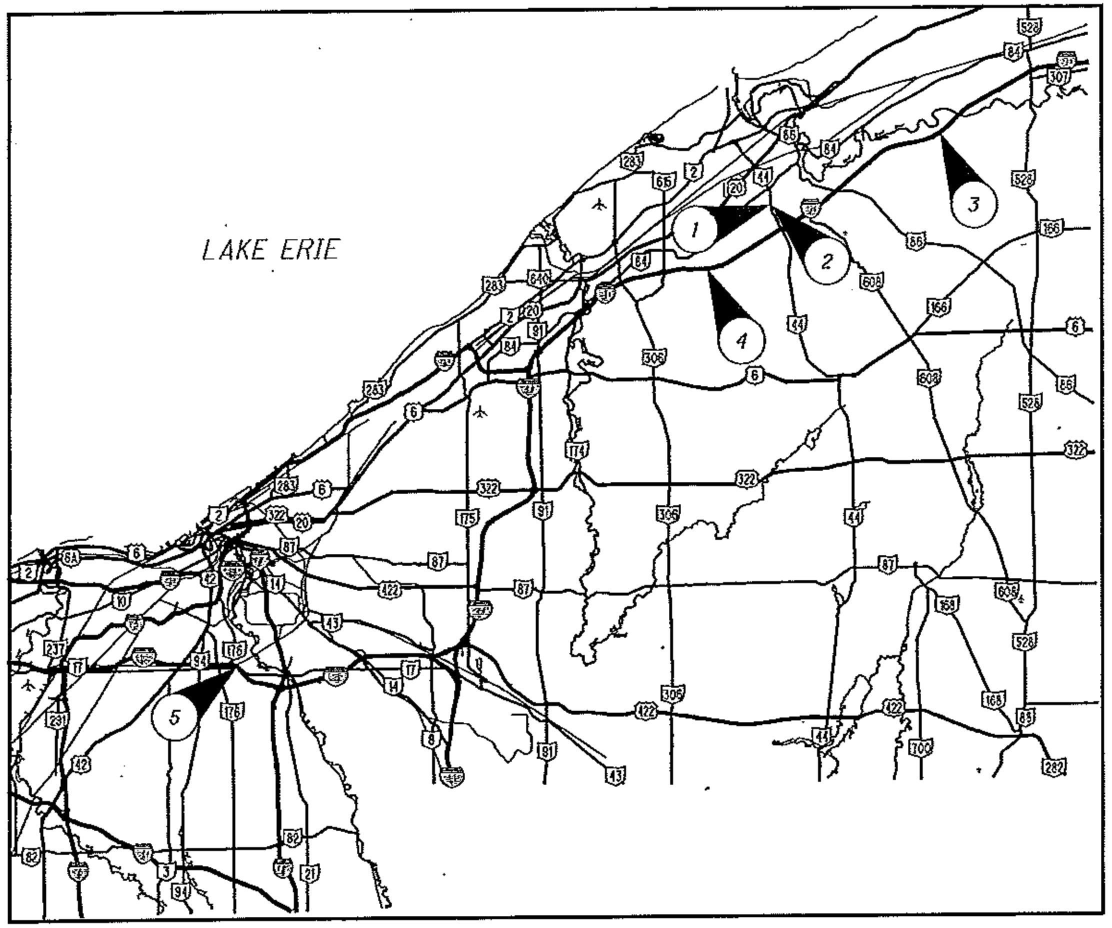
STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

D12 BH FY2018 MISCELLANEOUS



LOCATION MAP

LATITUDE: 41° 24' 54" N LONGITUDE: 81° 36' 54" W (ODOT DISTRICT 12)

(NOTE: FOR COORDINATES PER LOCATION, SEE SHEET 3/65)

LOCATION	BRIDGE NUMBER	STRUCTURAL FILE NUMBER	CITY / TOWNSHIP
1	LAK-44-0327 L	4302559	CONCORD
2	LAK-44-0327 R	4302583	CONCORD
3	LAK-90-2210	4304861	LEROY
4	LAK-90-1297	4304268	CONCORD
5	CUY-17-1227	1802402	BROOKLYN HEIGHTS

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF VARIOUS REPAIRS INCLUDING PATCHING AND SEALING CONCRETE STRUCTURES, ABUTMENT BEARING REPAIRS, END CROSSFRAME REPLACEMENTS, EXPANSION JOINT REPLACEMENTS, APPROACH SLAB REPLACEMENTS, PIER PATCHING AND FIBER WRAPPING, AND OTHER MISCELLANEOUS REPAIRS.

THIS IS A MAINTENANCE PROJECT.

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

2016 SPECIFICATIONS

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

INDEX OF SHEETS:

FEDERAL PROJECT NO. E 170-360

PID NO. 98600

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT NONE

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

PLAN PREPARED BY:

AECOM
AKRON CLEVELAND
1300 E. 9TH STREET, SUITE 500
CLEVELAND, OHIO 44114
(216) 622-2300

ENGINEERS SEAL:

STATE OF OHIO
DAVID EARL BUCHANAN
78416
REGISTERED
PROFESSIONAL ENGINEER

SIGNED: D. E. B.

DATE: 1-17-2018

STANDARD CONSTRUCTION DRAWINGS

AR-1-57	4/2/62	MT-95.30	7/15/16	MT-110.10	7/19/13				
AS-1-15	7/17/15	MT-95.31	7/18/14						
EXJ-2-81	7/19/02	MT-95.32	7/18/14	HL-50.21	7/15/16				
EXJ-4-87	7/19/02	MT-95.40	7/18/14						
GSD-1-96	7/19/02	MT-95.45	7/21/17	BP-2.3	7/18/14				
RB-1-55	7/19/13	MT-95.50	10/16/15	BP-2.4	7/19/13				
PCB-91	1/18/13	MT-97.10	7/18/14	BP-3.1	7/18/14				
TBR-1-11	1/18/13	MT-99.30	1/16/15						
VPF-1-90	7/17/15	MT-101.70	1/17/14						
		MT-102.10	7/18/14						
		MT-102.20	7/18/14						
		MT-105.10	7/19/13						

SUPPLEMENTAL SPECIFICATIONS	
800	1/19/18
821	4/20/12
832	1/17/14
921	4/20/12

SPECIAL PROVISIONS
WATERWAY PERMITS 1-16-18

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEETS 13/65 AND 14/65, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED [signature] DISTRICT DEPUTY DIRECTOR
DATE 01-22-18

APPROVED [signature] DIRECTOR, DEPARTMENT OF TRANSPORTATION
DATE 1-26-18

D12 BH FY2018 MISCELLANEOUS

LOCATION MAP FOR LOCATIONS 1 & 2

LOCATION MAP FOR LOCATION 3

NOTE:

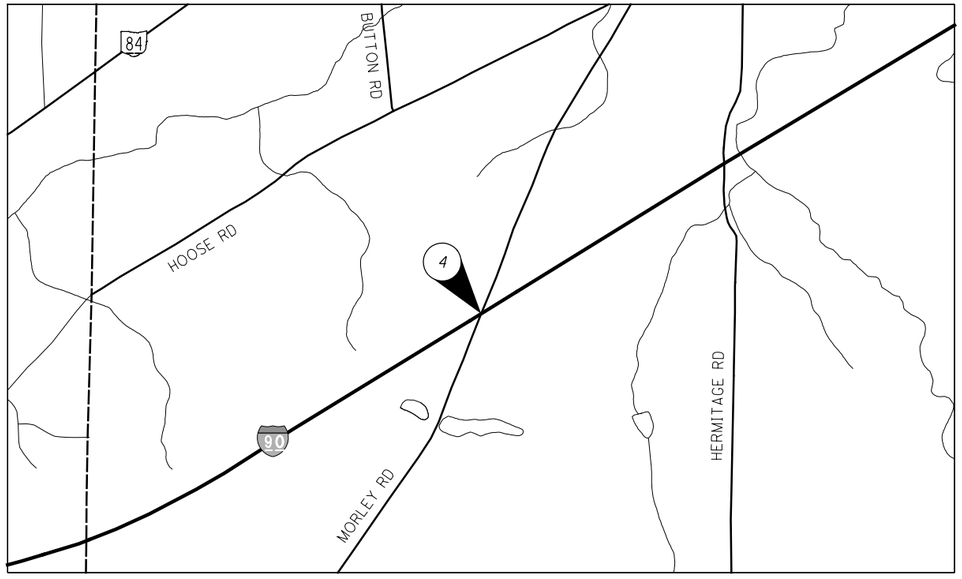
1. FOR COORDINATES OF EACH LOCATION, SEE SHEET 3/65.

LOCATION MAPS (1 OF 2)

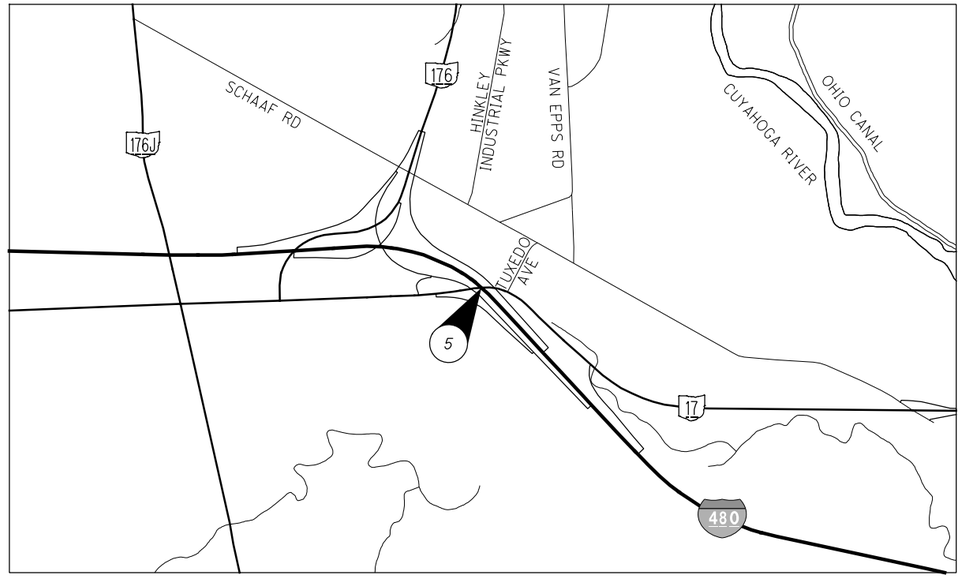
CALCULATED KGR
CHECKED DEB

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

2
65



LOCATION MAP FOR LOCATION 4



LOCATION MAP FOR LOCATION 5

LOCATION	BRIDGE NUMBER	STRUCTURAL FILE NUMBER	DESCRIPTION	LATITUDE	LONGITUDE
1	LAK-44-0327 L	4302559	SR 44 SB OVER KELLOGG CREEK	41.411042	81.151874
2	LAK-44-0327 R	4302583	SR 44 NB OVER KELLOGG CREEK	41.410994	81.151758
3	LAK-90-2210	4304861	FORD ROAD OVER IR-90	41.432158	81.073108
4	LAK-90-1297	4304268	MORLEY ROAD OVER IR-90	41.392800	81.163062
5	CUY-17-1227	1802402	SR 17 OVER IR-480	41.419776	81.680727

CALCULATED KGR
CHECKED DEB

LOCATION MAPS (2 OF 2)

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

PROJECT DESCRIPTION

VARIOUS REPAIRS INCLUDING PATCHING AND SEALING CONCRETE STRUCTURES, APPROACH SLAB REPAIRS AND REPLACEMENTS, BEARING REPAIRS AND REPLACEMENTS, END CROSSFRAME REPLACEMENTS, EXPANSION JOINT REPLACEMENTS, PIER PATCHING AND FIBER WRAPPING, AND OTHER MISCELLANEOUS REPAIRS.

REFER TO STANDARD BRIDGE DRAWINGS:

AS LISTED ON TITLE SHEET

REFER TO SUPPLEMENTAL SPECIFICATIONS:

AS LISTED ON TITLE SHEET

DESIGN SPECIFICATIONS

THE STRUCTURES CONFORM TO THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17th EDITION, 2002 AND THE ODOT BRIDGE DESIGN MANUAL, 2004.

DESIGN DATA

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4500 PSI
REINFORCING STEEL - ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI, EPOXY COATED
STRUCTURAL STEEL - ASTM A709 GRADE 36 - YIELD STRENGTH 36,000 PSI OR ASTM A709 GRADE 50 - YIELD STRENGTH 50,000 PSI, AS NOTED

RIGHT OF WAY

ALL WORK IS TO BE PERFORMED WITHIN THE EXISTING RIGHT OF WAY OR EASEMENTS OR WITHIN STATE PROPERTY.

KELLOGG CREEK

NO EQUIPMENT STORAGE IS ALLOWED BELOW THE BASE FLOOD ELEVATION (BFE) OF KELLOGG CREEK. DEBRIS THAT FALLS IN THE STREAM CHANNEL SHALL BE REMOVED WITHIN 24 HOURS. STREAM FLOW SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER-OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED BETWEEN THE HOURS OF 9:00 PM AND 7:00 AM. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS/HER OPERATIONS WITH THE CONTRACTORS ON OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THE CONTRACT. NO WAIVER OF ANY PROVISIONS OF 105.08 OF THE 2016 CONSTRUCTION AND MATERIAL SPECIFICATIONS IS INTENDED.

UTILITY OWNERSHIP

THE FOLLOWING UTILITIES AND OWNERS ARE LOCATED WITHIN THE WORK LIMITS OF THIS PROJECT. THE OHIO DEPARTMENT OF TRANSPORTATION HAS USED THE BEST AVAILABLE INFORMATION TO DETERMINE THE UTILITY COMPANIES SERVING THIS AREA, BUT CANNOT GUARANTEE THE UTILITY LIST IS COMPLETE.

CITY OF CLEVELAND DIVISION OF PUBLIC POWER
ATTN: CHRIS HIRZEL
1300 LAKESIDE AVENUE
CLEVELAND, OHIO 44114
PHONE: (216) 644-3922, EXT. 115
CHIRZEL@CPP.ORG

TIME WARNER CABLE
ATTN.: PAUL SILVESTRO
8150 DOW CIRCLE
STRONGSVILLE, OH 44136
PHONE: (440) 826-2940
EMAIL: PAUL.SILVESTRO@TWCABLE.COM

CITY OF CLEVELAND DIVISION OF WATER
ATTN: TINA GOSHA
1201 LAKESIDE AVENUE
CLEVELAND, OHIO 44114
PHONE: (216) 664-2444, EXT. 5526
FAX: (216) 664-2838
TINA_GOSHA@CLEVELANDWATER.COM

CITY OF CLEVELAND DIVISION OF WATER POLLUTION CONTROL
ATTN: ELIE RAMY
12302 KIRBY ROAD
CLEVELAND, OHIO 44108
PHONE: (216) 664-3785
ERAMY@CLEVELANDWPC.COM

DOMINION EAST OHIO GAS COMPANY
ATTN.: BRYAN DAYTON
320 SPRINGSIDE DRIVE, SUITE 320
AKRON, OH 44333
PHONE: (330) 664-2409
EMAIL: RELOCATION@DOM.COM

NORTHEAST OHIO REGIONAL SEWER DISTRICT
ATTN: MARY MACIEJOWSKI
3900 EUCLID AVENUE
CLEVELAND, OHIO 44115-2504
PHONE: (216) 881-6600 EXT. 6466
EMAIL: MACIEJOWSKIM@NEORSD.ORG

AT&T
ATTN: JAMES JANIS
13630 LORAIN AVENUE, ROOM 350
CLEVELAND, OH 44111
PHONE: (216) 476-6142
EMAIL: PJ8191@ATT.COM

ATTN: ERIC JOHNSTON,
PHONE (216) 476-6141
EMAIL: EJ1265@ATT.COM

ODOT DISTRICT 12 TRAFFIC
ATTN.: ANTHONY TOTH
5500 TRANSPORTATION BOULEVARD
GARFIELD HEIGHTS, OH 44125
PHONE: (216) 584-2220
EMAIL: ANTHONY.TOTH@DOT.STATE.OH.US

MCI CABLE
(CONTACT INFORMATION UNAVAILABLE)

UTILITY OWNERSHIP (CONT.)

AQUA OHIO INC
(CONTACT INFORMATION UNAVAILABLE)

CEI - ILLUMINATING COMPANY
ATTN.: TED RADER
6896 MILLER ROAD
BRECKSVILLE, OH 44141
PHONE: (440) 546-8738
EMAIL: RADERT@FIRSTENERGYCORP.COM

ATTN: MR. MARK ROBINSON
PHONE: (440) 717-6845

WATER SERVICE CENTER (EAST)
LAKE COUNTY EAST END SERVICE CENTER
PO BOX 490, PAINESVILLE, OHIO 44077
(440) 350-2725 FAX (440) 350-2359

WATER SERVICE CENTER (WEST)
LAKE COUNTY WEST END SERVICE CENTER
AQUARIUS WATER TREATMENT FACILITY (WEST)
PHONE: (440) 918-3420
FAX: (440) 918-3424

LAKE COUNTY
MADISON WASTEWATER TREATMENT FACILITY
PHONE: (440) 428-1794 (440) 428-2556
FAX: (440) 428-6450

LAKE COUNTY SANITARY ENGINEER
ATTN: MR. ALBERT SAARI
105 MAIN ST.
PAINESVILLE, OH 44077
PHONE: (440) 350-2652

CITY OF PAINESVILLE MUNICIPAL ELECTRIC DIVISION
ATTN: MR. RON MIHITSCH
459 STORRS ST.
PAINESVILLE, OH 44077
PHONE: (440) 392-6185

CITY OF PAINESVILLE WATER POLLUTION CONTROL
459 STORRS ST.
PAINESVILLE, OH 44077
PHONE: (440) 392-9591

CITY OF PAINESVILLE WATER DISTRIBUTION DIVISION
ATTN: MR. GEORGE GINNIS
459 STORRS ST.
PAINESVILLE, OH 44077
PHONE: (440) 392-2975

STORMWATER MANAGEMENT DEPARTMENT
125 EAST ERIE STREET
PAINESVILLE, OH 44077
PHONE: (440) 350-5900
FAX: (440) 350-5919

COBRA PIPELINE COMPANY LTD
(CONTACT INFORMATION UNAVAILABLE)

ORWELL NATURAL GAS
(CONTACT INFORMATION UNAVAILABLE)

THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UTILITIES IN THE WORK AREAS EXCEPT THE CEI DUCTS AT LOCATION 5 (CUY-15-1227) WHICH ARE TO BE REPLACED BY OTHERS AS NOTED IN THE PLANS. COORDINATION WITH CEI FOR UTILITY DUCT REPLACEMENT WILL BE REQUIRED AS A PART OF THE CONSTRUCTION.

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 SECTIONS 102.05 AND 105.02 OF THE 2016 CONSTRUCTION AND MATERIAL SPECIFICATIONS. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD. THE EXISTING STRUCTURE PLANS MAY BE REVIEWED AT THE:

OHIO DEPARTMENT OF TRANSPORTATION
DISTRICT 12 OFFICE
5500 TRANSPORTATION BOULEVARD
GARFIELD HEIGHTS, OH 44125

EXISTING PLANS ARE ALSO AVAILABLE THROUGH THE FOLLOWING ODOT WEBSITE:

HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/CONTRACTADMIN/CONTRACTS/PAGES/DESIGNFILES.ASPX

PROPOSED WORK

THE CONTRACTOR SHALL ONLY PERFORM THE WORK INCLUDED IN THE STRUCTURE DATA TABLE, GENERAL NOTES, AND FRAMED TEXT.

EXISTING DIMENSIONS

ALL DIMENSIONS ARE ±.

LIMITATIONS OF OPERATIONS

THE CONTRACTOR'S ACTIVITIES AND WORK SCHEDULE SHALL BE CONSTRAINED BY THE FOLLOWING SPECIAL LIMITATIONS:

1. MAINTENANCE OF TRAFFIC RESTRICTIONS (REFER TO THE MAINTENANCE OF TRAFFIC SHEETS IN THIS PLAN).

2. CONTRACTOR SHALL PREVENT ANY DEBRIS FROM ENTERING ANY STREAM, RIVER, CHANNEL, OR ANY OTHER BODY OF WATER.

EQUIPMENT AND MATERIAL STORAGE

IN ORDER TO PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC THE CONTRACTOR'S ATTENTION IS DIRECTED TO 614.03. IN ADDITION, THE FOLLOWING PROVISIONS SHALL APPLY:

1. NO REMOVED ITEMS ARE PERMITTED TO BE STORED ON THE RIGHT-OF-WAY.

2. NO STORAGE OF EQUIPMENT, MATERIALS, AND VEHICLES WITHIN THE HIGHWAY RIGHT-OF-WAY WILL BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE ENGINEER. ALL RESTORATION WILL BE AT NO COST TO THE STATE.

3. ALL DISTURBED AREAS SHALL BE RETURNED TO THEIR ORIGINAL CONDITION AT NO COST TO THE STATE.

CALCULATED KGR CHECKED DEB

GENERAL NOTES (1 OF 5)

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

CONTINGENCY QUANTITIES

THE CONTRACTOR SHALL NOT ORDER MATERIALS OR PERFORM WORK FOR ITEMS DESIGNATED BY PLAN NOTE TO BE USED "AS DIRECTED BY THE ENGINEER" UNLESS AUTHORIZED BY THE ENGINEER. THE ACTUAL WORK LOCATIONS AND QUANTITIES USED FOR SUCH ITEMS SHALL BE INCORPORATED INTO THE FINAL SUBSIDIARY AGREEMENT GOVERNING COMPLETION OF THIS PROJECT.

EXISTING PAVEMENT MARKINGS

ANY EXISTING PAVEMENT MARKINGS, INCLUDING RAISED PAVEMENT MARKINGS, THAT ARE AFFECTED BY THE PROPOSED WORK SHALL BE REPLACED IN-KIND. PAYMENT FOR THE NEW PAVEMENT MARKINGS IS AS LISTED IN THE PLANS.

CONNECTION BETWEEN EXISTING AND PROPOSED GUARDRAIL

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

CONCRETE REMOVALS

THE USE OF EXPLOSIVES, HEADACHE BALLS, AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SAW CUT TO PROVIDE A NEAT JOINT AT THE REMOVAL LIMITS. REMOVAL COSTS INCLUDING SAWCUTTING ARE INCLUDED FOR PAYMENT IN THE PERTINENT REMOVAL AND OR REMOVAL AND REPLACEMENT ITEM.

ENDANGERED BAT HABITAT REMOVAL

THE PROJECT IS LOCATED WITHIN THE KNOWN HABITAT RANGES OF THE FEDERALLY LISTED AND PROTECTED INDIANA BAT AND NORTHERN LONG-EARED BAT. NO TREES SHALL BE REMOVED UNDER THIS PROJECT FROM APRIL 1 THROUGH SEPTEMBER 30. ALL NECESSARY TREE REMOVAL SHALL OCCUR FROM OCTOBER 1 THOUGH MARCH 31. THIS REQUIREMENT IS NECESSARY TO AVOID AND MINIMIZE IMPACTS TO THESE SPECIES AS REQUIRED BY THE ENDANGERED SPECIES ACT. FOR THE PURPOSES OF THIS NOTE, A TREE IS DEFINED AS A LIVE, DYING, OR DEAD WOODY PLANT, WITH A TRUNK THREE INCHES OR GREATER IN DIAMETER AT A HEIGHT OF 4.5 FEET ABOVE THE GROUND SURFACE, AND WITH A MINIMUM HEIGHT OF 13 FEET.

ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN

AT ALL LOCATIONS THIS ITEM INCLUDES THE REMOVAL OF TREES AND BRUSH IN ORDER TO GAIN ACCESS TO APPLICABLE AREAS OF THE STRUCTURES TO PERFORM THE SPECIFIED WORK. ALTHOUGH NO TREES OR STUMPS ARE SPECIFICALLY MARKED FOR REMOVAL IN THE PLANS, THEY SHOULD BE REMOVED AT THE DIRECTION OF THE ENGINEER. THIS ITEM IS ALSO INTENDED TO BE USED TO CLEARLY REMOVE ALL VEGETATION FROM THE RIGHT OF WAY FENCE AT THE DIRECTION OF THE ENGINEER. PAYMENT FOR LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK IS INCLUDED FOR PAYMENT AT THE LUMP SUM CONTRACT PRICE FOR ITEM 201 - CLEARING AND GRUBBING, AS PER PLAN.

ITEM 202 - REMOVAL MISC.: DELAMINATED CONCRETE INSPECTION AND REMOVAL

AT LOCATIONS 3 (LAK-90-2210) AND 4 (LAK-90-1297), THE CONTRACTOR SHALL PROVIDE ACCESS AND SOUND ALL POSSIBLE AREAS OF LOOSE CONCRETE WITHIN THE LIMITS AS SHOWN IN THE PLANS. THE INSPECTION LIMITS SHOWN IN THE PLANS ARE DEFINED BY A THEORETICAL HORIZONTAL PLANE BOUNDED BY THE LIMITS OF THE UNDERPASS ROADWAY, INCLUDING SHOULDERS AND SIDEWALKS WHICH ARE WITHIN THE LIMITS OF THE OVERPASS STRUCTURE. THE INSPECTION LIMITS SHALL ALSO INCLUDE DECK FASCIA AND OUTSIDE FACE OF THE PARAPETS.

REMOVALS SHALL INCLUDE ONLY AREAS AS DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL DETERMINE THE AREAS OF CONCRETE THAT ARE TO BE REMOVED SUBJECT TO THE APPROVAL OF THE ENGINEER. STANDARD DESCRIPTIONS OF CONCRETE AREAS SUBJECT TO REMOVAL INCLUDE BUT ARE NOT LIMITED TO: SPALLED, DELAMINATED, MOTTLED, DAMP, HONEYCOMBED, EFFLORESCENCE, ETC.

THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN PROXIMITY TO THE EXISTING UTILITY FACILITIES. SECTIONS 105.07 AND 107.16 OF THE CMS SHALL BE OBSERVED IN THE COOPERATION OF THE CONTRACTOR AND THE CONTRACTOR'S RESPONSIBILITY TO TAKE RESPONSIBILITY FOR THE PROTECTION OF THE UTILITY PROPERTY AND SERVICES.

THE CONTRACTOR SHALL MAKE PROVISION TO ENSURE PUBLIC SAFETY WHILE REMOVING THE LOOSE AND DELAMINATED CONCRETE. THE REMOVED CONCRETE SHALL BE DISPOSED OF OFF SITE IN CONFORMANCE WITH LOCAL, STATE, AND FEDERAL POLLUTION CONTROL LAWS.

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. HAND HELD CONVENTIONAL HAMMERS MAY BE USED TO REMOVE MINOR SPALLS. HOWEVER, PNEUMATIC HAMMERS SHOULD ALSO BE EMPLOYED TO ENSURE COMPLETE REMOVAL OF ALL UNSOUND CONCRETE. THE WEIGHT OF THE HAMMER SHALL NOT EXCEED 35 POUND CLASS WITHOUT WRITTEN APPROVAL FROM THE ENGINEER FOR A VARIANCE. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH EXISTING REINFORCING STEEL.

PAYMENT FOR ALL LABOR, MATERIALS, ACCESS INCLUDING EQUIPMENT, SOUNDING, REMOVAL, PROTECTION OF THE PUBLIC AND EXISTING UTILITIES, DISPOSAL, AND ALL OTHER INCIDENTALS REQUIRED TO IDENTIFY AND REMOVE ALL THE UNSOUND CONCRETE WITHIN THE LIMITS DESCRIBED IN THE PLANS SHALL BE INCLUDED FOR PAYMENT AT THE LUMP SUM CONTRACT PRICE FOR ITEM 202 - REMOVAL MISC.: DELAMINATED CONCRETE INSPECTION AND REMOVAL. ALL COSTS FOR MAINTAINING TRAFFIC REQUIRED FOR THESE REMOVALS SHALL BE INCLUDED FOR PAYMENT WITH ITEM 614.

ITEM 202 - PAVEMENT REMOVED, ASPHALT, AS PER PLAN

AT LOCATIONS 1 & 2 (LAK-44-0327 L & R), IN ADDITION TO THE REQUIREMENTS OF ITEM 202, ALL EXISTING PAVEMENT AND SUBBASE SHALL BE REMOVED AS NECESSARY FOR THE INSTALLATION OF THE PROPOSED APPROACH SLABS SHOWN IN THE PLANS. INCLUDE ALL COSTS FOR THIS REMOVAL FOR PAYMENT AT THE SQUARE YARD CONTRACT PRICE FOR ITEM 202 - PAVEMENT REMOVED, ASPHALT, AS PER PLAN.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441), AS PER PLAN

AT LOCATION 4 (LAK-90-1297), IN ADDITION TO THE REQUIREMENTS OF ITEM 251 AND REMOVAL REQUIREMENTS PER CMS 202, THIS ITEM SHALL INCLUDE THE COST OF REMOVING EXISTING PAVEMENT AND ASPHALT SHOULDERS WITHIN THE LIMITS SHOWN IN THE PLANS AT THE SQUARE YARD CONTRACT PRICE FOR ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR, AS PER PLAN.

THIS ITEM IS TO BE USED AS DIRECTED BY THE ENGINEER TO REPAIR UNSOUND OR DISTRESSED AREAS OF THE APPROACH PAVEMENT AFTER PLANNING OPERATIONS HAVE TAKEN PLACE. REPAIRS WILL TYPICALLY RANGE FROM 1.5 INCH TO 3 INCHES IN DEPTH AS DIRECTED BY THE ENGINEER. USE APPROVED ITEM 441 MATERIAL AS DIRECTED AND APPROVED BY THE ENGINEER AND INCLUDE FOR PAYMENT ITEM 251. FOR ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG70-22M, THE COURSE VIRGIN AGGREGATE FOR THIS ITEM SHALL CONSIST OF A BLEND OF 60% MIN. AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE. USE TYPE 1 MATERIAL FOR REPAIR DEPTH OF 1.5 INCHES OR LESS. USE TYPE 2 MATERIAL FOR REPAIR DEPTH GREATER THAN 1.5 INCHES.

ASPHALT CONCRETE SURFACE COURSE SEALING REQUIREMENTS FOR ITEM 251:

IN ADDITION TO THE GUTTER SEALING REQUIREMENTS SPECIFIED IN SCD BP-3.1 AND C&MS401.15, THE CONTRACTOR SHALL SEAL THE FOLLOWING LOCATIONS:

- ALL CASTING INCLUDING BUT NOT LIMITED TO MONUMENTS, MANHOLES, WATER VALVES, CATCH BASINS, CURB INLETS
- BUTT JOINTS AND FEATHER JOINTS INCLUDING BRIDGE APPROACHES
- BUTT JOINTS BETWEEN PAVED SHOULDER AND DRIVEWAY ASPHALT AND THE TAPERED EDGE WHEN FEATHERING TO AN EXISTING ASPHALT DRIVEWAY
- PERIMETER OF ALL PAVEMENT REPAIRS OR OTHER ASPHALT INLAYS WHEN THE REPAIR/INLAY IS NOT OVERLAID WITH AN ASPHALT CONCRETE SURFACE COURSE
- ALL COLD LONGITUDINAL JOINTS BETWEEN PAVED SHOULDERS AND GUARDRAIL ASPHALT

THE MATERIAL USED SHALL BE A CERTIFIED 702.01 PG BINDER. THE WIDTH OF THE SEALER SHALL BE 2-3 INCHES. ANY ADDITIONAL COSTS ASSOCIATED WITH THE WORK IDENTIFIED IN THIS NOTE SHALL BE INCLUDED WITH ITEM 251 FOR PAYMENT.

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCEMENT STEEL, AS PER PLAN

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. IF DOWELS ARE NECESSARY FOR REPLACEMENT, PERFORM PER ITEM 510 AND INCLUDE WITH ITEM 509 FOR PAYMENT.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED IN THE PROPOSED WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

ITEM 512 - SEALING OF CONCRETE STRUCTURES (NON-EPOXY), AS PER PLAN

THE PROVISIONS OF SECTION 512 SHALL APPLY EXCEPT THAT ABRASIVE BLAST SURFACE PREPARATION IS REQUIRED AS SPECIFIED IN SECTION 512.03.F.

ITEM 512 - SEALING OF CONCRETE STRUCTURES (EPOXY-URETHANE), AS PER PLAN

SEAL CONCRETE AREAS SPECIFIED IN THE PLANS. THE COLOR OF THE FINISH COAT SHALL BE AS INDICATED ON THE STRUCTURE DATA SHEET AND IS INTENDED TO MATCH THE EXISTING COLOR. FOR UNSPECIFIED COLORS THE COLOR SHALL MATCH THE EXISTING COLOR AS APPROVED BY THE ENGINEER. CONTRACTOR SHALL ENSURE ANY EXISTING UNDERPASS LIGHTING, FENCE AND POSTS, RAILING, AND ALL OTHER BRIDGE COMPONENTS ARE PROTECTED DURING THE SEALING OPERATIONS. ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO SEAL ALL OF THE AREAS DETAILED IN THE PLANS SHALL BE PAID AT THE SQUARE YARD CONTRACT PRICE FOR ITEM 512 - SEALING OF CONCRETE STRUCTURES (EPOXY-URETHANE).

ITEM 513 - REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN

AT LOCATIONS 1 & 2 (LAK-44-0327 L & R), 3 (LAK-90-2210), 4 (LAK-90-1297), AND 5 (CUY-17-1227), THE EXISTING DAMAGED OR DETERIORATED CHANNELS AND ANGLES ARE TO BE REMOVED AND REPLACED AS PER THE PLANS OR AS DIRECTED BY THE ENGINEER. THE EXISTING END CROSSFRAME MEMBERS SHALL BE REMOVED FLUSH WITH THE BEAM WEB WHEN APPLICABLE. AT LOCATION 5 ONLY, CROSSFRAME REMOVALS SHALL BE STAGGERED SUCH THAT NO ADJACENT FRAMES ARE REMOVED SIMULTANEOUSLY. AT LOCATIONS WHERE ALL TRAFFIC IS DETOURED, ALL FRAMES MAY BE REMOVED SIMULTANEOUSLY WITHIN THE WORK LIMITS.

FOR ADDITIONAL DETAILS NOT SHOWN IN PLANS, REFER TO SCD GSD-1-96. CLEAN AND PAINT ALL AREAS OF NEW STEEL AND ALL AREAS COATING SYSTEM DAMAGED BY THIS WORK PER THE APPROPRIATE CMS SECTION 514 ITEMS PROVIDED IN THE PLANS. ALL EQUIPMENT, LABOR, AND MATERIALS REQUIRED TO REMOVE AND INSTALL THE END CROSSFRAMES SHALL BE INCLUDED FOR PAYMENT AT THE CONTRACT PRICE PER POUND FOR ITEM 513 - REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN.

ITEM 513 - STRUCTURAL STEEL, MISC.: BEAM END SPLICE (A & B)

AT LOCATIONS 1 & 2 (LAK-44-0327 L & R), PERFORM BEAM END SPLICE A AS SHOWN IN THE PLANS. AT LOCATION 4 (LAK-90-1297), PERFORM BEAM END SPLICE B AS SHOWN IN THE PLANS. FOR ALL LOCATIONS, PERFORM ALL WORK PER ITEM 513 AND AS SHOWN IN THE PLANS. PRIOR TO FABRICATING THE STEEL, THE CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND CLEARANCES NECESSARY TO PERFORM THE WORK AND INFORM THE ENGINEER OF ANY VARIANCES FROM THE PLANS THAT WOULD IMPACT THE WORK.

AT ALL SPLICE LOCATION SURFACE PREPARATION AND PAINTING OF EXISTING AND NEW STEEL SHALL BE PERFORMED PER THE APPLICABLE CMS SECTION 514 ITEM. PRIOR TO ANY WELDING AT SPLICE AND REPAIR LOCATIONS ABRASIVE BLAST AND PRIME THE AREAS TO BE WELDED PER 514 SPECIFICATION TO THE SATISFACTION OF THE ENGINEER. ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED FOR PAYMENT AT THE CONTRACT PRICE FOR EACH SPLICE UNDER ITEM 513 - STRUCTURAL STEEL, MISC.: BEAM END SPLICE A & B, RESPECTIVELY.

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ITEM 513 - STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NDT

AT LOCATION 5 (CUY-17-1227), THIS WORK CONSISTS OF THE FOLLOWING SEQUENCE OF OPERATIONS PERFORMED AT THE AREAS AS DESIGNATED IN THE PLANS AND AS DIRECTED BY THE ENGINEER.

1. CLEAN THE DESIGNATED AREA BY PENCIL ABRASIVE BLASTING THE PAINT AND/OR RUST FROM THE STEEL SURFACE. CLEANED AREAS SHALL BE AT LEAST 3 INCHES WIDE ALONG EACH SIDE OF A SUSPECTED CRACK LOCATION UNLESS OTHERWISE SHOWN IN THE PLANS AND MEET CMS 514.13C REQUIREMENTS.

2. THE ENGINEER, ACCOMPANIED BY THE CONTRACTOR, SHALL CAREFULLY VISUALLY INSPECT THE CLEANED AREA. GRINDING MAY BE DIRECTED BY THE ENGINEER TO ENHANCE THE INVESTIGATION FOR CRACK PRESENCE. ALL GRINDING MUST BE DONE CAUTIOUSLY, ESPECIALLY IN TENSION ZONES. THE GRINDING MOTION SHALL BE PARALLEL TO THE FLANGE EDGE.

3. NON-DESTRUCTIVELY TEST (NDT) THE AREA USING MAGNETIC PARTICLE EXAMINATION AND/OR DYE PENETRANT SO THAT THE ENGINEER MAY FURTHER INSPECT THE CRACKS.

4. ALL CRACKS AND/OR CRACK TIPS THAT ARE ACCESSIBLE ARE TO BE REMOVED AS SHOWN IN THE PLANS AND PAID FOR AS ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL, GRINDING, AND NDT. ANY CRACKS INACCESSIBLE TO DRILLING ARE TO BE REMOVED AS SHOWN IN THE PLANS BY CAREFULLY GRINDING OR BY CAREFULLY ENLARGING THE DRILLED HOLES BY GRINDING.

5. PERFORM STEPS 1 THROUGH 4 ON THE OPPOSITE SIDE OF THE STEEL AREAS DESIGNATED BY THE ENGINEER.

6. CLEAN AND PAINT AREAS PER ITEM 514 - PAINTING OF STRUCTURAL STEEL (PAINTING SHALL BE CONSIDERED INCIDENTAL WITH THIS ITEM). ALL AREAS OF STEEL CLEANED IN STEP 1 AND 5 SHALL BE REPAINTED PER CMS 514.22 REQUIREMENTS.

THE ACCEPTED NUMBER OF LOCATIONS OF WORK AS DESCRIBED HEREIN WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER LOCATION. THIS PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY TO CLEAN, GRIND, AND PERFORM NDT ON ALL SURFACES AT EACH LOCATION.

THE FOLLOWING HAS BEEN CARRIED TO THE ESTIMATED QUANTITIES:

ITEM 513 - STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NDT.....30 EACH

ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL, GRINDING, AND NDT

AT LOCATION 5 (CUY-17-1227), THIS WORK CONSISTS OF DRILLING CRACKS AND ENDS OF CRACKS, GRINDING TO ENLARGE DRILLED HOLES, AND NON-DESTRUCTIVE TESTING (NDT) AS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. DISTRICT PRODUCTION DEPARTMENT (BRIDGE SECTION) APPROVAL MUST BE OBTAINED BEFORE DRILLING ANY HOLES IN THE FLANGES UNDER THIS PAY ITEM IF ENCOUNTERED IN THE FIELD.

DRILL HOLES TO REMOVE ENTIRE CRACKS OR THE APPARENT ENDS OF THE CRACK REVEALED BY THE INITIAL NDT AND/OR VISUAL INSPECTION. GRIND SMOOTH THE EXPOSED CIRCUMFERENCE OF EACH DRILLED HOLE AND CAREFULLY INSPECT FOR CRACKS USING MAGNETIC PARTICLE EXAMINATION AND/OR DYE PENETRANT. CONTINUE DRILLING, GRINDING, AND TESTING UNTIL ALL CRACK ENDS ARE REMOVED. WHEN NO CRACKS ARE DETECTED AT A LOCATION, NO HOLES SHALL BE DRILLED UNDER THIS ITEM.

SINCE ANY OF THESE CRACKS COULD PROPAGATE INTO A TENSION ZONE, REMOVING THEIR ENDS IS IMPERATIVE. CRACKS LESS THAN 1½" LONG AND CRACK AREAS OR DEFECTS LESS THAN 1½" IN DIAMETER SHALL BE REMOVED BY A SINGLE HOLE WHEN PRACTICAL. ENDS OF CRACKS LONGER THAN 1½" AND DEFECTS SMALLER THAN ½" SHALL BE DRILLED WITH A 1" DIAMETER DRILL BIT. HOLES SHALL BE CAREFULLY EXAMINED FOR CRACKS IN THE PLANE OF THE PLATE. 1½" OR 2" DIAMETER HOLES MAY BE DRILLED WHERE THE PROXIMITY OF THE CRACK END TO ADJACENT STEEL PRECLUDES DRILLING 1" DIAMETER HOLES.

CLEAN AND PAINT AREAS PER ITEM 514 - PAINTING OF STRUCTURAL STEEL (PAINTING SHALL BE CONSIDERED INCIDENTAL WITH THIS ITEM).

THE LOCATION OF ALL HOLES SHALL BE DETERMINED BY AND DRILLED UNDER THE DIRECTION OF THE ENGINEER.

THE ACCEPTED NUMBER OF HOLES DRILLED IN THE STRUCTURAL STEEL AS DETAILED ABOVE WILL BE PAID FOR AT THE CONTRACT PRICE PER EACH HOLE. PRICE AND PAYMENT SHALL BE FULL COMPENSATION FOR FURNISHING ALL MATERIAL, LABOR, AND EQUIPMENT NECESSARY FOR DRILLING THE HOLES, GRINDING TO ENLARGE DRILLED HOLES, AND NDT.

THE FOLLOWING HAS BEEN CARRIED TO THE ESTIMATED QUANTITIES:

ITEM 513 - STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL, GRINDING, AND NDT.....30 EACH*

* - 24 EACH IS BASED ON KNOWN CRACK LOCATIONS AS INDICATED ON FRAMING PLANS AND 6 EACH TO BE USED FOR LOCATIONS OF POSSIBLE CRACKS, AS DIRECTED BY THE ENGINEER. SEE SHEET 57/65 FOR DRILLING DETAIL AND THICKNESSES OF WEBS TO BE DRILLED.

ITEM 516 - STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN

AT LOCATION 5(CUY-17-1227) THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY REPLACE THE STRUCTURAL STEEL SIDEWALK EXPANSION JOINT PER CMS 516, SCD EXJ-4-87, AND AS SHOWN ON SHEET 61/65.

OBTAIN APPROVAL FROM THE ENGINEER FOR REPLACEMENT PRODUCTS AND MANUFACTURERS PRIOR TO ORDERING MATERIAL. FIELD VERIFY ALL DIMENSIONS PRIOR TO ORDERING. FIELD MEASURE THE ACTUAL GAP AT THE ACTUAL

ITEM 516 - STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN (CONTINUED)

TEMPERATURE PRIOR TO THE MANUFACTURE OF THE JOINT COMPONENTS. IF THESE VALUES ARE NOT REASONABLY CLOSE TO THOSE GIVEN IN EXJ-4-87 ADJUST THE JOINT SIZE PER THE MANUFACTURER'S RECOMMENDATION AND AS APPROVED BY THE ENGINEER. NO SEPARATE PAYMENT WILL BE MADE FOR MEASUREMENT AND ADJUSTMENT.

ALL LABOR, EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE ABOVE WORK IS INCLUDED IN THE UNIT BID PRICE PER FOOT FOR ITEM 516 - STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN.

ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN

AT LOCATIONS 1 & 2 (LAK-44-0327 L & R), 3 (LAK-90-2210) AND 4 (LAK-90-1297), THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY REPAIR OR REPLACE THE STRUCTURAL STEEL DECK END DAM EXPANSION JOINT AND THE SIDEWALK EXPANSION JOINT PER CMS 516, SCD EXJ-4-87, AND AS MODIFIED ON SHEETS 34/65 AND 35/65.

OBTAIN APPROVAL FROM THE ENGINEER FOR REPLACEMENT PRODUCTS AND MANUFACTURERS PRIOR TO ORDERING MATERIAL. REPLACE THE EXPANSION JOINT WITH A STRIP SEAL SIZED PER THE PLANS ACCORDING TO THE MANUFACTURER SPECIFICATIONS AND RECOMMENDATIONS.

AT LOCATIONS 1 & 2 WHERE JOINT ARMOR IS REPLACED IN PHASES, THE SEAL SHALL BE INSTALLED IN ONE CONTINUOUS ELASTOMERIC STRIP SEAL. SPLICING OF THE SEAL IS PROHIBITED.

REMOVE 6" MINIMUM OF SAFETY CURB OR SIDEWALK EACH SIDE OF THE JOINT AND PARAPETS AS NECESSARY TO REMOVE AND REPLACE THE EXPANSION JOINT. FOR ADDITIONAL DETAILS SEE SHEET 34/65. TAKE CARE DURING REMOVAL TO NOT DAMAGE EXISTING REINFORCING. ALL EXISTING REINFORCING IS TO BE RETAINED IN THE PROPOSED WORK AND NO SEPARATE PAYMENT WILL BE MADE FOR REINFORCING DAMAGED BY THE CONTRACTOR'S REMOVAL OPERATIONS. SHOULD THE ENGINEER DEEM ANY EXISTING REINFORCING UNUSABLE DUE TO CORROSION, IT SHALL BE REPLACED IN KIND AT THE CONTRACT UNIT PRICE FOR ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN. ALL CONCRETE, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO REMOVE AND REPLACE EXISTING JOINT AND ARMOR, CONCRETE DECK, TOP OF ABUTMENT BACKWALL, SAFETY CURB OR SIDEWALK, AND PARAPETS, INCLUDING SEALING OF CONCRETE SURFACES REPLACED FOR THE WORK AND HMWM SEAL BETWEEN NEW AND EXISTING DECK CONCRETE, SHALL BE INCLUDED FOR PAYMENT AT THE LINEAR FOOT CONTRACT PRICE FOR ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.

SUBMIT TO THE PROJECT ENGINEER AS-BUILT DRAWINGS THAT SPECIFY THE SEAL GLAND MANUFACTURER, MODEL NUMBER, AND SIZE THAT WERE INSTALLED UNDER THIS ITEM. ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO COMPLETE THE ABOVE WORK IS INCLUDED IN THE LINEAR FOOT CONTRACT PRICE FOR ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.

ITEM SPECIAL - REFURBISH AND RESET BEARING

AT LOCATIONS 4 (LAK-90-1297) AND 5 (CUY-17-1227), THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE

ITEM SPECIAL - REFURBISH AND RESET BEARING (CONTINUED)

BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY SHEET LEAD WITH PREFORMED BEARING PADS (711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND RE-WELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60°F (15°C), LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS.

ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. NEW BEARINGS SHALL BE PAINTED PER ITEM 514. PAINT AND/OR OVERSPRAY SHALL NOT BE PERMITTED ON THE CONCRETE SURFACES.

ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE FOR EACH AT THE CONTRACT PRICE FOR ITEM SPECIAL - REFURBISH AND RESET BEARING.

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

AT LOCATIONS 1 & 2 (LAK-44-0327 L & R), 4 (LAK-90-1297) AND 5 (CUY-17-1227) THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO PERFORM THE WORK DEFINED IN THE PROJECT PLANS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND INSTALLATION OF AN ADEQUATE JACKING SYSTEM CAPABLE OF RAISING THE BEAMS AS INDICATED. A SUFFICIENT NUMBER OF JACKS OF ADEQUATE CAPACITY SHALL BE USED TO OFFSET THE DEAD LOAD AND LIVE LOAD (PLUS IMPACT) (IF APPLICABLE) REACTIONS OF THE STRUCTURE FOR VERTICAL LIFT. TEMPORARY BEARINGS AND BLOCKING SHALL BE AS INDICATED IN CMS 501.05. THE ESTIMATED DEAD LOAD AND LIVE LOAD (IF APPLICABLE) REACTIONS ARE GIVEN ON THE APPROPRIATE SHEETS.

THE CONTRACTOR SHALL FURNISH JACKS WITH A TOTAL MINIMUM CAPACITY OF 150% OF THE ESTIMATED EXISTING DEAD LOAD AND LIVE LOAD (PLUS IMPACT) (IF APPLICABLE) LISTED IN THESE PLANS. THE STRUCTURE SHALL NOT BE RAISED MORE THAN ¼" TO REMOVE THE BEARINGS. JACKS UNDER HYDRAULIC PRESSURE SHALL NOT BE USED TO SUPPORT LIVE LOADS. JACKS SHALL BE SHIMMED TIGHT OR OTHERWISE BLOCKED WHEN UNDER LIVE LOAD. GIRDERS SHALL NOT BE SUPPORTED ON VERTICAL JACKS DURING NON-WORKING HOURS OR WHILE UNATTENDED BY CONTRACTOR PERSONNEL.

TEMPORARY JACKS, BLOCKING, AND TEMPORARY BEARINGS SHALL BE USED FOR SUPPORT ON TOP OF THE SUBSTRUCTURE UNITS.

JACKS FOR LIFTING THE STRUCTURE SHALL BE HYDRAULIC RAM-TYPE WITH ELECTRIC POWER PUMPS. MULTIPLE JACKS AT A SINGLE BEARING LOCATION SHALL BE CONNECTED TO A HYDRAULIC MANIFOLD AND OPERATED BY A SINGLE PUMP TO PROVIDE EQUAL LIFTING PRESSURE. THE CONTRACTOR SHALL FURNISH PERSONNEL TO OPERATE AND/OR OBSERVE JACKS AT EACH BEARING LOCATION.

THE CONTRACTOR SHALL SUBMIT DETAILS OF THE TEMPORARY SUPPORT SYSTEM AND METHODS AND PROCEDURES FOR UNLOADING THE BEARINGS TO THE ENGINEER FOR APPROVAL 14 DAYS PRIOR TO BEGINNING WORK. THE CONTRACTOR SHALL

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

SUBMIT DETAILS OF AN ALTERNATE LOCATION FROM THE ONE SHOWN IN THE PLANS FOR THE TEMPORARY SUPPORT SYSTEM AND METHODS AND PROCEDURES FOR UNLOADING THE BEARINGS TO THE ENGINEER FOR APPROVAL 14 DAYS PRIOR TO BEGINNING WORK IF AN ALTERNATE LOCATION IS SELECTED. THE CONTRACTOR SHALL NOT USE SHEAR CONNECTIONS DRILLED INTO THE FACE OF THE PIER OR ABUTMENT AS AN ACCEPTABLE MEANS FOR JACKING. THE SUBMITTAL SHALL INDICATE MATERIALS, MEMBER SIZES, SPACINGS, JACK POINT LOCATIONS, JACKING LOADS, AND INSTALLATION AND REMOVAL PROCEDURES. DETAILED PLANS OF THE TEMPORARY SUPPORT SHALL BE PREPARED AND SUBMITTED IN ACCORDANCE WITH CMS 501.05. AFTER ALL BEARING WORK IS COMPLETE, ALL JACKS AND TEMPORARY SUPPORT MATERIAL SHALL BE REMOVED.

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

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS THAT INCLUDES ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED FOR JACKING, INCLUDING ALL TEMPORARY SUPPORTS, AND SUBMITTAL. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 516 - BEARING, PTFE (TEFLON), AS PER PLAN

AT LOCATIONS 1 & 2 (LAK-44-0327 L & R), THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO REMOVE EXISTING SLIDING PLATE BEARINGS, CUTTING EXISTING ANCHOR RODS, AND PLACEMENT OF PROPOSED BEARINGS AS DETAILED IN THE PLANS ON SHEET (44/65).

ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". NEW BEARINGS SHALL BE PAINTED PER ITEM 514. PAINT AND/OR OVERSPRAY SHALL NOT BE PERMITTED ON THE CONCRETE SURFACES. FOLLOWING INSTALLATION, ALL PTFE AND STAINLESS STEEL SURFACES SHALL BE PROTECTED DURING ANY ABRASIVE BLASTING OR PAINTING OPERATIONS. ALL WORK SHALL BE PERFORMED TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS TO PERFORM THIS WORK WILL BE MADE AT THE CONTRACT PRICE FOR EACH BEARING REPLACED UNDER ITEM 516 - BEARING, PTFE (TEFLON), AS PER PLAN.

ITEM 517 - RAILING, MISC.: REPLACE DAMAGED SAFETY RAIL

AT LOCATIONS 3 (LAK-90-2210) AND 4 (LAK-90-1297), THIS ITEM SHALL CONSIST OF REMOVING AND REPLACING IN KIND THE EXISTING DAMAGED SAFETY RAIL AS DIRECTED BY THE ENGINEER. ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED FOR PAYMENT AT THE CONTRACT PRICE FOR EACH RAIL SECTION REPLACED UNDER ITEM 517 - RAILING, MISC.: REPLACE DAMAGED SAFETY RAIL.

ITEM 518 - SCUPPER, VERTICAL EXTENSION, AS PER PLAN

AT LOCATIONS 1 & 2 (LAK-44-0327 L & R), 3 (LAK-90-2210), AND 4 (LAK-90-1297), THIS ITEM SHALL CONSIST OF REMOVING THE CORRODED EXISTING SCUPPER DOWNSPOUTS TO A WELDABLE UNCORRODED SECTION AND INSTALLING A DOWNSPOUT EXTENSION AS DIRECTED BY AND TO THE SATISFACTION OF THE ENGINEER. CARE SHALL BE TAKEN DURING REMOVAL OPERATIONS TO NOT DAMAGE THE EXISTING MAIN MEMBERS AND THE PORTIONS OF THE EXISTING SCUPPER DOWNSPOUTS TO REMAIN. INSTALL THE SCUPPER EXTENSIONS AS SHOWN ON SHEET (34/65). CLEAN AND PAINT ALL AREAS OF NEW STEEL AND ALL AREAS OF COATING SYSTEM DAMAGED BY THIS WORK UNDER THE APPROPRIATE CMS SECTION 514 ITEM. PRIOR TO ANY WELDING ABRASIVE BLAST AND PRIME ALL AREAS TO BE WELDED PER CMS SECTION 514 TO THE SATISFACTION OF THE ENGINEER. ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED FOR PAYMENT AT THE CONTRACT PRICE FOR EACH UNDER ITEM 518 - SCUPPER, VERTICAL EXTENSION, AS PER PLAN.

ITEM 518 - SCUPPER, MISC.: SCUPPER CLEANOUT

AT LOCATION 5 (CUY-17-1227), THIS ITEM SHALL CONSIST OF CLEANING OUT OF DEBRIS THE SCUPPER GRATINGS AND DOWNSPOUTS AS DIRECTED BY AND TO THE SATISFACTION OF THE ENGINEER. CARE SHALL BE TAKEN DURING REMOVAL OPERATIONS TO NOT DAMAGE SCUPPER, GRATINGS, AND DOWNSPOUTS, THE SCUPPERS TO REMAIN. ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED FOR PAYMENT AT THE CONTRACT PRICE FOR EACH UNDER ITEM 518 - SCUPPER, MISC.: SCUPPER CLEANOUT

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED, INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING. WHERE APPLICABLE, CONTRACTOR SHALL ENSURE ANY EXISTING UNDERPASS LIGHTING, BRIDGE RAIL, OR ANY OTHER BRIDGE COMPONENTS ARE PROTECTED DURING THE PATCHING OPERATIONS.

SPECIFIC PATCHING LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN ACCORDANCE WITH ITEM 519 UNLESS IDENTIFIED IN THE PLANS. IF EXISTING UTILITIES ARE LOCATED WITHIN THE SPECIFIED PATCHING AREAS, THE COST FOR REMOVAL AND REINSTALLING THE UTILITIES SHALL BE INCLUDED IN THIS ITEM. ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE INCLUDED FOR PAYMENT AT THE SQUARE FOOT CONTRACT PRICE FOR ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN.

ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN

AT LOCATIONS 1 & 2 (LAK-44-0327 L & R), THIS PAY ITEM IS INTENDED FOR THE INSPECTION AND RESTORATION OF THE EXISTING CRUSHED AGGREGATE SLOPE PROTECTION. THE QUANTITIES PROVIDED IN THE PLANS ARE THE CALCULATED SURFACE AREAS OF THE EXISTING SLOPE PROTECTION. THIS WORK INCLUDES THE REGRADING AND MOVING OF EXISTING SLOPE PROTECTION TO ACHIEVE A UNIFORM SLOPE PROTECTION THICKNESS WITH OR WITHOUT THE NEED FOR ADDITIONAL MATERIAL. THE CONTRACTOR SHALL ALSO REMOVE ALL FOREIGN DEBRIS THAT IS DEEMED TO BE REMOVED BY THE ENGINEER.

ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN (CONTINUED)

ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED FOR PAYMENT PER SQUARE YARD AT THE CONTRACT PRICE FOR ITEM 601 - CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN.

ITEM 601 - DUMPED ROCK FILL, TYPE A, AS PER PLAN

AT LOCATIONS 1 & 2 (LAK-44-0327 L & R), THIS PAY ITEM IS INTENDED FOR THE INSPECTION AND RESTORATION OF THE STREAM BANK OUTSIDE THE LIMITS OF AND AS FILL BENEATH THE CRUSHED AGGREGATE SLOPE PROTECTION. THE QUANTITIES PROVIDED IN THE PLANS ARE THE CALCULATED VOLUMES TO RESTORE THE EXISTING GRADING TO THE CONDITION SHOWN IN THE EXISTING PLANS. THIS WORK INCLUDES THE REGRADING AND MOVING OF EXISTING EMBANKMENT AND SLOPE PROTECTION TO ACHIEVE THE DESIRED GRADING AND/OR PROVIDE A SUITABLE BASE FOR THE CRUSHED AGGREGATE SLOPE PROTECTION. ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED FOR PAYMENT PER CUBIC YARD AT THE CONTRACT PRICE FOR ITEM 601 - DUMPED ROCK FILL, TYPE A, AS PER PLAN.

ITEM 606 - GUARDRAIL REBUILT, AS PER PLAN

AT LOCATION 4 (LAK-90-1297), THIS PAY ITEM IS INTENDED TO REMOVE AND REPLACE IN KIND DAMAGED GUARDRAIL PIECES AND SUPPORT POSTS AS DIRECTED BY THE ENGINEER. ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED FOR PAYMENT AT THE LINEAR FOOT CONTRACT PRICE FOR ITEM 606 - GUARDRAIL REBUILT, AS PER PLAN.

ITEM 607 - FENCE, MISC.: REPLACE DAMAGED LINE RAIL

AT LOCATION 4 (LAK-90-1297), THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO REPAIR/REPLACE DAMAGED ALUMINUM FENCE LINE RAIL INCLUDING ALL HARDWARE (BANDS, BARS, CAPS, ETC.) NECESSARY TO COMPLTE THE WORK AS DIRECTED BY THE ENGINEER AND AS SHOWN IN THE PLANS ON SHEET (51/65). ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED FOR PAYMENT AT THE CONTRACT PRICE FOR EACH LINE RAIL REPLACED UNDER ITEM 607 - FENCE, MISC.: REPLACE DAMAGED LINE RAIL.

ITEM 619 - FIELD OFFICE, TYPE B, AS PER PLAN

A TYPE B FIELD OFFICE IS REQUIRED FOR THIS PROJECT. THE FOLLOWING REVISIONS TO EQUIPMENT SUPPLIED WITH THE TYPE B FIELD OFFICE, AS SPECIFIED IN TABLE 619.02-1, FIELD OFFICE, SHALL APPLY:

- THE COPIER SUPPLIED MUST MEET THE REQUIREMENTS OF THE COPIER SUPPLIED WITH THE TYPE C FIELD OFFICE.
- THE BROAD BAND INTERNET CONNECTION MUST MEET A MINIMUM DOWNLOAD SPEED OF 10MB PER SECOND AND A MINIMUM UPLOAD SPEED OF 5MB PER SECOND.
- CONTRACTOR SHALL FURNISH AND SET UP A WI-FI ROUTER MEETING THE REQUIREMENTS OF IEEE 802.11AC FOR THE EXCLUSIVE USE OF THE DEPARTMENT.

ALL OTHER FIELD OFFICE ITEMS SUPPLIED SHALL MEET THE REQUIREMENTS OF A TYPE B FIELD OFFICE.

ITEM 619 - FIELD OFFICE, TYPE B, AS PER PLAN....8 MONTHS

ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN

AN OHIO PROFESSIONAL SURVEYOR SHALL DETERMINE THE MINIMUM VERTICAL CLEARANCES OF ALL EXISTING BRIDGES WITHIN THE PROJECT LIMITS AFTER COMPLETION OF ALL THE WORK, BUT PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. AT A MINIMUM, MEASUREMENTS SHALL BE TAKEN ALONG THE CENTERLINE OF EACH FASCIA BEAM AT THE EDGE OF SHOULDERS, EDGE LINES, LANE LINES, AND CROWN OF THE ROADWAY BELOW. THE MEASUREMENTS SHALL BE DOCUMENTED ON THE ODOT VERTICAL CLEARANCE SURVEY FORM. THE FORM SHALL BEAR THE STAMP OR SEAL OF THE OHIO PROFESSIONAL SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THE OHIO PROFESSIONAL SURVEYOR SHALL SUBMIT THE COMPLETED FORM TO THE PROJECT ENGINEER AND THE DISTRICT BRIDGE MAINTENANCE ENGINEER PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

IN ADDITION TO VERTICAL CLEARANCE DETERMINATION, THE CONTRACTOR SHALL VERIFY EXISTING ELEVATIONS AS NECESSARY PRIOR TO AND AT COMPLETION OF THE WORK, AT WORK INTERFACES SUCH AS ENDS OF DECK, EXPANSION JOINTS, AND END OF APPROACH SLABS. THESE MEASURMENTS ARE INTENDED TO ENSURE PROPOSED WORK MEETS EXISTING GRADES AND PROVIDES A SMOOTH RIDING SURFACE FOR THE TRAVELING PUBLIC.

ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECK

AT ALL LOCATIONS THIS ITEM IS INTENDED FOR PATCHING CONCRETE DECK AND APPROACH SLABS. THE ENGINEER SHALL DESIGNATE THE AREAS TO BE REPAIRED. CONCRETE FOR PATCHING CONCRETE BRIDGE DECK SHALL CONFORM TO THE FOLLOWING MIX DESIGNS SHOWN BELOW:

AGGREGATE TYPE	FINE AGGREGATE (LB)	#8 COARSE AGGREGATE* (LB)	AGGREGATE TOTAL (LB)	CEMENT CONTENT (LB)	MICRO-SILICA (LB)	WATER TO CEMENT RATIO	AIR CONTENT ±2%	FIBER 1/4" POLYPROPYLENE (LB)
GRAVEL	1410	1430	2840	600	50	0.40	8	1
LIMESTONE	1410	1450	2860	600	50	0.40	8	1
SLAG	1300	1350	2650	600	50	0.40	8	1

* ALL COARSE AGGREGATE SHALL HAVE AN ABSORPTION OF 1.00% OR GREATER AS DEFINED PER ASTM C127

** FIBER MESH SHALL BE 100% VIRGIN POLYPROPYLENE IN A FIBRILLATED NETWORK FORM AND SHALL BE 1¼" IN LENGTH (FIBER MESH WEIGHTS NOT INCLUDED IN MIX DESIGN)

THE ENGINEER SHALL DETERMINE AND DESIGNATE THE AREAS TO BE REPAIRED. THIS ITEM SHALL INCLUDE FURNISHING ALL NECESSARY LABOR, EQUIPMENT, AND MATERIALS TO REPAIR CONCRETE BRIDGE DECKS, INCLUDING THE REMOVAL OF LOOSE AND UNSOUND CONCRETE AND/OR BITUMINOUS PATCHES, SURFACE PREPARATION, PLACING, FINISHING, AND CURING OF THE PATCHING MATERIAL. ALL DISTURBED PAVEMENT MARKINGS SHALL BE REPLACED PER 614. PAYMENT FOR THE ABOVE WORK SHALL BE AT THE SQUARE YARD CONTRACT PRICE FOR ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECK.

CALCULATED KGR CHECKED DEB

GENERAL NOTES (4 OF 5)

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

7/65

ITEM SPECIAL - STRUCTURE, MISC.: COMPOSITE FIBER WRAP SYSTEM

AT LOCATION 5 (CUY-17-1227), THIS WORK SHALL CONSIST OF PROVIDING AND INSTALLING A FIBER WRAP FOR THE PIER CAP OR COLUMN. PREPARATION, WRAPPING THE PIER CAP/COLUMN, AND ALL INCIDENTALS NECESSARY TO COMPLETE. THE INSTALLATION SHALL BE PER THE MANUFACTURER'S REQUIREMENTS. ALSO INCLUDED FOR PAYMENT IN THIS ITEM IS THE REMOVAL AND REINSTALLATION OF THE EXISTING CONDUIT AND OR DOWNSPOUTS ATTACHED TO THE COLUMNS AS NECESSARY TO COMPLETE THE WORK

MATERIALS: SUPPLIERS SHALL HAVE A MINIMUM OF 10 INSTALLATIONS AND FURNISH CERTIFIED TEST REPORTS INCLUDING 1000 HOUR TESTS FOR 140 °F WATER, SALT WATER, ALKALINE SOIL, OZONE AND EFFERVESCENCE IN ADDITION TO THE REQUIREMENTS LISTED BELOW.

THE FABRIC FOR THE COMPOSITE CASING SHALL BE CONTINUOUS FILAMENT WOVEN FABRIC. PRIMARY FIBERS FOR THE FABRIC SHALL BE (E) ELECTRICAL GLASS FIBERS. THE MINIMUM WEIGHT OF THE FABRIC SHALL BE 27.0 OUNCES PER SQUARE YARD.

THE EPOXY SHALL BE SUPPLIED BY THE MANUFACTURER TO MEET THE COMPOSITE STRENGTH GIVEN BELOW. POLYESTER RESIN SHALL NOT BE ALLOWED AS A SUBSTITUTE FOR EPOXY RESIN.

THE COMPOSITE OF THE FIBER WRAPPED CASING SYSTEM SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

PROPERTY	REQUIREMENTS	ASTM TEST METHOD
ULTIMATE TENSILE STRENGTH, PSI MIN., IN PRIMARY FIBER DIRECTION	60,000 PSI	D3039, AVERAGE OF 7, 1" BY 10" NORMALIZED TO 0.80" THICK 0.01" PER MINUTE TESTING SPEED
ULTIMATE TENSILE STRENGTH, PSI MIN., IN ORTHOGONAL FIBER DIRECTION	3,000 PSI	D3039, AVERAGE OF 7, 1" BY 10" NORMALIZED TO 0.80" THICK 0.01" PER MINUTE TESTING SPEED
TENSILE STRENGTH (MIN. AFTER TEST) 1,000 HOURS EXPOSURE TO 100% HUMIDITY	60,000 PSI	C581
TENSILE STRENGTH (MIN. AFTER TEST) 1,000 HOURS EXPOSURE TO OZONE	60,000 PSI	D1149 EXCEPT NOT UNDER STRESS DURING OZONE EXPOSURE
TENSILE STRENGTH (MIN. AFTER TEST) 1,000 HOURS EXPOSURE TO ALKILI	60,000 PSI	D3083 USING SOIL BURIAL - WATER CONTENT OF 73% ± 3%
TENSILE STRENGTH (MIN. AFTER TEST) 1,000 HOURS EXPOSURE TO SALT WATER	60,000 PSI	C581 AND D1141 OMITTING ADDITION OF HEAVY METAL REAGENTS
TENSILE STRENGTH (MIN. AFTER TEST) 1,000 HOURS EXPOSURE @ 140°F	60,000 PSI	D3045
TENSILE STRENGTH (MIN. AFTER TEST) ULTRAVIOLET (UV) EXPOSURE	60,000 PSI	G154 USING FS40 UV-B BULTS FOR MIN. 40 CYCLES. THE CYCLE SHALL BE 4 HOURS OF CONDENSATE EXPOSURE AT 40°C
ELONGATION: PERCENT, MIN. PERCENT, MAX.	1.7% 5.0%	
TENSILE MODULUS, PSI MIN., OF PRIMARY FIBERS	3,000,000	D3039
VISUAL DEFECTS	ACCEPTANCE LEVEL III	D2563
COEFFICIENT OF THERMAL EXPANSION IN THE PRIMARY DIRECTION	4,300,000 PPM/°F (+15%)	D696

ITEM SPECIAL - STRUCTURE, MISC.: COMPOSITE FIBER WRAP SYSTEM (CONTINUED)

SURFACE PREPARATION: THE SURFACE TO RECEIVE THE COMPOSITE WRAP SHALL BE FREE FROM FINS, SHARP EDGES, AND PROTRUSIONS THAT WILL CAUSE VOIDS BEHIND THE CASING OR THAT, IN THE OPINION OF THE ENGINEER, WILL DAMAGE THE FIBER. IF FIBERS ARE TO WRAP AROUND CORNERS OF RECTANGLE CROSS-SECTIONS, THE CORNERS SHALL BE ROUNDED TO A ½ INCH RADIUS. THIS WILL HELP PREVENT STRESS CONCENTRATIONS IN THE FIBER WRAP AND VOIDS BETWEEN THE FIBER WRAP AND THE CONCRETE. IN ADDITION, THE SURFACE SHALL BE SMOOTH AND FREE OF VOIDS OR UNDULATIONS THAT WOULD PREVENT FULL CONTACT BETWEEN THE CONCRETE AND THE FIBER WRAP. ALL CONCRETE PATCHES SHALL BE CURED AS APPROVED BY THE ENGINEER.

AVOIDANCE OF THE EXISTING BEARINGS SHALL BE UNDERSTOOD, AND THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE AN ACCEPTABLE WRAPPING METHOD AROUND THESE BEARING DEVICES.

ADDITIONALLY, IF THERE ARE CONDUITS AND OR DOWNSPOUTS ATTACHED TO THE COLUMNS OR PIER CAPS TO RECEIVE FIBER WRAP, THE CONTRACTOR SHALL REMOVE THESE ITEMS AS DIRECTED BY THE ENGINEER AND RE-INSTALL THEM AFTER THE APPLICATION OF THE FINAL URETHANE TOP COAT.

COMPOSITE APPLICATION: THE AMBIENT TEMPERATURE AND THE TEMPERATURE OF THE EPOXY RESIN COMPONENTS SHALL BE BETWEEN 55 DEG. F AND 95 DEG. F AT THE TIME OF MIXING. THE COMPOSITE SHALL BE APPLIED WHEN THE RELATIVE HUMIDITY IS LESS THAN 85% AND THE SURFACE TEMPERATURE IS MORE THAN 5 DEG. F ABOVE THE DEW POINT. APPLICATION SHALL BEGIN WITHIN ONE HOUR AFTER THE BATCH HAS BEEN MIXED.

ITEM SPECIAL - STRUCTURE, MISC.: COMPOSITE FIBER WRAP SYSTEM (CONTINUED)

THE COMPONENTS OF THE EPOXY RESIN SHALL BE MIXED WITH A MECHANICAL MIXER AND APPLIED UNIFORMLY TO THE FIBER AT A RATE THAT SHALL INSURE COMPLETE SATURATION OF THE FABRIC.

THE FABRIC/EPOXY COMPOSITE SHALL BE APPLIED TO THE SURFACE OF THE COLUMN BY WRAPPING METHODS THAT PRODUCE A UNIFORM FORCE THAT IS DISTRIBUTED ACROSS THE ENTIRE WIDTH OF THE FABRIC. THE PRIMARY FIBERS OF THE FABRIC SHALL NOT DEVIATE FROM A HORIZONTAL LINE MORE THAN ½ INCH PER FOOT. THE HORIZONTAL LAP SHALL BE 2" MINIMUM AND THE MINIMUM PERIMETER LAP SHALL BE 1'-0". ENTRAPPED AIR SHALL BE RELEASED OR ROLLED OUT BEFORE THE EPOXY SETS.

SUCCESSIVE LAYERS OF COMPOSITE MATERIALS SHALL BE PLACED BEFORE POLYMERIZATION OF THE PREVIOUS LAYER OF EPOXY IS TOO DRY TO ACHIEVE ADEQUATE BOND BETWEEN LAYERS. IF POLYMERIZATION DOES OCCUR BETWEEN LAYERS THE SURFACE MUST BE ROUGHENED USING A LIGHT ABRASIVE THAT WILL NOT DAMAGE THE FIBER.

THE FINAL LAYER OF EPOXY SHALL BE APPLIED TO THE FINAL LAYER OF FABRIC, WITH CARE TAKEN TO INSURE COATING OF ALL EDGES AND SEAMS. SPACES BETWEEN THE BANDS OF FABRIC SHALL BE FILLED WITH EPOXY THICKENED AS DIRECTED BY THE MANUFACTURER.

A FINAL INSPECTION SHALL BE PERFORMED ON ALL FIBER WRAPPED SURFACES AFTER THE EPOXY SETS YET PRIOR TO THE APPLICATION OF THE URETHANE TOP COAT. ALL DEFECTS (INCLUDING BUBBLES, DELAMINATIONS AND FABRIC TEARS) MORE THAN 1 SQUARE INCH OF THE SURFACE AREA, OR AS SPECIFIED BY THE PROJECT ENGINEER, SHALL BE REPAIRED AS SUCH:

1. SMALL DEFECTS (ON THE ORDER OF 6" DIAMETER) SHALL BE INJECTED OR BACK FILLED WITH EPOXY.

2. BUBBLES LESS THAN 12" DIAMETER SHALL BE REPAIRED BY INJECTING WITH EPOXY. TWO HOLES SHALL BE DRILLED INTO THE BUBBLE TO ALLOW INJECTION OF THE EPOXY AND ESCAPE OF ENTRAPPED AIR.

3. BUBBLES, DELAMINATIONS AND FABRIC TEARS GREATER THAN 12" IN DIAMETER SHALL BE REPAIRED BY REMOVING AND REAPPLYING THE REQUIRED NUMBER OF LAYERS OF THE COMPOSITE AND THE REQUIRED FINISH COATING. ALL REPAIRS SHALL BE APPROVED BY THE PROJECT ENGINEER.

COATING SYSTEM APPLICATION: A FINAL URETHANE COATING IS REQUIRED TO PROTECT THE FIBERS FROM THE ELEMENTS SPECIFICALLY UV RADIATION AND TO GIVE THE FINAL AESTHETIC EFFECT.

AFTER 96 HOURS FROM THE FINAL APPLICATION OF EPOXY, IF THE FINAL EPOXY COAT IS COMPLETELY POLYMERIZED, THE EXTERIOR SURFACES OF THE COMPOSITE WRAP SHALL BE CLEANED AND ROUGHENED BY A LIGHT ABRASIVE. CARE SHOULD BE TAKEN DURING THE ROUGHENING PROCESS SO THAT THE FIBERS ARE NOT DAMAGED. ALL CLEANED AND ROUGHENED SURFACES SHALL BE DRY BEFORE APPLYING THE URETHANE COATING.

MEASUREMENT AND PAYMENT: THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PROVIDE AND INSTALL A FIBER WRAP CASING SYSTEM USING

ITEM SPECIAL - STRUCTURE, MISC.: COMPOSITE FIBER WRAP SYSTEM (CONTINUED)

HIGH STRENGTH, HYBRID FIBER/EPOXY COMPOSITES FIELD APPLIED TO THE PIER CAP/COLUMN, INCLUDING ERECTION OF SCAFFOLDING, CLEANING, SURFACE PREPARATION, WRAPPING THE SURFACES AND ALL INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION PER THE MANUFACTURER'S REQUIREMENTS. PAYMENT FOR ALL OF THE ABOVE LABOR, MATERIALS, AND EQUIPMENT SHALL BE AT THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM 530 - SPECIAL STRUCTURE MISC.: COMPOSITE FIBER WRAP SYSTEM.

ITEM SPECIAL - PATCHING CONCRETE STRUCTURE, MISC.: SIDEWALK AND SAFETY CURB REPAIR

AT ALL LOCATIONS, THIS PAY ITEM IS INTENDED FOR REPAIRING THE TOP AND VERTICAL FACES OF EXISTING SIDEWALKS, SAFETY CURBS, AND/OR PARAPETS AS DETAILED IN THE PLANS. THIS ITEM SHALL BE AS DIRECTED BY THE ENGINEER. FOLLOWING REMOVAL OF DETERIORATED CONCRETE PER ITEM 519 BUT PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING. ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED FOR PAYMENT AT THE CONTRACT PRICE PER LINEAR FOOT UNDER ITEM SPECIAL - PATCHING CONCRETE STRUCTURE, MISC.: SIDEWALK AND SAFETY CURB REPAIR.

ITEM SPECIAL - PATCHING CONCRETE STRUCTURE, MISC.: TOP OF BACKWALL REPAIR

AT LOCATION 5 (CUY-17-1227), THIS PAY ITEM IS INTENDED FOR REPAIRING THE TOP OF THE EXISTING BRIDGE BACKWALLS FROM ABOVE (RIDING SURFACE), AS DETAILED IN THE PLANS. THIS ITEM SHALL BE AS DIRECTED BY THE ENGINEER.

PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED FOR PAYMENT AT THE CONTRACT PRICE PER LINEAR FOOT UNDER ITEM SPECIAL - PATCHING CONCRETE STRUCTURE, MISC.: TOP OF BACKWALL REPAIR.

CALCULATED KGR CHECKED DEB

GENERAL NOTES (5 OF 5)

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

8
65

ITEM 614 - MAINTAINING TRAFFIC

THE CONTRACTOR SHALL CONDUCT THEIR OPERATIONS AS TO MAKE PROPOSED REPAIRS WITH A MINIMUM OF HAZARD, DELAY AND INCONVENIENCE TO THE MOTORISTS USING THE HIGHWAY AFFECTED BY THE WORK DONE UNDER THIS CONTRACT. IN ADDITION TO THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE FOLLOWING SPECIFIC PROVISIONS ARE MANDATORY.

I. NOTIFICATION

SINCE FUNCTIONAL TRAFFIC CONTROL IS A MAJOR CONCERN ON THIS PROJECT, IT IS ESSENTIAL THAT THE MOTORING PUBLIC BE ADEQUATELY FOREWARNED OF FUTURE LANE CLOSURES AND TRAFFIC CONSTRICTIONS. THEREFORE, THE CONTRACTOR MUST SUBMIT A WRITTEN SCHEDULE TO THE ODOT PUBLIC INFORMATION OFFICE (216)-584-2007 OR D12.PUBLICINFORMATION@DOT.OHIO.GOV) INDICATING THE LOCATIONS AND DATES OF THE LANE CLOSURES AT LEAST 14 DAYS PRIOR TO THE IMPLEMENTATION OF ANY SUCH CLOSURES. ALSO, NOTIFY THE ENGINEER, RESPONSIBLE LAW ENFORCEMENT AGENCIES AND EMERGENCY SERVICES, AND LOCAL MUNICIPALITIES OF LANE CLOSURES OR OTHER RESTRICTIONS AT LEAST 2 WEEKS PRIOR TO IMPLEMENTATION. USE PORTABLE CHANGEABLE MESSAGE SIGNS TO ALERT MOTORISTS 7 DAYS PRIOR TO THE IMPLEMENTATION OF ANY CHANGES SUCH AS LANE CLOSURES OR OTHER RESTRICTIONS.

II. LANE CLOSURE RESTRICTIONS

1. LANE CLOSURES MAY ONLY BE IMPLEMENTED AT THE TIMES PERMITTED BY THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" LIST WHICH IS LOCATED ON THE ODOT WEB SITE: HTTP://WWW.DOT.STATE.OH.US/DISTRICTS/D12/HIGHWAYMANAGEMENT/PAGES/PERMITTEDLANECLOSURES.ASPX THE LATEST REVISION AT 14 DAYS PRIOR TO THE BID DATE SHALL BE IN EFFECT FOR THIS PROJECT.

2. ANY ROADWAY NOT LISTED IN THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" SHALL NOT HAVE ANY WEEKDAY CLOSURES FROM 6:00AM - 9:00AM OR 3:00PM - 6:00PM, UNLESS PERMITTED OTHERWISE IN THE PLANS.

3. UNLESS OTHERWISE NOTED, EXIT AND ENTRANCE RAMP LANES SHALL REMAIN OPEN AT ALL TIMES AND EXHIBIT A MINIMUM WIDTH OF ELEVEN (11) FEET.

4. NO LANE OR SHOULDER CLOSURES SHALL BE IN PLACE WHEN NO WORK IS BEING PERFORMED.

5. MAINTENANCE OF TRAFFIC SHALL FOLLOW THE INSTRUCTION OF THE STANDARD CONSTRUCTION DRAWINGS LISTED ON THE TITLE SHEET AND THE LATEST REVISION OF THE OMUTCD.

6. PEDESTRIAN TRAFFIC SHALL BE PERMITTED AND ACCOMMODATED ON AT LEAST ONE SIDE AT ALL TIMES AT LOCATIONS WHERE PEDESTRIAN TRAFFIC IS CURRENTLY MAINTAINED.

7. THE REQUIREMENTS FOR SPECIFICATIONS DURING NONWORKING HOURS SHALL BE WAIVED FOR THE DURATION OF THE WEEKEND CLOSURES.

8. ALL NOTES AND RESTRICTIONS LISTED ON DISTRICT 12 WEBSITE LISTED IN NOTE 1 SHALL APPLY TO THESE SITES.

LOCATION 1 (LAK-44-0327 L) AND LOCATION 2 (LAK-44-0327 R): THE CONTRACTOR SHALL PERFORM WORK BY CLOSING ONE LANE AT A TIME FOR A MAXIMUM OF THREE WEEKS EACH. LANE CLOSURE AND SHIFTS SHALL BE PER THE MAINTENANCE OF TRAFFIC PLANS ON SHEETS (18/65) THROUGH (27/65) AND THE ODOT STANDARD CONSTRUCTION DRAWINGS MT-95.40, MT-95.50 AND MT-102.10. LOCATION 1 AND LOCATION 2 PHASES MUST BE PERFORMED CONCURRENTLY.

II. LANE CLOSURE RESTRICTIONS (CONT.)

LOCATION 3 (LAK-90-2210): THE CONTRACTOR IS PERMITTED TO CLOSE THE BRIDGE FOR 45 DAYS TO COMPLETE THE WORK. LANE CLOSURES WILL AFFECT BOTH DIRECTIONS OF TRAFFIC AND DETOURS SHALL BE IMPLEMENTED PER THE PLAN DETAILS. LIQUIDATED DAMAGES IN THE AMOUNT OF $1,000 SHALL BE DEDUCTED FOR EACH ADDITIONAL CALENDAR DAY THE BRIDGE IS CLOSED IN ACCORDANCE WITH CMS SECTION 108.

LOCATION 4 (LAK-90-1297): THE CONTRACTOR IS PERMITTED TO CLOSE THE BRIDGE FOR 45 DAYS TO COMPLETE THE WORK. LANE CLOSURES WILL AFFECT BOTH DIRECTIONS OF TRAFFIC AND DETOURS SHALL BE IMPLEMENTED PER THE PLAN DETAILS. LIQUIDATED DAMAGES IN THE AMOUNT OF $1,000 SHALL BE DEDUCTED FOR EACH ADDITIONAL CALENDAR DAY THE BRIDGE IS CLOSED IN ACCORDANCE WITH CMS SECTION 108.

LOCATION 5 (CUY-17-1227): THE CONTRACTOR SHALL PERFORM WORK BY CLOSING ONE LANE AT A TIME ON GRANGER ROAD (S.R. 17) PER DIRECTION OF TRAVEL. THE INNER LANES SHALL BE CLOSED FOR 4 WEEKS. THE OUTER LANES SHALL BE CLOSED FOR 6 WEEKS TOTAL, WITH TWO WEEKS DEDICATED TO THE RELOCATION OF THE CEI DUCTBANK. THE CONTRACTOR MAY ALSO CLOSE ONE SHOULDER AT A TIME ON I.R. 480 PER DIRECTION OF TRAVEL FOR A MAXIMUM OF FOUR WEEKS EACH. LANE CLOSURE AND SHIFTS SHALL BE PER THE DETAILS ON SHEET (28/65) AND THE ODOT STANDARD CONSTRUCTION DRAWINGS MT-95.30 AND MT-95.50. SHOULDER CLOSURE SHALL BE PER ODOT STANDARD CONSTRUCTION DRAWING MT-95.45.

NOT WITHSTANDING THE ABOVE, NO LANE CLOSURES OTHER THAN DETOURS NOTED ABOVE SHALL OCCUR DURING THE PERIOD BEGINNING AT 12:00 NOON ON THE DAY PRECEDING AND CONTINUING UNTIL 6:00AM ON THE DAY FOLLOWING LEGAL HOLIDAYS AND HOLIDAY WEEKENDS SUCH AS MEMORIAL DAY, FOURTH OF JULY, AND LABOR DAY. FURTHERMORE, NO LANE CLOSURES ARE TO BE IMPLEMENTED OR IN PLACE DURING INCREASED TRAFFIC VOLUMES CAUSED BY SPECIAL EVENTS OR WHEN THE ENGINEER DEEMS THE CONDITIONS TOO HAZARDOUS.

DAY	TIME ALL LANES MUST BE OPEN TO TRAFFIC				
SUNDAY	12:00N	FRI	THROUGH	6:00 AM	MON
MONDAY	12:00N	FRI	THROUGH	6:00 AM	TUES
TUESDAY	12:00N	MON	THROUGH	6:00 AM	WED
WEDNESDAY	12:00N	TUES	THROUGH	6:00 AM	THURS
THURSDAY	12:00N	WED	THROUGH	6:00 AM	MON
THURSDAY (THANKSGIVING)	6:00 AM	WED	THROUGH	6:00 AM	MON
FRIDAY	12:00N	THUR	THROUGH	6:00 AM	MON
SATURDAY	12:00N	FRI	THROUGH	6:00 AM	MON

THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE AS DESIGNATED IN THE UNAUTHORIZED LANE USE TABLE FOR EACH UNIT OF TIME A CRITICAL LANE/RAMP IS CLOSED BY THE CONTRACTOR'S ACTION WHILE NOT OTHERWISE PERMITTED BY THE CONTRACT.

UNAUTHORIZED LANE USE TABLE

DESCRIPTION OF CRITICAL LANE TO BE MAINTAINED	TIME UNIT	DISINCENTIVE $ PER TIME UNIT
SR 44 NB/SB (2 LANES EACH)	EACH 15 MINUTES	$500
SR 44 NB/SB (2 LANES EACH)	EACH HOUR	$5,000
IR-90 NB/SB AT FORD RD. (2 LANES EACH)	EACH 15 MINUTES	$750
IR-90 NB/SB AT FORD RD. (2 LANES EACH)	EACH HOUR	$7,500
IR-90 NB/SB AT MORLEY RD. (2 LANES EACH)	EACH 15 MINUTES	$1,000
IR-90 NB/SB AT MORLEY RD. (2 LANES EACH)	EACH HOUR	$10,000

III. MAINTENANCE OF TRAFFIC SYSTEMS

1. WHEN REQUIRED

WHENEVER ANY PART OF THE TRAVELED SURFACE IS BEING WORKED UPON OR IS OTHERWISE NOT SUITABLE FOR SAFE AND CONVENIENT USE BY VEHICLES, TRAFFIC CONTROL DEVICES SUFFICIENT TO PROTECT SUCH AREAS TO ASSURE THE SAFE AND CONVENIENT PASSAGE OF VEHICULAR TRAFFIC SHALL BE INSTALLED AND MAINTAINED. SUCH TRAFFIC CONTROL DEVICES AND THE MANNER IN WHICH THEY ARE USED SHALL BE CONSISTENT WITH THESE PLANS AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, HEREINAFTER REFERRED TO AS THE "MANUAL". THE TRAFFIC CONTROL DEVICE SYSTEM SHALL CONSTITUTE THE MINIMUM PROVISIONS FOR TRAFFIC CONTROL FOR EACH PARTICULAR SITUATION. WHENEVER THE ENGINEER DEEMS IT NECESSARY ESPECIALLY WHERE A GRADE, CURVE, OR MERGE CONDITIONS EXISTS, THEY MAY DIRECT THAT ADDITIONAL OR ALTERNATIVE DEVICES BE USED.

2. CONDITIONS

DURING ALL PARTS OF THIS PROJECT, FLAGGERS, SIGNING, BARRICADES, FLASHING ARROWS, ETC. SHALL BE LOCATED AS INDICATED IN THE "MANUAL" OR AS SHOWN IN THE STANDARD DRAWINGS.

3. ADVANCE WARNING SIGNS

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

4. FLAGGERS

AT LEAST TWO FLAGGERS ARE REQUIRED FOR EACH CLOSURE. THE CONTRACTOR SHALL FURNISH ADDITIONAL FLAGGERS AS DIRECTED BY THE ENGINEER.

5. PROTECTION OF PUBLIC

PERSONAL CARS SHALL NOT BE PARKED WITHIN THE RIGHT OF WAY.

6. FAILURE TO COMPLY

IF THERE IS ANY FAILURE TO COMPLY WITH PROVISIONS FOR TRAFFIC CONTROL SET OUT IN THESE PLANS AND NOTES, OR WITH THE PROVISIONS OF THE "MANUAL", THE HIGHWAY IN THE VICINITY OF THE WORK AREA SHALL NOT BE CONSIDERED IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC. ANY FAILURE TO KEEP THE HIGHWAY, IN THE VICINITY OF THE WORK AREA, IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC SHALL BE CONSIDERED A BREACH OF THIS CONTRACT. WORK SHALL BE SUSPENDED UNTIL THE CONTRACTOR COMPLIES WITH THE PROVISIONS OF THE AFOREMENTIONED ITEMS.

IV. MAINTENANCE OF TRAFFIC MATERIALS

1. SIGNS

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

2. SIGN SUPPORT

SIGN SUPPORTS SHALL BE OF SUFFICIENT SIZE AND MASS AS TO SUPPORT THE SIGNS AT THE APPROPRIATE HEIGHT. SUPPORTS SHALL BE AS SHOWN ON THE STANDARD DRAWINGS.

IV. MAINTENANCE OF TRAFFIC MATERIALS (CONT.)

3. FLASHING ARROW REQUIREMENT

WHENEVER ANY PART OF THE TRAVELED SURFACE IS CLOSED, THE MOTORISTS SHALL BE WARNED AND DIRECTED BY THE CONTRACTOR THROUGH THE USE OF ONE FLASHING ARROW PANEL FOR EACH LANE CLOSED. THE CONTRACTOR SHALL REFER TO CMS 614.03 AND THE PROVISIONS SET FORTH IN THE "MANUAL" FOR ALL INFORMATION REGARDING FURNISHING, MAINTAINING, AND USE OF FLASHING ARROW PANELS. PAYMENT FOR THE ABOVE MENTIONED ITEMS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

4. DRUMS

DRUMS SHALL BE IN ACCORDANCE WITH PERTINENT SECTIONS OF THE "MANUAL". ALL COSTS FOR INSTALLING, MAINTAINING, AND SUBSEQUENT REMOVAL OF SAID DRUMS IS TO BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

5. CONES

CONES, IF UTILIZED, ARE TO BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.

6. BARRIER

PORTABLE CONCRETE BARRIER IF NECESSARY IS TO BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.

7. FLASHERS

FLASHERS SHALL BE 12 VOLT BATTERY-OPERATED MODELS WITH 7 INCH DIAMETER YELLOW LENSES ILLUMINATED BY RAPID INTERMITTENT FLASHERS OF SHORT DURATION AND ARE TO BE PLACED ON ALL SIGNS AT ALL TIMES AS REQUIRED BY THE "MANUAL" AND THE STANDARD CONSTRUCTION DRAWINGS.

8. FLOODLIGHTING

FLOODLIGHTING OF THE WORKSITE FOR OPERATIONS CONDUCTED DURING THE NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND ENGINEER SHALL DRIVE THROUGH THE WORKSITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR MAINTAINING TRAFFIC.

9. WORK VEHICLES

ALL WORK VEHICLES LICENSED TO OPERATE ON THE HIGHWAY, SHALL BE EQUIPPED WITH A FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-QUARTER MILE IN BRIGHT SUNLIGHT AND SHALL BE OPERATED WITH LIGHTED HEAD AND TAIL LAMPS. THE AMBER LIGHT SHALL BE IN OPERATION AT ALL TIMES WITHIN THE WORK ZONE AND WHILE TRAVELING TO AND FROM THE WORK ZONE WHENEVER THE VEHICLE SPEED IS BELOW THE POSTED LEGAL LIMIT. VEHICLE HAZARD LIGHTS DO NOT SATISFY THIS REQUIREMENT. ALL OTHER EQUIPMENT SHALL BE EQUIPPED WITH A FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-QUARTER MILE IN BRIGHT SUNLIGHT. THE AMBER LIGHT SHALL BE IN OPERATION WHILE THE EQUIPMENT IS WITHIN THE WORK ZONE.

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V. PAYMENT

UNLESS STATED OTHERWISE, PAYMENT FOR PROVIDING, ERECTING, MAINTAINING AND REMOVING TEMPORARY MAINTENANCE OF TRAFFIC CONTROL DEVICES INCLUDING DETOURS AND INTERSTATE LANE CLOSURES/SHIFTS SHALL BE MADE UNDER THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

CONSTRUCTION TRAFFIC

ALL CONSTRUCTION TRAFFIC SHALL USE ACCEPTABLE TRUCK ROUTES TO ACCESS THE CONSTRUCTION AREA. USE OF LOCAL RESIDENTIAL STREETS IS STRICTLY PROHIBITED UNLESS ALLOWED IN WRITING BY THE LOCAL ENFORCEMENT AUTHORITY.

CONTINUOUS ACCESS

THE CONTRACTOR SHALL MAINTAIN SAFE AND ADEQUATE DRIVEWAYS AND WALKWAYS IN ORDER TO PROVIDE CONTINUOUS ACCESS FOR PEDESTRIANS, PASSENGER VEHICLES, TRUCKS, AND SAFETY EQUIPMENT TO ALL ADJOINING PROPERTIES. THE COST FOR ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO PROVIDE CONTINUOUS ACCESS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

MAINTENANCE OF TRAFFIC CONTROL ZONES

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE SIGNS, DRUM AND TEMPORARY PAVEMENT MARKINGS AT THE LOCATIONS DETAILED IN THE PLANS OR SPECIFIED IN THE STANDARD DRAWINGS. WHEN THE CONTRACTOR IS NOTIFIED OF DEFICIENCIES HE SHALL CORRECT THE DEFICIENCIES AS SOON AS POSSIBLE, PREFERABLY WITHIN 12 HOURS AND NO LATER THAN 24 HOURS.

MAINTENANCE OF TRAFFIC SCHEME

IF DURING THE PROJECT THE ENGINEER DETERMINES THAT THE APPROVED MAINTENANCE OF TRAFFIC PLAN IS NOT PERFORMING AS DESIRED, THE WORK SHALL BE SUSPENDED UNTIL THE PROBLEM IS RESOLVED TO THE SATISFACTION OF THE ENGINEER AND THE MAINTENANCE OF TRAFFIC PLAN IS REVISED ACCORDINGLY. THE CONTRACTOR SHALL DEVISE A SIMPLE MAINTENANCE OF TRAFFIC SCHEME FOR EACH LOCATION WHICH IS NOT PERFORMING AS DESIRED, WHICH SHALL BE STAMPED BY A PROFESSIONAL ENGINEER (SCHEME MAY BE A HAND SKETCH) AND PRESENT IT TO THE DISTRICT WORK ZONE SAFETY ENGINEER AND PROJECT ENGINEER FOR ACCEPTANCE AT LEAST TWO WEEKS PRIOR TO IMPLEMENTATION. IN GENERAL, THE METHODS FOR MAINTAINING TRAFFIC THAT THE CONTRACTOR PROPOSES TO USE FOR CONDUCTING THE REQUIRED WORK IN A SAFE AND EFFICIENT MANNER SUPPORTED BY HAND SKETCHES AS NECESSARY. THE MAINTENANCE OF TRAFFIC SCHEME SHALL BE IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION, THE REFERENCED STANDARD CONSTRUCTION DRAWINGS, THE ATTACHED MAINTENANCE OF TRAFFIC SHEETS, AND THE SPECIFICATIONS.

ANY COSTS OR DELAYS INCURRED AS A RESULT OF THE FAILURE OF THE SATISFACTION OF THE ENGINEER SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR. DURING NON-WORKING HOURS, ALL LANES SHALL BE IN FULL OPERATION WITH ALL TRAFFIC CONTROL SIGNS, EXCEPT OW-124 (ROAD CONSTRUCTION AHEAD) SIGNS, REMOVED OR COVERED AND ALL CHANNELIZING DEVICES REMOVED FROM THE PAVEMENT SURFACES. CHANNELIZING DEVICES MAY BE STORED OR DEPLOYED TEMPORARILY ADJACENT TO THE SHOULDER TO MINIMIZE THE NIGHTLY TRAFFIC CONTROL SET-UP TIME. PAYMENT FOR ALL THE ITEMS REQUIRED TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THESE REQUIREMENTS IS INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

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.

THE PROBABLE PCMS LOCATIONS FOR THOSE LOCATIONS ARE SHOWN ON SHEET (28/65) 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.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (CONT.)

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 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 .....8 SNMT

SEQUENCE OF OPERATIONS

THE CONTRACTOR SHALL CONSTRUCT ALL 5 LOCATIONS IDENTIFIED IN THESE PLANS IN PARALLEL IN ORDER TO COMPLETE WORK AND TO PROVIDE ENOUGH TIME FOR PAINTING THE ABUTMENTS. PAINTING SHALL END ON OCTOBER 15.

FOR MORE INFORMATION ON CONSTRUCTION SEQUENCE, REFER TO PROPOSAL NOTE 105 AND ITEM 108 - CPM PROJECT SCHEDULE SHORT DURATION PROJECTS.

WORKSITE TRAFFIC SUPERVISOR

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

1. AMERICAN TRAFFIC SAFETY SERVICE ASSOCIATION (ATSSA), PHONE NUMBER 1-800-272-8772, CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS).
2. NATIONAL HIGHWAY INSTITUTE, DESIGN AND OPERATION OF WORK ZONE TRAFFIC CONTROL, PHONE NUMBER 1-703-235-0500.
3. THE OHIO CONTRACTORS ASSOCIATION, TRAFFIC CONTROL SUPERVISOR (OCA/TCS) WORK ZONE CLASS, ONLY IF TAKEN AFTER MAY 5, 2004, PHONE NUMBER 1-800-229-1388.
4. OHIO LABORERS' TRAINING, TRAFFIC CONTROL SUPERVISORS CLASS, PHONE NUMBER 1-740-599-7915.

A COPY OF EACH WTS'S CERTIFICATION AND 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7), THE CONTRACTOR MAY DESIGNATE AN ALTERNATE WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY. EACH WTS SHALL HAVE A WTS CERTIFICATION CONTAINING THE DATE OF ISSUE AND SHALL BE FROM ANY OF THE APPROVED ORGANIZATIONS. AT THE TIME OF THE PRECONSTRUCTION CONFERENCE, THE WTS CERTIFICATION DATE OF ISSUE SHALL BE WITHIN THE 5 YEARS PRIOR TO THE ORIGINAL COMPLETION DATE OF THE PROJECT.

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

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS, AND BE ABLE TO BE ON SITE FOR ALL EMERGENCY TRAFFIC CONTROL NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF AND BE PREPARED TO EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TRAFFIC CONTROL DEVICES.
2. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TRAFFIC CONTROL MANAGEMENT IS DISCUSSED.
3. BE AVAILABLE FOR MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST OR WITHIN 36 HOURS.

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WORKSITE TRAFFIC SUPERVISOR (CONT.)

4. COORDINATE A TRAFFIC INCIDENT MANAGEMENT MEETING EACH YEAR BEFORE CONSTRUCTION WORK BEGINS WITH ODOT AND THE SAFETY FORCES THAT WILL RESPOND TO INCIDENTS ON THE PROJECT. ITEMS TO BE DISCUSSED WILL BE THE:
   A. TRAFFIC INCIDENT MANAGEMENT PLAN (TIMP);
   B. EMERGENCY RESPONSE AND NOTIFICATION;
   C. PROJECT WORK/PHASING CONCERNS (E.G., RAMP CLOSURES); AND
   D. RESPONDERS CONCERNS.

5. BE AWARE OF, AND COORDINATE IF NECESSARY, ALL TRAFFIC CONTROL OPERATIONS, INCLUDING THOSE OF SUBCONTRACTORS AND SUPPLIERS.

6. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). A WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEOS WHILE THEY ARE ON THE PROJECT.

7. COORDINATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS WORK ZONE TRAFFIC CONTROL.

8. ENSURE COMPLIANCE WITH THE CONTRACT DOCUMENTS FOR SIGNS, BARRICADES, TEMPORARY CONCRETE BARRIER, PAVEMENT MARKINGS, PORTABLE MESSAGE SIGNS, AND OTHER TRAFFIC CONTROL DEVICES ON A DAILY BASIS AND FACILITATE ANY CORRECTIVE ACTION NECESSARY.

9. NOTIFY THE CONTRACTOR OF THE NEED FOR CLEANING AND MAINTENANCE OF ALL TRAFFIC CONTROL DEVICES, INCLUDING THE COVERING AND REMOVAL OF INAPPLICABLE SIGNS.

10. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TRAFFIC CONTROL DEVICES AND/OR TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, A WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:
   A. INITIAL TRAFFIC CONTROL SETUP (DAY AND NIGHT REVIEW).
   B. DAILY TRAFFIC CONTROL SETUP AND REMOVAL.
   C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TRAFFIC CONTROL SETUP.
   D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA.
   E. REMOVAL OF TRAFFIC CONTROL DEVICES AT THE END OF A PHASE OR PROJECT.
   F. ALL OTHER EMERGENCY TRAFFIC CONTROL NEEDS.

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

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

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

WORKSITE TRAFFIC SUPERVISOR (CONT.)

14. IDENTIFY AND CONTACT ALL POSSIBLE RESPONSE PERSONNEL; PREPLAN AND KEEP AN UPDATED ROSTER WITH PHONE NUMBERS:
   A. FEDERAL, STATE, AND LOCAL TRANSPORTATION AGENCIES (TRAFFIC MANAGEMENT CENTER);
   B. REGIONAL, COUNTY OR LOCAL 911 DISPATCH AND
   C. TOWING AND RECOVERY PROVIDERS.

15. COMPLY WITH THE PROVISIONS OF OMUTCD CHAPTER 6I, CONTROL OF TRAFFIC THROUGH TRAFFIC INCIDENT MANAGEMENT AREAS.

16. PROPOSE A RESPONSE/ACTION PLAN TO:
   A. ESTABLISH ALTERNATE ROUTE PLANS PER THE PROVIDED ODOT PLAYBOOK;
   B. REMOVE TRAFFIC DEMAND FROM IMPACTED ROADWAY(S);
   C. DIVERT TRAFFIC TO ROUTES THAT CAN ACCOMMODATE DEMANDS;
   D. DETOUR TRAFFIC AWAY FROM SENSITIVE AREAS (SUCH AS SCHOOLS, HOSPITALS, ETC.);
   E. DISCUSS METHODS OF DETERMINING A STAGING AREA FOR RESPONDERS WITHIN OR NEAR THE CONSTRUCTION ZONE; AND
   F. DISCUSS METHODS OF DEVELOPING INGRESS AND EGRESS SITES WITHIN THE CONSTRUCTION ZONE.

   THE RESPONSE/ACTION PLAN SHALL BE SUBMITTED TO ODOT FOR ACCEPTANCE BEFORE THE CONTRACTOR'S FIRST DAY OF WORK.

17. PERFORM, AT A MINIMUM, THE FOLLOWING FUNCTIONS IN INCIDENT DETECTION AND VERIFICATION:
   A. CALL 911/ NOTIFY TRAFFIC MANAAGEMENT CENTER AND PROVIDE THE FOLLOWING:
      I. LOCATION - INCLUDING MILEPOST NUMBER AND DIRECTION OF TRAVEL.
      II. NUMBER AND TYPE OF VEHICLES INVOLVED.
      III. ESTIMATED EXTENT OF DAMAGE OR INJURY.
      IV. ESTIMATED NUMBER OF PATIENTS INVOLVED.
      V. ANY POTENTIAL HAZARDOUS CONDITIONS.
      VI. THE PLACARD NUMBER ON ANY HAZARDOUS MATERIALS PLACARD FROM A SAFE DISTANCE.
   B. INITIATE TRAFFIC MANAGEMENT / PROVIDE TRAFFIC CONTROL.
   C. ASSIST MOTORIST WITH DISABLED VEHICLES.
   D. RECOMMEND ROADWAY REPAIR NEEDS.
   E. PROVIDE REPAIR RESOURCES.

18. ATTEND POST-INCIDENT DEBRIEFINGS IF REQUIRED.

THE DEPARTMENT WILL DEDUCT THE PRORATED DAILY AMOUNT OF THE UNIT PRICE BID FOR THE WTS FOR ANY DAY ON WHICH THE CONTRACTOR FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. SHOULD THE CONTRACTOR'S FAILURE TO PERFORM ANY OF THE DUTIES DESCRIBED ABOVE RESULT IN A MAINTENANCE OF TRAFFIC SAFETY ISSUE, THE DEPARTMENT WILL DEDUCT THE PRORATED DAILY AMOUNT FOR ITEM 614 MAINTENANCE OF TRAFFIC FROM THE CONTRACTOR'S NEXT SCHEDULED ESTIMATE.

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

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

ITEM 614 - WORKSITE TRAFFIC SUPERVISOR.....8 MONTHS

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN

WORK ZONE RAISED PAVEMENT MARKERS, AS PER PLAN, AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614 OR C&MS 621 AS SPECIFIED HEREIN.

- RAISED PAVEMENT MARKERS IN USE DURING THE SNOWPLOWING SEASON SHALL CONFORM TO 621.

- RAISED PAVEMENT MARKERS IN USE DURING THE NON-SNOW PLOW SEASON SHALL CONFORM TO EITHER 614 OR TO 621.

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN (CONT.)

THE SNOW-PLOWING SEASON SHALL RUN FROM OCTOBER 15 THROUGH MARCH 31.

IF PROJECT DELAYS, NOT THE FAULT OF ODOT, CAUSE THE WORK TO EXTEND INTO THE SNOW-PLOWING SEASON, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING WORK ZONE RAISED PAVEMENT MARKERS (WZRPMS) CONFORMING TO C&MS 614, WITH RAISED PAVEMENT MARKERS CONFORMING TO 621, AS DETERMINED BY THE ENGINEER, AT THE CONTRACTOR'S EXPENSE.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN, INCLUDING FILLING OF ANY DEPRESSIONS CREATED IN THE PAVEMENT AS PER C&MS 621.08.

RESURFACING OF THE TRANSITION AREAS SHALL BE PERFORMED AT THE TIME THAT THE SURFACE COURSE IS BEING APPLIED TO THE ENTIRE PROJECT. PRIOR TO APPLICATION OF THE SURFACE COURSE ON THE PROJECT, THE EXISTING PAVEMENT WITHIN THE TRANSITION AREA SHALL BE REMOVED TO A DEPTH NECESSARY TO REACH THE LEVEL OF THE INTERMEDIATE COURSE OF THE PAVEMENT, AS DETERMINED BY THE ENGINEER.

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 CONCRETE PERMANENT BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE ALONG TAPERS AND TRANSITION AREAS AND 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.

DELINEATION OF PORTABLE AND PERMANANT BARRIER (CONT.)

THE FOLLOWING BID ITEMS ARE INCLUDED IN THE GENERAL SUMMARY:

ITEM 614 - BARRIER REFLECTOR, TYPE B (EACH)
ITEM 614 - OBJECT MARKER, TWO WAY (EACH)
ITEM 614 - INCREASED BARRIER DELINEATION (FT)

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 CMS 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).

IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.

WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.

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.

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ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS (CONT.)

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. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. 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 WHICH 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.....400 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED. ANY ADDITIONAL COST (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM 621 - RPM MISC.: REMOVE REFLECTORS FROM CASTINGS

THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL REFLECTORS FROM RAISED PAVEMENT MARKERS WHERE PAVEMENT MARKINGS ARE BEING REMOVED FOR MOT PHASING. IT IS ASSUMED THAT THE RPMS TO BE REMOVED ARE LOCATED AT 80' SPACING ALONG THE LANE LINES. THE RPM REFLECTORS WILL BE REPLACED IN THE FINAL CONDITION. PAYMENT FOR ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE ABOVE WORK IS INCLUDED WITH ITEM 621- RPM MISC.: REMOVE REFLECTORS FROM CASTINGS. SEE SHEET 17/65 FOR DETAILED QUANTITIES.

ITEM 621 - RPM MISC.: REPLACE DAMAGED RPM CASTING

THE CONTRACTOR SHALL REPLACE ANY DAMAGED RAISED PAVEMENT MARKER CASTINGS PRIOR TO INSTALLING THE NEW RPM REFLECTORS FOR THE FINAL CONDITION. A CONTINGENCY ESTIMATE OF 20% DAMAGED CASTINGS HAS BEEN ADDED TO THE PLAN QUANTITIES. PAYMENT FOR ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO COMPLETE THE ABOVE WORK IS INCLUDED WITH ITEM 621- RPM MISC.: REPLACE DAMAGED RPM CASTINGS. SEE SHEET 17/65 FOR DETAILED QUANTITIES.

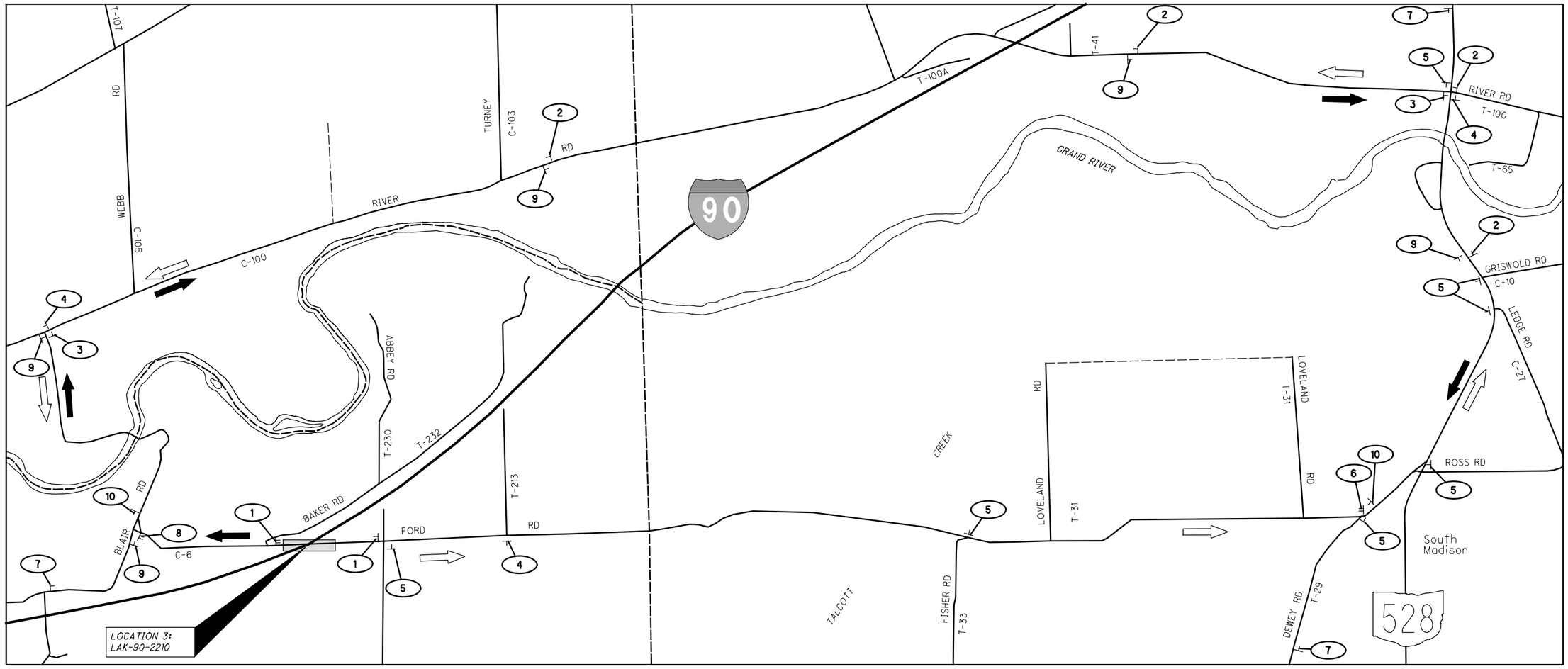
CALCULATED KMS
CHECKED DEB

MAINTENANCE OF TRAFFIC NOTES (4 OF 4)

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

12
65

FORD ROAD OVER IR-90 DETOUR



1

R11-2-48

ROAD CLOSED

2

D3-1-36 FORD RD

M3-4-24 WEST

M4-9C-30 DETOUR ↑

3

D3-1-36 FORD RD

M3-2-24 EAST

M4-9R-30 DETOUR →

4

D3-1-36 FORD RD

M3-4-24 WEST

M4-9L-30 DETOUR ←

5

D3-1-36 FORD RD

M3-4-24 WEST

M4-9R-30 DETOUR →

6

R11-3A-60 ROAD CLOSED 3.6 MILES AHEAD LOCAL TRAFFIC ONLY

M4-10R-48 DETOUR →

7

D3-1-36 FORD RD

W20-2-36 DETOUR AHEAD

8

R11-3A-60 ROAD CLOSED 0.6 MILES AHEAD LOCAL TRAFFIC ONLY

M4-10L-48 ← DETOUR

9

D3-1-36 FORD RD

M3-2-24 EAST

M4-9C-30 DETOUR ↑

10

D3-1-36 FORD RD

M4-8A-24 END DETOUR

WORK AREA

LEGEND:

EASTBOUND FORD ROAD DETOUR ROUTE

WESTBOUND FORD ROAD DETOUR ROUTE

N

0 500 1000 2000 HORIZONTAL SCALE IN FEET

CALCULATED KMS

CHECKED DEB

MAINTENANCE OF TRAFFIC LOCATION 3 DETOUR PLAN

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

13
65

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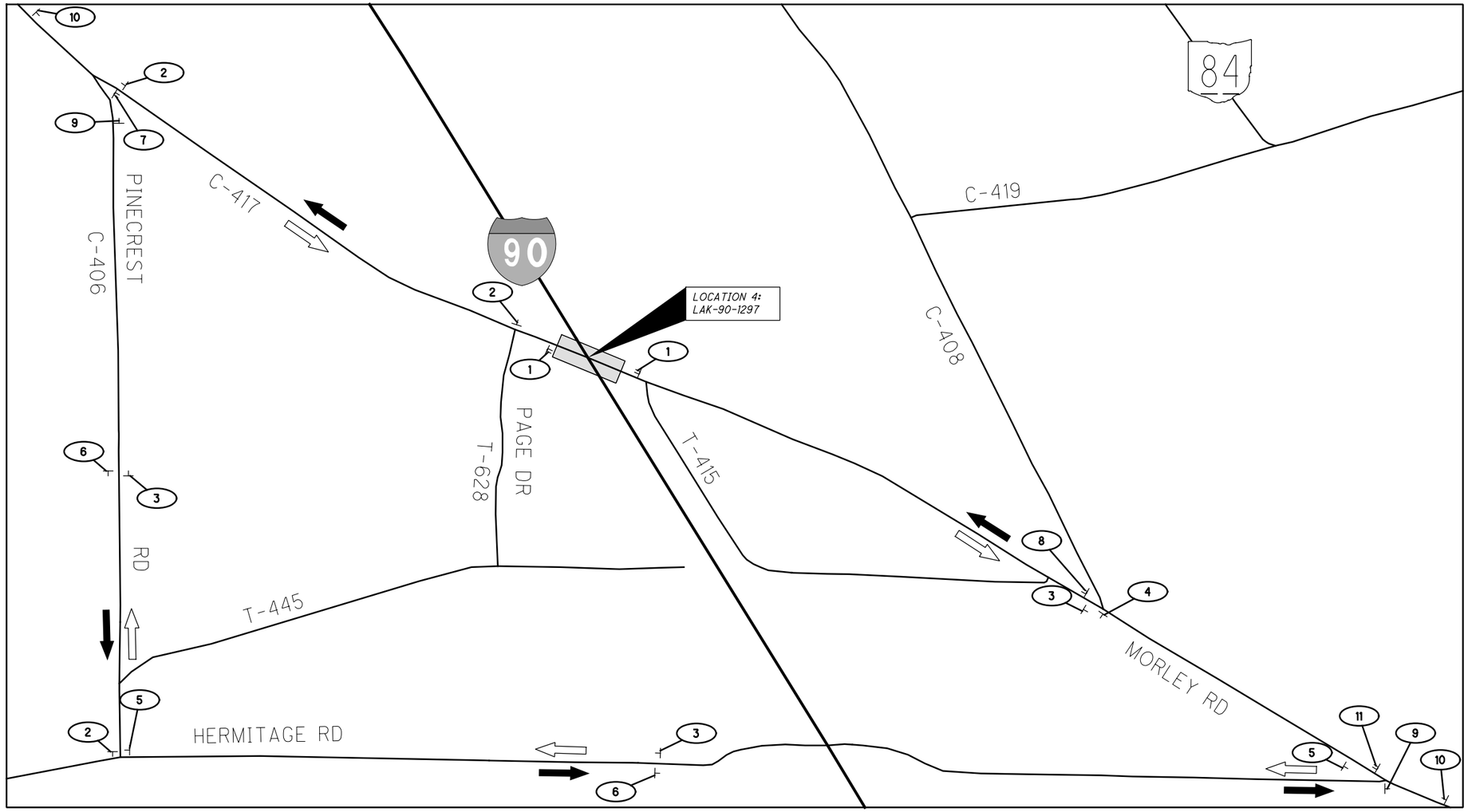
MORLEY ROAD OVER IR-90 DETOUR



1 — R11-2-48 — ROAD CLOSED

2 — D3-1-36 — MORLEY RD; M3-1-24 — NORTH; M4-9L-30 — DETOUR

3 — D3-1-36 — MORLEY RD; M3-3-24 — SOUTH; M4-9C-30 — DETOUR

4 — D3-1-36 — MORLEY RD; M3-3-24 — SOUTH; M4-9L-30 — DETOUR

5 — D3-1-36 — MORLEY RD; M3-3-24 — SOUTH; M4-9R-30 — DETOUR

6 — D3-1-36 — MORLEY RD; M3-1-24 — NORTH; M4-9C-30 — DETOUR

7 — R11-3A-60 — ROAD CLOSED 0.8 MILES AHEAD LOCAL TRAFFIC ONLY; M4-10R-48 — DETOUR

8 — R11-3A-60 — ROAD CLOSED 0.8 MILES AHEAD LOCAL TRAFFIC ONLY

9 — D3-1-36 — MORLEY RD; M4-8A-24 — END DETOUR

10 — D3-1-36 — MORLEY RD; W20-2-36 — DETOUR AHEAD

11 — R11-3A-60 — ROAD CLOSED 1.3 MILES AHEAD LOCAL TRAFFIC ONLY; M4-10L-48 — DETOUR

WORK AREA

LEGEND:
- NORTHBOUND MORLEY RD DETOUR ROUTE
- SOUTHBOUND MORLEY RD DETOUR ROUTE

N

0 250 500 1000 HORIZONTAL SCALE IN FEET

CALCULATED KMS
CHECKED DEB

MAINTENANCE OF TRAFFIC
LOCATION 4 DETOUR PLAN

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

14
65

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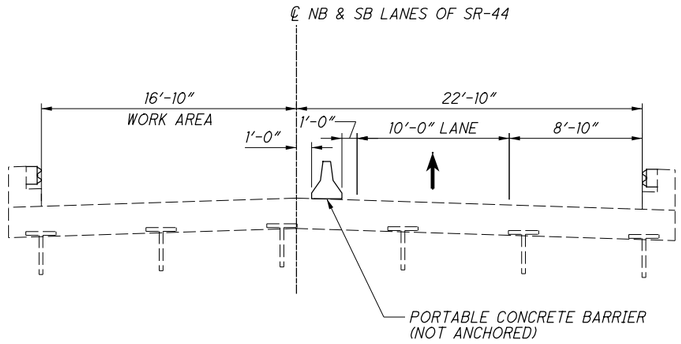
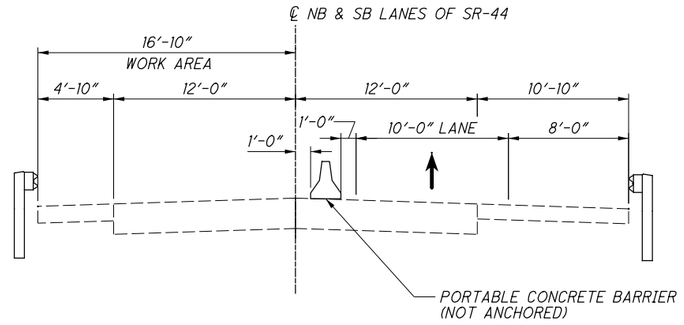


S.R. 44 BRIDGE DECK

PHASE I

CLOSE LEFT LANE NB & SB

NOTE: ℄ R/W SR-44 NOT SHOWN

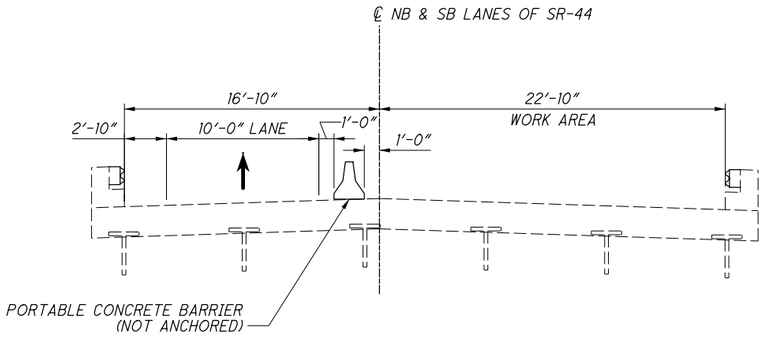


S.R. 44 APPROACH SLAB

PHASE I

CLOSE LEFT LANE NB & SB

NOTE: ℄ R/W SR-44 NOT SHOWN

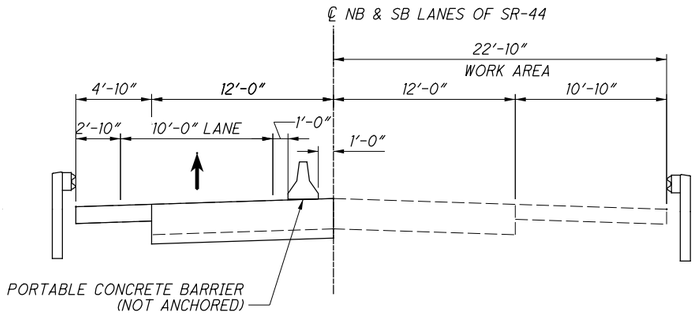


S.R. 44 BRIDGE DECK

PHASE II

CLOSE RIGHT LANE NB & SB

NOTE: ℄ R/W SR-44 NOT SHOWN



S.R. 44 APPROACH SLAB

PHASE II

CLOSE RIGHT LANE NB & SB

NOTE: ℄ R/W SR-44 NOT SHOWN

CALCULATED KMS
CHECKED DEB

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS LOCATIONS 1 AND 2

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

15
65

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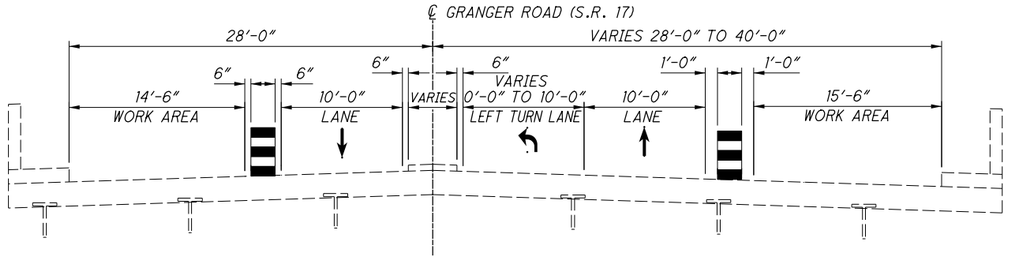
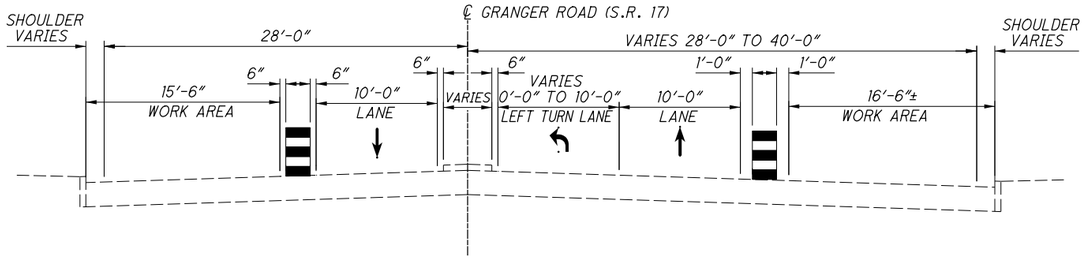
PHASE I



GRANGER ROAD (S.R. 17) BRIDGE DECK

CLOSE OUTER LANES EB AND WB

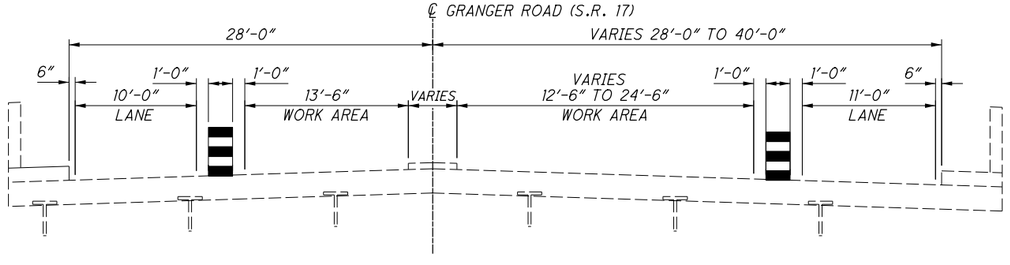
PHASE I



GRANGER ROAD (S.R. 17) APPROACH SLAB

CLOSE OUTER LANES EB AND WB

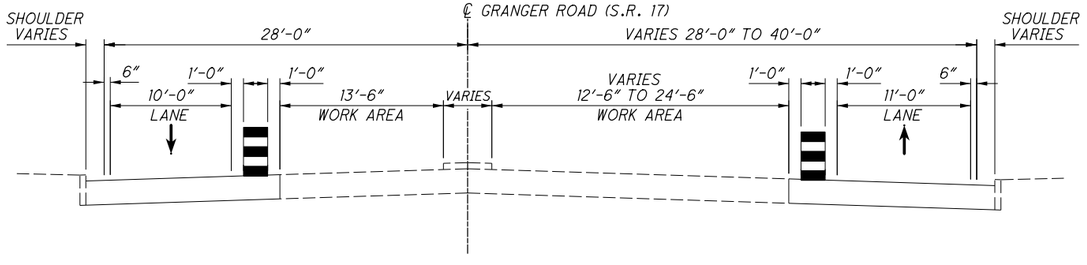
PHASE II



GRANGER ROAD (S.R. 17) BRIDGE DECK

CLOSE LEFT LANE NB & SB

PHASE II



GRANGER ROAD (S.R. 17) APPROACH SLAB

CLOSE INNER LANES (INCLUDING EB LT) EB AND WB

CALCULATED KMS
CHECKED DEB

MAINTENANCE OF TRAFFIC TYPICAL SECTIONS LOCATION 5

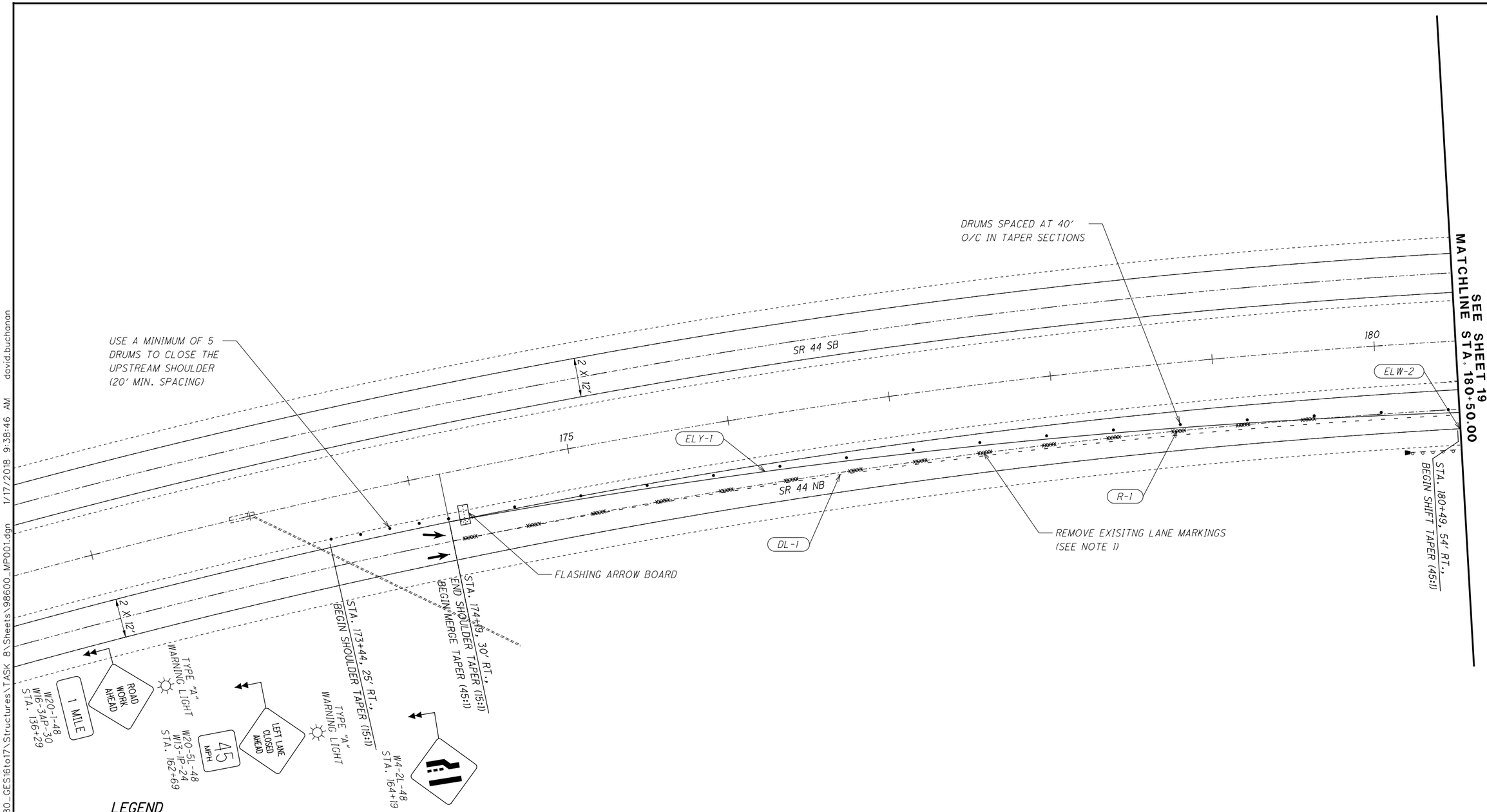
D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

REF. NO.	LOCATION FROM	LOCATION TO	LENGTH (L) FT	254 PAVEMENT PLANING, ASPHALT CONCRETE SY	441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22 CY	614 INCREASED BARRIER DELINEATION FT	614 WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL) EACH	614 WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN EACH	614 BARRIER REFLECTOR, TYPE B EACH	614 OBJECT MARKER, TWO WAY EACH	614 WORK ZONE EDGE LINE, CLASS I, 740.06, TYPE 1 MILE	614 WORK ZONE CHANNELIZING LINE, CLASS I, 740.06, TYPE 1 FT	614 WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE 1 FT	614 WORK ZONE ARROW, CLASS 1 EACH	618 RUMBLE STRIPS, (ASPHALT CONCRETE) FT	621 RPM REFLECTOR EACH	621 RPM, MISC.: REMOVE REFLECTORS FROM CASTINGS EACH	621 RPM, MISC.: REPLACE DAMAGED RPM CASTING EACH	622 PORTABLE BARRIER, 32" FT	646 EDGE LINE, 6" MILE	646 LANE LINE, 6" MILE	646 CHANNELIZING LINE, 12" FT	646 DOTTED LINE, 6" FT
				CADD AREA	CADD VOLUME	L		PER SCD	L/50	L/50	L/5280	L	L		L	L/80	L/80	(1/5)*L/80	L	L/5280	L/5280	L	L
								MT-99.30															
LOCATION 1, PHASE 1																							
PCB-2	185+59	189+85	426			426	1		9	9									426				
ELW-3	185+89	193+13	724								0.14												
R-3	185+89	193+13	724																	0.14			
ELY-4	186+79	208+45	2166	27	0.74			107			0.41												
R-4	191+13	201+25	1012																				1012
ELW-5	201+25	202+15	90	1	0.02			3			0.02												
DL-2	193+13	201+25	812										812										
R-5	194+74	208+45	1371													17	17	3		0.26	0.26		
DL-3	201+25	208+45	720										720										
R-6	201+25	202+15	90																			90	
LOCATION 2, PHASE 1																							
DL-1	174+19	181+39	720										720										
ELY-1	174+19	188+16	1397	17	0.46			66			0.26												
R-1	174+19	179+59	540													7	7	1			0.10		
ELW-2	180+49	189+06	857								0.16												
R-2	180+49	189+06	857																	0.16			
PCB-1	185+10	189+36	426			426	1		9	9									426				
LOCATION 1, PHASE 2																							
PCB-4	185+59	189+85	426			426	1		9	9									426				
ELY-8	185+89	204+85	1896								0.36												
R-8	185+89	204+85	1896																	0.36			
MF-2	185+89	204+85	1896	421	11.70										1896								
ELW-9	186+79	201+25	1446	12	0.48			68			0.27												
DL-5	193+56	195+96	240										240										
ELW-10	195+96	208+45	1249	12	0.46			66			0.24												
ELW-11	195+96	201+25	529	10	0.39			56			0.10												
DL-6	201+25	208+45	720										720										
LOCATION 2, PHASE 2																							
DL-4	174+19	181+39	720										720										
ELW-6	174+19	188+16	1397	8	0.46			66			0.26												
ELY-7	180+49	189+06	857	5	0.27			39			0.16												
R-7	180+49	189+06	857																	0.16			
MF-1	180+49	189+06	857	190	5.29										857								
PCB-3	185+10	189+36	426			426	1		9	9									426				
LOCATION 5, PHASES 1 & 2																							
CH-1	499+15	500+00	85									85											
R-9	499+15	500+00	85																			85	
A-1	501+20	501+86												4									
A-2	501+20	501+86												2									
TOTAL CARRIED TO GENERAL SUMMARY				704	23	1704	4	472	34	34	2.39	85	3932	6	2753	24	24	4	1704	1.08	0.36	175	1012

CALCULATED KMS CHECKED DEB

MAINTENANCE OF TRAFFIC SUBSUMMARY LOCATIONS 1, 2, AND 5

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600



LEGEND

- WORK AREA
- DRUMS (MIN. 1' SHY OF EL)
- PORTABLE BARRIER (PCB)
- REMOVE EXISTING MARKINGS
- DIRECTION OF TRAVEL
- AT = ATTENUATOR
- EL(W/Y) = EDGE LINE (WHITE/YELLOW)
- DL = DOTTED LINE (WHITE)
- R = PAVEMENT MARKING REMOVED

NOTES:

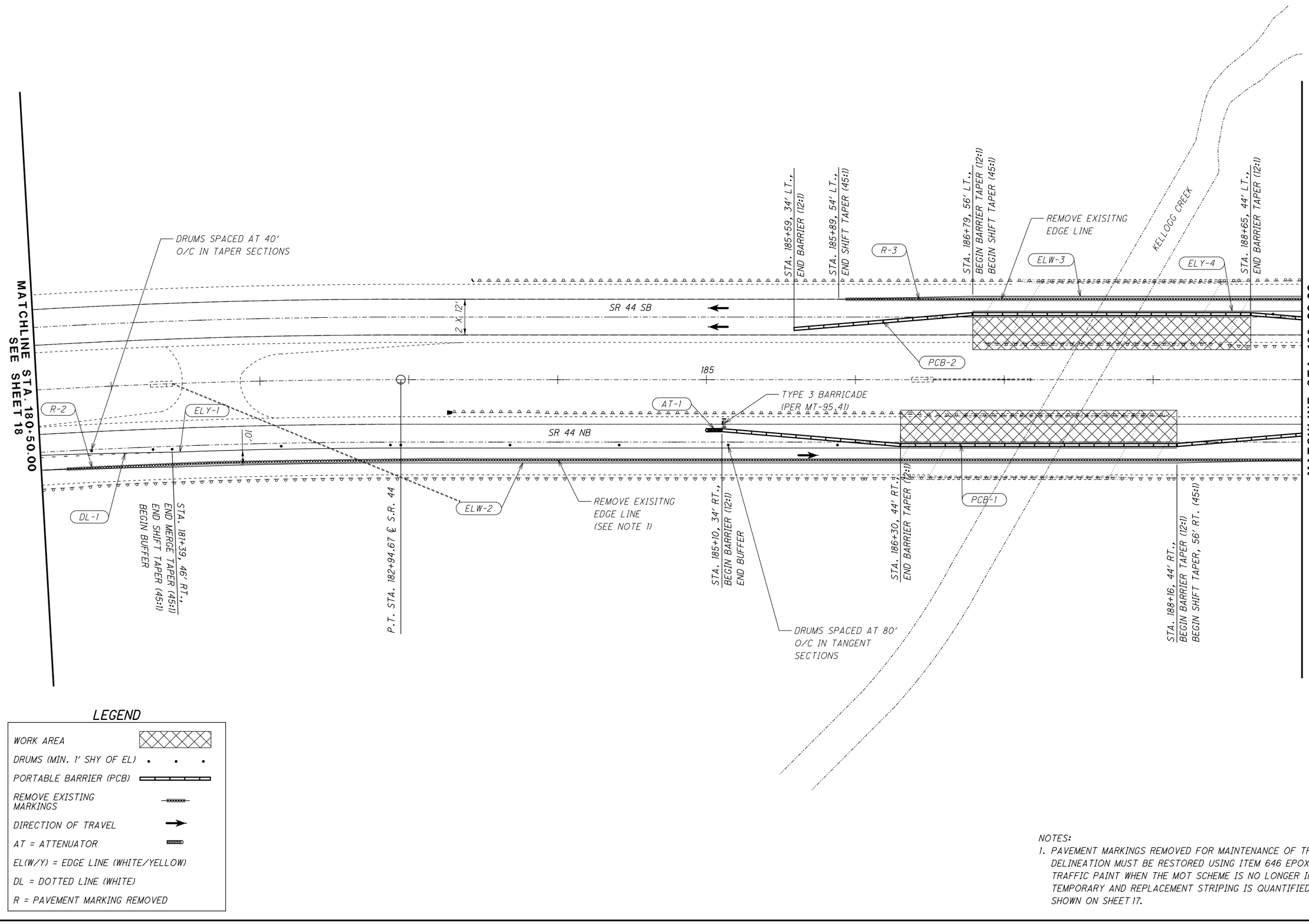
1. PAVEMENT MARKINGS REMOVED FOR MAINTENANCE OF TRAFFIC DELINEATION MUST BE RESTORED USING ITEM 646 EPOXY TRAFFIC PAINT WHEN THE MOT SCHEME IS NO LONGER IN USE. TEMPORARY AND REPLACEMENT STRIPING IS QUANTIFIED AS SHOWN ON SHEET 17.

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED KMS
CHECKED DEB

MAINTENANCE OF TRAFFIC PLAN LOCATIONS 1 & 2, PHASE 1

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600



LEGEND

- WORK AREA
- DRUMS (MIN. 1' SHY OF EL)
- PORTABLE BARRIER (PCB)
- REMOVE EXISTING MARKINGS
- DIRECTION OF TRAVEL
- AT = ATTENUATOR
- EL(W/Y) = EDGE LINE (WHITE/YELLOW)
- DL = DOTTED LINE (WHITE)
- R = PAVEMENT MARKING REMOVED

NOTES:

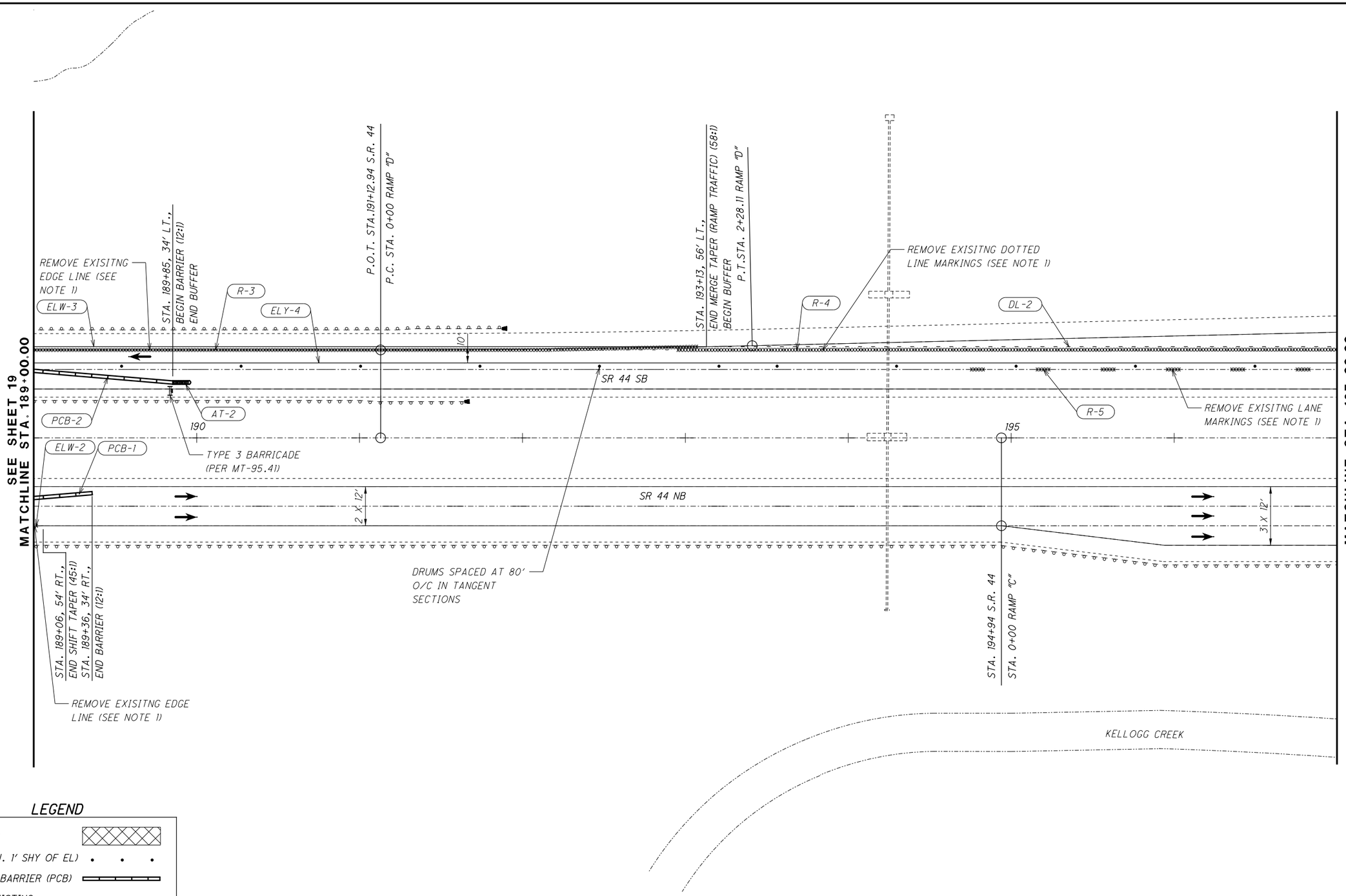
1. PAVEMENT MARKINGS REMOVED FOR MAINTENANCE OF TRAFFIC DELINEATION MUST BE RESTORED USING ITEM 646 EPOXY TRAFFIC PAINT WHEN THE MOT SCHEME IS NO LONGER IN USE. TEMPORARY AND REPLACEMENT STRIPING IS QUANTIFIED AS SHOWN ON SHEET 17.

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED KMS
CHECKED DEB

MAINTENANCE OF TRAFFIC PLAN LOCATIONS 1 & 2, PHASE 1

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600



LEGEND

- WORK AREA
- DRUMS (MIN. 1' SHY OF EL)
- PORTABLE BARRIER (PCB)
- REMOVE EXISTING MARKINGS
- DIRECTION OF TRAVEL
- AT = ATTENUATOR
- EL(W/Y) = EDGE LINE (WHITE/YELLOW)
- DL = DOTTED LINE (WHITE)
- R = PAVEMENT MARKING REMOVED

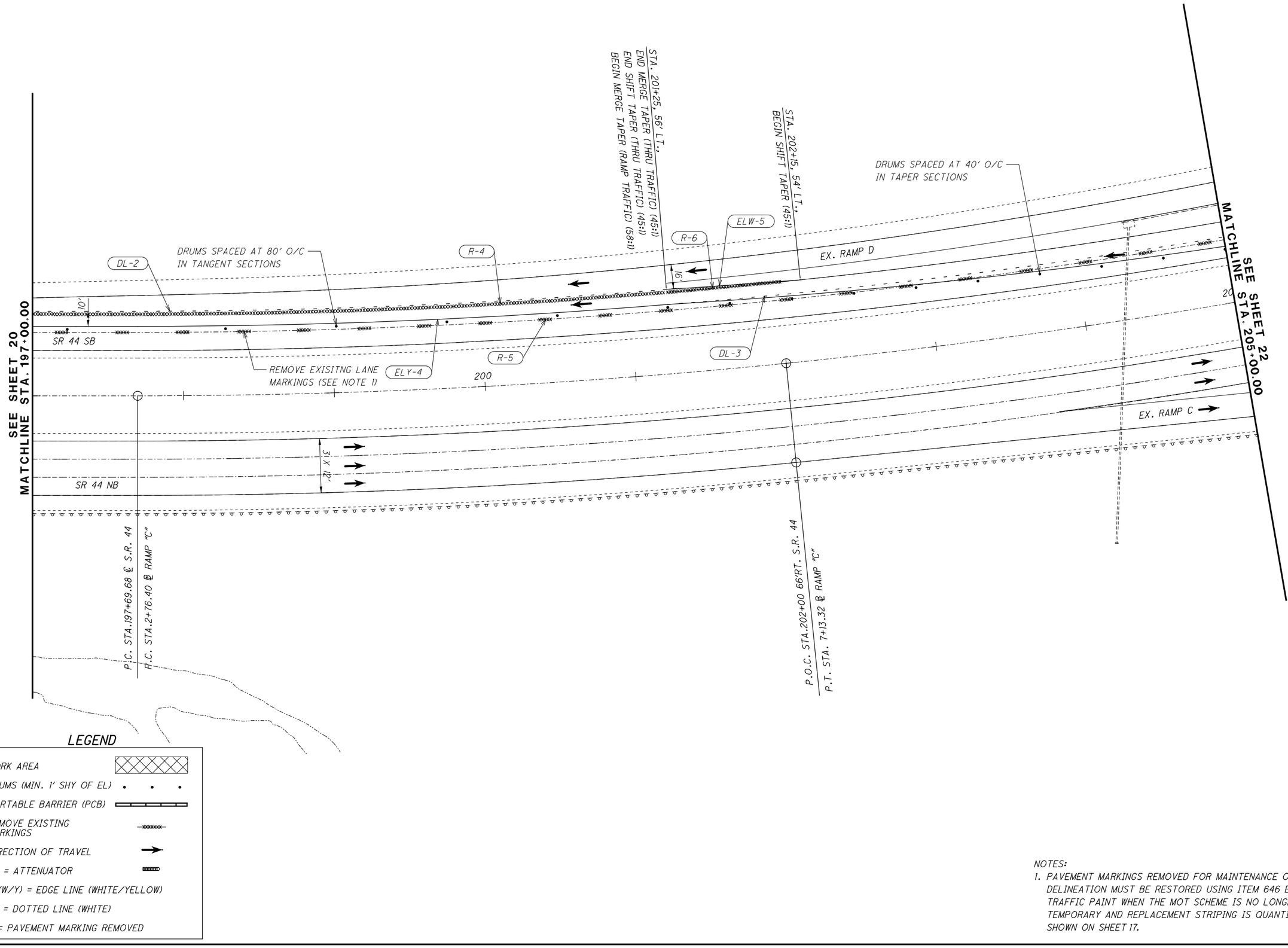
NOTES:
1. PAVEMENT MARKINGS REMOVED FOR MAINTENANCE OF TRAFFIC DELINEATION MUST BE RESTORED USING ITEM 646 EPOXY TRAFFIC PAINT WHEN THE MOT SCHEME IS NO LONGER IN USE. TEMPORARY AND REPLACEMENT STRIPING IS QUANTIFIED AS SHOWN ON SHEET 17.

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED KMS
CHECKED DEB

MAINTENANCE OF TRAFFIC PLAN LOCATIONS 1 & 2, PHASE 1

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600



LEGEND

- WORK AREA
- DRUMS (MIN. 1' SHY OF EL)
- PORTABLE BARRIER (PCB)
- REMOVE EXISTING MARKINGS
- DIRECTION OF TRAVEL
- AT = ATTENUATOR
- EL(W/Y) = EDGE LINE (WHITE/YELLOW)
- DL = DOTTED LINE (WHITE)
- R = PAVEMENT MARKING REMOVED

NOTES:

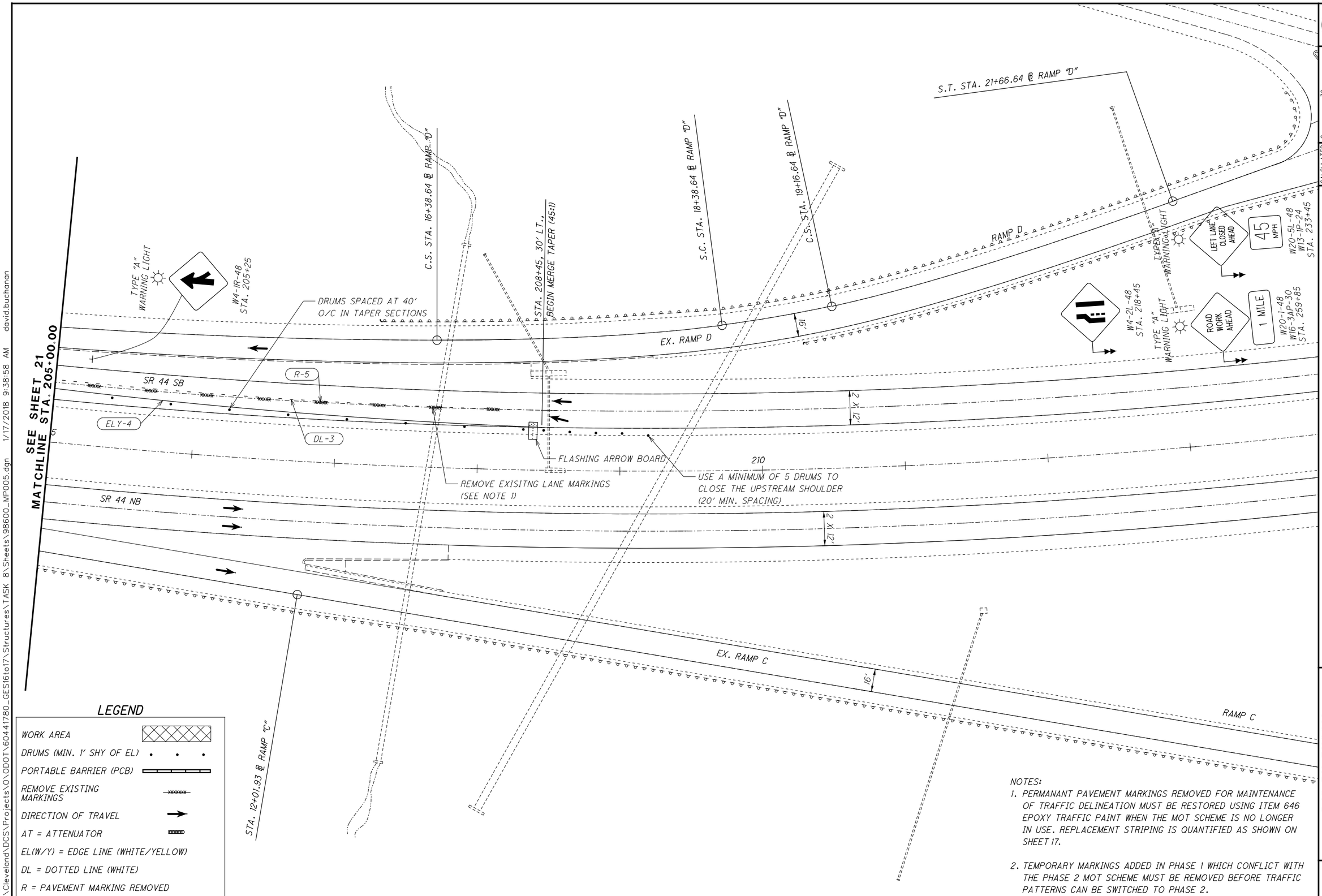
1. PAVEMENT MARKINGS REMOVED FOR MAINTENANCE OF TRAFFIC DELINEATION MUST BE RESTORED USING ITEM 646 EPOXY TRAFFIC PAINT WHEN THE MOT SCHEME IS NO LONGER IN USE. TEMPORARY AND REPLACEMENT STRIPING IS QUANTIFIED AS SHOWN ON SHEET 17.

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED KMS
CHECKED DEB

MAINTENANCE OF TRAFFIC PLAN LOCATIONS 1 & 2, PHASE 1

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600



LEGEND

- WORK AREA
- DRUMS (MIN. 1' SHY OF EL)
- PORTABLE BARRIER (PCB)
- REMOVE EXISTING MARKINGS
- DIRECTION OF TRAVEL
- AT = ATTENUATOR
- EL(W/Y) = EDGE LINE (WHITE/YELLOW)
- DL = DOTTED LINE (WHITE)
- R = PAVEMENT MARKING REMOVED

NOTES:

1. PERMANANT PAVEMENT MARKINGS REMOVED FOR MAINTENANCE OF TRAFFIC DELINEATION MUST BE RESTORED USING ITEM 646 EPOXY TRAFFIC PAINT WHEN THE MOT SCHEME IS NO LONGER IN USE. REPLACEMENT STRIPING IS QUANTIFIED AS SHOWN ON SHEET 17.

2. TEMPORARY MARKINGS ADDED IN PHASE 1 WHICH CONFLICT WITH THE PHASE 2 MOT SCHEME MUST BE REMOVED BEFORE TRAFFIC PATTERNS CAN BE SWITCHED TO PHASE 2.

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED KMS
CHECKED DEB

MAINTENANCE OF TRAFFIC PLAN
LOCATIONS 1 & 2, PHASE 1

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

22
65

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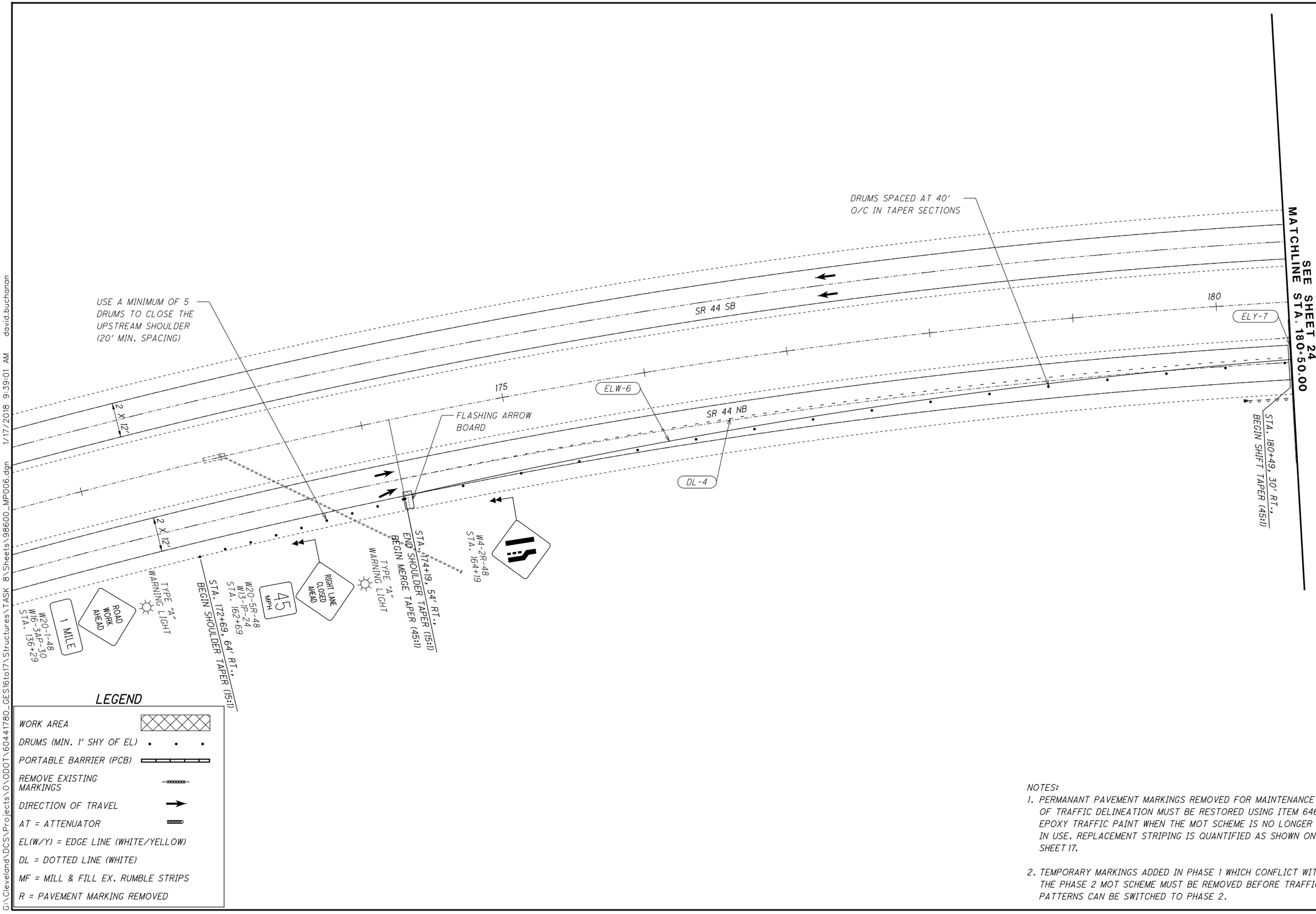


NOTES:

1. PERMANANT PAVEMENT MARKINGS REMOVED FOR MAINTENANCE OF TRAFFIC DELINEATION MUST BE RESTORED USING ITEM 646 EPOXY TRAFFIC PAINT WHEN THE MOT SCHEME IS NO LONGER IN USE. REPLACEMENT STRIPING IS QUANTIFIED AS SHOWN ON SHEET 17.

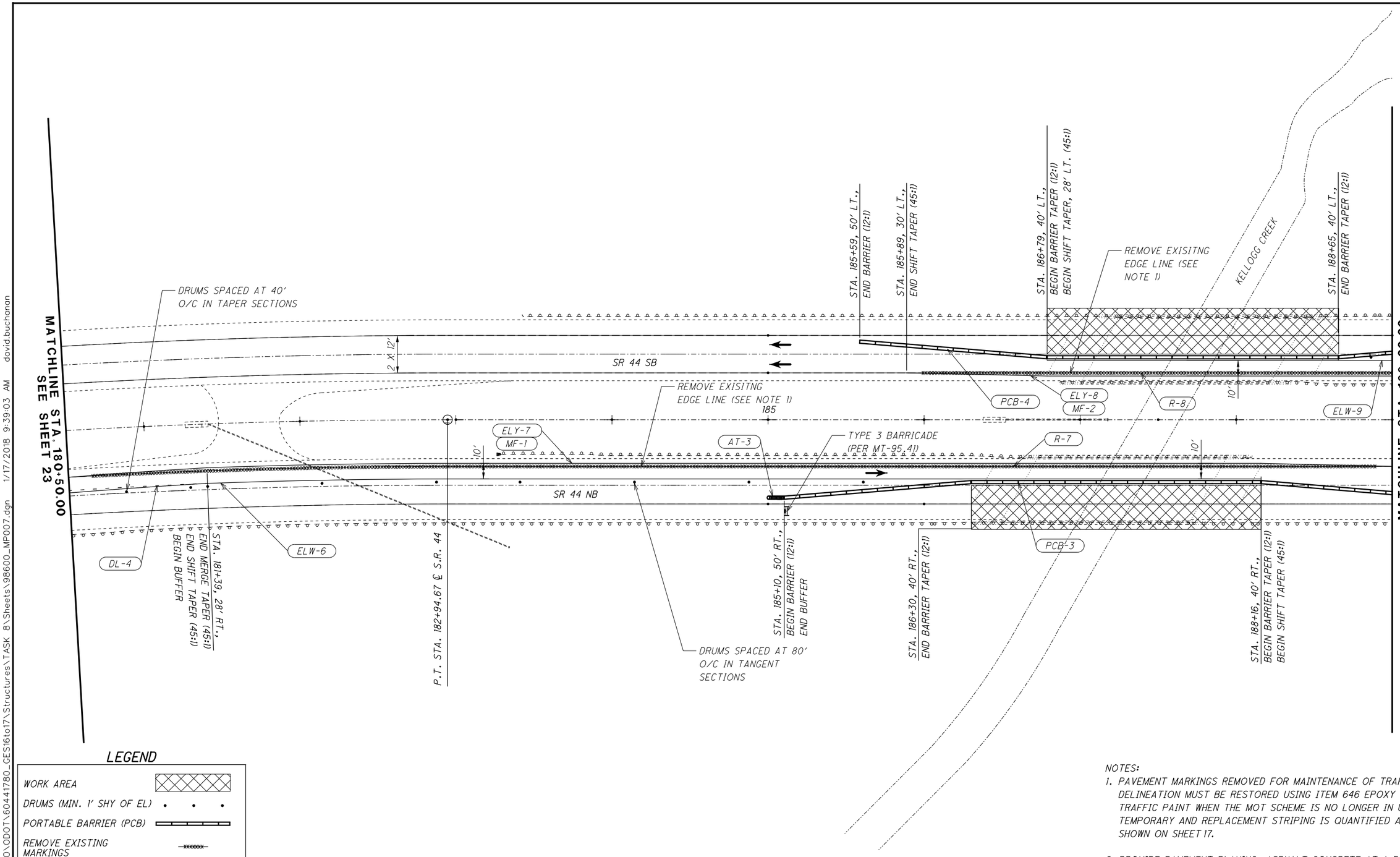
2. TEMPORARY MARKINGS ADDED IN PHASE 1 WHICH CONFLICT WITH THE PHASE 2 MOT SCHEME MUST BE REMOVED BEFORE TRAFFIC PATTERNS CAN BE SWITCHED TO PHASE 2.

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED KMS
CHECKED DEB

MAINTENANCE OF TRAFFIC PLAN LOCATIONS 1 & 2, PHASE 2

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600



LEGEND

- WORK AREA
- DRUMS (MIN. 1' SHY OF EL)
- PORTABLE BARRIER (PCB)
- REMOVE EXISTING MARKINGS
- DIRECTION OF TRAVEL
- AT = ATTENUATOR
- EL(W/Y) = EDGE LINE (WHITE/YELLOW)
- DL = DOTTED LINE (WHITE)
- MF = MILL & FILL EX. RUMBLE STRIPS
- R = PAVEMENT MARKING REMOVED

NOTES:

1. PAVEMENT MARKINGS REMOVED FOR MAINTENANCE OF TRAFFIC DELINEATION MUST BE RESTORED USING ITEM 646 EPOXY TRAFFIC PAINT WHEN THE MOT SCHEME IS NO LONGER IN USE. TEMPORARY AND REPLACEMENT STRIPING IS QUANTIFIED AS SHOWN ON SHEET 17.

2. PROVIDE PAVEMENT PLANING, ASPHALT CONCRETE AT A DEPTH OF 1", AND REPLACE WITH ASPHALT SURFACE COURSE WHERE RUMBLE STRIPS ARE PRESENT IN THE TEMPORARY LANE. RUMBLE STRIPS ARE TO BE REPLACED IN THE FINAL CONDITION. SEE MF-1 AND MF-2 ON THE SHEET NOTED ABOVE FOR QUANTITIES.

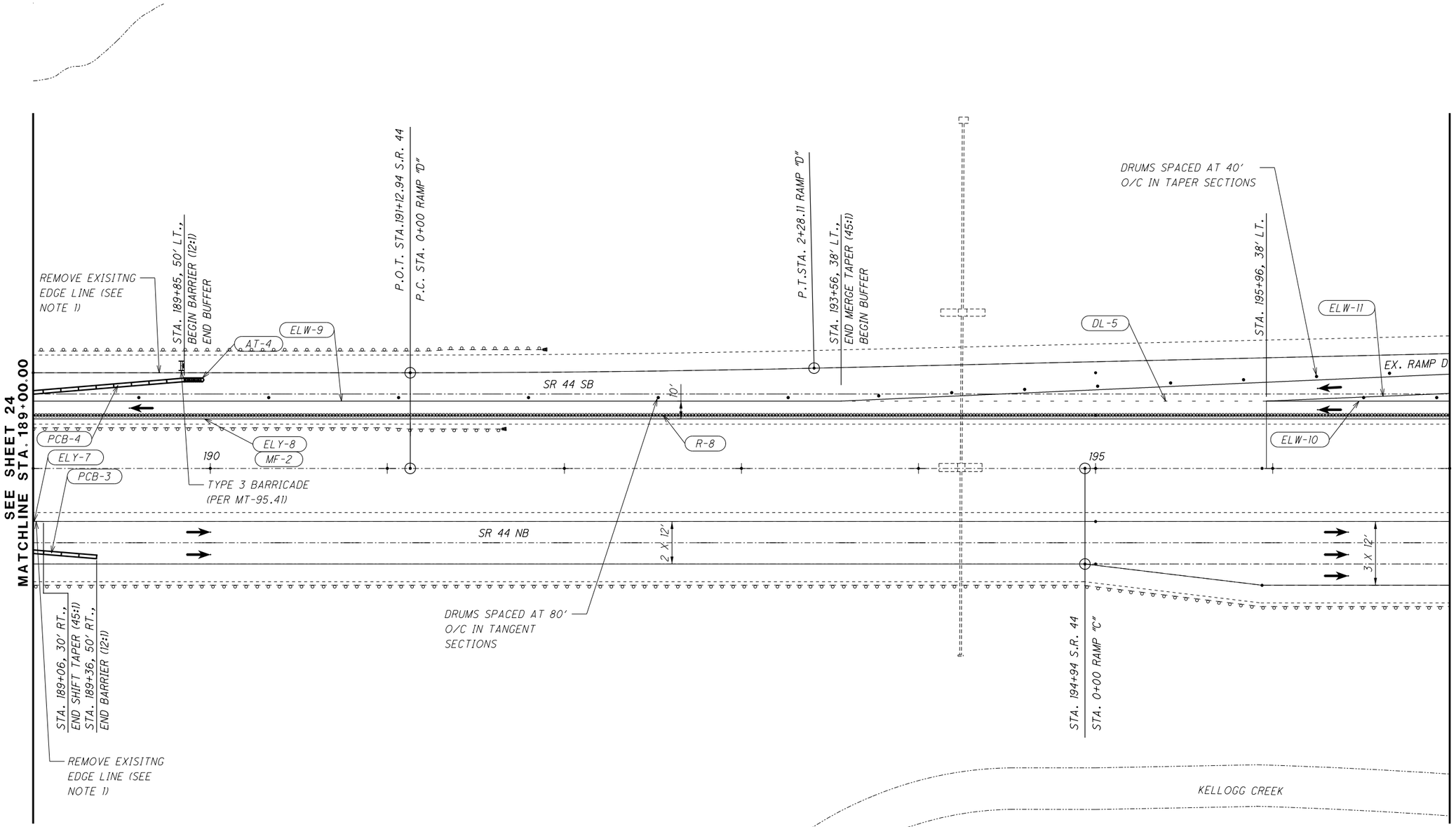
3. TEMPORARY MARKINGS ADDED IN PHASE 1 WHICH CONFLICT WITH THE PHASE 2 MOT SCHEME MUST BE REMOVED BEFORE TRAFFIC PATTERNS CAN BE SWITCHED TO PHASE 2.

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED KMS
CHECKED DEB

MAINTENANCE OF TRAFFIC PLAN LOCATIONS 1 & 2, PHASE 2

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600



LEGEND

- WORK AREA
- DRUMS (MIN. 1' SHY OF EL)
- PORTABLE BARRIER (PCB)
- REMOVE EXISTING MARKINGS
- DIRECTION OF TRAVEL
- AT = ATTENUATOR
- EL(W/Y) = EDGE LINE (WHITE/YELLOW)
- DL = DOTTED LINE (WHITE)
- MF = MILL & FILL EX. RUMBLE STRIPS
- R = PAVEMENT MARKING REMOVED

NOTES:

1. PAVEMENT MARKINGS REMOVED FOR MAINTENANCE OF TRAFFIC DELINEATION MUST BE RESTORED USING ITEM 646 EPOXY TRAFFIC PAINT WHEN THE MOT SCHEME IS NO LONGER IN USE. TEMPORARY AND REPLACEMENT STRIPING IS QUANTIFIED AS SHOWN ON SHEET 17.

2. PROVIDE PAVEMENT PLANING, ASPHALT CONCRETE AT A DEPTH OF 1", AND REPLACE WITH ASPHALT SURFACE COURSE WHERE RUMBLE STRIPS ARE PRESENT IN THE TEMPORARY LANE. RUMBLE STRIPS ARE TO BE REPLACED IN THE FINAL CONDITION. SEE MF-1 AND MF-2 ON THE SHEET NOTED ABOVE FOR QUANTITIES.

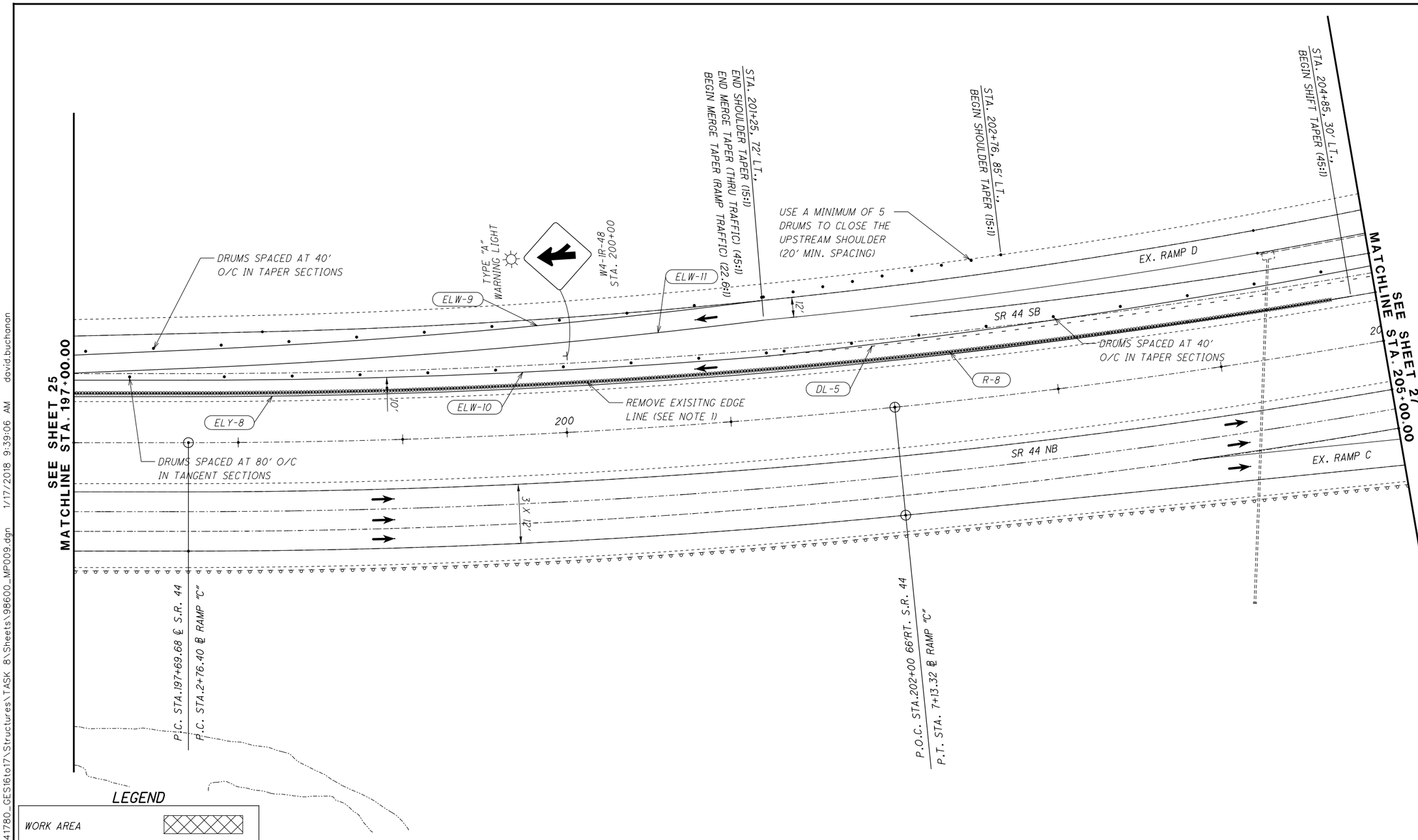
3. TEMPORARY MARKINGS ADDED IN PHASE 1 WHICH CONFLICT WITH THE PHASE 2 MOT SCHEME MUST BE REMOVED BEFORE TRAFFIC PATTERNS CAN BE SWITCHED TO PHASE 2.

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED KMS
CHECKED DEB

MAINTENANCE OF TRAFFIC PLAN LOCATIONS 1 & 2, PHASE 2

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600



LEGEND

- WORK AREA
- DRUMS (MIN. 1' SHY OF EL)
- PORTABLE BARRIER (PCB)
- REMOVE EXISTING MARKINGS
- DIRECTION OF TRAVEL
- AT = ATTENUATOR
- EL(W/Y) = EDGE LINE (WHITE/YELLOW)
- DL = DOTTED LINE (WHITE)
- MF = MILL & FILL EX. RUMBLE STRIPS
- R = PAVEMENT MARKING REMOVED

NOTES:

1. PERMANANT PAVEMENT MARKINGS REMOVED FOR MAINTENANCE OF TRAFFIC DELINEATION MUST BE RESTORED USING ITEM 646 EPOXY TRAFFIC PAINT WHEN THE MOT SCHEME IS NO LONGER IN USE. REPLACEMENT STRIPING IS QUANTIFIED AS SHOWN ON SHEET 17.

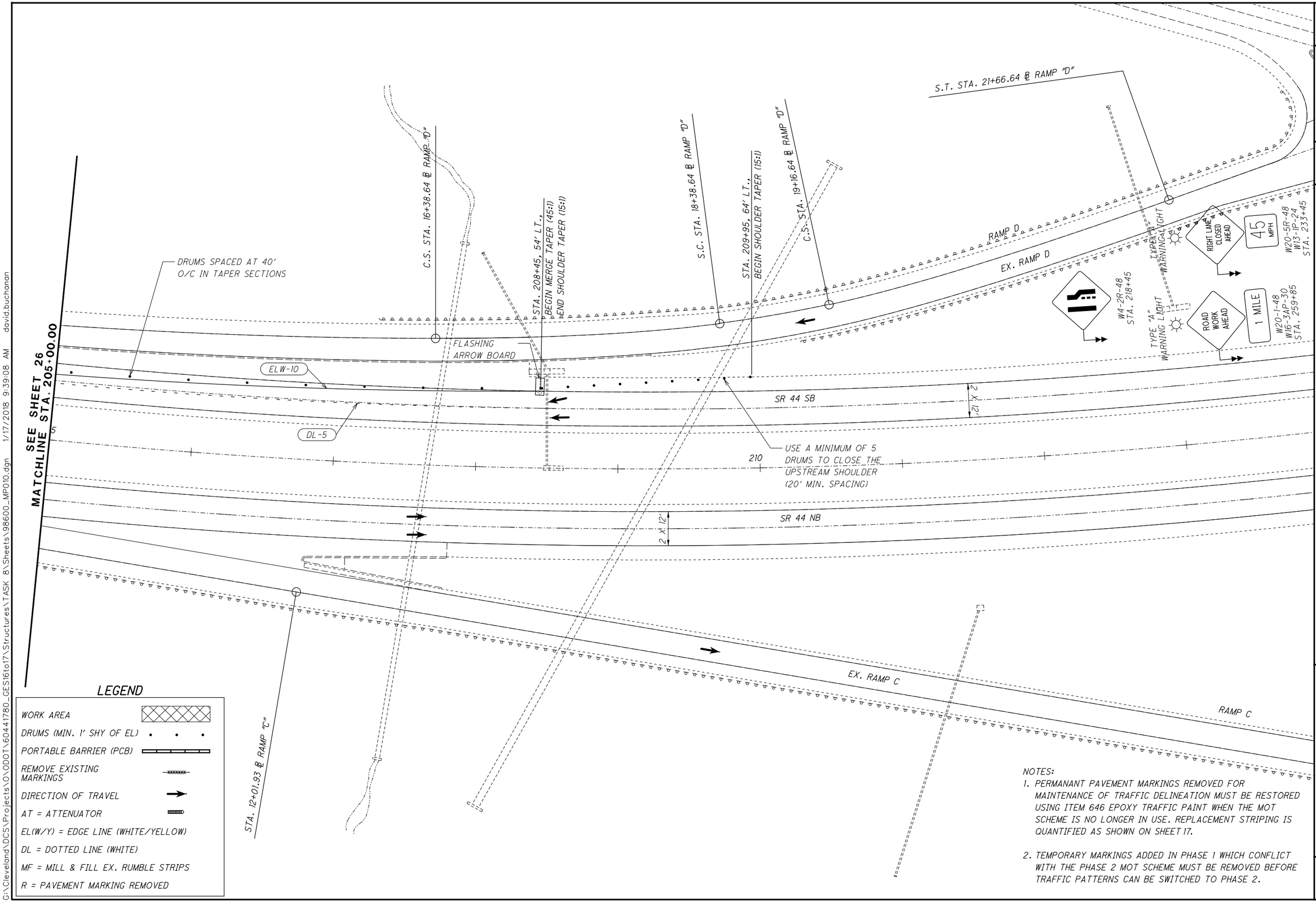
2. TEMPORARY MARKINGS ADDED IN PHASE 1 WHICH CONFLICT WITH THE PHASE 2 MOT SCHEME MUST BE REMOVED BEFORE TRAFFIC PATTERNS CAN BE SWITCHED TO PHASE 2.

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED KMS
CHECKED DEB

MAINTENANCE OF TRAFFIC PLAN LOCATIONS 1 & 2, PHASE 2

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600



LEGEND

- WORK AREA
- DRUMS (MIN. 1' SHY OF EL)
- PORTABLE BARRIER (PCB)
- REMOVE EXISTING MARKINGS
- DIRECTION OF TRAVEL
- AT = ATTENUATOR
- EL(W/Y) = EDGE LINE (WHITE/YELLOW)
- DL = DOTTED LINE (WHITE)
- MF = MILL & FILL EX. RUMBLE STRIPS
- R = PAVEMENT MARKING REMOVED

NOTES:

1. PERMANANT PAVEMENT MARKINGS REMOVED FOR MAINTENANCE OF TRAFFIC DELINEATION MUST BE RESTORED USING ITEM 646 EPOXY TRAFFIC PAINT WHEN THE MOT SCHEME IS NO LONGER IN USE. REPLACEMENT STRIPING IS QUANTIFIED AS SHOWN ON SHEET 17.

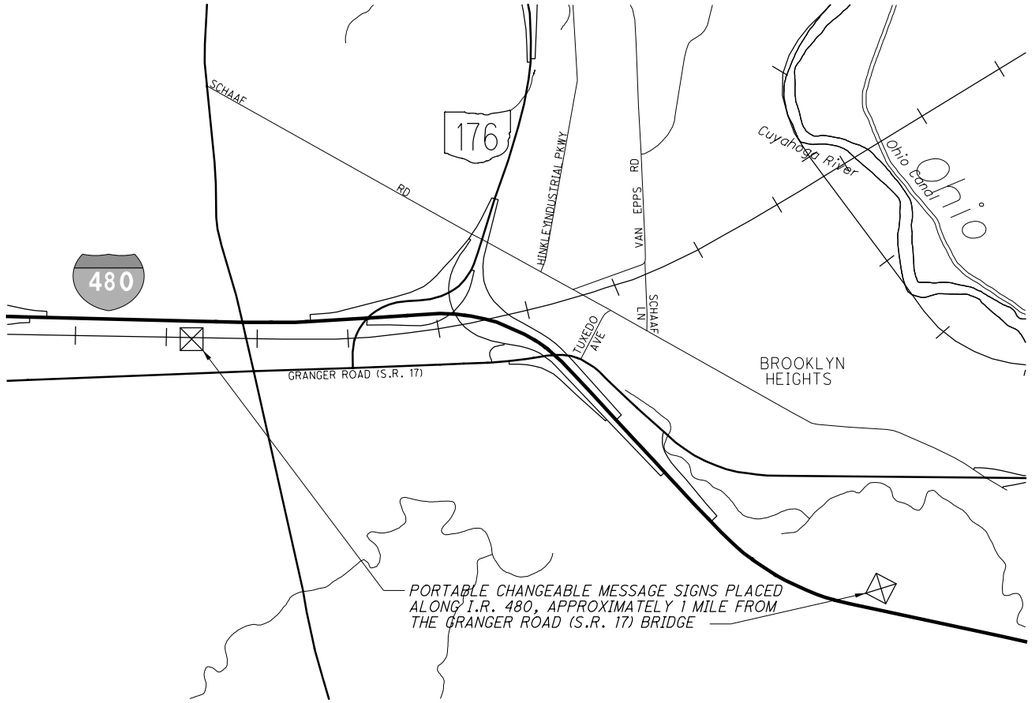
2. TEMPORARY MARKINGS ADDED IN PHASE 1 WHICH CONFLICT WITH THE PHASE 2 MOT SCHEME MUST BE REMOVED BEFORE TRAFFIC PATTERNS CAN BE SWITCHED TO PHASE 2.

HORIZONTAL SCALE IN FEET
0 15 30 60

CALCULATED KMS
CHECKED DEB

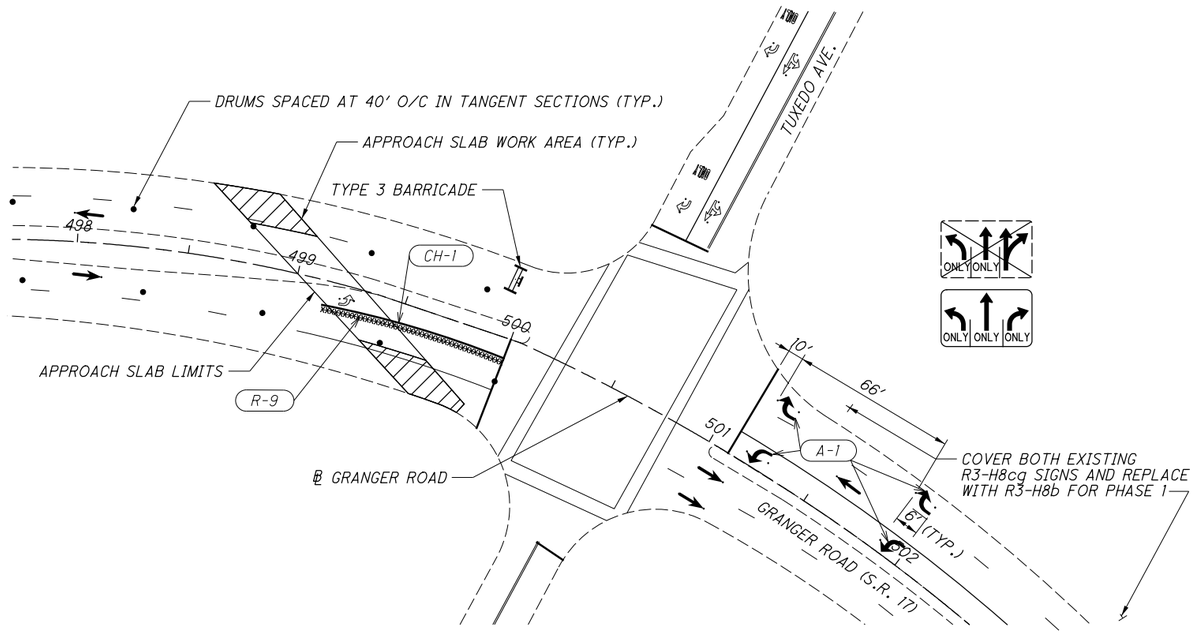
MAINTENANCE OF TRAFFIC PLAN
LOCATIONS 1 & 2, PHASE 2

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600



LOCATION 5 PORTABLE CHANGEABLE MESSAGE SIGN LOCATIONS

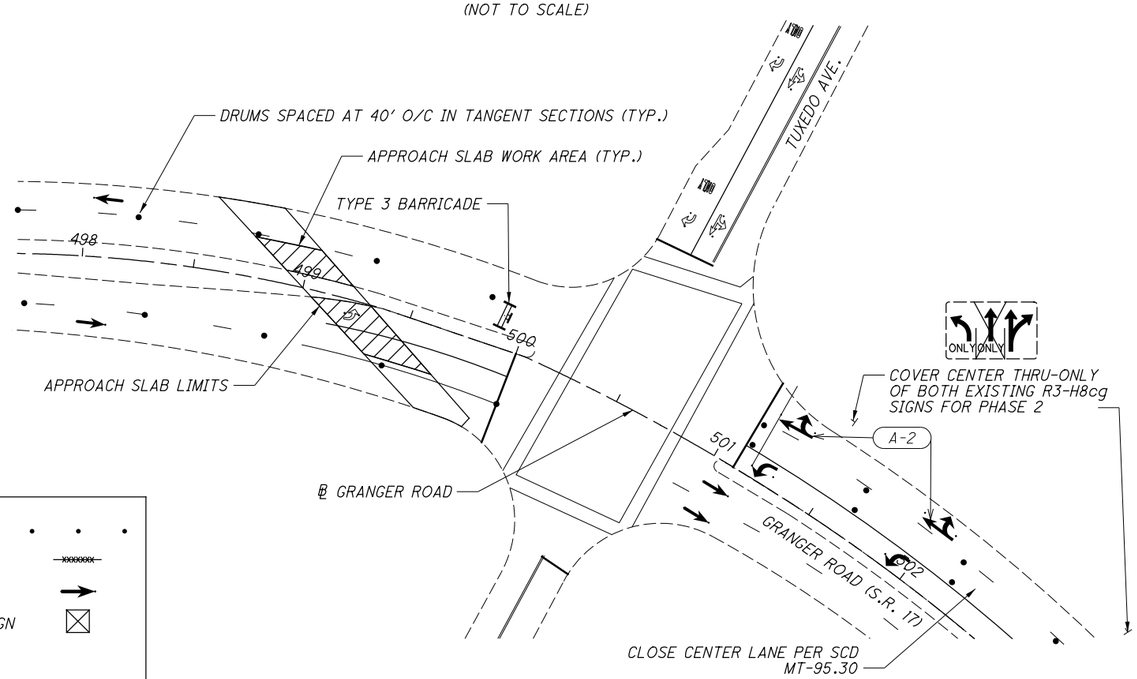
(NOT TO SCALE)



PHASE 1

GRANGER ROAD (S.R. 17) AT TUXEDO AVENUE M.O.T. DETAIL

(NOT TO SCALE)



PHASE 2

GRANGER ROAD (S.R. 17) AT TUXEDO AVENUE M.O.T. DETAIL

(SEE NOTE 2 FOR M.O.T. SIGNAL AND MARKING DETAILS)

(NOT TO SCALE)

NOTES:

1. FOR LOCATION 5 M.O.T. TYPICAL SECTIONS, SEE SHEET 16
2. FOR PHASE 2, COVER THE LEFT EXISTING SIGNAL HEAD FOR EB THRU TRAFFIC AND LEFT-TURNING TRAFFIC. PROVIDE A PROTECTED PHASE FOR EACH DIRECTION OF TRAFFIC ON GRANGER ROAD (S.R. 17). THE FIRST PHASE SHOULD ALLOW EB TRAFFIC TO TRAVEL FROM THE RIGHT MOST LANE TO MAKE A PROTECTED THRU, LEFT, OR RIGHT MOVEMENT. THE SECOND PHASE SHOULD ALLOW WB TRAFFIC TO USE THE RIGHT MOST LANE TO MAKE A PROTECTED THRU OR RIGHT MOVEMENT AND THE LEFT MOST LANE TO MAKE A PROTECTED LEFT TURN. REMOVE THE TEMPORARY RIGHT-ONLY PAVEMENT MARKINGS FROM THE WESTBOUND DIRECTION THAT WERE INSTALLED IN PHASE 1.
3. PORTABLE CHANGEABLE MESSAGE SIGNS PLACED ALONG I.R. 480 SHOULD PROVIDE MOTORISTS INFORMATION ABOUT SHOULDER CLOSURES FOR WORK ON THE LOCATION 5 BRIDGE.
4. ALL WORK NOTED ON THIS SHEET EXCEPT THOSE ITEMS QUANTIFIED IN THE MAINTENANCE OF TRAFFIC SUBSUMMARY ON SHEET (17/65) ARE INCLUDED FOR PAYMENT WITH ITEM 614 MAINTAINING TRAFFIC.

LEGEND

DRUMS (MIN. 1' SHY OF EL OR LL)	• • •
REMOVE EXISTING MARKINGS	xxxxxxx
DIRECTION OF TRAVEL	→
PORTABLE CHANGEABLE MESSAGE SIGN	☒
CH = CHANNELIZING LINE (WHITE)	
EL(W/Y) = EDGE LINE (WHITE/YELLOW)	
LL = LANE LINE (WHITE)	
R = PAVEMENT MARKING REMOVED	
A = TEMPORARY PAVEMENT MARKING ARROW	

CALCULATED KMS
CHECKED DEB

MAINTENANCE OF TRAFFIC DETAILS LOCATION 5

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

28
65

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
GEN	7	10	11	12	17	40	46	51	57			02/BRO/BR	01/IMS/BR						
																		ROADWAY	
LS												LS		201	11001	LS		CLEARING AND GRUBBING, AS PER PLAN	5
						268	142	149	335			268	626	202	22900	894	SY	APPROACH SLAB REMOVED	
						176						176		202	23011	176	SY	PAVEMENT REMOVED, ASPHALT, AS PER PLAN	5 & 36
							LS	LS					LS	202	98000	LS		REMOVAL MISC.: DELAMINATED CONCRETE INSPECTION AND REMOVAL	5, 48, 53
						920						920		204	50000	920	SY	GEOTEXTILE FABRIC	
								50				50		606	16001	50	FT	GUARDRAIL REBUILT, AS PER PLAN	7 & 51
								2				2		607	98100	2	EACH	FENCE, MISC.:REPLACE DAMAGED LINE RAIL	7 & 51
																		EROSION CONTROL	
						850						850		601	20001	850	SY	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN	7, 37-39
						2,375						2,375		601	25001	2,375	CY	DUMPED ROCK FILL, TYPE A, AS PER PLAN	7, 37-39
																		PAVEMENT	
								144				144		251	01001	144	SY	PARTIAL DEPTH PAVEMENT REPAIR (441), AS PER PLAN	5 & 51
					704							704		254	01000	704	SY	PAVEMENT PLANING, ASPHALT CONCRETEVARIABLE DEPTH	
						52	12	12				52	24	304	20000	76	CY	AGGREGATE BASE	
					23							23		441	50000	23	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), PG64-22	
					2,753							2,753		618	40100	2,753	FT	RUMBLE STRIPS, (ASPHALT CONCRETE)	
																		TRAFFIC CONTROL	
					24				8			24	8	621	00300	32	EACH	RPM REFLECTOR	
					24				8			24	8	621	90000	32	EACH	RPM, MISC.:REMOVE REFLECTORS FROM CASTINGS	12
					4				2			4	2	621	90000	6	EACH	RPM, MISC.:REPLACE DAMAGED RPM CASTING	12
							0.26	0.29					0.55	642	00090	0.55	MILE	EDGE LINE, 4"	
							0.13	0.14					0.27	642	00290	0.27	MILE	CENTER LINE	
					1.08							0.92	0.16	646	10010	1.08	MILE	EDGE LINE, 6"	
					0.36							0.36		646	10110	0.36	MILE	LANE LINE, 6"	
					175							90	85	646	10310	175	FT	CHANNELIZING LINE, 12"	
					1,012							1,012		646	20504	1,012	FT	DOTTED LINE, 6"	

CALCULATED CRG CHECKED DEB

GENERAL SUMMARY

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
GEN	7	10	11	12	17	40	46	51	57			02/BRO/BR	01/IMS/BR						
																		STRUCTURE REPAIR (LAK-44-0327L SFN:4302559 LOCATION 1)	
						2,600						2,600		509	20001	2,600	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	5 & 43
						56						56		512	10051	56	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN	5
						2,400						2,400		513	21501	2,400	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN	5 & 43
						2						2		513	95030	2	EACH	STRUCTURAL STEEL, MISC.:BEAM END SPLICE A	5 & 42
						1,300						1,300		514	00050	1,300	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
						1,300						1,300		514	00056	1,300	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
						1,300						1,300		514	00060	1,300	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
						1,300						1,300		514	00066	1,300	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
						14						14		514	00504	14	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
						2						2		514	10000	2	EACH	FINAL INSPECTION REPAIR	
						97						97		516	11211	97	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	6, 34, 35
						12						12		516	46501	12	EACH	BEARING, PTFE (TEFLON), AS PER PLAN	7 & 44
						LS						LS		516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	6 & 7
						14						14		518	12701	14	EACH	SCUPPER, VERTICAL EXTENSION, AS PER PLAN	7 & 34
						25						25		519	11101	25	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	7
						150						150		SPECIAL	51911720	150	FT	PATCHING CONCRETE STRUCTURE SIDEWALK AND SAFETY CURB REPAIR	8
						5						5		SPECIAL	51912510	5	SY	PATCHING CONCRETE BRIDGE DECK	7
						221						221		526	30001	221	SY	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN	45
																		STRUCTURE REPAIR (LAK-44-0327R SFN: 4302583 LOCATION 2)	
						2,600						2,600		509	20001	2,600	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	5 & 43
						63						63		512	10051	63	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN	5
						2,400						2,400		513	21501	2,400	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN	5 & 43
						1						1		513	95030	1	EACH	STRUCTURAL STEEL, MISC.: BEAM END SPLICE A	5 & 42
						1,300						1,300		514	00050	1,300	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
						1,300						1,300		514	00056	1,300	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
						1,300						1,300		514	00060	1,300	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
						1,300						1,300		514	00066	1,300	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
						14						14		514	00504	14	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
						2						2		514	10000	2	EACH	FINAL INSPECTION REPAIR	
						97						97		516	11211	97	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	6, 34, 35
						12						12		516	46501	12	EACH	BEARING, PTFE (TEFLON), AS PER PLAN	7 & 44
						LS						LS		516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	6 & 7
						14						14		518	12701	14	EACH	SCUPPER, VERTICAL EXTENSION, AS PER PLAN	7 & 34
						55						55		519	11101	55	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	7
						150						150		SPECIAL	51911720	150	FT	PATCHING CONCRETE STRUCTURESIDEWALK AND SAFETY CURB REPAIR	8
						5						5		SPECIAL	51912510	5	SY	PATCHING CONCRETE BRIDGE DECK	7
						221						221		526	30001	221	SY	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN	45

CALCULATED CRG
CHECKED DEB

GENERAL SUMMARY

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
GEN	7	10	11	12	17	40	46	51	57			02/BRO/BR	01/IMS/BR						
																		STRUCTURE REPAIR (LAK-90-2210 SFN: 4304861 LOCATION 3)	
							5,200						5,200	509	20001	5,200	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	5 & 49
							130						130	512	10051	130	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN	5
							937						937	512	10101	937	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	5
							1,710						1,710	512	73500	1,710	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
							632						632	512	74000	632	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
							5,500						5,500	513	21501	5,500	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN	5 & 49
							1,200						1,200	514	00050	1,200	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
							1,200						1,200	514	00056	1,200	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
							1,200						1,200	514	00060	1,200	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
							1,200						1,200	514	00066	1,200	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
							15						15	514	00504	15	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
							2						2	514	10000	2	EACH	FINAL INSPECTION REPAIR	
							136						136	516	11211	136	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	6,34,35,49
							1						1	517	76302	1	EACH	RAILING, MISC.: REPLACE DAMAGED SAFETY RAIL	7, 46, 49
							24						24	518	12701	24	EACH	SCUPPER, VERTICAL EXTENSION, AS PER PLAN	7 & 34
							145						145	519	11101	145	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	7
							380						380	SPECIAL	51911720	380	FT	PATCHING CONCRETE STRUCTURE SIDEWALK AND SAFETY CURB REPAIR	8
							20						20	SPECIAL	51912510	20	SY	PATCHING CONCRETE BRIDGE DECK	7
							142						142	526	15001	142	SY	REINFORCED CONCRETE APPROACH SLABS (T=13"), AS PER PLAN	50
																		STRUCTURE REPAIR (LAK-90-1297 SFN: 4304268 LOCATION 4)	
								3,600					3,600	509	20001	3,600	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	5 & 54
								160					160	512	10051	160	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN	5
								810					810	512	10101	810	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	5
								525					525	512	74000	525	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
								2,700					2,700	513	21501	2,700	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN	5 & 53
								2					2	513	95030	2	EACH	STRUCTURAL STEEL, MISC.: BEAM END SPLICE B	5 & 54
								900					900	514	00050	900	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
								900					900	514	00056	900	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
								900					900	514	00060	900	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
								900					900	514	00066	900	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
								12					12	514	00504	12	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
								2					2	514	10000	2	EACH	FINAL INSPECTION REPAIR	
								96					96	516	11211	96	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	6,34,35,54
								8					8	SPECIAL	51646800	8	EACH	REFURBISH AND RESET BEARING	6
								LS					LS	516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	6 & 7
								3					3	517	76302	3	EACH	RAILING, MISC.:REPLACE DAMAGED SAFETY RAIL	7, 51, 54
								22					22	518	12701	22	EACH	SCUPPER, VERTICAL EXTENSION, AS PER PLAN	7 & 34
								75					75	519	11101	75	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	7
								480					480	SPECIAL	51911720	480	FT	PATCHING CONCRETE STRUCTURE SIDEWALK AND SAFETY CURB REPAIR	8
								105					105	SPECIAL	51912510	105	SY	PATCHING CONCRETE BRIDGE DECK	7
								149					149	526	15001	149	SY	REINFORCED CONCRETE APPROACH SLABS (T=13"), AS PER PLAN	55

CALCULATED CRG
CHECKED DEB

GENERAL SUMMARY

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
GEN	7	10	11	12	17	40	46	51	57			02/BRO/BR	01/IMS/BR						
																		STRUCTURE REPAIR (CUY-17-1227 SFN: 1802402 LOCATION 5)	
									490				490	512	10101	490	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	5
									490				490	512	74000	490	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
									2,600				2,600	513	21501	2,600	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN	5 & 61
									30				30	513	95030	30	EACH	STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NDT	6 & 57
									30				30	513	95030	30	EACH	STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL, GRINDING, AND NDT	6 & 57
									2,700				2,700	514	00050	2,700	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
									2,700				2,700	514	00056	2,700	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
									2,700				2,700	514	00060	2,700	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
									2,700				2,700	514	00066	2,700	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
									33				33	514	00504	33	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
									2				2	514	10000	2	EACH	FINAL INSPECTION REPAIR	
									32				32	516	12201	32	FT	STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN	6 & 61
									28				28	SPECIAL	51646800	28	EACH	REFURBISH AND RESET BEARING	6 & 57
									LS				LS	516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	6 & 7
									4				4	518	12500	4	EACH	SCUPPER, MISC.: CLEANOUT SCUPPER	7 & 56
									3,400				3,400	SPECIAL	51900100	3,400	SF	COMPOSITE FIBER WRAP SYSTEM	8, 59, 60
									670				670	519	11101	670	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	7
									311				311	SPECIAL	51911720	311	FT	PATCHING CONCRETE STRUCTURE SIDEWALK AND SAFETY CURB REPAIR	8
									335				335	526	30001	335	SY	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN	62-65
									2				2	625	25930	2	EACH	CONDUIT, MISC.: REPLACE UTILITY DUCT BANK	58
																		MAINTENANCE OF TRAFFIC	
				400								400		614	11110	400	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	12
			8									8		614	11500	8	MNTH	WORKSITE TRAFFIC SUPERVISOR	11
					1,704							1,704		614	11630	1,704	FT	INCREASED BARRIER DELINEATION	
					4							4		614	12338	4	EACH	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)	
LS													LS	614	12420	LS		DETOUR SIGNING	
					472							472		614	12801	472	EACH	WORK ZONE RAISED PAVEMENT MARKER, AS PER PLAN	11
					34							34		614	13310	34	EACH	BARRIER REFLECTOR, TYPE 1ONE-WAY	
					34							34		614	13360	34	EACH	OBJECT MARKER, TWO WAY	
		8										2	6	614	18601	8	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	10
					2.39							2.39		614	22200	2.39	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 740.06, TYPE I	
					85								85	614	23400	85	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I	
					3,932							3,932		614	24400	3,932	FT	WORK ZONE DOTTED LINE, CLASS I, 740.06, TYPE I	
					6								6	614	30000	6	EACH	WORK ZONE ARROW, CLASS I	
					1,704							1,704		622	41000	1,704	FT	PORTABLE BARRIER, 32"	
																		INCIDENTALS	
LS												LS		108	30000	LS		CPM PROGRESS SCHEDULE SHORT DURATION PROJECTS	10
LS												LS		614	11000	LS		MAINTAINING TRAFFIC	9
	8											8		619	16011	8	MNTH	FIELD OFFICE, TYPE B, AS PER PLAN	7
LS												LS		623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	7

CALCULATED CRG
CHECKED DEB

GENERAL SUMMARY

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

LOCATION	BRIDGE NUMBER	STRUCTURAL FILE NUMBER	STRUCTURE TYPE	STRUCTURE LIMITS	BRIDGE WIDTH (OUT/OUT)	LANES ON	LANES UNDER	SEALER AND PAINT COLOR	PROPOSED WORK (WORK SHOWN IS REPRESENTATIVE AND DOES NOT INCLUDE ALL WORK REQUIRED)	
1	LAK-44-0327 L	4302559	3-SPAN CONTINUOUS ROLLED STEEL BEAM	122'	44.00'	2	N/A KELLOGG CREEK	MATCH EXISTING SEALER COLOR; MATCH EXISTING PAINT COLOR	- EXTEND SCUPPER DOWNSPOUTS	- REPLACE APPROACH SLABS
									- PATCH AND SEAL SAFETY CURB	- PATCH AND SEAL PARAPETS
									- PAINT LAST 10'-0" OF GIRDERS AT ABUTMENTS	- REPLACE END CROSS FRAMES
									- REPAIR BEAM ENDS AS DIRECTED	- REPLACE BEARINGS
									- REPLACE EXPANSION JOINTS	- REPAIR/INSTALL EROSION CONTROL AT PIERS
2	LAK-44-0327 R	4302583	3-SPAN CONTINUOUS ROLLED STEEL BEAM	122'	44.00'	2	N/A KELLOGG CREEK	MATCH EXISTING SEALER COLOR; MATCH EXISTING PAINT COLOR	- EXTEND SCUPPER DOWNSPOUTS	- REPLACE APPROACH SLABS
									- PATCH AND SEAL SAFETY CURB	- PATCH AND SEAL PARAPETS
									- PAINT LAST 10'-0" OF GIRDERS AT ABUTMENTS	- REPLACE END CROSS FRAMES
									- REPAIR BEAM ENDS AS DIRECTED	- REPLACE BEARINGS
									- REPLACE EXPANSION JOINTS	- REPAIR/INSTALL EROSION CONTROL AT PIERS
3	LAK-90-2210	4304861	4-SPAN CONTINUOUS STEEL GIRDER	641'	30.67'	2	4	MATCH EXISTING SEALER COLOR; MATCH EXISTING PAINT COLOR (APPROXIMATELY FEDERAL STANDARD COLOR NO. FS-595A-25630 BLUE SEMI-GLOSS)	- EXTEND SCUPPER DOWNSPOUTS	- REPLACE EXPANSION JOINTS AND ADJACENT DECK
									- PATCH AND SEAL SAFETY CURB	- REPLACE END CROSS FRAMES
									- PATCH CONCRETE DECK	- PATCH AND SEAL ABUTMENTS
									- REMOVE SPALLS FROM BOTTOM OF DECK OVER TRAFFIC	- SEAL DECK WITH GRAVITY-FED RESIN
									- REPLACE APPROACH SLABS	- REPAIR DAMAGED SAFETY RAIL
4	LAK-90-1297	4304268	6-SPAN CONTINUOUS STEEL GIRDER	662'	30.67'	2	4	MATCH EXISTING SEALER COLOR; MATCH EXISTING PAINT COLOR (APPROXIMATELY FEDERAL STANDARD COLOR NO. FS-595A-25630 BLUE SEMI-GLOSS)	- EXTEND SCUPPER DOWNSPOUTS	- REPLACE EXPANSION JOINTS
									- PATCH AND SEAL SAFETY CURB AND PARAPETS	- REPLACE END CROSS FRAMES
									- PATCH CONCRETE DECK	- PATCH AND SEAL ABUTMENTS
									- REMOVE SPALLS FROM BOTTOM OF DECK OVER TRAFFIC	- REFURBISH BEARINGS
									- REPLACE APPROACH SLABS AND ADJACENT PAVEMENT	- REPAIR DAMAGED SAFETY RAIL
5	CUY-17-1227	1802402	5-SPAN CONTINUOUS STEEL GIRDER	484'	VARIES 72.33'±	4	12	MATCH EXISTING SEALER COLOR; MATCH EXISTING PAINT COLOR	- PATCH AND SEAL SIDEWALK AND PARAPETS	- REPLACE APPROACH SLABS
									- PAINT LAST 10'-0" OF GIRDERS AT ABUTMENTS	- REPLACE END CROSSFRAMES
									- REFURBISH AND RESET BEARINGS	- PATCH AND SEAL ABUTMENTS
									- REPLACE DAMAGED JOINT ARMOR	- PATCH & APPLY COMPOSITE FIBER WRAP SYSTEM
									- REPAIR FATIGUE CRACKS IN STRUCTURAL STEEL	- REPLACE UTILITY DUCT AT ABUTMENTS

DESIGN AGENCY
AKRON CLEVELAND
564 WHITE POND DRIVE
AKRON, OHIO 44320-1100
(330) 836-9111
AECOM

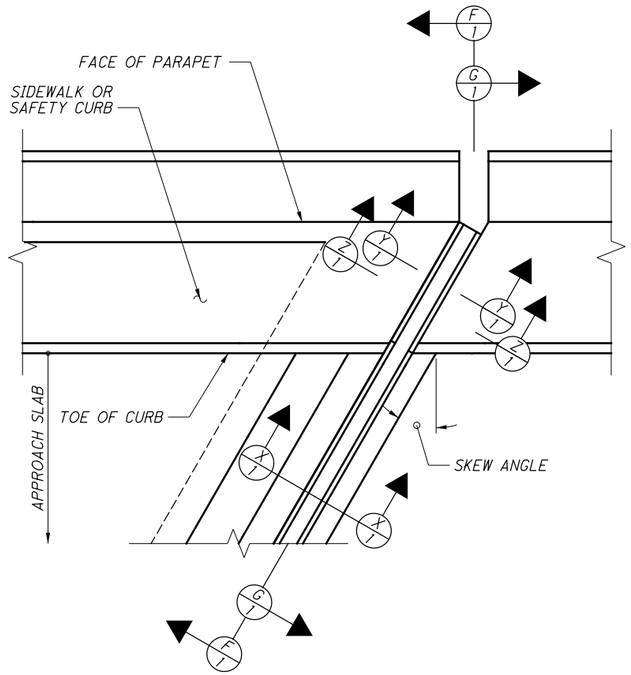
DESIGNED	DRAWN	REVIEWED	DATE
KGR	KGR	TMB	1/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEB		AS NOTED	

STRUCTURE DATA TABLE

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

1 / 1

33
65

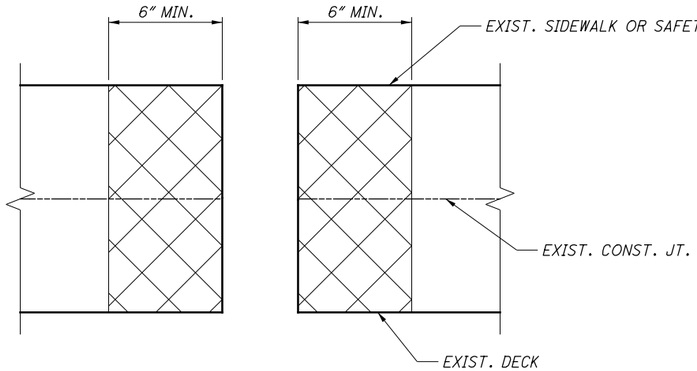


NOTES:

1. PERFORM ALL JOINT REPLACEMENT PER EXJ-4-87 EXCEPT AS MODIFIED IN THE PLANS.
2. FOR ADDITIONAL NOTES AND DETAILS NOT SHOWN, SEE EXJ-4-87.

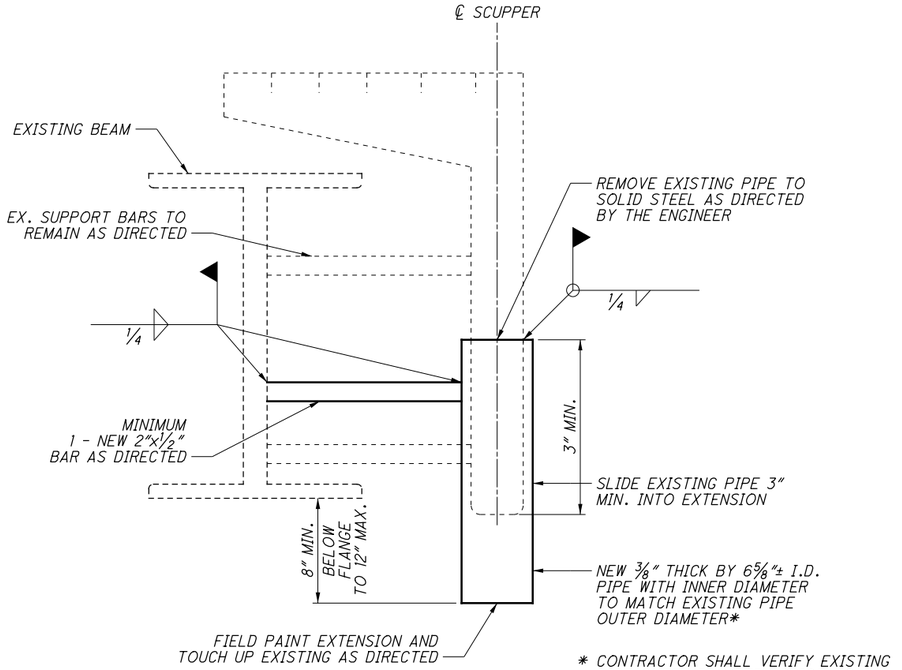
PART PLAN AT ABUTMENT

FOR BRIDGES WITH SIDEWALK OR SAFETY CURB PARAPET RAILING



Y/1 REMOVAL AT SIDEWALK OR SAFETY CURB

EXISTING REINFORCING TO REMAIN (NOT SHOWN FOR CLARITY)



SCUPPER EXTENSION DETAIL

NOTE: PROVIDE BEND AS DIRECTED BY THE ENGINEER TO DIRECT WATER AWAY FROM THE ABUTMENT AT LOCATION 4 (LAK-90-1297)

LEGEND:

REMOVAL LIMITS OF EXISTING JOINT AND CONCRETE

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR SECTIONS F-F, G-G, X-X, AND Z-Z, SEE SHEET 35/65.

DESIGN AGENCY
AKRON CLEVELAND
AECOM
564 WHITE POND DRIVE
AKRON, OHIO 44320-1100
(330) 836-9111

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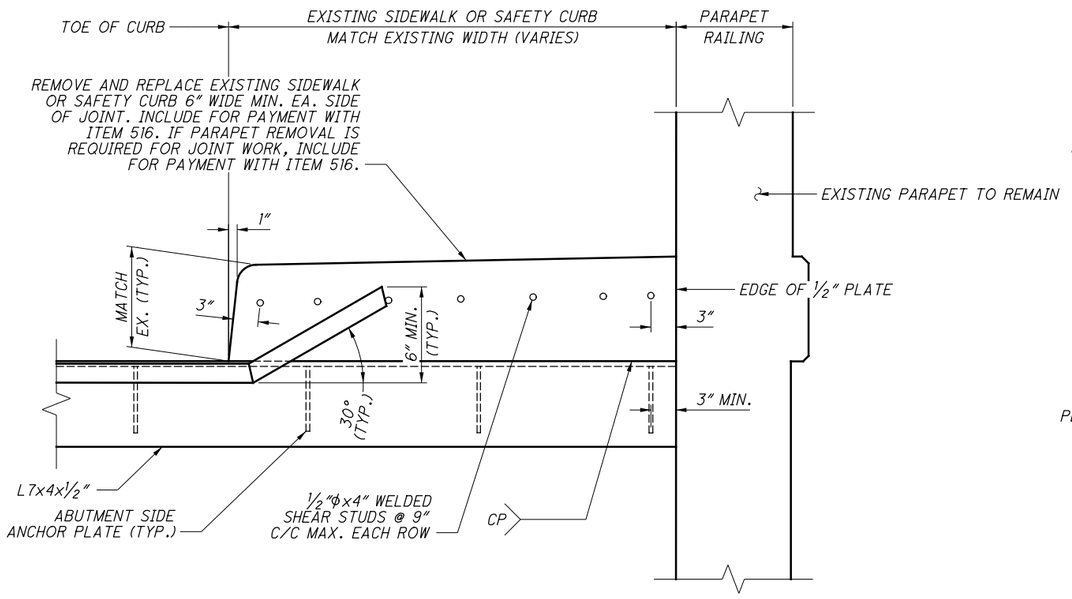
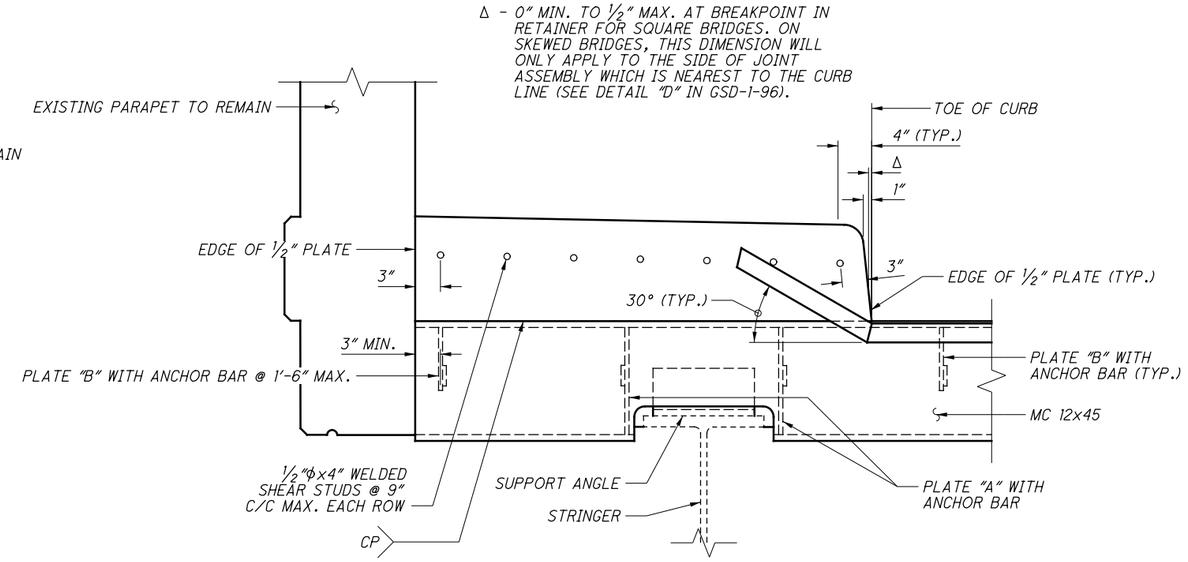
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEB		VARIOUS	

EXPANSION JOINT AND SCUPPER EXTENSION DETAILS
VARIOUS LOCATIONS

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600



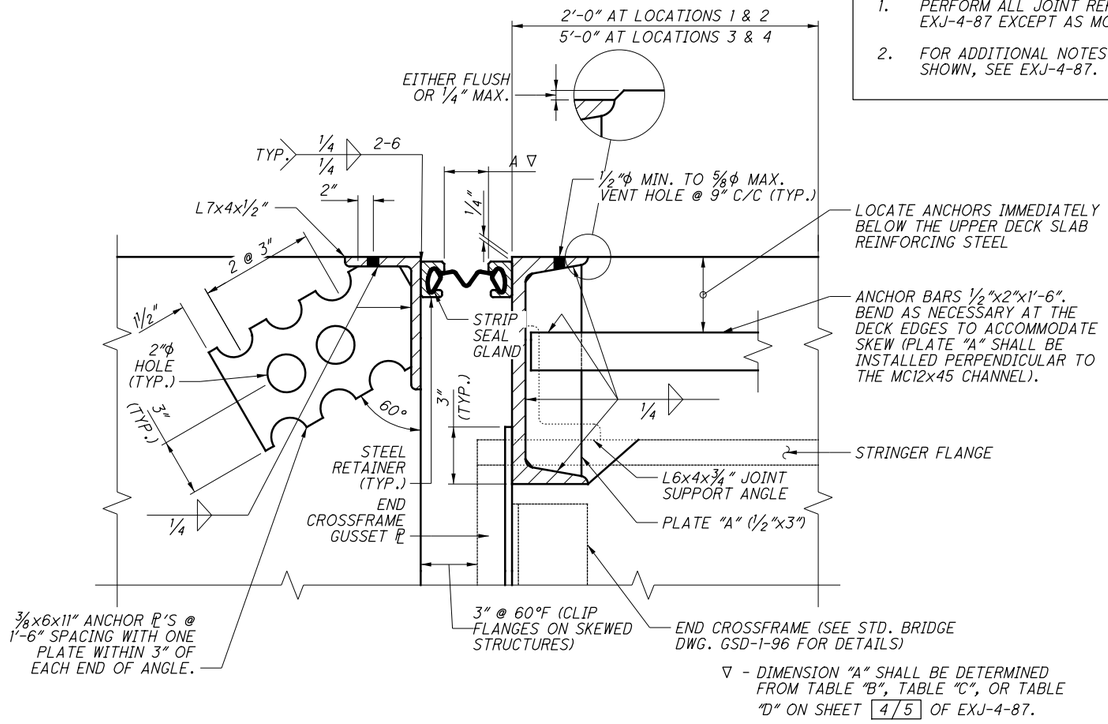
F / 1 REPLACEMENT AT SIDEWALK OR SAFETY CURB
EXISTING REINFORCING TO REMAIN (NOT SHOWN FOR CLARITY)



G / 1 REPLACEMENT AT SIDEWALK OR SAFETY CURB
EXISTING REINFORCING TO REMAIN (NOT SHOWN FOR CLARITY)

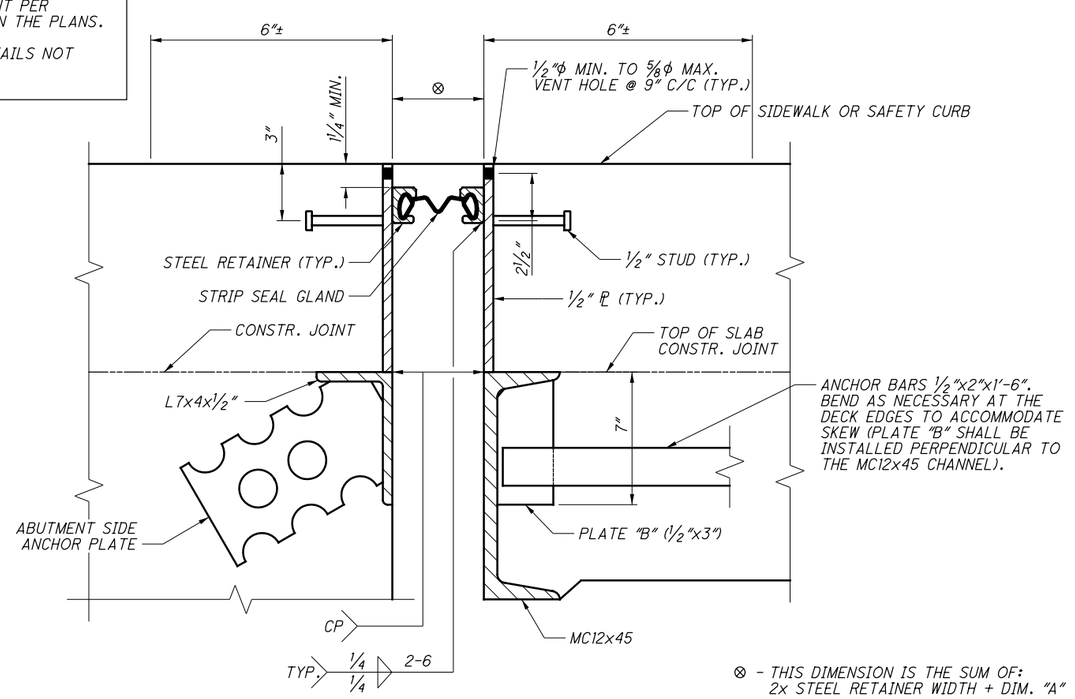
NOTES:

1. PERFORM ALL JOINT REPLACEMENT PER EXJ-4-87 EXCEPT AS MODIFIED IN THE PLANS.
2. FOR ADDITIONAL NOTES AND DETAILS NOT SHOWN, SEE EXJ-4-87.



▽ - DIMENSION "A" SHALL BE DETERMINED FROM TABLE "B", TABLE "C", OR TABLE "D" ON SHEET 4/5 OF EXJ-4-87.

X / 1 REPLACEMENT AT ROADWAY
EXISTING REINFORCING TO REMAIN (NOT SHOWN FOR CLARITY)



⊗ - THIS DIMENSION IS THE SUM OF: 2x STEEL RETAINER WIDTH + DIM. "A"

Z / 1 REPLACEMENT AT SIDEWALK OR SAFETY CURB
EXISTING REINFORCING TO REMAIN (NOT SHOWN FOR CLARITY)

DESIGN AGENCY
AKRON CLEVELAND
564 WHITE POND DRIVE
AKRON, OHIO 44320-1100
(330) 836-9111
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CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEB		VARIOUS	

PROPOSED EXPANSION JOINT DETAILS
VARIOUS LOCATIONS

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

2 / 2

35
65

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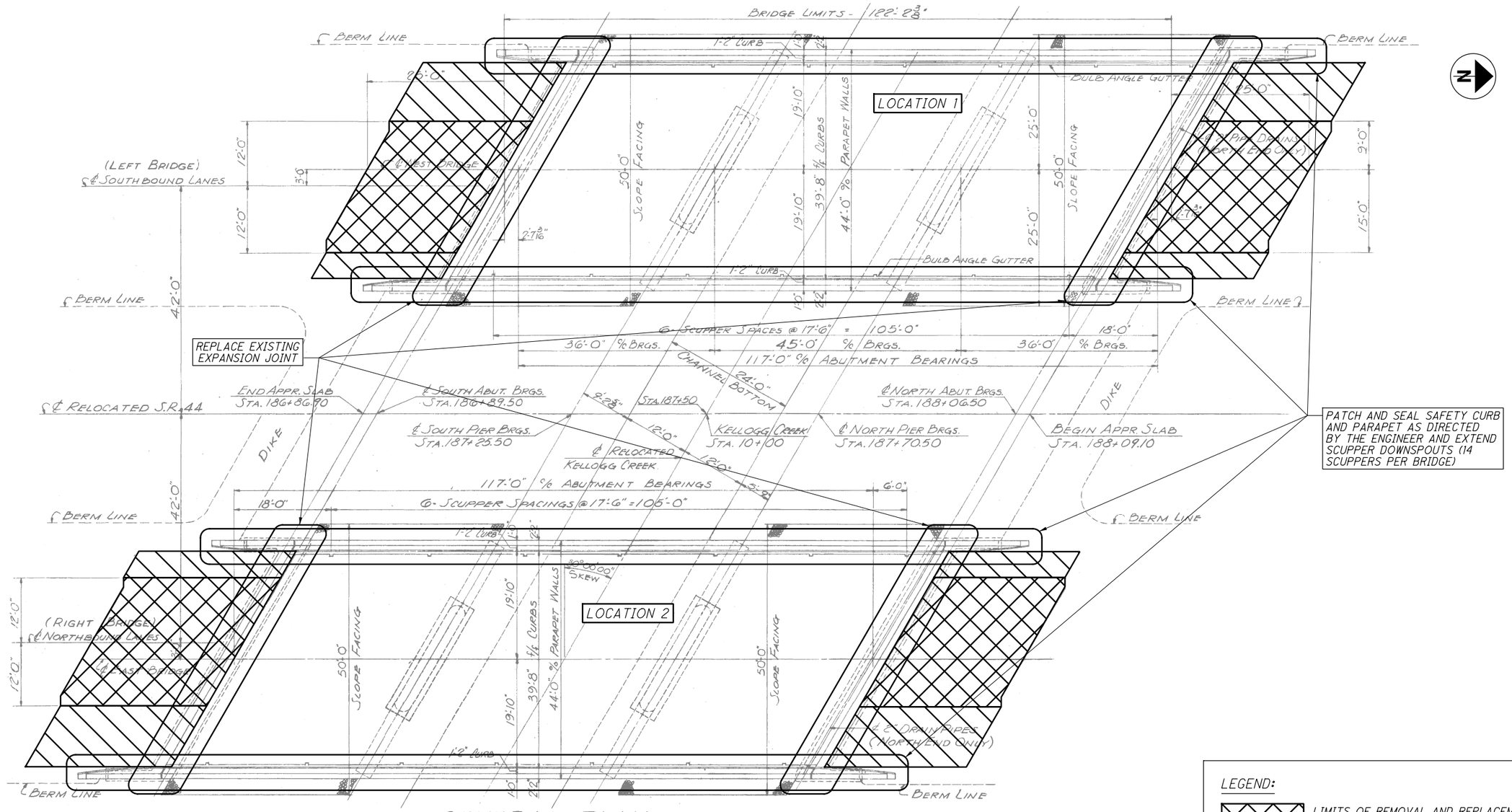
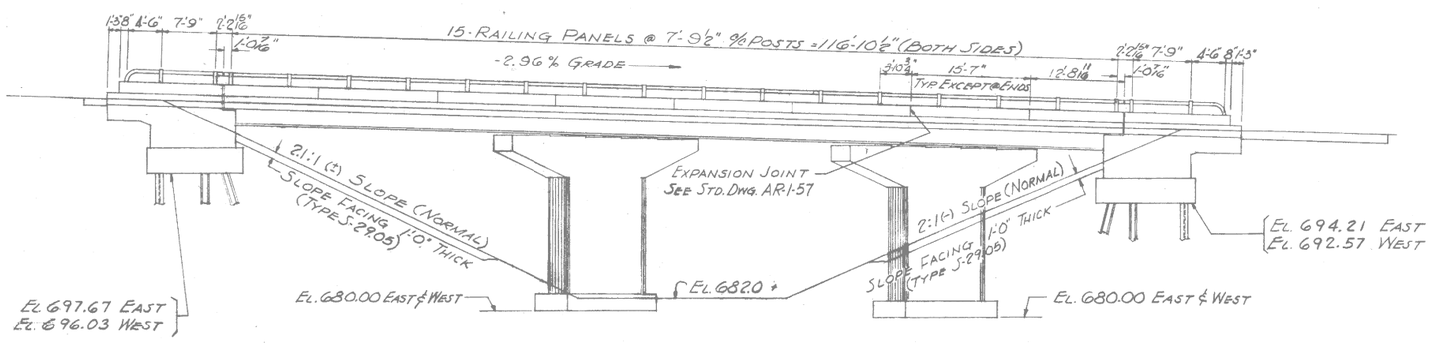


GENERAL PLAN



GENERAL ELEVATION

LEGEND:

- LIMITS OF REMOVAL AND REPLACEMENT OF EXISTING APPROACH SLAB
- LIMITS OF REMOVAL OF EXISTING PAVEMENT AND REPLACEMENT WITH APPROACH SLAB

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES, SEE SHEET 5/10.
4. SAFETY CURB AND PARAPET QUANTITIES HAVE BEEN INCREASED BY A FACTOR OF 1.5 FROM 2015 FIELD MEASUREMENTS.
5. FOR SCUPPER DOWNSPOUT EXTENSION DETAILS, SEE SHEET 34/65.

DESIGN AGENCY
AKRON CLEVELAND
564 WHITE POND DRIVE
AKRON, OHIO 44320-1100
(330) 836-9111
AECOM

DESIGNED	DRAWN	REVIEWED	DATE
KGR	KGR	TMB	1/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEB		4302559 (L)/4302583 (R)	

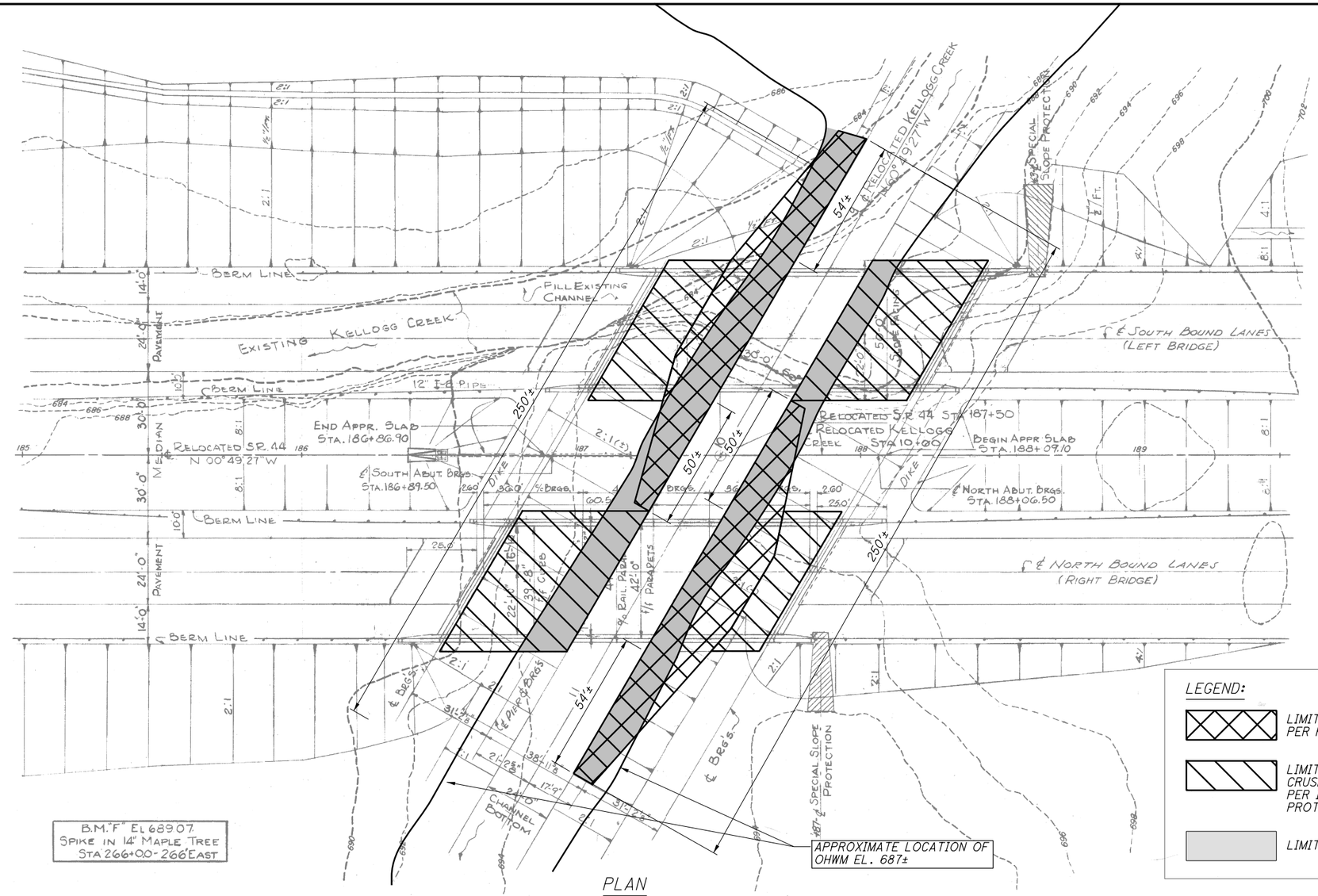
GENERAL PLAN AND ELEVATION - LOCATIONS 1 & 2

BRIDGE NO. LAK-44-0327 L & R
SR 44 SB & NB OVER KELLOGG CREEK

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

1 / 10

36 / 65



ENVIRONMENTAL COMMITMENTS:

ESTIMATED FILL BELOW OHWM AT SOUTH BANK:
160'± LONG x 20'± AVG. WIDTH = 3200 SF = 0.07 ACRES

ESTIMATED FILL BELOW OHWM AT NORTH BANK:
170'± LONG x 25'± AVG. WIDTH = 4250 SF = 0.10 ACRES

LEGEND:

- *LIMITS OF DUMPED ROCK FILL, TYPE A, AS PER PLAN FOR CHANNEL RESTORATION*
- *LIMITS OF RESTORATION OF EXISTING CRUSHED AGGREGATE SLOPE PROTECTION PER ITEM 601 CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN*
- *LIMITS OF WORK BELOW OHWM, 0.17 ACRES*

NOTES:

1. *DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.*
2. *PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.*
3. *FOR ESTIMATED QUANTITIES, SEE SHEET 4/10.*
4. *THE PROJECT IS LOCATED WITHIN FEMA FLOODPLAIN PANEL NUMBER 39085C0117F WHICH IS FLOODZONE AE FOR KELLOGG CREEK.*

DESIGN AGENCY
AKRON CLEVELAND
564 WHITE POND DRIVE
AKRON, OHIO 44320-1100
(330) 836-9111
AECOM

DESIGNED	DRAWN	REVIEWED	DATE
KGR	KGR	TMB	1/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEB		4302559 (L)/4302583 (R)	

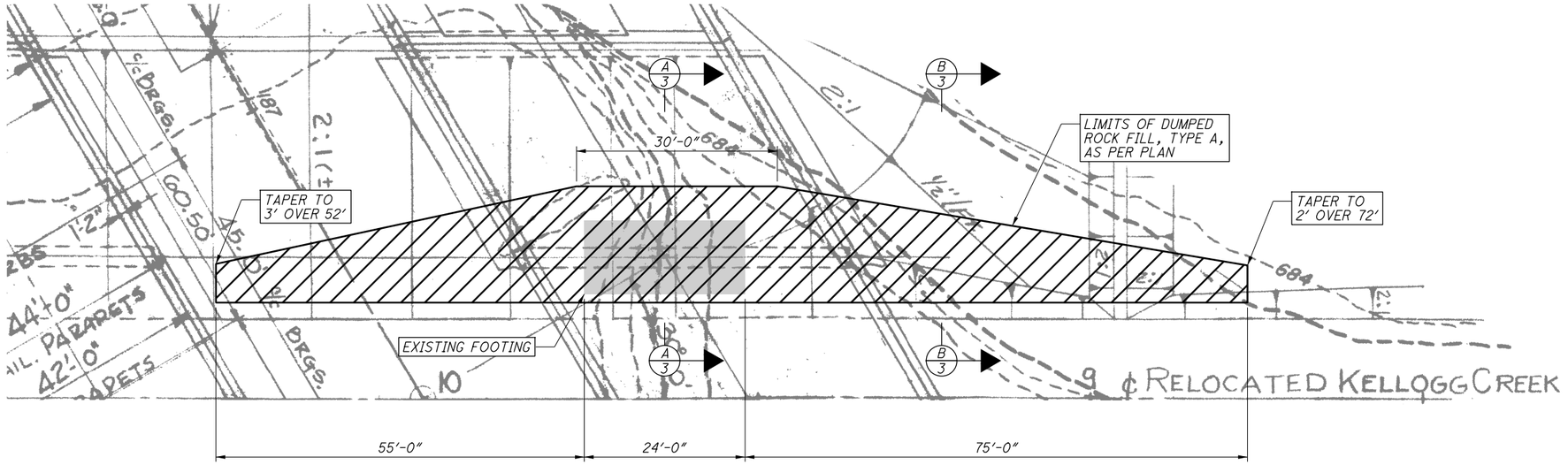
GENERAL PLAN - LOCATIONS 1 & 2

BRIDGE NO. LAK-44-0327 L & R
SR 44 SB & NB OVER KELLOGG CREEK

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

2 / 10

37
65



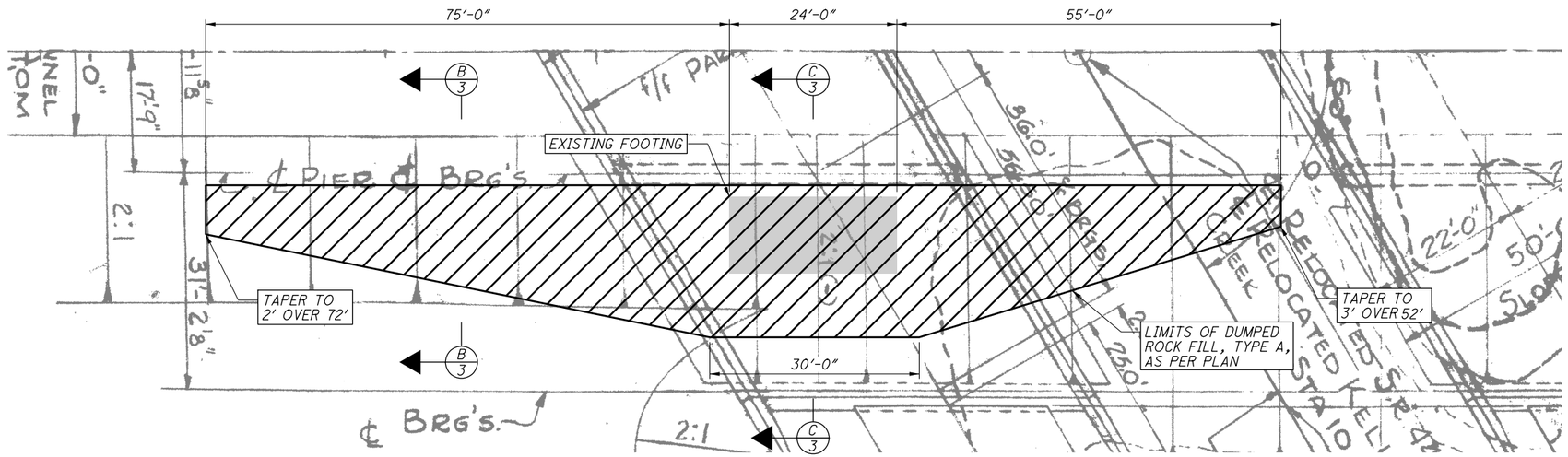
PLAN - PIER 1 SOUTHBOUND LANES

LOCATION 1

LEGEND:

EXISTING FOOTING LOCATION

LIMITS OF DUMPED ROCK FILL, TYPE A, AS PER PLAN



PLAN - PIER 2 NORTHBOUND LANES

LOCATION 2

NOTES:

1. FOR SECTIONS, SEE SCOUR REPAIR DETAILS ON SHEET 4/10.
2. FOR QUANTITIES, SEE SHEET 4/10.

DESIGN AGENCY
AKRON CLEVELAND
AECOM
564 WHITE POND DRIVE
AKRON, OHIO 44320-1100
(330) 836-9111

DESIGNED	DRAWN	REVIEWED	DATE
KGR	KGR	TMB	1/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEB		4302559 (L)/4302583 (R)	

SCOUR REPAIR PLAN - LOCATIONS 1 & 2

BRIDGE NO. LAK-44-0327 L & R
SR 44 SB & NB OVER KELLOGG CREEK

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

3 / 10

38
65

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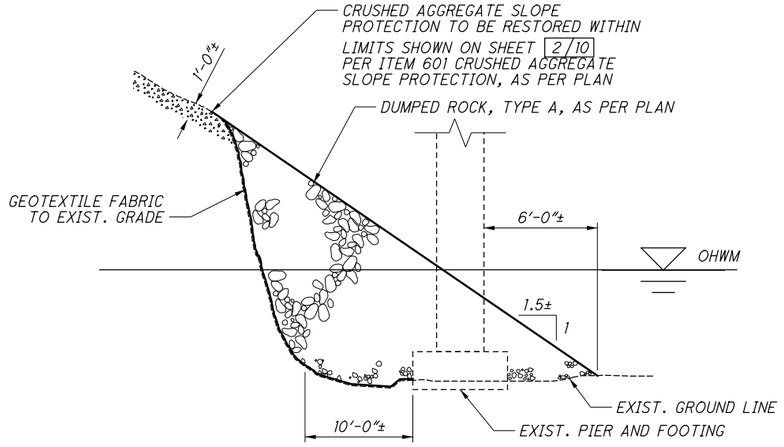
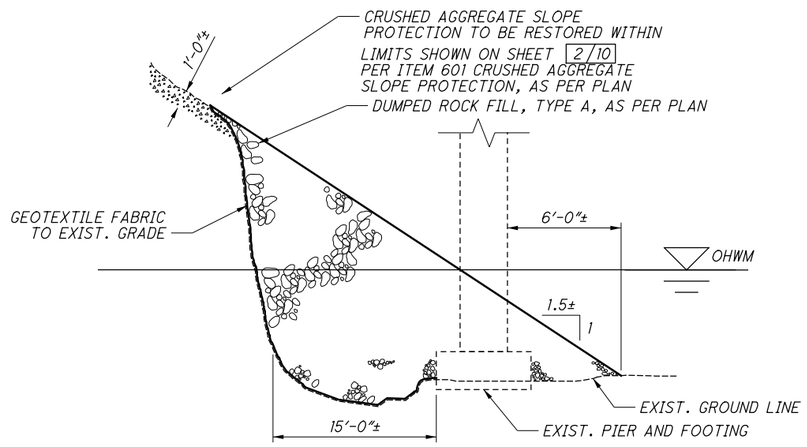
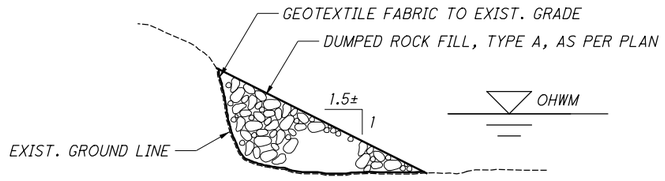


A/3 SCOUR REPAIR
PIER 1, SOUTHBOUND BRIDGE (LOCATION 1)



C/3 SCOUR REPAIR
PIER 2, NORTHBOUND BRIDGE (LOCATION 2)



B/3 SCOUR REPAIR
SOUTHBOUND & NORTHBOUND BRIDGES (LOCATIONS 1 & 2)

ESTIMATED QUANTITIES FOR BANK RESTORATION

ITEM	EXT.	LOCATION 1 TOTAL	LOCATION 2 TOTAL	TOTAL QUANTITY	UNIT	DESCRIPTION
204	50000	440	480	920	SY	GEOTEXTILE FABRIC
601	20011	430	420	850	SY	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN
601	25001	950	1425	2375	CY	DUMPED ROCK FILL, TYPE A, AS PER PLAN

NOTES:

1. PRIOR TO INSTALLATION OF DUMPED ROCK, SUBMIT AN INSTALLATION PLAN IN ACCORDANCE WITH CMS SECTION 501 TO THE ENGINEER FOR APPROVAL. INCLUDE COST OF INSTALLATION PLAN WITH ITEM 601 - DUMPED ROCK FILL, TYPE A, AS PER PLAN.
2. INSTALL ALL DUMPED ROCK FILL, TYPE A, AS PER PLAN AND ROCK CHANNEL PROTECTION, AS PER PLAN AS DIRECTED BY AND TO THE SATISFACTION OF THE ENGINEER.

DESIGN AGENCY
AKRON CLEVELAND
AECOM
564 WHITE POND DRIVE
AKRON, OHIO 44320-1100
(330) 836-9111

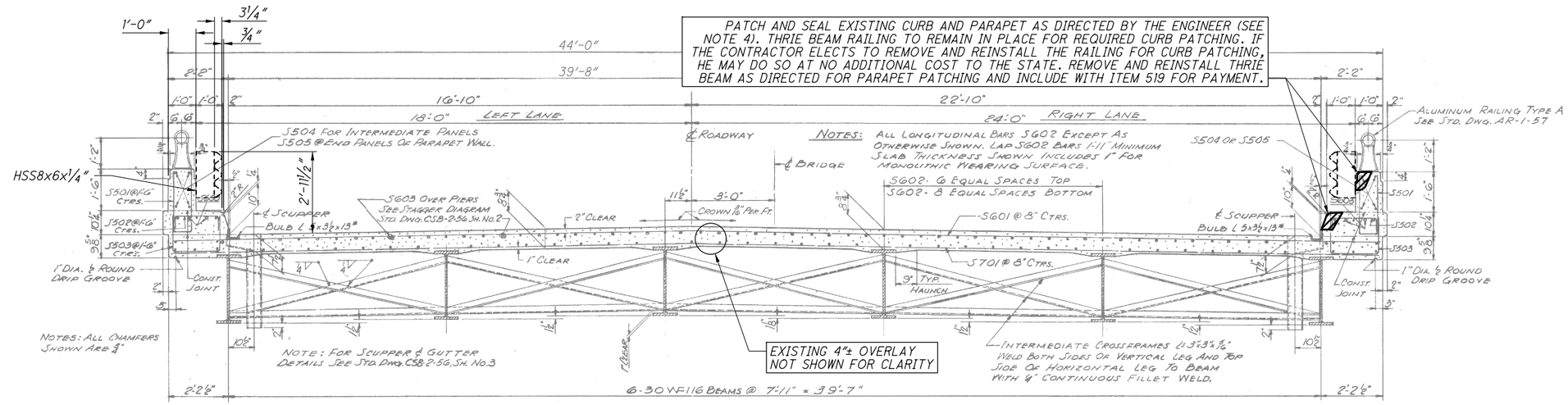
DESIGNED	DRAWN	REVIEWED	DATE
KGR	KGR	TMB	1/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEB		4302559 (L)/4302583 (R)	

SCOUR REPAIR DETAILS - LOCATIONS 1 & 2
BRIDGE NO. LAK-44-0327 L & R
SR 44 SB & NB OVER KELLOGG CREEK

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

4/10

39/65



TRANSVERSE SECTION

ESTIMATED QUANTITIES

	ITEM	EXT.	LOCATION 1 TOTAL	LOCATION 2 TOTAL	TOTAL QUANTITY	UNIT	DESCRIPTION	REF. SHEET
	202	22900	134	134	268	SY	APPROACH SLAB REMOVED	
	202	23011	88	88	176	SY	PAVEMENT REMOVED, ASPHALT, AS PER PLAN	5 & 36
	204	50000	440	480	920	SY	GEOTEXTILE FABRIC	
	304	20000	26	26	52	CY	AGGREGATE BASE	
	509	20001	2,600	2,600	5,200	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	5 & 43
	512	10051	56	63	119	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN	5
	513	21501	2,400	2,400	4,800	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN	5 & 43
	513	95030	2	1	3	EACH	STRUCTURAL STEEL, MISC.: BEAM END SPLICE A	5 & 42
	514	00050	1,300	1,300	2,600	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
	514	00056	1,300	1,300	2,600	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
	514	00060	1,300	1,300	2,600	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
	514	00066	1,300	1,300	2,600	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
	514	00504	14	14	28	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
	514	10000	2	2	4	EACH	FINAL INSPECTION REPAIR	
	516	11211	97	97	194	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	6, 34, & 35
	516	46501	12	12	24	EACH	BEARING, PTFE (TEFLON), AS PER PLAN	7 & 44
	516	47001	LS	LS	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	6 & 7
	518	12701	14	14	28	EACH	SCUPPER, VERTICAL EXTENSION, AS PER PLAN	7 & 34
	519	11101	25	55	80	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	7
	519	11720	150	150	300	FT	SPECIAL - PATCHING CONCRETE STRUCTURE, MISC.: SIDEWALK AND SAFETY CURB REPAIR	8
*	519	12510	5	5	10	SY	SPECIAL - PATCHING CONCRETE BRIDGE DECK	7
	526	30001	221	221	442	SY	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN	45
	601	20001	430	420	850	SY	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN	7, 37-39
	601	25001	950	1,425	2,375	CY	DUMPED ROCK FILL, TYPE A, AS PER PLAN	7, 37-39

LEGEND:

* ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECK IS INCLUDED AS A CONTINGENCY ITEM TO BE USED AS DIRECTED BY THE ENGINEER.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. SAFETY CURB AND PARAPET QUANTITIES HAVE BEEN INCREASED BY A FACTOR OF 1.5 FROM 2015 FIELD MEASUREMENTS.
4. EPOXY-URETHANE SEALER SHALL EXTEND 1'-0" BEYOND THE PERIMETER OF THE CURB AND PARAPET PATCHING LIMITS.

DESIGN AGENCY
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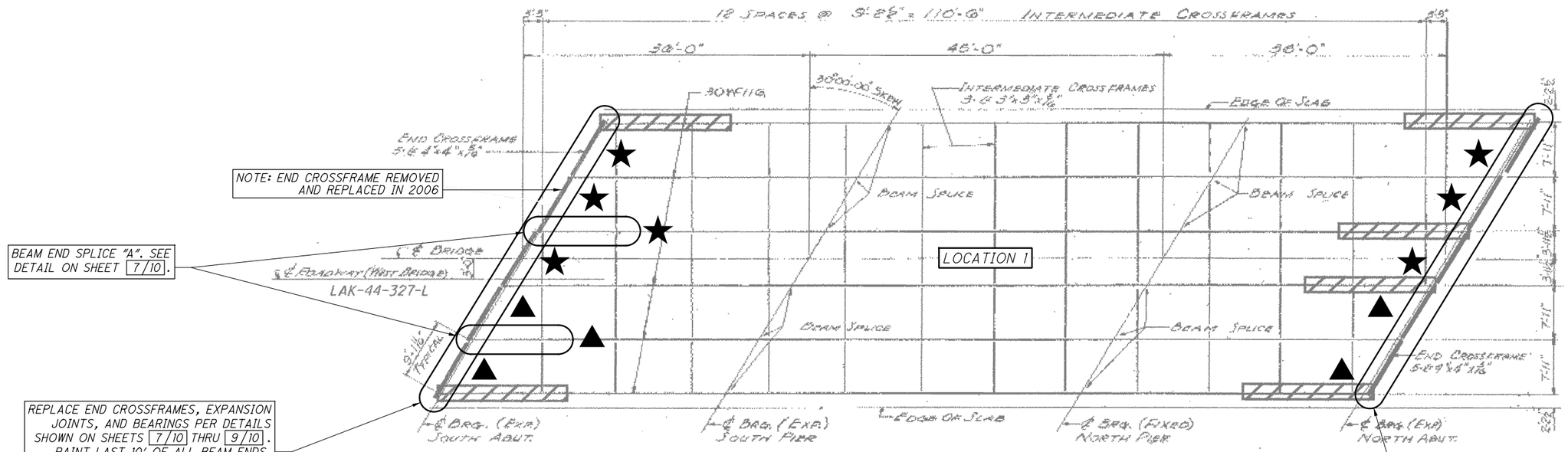
CHECKED DEB | REVISED | STRUCTURE FILE NUMBER 4302559 (L)/4302583 (R)

SUPERSTRUCTURE DETAILS - LOCATIONS 1 & 2
BRIDGE NO. LAK-44-0327 L & R
SR 44 SB & NB OVER KELLOGG CREEK

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

5 / 10

40 / 65



LEGEND:

- REPAIRED BEAM ENDS FROM 2006 REPAIRS
- ▲ DENOTES REPAIRS TO BE COMPLETED IN PHASE I
- ★ DENOTES REPAIRS TO BE COMPLETED IN PHASE II

- THE ESTIMATED WEIGHT OF END CROSSFRAMES TO BE REPLACED IS 2,400 LBS PER BRIDGE.
- THE ESTIMATED AREA TO BE PAINTED IS 1,300 SF PER BRIDGE.
- THREE BEAM ENDS ARE TO BE SPLICED PER SPLICE "A".

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES, SEE SHEET 5/10.

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FRAMING PLAN - LOCATIONS 1 & 2

BRIDGE NO. LAK-44-0327 L & R
SR 44 SB & NB OVER KELLOGG CREEK

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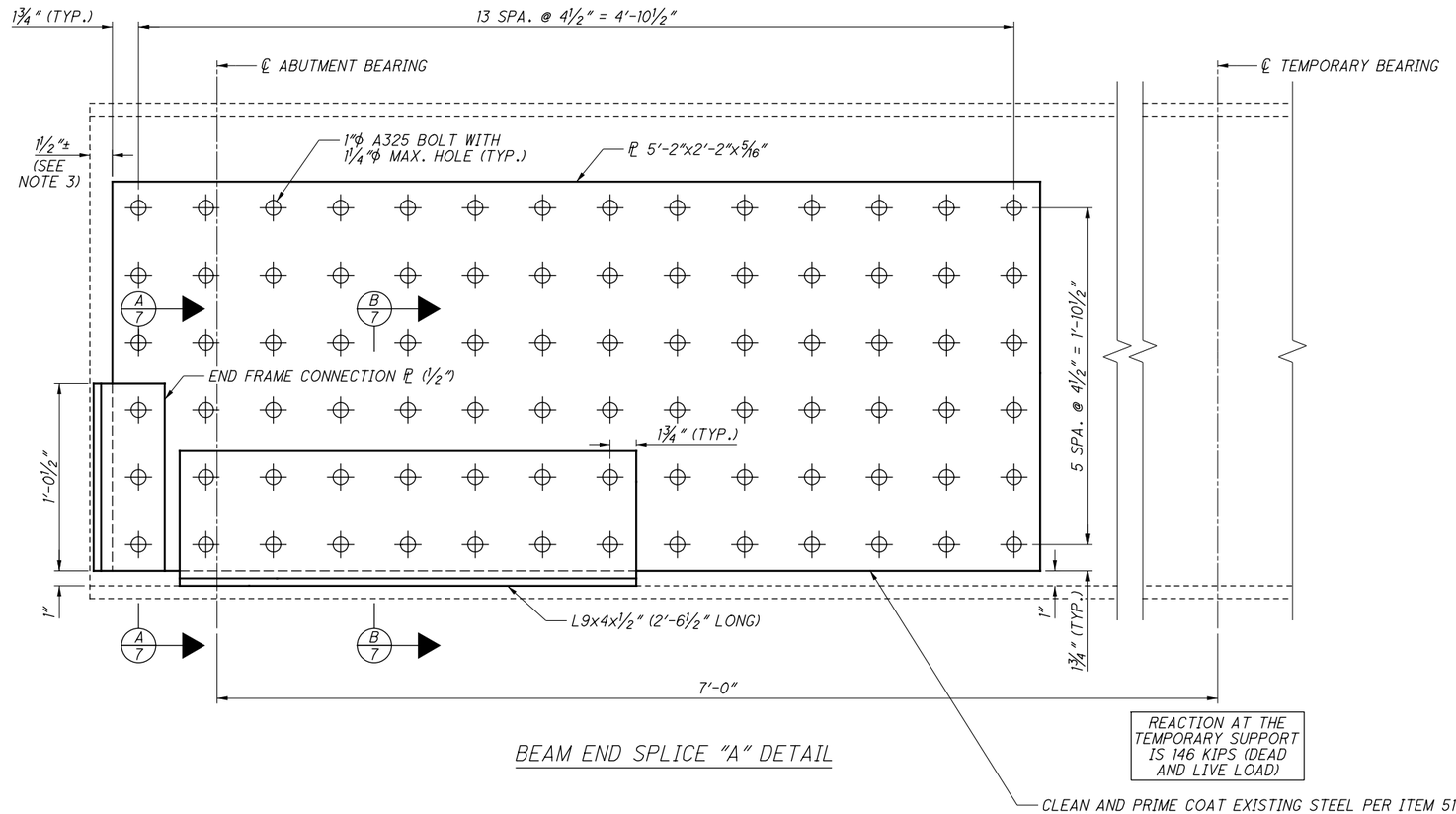


BEAM END SPLICE "A" DETAIL

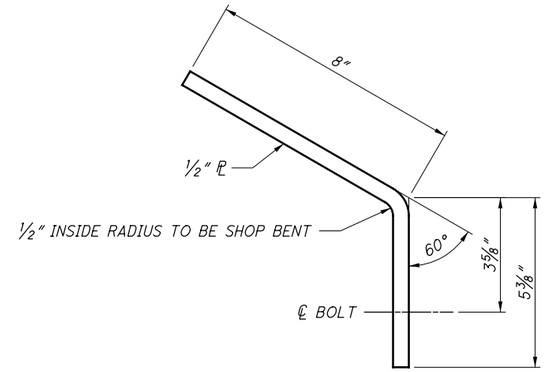


PLATE "A" DETAIL

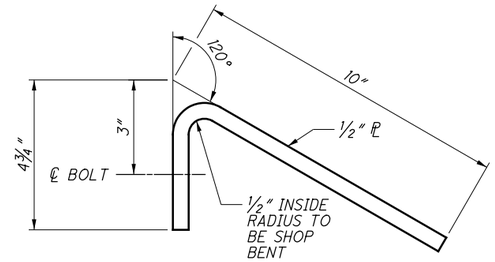
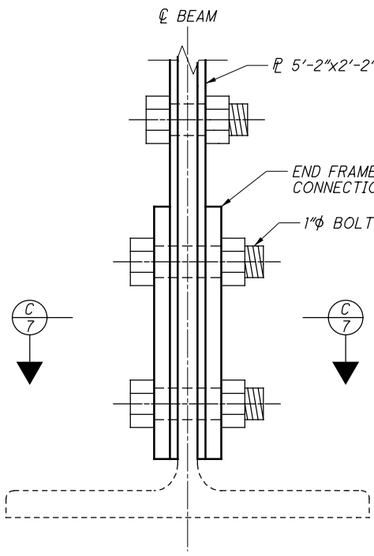
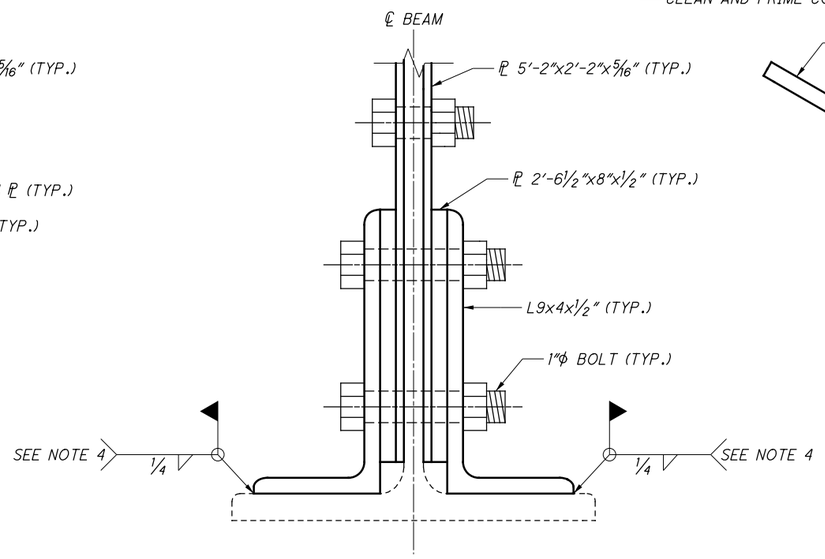


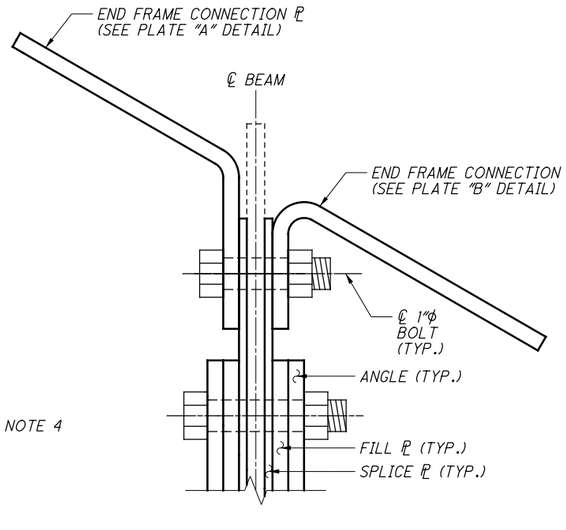
PLATE "B" DETAIL



A 7 SECTION
BEAM END SPLICE DETAIL



B 7 SECTION
BEAM END SPLICE DETAIL



C 7 SECTION
BEAM END SPLICE DETAIL

NOTES:

1. THE END FRAME CONNECTION PLATE SHALL NOT BE PLACED ON THE OUTSIDE FACE OF THE FASCIA BEAMS.
2. THE END FRAME CONNECTION PLATE SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 513 - STRUCTURAL STEEL, MISC.: BEAM END SPLICE (A & B).
3. THE CONTRACTOR SHALL DETERMINE THE EXACT DIMENSION BASED ON THE END FRAME CONNECTION PLATE PROPERLY ALIGNING WITH THE PROPOSED END FRAMES (SEE SHEET 5/65).
4. DO NOT WELD ON BACK SIDE OF ANGLE OR WITHIN ½" OF THE CORNERS.
5. BEAM SPLICE SHOWN ON THIS SHEET IS BEAM SPLICE A FOR PAYMENT.
6. PRIOR TO DRILLING ANY WEB SPLICE LOCATIONS, JACK THE BEAM TO SUPPORT IT ON THE TEMPORARY BEARING LOCATION.

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BEAM WEB SPLICE "A" DETAILS - LOCATIONS 1 & 2

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SR 44 SB & NB OVER KELLOGG CREEK

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

7 / 10

42
65

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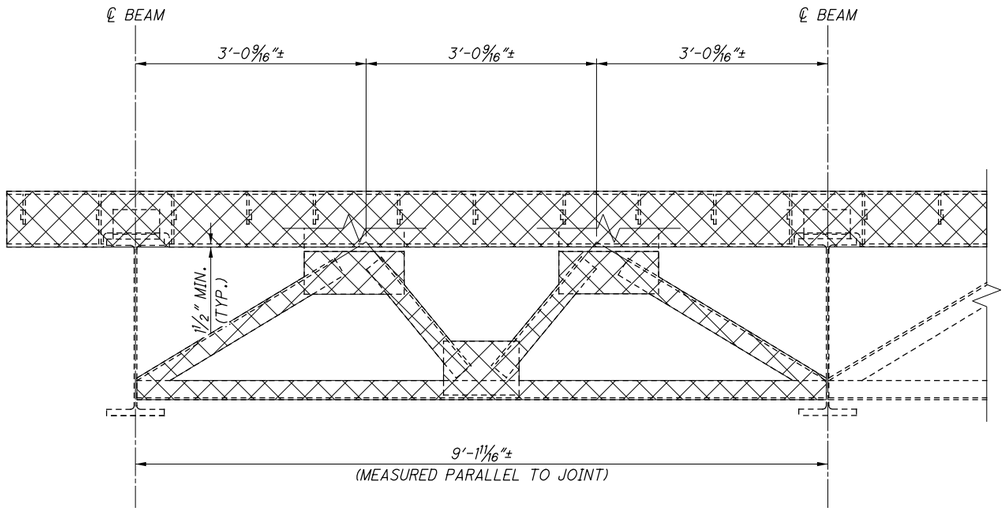
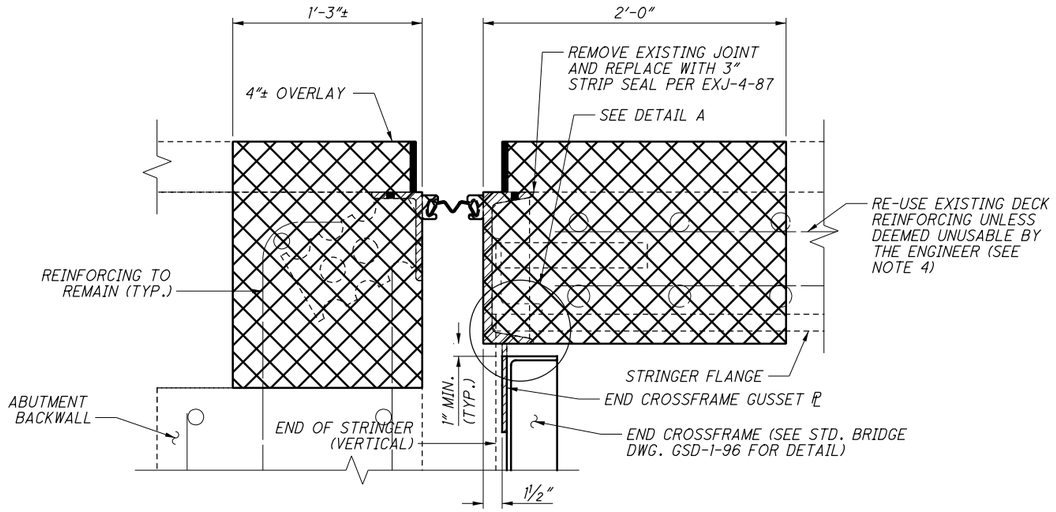
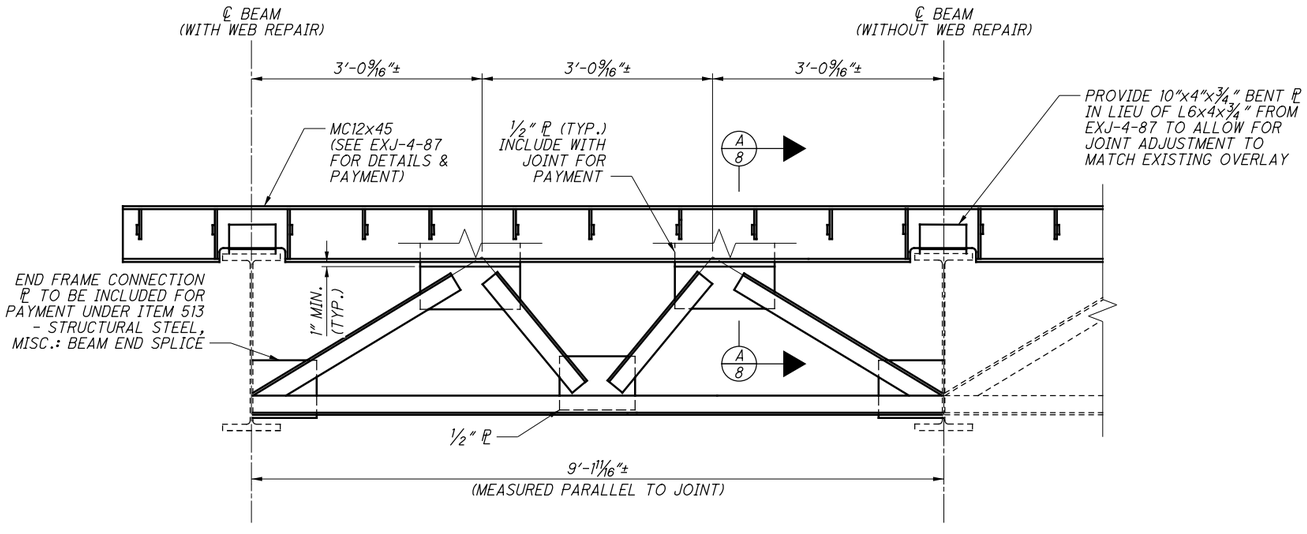


EXISTING END CROSSFRAME DETAIL

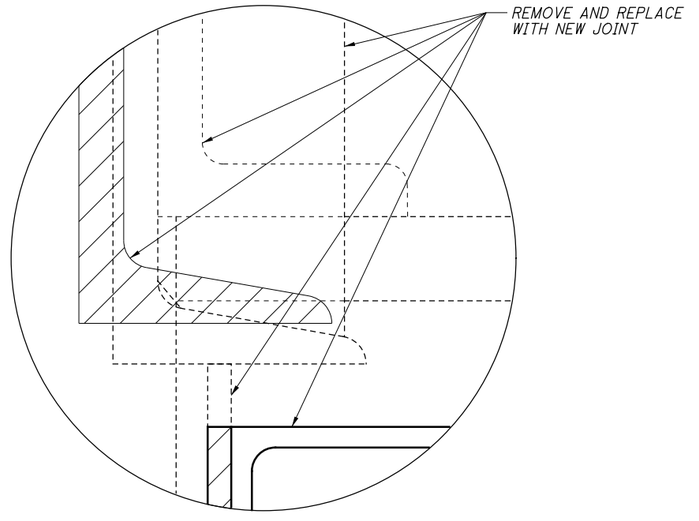


A/8 SECTION EXISTING JOINT



PROPOSED END CROSSFRAME DETAIL TYPE A

FOR ADDITIONAL DETAILS, SEE EXJ-4-87 AND SHEET 2/3 OF STANDARD DRAWING GSD-1-96



DETAIL A

NOTES:

1. ALL CROSSFRAME MEMBERS MAY BE REMOVED SIMULTANEOUSLY WITHIN THE WORK LIMITS.
2. FOR PROPOSED END OF JOINT DETAILS AT SAFETY CURB, SEE SHEETS 34/65 AND 35/65.
3. THRIE BEAM RAIL REMOVAL AND REPLACEMENT REQUIRED FOR JOINT INSTALLATION SHALL BE INCIDENTAL TO THE JOINT WORK AND INCLUDED FOR PAYMENT WITH ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.
4. AN ESTIMATED QUANTITY OF 2,600 LBS. OF REINFORCING STEEL HAS BEEN INCLUDED FOR BIDDING PURPOSES IN ITEM 509 - REINFORCING STEEL, REPLACEMENT OF REINFORCING STEEL, AS PER PLAN. ACTUAL REPLACEMENT QUANTITY SHALL BE THE WEIGHT OF REINFORCING STEEL DEEMED UNUSABLE BY THE ENGINEER FOLLOWING REMOVAL OF EXISTING CONCRETE AND REPLACED IN KIND.

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END CROSSFRAME AND JOINT DETAILS - LOCATIONS 1 & 2

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SR 44 SB & NB OVER KELLOGG CREEK

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MISCELLANEOUS
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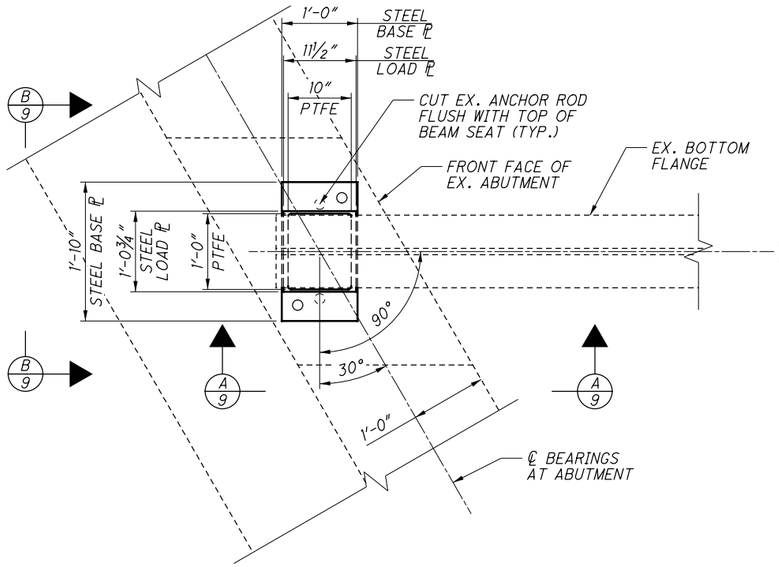
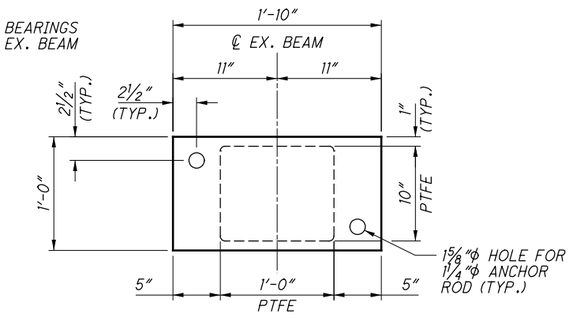
8 / 10

43 / 65

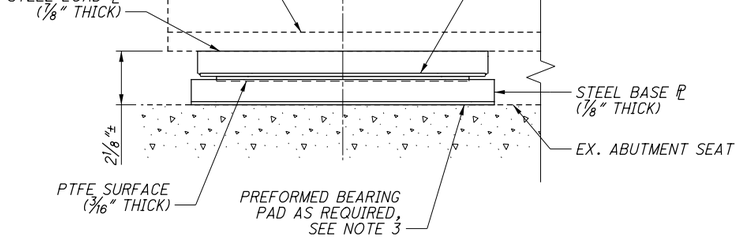


PLAN

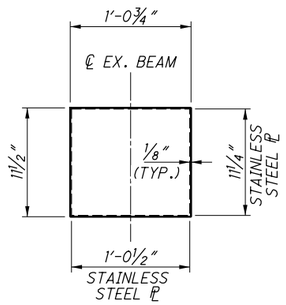


PLAN OF BASE ℄

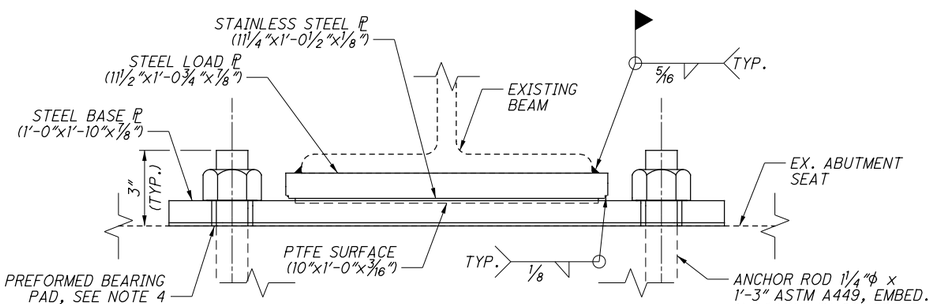
PREFORMED BEARING PAD SIMILAR (EXCEPT FOR PTFE)



A 9 PTFE EXPANSION BEARING DETAIL
LOOKING TRANSVERSELY



PLAN OF LOAD ℄



B 9 PTFE EXPANSION BEARING DETAIL
LOOKING LONGITUDINALLY

CONTRACTOR SHALL COORDINATE ANCHOR ROD INSTALLATION WITH END CROSSFRAME INSTALLATION TO AVOID INTERFERENCES

ITEM 516, BEARING, PTFE (TEFLON), AS PER PLAN:			
LOCATION	BRIDGE NO.	QUANTITY (EACH)	REF. SHEET NO.
1	LAK-44-0327 L	12	6 OF 10
2	LAK-44-0327 R	12	6 OF 10
TOTAL =		24	

NOTES:

1. FOR TEMPORARY SUPPORT LOCATION AND JACKING LOADS, SEE SHEET (42/65) .
2. WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE PTFE BONDED SURFACE DOES NOT EXCEED 200°F AS DETERMINED BY THE USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
3. ASTM A36 STEEL SHALL BE USED FOR ALL STEEL PLATES. ALL STEEL SHALL BE PAINTED. PAINT COLOR SHALL MATCH EXISTING BEAM COLOR, SUBJECT TO THE APPROVAL OF THE ENGINEER. PAINT IS TO BE INCLUDED WITH ITEM 516, BEARING, PTFE (TEFLON), AS PER PLAN FOR PAYMENT. ALL PTFE AND STAINLESS STEEL SURFACES SHALL NOT BE PAINTED.
4. PREFORMED BEARING PADS SHALL BE PER CMS 711.21. THE MINIMUM NUMBER OF BEARING PADS TO BE PROVIDED IS TWO ⅛" AND ONE ¼" PREFORMED BEARING PADS FOR EACH BEARING. A MINIMUM OF ONE PREFORMED BEARING PAD SHALL BE USED FOR EACH BEARING.
5. ANCHOR RODS SHALL BE GALVANIZED AS PER CMS 711.02.
6. FIELD DRILL ANCHOR RODS, INSTALL ANCHOR RODS, AND PLACE EPOXY GROUT AFTER THE PLACEMENT OF THE BEARING ASSEMBLY. THE GROUT SHALL BE NON-SHRINK, EPOXY GROUT MEETING THE REQUIREMENTS OF 705.20. ANCHOR RODS SHALL BE GALVANIZED AS PER CMS 711.02.
7. PTFE SURFACE:
   FINISHED UNFILLED DIMPLED LUBRICATED PTFE SHEETS SHALL BE MADE FROM 100 PERCENT VIRGIN PTFE RESIN AND SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

   TENSILE STRENGTH ASTM D4894 - 2800 PSI (MINIMUM)
   ELONGATION ASTM D4894 - 200 PERCENT (MINIMUM)
   SPECIFIC GRAVITY ASTM D792 - 2.13 (MINIMUM)
   MELTING POINT - ASTM D4894 - 623°F (±2°F)

   THE SHEET SHALL BE RECESSED AND EPOXY-BONDED INTO THE STEEL SUBSTRATE. THE SHOULDERS OF THE RECESS SHALL BE SHARP AND SQUARE AND THE DEPTH SHALL BE EQUAL TO ONE-HALF OF THE PTFE THICKNESS.

   PTFE SHEET SHALL BE COMMERCIALLY ETCHED ON ITS BONDING SIDE.

   THE BONDING SURFACE OF THE SUBSTRATE PLATE SHALL BE CLEANED OF RUST, SCALE, OIL, AND GREASE BY BLAST CLEANING AND THEN WIPED CLEAN WITH A CLEANING SOLVENT. BLAST CLEANING SHALL BE PERFORMED WITHIN A MAXIMUM OF FOUR HOURS TO BONDING.

   THE ADHESIVE MATERIAL, THE BONDING PROCEDURES TO BE USED, AND SURFACE PREPARATION SHALL CONFORM TO THE REQUIREMENTS OF FEDERAL SPECIFICATION MMM-A-134 AND THE MANUFACTURER'S RECOMMENDATIONS. THE ADHESION BETWEEN THE PTFE AND STEEL SUBSTRATE SHALL BE TESTED IN ACCORDANCE WITH ASTM D429, METHOD B. THE MINIMUM PEEL STRENGTH SHALL BE 25 POUNDS PER INCH.

   AFTER COMPLETION OF THE BONDING OPERATION, THE PTFE SURFACE SHALL BE FREE FROM BUBBLES.

   FOLLOWING INSTALLATION, ALL PTFE SURFACES SHALL BE PROTECTED DURING ANY ABRASIVE BLASTING OR PAINTING OPERATIONS.

8. STAINLESS STEEL PLATES:
   THE STAINLESS STEEL SHEET SURFACE SHALL CONFORM TO ASTM A167 OR A240 TYPE 304 AND SHALL HAVE A #8 MIRROR FINISH OR BETTER.

   THE STAINLESS STEEL SHALL BE ATTACHED TO THE LOAD PLATE BY A CONTINUOUS SEAL WELD AROUND ITS ENTIRE PERIMETER. WELDS SHALL BE PREQUALIFIED BY TEST WELDS PREPARED, WELDED, AND TESTED IN ACCORDANCE WITH 6.7 OF ANSI/AWS D1.3, STRUCTURAL WELDING CODE - SHEET STEEL. AFTER WELDING, THE STAINLESS STEEL SHEET SHALL BE FLAT, FREE FROM WRINKLES, AND IN CONTINUOUS CONTACT WITH ITS BACKING PLATE. NO ROUGHNESS FROM THE WELD PROTRUDING ABOVE THE SURFACE OF THE STAINLESS STEEL WILL BE PERMITTED.

   FOLLOWING INSTALLATION, ALL STAINLESS STEEL SURFACES SHALL BE PROTECTED DURING ANY ABRASIVE BLASTING OR PAINTING OPERATIONS.

9. LUBRICANT:
   LUBRICANTS SHALL BE SILICONE GREASE WHICH SATISFIES MILITARY SPECIFICATIONS MIL-S8660.
10. TESTING OF SLIDING SURFACES:
    A MATERIAL FRICTION TEST FOR THE SLIDING SURFACES SHALL BE PERFORMED PER DIVISION II, SECTION 18.7.4.2 OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
11. INSTALLATION OF SLIDING BEARINGS:
    A REPRESENTATIVE FROM THE BEARING MANUFACTURER SHALL BE PRESENT ON SITE FOR A SUFFICIENT PERIOD OF TIME TO ENSURE THAT THE CONTRACTOR IS INSTALLING THE BEARINGS PROPERLY.
12. PAYMENT:
    THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, STEEL PLATES, PREFORMED BEARING PADS, ANCHOR RODS, STAINLESS STEEL PLATES, PTFE SURFACES, LUBRICANT, AND INCIDENTALS NECESSARY TO REPLACE THE BEARINGS. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, BEARING, PTFE (TEFLON), AS PER PLAN.

DESIGN AGENCY
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BEARING REPLACEMENT DETAILS - LOCATIONS 1 & 2
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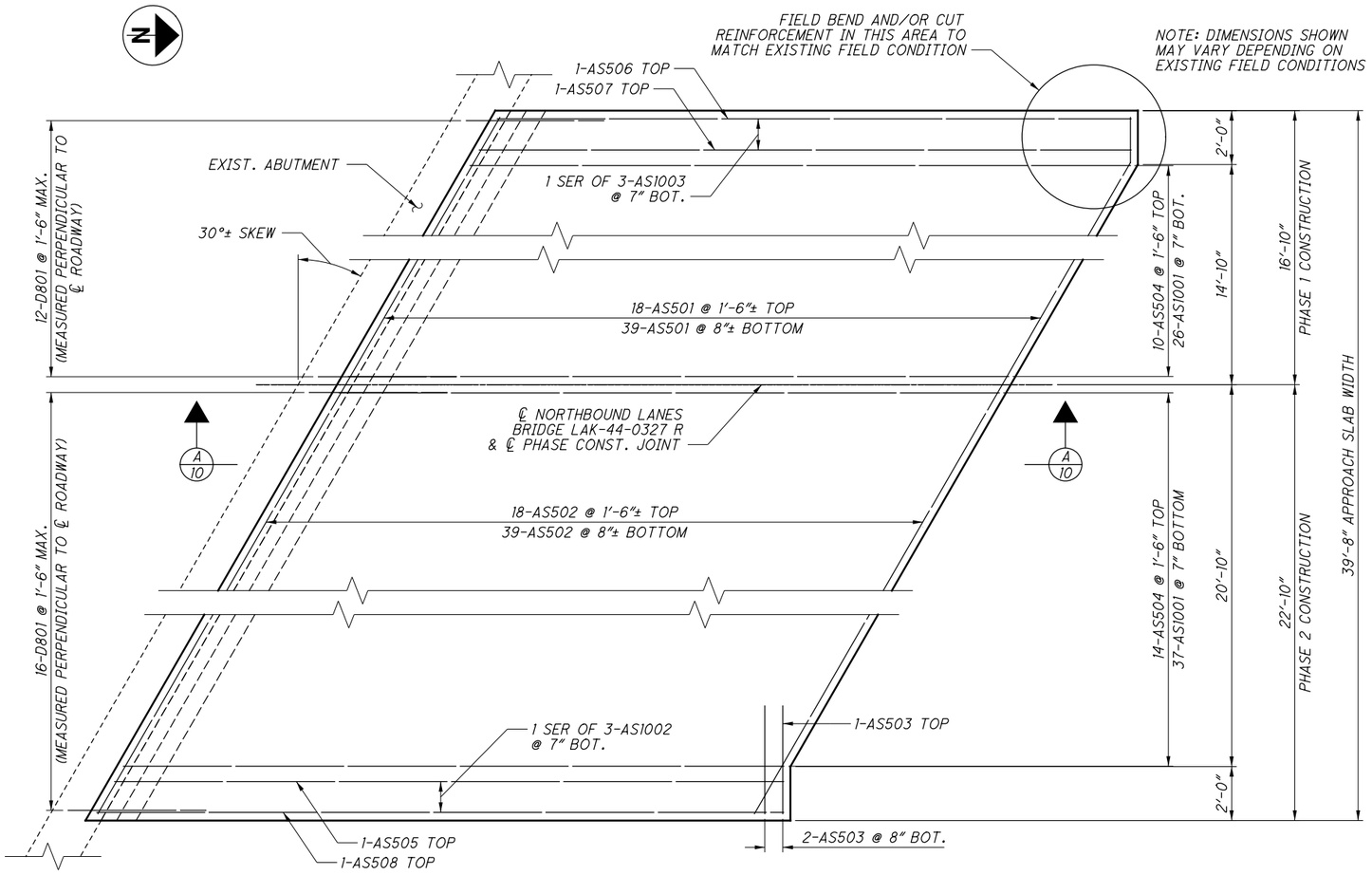
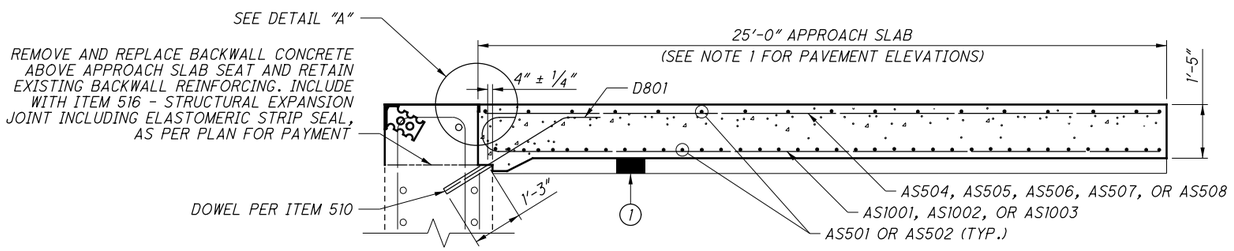
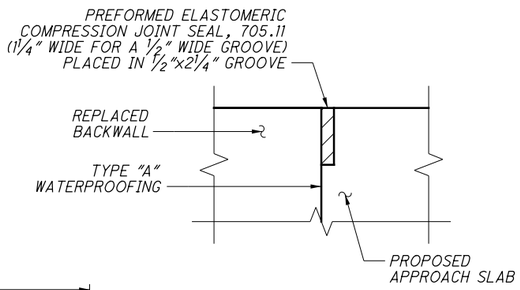


FORWARD ABUTMENT APPROACH SLAB

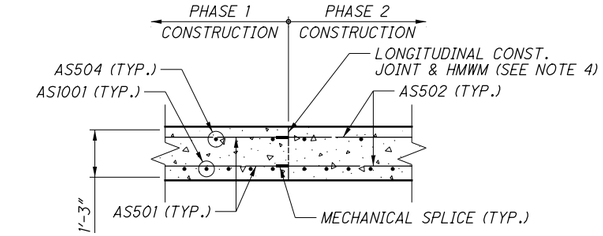
NORTHBOUND FORWARD ABUTMENT APPROACH SLAB SHOWN, OTHERS SIMILAR



A/10 APPROACH SLAB LONGITUDINAL SECTION

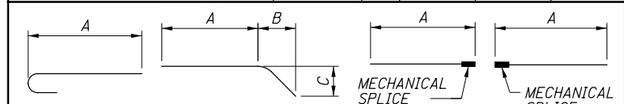


DETAIL "A"



LONGITUDINAL CONSTRUCTION JOINT DETAIL

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C
APPROACH SLAB REINFORCING PER SLAB (PAYMENT INCLUDED WITH ITEM 526)							
AS501*	57	19'-2"	1138*	34			
AS502*	57	26'-1"	1550*	35			
AS503	3	4'-0"	13	STR			
AS504	24	24'-6"	613	STR			
AS505	1	24'-8"	26	STR			
AS506	1	23'-6"	25	STR			
AS507	1	24'-4"	25	STR			
AS508	1	25'-6"	27	STR			
AS1001	63	25'-11"	7026	16	24'-6"		
AS1002	1 SER OF 3	26'-2" TO 26'-11"	342	16	24'-9" TO 25'-6"		
AS1003	1 SER OF 3	24'-11" TO 25'-7"	326	16	23'-6" TO 24'-2"		
D801	28	4'-2"	312	19	2'-11"	11 1/4"	11 1/4"
SUB-TOTAL			11423				



TYPE-16 TYPE-19 TYPE-34 TYPE-35

NOTES:
- - ALL REINFORCEMENT STEEL TO BE EPOXY COATED
- * - WEIGHT OF MECHANICAL CONNECTOR NOT INCLUDED

LEGEND:

(1) ITEM 304 - AGGREGATE, 3" WITHIN LIMITS OF EXISTING APPROACH SLAB AND 6" WITHIN LIMITS OF EXISTING PAVEMENT

NOTES:

1. PAVEMENT ELEVATIONS: PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL EXISTING PAVEMENT ELEVATIONS AT THE END OF APPROACH SLAB AND END OF DECK. PROPOSED TOP OF APPROACH SLAB ELEVATIONS SHALL MATCH THESE FIELD MEASUREMENTS AS DIRECTED BY THE ENGINEER. FIELD SURVEY SHALL BE PAID FOR UNDER ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN.
2. FOR ADDITIONAL APPROACH SLAB DETAILS AND REINFORCING, SEE STD. DWG. AS-1-15.
3. COST OF ALL REINFORCEMENT AND DOWELS SHALL BE INCLUDED IN THE PRICE BID FOR APPROACH SLABS.
4. THE LONGITUDINAL CONSTRUCTION JOINT SHALL BE SEALED WITH HIGH MOLECULAR WEIGHT METHACRYLATE (HMWM). THE WIDTH OF THE SEALING SHALL BE TWO FEET (2'-0") CENTERED OVER THE JOINT IN ACCORDANCE WITH CMS 511.22, AND PAID WITH ITEM 526.
5. REINFORCING TABLE IS GIVEN PER SLAB WITH FOUR SLABS TO BE CONSTRUCTED.

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APPROACH SLAB DETAILS - LOCATIONS 1 & 2

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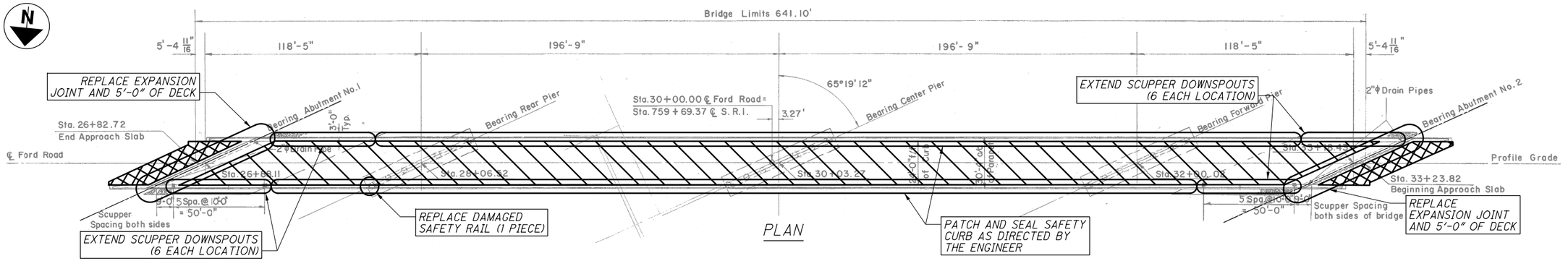

ESTIMATED QUANTITIES

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
202	22900	142	SY	APPROACH SLAB REMOVED	
202	98000	LS		REMOVAL MISC.: DELAMINATED CONCRETE INSPECTION AND REMOVAL	5 & 48
304	20000	12	CY	AGGREGATE BASE	
509	20001	5,200	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	5 & 49
512	10051	130	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN	5
512	10101	937	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	5
512	73500	1,710	SY	TREATING CONCRETE BRIDGE DECKS WITH GRAVITY FED RESIN	
512	74000	632	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
513	21501	5,500	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN	5 & 49
514	00050	1,200	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
514	00056	1,200	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
514	00060	1,200	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
514	00066	1,200	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
514	00504	15	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
514	10000	2	EACH	FINAL INSPECTION REPAIR	
516	11211	136	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	6, 34, 35, & 49
517	76302	1	EACH	RAILING, MISC.: REPLACE DAMAGED SAFETY RAIL	7, 46, & 49
518	12701	24	EACH	SCUPPER, VERTICAL EXTENSION, AS PER PLAN	7 & 34
519	11101	145	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	7
519	11720	380	FT	SPECIAL - PATCHING CONCRETE STRUCTURE, MISC.: SIDEWALK AND SAFETY CURB REPAIR	8
519	12510	20	SY	SPECIAL - PATCHING CONCRETE BRIDGE DECK	7
526	15001	142	SY	REINFORCED CONCRETE APPROACH SLABS (T=13"), AS PER PLAN	50
642	00090	0.26	MILE	EDGE LINE, 4"	
642	00290	0.13	MILE	CENTER LINE	

LEGEND:

REMOVE AND REPLACE EXISTING APPROACH SLABS

PATCH UNSOUND AREAS OF DECK AS DIRECTED BY THE ENGINEER AND TREAT DECK WITH GRAVITY-FED RESIN

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PORPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. DECK PATCHING QUANTITIES HAVE BEEN INCREASED BY A FACTOR OF 1.5 AND SAFETY CURB QUANTITIES BY 1.2 FROM FIELD MEASUREMENTS IN 2015.
4. FOR SCUPPER DOWNSPOUT EXTENSION DETAILS, SEE SHEET 34/65.
5. PERFORM ALL PAVEMENT MARKING CLEANING AND SURFACE PREPARATION PER CMS SECTION 646.04.C.

DESIGN AGENCY
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564 WHITE POND DRIVE
AKRON, OHIO 44320-1100
(330) 836-9111
AECOM

DESIGNED KGR | DRAWN KGR | REVIEWED TMB | DATE 1/17

CHECKED DEB | REVISED | STRUCTURE FILE NUMBER 4304861

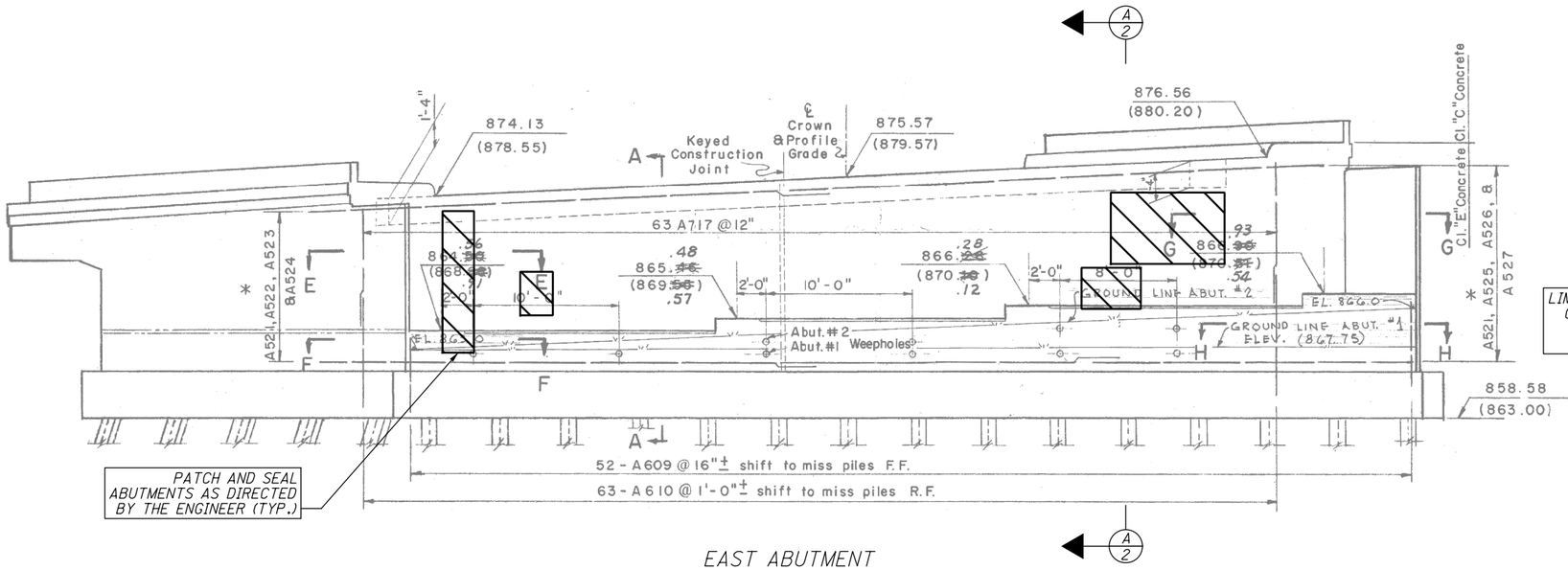
GENERAL PLAN - LOCATION 3

BRIDGE NO. LAK-90-2210
FORD ROAD OVER IR-90

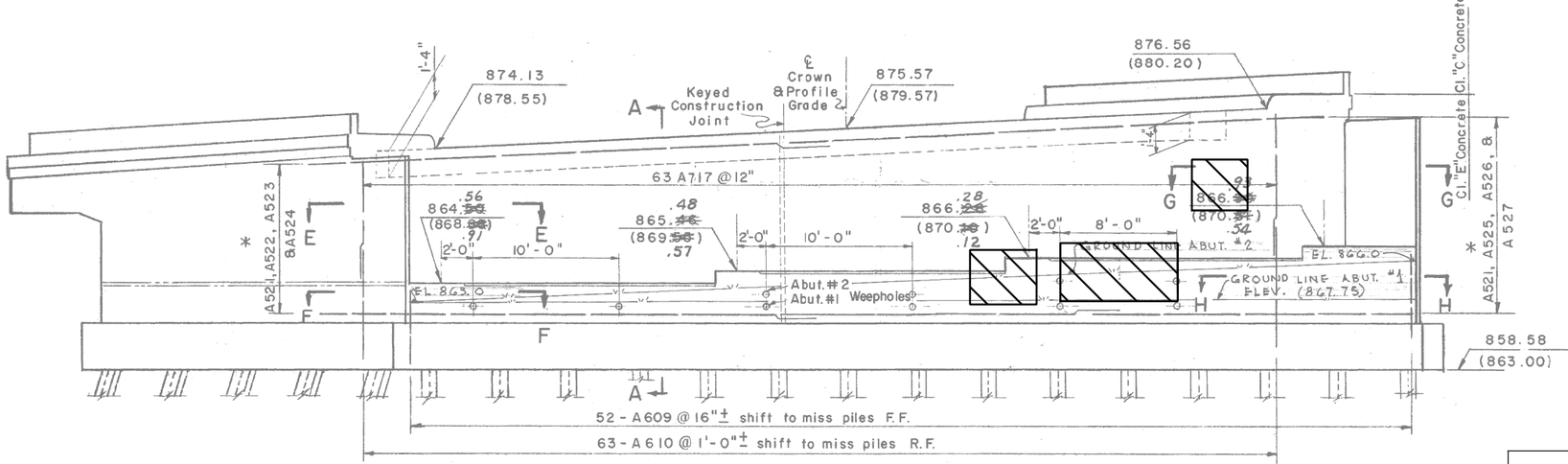
D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

1/5

46/65



EAST ABUTMENT

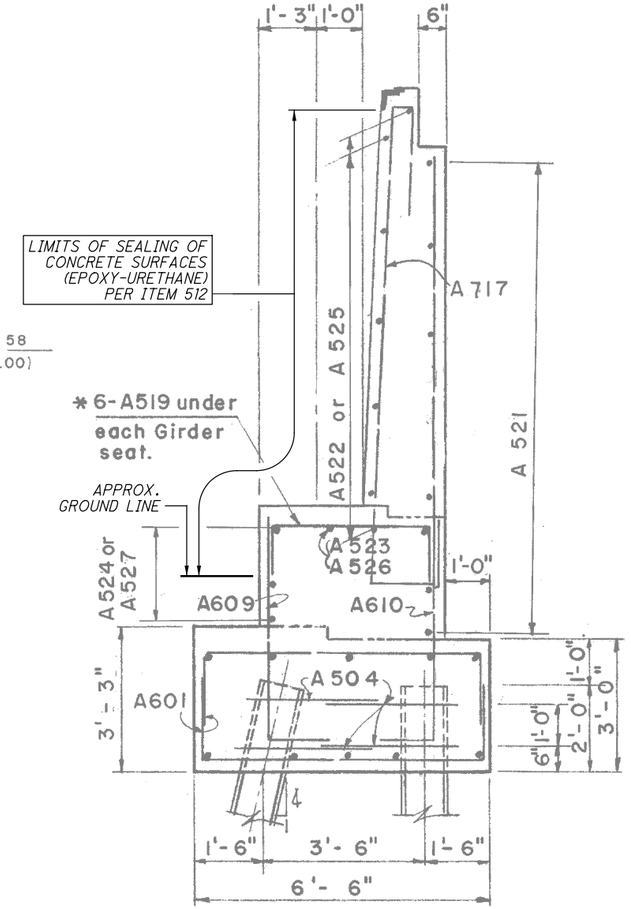


WEST ABUTMENT

EAST ABUTMENT ESTIMATED AREA TO BE PATCHED = 80 SF

WEST ABUTMENT AREA TO BE PATCHED = 65 SF

THE ESTIMATED AREA TO BE SEALED, THIS SHEET = 250 SY



A/2 ABUTMENT SECTION

LEGEND:

PATCH ABUTMENTS AS DIRECTED BY THE ENGINEER (LOCATIONS SHOWN ARE APPROXIMATE GRAPHICAL REPRESENTATIONS)

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES, SEE SHEET 1/5.
4. PATCHING QUANTITIES HAVE BEEN INCREASED BY A FACTOR OF 1.5 FROM 2015 FIELD MEASUREMENTS.
5. REMOVE ALL EXISTING COATINGS WITHIN LIMITS TO BE SEALED.

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STRUCTURE FILE NUMBER 4304861

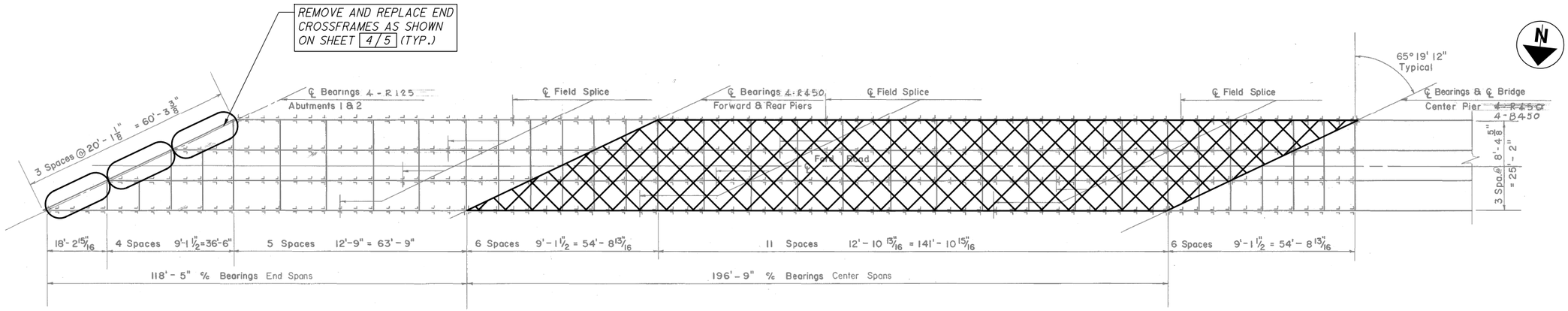
ABUTMENT DETAILS - LOCATION 3

BRIDGE NO. LAK-90-2210
FORD ROAD OVER IR-90

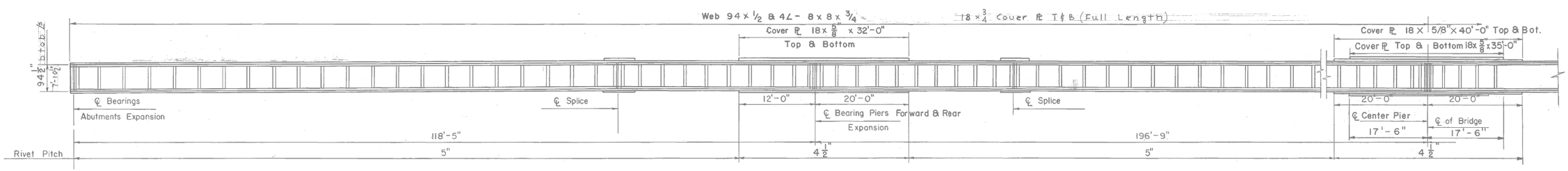
D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

2 / 5

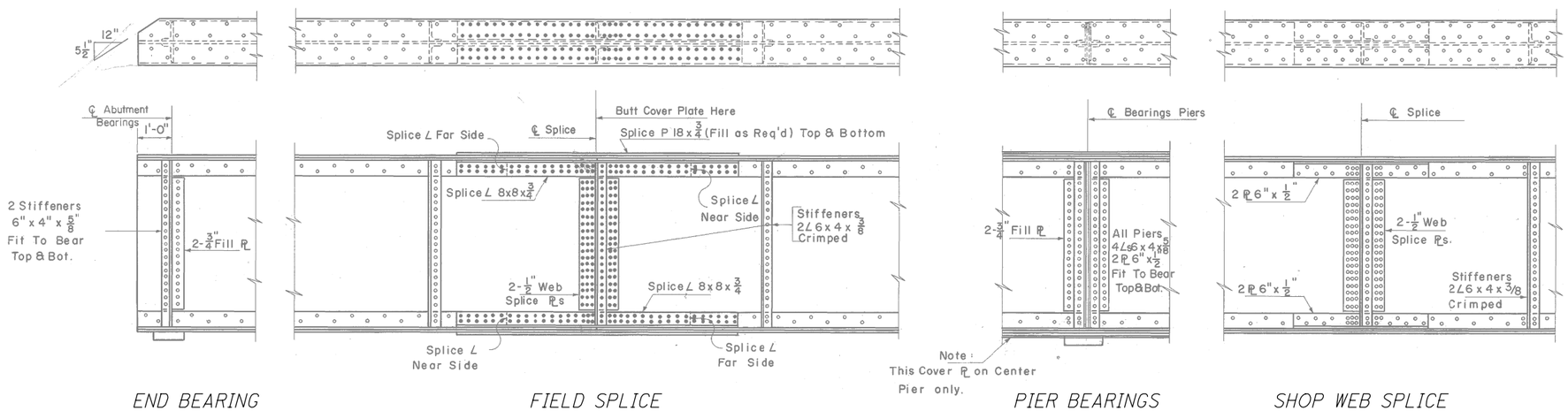
47
65



HALF PLAN - STEEL FRAMING



HALF ELEVATION OF INTERIOR & EXTERIOR GIRDERS



END BEARING | FIELD SPLICE | PIER BEARINGS | SHOP WELD SPLICE

LEGEND:

REMOVE SPALLS AND LOOSE CONCRETE FROM BOTTOM OF DECK OVER TRAVELED LANES AS DIRECTED BY THE ENGINEER

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES, SEE SHEET 1/5.

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KGR	KGR	TMB	1/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEB		4304861	

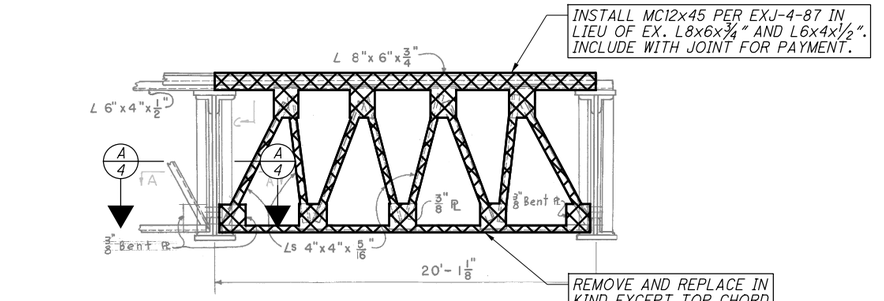
FRAMING PLAN - LOCATION 3

BRIDGE NO. LAK-90-2210
FORD ROAD OVER IR-90

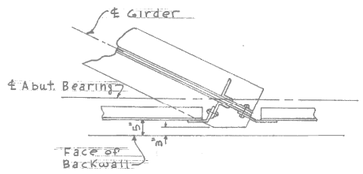
D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

3 / 5

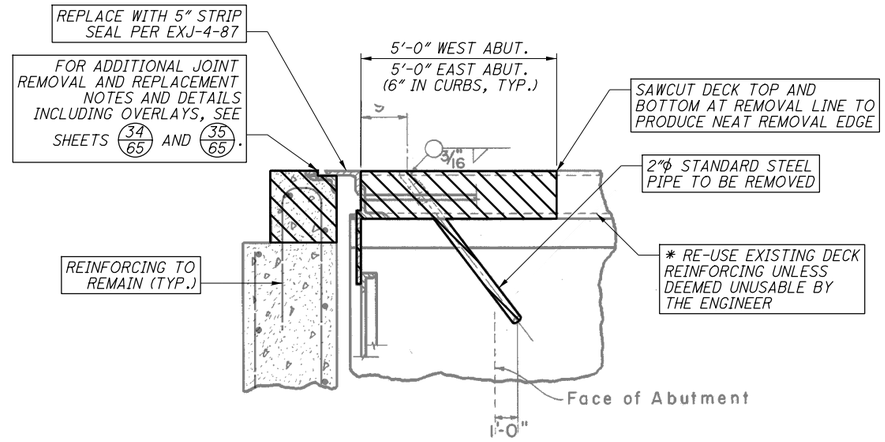
48
65



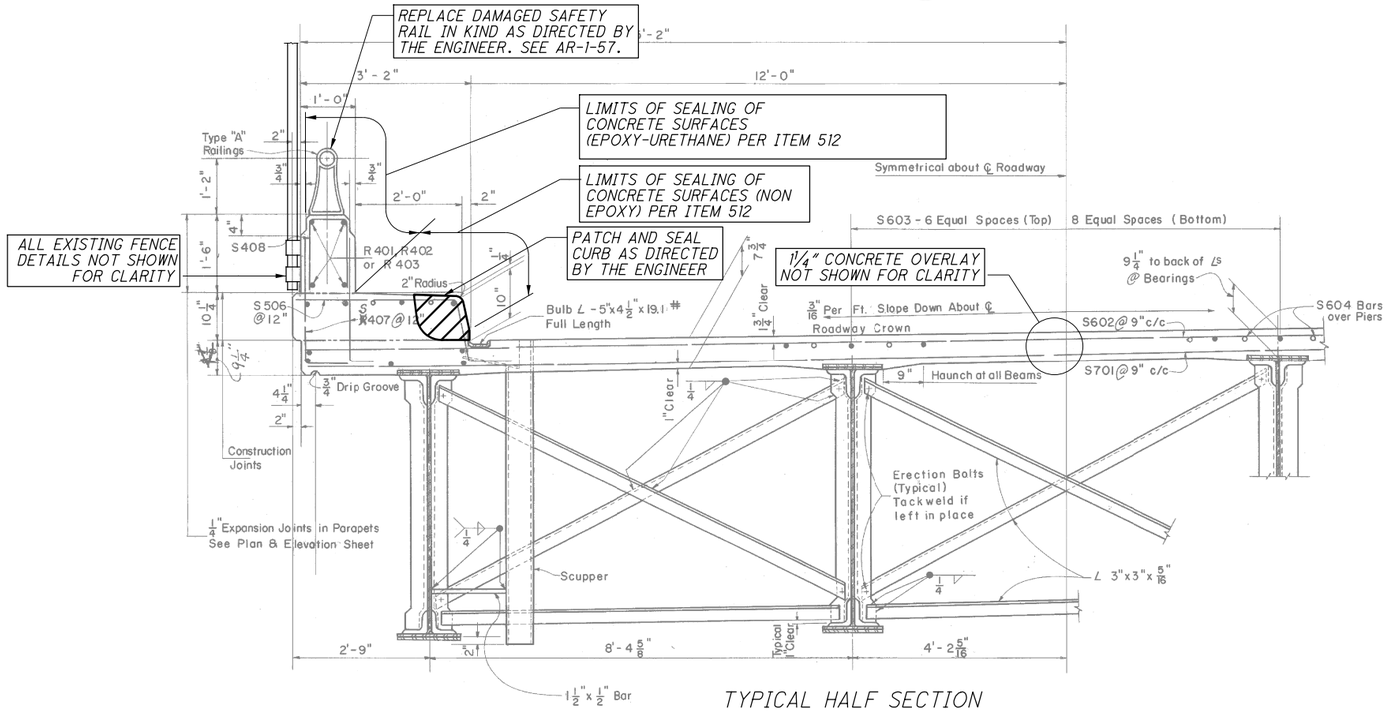
TYPICAL END CROSSFRAME



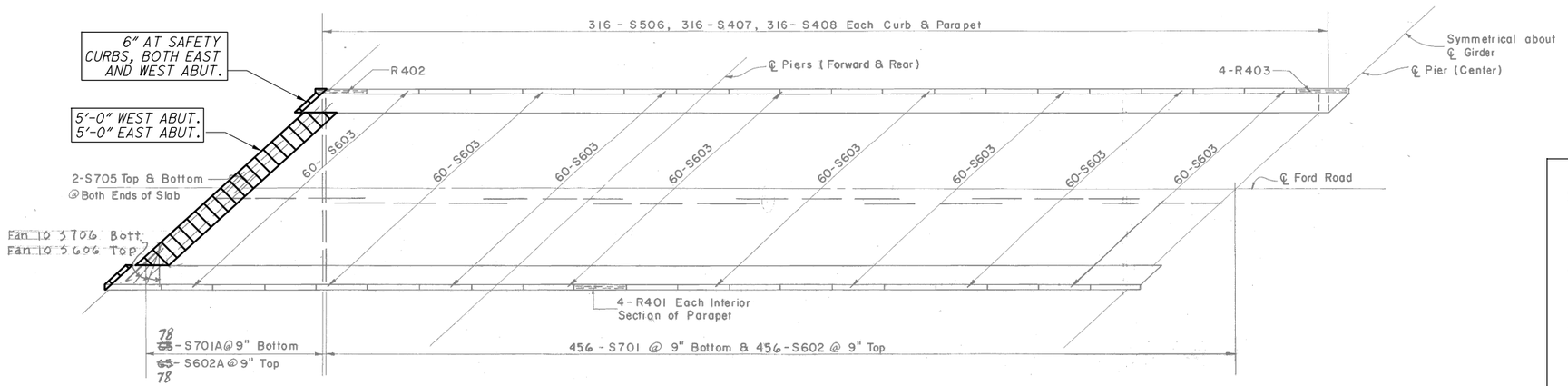
A/4 END CROSSFRAME CONNECTION



LIMITS OF JOINT REMOVAL



TYPICAL HALF SECTION



HALF DECK REINFORCEMENT PLAN

LEGEND:

- REMOVAL LIMITS OF EXISTING END CROSSFRAME
- REMOVAL LIMITS OF EXISTING JOINT, BACKWALL, AND DECK
- PATCH AND RESEAL CURB WITH EPOXY-URETHANE SEALER AS DIRECTED BY THE ENGINEER
- * REPLACE IN KIND WHERE REQUIRED. IF NECESSARY, BARS SHALL BE MECHANICALLY SPLICED AT NO ADDITIONAL COST OR LAP SPLICED PER CMS 509 REQUIREMENTS. FOR QUANTITY ESTIMATING PURPOSED, 5,200 POUNDS IS ESTIMATED TO BE REPLACED.

NOTES:

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2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES, SEE SHEET 1/5.
4. INCLUDE ALL COSTS FOR REMOVAL AND REPLACEMENT OF DECK AND BACKWALL ADJACENT TO JOINT AS SHOWN IN THE PLANS WITH ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.

DESIGN AGENCY
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CHECKED	REVISED	STRUCTURE FILE NUMBER
DEB		4304861

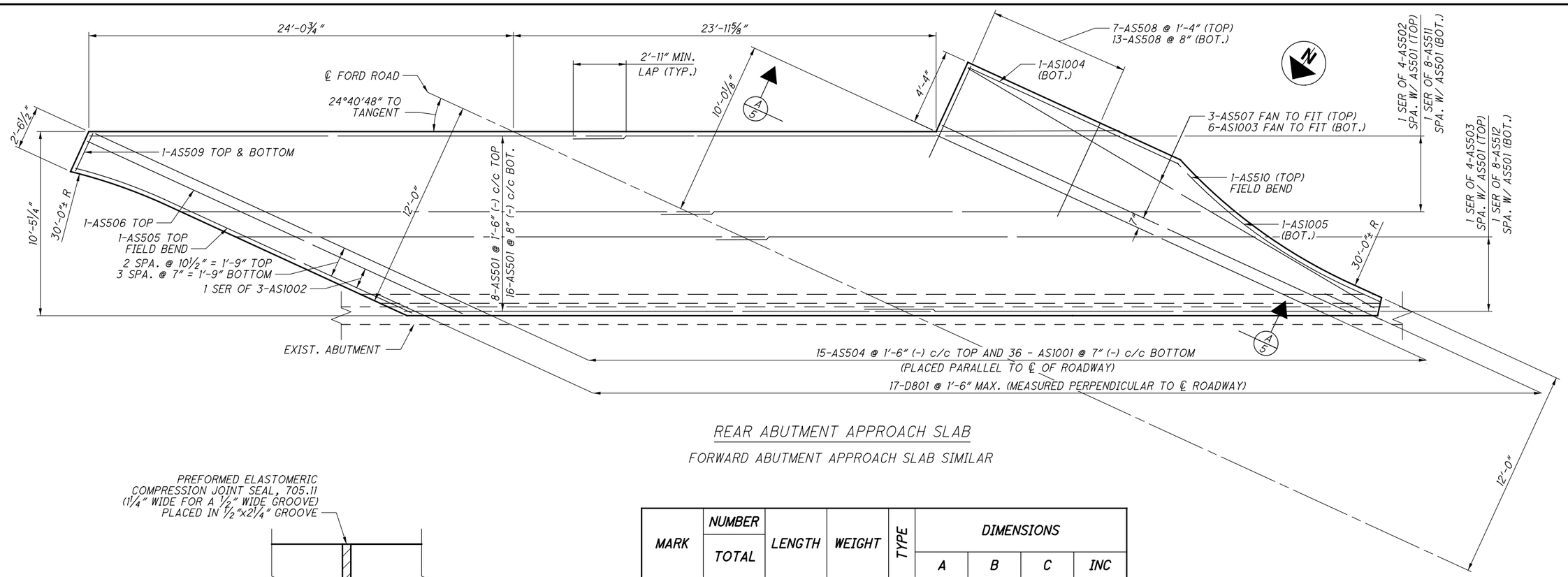
MISCELLANEOUS DETAILS - LOCATION 3

BRIDGE NO. LAK-90-2210
FORD ROAD OVER IR-90

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

4 / 5

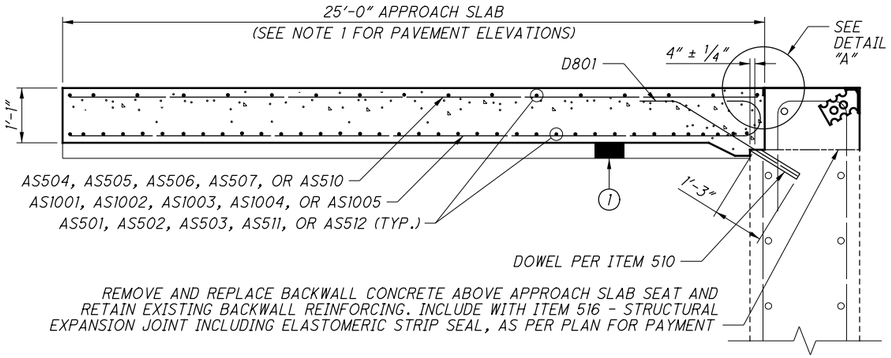
49
65



REAR ABUTMENT APPROACH SLAB

FORWARD ABUTMENT APPROACH SLAB SIMILAR

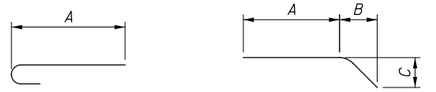
DETAIL "A"



A/5 APPROACH SLAB LONGITUDINAL SECTION

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	INC
APPROACH SLAB REINFORCING PER SLAB (PAYMENT INCLUDED WITH ITEM 526)								
AS501	24	30'-0"	751					
AS502	1 SER OF 4	35'-3" TO 31'-6"	139	STR				1'-3"
AS503	1 SER OF 4	31'-0" TO 29'-6"	126	STR				6"
AS504	15	24'-6"	383	STR				
AS505	1	20'-3"	21	STR				
AS506	1	23'-5"	24	STR				
AS507	3	26'-7"	83	STR				
AS508	20	5'-6"	115	STR				
AS509	2	2'-0"	4	STR				
AS510	1	26'-8"	28	STR				
AS511	1 SER OF 8	35'-3" TO 31'-6"	279	STR				6½"
AS512	1 SER OF 8	31'-0" TO 29'-6"	252	STR				2⅝"
AS1001	36	25'-11"	4015	16	24'-6"			
AS1002	1 SER OF 3	21'-8" TO 24'-10"	300	16	20'-3" TO 23'-5"			1'-7"
AS1003	7	26'-7"	801	STR				
AS1004	1	13'-0"	56	STR				
AS1005	1	13'-8"	59	STR				
D801	17	4'-2"	189	19	2'-11"	11¼"	11¼"	
SUB-TOTAL			7625					

BAR REINFORCING DIAGRAMS



TYPE-16 TYPE-19

NOTE: ALL REINFORCEMENT STEEL TO BE EPOXY COATED

LEGEND:

(1) ITEM 304 - AGGREGATE, 3" WITHIN LIMITS OF EXISTING APPROACH SLAB AND 6" WITHIN LIMITS OF EXISTING PAVEMENT

NOTES:

1. PAVEMENT ELEVATIONS: PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL EXISTING PAVEMENT ELEVATIONS AT THE END OF APPROACH SLAB AND END OF DECK. PROPOSED TOP OF APPROACH SLAB ELEVATIONS SHALL MATCH THESE FIELD MEASUREMENTS AS DIRECTED BY THE ENGINEER. FIELD SURVEY SHALL BE PAID FOR UNDER ITEM 623, CONSTRUCTION LAYOUT STAKES AND SURVEYING AS PER PLAN.
2. FOR ADDITIONAL APPROACH SLAB DETAILS AND REINFORCING, SEE STD. DWG. AS-1-15.
3. COST OF ALL REINFORCEMENT AND DOWELS SHALL BE INCLUDED IN THE PRICE BID FOR APPROACH SLABS.
4. NOTE THAT REINFORCING TABLE IS GIVEN PER SLAB WITH TWO SLABS TO BE CONSTRUCTED.

DESIGN AGENCY
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CHECKED DEB | REVISED | STRUCTURE FILE NUMBER 4304861

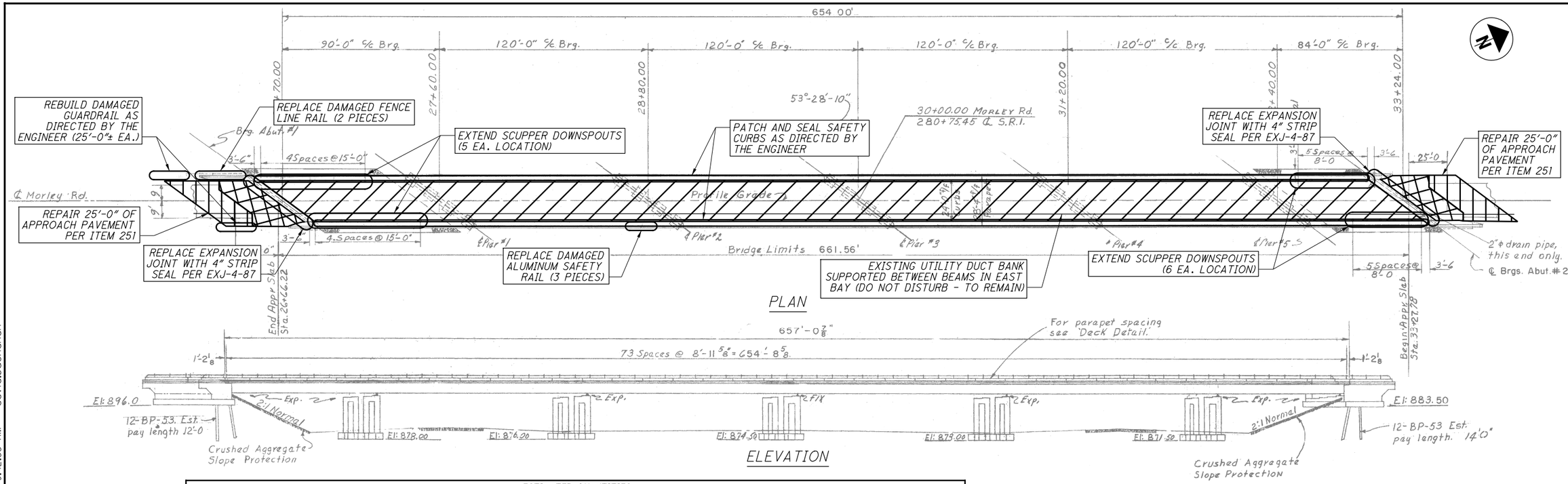
APPROACH SLAB DETAILS - LOCATION 3

BRIDGE NO. LAK-90-2210
FORD ROAD OVER IR-90

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

5 / 5

50
65



ESTIMATED QUANTITIES					
ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
202	22900	149	SY	APPROACH SLAB REMOVED	
202	98000	LS		REMOVAL MISC.: DELAMINATED CONCRETE INSPECTION AND REMOVAL	5 & 53
251	01001	144	SY	PARTIAL DEPTH PAVEMENT REPAIR (441), AS PER PLAN	5 & 51
304	20000	12	CY	AGGREGATE BASE	
509	20001	3,600	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	5 & 54
512	10051	160	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY), AS PER PLAN	5
512	10101	810	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	5
512	74000	525	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
513	21501	2,700	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN	5 & 53
513	95030	2	EACH	STRUCTURAL STEEL, MISC.: BEAM END SPLICE B	5 & 54
514	00050	900	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
514	00056	900	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
514	00060	900	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
514	00066	900	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
514	00504	12	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
514	10000	2	EACH	FINAL INSPECTION REPAIR	
516	11211	96	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	6, 34, 35, & 54
516	46800	8	EACH	SPECIAL - REFURBISH AND RESET BEARING	6
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	6 & 7
517	76302	3	EACH	RAILING, MISC.: REPLACE DAMAGED SAFETY RAIL	7, 51, & 54
518	12701	22	EACH	SCUPPER, VERTICAL EXTENSION, AS PER PLAN	7 & 34
519	11101	75	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	7
519	11720	480	FT	SPECIAL - PATCHING CONCRETE STRUCTURE, MISC.: SIDEWALK AND SAFETY CURB REPAIR	8
519	12510	105	SY	SPECIAL - PATCHING CONCRETE BRIDGE DECK	7
526	15001	149	SY	REINFORCED CONCRETE APPROACH SLABS (T=13"), AS PER PLAN	55
606	16001	50	FT	GUARDRAIL REBUILT, AS PER PLAN	7 & 51
607	98100	2	EACH	FENCE, MISC.: REPLACE DAMAGED LINE RAIL	7 & 51
642	00090	0.29	MILE	EDGE LINE, 4"	
642	00290	0.14	MILE	CENTER LINE	

LEGEND:

- REMOVE AND REPLACE EXISTING APPROACH SLABS
- PATCH UNSOUND AREAS OF DECK AS DIRECTED BY THE ENGINEER
- PARTIAL DEPTH APPROACH PAVEMENT REPAIR

NOTES:

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3. DECK PATCHING QUANTITIES HAVE BEEN INCREASED BY A FACTOR OF 1.5 AND SAFETY CURB QUANTITIES BY 1.2 FROM FIELD MEASUREMENTS IN 2015.
4. FOR JOINT REPLACEMENT DETAILS, SEE SHEETS 34/65 AND 35/65.
5. FOR SCUPPER DOWNSPOUT EXTENSION DETAILS, SEE SHEET 34/65.

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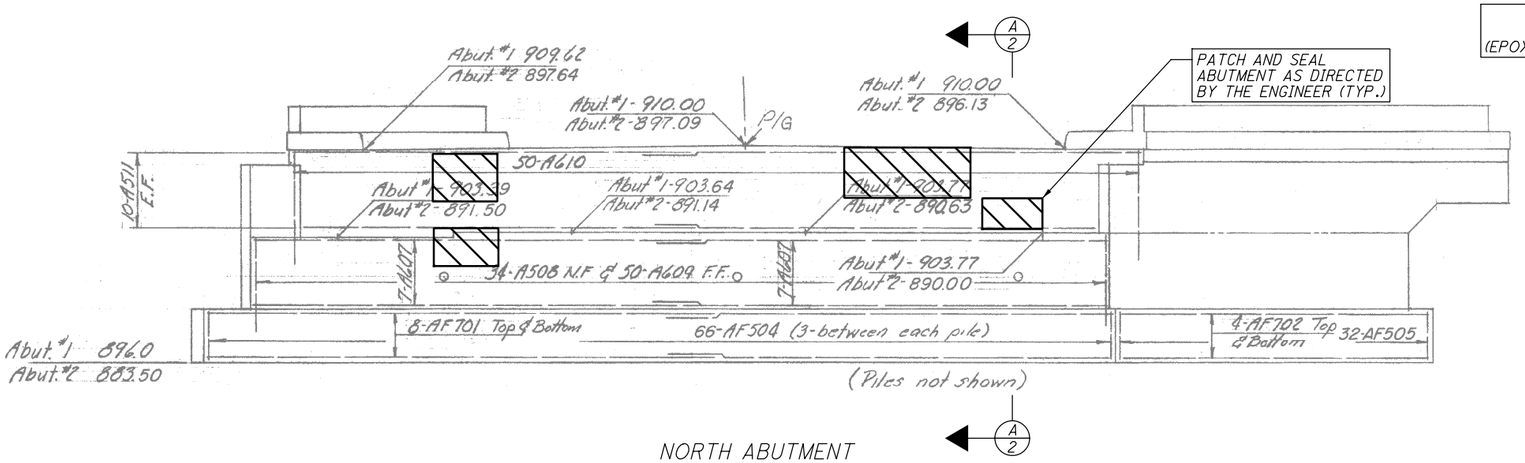
GENERAL PLAN - LOCATION 4
BRIDGE NO. LAK-90-1297
MORLEY ROAD OVER IR-90

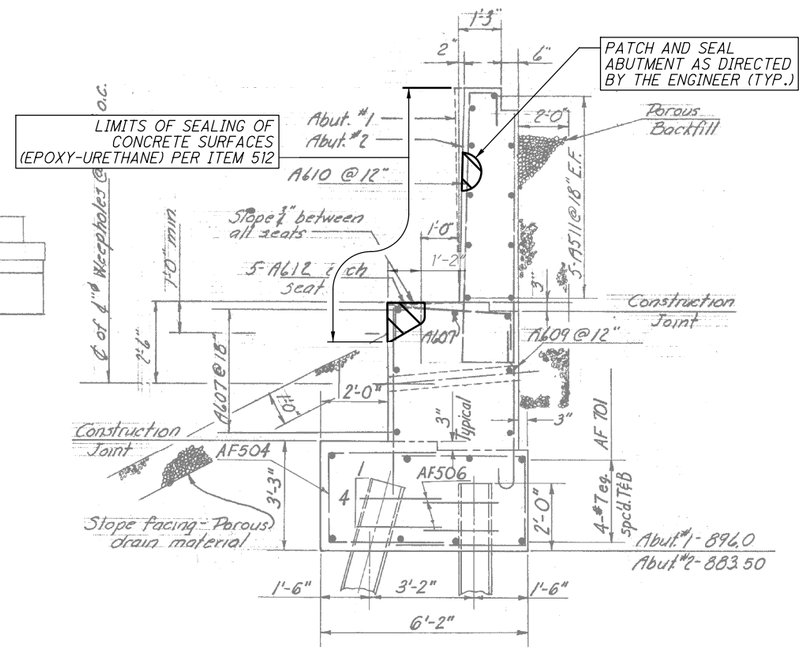
D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

1 / 5

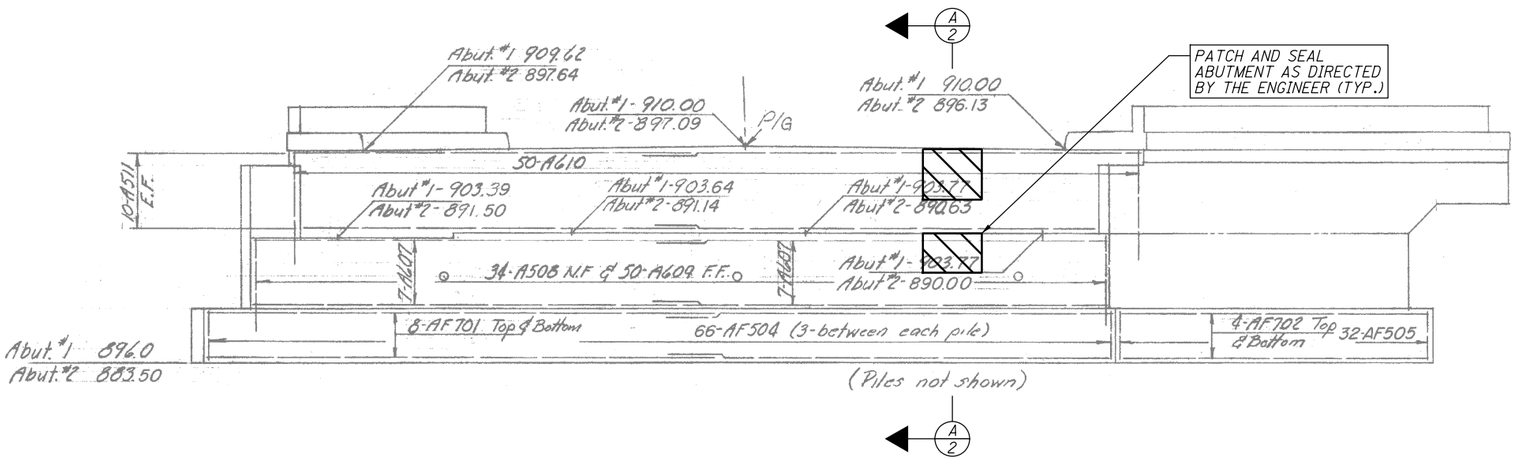
51 / 65



NORTH ABUTMENT



A/2 ABUTMENT SECTION
(NORTH AND SOUTH SIMILAR)



SOUTH ABUTMENT

NORTH ABUTMENT ESTIMATED AREA TO BE PATCHED = 50 SF
SOUTH ABUTMENT ESTIMATED AREA TO BE PATCHED = 25 SF
THE ESTIMATED QUANTITY OF SEALING THIS SHEET = 130 SY

LEGEND:

PATCHING ABUTMENT AS DIRECTED BY THE ENGINEER (LOCATIONS SHOWN ARE APPROXIMATE GRAPHICAL REPRESENTATIONS)

NOTES:

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2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. PATCHING QUANTITIES HAVE BEEN INCREASED BY A FACTOR OF 1.5 FROM FIELD MEASUREMENTS IN 2015.
4. FOR ESTIMATED QUANTITIES, SEE SHEET 1/5.
5. REMOVE ALL EXISTING COATINGS WITHIN LIMITS OF SEALING.

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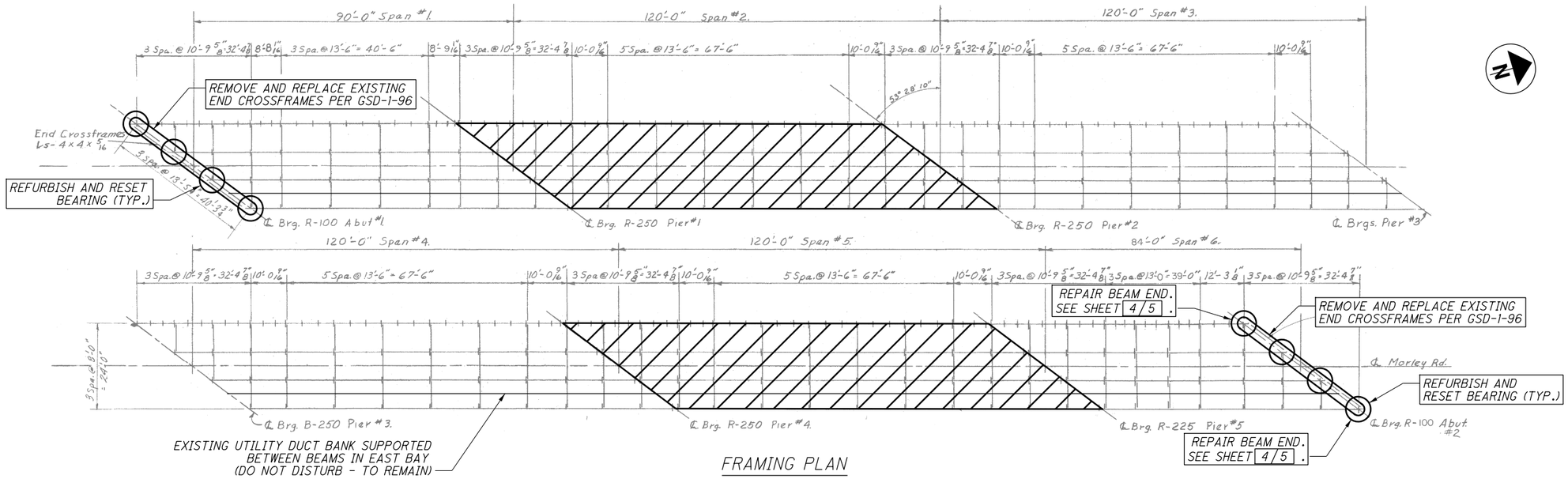
ABUTMENTS - LOCATION 4
BRIDGE NO. LAK-90-1297
MORLEY ROAD OVER IR-90

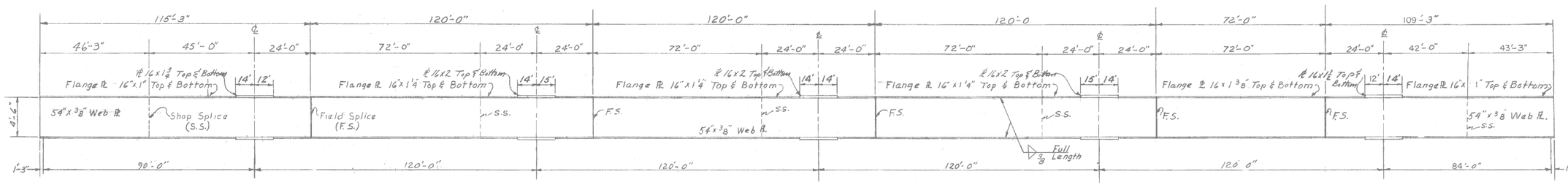
D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

2 / 5

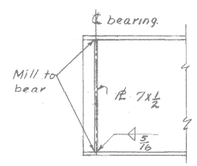
52
65



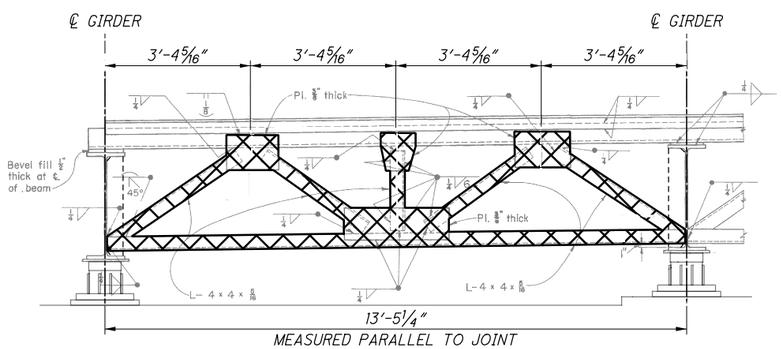
FRAMING PLAN



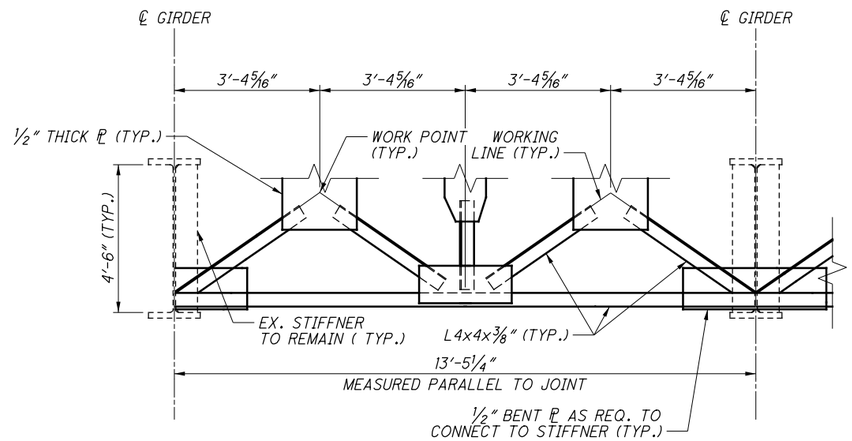
GIRDER ELEVATION



ABUTMENT STIFFENER DETAIL



EXISTING END CROSSFRAME



END CROSSFRAME DETAILS

FOR DETAILS NOT SHOWN, SEE GSD-1-96

THE ESTIMATED WEIGHT OF END CROSSFRAMES TO BE REPLACED IS 3,000 LBS.

EIGHT BEARINGS ARE TO BE REFURBISHED AND RESET.

TWO BEAM ENDS ARE TO BE REPAIRED PER SPLICE "B".

LEGEND:

REMOVE SPALLS AND LOOSE CONCRETE FROM BOTTOM OF DECK OVER TRAVELED LANES AS DIRECTED BY THE ENGINEER PER ITEM 202

LIMITS OF EXISTING CROSSFRAME REMOVAL

NOTES:

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3. FOR ESTIMATED QUANTITIES, SEE SHEET 1/5.

DESIGN AGENCY
AKRON CLEVELAND
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564 WHITE POND DRIVE
AKRON, OHIO 44320-1100
(330) 836-9111

DESIGNED KGR | DRAWN KGR | CHECKED DEB | REVIEWED TMB | DATE 1/17 | REVISED | STRUCTURE FILE NUMBER 4304268

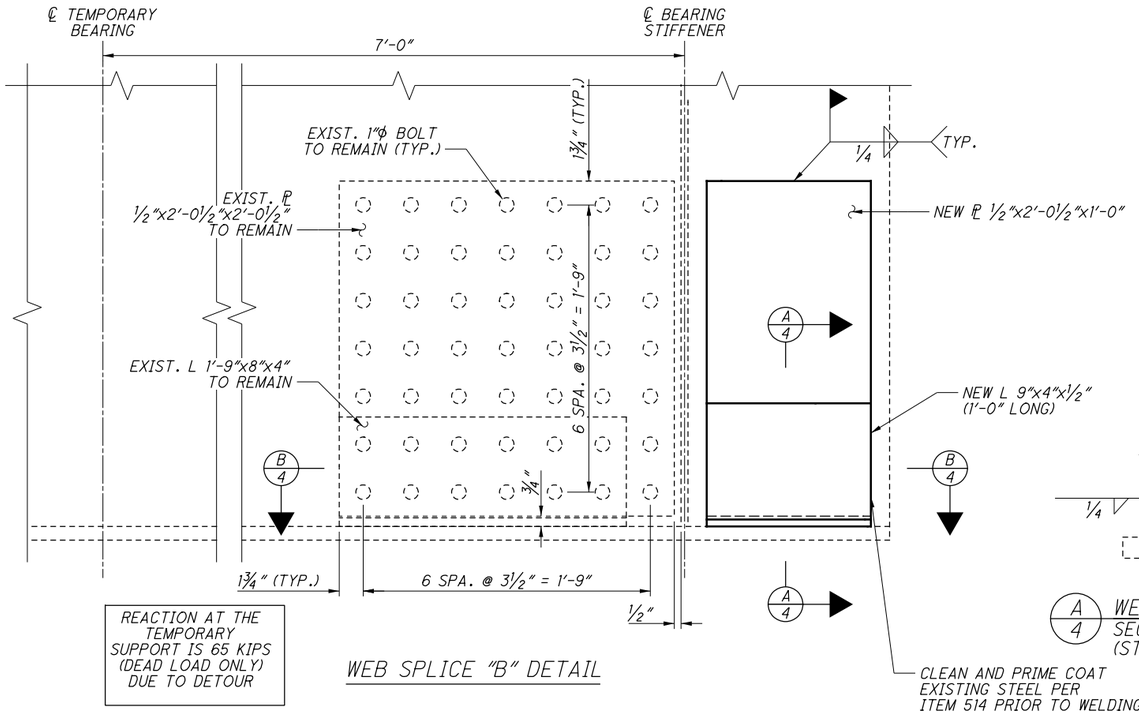
STEEL FRAMING PLAN - LOCATION 4

BRIDGE NO. LAK-90-1297
MORLEY ROAD OVER IR-90

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

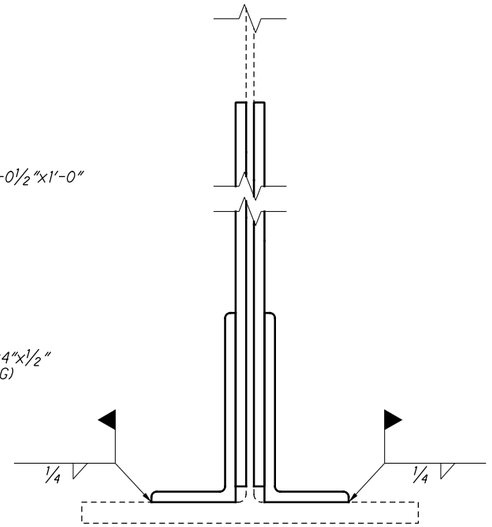
3 / 5

53 / 65

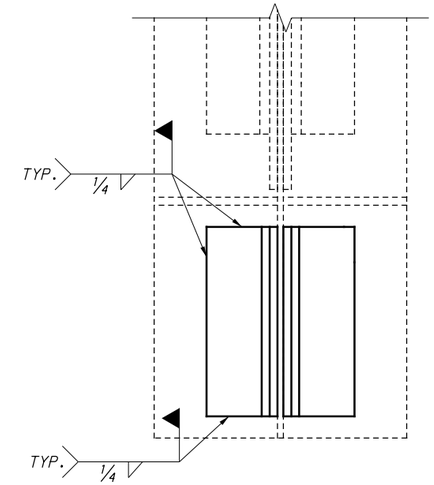


REACTION AT THE TEMPORARY SUPPORT IS 65 KIPS (DEAD LOAD ONLY) DUE TO DETOUR

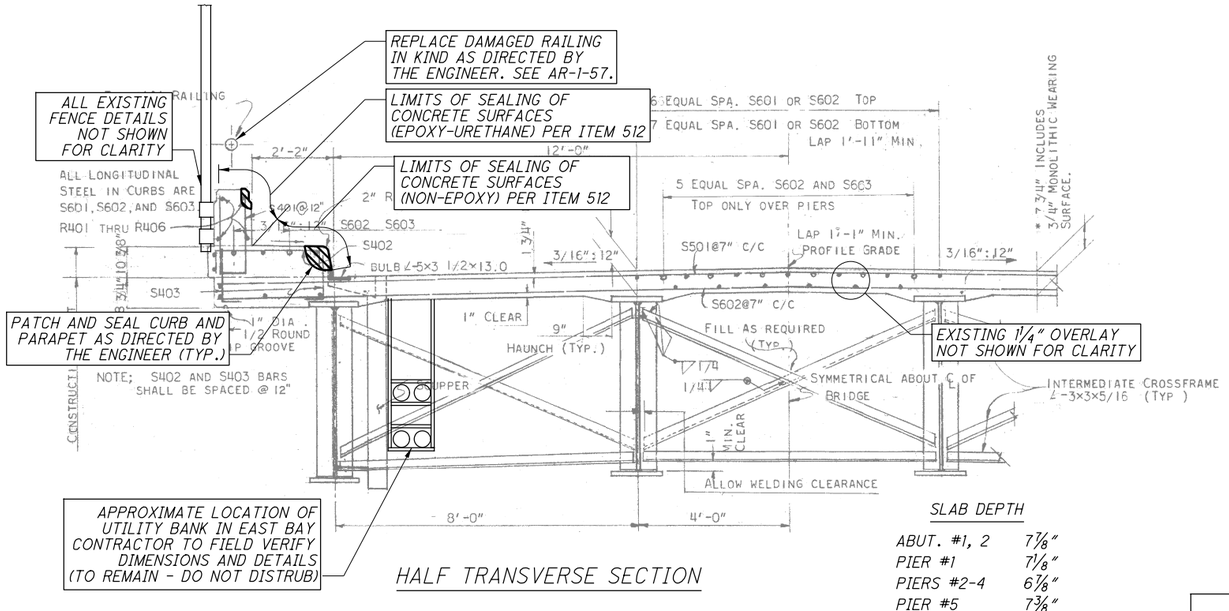
WEB SPLICE "B" DETAIL



A/4 WEB SPLICE
SECTION THROUGH NEW PLATES AND ANGLES (STIFFENER NOT SHOWN)



B/4 WEB SPLICE
SECTION SHOWING EXISTING AND NEW PLATES AND ANGLES



HALF TRANSVERSE SECTION

SLAB DEPTH

ABUT. #1, 2	7⅞"
PIER #1	7⅛"
PIERS #2-4	6⅞"
PIER #5	7⅜"

THE ESTIMATED QUANTITY OF PATCHING OF CURB IS 480 LF

THE ESTIMATED QUANTITY OF PATCHING OF PARAPET IS 200 SF

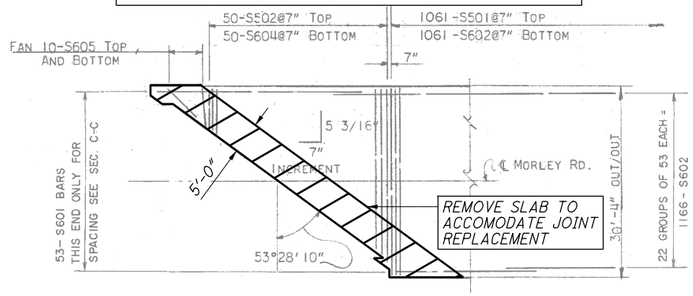
THE ESTIMATED QUANTITY OF SEALING THIS SHEET IS 840 SY

LEGEND:

PATCH AND RESEAL CURB AND PARAPET WITH EPOXY-URETHANE SEALER AS DIRECTED BY THE ENGINEER

SLAB REMOVAL LIMITS

DECK PLAN SHOWN FOR INFORMATIONAL PURPOSES ONLY. REPLACE IN KIND WHERE BARS ARE DEEMED UNUSABLE BY THE ENGINEER DUE TO CORROSION. IF NECESSARY, BARS SHALL BE MECHANICALLY SPLICED AT NO ADDITIONAL COST OR LAP SPLICED PER CMS 509 REQUIREMENTS. FOR QUANTITY ESTIMATING PURPOSED, 3,600 POUNDS IS ESTIMATED TO BE REPLACED.



PART SLAB PLAN AT ABUTMENT NO. 1

SLAB PLAN OF ABUTMENT NO. 2 OPPOSITE HAND

NOTES:

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3. PARAPET PATCHING QUANTITIES HAVE BEEN INCREASED BY A FACTOR OF 2 FROM FIELD MEASUREMENTS IN 2015.
4. FOR ESTIMATED QUANTITIES, SEE SHEET 1/5.
5. BEAM SPLICE DETAILS SHOWN ON THIS SHEET ARE FOR BEAM SPLICE B.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEB		4304268	

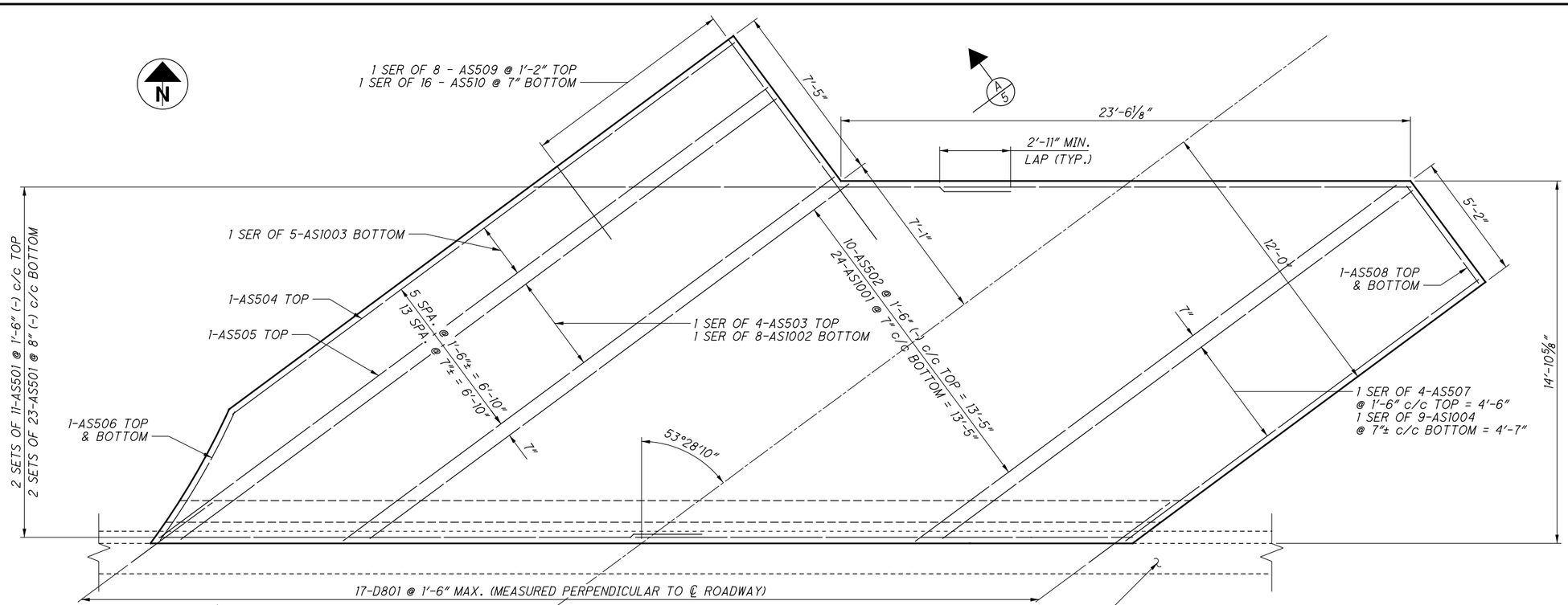
MISCELLANEOUS DETAILS - LOCATION 4

BRIDGE NO. LAK-90-1297
MORLEY ROAD OVER IR-90

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

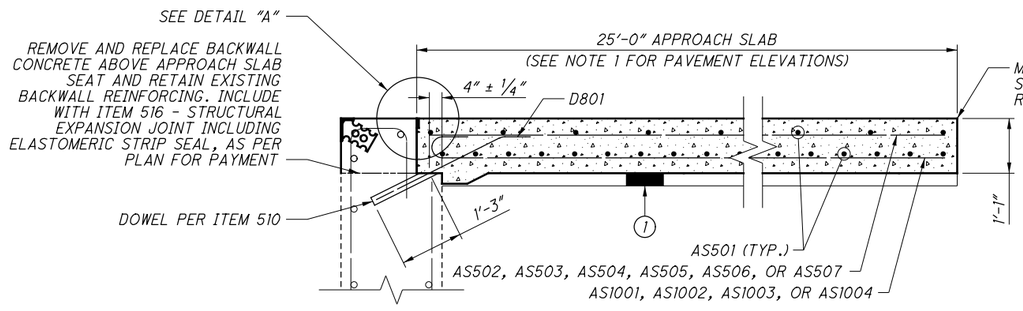
4 / 5

54
65

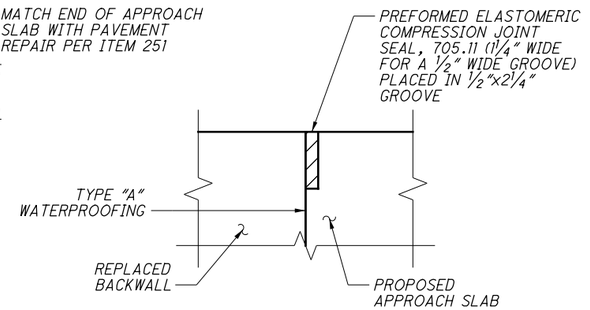


FORWARD ABUTMENT APPROACH SLAB

REAR ABUTMENT APPROACH SLAB SIMILAR



A/5 APPROACH SLAB LONGITUDINAL SECTION



DETAIL "A"

LEGEND:

(1) ITEM 304 - AGGREGATE, 3" WITHIN LIMITS OF EXISTING APPROACH SLAB AND 6" WITHIN LIMITS OF EXISTING PAVEMENT

NOTES:

1. PAVEMENT ELEVATIONS: PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL EXISTING PAVEMENT ELEVATIONS AT THE END OF THE APPROACH SLAB AND THE END OF DECK. PROPOSED TOP OF APPROACH SLAB ELEVATIONS SHALL MATCH THESE FIELD MEASUREMENTS AS DIRECTED BY THE ENGINEER. FIELD SURVEY SHALL BE PAID FOR UNDER ITEM 623, CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN.
2. FOR ADDITIONAL APPROACH SLAB DETAILS AND REINFORCING, SEE STD. DWG. AS-1-15.
3. COST OF ALL REINFORCEMENT AND DOWELS SHALL BE INCLUDED IN THE PRICE BID FOR APPROACH SLABS.
4. NOTE REINFORCING TABLE IS GIVEN PER SLAB WITH TWO SLABS TO BE CONSTRUCTED.

BAR REINFORCING DIAGRAMS

DETAIL "A"

TYPE-16 TYPE-19

NOTE: ALL REINFORCEMENT STEEL TO BE EPOXY COATED

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C
APPROACH SLAB REINFORCING PER SLAB (PAYMENT INCLUDED WITH ITEM 526)							
AS501	68	23'-9"	1648	STR			
AS502	10	24'-6"	256	STR			
AS503	1 SER	25'-6"					
	OF	TO	117	STR			
	4	30'-6"					
AS504	1	25'-7"	26	STR			
AS505	1	30'-2"	32	STR			
AS506	2	6'-1"	13	STR			
AS507	1 SER	18'-0"					
	OF	TO	88	STR			
	4	24'-2"					
AS508	2	4'-11"	10	STR			
AS509	1 SER	3'-8"					
	OF	TO	58	STR			
	8	10'-2"					
AS510	1 SER	3'-8"					
	OF	TO	115	STR			
	16	10'-2"					
AS1001	24	25'-11"	2676	16	24'-6"		
AS1002	1 SER	26'-6"			25'-1"		
	OF	TO	1004	16	TO		
	8	31'-11"			30'-6"		
AS1003	1 SER	25'-7"					
	OF	TO	612	STR			
	5	31'-2"					
AS1004	1 SER	19'-5"			18'-0"		
	OF	TO	871	16	TO		
	9	25'-7"			24'-2"		
D801	17	4'-2"	189	19	2'-11"	11¼"	11¼"
SUB-TOTAL			7,715				

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APPROACH SLAB DETAILS - LOCATION 4

BRIDGE NO. LAK-90-1297
MORLEY ROAD OVER IR-90

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

5 / 5

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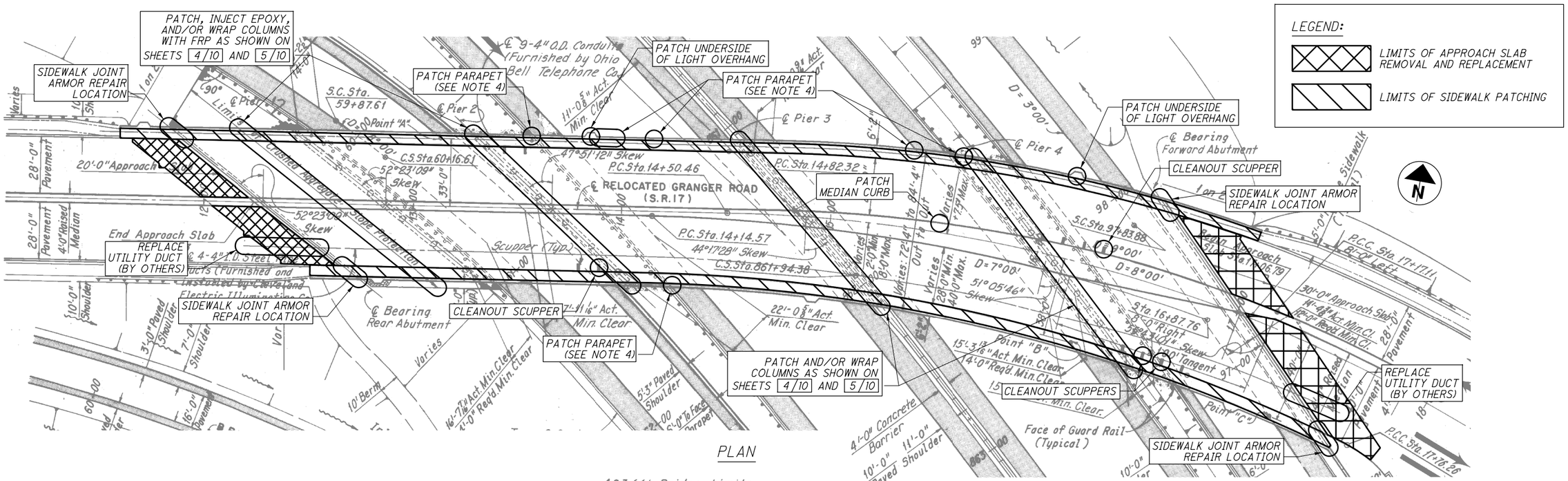
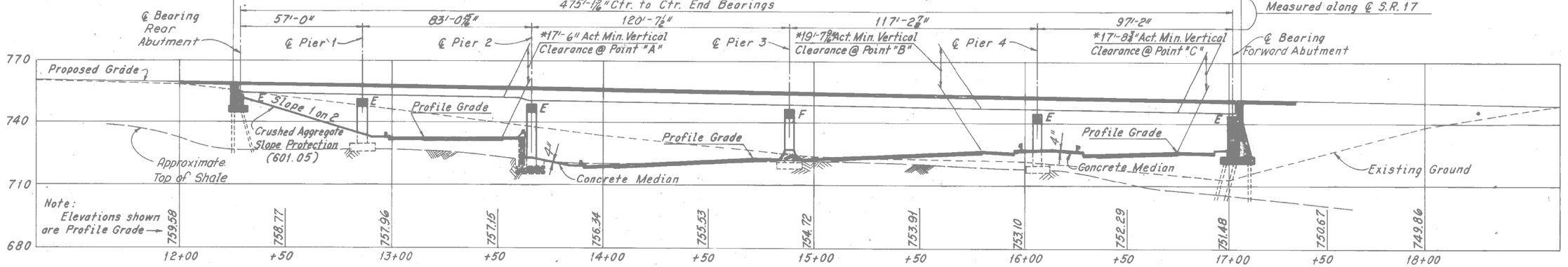
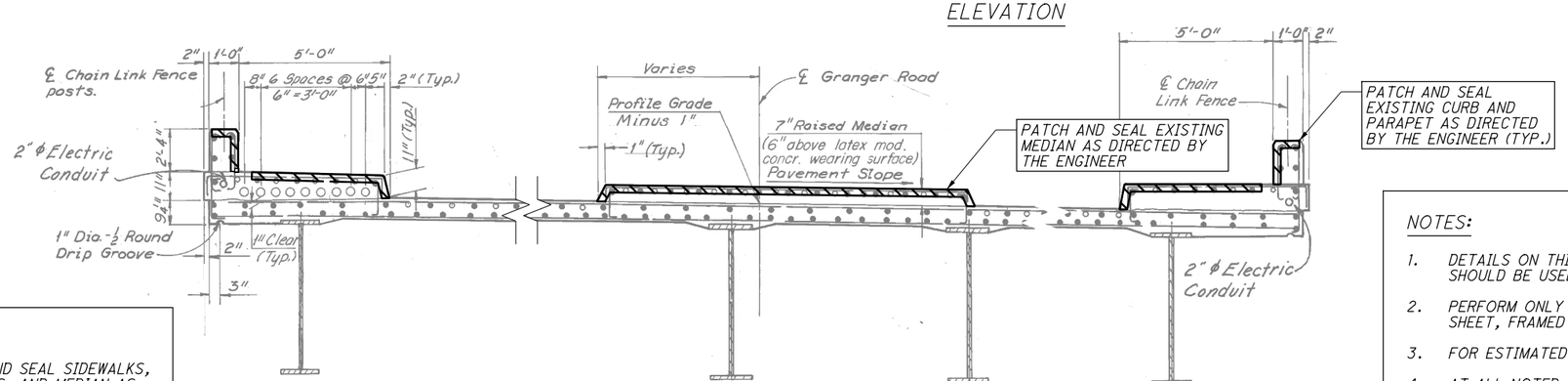


PLAN



ELEVATION



TRANSVERSE SECTION

LEGEND:

PATCH AND SEAL SIDEWALKS, PARAPETS, AND MEDIAN AS DIRECTED BY THE ENGINEER

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3. FOR ESTIMATED QUANTITIES, SEE SHEET 2/10 .
4. AT ALL NOTED PARAPET PATCHING LOCATIONS, PATCH AND SEAL THE PARAPET AS DIRECTED BY THE ENGINEER.

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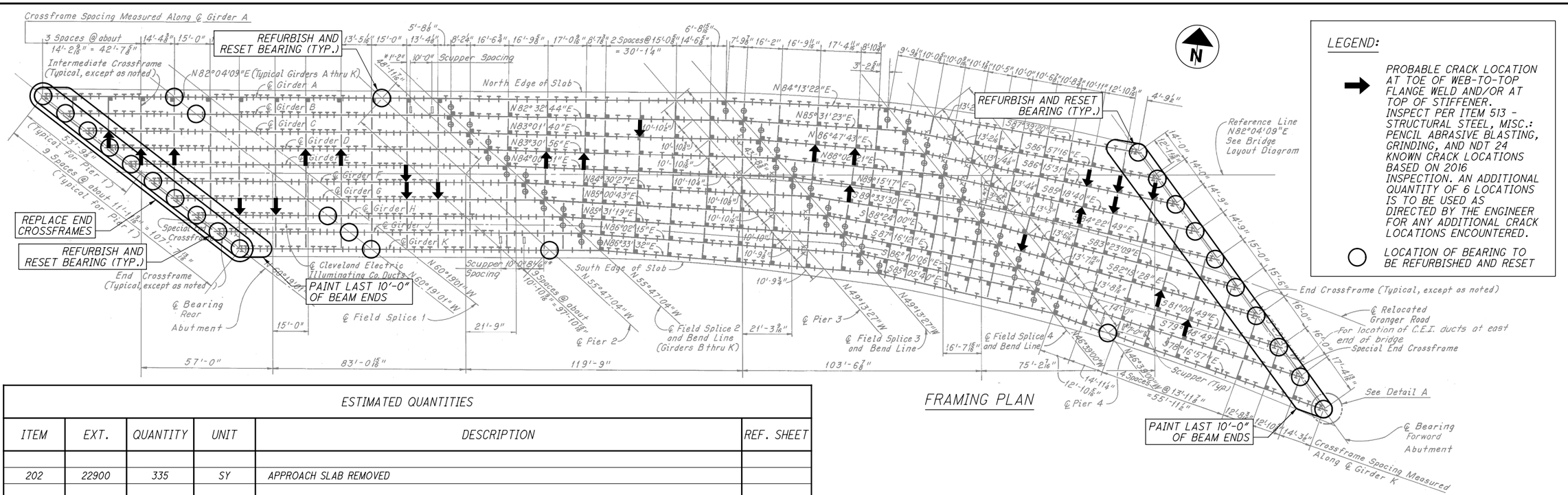
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEB		1802402	

GENERAL PLAN AND ELEVATION - LOCATION 5

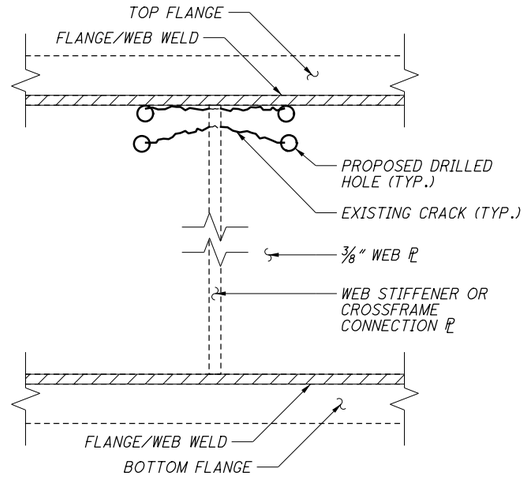
BRIDGE NO. CUY-17-1227
SR 17 OVER IR-480

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600



FRAMING PLAN

ESTIMATED QUANTITIES					
ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
202	22900	335	SY	APPROACH SLAB REMOVED	
512	10101	490	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	5
512	74000	490	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	
513	21501	2,600	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN	5 & 61
513	95030	30	EACH	STRUCTURAL STEEL, MISC.: PENCIL ABRASIVE BLASTING, GRINDING, AND NDT	6 & 57
513	95030	30	EACH	STRUCTURAL STEEL, MISC.: DRILLING STRUCTURAL STEEL, GRINDING, AND NDT	6 & 57
514	00050	2,700	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
514	00056	2,700	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	
514	00060	2,700	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	
514	00066	2,700	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	
514	00504	33	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
514	10000	2	EACH	FINAL INSPECTION REPAIR	
516	12201	32	FT	STRUCTURAL STEEL EXPANSION JOINT, AS PER PLAN	6 & 61
516	46800	28	EACH	SPECIAL - REFURBISH AND RESET BEARING	6 & 57
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	6 & 7
518	12500	4	EACH	SCUPPER, MISC.: CLEANOUT SCUPPER	7 & 56
519	00100	3,400	SF	SPECIAL - COMPOSITE FIBER WRAP SYSTEM	8, 59, & 60
519	11101	670	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	7
519	11720	311	FT	SPECIAL - PATCHING CONCRETE STRUCTURE, MISC.: SIDEWALK AND SAFETY CURB REPAIR	8
526	30001	335	SY	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN	62-65
621	00300	8	EACH	RPM REFLECTOR	
621	19000	8	EACH	RPM, MISC.: REMOVE REFLECTORS FROM CASTINGS	12
621	19000	2	EACH	RPM, MISC.: REPLACE DAMAGED RPM CASTING	12
625	25930	2	EACH	CONDUIT, MISC.: REPLACE UTILITY DUCT BANK	58



DRILLING DETAIL

NOTES:

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3. FOR PAVEMENT MARKING PAY ITEMS SEE MAINTENANCE OF TRAFFIC SUBSUMMARY AND SHEETS

DESIGN AGENCY
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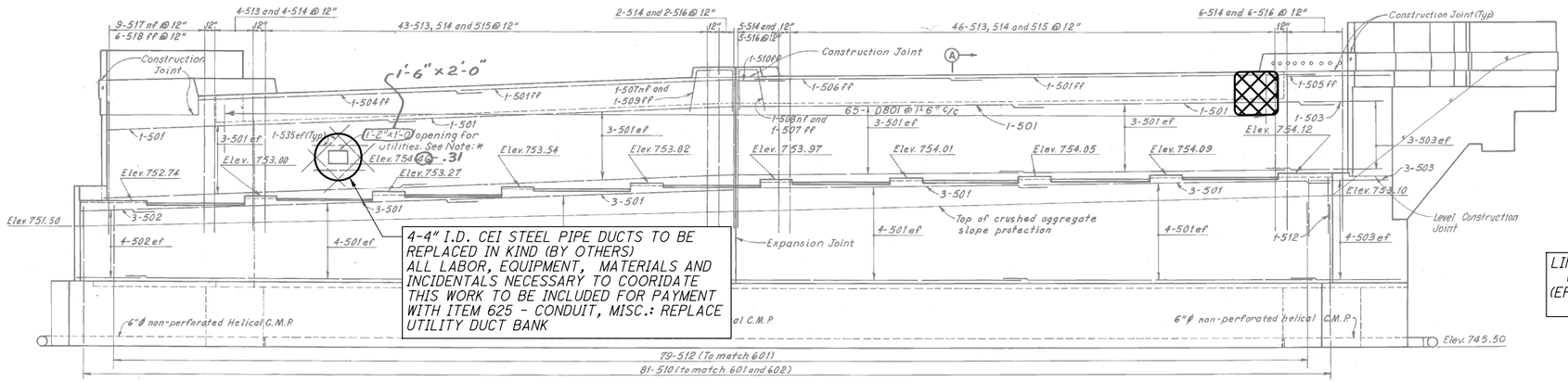
FRAMING PLAN - LOCATION 5

BRIDGE NO. CUY-17-1227
SR 17 OVER IR-480

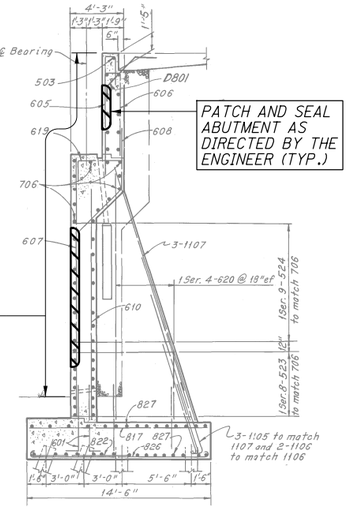
D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

2 / 10

57
65



REAR ABUTMENT ELEVATION

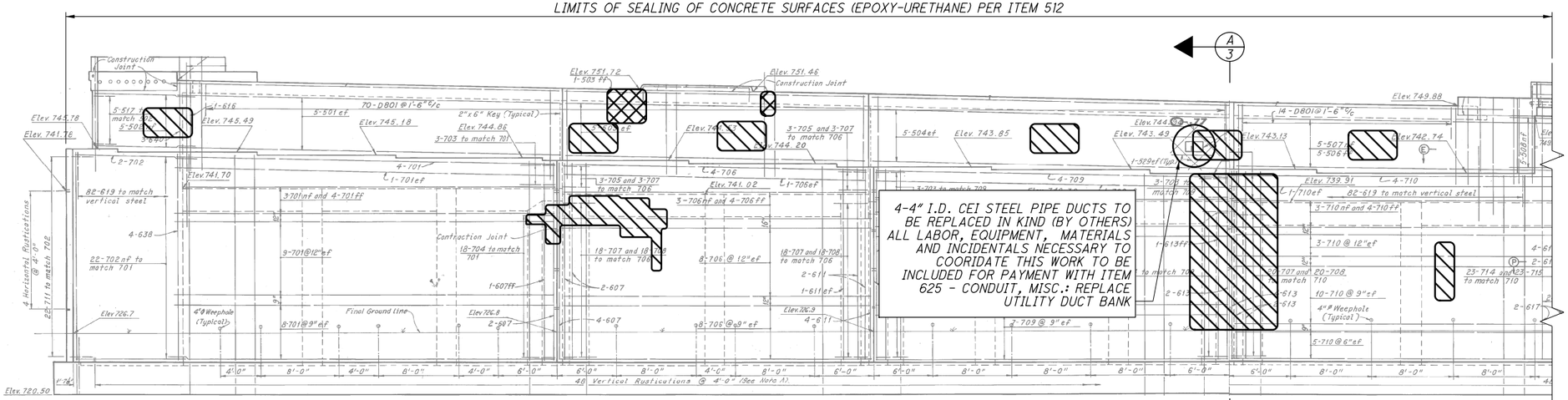


PATCH AND SEAL ABUTMENT AS DIRECTED BY THE ENGINEER (TYP.)

LIMITS OF SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) PER ITEM 512

A/3 SECTION FORWARD ABUTMENT

LIMITS OF SEALING OF CONCRETE SURFACES (EPOXY-URETHANE) PER ITEM 512



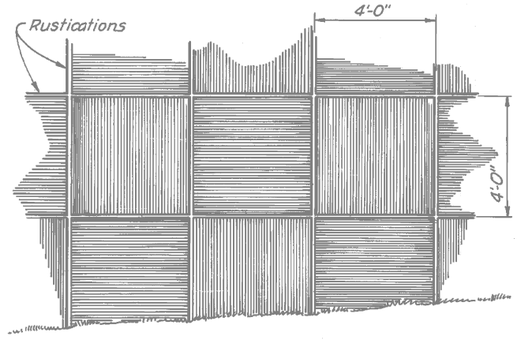
FORWARD ABUTMENT ELEVATION

REAR ABUTMENT ESTIMATED LENGTH OF BACKWALL REPAIR = 6 LF

FORWARD ABUTMENT ESTIMATED LENGTH OF BACKWALL REPAIR = 8 LF

FORWARD ABUTMENT ESTIMATED AREA TO BE PATCHED = 290 SF

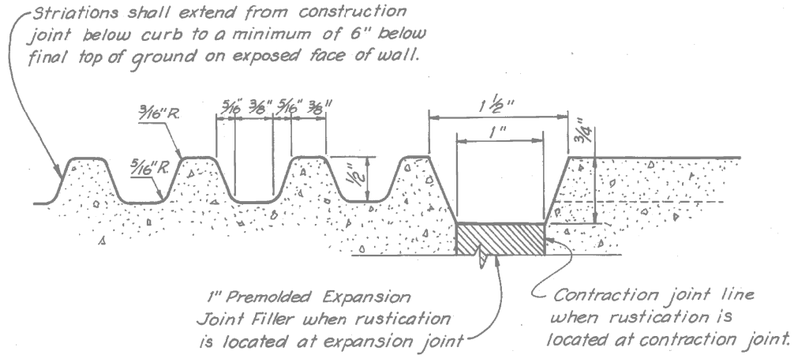
FORWARD ABUTMENT ESTIMATED AREA TO BE SEALED THIS SHEET = 490 SY



Note:
Special care shall be taken to properly match and finish striations at construction joints.

Direction of striations shall be alternated as indicated in the developed elevation view.

SURFACE TREATMENT



RUSTICATION AND STRIATION DETAIL

LEGEND:

PATCH AND SEAL ABUTMENT AS DIRECTED BY THE ENGINEER. LOCATIONS SHOWN ARE APPROXIMATE GRAPHICAL REPRESENTATIONS. MATCH THE EXISTING SURFACE TREATMENT SHOWN IN THE DETAILS ON THIS SHEET.

REPLACE ABUTMENT BACKWALL AS DIRECTED BY THE ENGINEER.

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4. REMOVE ALL EXISTING COATINGS WITHIN LIMITS TO BE SEALED.

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ABUTMENT DETAILS - LOCATION 5
BRIDGE NO. CUY-17-1227
SR 17 OVER IR-480

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

3 / 10

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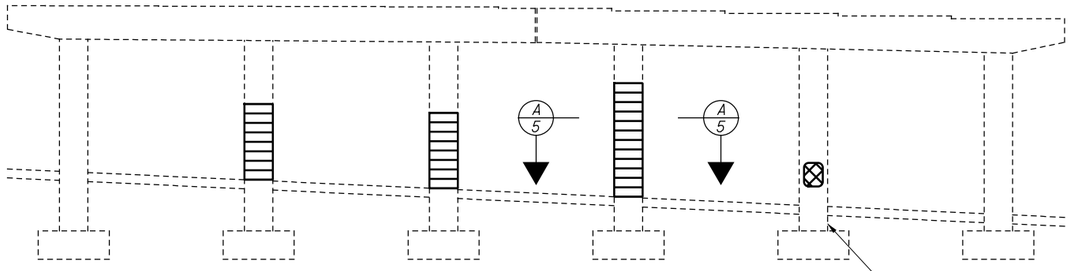
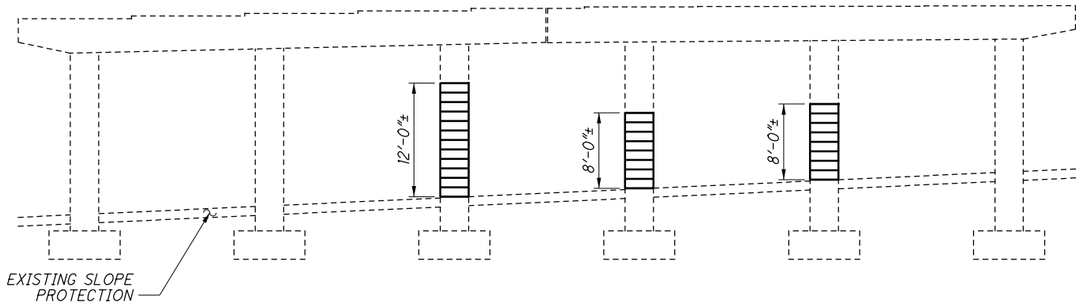


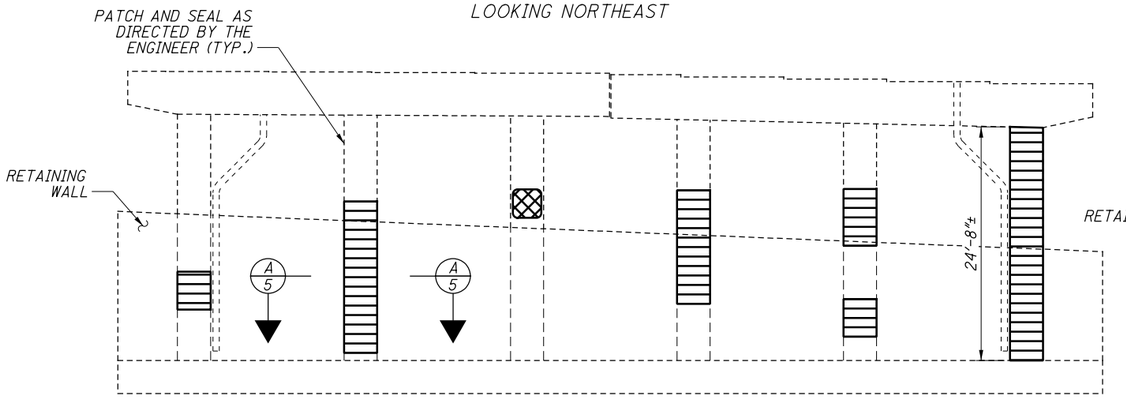
PIER 1 ELEVATION

LOOKING NORTHEAST



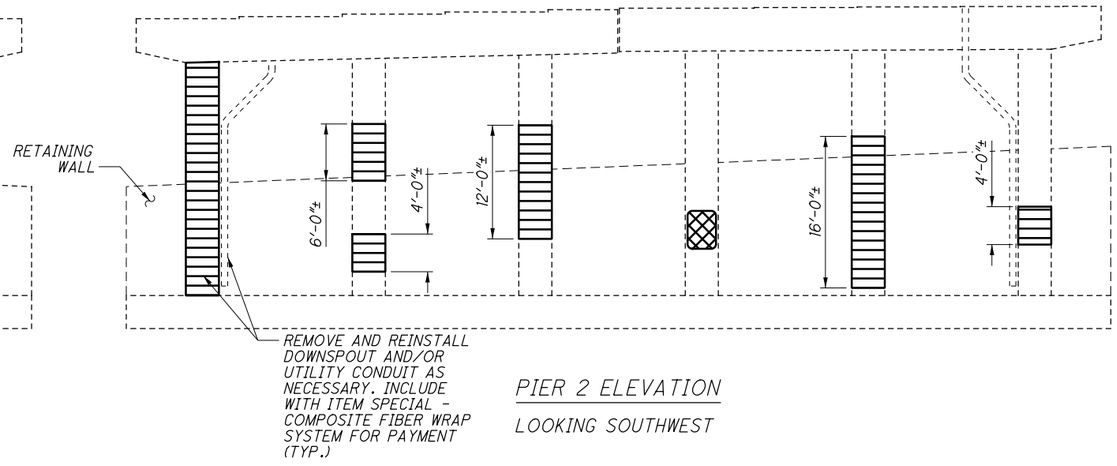
PIER 1 ELEVATION

LOOKING SOUTHWEST



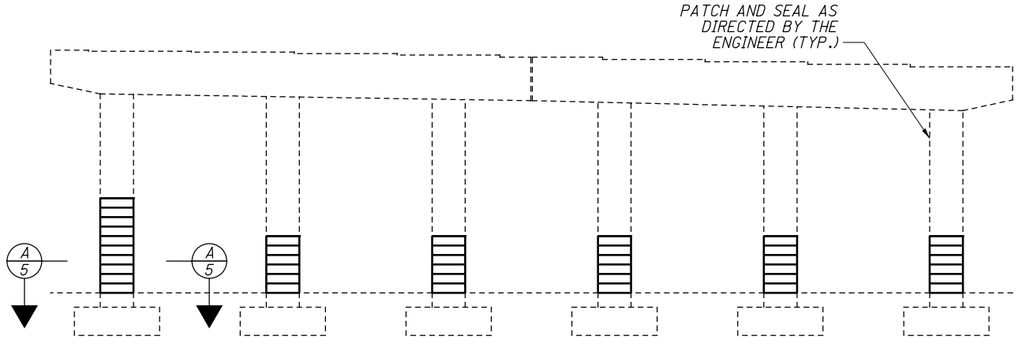
PIER 2 ELEVATION

LOOKING NORTHEAST



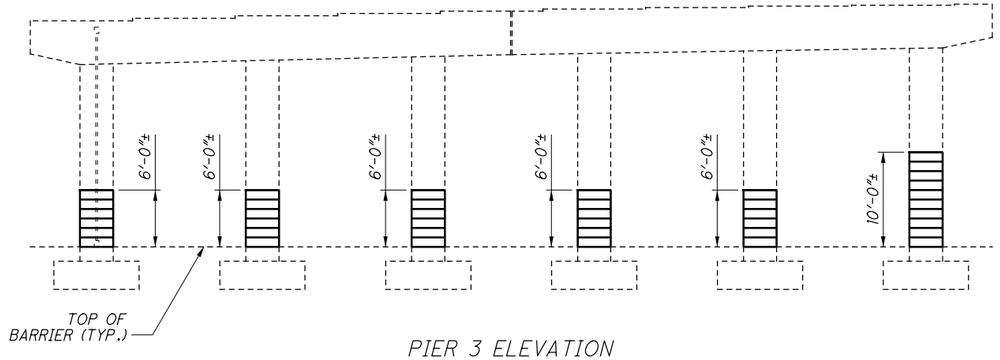
PIER 2 ELEVATION

LOOKING SOUTHWEST



PIER 3 ELEVATION

LOOKING NORTHEAST



PIER 3 ELEVATION

LOOKING SOUTHWEST

LEGEND:

ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM

PATCHING PIER COLUMNS AS DIRECTED BY THE ENGINEER

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DEB		1802402	

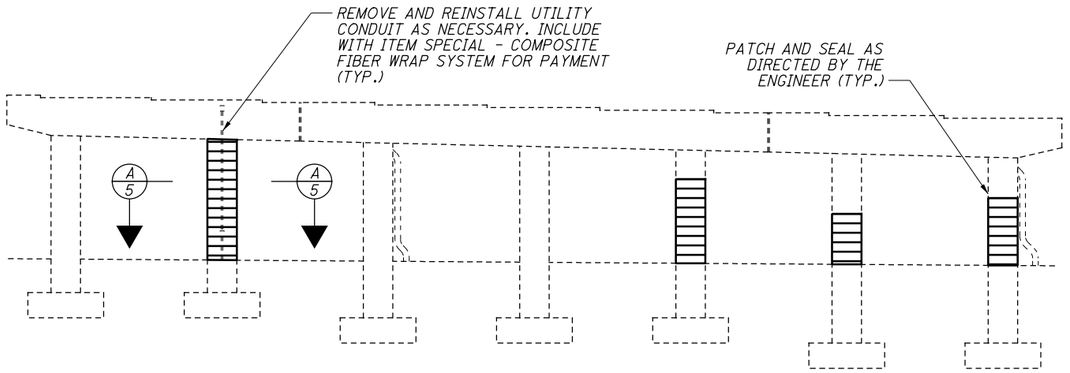
PIER DETAILS (1 OF 2) - LOCATION 5

BRIDGE NO. CUY-17-1227
SR 17 OVER IR-480

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

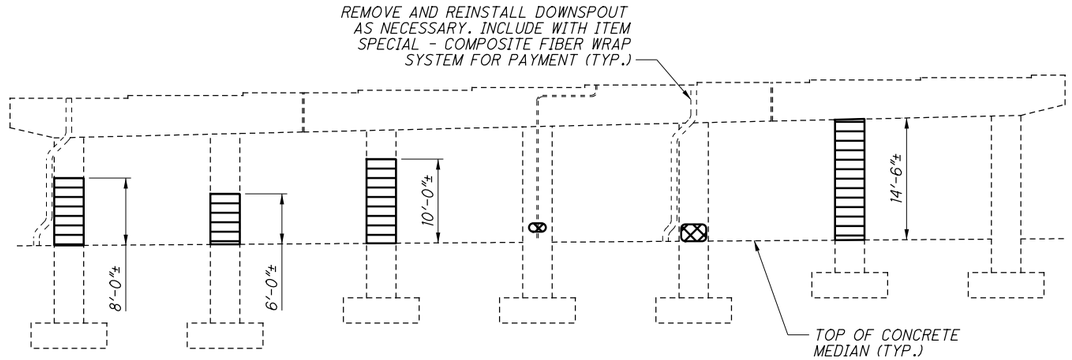
4 / 10

59
65



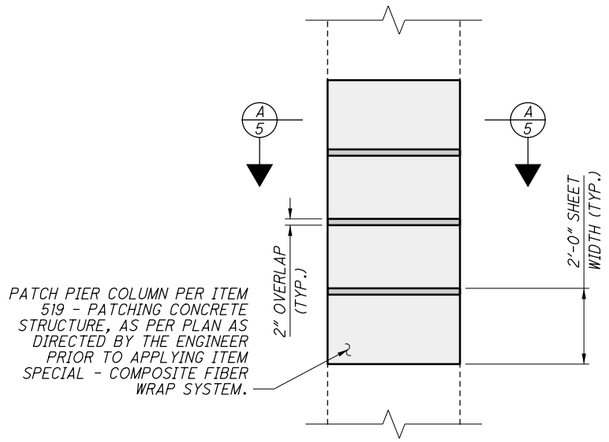
PIER 4 ELEVATION

LOOKING NORTHEAST

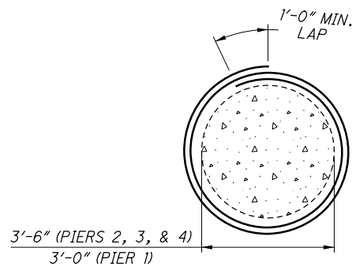


PIER 4 ELEVATION

LOOKING SOUTHWEST



PIER COLUMN COMPOSITE FIBER WRAP SYSTEM DETAIL



NOTES:

- COMPOSITE FIBER WRAP SHALL BE APPLIED AS ONE CONTINUOUS WRAP EXTENDING AROUND THE COLUMN TWICE WITH A MINIMUM 1'-0" LAP.
- PATCH PIER COLUMN PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN AS DIRECTED BY THE ENGINEER PRIOR TO APPLYING FIBER WRAP.

A/4 A/5 SECTION

PIER COLUMN COMPOSITE FIBER WRAP SYSTEM APPLICATION

LEGEND:

ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM

PATCHING PIER COLUMNS AS DIRECTED BY THE ENGINEER

NOTES:

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3. FOR ESTIMATED QUANTITIES, SEE SHEET 2/10.

DESIGN AGENCY
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DESIGNED	DRAWN	REVIEWED	DATE
KGR	KGR	TMB	1/17
CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEB		1802402	

PIER DETAILS (2 OF 2) - LOCATION 5

BRIDGE NO. CUY-17-1227
SR 17 OVER IR-480

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

5 / 10

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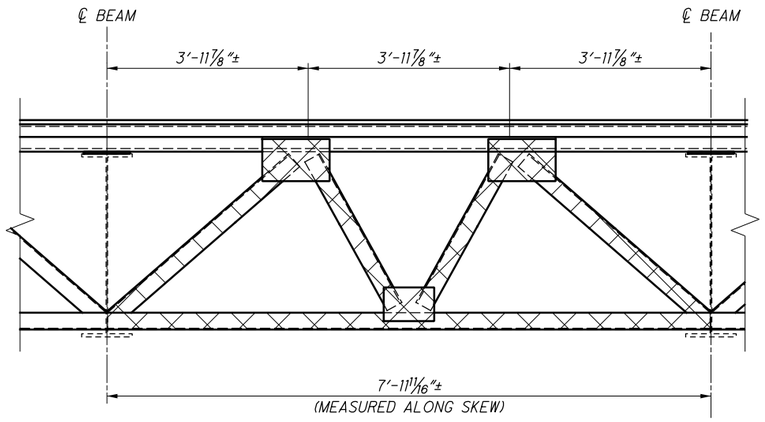
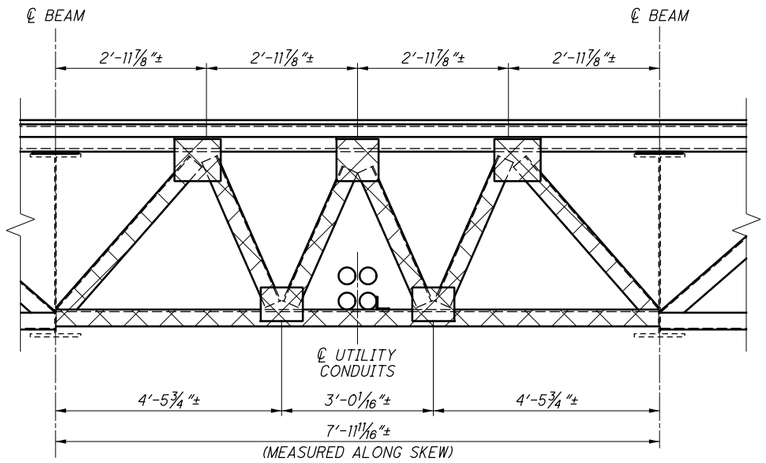


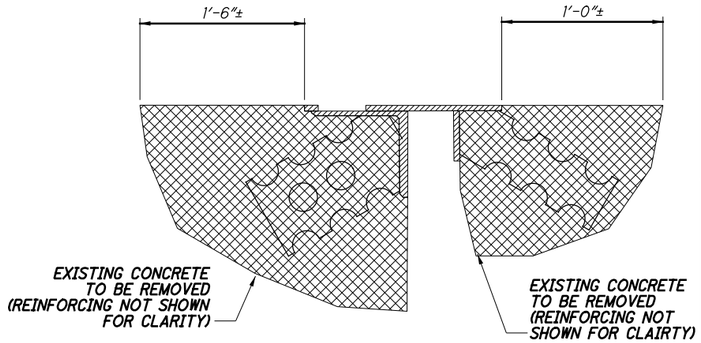
EXISTING END CROSSFRAME DETAIL

TYPICAL CROSSFRAME AT REAR ABUTMENT

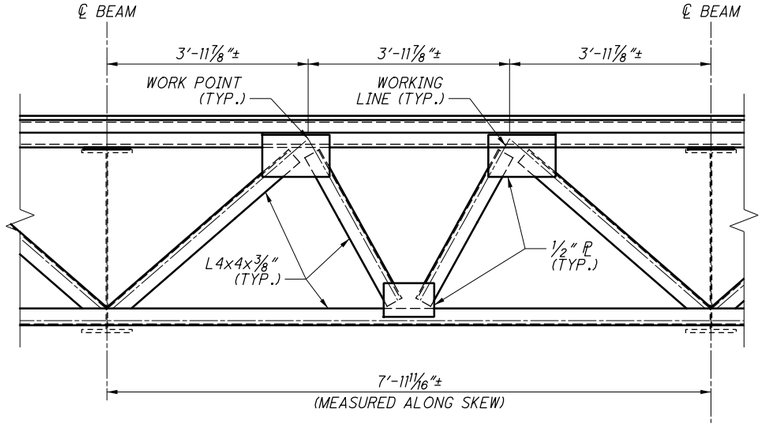


EXISTING END CROSSFRAME DETAIL

SPECIAL CROSSFRAME AT REAR ABUTMENT

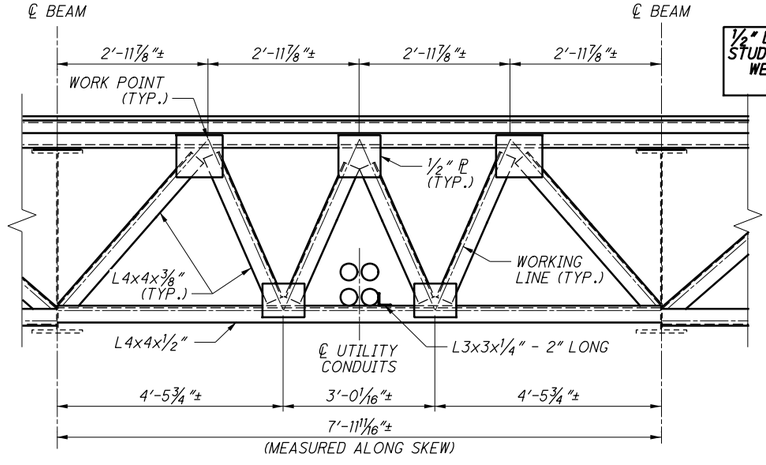


EXISTING SIDEWALK END DAM DETAIL (N.T.S.)



PROPOSED END CROSSFRAME DETAIL

TYPICAL CROSSFRAME AT REAR ABUTMENT
FOR DETAILS NOT SHOWN, SEE GSD-1-96



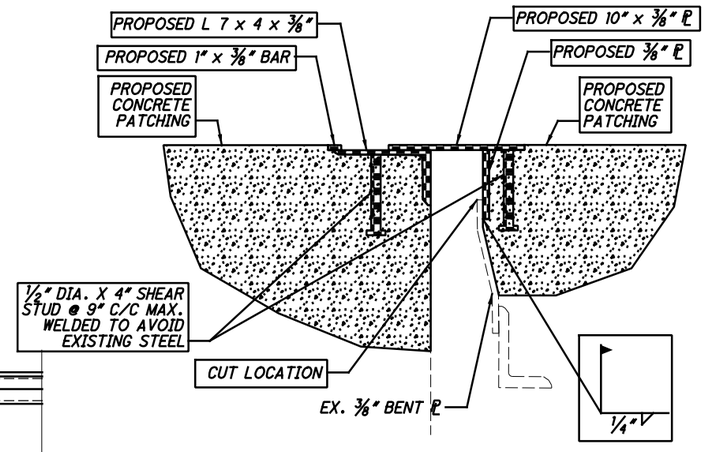
PROPOSED END CROSSFRAME DETAIL

TYPICAL CROSSFRAME AT REAR ABUTMENT
FOR DETAILS NOT SHOWN, SEE GSD-1-96

NOTE: AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY ELECT TO WELD GUSSET ℄'S TO THE BEAMS AND BOLT THE DIAPHRAGM MEMBERS TO THESE GUSSET ℄'S. SEE GSD-1-96.

CROSSFRAME REPLACEMENT LEGEND:

LIMITS OF EXISTING END CROSSFRAME REMOVAL



PROPOSED SIDEWALK END DAM DETAIL (N.T.S.)

SIDEWALK JOINT REPLACEMENT LEGEND:

- EXISTING PLATES TO BE REMOVED & REPLACED
- EXIST. CONCRETE TO BE REMOVED
- PROPOSED CONCRETE
- PROPOSED PLATES & STUDS

NOTES:

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3. FOR ESTIMATED QUANTITIES, SEE SHEET 2/10.

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CHECKED	REVISED	STRUCTURE FILE NUMBER	
DEB		1802402	

END CROSSFRAME AND JOINT DETAILS - LOCATION 5

BRIDGE NO. CUY-17-1227
SR 17 OVER IR-480

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

6 / 10

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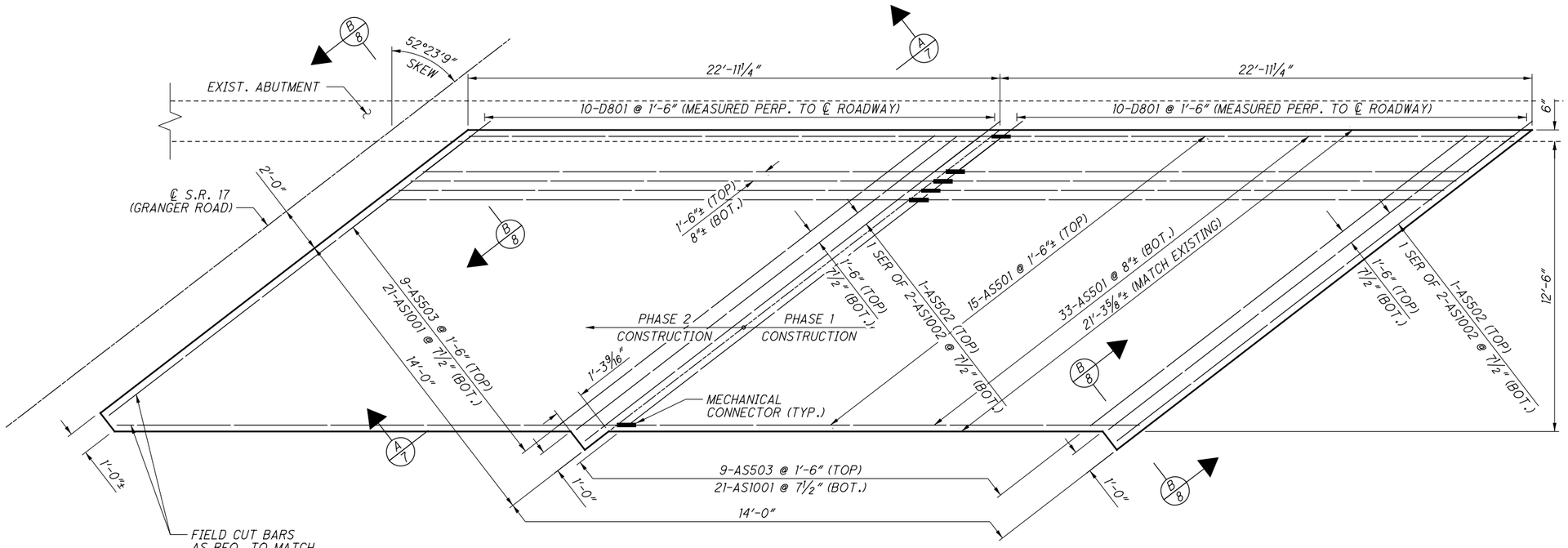
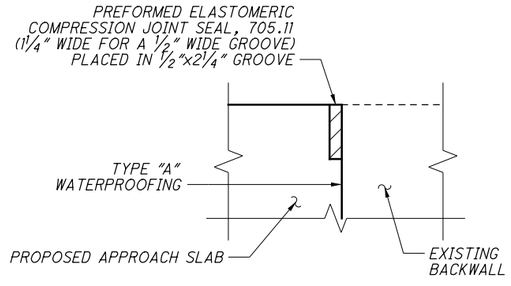
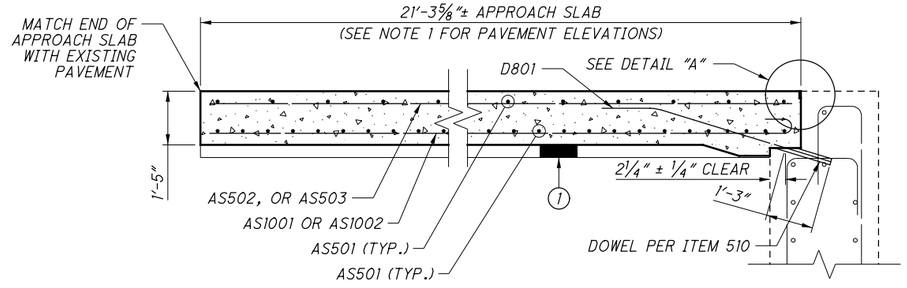


RIGHT REAR APPROACH SLAB



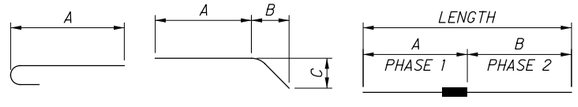
DETAIL "A"



A/7 A/8 APPROACH SLAB LONGITUDINAL SECTION

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	INC
APPROACH SLAB (PAYMENT INCLUDED WITH ITEM 526)								
AS501	48	45'-0"	2253	40	22'-6"	22'-6"		
AS502	2	21'-6"	45	STR				
AS503	18	20'-5"	383	STR				
AS1001	42	21'-11"	3961	16	20'-5 ¾"			
	2 SER	22'-2"			20'-9"			
AS1002	OF	TO	389	16	TO			0'-9 ½"
	2	23'-0"			21'-6 ½"			
D801	20	5'-5"	289	19	4'-1"	1'-0"	1'-0"	
SUB-TOTAL			7320					

BAR REINFORCING DIAGRAMS



TYPE-16 TYPE-19 TYPE-40

NOTES:
- ALL REINFORCEMENT STEEL TO BE EPOXY COATED
- WEIGHTS OF MECHANICAL CONNECTORS ARE NOT INCLUDED IN TABLE.

LEGEND:

(1) ITEM 304 - AGGREGATE, 3" WITHIN LIMITS OF EXISTING APPROACH SLAB

NOTES:

1. PAVEMENT ELEVATIONS: PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL EXISTING PAVEMENT ELEVATIONS AT THE END OF THE APPROACH SLAB AND THE END OF THE DECK. PROPOSED TOP OF APPROACH SLAB ELEVATIONS SHALL MATCH THESE FIELD MEASUREMENTS AS DIRECTED BY THE ENGINEER. FIELD SURVEY SHALL BE PAID FOR UNDER ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN.
2. FOR ADDITIONAL APPROACH SLAB DETAILS AND REINFORCING, SEE STD. DWG. AS-1-15.
3. COST OF ALL REINFORCEMENT AND DOWELS SHALL BE INCLUDED IN THE PRICE BID FOR APPROACH SLABS.

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DESIGNED KGR | DRAWN KGR | REVIEWED TMB | DATE 1/17
CHECKED DEB | REVISED | STRUCTURE FILE NUMBER 1802402

RIGHT REAR APPROACH SLAB DETAILS - LOCATION 5

BRIDGE NO. CUY-17-1227
SR 17 OVER IR-480

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

7 / 10

62
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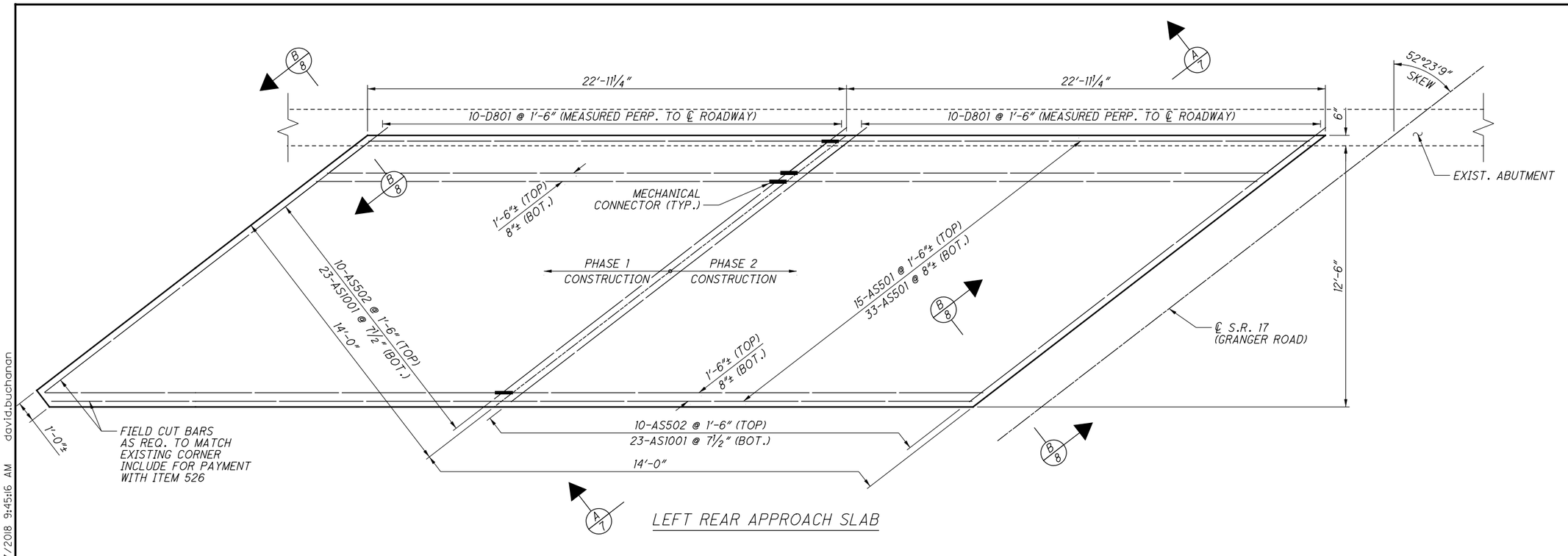
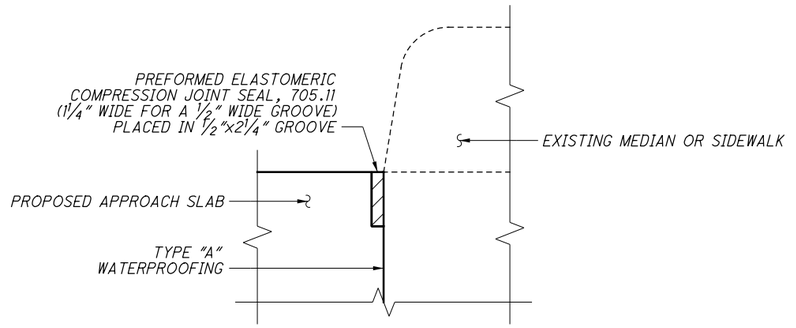


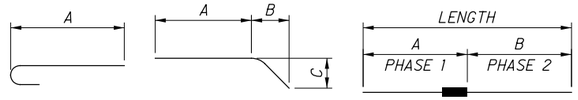
LEFT REAR APPROACH SLAB



B7 B8 B9 B10 APPROACH SLAB JOINT SECTION AT MEDIAN AND SIDEWALK

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	INC
APPROACH SLAB (PAYMENT INCLUDED WITH ITEM 526)								
AS501	48	45'-0"	2253	40	22'-6"	22'-6"		
AS502	20	20'-5"	426	STR				
AS1001	46	21'-11"	4338	16	20'-5 ¾"			
D801	20	5'-5"	289	19	4'-1"	1'-0"	1'-0"	
SUB-TOTAL			7306					

BAR REINFORCING DIAGRAMS



TYPE-16 TYPE-19 TYPE-40

NOTES:
- ALL REINFORCEMENT STEEL TO BE EPOXY COATED
- WEIGHTS OF MECHANICAL CONNECTORS ARE NOT INCLUDED IN TABLE.

NOTES:

1. PAVEMENT ELEVATIONS: PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL EXISTING PAVEMENT ELEVATIONS AT THE END OF THE APPROACH SLAB AND THE END OF THE DECK. PROPOSED TOP OF APPROACH SLAB ELEVATIONS SHALL MATCH THESE FIELD MEASUREMENTS AS DIRECTED BY THE ENGINEER. FIELD SURVEY SHALL BE PAID FOR UNDER ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN.
2. FOR ADDITIONAL APPROACH SLAB DETAILS AND REINFORCING, SEE STD. DWG. AS-1-15.
3. COST OF ALL REINFORCEMENT AND DOWELS SHALL BE INCLUDED IN THE PRICE BID FOR APPROACH SLABS.

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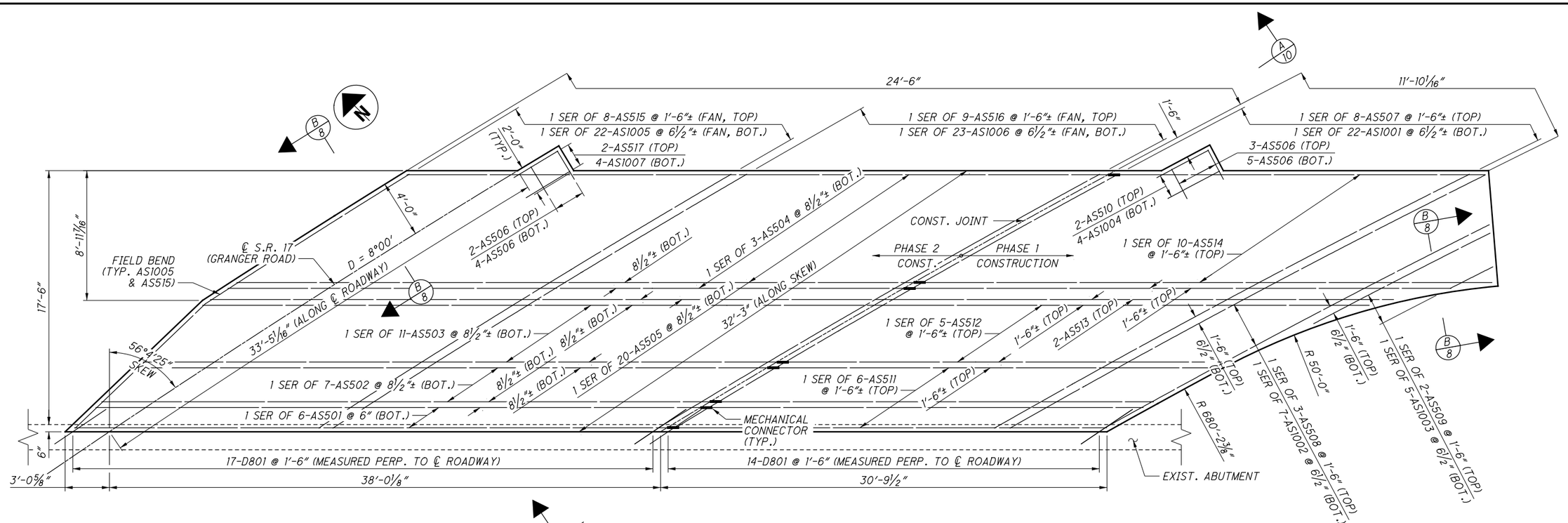
DESIGNED KGR | DRAWN KGR | REVIEWED TMB | DATE 1/17
CHECKED DEB | REVISED | STRUCTURE FILE NUMBER 1802402

LEFT REAR APPROACH SLAB DETAILS - LOCATION 5

BRIDGE NO. CUY-17-1227
SR 17 OVER IR-480

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600



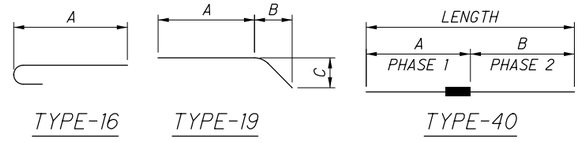
RIGHT FORWARD APPROACH SLAB

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	INC
APPROACH SLAB (PAYMENT INCLUDED WITH ITEM 526)								
AS501 *	1 SER OF 6	71'-5" TO 72'-3"	449	40	30'-6 1/4"	40'-10 1/4" TO 41'-8 1/2"		2"
AS502 *	1 SER OF 7	72'-11" TO 74'-5"	538	40	30'-11 1/2"	41'-11 1/4" TO 43'-5"		3"
AS503	1 SER OF 11	74'-8" TO 80'-7"	891	40	31'-0" TO 34'-3 1/2"	43'-8" TO 46'-3 1/2"		Incr A = 4" Incr B = 3 1/4"
AS504	1 SER OF 3	81'-7" TO 84'-4"	260	40	35'-1 3/4" TO 37'-8 3/4"	46'-5 1/4" TO 46'-7 1/4"		Incr A = 1'-3 1/2" Incr B = 1"
AS505	1 SER OF 20	86'-9" TO 74'-4"	1680	40	40'-0 1/4" TO 26'-0"	46'-8 1/4" TO 48'-4"		Incr A = 1'-3 1/4" Incr B = 1"
AS506	14	2'-4"	34	STR				
AS507	1 SER OF 8	35'-2" TO 37'-0"	301	STR				3 1/4"
AS508	1 SER OF 3	29'-11" TO 36'-7"	104	STR				3'-4"
AS509	1 SER OF 2	2'-2" TO 7'-11"	11	STR				5'-9"
AS510	2	4'-0"	8	STR				
AS511 *	1 SER OF 6	71'-2" TO 74'-5"	455	40	30'-3 3/4" TO 30'-11 1/2"	40'-10 1/4" TO 43'-5 1/4"		Incr A = 1 1/2" Incr B = 6 1/4"
AS512 *	1 SER OF 5	75'-2" TO 80'-3"	405	40	31'-1 3/4" TO 34'-0 1/2"	43'-11 3/4" TO 46'-2 1/2"		Incr A = 8 3/4" Incr B = 6 3/4"

RIGHT FORWARD APPROACH SLAB

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	INC
AS513	1	82'-5"	86	40	35'-11"	46'-6"		
AS514	1 SER OF 10	74'-4" TO 86'-6"	839	40	26'-0" TO 39'-10 1/4"	48'-4" TO 46'-8"		Incr A = 1'-6 1/2" Incr B = 1'-9 3/4"
AS515 *	1 SER OF 8	29'-0" TO 33'-1"	259	STR				7"
AS516 *	1 SER OF 9	33'-5" TO 35'-1"	322	STR				2 1/2"
AS517	2	3'-6"	7	STR				
AS1001 *	1 SER OF 22	36'-8" TO 38'-7"	3558	16	35'-2 1/2" TO 37'-1 1/2"			1"
AS1002	1 SER OF 7	31'-5" TO 38'-7"	1054	16	30'-0 1/4" TO 37'-1 1/2"			1'-2 1/4"
AS1003 *	1 SER OF 5	4'-8" TO 15'-1"	212	16	3'-3 1/4" TO 13'-7 3/4"			2'-7"
AS1004	4	4'-0"	69	STR				
AS1005 *	1 SER OF 22	30'-6" TO 34'-7"	3077	16	29'-0 1/2" TO 33'-1 1/2"			2 1/4"
AS1006 *	1 SER OF 23	34'-9" TO 36'-7"	3530	16	33'-3 1/2" TO 35'-1 1/2"			1"
AS1007	4	3'-6"	60	STR				
D801	31	5'-5"	448	19	4'-1"	1'-0"	1'-0"	
SUB-TOTAL			18657					

BAR REINFORCING DIAGRAMS



TYPE-16 TYPE-19 TYPE-40

NOTES:
- ALL REINFORCEMENT STEEL TO BE EPOXY COATED
- ** DENOTES MECHANICAL CONNECTOR AT PHASE CONSTRUCTION JOINT. WEIGHTS OF CONNECTORS ARE NOT INCLUDED IN TABLE.
- * ORDER THESE BARS TO THE LENGTHS SHOWN IN THE BAR LIST. FIELD CUT BARS AS REQUIRED TO FIT FIELD CONDITIONS.

NOTES:

1. PAVEMENT ELEVATIONS: PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL EXISTING PAVEMENT ELEVATIONS AT THE END OF THE APPROACH SLAB AND THE END OF THE DECK. PROPOSED TOP OF APPROACH SLAB ELEVATIONS SHALL MATCH THESE FIELD MEASUREMENTS AS DIRECTED BY THE ENGINEER. FIELD SURVEY SHALL BE PAID FOR UNDER ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN.
2. FOR ADDITIONAL APPROACH SLAB DETAILS AND REINFORCING, SEE STD. DWG. AS-1-15.
3. COST OF ALL REINFORCEMENT AND DOWELS SHALL BE INCLUDED IN THE PRICE BID FOR APPROACH SLABS.

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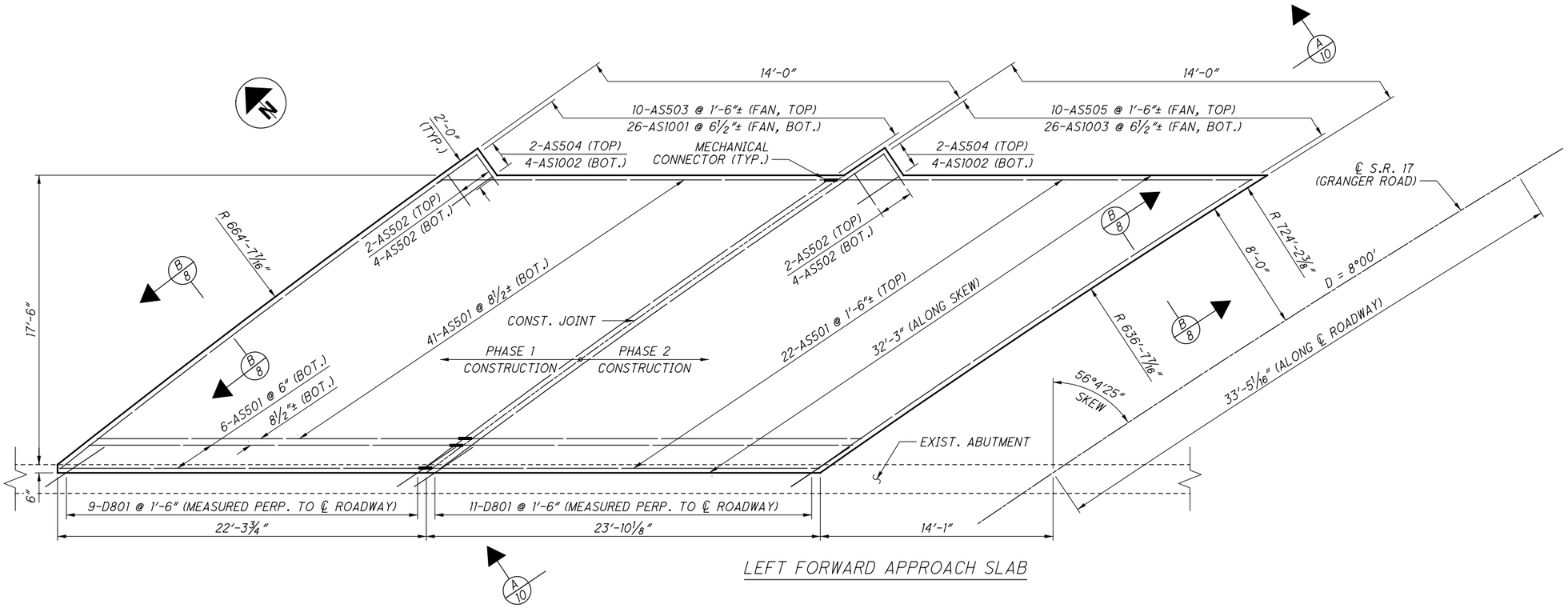
RIGHT FORWARD APPROACH SLAB DETAILS - LOCATION 5

BRIDGE NO. CUY-17-1227
SR 17 OVER IR-480

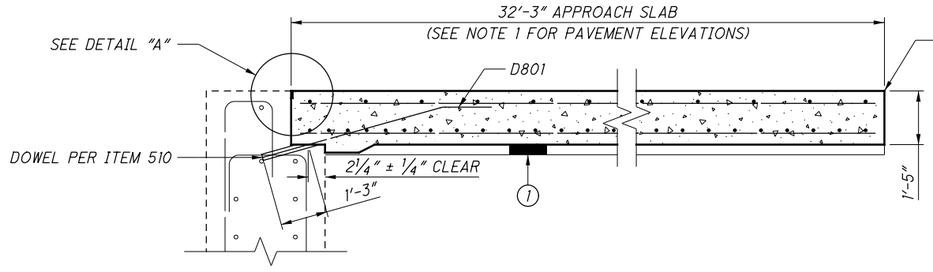
D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

9 / 10

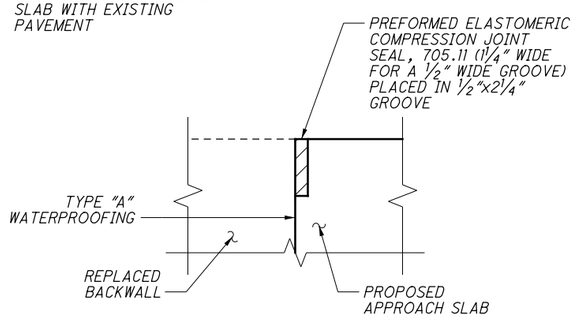
64 / 65



LEFT FORWARD APPROACH SLAB



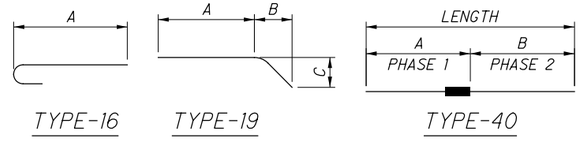
A 9 / A 10 APPROACH SLAB LONGITUDINAL SECTION



DETAIL "A"

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	INC
APPROACH SLAB (PAYMENT INCLUDED WITH ITEM 526)								
AS501 *	69	49'-0"	3526	40	23'-11"	25'-1"		
AS502	12	2'-4"	29	STR				
AS503 *	10	30'-1"	314	STR				
AS504	4	3'-0"	13	STR				
AS505 *	10	31'-6"	329	STR				
AS1001 *	26	31'-7"	3533	16	30'-1¾"			
AS1002	8	3'-0"	103	STR				
AS1003 *	26	33'-0"	3692	16	31'-6½"			
D801	20	5'-5"	289	19	4'-1"	1'-0"	1'-0"	
SUB-TOTAL			11828					

BAR REINFORCING DIAGRAMS



TYPE-16 TYPE-19 TYPE-40

NOTES:
- ALL REINFORCEMENT STEEL TO BE EPOXY COATED
- ** DENOTES MECHANICAL CONNECTOR AT PHASE CONSTRUCTION JOINT. WEIGHTS OF CONNECTORS ARE NOT INCLUDED IN TABLE.
- * ORDER THESE BARS TO THE LENGTHS SHOWN IN THE BAR LIST. FIELD CUT BARS AS REQUIRED TO FIT FIELD CONDITIONS.

LEGEND:

(1) ITEM 304 - AGGREGATE, 3" WITHIN LIMITS OF EXISTING APPROACH SLAB

NOTES:

1. PAVEMENT ELEVATIONS: PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN ALL EXISTING PAVEMENT ELEVATIONS AT THE END OF THE APPROACH SLAB AND THE END OF THE DECK. PROPOSED TOP OF APPROACH SLAB ELEVATIONS SHALL MATCH THESE FIELD MEASUREMENTS AS DIRECTED BY THE ENGINEER. FIELD SURVEY SHALL BE PAID FOR UNDER ITEM 623 - CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN.
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LEFT FORWARD APPROACH SLAB DETAILS - LOCATION 5
BRIDGE NO. CUY-17-1227
SR 17 OVER IR-480

D12-BH-FY2018
MISCELLANEOUS
PID No. 98600

10 / 10

65 / 65

SPECIAL PROVISIONS

WATERWAY PERMITS CONDITIONS

C-R-S: D12 BH FY2018

PID: 98600

Date: January 16, 2018

1. Waterway Permits Time Restrictions:

Regional General Permit (RGP) A (Linear Transportation Projects) is authorized for D12 BH FY2018, PID 98600. A copy of the RGP and authorization letter (ID 2017-01030-GRA) shall be kept at the work site at all times and made available to all contractors and subcontractors. The permit is effective starting: January 16, 2018. The permit expires: October 24, 2019.

For authorized work in aquatic resources (including streams, wetlands, jurisdictional ditches, captured streams, lakes, ponds), the Department will consider the Contractor's submission of a reauthorization to the waterway permit expiration date based on project constraints. If more than one permit is authorized for the project, then all permits become invalid once the first permit expires. In order for the request to be considered, the Contractor must submit a justification to the Engineer at least 90 days prior to the waterway permit expiration date. The Engineer will submit the request for a time extension to the Ohio Department of Transportation, Office of Environmental Services, Waterway Permits Unit (ODOT-OES-WPU) for consideration and coordination with the U.S. Army Corps of Engineers (USACE), Ohio Environmental Protection Agency (OEPA), U.S. Coast Guard (USCG), U.S. Fish and Wildlife Service (USFWS), and Ohio Department of Natural Resources (ODNR) as appropriate.

2. Deviations From Permitted Construction Activities

No deviation from the requirements for work in aquatic resources depicted in the plans, Special Provisions, and/or Working Drawings may be made unless a modification has been submitted to ODOT-OES-WPU and approved by the appropriate agencies (i.e., USACE, OEPA, USCG, ODNR, and USFWS).

NOTE: Plan sheets submitted with the Pre-Construction Notification (and/or other applicable waterway permit applications) were approved by the USACE/OEPA in accordance with **the Section 404 Pre-construction Notification** and are included in these Special Provisions.

For emergency situations resulting in unanticipated impacts to aquatic resources, provide notification (verbal or written) to the Engineer as soon as possible following discovery of the situation. Written notification to the Engineer and notification to the ODOT-OES-WPU (614-466-7100) must be made within 24 hours.

For non-emergency situations, notify the Engineer in writing for submission to the ODOT-OES-WPU (614-466-7100) for consideration and coordination with the appropriate agencies. Notification must be made at least 90 days prior to planned, non-permitted activities. Consideration of the requested deviation is at the discretion of the Director and must be coordinated with the appropriate regulatory agencies.

3. In-Stream Work Restrictions

Work in the following aquatic resources is further restricted as follows:

Stream Name /Description	Location	Work restriction dates (No in-stream work permitted)
Kellogg Creek	STA 187+50	September 15-June 30*

*Restriction dates do not apply if the stream has been dewatered prior to April 15.

In-stream work has been defined as the placement and/or removal of fill materials (temporary or permanent) below ordinary high water of a stream. Examples of "fill" include, but are not limited to:

bridge piers, abutments, culverts, rock channel protection, scour protection, and temporary access fills.

Fills placed within a stream identified in the above table (outside of the work restriction dates) can continue to be worked from during the work restriction dates, but cannot be expanded, removed, or otherwise modified (below ordinary high water) until once again outside of the work restriction dates.

4. Materials:

Materials utilized in or adjacent to aquatic resources for temporary or permanent fill or bank protection shall consist of suitable material free from toxic contaminants in other than trace quantities. Broken asphalt is specifically excluded. Chromated Copper Arsenate (CCA), creosote, and other pressure treated lumber shall not be used in structures that are placed in aquatic resources.

5. Cultural Resources

Per CMS 107.10, if archeological sites, historical sites, or human remains are discovered, cease all work in the immediate area and notify the Engineer who will immediately contact the ODOT-District Environmental Coordinator and ODOT-OES-Cultural Resource Section at 614-466-7100. In the event of human remains are identified by OES-Cultural Resources Section, the Engineer shall also contact the Lake County Sheriff's Office at (440) 350-5517.

6. Aquatic Resource Demarcation:

All aquatic resources indicated on the plans shall be demarcated in the field as per SS 832 prior to site disturbance. The remainder of the aquatic resources must be demarcated as to ensure avoidance. The fence shall remain in place and be maintained throughout the construction process. Following the completion of the project, the fence and posts shall be removed.

Table D is attached and includes detailed fill quantities that are authorized within the aquatic resources.

7. Spill containment:

Provide and Maintain an Oil Spill Kit with a minimum capacity of 65 gallons. The Spill Kit shall contain:

- 6 - 3 in. X 8 ft. Oil only socks
- 4 - 18 in. X18 in. Oil only pillows
- 2 - 5 in. X 10ft. Booms
- 50 - 16in. X 20 in. Oil only pads
- 10- Disposable Bags
- 1- 65 Gallon drum with lid
- 25 pounds of Granular Oil Absorbent

The Oil Spill Kit shall be located within 150 feet of any equipment working in a stream or wetland. The oil Spill Kit shall be maintained for the life of the contract. Any materials utilized during the project will be replaced within 48 hours. All costs associated with furnishing and maintaining the above referenced spill containment kit is incidental to work.

8. Blasting:

State law requires notification to the Ohio Department of Natural Resources should blasting be required

within or near stream channels (See ORC 1533.58 & CMS 107.09). Notify the Engineer, in writing, a minimum of 30 days in advance of blasting, for submission to ODOT-OES-WPU (614-466-7100) for coordination with ODNR.

9. Bridge Inspection:

Prior to the removal of bridge structures, the underside must be carefully examined for the presence of birds and bats. Should any birds or bats be found roosting on the underside of the bridge, the Contractor is required to notify the Engineer for coordination with ODOT-OES-WPU (614-466-7100).

10. Project Inspection:

Inspection of Work may include inspection by representatives of other government agencies or railroad corporations that pay a portion of the cost of the Work or regulate the Work through State and Federal law. Comments from the representatives of these agencies shall be directed to the Engineer. Please forward a copy to ODOT-OES-WPU (614-466-7100).

11. Excavation Activities:

Excavated material will be placed at an upland site and disposed of in such a manner that sediment and runoff to streams and other aquatic resources is controlled and minimized. Additionally, no more than incidental fallback into jurisdictional waters of the U.S. is permitted during the excavation process. If any changes to the proposed work are deemed necessary, you must notify and coordinate with the ODOT-OES-WPU (614-466-7100).

12. Temporary Fill Activities

Temporary fill in streams is not authorized for this project. Temporary fill includes, but is not limited to, causeways, work pads, cofferdams, sheet piling, temporary bridges, and construction equipment. Any unauthorized temporary impacts that occur will be in violation of Section 404 and 401 of the Clean Water Act.

13. Construction Completion Certification:

Upon completion of the work, notify the Engineer. The USACE Construction Completion Certification must be completed and signed by the Engineer then provided via US mail or email to:

Waterway Permits Program Manager
ODOT - Office of Environmental Services
1980 West Broad Street, Mail Stop 4170
Columbus, Ohio 43223
Adrienne.Earley@dot.ohio.gov

A copy of the certification has been attached to these Special Provisions.

15. Demolition Debris:

The intentional discharge of demolition debris from any structure (including but not limited to bridges,

culverts, abutments, wing walls, piers) into Kellogg Creek is not authorized for this project. If any demolition debris inadvertently falls into Kellogg Creek, it must be removed immediately. Notify the Engineer immediately in writing of any inadvertent fill discharged into Kellogg Creek. Also contact ODOT-OES-WPU at 614-466-7100 if any unintentional discharge occurs.

Version: 2017

Pre-Construction Notification
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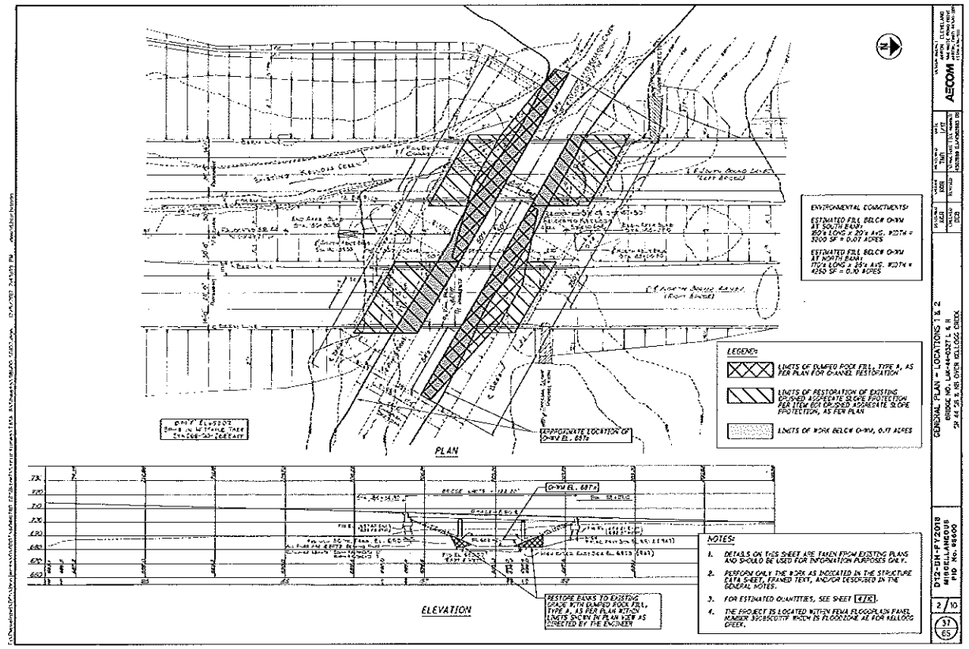
TABLE D. DISCHARGE AND FILL QUANTITIES

Slope Protection

STREAMS								Permanent Fill Within/Below OHWM												Total Permanent Fill Within OHWM						TOTAL IMPACT (Upstream to Downstream)	TOTAL NEW IMPACT (Total Impact Minus Pre-Existing Impacts)
Aquatic Resource ID	Station	Description of Impacts/Activities Within OHWM	Total Length Within Project Area	Stream Width (LF)	Stream Depth (LF)						Proposed RCP			Proposed Earthen, Granular, or Embankment Fill													
											Length (LF)	Area (AC)	Volume (CY)	Length (LF)	Area (AC)	Volume (CY)				Length (LF)	Area (AC)	Volume (CY)				Length (LF)	Length (LF)
Kellogg Creek	187+50	RCP & Crushed Aggregate	[illegible] LF	23 LF	3 LF						252.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	[illegible]	[illegible]				[illegible]	[illegible]
							SUM:				[illegible]	0.11	[illegible]	[illegible]	[illegible]	[illegible]				[illegible]	0.17	[illegible]				[illegible]	[illegible]

LF = linear feet; AC = acres; CY = cubic yards; RCP = rock channel protection or the like (specify if different, ie. concrete block matting); NA = Not Applicable



US Army Corps of Engineers
Huntington District

Permit Number: 2017-01030-GRA

Name of Permittee: Ohio Department of Transportation

Date of Issuance: January 2, 2018

Upon completion of the activity authorized by this permit and any mitigation required by the permit, sign this certification and return it to the following address:

U.S. Army Corps of Engineers - Huntington District
Building 10/ Section 10
PO Box 3990
Columbus, OH 43218-3990

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above-referenced permit has been completed in accordance with the terms and conditions of the said permit, and required mitigation was completed in accordance with the permit conditions.

_____ _____

Signature of Permittee Date