Memorandum

DATE    August 21, 2009

TO     Members of the Transportation and Environment Committee:
       Linda L. Koop (Chair), Sheffie Kadane (Vice Chair), Jerry Allen, Carolyn R.
       Davis, Tennell Atkins, Angela Hunt, Pauline Medrano, Delia Jasso and Ron
       Natinsky, Vonciel Jones-Hill

SUBJECT Truck Lane Restrictions Pilot Study Briefing

Attached is the “Truck Lane Expansion Study” briefing that will be presented to

Please contact me if you need additional information.

[Signature]

Jill A. Jordan, P.E.
Assistant City Manager

C: The Honorable Mayor and Members of the City Council
   Mary K. Suhm, City Manager
   Thomas P. Perkins, Jr., City Attorney
   Deborah Watkins, City Secretary
   Craig Kinton, City Auditor
   Judge C. Victor Landrie, Administrative Judge
   Ryan S. Evans, First Assistant City Manager
   A.C. Gonzalez, Assistant City Manager
   Forest Turner, Assistant City Manager
   David Cook, Chief Financial Officer
   Jeanne Chipperfield, Director, Budget and Management Services
   Edward Scott, Director, Controller’s Office
   Helena Stevens-Thompson, Assistant to the City Manager – Council Office
   Rick Galceran, P.E., Director, Public Works and Transportation
   Theresa O’Donnell, Director, Development Services

“Dallas, The City That Works; Diverse, Vibrant and Progressive”
In 1997, the Texas Legislature passed a law allowing municipalities to request truck lane restrictions.

Updated in 2003, the law allows counties and TxDOT to designate such lane restrictions as well.

Designated lane restrictions are to be coordinated through Metropolitan Planning Organizations and with adjacent jurisdictions.
Is the general public accepting of the truck lane restrictions?

Yes.
80% of the general public supports expanding truck lane restrictions.

However, only 20% of impacted truck drivers support expanding the restrictions.
Did the rate of crashes decrease?

Yes. The number of accidents per 1 million vehicle miles traveled decreased.

### Accident Rate Summary for the I.H. 30 Corridor

<table>
<thead>
<tr>
<th>Phase</th>
<th>Duration</th>
<th>ADT</th>
<th>Number of Accidents</th>
<th>Accidents per Day</th>
<th>Accidents per 100,000 ADT</th>
<th>Accidents per 1,000,000 VMT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without truck lane restrictions, with standard enforcement</td>
<td>61 days</td>
<td>167,957</td>
<td>102</td>
<td>1.67</td>
<td>0.99</td>
<td>0.55</td>
</tr>
<tr>
<td>With truck lane restrictions, with standard enforcement</td>
<td>30 days</td>
<td>166,520</td>
<td>38</td>
<td>1.27</td>
<td>0.76</td>
<td>0.43</td>
</tr>
</tbody>
</table>

### Accident Rate Summary for the I.H. 20 Corridor

<table>
<thead>
<tr>
<th>Phase</th>
<th>Duration</th>
<th>ADT</th>
<th>Number of Accidents</th>
<th>Accidents per Day</th>
<th>Accidents per 100,000 ADT</th>
<th>Accidents per 1,000,000 VMT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without truck lane restrictions, with standard enforcement</td>
<td>60 days</td>
<td>142,910</td>
<td>19</td>
<td>0.32</td>
<td>0.22</td>
<td>0.18</td>
</tr>
<tr>
<td>With truck lane restrictions, with standard enforcement</td>
<td>27 days</td>
<td>152,494</td>
<td>2</td>
<td>0.07</td>
<td>0.05</td>
<td>0.04</td>
</tr>
</tbody>
</table>

Source: Police Department Accident Data
Do truck lane restrictions provide an air quality benefit?

Yes.
Trucks move from the left lane to the middle and right lanes.

The estimated NOx emission reduction on the I.H. 30 test section was 61.24 pounds per day based on increased traffic speeds.

Potential regional benefit of 211 pounds per day reduction in NOx was estimated per 100 miles of truck lane restrictions.
Do truck lane restrictions have a positive effect on recurring travel speeds?

Yes.
There were small, but measurable improvements in travel speeds by lane. (average of I.H. 20 and I.H. 30)

### Average Speed (MPH) of All Vehicles

<table>
<thead>
<tr>
<th>Lane</th>
<th>Without Truck Lane Restrictions, With Standard Enforcement</th>
<th>With Truck Lane Restrictions, With Standard Enforcement</th>
<th>Change in Average Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left</td>
<td>71.50</td>
<td>72.38</td>
<td>0.88</td>
</tr>
<tr>
<td>Middle</td>
<td>65.63</td>
<td>66.19</td>
<td>0.56</td>
</tr>
<tr>
<td>Right</td>
<td>60.75</td>
<td>61.25</td>
<td>0.50</td>
</tr>
</tbody>
</table>
Are truck lane restrictions effective without added enforcement?

Yes. Compliance rates were similar with and without additional enforcement.

<table>
<thead>
<tr>
<th>Location on I.H. 30</th>
<th>Direction</th>
<th>Phase 3</th>
<th>Phase 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Truck % in Left Lane</td>
<td>Compliance Rate</td>
<td>Truck % in Left Lane</td>
</tr>
<tr>
<td>Beach Street</td>
<td>EB</td>
<td>5%</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td>WB</td>
<td>13%</td>
<td>87%</td>
</tr>
<tr>
<td>Loop 820</td>
<td>EB</td>
<td>45%</td>
<td>55%</td>
</tr>
<tr>
<td></td>
<td>WB</td>
<td>4%</td>
<td>96%</td>
</tr>
<tr>
<td>Morrison</td>
<td>EB</td>
<td>23%</td>
<td>77%</td>
</tr>
<tr>
<td></td>
<td>WB</td>
<td>6%</td>
<td>94%</td>
</tr>
</tbody>
</table>

Phase 3 - With Restrictions and *Increased* Enforcement
Phase 4 - With Restrictions and *Standard* Enforcement
1. Truck Lane Restrictions are accepted by the public.

2. Truck Lane Restrictions have positive impacts on:
   - Crash rates
   - Air quality
   - Travel speed

3. Truck Lane Restrictions are obeyed by a majority of drivers with or without active enforcement.
Truck Lane Pilot Study
Summary of Study Recommendations

- Develop a regional system based on facilities:
  - With three or more lanes
  - With a moderate to high level of truck traffic
  - Without site or corridor specific barriers to implementation
  - That may connect to Statewide lane restrictions

- Work with State and local communities to:
  - Perform operational and site specific analysis on potential locations
  - Implement a complete system of truck lane restrictions
  - Document air quality credit for truck lane restrictions
Truck Lane Recommendations

Legend
- Recommended Near-term Truck Lane Restrictions
- Potential Long-term Intercity Truck Lane Restrictions

- Freeways
- Major Roadways
- Regional Arterials
- County Boundaries
- Metropolitan Planning Area Boundary
- Major Lakes

Recommendations Include:
- 3 + lanes
- Moderate to High Truck Volumes
- Continuous system

Further site specific study needed to evaluate:
- Segments with geometric constraints
- Current or pending reconstruction
- Capacity and congestion levels
- Public opinion

New facility locations indicate transportation needs and do not represent specific alignments
Corridors Proposed for Near Term Truck Lane Restriction Implementation

Legend
- Current Truck Lane Restrictions
- Recommended Near-Term Truck Lane Restrictions
- Roadways Not Part of Current Expansion Effort
- Metropolitan Planning Area Boundary
- County Boundary
- Major Lakes

Factors to Consider When Selecting Potential Truck Lane Restriction Corridors:
- Three or more lanes
- Moderate to high level of truck traffic
- No site or corridor specific barriers to implementation
- Connection to statewide Truck Lane Restrictions

City of Dallas

June 2009
Truck Lane Restriction Expansion
Air Quality Benefits

CMAQ Project Cost-Effectiveness Comparisons

- Truck Lane Restrictions: $1,389
- Inspection and Maintenance: $1,900
- Idle Reduction Projects: $2,195
- Speed Enforcement: $4,747
- Texas Emissions Reduction Plan: $10,000
- Bike Racks on Transit: $19,500
- Employee Trip Reduction: $22,700
- Parking Cash-Out Subsidy: $23,255
- NCT Clean School Bus Program: $42,018
- CNG Bus Replacement: $45,900
- New Transit Capital Investments: $66,400
- Signal Optimization: $66,700
- Taxicab Replacement*: $80,050
- Bicycle/Pedestrian Projects: $84,100
- Alternative Fueled Buses: $126,400

*At $3,000 Voucher Amount
Truck Lane Restriction Expansion

Preliminary Timeline

- Stakeholder Meeting → February 11, 2009
- Mobility Plan Adopted by RTC → April 9, 2009
- Public Hearings
  - Ellis County → August 10, 2009
  - Tarrant County → August 11, 2009
  - Dallas County → August 12, 2009
- TxDOT Review → August/September 2009
- TxDOT Minute Order & Approval → October 2009
- Implementation → Fall 2009 - Spring 2010
- Opening Day → Spring 2010 (Ozone Season)
Truck Lane Restriction Expansion

For more information:

Rachel Wiggins, P.E.
Program Manager
rwiggins@nctcog.org
(817) 704-2502

Becky Karasko
Senior Transportation Planner
rkarasko@nctcog.org
(817) 695-9258

www.nctcog.org/trans/goods