MICHIGAN STATE UNIVERSITY

BRIDGES - REPAIR AND RESTORE PEDESTRIAN BRIDGES (FY24)

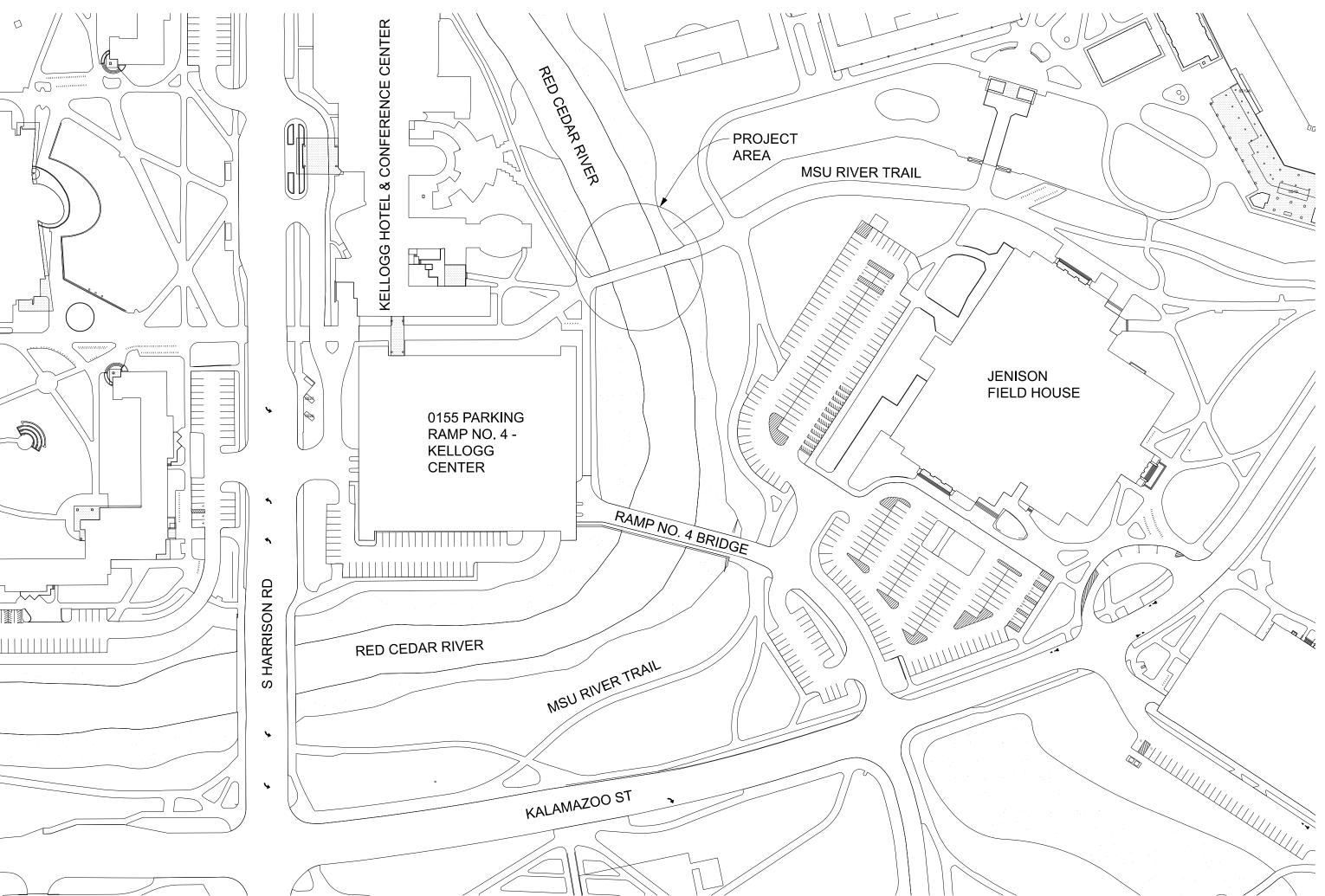
architects

constructors

and

SHEET INDEX

- TITLE SHEET
- GENERAL PLAN OF STRUCTURE
- REMOVAL DETAILS (1 OF 2)
- REMOVAL DETAILS (2 OF 2)
- SUBSTRUCTURE REPAIR DETAILS
- TEMPORARY SUPPORT DETAILS (1 OF 2) TEMPORARY SUPPORT DETAILS (2 OF 2)
- SOIL EROSION AND SEDIMENTATION CONTROL NOTES



GENERAL NOTES:

THE ORIGINAL DESIGN OF THIS STRUCTURE IS BASED OFF OF A UNIFORM LOAD OF 100 LB/SFT OF WALKWAY LIVE LOADING.

THE DESIGN OF THE STRUCTURAL MEMBERS IS BASED ON MATERIAL OF THE FOLLOWING GRADES AND STRESSES:

CONCRETE: GRADE 3500

f'c = 3,000 psify = 60,000 psi

STEEL REINFORCEMENT STRUCTURAL STEEL:

Fy = 36,000 psi

AASHTO M270 GRADE 36 AASHTO M270

GRADE 50, 50W

Fy = 50,000 psi

THE BRIDGE PAINT MAY CONTAIN LEAD.

BEVEL ALL EXPOSED CONCRETE CORNERS SHOWN SQUARE ON THE PLANS WITH 1/2" TRIANGULAR MOLDINGS EXCEPT AS OTHERWISE NOTED.

UNLESS OTHERWISE SHOWN ON THE PLANS, PROVIDE MINIMUM CONCRETE CLEAR COVER FOR REINFORCEMENT ACCORDING TO THE FOLLOWING:

CONCRETE AGAINST EARTH:

ALL OTHER UNLESS SHOWN ON PLANS: 2 IN.

DO NOT OPEN STRUCTURE TO TRAFFIC UNTIL ALL PROPOSED CONCRETE ATTAINS 100% OF ITS SPECIFIED STRENGTH

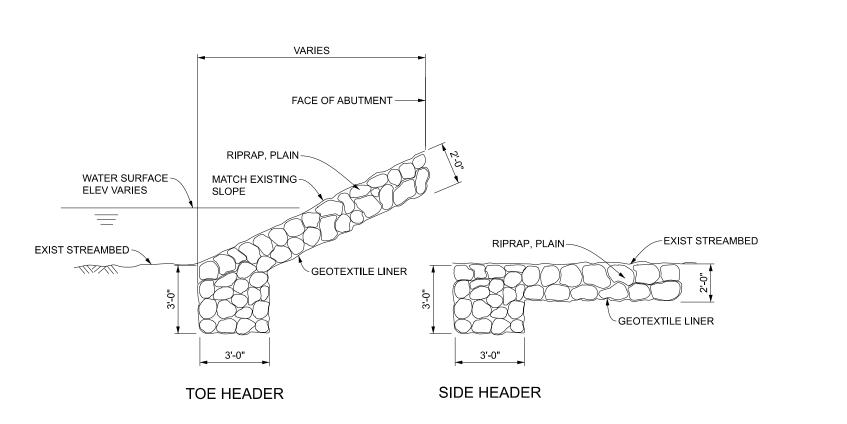
Michigan

RESTORE S (FY24)

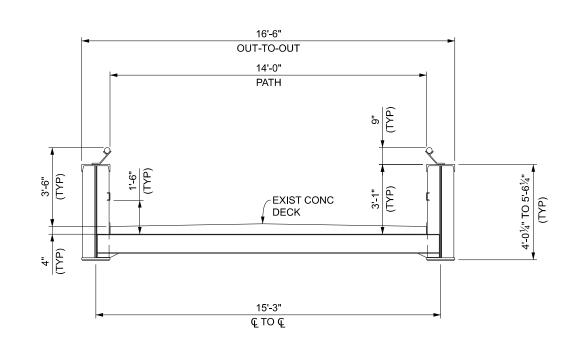
K. BEACH CIVIL INT. DES. NO SCALE

THE REGULATED WASTE ACTIVITY IDENTIFICATION NUMBERS FOR THIS PROJECT ARE AS FOLLOWS:

> NUMBER MIK109065676



RIPRAP HEADER DETAILS



TYPICAL DECK SECTION

EX REF PT A TO EX REF PT B EL 836.50 EXIST SIDEWALK (TYP) ~ _______ EXIST BRIDGE EL 833.00 LOW CHORD-GROUND -MATCH EXISTING SLOPE (TYP) EL 833.68 (TYP) -BACKFILL, STRUCTURE, CIP BACKFILL, STRUCTURE, CIP — BARRIER (STR 12033) WSE 821.65 ~ 11/11/2023 EL 822.85

ABUTMENT A ABUTMENT B

EXIST STREAMBED ~

ELEVATION VIEW

(LOOKING NORTH PERPENDICULAR TO BRIDGE $\mbox{\em c}$)

EL 818.52

EDGE OF WATER (TYP) ~

DEWATERING

BARRIER

° 13'-8"

(TYP)

EXCAVATION, FDN~

STUMP, REM, 37

INCH OR LARGER

DEWATERING BARRIER

∼RIPRAP, PLAIN

13'-8"

DISCHARGE WATER COLLECTED

WITHIN DEWATERING BARRIER

INTO GEOTEXTILE FILTER BAGS

LOCATED DOWN STREAM (TYP)

DEWATERING BARRIER (STR 12033) (TYP)

Ç EXIST BRIDGE

PLAN VIEW

LIMITS OF RIPRAP

RIPRAP, PLÀIN

EXIST REF LINE B

FOR ACCESS

CLEARING REQUIRED AS NEEDED

FENCE TO BE REMOVED AND REPLACED (TYP)

SILT FENCE (TYP)

CLEAR (TYP)

9'-3³/₄" | LIMITS OF

RIPRAP

FENCE, CHAIN— LINK, 72 INCH

13'-8"

DEWATERING

BARRIER

STUMP, REM, 37

INCH OR LARGER

TREE TO BE REMOVED

TREE TO BE REMOVED

EXIST SIDEWALK (TYP)

SUGGESTED CONSTRUCTION SEQUENCE:

1. CLEARING & TREE REMOVAL REQUIRED TO PLACE HAUL PATH AND MOBILIZE EQUIPMENT

CLEARING REQUIRED -AS NEEDED FOR

2. INSTALL DEWATERING BARRIER.

3. INSTALL TEMPORARY SUPPORTS.

4. PERFORM REHABILITATION WORK ACTIVITIES.

5. REMOVE TEMPORARY SUPPORTS.

6. PLACE RIPRAP FOR SCOUR PROTECTION AND RESTORE STREAMBED TO EXIST CONDITIONS.

7. REMOVE DEWATERING BARRIER.

SOIL EROSION AND SEDIMENTATION CONTROL QUANTITIES

Ft Erosion Control, Silt Fence Ea Erosion Control, Filter Bag

EXCAVATION, FDN

MISCELLANEOUS QUANTITIES

320 Cyd Excavation, Fdn
70 Cyd Backfill, Structure, CIP
1 LSUM Dewatering Barrier (STR 12033)
1 LSUM Temp Haul Road
1 LSUM Minor Traf Devices
0.1 Acre Clearing
30 Ft Fence, Rem
60 Syd Riprap, Plain
3 Ea Stump, Rem, 37 inch or Larger
30 Ft Fence, Chain Link, 72 inch

NOTES:

THE WORK COVERED BY THESE PLANS INCLUDES SUBSTRUCTURE PATCHING, BEARING REPLACEMENT, STEEL REPAIRS, AND SCOUR PROTECTION RIPRAP TO THE LIMITS SHOWN. ALL OTHER WORK IS TO BE DONE BY OTHERS AND IS NOT A PART OF THIS CONTRACT.

DETOUR PEDESTRIAN TRAFFIC OVER RAMP NO. 4 BRIDGE LOCATED SOUTH OF THE PROJECT.
PLAN ELEVATIONS REFER TO NAVGD29 DATUM.

WATER LEVEL IS SUBJECT TO CHANGE. MAKE A DETERMINATION OF WATER LEVELS THAT MAY EXIST DURING CONSTRUCTION.

IMMEDIATELY AFTER THE CONSTRUCTION OF AN ABUTMENT IS COMPLETED, PLACE SLOPE PROTECTION AND SEEDING OR SODDING ON THE ADJACENT EMBANKMENT SLOPES.

THE DESIGN OF THIS STRUCTURE IS BASED ON CURRENT AASHTO LRFD BRIDGE DESIGN SPECIFICATION PEDESTRIAN LOADING OF (100) PSF AND A MAINTANENCE VEHICLE H10 LOADING, NOT ACTING CONCURRENTLY. LIVELOAD DEFLECTION DOES NOT EXCEED 1/360 OF SPAN LENGTH.

PLACE GEOTEXTILE LINER ON ALL SLOPES PRIOR TO PLACING RIPRAP. PAYMENT OF GEOTEXTILE LINER IS INCLUDED IN PAYMENT FOR RIPRAP.

A COFFERDAM HAS NOT BEEN PROVIDED FOR THIS STRUCTURE. USE OTHER MEANS OF WATER CONTROL AS APPROVED BY THE ENGINEER. DO NOT DISTURB THE STREAM BED. WATER CONTROL, WHETHER IT BE BY COFFERDAM OR OTHER APPROVED MEANS, IS INCLUDED IN THE BID ITEM "DEWATERING BARRIER".

THE RIPRAP QUANTITY IS BASED ON THE LATERAL DIMENSIONS OF THE AREA TO BE PROTECTED, REGARDLESS OF THE NUMBER OF LAYERS REQUIRED. THE ESTIMATED WEIGHT OF RIPRAP IS 100 TONS.

SUMBIT ALTERNATE METHODS OF STREAM DIVERSION TO THE ENGINEER FOR APPROVAL.

IMPLEMENT MEASURE TO PREVENT DEBRIS FROM FALLING FROM THE STRUCTURE. IF DEBRIS FALLS INTO THE WATERWAY, REMOVE IT WITHIN 24 HOURS. SINCE DISTURBANCE OF THE WATERWAY BOTTOM MAY BE AS HARMFUL AS THE DEBRIS ITSELF, THE PREVENTATIVE MEASURES MUST BE EFFECTIVE. REMOVAL OF DEBRIS IS IS INCLUDED RELATED ITEMS OF

NOTIFY EACH UTILITY COMPANY A MINIMUM OF THREE FULL WORKING DAYS IN ADVANCE IF WORK IMPACTING THE COMPANY'S CONDUITS OR FACILITIES.

DO NOT WELD ON EXISTING GIRDERS, EXCEPT AS NOTED.

SEE SPECIAL PROVISIONS FOR DEWATERING BARRIER AND TEMP HAUL ROAD.

Michigan State University

EAST LANSING, BRIDGES - REPAIR, PEDESTRIAN BRI

RESTORE SS (FY24)

AND

BRIDGE

Facilities

Infrastructure Planning and F

CAPITAL PROJ. NO. PR. MGR. A. LINEBAUGH ARCH. MECH. ELEC. K. BEACH S. GARDNER CIVIL D. WILBER INT. DES. CONST. REP. APPR. DATE 05/22/2024 SCALE NO SCALE REVISIONS 05/22/2024

Facilities

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Michigan

K. BEACH ELEC. S. GARDNER CIVIL D. WILBER INT. DES. CONST. REP. APPR.

05/22/2024 DATE SCALE

NO SCALE

REVISIONS BIDS 05/22/2024

JOB NO. 231735 THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET

ARE IDENTIFIED BY USING THE LEGEND BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER

PROPOSED WORK

DENOTES REMOVAL PORTIONS

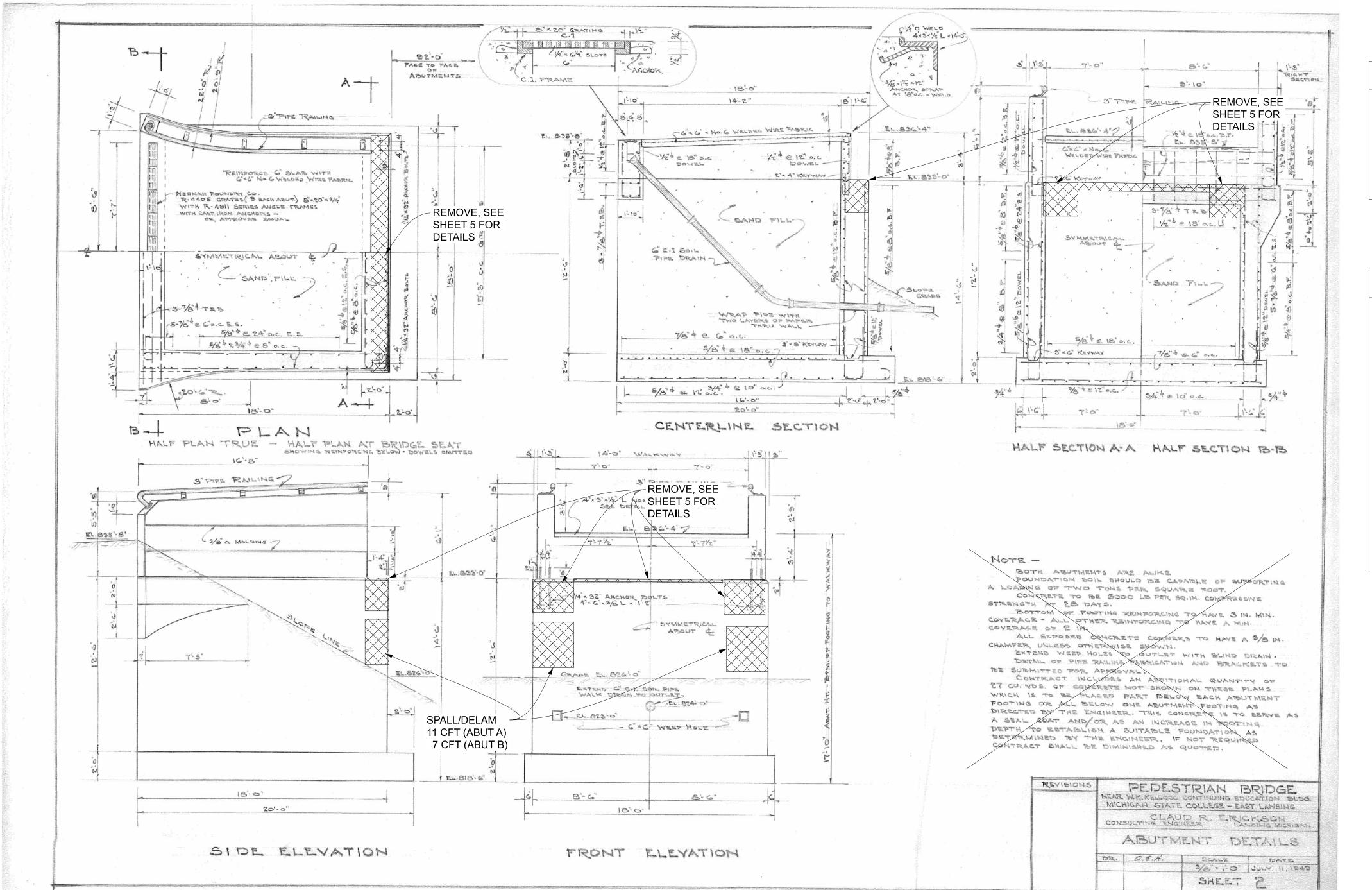
JOB NO. 231735

GENERAL LOCATIONS FOR DETERIORATED OR DAMAGED CONCRETE ARE SHOWN. FIELD VERIFY ALL DIMENSIONS, LOCATIONS, AND DEPTH OF REMOVAL LOCATIONS PRIOR TO REMOVAL OF CONCRETE. AREAS NOT SHOWN ON THE PLANS THAT NEED REPAIR ARE TO BE PATCHED ACCORDINGLY.

REMOVE SPALLED AND OR DELAMINATED TO SOUND CONCRETE.

AT ABUTMENT SEATS, SAWCUT AND REMOVE PORTIONS OF CONCRETE UNDER BEARINGS TO THE LIMITS SHOWN IN SUBSTRUCTURE REPAIR DETAILS. INCLUDED IN THE BID ITEM "HAND CHIPPING, OTHER THAN DECK".

AVOID DAMAGING THE EXIST REINF DURING SAW CUTTING AND CONCRETE REMOVAL OPERATIONS. BLAST CLEAN, STRAIGHTEN AND EMBED PROJECTING REINFORCEMENT INTO PROPOSED CONCRETE NOT PAID FOR SEPERATELY, BUT INCLUDED IN THE BID ITEM "HAND CHIPPING, OTHER THAN DECK".





Facilities

University Michigan

RESTORE SS (FY24)

AND

CAPITAL PROJ. NO. CP23034 PR. MGR. A. LINEBAUGH ARCH. MECH. K. BEACH ELEC. S. GARDNER CIVIL L.A. D. WILBER INT. DES. CONST REP. APPR. DATE <u>05/22/2024</u>

SCALE NO SCALE

REVISIONS BIDS 05/22/2024

JOB NO. 231735 THE ONLY ITEMS OF WORK TO BE DONE FROM THIS SHEET ARE IDENTIFIED BY USING THE LEGEND BELOW, LABELED WITH THIS PROJECT'S JOB NUMBER

PROPOSED WORK DENOTES REMOVAL PORTIONS

JOB NO. 231735

BRIDGE PAINT MAY CONTAIN LEAD.

SHEET 4

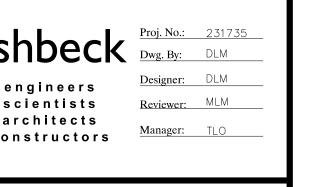
FIELD VERIFY ALL DIMENSIONS, LOCATIONS, MEMBERS TO BE REPAIRED PRIOR TO BEGINNING OF WORK.

FOR REPAIR DETAILS AND MATERIALS SEE STEEL DETAILS.

FIXED. PED. "A" NOTES EXP. PED. "B" BUILT-UP PLATE GIRDER - WEB 3/8 x 66 TO 3/8 x 48" - TOP FL. 15" FT 050" 2 5/8" x 14" R PART - BTM.FL. 1415" R 2 5/8" 14" R PART PABRICATOR TO SUBMIT WELDING AND FABRICATION SCHEDULE FOR APPROVAL. PLATE GIRDER TO BE DESIGNED POTE UNIFORM LOADING OF 100 LB. PER BOUARD FOOT OF WALKWAY (LIVE LOADING) AND EACH GIRDER SHALL HAVE A SECTION MODULUS OF AT LEAST IIIO INCHES AT MID SPAN.

ALTERNATE DESIGNS WILL BE ACCEPTABLE.

AT PABRICATOR'S OPTION ALL FIELD CONNECTIONS MAY BE WELDED. WEB PLATES ARE TO BE TRIMMED TOP AND BOTTOM TO PROVIDE THE PARABOLIC CURVED TOP AND BOTTOM PLANGES AS SHOWN. ADDUCTMENT OF GROUT THICKNESS (1"1") TO BE MADE UNDER PEDESTALS TO ADJUST THE ABUTMENT "JOINT DETAIL" AS SHOWN. SHOP PAINT ONE COAT OF "RUSTOLEUM" OR EQUAL. FIXED PED. A" EXP. PED. "B" 6-6/2 9% 9/8 6-6/2 5 SPA. @ 7'3" = 36'-3" 5 SPA. E 7'3" : 36'-3" 94-4" 0-0 93'-6" C-C BEARINGS FRAMING PLAN JOINT DETAIL 10" x 3/2" SOLE TR x 1-3" (SHAPE) SIGR. FOR SOLE R & 10x 1/2" BEARING P. x 1-3" (SHAPE)
11/2" x 3" SLOT - EXP. PED. B
11/4" HOLE - FIXED PED. A (11" × 12" BRONZE PE KI-4" EXP. PED'B" 51/2" ANCHOR BOLTE 11" x 1/2" MASONEY RX 1-4" FHED FED."A" 307-3" = 21-9" 36'-214" 3 = 7'3" = 21'9" 6'-6'2" 9% PEDESTAL DETAIL 94-4" 0-0 BOTTOM FLANGE BRACING 14'-0" WALKWAY 7'-0" 3" PIPE RAILING-3" PIPE RAILING -14"x 8/8" COVER PLAYER X 60'-0" C'x 3/8" | CURS PL -14" × 58" COVER PLATE " 60-0" 19/8" BRACHET TE SYMMETRICAL ABOUT 7'-71/2" -L3/2×3/2×5/16 NOTE - OFFSETS SHOWN PROVIDE A 13% PARABOLIC CAMBER ALL FLOORIBEAMS 10" WE 21" (12" PERMANENT CAMBER FLUS 13/8" DEAD LOAD DEFLECTION) AND A 3198" PARABOLIC CURVE FOR BOTTOM FLANGE (30" PERMANENT CAMBER) TRANSVERSE SECTION C SEE PED. DETAIL (102 8/44 1-8") CENTERLINE SECTION SYMMETRICAL ABOUT & 15"x1/2" R (a) 2.0" SCARE SPLICE 15"x1" COVER PLATE x 2210" 15"x1" COVER PLATE × 56-6" 4×3/8 72 PEDESTRIAN BRIDGE NEAR WINKELLOGG CONTINUING EDUCATION BLOG. REVISIONS II SPA. @ 3'-7/2" = 39-10/2 MICHIGAN STATE COLLEGE EAST LANSING ALL INTERMEDIATE STIFFENERS 7" 3/8" TR (EXCEPT AT SPLICE PLATE 6/2" 3/6" PL) CONSULTING ENGINEER R. ERICKSON LANSING MICHIGAN STRUCTURAL STEEL
DETAILS
DR. GEN. SCALE DATE
JULY 11, 1949 GIRDER BOTTOM FLANGE



Facilities ucture ng and Infrastruc Planning

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iversity RESTORE SS (FY24) AND REP/

Michigan

BRIDGES PEDEST

CAPITAL PROJ. NO. CP23034 PR. MGR. A. LINEBAUGH

ARCH MECH. K. BEACH ELEC. S. GARDNER CIVIL L.A. INT. DES. CONST. REP.

D. WILBER APPR. 05/22/2024 DATE NO SCALE SCALE

REVISIONS 05/22/2024

scientists architects constructors

ABUTMENT ABUTMENT 8" EXIST 8" EXIST **BACKWALL BACKWALL** 1'-5" 1'-5" PROP SEAT PROP SEAT 2 EQ SPA EA07 D04 BAR BARS IN BEAM SEAT PROP SOLE P 2 EQ SPA 6" (TYP) EA07 PROP ELASTOMERIC **EMBED** BARS BEARING PAD IN BEAM SEAT **PATCHING** PATCHING 1" BEVEL (TYP) CONC, C (TYP) CONC, C (TYP) PROP FACE OF PROP FACE OF **ABUTMENT ABUTMENT** EXIST FACE OF **ABUTMENT** - SAWCUT LINE 1" BEVEL (TYP) PLACE EMBEDDED GALVANIC ANODE ON EXIST VERTICAL SALVAGE AND BLAST AND HORIZONTAL ED06 BAR **CLEAN EXISTING** REINFORCEMENT (TYP) REINFORCEMENT EXIST VERTICAL - EXIST VERTICAL EB06 BAR (FS) HORIZONTALLY (TYP) A05 BARS (TYP) A05 BARS (TYP) ADHESIVE ANCHORED (TYP) EXIST HORIZONTAL EXIST FACE OF ~ A05 BARS (TYP) **EB05 BAR HORIZONTALLY ABUTMENT** ADHESIVE ANCHORED EB06 BAR (NS) LAP W/ EXIST REINF (TYP) SALVAGE AND BLAST SAWCUT LINE **CLEAN EXISTING** 1'-4" REINFORCEMENT ũ BRG & © 1¼" Ø 1'-4" **EXIST SEAT ANCHOR BOLT** EXIST SEAT SAWCUT LINE 2'-0" EXIST 2'-0" EXIST

SECTION A-A

ABUTMENT

2'-1" PROP

AVOID EXIST D04 BARS IN BACKWALL WHEN LOCATING EB04 HORIZONTAL ADHESIVE ANCHOR LOCATIONS

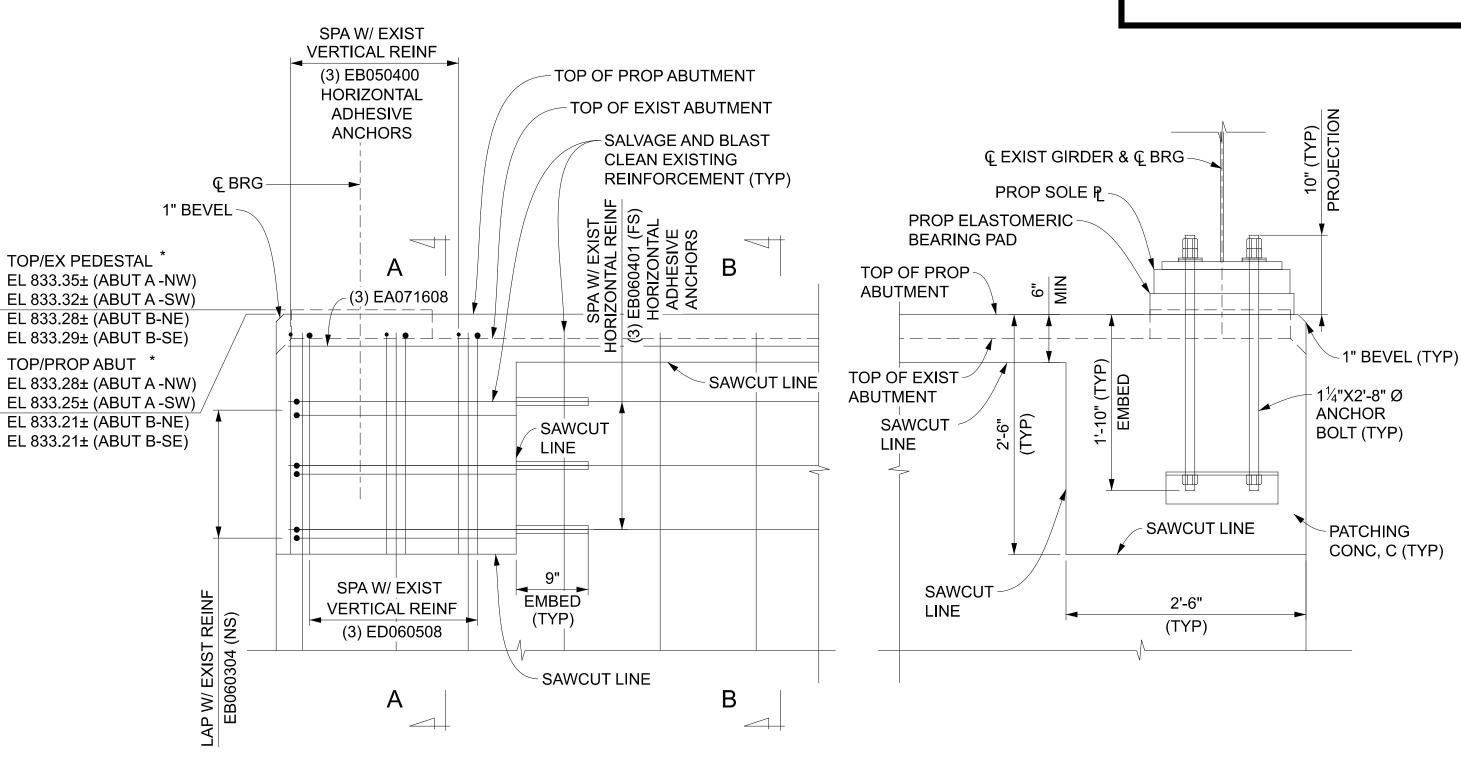
(TYP)

SECTION B-B

ABUTMENT

2'-1" PROP

EXIST HORIZONTAL ABUTMENT & BACKWALL REINFORCEMENT NOT SHOWN FOR CLARITY



* FIELD VERIFY ALL ELEVATIONS PRIOR TO STARTING ABUTMENT BEAM SEAT REPAIRS. MATCH BOTTOM OF EXISTING BEAM ELEVATIONS.

PARTIAL ELEVATION W/ REINFORCING

TYPICAL AT EA BEARING, ANCHOR BOLTS NOT SHOWN FOR CLARITY

PARTIAL ELEVATION W/ BEARING

TYPICAL AT EACH BEARING, REINFORCEMENT NOT SHOWN FOR CLARITY

MISCELLANEOUS QUANTITIES

Cyd Patching Conc, C-L

Sft Patch, Forming

Cyd Substructure Conc

Ft Structural Crack, Repr

Ea Embedded Galvanic Anode

Flushing Cracks, Water

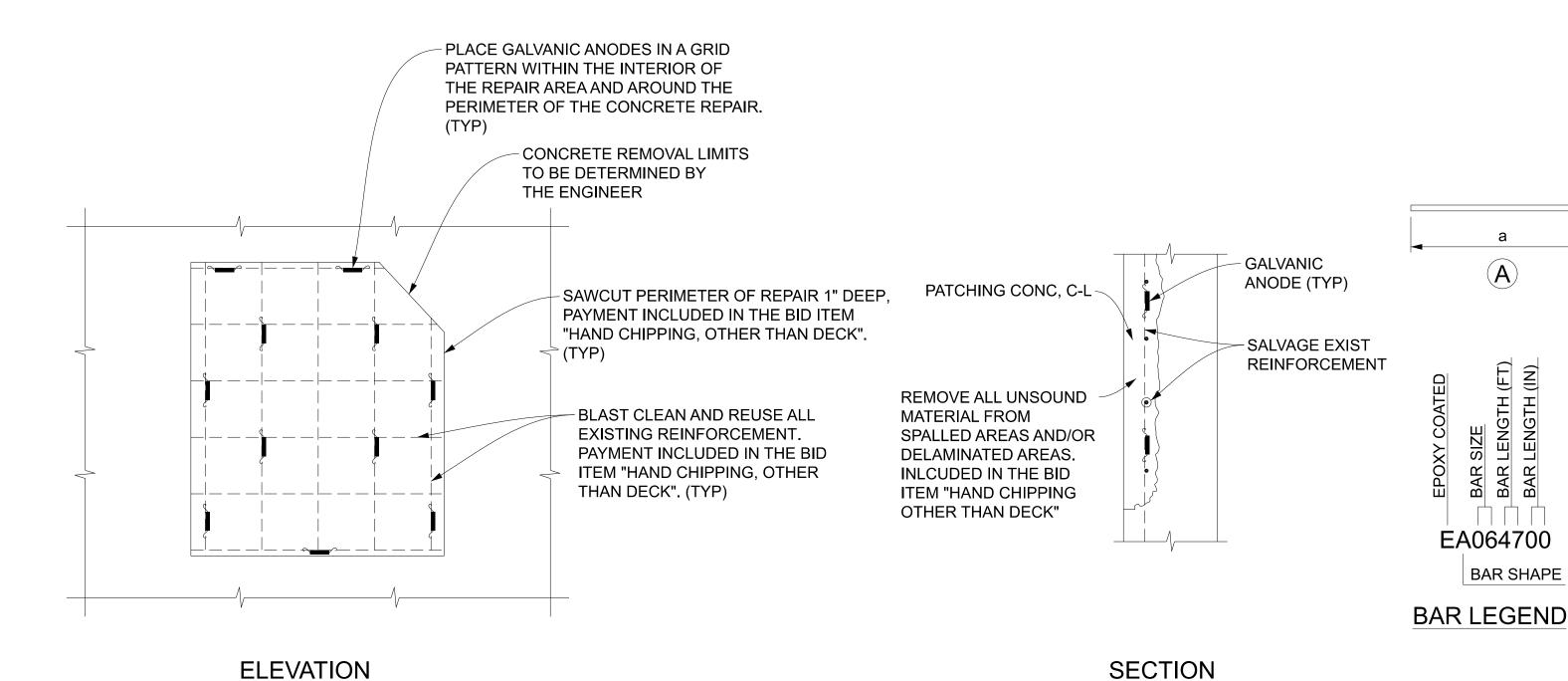
700 Lb Reinforcement, Steel, Epoxy Coated

Hand Chipping, Other Than Deck

Syd Substructure Horizontal Surface Sealer

TYPICAL ABUTMENT BEAM SEAT REPAIR

SEE STRUCTURAL STEEL DETAILS FOR ADDITIONAL BEARING & ANCHOR BOLT DETAILS BACKWALL NOT SHOWN FOR CLARITY



REINFORCEMENT, STEEL, **EPOXY COATED**

BAR	"a"	"b"	"c"	TOTAL LENGTH	NO. REQ'D	TOTAL WEIGHT
EA071608	16'-8"			16'-8"	6	206
EB050400	2'-3¾"	1'-8¼"		4'-0"	12	52
EB060304	2'-3¾"	1'-0"		3'-4"	12	62
EB060401	3'-0¾"	1'-0"		4'-1"	12	74
ED060508	2'-3¾"	1'-0"	2'-3¾"	5'-8"	12	104

NOTE: 100 LB ADDITIONAL REINFORCEMENT ADDED PER ABUTMENT FOR PATCHING REPAIRS REQUIRED. REINFORCEMENT IN TABLE IS FOR ALL ABUTMENT BEAM SEAT REPAIRS FOR ABUTMENTS A & B.

NOTES:

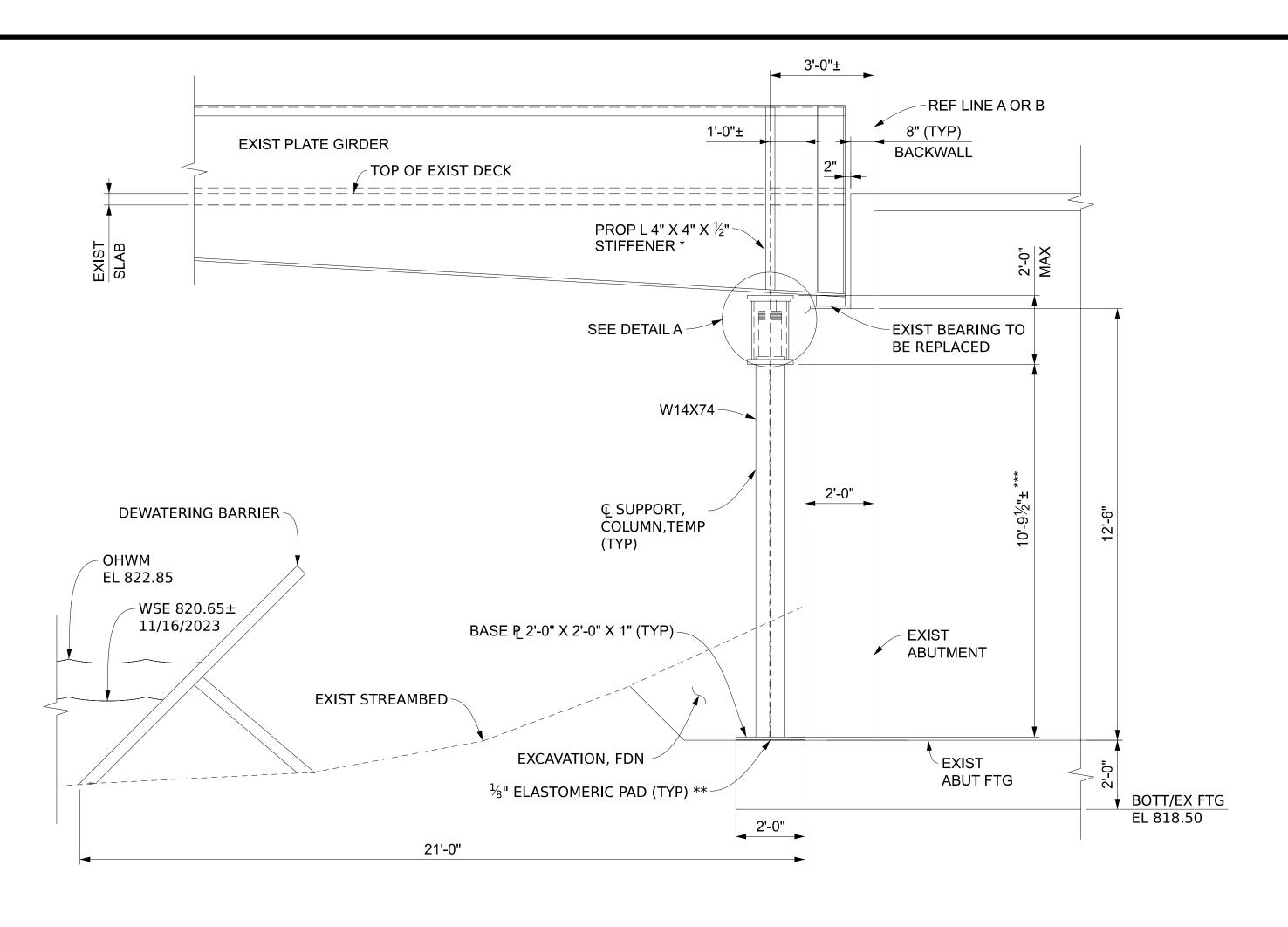
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SEE REMOVAL SHEET DETAILS FOR LOCATIONS TO BE PATCHED.

FOR BEVEL AND MOLDING DETAILS, SEE STANDARD PLAN B-103-SERIES.

FORMS FOR LARGE PATCHES ARE TO BE INSTALLED IN 2'-0" TO 4'-0" HIGH SECTIONS WITH THE TOP OF FORM NO MORE THAN 4'-0" ABOVE THE LEVEL OF CONCRETE AS THE POUR PROGRESSES.

APPLY LOW TEMPERATURE PROTECTION OF CONCRETE ACCORDING TO SECTION 706.03 J. OF THE STANDARD SPECIFICATIONS FOR CONSTRUCTION. LOW TEMPERATURE PROTECTION OF CONCRETE IS INCLUDED IN THE RELATED ITEMS OF WORK.



TYPICAL TEMPORARY SUPPORT ELEVATION AT ABUTMENT

L 5"X5"X½"X13'-8½"

WT8X20-

(TYP)

³/₄" H.S. BOLT (TYP)

L 5"X5"X½"X13'-8½"-

L 5"X5"X½"X15'-10½"

L 5"X5"X½"X15'-10½"~

SEE DETAIL B

SEE DETAIL D-

—SEE DETAIL C

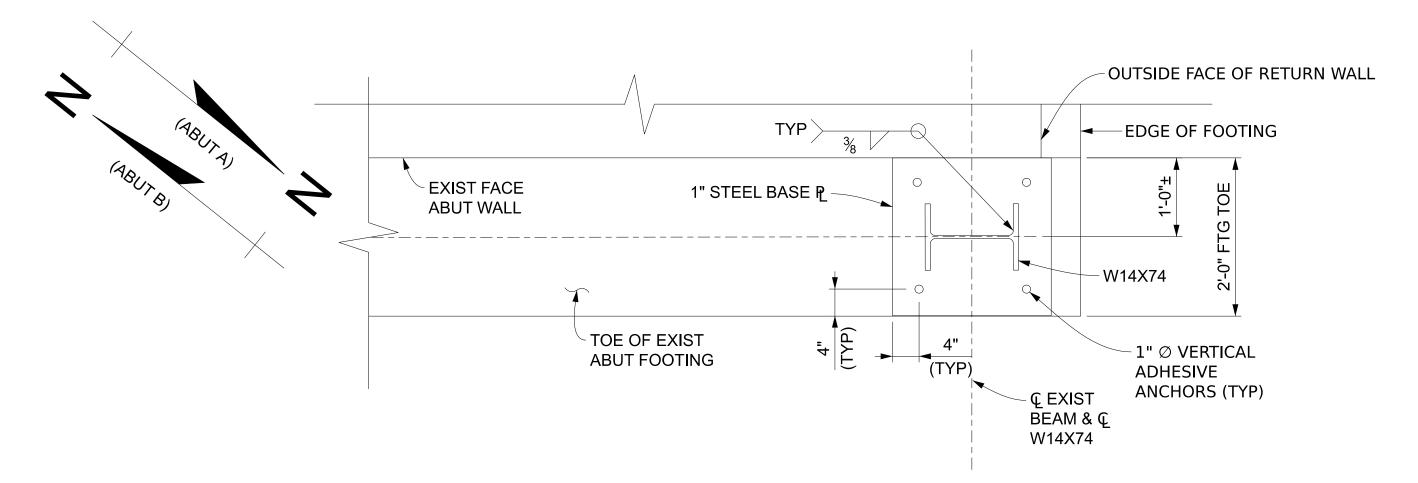
PROP L 4" X 4" X ½"

STIFFENER (TYP) *

TYPICAL TEMPORARY SUPPORT SECTION AT ABUTMENT

*** EXACT HEIGHT TO BE DETERMINED BY CONTRACTOR.
HEIGHT NOT TO EXCEED 12'-0".

ALL DIMENSIONS PERPENDICULAR TO ABUT REF LINE.



PLAN OF BASE PLATE ON FOOTING

TEMP SUPPORT BRACING NOT SHOWN FOR CLARITY



2 Ea Support, Column, Temp 16 Ea Adhesive Anchoring of Vertical Bar, 1 inch

* STIFFENERS TO BE PAID FOR AS STIFFENERS, FURN, FAB, AND ERECT ON SHEET STEEL 001

** $\frac{1}{8}$ " ELASTOMERIC PADS ARE TO BE IN INCLUDED IN THE PAY ITEM "SUPPORT, COLUMN, TEMP".

NOTES:

DO NOT LOAD TEMPORARY SUPPORTS FOR A CONTINUOUS PERIOD GREATER THAN FOUR WEEKS.

BASE ALTERNATE DESIGNS OF THE TEMPORARY SUPPORT ON LOADS AS FOLLOWS:

50 TONS VERTICAL GIRDER LOAD 1.25(DL) (AT ABUT A OR B) 4000 PSF ALLOWABLE SOIL PRESSURE

THE TEMPORARY SUPPORT DESIGN DOES NOT INCLUDE THE WEIGHT OF CONSTRUCTION EQUIPMENT. IF CONSTRUCTION EQUIPMENT IS TO BE USED ON THE SPAN WHILE THE TEMPORARY SUPPORT IS IN PLACE, SUBMIT ALTERNATIVE DESIGN AND WORKING DRAWINGS TO THE ENGINEER IN ACCORDANCE WITH THE STANDARD SPECIFICATION OF CONSTRUCTION. THE ALTERNATIVE DESIGN MUST INCLUDE A CHECK OF THE EXISTING SUPERSTRUCTURE THAT ACCOUNTS FOR THE CURRENT CONDITION OF THE BRIDGE MEMBERS AND MUST INCLUDE DETAILS FOR ANY STRENGTHENING OF THE EXISTING STRUCTURE REQUIRED TO PREVENT DAMAGE FROM THE TEMPORARY SUPPORT LOADS.

 $\begin{array}{c|cccc} HIGAN & STATE & Infrastructure \\ \hline I & V & E & R & S & I & T & Y \\ \hline \end{array}$

Facilities

scientists

architects

constructors

-HYDRAULIC JACK (TYP)

-W14X74 (TYP)

ANCHORS (TYP)

EL 818.50 (TYP)

Ç 1" Ø VERTICAL ADHESIVE

 $^{-1}\!\!/_{\!8}$ " ELASTOMERIC PAD (TYP) **

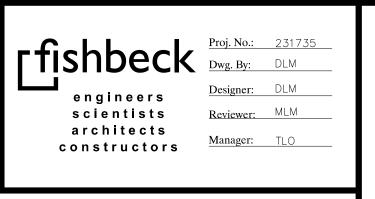
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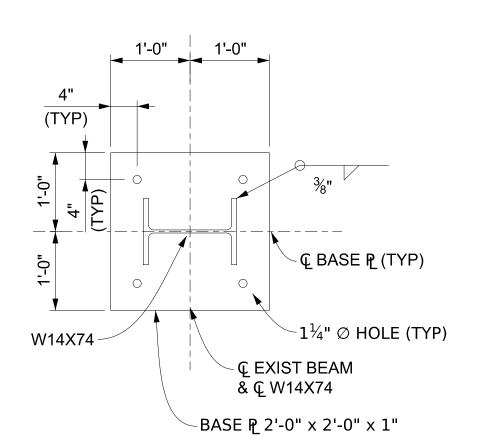
BRIDGES - REPAIR AND RESTORE
PEDESTRIAN BRIDGES (FY24)

CAPITAL PROJ. NO.

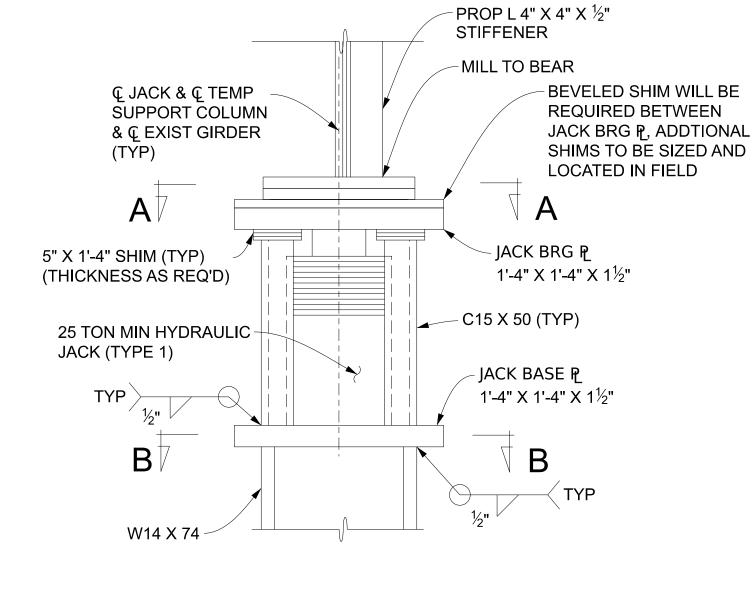
Michigan

CP23034 PR. MGR. A. LINEBAUGH ARCH. MECH. K. BEACH ELEC. S. GARDNER CIVIL D. WILBER INT. DES. CONST. REP. APPR. 05/22/2024 DATE SCALE NO SCALE REVISIONS BIDS 05/22/2024

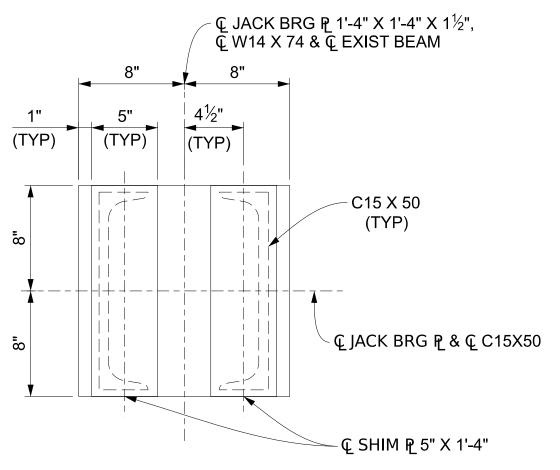




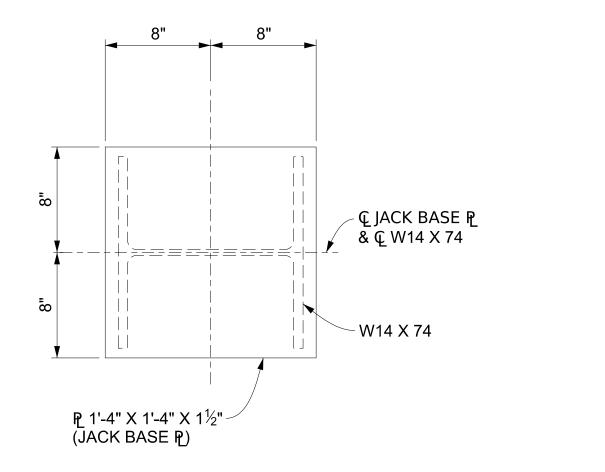




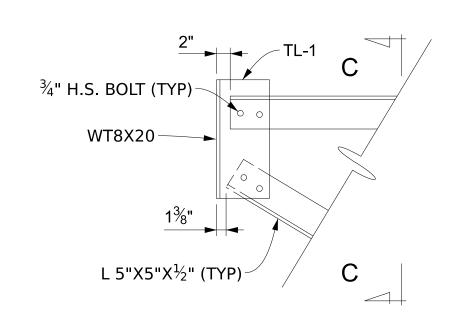
DETAIL A



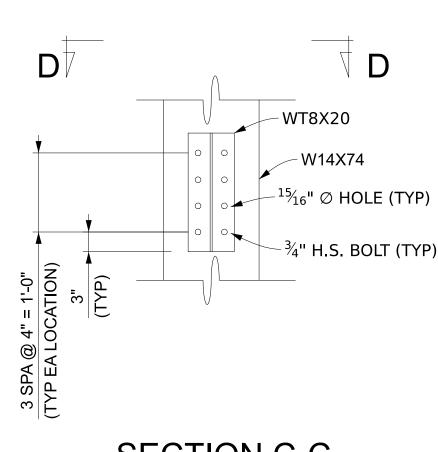
SECTION A-A



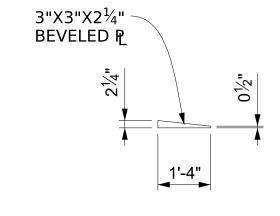
SECTION B-B



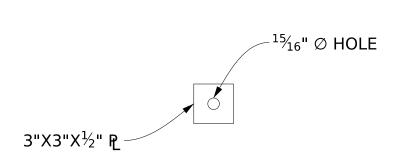
DETAIL B SUPPORT COLUMN NOT SHOWN FOR CLARITY



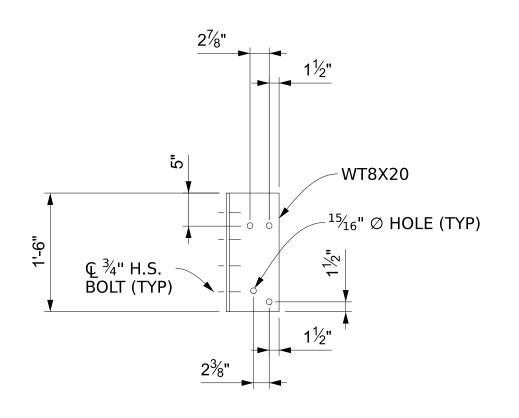
SECTION C-C BRACING ANGLES NOT SHOWN FOR CLARITY



BEVELED SHIM DETAILS BRACING ANGLES NOT SHOWN FOR CLARITY

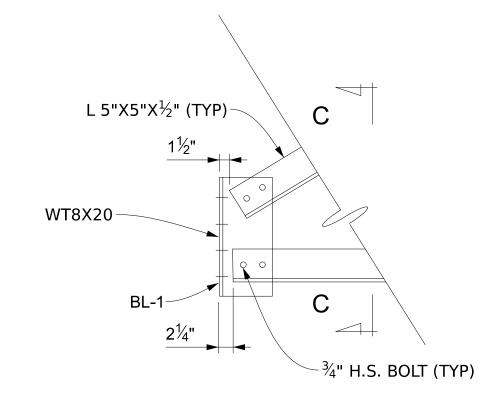


DETAIL D BRACING ANGLES NOT SHOWN FOR CLARITY

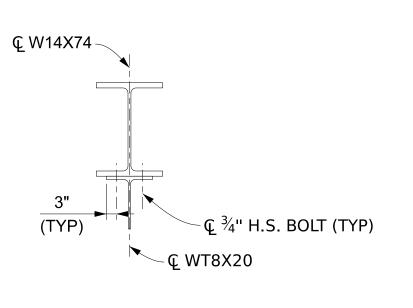


TOP LEFT CONNECTION PLATE (TL-1)

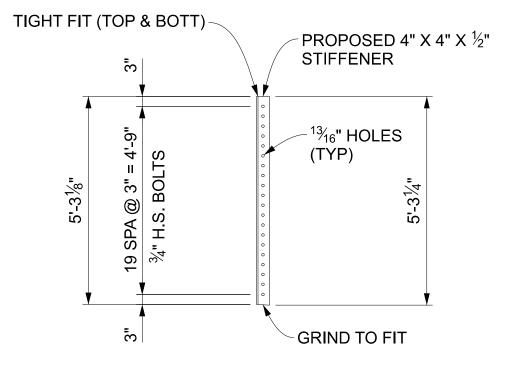
TOP RIGHT CONNECTION ը (TR-1) SAME AS TL-1 MIRRORED ABOUT Ը OF BRIDGE



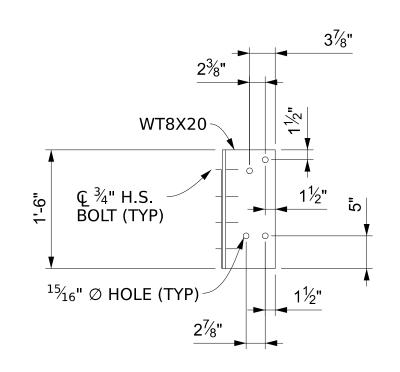
DETAIL C SUPPORT COLUMN NOT SHOWN FOR CLARITY



SECTION D-D BRACING ANGLES NOT SHOWN FOR CLARITY



STIFFENER DETAILS BRACING ANGLES NOT SHOWN FOR CLARITY



BOTT LEFT CONNECTION PLATE (BL-1)

BOTT RIGHT CONNECTION (BR-1) SAME AS BL-1 MIRRORED ABOUT (COF BRIDGE

REPAIR AND RESTORE RIAN BRIDGES (FY24) ANSING, MICHIGAN Michigan BRIDGES -PEDESTF CAPITAL PROJ. NO. PR. MGR. A. LINEBAUGH ARCH MECH. ELEC. CIVIL L.A. INT. DES. K. BEACH S. GARDNER

D. WILBER

05/22/2024

NO SCALE

05/22/2024

CONST. REP. APPR.

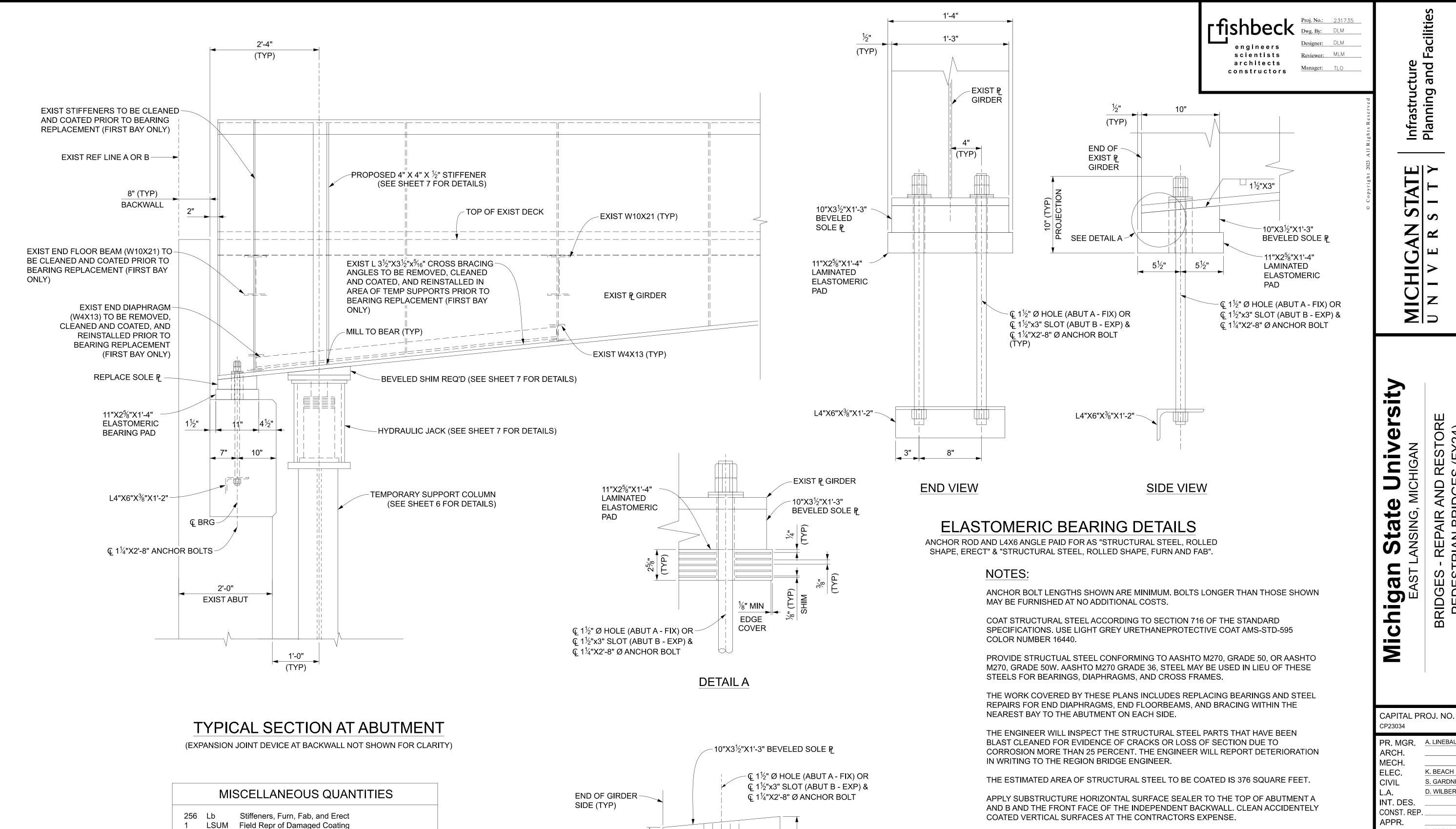
REVISIONS

DATE

SCALE

University

Infrastructure Planning and Facilities



PR. MGR. A. LINEBAUGH ARCH. MECH. K. BEACH ELEC. S. GARDNER CIVIL D. WILBER INT. DES. CONST. REP. APPR. 05/22/2024 DATE NO SCALE SCALE REVISIONS BIDS 05/22/2024

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Facilities

and

Infrastruc Planning

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RESTORE SS (FY24)

AND

S

RIDGE PEDES

EXISTING STRUCTURAL STEEL MEMBER.

PLATES AND ANGLES.

PROTECT PORTIONS OF THE STRUCTURE, INCLUDING SUPERSTRUCTURE, SUBSTRUCTURE, SLOPE PROTECTION, AND HIGHWAY APPURTANCES FROM SPLATTER AND OVERSPRAY OF COATING MATERIAL. INCLUDED IN THE BID ITEM 'STRUCTURE, COATING, TYPE 4 (STR# 12033)".

APPLY SEALANT AROUND THE PERIMETER OF BOLTED END DIAPHRAGM CONNECTION

APPLY SEALANT AROUND THE CONNECTION OF NEW STRUCTURAL STEEL MEMBER TO

BLAST CLEAN AND PRIME FAYING SURFACE PRIOR TO ERECTING DIAPHRAGMS.

INCLUDED IN THE PAY ITEMS FOR CLEANING AND COATING EXISTING STRUCTURAL

LSUM Steel Structure, Cleaning, Partial, Type 4

Bearing, Elastomeric, 2 1/2 inch

Structural Steel, Rolled Shape, Erect

Structural Steel, Rolled Shape, Furn and Fab

Structural Steel, Welded Repr, Furn, Fab, and Erect

LSUM Steel Structure, Coating, Partial, Type 4

600 Lb 160 Lb

160 Lb

704 Sin

SOLE PLATE PAID FOR AS "STRUCTURAL STEEL, WELDED REPR, FURN, FAB, AND ERECT"

10"

Proj. No.: 231735

Dwg. By: TLO Designer: TLO

Reviewer: TLO Manager: TLO

and Infrastruc Planning

Facilities

ORE (4) MICHIG/

Michiga

CAPITAL PROJ. NO.

CP 23034

RIDGE:

PR. MGR. A. LINEBAUGH ARCH. MECH. K. BEACH ELEC. S. GARDNER CIVIL D. WILBER INT. DES. CONST. REP.,

APPR. 05/22/2024 DATE NO SCALE SCALE REVISIONS

BIDS 05/22/2024

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S.E.S.C. NOTES

THE CONTRACTOR SHALL COMPLY WITH ALL CONTRACT DOCUMENTS, APPROVED SOIL EROSION AND SEDIMENTATION CONTROL (S.E.S.C.) PLANS, PERMIT CONDITIONS AND WITH PARTS 31 AND 91 OF PUBLIC ACT 451 OF 1994. THE OWNÈR SHALL OBTAIN A (S.E.S.C.) PERMIT FROM THE APPROPRIATE MUNICIPAL ENFORCING SOIL TYPE: URBANIZED SOILS AGENCY (M.E.A.) OR COUNTY ENFORCING AGENCY (C.E.A.). PERMIT FEES AND ROUTINE INSPECTIONS CHARGED BY THE M.E.A./ C.E.A. WILL BE PAID FOR BY THE OWNER.

PRIOR TO BEGINNING ANY EARTH CHANGE, THE CONTRACTOR SHALL RETAIN A M.D.E.Q. CERTIFIED STORM WATER OPERATOR (C.S.W.O.) TO PROVIDE THE REQUIRED S.E.S.C. REPORTS (WHICH INCLUDE THE WEEKLY AND STORM EVENT REPORTS AS WELL AS ALL FOLLOW UP REPORTS FOR BOTH VIOLATIONS AND STORM EVENT CORRECTIONS) ON THE STANDARD M.D.N.R.E. FORM. THE CONTRACTOR SHALL PROVIDE THE REPORTS TO THE OWNER ON A WEEKLY BASIS, AND RETAIN THOSE REPORTS FOR THREE YEARS.

PRIOR TO BEGINNING ANY EARTH CHANGE, THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL S.E.S.C. MEASURES AS SHOWN ON THE CONTRACT DOCUMENTS AND AS DIRECTED BY THE OWNER, C.S.W.O., M.E.A./ C.E.A. OR M.D.E.Q. AT ANYTIME DURING THE LIFE OF THE CONTRACT OR UNTIL M.S.U. OFFICIALLY TAKES OVER RESPONSIBILITY FOR THE SITE. IMMEDIATELY PRIOR TO M.S.U. TAKING RESPONSIBILITY FOR THE SITE, THE CONTRACTOR WILL BE REQUIRED TO CLEAN ALL CATCH BASINS AFFECTED BY THE CONSTRUCTION, BOTH WITHIN THE CONTRACT LIMITS AND ALL SURROUNDING ROADS AND LAWN AREAS WHERE SOIL MAY HAVE SPREAD AS A RESULT OF CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL CONDUCT ALL EXCAVATION, FILLING, GRADING, AND CLEAN UP OPERATIONS IN A MANNER SUCH THAT SEDIMENT, GENERATED BY WIND OR WATER IS NOT DISCHARGED INTO ANY STORM SEWER, DRAINAGE DITCH, RIVER, LAKE, AIR, OR UNDERGROUND UTILITY SYSTEM. STAGE WORK TO MINIMIZE THE AREA OF EXPOSED SOIL, THEREBY REDUCING THE OPPORTUNITY FOR SOIL EROSION.

WATER FROM TRENCHES AND OTHER EXCAVATION SHALL BE PUMPED INTO A FILTRATION BAG TO REMOVE SEDIMENTS FROM THE WATER.

IF SEDIMENT EXTENDS BEYOND THE PROJECT LIMITS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEAN UP

AND RESTORATION OF ALL SURFACES AND UTILITY SYSTEMS TO THE CONDITION THAT EXISTED PRIOR TO THE CONTRACT AWARD.

ALL S.E.S.C. MEASURES SHALL BE MAINTAINED DAILY.

SHOULD VIOLATIONS BE IDENTIFIED BY THE OWNER, C.S.W.O., M.E.A./ C.E.A. OR M.D.E.Q., THEY SHALL BE CORRECTED WITHIN 24 HOURS OF NOTIFICATION. THE CORRECTION(S) SHALL BE APPROVED BY THE OWNER, C.S.W.O., M.E.A./ C.E.A. OR M.D.E.Q.. ALL SUBSEQUENT INSPECTIONS PERFORMED BY THE OWNER, C.S.W.O., M.E.A./ C.E.A. OR M.D.E.Q. AS A RESULT OF THE VIOLATION (AND ANY OTHER ASSOCIATED COSTS) WILL BE PAID FOR BY THE CONTRACTOR. IF IDENTIFIED VIOLATIONS ARE NOT CORRECTED WITHIN 24 HOURS OF WRITTEN NOTICE, THE OWNER WILL MAKE THE REQUIRED REPAIRS WITHOUT FURTHER NOTIFICATION, AT THE CONTRACTORS EXPENSE.

FINES ASSESSED AS A RESULT OF THE VIOLATION FOR NON-COMPLIANCE OF THE S.E.S.C. PROVISIONS WILL BE EXTENSION REQUEST FOR THAT PERIOD WILL NOT BE GRANTED. (FINES COULD BE ASSESSED UP TO AND INCLUDING \$25,000 PER DAY FOR EACH VIOLATION).

ALL SOILS ARE TO BE LEFT ON SITE. IF STOCKPILE IS LEFT OVER NIGHT OR RAIN EVENT ANTICIPATED, THEN SURROUND PILE WITH SILT FENCE.

SUBJECT SITE IS WITHIN 500 FEET OF THE RED CEDAR RIVER.

STORM WATER FROM SUBJECT SITE SHALL NOT DISTURB ADJACENT PROPERTIES.

APPROXIMATE QUANTITIES OF EXCAVATION & FILL (INCLUDING TOPSOIL): TOTAL EXCAVATION 100 CYD

NET CHANGE NOTE: CONTRACTOR SHALL DETERMINE THEIR OWN QUANTITY OF EXCAVATED MATERIAL & SEQUENCE OF EVENTS. ABOVE QUANTITIES ARE FOR PERMIT APPLICATION PURPOSES ONLY.

CONSTRUCTION ACCESS ROAD WILL BE GRAVEL.

ACTUAL SITE GRADING WORK - 6,000 S.F.

S.E.S.C. NOTES (CONT.)

COST OF PERMIT- TOTAL ACRES OF PROJECT = 6,000 S.F. THERE ARE NO REGULATED WETLANDS ON OR IMMEDIATELY ADJACENT TO THE SITE.

STRIP ALL TOPSOIL WITHIN THE LIMITS OF WORK AS INDICATED ON DEMOLITION PLANS (EXCLUDE AREAS CONFINED BY TREE PROTECTION FENCE) STOCKPILE ALL TOPSOIL AT A SITE DESIGNATED BY OWNER.

DIRT OR MUD TRACKED ONTO ADJACENT PAVED OR CONCRETE AREAS SHALL BE PROMPTLY REMOVED AND THE SURFACE CLEANED. OPEN BROOM SWEEPERS ARE NOT ALLOWED.

CONSTRUCTION SEQUENCE AUG SEPT. 2024 2024 OCT. 2024 TEMPORARY CONTROL MEASURES BRIDGE REPAIRS RESTORATION SEEDING AND EROSION BLANKETS BY OWNER

* CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION AND MAINTENANCE OF TEMPORARY CONTROL MEASURES IN ALL PROJECT SEGMENTS UNTIL PERMANANT RESTORATION IS COMPLETE AND OWNER TAKES OVER RESPONSIBILITY.

SESC NOTES