Regional Rail can reduce the number of freeway lanes needed for commuters in the peak period. Building on the service and reliability currently operating in the region, the Regional Transportation Council is supporting a 260-mile system of new seamless passenger rail lines to serve communities across the Dallas-Fort Worth region.

Developing this system will be key to keeping up with the expected growth in our region. Over the next 30 years, North Central Texas will see an influx of nearly three million people. This will put additional strain on an already congested transportation system, cause additional air quality concerns, and further challenge the region's transportation funding resources. Implementing a regional rail system is critical as population and congestion continue to grow.

The North Central Texas Council of Governments (NCTCOG) and its Regional Transportation Council (RTC) in partnership with Dallas Area Rapid Transit (DART), Denton County Transportation Authority (DCTA) and the Fort Worth Transportation Authority (FWTA) recently completed work on a comprehensive Regional Rail Corridor Study (RRCS). The Study, which began in May 2002, focused on nine passenger rail corridors throughout the Dallas-Fort Worth Metropolitan Area, as identified in Mobility 2025: The Metropolitan Transportation Plan, 2004 Update. The goal of the study was to provide data and recommendations for staging and implementing a seamless passenger rail system in the region. The ongoing Regional Transit Initiative (RTI) continues work to develop regional consensus on administrative structures necessary to implement the system. This report summarizes the findings of the Regional Rail Corridor Study and Regional Transit Initiative (RRCS/RTI).
Consensus Approach

Public involvement is a key component of the Regional Rail Corridor Study and Regional Transit Initiative projects. With ten committees, hundreds of volunteers, extensive public outreach, and strong support and participation from the existing transportation authorities – stakeholders and the public had many avenues to provide input to the process. The combined RRCS/RTI approach was structured to provide a "bottom up" approach to decision making. The detailed evaluation of transit needs throughout the rail corridors became the fundamental basis for the financial, institutional, and legislative discussion. Jurisdictional boundaries were set aside throughout the transit needs assessment and consideration for all level of needs, without reference to political boundaries, were included.

Vehicle Technologies

A variety of technology options were considered for the rail corridors throughout the study’s efforts. Early screening resulted in the study focusing on regional rail and light rail technologies. These are described in detail below. Because many of the routes under study are active freight rail lines, it is important to understand that some trains can be operated in conjunction with railroad freight trains and some cannot. Equipment that meets certain safety standards is considered to be compliant with the Federal Railroad Administration (FRA) regulations. Equipment that does not meet these standards is restricted from joint operation with freight railroad equipment, but compliant with light rail corridors.

Regional Rail Technology

Regional rail, sometimes known as commuter rail, is the same type of technology as the Trinity Railway Express currently operating between Dallas and Fort Worth. Regional rail trains are self propelled and consist of either Locomotive Hauled Consists (LHC) or Diesel Multiple Units (DMU). Both of these technologies normally utilize a diesel engine for power. LHC trains operated in the U.S. are compliant with the federal structural and safety standards. LHC use a separate locomotive. DMU trains are selfpropelled and the equipment may or may not be compliant with the federal standards. Either can be single-level or double-level seating, depending on the volume of passengers being accommodated.
Regional rail systems typically range from 20 to 100 miles in length. The number of station stops is fewer, with an average station spacing of 5 miles. Fewer stations allow maximum benefit from the up to 79 miles per hour (mph) maximum operating speed for regional rail equipment. Platforms at regional rail stations can be either low-level, requiring a step up to board, or high-level (level with the car floor height). While high platforms allow for faster and easier boarding, they are not compatible with the clearance requirements of freight train equipment. If used, high platforms require a separate track for freight train movements.

The pictures to the right display examples of regional rail vehicles. The Trinity Railway Express uses a regional rail type vehicle. RRCS corridor operations, where regional rail technology is recommended, would most likely include the use of one of these vehicular options as well.

**Light Rail Technology**

Light rail transit is the same type of technology as DART’s rail system. It features an overhead electric power source. Light rail systems typically range from 8 to 25 miles in length. The average station spacing is 1/2 to 2 miles. They have a maximum operating speed of 55 to 65 mph with fairly rapid acceleration rates. Light rail trains can be operated on city streets, at-grade, elevated, or in subway alignments. They cannot, however, operate concurrently within a freight railroad corridor as they are considered non-compliant vehicles by FRA standards. Station platforms can be of either low-level or high-level configuration.

**Non-Rail Elements**

A variety of options, other than rail, could be available to transit users throughout these corridors, including:

- Fixed Bus Service
- Demand Response Service
- Elderly-Disabled Service
- Express Service/Park and Ride
- Local Assistance Program

Although these services were not investigated in great detail throughout the RRCS effort, it is assumed that communities would receive a basic level of feeder bus service to the passenger rail stations. Some local communities expressed an interest in developing additional services and others voiced no interest in such service. The final decision on these services would be made by each local government.
Cost Estimates

The study's efforts included developing cost estimates for each rail corridor. Unit prices for the estimates were derived from several sources, including:

- Sample costs incurred in 2002 and 2003 for the Trinity Railway Express commuter rail program and construction of the most recent DART light rail program;
- Local costs from 2002 and 2003 for civil construction projects; and
- Documented costs for other commuter rail systems across the United States, such as costs for commuter rail vehicles, maintenance facilities, signaling, and communications.

Capital costs were developed for each of the following categories, based on observation of conditions and characteristics of each study corridor. Cost categories included sitework and urban design, structures, trackwork, stations, light rail electrification (where appropriate), signal systems, right-of-way (routine costs only, extensive purchase not included in estimates), utilities, roadway crossings, vehicles and other special conditions unique to each corridor. Operating and maintenance costs were based on actual cost percentages observed in the current operation of the Trinity Railway Express and DART light rail system.

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Regional Rail</th>
<th>Light Rail</th>
<th>Bus Rapid Transit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Union Pacific Mainline</td>
<td>$435</td>
<td>$1,452</td>
<td>$1,390</td>
</tr>
<tr>
<td>(Fort Worth to Dallas)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hulen/DFWIA Line</td>
<td>$365</td>
<td>N/A</td>
<td>$1,433</td>
</tr>
<tr>
<td>(Southwest Fort Worth to D/FW International Airport)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cleburne Line</td>
<td>$230</td>
<td>N/A</td>
<td>$952</td>
</tr>
<tr>
<td>(Fort Worth to Cleburne)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Denton Line</td>
<td>$239</td>
<td>$998</td>
<td>$834</td>
</tr>
<tr>
<td>(Denton to Carrollton)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>McKinney Mainline</td>
<td>$235</td>
<td>$728</td>
<td>$554</td>
</tr>
<tr>
<td>(Plano to McKinney)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frisco Line</td>
<td>$178</td>
<td>$794</td>
<td>N/A</td>
</tr>
<tr>
<td>(Carrollton to Frisco)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midlothian Line</td>
<td>$170</td>
<td>$743</td>
<td>$373</td>
</tr>
<tr>
<td>(Duncanville to Midlothian)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waxahachie Line</td>
<td>$266</td>
<td>$1,144</td>
<td>N/A</td>
</tr>
<tr>
<td>(Dallas to Waxahachie)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Ridership Forecasts

### 2030 Corridor Average Daily Rail Riders by Corridor

<table>
<thead>
<tr>
<th>Rail Corridor</th>
<th>Regional Rail</th>
<th>Light Rail</th>
<th>Bus Rapid Transit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Union Pacific Mainline</strong> <em>(Fort Worth to Dallas)</em></td>
<td>11,600</td>
<td>32,800</td>
<td>22,400</td>
</tr>
<tr>
<td><strong>Hulen/DFWIA Line</strong> <em>(Southwest Fort Worth to D/FW International Airport)</em></td>
<td>9,400</td>
<td>N/A</td>
<td>9,400</td>
</tr>
<tr>
<td><strong>Trinity Railway Express (west)</strong> <em>(Fort Worth to Dallas County Line)</em></td>
<td>8,300</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Cleburne Line</strong> <em>(Fort Worth to Cleburne)</em></td>
<td>5,000</td>
<td>N/A</td>
<td>7,300</td>
</tr>
<tr>
<td><strong>Trinity Railway Express (east)</strong> <em>(Tarrant County Line to Dallas)</em></td>
<td>9,800</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Denton Line</strong> <em>(Denton to Carrollton)</em></td>
<td>6,200</td>
<td>8,800</td>
<td>6,600</td>
</tr>
<tr>
<td><strong>McKinney Mainline</strong> <em>(Plano to McKinney)</em></td>
<td>9,600</td>
<td>10,300</td>
<td>8,400</td>
</tr>
<tr>
<td><strong>Frisco Line</strong> <em>(Carrollton to Frisco)</em></td>
<td>6,500</td>
<td>8,400</td>
<td>N/A</td>
</tr>
<tr>
<td><strong>Midlothian Line</strong> <em>(Duncanville to Midlothian)</em></td>
<td>3,200</td>
<td>8,000</td>
<td>5,100</td>
</tr>
<tr>
<td><strong>Waxahachie Line</strong> <em>(Dallas to Waxahachie)</em></td>
<td>4,000</td>
<td>10,500</td>
<td>N/A</td>
</tr>
</tbody>
</table>

The study included developing an estimated number of riders in each corridor. Critical to this was travel demand forecasting, which uses information such as roadway and transit networks along with population and employment data to calculate the expected demand for transit facilities. NCTCOG’s Dallas-Fort Worth Regional Travel Model (DFWRTM) was utilized to prepare year 2030 transit ridership forecasts for the Dallas-Fort Worth Metropolitan Area. Each transit alternative was evaluated under 2030 conditions, with varying station locations and operating assumptions. The overall results are reflected in the above table. The number shown represents the midpoint of the +/- 10% range reported during the study. If all lines were developed as regional rail technology, the total 2030 average daily use would total 73,600 riders.

However, ridership alone is not the sole determinant of what is recommended in each corridor. Other factors, such as costs and technology compatibility, must also be considered. Pages 8 and 9 show the various performance measures.
Recommendations

A combined review of rail performance and future capacity needs prompted the recommended phasing of corridors. Regional rail was recommended in all corridors, except the McKinney Corridor, where light rail transit was recommended dependent on compatibility with Dallas Area Rapid Transit. Near and long-term recommendations will help guide regional decision makers and transportation providers in the continued planning and eventual implementation of rail throughout North Central Texas.

Demand for Rail Service

<table>
<thead>
<tr>
<th>Corridor</th>
<th>Near-Term</th>
<th>Long-Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denton Line</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>McKinney Line</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Frisco Line</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Midlothian Line</td>
<td>Yes, Phased Service in Ellis County</td>
<td>Yes</td>
</tr>
<tr>
<td>Waxahachie Line</td>
<td>Yes, Phased Service in Ellis County</td>
<td>Yes</td>
</tr>
<tr>
<td>Union Pacific Mainline</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Hulen/DFW International Airport Line</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Cleburne Line</td>
<td>Yes, Phased Service South of Sycamore School Road</td>
<td>Yes</td>
</tr>
</tbody>
</table>
1. **Annualized Cost per Annual Rider** - Represents a balance of capital cost and the use of the system.

2. **Total Daily Ridership** - The average number of riders using the system on a daily basis.

3. **Estimated Annual Operating and Maintenance (O&M) Cost** - Systems with lower O&M costs are preferred over those with higher O&M costs.

4. **Estimated Capital Cost** - Systems with lower capital cost are preferred over those with higher capital cost.

5. **One-way Trip Time** - The total time, in minutes, that a train or bus takes to travel from the terminal station at one end of a route to the terminal station at the other end of the route.

6. **Local Authority and Funding** - The existence of a local transportation authority and the availability of funding reflect local support and are required for the system to be constructed and operated.

7. **Community Acceptance** - Reflects the degree to which the local communities accept or reject the proposed corridor improvements and transit system.

8. **Ease of Implementation** - A system that is easy to implement because right-of-way acquisition, environmental issues, station site locations, and other major elements of a transit system are easily accommodated or is known as more likely to be completed on schedule and within budget.

9. **Connectivity with Existing and Planned Transit Operations** - The compatibility of the proposed transit system with any existing or planned transit service. Technology that is compatible with connecting transit services may preclude the need for riders to transfer between modes rather than to remain on the same train or bus to, or near, their destination.

10. **Compatibility with Freight Railroad Operations** - The ability to operate the proposed service and technology with freight railroad operations. If the track is jointly used in railroad right-of-way, the transit service must use FRA compatible equipment. If the equipment is not compatible with the transit operation, it must use new, separate tracks. Transit operations that are compatible with freight railroad operations may be able to share railroad trackage and facilities which may result in savings in both capital and operating cost, as well as the implementation schedule for the proposed system.

11. **Serves Area of Unmet Mobility Need** - The ability of the proposed transit system to potentially serve unmet mobility needs, especially with respect to roadway capacity. The implementation of transit service will result in the removal of some of the traffic from the roadway, which will allow some of the unmet need to be filled. The more ridership the transit system attracts from roadways, the more the unmet need for capacity can be alleviated.

12. **Impact on Adjacent Highways and Air Quality** - The potential impact of a proposed transit service on adjacent highways expressed as an equivalent number of traffic lanes in each direction. The impact on air quality is assumed to be proportional to the number of equivalent traffic lanes. The higher the number of equivalent traffic lanes, the greater the benefit the transit system will have on highway congestion and air quality.

13. **Transit-Oriented Development Potential** - The ability of the proposed transit service to attract growth and development along the system, especially at station locations. Usually, systems with higher ridership attract growth and development at a faster pace than do systems with low ridership. Locations with a mix of uses and higher densities generate more ridership. See page 10.
### Summary Data and Recommendations

The corridors were scored based on a five point system with five indicating a good score and one indicating a bad score. The individual scores were then added to reflect a total score for each alternative. The table below summarizes the results of this process. An explanation of each factor is available on page 7.

<table>
<thead>
<tr>
<th>Corridors</th>
<th>Denton Line (Carrollton to Denton)</th>
<th>McKinney Line (Plano to McKinney Regional Rail)</th>
<th>McKinney Line (Plano to McKinney Intermediate Light Rail)</th>
<th>Frisco Line (Carrollton to Frisco)</th>
<th>Midlothian (Duncanville)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Criteria (Points)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annualized Cost Per Rider</td>
<td>$10.37 (5)</td>
<td>$6.75 (5)</td>
<td>$8.90 (4)</td>
<td>$7.50 (4)</td>
<td>$14.55 (4)</td>
</tr>
<tr>
<td>Total Daily Ridership</td>
<td>6,200 (4)</td>
<td>9,600 (4)</td>
<td>9,600 (4)</td>
<td>6,500 (3)</td>
<td>3,200 (2)</td>
</tr>
<tr>
<td>Estimated Annual Operating &amp;</td>
<td>$11.5 M (4)</td>
<td>$7.4 M (4)</td>
<td>$11 M (3)</td>
<td>$9.40 M (5)</td>
<td>$9.10 M (4)</td>
</tr>
<tr>
<td>Maintenance Cost (millions)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Estimated Capital Cost (millions)</td>
<td>$238.60 M (5)</td>
<td>$234.70 M (5)</td>
<td>$312.8 M (4)</td>
<td>$161.40 M (5)</td>
<td>$169.50 M (4)</td>
</tr>
<tr>
<td>One-Way Trip Time</td>
<td>39 minutes (5)</td>
<td>28 minutes (5)</td>
<td>33 minutes (4)</td>
<td>33 minutes (5)</td>
<td>32 minutes</td>
</tr>
<tr>
<td>Local Authority and Funding?</td>
<td>Yes - Denton County Transportation Authority (5)</td>
<td>No (1)</td>
<td>No (1)</td>
<td>No (1)</td>
<td>No (1)</td>
</tr>
<tr>
<td>Community Acceptance</td>
<td>Yes (5)</td>
<td>Yes (3)</td>
<td>Yes (3)</td>
<td>Yes (3)</td>
<td>Yes (3)</td>
</tr>
<tr>
<td>Ease of Implementation</td>
<td>Owned and controlled by DART and Denton County, making implementation relatively straight forward, but there is a bicycle/pedestrian trail in a portion of the corridor that will have to be relocated (4)</td>
<td>Owned and controlled by DART making implementation relatively straight forward (5)</td>
<td>Light rail requires separate tracks or Federal Railroad Administration approved time separation (4)</td>
<td>Must be negotiated with the Burlington Northern Santa Fe Railroad (4)</td>
<td>Must be negotiated with the Burlington Northern Santa Fe Railroad (4)</td>
</tr>
<tr>
<td>Connectivity With Existing and Planned Transit Operations</td>
<td>Use will require a transfer to the DART system at Carrollton in order to access other transit options in the region (3)</td>
<td>Use will require a transfer to the DART system at Plano in order to access other transit options in the region (2)</td>
<td>Allows for interlining with the DART system without any transfer required (5)</td>
<td>Use will require a transfer to the DART system at Carrollton in order to access other transit options in the region (4)</td>
<td>Use will require a transfer to the DART system at Carrollton in order to access other transit options in the region (4)</td>
</tr>
<tr>
<td>Compatible with Local Freight Operations?</td>
<td>Yes (5)</td>
<td>Yes (5)</td>
<td>No, unless time separated and Federal Railroad approved (2)</td>
<td>Yes (3)</td>
<td>Yes (4)</td>
</tr>
<tr>
<td>Severity of Roadway Capacity Deficiency in Parallel Corridor</td>
<td>Moderately severe (2)</td>
<td>Severe (5)</td>
<td>Severe (5)</td>
<td>Severe (4)</td>
<td>Not severe</td>
</tr>
<tr>
<td>Impact On Adjacent Highways, &amp; Air Quality</td>
<td>Equivalent to 1 lane of vehicular traffic in each direction (4)</td>
<td>Equivalent to 1 lane of vehicular traffic in each direction (4)</td>
<td>Equivalent to 1 lane of vehicular traffic in each direction (4)</td>
<td>Equivalent to 1 lane of vehicular traffic in each direction (4)</td>
<td>Equivalent to 1 lane of vehicular traffic in each direction (4)</td>
</tr>
<tr>
<td>Transit-Oriented Development Potential</td>
<td>Some (2)</td>
<td>Some (2)</td>
<td>Some (2)</td>
<td>Some (2)</td>
<td>Some, but needs to develop slot (2)</td>
</tr>
<tr>
<td>Total points</td>
<td>53</td>
<td>50</td>
<td>47</td>
<td>46</td>
<td>43</td>
</tr>
<tr>
<td>Line Waxahachie Line Union Pacific Mainline Hulen/DFWIA Line Cleburne Line (Dallas to Waxahachie) (Fort Worth to Dallas) (Southwest Fort Worth to D/FW International Airport) (Fort Worth to Cleburne)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Cost $17.98 (4)</td>
<td>$10.40 (5)</td>
<td>$10.62 (5)</td>
<td>$12.49 (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volume 4,000 (3)</td>
<td>11,600 (5)</td>
<td>9,400 (5)</td>
<td>5,000 (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capital Cost $13.80 M (5)</td>
<td>$15.6 M (3)</td>
<td>$21.2 M (2)</td>
<td>$15 M (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time 53 minutes (5)</td>
<td>47 minutes (3)</td>
<td>61 minutes (2)</td>
<td>52 minutes (3)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ISO No (1) Yes (3) No (1) No (1) Yes (3)</td>
<td>No (1) Yes, and the project has local authority involvement on the east &amp; west ends (4) No (1) No (1) Yes, and the project has local authority involvement on the northern end of the corridor (5)</td>
<td>Yes, and the project has local authority involvement on the western end of the corridor (5)</td>
<td>Yes, and the project has local authority involvement on the northern end of the corridor (5)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Negotiated with the Must be negotiated with the Must be negotiated with the Owned by DART and the Must be negotiated with the Union Pacific at Forest Avenue (2) Burlington Northern Santa Fe and Fort Worth and Western railroads (4) and the Union Pacific Railroad and Fort Worth will restrict capacity (1) Burlington Northern Santa Fe and Fort Worth and Western railroads (4) Burlington Northern Santa Fe and Fort Worth and Western railroads (4)</td>
<td>Must be negotiated with the Burlington Northern Santa Fe and Union Pacific Railroads and a flyover rail-to-rail connection will be required of the Union Pacific at Forest Avenue (2) Must be negotiated with the Union Pacific Railroad and Fort Worth will restrict capacity (1) Owned by DART and the Fort Worth and Western Railroad (4) Must be negotiated with the Burlington Northern Santa Fe and Fort Worth and Western railroads (4)</td>
<td>Must be negotiated with the Burlington Northern Santa Fe and Union Pacific Railroads and a flyover rail-to-rail connection will be required of the Union Pacific at Forest Avenue (2) Must be negotiated with the Union Pacific Railroad and Fort Worth will restrict capacity (1) Owned by DART and the Fort Worth and Western Railroad (4) Must be negotiated with the Burlington Northern Santa Fe and Fort Worth and Western railroads (4)</td>
<td>Must be negotiated with the Burlington Northern Santa Fe and Union Pacific Railroads and a flyover rail-to-rail connection will be required of the Union Pacific at Forest Avenue (2) Must be negotiated with the Union Pacific Railroad and Fort Worth will restrict capacity (1) Owned by DART and the Fort Worth and Western Railroad (4) Must be negotiated with the Burlington Northern Santa Fe and Fort Worth and Western railroads (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Require a transfer to the Would require a transfer to the Would require a transfer to the Allow for interlining with Trinity Railway Express, along with other connections with The T in Fort Worth and the Dallas/ Fort Worth International Airport on the eastern end (5) Would require a transfer to the DART system at Union Station for light rail access, but could allow for an interlined operation with the Trinity Railway Express (4) Would require a transfer to the DART system at Union Station for light rail access, but could allow for an interlined operation with the Trinity Railway Express (4)</td>
<td>DART system at Union Station for light rail access, but could allow for an interlined operation with the Trinity Railway Express (4)</td>
<td>DART system at Union Station for light rail access, but could allow for an interlined operation with the Trinity Railway Express (4)</td>
<td>DART system at Union Station for light rail access, but could allow for an interlined operation with the Trinity Railway Express (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes (4) Yes (4) Yes (5) Yes (4)</td>
<td>Yes (4) Yes (4) Yes (5) Yes (4)</td>
<td>Yes (4) Yes (4) Yes (5) Yes (4)</td>
<td>Yes (4) Yes (4) Yes (5) Yes (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact Not severe (1) Moderately severe (2) Moderately severe (2) Moderately severe (2)</td>
<td>Moderately severe (2)</td>
<td>Moderately severe (2)</td>
<td>Moderately severe (2)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impacts to 1 lane of vehicular traffic in each direction (4) Equivalent to 1 lane of vehicular traffic in each direction (4) Equivalent to 2 lanes of vehicular traffic in each direction (5) Equivalent to 1 lane of vehicular traffic in each direction (4)</td>
<td>Equivalent to 2 lanes of vehicular traffic in each direction (5)</td>
<td>Equivalent to 1 lane of vehicular traffic in each direction (4)</td>
<td>Equivalent to 1 lane of vehicular traffic in each direction (4)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Would most likely develop slowly (2) Some, but would most likely develop slowly (2) Transit-oriented development is likely to develop slowly in this corridor, like has been shown in the Trinity Railway</td>
<td>Some (3) Transit-oriented development is likely to develop slowly in this corridor, like has been shown in the Trinity Railway</td>
<td>Transit-oriented development is likely to develop slowly in this corridor, like has been shown in the Trinity Railway</td>
<td>Transit-oriented development is likely to develop slowly in this corridor, like has been shown in the Trinity Railway</td>
<td></td>
<td></td>
</tr>
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Transit-Oriented Development

As part of the study, station locations were identified only as general vicinities. The location, number, and spacing of stations impacts the accessibility and trip time for rail patrons, as well as development opportunities along the rail line. Development of certain station locations might be deferred until ridership increases or joint economic development opportunities arise. General station locations were identified through a highly interactive process involving the RRCS Policy/Technical Committees in determination of the following:

- **Where** stations should be located along alternative corridors to provide cost-effective implementation, optimal service, and provide the best fit with the surrounding community;

- **What functions** each station will serve (commuter park-and-ride, transit-oriented development, transfer center, neighborhood serving, destination, special generator, etc.); and,

- **What form** the station and its various elements should be to best serve transit patrons and the community. Identification and assessment of station location area included consideration of previous transportation planning efforts, trip-making characteristics of potential transit patrons, site visits, aerial photography, land use development, and community plans.

The RTC Sustainable Development Policy supports development patterns that reduce vehicle miles traveled, improve air quality, and minimize congestion. In support of this Policy, the study stressed the importance of walkable and bikeable communities, mixed uses, and connectivity to the surrounding communities.

NCTCOG currently offers the following types of assistance to local governments interested in transit-oriented development:

- Funding opportunities such as the Regional Transportation Council's Joint Venture Program.

- Advance planning and cost estimates through NCTCOG's Center of Development Excellence to help local governments develop the public infrastructure necessary to incent a private sector investment in transit-oriented development.

- Information about the use of public sector tools such as: Tax Increment Financing Districts (TIF), tax incentives for developers, Neighborhood Empowerment Zones, Public Improvement Districts (PID), Municipal Management Districts, Economic Development Grants/Loans and Land Banking.
A related NCTCOG program furthers ideas and concepts that can be helpful in the implementation of passenger rail throughout the region, and is described below.

**At-Grade Railroad Crossings**

In 2001, the Regional Transportation Council (RTC) initiated the Railroad Crossing Reliability Partnership Program, providing funds to local governments to make safety improvements at rail crossings throughout the region. Under this Program, the RTC selects projects that:

1. Maximize safety through capital improvements,
2. Link operations with nearby traffic controls and other corridor improvements,
3. Minimize noise and other environmental impacts near sensitive land uses, and
4. Enhance the reliability of antiquated equipment.

Forty-four crossings in the region have been funded, including seven rail crossing closures. With service that may run 60 or more trains per day through neighborhoods, rail-crossing safety should be a key focus in local implementation of RRCS study results.

**Quiet Zones/Train Horn Rules**

A new Federal Railroad Administration (FRA) rule requires that locomotive horns be sounded as a warning to highway users at public highway-rail crossings. Along with this rule comes the opportunity for communities to mitigate the effects of train horn noise by establishing “quiet zones.”

Measures Necessary to Establish a Quiet Zone:
1. Closure of road in each direction or
2. Four Quadrant gates or
3. One-way street with a gate across width or
4. Channelization with gates by use of raised medians

Local governments can initiate these quiet zones by working with the rail owner, FRA, and NCTCOG. For more information on quiet zones or goods movement, visit [www.nctcog.org/trans/goods_movement](http://www.nctcog.org/trans/goods_movement)
The Regional Transit Initiative (RTI) represents the overarching framework to provide a bottom-up process for the exchange of information and ideas among elected representatives, policy officials, and the general public regarding options for implementing a seamless transit system in North Central Texas. The Regional Rail Corridor Study was a part of this Initiative, wherein the specific technical needs were evaluated and identified. The RTI efforts included strategies for funding and implementing the RRCS recommendations. The RTI efforts included the following committee structure:

### Institutional Committee

There was strong interest among local officials throughout the region to develop a new institutional framework to implement the unfunded transit elements of the Metropolitan Transportation Plan. The new structure needed to match the service area, transit service to be provided, and method of representation. The Institutional Committee considered issues of implementation and structure within the current North Central Texas framework.

The existing transportation authority boundaries and potential new Regional Rail Authority area are shown in the map. A clear emphasis from the Regional Transit Initiative was the direction to maintain the existing transit authorities and continue to support their responsibilities, commitments and funding needs, while providing for services in the area outside the existing authorities. Since more people live outside the existing transportation authority boundaries than inside; interest and need are outstripping service delivery areas. The service boundaries of 20 years ago will not serve us well 20 years from now. Therefore, the goal of the RRCS/RTI effort was to implement regional rail so the three million new residents can see tomorrow’s rail stations today.

### Financial Committee

The Metropolitan Transportation Plan recommends 350 miles of rail facilities, nearly half of which is outside of the current service areas. This translates into nearly $3 billion of facilities that are potentially at risk if no funding or implementation structure is identified. In addition, nearly the same amount in annual operating and maintenance costs would be necessary. Therefore, the Financial Committee considered various funding needs and options. The revenue generated from potential sources would need to be approximately $150 million per year. It is important to realize these are estimates used for development of a process, not actual dollar commitments at this time.
Legislative Committee

With the culmination of twelve months of efforts focused on financial options, institutional structures and special sessions, the Legislative Committee worked with the local delegation to develop a legislative position and was successful in convincing the 79th Texas Legislature to create the Regional Transit System Review Committee. This Committee will bring together local leaders and State legislators to make recommendations on a plan for regional rail to the 80th Texas Legislature.

Conclusions and Next Steps

The information outlined within this publication was presented at the Regional Transit Summit in August 2004. Nearly 300 elected and appointed officials embraced the recommendations and a Statement of Principles for seamless public transit service throughout North Central Texas, including a potential structure for financing and governance. Their endorsement included a $3.5 billion, 260 mile regional rail blueprint that will require the equivalence of an increase in the sales tax by half a percentage point. Over the course of the study, hundreds of local leaders met more than 70 times to discuss how to create seamless public transit for Dallas, Collin, Denton, Ellis, Johnson and Tarrant counties. The regional leaders participating in the Summit endorsed the conclusions and recommendations of the RTI process by adopting a statement of principles.

The Statement of Principles calls for a new Regional Rail Authority, funded through additional sales tax capacity and allowing for a regionwide local option election.

Since the Transit Summit, NCTCOG staff has worked diligently to incorporate the Regional Rail Corridor Study recommendations into the region's long-range plan, Mobility 2025: The Metropolitan Transportation Plan, Amended April 2005. The Metropolitan Transportation Plan will guide the implementation of multimodal transportation improvements, policies, and programs in the Dallas-Fort Worth Area through the year 2025. The next steps leading to implementation of regional rail service include further refinement of the details of such a Regional Rail Authority, gathering support for necessary state legislative change, and developing the organizational structure to plan and implement the new Regional Rail Authority system. RTC legislative priorities to move forward include:

Regional Transportation Council Legislative Policy on Regional Transit
(December 2004)

- Pursue legislation that would provide local governments, transit entities, and the State a common base for taxable goods and services, including any goods and services newly taxed by the Legislature.
- Pursue legislation that would allow for the creation of a Regional Rail Authority for regional rail service in North Central Texas to support the Regional Transit Initiative Statement of Principles. There is a strong preference for additional sales tax capacity allowing for a regionwide local option election that could provide such revenues. If this effort is not successful, pursue legislation that would allow for a regional referendum on a regional rail system, and work with the Legislature to provide funding for the creation of a regional rail authority pending the outcome of the referendum.
- Pursue a partnership with education that will provide mutually beneficial funding for education and regional rail.
STATEMENT OF PRINCIPLES FOR THE IMPLEMENTATION OF
A REGIONAL RAIL SYSTEM IN NORTH CENTRAL TEXAS

WHEREAS, area leaders serving on committees of the North Central Texas Regional Transit Initiative
have met over the past year to address the region’s rail transit needs, rail funding requirements, and institutional
arrangements to meet the region’s rail transit needs as defined in Mobility 2025 – 2004 Update, the metropolitan
transportation plan for the Dallas-Fort Worth Metropolitan Area; and

WHEREAS, there is an agreement on a demonstrated need for the provision of regional rail services in
Collin, Dallas, Denton, Ellis, Johnson, and Tarrant Counties to address the projected increase in population,
employment, and congestion; and

WHEREAS, funding for regional rail services should be shared by all residents of the counties receiving
regional rail services; and

WHEREAS, regional rail services should offer the region's citizens a seamless system of rail
transit services.

NOW, THEREFORE, BE IT RESOLVED:

Section 1. A new revenue stream is required that would be dedicated to the development and
ongoing operation for regional rail service. There is a strong preference for additional
sales tax capacity allowing for a regionwide local option election that could provide
such revenues.

Section 2. Local governments, transit entities, and the State should have a common base for
taxable goods and services, including any goods and services newly taxed by
the Legislature.

Section 3. The continued growth of the existing transportation authorities, through
the addition of new cities, is encouraged.

Section 4. A new Regional Rail Authority (RRA) should be created to provide funding and
represent the area as shown on Exhibit 1.

Section 5. The new RRA would work cooperatively with the existing transportation authorities to
provide the public with regional rail services throughout the region.

Section 6. A seamless system of rail transit services should be offered throughout the region.

Section 7. The three existing transportation authorities will maintain their respective funding,
responsibilities, and commitments (Dallas Area Rapid Transit, Denton County
Transportation Authority, and the Fort Worth Transportation Authority).

Section 8. There should be a provision for representation for the three existing
transportation authorities in the governance of the new RRA to encourage continued
cooperation and coordination.

Section 9. There should be a mechanism (in the permissive legislation) for additional geographic
areas (counties) to join the new RRA.

Section 10. There should be cooperation throughout the region to maximize the amount of federal
funding for regional rail.

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Lee Jackson
Chairperson, Institutional Committee

David Cain
Chairperson, Legislative Committee
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What Is NCTCOG?

The North Central Texas Council of Governments (NCTCOG) is a voluntary association of local governments within the 16-county North Central Texas region. The agency was established in 1966 to assist local governments in planning for common needs, cooperating for mutual benefit, and coordinating for sound regional development. North Central Texas is a 16-county region with a population of 4.6 million and an area of approximately 12,800 square miles. NCTCOG has 231 member governments, including all 16 counties, 164 cities, 23 independent school districts, and 28 special districts.

Since 1974, NCTCOG has served as the Metropolitan Planning Organization (MPO) for transportation in the Dallas-Fort Worth Metropolitan Area. The Regional Transportation Council is the policy body for the Metropolitan Planning Organization. The Regional Transportation Council consists of 40 members, predominantly local elected officials, overseeing the regional transportation planning process. NCTCOG's Department of Transportation is responsible for support and staff assistance to the Regional Transportation Council and its technical committees, which comprise the MPO policy-making structure.

Regional Mobility Initiatives Issues

- Advanced Transportation Management, March 1996
- Air Quality, July 1996
- Traffic Congestion, October 1996
- Multimodal Solutions in the North Central Corridor, July 1997
- Toll Roads, February 1998
- Major Investment Studies, August 1998
- The Transportation Equity Act for the 21st Century, October 1998
- High Occupancy Vehicle (HOV) Lanes, December 1998
- Travel Demand Forecasting Procedures, June 1999
- Commuter Traffic, December 2000
- Pedestrian Transportation, August 2002
- Metropolitan Planning Organization, November 2002
- Rail Station Access, February 2003
- Traffic Congestion, October 2004

We would like your comments...

If you have questions or comments regarding the transportation and air quality programs of the North Central Texas Council of Governments and the Regional Transportation Council or need additional information, please contact the NCTCOG Transportation Department at (817) 695-9240, by fax at (817) 640-3028, via e-mail: transinfo@nctcog.org, or visit our website at www.nctcog.org/trans.

The contents of this report reflect the views of the authors who are responsible for the opinions, findings, and conclusions presented herein. The contents do not necessarily reflect the views or policies of the Federal Highway Administration, the Federal Transit Administration, or the Texas Department of Transportation. This document was prepared in cooperation with the Texas Department of Transportation and the U.S. Department of Transportation, Federal Highway Administration, and Federal Transit Administration.

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