

TUS-W. 3RD STREET BRIDGE

MODEL: Sheet_SurvFl PAPERSIZE: 34x22 (in.) DATE: 2/12/2026 TIME: 2:31:20 PM USER: nthompson
R:\0801T80-11032-TUS-W 3RD ST BRIDGE-CITY OF UHRICHSVILLE\1162111400-Engineering\Roadway\Sheets\116211_GG002.dgn

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GENERAL SUMMARY

DESIGN AGENCY

THE
THRASHER
GROUP

DESIGNER

JMC

REVIEWER

CJD 07-01

PROJECT ID

116211

SHEET TOTAL

P.06	3
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STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:		
AS-1-15	REVISED	01-20-23
AS-2-15	REVISED	07-21-23
BD-1-11	REVISED	07-20-18
BR-2-15	REVISED	07-19-24
PSBD-2-07	REVISED	07-20-18
HL-50.21	REVISED	07-15-22

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE 9TH EDITION OF THE “LRFD BRIDGE DESIGN SPECIFICATIONS” ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020 AND THE ODOT BRIDGE DESIGN MANUAL, 2020 EDITION, REVISED JULY 2023.

DESIGN LOADING:

VEHICULAR LIVE LOAD: HL-93
NO FUTURE WEARING SURFACE

DESIGN DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
CONCRETE REINFORCEMENT:
EPOXY COATED STEEL REINFORCEMENT - MINIMUM YIELD STRENGTH 60-KSI

CONCRETE FOR PRESTRESSED BEAMS:
COMPRESSIVE STRENGTH (FINAL) = 8.5 KSI
COMPRESSIVE STRENGTH (RELEASE) = 7.0 KSI

PRESTRESSING STRAND:
AREA = 0.217 SQ IN
ULTIMATE STRENGTH = 270 KSI
INITIAL STRESS = 202.5 KSI (LOW RELAXATION STRANDS)

OPERATIONAL IMPORTANCE: A LOAD MODIFIER OF 1.00 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5. AND THE ODOT BRIDGE DESIGN MANUAL.

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1 INCH THICK.

EXISTING STRUCTURE VERIFICATION:

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

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

PLANS OF THE EXISTING STRUCTURE ARE ON FILE AT ODOT DISTRICT 11.

IT IS THE CONTRACTORS RESPONSIBILITY TO BECOME FAMILIAR WITH ALL PERTINENT EXISTING DRAWINGS AND DETAILS RELEVANT TO THIS PROJECT.

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

DESCRIPTION:

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION (BACKWALLS, PARTIAL BEAM SEAT, DECK JOINTS, BOX BEAMS, DECK, SIDEWALK, BRIDGE BARRIER, APPROACH SLABS, ETC.) AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THIS NOTE. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAM TYPE OF EQUIPMENT IS PROHIBITED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT DAMAGE PORTIONS OF THE STRUCTURE THAT ARE TO REMAIN. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH CONCRETE REINFORCEMENT THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO CMS 501.05.

THE EXISTING WATERLINE UTILITY SHALL REMAIN IN FULL OPERATIONAL SERVICE DURING CONSTRUCTION. THE CONTRACTOR SHALL REFER TO SHEET 19 / 20 FOR TEMPORARY SUPPORT DETAILS. THE CONTRACTOR SHALL SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT AT THE CONTRACT PRICE FOR ITEM 202, PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

MEASUREMENT AND 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 519, PATCHING CONCRETE STRUCTURE, AS PER PLAN

PRIOR TO THE SURFACE CLEANING SPECIFIED IN CMS 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 512, SEALING OF CONCRETE SURFACES (EPOXY-URETHANE):

ALL EXPOSED CONCRETE SURFACES OF THE ABUTMENT, INCLUDING WINGWALLS AND LIMITS OF THE CONCRETE SUPERSTRUCTURE AS PER PLAN DETAILS SHALL BE SEALED. EPOXY-URETHANE SHALL BE LIGHT NEUTRAL COLOR MEETING FEDERAL COLOR STANDARD NO. 17778.

STREAM MONITORING EQUIPMENT

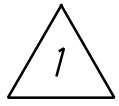
A USGS RIVER GAGE IS MOUNTED TO THE EXISTING BRIDGE. IT IS ANTICIPATED THAT THE STREAM MONITORING EQUIPMENT WILL NEED TO BE TEMPORARILY REMOVED FOR THE DURATION OF THIS PROJECT. HOWEVER, THE CONTRACTOR SHOULD NOT REMOVE THIS GAGE, WIRE-WEIGHT MOUNT, OR TRAFFIC CONTROL BOX. THE CONTRACTOR SHALL CONTACT THE US GEOLOGICAL SURVEY ONE MONTH PRIOR TO COMMENCEMENT OF WORK AT THE FOLLOWING CONTACT:

THOMAS E. HARRIS, CHIEF, HYDROLOGIC NETWORK SECTION, US GEOLOGICAL SURVEY
OHIO-KENTUCKY-INDIANA WATER SCIENCE CENTER
6460 BUSCH BLVD, SUITE 100
COLUMBUS, OHIO 43229-1737
THARRIS@USGS.GOV
(614) 430-7727

ABBREVIATIONS

ABUT.	ABUTMENT
APPROX.	APPROXIMATE
BOT.	BOTTOM
BRG.	BEARING
C/C	CENTER TO CENTER
CL	CENTERLINE
CLR.	CLEAR
CONC.	CONCRETE
CONST.	CONSTRUCTION
CY	CUBIC YARD
DIA.	DIAMETER
DWG.	DRAWING
EL.	ELEVATION
EQ.	EQUAL
EST.	ESTIMATED
EX.	EXISTING
EXP.	EXPANSION
F.A.	FORWARD ABUTMENT
F.F.	FAR FACE
FT.	FOOT / FEET
FWD.	FORWARD
JT.	JOINT
LS.	LUMP SUM
LT.	LEFT
MAX.	MAXIMUM
MIN.	MINIMUM
N.F.	NEAR FACE
P.C.B.	PORTABLE CONCRETE BARRIER
P.E.J.F.	PREFORMED EXPANSION JOINT FILLER
PROP.	PROPOSED
R.A.	REAR ABUTMENT
RT.	RIGHT
SF.	SQUARE FEET
SHLDR.	SHOULDER
SHT.	SHEET
SPA.	SPACES / SPACED
SQ.	SQUARE
STA.	STATION
SY.	SQUARE YARD
TYP.	TYPICAL
WF.	WIDE FLANGE
W/	WITH

BEARING PAD SHIMS



PLACE 1/8” THICK PREFORMED BEARING PAD SHIMS, MINIMUM OF 28, UNDER THE ELASTOMERIC BEARING PADS WHERE REQUIRED FOR PROPER BEARING. MATERIAL PER C&MS 711.21 AT THE SAME DIMENSIONS AS THE BEARING. FURNISH TWO SHIMS PER BEAM. THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - 1/8” PREFORMED BEARING PADS. TO BE USED AS NEEDED TO ENSURE FULL BEARING-TO-SEAT CONTACT, ANY UNUSED SHIMS WILL BECOME THE PROPERTY OF THE STATE.

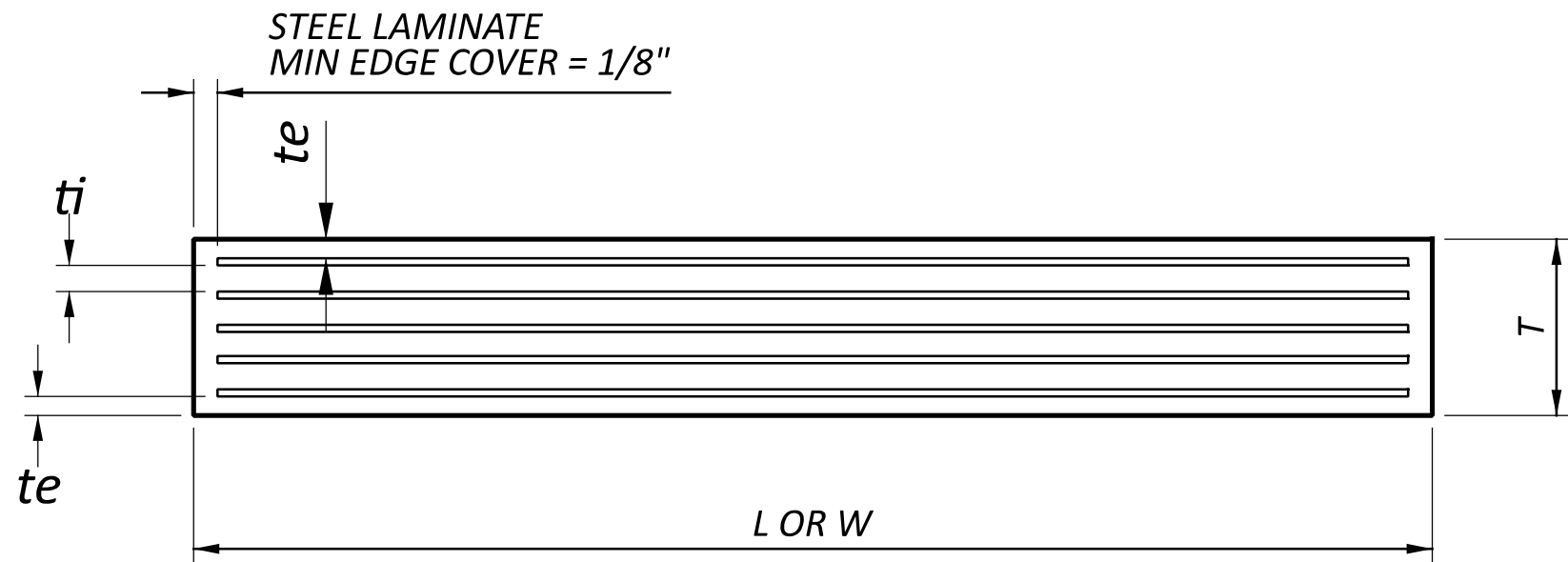
SFN 7961324	
DESIGN AGENCY	
THE THRASHER GROUP	
DESIGNER RLC	CHECKER JWA
REVIEWER MAT 07-01-24	
PROJECT ID 116211	
SUBSET 2	TOTAL 20
SHEET P.18	TOTAL 36

ESTIMATE OF QUANTITIES								
ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	SUPERSTRUCTURE	GENERAL	SHEET REFERENCE
202	11203	LUMP		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN			LUMP	2,4,6 OF 20
202	22900	172	SY	APPROACH SLAB REMOVED			172	
202	23500	298	SY	WEARING COURSE REMOVED	172	126		
503	11100	LUMP		COFFERDAMS AND EXCAVATION BRACING			LUMP	
503	21100	30	CY	UNCLASSIFIED EXCAVATION	30			
509	10000	25832	LB	EPOXY COATED STEEL REINFORCEMENT	7006	18826		
510	10000	212	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	212			
511	31611	89	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN		89		15 OF 20
511	45710	48	CY	CLASS QC1 CONCRETE, ABUTMENT	48			
511	51510	41	CY	CLASS QC2 CONCRETE, SIDEWALK		41		
512	10050	143	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)		143		
512	10100	968	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	609	359		
513	95030	12	EACH	STRUCTURAL STEEL, MISC.: UTILITY SUPPORT		12		19 OF 20
513	95020	LUMP		STRUCTURAL STEEL, MISC.: TEMPORARY WATERLINE SUPPORT			LUMP	
515	12101	14	EACH	PRESTRESSED CONCRETE COMPOSITE BOX BEAM BRIDGE MEMBERS, LEVEL 1, CB42-36, AS PER PLAN (110'-7 1/8" LONG)		14		12,13, OF 20
516	13900	57	SF	2" PREFORMED EXPANSION JOINT FILLER	57			
516	14020	88	FT	SEMI-INTEGRAL ABUTMENT EXPANSION JOINT SEAL	88			
516	41100	28	EACH	1/8" PREFORMED BEARING PAD, TYPE CDP	28			
516	43201	56	EACH	ELASTOMERIC BEARING WITH INTERNAL LAMINATES ONLY (NEOPRENE), AS PER PLAN, (10"W X 6"L X 2.523"H)	56			17 OF 20
517	75120	228	FT	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING)		228		
518	21200	28	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	28			
519	11101	54	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	54			2 OF 20
526	25001	172	SY	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN			172	18 OF 20
526	90010	68	FT	TYPE A INSTALLATION			68	
530	01300	88	FT	SPECIAL STRUCTURES: 6"X1.5" CONTINUOUS ELASTOMERIC STRIP	88			
625	33000	2	EACH	STRUCTURE GROUNDING SYSTEM				
846	00110	29	CF	POLYMER MODIFIED ASPHALT EXPANSION JOINT SYSTEM	29			

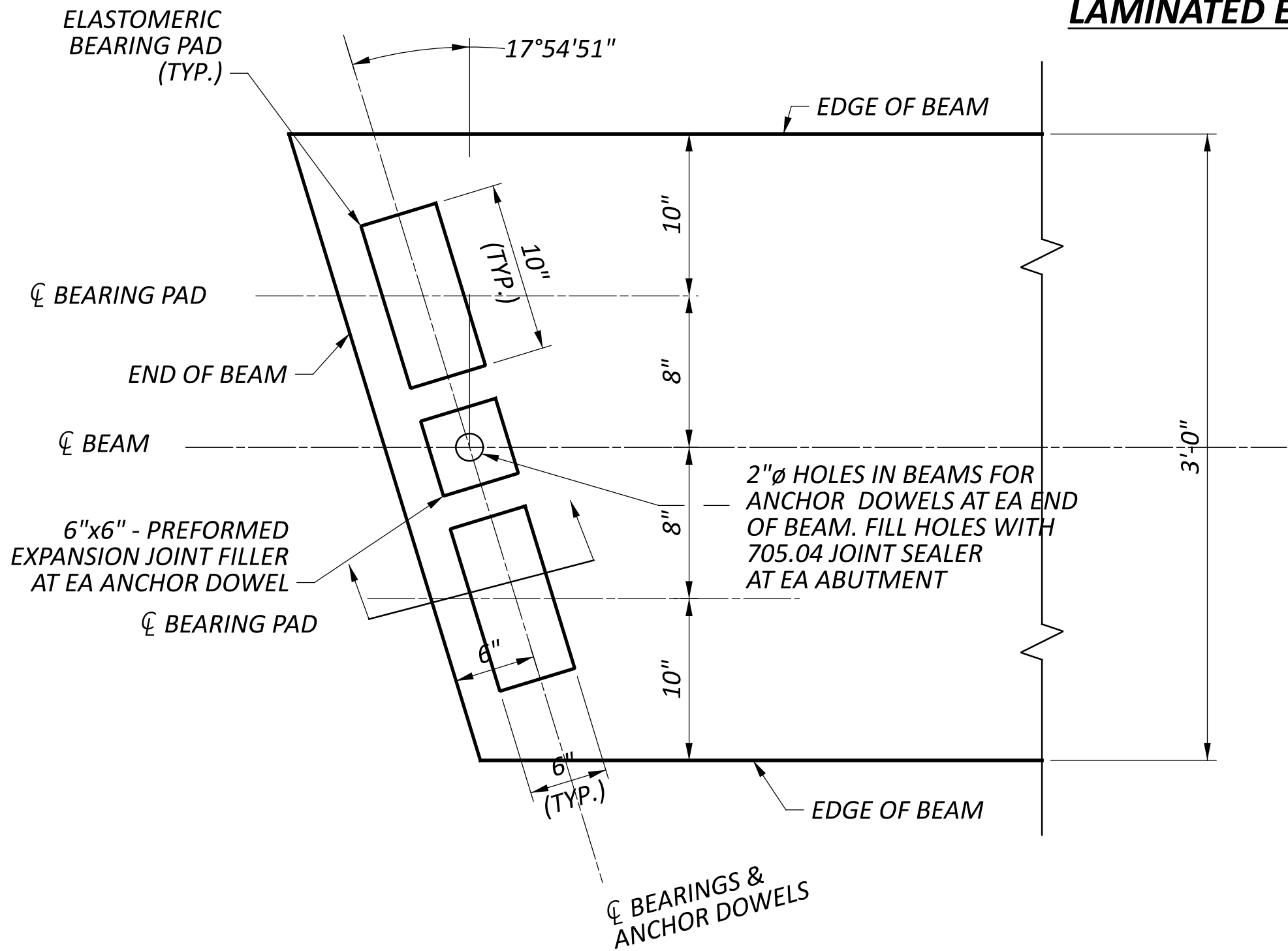
ELASTOMERIC BEARING PAD DATA										
LOCATION	BRG. TYPE	L	W	T	N	ti	te	DESIGN LOAD* (KIPS)		
								DL	LL	TOTAL
ABUTMENTS	EXPANSION	6"	10"	2.523"	5	0.375"	0.25"	36	31	67

ti = THICKNESS OF INTERNAL LAYER
te = THICKNESS OF EXTERNAL LAYER
T = TOTAL THICKNESS OF ELASTOMERIC BEARING
N = NO. OF STEEL LAMINATES
INTERNAL STEEL LAMINATE THICKNESS = 0.1047 (12 GAGE)

* - LOADS GIVEN IN THE BEARING TABLE ARE SERVICE LOADS AND WITH NO IMPACT

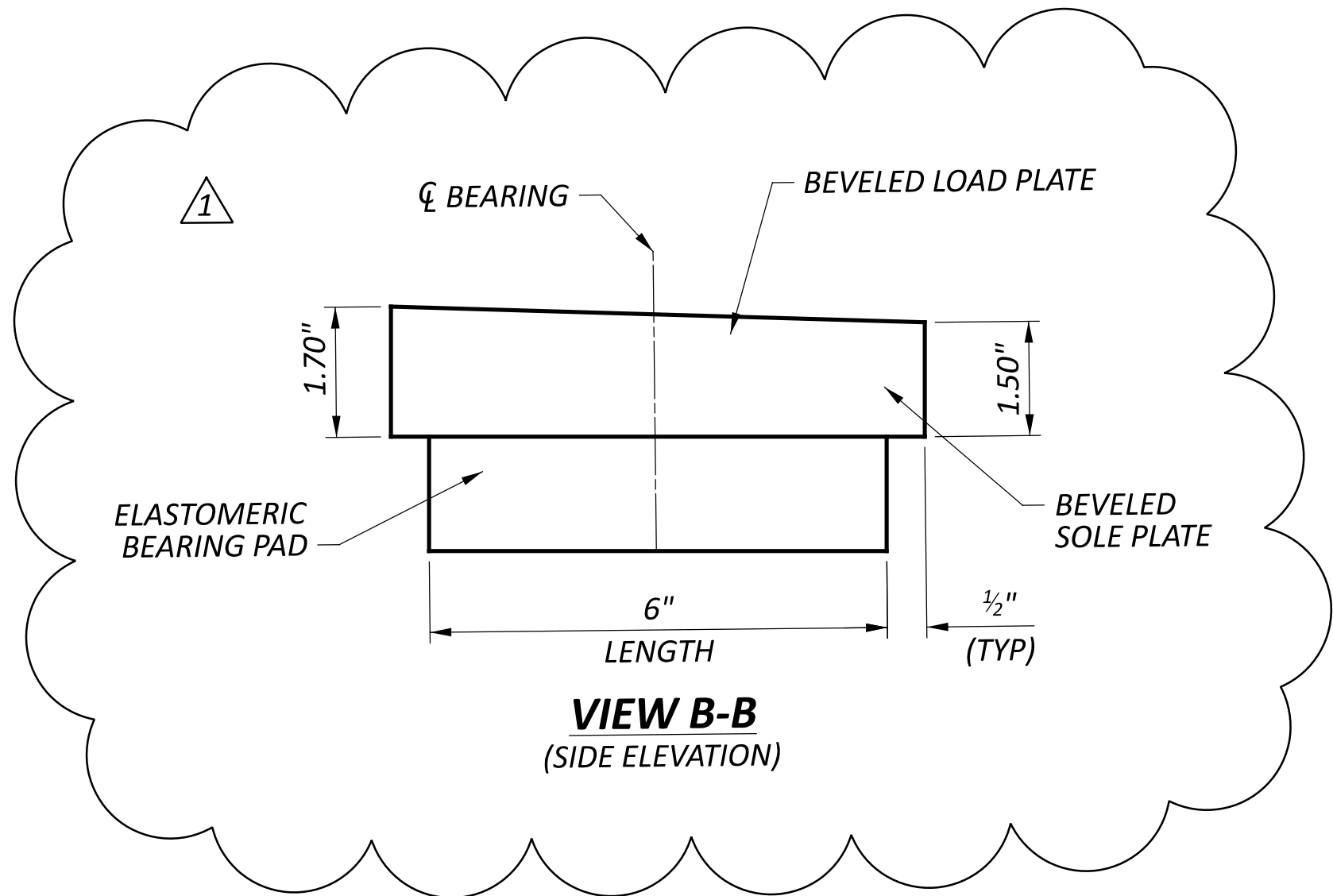


LAMINATED ELASTOMERIC BEARING



BEARING PAD LAYOUT - DETAIL A

(TYP. FOR BOTH ABUTMENTS)



NOTE:

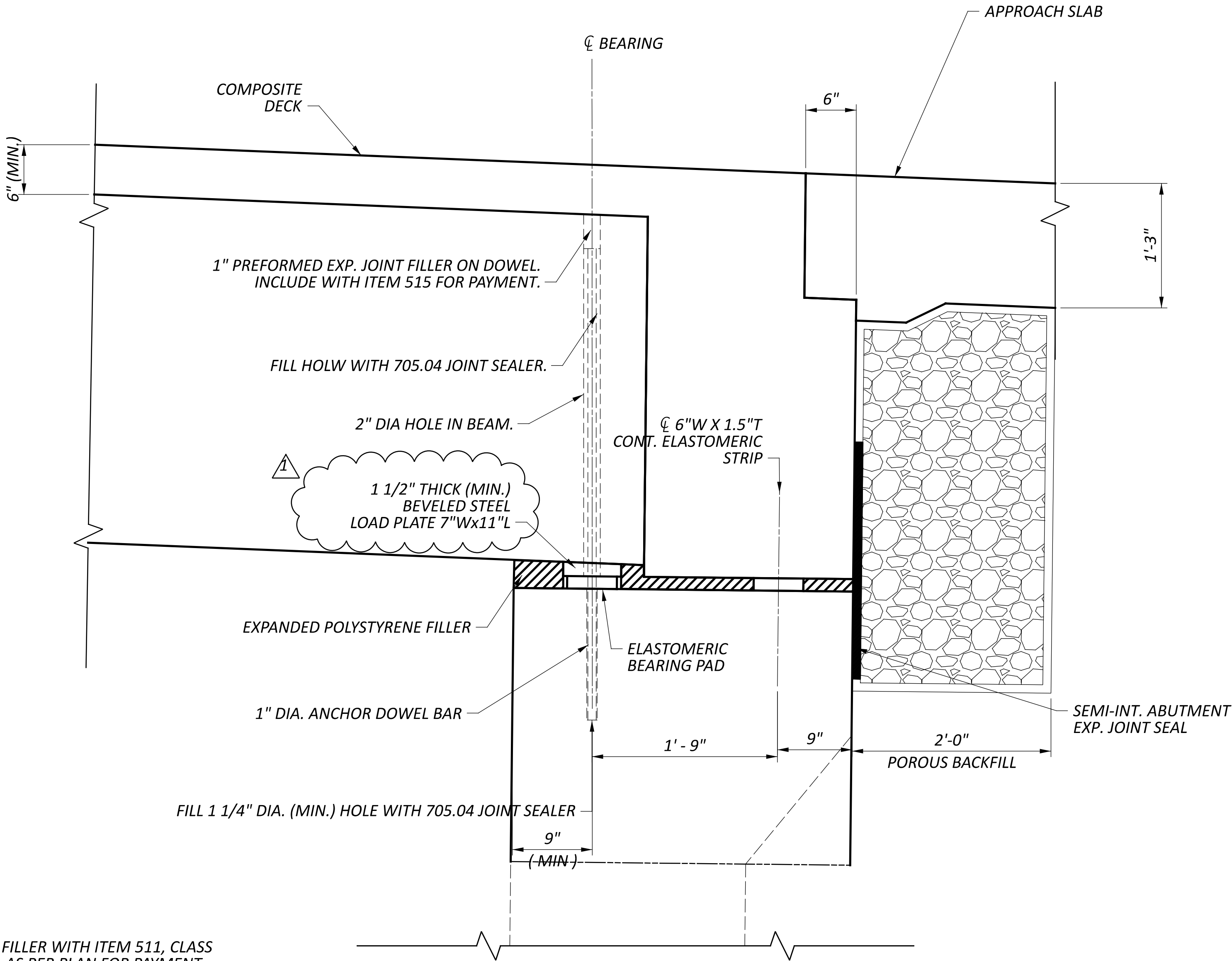
INCLUDE EXPANDED POLYSTYRENE FILLER WITH ITEM 511, CLASS QC2 CONCRETE SUPERSTRUCTURE, AS PER PLAN FOR PAYMENT.

ELASTOMERIC BEARING

THE ELASTOMER SHALL HAVE A HARDNESS OF 60 DUROMETER. THE BEARINGS WERE DESIGNED IN ACCORDANCE WITH SECTION 14.7.5 (METHOD B) OF THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS. PERFORM THE LONG-TERM COMPRESSION PROOF LOAD TEST IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICAIONS FOR HIGHWAY BRIDGES, DIVISION II, SECTION 18.7.2.6 AND 18.7.4.5.

NOTES:

- 1 - SEE STD. DRAWING BD-1-11 FOR ADDITIONAL BEARING DETAILS
- 2 - FOR BEARING PAD LOCATIONS, SEE SHEET 12/20
- 3- ALL BEARINGS SHALL BE MARKED PRIOR TO SHIPPING. THE MARKS SHALL INCLUDE THE BEARING LOCATION ON THE BRIDGE, AND A DIRECTION ARROW THAT POINTS UP-STATION. ALL MARKS SHALL BE PERMANENT AND BE VISIBLE AFTER THE BEARING IS INSTALLED



BEARING CROSS SECTION

(TYP. FOR BOTH ABUTMENTS)