

# Houbolt Road Bridge over Des Plaines River

Public/Private Partnership: Non-Traditional Procurement  
and Non-Traditional Solutions



March 14, 2024



An aerial, high-angle photograph of a multi-lane highway bridge spanning a wide river. The bridge is supported by several concrete piers. Several large trucks are visible on the bridge, including a white box truck, a dark semi-truck, and a flatbed truck. The surrounding landscape includes dense green trees and some industrial buildings in the distance. The entire image has a blue color cast. The word "INTRODUCTIONS" is overlaid in the center in a bold, white, sans-serif font.

# INTRODUCTIONS

# Introductions



**Pat Shea**  
**Kraemer North  
America**  
Project Executive



**Jack Canale**  
**Granite  
Construction**  
Project Manager



**Kevin Heffern**  
**Burns &  
McDonnell**  
Design Manager

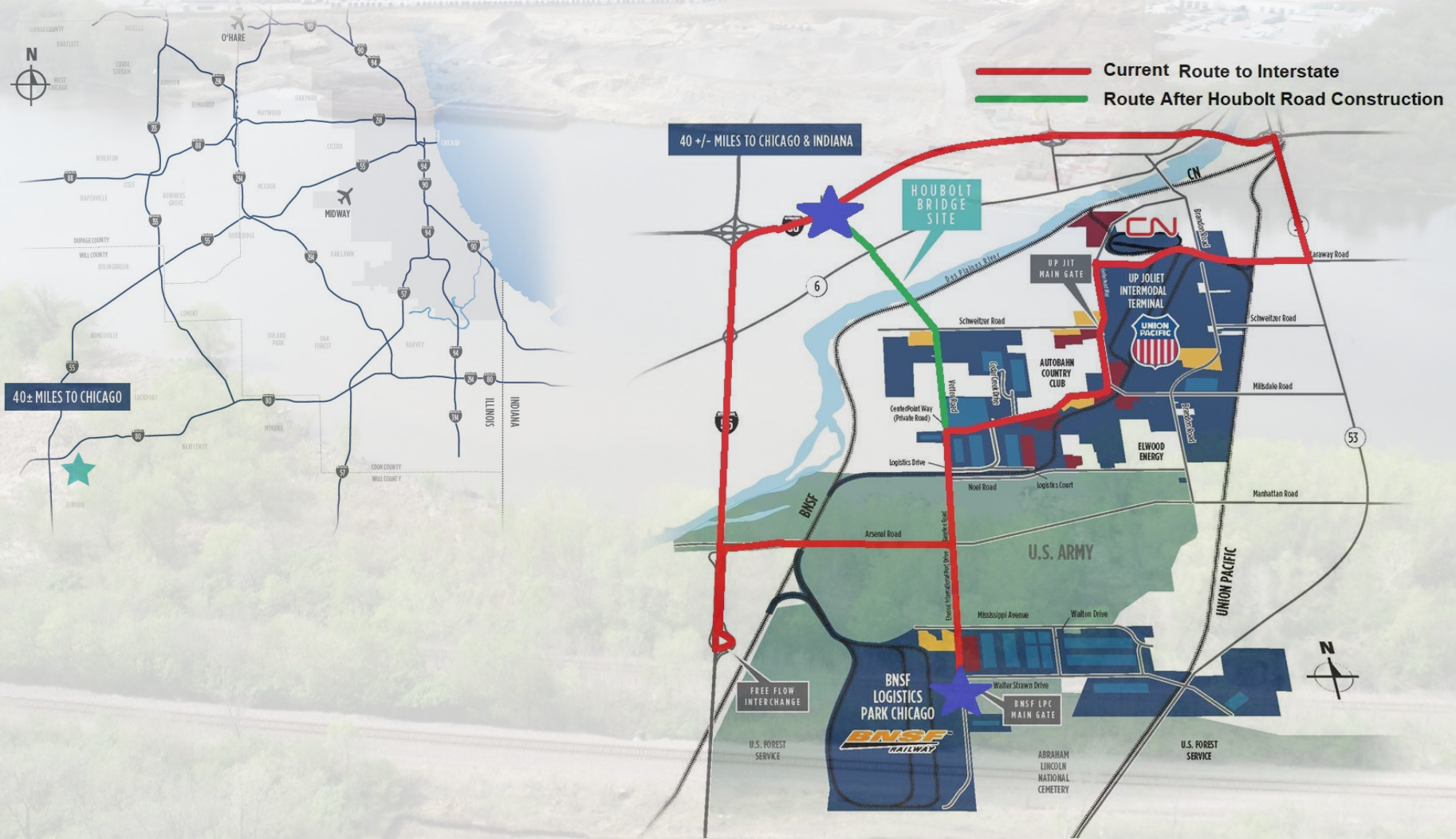
# Presentation Agenda

- Project Overview
- Contractor/Engineer Collaboration
- Project Highlights
- Closing Thoughts
- Questions

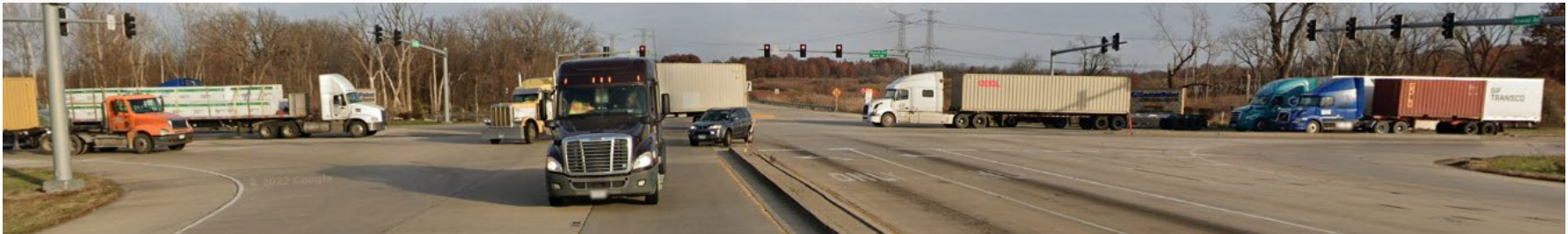
An aerial photograph of a multi-lane highway bridge spanning a wide river. The bridge is supported by several concrete piers. Several trucks are visible on the bridge, including a white box truck, a dark semi-truck, and a flatbed truck. The surrounding area includes dense green trees and some industrial buildings in the distance. The entire image is overlaid with a semi-transparent blue filter.

# PROJECT OVERVIEW

# Project Location

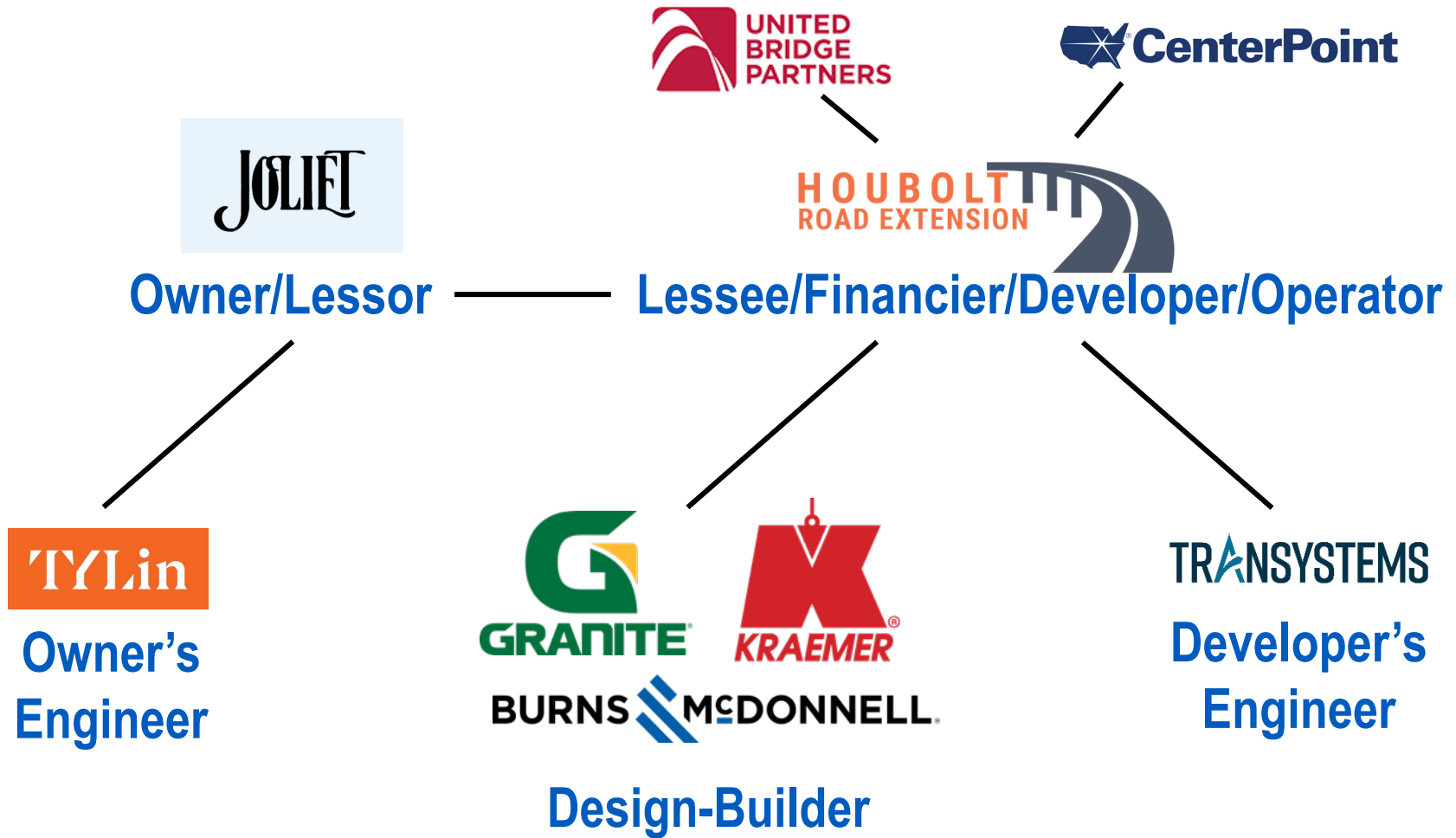








# Contractual Arrangement



# Where's IDOT?



Illinois Department  
of Transportation

# Where's IDOT?



Contractually required to design and build to IDOT standards.

TRANSYSTEMS

Advises Financier/Developer on design and construction conformance to IDOT standards.

JOLIET

Requested assistance from IDOT Bridge Office to review bridge plans.

An aerial photograph of a multi-lane highway bridge crossing a wide river. The bridge has several concrete pillars supporting it. Several trucks are visible on the bridge, including a white box truck, a dark semi-truck, and a flatbed truck. The background shows a dense line of trees and some industrial buildings in the distance. The entire image is overlaid with a semi-transparent blue filter.

**COLLABORATION  
DRIVES  
INNOVATION**

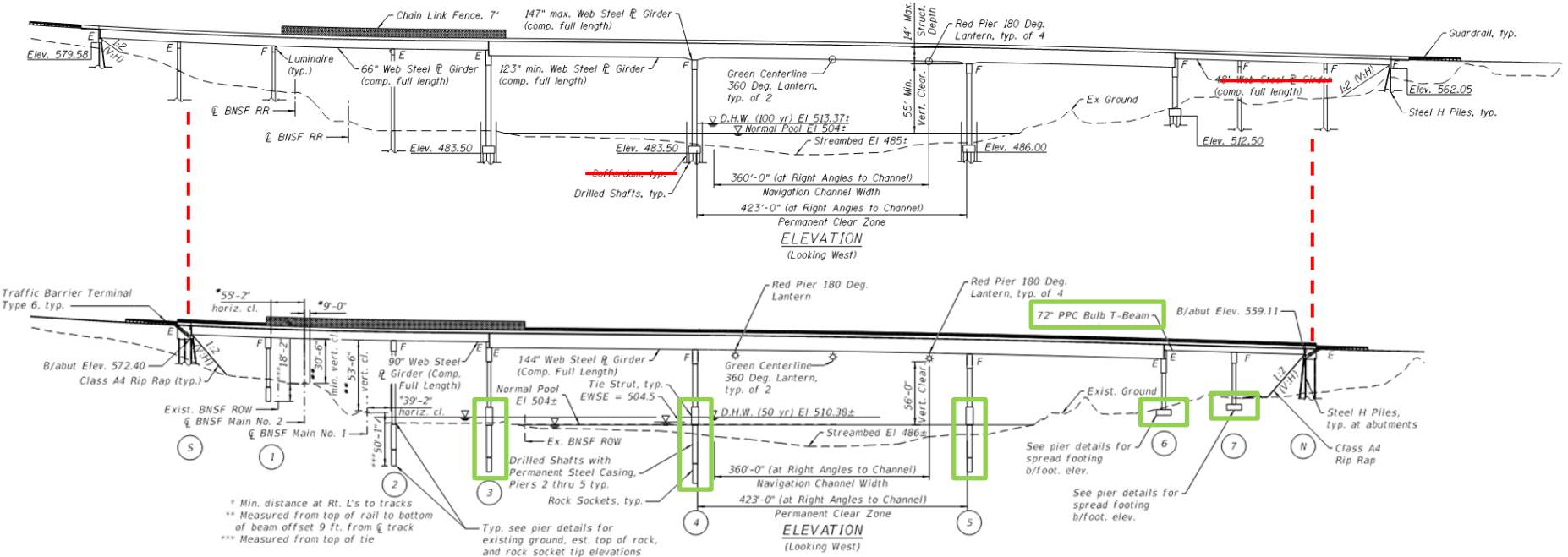
# Contractor/Engineer Collaboration

## Proposal Stage

- 60-Day Proposal Phase
- Co-Located Brainstorming Sessions
- Unlimited Number of Alternate Technical Concepts (Similar to MoDOT AAS process)
  - Reduced bridge length
  - Eliminated coffer dams
  - Spread footings
  - Prestressed spans
  - Stay-in-Place forming

# Contractor/Engineer Collaboration

## Proposal Stage



# Contractor/Engineer Collaboration

## Post Award Design Package Development

- Brainstorming Sessions - Design
  - Sequence of construction
  - Determining impacts of long lead time items
  - Considering contractor resources/availability
- Coordination w/ Permitting Agencies (Jointly)
  - USCG
  - BNSF
  - Causeway increase hydraulics – Illinois DNR
  - Clean Water Act Section 401/404 – USACE, Illinois EPA, Will South Cook Soil and Water Conservation District

# Contractor/Engineer Collaboration

## Post Design/Construction

- Contractor-Designer – Trust/Rapport/Transparency
  - Regularly scheduled Contractor/Designer check-ins
  - Brainstorming sessions - Construction engineering
- Non-Conformance Reports (NCR's)
  - Difference from D-B-B vs. D-B vs. Houbolt
  - IDOT's role



An aerial photograph of a multi-lane highway bridge spanning a wide river. The bridge is supported by several concrete piers. Several trucks are visible on the bridge, including a large semi-truck pulling a flatbed trailer. The image is overlaid with a semi-transparent blue filter. The text "PROJECT HIGHLIGHTS" is centered in the lower half of the image.

# PROJECT HIGHLIGHTS

# South Bank Access



# South Bank Access



# South Bank Access



# South Bank Access



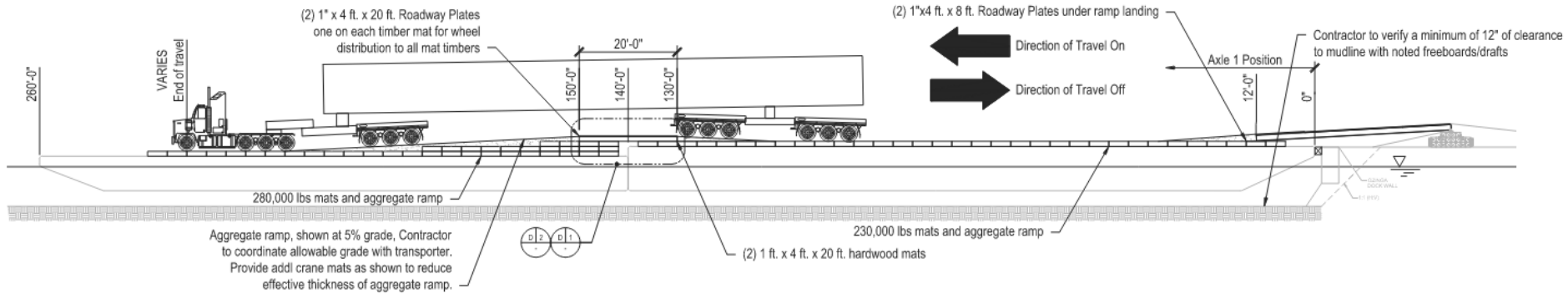
# South Bank Access



# South Bank Access



# South Bank Access





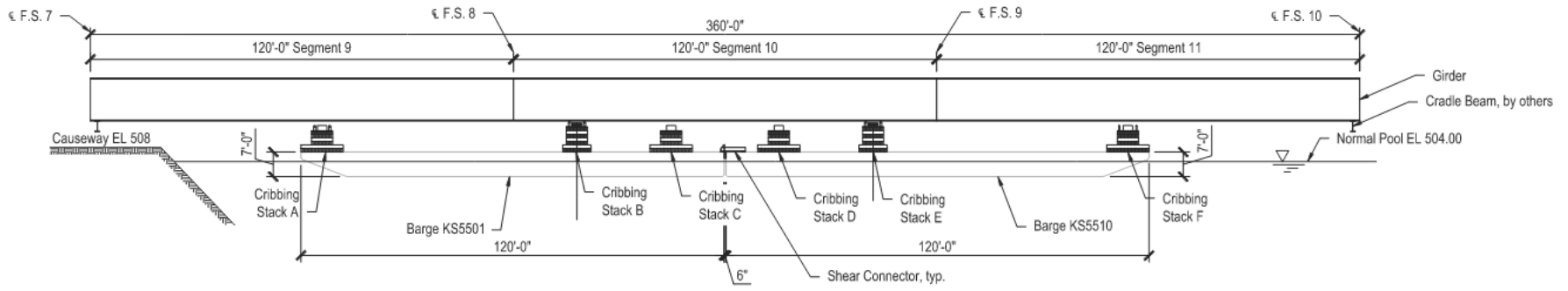
# South Bank Access



# Main Span Erection



# Main Span Erection



E1 ELEVATION

Plan Step	Anticipated Barge Freeboard (in.)							
	KS5501				KS5510			
	Bow	Port	Starboard	Stern	Bow	Port	Starboard	Stern
Barge Only	63	63	69	69	69	69	63	63
Barge & Cribbing	54	54	64	64	64	64	54	54
1	53	56	59	62	62	59	56	53
2	54	54	57	57	57	57	54	54
3	49	58	49	57	57	49	58	49
4	52	52	49	49	49	49	52	52
5	41	44	46	48	48	46	58	56
6	32	32	45	45	45	45	63	63
7	36	38	42	44	44	42	54	52
8	42	42	41	41	41	41	42	42
9	44	51	36	43	43	36	36	29
10	53	53	37	37	37	37	22	22
11	40	47	32	39	39	32	30	24
12	33	33	33	33	33	33	33	33

T1 TABLE 1

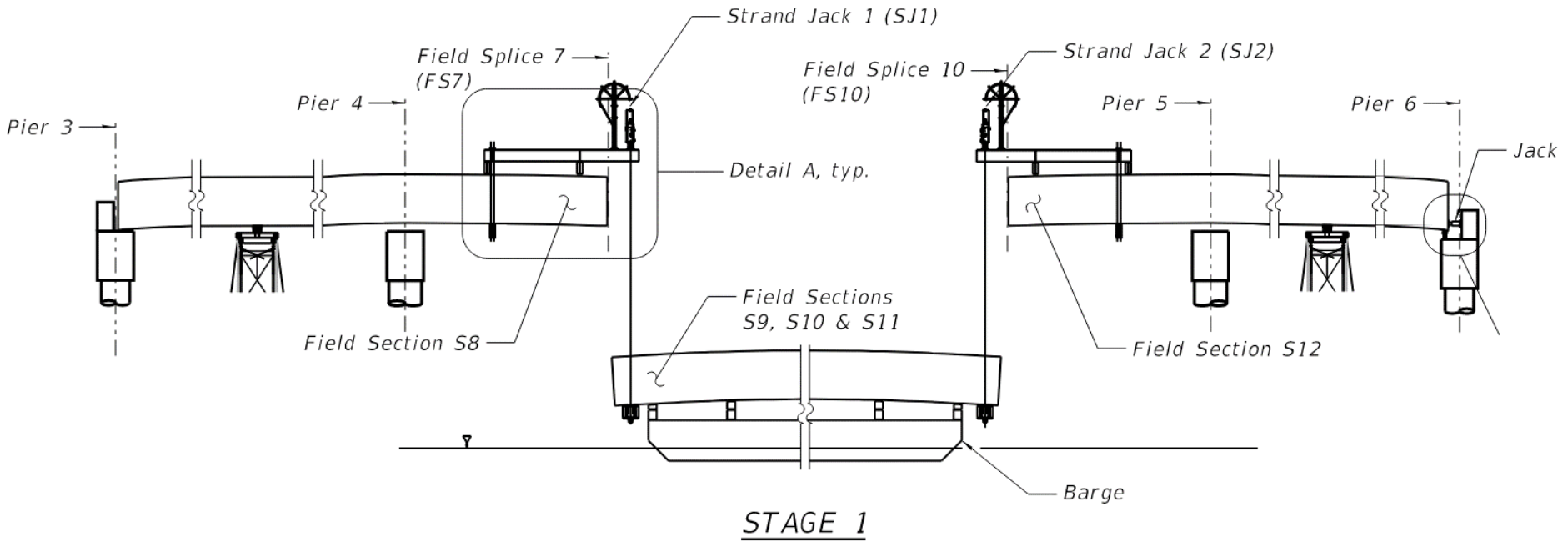
Plan Step	Anticipated Freeboard at Girder Tip (in.)															
	Segment 9								Segment 11							
	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6	Girder 7	Girder 8	Girder 1	Girder 2	Girder 3	Girder 4	Girder 5	Girder 6	Girder 7	Girder 8
5	123	117	126	129	130	122	126	123	145	144	147	150	151	149	147	145
6	114	103	105	118	121	108	105	113	150	149	152	155	157	155	152	149
7	118	110	113	123	125	116	113	118	140	142	143	146	147	147	143	141
8	124	120	122	128	130	125	122	122	131	128	130	135	138	133	130	130
9	126	127	131	135	133	133	131	129	115	113	117	128	121	118	117	123
10	134	138	141	138	141	143	141	133	100	99	102	104	107	104	101	99
11	126	124	128	131	133	129	128	125	107	107	111	115	113	112	111	110
12	111	110	112	115	118	115	112	110	119	118	120	123	126	123	120	118

T2 TABLE 2

# Main Span Erection



# Strand Jack Lift



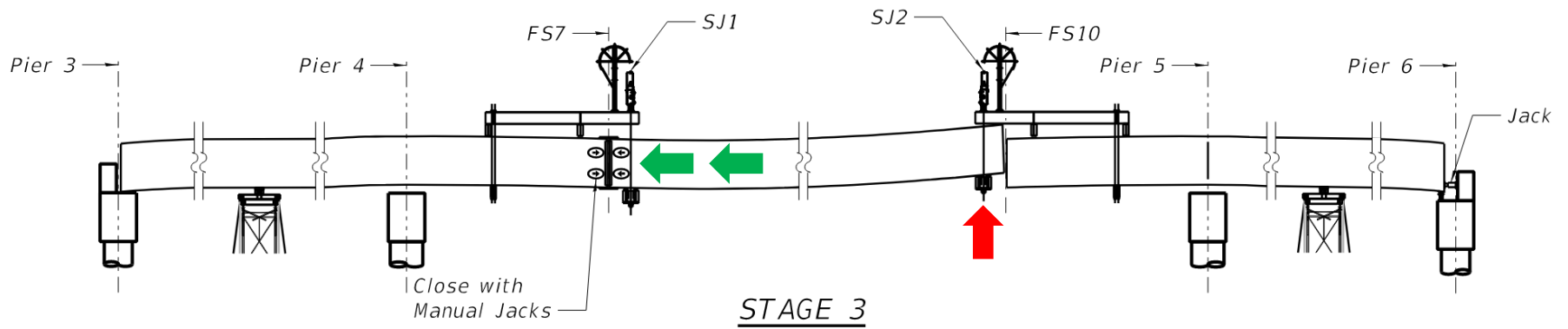
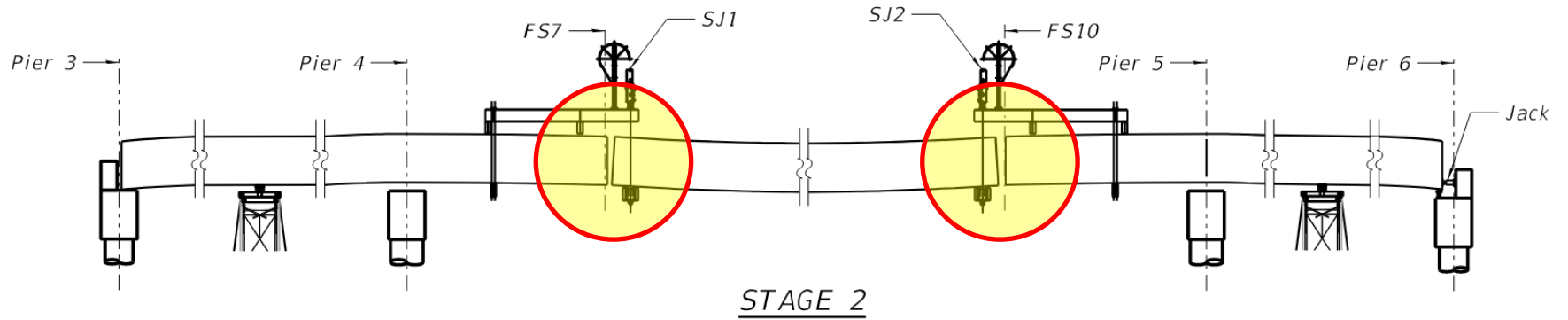
# Strand Jack Lift 1



# Strand Jack Lift 1

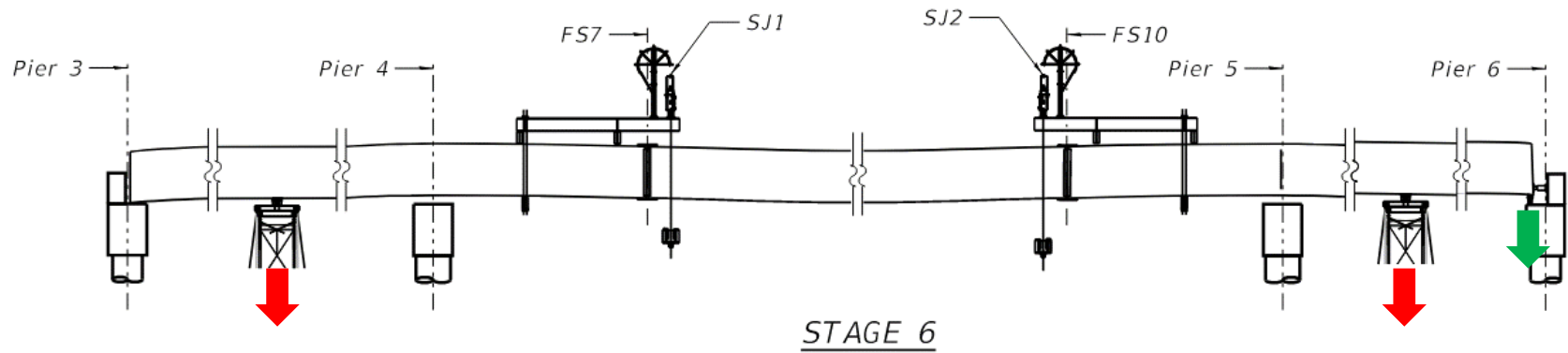
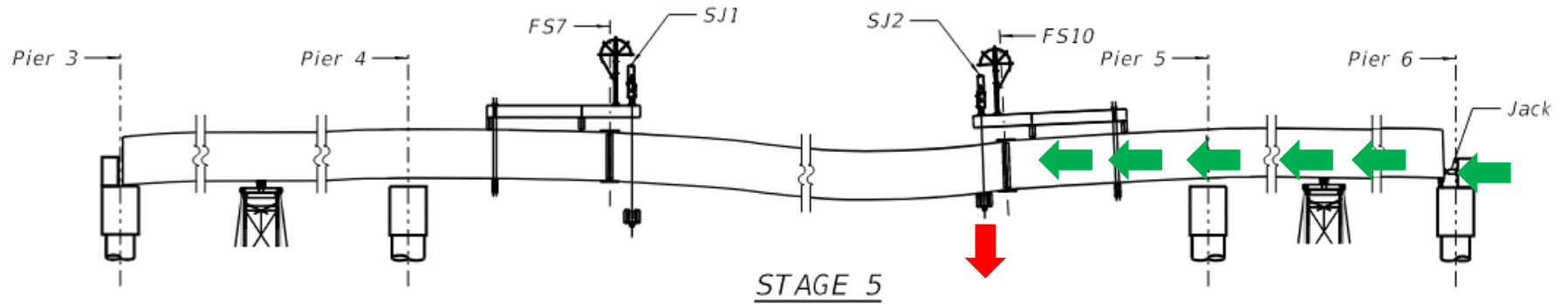


# Strand Jack Splicing





# Strand Jack Splicing



# Strand Jack Lift 1



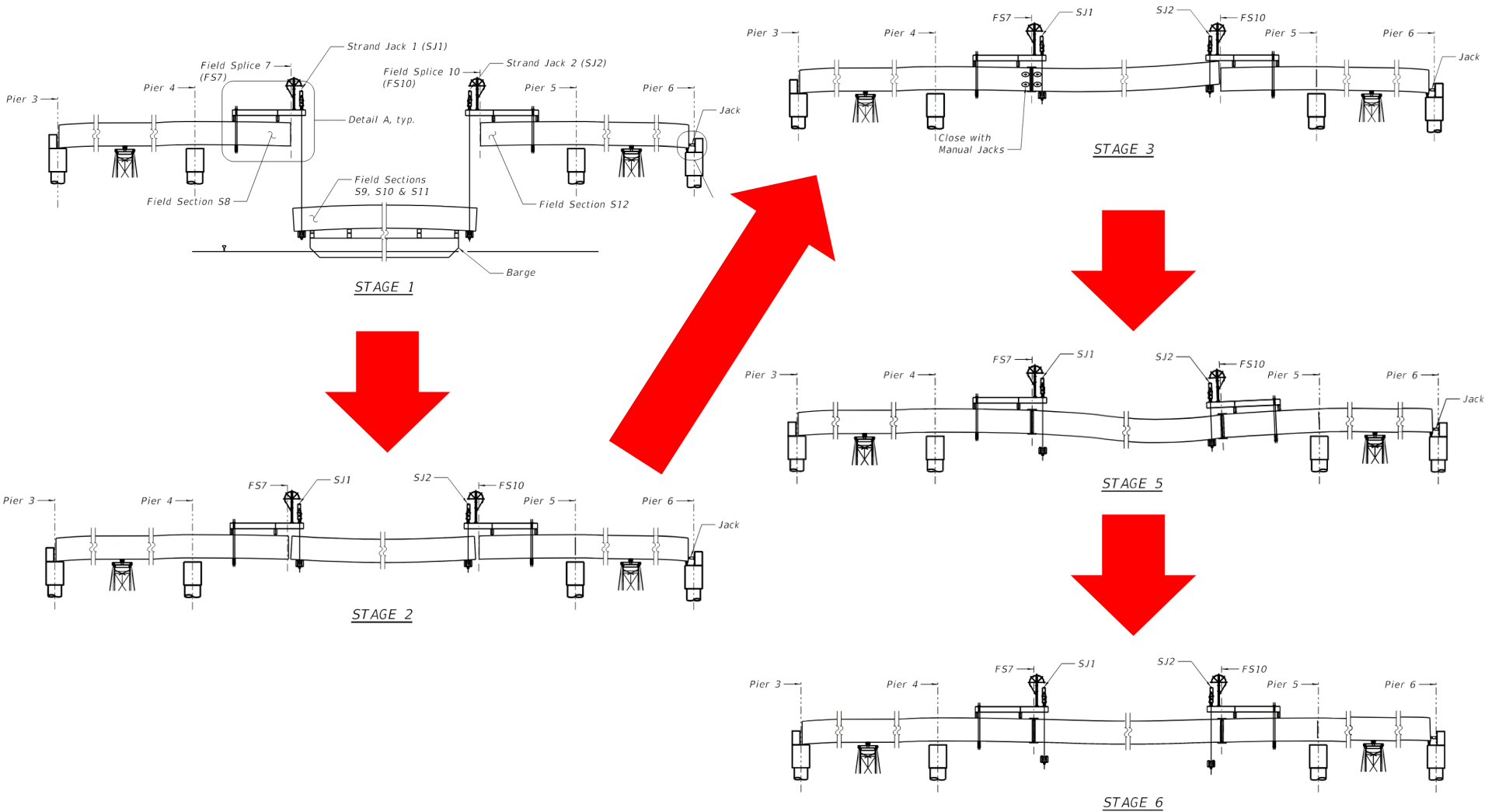
# Barge Repeat



# Lift Repeat



# Splice Repeat



# Complete



# Drainage over BNSF



# Private Asset Items





An aerial photograph of a multi-lane highway bridge crossing a wide river. The bridge is supported by several concrete pillars. Several trucks are visible on the bridge, including a white box truck, a dark semi-truck, and a flatbed truck. The surrounding area includes dense green trees and some industrial buildings in the distance. The entire image is overlaid with a semi-transparent blue filter.

# CLOSING THOUGHTS

# Closing Thoughts

- Perspectives - Share and Consider Opinions
- Compromises - Look for “Win-Win” Solutions
- Relationships - Get to Know Each Other

An aerial photograph of a dam under construction, overlaid with a semi-transparent blue filter. The dam structure is visible as a long, narrow concrete barrier across a river. The surrounding area includes forested hills and construction equipment. The word "QUESTIONS" is written in large, white, bold, sans-serif capital letters across the upper middle of the image.

# QUESTIONS