

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**D08-BM-FY2019**

**BUTLER, CLERMONT, GREENE  
& HAMILTON COUNTIES  
DISTRICT WIDE BRIDGE MAINTENANCE**

**PROJECT DESCRIPTION**

GENERAL BRIDGE MAINTENANCE PROJECT INCLUDING STRUCTURAL STEEL REPAIR, PAINTING, SEALING, EXPANSION JOINT REPLACEMENT, BEARING REHABILITATION AND OTHER MINOR MAINTENANCE WORK ON SEVERAL BRIDGES IN THE DISTRICT.

**EARTH DISTURBED AREAS**

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

**LIMITED ACCESS**

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

**2016 SPECIFICATIONS**

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

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

FEDERAL PROJECT NO.  
**NON-FEDERAL**

FID NO.  
**87127**

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT  
**NORFOLK SOUTHERN**

**D08-BM-FY2019**

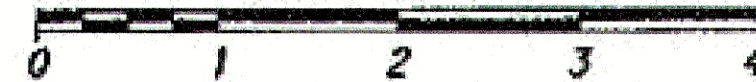
58

LOCATION MAP  
SEE SHEET 2

**LOCATION MAP**

LATITUDE: 39°25'52" LONGITUDE: 84°17'03"

SCALE IN MILES



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

**DESIGN DESIGNATION**

N/A

**DESIGN EXCEPTIONS**

NONE REQUIRED

**INDEX OF SHEETS:**

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**STATE OF OHIO  
D-8 BRIDGE SECTION  
SHEETS 53 AND 54**

**UNDERGROUND UTILITIES**  
CONTACT BOTH SERVICES TWO WORKING DAYS BEFORE YOU DIG.

Call Before You Dig  
1-800-362-2784

(Non-members must be called directly)

OIL & GAS PRODUCERS  
UNDERGROUND PROTECTION SERVICE  
1-800-925-0988

PLAN PREPARED BY:  
**CARPENTER  
MARTY** Transportation

1410 GALLUP DRIVE COLUMBUS, OH 43260  
614.888.2438 FAX 614.888.2438

**ENGINEERS SEAL:**  
SHEETS 53 AND 54

SIGNED: *R. Scott Kramer, Jr.*  
DATE: 10/19/16

**ENGINEERS SEAL:**  
ALL SHEETS EXCEPT 53 AND 54

SIGNED: *Shane T. Kalinoski*  
DATE: 3/21/18

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS
A-1-69	7/19/02	MT-98.29	1/20/17	800	10/19/18
BR-1-13	1/17/14	MT-101.60	1/20/17	808	1/20/17
EXJ-4-87	1/19/18	MT-102.20	7/18/14	821	4/20/12
GSD-1-96	7/18/02	MT-102.30	10/18/15	832	1/17/14
		MT-104.10	10/18/15	847	1/20/17
MT-95.30	7/21/17	MT-105.10	7/19/13	849	1/18/13
MT-95.31	7/21/17	MT-110.10	7/19/13	908	10/20/17
MT-95.32	7/21/17			921	4/20/12
MT-95.41	7/21/17	TC-42.20	10/18/13		
MT-95.45	7/21/17	TC-52.10	10/18/13		
MT-97.10	7/18/14	TC-52.20	7/20/18		
MT-98.10	1/20/17				
MT-98.11	1/20/17				
MT-98.20	7/18/14				
MT-98.22	1/20/17				
MT-98.28	1/20/17				

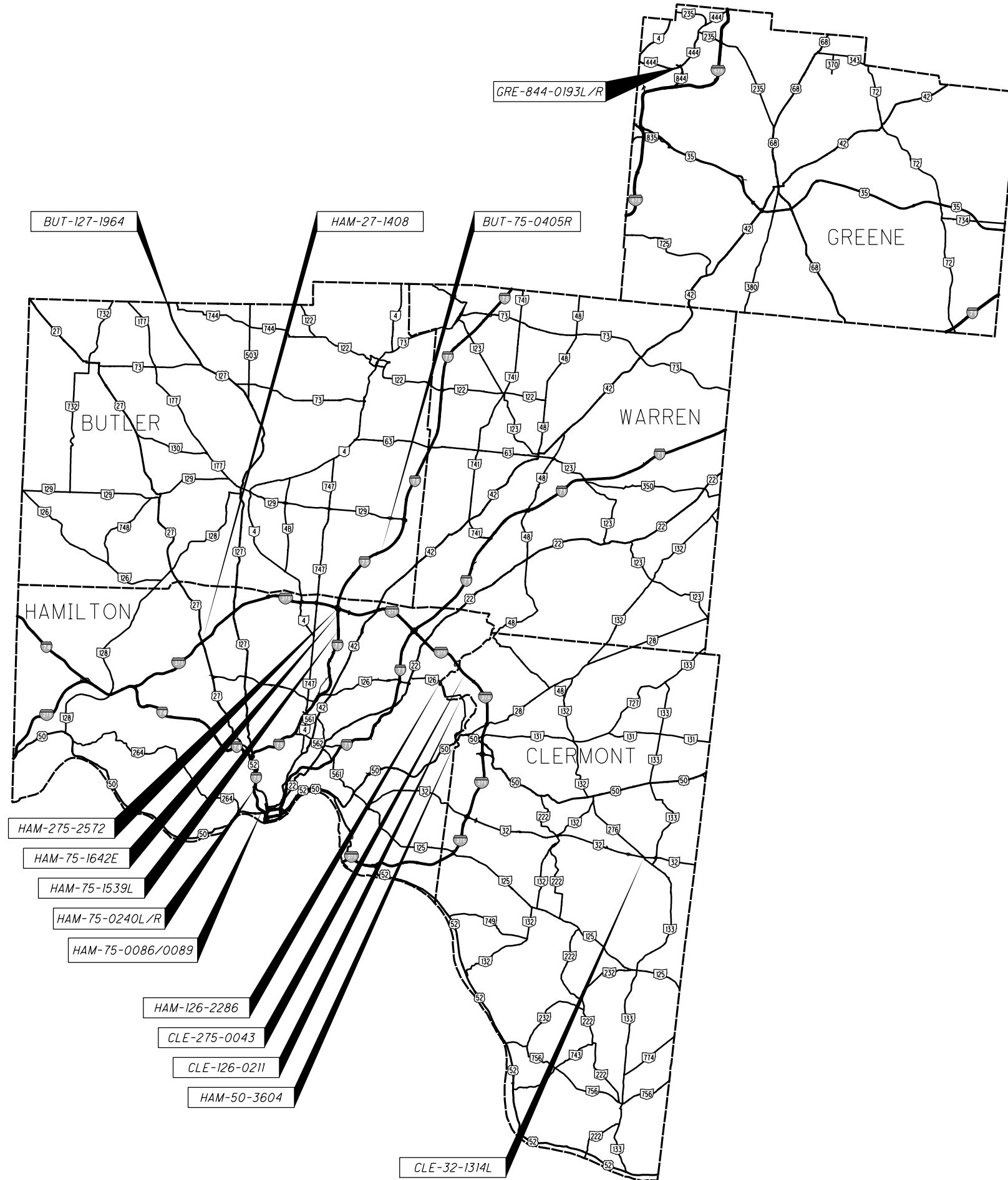
APPROVED *Tammy Campbell*  
DATE: 3/7/18 DISTRICT DEPUTY DIRECTOR

APPROVED *Shane Kalinoski*  
DATE: 3/21/18 DIRECTOR, DEPARTMENT OF TRANSPORTATION

D08 - Bridge Maintenance FY2019  
180498 PID - 87127  
Dist 8 9/13/2018

Contract Proposal Available @  
www.contracts.dot.state.oh.us/home

D:\DDT\08\Bridg Bridge Maintenance



NOT TO SCALE

CALCULATED
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### LOCATION MAP

D08 - BM - FY 2019

**EXISTING PLANS**

EXISTING PLANS MAY BE INSPECTED IN THE ODOT DISTRICT 8 OFFICE IN LEBANON, OHIO.

**WORK LIMITS**

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

**PROTECTION OF RIGHT-OF-WAY LANDSCAPING**

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS) A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRUCT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT.

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. EXCEPT AS INDICATED ON SHEET \_\_\_ USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

**PAVEMENT MARKINGS**

THE EPOXY PAVEMENT MARKINGS ARE TO BE PLACED ON THE HAM-27-1408 STRUCTURE AND MATCH UP TO THE EXISTING MARKINGS. THE FOLLOWING ESTIMATED QUANTITIES ARE INCLUDED IN THE GENERAL SUMMARY:

- ITEM 621, RAISED PAVEMENT MARKER REMOVED 12 EACH
- ITEM 646, EDGE LINE, 4" 0.23 MILE
- ITEM 646, LANE LINE, 4" 0.17 MILE
- ITEM 646, CHANNELIZING LINE 165 FT
- ITEM 646, LANE ARROW 2 EACH

**PROJECTS IN OR NEAR A DRINKING WATER SOURCE**

BRIDGE NO. CLE-126-0211 IS LOCATED IN OR NEAR THE SOURCE OF A PUBLIC DRINKING WATER SUPPLY. IN ORDER TO MINIMIZE THE POTENTIAL TO CONTAMINATE THIS WATER SUPPLY, PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL BE PERFORMED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER. THE CONTRACTOR SHALL IMMEDIATELY TAKE STEPS TO MITIGATE ANY EVENT, SUCH AS A SPILL OF FUELS, OILS OR CHEMICALS, THAT COULD THREATEN TO CONTAMINATE THE DRINKING WATER SUPPLY.

ANY SUCH SPILL OR EVENT SHALL BE REPORTED IMMEDIATELY TO THE CLERMONT COUNTY PWS PUB. PLANT 513-732-5300 AND INDIAN HILL PWS 513-831-3712. IF THE SPILL IS A REPORTABLE AMOUNT, THE CONTRACTOR SHOULD CONTACT MIAMI TOWNSHIP FIRE CHIEF STEVE KELLY 513-248-3725 AND LOVELAND/SYMMES TOWNSHIP STATION 60 FIRE CHIEF OTTO HUBER 513-583-3001 OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL.

**PROJECTS LOCATED OVER A SOLE SOURCE AQUIFER**

THE PROJECT AREA IS LOCATED OVER THE GREATER MIAMI SOLE SOURCE AQUIFER SYSTEM, A DESIGNATED SOLE SOURCE AQUIFER. IN ORDER TO MINIMIZE THE POTENTIAL FOR A RELEASE IN THIS SENSITIVE AREA, ALL PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL BE PERFORMED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER.

SPILLS OF FUELS, OILS, CHEMICALS OR OTHER MATERIALS WHICH COULD POSE A THREAT TO GROUNDWATER SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. IF THE SPILL IS A REPORTABLE AMOUNT, THE CONTRACTOR SHOULD CONTACT THE FIRE CHIEF OF THE COORDINATING TOWNSHIP OR THE OHIO EPA'S SPILLS HOTLINE 1-800-282-9378 FOR CLEAN-UP OF THE SPILL.

COUNTY	ROUTE	FIRE DEPARTMENT	PHONE
BUTLER	BUT US-127 19.65	MILFORD TOWNSHIP FIRE CHIEF MARK BAIRD	513-831-7777
CLERMONT	CLE SR-126 2.11	MIAMI TOWNSHIP FIRE CHIEF STEVE KELLY	513-248-3725
GREENE	GRE SR-844 2.06	BATH TOWNSHIP FIRE CHIEF WALT HOWARD	330-666-3738
HAMILTON	HAM SR-126 22.81	LOVELAND/SYMMES TOWNSHIP STATION 60 FIRE CHIEF OTTO HUBER	513-583-3001
HAMILTON	HAM US-50 36.05	COLUMBIA TOWNSHIP FIRE CHIEF RAYMOND ANTHONY	440-236-8812

**INTERIM COMPLETION DATE FOR GRE-844-0193L/R**

THE CITY OF FAIRBORN IS CONSTRUCTING A ROUNDABOUT AT THE INTERSECTION OF COLONEL GLENN HIGHWAY AND KAUFFMAN AVENUE IN CALENDAR YEAR 2019. AS SUCH, THE CONSTRUCTION OF ALL WORK ON BRIDGE GRE-844-0193 L/R SHALL NOT BEGIN BEFORE APRIL 1, 2020.

**NEW GUARDRAIL INSTALLATION**

THIS PROJECT REQUIRES THE INSTALLATION OF NEW GUARDRAIL POSTS. SURVEY WORK HAS NOT BEEN PERFORMED ON THIS PROJECT, NOR HAVE THE UTILITY LOCATIONS BEEN CONFIRMED IN THE FIELD. IN ADDITION TO C&MS 105.07, IF, DURING THE COURSE OF INSTALLING ANY NEW GUARDRAIL COMPONENT, IT IS DETERMINED THAT A UTILITY CONFLICT MAY RESULT, THE CONTRACTOR IS TO NOTIFY THE PROJECT ENGINEER IMMEDIATELY. UTILITIES ARE NOT BE RELOCATED AS A RESULT OF THIS OPERATION. ADJUSTMENTS TO THE PROPOSED GUARDRAIL WILL ACCOMMODATE THE EXISTING UTILITY. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING THE GUARDRAIL VIA MEANS THAT WOULD BE COMPLIANT WITH THE IMPACTED UTILITY'S SAFETY GUIDELINES AS WELL AS STILL MEETING ODOT'S DESIGN CRITERIA. ANY MINOR ADJUSTMENTS MADE TO THE PROPOSED GUARDRAIL INSTALLATIONS SHALL BE INCIDENTAL TO PAY ITEM 606

**AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS**

BRIDGE NO. GRE-844-0193 HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF 25 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. NOTIFY THE ODOT OFFICE OF AVIATION WHEN SUBMITTING AN FAA FORM 7460-1.

NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

EXPRESS PROCESSING CENTER  
THE FEDERAL AVIATION ADMINISTRATION  
SOUTHWEST REGIONAL OFFICE  
AIR TRAFFIC AIRSPACE BRANCH ASW-520  
2601 MEACHAN BLVD.  
FORT WORTH, TX 76137-4298

OHIO DEPARTMENT OF TRANSPORTATION  
OFFICE OF AVIATION  
2829 WEST DUBLIN-GRANVILLE ROAD  
COLUMBUS, OHIO 43235  
614-387-2346

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T.W.G.  
CHECKED  
W.H.M.

GENERAL NOTES

D08 - BM - FY 2019

**UTILITIES**

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

HAM-75-0086/0089

AT&T LONG DISTANCE  
950 FREEWAY DRIVE N.  
COLUMBUS, OH 45202  
614-431-9292 (CHRISTOPHER MCCLOSKEY)

CINCINNATI BELL TELEPHONE  
201 EAST 4TH ST. BUILDING 121-900  
CINCINNATI, OH 45202  
513-565-7043 (MARK CONNER)

CINCINNATI METROPOLITAN SEWER DISTRICT  
1600 GEST ST.  
CINCINNATI, OH 45204  
513-557-7188 (ROB FRANKLIN)

CITY OF CINCINNATI TRAFFIC ENGINEER  
801 PLUM ST., ROOM 320  
CITY HALL  
CINCINNATI, OH 45202  
513-352-3730 (LINDA KISER)

GREATER CINCINNATI WATER WORKS  
4747 SPRING GROVE AVE.  
CINCINNATI, OH 45232  
513-591-5056 (JON HUNSEDER)

DUKE ENERGY (ELECTRIC)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-3674 (AARON WRIGHT)

DUKE ENERGY (GAS)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-4415 (BRAD SEITER)

LEVEL (3) COMMUNICATIONS, LLC  
1025 ELDORADO BLVD.  
SUITE 43C-420  
BROOMFIELD, CO 80021

XO COMMUNICATIONS  
10 WEST BROAD ST., SUITE 300  
COLUMBUS, OH 43215  
216-619-3492 (DALE FERGUSON)

CHARTER  
11252 CORNELL PARK DR.  
CINCINNATI, OH 45242  
513-386-5499 (KENT RIEGER)

BUT-127-1964

BUTLER RURAL ELECTRIC COOPERATIVE, INC.  
3888 STILLWELL BECKETT ROAD  
OXFORD, OH 45056  
513-867-4438 (BILL HUMBERT)

CINCINNATI BELL TELEPHONE  
201 EAST 4TH ST. BUILDING 121-900  
CINCINNATI, OH 45202  
513-565-7043 (MARK CONNER)

DUKE ENERGY (ELECTRIC)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-3674 (AARON WRIGHT)

SOUTHWEST REGIONAL WATER DISTRICT  
3640 OLD OXFORD RD.  
HAMILTON, OH 45013  
513-863-0828 (TOM PUCKETT)

HAM-75-0240L/R

CINCINNATI BELL TELEPHONE  
201 EAST 4TH ST. BUILDING 121-900  
CINCINNATI, OH 45202  
513-565-7043 (MARK CONNER)

CINCINNATI METROPOLITAN SEWER DISTRICT  
1600 GEST ST.  
CINCINNATI, OH 45204  
513-557-7188 (ROB FRANKLIN)

CITY OF CINCINNATI TRAFFIC ENGINEER  
801 PLUM ST., ROOM 320  
CITY HALL  
CINCINNATI, OH 45202  
513-352-3730 (LINDA KISER)

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CINCINNATI, OH 45232  
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CHARTER  
11252 CORNELL PARK DR.  
CINCINNATI, OH 45242  
513-386-5499 (KENT RIEGER)

GRE-844-0193L/R

AT&T LONG DISTANCE  
950 FREEWAY DRIVE N.  
COLUMBUS, OH 45202  
614-431-9292 (CHRISTOPHER MCCLOSKEY)

DAYTON POWER AND LIGHT  
1900 DRYDEN RD.  
DAYTON, OH 45439  
937-331-4521 (BILL GOURLEY)

CITY OF FAIRBORN  
44 WEST HEBBLE AVENUE  
FAIRBORN, OH 45324  
937-754-3055 (LEE HARRIS)

INDEPENDENT FIBER NETWORK/COMNET  
13888 COUNTY ROAD 25A  
WAPAKONETA, OH 45895  
419-739-3116 (NATHAN ZEHRINGER)

LEVEL (3) COMMUNICATIONS, LLC  
1025 ELDORADO BLVD.  
SUITE 43C-420  
BROOMFIELD, CO 80021

MCI/VERIZON  
120 RAVINE ST.  
AKRON, OH 44303  
330-253-8267 (AL GUEST)

ODOT DISTRICT 8 TRAFFIC  
505 S. STATE ROUTE 741  
LEBANON, OH 45036  
513-933-6607 (MARK GRAKE)

CENTURYLINK  
20 NORTH MECHANIC ST.  
LEBANON, OH 45036  
513-933-3502 (MARK BENNETT)

SPRINT - FIBER OPTIC  
11370 ENTERPRISE PARK DRIVE  
SHARONVILLE, OH 45241  
937-209-9754 (JOE THOMAS)

HAM-75-1539L

CINCINNATI BELL TELEPHONE  
201 EAST 4TH ST. BUILDING 121-900  
CINCINNATI, OH 45202  
513-565-7043 (MARK CONNER)

CINCINNATI METROPOLITAN SEWER DISTRICT  
1600 GEST ST.  
CINCINNATI, OH 45204  
513-557-7188 (ROB FRANKLIN)

GREATER CINCINNATI WATER WORKS  
4747 SPRING GROVE AVE.  
CINCINNATI, OH 45232  
513-591-5056 (JON HUNSEDER)

DUKE ENERGY (ELECTRIC)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-3674 (AARON WRIGHT)

DUKE ENERGY (GAS)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-4415 (BRAD SEITER)

VILLAGE OF GLENDALE - PUBLIC WORKS  
30 VILLAGE SQUARE  
GLENDALE, OH 45246  
513-771-7200 (KEVIN BELL)

VILLAGE OF LOCKLAND - PUBLIC WORKS  
590 N. WAYNE AVE.  
LOCKLAND, OH 45215  
513-733-0957 (KEVIN CROSS)

ODOT DISTRICT 8 TRAFFIC  
505 S. STATE ROUTE 741  
LEBANON, OH 45036  
513-933-6607 (MARK GRAKE)

CITY OF SHARONVILLE - PUBLIC WORKS  
SHARONVILLE CITY HALL  
10900 READING ROAD, ROOM 160  
SHARONVILLE, OH 45241  
513-563-1177 (JOSEPH KEMPE)

SOUTHWESTERN WATER OHIO COMPANY  
600 SHEPARD AVE., SUITE 1  
CINCINNATI, OH 45215  
513-489-4844 (MICHAEL FLAVIN)

HAM-50-3604

CINCINNATI BELL TELEPHONE  
201 EAST 4TH ST. BUILDING 121-900  
CINCINNATI, OH 45202  
513-565-7043 (MARK CONNER)

CITY OF MILFORD - PUBLIC WORKS  
745 CENTER STREET, SUITE 200  
MILFORD, OH 45150  
513-576-5468 (NATHANIEL CLAYTON)

DUKE ENERGY (ELECTRIC)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-3674 (AARON WRIGHT)

DUKE ENERGY (GAS)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-4415 (BRAD SEITER)

CHARTER  
11252 CORNELL PARK DR.  
CINCINNATI, OH 45242  
513-386-5499 (KENT RIEGER)

HAM-75-1642E

CINCINNATI BELL TELEPHONE  
201 EAST 4TH ST. BUILDING 121-900  
CINCINNATI, OH 45202  
513-565-7043 (MARK CONNER)

CINCINNATI METROPOLITAN SEWER DISTRICT  
1600 GEST ST.  
CINCINNATI, OH 45204  
513-557-7188 (ROB FRANKLIN)

GREATER CINCINNATI WATER WORKS  
4747 SPRING GROVE AVE.  
CINCINNATI, OH 45232  
513-591-5056 (JON HUNSEDER)

DUKE ENERGY (ELECTRIC)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
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ODOT DISTRICT 8 TRAFFIC  
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LEBANON, OH 45036  
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CITY OF SHARONVILLE - PUBLIC WORKS  
SHARONVILLE CITY HALL  
10900 READING ROAD, ROOM 160  
SHARONVILLE, OH 45241  
513-563-1177 (JOSEPH KEMPE)

SOUTHWESTERN OHIO WATER COMPANY  
600 SHEPARD AVE., SUITE 1  
CINCINNATI, OH 45215  
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513-386-5499 (KENT RIEGER)

BUT-75-0405R

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937-209-9754 (JOE THOMAS)

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GENERAL NOTES

D08 - BM - FY 2019

CLE-275-0043

CINCINNATI BELL TELEPHONE  
201 EAST 4TH ST. BUILDING 121-900  
CINCINNATI, OH 45202  
513-565-7043 (MARK CONNER)

CLERMONT COUNTY WATER RESOURCES DEPARTMENT  
4400 HASKELL LANE  
BATAVIA, OH 45103  
513-479-4031 (TIM CHERRY)

CLERMONT COUNTY WATER & SEWER  
2381 CLERMONT CENTER DRIVE  
BATAVIA, OH 45103  
513-732-8872 (MARK JAEHNEN)

CINCINNATI METROPOLITAN SEWER DISTRICT  
1600 GEST ST.  
CINCINNATI, OH 45204  
513-557-7188 (ROB FRANKLIN)

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DUKE ENERGY (ELECTRIC)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-3674 (AARON WRIGHT)

DUKE ENERGY (GAS)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-4415 (BRAD SEITER)

HAM-126-2286

CINCINNATI BELL TELEPHONE  
201 EAST 4TH ST. BUILDING 121-900  
CINCINNATI, OH 45202  
513-565-7043 (MARK CONNER)

CLERMONT COUNTY WATER RESOURCES DEPARTMENT  
4400 HASKELL LANE  
BATAVIA, OH 45103  
513-479-4031 (TIM CHERRY)

CLERMONT COUNTY WATER & SEWER  
2381 CLERMONT CENTER DRIVE  
BATAVIA, OH 45103  
513-732-8872 (MARK JAEHNEN)

CINCINNATI METROPOLITAN SEWER DISTRICT  
1600 GEST ST.  
CINCINNATI, OH 45204  
513-557-7188 (ROB FRANKLIN)

GREATER CINCINNATI WATER WORKS  
4747 SPRING GROVE AVE.  
CINCINNATI, OH 45232  
513-591-5056 (JON HUNSEDER)

DUKE ENERGY (ELECTRIC)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-3674 (AARON WRIGHT)

DUKE ENERGY (GAS)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-4415 (BRAD SEITER)

VILLAGE OF INDIAN HILL  
WATER WORKS/PUBLIC ADMINISTRATION  
7100 GLENDALE MILFORD RD.  
MILFORD, OH 45150  
513-831-3885 (JASON ADKINS)

CHARTER  
11252 CORNELL PARK DR.  
CINCINNATI, OH 45242  
513-386-5499 (KENT RIEGER)

CLE-126-0211

CINCINNATI BELL TELEPHONE  
201 EAST 4TH ST. BUILDING 121-900  
CINCINNATI, OH 45202  
513-565-7043 (MARK CONNER)

CLERMONT COUNTY WATER RESOURCES DEPARTMENT  
4400 HASKELL LANE  
BATAVIA, OH 45103  
513-479-4031 (TIM CHERRY)

CLERMONT COUNTY WATER & SEWER  
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BATAVIA, OH 45103  
513-732-8872 (MARK JAEHNEN)

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513-287-3674 (AARON WRIGHT)

DUKE ENERGY (GAS)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-4415 (BRAD SEITER)

CHARTER  
11252 CORNELL PARK DR.  
CINCINNATI, OH 45242  
513-386-5499 (KENT RIEGER)

HAM-27-1408

CINCINNATI BELL TELEPHONE  
201 EAST 4TH ST. BUILDING 121-900  
CINCINNATI, OH 45202  
513-565-7043 (MARK CONNER)

CINCINNATI METROPOLITAN SEWER DISTRICT  
1600 GEST ST.  
CINCINNATI, OH 45204  
513-557-7188 (ROB FRANKLIN)

GREATER CINCINNATI WATER WORKS  
4747 SPRING GROVE AVE.  
CINCINNATI, OH 45232  
513-591-5056 (JON HUNSEDER)

DUKE ENERGY (ELECTRIC)  
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CINCINNATI, OH 45202  
513-287-3674 (AARON WRIGHT)

DUKE ENERGY (GAS)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-4415 (BRAD SEITER)

ODOT DISTRICT 8 TRAFFIC  
505 S. STATE ROUTE 741  
LEBANON, OH 45036  
513-933-6607 (MARK GRAKE)

CLE-32-1314L

BROWN COUNTY RURAL WATER  
3818 US ROUTE 52  
RIPLEY, OH 45167  
937-375-4001 (MARTY MARKALINSKI)

CINCINNATI BELL TELEPHONE  
201 EAST 4TH ST. BUILDING 121-900  
CINCINNATI, OH 45202  
513-565-7043 (MARK CONNER)

CLERMONT COUNTY WATER RESOURCES DEPARTMENT  
4400 HASKELL LANE  
BATAVIA, OH 45103  
513-479-4031 (TIM CHERRY)

CLERMONT COUNTY WATER & SEWER  
2381 CLERMONT CENTER DRIVE  
BATAVIA, OH 45103  
513-732-8872 (MARK JAEHNEN)

DUKE ENERGY (ELECTRIC)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-3674 (AARON WRIGHT)

DUKE ENERGY (GAS)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-4415 (BRAD SEITER)

HAM-275-2572

CINCINNATI BELL TELEPHONE  
201 EAST 4TH ST. BUILDING 121-900  
CINCINNATI, OH 45202  
513-565-7043 (MARK CONNER)

CINCINNATI METROPOLITAN SEWER DISTRICT  
1600 GEST ST.  
CINCINNATI, OH 45204  
513-557-7188 (ROB FRANKLIN)

GREATER CINCINNATI WATER WORKS  
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CINCINNATI, OH 45232  
513-591-5056 (JON HUNSEDER)

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513-287-3674 (AARON WRIGHT)

DUKE ENERGY (GAS)  
139 EAST 4TH ST. ROOM 467A  
CINCINNATI, OH 45202  
513-287-4415 (BRAD SEITER)

ODOT DISTRICT 8 TRAFFIC  
505 S. STATE ROUTE 741  
LEBANON, OH 45036  
513-933-6607 (MARK GRAKE)

CITY OF SHARONVILLE - PUBLIC WORKS  
SHARONVILLE CITY HALL  
10900 READING ROAD, ROOM 160  
SHARONVILLE, OH 45241  
513-563-1177 (JOSEPH KEMPE)

CITY OF SPRINGDALE  
11700 SPRINGFIELD PIKE  
CINCINNATI, OH 45246  
513-346-5700 (DERRICK PARHAM)

SOUTHWESTERN WATER OHIO COMPANY  
600 SHEPARD AVE., SUITE 1  
CINCINNATI, OH 45215  
513-489-4844 (MICHAEL FLAVIN)

**ENVIRONMENTAL COMMITMENT NOTE**

TIER III MINOR MAINTENANCE PROJECTS SHALL CONFORM TO THE FOLLOWING CONDITIONS:

- IF ANY EARTHWORK IS PERFORMED WITHIN A PROJECT AREA, THEN A SEDIMENT AND EROSION CONTROL PLAN SHALL BE DEVELOPED AND IMPLEMENTED BEFORE EARTHWORK COMMENCES. ALL CONTROLS SHALL BE PROPERLY MAINTAINED UNTIL FINAL SITE STABILIZATION HAS BEEN ACHIEVED. ALL DENUDED AREAS (LOCATION WHERE VEGETATION IS REMOVED OR ERODIBLE MATERIAL IS EXPOSED TO STORMWATER) SHALL BE SEEDED AND MULCHED AS SPECIFIED IN THE CURRENT OHIO EPA'S CONSTRUCTION GENERAL PERMIT PART IIIG2b1 STABILIZATION. THE SRM MAY REQUIRE IMMEDIATE STABILIZATION WHERE SEDIMENT EROSION MAY IMPACT ENVIRONMENTALLY CRITICAL AREAS. PROPERLY INSTALLED (FRAMED AND ENTRENCHED) SEDIMENT FENCE SHALL BE UTILIZED AROUND THE WORK SITE PERIMETER AND ANY STORM SEWER INLETS. APPROPRIATELY DESIGNED ROCK CHECK DAMS AND OTHER EROSION CONTROLS SHALL BE UTILIZED IN DITCHES AND CULVERTS. PARTICULAR ATTENTION SHALL BE GIVEN TO WATERCOURSES THAT COULD CONVEY SEDIMENT LADEN WATER DIRECTLY TO A DESIGNATED SCENIC RIVER. ANY DENUDED DITCHES SHALL BE SEEDED AND PROTECTED IMMEDIATELY WITH FIBER EROSION CONTROL MATTING OR SOD UPON COMPLETION OF EARTHWORK. STRAW BALES SHALL NOT BE UTILIZED AS A FORM OF SEDIMENT AND EROSION CONTROL. ALL SEDIMENT AND EROSION CONTROLS SHALL BE REMOVED UPON STABILIZATION OF THE PROJECT AREA. IF ANY EARTHWORK OR VEGETATION REMOVAL (OTHER THAN MOWING, TREE TRIMMING, BRUSH REMOVAL OR HERBICIDAL SPRAYING) BECOMES NECESSARY WITHIN 1,000 FEET OF A DESIGNATED SCENIC RIVER THEN THE DEC AND SRM SHALL JOINTLY CONDUCT A FIELD REVIEW AND COMPLETE A SRFR.
- IF ROADSIDE DITCH MAINTENANCE IS NECESSARY WITHIN 1000 FEET OF A DESIGNATED STATE SCENIC RIVER, THEN THE DITCH SHALL BE MAINTAINED ONLY FOR THE ORIGINAL INTENDED FUNCTION AND RESTORED TO THE ORIGINAL DESIGN CONFIGURATION, UNLESS THE DITCH LINE WILL BE MODIFIED FOR WATER QUALITY ISSUES SUCH AS STORM WATER CONTROL OR MITIGATION. ANY DENUDED DITCHES SHALL BE SEEDED AND PROTECTED IMMEDIATELY WITH NATURAL EROSION CONTROL MATTING OR SOD UPON COMPLETION OF EARTHWORK. STRAW BALES SHALL NOT BE UTILIZED AS A FORM OF SEDIMENT AND EROSION CONTROL. ALL SEDIMENT AND EROSION CONTROLS SHALL BE REMOVED UPON STABILIZATION OF THE PROJECT AREA. IF WORK EXCEEDS THESE RESTRICTIONS THEN THE DEC AND SRM SHALL JOINTLY CONDUCT A FIELD REVIEW AND COMPLETE A SRFR.
- IF HERBICIDAL SPAYING IS NECESSARY WITHIN 1000 FEET OF A DESIGNATED SCENIC RIVER, OR A STREAM SECTION UPSTREAM OF A DESIGNATED SCENIC RIVER, OR IN ANY TRIBUTARY WATERCOURSE WITHIN 1000 FEET OF THE CONFLUENCE TO A DESIGNATED RIVER THEN A STATE LICENSED PUBLIC APPLICATOR SHALL APPLY ONLY OHIO EPA AQUATIC APPROVED GLYPHOSATE, N - (PHOSPHONOMETHYL) GLYCINE IN THE FORM OF ITS ISOPROPYLAMINE SALT HERBICIDE AND SURFACTANT AT THE LABELED RATES IN FRONT, UNDER, AND BEHIND (18") GUARDRAIL AND ABUTMENT WINGWALLS. THE HERBICIDE MUST BE SAFE FOR APPLICATION ON OR NEAR STANDING WATER. THE APPLICATION OF THE HERBICIDE SHALL NOT INCLUDE ANY SOIL DISTURBANCE ACTIVITIES. IF ANY OTHER TYPES OF HERBICIDES OR HERBICIDAL APPLICATIONS ARE NECESSARY, THEN THE DEC AND SMR SHALL JOINTLY CONDUCT A FIELD REVIEW AND COMPLETE A SRFR.
- IF CUTTING AND CLEARING OF ANY VEGETATION WITHIN 1000 FEET OF A SCENIC RIVER IS REQUIRED, THEN ALL WORK SHALL BE COMPLETED IN SUCH A MANNER SO AS TO LIMIT THE AMOUNT OF VEGETATION BEING CLEARED TO THE ABSOLUTE MINIMUM NECESSARY TO ACCOMPLISH THE GOAL OF THE PROJECT. VERTICAL PRUNING OF TREES IS PERMITTED IF ANY OVERHANGING LIMBS CAUSE A SAFETY HAZARD OR OBSTRUCT VIEW. VERTICAL PRUNING SHALL NOT INCLUDE THE USE OF A FLAIL MOWER. CARE SHALL BE TAKEN NOT TO GIRDLER OR SCUFF TREE TRUNKS WHERE PRACTICABLE.
- NO TOXIC OR HAZARDOUS MATERIALS SUCH AS SEALANTS, PAINT, SOLVENTS, CLEANING AGENTS, EARTHEN MATERIALS, WASTE-WATER, FUELS OR DEBRIS OF ANY KIND SHALL BE DISCHARGED TO A SCENIC RIVER OR ANY TRIBUTARY WATER COURSES. ALL ASPHALT OR CONCRETE GRINDINGS, EXCESS ASPHALTIC OR CONCRETE MATERIALS OR ANY OTHER DEBRIS GENERATED DURING RESURFACING OR OTHER SIMILAR ACTIVITIES SHALL BE REMOVED IMMEDIATELY FROM WITHIN 1000 FEET OF A SCENIC RIVER AND DISPOSED OF AT AN APPROPRIATE FACILITY ABOVE THE FEMA 100 YEAR FLOOD ELEVATION AND NOT WITHIN 1000 FEET OF THE DESIGNATED SCENIC RIVER.
- IF PAINTING, WELDING, SAND AND/OR WATER BLASTING (CLEANING) IS INCORPORATED AS PART OF THE PROJECT AT OR OVER A SCENIC RIVER, THEN APPROPRIATE APRONS SHALL BE UTILIZED TO PROVIDE FOR COMPLETE CONTAINMENT OF ALL PAINT, WELDING SLAG AND/OR SEALANT OVER SPRAY AND OTHER DEBRIS. APRONS, APPROPRIATE FALSEWORK OR OTHER BARRIERS SHALL BE UTILIZED ON ALL DECK REPLACEMENT PROJECTS TO PREVENT THE DISCHARGE OF CONCRETE, ASPHALT OR OTHER DEBRIS TO A DESIGNATED SCENIC RIVER. ALL DEBRIS COLLECTED SHALL BE DISPOSED OF AT AN APPROPRIATE FACILITY ABOVE THE FEMA 100 YEAR FLOOD PLAIN AND NOT WITHIN 1000 FEET OF THE SCENIC RIVER.
- IF A TIER III PROJECT IMPACTS ANY PORTION OF A STREAM BANK OF A SCENIC RIVER THEN THE DEC AND SRM SHALL JOINTLY CONDUCT A FIELD REVIEW AND COMPLETE A SRFR.

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GENERAL NOTES

D08 - BM - FY 2019

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**ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN**

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING AND MAINTAINING SAFE AND EFFECTIVE TRAFFIC CONTROL 24 HOURS A DAY FOR THE DURATION OF THIS PROJECT. ALL TRAFFIC CONTROL DEVICES SHALL BE FURNISHED, ERECTED, MAINTAINED, AND REMOVED BY THE CONTRACTOR.

THE CONTRACTOR SHALL DEVISE A MAINTENANCE OF TRAFFIC SCHEME WHICH SHALL BE STAMPED BY A PROFESSIONAL ENGINEER, AND PRESENT IT TO THE ENGINEER FOR APPROVAL. THE MAINTENANCE OF TRAFFIC SCHEME SHALL PRESENT, IN GENERAL, THE METHOD FOR CONDUCTING THE REQUIRED WORK IN A SAFE AND EFFICIENT MANNER.

THE PLANS SHALL INCLUDE THE FOLLOWING COMPONENTS:  
THE PLAN VIEW AT AN APPROPRIATE SCALE TO SHOW:

- WORK AREA
- BEGIN/END STATIONING OF TAPERS, TEMPORARY MARKINGS, ETC.
- TEMPORARY PAVEMENT
- LOCATIONS OF SIGNS (EXISTING OVERHEAD SIGNS AND ALL PROPOSED, COVERED, OR MODIFIED SIGNS)
- LOCATIONS OF TYPICAL SECTIONS
- REFERENCES TO APPLICABLE STANDARD DRAWINGS

TYPICAL SECTIONS SHOWING:

- LANE WIDTHS, PAVEMENT MARKINGS, DRUMS, PCB, ETC.
- LIMITING STATIONS
- WORK AREA AND DROP-OFFS
- SIGN DETAILS FOR PROPOSED SIGNS AND OVERLAYS/ MODIFICATIONS

THE MAINTENANCE OF TRAFFIC SCHEME SHALL BE IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION, THE REFERENCED STANDARD CONSTRUCTION DRAWINGS INCLUDING DESIGNER NOTES, THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS), POLICY NO. 21-008(P) TRAFFIC MANAGEMENT IN WORK ZONES INTERSTATE AND OTHER FREEWAYS, ODOT LOCATION AND DESIGN MANUAL, VOLUME 1, AND ALL REQUIREMENTS DETAILED IN THESE PLANS. THIS SUBMITTAL SHALL CONSIST OF THREE (3) COPIES OF THE PLANS FOR REVIEW AND DISTRIBUTION. NO WORK SHALL BEGIN AT THE LOCATION UNTIL THE MAINTENANCE OF TRAFFIC PLANS HAVE BEEN APPROVED BY OHIO DEPARTMENT OF TRANSPORTATION. ALL PHASES OF M.O.T. AT A LOCATION SHALL BE SUBMITTED IN A BUILDABLE UNIT.

THE PROGRESS SCHEDULE WILL BE REQUIRED TO APPROVE THE MAINTENANCE OF TRAFFIC PLANS. THIS SCHEDULE OF OPERATIONS SHALL DETAIL THE CONTRACTOR'S WORK ACTIVITIES AND HIS METHODS OF MAINTAINING TRAFFIC DURING THESE ACTIVITIES. MAINTENANCE OF TRAFFIC PLANS SHALL BE PREPARED AND SUBMITTED TO THE DISTRICT FOR APPROVAL. THESE PLANS SHALL BE SEALED BY A REGISTERED PROFESSIONAL ENGINEER. THE DISTRICT SHALL HAVE 14 CALENDAR DAYS TO REVIEW AND COMMENT ON THESE PLANS. THE CONTRACTOR SHALL NOT BEGIN ANY WORK REQUIRING TRAFFIC CONTROL UNTIL THE ENGINEER HAS GIVEN APPROVAL OF THE CONTRACTOR'S SEQUENCE OF OPERATIONS AND MAINTENANCE OF TRAFFIC PLANS.

THE MAINTENANCE OF TRAFFIC SCHEME SHALL TAKE INTO CONSIDERATION SNOW AND ICE OPERATIONS FROM DECEMBER 1 THROUGH MARCH 31. LANE SHIFTS, RESTRICTIONS, AND CLOSURES MAY NOT BE APPROVED IF THEY ADVERSELY AFFECT SNOW REMOVAL OPERATIONS.

IF IN THE OPINION OF THE ENGINEER, THE CONTRACTOR FAILS TO COMPLY WITH THESE REQUIREMENTS AND THE PROVISIONS OF THE APPROVED MAINTENANCE OF TRAFFIC PLAN, THE ENGINEER SHALL SUSPEND WORK UNTIL ALL REQUIREMENTS ARE MET. ANY COST OR DELAYS INCURRED AS A RESULT OF THE FAILURE SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR.

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

NOTICE OF CLOSURE SIGNS (W20-H13), SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD OR RAMP CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW.

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.

ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURES	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDAR DAYS PRIOR TO CLOSURE
	< 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION. THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

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

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING
EASTER	

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

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

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT SHOWN ON SHEET 9 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL THE ITEMS REQUIRED TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THESE REQUIREMENTS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

**NOTIFICATION OF TRAFFIC RESTRICTIONS**

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

FOR WORK AT GRE-844-0207L, THE PROJECT ENGINEER IS TO INFORM WPAFB; FREDERICK J. TITO AT (937) 656-3591 OR EMAIL AT FREDERICK.TITO@WPAFB.AF.MIL

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

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

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

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**MAINTENANCE OF TRAFFIC GENERAL NOTES**

**D08 - BM - FY 2019**

**ITEM 614. PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN**

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

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. The PCMS shall be delineated in accordance with C&MS 614.03.

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

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

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN \_ HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRE-CONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE. THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

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

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

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

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

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN 4 SIGN MONTH

ASSUMING 2 PCMS SIGN(S) FOR 2 MONTH(S)

**ITEM 614 - DETOUR SIGNING**

THE CONTRACTOR SHALL PROVIDE THE DETOUR SIGNING AS SHOWN ON SHEET 10. PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT FOR ITEM 614 - DETOUR SIGNING.

**FLOODLIGHTING**

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

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC (PLAN NOTE 642-2).

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

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

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

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

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

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

FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

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

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

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

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 200 HOURS

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

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

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MAINTENANCE OF TRAFFIC GENERAL NOTES

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**APPROVED MAINTENANCE OF TRAFFIC (MOT) POLICY EXCEPTIONS**

PORTIONS OF THE MOT PLANS AS DESCRIBED BELOW HAVE BEEN APPROVED BY THE MOT EXCEPTION COMMITTEE (MOTEC) OR THE PROJECT IMPACT ADVISORY COUNCIL (PIAC) PER TRAFFIC MANAGEMENT IN WORK ZONES POLICY (21-008(P)) AND THE STANDARD PROCEDURE (123-001(SP)).

APPROVED MOT EXCEPTIONS INCLUDE:

GRE-844-0193

THE CONTRACTOR IS PERMITTED TO CLOSE ONE LANE OF TRAFFIC ON NORTHBOUND SR 844 AND THE NORTHBOUND EXIT RAMP TO SR 444 FOR A PERIOD NOT TO EXCEED 20 CONSECUTIVE CALENDAR DAYS (10 DAYS PER PHASE). TRAFFIC WILL BE ALLOWED TO TRAVEL ON NEW CONCRETE IF THE AVERAGE MODULUS OF RUPTURE FOR TWO BEAM TESTS IS NOT LESS THAN 650 PSI PER C&MS 511.14 (MINIMUM OF 4 DAYS FOLLOWING POUR). TRAFFIC SHALL BE MAINTAINED BY USE OF THE EXISTING PAVEMENT, THE COMPLETE PAVEMENT, AND ITEM 615 PAVEMENT FOR MAINTAINING TRAFFIC. THE NORTHBOUND EXIT RAMP TO SR 444 SHALL BE CLOSED DURING BOTH PHASES OF CONSTRUCTION. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT SPECIFIED IN THE PERMITTED LANE CLOSURE TIMES AND UNAUTHORIZED LANE USE TABLE FOR EACH TIME PERIOD THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

HAM-27-1408

THE CONTRACTOR IS PERMITTED TO CLOSE ONE LANE OF TRAFFIC IN BOTH DIRECTIONS OF US 27 ON A WEEKEND. A WEEKEND IS DEFINED AS BEGINNING FRIDAY AT 8 PM AND ENDING THE FOLLOWING MONDAY AT 6 AM. THIS WEEKEND LANE CLOSURE IS PERMITTED TO OCCUR A MAXIMUM OF 2 TIMES. DURING THE WEEKEND LANE CLOSURE, THE NORTHBOUND US 27 LEFT TURN TO WESTBOUND I-275 SHALL BE PROHIBITED. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT SPECIFIED IN THE PERMITTED LANE CLOSURE TIMES AND UNAUTHORIZED LANE USE TABLE FOR EACH TIME PERIOD THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

A MAINTENANCE OF TRAFFIC MEETING SHALL BE HELD A MINIMUM OF 30 CALENDAR DAYS PRIOR TO IMPLEMENTATION OF EACH APPROVED MOT EXCEPTION. THIS MEETING SHALL INCLUDE THE DISTRICT WORK ZONE TRAFFIC MANAGER AS WELL AS THE CONTRACTOR, WORKSITE TRAFFIC SUPERVISOR (WTS) AND ANY SUBCONTRACTORS INVOLVED WITH TEMPORARY TRAFFIC CONTROL.

IN ADDITION TO ANY NOTIFICATIONS REQUIRED IN OTHER NOTES, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND DWZTM AT LEAST 3 BUSINESS DAYS IN ADVANCE OF IMPLEMENTATION OF THE APPROVED MOT EXCEPTION(S) REFERENCED ABOVE SO THAT THE DWZTM CAN SEND EMAIL NOTIFICATION TO THE OFFICE OF ROADWAY ENGINEERING, STATEWIDE TMC, DWZTM AND SPECIAL HAULING PERMITS AT LEAST 2 BUSINESS DAYS IN ADVANCE OF THE IMPLEMENTATION OF THE APPROVED MOT EXCEPTION(S) REFERENCED ABOVE. REFERENCE "EXCEPTION REQUEST APPROVAL DATED [ / / ] FOR PID 87127" IN THE NOTIFICATION AND OTHER CORRESPONDENCE.

ANY CHANGES TO THE MOT THAT IMPACT THE PREVIOUSLY APPROVED MOT EXCEPTION(S) LISTED ABOVE SHALL BE APPROVED IN WRITING BY THE APPLICABLE ODOT CENTRAL OFFICE COMMITTEE (MOTEC OR PIAC). IN THE EVENT THAT SUCH CHANGES ARE PROPOSED, THE REQUEST SHALL BE COORDINATED THROUGH THE DISTRICT WORK ZONE TRAFFIC MANAGER (DWZTM) A MINIMUM OF 30 CALENDAR DAYS PRIOR TO DESIRED IMPLEMENTATION DATE. IF THE DISTRICT AGREES WITH THE PROPOSED CHANGES THE DWZTM SHALL SEEK APPROVAL FROM THE APPLICABLE ODOT CENTRAL OFFICE COMMITTEE. IN THE EVENT THE PROPOSED CHANGES ARE APPROVED IN WRITING, THE CLOSURES ARE STILL SUBJECT TO NOTIFICATION REQUIREMENTS WITHIN THIS NOTE PRIOR TO IMPLEMENTATION.

**TRUCK MOUNTED ATTENUATOR**

WHEN THE CONTRACTOR IS SETTING/REMOVING SHORT TERM WORK ZONES ON ROADWAY WITH A SPEED OF 45 MPH OR GREATER, A TRUCK MOUNTED ATTENUATOR (TMA) SHALL TRAIL THE OPERATION, INCLUDING SETTING THE ADVANCE WARNING SIGNS AND TAKING THEM DOWN. THIS SAME TRUCK MUST HAVE A TYPE B FLASHING ARROW PANEL MOUNTED ON IT FACING THE REAR OF THE TRUCK. THE CONTRACTOR SHALL USE A TMA FOR ANY APPLICATION WHERE THE OMUTCD OR STANDARD CONSTRUCTION DRAWING USES THE PHRASE "OPTIONAL" OR "WHEN SPECIFIED IN THE PLAN."

THE TMA MUST BRING A VEHICLE WEIGHING 1800 TO 4500 LBS. AND TRAVELING AT 60 MPH TO A SAFE CONTROLLED STOP, PER NCHRP 350 CRITERIA. THE MANUFACTURER'S SPECIFICATION SHALL BE FOLLOWED CONCERNING THE SIZE OF THE TRUCK AND THE CONNECTIONS TO THE TMA.

ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY TO PROVIDE A TMA ARE CONSIDERED INCIDENTAL TO ITEM 614 - MAINTAINING TRAFFIC, AS PER PLAN. FAILURE TO PROVIDE A TMA AS REQUIRED ABOVE SHALL RESULT IN A SUSPENSION OF WORK IN ACCORDANCE WITH C&MS 105.

**WORK ZONE MARKINGS**

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

ITEM 614, WORK ZONE LANE LINE, CLASS III, 4",  
642 PAINT --- 0.17 MILE

ITEM 614, WORK ZONE EDGE LINE, CLASS III, 4",  
642 PAINT --- 0.23 MILE

ITEM 614, WORK ZONE CHANNELIZING LINE, CLASS III, 8",  
642 PAINT --- 165 FT

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**PERMITTED LANE CLOSURES**

SHORT TERM LANE CLOSURES ARE THOSE WHICH ARE PERMITTED BY THE PERMITTED LANE CLOSURE NOTE. THESE TIMES SHALL NOT BE REVISED WITHOUT PRIOR APPROVAL FROM THE DISTRICT 8 WORK ZONE TRAFFIC CONTROL ENGINEER. SHORT TERM LANE CLOSURES SHALL ONLY BE IMPLEMENTED WHEN WORK IS BEING CONTINUOUSLY PERFORMED IN THE LANE. THE CLOSURE SHALL BE REMOVED AS SOON AS POSSIBLE AFTER WORK HAS STOPPED. PERMITTED LANE CLOSURES SHALL ONLY BE ALLOWED DURING TIMES SPECIFIED IN THE PERMITTED LANE CLOSURE TIMES AND UNAUTHORIZED LANE USE TABLE. MAINTENANCE OF TRAFFIC PLANS SHALL ADHERE WITH THE FOLLOWING RESTRICTIONS:

PERMITTED LANE CLOSURE TIMES AND UNAUTHORIZED LANE USE TABLE

LOCATION	DIRECTION	EX. NO. OF THRU LANES	1 LANE CLOSED	2 LANES CLOSED	3 LANES CLOSED	COMPLETE CLOSURE	TIME UNIT	DISINCENTIVE PER LANE PER TIME UNIT	COMMENTS
HAM/BUT I-75	BOTH	VARIES	EE PLCM	SEE PLCM	N/A	N/A	1 MINUTE	\$285	
WINCHELL AVENUE RAMP TO NB HAM I-75	NB	1	N/A	N/A	N/A	10 PM - 5 AM	1 MINUTE	\$285	
WESTERN HILLS VIADUCT RAMP TO SB HAM I-75	SB	1	N/A	N/A	N/A	10 PM - 5 AM	1 MINUTE	\$285	
HAM I-75 NB RAMP TO I-275	NB	2	8 PM - 6 AM	N/A	N/A	N/A	1 MINUTE	\$285	
CLE I-275	BOTH	3	SEE PLCM	SEE PLCM	N/A	N/A	1 MINUTE	\$265	
HAM-275-2572	EB	4	8 PM - 6 AM	8 PM - 6 AM	10 PM - 5 AM (LEFT LANE CLOSURE ONLY)	N/A	1 MINUTE	\$285	
HAM-275 RAMPS AT I-75 - EB EXIT RAMP - EB ENTRANCE RAMP	EB	1	N/A	N/A	N/A	10 PM - 5 AM	1 MINUTE	\$285	BOTH EXIT AND ENTRANCE RAMPS MAY BE CLOSED AT THE SAME TIME. PROVIDE A PCMS AT THE CLOSURE POINT AND AT THE NEXT LOGICAL EXIT FOR DETOUR INFORMATION FOR EACH CLOSED RAMP.
HAM US-50	EB/WB	VARIES	9 AM - 2 PM; 8 PM - 6 AM	9 AM - 2 PM; 8 PM - 6 AM (FLAGGING OPERATION)	N/A	N/A	1 MINUTE	\$130	
CLE SR-32	WB	2	12 MID. - 5 AM; 9 AM - 12 MID.	N/A	N/A	N/A	1 MINUTE	\$160	
HAM US-27	BOTH	2	8 PM - 6 AM	N/A	N/A	N/A	1 MINUTE	\$195	IT IS PERMISSIBLE TO CLOSE US-27 TO ONE LANE IN EACH DIRECTION FOR A WEEKEND, BEGINNING AT 8 PM ON A FRIDAY AND ENDING AT 6 AM ON THE FOLLOWING MONDAY. THIS CLOSURE IS PERMITTED TO OCCUR A MAXIMUM OF 2 TIMES.
GRE SR-844	NB	2	12 MID. - 6 AM; 9 AM - 12 MID.	N/A	N/A	N/A	1 MINUTE	\$135	IT IS PERMISSIBLE TO CLOSE SR-844 TO ONE LANE IN THE NB DIRECTION FOR A PERIOD NOT TO EXCEED 20 CONSECUTIVE CALENDAR DAYS (10 DAYS PER PHASE).
GRE SR-844 EXIT RAMP TO SR-444	NB	1	N/A	N/A	N/A	N/A	1 MINUTE	\$135	THE NB SR-844 EXIT RAMP TO SR-444 SHALL BE CLOSED FOR A PERIOD NOT TO EXCEED 20 CONSECUTIVE CALENDAR DAYS.
BRANCH HILL MIAMIVILLE ROAD	BOTH	1	7 AM - 10 PM	N/A	N/A	N/A	1 MINUTE	\$25	
SPRING GROVE AVENUE	NB	2	12 MID. - 3 PM; 7 PM - 12 MID.	N/A	N/A	N/A	1 MINUTE	\$25	
HARRISON AVENUE	BOTH	2	AT ALL TIMES	N/A	N/A	N/A	N/A	N/A	
KEMPER ROAD	BOTH	2	9 AM - 3 PM; 8 PM - 6 AM	N/A	N/A	N/A	1 MINUTE	\$135	
BUT US-27 CLE/HAM SR-126	BOTH	1	AT ALL TIMES	N/A	N/A	N/A	N/A	N/A	

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① NORTH M3-1-24 844 MI-5-3-30 RAMP CLOSED AHEAD W20-3-48	② NORTH M3-1-24 844 MI-5-3-30 DETOUR AHEAD W20-2-48	③ DETOUR M4-8-24 NORTH M3-1-24 844 MI-5-3-30 ↑ M6-3-21	④ DETOUR M4-8-24 NORTH M3-1-24 844 MI-5-3-30 ↙ M5-1L-21	⑤ DETOUR M4-8-24 NORTH M3-1-24 844 MI-5-3-30 ← M6-1L-21	⑥ DETOUR M4-8-24 NORTH M3-1-24 844 MI-5-3-30 → M6-1R-21
				TO SR 444 SPECIAL 24 X 18	TO SR 444 SPECIAL 24 X 18

⑦  
R11-2-48  
WITH TYPE "B"  
WARNING LIGHT

RAILS W/  
STRIPES ON  
BOTH SIDES

TYPE III BARRICADE DETAIL  
PER STD. DWG. MT-101.60

⑧  
END  
DETOUR  
M4-8A-24

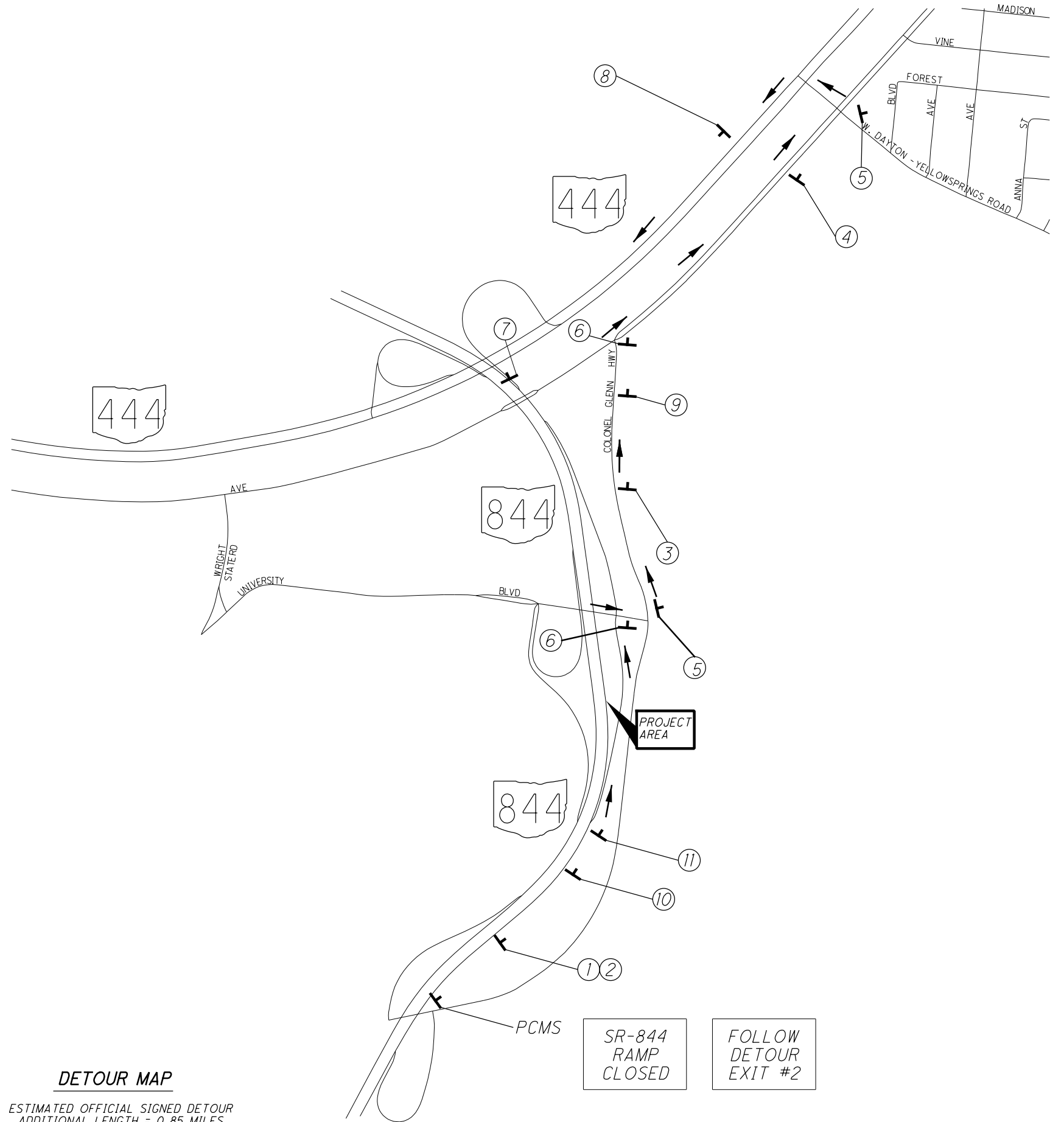
⑩ DETOUR M4-8-24 NORTH M3-1-24 844 MI-5-3-30 ↗ M5-2-21	⑪ DETOUR M4-8-24 NORTH M3-1-24 844 MI-5-3-30 ↘ M6-2-21
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**LEGEND**

→ OFFICIAL SIGNED  
DETOUR ROUTE

**DETOUR MAP**

ESTIMATED OFFICIAL SIGNED DETOUR  
ADDITIONAL LENGTH = 0.85 MILES



SR-844  
RAMP  
CLOSED

FOLLOW  
DETOUR  
EXIT #2

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SHEET NUM.									PART.				ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
						3	7	8	01/IMS/BR	02/STR/BR	03/S>2/BR	04/NHS/BR						
																TRAFFIC CONTROL		
						12			12				621	54000	12	EACH	RAISED PAVEMENT MARKER REMOVED	
						0.23			0.23				646	10000	0.23	MILE	EDGE LINE, 4"	
						0.17			0.17				646	10100	0.17	MILE	LANE LINE, 4"	
						165			165				646	10300	165	FT	CHANNELIZING LINE, 8"	
						2			2				646	20300	2	EACH	LANE ARROW	
																	STRUCTURE OVER 20 FOOT SPAN (HAM-75-0086)	16
																	STRUCTURE OVER 20 FOOT SPAN (HAM-75-0089)	16
																	STRUCTURE OVER 20 FOOT SPAN (HAM-75-0240L)	16
																	STRUCTURE OVER 20 FOOT SPAN (HAM-75-0240R)	16
																	STRUCTURE OVER 20 FOOT SPAN (HAM-75-1642E)	17
																	STRUCTURE OVER 20 FOOT SPAN (HAM-75-1539L)	17
																	STRUCTURE OVER 20 FOOT SPAN (HAM-50-3604)	17
																	STRUCTURE OVER 20 FOOT SPAN (GRE-844-0193L)	17
																	STRUCTURE OVER 20 FOOT SPAN (GRE-844-0193R)	17
																	STRUCTURE OVER 20 FOOT SPAN (BUT-75-0405R)	18
																	STRUCTURE OVER 20 FOOT SPAN (BUT-127-1964)	18
																	STRUCTURE OVER 20 FOOT SPAN (CLE-275-0043)	18
																	STRUCTURE OVER 20 FOOT SPAN (HAM-126-2286)	18
																	STRUCTURE OVER 20 FOOT SPAN (CLE-126-0211)	19
																	STRUCTURE OVER 20 FOOT SPAN (HAM-27-1408)	19
																	STRUCTURE OVER 20 FOOT SPAN (CLE-32-1314L)	19
																	STRUCTURE OVER 20 FOOT SPAN (HAM-275-2572)	19
																	MAINTENANCE OF TRAFFIC	
						200			200				614	11110	200	hour	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
						LS						LS	614	12420	LS		DETOUR SIGNING	
						4			2			2	614	18601	4	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	7
								0.17	0.17				614	20550	0.17	MILE	WORK ZONE LANE LINE, CLASS III, 4", 642 PAINT	
								0.23	0.23				614	22350	0.23	MILE	WORK ZONE EDGE LINE, CLASS III, 4", 642 PAINT	
								165	165				614	23680	165	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT	
																	INCIDENTALS	
									LS	LS	LS	LS	614	11001	LS		MAINTAINING TRAFFIC, AS PER PLAN	6
									LS	LS	LS	LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
									LS	LS	LS	LS	624	10000	LS		MOBILIZATION	

GENERAL SUMMARY

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REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

- A-1-69 REVISED 7-19-02
- BR-1-13 REVISED 1-17-14
- EXJ-4-87 REVISED 7-19-02
- GSD-1-96 REVISED 7-19-02

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

- 848 1-20-17
- 849 1-18-13

**DESIGN SPECIFICATIONS**

WORK PERFORMED TO THESE STRUCTURES CONFORMS TO "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2002, AND THE 2004 ODOT BRIDGE DESIGN MANUAL.

**DESIGN DATA**

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

CONCRETE CLASS QC3 - COMPRESSIVE STRENGTH 4000 PSI (SELF CONSOLIDATING CONCRETE)

CONCRETE CLASS QC MS - COMPRESSIVE STRENGTH 4500 PSI

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

STRUCTURAL STEEL - ASTM A709 GRADE 50, YIELD STRENGTH 50,000 PSI

**EXISTING STRUCTURE VERIFICATION**

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURES HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURES AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS SECTIONS 102.05, 105.02 AND 513.04.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURES. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

**UTILITY LINES**

THE UTILITIES SHALL BORE ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITIES ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

**EXISTING BRIDGE PLANS**

EXISTING BRIDGE PLANS MAY BE INSPECTED IN THE OFFICE OF STRUCTURAL ENGINEERING IN COLUMBUS, OHIO OR AT THE ODOT DISTRICT EIGHT OFFICE IN LEBANON, OHIO.

**ITEM 509 - REINFORCING STEEL. REPLACEMENT OF EXISTING REINFORCING STEEL. AS PER PLAN**

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE.

REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW 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.

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 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE. AS PER PLAN**

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS.

SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH C&MS 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.

**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.

**ITEM 513 - STRUCTURAL STEEL FOR REHABILITATION. AS PER PLAN**

THIS ITEM INCLUDES THE WORK NECESSARY FOR INSTALLATION OF STEEL SLAB SUPPORTS. THESE ITEMS SHALL BE COMPLETED AT THE LOCATIONS SPECIFIED ON THE PLANS.

STEEL MEMBERS TO BE FABRICATED UNDER THIS ITEM WILL NOT REQUIRE SHOP DRAWINGS PRIOR TO FABRICATION. THE CONTRACTOR SHALL MAKE NECESSARY MEASUREMENTS AND PREPARE SKETCHES, DRAWINGS, TABLE, ETC. THE PROJECT ENGINEER SHALL HAVE THE AUTHORITY AND RESPONSIBILITY FOR ENSURING THAT THE FABRICATED STEEL IS ACCEPTABLE. TECHNICAL ASSISTANCE WILL BE PROVIDED TO THE ENGINEER, IF REQUESTED, BY THE OFFICE OF STRUCTURAL ENGINEERING. MILL TEST REPORTS AND SHIPPING DOCUMENTS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO INCORPORATING STEEL ITEMS INTO THE WORK, AS REQUIRED BY 501.06. AFTER FABRICATION, THE CONTRACTOR SHALL SUBMIT AS-BUILT DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL TO ENSURE THAT THE DRAWINGS DEPICT THE STEEL AS ACTUALLY INCORPORATED INTO THE WORK. THE ENGINEER WILL THEN SEND ONE APPROVED SET TO THE OFFICE OF STRUCTURAL ENGINEERING FOR INFORMATION. PAY WEIGHTS SHALL BE COMPUTED IN COMPLIANCE WITH C&MS 513 AND SUBMITTED TO THE ENGINEER FOR HIS REVIEW AND APPROVAL.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, TOOLS, MATERIALS AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT FOR WELDING, CUTTING AND GRINDING SHALL BE DEEMED TO BE INCLUDED FOR PAYMENT UNDER THIS ITEM. PAYMENT SHALL BE MADE AT A UNIT BID PRICE OF POUNDS.

**ITEM 513 - STRUCTURAL STEEL MEMBERS. LEVEL UP. AS PER PLAN**

ALL REQUIREMENTS OF 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE IN ACCORDANCE WITH 501.06, TO THE ENGINEER. PROVIDE THE ENGINEER "AS-BUILT" DRAWINGS ACCORDING TO 513.06, EXCEPT 501.04 DOES NOT APPLY. UPON RECEIPT OF THE ENGINEER'S ACCEPTANCE, SUPPLY A COPY OF THE DRAWINGS, ACCORDING TO SUPPLEMENT 1002, TO THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES.

THE FOLLOWING MEMBERS ARE INCLUDED IN THIS ITEM: SELECT END CROSSFRAME ANGLES AND PLATES FOR HAM-75-0240L/R.

**ITEM 202 - PORTIONS OF STRUCTURE REMOVED. OVER 20 FOOT SPAN. AS PER PLAN**

THIS WORK CONSISTS OF THE REMOVAL OF PORTIONS OF THE EXISTING STRUCTURES, ETC. AS SHOWN IN THE PLANS OR AS DIRECTED BY THE ENGINEER. THIS WORK ALSO INCLUDES THE REMOVAL OF SUPERSTRUCTURE BEARINGS AND MISCELLANEOUS STRUCTURAL STEEL ITEMS AS DIRECTED BY THE ENGINEER.

THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY DURING BACKWALL REMOVAL TO PROTECT PORTIONS OF SUCH SYSTEMS THAT ARE TO BE SALVAGED AND INCORPORATED INTO THE PROPOSED STRUCTURE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST, OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH, BUT REMOVE ALL PACK AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

THE CONTRACTOR SHALL TAKE CARE NOT TO DAMAGE ANY PORTION OF THE STRUCTURE THAT WILL REMAIN IN SERVICE. ANY PORTION OF THE REMAINING STRUCTURE DAMAGED AS A RESULT OF CONTRACTOR ACTIONS SHALL BE REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR MUST REVIEW THE STRUCTURE WHEN PREPARING HIS BID. THE CONTRACTOR WILL REVIEW THE CONDITION OF THE STRUCTURE TO DETERMINE WHAT DEBRIS WILL FALL FROM THE STRUCTURE DURING REMOVAL. THE CONTRACTOR WILL DETERMINE THE CORRESPONDING COST TO CLEAN UP ANY AND ALL DEBRIS WHICH FALLS FROM THE STRUCTURE DURING ANY ALL REMOVAL OPERATION. THE COST TO CLEAR AND CLEAN UP ALL DEBRIS DURING REMOVAL SHALL BE INCLUDED WITH THE BID FOR THIS ITEM OF WORK. NO ADDITIONAL COST WILL BE RECOGNIZED TO CLEAN DEBRIS RESULTING FROM THE STRUCTURE REMOVAL OPERATION.

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

**ITEM 514 - FIELD PAINTING EXISTING STRUCTURAL STEEL**

THIS ITEM INCLUDES THE WORK NECESSARY FOR PAINTING THE EXISTING STRUCTURAL STEEL OF SPECIFIED BRIDGES AS SHOWN ON THE PLANS USING SYSTEM OZEU. PAINT COLOR SHALL MATCH EXISTING OR COLOR SPECIFIED IN THE PLANS.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, TOOLS, MATERIALS AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT SHALL BE MADE AT THE UNIT PRICE BID PER SQUARE FEET OF ITEM 514.

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

THIS WORK SHALL CONSIST OF REPLACING THE EXISTING GLAND WITH A NEW GLAND AT THE ABUTMENT EXPANSION JOINTS FOR BRIDGE NO. CLE-32-1314L. THE CONTRACTOR SHALL FIELD VERIFY THE SHAPE AND SIZE OF THE GLAND AND THE DIMENSION OF THE JOINT OPENING BEFORE ORDERING THE NEW GLAND.

THIS BRIDGE MAY HAVE AN EXISTING STRIP SEAL THAT IS NOT READILY AVAILABLE ON THE SHELF. A SPECIAL RUN BY THE MANUFACTURER FROM THE OLD MOLDS MAY BE NEEDED WHICH MAY REQUIRE ADDITIONAL LEAD TIME. THE CONTRACTOR IS TO SCHEDULE ACTIVITIES ACCORDINGLY.

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT SHALL BE MADE AT THE UNIT PRICE BID PER FOOT OF ITEM 516, ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN.

**ITEM 613 - LOW STRENGTH MORTAR BACKFILL. AS PER PLAN**

THIS WORK CONSISTS OF PLACING LOW STRENGTH MORTAR BACKFILL (LSM) UNDER THE NORTHWEST CORNER OF THE FORWARD APPROACH SLAB AT BRIDGE NO. HAM-75-0240L. PROVIDE A RECOMMENDED LSM MEANS AND METHODS PROCEDURE TO THE PROJECT ENGINEER FOR REVIEW. THE MEANS AND METHODS PROCEDURE IS TO INCLUDE A PROCESS THAT PROVIDES TWO FEET OF LSM HEAD ABOVE THE ELEVATION OF THE APPROACH SLAB. CONSIDER USING SAND BAGS OR A WOODEN BOX TO CONSTRUCT THE HEIGHT OF THE LSM DELIVERY TUB/FUNNEL USED TO HOLD THE LSM PRIOR TO THE LSM BEING FORCED TO FLOW UNDER THE APPROACH SLAB WHILE THE LSM MATERIAL HAS TWO FEET OF PRESSURE HEAD. PRIOR TO PLACING THE LSM, SEAL THE ABUTMENT WEEP HOLES. PRIOR TO PLACING THE LSM, ALSO SEAL ALL POTENTIAL LSM EXIT POINTS AROUND THE PERIMETER OF THE APPROACH SLAB WITH SAND BAGS. REMOVE THE WEEP HOLE SEALS AND THE SAND BAG SEALS AFTER THE LSM HAS REACHED AN INITIAL SET. PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, MATERIAL AND LABOR NECESSARY TO PERFORM THIS TASK. PAYMENT SHALL BE MADE AT THE UNIT PRICE BID PER CUBIC YARD OF ITEM 613, LOW STRENGTH MORTAR BACKFILL, AS PER PLAN.

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STRUCTURE GENERAL NOTES 1  
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**PROPOSED WORK**

**BRIDGE NO. HAM-75-0086/0089 EIGHTH STREET OVER I.R. 75**

1. REMOVE EXISTING SEALER AT AREAS TO BE PATCHED OR RECEIVE GLASS FIBER FRP ON PIER 6.
2. PATCH THE PIER CAPS AND COLUMNS OF PIERS 5 AND 6.
3. WRAP THE SPECIFIED COLUMNS AND ALL AREAS TO BE PATCHED WITH GLASS FIBER FRP AS SHOWN IN THE PLANS.
4. APPLY EPOXY URETHANE SEALER ON PIERS 5 & 6.
5. RESET AND SHIM BEARINGS AT PIER 5 AS SPECIFIED IN PLANS.

**BRIDGE NO. HAM-75-0240L/R I.R. 75 OVER HARRISON AVENUE**

1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS.
2. ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5 FEET FROM THE BEAM END USING OZEU SPECIFICATIONS. PAINT COLOR TO MATCH EXISTING.
3. REPAIR EROSION AT NORTHWEST CORNER THAT IS UNDERMINING THE FORWARD APPROACH SLAB OF THE LEFT BRIDGE.
4. REPLACE DETERIORATED END CROSS FRAMES AS SHOWN IN PLANS.
5. REPLACE DETERIORATED APPROACH GUARDRAIL POSTS ON THE LEFT BRIDGE AT BOTH REAR AND FORWARD ABUTMENT. LIMIT REMOVAL LENGTH TO WITHIN 25 FEET OF BRIDGE.

**BRIDGE NO. HAM-75-1642E N.B. I.R. 75 TO I.R. 275 RAMP OVER KEMPER ROAD**

1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS ON HP PEDASTALS.
2. ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5 FEET FROM THE BEAM END USING OZEU SPECIFICATIONS. PAINT COLOR TO MATCH EXISTING.
3. REPAIR GOUGE TO THE BOTTOM FLANGE OF BEAM B6.

**BRIDGE NO. HAM-75-1539L S.B. I.R. 75 OVER SHARON ROAD**

1. REPAIR THE LOOSE PORTION OF THE STEEL EXPANSION JOINT AT THE SOUTH ABUTMENT AS DETAILED IN THE PLANS.

**BRIDGE NO. HAM-50-3604 U.S. 50 OVER LITTLE MIAMI RIVER**

1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS ON HP PEDESTALS.
2. PATCH THE CANTILEVER HAMMERHEAD AT PIER 1 AS SHOWN ON THE PLANS.

**BRIDGE NO. GRE-844-0193L/R S.R. 844 OVER S.R. 444, KAUFFMAN ROAD AND NORFOLK SOUTHERN RAILROAD**

1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS ON HP PEDESTALS.
2. REPLACE THE NORTH EXPANSION JOINT ON THE NORTHBOUND BRIDGE, 2 FEET OF THE DECK, AND THE TOP OF THE BACKWALL DOWN TO THE APPROACH SLAB SEAT.

**BRIDGE NO. BUT-75-0405R N.B. I.R. 75 OVER NORFOLK SOUTHERN RAILROAD**

1. RESET AND SHIM THE BEARINGS AT PIER 2. THE BEARINGS SHALL BE RECENTERED AT THE CENTERLINE OF THE PIER, REQUIRING THE REMOVAL AND REPLACEMENT OF THE WELDS TO THE BOTTOM FLANGE OF THE BEAM. REPAIR THE DAMAGED PAINT USING OZEU SPECIFICATIONS.

**BRIDGE NO. BUT-127-1964 U.S. 127 OVER BIG CAVE RUN**

1. REMOVE LOOSE CONCRETE AT FORWARD ABUTMENT AND INSTALL STEEL ABUTMENT SUPPORTS THAT ARE THEN CAST-IN-PLACE USING SELF-CONSOLIDATING CONCRETE.
2. SEAL NEW CONCRETE WITH EPOXY URETHANE SEALER.

**BRIDGE NO. CLE-275-0043 BRANCH HILL MIAMIVILLE ROAD OVER I.R. 275**

1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS ON HP PEDASTALS.
2. ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5 FEET FROM THE BEAM END USING OZEU SPECIFICATIONS. PAINT COLOR TO MATCH EXISTING.

**BRIDGE NO. HAM-126-2286 S.R. 126 OVER LITTLE MIAMI RIVER**

1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS ON HP PEDASTALS.
2. ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5 FEET FROM THE BEAM END USING OZEU SPECIFICATIONS. PAINT COLOR OF THE TOP COAT SHALL BE FEDERAL COLOR NUMBER 595B-20045 OR 20059.

**BRIDGE NO. CLE-126-0211 S.R. 126 OVER LITTLE MIAMI RIVER**

1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS ON HP PEDASTALS.
2. ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5 FEET FROM THE BEAM END USING OZEU SPECIFICATIONS. PAINT COLOR TO MATCH EXISTING.

**BRIDGE NO. HAM-27-1408 U.S. 27 OVER I.R. 275**

1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS ON HP PEDASTALS.
2. REMOVE EXISTING 2" CONCRETE OVERLAY. REMOVE 1/2" OF THE ORIGINAL DECK USING HYDRODEMOLITION.
3. REPLACE WITH 2 1/2" OF SUPERPLASTICIZED DENSE CONCRETE OVERLAY IN THE WESTBOUND DIRECTION AND 2 1/2" OF POLYESTER POLYMER CONCRETE OVERLAY IN THE EASTBOUND DIRECTION.

**BRIDGE NO. CLE-32-1314L W.B. S.R. 32 OVER S.R. 276**

1. REPLACE THE ENTIRE JOINT SEAL GLAND WITH A NEW ELASTOMERIC SEAL GLAND. CONTRACTOR TO FIELD VERIFY PLAN DIMENSIONS.

**BRIDGE NO. HAM-275-2572 I.R. 275 OVER I.R. 75**

1. REPAIR THE LOOSE PORTION OF THE STEEL EXPANSION JOINT AT THE FORWARD ABUTMENT IN THE EASTBOUND DIRECTION AS DETAILED IN THE PLANS.



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**STRUCTURE GENERAL NOTES 2**  
BRIDGE NO. VARIES

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**ITEM 511 – QC3 CONCRETE, MISC.: SELF-CONSOLIDATING CONCRETE**

THIS ITEM INCLUDES PLACING QC3 SELF-CONSOLIDATING CONCRETE AS SHOWN IN THE PLANS.

DEFINITION OF SELF-CONSOLIDATING CONCRETE (SCC): FLOWING CONCRETE THAT IS CAPABLE OF FILLING THE FORMWORK, SPREADING TO A LEVEL STATE WITHOUT SEGREGATION AND ENCAPSULATING THE REINFORCEMENT WITHOUT THE USE OF INTERNAL/EXTERNAL VIBRATORS OR MECHANICAL CONSOLIDATION.

SUBMITTALS

SUBMIT THE FOLLOWING BEFORE PLACING SCC:

1. MIX DESIGN AND PLACEMENT PROCEDURES
2. TRIAL BATCH TEST REPORT, INCLUDING TEST RESULTS FOR THE TESTS SPECIFIED IN THE SECTION ENTITLED "PREQUALIFICATION OF MIX DESIGN"
3. PROVIDE A MOCK-UP

QUALITY CONTROL AND ASSURANCE

PREPARE SCC SPECIMENS FOR COMPRESSIVE STRENGTH TESTING PER THE APPLICABLE ASTM C31, C39, C172, C192, C470, EXCEPT FABRICATE TEST SPECIMENS AS FOLLOWS:

1. PLACE THE TEST MOLDS ON A FIRM, FLAT SURFACE TO PREVENT DISTORTION OF THE BOTTOM SURFACE.
2. IF MORE THAN 1 SPECIMEN IS TO BE MADE FROM THE SAME BATCH, MAKE ALL THE SPECIMENS SIMULTANEOUSLY.
3. FILL THE MOLD IN 1 LIFT, POURING THE CONCRETE FROM A LARGER CONTAINER.
4. PAT THE SIDES OF THE MOLD LIGHTLY BY HAND OR JIG BY ROCKING THE MOLD FROM SIDE TO SIDE.
5. STRIKE OFF THE SURFACE OF THE CONCRETE EVEN WITH THE TOP EDGE OF THE MOLD.
6. WIPE THE SIDES OF THE MOLD FREE OF EXCESS CONCRETE AND PRESS THE LID ON.

PREQUALIFICATION OF MIX DESIGN

PREQUALIFY THE SCC MIX DESIGN WITH A TRIAL BATCH USING THE SAME MATERIALS, MIX PROPORTIONS, MIXING EQUIPMENT, PROCEDURES, AND BATCH SIZE TO BE USED IN SCC PRODUCTION.

THE SCC TRIAL BATCH MUST COMPLY WITH THE REQUIREMENTS SHOWN IN THE FOLLOWING TABLE:

SCC MIX DESIGN REQUIREMENTS

PROPERTY	TEST	REQUIREMENT
SLUMP FLOW	ASTM C 1611	AT LEAST 20 INCHES
FLOW RATE, T50	ASTM C 1611	2 - 7 SECONDS
VISUAL STABILITY INDEX	ASTM C 1611	1 OR LESS
J-RING FLOW	ASTM C 1621	THE DIFFERENCE BETWEEN J-RING FLOW AND SLUMP FLOW MUST NOT EXCEED 2 INCHES
COLUMN SEGREGATION	ASTM C 1610	STATIC SEGREGATION MUST NOT EXCEED 15 PERCENT
BLEEDING	ASTM C 232	BLEEDING CAPACITY MUST NOT EXCEED 2.5 PERCENT
COMPRESSIVE STRENGTH	ASTM C 39	THE AVERAGE OF 5 TEST CYLINDERS MUST BE AT LEAST 600 PSI GREATER THAN THE QC3 4000 PSI CONCRETE STRENGTH AT 7 DAYS
MIN. COMPRESSIVE STRENGTH	ASTM C 39	THE MINIMUM FOR AN INDIVIDUAL TEST CYLINDER MUST NOT BE LESS THAN THE QC3 4000 PSI CONCRETE STRENGTH

MOCK-UP

CONSTRUCT A MOCK-UP BEFORE PLACING THE SCC.

THE MOCK-UP MUST DEMONSTRATE THAT THE SCC WILL:

1. FLOW FOR THE DISTANCE REQUIRED BY THE PROPOSED CONSTRUCTION PROCEDURE
2. COMPLETELY FILL THE FORMS
3. ENCAPSULATE THE REINFORCEMENT AND EMBEDMENTS

PREQUALIFY THE SCC MIX DESIGN BEFORE CONSTRUCTING THE MOCK-UP.

THE MOCK-UP FORMS MUST BE SIMILAR TO THOSE USED FOR THE PRODUCTION ELEMENTS. INCLUDE IN THE MOCK-UP THE CONCRETE, REINFORCEMENT, AND CONCRETE EMBEDMENTS SHOWN ON THE AUTHORIZED PLANS/SHOP DRAWINGS, EXCEPT THE REINFORCEMENT AND EMBEDMENTS MUST STOP 12 INCHES FROM BOTH LONGITUDINAL ENDS OF THE MOCK-UP.

THE MOCK-UP MUST SIMULATE THE FLOW OF CONCRETE FOR THE MAXIMUM DISTANCE ANTICIPATED DURING PRODUCTION OR FOR A MINIMUM OF 10 FEET IF THE ANTICIPATED FLOW TRAVEL IS LESS THAN 10 FEET.

PLACE THE SCC IN THE MOCK-UP IN THE ENGINEER'S PRESENCE.

TAKE A TEST SAMPLE OF AT LEAST 100 POUNDS OF CONCRETE FROM WITHIN THE FORMS AT THE DISCHARGE POINT AND AT THE POINT FARTHEST FROM THE DISCHARGE POINT. DETERMINE THE COARSE AGGREGATE CONTENT OF EACH TEST SAMPLE. THE COARSE AGGREGATE CONTENT OF THE TEST SAMPLES MUST NOT DIFFER FROM EACH OTHER BY MORE THAN 8 POUNDS OF AGGREGATE PER CUBIC FOOT OF CONCRETE.

SAW-CUT THE MOCK-UP FULL-DEPTH IN THE TRANSVERSE DIRECTION APPROXIMATELY 2 FEET FROM THE END OF THE POUR. VOIDS OR HONEYCOMBING IN THE SCC OR BETWEEN THE CONCRETE AND EMBEDDED ELEMENTS ARE NOT ACCEPTABLE.

IF THE ENGINEER REJECTS THE SCC PLACED IN THE MOCK-UP, CONSTRUCT ADDITIONAL MOCK-UPS UNTIL THE SCC IS ACCEPTED BY THE ENGINEER.

TEST SAMPLES AND TEST RESULTS FROM THE MOCK-UP  
 SUBMIT TEST RESULTS FOR SLUMP FLOW AND VISUAL STABILITY INDEX.  
 IF THE ENGINEER REJECTS THE SCC FOR SLUMP FLOW AND VISUAL STABILITY INDEX, MAKE CORRECTIVE CHANGES AND RESUBMIT THE SCC MIX DESIGN OR PLACEMENT PROCEDURES.  
 SUBMIT THE AGGREGATE GRADINGS AS AN INFORMATIONAL SUBMITTAL.

DISPOSE OF THE MOCK-UP IN ACCORDANCE WITH CMS 107.11.

FIELD QUALITY CONTROL

FINE AGGREGATE MOISTURE CONTENT  
 DETERMINE THE FINE AGGREGATE MOISTURE CONTENT FOR EACH BATCH OF SCC.

SLUMP FLOW AND VISUAL STABILITY INDEX  
 AT THE START OF SCC PLACEMENT AND WHENEVER A SET OF CONCRETE CYLINDERS IS PREPARED, DETERMINE THE SLUMP FLOW AND THE VISUAL STABILITY INDEX UNDER ASTM C 1611.

MATERIALS  
 PROVIDE AN SCC MIX WITH AGGREGATE GRADATIONS WITHIN ZONE II OF THE COARSENESS FACTOR CHART. INCREASING THE AMOUNT OF AN APPROVED CMS 705.12 (SCC) ADMIXTURE OF AN APPROVED JOB MIX FORMULA TO ACHIEVE THE DESIRED CONSISTENCY; RE-PROPORTIONING THE AGGREGATES WITHIN ZONE II; ADDING CEMENTITIOUS MATERIAL; AND INCLUDING A VISCOSITY MODIFYING ADMIXTURE (VMA) ARE ACCEPTABLE METHODS OF IMPROVING THE STABILITY OF THE MIX. A NEW MIX DESIGN IS NOT REQUIRED.

SLUMP REQUIREMENTS OF CMS TABLE 499.03-1 DO NOT APPLY.

ESTABLISH QUALITY CONTROL PROCEDURES IN THE QUALITY CONTROL PLAN FOR SCC CONCRETE. SET THE TARGET SLUMP FLOW FOR THE MIX AND MAINTAIN THE FLOW WITHIN ± 2 INCHES. VISUALLY INSPECT THE STABILITY OF THE MIX TO ENSURE THAT THERE IS NO AGGREGATE PILE IN THE MIDDLE OF, NOR MORTAR HALO IN EXCESS OF 1/2 INCH ON THE LEADING EDGE OF THE SLUMP FLOW TEST PILE. TEST THE SLUMP FLOW ACCORDING TO ASTM C1611.

GRADATION

PROVIDE A WELL-GRADED CONCRETE MIX BY MAINTAINING THE GRADATION OF THE COMBINATION OF AGGREGATES WITHIN ZONE II (OPTIMAL) OF THE COARSENESS FACTOR CHART (FIGURE 1) AS DEFINED IN THE COMPASS OR EQUAL SOFTWARE. USE A 0.75 INCH NOMINAL MAXIMUM SIZE AGGREGATE. ENSURE THAT THE DESIGN YIELD IS 27.0 CUBIC FEET.

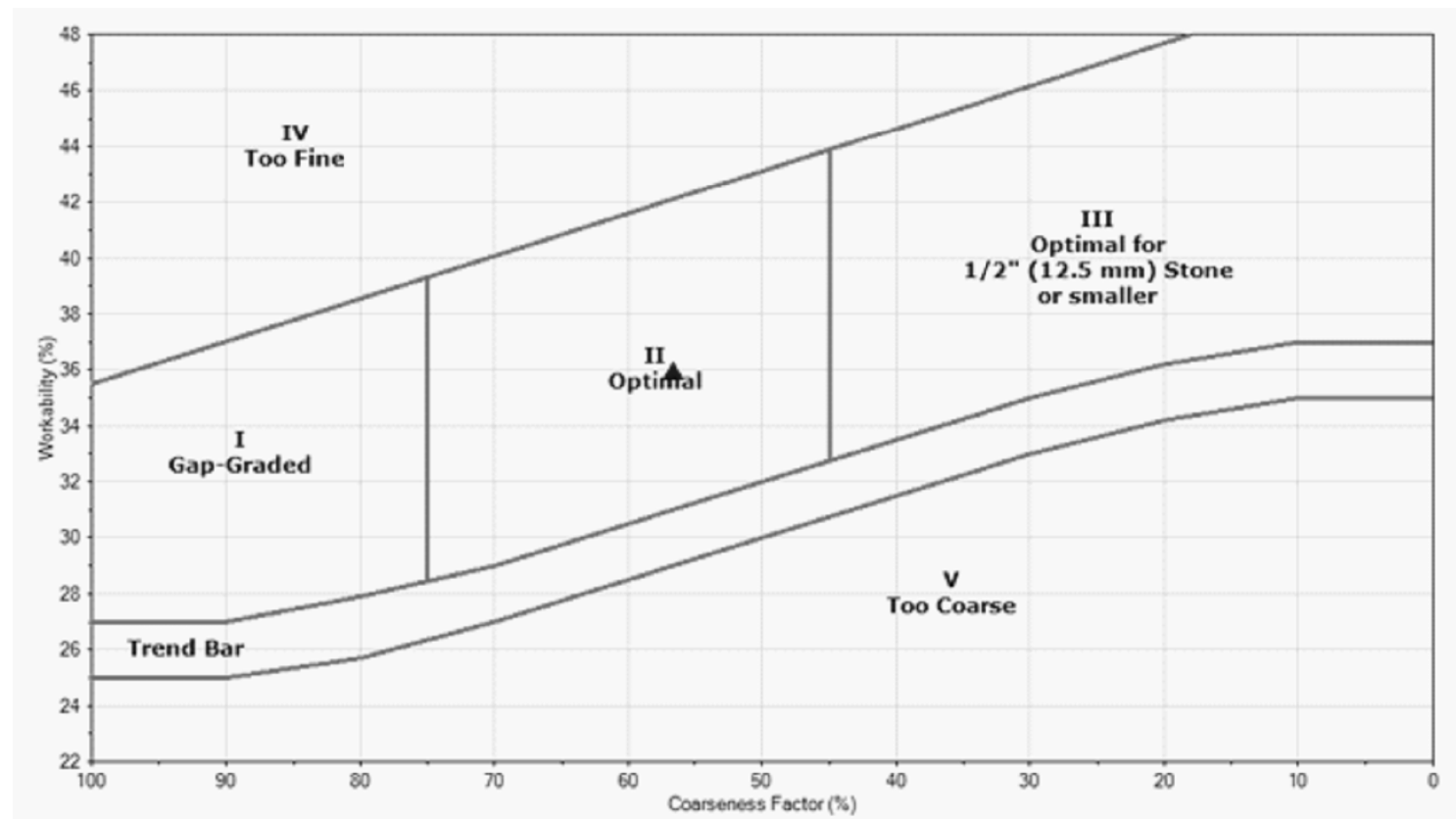


FIGURE 1

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USE THE FOLLOWING SIEVE SIZES TO DETERMINE THE GRADATION OF THE AGGREGATES:

1/2 INCH	# 8
1 INCH	# 16
3/4 INCH	# 30
1/2 INCH	# 50
3/8 INCH	# 100
#4	# 200

IN THE CHART:

WORKABILITY FACTOR (%) REFERS TO THE PERCENT OF THE COMBINED AGGREGATE THAT PASSES THE NO. 8 SIEVE. COARSENESS FACTOR (%) REFERS TO THE PERCENT OF THE COMBINED AGGREGATE THAT IS RETAINED ON THE NO. 8 SIEVE THAT IS ALSO RETAINED ON THE 3/8 IN. SIEVE. THE CHART IS BASED ON A CEMENT CONTENT OF 564 LBS /CUBIC YARD. ADJUST TO WORKABILITY PROPORTIONATELY AND DIRECTLY BY 2.5% PER 94 LBS. OF CEMENT WHEN USING EITHER LESS OR MORE.

THE MINIMUM ALLOWABLE SLUMP FLOW IS 20 INCHES. THE MAXIMUM ALLOWABLE SLUMP FLOW IS 24 INCHES. THE SLUMP FLOW MUST NOT VARY BY MORE THAN 3 INCHES FROM THE MIX DESIGN SLUMP FLOW.

THE VISUAL STABILITY INDEX MUST NOT EXCEED 1.

CONSTRUCTION

SSC SHALL BE PUMPED INTO THE FORMS. CORE DRILLING OF THE BRIDGE DECK TO ACCESS THE ABUTMENT FORMS SHALL NOT BE ALLOWED.

ENSURE THAT THE CONCRETE MIX DESIGN IS WORKABLE AND FINISHABLE DURING THE TRIAL PROCESS. WHEN THE MIX IS DETERMINED TO HAVE ISSUES RELATING TO WORKABILITY OR FINISHABILITY IN THE FIELD, THE DEPARTMENT MAY RESCIND THE MIX DESIGN ACCEPTANCE.

PAYMENT

PAYMENT FOR THIS WORK SHALL INCLUDE ALL EQUIPMENT, MATERIALS, LABOR, AND ANY MISCELLANEOUS APPURTENANCES NECESSARY TO PERFORM THIS TASK. PAYMENT SHALL BE MADE AT THE UNIT PRICE BID PER CUBIC YARD OF ITEM 511, QC3 CONCRETE, MISC.: SELF-CONSOLIDATING CONCRETE.

REFERENCES

- ACI 237R - SELF CONSOLIDATING CONCRETE
- ASTM C 31 - MAKING AND CURING CONCRETE TEST SPECIMENS IN THE FIELD
- ASTM C 39 - COMPRESSIVE STRENGTH OF CYLINDRICAL CONCRETE SPECIMENS
- ASTM C 127 - STANDARD TEST METHOD FOR DENSITY, RELATIVE DENSITY (SPECIFIC GRAVITY), AND ABSORPTION OF COARSE AGGREGATE
- ASTM C 128 - STANDARD TEST METHOD FOR DENSITY, RELATIVE DENSITY (SPECIFIC GRAVITY), AND ABSORPTION OF FINE AGGREGATE
- ASTM C 172 - SAMPLING FRESHLY MIXED CONCRETE
- ASTM C 192 - MAKING AND CURING CONCRETE TEST SPECIMENS IN THE LABORATORY
- ASTM C 232 - STANDARD TEST METHODS FOR BLEEDING OF CONCRETE
- ASTM C 470 - MOLDS FOR FORMING CONCRETE TEST CYLINDERS VERTICALLY
- ASTM C 1610 - STANDARD TEST METHOD FOR STATIC SEGREGATION OF SELF-CONSOLIDATING CONCRETE USING COLUMN TECHNIQUE
- ASTM C 1611 - STANDARD TEST METHOD FOR SLUMP FLOW OF SELF-CONSOLIDATING CONCRETE
- ASTM C 1621 - STANDARD TEST METHOD FOR PASSING ABILITY OF SELF-CONSOLIDATING CONCRETE BY J-RING

**ITEM 847 - MICRO-SILICA CONCRETE OVERLAY, AS PER PLAN (T=1/2") (ACCELERATED CLOSURE)**

THIS ITEM SHALL CONFORM TO SUPPLEMENTAL SPECIFICATION 847 WITH THE FOLLOWING CONDITIONS AND REVISIONS:

MINIMUM 4 LBS/CY MACRO-SYNTHETIC FIBERS (1.5 IN. MIN. TO 2.5 IN. MAX.) MEETING ASTM C1116 TYPE III SHALL BE ADDED TO THE MIX.

THE MACRO-SYNTHETIC FIBERS SHALL BE INCORPORATED INTO THE MIX IN SUCH A WAY THAT NO 'BALLING' OCCURS. UPON INSPECTION OF THE MIX AT THE TIME OF PLACEMENT, IF ANY 'BALLING' OCCURS, THE ENGINEER SHALL REJECT THE REMAINDER OF THE LOAD AT ANY TIME DURING THE POUR. IT IS IMPORTANT TO FOLLOW INDUSTRY STANDARDS AND ASTM SPECIFICATIONS ON THE PREMIXING OF THE CEMENT, AGGREGATE, AND MACRO-SYNTHETIC FIBERS PRIOR TO THE ADDITION OF WATER AND ADMIXTURES. PROVIDE MACRO-SYNTHETIC FIBERS THAT ARE MONOFILAMENT FIBERS MADE FROM VIRGIN POLYPROPYLENE, POLYETHYLENE, OR CO-POLYMERS THAT ARE INERT TO ALKALI ATTACK. ENSURE THE MACRO-SYNTHETIC FIBERS HAVE A MINIMUM TENSILE STRENGTH OF 70 KSI, A MINIMUM MODULUS OF ELASTICITY OF 800 KSI, A MINIMUM FILAMENT DIAMETER OF 0.012 INCHES, AND ASPECT RATIO BETWEEN 60 AND 100, AND ARE BETWEEN 1.5 AND 2.5 INCHES IN LENGTH. STORE THE MACRO-SYNTHETIC FIBERS ACCORDING TO THE MANUFACTURER'S RECOMMENDATION AND KEEP THE MATERIAL FREE FROM DUST, DIRT AND MOISTURE.

USE A MINIMUM DOSAGE RATE OF MACRO-SYNTHETIC FIBERS OF 4.0 LBS/CY OF CONCRETE. DETERMINE THE FINAL PROPOSED DOSAGE RATE THROUGH MIX TESTING. ENSURE THE FIBER REINFORCED CONCRETE MEETS OR EXCEEDS A MINIMUM EQUIVALENT FLEXURAL STRENGTH RATIO OF 25% ACCORDING TO ASTM C 1609. MACRO-SYNTHETIC FIBERS IS TO BE USED AS AN ADMIXTURE TO CONTROL CRACKING AND IS NOT TO BE USED TO SUPPLEMENT OR REPLACE REINFORCING STEEL IN THE DESIGN. ENSURE THE FINAL PROPOSED MIX IS WORKABLE AND ABLE TO BE PRODUCED SUCH THAT BALLING OR CLUMPING OF THE FIBERS IS NOT A PROBLEM AS DETERMINED BY THE ENGINEER. UTILIZE A LABORATORY REGULARLY INSPECTED BY THE CEMENT AND CONCRETE REFERENCE LABORATORY (CCRL) OF THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY, OR OTHER APPROVED REFERENCE LABORATORY, TO PERFORM THE TESTING. BEFORE USE, SUBMIT DOCUMENTATION TO THE PROJECT ENGINEER CERTIFYING BOTH THE MACRO-SYNTHETIC FIBERS AND THE MIX MEET OR EXCEED THE REQUIRED PROPERTIES. SAMPLING WILL BE ALLOWED FOR TESTING PURPOSES. A DEMONSTRATION OF THE MIX PRODUCTION OR TRIAL MIX, MAY BE REQUIRED BY THE ENGINEER PRIOR TO PLACING ANY OF THE MIX ON THE PROJECT.

THE BATCH WEIGHTS SHALL BE CORRECTED TO COMPENSATE FOR THE MOISTURE CONTAINED IN THE AGGREGATE AT THE TIME OF USE.

CONCRETE SUPPLIERS SHOULD RECOGNIZE THAT ADMIXTURES MAY HAVE AN EFFECT ON STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE CONCRETE SUPPLIERS CHOICE OF ONE OF THESE ADMIXTURES DOES NOT ALLEVIATE MEETING DESIGN REQUIREMENTS.

REVISIONS TO 847.14: AT THE OPTION OF THE ENGINEER, THE CONTRACTOR SHALL MAKE ONE OR MORE, ONE CUBIC YARD, TRIAL BATCHES OF OVERLAY MATERIAL AT LEAST 30 DAYS BEFORE THE OVERLAY IS TO BE PLACED. DEMONSTRATE THE ABILITY TO MEET 847.22 AND 847.27. DEVELOP BEAM BREAK MATURITY CURVES.

REVISIONS TO 847.20: AT LEAST THIRTY DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL A SCHEDULE OF OVERLAY WORK ITEMS TO BE COMPLETED. THE SCHEDULE SHALL INCLUDE A BREAKDOWN OF ALL MAJOR WORK ACTIVITIES ON AN HOURLY BASIS. OVERLAY WORK SHALL NOT BEGIN UNTIL THE SCHEDULE IS APPROVED BY THE ENGINEER.

CONSTRUCTION JOINTS SHALL NOT BE PERMITTED IN THE WHEEL LINE.

REVISIONS TO 847.19: FULL DEPTH REPAIR WILL NOT BE REQUIRED IF LESS THAN ONE HALF OF THE DECK ORIGINAL CONCRETE THICKNESS IS SOUND.

REVISIONS TO 847.22: LONGITUDINAL GROOVES SHALL BE SAWED IN THE CONCRETE SURFACE OF THE TRAVELLED LANES PER 511.20, AFTER THE WET CURE IS COMPLETE. AFTER THE TEXTURING THE CONCRETE SURFACE, CLEAN THE SURFACE AND SPRAY AN UNIFORM APPLICATION OF CURING MATERIAL 705.07, TYPE 1 OR 1D, AS PER CMS 511.17 METHOD B OF MEMBRANE CURING. THE DECK SURFACE MUST BE DRY PRIOR TO PLACEMENT OF THE CURING MATERIAL. IF THE SAWING OF THE LONGITUDINAL GROOVES CANNOT BE DONE WITHIN THE SAME SHORT-TERM CLOSURE PERIOD AS THE OVERLAY, THE CONTRACTOR MAY ALLOW TRAFFIC ONTO THE OVERLAY, AND SHALL HAVE 24 HOURS FROM REMOVAL OF THE WET CURE TO SAW THE LONGITUDINAL GROOVES AND REAPPLY THE MEMBRANE-CURING COMPOUND.

REVISE 847.23, 847.24 AND 847.29. THE CONTRACTOR SHALL CONTINUE THE WET CURE FOR THE MAXIMUM NUMBER OF HOURS POSSIBLE DURING THE PERMITTED LANE CLOSURE. THE CLOCK STARTS FOR THE WET CURE WHEN THE OVERLAY PLACEMENT IS COMPLETE.

TABLE 847.23 SCHEDULE OF DEDUCTIONS FOR WET CURE PERIOD LESS THAN 24 HOURS.

HOURS OF WET CURE AMOUNT OF DEDUCTION FOR EACH HOUR LESS THAN 24 HOURS OF WET CURE PER BID PRICE OF SQUARE YARD OF CONCRETE OVERLAY, AS PER PLAN (BY PERCENTAGE)

24-22	0%
21	2%
20	4%
19	6%
18	10%
17	14%
16	18%
15	22%
14	26%
13	30%
12	34%

IF THE CONTRACTOR FAILS TO OPEN LANES TO TRAFFIC AT THE TIMES REQUIRED IN THE MAINTENANCE OF TRAFFIC NOTES, THE CONTRACTOR WILL BE ASSESSED THE HIGHER OF THE TWO DISINCENTIVES FOR THE WET CURE PERIOD AND FOR THE MAINTENANCE OF TRAFFIC REQUIREMENT.

TRAFFIC WILL NOT BE PERMITTED ON THE FINISHED OVERLAY SURFACE UNTIL AFTER COMPLETION OF THE WET CURE, WHICH IS A MINIMUM OF 12 HOURS, AND AFTER TWO TEST BEAMS HAVE ATTAINED AN AVERAGE MODULUS OF RUPTURE OF 600 PSI.

FOR EACH POUR, THE CONTRACTOR SHALL 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 TESTS AND DOCUMENT THE TIME OF THE POUR, THE TIME OF THE BEAM BREAK TESTS AND THE MODULUS OF RUPTURE OF EACH BEAM UNTIL THE MODULUS OF RUPTURE OF TWO TESTS IS NOT LESS THAN 650 PSI.

REVISIONS TO 847.26: THE REMOVAL OPERATIONS SHALL NOT BEGIN IF SUSTAINED RAINS (5 HOURS OR MORE WITH BREAKS BETWEEN SHOWERS LESS THAN 1/2 HOURS) ARE PREDICTED WITHIN 48 HOURS OF COMMENCEMENT.

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.

PAYMENT FOR ALL LABOR, MATERIAL, AND EQUIPMENT NECESSARY TO COMPLETE THE ABOVE WORK SHALL BE INCLUDED IN ITEM 847 - MICRO-SILICA CONCRETE OVERLAY, AS PER PLAN, ON A SQUARE YARD BASIS.

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DESIGN AGENCY  
DATE 11-13-17  
STRUCTURE FILE NUMBER  
VARIES

REVIEWED  
WHM

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STK

DESIGNED  
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CHECKED  
AMR

STRUCTURE GENERAL NOTES 4  
BRIDGE NO. VARIES

D08 - BM - F Y 2019  
PID No. 87127

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HAM-75-0086 ESTIMATED QUANTITIES					REFER TO BRIDGE PLANS ON SHEET 20 OF 58				
ITEM	EXTENSION	FUNDING 01/IMS/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
512	10100	182	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		182			
512	74000	63	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES		63			
516	46700	3	EACH	RESET BEARING		3			
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN		LS			12/58
SPECIAL	51900100	792	SF	COMPOSITE FIBER WRAP SYSTEM		792			
519	11101	259	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN		259			12/58

HAM-75-0089 ESTIMATED QUANTITIES					REFER TO BRIDGE PLANS ON SHEET 20 OF 58				
ITEM	EXTENSION	FUNDING 01/IMS/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
512	10100	103	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)		103			
516	46700	5	EACH	RESET BEARING		5			
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN		LS			12/58
SPECIAL	51900100	469	SF	COMPOSITE FIBER WRAP SYSTEM		469			
519	11101	121	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN		121			12/58

HAM-75-0240L ESTIMATED QUANTITIES					REFER TO BRIDGE PLANS ON SHEET 24 OF 58				
ITEM	EXTENSION	FUNDING 01/IMS/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203	LS	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LS		12/58
202	38700	12	EACH	GUARDRAIL POST REMOVED				12	
513	10201	225	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN			225		12/58
514	00050	1646	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			1646		
514	00056	1646	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			1646		
514	00060	1683	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			1683		
514	00066	1683	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			1683		
514	00504	2	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			2		
514	10000	2	EACH	FINAL INSPECTION REPAIR			2		
516	44100	22	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (8" X 14" X 2.0732" WITH 9" X 16.5" X VAR. LOAD PLATE)			22		
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LS		12/58
606	17900	12	EACH	GUARDRAIL POST				12	
613	41201	6	CY	LOW STRENGTH MORTAR BACKFILL, AS PER PLAN				6	12/58

HAM-75-0240R ESTIMATED QUANTITIES					REFER TO BRIDGE PLANS ON SHEET 25 OF 58				
ITEM	EXTENSION	FUNDING 01/IMS/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203	LS	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LS		12/58
513	10201	440	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN			440		12/58
514	00050	2044	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			2044		
514	00056	2044	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			2044		
514	00060	2116	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			2116		
514	00066	2116	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			2116		
514	00504	3	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			3		
514	10000	3	EACH	FINAL INSPECTION REPAIR			3		
516	44100	28	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (8" X 14" X 2.0732" WITH 9" X 16.5" X VAR. LOAD PLATE)			28		
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LS		12/58



DESIGNED BY: AMR  
 CHECKED BY: AMR  
 DRAWN BY: STK  
 REVIEWED BY: WHM  
 DATE: 11-13-17  
 STRUCTURE FILE NUMBER: VARIES

STRUCTURE QUANTITIES 1  
 BRIDGE NO. VARIES

D08-BM-FY2019  
 PID No. 87127



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HAM-75-1642E ESTIMATED QUANTITIES

REFER TO BRIDGE PLANS ON SHEET 28 OF 58

ITEM	EXTENSION	FUNDING 01/IMS/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203	LS	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LS		12/58
514	00050	746	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			746		
514	00056	746	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			746		
514	00060	746	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			746		
514	00066	746	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			746		
514	00504	1	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			1		
514	10000	1	EACH	FINAL INSPECTION REPAIR			1		
516	44100	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (9" X 15" X 2.811" WITH 11" X 16" X 1.5" LOAD PLATE)			12		
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LS		12/58
849	10000	LS	-	DAMAGE ASSESSMENT			LS		
849	10500	LS	-	SURFACE PREPARATION			LS		
849	10600	1	HOURL	REPAIRING DAMAGED MEMBERS BY GRINDING			1		

HAM-75-1539L ESTIMATED QUANTITIES

REFER TO BRIDGE PLANS ON SHEET 31 OF 58

ITEM	EXTENSION	FUNDING 01/IMS/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
SPECIAL	53001300	57	FT	STRUCTURES: EXPANSION JOINT REPAIR	57				32/58

HAM-50-3604 ESTIMATED QUANTITIES

REFER TO BRIDGE PLANS ON SHEET 33 OF 58

ITEM	EXTENSION	FUNDING 03/S>2/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203	LS	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LS		12/58
516	44200	18	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (12" X 18.5" X 3.8354" WITH 13" X 19.5" X 1.5" LOAD PLATE)			18		
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LS		12/58
SPECIAL	51900100	60	SF	COMPOSITE FIBER WRAP SYSTEM		60			
519	11101	45	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN		45			12/58

GRE-844-0193L ESTIMATED QUANTITIES

REFER TO BRIDGE PLANS ON SHEET 36 OF 58

ITEM	EXTENSION	FUNDING 04/NHS/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203	LS	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LS		12/58
516	44300	5	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (13" X 20" X 4.0732" WITH 14" X 21" X 1.5" LOAD PLATE)			5		
516	44400	7	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (13" X 20" X 5.9848" WITH 14" X 21" X 1.5" LOAD PLATE)			7		
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LS		12/58

GRE-844-0193R ESTIMATED QUANTITIES

REFER TO BRIDGE PLANS ON SHEET 36 OF 58

ITEM	EXTENSION	FUNDING 04/NHS/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203	LS	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LS		12/58
509	10000	757	LB	EPOXY COATED REINFORCING STEEL	352		405		
509	20001	570	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	141		429		12/58
510	10000	10	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	10				
511	52110	15	CY	CLASS QC MS CONCRETE	6		9		
512	10100	10	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	3		7		
516	11210	86	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL			86		
516	44300	6	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (13" X 20" X 4.0732" WITH 14" X 21" X 1.5" LOAD PLATE)			6		
516	44400	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (13" X 20" X 5.9848" WITH 14" X 21" X 1.5" LOAD PLATE)			8		
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LS		12/58



DESIGNED BY: STK  
 CHECKED BY: AMR  
 DRAWN BY: STK  
 REVISED BY:  
 REVIEWED BY: WHM  
 DATE: 11-13-17  
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STRUCTURE QUANTITIES 2  
 BRIDGE NO. VARIES

D08-BM-FY2019  
 PID No. 87127

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BUT-75-0405R ESTIMATED QUANTITIES					REFER TO BRIDGE PLANS ON SHEET 43 OF 58				
ITEM	EXTENSION	FUNDING 01/IMS/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
516	46700	11	EACH	RESET BEARING			11		
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LS		12/58

BUT-127-1964 ESTIMATED QUANTITIES					REFER TO BRIDGE PLANS ON SHEET 44 OF 58				
ITEM	EXTENSION	FUNDING 02/STR/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203	LS	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	LS				12/58
503	21300	LS	-	UNCLASSIFIED EXCAVATION	LS				
509	10000	201	LB	EPOXY COATED REINFORCING STEEL	201				
509	20001	69	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	69				12/58
510	10000	40	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	40				
511	53014	4	CY	CLASS QC3 CONCRETE, MISC.: SELF-CONSOLIDATING CONCRETE	4				14/58, 15/58
512	10100	6	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	6				
512	74000	4	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES	4				
513	21600	3364	LB	STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN	3364				12/58
516	41100	8	EACH	1/8" PREFORMED BEARING PAD	8				
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LS		12/58

CLE-275-0043 ESTIMATED QUANTITIES					REFER TO BRIDGE PLANS ON SHEET 47 OF 58				
ITEM	EXTENSION	FUNDING 01/IMS/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203	LS	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LS		12/58
514	00050	640	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			640		
514	00056	640	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			640		
514	00060	640	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			640		
514	00066	640	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			640		
514	00504	1	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			1		
514	10000	1	EACH	FINAL INSPECTION REPAIR			1		
516	44200	10	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (10" X 17" X 3.3232" WITH 11" X 18" X 1.5" LOAD PLATE)			10		
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LS		12/58

HAM-126-2286 ESTIMATED QUANTITIES					REFER TO BRIDGE PLANS ON SHEET 49 OF 58				
ITEM	EXTENSION	FUNDING 03/S>2/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203	LS	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LS		12/58
514	00050	772	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			772		
514	00056	772	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			772		
514	00060	772	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			772		
514	00066	772	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			772		
514	00504	1	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			1		
514	10000	1	EACH	FINAL INSPECTION REPAIR			1		
516	44200	8	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (12" X 21" X 3.8354" WITH 13" X 22" X 1.5" LOAD PLATE)			8		
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LS		12/58



DESIGNED BY: STK  
 CHECKED BY: AMR  
 DRAWN BY: STK  
 REVISIONS:  
 WHM 11-13-17  
 STRUCTURE FILE NUMBER VARIES  
 DATE: 11-13-17

STRUCTURE QUANTITIES 3  
 BRIDGE NO. VARIES

D08-BM-FY2019  
 PID No. 87127

3 / 4

I:\D08\1001\project\project\008\Wide\108127\Design\Docs\Final Plans\Certification 2nd Time\Changed by 0001\075\_0086C\_S0004.dgn 10/10/2018 8:25:28 AM rkramer

CLE-126-0211 ESTIMATED QUANTITIES					REFER TO BRIDGE PLANS ON SHEET 51 OF 58				
ITEM	EXTENSION	FUNDING 03/S>2/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203	LS	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LS		12/58
514	00050	1288	SF	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL			1288		
514	00056	1288	SF	FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT			1288		
514	00060	1288	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			1288		
514	00066	1288	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			1288		
514	00504	1	MNHR	GRINDING FINES, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL			1		
514	10000	1	EACH	FINAL INSPECTION REPAIR			1		
516	44300	12	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (14.5" X 22.5" X 4.7104" WITH 15.5" X 23.5" X 1.5" LOAD PLATE)			12		
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LS		12/58

HAM-27-1408 ESTIMATED QUANTITIES					REFER TO BRIDGE PLANS ON SHEET 53 OF 58				
ITEM	EXTENSION	FUNDING 01/IMS/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
202	11203	LS	-	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LS		12/58
516	44200	22	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE) (11.5" X 18" X 3.3232" WITH 12.5" X 19" X 1.5" LOAD PLATE)			22		
516	47001	LS	-	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN			LS		12/58
SPECIAL	53000200	LS	-	STRUCTURES, POLYESTER POLYMER CONCRETE - TEST SLAB			LS		
SPECIAL	53000800	1258	SY	STRUCTURES, POLYESTER POLYMER CONCRETE OVERLAY (1" THICK)			1258		
SPECIAL	53000800	400	SY	STRUCTURES, HAND CHIPPING			400		
SPECIAL	53000800	1258	SY	STRUCTURES, EXISTING CONCRETE OVERLAY REMOVED (1" THICK)(PARTIAL)			1258		54/58
SPECIAL	53001100	15	CY	STRUCTURES, POLYESTER POLYMER CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			15		
847	10001	1324	SY	MICRO SILICA MODIFIED CONCRETE OVERLAY, AS PER PLAN (1 1/2" THICK) (ACCELERATED CLOSURE)			1324		15/58
847	20000	30	CY	MICRO SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY			30		
847	30000	LS	-	TEST SLAB			LS		
847	30200	1	CY	FULL DEPTH REPAIR			1		
847	30401	1324	SY	EXISTING CONCRETE OVERLAY REMOVED (1.5" THICK)(PARTIAL), AS PER PLAN			1324		54/58
847	50000	500	SY	HAND CHIPPING			500		

CLE-32-1314L ESTIMATED QUANTITIES					REFER TO BRIDGE PLANS ON SHEET 56 OF 58				
ITEM	EXTENSION	FUNDING 04/NHS/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
516	01301	103	FT	ELASTOMERIC STRIP SEAL WITHOUT STEEL EXTRUSIONS, AS PER PLAN	103				12/58

HAM-275-2572 ESTIMATED QUANTITIES					REFER TO BRIDGE PLANS ON SHEET 57 OF 58				
ITEM	EXTENSION	FUNDING 01/IMS/BR TOTAL	UNIT	DESCRIPTION	ABUT.	PIERS	SUPER.	GEN.	SHEET #
SPECIAL	53001300	99	FT	STRUCTURES: EXPANSION JOINT REPAIR	99				58/58



DESIGNED BY: STK  
CHECKED BY: AMR  
DRAWN BY: STK  
REVISIONS: .  
REVIEWED BY: WHM  
DATE: 11-13-17  
STRUCTURE FILE NUMBER: VARIES

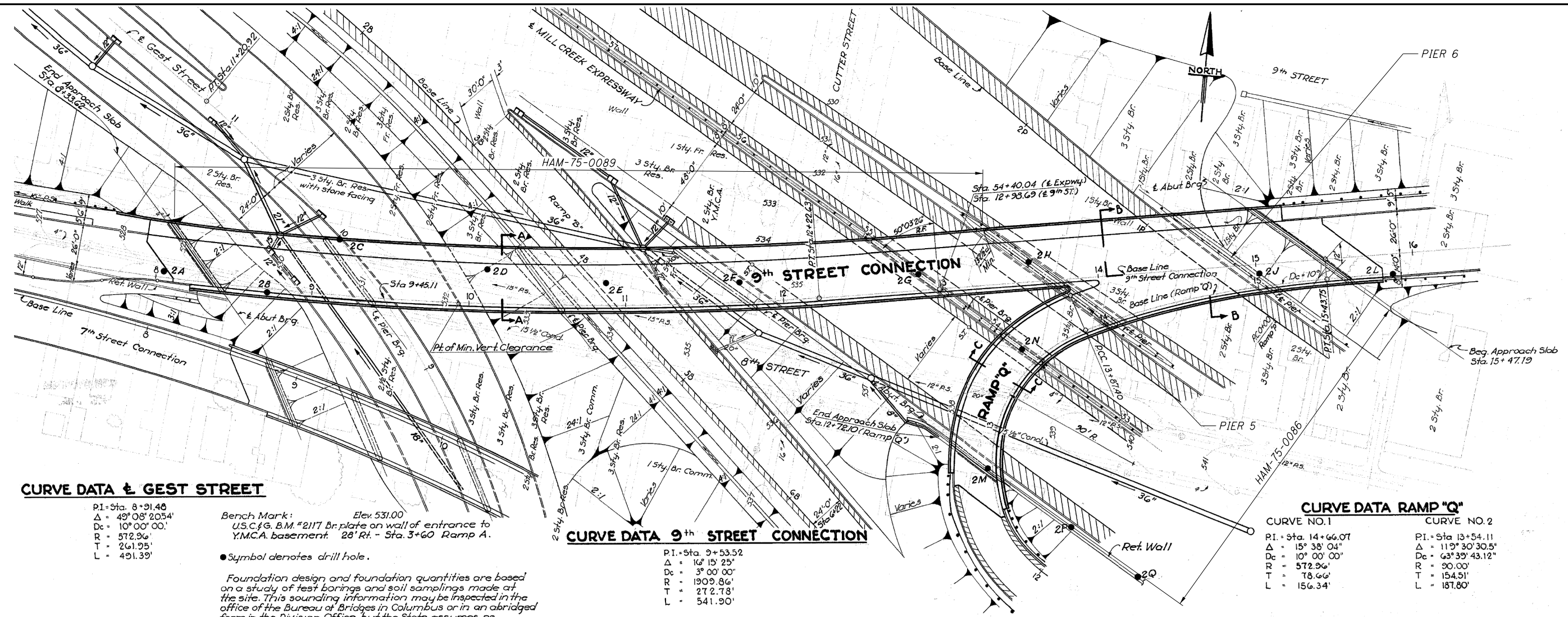
STRUCTURE QUANTITIES 4  
BRIDGE NO. VARIES

D08-BM-FY2019  
PID No. 87127

4 / 4

19  
58

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**CURVE DATA & GEST STREET**

PI = Sta. 8+91.46  
 Δ = 49° 08' 20.54"  
 Dc = 10° 00' 00."  
 R = 572.96'  
 T = 261.95'  
 L = 491.39'

Bench Mark: Elev. 531.00  
 U.S.C. & G. B.M. #2117 Br. plate on wall of entrance to Y.M.C.A. basement. 28' Rt. - Sta. 3+60 Ramp A.

● Symbol denotes drill hole.

Foundation design and foundation quantities are based on a study of test borings and soil samplings made at the site. This sounding information may be inspected in the office of the Bureau of Bridges in Columbus or in an abridged form in the Division Office, but the State assumes no responsibility for the accuracy thereof.

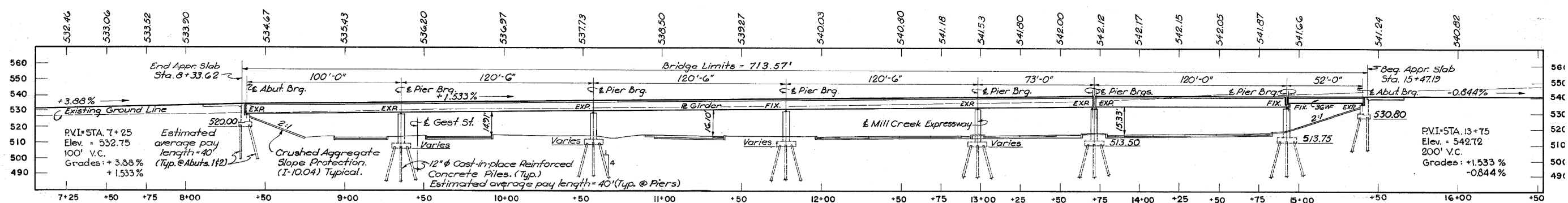
**CURVE DATA 9th STREET CONNECTION**

PI = Sta. 9+53.52  
 Δ = 16° 15' 25"  
 Dc = 3° 00' 00"  
 R = 1909.86'  
 T = 272.78'  
 L = 541.90'

**CURVE DATA RAMP "Q"**

CURVE NO.1	CURVE NO.2
PI = Sta. 14+66.07	PI = Sta. 13+54.11
Δ = 15° 38' 04"	Δ = 11° 30' 30.5"
Dc = 10° 00' 00"	Dc = 63° 39' 43.12"
R = 572.96'	R = 90.00'
T = 78.66'	T = 154.51'
L = 156.34'	L = 187.80'

**PLAN**



**PROFILE ON BASE LINE OF 9th STREET CONNECTION**

**EXISTING STRUCTURE (HAM-75-0086)**

TYPE: NON-CONTINUOUS STEEL PLATE GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 120'-0"±, 52'-0"±, 53'-1/2"±, 76'-7 1/2"± C/C BRGS.

ROADWAY: 28'-4"± T/T BARRIER

LOADING: C.F. = 400(57)

SKEW: VARIES

WEARING SURFACE: 1 3/4"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY

APPROACH SLABS: 25'-0"± LONG (AS-1-54)

STRUCTURAL FILE NUMBER: 3109003

DATE BUILT: 1963 REHABILITATED: 1988 & 2009

DISPOSITION: TO BE REHABILITATED

**EXISTING STRUCTURE (HAM-75-0089)**

TYPE: CONTINUOUS STEEL PLATE GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 100'-0"±, 120'-6"±, 120'-6"±, 120'-6"±, 73'-0"± C/C BRGS.

ROADWAY: 29'-2"± T/T BARRIER

LOADING: C.F. = 400(57)

SKEW: VARIES

WEARING SURFACE: 1 3/4"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY

APPROACH SLABS: 25'-0"± LONG (AS-1-54)

STRUCTURAL FILE NUMBER: 3109038

DATE BUILT: 1963 REHABILITATED: 1988 & 2009

DISPOSITION: TO BE REHABILITATED

**NOTE**  
 SEE SHEET 16 OF 58 FOR STRUCTURE QUANTITIES.

**PROPOSED WORK**

1. REMOVE EXISTING SEALER AT AREAS TO BE PATCHED OR RECEIVE GLASS FIBER FRP ON PIER 6.
2. PATCH THE PIER CAPS AND COLUMNS OF PIERS 5 AND 6.
3. WRAP THE SPECIFIED COLUMNS AND ALL AREAS TO BE PATCHED WITH GLASS FIBER FRP AS SHOWN IN THE PLANS.
4. APPLY EPOXY URETHANE SEALER ON PIERS 5 & 6.
5. RESET AND SHIM BEARINGS AT PIER 5 AS SPECIFIED IN PLANS.

DESIGN AGENCY  
**CARPENTER  
 MARTY**  
 TRANSPORTATION  
 ENGINEERS, INC.

DATE: 11-15-17  
 REVIEWED: WHM  
 DRAWN: STK  
 CHECKED: AMR

DESIGNED: STK  
 CHECKED: AMR

HAMILTON COUNTY  
 STA. 8+33.62  
 STA. 15+47.19

STRUCTURE FILE NUMBER  
 3109003/3109038

**SITE PLAN**  
 BRIDGE NO. HAM-75-0086/0089  
 EIGHTH STREET OVER I.R. 75

**D08-BM-FY2019**  
 PID No. 87127

**ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN**

PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2017.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ESTIMATED PATCHING QUANTITIES  
HAM-75-0086 (S.F.)

PIER 5	MEASURED QUANTITIES	ESTIMATED QUANTITIES
1	4	6*
2	4	6*
3	20	30*
4	20	30*
5	2	3*
6	4	6*
7	1	1.5*
8	2	3*
9	2	3*
10	1	1.5*
<b>TOTAL PIER 5</b>	<b>60</b>	<b>90*</b>

\* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ACCOUNT FOR ADDITIONAL DETERIORATION.

**ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN**

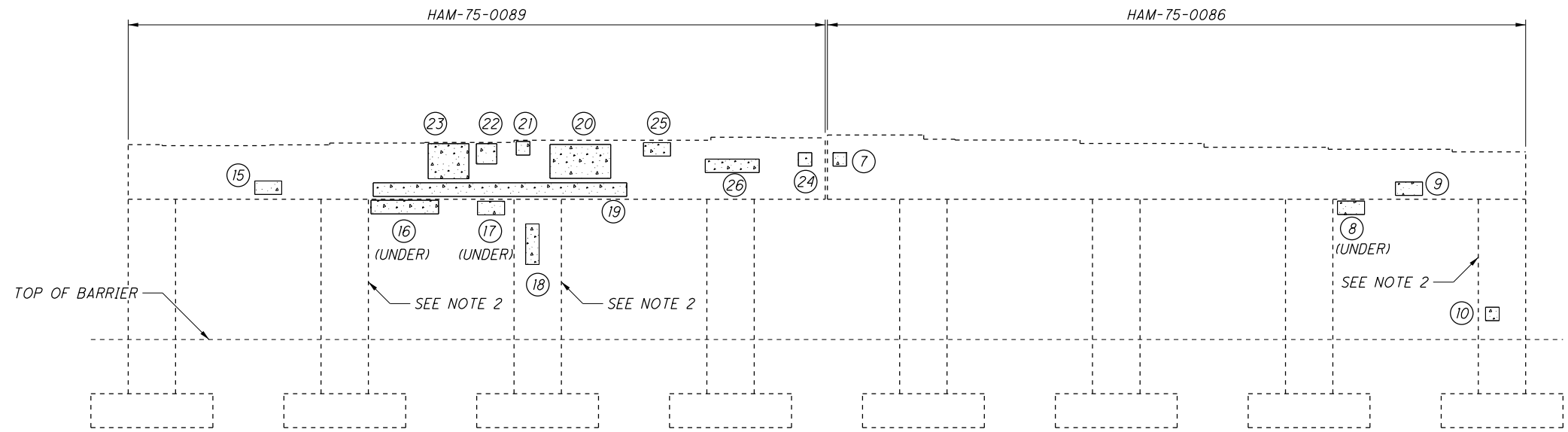
PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2017.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ESTIMATED PATCHING QUANTITIES  
HAM-75-0089 (S.F.)

PIER 5	MEASURED QUANTITIES	ESTIMATED QUANTITIES
11	3	4.5*
12	4.5	6.75*
13	8	12*
14	2	3*
15	2	3*
16	5	7.5*
17	2	3*
18	3	4.5*
19	20	30*
20	11.5	17.25*
21	1	1.5*
22	2.25	3.38*
23	9	13.5*
24	1	1.5*
25	2	3*
26	4	6*
<b>TOTAL PIER 5</b>	<b>80.25</b>	<b>120.38*</b>

\* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ACCOUNT FOR ADDITIONAL DETERIORATION.



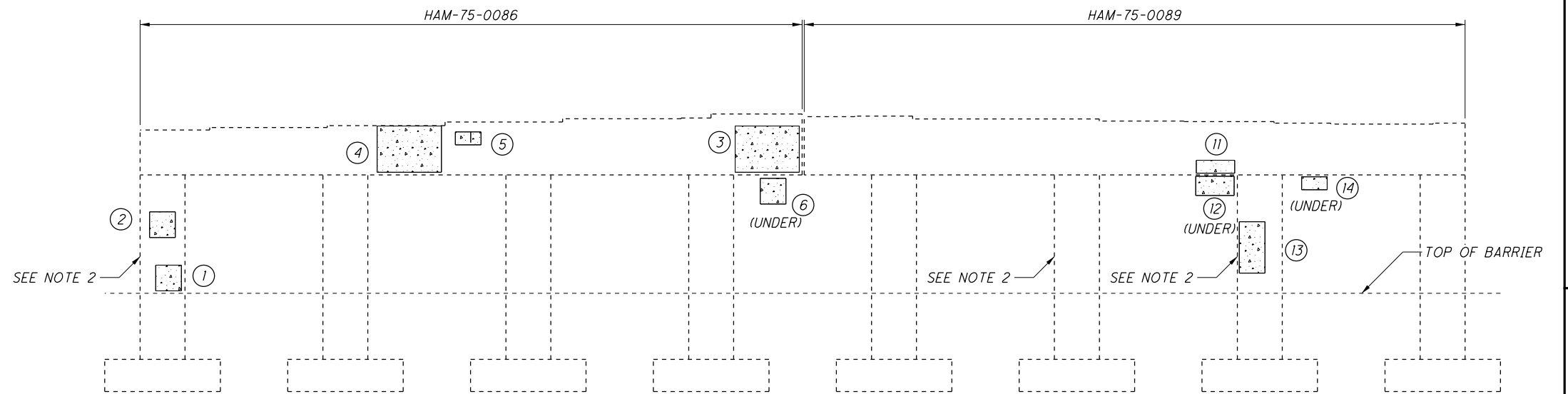
**PIER 5 (FACING NORTH)**

**LEGEND**

ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

**NOTES**

1. APPLY ONE LAYER OF GLASS FIBER FRP OVER ALL PATCHED AREAS. GLASS FIBER FRP SHALL EXTEND A MINIMUM OF 1'-0" (OR THE SELECTED MANUFACTURER'S RECOMMENDED DEVELOPMENT LENGTH) BEYOND THE LIMITS OF THE PATCHED AREA.
2. WRAP ENTIRE EXPOSED COLUMN WITH ONE LAYER OF GLASS FIBER FRP.
3. APPLY EPOXY-URETHANE SEALER TO ALL EXPOSED AREAS OF THE PIER CAP AND COLUMNS AFTER PATCHING AND FRP APPLICATION HAS BEEN COMPLETED. USE FEDERAL COLOR 17778.



**PIER 5 (FACING SOUTH)**

P:\DDT\08\0711\_008\_Bridge Maintenance\87127\_D08-BM-FY2018\Design\Structures\HAM075\_0086C\_Sheets\075\_0086C\_S1001.dgn Sheet 9/29/2018 8:06:19 AM CMT006

**LEGEND**

 ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

**NOTES**

1. REMOVE EXISTING SEALER AT AREAS TO BE PATCHED OR RECEIVE GLASS FIBER FRP.
2. WRAP ENTIRE EXPOSED COLUMN WITH ONE LAYER OF GLASS FIBER FRP.
3. APPLY ONE LAYER OF GLASS FIBER FRP OVER ALL PATCHED AREAS. GLASS FIBER FRP SHALL EXTEND A MINIMUM OF 1'-0" (OR THE SELECTED MANUFACTURER'S RECOMMENDED DEVELOPMENT LENGTH) BEYOND THE LIMITS OF THE PATCHED AREA.
4. APPLY EPOXY-URETHANE SEALER TO ALL PATCHED AREAS OF THE PIER CAP AND FRP WRAPPED COLUMNS. USE FEDERAL COLOR 17778.

**ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN**

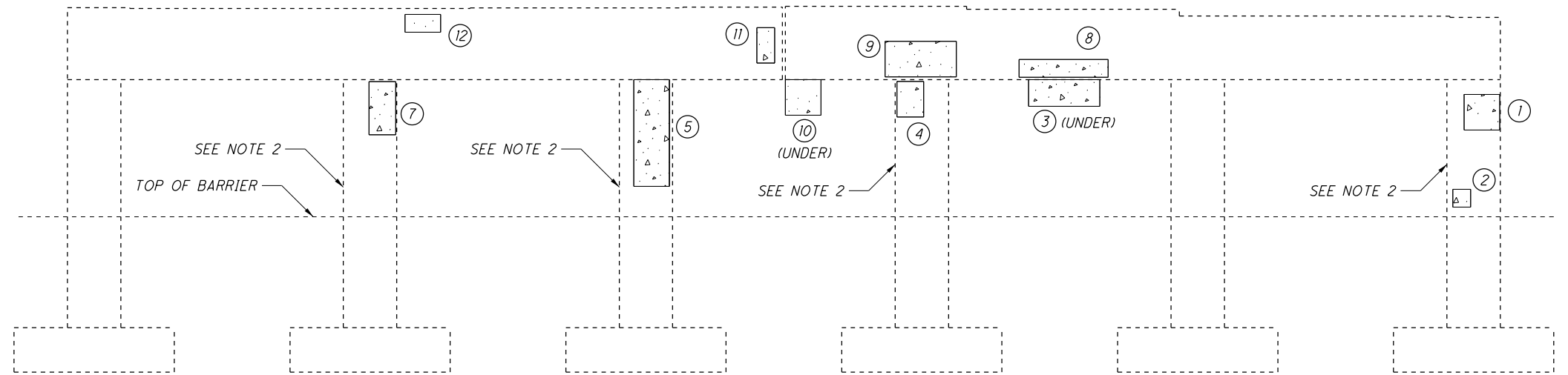
PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2017.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

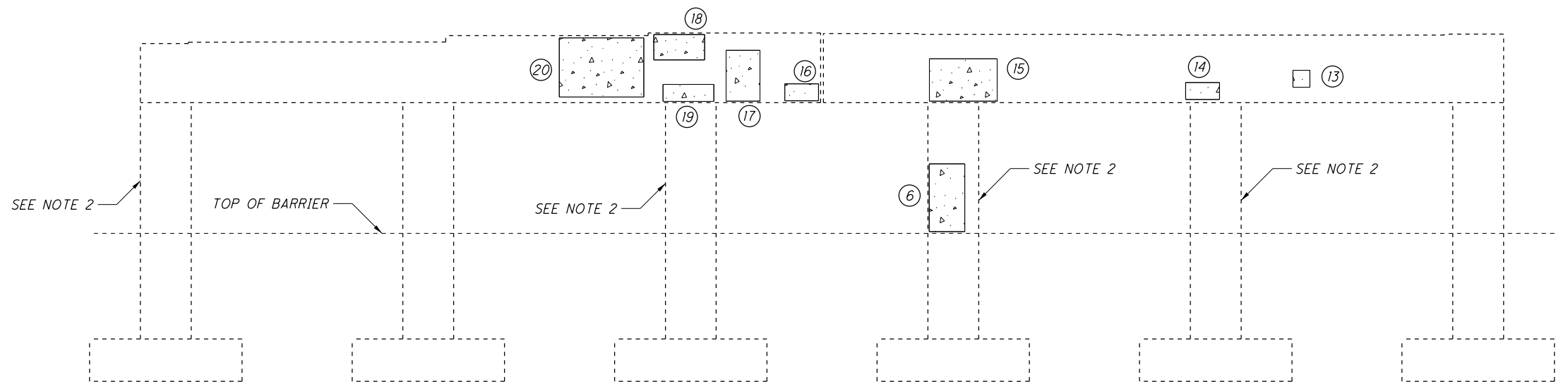
ESTIMATED PATCHING QUANTITIES (S.F.)

PIER 6	MEASURED QUANTITIES	ESTIMATED QUANTITIES
①	4	6*
②	1	1.5*
③	6	9*
④	3	4.5*
⑤	12	18*
⑥	12	18*
⑦	7.5	11.25*
⑧	5	7.5*
⑨	8	12*
⑩	4	6*
⑪	2	3*
⑫	2	3*
⑬	1	1.5*
⑭	2	3*
⑮	10	15*
⑯	2	3*
⑰	6	9*
⑱	4.5	6.75*
⑳	3	4.5*
㉑	17.5	26.25*
TOTAL PIER 6	112.5	168.75*

\* - ESTIMATED QUANTITIES HAVE BEEN INCREASED BY 50% OVER MEASURED QUANTITIES TO ACCOUNT FOR ADDITIONAL DETERIORATION.



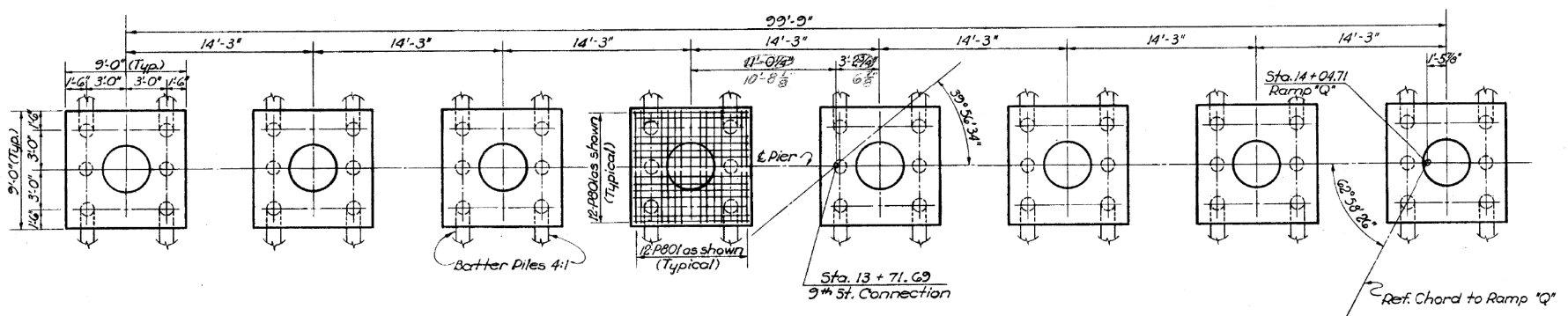
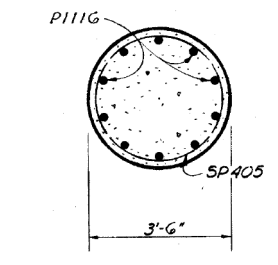
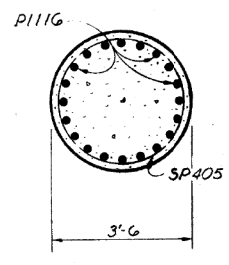
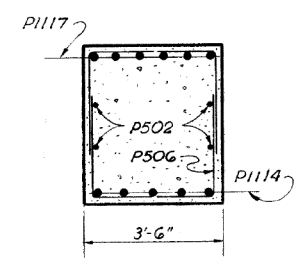
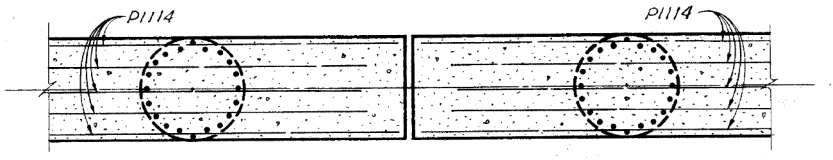
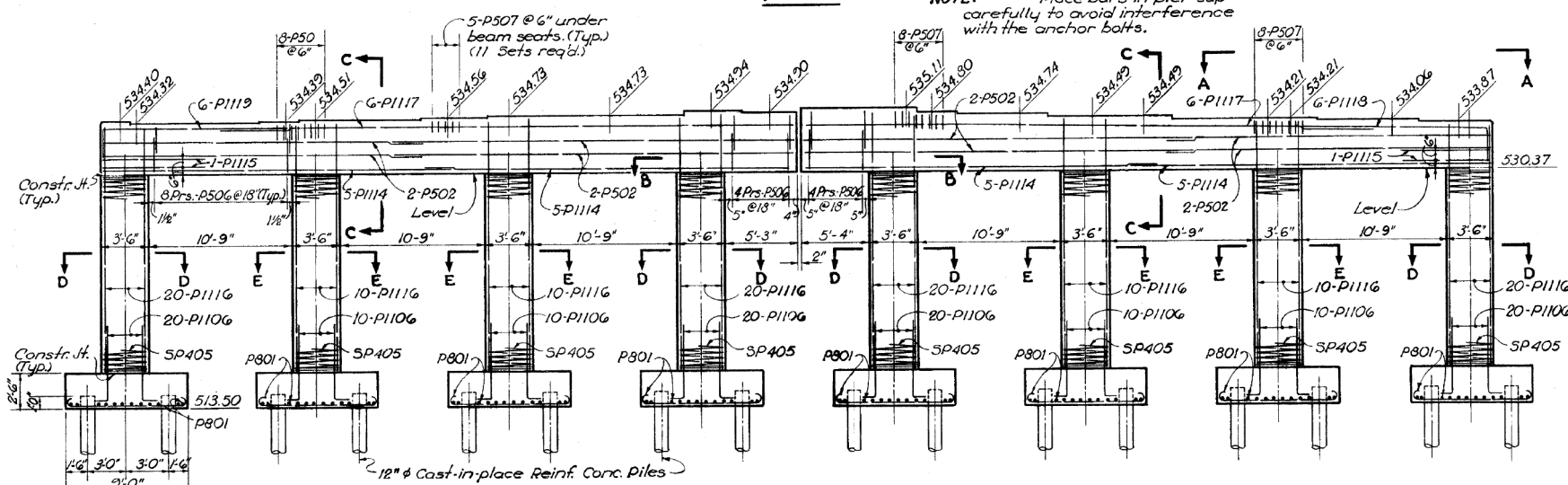
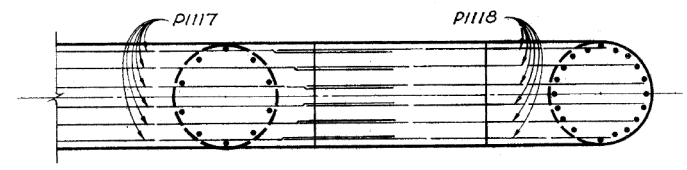
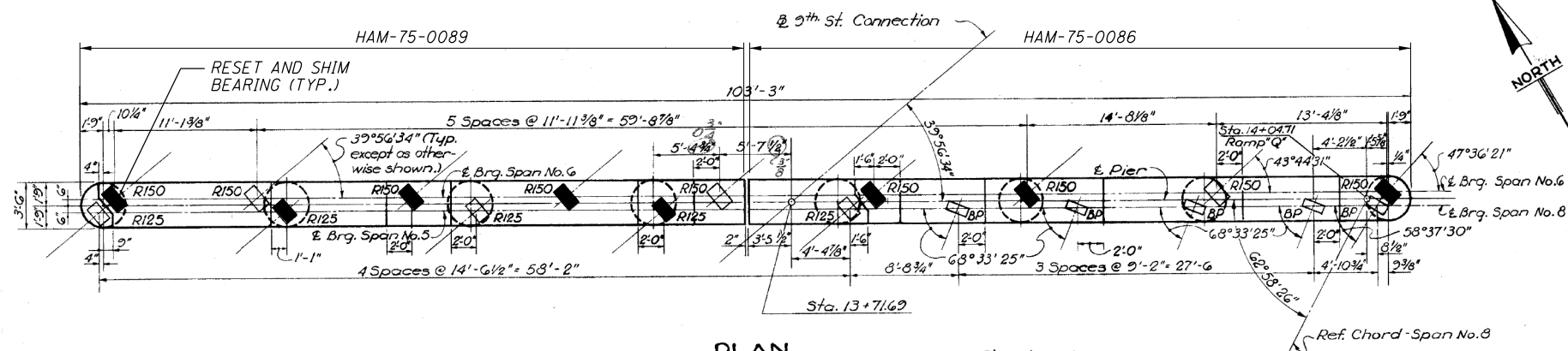
**PIER 6 (FACING NORTH)**



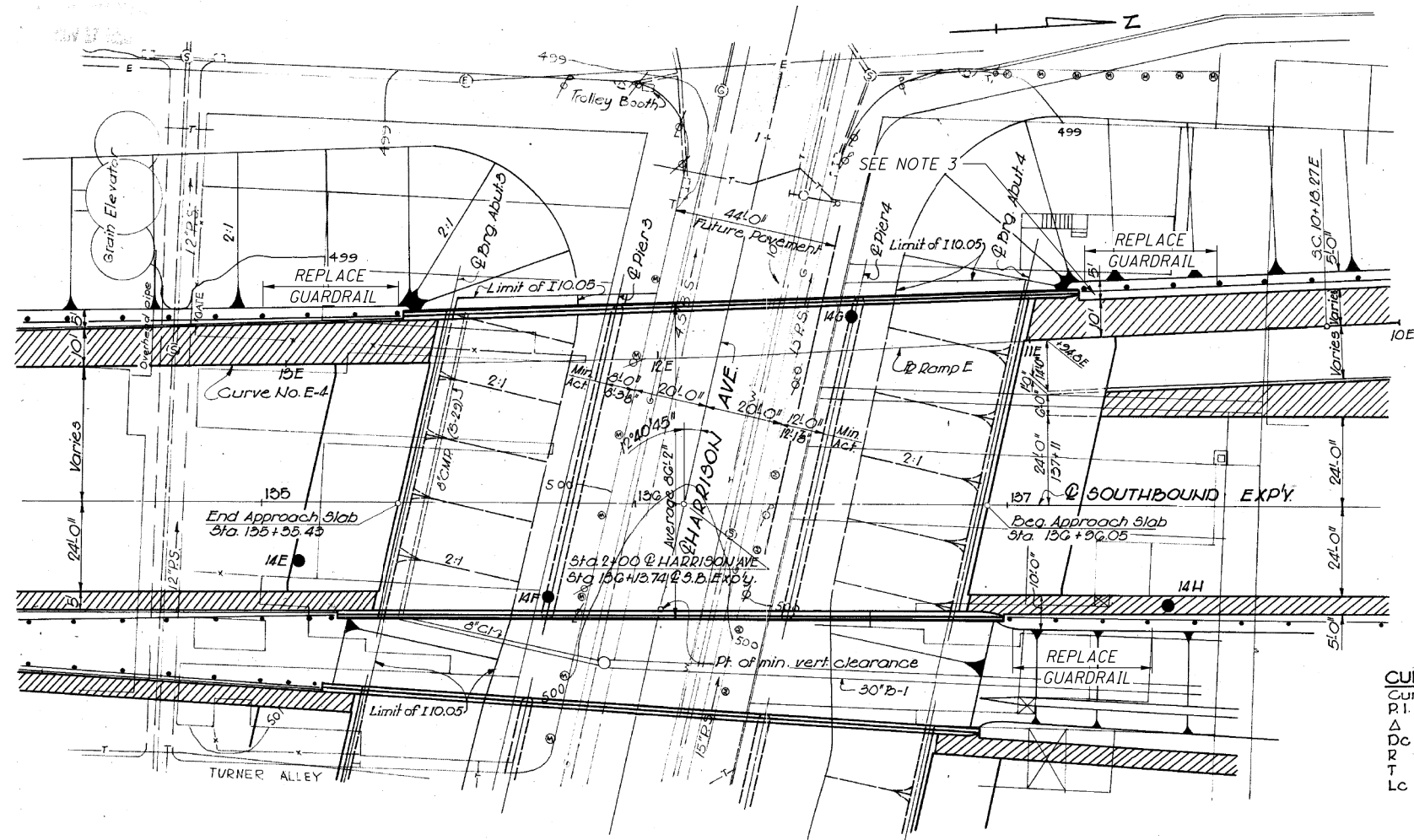
**PIER 6 (FACING SOUTH)**

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**LEGEND**  
 ■ - BEARING TO BE RESET



**CURVE DATA - Ramp E**  
 Curve No. E-4  
 P.I. = 12+10.00  
 Δ = 3° 58' 15"  
 D.C. = 1° 00' 00"  
 R = 5723.56'  
 T = 198.02'  
 L.C. = 397.07'

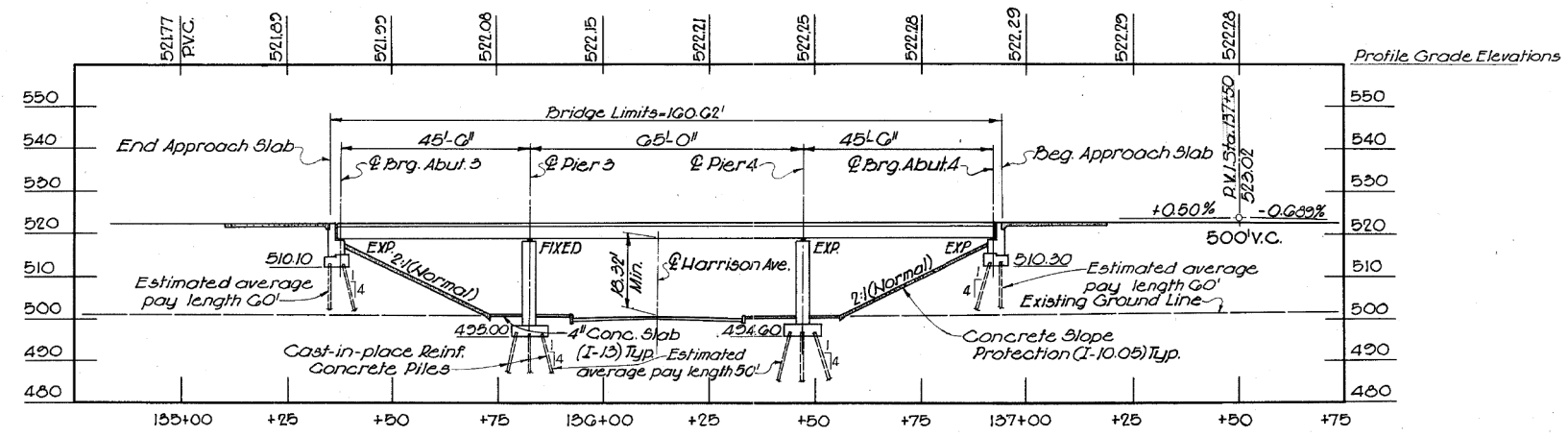
**PLAN**

**NOTE**

SEE SHEET 16 OF 58 FOR STRUCTURE QUANTITIES.

**PROPOSED WORK**

1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS.
2. ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5 FEET FROM THE BEAM END USING OZEU SPECIFICATIONS. PAINT COLOR TO MATCH EXISTING.
3. REPAIR EROSION AT NORTHWEST CORNER THAT IS UNDERMINING THE FORWARD APPROACH SLAB OF THE LEFT BRIDGE.
4. REPLACE DETERIORATED END CROSS FRAMES AS SHOWN IN PLANS.
5. REPLACE DETERIORATED APPROACH GUARDRAIL POSTS AT BOTH THE REAR AND FORWARD ABUTMENT. LIMIT REMOVAL LENGTH TO WITHIN 25 FEET OF BRIDGE.



**PROFILE ON @ SOUTHBOUND EXPRESSWAY**

**EXISTING STRUCTURE**

TYPE: CONTINUOUS ROLLED STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 45'-6"±, 65'-0"±, 45'-6"± C/C BEARINGS

ROADWAY: VARIES, 81'-8"± TO 87'-5"± T/T PARAPETS

LOADING: C.F. = 2000(57)

SKIEW: 12°40'45"± L.F.

WEARING SURFACE: 2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY

APPROACH SLABS: 25'-0"± LONG (AS-1-54)

STRUCTURAL FILE NUMBER: 3109399

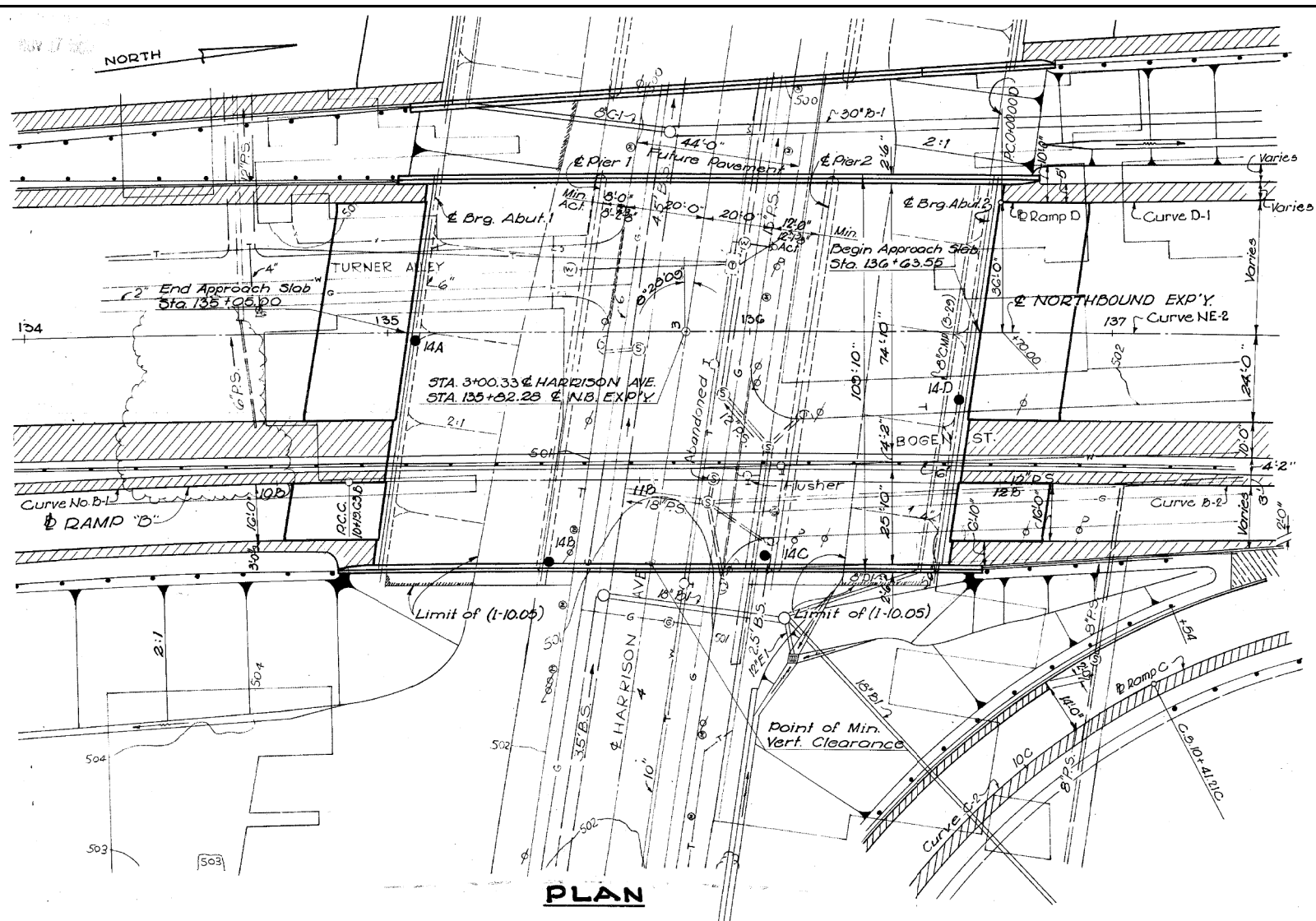
DATE BUILT: 1961

DISPOSITION: TO BE REHABILITATED

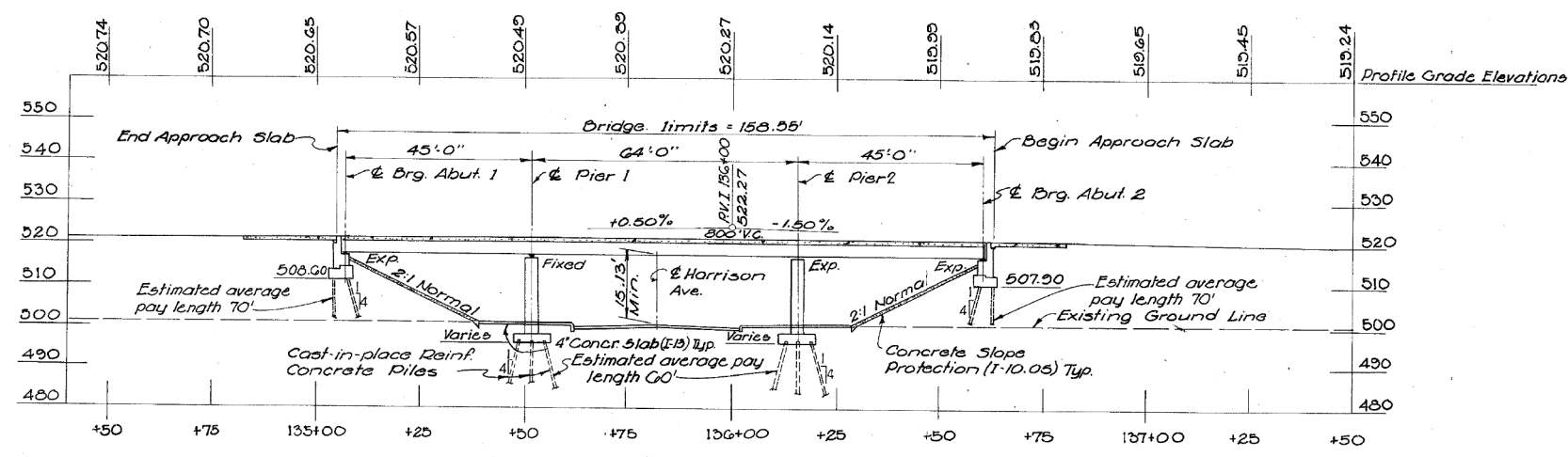
	DATE 11-15-17
	REVIEWED WHM
DRAWN STK	STRUCTURE FILE NUMBER 3109399
DESIGNED STK	CHECKED AMR
HAMILTON COUNTY STA. 135+35.43 STA. 136+96.05	
<b>SITE PLAN</b> BRIDGE NO. HAM-75-0240L I.R. 75 OVER HARRISON AVENUE	
D08-BM-FY2019 PID No. 87127	
1 / 4	
24 58	



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**PLAN**



**PROFILE ON & NORTHBOUND EXPRESSWAY**

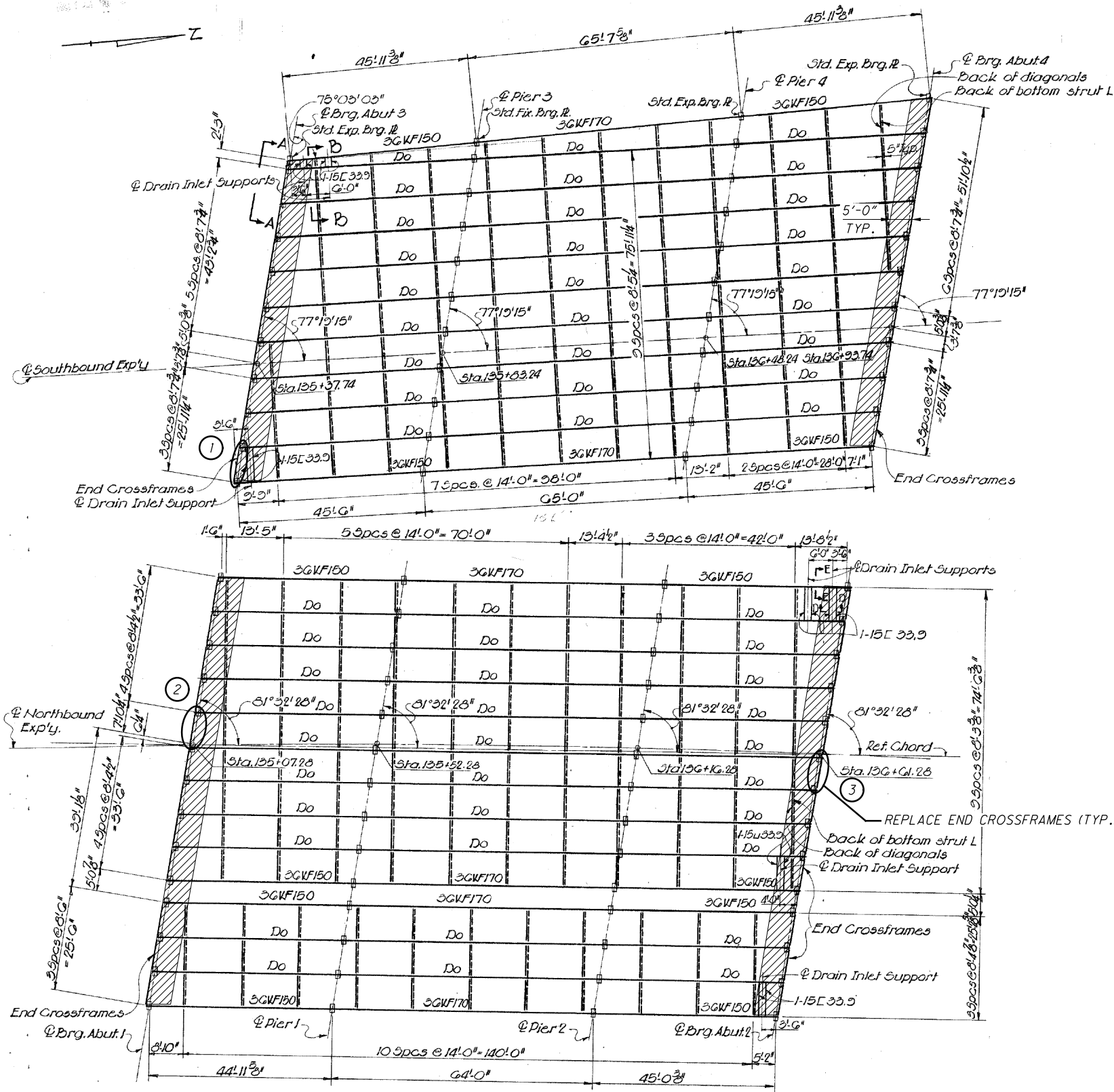
**NOTE**

SEE SHEET 16 OF 58 FOR STRUCTURE QUANTITIES.

**PROPOSED WORK**

1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS.
2. ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5 FEET FROM THE BEAM END USING OZEU SPECIFICATIONS. PAINT COLOR TO MATCH EXISTING.
3. REPLACE DETERIORATED END CROSS FRAMES AS SHOWN IN PLANS.

EXISTING STRUCTURE	
TYPE: CONTINUOUS ROLLED STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE	
SPANS: 45'-0"±, 64'-0"±, 45'-0"± C/C BEARINGS	
ROADWAY: 108'-10"± T/T PARAPETS	
LOADING: C.F. = 2000(57)	
SKEW: 8°28'09"± L.F.	
WEARING SURFACE: 2"± SUPERPLASTICIZED DENSE CONCRETE OVERLAY	
APPROACH SLABS: 25'-0"± LONG (AS-1-54)	
STRUCTURAL FILE NUMBER: 3109429	
DATE BUILT: 1961	
DISPOSITION: TO BE REHABILITATED	



**FRAMING PLAN**

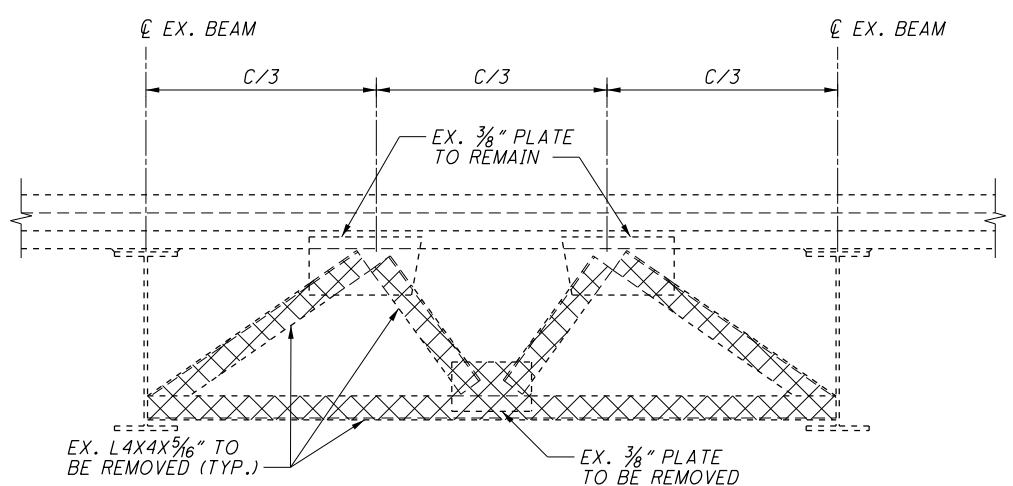
END CROSSFRAME LOCATION	DIMENSION 'C'
1	8'-7 <sup>3</sup> / <sub>4</sub> "±
2	8'-4 <sup>1</sup> / <sub>2</sub> "±
3	8'-4 <sup>1</sup> / <sub>2</sub> "±

**LEGEND**

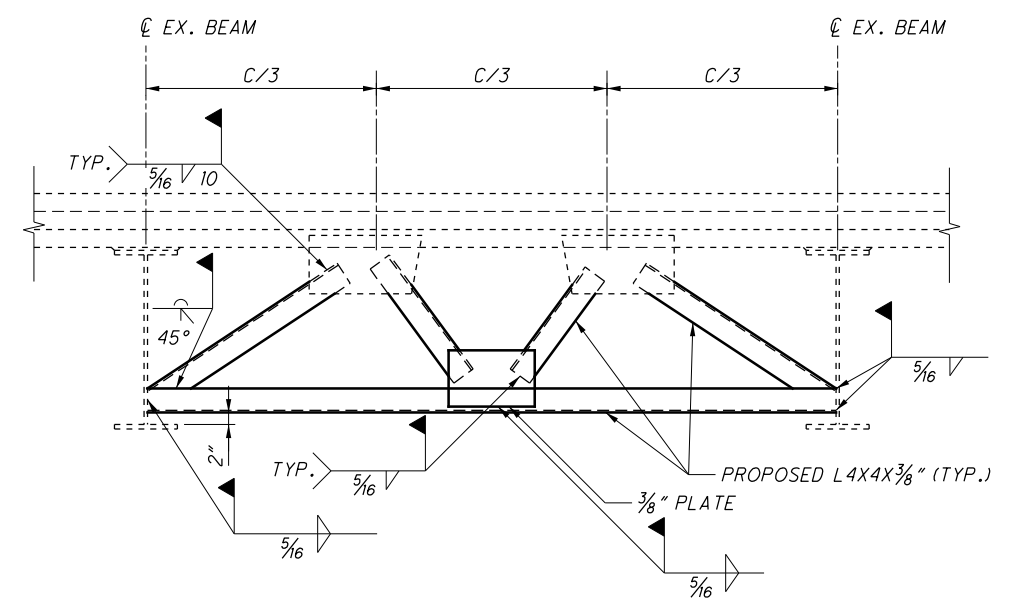
- ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5 FEET FROM THE BEAM END USING OZEU SPECIFICATIONS. PAINT COLOR TO MATCH EXISTING.
- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

**NOTES**

1. ALL COSTS ASSOCIATED WITH THE REMOVAL OF THE EXISTING CROSSFRAMES AND 3/8" PLATES AND GRINDING OF EXISTING WELDS SHALL BE MADE AT THE LUMP SUM BID OF ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
2. PROPOSED STEEL SHALL BE COATED WITH A SHOP APPLIED, INORGANIC ZINC PRIME COAT ACCORDING TO C&MS 514. REPAIR COATINGS DAMAGED BY WELDING ACCORDING TO C&MS 514.22. SHOP APPLIED PRIME COAT AND REPAIRS SHALL BE MADE AT THE UNIT PRICE BID PER POUND OF FOR ITEM 513, STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN.
3. REFER TO STD. DWG. GSD-1-96 FOR ADDITIONAL NOTES AND DETAILS.

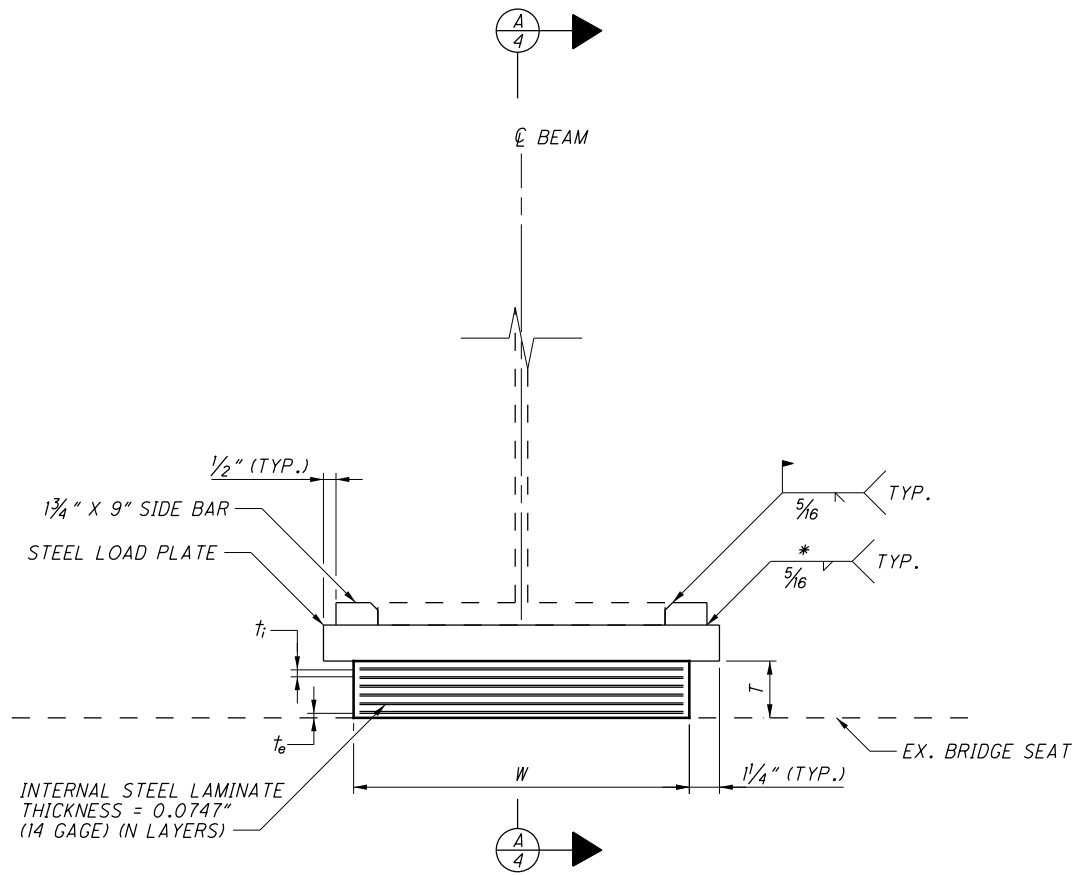


**EXISTING END CROSSFRAME ELEVATION**

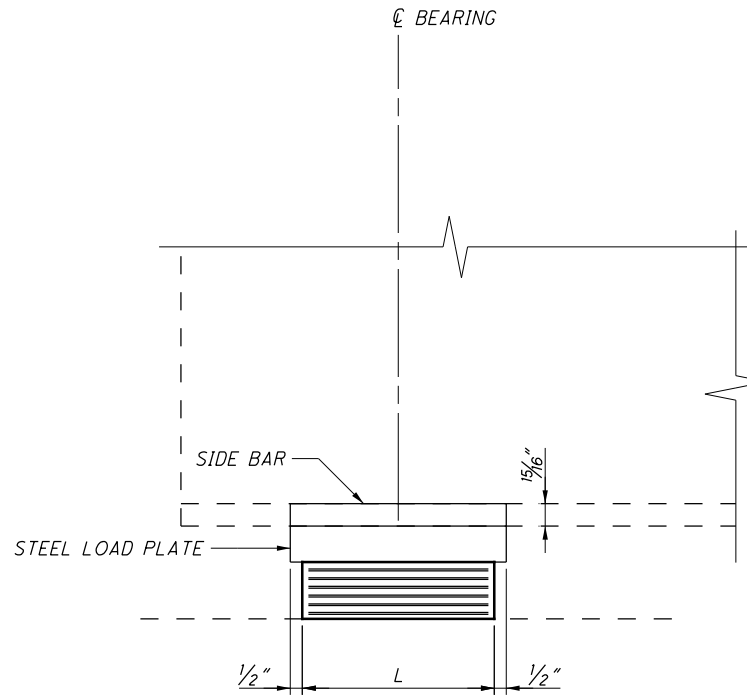


**PROPOSED END CROSSFRAME ELEVATION**

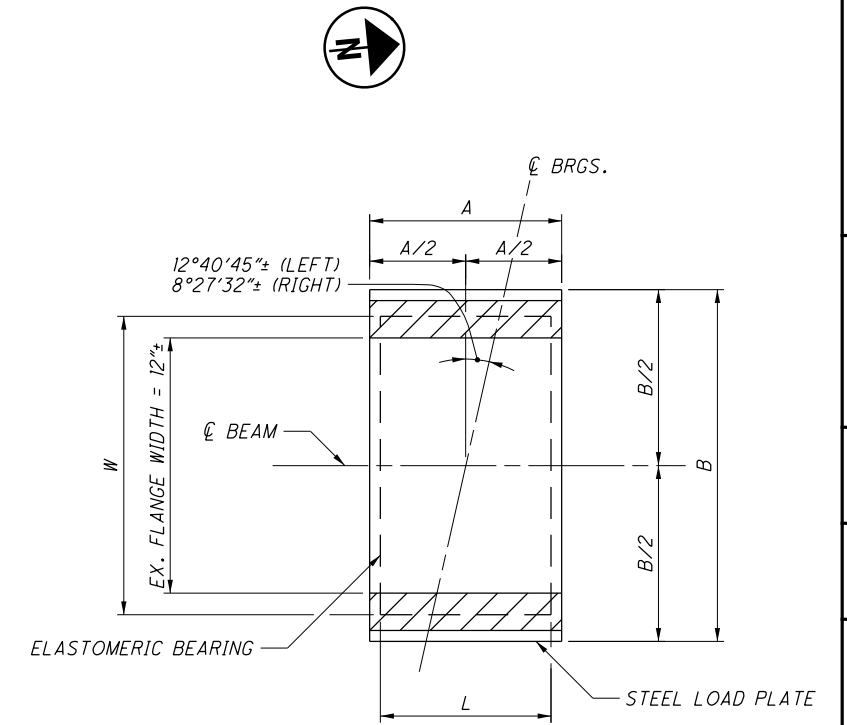
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**LAMINATED ELASTOMERIC EXPANSION BEARING  
REAR AND FORWARD ABUTMENT**



**A SECTION**



**ELASTOMERIC BEARING PAD  
AND STEEL LOAD PLATE PLAN**

**NOTES**

- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
- STEEL LOAD PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. THE STEEL PLATES SHALL BE ASTM A709 GRADE 50 AND BE COATED WITH A SHOP APPLIED, INORGANIC ZINC PRIME COAT ACCORDING TO C&MS 514. REPAIR COATING DAMAGED BY WELDING ACCORDING TO C&MS 514.22. FIELD PAINTING OF INTERMEDIATE AND FINISH COATS IS REQUIRED. PAINTING AND REPAIRS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).
- THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE FINAL LOAD PLATE THICKNESS BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND PROPOSED ELASTOMERIC BEARING HEIGHT FROM THE EXISTING BOTTOM OF BEAM ELEVATION AT EACH BEARING LOCATION. THIS LOAD PLATE THICKNESS IS A CONTRACTOR CALCULATED DIMENSION AND ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.

FINAL LOAD PLATE THICKNESS = (CONTRACTOR'S BOTTOM OF STEEL ELEVATION) - (EXISTING BEAM SEAT ELEVATION) - (ELASTOMERIC BEARING HEIGHT)

- BASIS OF PAYMENT: PAYMENT FOR ALL MATERIALS, LABOR, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE ELASTOMERIC BEARINGS FOR THE BEAMS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).
- ALL COST ASSOCIATED WITH THE LOAD PLATES, SIDE BARS AND WELDING TO THE BEAM FLANGES SHALL BE CONSIDERED INCIDENTAL TO ITEM 516.
- WELDING: CONTROL WELDING SO THAT THE PLATE TEMPERATURE AT THE ELASTOMER BONDED SURFACE DOES NOT EXCEED 185 DEGREES F AS DETERMINED BY USE OF PYROMETRIC STICKS OR OTHER TEMPERATURE MONITORING DEVICES.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE BEARING LOCATIONS ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UPSTATION. ALL MARKS SHALL BE PERMANENT AND VISIBLE AFTER BEARING IS INSTALLED.

\* - FIELD WELD ONE SIDE BAR TO ENSURE PROPER FIT.

LOAD PLATE THICKNESS (LEFT)			
BEAM	T (IN.)	BEAM	T (IN.)
1	1"±	1	3/4"±
2	1 1/16"±	2	1 1/16"±
3	1 1/4"±	3	1 1/16"±
4	1 1/2"±	4	1 5/16"±
5	1 1/2"±	5	1 7/8"±
6	1 1/16"±	6	1 7/8"±
7	1 3/16"±	7	1 11/16"±
8	1 3/16"±	8	9/16"±
9	1 1/8"±	9	1 1/16"±
10	1 1/16"±	10	1 3/16"±
11	1 5/16"±	11	7/8"±

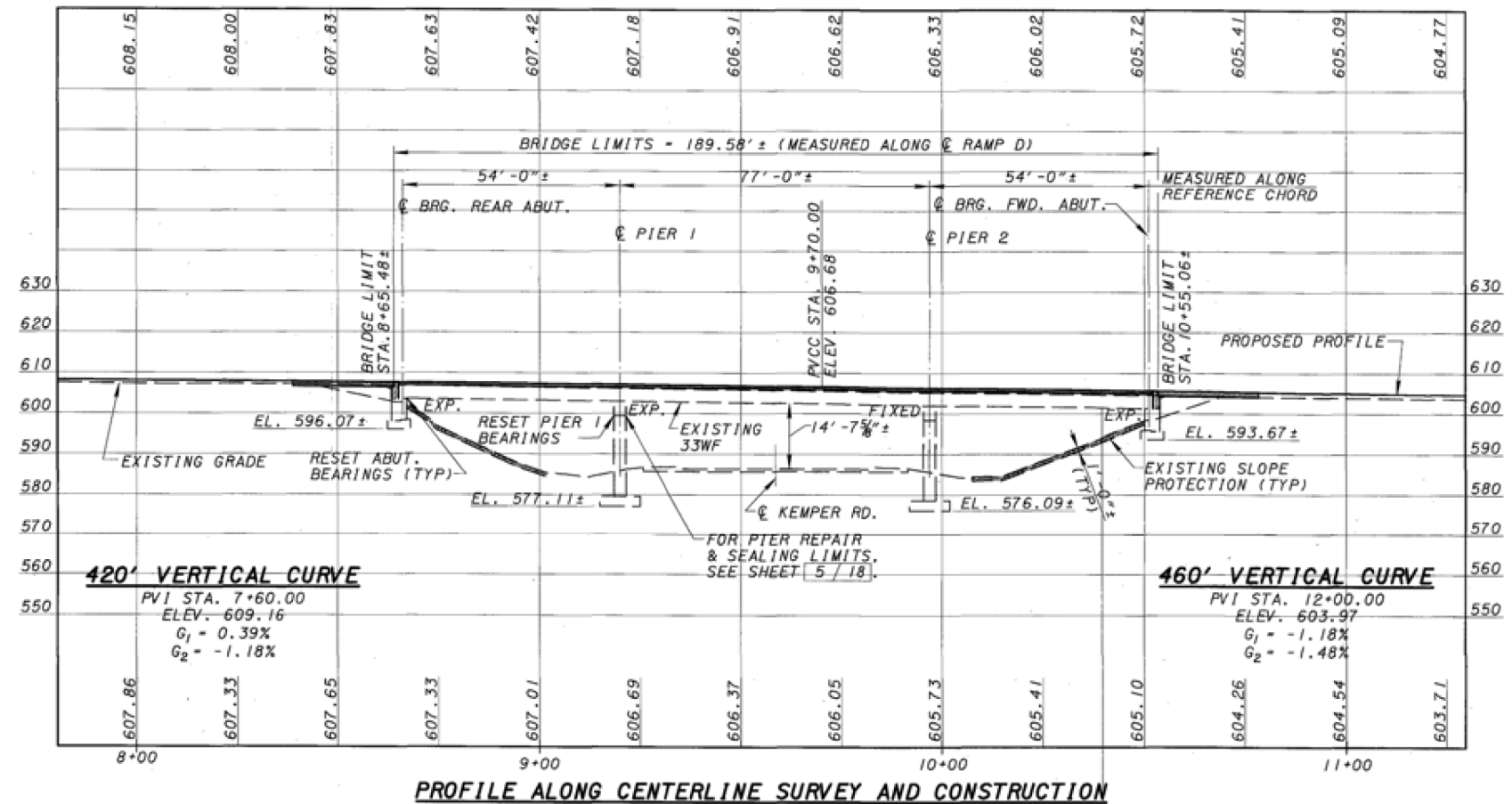
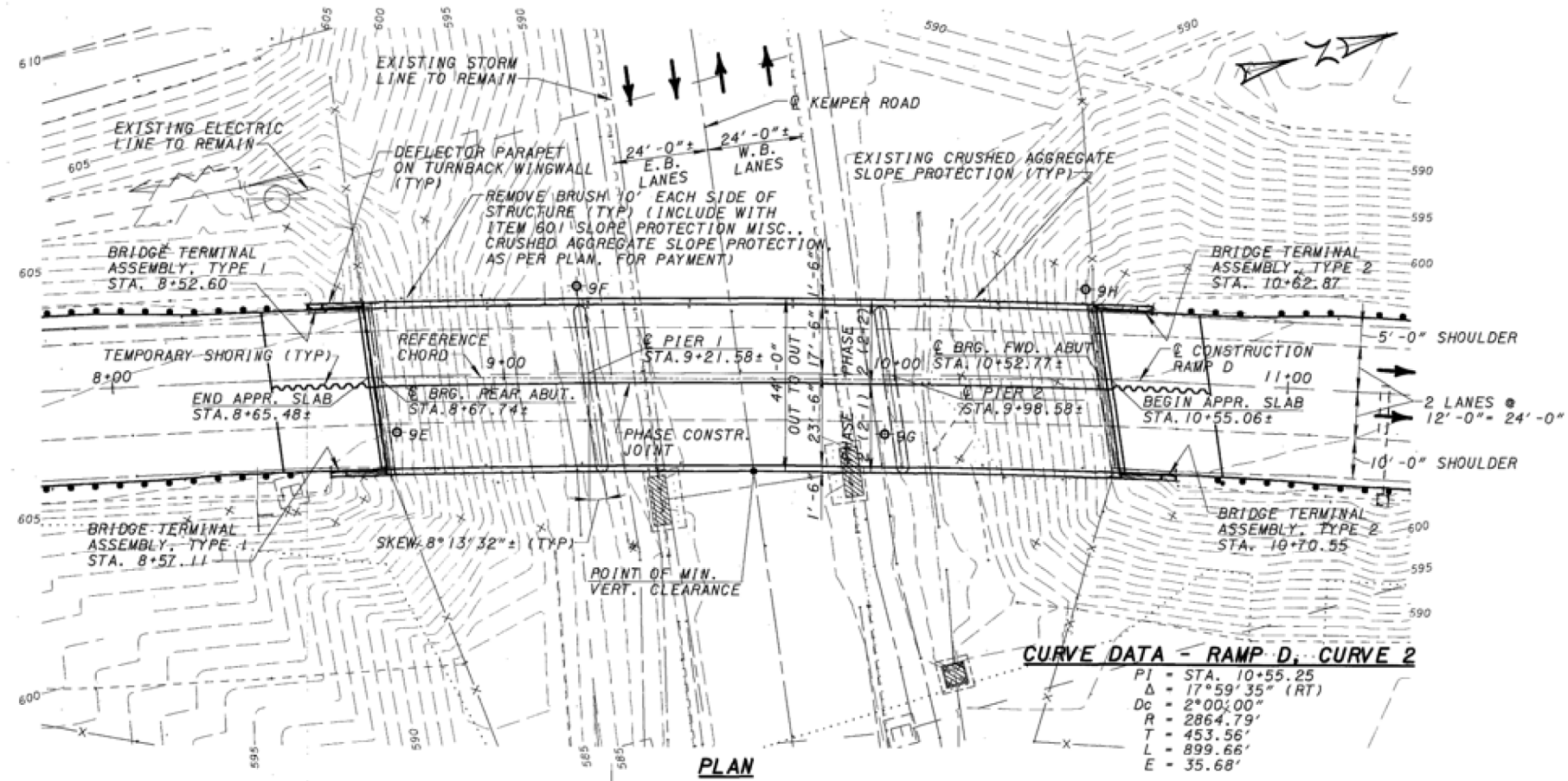
LOAD PLATE THICKNESS (RIGHT)			
BEAM	T (IN.)	BEAM	T (IN.)
1	1 3/8"±	1	1 3/16"±
2	1 1/4"±	2	1 1/16"±
3	1"±	3	1 1/8"±
4	7/8"±	4	1 3/16"±
5	1 1/16"±	5	1 1/16"±
6	3/4"±	6	1 3/8"±
7	7/16"±	7	1 5/16"±
8	7/16"±	8	1 3/16"±
9	1 1/16"±	9	1"±
10	1 1/16"±	10	1"±
11	1 1/16"±	11	1 5/16"±
12	5/8"±	12	7/8"±
13	1 3/16"±	13	7/8"±
14	7/8"±	14	3/4"±

ELASTOMERIC BEARINGS												
LOCATION	BEARING DIMENSIONS					N	STEEL LOAD PLATE		REACTIONS*		MAXIMUM TOTAL LOAD	
	L	W	t <sub>i</sub>	t <sub>e</sub>	T		A	B	THICKNESS	DL		LL
ABUTMENTS	8"	14"	0.25"	0.125"	2.0732"	6	9"	16 1/2"	SEE TABLE	26.43 k	49.46 k	75.89 k

\* REACTIONS ARE UNFACTORED

**LEGEND**

- t<sub>i</sub> - THICKNESS OF INTERNAL LAYERS
- t<sub>e</sub> - THICKNESS OF EXTERNAL LAYER
- T - TOTAL THICKNESS OF ELASTOMERIC BEARING
- N - NUMBER OF STEEL LAMINATES AND INTERNAL LAYERS
- INTERNAL STEEL LAMINATE THICKNESS = 0.0747 (14 GAGE)



**PROPOSED WORK**

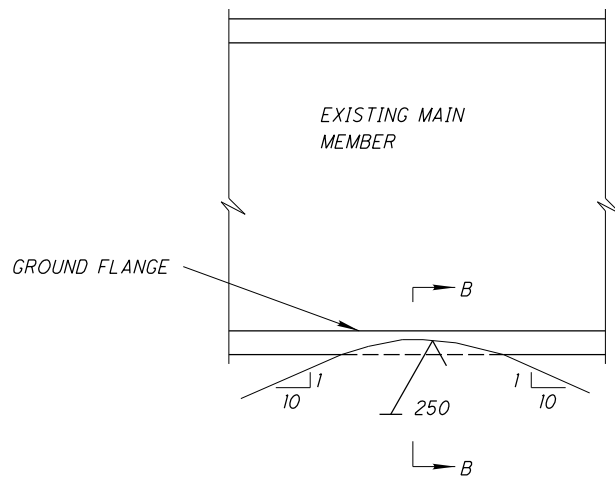
1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS ON HP PEDASTALS.
2. ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5 FEET FROM THE BEAM END USING OZEU SPECIFICATIONS. PAINT COLOR TO MATCH EXISTING.
3. REPAIR GOUGE TO THE BOTTOM FLANGE OF BEAM B6.

EXISTING STRUCTURE	
TYPE:	CONTINUOUS COMPOSITE STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS:	54'-0"±, 77'-0"±, 54'-0"± C/C BRGS.
ROADWAY:	41'-0"± T/T BARRIER
LOADING:	HS20-44, CASE I AND THE ALTERNATE MILITARY LOADING
SKEW:	8°13'32"± R.F.
WEARING SURFACE:	1" MONOLITHIC CONCRETE
APPROACH SLABS:	25'-0"± LONG (AS-1-81)
STRUCTURAL FILE NUMBER:	3111083
DATE BUILT:	1960
REHABILITATED:	2007
DISPOSITION:	TO BE REHABILITATED

**NOTE**

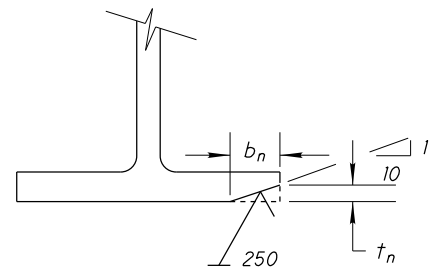
SEE SHEET 17 OF 58 FOR STRUCTURE QUANTITIES.

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**COLLISION REPAIR FC2-2**

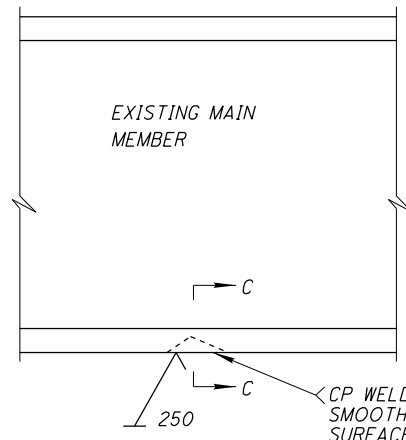
IF AREA ( $t_n$ ,  $b_n$ ) AFTER GRINDING  $\leq$  98% OF AREA ( $t_f$ ,  $b_f$ ) NOTE 1 APPLIES



**SECTION B-B**  
SEE NOTE 1

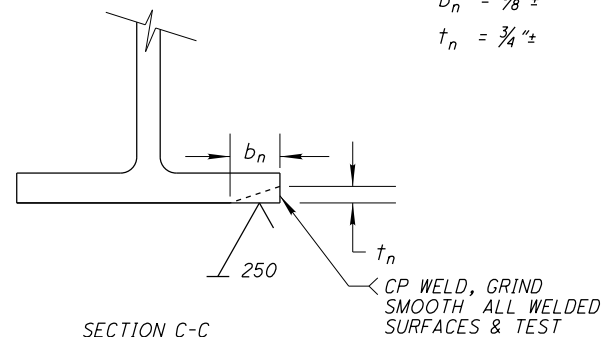
**NOTES**

1. IF NOTCH OR PARTIAL DEPTH CRACK CAN BE REMOVED BY GRINDING ACCORDING TO SUPPLEMENTAL SPECIFICATION 849, REPAIR DAMAGED MEMBERS. PERFORM GRINDING ACCORDING TO SUPPLEMENTAL SPECIFICATION 849 AND AS ILLUSTRATED IN DETAIL FC2-2.
2. IF NOTCH OR PARTIAL DEPTH CRACK MUST BE REPAIRED BY WELDING ACCORDING TO SUPPLEMENTAL SPECIFICATION 849 REPAIRING DAMAGED MEMBERS, AS ILLUSTRATED IN DETAIL FC2-3. PERFORM COMPLETE PENETRATION WELDING ACCORDING TO C&MS 513.21 BY ATTACHING RUN OFF TABS AND GRIND ALL WELDED SURFACES SMOOTH ACCORDING TO ANSI B46.1 OF 250 mil.
3. PERFORM NDT TESTING ACCORDING TO C&MS 513.25A.



**COLLISION REPAIR FC2-3**

IF AREA ( $t_n$ ,  $b_n$ ) AFTER GRINDING  $\geq$  98% OF AREA ( $t_f$ ,  $b_f$ ) NOTE 2 & 3 APPLIES

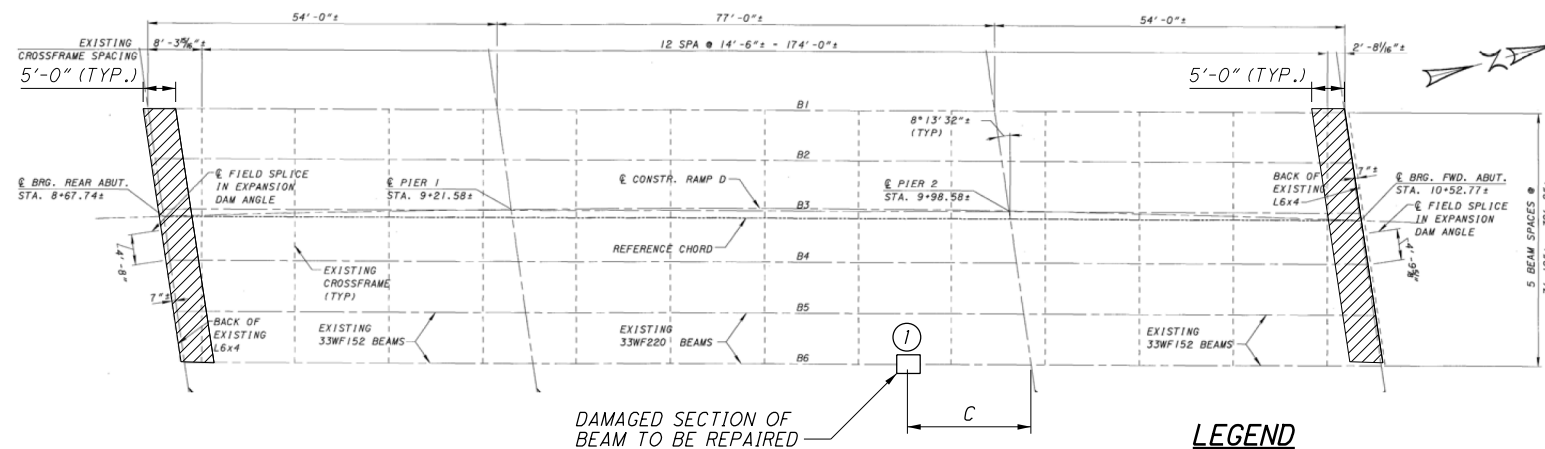


**SECTION C-C**  
SEE NOTE 2 & 3

**FIELD MEASUREMENTS**

$b_n = 5/8"$   
 $t_n = 3/4"$

849 REPAIRS									
DAMAGED AREA NO.	MEMBER LINE NO.	PIER	DIM. C	REPAIR DETAIL TYPE	DRILLING HOLES (EACH)	COPE HOLES (EACH)	STEEL MEMBER LEVEL UP (POUNDS)	CP WELD (FEET)	FILLET WELD (FEET)
1	B6	2	20'	FC2	0	0	0	0	0

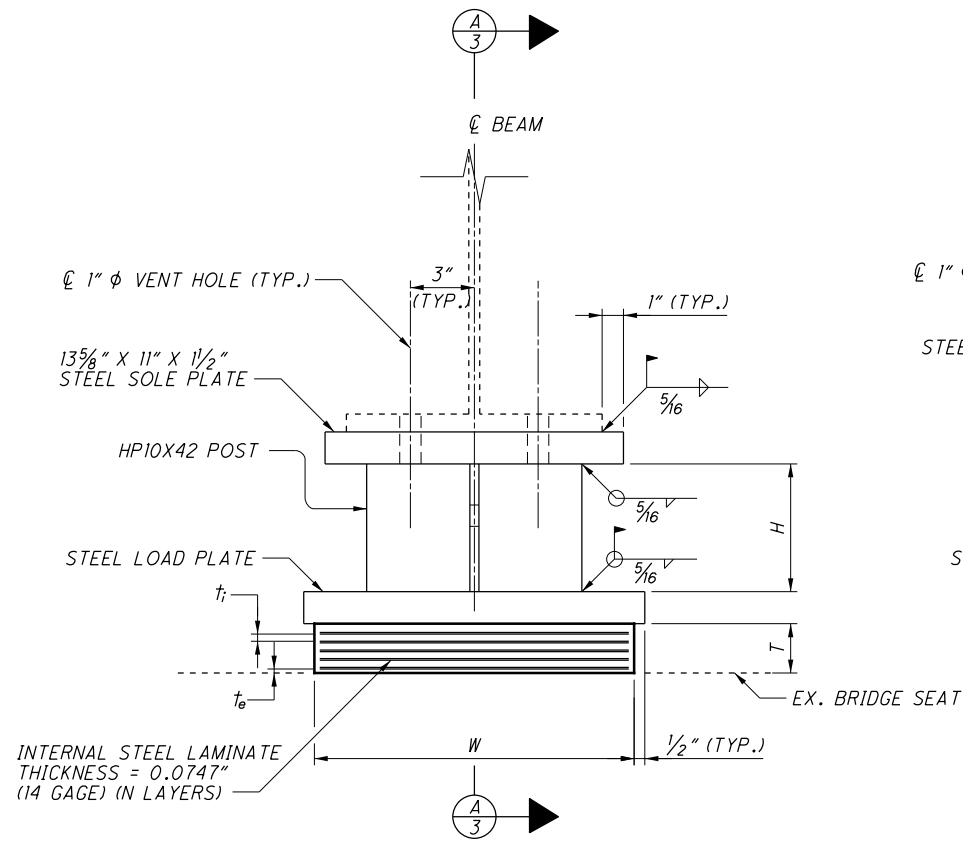


**FRAMING PLAN**

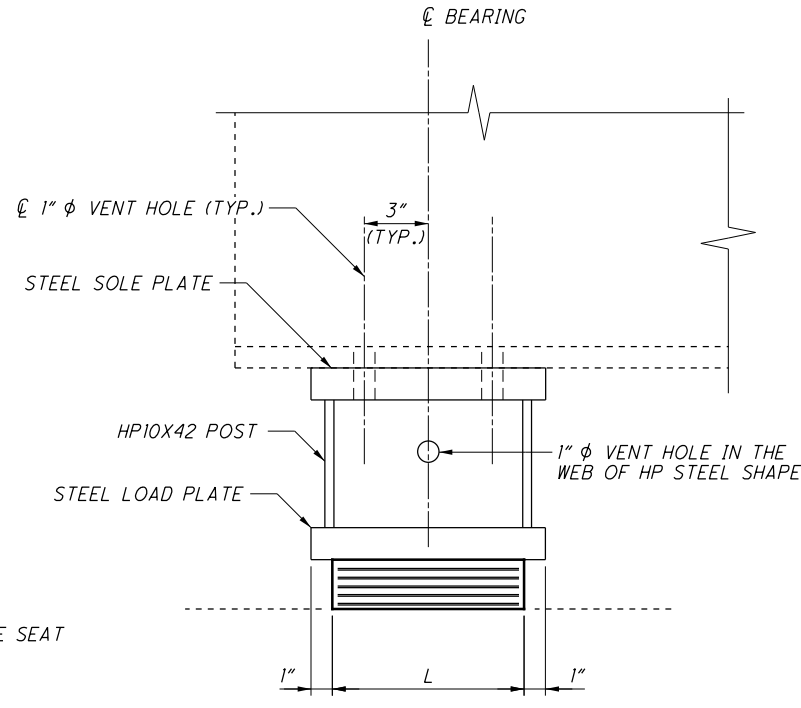
**LEGEND**

ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5 FEET FROM THE BEAM END USING OZEU SPECIFICATIONS. PAINT COLOR TO MATCH EXISTING.

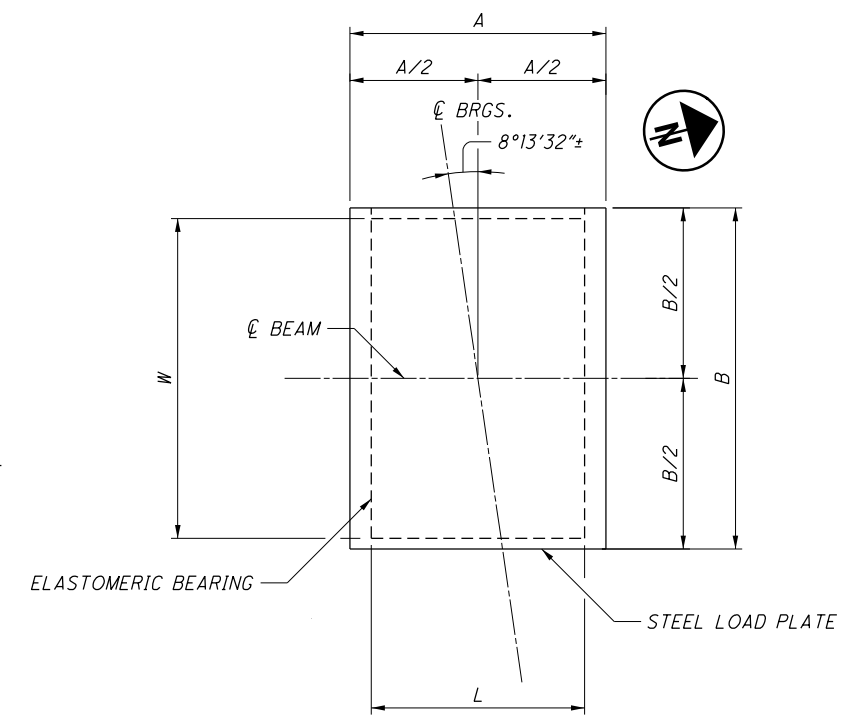
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**LAMINATED ELASTOMERIC EXPANSION BEARING  
REAR AND FORWARD ABUTMENT**



**A  
3 SECTION**



**ELASTOMERIC BEARING PAD  
AND STEEL LOAD PLATE PLAN**

**NOTES**

- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION 1, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
- STEEL LOAD PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. ALL STEEL SHALL BE ASTM A709 GRADE 50 AND BE COATED WITH A SHOP APPLIED, INORGANIC ZINC PRIME COAT ACCORDING TO C&MS 514. REPAIR COATING DAMAGED BY WELDING ACCORDING TO C&MS 514.22. FIELD PAINTING OF INTERMEDIATE AND FINISH COATS IS REQUIRED. PAINTING AND REPAIRS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).
- THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE FINAL HP SECTION HEIGHT BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND PROPOSED BEARING HEIGHT FROM THE EXISTING BOTTOM OF BEAM ELEVATION AT EACH BEARING LOCATION. THIS HP SECTION HEIGHT IS A CONTRACTOR CALCULATED DIMENSION AND ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.  
  
FINAL HP SECTION HEIGHT = (CONTRACTOR'S BOTTOM OF STEEL ELEVATION)-(EXISTING BEAM SEAT ELEVATION)-(BEARING HEIGHT)
- BASIS OF PAYMENT: PAYMENT FOR ALL MATERIALS, LABOR, DRILLING OF HOLES IN BEAM FLANGES AND PLATES, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE ELASTOMERIC BEARINGS FOR THE BEAMS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE). ALL COST ASSOCIATED WITH THE HP SECTIONS AND SOLE PLATES ARE CONSIDERED INCIDENTAL TO ITEM 516.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE BEARING LOCATIONS ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UPSTATION. ALL MARKS SHALL BE PERMANENT AND VISIBLE AFTER BEARING IS INSTALLED.

HP10X42 HEIGHT (H)			
REAR ABUTMENT		FORWARD ABUTMENT	
BEAM	H (IN.)	BEAM	H (IN.)
1	6 <sup>5</sup> / <sub>8</sub> ±	1	6 <sup>7</sup> / <sub>16</sub> ±
2	6 <sup>1</sup> / <sub>8</sub> ±	2	6 <sup>13</sup> / <sub>16</sub> ±
3	5 <sup>5</sup> / <sub>16</sub> ±	3	6 <sup>1</sup> / <sub>8</sub> ±
4	5 <sup>3</sup> / <sub>16</sub> ±	4	6 <sup>3</sup> / <sub>4</sub> ±
5	4 <sup>15</sup> / <sub>16</sub> ±	5	6 <sup>5</sup> / <sub>8</sub> ±
6	5 <sup>3</sup> / <sub>8</sub> ±	6	6 <sup>3</sup> / <sub>8</sub> ±

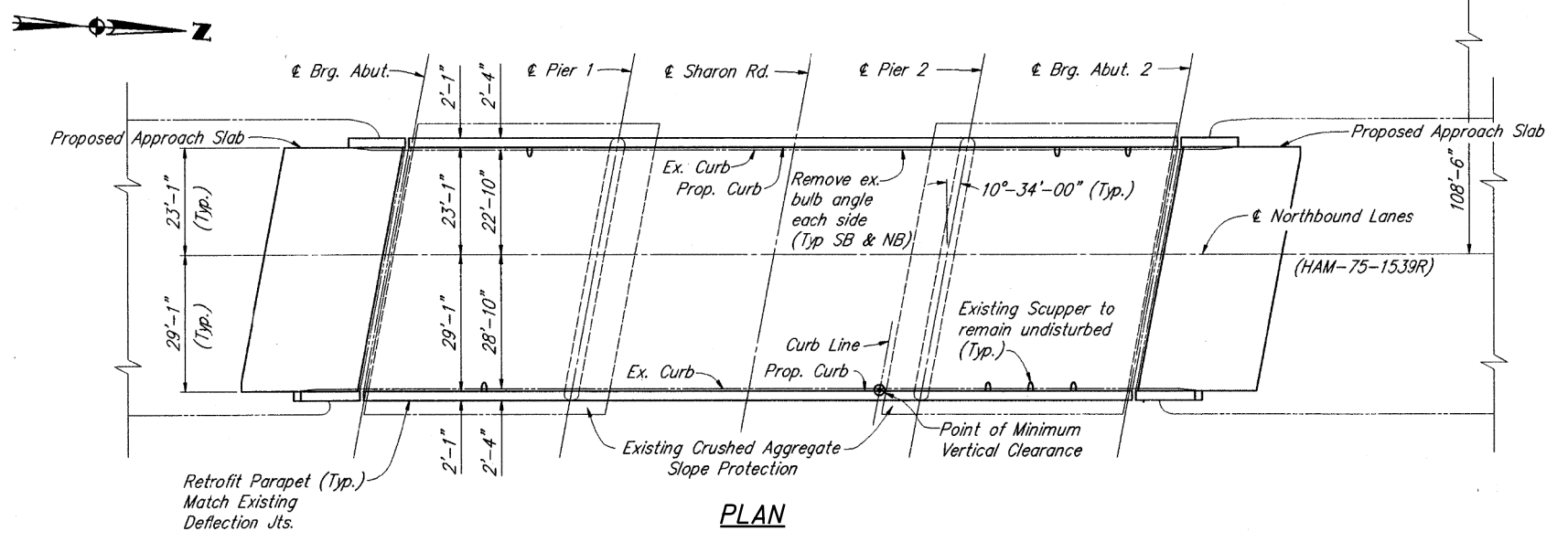
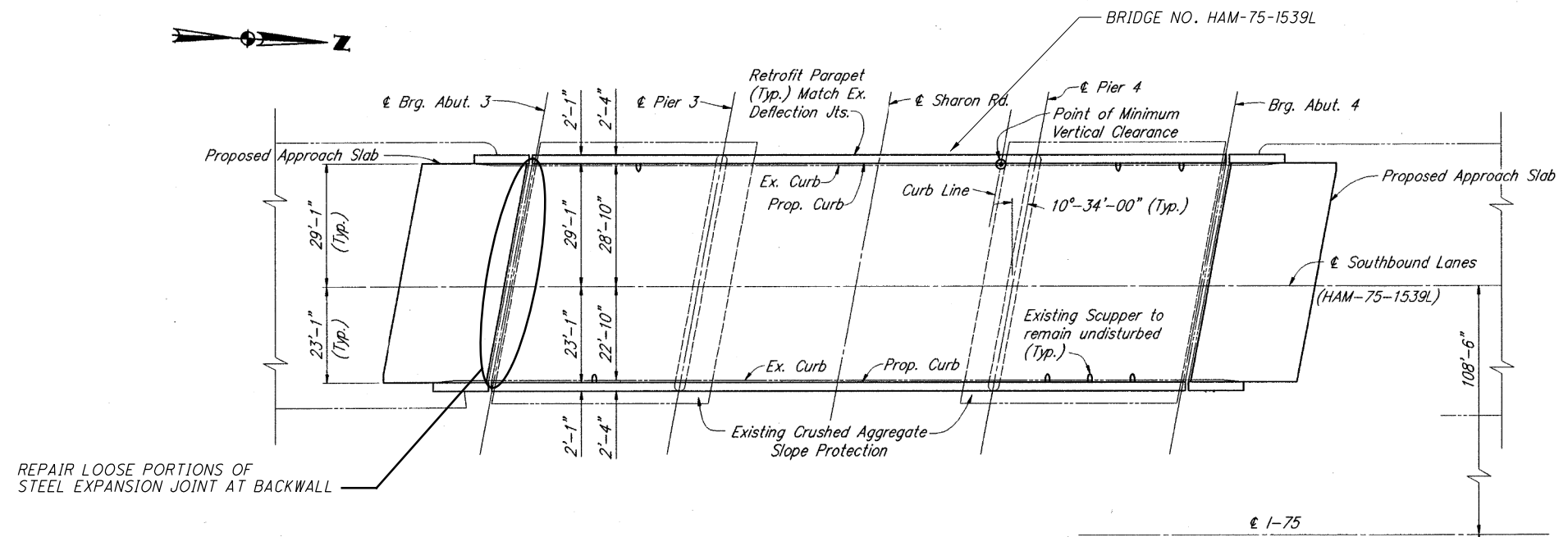
ELASTOMERIC BEARINGS												
LOCATION	BEARING DIMENSIONS					N	STEEL LOAD PLATE			REACTIONS*		MAXIMUM TOTAL LOAD
	L	W	t <sub>i</sub>	t <sub>e</sub>	T		A	B	THICKNESS	DL	LL	
ABUTMENTS	9"	15"	0.4375"	0.25"	2.811"	5	11"	16"	1 <sup>1</sup> / <sub>2</sub> "	32.29 k	49.36 k	81.65 k

\* REACTIONS ARE UNFACTORED

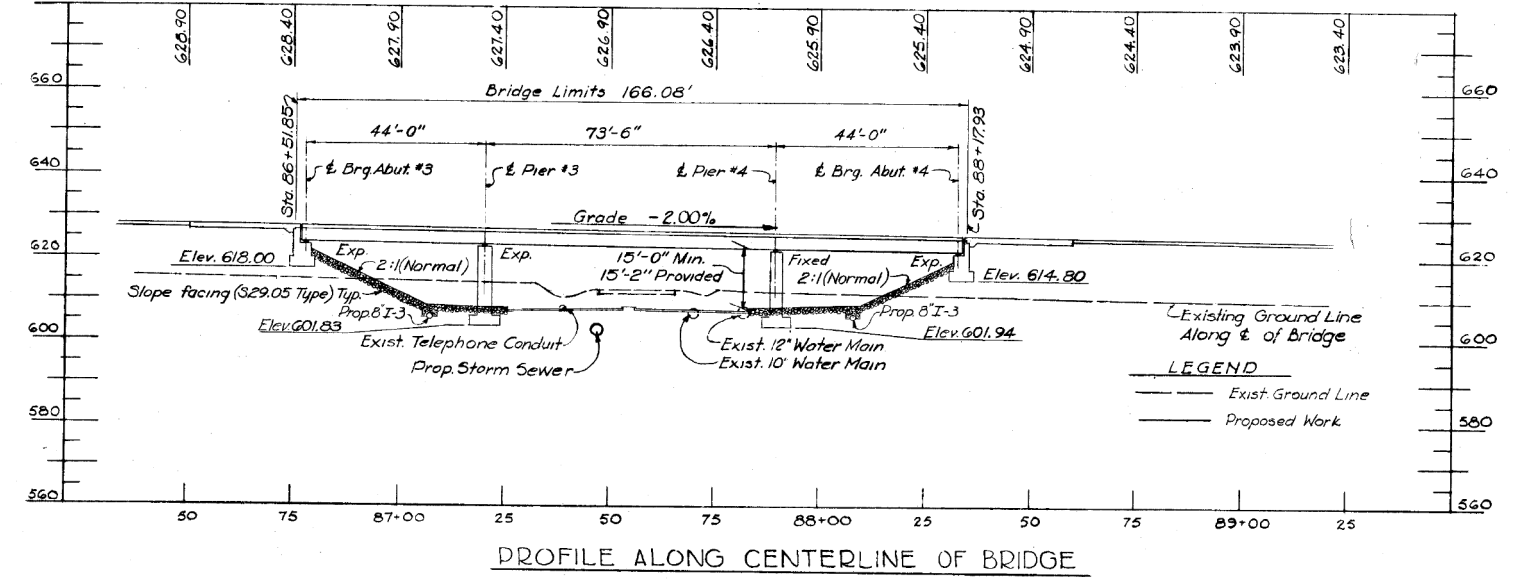
**LEGEND**

- t<sub>i</sub> - THICKNESS OF INTERNAL LAYERS
- t<sub>e</sub> - THICKNESS OF EXTERNAL LAYER
- T - TOTAL THICKNESS OF ELASTOMERIC BEARING
- N - NUMBER OF STEEL LAMINATES AND INTERNAL LAYERS  
INTERNAL STEEL LAMINATE THICKNESS = 0.0747 (14 GAGE)

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**PLAN**



**PROFILE ALONG CENTERLINE OF BRIDGE**

**PROPOSED WORK**

REPAIR THE LOOSE PORTION OF THE STEEL EXPANSION JOINT AT THE SOUTH ABUTMENT AS DETAILED IN THE PLANS.

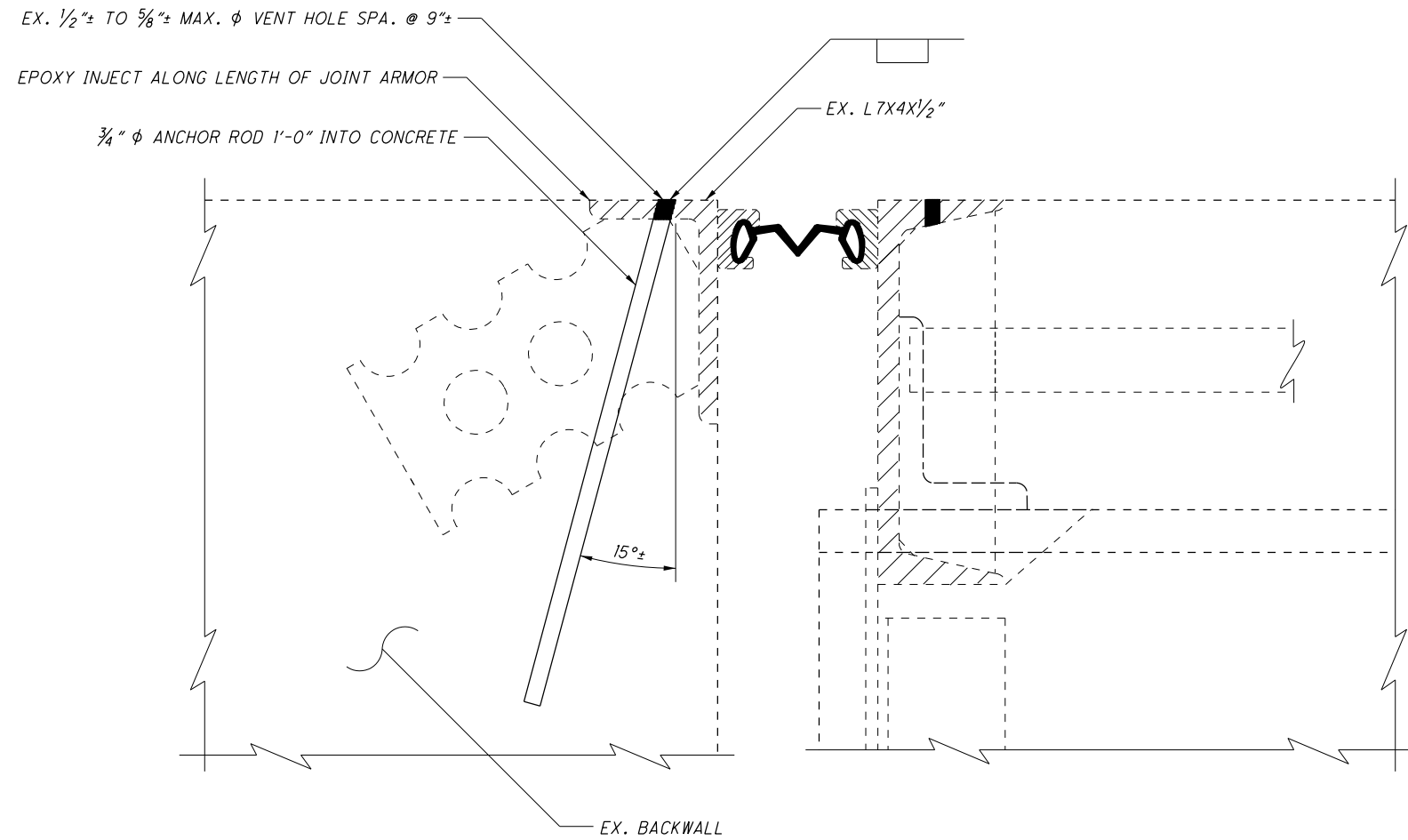
**NOTE**

SEE SHEET 17 OF 58 FOR STRUCTURE QUANTITIES.

**EXISTING STRUCTURE**

TYPE: CONTINUOUS ROLLED STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE  
 SPANS: 44'-0"±, 73'-6"±, 44'-0"± C/C BRGS.  
 ROADWAY: 52'-2"± T/T PARAPET  
 LOADING: C.F. = 2000(57)  
 SKEW: 10°34'00"± L.F.  
 WEARING SURFACE: 1 1/4"± LATEX MODIFIED CONCRETE OVERLAY  
 APPROACH SLABS: 25'-0"± (AS-1-81)  
 STRUCTURAL FILE NUMBER: 3110923  
 DATE BUILT: 1959  
 DISPOSITION: TO BE REHABILITATED

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**EXPANSION JOINT REPAIR DETAIL**

**JOINT REPAIR PROCEDURE**

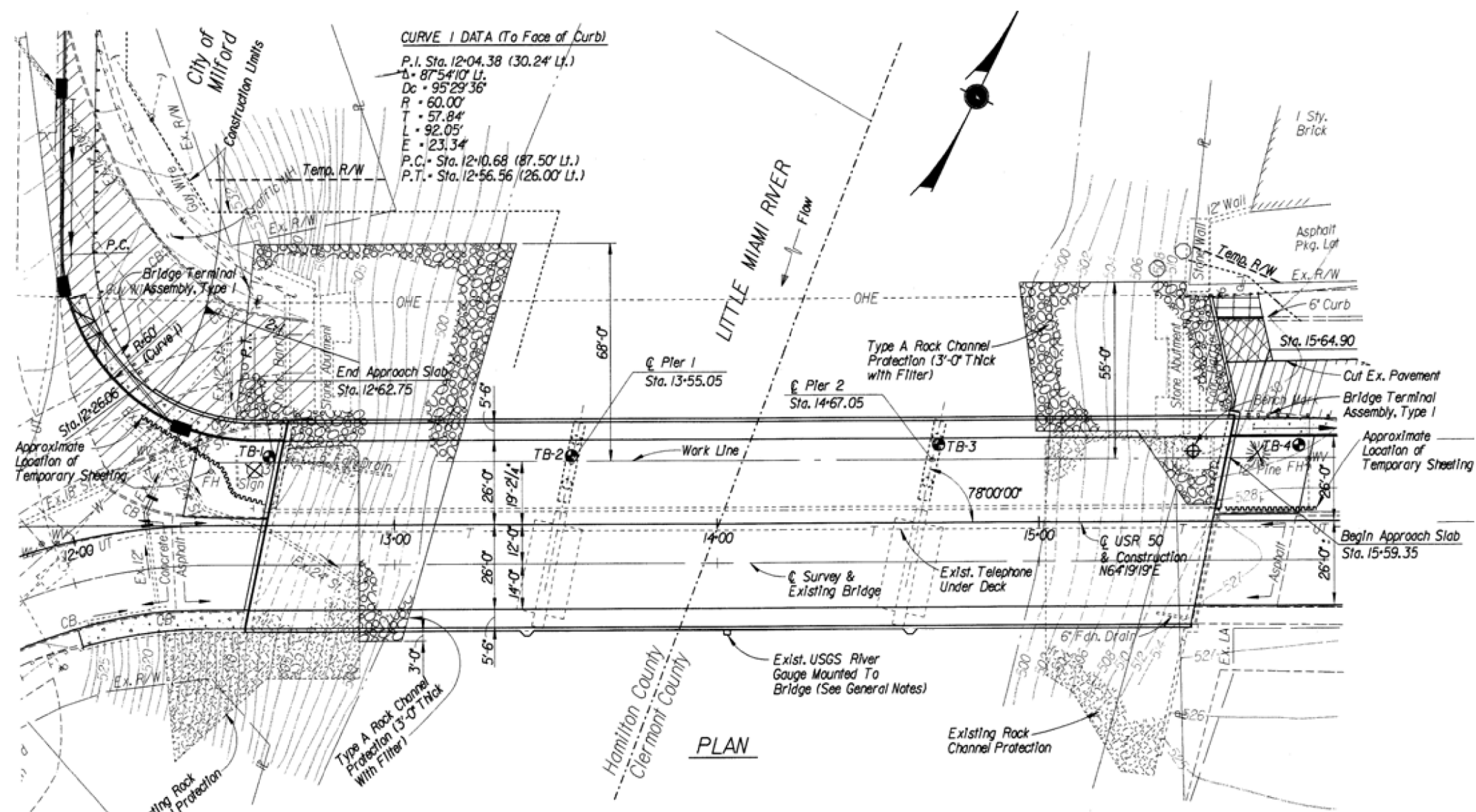
1. DRILL THROUGH THE VENT HOLES IN THE TOP OF THE ARMOR ON THE BACKWALL AT AN ANGLE. ENLARGE THE EXISTING VENT HOLES TO  $\frac{1}{8}$ "  $\phi$  IN THE TOP OF ARMOR WHEN DRILLING.
2. INSTALL EPOXY COATED STEEL ANCHOR RODS 1'-0" DEEP INTO THE BACKWALL WITH NONSHRINK, NONMETALLIC GROUT. THE GROUT SHALL NOT EXTEND INTO THE EXPANSION JOINT ARMOR.
3. PLUG WELD THE TOP OF THE ANCHOR RODS TO THE EXPANSION JOINT ARMOR.
4. EPOXY INJECT AROUND THE ARMOR ALONG THE LENGTH OF THE EXPANSION JOINT TO FILL AND SEAL VOIDS. EPOXY MATERIAL SHALL BE PER C&MS 705.26.

**NOTE**

PAYMENT FOR ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THE EXPANSION JOINT REPAIR SHALL BE MADE AT THE UNIT PRICE BID PER LINEAR FOOT OF ITEM 530, SPECIAL-STRUCTURES: EXPANSION JOINT REPAIR.



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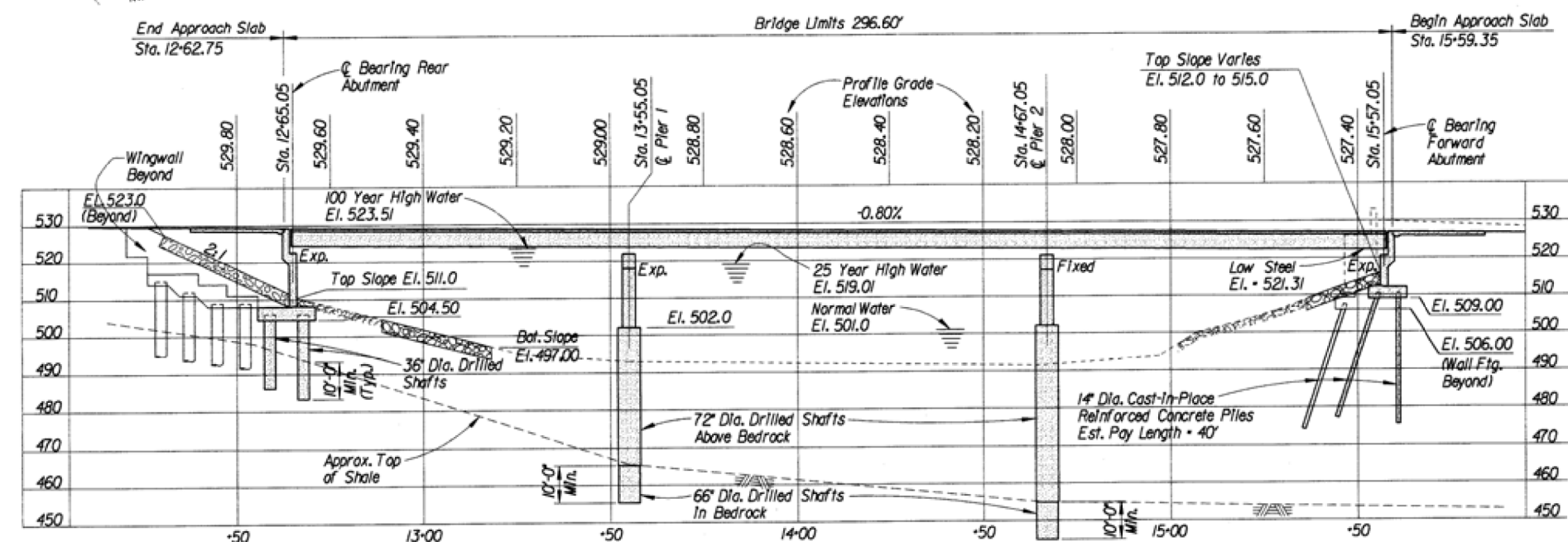


**CURVE 1 DATA (To Face of Curb)**  
 P.I. Sta. 12+04.38 (30.24' Lt.)  
 Δ = 87°54'10"  
 Dc = 95°29'36"  
 R = 60.00'  
 T = 57.84'  
 E = 92.05'  
 M = 23.34'  
 P.C. Sta. 12+10.68 (87.50' Lt.)  
 P.T. Sta. 12+56.56 (26.00' Lt.)

**PLAN**

**PROPOSED WORK**

1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS ON HP PEDESTALS.
2. PATCH THE CANTILEVER HAMMERHEAD AT PIER 1 AS SHOWN ON THE PLANS.



**PROFILE 19'-2 1/4" LEFT OF C CONSTRUCTION US RT. 50**

**EXISTING STRUCTURE**

TYPE: CONTINUOUS COMPOSITE WELDED STEEL PLATE GIRDERS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 90'-0"±, 112'-0"±, 90'-0"± C/C BRGS.

ROADWAY: 52'-0"± T/T 5'-6"± WIDE SIDEWALKS

LOADING: HS20-44, CASE II AND THE ALTERNATE MILITARY LOADING

SKEW: 12°00'00"± L.F.

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: 25'-0"± LONG (AS-1-81)

STRUCTURAL FILE NUMBER: 3104184

DATE BUILT: 1980 MAJOR RECONSTRUCTION: 2000

DISPOSITION: TO BE REHABILITATED

**NOTE**

SEE SHEET 17 OF 58 FOR STRUCTURE QUANTITIES.

DESIGN AGENCY <b>CARPENTER MARTY</b> <small>TRANSPORTATION CONSULTANTS</small>	DATE	11-15-17
	REVIEWED	WHM
	DRAWN	AMR
	DESIGNED	AMR
HAMILTON COUNTY STA. 12+62.75 STA. 15+59.35	STRUCTURE FILE NUMBER	3104184
	CHECKED	STK
<b>SITE PLAN</b> BRIDGE NO. HAM-50-3604 U.S. 50 OVER LITTLE MIAMI RIVER		
	D08-BM-FY2019 PID No. 87127	
	1 / 3 33 / 58	

**ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN**

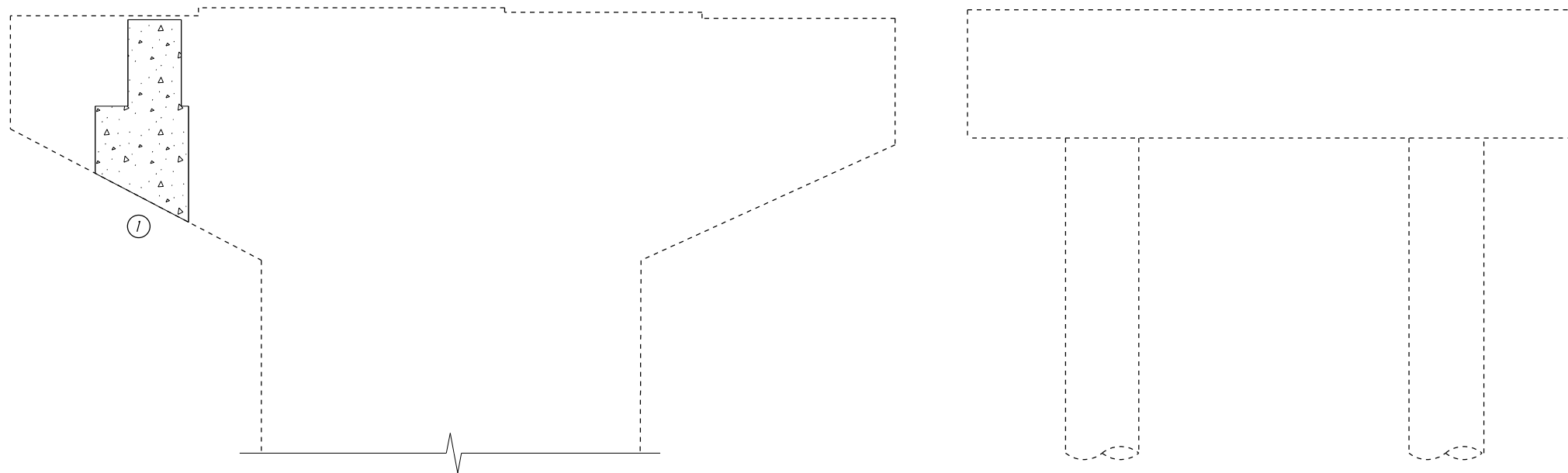
PHYSICAL INVENTORY OF MEASURED QUANTITIES OF DETERIORATION WAS PERFORMED IN JUNE OF 2017.

EXACT DIMENSIONS AND LOCATIONS OF PATCHES SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

ESTIMATED PATCHING QUANTITIES (S.F.)

PIER 1	MEASURED QUANTITY	ESTIMATED QUANTITY
①	30	45*

\* - ESTIMATED QUANTITY HAS BEEN INCREASED BY 50% OVER MEASURED QUANTITY TO ALLOW FOR ADDITIONAL DETERIORATION.



**PIER 1 ELEVATION**  
LOOKING DOWNSTATION

**LEGEND**

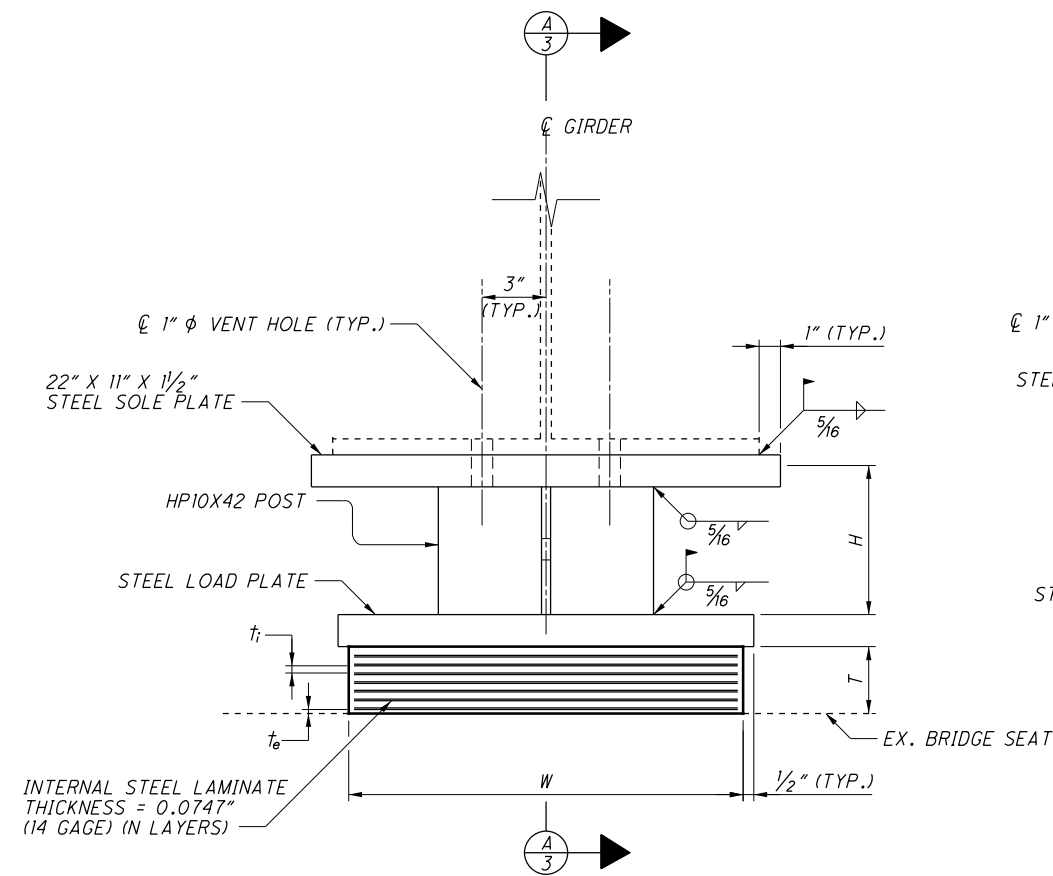


ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

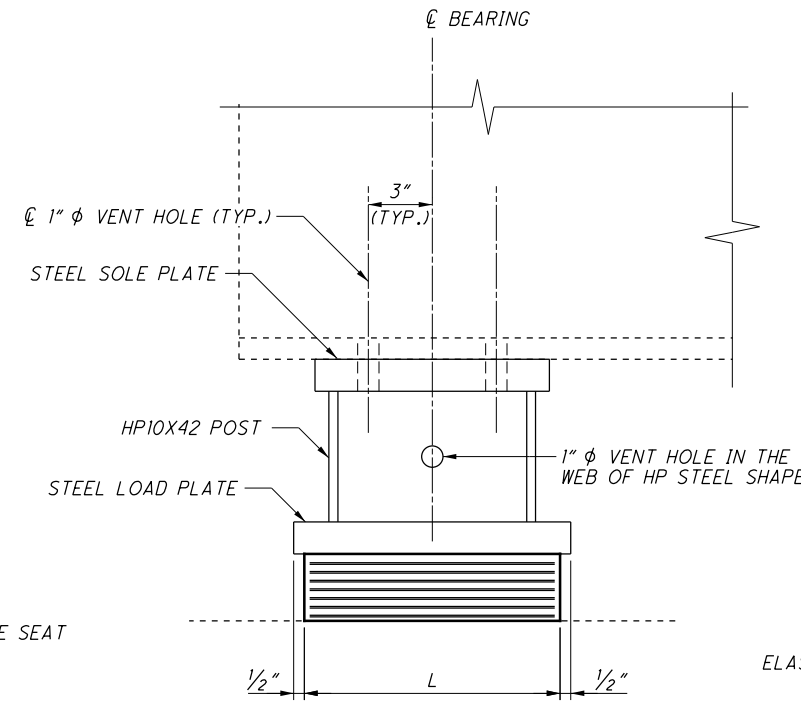
**NOTES**

1. THE CONTRACTOR IS RESTRICTED FROM ENTERING THE LITTLE MIAMI RIVER, OR DROPPING ANY DEBRIS INTO THE WATER. THE USE OF A SNOOPER OR EQUIVALENT BRIDGE MOUNTED PLATFORM TO PERFORM PATCHING OPERATIONS WILL BE REQUIRED.
2. APPLY ONE LAYER GLASS FIBER FRP OVER PATCHED AREA. GLASS FIBER FRP SHALL EXTEND A MINIMUM OF 1'-0" (OR THE SELECTED MANUFACTURER'S RECOMMENDED DEVELOPMENT LENGTH) BEYOND THE LIMITS OF THE PATCHED AREA.

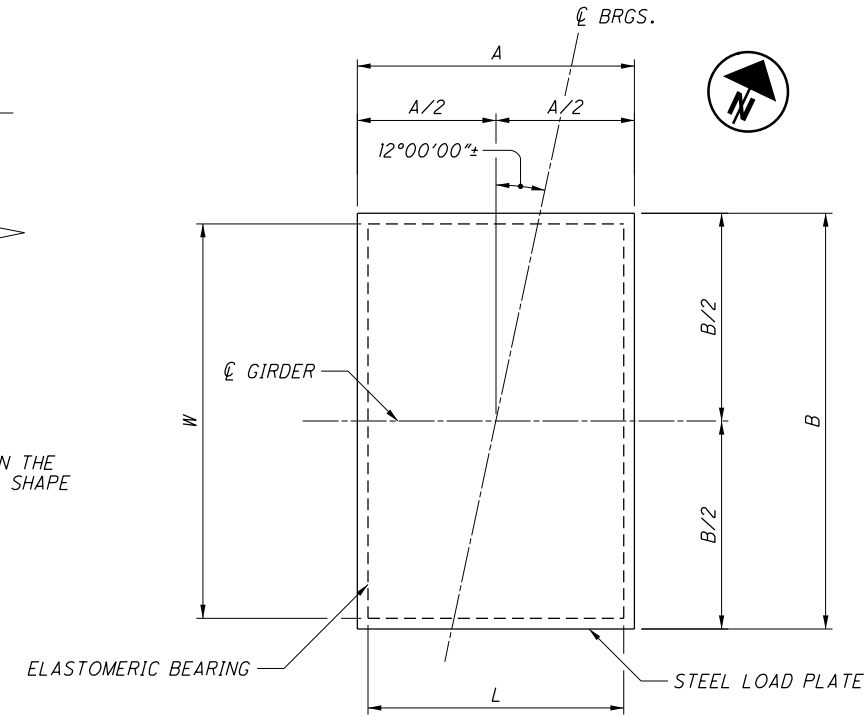
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**LAMINATED ELASTOMERIC EXPANSION BEARING  
REAR AND FORWARD ABUTMENT**



**A  
3 SECTION**



**ELASTOMERIC BEARING PAD  
AND STEEL LOAD PLATE PLAN**

**NOTES**

- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
- STEEL LOAD PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. ALL STEEL SHALL BE ASTM A709 GRADE 50 AND BE COATED WITH A SHOP APPLIED, INORGANIC ZINC PRIME COAT ACCORDING TO C&MS 514. REPAIR COATING DAMAGED BY WELDING ACCORDING TO C&MS 514.22. FIELD PAINTING OF INTERMEDIATE AND FINISH COATS IS REQUIRED. PAINTING AND REPAIRS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).
- THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE FINAL HP SECTION HEIGHT BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND PROPOSED BEARING HEIGHT FROM THE EXISTING BOTTOM OF BEAM ELEVATION AT EACH BEARING LOCATION. THIS HP SECTION HEIGHT IS A CONTRACTOR CALCULATED DIMENSION AND ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.  
  
FINAL HP SECTION HEIGHT = (CONTRACTOR'S BOTTOM OF STEEL ELEVATION)-(EXISTING BEAM SEAT ELEVATION)-(BEARING HEIGHT)
- BASIS OF PAYMENT: PAYMENT FOR ALL MATERIALS, LABOR, DRILLING OF HOLES IN BEAM FLANGES AND PLATES, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE ELASTOMERIC BEARINGS FOR THE BEAMS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE). ALL COST ASSOCIATED WITH THE HP SECTIONS AND SOLE PLATES ARE CONSIDERED INCIDENTAL TO ITEM 516.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE BEARING LOCATIONS ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UPSTATION. ALL MARKS SHALL BE PERMANENT AND VISIBLE AFTER BEARING IS INSTALLED.

HPI0X42 HEIGHT (H)			
REAR ABUTMENT		FORWARD ABUTMENT	
GIRDER	H (IN.)	GIRDER	H (IN.)
1	5 5/8 ±	1	5 5/8 ±
2	5 5/8 ±	2	5 5/8 ±
3	5 5/8 ±	3	5 5/8 ±
4	5 1/4 ±	4	5 1/4 ±
5	5 5/8 ±	5	5 5/8 ±
6	5 1/2 ±	6	5 1/2 ±
7	5 3/4 ±	7	5 3/4 ±
8	5 1/8 ±	8	5 1/8 ±
9	5 1/2 ±	9	5 1/2 ±

ELASTOMERIC BEARINGS												
LOCATION	BEARING DIMENSIONS						STEEL LOAD PLATE			REACTIONS*		MAXIMUM TOTAL LOAD
	L	W	t <sub>i</sub>	t <sub>e</sub>	T	N	A	B	THICKNESS	DL	LL	
ABUTMENTS	12"	18 1/2"	0.4375"	0.25"	3.8354"	7	13"	19 1/2"	1/2"	60.73 k	58.59 k	119.32 k

\* REACTIONS ARE UNFACTORED

**LEGEND**

- t<sub>i</sub> - THICKNESS OF INTERNAL LAYERS
- t<sub>e</sub> - THICKNESS OF EXTERNAL LAYER
- T - TOTAL THICKNESS OF ELASTOMERIC BEARING
- N - NUMBER OF STEEL LAMINATES AND INTERNAL LAYERS  
INTERNAL STEEL LAMINATE THICKNESS = 0.0747 (14 GAGE)

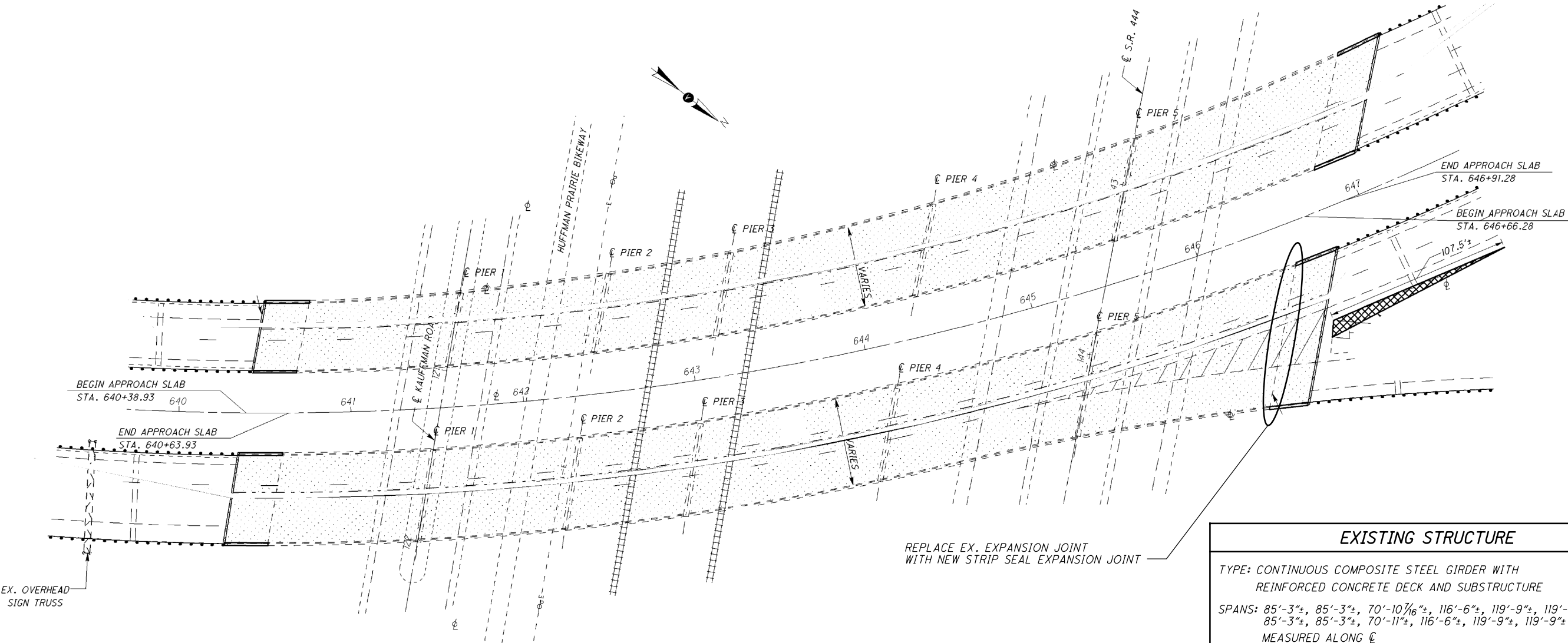
**DESIGN AGENCY**  
**CARPENTER**  
**MARTY**  
TRANSPORTATION CONSULTANTS

**DATE** 11-15-17  
**REVIEWED** WHM  
**STRUCTURE FILE NUMBER** 3104184  
**DESIGNED** AMR  
**CHECKED** STK  
**DRAWN** AMR  
**REVISED**

**BEARING DETAILS**  
 BRIDGE NO. HAM-50-3604  
 U.S. 50 OVER LITTLE MIAMI RIVER

**D08-BM-FY2019**  
**PID No. 87127**

3 / 3  
 35  
 58



PLAN

**EXISTING STRUCTURE**

TYPE: CONTINUOUS COMPOSITE STEEL GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 85'-3", 85'-3", 70'-10 1/16", 116'-6", 119'-9", 119'-9" (LEFT)  
85'-3", 85'-3", 70'-11", 116'-6", 119'-9", 119'-9" (RIGHT)  
MEASURED ALONG C

ROADWAY: VARIES T/T PARAPET

LOADING: HS20-44

SKEW: VARIES

WEARING SURFACE: 2 1/2" SUPERPLASTICIZED DENSE CONCRETE OVERLAY

APPROACH SLABS: 25'-0" LONG (AS-1-81)

STRUCTURAL FILE NUMBER: 2904810/2904845

DATE BUILT: 1988

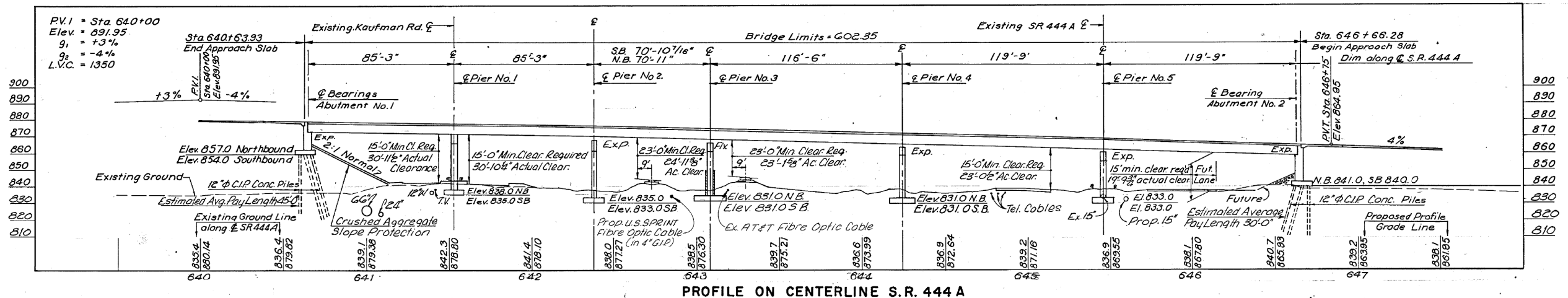
DISPOSITION: TO BE REHABILITATED

**PROPOSED WORK**

1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS ON HP PEDESTALS.
2. REPLACE THE NORTH EXPANSION JOINT ON THE NORTHBOUND BRIDGE, 2 FEET OF THE DECK, AND THE TOP OF THE BACKWALL DOWN TO THE APPROACH SLAB SEAT.

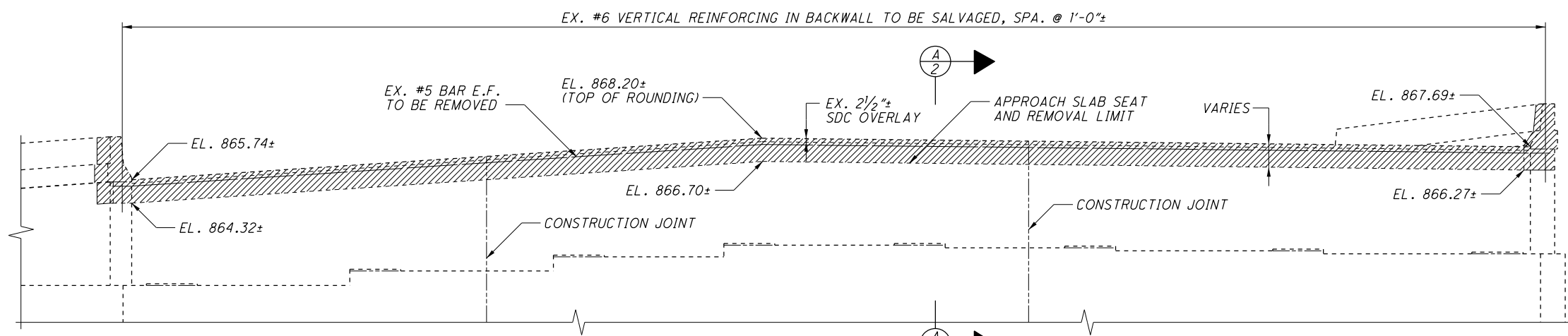
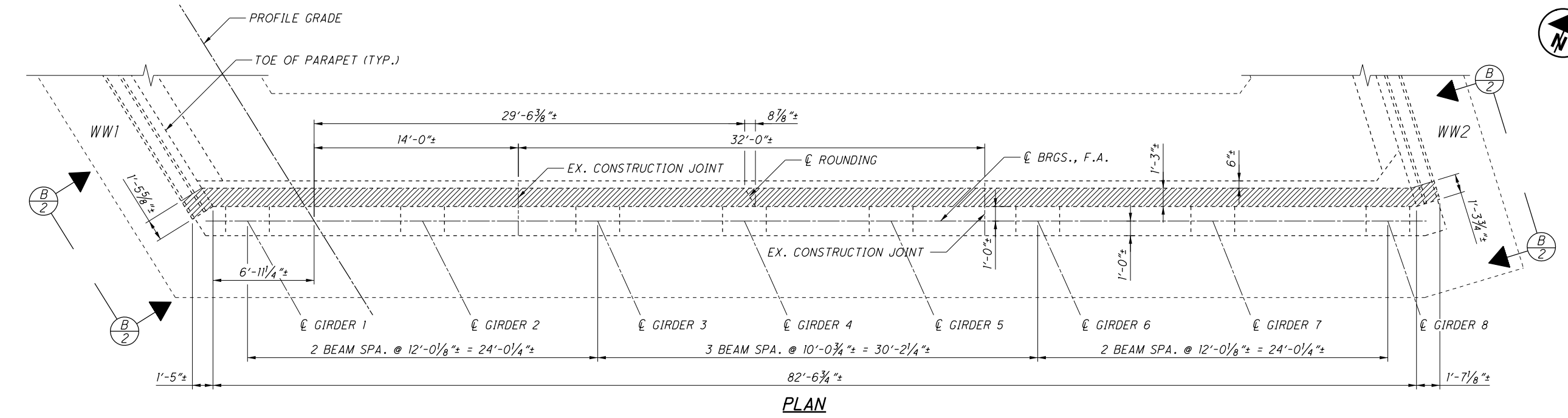
**NOTE**

SEE SHEET 17 OF 58 FOR STRUCTURE QUANTITIES.



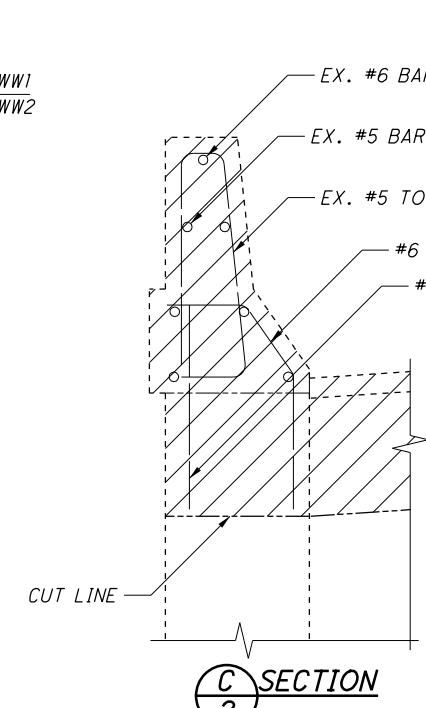
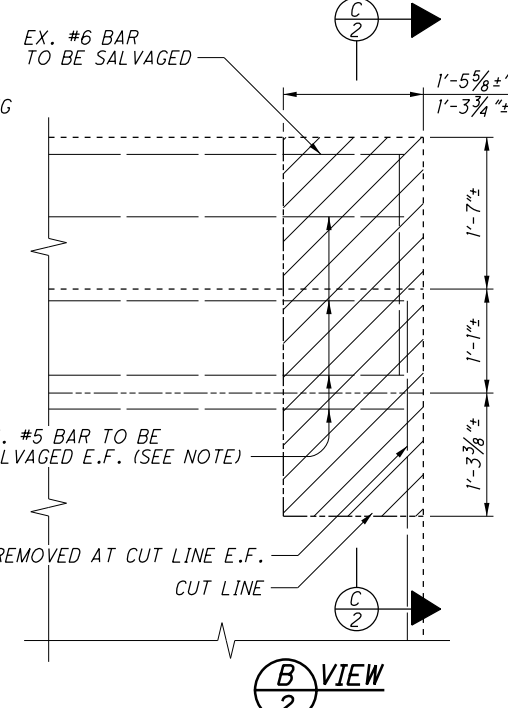
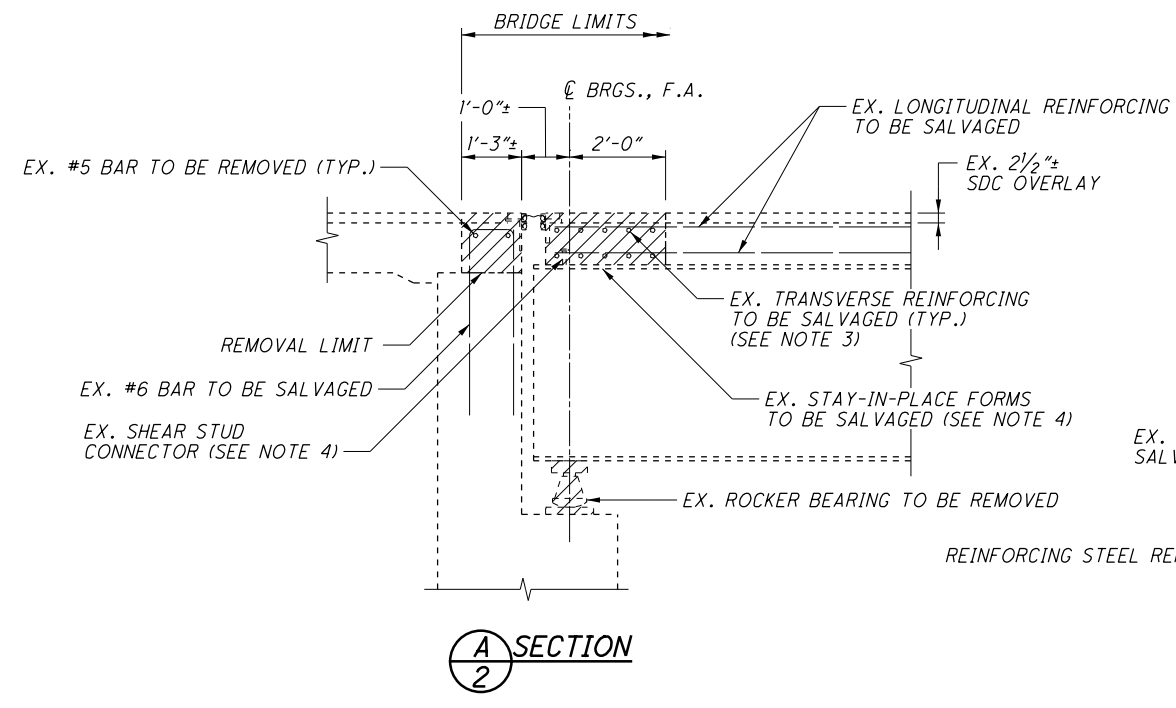
PROFILE ON CENTERLINE S.R. 444 A

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**LEGEND**

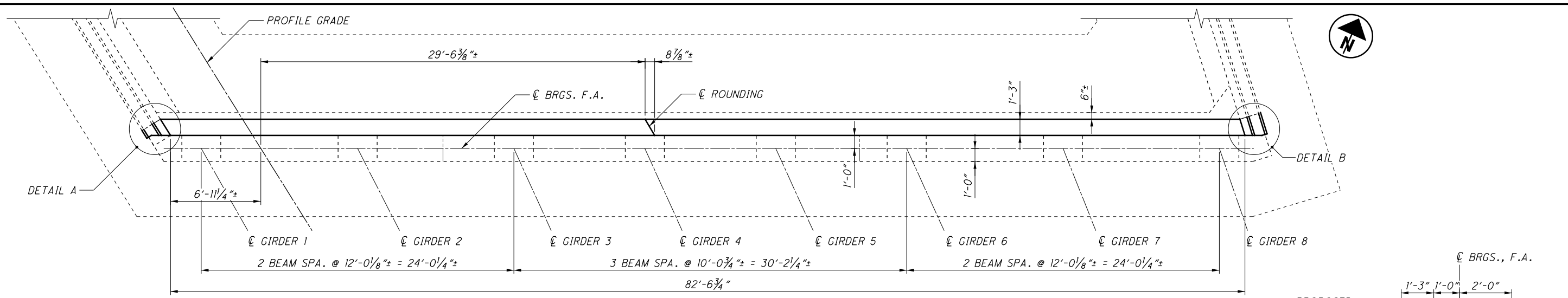
ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN



**NOTES**

- EXISTING REINFORCING SHALL BE TRIMMED AS NECESSARY TO PROVIDE 2" COVER IN RELATION TO PROPOSED GEOMETRY. PAYMENT FOR TRIMMING OF EXISTING REINFORCING SHALL BE MADE AT THE LUMP SUM BID OF ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
- CONTRACTOR TO VERIFY ALL EXISTING ELEVATIONS PRIOR TO REMOVAL AND ORDERING EXPANSION JOINT ARMOR.
- EX. #6 BAR (TOP) AND #5 BAR (BOTTOM) PLACED PARALLEL TO EX. BRGS. AT END OF DECK TO BE REMOVED.
- DECK CONCRETE SHALL BE CAREFULLY REMOVED TO ENSURE THE EXISTING SHEAR STUD CONNECTORS AND CORRUGATED STEEL STAY-IN-PLACE FORMS ARE NOT DAMAGED. ANY DAMAGE INCURRED TO THE SHEAR STUDS OR FORMS DUE TO DECK REMOVAL PROCEDURES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

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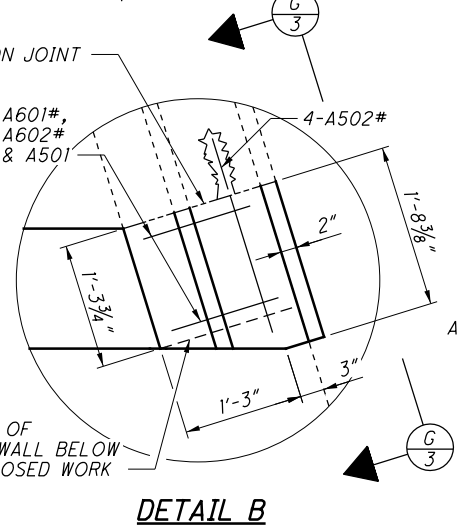
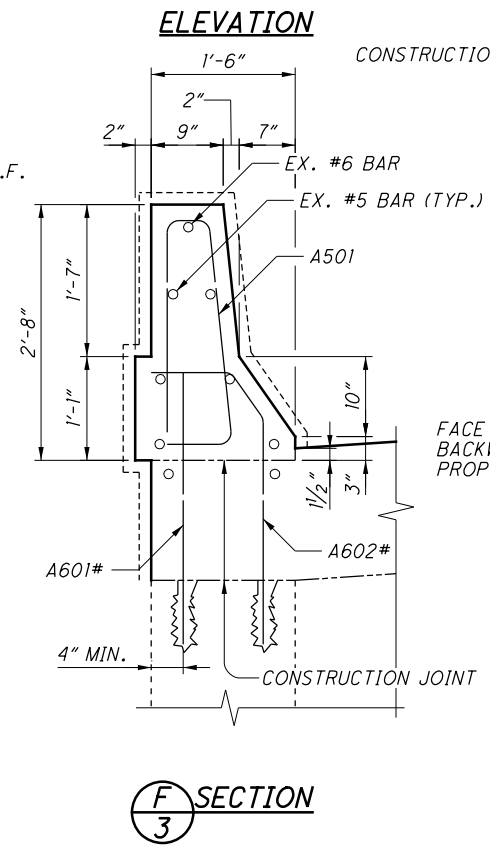
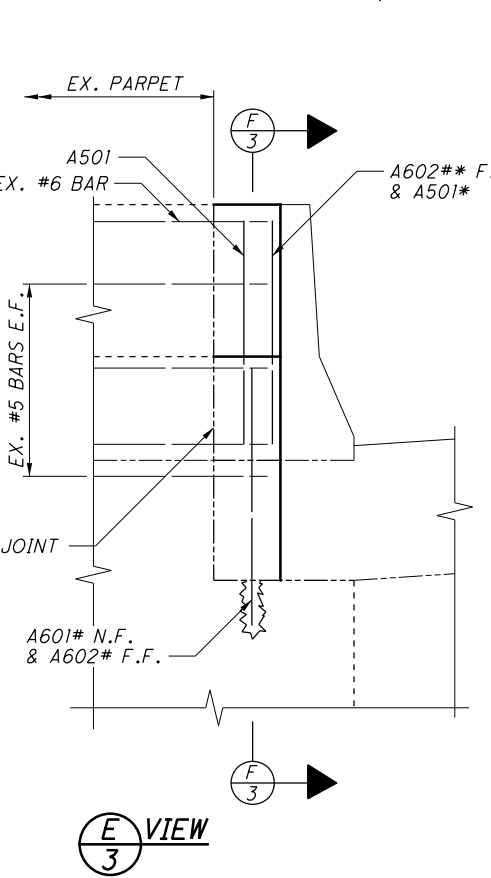
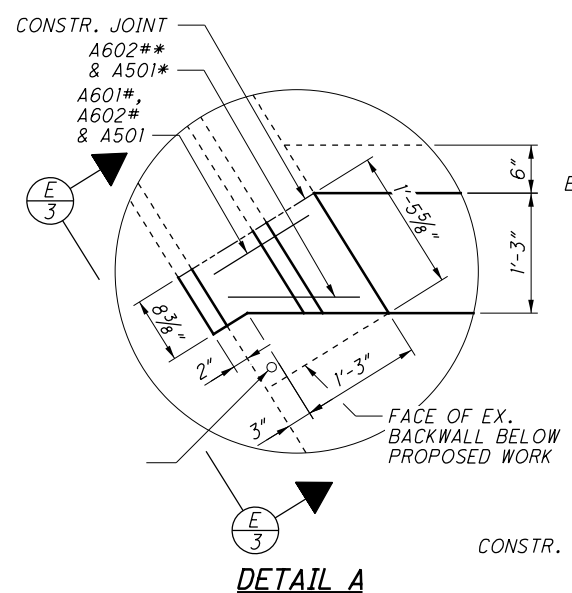
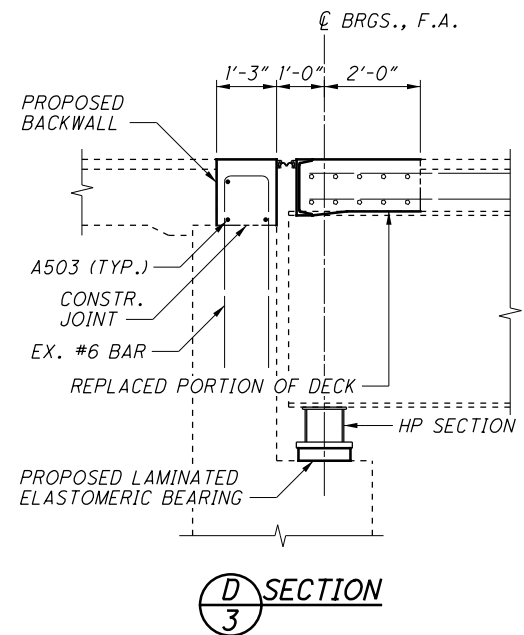
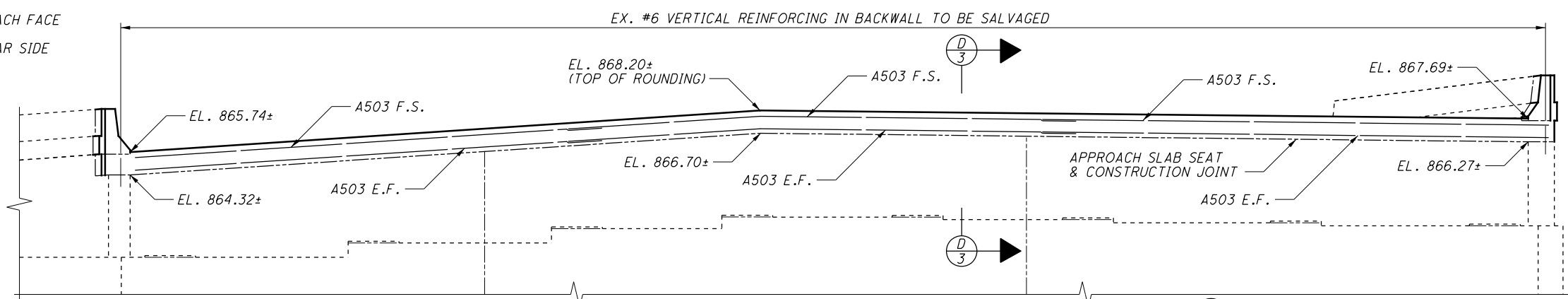
**LEGEND**

\* - BAR TO BE PLACED PARALLEL TO END OF PARAPET

# - BAR TO BE DOWELED INTO EXISTING STRUCTURE

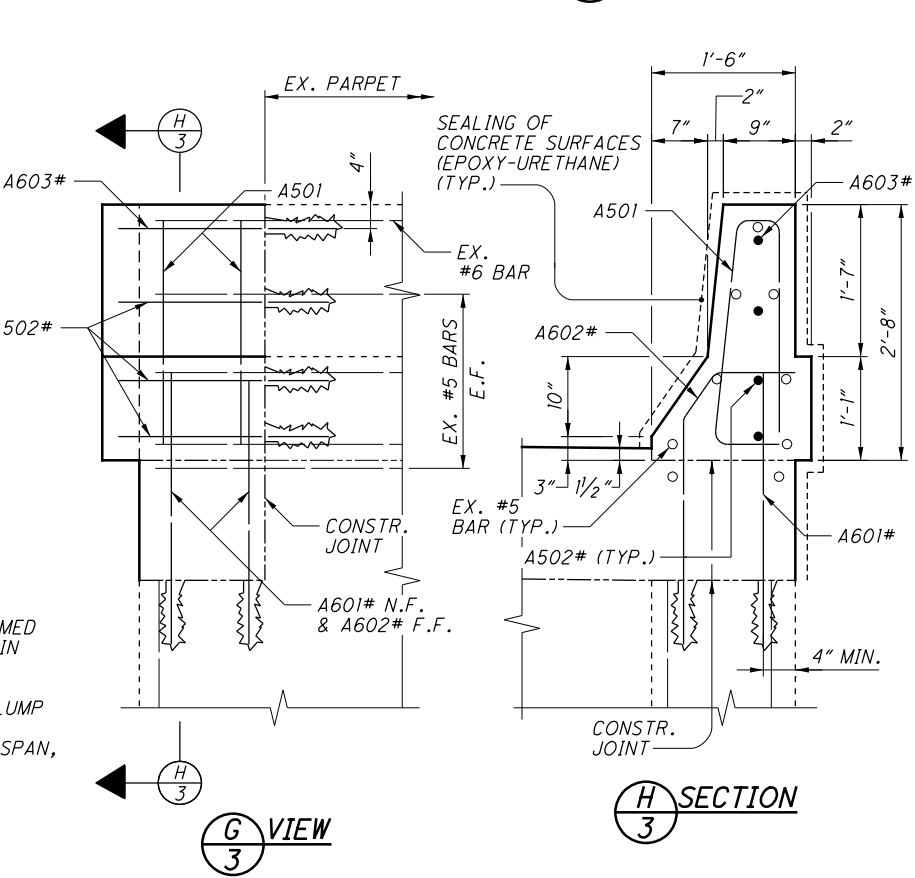
E.F. - EACH FACE

F.S. - FAR SIDE



**NOTES (CONTINUED)**

5. EXISTING REINFORCING SHALL BE TRIMMED AS NECESSARY TO PROVIDE 2" COVER IN RELATION TO PROPOSED GEOMETRY. PAYMENT FOR TRIMMING OF EXISTING REINFORCING SHALL BE MADE AT THE LUMP SUM BID OF ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.



**NOTES**

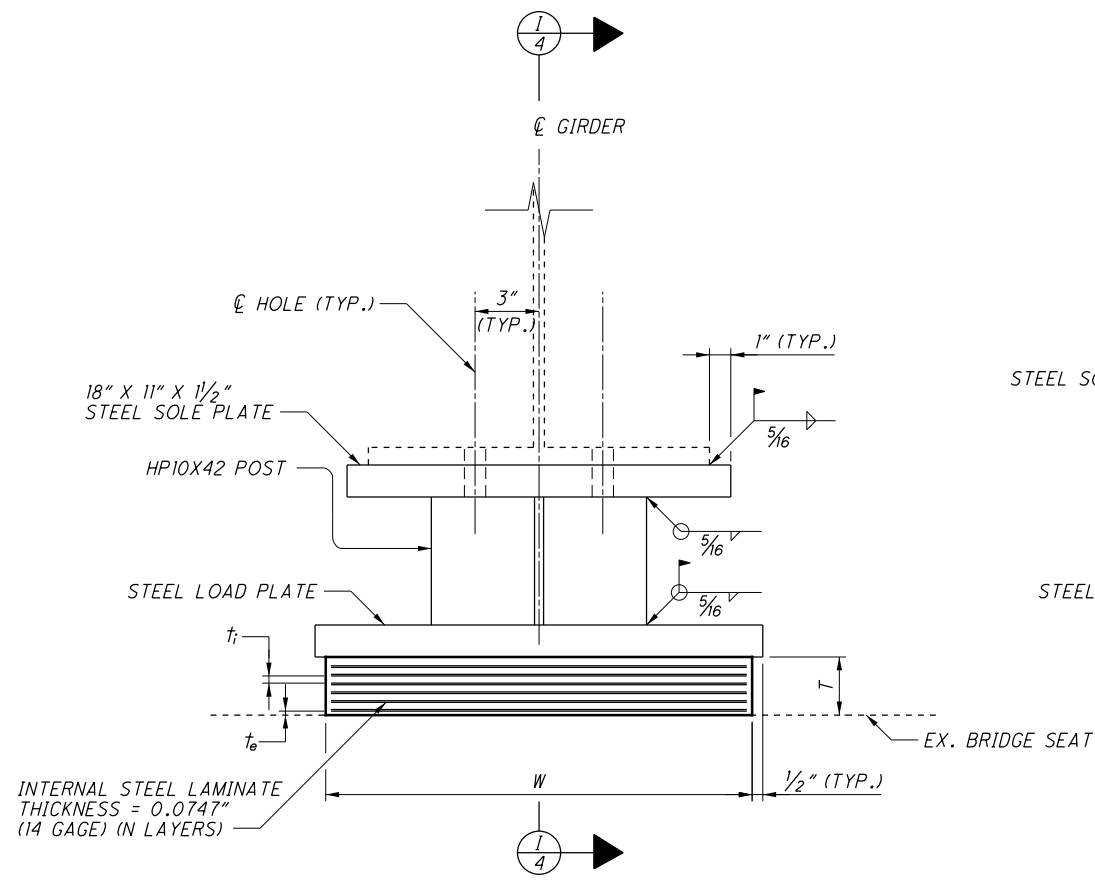
1. MINIMUM EMBEDMENT DEPTH:  
#5 BARS = 8 INCHES  
#6 BARS = 9 INCHES

2. PAYMENT FOR ALL CONCRETE SHALL BE MADE AT THE UNIT PRICE BID PER CUBIC YARD OF ITEM 511, CLASS OC MS CONCRETE.

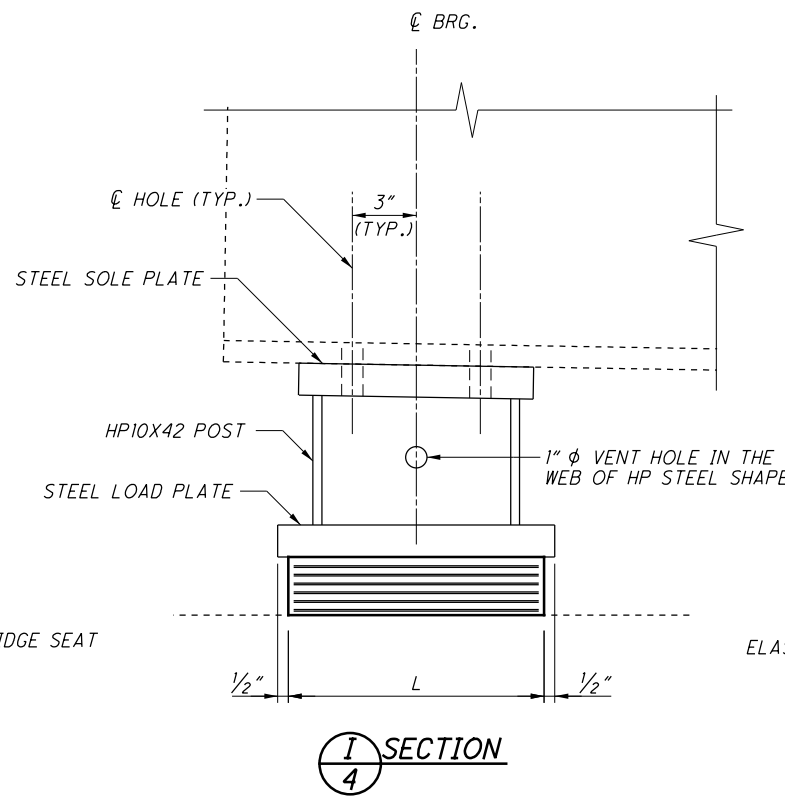
3. MINIMUM LAP LENGTH:  
#5 BAR = 29 INCHES

4. PROPOSED ELEVATIONS SHOULD MATCH FIELD VERIFIED EXISTING ELEVATIONS.

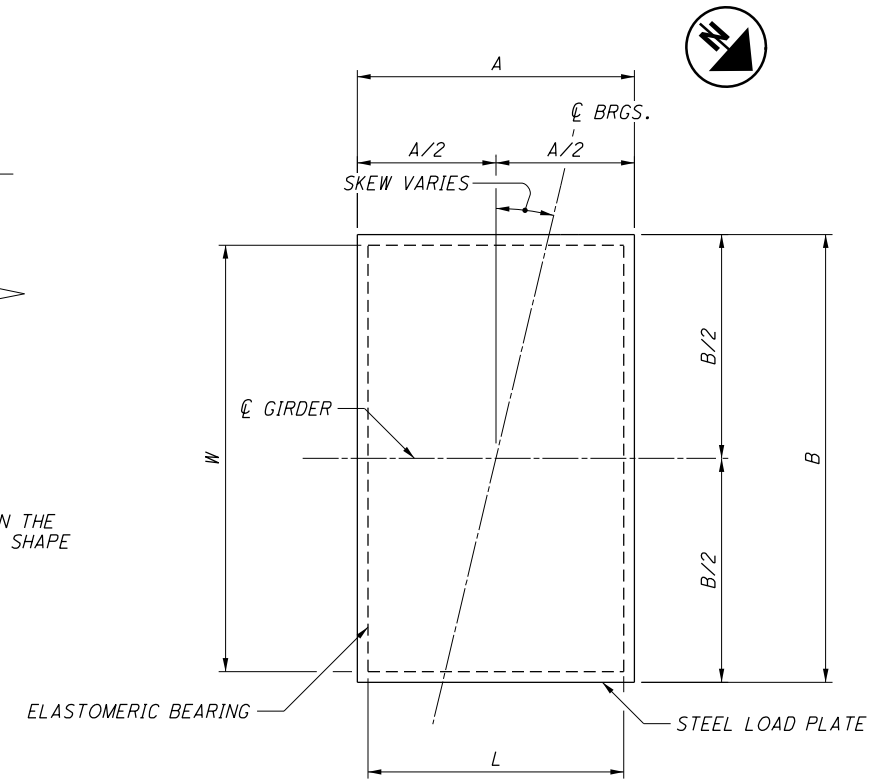
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**LAMINATED ELASTOMERIC EXPANSION BEARING  
REAR AND FORWARD ABUTMENT**



**I SECTION  
4**

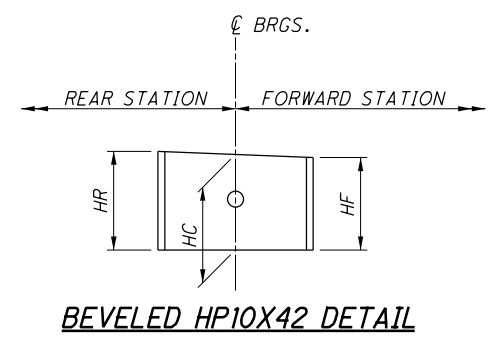


**ELASTOMERIC BEARING PAD  
AND STEEL LOAD PLATE PLAN**

**NOTES**

- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
- STEEL LOAD PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. ALL STEEL SHALL BE ASTM A709 GRADE 50 AND BE COATED WITH A SHOP APPLIED, INORGANIC ZINC PRIME COAT ACCORDING TO C&MS 514. REPAIR COATING DAMAGED BY WELDING ACCORDING TO C&MS 514.22. FIELD PAINTING OF INTERMEDIATE AND FINISH COATS IS REQUIRED. PAINTING AND REPAIRS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).
- THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE FINAL HP SECTION HEIGHT BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND PROPOSED BEARING HEIGHT FROM THE EXISTING BOTTOM OF BEAM ELEVATION AT EACH BEARING LOCATION. THIS HP SECTION HEIGHT IS A CONTRACTOR CALCULATED DIMENSION AND ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.  
  
FINAL HP SECTION HEIGHT = (CONTRACTOR'S BOTTOM OF STEEL ELEVATION)-(EXISTING BEAM SEAT ELEVATION)-(BEARING HEIGHT)
- BASIS OF PAYMENT: PAYMENT FOR ALL MATERIALS, LABOR, DRILLING OF HOLES IN BEAM FLANGES AND PLATES, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE ELASTOMERIC BEARINGS FOR THE BEAMS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE). ALL COST ASSOCIATED WITH THE HP SECTIONS AND SOLE PLATES ARE CONSIDERED INCIDENTAL TO ITEM 516.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE BEARING LOCATIONS ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UPSTATION. ALL MARKS SHALL BE PERMANENT AND VISIBLE AFTER BEARING IS INSTALLED.

HP10X42 HEIGHT (H) (LEFT BRIDGE)					
REAR ABUTMENT			FORWARD ABUTMENT		
GIRDER	LOCATION	H (IN.)	GIRDER	LOCATION	H (IN.)
1	HR	6 1/2 ±	1	HR	4 15/16 ±
	HC	6 1/16 ±		HC	4 3/4 ±
	HF	6 3/8 ±		HF	4 9/16 ±
2	HR	6 5/8 ±	2	HR	5 9/16 ±
	HC	6 3/16 ±		HC	5 3/8 ±
	HF	6 1/2 ±		HF	5 3/16 ±
3	HR	6 3/4 ±	3	HR	6 1/16 ±
	HC	6 1/16 ±		HC	5 7/8 ±
	HF	6 5/8 ±		HF	5 11/16 ±
4	HR	6 5/8 ±	4	HR	5 15/16 ±
	HC	6 3/16 ±		HC	5 3/4 ±
	HF	6 1/2 ±		HF	5 9/16 ±
5	HR	6 7/8 ±	5	HR	5 15/16 ±
	HC	6 1/16 ±		HC	5 3/4 ±
	HF	6 3/4 ±		HF	5 9/16 ±
6	HR	5 1/2 ±	6	HR	5 1/2 ±
	HC	5 1/2 ±		HC	5 1/2 ±
	HF	5 3/16 ±		HF	5 3/16 ±
7	HR	4 15/16 ±	7	HR	4 15/16 ±
	HC	4 3/4 ±		HC	4 3/4 ±
	HF	4 9/16 ±		HF	4 9/16 ±



**BEVELED HP10X42 DETAIL**

HP10X42 HEIGHT (H) (RIGHT BRIDGE)					
REAR ABUTMENT			FORWARD ABUTMENT		
GIRDER	LOCATION	H (IN.)	GIRDER	LOCATION	H (IN.)
1	HR	6 1/2 ±	1	HR	4 15/16 ±
	HC	6 1/16 ±		HC	4 3/4 ±
	HF	6 3/8 ±		HF	4 9/16 ±
2	HR	6 5/8 ±	2	HR	4 15/16 ±
	HC	6 3/16 ±		HC	4 3/4 ±
	HF	6 1/2 ±		HF	4 9/16 ±
3	HR	6 3/4 ±	3	HR	4 11/16 ±
	HC	6 1/16 ±		HC	4 1/2 ±
	HF	6 5/8 ±		HF	4 5/16 ±
4	HR	6 1/2 ±	4	HR	4 11/16 ±
	HC	6 1/16 ±		HC	4 1/2 ±
	HF	6 3/8 ±		HF	4 5/16 ±
5	HR	6 3/8 ±	5	HR	4 11/16 ±
	HC	6 3/16 ±		HC	4 1/2 ±
	HF	6 1/4 ±		HF	4 5/16 ±
6	HR	6 3/4 ±	6	HR	4 11/16 ±
	HC	6 1/16 ±		HC	4 1/2 ±
	HF	6 3/8 ±		HF	4 5/16 ±
7	HR	4 11/16 ±	7	HR	4 11/16 ±
	HC	4 1/2 ±		HC	4 1/2 ±
	HF	4 5/16 ±		HF	4 5/16 ±
8	HR	4 11/16 ±	8	HR	4 11/16 ±
	HC	4 1/2 ±		HC	4 1/2 ±
	HF	4 5/16 ±		HF	4 5/16 ±

LOCATION	BEARING DIMENSIONS					N	STEEL LOAD PLATE			REACTIONS*		MAXIMUM TOTAL LOAD
	L	W	t <sub>i</sub>	t <sub>e</sub>	T		A	B	THICKNESS	DL	LL	
REAR ABUTMENT	13"	20"	0.5625"	0.25"	4.0732"	6	14"	21"	1/2"	57.07 k	55.36 k	112.43 k
FORWARD ABUTMENT	13"	20"	0.5625"	0.25"	5.9848"	9	14"	21"	1/2"	83.67 k	58.57 k	142.24 k

\* REACTIONS ARE UNFACTORED

**LEGEND**

- t<sub>i</sub> - THICKNESS OF INTERNAL LAYERS
- t<sub>e</sub> - THICKNESS OF EXTERNAL LAYER
- T - TOTAL THICKNESS OF ELASTOMERIC BEARING
- N - NUMBER OF STEEL LAMINATES AND INTERNAL LAYERS  
INTERNAL STEEL LAMINATE THICKNESS = 0.0747 (14 GAGE)

DESIGN AGENCY  
**CARPENTER MARTY**  
TRANSPORTATION CONSULTANTS

DATE: 11-16-17  
REVIEWED: GDJ  
DRAWN: AMR  
CHECKED: AMR  
STK

STRUCTURE FILE NUMBER: 2904810/2904845

BRIDGE NO. GRE-844-0193L/R

S.R. 844 OVER S.R. 444, KAUFFMAN ROAD & NS RR

D08-BM-FY2019

PID No. 87127

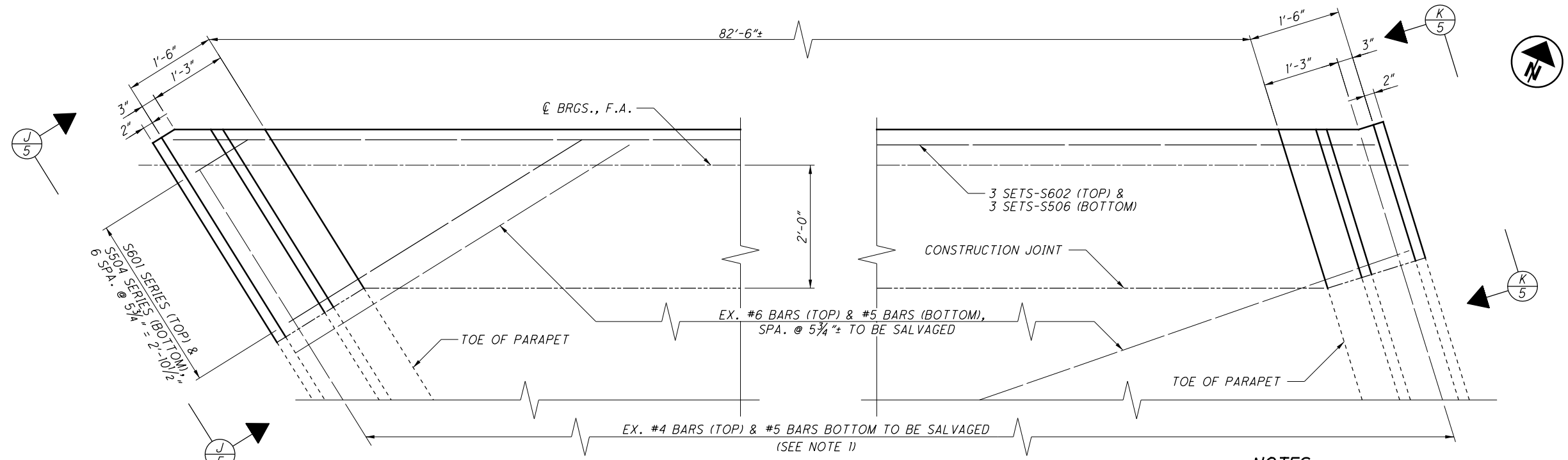
BEARING DETAILS

4 / 7

39

58

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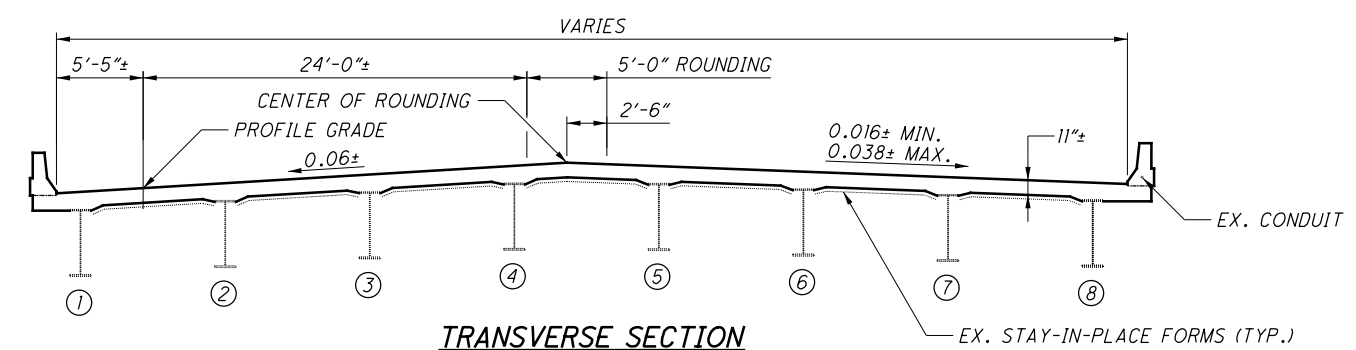
**PARTIAL SLAB PLAN**

**NOTES**

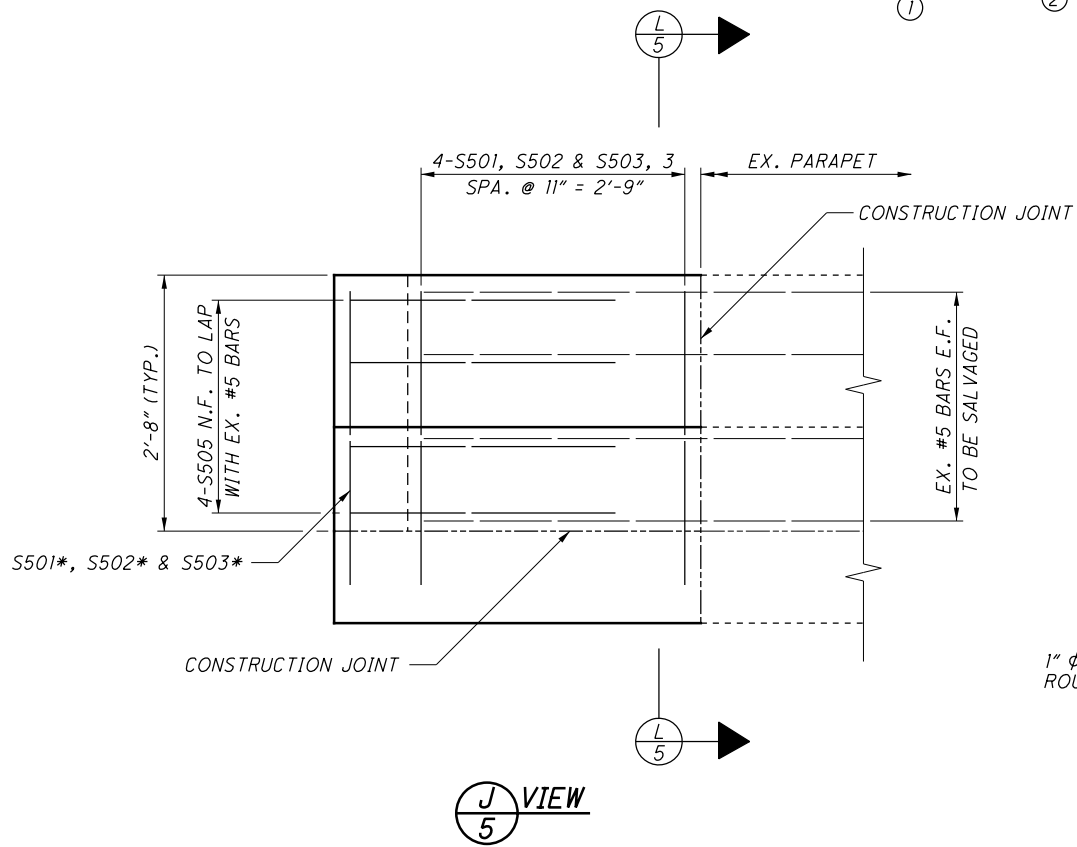
- EXISTING REINFORCING SHALL BE TRIMMED AS NECESSARY TO PROVIDE 2" COVER IN RELATION TO PROPOSED GEOMETRY. PAYMENT FOR TRIMMING OF EXISTING REINFORCING SHALL BE MADE AT THE LUMP SUM PRICE BID OF ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
- PAYMENT FOR ALL CONCRETE SHALL BE MADE AT THE UNIT PRICE BID PER CUBIC YARD OF ITEM 511, CLASS QC MS CONCRETE.
- MINIMUM LAP LENGTH:  
 #5 BAR = 29 INCHES  
 #6 BAR = 35 INCHES

**LEGEND**

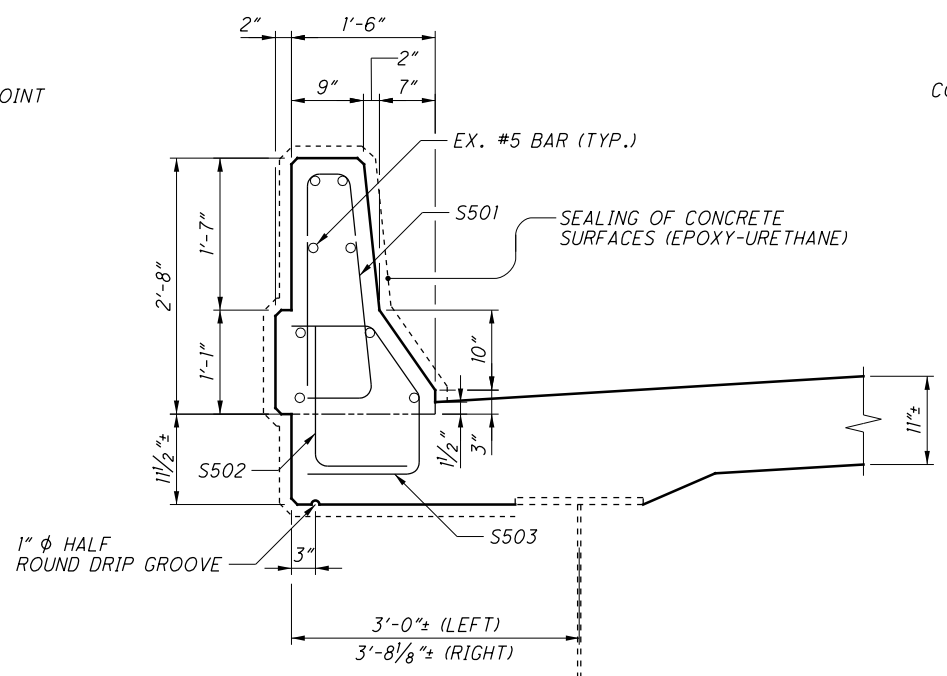
- \* - BAR TO BE PLACED PARALLEL TO END OF PARAPET
- N.F. - NEAR FACE
- E.F. - EACH FACE



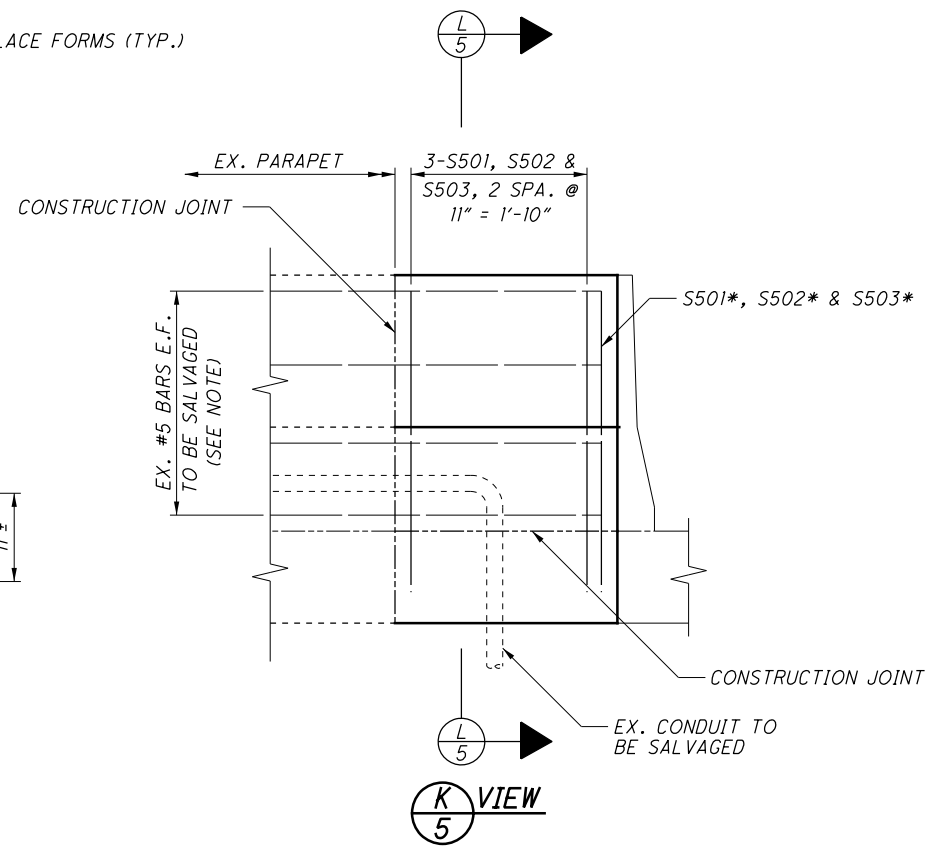
**TRANSVERSE SECTION**



**J VIEW**



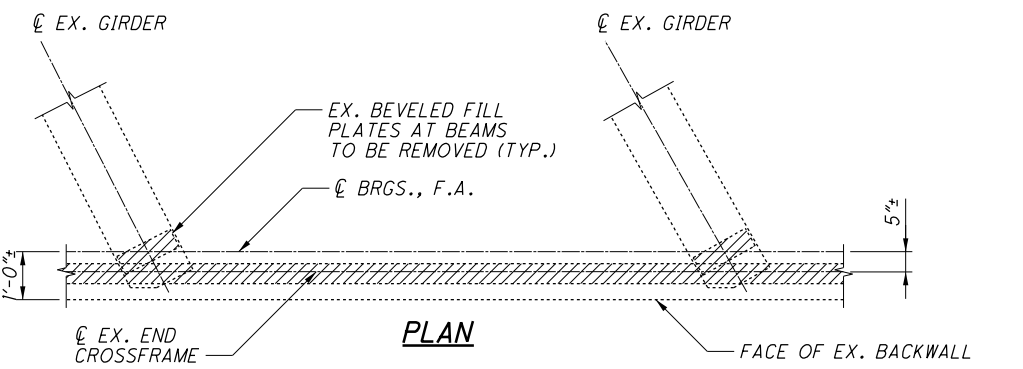
**L SECTION**  
 DECK REINFORCING AND SHEAR STUDS NOT SHOWN



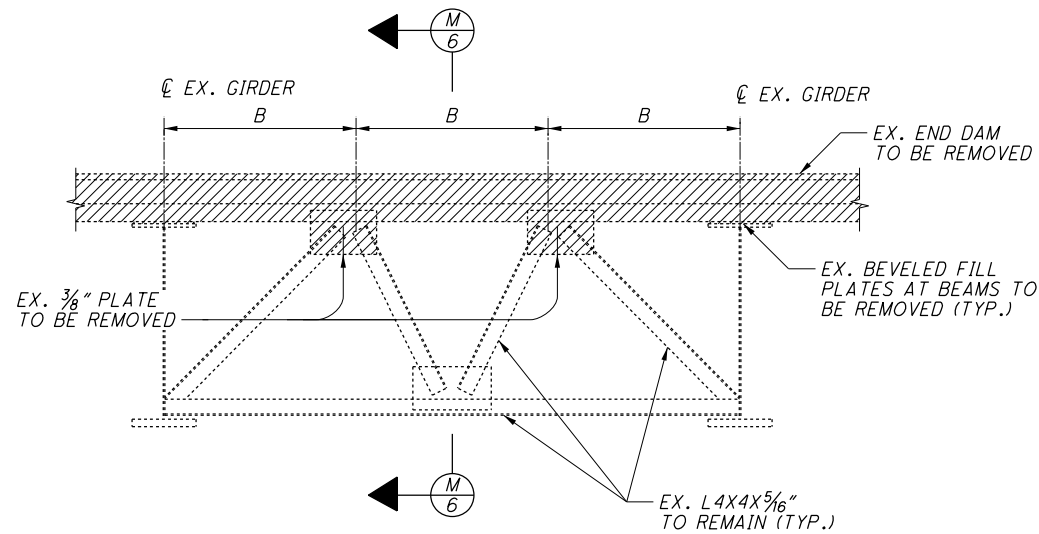
**K VIEW**



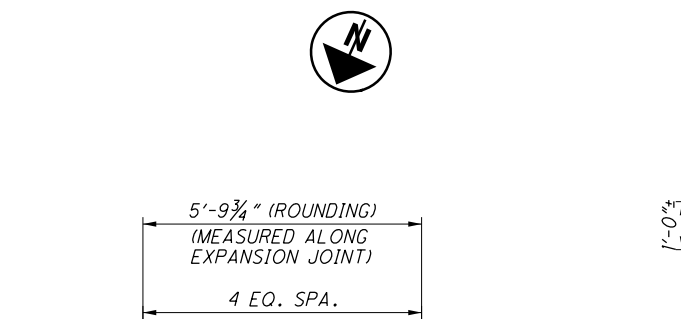
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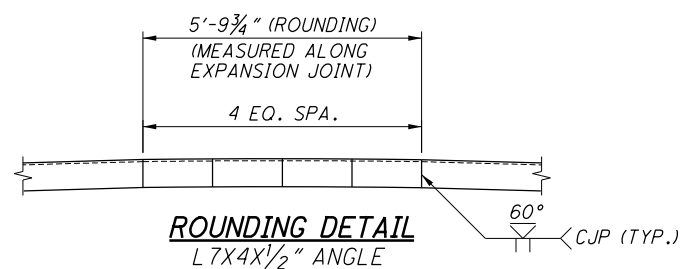
PLAN



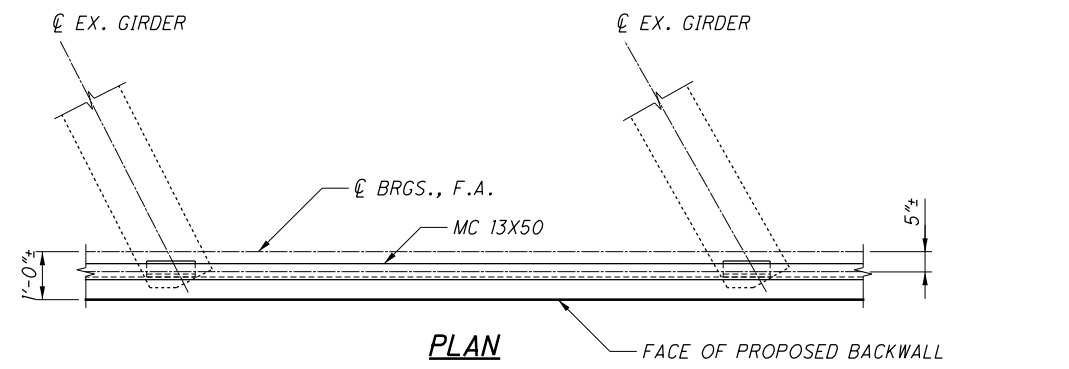
EXISTING END CROSSFRAME ELEVATION



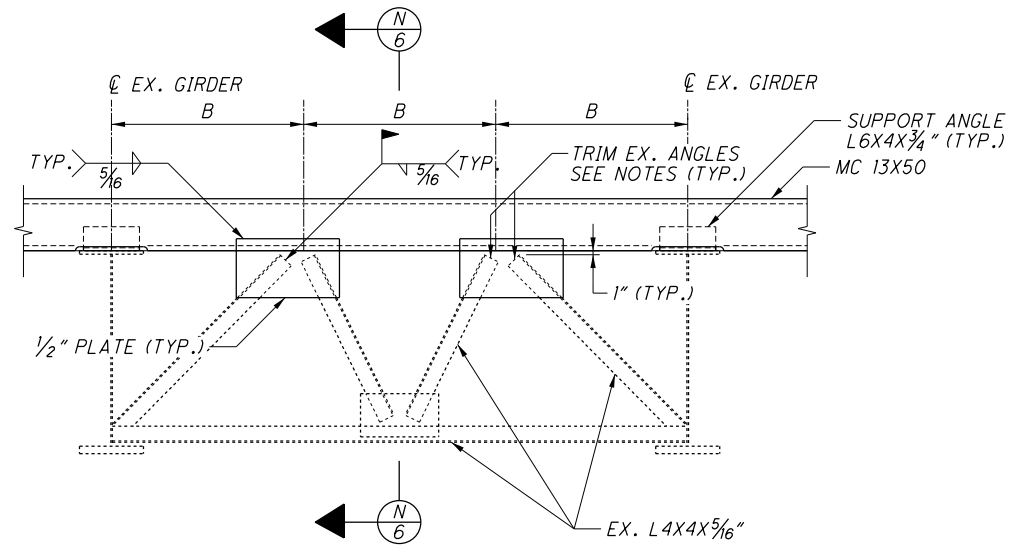
ROUNDING DETAIL  
MC13X50 SECTION



ROUNDING DETAIL  
L7X4X1/2" ANGLE



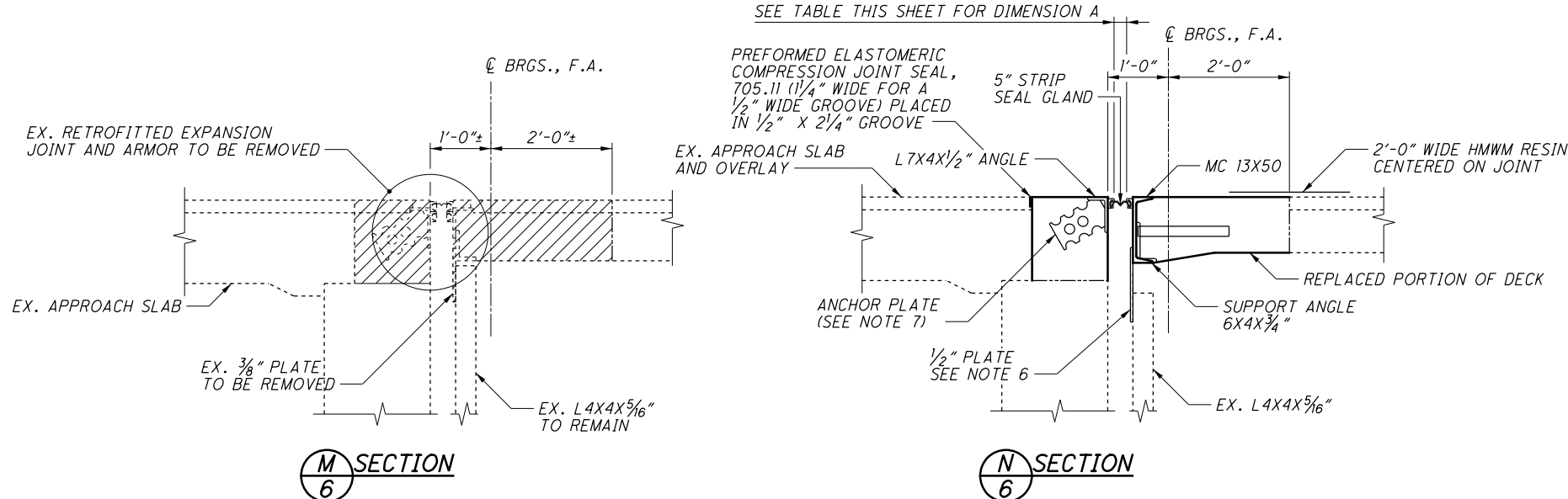
PLAN



PROPOSED END CROSSFRAME ELEVATION

**NOTES**

1. INSTALLATION OF SEAL: DURING INSTALLATION OF THE SUPPORT/ARMOR FOR THE SUPERSTRUCTURE SIDE OF THE EXPANSION JOINT SEAL, OBSERVE THE SEATING OF GIRDERS ON BEARINGS TO ASSURE THAT POSITIVE BEARING IS MAINTAINED.
2. ALL COSTS ASSOCIATED WITH THE REMOVAL OF THE EXISTING END DAMS AND PORTIONS OF EXISTING STAY-IN-PLACE FORMS AS NECESSARY TO INSTALL ELASTOMERIC STRIP SEAL ARMOR SHALL BE MADE AT THE LUMP SUM PRICE BID FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
3. THE LOCATIONS OF EXISTING CONNECTION PLATES AS SHOWN IN THE DETAILS IN THIS PLAN ARE BASED ON INFORMATION OBTAINED FROM PLANS OF THE ORIGINAL STRUCTURE AND RETIRED ODOT STANDARD DRAWING SD-1-69. THE ACTUAL LOCATIONS OF EXISTING CONNECTION PLATES MAY DIFFER FROM THAT SHOWN. TO ENSURE PROPER FITTING OF THE NEW END DAMS, THE CONTRACTOR SHALL TAKE MEASUREMENTS TO FIELD VERIFY ALL CONNECTION PLATE LOCATIONS PRIOR TO FABRICATING THE NEW SUPERSTRUCTURE END DAMS. COAT ALL STEEL PARTS OF THE JOINT ACCORDING TO STD. DWG. EXJ-4-87. CLEAN AND PAINT THE AREAS OF THE PROPOSED 1/2" GUSSET PLATES, TRIMMED L BRACKETS, ETC. DAMAGED DURING THE INSTALLATIONS, PER C&MS 514. ALL LABOR AND MATERIALS ASSOCIATED WITH THE SPECIFIED WORK SHALL BE MADE AT THE UNIT PRICE BID PER LINEAR FOOT OF ITEM 516, STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL.
4. REFER TO STD. DWG. EXJ-4-87 AND GSD-1-96 FOR ADDITIONAL NOTES AND DETAILS.
5. THE ENDS OF EXISTING END CROSSFRAME ANGLES WILL REQUIRE TRIMMING WHERE THEY MEET NEW CONNECTION PLATES. ANGLES SHALL BE TRIMMED TO PROVIDE A MINIMUM CLEARANCE OF 1" BETWEEN THE END OF THE ANGLE AND THE NEW MC 13X50, AS PER THE DETAILS SHOWN ON STD. DWG. EXJ-4-87. TRIMMING OF EXISTING CROSSFRAME ANGLES SHALL BE MADE AT THE LUMP SUM PRICE BID OF ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
6. SHIM 1/2" PLATE AS NECESSARY TO MAINTAIN DIMENSION A IN TABLE. ALL WORK SHALL MEET THE APPROVAL OF THE ENGINEER.
7. THE CONTRACTOR SHALL WELD ANCHOR PLATES IN THE FIELD TO AVOID THE EXISTING VERTICAL REINFORCING STEEL IN THE ABUTMENT.
8. SEE SHEET 3/7 FOR BEAM SPACING.
9. PAYMENT FOR HMWM RESIN AND PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL SHALL BE MADE AT THE UNIT PRICE BID PER CUBIC YARD OF ITEM 511, CLASS OC2 CONCRETE, SUPERSTRUCTURE.



M SECTION

N SECTION

AMBIENT TEMPERATURE	DIMENSION A
30° F	3 1/8"
40° F	2 7/8"
50° F	2 5/8"
60° F	2 3/8"
70° F	2 1/8"
80° F	1 3/8"
90° F	1 1/8"

**LEGEND**

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

B = 4'-0"± MAX., 3'-4 1/4"± MIN. (SEE NOTE 3)

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS					
					A	B	C	D	R	
<b>ABUTMENT</b>										
A501	4	5'-3"	22	22	8"	2'-5"	2'-2"			2 3/4"
A502#	3	2'-2"	7	STR						
A503	9	30'-0"	282	STR						
A601#	3	2'-10"	13	STR						
A602#	4	3'-11"	24	13	2'-4"	8 1/2"	6"	9"		
A603#	1	2'-3"	4	STR						
<b>SUB-TOTAL</b>			<b>352</b>							

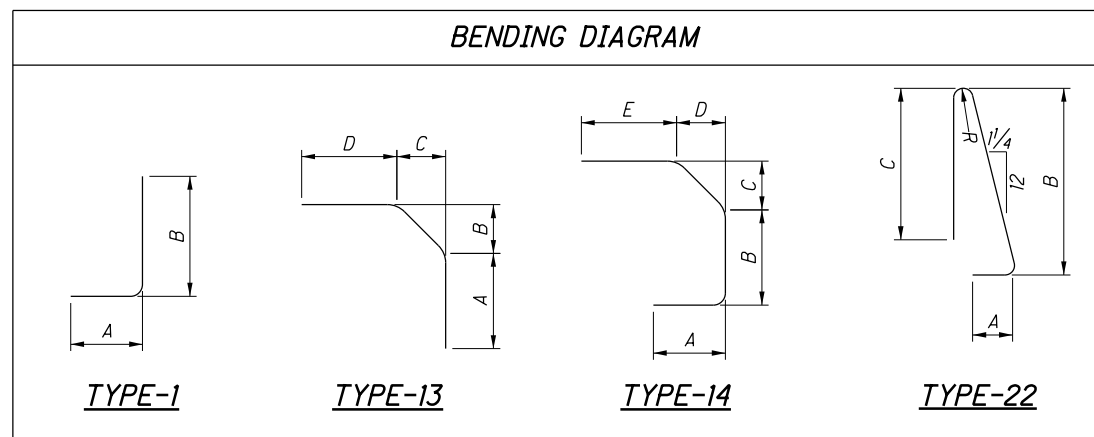
MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS						
					A	B	C	D	E	R	INC
<b>SUPERSTRUCTURE</b>											
S501	9	5'-3"	50	22	8"	2'-5"	2'-2"			2 3/4"	
S502	9	2'-3"	22	1	10 1/2"	1'-6"					
S503	9	3'-1"	29	14	10 1/2"	10"	8 1/2"	6"	7"		
S504	1 SERIES OF 7	1'-0" TO 5'-7"	25	STR							9" (+)
S505	4	2'-10"	12	STR							
S506	3	30'-0"	94	STR							
S601	1 SERIES OF 7	1'-0" TO 5'-7"	35	STR							9" (+)
S602	3	30'-5"	138	STR							
<b>SUB-TOTAL</b>			<b>405</b>								

**NOTES**

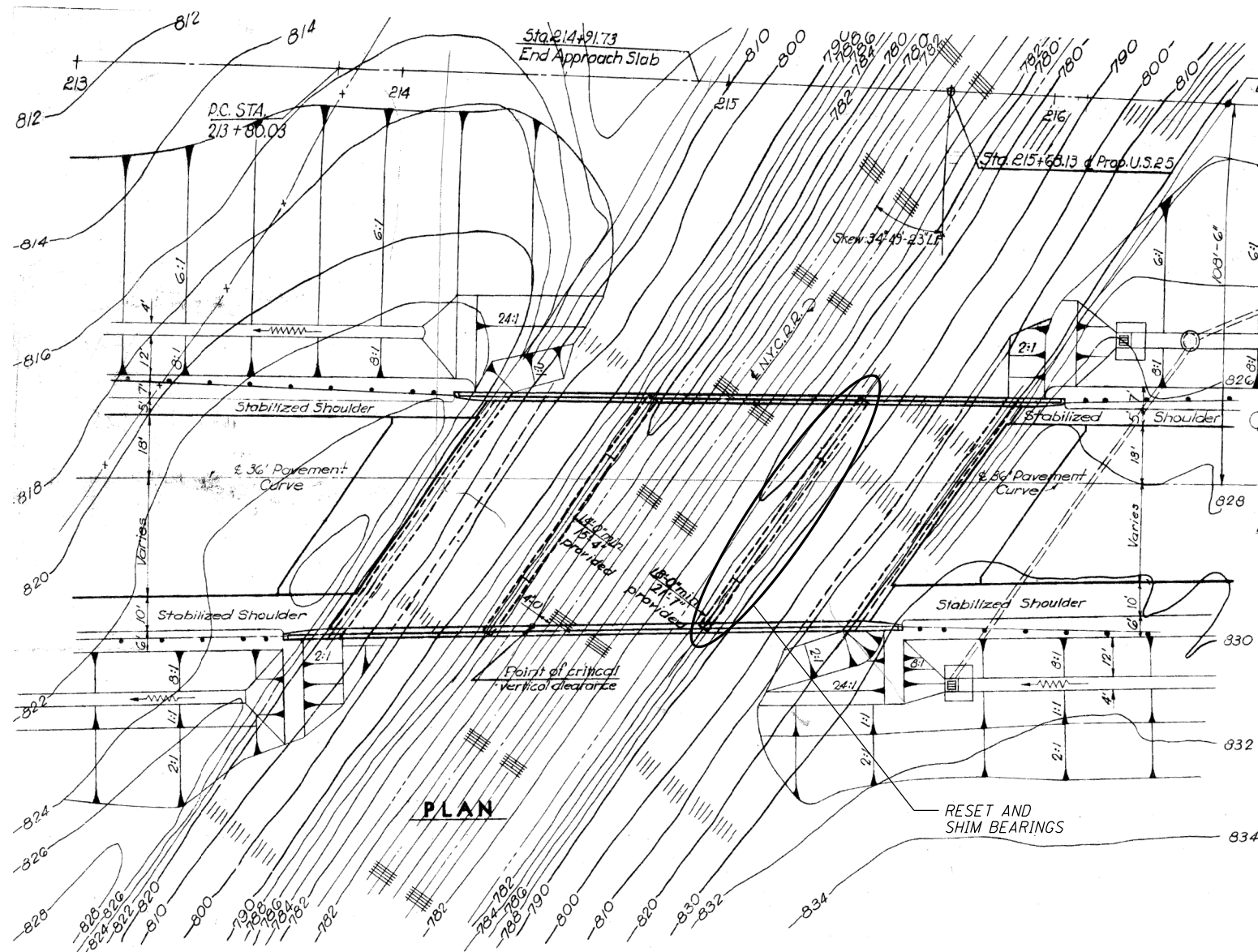
1. THE BAR NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT WHERE THREE DIGITS ARE USED, AND THE FIRST TWO DIGITS WHERE FOUR ARE USED, INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, S501 IS A NO. 5 BAR. BAR DIMENSIONS ARE OUT TO OUT UNLESS OTHERWISE INDICATED.
2. ALL REINFORCING STEEL TO BE EPOXY COATED.

**LEGEND**

\* - BARS TO BE DOWELED INTO EXISTING STRUCTURE

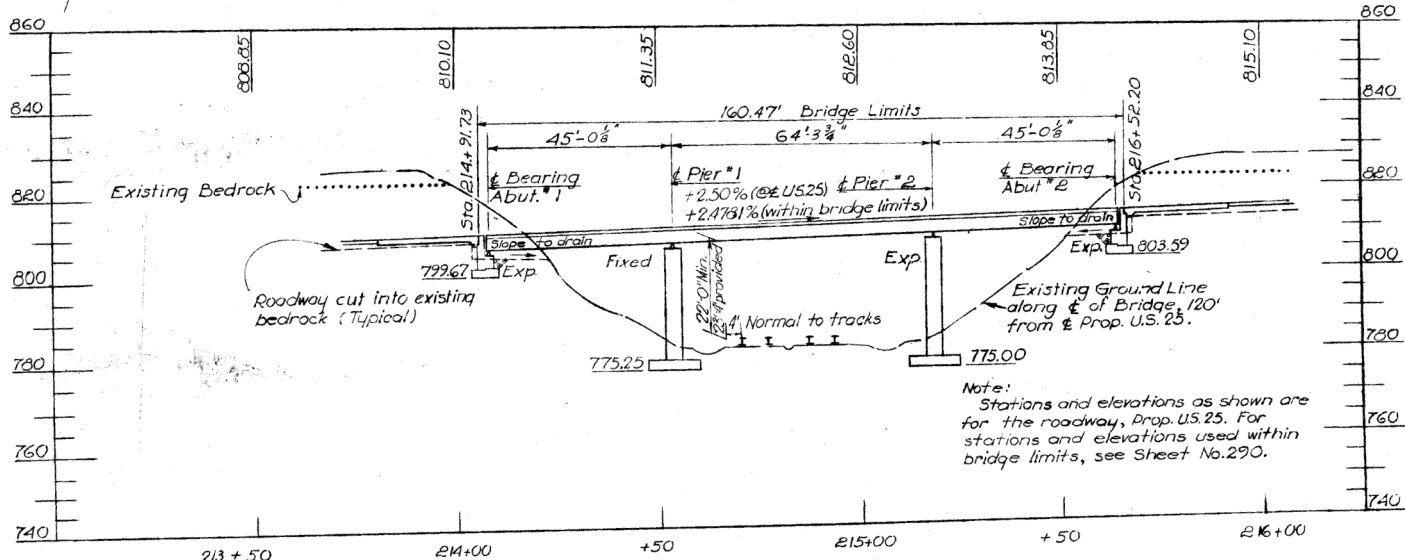
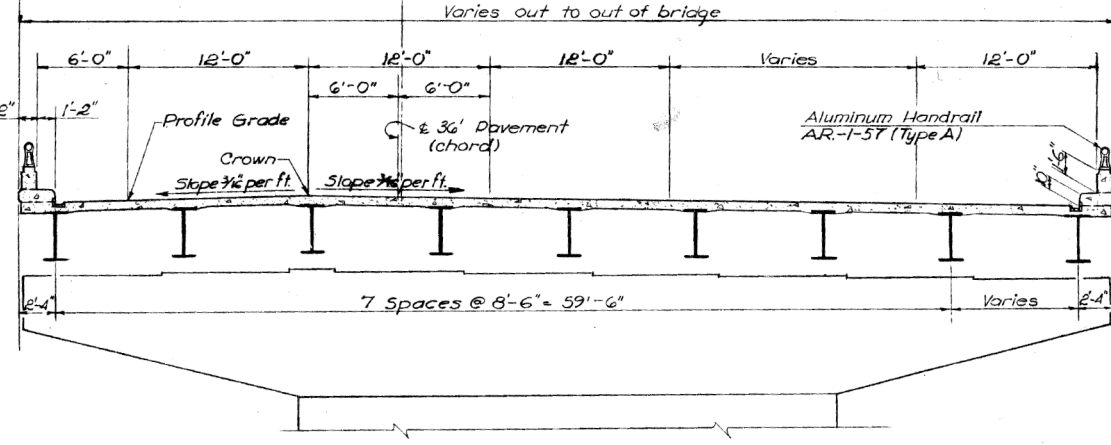


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**CURVE DATA**

PROPOSED U.S. 25  
 P.I. = Sta. 288+40.36  
 $\Delta = 62^\circ 34' 07''$  Lt.  
 D = 0°-28' Lt.  
 R = 12,277.67'  
 L<sub>c</sub> = 13,407.56  
 T = 7460.33



**PROFILE OF BRIDGE**

**EXISTING STRUCTURE**

TYPE: CONTINUOUS ROLLED STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 45'-0 1/8" ±, 64'-3 3/4" ±, 45'-0 1/8" ± C/C BRGS.,

ROADWAY: VARIES T/T BARRIER

LOADING: C.F. = 2000(57)

SKEW: 34°49'23" ± L.F.

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: 25' ± LONG (AS-1-54)

STRUCTURAL FILE NUMBER: 0901741

DATE BUILT: 1960; REHABILITATED: 2004

DISPOSITION: TO BE REHABILITATED

**PROPOSED WORK**

RESET AND SHIM THE BEARINGS AT PIER 2. THE BEARINGS SHALL BE RECENTERED AT THE CENTERLINE OF THE PIER, REQUIRING THE REMOVAL AND REPLACEMENT OF THE WELDS TO THE BOTTOM FLANGE OF THE BEAM. REPAIR COATINGS DAMAGED BY WELDING ACCORDING TO C&MS 514.22. PAINT REPAIRS SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH OF ITEM 516, RESET BEARINGS.

THE CONTRACTOR SHALL NOT DOWEL INTO THE FACE OF THE PIERS TO SUPPORT THE SUPERSTRUCTURE DURING JACKING OPERATIONS.

**NOTE**

SEE SHEET 18 OF 58 FOR STRUCTURE QUANTITIES.

DESIGN AGENCY: **CARPENTER MARTY** Transportation

DATE: 11-15-17

REVIEWED: WHM

DRAWN: STK

DESIGNED: STK

BUTLER COUNTY

STA. 214+91.73

STA. 216+52.20

**SITE PLAN**

BRIDGE NO. BUT-75-0405R

N.B. I.R. 75 OVER NORFOLK SOUTHERN RR

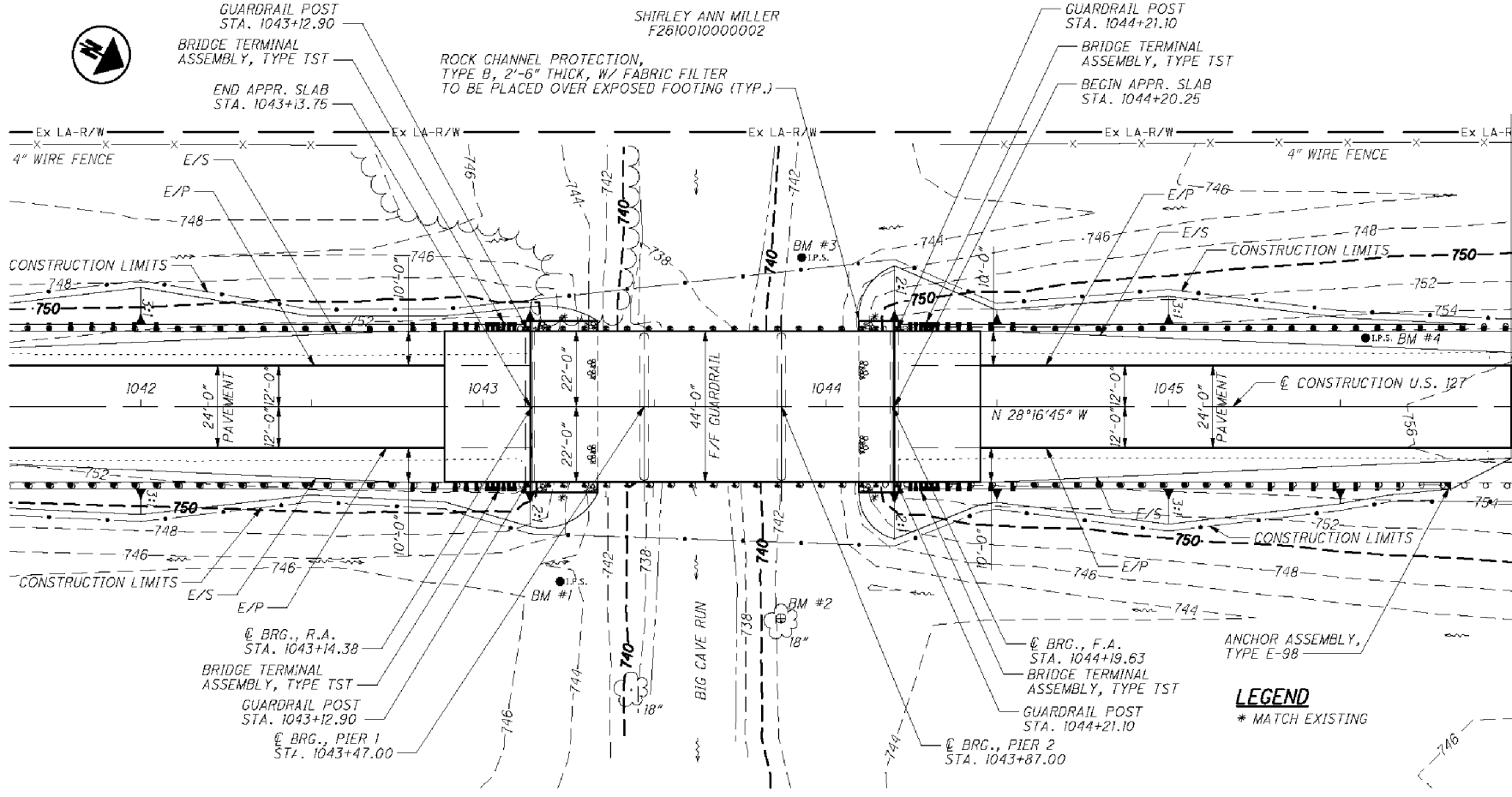
**D08-BM-FY2019**

PID No. 87127

1/1

43/58

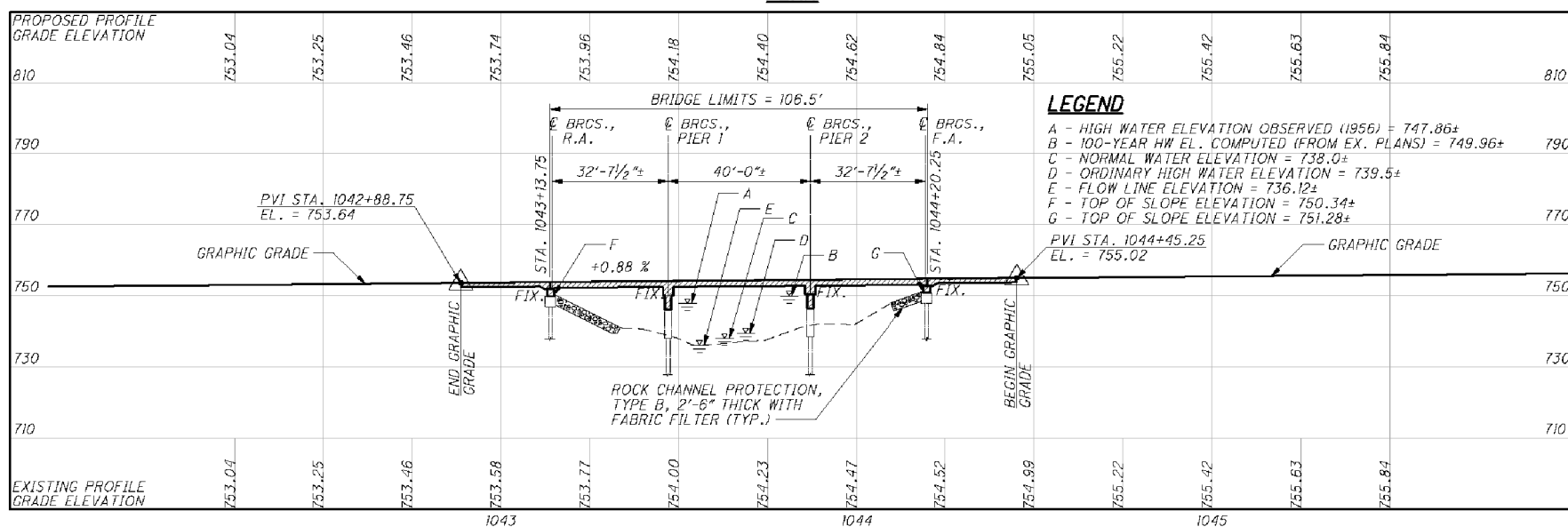
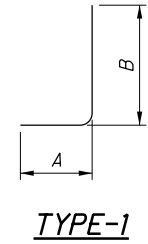
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PLAN

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS	
	REAR	FWD	TOTAL				A	B
<b>ABUTMENT</b>								
A501#		10	10	2'-5"	26	1	1'-0"	1'-7"
A502#		12	12	2'-6"	32	1	1'-0"	1'-8"
A503#		12	12	2'-7"	33	1	1'-0"	1'-9"
A504#		6	6	2'-8"	17	1	1'-0"	1'-10"
A505		4	4	22'-2"	93	STR		
<b>TOTAL</b>					<b>201</b>			

**LEGEND**  
# - BAR TO BE DOWELED INTO EXISTING STRUCTURE



PROFILE SHOWN ALONG C CONSTRUCTION U.S. 127

**LEGEND**  
A - HIGH WATER ELEVATION OBSERVED (1956) = 747.86±  
B - 100-YEAR HW EL. COMPUTED (FROM EX. PLANS) = 749.96±  
C - NORMAL WATER ELEVATION = 738.0±  
D - ORDINARY HIGH WATER ELEVATION = 739.5±  
E - FLOW LINE ELEVATION = 736.12±  
F - TOP OF SLOPE ELEVATION = 750.34±  
G - TOP OF SLOPE ELEVATION = 751.28±  
PVI STA. 1044+45.25  
EL. = 755.02

**EXISTING STRUCTURE**

TYPE: CONTINUOUS REINFORCED CONCRETE SLAB ON CONCRETE ABUTMENTS AND CAPPED PILE PIERS

SPANS: 32'-7 1/2"±, 40'-0"±, 32'-7 1/2"± C/C BRGS.

ROADWAY: 44'-0"± F/F GUARDRAIL

LOADING: HS25 AND THE ALTERNATE MILITARY LOADING (SUPERSTRUCTURE)  
C.F. = 2000(57) (SUBSTRUCTURE)

SKEW: NONE

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: 25'-0"± LONG (AS-1-81)

STRUCTURAL FILE NUMBER: 0902942

DATE BUILT: 1960; REHABILITATED: 2008

DISPOSITION: TO BE REHABILITATED

**PROPOSED WORK**

- REMOVE LOOSE CONCRETE AT FORWARD ABUTMENT AND INSTALL STEEL ABUTMENT SUPPORTS THAT ARE THEN CAST-IN-PLACE USING SELF-CONSOLIDATING CONCRETE.
- SEAL NEW CONCRETE WITH EPOXY URETHANE SEALER.

**NOTES**

- SEE SHEET 18 OF 58 FOR STRUCTURE QUANTITIES.
- THIS SITE PLAN WAS DEVELOPED BY REUSING THE MOST CURRENT REHABILITATION PLAN WHICH HAS CERTAIN ITEMS SHOWN WITH NEW WORK LINE STYLES THAT ARE NOW EXISTING. PLEASE SEE PROPOSED WORK LIST FOR THE WORK TO BE PERFORMED ON THIS STRUCTURE.



DATE 11-16-17  
REVIEWED GDU  
STRUCTURE FILE NUMBER 0902942

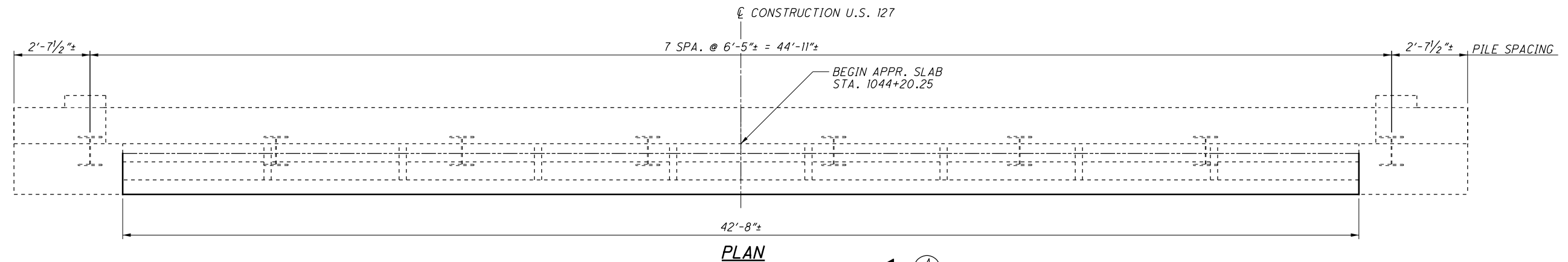
DRAWN STK  
CHECKED REVISED  
AMR

BUTLER COUNTY  
STA. 1043+13.75  
STA. 1044+20.25

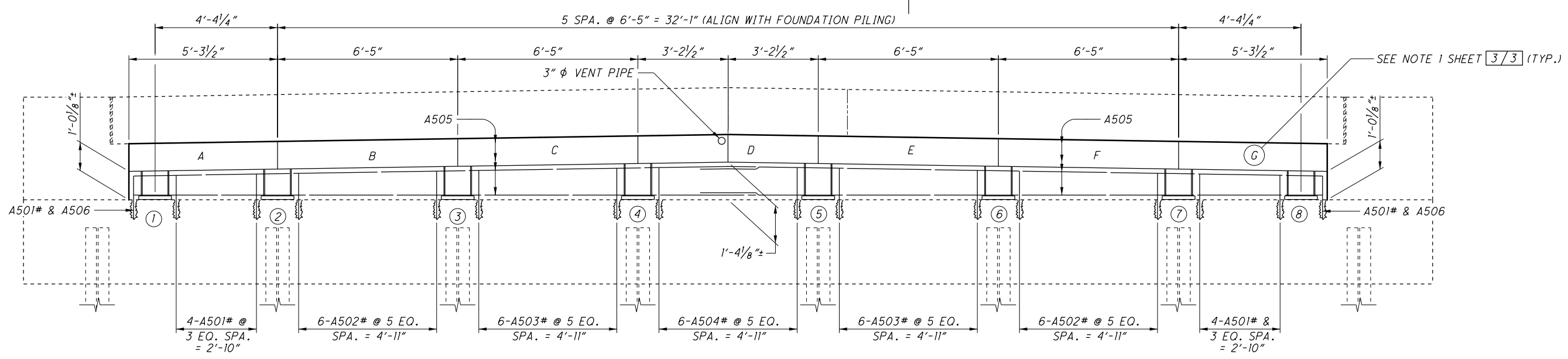
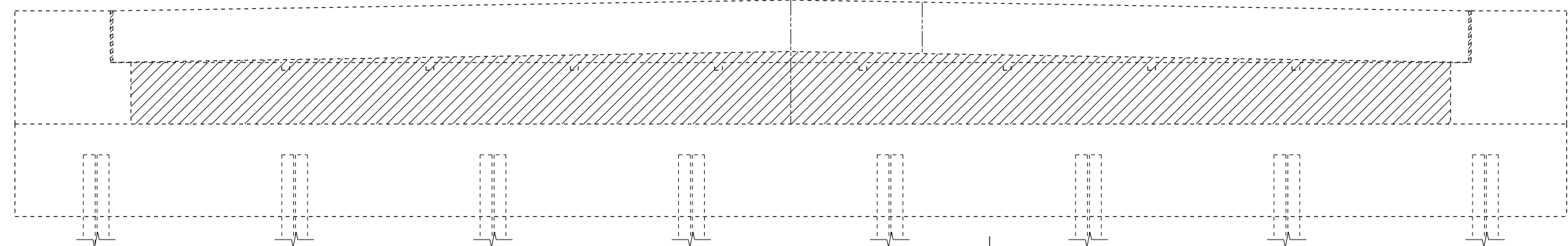
**SITE PLAN**  
BRIDGE NO. BUT-127-1964  
U.S. 127 OVER BIG CAVE RUN

**D08-BM-FY2019**  
PID No. 87127

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PLAN



ELEVATION

APPROXIMATE EXISTING BOTTOM OF DECK TO TOP OF FOOTING DIMENSIONS (FOR ESTIMATING PURPOSES ONLY)								
LOCATION	1	2	3	4	5	6	7	8
HEIGHT *	2'-0 1/8"	2'-0 3/8"	2'-2 1/8"	2'-3 1/4"	2'-3 1/4"	2'-2 1/8"	2'-0 7/8"	2'-0 1/8"

\* HEIGHTS SHALL BE CONSIDERED APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO FORMING THE CONCRETE CAPS OR FABRICATION OF STEEL BEARING PEDESTALS. ANY ERRORS IN THE FABRICATION OF THE STEEL SUPPORTS SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.

LEGEND

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- # - BAR TO BE DOWELED INTO EXISTING STRUCTURE

NOTES

- CUT EXISTING VERTICAL REINFORCING STEEL AS NEEDED TO CLEAR HP SECTIONS.
- SEAL PROPOSED ABUTMENT FACE WITH EPOXY-URETHANE.
- MINIMUM LAP LENGTH:  
#5 BAR = 24 INCHES
- MINIMUM EMBEDMENT DEPTH OF #5 DOWEL BARS IS 8 INCHES.

**DESIGN AGENCY**  
**CARPENTER MARTY**  
TRANSPORTATION CONSULTANTS

---

**DESIGNED** STK AMR  
**DRAWN** STK  
**REVIEWED** GDU  
**DATE** 11-16-17  
**STRUCTURE FILE NUMBER** 0902942

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**FORWARD ABUTMENT DETAILS**  
BRIDGE NO. BUT-127-1964  
U.S. 127 OVER BIG CAVE RUN

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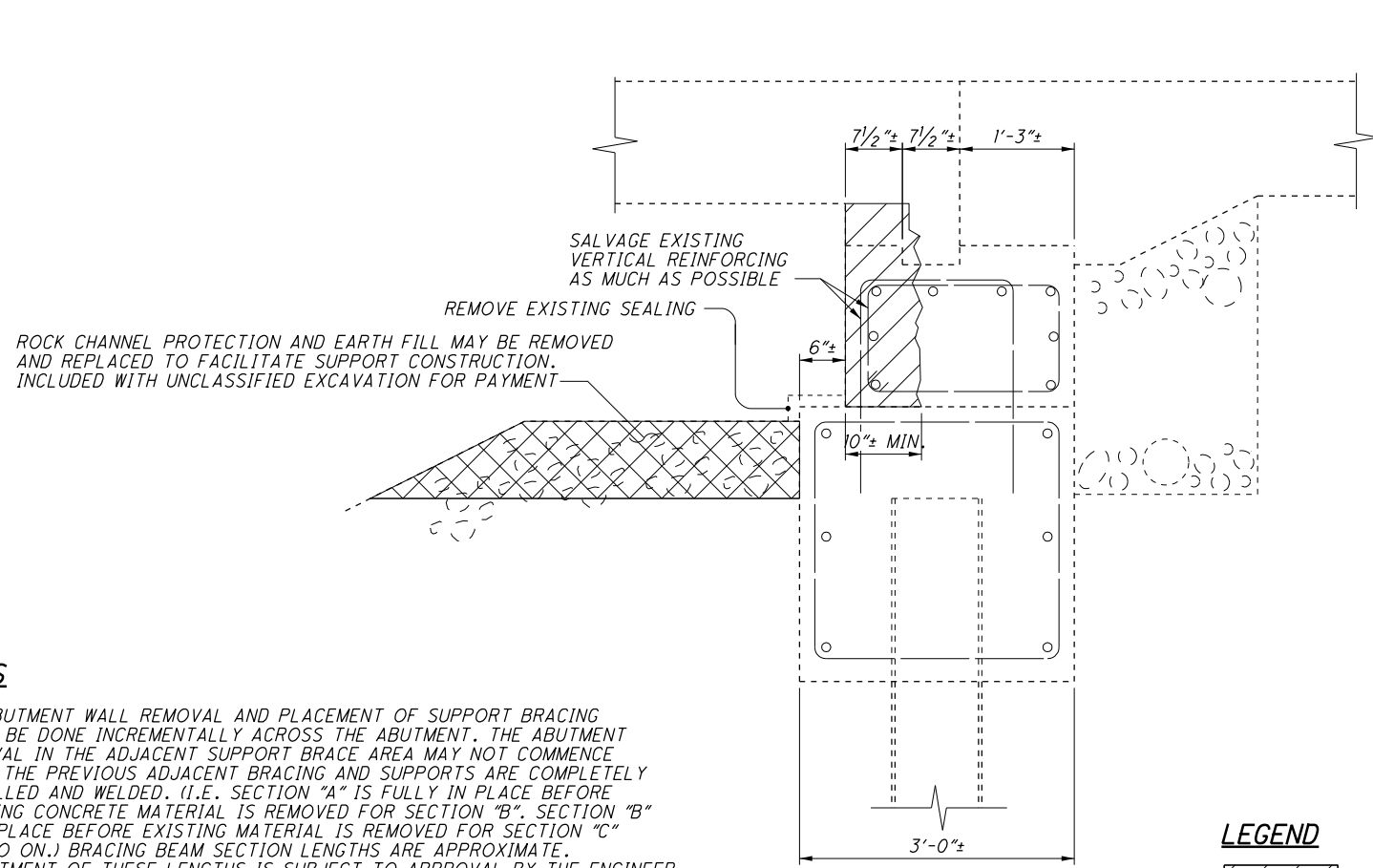
**D08-BM-FY2019**  
PID No. 87127

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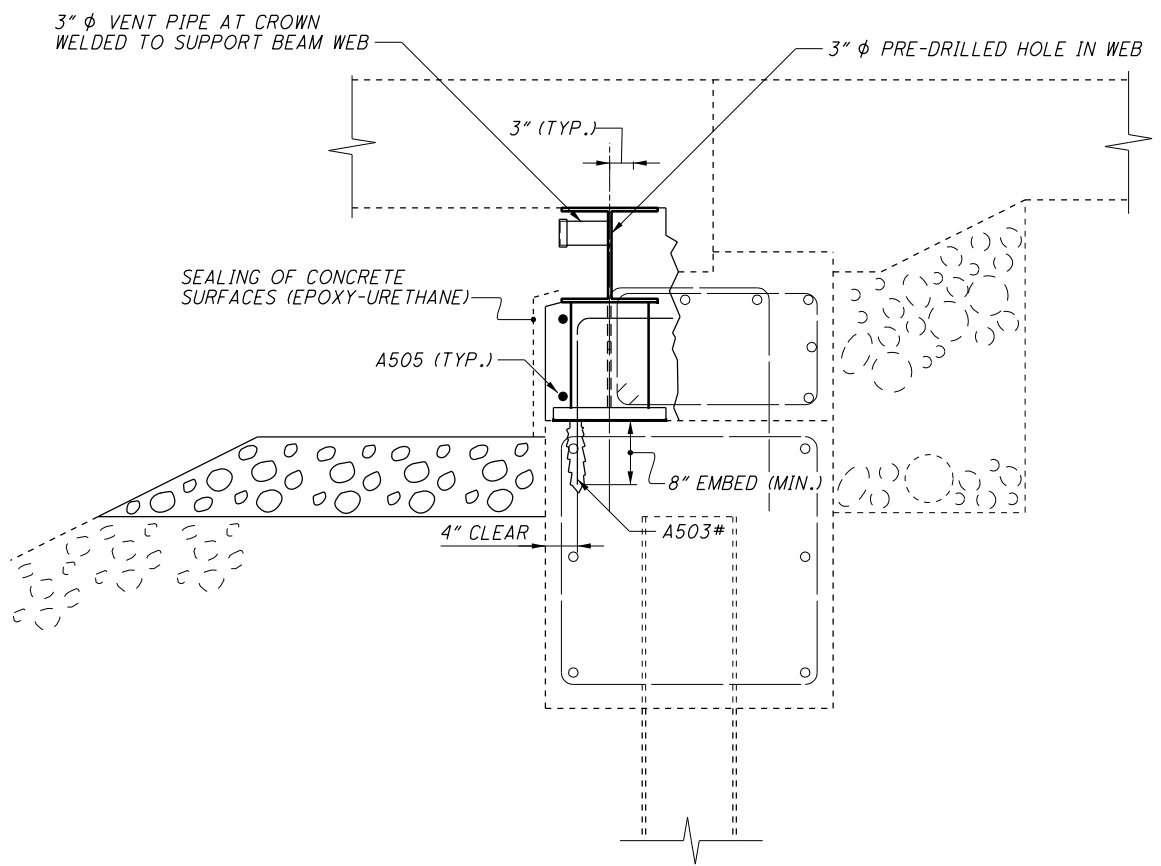
2 / 3

45  
58

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**A** SECTION



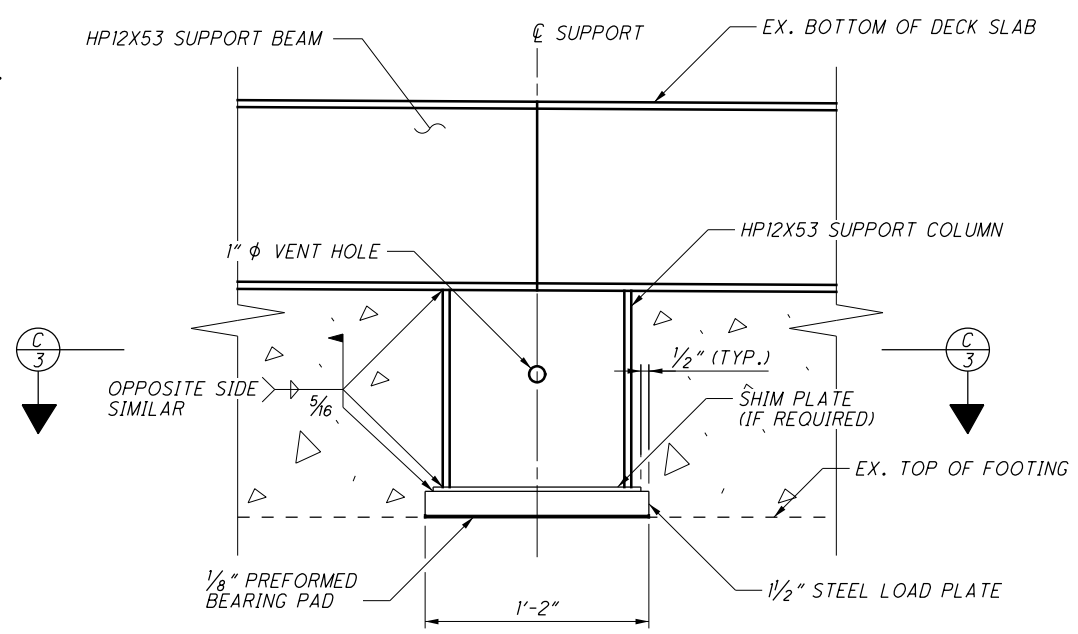
**B** SECTION

**LEGEND**

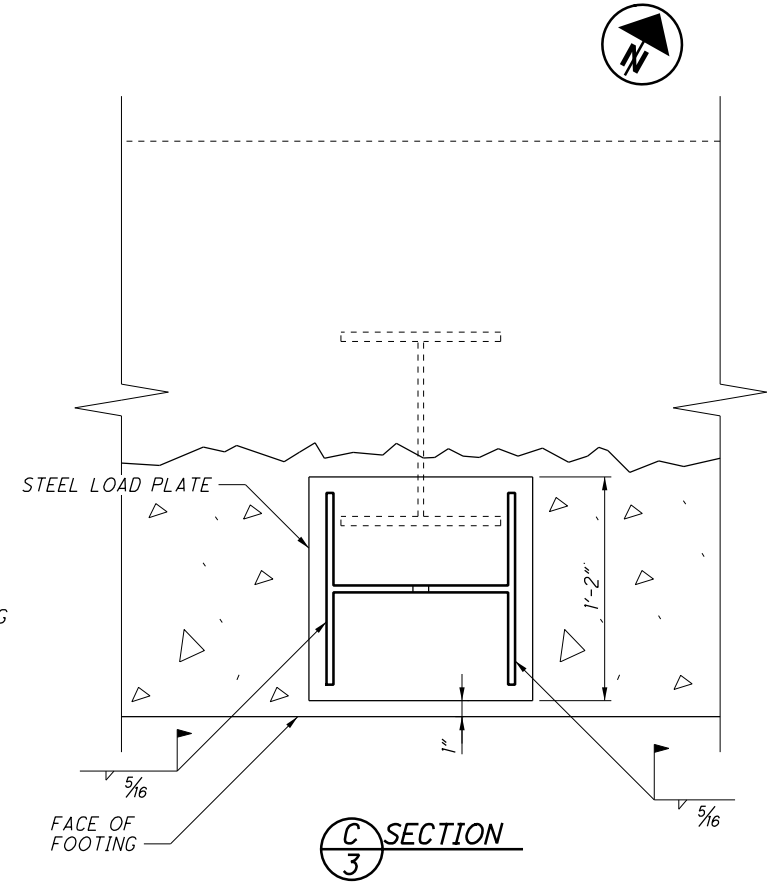
- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- # - BAR TO BE DOWELED INTO EXISTING STRUCTURE

**NOTES**

1. THE ABUTMENT WALL REMOVAL AND PLACEMENT OF SUPPORT BRACING SHALL BE DONE INCREMENTALLY ACROSS THE ABUTMENT. THE ABUTMENT REMOVAL IN THE ADJACENT SUPPORT BRACE AREA MAY NOT COMMENCE UNTIL THE PREVIOUS ADJACENT BRACING AND SUPPORTS ARE COMPLETELY INSTALLED AND WELDED. (I.E. SECTION "A" IS FULLY IN PLACE BEFORE EXISTING CONCRETE MATERIAL IS REMOVED FOR SECTION "B". SECTION "B" IS IN PLACE BEFORE EXISTING MATERIAL IS REMOVED FOR SECTION "C" AND SO ON.) BRACING BEAM SECTION LENGTHS ARE APPROXIMATE. ADJUSTMENT OF THESE LENGTHS IS SUBJECT TO APPROVAL BY THE ENGINEER.
2. REMOVE AND REPLACE EXISTING ROCK CHANNEL PROTECTION AND EARTH FILL IN FRONT OF THE ABUTMENT AS NECESSARY TO REHABILITATE THE STEM WALL.
3. THE STEEL SUPPORT AND REBAR LENGTHS SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL REQUIRED STEEL AND REBAR LENGTHS PRIOR TO FABRICATION. BEVEL AT TOP OF COLUMN SUPPORTS TO ACCOMMODATE DECK CROSS SLOPE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. ABUTMENT CONCRETE SHALL BE SELF-CONSOLIDATING CONCRETE PUMPED INTO PLACE AND NON-VIBRATED TO ACHIEVE SOLID FILLING. ALL CONCRETE SHALL BE PLACED IN ONE POUR.
5. ALL HP SECTIONS AND LOAD PLATES SHALL BE A709 AND GALVANIZED PER CMS 711.02.
6. HP SECTIONS, LOAD PLATES, DRILLING OF VENT HOLES AND ANY REQUIRED SHIMS SHALL BE INCLUDED IN THE UNIT PRICE BID PER POUND OF ITEM 513, STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN.
7. CONTRACTOR SHALL SHIM BETWEEN THE STEEL LOAD PLATE AND HP COLUMN SUPPORT AS NECESSARY TO ENSURE A SNUG FIT BETWEEN THE DECK SLAB AND BEAM SUPPORT. ONE SHIM PLATE SHALL BE ALLOWED PER SUPPORT COLUMN. SHIM PLATES SHALL BE WELDED TO THE LOAD PLATE AND SUPPORT COLUMN.
8. THE CONTRACTOR SHALL SUBMIT A PROPOSED CONSTRUCTION SCHEDULE AND METHODOLOGY TO THE ENGINEER FOR APPROVAL AT LEAST 14 DAYS PRIOR TO THE START OF CONSTRUCTION.
9. THE 3" DIAMETER VENT PIPE WITH THREADED END CAP SHALL BE ALIGNED WITH A PRE-DRILLED 3" φ HOLE IN THE SUPPORT BEAM WEB AND WELDED IN PLACE. LOCATE THE VENT AS CLOSE AS POSSIBLE TO THE TOP FLANGE AT THE CROWN OF THE ROAD. PAYMENT FOR ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY FOR PRE-DRILLING AND VENT PIPE SHALL BE MADE AT THE UNIT PRICE BID PER POUND OF ITEM 513, STRUCTURAL STEEL FOR REHABILITATION, AS PER PLAN.

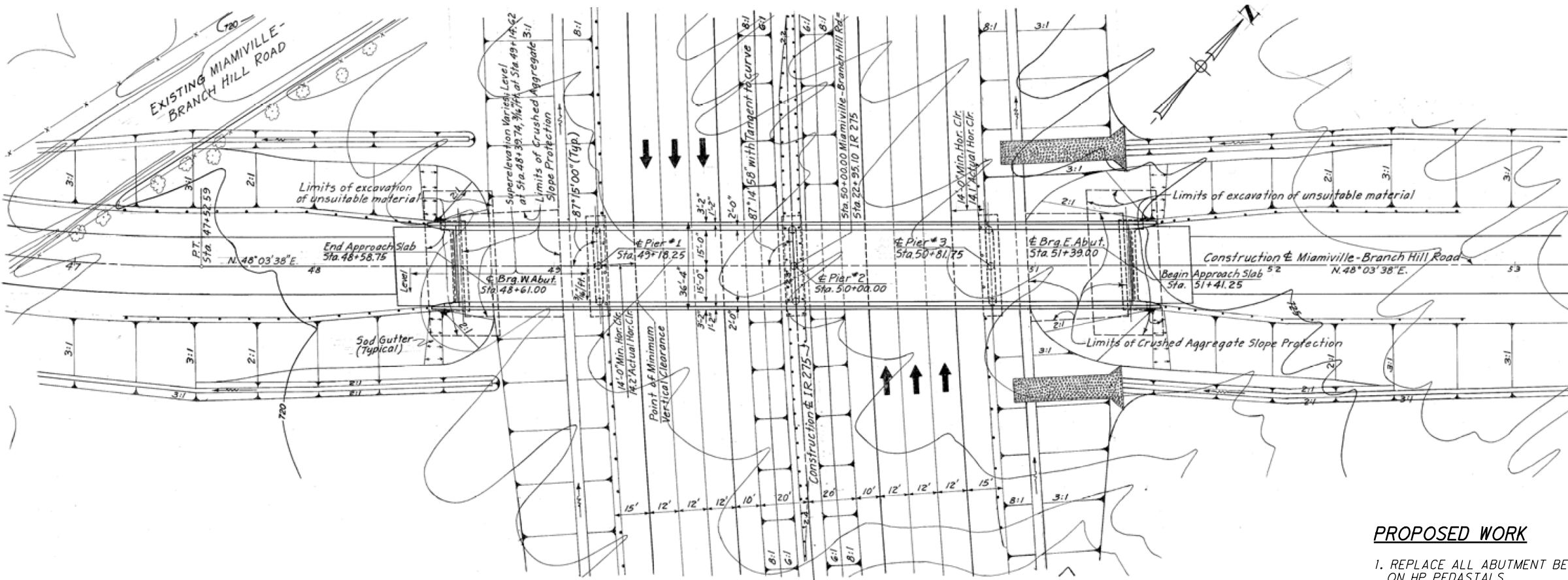


**ABUTMENT MODIFICATION DETAIL**



**C** SECTION





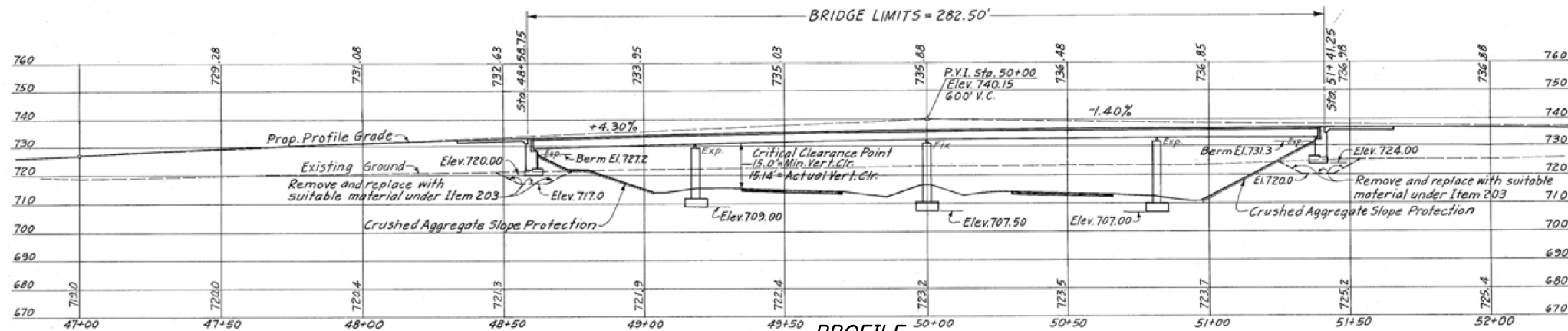
Abutments and Piers are parallel.

**PLAN**

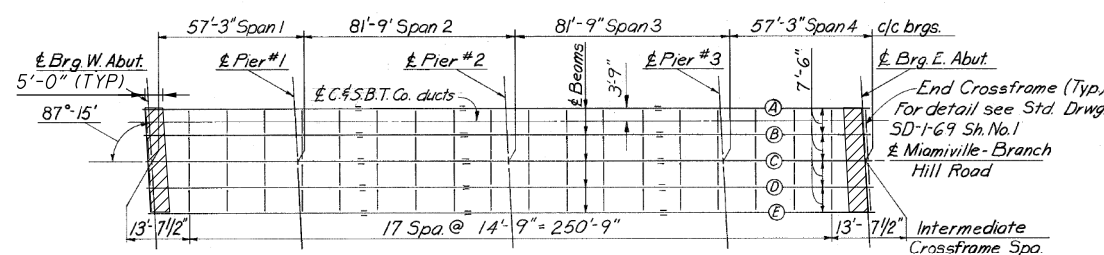
**CURVE DATA - IR 275**  
 P.I. = 21+10.01  
 Δ = 14° 59' 43"  
 D<sub>c</sub> = 1° 00' 00"  
 R = 5,729.58'  
 T = 754.07'  
 L = 1499.52'  
 E = 49.41'

**PROPOSED WORK**

1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS ON HP PEDASTALS.
2. ZONE PAINT STRUCTURAL STEEL.



**PROFILE**



**FRAMING PLAN**

**EXISTING STRUCTURE**

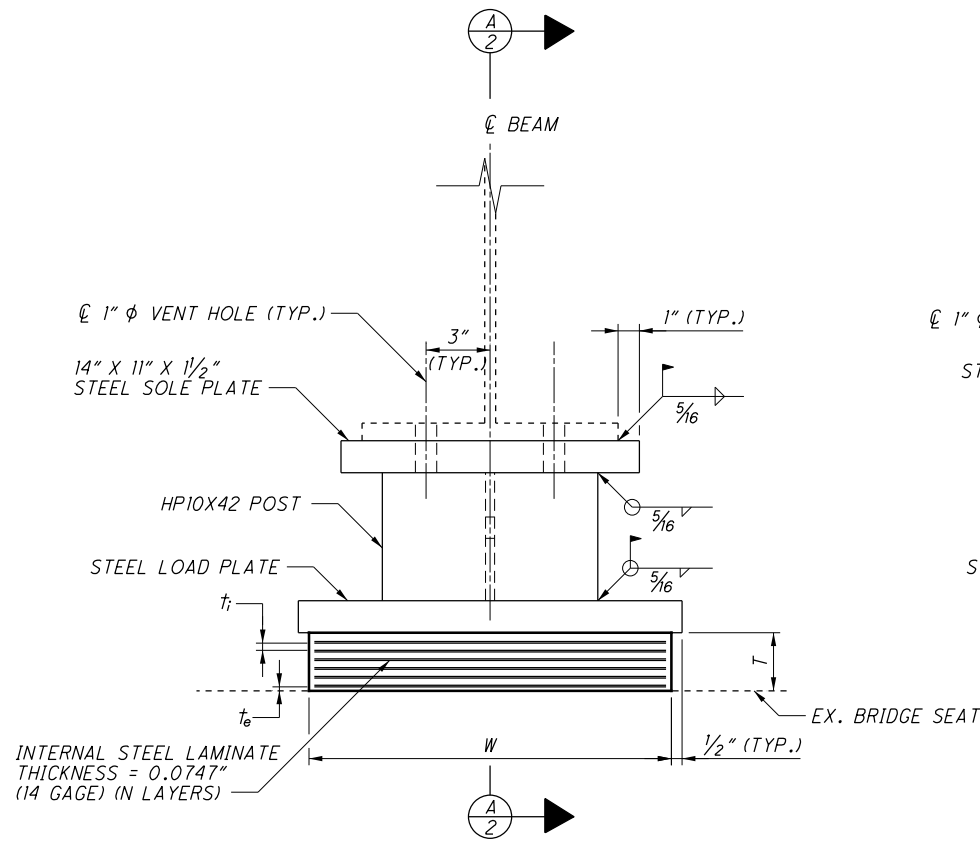
**TYPE:** CONTINUOUS STEEL BEAMS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE  
**SPANS:** 57'-3", 81'-9", 81'-9", 57'-3" C/C BRGS.  
**ROADWAY:** 31'-7" T/T BARRIER  
**LOADING:** C.F. = 130(57)  
**SKEW:** 2°45'00" R.F.  
**WEARING SURFACE:** 1/4" MICRO-SILICA MODIFIED CONCRETE OVERLAY  
**APPROACH SLABS:** 25'-0" LONG (AS-1-67)  
**STRUCTURAL FILE NUMBER:** 1305352  
**DATE BUILT:** 1973      **REHABILITATED:** 1986 & 2002  
**DISPOSITION:** TO BE REHABILITATED

**NOTE**

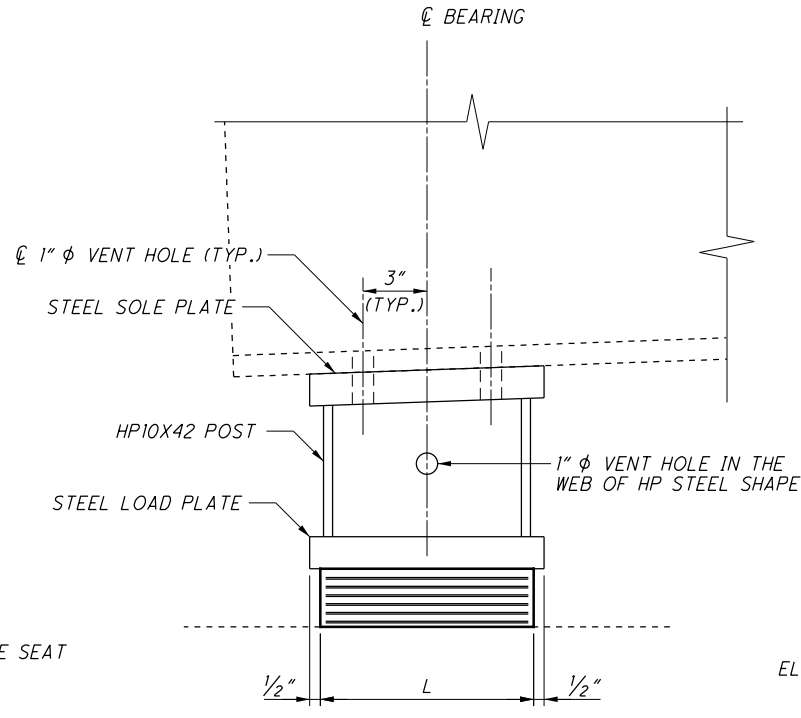
SEE SHEET 18 OF 58 FOR STRUCTURE QUANTITIES.

**LEGEND**

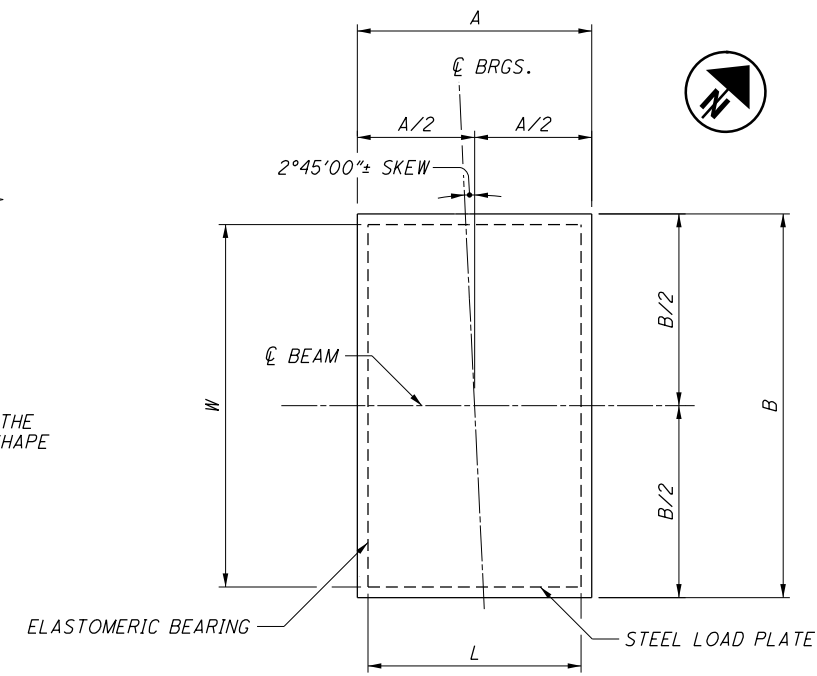
ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5 FEET FROM THE BEAM END USING OZEU SPECIFICATIONS. PAINT COLOR TO MATCH EXISTING.



**LAMINATED ELASTOMERIC EXPANSION BEARING  
REAR AND FORWARD ABUTMENT**



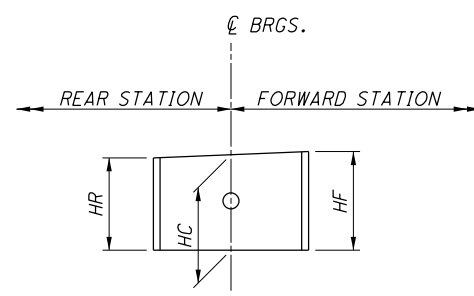
**SECTION  
A  
2**



**ELASTOMERIC BEARING PAD  
AND STEEL LOAD PLATE PLAN**

**NOTES**

- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION 1, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
- STEEL LOAD PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. ALL STEEL SHALL BE ASTM A709 GRADE 50 AND BE COATED WITH A SHOP APPLIED, INORGANIC ZINC PRIME COAT ACCORDING TO C&MS 514. REPAIR COATING DAMAGED BY WELDING ACCORDING TO C&MS 514.22. FIELD PAINTING OF INTERMEDIATE AND FINISH COATS IS REQUIRED. PAINTING AND REPAIRS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).
- THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE FINAL HP SECTION HEIGHT BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND PROPOSED BEARING HEIGHT FROM THE EXISTING BOTTOM OF BEAM ELEVATION AT EACH BEARING LOCATION. THIS HP SECTION HEIGHT IS A CONTRACTOR CALCULATED DIMENSION AND ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.  
  
FINAL HP SECTION HEIGHT = (CONTRACTOR'S BOTTOM OF STEEL ELEVATION)-(EXISTING BEAM SEAT ELEVATION)-(BEARING HEIGHT)
- BASIS OF PAYMENT: PAYMENT FOR ALL MATERIALS, LABOR, DRILLING OF HOLES IN BEAM FLANGES AND PLATES, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE ELASTOMERIC BEARINGS FOR THE BEAMS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE). ALL COST ASSOCIATED WITH THE HP SECTIONS AND SOLE PLATES ARE CONSIDERED INCIDENTAL TO ITEM 516.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE BEARING LOCATIONS ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UPSTATION. ALL MARKS SHALL BE PERMANENT AND VISIBLE AFTER BEARING IS INSTALLED.



**BEVELED HP10X42 DETAIL**

HP10X42 HEIGHT (H)						
REAR ABUTMENT			FORWARD ABUTMENT			
BEAM	LOCATION	H (IN.)	BEAM	LOCATION	H (IN.)	
1	HR	6 1/4 ±	1	HC	5 5/8 ±	
	HC	6 3/8 ±				
	HF	6 1/2 ±				
2	HR	6 1/16 ±	2	HC	5 3/8 ±	
	HC	6 3/16 ±				
	HF	6 5/16 ±				
3	HR	5 3/4 ±	3	HC	5 3/4 ±	
	HC	5 1/8 ±				
	HF	6 ±				
4	HR	5 13/16 ±	4	HC	5 7/8 ±	
	HC	5 15/16 ±				
	HF	6 1/16 ±				
5	HR	5 9/16 ±	5	HC	5 13/16 ±	
	HC	5 11/16 ±				
	HF	5 13/16 ±				

ELASTOMERIC BEARINGS												
LOCATION	BEARING DIMENSIONS					N	STEEL LOAD PLATE			REACTIONS*		MAXIMUM TOTAL LOAD
	L	W	t <sub>i</sub>	t <sub>e</sub>	T		A	B	THICKNESS	DL	LL	
ABUTMENTS	10"	17"	0.4375"	0.25"	3.3232"	6	11"	18"	1 1/2"	65.19 k	48.30 k	113.49 k

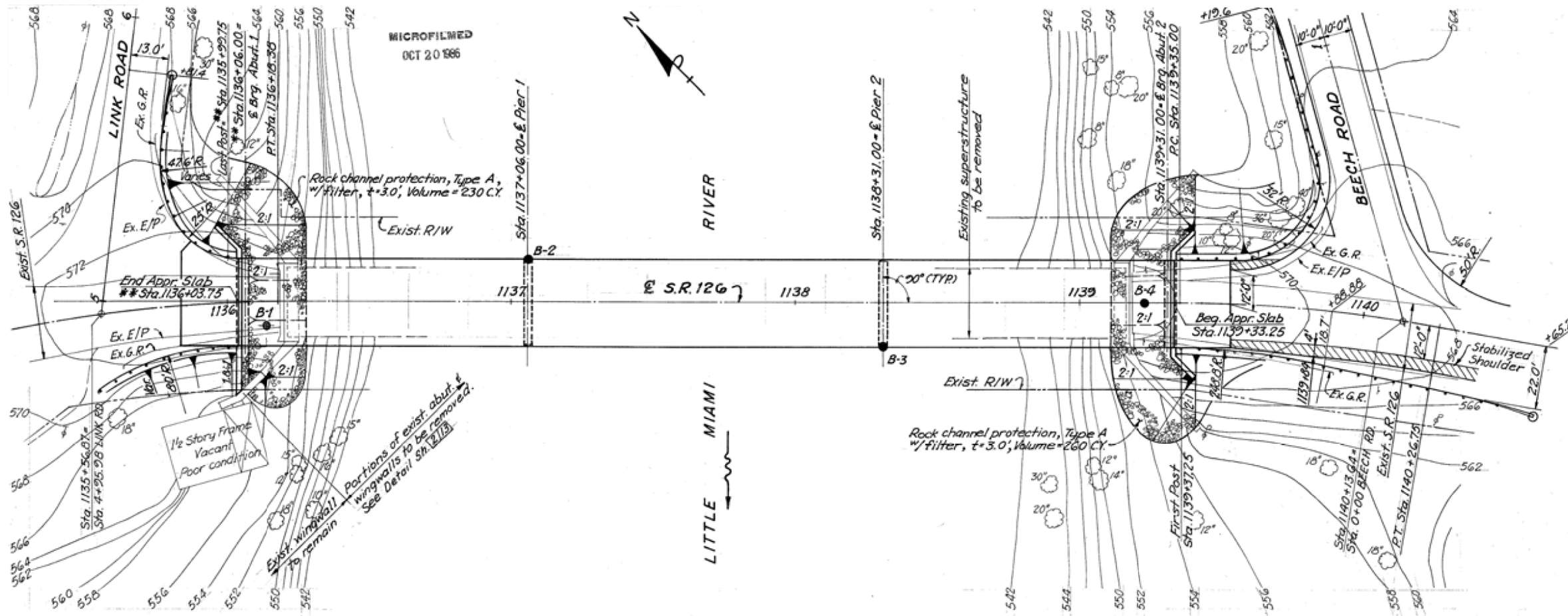
\* REACTIONS ARE UNFACTORED

**LEGEND**

- t<sub>i</sub> - THICKNESS OF INTERNAL LAYERS
- t<sub>e</sub> - THICKNESS OF EXTERNAL LAYER
- T - TOTAL THICKNESS OF ELASTOMERIC BEARING
- N - NUMBER OF STEEL LAMINATES AND INTERNAL LAYERS  
INTERNAL STEEL LAMINATE THICKNESS = 0.0747 (14 GAGE)



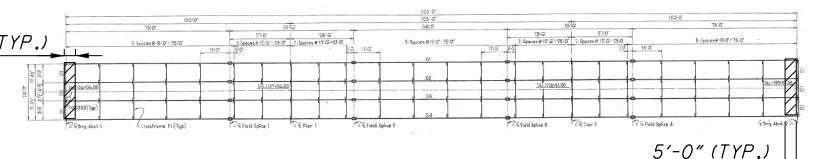
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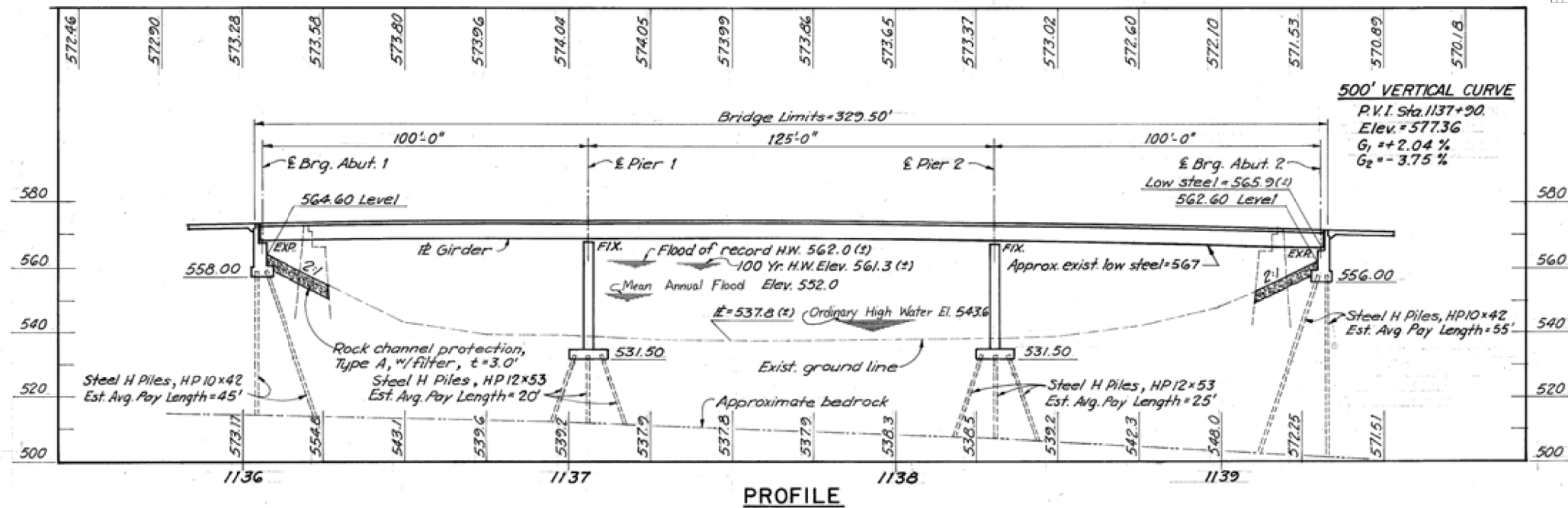
**HORIZONTAL CURVE DATA**  
 P.I. Sta. 1135+21.41 T=99.86'  
 $\Delta = 23^\circ 49'$  Lc=196.83'  
 Dc=12° 06' E=10.41'  
 R=473.52'

**PLAN**  
 \*\* Stationing on forward tangent extended back.  
 ◆ Denotes boring location.

**HORIZONTAL CURVE DATA**  
 P.I. Sta. 1139+81.00 T=46.00'  
 $\Delta = 10^\circ 16' 34''$  Lc=91.75'  
 Dc=11° 12' E=2.045'-0" (TYP.)  
 R=511.57'



**FRAMING PLAN**



**PROFILE**

**LEGEND**

ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5 FEET FROM THE BEAM END USING OZEU SPECIFICATIONS. PAINT COLOR OF TOP COAT TO BE FEDERAL COLOR NUMBER 595B-20045 OR 20059.

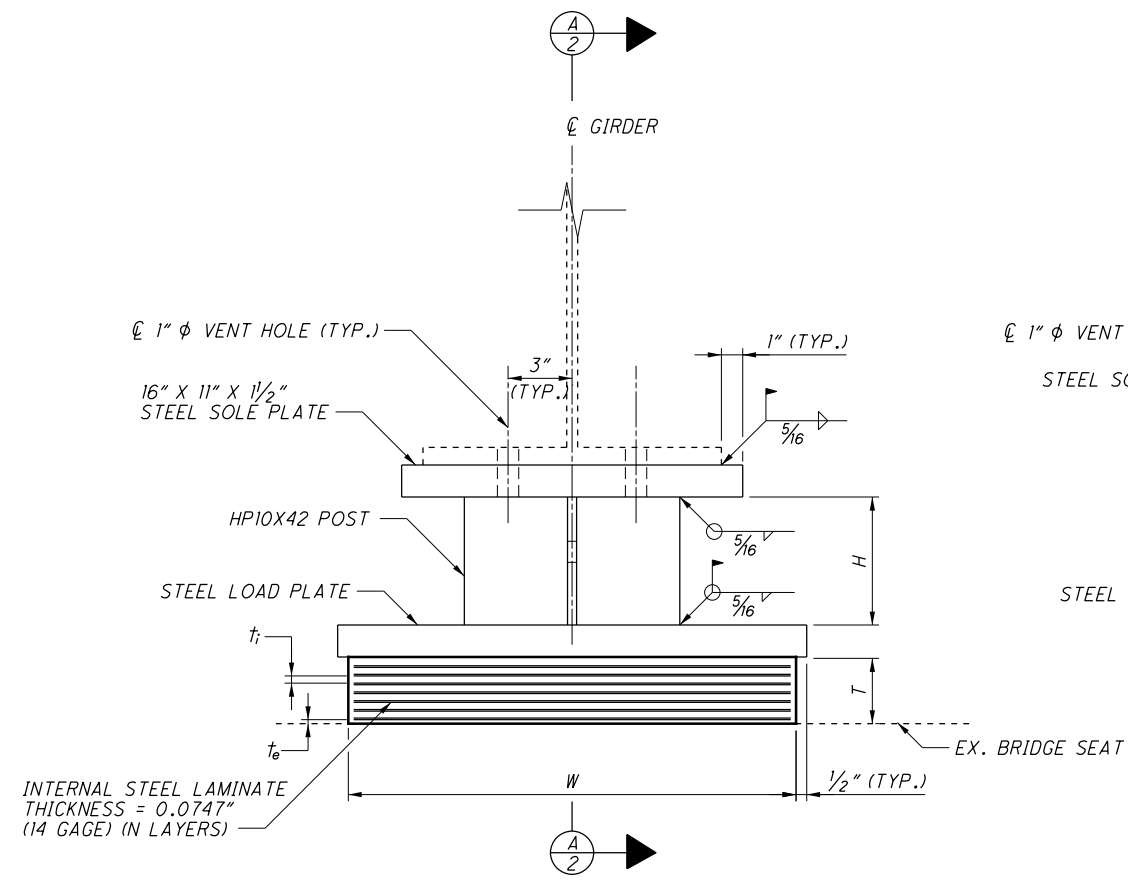
**EXISTING STRUCTURE**

TYPE: CONTINUOUS COMPOSITE WELDED PLATE GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE  
 SPANS: 100'-0"±, 125'-0"±, 100'-0"± C/C BRGS.  
 ROADWAY: 30'-0"± F/F GUARDRAIL  
 LOADING: HS20-44, CASE II AND THE ALTERNATE MILITARY LOADING  
 SKEW: NONE  
 WEARING SURFACE: 1" MONOLITHIC CONCRETE  
 APPROACH SLABS: 20'-0"± LONG (AS-1-81)  
 STRUCTURAL FILE NUMBER: 3105261  
 DATE BUILT: 1985  
 DISPOSITION: TO BE REHABILITATED

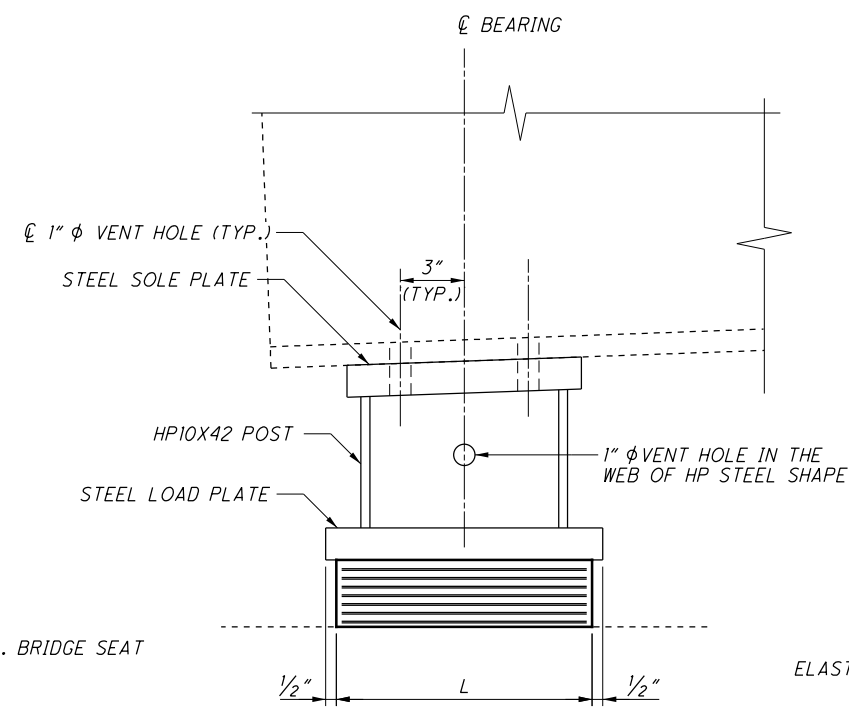
**PROPOSED WORK**  
 1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS ON HP PEDASTALS.  
 2. ZONE PAINT STRUCTURAL STEEL.

**NOTE**  
 SEE SHEET 18 OF 58 FOR STRUCTURE QUANTITIES.

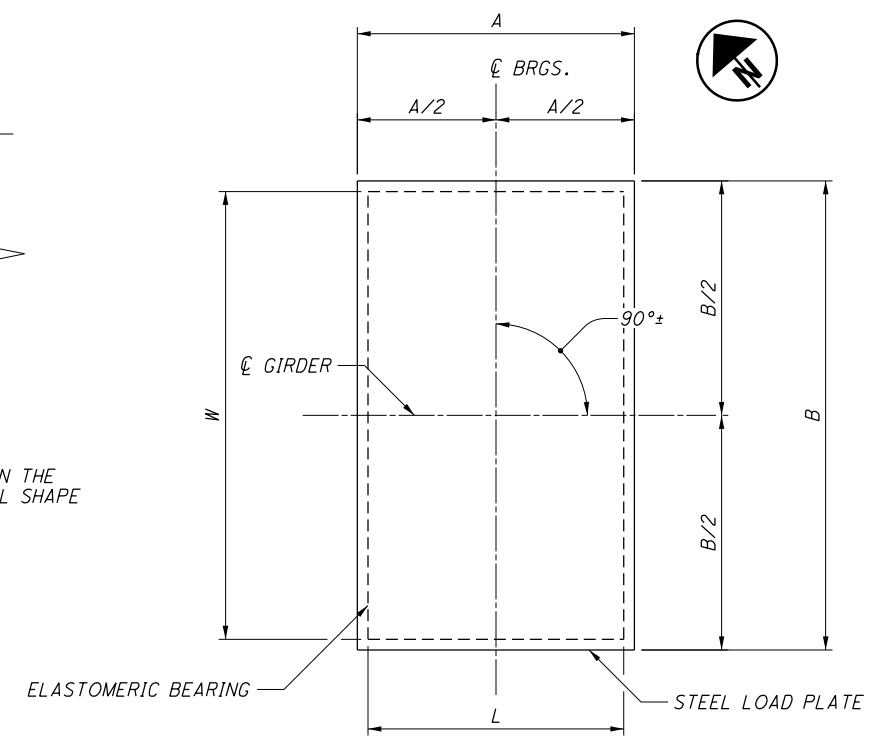
DESIGN AGENCY  
**CARPENTER MARTY**  
 TRANSPORTATION  
 11-15-17  
 DATE  
 11-15-17  
 REVIEWED  
 WHM  
 STRUCTURE FILE NUMBER  
 3105261  
 DRAWN  
 AMR  
 REVISIONS  
 DESIGNED  
 AMR  
 CHECKED  
 STK  
 HAMILTON COUNTY  
 STA. 1136+03.75  
 STA. 1139+33.25  
**SITE PLAN**  
 BRIDGE NO. HAM-126-22866  
 S.R. 126 OVER LITTLE MIAMI RIVER  
**D08-BM-FY2019**  
 PID No. 87127  
 1/2  
 49  
 58



**LAMINATED ELASTOMERIC EXPANSION BEARING  
REAR AND FORWARD ABUTMENT**



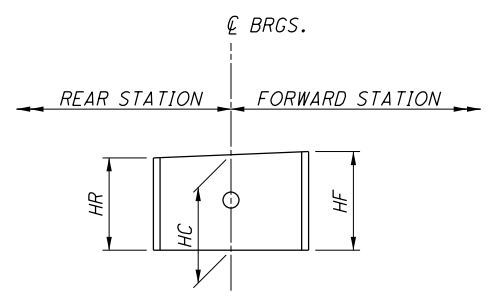
**A SECTION  
2**



**ELASTOMERIC BEARING PAD  
AND STEEL LOAD PLATE PLAN**

**NOTES**

- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
- STEEL LOAD PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. ALL STEEL SHALL BE ASTM A709 GRADE 50 AND BE COATED WITH A SHOP APPLIED, INORGANIC ZINC PRIME COAT ACCORDING TO C&MS 514. REPAIR COATING DAMAGED BY WELDING ACCORDING TO C&MS 514.22. FIELD PAINTING OF INTERMEDIATE AND FINISH COATS IS REQUIRED. PAINTING AND REPAIRS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).
- THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE FINAL HP SECTION HEIGHT BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND PROPOSED BEARING HEIGHT FROM THE EXISTING BOTTOM OF BEAM ELEVATION AT EACH BEARING LOCATION. THIS HP SECTION HEIGHT IS A CONTRACTOR CALCULATED DIMENSION AND ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.  
  
FINAL HP SECTION HEIGHT = (CONTRACTOR'S BOTTOM OF STEEL ELEVATION)-(EXISTING BEAM SEAT ELEVATION)-(BEARING HEIGHT)
- BASIS OF PAYMENT: PAYMENT FOR ALL MATERIALS, LABOR, DRILLING OF HOLES IN BEAM FLANGES AND PLATES, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE ELASTOMERIC BEARINGS FOR THE BEAMS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE). ALL COST ASSOCIATED WITH THE HP SECTIONS AND SOLE PLATES ARE CONSIDERED INCIDENTAL TO ITEM 516.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE BEARING LOCATIONS ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UPSTATION. ALL MARKS SHALL BE PERMANENT AND VISIBLE AFTER BEARING IS INSTALLED.



**BEVELED HP10X42 DETAIL**

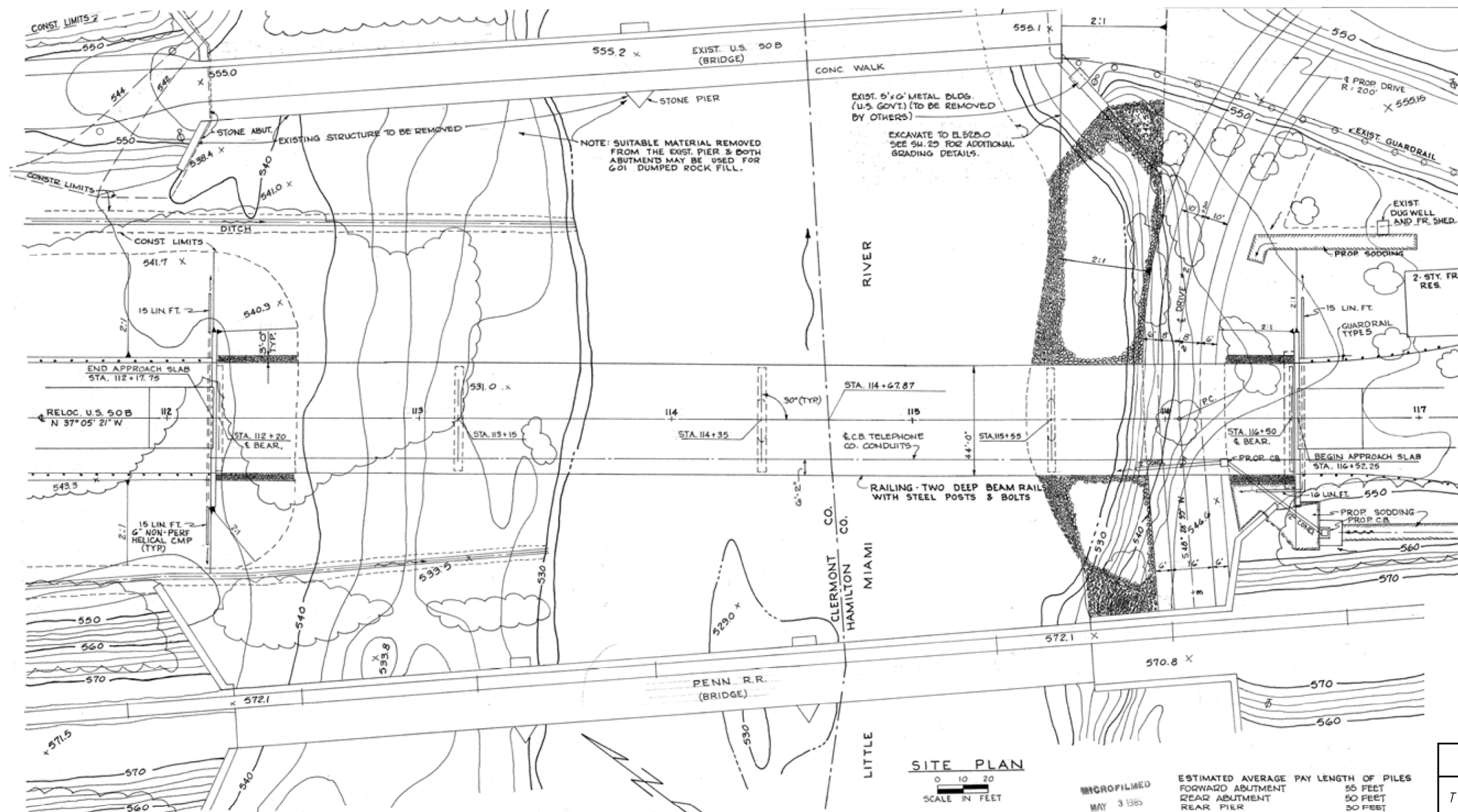
HP10X42 HEIGHT (H)					
REAR ABUTMENT			FORWARD ABUTMENT		
GIRDER	LOCATION	H (IN.)	GIRDER	LOCATION	H (IN.)
1	HR	5 9/16 ±	1	HR	5 11/16 ±
	HC	5 5/8 ±		HC	5 9/16 ±
	HF	5 11/16 ±		HF	5 7/16 ±
2	HR	5 1/2 ±	2	HR	5 13/16 ±
	HC	5 9/16 ±		HC	5 11/16 ±
	HF	5 5/8 ±		HF	5 9/16 ±
3	HR	5 1/2 ±	3	HR	5 11/16 ±
	HC	5 9/16 ±		HC	5 9/16 ±
	HF	5 5/8 ±		HF	5 7/16 ±
4	HR	5 9/16 ±	4	HR	5 13/16 ±
	HC	5 5/8 ±		HC	5 11/16 ±
	HF	5 11/16 ±		HF	5 9/16 ±

ELASTOMERIC BEARINGS												
LOCATION	BEARING DIMENSIONS						STEEL LOAD PLATE			REACTIONS*		MAXIMUM TOTAL LOAD
	L	W	t <sub>i</sub>	t <sub>e</sub>	T	N	A	B	THICKNESS	DL	LL	
ABUTMENTS	12"	21"	0.4375"	0.25"	3.8354"	7	13"	22"	1 1/2"	96.36 k	56.99 k	153.35 k

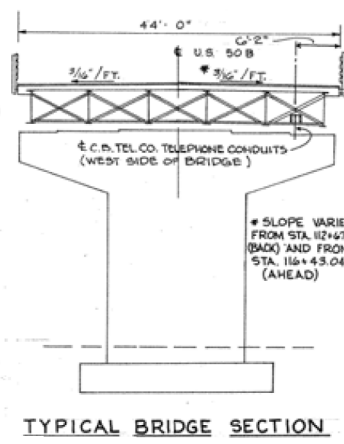
\* REACTIONS ARE UNFACTORED

**LEGEND**

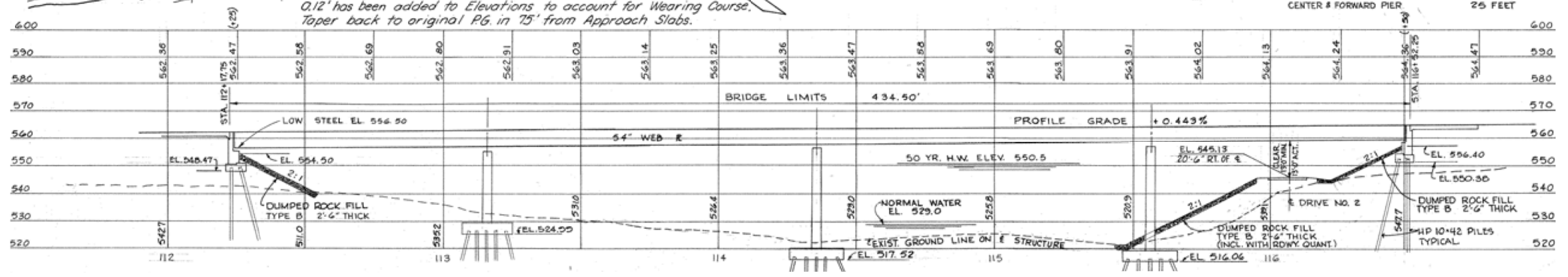
- t<sub>i</sub> - THICKNESS OF INTERNAL LAYERS
- t<sub>e</sub> - THICKNESS OF EXTERNAL LAYER
- T - TOTAL THICKNESS OF ELASTOMERIC BEARING
- N - NUMBER OF STEEL LAMINATES AND INTERNAL LAYERS  
INTERNAL STEEL LAMINATE THICKNESS = 0.0747 (14 GAGE)



- PROPOSED WORK**
1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS ON HP PEDASTALS.
  2. ZONE PAINT STRUCTURAL STEEL.



**NOTE**  
SEE SHEET 19 OF 58 FOR STRUCTURE QUANTITIES.



**EXISTING STRUCTURE**

TYPE: CONTINUOUS STEEL GIRDERS WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 95'-0"±, 120'-0"±, 120'-0"±, 95'-0"± C/C BRGS.

ROADWAY: 44'-0"± F/F GUARDRAIL

LOADING: HS20-44

SKEW: NONE

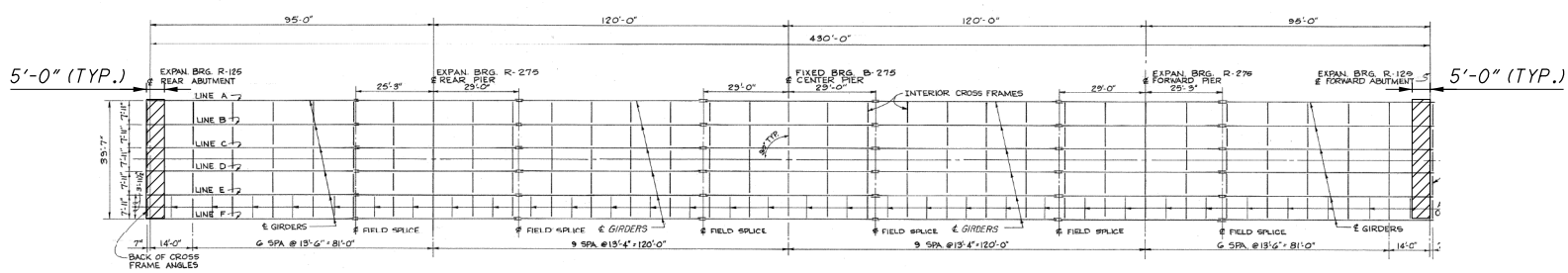
WEARING SURFACE: 1 1/2"± ASPHALT CONCRETE OVERLAY

APPROACH SLABS: 25'-0"± LONG (AS-I-72)

STRUCTURAL FILE NUMBER: 1306146

DATE BUILT: 1976

DISPOSITION: TO BE REHABILITATED



**LEGEND**

ZONE PAINT ALL STRUCTURAL STEEL WITHIN 5 FEET FROM THE BEAM END USING OZEU SPECIFICATIONS. PAINT COLOR TO MATCH EXISTING.

**FRAMING PLAN**

DESIGN AGENCY: **CARPENTER MARTY** Transportation

DATE: 11-15-17

REVIEWED: WHM

DRAWN: AMR

DESIGNED: AMR

CLEMMONT COUNTY

STA. 112+17.75

STA. 116+52.25

BRIDGE NO. CLE-126-0211

S.R. 126 OVER LITTLE MIAMI RIVER

**SITE PLAN**

D08-BM-FY2019

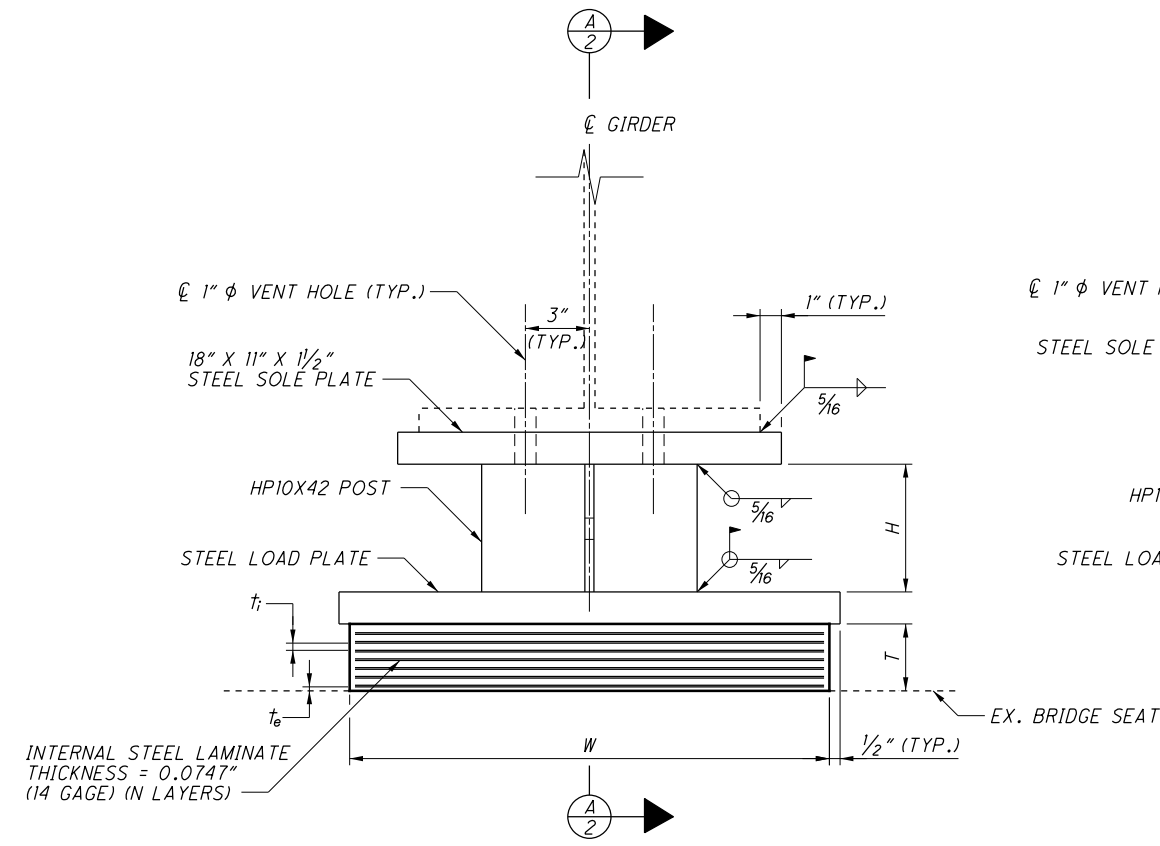
PID No. 87127

1/2

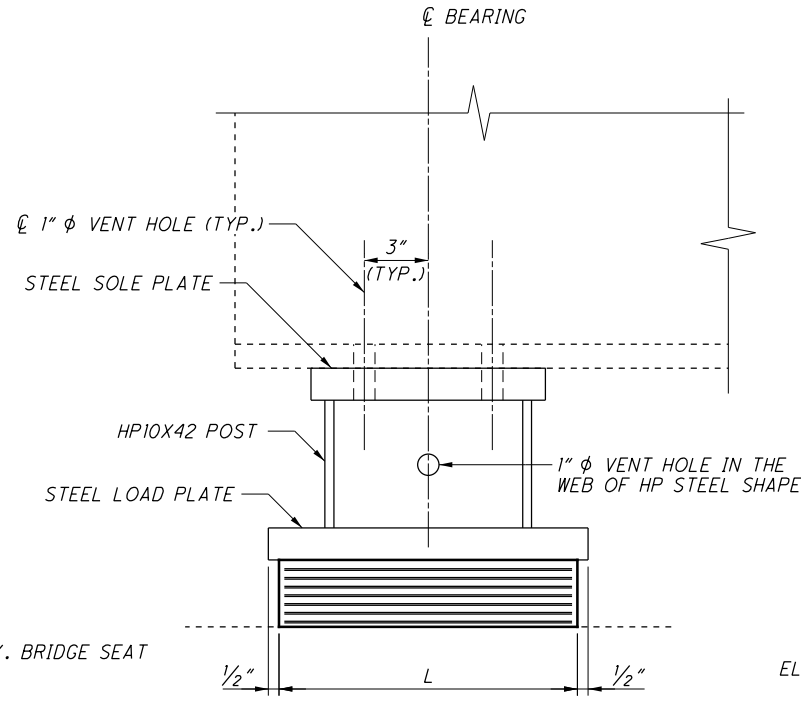
51

58

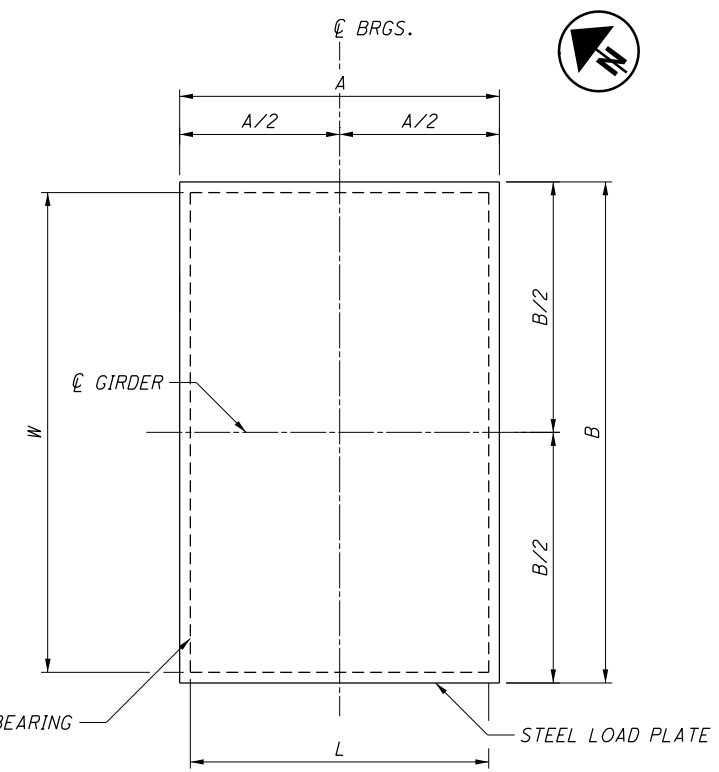
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**LAMINATED ELASTOMERIC EXPANSION BEARING  
REAR AND FORWARD ABUTMENT**



**A  
2 SECTION**



**ELASTOMERIC BEARING PAD  
AND STEEL LOAD PLATE PLAN**

**NOTES**

- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION I, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
- STEEL LOAD PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. ALL STEEL SHALL BE ASTM A709 GRADE 50 AND BE COATED WITH A SHOP APPLIED, INORGANIC ZINC PRIME COAT ACCORDING TO C&MS 514. REPAIR COATING DAMAGED BY WELDING ACCORDING TO C&MS 514.22. FIELD PAINTING OF INTERMEDIATE AND FINISH COATS IS REQUIRED. PAINTING AND REPAIRS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).
- THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE FINAL HP SECTION HEIGHT BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND PROPOSED BEARING HEIGHT FROM THE EXISTING BOTTOM OF BEAM ELEVATION AT EACH BEARING LOCATION. THIS HP SECTION HEIGHT IS A CONTRACTOR CALCULATED DIMENSION AND ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.  
  
FINAL HP SECTION HEIGHT = (CONTRACTOR'S BOTTOM OF STEEL ELEVATION)-(EXISTING BEAM SEAT ELEVATION)-(BEARING HEIGHT)
- BASIS OF PAYMENT: PAYMENT FOR ALL MATERIALS, LABOR, DRILLING OF HOLES IN BEAM FLANGES AND PLATES, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE ELASTOMERIC BEARINGS FOR THE BEAMS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE). ALL COST ASSOCIATED WITH THE HP SECTIONS AND SOLE PLATES ARE CONSIDERED INCIDENTAL TO ITEM 516.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE BEARING LOCATIONS ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UPSTATION. ALL MARKS SHALL BE PERMANENT AND VISIBLE AFTER BEARING IS INSTALLED.


HP10X42 HEIGHT (H)			
REAR ABUTMENT		FORWARD ABUTMENT	
GIRDER	H (IN.)	GIRDER	H (IN.)
1	5 5/16 ±	1	4 3/4 ±
2	5 3/16 ±	2	4 5/8 ±
3	4 15/16 ±	3	4 1/16 ±
4	4 15/16 ±	4	4 1/16 ±
5	4 13/16 ±	5	4 3/4 ±
6	4 7/8 ±	6	4 1/16 ±

ELASTOMERIC BEARINGS												
LOCATION	BEARING DIMENSIONS						STEEL LOAD PLATE			REACTIONS*		MAXIMUM TOTAL LOAD
	L	W	t <sub>i</sub>	t <sub>e</sub>	T	N	A	B	THICKNESS	DL	LL	
ABUTMENTS	14 1/2"	22 1/2"	0.5625"	0.25"	4.7104"	7	15 1/2"	23 3/2"	1 1/2"	100.55 k	54.98 k	155.53 k

\* REACTIONS ARE UNFACTORED

**LEGEND**

- t<sub>i</sub> - THICKNESS OF INTERNAL LAYERS
  - t<sub>e</sub> - THICKNESS OF EXTERNAL LAYER
  - T - TOTAL THICKNESS OF ELASTOMERIC BEARING
  - N - NUMBER OF STEEL LAMINATES AND INTERNAL LAYERS
- INTERNAL STEEL LAMINATE THICKNESS = 0.0747 (14 GAGE)

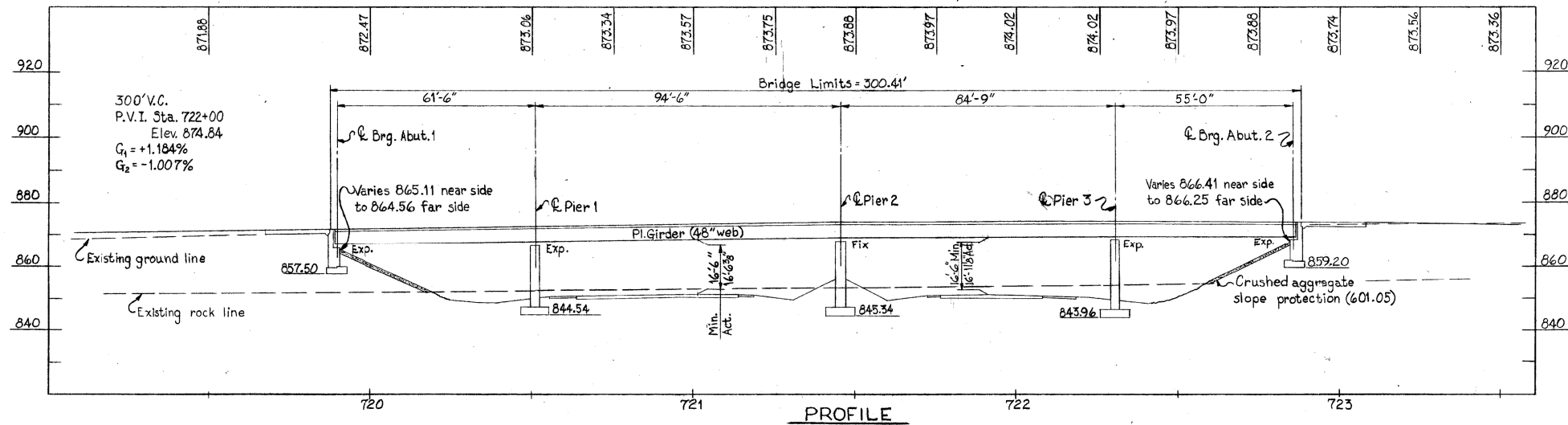
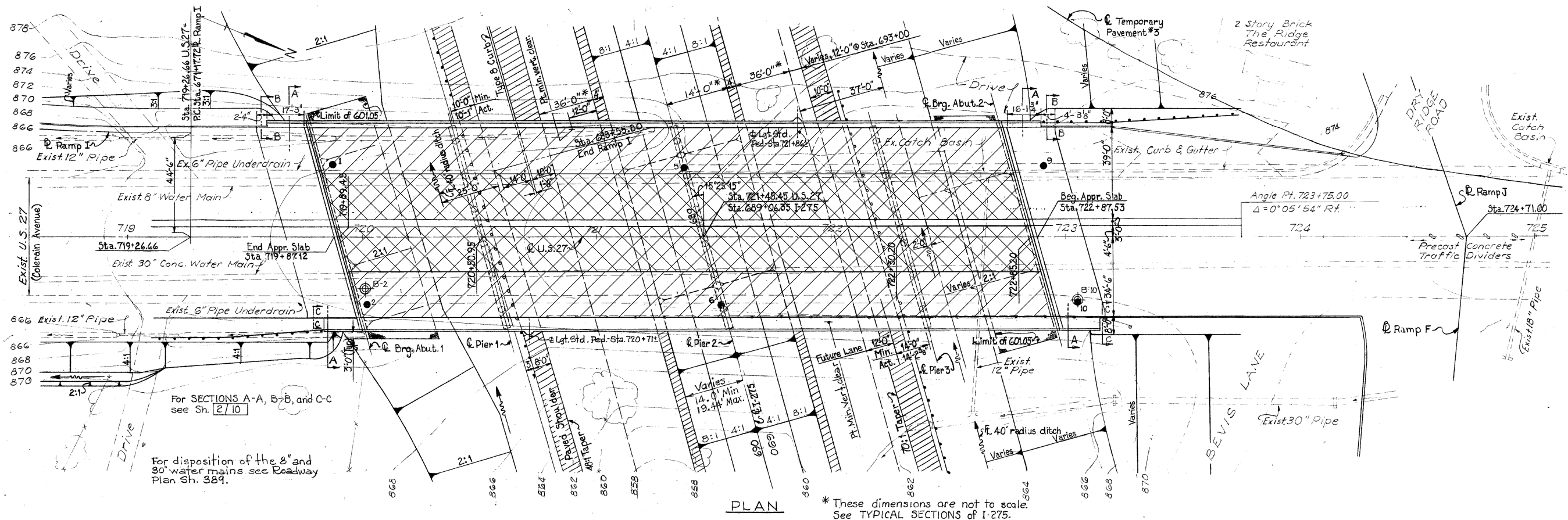
  
 DESIGN AGENCY  
**CARPENTER MARTY**  
 TRANSPORTATION  
 CONSULTANTS

DESIGNED	AMR	CHECKED	STK
DRAWN	AMR	REVISED	
REVIEWED	WHM	DATE	11-15-17
STRUCTURE FILE NUMBER	1306146		

**BEARING DETAILS**  
 BRIDGE NO. CLE-126-0211  
 S.R. 126 OVER LITTLE MIAMI RIVER

**D08-BM-FY2019**  
 PID No. 87127

2 / 2  
 52  
 58



**LEGEND**

- REMOVE 1.5" OF THE EXISTING CONCRETE OVERLAY, WITH SS847 SCARIFICATION AND CHIPPING AND PLACE MICRO-SILICA MODIFIED CONCRETE OVERLAY (MSC)
- REMOVE 1" OF THE EXISTING CONCRETE OVERLAY WITH PN 530 WITH SCARIFICATION AND PLACE POLYESTER POLYMER CONCRETE OVERLAY (PPC)

**NOTE**

SEE SHEET 19 OF 58 FOR STRUCTURE QUANTITIES.

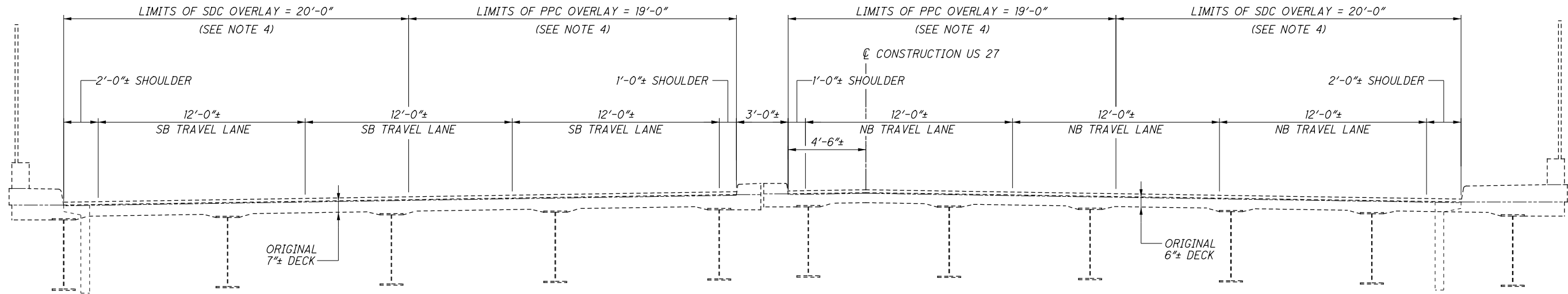
**PROPOSED WORK**

1. REPLACE ALL ABUTMENT BEARINGS WITH ELASTOMERIC BEARINGS ON HP PEDESTALS.
2. REMOVE A PORTION OF THE EXISTING 2" CONCRETE OVERLAY.
3. REMOVE 1 1/2" OF THE EXISTING OVERLAY USING SCARIFICATION AND CHIPPING FOR THE PORTION TO RECEIVE MSC OVERLAY AND REPLACE WITH 1/2" OF MSC OVERLAY.
4. REMOVE 1" OF THE EXISTING OVERLAY USING SCARIFICATION FOR THE PORTION TO RECEIVE PPC OVERLAY AND REPLACE WITH 1" OF PPC OVERLAY.

EXISTING STRUCTURE	
TYPE:	CONTINUOUS PLATE GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS:	61'-6"±, 94'-6"±, 84'-9"±, 55'-0"± C/C BRGS.
ROADWAY:	39'-0"± T/T CURB (BOTH DIRECTIONS) WITH 3'-0"± MEDIAN CURB, 2'-0"± SAFETY CURB AND 5'-0"± SIDEWALK
LOADING:	HS20-44
SKWEW:	15°25'15"± R.F.
WEARING SURFACE:	2"± LATEX MODIFIED CONCRETE OVERLAY
APPROACH SLABS:	20'-0"± LONG (AS-1-72)
STRUCTURAL FILE NUMBER:	3101738
DATE BUILT:	1977
DISPOSITION:	TO BE REHABILITATED

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<b>SITE PLAN</b>	HAMILTON COUNTY	DESIGN AGENCY
BRIDGE NO. HAM-27-1408	STA. 719+87.12	DATE 11-15-17
U.S. 27 OVER I.R. 275	STA. 722+87.53	STRUCTURE FILE NUMBER 3101738
<b>D08-BM-FY2019</b>	PID No. 87127	DRAWN STK
		REVIEWED WHM
		DESIGNED STK
		CHECKED AMR
1 / 3	53	
	58	



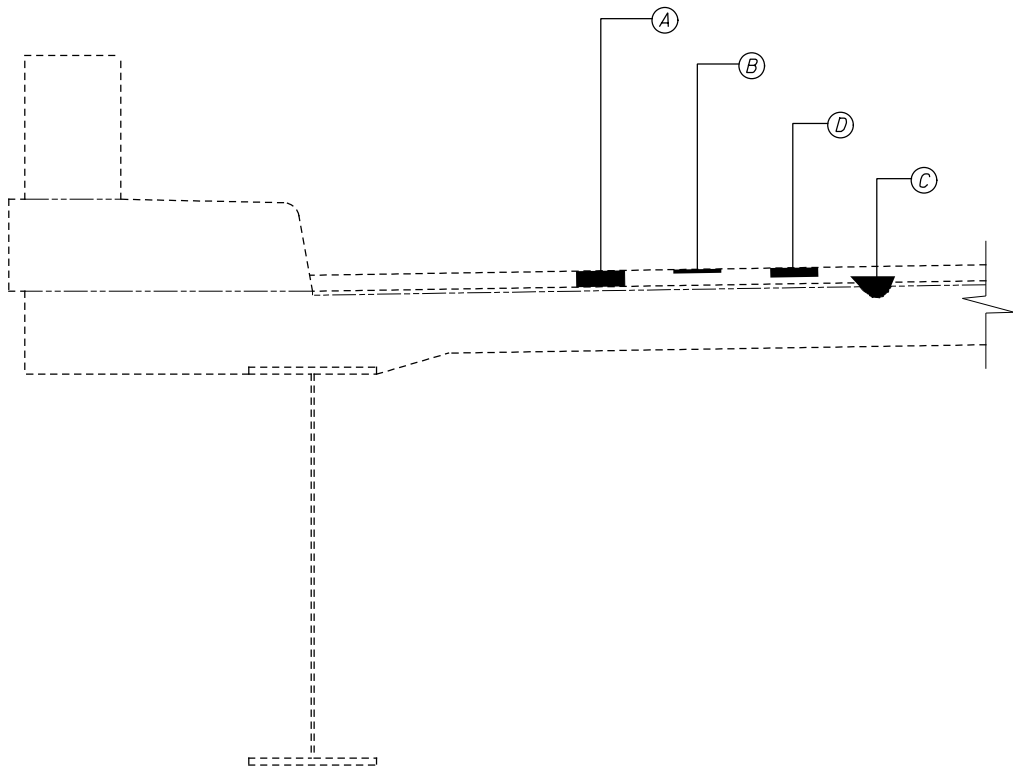
**TRANSVERSE SECTION**

**NOTES**

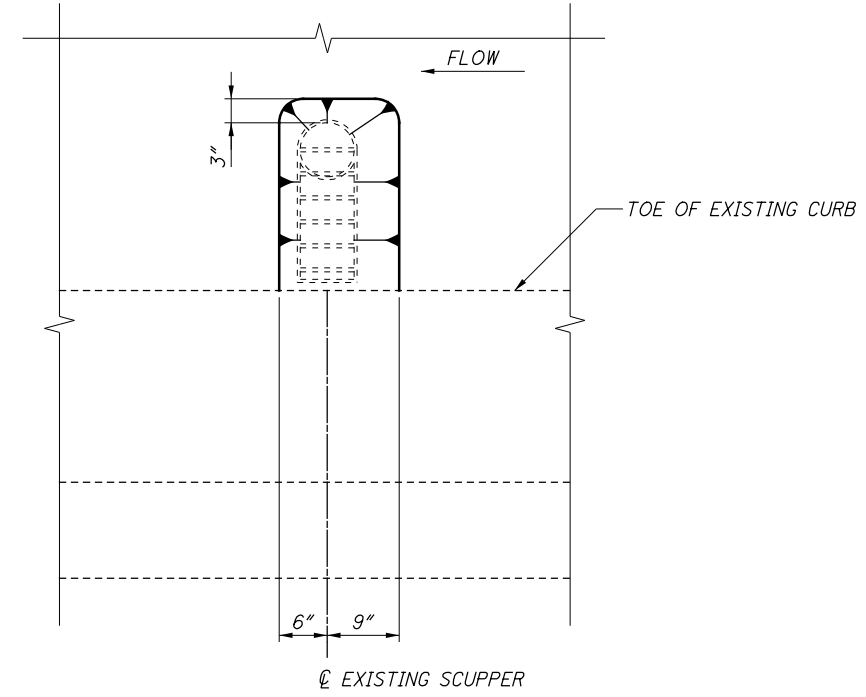
1. APPLY 2'-0" WIDE HMWM RESIN CENTERED ON LONGITUDINAL PHASE CONSTRUCTION JOINTS. PAYMENT FOR ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO FURNISH AND APPLY THE HMWM RESIN SHALL BE MADE AT THE UNIT PRICE BID PER SQUARE YARD OF EITHER ITEM 530, SPECIAL - STRUCTURES, POLYESTER POLYMER CONCRETE OVERLAY (1" THICK) OR ITEM 847, MICRO-SILICA MODIFIED CONCRETE OVERLAY USING SCARIFICATION AND CHIPPING, AS PER PLAN (1 1/2" THICK).
2. THE TOP SURFACE ELEVATION OF THE PROPOSED OVERLAY IS TO MATCH THE TOP SURFACE OF THE EXISTING OVERLAY.
3. CONSTRUCTION JOINTS SHALL NOT BE PLACED IN THE WHEEL PATH.
4. THE MICRO-SILICA MODIFIED CONCRETE OVERLAY SHALL BE PLACED BEFORE THE POLYESTER POLYMER CONCRETE OVERLAY.
5. THE EXISTING OVERLAY IS JUST ON TOP OF THE BRIDGE DECK EXISTING REINFORCING STEEL. AT NO TIME WILL THE MILLING OPERATION BE ALLOWED TO BE LESS THAN 1/2" FROM THE EXISTING REINFORCING. LEAVING THE BOTTOM OF THE WELL BONDED EXISTING UNIFORM THICKNESS OVERLAY IS INTENTIONAL AND EXPECTED.

**PROPOSED WORK**

- (A) - REMOVE EXISTING 2" LATEX MODIFIED CONCRETE OVERLAY.
- (B) - MILL 1 1/2" OF THE EXISTING 2" LATEX MODIFIED CONCRETE OVERLAY FOR MSC, OR MILL 1" OF THE EXISTING 2" LATEX MODIFIED CONCRETE OVERLAY PPC THAT WILL RECEIVE AN OVERLAY.
- (C) - HAND CHIPPING AND REMOVAL OF DEBONDED OR DETERIORATED EXISTING VARIABLE THICKNESS CONCRETE OVERLAY
- (D) - PLACE 1 1/2" MICRO-SILICA MODIFIED CONCRETE OVERLAY OR 1" POLYESTER POLYMER CONCRETE OVERLAY



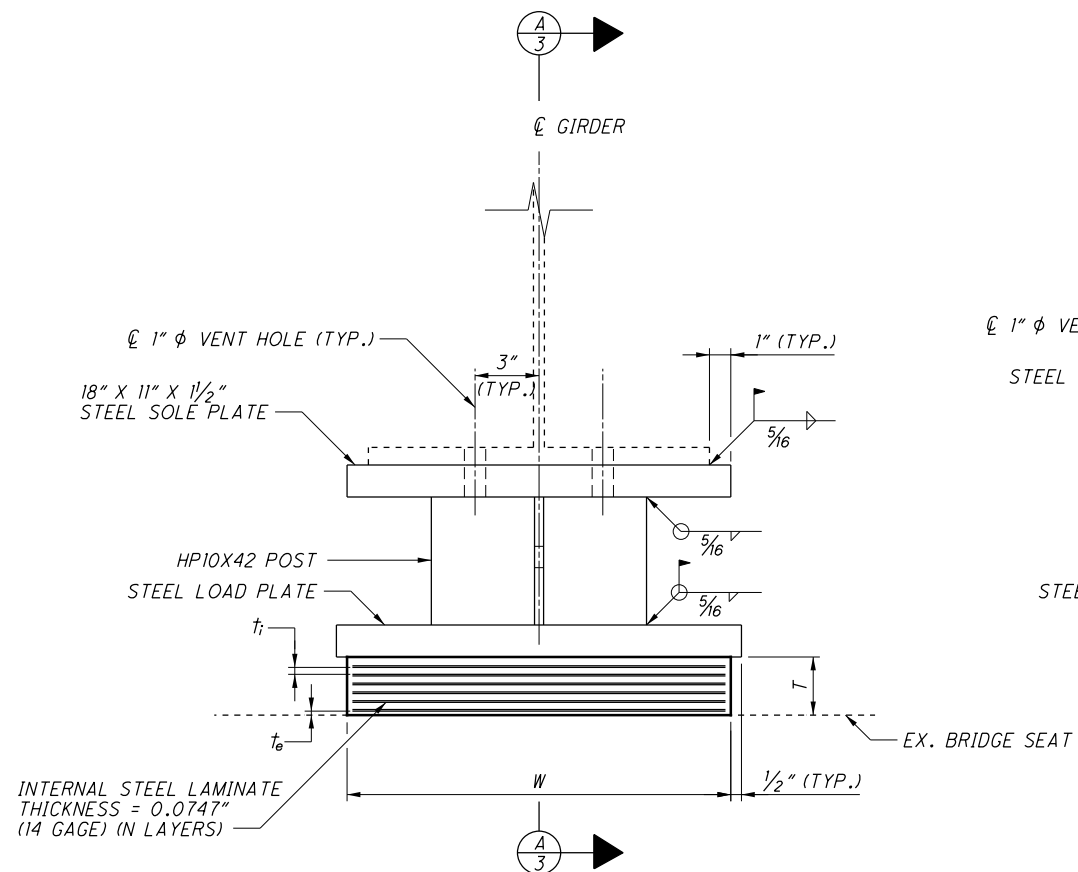
**OVERLAY DETAIL**



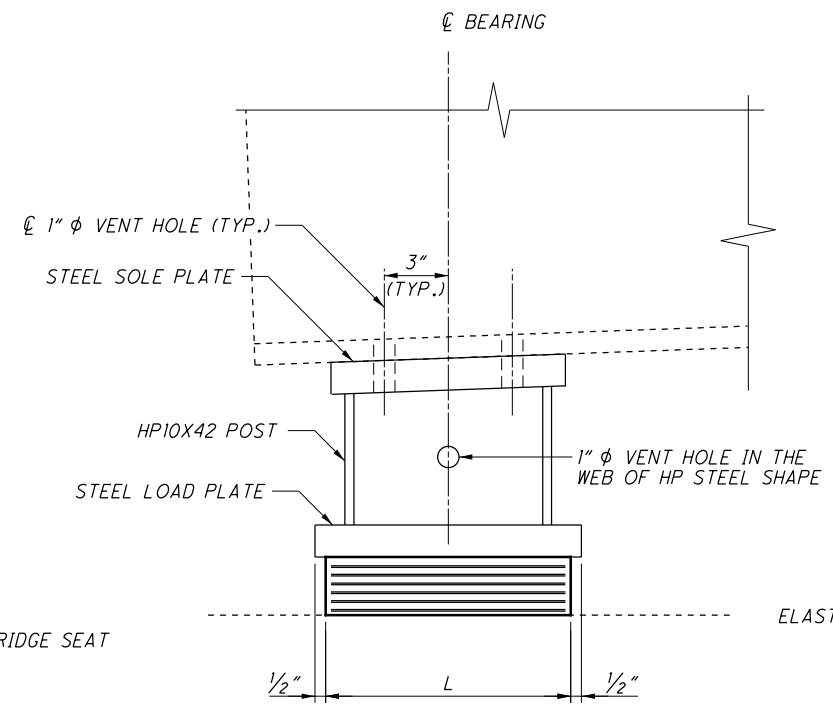
**SCUPPER OVERLAY DETAIL**

I:\D08\1001\project\project\008\Wide\1087127\Design\Docs\Final\Plans\Certification 2nd Time\Changed by 0D01\027\_1408C\_ST001.dgn 10/10/2018 8:48:44 AM rframer

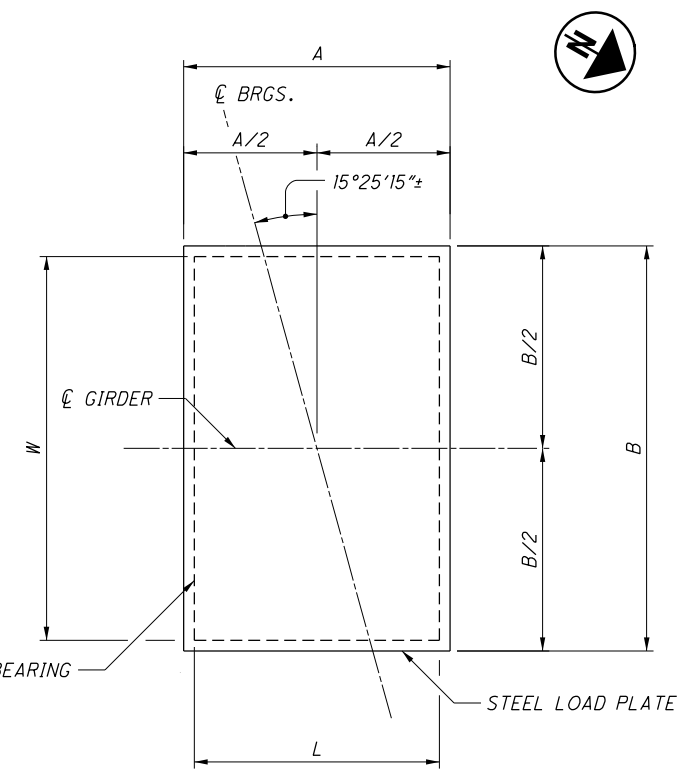
DESIGNED		DRAWN		REVIEWED		DATE		DESIGN AGENCY	
RSK		RSK		RSK		3/10/17		. . .	
CHECKED		REVISED		STRUCTURE FILE NUMBER		3101738			
<b>SUPERSTRUCTURE DETAILS</b>									
BRIDGE NO. HAM-27-1408									
U.S. 27 OVER I.R. 275									
<b>D08-BM-FY2019</b>					PID No. 87127				
2 / 3									
5.4					5.8				



**LAMINATED ELASTOMERIC EXPANSION BEARING  
REAR AND FORWARD ABUTMENT**



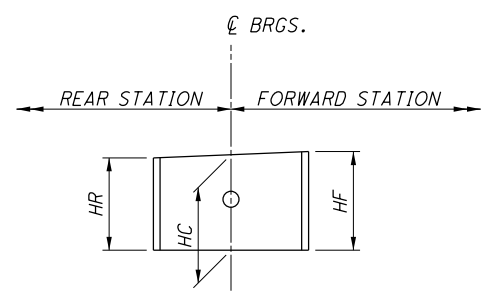
**SECTION  
A  
3**



**ELASTOMERIC BEARING PAD  
AND STEEL LOAD PLATE PLAN**

**NOTES**

- ELASTOMERIC BEARINGS: THE ELASTOMER SHALL HAVE A HARDNESS OF 50 DUROMETER. THE BEARINGS WERE DESIGNED UNDER DIVISION 1, SECTION 14.6.6 (METHOD A) OF THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES.
- STEEL LOAD PLATES SHALL BE BONDED BY VULCANIZATION TO THE ELASTOMER DURING THE MOLDING PROCESS. ALL STEEL SHALL BE ASTM A709 GRADE 50 AND BE COATED WITH A SHOP APPLIED, INORGANIC ZINC PRIME COAT ACCORDING TO C&MS 514. REPAIR COATING DAMAGED BY WELDING ACCORDING TO C&MS 514.22. FIELD PAINTING OF INTERMEDIATE AND FINISH COATS IS REQUIRED. PAINTING AND REPAIRS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE).
- THE CONTRACTOR IS REQUIRED TO FIELD VERIFY THE EXISTING BOTTOM OF BEAM AND BEAM SEAT ELEVATIONS PRIOR TO THE JACKING OPERATIONS. THE CONTRACTOR IS TO SUBMIT THE VERIFIED ELEVATIONS TO SCOTT KRAMER, DISTRICT 8 BRIDGE DESIGN ENGINEER PRIOR TO THE JACKING OPERATIONS. APPROVAL OF THE ELEVATIONS IS NOT REQUIRED. THE CONTRACTOR IS TO DETERMINE THE FINAL HP SECTION HEIGHT BY SUBTRACTING THE EXISTING BEAM SEAT ELEVATION AND PROPOSED BEARING HEIGHT FROM THE EXISTING BOTTOM OF BEAM ELEVATION AT EACH BEARING LOCATION. THIS HP SECTION HEIGHT IS A CONTRACTOR CALCULATED DIMENSION AND ANY SHIMS NEEDED AS A RESULT OF THE CONTRACTOR'S ERROR WILL BE AT THE CONTRACTOR'S EXPENSE AND WILL NEED TO BE APPROVED BY THE DISTRICT 8 BRIDGE DESIGN ENGINEER.  
  
FINAL HP SECTION HEIGHT = (CONTRACTOR'S BOTTOM OF STEEL ELEVATION)-(EXISTING BEAM SEAT ELEVATION)-(BEARING HEIGHT)
- BASIS OF PAYMENT: PAYMENT FOR ALL MATERIALS, LABOR, DRILLING OF HOLES IN BEAM FLANGES AND PLATES, TESTING AND INCIDENTALS NECESSARY TO FURNISH AND INSTALL THE ELASTOMERIC BEARINGS FOR THE BEAMS SHALL BE MADE AT THE UNIT PRICE BID PER EACH OF ITEM 516, ELASTOMERIC BEARING WITH INTERNAL LAMINATES AND LOAD PLATE (NEOPRENE). ALL COST ASSOCIATED WITH THE HP SECTIONS AND SOLE PLATES ARE CONSIDERED INCIDENTAL TO ITEM 516.
- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE BEARING LOCATIONS ON THE BRIDGE AND A DIRECTION ARROW THAT POINTS UPSTATION. ALL MARKS SHALL BE PERMANENT AND VISIBLE AFTER BEARING IS INSTALLED.



**BEVELED HPI0X42 DETAIL**

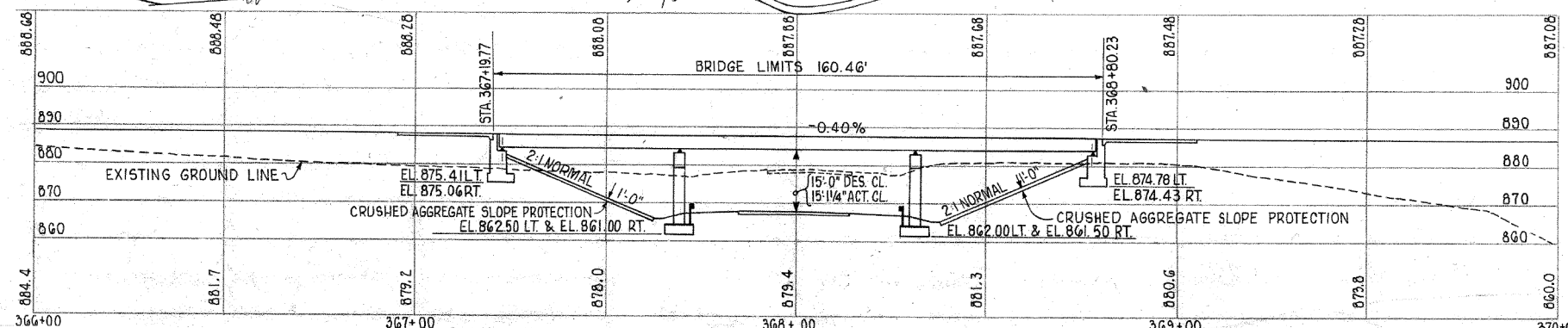
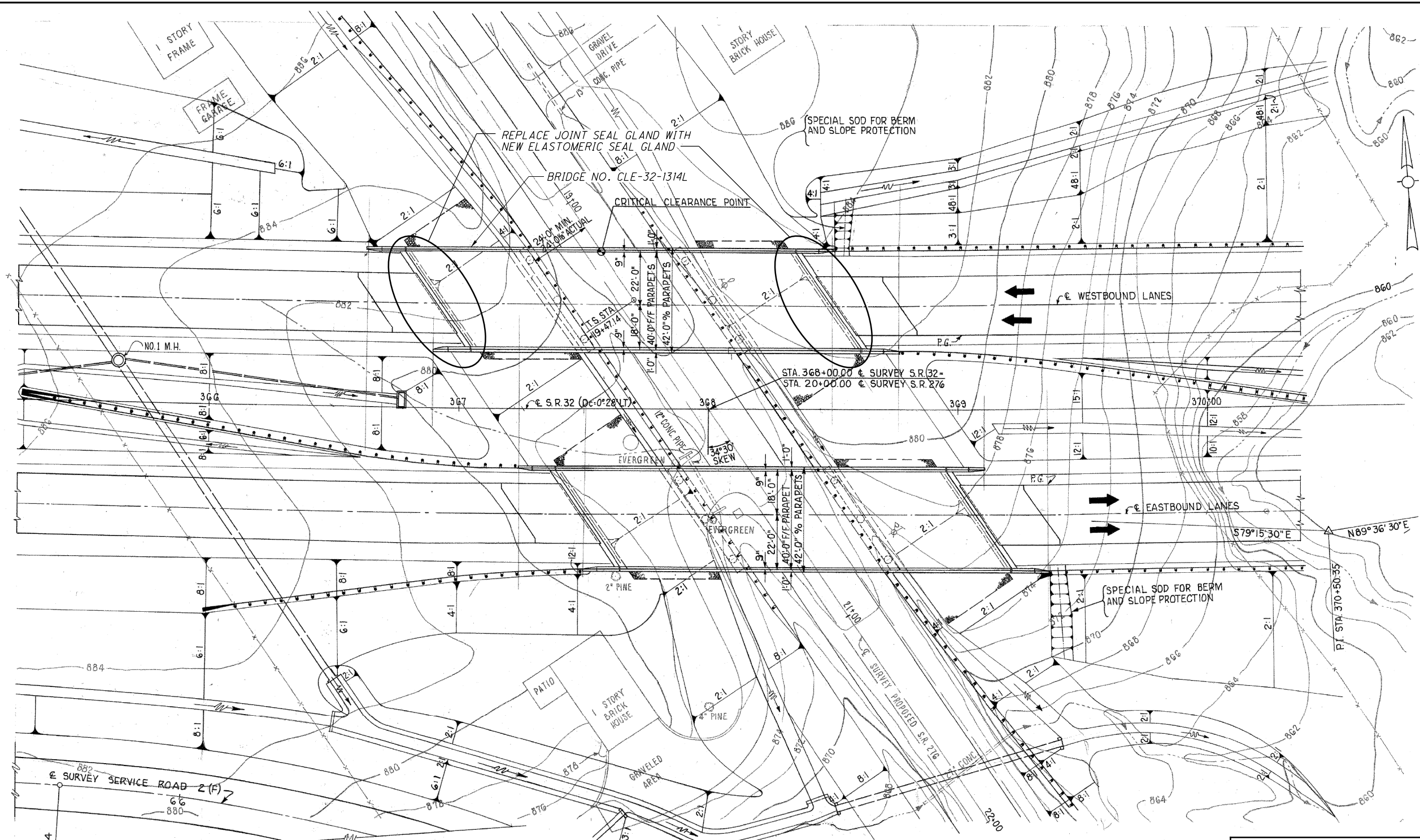
ELASTOMERIC BEARINGS													
LOCATION	BEARING DIMENSIONS					N	STEEL LOAD PLATE			REACTIONS*		MAXIMUM TOTAL LOAD	
	L	W	t <sub>i</sub>	t <sub>e</sub>	T		A	B	THICKNESS	DL	LL		
ABUTMENTS	11 1/2"	18"	0.4375"	0.25"	3.3232"	6	12 1/2"	19"	1/2"	90.0 k	57.45 k	147.45 k	

\* REACTIONS ARE UNFACTORED

**LEGEND**

- t<sub>i</sub> - THICKNESS OF INTERNAL LAYERS
- t<sub>e</sub> - THICKNESS OF EXTERNAL LAYER
- T - TOTAL THICKNESS OF ELASTOMERIC BEARING
- N - NUMBER OF STEEL LAMINATES AND INTERNAL LAYERS
- INTERNAL STEEL LAMINATE THICKNESS = 0.0747 (14 GAGE)

HPI0X42 HEIGHT (H)						
REAR ABUTMENT			FORWARD ABUTMENT			
GIRDER	LOCATION	H (IN.)	GIRDER	LOCATION	H (IN.)	
1	HR	4 9/16 ±	1	HC	5 3/8 ±	
	HC	4 5/8 ±		2	HC	5 1/8 ±
	HF	4 1 1/16 ±			HR	5 ±
2	HR	5 ±	3		HC	5 3/8 ±
	HC	5 1/16 ±		4	HC	5 1/16 ±
	HF	5 1/8 ±			HR	5 1/16 ±
3	HR	5 1/16 ±	5		HC	5 1/4 ±
	HC	5 1/8 ±		6	HC	5 1/4 ±
	HF	5 3/16 ±			HR	5 1/4 ±
4	HR	5 1/16 ±	7		HC	5 3/8 ±
	HC	5 1/8 ±		8	HC	5 5/16 ±
	HF	5 3/16 ±			HR	5 3/16 ±
5	HR	4 3/4 ±	9		HC	5 ±
	HC	4 13/16 ±		10	HC	5 3/16 ±
	HF	4 7/8 ±			HR	4 1 1/16 ±
6	HR	5 1/4 ±	11		HC	4 3/4 ±
	HC	5 5/16 ±		11	HC	4 13/16 ±
	HF	5 3/8 ±			HR	5 1/16 ±
7	HR	5 3/16 ±	11		HC	5 1/8 ±
	HC	5 1/4 ±		11	HC	4 15/16 ±
	HF	5 5/16 ±			HR	5 1/16 ±
8	HR	5 3/16 ±	11		HC	5 3/16 ±
	HC	5 1/4 ±		11	HC	4 15/16 ±
	HF	5 5/16 ±			HR	5 1/16 ±
9	HR	4 15/16 ±	11		HC	5 3/16 ±
	HC	5 ±		11	HC	4 15/16 ±
	HF	5 1/16 ±			HR	5 1/16 ±
10	HR	4 1 1/16 ±	11		HC	5 3/16 ±
	HC	4 3/4 ±		11	HC	4 15/16 ±
	HF	4 13/16 ±			HR	5 1/16 ±
11	HR	5 1/16 ±	11		HC	5 3/16 ±
	HC	5 1/8 ±		11	HC	4 15/16 ±
	HF	5 3/16 ±			HR	5 1/16 ±



EXISTING STRUCTURE	
TYPE:	CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE
SPANS:	46'-6"±, 62'-0"±, 46'-6"± C/C BRGS.
ROADWAY:	38'-6"± T/T PARAPET
LOADING:	HS20-44
SKIEW:	34°30'00"± R.F.
WEARING SURFACE:	1" MONOLITHIC CONCRETE
APPROACH SLABS:	25'-0"± LONG (AS-1-67)
STRUCTURAL FILE NUMBER:	1300458
DATE BUILT:	1971
DISPOSITION:	TO BE REHABILITATED

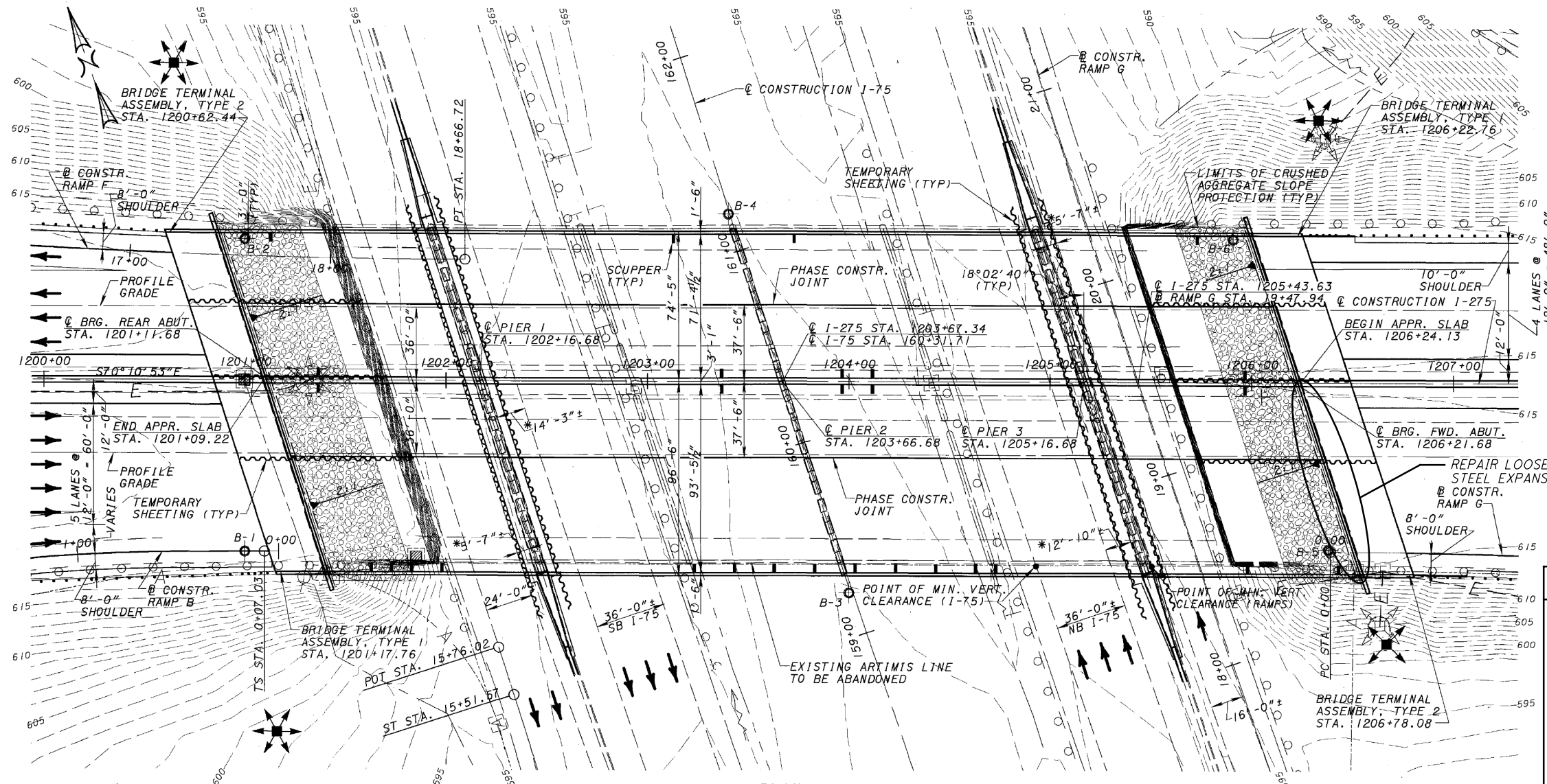
- NOTES**
- SEE SHEET 19 OF 58 FOR STRUCTURE QUANTITIES.
  - REFER TO STD. DWG. EXJ-4-87 FOR ADDITIONAL NOTES AND DETAILS.

**PROPOSED WORK**

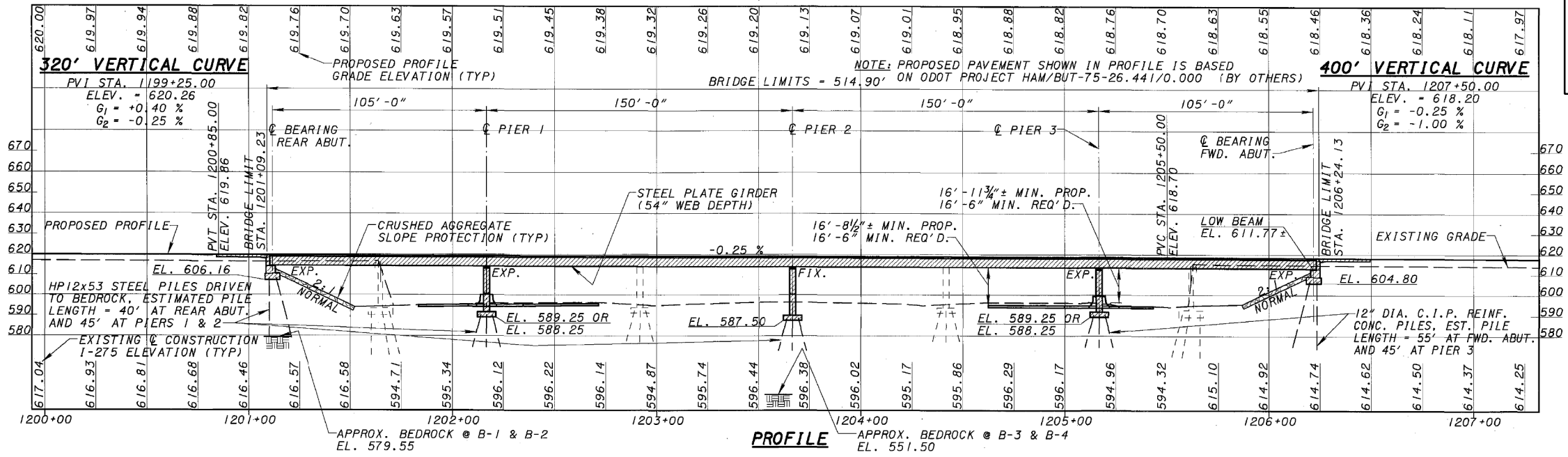
REPLACE THE ENTIRE JOINT SEAL GLAND WITH A NEW ELASTOMERIC SEAL GLAND. CONTRACTOR TO FIELD VERIFY PLAN DIMENSIONS AND SEAL MANUFACTURER.



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PLAN



PROFILE

**EXISTING STRUCTURE**

TYPE: CONTINUOUS COMPOSITE STEEL PLATE GIRDER WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE

SPANS: 105'-0"±, 150'-0"±, 150'-0"±, 105'-0"± C/C BRGS.

ROADWAY: 71'-4 1/2"± T/T PARAPET (LEFT)  
92'-5 1/2"± T/T PARAPET (RIGHT)

LOADING: HS25, CASE 1 AND THE ALTERNATE MILITARY LOADING

SKEW: 18°02'40"± R.F.

WEARING SURFACE: 1" MONOLITHIC CONCRETE

APPROACH SLABS: 25'-0"± LONG (AS-1-81)

STRUCTURAL FILE NUMBER: 3112314

DATE BUILT: 2007

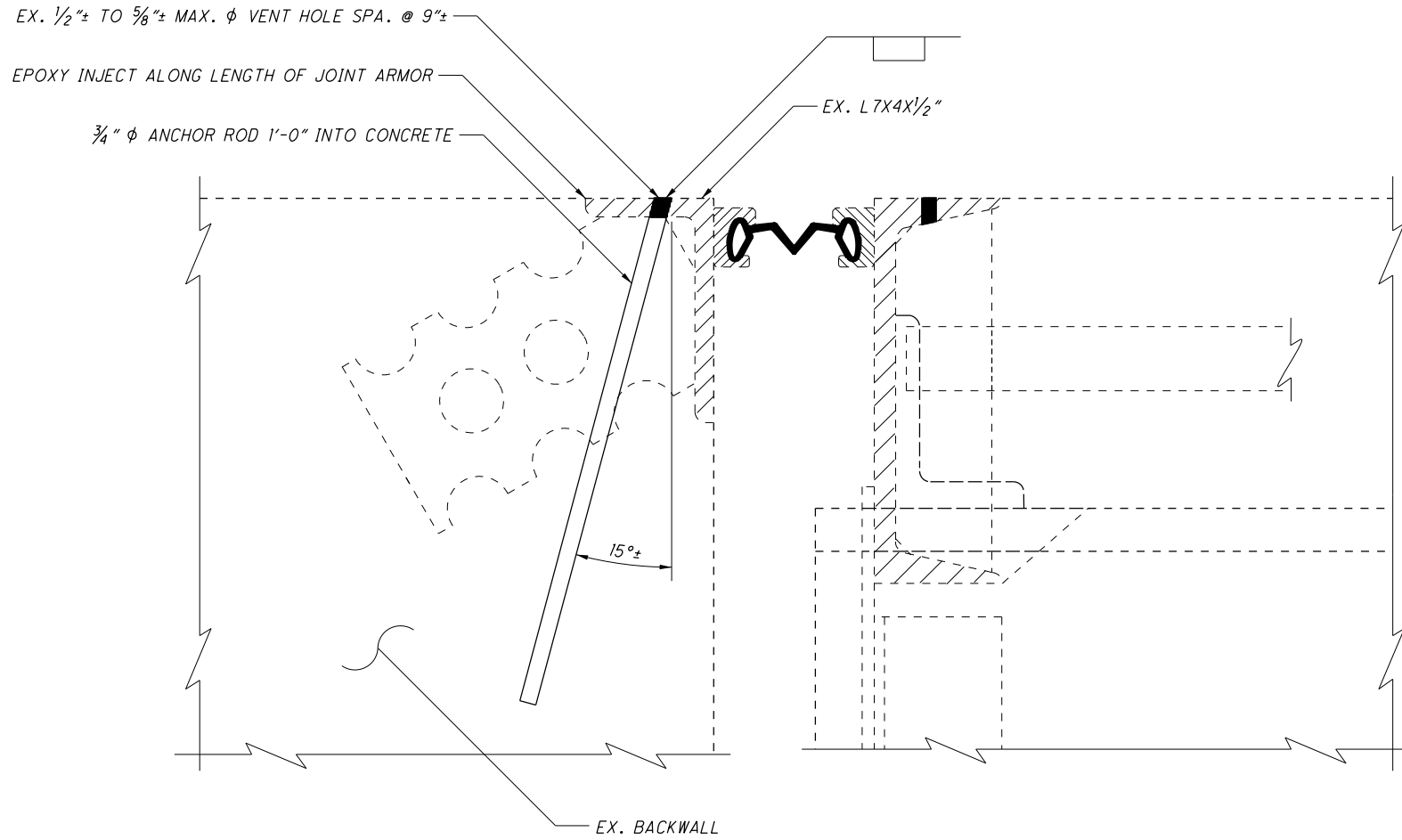
DISPOSITION: TO BE REHABILITATED

**PROPOSED WORK**

REPAIR THE LOOSE PORTION OF THE STEEL EXPANSION JOINT AT THE FORWARD ABUTMENT IN THE EASTBOUND DIRECTION AS DETAILED IN THE PLANS.

**NOTES**

- SEE SHEET 19 OF 58 FOR STRUCTURE QUANTITIES.
- THIS SITE PLAN WAS DEVELOPED BY REUSING THE MOST CURRENT REHABILITATION PLAN WHICH HAS CERTAIN ITEMS SHOWN WITH NEW WORK LINE STYLES THAT ARE NOW EXISTING. PLEASE SEE PROPOSED WORK LIST FOR THE WORK TO BE PERFORMED ON THIS STRUCTURE.



**EXPANSION JOINT REPAIR DETAIL**

**JOINT REPAIR PROCEDURE**

1. DRILL THROUGH THE VENT HOLES IN THE TOP OF THE ARMOR ON THE BACKWALL AT AN ANGLE. ENLARGE THE EXISTING VENT HOLES TO 7/8" φ IN THE TOP OF ARMOR WHEN DRILLING.
2. INSTALL EPOXY COATED STEEL ANCHOR RODS 1'-0" DEEP INTO THE BACKWALL WITH NONSHRINK, NONMETALLIC GROUT. THE GROUT SHALL NOT EXTEND INTO THE EXPANSION JOINT ARMOR.
3. PLUG WELD THE TOP OF THE ANCHOR RODS TO THE EXPANSION JOINT ARMOR.
4. EPOXY INJECT AROUND THE ARMOR ALONG THE LENGTH OF THE EXPANSION JOINT TO FILL AND SEAL VOIDS. EPOXY MATERIAL SHALL BE PER C&MS 705.26.

**NOTE**

PAYMENT FOR ALL MATERIALS, LABOR AND INCIDENTALS NECESSARY TO COMPLETE THE EXPANSION JOINT REPAIR SHALL BE MADE AT THE UNIT PRICE BID PER LINEAR FEET OF ITEM 530, SPECIAL-STRUCTURES: EXPANSION JOINT REPAIR.