

# I-94 over Pipestone Road Interchange Feasibility Study Stakeholder Meeting #3



June 5, 2013

# Stakeholder Meeting #3 Agenda

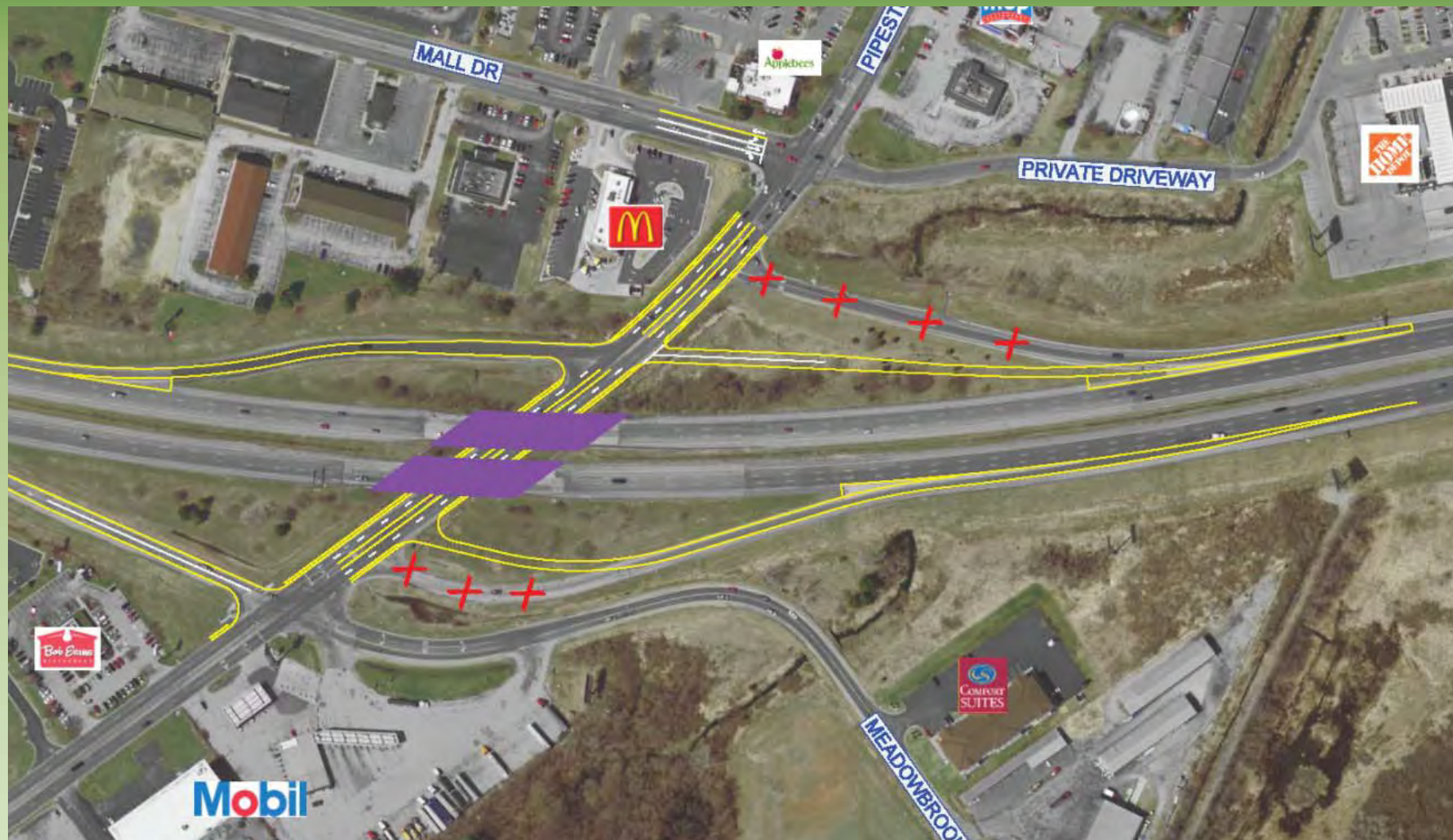
- Review of Alternatives from Stakeholder Meeting #2
- Stakeholder Meeting #2 Comments
- Goals and Solutions Statement
- Recap Stakeholder #1 Issues and Concerns
- State Long Range Plan
- Comparison of Alternatives
- Project Schedule

## No Build Alternative





# Draft Alternative 1 (Diamond)



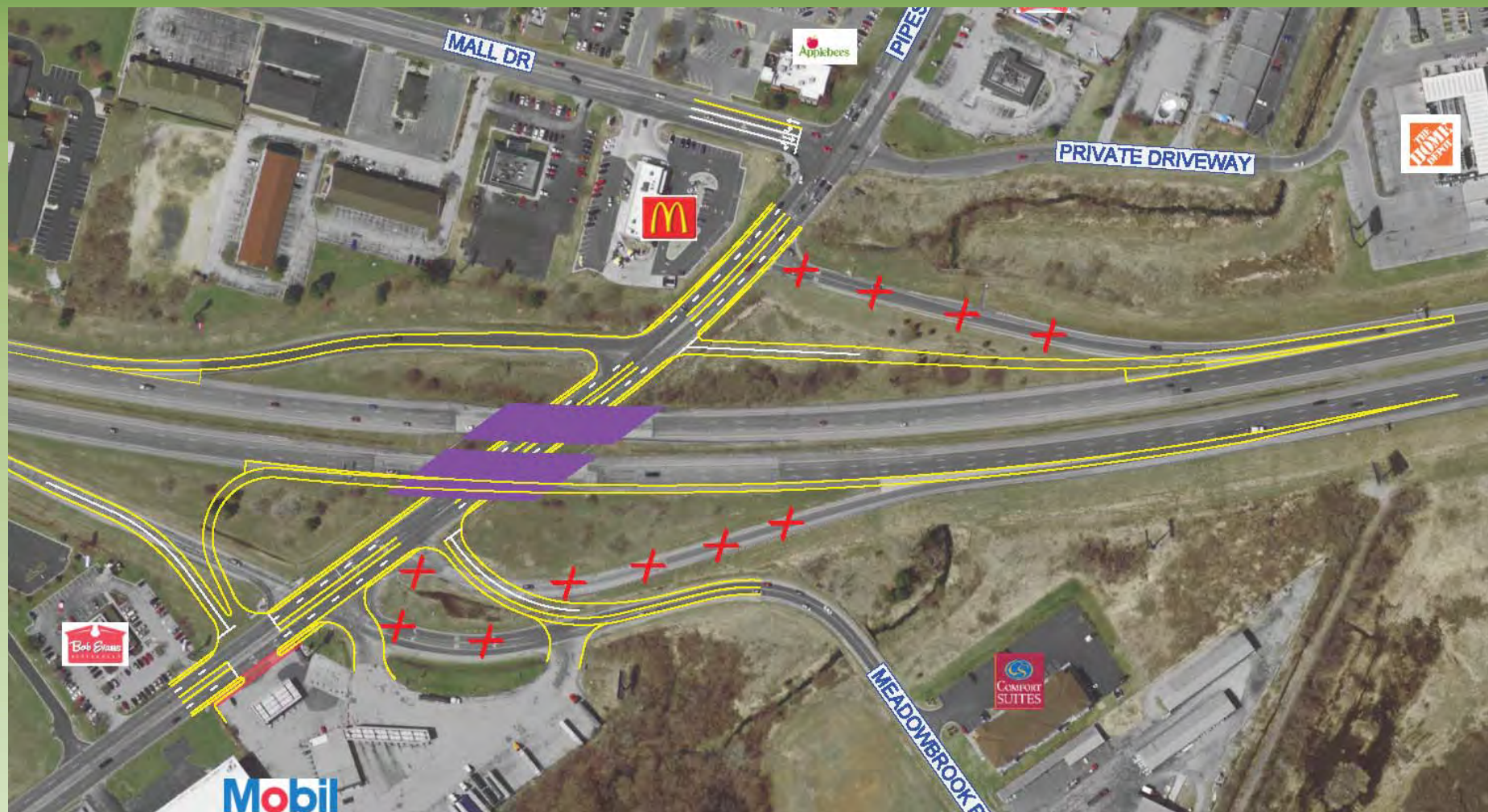


# Draft Alternative 2 (Side Road Ramps)



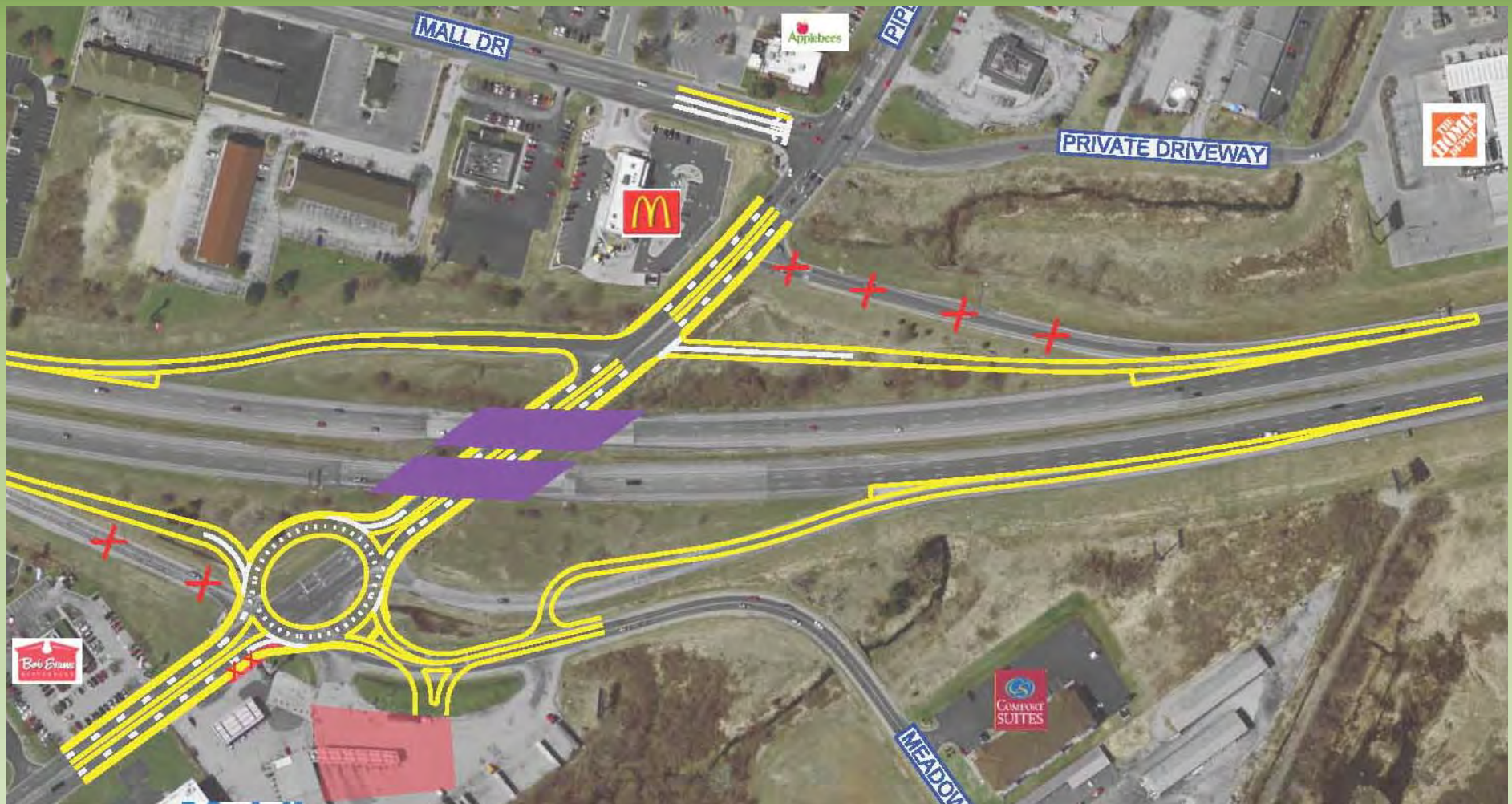


# Draft Alternative 3 (Loop Ramp)





# Draft Alternative 4 (One Roundabout)





# Draft Alternative 4B (One Roundabout)



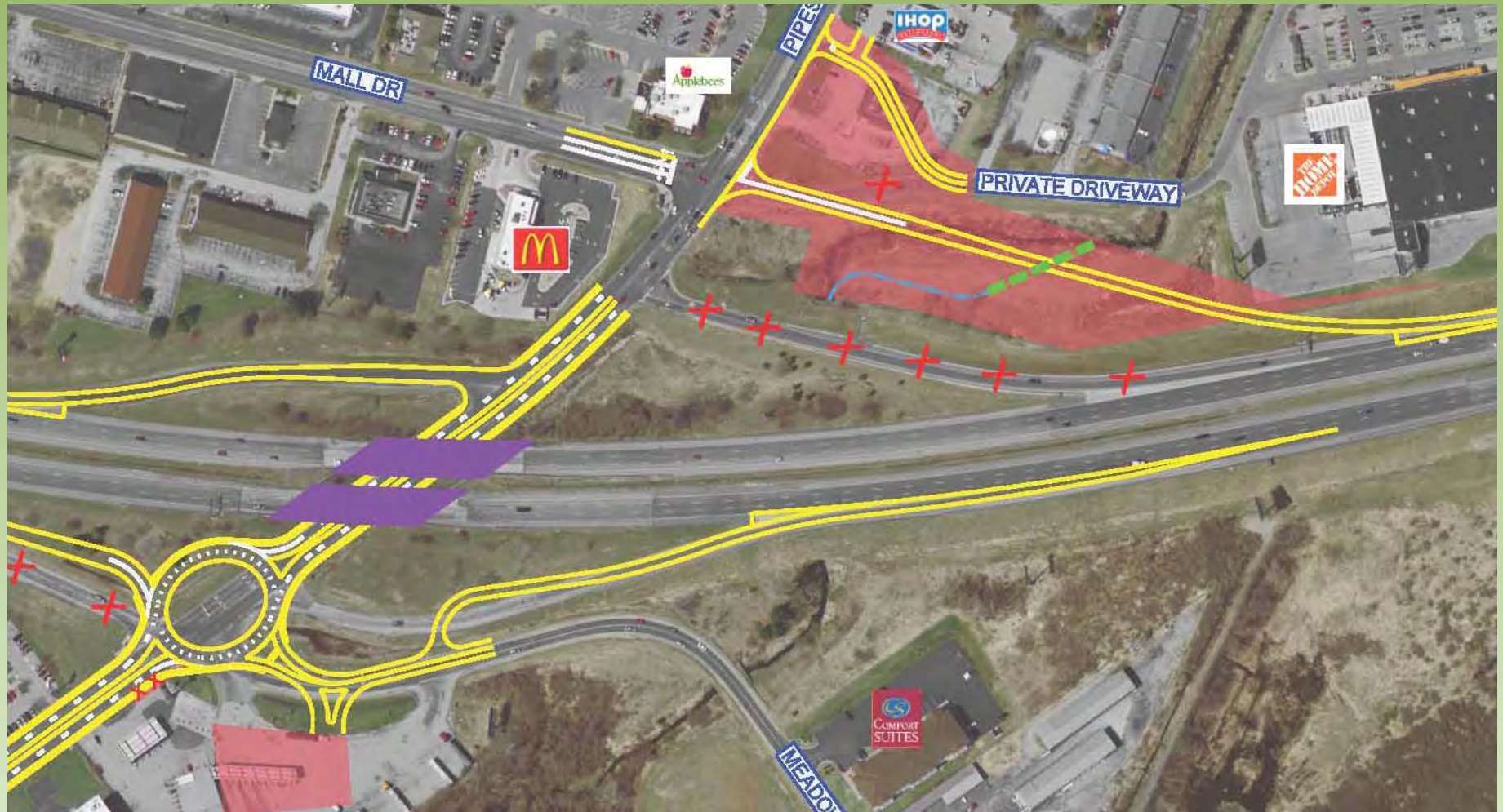


# Draft Alternative 5 (Two Roundabouts)





# Draft Alternative 6 (Relocate Private Drive)





# Preliminary Estimates

| Alternative                    | Preliminary Cost Estimate (2013 \$) |
|--------------------------------|-------------------------------------|
| No Build                       | \$18.0 M                            |
| Alt 1 - Diamond                | \$18.2 M                            |
| Alt 2 – Side Road Ramps        | \$18.8 M                            |
| Alt 3 – Loop Ramp              | \$20.0 M                            |
| Alt 4 – One Roundabout         | 20.0 M                              |
| Alt 4B – One Roundabout        | \$19.2 M                            |
| Alt 5 – Two Roundabouts        | \$21.8 M                            |
| Alt 6 – Relocate Private Drive | \$22.0 M                            |

- All estimates include reconstruction of I-94 from approximately 1500 feet westerly of Pipestone Road to 2000 easterly of Pipestone Road
- All estimates include ballpark right-of-way costs associated with interchange alternative.

# Stakeholder Comments

- General Comment
  - Lower I-94 at old railroad crossing.
- Alternative #1 – Diamond Interchange
  - Do not prefer (either side)
  - North side - RT too abrupt, similar difficult RT/LT into Mall Dr
  - South Side – Similar driver confusion (although better than existing).
- Alternative #2 – Side Road Ramps
  - Seems more realistic/helpful to current problems.
- Alternative #3 – Loop Ramp
  - Do not like the loop ramp – geometrics too severe.



# Stakeholder Comments

- Alternative #4 – One Roundabout
  - North Side – RT too abrupt, similar difficult RT/LT into Mall Dr
  - South Roundabout – Don't care for severity of curves and Mobil access. Could combination of entry ramp and Meadowbrook help solve that?
- Alternative #5 – Two Roundabouts
  - Do not prefer (either side)
  - North Roundabout – I like it, must consider truck movements.
- Alternative #6 – Relocate Private Drive
  - North side – I like this as well.
  - Do we need private driveway or could it be made right-in/right-out access? Could MDOT provide/enhance other access points.

# Stakeholder Comments

- North Side (Mall Drive)
  - Preference 1 - Tie directly into Mall Drive (similar to Alt 6) and move Home Depot Drive and purchase property.
  - Preference 2 – Tie directly into Home Depot Drive if grade works (similar to Alt 2).
- South Side (Meadowbrook Road)
  - Grades/Truck Flow/Gas Station
  - Access Issues – Not Sure.
- General Comment
  - I do not like Roundabouts due to large truck traffic with peak shopping.



# Stakeholder Comments

- Alternative #1 – Diamond Interchange
  - Least favorite.
- Alternative #2 – Side Road Ramps
  - Not an option – congestion on side roads.
- Alternative #3 – Loop Ramp
  - South ramp (EB Entrance) not an option (too steep)
  - North ramp (WB Exit) as best option.
- Alternative #4 – One Roundabout
  - Best option.
  - North Ramp (yes) – South Ramp (yes)

# Stakeholder Comments

- Alternative #5 – Two Roundabouts
  - Too confusing on North Ramp (WB Exit).
  - Do not like south roundabout (Meadowbrook/Pipestone).
- Alternative #6 – Relocate Private Drive
  - Do not prefer (either side)
  - North Ramp (no) – South Ramp (yes).
- General Comment
  - Alternative 4 (One Roundabout) is by far the best option.



# Stakeholder Comments

- General Comment
  - I like the alignment of WB off ramp with Mall Drive and relocation of Private Home Depot Drive (expensive).
  - Also, like reconstruction of EB on ramp from Meadowbrook, but need to reduce grade for trucks (possibly) enter/merge farther east (except possible trouble with extending EB @ Napier).
  - I'm not a roundabout fan. Too hard for truck traffic.

# Stakeholder Comments

- General Comment
  - I do not like the diamond option on the north side of I-94. The skew angle is too great for semi trucks turning right and sight distance/vehicle obstruction would occur from inside vehicles trying to turn.
  - Side Road Ramp option is good.
  - Roundabouts are good, but south side is questionable for truck traffic.



# Stakeholder Comments

- General Comment
  - There is a truck stop at the interchange and there are nearly 20,000 trucks a day using that road. Roundabouts are not a good solution for this location.

# Stakeholder Comments

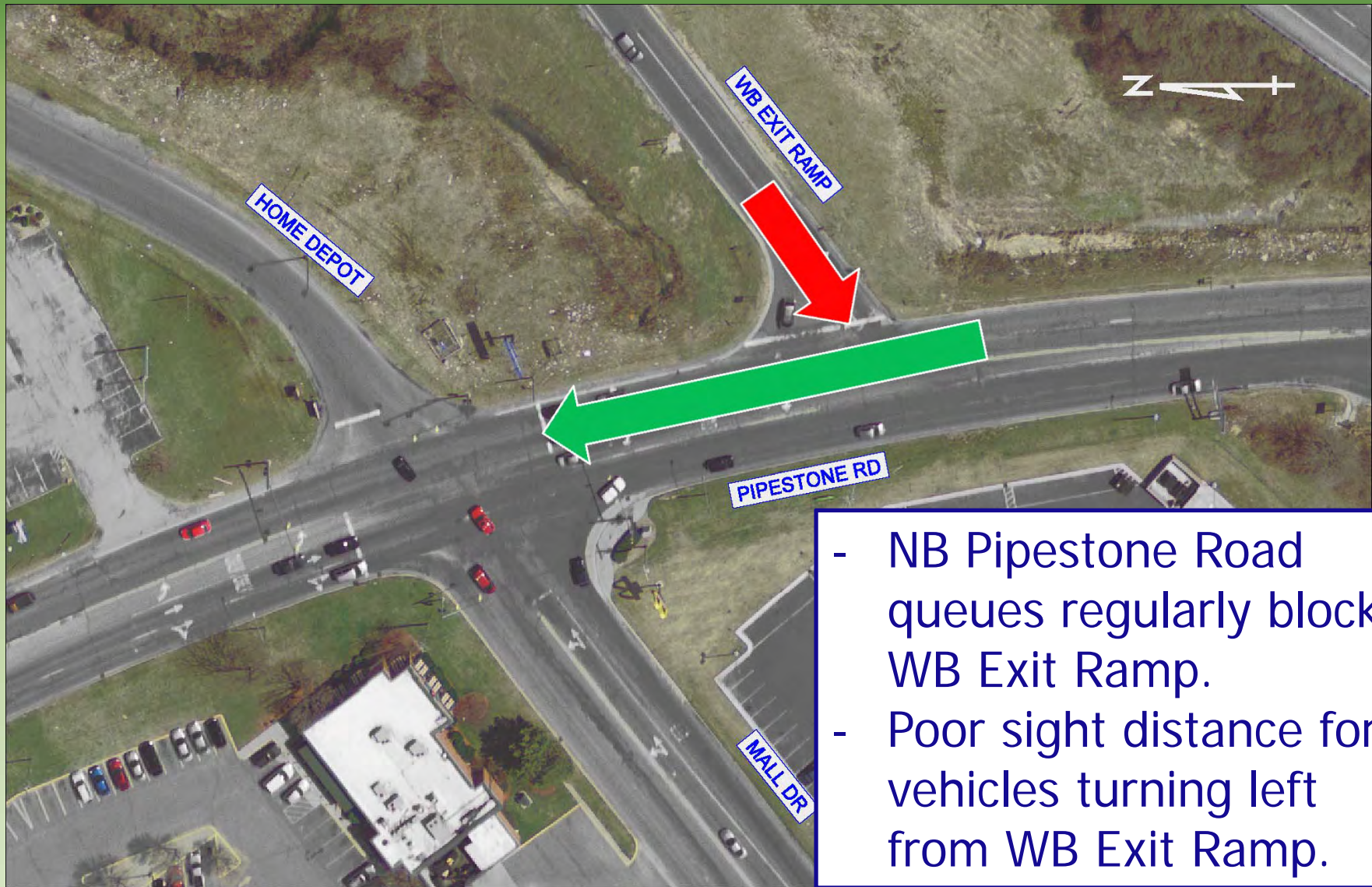
- General Comment
  - The different scenarios are great and many aspects could be coupled together in one project. Performance measures, levels of service, and cost are all important considerations. These meetings have been well-handled and well-planned, thank you for taking our concerns into the development of this project.



# Goals and Solutions Statement

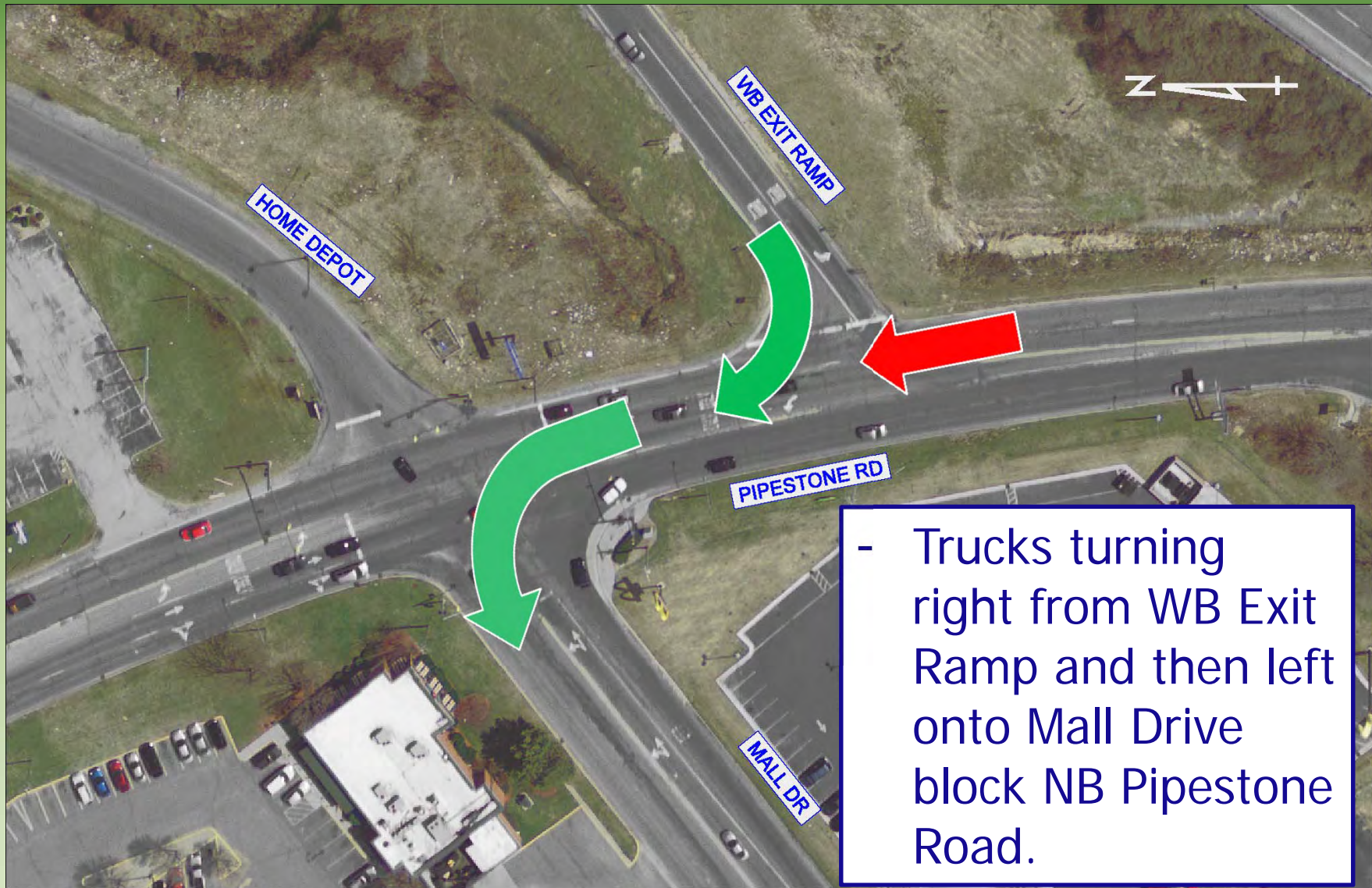
- The main goal at the I-94 Interchange with Pipestone Road is to replace the functionally-aging structures that carry I-94 over Pipestone Road. In doing so, MDOT anticipates accommodating future interchange operational needs while also improving any identified safety deficiencies.

- Stakeholder Meeting #1 - Issues/Concerns



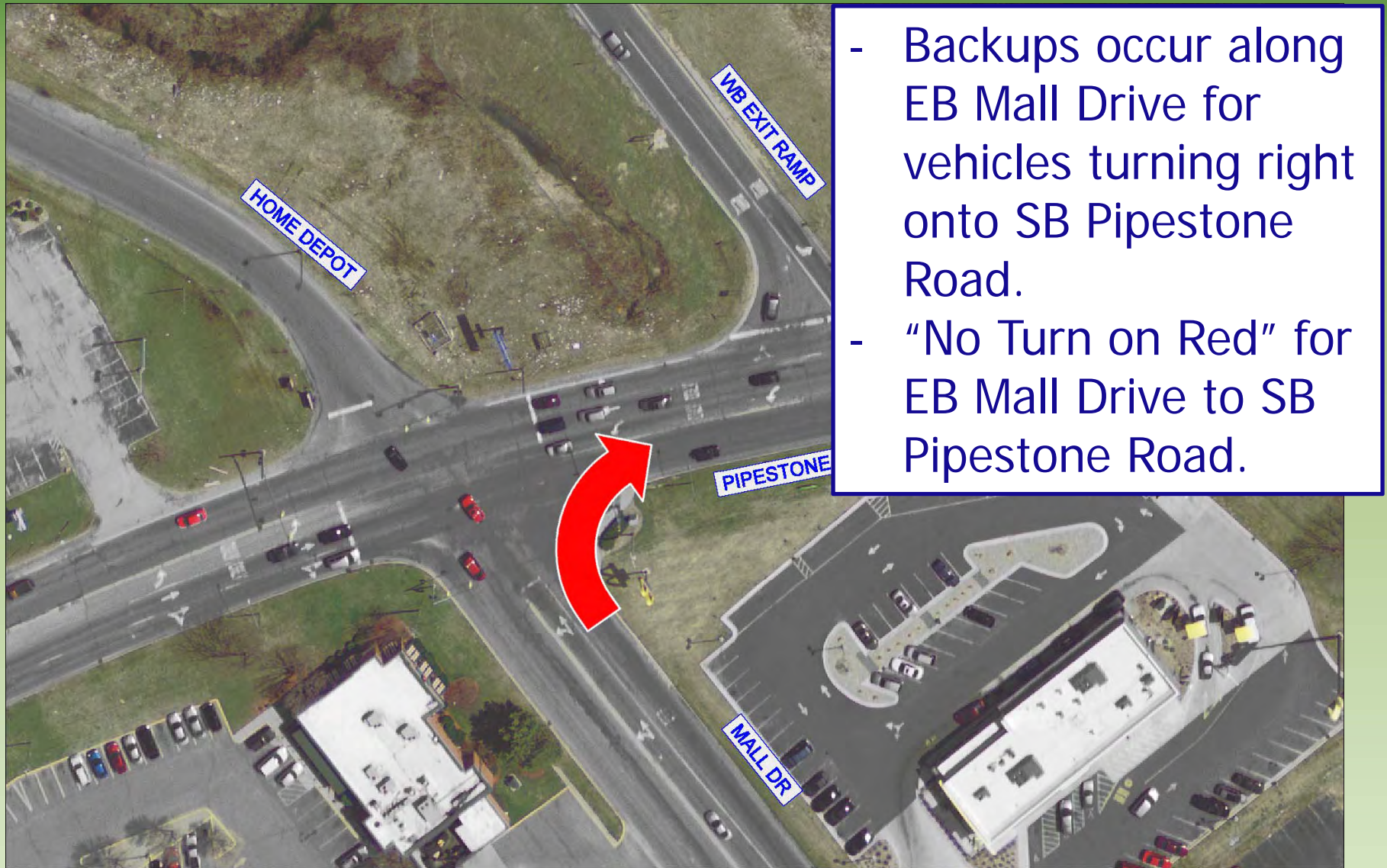


- Stakeholder Meeting #1 - Issues/Concerns



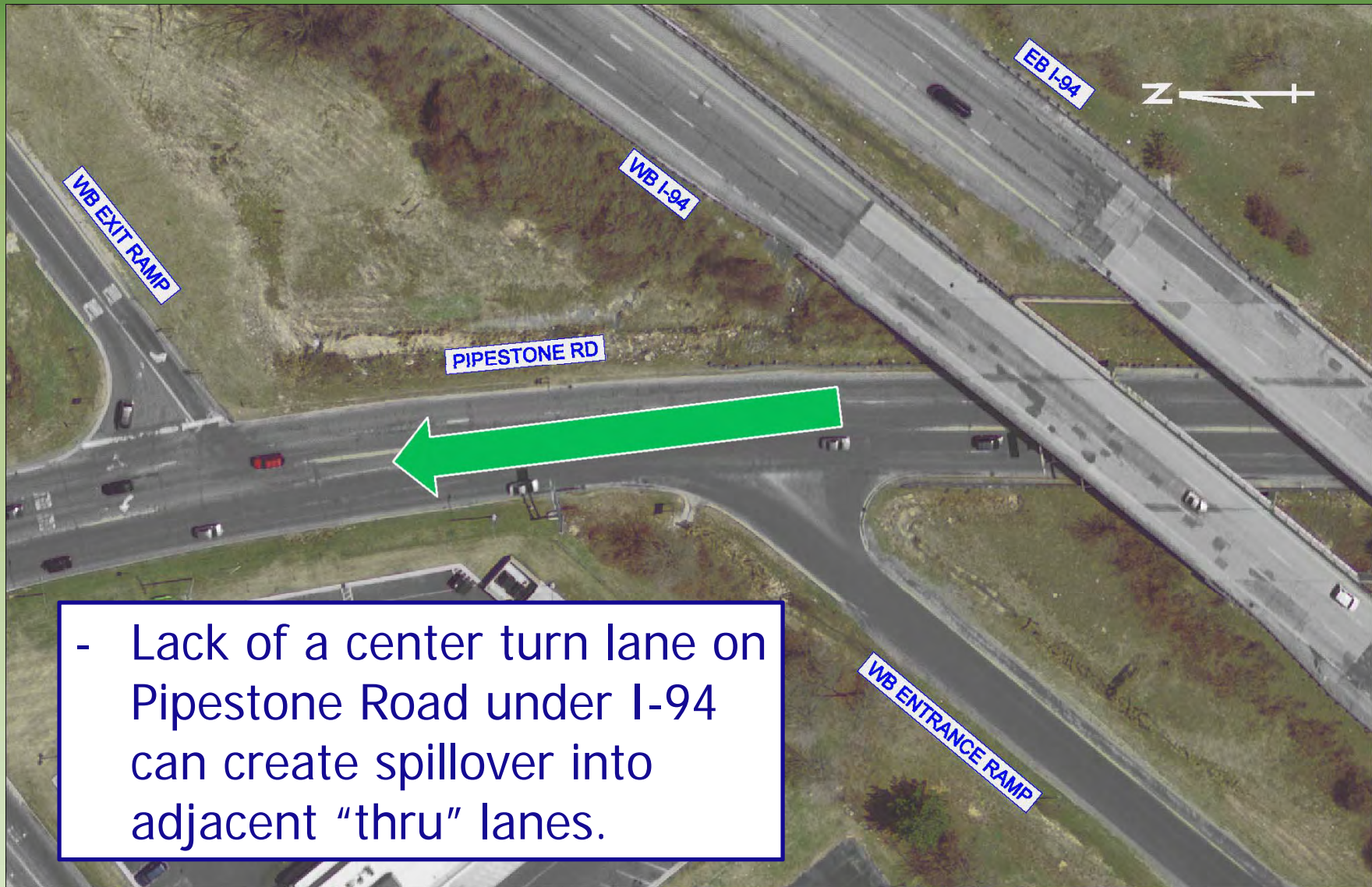


- Stakeholder Meeting #1 - Issues/Concerns





- Stakeholder Meeting #1 - Issues/Concerns



- Lack of a center turn lane on Pipestone Road under I-94 can create spillover into adjacent "thru" lanes.

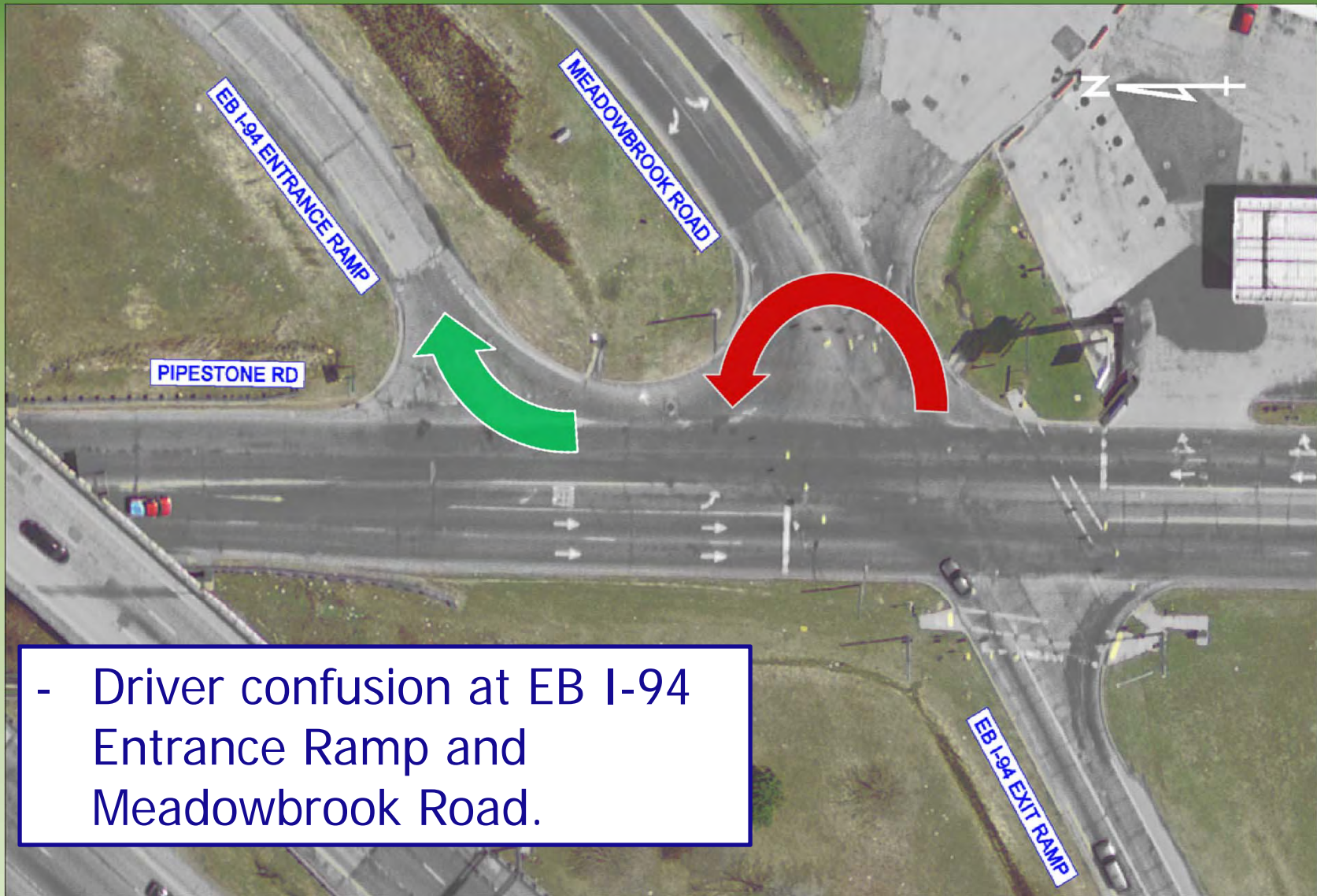


- Stakeholder Meeting #1 - Issues/Concerns



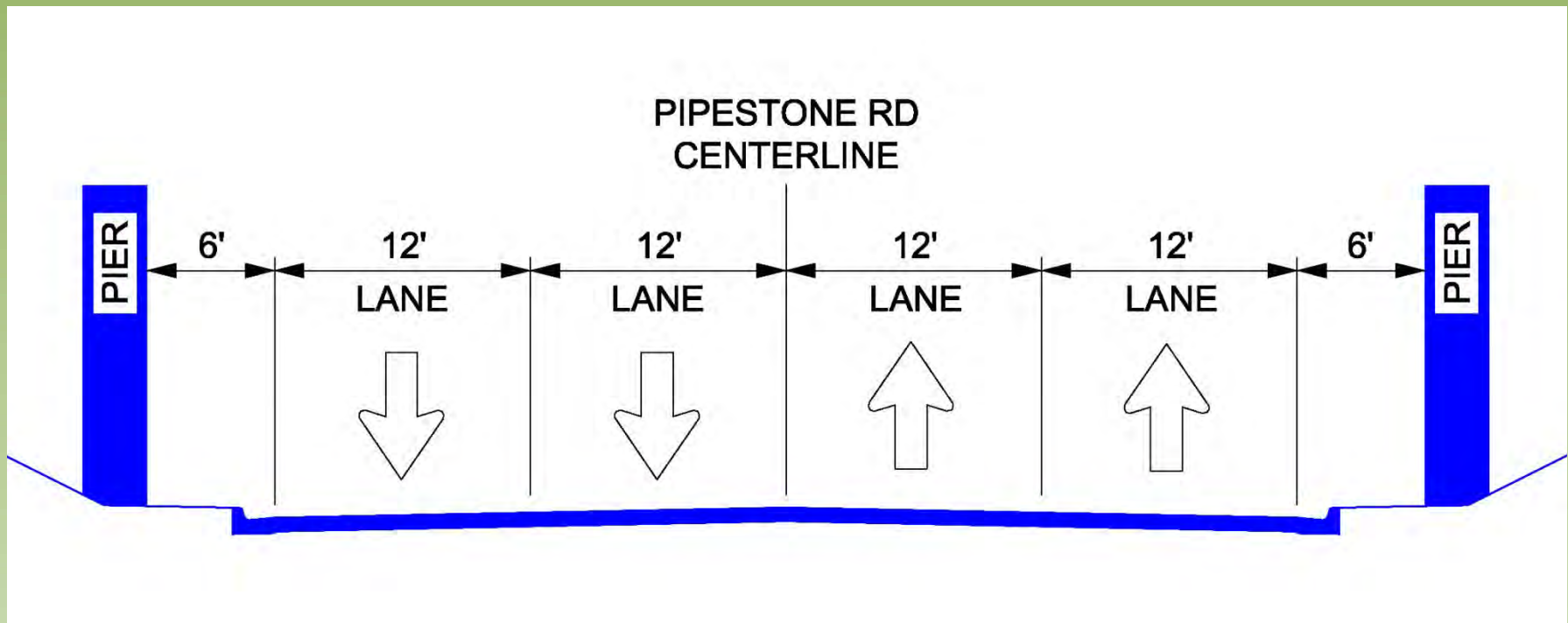


- Stakeholder Meeting #1 - Issues/Concerns





- Stakeholder Meeting #1 - Issues/Concerns



- Lack of Pedestrian Mobility under I-94.

- Stakeholder Meeting #1 - Issues/Concerns

- Drainage problems adjacent to Greenly Ave.



# Stakeholder Meeting #1 - Issues/Concerns

- Others
  - Entrance Ramps have steep grades with poor sight distance.
  - Construction staging for I-94 and Pipestone Road.
  - Aesthetics of interchange are in need of improvement.
  - Signals on Pipestone Road at Mall Drive and Meadowbrook Road are not interconnected, impacting traffic signal progression.



# State Long Range Plan (SLRP)

- SLRP initiatives included with this study:
  - Focus on corridors of highest significance.
  - Facilitate movement of truck freight.
  - Complete Streets and Context Sensitive Solutions.

## MI Transportation Plan

*Moving Michigan Forward*

2035 State Long-Range  
Transportation Plan



### Overview

Adopted by the State Transportation Commission September 27, 2012



# Alternative Comparison Criteria

## CRITERIA

Cost

Traffic Operations (LOS)

Right-of-Way

Social/Environmental

Pedestrian Mobility

Geometrics

Constructability

Maintenance

Traffic Safety

## Evaluation Legend



Very Good



Acceptable

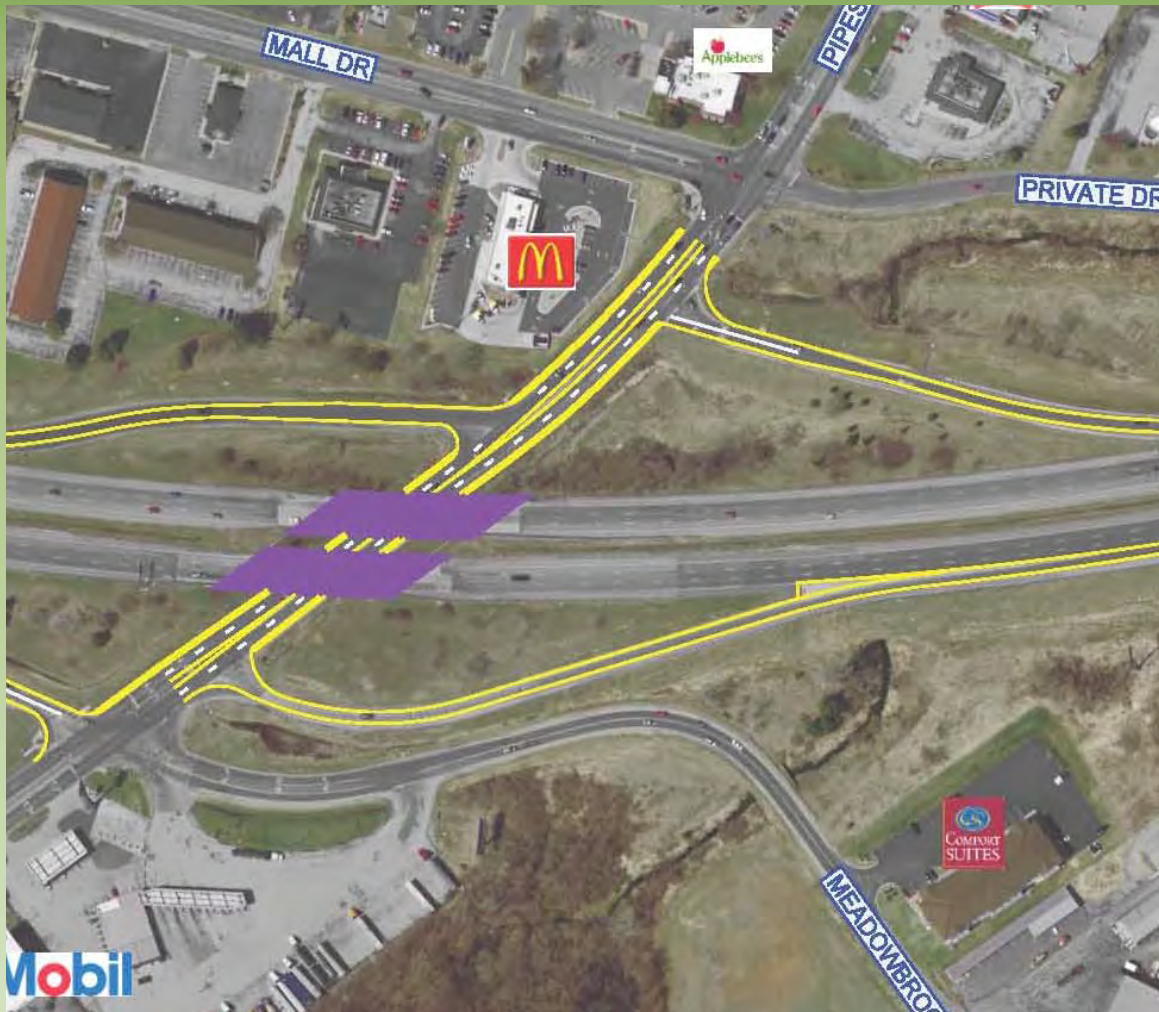


Not Good



Fatal Flaw

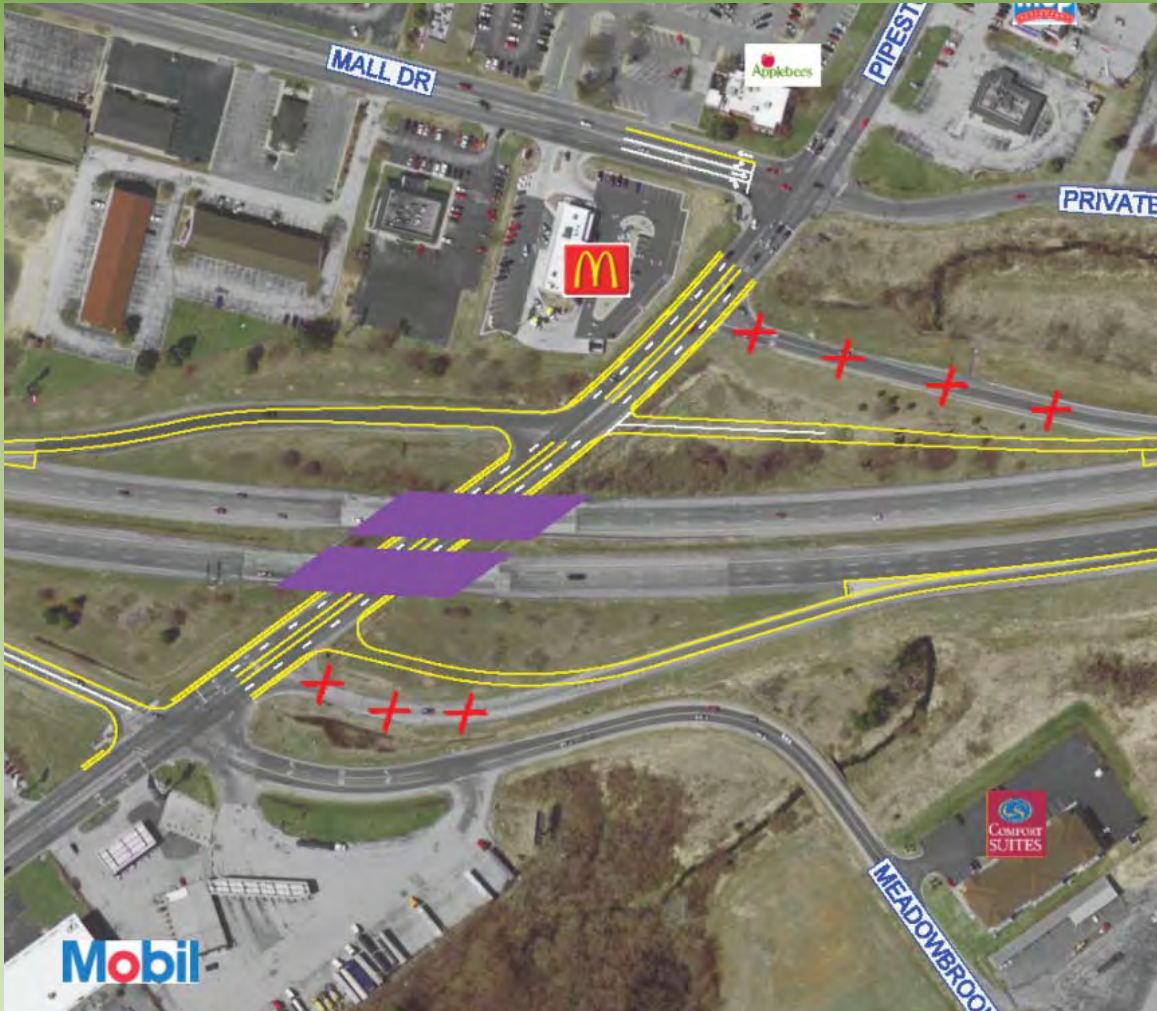
# No Build Alternative



| CRITERIA                 | NB |
|--------------------------|----|
| Cost                     | ●  |
| Traffic Operations (LOS) | ●  |
| Right-of-Way             | ●  |
| Social/Envir.            | ●  |
| Pedestrian Mobility      | ●  |
| Geometrics               | ●  |
| Constructability         | ●  |
| Maintenance              | ●  |
| Traffic Safety           | ●  |

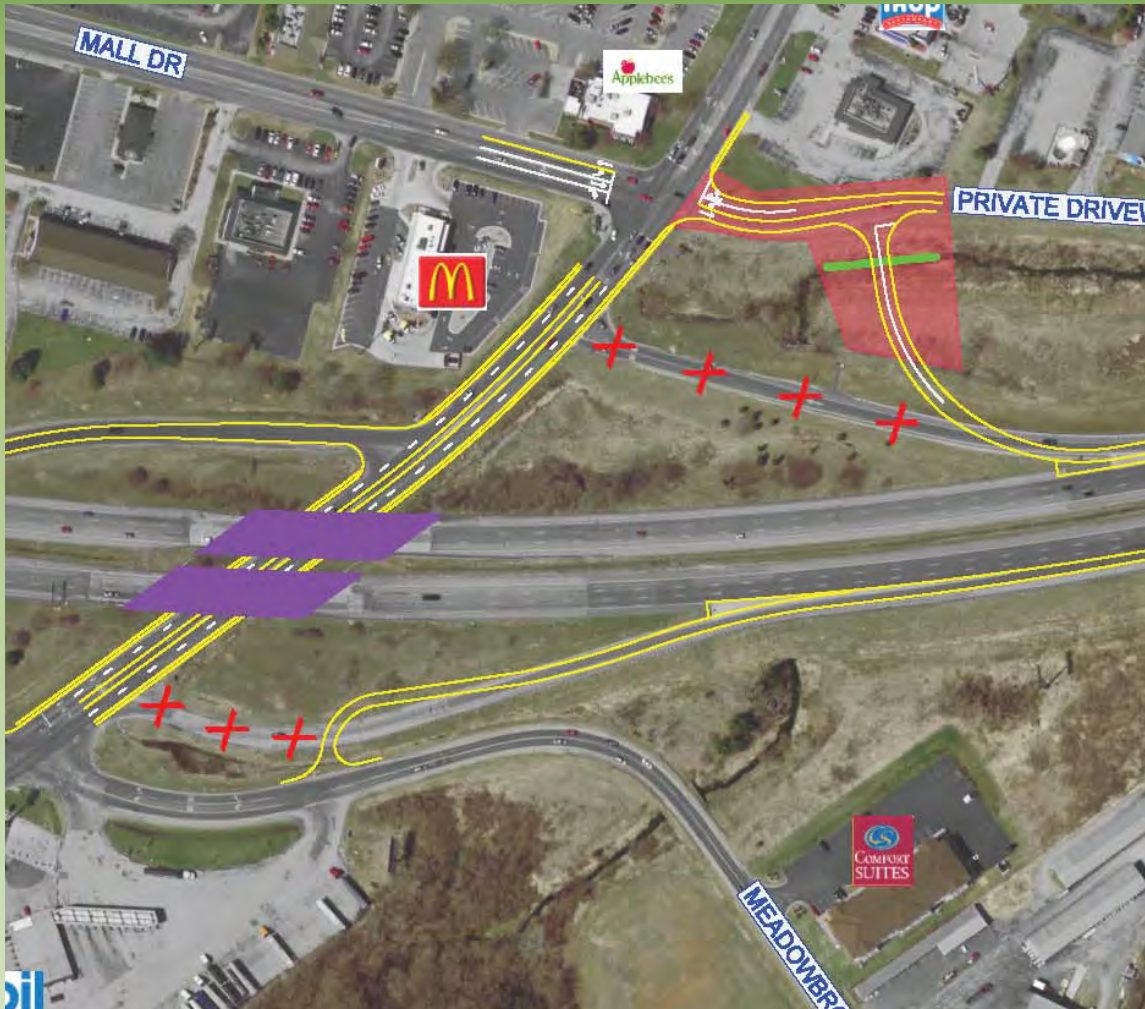


# Draft Alternative 1 (Diamond)



| CRITERIA                 | Alt 1 |
|--------------------------|-------|
| Cost                     | ●     |
| Traffic Operations (LOS) | ●     |
| Right-of-Way             | ●     |
| Social/Envir.            | ●     |
| Pedestrian Mobility      | ●     |
| Geometrics               | ●     |
| Constructability         | ●     |
| Maintenance              | ●     |
| Traffic Safety           | ●     |

# Draft Alternative 2 (Side Road Ramps)



| CRITERIA                 | Alt 2 |
|--------------------------|-------|
| Cost                     | ●     |
| Traffic Operations (LOS) | ●     |
| Right-of-Way             | ●     |
| Social/Envir.            | ●     |
| Pedestrian Mobility      | ●     |
| Geometrics               | ●     |
| Constructability         | ●     |
| Maintenance              | ●     |
| Safety                   | ●     |



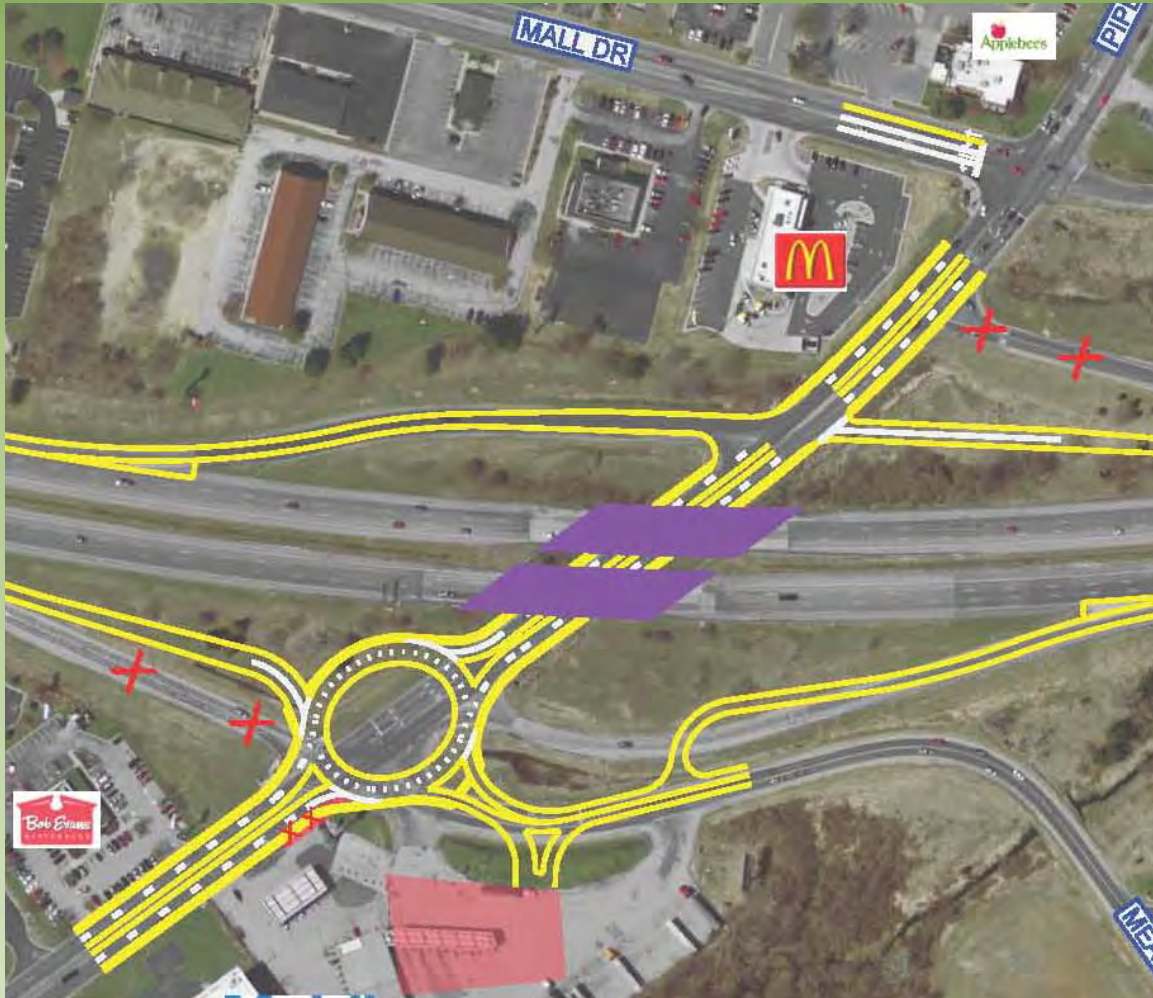
# Draft Alternative 3 (Loop Ramp)



| CRITERIA                 | Alt 3 |
|--------------------------|-------|
| Cost                     | ●     |
| Traffic Operations (LOS) | ●     |
| Right-of-Way             | ●     |
| Social/Envir.            | ●     |
| Pedestrian Mobility      | ●     |
| Geometrics               | ●     |
| Constructability         | ●     |
| Maintenance              | ●     |
| Safety                   | ●     |

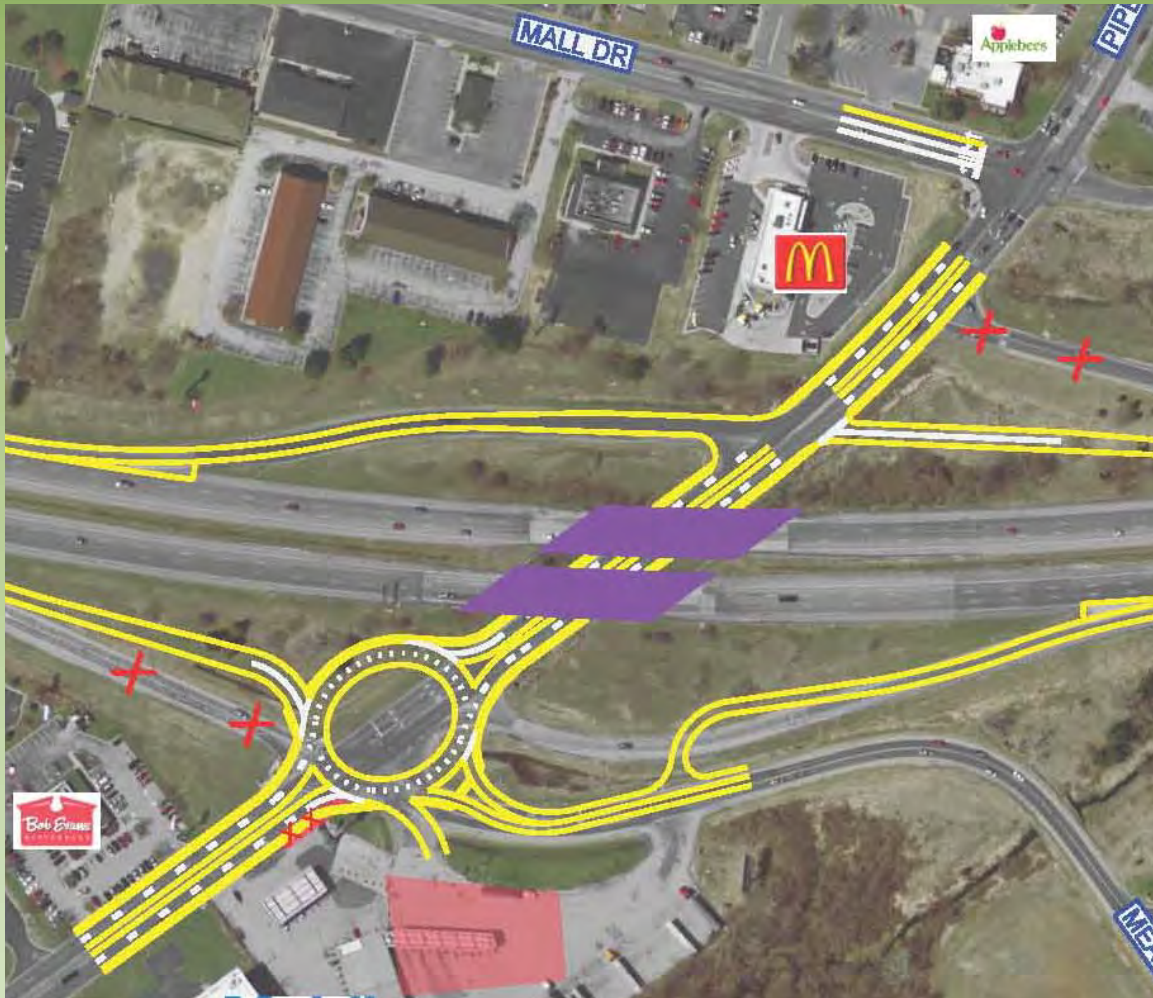


# Draft Alternative 4 (One Roundabout)



| CRITERIA                 | Alt 4 |
|--------------------------|-------|
| Cost                     | ●     |
| Traffic Operations (LOS) | ●     |
| Right-of-Way             | ●     |
| Social/Envir.            | ●     |
| Pedestrian Mobility      | ●     |
| Geometrics               | ●     |
| Constructability         | ●     |
| Maintenance              | ●     |
| Safety                   | ●     |

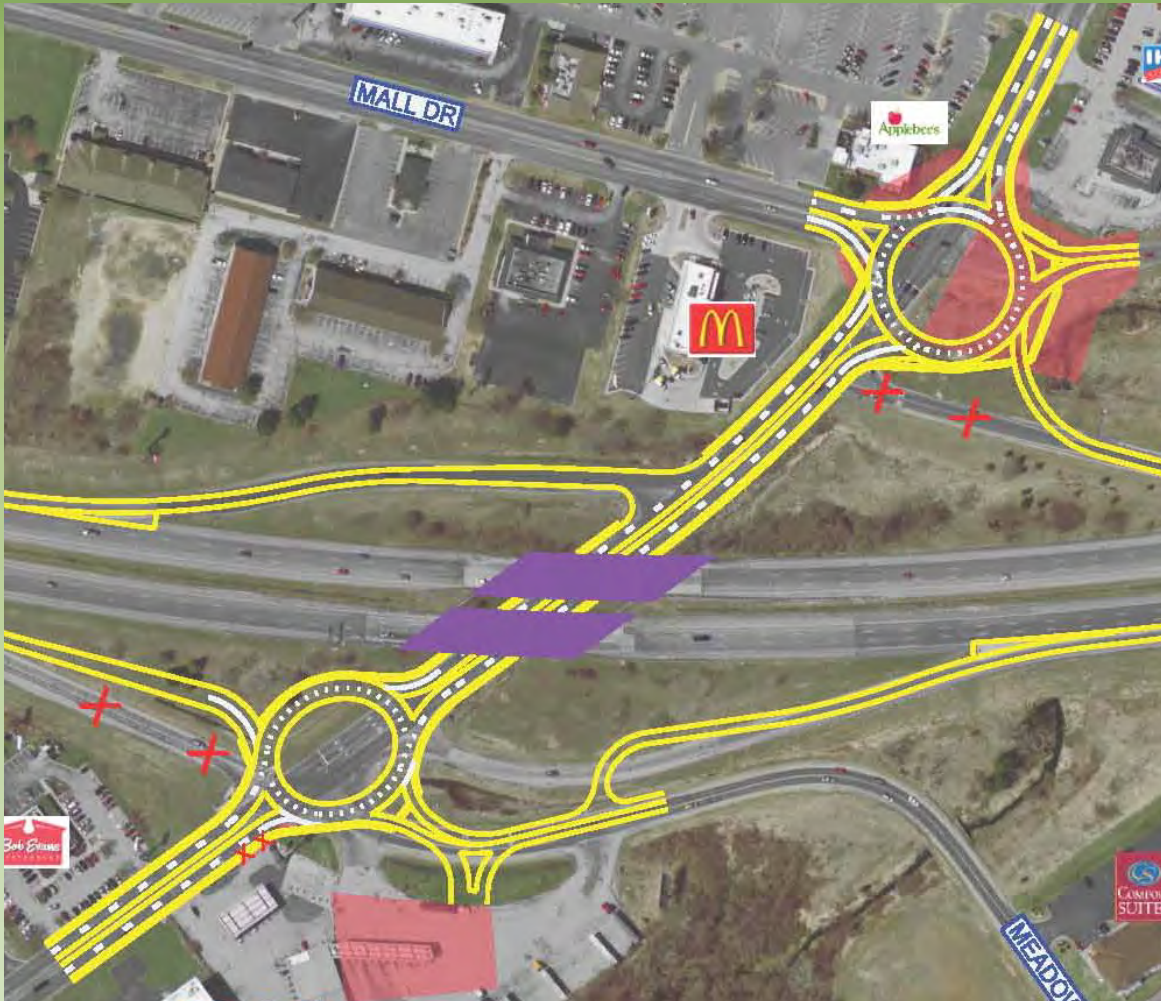
# Draft Alternative 4B (One Roundabout)



| CRITERIA                 | Alt 4 |
|--------------------------|-------|
| Cost                     | ●     |
| Traffic Operations (LOS) | ●     |
| Right-of-Way             | ●     |
| Social/Envir.            | ●     |
| Pedestrian Mobility      | ●     |
| Geometrics               | ●     |
| Constructability         | ●     |
| Maintenance              | ●     |
| Safety                   | ●     |



# Draft Alternative 5 (Two Roundabouts)



| CRITERIA                 | Alt 5 |
|--------------------------|-------|
| Cost                     | ●     |
| Traffic Operations (LOS) | ●     |
| Right-of-Way             | ●     |
| Social/Envir.            | ●     |
| Pedestrian Mobility      | ●     |
| Geometrics               | ●     |
| Constructability         | ●     |
| Maintenance              | ●     |
| Safety                   | ●     |



# Draft Alternative 6 (Relocate Private Drive)



| CRITERIA                 | Alt 6 |
|--------------------------|-------|
| Cost                     | ●     |
| Traffic Operations (LOS) | ●     |
| Right-of-Way             | ●     |
| Social/Envir.            | ●     |
| Pedestrian Mobility      | ●     |
| Geometrics               | ●     |
| Constructability         | ●     |
| Maintenance              | ●     |
| Safety                   | ●     |

# Alternative Comparison Criteria

| CRITERIA                 | NB | Alt 1 | Alt 2 | Alt 3 | Alt 4 | Alt 5 | Alt 6 |
|--------------------------|----|-------|-------|-------|-------|-------|-------|
| Cost                     | ●  | ●     | ●     | ●     | ●     | ●     | ●     |
| Traffic Operations (LOS) | ●  | ●     | ●     | ●     | ●     | ●     | ●     |
| Right-of-Way             | ●  | ●     | ●     | ●     | ●     | ●     | ●     |
| Social/Envir.            | ●  | ●     | ●     | ●     | ●     | ●     | ●     |
| Pedestrian Mobility      | ●  | ●     | ●     | ●     | ●     | ●     | ●     |
| Geometrics               | ●  | ●     | ●     | ●     | ●     | ●     | ●     |
| Constructability         | ●  | ●     | ●     | ●     | ●     | ●     | ●     |
| Maintenance              | ●  | ●     | ●     | ●     | ●     | ●     | ●     |
| Safety                   | ●  | ●     | ●     | ●     | ●     | ●     | ●     |



# Alternatives Moving Forward to Study

- Alternative 1 – Diamond Interchange
- Alternative 2 – Side Road Ramps
- Alternative 4/4B – South Roundabout
  
- New ideas can still be considered as we move forward.

# Project Schedule

- Stakeholder Meeting #1 - May 8, 2013
  - Discuss issues and brainstorm ideas
- Stakeholder Meeting #2 - May 22, 2013
  - Present preliminary alternatives
- Stakeholder Meeting #3 - June 5, 2013
  - Finalize project alternatives
- Public Meeting - Summer 2013 (approximate)
- Draft Report of Findings - Fall 2013
- Finalize Report of Findings - Winter 2013/2014
- Project Construction Begins – To be determined

# Contact Person

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THANK YOU!!