The Springfield Conservancy District
BID PACKAGE
Pumphouse Road Bridge Repair Project
(Buck Creek Trail over Beaver Creek)
December 16, 2025

PROJECT SUMMARY

The Pumphouse Road Bridge Repair Project ("Project") is designed to restore limited functionality to the now-closed early 20th century steel truss Pumphouse Road bridge ("Bridge") spanning Beaver Creek at the southern entrance to Springfield's Old Reid Park. The Bridge formerly carried the Buck Creek Trail across Beaver Creek, and was utilized by bicyclists, pedestrians, and maintenance equipment (mowers). The Buck Creek Trail is a multi-use trail, part of the Miami Valley recreational trail network connecting several communities across the greater Dayton/Cincinnati metro areas. The Project is being funded by The Springfield Conservancy District (SCD), but the Bridge is owned by the City of Springfield ("City"). The Bridge was closed by the City in early 2025 after a safety inspection by Carpenter Marty Transportation, Inc. SCD has since worked with U.S. Bridge to identify repairs needed in order to reopen the Bridge to trail users and maintenance equipment. Documentation for the Project consists of the Pumphouse Road Bridge Repairs Final Report (67 pages) appended hereto as attachment 1, and the Pumphouse Road Bridge Conceptual Plan appended hereto as attachment 2.

SCOPE OF WORK

The Project contractor ("Contractor") shall perform the following work in accordance with the Project plans and specifications (attachments 1 and 2) and the terms and conditions listed herein: remove the existing (asphalt and wood) bridge deck; provide and install new steel stringers; provide and install a new wood bridge deck and new wood railings with timber posts; provide certification by an Ohio professional engineer that the post-Project load rating of the Bridge is at least ninety (90) p.s.f.; and post the new load limit on the Bridge. The Project contemplates reduction of the width of the Bridge deck from 14' to 10' in order to achieve the desired load rating. All work by the Contractor must be coordinated with SCD, the City, and the Clark County Park District (which maintains the Buck Creek trail for SCD). The City may inspect the work to verify adherence to the plans and specifications.

The Contractor shall: furnish all materials, supplies, tools, equipment, labor, and supervision necessary for the proper execution and completion of the Project work; secure any required permits prior to commencement of the work; guarantee its workmanship and materials furnished for a period of one year from the date of Project completion; and, upon completion of the work and before acceptance and final payment, remove and properly dispose of all spoils, clean all areas occupied by the Contractor of all rubbish, debris, materials, and equipment, and repair any damage to the Bridge, the approaches, or the surrounding area incidental to the work.

No in-stream work is contemplated, and none shall be undertaken without first securing appropriate permits. No equipment or temporary fill may be placed below the ordinary high-

water mark of Beaver Creek. The Contractor shall take all appropriate measures to ensure that debris from the Project does not enter the waterway. If Project debris enters Beaver Creek during construction, the Contractor shall immediately remove same, utilizing equipment staged above the ordinary high-water mark.

BID INFORMATION

Bids for the Project will be received by SCD until Wednesday, January 21, 2026 at 10:00 a.m. EST. Bids must be submitted via email (springfieldconservancydistrict@gmail.com) on the bid form appended hereto as Attachment 3. Bidders should confirm SCD's receipt of their bid. Bids must be accompanied by a Bid Guaranty meeting the requirements of Section 153.54 of the Ohio Revised Code (a bond in the full amount of the bid issued by a Surety Company or Corporation licensed in the State of Ohio, or a certified check or cashier's check drawn payable to The Springfield Conservancy District for ten percent of the bid amount). Bids will be opened by SCD on Wednesday, January 21, 2026, at 10:05 a.m. EST. Bidders may view the opening of bids via Microsoft Teams, but must e-mail SCD to request the Teams link. SCD intends to award a contract to the lowest responsive and responsible bidder. SCD reserves the right to reject any or all bids, and to waive minor/inconsequential defects in any bid submitted if in its best interest. This bid package, including plans and specifications, is available as a PDF at https://ntprd.org/bids-current-project-proposals/.

PRE-BID QUESTIONS

To assist potential bidders, SCD will attempt to answer pre-bid questions received via email (springfieldconservancydistrict@gmail.com**)** prior to January 9, 2026. Answers to timely-received questions will be posted on the Clark County Park District website on or before January 12, 2026.

CONTRACT

It is anticipated that SCD will accept a bid and award a contract ("Contract") to the lowest responsive and responsible bidder (as determined by SCD), and provide notice of such acceptance and a copy of the proposed contract to such bidder, prior to February 15, 2026.

Per Section 153.54 of the Ohio Revised Code, the successful bidder must secure a performance/payment bond issued by a surety company doing business in the State of Ohio in an amount equal to one hundred percent (100%) of the Contract price, guaranteeing the Contractor's prompt payment for all labor and materials furnished for the Project, and holding SCD, the City, and their respective officers, directors, employees and agents harmless from claims and damages of any kind caused by the operations of the Contractor or its subcontractors.

The successful bidder will be expected to execute the Contract, and provide the performance/payment bonds, within ten (10) calendar days from the date the notice of award and copy of contract is received by the bidder.

INSURANCE

Prior to the Contractor or any subcontractor conducting any activity at the Project site, the

Contractor shall have the following insurance coverages in place with insurance companies licensed to do business in the State of Ohio, and the Contractor shall maintain such coverages in full force and effect until all work has been completed and accepted. The Contractor shall require all subcontractors to have and maintain like coverages unless covered under Contractor's policies:

1. Ohio Worker's Compensation Insurance;
2. Commercial General Liability insurance under a policy or policies naming The Springfield Conservancy District as an additional insured and insuring against liability, including but not limited to Public Liability, Personal Injury and Property Damage, with coverage of at least $1,000,000 per occurrence and $6,000,000 in the aggregate, with the C (collapse) exclusion removed; and
3. Automobile Liability insurance, including bodily injury and property damage, with coverage of at least $500,000 combined single limit or the equivalent.

MOBILIZATION AND DEMOBILIZATION

Mobilization shall consist of preparatory work and operations necessary for the movement of personnel, tools, equipment, and materials to the worksite, and for the establishment of temporary facilities at the worksite prior to beginning work. Demobilization shall consist of the removal of personnel, tools, equipment, materials, and temporary facilities from the worksite. Mobilization and Demobilization will be paid for at the Contractor's lump sum bid price, which shall be full compensation for furnishing all labor, equipment, and materials required to complete the project. There is a line item for mobilization and demobilization on the attached bid form (attachment 3). Prior to mobilization, an anticipated work schedule will be discussed with The Springfield Conservancy District, the City of Springfield, and the Clark County Park District. Once the Project is under contract, a pre-construction telephone call will be arranged for participation by all interested parties.

PROJECT SCHEDULE

Assuming that a contract is awarded and executed prior to March 1, 2026, **all work must be completed on or before May 1, 2026,** unless interim progress is approved by The Springfield Conservancy District**.** The contractor will have uninterrupted work time to complete the Project.

TAXES

SCD is a political subdivision of the State of Ohio exempt from Federal, State and local sales and/or excise taxes. SCD will provide the Contractor with a State of Ohio Sales Tax Exemption Certificate upon request.

PAYMENT

Payment to the Contractor will be made by SCD within 30 days from the receipt of an invoice. All invoices should contain proper documentation supporting work completed on the Project.

Attachment 1

Pumphouse Road Bridge Repairs Final Report

Bridge Evaluation

Historic Pedestrian Truss Bridge

Pumphouse Road

City of Springfield

Clark Co, Ohio

Calculations By: DLM
US Bridge
201 Wheeling Ave.
Cambridge, Ohio 43725
(740) 432-6334

U.S. BRIDGE
BRIDGING AMERICA SINCE 1936

DATE: 6-26-25 CALC. BY DLM
JOB No: 250192 CHECKED BY: INDEX
SHEET No: TITLE:
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, OH

REPORT INDEX

U.S. BRIDGE
BRIDGING AMERICA SINCE 1936

DATE: 6-12-25 CALC. BY DLM
JOB No: 250192 CHECKED BY:
SHEET No: TITLE: BRIDGE INFO
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, C

BRIDGE INFORMATION

LENGTH: 104'-0 c/c BEARINGS
6 PANELS @ 17'-4"

WIDTH: 14'-0" CLEAR WIDTH
16'-1" DECK WIDTH

FLOOR: 3"x6" NAIL LAMINATED WOOD STRIP
2" ASPHALT SURFACING (AVERAGE THICKNESS)

STRINGERS: 7 STRINGERS
6 SPACES @ 2'-6" = 15'-0"

YEAR BUILT: 1905

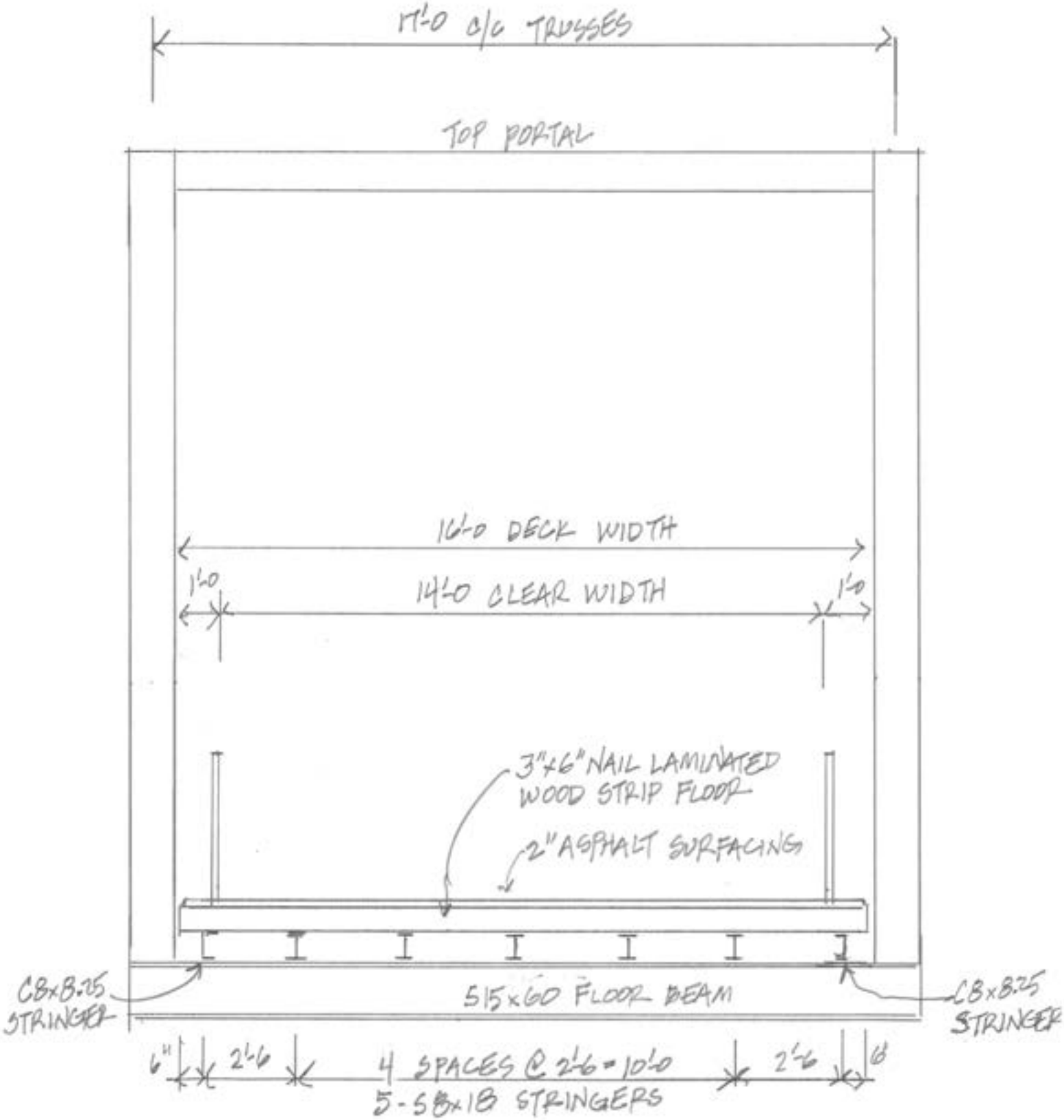
STEEL: F_y = 30 KSI F_u = 55 KSI

LIVE LOAD: 90 PSF PEDESTRIAN LIVE LOAD
H-10 VEHICLE LIVE LOAD

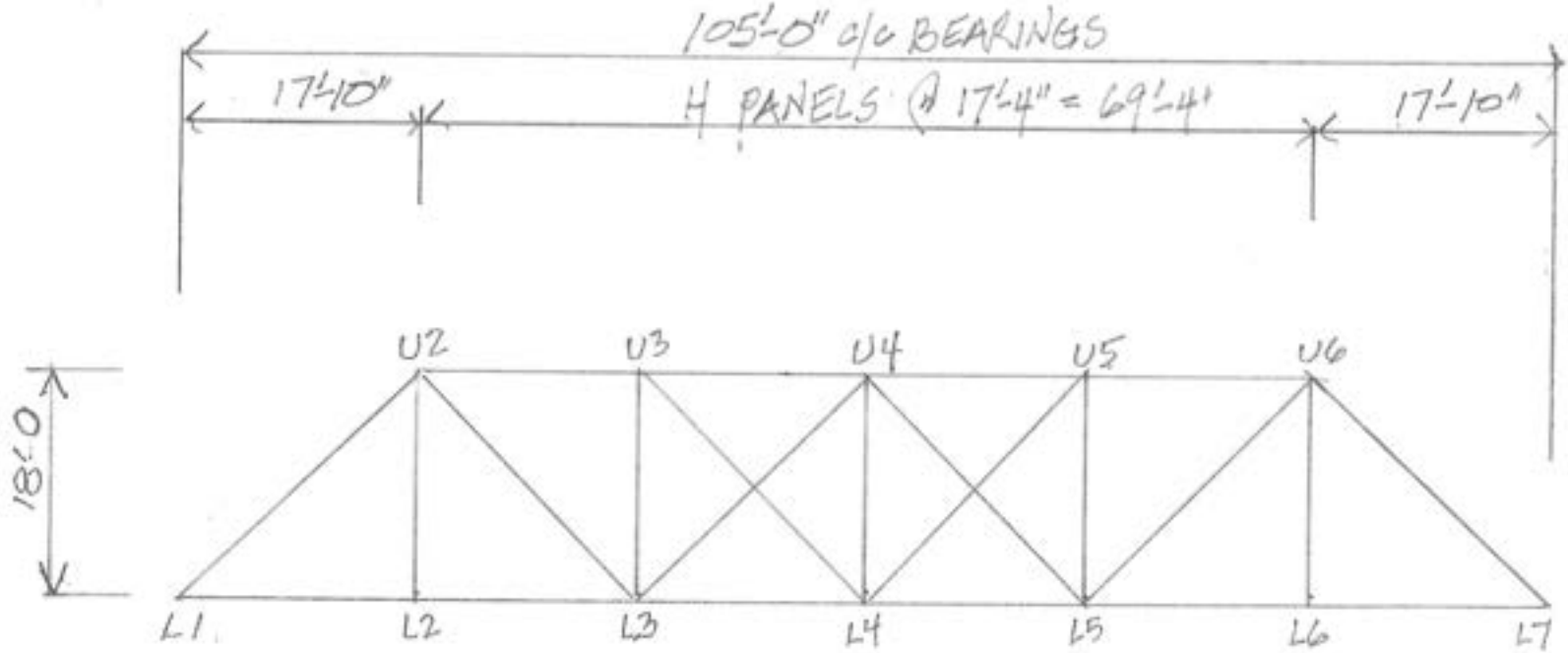
CALCULATIONS PERFORMED USING LRFD METHOD

DESIGN DEAD LOADS

WOOD FLOOR	25 PSF
ASPHALT	25 PSF



BRIDGE SECTION VIEW



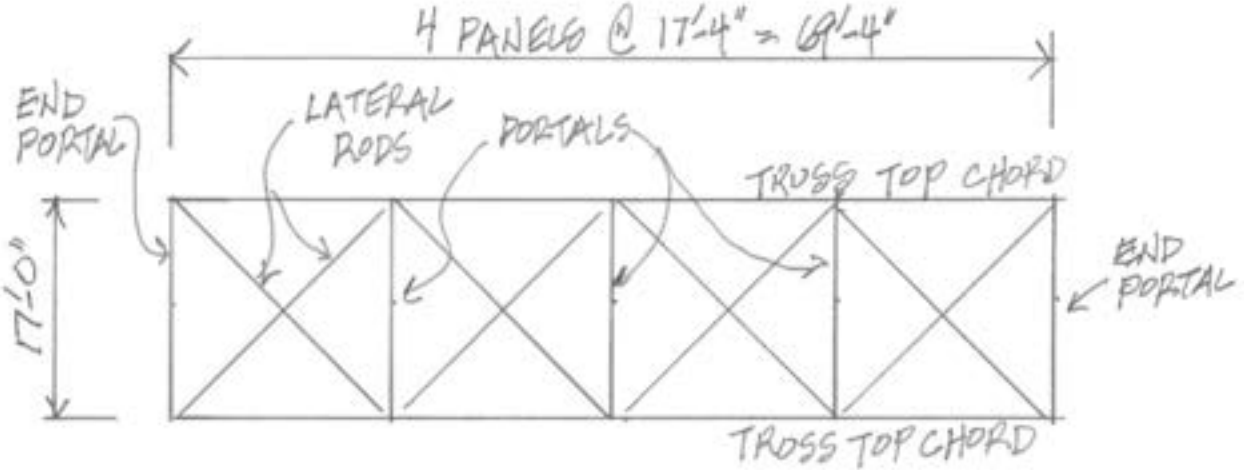
TRUSS ELEVATION

MEMBER	SHAPE
L1U2 U6L7	2-C8×11.25 + PL 5/16"×12"
U2U3 U5U6	2-C8×11.25 + PL 5/16"×12"
U3U4 U4U5	2-C8×11.25 + PL 5/16"×12"
L1L3 L5L7	2-3/4"×3" BARS
L3L4 L4L5	2-1"×4" BARS
U2L3 L5U6	2-3/4"×3" BARS
U3L4 L4U5	2-5/8"×2" BARS
L3U4 U4L5	ONE-1" ROD

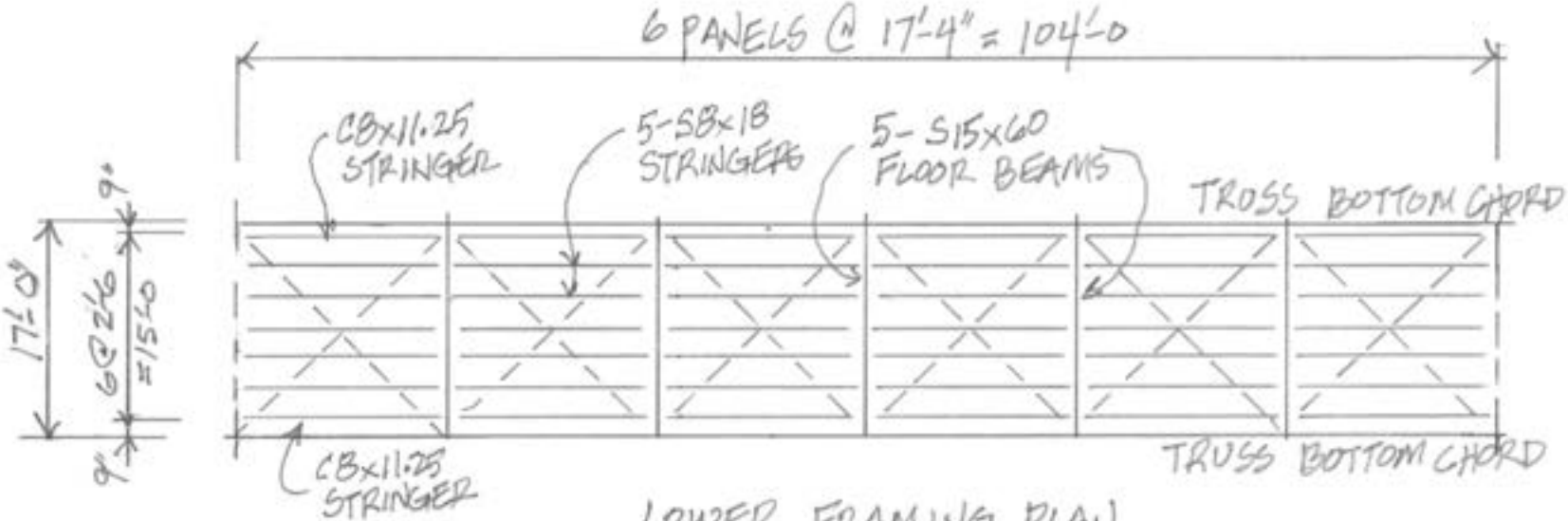
MEMBER	SHAPE
L2U2 L6U6	TWO-5/8"×2" BARS
L3U3 L5U5	TWO-C6×8.2
L4U4	TWO-C5×6.7

(5)

HISTORIC PEDESTRIAN TRUSS
PUMPHOUSE ROAD
CITY OF SPRINGFIELD
CLARK CO. OH



UPPER FRAMING PLAN



LOWER FRAMING PLAN

6

HISTORIC PEDESTRIAN TRUSS
PUMPHOUSE ROAD
SPRINGFILED, OH

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DATE: 6-25-25 CALC. BY DLM
JOB No: 250192 CHECKED BY:
SHEET No: TITLE: REPORT SUMMARY
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, OH

REPORT SUMMARY

BRIDGE ANALIZED FOR FIVE CONDITIONS

CASE 1 - BRIDGE AS IS WITH NO REPAIRS SUPPORTING BRIDGE DEAD LOAD ONLY NO LIVE LOAD (PEDESTRIAN OR H-10)

CASE 2 - BRIDGE AS IS WITH NO REPAIRS SUPPORTING BRIDGE DEAD LOAD AND PEDESTRIAN LIVE LOAD

CASE 3 - BRIDGE AS IS WITH NO REPAIRS SUPPORTING BRIDGE DEAD LOAD AND H-10 LIVE LOAD

CASE 4 - BRIDGE AS IS WITH NO REPAIRS SUPPORTING BRIDGE DEAD LOAD AND 9' WIDE PEDESTRIAN LIVE LOAD

CASE 5 - BRIDGE WITH REQUIRED REPAIRS SUPPORTING BRIDGE DEAD LOAD AND H-10 LIVE LOAD

BRIDGE AS IS WITH NO REPAIRS (CASES 1, 2, 3)

1. BRIDGE IS CAPABLE OF SUPPORTING BRIDGE DEAD LOAD WITH NO LIVE LOAD.
   CASE 1 BRIDGE RATING 1.84

2. BRIDGE IS NOT CAPABLE OF SUPPORTING BRIDGE DEAD LOAD WITH 90 PSF PEDESTRIAN LIVE LOAD.
   CASE 2 BRIDGE RATING .61
   BRIDGE IS CAPABLE OF SUPPORTING 55 PSF PEDESTRIAN LIVE LOAD.

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DATE: 7-2-25 CALC. BY DLM
JOB No: 250192 CHECKED BY:
SHEET No: TITLE: REPORT SUMMARY
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, OH

REPORT SUMMARY (CONT)

BRIDGE AS IS WITH NO REPAIRS (CASES 1, 2, 3)

3. BRIDGE IS NOT CAPABLE OF SUPPORTING BRIDGE DEAD LOAD WITH H-10 LIVE LOAD.
CASE 3 BRIDGE RATING .38
BRIDGE IS CAPABLE OF SUPPORTING H-3.5 LIVE LOAD 7,000 LB VEHICLE

BRIDGE AS IS WITH NO REPAIRS WITH 9' PEDESTRIAN WIDTH

4. BRIDGE WITH NO REPAIRS IS NOT CAPABLE OF SUPPORTING BRIDGE DEAD LOAD & 9' PEDESTRIAN WIDTH.
CASE 4 BRIDGE RATING .69
BRIDGE IS CAPABLE OF SUPPORTING 62 PSF PEDESTRIAN LIVE LOAD FOR 9' PEDESTRIAN WIDTH.

BRIDGE WITH STRINGER REPAIRS WITH 9' PEDESTRIAN WIDTH

5. BRIDGE WITH STRINGER REPAIRS IS CAPABLE OF SUPPORTING BRIDGE DEAD LOAD & 9' PEDESTRIAN WIDTH.
CASE 5 BRIDGE RATING 1.04

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DATE: 6-26-25 CALC. BY DLM
JOB No: 250192 CHECKED BY:
SHEET No: TITLE: REPAIR COSTS
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, OH

ESTIMATED REPAIR COSTS

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DATE: 6-25-25 CALC. BY DLM
JOB No: 250192 CHECKED BY:
SHEET No: TITLE: CASE I ANALYSIS
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, OH

CASE I ANALYSIS

BRIDGE AS IS WITH NO REPAIRS SUPPORTING BRIDGE DEAD LOAD ONLY

TRUSS MEMBER	DC DEAD LOAD	DW DEAD LOAD	STRENGTH I DC + DW	MEMBER CAPACITY	CASE I RATING
L1L3 L5L7	17.6k	7.5k	33.2k	64.1k	1.93
L3L4 L4L5	28.3k	12.0k	53.4k	114.1k	2.14
U2U3 U5U6	-28.3k	-12.0k	-53.4k	-233.3k	4.37
U3U4 U4U5	-31.9k	-13.4k	-60.0k	-233.3k	3.89
L2U2 L6U6	6.0k	3.1k	12.2k	35.6k	2.92
L3U3 L5U5	-10.3k	-4.7k	-19.9k	-89.4k	4.49
L4U4	ok	ok	ok	-61.7k	99
L1U2 U6L7	-25.4k	-10.8k	-48.0k	-191.1k	3.98
U2L3 L5U6	15.4k	6.5k	29.0k	64.1k	2.21
U3L4 L4U5	5.1k	2.2k	9.7k	35.6k	7.92
L3U4 U4L5	ok	ok	ok	37.3k	99
FLOOR BEAMS	23.1'k	15.5'k	52.1'k	214.7'k	4.12
INT. STRINGER	4.1'k	3.4'k	10.2'k	25.7'k	2.51

BRIDGE AS IS WITH NO REPAIRS IS CAPABLE OF SUPPORTING BRIDGE DEAD LOAD INTERIOR STRINGER WITH ADJACENT STRINGER MISSING

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DATE: 6-25-25 CALC. BY DLM
JOB No: 250192 CHECKED BY:
SHEET No: TITLE: CASE 2 ANALYSIS
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, OH

CASE 2 ANALYSIS

BRIDGE AS IS WITH NO REPAIRS SUPPORTING BRIDGE DEAD LOAD AND PEDESTRIAN LIVE LOAD

TRUSS MEMBER	DC+DW STRENGTH I	PEDESTRIAN LIVE LOAD	STRENGTH I PED+DC+DW	MEMBER CAPACITY	CASE 2 RATING	
L1L3 L5L7	33.2k	26.3k	79.2k	64.1k	.67	NG
L3L4 L4L5	53.4k	42.0k	126.9k	~~229.5k~~ 114.1k	.83	
U2U3 U5U6	-53.4k	-42.0k	-126.9k	-233.3k	2.45	
U3U4 U4U5	-60.0k	-47.2k	-142.6k	-233.3k	2.10	
L2U2 L6U6	12.2k	10.9k	31.3k	35.6k	1.23	
L3U3 L5U5	-19.9k	-16.4k	-48.6k	-89.4k	2.42	
L4U4	0k	0k	0k	-61.7k	99	
L1U2 U6L7	-48.0k	-37.9k	-114.3k	-191.1k	2.16	
U2L3 L5U6	29.0k	22.8k	68.9k	64.1k	.88	NG
U3L4 L4U6	9.7k	7.6k	23.0k	~~35.6k~~ ~~+7.8k~~	1.95	
L3U4 U4L5	0k	0k	0k	37.3k	99	
FLOOR BEAM	52.1k	56.4k	150.0k	214.7k	1.65	
INT. STRINGER	10.2k	12.8k	32.6k	25.7k	.69	NG

BRIDGE AS IS WITH NO REPAIRS IS NOT CAPABLE OF SUPPORTING BRIDGE DEAD LOAD & PEDESTRIAN LL

BRIDGE AS IS CAPABLE OF SUPPORTING 55 PSF PEDESTRIAN LIVE LOAD

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DATE: 6-25-25 CALC. BY DLM
JOB No: 250192 CHECKED BY:
SHEET No: TITLE: CASE 3 ANALYSIS
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, OH

CASE 3 ANALYSIS

BRIDGE AS IS WITH NO REPAIRS SUPPORTING BRIDGE DEAD LOAD AND H-10 LIVE LOAD

TRUSS MEMBER	DC+DW STRENGTH 2	H-10 LIVE LOAD	STRENGTH 2 H-10+DC+DW	MEMBER CAPACITY	CASE 3 RATING
L1L3 L5L7	33.2k	9.6k	46.2k	64.1k	2.38
L3L4 L4L5	53.4k	15.3k	74.1k	~~220.8k~~ 114.1k	2.94
U2U3 U5U6	-53.4k	-15.3k	-74.1k	-233.3k	8.71
U3U4 U4U5	-60.0k	-17.0k	-83.0k	-233.3k	7.55
L2U2 L6U6	12.2k	10.4k	26.2k	35.6k	1.67
L3U3 L5U5	-19.9k	-7.9k	30.6k	-89.4k	6.52
L4U4	0k	0k	0k	-61.7k	99
L1U2 U6L7	-48.0k	-13.9k	-66.8k	-191.1k	7.63
U2L3 L5U6	29.0k	11.0k	43.8k	64.1k	2.36
U3L4 L4U6	9.7k	8.1k	20.6k	~~17.8k~~ 35.6k	2.37
L3U4 U4L5	0k	0k	0k	37.3k	99
FLOOR BEAM	52.1'k	48.3'k	117.3'k	214.7'k	2.49
INT. STRINGER	10.2'k	30.5'k	51.4'k	25.7'k	.38 NG

BRIDGE AS IS WITH NO REPAIRS IS NOT CAPABLE OF SUPPORTING BRIDGE DEAD LOAD & H-10 LIVE LOAD

BRIDGE IS CAPABLE OF SUPPORTING H-3.5 LIVE LOAD

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DATE: 7-2-25 CALC. BY DLM
JOB No: 250142 CHECKED BY:
SHEET No: TITLE: CASE ANALYSIS
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, OH

CASE 4 ANALYSIS

BRIDGE AS IS WITH NO REPAIRS SUPPORTING BRIDGE DEAD LOAD AND 9' WIDE PEDESTRIAN LIVE LOAD

TRUSS MEMBER	DC+DW STRENGTH	PEDESTRIAN LIVE LOAD	PED+DC+DW	STRENGTH / MEMBER CAPACITY	CASE RATING
L1L3 L5L7	33.2k	16.9k	62.8k	64.1k	1.04
L3L4 L4L5	53.4k	27.0k	100.6k	114.1k	1.28
U2U3 U5U6	-53.4k	-27.0k	-100.6k	-233.3k	3.81
U3U4 U4U5	-60.0k	-30.3k	-113.0k	-233.3k	3.27
L2U2 L6U6	12.2k	7.0k	24.4k	35.6k	1.91
L3U3 L5U5	-19.9k	-10.5k	-38.3k	-89.4k	3.78
L4U4	0k	0k	0k	-61.7k	99
L1U2 U6L7	-48.0k	-24.4k	-90.7k	-191.1k	3.35
U2L3 L5U6	29.0k	14.6k	54.6k	64.1k	1.37
U3L4 L4U6	9.7k	4.9k	18.3k	35.6k	3.02
L3U4 U4L5	0k	0k	0	37.3k	99
FLOOR BEAM	52.1k	56.4k	122.6k	214.7k	1.65
INT. STRINGER	10.2k	12.8k	32.6k	25.7k	.69 NG

BRIDGE WITH NO REPAIRS IS NOT CAPABLE OF SUPPORTING BRIDGE DEAD LOAD & 9' PEDESTRIAN LL.

BRIDGE IS CAPABLE OF SUPPORTING 62 PSF PEDESTRIAN LIVE LOAD

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BRIDGING AMERICA SINCE 1936

DATE: 7-2-25 CALC. BY DLM
JOB No: 250192 CHECKED BY:
SHEET No: TITLE: CASE ANALYSIS
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, OH

CASE 5 ANALYSIS

BRIDGE WITH STRINGER REPAIRS SUPPORTING BRIDGE DEAD LOAD AND 9' WIDE PEDESTRIAN LIVE LOAD

TRUSS MEMBER	DC + DW STRENGTH	PEDESTRIAN LIVE LOAD	STRENGTH I PED + DC + DW	MEMBER CAPACITY	CASE RATING
L1L3 L5L7	33.2k	16.9k	62.8k	164.1k	1.04
L3L4 L4L5	53.4k	27.0k	100.6k	114.1k	1.28
U2U3 U5U6	-53.4k	-27.0k	-100.6k	-233.3k	3.81
U3U4 U4U5	-60.0k	-30.3k	-113.0k	-233.3k	3.27
L2U2 L6U6	12.2k	7.0k	24.4k	35.6k	1.91
L3U3 L5U5	-19.9k	-10.5k	-38.3k	-89.4k	3.78
L4U4	ok	ok	ok	-61.7k	99
L1U2 U6L7	-48.0k	-24.4k	-90.7k	-191.1k	3.35
U2L3 L5U6	29.0k	14.6k	54.6k	64.1k	1.37
U3L4 L4U6	9.7k	4.9k	18.3k	35.6k	3.02
L3U4 U4L5	ok	ok	0	37.3k	99
FLOOR BEAM	52.1k	56.4k	122.6k	214.7k	1.65
INT. STRINGER	7.1k	9.1k	23.0k	25.7k	1.17

BRIDGE WITH STRINGER REPAIRS IS CAPABLE OF SUPPORTING BRIDGE DEAD LOAD AND 9' PEDESTRIAN LIVE LOAD

Pumphouse Road Element Replacement – Proposed Methods of Repair

General - Replacing in situ portions of elements that make up the members of a pin-connected truss is an unusual task. Because the members are made up of twin elements it will be possible to cut away parts of one element at a time, while using the element that remains to stay connected to the pin. To replace an element (an eye bar in most cases for this bridge) we propose to use half-moon plate pieces that bear against the pin to mate up with wishbone-shaped pieces that will be spliced to the half-moon pieces and to the existing eye bars using field welded fish plates that lap across the bitted joints.

Eye Bar Verticals – If a vertical eye bar needs replaced at a joint, we intend to support the floor beam from below and disconnect the floor beam to allow for room to install a half-moon plate from below. The u-shaped spacer piece in the existing connection will also need removed. Above the pin, we will cut the eye bar high enough to allow for a wishbone piece to be lapped to the existing eye bar above and to the half-moon plate below. This procedure will be repeated if both eye bars are being replaced. Once these splices have been made, we will rehang the floor beams with new threaded rod u-hangers, spacer plates, and support plates.

Built-up Channel Verticals – To repair the built-up (latticed) vertical members we intend to remove the bottoms of the channels that make up these members, one at a time, and replace with half-moon plates that will be spliced onto the existing channel webs above, and bear on the top of the pins below. The existing batten plates will likely need removed before the new plates can be installed. The new half-moon bearing plates will be lapped to the existing channel webs on the inside of the channels and field welded in place. Afterward the batten plates will then be replaced. They will not require any mating pieces on the other side of the pin because they are in compression with the half-moon plates in bearing.

Eye Bar Diagonals – Eye bar diagonal elements will be replaced similarly to how eye bar verticals were described above. The support and removal of floor beams may or may not be necessary depending on which eye bar is being repaired. Exterior eye bars will not require the floor beams to be shored and removed but interior ones will likely need that step.

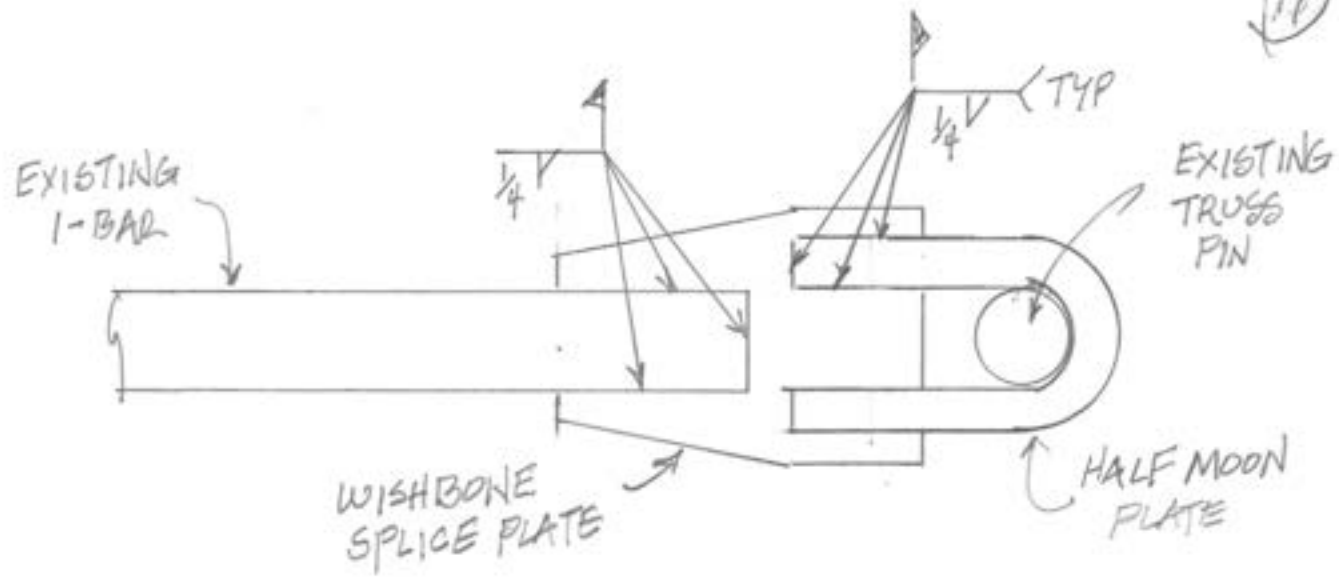
Eye Bar Bottom Chords – Bottom chord elements if found to be in need of repair will be replaced similarly to eye bar verticals and diagonals were described above. At this time, only the end panel bottom chord between the rear abutment bearing on the right truss is known to be in need of repair. For a bottom chord at a truss bearing pin, we will need to remove the cover plate of the batter post to an extent that will allow for access to the pin from the backside, opposite the eye bar end. Once access is created, we will repair the failed eye bar using the method for vertical and diagonal eye bars described above.

Representative Photos of Different Kinds of Pinned Connected Joints

Figure 1
Photo showing vertical eye bar & bottom chord pinned-connected joint showing space/access.

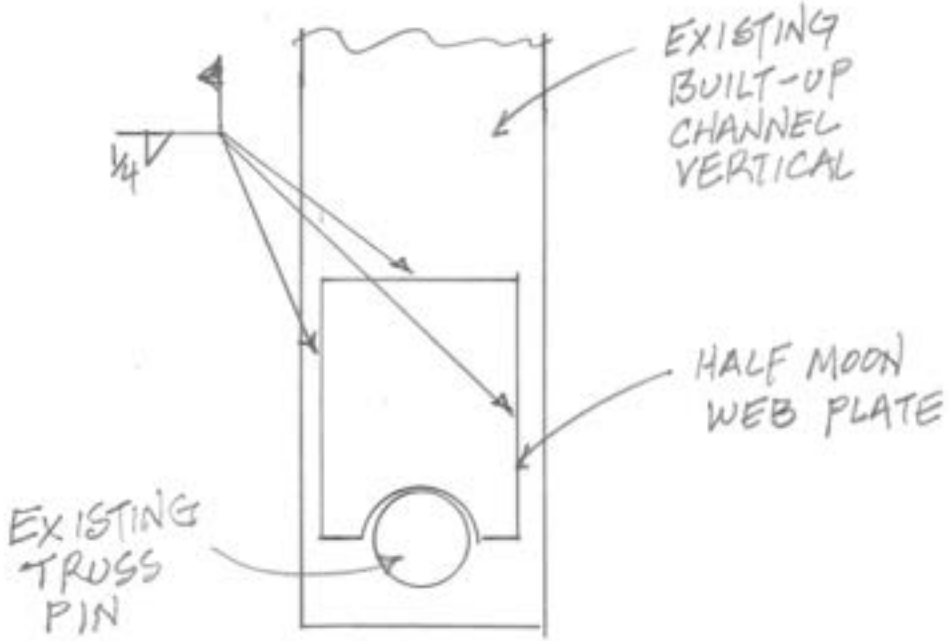
Figure 2
Photo showing built-up vertical & bottom chord pinned-connected joint (counter diagonal rod is also shown) showing space/access.

Figure 3
Photo showing bottom chord & batter post pinned-connected joint (at forward abutment showing space/access).



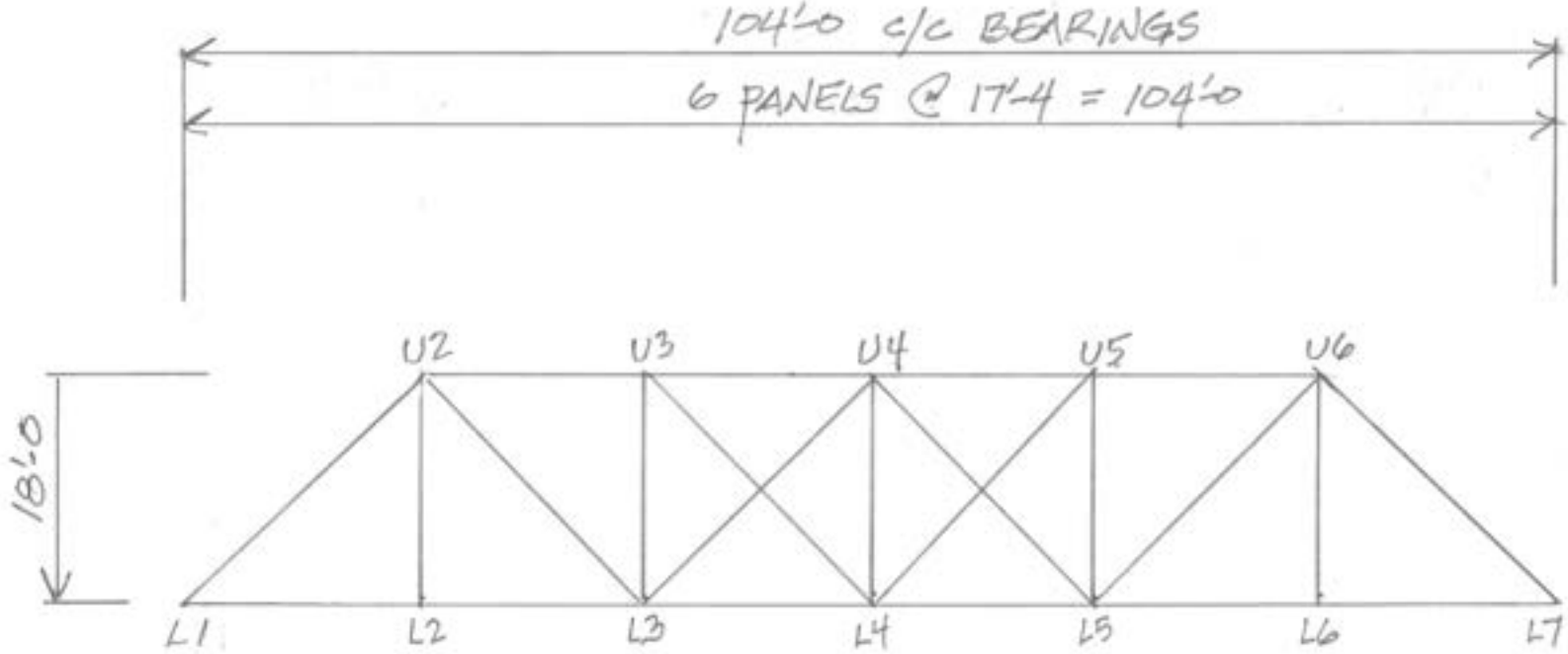
PROPOSED I-BAR REPAIR

FOR BOTTOM CHORD
I-BAR VERTICAL
I-BAR DIAGONAL



PROPOSED REPAIR

FOR BUILT-UP CHANNEL
VERTICAL



TRUSS ELEVATION

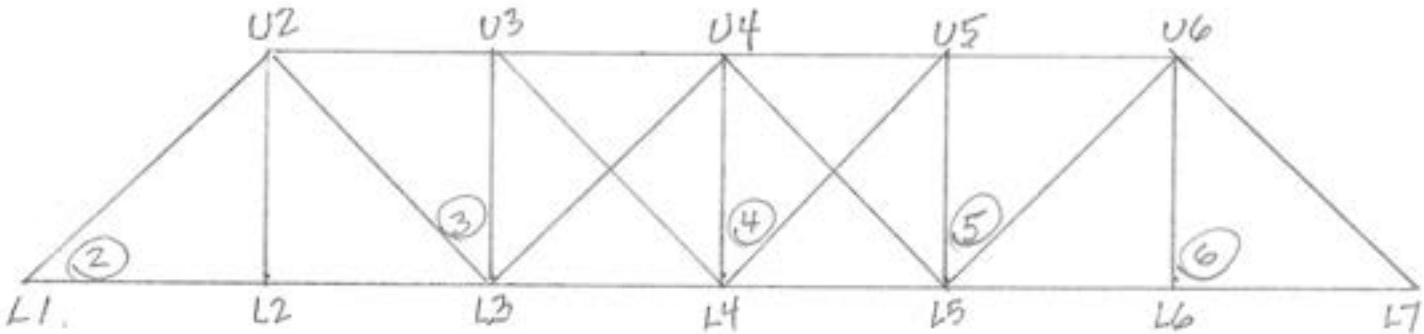
MEMBER	SHAPE
L1U2 U6L7	2-C8×11.25 + PL 5/16"×12"
U2U3 U5U6	2-C8×11.25 + PL 5/16"×12"
U3U4 U4U5	2-C8×11.25 + PL 5/16"×12"
L1L3 L5L7	2- 3/4"×3" BARS
L3L4 L4L5	2- 1"×4" BARS
U2L3 L5U6	2- 3/4"×3" BARS
U3L4 L4U5	2- 5/8"×2" BARS
L3U4 U4L5	ONE - 1" ROD

MEMBER	SHAPE
L2U2 L6U6	TWO - 5/8"×2" BARS
L3U3 L5U5	TWO - C6×8.2
L4U4	TWO - C5×6.7

(91)

HISTORIC PEDESTRIAN TRUSS
PUMPHOUSE ROAD
CITY OF SPRINGFIELD
CLARK CO, OH

(2) L1L2 BOTTOM CHORD ONE SEVERED 3/4"x3" BAR
(3) U2L3 DIAGONAL ONE SEVERED 3/4"x3" BAR
(4) L4U5 DIAGONAL HEAVILY RUSTED 75% DETERIORATION
(5) L5U6 DIAGONAL HEAVILY RUSTED
(6) L6U6 VERTICAL ONE SEVERED 5/8"x 2" BAR



RIGHT TRUSS ELEVATION

MEMBER	SHAPE
L1U2 U6L7	2-C8x11.25 + PL 5/16"x 12"
U2U3 U5U6	2-C8x11.25 + PL 5/16"x 12"
U3U4 U4U5	2-C8x11.25 + PL 5/16"x 12"
L1L3 L5L7	2- 3/4"x3" BARS
L3L4 L4L5	2- 1"x4" BARS
U2L3 L5U6	2- 3/4"x3" BARS
U3L4 L4U5	2- 5/8"x 2" BARS
L3U4 U4L5	ONE - 1" ROD

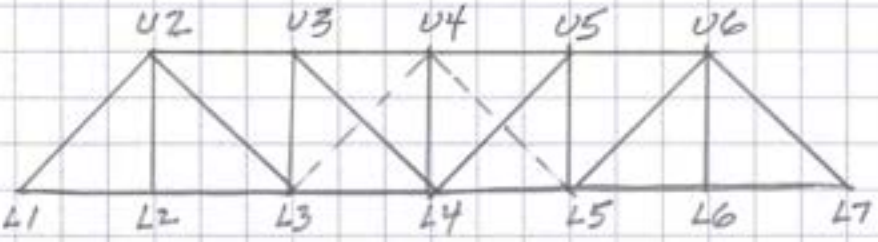
MEMBER	SHAPE
L2U2 L6U6	TWO - 5/8"x 2" BARS
L3U3 L5U5	TWO - C6x 8.2
L4U4	TWO - C5x 6.7

(19)

HISTORIC PEDESTRIAN TRUSS
PUMPHOUSE ROAD
CITY OF SPRINGFIELD
CLARK CO, OH

U.S. BRIDGE®
BRIDGING AMERICA SINCE 1936

DATE: 6-25-25 CALC. BY DLM
JOB No: 250192 CHECKED BY:
SHEET No: TITLE: TRUSS FORCES
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, PA



TRUSS MEMBER FORCES

TRUSS MEMBER	DC DEAD LOAD	DW DEAD LOAD	PEDESTRIAN LIVE LOAD	H-10 LIVE LOAD
L1L3 L5L7	17.6k	7.5k	26.3k	9.6k
L3L4 L4L5	28.8k	12.0k	42.0k	15.3k
U2U3 U5U6	-28.3k	-12.0k	-42.0k	-15.3k
U3U4 U4U5	-31.9k	-13.4k	-47.2k	-17.0k
L2U2 L6U6	6.0k	3.1k	10.9k	10.4k
L3U3 L5U5	-10.3k	-4.7k	-16.4k	-7.9k
L4U4	0k	0k	0k	0k
L1U2 U6L7	-25.4k	-10.8k	-37.9k	-13.9k
U2L3 L5U6	15.4k	6.5k	22.8k	11.0k
U3L4 L4U5	5.1k	2.2k	7.6k	8.1k
L3U4 U4L5	0k	0k	0k	0k

NOTE - ALL FORCES ARE UNFACTORED

U.S. BRIDGE
BRIDGING AMERICA SINCE 1936

DATE: 6-12-25 CALC. BY DLM
JOB No: 250192 CHECKED BY:
SHEET No: TITLE: FLOOR BEAM
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, O

FLOOR BEAM ANALYSIS

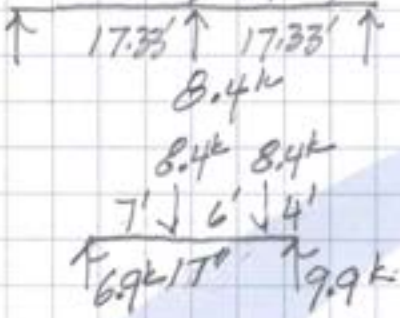
FLOOR BEAM S15×60
$I_x = 644\ in^3$ $S_x = 85.9\ in^3$ $F_y = 30\ ksi$
LENGTH = 17'-0 c/c TRUSSES

LIVE LOAD

PEDESTRIAN LL = .090 KSF × 17.33' = 1.56 KLF

$$M_{PED} = \frac{(1.56\ klf)\times(17.0')^2}{8} = 56.4'k$$

H-10 LIVE LOAD



$M_{H-10} = 6.9^k \times 7' = 48.3'k$

DC DEAD LOAD

FLOOR .025 KSF × 17.33' = .430
STRG $\frac{7 \times .020\ klf \times 17.33'}{16'}$ = .150
FB = .060
.640 KLF

DW DEAD LOAD

ASPHALT .025 KSF × 17.33' = .430 KLF

$$M_{DC} = \frac{(.64\ klf)(17')^2}{8} = 23.1'k \qquad M_{DW} = \frac{(.43)(17')^2}{8} = 15.5'k$$

STRENGTH I PEDESTRIAN
$M = (1.25)(23.1'k) + (1.5)(15.5'k) + (1.75)(56.4'k) = 150.8'k$

STRENGTH 2 H-10
$M = (1.25)(23.1'k) + (1.5)(15.5'k) + (1.35)(48.3'k) = 117.3'k$

FLOOR BEAM CAPACITY $= \frac{85.9\ in^3 \times 30\ ksi}{12} = 214.7'k > 150.8'k$ OK

$214.7'k > 117.3'k$ OK

U.S. BRIDGE
BRIDGING AMERICA SINCE 1936

DATE: 6-12-25 CALC. BY DLM
JOB No: 250192 CHECKED BY:
SHEET No: TITLE: STRINGER
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, OH

INTERIOR STRINGER ANALYSIS

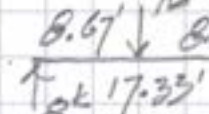
STRINGER S8x18
$I_x = 56.8\ IN^4$ $S_x = 14.2\ IN^3$ $F_y = 30$ KSI
LENGTH = 17'-4"
SPACING: 7 STRINGERS 6 SPACES @ 2'-6"
H-10 DISTRIBUTION FACTOR = $\frac{2.5'}{8.3} = .38$

LIVE LOAD

PEDESTRIAN LL = .090 KSF x 2.5' = .23 KLF

$$M_{PED} = \frac{(.23\ KSF)(17.33')^2}{8} = 8.6'k$$

H-10 LIVE LOAD



$M_{H-10} = 8^k \times 8.67' \times .30 = 20.8'k$

DC DEAD LOAD

Floor .025 KSF x 2.5' = .060
STRG = .020
.080 KLF

$$M_{DC} = \frac{(.08\ KLF)(17.33')^2}{8} = 3.0'k$$

DW DEAD LOAD

ASPHALT .025 KSF x 2.5' = .060 KLF

$$M_{DW} = \frac{.06\ KLF(17.33')^2}{8} = 2.2'k$$

STRENGTH I PEDESTRIAN

$M = (1.25)(3.0'k) + (1.5)(2.2'k) + (1.75)(8.6'k) =$ 22.1'k

STRENGTH 2 H-10

$M = (1.25)(3.0'k) + (1.5)(2.2'k) + (1.35)(20.8'k) =$ 35.1'k

$$\frac{14.2\ IN^3 \times 30\ KSI}{12} = 35.5'k$$

U.S. BRIDGE
BRIDGING AMERICA SINCE 1936

DATE: 6-25-25 CALC. BY DLM
JOB No: 250192 CHECKED BY:
SHEET No: TITLE: STRINGER ANALYSIS
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, OH

INTERIOR STRINGER ANALYSIS
LATERAL TORSIONAL BUCKLING

$L_b = 17.33' \times 12 = 208"$

$L_r = (1.95)(.969)\frac{29{,}000}{30}\sqrt{\frac{.336}{14.2 \times 7.56}}\sqrt{1+\sqrt{1+6.76\left(\frac{30 \times 14.2 \times 7.56}{29{,}000 \times .336}\right)^2}}$

$L_r = 134.7^k$

$L_p = (1.0)(.969)\sqrt{\frac{29{,}000}{30}}$

$L_p = 30.1"$

$L_b = 208" > L_r = 134.7"$

$F_{CR} = \frac{(1.0)(\pi^2)(29{,}000)}{(208/.969)^2}\sqrt{1+(.08)\left(\frac{.336}{14.2 \times 7.56}\right)\left(\frac{208}{.969}\right)^2}$

$F_{CR} = 21.74 \text{ KSI}$

$M = \frac{(21.74 \text{ KSI})(14.2 \text{ IN}^3)}{12}$

$M = 25.7'k.$

$25.7'k < 35.5'k$ USE $25.7'k$

		RATING	
STRINGER CAPACITY =	$25.7'k > 22.1'k$ PEDESTRIAN LL	1.24	OK
	$25.7'k < 35.1'k$ H-10 LL	.66	NG

U.S. BRIDGE
BRIDGING AMERICA SINCE 1936

DATE: 6-25-25 CALC. BY DLM
JOB No: 250192 CHECKED BY:
SHEET No: TITLE: STRINGER
SUBJECT: PUMPHOUSE ROAD SPRINGFIELD, OH

INTERIOR STRINGER ANALYSIS
WITH MISSING ADJACENT STRINGER

STRINGER S8x18
$I_x = 56.8\ IN^4$ $S_x = 14.2\ IN^3$ $F_y = 30\ KSI$
LENGTH = 17'-4"
SPACING = 3.75'

H-10 DISTRIBUTION FACTOR = $\frac{3.75}{8.5} = .44$

PEDESTRIAN LIVE LOAD
PEDESTRIAN LL = .090 KSF x 3.75' = .34 KLF

$M_{PED} = \frac{(.34\ KLF)(17.33')^2}{8} = 12.8'k$

H-10 LIVE LOAD
$M_{H-10} = 8^k \times 8.67' \times .44 = 30.5'k$

DC DEAD LOAD
FLOOR .025 KSF x 3.75' = .090
STRG = .020
.110 KLF

$M_{DC} = \frac{(.11)(17.33')^2}{8} = 4.1'k$

DW DEAD LOAD
ASPHALT .025 KSF x 3.75' = .090 KLF

$M_{DW} = \frac{(.09)(17.33')^2}{8} = 3.4'k$

STRENGTH I PEDESTRIAN
$M = (1.25)(4.1'k) + (1.5)(3.4'k) + (1.75)(12.8'k) = 32.6'k$

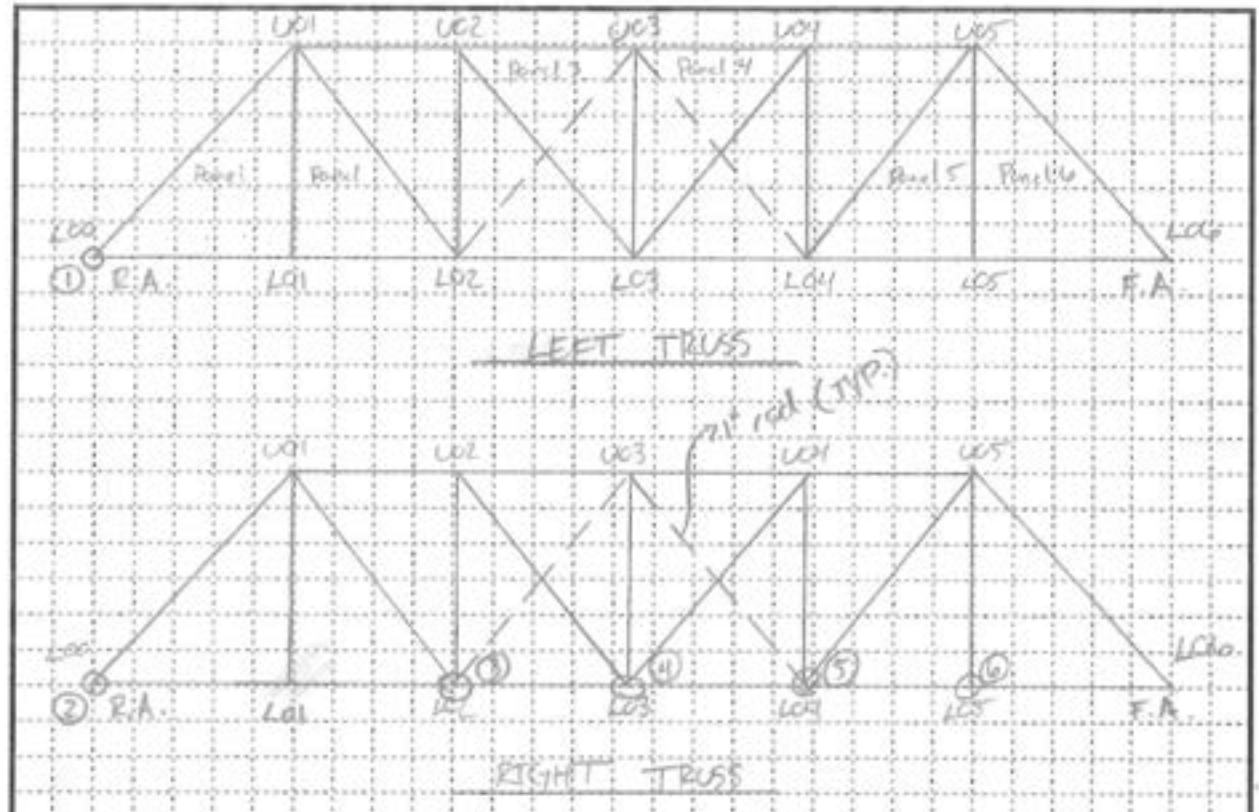
STRENGTH 2 H-10
$M = (1.25)(4.1'k) + (1.5)(3.4'k) + (1.35)(30.5'k) = 51.4'k$

		RATING
STRINGER CAPACITY =	$25.7'k < 32.6'k$ PEDESTRIAN LL	.69
	$25.7'k < 51.4'k$ H-10 LL	.30

CARPENTER MARTY

Surveying | Engineering | Project Management

Job Name: Pumphouse Rd Analysis Job No.: CSPTR0043
Location: Pumphouse Rd Sheet: 1 of 5
Task: Inspection 5/21/25 LuG



① Rusted through top plate @ end

② Severed inside lower chord bar

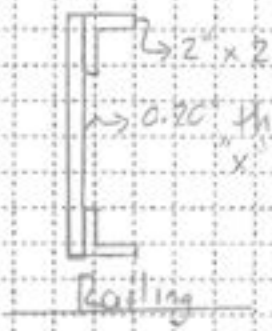
Rusted through inside channel on top chord

③ Severed inside diagonal

④ Heavily rusted connection of L03L04 diagonal (inside)

⑤ Heavily rusted connection of L04L05 diagonal (inside)

⑥ Severed inside L05U05 vertical



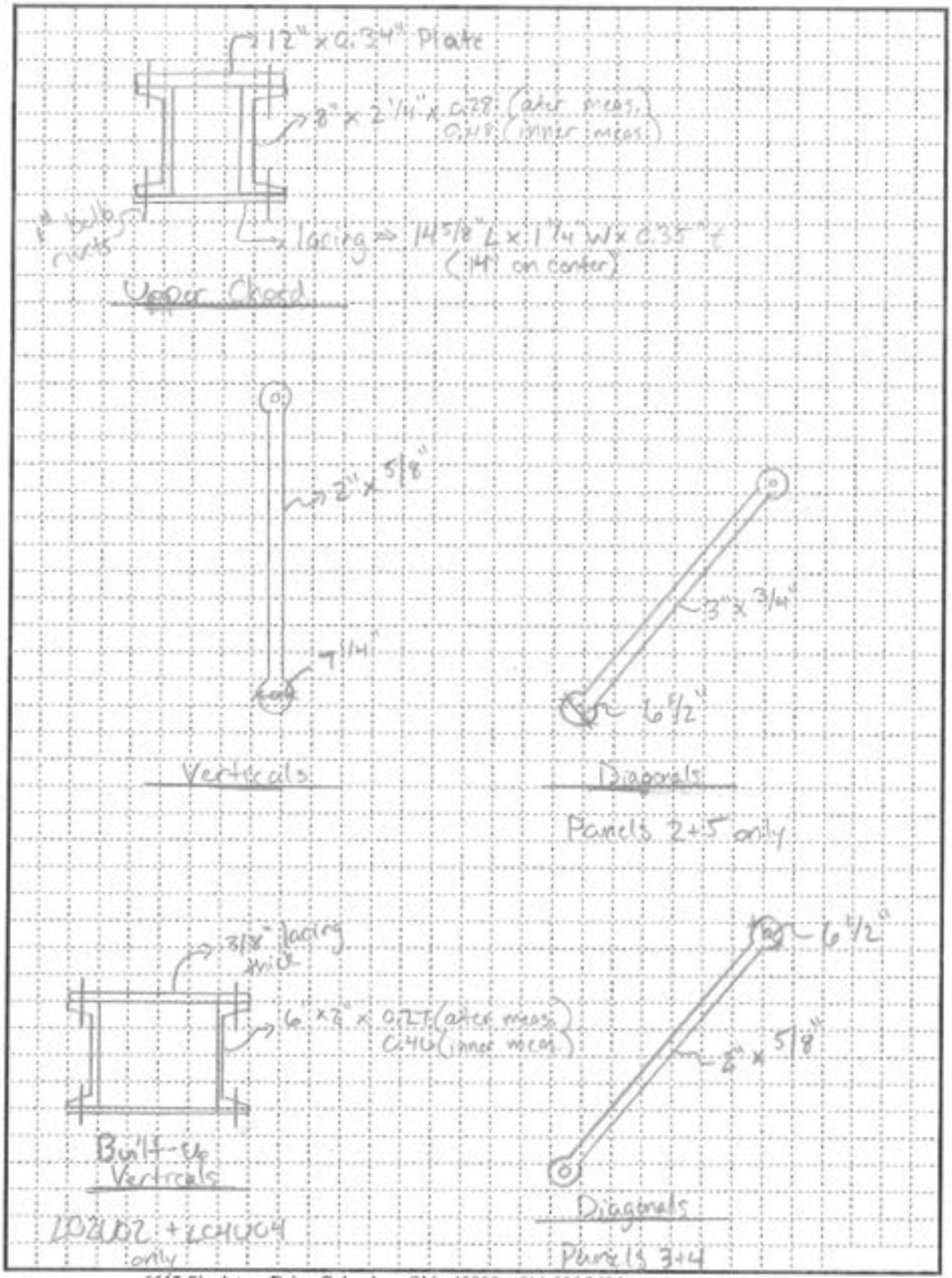
CARPENTER MARTY

Surveying | Engineering | Project Management

Job Name: Romphase Rd Analysis Job No.: CSPTRC043

Location: Romphase Rd Sheet: 2 of 5

Name & Date: Inspection 5/21/25 LWG



CARPENTER MARTY

Surveying | Engineering | Project Management

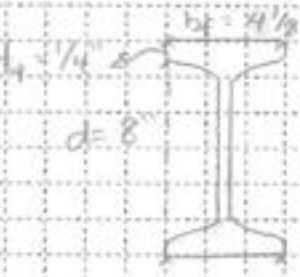
Job Name: Pumphouse Rd Analysis Job No.: CSPTR0043
Location: Pumphouse Rd Sheet: 3 of 5
Name & Date: Inspection 5/21/25 LWG

5" x 1 3/4" x 0.241 (outer webs) x 6.42 (Gusset webs)

same as prev.

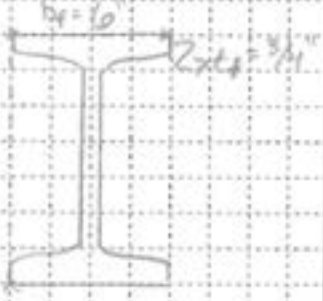
Built-Up Verticals L03U03 only

Fascia Stringer



Interior Stringer Standard Section

Lower F.B. PL Connection



Floor Beam Standard Section

Lateral Bracing = 1 1/8" ϕ rod

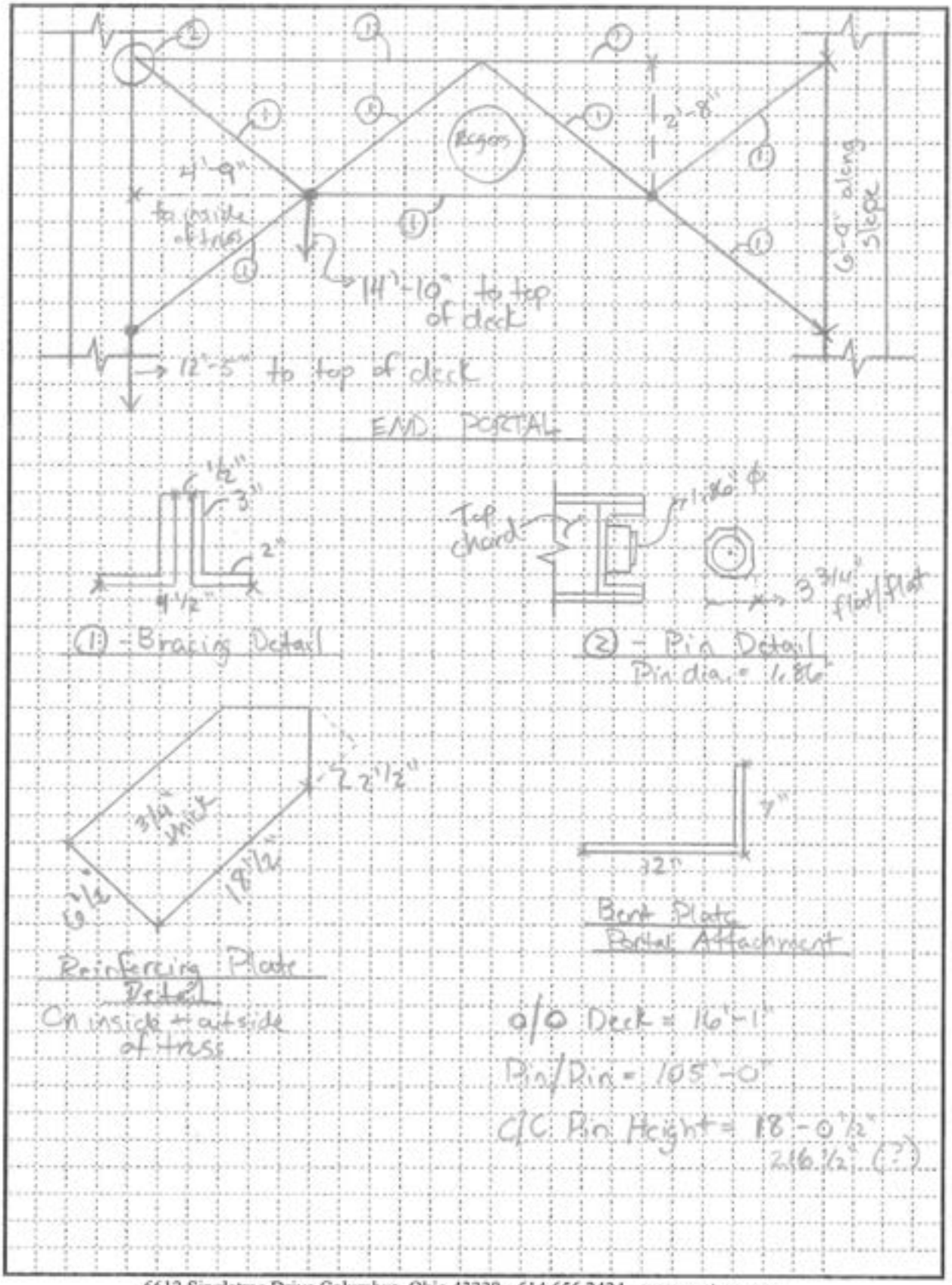
Slotted Hole in F.B. = 3 1/4" * 2 1/2"

Timber Floor = 5 1/2" x 2 1/2"

CARPENTER MARTY transportation

Surveying | Engineering | Project Management

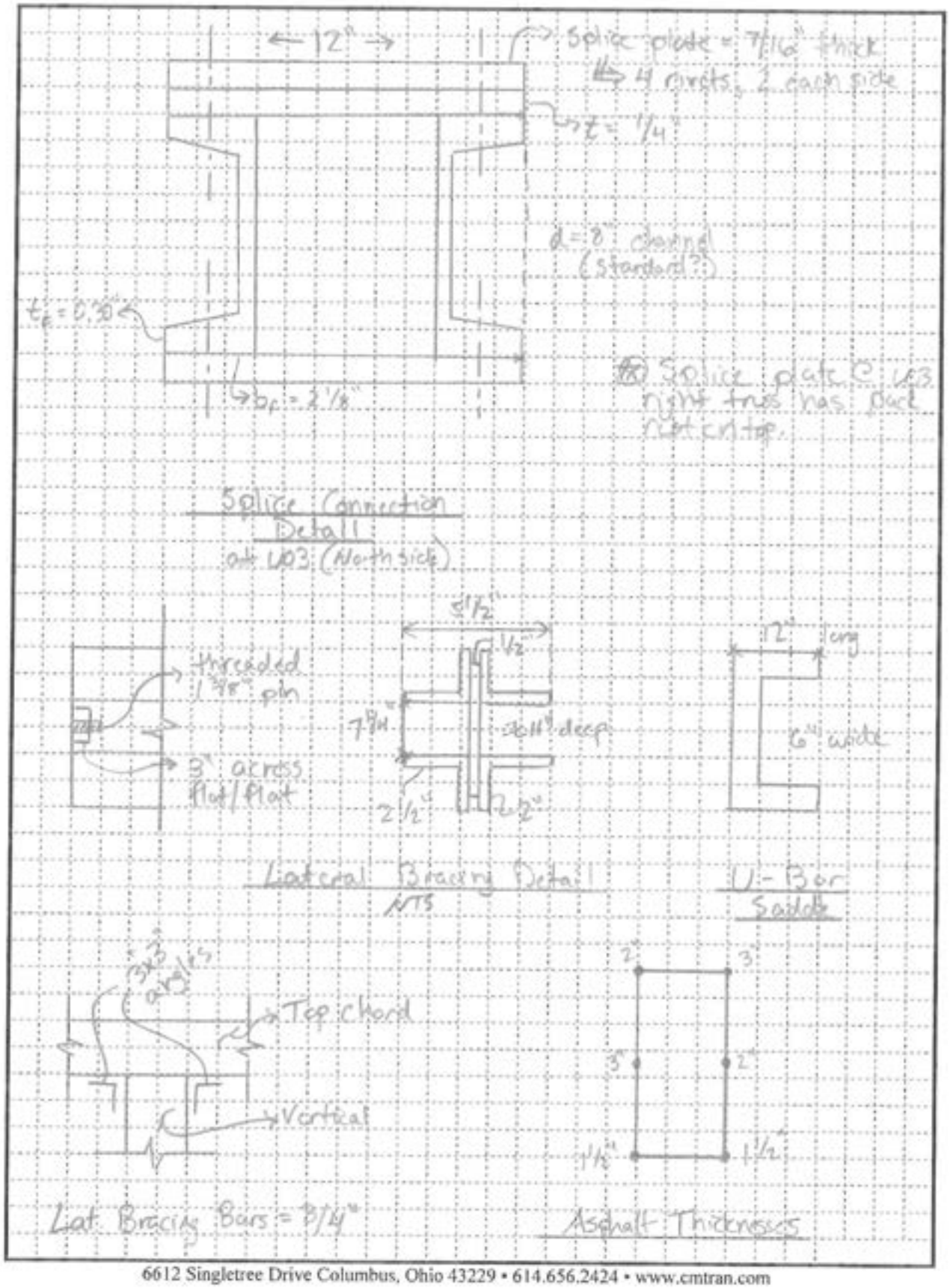
Job Name: Pumphouse Rd Analysis Job No.: CSPTR0043
Location: Pumphouse Rd Sheet: 4 of 5
Name & Date: Inspection 5/21/25 LWG



CARPENTER MARTY

Surveying | Engineering | Project Management

Job Name: Pimpkaxe Road Analysis Job No.: CSPTR0043
Location: Pimpkaxe Road Sheet: 5 of 5
Name & Date: Inspection 5/21/25 CWG



mitigate the risk from vehicle collisions with the superstructure. Should the owner desire additional mitigation, the following steps may be taken:

- Increasing vertical clearance in addition to that contained in *AASHTO LRFD*
- Providing structural continuity of the superstructure, either between spans or with the substructure
- Increasing the mass of the superstructure
- Increasing the lateral resistance of the superstructure

2—PHILOSOPHY

Pedestrian bridges shall be designed for specified limit states to achieve the objectives of safety; serviceability, including comfort of the pedestrian user (vibration); and constructability with due regard to issues of inspectability, economy, and aesthetics, as specified in *AASHTO LRFD*. These Guide Specifications are based on the LRFD philosophy. Mixing provisions from specifications other than those referenced herein, even if LRFD based, should be avoided.

3—LOADS

3.1—PEDESTRIAN LOADING (PL)

Pedestrian bridges shall be designed for a uniform pedestrian loading of 90 psf. This loading shall be patterned to produce the maximum load effects. Consideration of dynamic load allowance is not required with this loading.

C3.1

This article modifies the pedestrian loading provisions of the Fourth Edition of *AASHTO LRFD*, through the 2009 Interim. The previous edition of these Guide Specifications used a base nominal loading of 85 psf, reducible to 65 psf based on influence area for the pedestrian load. With the LFD load factors, this results in factored loads of 2.17(85) = 184 psf and 2.17(65) = 141 psf. The Fourth Edition of *AASHTO LRFD* specified a constant 85 psf regardless of influence area. Multiplying by the load factor, this results in 1.75(85) = 149 psf. This falls within the range of the previous factored loading, albeit toward the lower end.

European codes appear to start with a higher nominal load (approx 105 psf), but then allow reductions based on loaded length. Additionally, the load factor applied is 1.5, resulting in a maximum factored load of (1.5)105 = 158 psf. For a long loaded length, this load can be reduced to as low as 50 psf, resulting in a factored load of (1.5)50 = 75 psf. The effect of resistance factors has not been accounted for in the above discussion of the European codes. There are,

however, warnings to the designer that a reduction in the load based on loaded length may not be appropriate for structures likely to see significant crowd loadings, such as bridges near stadiums.

Consideration might be given to the maximum credible pedestrian loading. There is a physical limit on how much load can be applied to a bridge from the static weight of pedestrians. It appears that this load is around 150 psf, based on work done by Nowak (2000) from where Figures C1 through C3 were taken. Although there does not appear to be any available information relating to the probabilistic distribution of pedestrian live loading, knowing the maximum credible load helps to define the limits of the upper tail of the distribution of load. The use of a 90 psf nominal live load in combination with a load factor of 1.75 results in a loading of 158 psf, which provides a marginal, but sufficient, reserve compared with the maximum credible load of 150 psf.

Figure C3.1-1—Live Load of 50 psf

Figure C3.1-2—Live Load of 100 psf

Figure C3.1-3—Live Load of 150 psf

3.2—VEHICLE LOAD (LL)

Where vehicular access is not prevented by permanent physical methods, pedestrian bridges shall be designed for a maintenance vehicle load specified in Figure 1 and Table 1 for the Strength I Load Combination unless otherwise specified by the Owner.

C3.2

The vehicle loading specified is equivalent to the H-trucks shown in Article 3.6.1.6 of *AASHTO LRFD* 2009 Interim and contained in previous versions of the *AASHTO Standard Specifications for Highway Bridges*.

A single truck shall be placed to produce the maximum load effects and shall not be placed in combinations with the pedestrian load. The dynamic load allowance need not be considered for this loading.

Table 3.2-1—Design Vehicle

Clear Deck Width	Design Vehicle
7 to 10 ft	H5
Over 10 ft	H10

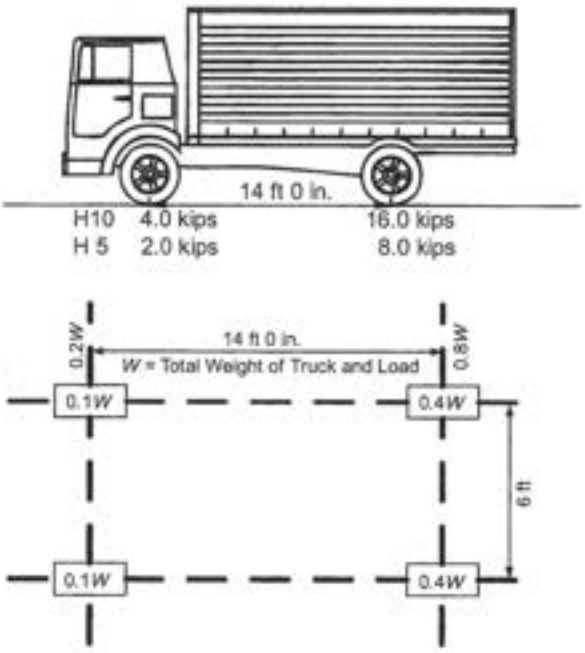


Figure 3.2-1—Maintenance Vehicle Configurations

3.3—EQUESTRIAN LOAD (LL)

Decks intended to carry equestrian loading shall be designed for a patch load of 1.00 kip over a square area measuring 4.0 in. on a side.

C3.3

The equestrian load is a live load and intended to ensure adequate punching shear capacity of pedestrian bridge decks where horses are expected. The loading was derived from hoof pressure measurements reported in Roland et. al. (2005). The worst loading occurs during a canter where the loading on one hoof approaches 100 percent of the total weight of the horse. The total factored load of 1.75 kips is approximately the maximum credible weight of a draft horse. This loading is expected to control only deck design.

3.4—WIND LOAD (WS)

Pedestrian bridges shall be designed for wind loads as specified in *AASHTO Signs*, Articles 3.8 and 3.9. Unless otherwise directed by the Owner, the Wind Importance Factor, I_r, shall be taken as 1.15. The loading shall be applied over the exposed area in front

C3.4

The wind loading is taken from *AASHTO Signs* specification rather than from *AASHTO LRFD* due to the potentially flexible nature of pedestrian bridges, and also due to the potential for traffic signs to be mounted on them.

Historical Record

Dimensions and Properties

ROLLED SHAPES

Steel and Wrought Iron

BEAMS & COLUMNS

As Rolled in U.S.A., Period 1873 to 1952

With Sources as Noted

Compiled and Edited by

Herbert W. Ferris

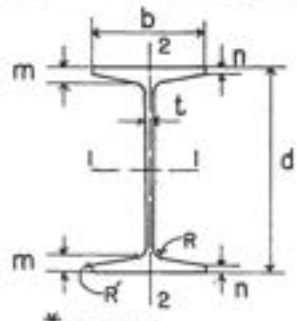
AMERICAN INSTITUTE OF STEEL CONSTRUCTION

400 N. MICHIGAN AVE., CHICAGO IL 60611

15" AMERICAN STANDARD BEAMS

REFERENCES, SEE COLUMN (1) AND PAGE 4

1,7,13,17,18, 21,25,26,28, 29,30 See Page 18	2,3,4,10,12, 15,16,19,20, 22,23,27,32, 33,34 See Page 17	11 IL 1934 CIL 1946 CIL 1948 USI 950 14 S54-1946 S56-1948	24 NJ 1889 NJ 1891 35 K 1950



* Computed

COL. (1)	WEIGHT PER FOOT	AREA	DEPTH	FLANGE WIDTH	WEB THICK	DIMENSIONS				SLOPE INSIDE FLANGE	AXIS 1—1			AXIS 2—2		
			d	b	t	m	n	R	R'		I	S	r	I	S	r
	Lb.	Sq In.	In.	In.	In.	In.	In.	In.	In.	%	In.⁴	In.³	In.	In.⁴	In.³	In.
33	60.8	17.88	15.0	6.00	.590	1.041	.590	.69	.35	16⅔	612.9	81.7	5.86	25.96	8.65	1.21
7,10,13,16,22, 30,32,34	60.8	17.68	15.0	6.000	.590	1.041	.590	.69	.35	16⅔	609.0	81.2	5.87	26.0	8.7	1.21
4,12,15,17,19, 20,21,23	60.0	17.67	15.0	6.000	.590	1.041	.590	.69	.354	16⅔	609.0	81.2	5.87	25.96	8.65	1.21
15	60.0	17.65	15.0	5.84	.75	.83	.41	.51	.25	16⅔	538.6	71.8	5.52	18.17	6.22	1.01
28	60.0	17.64	15.0	6.17	.55	1.04	.57	.65	.30	16⅔	619.02	82.5	5.92	27.60	8.9	1.25
29	60.0	17.64	15.0	6.125	.50	1.06	.66	.62	–	14.2	644.0	85.9	6.04	30.4	9.9	1.32
1,2,3	60.0	17.6	15.0	6.04	.54	1.07	.73	.62	–	12.4	644.0	85.9	6.04	30.4	10.1	1.32
25,26	60.0	17.6	15.0	6.00	.52	1.11	.69	.62	–	15.3	637.7	85.0	6.02	29.2	9.7	1.29
18	59.0	17.3	15.0	5.968	.468	1.125	.750	.75	–	13.6	640.9	85.3	6.08	30.3	10.2	1.32
27	57.6	16.95	15.0	6.10	.50	1.01	.60	–	–	14.6	583.78	77.84	5.87	26.95	8.8	1.26
27	56.9	16.74	15.0	5.95	.60	.89	.50	–	–	14.6	560.79	74.77	5.79	21.50	7.2	1.13
18	56.5	16.7	15.0	5.892	.572	.906	.500	.55	–	15.3	543.7	72.5	5.71	21.1	7.2	1.12
3	55.0	16.2	15.0	5.85	.55	.95	.55	.55	–	15.1	557.8	74.4	5.87	22.23	7.6	1.17
26	55.0	16.2	15.0	5.85	.55	.95	.55	.56	–	15.1	557.3	74.3	5.87	22.2	7.6	1.17
30	55.0	16.18	15.0	5.755	.665	.834	.41	.51	.246	16⅔	511.0	68.1	5.62	17.06	5.93	1.02
19,20	55.0	16.18	15.0	5.754	.664	.834	.41	.51	–	16⅔	511.0	68.1	5.62	17.06	5.93	1.00
4,12,15,17,21, 23	55.0	16.18	15.0	5.746	.656	.834	.41	.51	.246	16⅔	511.0	68.1	5.62	17.06	5.93	1.02
28	55.0	16.17	15.0	5.92	.58	.90	.46	.58	.28	16.5	542.84	72.4	5.79	20.34	6.87	1.12
7,10,13,16,22, 34	55.0	16.06	15.0	5.738	.648	.834	.41	.51	.25	16⅔	508.7	67.8	5.63	17.0	5.9	1.03
27	52.9	15.56	15.0	5.79	.60	.79	.41	–	–	14.6	497.68	66.36	5.65	17.08	5.9	1.05
19,20	50.0	14.84	15.0	5.656	.566	.834	.41	.51	–	16⅔	489.2	65.2	5.74	16.13	5.70	1.04
30	50.0	14.71	15.0	5.657	.567	.834	.41	.51	.246	16⅔	483.4	64.5	5.73	16.04	5.67	1.04
4,12,15,17,21, 23	50.0	14.71	15.0	5.648	.558	.834	.41	.51	.246	16⅔	483.4	64.5	5.73	16.04	5.67	1.04
28	50.0	14.70	15.0	5.82	.48	.90	.46	.58	.28	16.5	515.22	68.7	5.92	19.20	6.6	1.14
1,2,3,24,25, 26,29	50.0	14.7	15.0	5.75	.45	.95	.55	.55	–	15.1	529.7	70.6	6.00	21.0	7.3	1.20
7,10,11,13,14, 16,22,34,35	50.0	14.59	15.0	5.640	.550	.834	.41	.51	.25	16⅔	481.1	64.2	5.74	16.0	5.7	1.05
27	49.3	14.49	15.0	5.80	.45	.89	.50	–	–	14.6	518.61	69.15	5.98	19.71	6.8	1.17
18	48.0	14.1	15.0	5.726	.406	.906	.500	.55	–	15.3	459.9	66.1	5.93	19.2	6.7	1.16
18	47.5	14.1	15.0	5.642	.542	.750	.375	.55	–	14.7	451.1	60.1	5.66	14.5	5.1	1.01
19,20	45.0	13.37	15.0	5.558	.468	.834	.41	.51	–	16⅔	461.6	61.5	5.88	15.17	5.5	1.07
30	45.0	13.24	15.0	5.559	.469	.834	.41	.51	.246	16⅔	455.8	60.8	5.87	15.00	5.40	1.06
4,12,15,17,21, 23	45.0	13.24	15.0	5.550	.460	.834	.41	.51	.246	16⅔	455.9	60.8	5.87	15.09	5.44	1.07
28	45.0	13.23	15.0	5.54	.45	.83	.41	.51	.24	16.5	460.3	61.4	5.90	14.97	5.4	1.06
3	45.0	13.2	15.0	5.58	.48	.78	.40	.55	–	14.9	446.6	59.5	5.82	14.72	5.3	1.06
26	45.0	13.2	15.0	5.56	.46	.78	.40	.50	–	14.9	446.1	59.5	5.88	14.5	5.2	1.06
7,10,13,16,22, 34	45.0	13.12	15.0	5.542	.452	.834	.41	.51	.25	16⅔	453.6	60.5	5.88	15.0	5.4	1.07

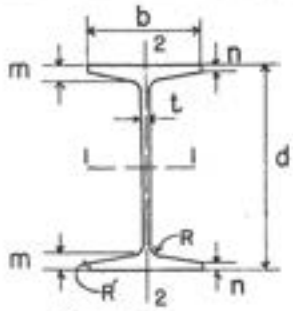
(36)

8" AMERICAN STANDARD BEAMS

REFERENCES, SEE COLUMN (1) AND PAGE 4

31
PE 1896

1,2,3,4,5,6,7,8,9,10,
11,12,13,14,15,16,17,
18,19,20,21,22,23,
24,25,26,27,28,
29,30,32,33,34,
35,36,37,38,39
See Page 26



* Computed

COL. (1)	WEIGHT PER FOOT	AREA	DEPTH	FLANGE WIDTH	WEB THICK	DIMENSIONS				SLOPE INSIDE FLANGE	AXIS 1—1			AXIS 2—2		
			d	b	t	m	n	R	R′		I	S	r	I	S	r
	Lb.	Sq In.	In.	In.	In.	In.	In.	In.	In.	%	In.⁴	In.³	In.	In.⁴	In.³	In.
2	21.7	6.4*	8.0	4.387*	.387*	.56	.26	.37	–	15.0*	63.65*	15.9*	3.15*	4.88	2.22*	.87*
31	21.2	6.24	8.0	4.14*	.40*	.53	.25	–	–	15.0*	60.28	15.07	3.11	3.96	1.91	.80
36,37	21.0	6.18	8.0	5.40	.38	.409	.20	.30	.03	8 1/3	62.3	15.6	3.18	6.80	2.52	1.05
23	20.5	6.07*	8.0	4.092	.362	.581	.27	.37	–	16 2/3	60.83*	15.21*	3.17*	4.09	2.00*	.82*
21	20.5	6.06*	8.0	4.090	.360	.581	.27	.37	–	16 2/3	60.74*	15.19*	3.17*	4.08*	2.00*	.82*
34,35	20.5	6.03	8.0	4.092	.362	.581	.27	.37	.162	16 2/3	60.6	15.1	3.17	4.07	1.99*	.82
4,9,11,17,18, 22,24,26	20.5	6.03	8.0	4.087	.357	.581	.27	.37	.162	16 2/3	60.6	15.1	3.17	4.07	2.0	.82
36,	20.5	6.03	8.0	4.08	.35	.581	.27	.37	.16	16 2/3	60.6	15.2	3.17	4.04	1.98	.82
32	20.5	6.03	8.0	4.07	.34	.58	.27	–	–	16 2/3	61.29	15.3	3.19	4.02	1.98*	.82
7,10,12,16,25, 37	20.5	5.97	8.0	4.079	.349	.581	.27	.37	.16	16 2/3	60.2	15.1	3.18	4.0	2.0	.82
20	20.25	6.06*	8.0	4.090	.360	.581	.27	.37	–	16 2/3	60.74*	15.19*	3.17*	4.08*	2.00*	.82*
14,15	20.25	5.96	8.0	4.08	.35	.581	.27	.37	.16	16 2/3	60.2	15.0	3.18	4.04	1.98*	.82
29	20.0	5.9	8.0	4.20	.32	.56	.27	.37	–	14.9*	59.9	15.0	3.22	4.33	2.06	.86
36,37	19.0	5.59	8.0	5.32	.31	.409	.20	.30	.03	8 1/3	59.2	14.8	3.26	6.45	2.42	1.08
36	18.4	5.41	8.0	4.00	.270	.581	.27	.37	.16	16 2/3	57.3	14.3	3.25	3.78	1.89	.84
7,8,10,12,13, 16,18,25,35, 37,38,39	18.4	5.34	8.0	4.00	.270	.581	.27	.37	.16	16 2/3	56.9	14.2	3.26	3.8	1.9	.84
21,	18.0	5.34*	8.0	4.000	.270	.581	.27	.37	–	16 2/3	56.90*	14.23*	3.26*	3.79*	1.90*	.84*
4,9,11,15,17, 18,22,23, 24,26,31	18.0	5.33	8.0	4.000	.270	.581	.27	.37	.162	16 2/3	56.9	14.2	3.27	3.78	1.9	.84
23,27,33	18.0	5.3	8.0	4.25	.25	.56	.26	.37	–	15.0*	57.8	14.4	3.30	4.35	2.05*	.91
19	18.0	5.3	8.0	4.250	.250	.563	.25	.375	–	15.7*	57.3	14.3	3.28	4.27	2.01*	.89
32	18.0	5.29	8.0	4.00	.27	.58	.27	–	–	16 2/3	57.36	14.3	3.29	3.72	1.86*	.84
34	18.0	5.29	8.0	4.000	.270	.581	.27	.37	.162	16 2/3	56.9	14.2	3.27	3.78	1.89*	.84
28	18.0	5.2	8.0	4.13	.25	.56	.27	.37	–	14.9*	56.8	14.2	3.30	3.95	1.91*	.87
14	17.75	5.33	8.0	4.00	.27	.581	.27	.37	.16	16 2/3	56.9	14.2	3.27	3.78	1.89*	.84
20	17.75	5.22	8.0	4.000	.270	.581	.27	.37	–	16 2/3	56.87	14.2	3.31	3.78	1.89*	.84
5	17.5	5.15	8.0	4.330	.210	.583	.24	.33	–	16 2/3	58.3	14.6	3.37	4.5	2.1	.93
6	17.5	5.12	8.0	5.000	.220	.457	.24	.18	–	9.0*	58.4	14.6	3.38	6.2	2.5	1.10
31	17.4	5.12	8.0	4.00	.26	.53	.25	–	–	15.0*	54.31	13.58	3.26	3.52	1.76*	.83
30	17.23	5.07	8.0	4.00	.26	.52	.26	.40	.20	13.9*	53.22	13.31	3.24	3.52	1.76*	.83
36,37	17.0	5.00	8.0	5.25	.24	.409	.20	.30	.03	8 1/3	56.0	14.0	3.35	6.16	2.35	1.11

THE DESIGN OF HIGHWAY BRIDGES
OF STEEL, TIMBER AND CONCRETE

BY

MILO S. KETCHUM, C.E., Sc.D.
M. AM. SOC. C. E.

DEAN OF COLLEGE OF ENGINEERING AND DIRECTOR OF ENGINEERING EXPERIMENT STATION, UNIVERSITY OF ILLINOIS; CONSULTING ENGINEER

SECOND EDITION REWRITTEN

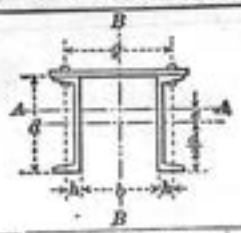
TOTAL ISSUE, 15,500

McGRAW-HILL BOOK COMPANY, INC.
NEW YORK AND LONDON
1920

TABLE 17.—*Continued.*

PROPERTIES OF TOP CHORD SECTIONS.

Properties of Top Chord Sections.



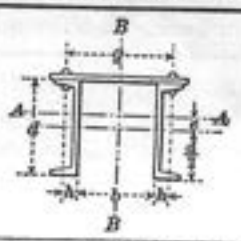
Two Channels and One Plate.

Section Number.	Channels. Depth.	Channels. Weight.	Cover Plate.	B to B Channels. b	Gross Area.	Eccentricity. e	Moments of Inertia. Axis A-A. I_A	Moments of Inertia. Axis B-B. I_B	Radii of Gyration. Axis A-A. r_A	Radii of Gyration. Axis B-B. r_B	Gages. Plate. g	Gages. Channel. h	Web of Channel.	Max. Rivet.
	In.	Lb.	In.	In.	In.²	In.	In.⁴	In.⁴	In.	In.	In.	In.	In.	In.
37	8	11.25	12×¼	7	9.70	1.28	99.9	150.2	3.21	3.93	9½	1¾	.22	¾
38			12×⅜	"	10.45	1.49	106.2	159.3	3.19	3.90	"	"	"	"
39			14×¼	9	11.08	1.64	110.4	247.2	3.16	4.72	11½	"	"	"
40			14×⅜	"	11.95	1.84	116.3	261.4	3.12	4.67	"	"	"	"
41			16×¼	11	12.70	1.98	120.2	378.5	3.08	5.46	13½	"	"	"
42			16×⅜	"	13.70	2.16	125.4	400.0	3.03	5.40	"	"	"	"
43	8	13.75	12×¼	6½	11.08	1.12	109.2	168.3	3.14	3.90	9½	1⅝	.31	¾
44			12×⅜	"	11.83	1.32	116.3	177.3	3.13	3.87	"	"	"	"
45			14×⅜	8½	12.46	1.46	121.0	276.6	3.12	4.71	11½	"	"	"
46			14×½	"	13.33	1.65	127.8	290.9	3.10	4.67	"	"	"	"
47			16×⅜	10½	14.08	1.78	132.5	421.9	3.07	5.48	13½	"	"	"
48			16×⅝	"	15.08	1.96	138.7	443.2	3.03	5.42	"	"	"	"
49	9	13.25	12×¼	6½	10.78	1.29	140.9	162.9	3.62	3.89	9½	1⅜	.23	¾
50			12×⅜	"	11.53	1.51	149.5	171.9	3.60	3.86	"	"	"	"
51			14×⅜	8½	12.16	1.68	155.3	268.2	3.57	4.70	11½	"	"	"
52			14×½	"	13.03	1.89	163.5	282.4	3.54	4.66	"	"	"	"
53			16×⅜	10½	13.78	2.04	169.1	409.9	3.50	5.45	13½	"	"	"
54			16×⅝	"	14.78	2.23	176.8	431.3	3.46	5.40	"	"	"	"
55	9	15.00	12×¼	6½	11.82	1.17	149.7	174.1	3.56	3.84	9½	1⅝	.29	¾
56			12×⅜	"	12.57	1.39	158.8	183.1	3.55	3.82	"	"	"	"
57			14×⅜	8½	13.20	1.54	165.2	287.4	3.54	4.67	11½	"	"	"
58			14×½	"	14.07	1.75	174.2	301.7	3.52	4.63	"	"	"	"
59			16×⅜	10½	14.82	1.90	180.3	439.4	3.49	5.44	13½	"	"	"
60			16×⅝	"	15.82	2.09	188.6	460.7	3.45	5.40	"	"	"	"
61	10	15.00	14×⅜	8½	13.30	1.70	211.7	289.4	3.99	4.67	11½	1½	.24	¾
62			14×½	"	14.17	1.92	222.8	303.6	3.97	4.65	"	"	"	"
63			16×⅜	10½	14.92	2.09	230.4	441.9	3.93	5.44	13½	"	"	"
64			16×⅝	"	15.92	2.30	240.6	463.9	3.89	5.39	"	"	"	"
65			18×⅝	12½	16.80	2.45	247.7	641.2	3.84	6.18	15½	"	"	"
66			18×¾	"	17.92	2.64	257.1	671.6	3.79	6.12	"	"	"	"
67	10	20.00	14×⅝	8½	16.14	1.40	242.1	341.2	3.88	4.60	11½	1⅝	.38	¾
68			14×¾	"	17.01	1.60	255.2	355.0	3.87	4.57	"	"	"	"
69			16×⅜	10½	17.76	1.75	264.4	520.4	3.86	5.41	13½	"	"	"
70			16×⅝	"	18.76	1.95	276.9	542.0	3.84	5.37	"	"	"	"
71			18×⅝	12½	19.64	2.09	286.9	752.3	3.82	6.19	15½	"	"	"
72			18×¾	"	20.76	2.28	297.8	782.7	3.79	6.14	"	"	"	"
73	10	25.00	14×⅝	7½	19.08	1.18	271.8	383.9	3.77	4.48	11½	1⅞	.53	¾
74			14×¾	"	19.95	1.37	286.2	398.2	3.79	4.47	"	"	"	"
75			16×⅜	9½	20.70	1.50	296.8	588.8	3.79	5.33	13½	"	"	"
76			16×⅝	"	21.70	1.62	313.6	610.1	3.80	5.30	"	"	"	"
77			18×⅝	11½	22.58	1.73	325.2	851.4	3.79	6.14	15½	"	"	"
78			18×¾	"	23.70	1.99	336.0	881.8	3.77	6.10	"	"	"	"

TABLE 17.—*Continued.*

PROPERTIES OF TOP CHORD SECTIONS.

Properties of Top Chord Sections.



Two Channels and One Plate.

Section Number.	Channels. Depth.	Channels. Weight.	Cover Plate.	B to B Channels. b	Total Area.	Eccentricity. e	Moments of Inertia. Axis A-A. I_A	Moments of Inertia. Axis B-B. I_B	Radii of Gyration. Axis A-A. r_A	Radii of Gyration. Axis B-B. r_B	Gages. Plate. g	Gages. Channels. h	Web of Channels.	Max. Rivet.
	In.	Lb.	In.	In.	In.²	In.	In.⁴	In.⁴	In.	In.	In.	In.	In.	In.
79	12	20.50	16×⅜	9½	18.06	2.06	409.8	485.8	4.76	5.19	13	1⅝	.28	¾
80			16×⅞	"	19.06	2.28	427.6	507.1	4.74	5.16	"	"	"	"
81			18×⅜	11½	18.91	2.21	422.4	682.1	4.73	6.00	15	"	"	"
82			18×⅞	"	19.94	2.46	440.6	712.4	4.70	5.98	"	"	"	"
83			20×⅞	13½	20.81	2.62	452.5	957.5	4.66	6.78	17	"	"	"
84			20×1	"	22.06	2.83	469.8	999.1	4.61	6.73	"	"	"	"
85	12	25.00	16×⅜	9½	20.70	1.79	451.4	550.0	4.67	5.16	13	1⅞	.39	¾
86			16×⅞	"	21.70	2.01	471.5	571.3	4.66	5.13	"	"	"	"
87			18×⅜	11½	21.45	1.95	465.1	774.9	4.66	6.01	15	"	"	"
88			18×⅞	"	22.58	2.17	486.5	805.2	4.64	5.98	"	"	"	"
89			20×⅞	13½	23.45	2.32	500.3	1084.7	4.62	6.80	17	"	"	"
90			20×1	"	24.70	2.53	520.5	1126.3	4.59	6.75	"	"	"	"
91	12	30.00	16×⅜	9	23.64	1.57	494.9	611.4	4.58	5.08	13	2	.51	¾
92			16×⅞	"	24.64	1.77	517.3	632.7	4.58	5.06	"	"	"	"
93			18×⅜	11	24.39	1.71	510.1	865.7	4.57	5.96	15	"	"	"
94			18×⅞	"	25.52	1.92	534.1	896.0	4.58	5.93	"	"	"	"
95			20×⅞	13	26.39	2.06	549.8	1211.1	4.56	6.78	17	"	"	"
96			20×1	"	27.64	2.34	567.6	1252.7	4.53	6.73	"	"	"	"
97	15	33.00	18×⅜	10½	26.55	1.96	922.8	936.7	5.90	5.94	15	2⅜	.40	¾
98			18×⅞	"	27.68	2.20	961.0	967.0	5.89	5.91	"	"	"	"
99			20×⅞	12½	28.55	2.36	986.7	1307.1	5.88	6.76	17	"	"	"
100			20×1	"	29.80	2.60	1024.5	1348.7	5.86	6.72	"	"	"	"
101			22×⅞	14½	30.80	2.77	1050.2	1761.1	5.84	7.56	19	"	"	"
102			22×1⅛	"	32.18	3.00	1085.5	1816.5	5.81	7.50	"	"	"	"
103	15	35.00	18×⅜	10½	27.35	1.90	940.5	965.7	5.87	5.95	15	2⅜	.43	¾
104			18×⅞	"	28.46	2.14	979.7	996.0	5.87	5.92	"	"	"	"
105			20×⅞	12½	29.33	2.30	1005.6	1346.7	5.86	6.78	17	"	"	"
106			20×1	"	30.58	2.53	1044.4	1388.3	5.84	6.74	"	"	"	"
107			22×⅞	14½	31.58	2.70	1070.8	1811.7	5.82	7.58	19	"	"	"
108			22×1⅛	"	32.96	2.92	1107.9	1867.1	5.79	7.52	"	"	"	"
109	15	40.00	18×⅜	10½	30.27	1.71	1005.1	1039.3	5.76	5.86	15	2⅜	.52	¾
110			18×⅞	"	31.40	1.94	1047.0	1069.6	5.77	5.84	"	"	"	"
111			20×⅞	12½	32.27	2.09	1074.8	1453.5	5.77	6.71	17	"	"	"
112			20×1	"	33.52	2.31	1116.7	1495.1	5.77	6.68	"	"	"	"
113			22×⅞	14½	34.52	2.47	1145.4	1956.5	5.76	7.52	19	"	"	"
114			22×1⅛	"	35.90	2.68	1186.2	2011.9	5.75	7.48	"	"	"	"
115	15	45.00	18×⅜	10½	33.23	1.56	1068.2	1127.9	5.67	5.82	15	2⅛	.62	¾
116			18×⅞	"	34.36	1.77	1112.0	1158.2	5.69	5.81	"	"	"	"
117			20×⅞	12½	35.23	1.92	1141.9	1577.3	5.69	6.69	17	"	"	"
118			20×1	"	36.48	2.12	1186.4	1618.9	5.70	6.66	"	"	"	"
119			22×⅞	14½	37.48	2.28	1217.2	2120.7	5.70	7.52	19	"	"	"
120			22×1⅛	"	38.86	2.48	1260.6	2176.1	5.70	7.48	"	"	"	"

Appendix 2.A.1

Year of Construction - Allowable Stress Stored
(All in psi)

for

Ohio Department of Transportation

Material	Year of Construction	F_y (psi)	Type of Rating		
			Inventory	Operating	Posting
Structrual Steel	Before 1900	26,000	14,000	19,000	19,000
	1900 to 1930	30,000	16,000	22,000	22,000
	1931 to 1965	33,000	18,000	25,000	25,000
	1966 to date	36,000	20,000	27,000	27,000
			0.55 Design	0.75 Overload	Post (same)
Reinforced Steel	Before 1935	32,000	16,000	25,000	25,000
	1935 to 1950	36,000	18,000	27,000	27,000
	1951 to date	40,000	20,000	29,000	29,000
		f'_c			
Cast-In-Place Concrete Reinforced (Compression in Bending)	Before 1930	2,000	700	1,300	1,300
	1930 to 1950	3,000	1,000	1,500	1,500
	1951 to date	4,000	1,300	2,000	2,000
Timber (Flexural Bending)	All Years	- -	1,600	2,133	2,133

TRAP FILE FOR PEDESTRIAN LOADING (40)


```
0101
0101
0102   TRUSS (L = 104.0 FT  W = 14 FT),  ANALYSIS  DATE  5-29-25
0103
0103      3        2
0104
0104104.00                                        14.0     .02     18.0   1.2
0105
0105   3                                  1.75          0.01
0301
0301HL-93          HL-93
0302
0302H-10           H-10
0303
0303 1   4.0    1 14.0    2 16.0
0401
0401   1      .00      .00 1 1
0401   2   17.33      .00         17.33  18.00
0401   3   34.67      .00         34.67  18.00
0401   4   52.00      .00         52.00  18.00
0401   5   69.33      .00         69.33  18.00
0401   6   86.67      .00         86.67  18.00
0401   7  104.00      .00    1
0501
0501   1L   1L   2      1    .0    .43 3.0   4.5    4.5   30.
0501   2L   2L   3                 .43 3.0   4.5    4.5   30.
0501   3L   3L   4                 .58 4.0   8.0    8.0   30.
0501   4L   4L   5                 .58 4.0   8.0    8.0   30.
0501   5L   5L   6                 .43 3.0   4.5    4.5   30.
0501   6L   6L   7      7    .0    .43 3.0   4.5    4.5   30.
0501   7U   2U   3                3.19 8.0  10.4   10.4   30.
0501   8U   3U   4                3.19 8.0  10.4   10.4   30.
0501   9U   4U   5                3.19 8.0  10.4   10.4   30.
0501  10U   5U   6                3.19 8.0  10.4   10.4   30.
0501  11L   2U   2      2 18.00    .36 2.0   2.5    2.5   30.
0501  12L   3U   3      3 18.00   2.34 6.0   4.8    4.8   30.
0501  13L   4U   4      4 18.00   1.95 5.0   3.9    3.9   30.
0501  14L   5U   5      5 18.00   2.34 6.0   4.8    4.8   30.
0501  15L   6U   6      6 18.00    .36 2.0   2.5    2.5   30.
0501  16L   1U   2                3.19 8.0  10.4   10.4   30.
0501  17U   2L   3                 .58 3.0   4.5    4.5   30.
0501  18U   3L   4                 .36 2.0   2.5    2.5   30.
0501  19L   4U   5                 .36 2.0   2.5    2.5   30.
0501  20L   5U   6                 .58 3.0   4.5    4.5   30.
0501  21U   6L   7                3.19 8.0  10.4   10.4   30.
0601
0601   1   .120      .01 104.00
0602
0602   1   .200      .01 104.00
0603
0603   1   .880      .01 104.00
0604
0604   1   .210      .01 104.00
```

- 104.00 — LENGTH
- 3 — LRFD
- VEHICLE LL FACTOR — 1.75
- WIDTH — 14.0
- PEDESTRIAN OFFSET FACTOR — .02
- DEAD LOAD DETAIL FACTOR — 1.2
- VEHICLE IMPACT FACTOR — 0.01
- H-10 VEHICE
- H-10 AXLE WEIGHTS
- X, Y — BOTTOM CHORD
- X, Y — TOP CHORD
- MEMBER, T. VALUE, AREA, Fy
- BOTTOM CHORD: 2 - 3/4" × 3"; 2 - 1" × 4"; 2 - 3/4" × 3"
- TOP CHORD: 2 - C8 × 11.25 + PL 5/16" × 12"
- VERTICALS: 2 - 5/8" × 2"; 2 - C6 × 8.2; 2 - C5 × 6.7; 2 - C6 × 8.2; 2 - 5/8" × 2"
- 2 - C8 × 11.25 + PL 5/16" × 12"
- DIAGONALS: 2 - 3/4" × 3"; 2 - 5/8" × 2"; 2 - 3/4" × 3"
- 2 - C8 × 11.25 + PL 5/16" × 12"
- KLF

LINE 601 FLOOR FRAMING DL (KLF) (FLOOR BEAMS & STRINGERS)

LINE 602. WOOD FLOOR DL (KLF)
$\frac{1}{2} \times .025 \text{ KSF} \times 16' = .200 \text{ KLF}$

LINE 603 PEDESTRIAN LL (KLF)
$\frac{1}{2} \times .090 \text{ KSF} \times 14' \times \frac{1.75}{1.25} = .880 \text{ KLF}$

LINE 604 2" ASPHALT SURFACING (KLF)
$\frac{1}{2} \times .025 \text{ KSF} \times 14' \times \frac{1.5}{1.25} = .210 \text{ KLF}$

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CONFORMS TO AASHTO SPEC. 17TH ED. W/UP TO 2003 INTERIM WITH LOAD FACTOR DESIGN
& AASHTO LRFD SPEC. 3RD ED. 2004, W/UP TO 2006 INTERIM
& 1994 AASHTO MANUAL FOR CONDITION EVALUATION OF BRIDGES W/UP TO 1998 INTERIM

TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

ALL INFORMATION PRESENTED IS FOR REVIEW,APPROVAL,
INTERPRETATION AND APPLICATION BY A REGISTERED
ENGINEER ONLY

TABLE 1.1 SYSTEM INPUT

PROGRAM OPTIONS

OUTPUT OPTION	SYSTEM OPTION	MOD. OF ELAS. (KSI)	WIND INTS. (KSF)	CABLE OPTION	UNITS (ENG/SI)
3	2	0.00	0.00000	0	0

GENERAL TRUSS CONFIGURATION

SPAN LENGTHS

SPAN 1 (FEET)
104.00

CONFIGURATION DETAILS

DISTFACT OPTION

CURB DISTANCE (FT)	DIST FACT	DISTANCE BETWEEN TRUSSES (FT)	DEAD LOAD DETAIL FACTOR
14.00	0.020	18.000	1.200

DESIGN METHOD & LOAD/RESISTANCE FACTORS

METHOD	LFD or LRFD				LRFD	All
NSD (0)	Dead	Prestr	Live Load	Factor	Tension	Impact

LFD (1) LRFD(2/3) (2 = AASHTO Guide, 3 = AASHTO LRFD Spec.)	Load Factor	Load Factor	for AASHTO	for State	for Overld	Red. O Factor	Factor
3	1.25	1.00	1.75	1.35	1.32	1.00	0.00

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TRUSS RATING AND ANALYSIS PROGRAM (TRAP) PAGE 2
TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 1.2 GENERAL LIVE LOAD AND RATING DATA

AASHTO LIVE LOAD

INVENTORY RATING DATA AASHTO LOAD NAME	ALLOWABLE STRESS FACTOR MEMBER	CABLE	OPERATING RATING DATA AASHTO LOAD NAME	ALLOWABLE STRESS FACTOR MEMBER	CABLE	INTERSTATE (MILITARY) LOADING 1=Y,0=N
HL-93	0.00	0.00	HL-93	0.00	0.00	0

STATE VEHICULAR LOADINGS

VEHICLE 1 NAME	VEHICLE 2 NAME	VEHICLE 3 NAME	ALLOW STRESS FACTOR MEMBER	CABLE
			0.00	0.00

1

TRUSS RATING AND ANALYSIS PROGRAM (TRAP) PAGE 3
TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 1.3 SPECIAL LIVE LOAD DATA

SPECIAL TRUCK INFORMATION

VEHICLE NAME	SPECIAL TRUCK GENERAL DESCRIPTION	ALLOW STRESS FACTOR MEMBER	CABLE	COMB 2ND LANE OPT. 1=YES	DISTRIB. FACTOR
H-10	H-10	0.000	0.000	0	0.000

SPECIAL TRUCK - AXLE WEIGHTS AND SPACINGS

NO WEIGHT (KIPS)	NO DISTANCE (FEET)	NO WEIGHT (KIPS)	NO DISTANCE (FEET)	NO WEIGHT (KIPS)	NO DISTANCE (FEET)
1 4.00	1 14.00	2 16.00			

1

TRUSS RATING AND ANALYSIS PROGRAM (TRAP) PAGE 4
TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 1.5 PANEL POINT DATA

PP NO	LOWER PANEL POINT X-COOR (FT)	Y-COOR (FT)	RE XY	UPPER PANEL POINT X-COOR (FT)	Y-COOR (FT)	RE XY	ADDITIONAL POINT A X-COOR (FT)	Y-COOR (FT)	RE XY	ADDITIONAL POINT B X-COOR (FT)	Y-COOR (FT)	RE XY
1	0.00	0.000	11	0.00	0.000	00	0.00	0.000	00	0.00	0.000	00
2	17.33	0.000	00	17.33	18.000	00	0.00	0.000	00	0.00	0.000	00
3	34.67	0.000	00	34.67	18.000	00	0.00	0.000	00	0.00	0.000	00
4	52.00	0.000	00	52.00	18.000	00	0.00	0.000	00	0.00	0.000	00
5	69.33	0.000	00	69.33	18.000	00	0.00	0.000	00	0.00	0.000	00
6	86.67	0.000	00	86.67	18.000	00	0.00	0.000	00	0.00	0.000	00
7	104.00	0.000	01	0.00	0.000	00	0.00	0.000	00	0.00	0.000	00

1

TABLE 1.6 MEMBER DATA

MEM NO	LCTN FRM	LCTN TO	MEM REL	LOADED MEM SEQ NO	LOADED MEM DEX LCN (FT)	MIN R GYRATON (IN)	MEM DEPTH (IN)	MEMBER AREA GROSS (SQIN)	MEMBER AREA NET	YIELD STRSS (KSI)	INF LIN OPT	EFF LNG FAC	TEMP CHNG
1	L 1	L 2	0	1	0.00	0.43	3.00	4.5	4.5	30.0	0	1.00	0.0
2	L 2	L 3	0	0	0.00	0.43	3.00	4.5	4.5	30.0	0	1.00	0.0
3	L 3	L 4	0	0	0.00	0.58	4.00	8.0	8.0	30.0	0	1.00	0.0
4	L 4	L 5	0	0	0.00	0.58	4.00	8.0	8.0	30.0	0	1.00	0.0
5	L 5	L 6	0	0	0.00	0.43	3.00	4.5	4.5	30.0	0	1.00	0.0
6	L 6	L 7	0	7	0.00	0.43	3.00	4.5	4.5	30.0	0	1.00	0.0
7	U 2	U 3	0	0	0.00	3.19	8.00	10.4	10.4	30.0	0	1.00	0.0
8	U 3	U 4	0	0	0.00	3.19	8.00	10.4	10.4	30.0	0	1.00	0.0
9	U 4	U 5	0	0	0.00	3.19	8.00	10.4	10.4	30.0	0	1.00	0.0
10	U 5	U 6	0	0	0.00	3.19	8.00	10.4	10.4	30.0	0	1.00	0.0
11	L 2	U 2	0	2	18.00	0.36	2.00	2.5	2.5	30.0	0	1.00	0.0
12	L 3	U 3	0	3	18.00	2.34	6.00	4.8	4.8	30.0	0	1.00	0.0
13	L 4	U 4	0	4	19.00	1.95	5.00	3.9	3.9	30.0	0	1.00	0.0
14	L 5	U 5	0	5	18.00	2.34	6.00	4.8	4.8	30.0	0	1.00	0.0
15	L 6	U 6	0	6	18.00	0.36	2.00	2.5	2.5	30.0	0	1.00	0.0
16	L 1	U 2	0	0	0.00	3.19	8.00	10.4	10.4	30.0	0	1.00	0.0
17	U 2	L 3	0	0	0.00	0.58	3.00	4.5	4.5	30.0	0	1.00	0.0
18	U 3	L 4	0	0	0.00	0.36	2.00	2.5	2.5	30.0	0	1.00	0.0
19	L 4	U 5	0	0	0.00	0.36	2.00	2.5	2.5	30.0	0	1.00	0.0
20	L 5	U 6	0	0	0.00	0.58	3.00	4.5	4.5	30.0	0	1.00	0.0
21	U 6	L 7	0	0	0.00	3.19	8.00	10.4	10.4	30.0	0	1.00	0.0

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TABLE 1.7 UNIFORM DEAD LOAD DATA

UNIFORM LOADS DUE TO FLOOR STEEL

NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)
1	0.120	0.01	104.00	0	0.000	0.00	0.00	0	0.000	0.00	0.00

UNIFORM LOADS DUE TO SLAB + W.S.

NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)
1	0.200	0.01	104.00	0	0.000	0.00	0.00	0	0.000	0.00	0.00

UNIFORM LOADS DUE TO RAILING + CURB

NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)
1	0.880	0.01	104.00	0	0.000	0.00	0.00	0	0.000	0.00	0.00

UNIFORM LOADS DUE TO UTILITY + ACCESS

NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)
1	0.210	0.01	104.00	0	0.000	0.00	0.00	0	0.000	0.00	0.00

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TABLE 2.1 TRUSS HEIGHTS

42

PANEL POINT NO	TRUSS HEIGHT (FT)	PANEL POINT NO	TRUSS HEIGHT (FT)	PANEL POINT NO	TRUSS HEIGHT (FT)	PANEL POINT NO	TRUSS HEIGHT (FT)	PANEL POINT NO	TRUSS HEIGHT (FT)
1	0.000	2	18.000	3	18.000	4	18.000	5	18.000
6	18.000	7	0.000						

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 2.2 GEOMETRIC DATA FOR LOWER CHORD MEMBERS

MEMBER	MEMBER LENGTH	MEMBER AXIS TO GRADE LINE	
	(FT or m)	SECANT OF THE ANGLE	TANGENT OF THE ANGLE
L 1 L 2	17.33	1.0000	0.0000
L 2 L 3	17.34	1.0000	0.0000
L 3 L 4	17.33	1.0000	0.0000
L 4 L 5	17.33	1.0000	0.0000
L 5 L 6	17.34	1.0000	0.0000
L 6 L 7	17.33	1.0000	0.0000

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TABLE 2.3 GEOMETRIC DATA FOR UPPER CHORD MEMBERS

MEMBER	MEMBER LENGTH	MEMBER AXIS TO GRADE LINE	
	(FT or m)	SECANT OF THE ANGLE	TANGENT OF THE ANGLE
U 2 U 3	17.34	1.0000	0.0000
U 3 U 4	17.33	1.0000	0.0000

U 4 U 5	17.33	1.0000	0.0000
U 5 U 6	17.34	1.0000	0.0000

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TABLE 2.5 GEOMETRIC DATA FOR VERTICAL MEMBERS

MEMBER	MEMBER LENGTH	MEMBER AXIS TO GRADE LINE	
	(FT or m)	SECANT OF THE ANGLE	TANGENT OF THE ANGLE
L 2 U 2	18.00	N/A	N/A
L 3 U 3	18.00	N/A	N/A
L 4 U 4	18.00	N/A	N/A
L 5 U 5	18.00	N/A	N/A
L 6 U 6	18.00	N/A	N/A

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 2.6 GEOMETRIC DATA FOR DIAGONAL MEMBERS

MEMBER	MEMBER LENGTH	MEMBER AXIS TO GRADE LINE	
	(FT or m)	SECANT OF THE ANGLE	TANGENT OF THE ANGLE
L 1 U 2	24.99	1.4418	1.0387
U 2 L 3	24.99	1.4414	-1.0381
U 3 L 4	24.99	1.4418	-1.0387
L 4 U 5	24.99	1.4418	1.0387
L 5 U 6	24.99	1.4414	1.0381
U 6 L 7	24.99	1.4418	-1.0387

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.1 DEAD LOADS AT LOWER PANEL POINTS

PP NO	FLOOR STEEL (K)	SLAB + WS (K)	RAILING + CURB (K)	UTILITY + ACCESS (K)	TRUSS DL (K)	BRACING DL (K)	ADDITIONAL DL (K)	TOTAL DL (K)
L 1	1.04	1.73	7.62	1.82	0.69	0.00	0.00	12.89
L 2	2.08	3.47	15.25	3.64	0.41	0.00	0.00	24.85
L 3	2.08	3.47	15.27	3.64	0.85	0.00	0.00	25.31
L 4	2.20	3.66	16.12	3.85	0.96	0.00	0.00	26.80
L 5	2.08	3.47	15.27	3.64	0.85	0.00	0.00	25.31
L 6	2.08	3.47	15.25	3.64	0.41	0.00	0.00	24.85
L 7	1.04	1.73	7.63	1.82	0.69	0.00	0.00	12.91

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.2 DEAD LOADS AT UPPER PANEL POINTS

PP NO	FLOOR STEEL (K)	SLAB + WS (K)	RAILING + CURB (K)	UTILITY + ACCESS (K)	TRUSS DL (K)	BRACING DL (K)	ADDITIONAL DL (K)	TOTAL DL (K)
U 2	0.00	0.00	0.00	0.00	1.22	0.00	0.00	1.22
U 3	0.00	0.00	0.00	0.00	1.04	0.00	0.00	1.04
U 4	-0.12	-0.19	-0.85	-0.20	0.88	0.00	0.00	-0.48
U 5	0.00	0.00	0.00	0.00	1.04	0.00	0.00	1.04
U 6	0.00	0.00	0.00	0.00	1.22	0.00	0.00	1.22

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TABLE 3.5 DEAD LOAD DEFLECTIONS (UNFACTORED)

LOWER PANEL POINT DEFLECTIONS

PANEL POINT NO	DEFLECTIONS DUE TO TOTAL STEEL: PP LOAD (K)	HORIZONTAL DEFLECTION (IN)	VERTICAL DEFLECTION (IN)	TOTAL DEAD LOAD DEFLECTIONS: PP LOAD (K)	HORIZONTAL DEFLECTION (IN)	VERTICAL DEFLECTION (IN)
L 1	1.73	0.0000	0.0000	12.89	0.0000	0.0000
L 2	2.49	0.0148	0.0885	24.85	0.1006	0.4237
L 3	2.93	0.0296	0.1415	25.31	0.2013	0.9550
L 4	3.16	0.0431	0.1731	26.80	0.2920	1.1575
L 5	2.93	0.0565	0.1415	25.31	0.3827	0.9550
L 6	2.49	0.0713	0.0885	24.85	0.4834	0.6237
L 7	1.73	0.0861	0.0000	12.91	0.5840	0.0000

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TABLE 3.6 DEAD LOAD DEFLECTIONS (UNFACTORED)

UPPER PANEL POINT DEFLECTIONS

PANEL POINT NO	DEFLECTIONS DUE TO TOTAL STEEL: PP LOAD (K)	HORIZONTAL DEFLECTION (IN)	VERTICAL DEFLECTION (IN)	TOTAL DEAD LOAD DEFLECTIONS: PP LOAD (K)	HORIZONTAL DEFLECTION (IN)	VERTICAL DEFLECTION (IN)
U 2	1.22	0.0650	0.0811	1.22	0.4404	0.5496
U 3	1.04	0.0547	0.1462	1.04	0.3705	0.9770
U 4	0.76	0.0431	0.1745	-0.48	0.2920	1.1566
U 5	1.04	0.0314	0.1462	1.04	0.2135	0.9770
U 6	1.22	0.0211	0.0811	1.22	0.1437	0.5496

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TABLE 3.9 DEAD LOAD FORCES AND ADJUSTED LENGTHS IN LOWER CHORD (UNFACTORED)

TOTAL STEEL TOTAL DEAD LOAD

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MEMBER	TOTAL STEEL FORCE (K)	TOTAL STEEL ADJ LENGTH (FT)	TOTAL DEAD LOAD FORCE (K)	TOTAL DEAD LOAD ADJ LENGTH (FT)
L 1 L 2	9.3	17.3312	63.1	17.3384
L 2 L 3	9.3	17.3412	63.1	17.3484
L 3 L 4	15.0	17.3311	101.2	17.3376
L 4 L 5	15.0	17.3311	101.2	17.3376
L 5 L 6	9.3	17.3412	63.1	17.3484
L 6 L 7	9.3	17.3312	63.1	17.3384

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.10 DEAD LOAD FORCES AND ADJUSTED LENGTHS IN UPPER CHORD (UNFACTORED)

MEMBER	TOTAL STEEL FORCE (K)	TOTAL STEEL ADJ LENGTH (FT)	TOTAL DEAD LOAD FORCE (K)	TOTAL DEAD LOAD ADJ LENGTH (FT)
U 2 U 3	-15.0	17.3391	-101.2	17.3342
U 3 U 4	-16.9	17.3290	-113.9	17.3235
U 4 U 5	-16.9	17.3290	-113.9	17.3235
U 5 U 6	-15.0	17.3391	-101.2	17.3342

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TABLE 3.12 DEAD LOAD FORCES AND ADJUSTED LENGTHS IN VERT. MEMBERS (UNFACTORED)

MEMBER	TOTAL STEEL FORCE TOP (K)	TOTAL STEEL FORCE BOTTOM (K)	TOTAL STEEL ADJ LENGTH (FT)	TOTAL DEAD LOAD FORCE TOP (K)	TOTAL DEAD LOAD FORCE BOTTOM (K)	TOTAL DEAD LOAD ADJ LENGTH (FT)
L 2 U 2	2.5	1.5	17.9994	24.9	12.6	17.9938
L 3 U 3	-3.0	-5.1	18.0004	-14.2	-38.7	18.0018
L 4 U 4	-0.9	-3.0	18.0001	-0.9	-25.4	17.9999
L 5 U 5	-3.0	-5.1	18.0004	-14.2	-38.7	18.0018
L 6 U 6	2.5	1.5	17.9994	24.9	12.6	17.9938

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.13 DEAD LOAD FORCES AND ADJUSTED LENGTHS IN DIAG. MEMBERS (UNFACTORED)

MEMBER	TOTAL STEEL FORCE (K)	TOTAL STEEL ADJ LENGTH (FT)	TOTAL DEAD LOAD FORCE (K)	TOTAL DEAD LOAD ADJ LENGTH (FT)
L 1 U 2	-13.4	24.9855	-91.0	24.9790
U 2 L 3	8.2	24.9951	54.9	25.0040
U 3 L 4	2.7	24.9875	18.3	24.9929
L 4 U 5	2.7	24.9875	18.3	24.9929
L 5 U 6	8.2	24.9951	54.9	25.0040
U 6 L 7	-13.4	24.9855	-91.0	24.9790

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.14 DEAD LOAD REACTIONS (UNFACTORED)

PANEL POINT NO	TOTAL STEEL REACTIONS HORIZONTAL (K or KN)	TOTAL STEEL REACTIONS VERTICAL (K or KN)	TOTAL DEAD LOAD REACTIONS HORIZONTAL (K or KN)	TOTAL DEAD LOAD REACTIONS VERTICAL (K or KN)
L 1	0.00	11.37	0.00	78.48
L 7	0.00	11.37	0.00	78.49

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TABLE 3.15 TOTAL TRUSS STEEL WEIGHT

TRUSS STEEL (K)	FLOOR STEEL (K)	BRACING STEEL (K)	TOTAL (K)
10.3	12.5	0.0	22.7

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TABLE 4.0 OUTPUT LANE FACTOR

LIVE LOAD OUTPUT

LANE FACTOR TO TRUSS = 0.0200

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TABLE 4.2 REACTION INFLUENCE LINE VALUE

INFLUENCE LINE ORDINATES FOR SUPPORT POINT REACTION NO. 1

PP NO	ORDINATE	PP NO	ORDINATE	PP NO	ORDINATE	PP NO	ORDINATE	PP NO	ORDINATE
1	1.000	2	0.833	3	0.667	4	0.500	5	0.333
6	0.167	7	0.000						

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TABLE 4.2 REACTION INFLUENCE LINE VALUE

INFLUENCE LINE ORDINATES FOR SUPPORT POINT REACTION NO. 2

PP NO	ORDINATE	PP NO	ORDINATE	PP NO	ORDINATE	PP NO	ORDINATE	PP NO	ORDINATE
1	0.000	2	0.167	3	0.333	4	0.500	5	0.667
6	0.833	7	1.000						

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TABLE 5.1 MAXIMUM LIVE LOAD FORCE IN LOWER CHORDS (UNFACTORED)

ASSHTO LOADING RESULTS

MEMBER	MAX TENSILE FORCE			MAX COMPRESSIVE FORCE		
	LL (K)	LL+I (K)	LOAD TYPE	LL (K)	LL+I (K)	LOAD TYPE
L 1 L 2	1.56	1.91	HL	0.00	0.00	HL
L 2 L 3	1.56	1.91	HL	0.00	0.00	HL
L 3 L 4	2.45	2.98	HL	0.00	0.00	HL
L 4 L 5	2.45	2.98	HL	0.00	0.00	HL
L 5 L 6	1.56	1.91	HL	0.00	0.00	HL
L 6 L 7	1.56	1.91	HL	0.00	0.00	HL

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TABLE 5.2 MAXIMUM LIVE LOAD FORCE IN UPPER CHORDS (UNFACTORED)

ASSHTO LOADING RESULTS

MEMBER	MAX TENSILE FORCE			MAX COMPRESSIVE FORCE		
	LL (K)	LL+I (K)	LOAD TYPE	LL (K)	LL+I (K)	LOAD TYPE
U 2 U 3	0.00	0.00	HL	-2.45	-2.98	HL
U 3 U 4	0.00	0.00	HL	-2.73	-3.31	HL
U 4 U 5	0.00	0.00	HL	-2.73	-3.31	HL
U 5 U 6	0.00	0.00	HL	-2.45	-2.98	HL

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TABLE 5.4 MAXIMUM LIVE LOAD FORCE IN VERTICAL MEMBERS (UNFACTORED)

AASHTO LOADING RESULTS

MEMBER	MAX TENSILE FORCE			MAX COMPRESSIVE FORCE		
	LL (K)	LL+I (K)	LOAD TYPE	LL (K)	LL+I (K)	LOAD TYPE
L 2 U 2 T	1.02	1.28	HL	0.00	0.00	HL
L 2 U 2 B	0.00	0.00	HL	0.00	0.00	HL
L 3 U 3 T	0.44	0.56	HL	-0.79	-0.99	HL
L 3 U 3 B	0.15	0.19	HL	-1.19	-1.46	HL
L 4 U 4 T	0.00	0.00	HL	0.00	0.00	HL
L 4 U 4 B	0.00	0.00	HL	-1.02	-1.28	HL
L 5 U 5 T	0.44	0.56	HL	-0.79	-0.99	HL
L 5 U 5 B	0.15	0.19	HL	-1.19	-1.46	HL
L 6 U 6 T	1.02	1.28	HL	0.00	0.00	HL
L 6 U 6 B	0.00	0.00	HL	0.00	0.00	HL

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TABLE 5.5 MAXIMUM LIVE LOAD FORCE IN DIAGONAL MEMBERS (UNFACTORED)

AASHTO LOADING RESULTS

MEMBER	MAX TENSILE FORCE			MAX COMPRESSIVE FORCE		
	LL (K)	LL+I (K)	LOAD TYPE	LL (K)	LL+I (K)	LOAD TYPE
L 1 U 2	0.00	0.00	HL	-2.26	-2.75	HL
U 2 L 3	1.65	2.03	HL	-0.21	-0.27	HL
U 3 L 4	1.10	1.37	HL	-0.61	-0.77	HL
L 4 U 5	1.10	1.37	HL	-0.61	-0.77	HL
L 5 U 6	1.65	2.03	HL	-0.21	-0.27	HL
U 6 L 7	0.00	0.00	HL	-2.26	-2.75	HL

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TABLE 5.7 MAXIMUM LIVE LOAD REACTIONS (UNFACTORED)

AASHTO LOADING RESULTS

PP NO	MAX POSITIVE REACTIONS			MAX NEGATIVE REACTIONS		
	LL (K)	LL + I (K)	LOAD TYPE	LL (K)	LL + I (K)	LOAD TYPE
L 1	2.0	2.4	HS	0.0	0.0	
L 7	2.0	2.4	HS	0.0	0.0	

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TABLE 5.8 VERTICAL DEFLECTIONS(LL+I) (UNFACTORED)

AASHTO LOADING RESULTS

PP NO	MAX POS DEFL (IN)	LOAD TYPE	MAX NEG DEFL (IN)	LOAD TYPE	ALLOWABLE DEFLECTION (IN)
L 1	0.0000	HL	0.0000	HL	0.0000
L 2	0.0191	HL	0.0000	HL	1.5600
L 3	0.0282	HL	0.0000	HL	1.5600
L 4	0.0340	HL	0.0000	HL	1.5600
L 5	0.0282	HL	0.0000	HL	1.5600
L 6	0.0191	HL	0.0000	HL	1.5600
L 7	0.0138	HL	0.0000	HL	0.0000

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TABLE 9.1 MAXIMUM LIVE LOAD FORCE IN LOWER CHORDS (UNFACTORED)

(FOR TRUCK 4)

MEMBER	MAX TENSILE FORCE			MAX COMPRESSIVE FORCE		
	LL (K)	LL+I (K)	LOAD TYPE	LL (K)	LL+I (K)	LOAD TYPE
L 1 L 2	0.31	0.41	S1	0.00	0.00	S1
L 2 L 3	0.31	0.41	S1	0.00	0.00	S1
L 3 L 4	0.49	0.66	S1	0.00	0.00	S1
L 4 L 5	0.49	0.66	S1	0.00	0.00	S1

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L 5 L 6	0.31	0.41	S1	0.00	0.00	S1
L 6 L 7	0.31	0.41	S1	0.00	0.00	S1

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TABLE 9.2 MAXIMUM LIVE LOAD FORCE IN UPPER CHORDS (UNFACTORED)

(FOR TRUCK 4)

MEMBER	MAX TENSILE FORCE LL (K)	MAX TENSILE FORCE LL+I (K)	LOAD TYPE	MAX COMPRESSIVE FORCE LL (K)	MAX COMPRESSIVE FORCE LL+I (K)	LOAD TYPE
U 2 U 3	0.00	0.00	S1	-0.49	-0.66	S1
U 3 U 4	0.00	0.00	S1	-0.55	-0.73	S1
U 4 U 5	0.00	0.00	S1	-0.55	-0.73	S1
U 5 U 6	0.00	0.00	S1	-0.49	-0.66	S1

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TABLE 9.4 MAXIMUM LIVE LOAD FORCE IN VERTICAL MEMBERS (UNFACTORED)

(FOR TRUCK 4)

MEMBER	MAX TENSILE FORCE LL (K)	MAX TENSILE FORCE LL+I (K)	LOAD TYPE	MAX COMPRESSIVE FORCE LL (K)	MAX COMPRESSIVE FORCE LL+I (K)	LOAD TYPE
L 2 U 2 T	0.34	0.45	S1	0.00	0.00	S1
L 2 U 2 B	0.00	0.00	S1	0.00	0.00	S1
L 3 U 3 T	0.12	0.16	S1	-0.19	-0.25	S1
L 3 U 3 B	0.06	0.07	S1	-0.26	-0.34	S1
L 4 U 4 T	0.00	0.00	S1	0.00	0.00	S1
L 4 U 4 B	0.00	0.00	S1	-0.34	-0.45	S1
L 5 U 5 T	0.12	0.16	S1	-0.19	-0.25	S1
L 5 U 5 B	0.06	0.07	S1	-0.26	-0.34	S1
L 6 U 6 T	0.34	0.45	S1	0.00	0.00	S1
L 6 U 6 B	0.00	0.00	S1	0.00	0.00	S1

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TABLE 9.5 MAXIMUM LIVE LOAD FORCE IN DIAGONAL MEMBERS (UNFACTORED)

(FOR TRUCK 4)

MEMBER	MAX TENSILE FORCE LL (K)	MAX TENSILE FORCE LL+I (K)	LOAD TYPE	MAX COMPRESSIVE FORCE LL (K)	MAX COMPRESSIVE FORCE LL+I (K)	LOAD TYPE
L 1 U 2	0.00	0.00	S1	-0.45	-0.60	S1
U 2 L 3	0.36	0.47	S1	-0.08	-0.10	S1
U 3 L 4	0.26	0.35	S1	-0.17	-0.23	S1
L 4 U 5	0.26	0.35	S1	-0.17	-0.23	S1
L 5 U 6	0.36	0.47	S1	-0.08	-0.10	S1
U 6 L 7	0.00	0.00	S1	-0.45	-0.60	S1

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TABLE 9.7 MAXIMUM LIVE LOAD REACTIONS (UNFACTORED)

(FOR TRUCK 4)

PP NO	MAX POSITIVE REACTIONS LL (K)	MAX POSITIVE REACTIONS LL + I (K)	LOAD TYPE	MAX NEGATIVE REACTIONS LL (K)	MAX NEGATIVE REACTIONS LL + I (K)	LOAD TYPE
L 1	0.4	0.5	S1	0.0	0.0	S1
L 7	0.4	0.5	S1	0.0	0.0	S1

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TABLE 9.8 VERTICAL DEFLECTIONS(LL+I) (UNFACTORED)

(FOR TRUCK 4)

PP NO	MAX POS DEFL (IN)	LOAD TYPE	MAX NEG DEFL (IN)	LOAD TYPE	ALLOWABLE DEFLECTION (IN)
L 1	0.0000	S1	0.0000	S1	0.0000
L 2	0.0043	S1	0.0000	S1	1.5600
L 3	0.0061	S1	0.0000	S1	1.5600

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L 4	0.0076	S1	0.0000	S1	1.5600
L 5	0.0061	S1	0.0000	S1	1.5600
L 6	0.0043	S1	0.0000	S1	1.5600
L 7	0.0000	S1	0.0000	S1	0.0000

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TABLE 10.1 DL+LL+I FORCE SUMMARY FOR LOWER CHORD MEMBERS (FACTORED)

AASHTO LOADING RESULTS

MEMBER	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
L 1 L 2	78.93	3.33	HL	0.00	HL	82.26	HL	78.93	HL
L 2 L 3	78.93	3.33	HL	0.00	HL	82.26	HL	78.93	HL
L 3 L 4	126.51	5.22	HL	0.00	HL	131.73	HL	126.51	HL
L 4 L 5	126.51	5.22	HL	0.00	HL	131.73	HL	126.51	HL
L 5 L 6	78.93	3.33	HL	0.00	HL	82.26	HL	78.93	HL
L 6 L 7	78.93	3.33	HL	0.00	HL	82.26	HL	78.93	HL

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TABLE 10.2 DL+LL+I FORCE SUMMARY FOR UPPER CHORD MEMBERS (FACTORED)

AASHTO LOADING RESULTS

MEMBER	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
U 2 U 3	-126.51	0.00	HL	-5.22	HL	-126.51	HL	-131.73	HL
U 3 U 4	-142.34	0.00	HL	-5.80	HL	-142.34	HL	-148.14	HL
U 4 U 5	-142.34	0.00	HL	-5.80	HL	-142.34	HL	-148.14	HL
U 5 U 6	-126.51	0.00	HL	-5.22	HL	-126.51	HL	-131.73	HL

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 10.4 DL+LL+I FORCE SUMMARY FOR VERTICAL MEMBERS (FACTORED)

AASHTO LOADING RESULTS

MEMBER	LCT	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
L 2 U 2 T		31.07	2.24	HL	0.00	HL	33.30	HL	31.07	HL
L 2 U 2 B		15.79	0.00	HL	0.00	HL	15.79	HL	15.79	HL
L 3 U 3 T		-17.75	0.97	HL	-1.72	HL	-16.78	HL	-19.47	HL
L 3 U 3 B		-48.33	0.33	HL	-2.55	HL	-47.99	HL	-50.88	HL
L 4 U 4 T		-1.10	0.00	HL	0.00	HL	-1.10	HL	-1.10	HL
L 4 U 4 B		-31.69	0.00	HL	-2.24	HL	-31.69	HL	-33.93	HL
L 5 U 5 T		-17.75	0.97	HL	-1.72	HL	-16.78	HL	-19.47	HL
L 5 U 5 B		-48.33	0.33	HL	-2.55	HL	-47.99	HL	-50.88	HL
L 6 U 6 T		31.07	2.24	HL	0.00	HL	33.30	HL	31.07	HL
L 6 U 6 B		15.79	0.00	HL	0.00	HL	15.79	HL	15.79	HL

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TABLE 10.5 DL+LL+I FORCE SUMMARY FOR DIAGONAL MEMBERS (FACTORED)

AASHTO LOADING RESULTS

MEMBER	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
L 1 U 2	-113.80	0.00	HL	-4.81	HL	-113.80	HL	-118.61	HL
U 2 L 3	68.58	3.55	HL	-0.46	HL	72.13	HL	68.11	HL
U 3 L 4	22.83	2.39	HL	-1.35	HL	25.23	HL	21.49	HL
L 4 U 5	22.83	2.39	HL	-1.35	HL	25.23	HL	21.49	HL
L 5 U 6	68.58	3.55	HL	-0.46	HL	72.12	HL	68.11	HL
U 6 L 7	-113.80	0.00	HL	-4.81	HL	-113.80	HL	-118.61	HL

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 14.1 DL+LL+I FORCE SUMMARY FOR LOWER CHORD MEMBERS (FACTORED)

STATE VEHICLE S1 LOADING RESULTS

MEMBER	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
L 1 L 2	78.93	0.55	S1	0.00	S1	79.47	S1	78.93	S1
L 2 L 3	78.93	0.55	S1	0.00	S1	79.47	S1	78.93	S1
L 3 L 4	126.51	0.87	S1	0.00	S1	127.37	S1	126.51	S1
L 4 L 5	126.51	0.87	S1	0.00	S1	127.37	S1	126.51	S1
L 5 L 6	78.93	0.55	S1	0.00	S1	79.47	S1	78.93	S1
L 6 L 7	78.93	0.55	S1	0.00	S1	79.47	S1	78.93	S1

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TABLE 14.2 DL+LL+I FORCE SUMMARY FOR UPPER CHORD MEMBERS (FACTORED)

STATE VEHICLE S1 LOADING RESULTS

MEMBER	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
U 2 U 3	-126.51	0.00	S1	-0.87	S1	-126.51	S1	-127.37	S1
U 3 U 4	-142.34	0.00	S1	-0.96	S1	-142.34	S1	-143.30	S1
U 4 U 5	-142.34	0.00	S1	-0.96	S1	-142.34	S1	-143.30	S1
U 5 U 6	-126.51	0.00	S1	-0.87	S1	-126.51	S1	-127.37	S1

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TABLE 14.4 DL+LL+I FORCE SUMMARY FOR VERTICAL MEMBERS (FACTORED)

STATE VEHICLE S1 LOADING RESULTS

MEMBER LCT	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
L 2 U 2 T	31.07	0.59	S1	0.00	S1	31.65	S1	31.07	S1
L 2 U 2 B	15.79	0.00	S1	0.00	S1	15.79	S1	15.79	S1
L 3 U 3 T	-17.75	0.22	S1	-0.33	S1	-17.53	S1	-18.08	S1
L 3 U 3 B	-48.33	0.10	S1	-0.45	S1	-48.23	S1	-48.78	S1
L 4 U 4 T	-1.10	0.00	S1	0.00	S1	-1.10	S1	-1.10	S1
L 4 U 4 B	-31.69	0.00	S1	-0.59	S1	-31.69	S1	-32.28	S1
L 5 U 5 T	-17.75	0.22	S1	-0.33	S1	-17.53	S1	-18.08	S1
L 5 U 5 B	-48.33	0.10	S1	-0.45	S1	-48.23	S1	-48.78	S1
L 6 U 6 T	31.07	0.59	S1	0.00	S1	31.65	S1	31.07	S1
L 6 U 6 B	15.79	0.00	S1	0.00	S1	15.79	S1	15.79	S1

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TABLE 14.5 DL+LL+I FORCE SUMMARY FOR DIAGONAL MEMBERS (FACTORED)

STATE VEHICLE S1 LOADING RESULTS

MEMBER	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
L 1 U 2	-113.80	0.00	S1	-0.79	S1	-113.80	S1	-114.59	S1
U 2 L 3	68.58	0.62	S1	-0.14	S1	69.20	S1	68.44	S1
U 3 L 4	22.83	0.46	S1	-0.30	S1	23.30	S1	22.54	S1
L 4 U 5	22.83	0.46	S1	-0.30	S1	23.30	S1	22.54	S1
L 5 U 6	68.58	0.62	S1	-0.14	S1	69.20	S1	68.44	S1
U 6 L 7	-113.80	0.00	S1	-0.79	S1	-113.80	S1	-114.59	S1

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 15.1 ALLOWABLE FORCE SUMMARY FOR LOWER CHORD MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO TENS.	INVENTORY AASHTO COMP.	OPERATING AASHTO TENS.	OPERATING AASHTO COMP.	POSTING STA. VEH. TENS.	POSTING STA. VEH. COMP.	POSTING SPE. TR. TENS.	POSTING SPE. TR. COMP.
L 1 L 2	128.25	4.36	128.25	4.36	0.00	0.00	128.25	4.36
L 2 L 3	128.25	4.36	128.25	4.36	0.00	0.00	128.25	4.36
L 3 L 4	228.00	14.11	228.00	14.11	0.00	0.00	228.00	14.11
L 4 L 5	228.00	14.11	228.00	14.11	0.00	0.00	228.00	14.11
L 5 L 6	128.25	4.36	128.25	4.36	0.00	0.00	128.25	4.36
L 6 L 7	128.25	4.36	128.25	4.36	0.00	0.00	128.25	4.36

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 15.2 ALLOWABLE FORCE SUMMARY FOR UPPER CHORD MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO TENS.	INVENTORY AASHTO COMP.	OPERATING AASHTO TENS.	OPERATING AASHTO COMP.	POSTING STA. VEH. TENS.	POSTING STA. VEH. COMP.	POSTING SPE. TR. TENS.	POSTING SPE. TR. COMP.
U 2 U 3	296.40	233.30	296.40	233.30	0.00	0.00	296.40	233.30
U 3 U 4	296.40	233.35	296.40	233.35	0.00	0.00	296.40	233.35
U 4 U 5	296.40	233.35	296.40	233.35	0.00	0.00	296.40	233.35
U 5 U 6	296.40	233.30	296.40	233.30	0.00	0.00	296.40	233.30

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 15.4 ALLOWABLE FORCE SUMMARY FOR VERTICAL MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO TENS.	INVENTORY AASHTO COMP.	OPERATING AASHTO TENS.	OPERATING AASHTO COMP.	POSTING STA. VEH. TENS.	POSTING STA. VEH. COMP.	POSTING SPE. TR. TENS.	POSTING SPE. TR. COMP.
L 2 U 2B	71.25	1.57	71.25	1.57	0.00	0.00	71.25	1.57

L 3 U 3B	136.80	89.42	136.80	89.42	0.00	0.00	136.80	89.42
L 4 U 4B	111.15	61.71	111.15	61.71	0.00	0.00	111.15	61.71
L 5 U 5B	136.80	89.42	136.80	89.42	0.00	0.00	136.80	89.42
L 6 U 6B	71.25	1.57	71.25	1.57	0.00	0.00	71.25	1.57

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 15.5 ALLOWABLE FORCE SUMMARY FOR DIAGONAL MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO TENS.	INVENTORY AASHTO COMP.	OPERATING AASHTO TENS.	OPERATING AASHTO COMP.	POSTING STA. VEH. TENS.	POSTING STA. VEH. COMP.	POSTING SPE. TR. TENS.	POSTING SPE. TR. COMP.
L 1 U 2	296.40	191.12	296.40	191.12	0.00	0.00	296.40	191.12
U 2 L 3	128.25	3.81	128.25	3.81	0.00	0.00	128.25	3.81
U 3 L 4	71.25	0.82	71.25	0.82	0.00	0.00	71.25	0.82
L 4 U 5	71.25	0.82	71.25	0.82	0.00	0.00	71.25	0.82
L 5 U 6	128.25	3.81	128.25	3.81	0.00	0.00	128.25	3.81
U 6 L 7	296.40	191.12	296.40	191.12	0.00	0.00	296.40	191.12

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TABLE 16.1 DL+LL+I RATING SUMMARY FOR LOWER CHORD MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO MAX T & C	OPERATING AASHTO MAX T & C	STATE VEHICLE 1 MAX T & C	STATE VEHICLE 2 MAX T & C	STATE VEHICLE 3 MAX T & C	SPECIAL VEHICLE 1 MAX T & C	SPECIAL VEHICLE 2 MAX T & C
L 1 L 2	14.79	19.18	0.00	0.00	0.00	90.46	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 2 L 3	14.79	19.18	0.00	0.00	0.00	90.46	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 3 L 4	19.44	25.21	0.00	0.00	0.00	99.00	0.00

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	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 4 L 5	19.44	25.21	0.00	0.00	0.00	99.00	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 5 L 6	14.79	19.18	0.00	0.00	0.00	90.46	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 6 L 7	14.79	19.18	0.00	0.00	0.00	90.46	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00

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TABLE 16.2 DL+LL+I RATING SUMMARY FOR UPPER CHORD MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO MAX T & C	OPERATING AASHTO MAX T & C	STATE VEHICLE 1 MAX T & C	STATE VEHICLE 2 MAX T & C	STATE VEHICLE 3 MAX T & C	SPECIAL VEHICLE 1 MAX T & C	SPECIAL VEHICLE 2 MAX T & C
U 2 U 3	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	20.46	26.52	0.00	0.00	0.00	99.00	0.00
U 3 U 4	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	15.69	20.34	0.00	0.00	0.00	94.83	0.00
U 4 U 5	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	15.69	20.34	0.00	0.00	0.00	94.83	0.00
U 5 U 6	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	20.46	26.52	0.00	0.00	0.00	99.00	0.00

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TABLE 16.4 DL+LL+I RATING SUMMARY FOR VERTICAL MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO MAX T & C	OPERATING AASHTO MAX T & C	STATE VEHICLE 1 MAX T & C	STATE VEHICLE 2 MAX T & C	STATE VEHICLE 3 MAX T & C	SPECIAL VEHICLE 1 MAX T & C	SPECIAL VEHICLE 2 MAX T & C
L 2 U 2T	17.97	23.29	0.00	0.00	0.00	68.25	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 2 U 2B	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 3 U 3T	73.75	95.60	0.00	0.00	0.00	99.00	0.00
	41.56	53.88	0.00	0.00	0.00	99.00	0.00
L 3 U 3B	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	16.09	20.85	0.00	0.00	0.00	91.48	0.00
L 4 U 4T	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 4 U 4B	99.00	99.00	0.00	0.00	0.00	99.00	0.00

	13.43	17.41	0.00	0.00	0.00	50.98	0.00
L 5 U 5T	73.75	95.60	0.00	0.00	0.00	99.00	0.00
	41.56	53.88	0.00	0.00	0.00	99.00	0.00
L 5 U 5B	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	16.09	20.85	0.00	0.00	0.00	91.48	0.00
L 6 U 6T	17.97	23.29	0.00	0.00	0.00	68.25	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 6 U 6B	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00

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TABLE 16.5 DL+LL+I RATING SUMMARY FOR DIAGONAL MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO MAX T & C	OPERATING AASHTO MAX T & C	STATE VEHICLE 1 MAX T & C	STATE VEHICLE 2 MAX T & C	STATE VEHICLE 3 MAX T & C	SPECIAL VEHICLE 1 MAX T & C	SPECIAL VEHICLE 2 MAX T & C
L 1 U 2	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	16.08	20.85	0.00	0.00	0.00	98.35	0.00
U 2 L 3	16.82	21.81	0.00	0.00	0.00	95.67	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
U 3 L 4	20.23	26.22	0.00	0.00	0.00	99.00	0.00
	35.89	46.52	0.00	0.00	0.00	99.00	0.00
L 4 U 5	20.23	26.22	0.00	0.00	0.00	99.00	0.00
	35.89	46.52	0.00	0.00	0.00	99.00	0.00
L 5 U 6	16.82	21.81	0.00	0.00	0.00	95.67	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
U 6 L 7	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	16.08	20.85	0.00	0.00	0.00	98.35	0.00

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TABLE 16.7 SUMMARY OF INVENTORY AND OPERATING RATING (L R F D)

AASHTO LIVE LOADING

INVENTORY RATING DATA	OPERATING RATING DATA	MILITARY LOADING
AASHTO LOAD NAME	AASHTO LOAD NAME	YES OR NO

```
   HL-93   0.55  0.60
*                          HL-93   0.75  0.90
*                                                    NO

 RATING ANALYSIS SUMMARY
 -----------------------

    INVENTORY RATING RESULTS              OPERATING RATING RESULTS
    ------------------------              ------------------------
 RATING  CRITICAL  CONTROLLING        RATING  CRITICAL  CONTROLLING
 FACTOR   MEMBER    LIVE LOAD         FACTOR   MEMBER    LIVE LOAD

   13.43  L  4 U  4     HL
*                                     17.41  L  4 U  4     HL

NOTE:  For capacity less than force due to dead load, rating will be 0
1
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    TRUSS (L = 104.0 FT  H = 14 FT),  ANALYSIS  DATE  5-29-25

 TABLE 16.8 SUMMARY OF POSTING VEHICLE RATING (L R F D)
           ----------------------------------

 SPECIAL TRUCK LOADING - 31
 --------------------------
   VEHICLE  DESCRIPTION          RATING RESULTS
   -----------------------       --------------
 VEHICLE   NO OF  TOTAL        SAFE LOAD  CRITICAL
  NAME     AXLES  WEIGHT      CAPACITY    MEMBER
                 (K or KN)     FACTOR

M-10          2     20.00        50.98   L  4 U  4

NOTE:  For capacity less than force due to dead load, rating will be 0
```

TRAP FILE FOR H-10 LOADING

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0101
0101
0102   TRUSS (L = 104.0 FT  W = 14 FT),  ANALYSIS  DATE  5-29-25
0103
0103       3         2
0104
0104 104.00  LENGTH
0105
0105     3   LRFD
0301
0301 HL-93          HL-93
0302
0302 H-10           H-10
0303
0303 1   4.0    1 14.0    2  16.0
0401          X          Y
0401    1     .00      .00 1 1      X       Y
0401    2   17.33      .00        17.33   18.00
0401    3   34.67      .00        34.67   18.00
0401    4   52.00      .00        52.00   18.00
0401    5   69.33      .00        69.33   18.00
0401    6   86.67      .00        86.67   18.00
0401    7  104.00      .00     1
0501      MEMBER                  Y VALUE          AREA          Fy
0501    1L   1L  2       1   .0    .43 3.0    4.5   4.5       30.
0501    2L   2L  3                  .43 3.0    4.5   4.5       30.
0501    3L   3L  4                  .58 4.0    8.0   8.0       30.
0501    4L   4L  5                  .58 4.0    8.0   8.0       30.
0501    5L   5L  6                  .43 3.0    4.5   4.5       30.
0501    6L   6L  7       7   .0     .43 3.0    4.5   4.5       30.
0501    7U   2U  3                 3.19 8.0   10.4  10.4       30.
0501    8U   3U  4                 3.19 8.0   10.4  10.4       30.
0501    9U   4U  5                 3.19 8.0   10.4  10.4       30.
0501   10U   5U  6                 3.19 8.0   10.4  10.4       30.
0501   11L   2U  2       2 18.00    .36 2.0    2.5   2.5       30.
0501   12L   3U  3       3 18.00   2.34 6.0    4.8   4.8       30.
0501   13L   4U  4       4 18.00   1.95 5.0    3.9   3.9       30.
0501   14L   5U  5       5 18.00   2.34 6.0    4.8   4.8       30.
0501   15L   6U  6       6 18.00    .36 2.0    2.5   2.5       30.
0501   16L   1U  2                 3.19 8.0   10.4  10.4       30.
0501   17U   2L  3                  .58 3.0    4.5   4.5       30.
0501   18U   3L  4                  .36 2.0    2.5   2.5       30.
0501   19L   4U  5                  .36 2.0    2.5   2.5       30.
0501   20L   5U  6                  .58 3.0    4.5   4.5       30.
0501   21U   6L  7                 3.19 8.0   10.4  10.4       30.
                KLF
0601
0601 1  .120        .01 104.00
0602
0602 1  .200        .01 104.00
0603
0603 1  .880        .01 104.00
0604
0604 1  .210        .01 104.00
```

VEHICLE OFFSET FACTOR

WIDTH 14.0 | .62 | 18.0 | 1.2 ← DEAD LOAD DETAIL FACTOR

1.75 ← VEHICLE LL FACTOR

0.01 ← VEHICLE IMPACT FACTOR

HL-93 H-10 VEHICLE

H-10 AXLE WEIGHTS

BOTTOM CHORD

TOP CHORD

BOTTOM CHORD
- 2L, 3L, 4L, 5L: 2-¾"×3"
- 6L: 2-1"×4"
- 7L: 2-¾"×3"

TOP CHORD
- 7U, 8U, 9U, 10U: 2-C8×11.25 + PL 5/16"×12"

VERTICALS
- 11L: 2-⅝"×2"
- 12L: 2-C6×8.2
- 13L: 2-C5×6.7
- 14L: 2-C6×8.2
- 15L: 2-⅝"×2"

DIAGONALS
- 16L: 2-C8×11.25 + PL 5/16"×12"
- 17U, 18U, 19L: 2-¾"×3"
- 20L: 2-⅝"×2"
- 21U: 2-¾"×3"
- 6L: 2-C8×11.25 + PL 5/16"×12"

LINE 601 FLOOR FRAMING DL (KLF)
(FLOOR BEAMS & STRINGERS)

LINE 602 WOOD FLOOR DL (KLF)
½ × .025 KSF × 16' = .200 KLF

LINE 603 PEDESTRIAN LL (KLF)
½ × .090 KSF × 14' × 1.75/1.25 = .880 KLF

LINE 604 2" ASPHALT SURFACING (KLF)
½ × .025 KSF × 14' × 1.5/1.25 = .210 KLF

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CONFORMS TO AASHTO SPEC. 17TH ED. W/UP TO 2003 INTERIM WITH LOAD FACTOR DESIGN
& AASHTO LRFD SPEC. 3RD ED. 2004. W/UP TO 2006 INTERIM
& 1994 AASHTO MANUAL FOR CONDITION EVALUATION OF BRIDGES W/UP TO 1998 INTERIM

TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

ALL INFORMATION PRESENTED IS FOR REVIEW,APPROVAL,
INTERPRETATION AND APPLICATION BY A REGISTERED
ENGINEER ONLY

TABLE 1.1 SYSTEM INPUT

PROGRAM OPTIONS

OUTPUT OPTION	SYSTEM OPTION	MOD. OF ELAS. (KSI)	WIND INTS. (KSF)	CABLE OPTION	UNITS (ENG/SI)
3	2	0.00	0.00000	0	0

GENERAL TRUSS CONFIGURATION

SPAN LENGTHS

SPAN 1 (FEET)
104.00

CONFIGURATION DETAILS

DISTFACT OPTION

CURB DISTANCE (FT)	DIST FACT	DISTANCE BETWEEN TRUSSES (FT)	DEAD LOAD DETAIL FACTOR
14.00	0.620	18.000	1.200

DESIGN METHOD & LOAD/RESISTANCE FACTORS

METHOD	LFD or LRFD				LRFD	All
WSD (0)	Dead	Prestr	Live Load	Factor	Tension	Impact

LFD (1) LRFD(2/3) (2 = AASHTO Guide, 3 = AASHTO LRFD Spec.)	Load Factor	Load Factor	for AASHTO	for State	for Overld	Red. Q Factor	Factor
3	1.25	1.00	1.75	1.35	1.75	1.00	0.01

1

TABLE 1.2 GENERAL LIVE LOAD AND RATING DATA

AASHTO LIVE LOAD

INVENTORY RATING DATA AASHTO LOAD NAME	ALLOWABLE STRESS FACTOR MEMBER	CABLE	OPERATING RATING DATA AASHTO LOAD NAME	ALLOWABLE STRESS FACTOR MEMBER	CABLE	INTERSTATE (MILITARY) LOADING 1=Y,0=N
HL-93	0.00	0.00	HL-93	0.00	0.00	0

STATE VEHICULAR LOADINGS

VEHICLE 1 NAME	VEHICLE 2 NAME	VEHICLE 3 NAME	ALLOW STRESS FACTOR MEMBER	CABLE
			0.00	0.00

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TABLE 1.3 SPECIAL LIVE LOAD DATA

SPECIAL TRUCK INFORMATION

VEHICLE NAME	SPECIAL TRUCK GENERAL DESCRIPTION	ALLOW STRESS FACTOR MEMBER	CABLE	COMB 2ND LANE OPT. 1=YES	DISTRIB. FACTOR
H-10	H-10	0.000	0.000	0	0.000

SPECIAL TRUCK - AXLE WEIGHTS AND SPACINGS

NO WEIGHT (KIPS)	NO DISTANCE (FEET)	NO WEIGHT (KIPS)	NO DISTANCE (FEET)	NO WEIGHT (KIPS)	NO DISTANCE (FEET)
1 4.00	1 14.00	2 16.00			

1

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TABLE 1.5 PANEL POINT DATA

PP NO	LOWER PANEL POINT X-COOR (FT)	Y-COOR (FT)	RE XY	UPPER PANEL POINT X-COOR (FT)	Y-COOR (FT)	RE XY	ADDITIONAL POINT A X-COOR (FT)	Y-COOR (FT)	RE XY	ADDITIONAL POINT B X-COOR (FT)	Y-COOR (FT)	RE XY
1	0.00	0.000	11	0.00	0.000	00	0.00	0.000	00	0.00	0.000	00
2	17.33	0.000	00	17.33	18.000	00	0.00	0.000	00	0.00	0.000	00
3	34.67	0.000	00	34.67	18.000	00	0.00	0.000	00	0.00	0.000	00
4	52.00	0.000	00	52.00	18.000	00	0.00	0.000	00	0.00	0.000	00
5	69.33	0.000	00	69.33	18.000	00	0.00	0.000	00	0.00	0.000	00
6	86.67	0.000	00	86.67	18.000	00	0.00	0.000	00	0.00	0.000	00
7	104.00	0.000	01	0.00	0.000	00	0.00	0.000	00	0.00	0.000	00

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TABLE 1.6 MEMBER DATA

MEM NO	LCTN FRM	TO	MEM REL	LOADED MEM SEQ NO	DEK (FT)	MIN R GYRATON (IN)	MEM DEPTH (IN)	MEMBER AREA GROSS (SQIN)	NET	YIELD STRSS (KSI)	INF LIN OPT	EFF LNG FAC	TEMP CHNG
1	L 1	L 2	0	1	0.00	0.43	3.00	4.5	4.5	30.0	0	1.00	0.0
2	L 2	L 3	0	0	0.00	0.43	3.00	4.5	4.5	30.0	0	1.00	0.0
3	L 3	L 4	0	0	0.00	0.58	4.00	8.0	8.0	30.0	0	1.00	0.0
4	L 4	L 5	0	0	0.00	0.58	4.00	8.0	8.0	30.0	0	1.00	0.0
5	L 5	L 6	0	0	0.00	0.43	3.00	4.5	4.5	30.0	0	1.00	0.0
6	L 6	L 7	0	7	0.00	0.43	3.00	4.5	4.5	30.0	0	1.00	0.0
7	U 2	U 3	0	0	0.00	3.19	8.00	10.4	10.4	30.0	0	1.00	0.0
8	U 3	U 4	0	0	0.00	3.19	8.00	10.4	10.4	30.0	0	1.00	0.0
9	U 4	U 5	0	0	0.00	3.19	8.00	10.4	10.4	30.0	0	1.00	0.0
10	U 5	U 6	0	0	0.00	3.19	8.00	10.4	10.4	30.0	0	1.00	0.0
11	L 2	U 2	0	2	18.00	0.36	2.00	2.5	2.5	30.0	0	1.00	0.0
12	L 3	U 3	0	3	18.00	2.34	6.00	4.8	4.8	30.0	0	1.00	0.0
13	L 4	U 4	0	4	19.00	1.95	5.00	3.9	3.9	30.0	0	1.00	0.0
14	L 5	U 5	0	5	18.00	2.34	6.00	4.8	4.8	30.0	0	1.00	0.0
15	L 6	U 6	0	6	18.00	0.36	2.00	2.5	2.5	30.0	0	1.00	0.0
16	L 1	U 2	0	0	0.00	3.19	8.00	10.4	10.4	30.0	0	1.00	0.0
17	U 2	L 3	0	0	0.00	0.58	3.00	4.5	4.5	30.0	0	1.00	0.0
18	U 3	L 4	0	0	0.00	0.36	2.00	2.5	2.5	30.0	0	1.00	0.0
19	L 4	U 5	0	0	0.00	0.36	2.00	2.5	2.5	30.0	0	1.00	0.0
20	L 5	U 6	0	0	0.00	0.58	3.00	4.5	4.5	30.0	0	1.00	0.0
21	U 6	L 7	0	0	0.00	3.19	8.00	10.4	10.4	30.0	0	1.00	0.0

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TABLE 1.7 UNIFORM DEAD LOAD DATA

UNIFORM LOADS DUE TO FLOOR STEEL

NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)
1	0.120	0.01	104.00	0	0.000	0.00	0.00	0	0.000	0.00	0.00

UNIFORM LOADS DUE TO SLAB + W.S.

NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)
1	0.200	0.01	104.00	0	0.000	0.00	0.00	0	0.000	0.00	0.00

UNIFORM LOADS DUE TO RAILING + CURB

NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)
1	0.880	0.01	104.00	0	0.000	0.00	0.00	0	0.000	0.00	0.00

UNIFORM LOADS DUE TO UTILITY + ACCESS

NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)	NO	LOAD (KLF)	LOCATION FROM (FT)	TO (FT)
1	0.210	0.01	104.00	0	0.000	0.00	0.00	0	0.000	0.00	0.00

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TABLE 2.1 TRUSS HEIGHTS

PANEL POINT NO	TRUSS HEIGHT (FT)	PANEL POINT NO	TRUSS HEIGHT (FT)	PANEL POINT NO	TRUSS HEIGHT (FT)	PANEL POINT NO	TRUSS HEIGHT (FT)	PANEL POINT NO	TRUSS HEIGHT (FT)
1	0.000	2	18.000	3	18.000	4	18.000	5	18.000
6	18.000	7	0.000						

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TABLE 2.2 GEOMETRIC DATA FOR LOWER CHORD MEMBERS

MEMBER	MEMBER LENGTH	MEMBER AXIS TO GRADE LINE	
	(FT or m)	SECANT OF THE ANGLE	TANGENT OF THE ANGLE
L 1 L 2	17.33	1.0000	0.0000
L 2 L 3	17.34	1.0000	0.0000
L 3 L 4	17.33	1.0000	0.0000
L 4 L 5	17.33	1.0000	0.0000
L 5 L 6	17.34	1.0000	0.0000
L 6 L 7	17.33	1.0000	0.0000

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TABLE 2.3 GEOMETRIC DATA FOR UPPER CHORD MEMBERS

MEMBER	MEMBER LENGTH	MEMBER AXIS TO GRADE LINE	
	(FT or m)	SECANT OF THE ANGLE	TANGENT OF THE ANGLE
U 2 U 3	17.34	1.0000	0.0000
U 3 U 4	17.33	1.0000	0.0000

U 4 U 5	17.33	1.0000	0.0000
U 5 U 6	17.34	1.0000	0.0000

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TABLE 2.5 GEOMETRIC DATA FOR VERTICAL MEMBERS

MEMBER	MEMBER LENGTH	MEMBER AXIS TO GRADE LINE	
	(FT or m)	SECANT OF THE ANGLE	TANGENT OF THE ANGLE
L 2 U 2	18.00	N/A	N/A
L 3 U 3	18.00	N/A	N/A
L 4 U 4	18.00	N/A	N/A
L 5 U 5	18.00	N/A	N/A
L 6 U 6	18.00	N/A	N/A

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TABLE 2.6 GEOMETRIC DATA FOR DIAGONAL MEMBERS

MEMBER	MEMBER LENGTH	MEMBER AXIS TO GRADE LINE	
	(FT or m)	SECANT OF THE ANGLE	TANGENT OF THE ANGLE
L 1 U 2	24.99	1.4418	1.0387
U 2 L 3	24.99	1.4414	-1.0381
U 3 L 4	24.99	1.4418	-1.0387
L 4 U 5	24.99	1.4418	1.0387
L 5 U 6	24.99	1.4414	1.0381
U 6 L 7	24.99	1.4418	-1.0387

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.1 DEAD LOADS AT LOWER PANEL POINTS

PP NO	FLOOR STEEL (K)	SLAB + WS (K)	RAILING + CURB (K)	UTILITY + ACCESS (K)	TRUSS DL (K)	BRACING DL (K)	ADDITIONAL DL (K)	TOTAL DL (K)
L 1	1.04	1.73	7.62	1.82	0.69	0.00	0.00	12.89
L 2	2.08	3.47	15.25	3.64	0.41	0.00	0.00	24.85
L 3	2.08	3.47	15.27	3.64	0.85	0.00	0.00	25.31
L 4	2.20	3.66	16.12	3.85	0.96	0.00	0.00	26.80
L 5	2.08	3.47	15.27	3.64	0.85	0.00	0.00	25.31
L 6	2.08	3.47	15.25	3.64	0.41	0.00	0.00	24.85
L 7	1.04	1.73	7.63	1.82	0.69	0.00	0.00	12.91

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.2 DEAD LOADS AT UPPER PANEL POINTS

PP NO	FLOOR STEEL (K)	SLAB + WS (K)	RAILING + CURB (K)	UTILITY + ACCESS (K)	TRUSS DL (K)	BRACING DL (K)	ADDITIONAL DL (K)	TOTAL DL (K)
U 2	0.00	0.00	0.00	0.00	1.22	0.00	0.00	1.22
U 3	0.00	0.00	0.00	0.00	1.04	0.00	0.00	1.04
U 4	-0.12	-0.19	-0.85	-0.20	0.88	0.00	0.00	-0.48
U 5	0.00	0.00	0.00	0.00	1.04	0.00	0.00	1.04
U 6	0.00	0.00	0.00	0.00	1.22	0.00	0.00	1.22

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.5 DEAD LOAD DEFLECTIONS (UNFACTORED)

LOWER PANEL POINT DEFLECTIONS

PANEL POINT NO	DEFLECTIONS DUE TO TOTAL STEEL: PP LOAD (K)	HORIZONTAL DEFLECTION (IN)	VERTICAL DEFLECTION (IN)	TOTAL DEAD LOAD DEFLECTIONS: PP LOAD (K)	HORIZONTAL DEFLECTION (IN)	VERTICAL DEFLECTION (IN)
L 1	1.73	0.0000	0.0000	12.89	0.0000	0.0000
L 2	2.49	0.0148	0.0885	24.85	0.1006	0.6237
L 3	2.93	0.0296	0.1415	25.31	0.2013	0.9550
L 4	3.16	0.0431	0.1731	26.80	0.2920	1.1575
L 5	2.93	0.0565	0.1415	25.31	0.3827	0.9550
L 6	2.49	0.0713	0.0885	24.85	0.4834	0.6237
L 7	1.73	0.0861	0.0000	12.91	0.5840	0.0000

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.6 DEAD LOAD DEFLECTIONS (UNFACTORED)

UPPER PANEL POINT DEFLECTIONS

PANEL POINT NO	DEFLECTIONS DUE TO TOTAL STEEL: PP LOAD (K)	HORIZONTAL DEFLECTION (IN)	VERTICAL DEFLECTION (IN)	TOTAL DEAD LOAD DEFLECTIONS: PP LOAD (K)	HORIZONTAL DEFLECTION (IN)	VERTICAL DEFLECTION (IN)
U 2	1.22	0.0650	0.0811	1.22	0.4404	0.5496
U 3	1.04	0.0547	0.1462	1.04	0.3705	0.9770
U 4	0.76	0.0431	0.1745	-0.48	0.2920	1.1566
U 5	1.04	0.0314	0.1462	1.04	0.2135	0.9770
U 6	1.22	0.0211	0.0811	1.22	0.1437	0.5496

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.9 DEAD LOAD FORCES AND ADJUSTED LENGTHS IN LOWER CHORD (UNFACTORED)

TOTAL STEEL TOTAL DEAD LOAD

MEMBER	TOTAL STEEL FORCE (K)	TOTAL STEEL ADJ LENGTH (FT)	TOTAL DEAD LOAD FORCE (K)	TOTAL DEAD LOAD ADJ LENGTH (FT)
L 1 L 2	9.3	17.3312	63.1	17.3384
L 2 L 3	9.3	17.3412	63.1	17.3484
L 3 L 4	15.0	17.3311	101.2	17.3376
L 4 L 5	15.0	17.3311	101.2	17.3376
L 5 L 6	9.3	17.3412	63.1	17.3484
L 6 L 7	9.3	17.3312	63.1	17.3384

1

TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.10 DEAD LOAD FORCES AND ADJUSTED LENGTHS IN UPPER CHORD (UNFACTORED)

MEMBER	TOTAL STEEL FORCE (K)	TOTAL STEEL ADJ LENGTH (FT)	TOTAL DEAD LOAD FORCE (K)	TOTAL DEAD LOAD ADJ LENGTH (FT)
U 2 U 3	-15.0	17.3391	-101.2	17.3342
U 3 U 4	-16.9	17.3290	-113.9	17.3235
U 4 U 5	-16.9	17.3290	-113.9	17.3235
U 5 U 6	-15.0	17.3391	-101.2	17.3342

1

TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.12 DEAD LOAD FORCES AND ADJUSTED LENGTHS IN VERT. MEMBERS (UNFACTORED)

MEMBER	TOTAL STEEL FORCE TOP (K)	TOTAL STEEL FORCE BOTTOM (K)	TOTAL STEEL ADJ LENGTH (FT)	TOTAL DEAD LOAD FORCE TOP (K)	TOTAL DEAD LOAD FORCE BOTTOM (K)	TOTAL DEAD LOAD ADJ LENGTH (FT)
L 2 U 2	2.5	1.5	17.9994	24.9	12.6	17.9938
L 3 U 3	-3.0	-5.1	18.0004	-14.2	-38.7	18.0018
L 4 U 4	-0.9	-3.0	18.0001	-0.9	-25.4	17.9999
L 5 U 5	-3.0	-5.1	18.0004	-14.2	-38.7	18.0018
L 6 U 6	2.5	1.5	17.9994	24.9	12.6	17.9938

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.13 DEAD LOAD FORCES AND ADJUSTED LENGTHS IN DIAG. MEMBERS (UNFACTORED)

MEMBER	TOTAL STEEL FORCE (K)	TOTAL STEEL ADJ LENGTH (FT)	TOTAL DEAD LOAD FORCE (K)	TOTAL DEAD LOAD ADJ LENGTH (FT)
L 1 U 2	-13.4	24.9855	-91.0	24.9790
U 2 L 3	8.2	24.9951	54.9	25.0040
U 3 L 4	2.7	24.9875	18.3	24.9929
L 4 U 5	2.7	24.9875	18.3	24.9929
L 5 U 6	8.2	24.9951	54.9	25.0040
U 6 L 7	-13.4	24.9855	-91.0	24.9790

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.14 DEAD LOAD REACTIONS (UNFACTORED)

PANEL POINT NO	TOTAL STEEL REACTIONS HORIZONTAL (K or KN)	TOTAL STEEL REACTIONS VERTICAL (K or KN)	TOTAL DEAD LOAD REACTIONS HORIZONTAL (K or KN)	TOTAL DEAD LOAD REACTIONS VERTICAL (K or KN)
L 1	0.00	11.37	0.00	78.48
L 7	0.00	11.37	0.00	78.49

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 3.15 TOTAL TRUSS STEEL WEIGHT

TRUSS STEEL (K)	FLOOR STEEL (K)	BRACING STEEL (K)	TOTAL (K)
10.3	12.5	0.0	22.7

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TABLE 4.0 OUTPUT LANE FACTOR

LIVE LOAD OUTPUT

LANE FACTOR TO TRUSS = 0.6200

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TABLE 4.2 REACTION INFLUENCE LINE VALUE

INFLUENCE LINE ORDINATES FOR SUPPORT POINT REACTION NO. 1

PP NO	ORDINATE	PP NO	ORDINATE	PP NO	ORDINATE	PP NO	ORDINATE	PP NO	ORDINATE
1	1.000	2	0.833	3	0.667	4	0.500	5	0.333
6	0.167	7	0.000						

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TABLE 4.2 REACTION INFLUENCE LINE VALUE

INFLUENCE LINE ORDINATES FOR SUPPORT POINT REACTION NO. 2

PP NO	ORDINATE	PP NO	ORDINATE	PP NO	ORDINATE	PP NO	ORDINATE	PP NO	ORDINATE
1	0.000	2	0.167	3	0.333	4	0.500	5	0.667
6	0.833	7	1.000						

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TABLE 5.1 MAXIMUM LIVE LOAD FORCE IN LOWER CHORDS (UNFACTORED)

ASSHTO LOADING RESULTS

MEMBER	MAX TENSILE FORCE LL (K)	MAX TENSILE FORCE LL+I (K)	MAX TENSILE FORCE LOAD TYPE	MAX COMPRESSIVE FORCE LL (K)	MAX COMPRESSIVE FORCE LL+I (K)	MAX COMPRESSIVE FORCE LOAD TYPE
L 1 L 2	48.51	48.83	HL	0.00	0.00	HL
L 2 L 3	48.51	48.83	HL	0.00	0.00	HL
L 3 L 4	76.10	76.59	HL	0.00	0.00	HL
L 4 L 5	76.10	76.59	HL	0.00	0.00	HL
L 5 L 6	48.51	48.83	HL	0.00	0.00	HL
L 6 L 7	48.51	48.83	HL	0.00	0.00	HL

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 5.2 MAXIMUM LIVE LOAD FORCE IN UPPER CHORDS (UNFACTORED)

ASSHTO LOADING RESULTS

MEMBER	MAX TENSILE FORCE LL (K)	MAX TENSILE FORCE LL+I (K)	MAX TENSILE FORCE LOAD TYPE	MAX COMPRESSIVE FORCE LL (K)	MAX COMPRESSIVE FORCE LL+I (K)	MAX COMPRESSIVE FORCE LOAD TYPE
U 2 U 3	0.00	0.00	HL	-76.10	-76.59	HL
U 3 U 4	0.00	0.00	HL	-84.64	-85.19	HL
U 4 U 5	0.00	0.00	HL	-84.64	-85.19	HL
U 5 U 6	0.00	0.00	HL	-76.10	-76.59	HL

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TABLE 5.4 MAXIMUM LIVE LOAD FORCE IN VERTICAL MEMBERS (UNFACTORED)

AASHTO LOADING RESULTS

MEMBER	MAX TENSILE FORCE LL (K)	MAX TENSILE FORCE LL+I (K)	LOAD TYPE	MAX COMPRESSIVE FORCE LL (K)	MAX COMPRESSIVE FORCE LL+I (K)	LOAD TYPE
L 2 U 2 T	31.49	31.74	HL	0.00	0.00	HL
L 2 U 2 B	0.00	0.00	HL	0.00	0.00	HL
L 3 U 3 T	13.63	13.74	HL	-24.50	-24.69	HL
L 3 U 3 B	4.63	4.67	HL	-36.76	-37.01	HL
L 4 U 4 T	0.00	0.00	HL	0.00	0.00	HL
L 4 U 4 B	0.00	0.00	HL	-31.48	-31.73	HL
L 5 U 5 T	13.63	13.74	HL	-24.50	-24.69	HL
L 5 U 5 B	4.63	4.67	HL	-36.76	-37.01	HL
L 6 U 6 T	31.49	31.74	HL	0.00	0.00	HL
L 6 U 6 B	0.00	0.00	HL	0.00	0.00	HL

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TABLE 5.5 MAXIMUM LIVE LOAD FORCE IN DIAGONAL MEMBERS (UNFACTORED)

AASHTO LOADING RESULTS

MEMBER	MAX TENSILE FORCE LL (K)	MAX TENSILE FORCE LL+I (K)	LOAD TYPE	MAX COMPRESSIVE FORCE LL (K)	MAX COMPRESSIVE FORCE LL+I (K)	LOAD TYPE
L 1 U 2	0.00	0.00	HL	-69.95	-70.41	HL
U 2 L 3	51.04	51.40	HL	-6.43	-6.48	HL
U 3 L 4	34.01	34.27	HL	-18.92	-19.07	HL
L 4 U 5	34.01	34.27	HL	-18.92	-19.07	HL
L 5 U 6	51.04	51.40	HL	-6.43	-6.48	HL
U 6 L 7	0.00	0.00	HL	-69.95	-70.41	HL

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TABLE 5.7 MAXIMUM LIVE LOAD REACTIONS (UNFACTORED)

AASHTO LOADING RESULTS

PP NO	MAX POSITIVE REACTIONS LL (K)	MAX POSITIVE REACTIONS LL + I (K)	LOAD TYPE	MAX NEGATIVE REACTIONS LL (K)	MAX NEGATIVE REACTIONS LL + I (K)	LOAD TYPE
L 1	61.3	74.7	HS	0.0	0.0	
L 7	61.3	74.7	HS	0.0	0.0	

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TABLE 5.8 VERTICAL DEFLECTIONS(LL+I) (UNFACTORED)

AASHTO LOADING RESULTS

PP NO	MAX POS DEFL (IN)	LOAD TYPE	MAX NEG DEFL (IN)	LOAD TYPE	ALLOWABLE DEFLECTION (IN)
L 1	0.0000	HL	0.0000	HL	0.0000
L 2	0.4902	HL	0.0000	HL	1.5600
L 3	0.7232	HL	0.0000	HL	1.5600
L 4	0.8735	HL	0.0000	HL	1.5600
L 5	0.7232	HL	0.0000	HL	1.5600
L 6	0.4902	HL	0.0000	HL	1.5600
L 7	0.3257	HL	0.0000	HL	0.0000

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TABLE 9.1 MAXIMUM LIVE LOAD FORCE IN LOWER CHORDS (UNFACTORED)

(FOR TRUCK 4)

MEMBER	MAX TENSILE FORCE LL (K)	MAX TENSILE FORCE LL+I (K)	LOAD TYPE	MAX COMPRESSIVE FORCE LL (K)	MAX COMPRESSIVE FORCE LL+I (K)	LOAD TYPE
L 1 L 2	9.63	9.72	S1	0.00	0.00	S1
L 2 L 3	9.63	9.72	S1	0.00	0.00	S1
L 3 L 4	15.28	15.43	S1	0.00	0.00	S1
L 4 L 5	15.28	15.43	S1	0.00	0.00	S1

L 5 L 6	9.63	9.72	S1	0.00	0.00 S1
L 6 L 7	9.63	9.72	S1	0.00	0.00 S1

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TABLE 9.2 MAXIMUM LIVE LOAD FORCE IN UPPER CHORDS (UNFACTORED)

(FOR TRUCK 4)

MEMBER	MAX TENSILE FORCE LL (K)	MAX TENSILE FORCE LL+I (K)	LOAD TYPE	MAX COMPRESSIVE FORCE LL (K)	MAX COMPRESSIVE FORCE LL+I (K)	LOAD TYPE
U 2 U 3	0.00	0.00	S1	-15.28	-15.43	S1
U 3 U 4	0.00	0.00	S1	-16.95	-17.12	S1
U 4 U 5	0.00	0.00	S1	-16.95	-17.12	S1
U 5 U 6	0.00	0.00	S1	-15.28	-15.43	S1

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TABLE 9.4 MAXIMUM LIVE LOAD FORCE IN VERTICAL MEMBERS (UNFACTORED)

(FOR TRUCK 4)

MEMBER	MAX TENSILE FORCE LL (K)	MAX TENSILE FORCE LL+I (K)	LOAD TYPE	MAX COMPRESSIVE FORCE LL (K)	MAX COMPRESSIVE FORCE LL+I (K)	LOAD TYPE
L 2 U 2 T	10.40	10.50	S1	0.00	0.00	S1
L 2 U 2 B	0.00	0.00	S1	0.00	0.00	S1
L 3 U 3 T	3.80	3.84	S1	-5.87	-5.92	S1
L 3 U 3 B	1.73	1.75	S1	-7.93	-8.01	S1
L 4 U 4 T	0.00	0.00	S1	0.00	0.00	S1
L 4 U 4 B	0.00	0.00	S1	-10.40	-10.50	S1
L 5 U 5 T	3.80	3.84	S1	-5.87	-5.92	S1
L 5 U 5 B	1.73	1.75	S1	-7.93	-8.01	S1
L 6 U 6 T	10.40	10.50	S1	0.00	0.00	S1
L 6 U 6 B	0.00	0.00	S1	0.00	0.00	S1

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TABLE 9.5 MAXIMUM LIVE LOAD FORCE IN DIAGONAL MEMBERS (UNFACTORED)

(FOR TRUCK 4)

MEMBER	MAX TENSILE FORCE LL (K)	MAX TENSILE FORCE LL+I (K)	LOAD TYPE	MAX COMPRESSIVE FORCE LL (K)	MAX COMPRESSIVE FORCE LL+I (K)	LOAD TYPE
L 1 U 2	0.00	0.00	S1	-13.88	-14.02	S1
U 2 L 3	11.01	11.12	S1	-2.41	-2.43	S1
U 3 L 4	8.14	8.22	S1	-5.27	-5.33	S1
L 4 U 5	8.14	8.22	S1	-5.27	-5.33	S1
L 5 U 6	11.01	11.12	S1	-2.41	-2.43	S1
U 6 L 7	0.00	0.00	S1	-13.88	-14.02	S1

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TABLE 9.7 MAXIMUM LIVE LOAD REACTIONS (UNFACTORED)

(FOR TRUCK 4)

PP NO	MAX POSITIVE REACTIONS LL (K)	MAX POSITIVE REACTIONS LL + I (K)	LOAD TYPE	MAX NEGATIVE REACTIONS LL (K)	MAX NEGATIVE REACTIONS LL + I (K)	LOAD TYPE
L 1	12.1	16.0	S1	0.0	0.0	S1
L 7	12.1	16.0	S1	0.0	0.0	S1

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TABLE 9.8 VERTICAL DEFLECTIONS(LL+I) (UNFACTORED)

(FOR TRUCK 4)

PP NO	MAX POS DEFL (IN)	LOAD TYPE	MAX NEG DEFL (IN)	LOAD TYPE	ALLOWABLE DEFLECTION (IN)
L 1	0.0000	S1	0.0000	S1	0.0000
L 2	0.1006	S1	0.0000	S1	1.5600
L 3	0.1435	S1	0.0000	S1	1.5600

L 4	0.1792	S1	0.0000	S1	1.5600
L 5	0.1435	S1	0.0000	S1	1.5600
L 6	0.1006	S1	0.0000	S1	1.5600
L 7	0.0000	S1	0.0000	S1	0.0000

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TABLE 10.1 DL+LL+I FORCE SUMMARY FOR LOWER CHORD MEMBERS (FACTORED)

AASHTO LOADING RESULTS

MEMBER	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
L 1 L 2	78.93	85.46	HL	0.00	HL	164.39	HL	78.93	HL
L 2 L 3	78.93	85.46	HL	0.00	HL	164.39	HL	78.93	HL
L 3 L 4	126.51	134.04	HL	0.00	HL	260.54	HL	126.51	HL
L 4 L 5	126.51	134.04	HL	0.00	HL	260.54	HL	126.51	HL
L 5 L 6	78.93	85.46	HL	0.00	HL	164.39	HL	78.93	HL
L 6 L 7	78.93	85.46	HL	0.00	HL	164.39	HL	78.93	HL

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TABLE 10.2 DL+LL+I FORCE SUMMARY FOR UPPER CHORD MEMBERS (FACTORED)

AASHTO LOADING RESULTS

MEMBER	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
U 2 U 3	-126.51	0.00	HL	-134.04	HL	-126.51	HL	-260.54	HL
U 3 U 4	-142.34	0.00	HL	-149.08	HL	-142.34	HL	-291.42	HL
U 4 U 5	-142.34	0.00	HL	-149.08	HL	-142.34	HL	-291.42	HL
U 5 U 6	-126.51	0.00	HL	-134.04	HL	-126.51	HL	-260.54	HL

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TABLE 10.4 DL+LL+I FORCE SUMMARY FOR VERTICAL MEMBERS (FACTORED)

AASHTO LOADING RESULTS

MEMBER LCT	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
L 2 U 2 T	31.07	55.54	HL	0.00	HL	86.61	HL	31.07	HL
L 2 U 2 B	15.79	0.00	HL	0.00	HL	15.79	HL	15.79	HL
L 3 U 3 T	-17.75	24.04	HL	-43.20	HL	6.29	HL	-60.95	HL
L 3 U 3 B	-48.33	8.17	HL	-64.78	HL	-40.16	HL	-113.10	HL
L 4 U 4 T	-1.10	0.00	HL	0.00	HL	-1.10	HL	-1.10	HL
L 4 U 4 B	-31.69	0.00	HL	-55.52	HL	-31.69	HL	-87.22	HL
L 5 U 5 T	-17.75	24.04	HL	-43.20	HL	6.29	HL	-60.95	HL
L 5 U 5 B	-48.33	8.17	HL	-64.78	HL	-40.16	HL	-113.10	HL
L 6 U 6 T	31.07	55.54	HL	0.00	HL	86.61	HL	31.07	HL
L 6 U 6 B	15.79	0.00	HL	0.00	HL	15.79	HL	15.79	HL

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TABLE 10.5 DL+LL+I FORCE SUMMARY FOR DIAGONAL MEMBERS (FACTORED)

AASHTO LOADING RESULTS

MEMBER	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
L 1 U 2	-113.80	0.00	HL	-123.22	HL	-113.80	HL	-237.02	HL
U 2 L 3	68.58	89.94	HL	-11.34	HL	158.52	HL	57.23	HL
U 3 L 4	22.83	59.97	HL	-33.37	HL	82.81	HL	-10.53	HL
L 4 U 5	22.83	59.97	HL	-33.37	HL	82.81	HL	-10.53	HL
L 5 U 6	68.58	89.94	HL	-11.34	HL	158.52	HL	57.23	HL
U 6 L 7	-113.80	0.00	HL	-123.22	HL	-113.80	HL	-237.02	HL

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TABLE 14.1 DL+LL+I FORCE SUMMARY FOR LOWER CHORD MEMBERS (FACTORED)

STATE VEHICLE S1 LOADING RESULTS

MEMBER	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
L 1 L 2	78.93	17.02	S1	0.00	S1	95.95	S1	78.93	S1
L 2 L 3	78.93	17.02	S1	0.00	S1	95.95	S1	78.93	S1
L 3 L 4	126.51	27.01	S1	0.00	S1	153.51	S1	126.51	S1
L 4 L 5	126.51	27.01	S1	0.00	S1	153.51	S1	126.51	S1
L 5 L 6	78.93	17.02	S1	0.00	S1	95.95	S1	78.93	S1
L 6 L 7	78.93	17.02	S1	0.00	S1	95.95	S1	78.93	S1

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TABLE 14.2 DL+LL+I FORCE SUMMARY FOR UPPER CHORD MEMBERS (FACTORED)

STATE VEHICLE S1 LOADING RESULTS

MEMBER	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
U 2 U 3	-126.51	0.00	S1	-27.01	S1	-126.51	S1	-153.51	S1
U 3 U 4	-142.34	0.00	S1	-29.95	S1	-142.34	S1	-172.30	S1
U 4 U 5	-142.34	0.00	S1	-29.95	S1	-142.34	S1	-172.30	S1
U 5 U 6	-126.51	0.00	S1	-27.01	S1	-126.51	S1	-153.51	S1

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 14.4 DL+LL+I FORCE SUMMARY FOR VERTICAL MEMBERS (FACTORED)

STATE VEHICLE S1 LOADING RESULTS

MEMBER	LCT	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
L 2 U 2 T		31.07	18.38	S1	0.00	S1	49.44	S1	31.07	S1
L 2 U 2 B		15.79	0.00	S1	0.00	S1	15.79	S1	15.79	S1
L 3 U 3 T		-17.75	6.72	S1	-10.37	S1	-11.03	S1	-28.12	S1
L 3 U 3 B		-48.33	3.06	S1	-14.02	S1	-45.27	S1	-62.35	S1
L 4 U 4 T		-1.10	0.00	S1	0.00	S1	-1.10	S1	-1.10	S1
L 4 U 4 B		-31.69	0.00	S1	-18.38	S1	-31.69	S1	-50.07	S1
L 5 U 5 T		-17.75	6.72	S1	-10.37	S1	-11.03	S1	-28.12	S1
L 5 U 5 B		-48.33	3.06	S1	-14.02	S1	-45.27	S1	-62.35	S1
L 6 U 6 T		31.07	18.38	S1	0.00	S1	49.44	S1	31.07	S1
L 6 U 6 B		15.79	0.00	S1	0.00	S1	15.79	S1	15.79	S1

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 14.5 DL+LL+I FORCE SUMMARY FOR DIAGONAL MEMBERS (FACTORED)

STATE VEHICLE S1 LOADING RESULTS

MEMBER	TOTAL DEAD LOAD (K)	MAXIMUM TENSION LL+I (K)	TYPE	MAXIMUM COMPRESSION LL+I (K)	TYPE	MAXIMUM MEMBER FORCE DL+LL+I (K)	TYPE	MINIMUM MEMBER FORCE DL+LL+I (K)	TYPE
L 1 U 2	-113.80	0.00	S1	-24.54	S1	-113.80	S1	-138.34	S1
U 2 L 3	68.58	19.47	S1	-4.25	S1	88.05	S1	64.33	S1
U 3 L 4	22.83	14.39	S1	-9.32	S1	37.23	S1	13.51	S1
L 4 U 5	22.83	14.39	S1	-9.32	S1	37.23	S1	13.51	S1
L 5 U 6	68.58	19.47	S1	-4.25	S1	88.05	S1	64.33	S1
U 6 L 7	-113.80	0.00	S1	-24.54	S1	-113.80	S1	-138.34	S1

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 15.1 ALLOWABLE FORCE SUMMARY FOR LOWER CHORD MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO TENS.	INVENTORY AASHTO COMP.	OPERATING AASHTO TENS.	OPERATING AASHTO COMP.	POSTING STA. VEH. TENS.	POSTING STA. VEH. COMP.	POSTING SPE. TR. TENS.	POSTING SPE. TR. COMP.
L 1 L 2	128.25	4.36	128.25	4.36	0.00	0.00	128.25	4.36
L 2 L 3	128.25	4.36	128.25	4.36	0.00	0.00	128.25	4.36
L 3 L 4	228.00	14.11	228.00	14.11	0.00	0.00	228.00	14.11
L 4 L 5	228.00	14.11	228.00	14.11	0.00	0.00	228.00	14.11
L 5 L 6	128.25	4.36	128.25	4.36	0.00	0.00	128.25	4.36
L 6 L 7	128.25	4.36	128.25	4.36	0.00	0.00	128.25	4.36

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 15.2 ALLOWABLE FORCE SUMMARY FOR UPPER CHORD MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO TENS.	INVENTORY AASHTO COMP.	OPERATING AASHTO TENS.	OPERATING AASHTO COMP.	POSTING STA. VEH. TENS.	POSTING STA. VEH. COMP.	POSTING SPE. TR. TENS.	POSTING SPE. TR. COMP.
U 2 U 3	296.40	233.30	296.40	233.30	0.00	0.00	296.40	233.30
U 3 U 4	296.40	233.35	296.40	233.35	0.00	0.00	296.40	233.35
U 4 U 5	296.40	233.35	296.40	233.35	0.00	0.00	296.40	233.35
U 5 U 6	296.40	233.30	296.40	233.30	0.00	0.00	296.40	233.30

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TABLE 15.4 ALLOWABLE FORCE SUMMARY FOR VERTICAL MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO TENS.	INVENTORY AASHTO COMP.	OPERATING AASHTO TENS.	OPERATING AASHTO COMP.	POSTING STA. VEH. TENS.	POSTING STA. VEH. COMP.	POSTING SPE. TR. TENS.	POSTING SPE. TR. COMP.
L 2 U 2B	71.25	1.57	71.25	1.57	0.00	0.00	71.25	1.57

L 3 U 3B	136.80	89.42	136.80	89.42	0.00	0.00	136.80	89.42
L 4 U 4B	111.15	61.71	111.15	61.71	0.00	0.00	111.15	61.71
L 5 U 5B	136.80	89.42	136.80	89.42	0.00	0.00	136.80	89.42
L 6 U 6B	71.25	1.57	71.25	1.57	0.00	0.00	71.25	1.57

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TABLE 15.5 ALLOWABLE FORCE SUMMARY FOR DIAGONAL MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO TENS.	INVENTORY AASHTO COMP.	OPERATING AASHTO TENS.	OPERATING AASHTO COMP.	POSTING STA. VEH. TENS.	POSTING STA. VEH. COMP.	POSTING SPE. TR. TENS.	POSTING SPE. TR. COMP.
L 1 U 2	296.40	191.12	296.40	191.12	0.00	0.00	296.40	191.12
U 2 L 3	128.25	3.81	128.25	3.81	0.00	0.00	128.25	3.81
U 3 L 4	71.25	0.82	71.25	0.82	0.00	0.00	71.25	0.82
L 4 U 5	71.25	0.82	71.25	0.82	0.00	0.00	71.25	0.82
L 5 U 6	128.25	3.81	128.25	3.81	0.00	0.00	128.25	3.81
U 6 L 7	296.40	191.12	296.40	191.12	0.00	0.00	296.40	191.12

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TRUSS (L = 104.0 FT W = 14 FT), ANALYSIS DATE 5-29-25

TABLE 16.1 DL+LL+I RATING SUMMARY FOR LOWER CHORD MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO MAX T & C	OPERATING AASHTO MAX T & C	STATE VEHICLE 1 MAX T & C	STATE VEHICLE 2 MAX T & C	STATE VEHICLE 3 MAX T & C	SPECIAL VEHICLE 1 MAX T & C	SPECIAL VEHICLE 2 MAX T & C
L 1 L 2	0.58	0.75	0.00	0.00	0.00	2.90	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 2 L 3	0.58	0.75	0.00	0.00	0.00	2.90	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 3 L 4	0.76	0.98	0.00	0.00	0.00	3.76	0.00

	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 4 L 5	0.76	0.98	0.00	0.00	0.00	3.76	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 5 L 6	0.58	0.75	0.00	0.00	0.00	2.90	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 6 L 7	0.58	0.75	0.00	0.00	0.00	2.90	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00

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TABLE 16.2 DL+LL+I RATING SUMMARY FOR UPPER CHORD MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO MAX T & C	OPERATING AASHTO MAX T & C	STATE VEHICLE 1 MAX T & C	STATE VEHICLE 2 MAX T & C	STATE VEHICLE 3 MAX T & C	SPECIAL VEHICLE 1 MAX T & C	SPECIAL VEHICLE 2 MAX T & C
U 2 U 3	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	0.80	1.03	0.00	0.00	0.00	3.95	0.00
U 3 U 4	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	0.61	0.79	0.00	0.00	0.00	3.04	0.00
U 4 U 5	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	0.61	0.79	0.00	0.00	0.00	3.04	0.00
U 5 U 6	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	0.80	1.03	0.00	0.00	0.00	3.95	0.00

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TABLE 16.4 DL+LL+I RATING SUMMARY FOR VERTICAL MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO MAX T & C	OPERATING AASHTO MAX T & C	STATE VEHICLE 1 MAX T & C	STATE VEHICLE 2 MAX T & C	STATE VEHICLE 3 MAX T & C	SPECIAL VEHICLE 1 MAX T & C	SPECIAL VEHICLE 2 MAX T & C
L 2 U 2T	0.72	0.94	0.00	0.00	0.00	2.19	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 2 U 2B	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 3 U 3T	6.43	8.33	0.00	0.00	0.00	10.67	0.00
	1.66	2.15	0.00	0.00	0.00	6.91	0.00
L 3 U 3B	99.00	6.52	0.00	0.00	0.00	99.00	0.00
	0.63	0.82	0.00	0.00	0.00	2.93	0.00
L 4 U 4T	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 4 U 4B	99.00	99.00	0.00	0.00	0.00	99.00	0.00

	0.54	0.70	0.00	0.00	0.00	1.63	0.00
L 5 U 5T	6.43	8.33	0.00	0.00	0.00	10.67	0.00
	1.66	2.15	0.00	0.00	0.00	6.91	0.00
L 5 U 5B	99.00	6.52	0.00	0.00	0.00	99.00	0.00
	0.63	0.82	0.00	0.00	0.00	2.93	0.00
L 6 U 6T	0.72	0.94	0.00	0.00	0.00	2.19	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00
L 6 U 6B	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	99.00	99.00	0.00	0.00	0.00	99.00	0.00

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TABLE 16.5 DL+LL+I RATING SUMMARY FOR DIAGONAL MEMBERS (L R F D)

MEMBER	INVENTORY AASHTO MAX T & C	OPERATING AASHTO MAX T & C	STATE VEHICLE 1 MAX T & C	STATE VEHICLE 2 MAX T & C	STATE VEHICLE 3 MAX T & C	SPECIAL VEHICLE 1 MAX T & C	SPECIAL VEHICLE 2 MAX T & C
L 1 U 2	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	0.63	0.81	0.00	0.00	0.00	3.15	0.00
U 2 L 3	0.66	0.86	0.00	0.00	0.00	3.07	0.00
	5.26	6.82	0.00	0.00	0.00	14.04	0.00
U 3 L 4	0.81	1.05	0.00	0.00	0.00	3.36	0.00
	0.71	0.92	0.00	0.00	0.00	5.19	0.00
L 4 U 5	0.81	1.05	0.00	0.00	0.00	3.36	0.00
	0.71	0.92	0.00	0.00	0.00	5.19	0.00
L 5 U 6	0.66	0.86	0.00	0.00	0.00	3.07	0.00
	5.26	6.82	0.00	0.00	0.00	14.04	0.00
U 6 L 7	99.00	99.00	0.00	0.00	0.00	99.00	0.00
	0.63	0.81	0.00	0.00	0.00	3.15	0.00

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TABLE 16.7 SUMMARY OF INVENTORY AND OPERATING RATING (L R F D)

AASHTO LIVE LOADING

INVENTORY RATING DATA	OPERATING RATING DATA	MILITARY LOADING
AASHTO LOAD NAME	AASHTO LOAD NAME	YES OR NO

66

```
   HL-93   0.55  0.60
*                          HL-93   0.75  0.90
*                                                  NO

 RATING ANALYSIS SUMMARY
 -----------------------

    INVENTORY RATING RESULTS          OPERATING RATING RESULTS
  ----------------------------      ----------------------------
  RATING  CRITICAL  CONTROLLING     RATING  CRITICAL  CONTROLLING
  FACTOR   MEMBER    LIVE LOAD      FACTOR   MEMBER    LIVE LOAD

    0.54  L  4 U  4     HL
*                                    0.70  L  4 U  4     HL

NOTE:  For capacity less than force due to dead load, rating will be 0
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    TRUSS (L = 104.0 FT  W = 14 FT),  ANALYSIS  DATE  5-29-25

 TABLE 16.8 SUMMARY OF POSTING VEHICLE RATING (L R F D)
           ----------------------------------

 SPECIAL TRUCK LOADING - S1
 --------------------------
   VEHICLE  DESCRIPTION        RATING RESULTS
  ----------------------      ------------------
  VEHICLE  NO OF  TOTAL      SAFE LOAD  CRITICAL
   NAME    AXLES  WEIGHT     CAPACITY    MEMBER
                (K or KN)     FACTOR

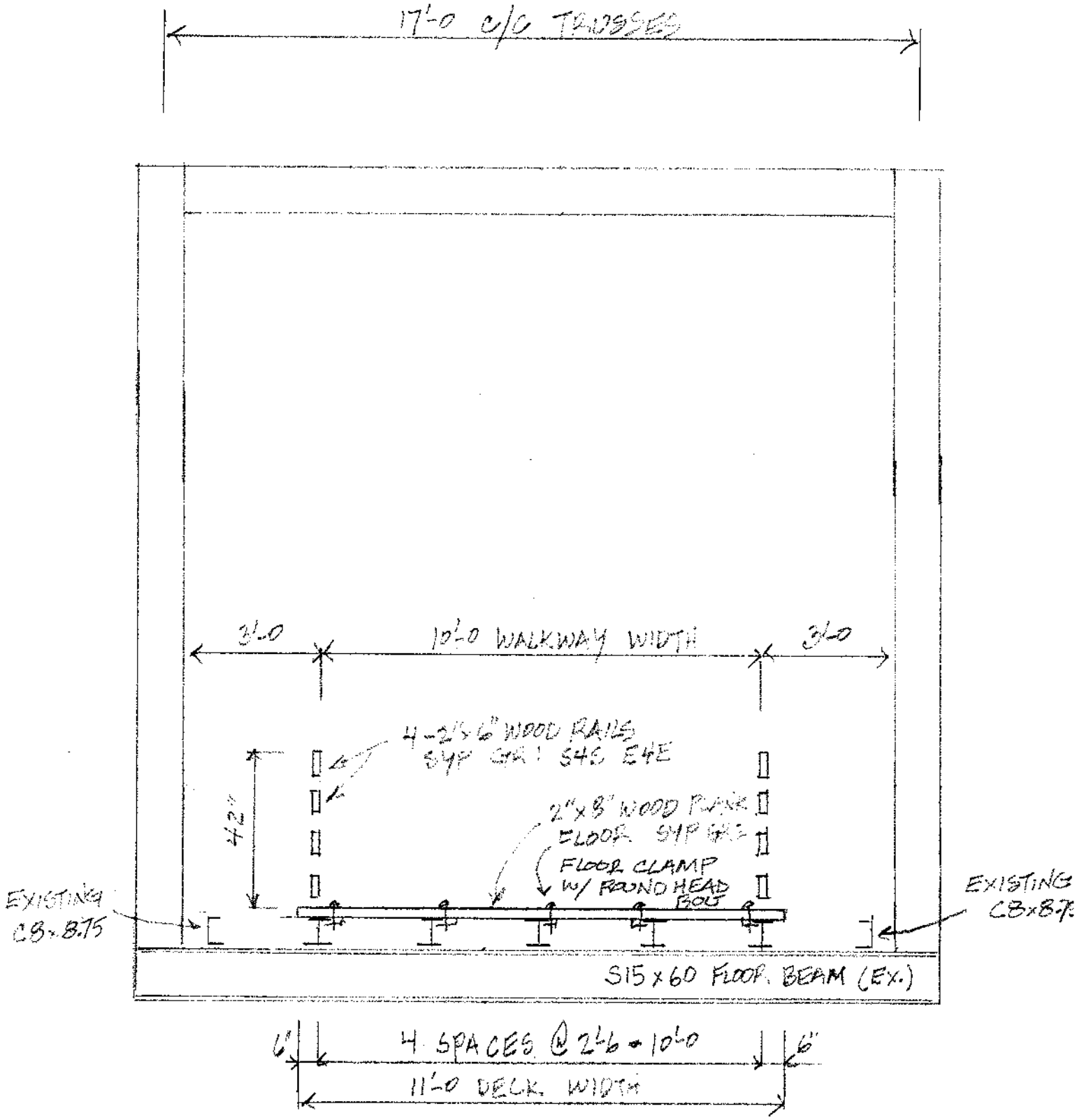
H-10         2     20.00         1.63   L  4 U  4

NOTE:  For capacity less than force due to dead load, rating will be 0
```

Attachment 2

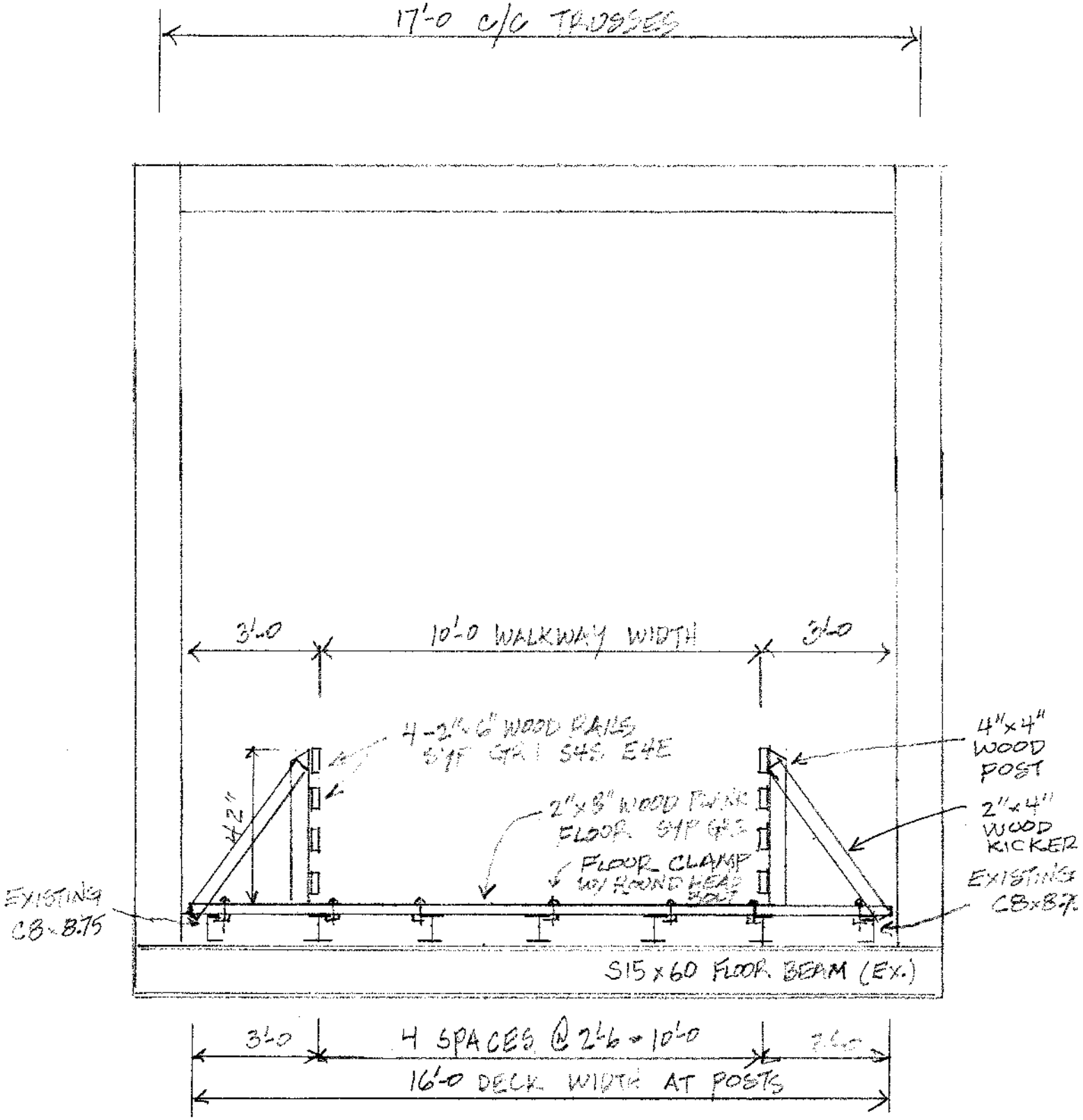
Pumphouse Road Bridge Conceptual Plan

PUMPHOUSE ROAD
SPRINGFIELD, OH



BRIDGE SECTION VIEW
RAIL POSTS NOT SHOWN

PUMPHOUSE ROAD
SPRINGFIELD, OH



BRIDGE SECTION VIEW
AT RAIL POSTS

Attachment 3

Pumphouse Road Bridge Bid Form

Base Bid Form

The awarded bidder, having examined the bid document and the site of the proposed work, and being familiar with all of the conditions surrounding the construction of the proposed project, including the availability of materials and labor, hereby proposes to furnish all labor, equipment, tools, supplies, insurance, taxes, materials, and all other necessary incidentals to construct the project in accordance with the Agreement, within the time set forth herein, and at the following unit prices:

Bid Item #	Bid Item Description	Bid Quantity	Bid Unit	Unit Price	Total
1	Removal of the existing bridge decking	1	LS		
2	Provide and install new W8 x 24# grade A572 plain stringers	17	EA		
3	Provide and install 2”x8” treated, SYP, Grade 2 timber plank decking	1	LS		
4	Provide and Install 2”x6” treated SYP, Grade 1 timber bridge railing with 4” x 4” SYP timber posts	1	LS		
5	Mobilization and Demobilization	1	LS		

Notes:

1. All debris will be hauled away by contractor
2. The bridge width will be reduced from 14’ to 10’.
3. The load rating will be certified by a PE certified in Ohio at the bidder’s expense.

BASE BID REHABILITATION WORK SUMMARY:

TOTAL FOR ALL
REHABILITATION ITEMS LISTED ABOVE **$**_____

_____

(In words)

BIDDER'S NAME: _____

SIGNATURE: _____

TITLE: _____