

COLORADO BRIDGE ENTERPRISE

Memorandum

Colorado Bridge Enterprise
4201 East Arkansas Avenue
Denver, Colorado 80222

DATE: June 7, 2013
TO: Bridge Enterprise Board of Directors
FROM: Ken Szeliga, Bridge Enterprise Program Manager
SUBJECT: Project Highlight
Pecos Street over I-70 Bridge Move

The Pecos over I-70 bridge replacement project is scheduled to remove the existing Pecos Street bridge and install a replacement structure utilizing accelerated bridge construction (or ABC) techniques. The work will be completed within a 50-hour window over a 3 day period starting on Friday, July 19th through Sunday, July 21st.

The replacement structure is currently being constructed off-site (see picture below) and shall be tracked into place using Self Propelled Modular Transporters (or SPMTs) per the picture below. The Region 6 project team and CDOT's Public Information / Public Relations office will provide a presentation regarding the bridge move at the June Board meeting (reference attached presentation).

Note – the contractors 50-hour schedule, PI/PR plan outlining planned road closure(s), detour(s), impacts to community stakeholders, and general public viewing opportunities were being finalized at the time this memorandum was written and subject information will be incorporated into the final presentation provided on June 20th.

Replacement Pecos Bridge Being Constructed Off-Site



Self Propelled Modular Transporters (SPMTs)



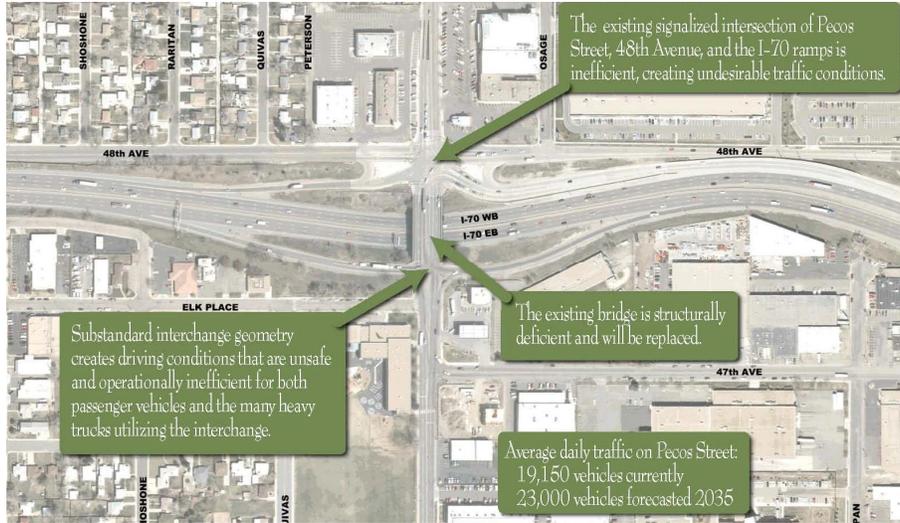
Pecos Street over I-70 Replacement of Str. E-16-EW BRIDGE MOVE



Pecos/I-70 Project Team

- Owner – CDOT/Colorado Bridge Enterprise
 - CDOT PM: Tamera Hunter-Maurer
- Consultant – Wilson & Company
 - Project Manager: Scott Waterman
- CM/GC Contractor – Kiewit Infrastructure
 - Project Manager: Dave Paris

Existing Interchange



Existing Bridge



Proposed Interchange



Proposed Bridges



Project Goals

1. Advance knowledge, experience & cost efficiency of the CDOT construction program and the construction industry in ABC and CM/GC project delivery
2. Provide a well publicized, highly successful ABC project
3. Replace the poor structure, and improve traffic operations and safety within the project budget
4. Accelerate delivery of construction schedule & complete by October 1, 2013

Project Goals (cont.)

5. Minimize inconvenience to traveling public, & maximize safety of workers & traveling public
6. Facilitate a collaborative partnership with all of the members of the project team and stakeholders
7. Provide a high quality design and construction

Why ABC for this Project?

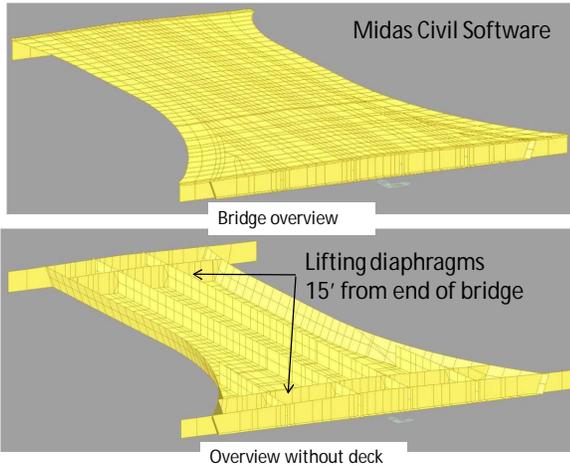
- Reduced construction schedule (preferred by local businesses)
- Reduced road user costs and delays
- Improved safety (work zone & road user)
- Strong public support for ABC approach
- Meets project goal to expand ABC construction knowledge in Colorado for Contractor and Owner

ABC: Roll-in Approach

- Construct superstructure in Bridge Staging Area
- Construct abutments behind existing piers
- No I-70 full closures until bridge move
- Replace superstructure in 50-hour weekend closure of I-70



Design Overview



3D analysis required to determine permanent and temporary loads

- Selected plate element model
- Used to determine reactions in lifting diaphragms
- Used to develop acceptable distortion limits for bridge move

Pecos/I-70 - Fun Facts

- 96 Self-Propelled Modular Transporters (SPMT) Axles
- Bridge weighs a total of 2,400 tons
 - 1,060 CY of concrete
 - 300,000 LBS Reinforcing Steel
- Bridge will be rolled 700 feet
- Traffic Counts per Day:
 - I-70 – 130,000
 - Pecos Street – 19,150

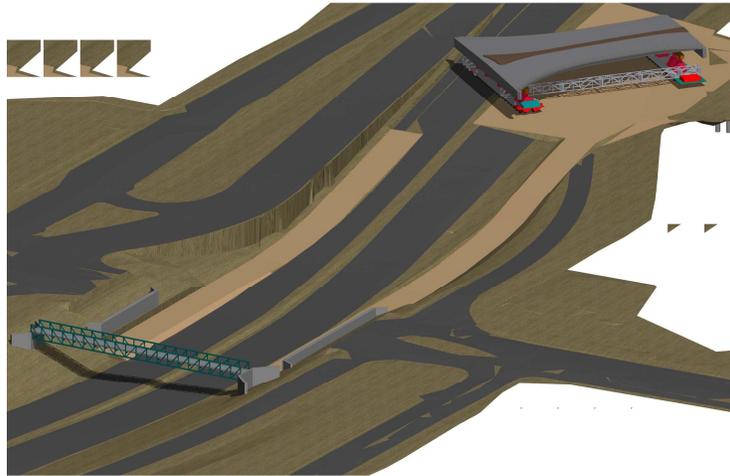
Construction - Bridge Staging Area



Construction – North Abutment Building the new abutment under the existing bridge



ABC Roll-in



Schedule

- June 24, 2013 Close Pecos for 8 weeks
to construct roundabouts
- July 19-July 21 50 hour Closure
Friday pm- demolish existing Pecos Street bridge
Saturday – Roll in bridge on SPMT's
Sunday pm– finish bridge connections and re-
open I-70
- First week of September
construction complete