Roundabouts and Utilities

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Roundabouts vs Utilities?

- INDOT desires roundabouts to be considered for any intersection improvement project

- A New Paradigm for Utility Coordination
Roundabouts vs Utilities?

A. Newly discovered molecular structure
B. Decorative tile pattern for your bathroom
C. A roundabout designer’s dream
Roundabouts vs Utilities?

A UTILITY COORDINATOR’S DREAM!
Roundabouts vs Utilities?

Survey....
Roundabouts & Utilities

Just because we are changing the way we do things doesn’t mean we change the way we do things!
Roundabout Myths

- Take more space (R/W)
- Cause more impact
- Just a fad
- Always cause more disruption to utilities
Roundabout Truths

• Safer intersection
• Here to stay
• Flexibility in design
• Right of way is different
• Can co-exist with utilities
• Can make utility avoidance easier
Utility Myths

- It’s easier for utilities to adjust their facilities around our design.
- It is cheaper for utilities to move out of our way.
- It is public right-of-way, they have to move if we tell them to.
Utilities Truths

- Utilities not always as flexible as we think
- Often need straight lines
- Desirable to be outside of pavement
- Must be able to maintain their facility
Utility Coordination

• “Old way”
  – Utilities move
  – Little coordination

• New Paradigm
  – Work with utility partners
  – Everyone knows where everyone goes
  – Coordinate early and often
Using the New Paradigm

• Coordination begins at the beginning of the project

• Work with utilities when setting right-of-way

• Working with utilities with recorded easements
Working with Utility Partners

• Understand utility limitations

• Understand easement rights

• Understand reasonable vs. unreasonable

• Mitigate impacts as much as possible
Underground Utilities

• Straight lines are best
• Can’t always lengthen run and go around intersection
• Go through roundabout?
• How do grades within roundabout affect them?
Roundabout Flexibility

CR 100N & 1050 E, Avon, IN
Roundabout Flexibility

17th & Arlington, Bloomington, IN
Overhead Utilities

• Much more difficult to make turns
• Flexibility of roundabout design may allow designers to avoid
• Roundabouts more forgiving than other intersections
Roundabout Flexibility

Northwestern & Yeager, W. Lafayette, IN
Overhead Utilities

• When no other option exists…

Cumberland & Yeager, W. Lafayette, IN

Cumberland & Manchester, W. Lafayette, IN
Working with Utility Partners

• Federal Aid/INDOT: follow IAC 13

• Locally funded projects – consider following IAC 13 if possible

• Provide plans in timely manner and update regularly
Using the New Paradigm - Planning

• Consider optional locations for roundabout
• Consider critical (and difficult) utilities
• Consider impacts to existing, exclusive easements
• Consider impacts to schedule
• Consider impacts to right of way
When Relocations are Necessary

For Overhead Utilities:
• Go Around roundabout
• Span one leg if possible

106th Street & Springmill Road, Carmel, IN
When Relocations are Necessary

For Overhead Utilities:

• Go Around roundabout
• Span one leg if possible
• Consider effects on drainage
• “Everybody knows where everybody goes!”
When Relocations are Necessary

For Underground Utilities:

• Best practice - Go around roundabout
• Option – Under Circulatory Roadway
Roundabouts and Utilities

Always Consider:

• How do you construct?
• Grades within roundabout
• Grades outside of roundabout (corners)
• Storm sewer conflicts
• Long term maintenance
  – How will it affect traffic?
  – Place manholes in inside lane or truck apron
Questions?