC

TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT THROUGH TRAFFIC ON STRUCTURE WAY-172-0.20 WILL BE DETOURED AS SHOWN ON THIS SHEET FOR A MAXIMUM OF 14 CONSECUTIVE CALENDAR DAYS. THE 14 DAYS SHALL BE CONSIDERED AS AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 14 DAYS THAT THE HIGHWAY REMAINS CLOSED TO TRAFFIC, THE CONTRACTOR SHALL BE ASSESSED LIQUIDATED DAMAGES AS PER 108.07.

DETOUR SIGNING WILL BE INSTALLED, MAINTAINED, AND REMOVED BY THE STATE OF OHIO. THE CONTRACTOR SHALL NOTIFY THE ROADWAY SERVICES MANAGER, MATT BLANKENSHIP (419)207-7045, IN WRITING A MINIMUM OF 14 DAYS IN ADVANCE OF THE DETOUR BEING PLACED.

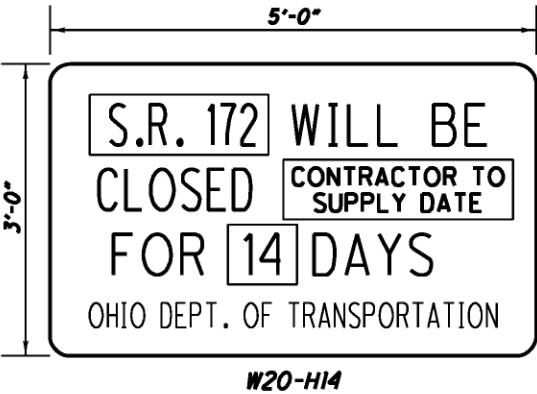
THE CONTRACTOR SHALL ALSO NOTIFY, IN WRITING, THE FOLLOWING AGENCIES AT LEAST TEN (10) DAYS PRIOR TO THE TIME WHEN THE DETOUR WILL BE IMPLEMENTED:

ODOT DISTRICT 4: MARK WALKER, 330-786-3148
CITY OF MASSILLON
TOWNSHIP TRUSTEES (TWP. ROADS ONLY)
LOCAL FIRE DEPARTMENT(S)
LOCAL SCHOOL DISTRICT(S)
COUNTY SHERIFF

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE GATES AND BARRICADES AT THE END OF THE WORK AREA AND THE ADVANCE WARNING SIGNS AS SHOWN ON STANDARD CONSTRUCTION DRAWING MT-101.60.

NOTICE OF CLOSURE SIGNS

THESE SIGNS SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE FOR S.R. 172. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. THEY SHOULD BE ERECTED AT THE POINT OF CLOSURE. PAYMENT FOR THIS WORK SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614, MAINTAINING TRAFFIC, AND IT SHALL INCLUDE FURNISHING, ERECTING, MAINTAINING AND REMOVING THE SIGNS AND SUPPORTS.

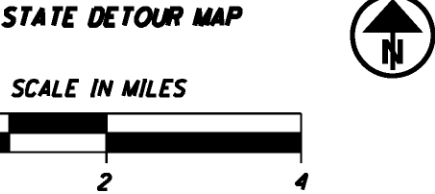
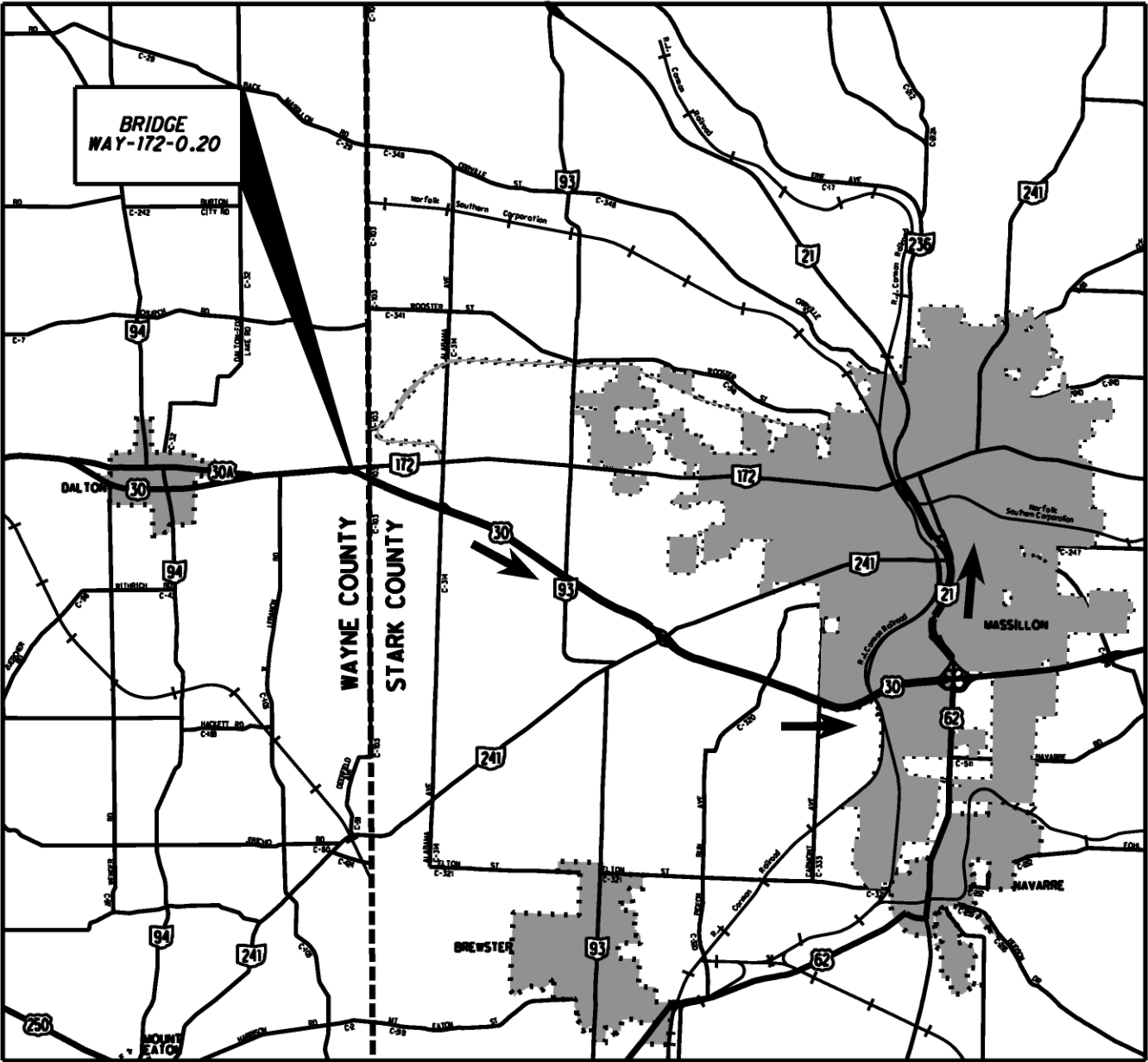


MAINTENANCE OF LOCAL DETOUR ROUTE

A LOCAL DETOUR ROUTE, OTHER THAN THE OFFICIAL SIGNED ODOT DETOUR ROUTE, AS NOTED ON THIS SHEET, WILL BE SELECTED BY AGREEMENT BETWEEN ODOT AND LOCAL GOVERNMENTAL AGENCIES PRIOR TO THE HIGHWAY CLOSURE.

DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THIS ROUTE IN A CONDITION WHICH IS REASONABLY SMOOTH AND FREE FROM HOLES, RUTS, RIDGES, BUMPS, DUST AND STANDING WATER. ONCE THE DETOUR IS REMOVED AND TRAFFIC RETURNED TO ITS NORMAL PATTERN, THE DESIGNATED LOCAL DETOUR ROUTE SHALL BE RESTORED TO A CONDITION THAT IS EQUIVALENT TO THAT WHICH EXISTED PRIOR TO ITS USE FOR THIS PURPOSE. ALL SUCH WORK SHALL BE PERFORMED WHEN AND AS DIRECTED BY THE ENGINEER. THE DESIGNATED LOCAL DETOUR ROUTE IS TO BE REVIEWED AND REPAIRED PRIOR TO THE ASPHALT CONTRACTOR OR SUBCONTRACTOR LEAVING THE PROJECT.

PAYMENT FOR THE WORK NECESSARY TO REPAIR THESE LOCAL ROADS WILL BE PERFORMED BY CHANGE ORDER.



STRUCTURE FILE NO.	BRIDGE NO.	LOCATION	BRIDGE TYPE	SKEW	BRIDGE LIMITS	DECK WIDTH	PROPOSED WORK
8502285	WAY-30-2126	OVER SUGAR CREEK	3-SPAN STEEL BEAM	33° 30' 00"	278'-5"±	63'-8"±	DECK & SUBSTRUCTURE SEALING, EXPANSION JOINT REPAIR, PARAPET REPAIR, DECK PATCHING, APPROACH SLAB REPAIR, MEDIAN BARRIER REPAIR AND RESET BEARINGS
8502374	WAY-30-2135	OVER W & LE RR	3-SPAN STEEL BEAM	32° 17' 00"	187'-4"±	63'-8"±	DECK & SUBSTRUCTURE SEALING, RESET BEARINGS, APPROACH SLAB REPAIR AND MEDIAN BARRIER REPAIR
8502455	WAY-172-0020	EB EXIT RAMP OVER US30	4-SPAN STEEL BEAM	51° 51' 38"	347'-5½"±	26'-0"	DECK OVERLAY, DECK & SUBSTRUCTURE SEALING, BACKWALL REPAIR, RESET BEARINGS, THRIE BEAM GUARD RAIL AND UPDATE BRIDGE TERMINAL ASSEMBLIES

WAY-30-2126 (8502285), L050 FUNDING

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
202	11301	10	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	54
202	98200	145	FT	REMOVAL MISC.: RUBBER SEAL	54
509	10000	597	POUND	EPOXY COATED REINFORCING STEEL	
510	10000	68	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
511	34450	2	CU YD	CLASS S CONCRETE, MISC.: REPAIR	55
511	71100	8	CU YD	CONCRETE, MISC.: CLASS C CONCRETE, MEDIAN WALL	55
512	10100	876	SO YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10400	1851	SO YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	
513	10280	383	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 4	
514	00100	LUMP		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
514	00200	LUMP		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
514	00300	LUMP		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
514	00400	LUMP		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
514	00504	1	MANHOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
514	10000	3	EACH	FINAL INSPECTION REPAIR	
516	13600	5	SO FT	1" PREFORMED EXPANSION JOINT FILLER	
516	31000	145	FT	JOINT SEALER	
516	46701	4	EACH	RESET BEARING, AS PER PLAN (R-200)	55
516	46701	3	EACH	RESET BEARING, AS PER PLAN (NORTH PIER 2)	55
516	46701	3	EACH	RESET BEARING, AS PER PLAN (SOUTH PIER 2)	55
516	47001	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	55

WAY-30-2135 (8502374), L050 FUNDING

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
202	11301	10	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	54
202	98200	143	FT	REMOVAL MISC.: RUBBER SEAL	54
509	10000	597	POUND	EPOXY COATED REINFORCING STEEL	
510	10000	68	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
511	34450	2	CU YD	CLASS S CONCRETE, MISC.: REPAIR	55
511	71100	8	CU YD	CONCRETE, MISC.: CLASS C CONCRETE, MEDIAN WALL	55
512	10100	609	SO YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
512	10400	1237	SO YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS	
516	13600	5	SO FT	1" PREFORMED EXPANSION JOINT FILLER	
516	31000	143	FT	JOINT SEALER	

DESIGN AGENCY
ODOT DISTRICT THREE
OFFICE OF PRODUCTION

DATE
04/10

REVIEWED
RDN

DRAWN
GTS

DESIGNED
GTS

CHECKED
CAL

REVISOR
REVISED

STRUCTURE SUMMARY

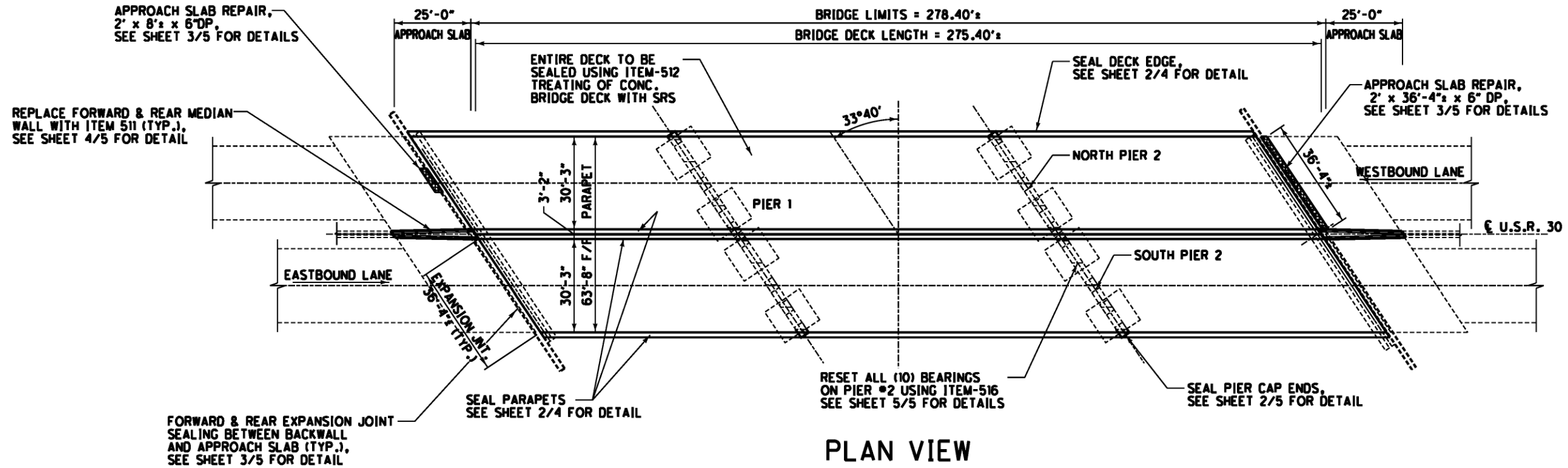
WAY-30-19.81
WAY-172-0.00

58
70

WAY-172-0020 (8502455), L050 FUNDING

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
201	11000	LUMP		CLEARING AND GRUBBING	
202	11300	1	CU YD	PORTIONS OF STRUCTURE REMOVED (PARAPET)	
202	11301	2	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	54
509	10000	95	POUND	EPOXY COATED REINFORCING STEEL	
511	71100	2	CU YD	CONCRETE, MISC.: BACKWALL REPAIR	55
SPECIAL	51160000	992	SO YD	BRIDGE DECK GROOVING	55
512	10100	1255	SO YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	46701	3	EACH	RESET BEARING, AS PER PLAN	55
516	47001	LUMP	CU YD	JACKING AND TEMPORARY SUPPORT OR SUPERSTRUCTURE, AS PER PLAN	55
517	72751	763	FT	RAILING (THRIE BEAM RETROFIT), AS PER PLAN	55
621	54000	11	EACH	RAISED PAVEMENT MARKER REMOVED	
847	10201	992	SO YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY, AS PER PLAN (2" THICK)	55
847	20201	25	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	55
847	30000	LUMP		TEST SLAB	
847	30401	992	SO YD	EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (2" NOMINAL THICKNESS)	55
847	50000	27	SO YD	HAND CHIPPING	

DESIGN FILE: I:\projects\77449\structures\Wayne\Way302126sd.dgn
WORKSTATION: sjzwik
DATE: 12/23/2010
MODELNAME: Default



PLAN VIEW

ITEM	QUANTITY	UNIT	DESCRIPTION
202	10	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
202	145	FT	REMOVAL MISC.: RUBBER SEAL
509	597	POUND	EPOXY COATED REINFORCING STEEL
510	68	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT
511	2	CU YD	CLASS S CONCRETE, MISC.: REPAIR
511	8	CU YD	CONCRETE, MISC.: CLASS C CONCRETE, MEDIAN WALL
512	876	SO YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	1851	SO YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS
516	5	SO FT	1" PREFORMED EXPANSION JOINT FILLER
516	145	FT	JOINT SEALER

- NOTES:
1. GUARDRAIL NOT SHOWN.
 2. PARAPETS, DECK EDGES AND PIER CAP ENDS SHALL BE SEALED WITH ITEM-512 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE). SEE SHEET 2/5 FOR DETAILS.
 3. DECK SHALL BE SEALED WITH ITEM-512, TREATING OF CONCRETE BRIDGE DECK WITH SRS.

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET

DESIGN AGENCY
OOOT DISTRICT THREE
OFFICE OF PRODUCTION

DATE
4/10
REVIEWED
RDN
STRUCTURE FILE NUMBER
8502285

DRAWN
GTS
CHECKED
CAL

PLAN VIEW
WAY-30-2126 OVER SUGAR CREEK

WAY-30-19.81
WAY-172-0.00

1/5
60/70



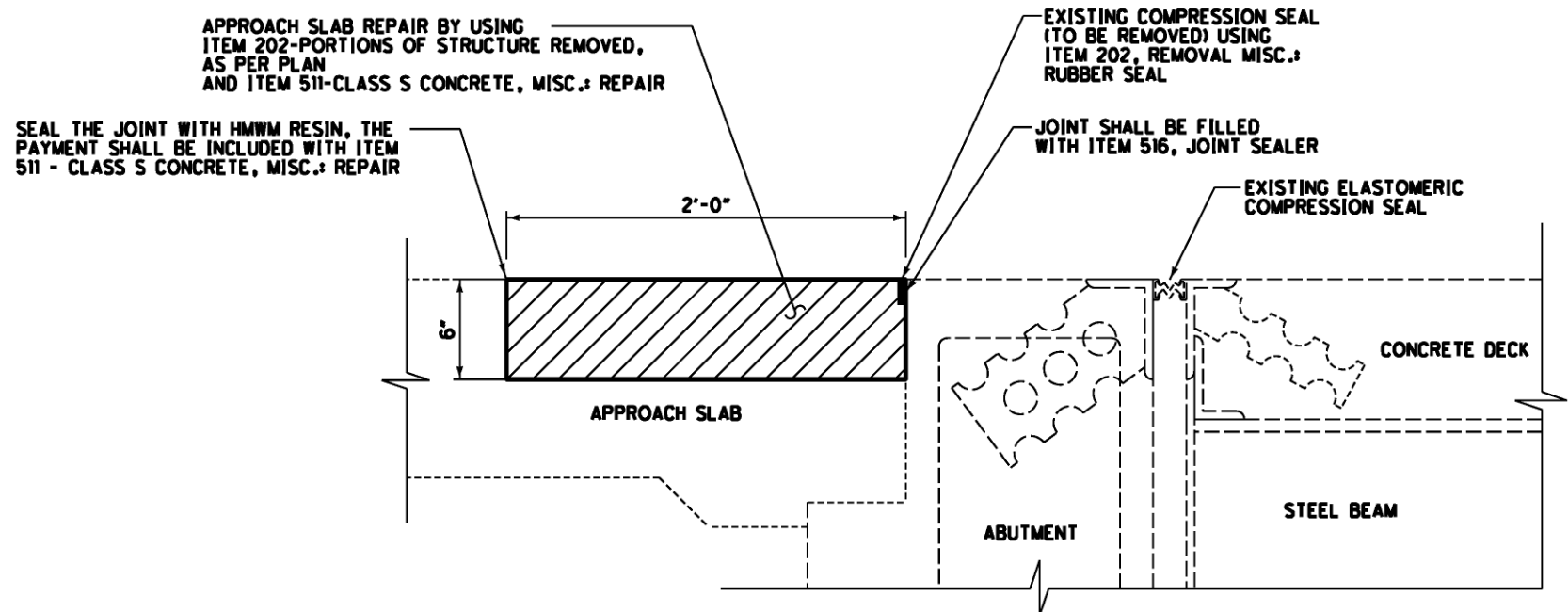
ITEM	QUANTITY	UNIT	DESCRIPTION
512	822	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO SHEET 1/4.

NOTES:

1. GUARDRAIL NOT SHOWN.
2. SEAL PIER CAP ENDS, DECK EDGES AND PARAPETS.

DESIGN FILE: I:\projects\77449\structures\Wayne\Way302126sd.dgn
WORKSTATION: sjzwik DATE: 12/23/2010 MODELNAME: Default



APPROACH SLAB REPAIR DETAIL

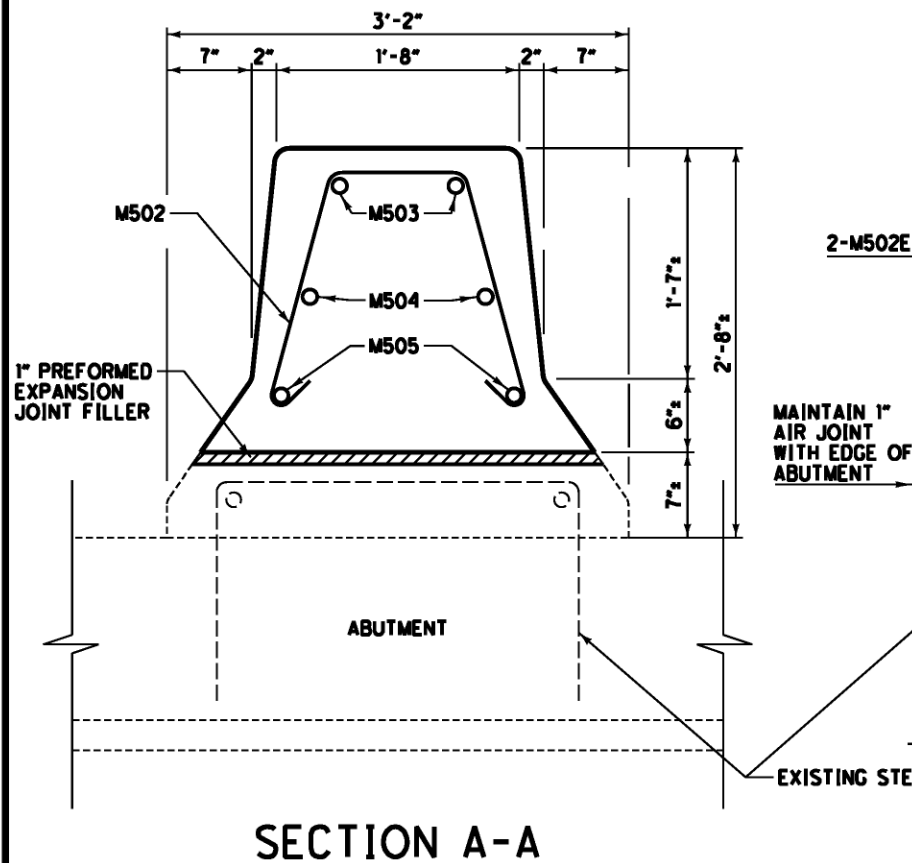
EXPANSION JOINT LENGTH = 36'-4" (4 JOINTS TO REPAIR)
REAR LEFT APPROACH SLAB PATCH = 2'W x 8'L x 6"D
FORWARD LEFT APPROACH SLAB PATCH = 2'W x 36'-4"L x 6"D

ITEM	QUANTITY	UNIT	DESCRIPTION
202	145	FT	REMOVAL MISC.: RUBBER SEAL
202	2	CU YD	PORTIONS OF STURCTURE REMOVED, AS PER PLAN
511	2	CU YD	CLASS S CONCRETE, MISC.: REPAIR
516	145	FT	JOINT SEALER

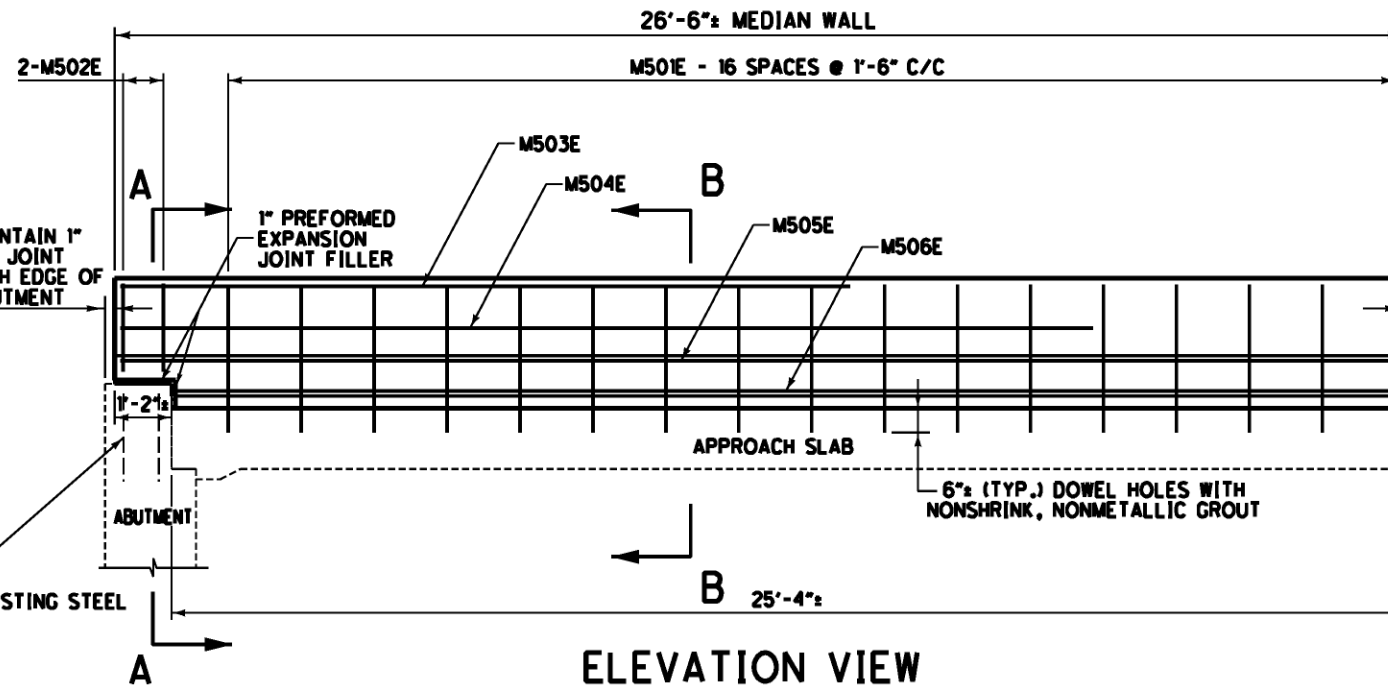
ALL QUANTITIES CARRIED TO SHEET 1/4.

- NOTES:
- 1. GUARDRAIL NOT SHOWN.
 - 2. PRIOR TO SEALING THE EXPANSION JOINT USING ITEM 516 ON BOTH STRUCTURES, THE EXISTING COMPRESSION/RUBBER SEAL SHALL BE REMOVED USING ITEM 202 REMOVAL MISC.: RUBBER SEAL.

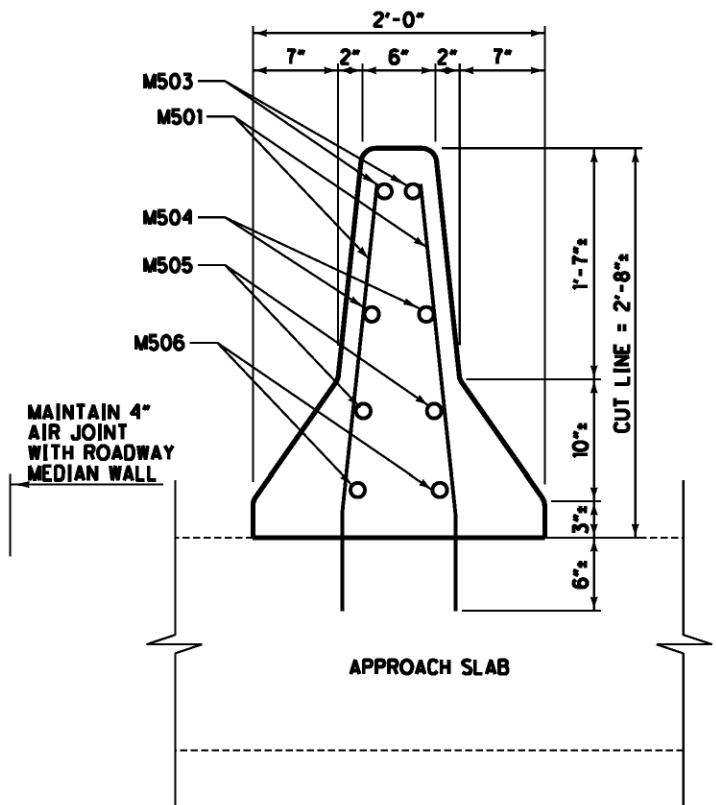
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WORKSTATION: sjuzwik
DATE: 12/23/2010
MODELNAME: Default



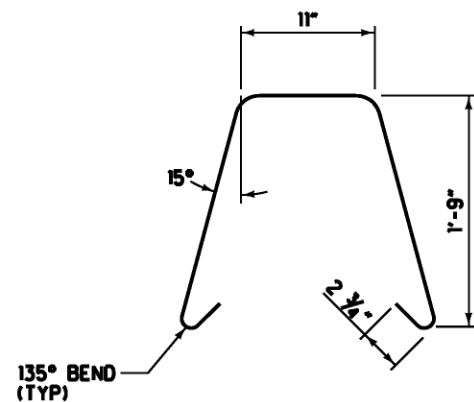
SECTION A-A



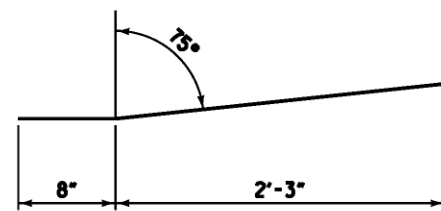
ELEVATION VIEW



SECTION B-B



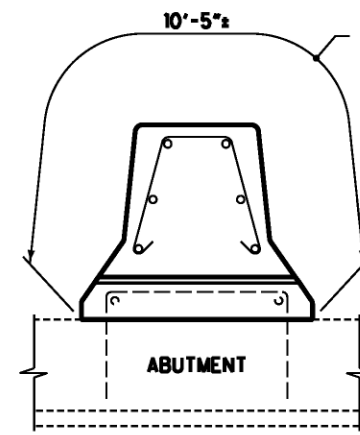
M502



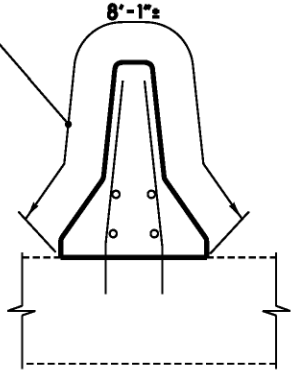
M501

REINFORCING STEEL LIST (EPOXY COATED)

MEDIAN BARRIER WALL				
MARK	NO.	LENGTH	WEIGHT	SHAPE
M501	68	3'-0"	214	B
M502	4	5'-3"	22	B
M503	4	15'-0"	63	S
M504	4	20'-0"	84	S
M505	4	26'-0"	109	S
M506	4	24'-11"	105	S
TOTAL			597	



APPROACH SLAB
MEDIAN PARAPET
TO BE SEALED

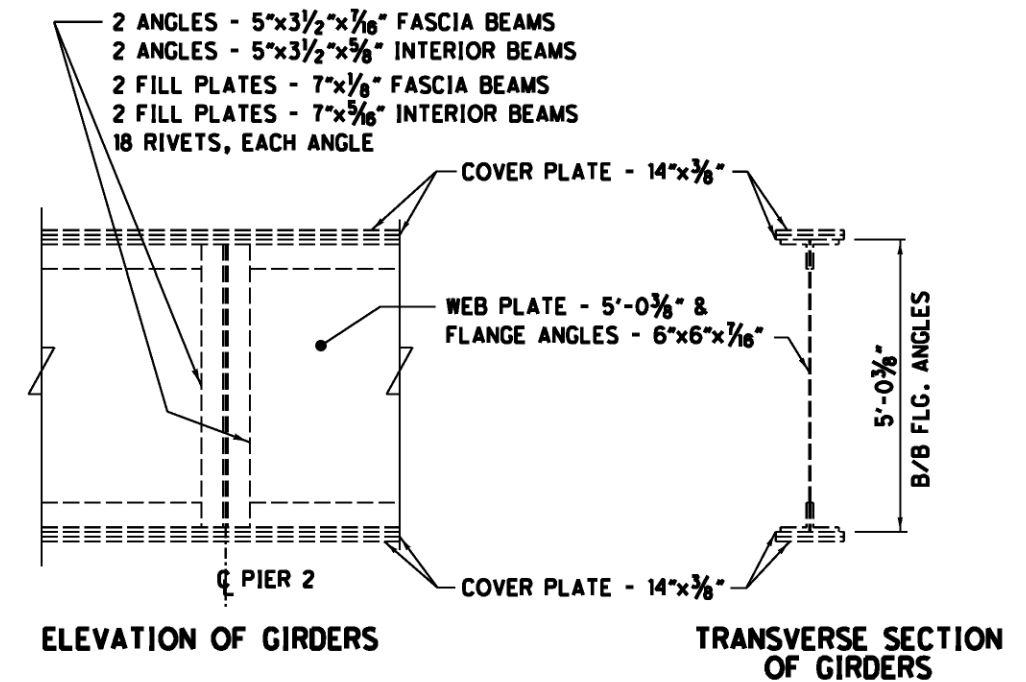
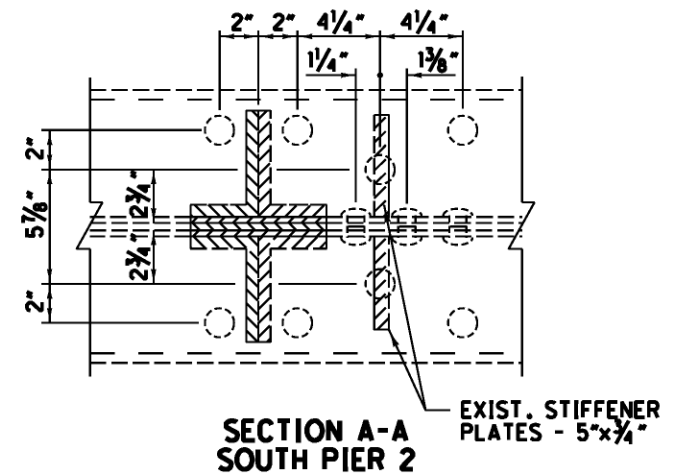
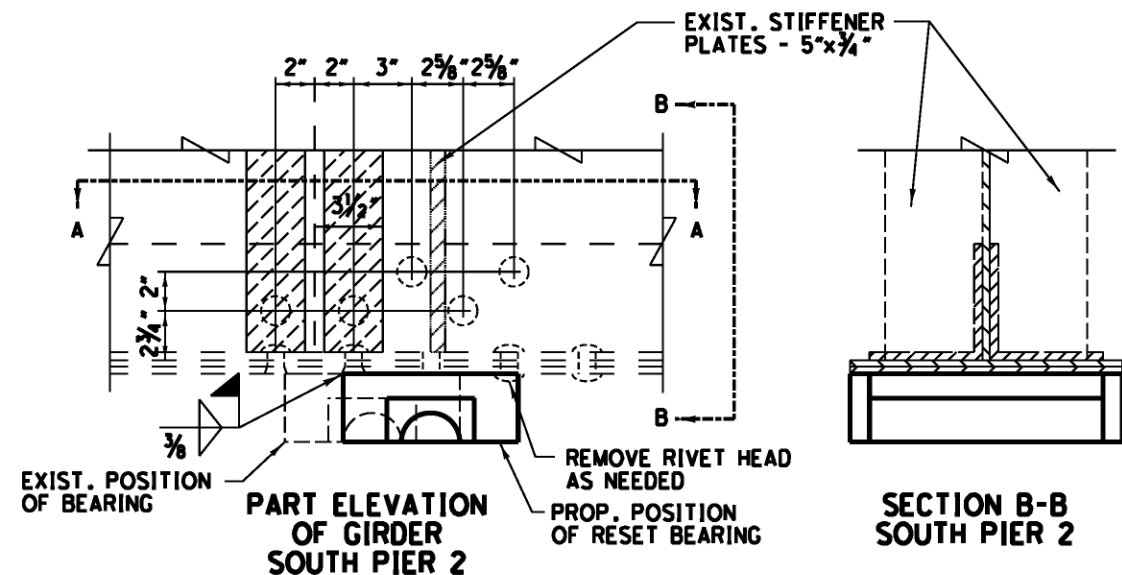
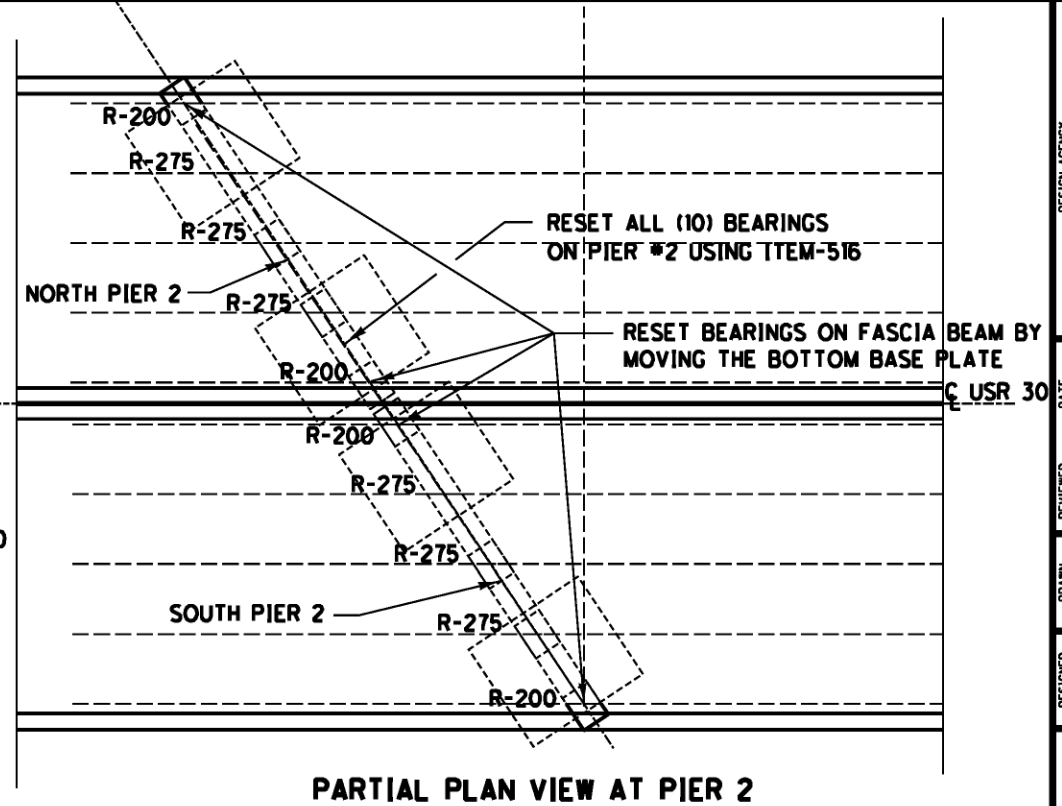
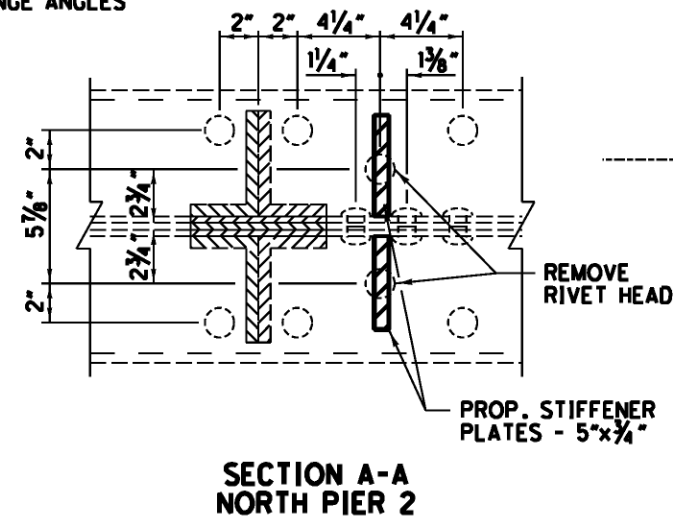
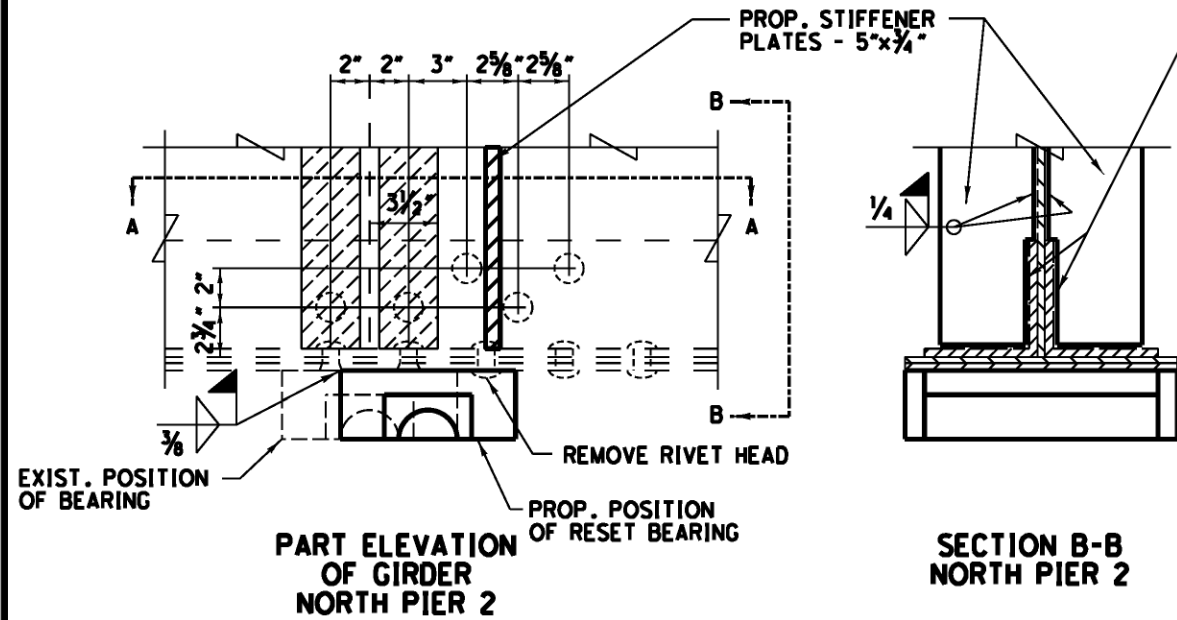


ITEM	QUANTITY	UNIT	DESCRIPTION
202	8	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
509	597	POUND	EPOXY COATED REINFORCING STEEL
510	68	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT
511	8	CU.YD	CONCRETE, MISC.: CLASS C CONCRETE, MEDIAN WALL
512	54	SO YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
516	5	SO FT	1" PREFORMED EXPANSION JOINT FILLER

NOTES:

- GUARDRAIL NOT SHOWN.
- THE MEDIAN WALL ON THE APPROACH SLABS SHALL BE REMOVED WITH ITEM 202 PORTIONS OF STRUCTURE REMOVED, APP. THE NEW MEDIAN WALL SHALL BE CONSTRUCTED AS DETAILED WITH ITEMS 509, 510, 511 & 516.
- SEAL APPROACH SLAB MEDIAN PARAPETS.

ALL QUANTITIES CARRIED TO SHEET 1/4.



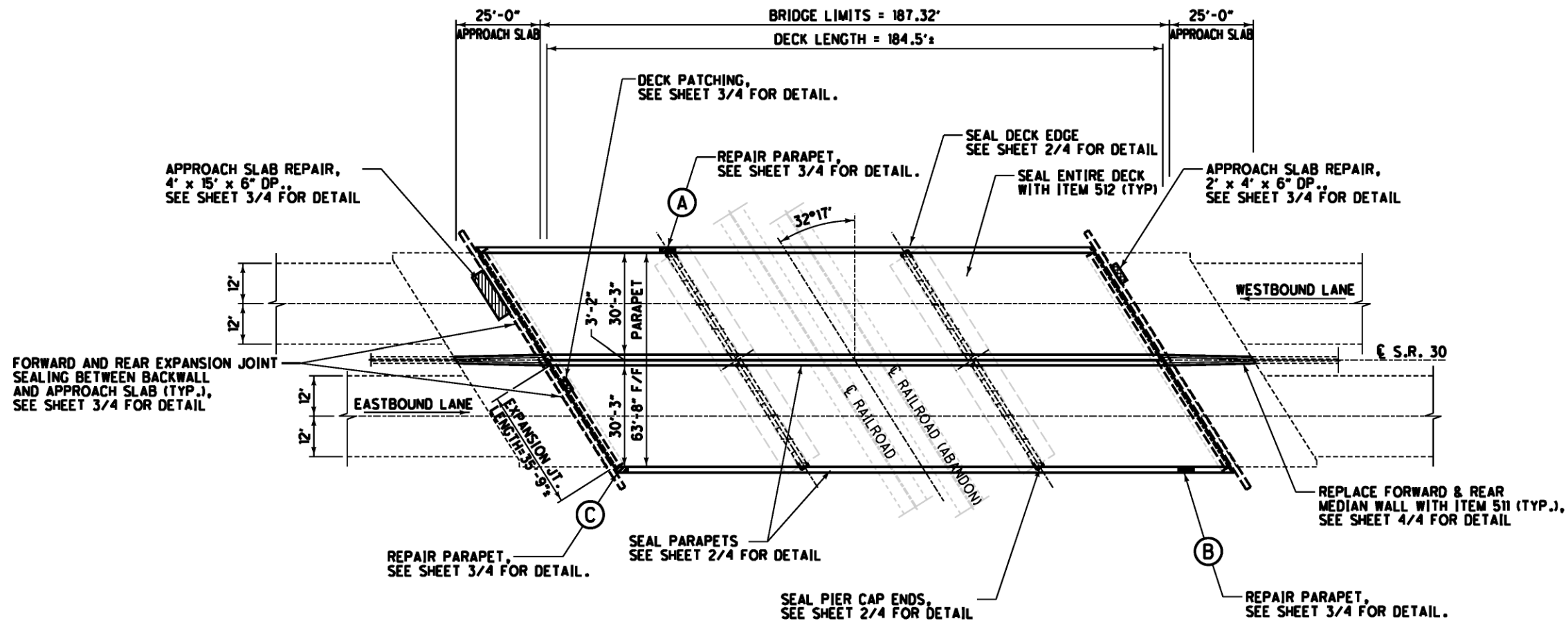
ITEM	QUANTITY	UNIT	DESCRIPTION
513	383	POUND	STRUCTURAL STEEL MEMBERS, LEVEL 4
514	LUMP		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL
514	LUMP		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT
514	LUMP		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT
514	LUMP		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT
514	1	MANHOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL
514	3	EACH	FINAL INSPECTION REPAIR
516	4	EACH	RESET BEARING, AS PER PLAN (R-200)
516	3	EACH	RESET BEARING, AS PER PLAN (NORTH PIER 2)
516	3	EACH	RESET BEARING, AS PER PLAN (SOUTH PIER 2)
516	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET

NOTES:

1. THE NORTH AND SOUTH PIER 2 FASCIA BEAMS (R-200) BEARINGS SHALL BE RESET BY MOVING THE BOTTOM BASE PLATE. THE INTENT IS TO MOVE THE BASE PLATE FOR THE BEARINGS THAT HAVE ROOM ON THE PIER CAP WITHOUT OVERHANGING AT A TOTAL OF 4 LOCATIONS.
2. THE SOUTH PIER 2 BEARINGS (EXCLUDING THE 2 FASCIA BEAMS) SHALL BE RESET AS DETAILED ABOVE AT A TOTAL OF 3 LOCATIONS. THE NORTH PIER 2 BEARINGS (EXCLUDING THE 2 FASCIA BEAMS) SHALL BE RESET AND NEW STIFFENERS SHALL BE INSTALLED AS DETAILED ABOVE AT A TOTAL OF 3 LOCATIONS.
3. AFTER RIVET HEAD IS REMOVED AND NEW STIFFENER IS IN PLACE, COVER RIVET HOLE WITH WELD METAL TO MAKE WATER TIGHT.
4. THE PROPOSED STIFFENERS, RELOCATED INTERIOR BEAM BEARINGS AND ANY OF THE EXISTING INTERIOR BEAMS WITH A DAMAGED PAINT COATING SHALL BE PAINTED USING ITEMS 514. THE FINISH COAT COLOR SHALL CLOSELY MATCH THE EXISTING COLOR.
5. WHILE A BEAM IS JACKED AND TEMPORARILY SUPPORTED, THE LANE ABOVE THE BEAM SHALL BE CLOSED TO TRAFFIC. TRAFFIC SHOULD BE SHIFTED TO THE LANE FOR WHICH THE BEAMS ARE NOT BEING SUPPORTED. THE CONTRACTOR SHALL MAINTAIN ONE LANE OF TRAFFIC AT ALL TIMES. PAYMENT FOR THE LANE CLOSURES SHALL BE INCLUDED WITH MAINTENANCE OF TRAFFIC.

DESIGN FILE: I:\projects\77449\structures\Wayne\Way302135sd.dgn
WORKSTATION: spjzwik DATE: 12/23/2010 MODELNAME: Default



ITEM	QUANTITY	UNIT	DESCRIPTION
202	10	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
202	143	FT	REMOVAL MISC.: RUBBER SEAL
509	597	POUND	EPOXY COATED REINFORCING STEEL
510	68	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT
511	2	CU YD	CLASS S CONCRETE, MISC.: REPAIR
511	8	CU YD	CONCRETE, MISC.: CLASS C CONCRETE, MEDIAN WALL
512	609	SO YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	1237	SO YD	TREATING OF CONCRETE BRIDGE DECK WITH SRS
516	5	SO FT	1" PREFORMED EXPANSION JOINT FILLER
516	143	FT	JOINT SEALER

NOTES:

1. GUARDRAIL NOT SHOWN.
2. PARAPETS, DECK EDGES AND PIER CAP ENDS SHALL BE SEALED WITH ITEM-512 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)SEE SHEET 2/4 FOR DETAILS.
3. DECK SHALL BE SEALED WITH ITEM-512, TREATING OF CONCRETE BRIDGE DECK WITH SRS.
4. FOR PARAPET REPAIRS, APPROACH SLAB REPAIRS & DECK PATCHING SEE SHEET 3/4.

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET



DESIGN AGENCY
0001 DISTRICT THREE
OFFICE OF PRODUCTION

DATE
4/10
REVIEWED
RDN
STRUCTURE FILE NUMBER
8502374

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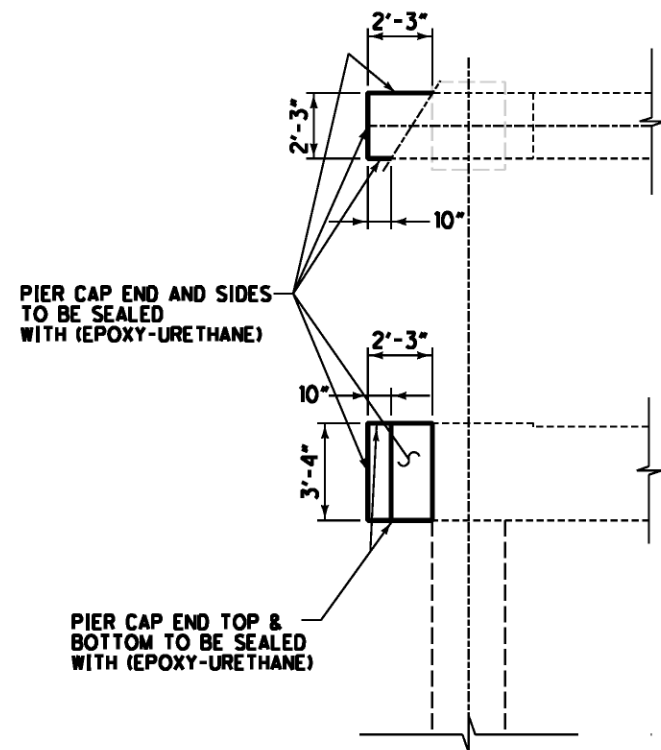
PLAN VIEW
WAY-30-2135
OVER WHEELING & LAKE ERIE RAILROAD

WAY-30-19.81
WAY-172-0.00

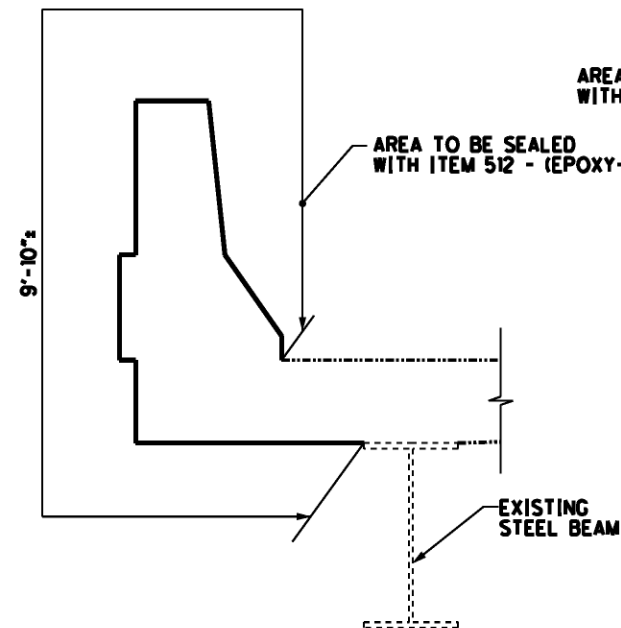
1 / 4

65
70

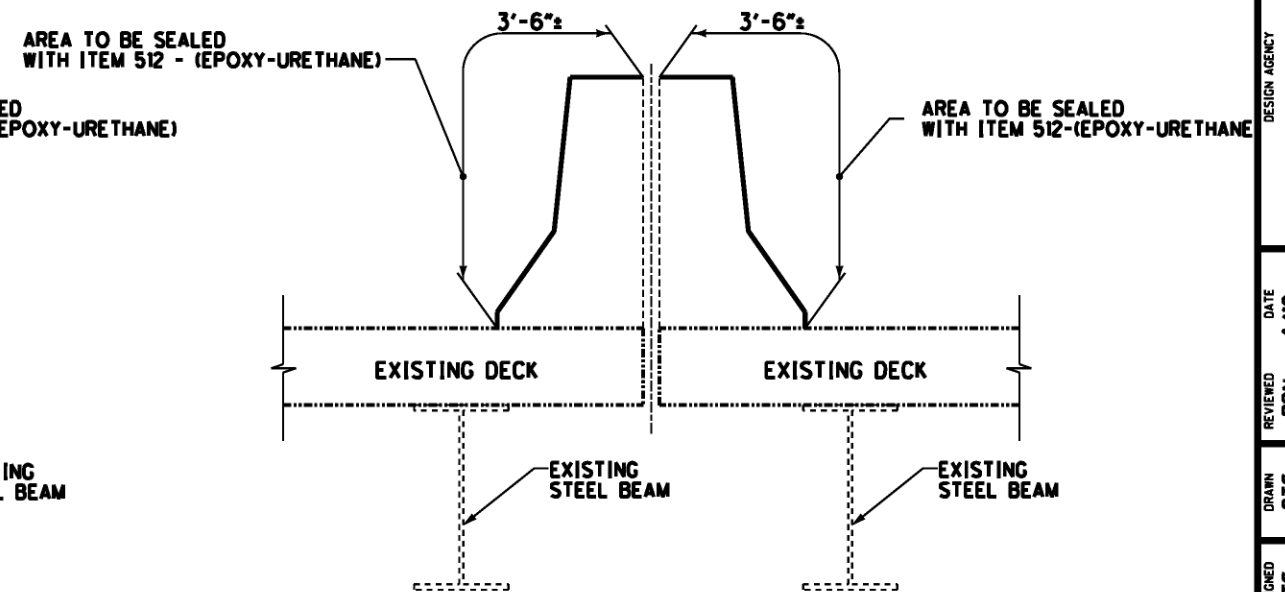
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WORKSTATION: sjuzwik DATE: 12/23/2010 MODELNAME: Default



TYPICAL PIER CAP SEALING
PIER CAP WIDTH = 2'-3"



TYPICAL SECTION AT PARAPET
LENGTH = 184.5'



TYPICAL SECTION AT MEDIAN PARAPET
LENGTH = 184.5'

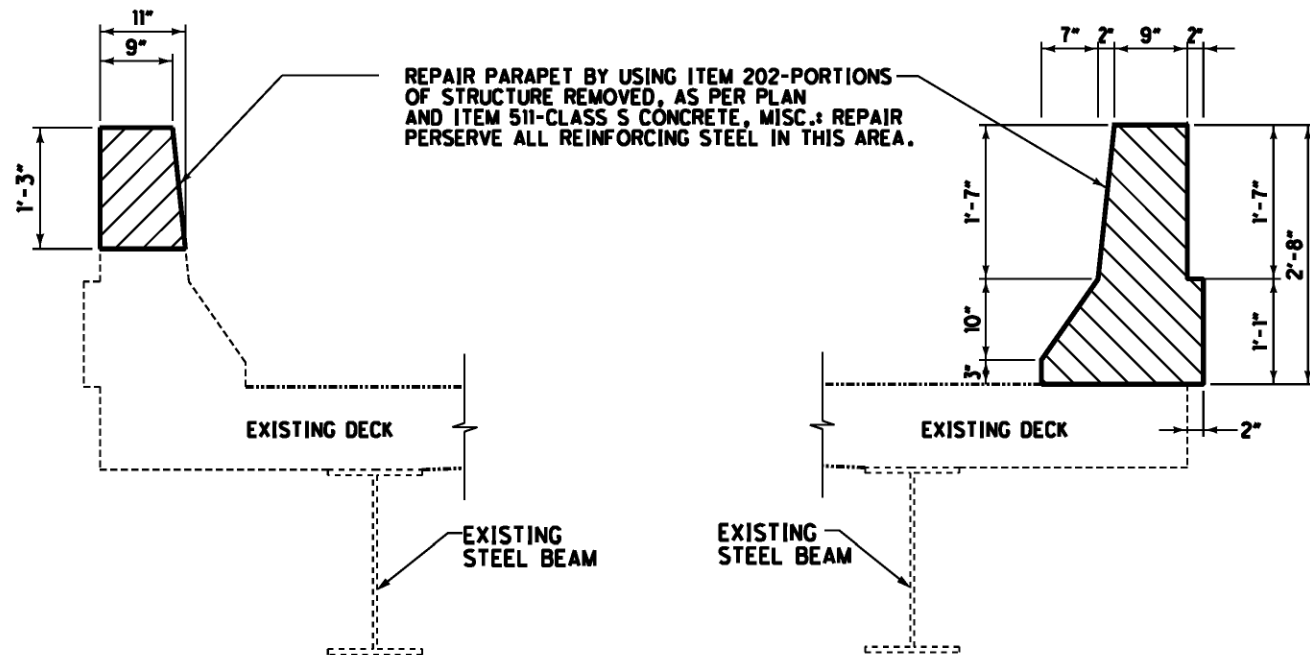
ITEM	QUANTITY	UNIT	DESCRIPTION
512	555	SO YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO SHEET 1/4.

NOTES:

1. GUARDRAIL NOT SHOWN.
2. SEAL PIER CAP ENDS, DECK EDGES AND PARAPETS.

DESIGN FILE: I:\projects\77449\structures\Wayne\Way302135sd.dgn
WORKSTATION: sjzwik DATE: 12/23/2010 MODELNAME: Default

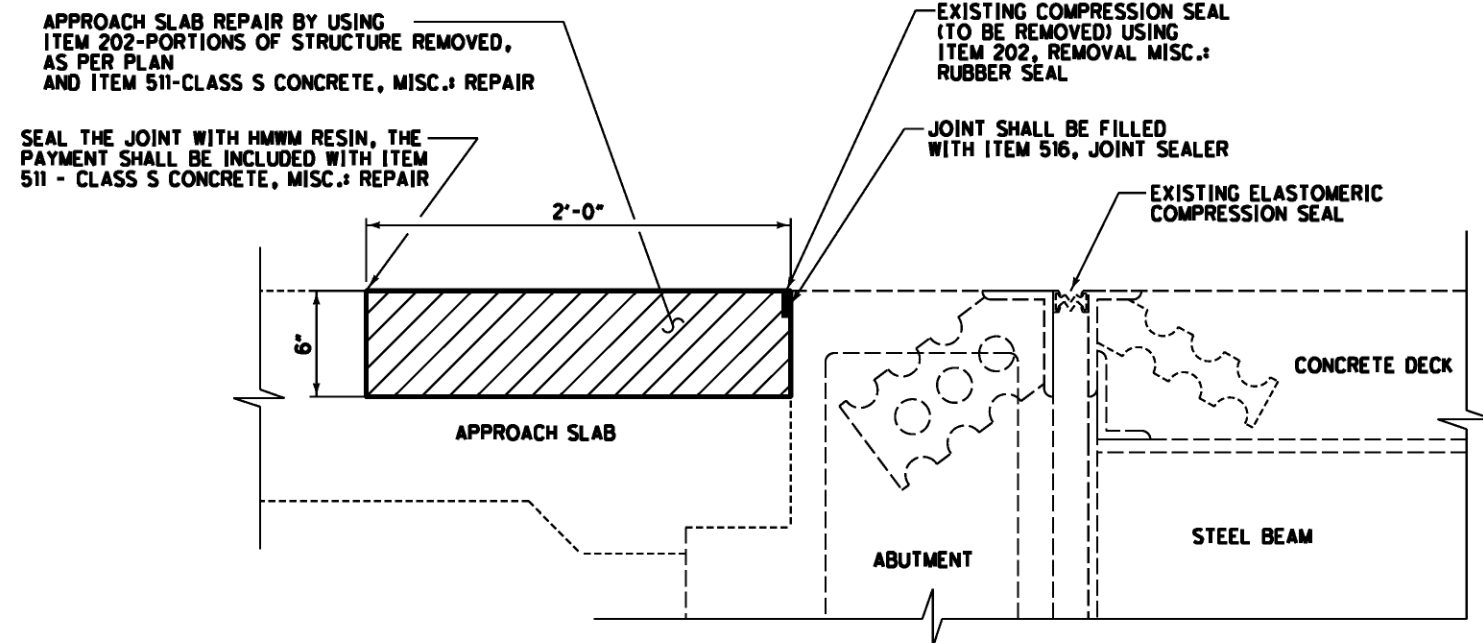


TYPICAL SECTION
AT PARAPET

- (A) LENGTH = 4'-6"
(B) LENGTH = 1'-6"

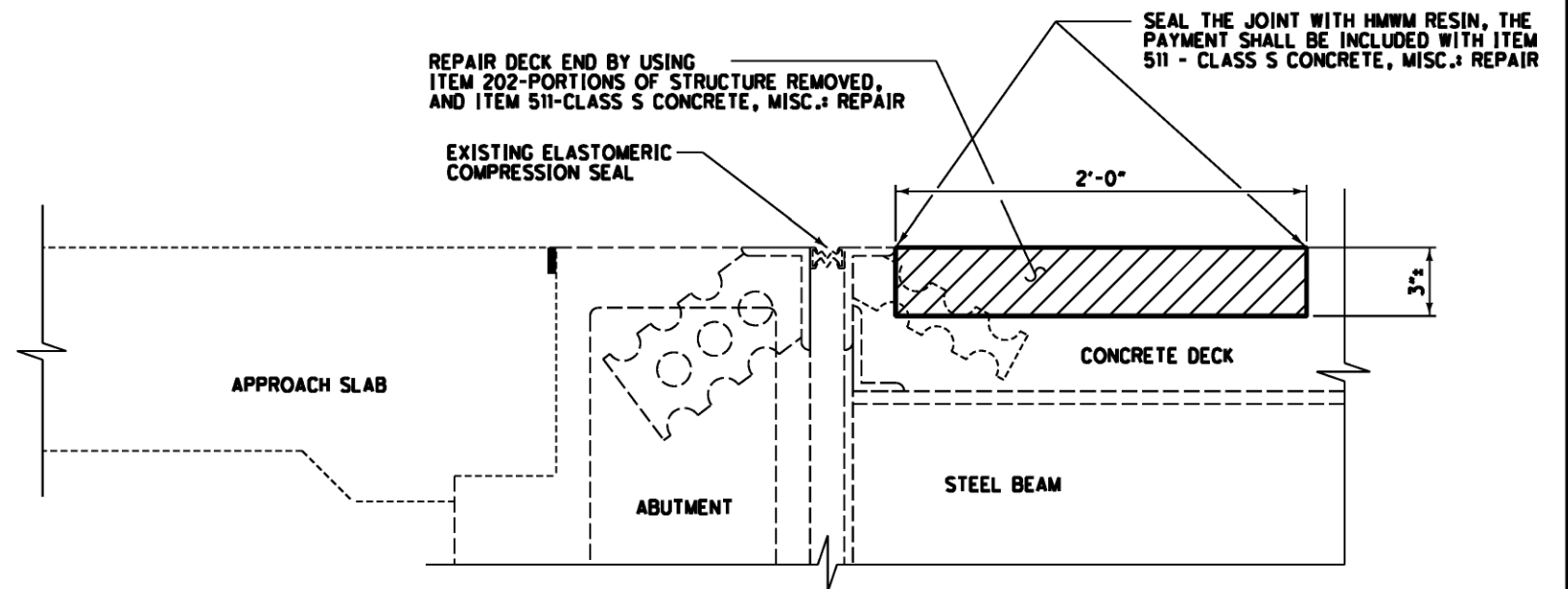
TYPICAL SECTION
AT PARAPET

- (C) LENGTH = 4'-0"



APPROACH SLAB REPAIR DETAIL

EXPANSION JOINT LENGTH = 35'-9" (4 JOINTS TO REPAIR)
FORWARD LEFT DRIVING LANE APPROACH SLAB PATCH = 2'W x 4'L x 6"D
REAR LEFT DRIVING LANE APPROACH SLAB PATCH = 4'W x 15'L x 6"D



DECK END REPAIR DETAIL

REAR RIGHT AT LEFT WHEEL PATH OF PASSING LANE PATCH = 2'W x 4'L x 3" DEPTH OR TO SOUND CONC.
PRESERVE ALL STEEL IN THIS AREA.

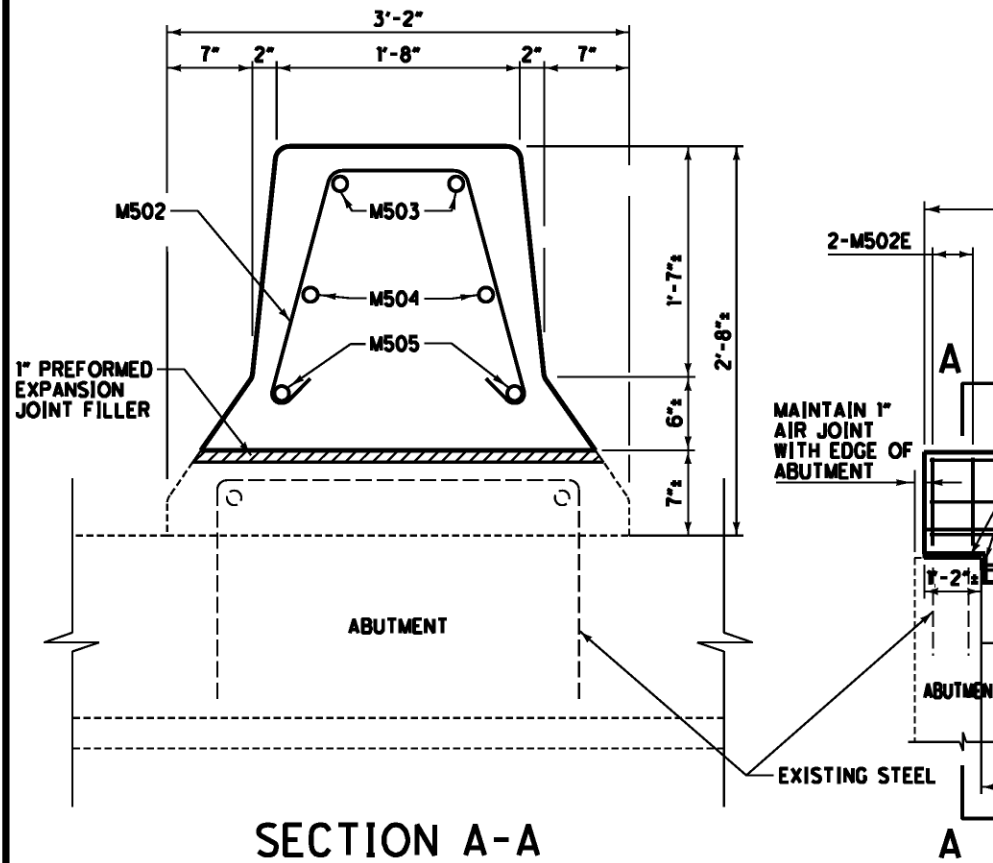
NOTES:

1. GUARDRAIL NOT SHOWN.
2. PRIOR TO SEALING THE EXPANSION JOINT USING ITEM 516 ON BOTH STRUCTURES, THE EXISTING COMPRESSION/RUBBER SEAL SHALL BE REMOVED USING ITEM 202 REMOVAL MISC.: RUBBER SEAL.

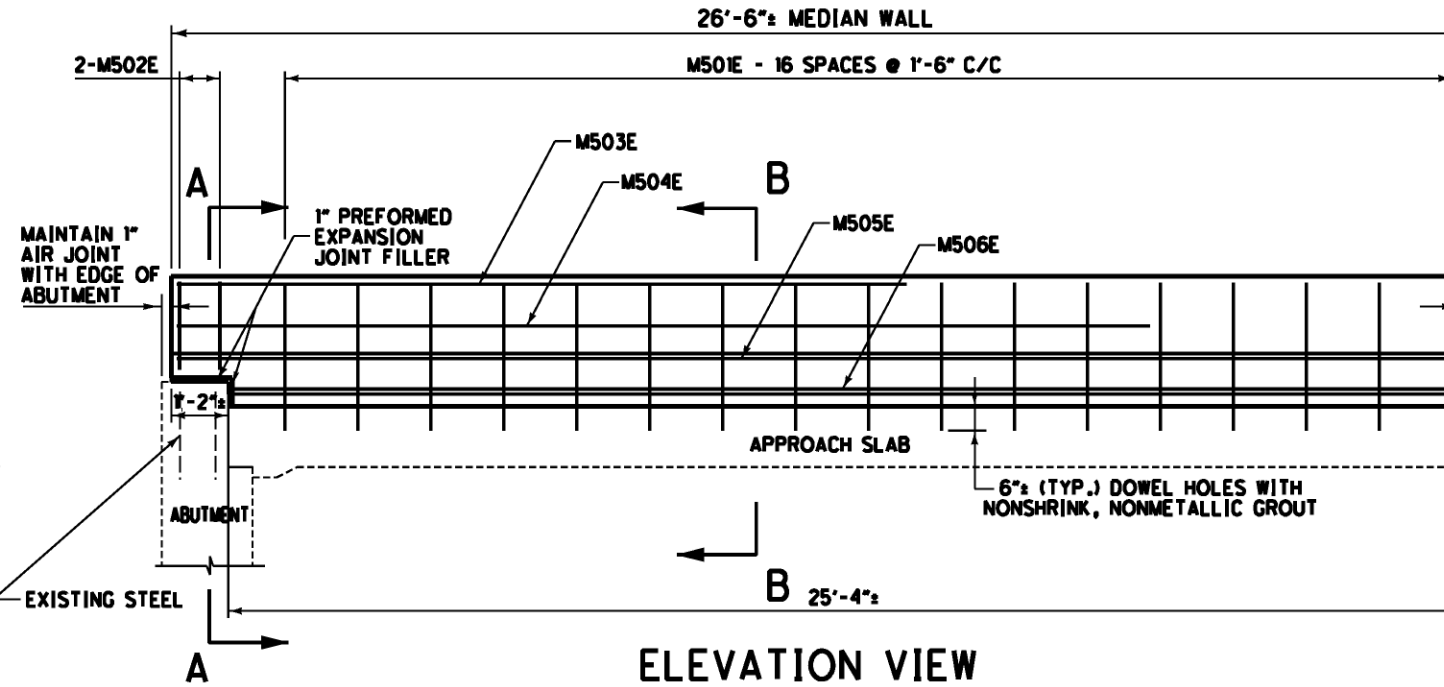
ITEM	QUANTITY	UNIT	DESCRIPTION
202	143	FT	REMOVAL MISC.: RUBBER SEAL
202	2	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
511	2	CU YD	CLASS S CONCRETE, MISC.: REPAIR
516	143	FT	JOINT SEALER

ALL QUANTITIES CARRIED TO SHEET 1/4.

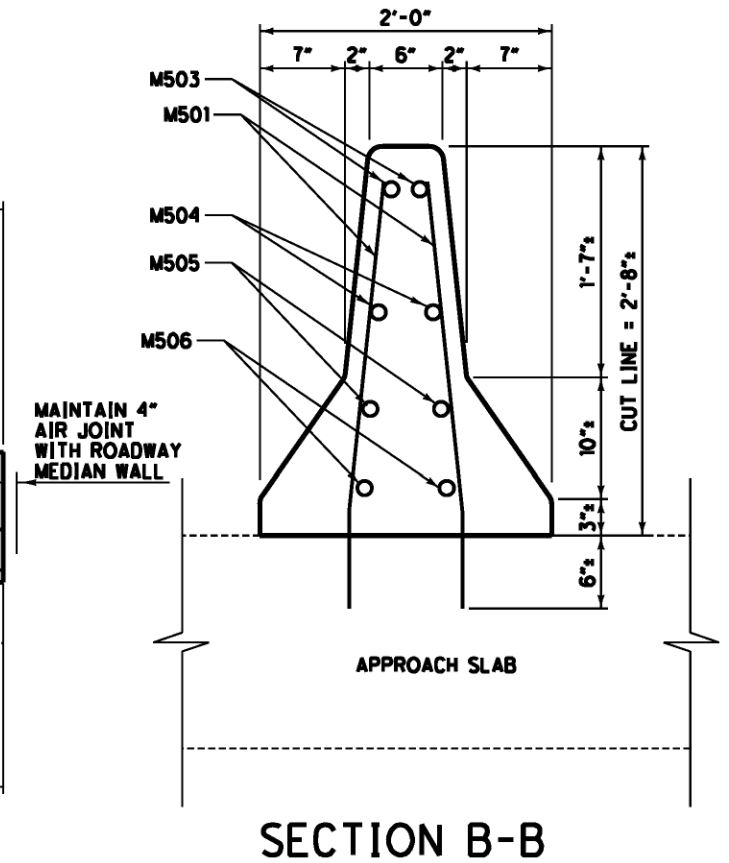
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WORKSTATION: sjuzwik DATE: 12/23/2010 MODELNAME: Default



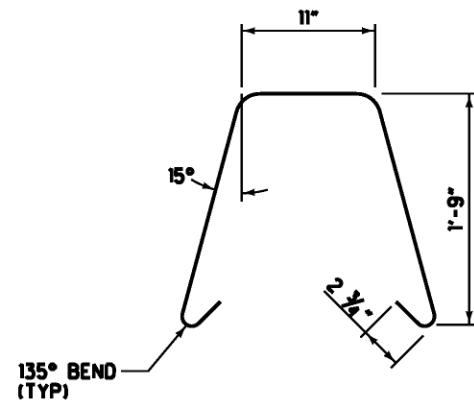
SECTION A-A



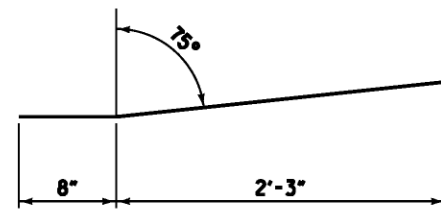
ELEVATION VIEW



SECTION B-B



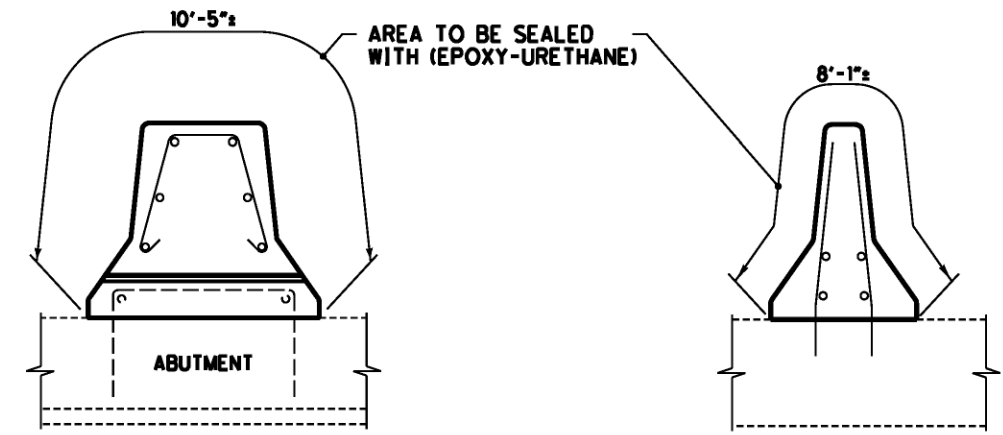
M502



M501

REINFORCING STEEL LIST (EPOXY COATED)

MEDIAN BARRIER WALL				
MARK	NO.	LENGTH	WEIGHT	SHAPE
M501	68	3'-0"	214	B
M502	4	5'-3"	22	B
M503	4	15'-0"	63	S
M504	4	20'-0"	84	S
M505	4	26'-0"	109	S
M506	4	24'-11"	105	S
TOTAL			597	



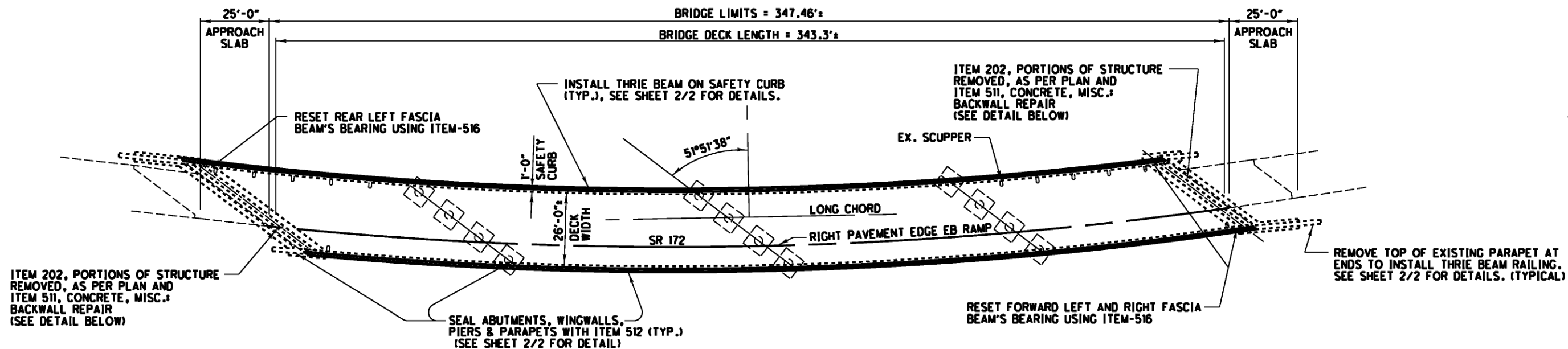
APPROACH SLAB
MEDIAN PARAPET
TO BE SEALED

ITEM	QUANTITY	UNIT	DESCRIPTION
202	8	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
509	597	POUND	EPOXY COATED REINFORCING STEEL
510	68	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT
511	8	CU YD	CONCRETE, MISC.; CLASS C CONCRETE, MEDIAN WALL
512	54	SO YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
516	5	SO FT	1" PREFORMED EXPANSION JOINT FILLER

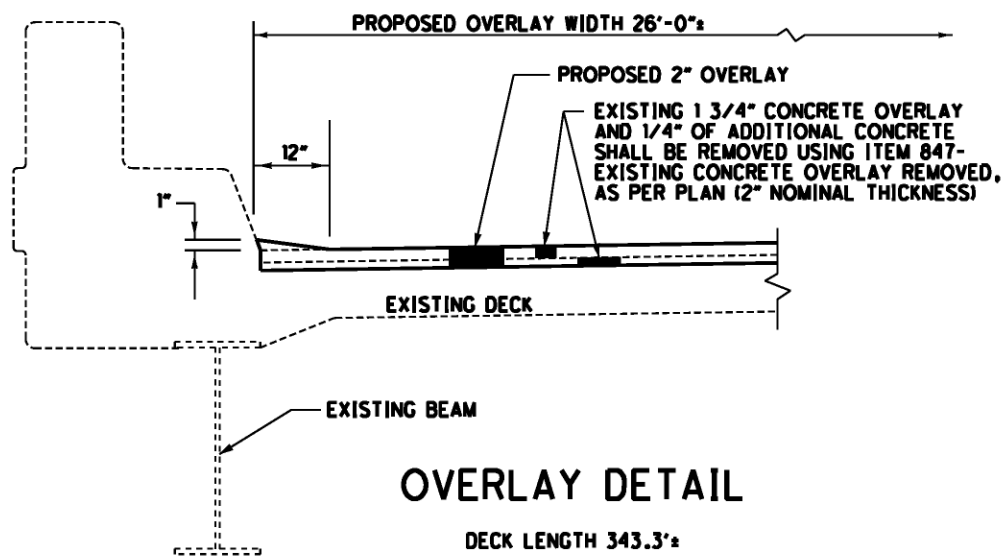
NOTES:

- GUARDRAIL NOT SHOWN.
- THE MEDIAN WALL ON THE APPROACH SLABS SHALL BE REMOVED WITH ITEM 202 PORTIONS OF STRUCTURE REMOVED, APP. THE NEW MEDIAN WALL SHALL BE CONSTRUCTED AS DETAILED WITH ITEMS 509, 510, 511 & 516.
- SEAL APPROACH SLAB MEDIAN PARAPETS.

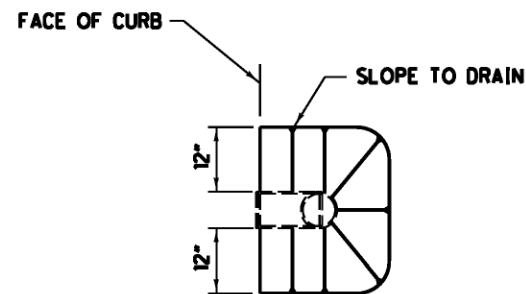
ALL QUANTITIES CARRIED TO SHEET 1/4.



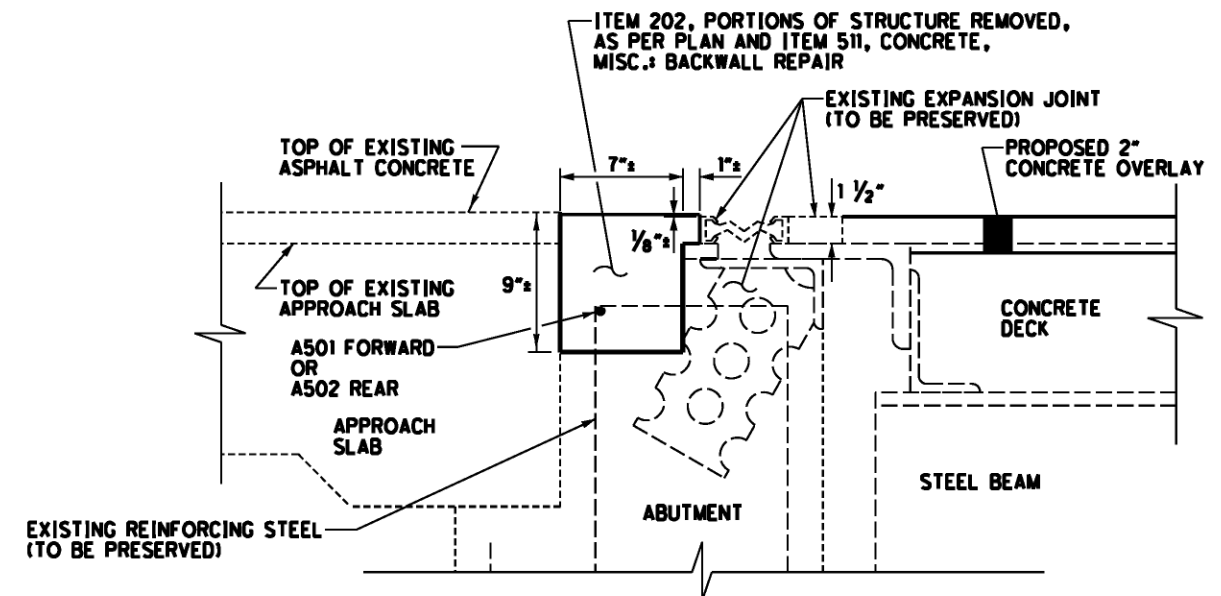
PLAN VIEW



OVERLAY DETAIL



PLAN VIEW AT SCUPPER



TYPICAL BACKWALL/APPROACH SLAB SECTION

HORIZONTAL LAP LENGTHS
FOR BARS A502:
#5 BARS = 3'-5"

MARK	NUMBER	LENGTH	WEIGHT	TYPE
A501	1	38'-5"	40	STRAIGHT
A502	2	26'-4"	55	STRAIGHT
		TOTAL	95	

BACKWALL REPAIR LENGTH:
38'-11" FORWARD ABUTMENT
49'-9" REAR ABUTMENT

ITEM	QUANTITY	UNIT	DESCRIPTION
201	LUMP		CLEARING AND GRUBBING
202	1	CU YD	PORTIONS OF STRUCTURE REMOVED (PARAPET)
202	2	CU YD	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
509	95	POUND	EPOXY COATED REINFORCING STEEL
511	2	CU YD	CONCRETE, MISC.; BACKWALL REPAIR
SPECIAL	992	SO YD	SPECIAL - BRIDGE DECK GROOVING
512	1255	SO YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
516	3	EACH	RESET BEARING, AS PER PLAN
516	LUMP		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
517	763	FT	RAILING (THRIE BEAM RETROFIT), AS PER PLAN
621	11	EACH	RAISED PAVEMENT MARKER REMOVED
847	992	SO YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY, AS PER PLAN (2" THICK)
847	25	CU YD	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN
847	LUMP		TEST SLAB
847	992	SO YD	EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (2" NOMINAL THICKNESS)
847	27	SO YD	HAND CHIPPING

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET

NOTES:

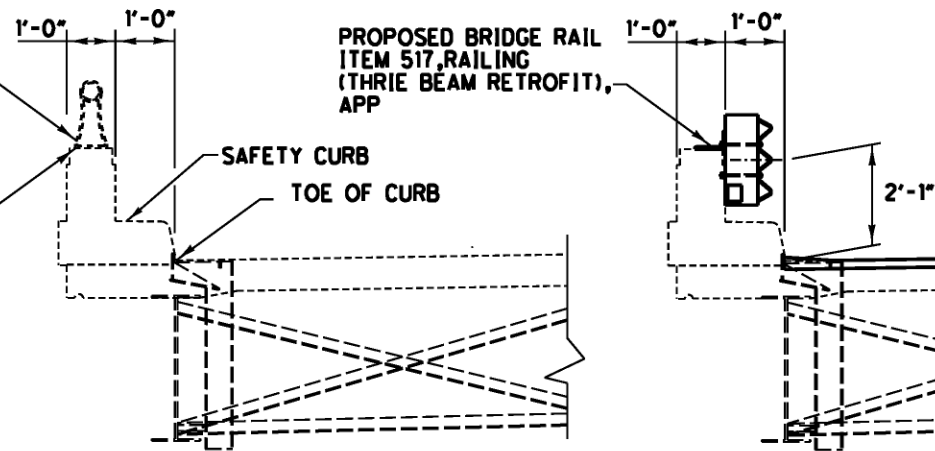
1. THE EXISTING APPROACH GUARDRAIL NOT SHOWN.
2. PARAPETS, PIERS, ABUTMENTS AND WINGWALLS SHALL BE SEALED WITH ITEM-512 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)SEE SHEET 2/2 FOR DETAILS.
3. THE EXISTING 1 3/4" THICK OVERLAY AND 1/4" OF ADDITIONAL DECK THICKNESS, 26'-0" WIDE SHALL BE REMOVED USING ITEM 847-EXISTING CONCRETE OVERLAY REMOVED, AS PER PLAN (2" NOMINAL THICKNESS).
4. 26'-0" OF THE BRIDGE DECK SHALL BE OVERLAID USING ITEM 847-SUPERPLASTICIZED DENSE CONCRETE OVERLAY, AS PER PLAN (2" THICK).
5. THE PROPOSED OVERLAY SHALL BE SLOPED TO DRAIN TO THE EXISTING SCUPPERS. THE EXISTING SCUPPERS SHALL NOT BE DISTURBED.
6. THE PROPOSED OVERLAY PROFILE ELEVATIONS SHALL MATCH THE EXISTING BRIDGE DECK PROFILE ELEVATIONS.
7. CLEARING AND GRUBBING QUANTITY HAS BEEN PROVIDED TO CLEAR TREES OR LIMBS IN CONFLICT WITH PERFORMING PROPOSED SEALING OF CONCRETE SURFACES.

DESIGN FILE: I:\projects\77449\structures\Wayne\Wayl720020sd.dgn
WORKSTATION: sjuzwik DATE: 12/23/2010 MODELNAME: Default

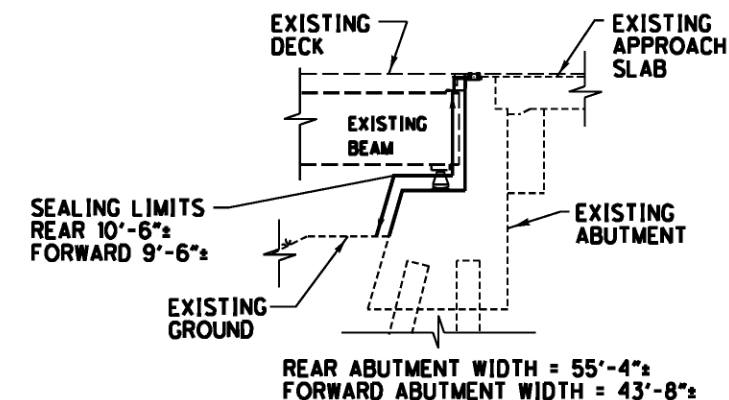
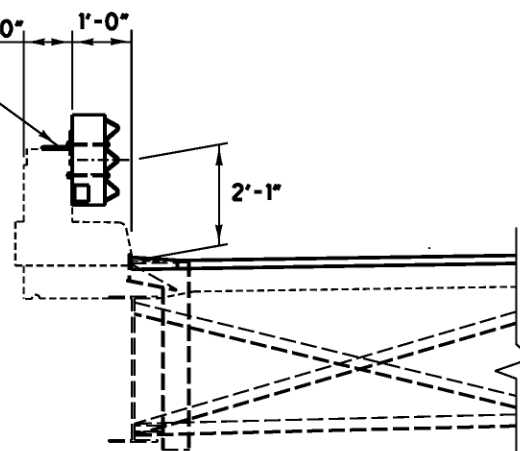
ANCHOR BOLTS SHALL CUT FLUSH
(SEE NOTE 1) COST INCLUDED
IN ITEM 517 RAILING (THRIE BEAM
RETROFIT), APP

ALUMINUM RAILING TO BE
REMOVED USING ITEM 517
RAILING (THRIE BEAM
RETROFIT), APP

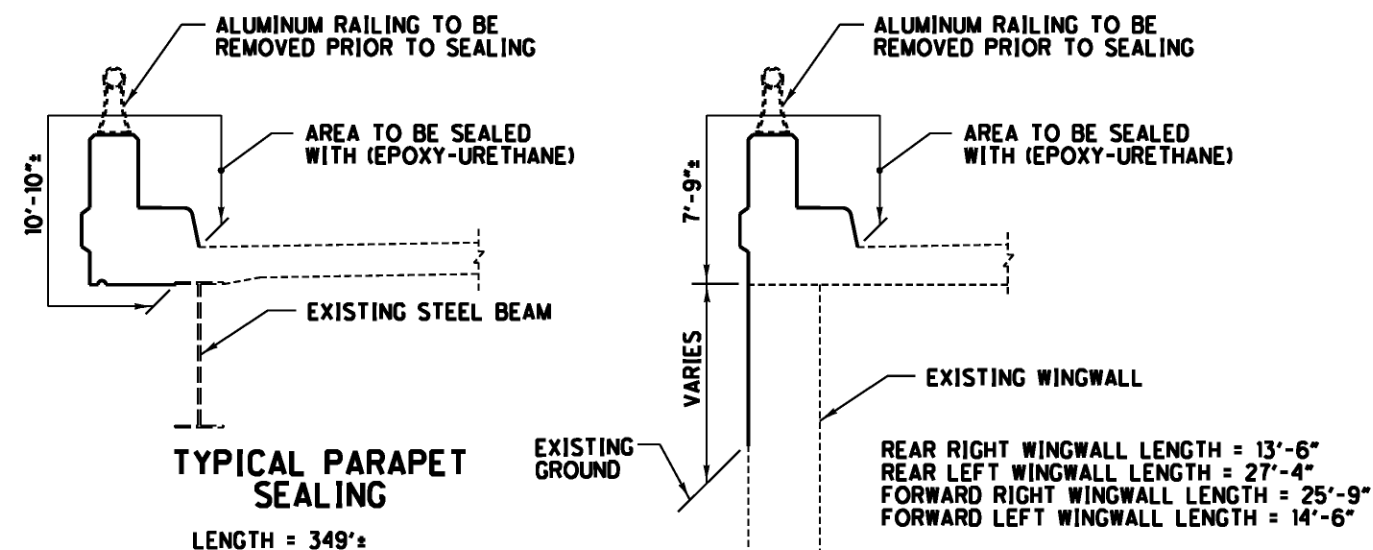
EXISTING PARTIAL
TRANSVERSE SECTION



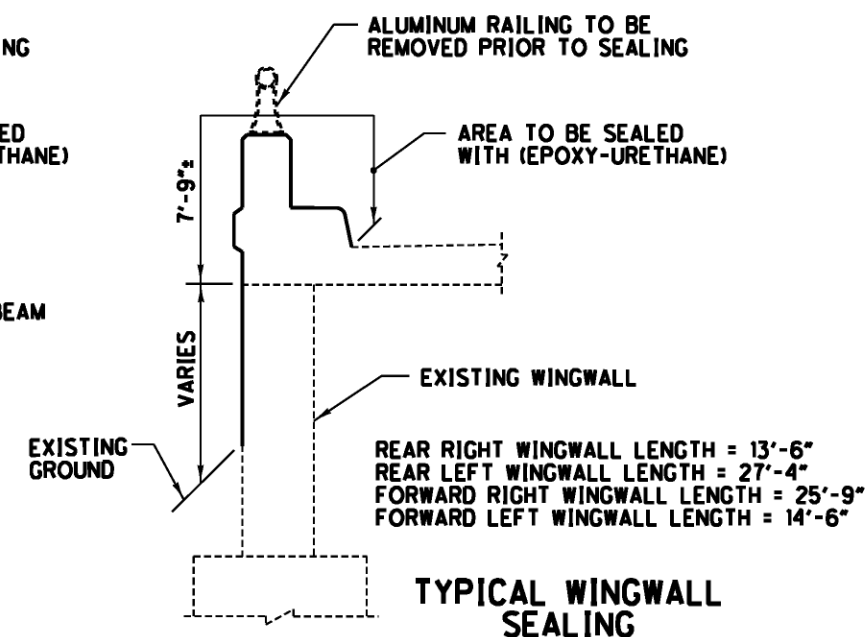
PROPOSED PARTIAL
TRANSVERSE SECTION



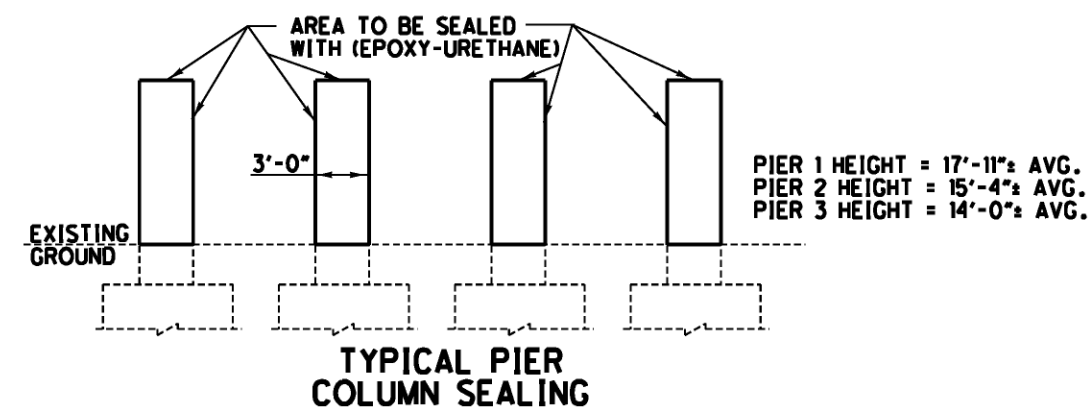
TYPICAL ABUTMENT SEALING



TYPICAL PARAPET
SEALING



TYPICAL WINGWALL
SEALING



TYPICAL PIER
COLUMN SEALING

NOTES:

1. THE ALUMINUM RAILING AND POSTS SHALL BE REMOVED. THE ANCHOR BOLTS AND #5 REBARS SHALL CUT FLUSH WITH THE TOP OF THE CONCRETE WALL.
2. REMOVE TOP OF PARAPET ON WINGWALLS.
3. THRIE BEAM RAILING SHALL BE INSTALLED AS PER DETAILS AND NOTES ON STANDARD DRAWING TBR-91
4. PARAPETS, PIERS, ABUTMENTS AND WINGWALLS SHALL BE SEALED WITH ITEM-512 SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

ITEM	QUANTITY	UNIT	DESCRIPTION
202	1	CU YD	PORTIONS OF STRUCTURE REMOVED (PARAPET)
512	1255	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
517	763	FT	RAILING (THRIE BEAM RETROFIT), AS PER PLAN

ALL QUANTITIES CARRIED TO SHEET 1/2

EXISTING PARTIAL
ELEVATION VIEW AT ABUTMENT

