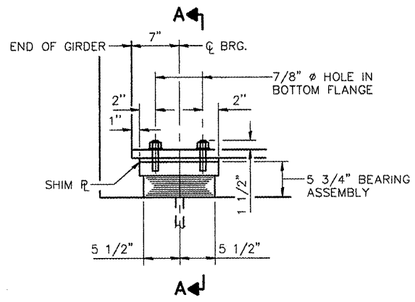
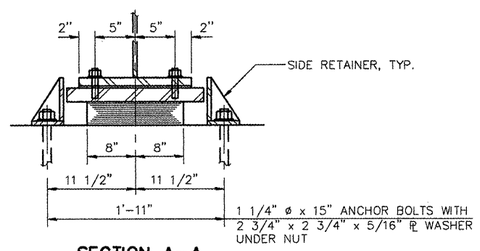
CONTRACT NO. 89392

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
6713	05-00148-00-PV	TAZEWELL	74	52
STA. 154+17.98		STRUCTURE NO. 090-0027		
FED. ROAD DST. NO. 4	ILLINOIS	FED. AID PROJECT		



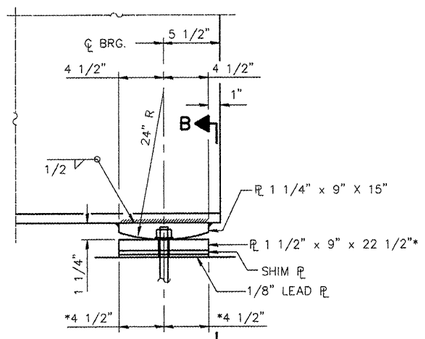
ELEVATION AT WEST ABUT.



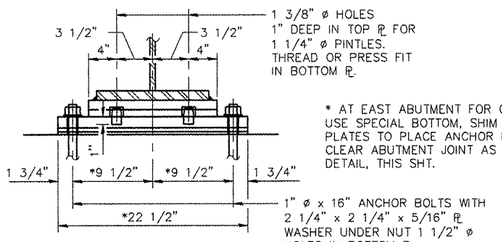
SECTION A-A

TYPE I ELASTOMERIC EXP. BRG.

NOTES:
ANCHOR BOLTS AT FIXED BEARINGS MAY BE BUILT INTO THE MASONRY. SEE ANCHOR BOLT DETAILS FOR BEARINGS SHEET FOR ANCHOR BOLT INSTALLATION.



ELEVATION AT EAST ABUT.

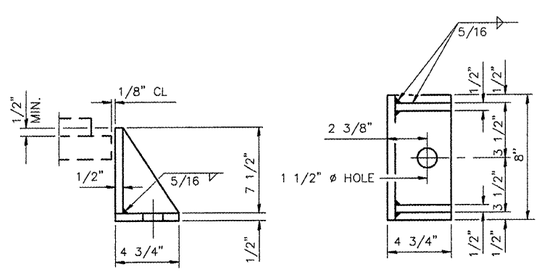


SECTION B-B

* AT EAST ABUTMENT FOR GIRDER G7, USE SPECIAL BOTTOM, SHIM AND LEAD PLATES TO PLACE ANCHOR BOLTS TO CLEAR ABUTMENT JOINT AS SHOWN IN DETAIL, THIS SHT.

FIXED BEARING

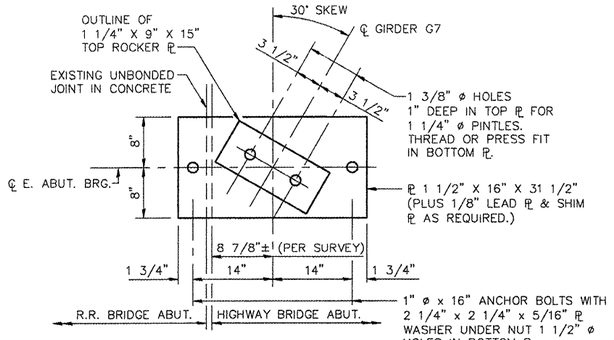
NEW GIRDERS G6 THRU G10



SIDE RETAINER

(10 REQUIRED)

EQUIVALENT ROLLED ANGLE WITH STIFFENERS WILL BE ALLOWED IN LIEU OF WELDED PLATES. WEIGHT INCLUDED WITH STRUCTURAL STEEL.



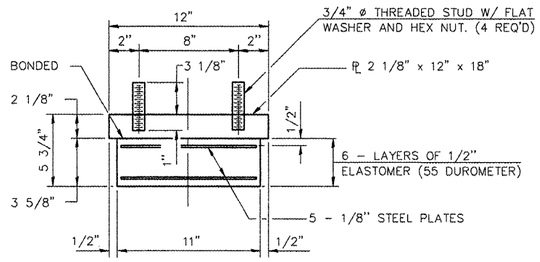
PLAN VIEW DETAIL

GIRDER G7 BEARING AT EAST ABUTMENT.

INTERIOR GIRDER REACTION TABLE

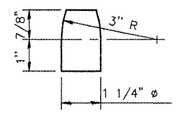
NEW GIRDERS G6 THRU G10

		ABUTMENT
R D	(K)	64.3
R L	(K)	40.7
IMP.	(K)	8.9
R (TOTAL)	(K)	113.9



BEARING ASSEMBLY

NOTE:
SHIM PLATES SHALL NOT BE PLACED UNDER BEARING ASSEMBLY.



PINTLE

STEEL FOR BEARINGS AND SIDE RETAINERS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M270, GRADE 50.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
ELASTOMERIC BEARING ASSEMBLY TYPE I	EACH	5

INTERIOR GIRDER MOMENT TABLE

NEW GIRDERS G6 THRU G10

		0.2 & 0.8 SPAN (@ E JOINTS)	0.5 SPAN (@ ℄)
Is	(in.4)	12,576	16,097
Ic (n) (MINIMUM)	(in.4)	28,387	40,555
Ic (3n) (MINIMUM)	(in.4)	21,061	28,460
Ss	(in.3)	722	1,108
Sc (n)	(in.3)	926	1,429
Sc (3n)	(in.3)	857	1,320
Z	(in.3)	———	———
D (AVERAGE)	(K/ft.)	0.891	0.891
M D	('k)	802	1,212
s D	(K/ft.)	0.35	0.35
Ms D	('k)	313	470
M L	('k)	682	985
M (IMP)	('k)	149	216
5/3[M L+M(IMP)]	('k)	1,385	2,002
Ma	('k)	3,250	4,789
Mu	('k)	———	———
fs D (NON-COMP)	(k.s.i.)	13.3	13.1
fs D (COMP)	(k.s.i.)	4.4	4.3
fs 5/3 (L + IMP)	(k.s.i.)	17.9	16.8
fs (OVERLOAD)	(k.s.i.)	35.6	34.2
fs (TOTAL)	(k.s.i.)	46.3	44.5
VR	(K)	49.6	———

Is AND Ss ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE STEEL SECTION USED IN COMPUTING fs (TOTAL & OVERLOAD).

Ic (n) AND Sc (n) ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING STRESSES DUE TO LIVE LOAD.

Ic (3n) AND Sc (3n) ARE THE MOMENT OF INERTIA AND SECTION MODULUS OF THE COMPOSITE SECTION USED IN COMPUTING STRESSES DUE TO SUPERIMPOSED DEAD LOADS. (SEE AASHTO 10.38)

VR IS THE MAXIMUM LIVE LOAD + IMPACT SHEAR RANGE IN SPAN.

Z IS THE PLASTIC SECTION MODULUS USED TO DETERMINE THE FULLY PLASTIC MOMENTS IN THE NON-COMPOSITE AREAS.

Ma (APPLIED MOMENT)=1.3[M D + Ms D + 5/3(M L + M(IMP))].

THE PLASTIC MOMENT CAPACITY (Mu) IS COMPUTED ACCORDING TO AASHTO 10.48.1 AND 10.50.1.1.

fs (OVERLOAD) IS THE SUM OF THE STRESSES DUE TO M D + MS D + 5/3(M L + M(IMP)).

fs (TOTAL) (NON-COMPACT SECTION) IS THE SUM OF THE STRESSES DUE TO 1.3[M D + MS D + 5/3(M L + M(IMP))].

THE STRUCTURAL STEEL FOR THE WELDED PLATE GIRDER FLANGES, WEBS, AND ATTACHED STIFFENERS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M270, GRADE 50.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

CAMP ST. OVER FARM CREEK DIVERSION CHANNEL BEARING DETAILS

SCALE: N.T.S. DRAWN BY: MGM

DATE: 12/22/2008 CHECKED BY: PJL

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