LONGMEADOW PARKWAY VALUE ENGINEERING STUDY
VE Summary

- **Purpose**
  - To ensure best value for the project
  - Projects over $50 million

- **Value Engineering**
  - Evaluates engineering in regards to function of a product or service
  - Generates alternatives through the use of creative thinking
  - Is conducted between Phase I and Phase II
  - Results in cost savings and better value

- **VE Workshop**
  - Idea generation - 126
  - Concepts reviewed & developed further
  - Ideas Moving forward - 23
VE Summary (cont.)

- Phase I Engineering primary areas of potential savings:
  - Structure over Fox River
  - Pavement Design
  - Earthwork
  - Drainage Design

Project Cost - Phase I Engineering Estimates
Reconfigure Span & Superstructure

Phase I Design: 8-span structural steel

- Evaluated 5 Alternate Designs
- 4-span over Fox River
- High Performance Concrete (HPC) / High Friction Deck / Anti-icing deck
- Two bridges separated by 150’ MSE Wall
- 4-lanes

Potential savings – $5M+
Weathering Steel

Phase I Design: Painted steel girders

Weathering Steel: A stable material that gives a rustic appearance when exposed to weathering elements

- Eliminates initial paint cost
- Reduces life cycle cost - no re-painting
- Blends into environment

Potential $4M savings including $3.5M life cycle
Open Pier Type

Phase I Design: Solid wall piers

- Open pier, multi-column, hammerhead configuration
- Reduces cost of material and maintenance
- More aesthetically pleasing

Potential $1M savings
Four Foot Wide Raised Median on Bridge

**Phase I Design:** Eight foot wide raised median

- Reduce median width by four feet
- Decreases width of entire bridge
- Decreases bridge cost

*Potential $1.5 M savings*
Bridge Profile Adjustment

Phase I Design: Large cuts thru bluffs on east and west of Fox River

- Evaluate profile alternatives to minimize cuts
- Significantly reduces earthwork cut

Potential $1M savings

Phase 1 Profile Shown in Red
11 Foot Wide Lanes

**Phase I Design: 12 foot wide lanes**

- 11 foot lanes on Longmeadow and side roads
- Reduce overall cross section
- Reduce pavement and earthwork costs
- 4 lanes – Randall to IL62

**Potential $1 M savings**
Grade Separation at IL 31

Phase I Design: Conventional at-grade

- Improve intersection capacity
- Better earthwork balance
- Improve drainage function
- Avoid historic property

Potential $1M savings
Earth Excavation

Phase I Design: Not directly addressed

- Raging Buffalo Snowboard/Ski Park
- KDOT and KCFP mutual benefit
- Reduces haul-off expenses
- Reduces truck traffic on IL 31

Potential savings - $1M
Open Ditch Drainage

- Convert a portion of closed drainage to open ditch
- Retain curb and gutter to collect water and outlet directly into ditch
- Eliminates an estimated 8,000 LF of storm sewer

Earth Berms

- Use excess fill for berms where able
- Reduces haul-off costs
- Separates road from adjacent properties

Potential $1M savings
Cost Breakdown

- Section A – Huntley/Boyer Road through Randall Road
  - $11 Million
- Section B – Randall Road through Illinois Route 31
  - $29 Million
- Section C – Illinois Route 31 through Illinois Route 25
  - $48 Million
- Section D – Illinois Route 25 through Illinois Route 62
  - $9 Million

Preliminary Estimated Construction Cost $97M
LONG MEADOW
PARKWAY
VE STUDY

Questions