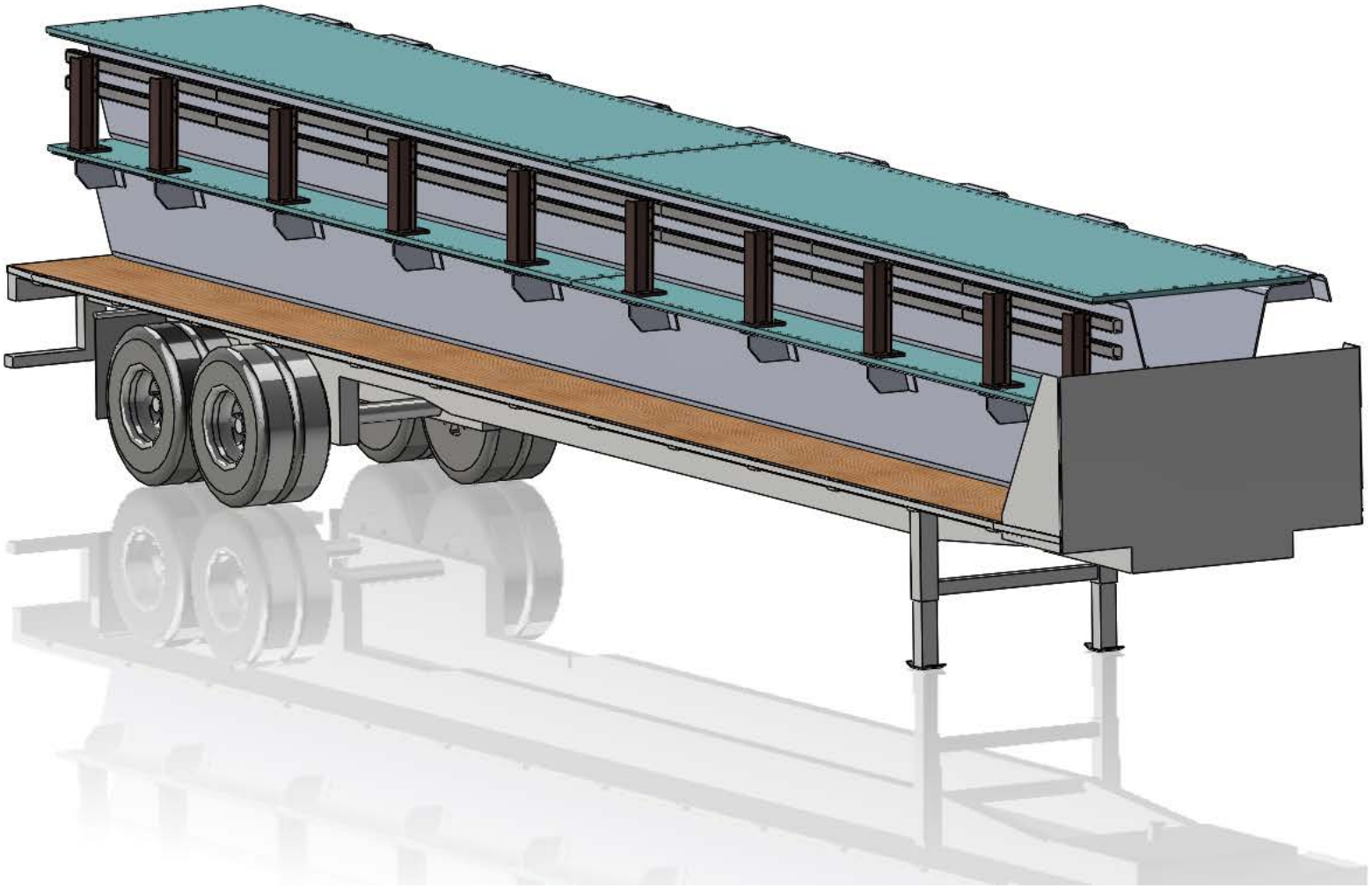
Large Preassembled Bridge Sections

SPS TECHNOLOGY

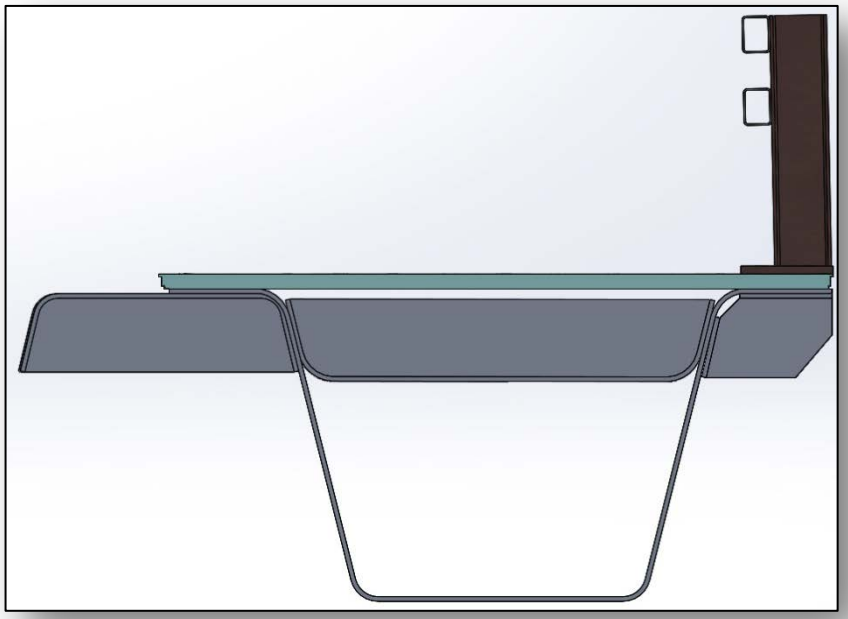


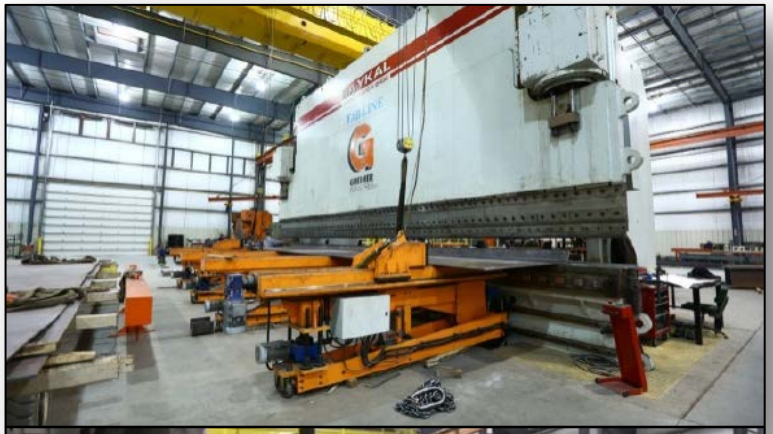
Prefabricated Tub Girder with SPS Decks

Quality control fabrication process

SPS TECHNOLOGY

1. Press-braked tub girders
   - standard plate dimensions & details
   - no welding or splicing required
   - no camber required ($^1/_4$" in 60' with SPS)
2. SPS plates partially bolted in shop to girders
   - stable module without internal diaphragms
3. Crash barriers installed and wearing surface applied to modules for easy erection



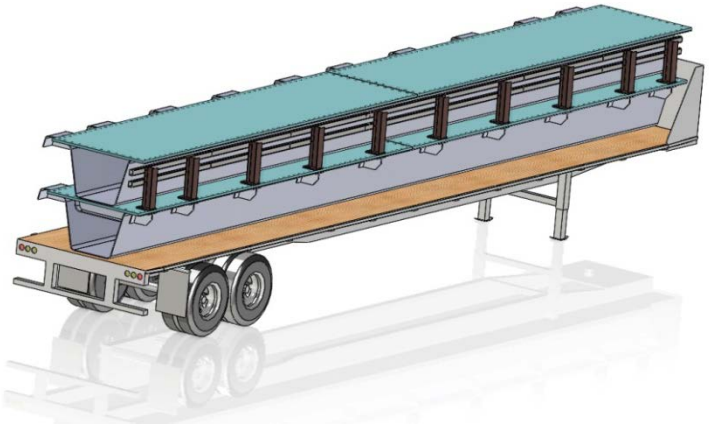


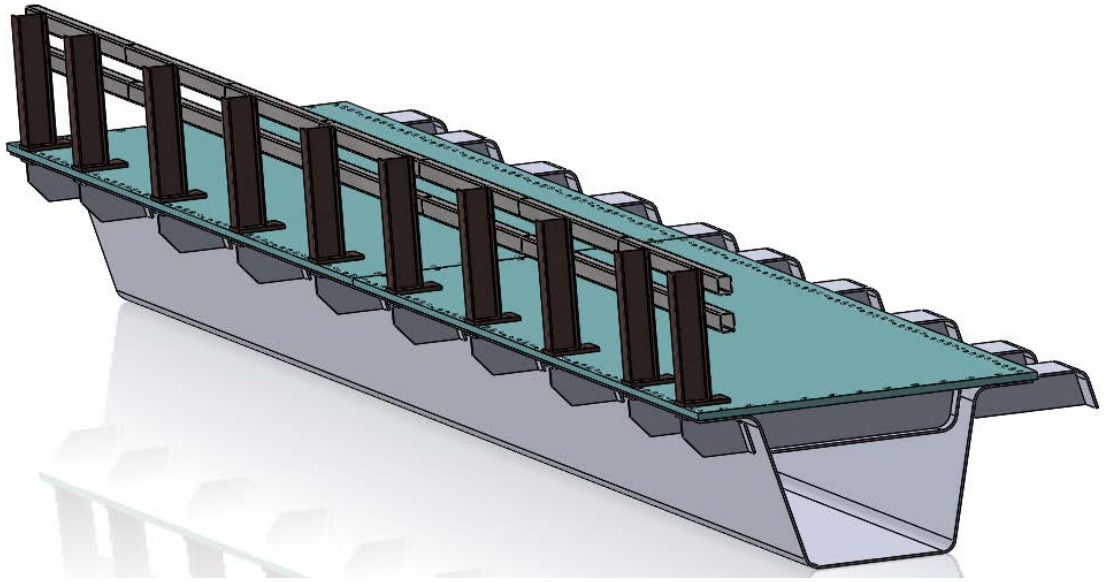
source
SSSBA

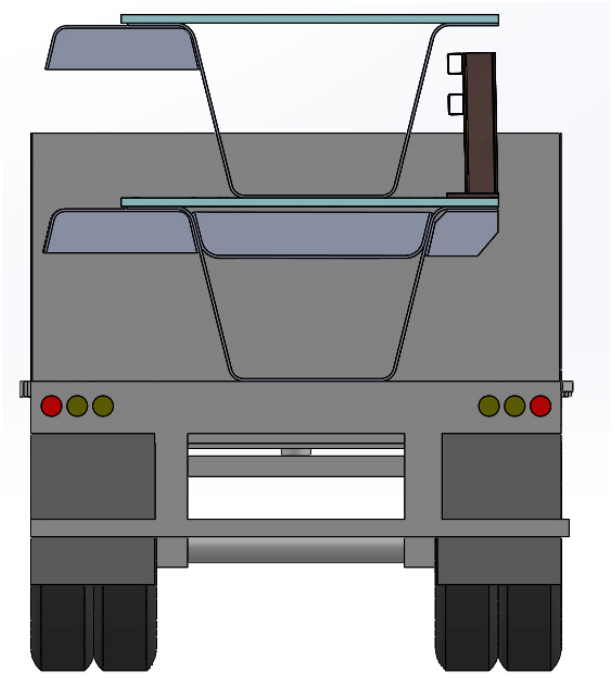
Prefabricated Tub Girder with SPS Decks

Pre-engineered modular unit

1. Each girder module weighs ≈ 12t
2. Two modules per flat-bed truck up to 60’
3. SPS deck, base plate, guard-rail posts & rails, wearing surface are pre-installed on steel girder





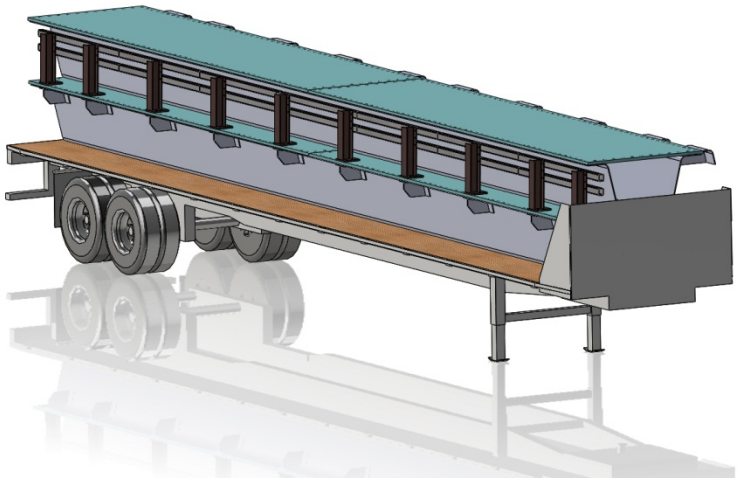


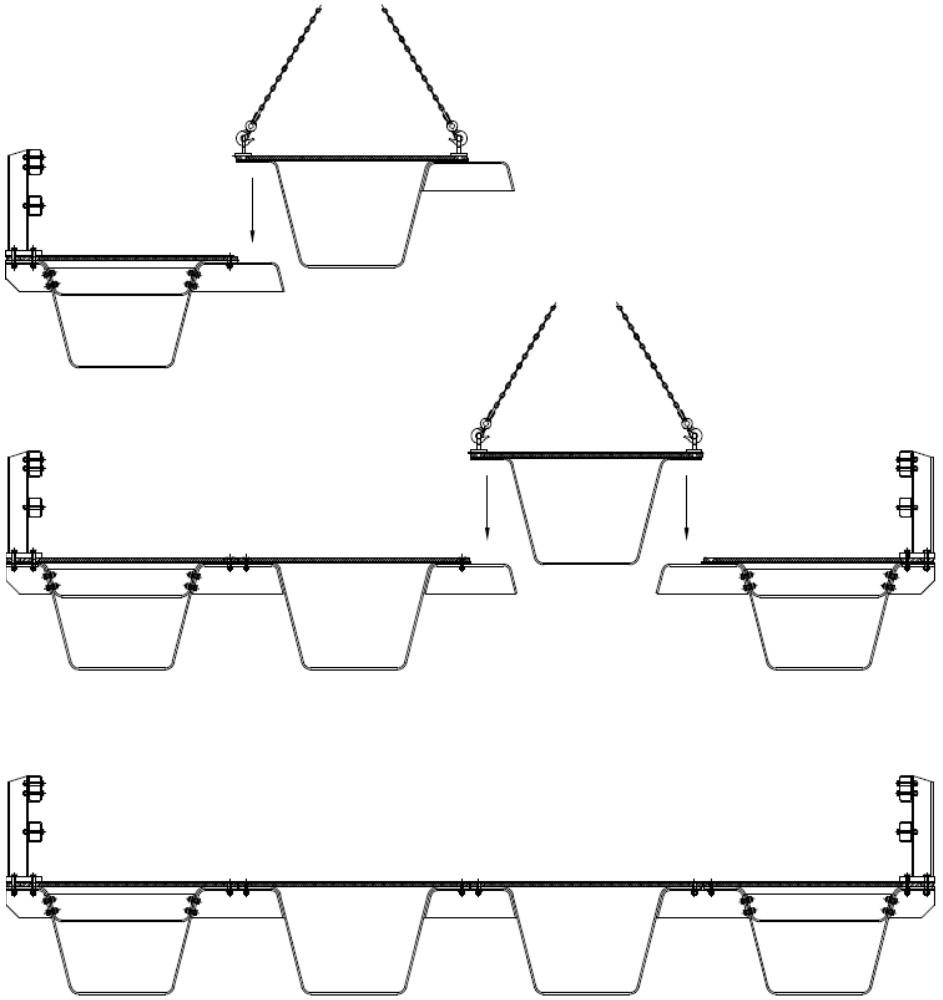
Prefabricated Tub Girder with SPS Decks

Erection / Installation - Rapid Deployment

Bridge Erection Sequence

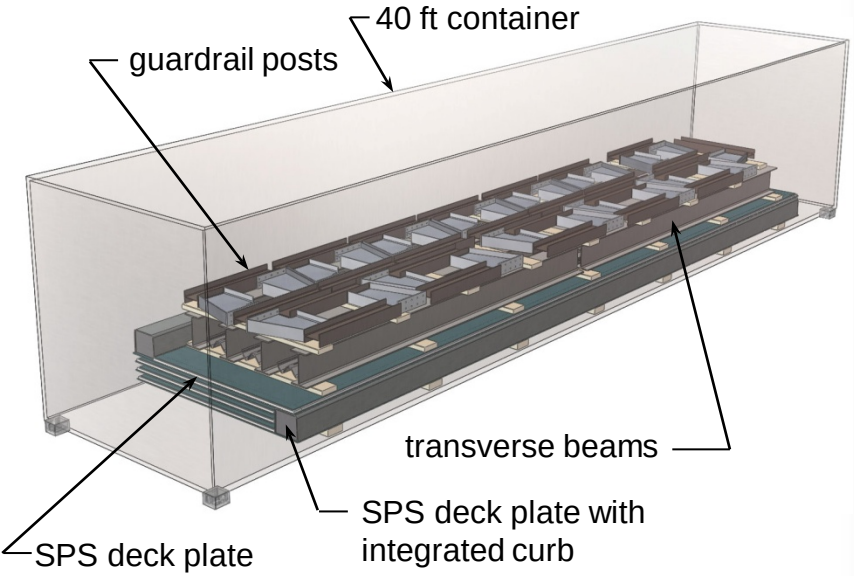
1. modules arrive on site ready to erect
2. typical crane capacity of 15t required
3. erect 6 to 8 modules per day
4. bolting crew → 4 to 6 modules per day
5. welding crew → 4 to 6 modules per day
6. apply remaining wearing surface

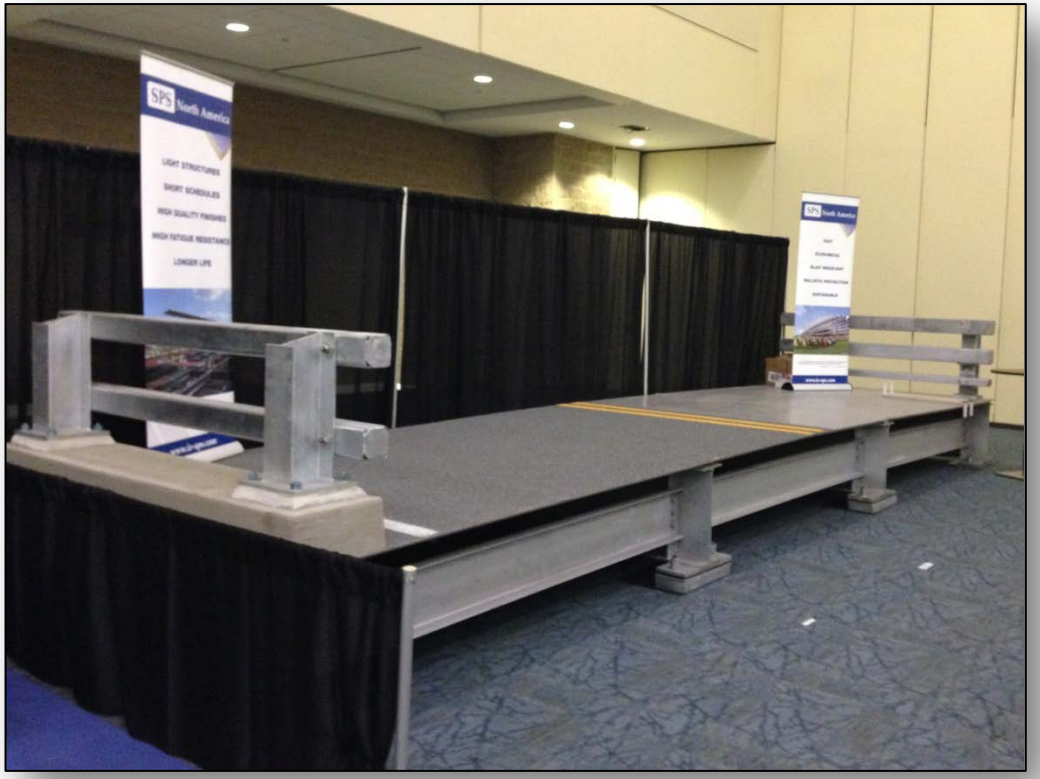




Prefabricated SPS Bridge Decks

Shipping - Bridge in a Box or Large Assemblies





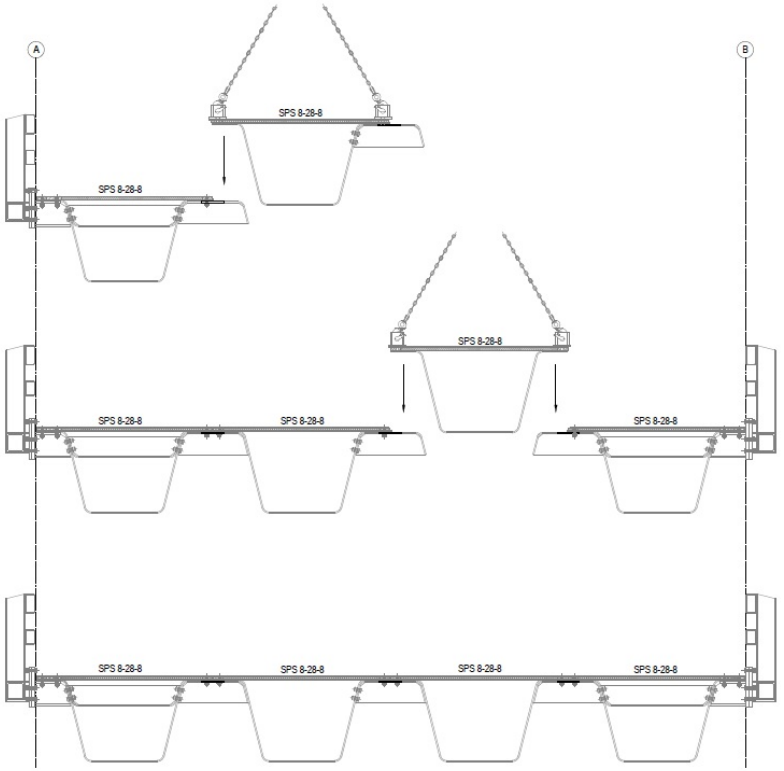
- bridge components shipped via container (22t capacity for standard 40 ft container) or flat bed truck
- transform construction site into an assembly site of prefabricated components, **speed**
- different wearing surfaces easily accommodated

SPS Bridge Deck for ABC Application

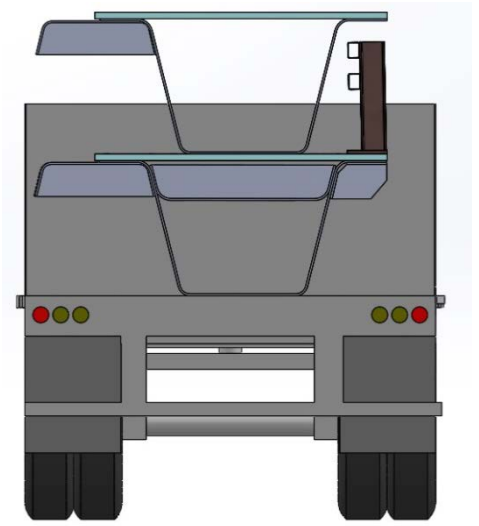
Erection and Assembly of Tub Girder Modules

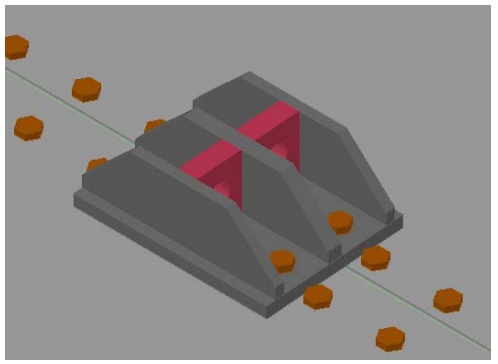
Pre-fabricated and Pre-assembled Large Modular Components

- weight of exterior modules (pre-attached guardrails, posts, shaped splice plates) ≈ 15.5 tons
- weight of interior modules ≈ 12.4 tons
- stable module with four built-in pick points



Erection Sequence





Typical Pick Point