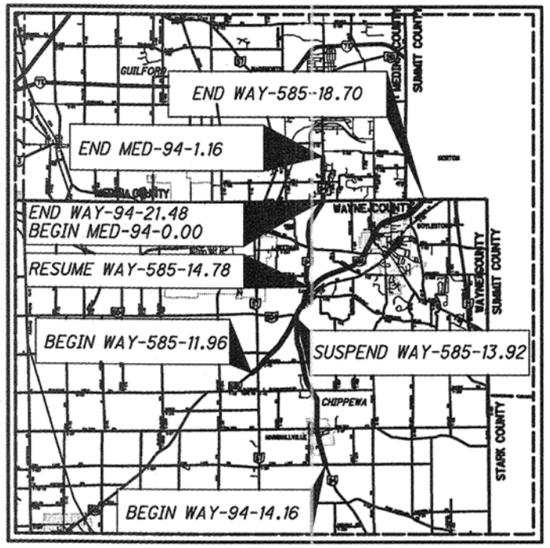


LOCATION MAP

LATITUDE: N 41° 57' 2" LONGITUDE: W 81° 44' 24"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE & DIVIDED HIGHWAY

UNDIVIDED STATE & FEDERAL ROUTES

OTHER ROADS

DESIGN EXCEPTIONS:

NONE

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

VILLAGE OF DOYLESTOWN
VILLAGE OF MARSHALLVILLE
BAUGHMAN TOWNSHIP
CHIPPEWA TOWNSHIP

MILTON TOWNSHIP
WADSWORTH TOWNSHIP
MEDINA COUNTY
WAYNE COUNTY

INDEX OF SHEETS:

PROJECT DESCRIPTION

THIS PROJECT WILL INCLUDE RESURFACING WITH ASPHALT CONCRETE, PAVEMENT REPAIRS, MINOR GUARDRAIL WORK, STRUCTURE MAINTENANCE, AND PAVEMENT MARKINGS.

EARTH DISTURBED AREAS

EARTH DISTURBED AREA: N/A ACRES (MAINTENANCE PROJECT)

ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A ACRES (MAINTENANCE PROJECT)

NOTICE OF INTENT EARTH DISTURBED AREA: N/A ACRES (MAINTENANCE PROJECT)

2013 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 DETOURS WILL BE PROVIDED AS INDICATED ON SHEETS 7-8.

APPROVED _____
DATE 12-1-14 DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE 12-9-14 DIRECTOR, DEPARTMENT OF TRANSPORTATION

ENGINEER'S SEAL:

STATE OF OHIO
KARLA R. BOHMER
E-76834
REGISTERED PROFESSIONAL ENGINEER

SIGNED: Karla R. Bohmer
DATE: 11/28/14

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	7/18/14	MT-95.30	7/18/14	TC-41.20	10/18/13		
BP-4.1	7/19/13	MT-95.50	7/19/13	TC-42.20	10/18/13		
BP-7.1	7/18/14	MT-96.11	7/18/14	TC-52.10	10/18/13		
		MT-96.20	7/19/13	TC-52.20	7/18/14		
DM-4.3	7/19/13	MT-96.26	7/19/13	TC-61.30	7/18/14		
DM-4.4	7/20/12	MT-97.10	7/18/14	TC-65.10	1/17/14		
		MT-97.12	7/18/14	TC-65.11	7/18/14		
		MT-99.20	7/19/13	TC-71.10	1/17/14		
RM-1.1	7/18/14	MT-101.60	7/19/13	TC-82.10	10/18/13		
		MT-101.90	7/18/14				
		MT-105.10	7/19/13				
DBR-2-73	7/19/02						

SUPPLEMENTAL SPECIFICATIONS

800	1/21/15
821	4/20/12
832	1/17/14
846	4/18/14
856	4/18/14

SPECIAL PROVISIONS

PLANS PREPARED BY:

ODOT DISTRICT THREE PLANNING & ENGINEERING DEPT.

UNDERGROUND UTILITIES
CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG
CALL
1-800-362-2764
(TOLL FREE)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY
OIL & GAS PRODUCERS PROTECTIVE SERVICE CALL: 1-800-925-0988

FEDERAL PROJECT NO. E090924

PID NO. 86728

CONSTRUCTION PROJECT NO.

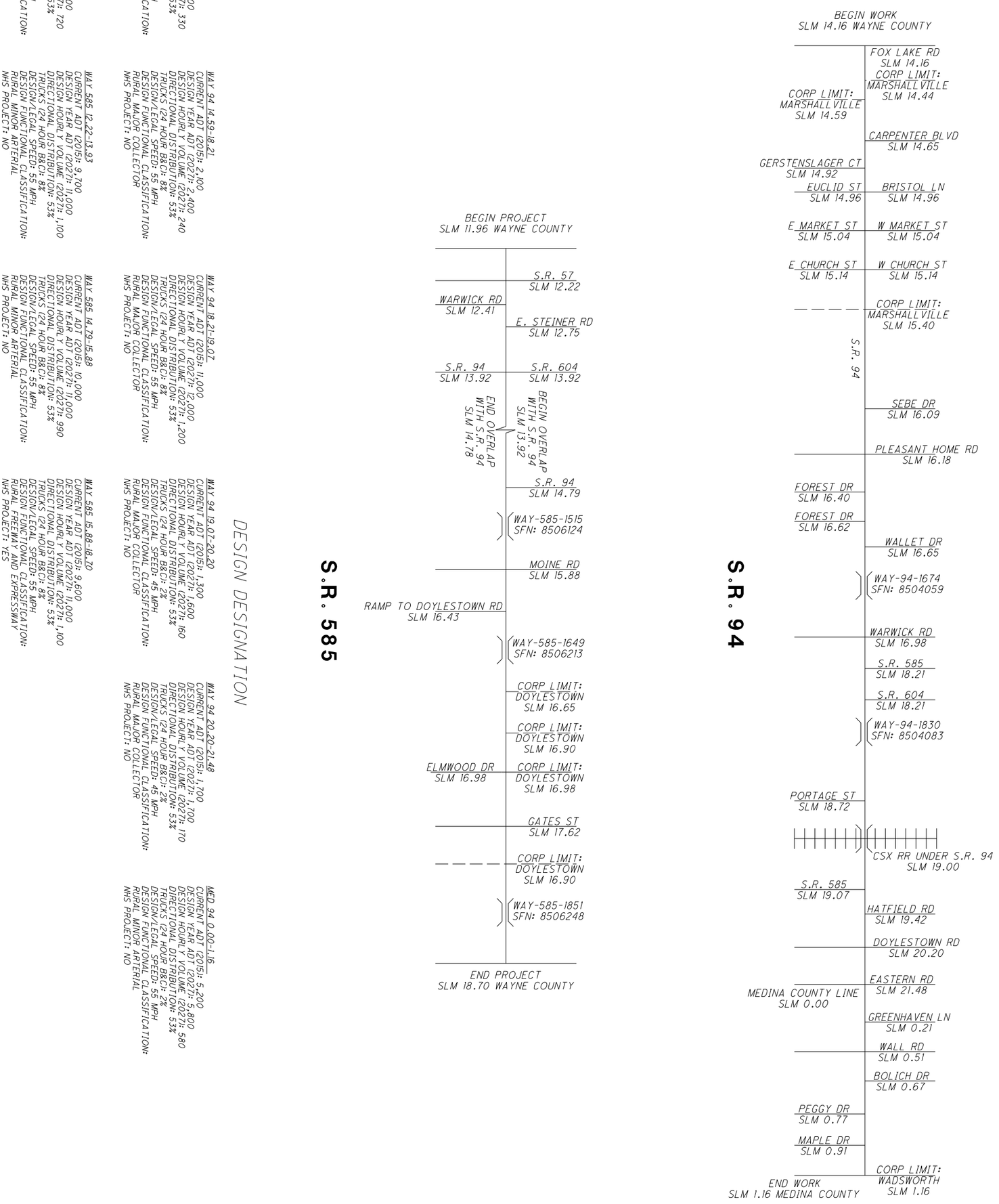
RAILROAD INVOLVEMENT
CSX RAILROAD

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

1
59

DESIGN FILE: i:\projects\86728\roadway\sheets\86728GT001.dgn MODELNAME: Design
WORKSTATION: ksaloy DATE: 11/28/2014

DESIGN FILE: I:\projects\86728\roadway\sheets\86728GB001.dgn
WORKSTATION: mpeters DATE: 12/1/2014 MODELNAME: Design



2/59	WAY-94-14.16 MED-94-0.00 WAY-585-(11.96)(14.78)	SCHEMATIC PLAN

GENERAL

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. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS 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
ARMSTRONG UTILITIES
1141 LAFAYETTE RD.
MEDINA, OH 44256
PHONE 330-722-3141

CABLE
TIME WARNER CABLE
530 SOUTH MAIN STREET, SUITE 1751
AKRON, OH 44311
330-630-7950

GAS
ENERVEST OPERATING
1748 SALTWELL ROAD
DOVER, OH 44622
330-602-5551

GAS
DOMINION EAST OHIO
1000 WEST WILBETH ROAD
AKRON, OHIO 44134
330-798-7164

GAS
NORTHEAST OHIO NATURAL GAS
9081 STATE ROUTE 250
STRASBURG, OH 44680
330-878-5589

GAS
SPELLMAN PIPELINE HOLDINGS, LLC
9081 STATE ROUTE 250
STRASBURG, OHIO
1-800-848-5589

TELECOM
AT&T OF OHIO
50 WEST BOWERY STREET
330-384-8057
AKRON, OHIO 44308

TELECOM
CENTURYLINK
2025 AKRON ROAD
WOOSTER, OHIO 44691
330-262-1128

TELECOM
DOYLESTOWN TELEPHONE CO.
28 EAST MARION STREET
DOYLESTOWN, OHIO 44230
330-658-6666

TELECOM
FRONTIER COMMUNICATIONS
6223 NORWALK ROAD
MEDINA, OHIO 44256
330-722-9586

TELECOM
VERIZON BUSINESS
120 RAVINE STREET
AKRON, OHIO 44303
330-253-8267

TELECOM
SPRINT
11370 ENTERPRISE PARK DR.
SHARONVILLE, OH 45241
513-612-4204

ELECTRIC
OHIO EDISON COMPANY
1910 WEST MARKET STREET, BLDG #1
AKRON, OHIO 44313
330-384-4954

CITY
CITY OF ORRVILLE
207 NORTH MAIN STREET
ORRVILLE, OH 44667
330-684-5000

CITY
CITY OF WADSWORTH
120 MAPLE STREET
WADSWORTH, OHIO 44281
330-335-2705

VILLAGE
VILLAGE OF DOYLESTOWN
24 SOUTH PORTAGE STREET
DOYLESTOWN, OHIO 44230
330-658-2181

VILLAGE
VILLAGE OF MARSHALLVILLE
7 NORTH MAIN STREET, P.O. BOX 169
MARSHALLVILLE, OHIO 44645
330-855-2491

STATE
ODOT DISTRICT 3 TRAFFIC
906 CLARK AVENUE
ASHLAND, OHIO 44805
419-207-7045

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

EXTREME CAUTION SHOULD BE EXERCISED IN AREAS WITH UTILITIES. SECTIONS 105.07 AND 107.16 OF THE DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS REQUIRE, AMONG OTHER THINGS, THAT THE CONTRACTOR COOPERATE WITH ALL UTILITIES LOCATED WITHIN THE LIMITS OF THIS CONSTRUCTION PROJECT AND TAKE RESPONSIBILITY FOR THE PROTECTION OF THE UTILITY PROPERTY AND SERVICES.

GENERAL

CONSTRUCTION NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE PROJECT ENGINEER A MINIMUM OF FOURTEEN (14) DAYS PRIOR TO THE FOLLOWING: THE START OF CONSTRUCTION ACTIVITIES, LANE RESTRICTIONS, LANE CLOSURES, AND OR ROAD CLOSURES. THE PROJECT ENGINEER WILL FORWARD THIS INFORMATION TO THE FOLLOWING:

DISTRICT PUBLIC INFORMATION OFFICER (PIO) BY FAX AT (614) 887-4305 OR EMAIL AT D03.PIO@DOT.STATE.OH.US

DISTRICT PERMIT SECTION BY FAX AT (614) 887-4318 OR EMAIL AT LOUIS.TUMBLIN@DOT.STATE.OH.US

CENTRAL OFFICE SPECIAL HAUL PERMITS SECTION BY FAX AT (614) 728-4099 OR EMAIL AT HAULING.PERMITS@DOT.STATE.OH.US

THE PIO WILL, IN TURN, NOTIFY THE PUBLIC, THE LOCAL EMERGENCY SERVICES, AFFECTED SCHOOLS AND BUSINESSES, AND ANY OTHER IMPACTED LOCAL PUBLIC AGENCY OF ANY OF THE ABOVE MENTIONED ITEMS, VIA MEDIA SOURCES.

COORDINATION OF WORK BETWEEN CONTRACTORS

THE CONTRACTOR SHOULD BE AWARE THAT THERE MAY BE OTHER WORK BEING PERFORMED BY SEPARATE CONTRACTS. WAY-BH-FY2015 (PID 83453) IS A BRIDGE PAINTING/MAINTENANCE PROJECT WITH STRUCTURE WORK AT WAY-585-16.49 AND WAY-94-18.30. THIS PROJECT IS SCHEDULED TO BEGIN WORK IN THE 2015 CONSTRUCTION SEASON. THE CONTRACTOR WILL NOT BE ALLOWED TO PAVE AT THESE STRUCTURES WHILE THE BRIDGE PAINTING/MAINTENANCE WORK IS BEING PERFORMED WITH PROJECT WAY-BH-FY2015. COORDINATION OF WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

MED-94-1.16 (PID 88773) IS A RESURFACING PROJECT SCHEDULED TO BEGIN WORK IN THE 2015 CONSTRUCTION SEASON. COORDINATION OF WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.

ROADWAY

SAFETY EDGE

IN ADDITION TO THE REQUIREMENTS OF 401.12, ATTACH A DEVICE TO THE SCREED OF THE PAVER THAT CONFINES THE MATERIAL AT THE END GATE AND EXTRUDES THE ASPHALT MATERIAL IN SUCH A WAY THAT RESULTS IN A COMPACTED WEDGE SHAPE PAVEMENT EDGE OF APPROXIMATELY 30 DEGREES (NOT STEEPER THAN 40 DEGREES). ENSURE THE DEVICE MAINTAINS CONTACT WITH THE EXISTING SURFACE, AND ALLOW FOR AUTOMATIC TRANSITION TO CROSS ROADS, DRIVEWAYS, AND OBSTRUCTIONS. DO NOT USE CONVENTIONAL SINGLE PLATE STRIKE OFF.

CONSTRUCTION OF SAFETY EDGE CAN BE OMITTED AT LOCATIONS WHERE EXISTING WIDTH OF GRADED SHOULDER OR BERM IS LESS THAN 12". PROJECTS WITH VARYING CONDITIONS SHOULD USE SAFETY EDGE WHERE POSSIBLE. PLAN PREPARATION HAS MADE EVERY REASONABLE ATTEMPT TO IDENTIFY POSSIBLE SAFETY EDGE LOCATIONS.

USE THE TRANSTECH SHOULDER WEDGE MAKER, THE CARLSON SAFETY EDGE END GATE, THE ADVENT-EDGER, THE TROXLER SAFETSLOPE, OR A SIMILAR APPROVED-EQUAL DEVICE THAT PRODUCES THE SAME WEDGE CONSOLIDATION RESULTS. CONTACT INFORMATION FOR THESE WEDGE SHAPE COMPACTION DEVICES IS THE FOLLOWING:

TRANSTECH SYSTEMS, INC.
1594 STATE STREET
SCHENECTADY, NY 12304
1-800-724-6306
www.transtechsys.com

ADVANT-EDGE PAVING EQUIPMENT LLC
P.O. BOX 9163
NISKAYUNA, NY 12309-0163
518-280-6090
www.advantageedgepaving.com

CARLSON SAFETY EDGE END GATE
18450 50TH AVENUE EAST
TACOMA, WA 98446
253-875-8000

TROXLER ELECTRONICS LABORATORIES INC.
3008 E. CORNWALLIS RD.
RESEARCH TRIANGLE PARK, NC 27709
1-877-TROXLER
www.troxlerlabs.com

IF ELECTING TO USE A SIMILAR DEVICE, PROVIDE PROOF THAT THE DEVICE HAS BEEN USED ON PREVIOUS PROJECTS WITH ACCEPTABLE RESULTS OR CONSTRUCT A TEST SECTION PRIOR TO THE BEGINNING OF WORK AND DEMONSTRATE WEDGE COMPACTION TO THE SATISFACTION OF THE ENGINEER. SHORT SECTIONS OF HANDWORK WILL BE ALLOWED WHEN NECESSARY FOR TRANSITIONS AND TURNOUTS OR OTHERWISE AUTHORIZED BY THE ENGINEER.

IN ADDITION TO THE REQUIREMENTS OF 401.16, MAKE THE FIRST ROLLER PASS 8 TO 12 INCHES (200 TO 300 MM) AWAY FROM TAPERED EDGE. DO NOT ROLL THE TAPER.

ROADWAY

ITEM 209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN

PREPARE THE SHOULDER FOR PAVING A CONSISTENT SAFETY EDGE IN BOTH THICKNESS AND WIDTH.

PRIOR TO PAVING THE SAFETY EDGE, GRADE AN AREA 10 INCHES WIDE, BEGINNING AT THE EDGE OF THE PAVED ROADWAY, TO PROVIDE A LEVEL SURFACE FREE OF VEGETATION FOR CONSTRUCTION OF THE SAFETY EDGE. IF NECESSARY, EXCAVATE THE GRADED AREA TO THE DEPTH NECESSARY TO CONSTRUCT THE SAFETY EDGE. COMPACT THE GRADED SHOULDER ACCORDING TO 617.05 OR AS DIRECTED BY THE ENGINEER. THE GRADED SHOULDER BEYOND THE 10 INCH WIDE AREA FOR THE SAFETY EDGE SHALL BE GRADED AT A 10:1 SLOPE.

DRAINAGE

ITEM 611 - 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.

MANHOLES ADJUSTED TO GRADE (01/STR/PV): 11 EACH

INLETS ADJUSTED TO GRADE (01/STR/PV): 1 EACH

CATCH BASIN ADJUSTED TO GRADE (01/STR/PV): 9 EACH

APPROXIMATE LOCATIONS OF KNOWN CASTINGS

WAY-94 (01/STR/PV)

MANHOLE	WATER VALVE	GAS VALVE	INLET
(SLM)	(SLM)	(SLM)	(SLM)
14.85	14.92	15.07	15.09
14.93	15.33		
15.00			
15.07			
15.09			
15.14			
15.27			
15.35			

CALCULATED MKP
CHECKED KRB

GENERAL NOTES

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

3
59

DESIGN FILE: ii:\projects\86728\roadway\sheets\86728GN001.dgn MODEL NAME: Design
WORKSTATION: ksalay DATE: 12/1/2014

PAVEMENT

PAVING AT RAILROAD CROSSINGS

PRIOR TO ANY WORK AT RAILROAD CROSSINGS THE CONTRACTOR SHALL CONTACT THE AFFECTED RAILROAD AUTHORITY SO AS TO MAKE THEM AWARE OF THE PROGRESS AND SCHEDULE OF WORK. THE CONTRACTOR SHALL COOPERATE WITH THE RAILROAD SO AS TO ELIMINATE ANY SAFETY CONCERNS. IF FLAGGING IS REQUIRED BY THE RAILROAD, ODOT WILL BE RESPONSIBLE FOR PAYING THE RAILROAD FOR ALL FLAGGING COSTS. REFER TO THE RAILROAD SPECIAL CLAUSES IN THE PROPOSAL.

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.

PROFILE AND ALIGNMENT

PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY TO FOLLOW THE ALIGNMENT AND PROFILE OF THE EXISTING PAVEMENT. PLACE THE PROPOSED ASPHALT CONCRETE OVERLAY AS SHOWN ON THE TYPICAL SECTIONS.

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE

THE INTENT OF THE PLANING IS TO MILL 1.5 INCHES AT THE CENTER OF PAVEMENT AT NON-CURBED AREAS. THE PAVEMENT SLOPE SHALL BE 0.010 MINIMUM AND 0.016 PREFERRED, CONTINUOUS BETWEEN THE CROWN AND THE PROPOSED EDGELINE/SHOULDER. THE MILLING DEPTH SHALL BE CONTROLLED FROM THE CENTER OF PAVEMENT IN CONFORMANCE WITH THE ABOVE GUIDELINES.

SPECIAL ATTENTION SHALL BE GIVEN TO SUPERELEVATED CURVES. THE SUPERELEVATION SHALL BE MAINTAINED AND/OR RESTORED, IF NECESSARY, AS DIRECTED BY THE ENGINEER. IF THERE IS NO INFORMATION IN THE PLANS TO CHANGE THE SUPERELEVATION, THE INTENT IS TO MAINTAIN THE EXISTING SUPERELEVATION.

THE CONTRACTOR SHALL MAINTAIN POSITIVE DRAINAGE TO 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 FOURTEEN (14) CALENDAR DAYS. FOR EACH CALENDAR DAY BEYOND THE 14 DAYS THAT THE ROADWAY REMAINS EXPOSED TO THE PLANED SURFACE, THE CONTRACTOR WILL BE ASSESSED A DISINCENTIVE FEE OF $1500 PER DAY.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT PLANING, ASPHALT CONCRETE. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER SQUARE YARD OF ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE.

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (CURBED SECTION)

THE INTENT OF THE PLANING IS TO MILL THE SPECIFIED DEPTH ALONG THE CURB CONTINGENT ON THE FOLLOWING: THE MAXIMUM CROSS SLOPE SHALL BE 0.02 WHILE THE MINIMUM CROSS SLOPE SHALL BE 0.01. THE PREFERRED CROSS SLOPE IS 0.016. THE CROWN OF THE PAVEMENT SHALL BE LOCATED BETWEEN THE TRAVELED LANES, OR AS DIRECTED BY THE ENGINEER. THE MILLING DEPTH SHALL BE CONTROLLED FROM THE CURB, TO PRODUCE A CROSS SLOPE IN CONFORMANCE WITH THE ABOVE GUIDELINES.

SPECIAL ATTENTION SHALL BE GIVEN TO SUPERELEVATED CURVES. THE SUPERELEVATION SHALL BE MAINTAINED AND/OR RESTORED, IF NECESSARY, AS DIRECTED BY THE ENGINEER. IF THERE IS NO INFORMATION IN THE PLANS TO CHANGE THE SUPERELEVATION, THE INTENT IS TO MAINTAIN THE EXISTING SUPERELEVATION.

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

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PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT PLANING, ASPHALT CONCRETE. PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER SQUARE YARD OF ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE.

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 251 - PARTIAL DEPTH PAVEMENT REPAIR
ITEM 253 - PAVEMENT REPAIR

THESE ITEMS OF WORK SHALL CONSIST OF THE REMOVAL OF THE EXISTING PAVEMENT OR PAVED BERM WHICH MAY BE ASPHALT, BRICK, CONCRETE, OR A COMBINATION OF EACH, IN AREAS OF EXISTING PAVEMENT FAILURE. CORING HAS BEEN PERFORMED TO HELP DETERMINE THE COMPONENTS THAT MAY BE ENCOUNTERED DURING THIS ITEM OF WORK. THE PAVEMENT CORING INFORMATION IS SHOWN BELOW ON THIS SHEET.

PAVEMENT REPAIR SHALL BE PERFORMED AFTER PAVEMENT PLANING AND BEFORE PLACEMENT OF THE INTERMEDIATE AND/OR SURFACE COURSE. THE DEPTH OF REMOVAL SHALL BE SUFFICIENT TO REMOVE ALL DETERIORATED PAVEMENT WITH A MAXIMUM DEPTH OF 12", BASED ON THE PAVEMENT DESIGN AND AN AVERAGE DEPTH OF 4" AND AN AVERAGE WIDTH OF 3 FT FOR ESTIMATING PURPOSES.

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

REPLACEMENT MATERIAL SHALL BE ITEM 301, ITEM 448 TYPE 2, OR ITEM 442 19MM MATERIAL AND SHALL BE PLACED AND COMPACTED TO FINISH FLUSH WITH THE ADJACENT PAVEMENT SURFACE. ITEM 301 ASPHALT CONCRETE, PG64-22 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 OR ITEM 442 19MM 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, ITEM 448 TYPE 2, OR ITEM 442 19MM MATERIAL WHEN THE PAVEMENT REPAIR IS BETWEEN 3" AND 5" DEEP. ITEM 448 TYPE 2 OR ITEM 442 19MM MATERIAL SHALL BE PG64-22 FOR MEDIUM MIX DESIGN PAVEMENTS AND PG64-28 FOR HEAVY MIX DESIGN PAVEMENTS.

PAYMENT SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE PAVEMENT REPAIR. FOR PAYMENT PURPOSES ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR IS TO BE A MAXIMUM OF 4" DEEP AND ITEM 253 PAVEMENT REPAIR IS FOR DEPTHS GREATER THAN 4". PAYMENT WILL BE MADE AT THE UNIT BID PRICE PER CUBIC YARD, (BY TICKET WEIGHT CONVERSION), OF ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR OR ITEM 253 - PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED IN THE GENERAL SUMMARY TO BE USED AS DIRECTED BY THE ENGINEER:

WAY 94 ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR		700 CU. YD.
14.16 TO 15.00	85 CU YD	
15.00 TO 16.00	100 CU YD	
16.00 TO 17.00	100 CU YD	
17.00 TO 18.00	115 CU YD	
19.00 TO 20.00	100 CU YD	
20.00 TO 21.00	100 CU YD	
21.00 TO 21.48	50 CU YD	
MED 94 ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR7		45 CU. YD
0.00 TO 1.00	40 CU YD	
1.00 TO 1.16	5 CU YD	
WAY 585 ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR		600 CU. YD.
11.96 TO 13.93	425 CU YD	
14.79 TO 16.00	55 CU YD	
16.00 TO 17.00	50 CU YD	
17.00 TO 18.00	50 CU YD	
18.00 TO 18.70	20 CU YD	
WAY 94 ITEM 253- PAVEMENT REPAIR		35 CU. YD.
MED 94 ITEM 253 - PAVEMENT REPAIR		5 CU. YD.
WAY 585 ITEM 253 - PAVEMENT REPAIR		30 CU. YD.
01/STR/PV		
ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR		1120 CU. YD.
ITEM 253 - PAVEMENT REPAIR		50 CU. YD.
02/SR2/PV		
ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR		55 CU. YD.
ITEM 253 - PAVEMENT REPAIR		10 CU. YD.
03/NHS/PV		
ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR		170 CU. YD.
ITEM 253 - PAVEMENT REPAIR		10 CU. YD.

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" (W8-1-36) AND "ADVISORY SPEED" (W13-1-24) 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.

PAVEMENT CORING INFORMATION

WAY-585-11.96				
SLM	Position on Road	Surface Type	Depth (in.)	COMMENTS
12.03	SH	ASPHALT	3	Pavement not in good condition
12.03	RWP	ASPHALT	7	taken on old pavement
12.03	LWP	ASPHALT	5	taken on new pavement-part of core still in hole
13.25	SH	ASPHALT	11	better pavement
13.25	RWP	ASPHALT	6.5	
13.25	Middle of Lane	ASPHALT	14	near longitudinal crack-3" of brick?
13.76	SH-1	ASPHALT	12	outside core, older pavement
13.76	SH-2	ASPHALT	9	inside core, newer pavement
13.76	LWP	ASPHALT	8	taken on crack

WAY-585-14.79				
SLM	Position on Road	Surface Type	Depth (in.)	COMMENTS
14.87	LWP	ASPHALT	18	
14.87	RWP	ASPHALT	18	
14.87	SH	ASPHALT	7	3" core- hole deeper- destroyed core during drilling
16.38	LWP	ASPHALT	7	
16.38	RWP	ASPHALT	17	Only top 7" of asphalt came out.
16.38	SH-1	ASPHALT	9	inside core
16.67	LWP	ASPHALT	7	7" asphalt, 9" concrete mesh reinforcement
16.67	RWP	ASPHALT	7	7" asphalt, 9" concrete mesh reinforcement
16.67	SH-1	ASPHALT	10	10" hole, 4" left in-incomplete core
16.38	SH-2	ASPHALT	8	outside core
16.68	SH-2	ASPHALT	10	

MED/WAY-0.00/14.16				
SLM	Position on Road	Surface Type	Depth (in.)	COMMENTS
14.26	RWP	ASPHALT	12	
14.26	Middle of Lane	ASPHALT	12	Very poor material-Destroyed during coring
14.26	LWP	ASPHALT	12	Very poor material-Destroyed during coring
14.57	SH	ASPHALT	9	
14.57	RWP	ASPHALT	9	
14.57	LWP	ASPHALT	3	Very poor quality-Destroyed during coring
14.87	RWP	ASPHALT	13	
14.87	Middle of Lane	ASPHALT	10	No shoulder-in town-core destroyed
14.87	LWP	ASPHALT	9	
15.21	SH	ASPHALT	9	Bad quality-Core destroyed during drilling
15.21	RWP	ASPHALT	9	
15.21	LWP	ASPHALT	9	

PROFILE CORRECTION AT STRUCTURE WAY-94-1900

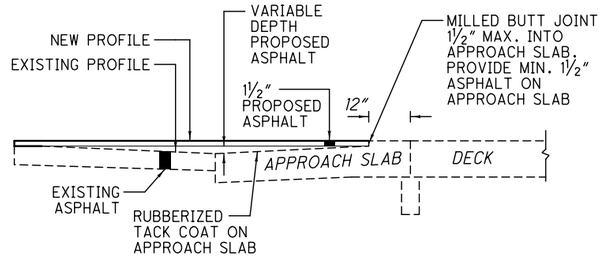
THE CONTRACTOR SHALL CORRECT THE PAVEMENT PROFILE WITH THE RESURFACING OPERATIONS WHILE ENSURING A SMOOTH TRANSITION FROM THE APPROACH SLAB (12" FROM BRIDGE DECK) TO THE PROPOSED ROADWAY PAVEMENT BUILDUP. SEE DETAIL BELOW.

THE MINIMUM DISTANCE BETWEEN CONSECUTIVE GRADE BREAKS IS:
100' WHERE THE POSTED SPEED IS 50 MPH OR GREATER
50' WHERE THE POSTED SPEED IS LESS THAN 50 MPH

THE FOLLOWING ARE TAPER RATES, BASED ON THE EXISTING PROFILE GRADE OF THE ROADWAY, WHICH SHALL BE MET TO ENSURE A SMOOTH TRANSTION.

SPEED	TAPER RATE
55	250:1

THE ABOVE SURVEY WORK TO CORRECT THE PROFILE OF THE ROAD SHALL INCLUDE ALL LABOR AND EQUIPMENT NEEDED TO PERFORM THE WORK AND SHALL BE PAID FOR UNDER ITEM 623 CONSTRUCTION LAYOUT STAKES AND SURVEYING.



CALCULATED MKP
CHECKED KRB

GENERAL NOTES

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE: i:\projects\86728\roadway\sheets\86728GN001.dgn
WORKSTATION: ksolay
DATE: 12/1/2014
MODELNAME: Design

PAVEMENT (CONTINUED)

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W8-1-36) 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 PAVED BERMS, DRIVES, INTERSECTIONS, ETC.

REQUIREMENTS OF 442 APPLY EXCEPT AS FOLLOWS:
MIX DESIGN: FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS.
MINIMUM TOTAL PG BINDER CONTENT IS 6.0 PERCENT.
USE A PG 64-22 BINDER.
MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 20 PERCENT.
WHEN AN AGGREGATE SOURCE IS SPECIALLY DESIGNATED WITH AN SR ON THE AGGREGATE GRAVITY LIST DO NOT USE THE AGGREGATE EXCEPT AS ALLOWED FOR MEDIUM TRAFFIC IN THE GUIDELINES FOR MAINTAINING ADEQUATE PAVEMENT FRICTION IN SURFACE PAVEMENT.
QUALITY CONTROL: DO NOT PERFORM Nmax IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

ITEM 442 - ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5MM, TYPE A (448), AS PER PLAN

THIS ITEM SHALL BE USED FOR CORRECTION OF CROWN, PROFILE AND ANY OTHER IRREGULARITIES.

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W8-1-36) 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.

REQUIREMENTS OF 442 APPLY EXCEPT AS FOLLOWS:
MIX DESIGN: FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS.
MINIMUM TOTAL PG BINDER CONTENT IS 6.0 PERCENT.
USE A PG 64-22 BINDER.
MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 20 PERCENT.
QUALITY CONTROL: DO NOT PERFORM Nmax IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 9.5MM, TYPE A (446), AS PER PLAN (SAFETY EDGE)

THE SAFETY EDGE SHALL BE INSTALLED AT THE SAME TIME AS THE SURFACE COURSE IS TO BE PLACED. THE SAFETY EDGE WILL NOT REQUIRE ANY DENSITY TESTING.

446 DENSITY ACCEPTANCE WITH FLAGGER CLOSING OF A 2-LANE HIGHWAY FOR PAVING OPERATIONS

THIS PLAN NOTE APPLIES ONLY TO A FLAGGER CLOSURE OF ONE LANE OF A 2-LANE HIGHWAY DURING PAVING OPERATIONS WHEN USING STANDARD CONSTRUCTION DRAWING MT-97.12, AND ALLOWS A PAVING OPERATION TO PROCEED CONCURRENTLY WITH THE MARKING AND CUTTING OF CORES REQUIRED FOR 446 DENSITY ACCEPTANCE.

IN ALL CASES THE CONTRACTOR SHOULD LENGTHEN THEIR LANE CLOSURES TO THE MAXIMUM PERMISSIBLE LENGTH DETAILED IN THE ABOVE REFERENCED STANDARD CONSTRUCTION DRAWINGS TO ALLOW THE ENGINEER ADEQUATE TIME TO MARK THE REQUIRED CORE LOCATIONS AND FOR CORE CUTTING OPERATIONS.

THE CONTRACTOR WILL PROVIDE TO THE ENGINEER THE PLANNED QUANTITY THAT WILL BE PLACED FOR THE DAY'S PRODUCTION. EACH DAY'S PRODUCTION WILL BE CONSIDERED ONE LOT AND INCLUDES SHOULDERS. TEN CORES WILL BE OBTAINED BY THE CONTRACTOR FOR EACH LOT AT RANDOM LOCATIONS DETERMINED BY THE ENGINEER. THE ENGINEER WILL DIVIDE A LOT INTO FIVE EQUAL SUBLOTS AND CALCULATE TWO RANDOM CORE LOCATIONS IN EACH SUBLOT AS DESCRIBED IN C&MS 446.05.

THE ENGINEER WILL MARK THE CORE LOCATIONS AFTER THE PAVING OPERATION (INCLUDING THE FINISH ROLLER) HAS COMPLETELY PASSED THE RANDOMLY SELECTED CORE LOCATION. THE CONTRACTOR SHOULD DETERMINE WHEN IT IS APPROPIATE TO START THE CORE DRILL OPERATION AND BEGIN CUTTING CORES WHEN THE NEWLY PLACED PAVEMENT SURFACE TEMPERATURE IS LESS THAN 140°F. IT IS THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN THE LANE CLOSURE DURING ALL PAVING, CORE MARKING, AND CORING OPERATIONS PER THE REQUIREMENTS OF THE STANDARD CONSTRUCTION DRAWING USED FOR THE PAVING OPERATION.

INTERSECTIONS AND DRIVES

RURAL-INTERSECTIONS SHALL BE PLANED AND PAVED TO THE END OF THE RADII OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS).

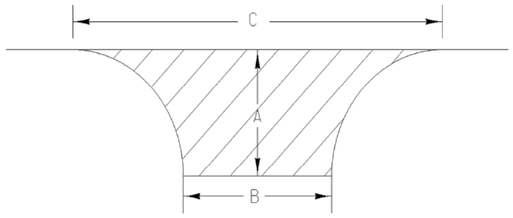
URBAN-INTERSECTIONS SHALL BE PLANED AND PAVED TO THE BACK OF CROSSWALKS OR AS DIRECTED BY THE ENGINEER. (TO PROVIDE A SMOOTH TRANSITION BETWEEN THE TWO HIGHWAYS, AND TO ELIMINATE WATER POCKETS).

EXISTING PAVED DRIVES SHALL BE PAVED SO AS TO PROVIDE A SMOOTH TRANSITION BETWEEN THE HIGHWAY AND THE DRIVE, (DISTANCE FROM EDGE OF ROADWAY MAY VARY AT EACH DRIVE) AS DIRECTED BY THE ENGINEER.

EXISTING AGGREGATE DRIVES SHALL BE PAVED WITH AN APRON AN AVERAGE WIDTH OF 4 FT. THE SLOPE OF THIS APRON SHALL BE THE SAME AS THE ADJACENT PAVEMENT SLOPE OR AS DIRECTED BY THE ENGINEER. ANY GRADING NEEDED TO PAVE THE APRON SHALL BE INCLUDED IN THE RELATED ASPHALT ITEM FOR PAYMENT. ITEM 617 COMPACTED AGGREGATE SHALL BE PLACED ADJACENT TO THIS APRON TO PROVIDE A SMOOTH TRANSITION FROM THE APRON TO THE EXISTING DRIVE, (WIDTH OF THIS 617 APPLICATION MAY VARY) AS DIRECTED BY THE ENGINEER. AN ADDITIONAL QUANTITY OF ITEM 617 HAS BEEN ESTIMATED TO COMPLETE THIS WORK AND IS SHOWN AS AN EXTRA AREA ON THE PAVEMENT & SHOULDER DATA SHEET.

ANY HAZARD OR UNSAFE CONDITION RESULTING FROM THE ABOVE WORK MUST BE CORRECTED IMMEDIATELY. THE CONTRACTOR IS REMINDED OF SECTIONS 105.01, 107.07 & 614.02A OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS.

THE PAVING DIMENSIONS FOR THE INTERSECTIONS ARE SHOWN IN THE CHART BELOW.



WAY 585 11.95-13.92 AND 14.78-15.87

Intersection Name	A (ft.)	B (ft.)	C (ft.)	Area (sy)
S.R. 585 AT S.R. 57 LEFT				661
S.R. 585 AT S.R. 57 RIGHT				39
WARWICK RD	55	30	138	403
E. STEINER RD	42	20	68	168
S.R. 604	40	26	80	196

WAY 94 14.16-21.25

Intersection Name	A (ft.)	B (ft.)	C (ft.)	Area (sy)
FOX LAKE RD LEFT	30	25	58	120
FOX LAKE RD RIGHT	32	57	115	271
CARPENTER BLVD	21	33	78	112
EUCLID ST	19	28	62	83
BRISTOL LN	18	19	47	57
E MARKET ST	18	44	58	97
W MARKET ST	14	35	52	63
E CHURCH ST	20	29	56	84
W CHURCH ST	28	25	74	129
SEBE DR	35	20	77	152
PLEASANT HOME RD LEFT	29	22	63	115
PLEASANT HOME RD RIGHT	36	28	79	180
FOREST DR SOUTH				113
FOREST DR NORTH	23	23	59	89
WALLET DR	28	19	72	114
WARWICK RD LEFT	24	21	70	100
WARWICK RD RIGHT	29	22	66	118
PORTAGE ST	53	24	97	285
HATFIELD RD	32	21	49	108
DOYLESTOWN RD LEFT	27	38	106	182
DOYLESTOWN RD RIGHT	36	27	68	163
Total Intersection Areas			01/STR/PV	4202

MED 94 0.00-1.16

Intersection Name	A (ft.)	B (ft.)	C (ft.)	Area (sy)
EASTERN RD LEFT	37	26	78	178
EASTERN RD RIGHT	19	29	81	98
WALL RD LEFT	21	35	89	124
WALL RD RIGHT	29	22	60	112
BOLICH DR	45	27	143	328
PEGGY DR	18	23	54	67
MAPLE DR	11	30	52	46
Total Intersection Areas			02/SC2/PV	953

WAY 585 15.87-18.70

Intersection Name	A (ft.)	B (ft.)	C (ft.)	Area (sy)
MOINE RD LEFT	55	34	120	383
MOINE RD RIGHT	40	54	162	400
ELMWOOD DR LEFT	38	29	110	236
ELMWOOD DR RIGHT	46	28	95	257
GATES ST SOUTH	80	20	125	489
GATES ST NORTH	70	26	125	459
Total Intersection Areas			03/NHS/PV	2224

ROLLER REQUIREMENTS WITHIN VILLAGE OF MARSHALLVILLE

WITHIN THE VILLAGE OF MARSHALLVILLE (APP. SLM 14.4 TO 15.40), THE CONTRACTOR SHALL NOT USE A VIBRATORY ROLLER TO COMPACT THE ASPHALT CONCRETE.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN WITHIN THE VILLAGE OF MARSHALLVILLE WAY-94-14.44 TO 15.40

ALL OPEN TRANSVERSE JOINTS SHALL BE TAPERED TO MEET EXISTING PAVEMENT BEFORE INTRODUCING TRAFFIC. A "BUMP" SIGN (W8-1-36) 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 PAVED BERMS, DRIVES, INTERSECTIONS, ETC.

REQUIREMENTS OF 442 APPLY EXCEPT AS FOLLOWS:
MIX DESIGN: FOR Ndes USE 50 GYRATIONS, FOR Nmax USE 75 GYRATIONS.
MINIMUM TOTAL PG BINDER CONTENT IS 6.0 PERCENT.
USE A PG 64-22 BINDER.
MAXIMUM RECLAIMED ASPHALT CONCRETE PAVEMENT IS 20 PERCENT.
WHEN AN AGGREGATE SOURCE IS SPECIALLY DESIGNATED WITH AN SR ON THE AGGREGATE GRAVITY LIST DO NOT USE THE AGGREGATE EXCEPT AS ALLOWED FOR MEDIUM TRAFFIC IN THE GUIDELINES FOR MAINTAINING ADEQUATE PAVEMENT FRICTION IN SURFACE PAVEMENT.
QUALITY CONTROL: DO NOT PERFORM Nmax IN QUALITY CONTROL TESTING. DO NOT TAKE EXTRA ASPHALT BINDER SAMPLES AS OUTLINED IN CMS 442.05.

THE CONTRACTOR IS REQUIRED TO COMPLETE A TEST STRIP OF THE ITEM 442: ASPHALT CONCRETE SURFACE COURSE, 9.5 MM TYPE A (446), AS PER PLAN. THE TEST STRIP SHALL CONSIST OF 50 TO 100 TONS OF THE CONTRACT SPECIFIED ASPHALT SURFACE COURSE PLACED AND COMPACTED WITHOUT THE USE OF VIBRATORY ROLLERS. ENSURE BASIC COMPACTION PRACTICES SUCH AS PROPER MIX TEMPERATURES, ROLLERS TIGHT TO THE PAVER AND ADEQUATE NUMBER OF ROLLERS VS. PAVER SPEED ARE FOLLOWED. THE CONTRACTOR SHALL OBTAIN AND TEST 3 RANDOM CORES OF THE COMPACTED TEST STRIP. IF THE AVERAGE OF THE CORE RESULTS ARE BELOW 92.0 PERCENT ADJUST THE MIX OR COMPACTION AS NECESSARY AND ALLOWABLE PER SPECIFICATION AND REPEAT THE TEST STRIP. DO NOT BEGIN FULL PRODUCTION OF THE ASPHALT SURFACE COURSE UNTIL THE ENGINEER HAS ACCEPTED THE TEST STRIP. THE TEST STRIP WILL BE INCLUDED IN THE FIRST LOT FOR DETERMINING DENSITY FOR PAYMENT. TEST STRIPS ARE INCIDENTAL TO THE PAY ITEM.

TABLE 446.05-1 FOR LOTS WITH 3 COLD JOINT CORES

Mean of Cores [1]	Pay Factor	
	Surface Course	Intermediate Course
98.0% or greater	[2]	[2]
97.0 to 97.9%	0.94	[2]
96.0 to 96.9%	1	0.94
93.4 to 95.9%	1.04 [4]	1
92.4 to 93.3%	1.02 [4]	1
91.4 to 92.3%	1	1
90.4 to 91.3%	0.9	0.94
89.4 to 90.3%	0.8	0.88
88.4 to 89.3%	[3]	[3]
Less than 88.4%	[2]	[2]

[1] Mean of cores as percent of average MSG for the production day.

[2] For surface courses, remove and replace. For other courses, the District will determine whether the material may remain in place. If the District determines the course should be removed and replaced, the Contractor will remove and replace this course and all courses paved on this course. The pay factor for material allowed to remain in place is 0.60.

[3] The District will determine whether the material may remain in place. If the District determines the course should be removed and replaced, the Contractor will remove and replace this course and all courses paved on this course. The pay factor for such material allowed to remain in place is 0.70.

[4] No incentive will be paid if any single cold joint core is less than 90.5%.

CALCULATED MKP CHECKED KRB

GENERAL NOTES

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE: i:\projects\86728\roadway\sheets\86728GN001.dgn MODELNAME: Design
WORKSTATION: ksalay DATE: 3/27/2015

PLACEMENT OF ASPHALT CONCRETE (2 LANE SECTIONS)

TWO-WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT ONE-WAY TRAFFIC WILL BE PERMITTED FOR MINIMUM PERIODS OF TIME CONSISTENT WITH THE REQUIREMENTS OF THE SPECIFICATIONS FOR PROTECTION OF COMPLETED ASPHALT CONCRETE COURSES.

ITEM 614 - MAINTAINING TRAFFIC: GENERAL (WAY-585 4 LANE SECTION)

ONE 11' LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES. 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. NIGHT WORK IS PERMITTED.

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.

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 BUTT JOINTS AND OTHER LOCATIONS THAT RESULT IN A DROP-OFF. 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
(01/STR/PV) 15 CU YD
(02/S<2/PV) 3 CU YD
(03/NHS/PV) 7 CU YD

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.

WORK ZONE MARKING SIGN: (W8-H12A-36) NO EDGE LINE = 25 EACH
WORK ZONE MARKING SIGN: (R4-1-24) DO NOT PASS = 15 EACH
WORK ZONE MARKING SIGN: (R4-2-24) PASS WITH CARE = 12 EACH
TOTAL (01/STR/PV) = 52 EACH

WORK ZONE MARKING SIGN: (W8-H12A-36) NO EDGE LINE= 6 EACH
WORK ZONE MARKING SIGN: (R4-1-24) DO NOT PASS= 7 EACH
WORK ZONE MARKING SIGN: (R4-2-24) PASS WITH CARE= 4 EACH
TOTAL (02/S<2/PV) = 17 EACH

WORK ZONE MARKING SIGN: (W8-H12A-36) NO EDGE LINE= 5 EACH
WORK ZONE MARKING SIGN: (R4-1-24) DO NOT PASS= 5 EACH
WORK ZONE MARKING SIGN: (R4-2-24) PASS WITH CARE= 4 EACH
TOTAL (03/NHS/PV) = 14 EACH

FLOODLIGHTING

FLOODLIGHTING OF THE WORK SITE FOR OPERATIONS CONDUCTED DURING NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE THE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND THE ENGINEER SHALL DRIVE THROUGH THE WORK SITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. 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 UNIT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - MAINTAINING TRAFFIC LANE CLOSURE/REDUCTION REQUIRED

LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

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 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.

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.

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE OMUTCD, 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 - 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 ROAD
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:

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
120 HOURS (04/STR/BR)
40 HOURS (03/NHS/PV)

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 - 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 WILL BE DETERMINED BY THE ENGINEER PRIOR TO BEGINNING WORK ON THIS PROJECT. 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 PREPROGRAMMED 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 PREPROGRAMMED 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.)

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
30 DAY (03/NHS/PV)
30 DAY (05/NHS/BR)

CALCULATED MKP
CHECKED KRB

MAINTENANCE OF TRAFFIC NOTES

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE: i:\projects\86728\roadway\sheets\86728GN001.dgn MODEL NAME: Design
WORKSTATION: ksalay DATE: 3/27/2015

MAINTAINING TRAFFIC

TWO-WAY TRAFFIC ALONG THE DOYLESTOWN ROAD RAMP SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT THROUGH TRAFFIC ON THE RAMP WILL BE DETOURED AS SHOWN ON THIS SHEET FOR A MAXIMUM OF 5 CONSECUTIVE CALENDAR DAYS FOR THE PLANING AND PAVING OF THE RAMP. THE 5 DAYS SHALL BE CONSIDERED AS AN INTERIM COMPLETION DATE (SECTION 108), AND FOR EACH CALENDAR DAY BEYOND THE 5 DAYS THAT THE ROADWAY REMAINS CLOSED TO TRAFFIC, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE FEE OF $1500 PER DAY.

THE DOYLESTOWN ROAD RAMP AND STRUCTURE WAY-585-1649 SHALL BE CLOSED AT SEPARATE TIMES.

THE CONTRACTOR SHALL NOTIFY THE ROADWAY SERVICES MANAGER, 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 14 DAYS PRIOR TO THE TIME WHEN THE DETOUR WILL BE IMPLEMENTED:

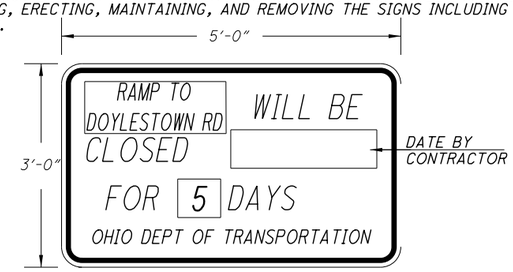
WAYNE COUNTY ENGINEER
TOWNSHIP TRUSTEES
VILLAGE OF DOYLESTOWN
LOCAL FIRE DEPARTMENT(S)
LOCAL SCHOOL DISTRICT(S)
WAYNE COUNTY SHERIFF

THE CONTRACTOR SHALL PROVIDE, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE THE DOYLESTOWN ROAD RAMP DETOUR SIGNING AS DETAILED ON THIS SHEET. 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.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATION, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

NOTICE OF CLOSURE SIGNS

THESE SIGNS SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE FOR THE DOYLESTOWN ROAD RAMP. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE LOCATED IN THE FIELD SO AS NOT TO INTERFERE WITH ANY PERMANENT SIGNS. ON THIS PROJECT 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 SHALL INCLUDE FURNISHING, ERECTING, MAINTAINING, AND REMOVING THE SIGNS INCLUDING SUPPORTS.



W20-H14

MAINTENANCE OF DETOUR ROUTE

DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THE 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 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 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 THE DETOUR ROUTE WILL BE PERFORMED BY CHANGE ORDER.

DETOUR SIGNING

THE FOLLOWING QUANTITY IS INCLUDED FOR THE CONTRACTOR TO PROVIDE THE DETOUR SIGNING AS SHOWN AS PER 614.06 (B):

ITEM 614 - DETOUR SIGNING LUMP (03/NHS/PV)

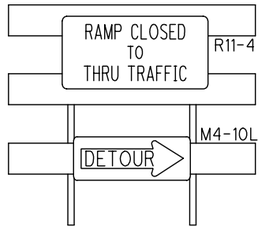
SIGN LEGEND

1 ITEM 614- PORTABLE CHANGEABLE MESSAGE SIGN

2

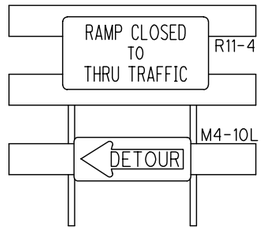
W20-3-36

3



TYPE III BARRICADES

4



TYPE III BARRICADES

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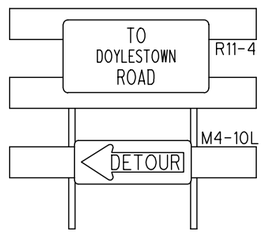

TYPE III BARRICADES

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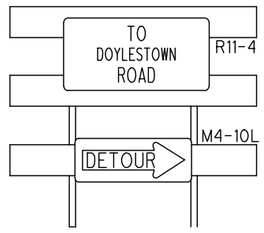
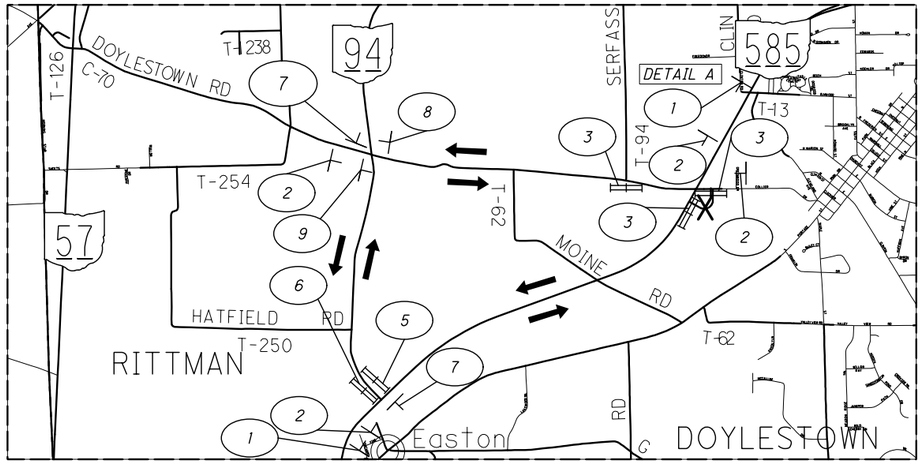


TYPE III BARRICADES



X - PROJECT LOCATION

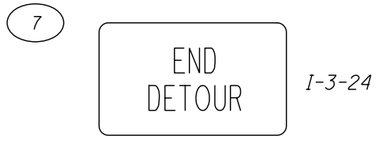
- OFFICIAL SIGNED DETOUR

- GATES AND BARRICADES, AS PER MT-101.60

SCALE IN MILES
0 0.25 0.5 0.75 1

N

7



I-3-24

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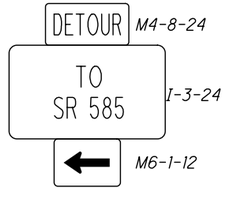

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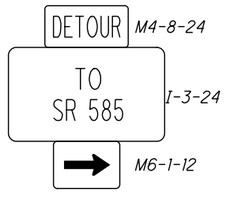


CALCULATED MKP
CHECKED KRB

MAINTENANCE OF TRAFFIC NOTES AND DETOUR MAP
DOYLESTOWN RD. RAMP

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE:i:\projects\86728\roadway\sheets\86728MD001.dgn MODELNAME: Design
WORKSTATION:mpeters DATE:12/18/2014

MAINTAINING TRAFFIC

TWO-WAY TRAFFIC ALONG DOYLESTOWN ROAD SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT THROUGH TRAFFIC ON STRUCTURE WAY-585-1649 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 ROADWAY REMAINS CLOSED TO TRAFFIC, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE FEE OF $1500 PER DAY.

STRUCTURE WAY-585-1649 AND THE DOYLESTOWN ROAD RAMP SHALL BE CLOSED AT SEPARATE TIMES.

THE CONTRACTOR SHALL NOTIFY THE ROADWAY SERVICES MANAGER, 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 14 DAYS PRIOR TO THE TIME WHEN THE DETOUR WILL BE IMPLEMENTED:

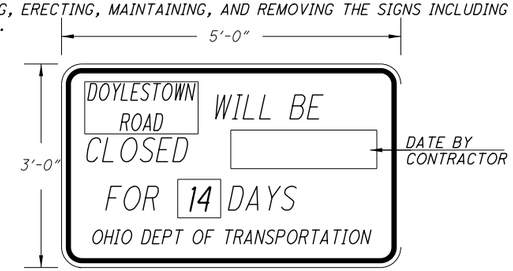
WAYNE COUNTY ENGINEER
TOWNSHIP TRUSTEES
VILLAGE OF DOYLESTOWN
LOCAL FIRE DEPARTMENT(S)
LOCAL SCHOOL DISTRICT(S)
WAYNE COUNTY SHERIFF

THE CONTRACTOR SHALL PROVIDE, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE THE DOYLESTOWN ROAD DETOUR SIGNING AS DETAILED ON THIS SHEET. 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.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATION, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

NOTICE OF CLOSURE SIGNS

THESE SIGNS SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD CLOSURE FOR DOYLESTOWN ROAD. THE SIGNS SHALL BE ERECTED ON THE RIGHT HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE LOCATED IN THE FIELD SO AS NOT TO INTERFERE WITH ANY PERMANENT SIGNS. ON THIS PROJECT 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 SHALL INCLUDE FURNISHING, ERECTING, MAINTAINING, AND REMOVING THE SIGNS INCLUDING SUPPORTS.



W20-H14

MAINTENANCE OF DETOUR ROUTE

DURING THE TIME THAT TRAFFIC IS DETOURED, THE CONTRACTOR SHALL MAINTAIN THE 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 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 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 THE DETOUR ROUTE WILL BE PERFORMED BY CHANGE ORDER.

DETOUR SIGNING

THE FOLLOWING QUANTITY IS INCLUDED FOR THE CONTRACTOR TO PROVIDE THE DETOUR SIGNING AS SHOWN AS PER 614.06 (B):

ITEM 614 - DETOUR SIGNING LUMP (05/NHS/BR)

SIGN LEGEND

1 — ROAD CLOSED AHEAD — W20-3-36

2 — BRIDGE CLOSED TO THRU TRAFFIC (R11-4) / DETOUR (M4-10L) — TYPE III BARRICADES

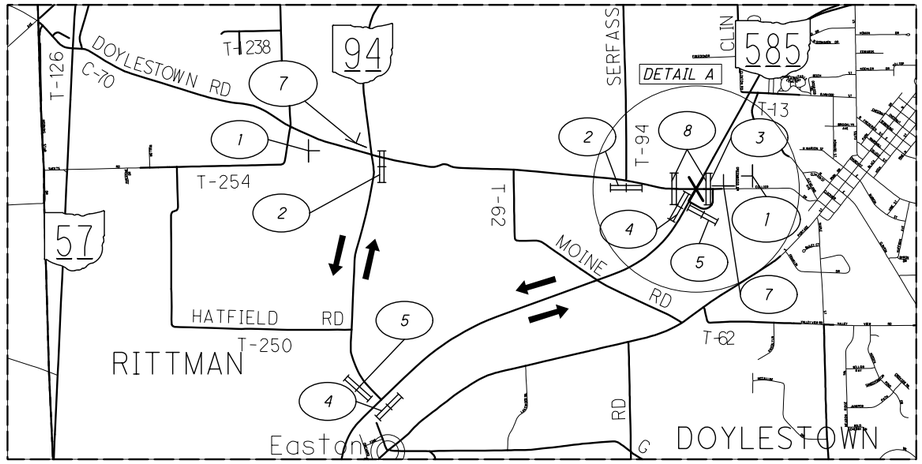
3 — BRIDGE CLOSED TO THRU TRAFFIC (R11-4) / DETOUR (M4-10L) — TYPE III BARRICADES

4 — TO DOYLESTOWN ROAD (R11-4) / DETOUR (M4-10L) — TYPE III BARRICADES

5 — TO DOYLESTOWN ROAD (R11-4) / DETOUR (M4-10L) — TYPE III BARRICADES

7 — END DETOUR — I-3-24

8 — ROAD CLOSED (R11-2-48) — TYPE III BARRICADES



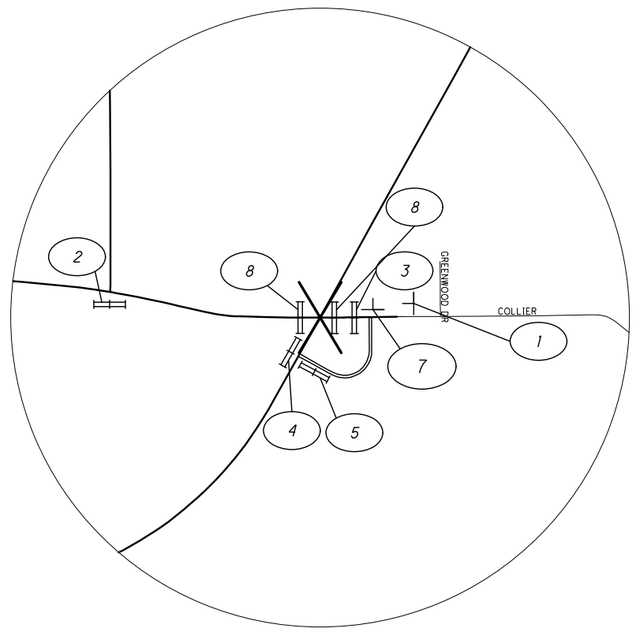
X - PROJECT LOCATION

- OFFICIAL SIGNED DETOUR

- GATES AND BARRICADES, AS PER MT-101.60

SCALE IN MILES
0 0.25 0.5 0.75 1

N



DETAIL A

CALCULATED MKP
CHECKED KRB

MAINTENANCE OF TRAFFIC NOTES AND DETOUR MAP STR. WAY-585-1649 (DOYLESTOWN RD.)

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

8
59

DESIGN FILE: i:\projects\86728\roadway\sheets\86728MD001.dgn MODELNAME: Design
WORKSTATION: mpeters DATE: 12/18/2014

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 4½ 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	
S.R. 94 (01/STR/PV)	1 EACH
S.R. 94 (02/S<2/PV)	1 EACH

MAILBOX APPROACHES

THE MAILBOX APPROACHES SHALL BE PAVED WITH THE CORRESPONDING MAINLINE PAVEMENT TREATMENT COURSE(S). 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 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.

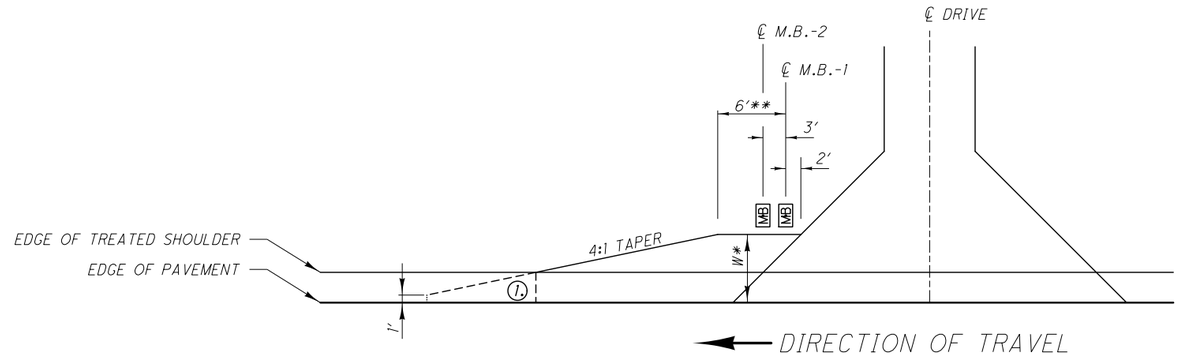
ITEM 209 - GRADING MAILBOX APPROACHES:	
(01/STR/PV)	10 EACH
(02/S<2/PV)	10 EACH
ITEM 617 - COMPACTED AGGREGATE	
(01/STR/PV)	20 CU YD
(01/S<2/PV)	20 CU YD

LOCATIONS OF MAILBOX SUPPORT SYSTEM TO BE REPLACED

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

SR 94 - NEAR SLM 16.00 (01/STR/PV)
SR 94 - NEAR SLM 20.00 DRIVE (02/S<2/PV)

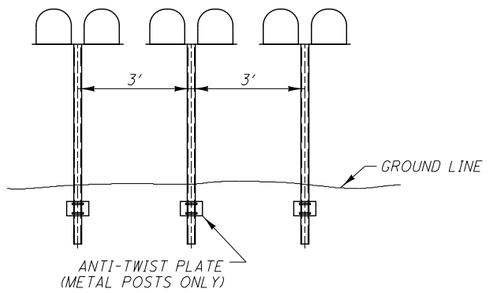
FOR DETAILS NOT SHOWN SEE STANDARD DRAWING BP-4.1



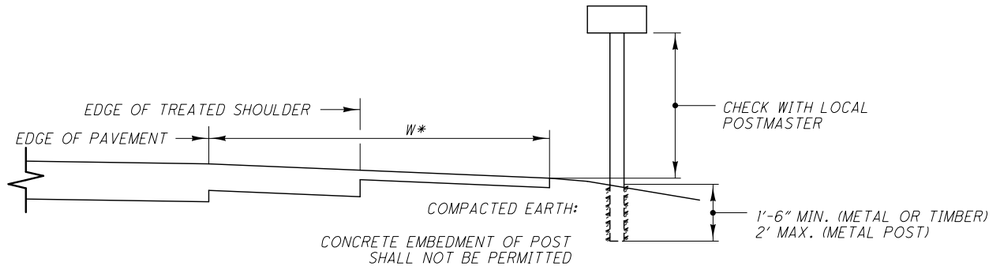
1. END MAILBOX TURNOUT AT EDGE OF ASPHALT CONCRETE SHOULDER OR 1' FROM EDGE OF PAVEMENT IF TREATED SHOULDER IS AGGREGATE.

W* NOTES
1) WHERE EXISTING STANDARD MAILBOX POSTS ARE BEHIND GUARDRAIL AND ARE TO REMAIN IN PLACE, TURNOUT WIDTH SHALL EXTEND TO FACE OF GUARDRAIL.
2) WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL BE 6 FT MAXIMUM OR TO FACE OF EXISTING STANDARD MAILBOX IF IT IS LESS THAN 6 FT.
3) IF THE MAILBOX SUPPORT IS SPECIFIED TO BE REMOVED AND REERECTED OR REPLACED, WHERE GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL EXTEND TO FACE OF GUARDRAIL AND MAILBOX SHALL BE INSTALLED BEHIND THE GUARDRAIL.
4) IF THE MAILBOX SUPPORT IS SPECIFIED TO BE REMOVED AND REERECTED OR REPLACED, WHERE NO GUARDRAIL IS REQUIRED, TURNOUT WIDTH SHALL BE 6 FT. MAXIMUM.

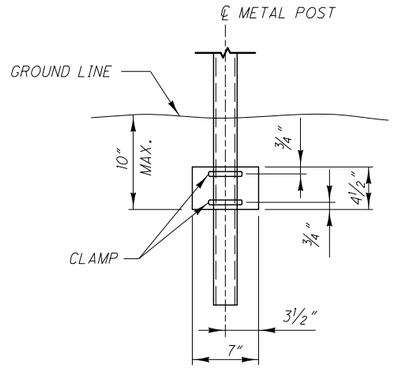
** NOTE
1) 6 FT FOR ONE MAILBOX SUPPORT, ADD 3 FT. FOR EACH ADDITIONAL MAILBOX SUPPORT.



GROUP MAILBOX INSTALLATION



CROSS SECTION / ELEVATION VIEW



ANTI-TWIST PLATE

CALCULATED MKP
CHECKED KRB

MAILBOX FACILITIES

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE: ii:\projects\86728\roadway\sheets\86728GM001.dgn MODELNAME: Sheet
WORKSTATION: mpeters DATE: 12/18/2014

SHEET NUMBER								PARTICIPATION						ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	9	12	16	26	27	28	01/STR/PV	02/S<2/PV	03/NHS/PV	04/STR/BR	05/NHS/BR							
																		ROADWAY	
					175	132		307						202	30000	307	SF	WALK REMOVED	
					90			90						202	32000	90	FT	CURB REMOVED	
				725				450	50	225				202	38000	725	FT	GUARDRAIL REMOVED	
				162.5				100	62.5					202	38200	162.5	FT	GUARDRAIL REMOVED FOR REUSE	
				18				7	2	9				202	42000	18	EACH	ANCHOR ASSEMBLY REMOVED, TYPE A	
				4				4						202	47000	4	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
				2				2						202	47200	2	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE	
				15				15						203	20001	15	CY	EMBANKMENT, AS PER PLAN	15
				18.98				10.1	2.13	6.75				209	15000	18.98	STA	RESHAPING UNDER GUARDRAIL	
		20						10	10					209	80000	20	EACH	GRADING MAILBOX APPROACHES	
			18.33					17.97		0.36				209	60500	18.33	MILE	LINEAR GRADING	
			10.03					2.05	2.32	5.66				209	72051	10.03	MILE	PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN	3
				375				375						606	13000	375	FT	GUARDRAIL, TYPE 5	
				162.5				100	62.5					606	16500	162.5	FT	GUARDRAIL REBUILT, TYPE 5	
				65				65						606	17000	65	FT	RAISING TYPE 5 GUARDRAIL	
				4				4						606	25000	4	EACH	ANCHOR ASSEMBLY, TYPE A	
				14				3	2	9				606	26100	14	EACH	ANCHOR ASSEMBLY, TYPE E	
				4				4						606	35120	4	EACH	BRIDGE TERMINAL ASSEMBLY, TYPE 3	
				2				2						606	35150	2	EACH	BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 4	
					120	169		289						608	52070	289	SF	CURB RAMP, TYPE D	
					55			55						608	52010	55	SF	CURB RAMP, TYPE A1	
				43				21	4	18				614	13100	43	EACH	BARRIER REFLECTOR	
		2						1	1					SPECIAL	69050100	2	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	9
																		DRAINAGE	
9								9						611	98630	9	EACH	CATCH BASIN ADJUSTED TO GRADE	
1								1						611	99150	1	EACH	INLET ADJUSTED TO GRADE	
11								11						611	99654	11	EACH	MANHOLE ADJUSTED TO GRADE	
																		PAVEMENT	
	1345							1120	55	170				251	01010	1345	CY	PARTIAL DEPTH PAVEMENT REPAIR	
	70							50	10	10				253	02000	70	CY	PAVEMENT REPAIR	
			285226					173077	22971	89178				254	01000	285226	SY	PAVEMENT PLANING, ASPHALT CONCRETE	
			2853					1731	230	892				254	01600	2853	SY	PATCHING PLANED SURFACE	
			23058					14058	1866	7134				407	10000	23058	GAL	TACK COAT	
			1345					1345						407	14000	1345	GAL	TACK COAT FOR INTERMEDIATE COURSE	
			11891					7088	1005	3798				442	00201	11891	CY	ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN	5
			936					936						442	20101	936	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 MM, TYPE A (448), AS PER PLAN	5
		40	2106					1481	224	441				617	10100	2146	CY	COMPACTED AGGREGATE	
			22040					21082	540	418				617	20000	22040	SY	SHOULDER PREPARATION	
			9.14					7.82		1.32				618	41000	9.14	MILE	EDGE LINE, RUMBLE STRIPE (ASPHALT CONCRETE)	
																		TRAFFIC CONTROL	
							1185	785	108	292				621	00100	1185	EACH	RPM	
							1185	785	108	292				621	54000	1185	EACH	RAISED PAVEMENT MARKER REMOVED	
				7				7						630	03100	7	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
				1				1						630	85100	1	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
				1				1						630	86002	1	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
							9.14	7.82		1.32				642	00100	9.14	MILE	EDGE LINE, 4", TYPE 1	
							22.63	12.46	2.78	7.39				642	00104	22.63	MILE	EDGE LINE, 6", TYPE 1	
							2.33			2.33				642	00204	2.33	MILE	LANE LINE, 6", TYPE 1	
							13.42	10.14	1.39	1.89				642	00300	13.42	MILE	CENTER LINE, TYPE 1	
							428	428						642	00590	428	FT	CROSSWALK LINE	
							2834	1084		1750				644	00400	2834	FT	CHANNELIZING LINE, 8"	
							885	504	136	245				644	00500	885	FT	STOP LINE	
							1436	666		770				644	00700	1436	FT	TRANSVERSE/DIAGONAL LINE	
							345			345				644	00720	345	FT	CHEVRON MARKING	
							240	240						644	01200	240	FT	PARKING LOT STALL MARKING	
							32	18		14				644	01300	32	EACH	LANE ARROW	

CALCULATED MKP
CHECKED KRB

GENERAL SUMMARY

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE: i:\projects\86728\roadway\sheets\86728GG001.dgn
WORKSTATION: ksalay
DATE: 3/27/2015
MODELNAME: Design

SHEET NUMBER								PARTICIPATION						ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
6	7	8	28	29	31	32	33	01/STR/PV	02/S<2/PV	03/NHS/PV	04/STR/BR	05/NHS/BR							
																		TRAFFIC SIGNALS	
				26				10		16				632	26501	26	EACH	DETECTOR LOOP, AS PER PLAN	29
																		MAINTENANCE OF TRAFFIC	
160										40	120			614	11110	160	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	LUMP	LUMP								LUMP		LUMP		614	12420	LS		DETOUR SIGNING	
83								52	17	14				614	12460	83	EACH	WORK ZONE MARKING SIGN	
25								15	3	7				614	13000	25	CY	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC	
					47						47			614	13202	47	EACH	BARRIER REFLECTOR, TYPE A2	
					12						12			614	13302	12	EACH	BARRIER REFLECTOR, TYPE B2	
60										30		30		614	18401	60	DAY	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	6
			4.66							4.66				614	20550	4.66	MILE	WORK ZONE LANE LINE, CLASS III, 642 PAINT	
			28.66					22.24	2.78	3.64				614	21550	28.66	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
			3716					216		3500				614	23680	3716	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	
			730					312	48	370				614	26610	730	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
					0.57						0.57			614	21200	0.57	MILE	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I	
					0.92						0.92			614	22200	0.92	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I	
					86						86			614	26400	86	FT	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I	
																		STRUCTURE UNDER 20 FOOT SPAN (WAY-94-1674)	
						62.5					62.5			517	73008	62.5	FT	RAILING (THRIE BEAM RAIL), MISC.:BRIDGE RAILING	35
																		STRUCTURE UNDER 20 FOOT SPAN (WAY-94-1830)	
						36					36			202	98100	36	EACH	REMOVAL MISC.:EXISTING PILE ENCASEMENT	34
						80					80			202	98200	80	FT	REMOVAL MISC.:JOINT SEALER	34
						LUMP					LUMP			503	11100	LS		COFFERDAMS AND EXCAVATION BRACING	
						4367					4367			509	10000	4367	LB	EPOXY COATED REINFORCING STEEL	
						21					21			511	43211	21	CY	CLASS QC1 CONCRETE, PIER, AS PER PLAN	34
						713					713			512	10300	713	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
						80					80			516	31000	80	FT	JOINT SEALER	
						11					11			SPECIAL	51910000	11	SY	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO- SILICA MODIFIED CONCRETE	35
																		STRUCTURE UNDER 20 FOOT SPAN (WAY-94-1900)	
						3					3			202	32000	3	FT	CURB REMOVED	
						83					83			202	98200	83	FT	REMOVAL MISC.:JOINT SEALER	34
						229					229			512	10100	229	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
						166					166			516	31000	166	FT	JOINT SEALER	
						11					11			SPECIAL	51910000	11	SY	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO- SILICA MODIFIED CONCRETE	35
																		STRUCTURE UNDER 20 FOOT SPAN (WAY-585-1512)	
							70				70			512	10100	70	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
							452				452			512	10300	452	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
							87.5				87.5			517	76300	87.5	FT	RAILING, MISC.:DEEP BEAM RAILING PANELS	35
							6				6			SPECIAL	51910000	6	SY	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO- SILICA MODIFIED CONCRETE	35
																		STRUCTURE UNDER 20 FOOT SPAN (WAY-585-1649)	
							4					4		202	11300	4	CY	PORTIONS OF STRUCTURE REMOVED	34
							1					1		511	45511	1	CY	CLASS QC1 CONCRETE, ABUTMENT, AS PER PLAN	34
							3					3		511	53012	3	CY	CLASS QC2 CONCRETE, MISC.:	34
							3					3		512	33300	3	SY	TYPE A WATERPROOFING	
							55					55		516	31000	55	FT	JOINT SEALER	
							55					55		846	00100	55	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	
							33					33		856	10000	33	CY	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE	
																		STRUCTURE UNDER 20 FOOT SPAN (WAY-585-1851)	
							20					20		601	26000	20	CY	DUMPED ROCK FILL, TYPE B	
							1					1		613	41200	1	CY	LOW STRENGTH MORTAR BACKFILL	
																		INCIDENTALS	
														614	11000	LS		MAINTAINING TRAFFIC	
														619	16010	6	MNTH	FIELD OFFICE, TYPE B	
														623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
														624	10000	LS		MOBILIZATION	

CALCULATED MKP
CHECKED KRB

GENERAL SUMMARY

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE: i:\projects\86728\roadway\sheets\86728GG001.dgn
WORKSTATION: ksalay
DATE: 4/1/2015
MODELNAME: Design

* - FOR TYPICALS, SEE SHEETS 13-14

FUNDING	COUNTY	ROUTE	LOG POINT TO LOG POINT (STRAIGHT LINE MILEAGE)		LENGTH MILE	LENGTH FEET	WIDTH FEET AVG.	*TYPICAL	PAVEMENT AREA	254 PAVEMENT PLANING, ASPHALT CONCRETE (1.5")	254 PATCHING PLANED SURFACE	407 TACK COAT @.08 GAL/SY	407 TACK COAT FOR INTERMIATE COURSE @.04 GAL/SY		442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN 1.25 INCH	442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN 1.5 INCH	442 ASPHALT CONCRETE SURFACE COURSE, 9.5 MM, TYPE A (446), AS PER PLAN (FOR SAFETY EDGE)	442 ASPHALT CONCRETE INTERMEDIATE COURSE, 9.5 MM, TYPE A (448), AS PER PLAN 1.0 INCH	209 LINEAR GRADING	209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN		AGGREGATE SHOULDER WIDTH SL	AGGREGATE SHOULDER WIDTH SR	AGGREGATE SHOULDER AREA	617 COMPACTED AGGREGATE 2.25 INCH AVG. THICKNESS	617 SHOULDER PREPERATION	618 EDGE LINE, RUMBLE STRIPE (ASPHALT CONCRETE)
									SQ.YD	SQ.YD	SQ.YD	GAL	GAL		CU. YD	CU. YD	CU. YD	CU. YD	MILE	MILE		FT	FT	SQ. YD	CU. YD	SQ.YD	MILE
01/STR/PV	WAY	94	14.16	15.00	0.84	4435	26.0	4	12813	12813	128	1025				534			1.68			2.00	2.00	1971	123	1971	
01/STR/PV	WAY	94	15.00	15.01	0.01	77	32.0	4	274	274	3	22				11			0.03			2.00	2.00	34	2	34	
01/STR/PV	WAY	94	15.01	15.08	0.07	345	38.0	2	1458	1458	15	117				61											
01/STR/PV	WAY	94	15.08	15.11	0.03	132	32.0	4	469	469	5	38				20			0.05			2.00	2.00	59	4	59	
01/STR/PV	WAY	94	15.11	15.33	0.23	1188	26.0	4	3432	3432	34	275				143			0.45			2.00	2.00	528	33	528	
01/STR/PV	WAY	94	15.33	18.21	2.88	15206	24.0	4	40550	40550	406	3244				1690			5.76			2.00	2.00	6758	422	6758	
01/STR/PV	WAY	94	18.21	18.36	0.15	792	37.0	4	3256	3256	33	260				136			0.3			2.00	2.00	352	22	352	0.30
01/STR/PV	WAY	94	18.36	19.07	0.71	3749	34.0	4	14162	14162	142	1133				590			1.42			2.00	2.00	1666	104	1666	1.42
01/STR/PV	WAY	94	19.07	19.33	0.26	1373	28.0	4	4271	4271	43	342				178			0.52			2.00	2.00	610	38	610	
01/STR/PV	WAY	94	19.33	21.19	1.86	9821	26.0	4	28371	28371	284	2270				1182			3.72			2.00	2.00	4365	273	4365	
01/STR/PV	WAY	94	21.19	21.25	0.06	317	28.0	4	986	986	10	79				41			0.12			2.00	2.00	141	9	141	
02/SC2/PV	WAY	94	21.25	21.48	0.23	1214	28.0	4	3778	3778	38	302				157			0.46			2.00	2.00	540	34	540	
02/SC2/PV	MED	94	0.00	1.16	1.16	6125	26.0	4	17694	17694	177	1416				737	33.08			2.32		2.00	2.00	2722	170		
01/STR/PV	WAY	585	11.96	11.99	0.03	158	30.0	1	528	528	5	42	21		18			15	0.06			2.00	2.00	70	4	70	0.06
01/STR/PV	WAY	585	11.99	12.03	0.04	211	35.0	1	821	821	8	66	33		29			23	0.08			2.00	2.00	94	6	94	0.08
01/STR/PV	WAY	585	12.03	12.08	0.05	264	40.0	1	1173	1173	12	94	47		41			33	0.10			2.00	2.00	117	7	117	0.10
01/STR/PV	WAY	585	12.08	12.17	0.09	475	55.0	1	2904	2904	29	232	116		101			81	0.18			2.00	2.00	211	13	211	0.18
01/STR/PV	WAY	585	12.17	12.35	0.18	950	46.0	1	4858	4858	49	389	194		169			135	0.36			2.00	2.00	422	26	422	0.36
01/STR/PV	WAY	585	12.35	12.48	0.13	686	34.0	1	2593	2593	26	207	104		90			72	0.26			2.00	2.00	305	19	305	0.26
01/STR/PV	WAY	585	12.48	13.77	1.29	6811	26.0	1	19677	19677	197	1574	787		683			547	2.58			2.00	2.00	3027	189	3027	2.58
01/STR/PV	WAY	585	13.77	13.86	0.09	475	34.0	1	1795	1795	18	144	72		62			50	0.18			2.00	2.00	211	13	211	0.18
01/STR/PV	WAY	585	13.86	13.92	0.06	317	40.0	1	1408	1408	14	113	56		49			39	0.12			2.00	2.00	141	9	141	0.12
01/STR/PV	WAY	585	14.78	15.87	1.09	5755	34.0	5	21742	21742	217	1739				906	31.08			2.18		2.00	2.00	2558	160		2.18
03/NHS/PV	WAY	585	15.87	16.53	0.66	3485	30.0	5	11616	11616	116	929				484	18.82			1.32		2.00	2.00	1549	97		1.32
03/NHS/PV	WAY	585	16.53	17.39	0.86	4541	30.0	5	15136	15136	151	1211				631	24.52			1.72		2.00	2.00	2018	126		
03/NHS/PV	WAY	585	17.39	17.47	0.08	422	72.0	3	3379	3379	34	270				141	2.28			0.16		2.00	2.00	188	12		
03/NHS/PV	WAY	585	17.47	17.67	0.20	1056	85.0	3	9973	9973	100	798				416	5.7			0.40		2.00	2.00	469	29		
03/NHS/PV	WAY	585	17.67	18.70	1.03	5438	72.0	3	43507	43507	435	3481				1813	29.38			2.06		2.00	2.00	2417	151		
03/NHS/PV		RAMP TO DOYLESTOWN RD				940	32.0		3342	3342	33	267				139			0.36			2.00	2.00	418	26	418	
01/STR/PV		DEDUCTIONS FOR STRUCTURES							2127	-2127	-21	-170	-85			-89	-17	-59		-0.13		2.00	2.00	-244	-15		
01/STR/PV		EXTRA AREA FOR INTERSECTIONS							4202	4202	42	336				175											
01/STR/PV		EXTRA AREA FOR PAVED DRIVES							1800	1800	18	144				75											
01/STR/PV		EXTRA AREA FOR AGGREGATE DRIVES							2646			212				110											
01/STR/PV		EXTRA AREA FOR EX. & PR. MAILBOX APPROACHES							1660	1660	17	133				69											
02/SC2/PV		EXTRA AREA FOR INTERSECTIONS							953	953	10	76				40											
02/SC2/PV		EXTRA AREA FOR PAVED DRIVES							306	306	3	24				13											
02/SC2/PV		EXTRA AREA FOR AGGREGATE DRIVES							360			29				15											
02/SC2/PV		EXTRA AREA FOR EX. & PR. MAILBOX APPROACHES							240	240	2	19				10											
03/NHS/PV		EXTRA AREA FOR INTERSECTIONS							2224	2224	22	178				93											
		01/STR/PV TOTAL			10.14					173077	1731	14058	1345		1242	5832	14	936	17.97	2.05				23396	1461	21082	7.82
		02/SC2/PV TOTAL			1.39					22971	230	1866				972	33			2.32				3262	204	540	
		03/NHS/PV TOTAL			2.83					89178	892	7134				3717	81		0.36	5.66				7059	441	418	1.32
		GRAND TOTAL			*14.36*	*76761*				*285226*	*2853*	*23058*	*1345*		*1242*	*10521*	*128*	*936*	*18.33*	*10.03*				*33717*	*2106*	*22040*	*9.14*

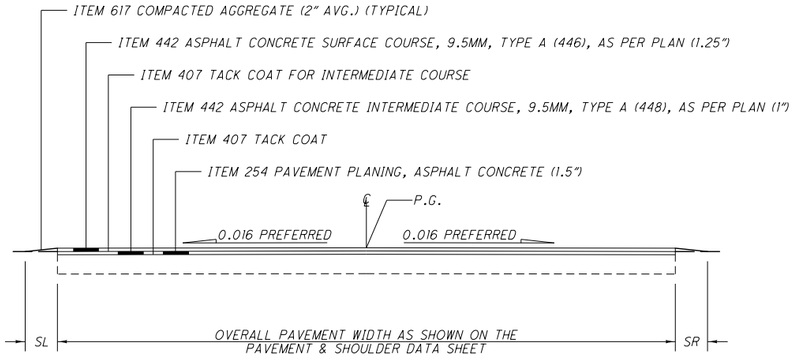
CALCULATED MKP
CHECKED KRB

PAVEMENT & SHOULDER DATA SHEET

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

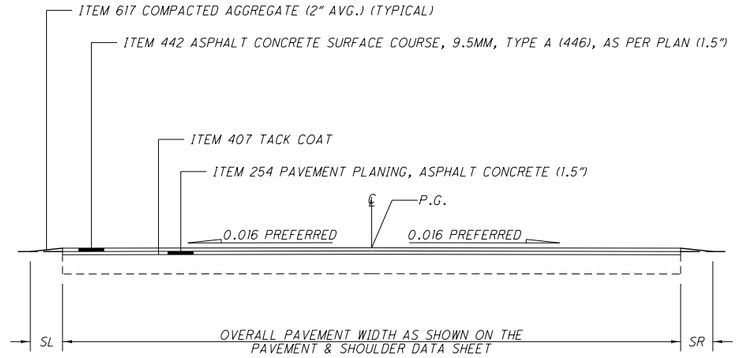
12
59

DESIGN FILE:i:\projects\86728\roadway\sheets\86728GQ001.dgn
WORKSTATION:ssloay
DATE:3/27/2015
MODELNAME:Design



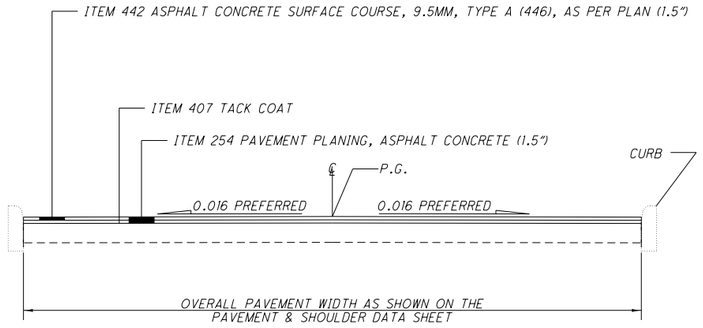
TYPICAL 1

WAY-585-11.96 TO 13.92



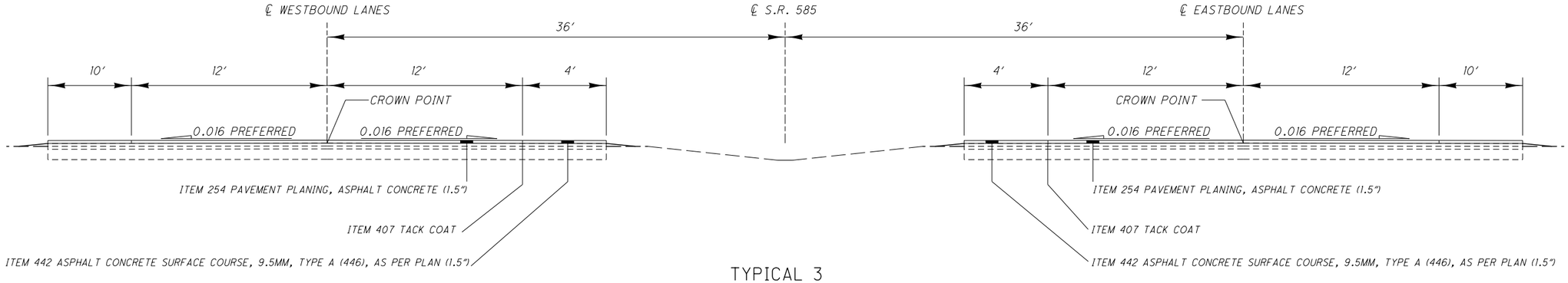
TYPICAL 4

WAY-94-14.16 TO 15.01
WAY-94-15.08 TO 21.48
MED-94-0.00 TO 1.16



TYPICAL 2

WAY-94-15.01 TO 15.08



TYPICAL 3

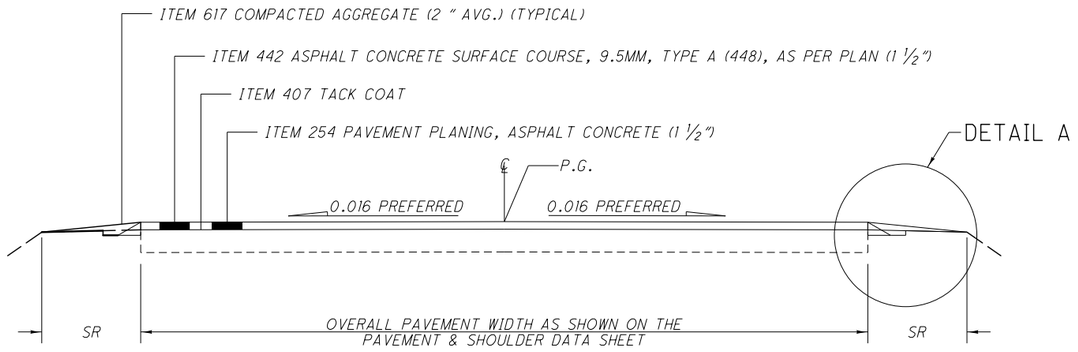
WAY-585-17.39 TO 18.70

CALCULATED MKP
CHECKED KRB

TYPICAL SECTIONS

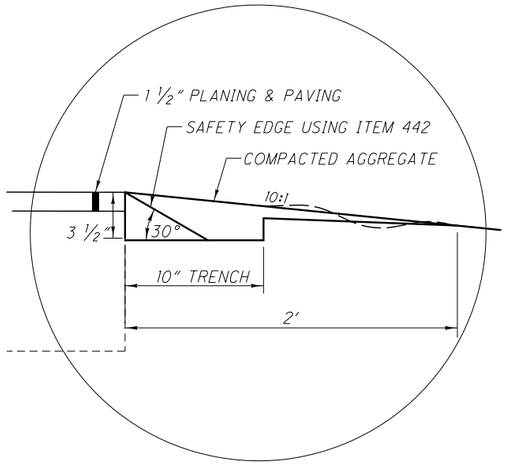
WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE: I:\projects\86728\roadway\sheets\86728GY001.dgn
WORKSTATION: roadway\sheets\86728GY003.dgn
DATE: 3/27/2015

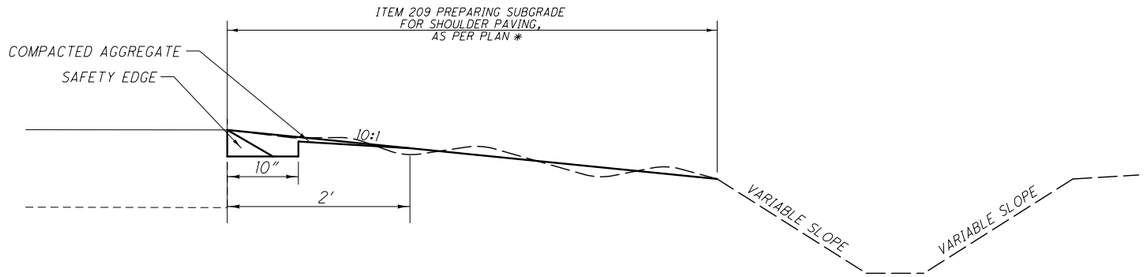


TYPICAL 5

WAY-585-14.78 TO 17.39



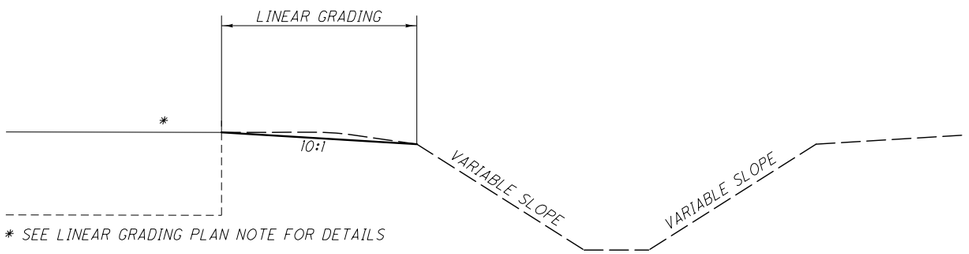
DETAIL A
SAFETY EDGE



ITEM 209 PREPARING SUBGRADE
FOR SHOULDER PAVING, AS PER PLAN

WAY-585-14.78 TO 18.70
MED-94-0.00 TO 1.16

* SEE ITEM 209 PREPARING SUBGRADE FOR SHOULDER PAVING, AS PER PLAN NOTE FOR ADDITIONAL DETAILS



* SEE LINEAR GRADING PLAN NOTE FOR DETAILS

LINEAR GRADING DETAIL

WAY-94-14.16 TO 15.01
WAY-94-15.08 TO 21.48
WAY-585-11.96 TO 13.92

DESIGN FILE: I:\projects\86728\roadway\sheets\86728GY001.dgn
WORKSTAGE: roadway\sheets\86728GY001.dgn DATE: 12/18/2014

CALCULATED MKP
CHECKED KRB

TYPICAL SECTIONS

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

14
59

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.

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.

SUGGESTED SEQUENCE OF GUARDRAIL WORK

1. GUARDRAIL WORK IS TO BEGIN AFTER THE 617 MATERIAL IS PLACED.
2. REMOVE THE GUARDRAIL.
3. PERFORM THE RESHAPING UNDER GUARDRAIL INCLUDING COMPLETING THE EMBANKMENT, AS PER PLAN.
4. REBUILD/CONSTRUCT THE GUARDRAIL RUN.
5. INSTALL BARRIER REFLECTORS.

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 SHALLBE 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.

BRIDGE LOCATION MARKER SIGN

THE BRIDGE LOCATION MARKER SIGN INDICATES THE COUNTY, THE ROUTE, AND THE STRAIGHT LINE MILEAGE OF THE STRUCTURE. THE CONTRACTOR SHALL REMOVE THE EXISTING BRIDGE LOCATION MARKER SIGNS AND REERECT THE SIGNS IN KIND. IF THERE ARE ANY QUESTIONS ON THE LOCATION, PLEASE CONTACT THE DISTRICT BRIDGE ENGINEER.

ALL COSTS, INCLUDING THE SIGN REMOVAL, SIGN REERECTION, POST REMOVAL, AND POST INSTALLATION SHALL BE INCLUDED IN THE FOLLOWING PAY ITEMS:

ITEM 630 GROUND MOUNTED SUPPORT, NO. 3 POST
ITEM 630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION
ITEM 630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL

SEE ROADWAY SUB-SUMMARY SHEET FOR QUANTITIES

ITEM 203 - EMBANKMENT, AS PER PLAN

AT SPECIFIED LOCATIONS AND LOCATIONS AS DIRECTED BY THE ENGINEER, EMBANKMENT SHALL BE PLACED AS TO PROVIDE A SUITABLE AREA TO CONSTRUCT GUARDRAIL AND TO PROVIDE STRUCTURAL INTEGRITY OF THE ROADWAY SHOULDER.

AREAS WHERE EMBANKMENT MATERIAL IS TO BE PLACED SHALL BE SCALPED. THE REQUIREMENTS FOR BENCHING SHALL BE WAIVED. THE DEPTH OF LAYERS IN WHICH THE EMBANKMENT IS PLACED SHALL BE LIMITED TO EIGHT (8) INCHES IN THICKNESS. THE METHOD OF COMPACTION AND EQUIPMENT USED SHALL BE SUFFICIENT TO PROVIDE A MINIMUM OF 60 PERCENT OF RELATIVE COMPACTION.

AFTER THE EMBANKMENT HAS BEEN PLACED, THE AREAS SHALL BE FERTILIZED, SEEDED, MULCHED, AND WATERED AS PER ITEM 659. THE COST SHALL BE INCLUDED IN THIS ITEM FOR PAYMENT.

THE METHOD OF MEASUREMENT FOR EMBANKMENT MATERIAL SHALL BE BY THE NUMBER OF CUBIC YARDS MEASURED BY LOOSE VOLUME IN THE CARRIER AT THE WORK SITE, IN LIEU OF THE REQUIREMENTS OF 203.09. PAYMENT FOR ACCEPTED QUANTITIES WILL BE MADE AT THE CONTRACT UNIT BID PRICE PER CUBIC YARD FOR ITEM 203 - EMBANKMENT, AS PER PLAN AND SHALL INCLUDE ALL WORK DESCRIBED ABOVE.

ITEM 209 - RESHAPING UNDER GUARDRAIL

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

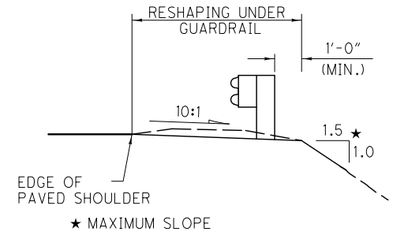
THIS WORK SHALL BE COMPLETED AT LOCATIONS SPECIFIED FOR WORK AS WELL AS PER CMS 209.05 AND AS DESCRIBED HEREIN, AND SHALL AT ALL TIMES BE AS DIRECTED BY THE ENGINEER.

THE AREA IN FRONT OF, UNDER, AND BEHIND THE GUARDRAIL SHALL BE GRADED AND RESHAPED TO PROVIDE AN AREA THAT HAS A SLOPE OF 10:1 MAXIMUM (SEE DETAIL BELOW AS WELL AS THE GUARDRAIL DETAIL SHEETS FOR FURTHER DETAILS AND INFORMATION OF THE LIMITS OF THIS WORK).

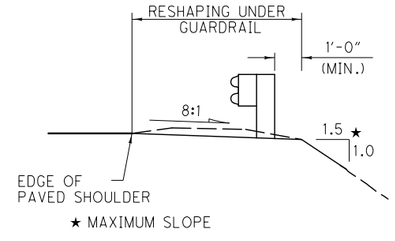
EXCESS MATERIAL RESULTING SHALL BE USED ELSEWHERE FOR THIS ITEM IF SO DIRECTED OR DISPOSED OF PROPERLY. IF EXTRA MATERIAL IS REQUIRED IT SHALL BE PAID FOR WITH ITEM 203 - EMBANKMENT, AS PER PLAN. THIS WORK SHALL NOT BE STARTED UNTIL AFTER THE RESURFACING AND BERM WORK HAS BEEN COMPLETED.

THE ABOVE WORK SHALL BE PAID FOR PER STATION WITH ITEM 209, RESHAPING UNDER GUARDRAIL WITH THE EXCEPTION OF ANY EXTRA MATERIAL REQUIRED TO MEET THE SLOPE REQUIREMENTS WHICH SHALL BE PAID BY ITEM 203 - EMBANKMENT, AS PER PLAN.

TYPICAL SECTION "TYPE 5"



TYPICAL SECTION "TYPE MGS"



ITEM 606 - RAISING TYPE 5 GUARDRAIL

WHERE DESIGNATED ON THE PLAN, THE EXISTING TYPE 5 GUARDRAIL SHALL BE RAISED ON THE EXISTING WOOD POSTS AS PER PLAN INSERT SHEET GR-2.1 SO AS TO OBTAIN THE STANDARD 29 IN. HEIGHT. THE RAIL SHALL BE RE-ATTACHED TO THE POSTS USING NEW POST BOLTS.

THE RAIL SHALL BE DISMANTLED ONLY TO THE EXTENT NECESSARY TO FIELD BORE NEW BOLT HOLES IN THE WOOD POSTS, AND TO RECONNECT THE RAIL AND BLOCK TO THE EXISTING POSTS.

THE EXISTING TYPE "A" ANCHOR ASSEMBLIES THAT ARE TO REMAIN SHALL NOT BE ADJUSTED. THE LAST RAIL ELEMENT SHALL BE TRANSITIONED TO MEET THESE ASSEMBLIES.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT OF ITEM 606 - RAISING TYPE 5 GUARDRAIL, WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 606 - ANCHOR ASSEMBLY, TYPE E

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

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 INSTRUCTIONS 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 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 FROM THE EDGE OF THE SHOULDER.

ON SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT PROJECT MORE THAN 4 INCHES 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.

CALCULATED KRB CHECKED

GUARDRAIL GENERAL NOTES

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE:i:\projects\86728\roadway\sheets\86728GR_GN.dgn MODELNAME: Sheet
WORKSTATIONmpeters DATE:12/1/2014

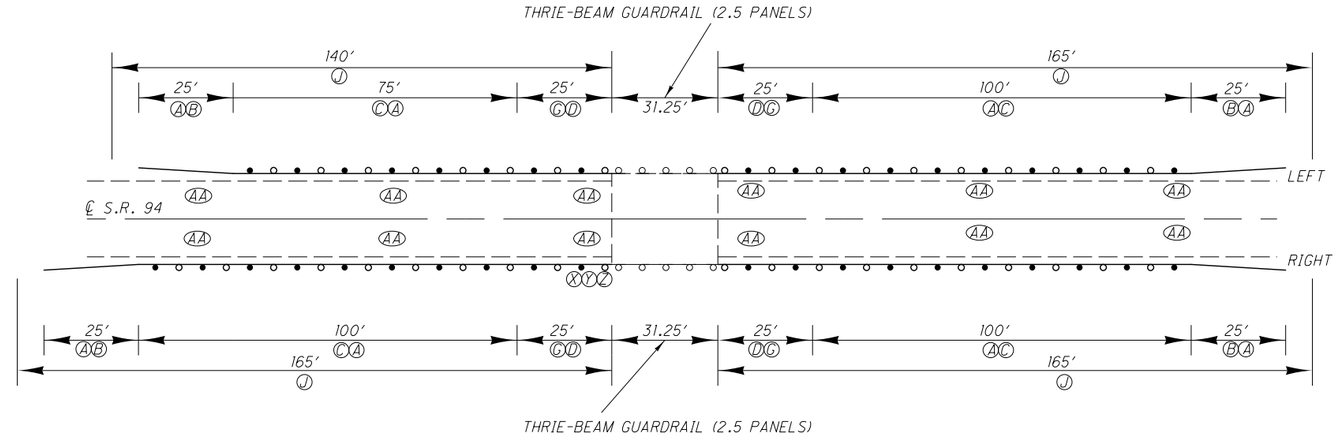
SHEET	LOCATION	FUNDING SPLIT	202 GUARDRAIL REMOVED	202 GUARDRAIL REMOVED FOR REUSE	202 ANCHOR ASSEMBLY REMOVED, TYPE A	202 BRIDGE TERMINAL ASSEMBLY REMOVED	202 BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE	203 ENBANKMENT, AS PER PLAN	209 RESHAPING UNDER GUARDRAIL	606 GUARDRAUL, TYPE 5	606 GUARDRAUL REBUILT, TYPE 5	606 RAISING TYPE 5 GUARDRAIL	606 ANCHOR ASSEMBLY, TYPE A	606 ANCHOR ASSEMBLY, TYPE E	606 BRIDGE TERMINAL ASSEMBLY, TYPE 3	606 BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 4	626 BARRIER REFLECTOR		630 GROUND MOUNTED SUPPORT, NO. 3 POST	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL				
			FT	FT	EACH	EACH	EACH	CY	STA	FT	FT	FT	EACH	EACH	FT	EACH	EACH		FT	EACH	EACH				
17	WAY-94-16.74	01/STR/PV	375		4	4			6.35	375			4		4		12		7	1	1				
18	WAY-94-18.20	01/STR/PV		100				15	1.00		100						3								
19	WAY-94-18.40	01/STR/PV	25		1		2		1.25			65		1		2	2								
20	WAY-94-18.70	01/STR/PV	25		1				0.75					1			2								
21	WAY-585-15.18	01/STR/PV	25		1				0.75					1			2								
22	WAY-585-16.50	03/NHS/PV	100		4				3.00					4			8								
23	WAY-585-17.91	03/NHS/PV	50		2				1.50					2			4								
24	WAY-585-18.40	03/NHS/PV	75		3				2.25					3			6								
25	MED-94-0.18	02/S<2/PV	50	62.5	2				2.13		62.5			2			4								
	TOTAL (01/STR/PV)		**450**	**100**	**7**	**4**	**2**	**15**	**10.1**	**375**	**100**	**65**	**4**	**3**	**4**	**2**	**21**		**7**	**1**	**1**				
	TOTAL (02/S<2/PV)		**50**	**62.5**	**2**				**2.13**		**62.5**			**2**			**4**								
	TOTAL (03/NHS/PV)		**225**		**9**				**6.75**					**9**			**18**								

CALCULATED MKP
CHECKED KRB

ROADWAY SUB-SUMMARY

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE:i:\projects\86728\roadway\sheets\86728GR001.dgn MODELNAME: Design
WORKSTATIONmpeters DATE:12/1/2014



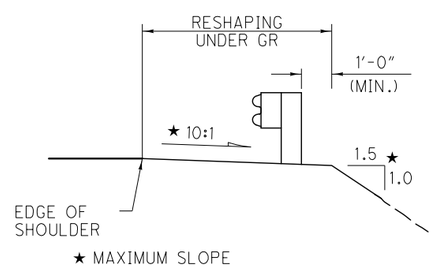
NOTE:

1. PROPOSED GUARDRAIL OFFSET SAME AS EXISTING
2. SEE STRUCTURE SHEETS FOR PROPOSED THRIE-BEAM BRIDGE RAILING WORK

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
A	202	GUARDRAIL REMOVED	FT	175	200	375
H	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
G	202	BRIDGE TERMINAL ASSEMBLY REMOVED	EACH	2	2	4
J	209	RESHAPING UNDER GUARDRAIL	STA	3.05	3.3	6.35
C	606	GUARDRAIL, TYPE 5	FT	175	200	375
B	606	ANCHOR ASSEMBLY, TYPE A	EACH	2	2	4
D	606	BRIDGE TERMINAL ASSEMBLY, TYPE 3	EACH	2	2	4
AA	626	BARRIER REFLECTOR	EACH	6	6	12
X	630	GROUND MOUNTED SUPPORT, NO. 3 POST	FT		7	7
Y	630	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	EACH		1	1
Z	630	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	EACH		1	1

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET (01/STR/PV)

TYPICAL SECTION "TYPE 5"



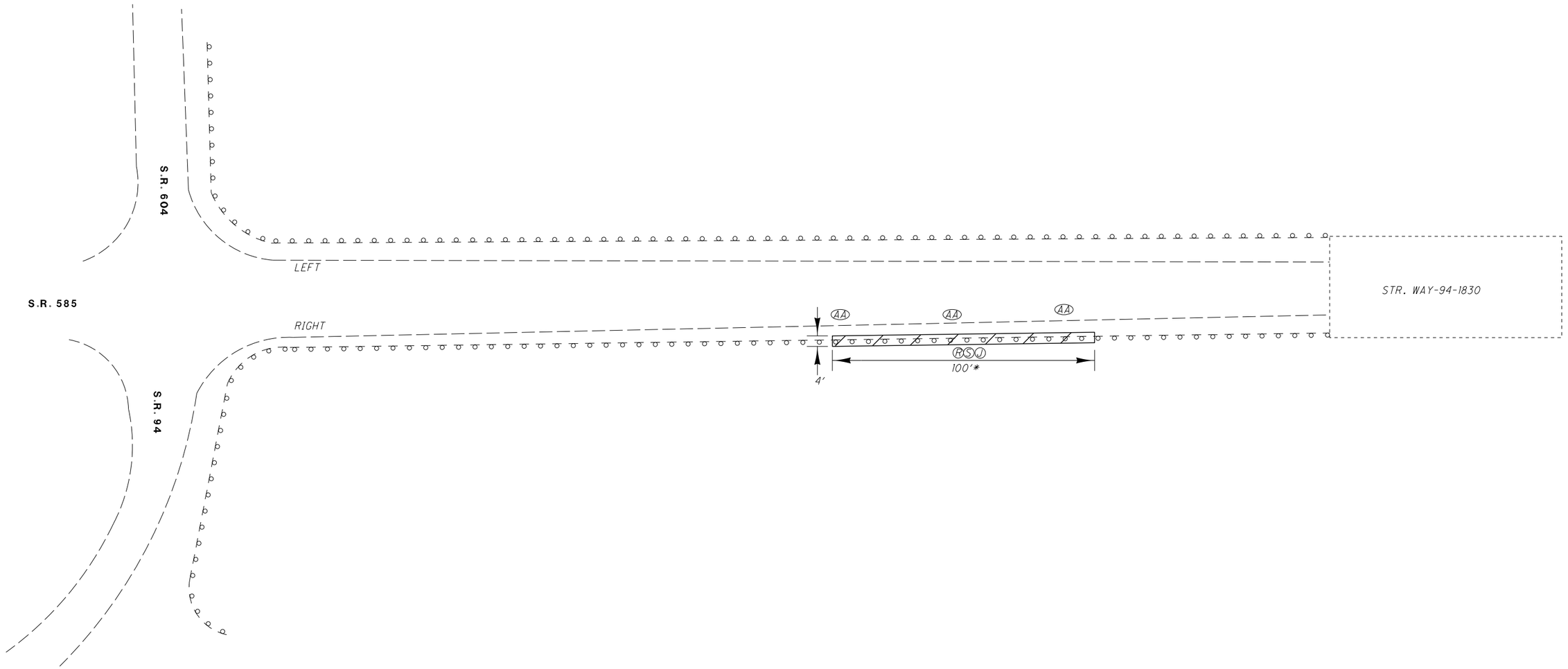
CALCULATED MKP
CHECKED KRB

GUARDRAIL DETAIL
WAY-94-16.74

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

17
59

DESIGN FILE:i:\projects\86728\roadway\sheets\86728GR001.dgn MODELNAME: Design
WORKSTATIONmpeters DATE:12/1/2014

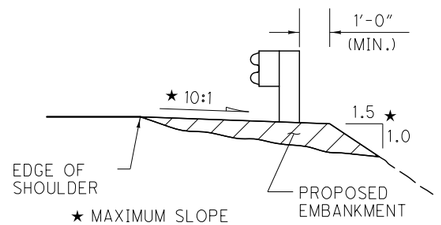


* EMBANKMENT LOCATIONS TO BE DETERMINED IN THE FIELD BY PROJECT ENGINEER

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
(R)	202	GUARDRAIL REMOVED FOR REUSE	FT		100	100
	203	EMBANKMENT, AS PER PLAN	CY		15	15
(J)	209	RESHAPING UNDER GUARDRAIL	STA		1.00	1.00
(S)	606	GUARDRAIL REBUILT, TYPE 5	FT		100	100
AA	626	BARRIER REFLECTOR	EACH		3	3

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET (01/STR/PV))

TYPICAL SECTION "TYPE 5"



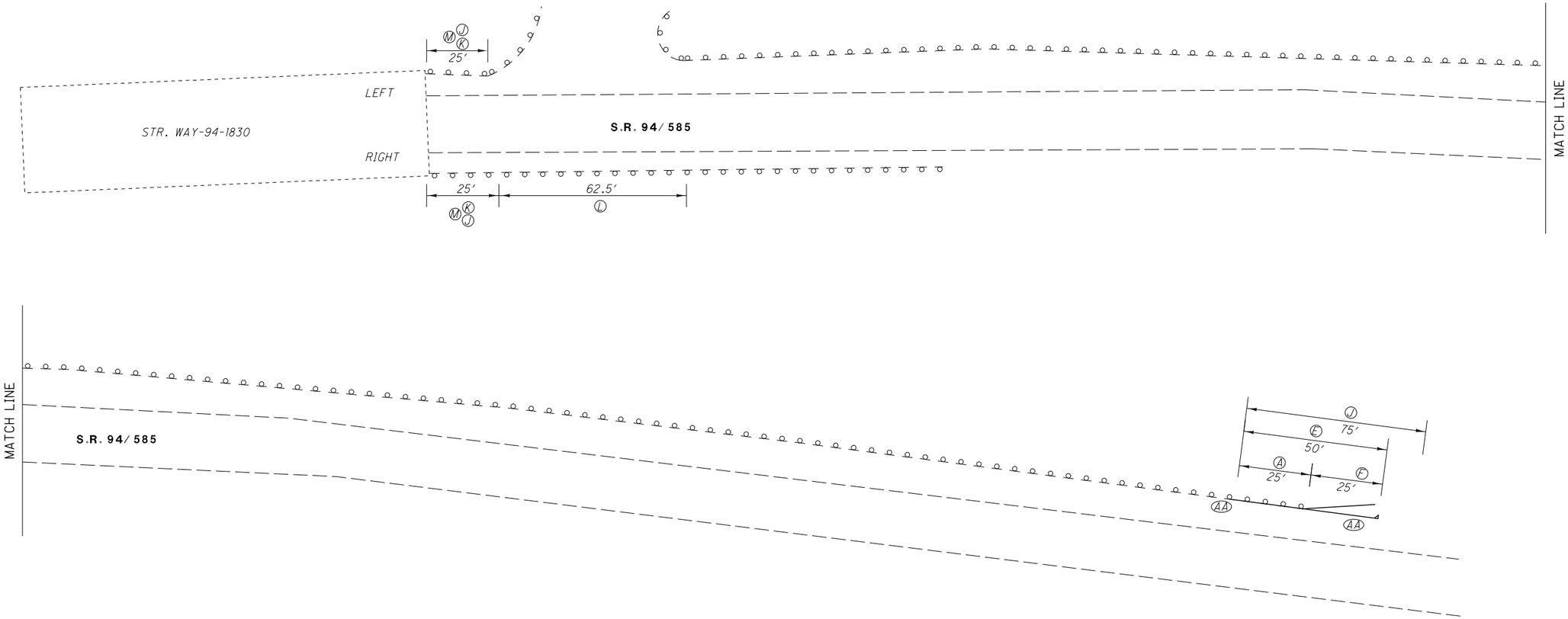
CALCULATED MKP
CHECKED KRB

GUARDRAIL DETAIL
WAY-94-18.20

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

18
59

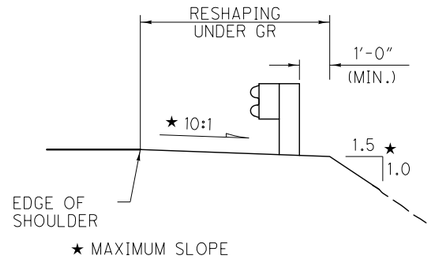
DESIGN FILE: i:\projects\86728\roadway\sheets\86728GR001.dgn MODELNAME: Design
WORKSTATIONmpeters DATE: 12/1/2014



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT	25		25
(F)	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1		1
(M)	202	BRIDGE TERMINAL ASSEMBLY REMOVED FOR REUSE	EACH	1	1	2
(J)	209	RESHAPING UNDER GUARDRAIL	STA	1.00	0.25	1.25
(L)	606	RAISING TYPE 5 GUARDRAIL	FT		65	65
(E)	606	ANCHOR ASSEMBLY, TYPE E	EACH	1		1
(K)	606	BRIDGE TERMINAL ASSEMBLY REBUILT, TYPE 4	EACH	1	1	2
(AA)	626	BARRIER REFLECTOR	EACH	2		2

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET (01/STR/PV))

TYPICAL SECTION "TYPE 5"



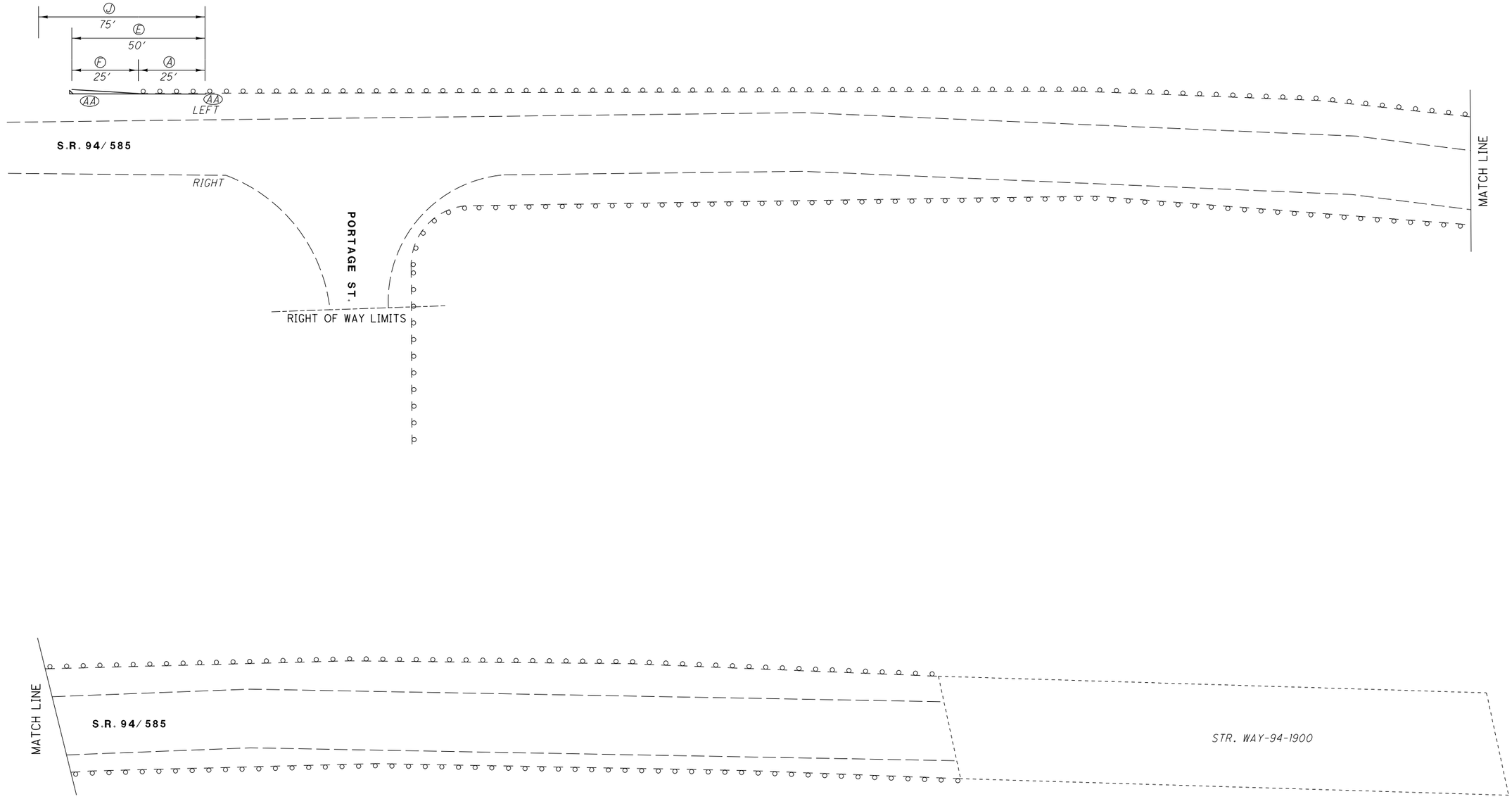
CALCULATED MKP
CHECKED KRB

GUARDRAIL DETAIL
WAY-94-18.40

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

19
59

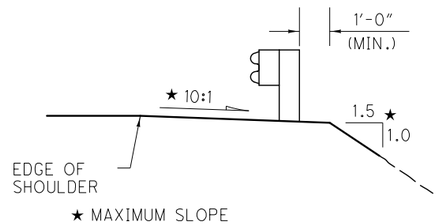
DESIGN FILE: i:\projects\86728\roadway\sheets\86728GR001.dgn MODELNAME: Design
WORKSTATION mpeters DATE: 12/1/2014



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT	25		25
(F)	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1		1
(J)	209	RESHAPING UNDER GUARDRAIL	STA	0.75		0.75
(E)	606	ANCHOR ASSEMBLY, TYPE E	EACH	1		1
(AA)	626	BARRIER REFLECTION	EACH	2		2

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET (01/STR/PV))

TYPICAL SECTION "E"



CALCULATED MKP
CHECKED KRB

GUARDRAIL DETAIL
WAY-94-18.70

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

20
59

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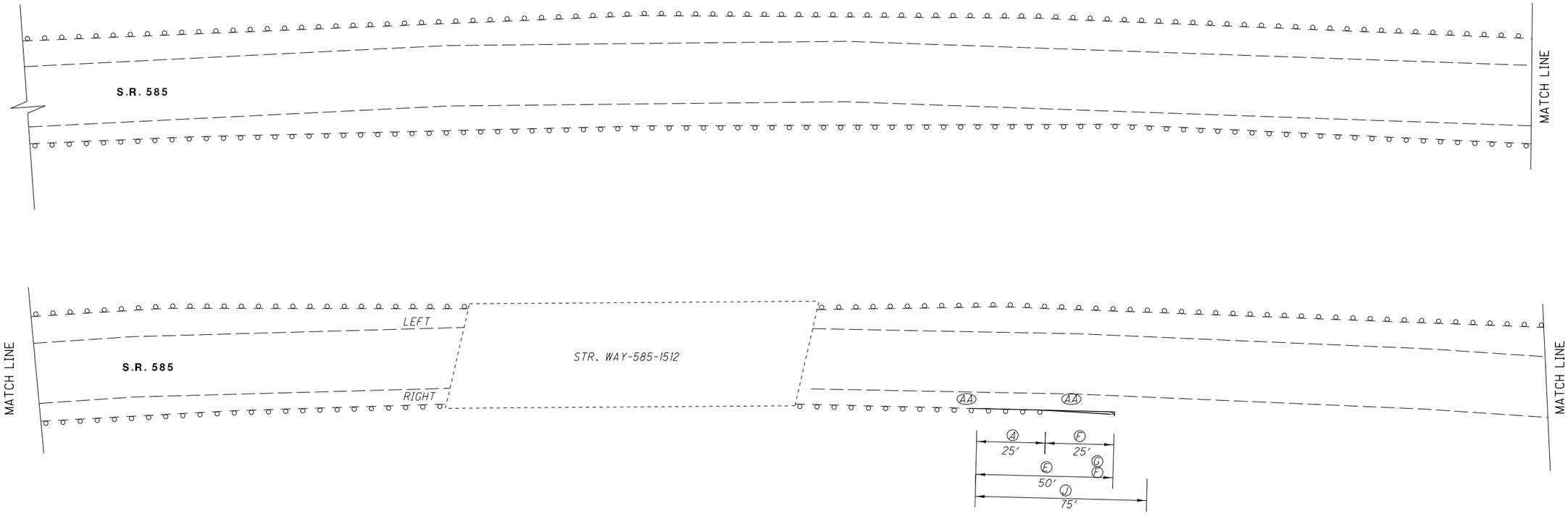
MODELNAME: Design



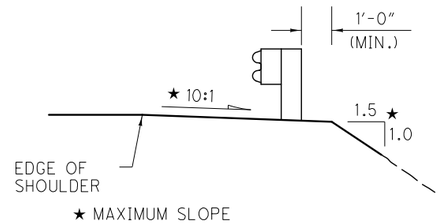
NOTE:

1. SEE STRUCTURE SHEETS FOR PROPOSED THRIE-BEAM BRIDGE RAILING WORK

LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT		25	25
(F)	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH		1	1
(J)	209	RESHAPING UNDER GUARDRAIL	STA		0.75	0.75
(E)	606	ANCHOR ASSEMBLY, TYPE E	EACH		1	1
(AA)	626	BARRIER REFLECTOR	EACH		2	2

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET (01/STR/PV))

TYPICAL SECTION "E"



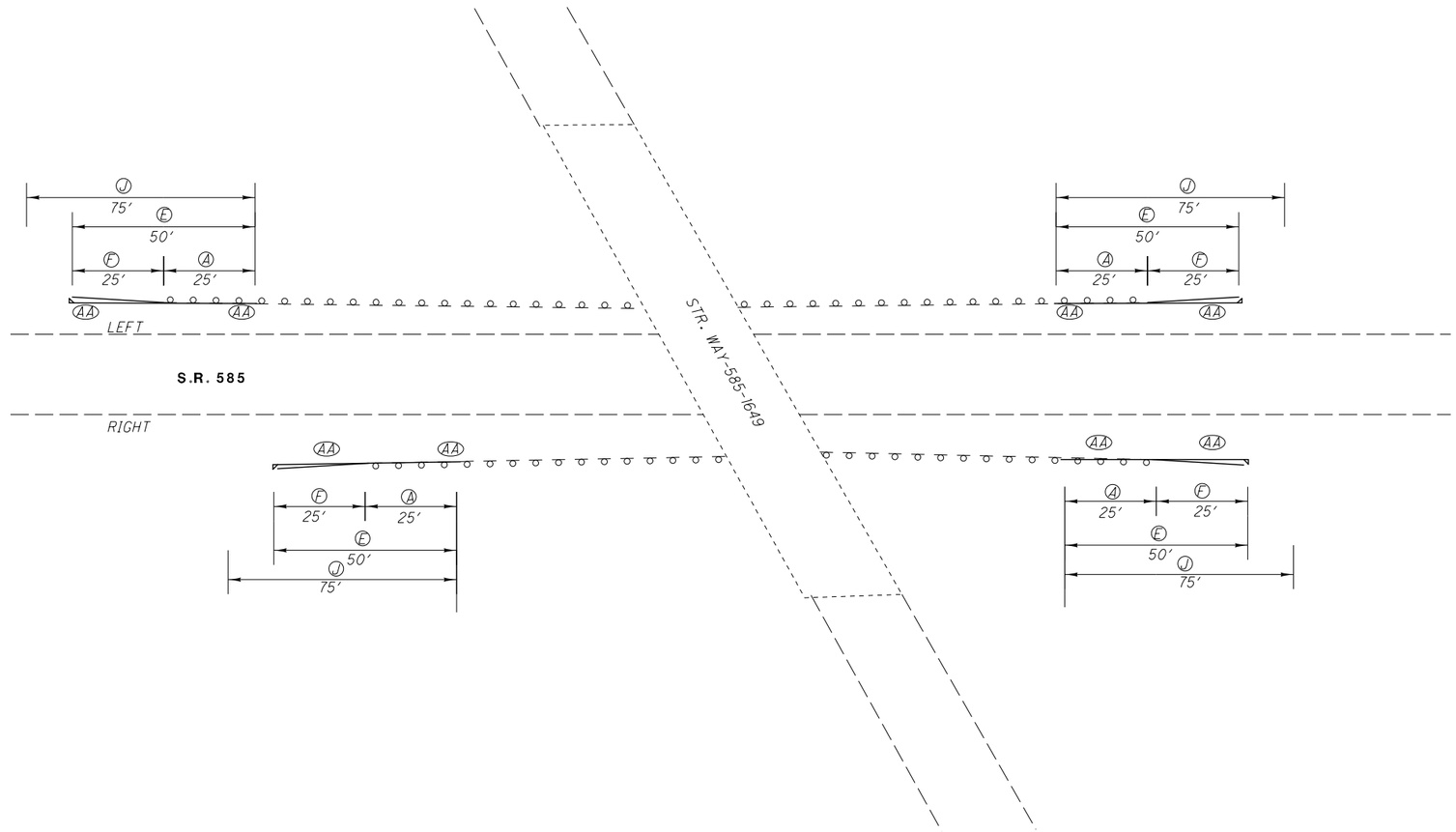
CALCULATED MKP
CHECKED KRB

GUARDRAIL DETAIL
WAY-585-15.18

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

21
59

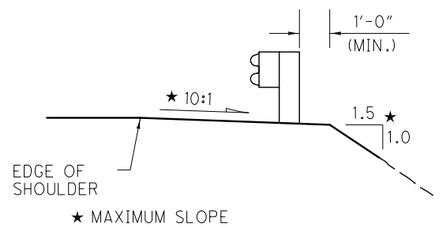
DESIGN FILE: i:\projects\86728\roadway\sheets\86728GR001.dgn
WORKSTATION mpeters
DATE: 12/1/2014
MODELNAME: Design



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT	50	50	100
(F)	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2	2	4
(J)	209	RESHAPING UNDER GUARDRAIL	STA	1.50	1.50	3.00
(E)	606	ANCHOR ASSEMBLY, TYPE E	EACH	2	2	4
(AA)	626	BARRIER REFLECTOR	EACH	4	4	8

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET (03/NHS/PV)

TYPICAL SECTION "E"



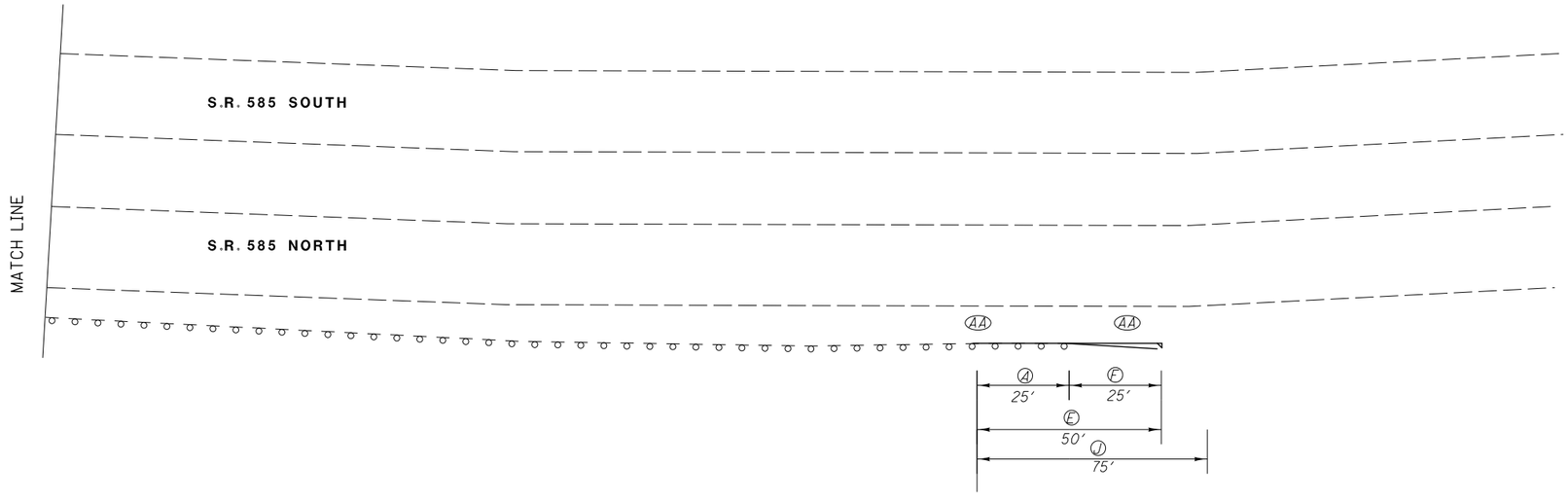
CALCULATED MKP
CHECKED KRB

GUARDRAIL DETAIL
WAY-585-16.50

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

22
59

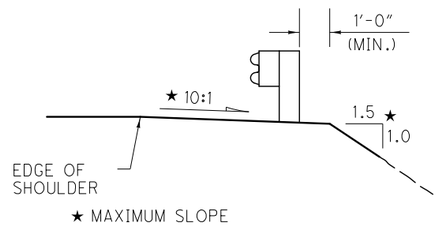
DESIGN FILE: i:\projects\86728\roadway\sheets\86728GR001.dgn
WORKSTATION mpeters
DATE: 12/1/2014
MODELNAME: Design



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				NORTH	SOUTH	
(A)	202	GUARDRAIL REMOVED	FT	50		50
(F)	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	2		2
(J)	209	RESHAPING UNDER GUARDRAIL	STA	1.50		1.50
(E)	606	ANCHOR ASSEMBLY, TYPE E	EACH	2		2
(AA)	626	BARRIER REFLECTOR	EACH	4		4

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET (03/NHS/PV)

TYPICAL SECTION "E"



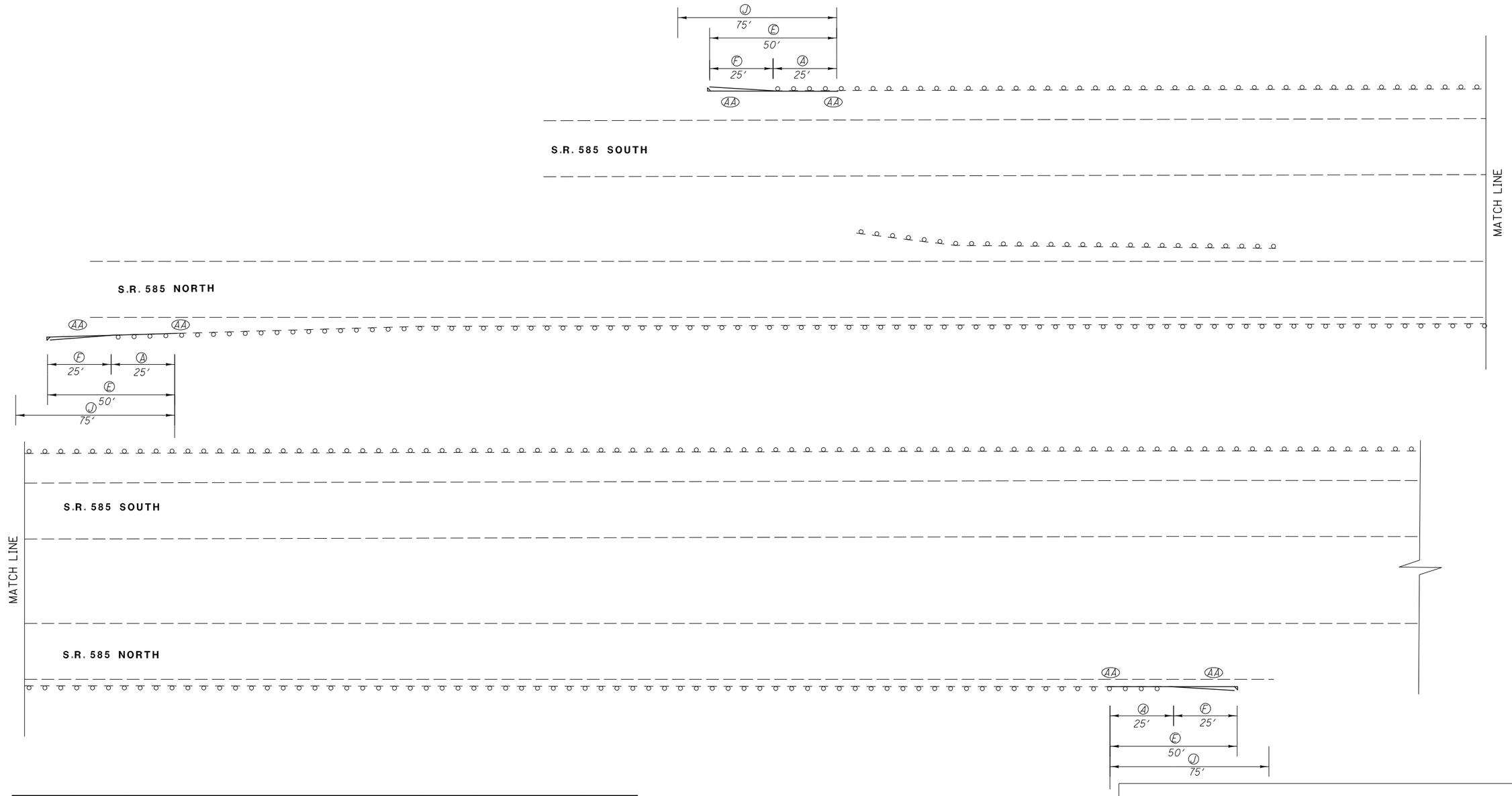
CALCULATED MKP
CHECKED KRB

GUARDRAIL DETAIL
WAY-585-17.91

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

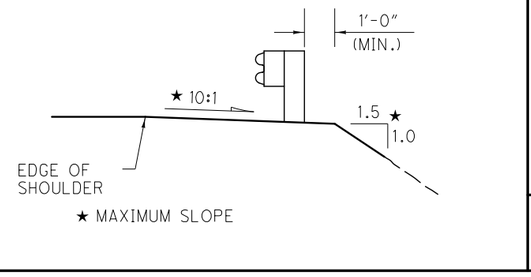
23
59

DESIGN FILE:i:\projects\86728\roadway\sheets\86728GR001.dgn
WORKSTATION:mpeters
DATE:12/1/2014
MODELNAME:Design



LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT	25	50	75
(F)	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH	1	2	3
(J)	209	RESHAPING UNDER GUARDRAIL	STA	0.75	1.50	2.25
(E)	606	ANCHOR ASSEMBLY, TYPE E	EACH	1	2	3
(AA)	626	BARRIER REFLECTOR	EACH	2	4	6

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET (03/NHS/PV)

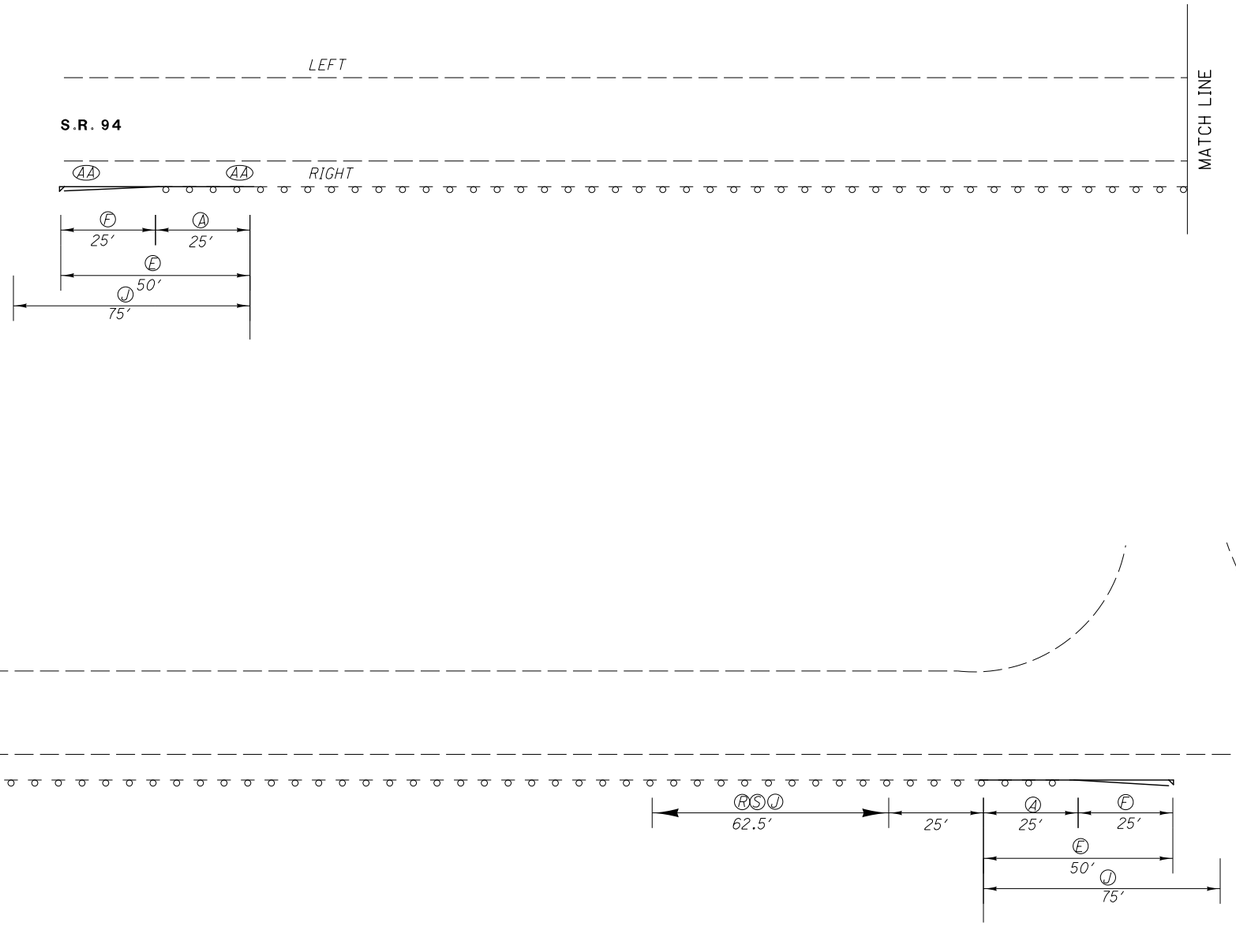


CALCULATED MKP
CHECKED KRB

GUARDRAIL DETAIL
WAY-585-18.40

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

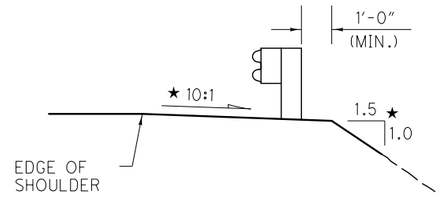
DESIGN FILE:i:\projects\86728\roadway\sheets\86728GR001.dgn MODELNAME:Design
WORKSTATIONmpeters DATE:12/1/2014



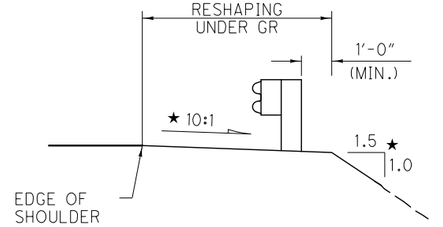
LOCATION	ITEM	DESCRIPTION	UNIT	QUANTITY		TOTAL
				LEFT	RIGHT	
(A)	202	GUARDRAIL REMOVED	FT		50	50
(R)	202	GUARDRAIL REMOVED FOR REUSE	FT		62.5	62.5
(F)	202	ANCHOR ASSEMBLY REMOVED, TYPE A	EACH		2	2
(J)	209	RESHAPING UNDER GUARDRAIL	STA		2.13	2.13
(S)	606	GUARDRAIL REBUILT, TYPE 5	FT		62.5	62.5
(E)	606	ANCHOR ASSEMBLY, TYPE E	EACH		2	2
(AA)	626	BARRIER REFLECTOR	EACH		4	4

ALL QUANTITIES CARRIED TO ROADWAY SUB-SUMMARY SHEET (02/S<2/PV)

TYPICAL SECTION "E"



TYPICAL SECTION "TYPE 5"



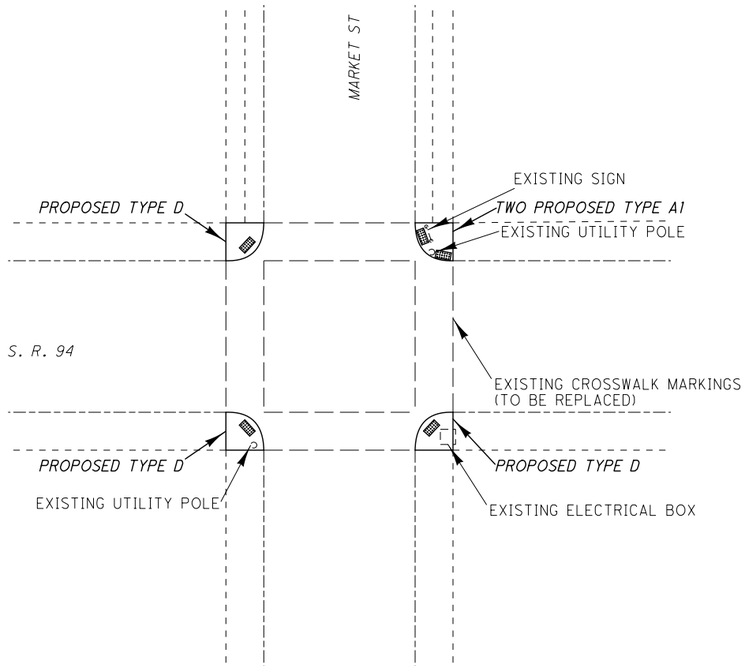
CALCULATED MKP
CHECKED KRB

GUARDRAIL DETAIL
MED-94-0.18

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

25
59

DESIGN FILE: i:\projects\86728\roadway\sheets\86728GR001.dgn
WORKSTATION: mpeters
DATE: 12/1/2014
MODELNAME: Design



LOCATION	202	202	608	608
	CURB REMOVED	WALK REMOVED	CURB RAMP, TYPE D	CURB RAMP, TYPE A1
	FT	SQ FT	SQ FT	SQ FT
AT MARKET ST. NE CORNER	25	30	30	
AT MARKET ST. SE CORNER	20	50	50	
AT MARKET ST. SW CORNER	20	40	40	
AT MARKET ST. NW CORNER	25	55		55
TOTAL (01/STR/PV)	**90**	**175**	**120**	**55**

NOTES:

FOR ADDITIONAL DETAILS, SEE SCD BP-7.1, NEW CURB RAMPS

AREAS CALCULATED ARE FOR ESTIMATING PURPOSES ONLY,
ACTUAL AREAS SHALL BE VERIFIED BY THE PROJECT ENGINEER.

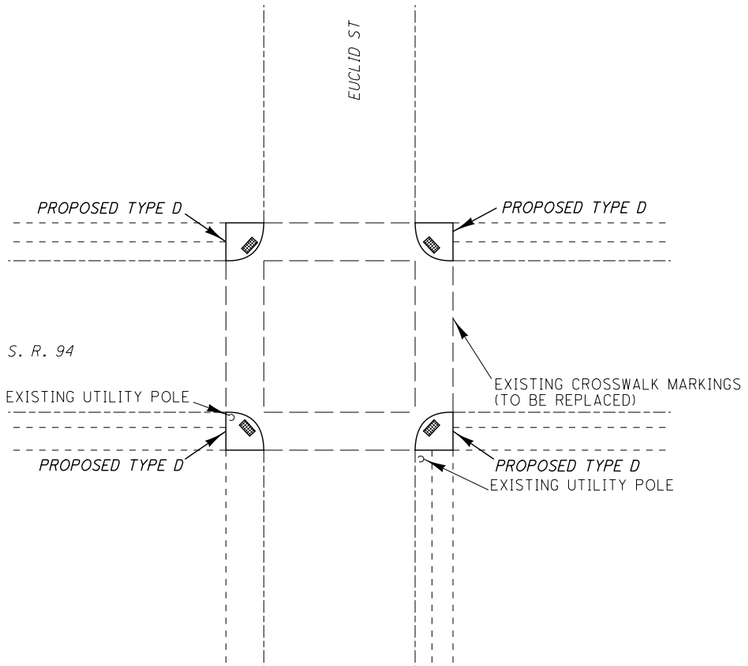
ALL QUANTITIES CARRIED TO THE GENERAL SUMMARY.

CURB RAMP DETAILS
S.R. 94 & MARKET ST

CALCULATED MKP
CHECKED KRB

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE:i:\projects\86728\roadway\sheets\86728GA001.dgn MODELNAME: Design
WORKSTATIONmpeters DATE:12/1/2014



LOCATION	202	202	608	
	CURB REMOVED	WALK REMOVED	CURB RAMP, TYPE D	
	FT	SQ FT	SQ FT	
AT EUCLID ST. NE CORNER		20	40	
AT EUCLID ST. SE CORNER		8	25	
AT EUCLID ST. SW CORNER		60	60	
AT EUCLID ST. NW CORNER		44	44	
TOTAL (01/STR/PV)		132	169	

NOTES:

FOR ADDITIONAL DETAILS, SEE SCD BP-7.1, NEW CURB RAMPS

AREAS CALCULATED ARE FOR ESTIMATING PURPOSES ONLY,
ACTUAL AREAS SHALL BE VERIFIED BY THE PROJECT ENGINEER.

ALL QUANTITIES CARRIED TO THE GENERAL SUMMARY.

CALCULATED MKP
CHECKED KRB

CURB RAMP DETAILS
S.R. 94 & EUCLID ST

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

27
59

DESIGN FILE: i:\projects\86728\roadway\sheets\86728GA001.dgn MODELNAME: Design
WORKSTATION mpeters DATE: 12/1/2014

AUXILIARY & LONG LINE MARKINGS

FUNDING SPLITS	COUNTY	ROUTE	DIRECTION	STATION / SLM FROM	STATION / SLM TO	HIGHWAY MILES	614 WORK ZONE LANE LINE, CLASS III, 642 PAINT	614 WORK ZONE CENTER LINE, CLASS III, 642 PAINT	614 WORK ZONE CHANNELIZING LINE, CLASS III, 642 PAINT	614 WORK ZONE STOP LINE, CLASS III, 642 PAINT	642 EDGE LINE, 6" TOTAL (PAY QUANTITY) (WHITE)	642 EDGE LINE, 6" TOTAL (PAY QUANTITY) (YELLOW)	642 EDGE LINE, 4" TOTAL (PAY QUANTITY) (WHITE)	642 EDGE LINE, 4" TOTAL (PAY QUANTITY) (YELLOW)	642 LANE LINE, 6"	642 CENTER LINE SOLID LINE EQUIVALENT	642 CENTER LINE TOTAL (PAY QUANTITY)	646 EDGE LINE, 4" TOTAL (PAY QUANTITY) (WHITE)	646 EDGE LINE, 4" TOTAL (PAY QUANTITY) (YELLOW)	646 LANE LINE, 4"	646 CENTER LINE SOLID LINE EQUIVALENT	646 CENTER LINE TOTAL (PAY QUANTITY)
				FROM	TO	MILE	MILE	MILE	FT	FT	MILE	MILE	MILE	MILE	MILE	MILE	MILE	MILE	MILE	MILE	MILE	MILE
01/STR/PV	WAY	94		14.16	21.25	7.09		14.18		72	12.46		1.72			14.10	7.09					
02/S<2/PV	WAY	94		21.25	21.48	0.23		0.46			0.46					0.46	0.23					
02/S<2/PV	MED	94		0.00	1.16	1.16		2.32		48	2.32					1.41	1.16					
01/STR/PV	WAY	585		11.96	13.92	1.96		5.88	216	216			3.92			3.76	1.96					
01/STR/PV	WAY	585		14.78	15.87	1.09		2.18		24			2.18			0.95	1.09					
03/NHS/PV	WAY	585		15.87	16.53	0.66		1.32					1.32			1.15	0.66					
03/NHS/PV	WAY	585		16.53	17.47	0.94		2.06			1.88					0.86	1.03					
03/NHS/PV	WAY	585		17.47	17.74	0.27	0.82	0.26	3,500	346	0.54	0.41			0.41	0.26	0.13					
03/NHS/PV	WAY	585		17.74	18.70	0.96	3.84				1.92	1.92			1.92							
03/NHS/PV	DOYLES TOWN RAMP			0.00	0.18	0.18				24	0.36	0.36										
03/NHS/PV	STR. WAY-585-1649																0.07					
TOTAL (01/STR/PV)						10.14		22.24	216	312	12.46		7.82			18.81	10.14					
TOTAL (02/S<2/PV)						1.39		2.78		48	2.78					1.87	1.39					
TOTAL (03/NHS/PV)						3.01	4.66	3.64	3500	370	4.70	2.69	1.32		2.33	2.27	1.89					
TOTALS TO GENERAL SUMMARY:						14.54	4.66	28.66	3716	730	19.94	2.69	9.14		2.33	22.95	13.42					

FUNDING SPLITS	COUNTY	ROUTE	DIRECTION	644 AUXILIARY MARKINGS (740.04) CHANNELIZING LINE 8"	STOP LINE 24"	CROSSWALK LINE 12"	CHEVERON MARKINGS 24"	TRANSVERSE/ DIAGONAL LINE (YELLOW) 24"	ISLAND MARKING	RAILROAD SYMBOL MARKING	SCHOOL SYMBOL MARKING 72 INCH	SCHOOL SYMBOL MARKING 96 INCH	PARKING LOT STALL MARKING	LANE ARROW LEFT	LANE ARROW RIGHT	LANE ARROW THROUGH	LANE ARROW MERGE RIGHT	WORD ON PAVEMENT "ONLY" 72 INCH	WORD ON PAVEMENT "ONLY" 96 INCH	DOTTED LINE, 6"	HANDICAP SYMBOL MARKING	SPECIAL AIR SPEED ZONE MARKING
				FT	FT	FT	FT	FT	SQ FT	EACH	EACH	EACH	FT	EACH				EACH		FT	EACH	EACH
01/STR/PV	WAY	94			348	428		136					240	2								
02/S<2/PV	WAY	94																				
02/S<2/PV	MED	94			136																	
01/STR/PV	WAY	585		1,084	144			530							3							
01/STR/PV	WAY	585			12									13								
03/NHS/PV	WAY	585																				
03/NHS/PV	WAY	585			60			200														
03/NHS/PV	WAY	585		1,750	173		345	570						14								
03/NHS/PV	WAY	585																				
03/NHS/PV	DOYLES TOWN RAMP				12																	
03/NHS/PV	STR. WAY-585-1649																					
TOTAL (01/STR/PV)				1084	504	428		666					240	15	3							
TOTAL (02/S<2/PV)					136																	
TOTAL (03/NHS/PV)				1750	245		345	770						14								
TOTALS TO GENERAL SUMMARY:				2834	885	428	345	1436					240	29	3							

RAISED PAVEMENT MARKERS

FUNDING SPLITS	COUNTY	ROUTE	DIRECTION	STATION-SLM FROM	STATION-SLM TO	DETAIL	621 RAISED PAVEMENT MARKER REMOVED	621 RPM	PRISMATIC RETRO-REFLECTOR TYPES ONE-WAY WHITE	TWO-WAY YELLOW / YELLOW	TWO-WAY WHITE / RED	TWO-WAY YELLOW / RED	TWO-WAY	TWO-WAY	TWO-WAY BLUE / BLUE	REMARKS
				FROM	TO		EACH	EACH	EACH							
01/STR/PV	WAY	94		14.16	18.11	GAP	261	261		261						CONTINUOUS ROUTE TREATMENT
01/STR/PV	WAY	94		18.11	18.31	6	27	27	16	11						STOP APPROACH @ SR 585 (WEST JUNCT.)
01/STR/PV	WAY	94		18.31	19.17	GAP	96	96		94	2					OVERLAP ON STATE RT. 585 LR. LANE @ SR 94
01/STR/PV	WAY	94		19.17	19.37	6	27	27	16	11						STOP APPROACH @ SR 585 (EAST JCT.)
01/STR/PV	WAY	94		19.37	19.56	15	28	28		28						CURVE
01/STR/PV	WAY	94		19.56	20.13	GAP	37	37		37						CONTINUOUS ROUTE TREATMENT
01/STR/PV	WAY	94		20.13	20.37	15	32	32		32						CURVE
01/STR/PV	WAY	94		20.37	21.25	GAP	76	76		76						CONTINUOUS ROUTE TREATMENT
02/S<2/PV	WAY	94		21.25	21.48	GAP	31	31	16	15						CONTINUOUS ROUTE TREATMENT
02/S<2/PV	MED	94		0.00	1.16	GAP	77	77		77						CONTINUOUS ROUTE TREATMENT
01/STR/PV	WAY	585		11.96	12.34	8	54	54	32	22						STOP APPROACHES @ SR 57
01/STR/PV	WAY	585		12.34	13.73	16/GAP	55	55		55						CURVE AND CONTINUOUS ROUTE TREATMENT
01/STR/PV	WAY	585		13.73	13.90	8	18	18		16	2					THRU APPROACH @ SR 94 & LT. LANE (SOUTH JUNCTION)
01/STR/PV	WAY	585		14.78	14.93	8	11	11		11						THRU APPROACH @ SR 94 (NORTH JUNCTION)
01/STR/PV	WAY	585		14.93	15.87	GAP	142	63		63						CONTINUOUS ROUTE TREATMENT
03/NHS/PV	WAY	585		15.87	16.96	GAP	10	89		89						CONTINUOUS ROUTE TREATMENT
03/NHS/PV	WAY	585		16.96	18.70	5	203	203		17	175	11				4-LANE DIVIDED
TOTAL (01/STR/PV)							785	785								
TOTAL (02/S<2/PV)							108	108								
TOTAL (03/NHS/PV)							292	292								
TOTALS TO GENERAL SUMMARY:							1,185	1,185								

DETAIL	DESCRIPTION
1	MULTILANE UNDIVIDED TYPICAL SPACING
2	TAPERED ACCEL. LANE
3	DECELERATION LANE
4	PARALLEL ACCEL LANE
5	MULTILANE DIVIDED/EXPRESSWAY
6	STOP APPROACH
7	2 LANE APPR. WITH TURN LANE
8	THROUGH APPROACH
9	3 LANE APPR. WITH TURN LANE
11	3 LANE UNDIVIDED TO 2 LANE TRANSITION
12	TWO LANE NARROW BRIDGE
13	TWO WAY LEFT TURN LANE
14	ONE LANE BRIDGE
15	HORIZONTAL CURVE
16	HORIZONTAL CURVE ALT.
17	STOP APPROACH ALT.
18	FIRE HYDRANT
GAP	CENTER LINE AT 80 FT. TYP.

NOTES

1) S.R. 585 SHALL BE STRIPED 12' WIDE. S.R. 94 SHALL BE STRIPED TO MATCH EXISTING WIDTHS. ALL LANES TO BE STRIPED ACCORDING TO CMS 614.08A.

2) FOR ALL WORK ZONE MARKINGS, THE 642 PAINT USED SHALL BE TYPE 1.

3) WORK ZONE STOP LINES SHALL BE PLACED AT THE FOLLOWING LOCATIONS:

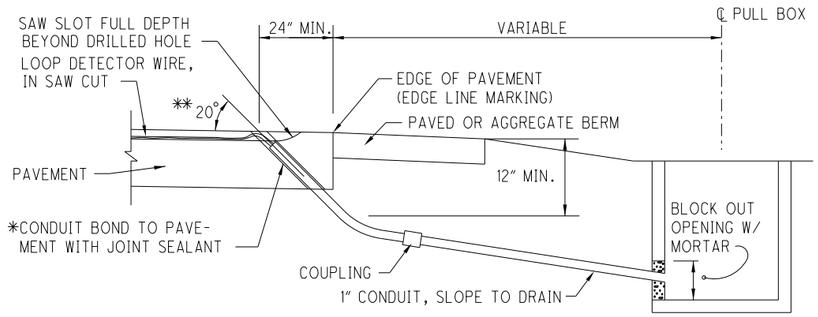
94/EASTERN, 94/DOYLESTOWN RD., 94/585, 94/604/585, 585/57, 585/GATES ST

CALCULATED MKP
CHECKED KRB

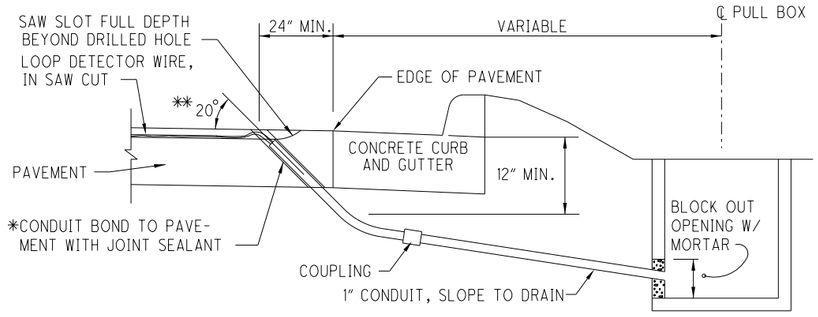
PAVEMENT MARKINGS / RMP SUB-SUMMARY

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

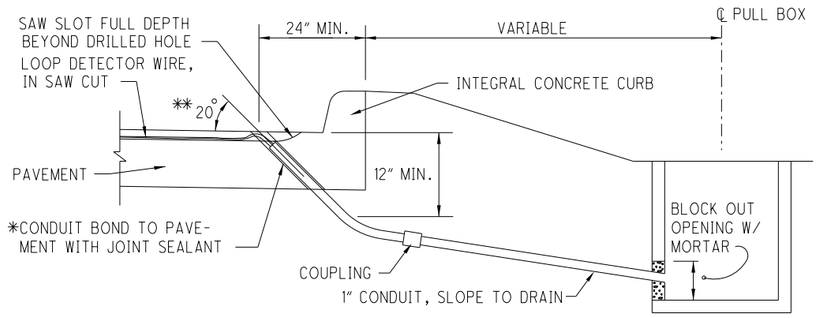
DESIGN FILE: i:\projects\86728\roadway\sheets\86728TS001.dgn
MODELNAME: Design
WORKSTATION: ksalay
DATE: 3/27/2015



DRILLED HOLE LOCATION DETAIL WITH PAVED OR AGGREGATE BERM



DRILLED HOLE LOCATION DETAIL WITH CONCRETE CURB AND GUTTER

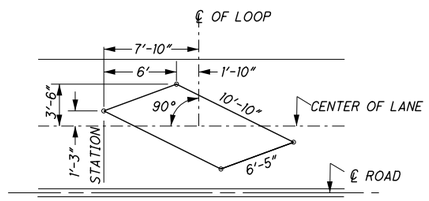


DRILLED HOLE LOCATION DETAIL WITH INTEGRAL CONCRETE CURB

*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



ANGULAR DESIGN DETECTION (ADD) LOOP DETAIL FOR LANE WIDTH 11' & LARGER

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. 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 NEW DETECTOR LOOPS ARE REPLACED SO THAT HE CAN RESCHEDULE DISTRICT CREWS TO RESTORE SIGNAL TIMINGS TO THE ORIGINAL SETTINGS. IN ADDITION, THE CONTRACTOR SHALL ALSO NOTIFY CRAIG DEVORE, ODOT DISTRICT 3 PLANNING AND ENGINEERING DEPT. (PHONE 419-207-7169) WHEN THE NEW LOOPS ARE INSTALLED.

FAILURE TO COMPLY WITH THE ABOVE STATED REQUIREMENTS WILL RESULT IN THE ASSESSMENT OF A DISINCENTIVE FEE OF $500.00 PER DAY TO THE CONTRACTOR 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. RESIDUE FROM DRY CUTTING SHALL NOT BE REMOVED BY COMPRESSED AIR. AS AN ALTERNATE, THE CONTRACTOR MAY USE WET CUTTING.

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 (QPL).

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.

(01/STR/PV)	
ITEM 632 - DETECTOR LOOP, AS PER PLAN	*10 EACH*
(03/NHS/PV)	
ITEM 632 - DETECTOR LOOP, AS PER PLAN	*16 EACH*

CALCULATED KRB
CHECKED MKP

DETECTOR LOOP GENERAL NOTES

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE: i:\projects\86728\roadway\sheets\86728TM001.dgn MODELNAME: Default
WORKSTATION ksalay DATE: 3/27/2015

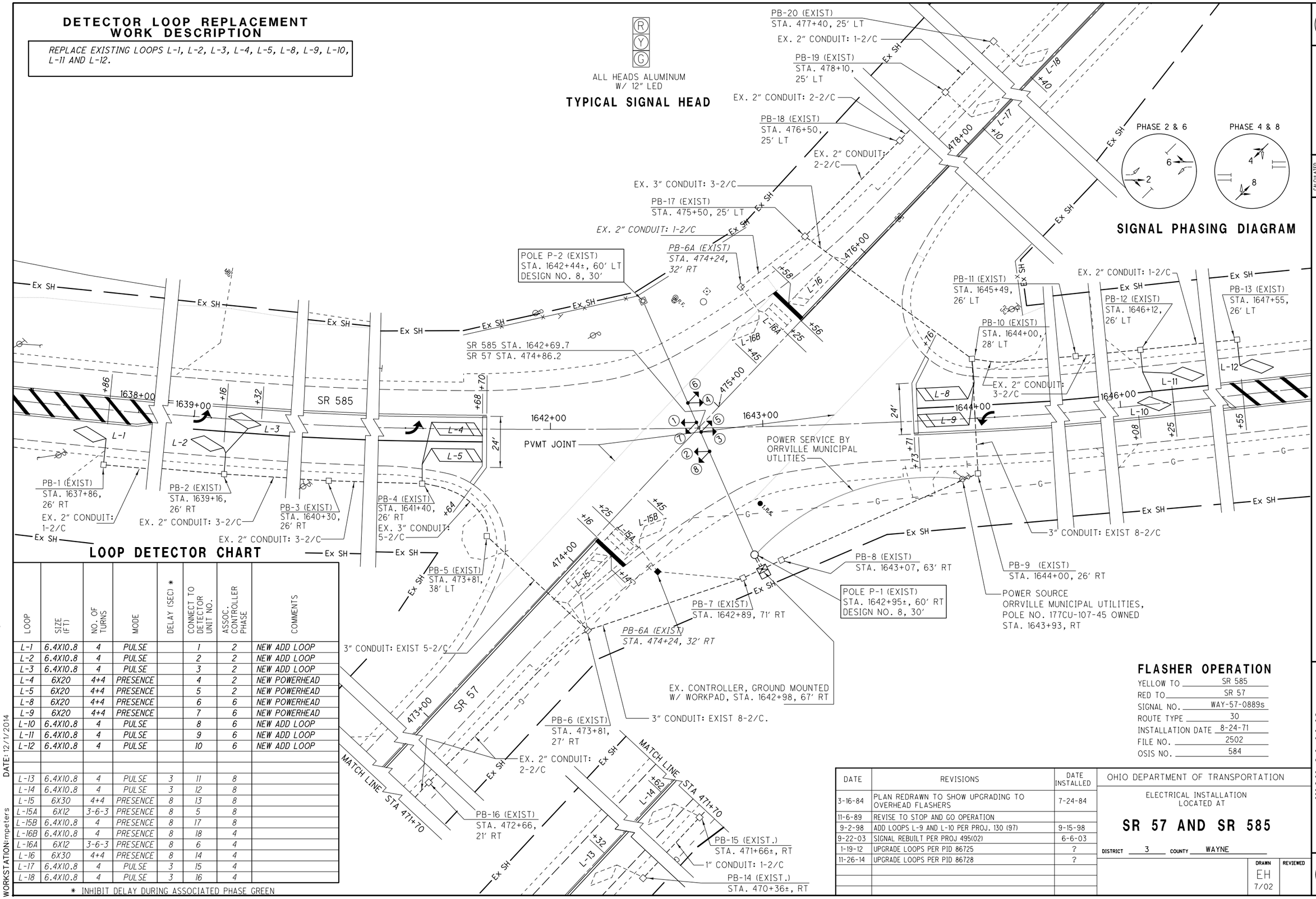
DETECTOR LOOP REPLACEMENT
WORK DESCRIPTION

REPLACE EXISTING LOOPS L-1, L-2, L-3, L-4, L-5, L-8, L-9, L-10, L-11 AND L-12.

R
Y
G

ALL HEADS ALUMINUM
W/ 12" LED

TYPICAL SIGNAL HEAD



LOOP DETECTOR CHART

LOOP	SIZE (FT)	NO. OF TURNS	MODE	DELAY (SEC) *	CONNECT TO DETECTOR UNIT NO.	ASSOC. CONTROLLER PHASE	COMMENTS
L-1	6.4X10.8	4	PULSE		1	2	NEW ADD LOOP
L-2	6.4X10.8	4	PULSE		2	2	NEW ADD LOOP
L-3	6.4X10.8	4	PULSE		3	2	NEW ADD LOOP
L-4	6X20	4+4	PRESENCE		4	2	NEW POWERHEAD
L-5	6X20	4+4	PRESENCE		5	2	NEW POWERHEAD
L-8	6X20	4+4	PRESENCE		6	6	NEW POWERHEAD
L-9	6X20	4+4	PRESENCE		7	6	NEW POWERHEAD
L-10	6.4X10.8	4	PULSE		8	6	NEW ADD LOOP
L-11	6.4X10.8	4	PULSE		9	6	NEW ADD LOOP
L-12	6.4X10.8	4	PULSE		10	6	NEW ADD LOOP
L-13	6.4X10.8	4	PULSE	3	11	8	
L-14	6.4X10.8	4	PULSE	3	12	8	
L-15	6X30	4+4	PRESENCE	8	13	8	
L-15A	6X12	3-6-3	PRESENCE	8	5	8	
L-15B	6.4X10.8	4	PRESENCE	8	17	8	
L-16B	6.4X10.8	4	PRESENCE	8	18	4	
L-16A	6X12	3-6-3	PRESENCE	8	6	4	
L-16	6X30	4+4	PRESENCE	8	14	4	
L-17	6.4X10.8	4	PULSE	3	15	4	
L-18	6.4X10.8	4	PULSE	3	16	4	

* INHIBIT DELAY DURING ASSOCIATED PHASE GREEN

FLASHER OPERATION

YELLOW TO SR 585
RED TO SR 57
SIGNAL NO. WAY-57-0889s
ROUTE TYPE 30
INSTALLATION DATE 8-24-71
FILE NO. 2502
OSIS NO. 584

DATE	REVISIONS	DATE INSTALLED
3-16-84	PLAN REDRAWN TO SHOW UPGRADING TO OVERHEAD FLASHERS	7-24-84
11-6-89	REVISE TO STOP AND GO OPERATION	
9-2-98	ADD LOOPS L-9 AND L-10 PER PROJ. 130 (97)	9-15-98
9-22-03	SIGNAL REBUILT PER PROJ 495(02)	6-6-03
1-19-12	UPGRADE LOOPS PER PID 86725	?
11-26-14	UPGRADE LOOPS PER PID 86728	?

OHIO DEPARTMENT OF TRANSPORTATION

ELECTRICAL INSTALLATION
LOCATED AT

SR 57 AND SR 585

DISTRICT 3 COUNTY WAYNE

DRAWN EH 7/02 | REVIEWED

30
59

N

0 20 40 SCALE IN FEET

CALCULATED KRB | CHECKED

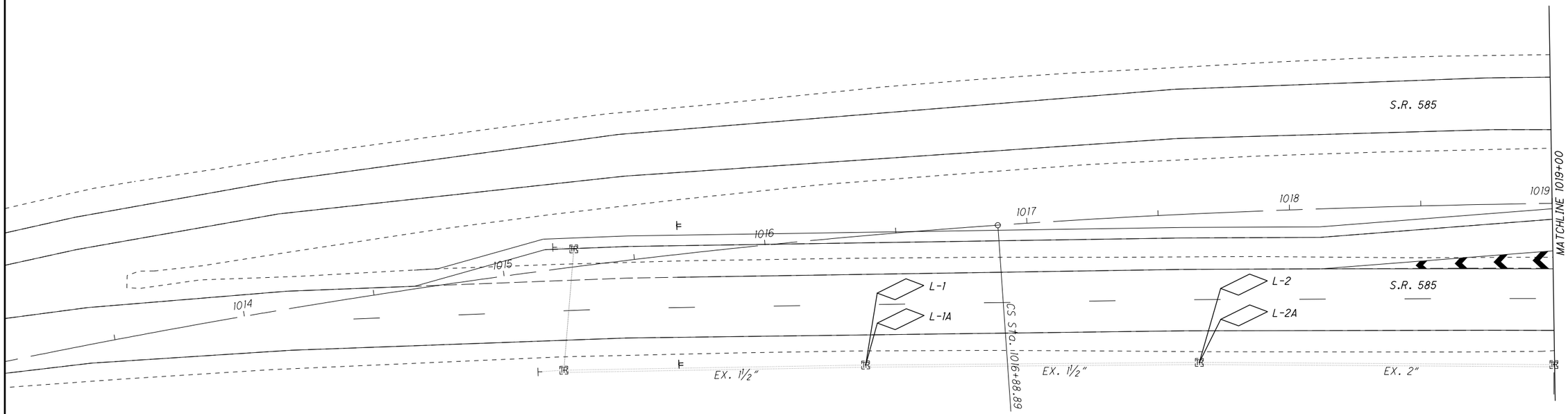
DETECTOR LOOP REPLACEMENT PLAN SR 57 & SR 585

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE: i:\projects\86728\roadway\sheets\86728W57&585.dgn
WORKSTATION: mpeters
DATE: 12/1/2014

DETECTOR LOOP REPLACEMENT
WORK DESCRIPTION

REPLACE EXISTING LOOPS: *L1, L1A, L2, L2A, L3, L3A, L4, L4A, L5, L5A, L6, L6A, L7, L8, L9 & L10.*



LOOP DETECTOR CHART									
LOOP DESIGNATION	**LOOP CONFIGURATION	SIZE (WIDTH X LENGTH) (FT.)	NO. OF TURNS	PULSE OR PRESENCE	DELAY (SEC.)	EXTENSION (SEC.)	CONNECT TO DETECTOR UNIT (UNIT-CHANNEL)	ASSOCIATED CONTROLLER PHASE	TERMINAL NO.
L-1	ADD		4	PULSE		3	1	2	
L-1A	ADD		4	PULSE		3	1	2	
L-2	ADD		4	PULSE		3	2	2	
L-2A	ADD		4	PULSE		3	2	2	
L-3	ADD	SEE	4	PULSE		3	3	2	
L-3A	ADD	SCD	4	PULSE		3	3	2	
L-4	ADD	TC-82.10	4	PULSE		3	4	6	
L-4A	ADD		4	PULSE		3	4	6	
L-5	ADD		4	PULSE		3	5	6	
L-5A	ADD		4	PULSE		3	5	6	
L-6	ADD		4	PULSE		3	6	6	
L-6A	ADD		4	PULSE		3	6	6	
L-7	P	6X30	3+3	PRESENCE	8#	3	7	4	
L-8	P	6X30	3+3	PRESENCE	8#	3	8	8	
L-9	ADD	6X30	3	PRESENCE	2#	3	9	5	
L-10	ADD	6X30	3	PRESENCE	2#	3	10	1	

#INHIBIT DELAY DURING ASSOCIATED PHASE GREEN INTERVAL.
##CONFIGURATIONS: POWERHEAD (P), QUADRUPOLE (Q), ANGULAR DESIGN DETECTOR (ADD), RECTANGULAR (R), OR DIAMOND (D)

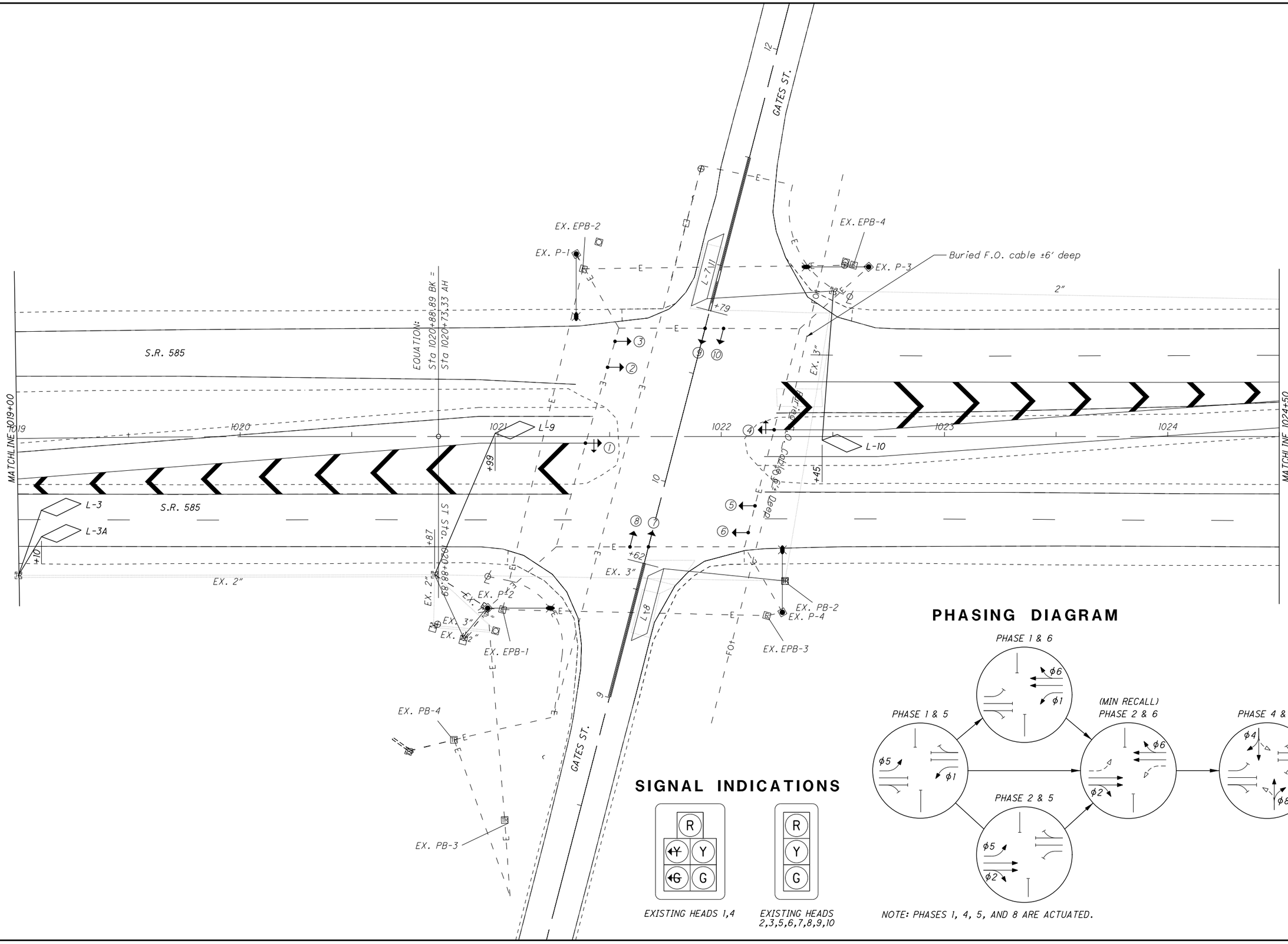
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MKP
CHECKED KRB

DETECTOR LOOP REPLACEMENT PLAN
S.R. 585 AND GATES ST.

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE:ii:\projects\86728\roadway\sheets\86728GATES.dgn MODELNAME: Sheet
WORKSTATION:ksalay DATE:3/27/2015



SIGNAL INDICATIONS

EXISTING HEADS 1,4

EXISTING HEADS 2,3,5,6,7,8,9,10

PHASING DIAGRAM

NOTE: PHASES 1, 4, 5, AND 8 ARE ACTUATED.

DESIGN FILE: i:\projects\86728\roadway\sheets\86728GATES.dgn
WORKSTATION: salay
DATE: 3/27/2015
MODELNAME: Sheet

HORIZONTAL SCALE IN FEET
0 10 20 40

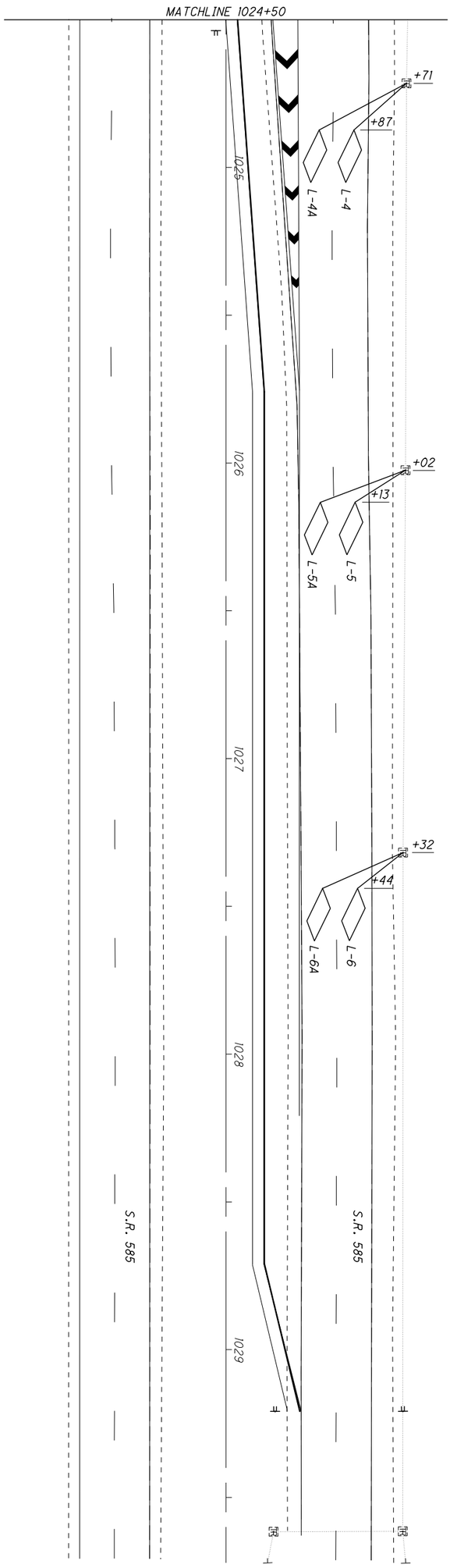
CALCULATED MKP
CHECKED KRB

DETECTOR LOOP REPLACEMENT PLAN
S.R. 585 AND GATES ST.

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

30B
59

DESIGN FILE: I:\projects\86728\roadway\sheets\86728GATES.dgn
WORKSTATION ksalay DATE: 3/27/2015 MODELNAME: Sheet



30C 59	WAY-94-14.16 MED-94-0.00 WAY-585-(11.96)(14.78)	DETECTOR LOOP REPLACEMENT PLAN S.R. 585 AND GATES ST.	CALCULATED MKP CHECKED KRB	0 20 10 40 HORIZONTAL SCALE IN FEET

SHEET	LOCATION	614 BARRIER REFLECTOR, TYPE A2 EACH	614 BARRIER REFLECTOR, TYPE B2 EACH	614 WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I MILE	614 WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I MILE	614 WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I FT
41	WAY-94-1830	16		0.19	0.18	25
43	WAY-94-1900	15	12	0.19	0.39	36
47	WAY-585-1512	16		0.19	0.35	25
	TOTAL: (04/STR/BR)	47	12	0.57	0.92	86
	TOTALS CARRIED TO GENERAL SUMMARY	47	12	0.57	0.92	86

CALCULATED JWS
CHECKED KRB

MOT SUB-SUMMARY

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE: i:\projects\86728\roadway\sheets\86728GS001.dgn
WORKSTATION: mpeters
DATE: 12/18/2014
MODELNAME: Design

WAY-94-1674 SFN: 8504059 (04/STR/BR)

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
517	73008	62.5	FT	RAILING (THRIE BEAM RAIL), MISC.: BRIDGE RAILING	35

WAY-94-1830 SFN: 8504083 (04/STR/BR)

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
202	98100	36	EACH	REMOVAL MISC: EXISTING PILE ENCASEMENT	34
202	98200	80	FT	REMOVAL MISC: JOINT SEALER	34
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING	
509	10000	4367	LB	EPOXY COATED REINFORCING STEEL	
511	43211	21	CY	CLASS QC1 CONCRETE, PIER, AS PER PLAN	34
512	10300	713	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
516	31000	80	FT	JOINT SEALER	
SPECIAL	519E10000	11	SY	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE	35

WAY-94-1900 SFN: 8504113 (04/STR/BR)

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
202	32000	3	FT	CURB REMOVED	
202	98200	83	FT	REMOVAL MISC: JOINT SEALER	34
512	10100	229	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
516	31000	166	FT	JOINT SEALER	
SPECIAL	519E10000	11	SY	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE	35

CALCULATED JWS
CHECKED KRB

STRUCTURE SUB-SUMMARY

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE: i:\projects\86728\roadway\sheets\86728SS001.dgn MODELNAME: Sheet
WORKSTATION: ksolay DATE: 4/1/2015

WAY-585-1512 SFN: 8506124 (04/STR/BR)

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
512	10100	70	SY	SEALING OF CONCRETE SURFACES (EPOXY URETHANE)	
512	10300	452	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
517	76300	87.5	FT	RAILING, MISC.: DEEP BEAM RAILING PANELS	35
SPECIAL	519E10000	6	SY	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE	35

WAY-585-1649 SFN: 8506213 (05/NHS/BR)

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
202	11201	4	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	34
511	45511	1	CY	CLASS QC1 CONCRETE ABUTMENT, AS PER PLAN	34
511	53012	3	CY	CLASS QC2 CONCRETE MISC.: APPROACH SLAB REPAIR	34
512	33300	3	SY	TYPE A WATERPROOFING	
516	31000	55	FT	JOINT SEALER	
846	00100	55	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	
856	10000	33	CY	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE	

WAY-585-1851 SFN: 8506248 (05/NHS/BR)

ITEM	EXTENSION	QUANTITY	UNIT	DESCRIPTION	REFERENCE SHEET
601	26000	20	CY	DUMPED ROCK FILL, TYPE B	
613	41200	1	CY	LOW STRENGTH MORTAR BACKFILL	

CALCULATED JWS
CHECKED KRB

STRUCTURE SUB-SUMMARY

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE: i:\projects\86728\roadway\sheets\86728SS001.dgn MODELNAME: Sheet
WORKSTATION mpeters DATE: 12/18/2014

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 AND 105.02.

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-94-1830	WAY-5-(15.49-15.97)	1959
WAY-94-1900	WAY-5-(15.78)	1958
WAY-585-1512	WAY-5-(15.78)	1958
WAY-585-1649	WAY-5-(15.78)	1958
WAY-585-1851	WAY-5-(15.78)	1958

UTILITIES:

THERE ARE NO UNDERGROUND UTILITIES SHOWN ON THIS PLAN. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UNDERGROUND UTILITIES THAT EXIST UNDER OR ADJACENT TO THE WORK AREA.

PLACING ASPHALT CONCRETE 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.

DESIGN DATA:

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4,000 PSI

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4,500 PSI

REINFORCING STEEL - ASTM A615 OR A996, GRADE 60, MINIMUM YIELD STRENGTH 60,000 PSI

DECK PROTECTION METHOD

ASPHALT CONCRETE OVERLAY
SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN

WASTE MATERIAL HANDLING (FOR STRUCTURE WAY-94-1900 OVER CSXT RAILROAD)

ALL WASTE MATERIALS GENERATED BY THIS PROJECT, INCLUDING WASHING WITH CLEANING SOLVENTS, BLASTING, SCRAPING, BRUSHING AND PAINTING OPERATIONS, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE CONTAINED, COLLECTED AND PROPERLY DISPOSED OF BY THE CONTRACTOR. THE STATE AND ITS CONTRACTOR AGREE TO FULLY COMPLY WITH ALL FEDERAL, STATE, AND LOCAL ENVIRONMENTAL LAWS, REGULATIONS, STATUTES AND ORDINANCES AT ALL TIMES.

ENVIRONMENTAL COMMITMENTS (FOR STRUCTURE WAY-94-1830):

1. A GROUP 1 MUSSEL SURVEY AND CONCURRENT RELOCATION WILL BE COORDINATED AND PAID FOR BY ODOT AT STRUCTURE WAY-94-1830. NO IN-STREAM WORK SHALL BE PERFORMED UNTIL AFTER THE SURVEY/RELOCATION HAS BEEN COMPLETED AND APPROVED.

2. THE 404/401 WATERWAY PERMITS FOR THIS PROJECT HAVE YET TO BE AUTHORIZED BY THE US ARMY CORPS OF ENGINEERS AND/OR THE OHIO ENVIRONMENTAL PROTECTION AGENCY. THE CONTRACTOR SHALL NOT PERFORM ANY WORK IN AND/OR PLACE ANY FILL IN JURISDICTIONAL STREAMS OR WETLANDS UNTIL THE FINAL 404/401 PERMITS ARE AUTHORIZED BY THE US ARMY CORPS OF ENGINEERS AND THE OHIO ENVIRONMENTAL PROTECTION AGENCY. THE COMPLETE/AUTHORIZED 404/401 PERMITS WILL BE PROVIDED TO THE CONTRACTOR BY ODOT PERSONNEL AS SOON AS THEY BECOME AVAILABLE.

IN-STREAM WORK RESTRICTION (FOR WAY-585-1512 OVER MILL CREEK):

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS TO AVOID CONSTRUCTION IN AND/OR LIMIT DEMOLITION DEBRIS FROM ENTERING STREAMS OR WETLANDS. ANY MATERIAL THAT DOES FALL INTO STREAMS OR WETLANDS SHALL BE REMOVED AS SOON AS POSSIBLE.

ALL PROJECTS INVOLVING JURISDICTIONAL WATERS OF THE UNITED STATES (STREAMS, RIVERS, NON-ISOLATED WETLANDS) AND/OR ISOLATED WETLANDS ARE SUBJECT TO REGULATION UNDER SECTIONS 404 AND 401 OF THE CLEAN WATER ACT, AND POSSIBLY OHIO EPA ISOLATED WETLAND LAW. IT IS ANTICIPATED THAT NO IN-STREAM WORK, OR WORK UNDER THE STREAM'S ORDINARY HIGH WATER MARK (OHWM) WILL BE NEEDED. THEREFORE NO WATERWAY PERMITS HAVE BEEN GRANTED FOR THE WAY-585-1512 STRUCTURE OVER MILL CREEK AND NO IN-STREAM WORK IS ALLOWED.

SHOULD WORK (EITHER TEMPORARY OR PERMANENT) IN THE STREAM IS NEEDED; IT WILL REQUIRE A PERMIT AND AUTHORIZATION BY THE UNITED STATES ARMY CORPS OF ENGINEERS (USACE). THE CONTRACTOR SHALL NOT UTILIZE FILLS BELOW OHWM UNTIL SUCH ACTIVITY IS AUTHORIZED BY THE USACE. DETAILS OF THIS REQUIREMENT ARE DESCRIBED IN ODOT'S SUPPLEMENTAL SPECIFICATION 832.09

USACE DEFINITION OF OHWM - THE ORDINARY HIGH WATER MARK IS THE LINE ON THE SHORES ESTABLISHED BY THE FLUCTUATIONS OF WATER AND INDICATED BY PHYSICAL CHARACTERISTICS SUCH AS A CLEAR, NATURAL LINE IMPRESSED ON THE BANK; SHELVING; CHANGES IN THE CHARACTER OF THE SOIL; DESTRUCTION OF TERRESTRIAL VEGETATION; THE PRESENCE OF LITTER AND DEBRIS; OR THE APPROPRIATE MEANS THAT CONSIDER THE CHARACTERISTICS OF THE SURROUNDING AREAS.

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

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

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, IF REQUIRED IN THE PLANS, 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.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID PER CUBIC YARD OF ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

ITEM 202 - REMOVAL MISC.: JOINT SEAL

THIS ITEM SHALL BE USED TO REMOVE ANY JOINT SEAL BETWEEN THE APPROACH SLAB AND THE DECK OR BACKWALL.

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 - REMOVAL MISC.: EXISTING PILE ENCASEMENT

THIS ITEM SHALL BE USED TO REMOVE THE EXISTING PILE ENCASEMENTS AT STRUCTURE WAY-94-1830.

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

ITEM 511 - CLASS QC2 CONCRETE, MISC.: APPROACH SLAB REPAIR

ITEM 511 - CLASS QC1 CONCRETE, ABUTMENT, AS PER PLAN (REPAIR)

EACH ITEM SHALL BE USED AT THE LOCATIONS INDICATED IN THE PLANS.

THE COARSE AGGREGATE SHALL BE LIMESTONE.

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

ITEM 511 - CLASS QC1 CONCRETE, PIER, AS PER PLAN (REPAIR)

THIS ITEM SHALL BE USED AT THE LOCATIONS INDICATED IN THE PLANS. ALL EXCAVATION AND EMBANKMENT SHALL BE CONSIDERED INCIDENTAL AND INCLUDED IN THE COST OF ITEM 511 - CLASS QC1 CONCRETE, PIER, AS PER PLAN (REPAIR).

THE COARSE AGGREGATE SHALL BE LIMESTONE.

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

CALCULATED MKP
CHECKED KRB

STRUCTURE GENERAL NOTES

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE: i:\projects\86728\structures\86728SN001.dgn
WORKSTATION: ksalay
DATE: 4/2/2015
MODELNAME: Design

ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECK OVERLAYS WITH MICRO-SILICA MODIFIED CONCRETE

THESE ITEMS SHALL CONSIST OF PATCHING PORTIONS OF CONCRETE SURFACES AS OUTLINED IN THE PLANS . REMOVE ALL UNSOUND MATERIAL FROM AROUND THE REPAIR AREA PRIOR TO PATCHING.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS, NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE ABOVE ITEM.

ITEM 517 - RAILING (THRIE BEAM RAIL), MISC.: BRIDGE RAILING

THIS ITEM SHALL INCLUDE THE REMOVAL AND REPLACEMENT OF THE EXISTING THRIE BEAM RAILING PANELS. THE REMOVAL AND REPLACEMENT OF ALL BOLTS AND HARDWARE NECESSARY TO PERFORM THIS WORK SHALL BE INCLUDED IN THIS ITEM. THE RAIL ELEMENTS SHALL BE OF THE SAME TYPE AND SIZE AS THE EXISTING RAILING.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER EACH FOR ITEM 517 - RAILING (THRIE BEAM RAIL), MISC.: BRIDGE RAILING WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 517 - RAILING, MISC.: DEEP BEAM RAILING PANELS

THIS ITEM SHALL INCLUDE THE REMOVAL AND REPLACEMENT OF THE EXISTING DEEP BEAM RAILING PANELS. THE REMOVAL AND REPLACEMENT OF ALL BOLTS AND HARDWARE NECESSARY TO PERFORM THIS WORK SHALL BE INCLUDED IN THIS ITEM. THE RAIL ELEMENTS SHALL BE OF THE SAME TYPE AND SIZE AS THE EXISTING RAILING. THEY SHALL BE PLACED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING DBR-2-73.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER EACH FOR ITEM 517 - RAILING, MISC.: DEEP BEAM RAILING PANELS WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

TEMPORARY TRAFFIC SIGNAL ACTIVATION FOR PARTIAL ROADWAY CLOSURE:

THE CONTRACTOR SHALL NOTIFY ODOT DISTRICT 3 PUBLIC INFORMATION OFFICER (PIO) A MINIMUM OF TEN (10) CALENDAR DAYS ADVANCE NOTICE BEFORE ACTIVATING A TEMPORARY TRAFFIC SIGNAL TO STOP-AND-GO OPERATION FOR PARTIAL ROADWAY CLOSURE.

THE PIO CONTACT INFORMATION IS AS FOLLOWS:

CHRISTINE MYERS
ODOT DISTRICT 3
906 CLARK AVENUE
ASHLAND, OH 44805
PHONE 419-207-7182

ALL COSTS ASSOCIATED WITH THE ABOVE DESCRIBED WORK SHALL BE INCLUDED WITH 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.

ITEM 614 - MAINTAINING TRAFFIC FOR STRUCTURE WAY-94-1674:

TWO WAY TRAFFIC ON STRUCTURE WAY-94-1674 SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT THROUGH TRAFFIC ON THE STRUCTURE MAY HAVE A LANE CLOSURE DURING NORMAL WORKING HOURS USING FLAGGERS AS SHOWN ON STANDARD DRAWING MT-97.10.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 614 - MAINTAINING TRAFFIC FOR STRUCTURE WAY-94-1830:

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT THROUGH TRAFFIC ON STRUCTURE WAY-94-1830 SHALL HAVE A SIGNALIZED CLOSURE AS SHOWN ON SHEET XX FOR A MAXIMUM OF 30 CONSECUTIVE CALENDAR DAYS (TOTAL BOTH PHASES). THE 30 CONSECUTIVE DAYS SHALL BE CONSIDERED AS AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 30 CALENDAR DAYS THAT THE HIGHWAY REMAINS IN A SIGNALIZED CLOSURE, THE CONTRACTOR WILL BE ASSESSED A DISINCENTIVE OF $1,500 A DAY.

NO EQUIPMENT OR MATERIAL SHALL BE LOCATED OTHER THAN BEHIND THE DRUMS.

ACCESS TO ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES AS PER 614.02 (A).

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 614 - MAINTAINING TRAFFIC FOR STRUCTURE WAY-94-1900:

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT THROUGH TRAFFIC ON STRUCTURE WAY-94-1900 SHALL HAVE A SIGNALIZED CLOSURE AS SHOWN ON SHEET XX FOR A MAXIMUM OF 15 CONSECUTIVE CALENDAR DAYS (TOTAL BOTH PHASES). THE 15 CONSECUTIVE DAYS SHALL BE CONSIDERED AS AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 15 CALENDAR DAYS THAT THE HIGHWAY REMAINS IN A SIGNALIZED CLOSURE, THE CONTRACTOR WILL BE ASSESSED A DISINCENTIVE OF $1,500 A DAY.

NO EQUIPMENT OR MATERIAL SHALL BE LOCATED OTHER THAN BEHIND THE DRUMS.

ACCESS TO ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES AS PER 614.02 (A).

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 614 - MAINTAINING TRAFFIC FOR STRUCTURE WAY-585-1512:

TWO WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES EXCEPT THAT THROUGH TRAFFIC ON STRUCTURE WAY-585-1512 SHALL HAVE A SIGNALIZED CLOSURE AS SHOWN ON SHEET XX FOR A MAXIMUM OF 15 CONSECUTIVE CALENDAR DAYS (TOTAL BOTH PHASES). THE 15 CONSECUTIVE DAYS SHALL BE CONSIDERED AS AN INTERIM COMPLETION DATE (SECTION 108) AND FOR EACH CALENDAR DAY BEYOND THE 15 CALENDAR DAYS THAT THE HIGHWAY REMAINS IN A SIGNALIZED CLOSURE, THE CONTRACTOR WILL BE ASSESSED A DISINCENTIVE OF $1,500 A DAY.

NO EQUIPMENT OR MATERIAL SHALL BE LOCATED OTHER THAN BEHIND THE DRUMS.

ACCESS TO ADJACENT PROPERTIES SHALL BE MAINTAINED AT ALL TIMES AS PER 614.02 (A).

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

CALCULATED KRB
CHECKED MKP

STRUCTURE GENERAL NOTES

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

DESIGN FILE:i:\projects\86728\structures\86728SN001.dgn MODELNAME:Design
WORKSTATIONmpeters DATE:12/1/2014

BRIDGE DECK DATA								ROADWAY DATA		
COUNTY, ROUTE, BRIDGE NO.	LOCATION	STRUCTURE TYPE	LENGTH (BRIDGE DECK)	WIDTH	BRIDGE DECK AREA	SKEW	EXISTING WEARING SURFACE	EXISTING PAVEMENT WIDTH	EXISTING APPROACH SLAB WIDTH	EXISTING APPROACH SLAB LENGTH
			FT.	FT.	SQ.YD.			FT.	FT.	FT.
+ WAY-94-1674	ROUTE CARRIED BY STRUCTURE DITCH	CONCRETE SLAB	26.67±	24±	646	0°	ASPHALT CONCRETE	26		
* WAY-94-1830	OVER CHIPPEWA CREEK	3-SPAN STEEL BEAM	158.5±	40±	6340	0°	CONCRETE	40	25	15
** WAY-94-1900	OVER CSXT RAILROAD	CONCRETE SLAB	222.56±	46.3±	10304	9° 23′ 30″ RF	CONCRETE	45	25	25
***WAY-585-1512	OVER MILL CREEK	CONCRETE SLAB	92.56±	44±	4072	15° LF	CONCRETE	43	24	25
++ WAY-585-1649	OVER S.R. 585	4-SPAN STEEL BEAM	247.18±	30.9±	7638	29° 37″ 15″ LF	CONCRETE	24	24	25
+ WAY-585-1851	ROUTE CARRIES SILVER CREEK	STEEL CULVERT								

* NO PAVING OVER STRUCTURE. BUTT JOINT AT BRIDGE DECK.

** NO PAVING OVER STRUCTURE. SEE PROFILE CORRECTION NOTE IN GENERAL NOTES.

*** NO PAVING OVER STRUCTURE. BUTT JOINT AT APPROACH SLABS.

\+ PLANE AND PAVE OVER STRUCTURE (SEE PAVEMENT AND SHOULDER DATA SHEET FOR PAVING QUANTITIES).

++ PAVE OVER STRUCTURE WITH ITEM 856 - BRIDGE DECK WATERPROOFING ASPHALT CONCRETE (SEE STRUCTURE PLANS FOR DETAILS).

DESIGN AGENCY
ODOT DISTRICT THREE
OFFICE OF PLANNING
AND ENGINEERING

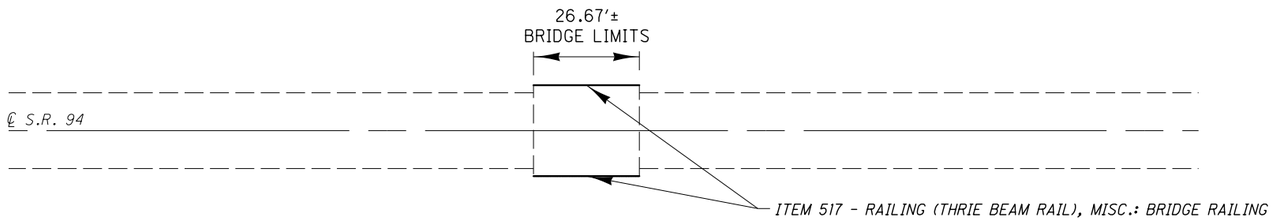
DESIGNED MKP | DRAWN MKP | REVIEWED KRB | DATE 11-25-14 | CHECKED | REVISED

STRUCTURE TREATMENT

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

36
59

DESIGN FILE: i:\projects\86728\structures\86728S1001.dgn
WORKSTATION mpeters DATE: 12/1/2014 MODELNAME: Design



PLAN VIEW

NOTES:
1) THE EXISTING GUARDRAIL IS NOT SHOWN.

ITEM	QUANTITY	UNITS	DESCRIPTION
517	62.5	FT	RAILING (THRIE BEAM RAIL), MISC.: BRIDGE RAILING

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY (04/STR/BR)

DESIGN AGENCY
ODOT DISTRICT THREE
OFFICE OF
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
KRB	KRB		
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		8504059	

PLAN VIEW
WAY-94-1674
OVER DITCH

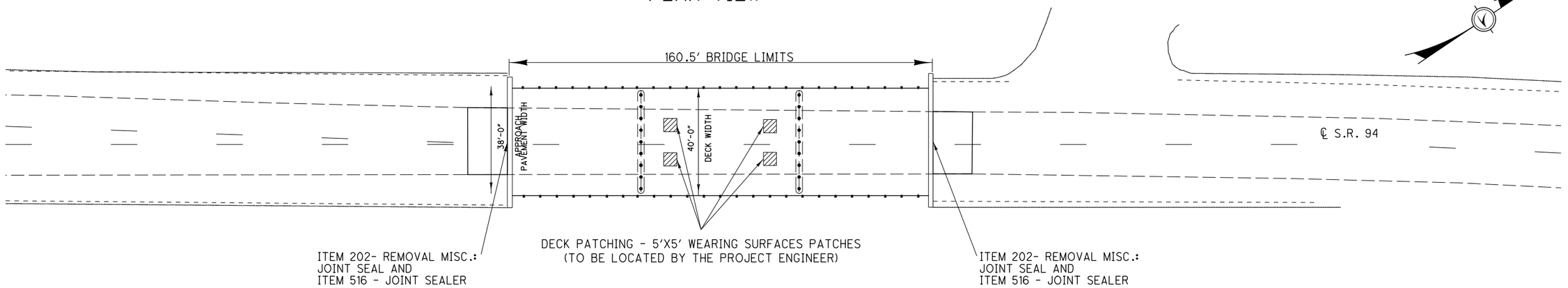
WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

1 / 1

37
59

DESIGN FILE:\\D03FS005\I-Drive\projects\86728\structures\WAY-94-16.74\WAY-94-16.74.dgn
WORKSTATION mpeters DATE:12/18/2014 MODELNAME: Design

PLAN VIEW



ITEM	QUANTITY	UNITS	DESCRIPTION
202	80	FT	REMOVAL MISC.: JOINT SEALER
202	36	EACH	REMOVAL MISC.: EXISTING PILE ENCASEMENT
503	LUMP		COFFERDAMS AND EXCAVATION BRACING
509	4367	POUND	EPOXY COATED REINFORCING STEEL
511	21	CU YD	CLASS QC1 CONCRETE, PIER, AS PER PLAN
512	713	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN
SPECIAL	11	SY	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE
516	80	FT	JOINT SEALER

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY (04/STR/BR)

DESIGN FILE:i:\projects\86728\structures\WAY-94-18.30.dgn MODELNAME: Design
WORKSTATIONmpeters DATE:12/1/2014

DESIGN AGENCY
ODOT DISTRICT THREE
OFFICE OF
PLANNING AND ENGINEERING

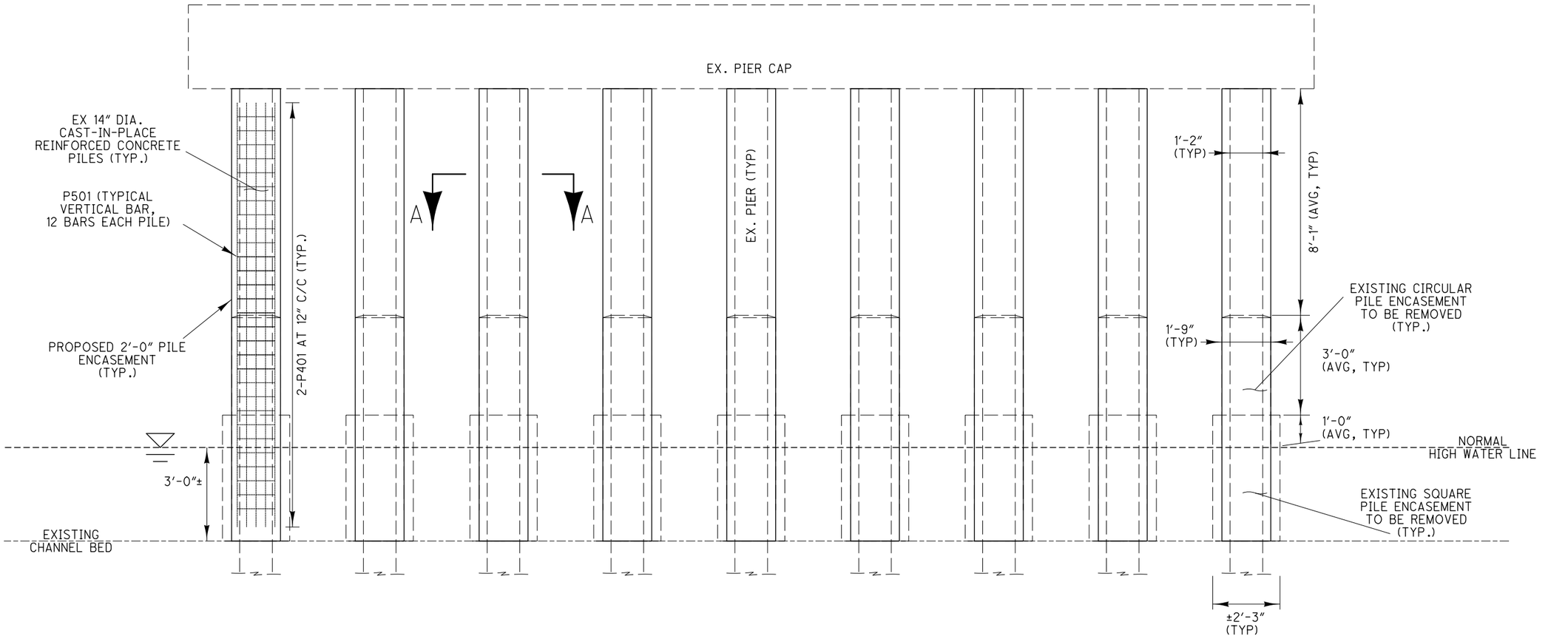
DESIGNED	DRAWN	REVIEWED	DATE
MKP	MKP	KRB	11-25-14
CHECKED	REVISED	STRUCTURE FILE NUMBER	8504083

PLAN VIEW
WAY-94-18.30
OVER CHIPPEWA CREEK

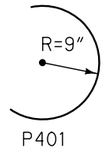
WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

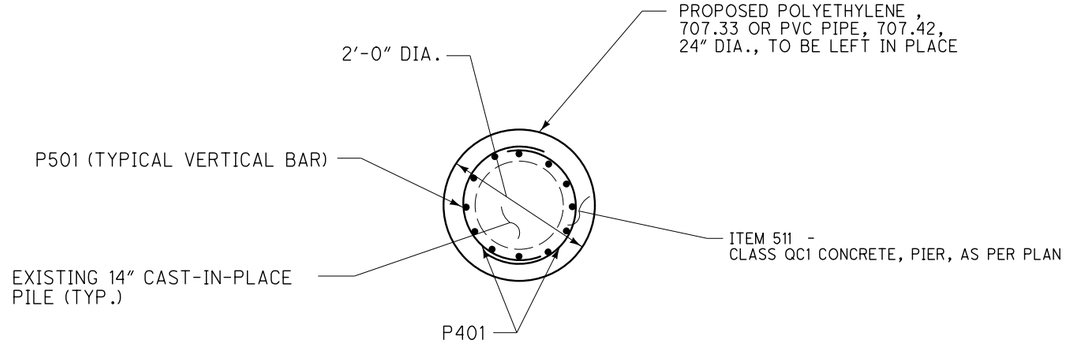
1 / 4

38
59



REINFORCING TABLE				
BAR MARK	**NO.**	**LENGTH**	**SHAPE**	**WEIGHT**
P401	540	3' 0"	BENT	1082
P4501	216	14' 7"	STRAIGHT	3285
TOTAL				***4367***





SECTION A-A

ITEM	*QUANTITY*	*UNITS*	*DESCRIPTION*
202	*36*	*EACH*	*REMOVAL MISC.: EXISTING PILE ENCASEMENT*
503	*LUMP*		*COFFERDAMS AND EXCAVATION BRACING*
509	*4367*	*POUND*	*EPOXY COATED REINFORCING STEEL*
511	*21*	*CU YD*	*CLASS QC1 CONCRETE, PIER, AS PER PLAN*

ALL QUANTITIES CARRIED TO SHEET 1/4

DESIGN AGENCY
ODOT DISTRICT THREE
OFFICE OF
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MKP	MKP	KRB	11-25-14
CHECKED	REVISED	STRUCTURE FILE NUMBER	
		8504083	

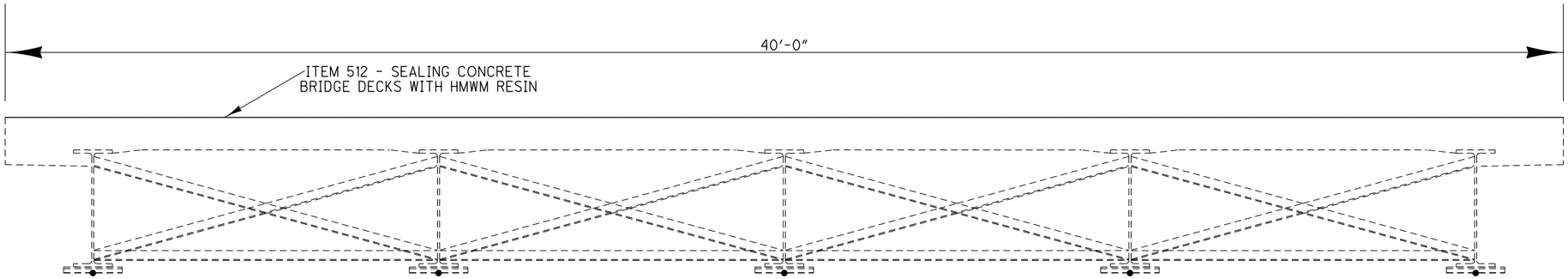
PIER ENCASEMENT DETAILS
WAY-94-18.30
OVER CHIPPEWA CREEK

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

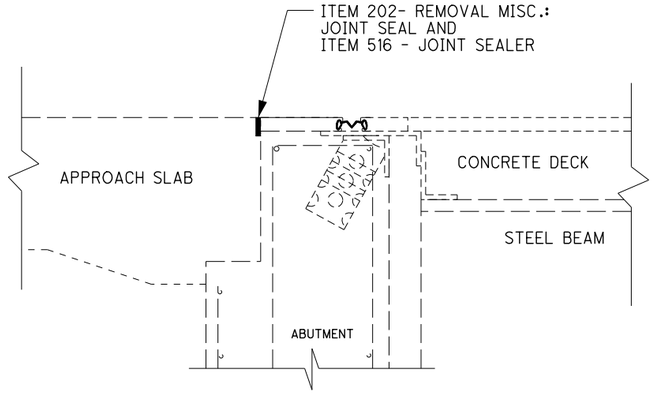
2 / 4

39
59

DESIGN FILE: i:\projects\86728\structures\WAY-94-18.30.dgn
WORKSTATION: mpeters
DATE: 12/1/2014
MODELNAME: Design



DECK SEALING



EXPANSION JOINT
DETAIL

ITEM	QUANTITY	UNITS	DESCRIPTION
202	80	FT	REMOVAL MISC.: JOINT SEALER
512	713	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN
516	80	FT	JOINT SEALER

ALL QUANTITIES CARRIED TO SHEET 1/4

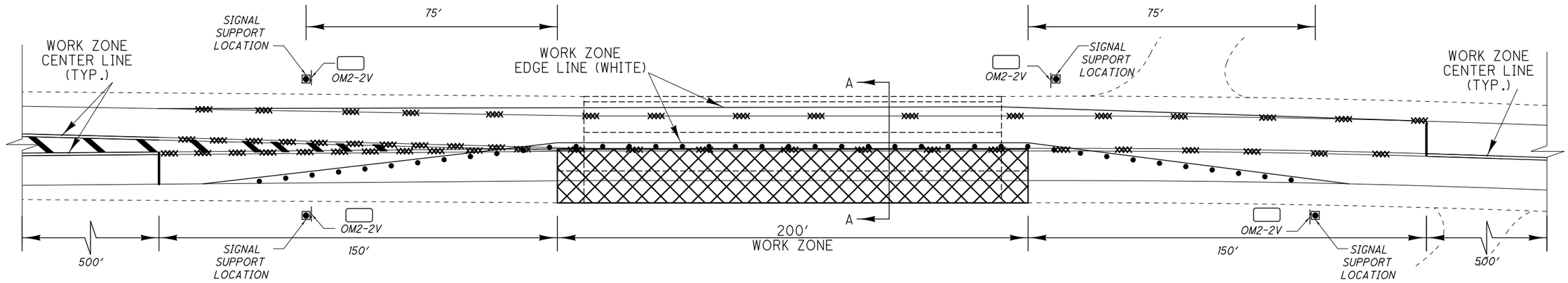
DESIGN FILE: i:\projects\86728\structures\WAY-94-18.30.dgn
WORKSTATION: mpeters
DATE: 12/1/2014
MODELNAME: Design

DESIGN AGENCY
ODOT DISTRICT THREE
OFFICE OF
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MKP	MKP	KRB	11-25-14
CHECKED	REVISED	STRUCTURE FILE NUMBER	8504083

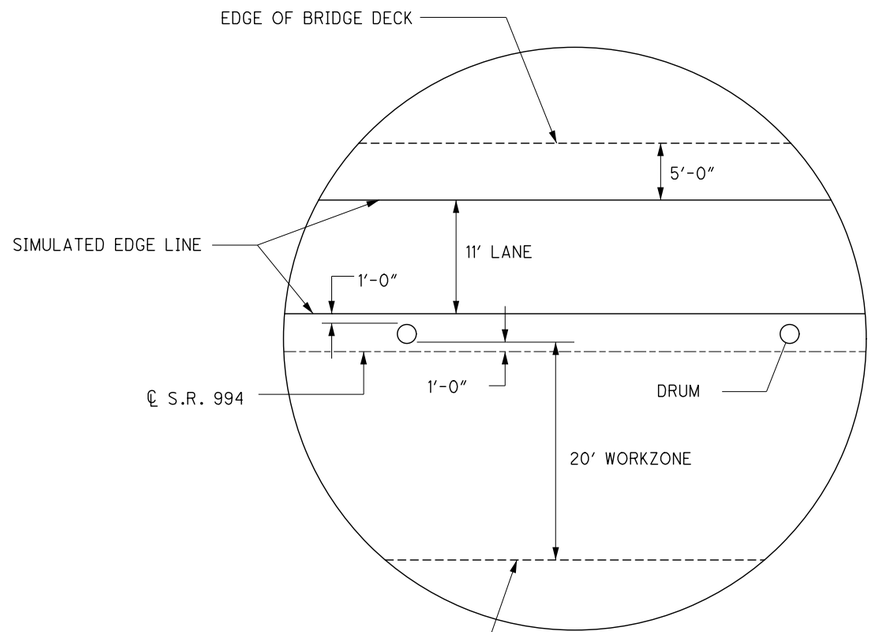
DECK SEALING DETAILS
WAY-94-18.30
OVER CHIPPEWA CREEK

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)



PLAN VIEW

PHASE I SHOWN, PHASE II SIMILAR



DETAIL A

LEGEND

WORK AREA	
DRUMS	• • •
PORTABLE BARRIER (PB)	
REMOVE EXISTING MARKINGS	XXXX
ATTENUATOR	
OPTIONAL TREATMENT	
DIRECTION OF TRAVEL	→

NOTES:

1) THE EXISTING BRIDGE RAILING IS NOT SHOWN IN THE PLAN VIEW

2) FOR ADDITIONAL DETAILS, SEE SCD MT-96.11, MT-96.20 AND MT-96.26

3) ACCESS TO ALL DRIVES SHALL BE MAINTAINED

SIGNAL TIMING

A TWO PHASE CONTROLLER WITH CABINET CAPABLE OF BEING SET WITH THE FOLLOWING SPLITS SHALL BE FURNISHED

CYCLE LENGTH: 180 SECONDS

	GREEN	AMBER	RED
PHASE A	70	5	15
PHASE B	70	5	15

THE ABOVE TIMING MAYBE CHANGED WITH THE APPROVAL OF THE ENGINEER.

ITEM	QUANTITY	UNIT	DESCRIPTION
614	0.19	MILE	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I
614	0.18	MILE	WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE I
614	25	FT	WORK ZONE STOP LINE, CLASS I, 740.06, TYPE I
614	16	EA	BARRIER REFLECTOR, TYPE A2

ALL TOTALS CARRIED TO MOT SUB-SUMMARY SHEET.

CALCULATED MKP
CHECKED KRB

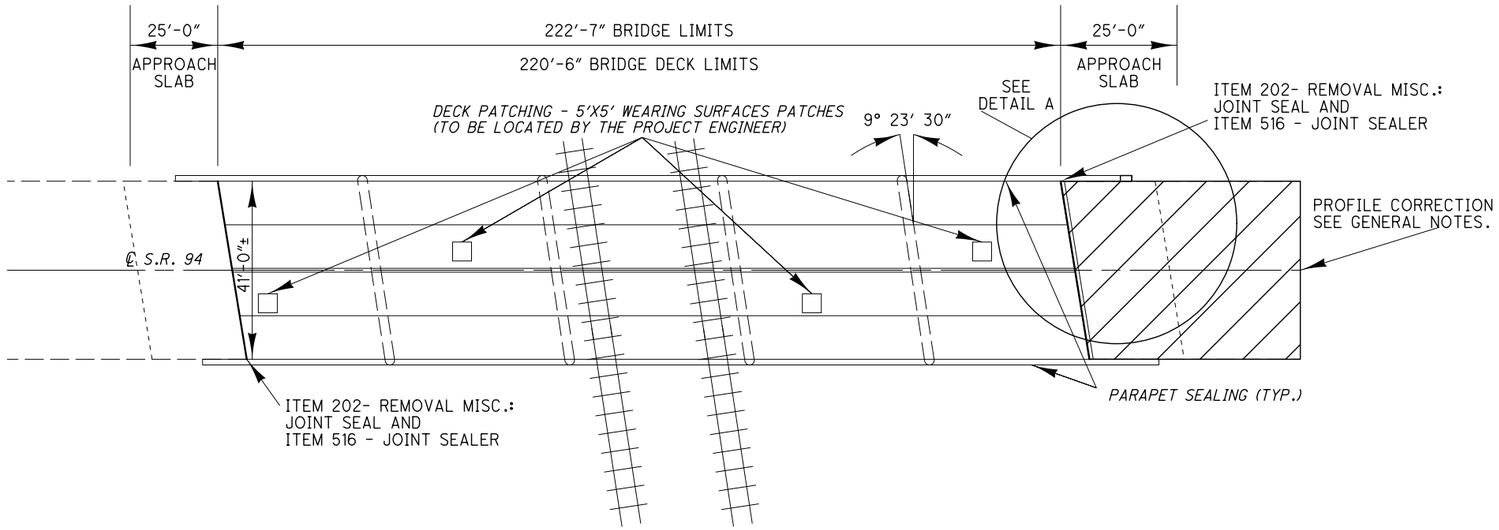
MAINTENANCE OF TRAFFIC
WAY-94-18.30

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

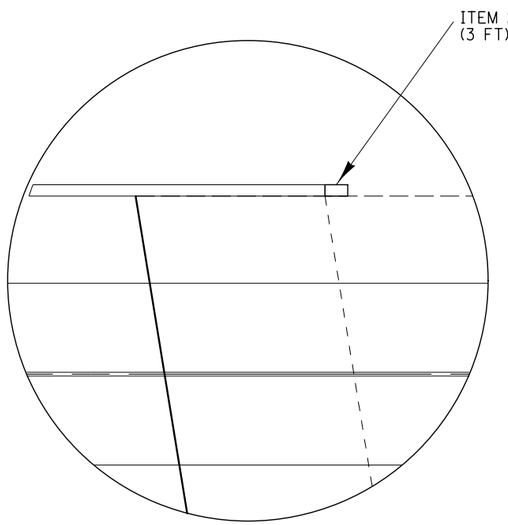
4 / 4

41
59

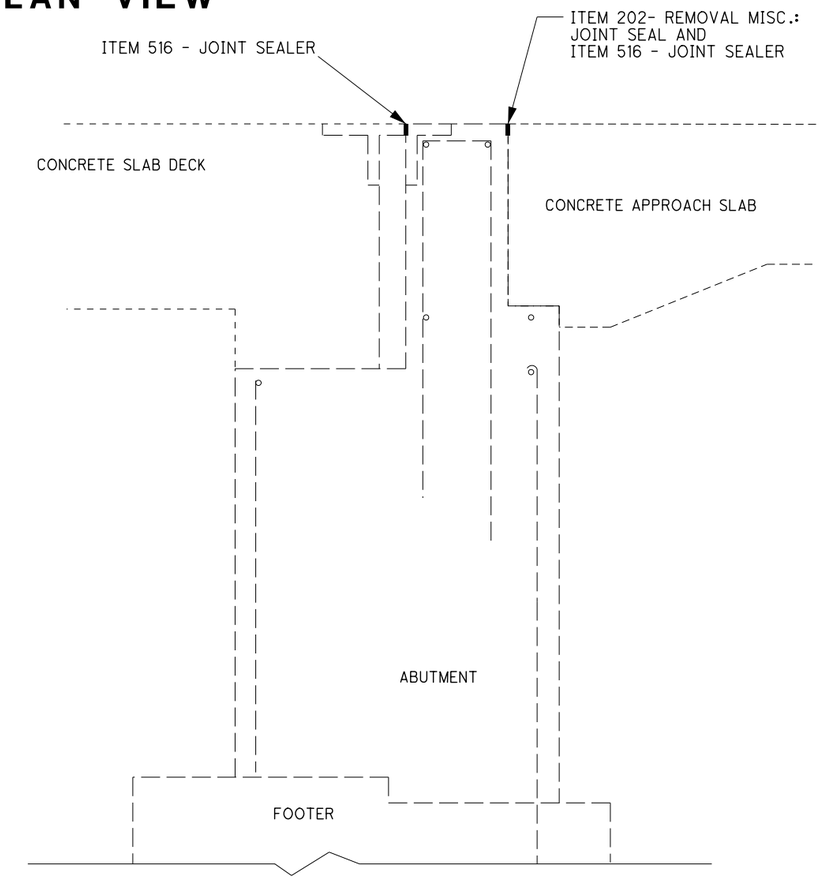
DESIGN FILE: i:\projects\86728\structures\WAY-94-18.30.dgn
WORKSTATION: mpeters
DATE: 12/18/2014
MODELNAME: Design



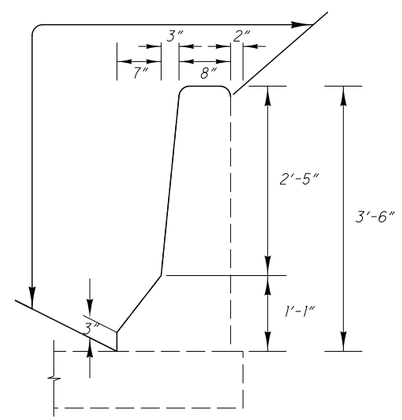
PLAN VIEW



DETAIL A



EXPANSION JOINT REPAIRS



PARAPET SEALING

ITEM	QUANTITY	UNITS	DESCRIPTION
202	83	FT	REMOVAL MISC.: JOINT SEALER
202	3	FT	CURB REMOVED
512	229	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
SPECIAL	11	SY	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO- SILICA MODIFIED CONCRETE
516	166	FT	JOINT SEALER

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET (04/STR/BR)

DESIGN AGENCY
ODOT DISTRICT THREE
OFFICE OF PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MKP	MKP	KRB	11-25-14
CHECKED	REVISED	STRUCTURE FILE NUMBER	8504113

PLAN VIEW
WAY-94-1900
OVER CSXT RAILROAD

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

1 / 2

42
59

DESIGN FILE: i:\projects\86728\structures\WAY-94-19.00\WAY-94-19.00.dgn
WORKSTATION: mpeters
DATE: 12/1/2014
MODELNAME: Design

SIGNAL TIMING

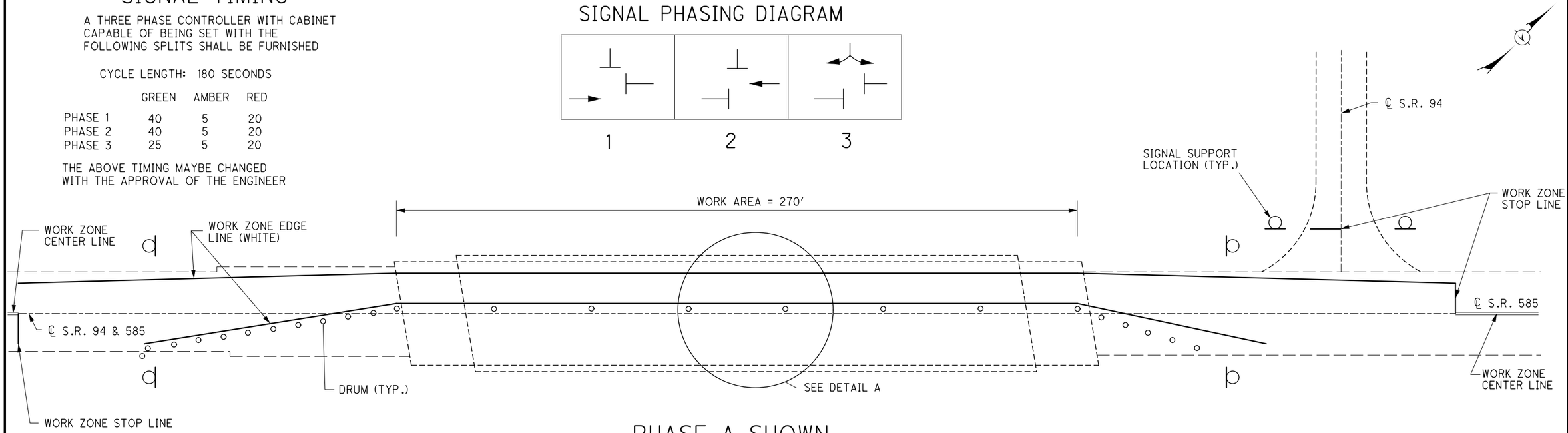
A THREE PHASE CONTROLLER WITH CABINET CAPABLE OF BEING SET WITH THE FOLLOWING SPLITS SHALL BE FURNISHED

CYCLE LENGTH: 180 SECONDS

	GREEN	AMBER	RED
PHASE 1	40	5	20
PHASE 2	40	5	20
PHASE 3	25	5	20

THE ABOVE TIMING MAYBE CHANGED WITH THE APPROVAL OF THE ENGINEER

SIGNAL PHASING DIAGRAM



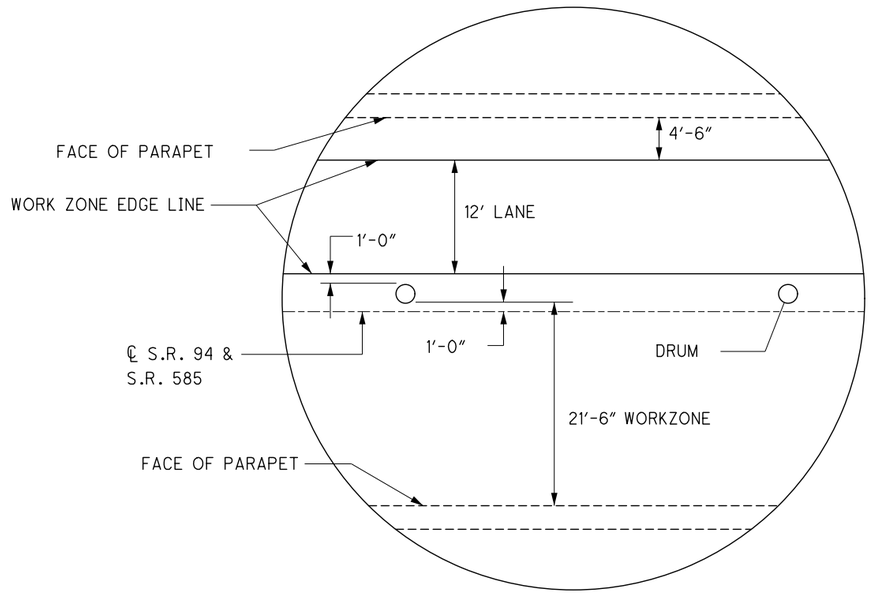
PHASE A SHOWN
PHASE B SIMILAR

NOTES:

1) THE EXISTING GUARDRAIL IS NOT SHOWN IN THE PLAN VIEW
2) FOR DETAILS NOT SHOWN, SEE STD. DRW. MT-96.11, MT-96.20 & MT-96.26

ITEM	QUANTITY	UNIT	DESCRIPTION
614	15	EACH	BARRIER REFLECTOR, TYPE A2
614	12	EACH	BARRIER REFLECTOR, TYPE B2
614	.19	MILE	WORK ZONE CENTER LINE, CLASS 1, 740.06, TYPE 1
614	.39	MILE	WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1
614	36	FT.	WORK ZONE STOP LINE, CLASS 1, 740.06, TYPE 1

ALL QUANTITIES CARRIED TO MOT SUB-SUMMARY SHEET.



DETAIL A

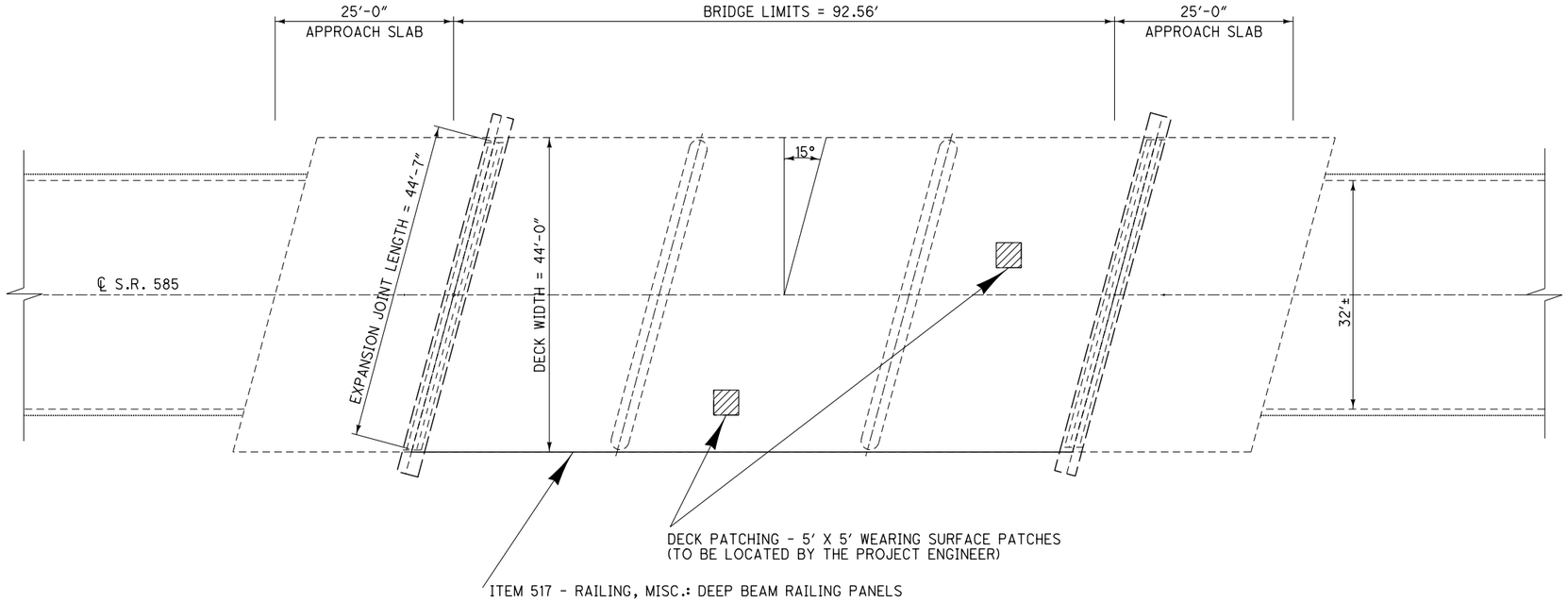
DESIGN FILE:\\D03FS005\I-Drive\projects\86728\structures\WAY-94-19.00\WAY-94-19.00.dgn
WORKSTATIONmpeters DATE:12/18/2014 MODELNAME: Design

DESIGN AGENCY
ODOT DISTRICT THREE
OFFICE OF PLANNING AND ENGINEERING

DESIGNED MKP | DRAWN MKP | REVIEWED KRB | DATE 11-25-14
CHECKED | REVISED | STRUCTURAL FILE NUMBER 8504113

MAINTENANCE OF TRAFFIC
WAY-94-1901 OVER CSXT RAILROAD

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)



ITEM	QUANTITY	UNITS	DESCRIPTION
SPECIAL	6	SY	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO- SILICA MODIFIED CONCRETE
512	70	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	452	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN
517	87.5	FT	RAILING, MISC.: DEEP BEAM RAILING PANELS

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY SHEET (04/STR/BR)

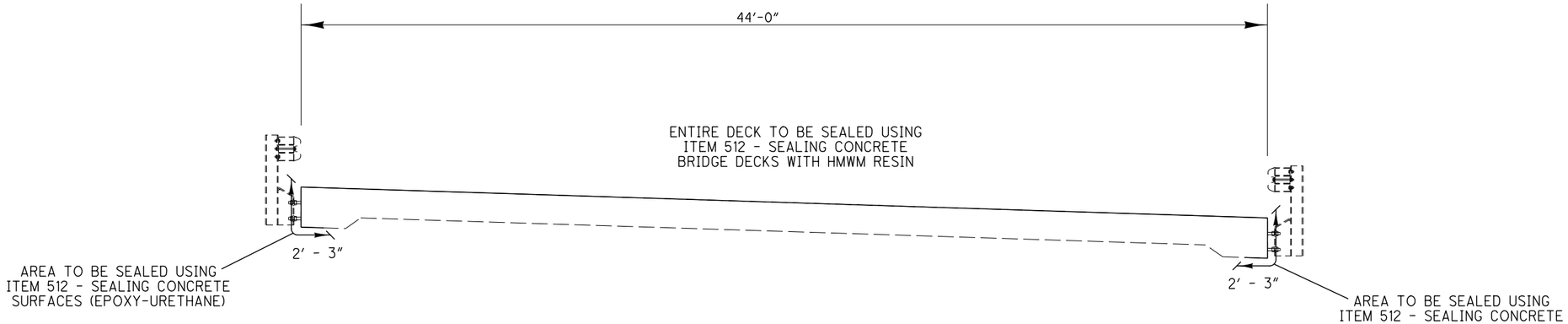
DESIGN FILE: i:\projects\86728\structures\WAY-585-15.15\WAY-585-15.12.dgn
WORKSTATION: mpeters DATE: 12/1/2014 MODELNAME: Design

DESIGN AGENCY
ODOT DISTRICT THREE
OFFICE OF PLANNING
AND ENGINEERING

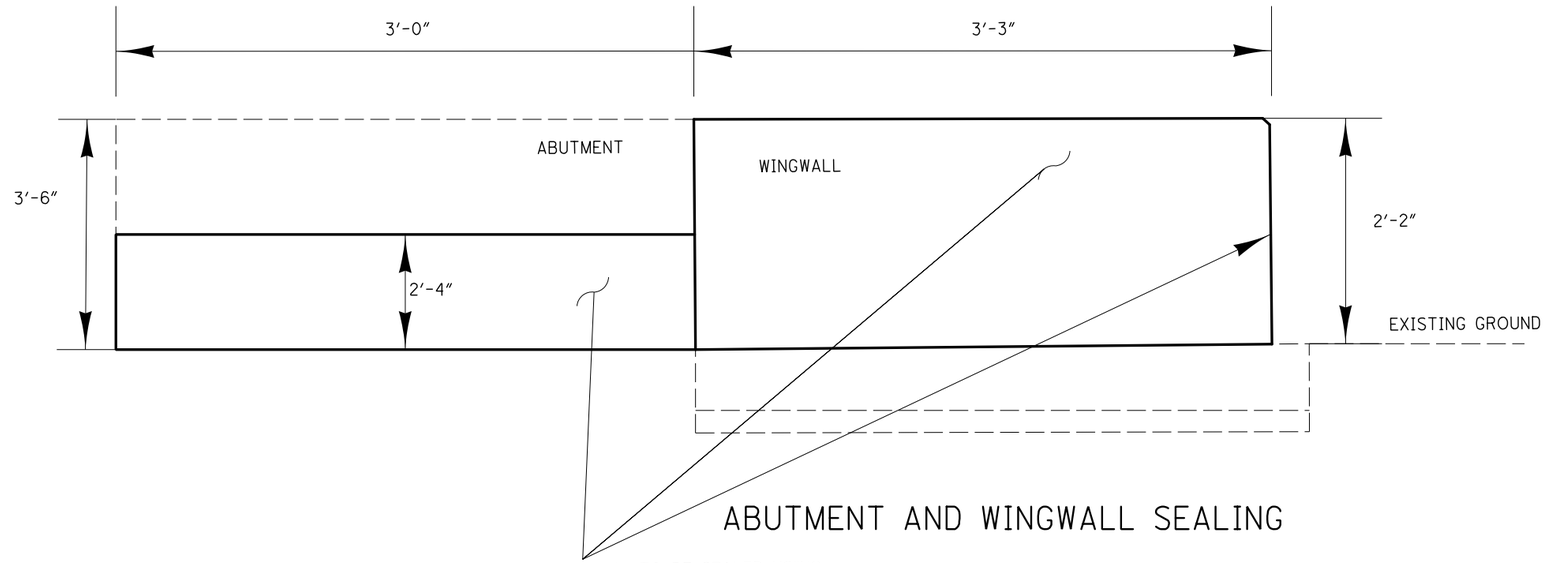
DESIGNED	DRAWN	REVIEWED	DATE
MKP	MKP	KRB	11-25-14
CHECKED	REVISED	STRUCTURE FILE NUMBER	8506124

PLAN VIEW
WAY-585-1512
OVER MILL CREEK

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)



DECK SEALING



ABUTMENT AND WINGWALL SEALING

ITEM	QUANTITY	UNITS	DESCRIPTION
512	63	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)
512	452	SQ YD	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN

ALL QUANTITIES CARRIED TO SHEET 1/4

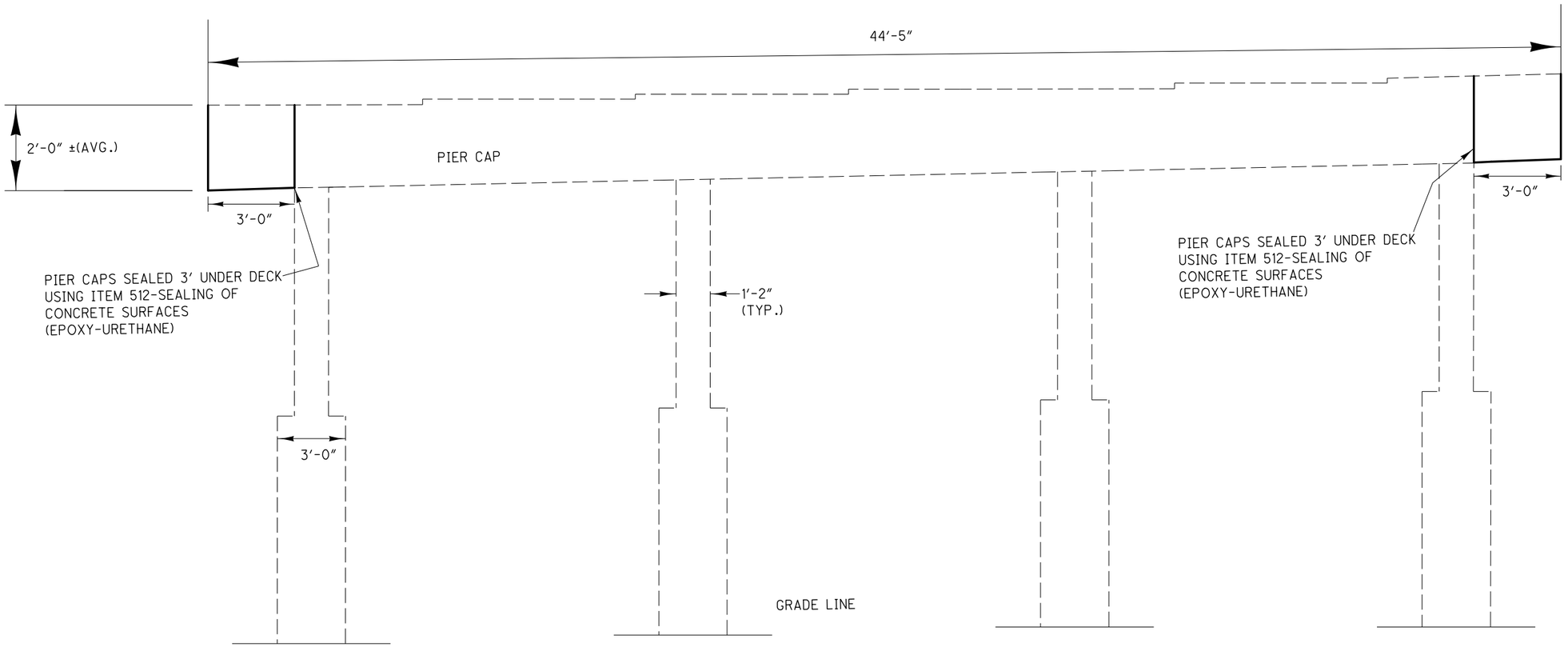
DESIGN FILE:i:\projects\86728\structures\WAY-585-15.15\WAY-585-15.12.dgn
WORKSTATION:mpeters DATE:12/1/2014 MODELNAME: Design

DESIGN AGENCY
ODOT DISTRICT THREE
OFFICE OF PLANNING
AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MKP	MKP	KRB	11-25-14
CHECKED	REVISED	STRUCTURE FILE NUMBER	8506124

PLAN VIEW
WAY-585-1512
OVER MILL CREEK

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)



PIER SEALING ELEVATION VIEW

PIER CAP WIDTH = 2′-6″

ITEM	QUANTITY	UNITS	DESCRIPTION
512	7	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)

ALL QUANTITIES CARRIED TO SHEET 1/4

DESIGN FILE: i:\projects\86728\structures\WAY-585-15.15\WAY-585-15.12.dgn
WORKSTATION: mpeters DATE: 12/1/2014 MODELNAME: Design

DESIGN AGENCY
ODOT DISTRICT THREE
OFFICE OF PLANNING
AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MKP	MKP	KRB	11-25-14
CHECKED	REVISED	STRUCTURE FILE NUMBER	8506124

PLAN VIEW
WAY-585-1512
OVER MILL CREEK

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

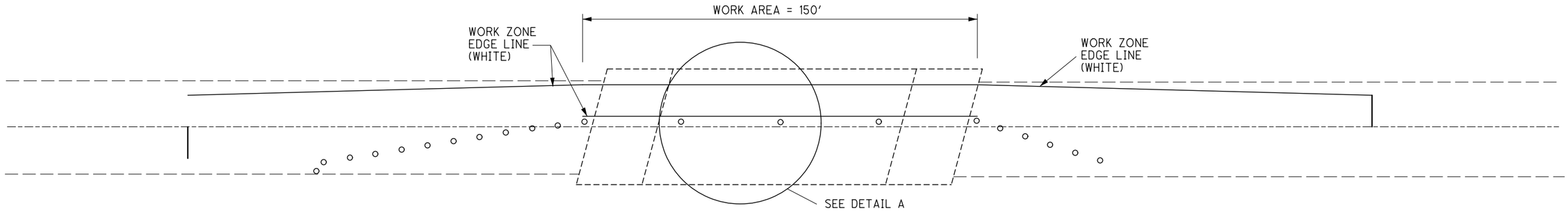
SIGNAL TIMING

A TWO PHASE CONTROLLER WITH CABINET CAPABLE OF BEING SET WITH THE FOLLOWING SPLITS SHALL BE FURNISHED

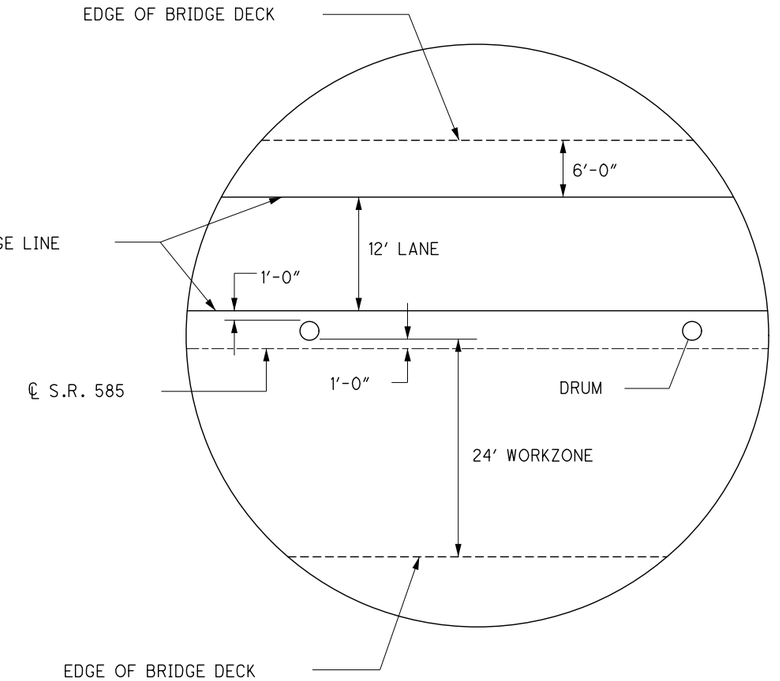
CYCLE LENGTH: 180 SECONDS

	GREEN	AMBER	RED
PHASE A	70	5	15
PHASE B	70	5	15

THE ABOVE TIMING MAYBE CHANGED WITH THE APPROVAL OF THE ENGINEER



PHASE A SHOWN
PHASE B SIMILAR



DETAIL A

ITEM	QUANTITY	UNIT	DESCRIPTION
614	16	EACH	BARRIER REFLECTOR, TYPE A2
614	0.19	MILE	WORK ZONE CENTER LINE, CLASS 1, 740.06, TYPE 1
614	0.35	MILE	WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1
614	25	FT.	WORK ZONE STOP LINE, CLASS 1, 740.06, TYPE 1

ALL QUANTITIES CARRIED TO MOT SUB-SUMMARY SHEET.

NOTES:

1) THE EXISTING BRIDGE RAILING AND GUARDRAIL ARE NOT SHOWN IN THE PLAN VIEW

2) FOR ADDITIONAL DETAILS, SEE SCDS MT-96.11, MT-96.20 AND MT-96.26.

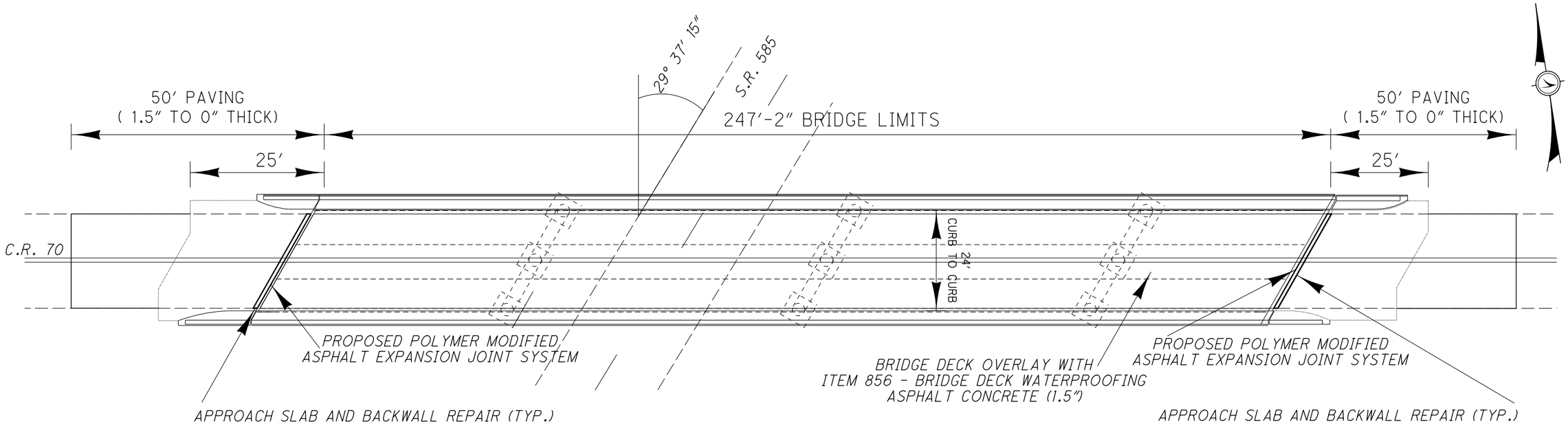
DESIGN FILE: I:\projects\86728\structures\WAY-585-15.15\WAY-585-15.12.dgn
WORKSTATION: mpeters DATE: 12/18/2014

DESIGN AGENCY
DISTRICT THREE
OFFICE OF PLANNING AND ENGINEERING

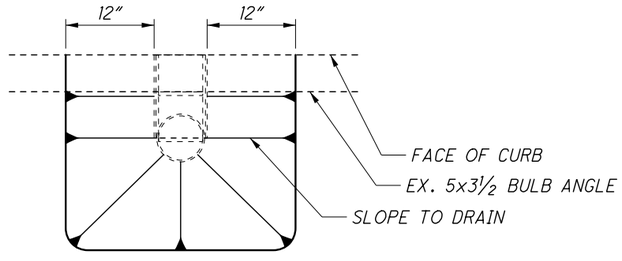
DESIGNED	DRAWN	REVIEWED	DATE
MKP	MKP	KRB	11-25-14
CHECKED	REVISED	STRUCTURAL FILE NUMBER	8506124

MAINTENANCE OF TRAFFIC
WAY-585-1512
OVER MILL CREEK

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)



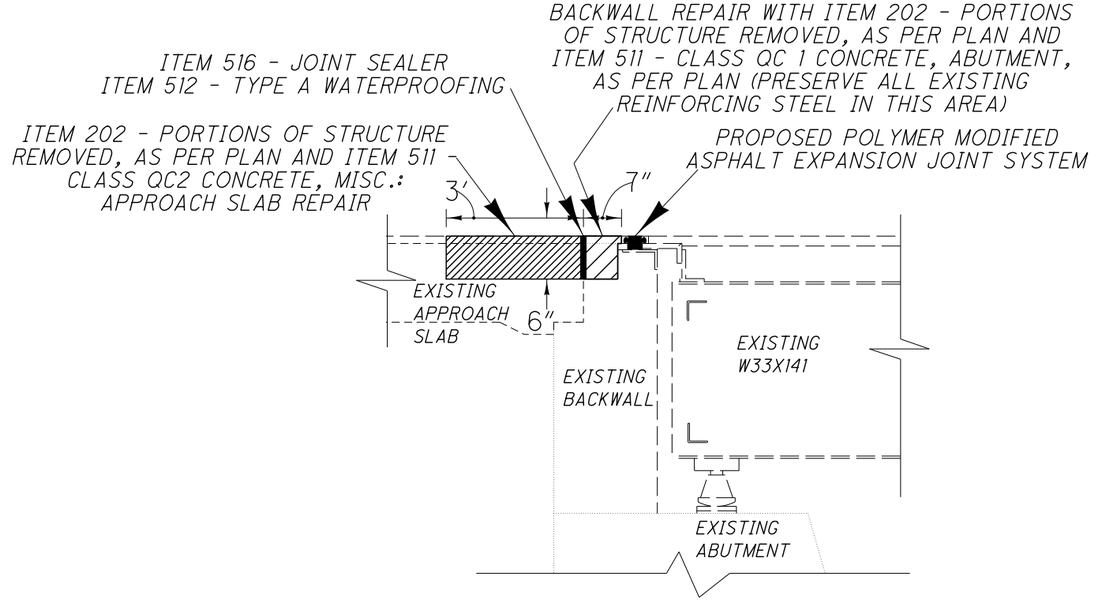
PLAN VIEW



TYPICAL PLAN VIEW AT SCUPPER

ITEM	QUANTITY	UNITS	DESCRIPTION
202	4	CY	PORTIONS OF STRUCTURE REMOVED, AS PER PLAN
511	1	CY	CLASS QC1 CONCRETE, ABUTMENT, AS PER PLAN
511	3	CY	CLASS QC2 CONCRETE MISC.: APPROACH SLAB REPAIR
512	3	SY	TYPE A WATERPROOFING
516	55	FT	JOINT SEALER
846	55	FT	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM
856	33	CY	BRIDGE DECK WATERPROOFING ASPHALT CONCRETE

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY (05/NHS/BR)



BACKWALL/APPROACH SLAB REPAIR

NOTES:

1) ALL EXISTING REINFORCING STEEL TO BE PRESERVED.

2) EXISTING VANDAL FENCE NOT SHOWN.

DESIGN AGENCY
ODOT DISTRICT THREE
OFFICE OF
PLANNING AND ENGINEERING

DESIGNED MKP | DRAWN MKP | REVIEWED KRB | DATE 11-25-14
CHECKED | REVISED | STRUCTURE FILE NUMBER 8506213

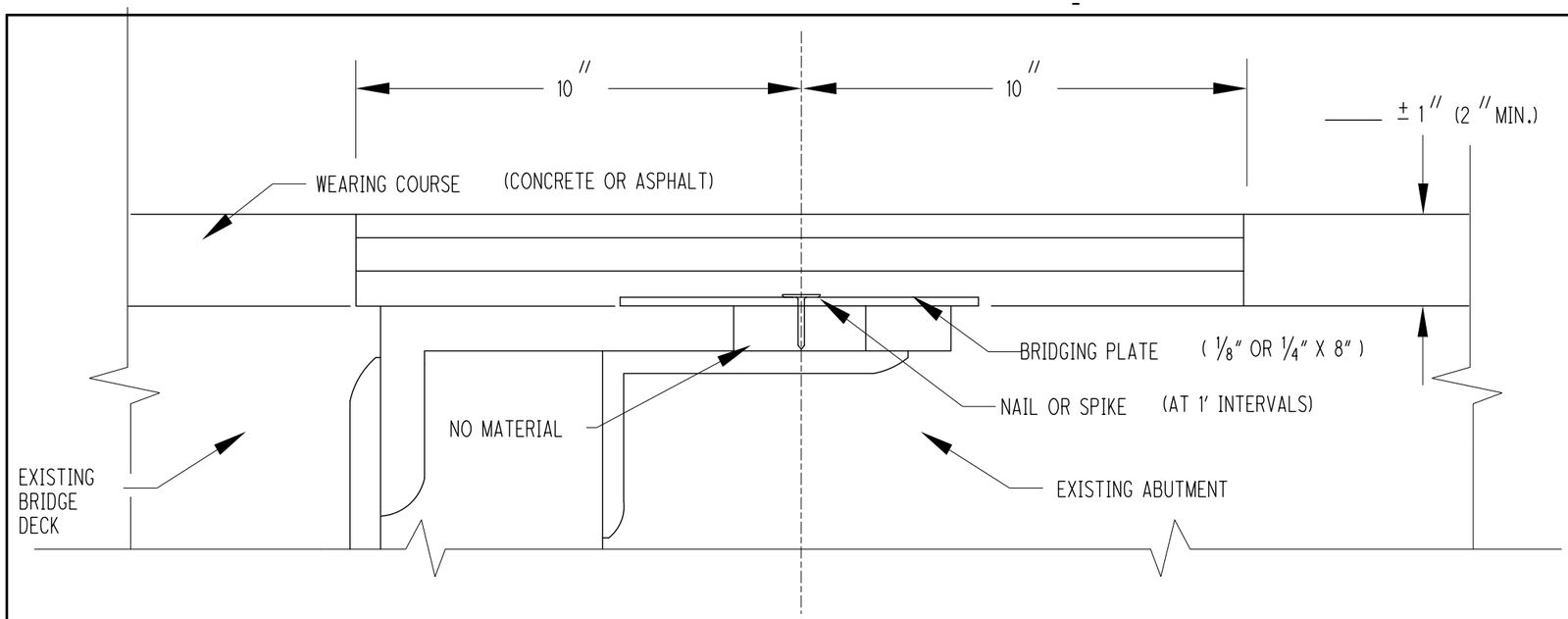
PLAN VIEW
WAY-585-1649
OVER SR 585

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

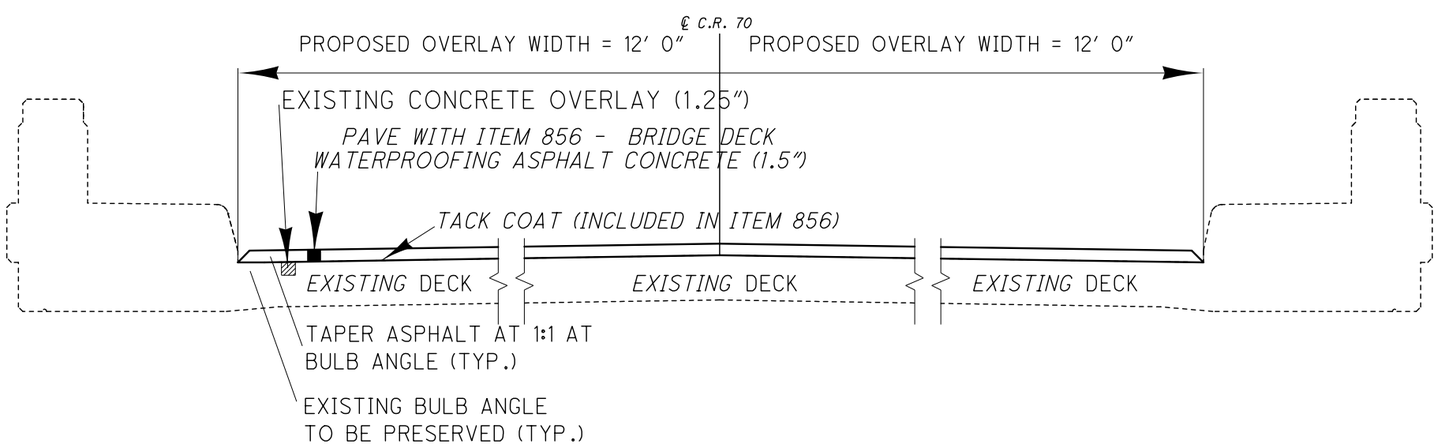
1 / 2

48
59

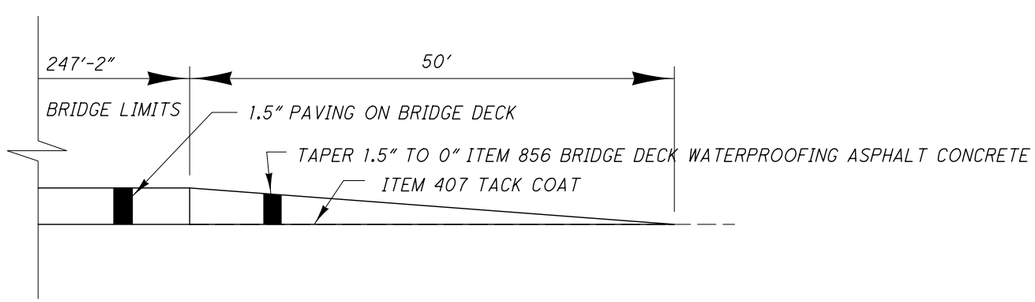
DESIGN FILE:\\D03FS005\I-Drive\projects\86728\structures\WAY-585-16.49\WAY-585-16.49.dgn
WORKSTATIONmpeters DATE:12/18/2014 MODELNAME:Design



POLYMER MODIFIED EXPANSION JOINT



DECK OVERLAY DETAIL



APPROACH PAVING DETAIL

DESIGN FILE: i:\projects\86728\structures\WAY-585-16.49\WAY-585-16.49.dgn
WORKSTATION: salay
DATE: 3/27/2015
MODELNAME: Design

DESIGN AGENCY
ODOT DISTRICT THREE
OFFICE OF
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MKP	MKP	KRB	11-25-14
CHECKED	REVISED	STRUCTURE FILE NUMBER	8506213

PLAN VIEW
WAY-585-1649
OVER SR 585

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

2 / 2

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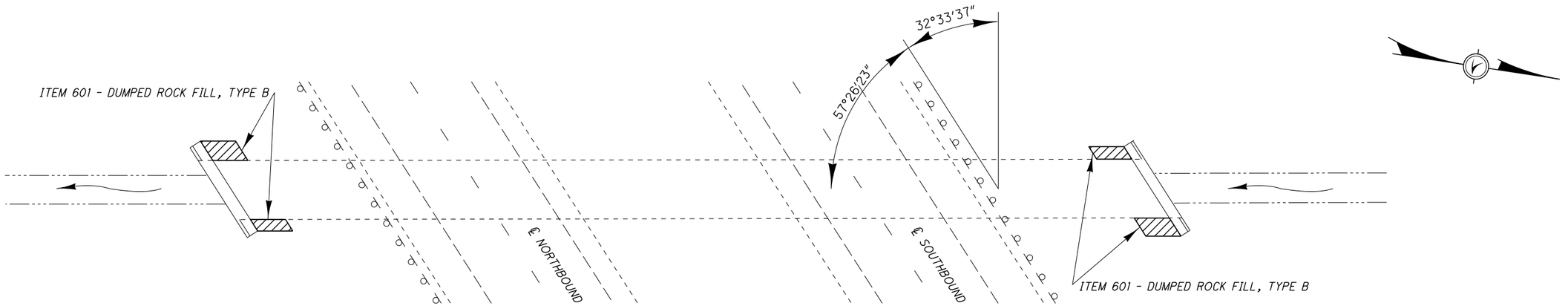
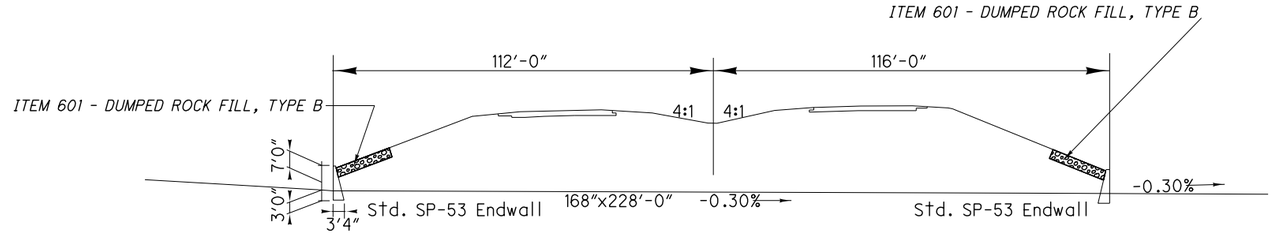
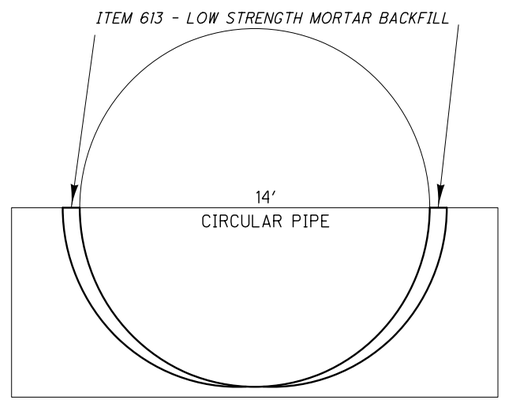
59



PLAN VIEW



ELEVATION VIEW



INLET/OUTLET REPAIRS

ITEM	QUANTITY	UNITS	DESCRIPTION
601	20	CY	DUMPED ROCK FILL, TYPE B
613	1	CY	LOW STRENGTH MORTAR BACKFILL

ALL QUANTITIES CARRIED TO STRUCTURE SUMMARY (05/NHS/BR)

DESIGN AGENCY
ODOT DISTRICT THREE
OFFICE OF
PLANNING AND ENGINEERING

DESIGNED	DRAWN	REVIEWED	DATE
MKP	MKP	KRB	11-25-14
CHECKED	REVISED	STRUCTURE FILE NUMBER	8506248

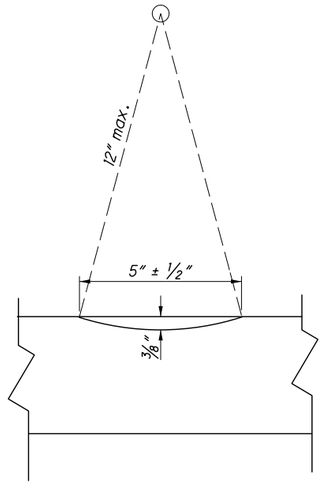
PLAN VIEW
WAY-585-18.51
ROUTE CARRIES SILVER CREEK

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

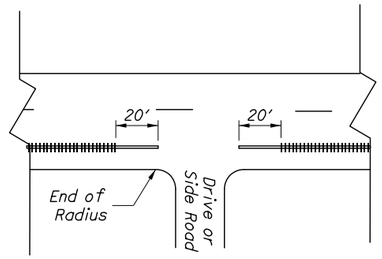
1 / 1

50
59

DESIGN FILE: i:\projects\86728\structures\WAY-585-18.51.dgn
WORKSTATION: mpeters
DATE: 12/18/2014
MODELNAME: Design



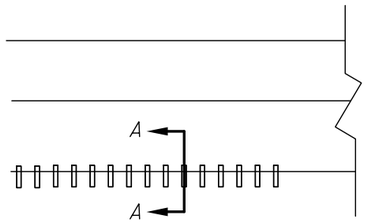
PROFILE



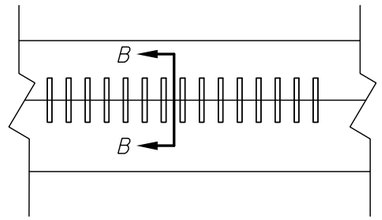
SIDE ROAD AND DRIVE RUMBLE STRIPE INSTALLATION DETAILS

NOTES:

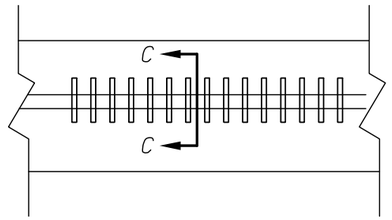
1. Rumble stripes shall be interrupted for driveways, intersections, and over structures.
2. Rumble stripes shall be paid for in accordance with Item 618.
3. Rumble stripes shall be installed on a 60' cycle, i.e., 48' rumble stripes followed by a 12' gap.
4. Apply final pavement markings after rumble stripes are completed.
5. Location of the construction joint shall be verified in the field.



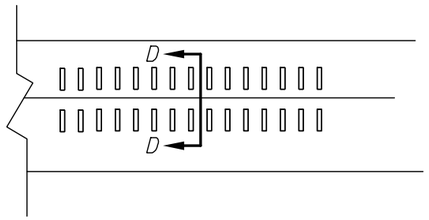
EDGE LINE



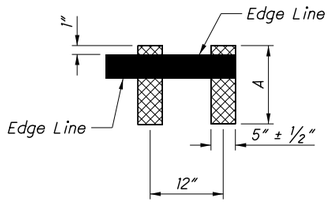
SINGLE CENTER LINE OR LANE LINE



DOUBLE CENTER LINE



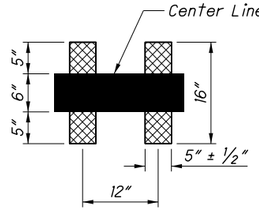
CONCRETE JOINT LINE



SECTION A-A

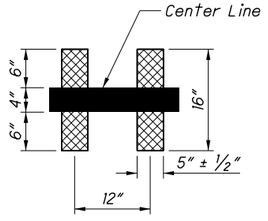
EDGE LINE RUMBLE STRIPE

SHOULDER WIDTH	A
2' to 5'	6"
5'-1" to 8'	10"
≥ 8'-1"	16"



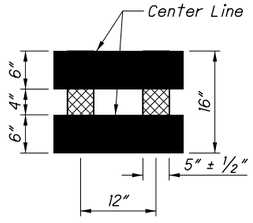
SECTION B-B

6" CENTER LINE OR LANE LINE RUMBLE STRIPE



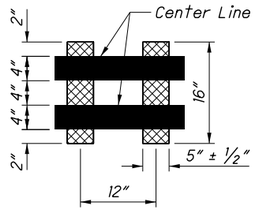
SECTION B-B

4" CENTER LINE OR LANE LINE RUMBLE STRIPE



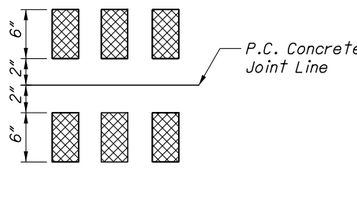
SECTION C-C

6" CENTER LINE RUMBLE STRIPE



SECTION C-C

4" CENTER LINE RUMBLE STRIPE



SECTION D-D

PORTLAND CEMENT CONCRETE JOINT CENTER LINE RUMBLE STRIPE

THIS DRAWING REPLACES PIS 206410 DATED 04-20-2012.

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED

REVISION DATE 01-17-2014 | CHECKED

PIS NUMBER 206410

PLAN INSERT SHEET

RUMBLE STRIPES

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

1 / 1

51
59

DESIGN FILE: i:\projects\86728\roadway\sheets\86728 Rumble Stripes.dgn MODELNAME: Sheet
WORKSTATIONmpeters DATE: 12/1/2014

NOTES

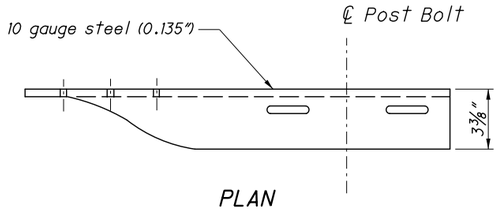
GENERAL: *Components shown on this drawing are used in a variety of guardrail systems. See individual guardrail drawing for specific applications.*

See CMS 606 for guardrail specifications not covered on these drawings.

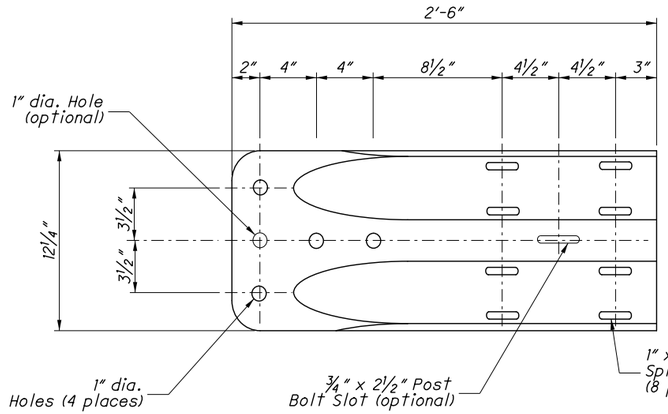
Refer to AASHTO M 180 for dimensional details of W-Beam and Thrie-Beam rail elements, related buffer and end sections, beam splices, post and splice bolts, nuts, and Type 1 W-Beam to Thrie-Beam Transition sections.

RAIL ELEMENTS: *W-Beam Rail has an effective length of 12'-6" unless otherwise specified, with ¾" x 2½" post bolt slots on 6'-3" centers regardless of post spacing. Field punch or drill bolt holes or slots for irregularly spaced posts as specified in CMS 606.04.*

RAIL SPLICES: *Lap splices between two rail elements or between a rail and terminal connector in the direction of traffic. Lap the buffer or flared end sections in the direction of traffic.*

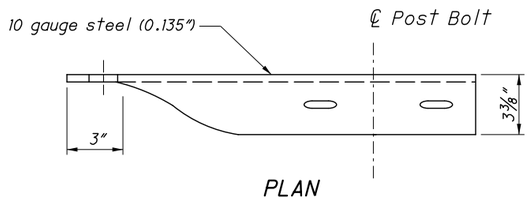


PLAN

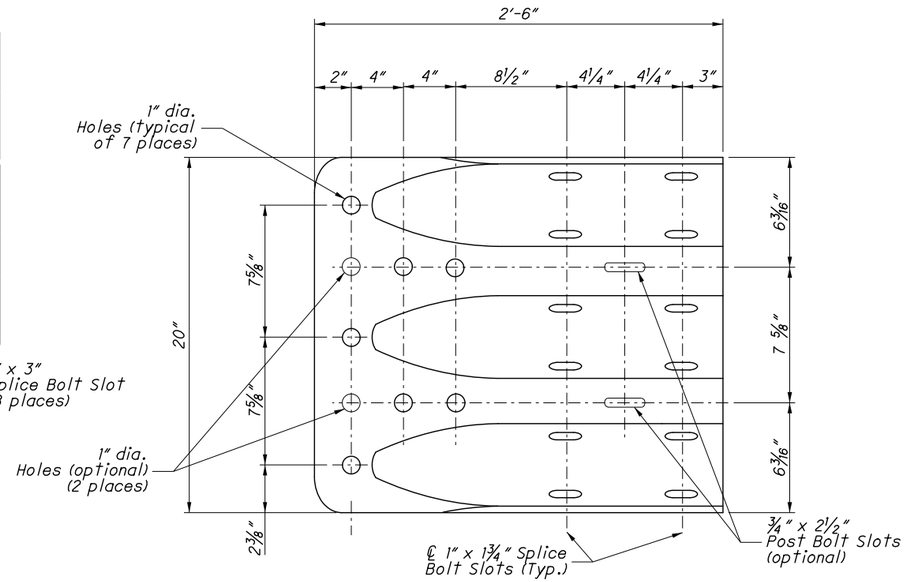


ELEVATION

W-BEAM TERMINAL CONNECTOR

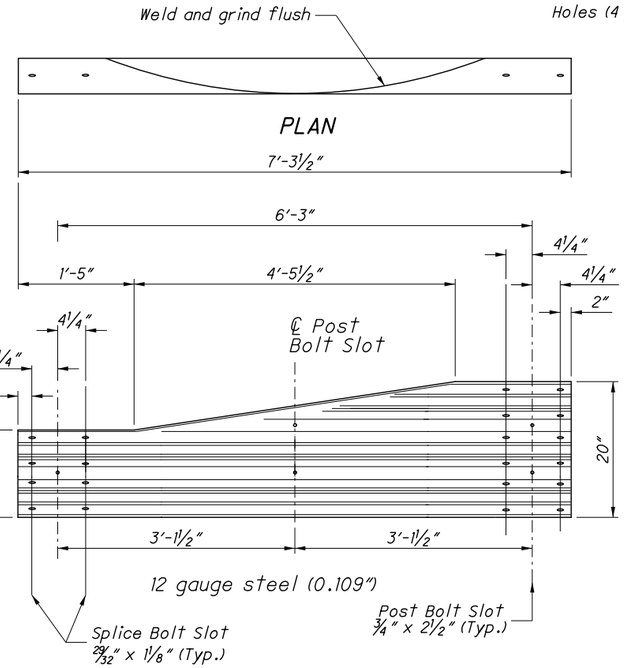


PLAN



ELEVATION

THRIE-BEAM TERMINAL CONNECTOR

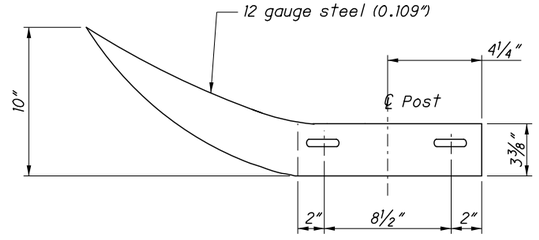


ELEVATION

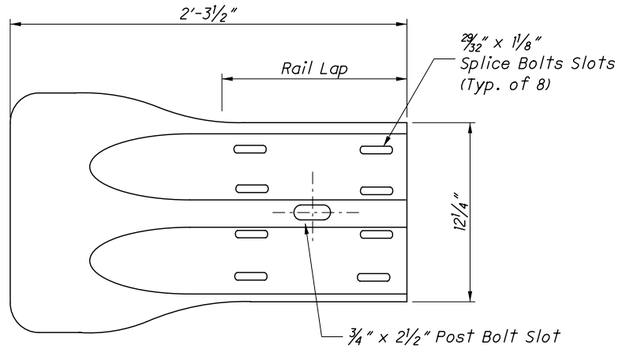
TYPE 2 TRANSITION SECTION

(Asymmetric W to Thrie-Beam)

For details of Type 1 Transition Section (Symmetric), refer to AASHTO M 180, Figure 4.

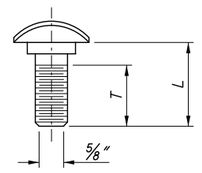


PLAN



ELEVATION

W-BEAM FLARED END SECTION



GUARDRAIL BOLT (For Post and Splice Bolts)		
L	**T min.**	**Bolt Use**
18" (Standard Rail)	4"	Type 5: WP/WB, PB
26" (Barrier Rail)		
10"	4"	Type 5: SP/WB, PB
1¼"	1⅛"	Splice Bolt

WP = Wood Post WB = Wood Blockout
SP = Steel Post PB = Plastic Blockout

Longer Bolt may be needed for round Wood Post larger than 8" dia.

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED

REVISION DATE | CHECKED

PIS NUMBER

PLAN INSERT SHEET

GUARDRAIL DETAILS (Rail Components)

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

1 / 3

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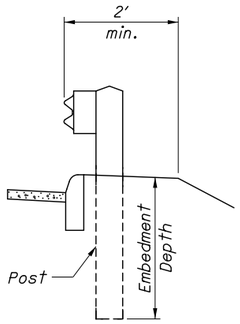
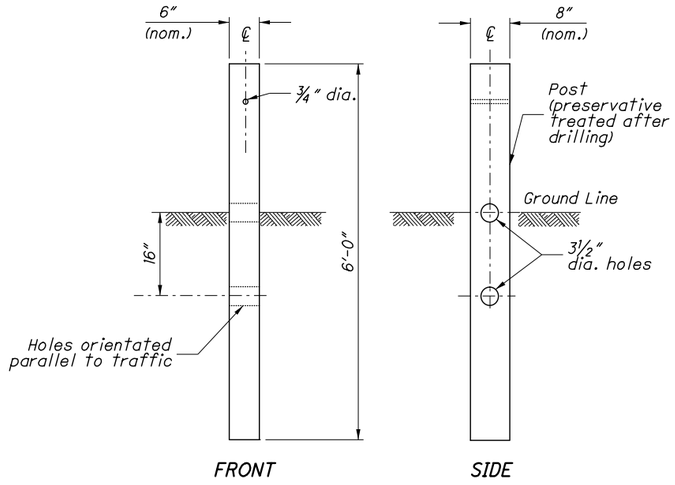
DESIGN FILE: i:\projects\86728\roadway\sheets\PIS_GR-1.1_1-18-2013.dgn
WORKSTATION: mpeters
MODEL NAME: Sheet
DATE: 12/1/2014

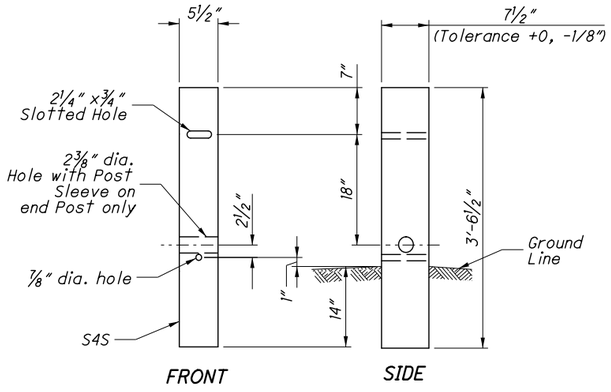


DETAIL A

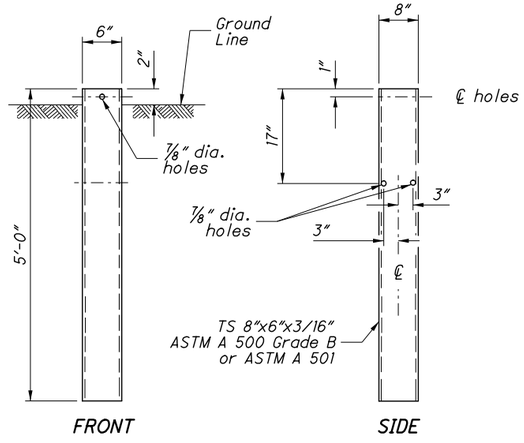
See POST EMBEDMENT DEPTH Note



TYPE 1 BREAKAWAY CRT POST



TYPE 2 BREAKAWAY CRT POST



STEEL GROUND TUBE

NOTES

GUARDRAIL HEIGHT: *For initial installation, construct the guardrail within ± 1″ of the standard height, h, or* ***29″*** *to the top of W-Beam rail. (See MEASURING GUARDRAIL HEIGHT Detail.)*
When subsequent projects, such as resurfacings, affect the height of existing guardrail, the finished height is to be within ±2.5″ of the standard height.

POST EMBEDMENT DEPTH: *Standard embedment is 3′-5″ min. Where less than 2′ of graded shoulder width (10:1 or flatter) exists, measured from the face of the guardrail (see DETAIL "A"), use longer posts so that a minimum of 5′-5″ embedment depth is provided. Payment for the longer posts will be made at the unit price bid for* ***ITEM 606 - GUARDRAIL POST, 9′, Each.***

SPECIAL POST MOUNTINGS: *Install posts located over a drainage inlet or structure as shown in the FOOTING ANCHOR Detail, or anchor per the details shown on* ***SCD GR-2.2.***

Install posts located over a footing with a cover of less than 2′-6″ with a footing anchor as detailed here. (A plate, as detailed on SECTION B-B of ***SCD GR-2.2****, may be used as an alternative attachment method.) Where the cover is between 2′-6″ and 3′-5″, the footing anchor may be omitted and the post encased instead with 4″ (min.) of concrete.*

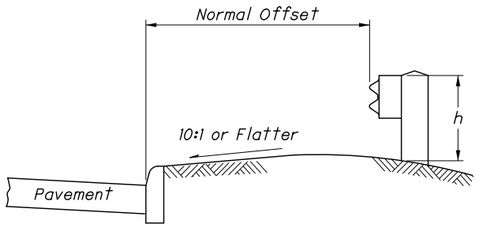
Do not drive posts located over a culvert with less than 4′-3″ of cover; instead set in drilled or dug holes. Where the available post embedment depth is less than 3′-5″, encase the post with a minimum of 4″ concrete.

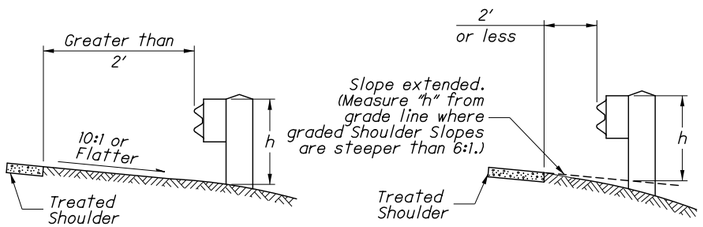
All costs associated with special post mountings are included in the unit price bid of Item 606 Guardrail of the type specified in the plans.

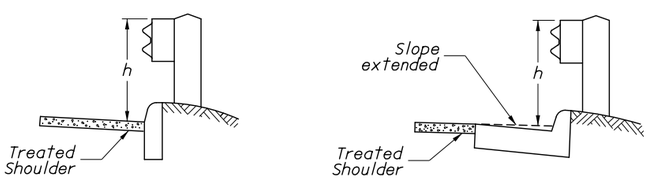
ANCHORS: *Holes and grouting shall comply with CMS 510. Use either cement or non-shrink, nonmetallic grout.*

Expansion shield anchors as specified in CMS 712.01 may be substituted except where concrete deterioration has occurred, as determined by the Engineer. Where self-drilling anchors are used, drill the holes with the expansion shield (not by a drill bit) and install the shield flush with the concrete surface.

PROTECTIVE COATING: *In lieu of the complying with CMS 710.06, coat expansion shields, anchors and concrete insert anchor assemblies embedded in concrete in accordance with ASTM A 153 or be of stainless steel. Any bolts screwed into these devices shall meet CMS 710.06. (See sheet 3 for Concrete Insert Anchor Assembly Detail.)*

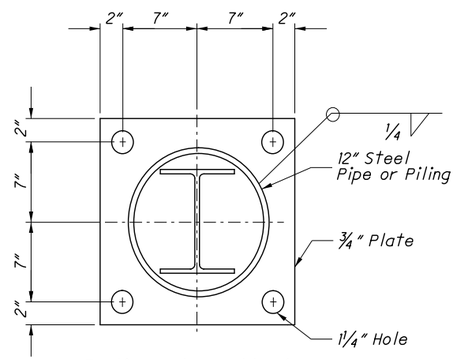






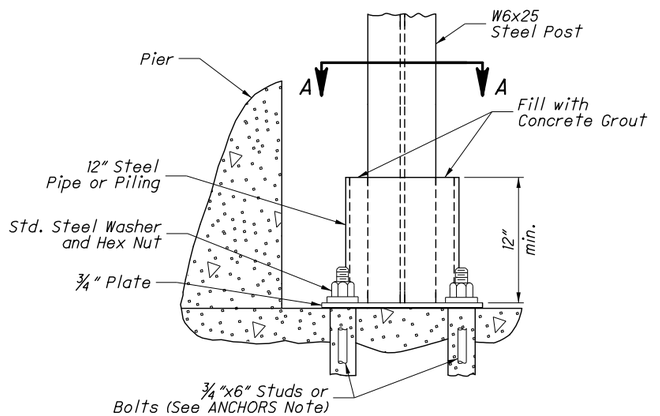
h = Standard Height (See GUARDRAIL HEIGHT Note)

MEASURING GUARDRAIL HEIGHT



Footing Anchor and hardware need not be galvanized

SECTION A-A



ELEVATION
FOOTING ANCHOR

See SPECIAL POST MOUNTINGS Note.

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED
REVISION DATE | CHECKED
PIS NUMBER

PLAN INSERT SHEET

GUARDRAIL DETAILS (Rail Components)

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

2 / 3

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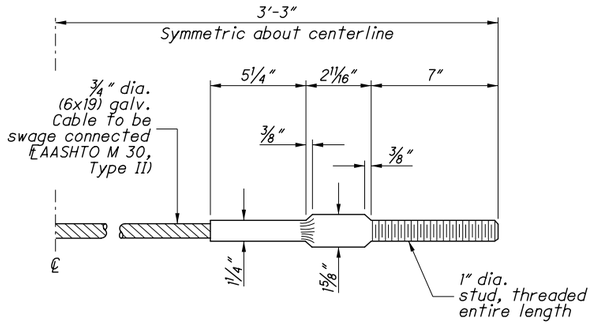
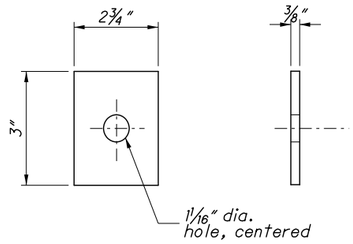
DESIGN FILE: i:\projects\86728\roadway\sheets\PIS_GR-1.1_1-18-2013.dgn
WORKSTATION: mpeters
DATE: 12/1/2014
MODELNAME: Sheet

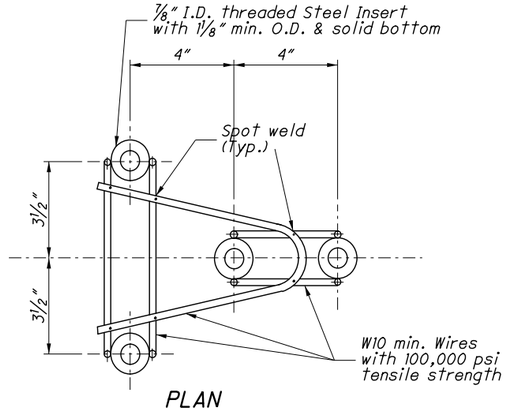


STANDARD SWAGED FITTING AND STUD

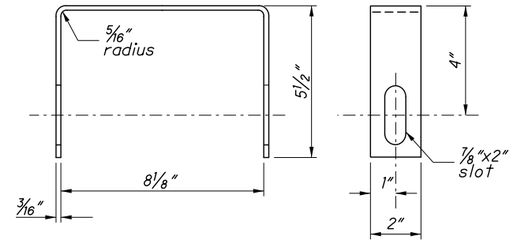
CABLE ANCHOR



END PLATE

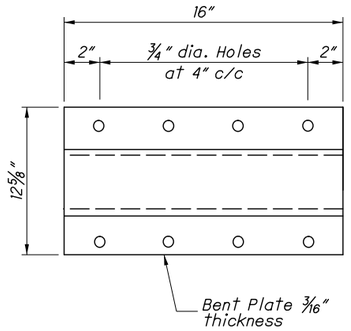


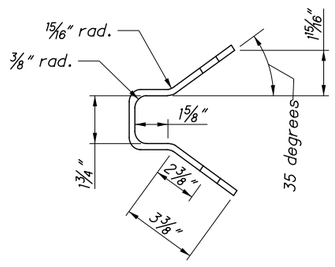
PLAN



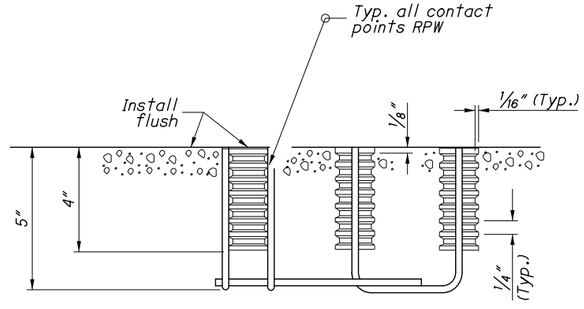
YOKE

Two required in Assembly





ANCHOR BRACKET

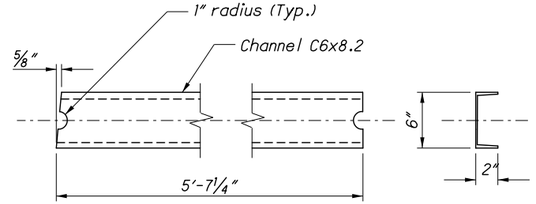


Four 7/8" Bolts required

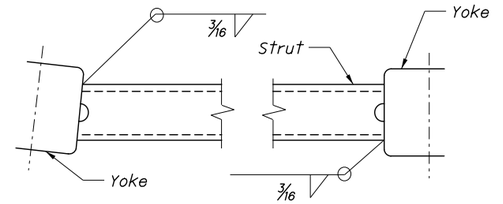
ELEVATION

CONCRETE INSERT ANCHOR ASSEMBLY (W-BEAM ONLY)

See ANCHORS and PROTECTIVE COATINGS Notes on Sheet 2

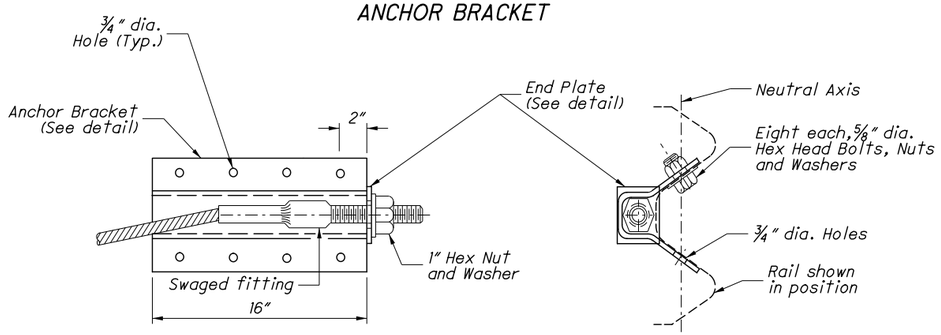


STRUT

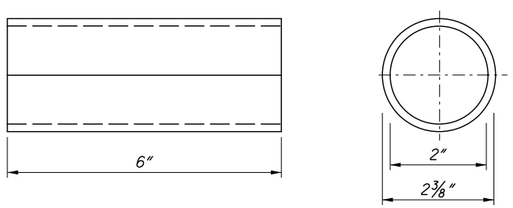


Channel legs shown down. For opposite hand, install Channel legs up.

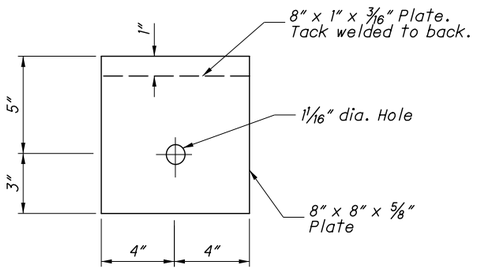
STRUT AND YOKE ASSEMBLY



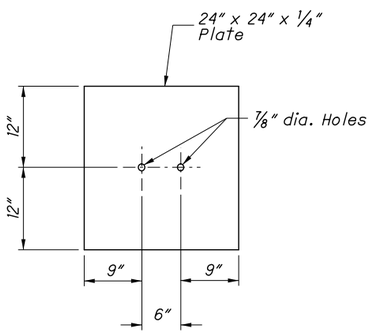
ANCHOR BRACKET ASSEMBLY DETAILS



POST SLEEVE



BEARING PLATE



SOIL PLATE

DESIGN FILE:i:\projects\86728\roadway\sheets\PIS_GR-1.1_1-18-2013.dgn
WORKSTATION:mpeters
MODELNAME: Sheet
DATE:12/1/2014

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DESIGNED | REVIEWED
REVISION DATE | CHECKED
PIS NUMBER

PLAN INSERT SHEET
GUARDRAIL DETAILS (Rail Components)

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

3 / 3

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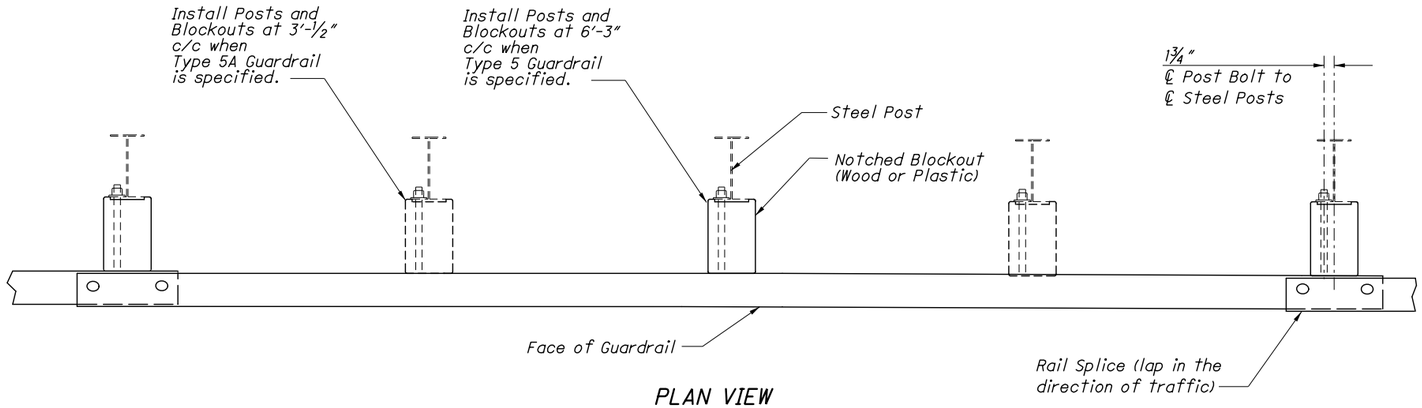
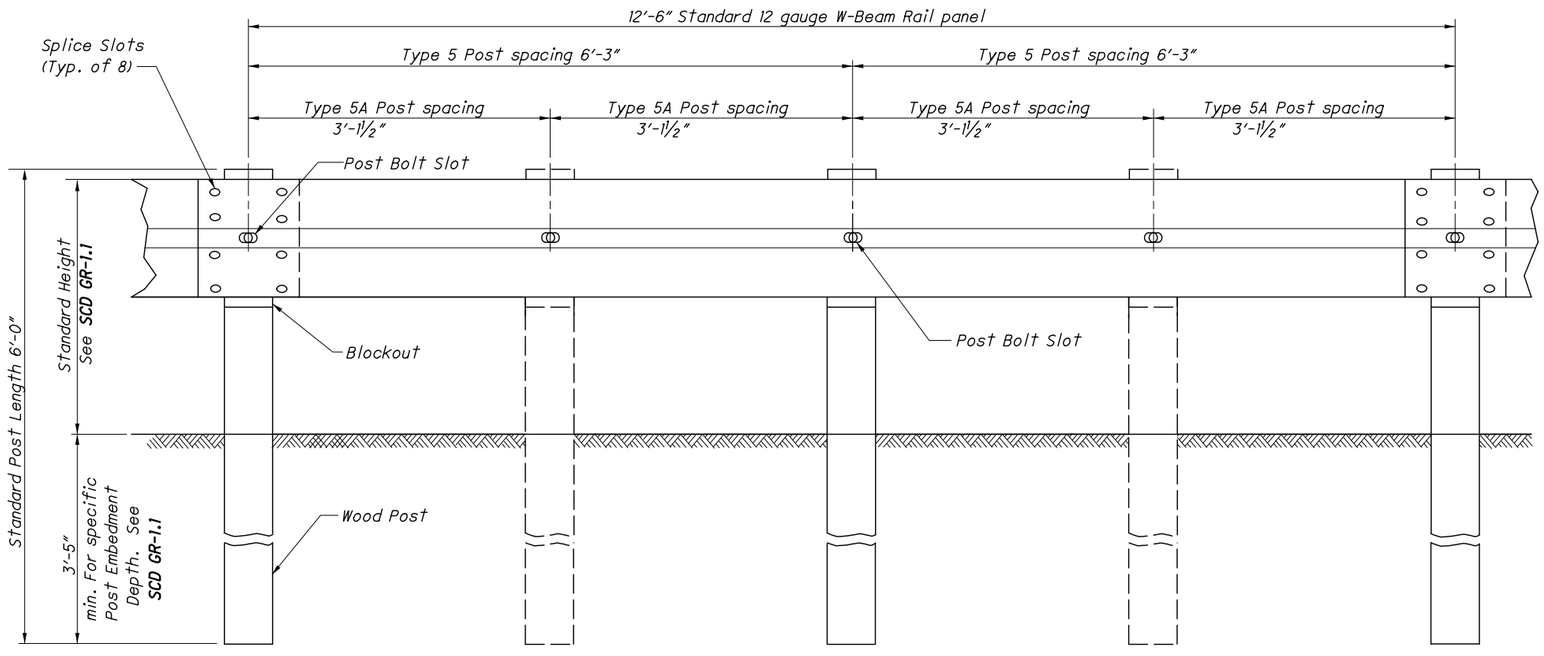


PLAN VIEW
(Steel Posts shown)



ELEVATION
(Wood Posts shown)

NOTES

RAIL: *Use W-Beam rail meeting AASHTO M 180 Type II Class A, as specified in CMS 606.*

POSTS: *Posts may be constructed of wood or steel. Wood posts may be round or 6"x8" square-sawed.*

Use round wood posts on runs of single-sided rail. The round posts shall be 8"±1 in diameter at the top and not more than 3" larger at the butt with a uniform taper.

Fabricated wood posts with square ends. Posts shall be pressure-treated as per CMS 710.14. Bore bolt holes and, if required, trim the tops of posts after the posts are set.

Steel posts are to be W6x9 or W6x8.5 galvanized steel. Use the same type of post throughout the length of the project unless otherwise specified in the plans or permitted by the Engineer.

All posts are 6'-0" long unless specified otherwise in the Contract Document. Posts may be set in drilled holes or may be driven to grade.

WELDED BEAM POSTS: *Welded beam guardrail posts may be used for Item 606, Guardrail, provided the web and flange sizes are as shown here. Welding of the web to the flanges must comply with ASTM A 769, Class 1, using Grade 36 steel [250 MPa yield point] with the following exceptions:*

Sec. 7.2 Test reports of tensile properties for each lot shall accompany each shipment.

Sec. 12 Beams that have imperfections repaired by welding shall not be accepted for use in Item 606.

Sec. 13 Random samples shall be tested by the Department from materials delivered to the project site, or other locations designated by the Laboratory.

ALTERNATE POSTS: Engineered guardrail posts having met NCHRP 350 criteria, and listed on the ***Office of Materials Management's*** *Approved List are permitted as an equal alternate when installed according to the Manufacturer's instructions and within the limitations shown on the Approved List.*

BLOCKOUTS: *Blockout dimensions are dependent on post used. Wood Blockouts are to be pressure treated as specified in CMS 710.14. Bore bolt holes. Approved alternate blockouts may be used in lieu of the wood blockouts shown. The approved list is maintained by the* ***Office of Roadway Engineering.***

WASHERS: *Install appropriate sized standard galvanized steel washers on the nut side of bolts installed on wood posts.*

DELINEATION: *For barrier reflectors, see CMS 626.*

MISCELLANEOUS: *For other guardrail details, see* ***SCD GR-1.1.***

STEEL BEAM POSTS (English)				
Size	**Beam depth**	**Flange width**	**Flange thickness**	**Web thickness**
Rolled W6x8.5	5.8"	3.94"	0.193"	0.170"
Rolled W6x9	5.9"	3.94"	0.215"	0.170"
Welded 6x8.5	6.0"	3.94"	0.193"	0.170"
Welded 6x9	6.0"	3.94"	0.215"	0.170"

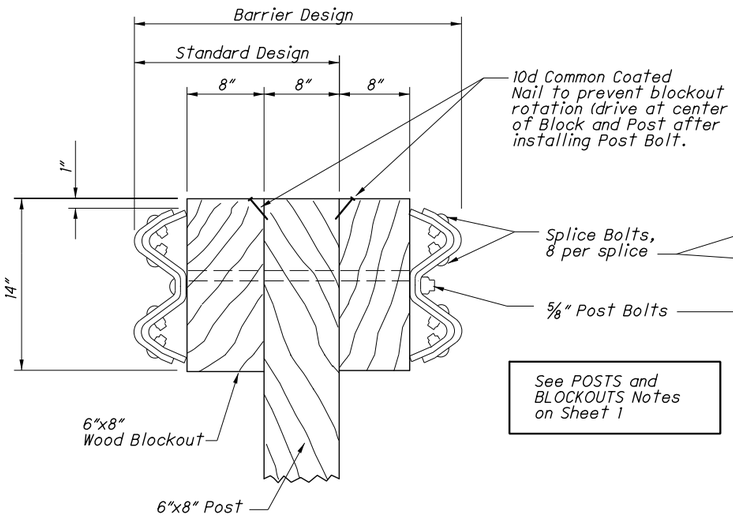
DESIGN FILE: ii:\projects\86728\roadway\sheets\PIS_GR-2.1_1-18-2013.dgn MODELNAME: Sheet
WORKSTATION: mpeters DATE: 12/1/2014

OFFICE OF ROADWAY ENGINEERING
DESIGNED | REVIEWED
REVISION DATE | CHECKED
PIS NUMBER

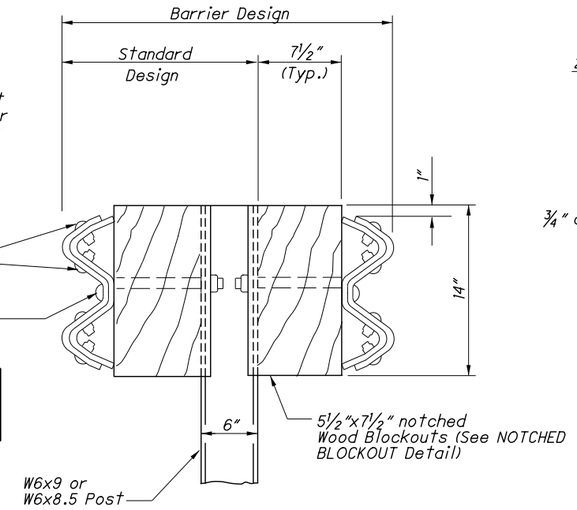
PLAN INSERT SHEET

GUARDRAIL TYPE 5 & 5A

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

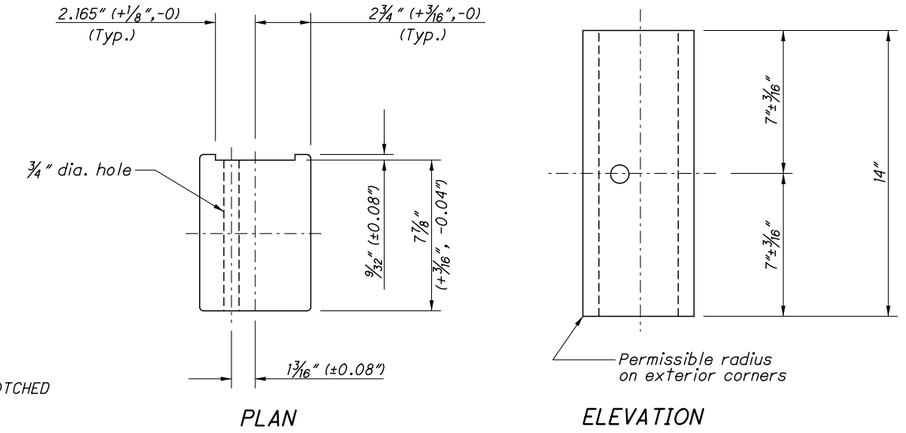


SQUARE WOOD POST



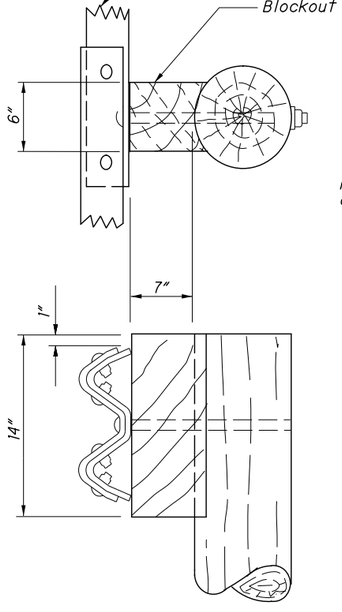
STEEL POST

See POSTS Note, Sheet 1

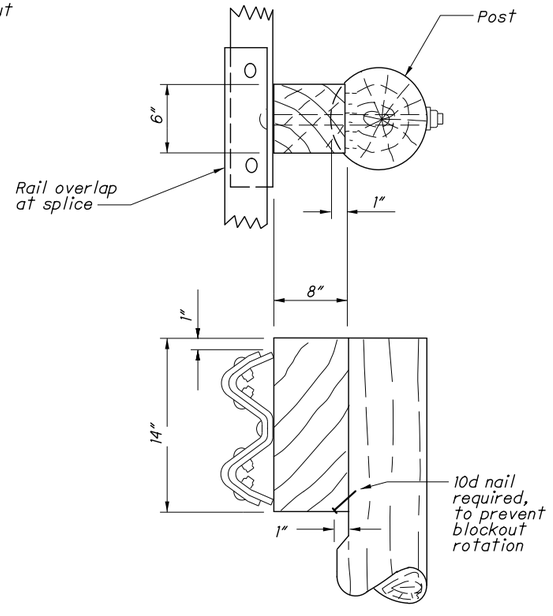


NOTCHED BLOCKOUTS FOR STEEL POSTS

See BLOCKOUTS Note on Sheet 1



Method 1
Routed Blockout

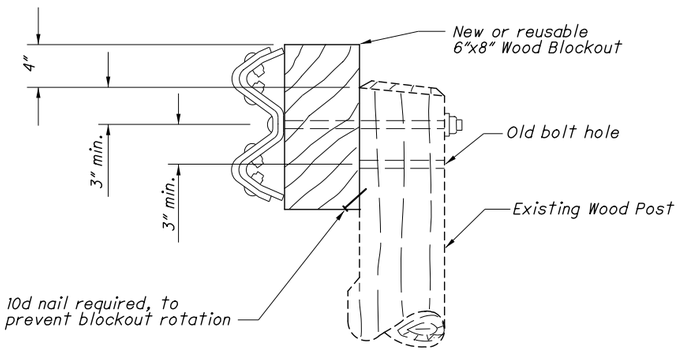


Method 2
Notched Post

Alternate methods of placing the Blockouts on round Posts may be submitted for consideration and approved by the Engineer.

ROUND WOOD POSTS

Single Sided runs only (Standard Design)



WOOD POSTS WITH WOOD BLOCK
RAISING EXISTING GUARDRAIL HEIGHT

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REVISION DATE | CHECKED
PIS NUMBER

PLAN INSERT SHEET

GUARDRAIL TYPE 5 & 5A

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

2 / 2

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DESIGN FILE: i:\projects\86728\roadway\sheets\PIS_GR-2.1_1-18-2013.dgn
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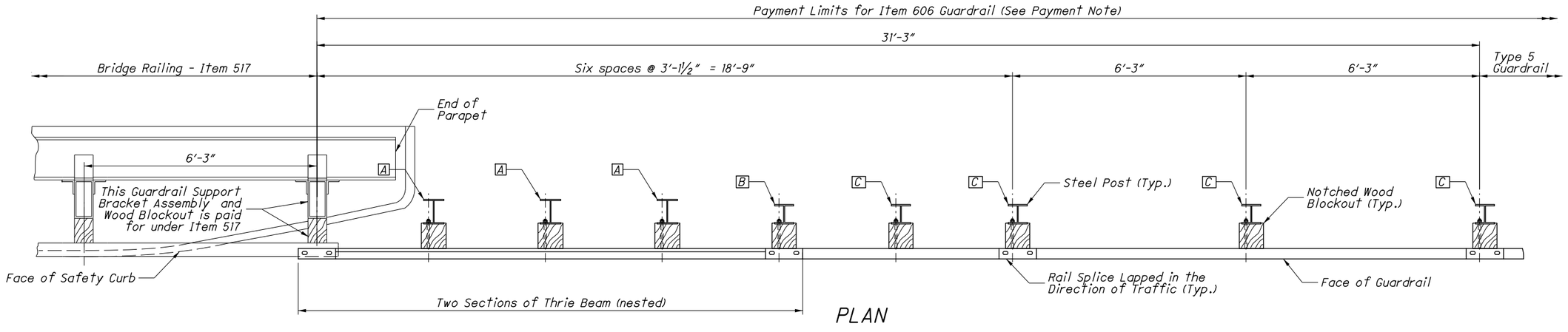
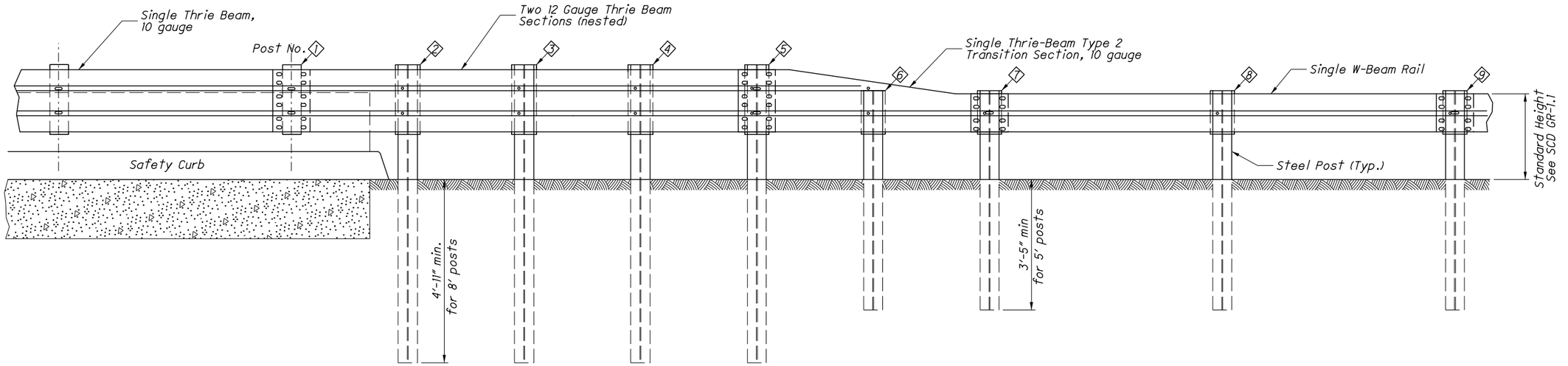
MODELNAME: Sheet
DATE: 12/1/2014



PLAN



ELEVATION

NOTES

GENERAL: *For additional rail and post details, see* ***SCD GR-1.1.***

APPLICATION: *Use Type 3 Bridge Terminal Assembly to connect guardrail runs for both the approach and trailing ends of Thrie Beam Bridge Railings. The design detailed on this sheet is approved to NCHRP 350 Test Level 3. See* ***Structural Engineering's SCD TBR-1-11*** *for the associated Bridge Railing.*

THRIE BEAM TRANSITION: *The asymmetrical W-Beam to Thrie Beam transition panel shall be 10 guage.*

FLARED GUARDRAIL: *Start Standard Guardrail Flares as shown on* ***SCD GR-5.1*** *at or beyond Post No. 9; However, where sight constraints exist, the flare may begin at Post No. 7.*

POSTS: *- Use steel posts only. Wood posts are not permitted in this design. Posts may be set in drilled holes or driven to grade. After placing posts in drilled holes, backfill and tamp disturbed soil. See* ***SCD GR-1.1*** *for additional post embedment details.*

BLOCKOUTS: *Steel posts in this design require the use of notched wood blockouts similar to those shown on* ***SCD GR-2.1.*** *The Blockout's notch shall be sized to accept the post's flange. Steel or plastic blockouts are not permitted.*

PAYMENT: ITEM 606 - Bridge Terminal Assembly, Type 3, Each, *includes the cost of extra components, in excess of normal guardrail, for additional and different types of posts and blockouts, nested Thrie-Beam, transition and connector sections, and other hardware.*

LEGEND

A *Posts 2, 3, & 4:*
W8x24x8'-0" Steel Post with 8"x8"x22½" Notched Wood Blockout

B *Post 5:*
W6x25x8'-0" Steel Post with 8"x8"x22½" Notched Wood Blockout

C *Post 6, 7, 8, & 9:*
W6x25x6'-0" Steel Post with 8"x8"x14" Notched Wood Blockout

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PIS NUMBER

PLAN INSERT SHEET

BRIDGE TERMINAL ASSEMBLY, TYPE 3

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

1 / 1

57
59

DESIGN FILE: i:\projects\86728\roadway\sheets\PIS_GR-3.3_1-18-2013.dgn
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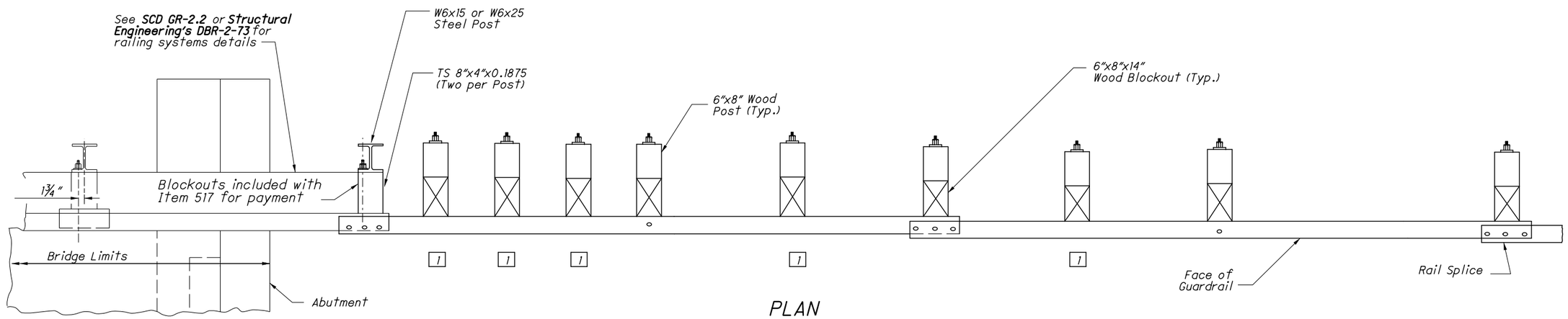
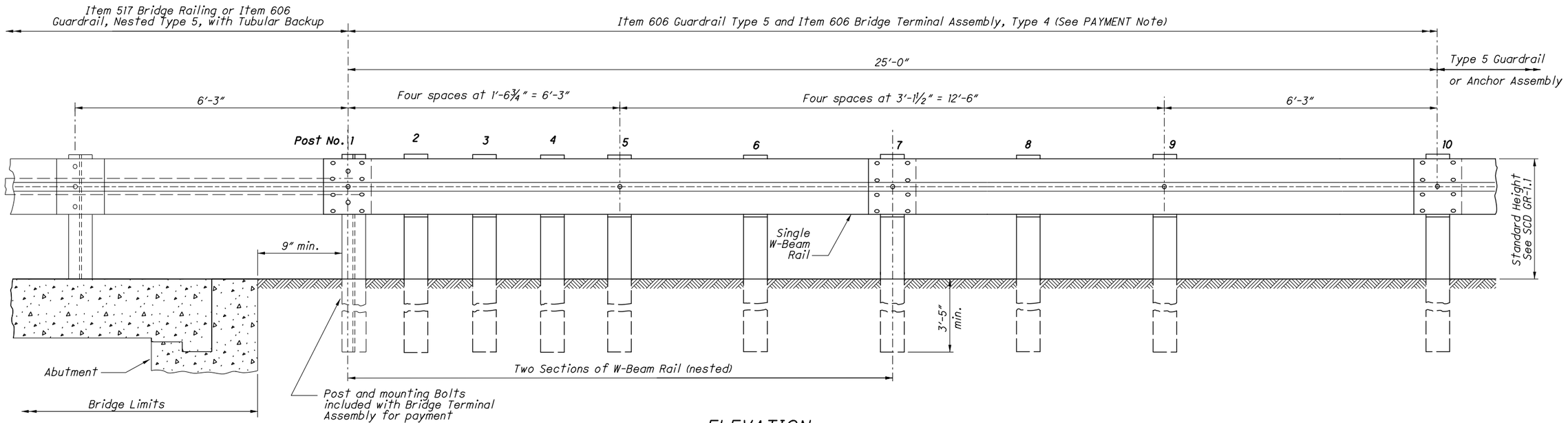
DATE: 12/1/2014
MODELNAME: Sheet



PLAN



ELEVATION

NOTES

GENERAL: *For additional details, see* ***SCD GR-1.1.***

APPLICATION: *The Type 4 Bridge Terminal Assembly shall connect Type 5 Guardrail runs to Type 5 Guardrail with Tubular Backup or to Deep Beam Bridge Guardrail (as shown on* ***Structural Engineering SCD DBR-2-73****).*

DETAIL INFORMATION: *The first post off the bridge shall be steel (W6x15 or W6x25). All holes in the off-structure end of the approach panel rail section spanning the abutment are slotted ¾"x2½". Tighten the bolts as specified for expansion joints in Item 606.05.*

POSTS: *Posts may be set in drilled holes or driven to grade. See* ***SCD GR-1.1*** *for additional Post embedment details. Guardrail is not attached to certian posts (see LEGEND).*

WOOD POSTS - Use square sawed pressure treated wood as specified in CMS 710.14 and fabricated with square ends. Bore bolt holes and trim the tops of posts, if required after the posts are set.

STEEL POSTS - are allowed as an alternate. Use W6x9 or W6x8.5 in lieu of the 6"x8" wood post. Use same post material through-out assembly.

BLOCKOUTS: *Use wood blockouts only. Steel or plastic blockouts are not permitted. Notched wood blockouts are used with steel posts.*

FLARED GUARDRAIL: *Start Standard Guardrail Flares as shown on* ***SCD GR-5.1*** *at or beyond Post No. 10; however, the flare may begin at Post No. 7.*

PAYMENT: Item 606 - Bridge Terminal Assembly, Type 4, Each, *includes the cost of extra components in excess of normal guardrail, such as additional posts and other hardware. The TS 8"x4" spacers and tubular backup rail extending to the first post off the bridge is included with* ***Item 517 - Railing,*** *or* ***Item 606 - Guardrail, Nested Type 5 with Tubular Backup,*** *for payment.*

LEGEND

[1] *Guardrail is not attached to posts at Posts 2, 3, 4, 6, and 8. Blockout is fastened to post with standard Post Bolt.*

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BRIDGE TERMINAL ASSEMBLY, TYPE 4

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

1 / 1

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59

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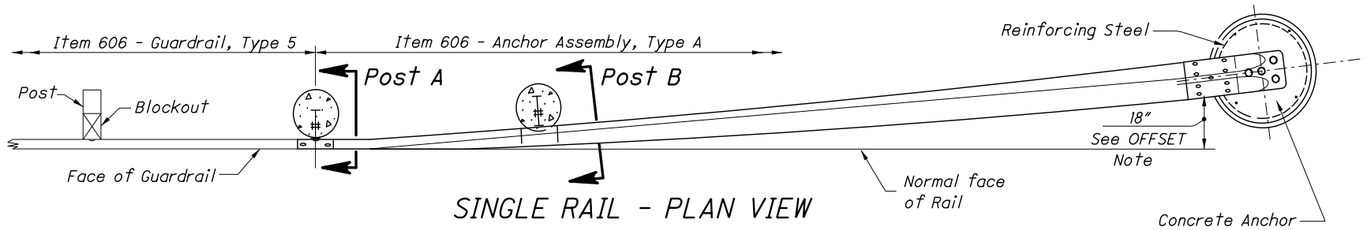
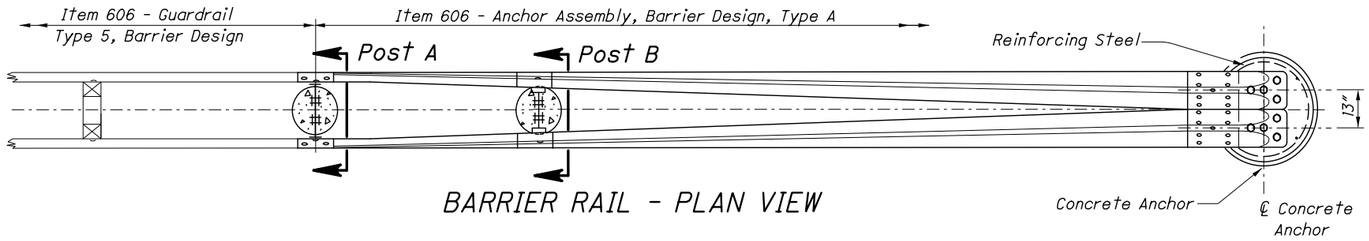
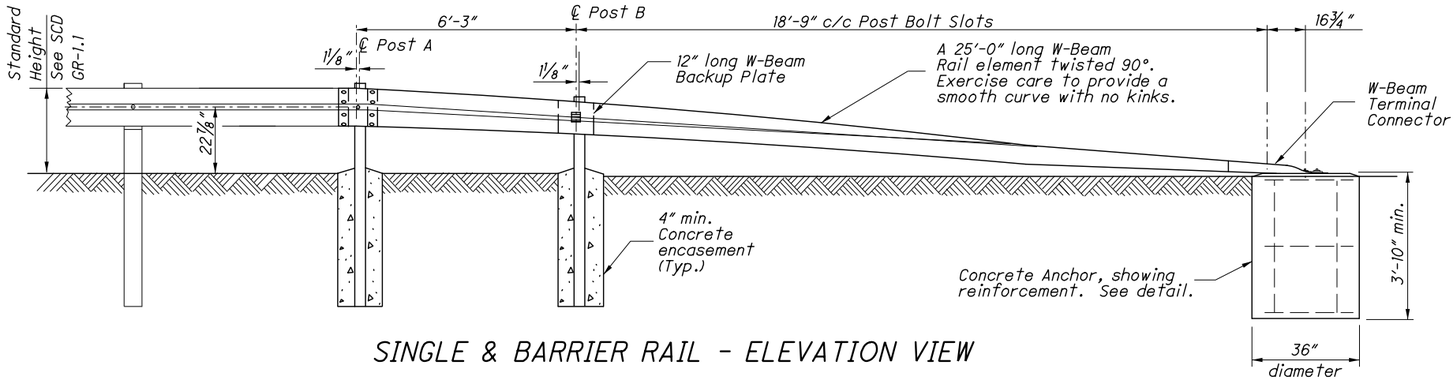


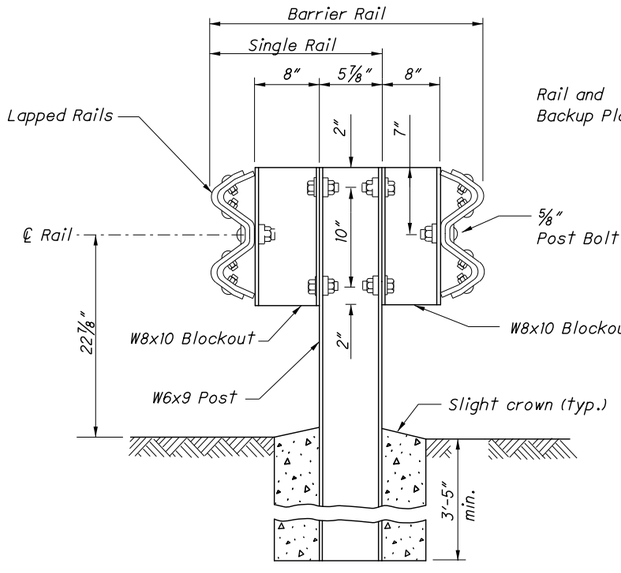
SINGLE RAIL - PLAN VIEW



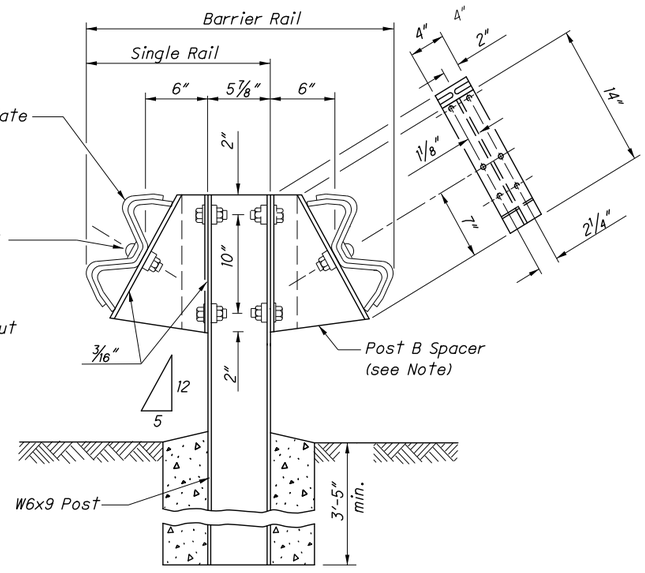
BARRIER RAIL - PLAN VIEW



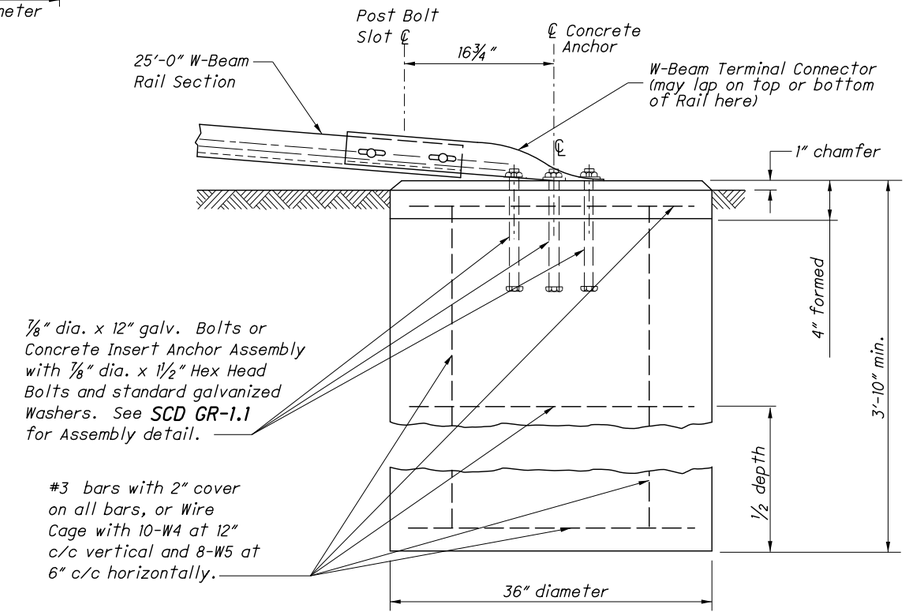
SINGLE & BARRIER RAIL - ELEVATION VIEW



POST A



POST B



CONCRETE ANCHOR

NOTES

APPLICATION: *On Non-NHS roadways it may be used in the clear zone, with restrictions. See Section 603.* ***Location & Design Manual, Volume 1.***

GENERAL: *For details not shown, see* ***SCD GR-1.1*** *and other Drawings pertaining to specific guardrail type. Galvanize all steel parts.*

OFFSETS: *See* ***SCD GR-5.1*** *for Standard Guardrail Flare. The 18" flare offset from normal face of rail, shown in the plan view (for single rail installations) will be utilized only where shoulder is insufficient for providing standard flares.*

POSTS: *Steel posts W6x9 are shown, but W6x8.5 posts are also permitted. See* ***SCD GR-1.1*** *for additional embedment details.*

SPACERS: *Post B Spacers shall be made of 3⁄16" Steel Plate as specified in CMS 710.15 or tow sections of W6x9 or W8x10 cut in the web (see dashed line on POST B Detail) and welded together on both sides.*

All steel spacers and posts may be provided with additional bolt holes so that these items will not be required to be made right and left handed.

Spacers shall be fastened to Posts with two ⅝" hex head bolts and nuts with standard washers on both sides.

WASHERS: *All washers indicated on this drawing are standard galvanized steel of the appropriate size.*

CONCRETE ANCHOR: *Form top 4" of anchor and slope the top to conform to slope of the adjacent ground. The 36" diameter anchor may be replaced by a 2'-6" square anchor at the contractor's option.*

PAYMENT: *include all materials and labor for the 25'-0" Single Rail, Type A Anchor Assembly in the unit price bid for* ***Item 606 - Anchor Assembly, Type A, Each.*** *Pay for all materials and labor for the 25'-0" Barrier Rail under the unit bid price* ***Item 606 - Anchor Assembly, Barrier Design, Type A, Each.***

OFFICE OF ROADWAY ENGINEERING

DESIGNED | REVIEWED

REVISION DATE | CHECKED

PIS NUMBER

PLAN INSERT SHEET

TYPE A ANCHOR ASSEMBLY

WAY-94-14.16
MED-94-0.00
WAY-585-(11.96)(14.78)

1 / 1

59
59

DESIGN FILE: i:\projects\86728\roadway\sheets\PIS_GR-4.1_1-18-2013.dgn
WORKSTATION: mpeters
DATE: 12/1/2014
MODELNAME: Sheet