

NOTE: Highlighted areas are not to scale

## **NEED AND PURPOSE**

## Need for the Feasibility Study:

I-345 was constructed in 1974.

Located between I-30 and Spur 366 (Woodall Rogers)

High Daily Traffic Volume

The Feasibility Study evaluation of alternatives is based on the growing cost of continued maintenance and preservation of the structure

# Purpose of the Feasibility Study is to evaluate (9) alternatives intended to:

Improve the structural condition of the bridge

Reduce maintenance cost

Reduce the frequency of maintenance and preservation activities

#### **FEASIBILITY STUDY SCHEDULE**

	Notice to Proceed	June 2012
	Develop Conceptual Alternatives	Sept-Dec 2012
	Stakeholder Meeting	November 2012
	Public Meeting	December 2012
	Finalize Feasibility Report	Summer 2013

## **EXISTING CONDITION**

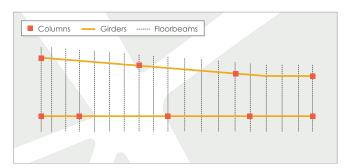
- 1. Bridge designed and built in 1974
- 2. Unique design:

Two steel girder superstructure framing

Concrete deck not mechanically connected (bolted) to floor beams or girders

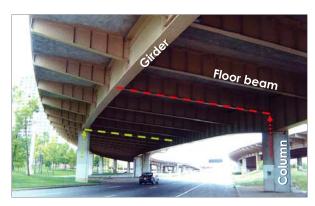
Unsymmetrical column layout

3. 1972 Average Daily Traffic (ADT): 85,000 2010 Average Daily Traffic (ADT): 170,000



**Shows unsymmetric column** arrangement and underlaying roadways supports.

TxDOT graphic





Photos show main girders with unsymmetric column supports.

TxDOT photo archive

# **STUDY ALTERNATIVES**

- 1. No-build
- 2. Strengthen superstructure by connecting the top of the steel girders with the concrete bridge deck
- 3. Add columns to provide symmetrical support
- 4. Strengthen local connections
- 5. Strengthen superstructure by adding girders & bent caps
- 6. Rapid bridge replacement (roll-out, roll-in)
- 7. Close down I-345 during fast track superstructure & cap replacement (similar to Pierce Elevated in Houston)
- 8. Hybrid alternative (combination of alternatives 2 thru 7)
- 9. Complete facility reconstruction

# **PROPOSED EVALUATION CRITERIA**

- 1. Initial capital cost
- 2. Ongoing maintenance cost
- 3. Construction duration
- 4. Structural life expectancy
- 5. City street impact
- 6. Local residents impact
- 7. Local businesses impact
- 8. Construction traffic impact
- 9. DART impact
- 10. Aesthetic impact
- 11. Current design standards
- 12. Other applicable criteria

TxDOT graphic

SOURCE: TxDOT research

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