

**STATE OF OHIO
DEPARTMENT OF TRANSPORTATION**

HAM-IR 71-14.40/18.58

CITY OF MONTGOMERY, SYMMES TOWNSHIP,
& SYCAMORE TOWNSHIP
HAMILTON COUNTY

FEDERAL PROJECT NUMBER

E170223

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

REHABILITATE BRIDGE HAM-71-1440 (COOPER RD OVER I-71)
BY REPLACING THE CONCRETE PARAPETS AND VANDAL FENCE.
REHABILITATE BRIDGE HAM-71-1858 (SNIDER RD OVER I-71)
BY REPLACING THE CONCRETE PARAPETS AND VANDAL FENCE
AND PERFORMING OTHER MINOR BRIDGE AND ROAD UPGRADES.

HAM-71-1440 EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 0.2 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.1 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 0.3 ACRES
N.O.I. NOT REQUIRED - MAINTENANCE PROJECT

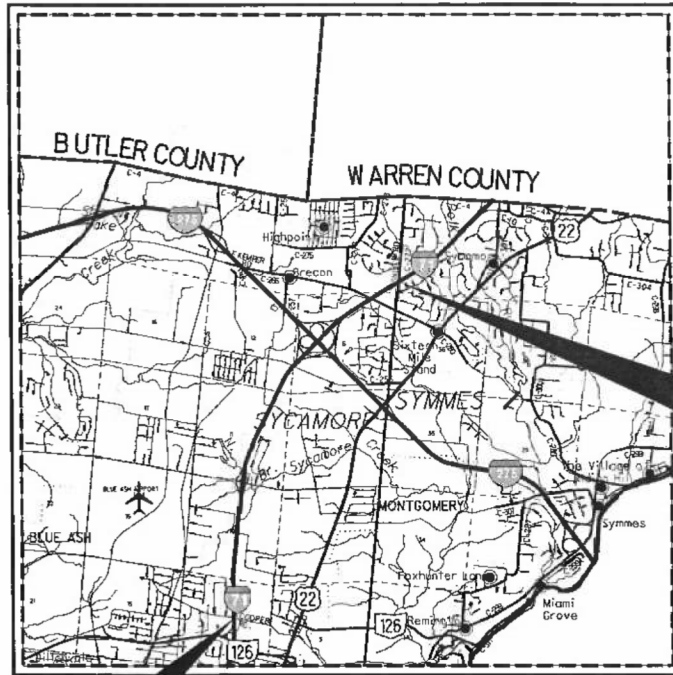
HAM-71-1858 EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 0.7 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.1 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 0.8 ACRES
N.O.I. NOT REQUIRED - MAINTENANCE PROJECT

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 HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY AND THAT DETOURS WILL BE PROVIDED AS INDICATED ON SHEETS 7 & 8.



HAM-IR 71-14.40 LOCATION MAP
HAM-IR 71-14.40 LATITUDE: N39°13'44" LONGITUDE: W84°22'01"
HAM-IR 71-18.58 LATITUDE: N39°16'49" LONGITUDE: W84°20'07"

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

DESIGN DESIGNATION

	HAM-71-1440	HAM-71-1858	COOPER RD.	SNIDER RD.
CURRENT ADT (2023, 2021 - LOCAL)	131,000	134,000	9,908	12,164
DESIGN YEAR ADT (2035)	135,000	150,000		
DESIGN HOURLY VOLUME (2035)	12,000	15,000		
DIRECTIONAL DISTRIBUTION	0.50	0.53	0.51	0.50
TRUCKS (24 HOUR B&C)	11%	15%	4%	3%
DESIGN SPEED	65 MPH	65 MPH	35 MPH	35 MPH
LEGAL SPEED	65 MPH	65 MPH	35 MPH	35 MPH
DESIGN FUNCTIONAL CLASSIFICATION:	01	01	05	04

- (01) INTERSTATE (URBAN)
- (04) MINOR ARTERIAL (URBAN)
- (05) MAJOR COLLECTOR (URBAN)
- NHS PROJECT ----- YES

DESIGN EXCEPTIONS

N/A

ADA DESIGN WAIVERS

N/A

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO811.org
Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:
OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 8 ENGINEERING
505 SOUTH SR 741, LEBANON, OHIO 45036

ENGINEER'S SEAL:

SIGNED: *Chris Howard*
DATE: 8-15-22

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STANDARD CONSTRUCTION DRAWINGS								SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
BP-3.1	1/21/22	A-1-20	1/21/22	MT-95.30	7/19/19		800-2019	ASBESTOS REPORT 6/10/22	
BP-5.1	7/15/22	BR-2-15	1/21/22	MT-95.45	1/17/20	TC-41.20	SEE PROPOSAL		
DM-4.1	7/17/20	EXJ-4-87	7/15/22	MT-95.50	7/21/17	TC-41.30	809 1/21/22		
DM-4.3	1/15/16	GSD-1-19	1/15/21	MT-98.20	4/19/19	TC-42.10	821 4/20/12		
DM-4.4	1/15/16	PCB-91	7/17/20	MT-98.22	1/17/20	TC-42.20	832 10/19/18		
		SBR-1-20	7/17/20	MT-98.29	1/17/20		844 4/20/18		
MGS-1.1	7/16/21	TVPF-1-18	7/20/18	MT-101.60	1/17/20	TC-61.30	847 1/15/21		
MGS-2.1	1/19/18	VPF-1-90	7/20/18	MT-101.70	1/17/20		848 1/15/21		
MGS-3.1	1/19/18			MT-101.75	1/17/20	TC-65.10	863 7/18/21		
MGS-4.2	7/19/13	HL-20.14	4/17/20	MT-101.90	7/17/20	TC-65.11	872 1/21/22		
MGS-4.3	1/18/13	HL-30.11	1/15/21	MT-103.10	1/21/22	TC-71.10	878 1/21/22		
		HL-30.21	4/17/20	MT-105.10	1/17/20		921 4/20/12		
RM-4.2	4/17/20	HL-30.31	4/17/20	MT-99.60	7/15/16				
RM-4.5	7/21/17	HL-30.33	1/21/22	TC-12.30	10/18/13				
RM-4.6	7/19/13			TC-21.20	10/18/13				
				TC-22.20	1/17/14				

APPROVED *Tammy K. Ceybell*
DATE 8-10-2022 DISTRICT DEPUTY DIRECTOR

John M. Roberts
DIRECTOR, DEPARTMENT OF TRANSPORTATION

TITLE SHEET

DESIGN AGENCY	
DESIGNER	CAH
REVIEWER	AS 5-23-22
PROJECT ID	102793
SHEET	TOTAL
1	53

HAM-IR 71-14.40/18.58

MODEL: Sheet PAPER: 17x11 (in.) DATE: 8/10/2022 TIME: 4:06:13 PM USER: choward4 p:\vehicledwg\ben\ben\com\hcd\p\2\Documents\01 Active Projects\District 8\Hamilton\102793\40-Engineering\Roadway\Sheets\102793_G11001.dgn

ITEM 630 - REMOVAL OF OVERHEAD MOUNTED SIGN SUPPORT AND REERECTION, TYPE TC-12.30, AS PER PLAN

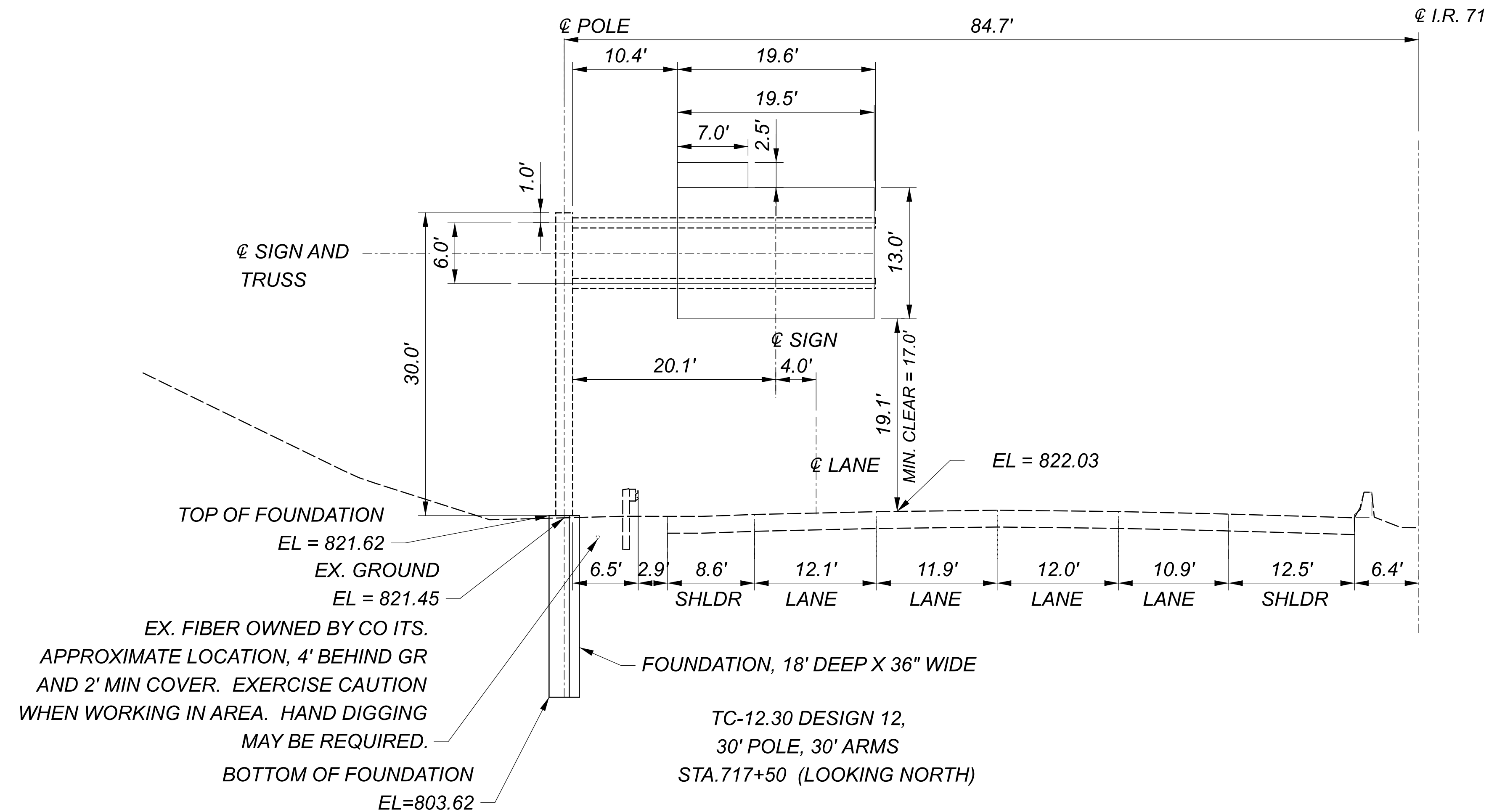
THE CONTRACTOR SHALL RELOCATE THE CANTILEVER HIGHWAY SIGN ALONG I-71 SOUTHBOUND NEAR COOPER RD. TO ACCOMMODATE THE REHABILITATION OF THE HAM-71-14.40 BRIDGE. THE SIGN IS CURRENTLY LOCATED AT STA. 717+00 AND WILL MOVE TO STA. 717+50.

THE OVERHEAD SIGN SUPPORT TO BE REMOVED AND REERECTION IS A TC-12.30 DESIGN 12. THE NEW FOUNDATION WILL NEED TO FOLLOW THE SCD THAT WAS IN PLACE AT THE TIME OF ITS CONSTRUCTION (ARCHIVED STANDARD DRAWING TC-21.20, DATED 10-18-13) IN ORDER TO MATCH THE ANCHOR BOLT PATTERN, LENGTHS AND SIZES. THE CONTRACTOR SHALL CONFIRM MEASUREMENTS OF THE EXISTING SIGN IN THE FIELD TO ENSURE THE SUPPORT WILL FIT ON THE NEW FOUNDATION. PER THE CMS, THE REQUIRED ANCHOR BOLTS ARE INCLUDED WITH THIS ITEM FOR PAYMENT, AS WELL AS FOUNDATION REMOVAL AND SITE RESTORATION. THE NEW FOUNDATION IS ITEMIZED SEPARATELY. SEE ELEVATION DETAIL BELOW.

MAINTAINING ITS DURING CONSTRUCTION

THE CONTRACTOR SHALL MAINTAIN ALL PREEXISTING OR NEWLY INSTALLED PERMANENT ITS/TRAFFIC DEVICES AND INFRASTRUCTURE DURING CONSTRUCTION ACCORDING TO ODOT SUPPLEMENTAL SPECIFICATION 809.

WORK INTERFERING WITH COOPER RD. OVERHEAD ELECTRIC LINES
 THE CONTRACTOR SHALL SUBMIT A "POWER LINE ENCROACHMENT SAFETY AGREEMENT" TO THE ELECTRIC UTILITY OWNER PRIOR TO THE DEENERGIZING OF THE OVERHEAD ELECTRIC LINES AND THE BEGINNING OF WORK ON THE COOPER RD BRIDGE. ANY COST ASSOCIATED WITH THIS TASK AND ANY ASSOCIATED COORDINATION SHALL BE CONSIDERED INCIDENTAL TO ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.



SIGN RELOCATION QUANTITIES

ITEM	EXTENSION	QTY	UNIT	DESCRIPTION
625	32000	1	EACH	GROUND ROD
630	75000	3	EACH	SIGN ATTACHMENT ASSEMBLY
630	84510	1	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION
630	87100	2	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION
630	89101	1	EACH	REMOVAL OF OVERHEAD SIGN SUPPORT AND REERECTION, TYPE TC-12.30, AS PER PLAN

QUANTITIES CARRIED TO GENERAL SUMMARY.

DESIGN AGENCY



DESIGNER

CAH

REVIEWER

TS 6-16-22

PROJECT ID

102793

SHEET

TOTAL

4 | 53

ITEM 614 MAINTAINING TRAFFIC

ON I-71:
ALL LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT IN ACCORDANCE WITH THE PERMITTED LANE CLOSURE TIMES NOTE, BY USE OF THE EXISTING PAVEMENT.

ON COOPER ROAD:
A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED THAT SHOWN IN THE A+B CONTRACT TABLE, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 7. A DISINCENTIVE SHALL BE ASSESSED PER THE A+B CONTRACT TABLE FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT. THE PROPOSED WORK WILL IMPACT THE END OF THE 2022/2023 SCHOOL YEAR AT THE SYCAMORE JUNIOR HIGH SCHOOL. THE LAST DAY OF SCHOOL FOR SYCAMORE JUNIOR HIGH SCHOOL IS SCHEDULED FOR MAY 26, 2023.

ON SNIDER ROAD:
A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED THAT SHOWN IN THE DISINCENTIVE TABLE, WHEN THROUGH TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 8. A DISINCENTIVE SHALL BE ASSESSED PER THE DISINCENTIVE TABLE FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ON ALL ROADS, NO WORK SHALL BE PERFORMED AND ON I-71 ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEAR'S	LABOR DAY
MEMORIAL DAY	THANKSGIVING
EASTER	

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 OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00 AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00 AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00 AM FRIDAY
THURSDAY	6:00 AM WEDNESDAY THROUGH 6:00 AM MONDAY (THANKSGIVING ONLY)
FRIDAY	12:00N THURSDAY THROUGH 6:00 AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00 AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$300 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

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.

PERMITTED LANE CLOSURE TIMES
SHORT TERM LANE CLOSURES ARE THOSE WHICH ARE PERMITTED BY THE PERMITTED LANE CLOSURE NOTE. THESE TIMES SHALL NOT BE REVISED WITHOUT PRIOR APPROVAL FROM THE DISTRICT 8 WORK ZONE TRAFFIC CONTROL MANAGER. SHORT TERM LANE CLOSURES SHALL ONLY BE IMPLEMENTED WHEN WORK IS BEING CONTINUOUSLY PERFORMED IN THE LANE. THE CLOSURE SHALL BE REMOVED AS SOON AS POSSIBLE AFTER WORK HAS STOPPED. PERMITTED LANE CLOSURES SHALL ONLY BE ALLOWED DURING THE TIMES SPECIFIED IN THE LANE VALUE CONTRACT TABLE INCLUDED IN THESE PLANS. NO LANE OR SHOULDER CLOSURE SHALL BE IN PLACE WHEN NO WORK IS BEING PERFORMED.

LANE VALUE CONTRACT TABLE			
DESCRIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED	RESTRICTED TIME PERIOD	TIME UNIT	DISINCENTIVE \$ PER TIME UNIT PER LANE
IR-71: SINGLE LANE CLOSURE	6:00AM-8:00PM	1 MINUTE	\$300
DOUBLE LANE CLOSURE	5:00AM-11:00PM	1 MINUTE	\$300
TRIPLE LANE CLOSURE	5:00AM-12:00AM	1 MINUTE	\$300
15 MINUTE SHORT DURATION COMPLETE CLOSURE	5:00AM-12:00AM	1 MINUTE	\$300
SB IR-71 EXIT RAMP CLOSURE	5:00AM-10:00PM	1 MINUTE	\$300

NOTE: ALL TRIPLE LANE CLOSURES SHALL BE PERFORMED FROM THE LEFT (LEFT LANES CLOSED).

DETOUR SIGNING
THE DETOUR SIGNING PAY ITEM SHALL INCLUDE THE ERECTION, MAINTENANCE AND SUBSEQUENT REMOVAL OF ALL SIGNAGE REQUIRED TO TEMPORARILY RE-ROUTE TRAFFIC AROUND THE CLOSURES AT COOPER RD. AND SNIDER RD. AS SHOWN ON SHEETS 7 AND 8.

PARAPET REMOVAL AND VANDAL PROTECTION FENCE WORK
PARAPET REMOVALS AND REMOVAL/INSTALLATION OF VANDAL PROTECTION FENCE AT THE COOPER RD. AND SNIDER RD. BRIDGES SHALL ONLY BE PERFORMED AT NIGHT WITH LANE CLOSURES ON I-71 IN ACCORDANCE WITH THE PERMITTED LANE CLOSURE MAP AND LANE USE CONTRACT TABLE.

DISINCENTIVE & WINDOW TABLE				
CONTRACT SEGMENT - LOCATION AND DESCRIPTION OF CRITICAL WORK	CALENDAR DAYS TO COMPLETE	WORK WINDOW		DISINCENTIVE \$ PER DAY
		START	END	
ALL WORK PERFORMED BY COMPLETE CLOSURE OF SNIDER RD. HAM-71-1858	120	4/1/2023	10/15/2023	\$8,000
NOTE: SHOULD THE AESTHETIC VANDAL PROTECTION FENCE ALTERNATE BE SELECTED, THE CONSTRUCTION DURATION WILL BE INCREASED 30 CALENDAR DAYS BY CHANGE ORDER. TOTAL CONSTRUCTION DURATION WILL BE 150 DAYS. DISINCENTIVES SHALL APPLY TO THE REVISED CONSTRUCTION SCHEDULE.				

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.

A QUANTITY OF 3 ATTENUATORS HAVE BEEN CARRIED TO THE GENERAL SUMMARY FOR THE I-71 SHOULDER CLOSURES.

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.

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

ITEM 614, BARRIER REFLECTOR, TYPE 1 (ONE-WAY) 8 EACH
ITEM 614, OBJECT MARKER, ONE - WAY 8 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

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).

FOR OPERATIONS WITHOUT POSITIVE PROTECTION OCCURRING WITHIN 10 FEET OF AN OPEN TRAVELED LANE THAT MEET ALL OF THE FOLLOWING CRITERIA:
ON A MULTI-LANE DIVIDED INTERSTATE, OTHER FREEWAY OR EXPRESSWAY; AND
AN AUTHORIZED SPEED LIMIT OF 45 MPH OR GREATER THAT IS IN EFFECT AT THE TIME OF THE OPERATION;
AND,
AADT OF 50,000 (OR AADT OF 30,000 WITH 25% OR HIGHER PERCENT TRUCKS)

"WITHOUT POSITIVE PROTECTION" MEANS USE OF DRUMS, CONES, SHADOW VEHICLE, ETC, WITHOUT PROTECTION FROM PORTABLE BARRIER OR OTHER RIGID BARRIER ALONG THE WORK AREA. THIS PHRASE DOES NOT APPLY TO CASES WHERE POSITIVE PROTECTION IS REQUIRED. MOBILE OPERATIONS ARE REGARDED AS "WITHOUT POSITIVE PROTECTION". FOR WORK ZONES USING A COMBINATION OF BARRIER AND TEMPORARY TRAFFIC CONTROL DEVICES (CONES, DRUMS, ETC), THE DESIGNATION SHALL BE BASED UPON THE TYPE OF DEVICES USED IN THE AREA THAT WORKERS ARE LOCATED.

A + B CONTRACT & WINDOW TABLE						
CONTRACT SEGMENT - LOCATION AND DESCRIPTION OF CRITICAL WORK	MINIMUM DAYS	MAXIMUM DAYS	WORK WINDOW		INCENTIVE/ DISINCENTIVE \$ PER DAY	MAXIMUM INCENTIVE \$
			START	END		
ALL WORK PERFORMED BY COMPLETE CLOSURE OF COOPER RD. HAM-71-1440	50	70	3/1/2023	6/1/2023	\$10,000	\$50,000

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

IF MULTIPLE ACTIVE LOCALIZED QUALIFYING WORK AREAS OCCUR WITHOUT POSITIVE PROTECTION, PER MAINLINE TRAFFIC DIRECTION, PROVIDE A UNIFORMED LEO AND OFFICIAL PATROL CAR IN ADVANCE OF:
THE FIRST ACTIVE WORK AREA THAT DRIVERS WILL ENCOUNTER; OR
THE ACTIVE WORK AREA Laterally Closest to the OPEN TRAVELED LANE; OR
OTHER LOCATION AS APPROVED BY THE ENGINEER.
THE UNIFORMED LEO AND OFFICIAL PATROL CAR MAY RELOCATE AMONG THE LISTED LOCATIONS AS APPROPRIATE AS THE OPERATIONS PROCEED IN THE LOCALIZED QUALIFYING WORK AREAS.

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 1,900 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.

NOTIFICATION OF TRAFFIC RESTRICTIONS

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 THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). 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 CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION OF TRAFFIC RESTRICTIONS 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
	<= 12 HOURS	4 CALENDAR DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

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

PORTABLE BARRIER

PORTABLE BARRIER SHALL BE PLACED ALONG THE I-71 NORTHBOUND AND SOUTHBOUND OUTSIDE SHOULDERS AT THE SNIDER RD. OVERPASS DURING PIER PROTECTION UPGRADES.

PORTABLE BARRIER SHALL BE PLACED ALONG THE I-71 SOUTHBOUND OUTSIDE SHOULDER AT THE COOPER RD. OVERPASS DURING HIGHWAY SIGN RELOCATION WORK.

A QUANTITY OF 1,200 LIN. FT OF UNANCHORED PORTABLE BARRIER HAS BEEN CARRIED TO THE GENERAL SUMMARY.

800' - I-71 SHOULDER CLOSURES AT SNIDER RD. OVERPASS
400' - I-71 SHOULDER CLOSURE AT COOPER RD. OVERPASS

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.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET(S) 7 AND 8 OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED 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 2 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.

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
20 SIGN MONTHS ASSUMING 4 PCMS SIGNS FOR 2 MONTHS AT COOPER RD. AND 4 ADDITIONAL PCMS SIGNS FOR 3 MONTHS AT SNIDER RD.

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 2 (ONE WAY) 10 EACH
ITEM 614, OBJECT MARKER, ONE-WAY 10 EACH

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

DESIGN AGENCY



DESIGNER

CAH

REVIEWER

SK 6-22-22

PROJECT ID


102793

SHEET

TOTAL

6 | 53

SHEET NUM.												PART.	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
3	5	6	12									01/IMS/BR	EXT	TOTAL				
			0.13									0.13	646	10010	0.13	MILE	EDGE LINE, 6"	
			0.07									0.07	646	10200	0.07	MILE	CENTER LINE	
			0.13									0.13	646	50300	0.13	MILE	REMOVAL OF PAVEMENT MARKING	
																	STRUCTURE REPAIR (HAM-71-1440)	20
																	STRUCTURE REPAIR (HAM-71-1858)	30
																	MAINTENANCE OF TRAFFIC	
		1,900										1,900	614	11110	1,900	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
												3	614	12380	3	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
	LUMP											LUMP	614	12420	LS		DETOUR SIGNING	5
	8											8	614	13310	8	EACH	BARRIER REFLECTOR, TYPE 1 (ONE WAY)	5
		10										10	614	13312	10	EACH	BARRIER REFLECTOR, TYPE 2 (ONE WAY)	
	8	10										18	614	13350	18	EACH	OBJECT MARKER, ONE WAY	
		20										20	614	18601	20	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	6
		1,200										1,200	622	41100	1,200	FT	PORTABLE BARRIER, UNANCHORED	
																	INCIDENTALS	
	LUMP											LUMP	614	11000	LS		MAINTAINING TRAFFIC	5
												LUMP	623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	3
												LUMP	624	10000	LS		MOBILIZATION	

DESIGN AGENCY

 DESIGNER
 CAH
 REVIEWER
 AS 5-23-22
 PROJECT ID
 102789
 SHEET TOTAL
 10 53

CLASS QC3 CONCRETE, MISC.: LIGHT WEIGHT SUPERSTRUCTURE CONCRETE WITH QC/QA, AS PER PLAN (FOR PARAPETS, DECK SLAB AND SIDEWALKS)

THIS ITEM MODIFIES THE STANDARD 511 CONCRETE FOR STRUCTURES SPECIFICATION TO INCLUDE MACRO-SYNTHETIC, AND CORROSION INHIBITORS INTO THE SUPERSTRUCTURE CONCRETE. THIS ITEM SHALL CONFORM TO CMS 511 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

PROVIDE MATERIALS CONFORMING TO 511.02 EXCEPT AS MODIFIED BELOW:

PORTLAND CEMENT CONCRETE 499.03, CLASS QC 3 MEETING A DESIGN STRENGTH OF 4,500 PSI, WITH MACRO-SYNTHETIC FIBERS WITH MODIFICATION PER 511.02
FIBERS FOR CONCRETE ASTM C 1116, TYPE III
CORROSION INHIBITOR 515.15

THE CLASS QC3 CONCRETE FOR THE SUPERSTRUCTURE SHALL MEET THE FOLLOWING CRITERIA:
WATER/CEMENT RATIO = 0.40 MAXIMUM; MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.0 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

THE CLASS QC3 MISCELLANEOUS CONCRETE FOR THE SIDEWALK SHALL HAVE A MAXIMUM DRY (CURED) WEIGHT OF 120 LBS/CF AND THE AGGREGATE SHALL MEET THE REQUIREMENTS OF ASTM C330. MIX DESIGN SHALL BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO USE. THIS LIGHTWEIGHT CONCRETE SHALL BE USED FOR THE SIDEWALK ON THE BRIDGE DECK AND NOT ON THE PPROACH SLABS.

MIX SHALL INCLUDE A MIGRATING CORROSION INHIBITOR AS MANUFACTURED BY AN APPROVED SUPPLIER LISTED ON ODOT'S QUALIFIED APPROVED SUPPLIERS, ITEM 515.15. THE DOSAGE RATE LISTED ON THE ODOT QUALIFIED APPROVED SUPPLIERS LIST WILL APPLY.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.0 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURE'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE

LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE. A CHEMICAL ADMIXTURE (705.12, TYPE A OR D) SHALL BE USED. THE TRANSIT MIXER CHARGE SHALL BE LIMITED TO 3/4 OF ITS RATED CAPACITY OR 6 CUBIC YARDS, WHICHEVER IS SMALLER. THE FIRST THREE TRANSIT MIXER LOADS ARE REQUIRED TO BE AT THE MINIMUM YARDAGE LISTED ABOVE TO SHOW PROOF OF THE SUCCESSFUL BATCHING OPERATION. AFTER CONSISTENCY IN THE DELIVERED MATERIAL HAS BEEN ESTABLISHED, THE CONCRETE SUPPLIER MAY INCREASE THE BATCH DELIVERED QUANTITIES AS LONG AS THE QUALITY REMAINS ACCEPTABLE TO THE ENGINEER. THE ENGINEER CAN REDUCE THE BATCH LOAD SIZE AT ANY TIME AS NEEDED TO CORRECT/IMPROVE CONCRETE QUALITY.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR AND ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CORROSION INHIBITOR IS SUGGESTED TO BE A MCI PRODUCT BY CORTEC OR AN APPROVED EQUAL FROM THE QUALIFIED PRODUCTS LIST. THE CONCRETE SUPPLIER'S CHOICE OF ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS. PLEASE BE ADVISED THAT SOME PRODUCTS ON THE LIST EFFECT THE DELIVERED MIX PROPERTIES GREATLY WHILE OTHER PRODUCTS DO NOT.

APPROACH SLABS, DIAPHRAGMS, AND BRIDGE RAILING CONCRETE (WHEN APPLICABLE) ARE TO USE THE SAME MIX DESIGN AS THE BRIDGE DECK. THE CONTRACTOR SHOULD BE ADVISED THAT CONCRETE RETARDING AGENTS MAY NEED TO BE ADDED TO OFFSET THE EFFECTS OF THE MIGRATING CORROSION INHIBITOR SELECTED. USE SELF-COMPACTING CONCRETE ON DECORATIVE RAILING SIMILAR TO TEXAS RAILING AND MACRO-SYNTHETIC CONCRETE PER THIS SPECIFICATION ON TRADITIONAL CONCRETE RAILING WHEN APPLICABLE.

THE CONTRACTOR SHALL PROVIDE TRADITIONAL BRIDGE DECK FORMS CONFORMING TO CMS 508. PERMANENT STAY-IN-PLACE (SIP) FORMS ARE NOT ALLOWED. THE PLACING OF THE DECK AND THE APPROACH SLABS IN THE SAME CONCRETE POUR IS NOT PERMITTED.

CLASS QC3 CONCRETE, MISC.: APPROACH SLAB CONCRETE WITH QC/QA, AS PER PLAN (FOR APPROACH SLABS AND APPROACH SLAB SIDEWALKS)

SPECIFICATIONS SHALL BE THE SAME AS THE QC3 SUPERSTRUCTURE CONCRETE EXCEPT THAT A NORMAL CURED CONCRETE WEIGHT OF 145 LB/CF SHALL BE USED.

REHABILITATE THE HAM-71-1440 BRIDGE (SFN 3105164) THAT CARRIES COOPER RD OVER I-71 IN THE CITY OF MONTGOMERY AS FOLLOWS:

1. REPLACE THE EXISTING PARAPETS WITH NEW BARRIER PER BR-2-15 ON THE DECK AND WINGWALLS. INCLUDE A 3" CONDUIT IN THE NEW BARRIER(S) ON THE DECK, THE PARAPET AND A PORTION OF THE UNDERLYING SHALL BE REMOVED DOWN TO THE TOP OF THE ORIGINAL DECK. ON THE WINGWALL, THE PARAPET SHALL BE REMOVED DOWN TO THE TOP OF SIDEWALK. EXISTING REINFORCING MAY BE CUT AND NEW REINFORCING SHALL BE DOWELED IN AS NECESSARY UNLESS NOTED OTHERWISE. INSTALL NEW VANDAL PROTECTION FENCE PER VPF-1-90 WITH A CURVED TOP THAT IS 12' OVER THE SIDEWALK AND A COMBINED BASEPLATE FOR THE RAILING AND FENCE POST PER BR-2-15. THE PVC COATING OF THE FABRIC AND WIRE TIES SHALL BE BLACK INSTEAD OF GRAY AS NOTED IN THE STANDARD DRAWING AND THE GALVANIZED FENCE POSTS, PLATES, AND CONNECTIONS SHALL FIRST BE GALVANIZED, BRUSH-OFF BLASTED, THEN PAINTED BLACK WITH AN EU PAINT SYSTEM.
2. PATCH SPALLED AND UNSOUND AREAS OF THE BACKWALLS, ABUTMENTS, AND PIERS WITH 519 PATCHING. EPOXY INJECT AREAS THAT ARE SOUND, BUT CRACKED.
3. REMOVE THE REMAINING SEALER ON THE ABUTMENTS, BACKWALLS, DECK EDGE, SIDEWALK, AND CURB PRIOR TO SEALING. PROTECT THE EXISTING PAINT DURING SEALER REMOVAL. SEAL THE NEW BARRIERS, PIER PATCHES, ABUTMENTS, BACKWALLS, AND THE DECK OVERHANG WITH EPOXY URETHANE SEALER, FEDERAL COLOR 17778.
4. THE CONTRACTOR SHALL REPAIR AREAS OF DAMAGED PAINT CAUSED BY THEIR FORMWORK OR OTHER ACTIVITIES AT NO ADDITIONAL COST TO THE DEPARTMENT. COLOR TO MATCH EXISTING.
5. THE HIGHWAY SIGN FACING THE SOUTHBOUND DIRECTION THAT IS WITHIN 10 FEET OF THE BRIDGE SHALL BE RELOCATED.
6. THE REBAR DOWELS USED TO ANCHOR THE PARAPET AND SIDEWALK TO THE BRIDGE DECK, APPROACH SLABS AND ABUTMENTS SHALL BE BLACK REBAR INSTEAD OF EPOXY COATED AND DRILLED AND GROUTED INTO PLACE. THE ANGLE OF THE FRONT LEG SHALL BE TURNED VERTICAL AT THE INTERFACE WITH THE EXISTING DECK AND ABUTMENTS TO FACILITATE INSTALLATION.

REHABILITATE THE HAM-71-1858 BRIDGE (SFN 3107620) THAT CARRIES SNIDER RD (COUNTY ROUTE 277) OVER I-71 ON THE BORDER OF SYCAMORE TOWNSHIP AND SYMMES TOWNSHIP AS FOLLOWS:

1. REPLACE THE EXISTING PARAPET ALONG THE EAST SIDE OF THE BRIDGE AND REPLACE IT WITH NEW STRAIGHT FACED PARAPETS PER SBR-1-20 ON THE DECK AND WINGWALLS. REPLACE THE EXISTING PARAPET ALONG THE WEST SIDE OF THE BRIDGE AND REPLACE IT WITH NEW SIDEWALK AND PARAPETS PER BR-2-15 ON THE DECK AND WINGWALLS. INCLUDE A 3" CONDUIT WITH A PULLBOX EVERY 200' IN THE WEST PARAPET.

2. REMOVE THE EXISTING DRAINAGE BULB ANGLE ALONG THE EAST SIDE OF THE DECK. INSTALL NEW SCUPPERS. EXISTING SCUPPERS IN FRONT OF THE STRAIGHT-FACED PARAPET SHALL BE REMOVED AND REPLACED WITH CONCRETE. EXISTING SCUPPERS UNDER THE NEW SIDEWALK SHALL REMAIN IN PLACE AND BE FILLED WITH CONCRETE. INSTALL NEW 6' TALL VANDAL PROTECTION FENCE PER VPF-1-90 ALONG THE STRAIGHT-FACED PARAPET AND INSTALL 12' TALL CURVED VANDAL PROTECTION FENCE PER VPF-1-90 ALONG THE SIDEWALK PARAPET UNLESS AN AESTHETIC VANDAL PROTECTION FENCE OPTION IS CHOSEN.
3. THE REBAR DOWELS USED TO ANCHOR THE PARAPET AND SIDEWALK TO THE BRIDGE DECK, APPROACH SLABS AND ABUTMENTS SHALL BE BLACK REBAR INSTEAD OF EPOXY COATED AND DRILLED AND GROUTED INTO PLACE. THE ANGLE OF THE FRONT LEG SHALL BE TURNED VERTICAL AT THE INTERFACE WITH THE EXISTING DECK AND ABUTMENTS TO FACILITATE INSTALLATION. THE S602 BAR IN THE STRAIGHT FACED PARAPET SHALL HAVE A 5"DIA BEND (INSTEAD OF 3 3/4") TO FACILITATE INSTALLATION OF THE ELECTRICAL CONDUIT.
4. REPLACE THE STEEL EXPANSION JOINTS, THE TOP OF BACKWALL DOWNS TO THE APPROACH SLAB SEAT, AND 2 FEET OF THE DECK. REPLACE THE EXISTING END CROSSFRAMES TO ACCOMMODATE THE NEW EXPANSION JOINTS.
5. COORDINATE WITH UTILITY OWNER TO ENSURE THAT THEY HAVE COMPLETED THE RELOCATION OF THEIR FIBER UTILITY FROM THE CONDUITS IN THE NORTH/EAST PARAPET. NOTE THAT THESE WERE SEEN THROUGH THE EXPANSION JOINT GAP IN THE FIELD. AT LEAST ONE CONDUIT MAY BE ASBESTOS.
6. REMOVE FLARED PORTIONS OF THE EXISTING APPROACH SLABS AND RECONSTRUCT/WIDEN THE APPROACH SLABS TO EXTEND TO THE NEW FACE OF BARRIER ON THE WINGWALL.
7. REPLACE THE ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS. FIELD MEASURE EACH BEARING TO ENSURE THEY WILL FIT. PROVIDE ODOT THE MEASUREMENTS FOR EACH BEARING PRIOR TO ORDERING THE BEARINGS.
8. PATCH THE BACKWALLS, ABUTMENTS, AND PIERS WITH 519 PATCHING. WRAP ANY COLUMN SPALLS WITH FIBER REINFORCED POLYMER FOR PROTECTION AND CONFINEMENT, ESPECIALLY AT THE COLUMN TOPS.
9. ON I-71, REPLACE THE GUARDRAIL IN FRONT OF THE OUTSIDE SHOULDER BRIDGE PIERS WITH CONCRETE PARAPET.
10. PAINT THE NEW CROSSFRAMES AND ABUTMENT BEARINGS WITH OZEU. REPAIR ANY DAMAGED PAINT (FROM FORMWORK, BRACING, OVERBLASTING, OVERSPRAY, ETC.). PAINT COLOR TO MATCH EXISTING.
11. REMOVE THE REMAINING SEALER ON THE ABUTMENTS, BACKWALLS, AND DECK EDGE PRIOR TO SEALING. PROTECT THE EXISTING PAINT DURING SEALER REMOVAL. SEAL THE NEW BARRIERS, PIER PATCHES, ABUTMENTS, BACKWALLS, AND THE DECK OVERHANG WITH EPOXY URETHANE SEALER, FEDERAL COLOR 17778.
12. MILL AND FILL THE APPROACH SLAB AND APPROACH ROADWAY FOR A DISTANCE OF 100 FEET. PAVEMENT MARKINGS SHALL BE 644 THERMO.
13. REPLACE THE GUARDRAIL AT ALL FOUR CORNERS INCLUDING END TERMINAL ASSEMBLIES.
14. AN AESTHETIC VANDAL PROTECTION FENCE ALTERNATE IS INCLUDED IN THE PLANS FOR BOTH SYMMES AND SYCAMORE TOWNSHIPS.

DESIGN AGENCY

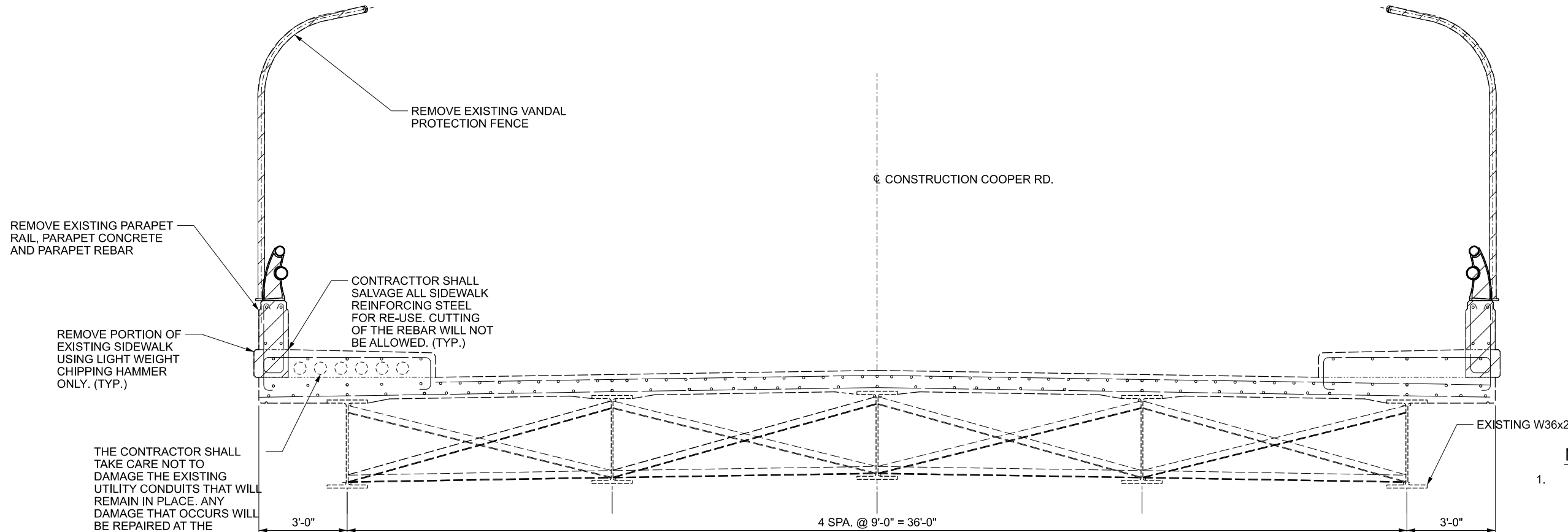


DESIGNER
CAH

REVIEWER
AS 5-23-22

PROJECT ID
102793

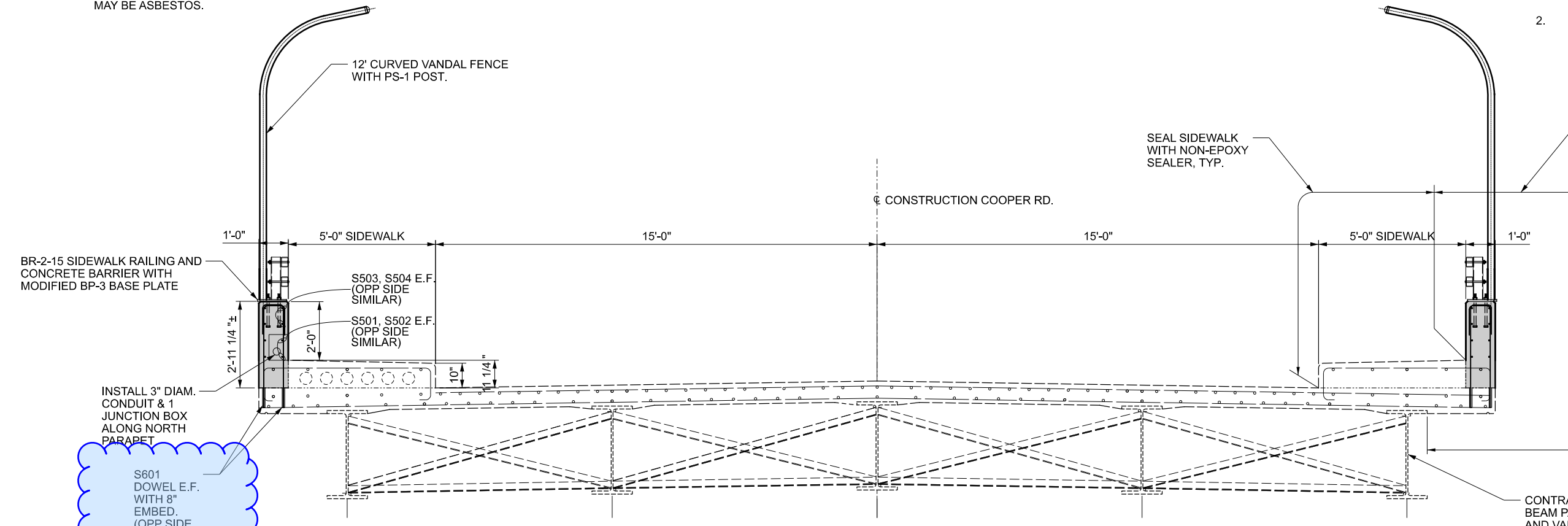
SHEET TOTAL
16 53



EXISTING TRANSVERSE SECTION

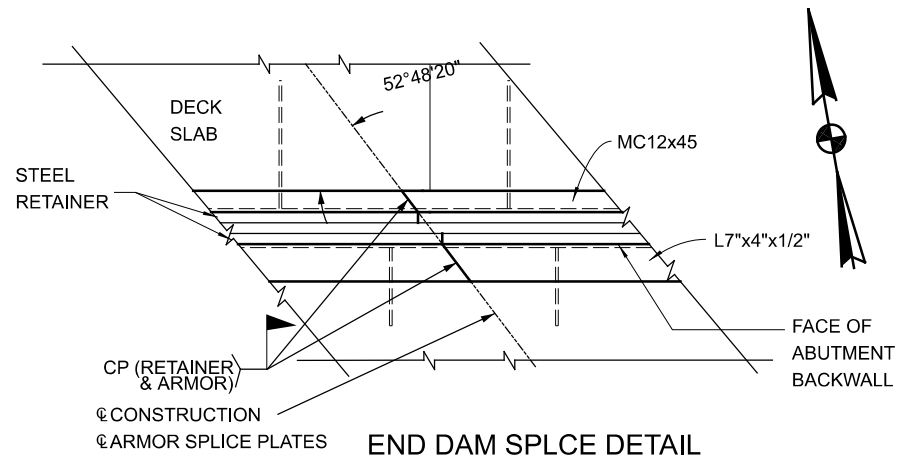
NOTES:

- EXCEPT FOR THE TOP SIDEWALK PLATE, THE EXISTING SIDEWALK EXPANSION JOINT SHALL NOT BE DISTURBED. REMOVAL AND RESTORATION OF THE TOP SIDEWALK PLATE SHALL BE CONSIDERED INCIDENTAL TO THE PARAPET WORK.
- GALVANIZED HANDRAIL SHALL BE PAINTED BLACK IN ACCORDANCE WITH EPOXY-URETHANE SPEC.



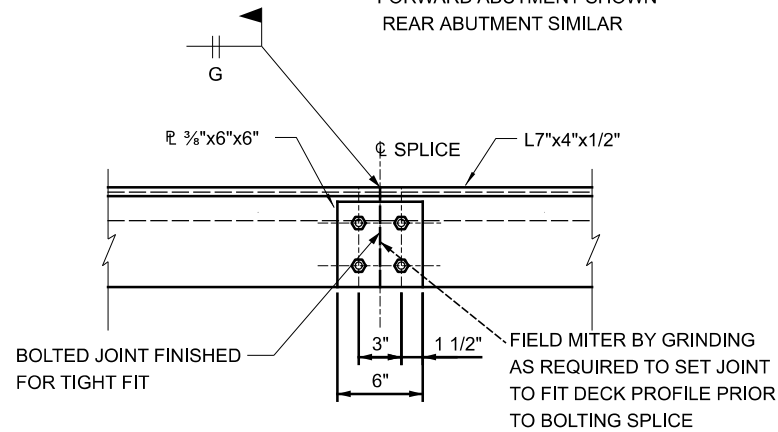
PROPOSED TRANSVERSE SECTION

SFN	3105164
DESIGN AGENCY	
DESIGNER	CAH
CHECKER	GTF
REVIEWER	AS
PROJECT ID	102793
SUBSET	8
TOTAL	10
SHEET	26
TOTAL	53



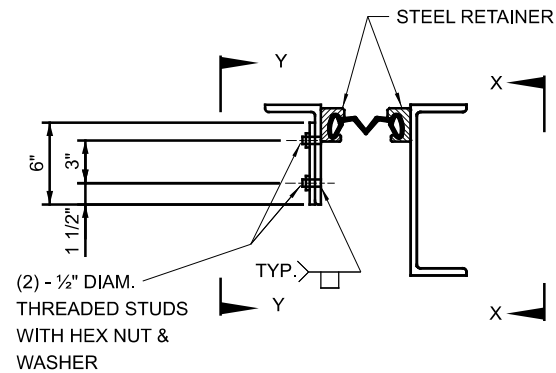
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FORWARD ABUTMENT SHOWN
 REAR ABUTMENT SIMILAR

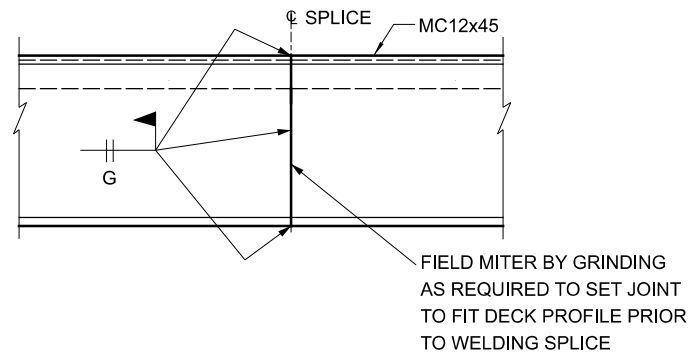


ABUTMENT SIDE SUPPORT ARMOR SPLICE DETAIL

VIEW Y-Y



STRIP SEAL EXPANSION JOINT SPLICE DETAIL



DECK SLAB SUPPORT ARMOR SPLICE DETAIL

VIEW X-X

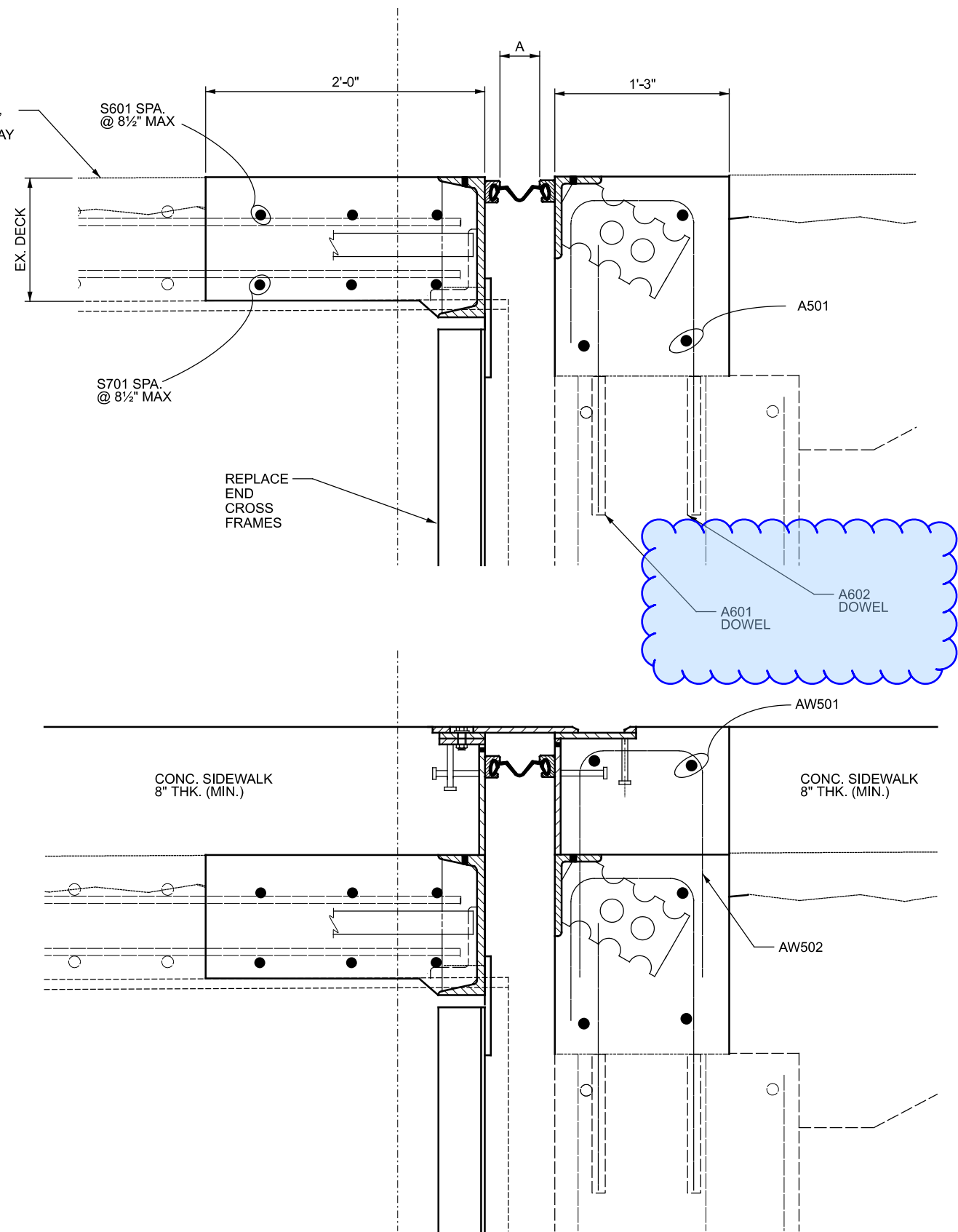
ABUTMENT EXPANSION JOINT OPENING TABLE FOR 3" GLAND	
AMBIENT TEMP (°F)	DIMENSION "A" REAR ABUT. & FWD. ABUT.
30°	2.13"
40°	2.00"
50°	1.92"
60°	1.82"
70°	1.71"
80°	1.61"
90°	1.50"

MINIMUM JOINT OPENING (DIMENSION 'A') AT THE TIME OF SEAL GLAND INSTALLATION SHALL NOT BE LESS THAN 1.75". IF THE JOINT OPENING IS LESS, INSTALLATION SHALL BE POSTPONED UNTIL THE TEMPERATURE DROPS A SUFFICIENT AMOUNT TO ALLOW THE 1.75" OPENING.

NOTES:

- SEE STD. DWG. EXJ-4-87 FOR ADDITIONAL INFORMATION.
- STRIP SEAL GLAND SHALL BE INSTALLED IN ONE CONTINUOUS PIECE AFTER COMPLETION OF THE END DAM INSTALLATION.
- PORTIONS OF THE STRIP SEAL EXPANSION JOINT ASSEMBLY THAT ARE ANGLED TO MEET THE TRANSVERSE DECK CROSS SLOPE SHALL BE CONNECTED AS SHOWN AT THE CENTERLINE OF CONSTRUCTION USING COMPLETE PENETRATION FIELD WELDS AND/OR SPLICE PLATES. WELDS SHALL BE GROUND SMOOTH. WELDS AND SPLICE PLATES SHALL BE INCLUDED WITH THE EXPANSION JOINT FOR PAYMENT.
- INSTALLATION OF SEAL: DURING INSTALLATION OF THE SUPPORT/ARMOR FOR THE SUPERSTRUCTURE SIDE OF THE EXPANSION JOINT SEAL, OBSERVE THE SEATING OF BEAMS ON BEARINGS TO ASSURE THAT POSITIVE BEARING IS MAINTAINED.
- PROPER ELEVATION OF THE SUPPORT/ARMOR ON THE BEAMS SHALL BE ACHIEVED BY POSITIONING OF THE BEVEL FILL PLATES RATHER THAN BY CLAMPING FORCE.
- ALL COSTS ASSOCIATED WITH THE ELASTOMERIC STRIP SEAL EXPANSION JOINT, ANCHOR PLATES, GUSSET PLATES, FILL PLATES AND ANY REMAINING INCIDENTALS REQUIRED TO COMPLETE THE EXPANSION JOINT INSTALLATION SHALL BE INCLUDED WITH ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN FOR PAYMENT.
- FOR LOCATION OF FIELD SPLICES, SEE ABUTMENT AND DECK PLAN SHEETS.
- FINAL FIT-UP OF THE EXPANSION JOINT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. ELEVATIONS SHOWN IN THE PLANS SHALL BE CONSIDERED TENTATIVE AND SHALL BE VERIFIED. ANY SURVEY REQUIRED TO ENSURE FIT-UP SHALL BE INCLUDED IN THE BID PRICE FOR THE EXPANSION JOINT.

EX. 2.75"± THK. MICROSILICA CONC. OVERLAY



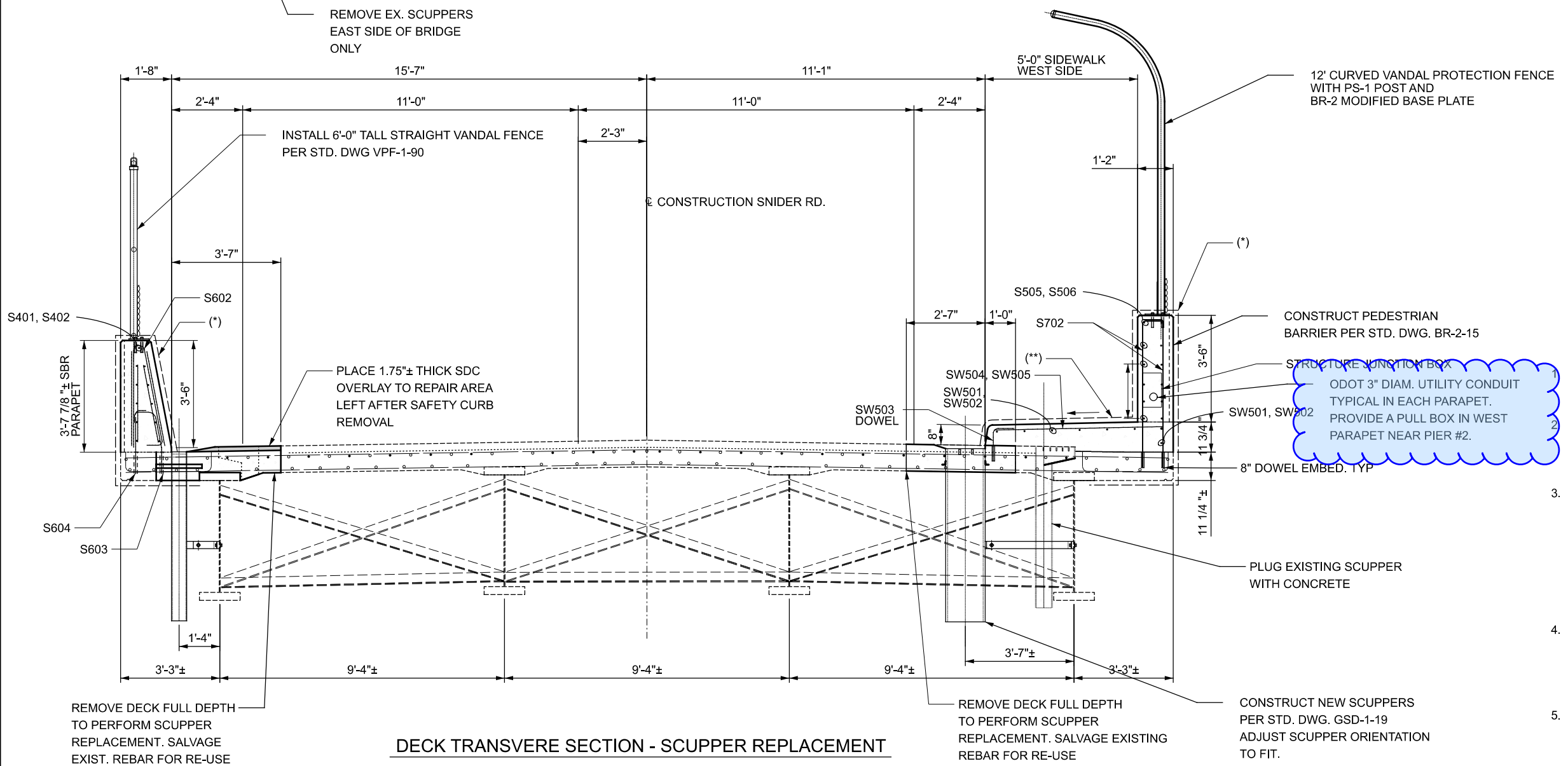
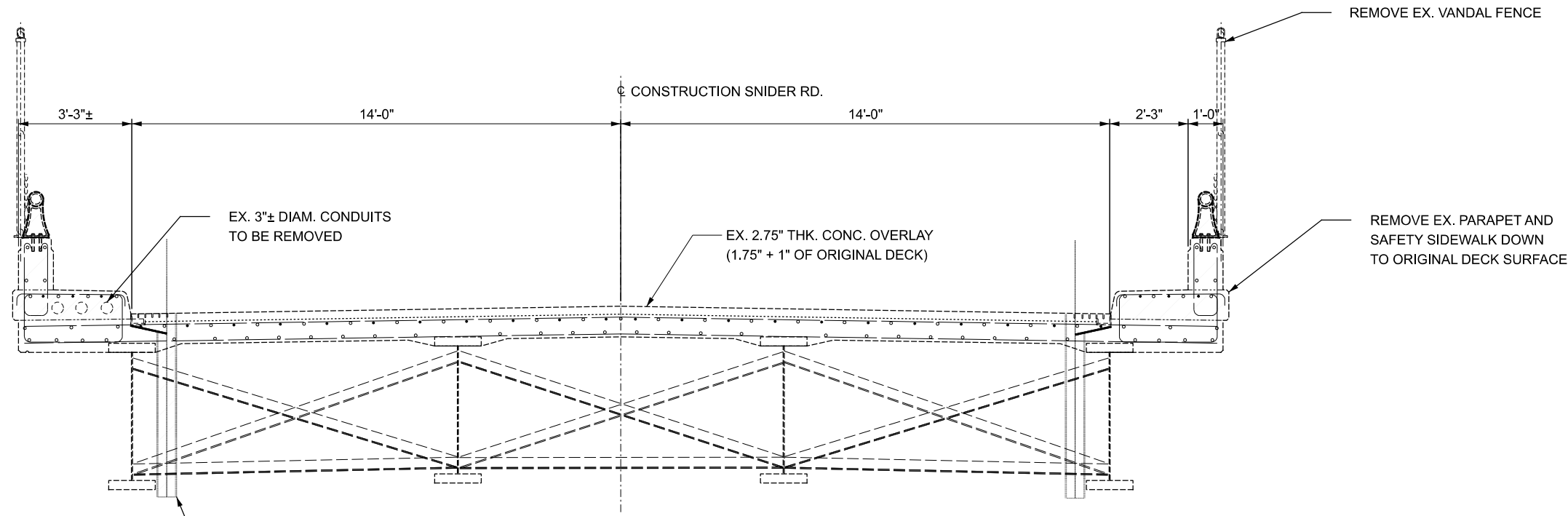
EXPANSION JOINT DETAILS
 BRIDGE No.: HAM-71-1858
 SNIDER RD. OVER I-71

SFN
 3107620
 DESIGN AGENCY



DESIGNER	CHECKER
CAH	GTF
REVIEWER	
AS	5-23-22
PROJECT ID	102793
SUBSET	TOTAL
12	18
SHEET	TOTAL
40	53

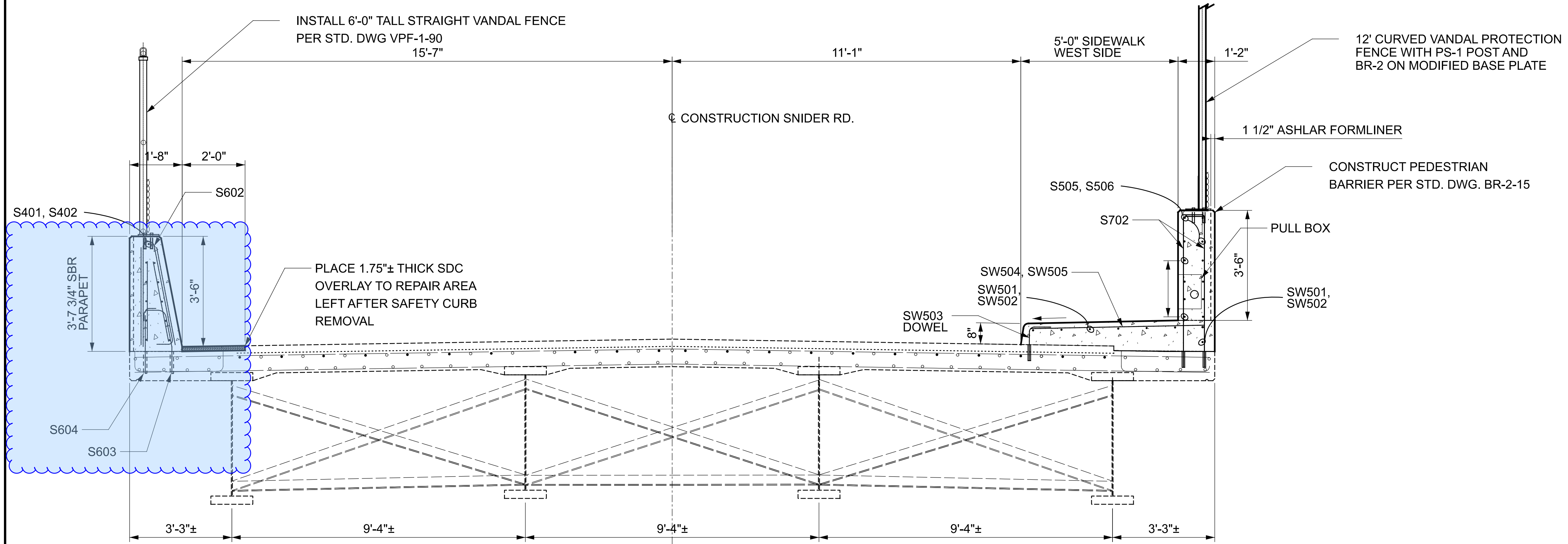
SFN	
3107620	
DESIGN AGENCY	
DESIGNER	CHECKER
CAH	GTF
REVIEWER	
AS 5-23-22	
PROJECT ID	
102793	
SUBSET	TOTAL
15	18
SHEET	
TOTAL	
43	53



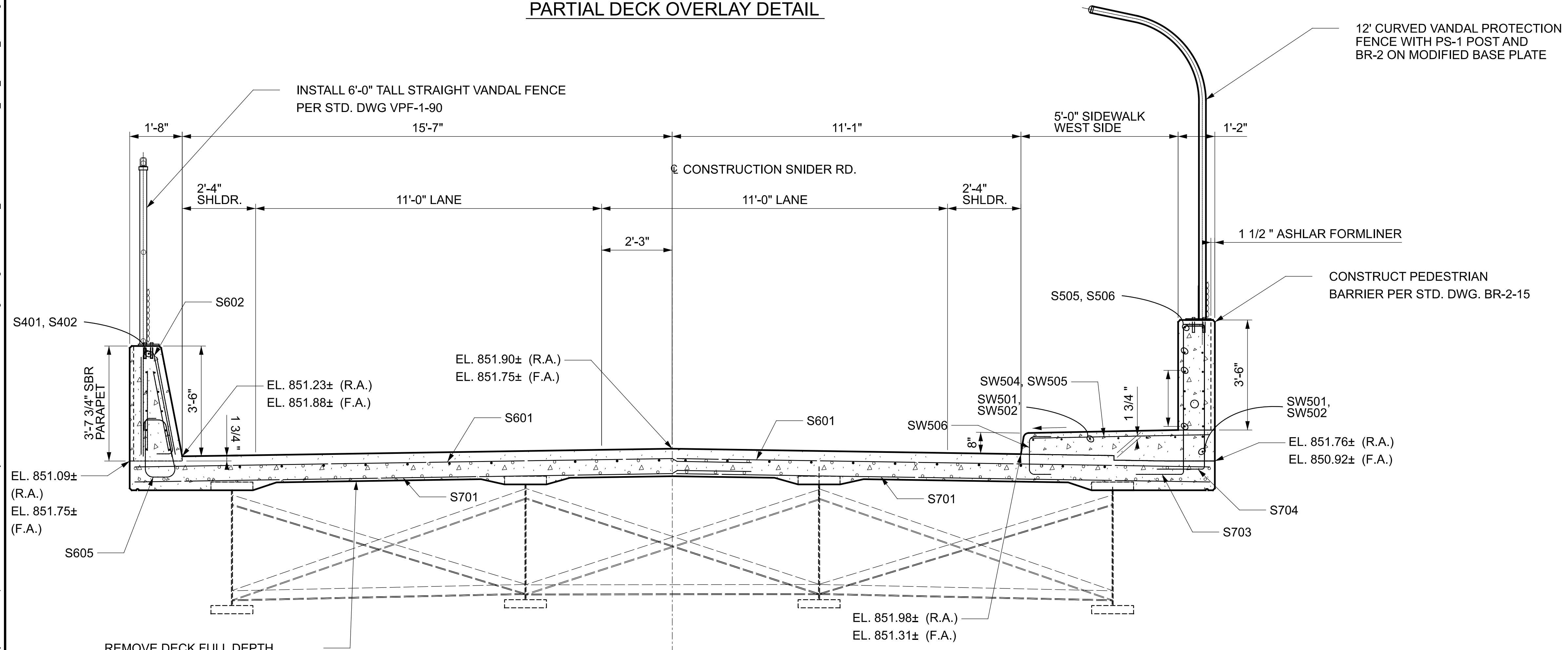
- LEGEND**
- (*) - SEAL CONCRETE PARAPET AND DECK SIDES & BTM. WITH EPOXY-URETHANE. PROVIDE NON-SKID SURFACE ON SIDEWALK.
 - (**) - NON-EPOXY CONCRETE SEALER WITH NON-SKID SURFACE ON SIDEWALK.

- NOTES:**
- SEE SHEETS 47 THRU 53 FOR ALTERNATE AESTHETIC VANDAL FENCE DETAILS.
 - FORMLINER RELIEF SHALL EXTEND NO MORE THAN 1/2" INTO THE PARAPET CONCRETE COVER OVER THE REBAR.
 - CONTRACTOR SHALL INCREASE PARAPET THICKNESS BEYOND THE DECK EDGE TO ACCOMMODATE RELIEF GREATER THAN 2". ADJUSTING TRANSVERSE DECK DIMENSIONS TO INCREASE PARAPET THICKNESS TOWARD THE INTERIOR OF THE BRIDGE SHALL NOT BE ALLOWED.
 - SCUPPER SUPPORTS AND CONNECTION TO THE EXISTING GIRDERS SHALL BE INCLUDED WITH THE SCUPPERS FOR PAYMENT.
 - ALL VANDAL PROTECTION FENCE SHALL BE SHOP PAINTED COLOR BLACK.

1
2



PARTIAL DECK OVERLAY DETAIL



PARTIAL DECK REPLACEMENT

REMOVE DECK FULL DEPTH TO PERFORM EXPANSION JOINT REPLACEMENT. SALVAGE EXISTING LONGITUDINAL DECK REBAR FOR RE-USE

FOR EXPANSION JOINT REPLACEMENT SALVAGE ALL EXISTING LONGITUDINAL DECK REBAR FOR RE-USE

NOTES:

1. ODOT 3" DIAM. UTILITY CONDUIT TYPICAL IN EACH PARAPET. PROVIDE A PULL BOX IN WEST PARAPET NEAR PIER #2.
2. SEE SHEET 43 FOR ADDITIONAL NOTES.
3. SBR PARAPET HEIGHT SHALL EXTEND TO TOP OF EXISTING DECK. CONCRETE OVERLAY SHALL STOP AT TOE OF PARAPET.

DESIGNER	CHECKER
CAH	GTF
REVIEWER	AS
PROJECT ID	102793
SUBSET	TOTAL
16	18
SHEET	TOTAL
44	53