Tower Terrace

Purpose of tonight's meeting

- Provide and update on study progress
- Show concept alternatives for the Tower Terrace interchange
- Gather feedback on the concept alternatives

Please talk with study team members and ask questions.

Thanks for attending!

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Study goals

The study goals are to:

- Determine what future transportation improvements, if any, in the vicinity of Tower Terrace Road and I-380 are needed.
- Evaluate the proposed improvements for environmental impacts, including natural resource, social, and economic impacts.
- Coordinate any proposed improvements with local, regional, and state long-range plans.

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Purpose and need

The purpose of the project is to accommodate increased travel demands generated by existing and future planned development in the vicinity of I-380 and Tower Terrace Road. In order to meet increased travel demands, the project is expected to meet the following needs:

- Alleviate forecasted future traffic congestion at the Boyson Road and County Home Road interchanges;
- Accommodate anticipated future traffic growth in the vicinity of the project area;
- Support planned economic development and land uses.

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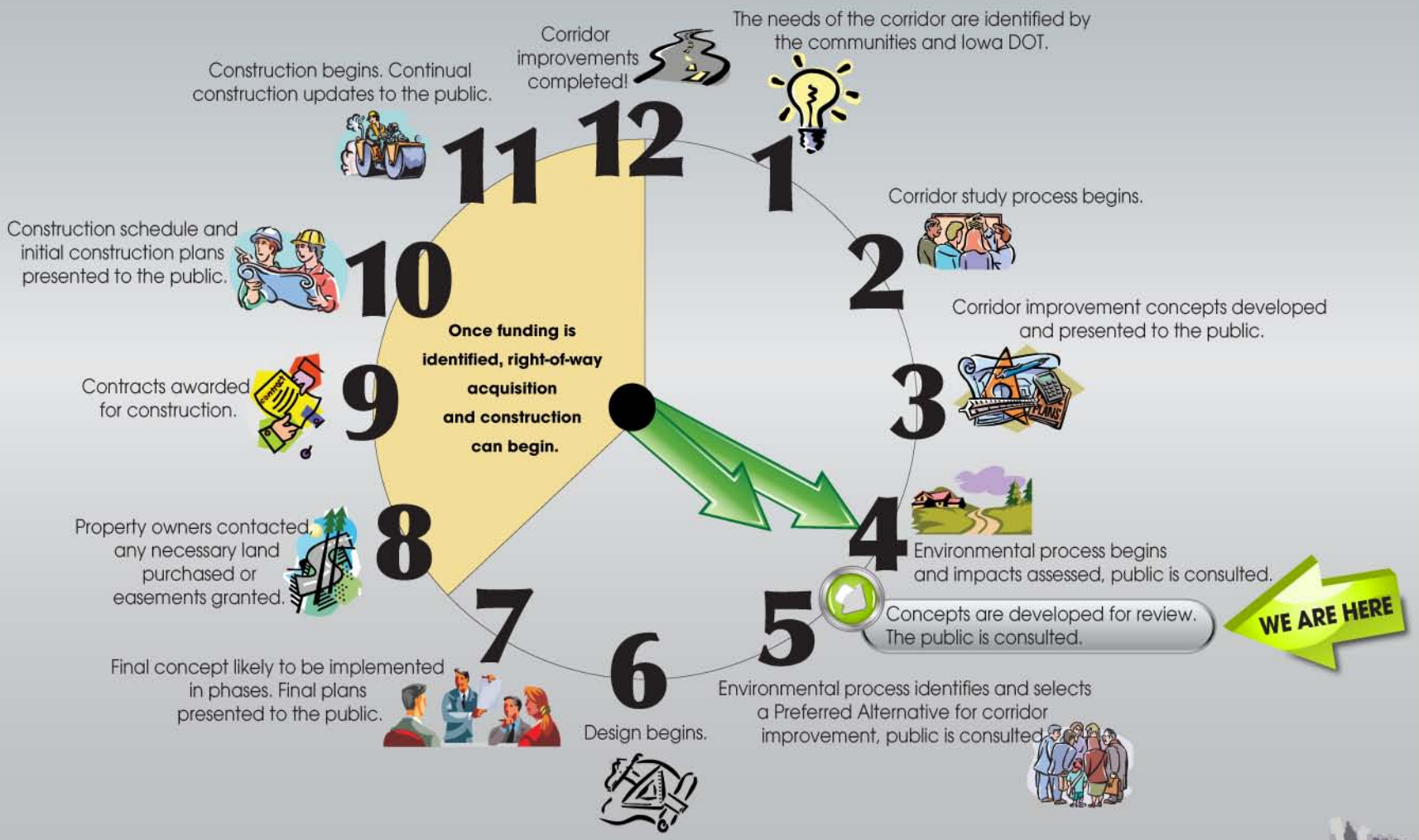
Project development process



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Study area

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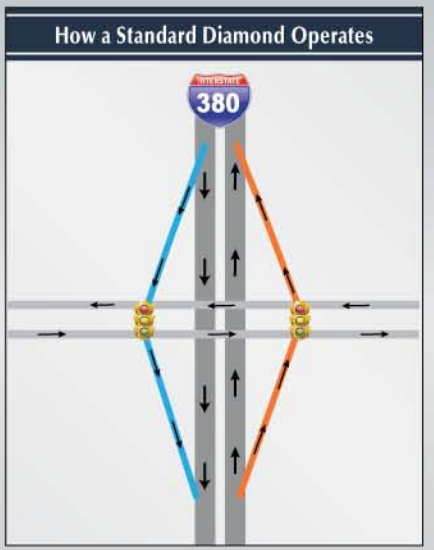
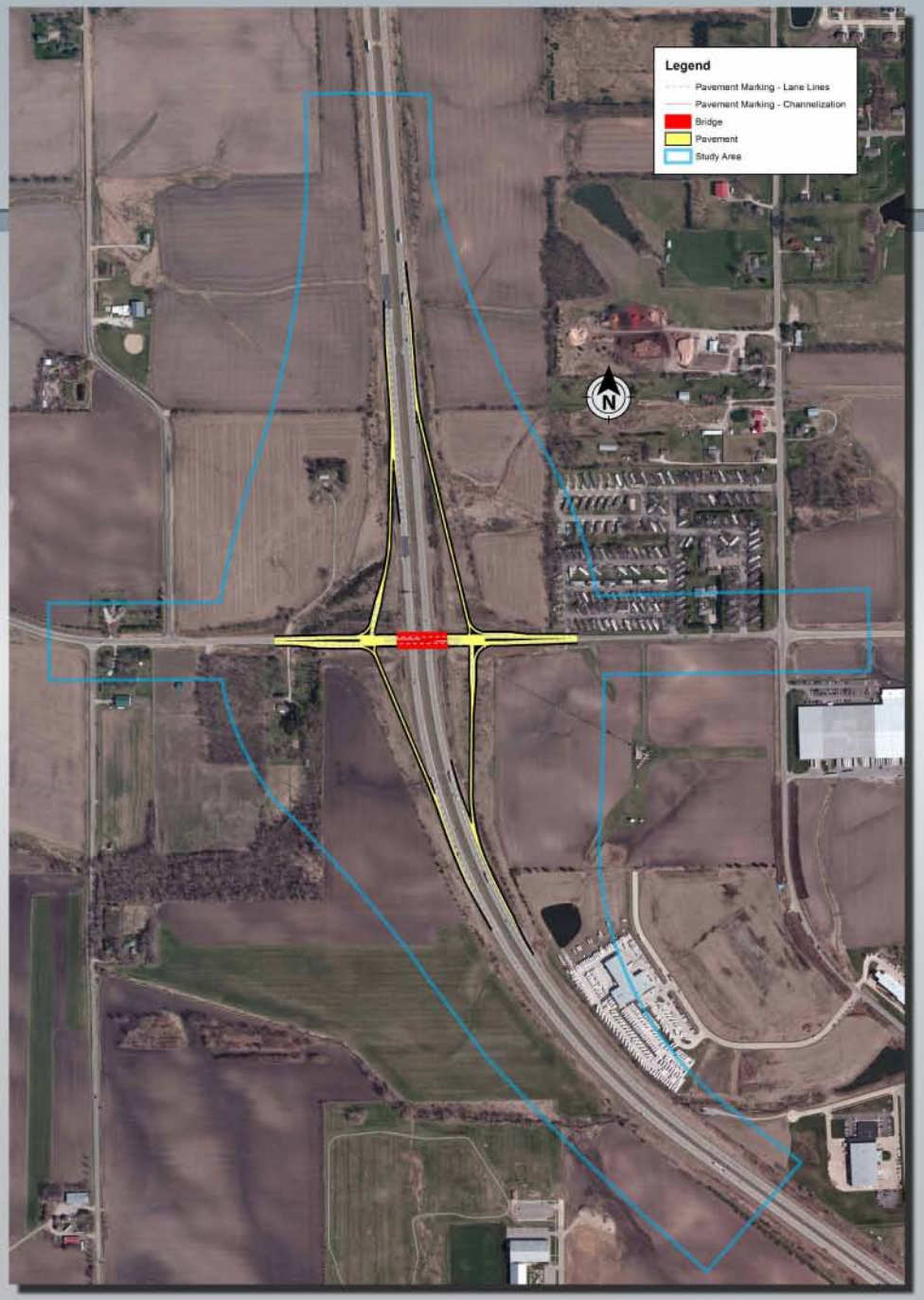
Alternatives under consideration

Concept 1 - Standard Diamond Interchange



- Most basic interchange configuration.
- Most common interchange type in Iowa



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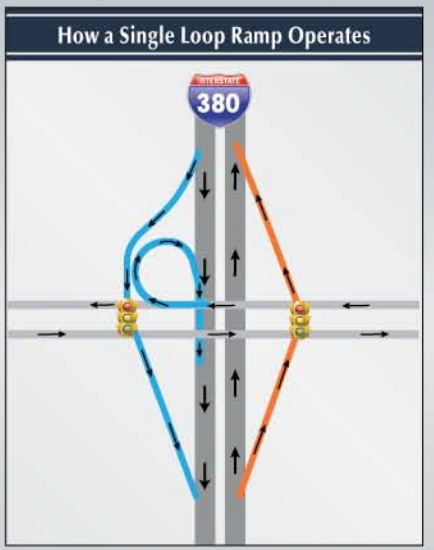
Alternatives under consideration

Concept 2 - Single Loop Ramp Interchange



The benefits of this type of interchange:

- Same as diamond interchange.
- Includes dedicated loop ramp for high-volume turns.
- In this case, the loop ramp replaces left turn lane and will handle high-volumes of westbound to southbound traffic.
- The left turn loop ramp reduces conflict for left turns providing congestion relief and crash reduction.

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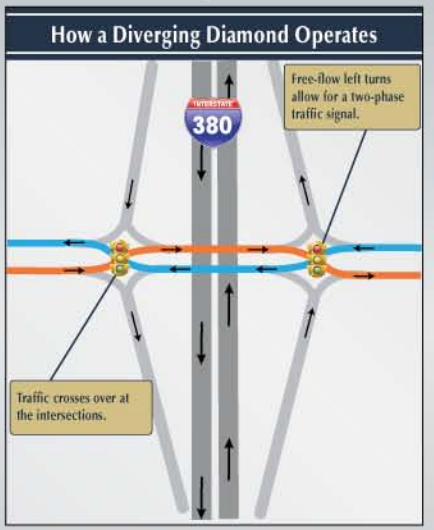
Alternatives under consideration

Concept 3 - Diverging Diamond Interchange (DDI)



- Accommodates higher left-turning movements both onto and off of I-380 thereby improving the efficiency of the interchange.
- Reduces the total conflict points inherent to a traditional diamond interchange and increases safety.
- Shortens the overall traffic signal cycle length reducing delays and increasing safety and capacity.
- Reduces the construction cost and construction time by reducing the width of the bridge needed to accommodate left turns.

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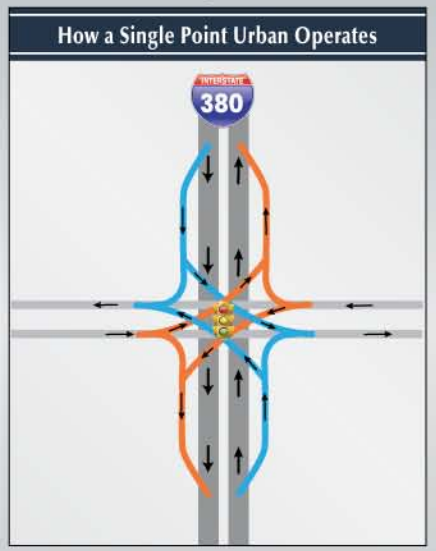
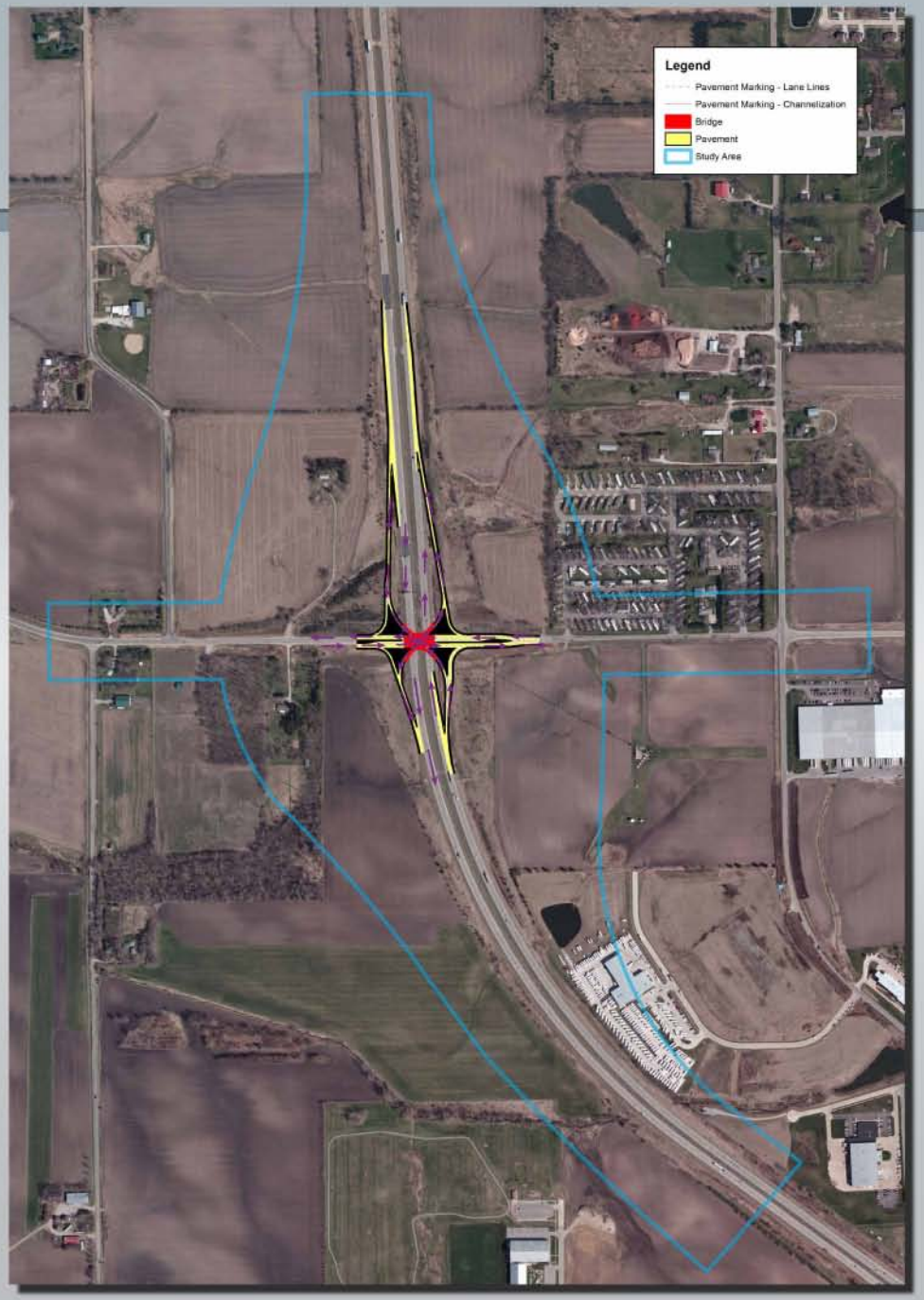
Alternatives under consideration

Concept 4 - Single Point Urban Interchange (SPUI)



A SPUI has a single traffic signal at the center of the interchange to control turning movements. SPUI's can handle large volumes of traffic. Benefits include:

- Less right of way needed; ideal for urban areas.
- More vehicles can make turns and clear the intersections during one cycle.
- Allows long, gradual turns for larger vehicles.



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How will a preferred alternative be selected?

Each of the four concepts will be evaluated based on the following factors:

- Ability to alleviate congestion at adjacent interchanges
- Ability to handle traffic at the Tower Terrace interchange
- Ability to handle future traffic at nearby intersections
- Cost
- Right of way impact
- Constructability
- Impact to the natural and built environment.
- Ability to support planned economic development.

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What is an Environmental Assessment?

An EA is one kind of environmental study. It helps agencies and the public make well-informed decisions about investments in their communities. The EA documents the decision-making process and answers the following questions:

- What is the purpose and need for the improvement?
- How would the proposed improvement function?
- How might improvements impact the natural and man-made environment?
- Which alternative best meets the purpose and need while minimizing or avoiding impacts?

The Federal Highway Administration is responsible for overseeing the EA and issuing a Finding of No Significant Impact (FONSI) approving the selected alternative. This approval is necessary for the project to move forward into design, right of way acquisition and construction.

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What will be analyzed?

In the EA, the study team is evaluating a number of issues and constraints. The areas being reviewed include:

Natural environment

- Air quality
- Water quality
- Water resources
- Wetlands
- Floodways
- Threatened and endangered species
- Hazardous waste

Social/economic

- Cultural and historic resources
- Property acquisitions
- Homes, neighborhoods, and businesses
- Parks and public facilities
- Noise
- Environmental justice
- Land use
- Farmland
- Safety of pedestrians and motorists

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Interchange Justification Report

IJRs are required to justify the construction of new or revised access points (interchanges) to the federal interstate system. An IJR requires that a proposed interchange meet 8 policy requirements. Those requirements are:

- The existing interchanges and local roads and streets cannot accommodate the future traffic demands;
- Transportation system management improvements (ramp metering, mass transit, HOV facilities) have been assessed and provided for if justified;
- The proposed interchange does not have a significant adverse impact on the safety and operation of the Interstate;
- The proposed interchange connects to a public road only and will provide for all traffic movements;
- The proposed interchange is consistent with local and regional land use plans;
- The proposed interchange is supported by a comprehensive Interstate network study;
- The request for the new interchange demonstrates coordination between planned development and other required transportation improvements; and
- The request for the new interchange contains information related to the planning requirement and status of the environmental process.

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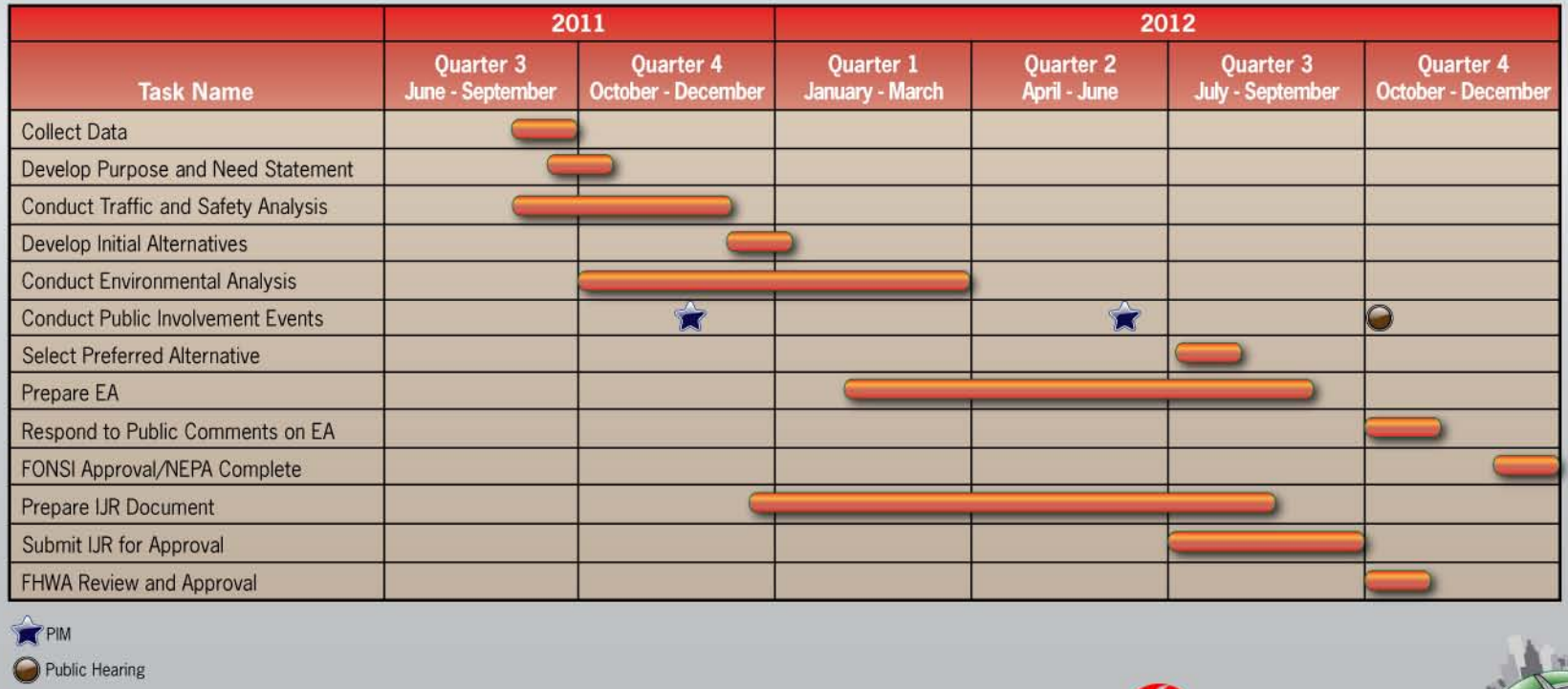
Schedule and next steps

The schedule shows major tasks to complete the Environmental Assessment and IJR documents. Design of initial improvement could begin in summer of 2013. Once these steps are complete and funding is identified, right of way acquisition and construction can begin.



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