PERFORMANCE MEASURES: ROADWAY SAFETY AND TRANSIT ASSET MANAGEMENT

Regional Transportation Council

Natalie Bettger
North Central Texas Council of Governments
Action Item
December 14, 2017
Background

Federal legislation specifies quantitative performance measures that must be tracked and reported annually.

Today’s presentation requests action for two performance areas:
- Highway Safety Improvement Program (PM1)
- Transit Asset Management

Two additional performance areas will be presented in Spring 2018:
- Infrastructure Condition (PM2)
- System Performance/Freight/Congestion Mitigation and Air Quality (PM3)

Proposed targets were prepared in coordination with the State and regional partners.
**NCTCOG Safety Target Recommendations**

<table>
<thead>
<tr>
<th>Safety Performance Targets</th>
<th>TxDOT 2018 Targets</th>
<th>NCTCOG 2018 Targets</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No. of Fatalities</strong></td>
<td>3,704</td>
<td>665</td>
</tr>
<tr>
<td><strong>Fatality Rate</strong></td>
<td>1.432</td>
<td>0.96</td>
</tr>
<tr>
<td><strong>No. of Serious Injuries</strong></td>
<td>17,565</td>
<td>3,612</td>
</tr>
<tr>
<td><strong>Serious Injury Rate</strong></td>
<td>6.74</td>
<td>5.18</td>
</tr>
<tr>
<td><strong>No. of Non-motorized Fatalities and Serious Injuries</strong></td>
<td>2,151</td>
<td>560</td>
</tr>
</tbody>
</table>

Targets are based on five-year averages and will be revisited annually.

Two percent reduction achieved by the year 2022.

Regional Safety Position: Even one death on the transportation system is unacceptable. Staff will work with our partners to develop projects, programs, and policies that assist in eliminating serious injuries and fatalities across all modes of travel.
<table>
<thead>
<tr>
<th>NCTCOG Programs and Projects</th>
<th>TxDOT Strategic Highway Safety Plan Emphasis Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Distracted Driving</td>
</tr>
<tr>
<td>Driver Behavior Social Marketing Campaign</td>
<td>X</td>
</tr>
<tr>
<td>Inter. Safety Imp. Plan (ISIP)</td>
<td></td>
</tr>
<tr>
<td>Traffic Signal Retiming Prog.</td>
<td></td>
</tr>
<tr>
<td>Traffic Signal/Intersection Improvement Prog.</td>
<td></td>
</tr>
<tr>
<td>WWD Mitigation Prog.</td>
<td></td>
</tr>
<tr>
<td>Traffic Signal Cloud Data</td>
<td>X</td>
</tr>
<tr>
<td>Look Out Texans</td>
<td></td>
</tr>
<tr>
<td>Reg. Pedestrian Safety Plan</td>
<td></td>
</tr>
<tr>
<td>Technical Training/Workshops</td>
<td>X</td>
</tr>
<tr>
<td>Safety Spot Improvement Prog.</td>
<td></td>
</tr>
<tr>
<td>Trans. Alternative Funding</td>
<td></td>
</tr>
<tr>
<td>Emerging Technology Investment Prog.</td>
<td>X</td>
</tr>
<tr>
<td>Freeway Management and HOV Enforcement Prog.</td>
<td>X</td>
</tr>
</tbody>
</table>
Transit Asset Management

Images: DART, DCTA, FWTA, and NCTCOG
## Proposed Regional Targets for 2018

<table>
<thead>
<tr>
<th>Asset Category</th>
<th>Target</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rolling Stock (transit vehicles)</td>
<td>0%</td>
<td>Vehicles that meet or exceed the industry standard, defined as the Federal Transit Administration’s Default Useful Life Benchmark</td>
</tr>
<tr>
<td>Infrastructure (rail track)</td>
<td>0%</td>
<td>Rail track segments with performance restrictions</td>
</tr>
<tr>
<td>Equipment (transit support vehicles)</td>
<td>0%</td>
<td>Vehicles that meet or exceed the industry standard, defined as the Federal Transit Administration’s Default Useful Life Benchmark</td>
</tr>
<tr>
<td>Facilities (buildings, stations, park and rides)</td>
<td>0%</td>
<td>Transit facilities rated below “Adequate” (3.0) on the industry standard Transit Economic Requirements Model (TERM) scale.</td>
</tr>
</tbody>
</table>
## Timeline

<table>
<thead>
<tr>
<th>Action</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>STTC Information</td>
<td>October 27, 2017</td>
</tr>
<tr>
<td>RTC Information</td>
<td>November 9, 2017</td>
</tr>
<tr>
<td>Public Meetings</td>
<td>November 2017</td>
</tr>
<tr>
<td>STTC Action</td>
<td>December 8, 2017</td>
</tr>
<tr>
<td>RTC Action</td>
<td>December 14, 2017</td>
</tr>
<tr>
<td>Target-Setting Deadline: Transit Asset Management</td>
<td>December 27, 2017</td>
</tr>
<tr>
<td>Target-Setting Deadline: Roadway Safety</td>
<td>February 27, 2018</td>
</tr>
</tbody>
</table>
Requested Action

Approval of regional targets for roadway safety and transit asset management as shown.

Direction to continue coordination with transit providers to standardize regional transit asset management approach.

Approval of aspirational goals for roadway safety.

“Even one death on the transportation system is unacceptable. Staff will work with our partners to develop projects, programs, and policies that assist in eliminating serious injuries and fatalities across all modes of travel.”
Contact

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RTC SUCCESS

$28 Billion in Construction Since the Year 2000

Leading State in Transportation Delivery in Partnership with TxDOT and NTTA

Successful Mobility Outcomes (Air Quality, Reliability and Safety)

Dallas-Fort Worth's congestion is offset with transportation investments.

Sources: TomTom Traffic Index 2013, 2014, 2015 and 2016 Data; North Central Texas Council of Governments
Percentage of 100 Most Congested Corridors in DFW Region

Source: Texas' Most Congested Roadways, Texas A&M Transportation Institute
SUPPLY/DEMAND RELATIONSHIP OF TRANSPORTATION REVENUES AND NEEDS

CONGRESS

TEXAS LEGISLATURE

FUNDING

NEEDS

VIEWPOINTS

RTC CONSENSUS

LAWS and REGULATORY

MOBILITY DIRECTION
RE-ENGAGE STATE LEGISLATURE

WORK WITH CONGRESS

1. Why don’t we collect revenue smarter?
2. Why is Texas sending money to other states?
3. Why is Texas being short changed using old formulas?
4. Why isn’t everyone paying taxes?
5. Why can’t we pilot test the new federal program, especially since we are one of a few donor states?
6. Why don’t we collect revenues smarter?
7. Why isn’t everyone paying taxes?
8. Why can’t TxDOT borrow funds when cost of construction is greater than the cost of money?
9. Why can’t TxDOT use the credit rating of Texas and pay lower interest?
10. Why did the legislature reduce TxDOT’s construction revenues by changing TxDOT interest payments?
11. Why can’t the legislature give TxDOT more reliable authority on new revenue sources?

12. Why does the legislature restrict transit choices that lower the need for freeway capacity, toll managed lanes and toll road lanes?

13. Why does Texas let tax dollars leak to neighboring states for entertainment choices?

14. Why does Texas resist local option revenue generation?

15. Why can’t the legislature support new institutional structures to deliver next generation technology, rail, people mover and transportation reward programs?
ACTION

Approve Legislative Program Advancing 15 or so Revenue Ideas
Federal Legislative Update

Fiscal Year 2018 Appropriations Continuing Resolution
  ◦ Extended through December 22
  ◦ Continues FY17 Funding Levels

Fiscal Year 2018 Appropriations
  ◦ House Passed a FY18 Bill (H.R. 3353)
  ◦ Senate Committee Passed a FY18 Bill (S. 1655)

Tax Bill Negotiations
  ◦ House and Senate each Passed a Tax Bill, Conference Committee Negotiations Ongoing
## Fiscal Year 2018 Appropriations

**SENATE APPROPRIATIONS**
- Provides USDOT with $1.5B more funding than 2017
- Restores TIGER grants ($550M)
- Funds transit Capital Investment Grants (CIG) program
- No funds for Automated Vehicle (AV) research

**HOUSE APPROPRIATIONS**
- Provides USDOT with $1.1B less funding than 2017
- Cuts all funding for TIGER
- Cuts to transit CIG program
- $100 million for AV research
- $800M Highway contract authority rescission, Woodall Amendment
Highway Authority Rescission

Woodall Amendment

- Approved and Included in House Bill in September
- Strikes the language that prevents the current highway rescission from applying to safety programs and to sub-allocated Surface Transportation Block Grant Program (STBG) funds
- Strikes the proportionality clause
- Allows states more flexibility in implementing the $800 million rescission
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www.nctcog.org/trans/legislative
Based 2015 8-Hour Ozone NAAQS (≤70 ppb)

Exceedance Levels
- Orange (71-75 ppb)
- Orange (76-85 ppb)
- Red (86-105 ppb)
- Purple (106+ ppb)

Exceedance Level indicates daily maximum eight-hour average ozone concentration. Exceedance Levels are based on Air Quality Index (AQI) thresholds established by the EPA for the revised ozone standard of 70 ppb.

*Data not certified by TCEQ
Source: TCEQ, http://www.tceq.state.tx.us/cgi-bin/compliance/monops/8hr_monthly.pl
ppb = parts per billion
Design Value parts per billion (ppb)\(^1\)

1 Attainment Goal - According to the US EPA National Ambient Air Quality Standards, attainment is reached when, at each monitor, the Design Value (three-year average of the annual fourth-highest daily maximum eight-hour average ozone concentration) is equal to or less than 70 parts per billion (ppb).

\(^{\text{a}}\) Data not certified by TCEQ

<table>
<thead>
<tr>
<th>Year</th>
<th>Design Value (ppb)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015</td>
<td>≤ 70 ppb (TBD; Marginal by 2021)</td>
</tr>
<tr>
<td>2008</td>
<td>≤ 75 ppb(^1) (by 2017)</td>
</tr>
<tr>
<td>1997</td>
<td>&lt; 85 ppb (Revoked)</td>
</tr>
</tbody>
</table>

Source: NCTCOG TR Dept
MONITOR EXCEEDANCES

2008 8-Hour Ozone NAAQS (≤75 ppb)

Not a full year of data. Current as of 11/27/2018
MONITOR EXCEEDANCES

2015 8-Hour Ozone NAAQS (≤70 ppb)

Legend
- Metropolitan Planning Area
- 2015-2017 Design Value (ppb)*
  - 0 - 54 ppb
  - 55 - 70 ppb
  - 71 - 85 ppb

### 2015 8-HOUR OZONE NAAQS

#### Air Quality Designations for the 2015 NAAQS for Ozone

**November 16, 2017:**
EPA designated 2,646 counties as Attainment/Unclassifiable and three counties as Unclassifiable.
*(Note: Hood and Hunt Counties were not included in this list)*

**January 16, 2018:**
Final Rule Effective Date

**TBD:**
Final Rule Designating Nonattainment Counties

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LOOKING FORWARD

Monitoring Next Steps Associated to the Region’s Design Value being Higher than the 75 ppb Standard

Monitoring EPA’s Final Designations and Associated Rules to the 70 ppb Standard

Conducting a Transportation Conformity Analysis on Mobility 2045

Enhancing the Regional Communications Plan

Continuing to Develop and Implement Mobile Source Emission Reduction Programs

Composing Letter to TCEQ on NO$_x$ and VOC Ratios
REFERENCES

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www.nctcog.org/trans/air
Mobility 2045 Update

Regional Transportation Council

December 14, 2017
Mobility Plan Development Process

Maximize Existing System
- Infrastructure Maintenance
  - Maintain & Operate Existing Facilities
  - Bridge Replacements
- Management and Operations
  - Improve Efficiency & Remove Trips from System
  - Traffic Signals and Bicycle & Pedestrian Improvements
- Growth, Development, and Land Use Strategies
  - More Efficient Land Use & Transportation Balance

Strategic Infrastructure Investment
- Rail and Bus
  - Induce Switch to Transit
  - Transit Capacity
- HOV/Managed Lanes
  - Increase Auto Occupancy
- Freeways/Tollways and Arterials
  - Additional Vehicle Capacity
# Mobility 2045 Schedule

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>DRAFT Projects to RTC</td>
<td>December 14</td>
</tr>
<tr>
<td>DRAFT Programs and Policies to RTC</td>
<td>January 11</td>
</tr>
<tr>
<td>DRAFT Final Plan – RTC Workshop</td>
<td>February 8</td>
</tr>
<tr>
<td>RTC Action – Take DRAFT Plan to Public</td>
<td>March 8</td>
</tr>
<tr>
<td>Official 60-Day Comment Period Begins</td>
<td>April 9</td>
</tr>
<tr>
<td>Mobility 2045 – STTC Action</td>
<td>May 25</td>
</tr>
<tr>
<td>Mobility 2045 – RTC Action</td>
<td>June 14</td>
</tr>
</tbody>
</table>
Major Project Recommendations
Process Overview

Builds Upon Mobility 2040 Process
Consistent with HB 20 Process
Enhanced Criteria and Analysis
All Tools Available
Consistent with MAP-21 and FAST Act Goals
Continuous, Coordinated, and Comprehensive Process
Asset Optimization Recommendations

Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
DRAFT Transit Corridor Projects

Rail
1 - Cotton Belt
2 - Cotton Belt East Extension
3 - Downtown Dallas 2nd Alignment (D2)
4 - Dallas Streetcar
5 - A-train Extension
6 - Frisco Line
7 - Mansfield Line
8 - McKinney Line
9 - Midlothian Line
10 - Green Line Extension
11 - Cleburne Line
12 - Southwest TEX Rail
13 - Scyene Line
14 - Waxahachie Line

High-Intensity Bus
15 - IH 35W Express
16 - IH 30 Express
17 - Spring Creek Parkway

Dallas CBD
Fort Worth CBD

Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
Major Arterial Recommendations

Capacity Improvements

Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
Arterial System Needs Assessment

Change in Population Density
Change in Employment Density
Arterial Spacing
Congestion on Arterials
Congestion on All Facilities
Arterial Connectivity
Existing Arterial Network Deficiency Areas

Shaded areas are not project recommendations. These areas have population/employment growth, congestion, and deficiencies in the existing arterial network that may warrant further study for arterial improvements. Higher scores depict areas of greater arterial need. Maximum possible score is 10.
Illustrative roadway corridors indicate an identified transportation need and do not represent recommendations or specific alignments. Recommendations may be developed for future MTPs through feasibility analyses, thoroughfare plans, and environmental studies.
Major Roadway Recommendations

- New or Additional Freeway Capacity
- Additional Freeway Capacity and New Tolled Managed Lanes
- New or Additional Managed Lane Capacity
- New or Additional Toll Road Capacity
- Staged Facility (Frontage Roads)

DRAFT

Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.
Questions

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www.nctcog.org/mobility2045
<table>
<thead>
<tr>
<th>Public Sector</th>
<th>Public Sector Through Private Sector Contract</th>
<th>Private Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>For Hire Taxi</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Transportation Network Company/Automated</td>
<td>✓</td>
<td>Uber, Lyft</td>
</tr>
<tr>
<td>Bicycle Share</td>
<td>✓</td>
<td>Bcycle, LimeBike, etc.</td>
</tr>
<tr>
<td>Car Share/Automated</td>
<td>✓</td>
<td>Zipcar</td>
</tr>
<tr>
<td>On-Demand Network Shared-Ride</td>
<td></td>
<td>Arlington</td>
</tr>
<tr>
<td>Elderly and Disabled</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Buses</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>“Guaranteed Transit”</td>
<td></td>
<td>RTC Pilot (IH 30, IH 35W)</td>
</tr>
<tr>
<td>Air Taxi</td>
<td></td>
<td>Uber Elevate</td>
</tr>
</tbody>
</table>
### TECHNOLOGY AND PRIVATE SECTOR

#### TRANSIT REVOLUTION: WHO AND HOW (Cont.)

<table>
<thead>
<tr>
<th></th>
<th>Public Sector</th>
<th>Public Sector Through Private Sector Contact</th>
<th>Private Sector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rail</td>
<td>✔️</td>
<td></td>
<td></td>
</tr>
<tr>
<td>People Mover (People and Goods)</td>
<td>?</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>High-Speed Rail/Mag. Lev.</td>
<td>?</td>
<td>?</td>
<td>✔️</td>
</tr>
</tbody>
</table>

GoPass, the mobile ticketing app for DART, DCTA, and FWTA, will be upgraded in the near future to include access to most of these services through a single app, called GoPass 2.0.
ARLINGTON’S INSTITUTIONAL COMMITMENT

Test Track @ GM

Three Station High-Speed Rail (Plan, EIS)  
February 1, 2018

People Mover to CentrePort and DFW  
February 1, 2018
Demand Response RIDESHARE

Addresses mobility needs through the use of a dynamic micro-transportation system with no fixed schedules, no fixed routes and an infinite number of on-demand stops.
How Does It Work?

On-demand
Passengers book using a smartphone app

Convenient
Passengers are picked up within minutes at a nearby corner – a “virtual bus stop”

Shared
Passengers are seamlessly matched with others heading in the same direction

Fully Dynamic
Vehicle routes and schedules are updated in real time

City of Arlington
RISE IN FRAUDULENT TEMPORARY VEHICLE REGISTRATION TAGS

Regional Transportation Council
December 14, 2017

Chris Klaus
Sr. Program Manager
SINGLE STICKER HISTORY

Inspection Certificate
Separate windshield inspection certificate used prior to March 2015
Counterfeit certificates and fraudulent inspections proliferated

House Bill 2305
Fully implemented March 2016
Eliminated inspection certificate
Tied inspection to registration

Effects
Enhanced motorist convenience
Elimination of counterfeit inspection certificate fraud
Surge in counterfeit and improper temp tags
TEMPORARY TAG EXAMPLES

**Texas Buyer**

- **Tag Number:** 42F8851
- **Expiration:** 07-18-2008
- **Make:** 1999 Dodge
- **VIN:** 1B7MC3362XJ633176
- **Seller:** Garza Used Cars

**Texas Dealer**

- **Tag Number:** 14L9590
- **Expiration:** 07-02-2008
- **Make:** 1999 Ford
- **VIN:** 1FAPP42X8XF207434
- **Owner:** Garza Used Cars

**Texas Buyer - Internet**

- **Tag Number:** 80H7277
- **Expiration:**
- **VIN:**
- **Seller:** Garza Used Cars

**Texas Dealer**

- **Tag Number:** 12M9737
- **Expiration:** 07-12-2008
- **Make:** Authorized Agent Tag
- **Purpose:** Demonstration

**Texas 30 Day Permit**

- **Tag Number:** 80H7277
- **Expiration:** 04-30-2016
- **Make:** 2008 Honda
- **VIN:** 1JDLC49C3489237
- **Issued By:** Tarrant County
Enforcement Challenges
Large volume of temporary tags
Many types of tags with different layouts/content

Criminal Enterprises Profit from Fraudulent Temp Tags
Organized crime involvement
Sold online, at flea markets and other locations
Leads from on-road enforcement praised by federal law enforcement in pursuit of serious crimes

Funding Issues
Local Initiatives Projects (LIP) allows funding for on-road enforcement of temp tag crimes
Veto of LIP funding for FY 2018-2019 has led to cease in on-road enforcement efforts
IMPACTS

Air Quality
Vehicles circumventing emissions inspection requirements impede region’s ozone attainment efforts

Safety
Vehicles that cannot pass annual safety inspection pose a danger to all

Financial
Tolling authority unable to collect for use of facilities
Vehicle inspection and repair facilities experience loss of revenue
State and local jurisdictions lose revenue from lack of registration and inspection fees

Source: NCTCOG
State Highway Fund $50.75
Other State Fees $8.25
County Fees $16
Total Loss $75
Analysis
Quantify problem
Investigate other states

Law Enforcement Training
Academy training
Individual agency training
Visual training aids for law enforcement
Restore Funding

Legislative Action
Explore types of tags needed
Standardize tag appearance
Add security features
Enhance penalties

Source: NCTCOG
“THIS TRUCK CANNOT GO FASTER THAN 55

WORN SHOCKS
BALD TIRES
WORN BRAKES

GO SLOW!”
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