



# What is an Environmental Assessment?



An Environmental Assessment (EA) is a federally required process designed to help communities and public agencies make decisions about public investments. Additionally, it documents the information and the decision-making process.

The Callaway County Connector EA has developed and evaluated options to improve transportation in southeastern Callaway County. It has also examined the potential impacts of those improvements on people, places and the natural environment.



EA Steps	Schedule	Public Input
1. Establish goals (formally known as "Purpose and Need")	Winter 2008/ Spring 2009	April 29, 2009
2. Evaluate current and future conditions		
3. Develop concepts for transportation improvements		
4. Evaluate the impacts of those improvements and make needed refinements	Summer 2009	June 4, 2009
5. Recommend needed and appropriate transportation improvements to the community*	Fall 2009	January 15, 2013
6. Receive final approval from the Federal Highway Administration	Early 2013	

*\*Economic conditions and changing projected travel demands caused a delay in the evaluation process.*



# How does the Callaway Plant fit into this study?

Percent of Callaway Plant Employees Residing in Missouri Counties



With or without expansion, the Callaway Plant is a **major source of traffic** in the area as 800+ people drive to and from work each day. Where traffic goes to — and comes from — is an important part in the development of potential solutions, and in the evaluation process.

If and when plant expansion happens, more traffic, along with heavier trucks, will be traveling between Highway 54 and eastern Callaway County.

The Callaway County Connector EA discusses the impacts of existing and future traffic, and if and how improvements could make travel safer, more efficient and more reliable.

The EA examined the need for transportation improvements in relation to:

- (1) safety,
- (2) connectivity,
- (3) the ability of the roadway to support modern traffic, and
- (4) roadway access during floods.



*Note: Questions and comments about Callaway Plant operations have been forwarded to Ameren Missouri. The Callaway County Connector study is about local transportation needs, not specific activities at the Callaway Plant.*



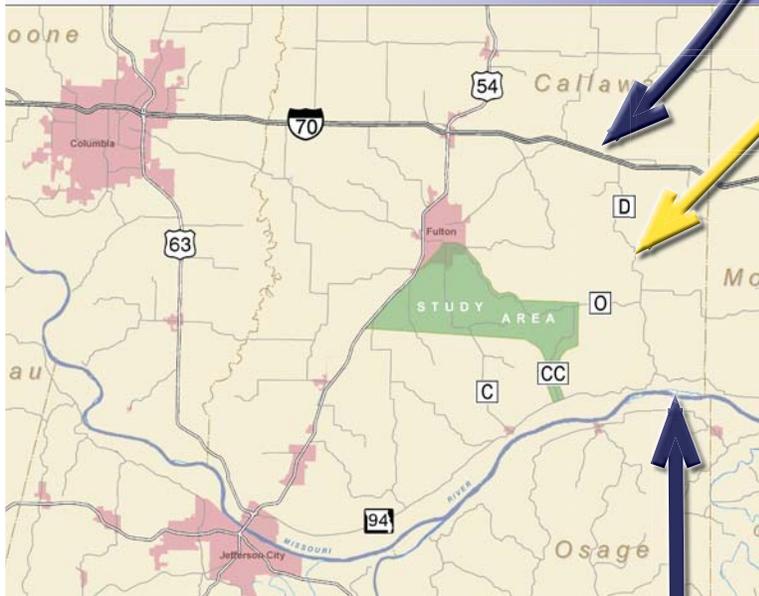
## Study area

The study area was developed based upon factors, including:

- Where people are traveling to and from in the region;
- Connections with existing highways; and
- Anticipated future regional travel needs.

### *What about connecting to I-70?*

While a connection to I-70 could serve long-distance travelers trying to reach southeast Callaway County, it wouldn't serve area residents, the main users of the local transportation system.



### *Why not use the existing heavy-haul road?*

Improvements to the heavy-haul road could serve construction traffic, if the Callaway Plant is ever expanded. However, improvements there wouldn't serve the main users of the local transportation system: residents in Fulton and in Callaway, Cole and Boone Counties.

### *What about connections to the east?*

The majority of the traffic in the region travels to or from the west, from places like Fulton and Jefferson City.



# Project Purpose and Need

In the EA process, there is a statement of Purpose and Need, which will serve as the criteria for:

- (1) evaluating the need for improvements, and
- (2) if needed, deciding which improvement(s) are best.

## Feedback from the public on the project Purpose and Need:

- 1. Make travel safer:** The area has higher-than-average crash rates for similar routes in Missouri. Area roadways include sharp turns, steep hills and curves which can often contribute to crashes.

*Action: Improvements, where practical, should meet MoDOT engineering policy guidelines for sight distances, stopping distances, turns and grades.*



- 2. Improve access from Route 54 to the east:** There is significant traffic between Route 54 to the east in Callaway County, including travelers to the Callaway Plant.

*Action: Changes should support those travelers moving from Route 54 to the Callaway Plant.*

- 3. Update the roadway system:** Some of the existing roads were first paved more than 50 years ago, when there was much less traffic, and when cars and trucks carried lighter loads.

*Action: New or rebuilt roads should better withstand current and future vehicle loads.*



- 4. Provide better access during floods:**

The current roadway system is vulnerable to high water.

*Action: Improvements should provide residents and travelers safe routes during most local high-water events.*



# What happens if there are no transportation improvements?

The existing roadway system is adequate for today's traffic levels. However, without major improvements, long-term safety issues related to roadway design (like sharp turns and steep hills) cannot be addressed. Roadway access during local high-water events will continue to be impacted.

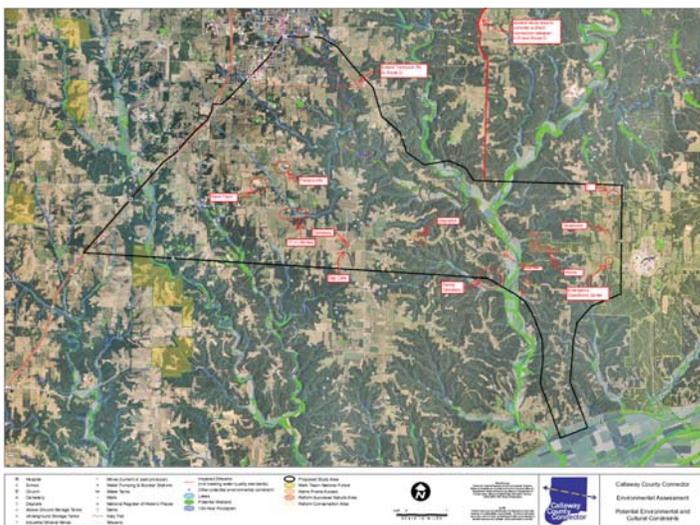


On the other hand, there would be no new impacts to nature, homes, historic sites or businesses.



At earlier public meetings about the project, the community identified the following issues:

- Concerns about potential impacts to farms and homes;
- Concerns about splitting properties;
- The need for improved safety;
- A desire to improve the local roadway system rather than build a new one;
- Impacts of additional traffic to properties; and
- Questions about the general need for the project.



*Input and information received at the first public meeting were added to a map of the area to help engineers understand concerns and minimize impacts.*



# Key challenges and constraints



## Minimizing impacts:

Improvements need to avoid creating negative impacts as much as possible. The recommended alternative:

- Maximizes use of existing roadways and right-of-way;
- Could impacts fewer homes and business; *during the design phase, ways to minimize those impacts will be carefully considered;*
- Has less impact on acres of farmland, forests, wetlands and floodplains;
- Is less expensive;
- Offers a shorter travel distance and travel time; and,
- Provides better emergency service access.

## Roadway design:

Some of the roads in the area started as dirt roads and were first paved or covered in gravel during the state's "Get Missouri Out of the Mud" campaign in the 1920s. Over the years, the vehicles traveling these roads have changed significantly, but short sight distances, sharp curves and tall hills have not.



## Topography:

The area's hills and valleys create challenges for roadway design. An improved roadway would need to be less steep and less curvy.

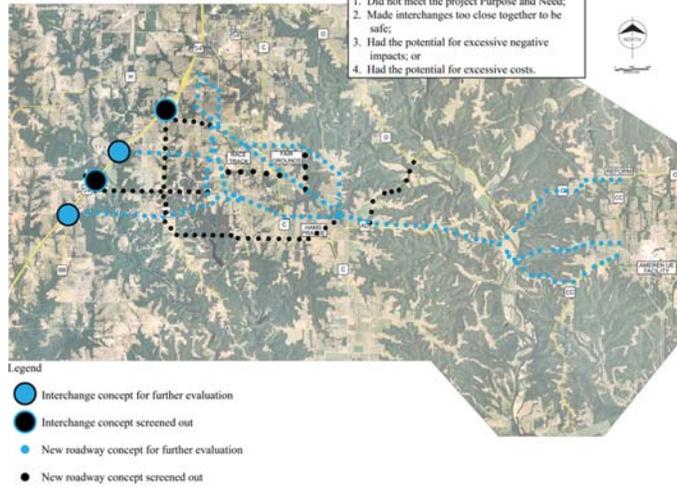
To do that, transportation improvements might need to take up more space than the existing roadways.



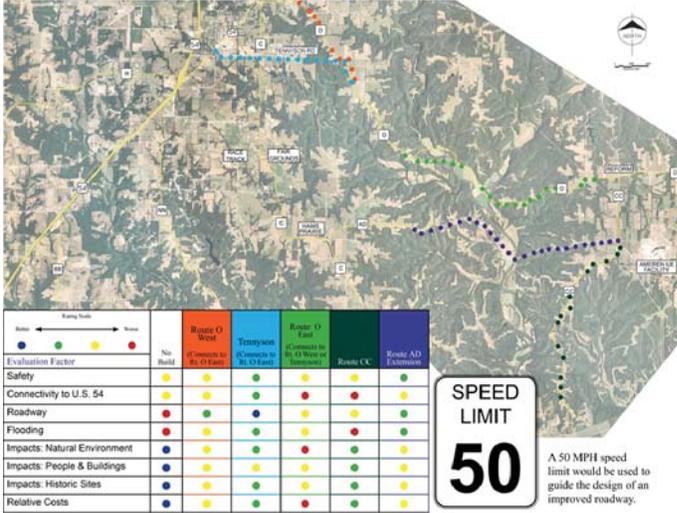
# Initial concepts

The alternatives developed and reviewed to address the transportation needs include:

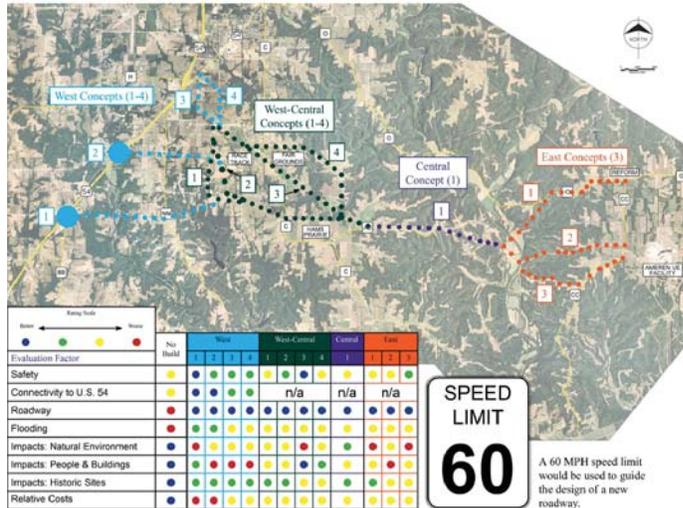
Initial Concepts for New Roadway



Improve Existing Roadway Concepts



New Roadway Concepts for Detailed Evaluation



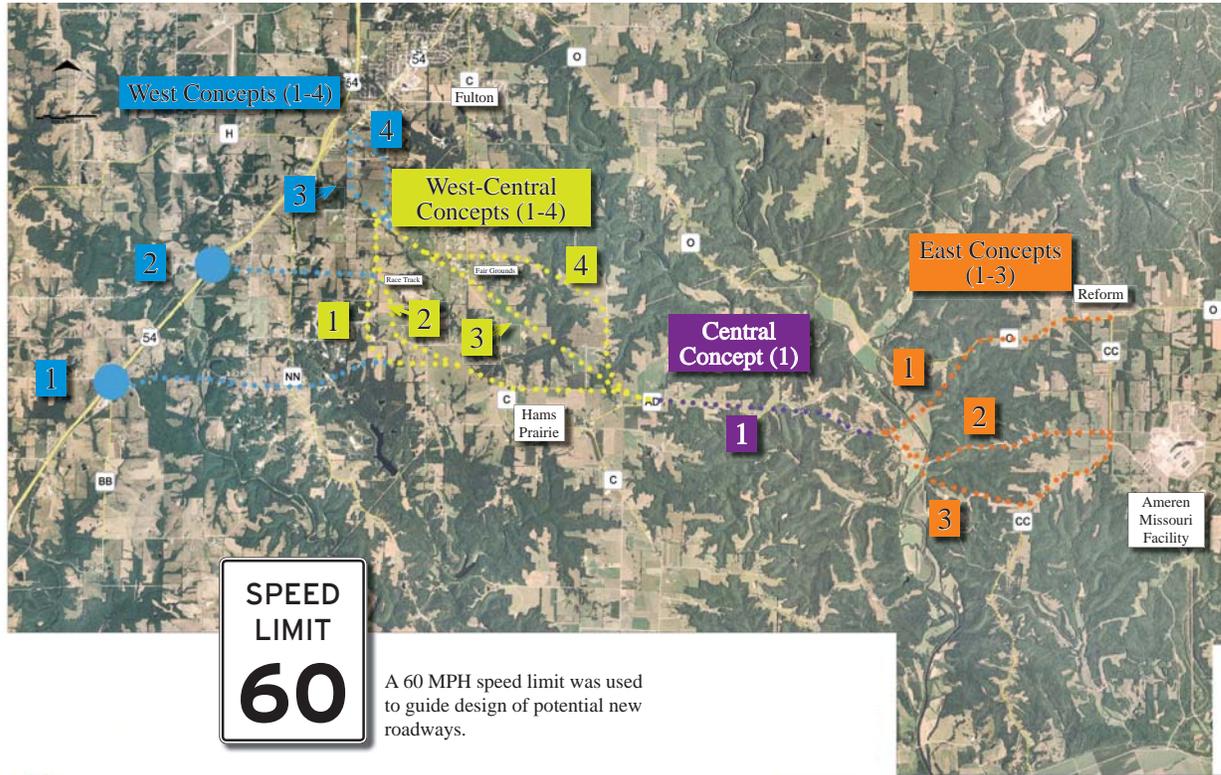
- **No-Build:** Leave the existing roadway system in the condition it is today.
- **Improve Existing Roads:** What can be done to make sections of the existing roadway system better – eliminate curves, widen the pavement, add shoulders, etc.?
- **Construct New Roads:** Where would be the best location for a new roadway and what type of road should it be?

## Key evaluation criteria:

- Meets Purpose and Need
- Minimizes or addresses environmental impacts
- Relative construction costs
- Public comments



# New roadway concept evaluations



	Units	West				West-Central				Central	East		
		1	2	3	4	1	2	3	4	1	1	2	3
Length	Miles	3.84	2.25	1.48	1.50	5.11	4.68	3.87	4.55	2.93	3.64	3.10	3.67
Right of Way	Acres	237	141	94	95	314	288	239	268	182	225	192	227
Travel Time	relative to today	Some Benefit	Improved	Best Option	More Improved	Some Benefit	Some Benefit	Best Option	Improved	Best Option	Improved	Best Option	Improved
Emergency Services	relative to today	Some Benefit	Some Benefit	Improved	Improved	Some Benefit	Some Benefit	Improved	Some Benefit	Improved	Some Benefit	Improved	Some Benefit
Potential Residential Relocations	No.	5	8	3	3	8	6	2	7	7	8	14	7
Potential Commercial Relocations	No.	0	0	0	0	0	0	2	0	1	0	1	1
Prime Farmland	Acres	192	134	94	93	297	284	215	238	133	177	137	170
Forested Land	Acres	103	34	8	1	44	21	28	37	58	88	73	89
Length of Streams within Corridor	Feet	4,294	2,670	1,456	2,582	1,253	567	1,495	2,029	1,426	2,732	1,065	2,785
Floodplain	Acres	10	0	6	0	0	0	8	7	0	19	21	32
Wetlands	Acres	1.6	1.1	0	0.1	0.5	1.7	1.9	2.5	1.4	2.2	1.1	5.1
Public Drinking Water Wells	No.	0	0	1	0	1	1	0	0	0	1	0	0
Archaeological Sites	No.	0	0	1	0	0	0	0	1	0	2	5	3
Threatened/Endangered Species <sup>3</sup>	Species	IB, GB	IB, GB	IB, GB	IB, GB	IB, GB	IB, GB	IB, GB	IB, GB	IB, GB	IB, GB, BS, WSM	IB, GB, BS, WSM	IB, GB, BS, WSM
Hazardous Waste Locations	No.	0	0	0	0	0	0	0	0	0	0	0	1
Public Lands	No.	0	0	0	0	0	0	0	0	0	1	2	2
<b>Estimated Costs<sup>5</sup>:</b>													
Construction	Million dollars (2011)	14.6	11.6	2.9	2.9	13.0	11.9	8.9	10.6	6.7	8.5	8.2	8.6
Right of Way & Relocation		0.6	0.4	0.1	0.1	0.9	0.8	0.7	0.8	0.3	0.4	1.0	0.4
Engineering & Construction Admin.		2.2	1.7	0.4	0.4	2.0	1.8	1.4	1.6	1.0	1.4	1.2	1.3
<b>Total</b>		<b>17.4</b>	<b>13.7</b>	<b>3.4</b>	<b>3.4</b>	<b>15.9</b>	<b>14.5</b>	<b>11.0</b>	<b>13.0</b>	<b>8.0</b>	<b>10.3</b>	<b>10.4</b>	<b>10.3</b>

<sup>1</sup> Totals for the Preferred Alternative may not equal the sum of the data for the individual segments West 3, West-Central 3, Central 1, and East 1 because of the way the individual segments have been delineated to provide comparison with corresponding segments  
<sup>2</sup> Based on the architectural survey conducted for the Preferred and Southern Alternatives; not all roadway concept segments were surveyed  
<sup>3</sup> Potential to affect these species (IB=Indiana bat, GB=gray bat, BS=blacknose shiner, WSM=western silvery minnow)  
<sup>4</sup> Based on the noise analysis conducted for the Preferred and Southern Alternatives; not all roadway concept segments were analyzed  
<sup>5</sup> Costs as reported in this table have been rounded to the nearest 0.1 million; more detailed cost information is provided in Appendix D



# Linked build concepts

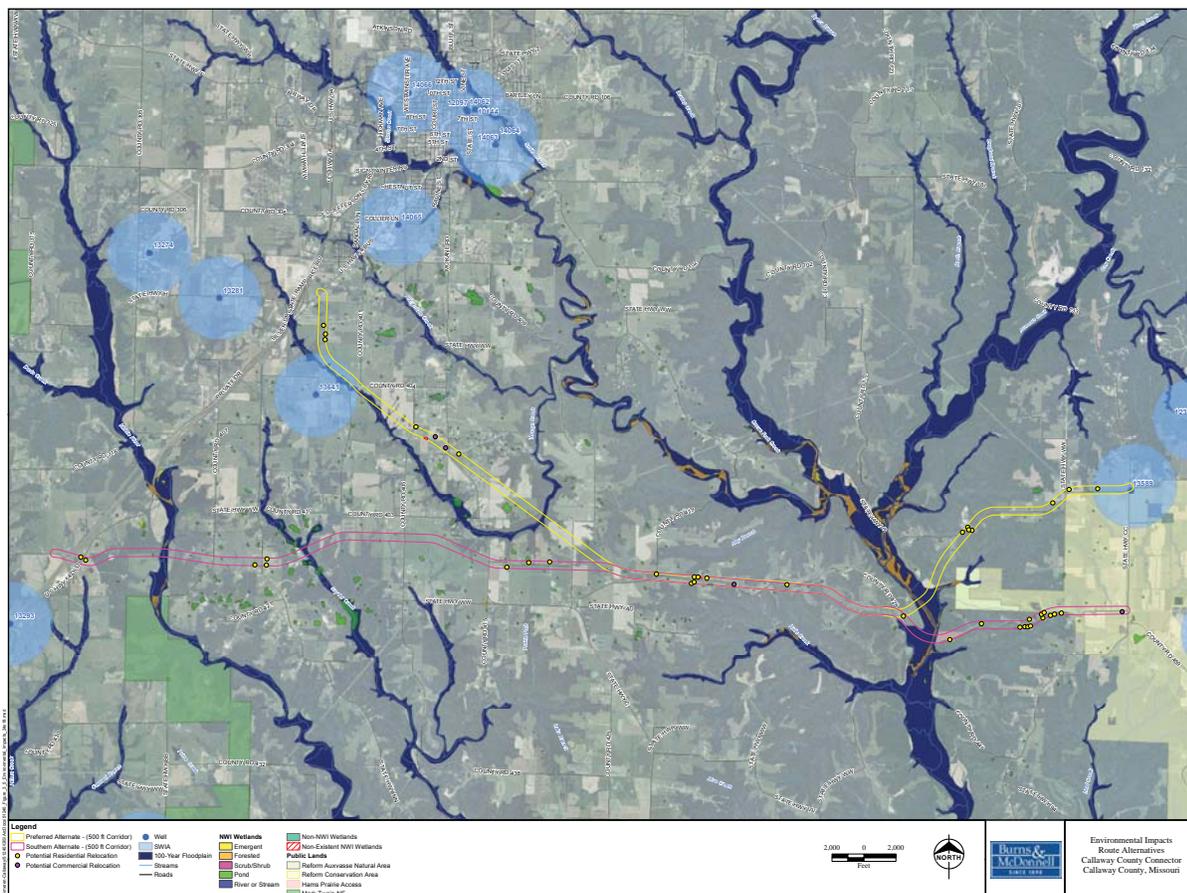
Based on the technical evaluation and consideration of the public input received, the best concepts were selected and linked together to form two potential routes for a new roadway, identified for preliminary review as the *Northern Alternative* and the *Southern Alternative*.

Each provides:

- A well-functioning roadway supported by the members of the public who attended the various outreach sessions, and
- A roadway that spans the study area and connects at logical termini.

*Northern Alternative* – Composed of roadway concepts West 3, West-Central 3, Central 1, and East 1.

*Southern Alternative* – Composed of roadway concepts West 1, portions of West-Central 1 and 2, Central 1, and East 2.



*Please see the large map on the table for greater detail.*



# Impacts, evaluations and recommendation

The *Northern Alternative* has been designated as the Preferred Alternative because it would:

- Utilize existing roadways and right of way.
- Provide safer travel by creating a new roadway that is designed to current MoDOT standards in an area that has roads with sharp curves and steep grades.
- Create a more direct access route from Route 54 into southeastern Callaway County by connecting to Business 54 near the Route 54/Route H interchange.
- Provide a more reliable roadway system in Callaway County that could accommodate an increase in general and truck traffic that would occur with a Callaway Plant expansion.
- Facilitate access and travel through southeastern Callaway County during flood events.

**IMPORTANT:**

The corridors and impacts shown on the map are for a 500-foot wide corridor. The final roadway would be approximately 64 feet wide, including shoulders. Actual impacts to properties will likely be less than shown.

IMPACTS	Units	Northern Alternative Total <sup>1</sup>	Southern Alternative Total
Length	Miles	11.92	12.94
Right of Way	Acres	727	801
Travel Time	relative to today	Best Option	Some Benefit
Emergency Services	relative to today	Improved	Some Benefit
Potential Residential Relocations	No.	20	29
Potential Commercial Relocations	No.	3	2
Prime Farmland	Acres	607	647
Forested Land	Acres	181	258
Length of Streams within Corridor	Feet	7,109	8,605
Floodplain	Acres	33	31
Wetlands	Acres	5.5	6.3
Public Drinking Water Wells	No.	2	0
NRHP Eligible Resources <sup>2</sup>	No.	2	3
Archaeological Sites	No.	3	5
Threatened/ Endangered Species <sup>3</sup>	Species	IB, GB, BS, WSM	IB, GB, BS, WSM
Hazardous Waste Locations	No.	0	0
Public Lands	No.	1	2
Receivers Affected by Noise <sup>4</sup>	No.	37	41
<b>Estimated Costs<sup>5</sup>:</b>			
Construction	Million Dollars (2011)	27.1	37.8
Right of Way & Relocation		1.6	2.5
Engineering & Construction Admin.		4.1	5.7
<b>Total</b>		<b>32.8</b>	<b>46.0</b>

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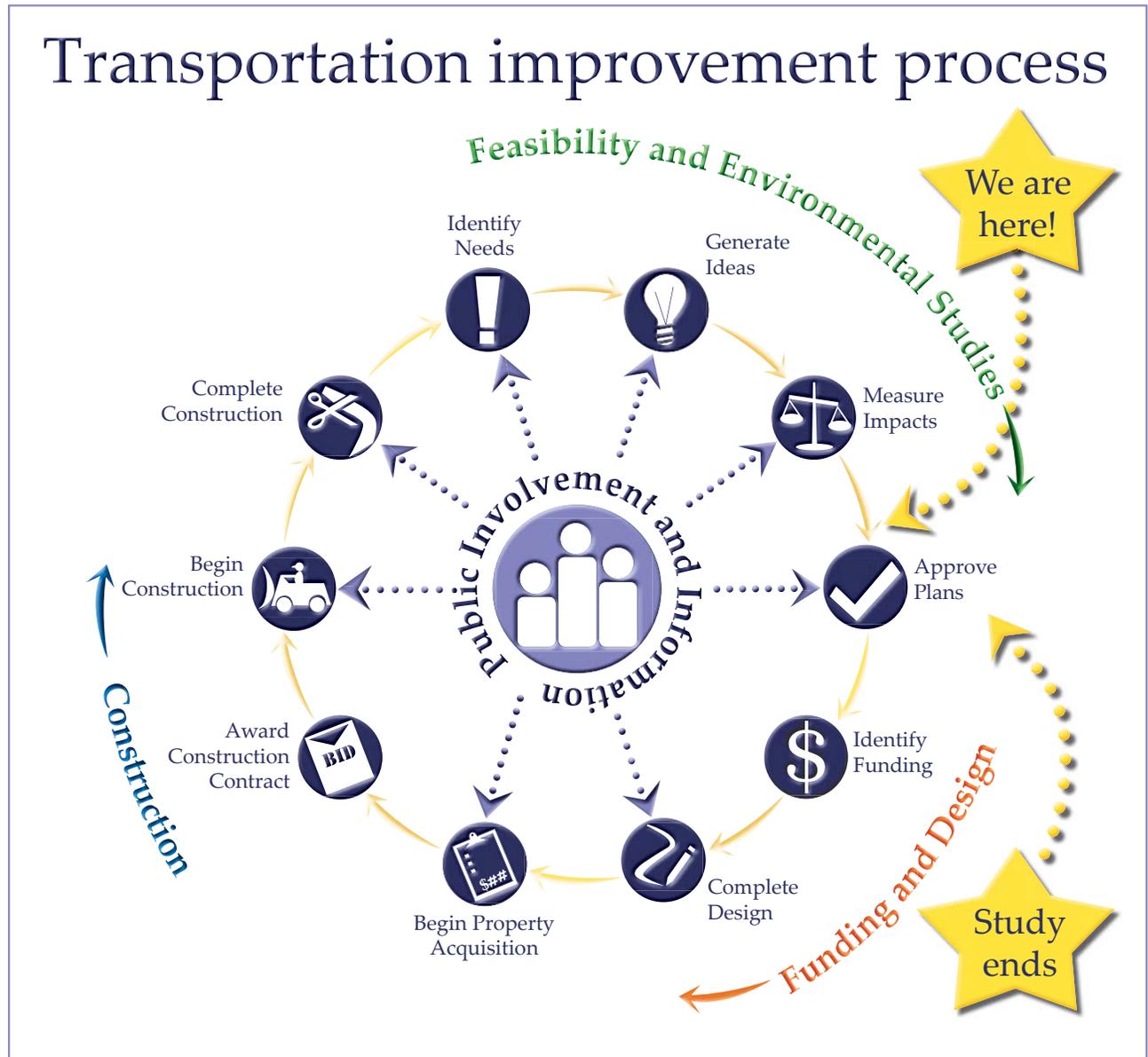
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## What's next?

Comments received by January 25, 2013 will be considered in any further action taken on the project. Comments will also be included as part of the formal FHWA decision document on the project.



### When could construction start?

Final design and construction cannot begin until after (1) FHWA approval and (2) funding has been identified.



# What do you think?

Please do one of the following:

- Talk with a team member,
- Fill out a comment form, or
- Take a comment form home to complete and mail, or e-mail your thoughts. The deadline for comments is 1/25/2013.

Thank you for your time and interest!

*Please submit your comments by January 25, 2013 so that they can be included in the federal approval process.*

