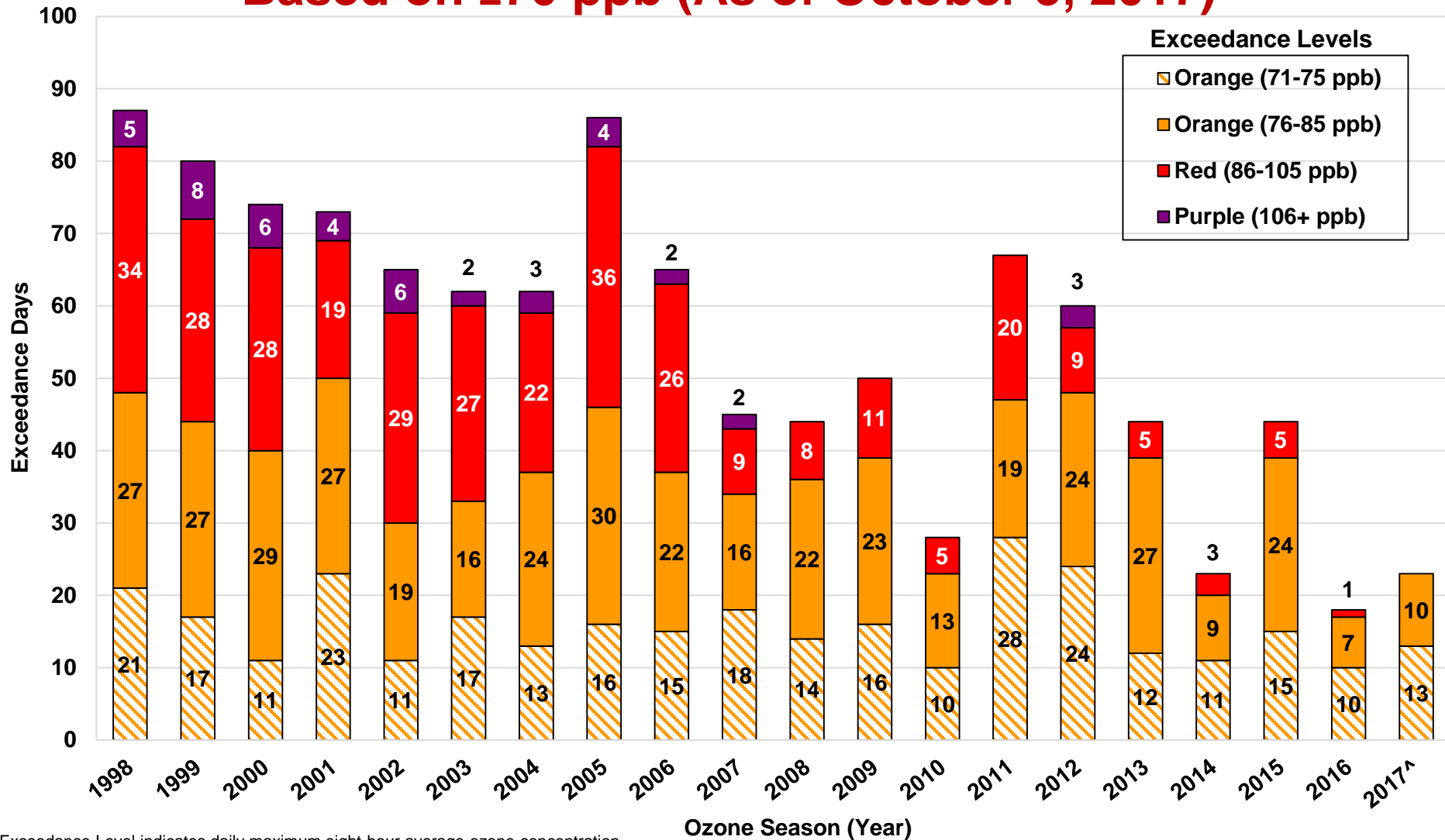



EIGHT-HOUR NAAQS FOR OZONE HISTORICAL TRENDS

Based on ≤ 70 ppb (As of October 5, 2017)



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.

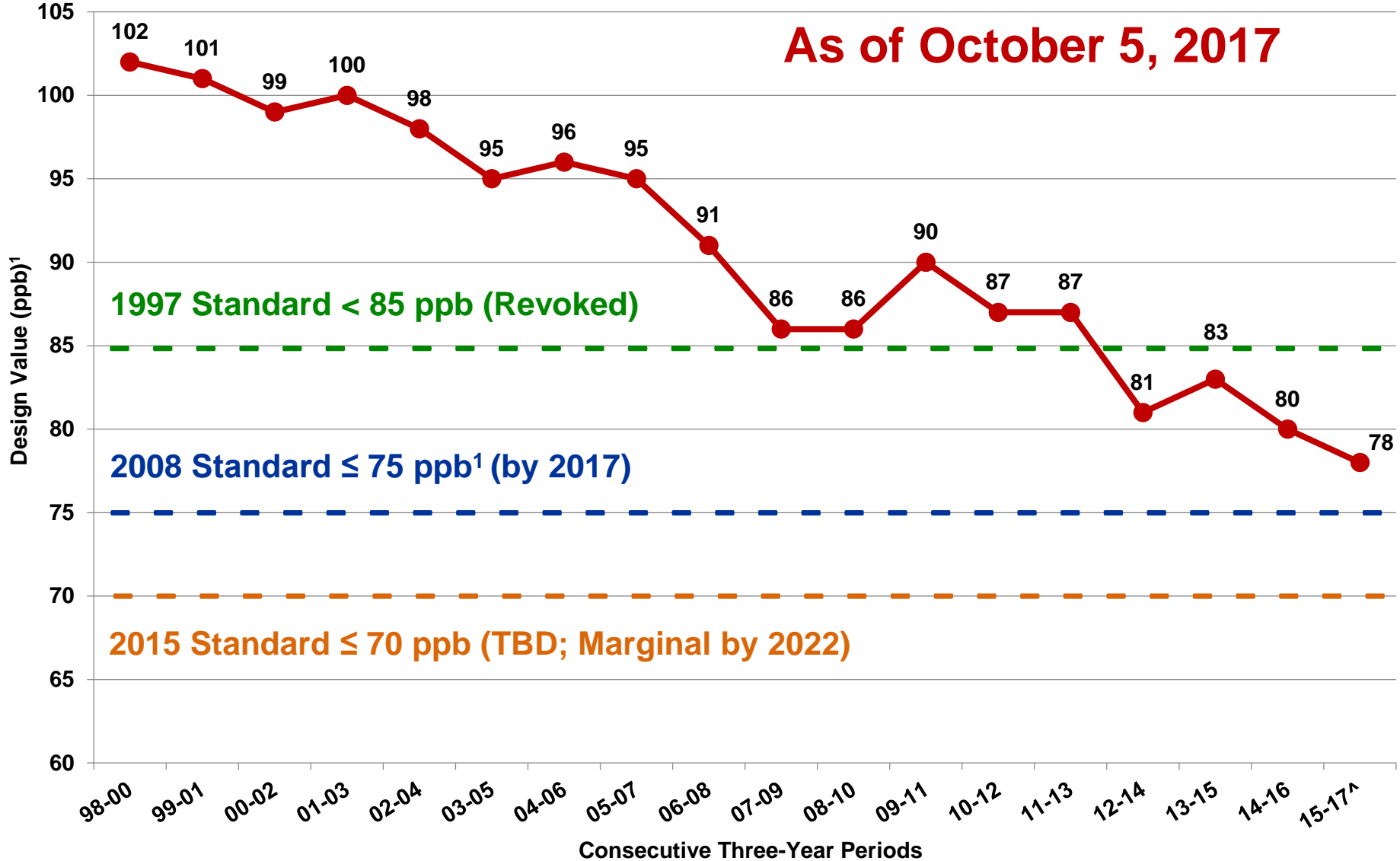
 = Additional level orange exceedance days under the revised standard that were not exceedances under the previous 75 ppb standard. (AQI level orange = 71-75 ppb)

^ANot a full year of data.

Source: TCEQ, http://www.tceq.state.tx.us/cgi-bin/compliance/monops/8hr_monthly.pl
ppb = parts per billion

EIGHT-HOUR NAAQS FOR OZONE HISTORICAL TRENDS

As of October 5, 2017



¹Attainment 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).

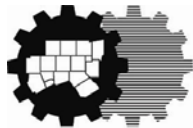
[^]Not a full year of data.

REGIONAL TRANSPORTATION COUNCIL TRANSIT CALL FOR PROJECTS

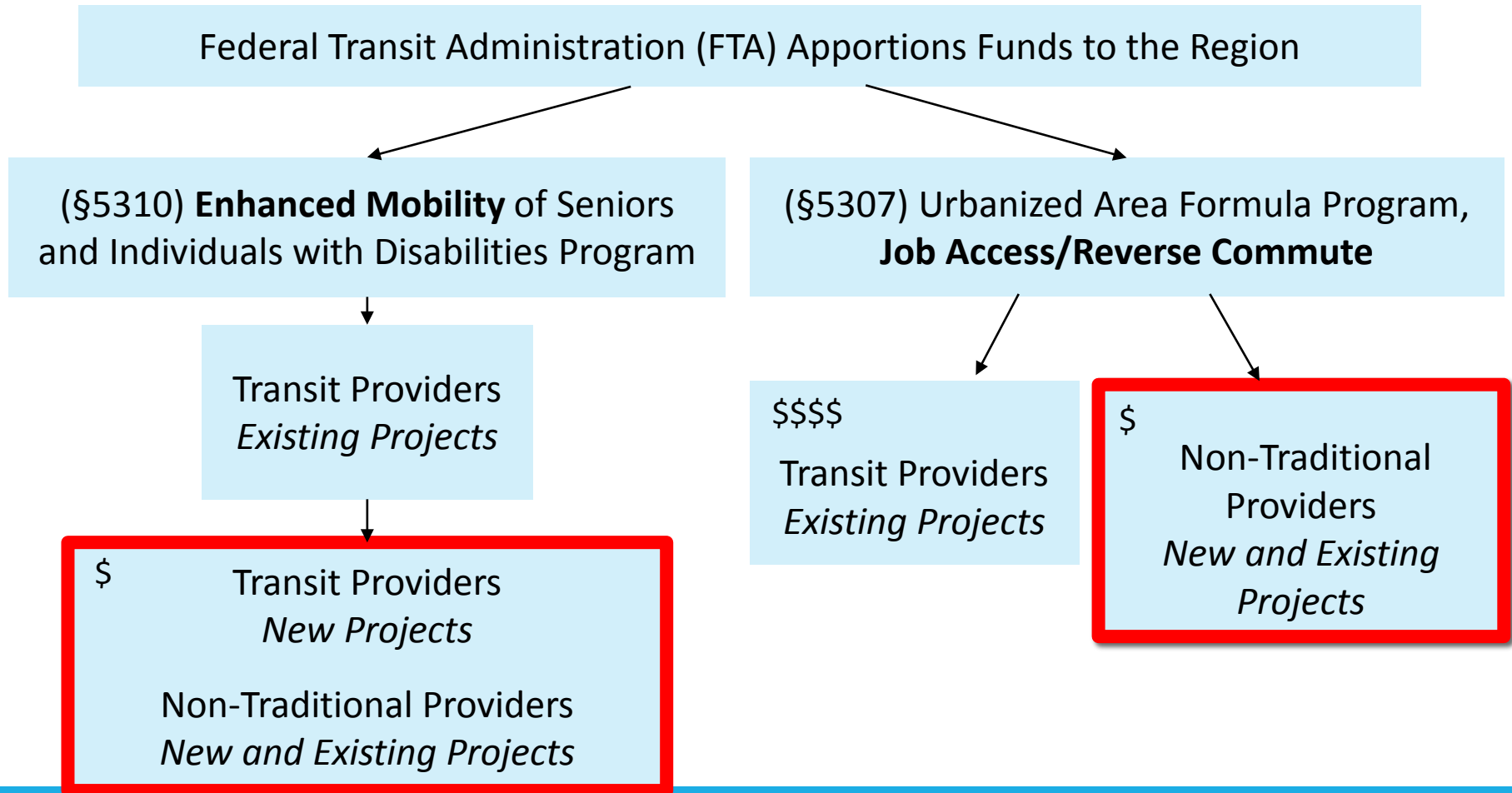
ACTION: PROJECT RECOMMENDATIONS

**Regional Transportation Council
October 12, 2017**

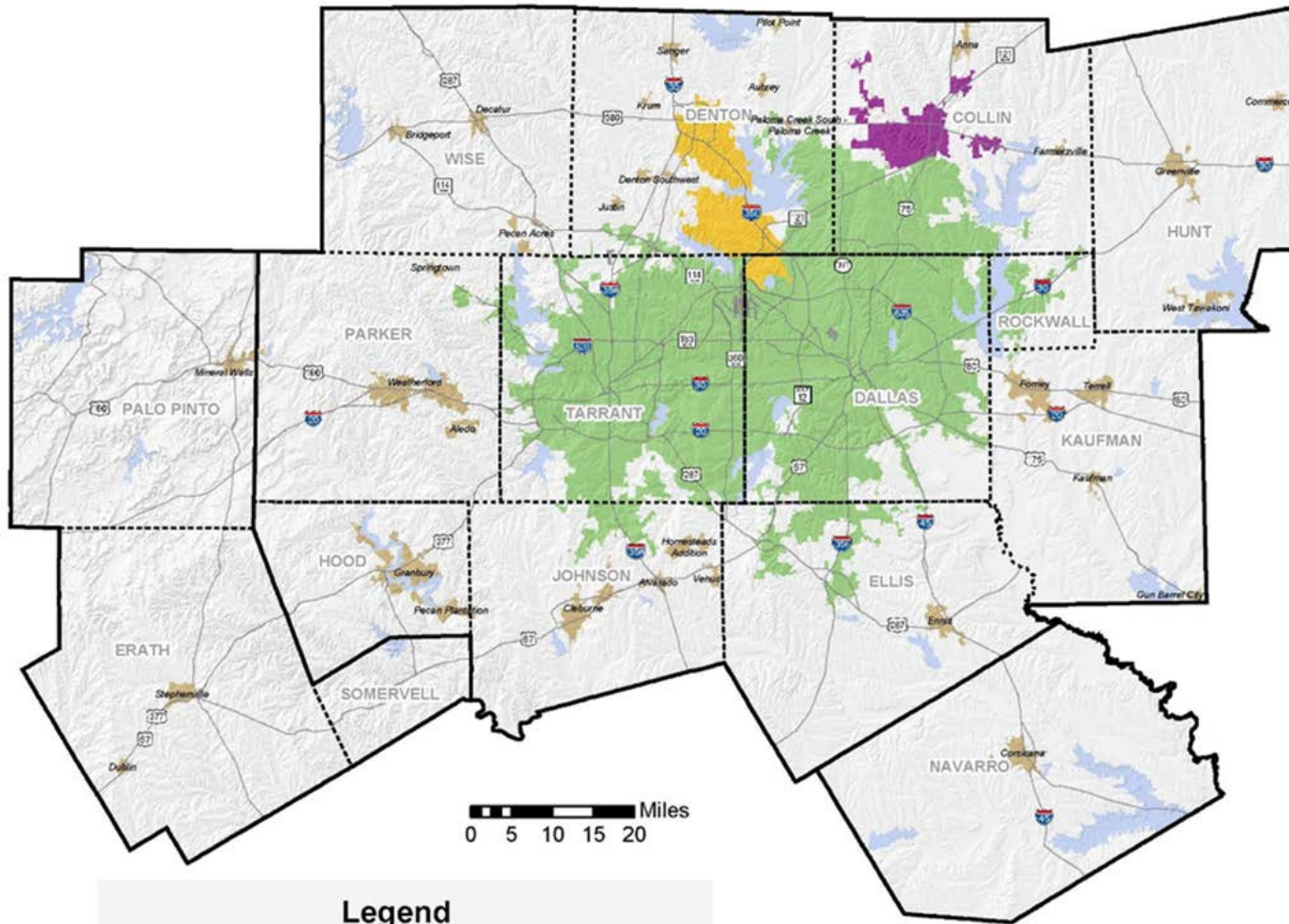
**Sarah Chadderdon
North Central Texas Council of Governments**



RTC Funding Process



U.S. Census Bureau Urbanized Areas and Urban Clusters (2010)

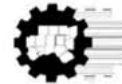


Projects must be focused on:

Dallas-Fort Worth-Arlington Urbanized Area



Denton-Lewisville (DL) Urbanized Area



North Central Texas
Council of Governments
Transportation
March 2012



Draft Project Recommendations

Dallas-Fort Worth-Arlington Urbanized Area

Enhanced Mobility Projects: \$1.2 M

Dallas Area Rapid Transit (DART)

City of Dallas

Dallas County Health and Human Services Older Adult Services Program

City of DeSoto

Fort Worth Transportation Authority (FWTA)

City of Lancaster

Job Access/Reverse Commute Projects: \$0.4 M

Workforce Solutions of Greater Dallas (Planning)

Workforce Solutions of Greater Dallas (Vanpool)

See Reference Item 4 for more information, including a summary of the evaluation criteria



Draft Project Recommendations

Denton-Lewisville Urbanized Area

Enhanced Mobility Projects: \$0.3 M

Span, Inc. (Flower Mound)

Span, Inc. (Lake Cities)

Job Access/Reverse Commute Projects: \$0

No Proposals Received

See Reference Item 4 for more information, including a summary of the evaluation criteria

Estimated Impacts



Dallas Fort Worth-Arlington Urbanized Area

83,500 Trips Provided Annually

4,500 Seniors, Low-income Individuals, and Persons with Disabilities Served



Denton/Lewisville Urbanized Area

3,800 Trips Provided Annually

Schedule

February 27, 2017	Call for Projects Opened
April 7, 2017	Call for Projects Closed
August 25, 2017	STTC: Information Item
Week of September 11, 2017	Public Meetings
September 14, 2017	RTC: Information Item
September 22, 2017	STTC: Action Item
October 12, 2017	RTC: Action Item
October 26, 2017	Executive Board: Agreements
Fall 2017	Submit FTA Grant Applications
Winter 2018	Enter into Agreements

Requested Action

Approve the Job/Access Reverse Commute and Enhanced Mobility projects as shown in Reference Item 4.

Questions

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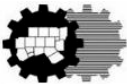
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Dan Lamers
Senior Program Manager
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2017-2018 CMAQ/STBG* FUNDING: LOCAL BOND PROGRAM PARTNERSHIPS

Regional Transportation Council
October 12, 2017

* Congestion Mitigation and Air Quality Improvement Program/
Surface Transportation Block Grant



North Central Texas
Council of Governments
Transportation Department

CMAQ/STBG FUNDING PROGRAMS

STATUS

PROGRAM

- Federal/Local Funding Exchanges
- Automated Vehicle Program
- Strategic Partnerships
- Planning and Other Studies
- 10-Year Plan/Proposition 1 Adjustments
- Sustainable Development Phase 4: Turnback Program, Context Sensitive, Transit Oriented Development (TOD) Projects
- Transit Program
- Assessment Policy Programs/Projects
- Local Bond Program Partnerships**
- Safety, Innovative Construction, and Emergency Projects
- Management and Operations (M&O), NCTCOG-Implemented, and Regional/Air Quality Programs

- = Project Selection Completed
- = Pending STTC/RTC Approval
- = Program Partially Completed

CMAQ/STBG FUNDING PROGRAM: LOCAL BOND PROGRAM

Description/ Purpose	To leverage bond funds for projects of strategic importance to local governments and the region.
Current Requests	<ul style="list-style-type: none">• City of Dallas Bond Program (pending bond election decision by City Council)• Parker County Bond Program• Others?
Next Steps	Finalize projects with Parker County and City of Dallas. Possible Action in late 2017/early 2018.

PROPOSED FUNDING BY AGENCY

AGENCY	PROPOSED FEDERAL FUNDING ^{1,2}
City of Dallas	\$43,537,487 ³
Hunt County	\$16,104,000 \$20,748,672⁴
Parker County	\$12,528,000 ⁴
City of Cedar Hill	\$280,000
Total	\$72,449,487 \$77,094,159

1: All Regional Transportation Council (RTC) funds would be contingent upon bond program/private sector contributions materializing. Individual projects will not be added to the Transportation Improvement Program (TIP) until the overall agreement about each partnership is executed, if needed.

2: Additional details on the individual projects, funding amounts, and timing can be found in Reference Item 5.1.

3: In addition to this funding, up to \$40 million has been approved for the Southern Gateway Pedestrian Plaza through a previous RTC action.

4: The 20 percent State match increases the total construction funding to ~~\$20.13~~ **\$25.93** million in Hunt County, and \$15.66 million in Parker County.

TIMELINE

MEETING/TASK	DATE
STTC Information	August 25, 2017
RTC Information	September 14, 2017
Public Meetings	September 11, 13, and 18, 2017
STTC Action	September 22, 2017
RTC Action	October 12, 2017

ACTION REQUESTED

- RTC approval of:
 - The proposed list of projects to fund through the 2017-2018 CMAQ/STBG: Local Bond Program Partnerships Program (Reference Item 5.1)
 - Administratively amending the 2017-2020 Transportation Improvement Program (TIP)/Statewide Transportation Improvement Program (STIP) and other planning/administrative documents to incorporate these changes.

QUESTIONS?

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Senior Program Manager

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Brian Dell

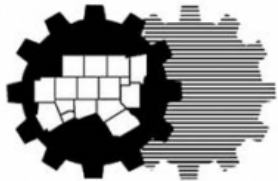
Transportation Planner II

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2017 INFRASTRUCTURE FOR REBUILDING AMERICA (INFRA) GRANT PROJECT SUBMITTAL



North Central Texas
Council of Governments

Regional Transportation Council

October 12, 2017

TXDOT PROJECT SELECTION

- Texas Department of Transportation (TxDOT) has selected the three projects to be submitted by the state:

Project
US 69 widening in the Beaumont District
SH 225 at Beltway 8 in the Houston District
IH 35W North Tarrant Express in the Fort Worth District

NCTCOG AND TXDOT COORDINATION

- Staff proposes the following projects for submittal by the Regional Transportation Council (RTC)/North Central Texas Council of Governments (NCTCOG):

Project	Proposed INFRA Request Amount
IH 635 LBJ East	\$165 Million
DFW Connector at IH 635/SH 114 or SH 121	\$65 million
IH 20 Y-Connection	\$100 Million

CONSIDERATIONS FOR PROPOSING PROJECTS

- Select projects in both the East and West
- Put all our “eggs” in one basket (so to speak) to focus on large scale, mega-projects
- Is there an opportunity for “Mega-Leveraging?”
- Is the project large enough?
- Partnership opportunity with TxDOT (we submit our priority projects that they do not choose to submit)

ACTION REQUESTED

RTC approval of:

- Projects proposed for submittal by NCTCOG/RTC for INFRA Funding
- Direction to staff to administratively amend the Transportation Improvement Program (TIP) and Statewide TIP and other planning/administrative documents to include INFRA projects if selected

TIMELINE

- | | |
|--------------|---|
| July 5 | INFRA Grant Notice of Opportunity Announced |
| August 25 | Surface Transportation Technical Committee (STTC) Information |
| September 14 | RTC Information on projects and action on Letters of Support |
| September 22 | STTC Action |
| October 12 | RTC Action |
| November 2 | Applications must be submitted by 7:00pm CST through www.grants.gov |

CONTACT INFORMATION

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Principal Transportation Planner

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TxDOT Strategic Partnerships

Need for Big Projects

Interface Connections Between Urban and Rural Areas

TxDOT Staged Projects Begun but with Inadequate Resources to Complete

Strategic Projects with Unique Circumstances



Mobility 2045 Plan Workshop Follow-Up

Regional Transportation Council

October 12, 2017



Top 10 Things to Consider

1. Trinity Parkway Response

Policy P17-03

2. Southeast Connector – The “Y”

Policy P17-02

3. CityMAP Recommendations

4. Collin County Study and Transit







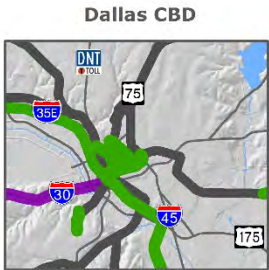
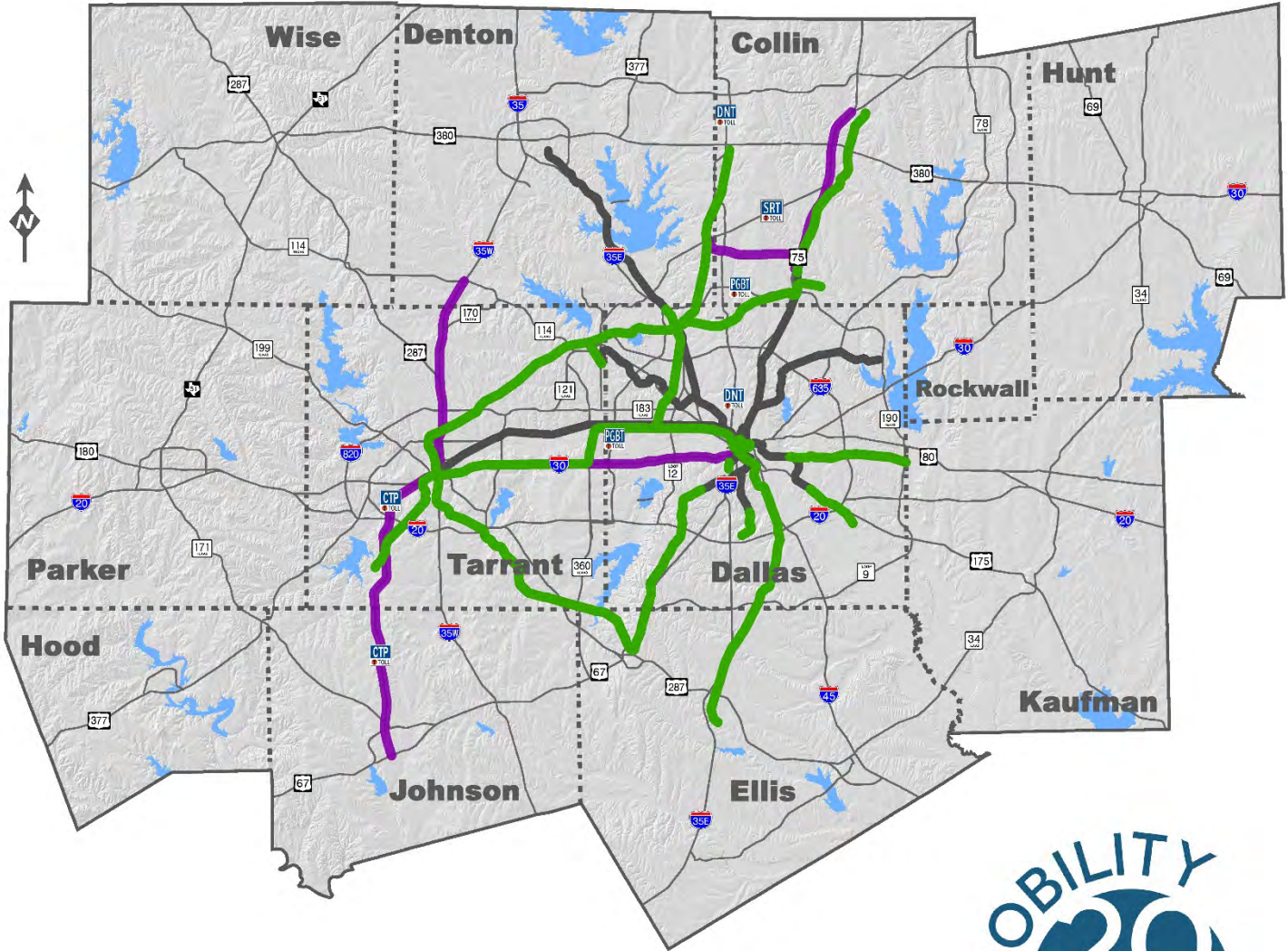
Top 10 Things to Consider

5. Tunnel Connecting IH 35E to US 75
6. Toll Managed Lane System Policy
7. Revenue Assumptions
8. Public Transportation
9. Performance Measures and Targets
10. Solve Tomorrow's Problems Today

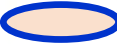







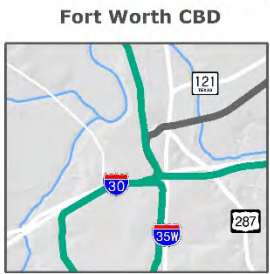
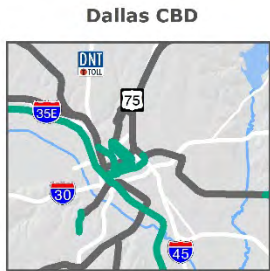
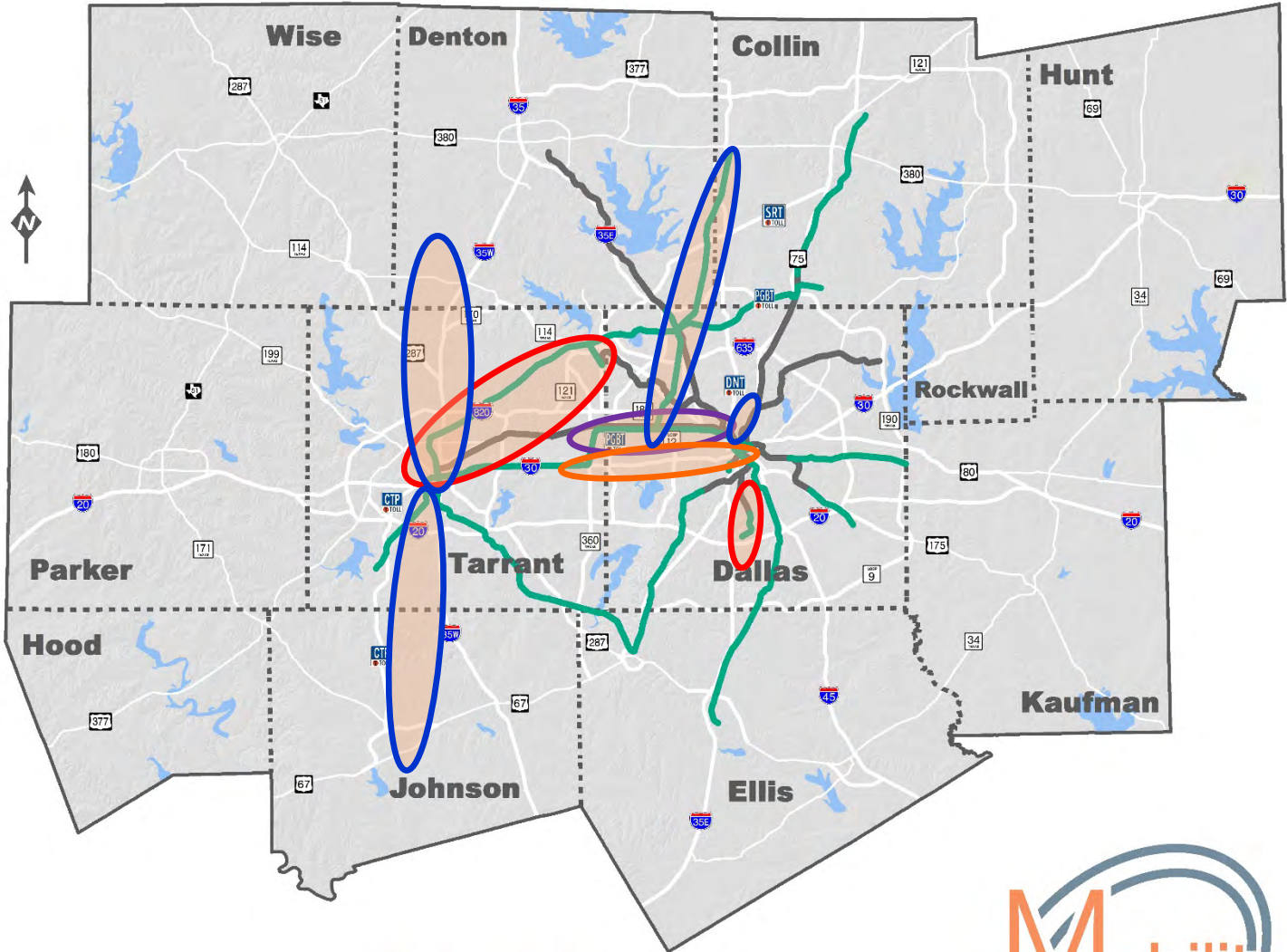
Major Transit Corridor Recommendations

-  Recommended Rail
-  Existing Rail
-  Recommended High-Intensity Bus
-  Major Roadways



Passenger Rail Projects

-  Under Evaluation
-  Remove - Under Construction/Complete
-  Remove - Local Consensus
-  Alignment Change
-  Mobility 2040 Rail Projects
-  Existing Rail

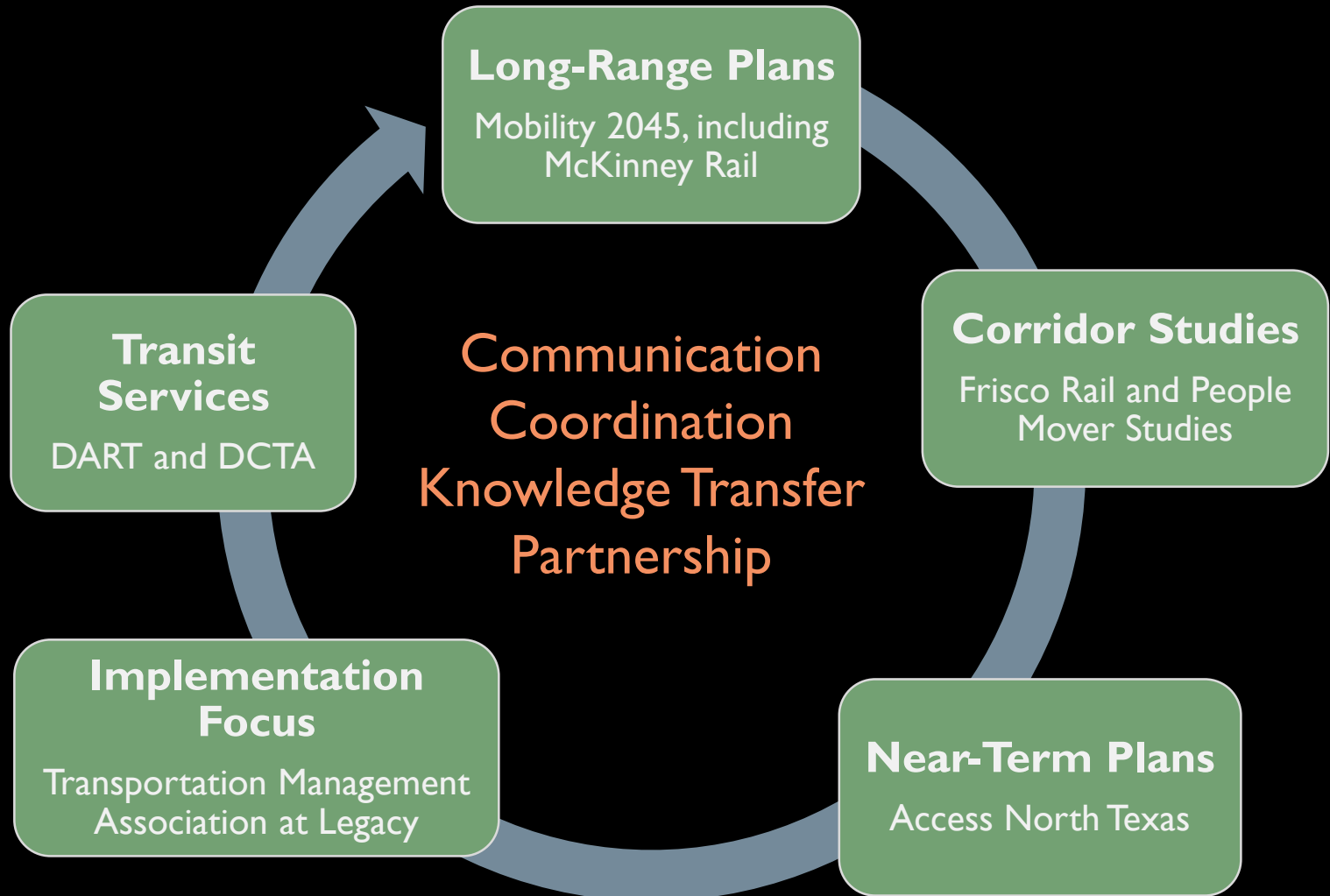


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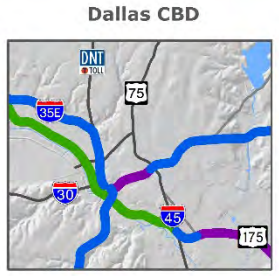
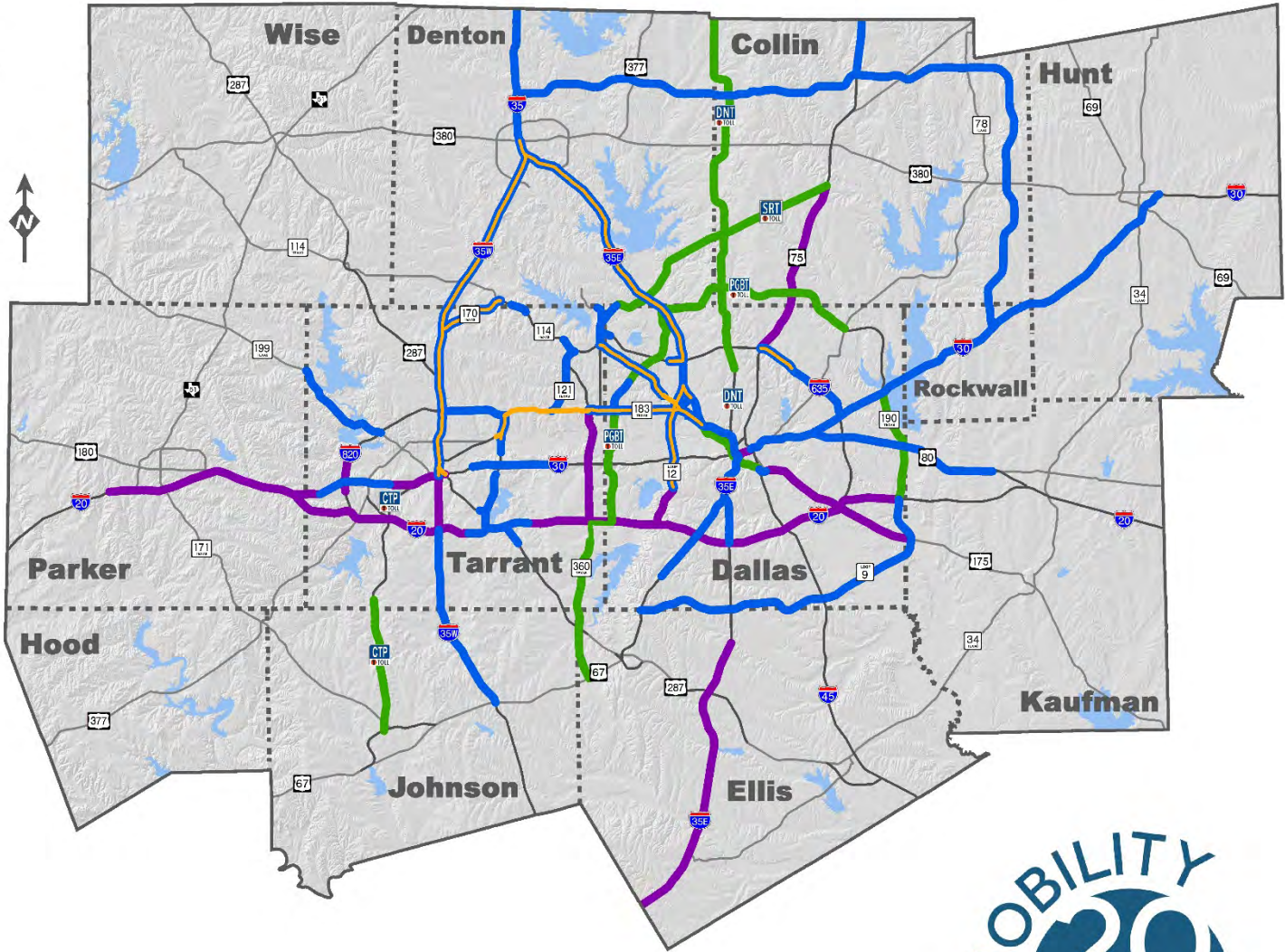
Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.

Collin County Transit-Related Initiatives



Major Roadway Recommendations



-  New or Additional Freeway Capacity
-  Additional Freeway Capacity and New Tolloed Managed Lanes
-  New or Additional Tolloed Managed Capacity
-  New or Additional Toll Road Capacity
-  Capacity Maintenance
-  Freeways/Tollways
-  Other Major Roadways



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

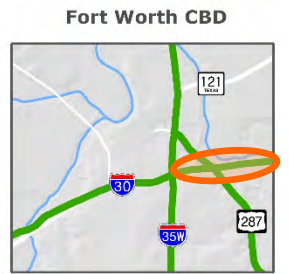
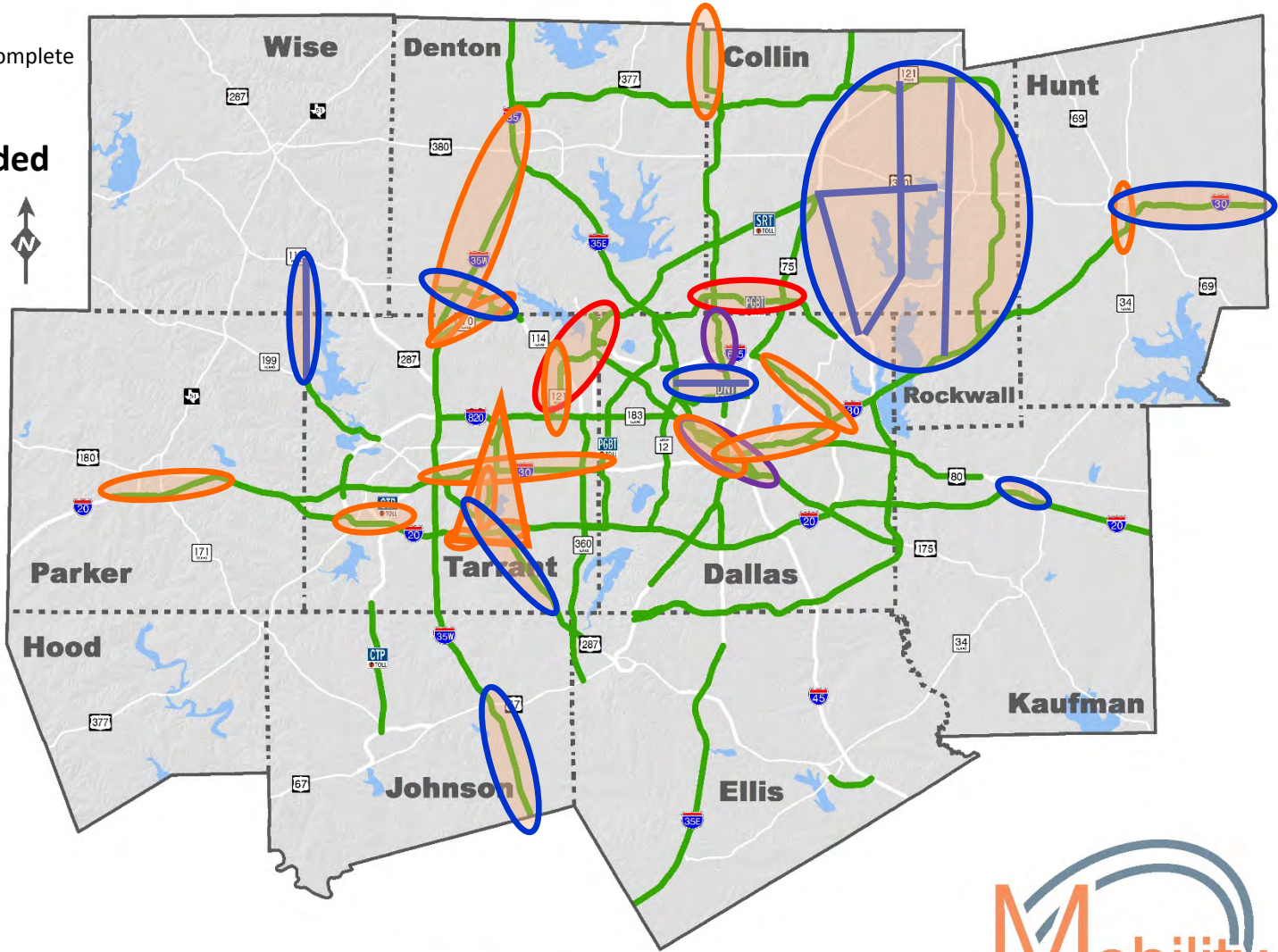
Roadway Project Status

Projects Removed

-  Under Construction/Complete
-  Local Consensus

Projects Revised/Added

-  Design Change
-  New Projects



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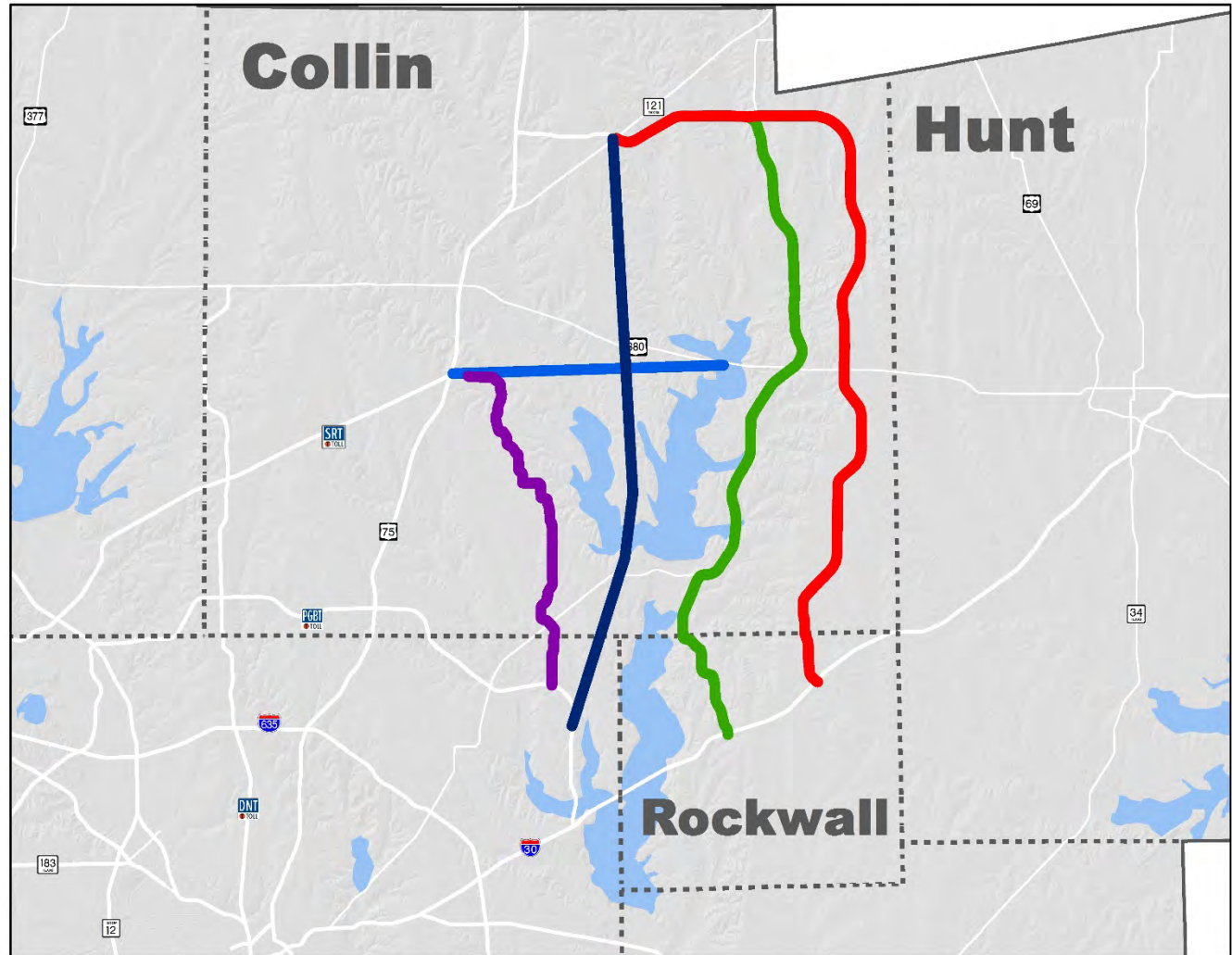


Facility recommendations indicate transportation need. Corridor-specific alignment, design, and operational characteristics will be determined through ongoing project development.

Collin County Roadway Opportunities

Proposed Roadway Corridors

- West Corridor
- Lake Corridor Frwy
- SH 78/SH 205/John King Corridor
- Collin County Outer Loop Frwy
- Spur 399 Frwy Extension



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



Policies and Programs

Review and Revise Policies and Programs

Response to Legislative Programs

Enhanced Performance-Based Planning

Guaranteed Transit

Role of Technology

Toll Managed Lane System Policy



Possible Technology Policies

Support Open Data Best Practices

Encourage Cooperation on Wireless
Communications Infrastructure

Encourage Multi-Occupant Ride Sharing

Support Automated Vehicle Deployment

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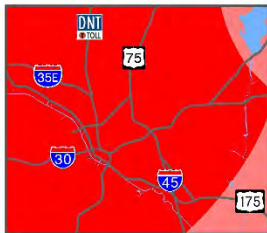


Toll Managed Lane System Policy Boundary

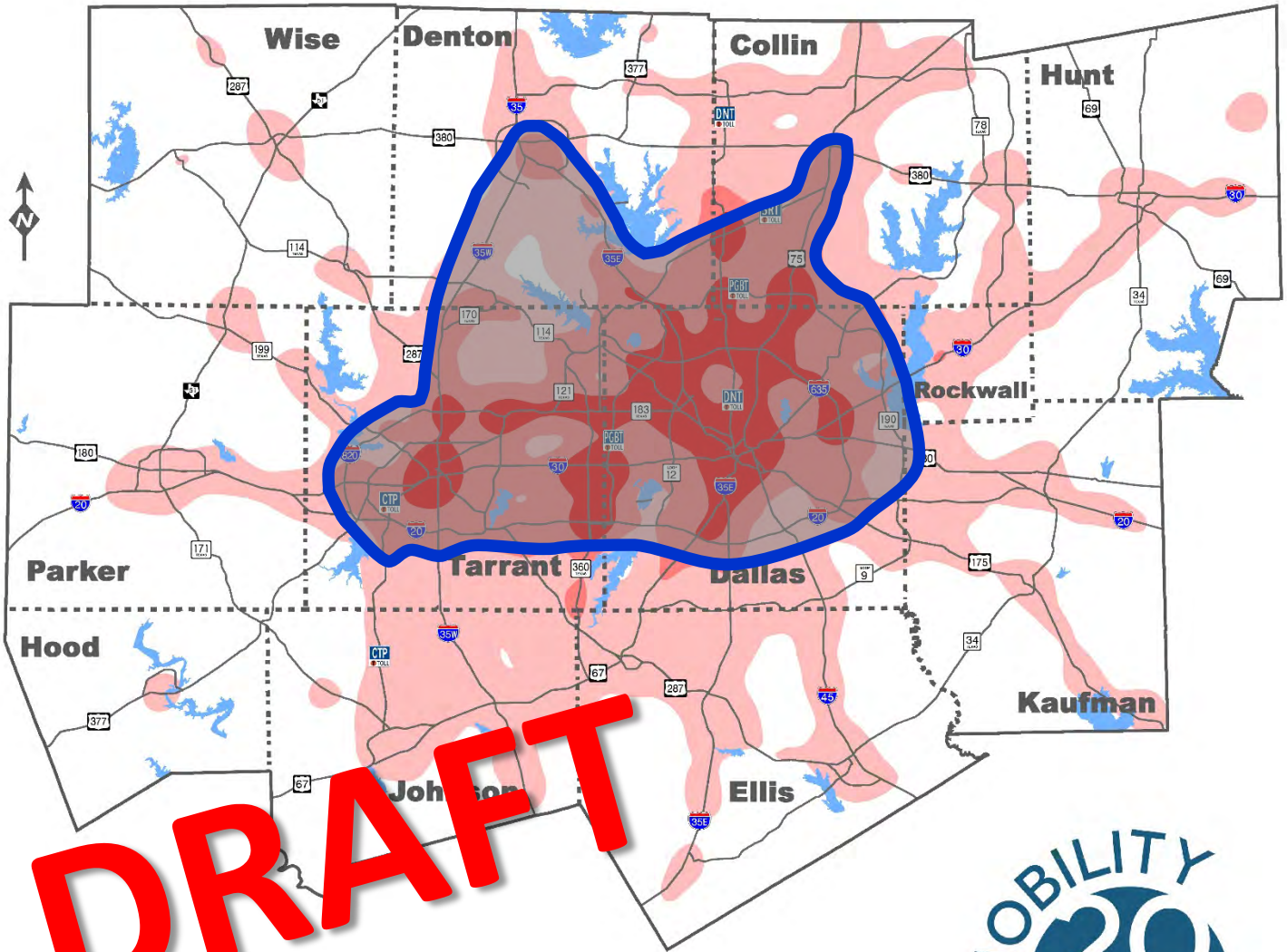
Congestion Index*

- No Congestion
- Light Congestion
- Moderate Congestion
- Severe Congestion
- Major Roads
- Toll/Managed Lane Policy Boundary

Dallas CBD



Fort Worth CBD



DRAFT



Cost of Congestion/Delay: \$25.3 billion

*Congestion Index is based on a percent increase in travel time.

Schedule

Milestone	Date
Continuous Public Involvement	Through March 2018
Mobility 2045 Draft (RTC Action)	April 12, 2018
Official Public Meetings	April 9, 2018
Mobility 2045 and AQ Conformity (RTC Action)	June 14, 2018
Air Quality Conformity DOT Determination Deadline	November 23, 2018



Next Steps

Continue Partner Coordination

Finalize Partner Projects – Nov. 15

Provide Monthly RTC Updates

Finalize Financial Forecast

Conduct Public Meetings

October and January



Questions

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TOLL MANAGED LANE DATA MONITORING

Regional Transportation Council

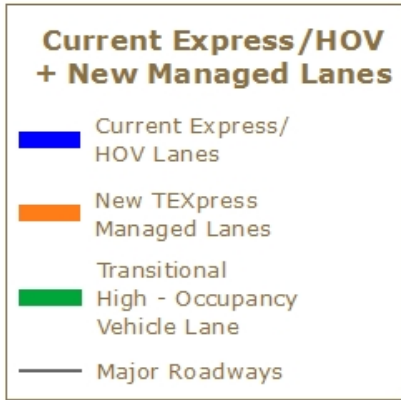
October 12, 2017

Dan Lamers, P.E.



*North Central Texas Council of Governments
Transportation Department*

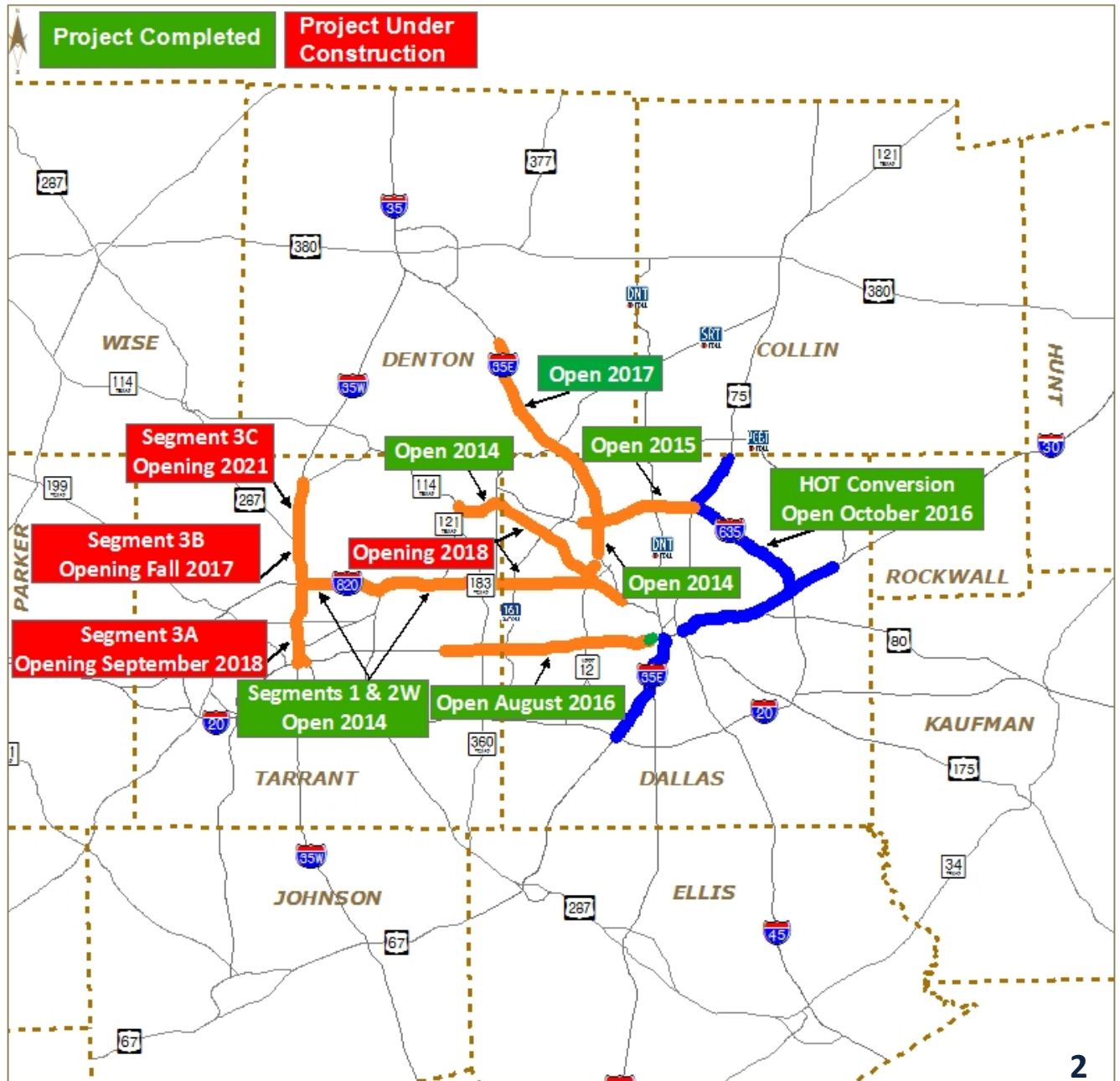
Near Term Managed Lane System Openings



Fort Worth CBD



Dallas CBD



TOLL MANAGED LANE DATA MONITORING

Cumulative December 2013 – June 2017

For how much HOV 2+ Subsidy has the RTC been responsible?

\$1,507,756 as of June 2017

For how much of the Vanpool Toll reimbursement has the RTC been responsible?

\$ 3,266 from October 2014 – June 2017

How long can the RTC keep the HOV policy at 2+?

For now, it remains 2+ and it will continue to be monitored quarterly

Have there been any additional NTTA customer service needs?

No, minimal impact

Have the speeds on the Toll Managed Lane facilities dropped below 35 mph?

No

TOLL MANAGED LANE DATA MONITORING

Cumulative December 2013 – June 2017

Facility	HOV 2+ Subsidy Costs	NTTA Customer Service (Additional Needs)	Project Performance Events (Speeds < 35 mph)
North Tarrant Express <i>SH 183/121 from IH 35W to SH 121</i>	\$654,411	Negligible	0
LBJ Express <ul style="list-style-type: none"> • <i>IH 635 from Preston Road to Greenville Avenue</i> • <i>IH 35E from Loop 12 to IH 635</i> 	\$853,345	Negligible	0
DFW Connector <i>SH 114 from Kimball Avenue to Freeport Parkway</i>	N/A	Negligible	0
IH 30 Managed Lanes <i>IH 30 from SH 161 to Westmoreland Road</i>	N/A	Negligible	0
IH 35E Managed Lanes <i>IH 35E from FM 2181 (Teasley) to LBJ</i>	N/A	Negligible	0

Auto Occupancy Detection and Verification Technology Update

REGIONAL TRANSPORTATION COUNCIL

OCTOBER 12, 2017

Dan Lamers, Sr. Program Manager



Project History

2012 – NCTCOG

Technology Approaches to HOV Occupancy Declaration and Verification (Texas A&M Transportation Institute)

2012 – NCTCOG

Request for Information (RFI) for IH 30 Managed Lane Technology

- Occupancy detection and verification
- Dynamic tracking of vehicles

2013 – NCTCOG

Re-issue RFI with demonstration component

2014 – NCTCOG

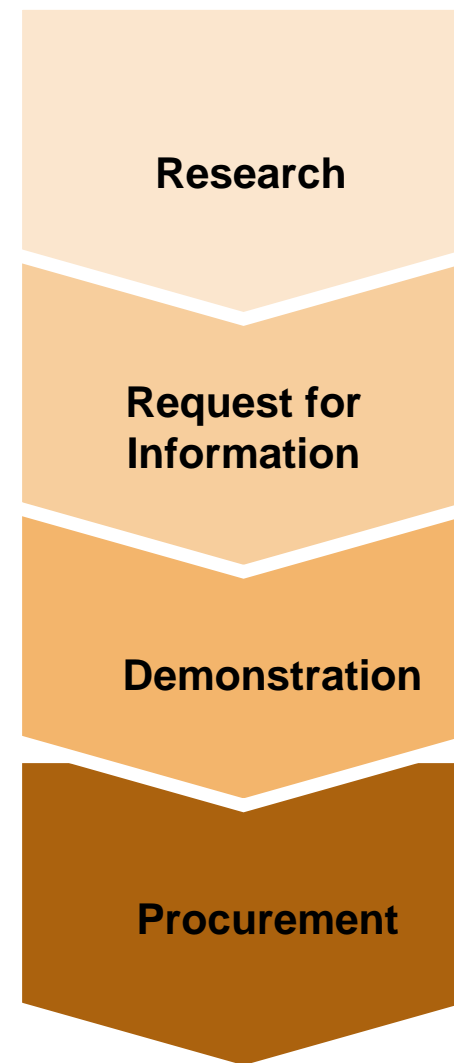
TTI Update to white paper and proof of concept testing of in-vehicle technology

2015 – TxDOT/NCTCOG

Request for Offer - Automated Vehicle Occupancy Detection Solution

2016 – NCTCOG/TxDOT

Request for Proposals for Auto Occupancy Detection and Verification Technology



Why Mobile Occupancy Verification?

Verification

~~Enforcement~~

No Additional Roadside Infrastructure

- No right-of-way for HOV declaration-ramps of law enforcement
- No special lights or law enforcement technologies
- Work with existing toll infrastructure

Reliability

- Works 24 hours per day x 365 days per year
- Covers 100% of your road network
- Invulnerable to variance in weather, traffic, vehicles

Privacy

- Opt-in by users, no peering inside vehicles
- No PII data: toll tagplus verified occupancy

Network Benefits

- Leakage reductions, optional occupancy perks
- Performance measures, planning data

Big Data Analytics

- Big Data analysis identifies non-compliant behaviors
- Agency policies define automated warnings
- Data aggregation of traffic patterns, travel times and origin / destination maps



Roadside
Sensing



Patrol
Enforcement

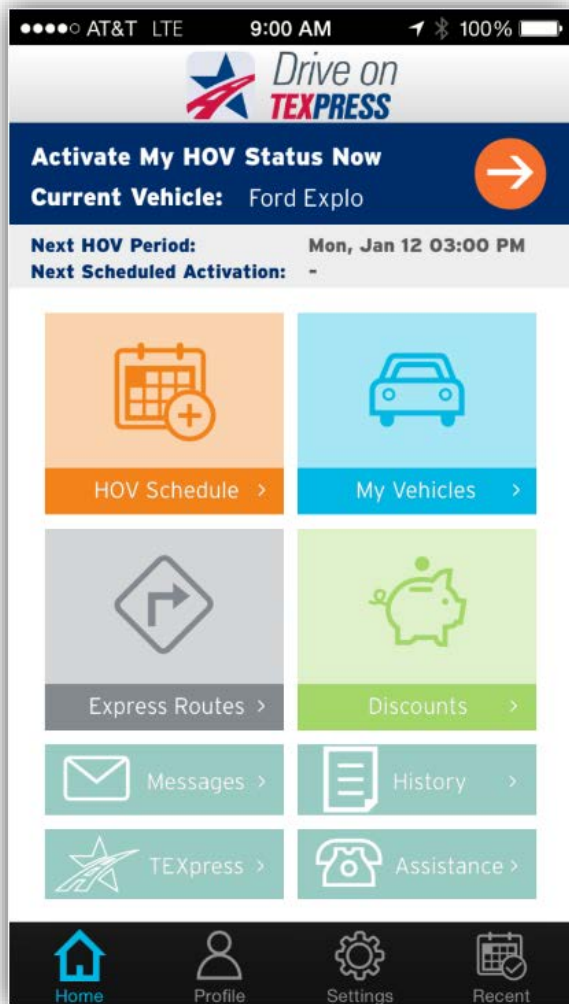


Manual
Declaration

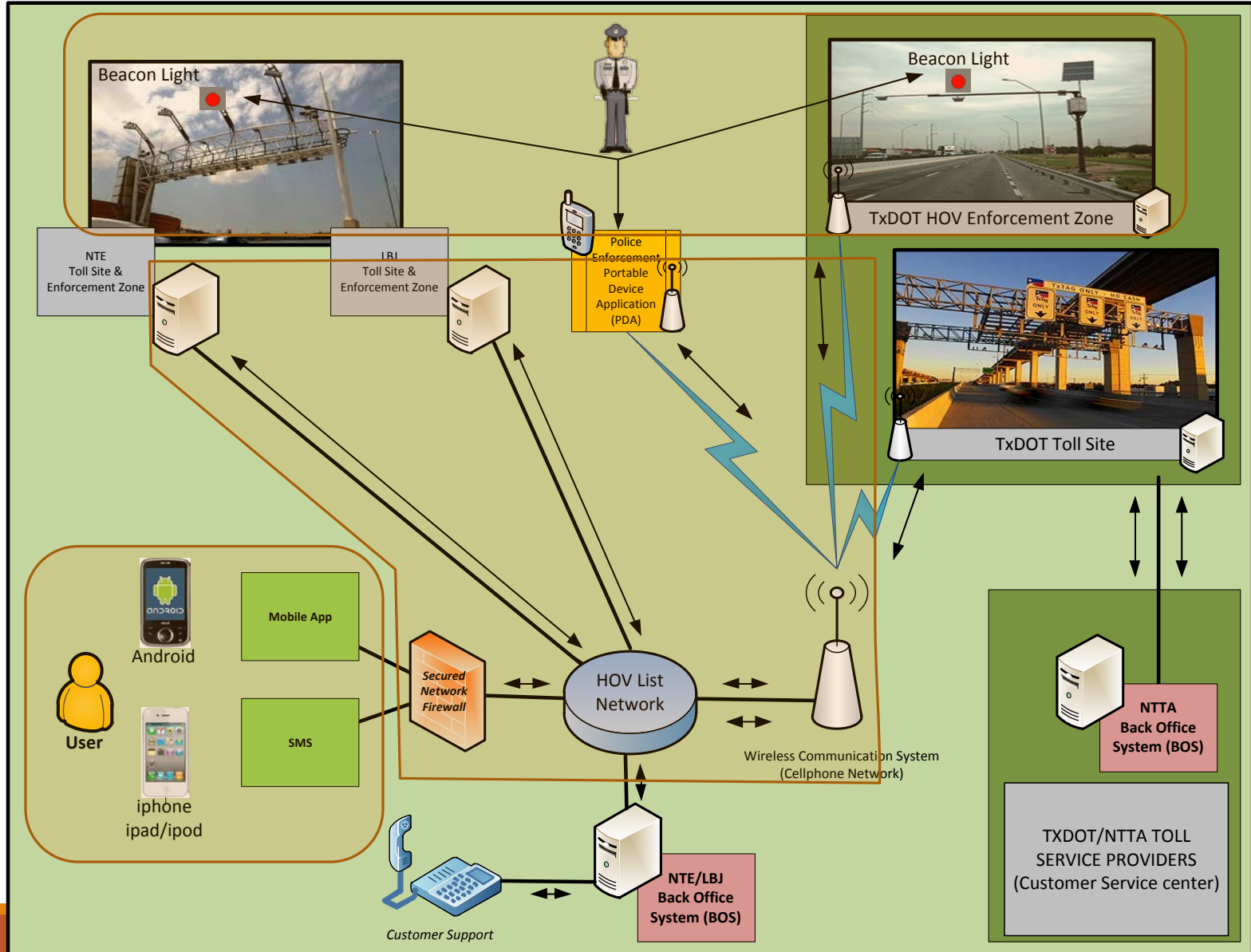
No Messy Legal Issues

- Manual enforcement is often sporadic and ineffective
- No law enforcement officers needed to issue tickets
- Does not tie-up court system
- Flexible “fraud detection” program
- Charge the right toll
- Willing to live with small level of “violators” in lieu of costly manual enforcement

Drive on TEXPRESS Application



Current HOV Enforcement



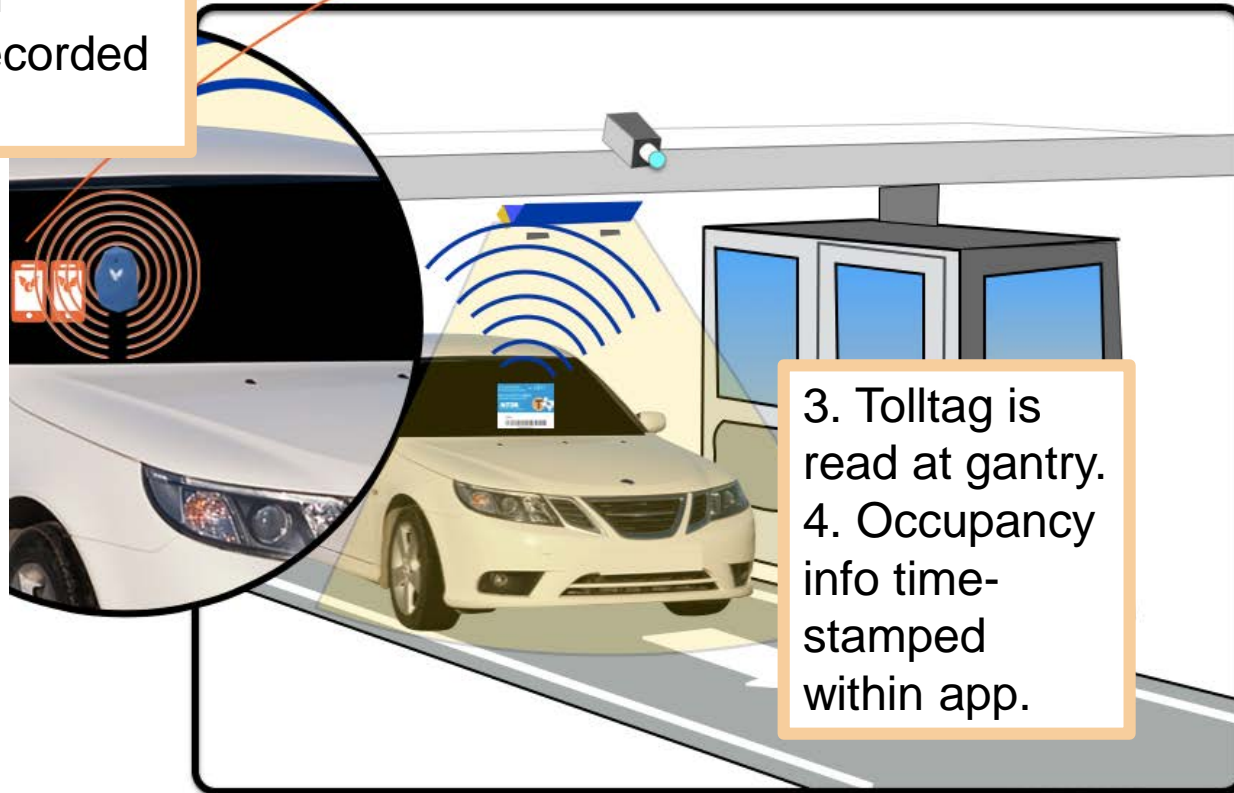
Technology Overview

How Carma's solution works

1. Car beacon
"reads" cell phone/
occupant beacon.

2. Number of
occupants recorded
within app.

TollTag ID: T1982465
2 Occupants



3. Tolltag is
read at gantry.
4. Occupancy
info time-
stamped
within app.





Customer Process

Place car beacon in glove box

- Or other out of the way location in vehicle

Download app

- Runs in background once installed
- Bluetooth turned on
- Low energy/battery usage
- Pickup a friend and want to carpool? Just use the app to send an invite before you drive.

Register Tolltag to car beacon

- Occupants do not need to register to tolltag

Place optional occupant beacon in diaper bag or backpack

- In lieu of app for occupants without phone

Detection/Verification Process

Occupancy automatically detected

- When occupant with app enters vehicle
- Optional occupant beacons also counted
- Occupant count transmitted to Carma server via cellular network
- Carma server transmits timestamped occupancy data to toll back office

Occupant data timestamped at toll gantry

- Carma occupant data matched with toll transaction

Customer gets charged correct toll!

Fraud detection

- System monitors proximity of phones/beacons periodically
- Region to develop potential fraud messaging and response

Overall Schedule

Task	Timeframe
Kick-off Meeting with Partners	August 2017
Surface Transportation Technical Committee/Regional Transportation Council/Public Meetings	September/October 2017
Pilot on DFW Connector Corridor	October/November 2017
Share Pilot Results to Partner Agencies	December 2017
Surface Transportation Technical Committee/Regional Transportation Council/Public Meetings	January/February 2018
Partner Integration	March 2018
System-Wide Deployment	May 2018
Transition to Incentive Program	??