Steel Industry Update

Jeff Carlson

Director of Market Development

Celebrating 10 Years of SteelDay!

September 28, 2018

Thursday, September 27th

Baileson Brewery
2322 Bissonnet St., Houston

Happy Hour sponsored by AISC/NSBA
6 – 9 PM

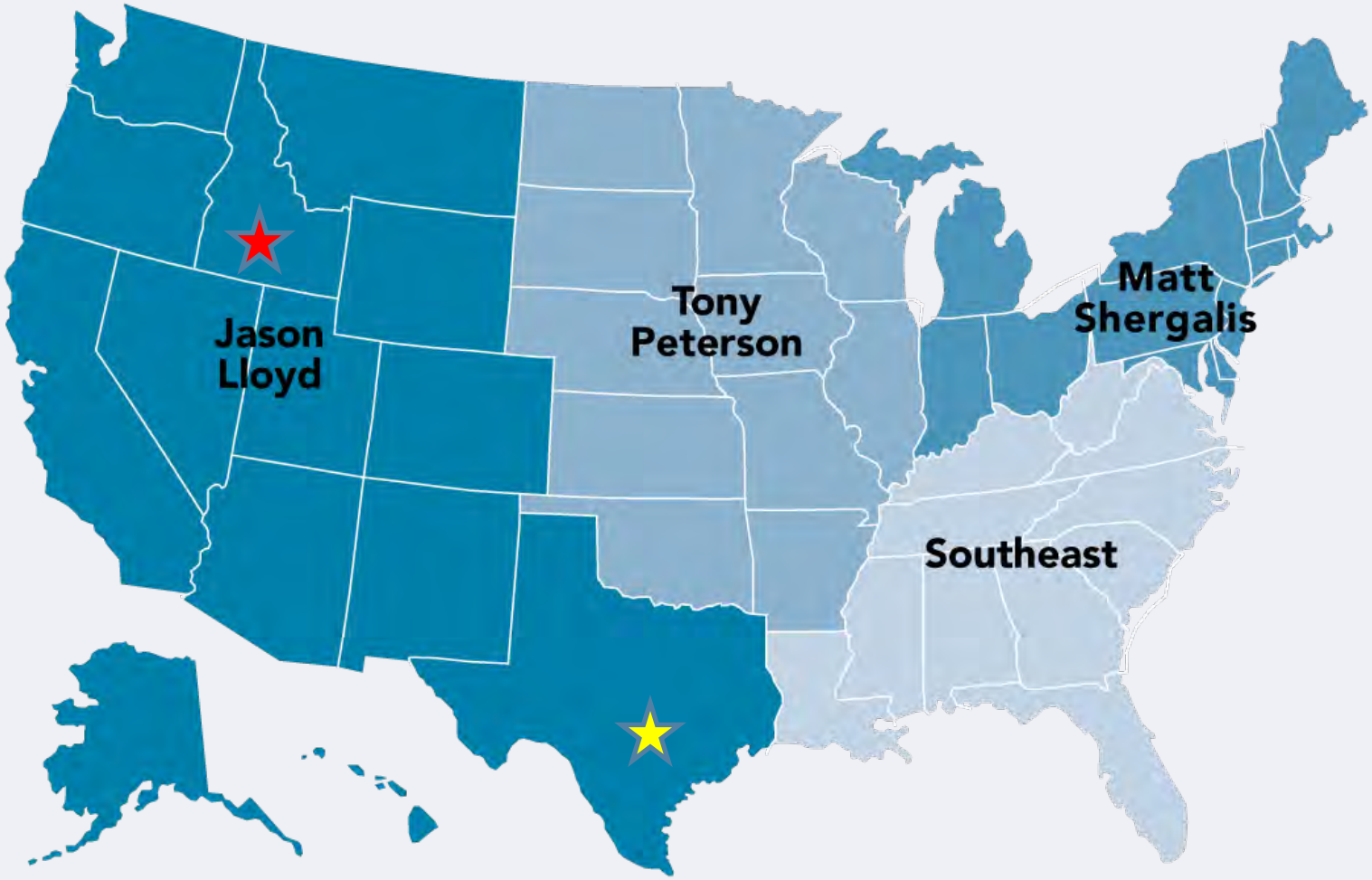
Register for event here:
https://www.aisc.org/why-steel/steelday/steelday-events/nsba-aisc-happy-hour/

Staff Updates

Staffing Updates

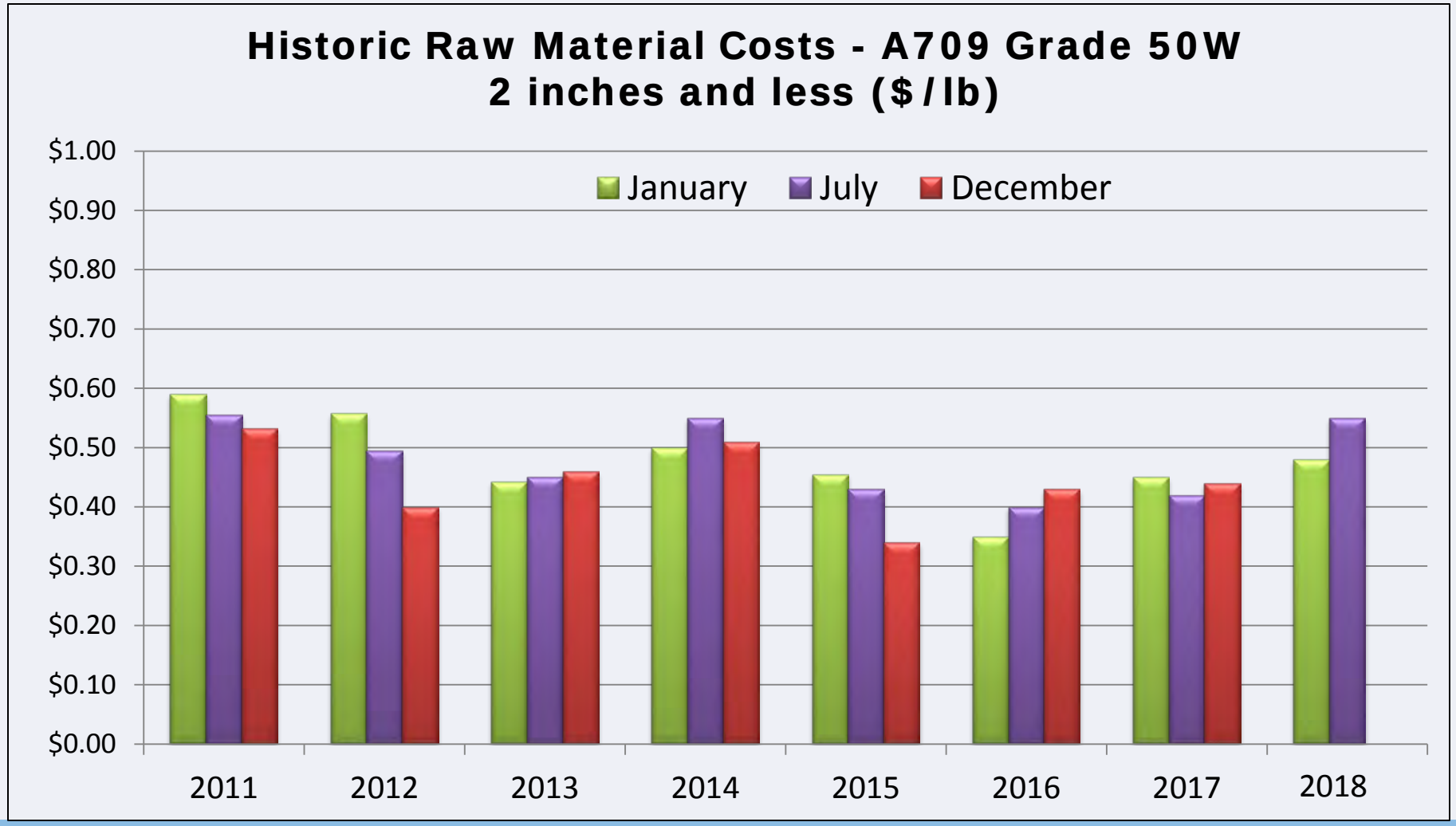
- New Roles
  - Chris Garrell: Chief Bridge Engineer
  - Jeff Carlson: Director of Market Development
- Retirement
  - Calvin Schrage retired September 15
- Staff Additions
  - Tony Peterson joins NSBA in central region
  - Jason Lloyd joins NSBA in west region

Regions



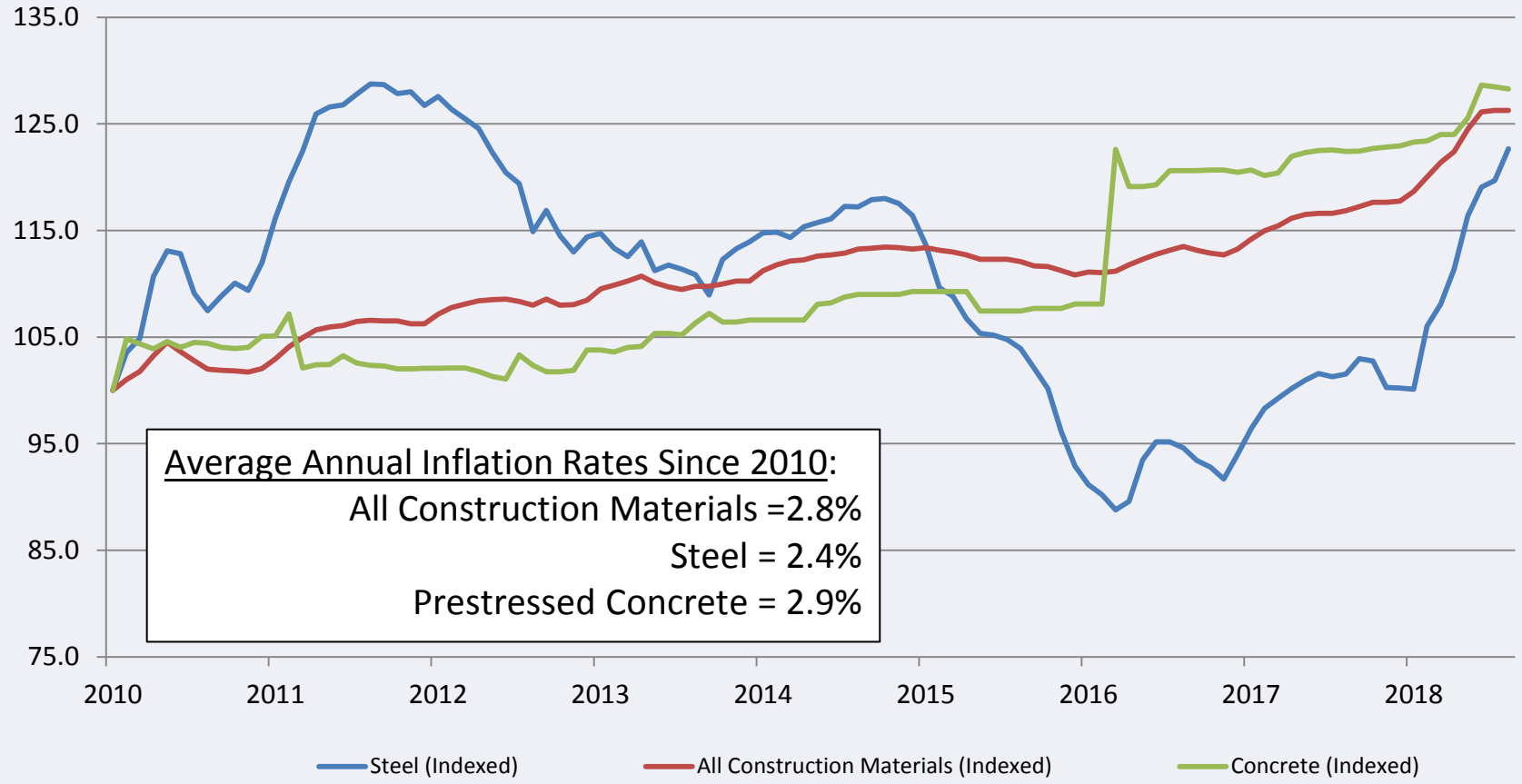
Pricing Estimates

Plate Material Prices



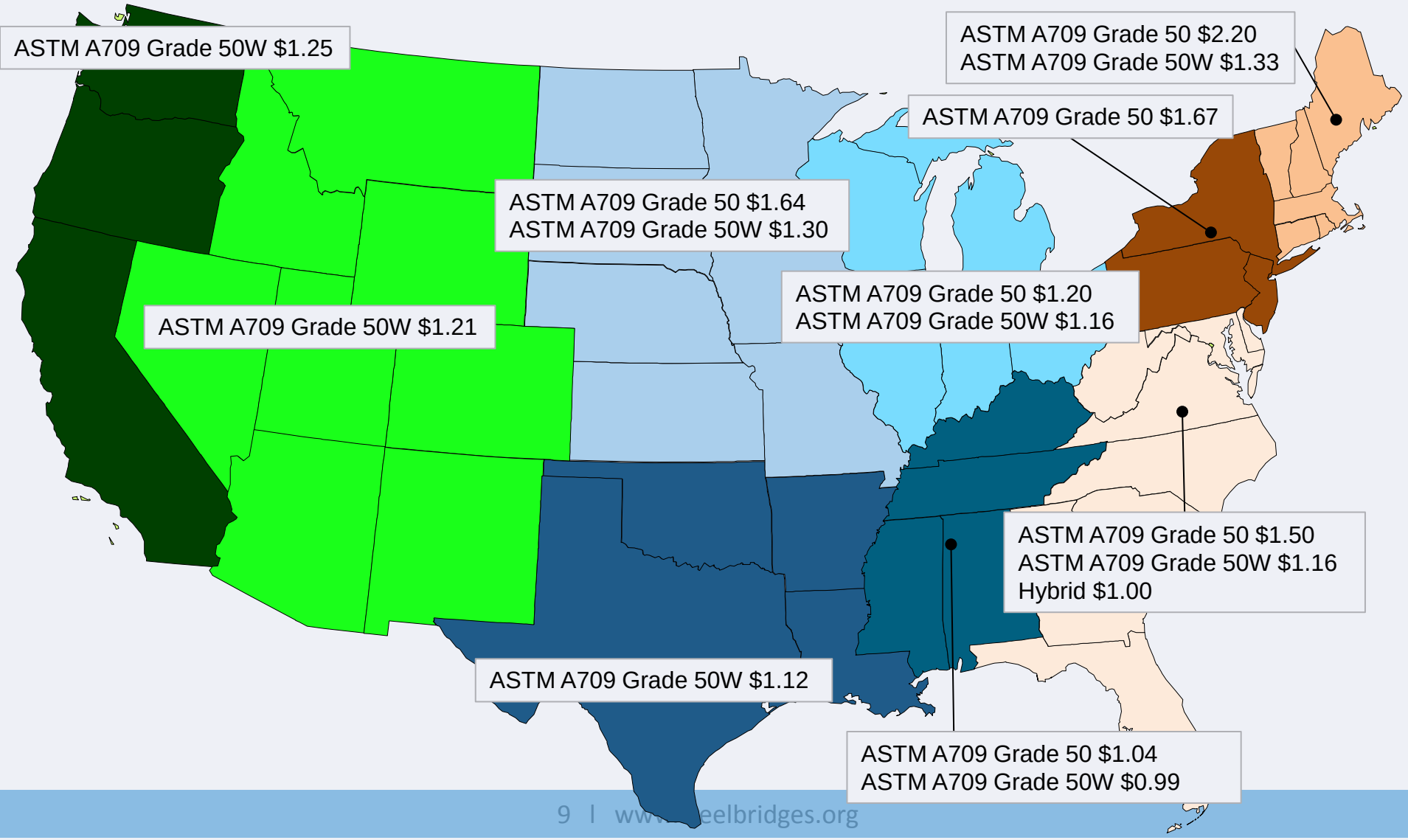
Steel In The News

Relative Construction Producer Price Index

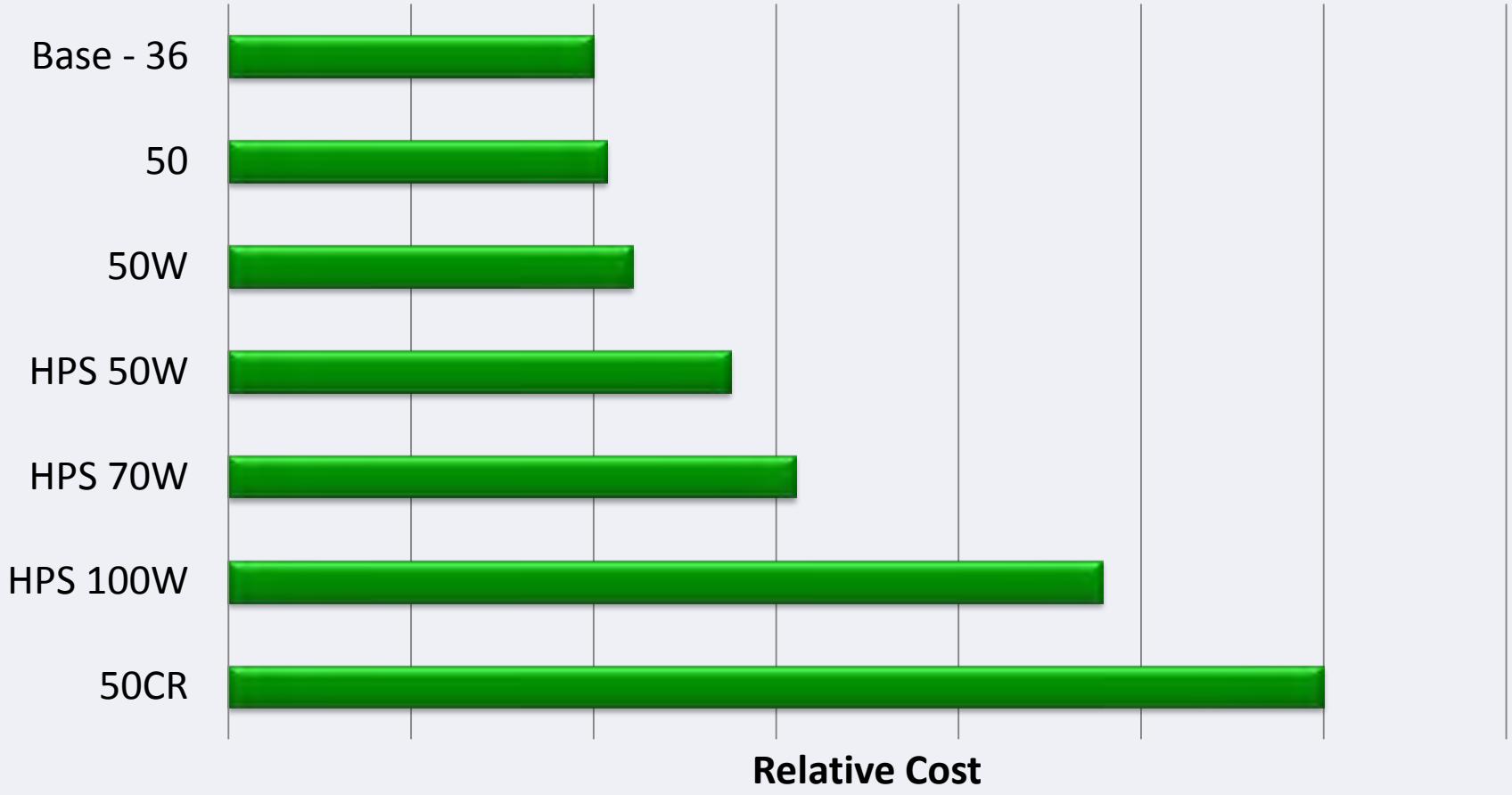


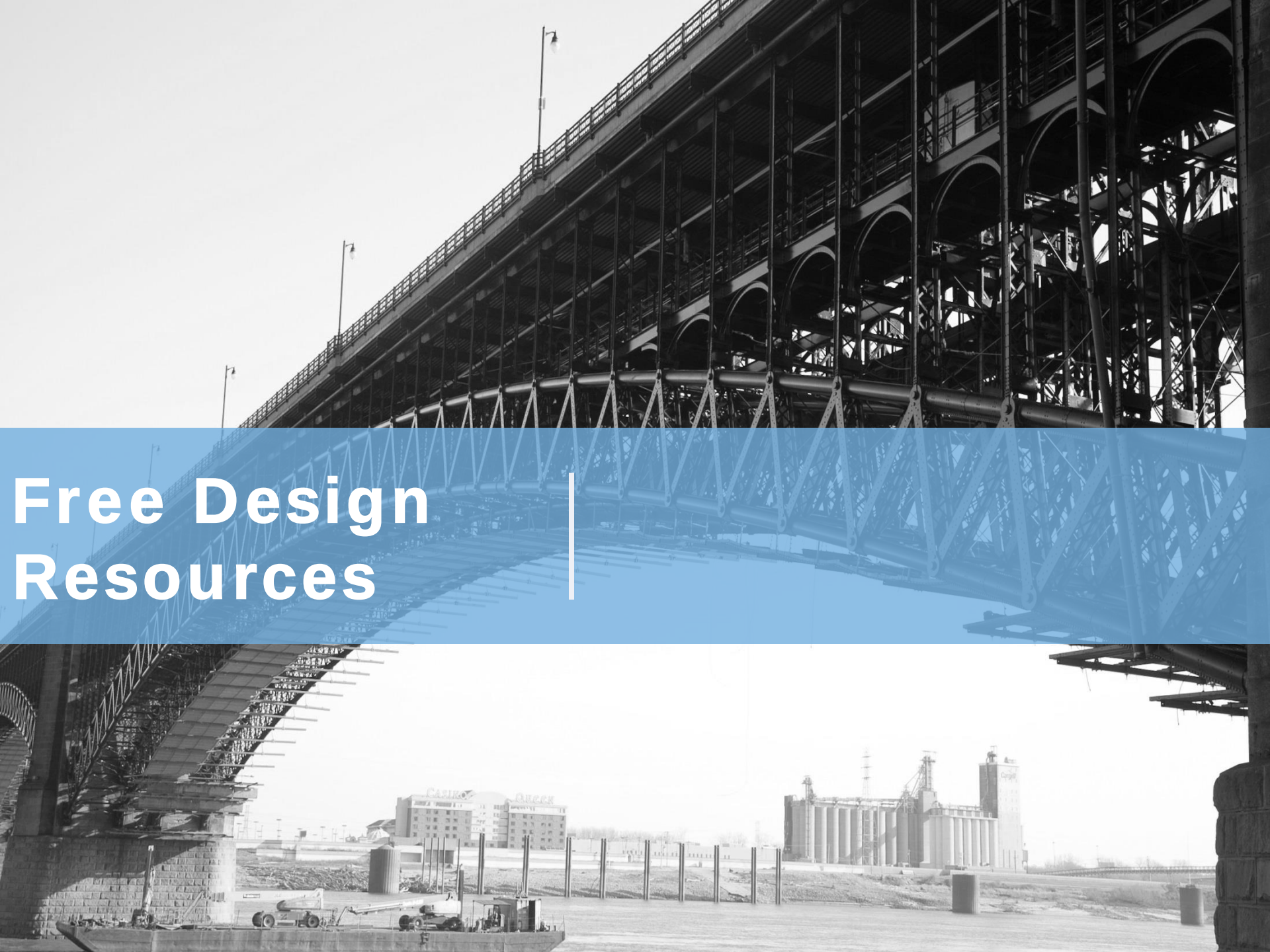
Souce: US Bureau of Labor Statistics (St Louis Federal Reserve)

Historic Bridge Costs ($/lb)



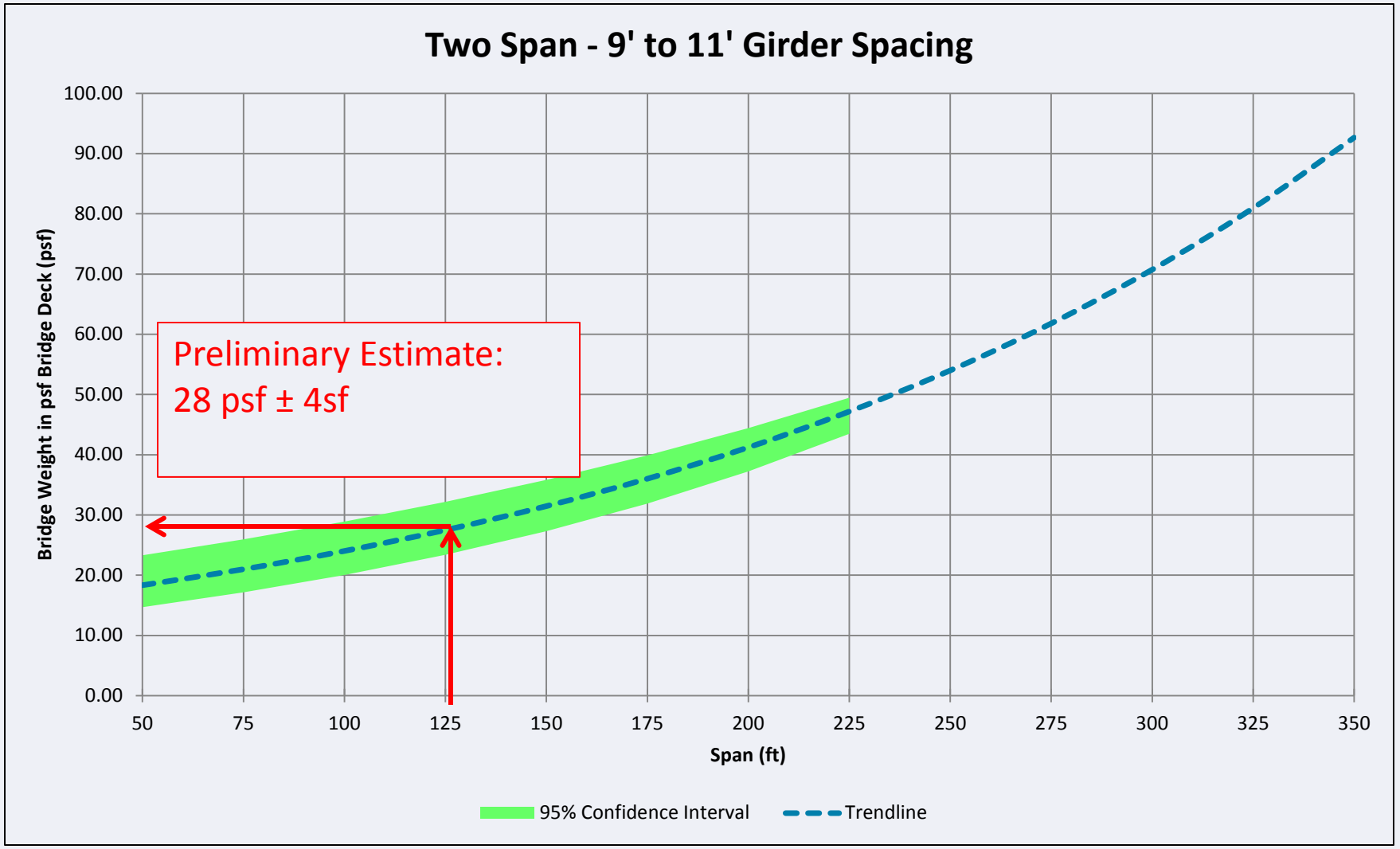
Material Relative Cost





Free Design Resources

Steel Superstructure Weight vs. Span



LRFD Simon – AASHTO 8th Edition

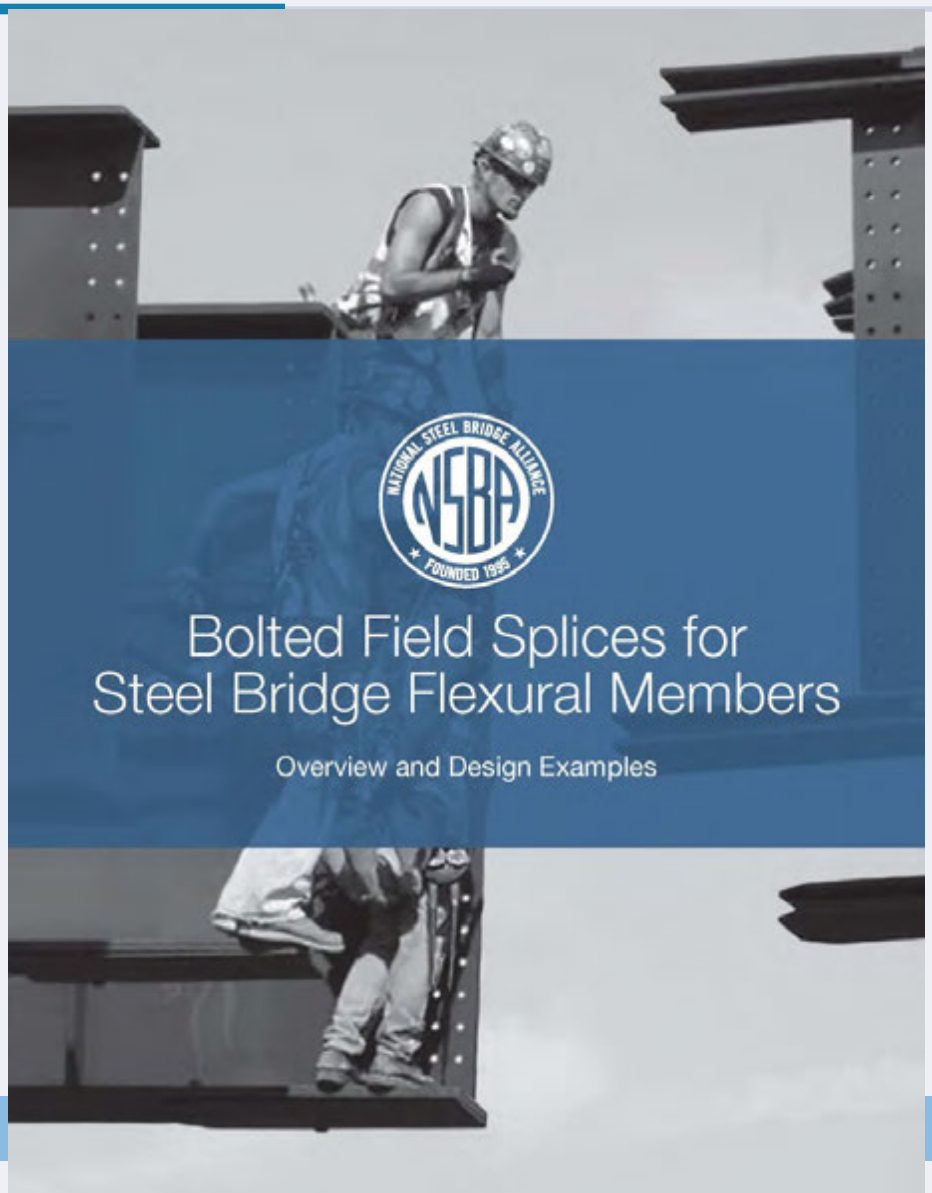
- LRFD Simon – Latest Enhancements
  - 8th Edition AASHTO Specification Support.
  - Input File Validation.
  - “Best Design” input file creation.
  - Updated User Documentation.
  - An Assortment of Bug Fixes.

LRFD Simon – AASHTO 8th Edition

New Version Available Now!

www.aisc.org/nsba/design-resources

Splice Design Aid

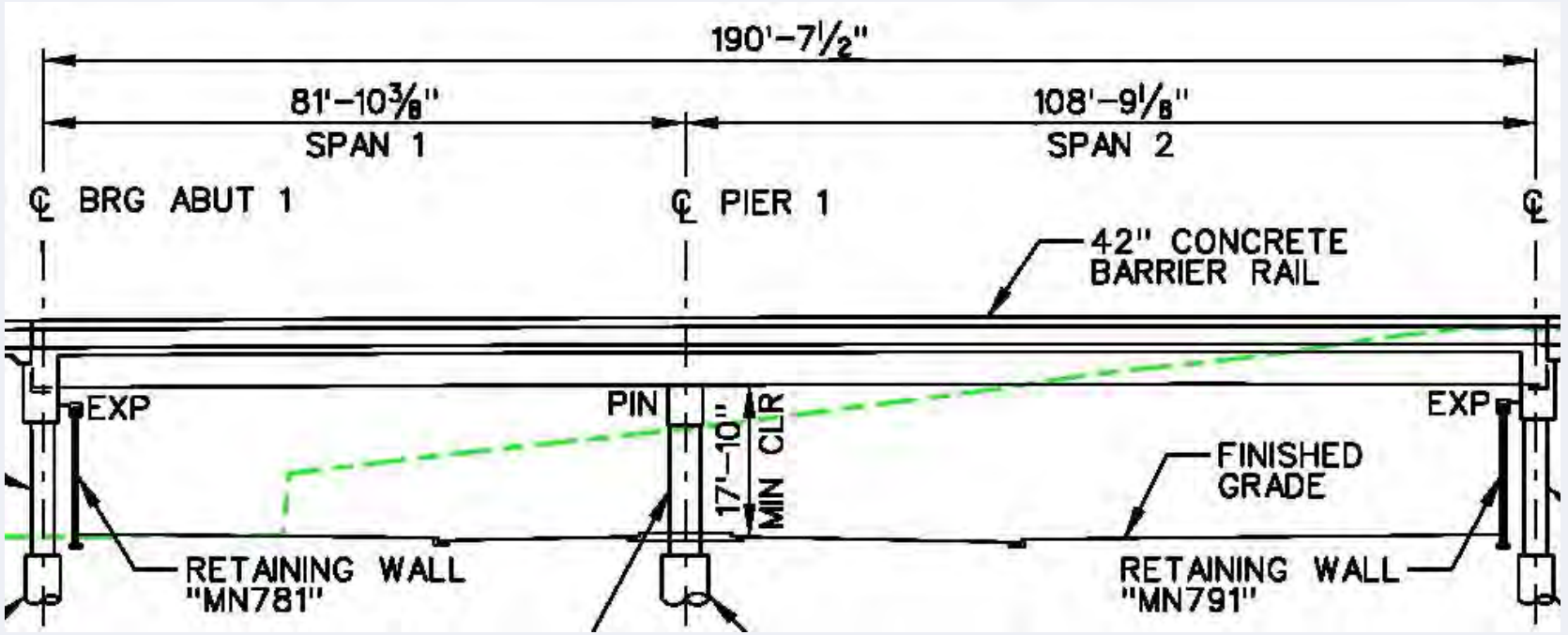


Go To:

https://www.aisc.org/nsba/design-resources

Conceptual Studies

- For example, you might have a bridge with this layout



Conceptual Studies

- You would receive a detailed report including:
  - Comparison tables

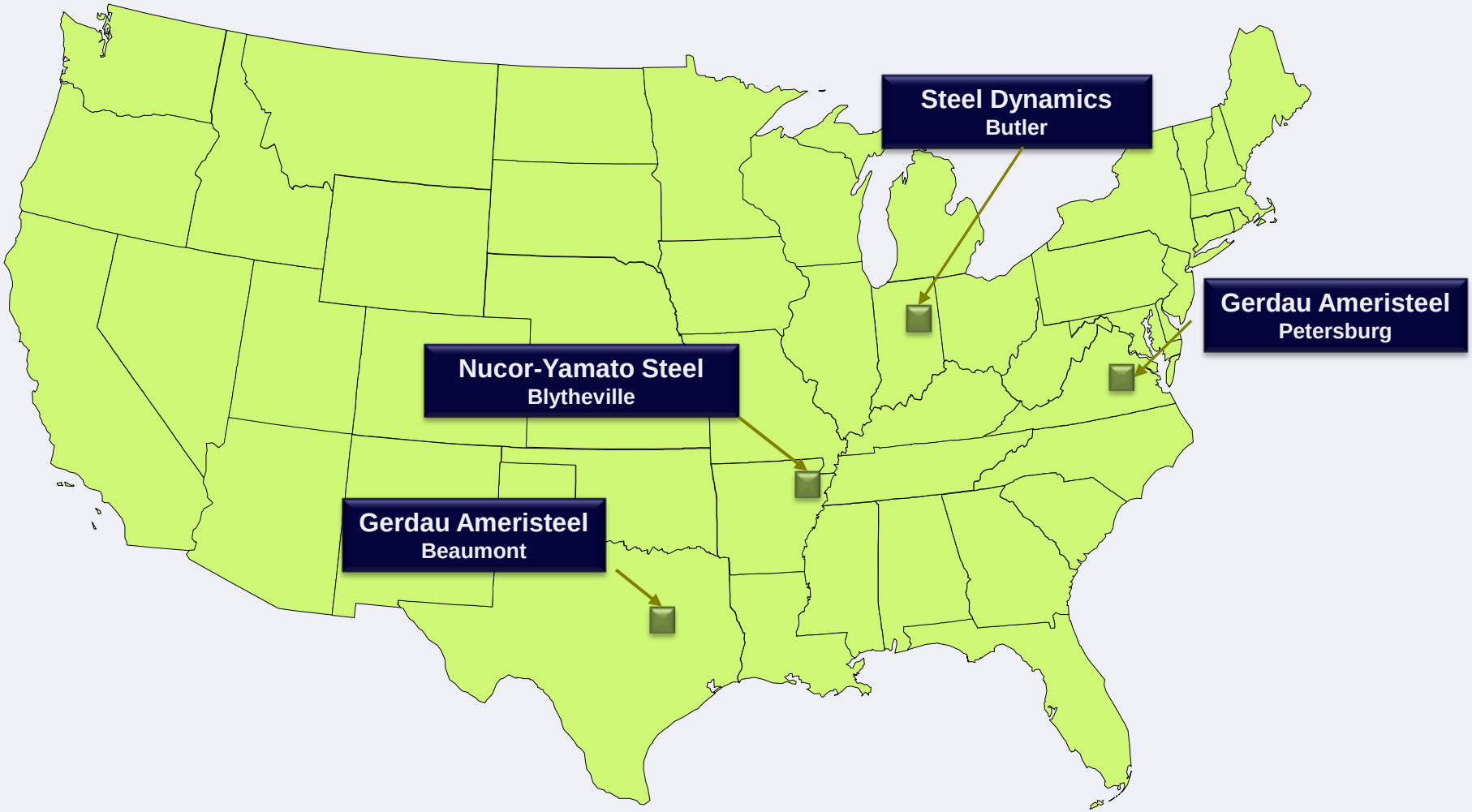
PDS 2004/25
Two spans (82.76 - 112.76')

Description	Estimated Unit Weight Scheme A1	A2	B1	B2			
Number of girder lines	5	5	4	4			
Approximate number of studs/gdr	384	339	396	498			
Number of t. stiffeners/gdr	0	0	8	0			
Deck Area (ft^2)	8079	8079	8079	8079			
Weight of one girder line (Grade 50w)	19.31	17.26	6.24	20.65			
HPS 70W <= 2 in			12.56				
HPS 70W > 2 in.							
Weight of field splices	0.19	0.18	0.19	0.21			
Summation for one girder line (tons)	19.50	17.44	18.99	20.86			
Weight of all girder lines (tons)	97.50	87.20	75.96	83.44			
Interior Cross frames (tons)	2.19	2.29	2.13	2.18			
Cross frames at supports (tons)	1.76	1.80	1.70	1.73			
Total Weight (tons)	101.5	91.3	79.8	87.4			
Unit Weight (psf deck area)	25.1	22.6	19.8	21.6			
Normalized Unit Weight	1.271	1.144	1.000	1.095			

A1: Five girder lines, constant depth
A2: Five girder lines, variable depth (Span 1 only)
B1: Four girder lines, constant depth
B2: Four girder lines, variable depth (Span 1 only)

Material Guidance

Structural Shape Availability



Structural Shape Availability

- Wide Flange Availability Maximums

Producer	Maximum Depth (in)	Length (ft)
Nucor-Yamato Steel	44	120*
Gerdau Ameristeel	36	
Steel Dynamics	36	

* Maximum length for some beam sizes may be shorter.

- Allow a plate girder alternative & show on bid documents.

Mill Plate Availability

Mill Plate Availability – Grade 50

- Plate Availability Maximums

Producer	Maximum Thickness (in)	Maximum Width (in)
Arcelor-Mittal	4	162
Nucor Steel	4	136
SSAB	3	120

- <= 3” thick plate will result in the best pricing

Mill Plate Availability – HPS70W

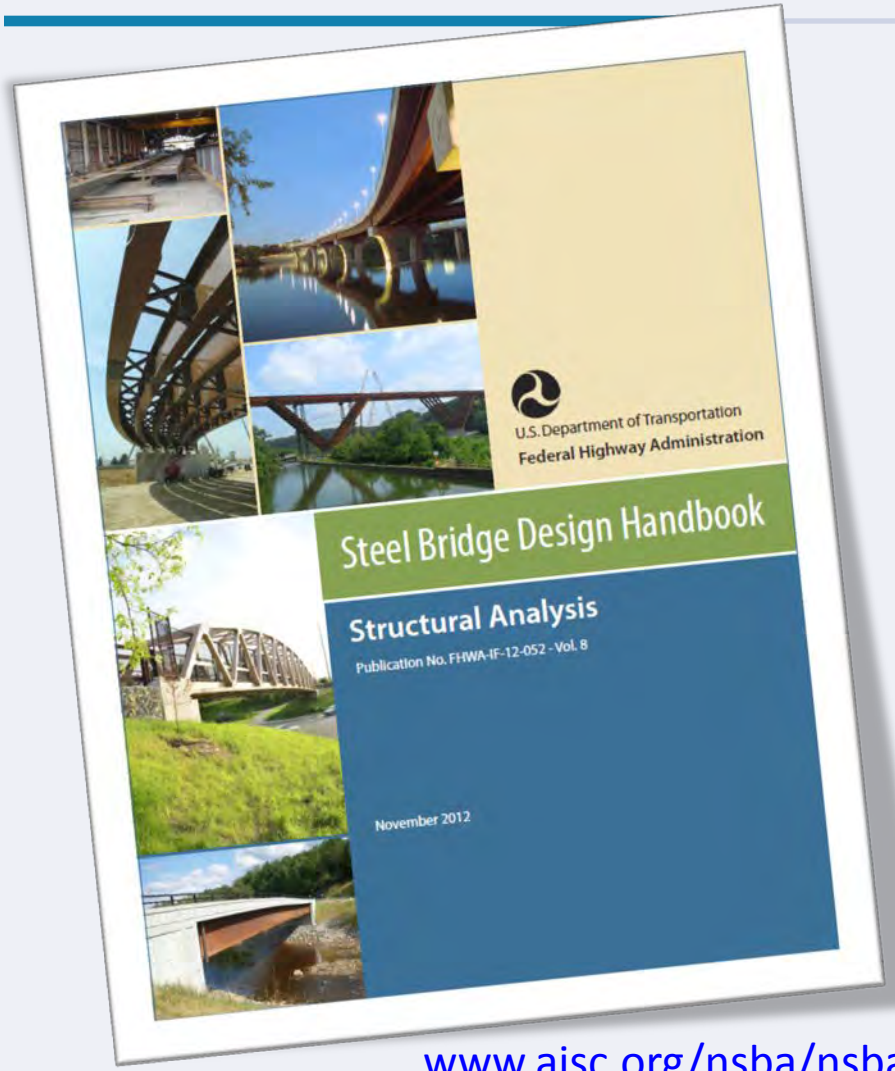
- Plate Availability Maximums

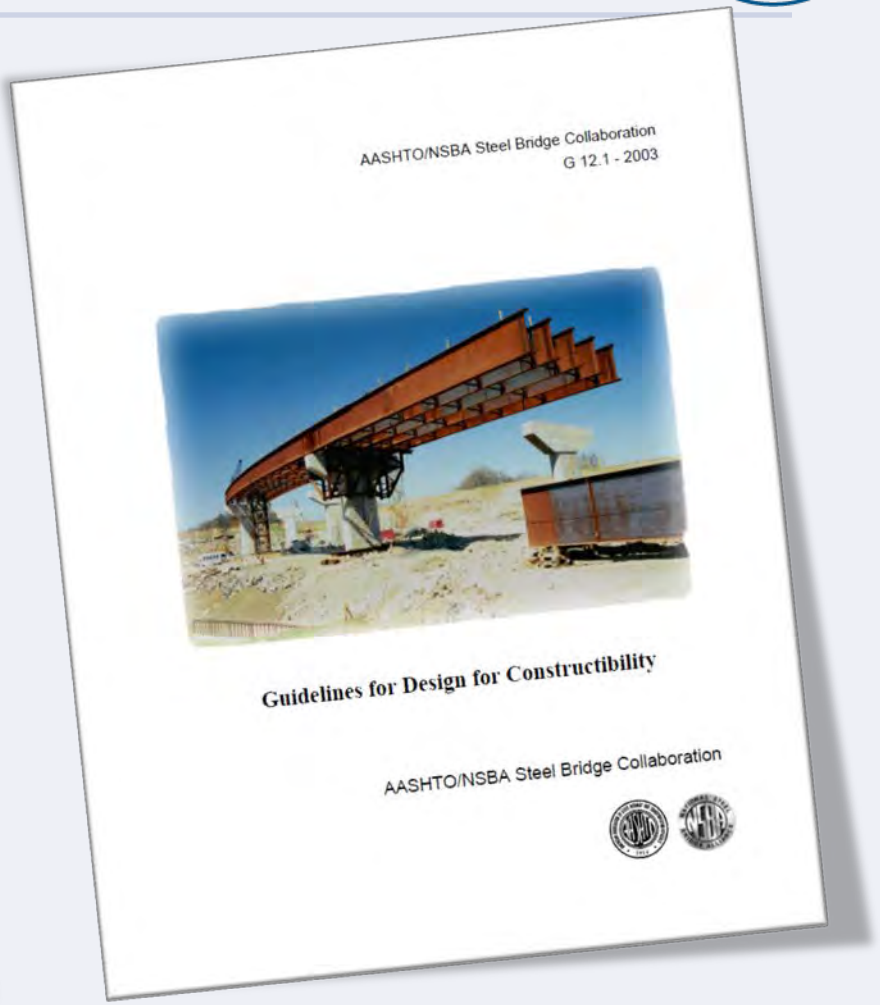
Producer	Maximum Thickness (in)	Maximum Width (in)	Maximum Length (in)
Arcelor-Mittal (Q&T)	4	195	600
Arcelor-Mittal (TMCP)	1 3/8	120	1500
Nucor Steel (Q&T)	3	124	580
SSAB (TMCP)	2	103	1140

* Q&T: Quench and Tempered.
** TMCP: Thermomechanical Controlled Process.

White Papers & Publications

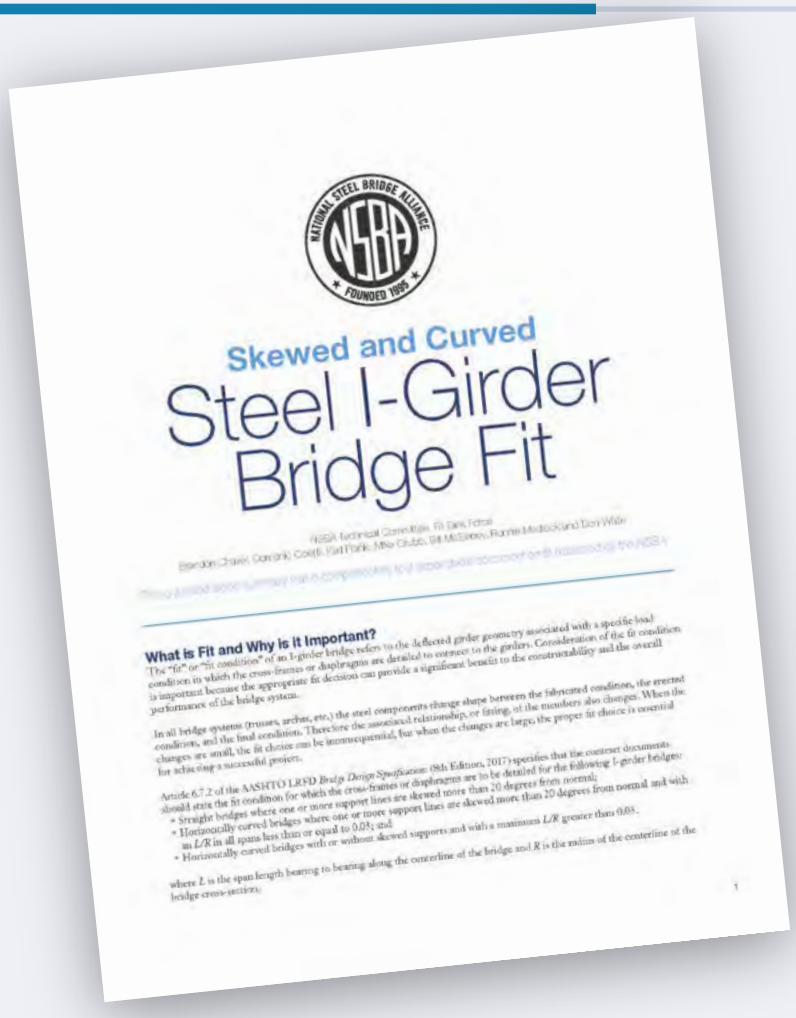
Design References





www.aisc.org/nsba/nsba-publications

Technical Resources



Skewed and Curved

Steel I-Girder Bridge Fit

What is Fit and Why is it Important?

bridge crossings

ARE YOU SURE THAT'S FRACTURE CRITICAL?

Understanding which steel bridge elements are fracture critical members will provide the required protection while saving on in-service inspection.

ONE OF THE MOST NOTEWORTHY bridge failures in the United States occurred in 1967, when the Point Pleasant Bridge over the Ohio River (also known as the Silver Bridge) collapsed, resulting in 46 deaths.

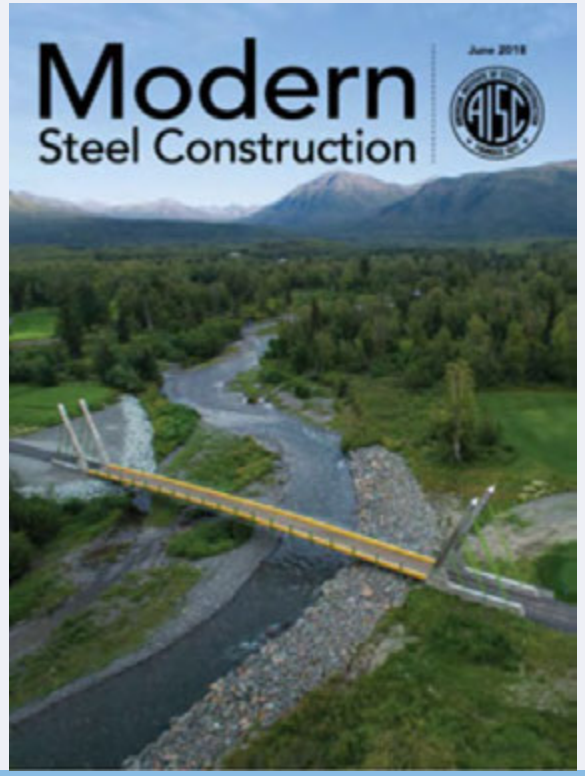
The Three-Legged Stool

www.aisc.org/nsba/nsba-publications

Alerts & Upcoming Events

MSC Articles

- Have an idea for a great bridge article?
  - Submit it to www.aisc.org/bridgeideas



Prize Bridge Awards

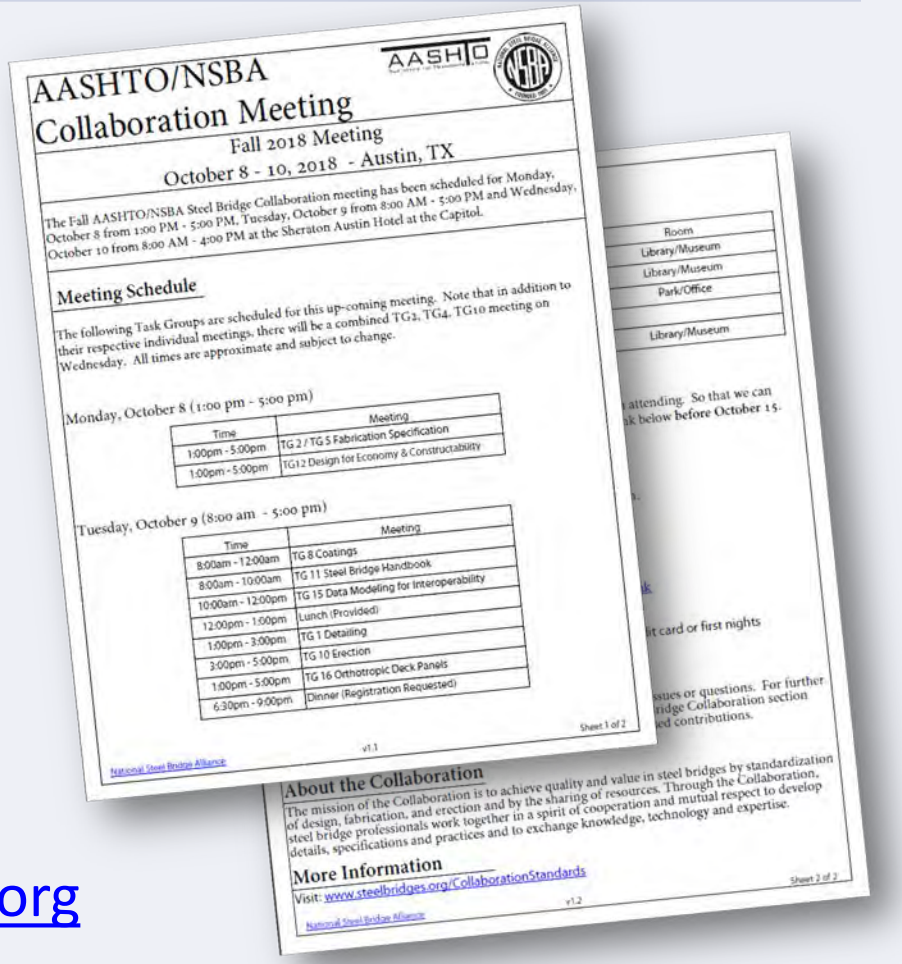
- 2020 Awards – Submissions open next summer
- Bridges must be open to traffic between May 1, 2017 and September 30, 2019.

2019 World Steel Bridge Symposium

- St. Louis – April 3 – 5, 2019
- DOT registration & travel reimbursement is available

AASHTO / NSBA Collaboration

- Fall 2018 Meeting
  - October 8 – 10.
  - Austin, TX.



AASHTO/NSBA Collaboration Meeting

Fall 2018 Meeting

October 8 - 10, 2018 - Austin, TX

The Fall AASHTO/NSBA Steel Bridge Collaboration meeting has been scheduled for Monday, October 8 from 1:00 PM - 5:00 PM, Tuesday, October 9 from 8:00 AM - 5:00 PM and Wednesday, October 10 from 8:00 AM - 4:00 PM at the Sheraton Austin Hotel at the Capitol.

Meeting Schedule

The following Task Groups are scheduled for this up-coming meeting. Note that in addition to their respective individual meetings, there will be a combined TG2, TG4, TG10 meeting on Wednesday. All times are approximate and subject to change.

Monday, October 8 (1:00 pm - 5:00 pm)

Time	Meeting
1:00pm - 5:00pm	TG 2 / TG 5 Fabrication Specification
1:00pm - 5:00pm	TG12 Design for Economy & Constructability

Tuesday, October 9 (8:00 am - 5:00 pm)

Time	Meeting
8:00am - 12:00am	TG 8 Coatings
8:00am - 10:00am	TG 11 Steel Bridge Handbook
10:00am - 12:00pm	TG 15 Data Modeling for Interoperability
12:00pm - 1:00pm	Lunch (Provided)
1:00pm - 3:00pm	TG 1 Detailing
3:00pm - 5:00pm	TG 10 Erection
1:00pm - 5:00pm	TG 16 Orthotropic Deck Panels
6:30pm - 9:00pm	Dinner (Registration Requested)

National Steel Bridge Alliance v1.1 Sheet 1 of 2

Room
Library/Museum
Library/Museum
Park/Office
Library/Museum

attending. So that we can
k below before October 15.

it card or first nights

ssues or questions. For further
ridge Collaboration section
ed contributions.

About the Collaboration

The mission of the Collaboration is to achieve quality and value in steel bridges by standardization of design, fabrication, and erection and by the sharing of resources. Through the Collaboration, steel bridge professionals work together in a spirit of cooperation and mutual respect to develop details, specifications and practices and to exchange knowledge, technology and expertise.

More Information

Visit: www.steelbridges.org/CollaborationStandards

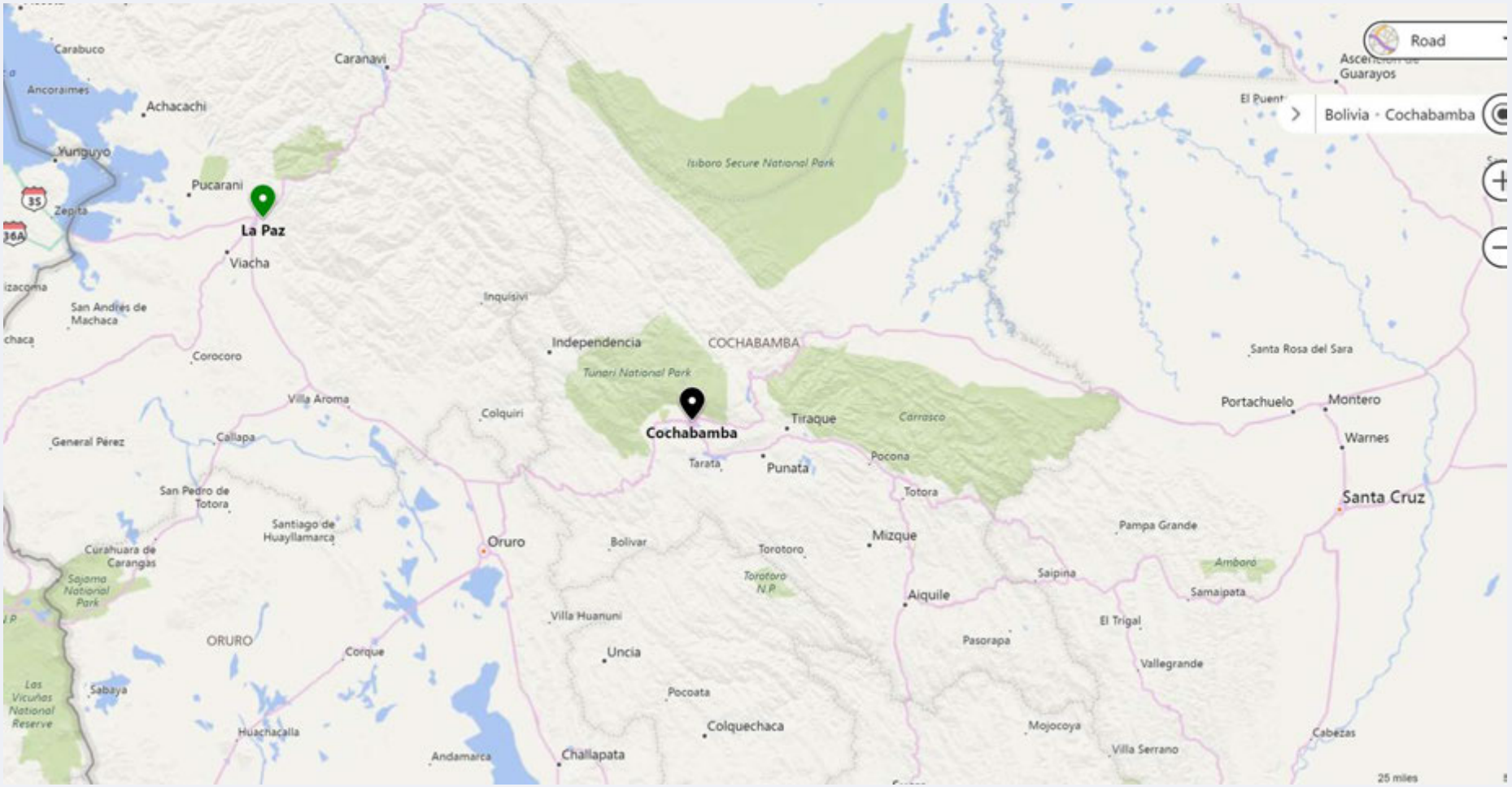
National Steel Bridge Alliance v1.2 Sheet 2 of 2

More Information:

nsbacollaboration@steelbridges.org

Bridges to Prosperity - Bolivia

Bridges to Prosperity - Bolivia



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Thank you