



Ann Arbor Connector Feasibility Study

June 8, 2010

Welcome to the Meeting!

Our Program Tonight:

1. Find out about the Connector study
2. Find out about alternative transit technologies
3. Hear preliminary study findings
4. Give us your comments to help guide our study process



Ann Arbor Connector Feasibility Study

June 8, 2010

What is the Ann Arbor Connector Feasibility Study?

Study Purpose - To determine the feasibility of advanced transit options for the city to meet growing transportation demands.

- Supplement multi-modal transportation system
- More travel options
- Convenience
- Sustainability
- Improve safety
- Economic stability and growth
- Improve overall quality of life

Project Sponsors:





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Transportation is
Important to our Community

Previous studies by the City, County, AATA, DDA, U-M and WATS have identified common themes that have led to this study:

Sustainable
Transportation

Minimize
Road
Expansion

Support Non-
motorized
Travel

Increased
Use of
Transit

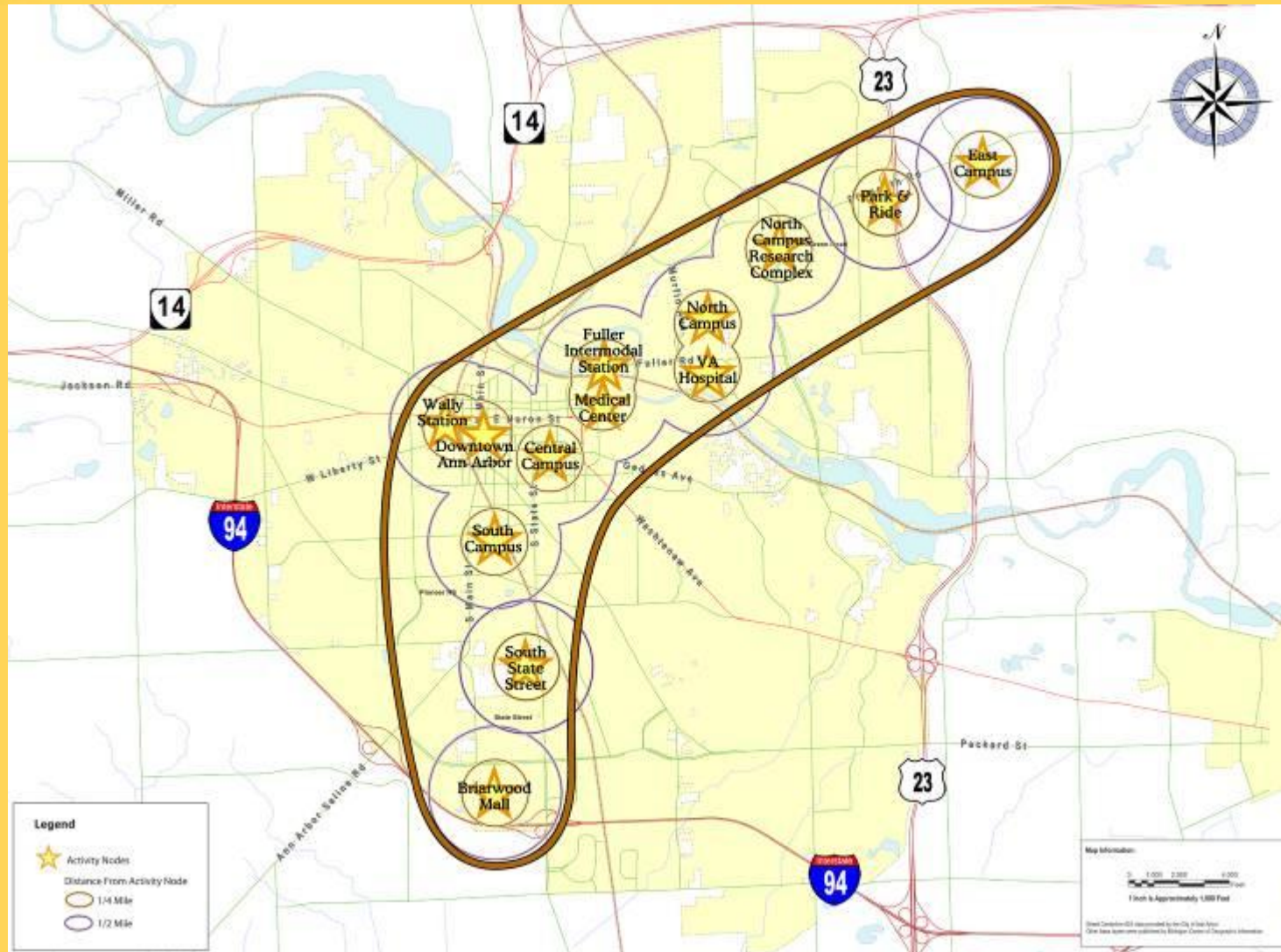
The University of Michigan sponsored a Transportation Technology Forum to explore and advance input to the Connector Study



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Study Area Map





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What is the Ann Arbor Connector Feasibility Study?

Step 1

- **Identify Needs:**
 - Accommodate growth
 - Maintain quality of life
- **Estimate Future Conditions / Changes Relative to Current:**
 - Development
 - Travel

Step 2

- **Identify Options to Address Needs:**
 - Service
 - Technology
- **Document Performance of Options Relative to Criteria**

Step 3

- **Evaluate Feasibility**
 - Physical – Do the benefits outweigh the costs?
 - Financial – Are sources of funding available?
 - Political – Support from residents, businesses, and stakeholders?
- **Recommendations for Further Action**

- **The study is scheduled to be complete by December 2010**
- **Preliminary findings and recommendations will be presented for public review in the fall of 2010**



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What are the needs?

May 2009 Ann Arbor Transportation Master Plan Update (TMPU)

- **Existing Traffic Congestion** – along a number of corridors including Fuller Road and State Street.
- **Anticipated Growth** - Between 2005 and 2035, Ann Arbor is forecast to gain 19,000 employees - a 15% increase.
- **Roadway System Constraints** –Significant roadway widening is not consistent with the goals of the TMPU.



- **Transit System Operations**
As traffic congestion increases, bus transit travel times can be expected to increase and reliability of service will diminish.



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What are the needs?

- The TMPU recommended **Signature Transit Corridors** - high capacity transit in the Plymouth-Fuller and State Street corridors - to provide opportunities for economic development without increasing the need for new roads



- The U of M North Campus Master Plan identifies a potential high capacity route connecting to Plymouth and/or Fuller



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What are the needs?

- **Transit Service Demand** – Between 2003 and 2008 ridership on AATA and U of M buses increased by 38% to over 12 million passenger trips annually. Increased transit capacity will be needed to accommodate growing demand.
- **Intercampus Transit Demand** – There are over 50,000 person trips per day between the North and Central Campus
- **Transportation Demand Management (TDM)** – A variety of TDM measures, including improved transit service, are needed to accommodate future travel demand.



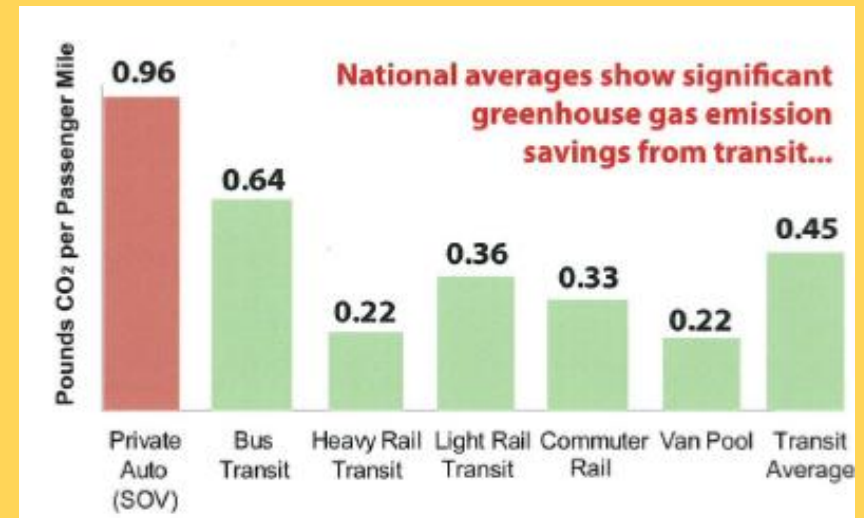


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- **Sustainability** – All of the project partners promote green transportation improvements.
- **U of M Office of Sustainability**, in cooperation with the Graham Environmental Sustainability Institute, is working to advance sustainability at the University by connecting operational efforts to research and learning opportunities

What are the needs?



Source: Public Transportation's Role in Responding to Climate Change, U.S. DOT, FTA, January 2010



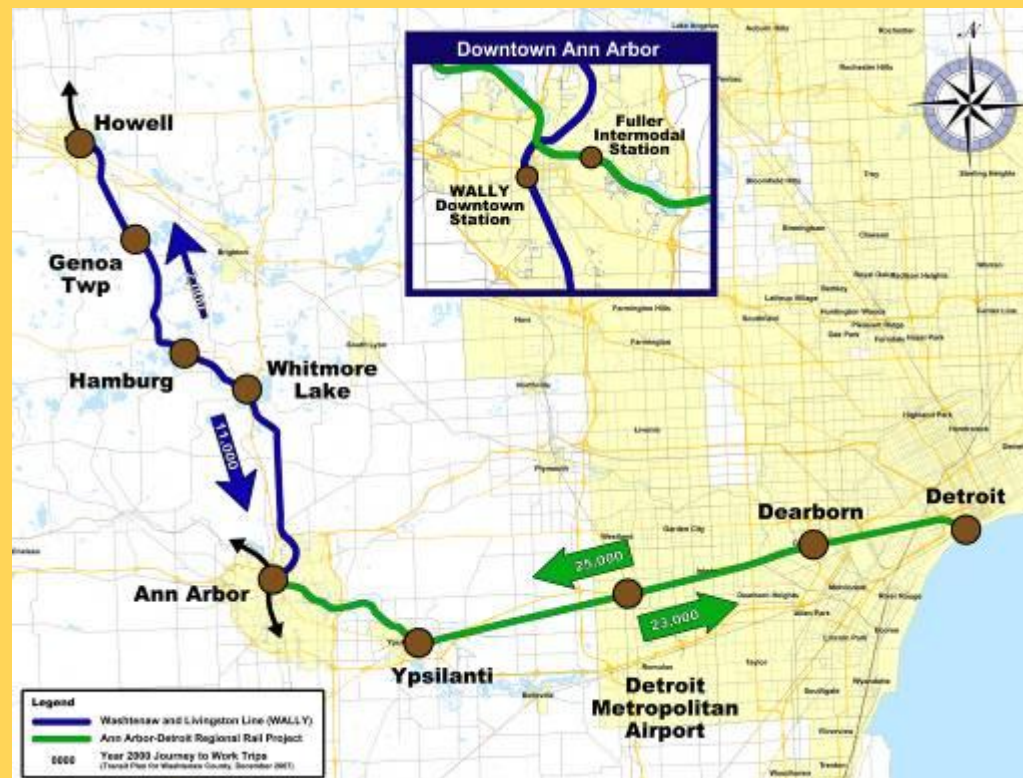


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What are the needs?

- **Planned Commuter Rail Service** – Implementation of the WALLY line and the Detroit to Ann Arbor commuter rail line will bring people into the city that will need local public transit service to reach their final destinations.

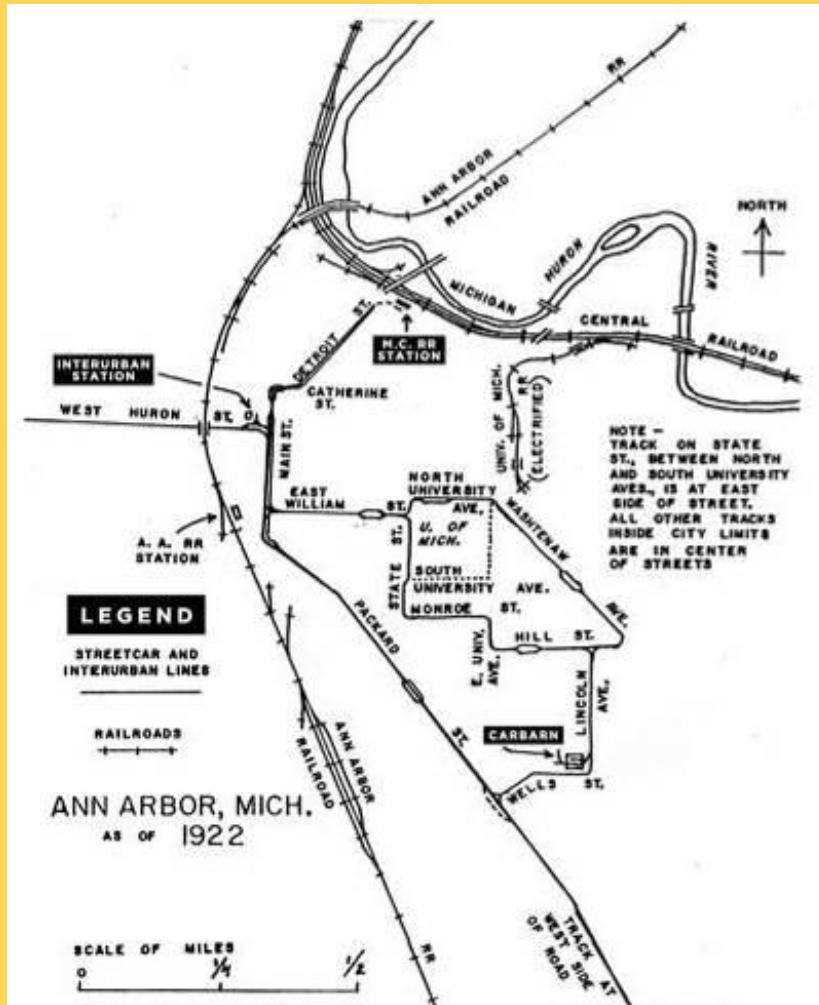




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Historic Streetcar



Electric streetcars ran in Ann Arbor from 1890 to 1925. From Main Street, cars followed Detroit Street down to the end of the line near the Michigan Central depot.



Photo Credit: Bentley Historical Library, University of Michigan



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What are the potential solutions?

Vehicle Technology

- Bus improvements
- Bus rapid transit
- Modern streetcar
- Light rail transit
- People mover

Service Concepts

- Hours
- Frequency
- Fare Collection

Route Changes/Enhancements

- New Routes:
 - Using Existing Streets
 - New Guideways
- Changes to Existing Routes to Support New Service

Stations/ Stops

- Multimodal Connections
- Locations
- Amenities



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Streetcars

- û Electric powered rail transit
- û Smaller vehicles – generally one-car trains with 115 passenger capacity
- û Operate in mixed flow – cars drive on the tracks
- û Simple stations
- û Frequent station stops
- û Less extensive construction
- û Modern streetcar operating in Portland
- û Other U.S. cities have streetcar systems that use vintage vehicles
 - Tampa, San Francisco, Kenosha, New Orleans

Little Rock, AR



Portland, OR



Tacoma, WA



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Light Rail Transit (LRT)

- û Electric powered rail transit
- û Generally operate in 1 to 3 car trains with 150 people per car
- û Operate in semi-exclusive right of way; cars drive across but not on the tracks
- û Stations generally ½ to 1 mile apart
- û Construction generally involves extensive reconstruction in urban environments
- û Operating in Minneapolis, Portland, Denver, Dallas, Pittsburgh, St. Louis, Charlotte, San Diego, Cleveland, Salt Lake City...

Minneapolis, MN



Charlotte, NC



Dallas, TX



Denver, CO





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Bus Rapid Transit (BRT)

- û Enhanced bus service which combines vehicles, stations, services, running ways and information technologies into an integrated transit system, generally with a strong image or identity
- û Treatments can range from simple to complex with a focus on convenience and travel time savings

Kansas City, MO



Cleveland, OH



Eugene, OR





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Monorail

- û Systems in Las Vegas, NV, Seattle, WA and Walt Disney World
- û Elevated guideway and stations
- û Electric power contained in elevated guideway
- û No conflicts with surface traffic

Las Vegas, NV

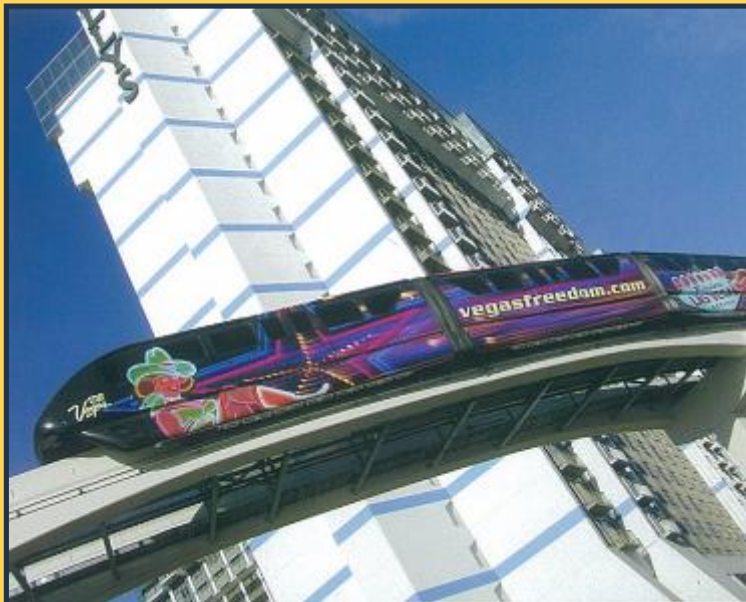


Photo Credit: "Sustainable Solutions", Bombardier Transportation Systems

Seattle, WA



Photo Credit: "My Kind of Transit, Rethinking Public Transportation in America", Darrin Nordahl, 2008



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AGT or PRT

- û **Automated Guideway Transit (AGT)** – a driverless system in which vehicles are automatically guided along an elevated “guideway”. Detroit People Mover is one example.
- û **Personal Rapid Transit (PRT)** – a type of AGT that uses small, driverless cars that do not stop at every station. Instead, they are designed to make a nonstop journey to the destination individual users have selected. The Morgantown PRT at West Virginia University is one example.

Morgantown, WV



Indianapolis, IN



Detroit, MI





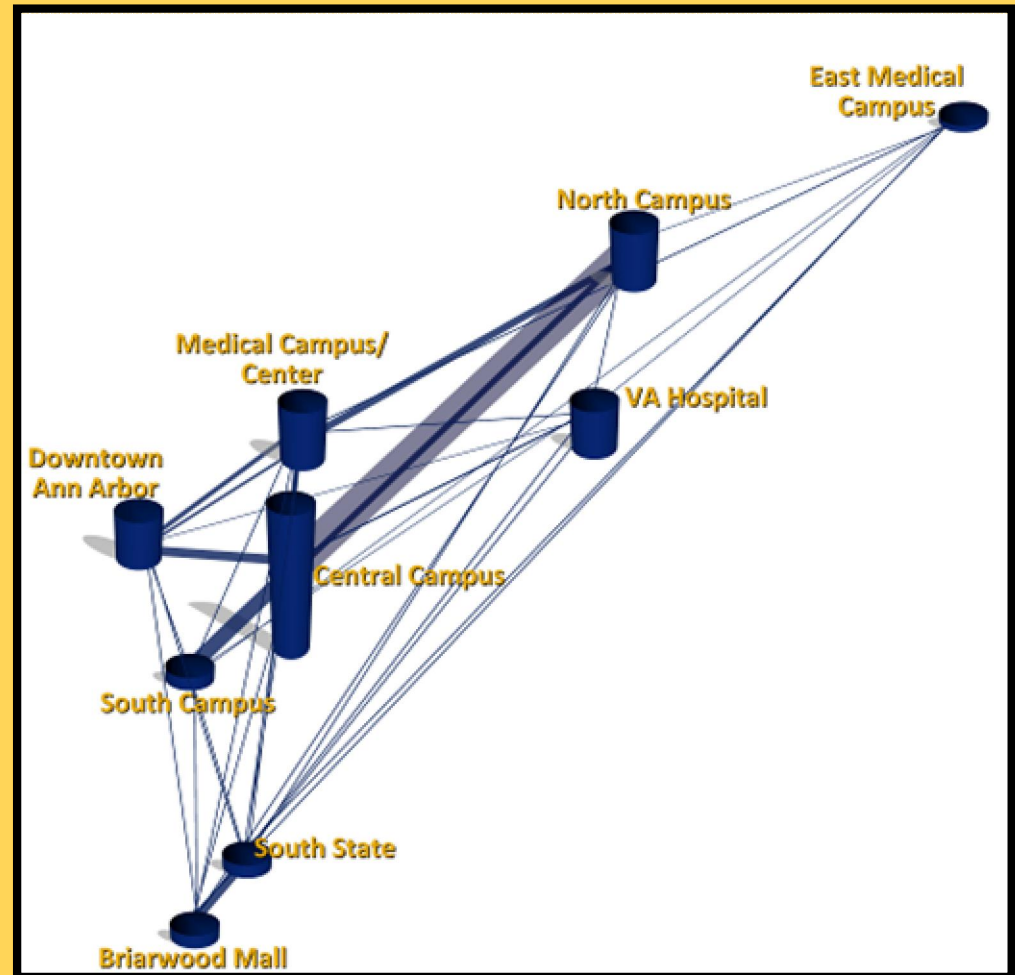
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Understanding Current Travel Patterns

Most back-and-forth travel:

- Central Campus-North Campus
- South Campus-Central Campus
- Downtown-Central Campus
- Briarwood Mall-South State





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Preliminary Findings

Technologies Supported by Current Travel Levels

| Activity Areas | Briarwood Mall | South Campus | Central Campus | Downtown | Medical Center | VA Hospital | North Campus | NCRC | East Campus Medical |
|---------------------|----------------|--------------|----------------|----------|----------------|-------------|---------------|------|---------------------|
| Briarwood Mall | | ● | ● | ● | ● | ● | ● | ● | ● |
| South Campus | ● | | ● ● ● | ● | ● | ● | ● | ● | ● |
| Central Campus | ● | ● ● ● | | ● ● ● | ● ● ● | ● | ● ● ● ● ● ● ● | ● | ● |
| Downtown | ● | ● | ● ● ● | | ● | ● | ● | ● | ● |
| Medical Center | ● | ● | ● ● ● | ● | | ● | ● | ● | ● |
| VA Hospital | ● | ● | ● | ● | ● | | ● | ● | ● |
| North Campus | ● | ● | ● ● ● ● ● ● ● | ● | ● | ● | | ● | ● |
| NCRC | ● | ● | ● | ● | ● | ● | ● | | ● |
| East Campus Medical | ● | ● | ● | ● | ● | ● | ● | ● | |

Legend

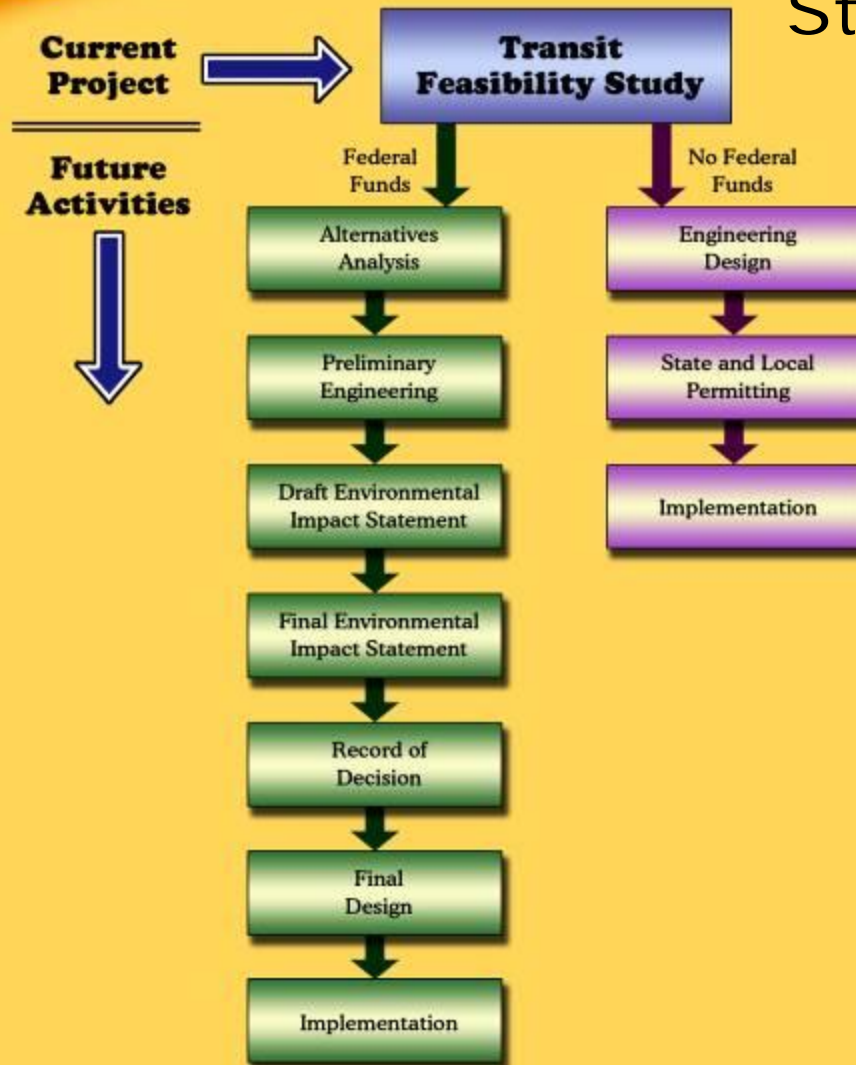
-  Standard Bus
-  Articulated Bus
-  Streetcar
-  2-Car Train (LRT)
-  3-Car Train (LRT)



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If community supports... Steps to Implementation



This feasibility study is the first of a number of studies required to implement an advanced transit system.

If feasible, more detailed design studies and additional community working sessions will be required.

Identification of funding sources is a critical step to implementation.



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