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.-BH-FY2013 MISCELLANEOU

SCALE IN MILES

LOCATION MAP

LATITUDE: 41° 24' 54" N LONGTUDE: 81° 36' 54" W (ODOT DISTRICT 12)
WOTE: FOR COORDINATES PER LOCATION, SEE SHEET 5 OF 84)

UNDERGROUND UTILITIES CONTACT BOTH SERVICES CALL TWO WORKING DAYS BEFORE YOU DIG CALL 1-800-362-2764 FOHDE TOLL FREE CONTACT BOTH SERVICES CALL TWO WORKING DAYS REFORE FOR YOU DIG KEVIN M. ROHDE E-73234

ENGINEERS SEAL:

DATE: 2/7/13

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY
OIL & GAS PRODUCERS PROTECTIVE
SERVICE CALL: 1-800-925-0988

PLAN PREPARED BY:

ODOT - DISTRICT 12 PLANNING & ENGINEERING DEPARTMENT 5500 TRANSPORTATION BLVD. GARFIELD HEIGHTS, OHIO 44125

STATE OF OHIO DEPARTMENT OF TRANSPORTATION

D12 BH FY2013 MISCELLANEOUS

LOCATION	BRIDGE NUMBER	STRUCTURAL FILE NUMBER	CITY / TOWNSHIP
1	CUY-71-0000	1803549	STRONGSVILLE / BRUNSWICK
2	CUY-480-0283	1814079	NORTH OLMSTED
3	LAK-90-0528 L&R	4303660 & 4303695	WILLOUGHBY HILLS
4	LAK-90-0599 L&R	4303784 & 4303814	WILLOUGHBY
5	LAK-90-0711	4303962	WILLOUGHBY
6	LAK-90-1151	4304233	KIRTLAND HILLS
7		REMOVED FROM PL	ÀNS
8		REMOVED FROM PL	ANS
9	CUY-422-1365 R	1814664	WARRENSVILLE HTS
10	CUY-17-0449	1802054	CLEVELAND
n	LAK-2-0055 L&R	4300092 & 4300122	WICKLIFFE
12	LAK-2-0255 L&R	4300300 & 4300335	EASTLAKE
13	LAK-2-1354 ES	4301293	PAINESVILLE TWP
14	LAK-306-0518	4303997	WILLOUGHBY

INDEX OF SHEETS:

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MAINTENANCE OF TRAFFIC	15-25, 17A	LOCATION 8 - REMOVED FROM PLANS		
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LOCATION 4	55-57			

	STANDARD CONSTRUCTIO	N DRAWINGS	SPECIFICATIONS
GR-1.1-	7/20/12 MT-95.30 7/20/12		800 1/18/13
GR-2.1	7/20/12 147-95.31 7/20/12		821 4/20/12
GR-3.1	7/20/12 MT-95.32 7/20/12		832 5/05/09
	WT-95.40 1/20/12		847 10/21/11
BR-2-98	7/20/12 141-95.41 1/20/12		848 10/21/11
EXJ-2-81	7/19/02 41-95,50 7/20/12	l	898 10/21/11
EXJ-4-87	7/19/02 MT-99.30 4/15/11		921 4/20/12
GSD-1-96	7/19/02 MT-101.70 4/15/11		SPECIAL
** PCB-91	7/19/02 MT-102.10 1/20/12		PROVISIONS
VPF-1-90	4/15/11 NT-102.20 7/20/12		Ph071310765
	MT-105.10 7/20/12		
	MT-110.10 1/20/12	Neve	

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF VARIOUS REPAIRS INCLUDING PATCHING AND SEALING CONCRETE STRUCTURES, ABUTMENT BEARING REPAIRS, WEARING SURFACE REPLACEMENTS, EXPANSION JOINT REPAIRS, 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

2010 SPECIFICATIONS

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

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEET 23, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED MYMS-LC DEPUTY DIRECTOR

DATE 2-13-13 DIRECTOR DEPARTMENT OF TRANSPORTATION

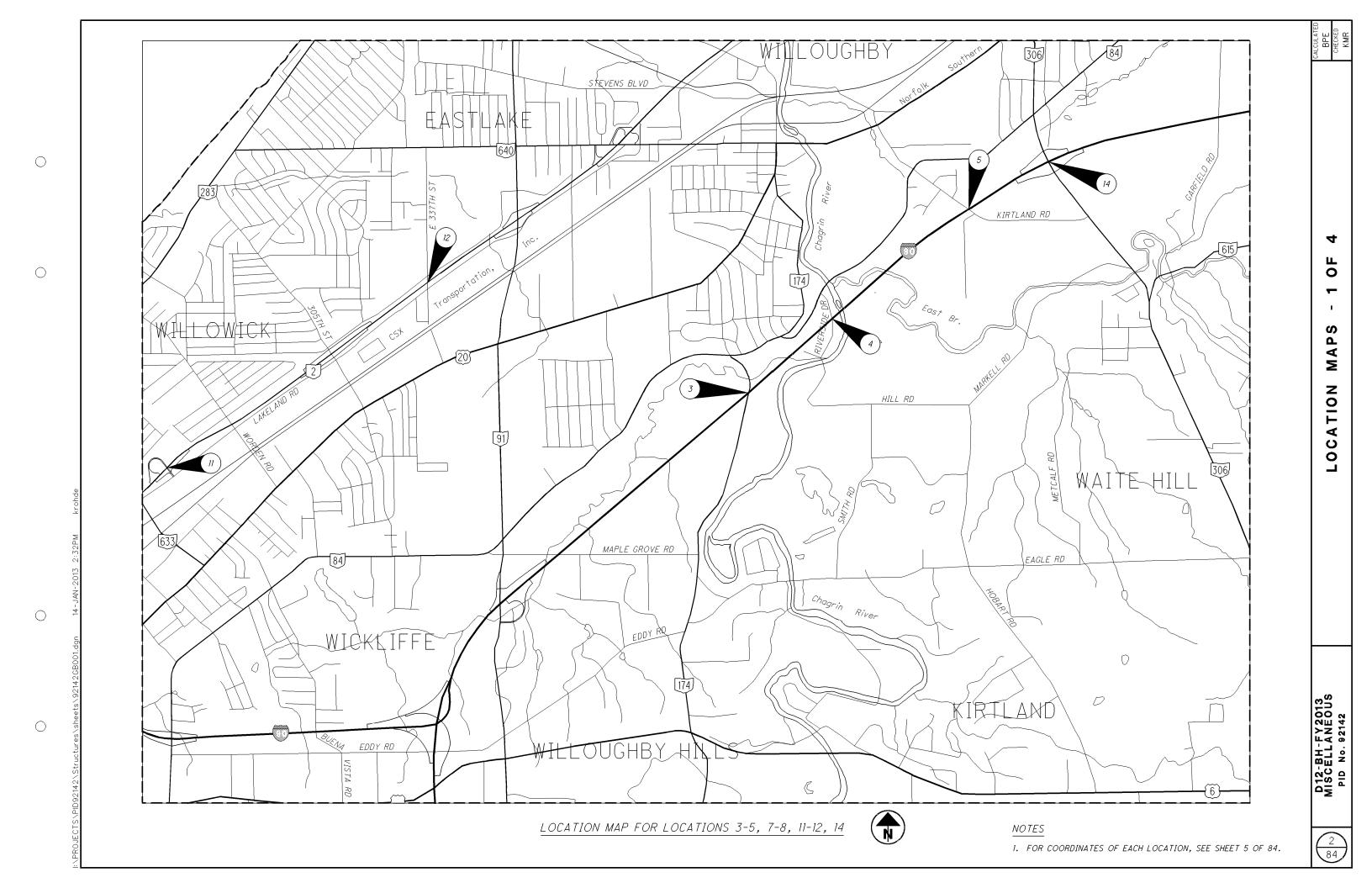


D12 BH FY2013 Miscellaneous

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LOCATION MAPS - 2 OF 4

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D12-BH-FY2013 MISCELLANEOUS PID No. 92142

. 3

BLACKBROOK RD

13

PAINES INE TWP

20

NORFOLK SOUTHERN CORPORATION

LOCATION MAP FOR LOCATION 13



LOCATION MAP FOR LOCATION 6

<u>NOTES</u>

1. FOR COORDINATES OF EACH LOCATION, SEE SHEET 5 OF 84.

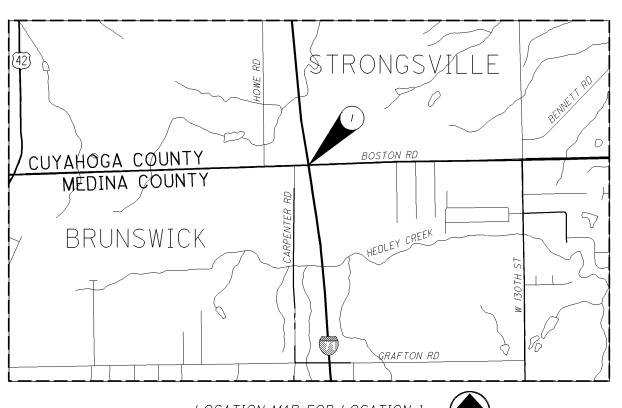


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MAPS LOCATION

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LOCATION MAP FOR LOCATION 1



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NOTES

WARRENSVILLE
HEIGHTS

MILES RD

LOCATION MAP FOR LOCATION 9

LOCATION	BRIDGE NUMBER	STRUCTURAL FILE NUMBER	DESCRIPTION	LATITUDE	LONGITUDE
1	CUY-71-0000	1803549	IR 71 UNDER CR-127 (BOSTON RD.)	41°16′34″ N	81°48′23″ W
2	CUY-480-0283	1814079	IR 480 OVER CR-170 (FITCH RD.)	41°24′17″ N	81°55′16″ W
3	LAK-90-0528 L&R	4303660 & 4303695	IR 90 OVER SR 174	41°37′14″ N	81°24′36″ W
4	LAK-90-0599 L&R	4303784 & 4303814	IR 90 OVER RIVERSIDE DR	41°37′37″ N	81°24′00″ W
5	LAK-90-0711	4303962	IR 90 UNDER KIRTLAND RD	41°38′11″ N	81°23′01″ W
6	LAK-90-1151	4304233	IR 90 UNDER KING MEMORIAL RD	41°38′54″ N	81°18′05″ W
7			REMOVED FROM PLANS		
8			REMOVED FROM PLANS		
9	CUY-422-1365 R	1814664	US 422EB MAINLINE OVER US 422WB TO GO IR 480WB/27ISB RAMP	41°25′48″ N	81°30′06″ W
10	CUY-17-0449	1802054	SR 17 OVER RAMP IR 480 WB TO SR 237 SB	41°25′07″ N	81°49′48″ W
11	LAK-2-0055 L&R	4300092 & 4300122	SR 2 OVER LLOYD RD CONNECTOR RAMP	41°36′50″ N	81°28′47″ W
12	LAK-2-0255 L&R	4300300 & 4300335	SR 2 OVER E 337TH ST	41°37′50″ N	81°26′54″ W
13	LAK-2-1354 ES	4301293	SR 2 WB TO SR 44 SB RAMP OVER SR 2	41°43′20″ N	81°16′56″ W
14	LAK-306-0518	4303997	SR 306 OVER IR 90	41°38′26″ N	81°22′26″ W

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PROJECT DESCRIPTION

VARIOUS REPAIRS INCLUDING PATCHING AND SEALING CONCRETE STRUCTURES, ABUTMENT BEARING REPAIRS, WEARING SURFACE REPLACEMENT, EXPANSION JOINT REPAIRS, 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 "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICA ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 17TH EDITION, 2002 AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

DESIGN DATA

CONCRETE CLASS QSC2 - 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

RIGHT OF WAY

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

STREAM NOTE

NO EQUIPMENT STORAGE IS ALLOWED BELOW THE ORDINARY HIGH WATER MARK OF THE STREAM. 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

THIS NOTE APPLIES TO ALL LOCATIONS EXCEPT FOR LOCATION 3, LAK-90-0528L, AND LOCATION 9, CUY-422-1365R:

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.

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 ±.

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 2010 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

THE EXISTING PLANS ARE ALSO AVAILABLE ONLINE THROUGH THE FOLLOWING ODOT WEB SITE:

http://www.dot.state.oh.us/Divisions/ContractAdmin/Contracts/Pages/designfiles.aspx

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:

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

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 2010 CONSTRUCTION AND MATERIAL SPECIFICATIONS IS INTENDED.

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.

LIMITATIONS OF OPERATIONS

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

- 1. MAINTENANCE OF TRAFFIC RESTRICTIONS AT LOCATION 1, CUY-71-0000, SHALL BE LIMITED TO A TOTAL DURATION OF 60 CALENDER DAYS.
- 2. MAINTENANCE OF TRAFFIC LANE RESTRICTIONS AT LOCATION 3, LAK-90-0528 L, SHALL BE LIMITED TO A TOTAL OF TWO WEEKENDS. DURING EACH WEEKEND, THE MOT LANE RESTRICTIONS PER SHEETS 20-22 MAY BE IMPLEMENTED FROM FRIDAY AT 6:30PM TO MONDAY AT 6:00AM. ALL LANES MUST BE OPEN TO TRAFFIC PATTERNS WHEN LANE RESTRICTIONS ARE NOT PERMITTED.
- 3. MAINTENANCE OF TRAFFIC RESTRICTIONS AT LOCATION 9, CUY-422-1365R, SHALL BE LIMITED TO A TOTAL OF ONE WEEKEND. THE FULL CLOSURE MAY BE IMPLEMENTED FROM FRIDAY AT 6:30PM TO MONDAY AT 5:30AM. RAMP TRAFFIC MUST BE OPEN TO TRAFFIC WHEN RESTRICTIONS ARE NOT PERMITTED.
- 4. MAINTENANCE OF TRAFFIC RESTRICTIONS AT LOCATION 10, CUY-17-0449, SHALL BE LIMITED TO A TOTAL DURATION OF 60 CALENDER DAYS.
- 5. FOR ADDITIONAL MAINTENANCE OF TRAFFIC RESTRICTIONS, REFER TO THE MAINTENANCE OF TRAFFIC SHEETS 15 THRU 25.
- 6. CONTRACTOR SHALL PREVENT ANY DEBRIS FROM ENTERING ANY STREAM, RIVER, CHANNEL, OR ANY OTHER BODY OF WATER.

EXISTING PAVEMENT MARKINGS

ANY EXISTING PAVEMENT MARKINGS, INCLUDING RAISED PAVEMENT MARKINGS, THAT ARE EFFECTED BY THE PROPOSED WORK SHALL BE REPLACED IN-KIND. QUANTITIES HAVE BEEN PROVIDED IN THE GENERAL SUMMARY AND ARE TO BE USED AS DIRECTED BY THE ENGINEER.

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EXISTING LIGHTING VERIFICATION

THE LOCATIONS OF EXISTING LIGHTING ITEMS, CONDUIT, AND DUCT CABLE SHOWN ON THE PLANS HAVE BEEN OBTAINED VIA EXISTING RECORDS. THE CONTRACTOR IS REQUIRED TO VERIFY THE EXISTING LIGHTING COMPONENTS AND IS CAUTIONED TO FIELD VERIFY ALL CIRCUITS PRIOR TO COMMENCING WORK.

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.

AT&T 13630 Lorain Ave., 2nd Floor Cleveland, OH 44111 Attn: James Janis Design Manager Phone: 216.476.6142 Fax: 216.476.6013

Buckeye Pipeline Co. 5002 Buckeye Rd. Emmaus, PA 18049 Attn: Donald Samala Phone: 484.232.4303 Fax: 484.232.4289

Illuminating Co. 6896 Miller Rd. Brecksville, OH 44141 Attn: Mark Robinson Phone: 440.717.6845 Fax: 440.546.8780 Cell: 440.550.9001 Email:

robinsonme@firstenergycorp.com MCI-Worldcom 120 Ravine St. Akron, OH 44303 Attn: Al Guest Phone: 330,253,8267

Northeast Ohio Regional Sewer 3900 Euclid Ave. Cleveland, OH 44115-2504 Attn: Richard Switalski Phone: 216.881.6600 Fax: 216.881.2738

Ohio Edison 730 South Ave. Youngstown, OH 44646 Attn: William Speece Phone: 330.740.7635 Fax: 330.740.7518 City of Cleveland Division of Water 1201 Lakeside Ave. Cleveland, OH 44114 Attn: Guy Singer Phone: 216.664.2444, Ext. 5555

City of Cleveland Division of Water Pollution Control 12302 Kirby Rd. Cleveland, OH 44108 Attn: Rachid Zoghaib Phone: 216.664.3785

Fax: 216.664.2378

Columbia Gas of Ohio 7080 Fry Road. Middleburg Heights, Ohio 44130 Attn: Dan Suren Phone: 440.891.2428 Fax: 3440.891.2477 Email: dsuren@nisource.com

Dominion East Ohio 320 Springside Dr. Akron, OH 44333 Attn: Lawrence K. Duffy Phone: 330.664.2761 Fax: 330.664.2695

Email: lawrence.k.duffy@dom.com

Windstream 1111 Superior Ave. Suite #500 Cleveland, Ohio 44114 Attn: Rodger Maddern Phone: 440.274.0209

Rodger.Maddern@windstream.com

THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UTILITIES IN THE WORK AREAS.

CLEARING AND GRUBBING

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 COMPLETION OF THE ABOVE WORK IS INCLUDED IN ITEM 201 – CLEARING AND GRUBBING

ASBESTOS ABATEMENT

AN ASBESTOS SURVEY WAS CONDUCTED ON THE CUY-71-0.00 BRIDGE OVER BOSTON ROAD AND THE CUY-17-4.49 RAMP BRIDGE OVER IR-480 WESTBOUND AND WAS COMPLETED ON DECEMBER 19, 2012 BY A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST FROM HAZCORP ENVIRONMENTAL SERVICES, INC. THE SURVEY DETERMINED THAT NO ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE.

A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS WITH SECTIONS I-IV, VI AND VII COMPLETED IS INCLUDED WITH THE BID PACKAGE. THE CONTRACTOR WILL COMPLETE SECTIONS V, AND VIII-XVIII OF THE FORM AND SUBMIT THE COMPLETED FORM TO THE LOCAL AIR AUTHORITY AT LEAST TEN (10) DAYS PRIOR TO RECONSTRUCTION OF THE BRIDGES. THE CONTRACTOR WILL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER. THE LOCAL AIR AUTHORITY IS:

RAYMOND BROUSSARD CITY OF CLEVELAND DEPARTMENT OF HEALTH & WELFARE 1925 ST. CLAIR AVENUE CLEVELAND, OHIO 44114

THE CONTRACTOR WILL FURNISH ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE, SUBMIT, AND COMPLY WITH THE OEPA NOTIFICATION FORM. PAYMENT OF THIS WORK WILL BE INCLUDED WITH ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN "A" OR "B".

<u>ITEM 202 – PORTIONS OF STRUCTURE REMOVED, AS PER PLAN</u> <u>"A"</u>

<u>ITEM 202 – PORTIONS OF STRUCTURE REMOVED, AS PER PLAN</u> <u>"B"</u>

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. SAW CUTTING SHALL BE INCLUDED IN THE PAYMENT FOR ITEM 202 – PORTIONS OF STRUCTURE REMOVED.

LOCATION 1, CUY-71-0000: THIS ITEM OF WORK SHALL INCLUDE THE COMPLETE REMOVAL OF THE CONCRETE PARAPETS (INCLUDING PARAPET FENCE), UNSOUND CONCRETE AT SIDEWALK CURB, SIDEWALK REMOVAL AT BRIDGE LIMITS, TRIMMING OF BRIDGE DECK JOINT, AND TOP OF ABUTMENT BACKWALL. REMOVAL LIMITS ARE AS SHOWN IN THE PLANS. REINFORCING STEEL EXTENDING FROM THE PORTIONS OF THE SUPERSTRUCTURE AND WINGWALL SHALL ALSO BE CUT FLUSH EXCEPT AT SIDEWALK REMOVAL AT BRIDGE LIMITS. ALL EXISTING REINFORCEMENT SHALL BE REMOVED EXCEPT AS NOTED OTHERWISE. ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE WORK AT LOCATION 1 SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 202 – PORTIONS OF STRUCTURE REMOVED, AS PER PLAN "A".

LOCATION 10, CUY-17-0449: THIS ITEM OF WORK SHALL INCLUDE THE COMPLETE REMOVAL OF THE CONCRETE PARAPETS, INCLUDING PARAPET FENCE. REMOVAL LIMITS ARE AS SHOWN IN THE PLANS. REINFORCING STEEL EXTENDING FROM THE PORTIONS OF THE SUPERSTRUCTURE AND WINGWALL TO REMAIN SHALL BE SALVAGED. CONTRACTOR SHALL WORK CAREFULLY TO PROTECT REINFORCING STEEL THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE WORK AT LOCATION 10 SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 202 – PORTIONS OF STRUCTURE REMOVED, AS PER PLAN "B".

ITEM 202 - APPROACH SLAB REMOVED, AS PER PLAN

LOCATION 1, CUY-71-0000: THIS ITEM OF WORK SHALL INCLUDE THE PARTIAL REMOVAL OF THE CONCRETE APPROACH SLABS (INCLUDING ASPHALT WEARING SURFACE) AS SHOWN IN THE PLANS. SAW CUT TO PROVIDE A NEAT JOINT AT THE REMOVAL LIMITS. REINFORCING STEEL EXTENDING FROM THE PORTIONS OF THE APPROACH SLAB TO REMAIN SHALL BE CUT FLUSH.

ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE WORK AT LOCATION 1 SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 202 – APPROACH SLAB REMOVED, AS PER PLAN.

ITEM 202 - PIPE REMOVED, 24" AND UNDER, AS PER PLAN

LOCATION 2, CUY-480-0283 & LOCATION 10, CUY-17-0449: THIS ITEM OF WORK SHALL INCLUDE THE REMOVAL OF THE 6" HELICAL CORRUGATED STEEL PIPE AS SHOWN IN THE PLANS. PIPE REMOVAL AND REAMING SHALL EXTEND 1'-0" INTO THE EXISTING ABUTMENT WEEP HOLE. ALL DEBRIS SHALL BE REMOVED FROM THE WEEP HOLE PRIOR TO PLACEMENT OF THE PROPOSED PIPE.

ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE WORK AT LOCATIONS 2 & 10 SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 202 – PIPE REMOVED, 24" AND UNDER, AS PER PLAN.



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ITEM 203 - EMBANKMENT, AS PER PLAN

THIS ITEM INCLUDES PLACING EMBANKMENT PER CMS 203.

LOCATION 1, CUY-71-0000: THE INTENT OF THIS ITEM IS TO RESTORE THE TOP OF THE SLOPE ALONG THE BACKSIDE OF THE APPROACH SIDEWALKS AT THE DIRECTION OF THE ENGINEER.

LOCATION 10, CUY-17-0449: THE INTENT OF THIS ITEM IS TO FILL THE VOIDS UNDER THE ERODED SLOPE PROTECTION IN THE AREA INDICATED IN THE PLANS AT THE DIRECTION OF THE ENGINEER

ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS NECESSARY TO PERFORM THE WORK AT LOCATIONS 1 & 10 SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 203 – EMBANKMENT, AS PER PLAN.

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

REPLACE MISSING OR 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.

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 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO 709.00.

ITEM 510 - DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT

PRIOR TO DRILLING DOWEL HOLES, LOCATE ALL EXISTING REINFORCING STEEL WITH AID OF A REINFORCING STEEL BAR LOCATOR (PACHOMETER). IF AN EXISTING BAR IS ENCOUNTERED AT THE SAME LOCATION AS A PROPOSED DOWEL HOLE, MOVE THE DOWEL HOLE TO EITHER SIDE OF THE EXISTING BAR. ALL WORK AND EQUIPMENT REQUIRED FOR LOCATING EXISTING BARS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 510, DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT.

<u>ITEM 512 – SEALING OF CONCRETE STRUCTURES (EPOXY-URETHANE)</u>

THE COLOR OF THE FINISH COAT SHALL BE AS INDICATED ON THE BRIDGE DATA SHEET. 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 UNDER ITEM 512 – SEALING OF CONCRETE STRUCTURES (EPOXY-URETHANE).

<u>ITEM 512 – REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES</u>

THE PROVISIONS OF PROPOSAL NOTE 552 SHALL APPLY. THIS ITEM IS INCLUDED FOR THE REMOVAL OF EXISTING COATINGS FROM EXISTING CONCRETE SURFACES TO BE SEALED.

ITEM 513 - TRIMMING OF BEAM END, AS PER PLAN

THIS ITEM OF WORK SHALL INCLUDE THE TRIMMING OF THE BEAM ENDS. ALL DIMENSIONS SHOWN IN THE PLANS SHALL BE FIELD VERIFIED. THE TRIMMING METHOD SHALL BE APPROVED BY THE ENGINEER PRIOR TO ANY REMOVAL OF THE BEAM ENDS.

CLEAN AND PAINT AREAS OF COATING SYSTEM DAMAGED BY THIS WORK PER ITEM 513 – STRUCTURAL STEEL MISC.: COATING SYSTEM REPAIR. THE COATING SYSTEM REPAIR IS INCIDENTAL TO THIS PAY ITEM.

ALL EQUIPMENT, LABOR, MATERIALS, AND ACCESS REQUIRED TO TRIM THE BEAM ENDS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 513 – TRIMMING OF BEAM END, AS PER PLAN.

ITEM 513 - STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN

LOCATION 1, CUY-71-0000: PROVIDE STEEL COVER PLATES FOR SIDEWALK AND CURB AS DETAILED IN THE PLANS. STRUCTURAL STEEL MATERIAL SHALL BE A709, GRADE 36 OR 50 STEEL. COAT ALL STEEL PARTS OF THE JOINT ASSEMBLY ACCORDING TO CMS 516.03.

FIELD MEASURE TO CONFIRM PLATE DIMENSIONS PRIOR TO ORDERING MATERIALS.

ALL EQUIPMENT, LABOR, MATERIALS, ACCESS FOR THE ABOVE WORK SHALL INCLUDED FOR PAYMENT UNDER ITEM 513, STRUCTURAL STEEL FOR REHABILITATION. AS PER PLAN.

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

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. ALL END CROSSFRAME MEMBERS DESIGNATED FOR REPLACEMENT IN ONE BAY SHALL BE REMOVED AND REPLACED PRIOR TO REMOVING ANY END CROSSFRAME MEMBERS IN ANOTHER BAY.

EXCEPT AS NOTED IN THE PLANS, EXISTING GUSSET PLATES ARE TO BE REUSED AS WELD CONNECTING POINTS FOR THE NEW STEEL CROSS FRAME MEMBERS. CUT OR GRIND EXISTING GUSSET PLATES TO HAVE A $1\frac{1}{2}$ " ± TAB REMAINING FOR WELDING PURPOSES.

FOR ADDITIONAL DETAILS NOT SHOWN IN PLANS, REFER TO SCD GSD-1-96.

CLEAN AND PAINT AREAS OF COATING SYSTEM DAMAGED BY THIS WORK PER ITEM 513, STRUCTURAL STEEL MISC.: COATING SYSTEM REPAIR. THE COATING SYSTEM REPAIR IS INCIDENTAL TO THIS PAY ITEM.

ALL EQUIPMENT, LABOR, AND MATERIALS REQUIRED TO REMOVE AND INSTALL THE END CROSSFRAMES AND REPAIR THE COATING SYSTEM SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 513 – REPLACEMENT OF DETERIORATED END CROSSFRAME, AS PER PLAN.

ITEM 513 - STRUCTURAL STEEL, MISC.: COATING SYSTEM REPAIR

AFTER ALL NEW STEEL MEMBERS OR EXPANSION JOINTS ARE INSTALLED, AND/OR AFTER ALL RETROFITS ARE PERFORMED, REPAIR ANY DAMAGED AREAS OF PAINT, WHICH WERE DAMAGED FROM THE INSTALLATION OR RETROFITTING PROCESS, ON ALL NEW AND EXISTING STEEL UNLESS OTHERWISE NOTED TO BE PAINTED UNDER ANOTHER PAY ITEM.

THESE DAMAGED PAINT AREAS SHALL BE REPAIRED IN ACCORDANCE WITH SECTION 514 OF THE ODOT CMS WITH THE FOLLOWING MODIFICATIONS:

- FOR EXISTING STEEL ON EXTERIOR GIRDERS, APPLY A
 THREE-COAT SYSTEM CONSISTING OF AN ORGANIC ZINC
 PRIME COAT, AN EPOXY INTERMEDIATE COAT, AND A
 URETHANE FINISH COAT. FOR ALL OTHER EXISTING STEEL,
 APPLY A TWO-COAT PAINT SYSTEM CONSISTING OF
 ORGANIC ZINC PRIME COAT AND AN EPOXY TOP COAT.
 (SECTION 514.02)
- EXISTING STEEL MAY BE CLEANED ACCORDING TO COMMERCIAL BLAST SPECIFICATION SSPC-SP6. (SECTION 514.13)
- NO DESTRUCTIVE TESTING IS TO BE PERFORMED ON EXISTING STEEL. (SECTION 514.21)
- PAINT FEATHERING IS NOT REQUIRED. MINIMAL OVERSPRAY IS PERMISSIBLE, AS DETERMINED BY THE ENGINEER. (SECTION 514.22)

THE FINAL COLOR OF THE FINISH COAT SHALL CLOSELY MATCH THE EXISTING BRIDGE COLOR AS APPROVED BY THE ENGINEER THIS ITEM SHALL BE INCLUDED FOR PAYMENT UNDER AND INCIDENTAL TO THE ASSOCIATED 513 ITEM.

ITEM 514 - SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL ITEM 514 - FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT

ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT

THIS WORK INCLUDES THE FIRST 10' OF ALL STRUCTURAL STEEL MEASURED FROM THE ENDS OF THE BEAMS/GIRDERS. REFER TO THE STRUCTURE DATA TABLE SHEET FOR THE COLORS SPECIFIED FOR EACH LOCATION. FOR UNSPECIFIED COLORS, FINAL COLOR OF THE FINISH COAT SHALL CLOSELY MATCH THE EXISTING BRIDGE COLOR AS APPROVED BY THE ENGINEER.

ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF CMS 514. ALL EQUIPMENT, LABOR, AND MATERIALS REQUIRED TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE INCLUDED FOR PAYMENT PER SQUARE FOOT.



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ITEM SPECIAL - POURED POLYURETHANE JOINT SEAL

DESCRIPTION: THIS WORK SHALL CONSIST OF SEALING JOINTS WITH POURED POLYURETHANE JOINT SEAL IN ACCORDANCE WITH THESE SPECIFICATIONS, IN REASONABLE CLOSE CONFORMITY WITH THE PLANS AND MANUFACTURER'S SPECIFICATIONS AND RECOMMENDATIONS AND AS DIRECTED BY THE ENGINEER.

MATERIAL: THE MATERIAL FOR THIS ITEM IS A TWO-PART, COLD APPLIED, CHEMICALLY CURING, SELF-LEVELING, ELASTOMERIC, POLYURETHANE JOINT SEALANT MEETING THE REQUIREMENTS OF FEDERAL SPECIFICTION TT-S-00227E ASTM C920. ALL MATERIALS SHALL BE STORED AND INCORPORATED IN THE WORK AS SPECIFIED BY THE MANUFACTURER.

APPLICATION: THE SURFACES TO WHICH THE SEALER IS TO ADHERE SHALL FIRST BE THOROUGHLY CLEANED BY ABRASIVE BLASTING. POLYURETHANE JOINT SEALER SHALL BE APPLIED ONLY WHEN THE SURFACE IS DRY AND ITS TEMPERATURE IS ABOVE 50 DEGREES F. THE INSTALLED AND CURED MATERIAL SHALL BE THE DEPTH AS SHOWN IN THE PLANS AND SHALL BE BONDED TO THE CONCRETE OR STEEL SIDES OF THE JOINT. ANY UNBONDED SECTION SHALL BE REMOVED AND REPLACED AT THE CONTRACTOR'S EXPENSE. DAMS AS REQUIRED TO CONTAIN THE POURED SEALER SHALL BE INCIDENTAL TO THIS ITEM OF WORK.

JOINT WIDTHS SHALL BE VERIFIED BY CONTRACTOR. MATERIAL SIZE SHALL BE ADJUSTED AS PER CONTRACTOR MEASUREMENT AND AS APPROVED BY THE ENGINEER.

METHOD OF PAYMENT: PAYMENT FOR THE POURED POLYURETHANE JOINT SEAL SHALL BE INCLUDED IN THE PRICE PER LINEAR FOOT FOR ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN OR ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN.

ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN

LOCATION 1, CUY-71-0000: THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY REMOVE AND REPLACE THE ELASTOMERIC STRIP SEAL PER CMS 516. SCD EXJ-4-87. AND AS MODIFIED IN THE PLANS.

OBTAIN APPROVAL FROM THE ENGINEER FOR REPLACEMENT PRODUCTS AND MANUFACTURERS PRIOR TO ORDERING MATERIAL. FIELD VERIFY THE TYPE OF STRIP SEAL BY REMOVING A FULL-WIDTH PORTION OF THE SEAL AND CONSULTING WITH AN APPROVED MANUFACTURER. REPLACE THE EXPANSION JOINT STRIP SEAL WITH AN IDENTICAL STRIP SEAL ACCORDING TO THE MANUFACTURER SPECIFICATIONS AND RECOMMENDATIONS. PRIOR TO INSTALLING THE NEW STRIP SEAL, CLEAN THE EXISTING STEEL RETAINERS TO THE SATISFACTION OF THE ENGINEER AND IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS, FREE OF ALL MATERIAL, DEBRIS, AND RESIDUE THAT MAY INTERFERE WITH THE INSTALLATION OF THE NEW SEAL.

FIELD MEASURE THE ACTUAL GAP AT THE ACTUAL TEMPERATURE PRIOR TO THE MANUFACTURE OF JOINT COMPONENTS. IF THE MEASURED VALUES ARE REASONABLY CLOSE TO THE GIVEN

VALUES. USE THE STRIP SEAL SIZE AS GIVEN IN THE PLANS. OTHERWISE, ADJUST THESE SIZES AS RECOMMENDED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER. NO SEPARATE PAYMENT WILL BE MADE FOR MEASUREMENT OR ADJUSTMENT.

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 UNIT BID PRICE FOR ITEM 516 - ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN

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

LOCATION 9, CUY-422-1365 R: THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY INSTALL THE STRUCTURAL EXPANSION JOINT AND ELASTOMERIC STRIP SEAL PER CMS 516, SCD EXJ-4-87, AND AS MODIFIED ON SHEET 65.

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

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 36.

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.

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, INCLUDING JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - BEARING, PTFE (TEFLON), AS PER PLAN.

ITEM 516 - REFURBISH AND RESET BEARING, AS PER PLAN

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 BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED 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-DEGREES F [15-DEGREES 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 AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH AND RESET BEARING, AS PER PLAN.

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

THIS WORK INCLUDES RAISING OR RE-POSITIONING EXISTING STRUCTURES TO PERFORM THE WORK DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05. IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED. IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDANCE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE. AS PER PLAN.

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EXPANSION JOINT GAP VALUES LISTED ARE ANTICIPATED BASED ON AVAILABLE RECORD DATA. FIELD MEASURE THE ACTUAL GAP AT THE ACTUAL TEMPERATURE PRIOR TO THE MANUFACTURING OF JOINT COMPONENTS. IF THE MEASURED VALUES ARE REASONABLY CLOSE TO THE GIVEN VALUES. THE FILLER SIZE GIVEN IN THE PLANS MAY BE USED. OTHERWISE, ADJUST THE SIZE AS RECOMMENDED BY THE MANUFACTURER AND APPROVED BY THE ENGINEER. NO SEPARATE PAYMENT WILL BE MADE FOR MEASUREMENT AND ADJUSTMENT.

LOCATION 10, CUY-17-0449: PRECOMPRESSED JOINT FILLER SHALL BE PLACED FROM THE FACE OF EXISTING CURB TO THE FACE OF PROPOSED PARAPET.

LOCATION 11, LAK-2-0055 L&R: PRECOMPRESSED JOINT FILLER SHALL BE PLACED AS ONE CONTINUOUS STRIP FOR ENTIRE DECK WIDTH AND EXTENDING UP THE PARAPET JOINTS. SEE STD. DWG. EXJ-2-81 FOR DETAILS NOT SHOWN.

SURFACE PREPARATION: BLAST CLEAN THE FACES TO WHICH THE SEAL MUST ADHERE SO THAT IT IS FREE OF FOREIGN MATERIAL SUCH AS DIRT, DUST, GREASE, FORM RELEASE AGENTS, AND ANY OTHER MATERIAL DETRIMENTAL TO THE ADHESION OF THE SEALANT ACCORDING TO MANUFACTURER SPECIFICATIONS. BLASTING ABRASIVE CONTAINING MORE THAN 1% FREE SILICA IS NOT ALLOWED. INSTALL JOINT AS PER THE MANUFACTURE'S SPECIFICATIONS.

MATERIALS: USE PRECOMPRESSED EXPANSION JOINT FILLER SUCH AS THE EMSEAL DSM SYSTEM, WATSON BOWMAN WABO HSEAL OR AN APPROVED EQUAL. AS DIRECTED BY THE ENGINEER. AFOREMENTIONED JOINT FILLERS CAN BE OBTAINED FROM:

EMSEAL JOINT SYSTEMS, LTD. 25 BRIDLE LANE WESTBOROUGH, MA 01581-2603 PHONE: (800) 526-8365 WWW.EMSEAL.COM

WATSON BOWMAN ACME CORP. 95 PINEVIEW DRIVE AMHERST, NY 14228 PHONE: (716) 691-7566 WWW.WBACORP.COM

PAYMENT FOR LABOR INCLUDING REMOVAL OF EXISTING JOINT SEAL (IF APPLICABLE), MATERIALS, AND INSTALLATION OF THIS WORK IS INCLUDED IN ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: (1", 11/2" OR 31/2") PRECOMPRESSED EXPANSION JOINT FILLER.

ITEM 517 - RAILING, MISC.: RE-ANCHOR TUBE RAILING SUPPORT

LOCATION 5. LAK-90-0711: THIS WORK INCLUDES RE-ANCHORING THE EXISTING TUBE RAILING SUPPORT IN-KIND INTO EXISTING CONCRETE PARAPET.

THE DEPARTMENT WILL MEASURE THIS WORK ON AN EACH BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 517 - RAILING, MISC.: RE-ANCHOR TUBE RAILING SUPPORT.

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.

LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN ACCORDANCE WITH ITEM 519.

ALL EQUIPMENT, LABOR, AND MATERIALS REQUIRED TO PERFORM THE ABOVE DESCRIBED WORK SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN.

ITEM SPECIAL - PATCHING CONCRETE STRUCTURES, MISC.: REPAIR CORRODED REINFORCEMENT USING ZINC

REFER TO ASTM A780 FOR REPAIR METHOD AND PAINT MATERIAL SPECIFICATIONS. ALL AREAS CALLED FOR CONCRETE PATCHING SHALL BE EXAMINED BY THE ENGINEER FOR REINFORCEMENT CORROSION. REINFORCEMENT DEEMED BY THE ENGINEER TO BE CORRODED SHALL BE CLEANED AS SPECIFIED IN ITEM 519, THEN PAINT USING METHOD A2 OF ASTM A 780. THE 24 HOUR LIMITATION SPECIFIED IN ITEM 519 SHALL BE WAIVED IN AREAS DESIGNATED TO PAINT. PATCHING SHALL COMMENCE WITHIN 24 HOURS AFTER THE MINIMUM PAINT DRYING TIME SPECIFIED BY THE MANUFACTURER HAS ELAPSED.

THE COST OF SUPPLYING AND APPLICATION OF THE ZINC COATING SHALL BE INCLUDED IN THE UNIT PRICE FOR ITEM 519 -PATCHING CONCRETE STRUCTURES, AS PER PLAN

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

THIS PAY ITEM IS INTENDED FOR REPAIRING THE TOP OF THE EXISTING BRIDGE BACKWALLS FROM ABOVE (RIDING SURFACE), AS DETAILED IN THE PLAN. 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 OUR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

CONCRETE FOR TOP OF BACKWALL REPAIR SHALL BE MICRO-SILICA MODIFIED CONCRETE MIX AS SPECIFIED UNDER ITEM 848.

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

ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECK

THE ENGINEER SHALL DETERMINE AND DESIGNATE THE AREAS TO BE REPAIRED. CONCRETE FOR PATCHING CONCRETE BRIDGE DECK SHALL BE MICRO-SILICA MODIFIED CONCRETE MIX AS SPECIFIED UNDER ITEM 848.

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 PAVEMENT MARKINGS SHALL BE INCLUDED UNDER ITEM SPECIAL - PATCHING CONCRETE BRIDGE DECK.

ITEM SPECIAL STRUCTURE MISC.: RE-WELDING END **CROSSFRAME MEMBERS**

LOCATION 3, LAK-90-0528 L&R: THIS WORK SHALL INCLUDE RE-WELDING AS LISTED ON SHEETS 51 & 52. WELDS SHALL MATCH EXISTING WELD DETAILS. FOR ADDITIONAL DETAILS NOT SHOWN IN PLANS, REFER TO SCD GSD-1-96.

CLEAN AND PAINT AREAS OF COATING SYSTEM DAMAGED BY THIS WORK PER ITEM 513. STRUCTURAL STEEL MISC.: COATING SYSTEM REPAIR. THE COATING SYSTEM REPAIR IS INCIDENTAL TO THIS PAY ITEM.

ALL EQUIPMENT, LABOR, AND MATERIALS REQUIRED TO REMOVE AND RE-WELD THE END CROSSFRAME MEMBERS AND REPAIR THE COATING SYSTEM SHALL BE INCLUDED FOR PAYMENT UNDER ITEM SPECIAL - STRUCTURE MISC.: RE-WELDING END **CROSSFRAME MEMBERS**

<u>ITEM SPECIAL - STRUCTURE MISC.: EMERGENCY ASPHALT PAVING OPERATION ON STANDBY</u>

THE CONTRACTOR SHALL MAKE ARRANGEMENTS TO HAVE AN ASPHALT CONCRETE SUPPLIER AND ASPHALT PAVING COMPANY ON CALL ON SUNDAYS THAT THE BRIDGE DECK OVERLAY IS SCHEDULED. IF THE CONTRACTOR HAS NOT STATED TO POUR THE CONCRETE OVERLAY BY 3 AM SUNDAY, THE PROJECT ENGINEER WILL DIRECT THE CONTRACTOR TO STOP OPERATIONS AND PAVE THE BRIDGE WITH ASPHALT. THE ASPHALT CONTRACTOR WILL HAVE THE ABILITY TO MOBILIZE OPERATIONS WITHIN 12 HOURS. THIS INCLUDES PROVIDING 448 ASPHALT AND A PAVING CREW WITH COMPACTION EQUIPMENT.

THE PAVING AND ALL ORIGINAL TRAFFIC CONTROL MUST BE IN PLACE BY THE TIMES LISTED IN THE LIMITATIONS OF OPERATIONS ON SHEET 6.

THE FOLLOWING ITEMS SHALL BE USED IN THIS OPERATION:
614 CU. YD. ASPHALT CONCRETE FOR MAINTAINING TRAFFIC
848 SQ. YD. WEARING COURSE REMOVED, ASPHALT

THE STATE WILL PAY FOR ALL COSTS ASSOCIATED WITH PLACING AND REMOVING THE ASPHALT IF THE CONTRACTOR WAS NOT RESPONSIBLE FOR THE DELAY. THE CONTRACTOR WILL HAVE TO PAY ALL THE COST ASSOCIATED WITH THE PLACEMENT AND REMOVAL OF THE ASPHALT.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER EACH FOR ITEM SPECIAL – STRUCTURE, MISC.: EMERGENCY ASPHALT PAVING OPERATION ON STANDBY WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

<u>ITEM SPECIAL – STRUCTURE, MISC.: COMPOSITE FIBER WRAP SYSTEM</u>

DESCRIPTION: THIS WORK SHALL CONSIST OF PROVIDING AND INSTALLING A FIBER WRAP PIER CAP PREPARATION, WRAPPING THE PIER CAP, AND ALL INCIDENTALS NECESSARY TO COMPLETE. THE INSTALLATION SHALL BE PER THE MANUFACTURER'S REQUIREMENTS.

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 FIBER SHALL HAVE A MINIMUM NOMINAL THICKNESS OF 0.05 INCHES. 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 COLUMN 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, PIS 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) 1000 Hours exposure to 100% Humidity	60,000 PSI	C581
Tensile Strength (Min. After Test) 1000 Hours exposure to Ozone	60,000 PSI	D1149 Except Not Under Stress During Ozone Exposure
Tensile Strength (Min. After Test) 1000 Hours exposure to Alkali	60,000 PSI	D3083 Using Soil Burial – Water Content of 73% +/- 3%
Tensile Strength (Min. After Test) 1000 Hours exposure to Salt Water	60,000 PSI	C581 and D1141 Omitting Addition of Heavy Metal Reagents
Tensile Strength (Min. After Test) 1000 Hours exposure @ 140 Degrees F	60,000 PSI	D3045
Tensile Strength (Min. After Test) Ultraviolet (UV) Exposure	60,000 PSI	G154 Using FS40 UV-B Bulbs for a Min. 40 cycles. The cycle shall be 4 hours of condensate exposure at 40 degrees 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	D2563
Coefficient of Thermal Expansion in the Primary Direction	4,300,000 PPM/Deg. F (+15%)	D696

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.

AVOIDANCE OF THE EXISTING FIXED BEARINGS SHALL BE UNDERSTOOD, AND THE RESPONSIBILITY OF THE CONTRACTOR

TO PROVIDE AN ACCEPTABLE WRAPPING METHOD AROUND THESE BEARING DEVICES.

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. A MANUFACTURER REPRESENTATIVE SHALL BE ON SITE FOR THE FIRST APPLICATION OF THE COMPOSITE FIBER WRAP SYSTEM TO APPROVE THE CONTRACTOR'S APPLICATION PROCESS. THIS REQUIREMENT MAY BE WAIVED WITH WRITTEN APPROVAL FROM THE ENGINEER.

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. 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 COLUMNS 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



<u>ITEM SPECIAL - STRUCTURE, MISC.: COMPOSITE FIBER WRAP SYSTEM, CONT.</u>

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

PAYMENT FOR LABOR, MATERIALS, EQUIPMENT, AND INSTALLATION OF THE ABOVE WORK IS INCLUDED WITH ITEM SPECIAL – STRUCTURE, MISC.: COMPOSITE FIBER WRAP SYSTEM.

ITEM 601 – CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN

THIS WORK IS PROVIDED FOR RESTORING THE EXISTING CRUSHED AGGREGATE SLOPE PROTECTION WITH NEW MATERIAL TO A MINIMUM DEPTH OF 1'-0" WITHIN THE APPROXIMATE LIMITS SHOWN IN THE PLANS AND AS DIRECTED BY THE ENGINEER. A QUANTITY FOR ITEM 601, CRUSHED AGGREGATE SLOPE PROTECTION HAS BEEN PROVIDED IN THE PLANS TO BE USED AS DIRECTED BY THE ENGINEER.

ALL EQUIPMENT, LABOR, MATERIALS AND INCIDENTALS NECESSARY TO PERFORM THE ABOVE WORK SHALL BE INCLUDED FOR PAYMENT PER CUBIC YARD UNDER ITEM 601 – CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN.

ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN

THIS ITEM INCLUDES PROVIDING A CONCRETE PAVED GUTTER, TYPE 1-2 AS DETAILED ON STANDARD DRAWING DM-2.1, MODIFIED AS FOLLOWS:

- 1. PAVED GUTTER DIMENSIONS SHALL BE MODIFIED TO MATCH CONTRACTOR FIELD MEASUREMENTS AND EXISTING GUTTER FLOW LINE ELEVATIONS.
- SOD STRIP SHALL NOT APPLY.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR ITEM 601 – PAVED GUTTER, TYPE 1-2, AS PER PLAN,

AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 606 - ANCHOR ASSEMBLY, TYPE B ITEM 606 - ANCHOR ASSEMBLY, TYPE E

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

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27.75 INCHES FROM THE EDGE OF THE SHOULDER.

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

THE FACE OF THE TYPE (B OR E) IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

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

ITEM 606 - BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN

THIS ITEM INCLUDES PROVIDING A BRIDGE TERMINAL ASSEMBLY, TYPE 1 AS DETAILED ON STANDARD DRAWING GR-3.1, MODIFIED AS FOLLOWS:

LOCATION 10, CUY-17-0449: WHERE CURVED GUARDRAIL IS SHOWN IN THE PLANS, THE W-BEAM SECTIONS SHALL BE SHOP BENT TO THE RADIUS AS DETERMINED BY THE CONTRACTOR THROUGH FIELD MEASUREMENT PRIOR TO GALVANIZING.

LOCATION 11, LAK-2-0555 L&R: TOTAL LENGTH OF BRIDGE TERMINAL ASSEMBLY TYPE 1 SHALL BE REDUCED TO 18'-9" BY ELIMINATION OF POST NO. 6 & 7.

BASIS OF PAYMENT: ITEM 606, BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN INCLUDES THE COST OF SHOP BENDING OF W-BEAM SECTIONS AND THE COST OF EXTRA COMPONENTS, IN EXCESS OF NORMAL GUARDRAIL, SUCH AS ADDITIONAL POSTS AND OTHER HARDWARE.

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.

ITEM 607 - VANDAL PROTECTION FENCE, 6 FOOT STRAIGHT, COATED FABRIC, AS PER PLAN

THIS ITEM SHALL BE AS PER THE DETAILS IN THE PLANS WITH THE APPLICABLE PORTIONS OF STANDARD DRAWING VPF-1-90 AND THE MANUFACTURER'S RECOMMENDATIONS.

THE ANCHORS SHALL BE CAST IN PLACE.

AT LOCATIONS WHERE THE FENCE SPANS ACROSS THE EXPANSION JOINT, DO NOT INSTALL LINE RAILS AND EXPANSION JOINT SLEEVES; HOWEVER, THE FABRIC SHALL REMAIN CONTINUOUS ACROSS THE EXPANSION JOINT.

THE COLOR OF THE FENCE FABRIC, RAILS, POSTS, PLATES, TIE WIRES, AND ADDITIONAL VISUAL HARDWARE AND CAULK SHALL BE BLACK.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM 607 – VANDAL PROTECTION FENCE 6 FOOT STRAIGHT, COATED FABRIC, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

ITEM 607 - FENCE REMOVED AND REBUILT, AS PER PLAN "A"

THIS ITEM IS USED FOR LOCATION 2, CUY-480-0283:

THIS ITEM SHALL INCLUDE THE FOLLOWING: REMOVAL OF EXISTING FENCE FABRIC AND INSTALLING NEW 5 FOOTCHAIN LINK FENCE FABRIC PER THE DETAILS SHOWN IN THE PLANS AND F-1.1.

CONTRACTOR SHALL FIELD DETERMINE THE FENCE REPAIR LIMITS AND RECEIVE THE ENGINEER'S APPROVAL PRIOR TO ODERING MATERIALS FOR THIS WORK.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR ITEM 607 – FENCE REMOVED AND REBUILT, AS PER PLAN "A", AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, DISPOSAL AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

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ITEM 607 - FENCE REMOVED AND REBUILT, AS PER PLAN "B"

THIS ITEM IS USED FOR LOCATION 2. CUY-480-0283:

THIS ITEM SHALL INCLUDE THE FOLLOWING: REMOVAL OF EXISTING FENCE AND INSTALLING NEW 5 FOOTCHAIN LINK FENCE PER THE DETAILS SHOWN IN THE PLANS AND F-1.1. EXISTING FENCE FABRIC SHALL BE SALVAGED AND REUSED FOR THE REBUILT FENCE.

CONTRACTOR SHALL FIELD DETERMINE THE FENCE REPAIR LIMITS AND RECEIVE THE ENGINEER'S APPROVAL PRIOR TO ODERING MATERIALS FOR THIS WORK.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER FOOT FOR ITEM 607 - FENCE REMOVED AND REBUILT, AS PER PLAN "B", AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, DISPOSAL AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

ITEM 613 - LOW STRENGTH MORTAR BACKFILL, AS PER PLAN

LOCATION 1, CUY-71-0000 & LOCATION 2, CUY-480-0283: THIS ITEM OF WORK SHALL INCLUDE PUMPING OR PLACING LSM INTO THE VOIDS UNDER THE EXISITNG CONCRETE SLOPE PROTECTION AS SHOWN IN THE PLANS. CORES MAY BE DRILLED THROUGH THE EXISTING SLOPE PROTECTION AS NEEDED FOR THE PUMPING OR PLACING OF LSM. CORE HOLES SHALL BE BACK FILLED WITH LSM FLUSH TO THE TOP OF THE EXISTING CONCRETE WALK.

THE QUANTITY PROVIDED IN THE PLANS FOR ITEM 613 - LOW STRENGTH MORTAR BACKFILL, AS PER PLAN HAS BEEN PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER.

THE PAYMENT FOR THIS ITEM SHALL BE CUBIC YARDS IN PLACE AND ACCEPTED.

THIS ITEM SHALL INCLUDE THE MATERIAL, INSTALLATION, CORING AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE LSM BACK FILLING AND SHALL BE PAID UNDER ITEM 613 - LOW STRENGTH MORTAR BACKFILL, AS PER PLAN.

ITEM 623 - CONSTRUCTION LAYOUT STAKES. AS PER PLAN

AN OHIO PROFESSIONAL SURVEYOR SHALL DETERMINE THE MINIMUM VERTICAL CLEARANCES OF ALL EXISTING AND NEW 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.

ITEM 847 - MICRO-SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (2" THICKNESS) ITEM 847 - MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN

THESE ITEMS SHALL BE PERFORMED PER SUPPLEMENTAL SPECIFICATION 847 "BRIDGE DECK REPAIR AND OVERLAY WITH CONCRETE USING SCARIFICATION AND CHIPPING" WITH THE **FOLLOWING REVISIONS:**

CONSTRUCTION JOINTS WILL NOT BE PERMITTED IN THE WHEEL LINE.

(SEE 847.11) THE COMPONENTS OF THE MICRO-SILICA MODIFIED CONCRETE SHALL BE PROPORTIONED AS DESCRIBED IN ITEM 848.

IN ADDITION TO THE ABOVE REQUIREMENTS, THE FOLLOWING REVISIONS SHALL APPLY FOR LOCATION 3, LAK-90-0528 (LEFT BRIDGE ONLY):

> (SEE 847.17) THE REMOVAL OPERATIONS SHALL NOT BEGIN IF SUSTAINED RAINS (5 HOURS OR MORE WITH BREAKS BETWEEN SHOWERS LESS THAN 11/2 HOURS) ARE PREDICTED WITHIN 48 HOURS OF COMMENCEMENT.

> (SEE 847.18) THE FINAL DECK SOUNDING MAY TAKE PLACE WITHIN 24 HOURS OF A RAIN, AND THE DECK DOES NOT HAVE TO BE COMPLETELY DRY.

> (SEE 847.19) FULL DEPTH REPAIR IS NOT REQUIRED IF LESS THAN ONE HALF OF THE DECK ORIGINAL CONCRETE THICKNESS IS SOUND.

> (SEE 847.25) THE WET CURE TIME IS REDUCED FROM 72 HOURS TO 24 HOURS OR UNTIL A BEAM BREAK OF 600 PSI IS ACHIEVED, WHICHEVER IS GREATER. AFTER THE 24 HOUR WET CURE. THE FINISHED OVERLAY SURFACE SHALL BE CURED BY SPRAYING A UNIFORM APPLICATION OF CURING MATERIAL OF 705.07, TYPE 1 OR 1D, AS PER CMS 511.17 METHOD (B) MEMBRANE CURING. IF THE CURING COMPOUND CAN NOT BE PLACED WITHIN THE SAME SHORT TERM CLOSURE PERIOD AS THE OVERLAY, THE CONTRACTOR MAY ALLOW TRAFFIC ONTO THE OVERLAY AND SHALL, AT THE NEXT AVAILABLE SHORT TERM CLOSURE PERIOD, APPLY THE MEMBRANE CURING COMPOUND.

> (SEE 847.25) TRAFFIC WILL NOT BE PERMITTED ON THE FINISHED OVERLAY SURFACE UNTIL AFTER THE COMPLETION OF THE 24 HOUR WET CURE AND AFTER TWO TEST BEAMS HAVE ATTAINED AN AVERAGE MODULUS OF RUPTURE OF 600 PSI (4.2 MPA).

> (SEE 847.26) THE OVERLAY SURFACE EVAPORATION RATE REQUIREMENTS ARE IN EFFECT FROM 9:30 AM TO 11:00 PM. THEY ARE NOT IN EFFECT FROM 11:00 PM TO 9:30 AM.

> (SEE 847.27) FOR EACH PHASE, PROVIDE ENOUGH MATERIAL FOR TWO BEAM BREAKS EACH AT 12 HOURS.

24 HOURS, 36 HOURS, AND 48 HOURS. THE DEPARTMENT WILL PERFORM THE BEAM BREAK TEST AND DOCUMENT THE TIME OF THE POUR, THE TIME OF THE BEAM BREAK TESTS. AND THE MODULUS OF RUPTURE FOR EACH BEAM UNTIL THE MODULUS OF RUPTURE OF THE TWO TESTS IS NOT LESS THAN 650 PSI (4.5 MPA). TRAFFIC IS ALLOWED ON THE OVERLAY AT 600 PSI (4.5 MPA).

IF THE CONTRACTOR CANNOT COMMENCE THE CONCRETE POUR BY 3 A.M. SUNDAY, THE CONTRACTOR SHALL FOLLOW ITEM SPECIAL - STRUCTURE, MISC.: EMERGENCY ASPHALT PAVING OPERATION ON STANDBY.

ALL OTHER REQUIREDMENTS OF THE SUPPLEMENTAL SPECIFICATION SHALL REMAIN IN EFFECT.

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ITEM 848 – REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY, AS PER PLAN ITEM 848 – MICRO-SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (2.75" THICKNESS)

ITEM 848 - MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN

THESE ITEMS SHALL BE PERFORMED PER SUPPLEMENTAL SPECIFICATION "BRIDGE DECK REPAIR AND OVERLAY WITH CONCRETE USING HYDRODEMOLITION" WITH THE FOLLOWING REVISIONS:

CONSTRUCTION JOINTS WILL NOT BE PERMITTED IN THE WHEEL LINE.

(SEE 848.12) THE COMPONENTS OF THE MICRO-SILICA MODIFIED CONCRETE SHALL BE PROPORTIONED AS FOLLOWS:

CONCRETE TABLE QUANTITIES PER CUBIC YARD AGGREGATES (SSD)

MICRO-SILICA OVERLAY CONCRETE, AS PER PLAN

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Aggre Type	Fine Aggr (lb)	* #8 Coarse Aggr (lb)	Aggr Total (lb)	Ce- ment Cont (lb)	Micro- Silica (lb)	Water to Cemen titious Ratio	Air Cont +/- 2%	** Fiber (1¼" Poly- propylene) (lb)
Gravel	1410	1430	2840	600	50	0.40	8	1
Lime- stone	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 11/4" IN LENGTH.

THE WEIGHTS SPECIFIED IN THE CONCRETE TABLE WERE CALCULATED FOR MATERIALS OF THE FOLLOWING BULK SPECIFIC GRAVITIES (SSD): NATURAL SAND AND GRAVEL 2.62, LIMESTONE SAND 2.68, LIMESTONE 2.65, SLAG 2.30, MICRO-SILICA SOLIDS 2.20, AND PORTLAND CEMENT 3.15. FOR AGGREGATES OF SPECIFIC GRAVITIES DIFFERING MORE THAN PLUS OR MINUS 0.02 FROM THESE, THE WEIGHTS IN THE TABLE WILL BE CORRECTED. (FIBER MESH WEIGHTS NOT INCLUDED IN MIX DESIGN)

IN ADDITION TO THE ABOVE REQUIREMENTS, THE FOLLOWING REVISIONS SHALL APPLY FOR LOCATION 9, CUY-422-1365 R:

(SEE 848.18) THE REMOVAL OPERATIONS SHALL NOT BEGIN IF SUSTAINED RAINS (5 HOURS OR MORE WITH BREAKS BETWEEN SHOWERS LESS THAN 1½ HOURS) ARE PREDICTED WITHIN 48 HOURS OF COMMENCEMENT.

(SEE 848.21) THE FINAL DECK SOUNDING MAY TAKE PLACE WITHIN 24 HOURS OF A RAIN, AND THE DECK DOES NOT HAVE TO BE COMPLETELY DRY.

(SEE 848.23) FULL DEPTH REPAIR IS NOT REQUIRED IF LESS THAN ONE HALF OF THE DECK ORIGINAL CONCRETE THICKNESS IS SOUND.

(SEE 848.29) THE WET CURE TIME IS REDUCED FROM 72 HOURS TO 24 HOURS OR UNTIL A BEAM BREAK OF 600 PSI IS ACHIEVED, WHICHEVER IS GREATER. AFTER THE 24 HOUR WET CURE, THE FINISHED OVERLAY SURFACE SHALL BE CURED BY SPRAYING A UNIFORM APPLICATION OF CURING MATERIAL OF 705.07, TYPE 1 OR 1D, AS PER CMS 511.17 METHOD (B) MEMBRANE CURING. IF THE CURING COMPOUND CAN NOT BE PLACED WITHIN THE SAME SHORT TERM CLOSURE PERIOD AS THE OVERLAY, THE CONTRACTOR MAY ALLOW TRAFFIC ONTO THE OVERLAY AND SHALL, AT THE NEXT AVAILABLE SHORT TERM CLOSURE PERIOD, APPLY THE MEMBRANE CURING COMPOUND.

(SEE 848.29) TRAFFIC WILL NOT BE PERMITTED ON THE FINISHED OVERLAY SURFACE UNTIL AFTER THE COMPLETION OF THE 24 HOUR WET CURE AND AFTER TWO TEST BEAMS HAVE ATTAINED AN AVERAGE MODULUS OF RUPTURE OF 600 PSI (4.2 MPA).

(SEE 848.30) THE OVERLAY SURFACE EVAPORATION RATE REQUIREMENTS ARE IN EFFECT FROM 9:30 AM TO 11:00 PM. THEY ARE NOT IN EFFECT FROM 11:00 PM TO 9:30 AM.

(SEE 848.31) FOR EACH PHASE, PROVIDE ENOUGH MATERIAL FOR TWO BEAM BREAKS EACH AT 12 HOURS, 24 HOURS, 36 HOURS, AND 48 HOURS. THE DEPARTMENT WILL PERFORM THE BEAM BREAK TEST AND DOCUMENT THE TIME OF THE POUR, THE TIME OF THE BEAM BREAK TESTS, AND THE MODULUS OF RUPTURE FOR EACH BEAM UNTIL THE MODULUS OF RUPTURE OF THE TWO TESTS IS NOT LESS THAN 650 PSI (4.5 MPA). TRAFFIC IS ALLOWED ON THE OVERLAY AT 600 PSI (4.5 MPA).

IF THE CONTRACTOR CANNOT COMMENCE THE CONCRETE POUR BY 3 A.M. SUNDAY, THE CONTRACTOR SHALL FOLLOW ITEM SPECIAL — STRUCTURE, MISC.: EMERGENCY ASPHALT PAVING OPERATION ON STANDBY.

ALL OTHER REQUIREMENTS OF THE SUPPLEMENTAL SPECIFICATION SHALL REMAIN IN EFFECT.

ITEM 898 – QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET), AS PER PLAN
ITEM 898 – QC/QA CONCRETE, MISC.: APPROACH SLAB INCLUDING SIDEWALK & PARAPET

GENERAL REQUIREMENTS
THE PROVISIONS OF SUPPLEMENTAL SPECIFICATION 898 SHALL APPLY EXCEPT AS NOTED.

MATERIALS

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

PARAPET CONSTRUCTION (FORMED AND POURED)
FORMS SHALL NOT BE REMOVED UNTIL AT LEAST 2 HOURS AFTER
THE FINAL SET. DETERMINATION OF THE FINAL SET SHALL BE PER
ASTM C266 (GILLMORE NEEDLE). TESTING SHALL BE PREFORMED
BY THE CONTRACTOR AT NO COST TO THE STATE.

THE MINIMUM CONCRETE SLUMP DURING PLACEMENT OF THE FORMED CONCRETE PARAPETS SHALL BE 6", WITH A MAXIMUM OF 8"

ANCHOR BOLTS FOR FENCE POSTS SHALL BE CAST IN PLACE.

PARAPET CONSTRUCTION (SLIP FORMED) SLIPFORMING IS PROHIBITED.

EXCAVATION PER CMS 203 REQUIRED FOR INSTALLING APPROACH SLABS AND PARAPETS SHALL BE CONSIDERED INCIDENTAL TO ITEM 898.

REINFORCING STEEL AS DETAILED IN THE PLANS SHALL BE PAID FOR SEPARATELTY UNDER ITEM 509.

THE PAYMENT FOR THIS ITEM SHALL BE CUBIC YARDS IN PLACE AND ACCEPTED.

THIS ITEM SHALL INCLUDE THE MATERIAL, INSTALLATION, AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE PARAPET AND APPROACH SLAB INSTALLATION.

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ITEM 614 - MAINTAINING TRAFFIC

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IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE THRU VEHICULAR ACCESS AT ALL TIMES THROUGHOUT THE PROJECT AREA UNLESS OTHERWISE STATED IN THE PLANS. THE PROJECT SHALL BE CONSTRUCTED IN PHASES IN ORDER TO MINIMIZE TRAFFIC DISRUPTION AND INCONVENIENCE TO THE GENERAL PUBLIC. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL EQUIPMENT, MATERIALS AND MANPOWER NEEDED TO ADEQUATELY MAINTAIN TRAFFIC AS PROVIDED FOR IN THE PLANS AND SPECIFICATIONS.

THE CONTRACTOR IS REMINDED THAT, IN THE CONDUCT OF THIS PROJECT, HIS SEQUENCE OF OPERATIONS SHALL BE PLANNED IN SUCH A WAY AS TO MINIMIZE THE NUMBER OF LANE REDUCTIONS AND/OR LANE WIDTH REDUCTIONS REQUIRED TO MAINTAIN TRAFFIC THROUGH THE PROJECT.

PERMITTED LANE CLOSURES SHALL BE AS SHOWN ON THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" LIST.

TRUCK MOUNTED ATTENUATOR

WHEN THE CONTRACTOR IS SETTING SHORT TERM WORK ZONES AND THE SHOULDERS (RIGHT OR LEFT SHOULDER) ARE LESS THAN 10 FEET IN WIDTH AND ARE ON A ROAD WITH SPEEDS 45 MPH OR HIGHER, A TRUCK MOUNTED ATTENUATOR (TMA) MUST TRAIL THE OPERATION OF SETTING THE ADVANCE WARNING SIGN UP OR TAKING THEM DOWN. THIS SAME TRUCK MUST HAVE A TYPE B FLASHING ARROW PANEL MOUNTED ON IT FACING THE REAR OF THE TRUCK.

MAINTENANCE OF TRAFFIC CONTROL ZONES

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE SIGNS, DRUMS OR CONES SPECIFIED IN THE STANDARD DRAWINGS. WHEN THE CONTRACTOR IS NOTIFIED OF DEFICIENCIES HE SHALL CORRECT THE DEFICIENCIES AS SOON AS POSSIBLE.

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.

THE CONTRACTOR SHALL BE RESPONSIBLE TO ANY DAMAGE TO TURN-AROUNDS LOCATED WITHIN THE PROJECT LIMITS. ANY DAMAGE CAUSED BY THE CONTRACTOR'S ACTIONS SHALL BE REPAIRED AT NO COST TO THE STATE.

SUSPENSION OF WORK

IF THE CONTRACTOR FAILS TO COMPLY WITH THE PROVISIONS FOR TRAFFIC CONTROL AS SET FORTH IN THESE PLANS OR WITH PROVISIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL

DEVICES. THE ENGINEER SHALL SUSPEND WORK UNTIL THE CONTRACTOR COMPLIES WITH THE NECESSARY REQUIREMENTS.

MAINTAINING TRAFFIC - GENERAL PROVISIONS

- 1. REFER TO SHEET 6 FOR LIMITATIONS OF OPERATIONS FOR LOCATIONS 1, 3, 9 AND 10.
- 2. TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES." THE CONTRACTOR SHALL SET UP AND OPERATE HIS EQUIPMENT IN SUCH A MANNER AS TO MINIMIZE ENCROACHMENT UPON THE TRAVELED WIDTH OF PAVEMENT.
- 3. 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.STATE.OH.US) INDICATING THE LOCATIONS AND DATES OF THE LANE CLOSURES AT LEAST 3 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 3 DAYS PRIOR TO THE IMPLEMENTATION OF ANY CHANGES SUCH AS LANE CLOSURES OR OTHER RESTRICTIONS.
- 4. NIGHTTIME WORK SHALL BE PERMITTED IN ACCORDANCE WITH THESE PLANS AND NOTES. THE CONTRACTOR SHALL PROVIDE FLOOD LIGHTING OF THE WORK AREA IN ACCORDANCE TO 401.15 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS IN ORDER TO ASSURE THE SAFEST CONDITIONS DURING NIGHTTIME WORK. A LIGHTING PLAN FOR NIGHTTIME OPERATIONS SHALL BE PRESENTED TO AND APPROVED BY THE ENGINEER.
- 5. THE CONTRACTOR SHALL FURNISH, ERECT AND MAINTAIN ALL WARNING AND INFORMATION SIGNS NECESSARY FOR MAINTAINING TRAFFIC. THE SIGN FACES SHALL BE REFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 730.19. THE CONTRACTOR SHALL DETERMINE WHAT SIGNS ARE NEEDED AND ADVISE THE ENGINEER TWO (2) WEEKS IN ADVANCE OF HIS DETAILED PLANS. SEE THE OMUTCD AND STANDARD DRAWINGS FOR THE MINIMUM SIGNAGE REQUIRED."
- 6. TRAFFIC CONTROL DEVICES SHALL BE SET UP PRIOR TO THE START OF CONSTRUCTION, AND SHALL BE PROPERLY MAINTAINED DURING THE TIME SPECIAL CONDITIONS EXIST. THEY SHALL REMAIN IN PLACE ONLY AS LONG AS THEY ARE NEEDED AND SHALL BE IMMEDIATELY REMOVED THEREAFTER. WHERE OPERATIONS ARE PERFORMED IN STAGES, THERE SHALL BE IN PLACE ONLY THOSE DEVICES

THAT APPLY TO THE CONDITION PRESENT DURING STAGE IN PROGRESS. ALL SIGNS WITH MESSAGES WHICH DO NOT APPLY DURING A CERTAIN PERIOD SHALL BE COVERED OR SET ASIDE OUT OF THE VIEW OF TRAFFIC.

- 7. PLACEMENT OF FINAL ROADWAY PAVEMENT MARKINGS AND RAISED PAVEMENT MARKERS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" LIST. THE CONTRACTOR SHALL PROVIDE 2 TRAILING VEHICLES FOLLOWING THE PAVEMENT MARKING EQUIPMENT. THE TRAILING VEHICLES SHALL TRAVEL 500' APART WITH THE REMOTE VEHICLE TRAVELING ON THE SHOULDER (LEFT OR RIGHT AS APPLICABLE) WHERE USABLE SHOULDER IS AVAILABLE. THE FIRST TRAIL VEHICLE IN A TRAFFIC LANE SHALL BE EQUIPPED WITH A TRUCK MOUNTED ATTENUATOR MEETING NCHRP 350 REQUIREMENTS. EACH TRAILING VEHICLE SHALL HAVE A YELLOW FLASHING BEACON PLUS 48" CONSTRUCTION WARNING SIGNS MOUNTED ON THE BACK FACING TRAFFIC WITH STANDARD TYPE MESSAGES ADVISING MOTORISTS OF THE WORK AHEAD, ADVISORY WARNING SPEED, AND WHICH LANE IS CLOSED.
- 8. DURING NON-WORKING PERIODS, OPEN EXCAVATIONS SHALL BE DELINEATED WITH WARNING FLASHERS AND/OR OTHER APPROVED DEVICES AS DEEMED APPROPRIATE BY THE ENGINEER.
- 9. EXISTING SIGNS LOCATED WITHIN THE ROAD WORK AREAS WHICH ARE NECESSARY FOR INTERIM OR PERMANENT TRAFFIC CONTROL SHALL BE REMOVED AND RE-ERECTED IN LOCATIONS AS APPROVED BY THE ENGINEER.
- 10. NO STOPPAGE OF TRAFFIC SHALL OCCUR WITHOUT LAW ENFORCEMENT PERSONNEL AT EACH LOCATION TO DIRECT TRAFFIC.
- 11. ANY TIME TRAFFIC MUST BE COMPLETELY STOPPED ON A FREEWAY OR INTERSTATE, IT SHALL BE AS FOLLOWS. THE COMPLETE TRAFFIC STOPPAGE OF ALL LANES OF ANY DIRECTIONAL ROADWAY SHALL BE NO MORE THAN 10 MINUTES IN ANY ONE CONSECUTIVE 30 MINUTE PERIOD. A MINIMUM OF TWO (2) LAW ENFORCEMENT OFFICERS (LEO'S) WITH PATROL VEHICLES SHALL BE USED TO PACE MOTORISTS TO A STOP. ONE LEO WITH PATROL CAR SHOULD BE PROVIDED FOR EACH LANE OF TRAFFIC TO BE CLOSED. PAYMENT FOR LEO'S SHALL BE INCIDENTAL TO ITEM 614 MAINTAINING TRAFFIC, UNLESS ITEMIZED SEPARATELY ELSEWHERE IN THE PLANS. AFTER TRAFFIC HAS BEEN SLOWED, ONE (1) PATROL VEHICLE SHALL TRAVEL ALONG THE ROADWAY SHOULDER 500' BEHIND THE BACK UP OF STOPPED VEHICLES. WHERE STOPPAGE OCCURS IN THE VICINITY OF FREEWAY ENTRANCES, THE CONTRACTOR SHALL PLACE FLAGGERS ON THE RAMPS TO STOP TRAFFIC. PATROL VEHICLES SHALL HAVE FLASHING BEACONS. TO PROVIDE ADEQUATE VISIBILITY TO APPROACHING MOTORISTS, THE CONTRACTOR SHALL ERECT AND MAINTAIN "ROAD WORK AHEAD", "PREPARE TO STOP", AND "STOP AHEAD" SIGNS WITH TWO FLASHING 12" TRAFFIC SIGNAL HEADS IN ACCORDANCE WITH 632.05. FLARES MAY BE SUBSTITUTED FOR FLASHING LIGHTS AND SIGN ILLUMINATION. THESE SIGNS SHALL BE

D12-BH-FY2013 MISCELLANEOUS PID No. 92142

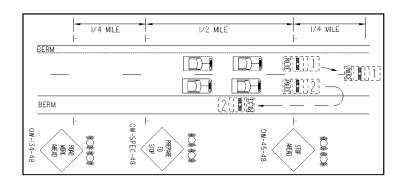
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MAINTAINING TRAFFIC - GENERAL PROVISIONS - CONT.

ILLUMINATED DURING NIGHT OPERATIONS AND SHALL BE 48" BY 48" SIGNS. STOPPING TRAFFIC SHALL BE DONE WHEN THE GREATEST NUMBERS OF LANES ARE PERMITTED TO BE CLOSED ACCORDING TO THE SCHEDULE OF THROUGH LANES TO BE MAINTAINED.

A PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE PLACED 1.5 MILES TO 2 MILES IN ADVANCE OF THE CLOSURE. PATROL VEHICLES AND SIGNS SHALL BE LOCATED IN ACCORDANCE WITH THE SKETCH BELOW.



- 12. WHENEVER A TOTAL CLOSURE IS IMPLEMENTED, THE CONTRACTOR SHALL PROVIDE A PORTABLE CHANGEABLE MESSAGE SIGN, TYPE FROM ODOT'S PRE-APPROVED LIST. IT SHALL BE PLACED 1.5 MILES TO 2 MILES IN ADVANCE OF THE CLOSURE OR AS DIRECTED BY THE ENGINEER.
- 13. FOR ANY OPERATION NOT SPECIFICALLY MENTIONED IN THESE PLANS, THE TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH THE OMUTCD.
- 14. ALL LABOR, MATERIALS, EQUIPMENT AND ANY INCIDENTALS REQUIRED TO COMPLETE THE WORK AS DESCRIBED ABOVE SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 MAINTAINING TRAFFIC.
- 15. DRUMS SHALL BE IN ACCORDANCE WITH PERTINENT SECTIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. ALL PERMANENT LANE CLOSURES SHALL BE DELINEATED WITH DRUMS SPACED AT 50 FEET CENTER TO CENTER. ALL COSTS FOR INSTALLING, MAINTAINING AND SUBSEQUENT REMOVAL OF SAID DRUMS SHALL BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614- MAINTAINING TRAFFIC.

PERMITTED LANE CLOSURES

ALL LANE CLOSURES ON THIS PROJECT 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:

www.dot.state.oh.us/dist12/workzone/laneclo.htm

THE LATEST REVISION, AT 14 DAYS PRIOR TO THE BID DATE, SHALL BE IN EFFECT FOR THIS PROJECT.

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

IF LANE CLOSURES ARE IN PLACE OUTSIDE THE SPECIFIED TIME, LIQUIDATED DAMAGES IN THE AMOUNT OF \$100.00 PER MINUTE SHALL BE ASSESSED THE CONTRACTOR FOR EACH MINUTE THE LANE REMAINS CLOSED.

HOLIDAY CLOSURES

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

CHRISTMAS	NEW YEARS	MOTHERS DAY

MEMORIAL DAY FOURTH OF JULY EASTER

LABOR DAY THANKSGIVING

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

DAY 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	1 WED
WEDNESDAY	12:00N TUES	THROUGH 6:00 AM	1 THURS
THURSDAY	12:00N WED	THROUGH 6:00 AM	1 MON
FRIDAY	12:00N THUR	THROUGH 6:00 AM	1 MON
SATURDAY	12:00N FRI	THROUGH 6:00 AM	1 MON

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

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

LANE CLOSURE ANALYSIS FOR ADDITIONAL LANE CLOSURE TIMES

IF THE CONTRACTOR WOULD LIKE TO CLOSE LANES OUTSIDE THE TIME PERMITTED THERE MUST FIRST BE A LANE CLOSURE ANALYSIS. A LANE CLOSURE ANALYSIS SHALL BE DONE AND DOCUMENTED IN THE FOLLOWING MANNER:

LANES MAY BE CLOSED IF THE HOURLY COUNTS ARE LESS THAN THE COUNTS GIVEN BELOW. IF THE ADDITIONAL HOURS ARE ON A WEEKDAY THE COUNT MUST BE DONE ON A WEEKDAY. THE SAME SHALL APPLY FOR A WEEKEND.

FOR 1 OUT OF 3 LANES CLOSED:

TWO HOURLY COUNTS SHALL BE DONE FOR THE ADDITIONAL TIMES THE CONTRACTOR WOULD LIKE TO CLOSE AN ADDITIONAL LANE. IF THE TOTAL HOURLY COUNT IS UNDER 2200 VEHICLES PER HOUR FOR WEEKDAYS AND 2700 VEHICLES PER HOUR FOR WEEKENDS THEN THE CONTRACTOR MAY CLOSE A LANE DURING HOURS THAT MEET THIS CRITERIA.

THE TRAFFIC COUNTS SHALL BE TURNED INTO THE WORK ZONE TRAFFIC CONTROL ENGINEER FOR APPROVAL OF THE NEW TIMES. IF A BACK UP, (STOP AND GO TRAFFIC) OR DELAYS, (SPEEDS BELOW 40 MPH) OCCURS DURING THE NEW CLOSURE TIMES THE CONTRACTOR SHALL DO ANOTHER ANALYSIS. IF A TRAFFIC BACKUP OR DELAY OCCURS AFTER THE SECOND ANALYSIS, THE CONTRACOTOR SHALL NOT CLOSE THE LANES FOR THE ADDITIONAL HOURS.

WORKSITE TRAFFIC SUPERVISOR

Work Zone Traffic Supervisor

SUBJECT TO THE APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY, 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), 1-877-642-4637, http://www.ATSSA.com/trainingcertification.aspx CERTIFIED TRAFFIC CONTROL SUPERVISOR (TCS).
- 2. NATIONAL HIGHWAY INSTITUTE, DESIGN AND OPERATION OF WORK ZONE TRAFFIC, 1-877-558-6873. http://www.nhi.fhwa.dot.gov/training/course_search.aspx
- 3. THE OHIO CONTRACTORS ASSOCIATION, TRAFFIC CONTROL SUPERVISOR (OCA/TCS) WORK ZONE CLASS, ONLY IF TAKEN AFTER MAY 5, 2004, 1-800-229-1388. http://www.ohioContractors.org/default.aspx
- 4. OHIO LABORERS' TRAINING, TRAFFIC CONTROL SUPERVISORS CLASS, 1-800-635-7570. http://www.ohiolaborerstraining.com/adv.htm



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WORKSITE TRAFFIC SUPERVISOR - CONT.

THE WTS POSITION IS ESTABLISHED FOR THE PURPOSE OF SUPERVISING THE INSTALLATION OF THE WORK ZONE. MONITORING IT AND CORRECTING ANY DEFICIENCIES IN THE WORK ZONE. THE WTS SHALL OVERSEE ALL OPERATIONS THAT AFFECT THE MOVEMENT OF VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH THE WORK ZONE.

THE WTS SHALL BE PRESENT WHEN THE CONTRACTOR OR SUBCONTRACTOR INSTALLS A TRAFFIC RESTRICTION, LANE CLOSURE, ETC. IN LIEU OF THE WTS BEING PRESENT WHEN A SUBCONTRACTOR HAS A WORK ZONE IN PLACE, THE SUBCONTRACTOR MAY USE HIS OWN PERSONNEL IF THAT PERSON IS A CERTIFIED WTS. THE CONTRACTOR AND SUBCONTRACTOR MUST PRESENT A COPY OF HIS WTS CERTIFICATE TO THE PROJECT ENGINEER.

A WTS MUST BE PRESENT FOR ANY CLOSURE OR TRAFFIC RESTRICTION THAT TAKES PLACE ON THE PROJECT.

THE WTS MAY BE A PART OF THE WORKING CREW AND MUST BE IN CHARGE OF SETTING UP THE WORK ZONE. AFTER THE WORK ZONE IS IN PLACE THE WTS MAY RESUME OTHER DUTIES NOT RELATED TO WORK ZONE TRAFFIC CONTROL. IF THE RESTRICTIONS ARE SHORT TERM. THE WTS SHALL MONITOR THE ZONE FOR COMPLIANCE. TRAFFIC CONTROL WILL BE THE WTS'S MAIN DUTY DURING IMPLEMENTATION OF THE WORK ZONES. THE WTS SHALL HAVE THE AUTHORITY TO HAVE THE DEFICIENCIES CORRECTED AS SOON AS POSSIBLE.

THE WTS SHALL PROVIDE THE PROJECT ENGINEER A SKETCH OF THE (TCP) TRAFFIC CONTROL PLAN EVERY DAY THERE IS TO BE A SHORT TERM TRAFFIC RESTRICTION, LANE CLOSURE ETC. THIS TCP SHALL SHOW HOW THE WORK ZONES ARE TO BE IMPLEMENTED. APPROXIMATE LOCATIONS OF THE TRAFFIC CONTROL DEVICES AND WHAT STANDARD DRAWING OR SECTION FROM THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES WAS REFERENCED.

A 24-HOUR PHONE NUMBER SHALL BE MADE AVAILABLE TO THE PROJECT ENGINEER/SUPERVISOR IN ORDER TO CONTACT THE WTS. THE WTS SHALL HAVE A PAGER AND/OR CELL PHONE NUMBER PROVIDED TO THE PROJECT ENGINEER.

FAILURE OF THE CONTRACTOR TO COMPLY WITH ANY OF THE ABOVE SHALL CONSTITUTE CAUSE FOR THE PROJECT ENGINEER / SUPERVISOR TO DEDUCT \$500.00 PER DAY FROM MONEY DUE TO THE CONTRACTOR NOT AS A PENALTY BUT AS A LIQUIDATED DAMAGE.

PAYMENT FOR THE WTS SHALL BE INCLUDED UNDER THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE

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 OMUTCO INTENDS THAT FLAGGERS BE USED. IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH ANOFFICIAL 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 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) SHOULD BE PROVIDED FOR THE **FOLLOWING TRAFFIC CONTROL TASKS:**

- 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.

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

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

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

ITEM 614 - ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN

WHEN TRAFFIC IS SHIFTED ONTO EXISTING SHOULDERS WITH RUMBLE STRIPS, ITEM 614, ASPHALT FOR MAINTAINING TRAFFIC, AS PER PLAN SHALL BE USED TO FILL IN THE RUMBLE STRIPS. PRIOR TO PLACING THE ASPHALT, THE CONTRACTOR SHALL ENSURE THAT THE RUMBLE STRIPS ARE CLEAN AND DRY. PRIOR TO COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL REMOVE THE ASPHALT FROM THE RUMBLE STRIPS AND RETURN THEM TO THEIR PREVIOUS CONDITION.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY TO BE USED AS OUTLINED ABOVE:

ITEM 614 - ASPHALT FOR MAINTAINING TRAFFIC, AS PER PLAN10 CU. YD.

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ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

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

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED ON A PERMANENT BASIS BY AFFIXING RETROREFLECTIVE MATERIAL, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC, AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW RETRO-REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

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 BE EQUIPPED WITH RADAR EMULATOR OR A RADAR DEVICE. A RADAR EMULATOR SENDS OUT A SIGNAL THAT ACTIVATED RADAR DETECTORS. THE DEVICE MUST BE APPROVED BY THE FCC. THE RADAR EMULATOR SHALL USE THE SAME POWER SUPPLY AS THE PCMS. THE RADAR EMULATOR SHALL BE ABLE TO

BE ACTIVATED WITH THE PCMS RUNNING OR NOT. THE DEVICE SHALL HAVE AN EFFECTIVE RANGE NOT TO EXCEED ONE-HALF MILE. THE RADAR EMULATOR MAY BE PURCHASED FROM THE FOLLOWING COMPANIES:

TRIPLEX GROUP http://www.triplexgroup.com/safety%20beam.htm

SPEED MEASUREMENT LABORATORIES, INC. http://www.speedlabs.com/radar_drones.html

TRAFFIC SAFETY TECHNOLOGIES http://www.traffic-safety-technologies.com/drones.htm

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 CMS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

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

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B. AS PER PLAN

THIS ITEM SHALL BE LIMITED TO CLASS A, FLEXIBLE PAVEMENT AND SHALL REMAIN IN PLACE AFTER ITS USE. ALL OTHER SPECIFICATIONS SHALL BE AS PER ITEM 615.

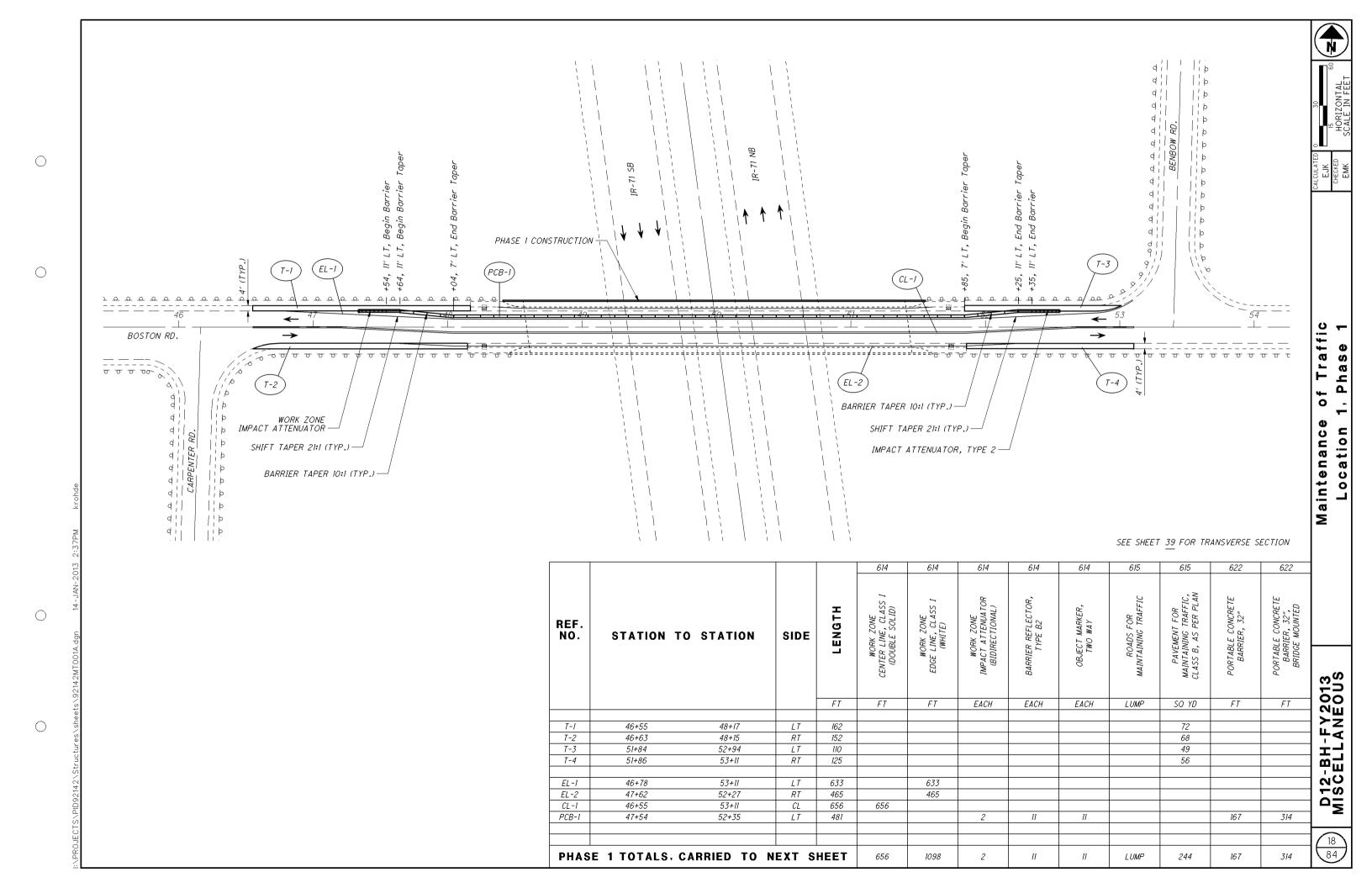
ITEM 630 - SIGNING MISC.: ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER

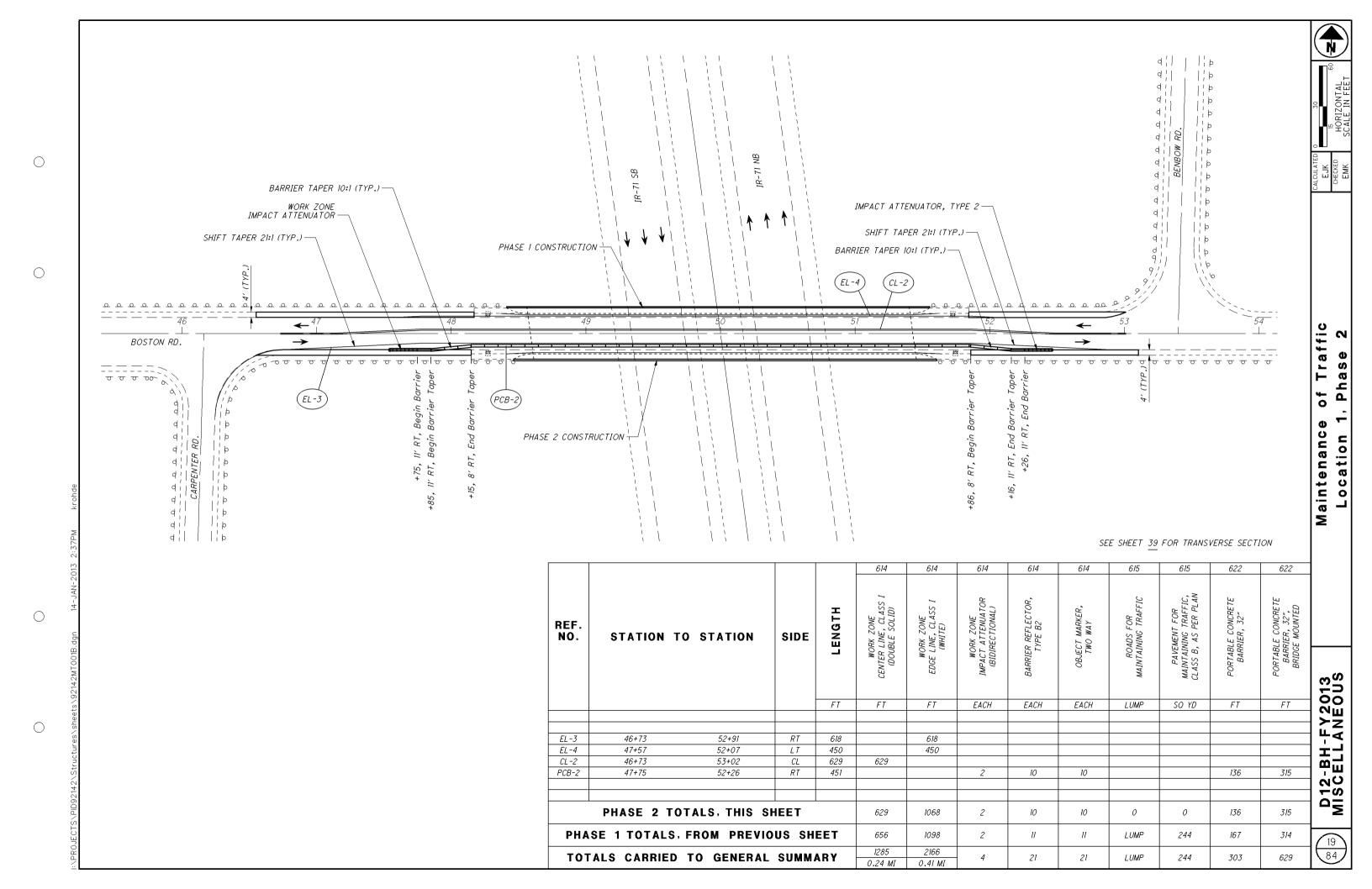
WHEN ADDITIONAL SIGNING IS NEEDED TO MAINTAIN TRAFFIC, THE CONTRACTOR SHALL FURNISH THE SIGN OR SIGNS AS DIRECTED BY THE ENGINEER. THESE SIGNS SHALL BE GROUND MOUNTED AND MEET ALL THE SPECIFICATIONS OF THE PLAN, PROPOSAL AND THE CURRENT YEAR CMS.

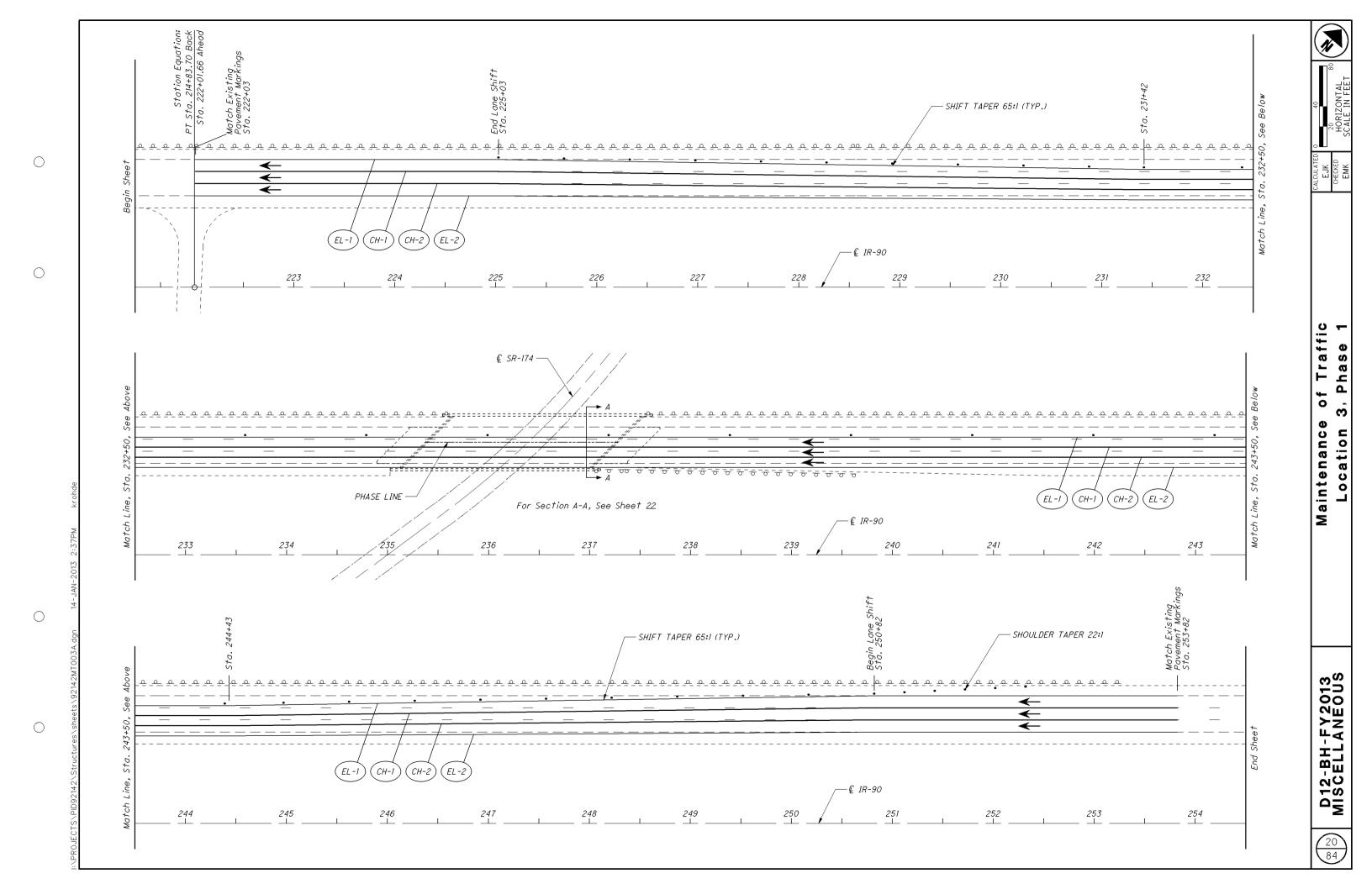
PAYMENT FOR THIS ITEM SHALL INCLUDE BUT NOT BE LIMITED TO THE COST TO FURNISH AND ERECT THE SIGN, INCLUDING DRIVE POSTS OR OTHER APPROVED METHODS OF SUPPORT, MAINTAINING THE SIGN AND REMOVAL OF THE SIGN.

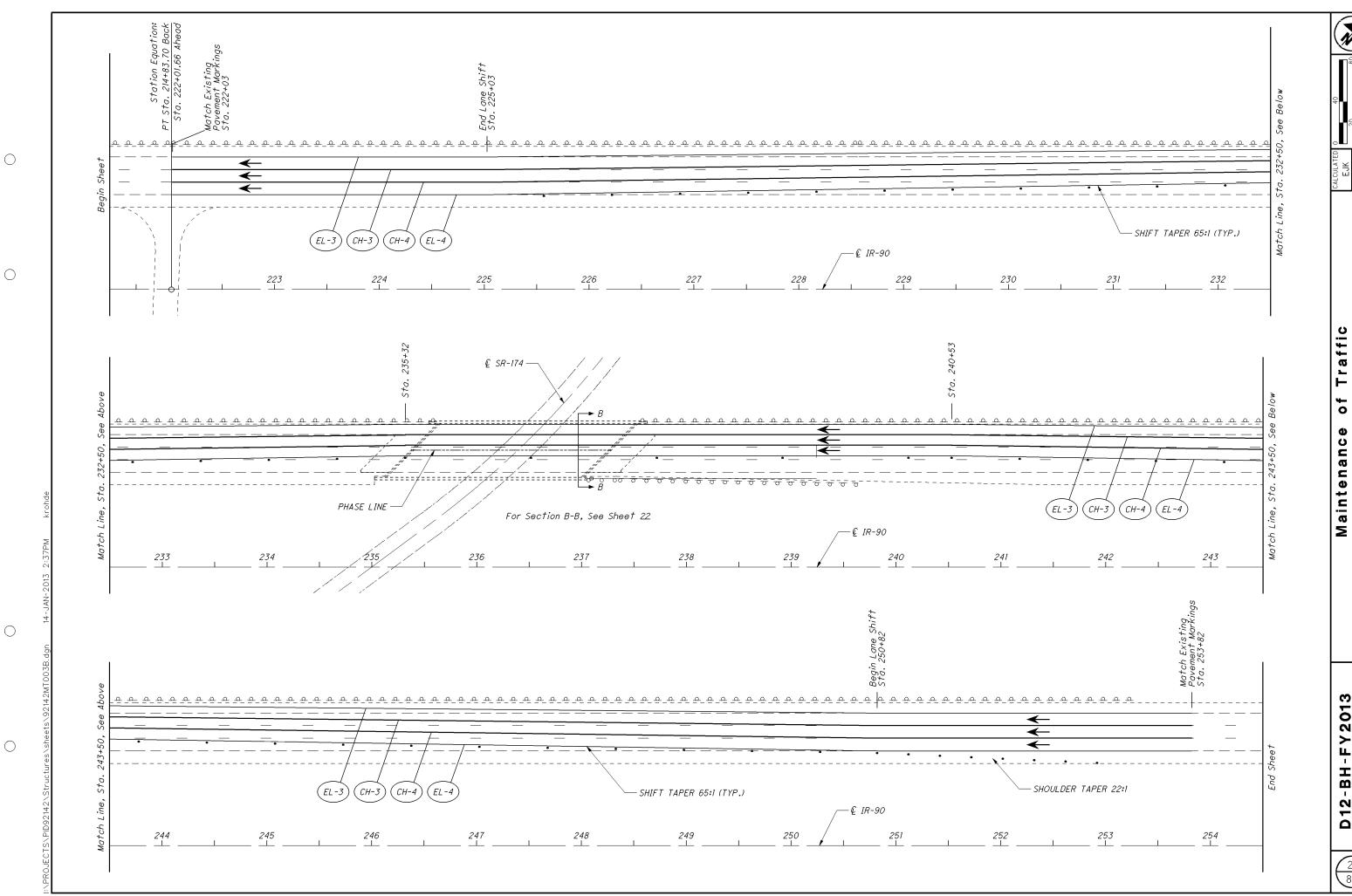
THIS ITEM OF WORK SHALL BE USED TO PROVIDE SIGNS THAT ARE BEYOND THE REQUIREMENTS OF THE SIGNAGE THAT IS DETAILED IN THE STANDARD DRAWINGS AND THE OMUTCD.

THE FOLLOWING QUANTITY SHALL BE CARRIED TO THE GENERAL SUMMARY:



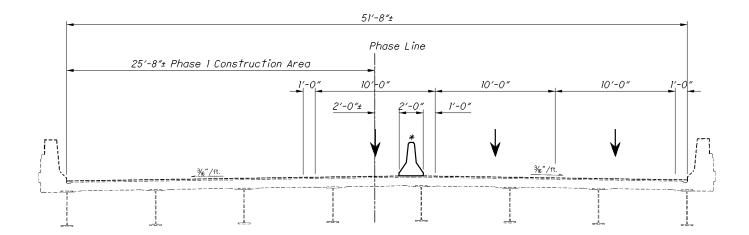




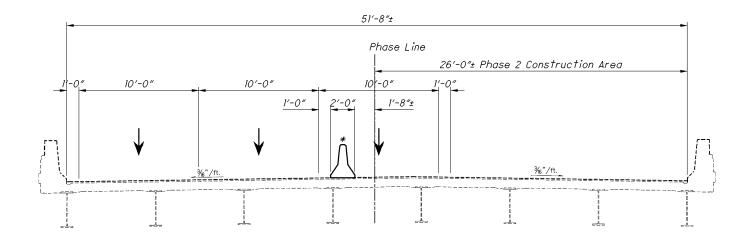


Phase Location

D12-BH-FY2013 MISCELLANEOUS



SECTION A-A, PHASE 1, IR-90 WESTBOUND



SECTION B-B, PHASE 2, IR-90 WESTBOUND

* - Portable Barrier System used for weekend Lane Closure

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₽ <i>CH-2</i>		222+03	<i>253+82</i>	LT	1	3179			3179	
*		234+92	241+52	LT	1	660				660
EL-3		222+03	253+82	LT	2	3179	3179			
EL-4		222+03	253+82	LT	2	3179	3113	3179		
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Item 622 - Barrier Misc.: Temporary Movable Barrier System

A. Description

This item consists of furnishing, installing and relocating a temporary movable barrier system, including the necessary barrier transfer devices, in accordance with this specification, the plans and as directed by the Engineer.

B. Materials and Construction Methods

All temporary barrier installations shall be completed in accordance with the applicable sections of the Ohio Manual of Uniform Traffic Control Devices (OMUTCD) including all revisions up to the date of advertisement of the contract.

The Temporary Movable Barrier System shall be fully tested to and shall meet the recommended criteria as defined in the National Cooperative Highway Research Program (NCHRP) Report 350 for test level 3 when properly installed according to the manufacturer's recommendations, the plans and as directed by the Engineer.

For design impacts the Temporary Movable Barrier System shall be capable of a lateral deflection of no more than 8 feet when impacted.

The Temporary Movable Barrier System shall be constructed from a series of individual sections. Each barrier section shall be no longer than 50 feet (15 meters) and no shorter than 3 feet (1 meter). A movable impact attenuator shall be installed at the leading edge of the barrier installation and the first two (2) sections of barrier shall be anchored to the roadway in accordance with the manufacturer's recommendations. Payment for the appropriate impact attenuators shall be included in this bid item. The last two (2) sections of barrier shall also be anchored to the roadway in accordance with the manufacturer's recommendations. Barrier-to-barrier connections shall be accomplished in accordance with the manufacturer's recommendations.

Sections of the Temporary Movable Barrier System shall be equipped with wheel and jack mechanisms that allow for manual movement of the barrier if directed by the Engineer.

The Temporary Movable Barrier System shall have the capability to be configured as a gate to facilitate work zone or median access. The gate function shall be integrated into the barrier and shall be capable of being moved with the barrier. The gate functionality shall only be used if directed by the Engineer.

A barrier transfer device shall be provided as per the manufacturer's recommendations and shall be incidental to this item. The barrier transfer device shall be a self-contained unit or can be an attachment for any typical construction apparatus. The barrier transfer devices shall be capable of laterally adjusting the barrier at a rate no more than one (1) mile in thirty (30) minutes. The barrier system shall be moved at the beginning of the work day to close a lane as required by the Engineer and shall be moved at the end of the work day to open a lane as required by the Engineer.

Barrier reflectors and object markers, spaced at alternating 50 foot intervals per standard drawing MT-101.70, shall be installed on the Temporary Movable Barrier System. Payment for the appropriate barrier reflectors and object markers shall be included in this bid item.

To reposition the movable barrier system to close or open a lane, the Contractor shall position three (3) Truck Mounted Attenuators (TMAs) in the left lane/shoulder. One TMA shall remain at the end of the left lane taper, one shall follow the barrier positioning vehicle and one TMA shall follow further behind the second TMA. Barrier movement shall occur in the direction of traffic flow. A LEO shall follow the second TMA.

It is expected that the Contractor shall rent 780 feet of Item 622 – Barrier Misc.: Temporary Movable Barrier System from the manufacturer/distributor for the duration of the westbound bridge work at Location 3

The Contractor shall submit his or her plan for phasing of the Temporary Movable Barrier System to the Engineer for approval two weeks prior to mobilizing the Temporary Movable Barrier System.

The Contractor shall submit to the Engineer the product specification information, design cut sheets and other information necessary for approval as determined by the Engineer.

C. Method of Measurement and Basis of Payment

The measurement of the item shall be made along the centerline in feet and payment shall be made at the unit price bid per foot of Item 622 – Barrier Misc.: Temporary Movable Barrier System.

Payment for accepted quantities, complete in place, will be made at the contract price. Payment shall be full compensation for all materials, labor, incidentals and equipment for furnishing, erecting, relocating, maintaining and removing the Temporary Movable Barrier System. The following estimated quantity has been carried to the general summary:



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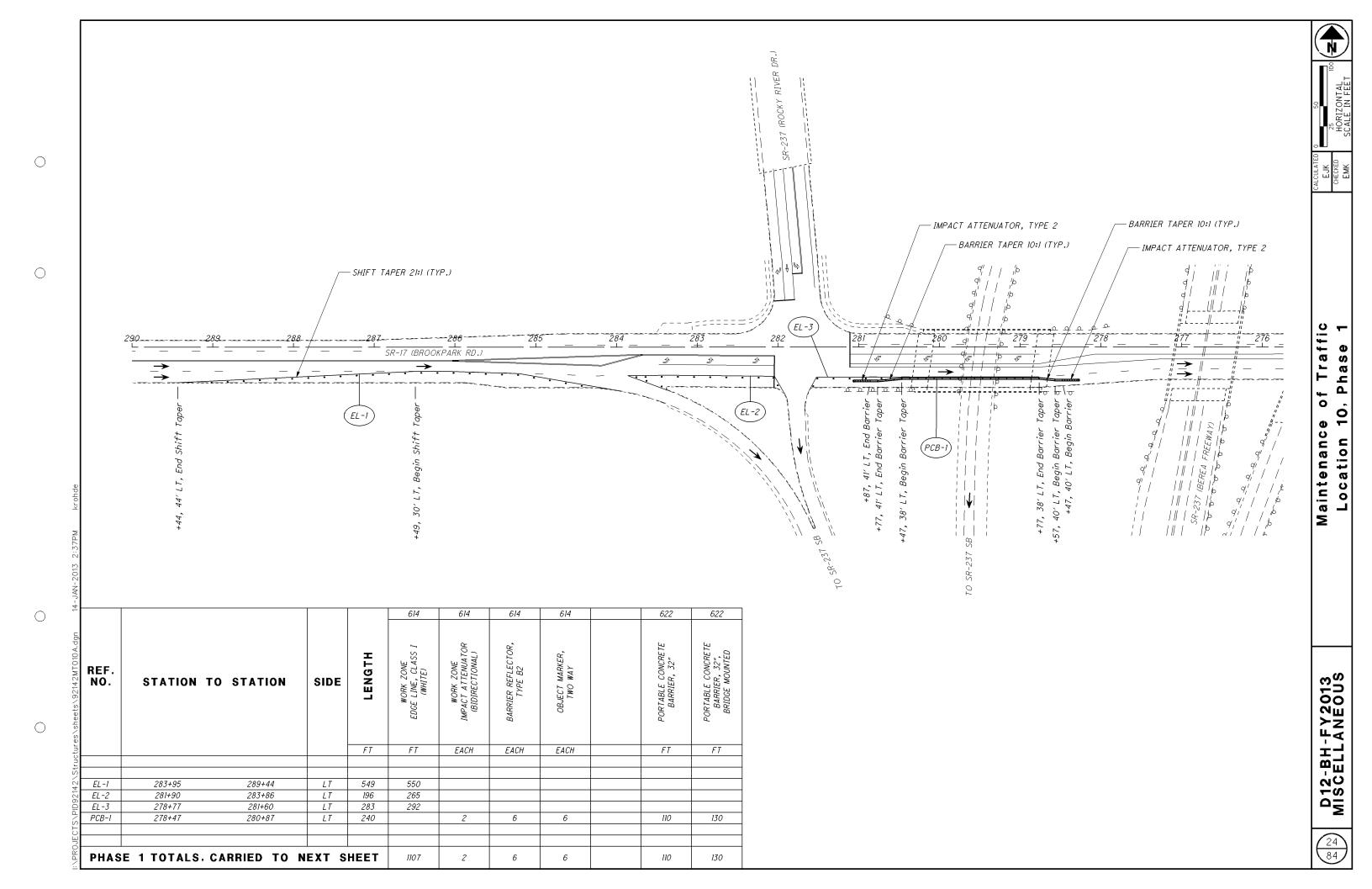
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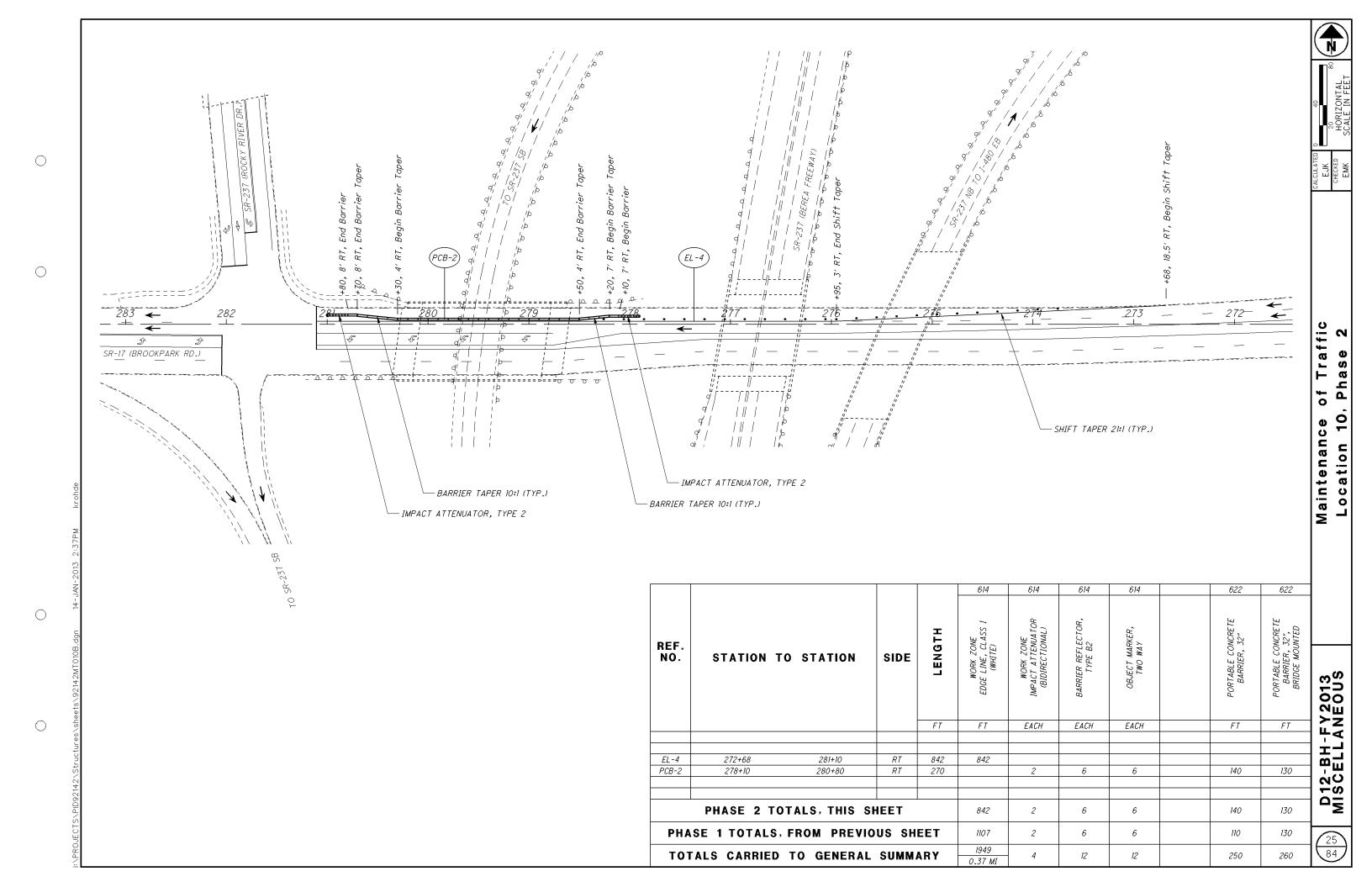
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Detour Plan Traffic of Maintenance 6 Location







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HRU 8, SEE HEET 26	CUY-422-1365 R 1814664 US 422EB MAINLINE OVER US 422WB TO GO IR 480WB/271SB RAMP	R 480 WB TO SR	LAK-2-0055 LEFT 4300092 SR 2 OVER LLOYD RD CONNECTOR RAMP	RD CONNECTOR	157	RIGHT 3377H ST	LAK-2-1354 ES 4301293 SR 2 WB TO SR 44 SB RAMP OVER SR 2	LAK-306-0518 4303997 SR 306 OVER IR 90	GENERAL	01/1MS/BR/	02/NHS/BR/	03/BRO/BR/	ITEM	ITEM EXT.	PROJECT TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	
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b.																			1
700																	TRAFFIC CONTROL		
S 4										4			621	00100	4	EACH	RPM		
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0 7.27	0.111	0.36								0.36			642	00190	0.36	MILE	LANE LINE, 4"		<u>5</u> 2
र्फ़ 1.21										1.21			642	00194	1.21	MILE	LANE LINE, 6"		<u> </u>
်စ္ <i>0.13</i>										0.13			642	00290	0.13	MILE	CENTER LINE		FA 9
To for																			D12-BH-FY2013 MISCELLANEOUS PID No. 92142
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FOR LOCATIONS 1 THRU 8, SEE 44 SUB-SUMMARY ON SHEET 27 8	5 R INLINE OVER US 422WB	CUY-17-0449 1802054 SR 17 OVER RAMP IR 480 WB TO SR	AK-2-0055 LEFT 300092 R 2 OVER LLOYD RD CONNECTOR MMP	AK-2-0055 RIGHT 300122 R 2 OVER LLOYD RD CONNECTOR AMP	LAK-2-0255 LEFT 4300300 SR 2 OVER E 337TH ST	LAK-2-0255 RIGHT 4300335 SR 2 OVER E 337TH ST	LAK-2-1354 ES 4301293 SR 2 WB TO SR 44 SB RAMP OVER SR 2	LAK-306-0518 4303997 SR 306 OVER IR 90	GENERAL 01/1MS/BR/	O2/NHS/BR/	3/BRO/BR/	ITEM	ITEM EXT.	PROJECT TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.	CALC
π. ν.	0 % 2 F	0 20 00	7400	7420	748	748	7400	748	010	0	0					STRUCTURES (20' AND OVER)		┨
LUMP									LUMP)		202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN "A"	7	၂ က
		LUMP							LUMF			202	11201	LUMP		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN "B"	7	⊣ ⊾
40									40			202	22901	40	SQ YD	APPROACH SLAB REMOVED, AS PER PLAN	7	∃
530									530			202	32800	530	SQ YD	CONCRETE SLOPE PROTECTION REMOVED		」
		5440							0777	_				07770	50/4/5	SOOM OO TES SENSOON OFFE AND SES OF AN		⊣ α
18323		5416							2373			509	10001	23739	POUND	EPOXY COATED REINFORCING STEEL, AS PER PLAN	8	4 .
150		250							400			509	20001	400	POUND	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	8	- '
1552		178							1730			510	10000	1730	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	8	₩
410		190						280	880			512	10050	880	SQ YD	SEALING OF CONCRETE SURFACES (NON-EPOXY)		∃ ₹
1502	70	500	120	100			120	370	2442	240	100	512	10100	2782	SQ YD	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	8	1 🗟
1050	70	480	120	100			120	520	2120		100	512	74000	2460	SQ YD	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	8	N M
																		1 ≥ '
			18	14			5			23	14	513	21001	37	EACH	TRIMMING OF BEAM END, AS PER PLAN	8	1 💆
505		500	7500	5750				110	1115	7500	5750	513	21501	14365	POUND	REPLACEMENT OF DETERIORATED END CROSSFRAMES, AS PER PLAN	8	
940									940			513	21600	940	POUND	STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN	8	1 .
																		1 🚽 '
4206		2100							6306	;		514	00050	6306	SQ FT	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	8	1 ≲ '
4206		2100							6306			514	00056	6306	SQ FT	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT	8	⊢ ∝
4206		2100							6306			514	00060	6306	SQ FT	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT	8	⊣ ш
4206		2100							6306			514	00066	6306	SQ FT	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT	8	Z
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⊕ 8		4							12	+	+	514	00504	12	MAN HOUR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL		ქ ౮
8		4							12	+	+	514	10000	12	EACH	FINAL INSPECTION REPAIR		-
Ž		7							"2	+	+	314	70000	12	LACII	I THAL THUS LOTTON NET AIN		-
57									57			516	01301	57	FT	ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN	9	-
ş	54								54			516	11211	54	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	9	
8	V 1			114					J ,		114	516	14600	114	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: I" PRECOMPRESSED EXPANSION JOINT FILLER	10	
=======================================			138	111						138	- ""	516	14600	138	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 1 1/2" PRECOMPRESSED EXPANSION JOINT	10	-
2			100							- ,,,,,		1 0,0	7,7000	1 .00	, ,	FILLER	1,0	-
FEB-20		10							10			516	14600	10	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: 3 1/2" PRECOMPRESSED EXPANSION JOINT FILLER	10	
6				1	+							+	40501	100		DEADING DIES (ISSUAN) AS DED SULV	+	4
48		10	18	14	14	14	10		48	18	42	516	46501	108	EACH	BEARING, PTFE (TEFLON), AS PER PLAN	9	-
		18			1	1	10		34	10		516 516	46801	44	EACH	REFURBISH AND RESET BEARING, AS PER PLAN	9	-
Бр LUMP		LUMP					LUMP		LUMF	LUMP		516	47001	LUMP	 	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	9	- '
2005.0									1			517	76302	1	EACH	RAILING, MISC.: RE-ANCHOR TUBE RAILING SUPPORT	10	
56 56		10							66			518	41200	66	FT	6" NON-PERFORATED HELICAL CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01		- -
6 1530	150	220	210	175		1	210	1200	3100	420	175	519	11101	3695	SQ FT	PATCHING CONCRETE STRUCTURE, AS PER PLAN	10	−ျဗ <mark>လ</mark>
531	54	220	210	113	+		92	1200	585		113	SPECIAL	51911720	677	FT	PATCHING CONCRETE STRUCTURE, MISC.: TOP OF BACKWALL REPAIR	10	-BH-FY2013 :ELLANEOUS No. 92142
<u> </u>	J 7						J2		130			SPECIAL	51912510	130	SQ YD	PATCHING CONCRETE STRUCTURE, MISC.: FOR OF BACKWALL REPAIR	11	1 9⊞ 4
\s_\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \									130			JI LOIAL	31312310	130	30 10	TATOMING CONTONETE BRIDGE BEGIN	+ "	┦ŸZ ਯੂ
LUMP		 							LUMF	,		SPECIAL	53000200	LUMP	1	STRUCTURE, MISC.: RE-WELDING END CROSSFRAME MEMBERS	10	վ⊑Ճ ։՝
1 LOWIF	1	 	 		+	+			LUMF 2			SPECIAL	53000200	LOWF 2	EACH	STRUCTURE, MISC.: EMERGENCY ASPHALT PAVING OPERATION ON STANDBY	11	┧╬╌╴┋╵
500	<u> </u>			<u> </u>	+				500			SPECIAL	53000400	500	SQ FT	STRUCTURE, MISC.: COMPOSITE FIBER WRAP SYSTEM	11-12	128 -
200					+				300			JI LOTAL	3300000	1 300	3077	STREET ORL, MILEON COMIT COLLE LIDER MINAL STOTEM	11 12	D12- MISCI PID
90		8			+			140	238			601	20011	238	CU YD	CRUSHED AGGREGATE SLOPE PROTECTION, AS PER PLAN	12	┦₽⋛╺╻
530		 			+			170	530			601	21000	530	SQ YD	CONCRETE SLOPE PROTECTION	12	┨ ̄
<u>-</u>		20			+			45	65			601	32204	65		ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER	+	1
S		1 20	1		+			70				1 007	32207		00 10	NOON GRAMEE PROTECTION, THE CHITH PADRIC FIETER	+	1
610		305							915			607	39901	915	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN	12	33
\frac{1}{2} 40									40			613	41201	40	CU YD	LOW STRENGTH MORTAR BACKFILL, AS PER PLAN	13	1 💛

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		DCATION NUMBER		1 555	7.55	14472	T1 10	ı			u ITC							ATED ح ED
IMS 1 thru 8	IMS 9	IMS NHS	BRO 11	BRO 12	12	NHS 13	IMS 14		+ FUNI	DING SP	LIIS							KM KM
FOR LOCATIONS 1 THRU 8, SEE	5 R INLINE OVER US 422WB '	49 RAMP IR 480 WB TO SR 5 (LT) LLOYD RD CONNECTOR	(RT) LOYD RD CONNECTOR	3377H ST	RIGHT - 337TH ST	SS A4 SB RAMP OVER	18 R IR 90	GENERAL	01/IMS/BR/	02/NHS/BR/	03/BRO/BR/	ITEM	ITEM EXT.	PROJECT TOTAL	UNIT	DESCRIPTION STRUCTURES (20' AND OVER) - CONTINUED	SEE SHEET NO.	
																STRUCTURES (20 AND OVER) - CONTINUED		ო
1054 15									1054 15			847 847	10001 20001	1054 15	SQ YD CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (2" THICKNESS) MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS PER PLAN	13	В
LUMP									LUMP			847	30000	LUMP		TEST SLAB] ຕ
65									65			847	30200	65	CU YD	FULL DEPTH REPAIR		↓ `´
1054									1054			847	30400	1054	SQ YD	EXISTING CONCRETE OVERLAY REMOVED (2" NOMINAL THICKNESS)		↓ '
265									265			847	50000	265	SO YD	HAND CHIPPING		┨
250									250			848	10001	250	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (1.25" THICKNESS)	14	ARY
	770								770			848	10001	770	SQ YD	MICRO SILICA MODIFIED CONCRETE OVERLAY USING HYDRODEMOLITION, AS PER PLAN (2.75" THICKNESS)	14	W W
250	770								1020			848	20000	1020	SQ YD	SURFACE PREPARATION USING HYDRODEMOLITION		1 ≥
26	20								46			848	30001	46	CU YD	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY, AS	14	ไร
25	50								75			848	50000	75	SQ YD	PER PLAN HAND CHIPPING		┨ ~~
LUMP	LUMP								LUMP			848	50100	LUMP	30 10	TEST SLAB		┨╶┛
201111	15								15			848	50200	15	CU YD	FULL-DEPTH REPAIR		┤ ≲
	770								770			848	50320	770	SQ YD	EXISTING CONCRETE OVERLAY REMOVED(1.75" NOMINAL THICKNESS)		#
	250								250			848	50341	250	SQ YD	REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY, AS PER PLAN	14	U U
υ 57		34							91			898	11001	91	CU YD	QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET), AS PER PLAN	14	ქ
krohd 44									44			898	98000	44	CU YD	QC/QA CONCRETE, MISC.: APPROACH SLAB INCLUDING SIDEWALK & PARAPET	14]
MA																MAINTENANCE OF TRAFFIC		-
9:15	+ +							1000	680	130	190	614	11110	1000	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	17	1
₽ 4		4							8			614	12338	8	EACH	WORK ZONE IMPACT ATTENUATOR (BIDIRECTIONAL)		1
50								10	7	1	2	614	13001	10	CU YD	ASPHALT CONCRETE FOR MAINTAINING TRAFFIC, AS PER PLAN	17	1
<u>21</u>		12							33			614	13302	33	EACH	BARRIER REFLECTOR, TYPE B2		4
21		12							33			614	13360	33	EACH	OBJECT MARKER, TWO WAY		-
								500	340	65	95	614	18401	500	DAY	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	17A	1
⊆ 0.24									0.24	- 00		614	21000	0.24	MI	WORK ZONE CENTER LINE, CLASS I	1	1
0.41		0.37							0.78			614	22000	0.78	ΜI	WORK ZONE EDGE LINE, CLASS I		
2.42									2.42			614	22200	2.42	ΜI	WORK ZONE EDGE LINE, CLASS 1, 740.06, TYPE 1		4
SS 12716									12716			614	23400	12716	FT	WORK ZONE CHANNELIZING LINE, CLASS 1, 740.06, TYPE 1		-
LUMP LUMP									LUMP			615	10000	LUMP		ROADS FOR MAINTAINING TRAFFIC		-
5 244									244			615	25001	244	SQ YD	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, AS PER PLAN	17A	ဗုလ္
eet														 				 55 ~
^फ ु 303		250							553			622	40020	553	FT	PORTABLE CONCRETE BARRIER, 32"		12点 4
်မ <i>629</i>		260							889			622	40040	889	FT	PORTABLE CONCRETE BARRIER, 32", BRIDGE MOUNTED]r- <u>4</u> 8
1440								100	1440 68	13	19	622 630	90000 97800	1440	FT SQ FT	BARRIER, MISC.: TEMPORARY MOVABLE BARRIER SYSTEM SIGNING, MISC.: ADDITIONAL SIGNS, GROUND MOUNTED, AS DIRECTED BY THE ENGINEER	22 17A	D12-BH-FY2013 MISCELLANEOUS PID No. 92142
2\St.																		22-1 SCI
1214				1								1				MISCELLANEOUS	+	 ⁰፮ "
500																		1
S								LUMP	LUMP	LUMP	LUMP	SPECIAL	10830000	LUMP		CPM PROGRESS SCHEDULE SHORT DURATION PROJECTS		4
						1		LUMP	LUMP	LUMP 1	LUMP	614	11001	LUMP	MONTH	MAINTAINING TRAFFIC, AS PER PLAN	15-17	
Γος <u></u>			-					8 LUMP	5 LUMP	LUMP	2 LUMP	619 623	16010 10001	8 LUMP	MONTH	FIELD OFFICE, TYPE B CONSTRUCTION LAYOUT STAKES, AS PER PLAN	13	$\frac{34}{34}$
4	+ +		+			+		LUMP	LUMP	LUMP	LUMP	624	10001	LUMP		MOBILIZATION	13	84
<u> </u>							1			LOWII		02 /	10000	LOM				

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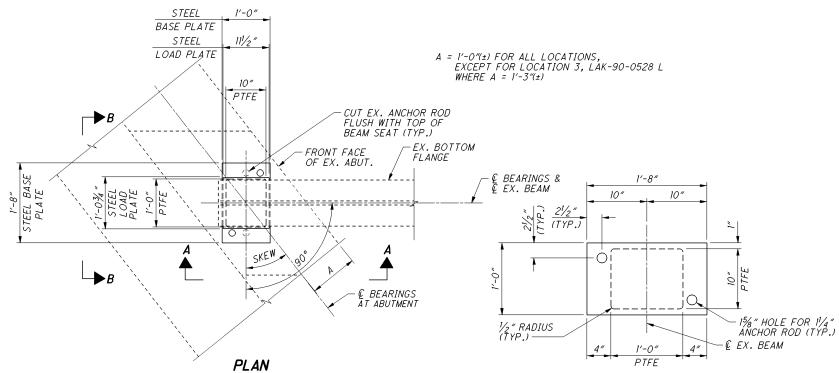
SIGN AGENCY DISTRICT 12 8 ENGINEERING PARTMENT ODOT D PLANNING 8

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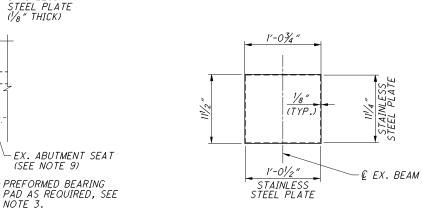
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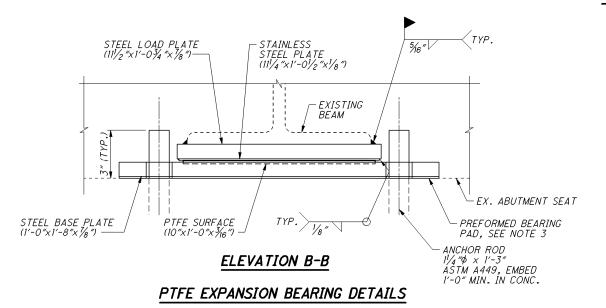
STAINLESS

PLAN OF BASE PLATE

PREFORMED BEARING PAD SIMILAR (EXCEPT FOR PTFE)



PLAN OF LOAD PLATE



Q ABUTMENT

BEARINGS

STEEL BASE PLATE (1/8" THICK)

ELEVATION A-A

EXISTING BEAM

STEEL LOAD PLATE (%" THICK)-

BOTTOM FLANGE

PTFE

SURFACE (¾6" THICK)-

NOTES:

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

BRIDGE

LAK-90-0528 L

LAK-90-0599 L&R

LAK-2-0055 L&R

LAK-2-0255 L&R

TOTAL =

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.

ITEM 516, BEARING, PTFE (TEFLON), AS PER PLANS

QUANTITY

(EACH)

32

32

28

108 EACH

REF. SHEET

NO.

51 OF 84

57 OF 84

74 OF 84

78 OF 84

- PREFORMED BEARING PADS SHALL BE PER CMS 711.21. THE MINIMUM NUMBER OF BEARING PADS TO BE PROVIDED IS TWO 1/8" AND ONE 1/4" PREFORMED BEARING PADS FOR EACH BEARING. A MINIMUM OF ONE PREFORMED BEARING PAD SHALL BE USED FOR EACH BEARING.
- ANCHOR RODS SHALL BE GALVANIZED AS PER CMS 711.02.

LOCATION

12

- 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.
- 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

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 DI.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.

LUBRICANT: 8.

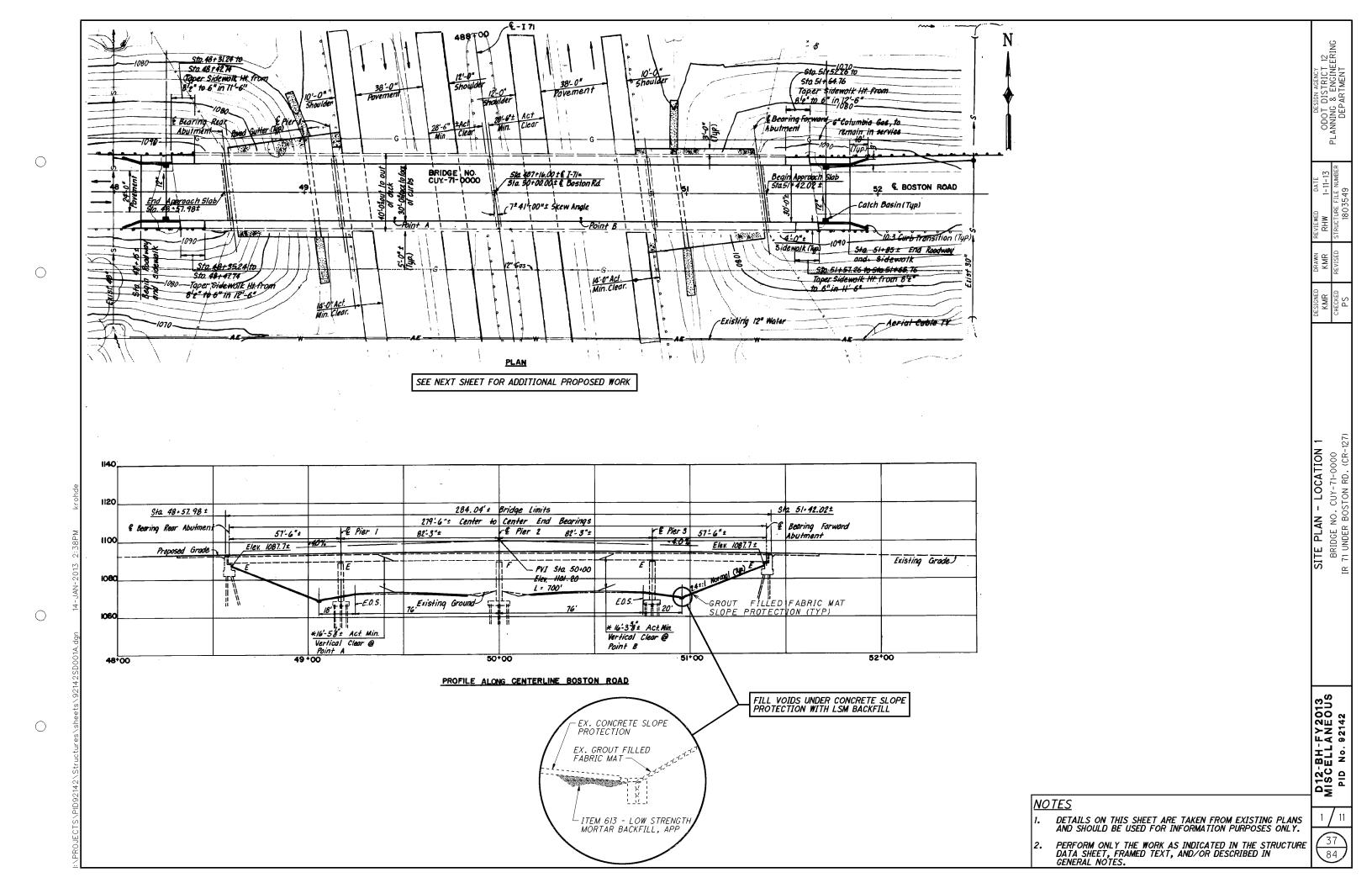
LUBRICANTS SHALL BE SILICONE GREASE WHICH SATISFIES MILITARY SPECIFICATIONS MIL-S8660.

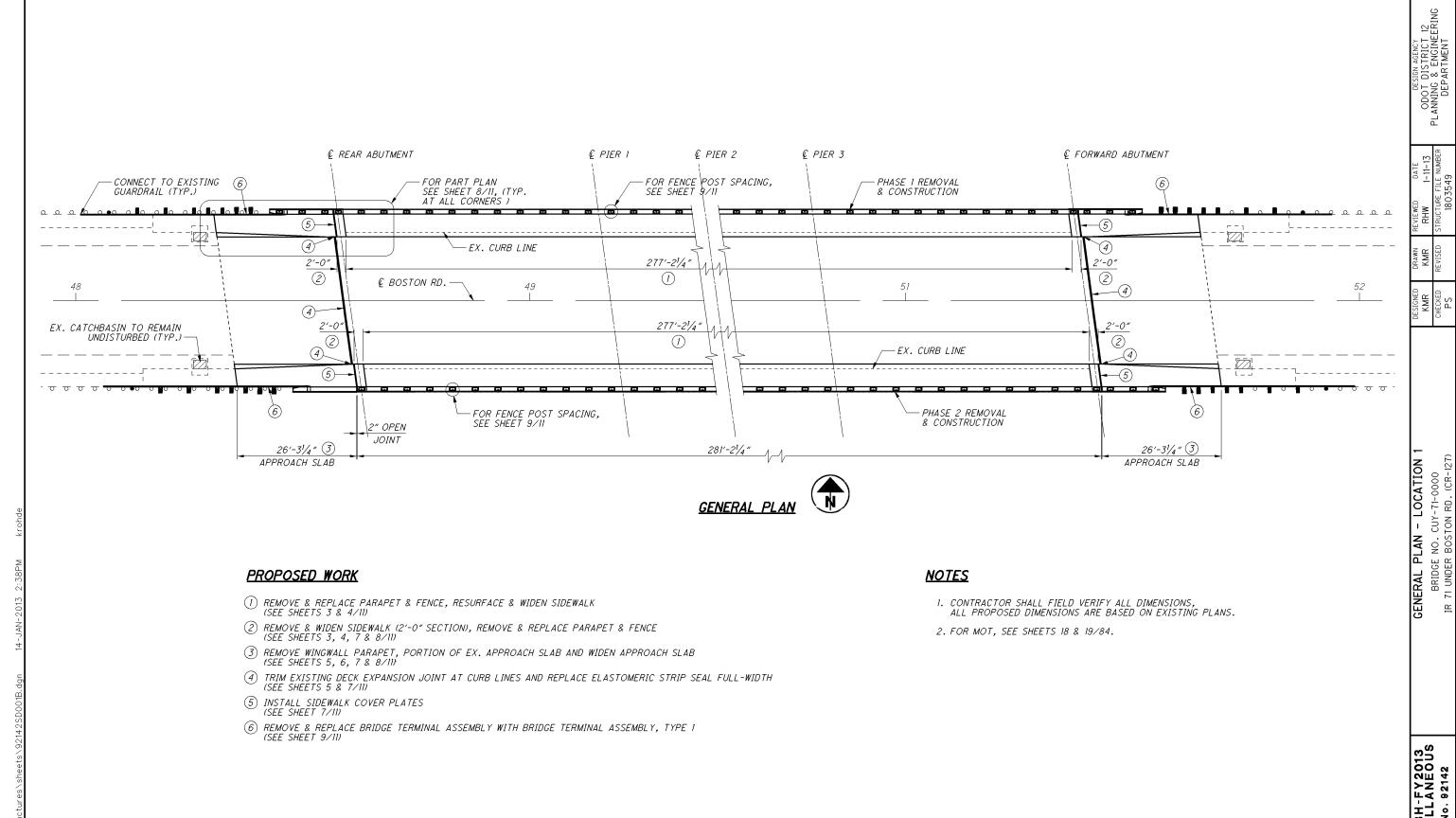
TESTING OF SLIDING SURFACES: A MATERIAL FRICTION TEST FOR THE SLIDING SURFACES SHALL BE PERFORMED PER DIVISION II, SECTION 18.7.4.2 OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.

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

PAYMENT:

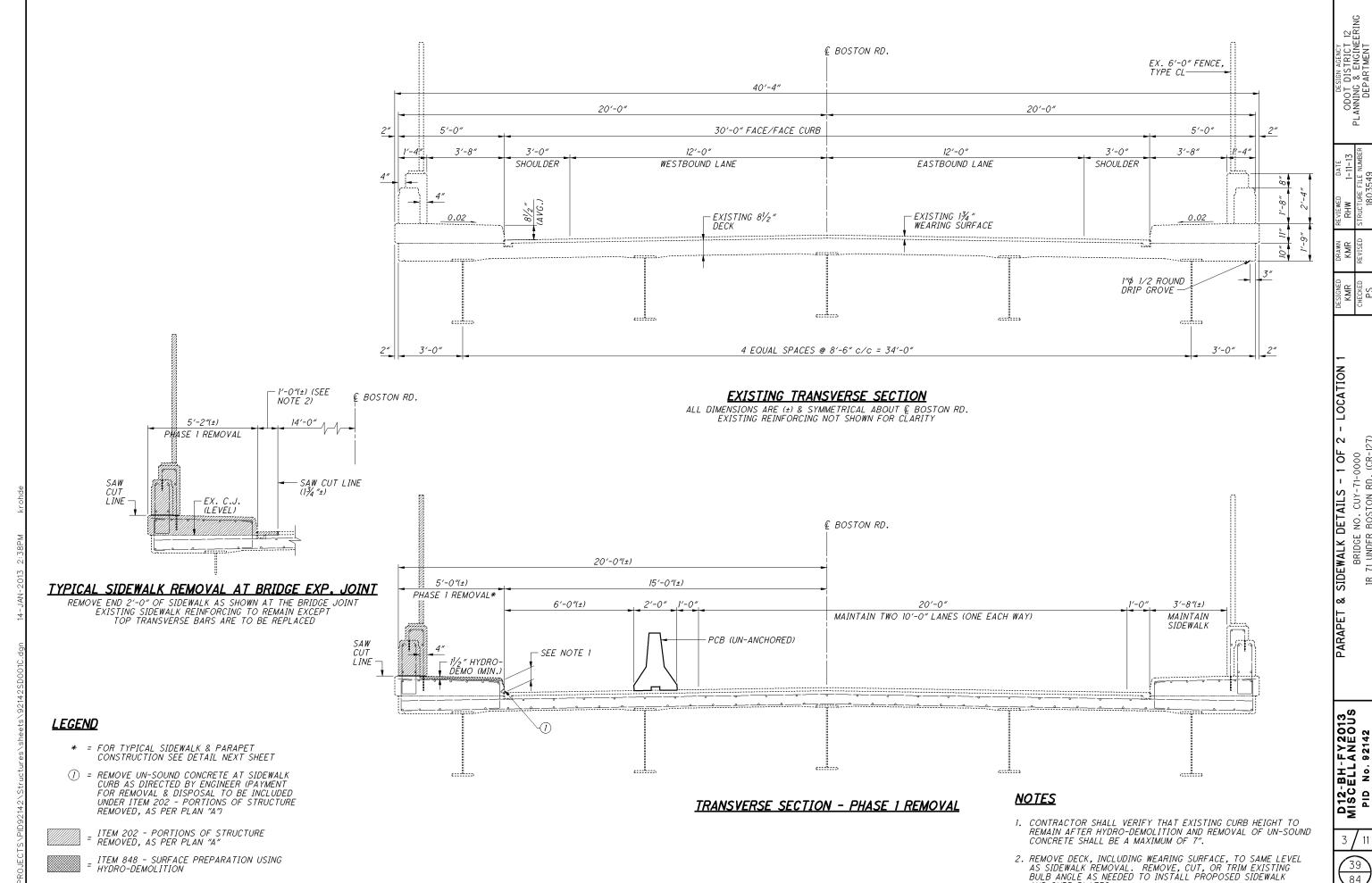
THE UNIT BID PRICE SHALL INCLUDE ALL MATERIALS, LABOR, TESTING, STEEL PLATES, PREFORMED BEARING PADS, STAINLESS STEEL PLATES, PTFE SURFACES, LUBRICANT AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE SLIDING PLATES. PAYMENT WILL BE MADE AT THE CONTRACT PRICE FOR ITEM 516, BEARING, PTFE (TEFLON), AS PER PLAN.





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SIDEWALK DETAILS - 1 OF BRIDGE NO. CUY-71-0000 IR 71 UNDER BOSTON RD. (CR-1

D12-BH-FY2013 MISCELLANEOUS PID No. 92142

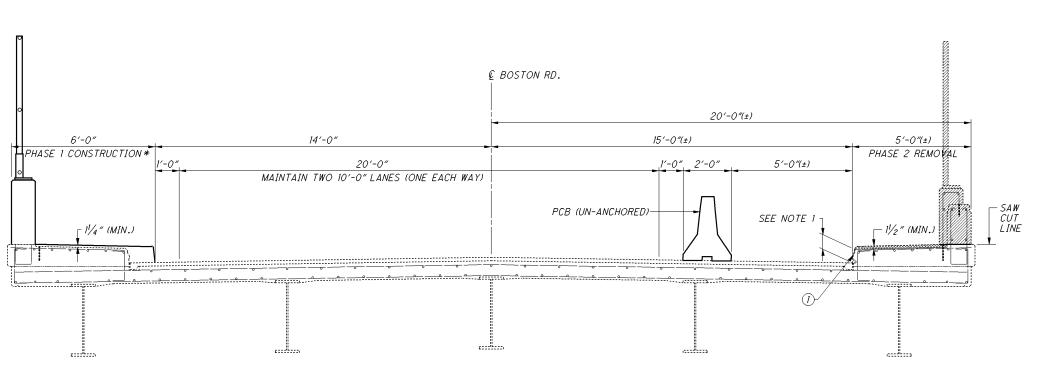
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AND CURB PLATES.

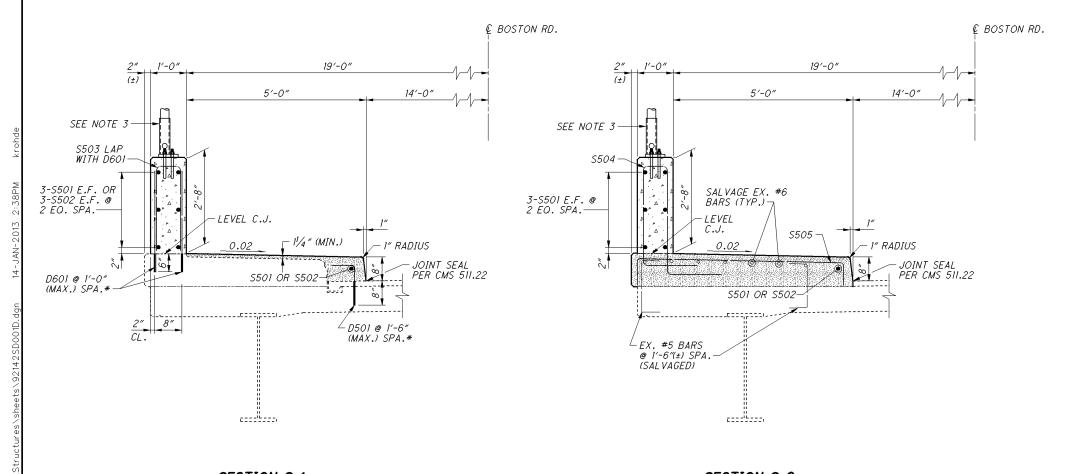
SIDEWALK l oð

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84



TRANSVERSE SECTION - PHASE 2 REMOVAL



SECTION S-1

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LEFT SIDE SHOWN, RIGHT SIDE SIMILAR EXISTING REINFORCING AND SCUPPERS NOT SHOWN FOR CLARITY FOR LOCATION OF SECTION S-1, SEE SHEET 8/11

SECTION S-2

SECTION APPLIES TO END 2'-O" OF SIDEWALK AT BRIDGE JOINT SIMILAR FOR ALL BRIDGE DECK CORNERS FOR LOCATION OF SECTION S-2, SEE SHEET 8/11

TYPICAL SIDEWALK REMOVAL AT BRIDGE EXP. JOINT

- EX. C.J. (LEVEL)

-1'-0"(±) (SEE NOTE 2)

5'-2"(±)

PHASE 2 REMOVAL

CUT

LINE

REMOVE END 2'-0" OF SIDEWALK AS SHOWN AT THE BRIDGE JOINT EXISTING SIDEWALK REINFORCING TO REMAIN EXCEPT TOP TRANSVERSE BARS ARE TO BE REPLACED

NOTES

€ BOSTON RD.

SAW CUT LINE (1¾ "±)

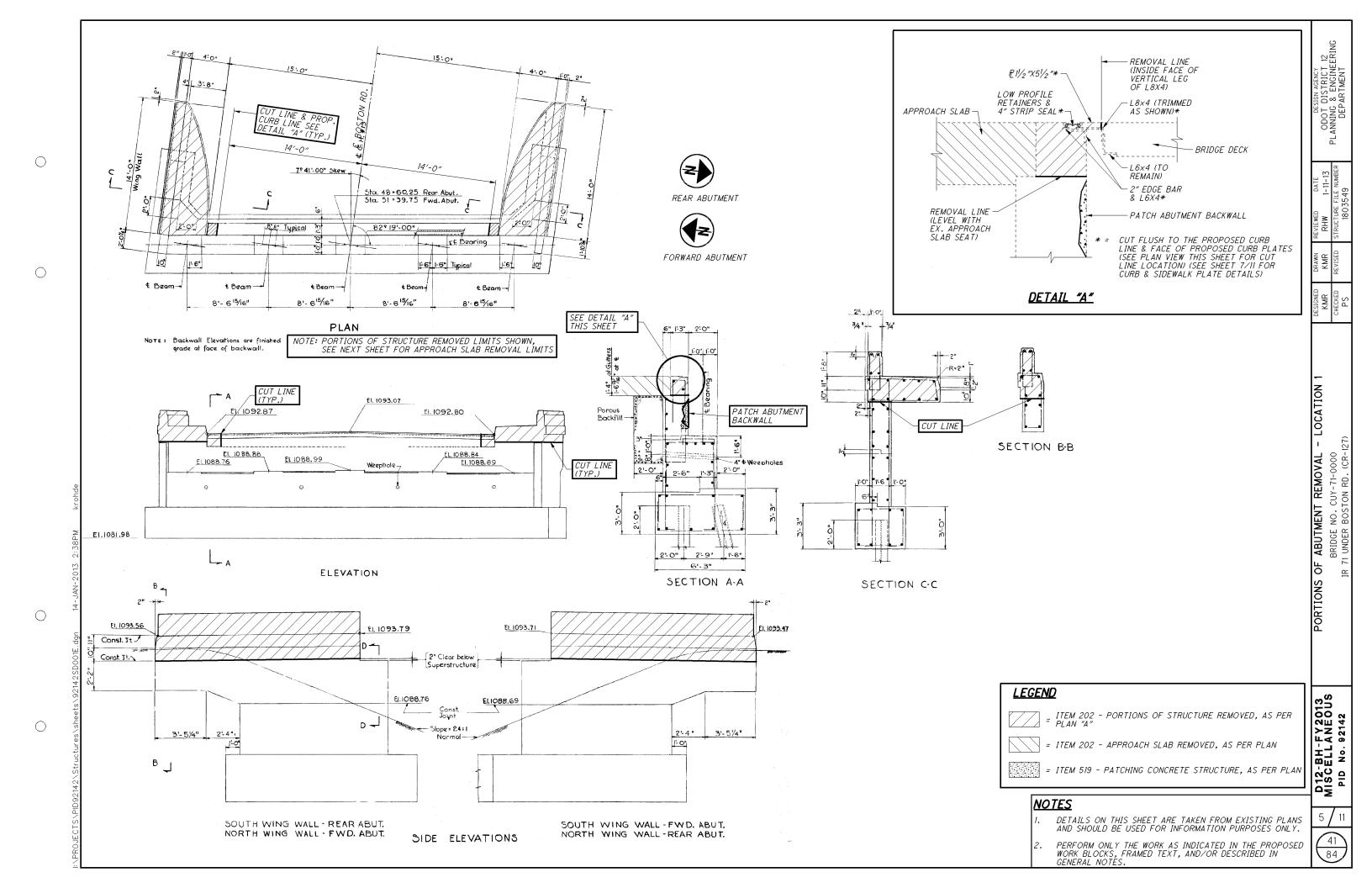
14'-0'

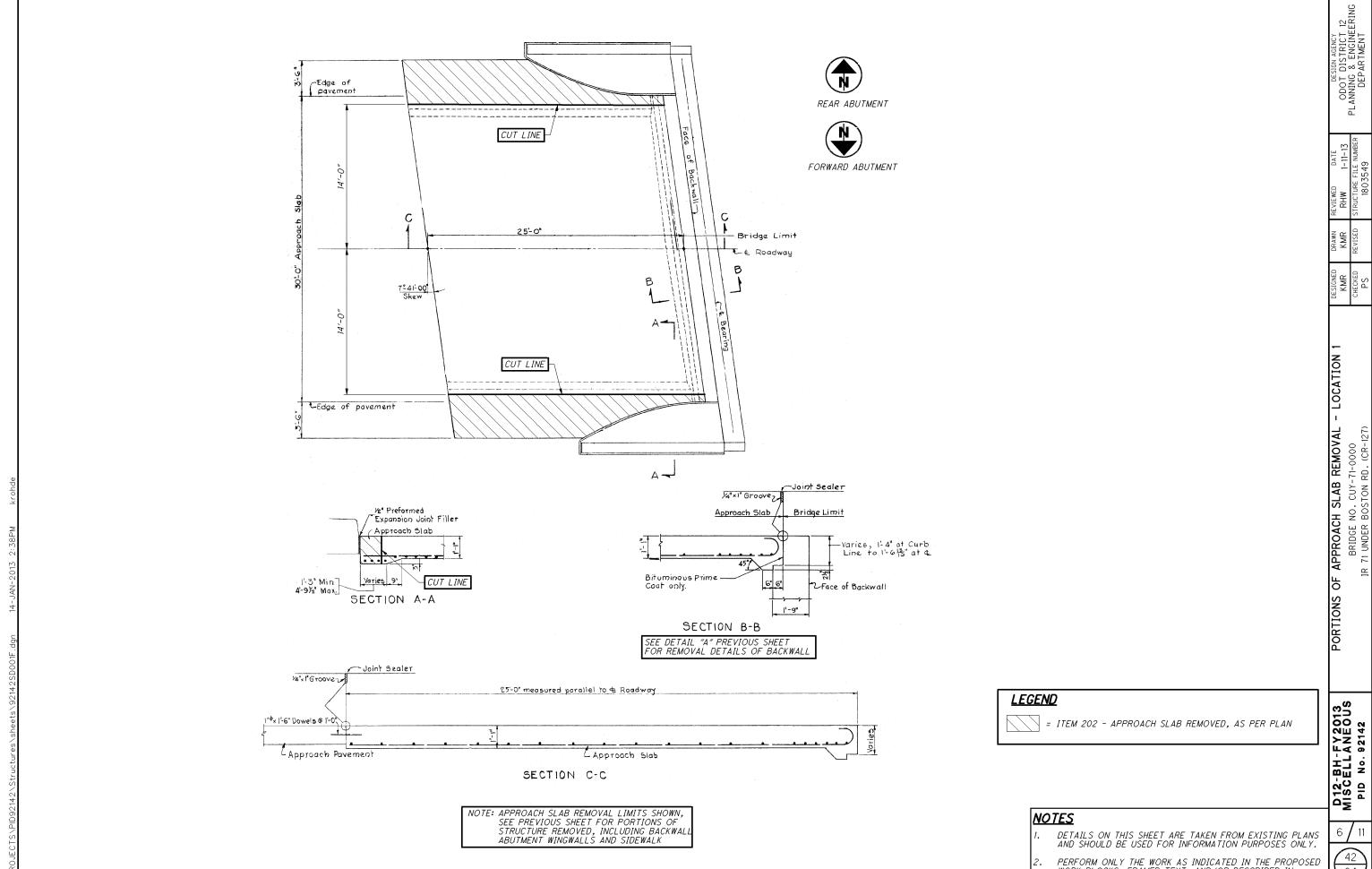
- 1. CONTRACTOR SHALL VERIFY THAT EXISTING CURB HEIGHT TO REMAIN AFTER HYDRO-DEMOLITION AND REMOVAL OF UN-SOUND CONCRETE SHALL BE A MAXIMUM OF 7".
- 2. REMOVE DECK, INCLUDING WEARING SURFACE, TO SAME LEVEL AS SIDEWALK REMOVAL. REMOVE, CUT, OR TRIM EXISTING BULB ANGLE AS NEEDED TO INSTALL PROPOSED SIDEWALK AND CURB PLATES.
- 3. 6'-0" STRAIGHT VPF (PS-4) WITH TYPE BP-5 BASE PLATES, FOR DETAILS SEE STD. DWG. VPF-1-90 (TYP.)
- 4. FOR REINFORCING STEEL LIST AND CONCRETE SEALING LIMITS DETAILS, SEE SHEET 11/11.

LEGEND

- * = THE CONTRACTOR SHALL FIELD ADJUST DOWEL SPACING TO AVOID EXISTING REINFORCING AND/OR EXISTING SCUPPERS.
- () = REMOVE UN-SOUND CONCRETE AT SIDEWALK CURB AS DIRECTED BY ENGINEER (PAYMENT FOR REMOVAL & DISPOSAL TO BE INCLUDED UNDER ITEM 202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN "A")
 - ITEM 202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN "A"
- ITEM 848 SURFACE PREPARATION USING HYDRO-DEMOLITION
- ITEM 898 QC/QA CONCRETE, CLASS QSC2, SUPERSTRUCTURE (PARAPET), AS PER PLAN
- ITEM 848 MICRO-SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (11/4" THICK) ITEM 848 MICRO-SILICA MODIFIED CONCRETE OVERLAY,

(VARIABLE THICKNESS), MATERIAL ONLY

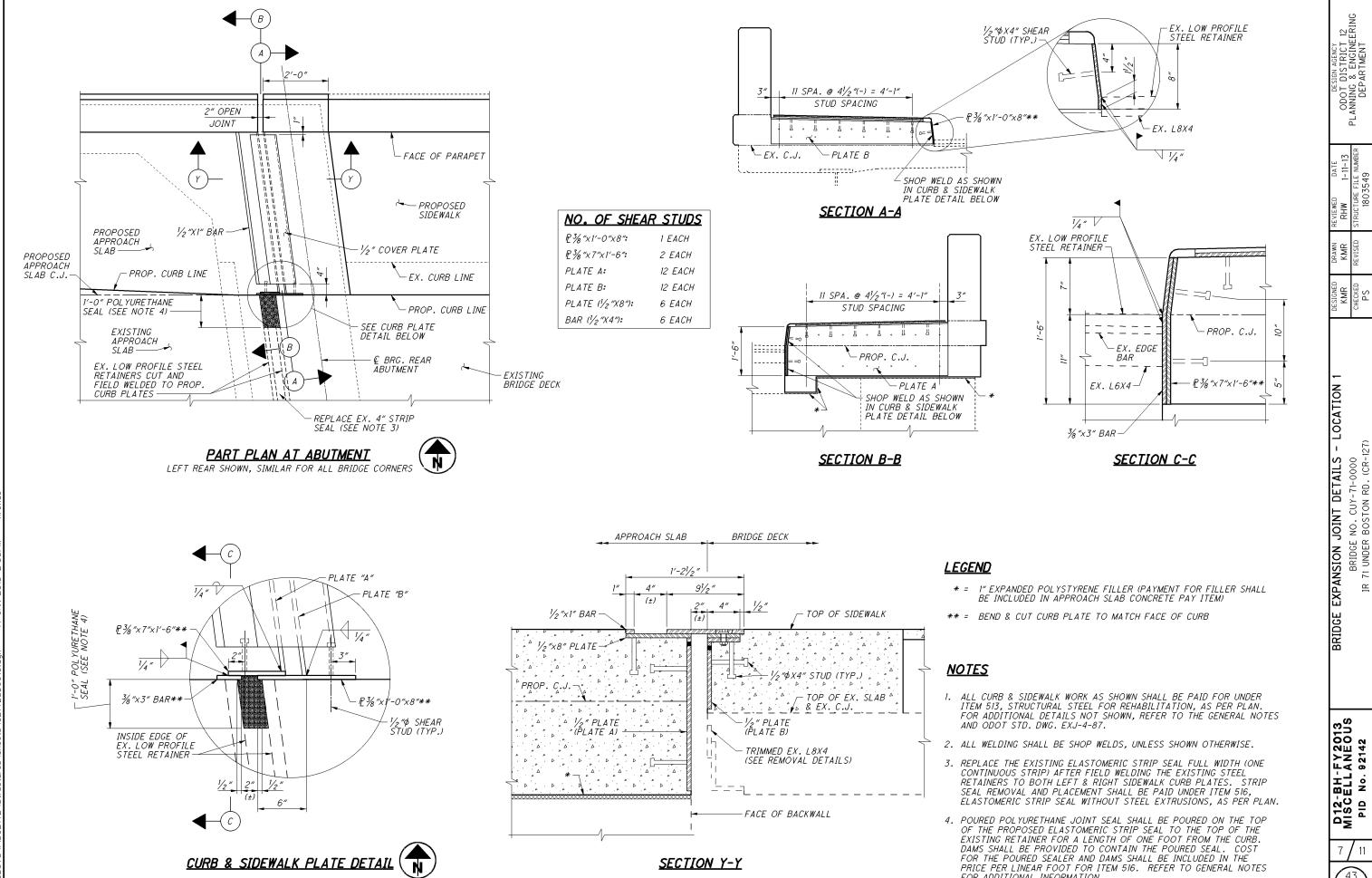




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PERFORM ONLY THE WORK AS INDICATED IN THE PROPOSED WORK BLOCKS, FRAMED TEXT, AND/OR DESCRIBED IN GENERAL NOTES.



SECTION Y-Y

CURB & SIDEWALK PLATE DETAIL

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FOR ADDITIONAL INFORMATION.



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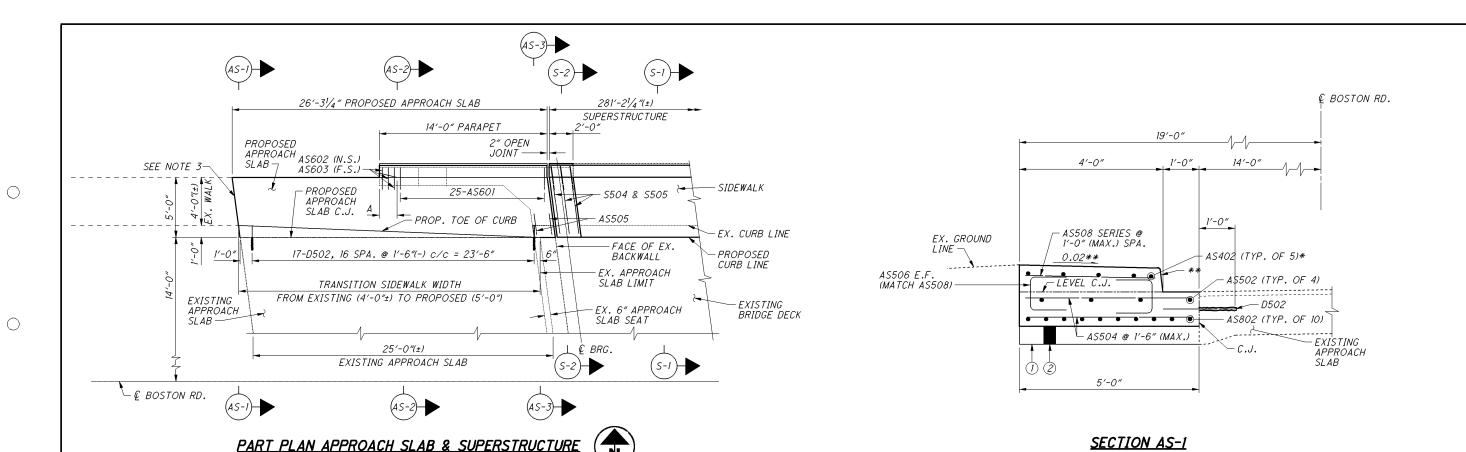
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SIGN AGENCY
DISTRICT 1
& ENGINEE

ODOT D ODOT D PLANNING 8



& BOSTON RD. € BOSTON RD. 19'-0" 1'-0" 19'-0" VARIES 4'-0" TO 5'-0" 14'-0" 5'-0" 14'-0" VARIES, 1'-0" TO 0'-0" SEE NOTE 1-SEE NOTE 1 AS601 @ 6" AS601 @ 6" (MAX.) SPA. (MAX.) SPA. AS401 & AS402 @ 1'-0" (MAX.) SPA. (TYP.) -LEVEL C.J. LEVEL C.J. AS507 @ 1'-0" (MAX. AS507 @ 1'-0" (MAX.) I" RADIUS AS402 (TYP. OF 5)* EXISTING 0.02 0.02 (TYP.) APPROACH AS401 AS506 E.F. (MATCH AS507) AS506 E.F. SLAB SEAT \$502 (TYP. OF 4) (MATCH AS507) AS501 -0502- AS802 (TYP. OF 10) AS801 └ AS503 @ 1'-6" (MAX. - AS503 @ AS505 1'-6" (MAX.) **APPROACH** 1" EXPANDED 1" EXPANDED SLABCUT LINE POLYSTYRENE POLYSTYRENE FILLER 6'-0" 6'-0" EXISTINGBACKWALL (TO REMAIN) **EXISTING EXISTING** WINGWALL WINGWALL

SECTION AS-3

SEE SECTION AS-1 FOR ADDITIONAL REBAR DETAILS

LEFT REAR SHOWN, ALL OTHER LOCATIONS SIMILAR FOR SIDEWALK & CURB PLATE DETAILS, SEE SHEET 7/11 BRIDGE TERMINAL ASSEMBLY & GUARDRAIL NOT SHOWN

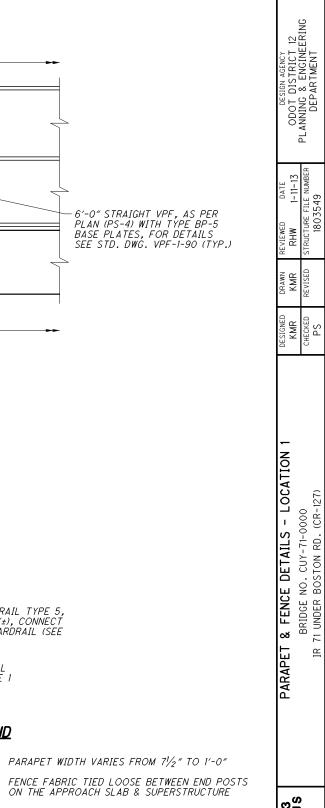
SECTION AS-2

<u>LEGEND</u>

- * = AS402 BARS SHALL BE PLACED PARALLEL TO © BOSTON RD. EXCEPT BAR CLOSEST TO CURB LINE SHALL BE PLACE ALONG CURB LINE AS SHOWN
- ** = TRANSITION SIDEWALK SLOPE AND CURB HEIGHT TO MATCH EXISTING IN LAST 10'-0" OF PROPOSED APPROACH SLAB WIDENING
- A = 1'-6", PARAPET WIDTH VARIES FROM $7\frac{1}{2}$ " TO 1'-0"
- B = 4 SPA. @ 1'-4\frac{1}{2}" c/c (TOP) = 5'-6" 11 SPA. @ 6" c/c (BTM.) = 5'-6"
- C = 3-AS501 BACK FACE & 3-AS510 FRONT FACE @ 2 EQUAL SPACES
- 1 ITEM 204 SUBGRADE COMPACTION
- 2 ITEM 304 6" AGGREGATE BASE

<u>NOTES</u>

- 1. 6'-0" STRAIGHT VPF (PS-4) WITH TYPE BP-5 BASE PLATES, FOR DETAILS SEE STD. DWG. VPF-1-90 (TYP).
- 2. PLACE AS503 THRU AS507 BARS PARALLEL TO BRIDGE SKEW.
- 3. INSTALL 1/2" PREFORMED EXPANSION JOINT FILLER (705.03) BETWEEN EXISTING CONCRETE AND PROP. APPROACH SLAB. SEAL TOP 1" OF JOINT WITH JOINT SEAL (705.04). PAYMENT FOR PEJF AND JOINT SEAL SHALL BE INCLUDED WITH ITEM 898.
- 4. SEE SHEET 4/11 FOR SECTION S-1 & SECTION S-2.
- 5. SEE SHEET 11/11 FOR REINFORCING STEEL LIST AND CONCRETE SEALING DETAILS.
- 6. SEE SHEET 9/11 FOR PROPOSED BRIDGE TERMINAL ASSEMBLY.

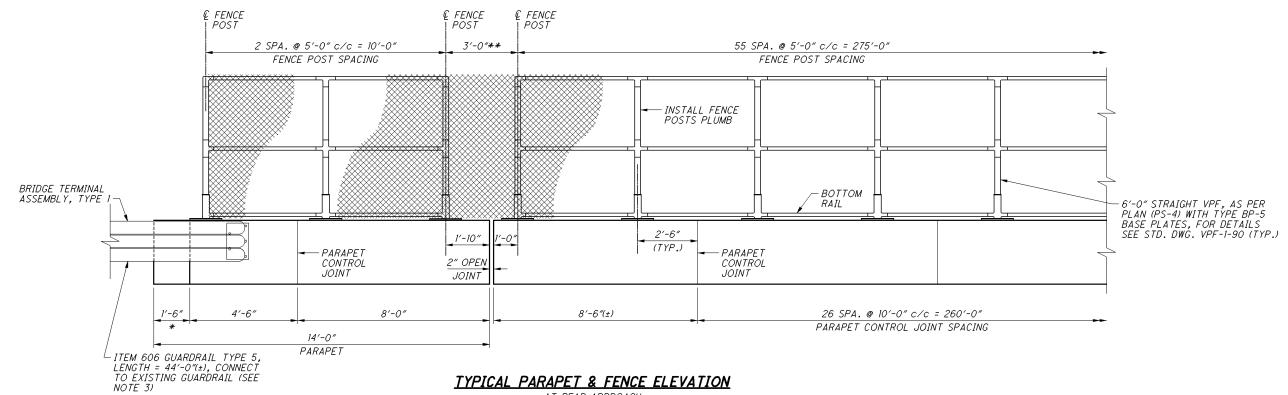






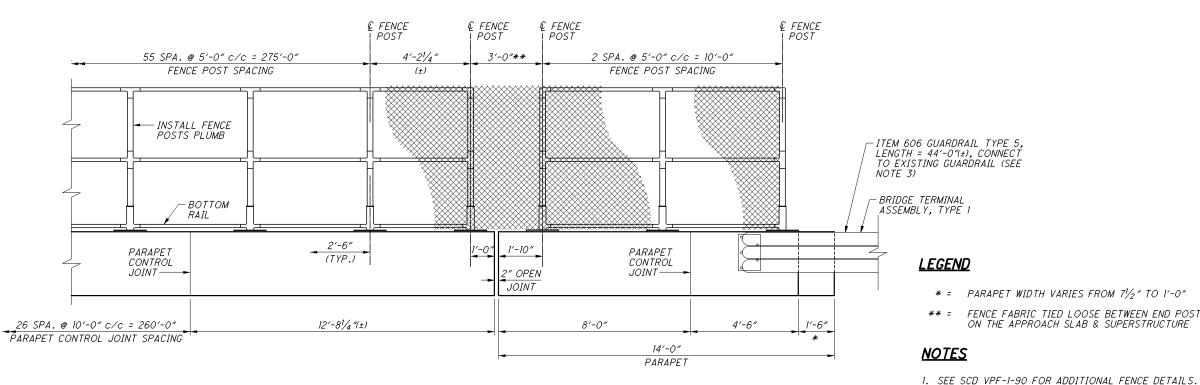
2. SEE SCD GR-3.1 FOR ADDITIONAL BRIDGE TERMINAL ASSEMBLY DETAILS.

3. GUARDRAIL LENGTH INCLUDES LENGTH REQUIRED FOR BTA, TYPE I AND ONE PANEL LENGTH TO CONNECT TO EXISTING GUARDRAIL.



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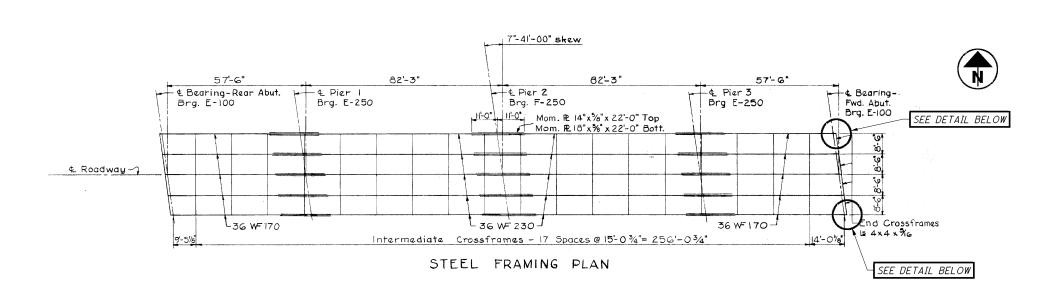
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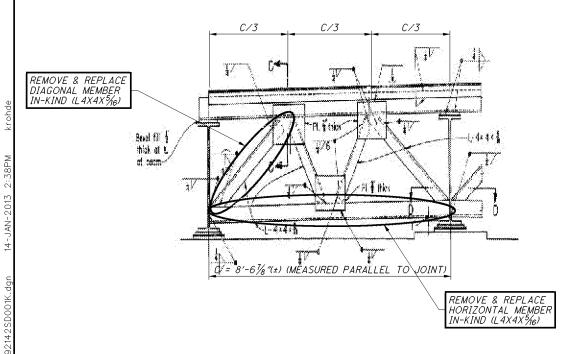


TYPICAL PARAPET & FENCE ELEVATION AT REAR APPROACH

TYPICAL PARAPET & FENCE ELEVATION

AT FORWARD APPROACH





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EXISTING END CROSSFRAME REHABILITATION

ALL END CROSSFRAME WORK SHALL BE PAID UNDER ITEM 513, REPLACEMENT OF DETERIORATED END CROSSFRAMES, A.P.P.

<u>NOTES</u>

- I. 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 GENERAL NOTES.

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D12-BH-FY2013 MISCELLANEOUS PID No. 92142

END CROSSFRAME REHABILITATION DETAILS - LOCATION

BRIDGE NO. CUY-71-0000

IR 71 UNDER BOSTON RD. (CR-127)

DESIGN AGENCY
ODOT DISTRICT 12
PLANNING & ENGINEERING
DEPARTMENT

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REINFORCING STEEL LIST

ST & TYPICAL SEALING LIMITS - LOCATION 1
BRIDGE NO. CUY-71-0000
1 UNDER BOSTON RD. (CR-127)

DESIGN AGENCY
ODOT DISTRICT 12
PLANNING & ENGINEERING
DEPARTMENT

EXISTING BRIDGE DECK

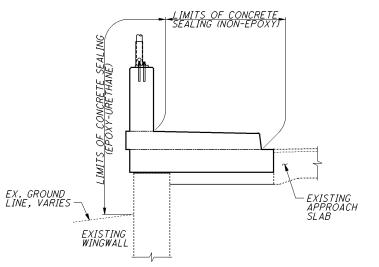
MINGE		PID No. 8
1	7	11

	NUMBER							3,			BENDING DIAGRAM					
MARK			LEFT	RIGHT	TOTAL	LENGTH	WEIGHT	WEIGHT 3	Α	В	С	D	Ε	R	INC	
						CUDED	STRUCTUR)r								1
0501		1	100	100	770				0/ 7//	1/ 1//		1		1		8
D501			186	186	372	1'-6"	582	1	0'-7"	1'-1"		+				·
D601			556	556	1112	3'-0"	5011	STR								
S501			70	70	140	30'-0"	4381	STR							1	
S502			7	7	14	6'-0"	88	STR								TYPE-1
S503			278	278	556	5′-5″	3141	2	2′-6″	0'-8"	2'-6"					<u> </u>
S504			6	6	12	10'-0"	125	30	2'-0"	0'-8"	3'-1"	2'-10"				J 🕶 🗀
S505			6	6	12	6'-4"	79	2	0'-6"	5′-8″	0′-5″					
																4 0
																-
					SI	I IB-TOTAL	13,407									1 1
						<i>D</i> 707712	1 .0,	-								
																
		NUMBER DIMENSIONS							NUMBER			NUMBER				<u>TYPE-2</u>
MARK	LEFT REAR	RIGHT REAR	LEFT FWD	RIGHT FWD	TOTAL	LENGTH	WEIGHT	TYPE							7440	<u>-</u>
	REAR	KEAK	FNU	FND					A	В	С	D	E	R	INC	$A \rightarrow B$
						APPRO	DACH SLAI	В								
D502	17	17	17	17	68	2'-0"	142	STR								
10101						17/ 0//	77	CTD								
AS401 AS402	<i>2</i> 5	<i>2 5</i>	<i>2 5</i>	2	8	13'-8" 25'-11"	73 346	STR STR								<u> TYPE-19</u>
A3402	5	3	5	5	20	25 -11	346	3114								-
AS501	4	4	4	4	16	13'-8"	228	STR								 B
AS502	4	4	4	4	16	25'-11"	432	STR								
AS503	22	22	22	22	88	5'-8"	520	STR								1 []
AS504	18	18	18	18	72	4'-8"	350	STR								
AS505	2	2	2	2	8	3′-10″	32	30	1'-0"	0'-8"	0′-8″	1'-0"]
AS506	28	28	28	28	112	2'-7"	302	2	1'-0"	0'-10"	1'-0"					
AS507	15	15	15	15	60	6'-4"	396	2	0'-6"	5′-8″	0′-5″	1				
16500	1	1	1	1	4 SR	4'-4"	000		01.0"	3′-8″	0/.5"				0/ 1/	
AS508	OF	OF 17	OF 17	OF 17	OF	TO 5'-4"	262	2	0'-6"	TO	0'-5"				0'-1"	1 1
AS509	13 25	13 25	13 25	13 25	13 100	13'-10"	173	19	12'-4"	4'-8" 1'-6"	0'-3"	+				
ASSUS	23	23	23	23	100	13 -10	1175	13	12 -4	1-0	0 -5					
	3	3	3	3	12	9'-11"	1489	30	2'-0"	0'-8"	3′-1″	2'-10"				1 4
AS601																
AS601 AS602	3	3	3	3	12	4'-10"	87	1	1'-10"			1				
								1		3'-2" 3'-0"						TYPE-30

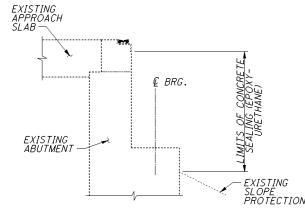
SUB-TOTAL 4,916 LBS

TYPICAL SEALING LIMITS - SUPERSTRUCTURE

LIMITS OF CONCRETE SEALING (EPOXY-URETHANE)



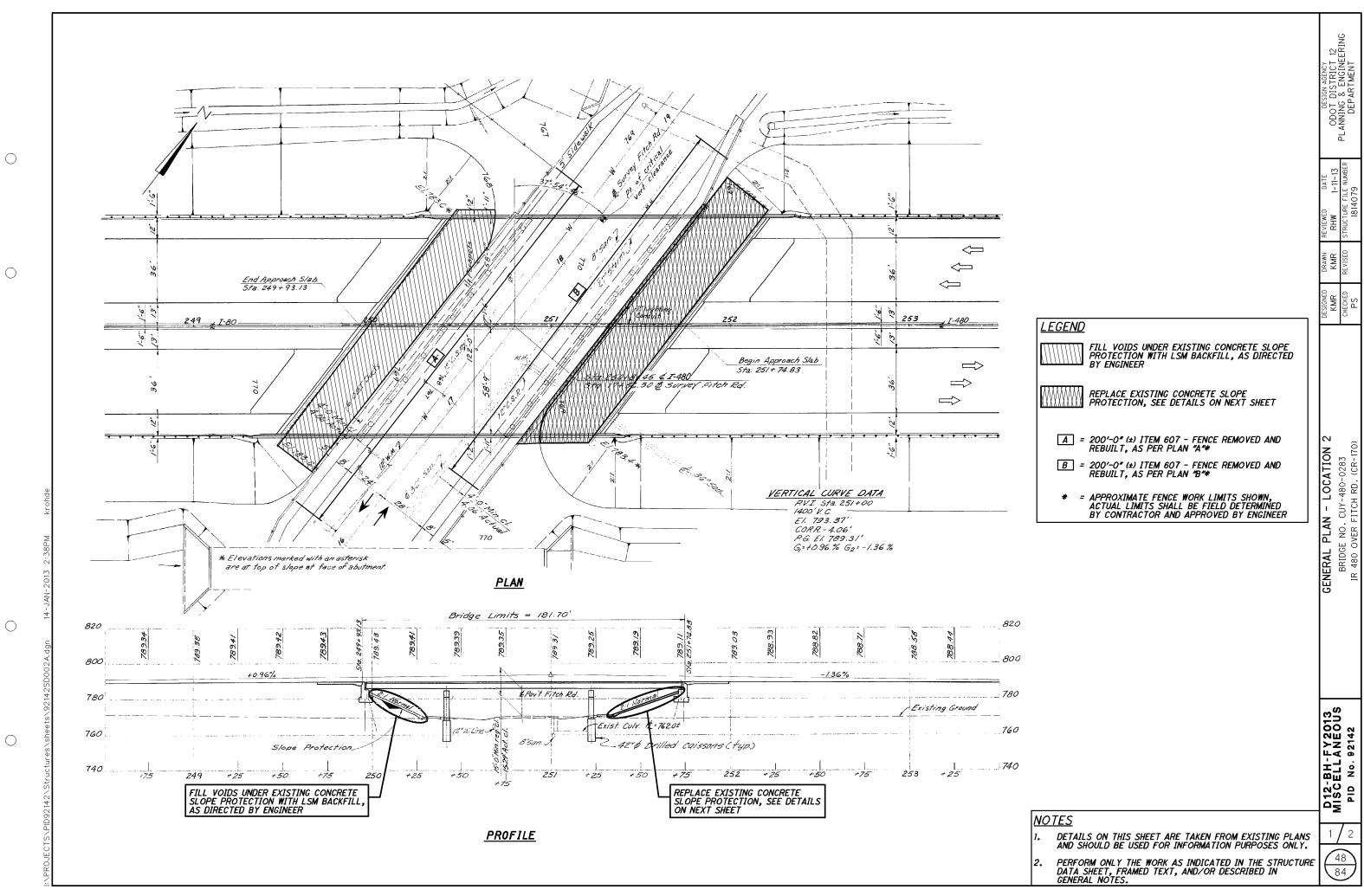
TYPICAL SEALING LIMITS - APPROACH SLAB

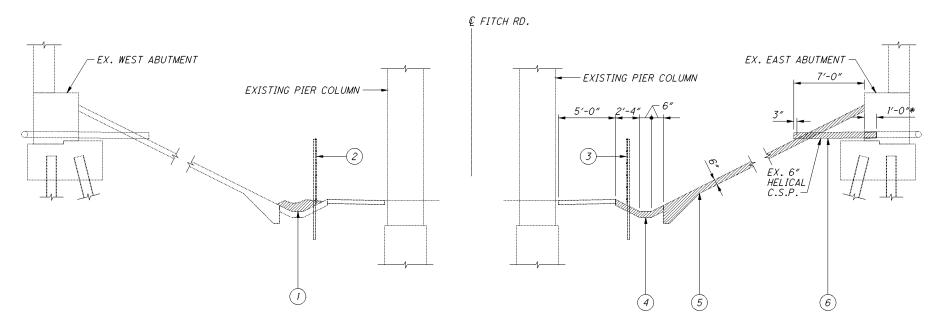


TYPICAL SEALING LIMITS - ABUTMENT

REINFORCING STEEL NOTES

- 1. ALL DIMENSIONS ARE OUT TO OUT.
- 2. TYPE "STR" INDICATES A STRAIGHT BAR.
- 3. THE BAR SIZE NUMBER IS INDICATED IN THE "MARK" COLUMN. THE FIRST DIGIT OF EACH MARK INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, ASSOI IS A #5 BAR.
- 4. ALL BARS SHALL BE EPOXY COATED.

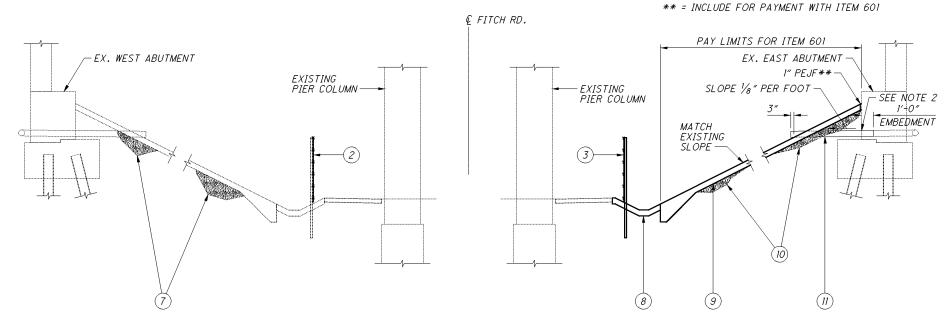




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PROFILE VIEW - REMOVAL DETAILS

ALL EXISTING CALLOUTS AND DIMENSIONS ARE (±)
ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR



* = REAM 6" DIAMETER HOLE 1'-0" INTO EXISTING 6" WEEP HOLE

<u>LEGEND</u>

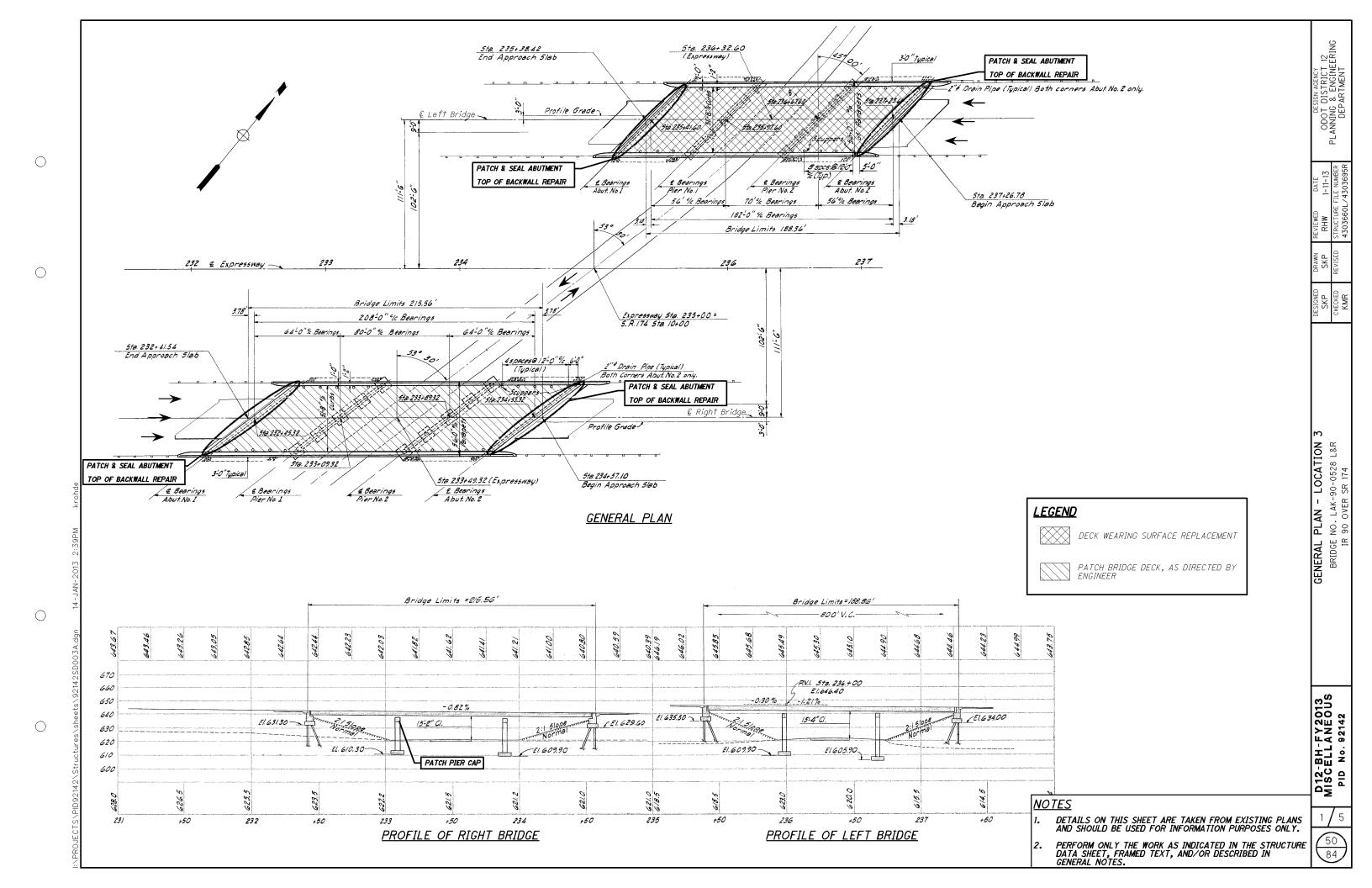
- (1) ITEM 209 DITCH CLEANOUT
- ITEM 607 FENCE REMOVED AND REBUILT, AS PER PLAN "A"
- ITEM 607 FENCE REMOVED AND REBUILT, AS PER PLAN "B"
- (4) ITEM 202 GUTTER REMOVED
- 5 ITEM 202 CONCRETE SLOPE PROTECTION REMOVED
- ITEM 202 PIPE REMOVED, 24" AND UNDER, AS PER PLAN
- (7) ITEM 613 LOW STRENGTH MORTAR BACKFILL, AS PER PLAN
- (8) ITEM 601 PAVED GUTTER, TYPE 1-2, AS PER PLAN
- (9) ITEM 601 CONCRETE SLOPE PROTECTION
- 10 ITEM 203 GRANULAR EMBANKMENT
- ITEM 518 6" NON-PREFORATED HELICAL CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01 (7 TOTAL) (SEE NOTE 2)

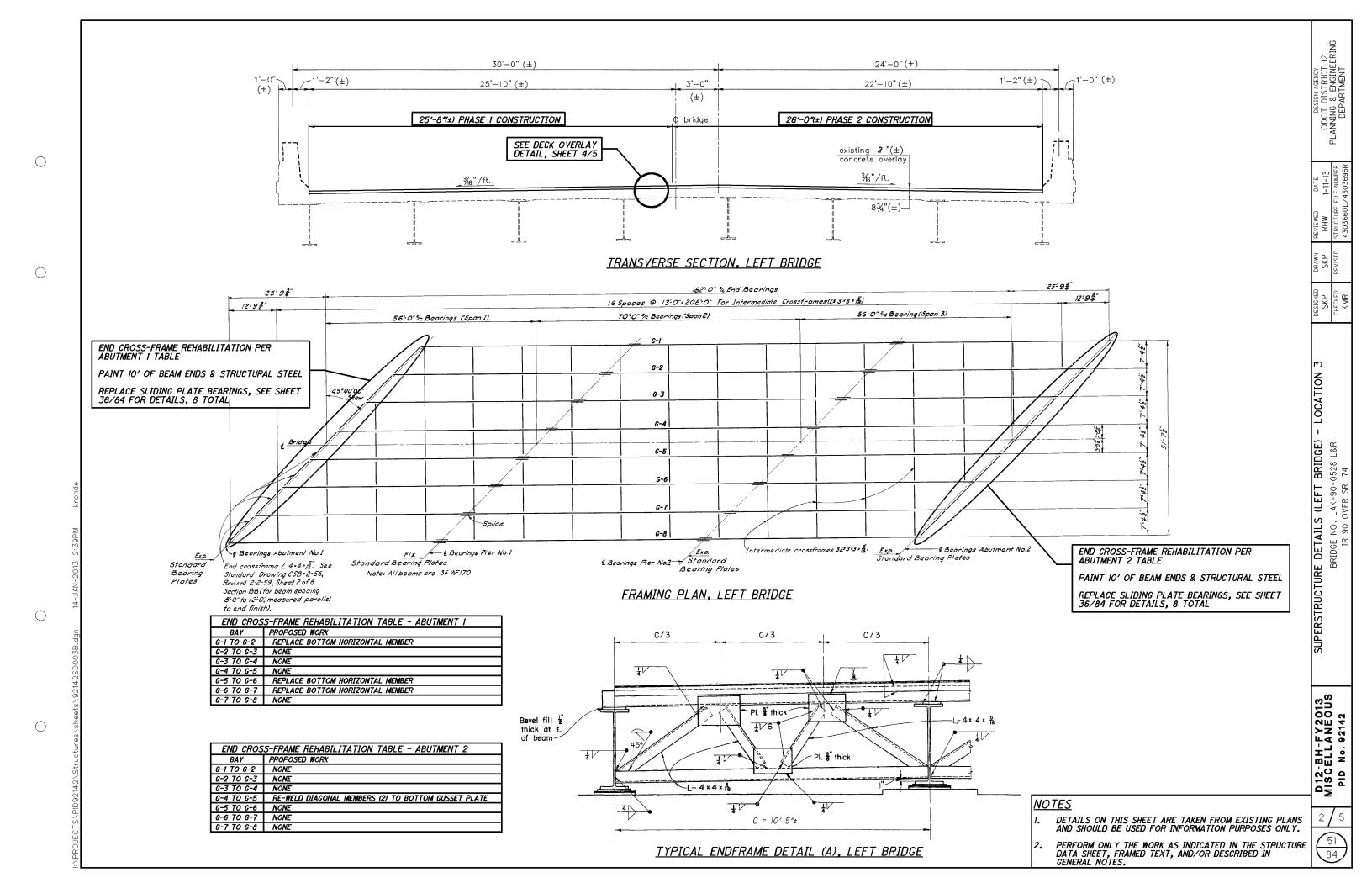
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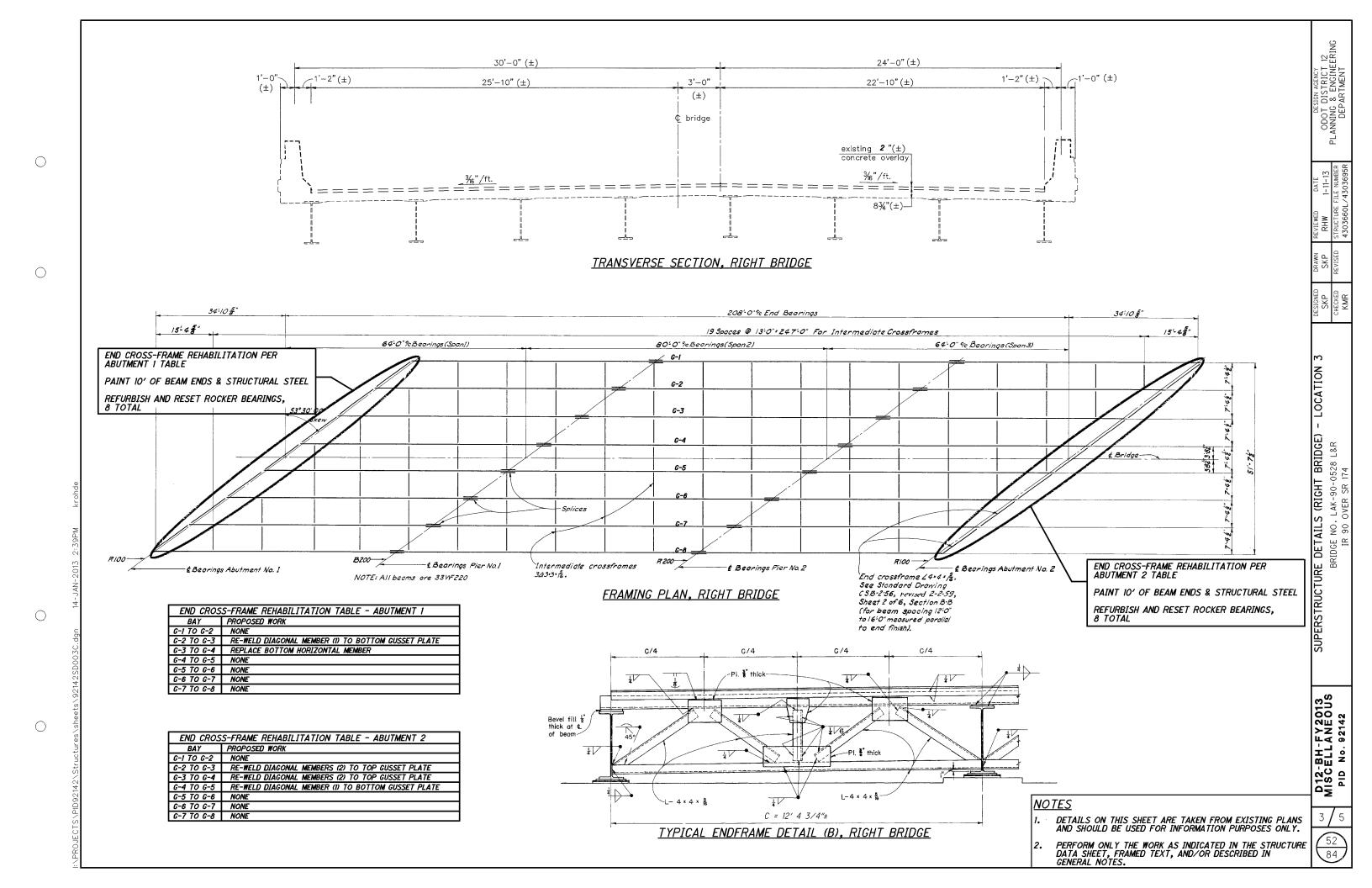
- 1. REFER TO GENERAL NOTES FOR ADDITIONAL INFORMATION.
- 2. CAULK AROUND PROPOSED PIPE AT FACE OF THE ABUTMENT WITH A SILICON CAULK PER CMS 258.02. CAULK SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 518 6" NON-PREFORATED HELICAL CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01

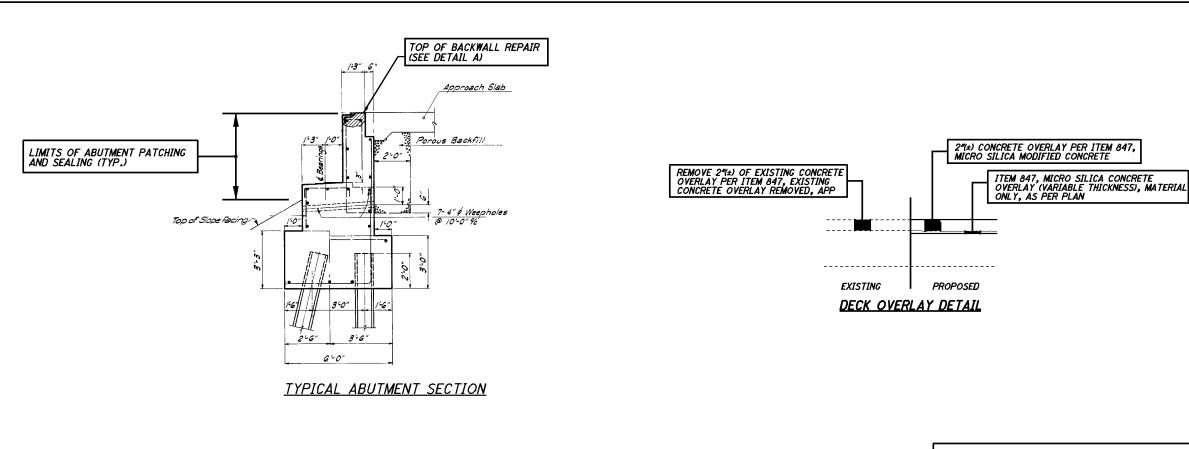
PROFILE VIEW - PROPOSED DETAILS

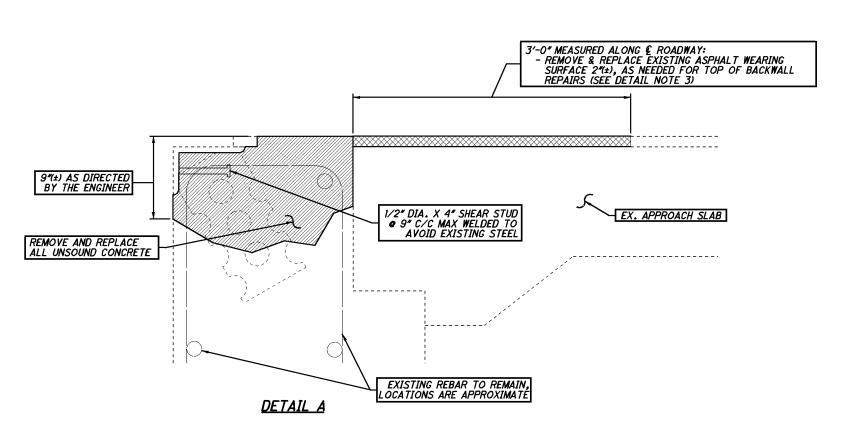
PROPOSED DIMENSIONS SHALL MATCH EXISTING DIMENSIONS











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DETAIL NOTES

- 1. MATERIAL FOR TOP OF BACKWALL REPAIR SHALL BE AS SPECIFIED UNDER ITEM 848 MICRO SILICA MODIFIED CONCRETE
- 2. ALL LABOR, MATERIAL, EOUIPMENT & INCIDENTALS
 REQUIRED TO PERFORM THE TOP OF THE BACKWALL REPAIR
 SHALL BE PAID UNDER ITEM SPECIAL PATCHING CONCRETE
 STRUCTURE MISC.: TOP OF BACKWALL REPAIR.
- 3. ALL LABOR, MATERIAL, EQUIPMENT & INCIDENTALS REQUIRED TO REMOVE & REPLACE ASPHALT WEARING SURFACE SHALL BE PAID UNDER ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR.

LEGEND

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



ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR

<u>NOTES</u>

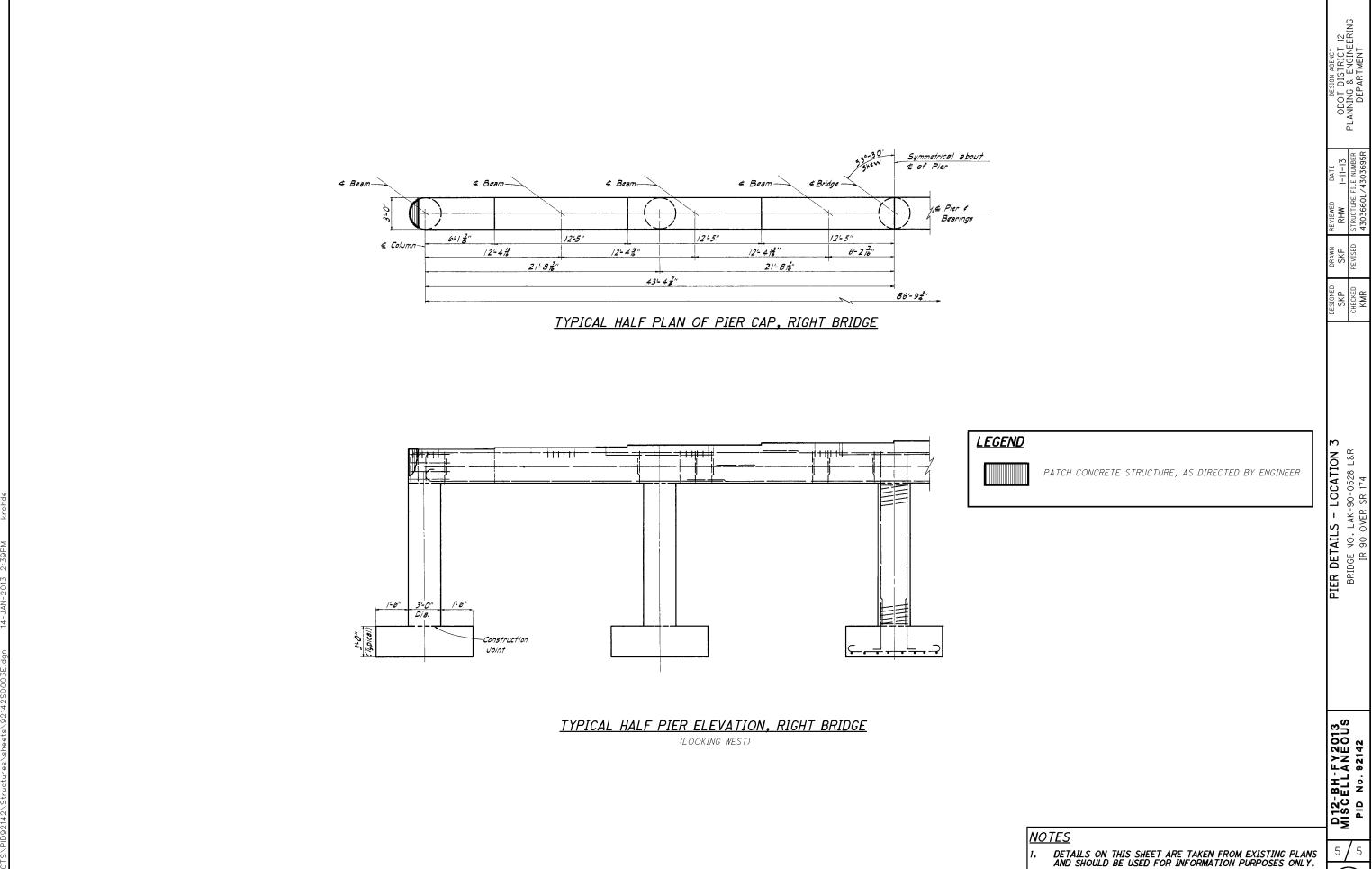
- DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
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DESIGN AGENCY
ODOT DISTRICT 12
PLANNING & ENGINEERING
DEPARTMENT

MISCELLANEOUS DETAILS - LOCATION ;
BRIDGE NO. LAK-90-0528 L&R
IR 90 OVER SR 174

D12-BH-FY2013 MISCELLANEOUS PID No. 92142

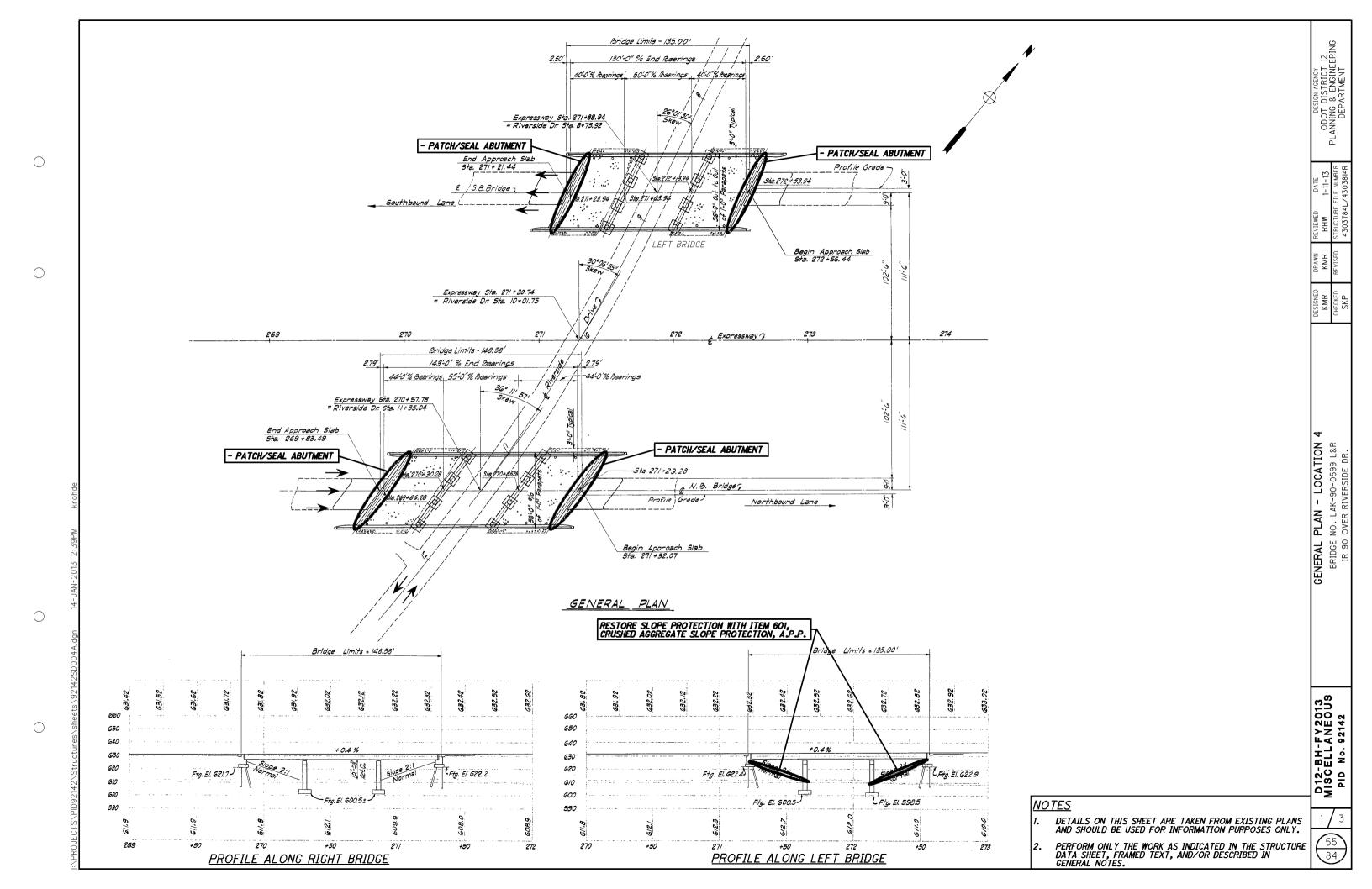


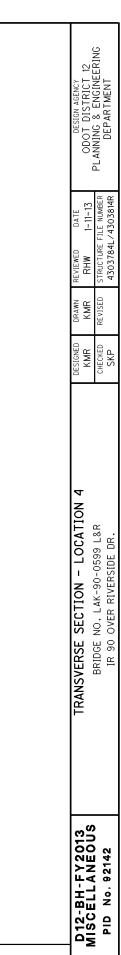
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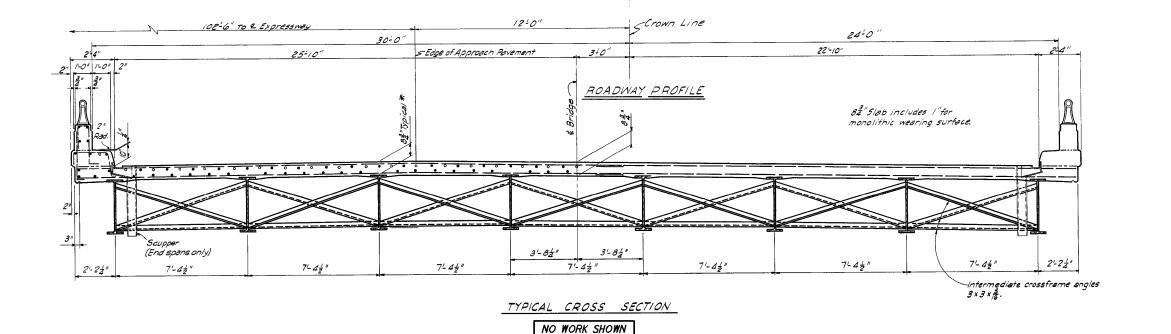
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AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.

PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN GENERAL NOTES.







RESTORE SLOPE PROTECTION WITH ITEM 601, CRUSHED AGGREGATE SLOPE PROTECTION, A.P.P.

TYPICAL ABUTMENT WORK FOR LAK-90-0599 L

TYPICAL ABUTMENT WORK FOR LAK-90-0599 L

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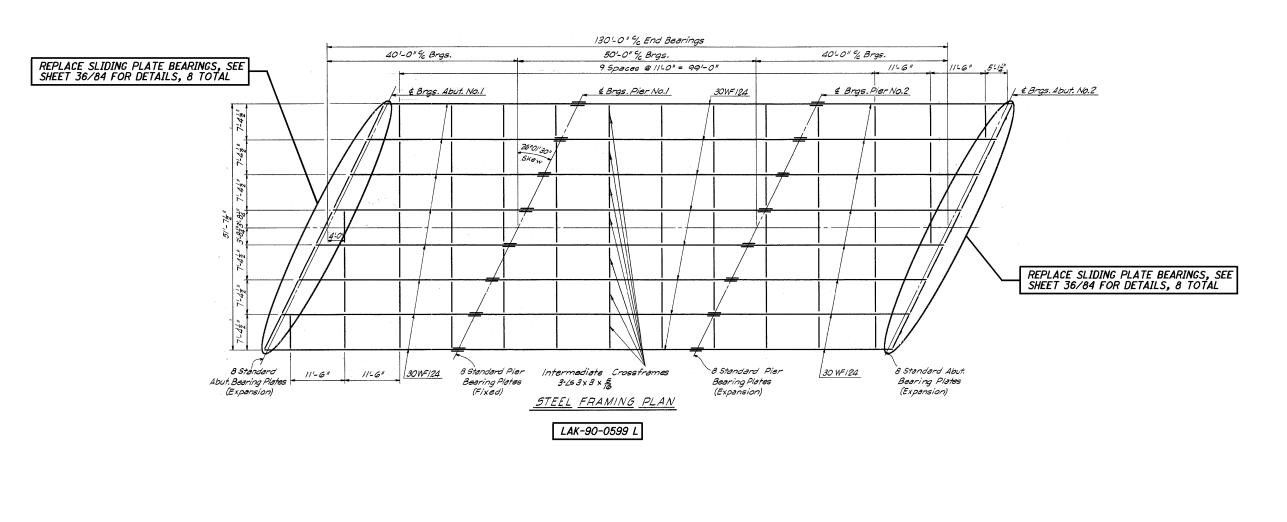
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<u>NOTES</u>

- I. 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 GENERAL NOTES.

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ESIGN AGENCY
DISTRICT 12
S & ENGINEERING
PARTMENT

SUPERSTRUCTURE DETAILS - LOCATION
BRIDGE NO. LAK-90-0599 L&R
IR 90 OVER RIVERSIDE DR.

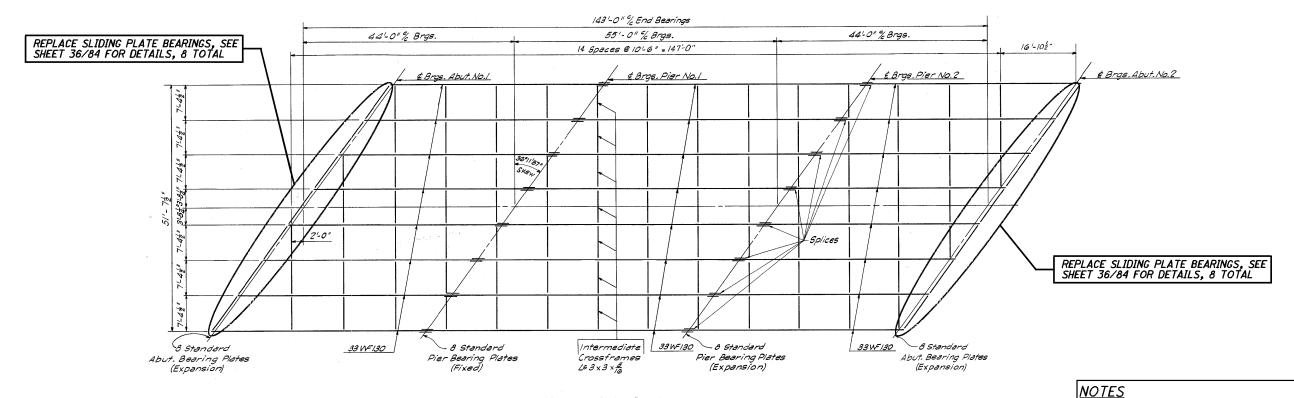
D12-BH-FY2013 MISCELLANEOUS PID No. 92142

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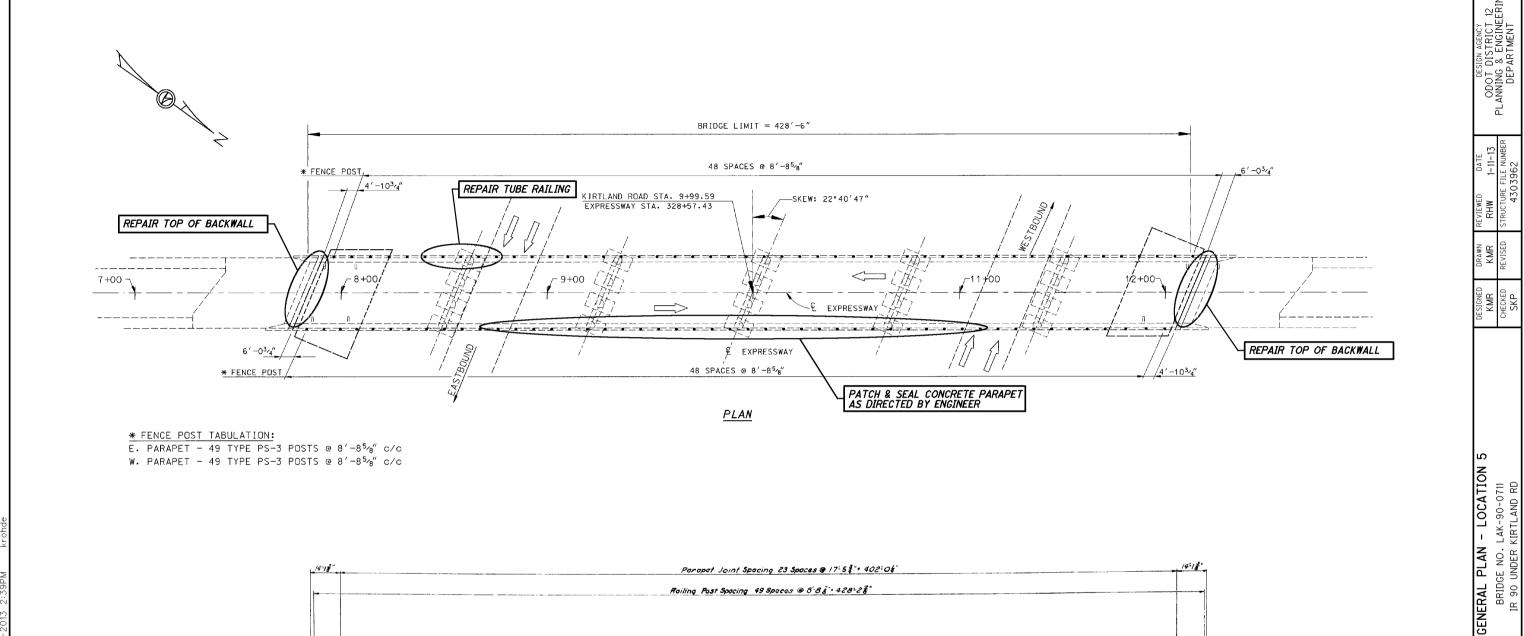
DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.

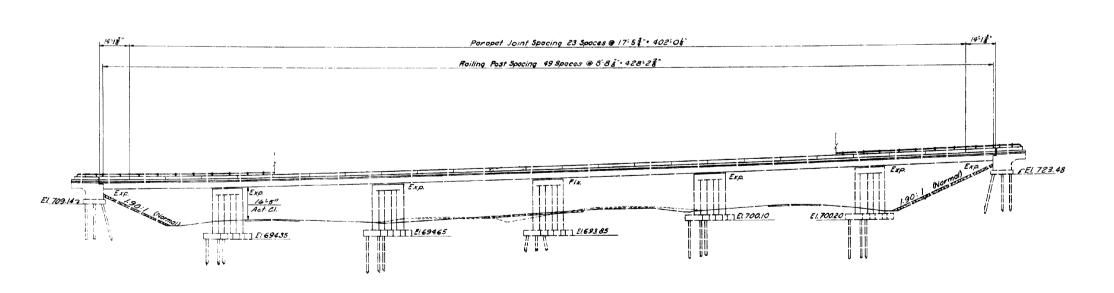
PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN GENERAL NOTES.



STEEL FRAMING PLAN

LAK-90-0599 R





<u>ELEVATION</u>

<u>NOTES</u>

- I. 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 GENERAL NOTES.

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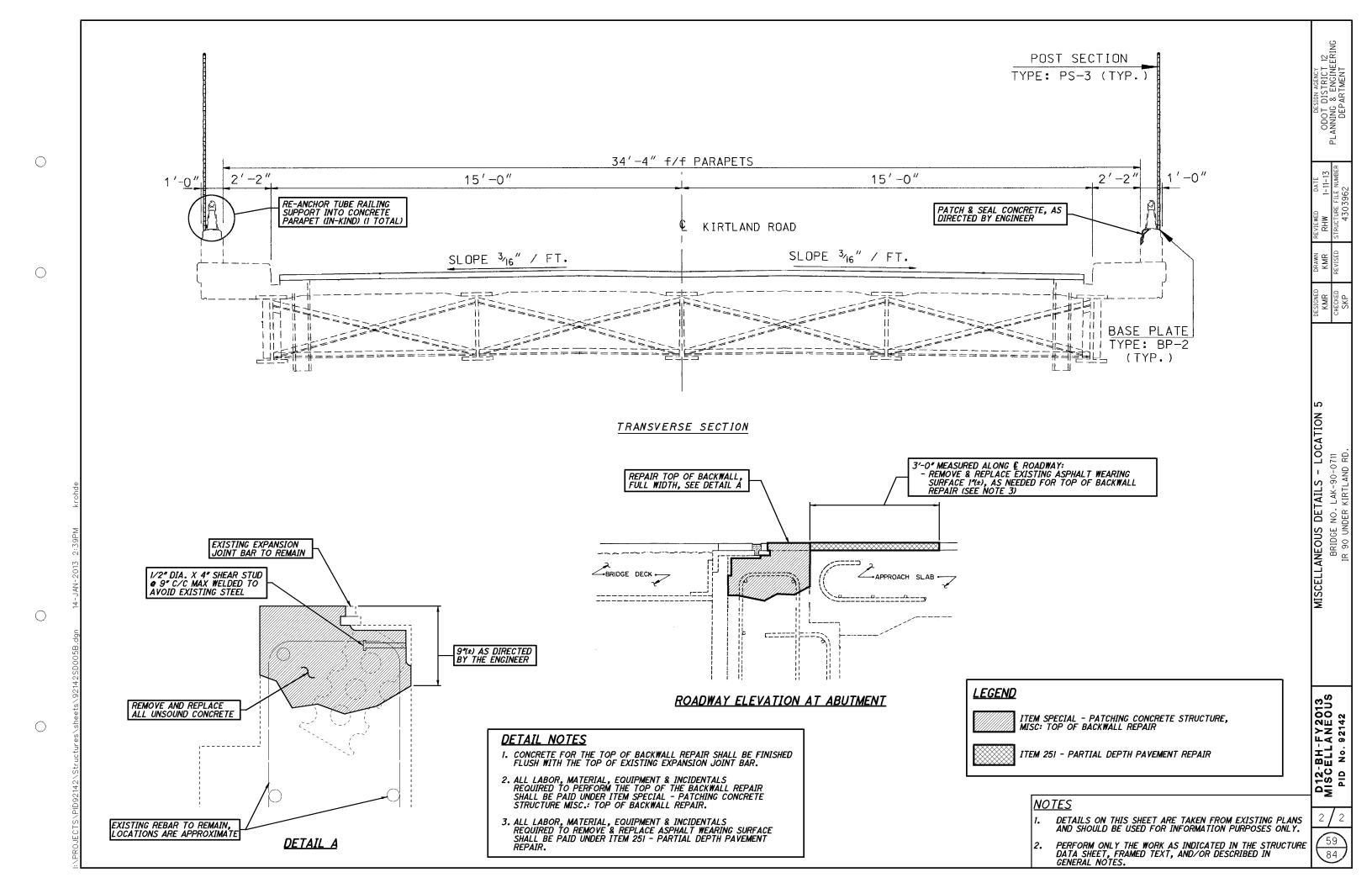
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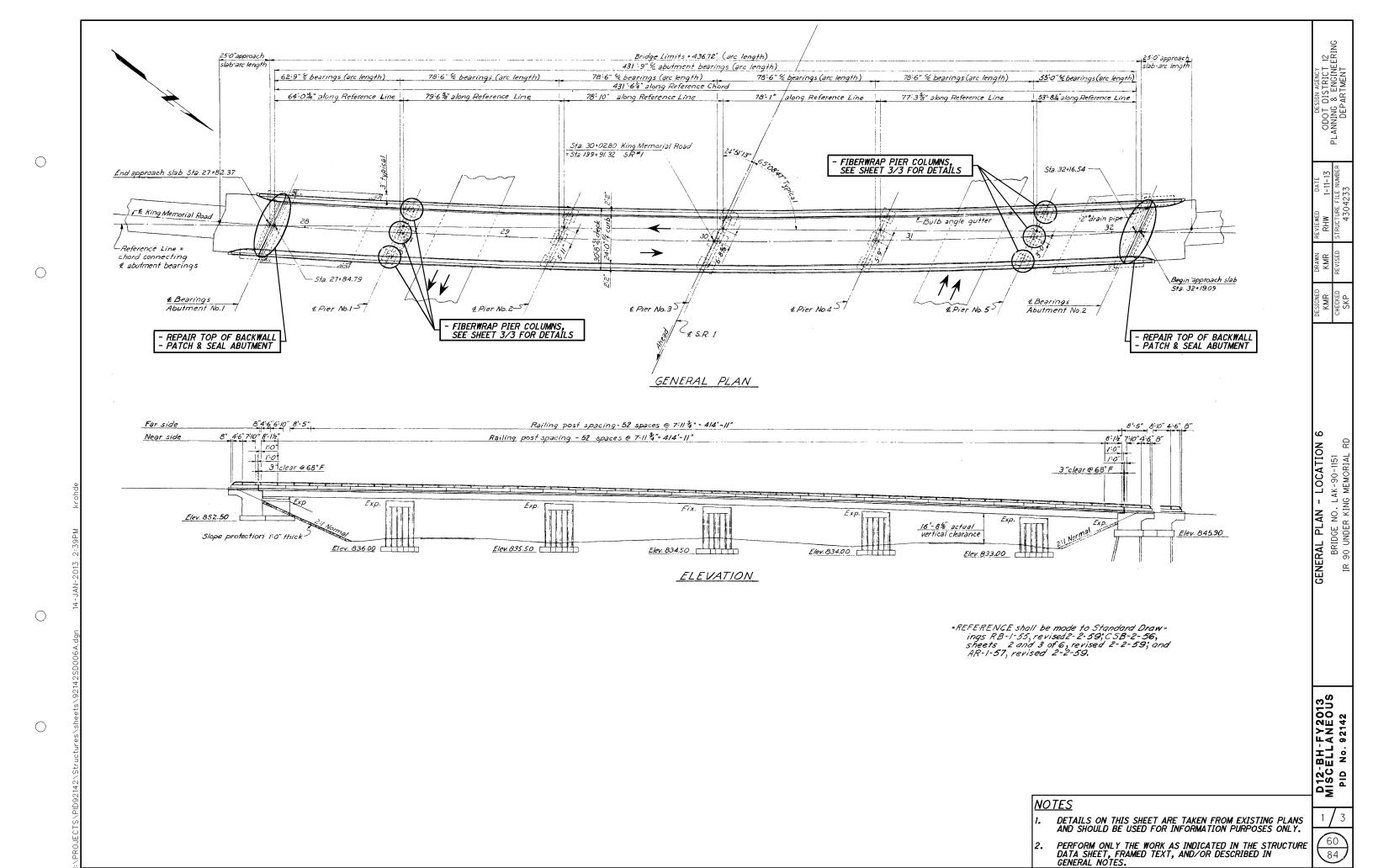
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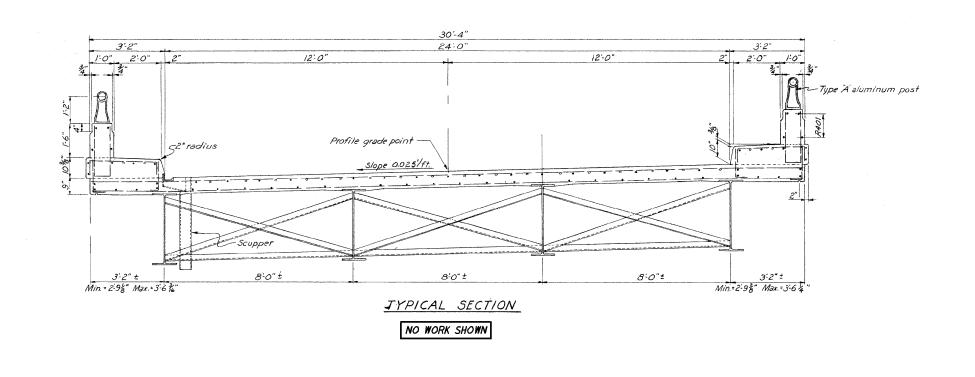
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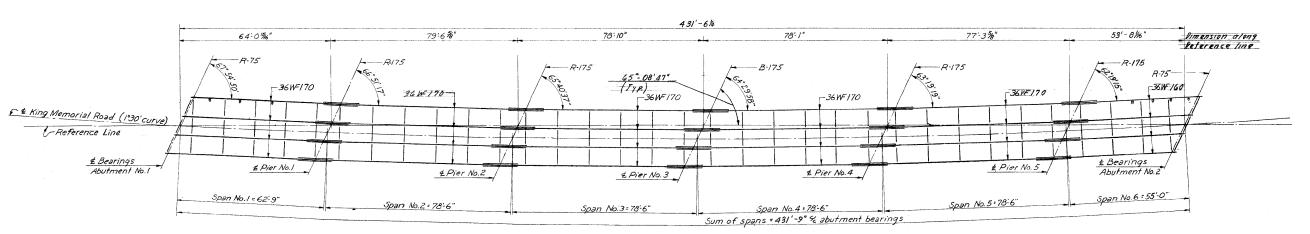
D12-BH-FY2013 MISCELLANEOUS PID No. 92142

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STEEL FRAMING PLAN

NO WORK SHOWN

<u>NOTES</u>

- DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
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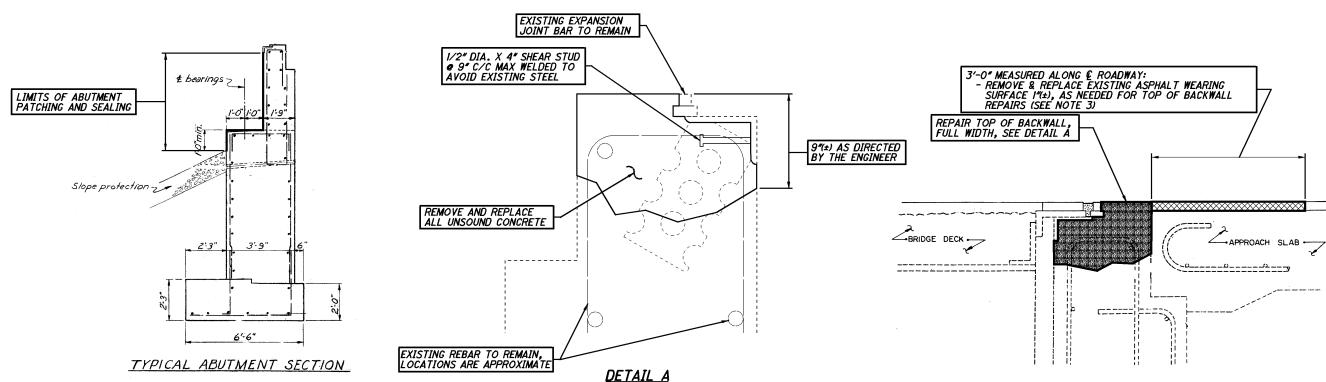
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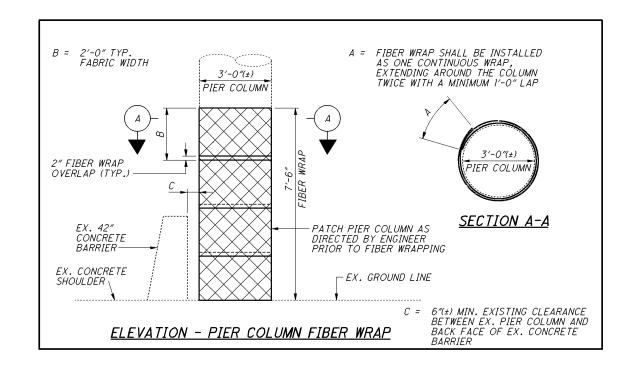
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D12-BH-FY2013 MISCELLANEOUS PID No. 92142

SUPERSTRUCTURE DETAILS - LOCATION 6
BRIDGE NO. LAK-90-1151
IR 90 UNDER KING MEMORIAL RD

DESIGN AGENCY
ODOT DISTRICT 12
PLANNING & ENGINEERING
DEPARTMENT





ROADWAY ELEVATION AT ABUTMENT

NOTES

- CONCRETE FOR THE TOP OF BACKWALL REPAIR SHALL BE FINISHED FLUSH WITH THE TOP OF EXISTING EXPANSION JOINT BAR.
- 2. ALL LABOR, MATERIAL, EQUIPMENT & INCIDENTALS
 REQUIRED TO PERFORM THE TOP OF THE BACKWALL REPAIR
 SHALL BE PAID UNDER ITEM SPECIAL PATCHING CONCRETE STRUCTURE MISC .: TOP OF BACKWALL REPAIR.
- 3. ALL LABOR, MATERIAL, EQUIPMENT & INCIDENTALS
 REQUIRED TO REMOVE & REPLACE ASPHALT WEARING SURFACE
 SHALL BE PAID UNDER ITEM 251 PARTIAL DEPTH PAVEMENT

NOTES

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

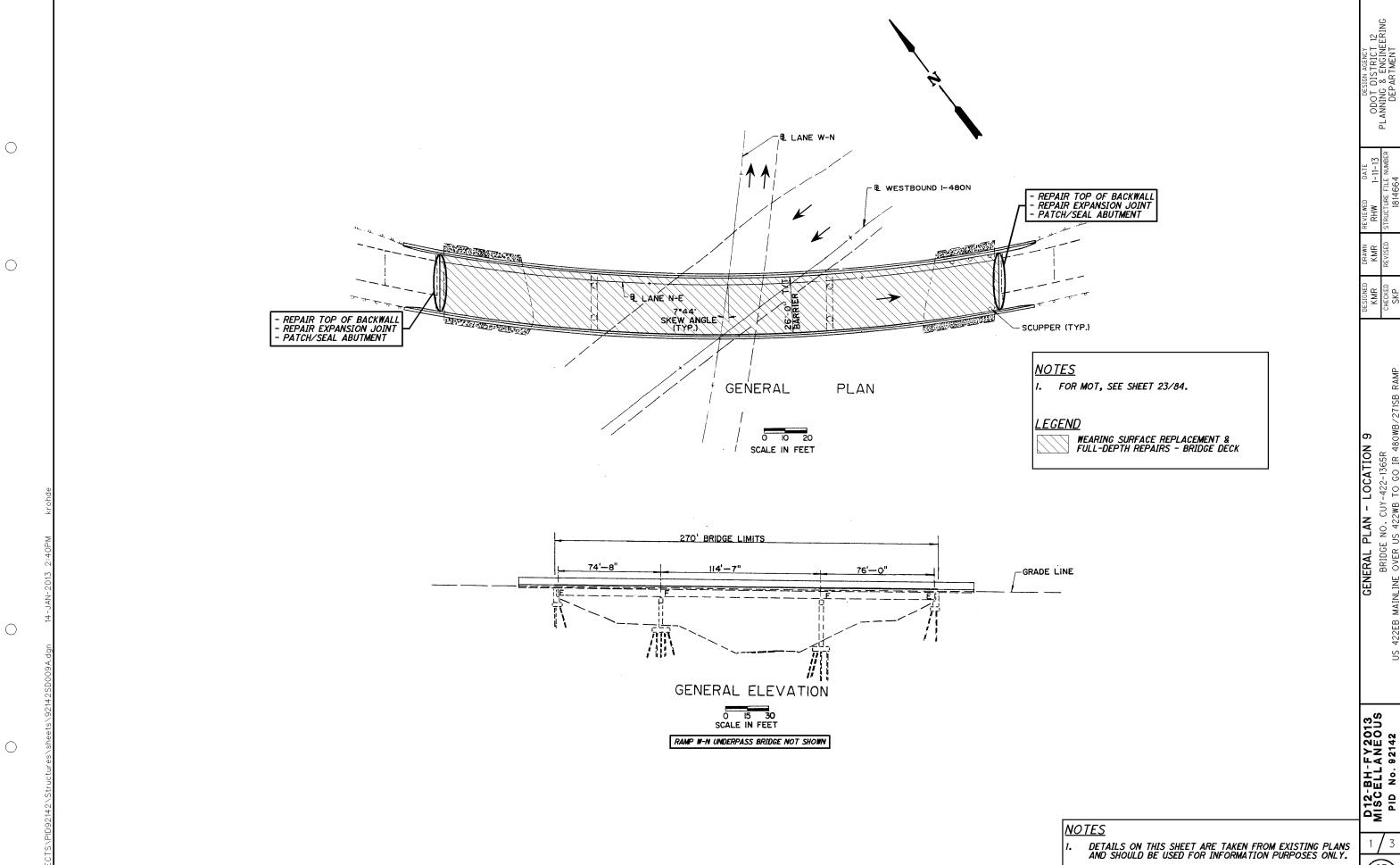
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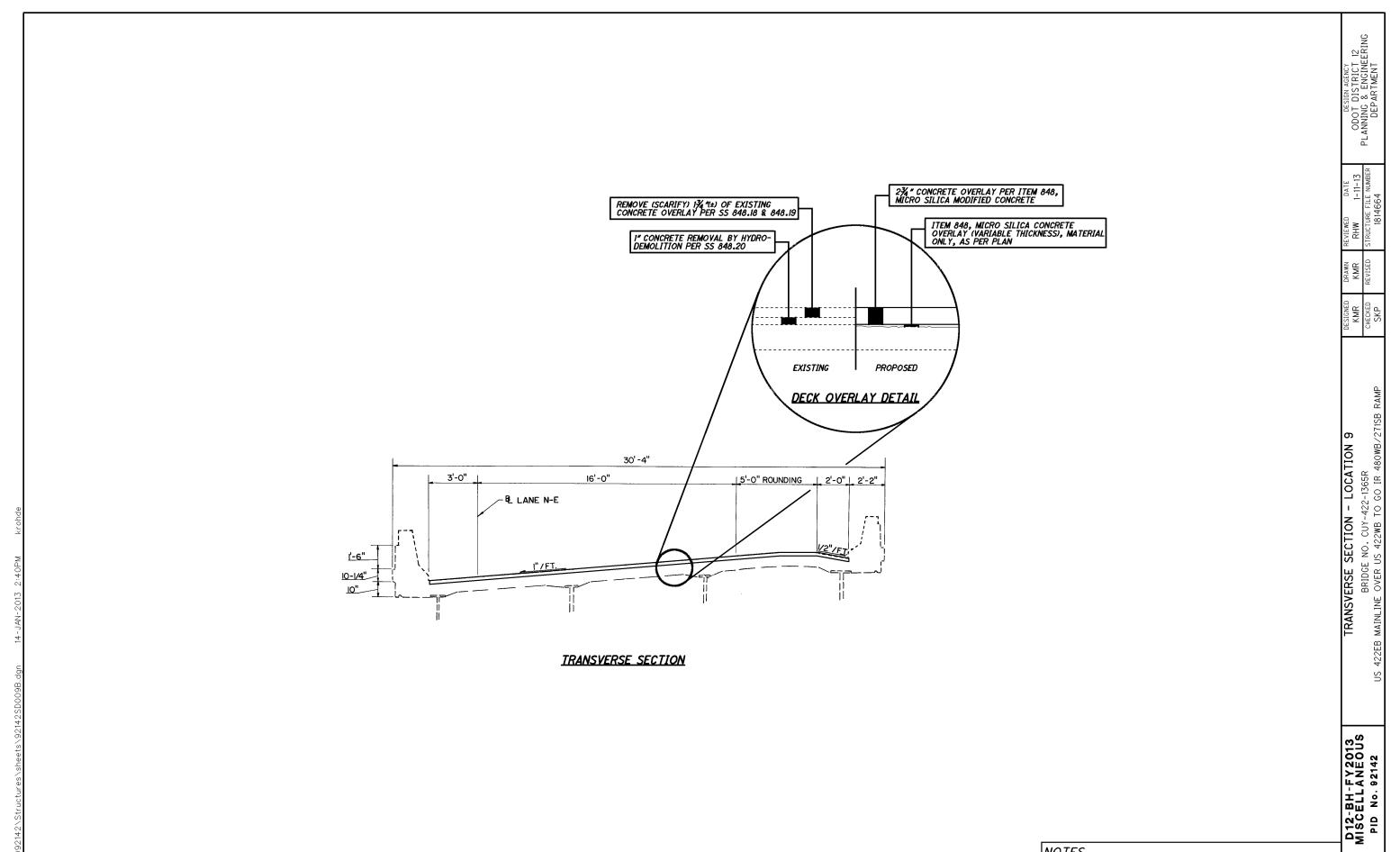
MISCELLANEOUS DETAILS - LOCATION
BRIDGE NO. LAK-90-1151
IR 90 UNDER KING MEMORIAL RD

DESIGN AGENCY
ODOT DISTRICT 12
PLANNING & ENGINEERING
DEPARTMENT

D12-BH-FY2013 MISCELLANEOUS PID No. 92142



PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN GENERAL NOTES.



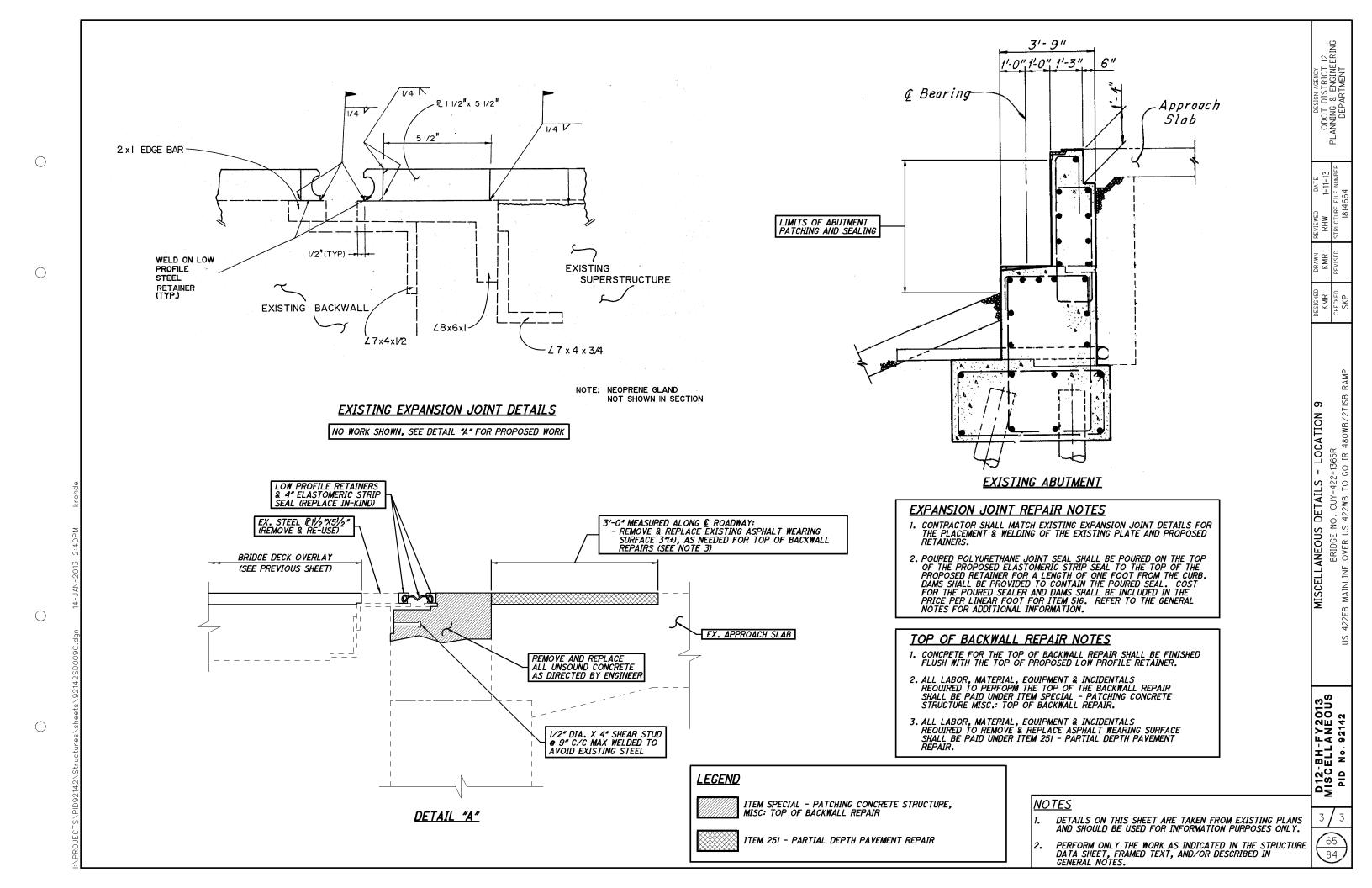
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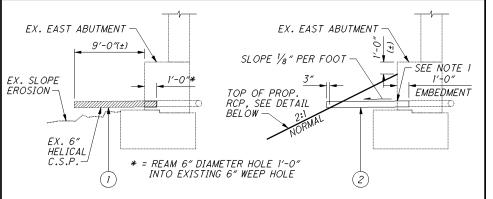
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<u>NOTES</u>

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LEGEND

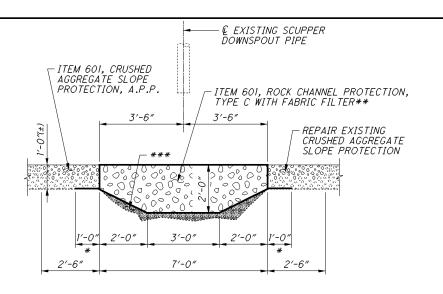
- 1) ITEM 202 PIPE REMOVED, 24" AND UNDER, AS PER PLAN
- 2 ITEM 518 6" NON-PREFORATED HELICAL CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01 (1 TOTAL) (SEE NOTE 1)

NOTES

1. CAULK AROUND PROPOSED PIPE AT FACE OF THE ABUTMENT WITH A SILICON CAULK PER CMS 258.02. CAULK SHALL BE INCLUDED FOR PAYMENT UNDER ITEM 518 - 6" NON-PREFORATED HELICAL CORRUGATED STEEL PIPE, INCLUDING SPECIALS, 707.01

6" HELICAL C.M.P. REPAIR DETAIL

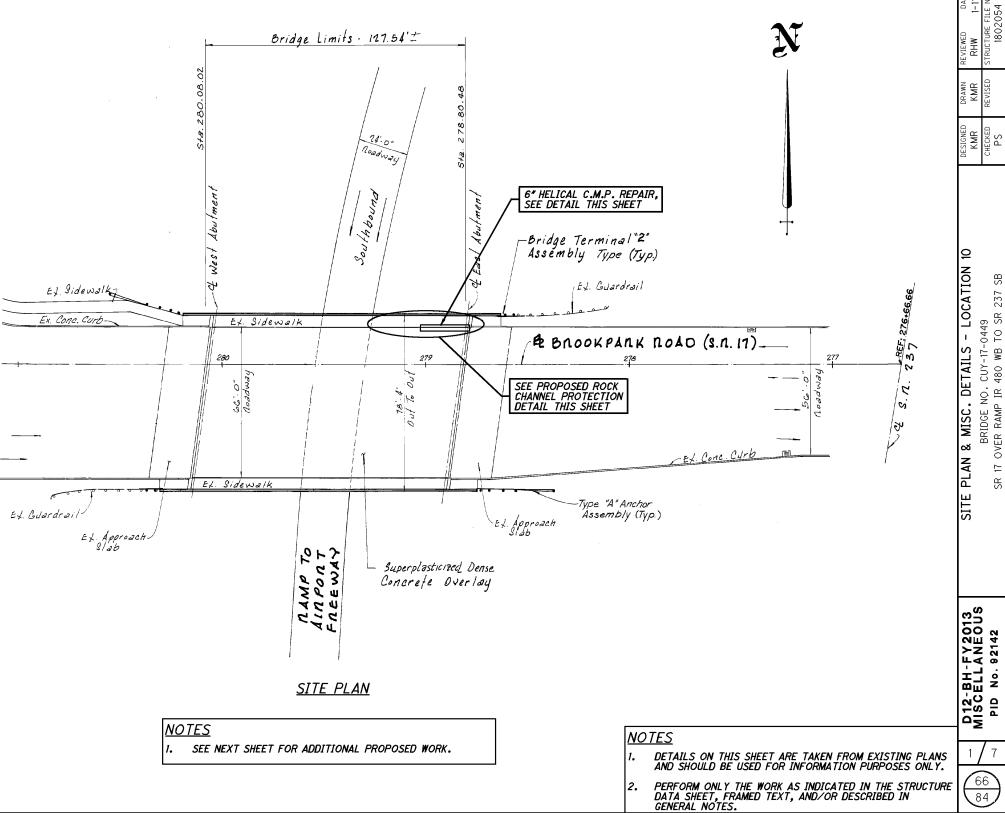
THIS DETAIL APPLIES TO ONE LOCATION AT EAST ABUTMENT ALL DIMENSIONS SHALL BE FIELD VERIFIED BY CONTRACTOR



- * EXTEND FILTER FABRIC MINIMUM 1'-0" UNDER EXISTING SLOPE PROTECTION
- ** PROP. RCP LIMITS SHALL EXTEND FROM THE FACE OF THE ABUTMENT SEAT TO THE TOE OF EXISTING SLOPE PROTECTION, SEE ABOVE FOR LOCATION
- *** ITEM 203 EMBANKMENT, AS PER PLAN

PROPOSED ROCK CHANNEL PROTECTION DETAIL

THIS DETAIL APPLIES TO ONE LOCATION AT EAST ABUTMENT



SIGN AGENCY DISTRICT 12 S ENGINEERING PARTMENT

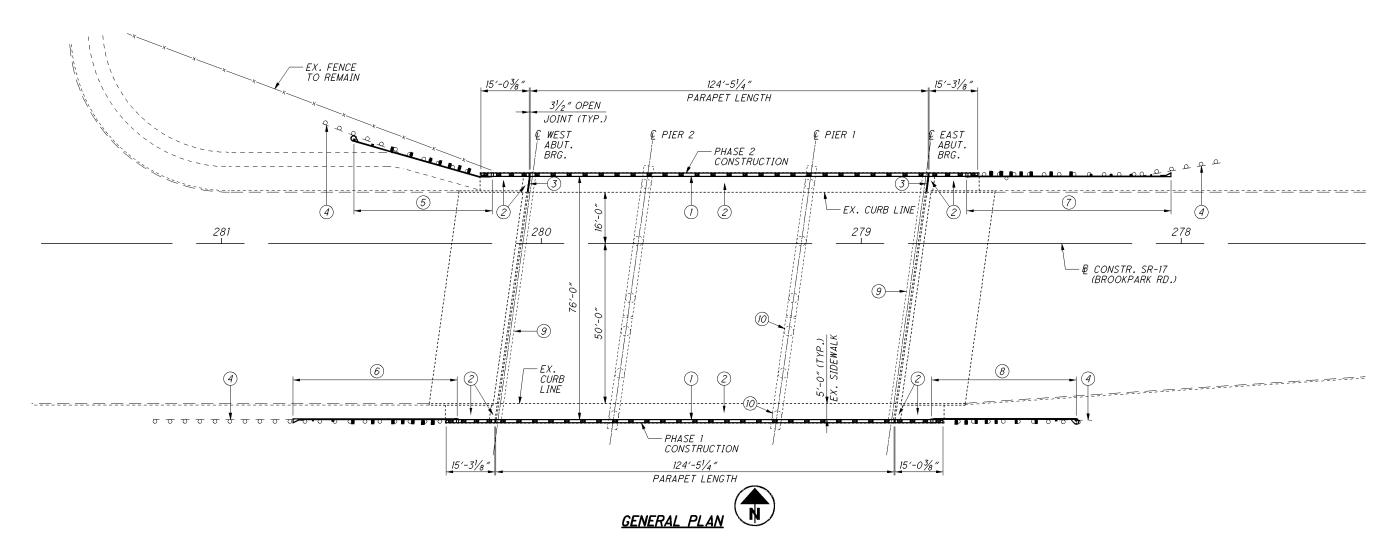
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LOCATION



PROPOSED WORK

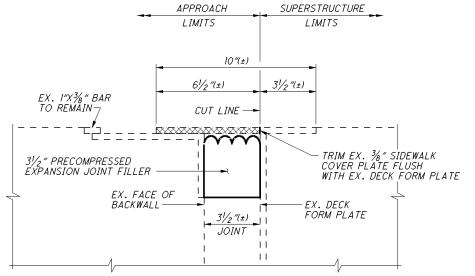
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- (1) REMOVE & REPLACE PARAPET & FENCE (SEE SHEETS 4 THRU 7/7)
- (2) PATCH SIDEWALK (SEE SHEET 7/7)
- (3) REPAIR SIDEWALK EXPANSION JOINT (NORTH SIDE ONLY, SEE DETAIL THIS SHEET)
- (4) REMOVE EX. GUARDRAIL, BRIDGE TERMINAL ASSEMBLY, AND ANCHOR ASSEMBLY
- (5) 32 FT. GUARDRAIL, TYPE 5, AS PER PLAN I EA. BRIDGE TERMINAL ASSEMBLY, TYPE 1, AS PER PLAN I EA. ANCHOR ASSEMBLY, TYPE B
- (6) 32 FT. GUARDRAIL, TYPE 5 I EA. BRIDGE TERMINAL ASSEMBLY, TYPE I I EA. ANCHOR ASSEMBLY, TYPE E
- 7 55 FT. GUARDRAIL, TYPE 5 1 EA. BRIDGE TERMINAL ASSEMBLY, TYPE 1 1 EA. ANCHOR ASSEMBLY, TYPE E
- (8) 32 FT. GUARDRAIL, TYPE 5 I EA. BRIDGE TERMINAL ASSEMBLY, TYPE 1 I EA. ANCHOR ASSEMBLY, TYPE B
- (9) PATCH & SEAL ABUTMENT BACKWALL & BEAM SEAT (SEE SHEET 7/7)
- (10) PATCH & SEAL PIER COLUMN (SEE SHEET 7/7)

NOTES

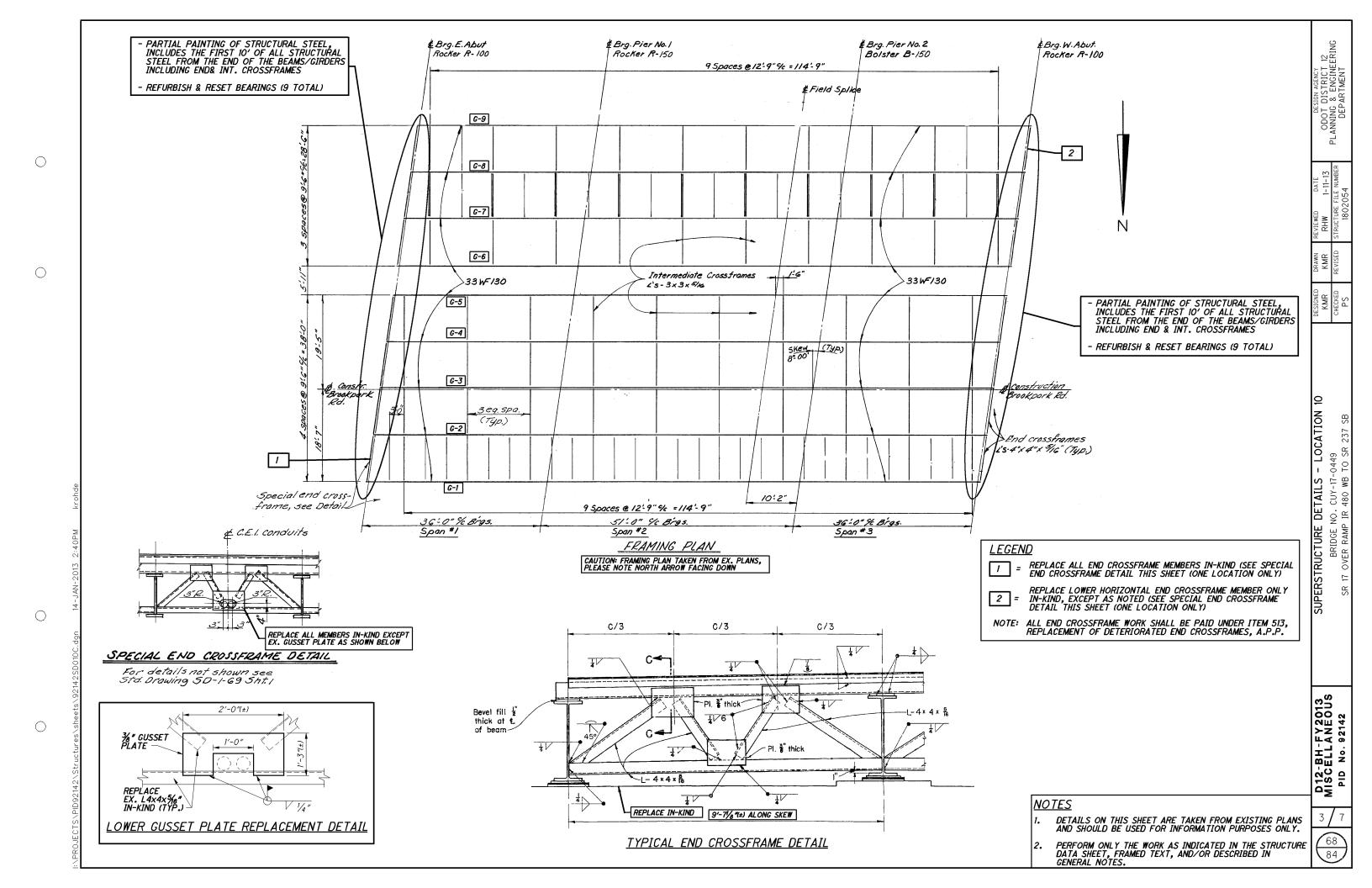
- 1. ALL PROPOSED DIMENSIONS ARE BASED ON EXISTING PLANS, CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS.
- 2. FOR MOT, SEE SHEETS 24 & 25/84.

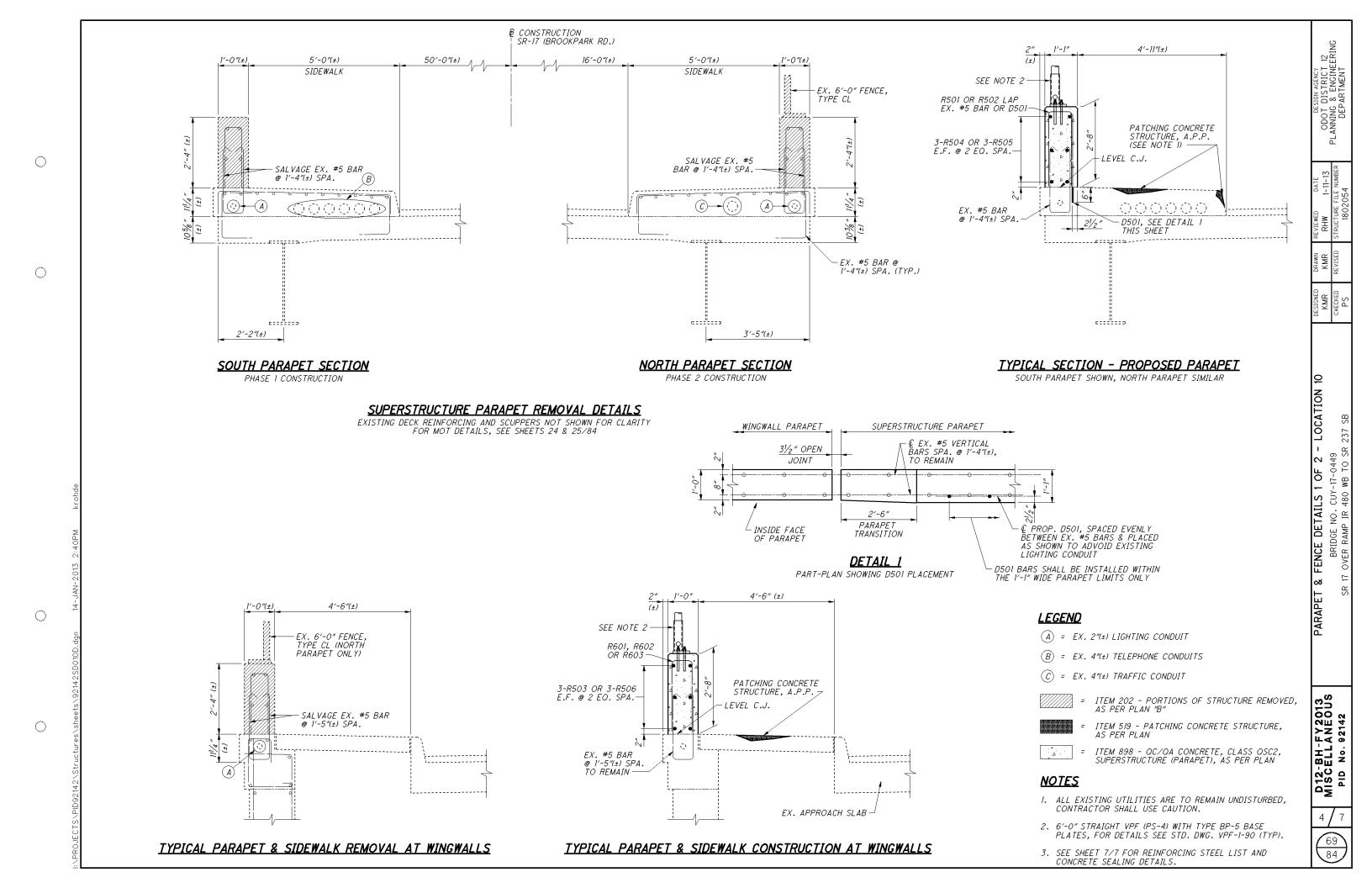


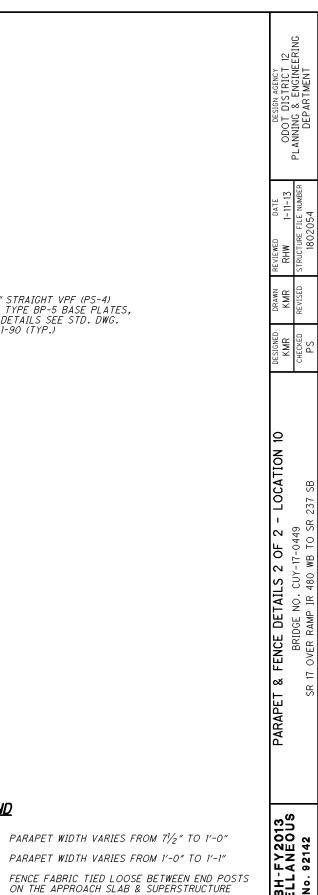
SIDEWALK EXPANSION JOINT REPAIR DETAIL

LENGTH OF PRECOMPRESSED EXPANSION JOINT FILLER SHALL BE FROM FACE OF CURB TO FACE OF PARAPET

DETAIL IS REPRESENTATIVE OF THE PRODUCT TYPE; HOWEVER, THE ACTUAL NUMBER OF BELLOWS IS DEPENDENT ON THE MANUFACTURER AND SIZE OF JOINT OPENING. OPENING SHALL BE FIELD VERIFIED PRIOR TO ORDERING MATERIALS.





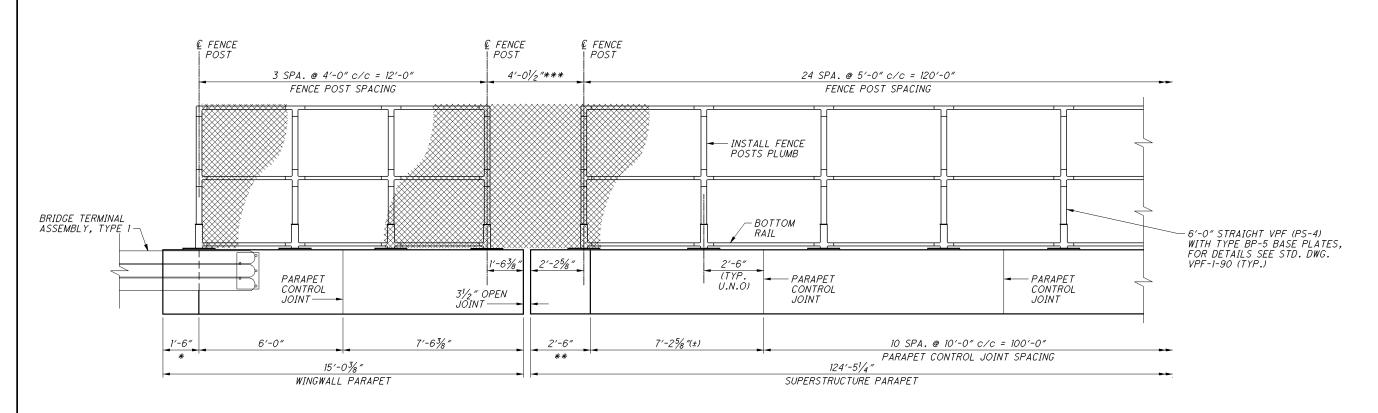


D12-BH-FY2013 MISCELLANEOUS PID No. 92142

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3. SEE NEXT SHEET FOR ADDITIONAL PARAPET REINFORCING DETAILS.



TYPICAL PARAPET & FENCE ELEVATION

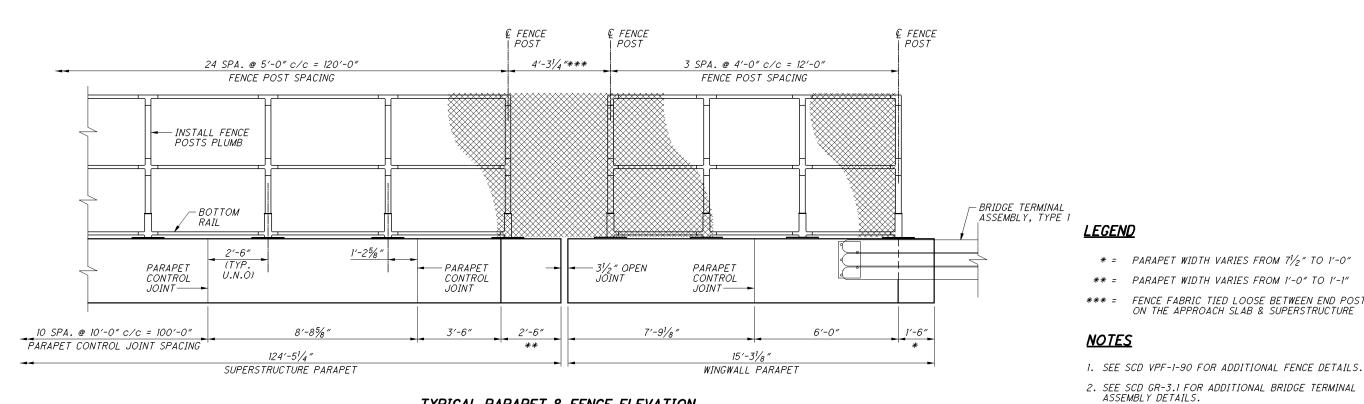
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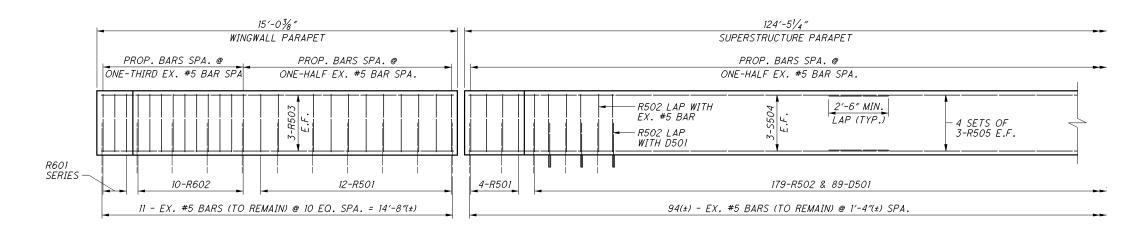
SHOWING NORTH PARAPET AT WEST BRIDGE LIMIT SOUTH PARAPET AT EAST BRIDGE LIMIT SIMILAR



TYPICAL PARAPET & FENCE ELEVATION

SHOWING NORTH PARAPET AT EAST BRIDGE LIMIT SOUTH PARAPET AT WEST BRIDGE LIMIT SIMILAR

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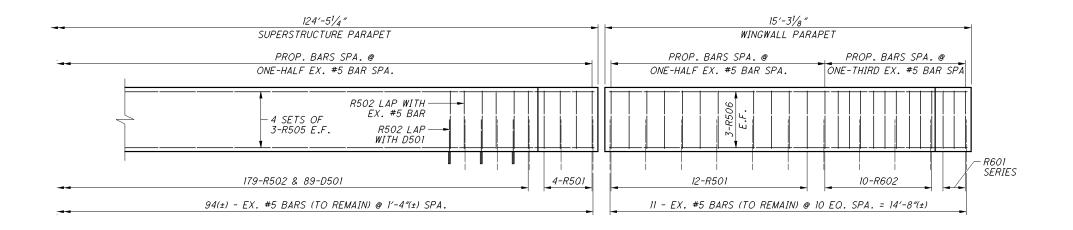
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TYPICAL PARAPET REINFORCING DETAILS

SHOWING NORTH PARAPET AT WEST BRIDGE LIMIT SOUTH PARAPET AT EAST BRIDGE LIMIT SIMILAR PARAPET FENCE NOT SHOWN FOR CLARITY



TYPICAL PARAPET REINFORCING DETAILS

SHOWING NORTH PARAPET AT EAST BRIDGE LIMIT SOUTH PARAPET AT WEST BRIDGE LIMIT SIMILAR PARAPET FENCE NOT SHOWN FOR CLARITY

NOTES

- 1. PROPOSED REINFORCING STEEL SPACING SHALL BE FIELD ADJUSTED TO CLEAR PROPOSED PARAPET CONTROL JOINTS PER ODOT STD. DWG. BR-2-98.
- 2. SEE SHEETS 4 & 5/7 FOR ADDITIONAL PARAPET DETAILS.
- 3. SEE SHEET 7/7, FOR REINFORCING STEEL LIST.

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MARK		NUMBER					Ē				BENDING DIAGRAM					
		LEFT	RIGHT	TOTAL	LENGTH	WEIGHT	TYPE		T _	DIMENSIONS				7110		
								Α	В	С	D	E	R	INC		
<u>'</u>	<u> </u>		1	PARAF	ET REINF	ORCING S	TEEL	LIST				1	1	1		
D501		89	89	178	3'-0"	557	STR									
R501		32	32	64	5′-5″	362	2	2'-6"	0′-8″	2'-6"					<u> </u>	1
R502		179	179	358	5'-6"	2054	2	2'-6"	0'-9"	2'-6"					1 1	1 1
R503		6	6	12	14'-8"	184	STR								4	
R504		6	6	12	15'-0"	188	STR									
R505		24	24	48	30'-0"	1502	STR								↓	
R506		6	6	12	14'-11"	187	STR								1	В
		2 SR	2 SR	4 SR	5′-1″				0′-5″						<u></u>	
R601		OF	OF	OF	TO	62	2	2'-6"	TO	2'-6"				1"	T.	'DE 2
		3	3	3	5'-3"				0'-7"						<u> </u>	<u> PE-2</u>
R602		20	20	40	5′-4″	320	2	2′-6″	0'-8"	2'-6"						
				<u>SU</u>	 'B-TOTAL	<i>5416</i>	LBS									

REINFORCING STEEL NOTES

- 1. ALL DIMENSIONS ARE OUT TO OUT.
- 2. TYPE "STR" INDICATES A STRAIGHT BAR.
- 3. "SR" INDICATES SERIES BAR.

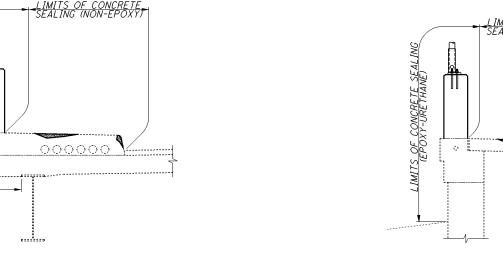
IMITS OF CONCRETE SEALING (EPOXY-URETHANE)

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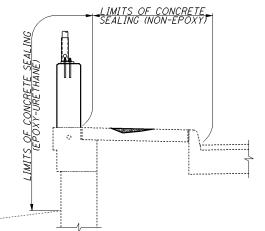
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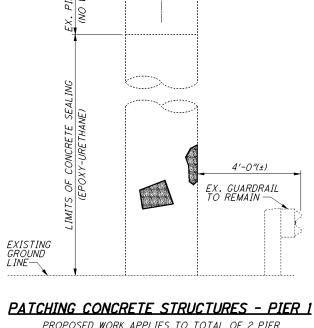
- 4. THE BAR SIZE NUMBER IS INDICATED IN THE "MARK" COLUMN. THE FIRST DIGIT OF EACH MARK INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, R501 IS A #5 BAR.
- 5. ALL BARS SHALL BE EPOXY COATED.





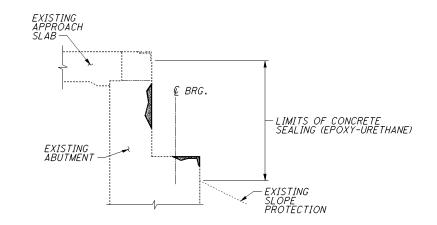


TYPICAL PATCHING & SEALING LIMITS - WINGWALLS



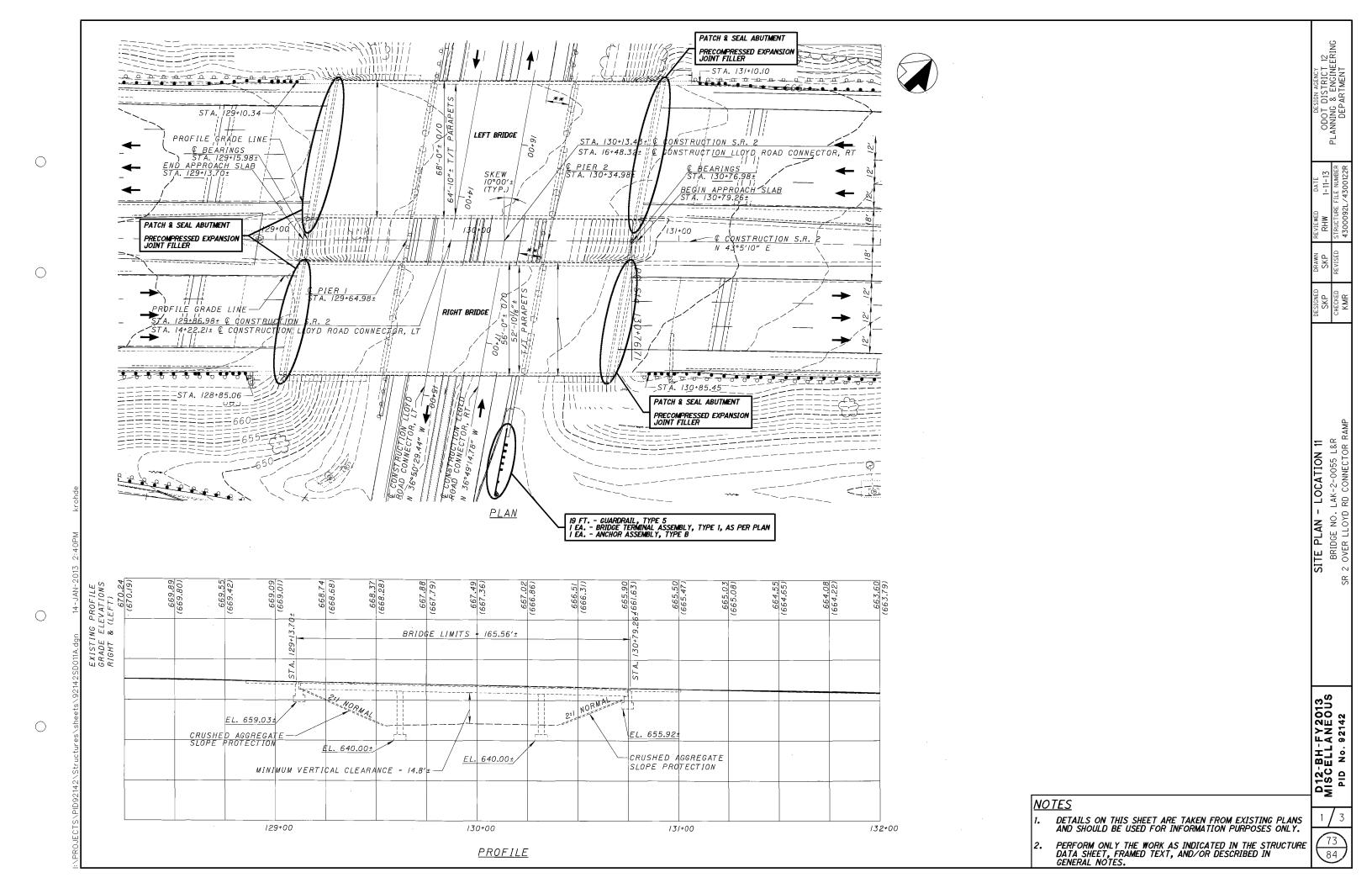
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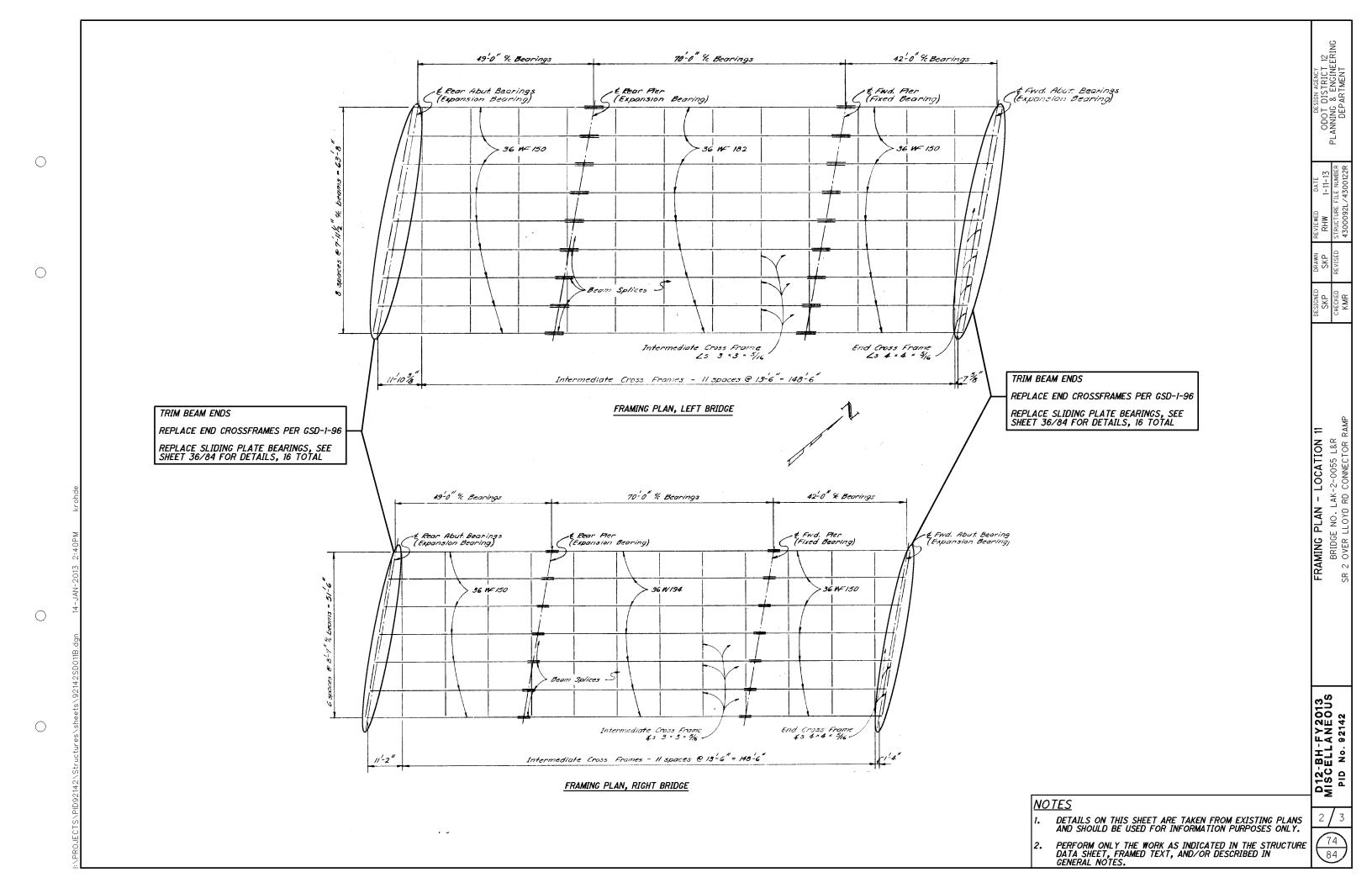
PROPOSED WORK APPLIES TO TOTAL OF 2 PIER COLUMNS AT THE LOCATIONS AS SHOWN ON SHEET 2/7

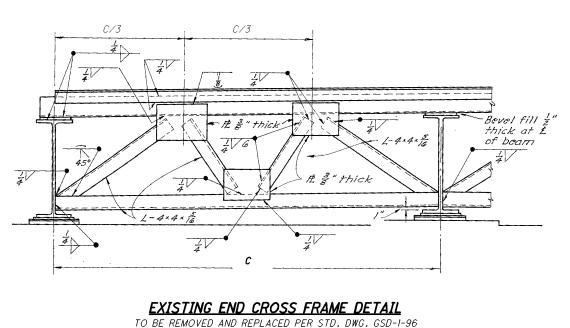


TYPICAL PATCHING & SEALING LIMITS - ABUTMENTS

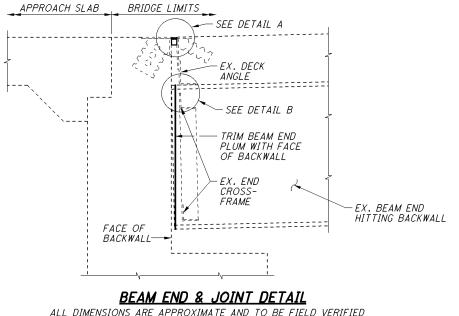
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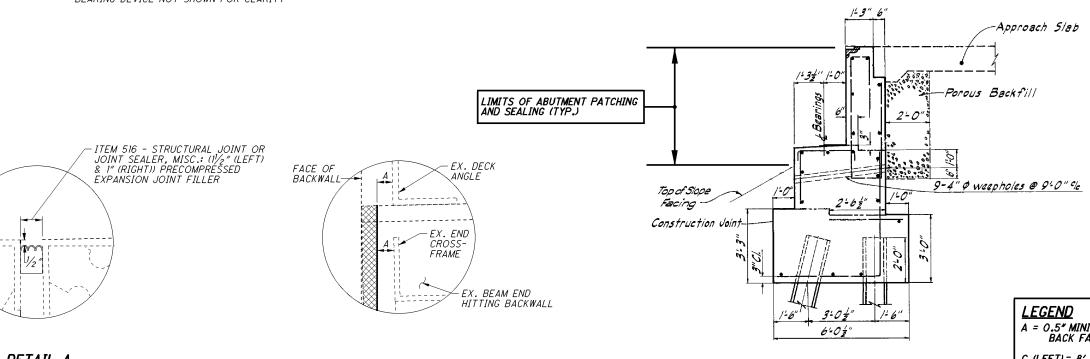




TO BE REMOVED AND REPLACED PER STD. DWG. GSD-1-96



ALL DIMENSIONS ARE APPROXIMATE AND TO BE FIELD VERIFIED BEARING DEVICE NOT SHOWN FOR CLARITY



DETAIL A

DETAIL IS REPRESENTATIVE OF THE PRODUCT TYPE; HOWEVER, THE ACTUAL NUMBER OF BELLOWS IS DEPENDENT ON THE MANUFACTURER AND SIZE OF JOINT OPENING. OPENING SHALL BE FIELD VERIFIED PRIOR TO ORDERING MATERIALS.

DETAIL B

ENSURE BEAM END TRIMMING AVOIDS ALL EXISTING WELDS

TYPICAL ABUTMENT SECTION

A = 0.5" MINIMUM CLEARANCE TO BACK FACE OF ANGLE

C (LEFT) = 8' 1" ±

C (RIGHT) = 8' 85%" ±

PORTION OF BEAM REMOVED

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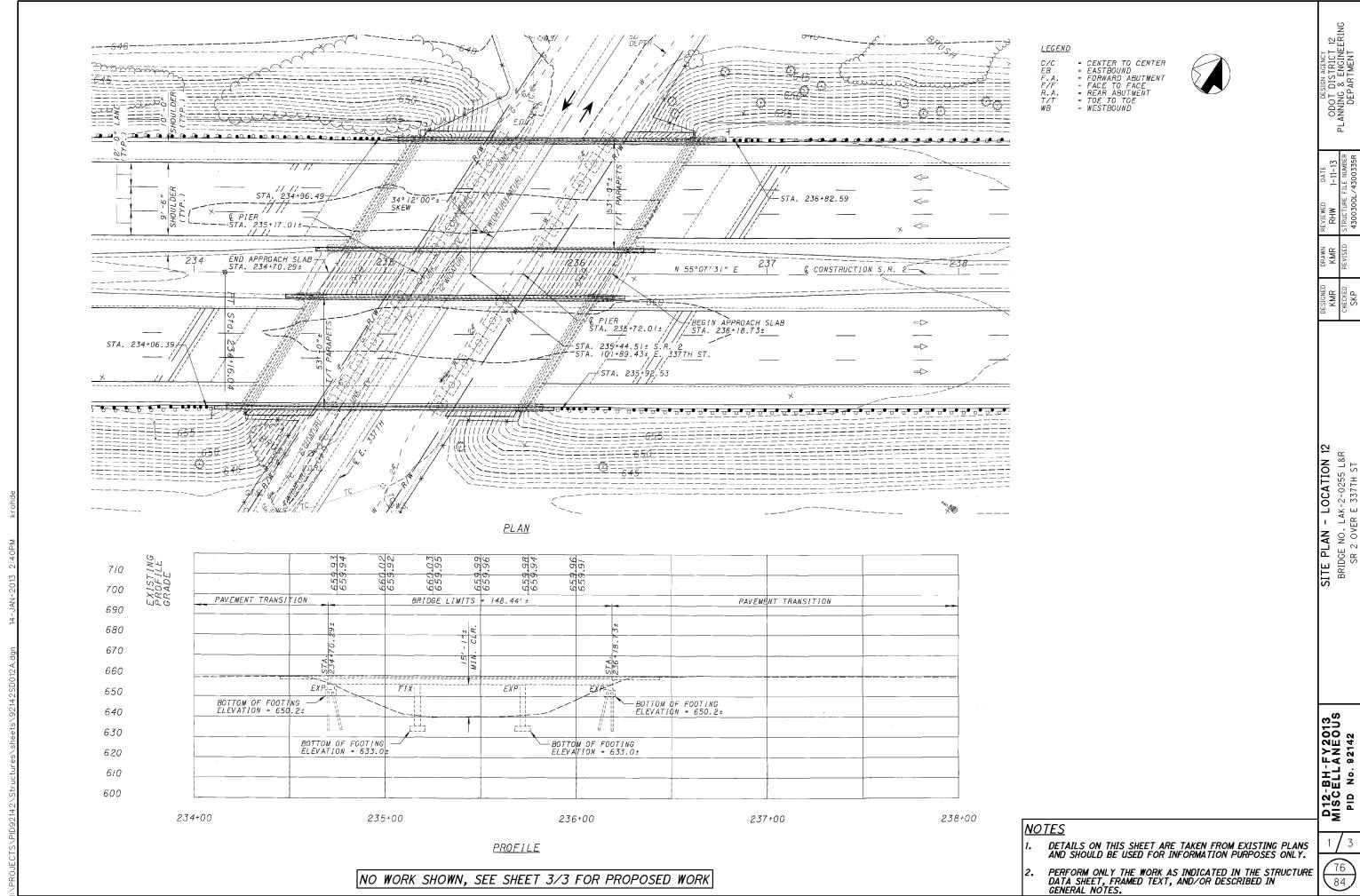
MISCELLANEOUS DETAILS - LOCATION
BRIDGE NO. LAK-2-0055 L&R
SR 2 OVER LLOYD RD CONNECTOR RAMP

DESIGN AGENCY
ODOT DISTRICT 12
PLANNING & ENGINEERING
DEPARTMENT

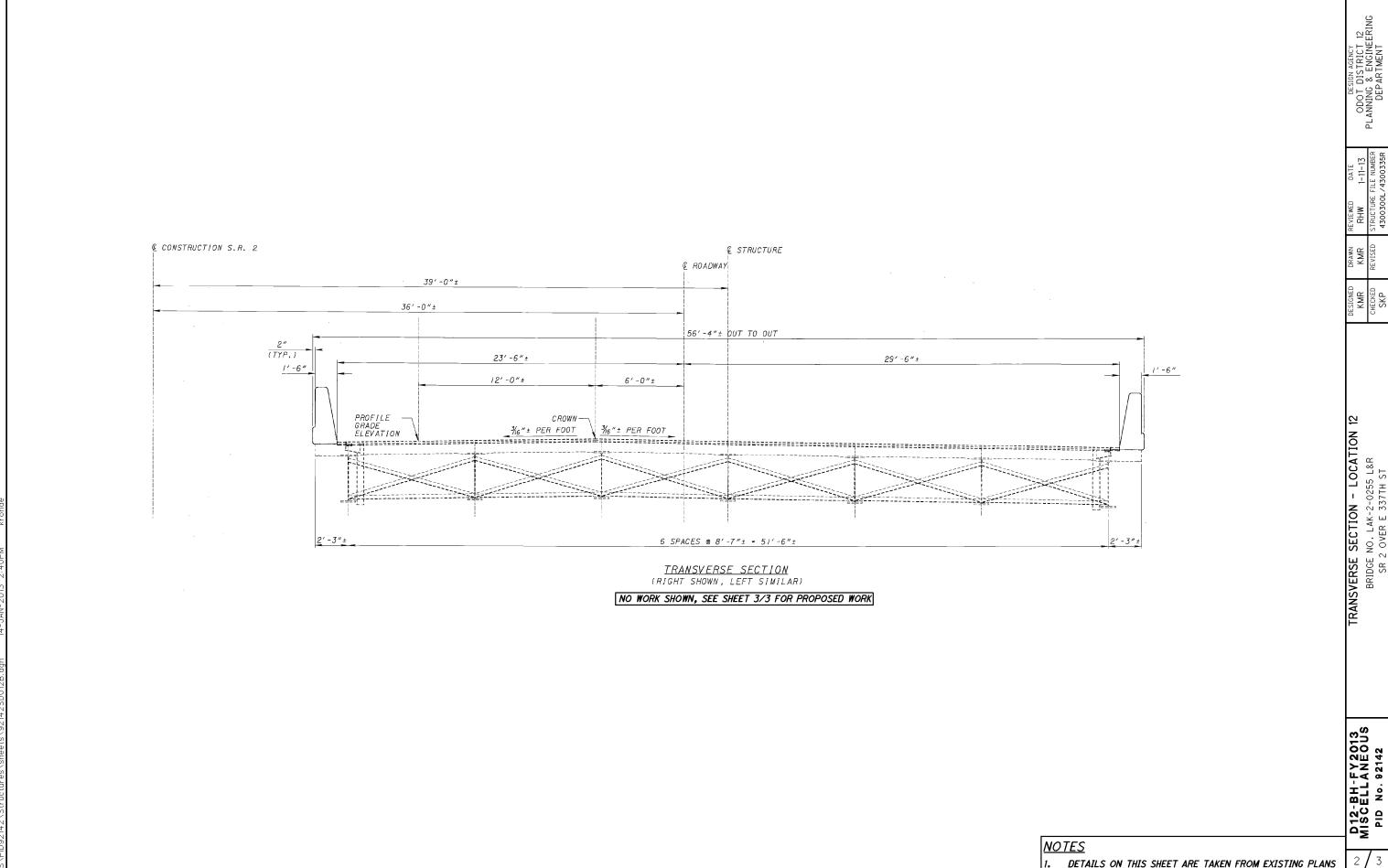
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D12-BH-FY2013 MISCELLANEOUS PID No. 92142

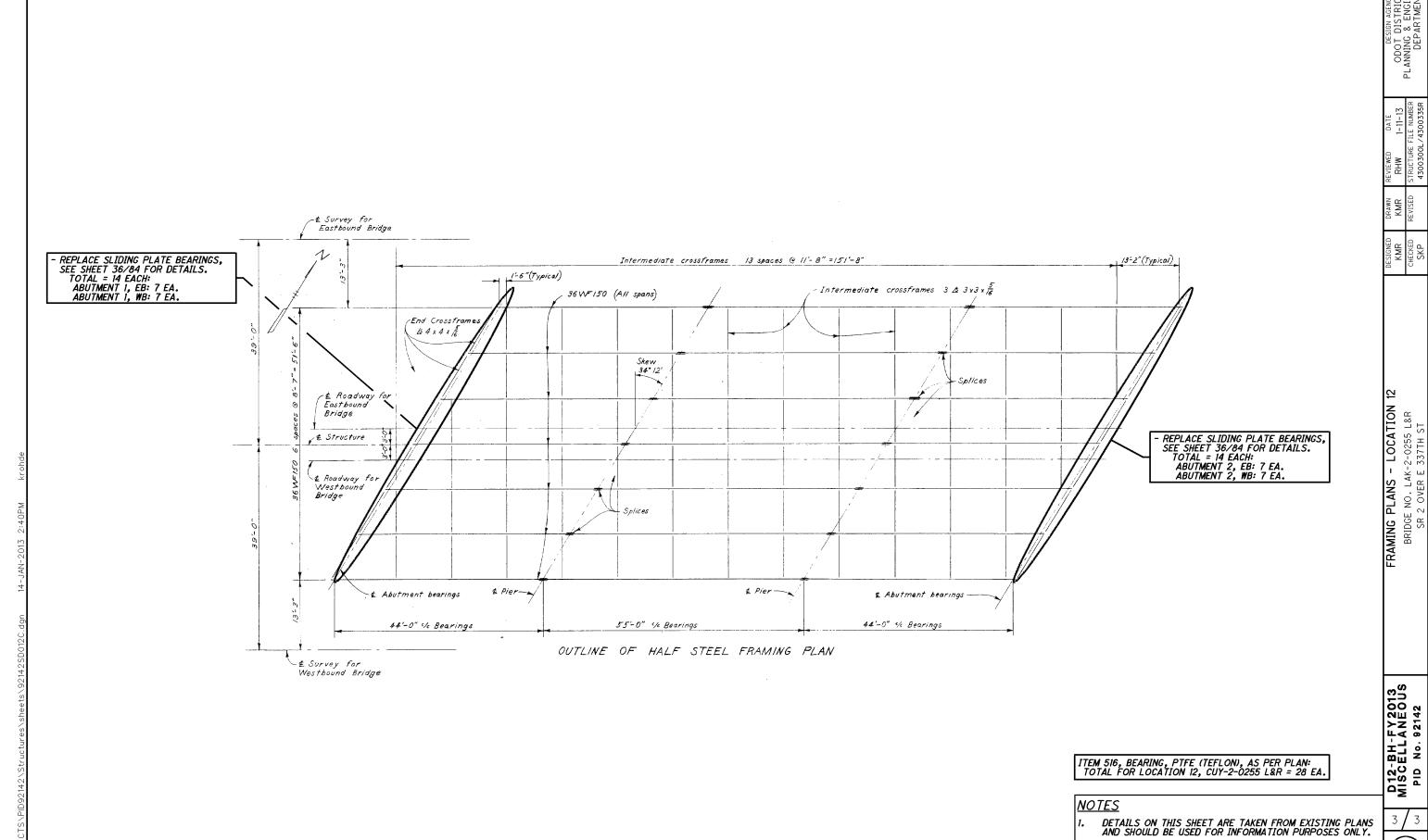


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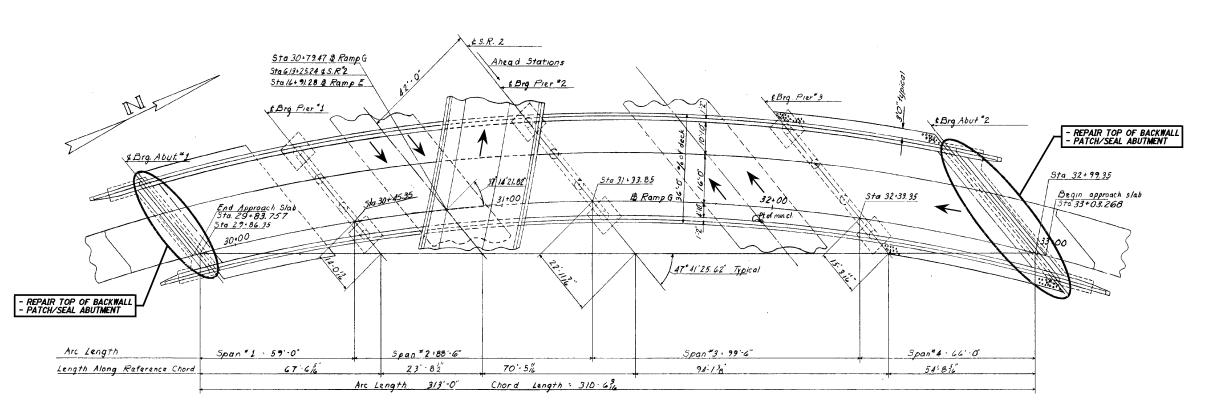
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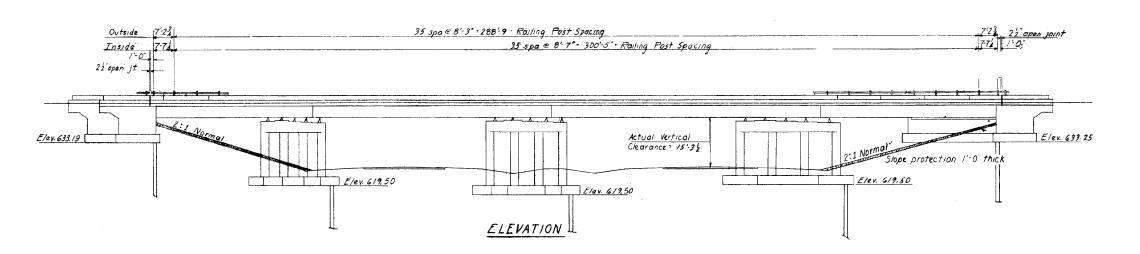
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DESIGN AGENCY
ODOT DISTRICT 12
PLANNING & ENGINEERING
DEPARTMENT

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GENERAL PLAN



Reference shall be made to standard drawings CSB-2-56 sheets 2.53, a.f. Expressed 2.7-59, RB-1-55 revised 2-2-59, AR-1-57 revised 2-2-59 and AS-1-54 revised 12-1-54 and Supplemental Specification 5-201, dated 4-28-55.

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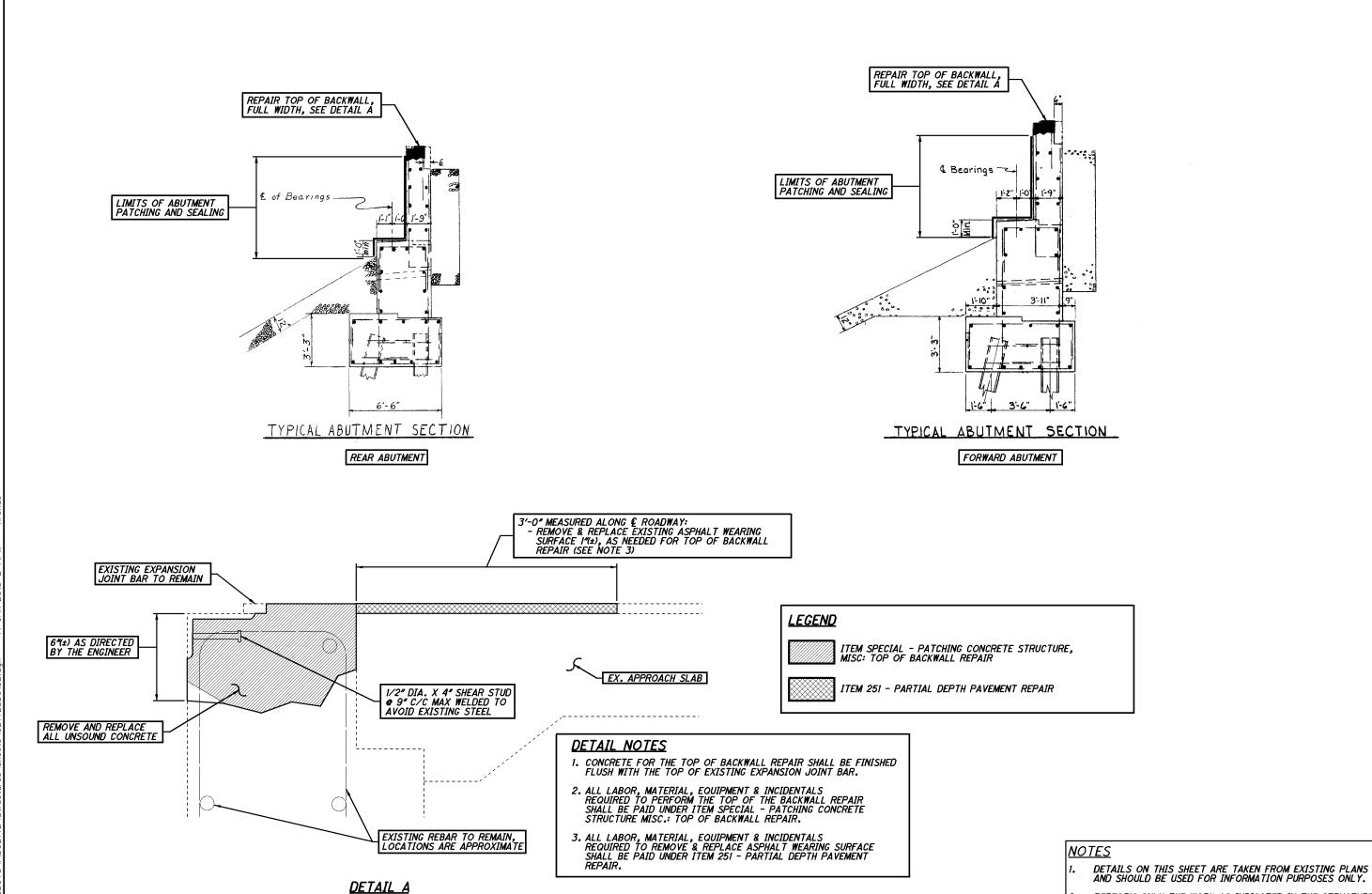
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GENERAL PLAN - LOCATION 13
BRIDGE NO. LAK-2-1354 ES
SR 2 WB TO SR 44 SB OVER SR 2

DESIGN AGENCY
ODOT DISTRICT 12
PLANNING & ENGINEERING
DEPARTMENT

D12-BH-FY2013 MISCELLANEOUS PID No. 92142



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DESIGN AGENCY
ODOT DISTRICT 12
PLANNING & ENGINEERING
DEPARTMENT

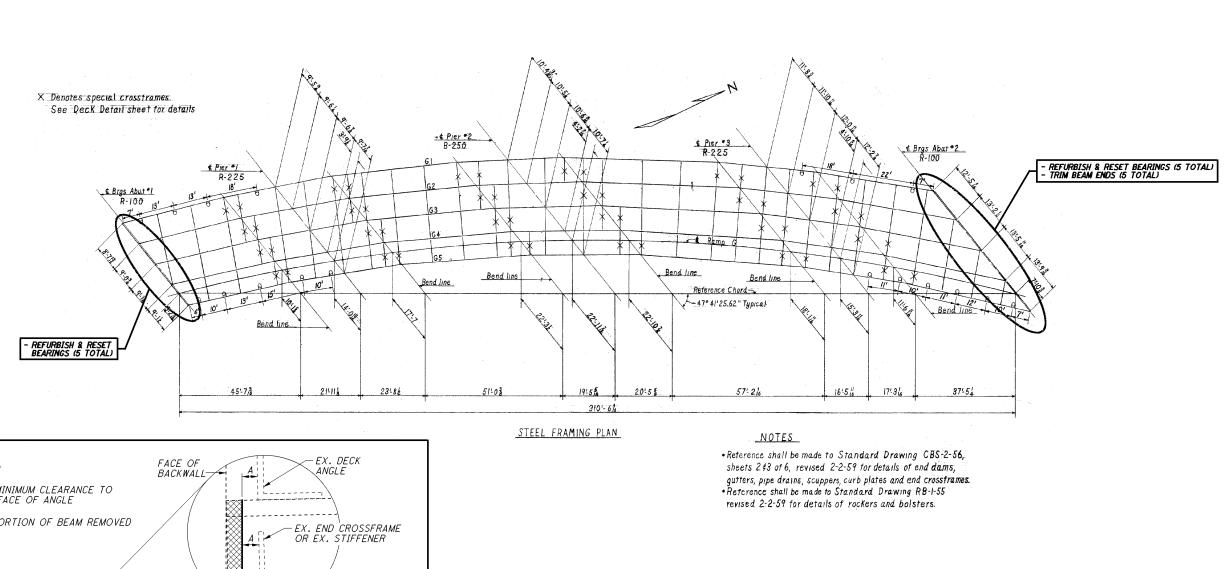
ABUTMENT DETAILS - LOCATION
BRIDGE NO. LAK-2-1354 ES
SR 2 WB TO SR 44 SB OVER SR 2

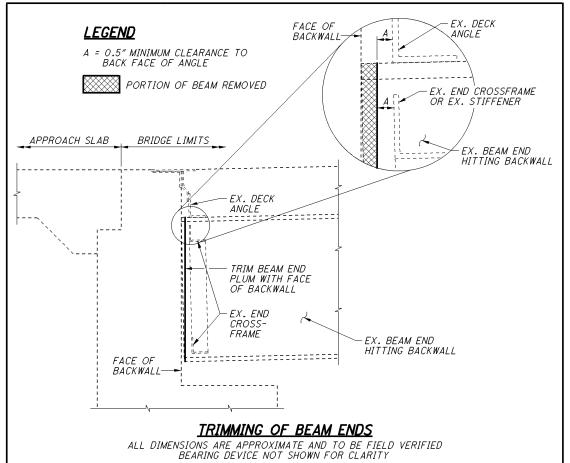
D12-BH-FY2013 MISCELLANEOUS PID No. 92142

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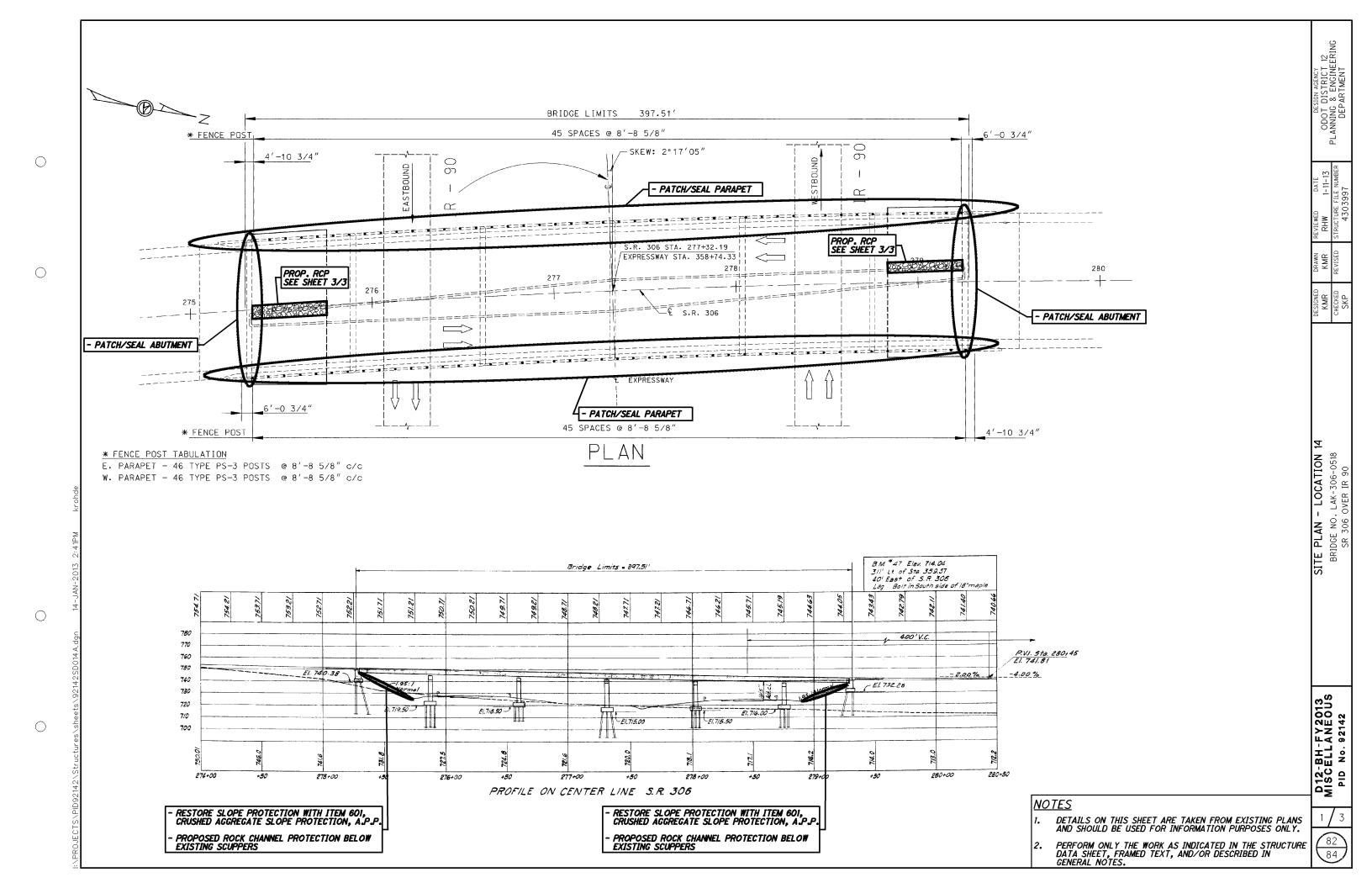
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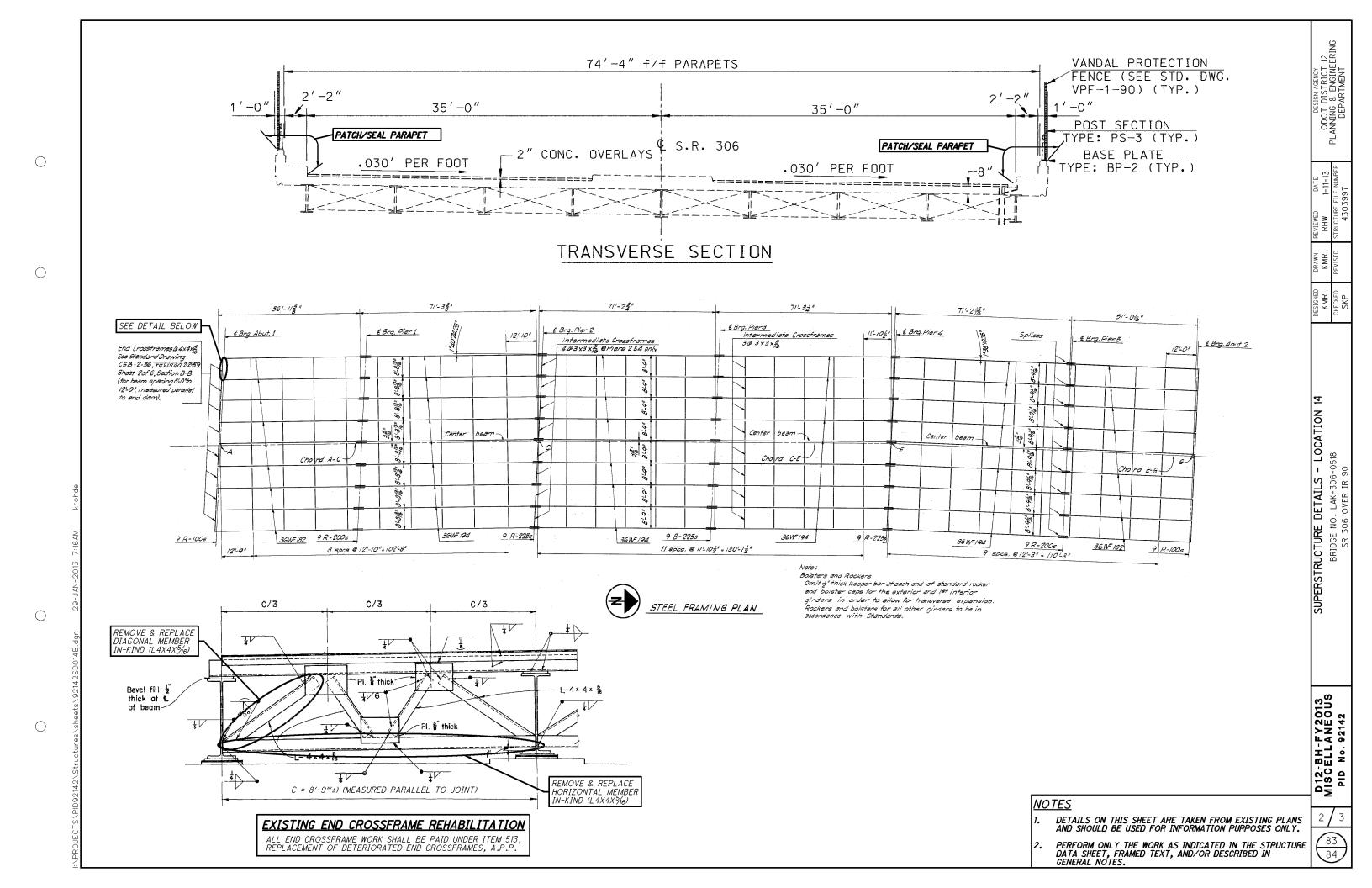
D12-BH-FY2013 MISCELLANEOUS PID No. 92142

DESIGN AGENCY
ODOT DISTRICT 12
PLANNING & ENGINEERING
DEPARTMENT

13

SUPERSTRUCTURE DETAILS - LOCATION
BRIDGE NO. LAK-2-1354 ES
SR 2 WB TO SR 44 SB OVER SR 2

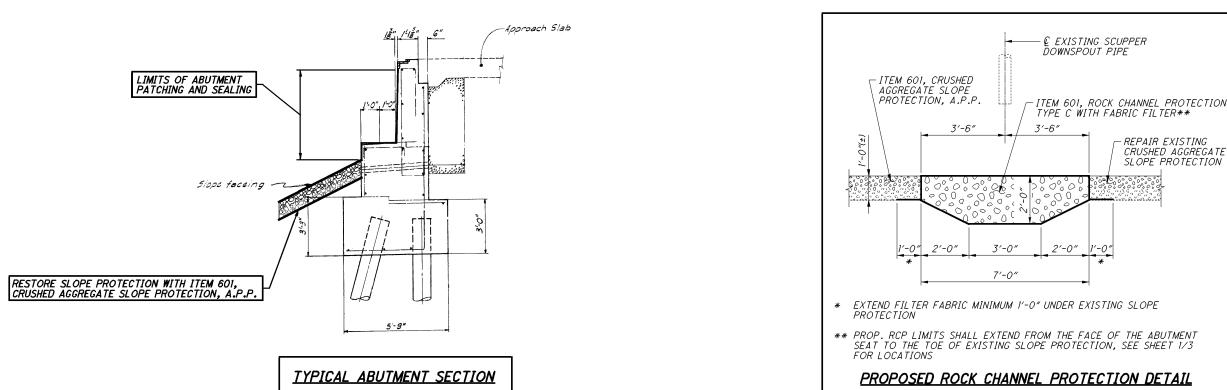




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PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA SHEET, FRAMED TEXT, AND/OR DESCRIBED IN GENERAL NOTES.



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