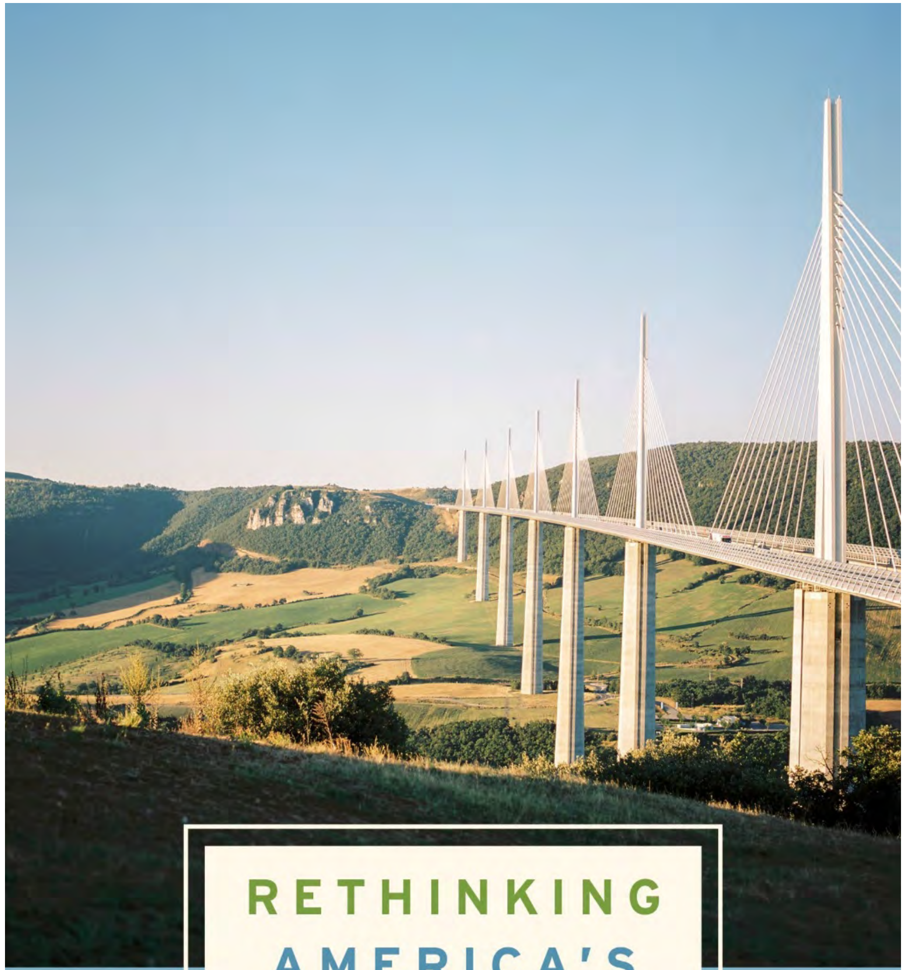
reason FOUNDATION



RETHINKING AMERICA'S HIGHWAYS

A 21st-Century Vision for Better Infrastructure

ROBERT W. POOLE JR.

reason FOUNDATION

Our troubled major highways

reason FOUNDATION

- Chronic congestion on the freeways
- Ongoing problem of deferred maintenance
- Large backlog of unfunded major projects
- Project costs exceeding benefits
- Declining and unpopular fuel taxes

What are the underlying causes?

Symptom	Cause
Congestion	Lack of pricing
Deferred maint.	Cheap design, low political priority
Backlog	Little long-term financing
Boondoggles	Politics vs. economics
Funding battles	Fuel tax seen as just a *tax*

A better system would:

1. Use pricing to manage traffic.
2. Charge customers for what they use.
3. Select projects with B>C, positive ROI.
4. Minimize *life-cycle* costs, not initial cost.
5. Finance major projects via revenue bonds.

What has just been described?

Public utilities such as:

- Electricity
- Telephones
- Natural gas
- Cable/satellite
- Water supply

How are highways different from the other utilities?

- All the others are *businesses*.
  - Customers pay the business *directly*, based on how much they use.
  - Pricing depends on services chosen.
  - Major projects financed, based on customer revenue streams.
  - Projects show positive ROI, or won't get financed.
  - Proper maintenance essential, or customers complain, go elsewhere, etc.

Major highways as businesses?

- Could be companies, toll agencies, or nonprofit user co-ops.
- Charge per mile driven.
- Add capacity when/where needed.
- Decide projects based on ROI, not politics.
- Treat people as customers, not “users”.

This is not a pipedream:

- Private turnpikes were common in 18th century Britain and 19th century USA.
- Investor-owned toll highways common today in France, Italy, Spain, Portugal.
- Investor-owned expressways in Brisbane, Melbourne, & Sydney—and Santiago, Sao Paulo, Mexico City
- Investor-owned toll bridges in Canada, U.K.

U.S. is a late-mover, but has begun using long-term toll concessions

reason FOUNDATION

- Beltway and I-95 express lanes near DC
- LBJ (I-635) express lanes in Dallas
- Indiana Toll Road & Chicago Skyway
- PR 22 in San Juan
- I-595 express lanes in Ft. Lauderdale and I-4 under way in Orlando
- <u>$36 billion</u> worth of projects financed thus far.

These are public-private partnerships (P3s), not "privatization"

reason FOUNDATION

- Single team to design, build, finance, operate, and maintain: 35 to 70 years.
- Similar to electric utility franchises.
- Financed by debt and equity.
- Long-term agreement details performance requirements, penalties.
- Guaranteed long-term maintenance.
- Good fit for mega-projects.

Economic vs. political incentives

- Weeds out projects with B<C, poor ROI.
- As long-term "owner," company designs project to minimize *life-cycle* cost.
- Customer/provider relationship makes design customer-friendly.
- Tolling/charging policy negotiated in advance.
- Termination and handback provisions protect the state and customers.

P3 megaprojects shield taxpayers from significant risks

- Cost overruns & change orders
- Late completion
- Inadequate traffic & revenue
- Deferred maintenance
- No bailouts in event of bankruptcy

reason FOUNDATION

Where does the money come from for highway P3 mega-projects?

- U.S. and global infrastructure investment funds
- U.S. and overseas pension funds (incl. Texas ERS)
- U.S. and global debt markets
- *Tolls as the revenue stream*

The problem is not enough good projects, *not* a shortage of funds!

How to begin the transition

- Build on need to change from per-gallon to per-mile funding.
- Make the new MBUFs true user fees, paid to the highway provider.
- Start per-mile charging with Interstates, as easiest to transition.
- Introduce charging based on need to finance Interstate reconstruction.

Trump infrastructure proposal could help

- Incentives for states to use long-term P3s.
- Remove federal ban on Interstate tolling.
- End federal ban on commercial rest areas on Interstates.
- Expanded tax-exempt financing for P3s.
- Environmental streamlining for major projects.

Why highway utilities may happen (1)

Three major problems:

- Looming insolvency of federal government
- Dire fiscal problems of state governments, especially unfunded pension systems
- Fading of per-gallon fuel taxes as main highway funding source.

Stein's Law: "If something cannot go on forever, it will stop."

Why highway utilities may happen (2)

Three new factors:

- The growing worldwide and US track of long-term P3 highway projects
- The growth of global infrastructure equity investment funds
- The need and desire of US pension funds to add infrastructure to their portfolios.

But maybe not in Texas

- Moratorium on new P3 highway projects
- Ban on state funds in new tolled projects
- Planned express toll lane networks may not be possible.
- Billions in private capital would go elsewhere.

Texas populists' self-contradiction

- Claim to speak for the grass roots.
- But push for top-down ban on local decision-making.
- Ideally: repeal bans on tolling and P3s.
- 2nd best: let MPOs use tolls and P3s if demonstrated local support.

Conclusions

- Major highways are failing, due to constraints of politicized decision-making.
- Major highways should be reconfigured as network utilities, paid directly by customers.
- Key ingredients are there:
  - Per-mile, all-electronic tolling
  - The long-term P3 model
  - Companies with impressive track records
  - Willing investors
- What's needed is to put the ingredients together and gain political support.

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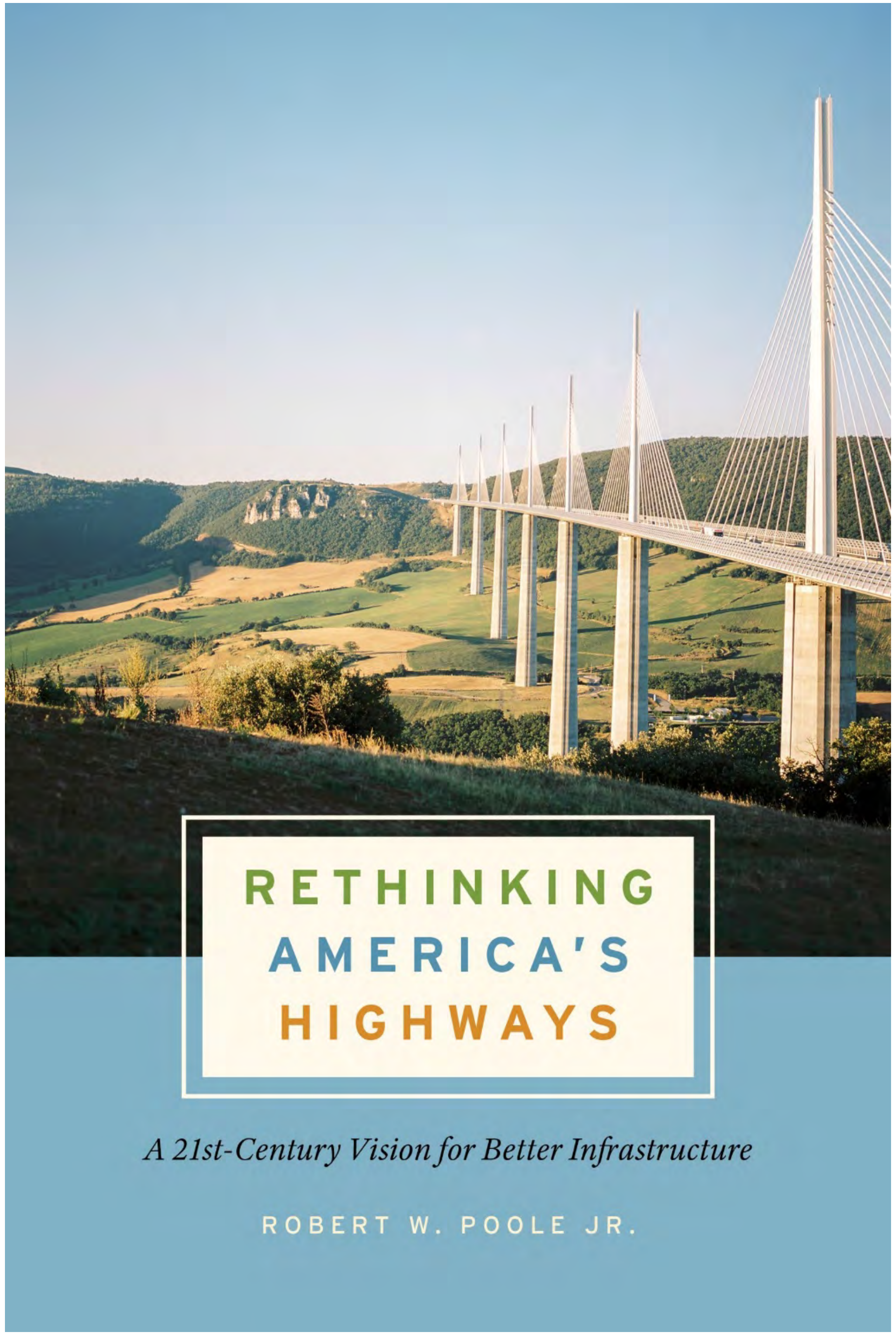

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FOUNDATION

Questions?

Contact information:

http://reason.org/transportation

Bob.poole@reason.org

Appendix

Coming technology challenges:

- Electric vehicles
- Connected vehicles
- Autonomous vehicles
- Shared mobility (MaaS)

How will these affect highways?

Electric vehicles

- Large numbers are far off, unless continued subsidies.
- Will further decrease fuel-tax revenues.
- Will hasten the transition from per-gallon taxes to per-mile charges.
- Zero-emissions may reduce environmental opposition to highway investment.

Connected vehicles

- CACC increases vehicle throughput if large numbers equipped.
- This could reduce widening need for urban expressways, *ceteris paribus*.
- Does not reduce need for express toll lanes, if congestion remains.
- Increases case for dedicated truck lanes on long-distance Interstates (platooning).

Autonomous vehicles

- Level 5 unlikely until 2035; majority of fleet by 2050.
- Total VMT projected at 5 trillion by 2050 (from 3T today) due to elderly, youth, disabled becoming mobile. (KPMG)
- Growing AV consensus is more VMT due to AVs, not less.

Shared mobility (MaaS)

reason FOUNDATION

- OECD Lisbon studies assume ban on personal vehicles and “equivalent personal mobility” in shared, on-demand vehicles.
- Americans likely unwilling to give up personal vehicles.
- Numerous trip purposes difficult with shared rides, e.g.:
  - Trip chaining during commute
  - Taking sick child to doctor
  - Shopping trips

Auto Occupancy Detection Technology and HOV Rewards Program

Regional Transportation Council

October 11, 2018

Natalie Bettger

North Central Texas Council of Governments

Project History

2012 – NCTCOG: Regional Transportation Council instructed staff to replace manual enforcement with more advanced technology verification equipment

2012 – NCTCOG: Technology Approaches to HOV Occupancy Declaration and Verification, Texas A&M Transportation Institute (TTI) Request for Information (RFI) for IH 30 Managed Lane Technology Occupancy detection and verification - Dynamic tracking of vehicles

2013 – NCTCOG: Reissue RFI with demonstration component

2014 – NCTCOG: TTI Update to White Paper and Proof of Concept Testing of In-Vehicle Technology

2014 – TxDOT/P3: Drive on TEXPRESS application

2015 – TxDOT Lead/NCTCOG Partner: Request for Offer - Automated Vehicle Occupancy Detection Solution

2016 – NCTCOG Lead/TxDOT Partner: TxDOT Requested NCTCOG to Take the Lead
Request for Proposals - Auto Occupancy Detection and Verification Technology

Activities Implementing New Technology

July 2017
Issued Notice to Proceed with Carma Technology Corporation

August – December 2017
Pilot Test on DFW Connector Corridor

- 98.4% exact match in reported occupancy
- 1.6% indicates an “over count”

January – March 2018
Shared pilot results and worked with partners on back office integration

March – June 2018
Developed draft violation process and continued to work with partners on back office integration

July 2018
Met with TxDOT management on statewide interest

August 2018
Discussed rewards approach with partners

September 2018
RTC Workshop: Approach endorsed by Bill Hale, TxDOT Chief Engineer and several RTC members

HOV Rewards Program

Register

Pre - Declare Every Trip

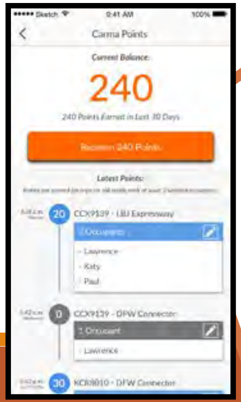
Occupancy Declaration Sent to Field

NTTA Back Office System for Billing

Officers Watch for Red Light

Violation: Legal Process

Toll Collected



HOV Clearinghouse

Receive Transaction File(s)
Carma Active Tags/Plates API
Select Carma User Transactions
Carma Occupancy API
Send Differential File(s)

Direct Cost Comparison

Estimated Direct Costs with Existing System (10 Years)	
Manual Enforcement	$15,245,452
Enhancement to TEXPress Application	$5,927,285
Marketing and Education	$2,000,000
Total	**$23,172,737**
Expected Total Cost for New System (10 years)	
New Technology Operating and Marketing Cost	**$20,000,000**

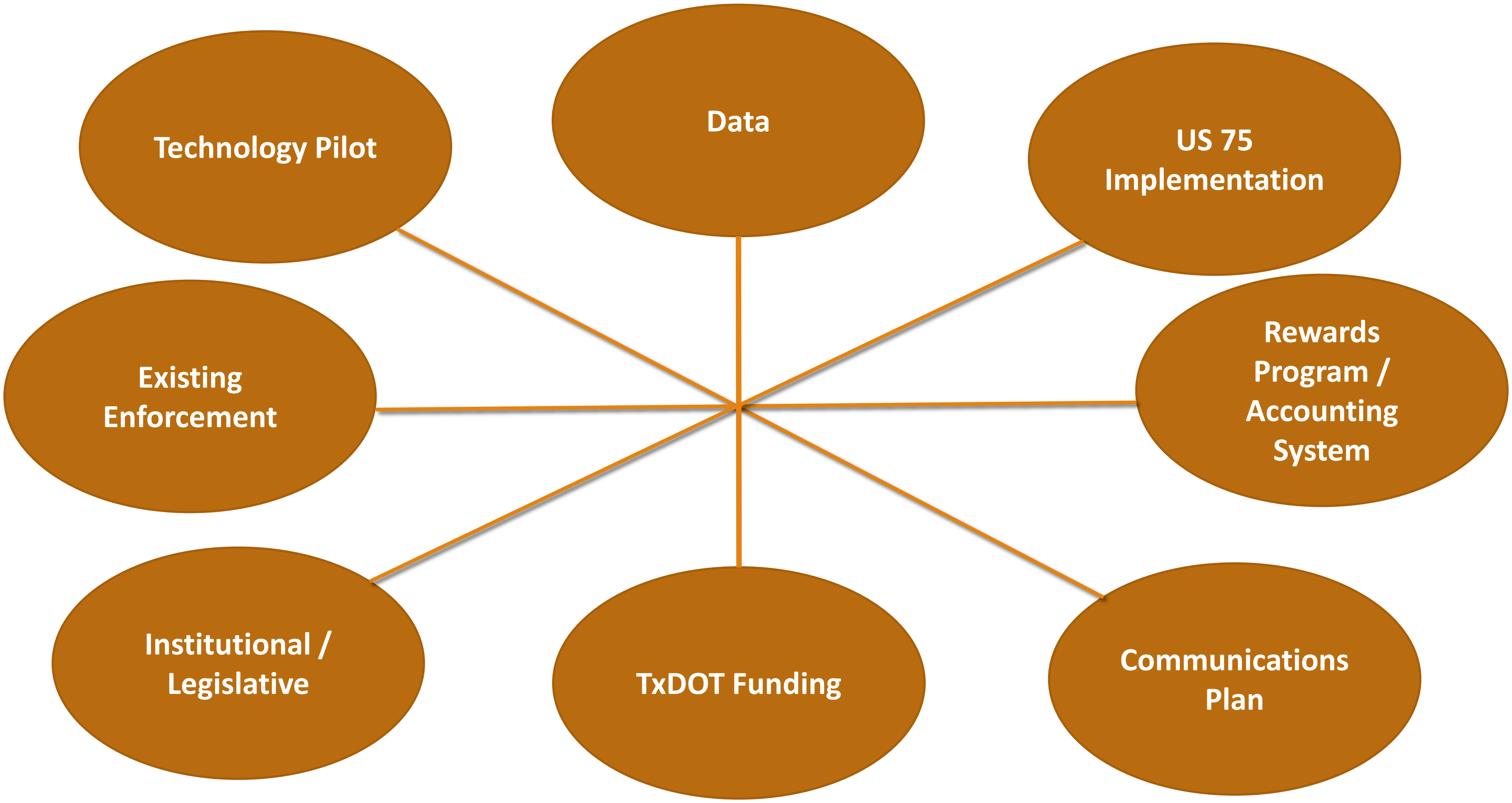
*Does not include indirect benefits such as safety, traffic flow, and legal savings.

Indirect Benefits

Automated Vehicle Occupancy Verification

- Safety
- Reliability/Compliance
- Easy to Use
- Air Quality/Congestion Benefits
- Privacy Protection
- Expandability
- Return on Investment
- Legal/Court

Continue Monitoring through Implementation Process



CARMA Agreement – Data Provisions

Three Documents Govern Data Collection, Use, Storage, and Security

Software as a Service Agreement (NCTCOG/CARMA)

Turnkey System provided by CARMA (includes maintenance and support)
NCTCOG has non-exclusive license
CARMA owns End-User Data (with NCTCOG restrictions)
CARMA may not provide data to third party without express NCTCOG approval

App Terms of Service (CARMA)

Details collection, use, storage, security, and disclosure of information

Data Protection and Access Policy (CARMA)

Details data security procedures

Action Requested

1. RTC approval to pursue occupancy verification technology and pilot testing.
2. RTC approval of $5,000,000 to fill the funding gap for three (3) years of implementation cost (FY19, 20, and 21). Bring back future year requests for FY22 and beyond.
3. Evaluate feasibility and cost savings of another incentive-based program that considers:
    - Data Security
    - US 75 Implementation
    - Rewards Program/Accounting System
    - Communications Plan
    - Institutional/Legislative Items
    - Existing Enforcement
    - Technology Pilot
    - TxDOT Funding in Non-Concession Corridors

   There are no completion schedules for these activities.
4. Direct staff to administratively amend the TIP and other funding, planning, and administrative documents to reflect this action.

Contacts

Natalie Bettger
Senior Program Manager
nbettger@nctcog.org
817-695-9280

Dan Lamers
Senior Program Manager
dlamers@nctcog.org
817-695-9263

IMPLEMENTATION OF REGIONAL VELOWEB TRAIL CORRIDORS

Last-Mile Connections to Transit

Mobility 2045

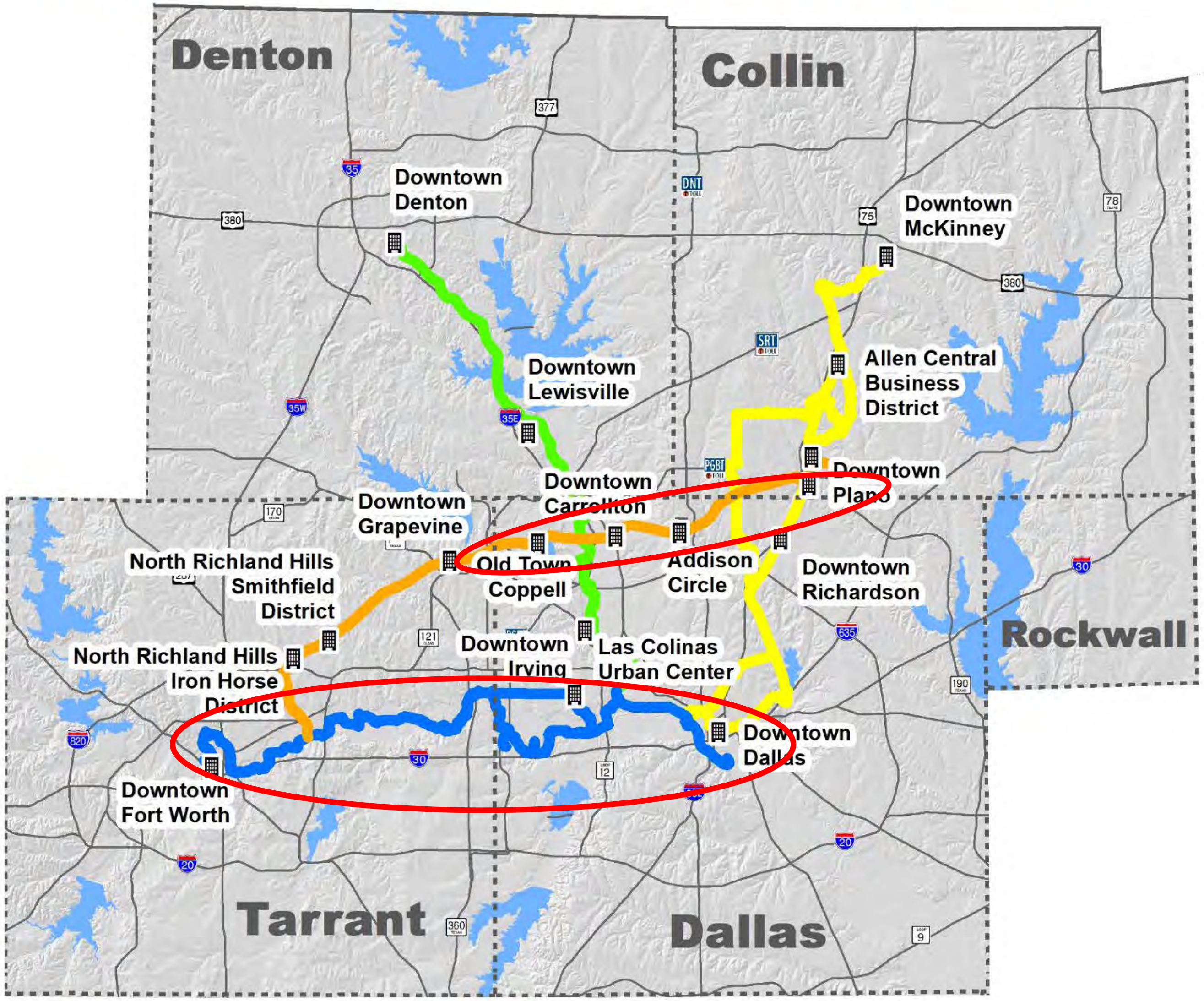
Karla Weaver, AICP

October 11, 2018

Regional Transportation Council

North Central Texas Council of Governments

Highlighted Regional Trail Corridors



Corridor	Existing/Funded	Planned	Total
Fort Worth to Dallas Regional Trail Corridor	52 miles	12 miles	64 miles
Cotton Belt Regional Trail Corridor	16.5 miles	28.5 miles	45 miles
Dallas to McKinney Regional Trail Corridor	67 miles	15 miles	82 miles
Denton to Dallas Regional Trail Corridor	41 miles	13 miles	54 miles

Background

Fort Worth to Dallas Regional Trail

- Five Mayors meet in 2013 and commit to implement the 64-mile Regional Veloweb alignment (24.5 miles need funding)
- 18.5 miles of trail with funding commitments (variety of sources have been identified)
- Funding request today of RTC for final 3.1 miles to complete a continuous 53-mile southern alignment connecting the five cities
  - 1.4 miles from CentrePort TRE Station to Grand Prairie city limits
  - 1.7 miles from Fort Worth city limits to Mike Lewis Trail

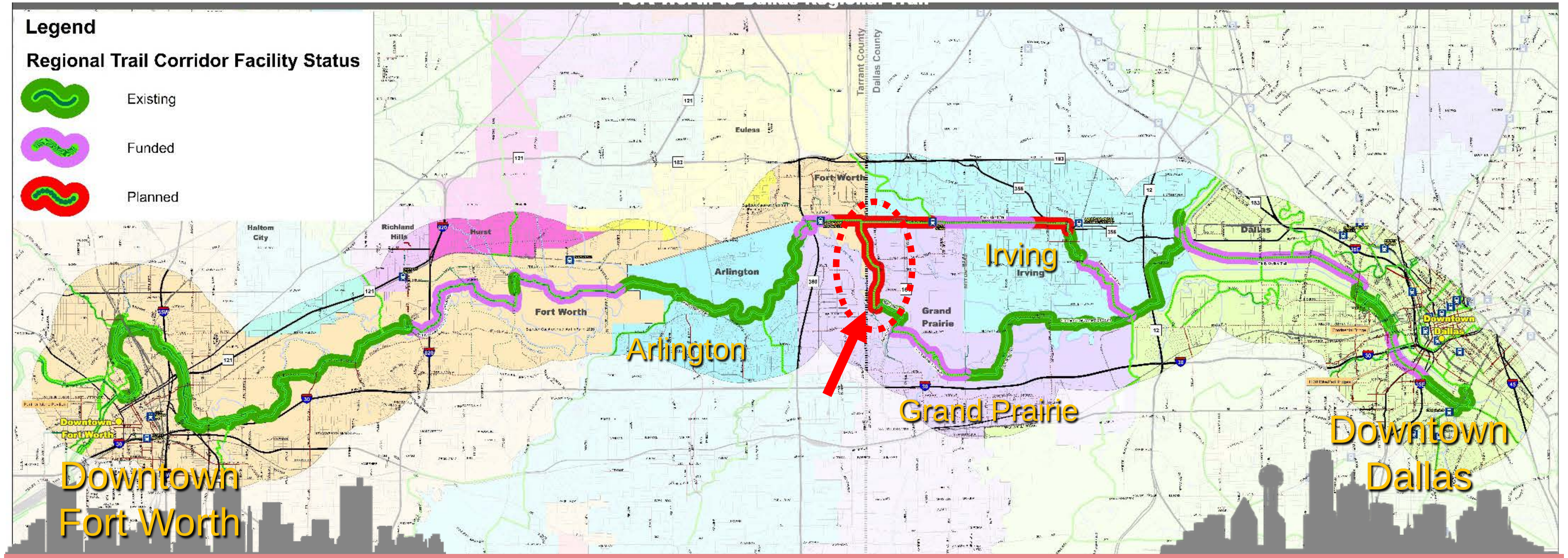
Mayors (from left) Mike Rawlings, Dallas; Robert Cluck, Arlington; Betsy Price, Fort Worth; Ron Jensen, Grand Prairie; and Beth Van Duyne, Irving, met recently to discuss connecting their cities with a regional bicycle-pedestrian trail corridor.

Cotton Belt Regional Trail

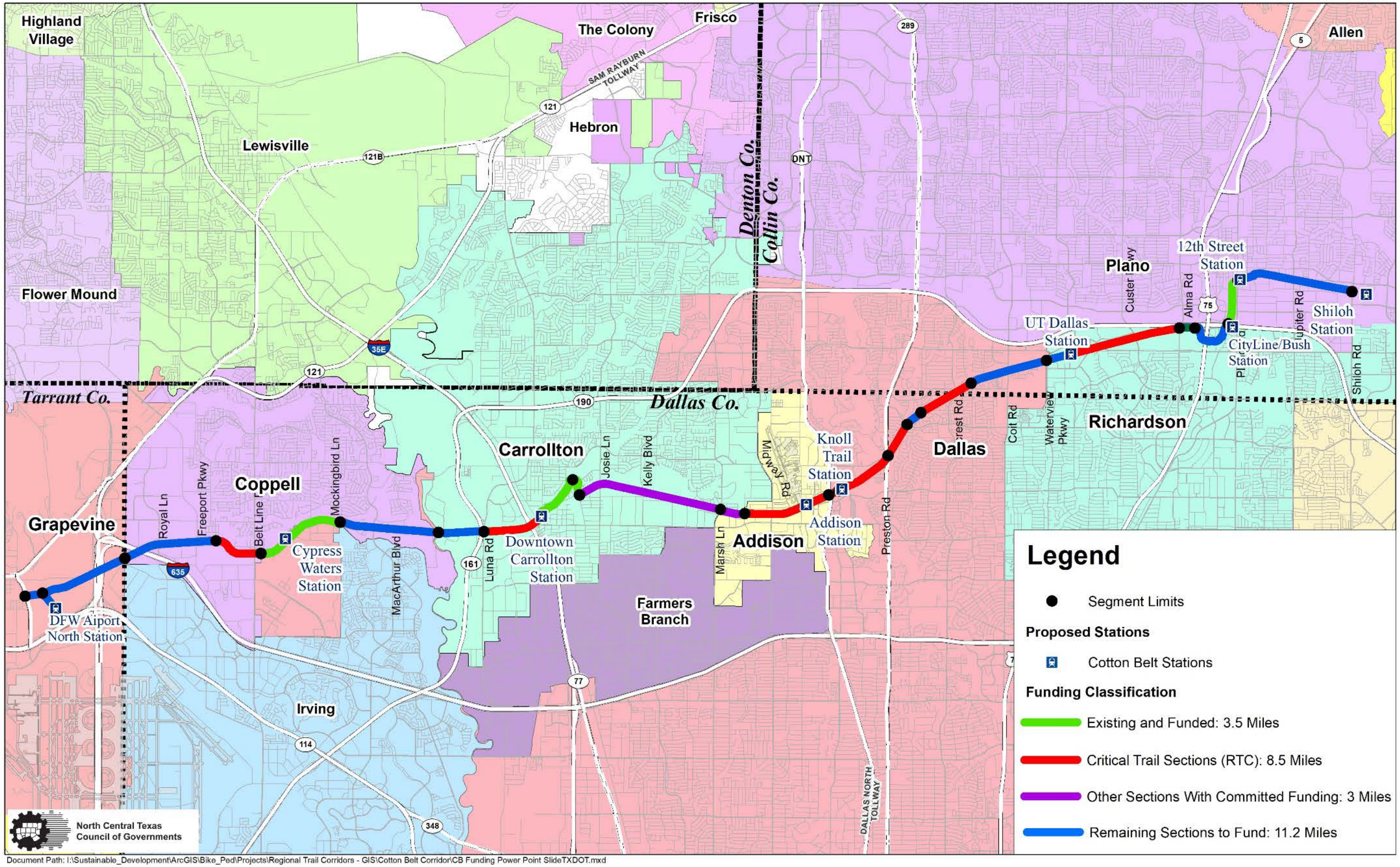
- Cotton Belt rail corridor will environmentally clear the trail
- Funding requested of RTC for trail:
  - Design (26-mile corridor) and
  - Construction (8.5 miles of "critical" trail sections)

Fort Worth To Dallas Regional Veloweb Trail

	Fort Worth	Arlington	Grand Prairie Texas	Irving Texas	City of Dallas	Total
Existing and Funded	**21.9 miles**	**7.4 miles**	**6.4 miles**	**11.9 miles**	**10.4 miles**	**58 miles**
Planned and Unfunded	1.4 miles	0	3.3 miles	1.3	0	6 miles



Cotton Belt Regional Veloweb Trail Sections



Summary of Proposed Funding for Regional Trail Implementation

Regional Trail Corridor	Total	Federal	Local	TDCs
Fort Worth To Dallas Regional Trail (Fort Worth and Grand Prairie Sections)	**$10.0M**	**$9.08M**	**0.92M**	**1.08M**
Cotton Belt Regional Trail (design for entire 26 mi. corridor)	$8.20M	$8.20M	-	1.64M
Cotton Belt Regional Trail (construction of "critical" sections)	$21.27M	$19.46M	$1.81M	2.44M
Cotton Belt Trail Total	**$29.47M**	**$27.66M**	**$1.81M**	**4.08M**
Combined Total Both Corridors	**$39.47M**	**$36.74M**	**$2.73M**	**5.16M**

Schedule for Funding Request

	Date
BPAC Briefing	8/15/18
STTC Information Item	8/24/18
Public Meetings	Early September
RTC Information Item	9/13/18
STTC Action	9/28/18
RTC Action	10/11/18
All Local and State Funding Commitments in Place	December 2018

Requested Action

Action Requested:

- RTC Approval of the $36.74M and the use of 5.16M TDCs as outlined in slide 6 and Electronic Item 5.1.
- Direct staff to administratively amend the TIP and other funding, planning, administrative documents to reflect this action

Contact Information

Karla Weaver, AICP
Senior Program Manager

(817) 608-2376 / kweaver@nctcog.org

Kevin Kokes, AICP
Principal Transportation Planner

(817) 695-9275 / kkokes@nctcog.org

Patricia Rohmer, PE
Project Engineer

(817) 608-2307/ prohmer@nctcog.org

Gabriel Ortiz
Transportation Planner II

(817) 695-9259/ gortiz@nctcog.org

Regional Trail Web Pages

Cotton Belt Regional Trail: nctcog.org/CottonBeltTrail

Fort Worth to Dallas Regional Trail: nctcog.org/FWtoDALtrail

Automated Vehicle Program 2.0

Regional Transportation Council

North Central Texas Council of Governments

Thomas Bamonte
October 11, 2018

Program Rationale: Preparing for Change

1900

1913

5th Avenue, New York City

Project #1: AV Planning

NCTCOG procures planner(s) to assist public entities attracting or facing AV deployments

Planner(s) on retainer

Grant size tied to metric(s)—e.g., population/deployment scale

Total: **Up to $1.5M**, plus NCTCOG administration ($200K approx.)

Funding source: Anticipate federal

Project #2: AV Deployment Cost Coverage

Cover costs associated with public entity hosting an AV deployment

Grants payable upon actual AV deployment

Total: **<u>Up to</u> $10M**, plus NCTCOG administration ($600K approx.)

Funding source: TBD

Project #3: Regional Priority AV Planning Deployments

Fund AV deployments for use cases not served by AV developers

Competitive project selection

Total: **<u>Up to</u> $20M**, plus NCTCOG administration ($900K approx.)

Funding source: Anticipate federal

Voluntary Program: Process

1. Public entities express interest in hosting AV deployments.

2. Respondents eligible for grants.

3. Advance paperwork done to help ensure greatest possible cost coverage.

4. Public entities can join AV 2.0 Program at any time.

Associated Policies: P18-01

1. North Texas will build on its history of transportation innovation to be a leader in the deployment of automated vehicles (AVs) to help achieve the region’s mobility goals.
2. All North Texas communities should have the resources necessary to plan for AV deployments and to build effective partnerships with AV developers when they deploy AVs in a community.
3. The region will make strategic investments in AV services to explore use cases and AV deployments in communities overlooked by AV developers.
4. The AV 2.0 Program will be administered to advance these policies.

Schedule	
STTC Briefing	August 2018
Public Meetings	September 2018
RTC Briefing	September 2018
STTC Action	September 2018
RTC Action	October 2018
TIP Process Complete	April 2019
Funding Available	Late 2019

Requested Actions

1. Approve Automated Vehicle Program 2.0 and associated policies (P18-10).

2. Authorize staff to administratively amend the TIP and other funding, planning, and administrative documents to reflect this action.

Thomas J. Bamonte
@TomBamonte
tbamonte@nctcog.org
469-600-0524

Status Report on Positive Train Control Implementation in North Central Texas

Regional Transportation Council

October 11, 2018

Shannon Stevenson, Program Manager, NCTCOG

Timothy H. McKay, Executive Vice President, Growth/Regional Development, DART

North Central Texas Council of Governments

Background

- Positive Train Control (PTC): complex communications technology designed to make rail safer by preventing collisions and other incidents by automatically detecting and controlling the movement of trains.
- October 16, 2008: Congress passed the Rail Safety Improvement Act of 2008 requiring the installation of PTC technology on a majority of the US Railroad network, including all commuter rail, by December 31, 2018, or apply for an Alternative Schedule by that date.
- Fiscal Year 2014: Regional Transportation Council Provided $25 Million for PTC
  - $12.5 Million to Dallas Area Rapid Transit (DART) for the Trinity Railway Express (TRE)
  - $12.5 to Denton County Transportation Authority (DCTA) for the A-Train
- Limited Contractors: Delays in installation resulting from a limited number of contractors with the expertise to install PTC.

Implementation Status of Commuter Rail in North Central Texas*

Commuter Line	Total Hardware Installed	Onboard (Trains) Hardware Installed	Wayside (Signals) Hardware Installed	All Spectrum Acquired?	Sufficient RSD Initiated?	Employees Trained	On Track to Meet Deadline**?	Status
DCTA's A-train	100%	11/11	121/121	N/A	No	20/50	RSD Request Submitted	✓
TRE[1]	~~52%~~ 100%	~~6/34~~ 17/17	~~30/35~~ 38/38	Yes	No	~~0/80~~ 6/80[2]	~~No request Submitted Yet~~ Substitute Criteria Request Submitted	~~?~~ ✓
Coming Soon								
TEXRail	Expected to be Operational 2019 Will Meet Criteria for Alternative Schedule							✓
Cotton Belt	Expected to be Operational 2022 All Required Technology to be included in RFP							✓

*Source: Federal Railroad Administration as of June 30, 2018
**Deadline to Meet Criteria for Alternative Schedule
RSD – Revenue Service Demonstration

[1] TRE data is current as of October 5, 2018
[2] Adequate staff will be trained to support RSD by October 30, 2018

Implementation Status of Commuter Rail in North Central Texas (TRE Update)

- FRA Deadline – December 31, 2018
- Alternate Schedule
  - Installation of All Hardware Components (100% Completed)
  - Installation of All Communication (October 31, 2018)
  - Installation of Back Office System (October 31, 2018)
  - Adequate staff trained to support Revenue Service Demonstration (RSD) (October 31, 2018)
  - In RSD on at least one segment **OR** met any other criteria established by the FRA, "**Substitute Criteria**"

Implementation Status of Commuter Rail in North Central Texas (TRE Update)

- Activities to be Completed to Comply with Substitute Criteria
  - Critical Feature Validation & Verification — Aug 30, 2018 – Sep 2, 2018
  - Brake Testing — Sep 03, 2018 – Sep 30, 2018
  - Lab Integration Nearest Neighbor — Oct 01, 2018 – Oct 30, 2018
  - WIU Validation & Verification — Sep 14, 2018 – Nov 13, 2018
  - Lab Integration End to End (Cycle 1) — Oct 11, 2018 – Nov 15, 2018
  - Commencement of Field Integration Testing — Nov 15, 2018

Implementation Status of Commuter Rail in North Central Texas (TRE Update)

- Obtain Alternate Schedule
  - Meeting with FRA — Oct 15, 2018 – Oct 19, 2018
  - Develop Alternate Schedule Application — Oct 22, 2018 – Oct 29, 2018
  - Formal Submission of Alternate Schedule — Nov 15, 2018
  - FRA Review of Alternate Schedule — Nov 16, 2018 – Dec 21, 2018
  - FRA Approval of Alternate Schedule — Dec 26, 2018 – Dec 28, 2018

Contact Information

Shannon Stevenson
Program Manager, NCTCOG
sstevenson@nctcog.org
817.608.2304

Timothy H. McKay
Executive Vice President, Growth/Regional Development, DART
tmckay@dart.org
214.749.2926

Performance Measures Target Setting

Regional Transportation Council

October 11, 2018

Regional Performance Planning

Incorporate Required Federal Performance Measures

Support TxDOT Targets as Appropriate

Identify Additional Performance Measures to Support Mobility 2045 and 2019-2022 Transportation Improvement Plan

Federal Measures Target Status

Complete	Rulemaking	Number of Measures	MPO Target Setting Deadline	Reporting Period	Reporting Schedule
✓	Transit Asset Management	**4**	12/27/2017	Annually	Annually
✓	Safety Performance	**5**	2/27/2018	Annually	Annually
	Pavement and Bridge	**6**	11/15/2018	Four-Year Performance Periods	Biennially
	System Performance	**6**	11/15/2018	Four-Year Performance Periods	Biennially

Federal Performance Measures

Pavement and Bridge

Interstate Pavement – Good

Interstate Pavement – Poor

Non-Interstate Pavement – Good

Non-Interstate Pavement – Poor

Bridge Condition – Good

Bridge Condition – Poor

System Performance

Interstate Reliability

Non-Interstate NHS Reliability

Truck Travel Time Reliability Index

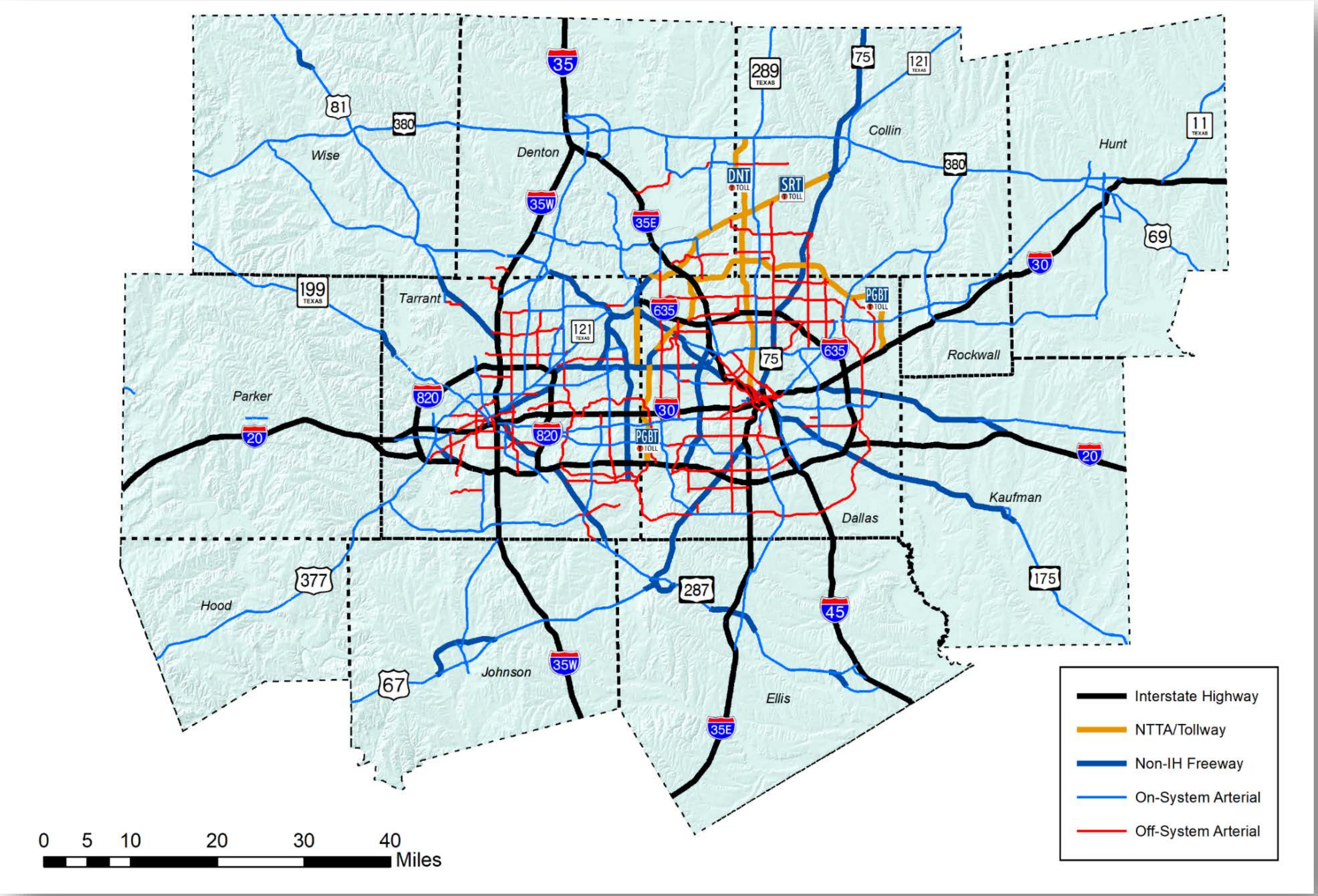
Peak Hour Excessive Delay

Percent Non-SOV Mode Share

On-Road Mobile Source Emissions Reduction

- Nitrogen Oxide (NOx)
- Volatile Organic Compound (VOC)

National Highway System Within MPA



Proposed RTC Position on Pavement Condition Targets

Good

NCTCOG Supports TxDOT Statewide 2022 “Good Pavement Condition” Targets for National Highway System Facilities

Poor

NCTCOG Supports TxDOT Statewide 2022 “Poor Pavement Condition” Targets for National Highway System Facilities

Collaboration with TxDOT to Plan and Program Projects Contributing Toward Accomplishment of Pavement Goals will also Include the Following Action: NCTCOG will Work with Local Governments to Focus on Improvement of National Highway System Off-System Arterials in Poor Condition

Roadway Pavement Condition Targets

DRAFT

Roadway Categories	Total Network	2018 Baseline	2022 Target
STATE of TEXAS			
Good Pavement Condition			
Interstate National Highway System (NHS)	19.19%	66.80%	66.40%
Non-Interstate National Highway System (NHS)	80.81%	54.40%	52.30%
Poor Pavement Condition			
Interstate National Highway System (NHS)	19.19%	0.30%	0.30%
Non-Interstate National Highway System (NHS)	80.81%	13.80%	14.30%
North Central Texas Region			
Interstates (on-system)[1]	25.90%[2]	5.81%[3]	7.99%[3]
Non-Interstate Freeway (on-system)[1]	13.40%[2]	6.76%[3]	8.93%[3]
Toll Roads (off-system)	6.70%[2]	8.43%[3]	9.32%[3]
Arterials (on-system)[1]	30.30%[2]	18.52%[3]	18.39%[3]
Arterials (off-system)	23.80%[2]	73.66%[3]	69.82%[3]

[1] On-system refers to the TxDOT System
[2] Mobility 2045 Plan – 2018 Baseline Network Lane-Miles
[3] Based on 5-year moving average

Proposed RTC Bridge Condition Targets

DRAFT

NCTCOG Supports TxDOT Statewide 2022 "Good/Poor Condition" Targets for National Highway System Bridges

Collaboration with TxDOT to Plan and Program Projects Contributing Toward Accomplishment of Bridge Goals will also Include the Following Action: NCTCOG will Focus on Expedited Programming to Improve National Highway System Bridges in Poor Condition

State of Texas		
Bridges*	2018 Baseline	2022 Target
Good Bridge Condition		
All National Highway System Facilities	**50.63%**	**50.42%**
Poor Bridge Condition		
All National Highway System Facilities	**0.88%**	**0.80%**

*Based on total deck area

Proposed RTC System Performance Targets

DRAFT

Performance Measure		Historical Trend	Baseline (2016/2017)	2020 Target	2022 Target	Target Strategy
Interstate Reliability (% Person Miles Travelled)		Improving	77.3%	78.6%	79.5%	Targets Set to Improve Over Trend
Non-Interstate NHS Reliability (% Person Miles Travelled)		Worsening	71.1%	N/A	71.1%	
Truck Travel Time Reliability Index		Improving	1.74	1.71	1.66	
Peak Hour Excessive Delay (Hours per Capita) *		Worsening	15.5	N/A	16.0	
Percent Non-SOV Mode Share (% Commuter Trips) *		Improving	19.5%	19.9%	20.2%	
On-Road Mobile Source Emissions Reductions (Cumulative)	NOx (kg/day)	Improving	2,410.80	2,892.96	5,062.68	
	VOC (kg/day)	Improving	499.72	599.67	1,079.40	

*Regional Transportation Council and TxDOT Must Agree on a Single Regional Target

Proposed Regional Transportation Council Future Action

DRAFT

Agree to Support TxDOT Statewide Targets for National Highway System Pavement and Bridge Conditions with Focus on:

- The Improvement of Regional National Highway System Off-System Arterial Pavements
- National Highway System Bridges in Poor Condition

Adopt Regional Targets For:

- Interstate Reliability
- Non-Interstate Reliability
- Truck Travel Time Reliability Index
- Peak Hour Excessive Delay
- Percent Non-SOV Mode Share
- Emissions Reductions

Schedule

July 27	STTC Information Item – Performance Measures and Targets
August 9	RTC Information Item – Performance Measures and Targets
August 24	STTC Workshop – Performance Measures and Targets
September 13	RTC Information Item
September 28	STTC Information Item – Draft Targets
October 8, 15, 18	Public Meetings
October 11	**RTC Information Item – Draft Targets**
October 26	STTC Action Item - Recommend Approval of Final Targets
November 8	**RTC Action Item – Approval of Final Targets**
November 15	Target Adoption Deadline

Questions

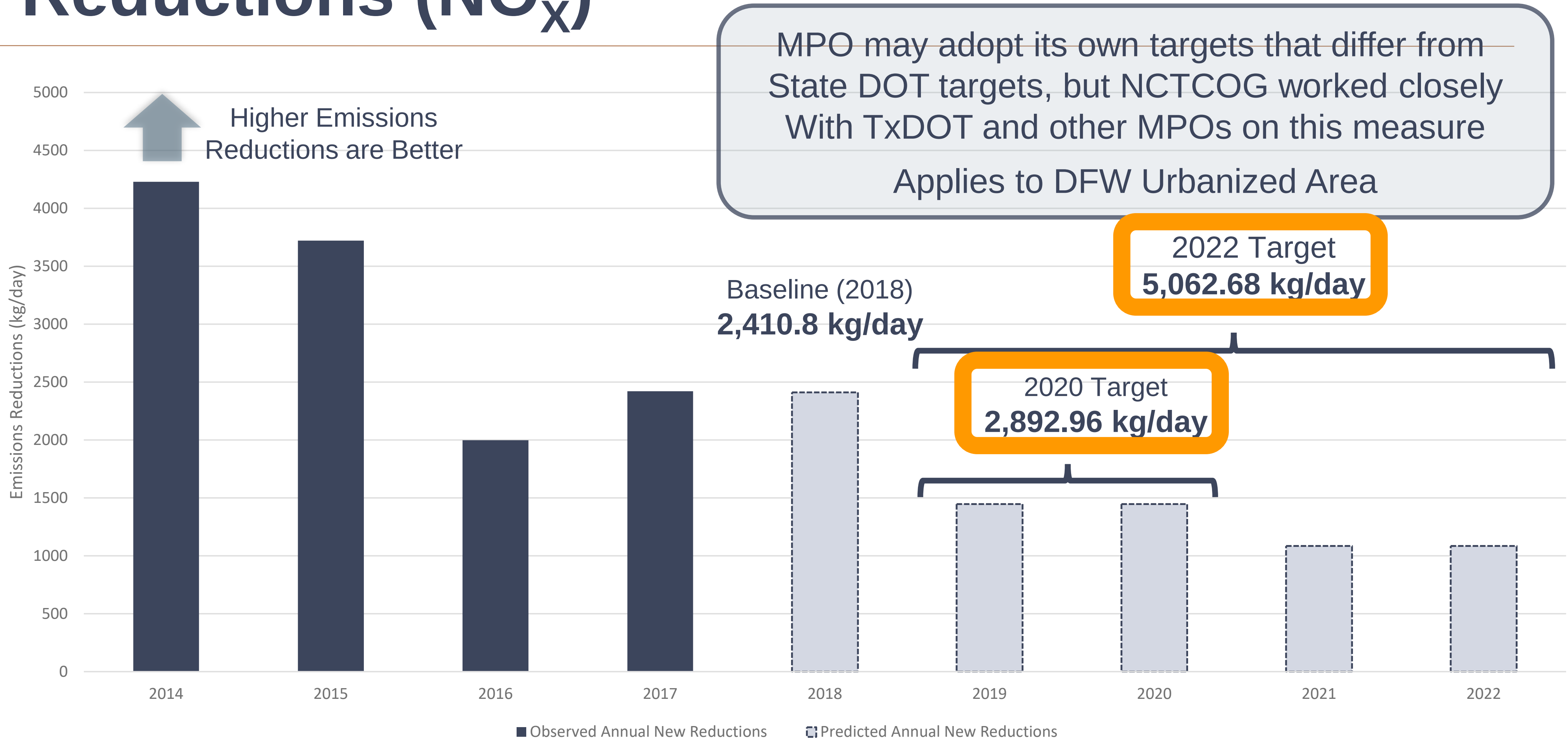
Dan Lamers

Senior Program Manager

dlamers@nctcog.org

(817) 695-9263

On-Road Mobile Source Emissions Reductions (NO_X)

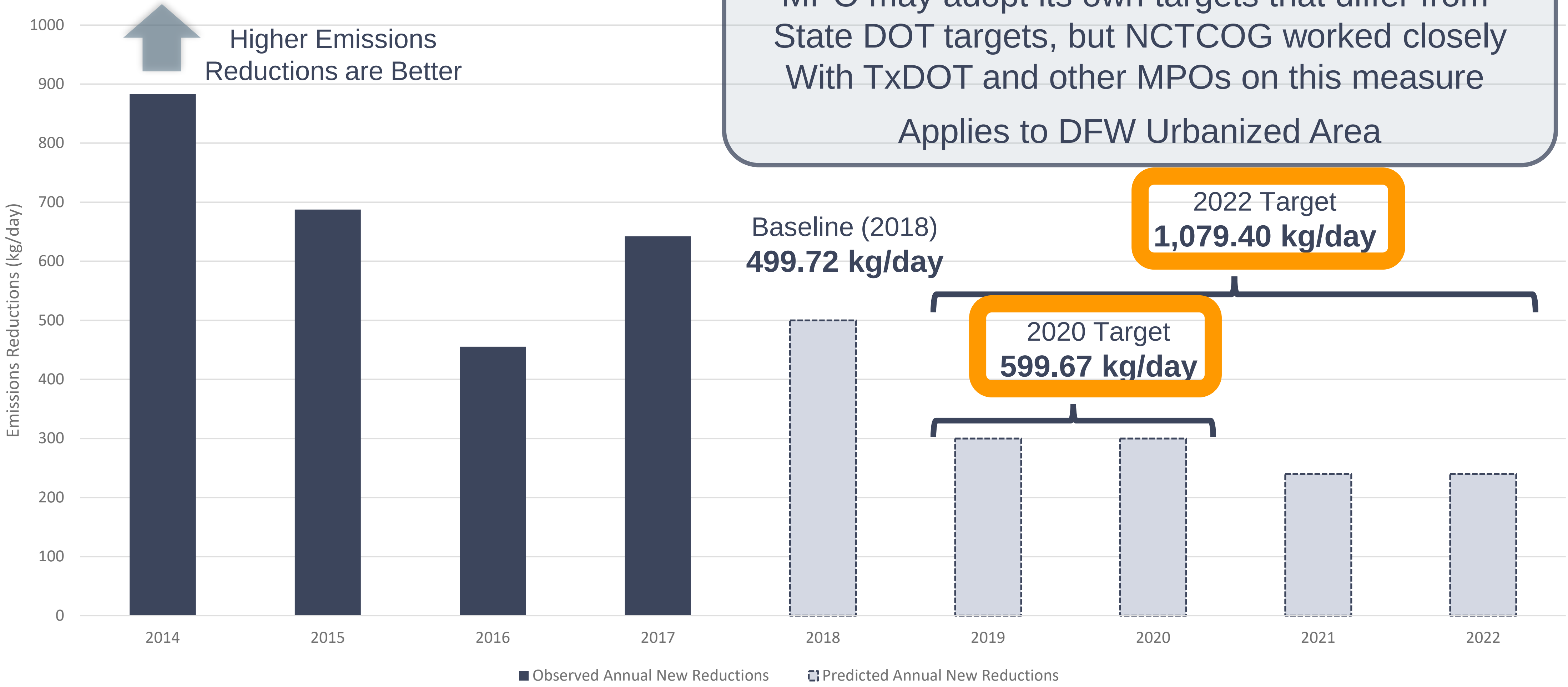


	2014	2015	2016	2017	2018	2019	2020	2021	2022
Observed Annual New Reductions	4,230.22	3,720.74	1,998.06	2,420.93					
Predicted Annual New Reductions					2,410.8	1,446.48	1,446.48	1,084.86	1,084.86

On-Road Mobile Source Emissions Reductions (VOC)

MPO may adopt its own targets that differ from State DOT targets, but NCTCOG worked closely With TxDOT and other MPOs on this measure

Applies to DFW Urbanized Area



	2014	2015	2016	2017	2018	2019	2020	2021	2022
Observed Annual New Reductions	883.10	687.64	455.44	642.22					
Predicted Annual New Reductions					499.72	299.83	299.83	239.87	239.87

2018 Public Participation Plan Update

Regional Transportation Council

October 11, 2018

Amanda Wilson, AICP

North Central Texas Council of Governments

Public Participation Plan

Fulfills basic public involvement requirements established by federal law

Defines public involvement procedures and comment periods

Outlines communications and outreach strategies for informing the public

Describes measures for diversity and inclusiveness

Provides basis for evaluating outreach efforts

Ways We Involve People

Public meetings, online comment opportunities

Website, email and social media

Publications, newsletters

Community events

Speaking opportunities

Media relations

Advertising

@NCTCOGtrans

Proposed Revisions

Revised stakeholder list to reflect new federal requirements

More efficient public input opportunities

Increased emphasis on livestreaming

Updated Language Assistance Plan

Increased weight given to local comments

Refined evaluation measures and reporting

More appealing design and formatting

Schedule

August 9, 2018	RTC Information
August 24, 2018	STTC Information
September 10, 11, 19, 2018	Public meetings
September 10, 2018	Public comment period begins
October 11, 2018	**RTC Information**
October 24, 2018	**Public comment period ends**
October 26, 2018	STTC Action
November 8, 2018	RTC Action

Contacts

Amanda Wilson, AICP
Program Manager
awilson@nctcog.org • 817-695-9284

Kyle Roy
Communications Specialist
kroy@nctcog.org • 817-704-5610

www.nctcog.org/trans/involve

@NCTCOGtrans