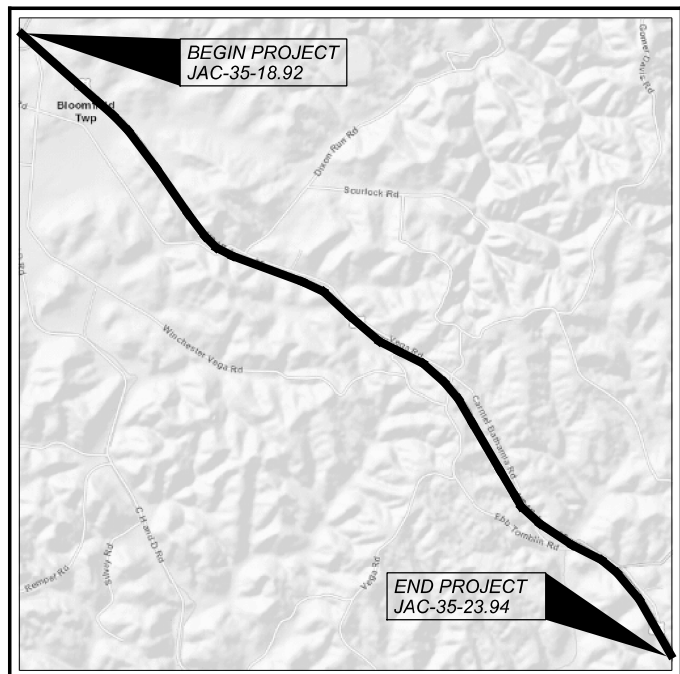


STATE OF OHIO DEPARTMENT OF TRANSPORTATION

JAC-35-18.92

BLOOMFIELD/MADISON TOWNSHIPS

JACKSON COUNTY



LOCATION MAP

LATITUDE: 38°58'11" LONGITUDE: W82° 30'23"



PORTION TO BE IMPROVED	-----	=====
INTERSTATE HIGHWAY	-----	=====
FEDERAL ROUTES	-----	=====
STATE ROUTES	-----	=====
COUNTY & TOWNSHIP ROADS	-----	=====
OTHER ROADS	-----	=====

DESIGN DESIGNATION

CURRENT ADT (2022)	-----	12,000
DESIGN YEAR ADT (2042)	-----	14,000
DESIGN HOURLY VOLUME (2042)	-----	1,400
DIRECTIONAL DISTRIBUTION	-----	56%
TRUCKS (24 HOUR B&C)	-----	30%
DESIGN SPEED	-----	60 MPH
LEGAL SPEED	-----	60 MPH
DESIGN FUNCTIONAL CLASSIFICATION:		
OTHER PRINCIPAL ARTERIAL	-----	
NHS PROJECT	-----	YES

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO811.org
Before You Dig

OHIO 811. 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
OHIO DEPARTMENT
OF TRANSPORTATION
DISTRICT 9

ENGINEER'S SEAL:

SIGNED: *Matthew C. McClellan*
DATE: 11/29/2021

ENGINEER'S SEAL:

SIGNED: *David M. Beekman*
DATE: 11/29/2021

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS	
BP-3.1	1/17/20	DM-1.1	7/17/20	MT-95.30	7/19/19	800-2019	10/15/21		
		DM-1.3	7/18/14	MT-95.40	1/17/20	807	7/16/21		
MGS-3.1	1/19/18	DM-4.4	1/15/16	MT-95.45	1/17/20	808	1/18/19		
MGS-3.2	1/18/13			MT-95.50	7/21/17	821	4/20/12		
		TC-42.20	10/18/13	MT-97.10	4/19/19	832	10/19/18		
AS-1-15	7/17/15	TC-61.10	1/17/20	MT-98.10	1/17/20	848	1/15/21		
AS-2-15	1/18/19	TC-61.30	7/19/19	MT-98.11	1/17/20	850	4/16/21		
BR-1-13	1/17/14	TC-65.10	1/17/14	MT-98.20	4/19/19	897	1/16/15		
PCB-91	7/17/20	TC-65.11	7/21/17	MT-98.22	1/17/20	908	10/20/17		
TST-2-21	7/16/21	TC-71.10	7/16/21	MT-98.28	1/17/20	921	4/20/12		
VPF-1-90	7/20/18	TC-72.20	7/20/18	MT-99.20	4/19/19				
				MT-101.70	1/17/20				
BP-2.1	7/17/15			MT-101.75	1/17/20				
BP-2.5	7/19/13			MT-101.90	7/17/20				
BP-3.1	1/17/20			MT-104.10	10/16/15				
BP-9.1	1/18/19			MT-105.10	1/17/20				

FEDERAL PROJECT NUMBER

E201188

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF PLANING AND RESURFACING 5.02 MILES OF U.S. ROUTE 35 IN JACKSON COUNTY FROM SLM 18.92 TO SLM 23.94. ALSO INCLUDED IN THIS PROJECT IS BRIDGE REHAB WORK AT THE SLM 18.92 BRIDGE. THIS WORK CONSISTS OF THE HYDRODEMOLITION OF THE DECK AND REPLACING THE OVERLAY AND CAPPING PARAPETS AND INSTALLING VANDAL FENCING.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 0.0 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.0 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI not required)*
* Routine Maintenance Project

LIMITED ACCESS

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

2019 SPECIFICATIONS

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

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

APPROVED: *Michael J. Johnson*
DATE 11-29-2021 DISTRICT DEPUTY DIRECTOR

APPROVED: _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

TITLE SHEET

DESIGN AGENCY



DESIGNER
JEM

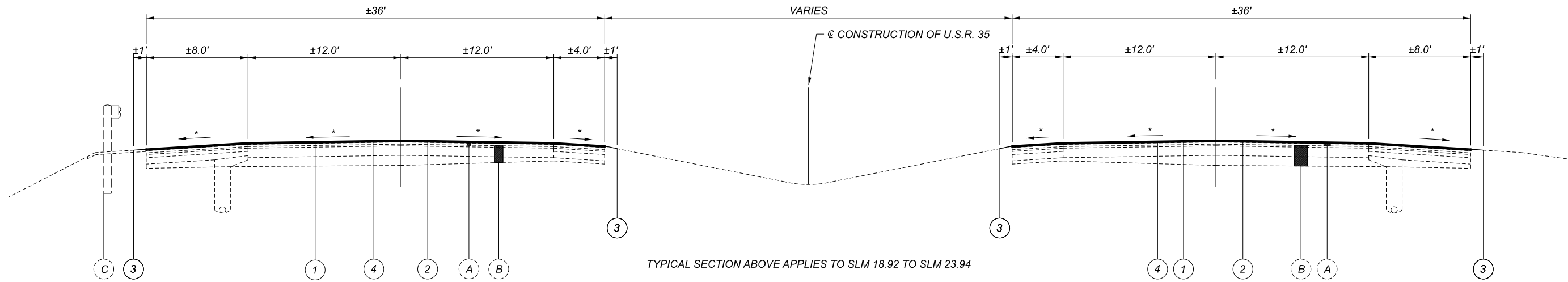
REVIEWER
DMB

PROJECT ID
112993

SHEET TOTAL
P.1 30

JAC-35-18.92

MODEL: Sheet PAPER: 17x11 (in.) DATE: 11/28/2021 TIME: 4:08:40 PM USER: jmcldug2 pwc:\ohio\dot-pw-bentley.com\shahidoc\pww-02\Documents\01 Active Projects\District 09\Jackson\112993\400-Engineering\Roadway\Sheets\112993_GT001.dgn



TYPICAL SECTION ABOVE APPLIES TO SLM 18.92 TO SLM 23.94

NOTES:

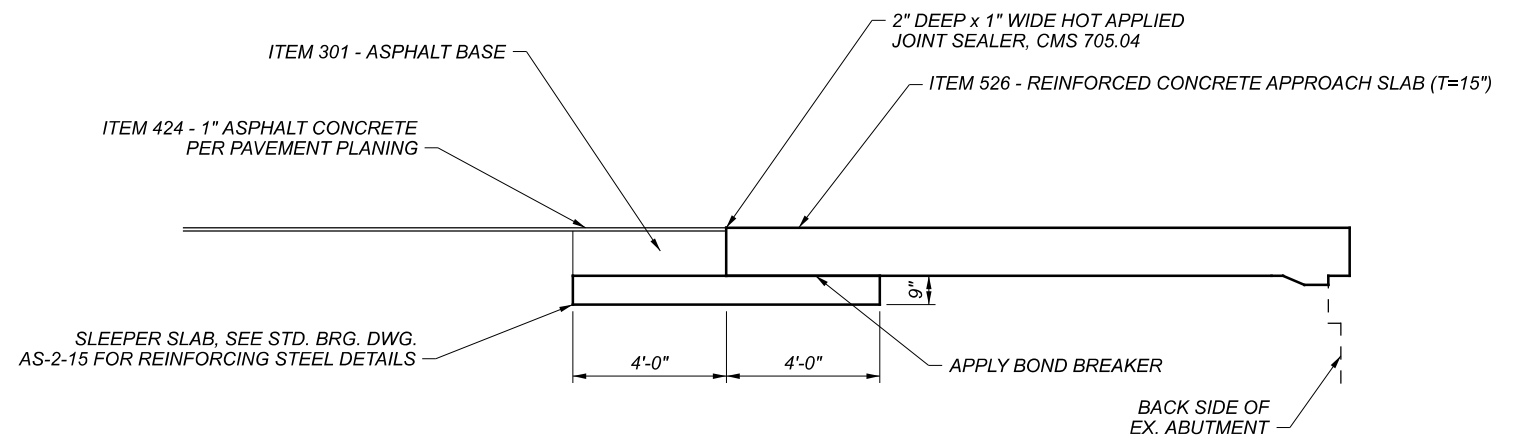
* MATCH EXISTING PAVEMENT SLOPE

PROPOSED LEGEND:

- ① ITEM 897 3/4" PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A, AS PER PLAN
- ② ITEM 424 1" FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B
- ③ ITEM 617 COMPACTED AGGREGATE
- ④ ITEM 407 TACK COAT

EXISTING PAVEMENT LEGEND:

- Ⓐ EXISTING ASPHALT CONCRETE PAVEMENT
- Ⓑ EXISTING BASE
- Ⓒ EXISTING TYPE 5 GUARDRAIL



APPROACH SLAB TYPE A INSTALLATION, AS PER PLAN

TYPICAL SECTIONS

DESIGN AGENCY



DESIGNER	JEM
REVIEWER	DMB
PROJECT ID	112993
SHEET	TOTAL
P.2	30

UTILITIES

THERE ARE NO EXISTING UNDERGROUND UTILITY FACILITIES SHOWN ON THE PLANS, NOR WILL ANY EXISTING UNDERGROUND UTILITY FACILITIES BE RELOCATED FOR THE PROJECT. THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY UTILITIES THAT MAY EXIST WITHIN THE WORK AREA. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY POTENTIAL UTILITY CONFLICTS, BY VISUAL INSPECTION AND BY CONTACTING THE OHIO UTILITIES PROTECTION SERVICE (OHIO 811) FOR FIELD MARKINGS OF THE UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH THE OWNERS TO RESOLVE ALL UTILITY CONFLICTS PRIOR TO CONSTRUCTION OR, WITH THE APPROVAL OF THE PROJECT ENGINEER, THE CONTRACTOR SHALL ADJUST THE PROJECT CONSTRUCTION ACCORDINGLY, SO AS TO AVOID DAMAGE TO THE EXISTING UTILITY FACILITIES.

THE UTILITY CONTACT INFORMATION FOR THE PROJECT CAN BE OBTAINED THROUGH THE ODOT DISTRICT 9 UTILITY COORDINATOR AT 740-774-9075.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

ITEM 254- PATCHING PLANED SURFACE

THIS ITEM SHALL BE IN ACCORDANCE WITH SECTION 254 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR THE FOLLOWING WORK: ITEM 254 PATCHING PLANED SURFACE 42,720 SQ.YD.

ITEM 606 - IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY ONE OF THE TYPE 1 IMPACT ATTENUATORS AS LISTED ON THE OFFICE OF ROADWAY ENGINEERING'S WEB PAGE. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, IMPACT ATTENUATOR, TYPE 1 (UNIDIRECTIONAL OR BIDIRECTIONAL), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED TRANSITIONS, HARDWARE, REFLECTIVE SHEETING AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN

ALL CONSTRUCTION REQUIREMENTS OF 2019 CMS ITEM 251 SHALL APPLY.

THE MINIMUM DIMENSION FOR TRANSVERSE REPAIRS SHALL BE 4', THE MINIMUM FOR LONGITUDINAL REPAIRS SHALL BE 2'. THIS ITEM SHALL COMMENCE PRIOR TO RESURFACING. MATERIAL FOR REPAIR AREAS SHALL BE ITEM 442 SURFACE COURSE, 12.5MM, TYPE A (448) IN TWO LIFTS, FOLLOWING THE APPLICATION OF ITEM 407 TACK COAT. REMOVE EXISITING SURFACE TO A UNIFORM DEPTH OF 4.50", TRIM AS NEEDED WHERE ROUNDED TO PROVIDE VERTICAL FACES A LONG THE PERIMETER OF THE REPAIR AREA. THOROUGHLY COMPACT ENTIRE AREA.

THE SMOOTHNESS OF ASPHALT REPAIRS CAN NOT EXCEED 0.25" FROM THE TESTING EDGE OF A TEN FOOT STRAIGHTEDGE. THE CONTRACTOR IS REQUIRED TO PROVIDE STRAIGHTEDGE THAT IS SATISFACTORY TO THE ENGINEER. CORRECT VARIATIONS IN EXCESS OF SURFACE TOLERANCE BY RECONSTRUCTING REPAIRS OR SURFACE GRINDING IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.

PAYMENT FOR ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO PERFORM THE WORK OUTLINED ABOVE SHALL BE INCLUDED IN THE SQUARE YARD CONTRACT PRICE FOR ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DESIGNATED BY THE ENGINEER.

ITEM 251, PARTIAL DEPTH REPAIR (442), AS PER PLAN
1500 SQ.YD.

RPM

IN ADDITION TO CMS 621.03, RPM'S SHALL NOT BE INSTALLED ON BRIDGES OR APPROACH SLABS THAT HAVE A CONCRETE SURFACE. INSTALL RPM'S IN ASPHALT CONCRETE BEFORE AND AFTER THE SUPERSTRUCTURE. RPM'S LOCATED IN EXISTING CONCRETE BRIDGE DECKS OR APPROACH SLABS SHALL BE LEFT IN PLACE.

CLEARING AND GRUBBING

ALTHOUGH THERE ARE NO TREES OR STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE LIMITS OF THE PROJECT, A LUMP SUM QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR ITEM 201, CLEARING AND GRUBBING. ALL PROVISIONS AS SET FORTH IN THE SPECIFICATIONS UNDER THIS ITEM ARE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 201, CLEARING AND GRUBBING.

ITEM 897- PAVEMENT PLANING, ASPHALT CONCRETE, CLASS A, AS PER PLAN

THIS ITEM SHALL BE IN ACCORDANCE WITH SECTION 897 OF THE CONSTRUCTION AND MATERIALS SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER.

ESTIMATED QUANTITIES HAVE BEEN PROVIDED FOR THE FOLLOWING WORK: 1.0" MAX. - PLANING FOR BUTT JOINTS:

PLAN INTENT IS TO PROVIDE A SMOOTH RIDING PAVEMENT TRANSITION FROM THE PROPOSED PAVEMENT TYPICAL SECTION TO MEET THE EXISTING PAVEMENT OR BRIDGE DECK AND APPROXIMATE 0.25" ELEVATION TRANSITION IN THE PAVEMENT PROFILE IN ACCORDANCE WITH STANDARD DRAWING BP-3.1 DETAIL FOR "BUTT JOINT" EXCEPT THAT THE MINIMUM LENGTH OF THE BUTT JOINT SHALL BE 50 FOOT PER INCH OF PROPOSED OVERLAY. DEPTH OF PLANING IS VARIABLE FROM A MINIMUM OF 0.75" TO A MAXIMUM OF 1.0".

1.0" - PLANING AT BRIDGES SFN 4000579, 4000609:

PLAN INTENT IS TO PROVIDE A SMOOTH RIDING PAVEMENT TRANSITION AND TO NOT INCREASE THE DEPTH OF THE WEARING COURSE ON THE BRIDGE AND APPROACH SO THAT THE DEAD LOAD ON THE BRIDGE IS NOT INCREASED. PLANING OF BRIDGE DECKS AND APPROACH SLABS SHALL BE FULL WIDTH OF BRIDGE AND APPROACH SLABS AT THE UNIFORM DEPTH OF 1.0" AND VARIABLE ON APPROACH PAVEMENT FROM A MINIMUM OF 0.75" TO A MAXIMUM OF 1.0" IN ACCORDANCE WITH STANDARD DRAWING BP-3.1 DETAIL FOR "FEATHERING AT STRUCTURE" EXCEPT THAT THE MINIMUM LENGTH OF THE"FEATHER" SHALL BE 50 FOOT PER INCH OF PROPOSED OVERLAY ON THE APPROACH PAVEMENT TO THE BRIDGE.

1.0" MAX- PLANING AT THE VEGA ROAD OVERHEAD BRIDGE (SFN 4000692) EASTBOUND AND WESTBOUND.

PLAN INTENT IS TO MAINTAIN EXISTING VERTICAL CLEARANCES.

PRIOR TO PLANING U.S.R. 35 UNDER THE ABOVE MENTIONED OVERHEAD PASS, THE EXISTING VERTICAL CLEARANCES SHALL BE CHECKED AND RECORDED AT EACH BEAM ALONG EDGE LINES AND CENTERLINE OF PAVEMENT. MINIMUM DEPTH OF MILLING UNDER BRIDGE AND ON APPROACHES TO BRIDGE SHALL BE ADJUSTED TO ASSURE THAT THE EXISTING VERTICAL CLEARANCE IS MAINTAINED.

AFTER PAVING IS COMPLETED THE VERTICAL CLEARANCES SHALL BE CHECKED AND RECORDED AT EACH BEAM ALONG EDGE LINES AND CENTERLINE OF PAVEMENT. IF THESE VERTICAL CLEARANCES ARE LESS THAN THE EXISTING VERTICAL CLEARANCES RECORDED ABOVE, THE CONTRACTOR SHALL PERFORM ADDITIONAL CORRECTIVE WORK UNTIL MEASUREMENTS ARE EQUAL TO OR GREATER THAN THE EXISTING VERTICAL CLEARANCES.

INTERIM COMPLETION DATES FOR PAVEMENT PLANING

TRAFFIC SHALL NOT BE REQUIRED TO USE ANY PLANED ROADWAY SURFACE FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS. SHOULD THE CONTRACTOR FAIL TO MEET THIS REQUIREMENT, DISINCENTIVES SHALL BE ASSESSED IN THE AMOUNT OF \$1000 FOR EACH CALENDAR DAY OR PORTION OF THEREOF BEYOND THE 21 CALENDAR DAYS.

ITEM 617 - COMPACTED AGGREGATE

THE FOLLOWING ESTIMATED QUANTITY OF ITEM 617 - COMPACTED AGGREGATE HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE TO FILL ANY LOW BERM AREAS AS DIRECTED BY THE ENGINEER.

ITEM 617 - COMPACTED AGGREGATE 350 CY

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH, CARE OF PERMANENT SEEDED AREAS AT SPRING DRAIN AND SHOULDER REPLACEMENT AREA AT S.L.M. 19.861 AND GROUND AROUND GUARDRAIL REPLACEMENT:

659, SEEDING AND MULCHING 1156 SQ. YD.
175' x 8' +9000= 10,400 SF / 9 SF/SQ = 1156 SY
659, COMMERCIAL FERTILIZER 0.104 TON
10,400 SF * 20 LBS / 1000 SF = 208 LBS / 2000 LBS / TON
659, LIME 0.239 ACRES
10,400 SF / 43,560 SF / ACRE = 0.239
659, WATER 0.840 M. GAL.
10,400 SF * 300 GAL / 1000 SF = 3,120 GAL
2ND APPLICATION @ 300 GAL PER 1000 SF = 3,120 GAL
TOTAL = 840 GAL / 1000 GAL/M GAL = 6.240 M.GAL.

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL AT SPRING DRAIN AND SHOULDER REPLACEMENT AREA.

PROFILE AND ALIGNMENT

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

FULL DEPTH PAVEMENT SAWING

AN ESTIMATED QUANTITY FOR FULL DEPTH PAVEMENT SAWING HAS BEEN CALCULATED AND CARRIED TO THE GENERAL SUMMARY. THIS QUANTITY INCLUDES FULL DEPTH PAVEMENT SAWING FOR THE FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT.

ITEM 255 FULL DEPTH PAVEMENT SAWING: 900 LF
CALCULATED BY: PAVEMENT JOINT REPAIR: (6'+24'+6'+24') x 15' = 900'

GENERAL NOTES

DESIGN AGENCY



DESIGNER
JEM

REVIEWER
DMB

PROJECT ID
112993

SHEET TOTAL
P.3 30

FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC/MS, AS PER PLAN CONT'D

ALL OF THE CONSTRUCTION REQUIREMENTS OF THE CMS FOR ITEM 255 SHALL APPLY.

FULL DEPTH PAVEMENT REPAIRS WILL BE CONSTRUCTED USING THE UNDERCUT DETAILS SHOWN HERE AND ON SCD BP-2.5 AND BP-2.1.

ONE TU TYPE JOINT AND ONE YU TYPE JOINT WILL BE REQUIRED AT EACH REPAIR LOCATION.

NECESSARY PAVEMENT REPAIRS THAT ARE DISCOVERED AT MID-SLAB LOCATIONS SHALL BE TREATED WITH A TU TYPE JOINT AT EACH END.

COMPLETED REPAIRS SHALL BE THE FULL LANE WIDTH OF THE EXISTING CONCRETE PAVEMENT WITH REPAIR LENGTH AND LOCATION DETERMINED BY THE ENGINEER.

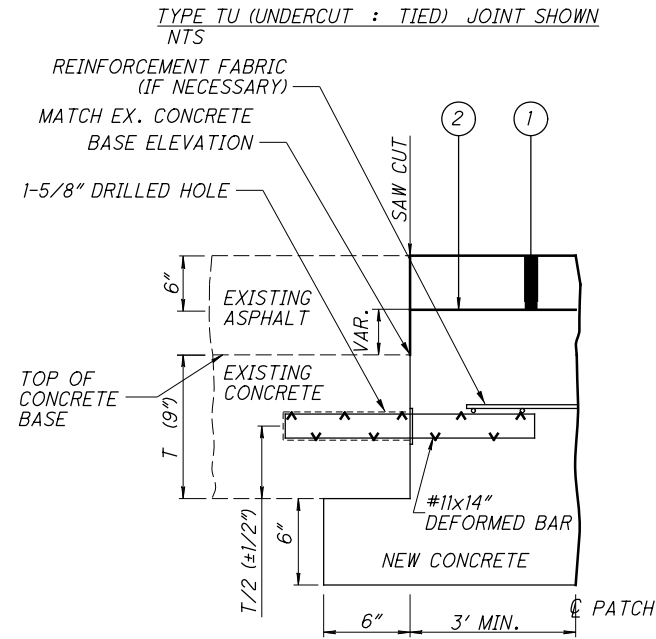
EACH CONCRETE REPAIR SHALL BE COVERED WITH 6" OF ITEM 301, ASPHALT CONCRETE BASE, PG64-22.

THE SMOOTHNESS OF ASPHALT REPAIRS CANNOT EXCEED 1/4" FROM THE TESTING EDGE OF A 10 FOOT STRAIGHT EDGE THAT IS SATISFACTORY TO THE ENGINEER. CORRECT VARIATIONS IN EXCESS OF SURFACE TOLERANCES BY SURFACE GRINDING IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO THE STATE.

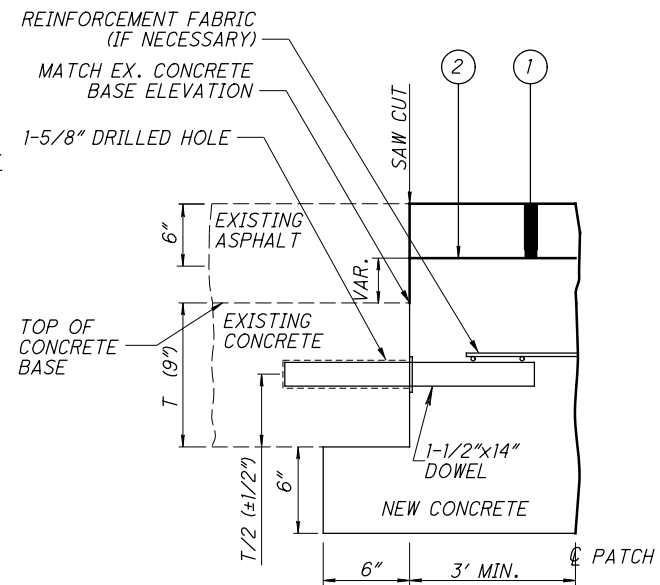
IN ADDITION TO THE QUANTITIES IN 255.10, THE ESTIMATED QUANTITY LISTED BELOW HAVE BEEN INCLUDED AND CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

ITEM 255: FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, CLASS QC/MS, AS PER PLAN 240 SY

FULL DEPTH REPAIR DETAILS (PRIOR TO MILL & FILL)



TYPE YU (UNDERCUT : CONTRACTION) JOINT SHOWN



LEGEND

- ① 301 6" ASPHALT CONCRETE BASE, PG64-22
- ② 407 NON-TRACKING TACK COAT (0.085 GAL/SY)

PAVING UNDER GUARDRAIL

THIS OPERATION SHALL INCLUDE PREPARATION OF THE GRADED SHOULDER USING ITEM 209, LINEAR GRADING, AS PER PLAN AND PAVING UNDER THE GUARDRAIL USING 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (448), UNDER GUARDRAIL, AS PER PLAN.

ITEM 209, LINEAR GRADING, AS PER PLAN SHALL CONSIST OF EXCAVATING TOPSOIL, AND PLACING GRANULAR MATERIAL.

ALL COLLECTED DEBRIS AND TOPSOIL, INCLUDING RHIZOMES, ROOTS AND OTHER VEGETATIVE PLANT MATERIAL SHALL BE REMOVED AND DISPOSED OF AS SPECIFIED IN 105.17.

THE REMOVED MATERIAL SHALL BE REPLACED WITH COMPACTABLE GRANULAR MATERIAL CONFORMING TO 703.16 PLACED TO GRADE AS DETAILED ON THE TYPICAL SECTION OR AS APPROVED BY THE ENGINEER.

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

PAVING UNDER GUARDRAIL SHALL CONSIST OF PLACING ITEM 441 TO THE DEPTH SPECIFIED USING ONE OF THE FOLLOWING METHODS:

METHOD A:

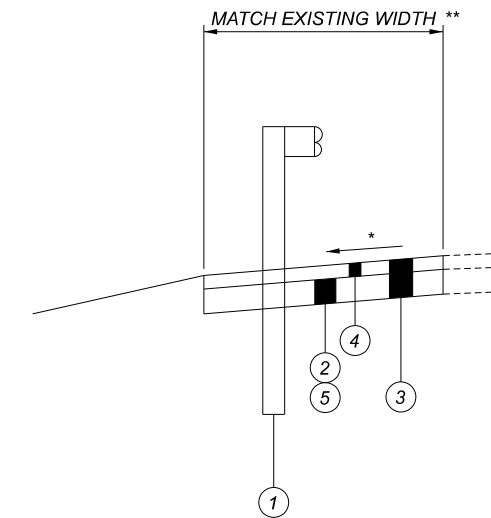
1. SET GUARDRAIL POSTS
2. PLACE ITEM 441

METHOD B:

1. PLACE ITEM 441
2. BORE ASPHALT AT POST LOCATIONS (MAY BE OMITTED IF STEEL POSTS ARE USED)
3. SET GUARDRAIL POSTS
4. PATCH AROUND POSTS. THE MATERIALS USED FOR PATCHING SHALL BE AN ASPHALT CONCRETE APPROVED BY THE ENGINEER. PATCHED AREAS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN AWAY FROM THE POSTS.

ALL EQUIPMENT, MATERIALS AND LABOR REQUIRED TO PERFORM THE WORK OUTLINED ABOVE, WITH THE EXCEPTION OF SETTING GUARDRAIL POSTS, SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 441, ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1 (448), UNDER GUARDRAIL, AS PER PLAN.

PAVING UNDER GUARDRAIL



- * MATCH THE EXISTING CROSS SLOPES
- ** 5'-0" WAS USED FOR CALCULATION PURPOSES

ITEM 606 - GUARDRAIL, TYPE MGS

$2 \times (450' + 62.5' + 50' + 12.5' + 62.5' + 25' + 32.5') = 1390'$

ITEM 209 - LINEAR GRADING, AS PER PLAN

$1390' / 5280' / \text{MILE} = 0.27 \text{ MILE}$

ITEM 209 - 4" BORROW

$2 \times 695' \times 5' \times (4"/12") = 85.8 \text{ CY}$

ITEM 441 - 2" ASPHALT CONCRETE, INTERMEDIATE COURSE, TYPE 1 (448), UNDER GUARDRAIL, AS PER PLAN

$2 \times 695' \times 5' \times (2"/12") = 1158.4 \text{ CY}$

ITEM 202 - PAVEMENT REMOVED

$2 \times 695' \times 5' / 9 = 774 \text{ SY}$

DESIGN AGENCY



DESIGNER

JEM

REVIEWER

DMB

PROJECT ID

112993

SHEET

P.4

TOTAL

30

ITEM 614, MAINTAINING TRAFFIC

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES BY USE OF THE EXISTING PAVEMENT AND THE COMPLETED PAVEMENT.

BEFORE THE WORK BEGINS, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER THE NAME(S) AND TELEPHONE NUMBER(S) OF A PERSON OR PERSONS WHO CAN BE CONTACTED TWENTY-FOUR (24) HOURS PER DAY BY THE OHIO DEPARTMENT OF TRANSPORTATION AND ALL INTERESTED POLICE AGENCIES. THIS PERSON OR PERSONS SHALL BE RESPONSIBLE FOR PLACING OR REPLACING NECESSARY TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE. THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF INSPECTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVEABLE PAVEMENT DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & <2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<= 2 WEEKS	4 DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 CALENDAR DAYS PRIOR TO CLOSURE
START OF CONST. & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO CLOSURE

ANY UNFORSEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

THE CONTRACTOR SHALL ARRANGE FOR ALL MAINTENANCE OF TRAFFIC OPERATIONS SUCH THAT THERE WILL BE NO OBSTRUCTIONS TO THE CONTINUOUS FLOW OF TRAFFIC. ALL INTERSECTIONS AND DRIVEWAYS SHALL BE OPEN TO TRAFFIC AT ALL TIMES UNLESS OTHERWISE SHOWN IN THE PLAN.

ITEM 614, MAINTAINING TRAFFIC CONT'D

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC EXCEPT LANE CLOSURES WITH PORTABLE BARRIER DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS FOURTH OF JULY
NEW YEAR'S LABOR DAY
MEMORIAL DAY THANKSGIVING
(OTHER HOLIDAY OR EVENT)

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

DAY OF HOLIDAY TIME ALL LANES
OR EVENT MUST BE OPEN TO TRAFFIC

SUNDAY 12:00N FRIDAY THROUGH 6:00AM MONDAY
MONDAY 12:00N FRIDAY THROUGH 6:00AM TUESDAY
TUESDAY 12:00N MONDAY THROUGH 6:00AM WEDNESDAY
WEDNESDAY 12:00N TUESDAY THROUGH 6:00AM THURSDAY
THURSDAY 12:00N WEDNESDAY THROUGH 6:00AM FRIDAY
THURSDAY (THANKSGIVING ONLY)
6:00AM WEDNESDAY THROUGH 6:00AM MONDAY
FRIDAY 12:00N THURSDAY THROUGH 6:00AM MONDAY
SATURDAY 12:00N FRIDAY THROUGH 6:00AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

LANE VALUE CONTRACT TABLE

DESCRIPTION OF CRITICAL LANE	TIME UNIT	DISINCENTIVE \$ PER TIME UNIT
1 LANE EB & WB OF JAC US-35 FROM SLM 18.92 TO SLM 23.94	EACH MINUTE	\$75.00

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.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 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.

SUGGESTED CONSTRUCTION SEQUENCE

THE FOLLOWING IS A SUGGESTED SEQUENCE FOR MAINTENANCE OF TRAFFIC AND CONSTRUCTION FOR THE STRUCTURE JAC-35-1892 L&R ON THIS PROJECT. SEE SHEET 16 FOR ADDITIONAL DETAILS AND QUANTITIES ASSOCIATED WITH THE FOLLOWING PHASES. FOR DETAILS NOT SHOWN ON THESE PLANS, CONSULT THE APPROPRIATE STANDARD CONSTRUCTION DRAWINGS.

PHASE 1: SET UP TRAFFIC CONTROL IN ACCORDANCE WITH SCD MT-95.30 AND PERFORM PAVEMENT PLANING AND RESURFACING ON THE EXISTING SHOULDERS AS DISCUSSED ON THIS SHEET.

PHASE 2: SET UP TRAFFIC CONTROL IN ACCORDANCE WITH SCD MT-95.40 AND AS SHOWN ON SHEETS 8-11 TO CLOSE THE DRIVING LANES OF BOTH EASTBOUND AND WESTBOUND TRAFFIC ON U.S.R. 35. CONSTRUCT PHASE 1 PORTION OF THE STRUCTURE JAC-35-1892 WITH THE EXCEPTION OF THE ASPHALT CONCRETE SURFACE COURSE.

PHASE 3: SET UP TRAFFIC CONTROL IN ACCORDANCE WITH SCD MT-95.40 AND AS SHOWN ON SHEETS 12-15 TO CLOSE THE PASSING LANES OF BOTH EASTBOUND AND WESTBOUND TRAFFIC ON U.S.R. 35. CONSTRUCT PHASE 2 PORTION OF THE STRUCTURE JAC-35-1892 WITH THE EXCEPTION OF THE ASPHALT CONCRETE SURFACE COURSE.

PHASE 4: SET UP TRAFFIC CONTROL IN ACCORDANCE WITH SCD MT-95.30 AND PERFORM PAVEMENT PLANING, PLACE REMAINING ASPHALT CONCRETE COURSES, AND PLACE THE PERMANENT PAVEMENT MARKINGS.

WORK ZONE SPEED ZONES (WZSZS)

THE FOLLOWING WORK ZONE SPEED ZONE (WZSZ) SPEED LIMIT REVISION(S) HAVE BEEN APPROVED FOR USE ON THIS PROJECT WHEN WORK ZONE CONDITIONS AND FACTORS ARE MET AS DESCRIBED BELOW:

WZSZ REVISION NUMBER(S) COUNTY-ROUTE-SECTION(S) DIRECTION(S) WZ-50382

POTENTIAL WZSZ LOCATIONS SHALL HAVE AN ORIGINAL (PRE-CONSTRUCTION) POSTED SPEED LIMIT OF 55 MPH OR GREATER, A QUALIFYING WORK ZONE CONDITION OF AT LEAST 0.5 MILE IN LENGTH, AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS, AND A WORK ZONE CONDITION IN PLACE THAT REDUCES THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS (I.E., LANE CLOSURE, LANE SHIFT, CROSSOVER, CONTRAFLOW AND/OR SHOULDER CLOSURE). THE LENGTH OF THE WORK ZONE CONDITION IS MEASURED FROM THE BEGINNING OF THE TAPER FOR THE SUBJECT WORK ZONE CONDITION IMPACTING THE TRAVEL LANES AND/OR SHOULDER TO THE END OF THE DOWNSTREAM TAPER, WHERE DRIVERS ARE RETURNED TO TYPICAL ALIGNMENT. AN EXPECTED WORK DURATION OF AT LEAST THREE HOURS IS REQUIRED TO BALANCE THE ADDITIONAL EXPOSURE CREATED BY INSTALLING AND REMOVING WZSZ SIGNING WITH THE TIME NEEDED TO COMPLETE THE WORK.

IF THE WORK ZONE MEETS THESE MINIMUM CRITERIA, IT SHALL BE ANALYZED FURTHER USING TABLE 1 BELOW TO DETERMINE IF AND WHEN IT QUALIFIES FOR A SPEED LIMIT REDUCTION. DEPENDING ON THE ORIGINAL POSTED SPEED LIMIT, THE TYPE OF TEMPORARY TRAFFIC CONTROL USED, AND WHETHER OR NOT WORKERS ARE PRESENT, A WARRANTED WZSZ WILL VARY IN THE APPROVED SPEED LIMIT TO BE POSTED OVER TIME.

WORK ZONE SPEED ZONES (WZSZS) CONT'D

C&MS ITEM 614, PARAGRAPH 614.02(B), INDICATES THAT TWO DIRECTIONS OF A DIVIDED HIGHWAY ARE CONSIDERED SEPARATE HIGHWAY SECTIONS. THEREFORE, IF THE WORK ON A MULTI-LANE DIVIDED HIGHWAY IS LIMITED TO ONLY ONE DIRECTION, A SPEED LIMIT REDUCTION IN THE DIRECTION OF THE WORK DOES NOT AUTOMATICALLY CONSTITUTE A SPEED LIMIT REDUCTION IN THE OPPOSITE DIRECTION. EACH DIRECTION SHALL BE ANALYZED INDEPENDENTLY FROM EACH OTHER.

ALL WZSZS FLUCTUATE BETWEEN TWO APPROVED REDUCED SPEED LIMITS OR BETWEEN AN APPROVED REDUCED SPEED LIMIT AND THE ORIGINAL POSTED SPEED LIMIT. ONLY ONE OF TWO SIGNING STRATEGIES SHALL BE USED TO IMPLEMENT A WZSZ.

[WZSZS USING DSL SIGN ASSEMBLIES SHALL BE IN ACCORDANCE WITH THIS NOTE, APPROVED LIST, SUPPLEMENTAL SPECIFICATIONS (SS) 808 AND 908, AND TRAFFIC SCD MT-104.10.]

ONLY ONE WARRANTED SPEED LIMIT APPLIES AT ANY ONE TIME; SPEED LIMIT REDUCTIONS ARE NOT CUMULATIVE. WZSZS SHALL NOT BE USED FOR MOVING/MOBILE ACTIVITIES, AS DEFINED IN OMUTCD PART 6.

WHEN LOOKING UP THE WARRANTED WORK ZONE SPEED LIMITS, ALWAYS USE THE ORIGINAL, PRECONSTRUCTION, POSTED SPEED LIMIT. DO NOT USE A PRIOR OR CURRENT WORK ZONE SPEED LIMIT AS A LOOK UP VALUE IN THE TABLE. POSITIVE PROTECTION IS GENERALLY REGARDED AS PORTABLE BARRIER OR OTHER RIGID BARRIER IN USE ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WITHOUT POSITIVE PROTECTION IS GENERALLY REGARDED AS USING DRUMS, CONES, SHADOW VEHICLE, ETC., ALONG THE WORK AREA WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WORKERS ARE CONSIDERED AS BEING PRESENT WHEN ON-SITE, WORKING WITHIN THE SUBJECT WARRANTED WORK ZONE CONDITION. WHEN THE WORK ZONE CONDITION REDUCING THE EXISTING FUNCTIONALITY OF THE TRAVEL LANES OR SHOULDERS IS REMOVED, THE SPEED LIMIT DISPLAYED SHALL RETURN TO THE ORIGINAL POSTED SPEED LIMIT.

TABLE 1: WARRANTED WORK ZONE SPEED LIMITS (MPH) FOR WORK ZONES ON HIGH-SPEED (55 MPH OR GREATER) MULTI-LANE HIGHWAYS

ORIGINAL POSTED SPEED LIMIT	WITH POSITIVE PROTECTION WORKERS PRESENT / WORKERS NOT PRESENT	WITHOUT POSITIVE PROTECTION WORKERS PRESENT / WORKERS NOT PRESENT
60	55 / 60	50 / 60

DESIGN AGENCY



DESIGNER

JEM

REVIEWER

DMB

PROJECT ID

112993

SHEET TOTAL

P.5 30

WORK ZONE SPEED ZONES (WZSZS) CONT'D

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 808, DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY
42 SIGN MONTH
ASSUMING 14 DSL SIGN ASSEMBLIES FOR
3 MONTH(S)

CALCULATED BY:

SPACING = 1.0 MILES FOR SPEED ZONE AREA = 5.02/1.0 MILES = 5.02 SIGNS
OR 6.0 SIGNS + 1 (FIRST SIGN) = 7 SIGNS
BOTH EB & WB = 7*2 = 14 SIGNS

WORK ZONE INCREASED PENALTIES SIGN (R11-H5A)

R11-H5A-48 SIGNS SHALL BE FURNISHED, ERECTED, AND MAINTAINED IN GOOD CONDITION AND/OR REPLACED AS NECESSARY AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. SIGNS SHALL BE MOUNTED AT THE APPROPRIATE OFFSETS AND ELEVATIONS AS PRESCRIBED BY THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. THEY SHALL BE MAINTAINED ON SUPPORTS MEETING CURRENT SAFETY CRITERIA.

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

THE SIGNS ON THE MAINLINE SHALL BE DUAL MOUNTED UNLESS NOT PHYSICALLY POSSIBLE. THE FIRST SIGN SHALL BE PLACED BETWEEN THE ROAD WORK AHEAD (W20-1) SIGN AND THE NEXT SIGN IN THE SEQUENCE. SIGNS SHALL BE ERECTED ON EACH ENTRANCE RAMP AND EVERY 2 MILES THROUGH THE CONSTRUCTION WORK LIMITS. SIGNS ON THE MAINLINE SHALL BE R11-H5A-48. SIGNS USED ON THE RAMP SHALL BE R11-H5A-24. R11-H5A-24 SIGNS MAY BE USED IN THE MEDIAN IN LIEU OF R11-H5A-48 SIGNS IF IT IS NOT PHYSICALLY POSSIBLE TO PROVIDE R11-H5A-48 SIGNS IN THE MEDIAN.

THE R11-H5A-48 SIGNS SHALL BE MOUNTED ON 2 NO. 3 POSTS WHEN LOCATED WITHIN CLEAR ZONES.

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

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

WORK ZONE INCREASED PENALTIES SIGN (R11-H5A) CONT'D

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

ITEM 614, WORK ZONE INCREASED PENALTIES SIGN 10 EACH

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

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

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

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, 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. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS WILL BE AT THE BEGIN AND END OF PROJECT LIMITS. 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 AWAY FROM ALL 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 4 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 PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

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.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 12 SIGN MONTH ASSUMING 2 PCMS SIGN(S) FOR 6 MONTH(S)

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

DESIGN AGENCY



DESIGNER	JEM
REVIEWER	DMB
PROJECT ID	112993
SHEET	TOTAL
P.6	30

DUST CONTROL

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

ITEM 616, WATER 1 M. GAL.

WORK ZONE MARKINGS AND SIGNS

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AT LOCATIONS IDENTIFIED BY THE ENGINEER FOR WORK ZONE PAVEMENT MARKINGS AND SIGNS PER THE REQUIREMENTS OF C&MS 614.04 AND 614.11.

ITEM 614, WORK ZONE, MARKING SIGN	11 EACH
ITEM 614, WORK ZONE, EDGE LINE, CLASS I, 6" 740.06, TYPE 1	0.55 MILE
ITEM 614, WORK ZONE, DOTTED LINE, CLASS I, 6" 740.06, TYPE 1	2880 FT
ITEM 614, WORK ZONE, LANE LINE, CLASS III, 6" 642 PAINT	10.04 MILE

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

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

DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED 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 FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION (OR AT THE POINT OF ROAD CLOSURE), AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS 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 LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE THAT SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (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 QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 40 HOURS

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

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF A LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL; AND, ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO C&MS 626 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO C&MS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET WITH A 25 FOOT OFFSET FROM THE BARRIER REFLECTORS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 3 ONE-WAY 4 EACH

ITEM 614, OBJECT MARKER, ONE-WAY 4 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING THE ABOVE ITEM(S).

EXISTING SHOULDERS

QUANTITIES HAVE BEEN CALCULATED IN THE PAVEMENT CALCULATIONS SUB-SUMMARY AND CARRIED TO THE GENERAL SUMMARY FOR MILLING 0.75" AND RESURFACING 1" OF THE EXISTING SHOULDERS.

DESIGN AGENCY



DESIGNER

JEM

REVIEWER

DMB

PROJECT ID

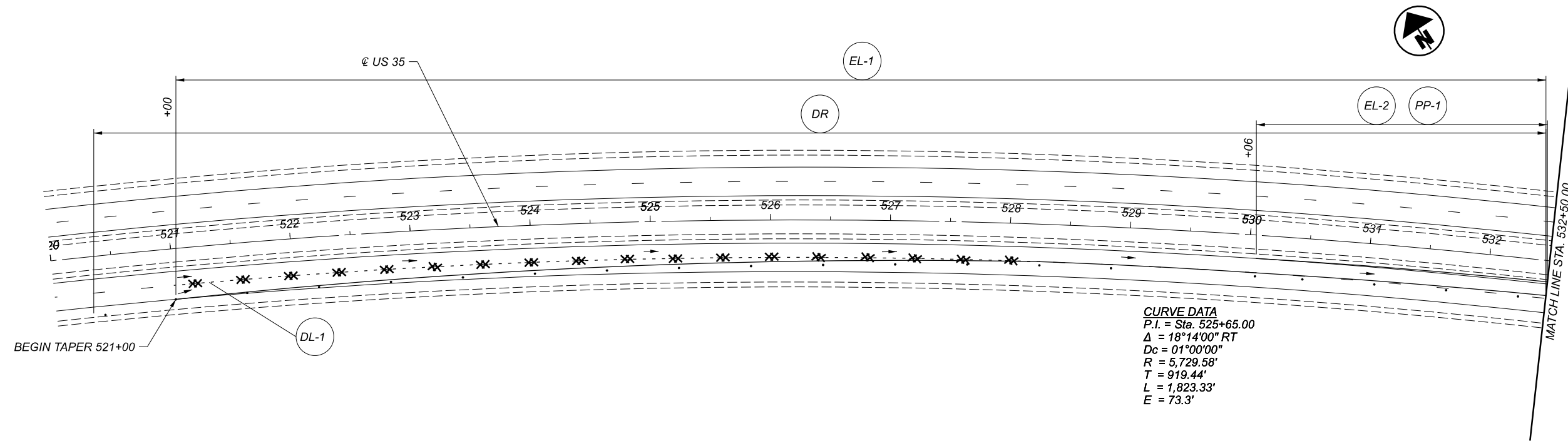
112993

SHEET

P.7

TOTAL

30



CURVE DATA
 P.I. = Sta. 525+65.00
 $\Delta = 18^\circ 14' 00''$ RT
 $D_c = 01^\circ 00' 00''$
 $R = 5,729.58'$
 $T = 919.44'$
 $L = 1,823.33'$
 $E = 73.3'$

LEGEND

- DL-# WORK ZONE DOTTED LINE
- EL-# WORK ZONE EDGE LINE
- PP-# PAVEMENT PLANING
(EXISTING RUMBLE STRIPS REMOVED)
- ELR EXISTING EDGE LINE REMOVED
- DR DRUMS
- DIRECTION OF TRAVEL
- REMOVE EXISTING MARKINGS

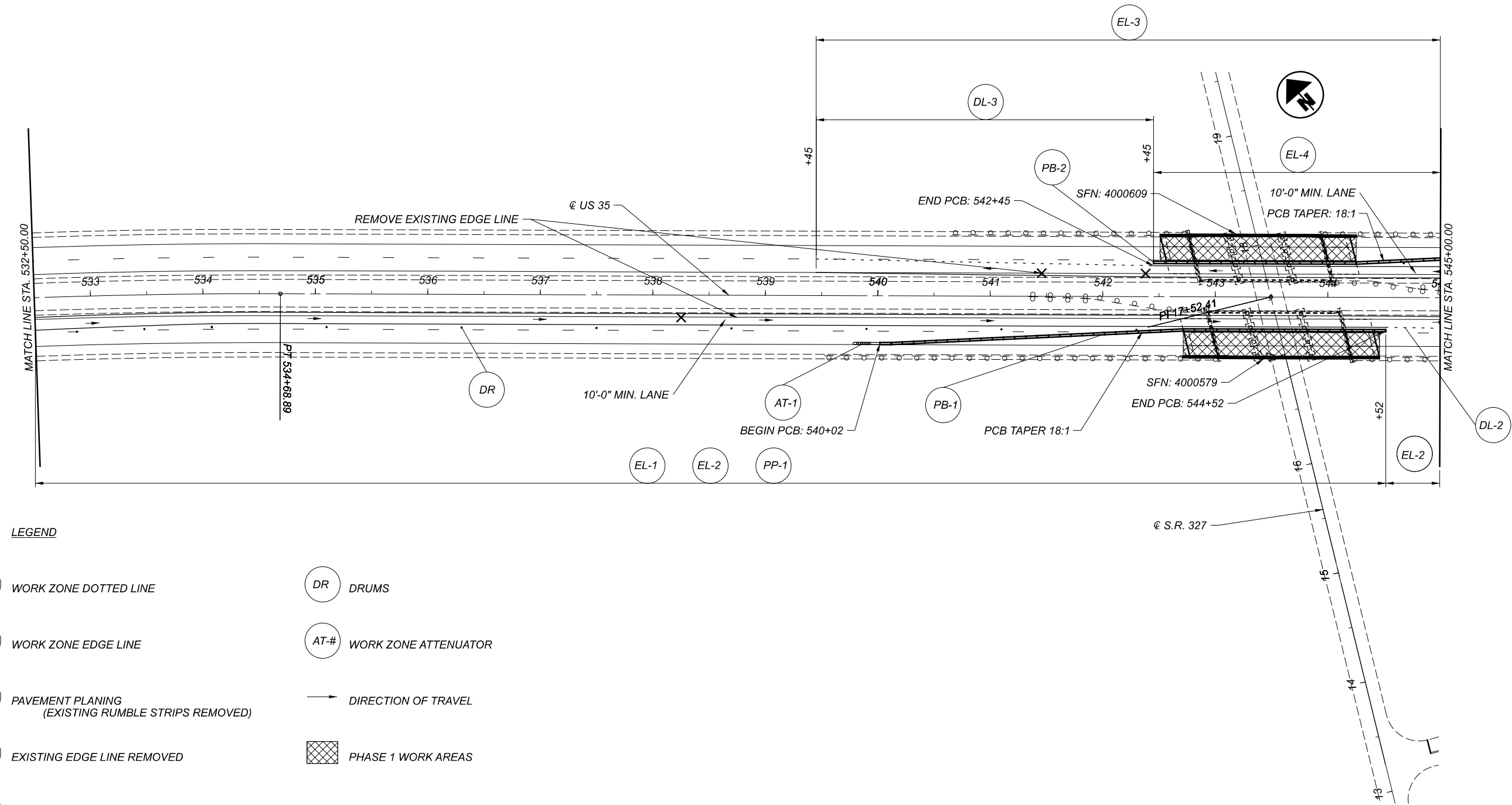


MAINTENANCE OF TRAFFIC - PHASE 1
 STA. 520+00 TO STA. 532+50

DESIGN AGENCY

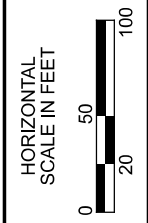


DESIGNER	
JEM	
REVIEWER	
DMB	
PROJECT ID	
112993	
SHEET	TOTAL
P.8	30



LEGEND

- DL-# WORK ZONE DOTTED LINE
- EL-# WORK ZONE EDGE LINE
- PP-# PAVEMENT PLANING (EXISTING RUMBLE STRIPS REMOVED)
- ELR EXISTING EDGE LINE REMOVED
- PB-# PORTABLE BARRIER, 32"
- DR DRUMS
- AT-# WORK ZONE ATTENUATOR
- DIRECTION OF TRAVEL
- ▨ PHASE 1 WORK AREAS

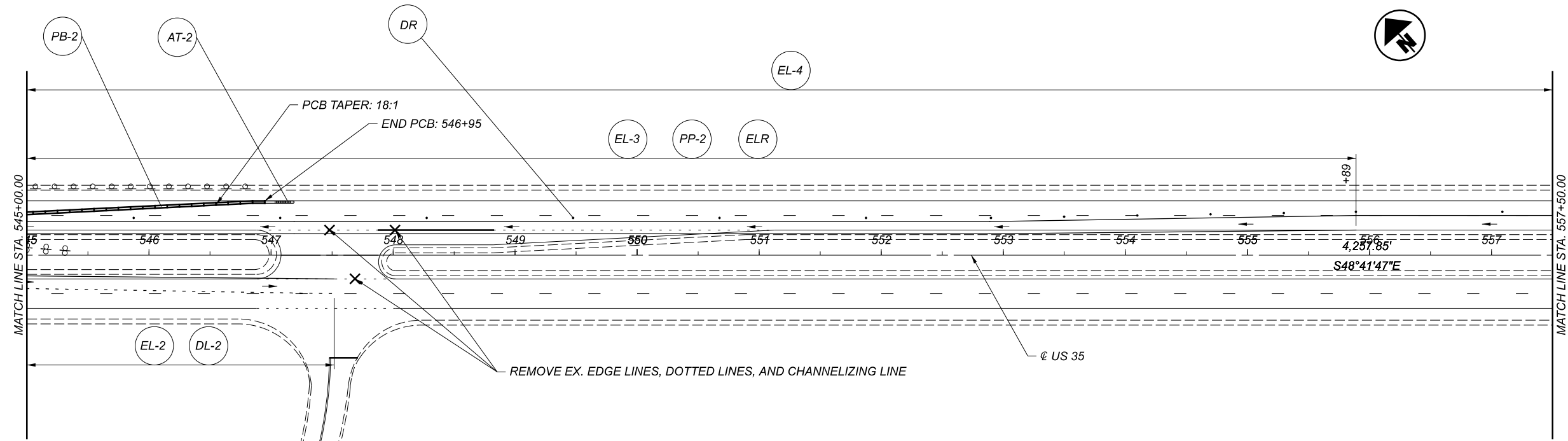


MAINTENANCE OF TRAFFIC - PHASE 1
 STA. 532+50 TO STA. 545+00

DESIGN AGENCY



DESIGNER	JEM
REVIEWER	DMB
PROJECT ID	112993
SHEET	TOTAL
P.9	30



LEGEND

- DL-# WORK ZONE DOTTED LINE
- EL-# WORK ZONE EDGE LINE
- PP-# PAVEMENT PLANING
(EXISTING RUMBLE STRIPS REMOVED)
- ELR EXISTING EDGE LINE REMOVED
- PB-# PORTABLE BARRIER, 32"
- DR DRUMS
- AT-# WORK ZONE ATTENUATOR
- DIRECTION OF TRAVEL

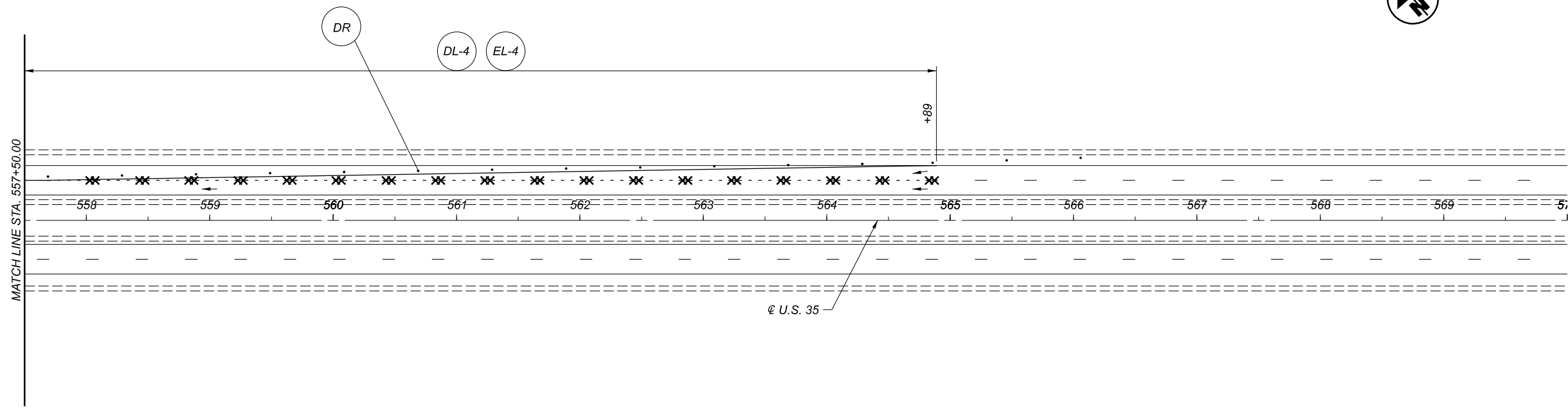


MAINTENANCE OF TRAFFIC - PHASE 1
 STA. 545+00 TO STA. 557+50

DESIGN AGENCY



DESIGNER	
JEM	
REVIEWER	
DMB	
PROJECT ID	
112993	
SHEET	TOTAL
P.10	30



LEGEND

- DL-# WORK ZONE DOTTED LINE
 - EL-# WORK ZONE EDGE LINE
 - PP-# PAVEMENT PLANING
(EXISTING RUMBLE STRIPS REMOVED)
 - ELR EXISTING EDGE LINE REMOVED
- DR DRUMS
 - DIRECTION OF TRAVEL
 - XX REMOVE EXISTING MARKINGS

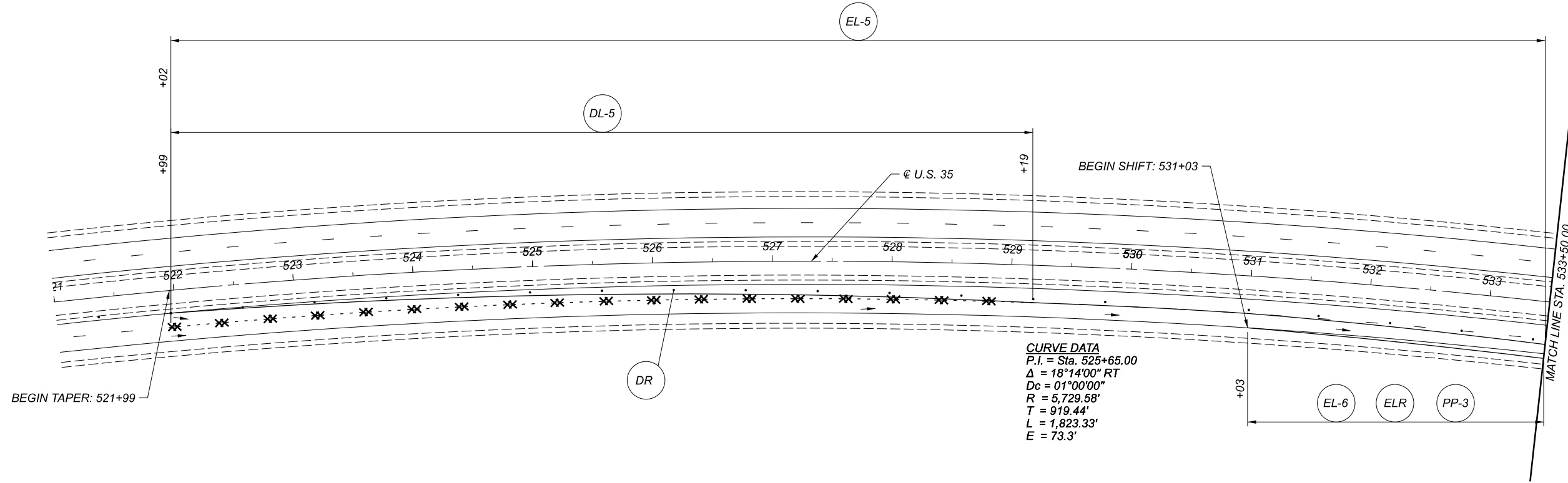


MAINTENANCE OF TRAFFIC - PHASE 1
 STA. 557+50 TO STA. 570+00

DESIGN AGENCY



DESIGNER	
JEM	
REVIEWER	
DMB	
PROJECT ID	
112993	
SHEET	TOTAL
P.11	30



LEGEND

- DL-# WORK ZONE DOTTED LINE
- EL-# WORK ZONE EDGE LINE
- PP-# PAVEMENT PLANNING
(EXISTING RUMBLE STRIPS REMOVED)
- ELR EXISTING EDGE LINE REMOVED
- DR DRUMS
- DIRECTION OF TRAVEL
- REMOVE EXISTING MARKINGS

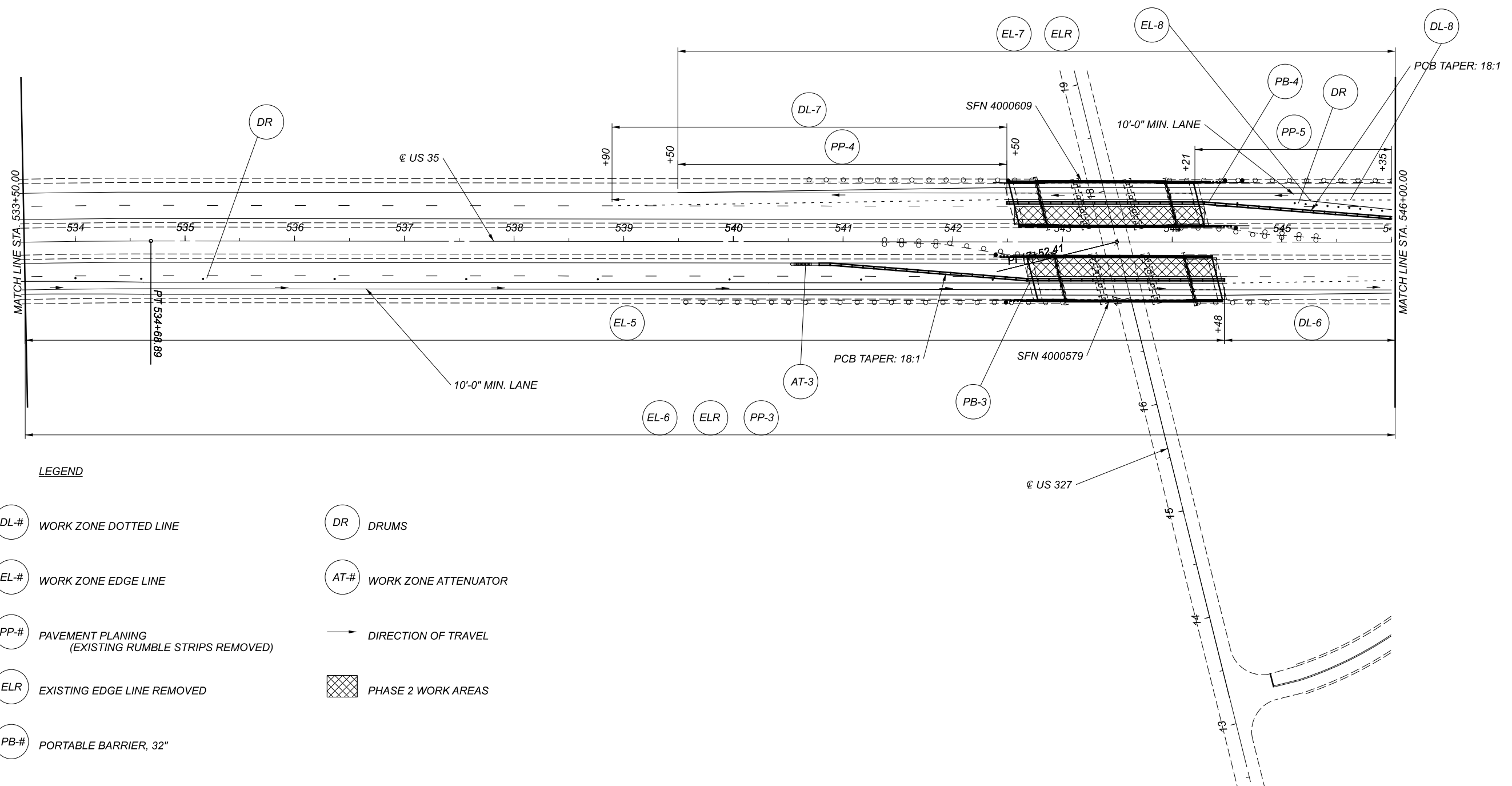


MAINTENANCE OF TRAFFIC - PHASE 2
 STA. 521+00 TO STA. 533+50

DESIGN AGENCY

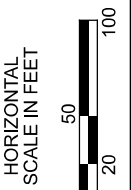


DESIGNER	
JEM	
REVIEWER	
DMB	
PROJECT ID	
112993	
SHEET	TOTAL
P.12	30



LEGEND

- | | | | |
|------|---|------|----------------------|
| DL-# | WORK ZONE DOTTED LINE | DR | DRUMS |
| EL-# | WORK ZONE EDGE LINE | AT-# | WORK ZONE ATTENUATOR |
| PP-# | PAVEMENT PLANNING
(EXISTING RUMBLE STRIPS REMOVED) | | DIRECTION OF TRAVEL |
| ELR | EXISTING EDGE LINE REMOVED | | PHASE 2 WORK AREAS |
| PB-# | PORTABLE BARRIER, 32" | | |

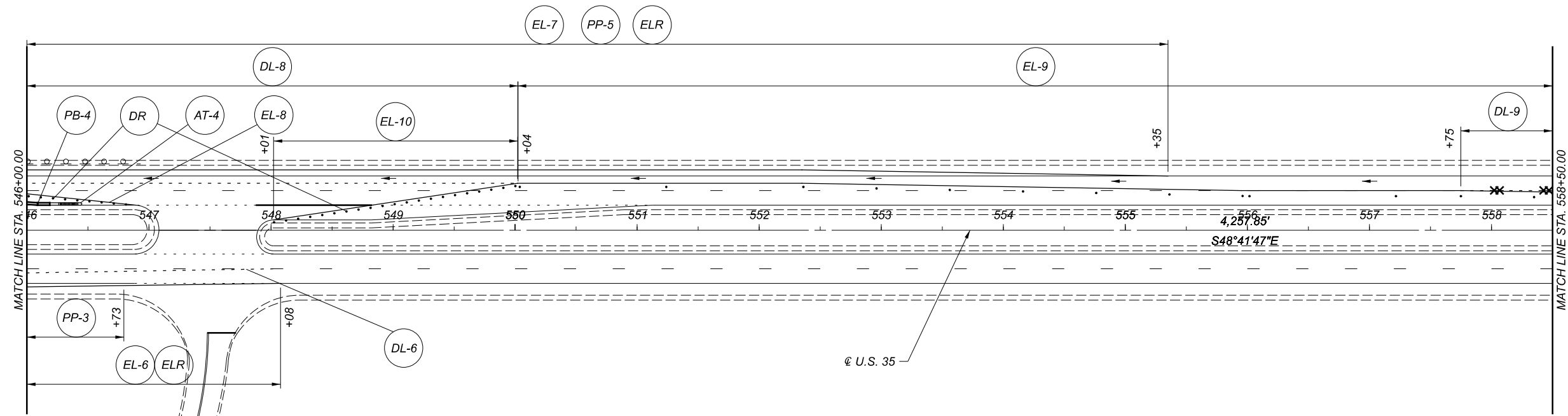


MAINTENANCE OF TRAFFIC - PHASE 2
 STA. 533+50 TO STA. 546+00

DESIGN AGENCY



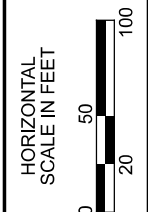
DESIGNER	JEM
REVIEWER	DMB
PROJECT ID	112993
SHEET	TOTAL
P.13	30



© S.R. 327

LEGEND

- DL-# WORK ZONE DOTTED LINE
- EL-# WORK ZONE EDGE LINE
- PP-# PAVEMENT PLANING
(EXISTING RUMBLE STRIPS REMOVED)
- ELR EXISTING EDGE LINE REMOVED
- PB-# PORTABLE BARRIER, 32"
- DR DRUMS
- AT-# WORK ZONE ATTENUATOR
- \rightarrow DIRECTION OF TRAVEL
- \otimes REMOVE EXISTING MARKINGS

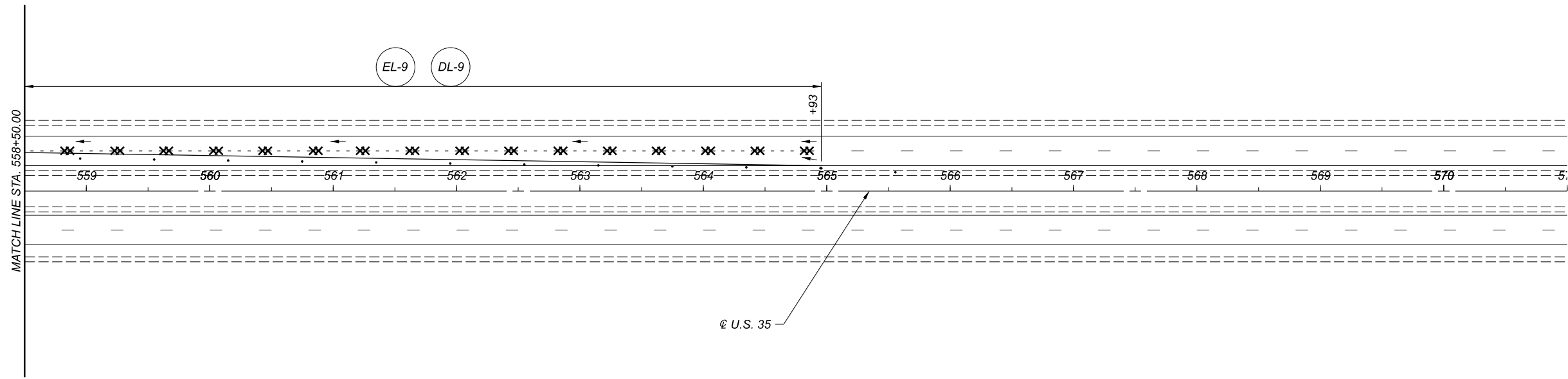


MAINTENANCE OF TRAFFIC - PHASE 2
 STA. 546+00 TO STA. 558+50

DESIGN AGENCY



DESIGNER	
JEM	
REVIEWER	
DMB	
PROJECT ID	
112993	
SHEET	TOTAL
P.14	30



LEGEND

DL-# WORK ZONE DOTTED LINE

EL-# WORK ZONE EDGE LINE

DR DRUMS

→ DIRECTION OF TRAVEL

X REMOVE EXISTING MARKINGS

HORIZONTAL
SCALE IN FEET



MAINTENANCE OF TRAFFIC - PHASE 2
 STA. 558+50 TO STA. 571+00

DESIGN AGENCY



DESIGNER

JEM

REVIEWER

DMB

PROJECT ID

112993

SHEET TOTAL

P.15 30

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	6	7	16	19	20	22	25	25A		01/NHS/PV	02/SAF/OT	03/NHS/BR						
								239					239	526	25000	239	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")	
								78					78	526	90011	78	FT	TYPE A INSTALLATION, AS PER PLAN	24
								450					450	606	15050	450	FT	GUARDRAIL, TYPE MGS	
								62.5					62.5	606	15550	62.5	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS	
								1					1	606	26150	1	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	
								1					1	606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
								2					2	606	35002	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
								1					1	606	35102	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
								1					1	606	60012	1	EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)	
								160					160	607	39900	160	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	
								6					6	626	00102	6	EACH	BARRIER REFLECTOR, TYPE 1 (1-WAY)	
								5					5	626	00112	5	EACH	BARRIER REFLECTOR, TYPE 3 (1-WAY)	
								501					501	848	10000	501	SY	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (2.75" THICK)	
								501					501	848	20000	501	SY	SURFACE PREPARATION USING HYDRODEMOLITION	
								10					10	848	30000	10	CY	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	
								50					50	848	50000	50	SY	HAND CHIPPING	
								LS					LS	848	50100	LS		TEST SLAB	
								10					10	848	50200	10	CY	FULL-DEPTH REPAIR	
								501					501	848	50320	501	SY	EXISTING CONCRETE OVERLAY REMOVED (1.75" THICK)	
								50					50	848	50340	50	SY	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY	
																		STRUCTURE OVER 20 FOOT SPAN (JAC-35-18.92 R)	
								LS					LS	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	24
								134					134	202	22900	134	SY	APPROACH SLAB REMOVED	
								132					132	202	23000	132	SY	PAVEMENT REMOVED	
								134					134	202	23500	134	SY	WEARING COURSE REMOVED	
								475					475	202	38000	475	FT	GUARDRAIL REMOVED	
								62.5					62.5	202	38300	62.5	FT	GUARDRAIL REMOVED, BARRIER DESIGN	
								3					3	202	42206	3	EACH	ANCHOR ASSEMBLY REMOVED	
								3					3	202	47000	3	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED	
								4,526					4,526	509	10000	4,526	LB	EPOXY COATED REINFORCING STEEL	
								160					160	510	10000	160	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
								24					24	511	34448	24	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)	
								373					373	512	10100	373	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	
								206					206	512	74000	206	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
								18					18	516	13600	18	SF	1" PREFORMED EXPANSION JOINT FILLER	
								206					206	517	75401	206	FT	RAILING (UPGRADING EXISTING), AS PER PLAN	24
								450					450	519	11100	450	SF	PATCHING CONCRETE STRUCTURE	
								239					239	526	25000	239	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")	
								78					78	526	90011	78	FT	TYPE A INSTALLATION, AS PER PLAN	24
								450					450	606	15050	450	FT	GUARDRAIL, TYPE MGS	
								62.5					62.5	606	15550	62.5	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS	
								1					1	606	26150	1	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	
								2					2	606	35002	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
								1					1	606	60012	1	EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)	
								160					160	607	39900	160	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC	
								6					6	626	00102	6	EACH	BARRIER REFLECTOR, TYPE 1 (1-WAY)	
								5					5	626	00112	5	EACH	BARRIER REFLECTOR, TYPE 3 (1-WAY)	
								501					501	848	10000	501	SY	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (2.75" THICK)	
								501					501	848	20000	501	SY	SURFACE PREPARATION USING HYDRODEMOLITION	
								10					10	848	30000	10	CY	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	
								50					50	848	50000	50	SY	HAND CHIPPING	
								LS					LS	848	50100	LS		TEST SLAB	
								10					10	848	50200	10	CY	FULL-DEPTH REPAIR	
								501					501	848	50320	501	SY	EXISTING CONCRETE OVERLAY REMOVED (1.75" THICK)	
								50					50	848	50340	50	SY	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY	

GENERAL SUMMARY

DESIGN AGENCY



DESIGNER
JEM
REVIEWER
DMB
PROJECT ID
112993
SHEET TOTAL
P.18 30

SHEET NUM.											PART.			ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
3	4	6	7	16	19	20	22	25	25A		01/NHS/PV	02/SAF/OT	03/NHS/BR						
				599									599	254	01000	599	SY	MAINTENANCE OF TRAFFIC	
				21									21	441	50000	21	CY	PAVEMENT PLANING, ASPHALT CONCRETE (1.25")	
			40										40	614	11110	40	HOUR	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
				1,640									1,640	614	11630	1,640	FT	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
				4									4	614	12380	4	EACH	INCREASED BARRIER DELINEATION	
			11								11		614	12460	11	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)		
																		WORK ZONE MARKING SIGN	
			10								10		614	12484	10	EACH	WORK ZONE INCREASED PENALTIES SIGN		
				31									31	614	13310	31	EACH	BARRIER REFLECTOR, TYPE 1, ONE WAY	
				4							4		614	13314	4	EACH	BARRIER REFLECTOR, TYPE , ONE WAY		
				4	31						4		31	614	13350	35	EACH	OBJECT MARKER, ONE WAY	
			12										12	614	18600	12	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN	
				10.04							10.04		614	20560	10.04	MILE	WORK ZONE LANE LINE, CLASS III, 6", 642 PAINT		
				1.93									1.93	614	22010	1.93	MILE	WORK ZONE EDGE LINE, CLASS I, 6"	
				0.55	1.03						0.55		1.03	614	22210	1.58	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I	
				2,880	4,685						2,880		4,685	614	24402	7,565	FT	WORK ZONE DOTTED LINE, CLASS I, 6", 740.06, TYPE I	
				600									600	622	41110	600	FT	PORTABLE BARRIER, ANCHORED	
				1,040									1,040	622	41100	1,040	FT	PORTABLE BARRIER, UNANCHORED	
			42										42	808	18700	42	SNMT	DIGITAL SPEED LIMIT (DSL) SIGN ASSEMBLY	
																		INCIDENTALS	
											0.8	0.08	0.12	614	11000	LS		MAINTAINING TRAFFIC	
											3			619	16000	3	MNTH	FIELD OFFICE, TYPE A	
											0.8	0.08	0.12	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
											0.8	0.08	0.12	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

DESIGN AGENCY




DESIGNER
JEM
 REVIEWER
DMB
 PROJECT ID
112993
 SHEET TOTAL
P.18A 30

COUNTY-ROUTE DIRECTION	LOCATION				PAVEMENT DATA							407	424	897	897	618	COMMENTS	
	LOG POINT		LENGTH		PAVEMENT WIDTH	PAVEMENT AREA	SHOULDER WIDTH		SHOULDER AREA	CADD MEASURED	TOTAL PAVEMENT AREA	TACK COAT (0.085 GAL/SY)	FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B	PAVEMENT PLANING ASPHALT CONCRETE, CLASS A, AS PER PLAN	PAVEMENT PLANING ASPHALT CONCRETE, CLASS A, AS PER PLAN	RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)		
	SLM	TO SLM	MILES	FT			FT	FT		FT								SY
JAC-35 EB & WB	18.9200	18.9425	0.0225	118.80	SEE STRUCTURE SHEETS FOR STRUCTURE JAC-35-18.92													START PAVEMENT WORK AT EAST END OF BRIDGE
	18.9425	19.0100	0.0675	356.40	24	950.40	4	8	475.20		2,851.20	242.35	79.20	2,851.20		0.28		
	19.0100	19.0413	0.0313	165.26	24	440.70	4	8	220.35		1,322.11	112.38	36.73	1,322.11		0.16	S.R. 327 INTERSECTION	
	19.0413	20.5500	1.5087	7,965.94	24	21,242.50	4	8	10,621.25		63,727.49	5,416.84	1,770.21	63,727.49		6.04		
	20.5500	20.6362	0.0862	455.14	24	1,213.70	4	8	606.85		3,641.09	309.49	101.14	3,641.09		0.36	DIXON RUN INTERSECTION	
	20.6362	22.0100	1.3738	7,253.66	24	19,343.10	4	8	9,671.55		58,029.31	4,932.49	1,611.93	58,029.31		5.52		
	22.0100	22.0195	0.0095	50.16	24	133.76	4	8	66.88		401.28	34.11	11.15	401.28		0.04	OVERHEAD BRIDGE, MILL 1"	
	22.0195	23.1200	1.1005	5,810.64	24	15,495.04	4	8	7,747.52		46,485.12	3,951.24	1,291.25	46,485.12		4.44		
	23.1200	23.1465	0.0265	139.92	24	373.12	4	8	186.56		1,119.36	95.15	31.09	1,119.36		0.12	ORPHEUS & EBB TOMBLIN ROADS INTERSECTION	
	23.1465	23.9400	0.7935	4,189.68	24	11,172.48	4	8	5,586.24		33,517.44	2,848.98	931.04	33,517.44		3.20		
EXTRA AREAS																		
MEDIAN CROSSOVER	19.01										518.05	44.03	14.39	518.05			TURN LANE - S.R. 327 INTERSECTION	
MEDIAN CROSSOVER	20.55										995.09	84.58	27.64	995.09			2 TURN LANE - DIXON RUN INTERSECTION	
MEDIAN CROSSOVER	23.12										994.67	84.55	27.63	994.67			2 TURN LANE - ORPHEUS & EBB TOMBLIN INTERSECTION	
SUB-TOTALS											18,156.19	5,933.39	213,200.93	401.28	20.16			
TOTALS CARRIED TO GENERAL SUMMARY											18,157	5,934	213,201	402	20.16			

PAVEMENT CALCULATIONS

DESIGN AGENCY



DESIGNER
JEM

REVIEWER
DMB

PROJECT ID
112993

SHEET TOTAL
P.19 | 30


LOCATION	DIRECTION	LOG POINT		LENGTH	807						850			621		COMMENTS				
					WET REFLECTIVE THERMOPLASTIC PAVEMENT MARKING						WET REFLECTIVE EPOXY PAVEMENT MARKING			GROOVING						
		FROM	TO		EDGE LINE, 6" (YELLOW)	EDGE LINE, 6" (WHITE)	LANE LINE, 6"	CHANNELIZING LINE, 12"	DOTTED LINE, 6" (WHITE)	DOTTED LINE, 6" (YELLOW)	EDGE LINE, 6" (YELLOW)	EDGE LINE, 6" (WHITE)	LANE LINE, 6"	FOR 6" RECESSED MARKING, (ASPHALT)	FOR 6" RECESSED MARKING, (CONCRETE)		RPM	RAISED PAVEMENT MARKER REMOVED		
		SLM	SLM		MILE	MILE	MILE	FT	FT	FT	MILE	MILE	MILE	MILE	MILE		EACH	EACH		
JAC-35	EB,WB	18.9200	18.9425	0.0225								0.05	0.05	0.05		0.15		4	4	STRUCTURE JAC-35-1892 L&R
JAC-35	EB,WB	18.9425	19.0100	0.0675	0.07	0.14	0.14								0.35			8	8	
JAC-35	WB	19.0100	19.0413	0.0313	0.03	0.00	0.04	111.97	228.13	116.06					0.07			2	2	
JAC-35	EB	19.0100	19.0413	0.0313	0.03	0.04	0.04		162.00	180.62					0.11			2	2	
JAC-35	EB,WB	19.0413	20.5500	1.5087	3.02	3.02	3.02								9.06			200	200	
JAC-35	WB	20.5500	20.6362	0.0862	0.09	0.16	0.09	43.59	336.82	159.42					0.34			6	6	
JAC-35	EB	20.5500	20.6362	0.0862	0.06	0.15	0.09	38.91	305.65	166.64					0.31			6	6	
JAC-35	EB,WB	20.6362	22.0100	1.3738	2.75	2.75	2.75								8.25			182	182	
JAC-35	WB	22.0100	22.0290	0.0190	0.02	0.04	0.02								0.08			1	1	STRUCTURE OVERHEAD
JAC-35	EB	22.0100	22.0290	0.0190	0.02	0.04	0.02								0.08			1	1	STRUCTURE OVERHEAD
JAC-35	EB,WB	22.0195	23.1200	1.1005	2.21	2.21	2.21								6.63			146	146	
JAC-35	WB	23.1200	23.1730	0.0530	0.06	0.04	0.06	0.00	100.78	447.53					0.16			2	2	
JAC-35	EB	23.1200	23.1730	0.0530	0.05	0.05	0.06	0.00	71.76	403.60					0.16			2	2	
JAC-35	EB,WB	23.1465	23.9400	0.7935	1.59	1.59	1.59								4.77			104	104	
THIS SHEET SUB-TOTALS					10.00	10.23						0.05	0.05					666	666	
THIS SHEET TOTALS					20.23	10.13	194.47	1205.14	4151.50			0.10	0.05	30.36	0.15			666	666	
CONVERT TO MILE																				
TOTALS CARRIED TO GENERAL SUMMARY					20.23	10.13	195.00	5,357			0.10	0.05	30.36	0.15			666	666		

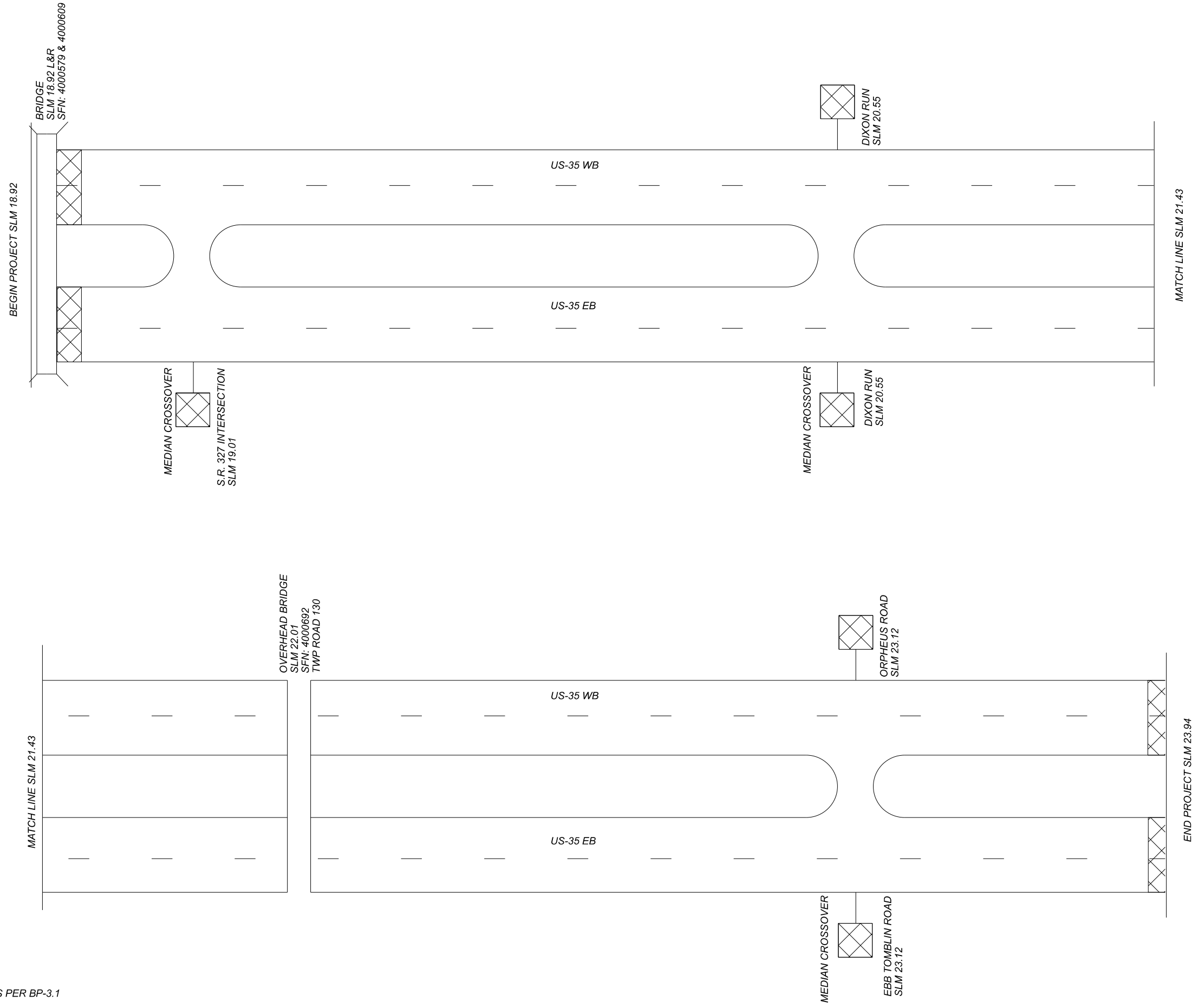
PAVEMENT MARKING SUB-SUMMARY

DESIGN AGENCY



DESIGNER
JEM
REVIEWER
DMB
PROJECT ID
112993
SHEET TOTAL
P.20 30

LEGEND:
 BUTT JOINT AS PER BP-3.1

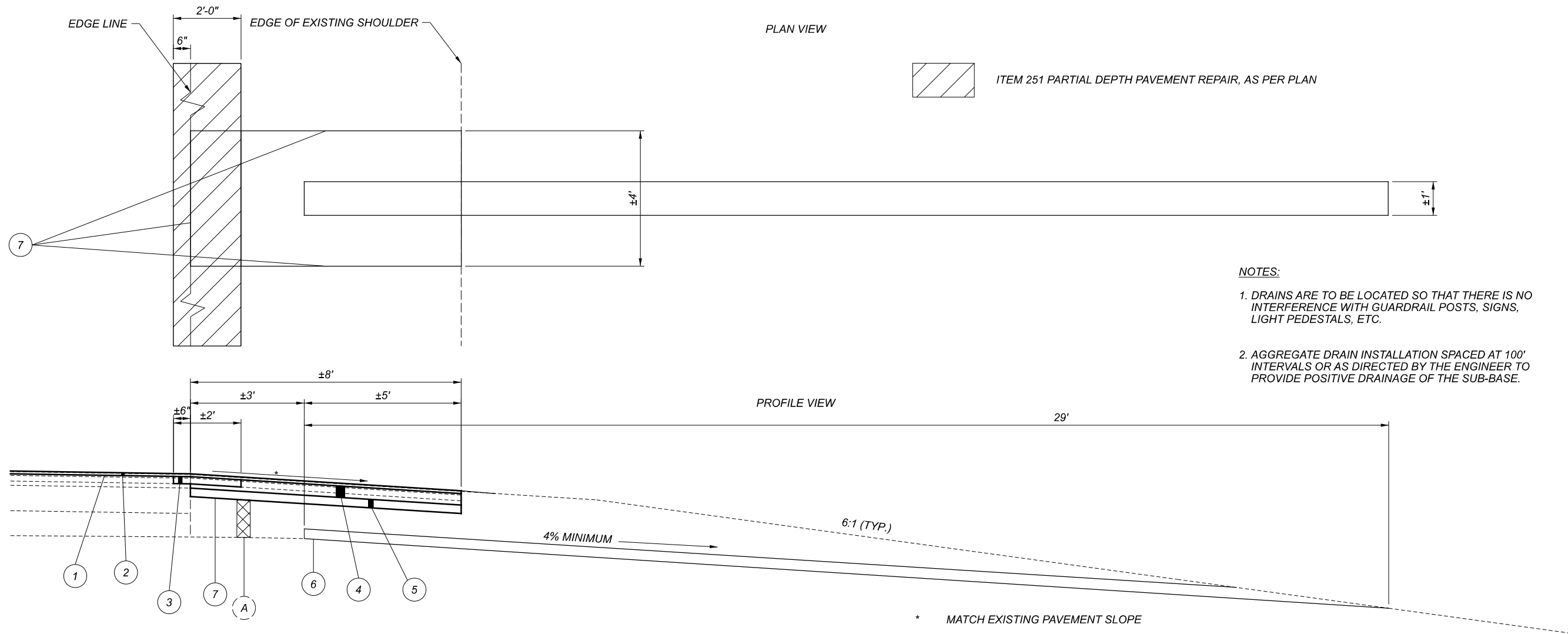


DESIGN AGENCY



DESIGNER	JEM
REVIEWER	DMB
PROJECT ID	112993
SHEET	TOTAL
P.21	30

PAVEMENT LINE DIAGRAM
 S.L.M 18.92-23.94



ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN

- NOTES:**
1. DRAINS ARE TO BE LOCATED SO THAT THERE IS NO INTERFERENCE WITH GUARDRAIL POSTS, SIGNS, LIGHT PEDESTALS, ETC.
 2. AGGREGATE DRAIN INSTALLATION SPACED AT 100' INTERVALS OR AS DIRECTED BY THE ENGINEER TO PROVIDE POSITIVE DRAINAGE OF THE SUB-BASE.

SHOULDER REPAIR DETAILS

PROPOSED LEGEND:

- 1 ITEM 424 1" FINE GRADED POLYMER ASPHALT CONCRETE, TYPE B, SURFACE COURSE
- 2 ITEM 407 TACK COAT
- 3 ITEM 251 PARTIAL DEPTH PAVEMENT REPAIR (441)
- 4 ITEM 301 10" ASPHALT CONCRETE BASE, PG64-22
- 5 ITEM 304 6" AGGREGATE BASE
- 6 ITEM 605 AGGREGATE DRAINS, AS PER PLAN (8")
- 7 ITEM 252 FULL DEPTH PAVEMENT SAWING

EXISTING LEGEND:

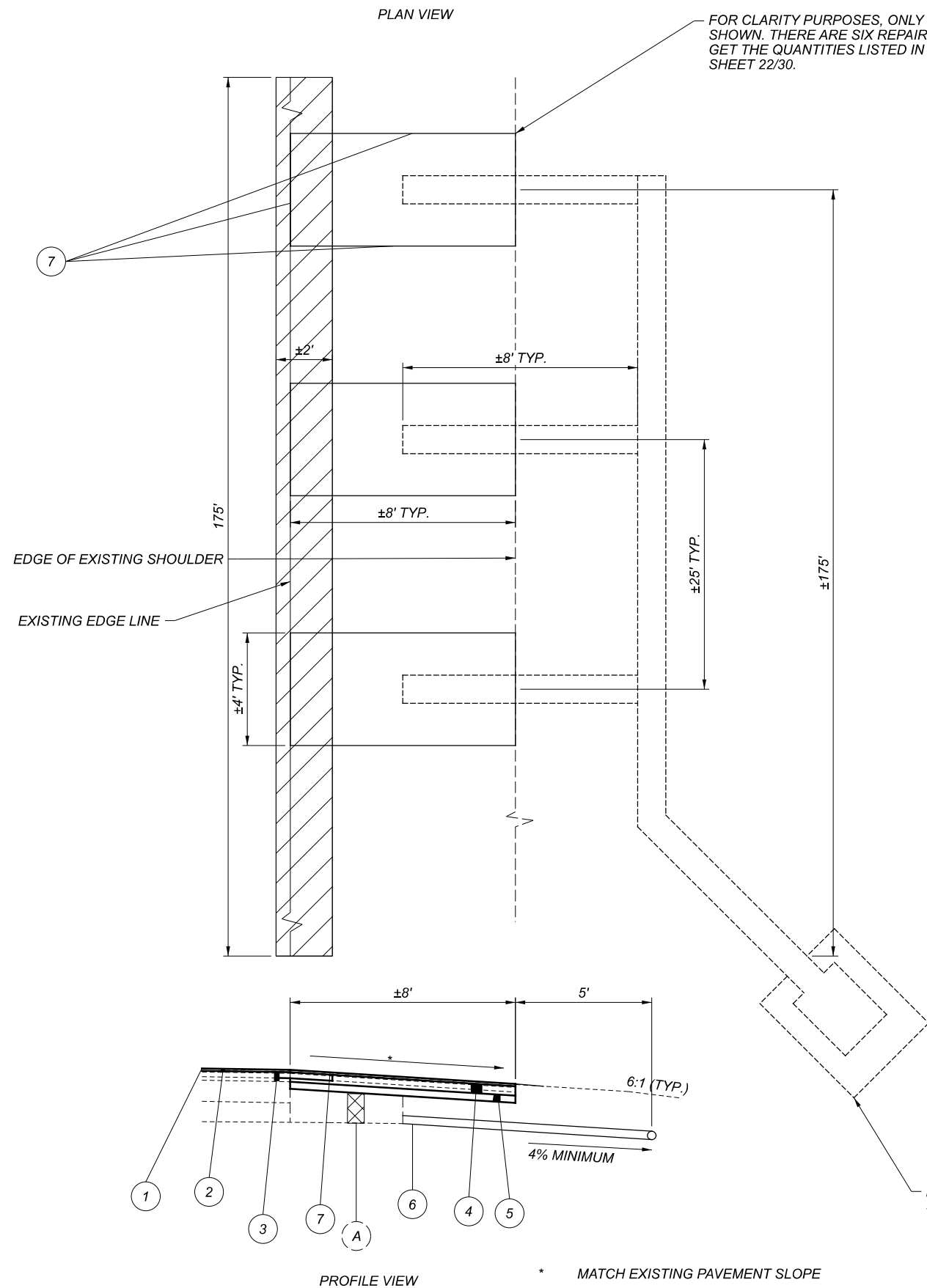
- (A) EX. LIMESTONE VEIN

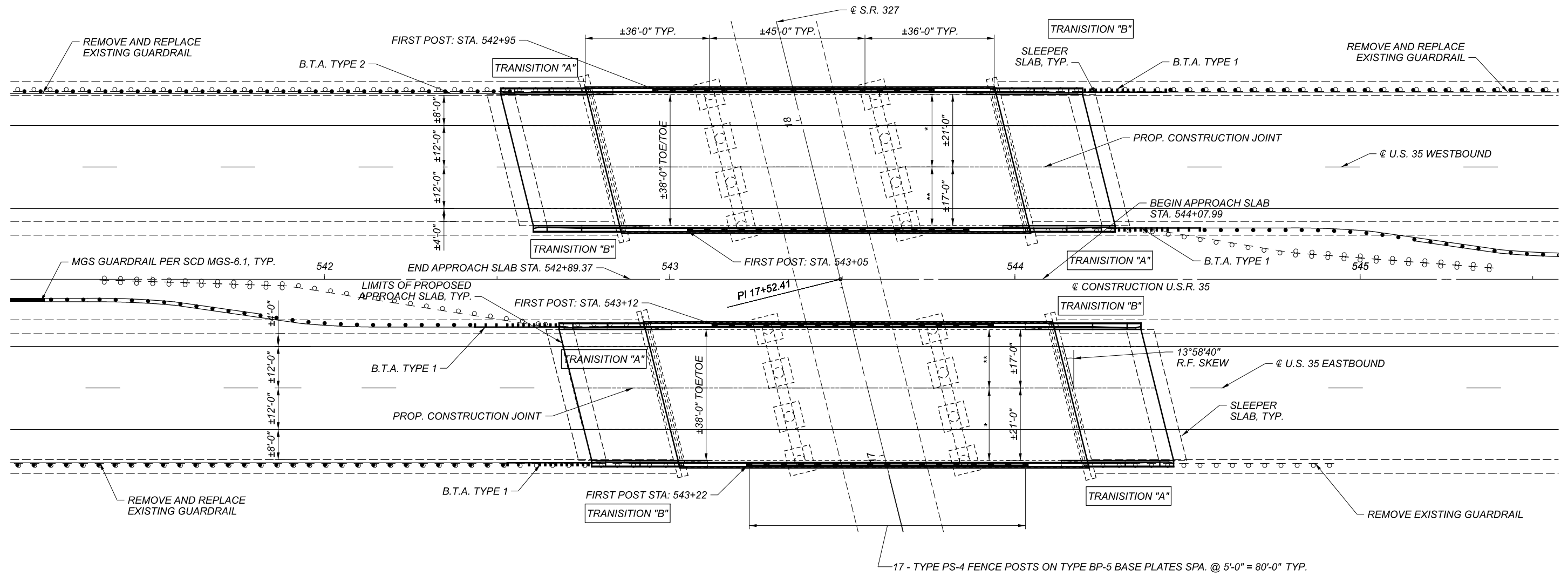
SHOULDER REPAIR SUB-SUMMARY

COUNTY	ROUTE	SIDE	LOCATION			PAVEMENT DATA				251	252	301	304	407	424	605	605	COMMENTS
			LOG POINT	LENGTH	WIDTH	TOTAL SURFACE AREA	NUMBER OF REPAIRS @ 100' INTERVALS	PARTIAL DEPTH PAVEMENT REPAIR (441)	FULL DEPTH PAVEMENT SAWING	ASPHALT CONCRETE BASE, PG64-22	AGGREGATE BASE	AGGREGATE DRAINS	6" UNCLASSIFIED PIPE UNDERDRAINS FOR SPRINGS					
								5" SY		10" CY	6" CY			FT	FT			
JAC	US-35 EB	RT	AS DIRECTED BY ENGINEER	4.00	8	3.56	21		420	20.74	12.44					609		CALCULATIONS USED ARE AS FOLLOWS: PARTIAL DEPTH PAVEMENT REPAIR EQUALS SURFACE AREA SY [(LENGTH x 2)+(W)](# REPAIRS) = FT ASPHALT CONCRETE BASE, PG64-22 AGGREGATE BASE (SURFACE AREA x DEPTH/36)(# REPAIRS) = CY AGGREGATE DRAINS # REPAIRS x 25' L = FT UNDERDRAINS: 175'+(8"x6" REPAIRS)
	US-35 EB	RT		2000.00	2	444.44		444.44										
JAC	US-35 EB	RT	19.861			4.00	8	3.56	6	120	5.93	3.56					223.00	
						175.00	2	38.89										
SUB-TOTALS									483.33	540.00	26.67	16.00				609.00	223.00	
TOTALS									483.33	540.00	26.67	16.00				609.00	223.00	
TOTALS CARRIED TO GENERAL SUMMARY									484	540	27	16				609	223	

DESIGN AGENCY

 DESIGNER
 JEM
 REVIEWER
 DMB
 PROJECT ID
 112993
 SHEET TOTAL
 P.22 30





SITE PLAN
 BRIDGE NO. JAC-35-1892 L&R
 OVER S.R. 327

EXISTING STRUCTURE	
TYPE:	CONTINUOUS CONCRETE SLAB WITH REINFORCED CONCRETE SUBSTRUCTURE
SPANS:	±36'-0" - ±45'-0" - ±36'-0"
ROADWAY:	TWO STRUCTURES AT ±38'-0" TOE/TOE
LOADING:	HS20
SKEW:	13°58'40" R.F. SKEW
WEARING SURFACE:	1" MONOLITHIC CONCRETE W/ 1 3/4" SUPERPLASTICIZED DENSE CONCRETE OVERLAY
APPROACH SLABS:	AS-1-54 (25' LONG)
ALIGNMENT:	TANGENT
STRUCTURE FILE NUMBER:	4000579 & 4000609
DATE BUILT:	1969

PROPOSED STRUCTURE	
REMOVE EXISTING OVERLAYS FROM SUPERSTRUCTURE AND COMPLETELY REMOVE APPROACH SLABS.	
HYDRODEMOLITION REMAINING DECK 1"	
PLACE 2 3/4" MICRO SILICA MODIFIED CONCRETE OVERLAY	
CONSTRUCT NEW FULL WIDTH APPROACH SLABS (25'-0")	
UPGRADE EXISTING PARAPET ON SUPERSTRUCTURE AND INSTALL NEW PARAPET TRANSITIONS ON APPROACH SLABS.	
REMOVE EXISTING CONCRETE SEALER FROM SUPERSTRUCTURE AND SEAL CONCRETE SURFACES WITH EPOXY-URETHANE SEALER	
INSTALL VANDAL PROTECTION FENCE	
REMOVE AND REPLACE APPROACH GUARDRAIL AS SHOWN	
COORDINATES:	LATITUDE N 38°59'35" LONGITUDE W 82°32'28"

NOTES
 DESIGN TRAFFIC:
 2022 ADT = 12,000 2022 ADTT = 3600
 2042 ADT = 14,000 2042 ADTT = 4200
 DIRECTIONAL DISTRIBUTION = 56%

LEGEND
 * - PHASE 1 CONSTRUCTION
 ** - PHASE 2 CONSTRUCTION

BENCHMARK DATA			
BM #1 STA.	537+69.87,	ELEV.	720.660', OFFSET 52.938', L
BM #2 STA.	542+76.87,	ELEV.	715.090', OFFSET 5.466', R
BM #3 STA.	550+99.86,	ELEV.	720.080', OFFSET 51.946', L

SFN	4000579
SFN	4000609
DESIGN AGENCY	
DESIGNER	JEM
CHECKER	XXX
REVIEWER	MCM
PROJECT ID	112993
SUBSET	TOTAL
1	8
SHEET	TOTAL
P.23	30

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

- VPF-1-90 DATED REVISED 7/20/2018
- AS-1-15 DATED REVISED 7/17/2015
- PCB-91 DATED REVISED 7/17/2020

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATION(S):

- 800 DATED 10/15/2021
- 832 DATED 10/19/2018
- 848 DATED 1/15/2021

DESIGN SPECIFICATIONS

THIS STRUCTURE CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002 AND THE ODOT BRIDGE DESIGN MANUAL, 2020, EXCEPT AS NOTED ELSEWHERE IN THE PLANS.

DESIGN LOADING

DESIGN LOADING INCLUDES: HS20 AND ALTERNATE MILITARY LOADING.

DESIGN DATA

- CONCRETE QC2: COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
- REINFORCING STEEL MINIMUM YIELD STRENGTH 60 KSI

DECK PROTECTION METHOD

3" MICRO SILICA MODIFIED CONCRETE OVERLAY

ITEM 526 - TYPE A INSTALLATION, AS PER PLAN

THIS ITEM CONSISTS OF PROVIDING THE TYPE A INSTALLATION AS SHOWN IN SCD AS-2-15 EXCEPT IT WILL BE MODIFIED AS SHOWN ON SHEET 2 OF THE PLANS. INSTALLTION OF THE DRAINAGE ITEMS, GRANULAR MATERIAL, AND POLYMER MODIFIED EXPANSION JOINT AS SHOWN ON SCD AS-2-15 WILL NOT BE REQUIRED. SEE BASIS OF PAYMENT NOTE ON SHEET 14 OF SCD AS-2-15 AND INCLUDE PAYMENT FOR THE ASPHALT BASE COURSE SHOWN ON SHEET 2 IN THIS ITEM OF WORK.

BRIDGE CONSTRUCTION SEQUENCE

1. SETUP PHASE 1 TRAFFIC CONTROL TO CLOSE THE RIGHT (DRIVING) LANES IN ACCORDANCE WITH S.C.D. MT-95.40.
2. COMPLETE PHASE ONE CONSTRUCTION OF BOTH BRIDGE NO. JAC-35-1892 L&R AS DETAILED ON SHEET 4/8 WITH THE EXCEPTION OF ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).
3. AT THE COMPLETION OF PHASE ONE CONSTRUCTION, REVISE MAINTENANCE OF TRAFFIC DEVICES TO OPEN THE RIGHT (DRIVING) LANES AND SET UP PHASE 2 TRAFFIC CONTROL TO CLOSE THE LEFT PASSING) LANES IN ACCORDANCE WITH S.C.D. MT-95.40.
4. COMPLETE PHASE TWO CONSTRUCTION OF BOTH BRIDGE NO. JAC-35-1892 L&R AS DETAILED ON SHEET 4/8 WITH THE EXCEPTION OF ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).
5. AT THE COMPLETION OF PAHSE TWO CONSTRUCTION, REMOVE MAINTENANCE OF TRAFFIC DEVICES AND OPEN ALL TRAFFIC LANES.
6. SET UP TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH S.C.D. MT-95.30 TO PERFORM ITEM 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE).

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS, SECTIONS 102.05, 105.02, AND 513.04*. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

ITEM 517 - RAILING (UPGRADING EXISTING), AS PER PLAN

DESCRIPTION:

THIS WORK CONSISTS OF ADDING AN 11½" HEIGHT EXTENSION ONTO THE EXISTING PARAPET AND PARAPET TRANSITION, USING CAST IN PLACE CONCRETE, TO OBTAIN THE DEFLECTOR SHAPE AS SHOWN IN THE PLANS.

SURFACE PREPERATIONS:

THOROUGHLY CLEAN THE EXISTING PARAPET AND EXISTING PARAPET TRANSITION SURFACE IN CONTACT WITH THE PROPOSED CAP IN ACCORDANCE WITH ITEM 512, REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES.

DOWEL HOLES AND REINFORCING:

DRILL DOWEL HOLES WHERE SHOWN IN THE PLANS. INSTALL REINFORCING STEEL ACCORDING TO ITEM 510 USING GROUT IN ACCORDANCE WITH CMS SPECIFICATION 705.20. PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL BARS IN THE AREA OF THE HOLE WITH THE AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL, DOWEL HOLES AND GROUTING WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

CONCRETE:

CONCRETE SHALL BE IN ACCORDANCE WITH CMS 511 AND SHALL BE CLASS HP. THE DEPARTMENT WILL PAY FOR ALL CONCRETE, CLASS HP WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

REINFORCING STEEL:

FURNISH REINFORCING STEEL ACCORDING TO 709.00, GRADE 60, WITH A MINIMUM YIELD STRENGTH OF 60,000 PSI. THE DEPARTMENT WILL PAY FOR ALL REINFORCING STEEL WITH ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

CONTROL JOINTS:

SAWCUT 1¼" DEEP CONTROL JOINTS ALONG THE PERIMETER OF THE PARAPET AS SOON AS THE SAW CAN BE OPERATED WITHOUT DAMAGING THE CONCRETE. PLACE THE JOINTS AT THE SAME LOCATION AS THE EXISTING DEFLECTION JOINTS. USE AN EDGE GUIDE, FENCE, OR JIG TO ENSURE THAT THE SAWCUT IS STRAIGHT, TRUE AND ALIGNED ON ALL FACES OF THE PARAPET. THE JOINT WIDTH OF ¼". SEAL THE PERIMETER OF THE CONTROL JOINT TO A MINIMUM DEPTH OF ONE INCH WITH A POLYURETHANE OF POLYMERIC MATERIAL CONFORMING TO ASTM, C920, TYPE S.

METHOD OF MEASUREMENT:

THE DEPARTMENT WILL MEASURE THIS IN FOOT BY THE ACTUAL LENGTH OF RAILING UPGRADED BETWEEN THE ENDS OF THE EXISTING CONCRETE PARAPET.

BASIS OF PAYMENT:

PAYMENT FOR THIS ITEM INCLUDES ALL COSTS FOR DOWEL HOLES, REINFORCING STEEL, CONCRETE, AND SHRINKAGE CONTROL JOINTS. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE FOOT CONTRACT PRICE FOR ITEM 517, RAILING (UPGRADING EXISTING), AS PER PLAN.

ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 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. INSTALL DOWEL BARS IF SPECIFIED. 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.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

GENERAL NOTES
BRIDGE NO. JAC-35-1892 L&R
OVER S.R. 327

SFN 4000609

SFN 4000579

DESIGN AGENCY



DESIGNER CHECKER
JEM XXX

REVIEWER

MCM

PROJECT ID
112993

SUBSET TOTAL
2 8

SHEET TOTAL
P.24 30

CALC: MCM DATE:
 CHECKED: DATE:

ESTIMATED QUANTITIES (JAC-35-1892 L)

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SEE SHEET
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					7/8
202	22900	134	SY	APPROACH SLAB REMOVED				134	
202	23000	132	SY	PAVEMENT REMOVED				132	
202	23500	134	SY	WEARING COURSE REMOVED				134	
202	38000	512.5	FT	GUARDRAIL REMOVED				512.5	
202	38300	62.5	FT	GUARDRAIL REMOVED, BARRIER DESIGN				62.5	
202	42206	3	EACH	ANCHOR ASSEMBLY REMOVED				3	
202	47000	3	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED				3	
509	10000	4526	LB	EPOXY COATED REINFORCING STEEL	1292		702	2532	
510	10000	160	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	88		72		7/8
511	34448	24	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)			8	16	
512	10100	373	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)			284	89	
512	74000	206	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES			206		
516	13600	18	SF	1" PREFORMED EXPANSION JOINT FILLER				18	
517	75401	206	FT	RAILING (UPGRADING EXISTING), AS PER PLAN			206		7/8
519	11100	450	SF	PATCHING CONCRETE STRUCTURE			450		
526	25000	239	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")				239	
526	90011	78	FT	TYPE A INSTALLATION, AS PER PLAN				78	7/8
606	15050	450	FT	GUARDRAIL, TYPE MGS				450	
606	15550	62.5	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS				62.5	
606	26150	1	EACH	ANCHOR ASSEMBLY, MGS TYPE E				1	
606	26550	1	EACH	ANCHOR ASSEMBLY, MGS TYPE T				1	
606	35002	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1				2	
606	35102	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2				1	
606	60012	1	EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)				1	
607	39900	160	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			160		
626	00102	6	EACH	BARRIER REFLECTOR, TYPE 1				6	
626	00112	5	EACH	BARRIER REFLECTOR, TYPE 3				5	
848	10000	501	SY	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (2.75" THICK)			501		
848	20000	501	SY	SURFACE PREPARATION USING HYDRODEMOLITION			501		
848	30000	10	CY	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			10		
848	50000	50	SY	HAND CHIPPING			50		
848	50100	LS		TEST SLAB			LS		
848	50200	10	CY	FULL-DEPTH REPAIR			10		
848	50320	501	SY	EXISTING CONCRETE OVERLAY REMOVED (1.75")			501		
848	50340	50	SY	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			50		

ESTIMATED QUANTITIES
 BRIDGE NO. JAC-35-1892 L
 OVER S.R. 327

SFN 4000579

SFN 4000609

DESIGN AGENCY



DESIGNER: JEM CHECKER: XXX

REVIEWER: MCM

PROJECT ID: 112993

SUBSET TOTAL: 3 8

SHEET TOTAL: P.25 30

CALC:	MCM	DATE:
CHECKED:		DATE:

ESTIMATED QUANTITIES (JAC-35-1892 R)

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SEE SHEET
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN					%
202	22900	134	SY	APPROACH SLAB REMOVED				134	
202	23000	132	SY	PAVEMENT REMOVED				132	
202	23500	134	SY	WEARING COURSE REMOVED				134	
202	38000	475	FT	GUARDRAIL REMOVED				475	
202	38300	62.5	FT	GUARDRAIL REMOVED, BARRIER DESIGN				62.5	
202	42206	3	EACH	ANCHOR ASSEMBLY REMOVED				3	
202	47000	3	EACH	BRIDGE TERMINAL ASSEMBLY REMOVED				3	
509	10000	4526	LB	EPOXY COATED REINFORCING STEEL	1292		702	2532	
510	10000	160	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	88		72		%
511	34448	24	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)			8	16	
512	10100	373	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)			284	89	
512	74000	206	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES			206		
516	13600	18	SF	1" PREFORMED EXPANSION JOINT FILLER				18	
517	75401	206	FT	RAILING (UPGRADING EXISTING), AS PER PLAN			206		%
519	11100	450	SF	PATCHING CONCRETE STRUCTURE			450		
526	25000	239	SY	REINFORCED CONCRETE APPROACH SLABS (T=15")				239	
526	90011	78	FT	TYPE A INSTALLATION, AS PER PLAN				78	%
606	15050	450	FT	GUARDRAIL, TYPE MGS				450	
606	15550	62.5	FT	GUARDRAIL, BARRIER DESIGN, TYPE MGS				62.5	
606	26150	1	EACH	ANCHOR ASSEMBLY, MGS TYPE E				1	
606	35002	2	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1				2	
606	60012	1	EACH	IMPACT ATTENUATOR, TYPE 1 (BIDIRECTIONAL)				1	
607	39900	160	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC			160		
626	00102	6	EACH	BARRIER REFLECTOR, TYPE 1				6	
626	00112	5	EACH	BARRIER REFLECTOR, TYPE 3				5	
848	10000	501	SY	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION (2.75" THICK)			501		
848	20000	501	SY	SURFACE PREPARATION USING HYDRODEMOLITION			501		
848	30000	10	CY	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			10		
848	50000	50	SY	HAND CHIPPING			50		
848	50100	LS		TEST SLAB			LS		
848	50200	10	CY	FULL-DEPTH REPAIR			10		
848	50320	501	SY	EXISTING CONCRETE OVERLAY REMOVED (1.75")			501		
848	50340	50	SY	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY			50		

ESTIMATED QUANTITIES
 BRIDGE NO. JAC-35-1892 R
 OVER S.R. 327

SFN 4000579

SFN 4000609

DESIGN AGENCY



DESIGNER CHECKER
 JEM XXX

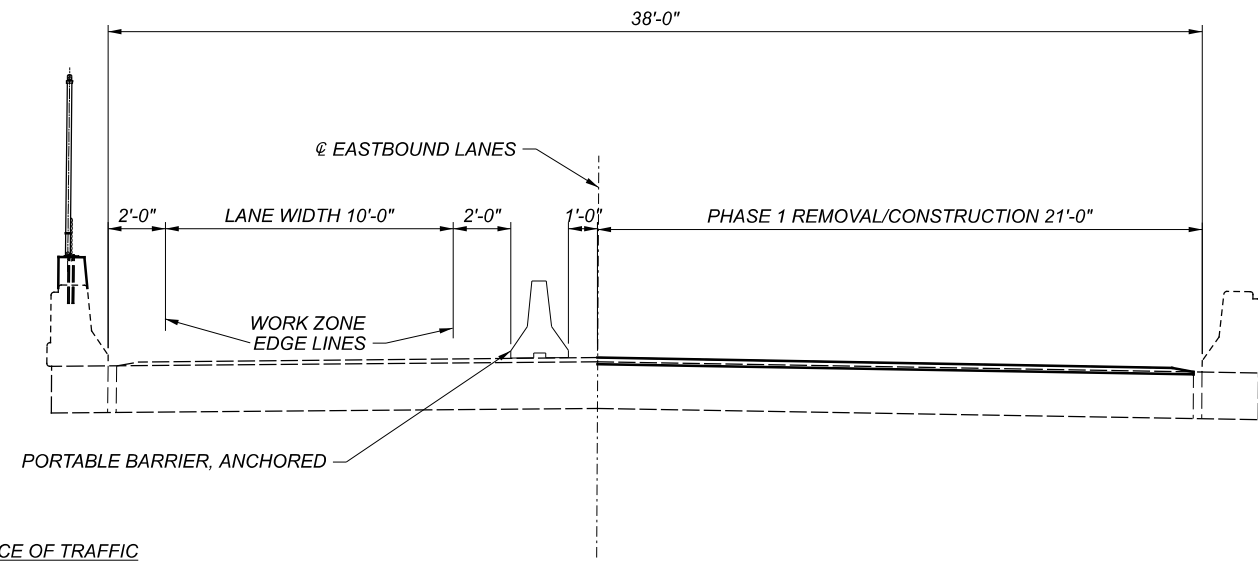
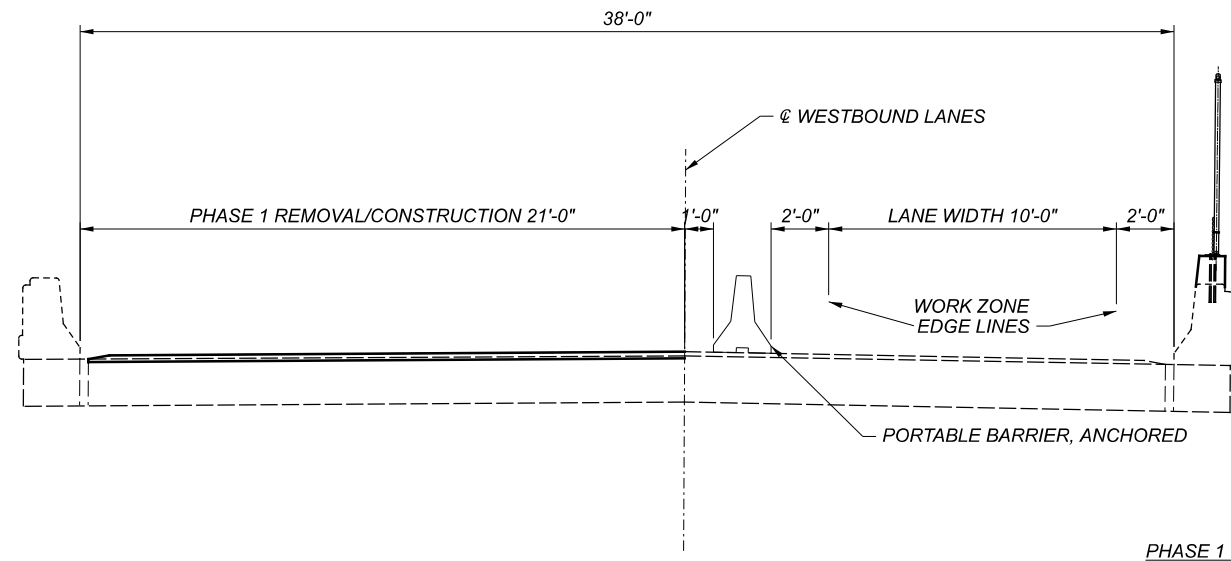
REVIEWER

MCM

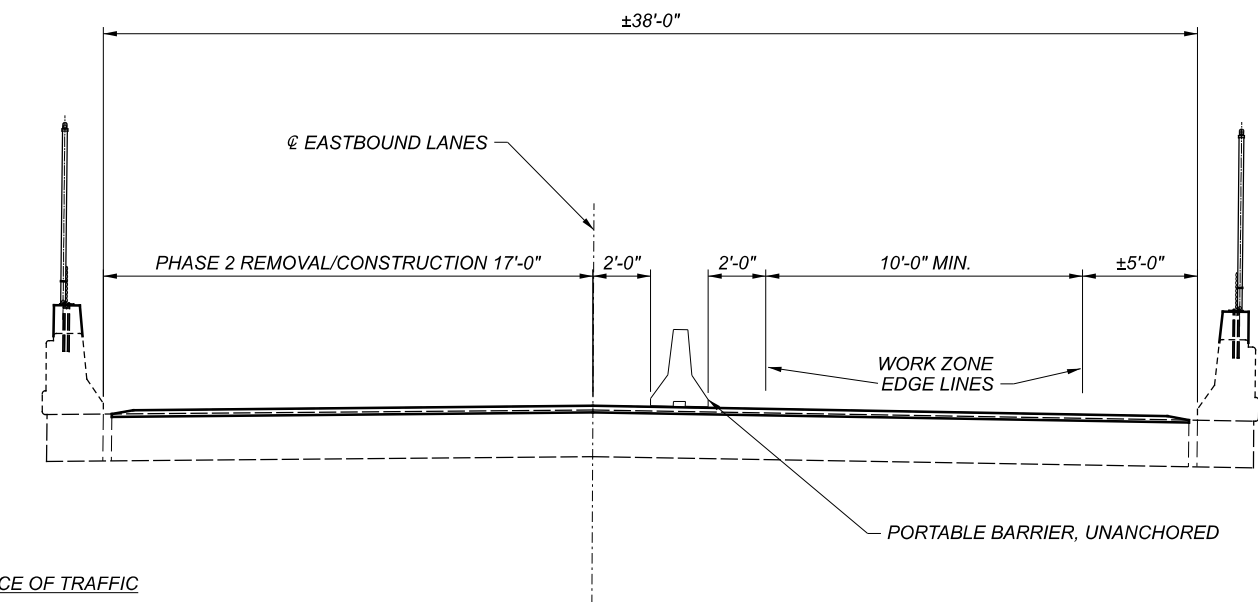
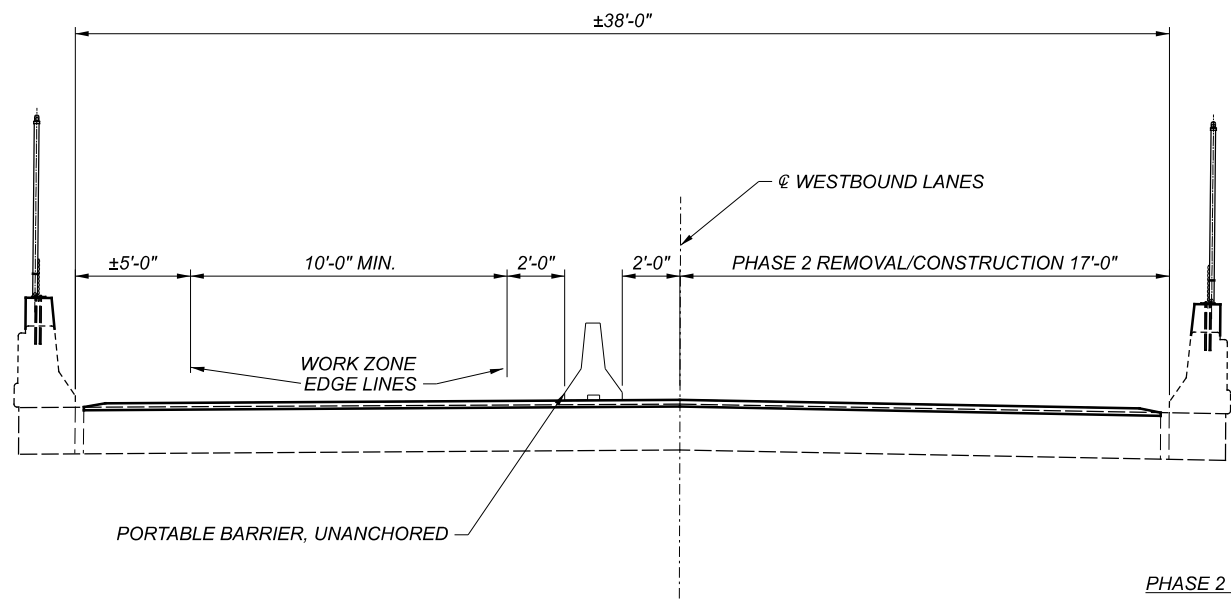
PROJECT ID
 112993

SUBSET	TOTAL
3A	8

SHEET	TOTAL
P.25A	30




PHASE 1 MAINTENANCE OF TRAFFIC



PHASE 2 MAINTENANCE OF TRAFFIC

STAGED CONSTRUCTION DETAILS
 BRIDGE NO. JAC-35-18.92 L&R
 OVER S.R. 327

SFN	4000579
SFN	4000609
DESIGN AGENCY	
	
DESIGNER	JEM
CHECKER	XXX
REVIEWER	MCM
PROJECT ID	112993
SUBSET	4
TOTAL	8
SHEET	P.26
TOTAL	30



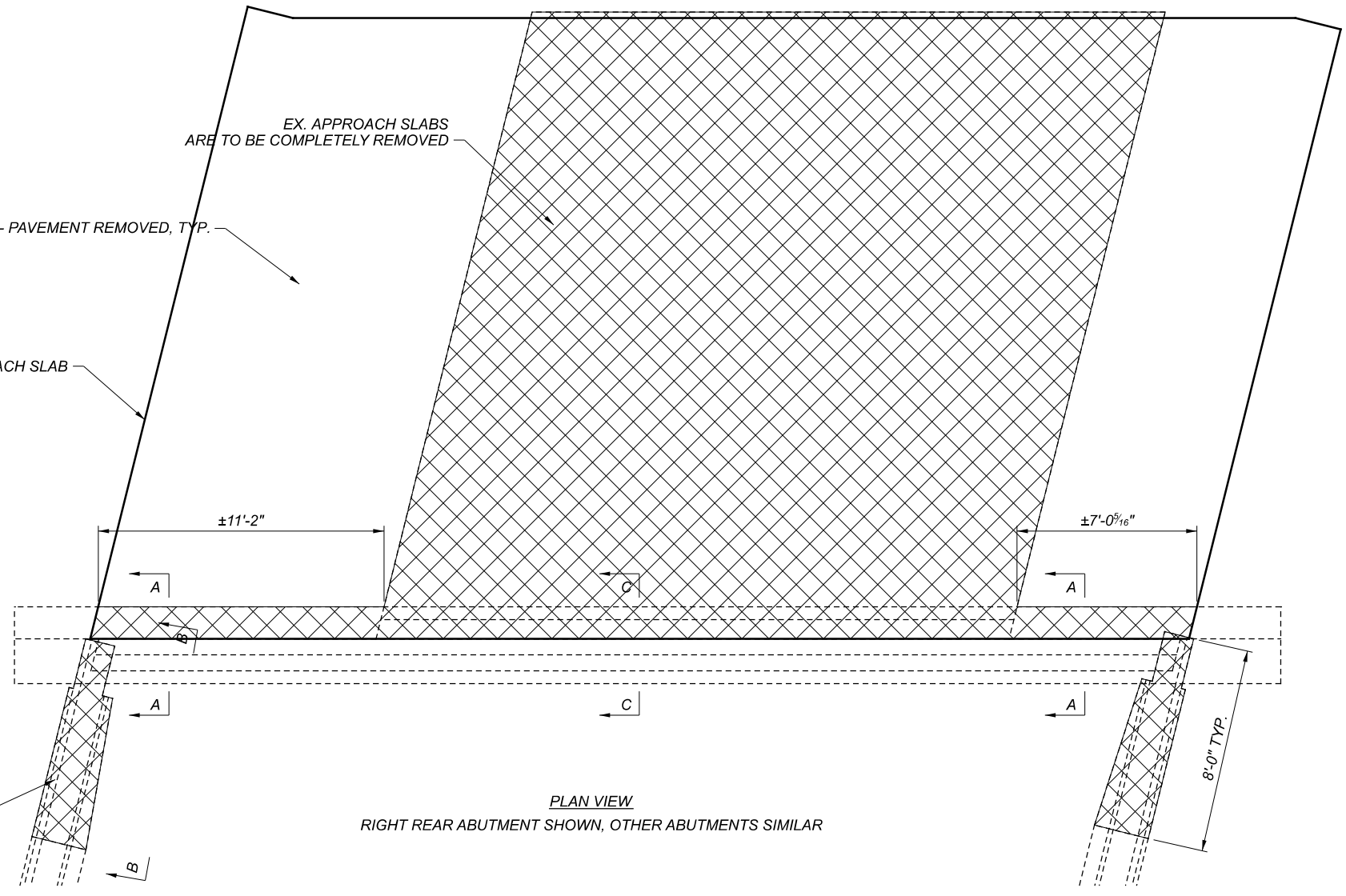
REMOVAL AREA

ITEM 202 - PAVEMENT REMOVED, TYP.

LIMITS OF PROPOSED APPROACH SLAB

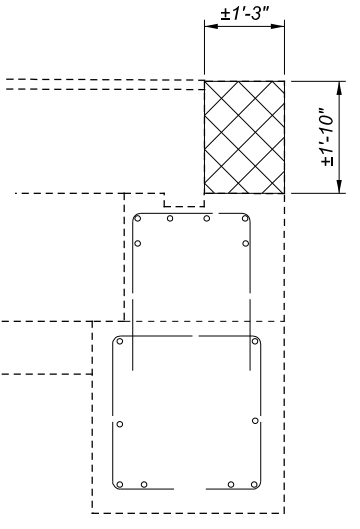
EX. APPROACH SLABS ARE TO BE COMPLETELY REMOVED

REMOVE EX. PARAPET TRANSITIONS TYP.
 (PRESERVE ALL LONGITUDINAL STEEL IN TRANSITION AND ALL REINFORCING STEEL DOWELED IN EXISTING CONCRETE DECK)

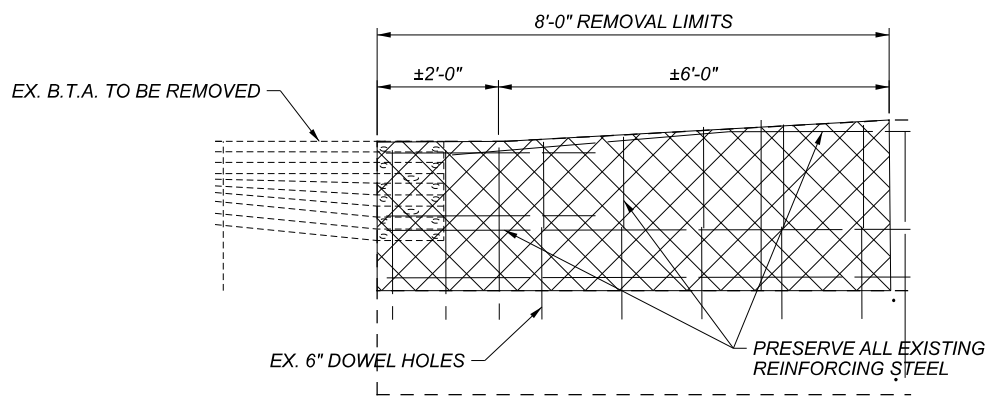


PLAN VIEW

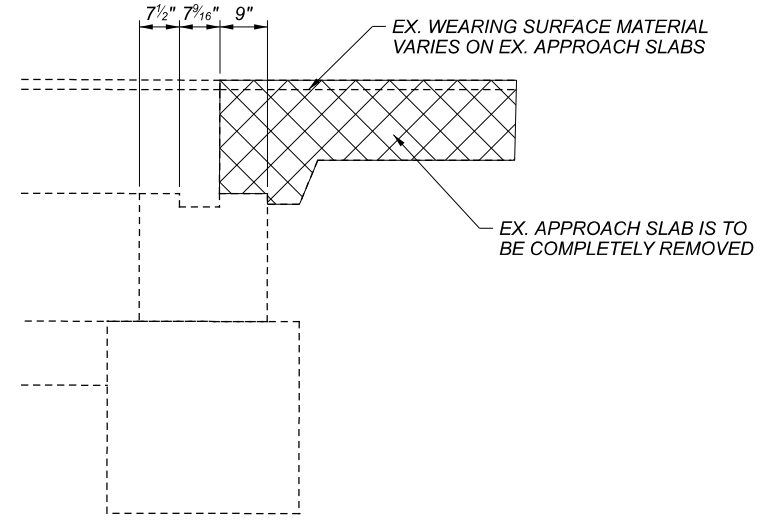
RIGHT REAR ABUTMENT SHOWN, OTHER ABUTMENTS SIMILAR



SECTION A-A



SECTION B-B



SECTION C-C

REMOVAL DETAILS
 BRIDGE NO. JAC-35-1892 L&R
 OVER S.R. 327

SFN 4000579

SFN 4000609

DESIGN AGENCY



DESIGNER CHECKER
 JEM XXX

REVIEWER

MCM

PROJECT ID

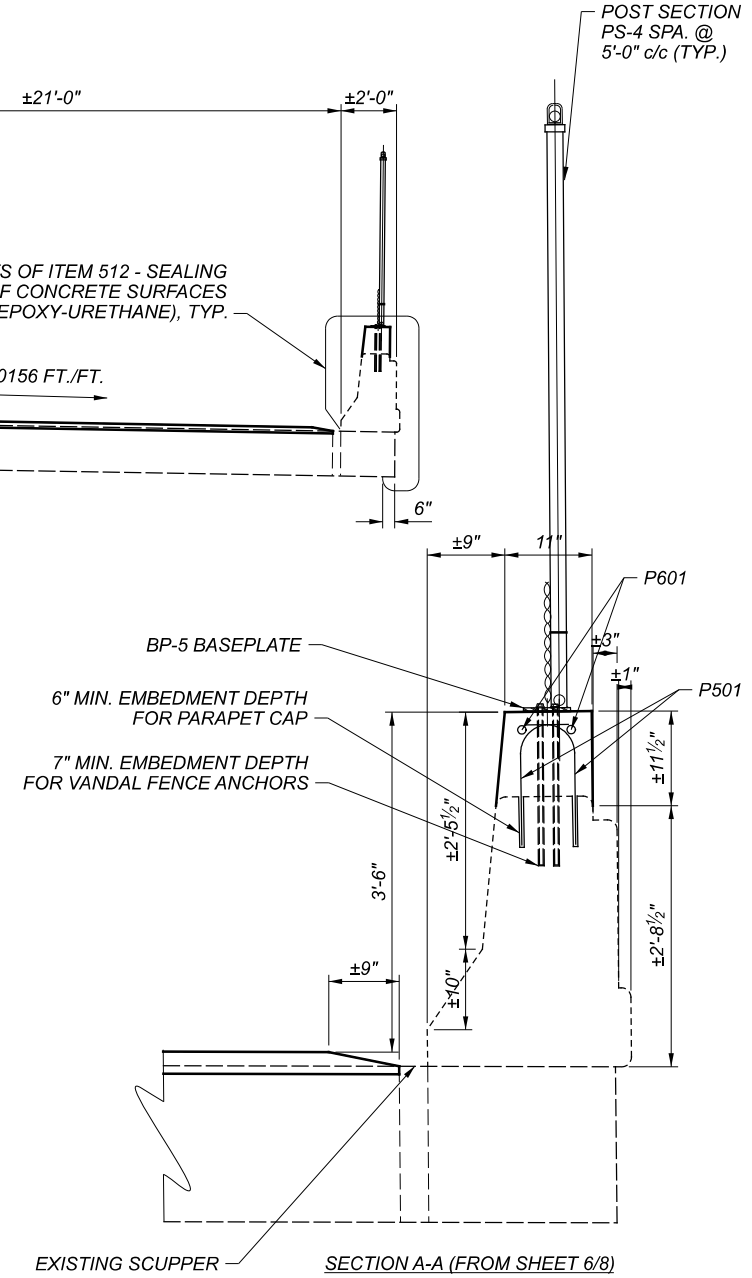
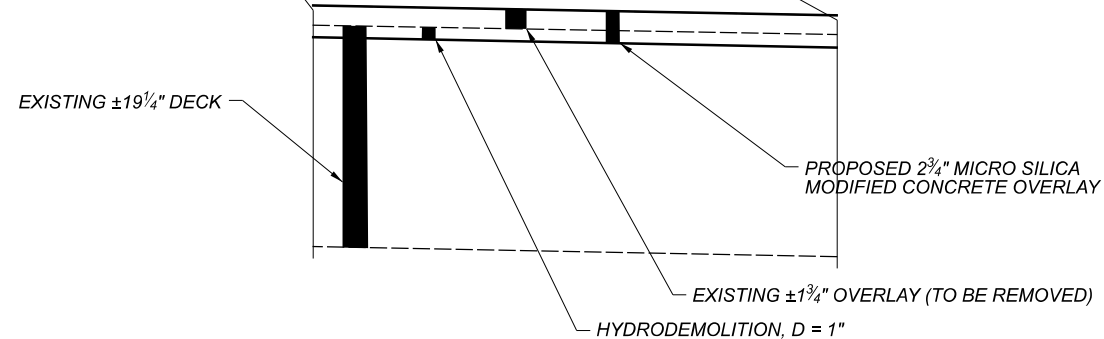
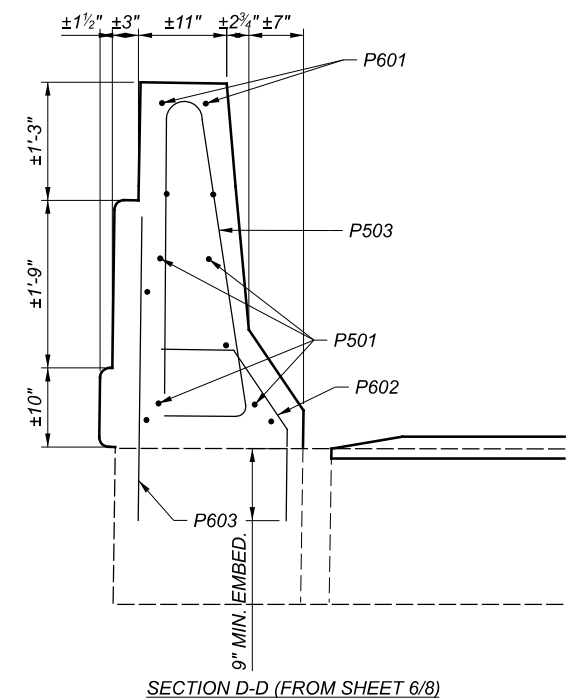
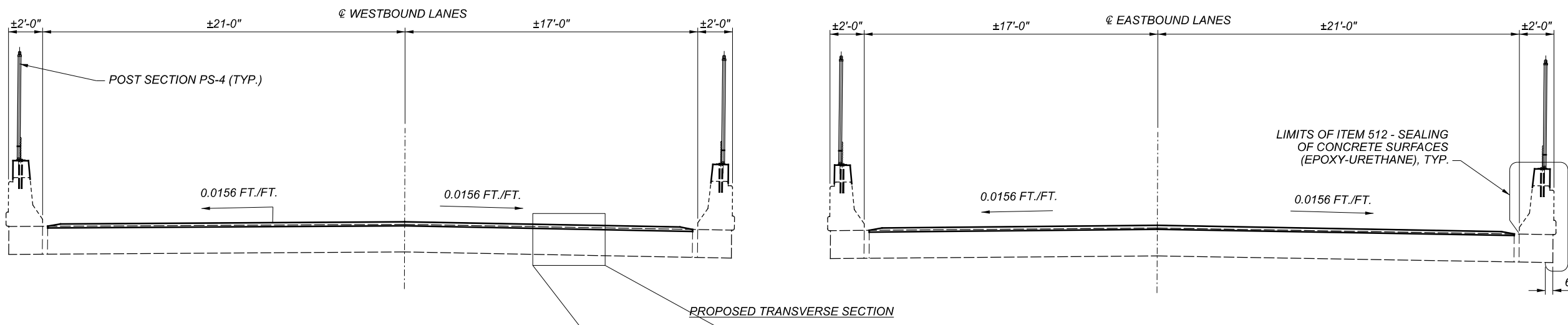
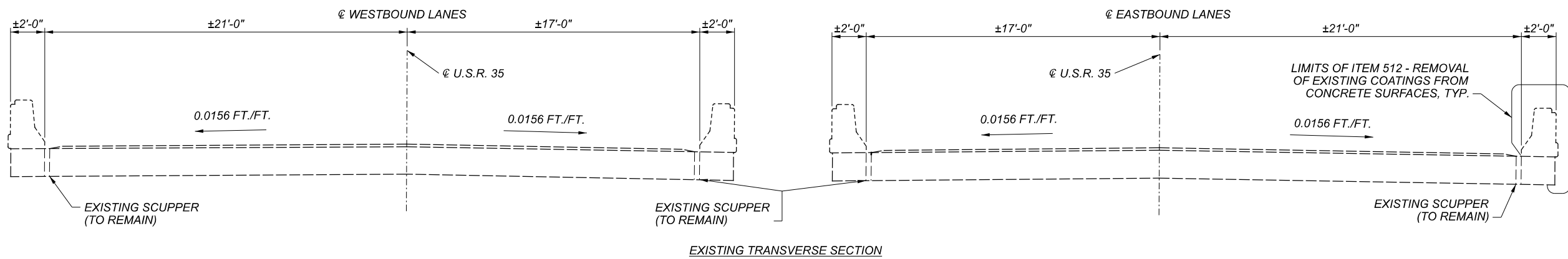
112993

SUBSET TOTAL

4A 8

SHEET TOTAL

P.26A 30

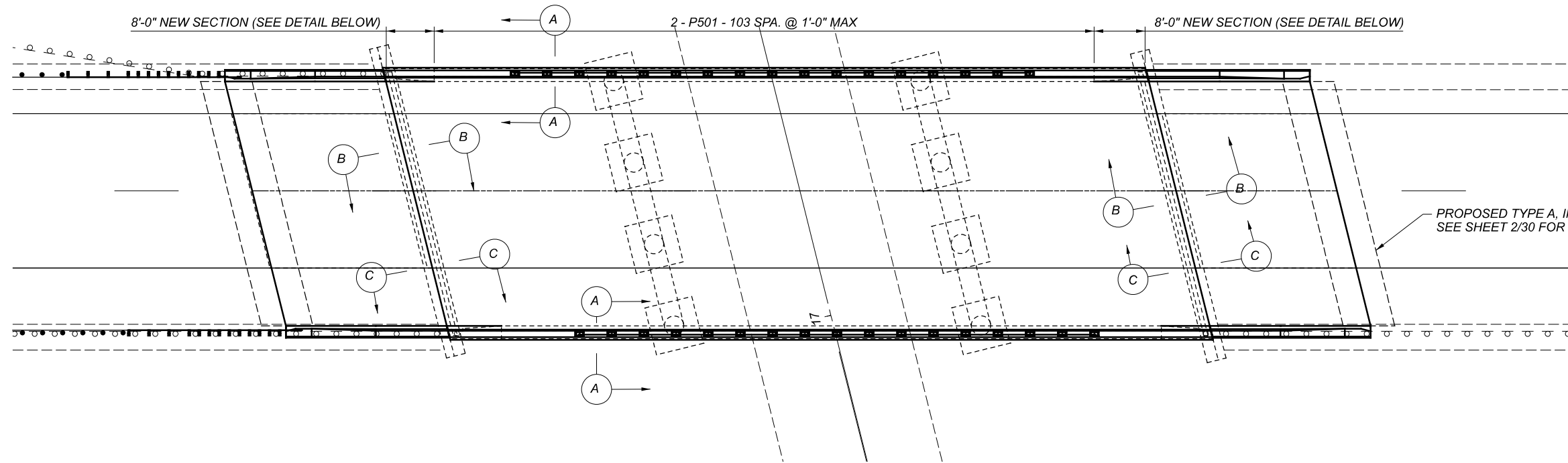


APPLIES TO: BOTH THE LEFT AND RIGHT EDGE OF DECK OF BOTH THE WESTBOUND AND EASTBOUND LANES.

APPLIES TO: BOTH THE LEFT AND RIGHT EDGE OF DECK OF BOTH THE WESTBOUND AND EASTBOUND LANES.

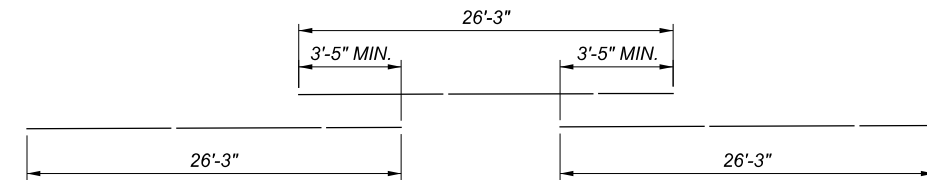
TRANSVERSE SECTION
 BRIDGE NO. JAC-35-1892 L&R
 OVER S.R. 327

SFN	4000609
SFN	4000579
DESIGN AGENCY	
DESIGNER	JEM
CHECKER	XXX
REVIEWER	MCM
PROJECT ID	112993
SUBSET	TOTAL
5	8
SHEET	TOTAL
P.27	30

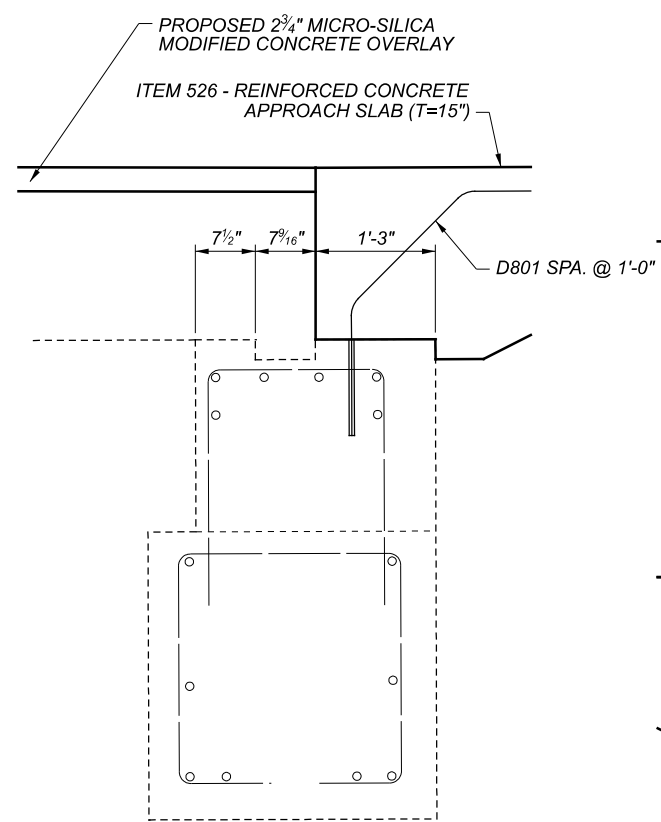


FOR SECTION A-A & D-D, SEE SHEET 5/8

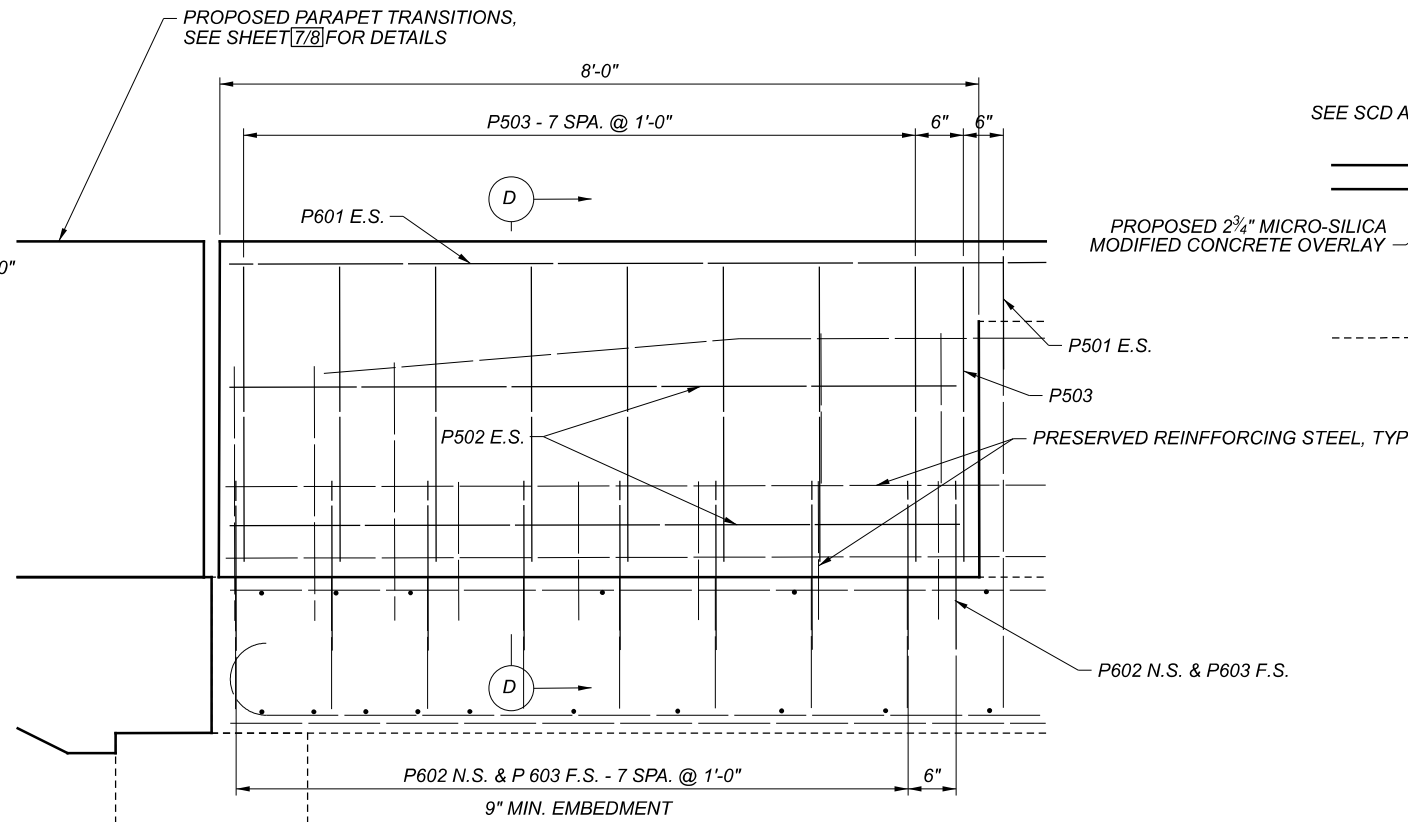
PROPOSED PLAN VIEW
 EASTBOUND LANES SHOWN, WESTBOUND LANES SIMILAR



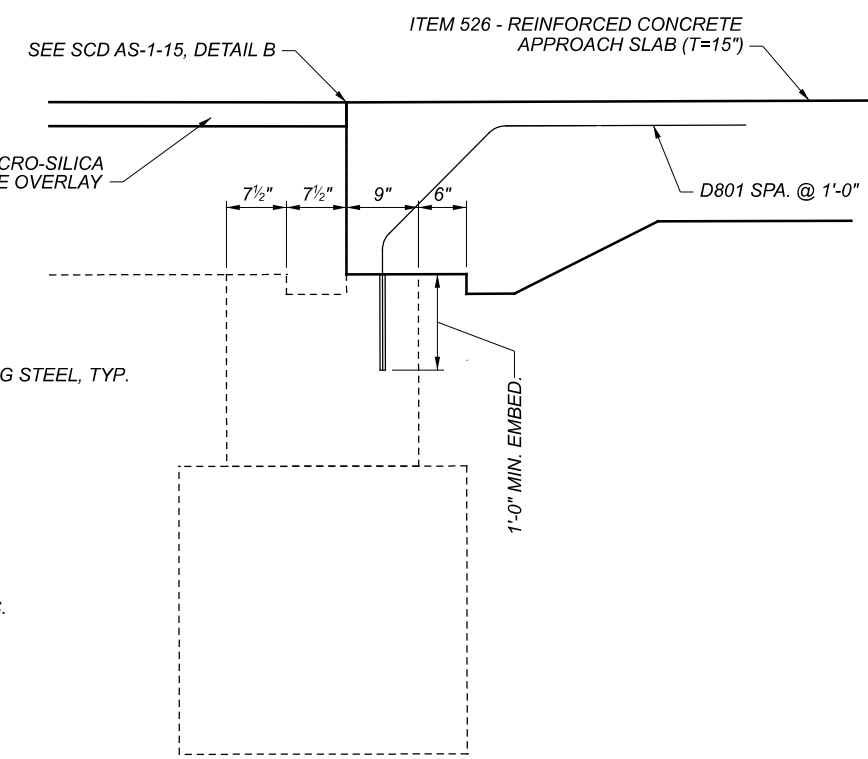
LAPPING DIAGRAM
 APPLIES TO P601 BAR



SECTION C-C



ELEVATION VIEW (NEW 8'-0" SECTION)
 APPLIES TO BOTH LEFT AND RIGHT EDGES OF THE DECK
 AT BOTH THE REAR AND FORWARD ABUTMENTS
 IN BOTH EAST/WESTBOUND LANES.



SECTION B-B

APPLIES TO BOTH FORWARD/REAR ABUTMENTS
 IN BOTH EAST/WESTBOUND LANES. FOR FURTHER
 DETAILS, REFER TO STD. BRG. DWG. AS-2-15 & AS-1-15 DETAIL B

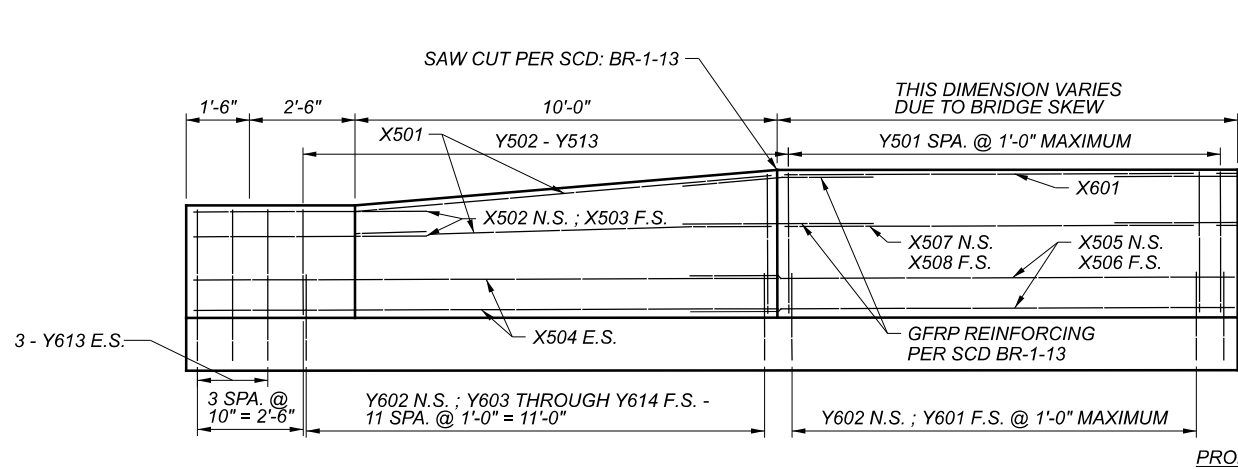


SUPERSTRUCTURE DETAILS
 BRIDGE NO. JAC-35-1892 L&R
 OVER S.R. 327

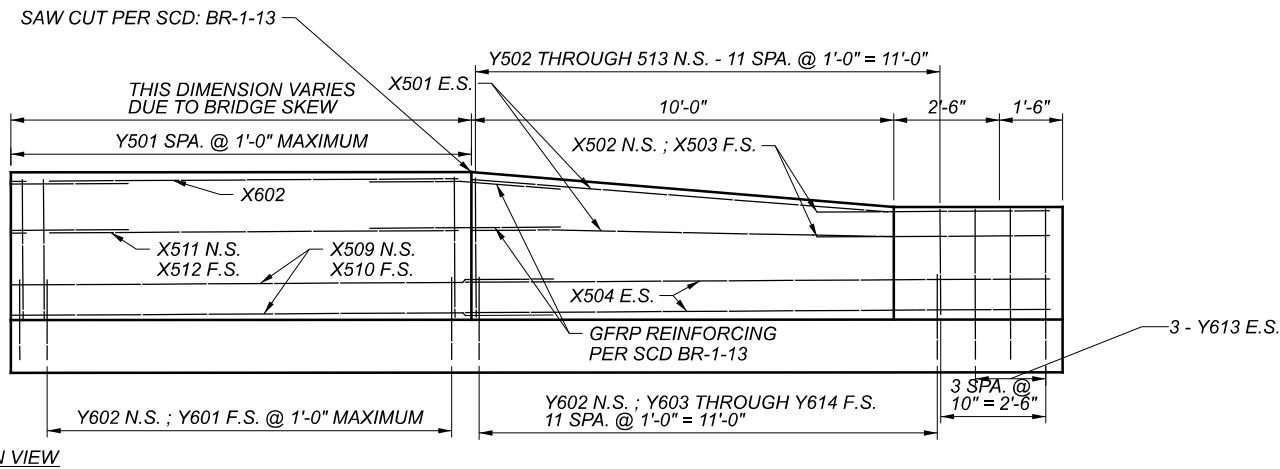
SFN	4000579
SFN	4000609
DESIGN AGENCY	



DESIGNER	JEM	CHECKER	XXX
REVIEWER	MCM		
PROJECT ID	112993		
SUBSET	6	TOTAL	8
SHEET	P.28	TOTAL	30

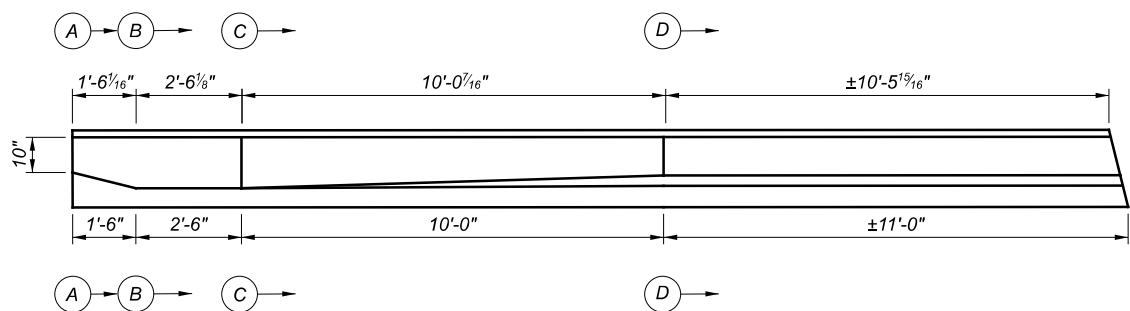


PROPOSED ELEVATION VIEW

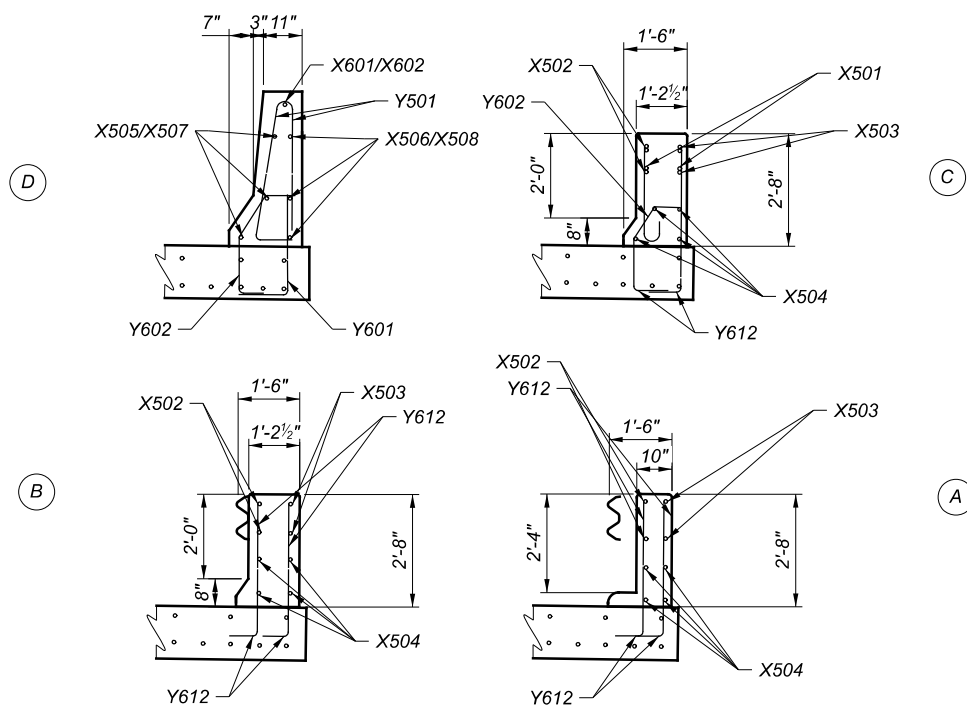
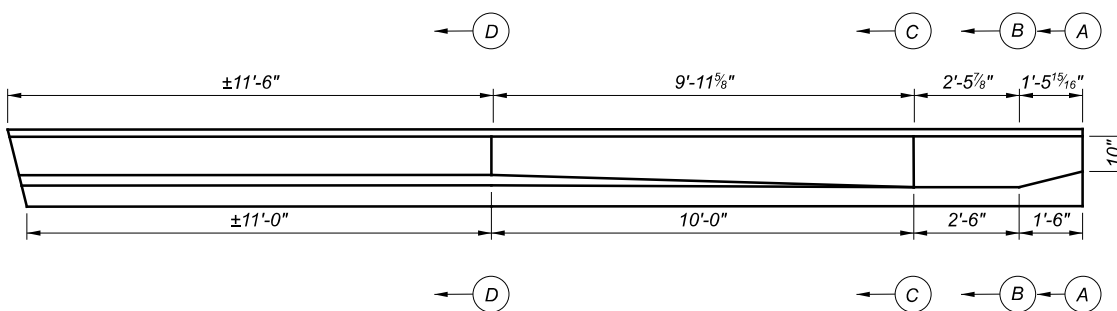


PROPOSED PARAPET TRANSITION APPLIES TO LOCATIONS LABELED AS "B" ON SHEET 1/8

PROPOSED PARAPET TRANSITION APPLIES TO LOCATIONS LABELED AS "A" ON SHEET 1/8



PROPOSED PLAN VIEW



SEE SHEET 29 FOR FURTHER DETAILS ON REINFORCING STEEL QUANTITIES

REINFORCING STEEL FOR 42" BR-1 TRANSITION MOUNTED ON APPROACH SLAB

BENDING DIAGRAMS

Bar	Length
Y502	3'-3"
Y503	3'-2"
Y504	3'-1"
Y505	3'-0"
Y506	2'-11"
Y507	2'-10"
Y508	2'-9"
Y509	2'-8"
Y510	2'-7"
Y511	2'-6"
Y512	2'-5"
Y513	2'-4"

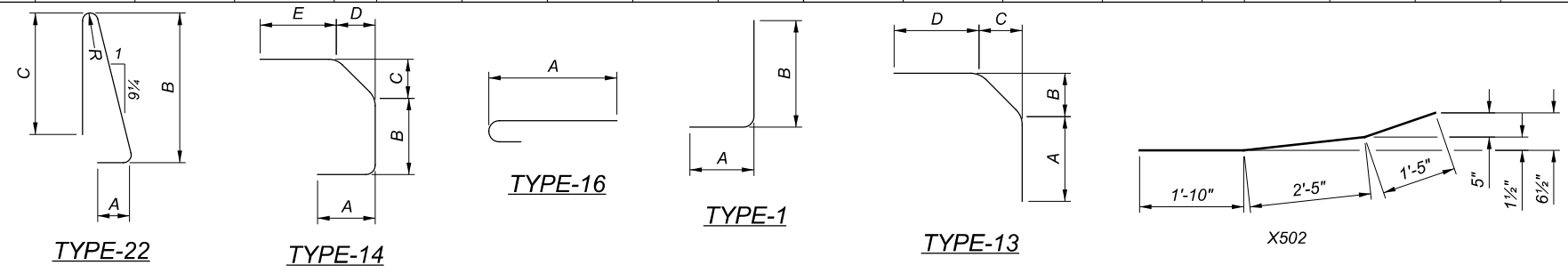
Bar	Embedment
Y603	3'-4"
Y604	3'-3"
Y605	3'-2"
Y606	3'-1"
Y607	3'-0"
Y608	2'-11"
Y609	2'-10"
Y610	2'-9"
Y611	2'-8"
Y612	2'-7"
Y613	2'-6"
Y614	2'-5"

Y502 THROUGH Y513

SFN	4000579
SFN	4000609
DESIGN AGENCY	
DESIGNER/CHECKER	JEM XXX
REVIEWER	MCM
PROJECT ID	112993
SUBSET	7
TOTAL	8
SHEET	P.29
TOTAL	30

MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	R/INCR.	MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D	R/INCR.	MARK	NO.	LENGTH	WEIGHT	TYPE	A	B	C	D		
PARAPET TRANSITION FOR LOCATION "A"										PARAPET TRANSITION FOR LOCATION "B"										PARAPET CAP AND RE-CONSTRUCTION (FOR ONE BRIDGE)										
Y501	11	6'-11"	79	22	0'-8"	3'-0"	3'-3"		0'-2"	Y501	12	6'-11"	87	22	0'-8"	3'-0"	3'-3"		0'-2"	P501*	416	1'-9"	759	1	0'-6"	1'-5"				
Y502	1	3'-10"	4	16	3'-3"					Y502	1	3'-10"	4	16	3'-3"					P502	16	7'-7"	127	STR						
Y503	1	3'-9"	4	16	3'-2"					Y503	1	3'-9"	4	16	3'-2"					P503	36	6'-11"	260	22	0'-8"	3'-0"	3'-3"	0'-2"		
Y504	1	3'-8"	4	16	3'-1"					Y504	1	3'-8"	4	16	3'-1"															
Y505	1	3'-7"	4	16	3'-0"					Y505	1	3'-7"	4	16	3'-0"					P601*	20	26'-3"	789	STR						
																				P602	36	2'-8"	144	13	1'-0"	0'-10"	0'-7"	0'-9"		
Y506	1	3'-6"	4	16	2'-11"					Y506	1	3'-6"	4	16	2'-11"					P603	36	3'-2"	171	STR						
Y507	1	3'-5"	4	16	2'-10"					Y507	1	3'-5"	4	16	2'-10"					TOTAL FOR LEFT BRIDGE:				702						
Y508	1	3'-4"	3	16	2'-9"					Y508	1	3'-4"	3	16	2'-9"					TOTAL FOR RIGHT BRIDGE:				702						
Y509	1	3'-3"	3	16	2'-8"					Y509	1	3'-3"	3	16	2'-8"															
Y510	1	3'-2"	3	16	2'-7"					Y510	1	3'-2"	3	16	2'-7"															
																				ABUTMENT (FOR ONE BRIDGE)										
Y511	1	3'-1"	3	16	2'-6"					Y511	1	3'-1"	3	16	2'-6"					D801	88	5'-6"	1292	13	1'-5"	1'-2"	1'-2"	2'-6"		
Y512	1	3'-0"	3	16	2'-5"					Y512	1	3'-0"	3	16	2'-5"					TOTAL FOR LEFT BRIDGE:				1,292						
Y513	1	2'-11"	3	16	2'-4"					Y513	1	2'-11"	3	16	2'-4"					TOTAL FOR RIGHT BRIDGE:				1,292						
X501	4	10'-0"	42	STR						X501	4	10'-0"	42	STR																
X502	2	5'-8"	12	25	1'-10"	2'-5"	1'-5"	0'-5"	0'-1"	X502	2	5'-8"	12	25	1'-10"	2'-5"	1'-5"	0'-5"	0'-1"											
X503	2	5'-8"	12	STR						X503	2	5'-8"	12	STR																
X504	4	13'-10"	58	STR						X504	4	13'-10"	58	STR																
X505	2	14'-6"	30	STR						X509	2	14'-6"	30	STR																
X506	2	14'-0"	29	STR						X510	2	15'-0"	31	STR																
X507	1	10'-9"	11	STR						X511	1	10'-9"	11	STR																
X508	1	10'-6"	11	STR						X512	1	11'-3"	12	STR																
Y601	11	2'-10"	47	1	2'-0"	1'-0"				Y601	12	2'-10"	51	1	2'-0"	1'-0"														
Y602	23	3'-9"	130	14	1'-0"	1'-3"	0'-8"	0'-6"	0'-10"	Y602	24	3'-9"	132	14	1'-0"	1'-3"	0'-8"	0'-6"	0'-10"											
Y603	1	5'-2"	8	1	1'-0"	4'-4"				Y603	1	5'-2"	8	1	1'-0"	4'-4"														
Y604	1	5'-1"	8	1	1'-0"	4'-3"				Y604	1	5'-1"	8	1	1'-0"	4'-3"														
Y605	1	5'-0"	8	1	1'-0"	4'-2"				Y605	1	5'-0"	8	1	1'-0"	4'-2"														
Y606	1	4'-11"	7	1	1'-0"	4'-1"				Y606	1	4'-11"	7	1	1'-0"	4'-1"														
Y607	1	4'-10"	7	1	1'-0"	4'-0"				Y607	1	4'-10"	7	1	1'-0"	4'-0"														
Y608	1	4'-9"	7	1	1'-0"	3'-11"				Y608	1	4'-9"	7	1	1'-0"	3'-11"														
Y609	1	4'-8"	7	1	1'-0"	3'-10"				Y609	1	4'-8"	7	1	1'-0"	3'-10"														
Y610	1	4'-7"	7	1	1'-0"	3'-9"				Y610	1	4'-7"	7	1	1'-0"	3'-9"														
Y611	1	4'-6"	7	1	1'-0"	3'-8"				Y611	1	4'-6"	7	1	1'-0"	3'-8"														
Y612	1	4'-5"	7	1	1'-0"	3'-7"				Y612	1	4'-5"	7	1	1'-0"	3'-7"														
Y613	4	4'-4"	26	1	1'-0"	3'-6"				Y613	4	4'-4"	26	1	1'-0"	3'-6"														
Y614	1	4'-3"	6	1	1'-0"	3'-5"				Y614	1	4'-3"	6	1	1'-0"	3'-5"														
X601	1	10'-6"	16	STR						X602	1	11'-1"	17	STR																
TOTAL FOR ONE TRANSITION:			624							TOTAL FOR ONE TRANSITION:			642																	
TOTAL FOR LEFT BRIDGE:			1,248							TOTAL FOR LEFT BRIDGE:			1,284																	
TOTAL FOR RIGHT BRIDGE:			1,248							TOTAL FOR RIGHT BRIDGE:			1,284																	

* - PROVIDED FOR INFORMATION ONLY, PAYMENT INCLUDED IN ITEM 517, RAILING (UPGRADE EXISTING), AS PER PLAN



REINFORCING STEEL LIST
 BRIDGE JAC-35-1892 L&R
 OVER S.R. 327

SFN	4000579
SFN	4000609
DESIGNER	JEM
CHECKER	XXX
REVIEWER	MCM
PROJECT ID	112993
SUBSET	8
TOTAL	8
SHEET	P.30
TOTAL	30