

1955 Lakeway Dr., # 260, Lewisville, Texas 75057 972.221.4600 | RideDCTA.net

#### **Board of Directors Regular Meeting**

November 16, 2017 | 3:00 p.m.\*

\*or immediately following Board Work Session scheduled at 1:30 p.m. on November 16, 2017

**CALL TO ORDER** 

PLEDGE OF ALLEGIANCE TO US AND TEXAS FLAGS

INVOCATION

WELCOME AND INTRODUCTION OF VISITORS

AGENCY AWARDS AND RECOGNITIONS

#### 1. CONSENT AGENDA

- a. Approval of Minutes for the Board Work Session and Regular Meeting on October 26, 2017
- b. Approval of Resolution R17-07 to adopt NCTCOG's revised Clean Fleet Policy
- c. Approval of Award of Contract for Tire and Barrel Removal to Reyes Group
- d. Approval of Change Order for Document Imaging with Iron Mountain
- e. Approval of Resolution 17-06 Designating Brandy Pedron as the Public Information Coordinator and Records Manager

#### 2. REGULAR AGENDA

- a. Approval of Award of Contract for Construction of Concrete Flume Repair at Pockrus Page to EPCS Environmental LLC
- b. Discussion and Approval of the Bus Service Changes for August 2017 and January 2018

- Convene Executive Session. The Board may convene the Regular Board Meeting into Closed Executive Session for the following:
  - a. As Authorized by Section 551.071(2) of the Texas Government Code, the Work Session or the Regular Board Meeting may be Convened into Closed Executive Session for the Purpose of Seeking Confidential Legal Advice from the General Counsel on any Agenda Item Listed Herein.
  - b. As Authorized by Texas Government Code Section 551.072 Deliberation regarding Real Property: Discuss acquisition, sale or lease of real property related to long-range service plan within the cities of Denton, Lewisville, Highland Village, or the A-train corridor.
- 4. Reconvene Open Session
  - Reconvene and Take Necessary Action on Items Discussed during Executive Session.
- 5. CHAIR REPORT
  - a. Discussion of Regional Transportation Issues
  - b. Discussion Legislative Issues
    - i. Regional
    - ii. State
    - iii. Federal
- PRESIDENT'S REPORT
  - a. Budget Transfers
  - b. Regional Transportation Issues

#### 7. REPORT ON ITEMS OF COMMUNITY INTEREST

a. Pursuant to Texas Government Section 551.0415 the Board of Directors may report on following items: (1) expression of thanks, congratulations, or condolences; (2) information about holiday schedules; (3) recognition of individuals; (4) reminders about upcoming DCTA and Member City events; (5) information about community events; and (6) announcements involving imminent threat to public health and safety.

#### 8. ADJOURN

Chair - Charles Emery Vice Chair - Vacant

Secretary – Richard Huckaby Treasurer – Dave Kovatch

Members – Skip Kalb, Tom Winterburn, Don Hartman, George A. Campbell, Allen Harris, Carter Wilson, Connie White, Mark Miller, Dianne Costa President – Jim Cline

The Denton County Transportation Authority meeting rooms are wheelchair accessible. Access to the building and special parking are available at the main entrance. Requests for sign interpreters or special services must be received forty-eight (48) hours prior to the meeting time by emailing bpedron@dcta.net or calling Brandy Pedron at 972-221-4600.

This notice was posted on 11/10/2017 at 2:41 PM.
Brandy Pedron, Administrative Assistant



#### **Board of Directors**

#### **Work Session Minutes**

The Board of Directors of the Denton County Transportation Authority convened the work session of the Board of Directors with Charles Emery, Chairman presiding at 1:30 p.m. on October 26, 2017 at 1955 Lakeway Drive, Suite 260, Lewisville, Texas 75057. A quorum was present.

#### **Attendance**

#### **Small Cities**

Skip Kalb Connie White

#### **Large Cities**

Charles Emery, Lewisville, Chairman Dianne Costa, Highland Village Richard Huckaby, Denton, Secretary Tom Winterburn, Corinth Mark Miller, Flower Mound Carter Wilson, Frisco

#### **Denton County Unincorporated**

Don Hartman

#### **Board Members Absent**

Allen Harris, The Colony
George Campbell, Denton County
Unincorporated
Dave Kovatch, Denton County At Large,
Treasurer

#### Legal Counsel

Pete Smith

#### **DCTA Staff**

Jim Cline, President
Anna Mosqueda, Chief Financial Officer
Raymond Suarez, Chief Operating
Officer
Nicole Recker, Vice President,
Marketing and Communications
Kristina Holcomb, Vice President,
Planning and Development

#### Other Attendees

Chrissy Nguyen, Senior Accountant Marisa Perry, Controller Amanda Riddle, Budget Manager Dave Smith Jim Owen Selena Asire, HNTB

Chairman, Charles Emery, called the meeting to order and announced the presence of a quorum.

- 1. Routine Briefing Items
  - a. Staff Briefing on Monthly Financial Reports Anna Mosqueda, Chief Financial Officer and Marisa Perry, Controller reported on the following
    - i. Monthly Financial Statements for September 2017
    - ii. Capital Projects Budget Report for September 2017
    - iii. Monthly Sales Tax Receipts
    - iv. Quarterly Investment Report Q4 FY17
    - v. Quarterly Grants Update Q4 FY17
    - vi. Current Procurement Activities
  - b. Marketing and Communications Nicole Recker, Vice President Marketing and Communications, reported on the following
    - i. New Collateral Overview
    - ii. Quarterly Metrics Report (EOY FY17)
    - iii. September Public Meeting Report
    - iv. August 28 Service Change Recap Report
    - v. Lewisville Western Days Recap Report
    - vi. Monthly Media Report
    - vii. FY 17 End of Year Awards Report
  - c. Strategic Planning and Development Kristina Holcomb, reported on the following
    - i. Departmental Administrative Update
    - ii. Regional Planning Initiatives Update
    - iii. Local Planning Update
    - iv. Business Development and Partnerships Update
    - v. Funding Opportunities Update
    - vi. Land Use Planning & Development
  - d. Capital Projects Raymond Suarez, Chief Operating Officer, gave an update on the following projects
    - i. Flood Damage Repairs Update
    - ii. Positive Train Control
  - e. Staff Briefing on Transit Operations Reports Raymond Suarez, Chief Operating Officer, gave an update on ridership
    - i. Bus and Rail Operations
- 2. Items for Discussion The following was not discussed at this time:
  - a. NCTCOG Mobility Transportation Plan 2045 Update
- 3. Committee Chair Report
  - a. Program Services (10/17/2017) Charles Emery, Interim Chair Jim Cline, President gave an update
  - b. Finance Committee (10/17/2017) Dave Kovatch, Chair Connie White gave an update

- 4. Discussion of Regular Board Meeting Agenda Items (October 26, 2017) There was no discussion on this item
- 5. Convene Executive Session The board did not meet in Executive Session
- 6. Discussion of Future Agenda Items There was no discussion on this item a. Board Member Requests
- 7. ADJOURN at 3:14 p.m.

The minutes of the October 26, 2017 work session meeting of the Board of Directors were passed, and approved by a vote on this 16<sup>th</sup> day of November, 2017.

	Charles Emery, Chairman	
ATTEST		
Richard Huckaby, Secretary		



#### **Board of Directors**

#### **Board Meeting Minutes**

The regular meeting of the Board of Directors of the Denton County Transportation at 3:24 p.m., October 26, 2017 at 1955 Lakeway Drive, Suite 260, Lewisville, Texas 75057. A quorum was present.

#### **Attendance**

#### **Small Cities**

Skip Kalb Connie White

#### **Large Cities**

Charles Emery, Lewisville, Chairman Dianne Costa, Highland Village Richard Huckaby, Denton, Secretary Tom Winterburn, Corinth Mark Miller, Flower Mound Carter Wilson, Frisco

#### **Denton County Unincorporated**

Don Hartman

#### **Board Members Absent**

Allen Harris, The Colony
George Campbell, Denton County
Unincorporated
Dave Kovatch, Denton County At Large,
Treasurer

#### Legal Counsel

Pete Smith

#### **DCTA Staff**

Jim Cline, President
Anna Mosqueda, Chief Financial Officer
Raymond Suarez, Chief Operating
Officer
Nicole Recker, Vice President,
Marketing and Communications
Kristina Holcomb, Vice President,
Planning and Development

#### **Other Attendees**

Joshua Graham, Frisco 1st Alternate Marisa Perry, Controller Amanda Riddle, Budget Manager Dave Smith Jim Owen Selena Asire, HNTB Rhianna Friedman, K Strategies

CALL TO ORDER –Chairman, Charles Emery, called the meeting to order and announced the presence of a quorum.

#### PLEDGE OF ALLEGIANCE TO US AND TEXAS FLAGS - led by Dianne Costa

INVOCATION - led by Charles Emery, Chair

WELCOME AND INTRODUCTION OF VISITORS – Charles Emery, Chairman, welcomed Rhinna Friedman with K Strategies

AGENCY AWARDS AND RECOGNITIONS – None at this time.

#### 1. CONSENT AGENDA

- a. Approval of Minutes for the Board Work Session and Regular Meeting on September 28, 2017
- b. Acceptance of Monthly Financial Statements September 2017
- c. Acceptance of Quarterly Investment Report Q4 FY17
- d. Approve Award to Goolsbee Tire Service, Inc. for the Purchase of New and Recapped Tires
- e. Authorize the President to Execute Amendment No. 2 to Task Order 3 for the Lewisville Hike and Bike Trail Project
  - Motion to approve the Consent Agenda items a e was made by Dianne Costa. The motion was seconded by Skip Kalb. Motion passed unanimously.

#### 2. REGULAR AGENDA

- a. Approval of Resolution 17-05 adopting Annual Investment Policy for FY2018
  - Motion to approve Resolution 17-05 was made by Connie White. The motion was seconded by Skip Kalb. Motion passed unanimously.

#### 3. CONVENE EXECUTIVE SESSION - convened at 3:31 p.m.

a. As Authorized by Section 551.072 of the Texas Government Code regarding Real Property, the Regular Board Meeting convened into Closed Executive Session for the Purpose of Discussion of Acquisitions, Sale or Lease of real property related to long range service plan within the cities of Denton, Lewisville, Highland Village, or the A-train corridor. Subject matter of deliberation: Board received briefing from staff regarding status of project acquisitions.

#### 4. RECONVENE OPEN SESSION – reconvened at 3:47

- a. Reconvene and Take Necessary Action on Items Discussed during Executive Session
  - No action was taken

#### 5. CHAIR REPORT - Charles Emery, Chairman, gave updates on the following

- a. Discussion of Regional Transportation Issues
- b. Discussion Legislative Issues
  - Regional
  - State
  - Federal

- 6. PRESIDENT'S REPORT Jim Cline, President, provided information on the following items
  - a. Budget Transfers
  - b. Regional Transportation Issues
- 7. REPORT ON ITEMS OF COMMUNITY INTEREST there was none at this time
  - a. Pursuant to Texas Government Section 551.0415 the Board of Directors may report on following items: (1) expression of thanks, congratulations, or condolences; (2) information about holiday schedules; (3) recognition of individuals; (4) reminders about upcoming DCTA and Member City events; (5) information about community events; and (6) announcements involving imminent threat to public health and safety.
- 8. ADJOURN Adjourned at 3:53 PM

The minutes of	f the	October	26,	2017	regular	meeting	of the	Board	of	Directors	were
passed, and ap	prove	ed by a v	ote/	on this	s 16 <sup>th</sup> da	y of Nove	ember,	2017.			

	Charles Emery, Chairman
ATTEST	
Richard Huckaby, Secretary	



Board of Directors Memo

November 16, 2017

Subject: RM 1(b) Approval of Resolution R17-07 to adopt NCTCOG's Revised Clean Fleet Policy

Background

In 2000, the Regional Transportation Council (RTC) adopted a Clean Vehicle Policy. The policy was amended in 2005 and adopted by DCTA in 2006. This comprehensive policy covers ways fleets can have a positive impact on air quality through vehicle acquisition, maintenance, operations, and compliance verification.

On December 11, 2014, the RTC approved a resolution supporting the adoption and implementation of a revised Clean Fleet Policy by entities with fleet operations in the nonattainment area. The revised policy outlines goals and provides workable, cost-effective solutions to reduce emissions from local fleets and support regional efforts to attain federal air quality standards.

As of October 2017, 64 entities have adopted the revised Clean Fleet Policy. Adoption ensures eligibility for clean vehicle funding made available through the RTC and fleet recognition from the Dallas-Fort Worth Clean Cities coalition. The Clean Fleet Policy is also a part of the Metropolitan Transportation Plan Policy bundle initiative, which allows for an offset of local funds in federal transportation projects.

#### **Identified Need**

Adopt and implement the 2014 revised Clean Fleet Vehicle Policy.

#### **Financial Impact**

The adoption of the Clean Fleet Policy ensures eligibility for clean vehicle funding made available through the RTC. As part of the Metropolitan Transportation Plan Policy bundle initiative, it also provides the opportunity for an offset of local funds in federal transportation projects.

#### Recommendation

Staff recommends the DCTA Board of Directors to approve Resolution 17-07 adopting and implementing the Clean Fleet Policy.

Submitted by:

Mignelle Bloomer, AVP Bus Operations & Maintenance

Final Review:

Raymond Suarez, COO

Approval:

James C. Cline, Jr., P.E.

President

#### DENTON COUNTY TRANSPORTATION AUTHORITY RESOLUTION NO. 17-07

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE DENTON COUNTY TRANSPORTATION AUTHORITY (DCTA) ADOPTING AND IMPLEMENTING THE REVISED CLEAN FLEET VEHICLE POLICY TO IMPROVE AIR QUALITY WITHIN THE DCTA; PROVIDING A REPEALING CLAUSE; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the North Central Texas Council of Governments (NCTCOG) has been designated as the Metropolitan Planning Organization (MPO) for the Dallas-Fort Worth (DFW) Metropolitan Area by the Governor of Texas and in accordance with federal law; and

**WHEREAS**, the Regional Transportation Council (RTC), comprised primarily of local elected officials, is the regional transportation policy body associated with NCTCOG and has been and continues to be the regional forum for cooperative decisions on transportation; and

**WHEREAS**, NCTCOG has been designated as a Clean Cities Coalition for the DFW region by the US Department of Energy in accordance with federal law and the NCTCOG Executive Board authorized NCTCOG to serve as the host organization for the DFW Clean Cities (DFWCC) Coalition and its efforts; and

**WHEREAS**, the U.S. Environmental Protection Agency (EPA) has designated the DFW area as a nonattainment area for the pollutant ozone, and air quality impacts the public health of the entire region; and

WHEREAS, emissions inventories from the Texas Commission on Environmental Quality (TCEQ) indicate that in 2012, approximately 76 percent of the nitrogen oxides (NO<sub>X</sub>) emissions and 25 percent of the volatile organic compounds (VOC) emissions in the DFW ozone nonattainment area are attributable to mobile sources; and

WHEREAS, the RTC is responsible for transportation conformity; and the Clean Air Act Amendments of 1990 require that transportation plans and improvement programs in air quality nonattainment areas conform to the adopted State Implementation Plan (SIP); and

**WHEREAS**, the RTC has adopted a resolution supporting the adoption and implementation of a Clean Fleet Policy by organizations with fleet operations in the DFW area; and reserves all future vehicle funding for entities that adopt and comply with a policy consistent with the provisions outlined below; and

**WHEREAS**, the Denton County Transportation Authority (DTCA) will set goals and provide workable, cost-effective solutions to improve air quality and reduce petroleum consumption in the DFW area, and implement those measures as practicable.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE DENTON COUNTY TRANSPORTATION AUTHORITY, THAT:

**SECTION 1.** DCTA will reduce emissions from fleet activities by performing the following actions as practicable:

- 1.1 Implement an idle-reduction policy/standard operating procedure (SOP) that applies to all of the entity's vehicles and equipment, except where exempted as determined by <adopting entity>; communicate idle-reduction expectations to staff, vendors and visitors; and utilize idle-reduction technology.
- 1.2 Maximize use of vehicles and equipment with the lowest emissions wherever possible.
- 1.3 Ensure all conversions are EPA and/or California Air Resources Board (CARB) certified; ensure that aftermarket technologies are EPA and/or CARB verified, or are listed as an emerging technology by the EPA or a state environmental agency; and both conversions and aftermarket technologies are compatible with Texas Low Emission Diesel Program (TxLED) requirements.
- 1.4 Establish a plan to modify non-essential fleet activities on high ozone days to reduce air quality impacts.
- 1.5 Implement vehicle and equipment disposal strategies which minimize negative impacts on air quality.
- 1.6 Implement vehicle and equipment emissions inspection practices which meet or surpass the standards required by statute, including prompt resolution of any illuminated malfunction indicator lamp (MIL).

**SECTION 2.** DCTA will reduce overall fuel consumption, particularly the use of conventional petroleum fuels, by performing the following actions as practicable:

- 2.1 Pursue low-emission vehicles and equipment for acquisition, with an emphasis on alternative fuel, advanced technology, and/or Smartway<sup>SM</sup> certified vehicles and equipment.
- 2.2 Improve overall fleet fuel efficiency.
- 2.3 Establish practices to reduce vehicle miles traveled, passenger miles traveled, engine hours, and/or ton miles traveled, as appropriate.

**SECTION 3.** DCTA will partner with the NCTCOG and DFWCC by performing the following actions as practicable:

3.1 Maintain membership and active participation in DFWCC and submit timely Clean Fleet Policy reporting.

- 3.2 Evaluate and consider participation in programs to test/commercialize/demonstrate new technologies to improve efficiency, reduce emissions, and/or increase fuel efficiency.
- 3.3 Pursue activities which support peer fleets' efforts to implement fuel- or emissions-reducing activities by sharing and maximizing resources.
- 3.4 Encourage fleet activities which minimize water, solid waste, or other environmental impacts of fleet activities, as appropriate.

**SECTION 4.** DCTA will ensure drivers/operators and fleet personnel are familiar with air quality and petroleum reduction goals by performing the following actions as practicable:

- 4.1 Provide in-house training and/or attending training administered by NCTCOG for fleet personnel and other staff involved in fleet decisions to review policy elements and provide recommendations for achieving objectives.
- 4.2 Consider other mechanisms to increase understanding and awareness among fleet personnel and others.

**SECTION 5.** DCTA acknowledges that adoption of the Clean Fleet Policy, adoption of an idle reduction policy/SOP as outlined in section 1.1, submittal of both policies, and submittal of Clean Fleet Policy reporting is required to be eligible for future clean fleet funding from the RTC, and may be considered when determining other funding actions. The extent of Clean Fleet Policy implementation, as documented through reporting, will also be a factor in receiving DFWCC fleet recognition.

**SECTION 6.** That all provisions of the resolutions of the Board of Directors of the DCTA in conflict with the provisions of this Resolution be, and the same are hereby, repealed, and all other provisions not in conflict with the provisions of this Resolution shall remain in full force and effect.

**SECTION 7.** This Resolution shall become effective immediately upon its passage and approval and replaces the prior DCTA Clean Fleet Vehicle Policy.

DULY PASSED AND APPROVED BY THE BOARD OF DIRECTORS OF THE DENTON COUNTY TRANSPORTATION AUTHORITY THE 16TH DAY OF NOVEMBER, 2017.

APPROVED:		
Charles Emery,	, Chairman	

ATTEST:
Richard Huckaby, Secretary

Peter & Smith

APPROVED AS TO FORM:

Peter G. Smith, General Counsel (PGS:11-7-17:95.93110)

November 16, 2017

Item: 1(c) Approve Award of Tire and Barrel Removal to EPCS Environmental LLC

#### **Background**

The approximately 49 acres immediately adjacent to the Rail O&M facility is littered with construction debris, abandoned tires and barrels. For safety and aesthetic reasons, DCTA staff has initiated a project to remove the tires and barrels, to go hand-in-hand with the subsurface evaluation.

A request for bids was released on October 4th, on BidSync for the Tire and Barrel Removal. Thirty (30) suppliers viewed the documents.

On November 1, 2017 DCTA received three (3) bids in response to our RFB:

- 1. M&M Protection
- 2. Eagle Remediation and Demolition Services
- 3. EPCS Environmental LLC

#### **Identified Need**

The tires and barrels represent a safety hazard and are the most objectionable surface materials on the property. We have received an EPA grant to investigate sub-surface contamination, but removal of the surface debris is DCTA's responsibility as part of the grant.

#### **Financial Impact**

The project costs are within the project budget and will be paid from the operating budget. Costs for the tire and barrel removal is \$73,000.

#### Recommendation

Staff recommends the Board approve the award to EPCS Environmental LLC and authorize the President to execute a contract.

Submitted by:

Athena Forrester, CPPO, CPPB,

**AVP of Procurement** 

Final Review:

Raymond Suarez, SOO

Approval:

James C. Cline, Jr., President

November 16, 2017

Item: 1(d) Approve Change Order to Iron Mountain

#### Background

DCTA is in possession of several hundred thousand paper documents generated by the planning, engineering and construction of the A-Train and other facilities. The volume of records has outgrown the file storage room at the Rail Facility and has spilled over into training rooms and other spaces. Many of these documents must be retained for as long as 20 years. The original proposal was less than \$25,000, based on an estimate from the vendor. The number of records exceeds their original estimate and will require a change order that will increase the cost in excess of \$25,000.

#### **Identified Need**

The storage location at the rail facility has reached capacity. The documents will be scanned and stored at an off-site facility in Dallas. Staff can access the documents via the on-line system and the hard copy files can be retrieved if needed. The documents related to the construction and modification of the rail and facility are considered permanent records per the Office of the Attorney General.

#### **Financial Impact**

The original agreement was executed in the amount of \$23,742.69, which was based on an estimate of number of records. The number of records has increased and additional funds are needed. The additional funds needed are \$5,000. Which will bring the total to \$28,742.69. These funds are within budget and will be paid from the capital project fund. The monthly storage fees will be paid from the operating budget.

#### Recommendation

Staff recommends the Board approve the change order to the agreement with Iron Mountain and authorize the President to execute.

Submitted by:

Athena Forrester, CPPO, CPPB,

AVP of Procurement

Final Review:

Raymond Suarez, CO

Approval:

lames C. Cline, Jr., President



#### **Board of Directors Memo**

November 16, 2017

Subject: RM 1(e) Approval Resolution 17-06 Designating Brandy Pedron as the Public Information Coordinator and Records Manager

Due to the reassignment of duties from Rusty Comer to Brandy Pedron, Resolution 17-06 Designating Brandy Pedron as the Public Information Coordinator and Records Manager for DCTA is presented to the Board of Directors for approval.

Submitted by:

Brandy Pedron, Administrative Assistant

Approval:

James C. Cline, Jr., P.E.,

President

#### DENTON COUNTY TRANSPORTATION AUTHORITY RESOLUTION NO. 17-06

A RESOLUTION OF THE BOARD OF DIRECTORS OF THE DENTON COUNTY TRANSPORTATION AUTHORITY ("DCTA") DESIGNATING BRANDY L. PEDRON AS THE PUBLIC INFORMATION COORDINATOR AND RECORDS MANAGER; PROVIDING A REPEALING CLAUSE; AND PROVIDING AN EFFECTIVE DATE.

**WHEREAS**, Section 552.012 of the Texas Government Code, as added by Texas Senate Bill 286, in the Texas 79<sup>th</sup> Regular Legislative Session, effective January 1, 2006, requires public officials and/or the public information coordinator to complete one (1) to two (2) hours of training on the Public Information Act;

WHEREAS, the Board of Directors of the DCTA desires to appoint Brandy L. Pedron as the public information coordinator pursuant to Section 552.012 of the Texas Government Code; and

**WHEREAS**, the Board of Directors of the DCTA also desires to appoint Brandy L. Pedron as the records manager for DCTA.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF DIRECTORS OF THE DENTON COUNTY TRANSPORTATION AUTHORITY THAT:

**SECTION 1.** The Board of Directors of the DCTA hereby designates Brandy L. Pedron as the public information coordinator and as the records manager.

**SECTION 2.** That the provisions of Resolution No. 92-06 of the DCTA in conflict with the provisions of this Resolution be, and the same are hereby, repealed.

**SECTION 3.** This Resolution shall be effective immediately upon its passage

DULY PASSED AND APPROVED BY THE BOARD OF DIRECTORS OF THE DENTON COUNTY TRANSPORTATION AUTHORITY ON THIS \_\_\_\_\_ DAY OF NOVEMBER, 2017.

	APPROVED:
	Charles Emery, Chairman
APPROVED AS TO FORM:	ATTEST:
Peter G. Smith, General Counsel	Richard Huckaby, Secretary



November 16, 2017

Item: 2(a) Approve Award of Construction of Concrete Flume Repair at Pockrus Page to Reyes Group

#### Background

The DCTA Concrete Flume Repairs Project consists of earthwork, pre-cast concrete box culverts and concrete construction necessary for the refurbishment and replacement of sections of an existing open concrete flume along the east side of the Denton Katy Trail Right-of-Way along the side of an existing DCTA rail line between Pockrus Page Rd. and Spc. Ernest W. Dallas Jr. Veterans Memorial Park in southeast Denton, Texas. There is security fencing along each side of the Right-of-Way along the Project Site.

A request for bids was released on September 7th, on BidSync for the concrete repairs to the concrete flume at Pockrus Page. Fifty-one (51) suppliers viewed the documents.

On October 11, 2017 DCTA received two (2) bids in response to our RFB:

- 1. Reyes Group
- 2. MHB Construction, Inc.

#### **Identified Need**

The May, 2015 flooding caused a 290' section of drainage flume, just south of Pockrus Page, to fail. In addition, 320' of flume wall was left unstable. The repair work is complicated by its proximity to the rail and difficult access. FEMA has approved repair of the entire 610'.

#### **Financial Impact**

The project costs are within the project budget and will be reimbursed by FEMA at 75%. The cost of the project is \$620,002

#### Recommendation

Staff recommends the Board approve the award to Reyes Group and authorize the President to execute a contract.

Submitted by:

Athena Forrester, CPPO, CPPB,

AVP of Procurement

Final Review:

Raymond Suarez, COO

Approval:

James C. Cline, Jr., President



#### **Board of Directors Memo**

November 16, 2017

Subject: RM 2b Discussion and Approval of the Bus Service Changes for August 2017 and January 2018

#### **Background**

In August 2017, a series of service changes were implemented. Generally, service recommendations are brought to the Board for their approval prior to implementation. Due to timing, this was not feasible for the August 2017 service changes, which were in response to the University of North Texas' (UNT) directive to implement service changes for the start of the Fall 2017 Semester, which was less than six (6) weeks prior to the required implementation date.

The requested UNT service changes were in response to the University's adoption of a new Transportation Long Range Plan, which seeks to make the campus more pedestrian friendly by minimizing the number of large buses operating on campus, creating two transfer points on campus at Fouts Field and Union Circle, and implementation of a campus circulator. These changes impacted not only the existing UNT routes, but also Denton Connect Routes 7 and 8.

The service changes were approved by UNT leadership in mid-July and presented to Program Services Committee and Board at their August 2017 meetings. Due to timing, the service changes were initially implemented as a pilot to allow for public and student feedback and to allow for the Title VI analysis to be conducted.

In addition to the UNT and Denton Connect service changes, the Highland Village services were recommended to transition from pilot to permanent service. Two additional service changes are recommended for implementation in January 2018. First, is improving the frequency on Route 4 as outlined in the Denton Comprehensive Operational Analysis. Second, is a slight extension of Route 6 to serve Discovery Park.

In order to solicit stakeholder and public feedback on the service changes, DCTA held a series of public meetings, published an online video, and conducted outreach via email, Facebook, Twitter, and local media outlets. A copy of the Public Engagement Wrap Up and online presentation summarizing the service changes are attached for reference.

Based on a comprehensive analysis, the proposed service changes were determined to have no disparate impact or disproportionate burden under Title VI.

#### Recommended Service Changes

#### University of North Texas (UNT)

The service recommendations sought to streamline the existing UNT services, and support the University's goal to remove large bus traffic from campus. Attached is a side-by-side comparison of the existing and revised routes. Some key changes include:

- Route pulse point transitioned from existing location (i.e., Highland Street) to either Fouts Field or Union Circle.
- Service frequencies were adjusted based on ridership and unproductive portions of routes were eliminated.
- Sam Bass route transitioned from two (2) to one (1) bus. Recommendation this be the last school year to run Sam Bass due to low ridership. The route would be eliminated in August 2018, but this area would continue to be served via Denton Connect Route 1.

#### **Denton Connect Bus Service**

- Routes 7 & 8 were rerouted from Highland Street to Eagle in support of UNT's Transportation Master Plan. This change was implemented in August 2017 in conjunction with the UNT service changes.
- In January 2018, the recommendation is to increase the frequency on Route 4 from 60 minutes all day to 30 minutes during peak and 60 minutes in off-peak, as recommended by the Denton Comprehensive Analysis.
- Also in January 2018, staff is recommending extending Route 6 to serve Discovery Park. This extension will provide a one seat ride from the Downtown Denton Transit Center to Discovery Park with minimal impact to the current schedule and cost of service. It is also anticipated that this change will help address overcrowding on UNT's Discovery Park shuttle, and potentially increasing the ridership on Route 6 and the A-train by providing a more direct connection.

#### Highland Village Bus Service

In April 2016, DCTA implemented a pilot project in Highland Village to explore innovative strategies to meet mobility needs and to provide additional mobility options within Highland Village and North Lewisville. The existing service (RSVP) was replaced with a combination of services, including: Highland Village Connect Shuttle, Highland Village On-Demand, and subsidized trip through Uber. These services have been in effect for over a year, and DCTA has seen a significant growth in ridership in Highland Village. As a result, the service is being transitioned from a pilot project to permanent service. In addition, "flag stop" service was implemented on the Highland Village Connect Shuttle in August 2018.

#### **Financial Impact**

The recommended service modifications for Connect bus service in Highland Village, Denton, and UNT are included in the FY2018 Budget, and DCTA can meet the increased fleet demand within the existing fleet replacement program.

#### Recommendation

Staff recommends the board approve the service changes for August 2017 and January 2018 as outlined.

Submitted by:

Michelle/Bloomer, AVP Bus Operations & Maintenance

Final Review:

Raymond Suarez Chief Operating Officer

Approval:

ames C. Cline, Jr., P.E., President



#### September 2017 Public Engagement Wrap Up

#### **Engagement Area:**

Cities of Highland Village, Lewisville and Denton

#### **Engagement Objective:**

Solicit public input on the following topics: FY17 Program of Projects, Brownfield Remediation Project, Proposed Regional Fare Changes, FY18 Budget Overview, Promotional Free Fare Zones, Transit Tracker System, UNT Service Changes, Highland Village Connect Shuttle Flag Stops, and Denton Connect Route 7 and 8 Changes.

#### **Engagement Timeframe:**

August 28 - September 29, 2017

# TOPICS: Proposed Regional Sinc Changes, Program of Procede By 148 Budges, Strate Changes HIGHLAND VILLAGE CITY HALL TUESDAY, SEPTEMBER 12, 2017, 6:00PM - 7:30PM 1000 HIGHLAND VILLAGE ROAD, HIGHLAND VILLAGE, TOPICAL HIGHLAND V

#### **Public Meetings**

A series of open house meetings were held in DCTA's three member cities in September 2017. The meetings were open house style to give the attendees flexibility in their time of attendance and offered people time to peruse the proposals at their own pace. An online presentation and a dedicated webpage showcasing the information presented at the three meetings was hosted on RideDCTA.net with an available comment form.



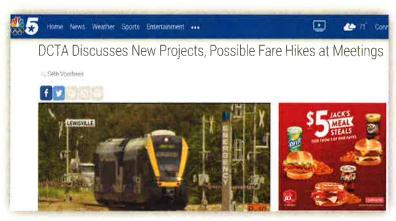
#### **Media/Community Relations**

Meeting notices were posted on RideDCTA.net, Facebook and Twitter. Notices were posted on the vehicles. DCTA sent e-blasts to targeted audience segments. In addition, DCTA developed and distributed a news release to local media outlets to garner coverage.

#### **Engagement Statistics**

- Highland Village Open House
  - Highland Village City Hall
    - In conjunction with the regularly scheduled city council meeting and the boards and commissions meet and greet event.
  - Tuesday, September 12
  - o 6 pm 7:30
  - o 8 individual interactions
- Lewisville Open House
  - Old Town City Hall
    - In conjunction with the regularly scheduled city council meeting.
  - Monday, September 18
  - 5:30 pm 7 pm
  - 18 individual interactions
- Denton Open House
  - DDTC Lobby
  - o Thursday, September 21
  - o 5:30 pm 7 pm
  - I I individual interactions
- Online Video
  - Monday, August 28 –
     Friday, September 29
  - RideDCTA.net
  - 494 Total Video Views
  - 404 Unique Page Views
- Media Relations
  - I4 articles secured
  - o 2,770,000 media impressions/reach
  - o \$41,000 total publicity value
- Email Marketing
  - o 2,589 total email opens
  - 15% open rate (average from two alerts)
  - 1% click-through rate (average from two alerts)
- Facebook
  - 3,965 total people reached and 31 total engagements
- Twitter
  - 13,403 total impressions and 61 total engagements





#### Comments

#### Highland Village Open House

 How will the bike trail be routed around the Highland Village Lewisville Lake Station?

#### Lewisville Open House

- o I would like additional information on the rail trail construction.
- O What does the master plan for the trails in the area look like?
- o I am interested in service from the Old Town station to Plano near Legacy.

#### Denton Open House

- o I would like expanded Saturday and Sunday service.
- o I think that there should be a stop on Mulberry right before Carroll.
- What is DCTA doing to improve the safety along the hike and bike trail?
- There should be a shelter at Fouts Field for all the students.
- The Route 4 should go back to the old routing along University Drive so the Redwood/University stop could be added back, there is limited pedestrian access to the stops further south.
- You should hold your public meetings at Our Daily Bread to catch those passengers.
- The Access/reduced fare application is too long, it should be two pages instead
  of ten

#### Online Feedback Form with Video/Presentation

O Route 6 is underutilized and could serve many more folks if it were altered to also serve UNT Discovery Park - 4,000 students, faculty and staff. We already know that the UNT Discovery Park shuttle service is over-crowded, that extra buses have to be assigned regularly to handle the over flow of riders, and that buses are often "standing room only" (a safety problem - imagine the injuries in an accident or hard stop). Many of these folks also ride the A-Train. Meanwhile Route 6 operates in the Evers Park neighborhood with almost no riders at all. Time to fix this please.

The Swiftly app often malfunctions with the DCTA Connect Buses 7 and 8. Often these buses are not displayed correctly on the app maps when they are on North Texas BLVD, Eagle ST, and Welch ST. I have missed the A-Train waiting for falsely displayed Route 7 and 8 buses that appear to be at the intersection of Eagle and Welch with projected arrival at Eagle and Mulberry in 2 to 5 minutes but they never actually arrive. Instead the ETA just keeps resetting. Something is wrong with Swiftly and the GPS feed from the 7 and 8 buses. Please fix it.

On the upside, DCTA has great equipment and great drivers who are out there doing a nice job on a regular basis.

- o I) I love that DCTA's routes and schedules are now on the Transit app;
  - 2) I've really enjoyed the Citizens Advisory Team (CAT) meetings;
  - 3) I'd like to see express bus service to/from the Lantana Golf Club to/from

Highland Village/Lewisville Lake Station on weekdays;

- 4) I'd like to see Sunday service for the A-Train and all Connect buses;
- 5) I'd like to see continued work with Flower Mound leaders in order to begin fixed route bus services there;
- 6) I'd like to see express bus service to/from Hebron Station to/from Flower Mound's Lakeside district:
- 7) I'd like to see express bus service to/from Hebron Station to/from DART's Northwest Plano Park & Ride:
- 8) I'd like to see express bus service to/from MedPark Station to/from TEXRail's Downtown Grapevine Station when TEXRail begins service, with a stop and designated park & ride at or near The Shops at Highland Village;
- 9) I'd like to see Route 6 extended to serve both North Lakes Park and Evers Park;
- 10) I'd like to see a new Route 9 created, running to/from the North Texas Fairgrounds to the shopping center behind Chili's at 35E @ Lillian Miller traveling along Carroll, Hickory/Oak, Elm/Locust, Eagle, Dallas, Teasley, Shady Oaks, Loop 288 and Lillian Miller:
- 11) I'd like to see a new Route 23 created, running to/from Hebron Station to/from Highland Village/Lewisville Lake Station traveling along Hebron/Round Grove, Valley, Corporate, Old Orchard, Main and Garden Ridge.



## September 2017 Open House Meetings



### MEETING OVERVIEW

- Proposed Fare Changes
- Fiscal Year 2017 Program of Projects
- Proposed Fiscal Year 2018 Budget Overview
- Brownfield Remediation Project
- DCTA's New Transit Tracker
- University of North Texas Campus Shuttle Service Changes
- Denton Connect Bus Routes 7 and 8 Service Changes
- Highland Village Connect Shuttle Service Changes
- Promotional A-train Free Fare Zones



## UNIVERSITY OF NORTH TEXAS CAMPUS SHUTTLE SERVICE CHANGES



## UNIVERSITY OF NORTH TEXAS CAMPUS SHUTTLE SERVICE CHANGES

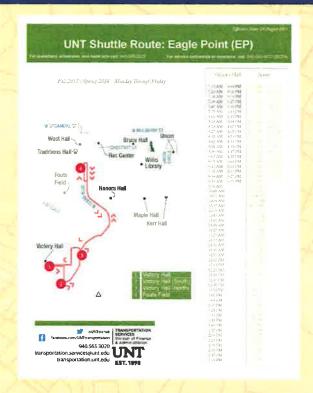
- DCTA implemented key changes on behalf of UNT in August by stationing new transit hub centers at Fouts Field and Union Circle. These changes will contribute to UNT's vision of a more safe and walkable campus. In addition, modifying these routes will help save money in fuel and other costs, and ensure the sustainability of overall transit operations for UNT.
- Comments or questions regarding the UNT Campus Shuttle service changes should be provided to UNT Transportation Services at:
  - @UNTtransit on Twitter
  - @UNTtransportation on Facebook
  - transportation.services@unt.edu
  - 940.565.3020





## EAGLE POINT SHUTTLE

- Operates:
  - 7:15 a.m. to 5:30 p.m. with an 8-minute frequency
- On-campus stops at the UNT Business Leadership Building/Kerr Hall have been relocated to Fouts Field
- Route serves Victory Hall at Apogee
- Riders who need to get to the Union and prefer not to walk can board the Mean Green Shuttle, Denton Connect Route 7 or Connect Route 8







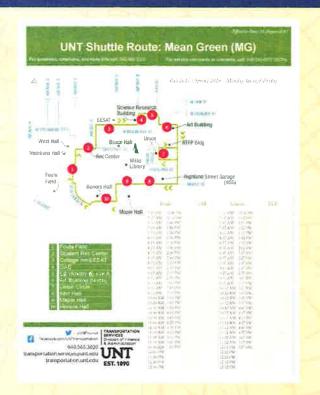
### MEAN GREEN SHUTTLE

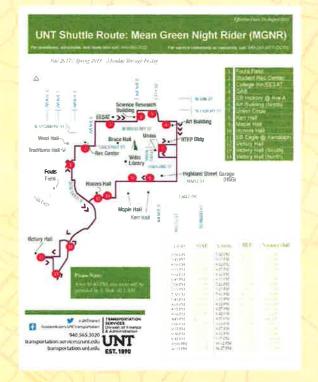
- Operates:
  - Monday through Friday
    - 7:15 a.m. to 5:30 p.m. with a 10-minute frequency
  - Monday through Thursday
    - 5:30 p.m. to 10:30 p.m. with a 15-minute frequency
  - Saturday
    - 8 a.m. to 6:30 p.m. with a 30-minute frequency
- Serves Victory Hall by Apogee Stadium after 5:30 pm Monday to Thursday and on Saturdays
- Serves as the campus connector route that will bus students from both Fouts Field and Union Circle to various points on campus
- No longer serves the south and west sides of Fouts Field





## DCTA MEAN GREEN SHUTTLE



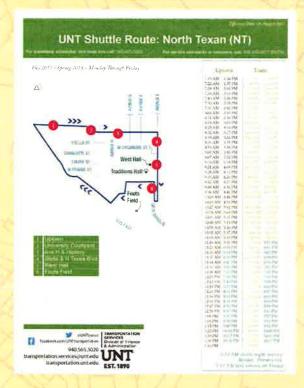






## NORTH TEXAN SHUTTLE

- Operates:
  - Monday through Friday
    - 7:15 a.m. to 5:30 p.m. with a 7-minute frequency
  - Monday through Thursday
    - 5:30 p.m. to 10:30 p.m. with a 14-minute frequency
- On-campus stop at the Union has been relocated to Fouts Field
- Riders who need to get to the Union and prefer not to walk can board the Mean Green Shuttle, Denton Connect Route 7 or Connect Route 8

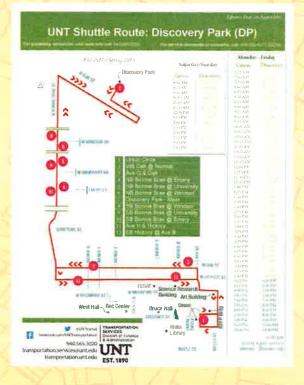






## DISCOVERY PARK SHUTTLE

- Operates:
  - Monday through Friday
    - 7:15 a.m. to 5:30 p.m. with a 15-minute frequency
  - Monday through Thursday
    - 5:30 p.m. to 8:30 p.m. with a 20-minute frequency
    - 8:30 p.m. to 10:30 p.m. with a 40-minute frequency
  - Saturday
    - 8:00 a.m. to 6:00 p.m. with a 45-minute frequency
- On-campus stops at the the UNT Recreation Center, Environmental Engineering Science and Technology (ESSAT) and General Academic Building (GAB) have been relocated to the Union
  - Passengers who need to get to the EESAT or GAB can use the EB Hickory at Avenue B stop
  - Passengers who need to get to the UNT Recreation Center can board the Mean Green shuttle







## CENTRE PLACE SHUTTLE

- Operates:
  - Monday through Friday
    - 7:15 a.m. to 2 p.m. with a 6-minute frequency
    - 2 p.m. to 5:30 p.m. with a 10-minute frequency
  - Monday through Thursday
    - 5:30 p.m. to 10:30 p.m. with a 30-minute frequency
- The shuttle stops on-campus at the Union

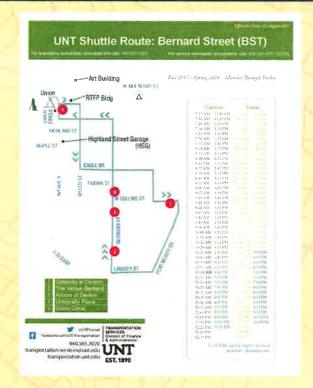






## BERNARD STREET SHUTTLE

- Operates:
  - Monday through Friday
    - 7:15 a.m. to 12:30 p.m. with a 7-minute frequency
    - 12:30 p.m. to 5:30 p.m. with a 10-minute frequency
  - Monday through Thursday
    - 5:30 p.m. to 10:30 p.m. with a 20-minute frequency
- The shuttle stops on-campus at the Union

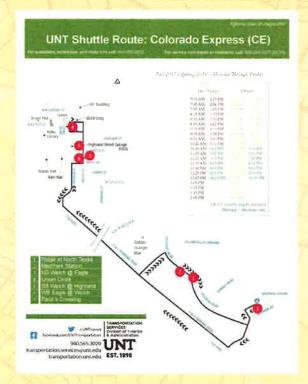






## COLORADO EXPRESS SHUTTLE

- Operates:
  - Monday through Friday
    - 7:15 a.m. to 5:30 p.m. with a 20-minute frequency
  - Monday through Thursday
    - 5:30 p.m. to 10:30 p.m. with a 40-minute frequency
- No longer stops at the Golden Triangle Mall from Colorado Blvd
  - Riders are encouraged to utilize the MedPark Station for a park and ride option
- The shuttle stops on-campus at the Union







### SAM BASS SHUTTLE

- Operates:
  - Monday through Thursday
    - 7:15 a.m. to 10:30 p.m. with a 30-minute frequency
  - Friday
    - 7:15 am to 5:30 pm with a 30-minute frequency
- The shuttle stops on-campus at the Union
- Effective fall 2018, the shuttle will no longer be in operation
  - An alternate travel option:
    - Take Denton Connect Route I to the Downtown Denton Transit Center
    - Transfer to Denton Connect Routes 7 or 8 to get to UNT







## DENTON CONNECT BUS ROUTES 7 AND 8 SERVICE CHANGES



## CONNECT BUS ROUTES 7 AND 8

- DCTA implemented minor changes at the request of UNT in August by moving these routes off campus, contributing to UNT's vision of a more safe and walkable campus
- The portion of the routes along Highland Street have been relocated to Eagle





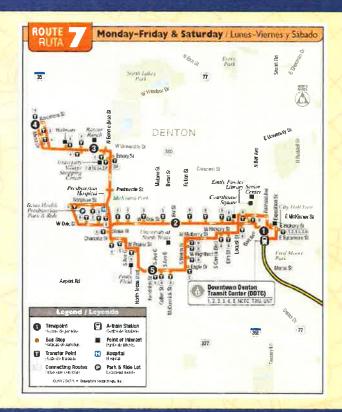


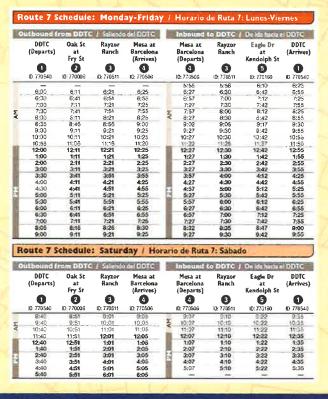
- Both routes had minor changes to the schedules
- Both operate:
  - Monday through Friday
    - 5:30 a.m. to 9:30 p.m. with 15-minute peak frequency and 30-minute off-peak frequency
  - Saturdays
  - 8:00 a.m. to 6:00 p.m. with 30-minute headways
- Both 7 & 8 connect Fouts Field and Union Circle every 15 minutes
  - Only travels in one direction: from Fouts Field to Union Circle





# **DCTA** CONNECT BUS ROUTE 7



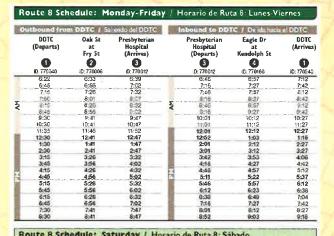






# **DCTA** CONNECT BUS ROUTE 8





0	utbound from	n DOTC / S	endo del DDTC	1 3	inbound to DD	TC / De leta hacio	* DDTC
	DDTC (Departs)	Oak St at Fry St	Presbyterian Hospital (Arrives)		Presbyterian Hospital (Departs)	Eagle Dr at Kendolph St	DDTC (Arrives
	0	A	3		Ø	4	•
	D: 770540	ID: 770006	iD: 770012		:D: 770012	ID: 770180	ID: 770540
				W	7.44	7:55	8:10
	8:10	8:21	8:27		8:30	6:41	8:55
	9:10	9:21	P:27	3	9:30	9:41	9:58
	10:10	10:21	10:27	-	10:30	10:41	10:55
	11:10	11:21	11:27	13	11:50	11:41	11:56
١.	12:10	12:21	12:27	-	12:30	12:41	12:56
г	1:10	1:21	1:27	-	1:30	1>41	1:56
1	2:10	2:21	2:27	-	2:30	2:41	1:56 2:56
5	3:10	3:21	3:27	1.3	3:30	3:41	3:56
2	4:10	4:21	4:27	12	3:30 4:30	4:41	4:56
г	5:10	5:21	5:27	- 10	5:30	5:41	5:56
	6:10	6.21	6:27	-			_





# HIGHLAND VILLAGE CONNECT SHUTTLE SERVICE CHANGES



# HIGHLAND VILLAGE CONNECT SHUTTLE FLAG STOPS

- On August 28, DCTA launched flag stops for certain areas along the Highland Village Connect Shuttle route
- The new flag stops process allows riders to signal a driver along the existing Connect Shuttle route to board the shuttle without being at an official stop
- There will be no flag stopping permitted along the I-35E service road, FM 407 or Village Parkway







# HIGHLAND VILLAGE CONNECT SHUTTLE FLAG STOPS

- Instructions for using the flag stops:
  - I. Stand in a safe location along the shuttle route
  - 2. Wave to the bus operator
  - 3. The bus operator will pull over at the safest location closest to you
- Use the Connect Shuttle schedule to gauge the estimated vehicle arrival time based on where you wave the shuttle to a stop
  - Passengers can also utilize the free Transit App mobile app to get arrival time information straight from their phone or tablet





Transit Mobility Program
Texas A&M Transportation Institute
701 N. Post Oak Rd
Houston, TX 77024
713-613-9241
tti.tamu.edu/group/transit-mobility

#### DRAFT Technical Memorandum – Task 2 (W.A. #1)

**TO:** Michelle Bloomer, Denton County Transportation Authority

FROM: Zachary Elgart, Texas A&M Transportation Institute

**DATE:** November 8, 2017

**SUBJECT:** Title VI Analysis – Process and Outcomes

#### **Background and Purpose**

As documented in *Technical Memorandum 1: Title VI Requirements for Service Changes*, DCTA is committed to specific Title VI analysis actions related to service changes. Specifically, the transit agency's Title VI program requires the following actions to maintain policy compliance:

- Conduct a Title VI equity analysis as outlined in section four of DCTA's 2016 Title VI Program and presented here in Appendix A.
- Ensure the service changes align with DCTA's service performance and design standards as described in section three of DCTA's 2016 Title VI Program and presented here in Appendix B.

DCTA implemented a service change in August 2017 (described in Appendix C) that DCTA policies classify as a major service change. Due to this classification, it requires an equity analysis. This technical memorandum documents findings from the required Title VI equity analysis and compares the service change with DCTA's service performance and design standards.

#### **Title VI Analysis**

DCTA requires a Title VI equity analysis for all major service changes. As discussed in *Technical Memorandum 1: Title VI Requirements for Service Changes*, the August 2017 service change is classified as a major change because the change affects areas of the service area with populations of low-income, minority, or LEP persons that are greater than the service area average. DCTA's Title VI equity analysis process for service and fare changes has seven main steps, presented in Appendix A. This section documents the process of data collection and spatial analysis used to determine where low-income and minority persons and Limited English Proficiency (LEP) households are located within the service area and near the August 2017 service changes.

#### **Data Collection and Findings**

DCTA's Title VI equity analysis process requires documentation of the affected area including information about the demographics of potential riders and the location of the proposed service change. To initiate collection of this information, DCTA staff ran a Title VI analysis in the transit agency's service planning software, Remix<sup>TM</sup>. The Remix<sup>TM</sup> Title VI analysis allows a DCTA planner, for example, to make changes to an existing route and then use the software to produce a report showing the portion of minority and low-income riders that would potentially be effected by the change. This report contains information about the number of low-income and minority residents in each census block group where a modified route or stop is located and a summary of the transit agency's service area demographics (total population, low-income, and minority). The Remix<sup>TM</sup> report does not incorporate Limited English Proficiency (LEP) data.

#### Low-Income and Minority Populations

In 2015, DCTA's service area population was 687,857¹. In the same year, the average population within each of the service area's census block groups that was identified as low-income was 8.7 percent and the average population that identified as a minority (non-white) was 36.4 percent. According to the Remix<sup>TM</sup> analysis, the August 2017 service change affected 33 census block groups with a population of 57,250. DCTA's service area contains 378 block groups. Table 1 presents the percent of low-income and minority populations affected by the service changes, according to the Remix<sup>TM</sup> analysis.

Table 1. Low-Income and Minority Population Affected by August 2017 Service Change

	Low-Income	Minority
Change Borne By	73.6%	40.9%
Area Average	8.7%	36.4%
Difference	64.8%	4.5%

Source: Remix $^{TM}$  Analysis of data from the U.S. Census Bureau's ACS 2015 5-Year Estimates

Despite the high percentage of low-income and minority populations identified as bearing a larger portion of the service change outcomes, the analysis shows that the net number of potential trips made by each group and by the total population could increase. Table 2 presents the difference in potential trips and the percent of low-income and minority population that bore the impact of the change, by route, after the August 2017 service change. Figure 1 shows projected ridership—a net gain—that could result from the August 2017 service change, according to the Remix<sup>TM</sup> analysis.

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<sup>&</sup>lt;sup>1</sup> Source: U.S. Census Bureau ACS 2015 5-Year Estimates

Table 2. August 2017 Service Change – Changes in Trips by Route

	Difference in Trips Aj	fter August 2017 S	ervice Change	Percent	t Impacted
Route	People-Trips <sup>A</sup>	Low Income	Minority	Low	Minorities
		People-Trips A	People-Trips A	Income	
7	9,981,400	4,704,594	4,362,500	47.1%	43.7%
8	9,981,400	4,770,617	4,369,480	47.8%	43.8%
100	114,482,280	67,566,854	56,130,210	59.0%	49.0%
150	142,640,820	78,043,309	71,337,000	54.7%	50.0%
200	-47,694,075	-29,915,037	-21,298,695	62.7%	44.7%
300	-52,006,740	-30,459,998	-26,392,500	58.6%	50.7%
400	23,250,850	14,250,154	9,955,385	61.3%	42.8%
500	-23,146,460	-10,260,734	-12,535,160	44.3%	54.2%
600	34,706,700	20,247,806	13,891,640	58.3%	40.0%
700	-13,556,675	488,009	-8,300,600	-3.6%	61.2%
800 900	-84,914,865	-46,033,101	-43,289,775	54.2%	51.0%
1000	-30,607,210	-12,239,664	-14,227,200	40.0%	46.5%
Total	83,117,425	61,162,809	34,002,285	73.6%	40.9%

<sup>&</sup>lt;sup>A</sup> People-trips are calculated by multiplying the population (total, low-income, or minority) near a route (within  $\frac{1}{4}$  mile of each stop) by the number of trips the route will make in one year.

Source: Remix™ Analysis of data from the U.S. Census Bureau's ACS 2015 5-Year Estimates



Source: Remix<sup>TM</sup> Analysis of data from the U.S. Census Bureau's ACS 2015 5-Year Estimates and TTI calculations

Figure 1. Post August 2017 Service Change - Change in Trips by Route

#### **Limited English Proficiency Populations**

As mentioned above, the Remix<sup>TM</sup> analysis does not include data about LEP populations. However, DCTA includes these populations in the transit agency's equity analysis requirements. Data about LEP populations is available from the U.S. Census Bureau as part of the American Communities Survey (ACS) at the census tract level (as opposed to the block group level, like low-income and minority status). This data identifies households by the household's preferred language and whether the household is a limited English speaking household<sup>2</sup>. Using the census block groups (portions of a census tract) included in the Remix<sup>TM</sup> analysis discussed above, TTI identified the census tracts (16 total) impacted by the August 2017 service changes and collected LEP information accordingly.

In 2015, DCTA's service area had 563,102 households<sup>3</sup>. Of the households in the service area, 5.6 percent identified as LEP households. Among the 16 census tracts impacted by the August 2017 service change, 6.8 percent of households identify as LEP and ten census tracts have more LEP households than the service area average (maximum 14.8 percent). Table 3 presents the census tracts impacted by the service change and the percent of LEP households in each.

Table 3. LEP Households Impacted by August 2017 Service Change

<b>Census Tract</b>	LEP Households
48121020401	6.6%
48121020402	2.9%
48121020403	1.3%
48121020601	13.8%
48121020602	8.0%
48121020700	7.4%
48121020800	8.4%
48121020900	14.1%
48121021000	7.2%
48121021100	11.4%
48121021201	4.7%
48121021202	5.8%
48121021301	2.8%
48121021303	8.4%
48121021304	5.2%
48121021305	0.8%

Source: U.S. Census Bureau ACS 2015 5-Year

Estimates

<sup>2</sup> According to the U.S. Census Bureau, ""limited English speaking household" is one in which no member 14 years old and over (1) speaks only English or (2) speaks a non-English language and speaks English "very well."" (<a href="https://www.census.gov/topics/population/language-use/about/faqs.html">https://www.census.gov/topics/population/language-use/about/faqs.html</a>)

<sup>&</sup>lt;sup>3</sup> Source: U.S. Census Bureau ACS 2015 5-Year Estimates

#### Data Summary

TTI collected data from the Remix<sup>™</sup> report and ACS 2015 5-year estimates to summarize the area effected by the August 2017 service changes. Table 4 presents this data summary for each census block group (or census tract for LEP).

Table 4. Low-Income, Minority, and LEP Status for Census Blocks/Tracts – August 2017 Service Change

Census Block Groups <sup>A</sup>	Population	% Low- Income	Above Avg. Low-Income ( <u>Yes/No</u> )	% Minority	Above Avg. Minority ( <u>Yes/No</u> )	% LEP Households (per census tract <sup>A</sup> )	Above Avg. LEP ( <u>Yes/No</u> )
481210204011	4497	25.5%	Y	22.4%	N	6.6%	Y
481210204012	3881	1.1%	N	8.0%	N	6.6%	Y
481210204021	1979	9.5%	Y	18.4%	N	2.9%	N
481210204022	1258	4.3%	N	9.6%	N	2.9%	N
481210204032	908	35.4%	Y	9.7%	N	1.3%	N
481210204034	1397	15.9%	Y	22.5%	N	1.3%	N
481210206012	834	38.1%	Y	44.6%	Y	13.8%	Y
481210206013	2568	42.2%	Y	45.4%	Y	13.8%	Y
481210206023	619	0.0%	N	16.5%	N	8.0%	Y
481210207001	1365	34.2%	Y	23.4%	N	7.4%	Y
481210207002	1137	51.8%	Y	48.2%	Y	7.4%	Y
481210207003	658	15.9%	Y	20.2%	N	7.4%	Y
481210208001	1793	36.4%	Y	47.0%	Y	8.4%	Y
481210208002	3224	36.5%	Y	43.6%	Y	8.4%	Y
481210209001	2456	55.7%	Y	35.1%	N	14.1%	Y
481210209002	2594	34.2%	Y	44.2%	Y	14.1%	Y
481210210001	687	80.4%	Y	21.8%	N	7.2%	Y
481210210002	3492	58.8%	Y	36.3%	N	7.2%	Y
481210210003	938	58.8%	Y	17.3%	N	7.2%	Y
481210210004	861	25.6%	Y	2.1%	N	7.2%	Y
481210211001	551	22.6%	Y	19.6%	N	11.4%	Y
481210211002	916	65.6%	Y	24.0%	N	11.4%	Y
481210211003	1253	57.8%	Y	49.4%	Y	11.4%	Y
481210212011	4795	29.4%	Y	41.6%	Y	4.7%	N
481210212012	1708	39.0%	Y	57.6%	Y	4.7%	N
481210212021	1533	23.9%	Y	53.2%	Y	5.8%	Y
481210212022	930	9.6%	Y	20.3%	N	5.8%	Y
481210212023	2566	32.9%	Y	48.2%	Y	5.8%	Y

6

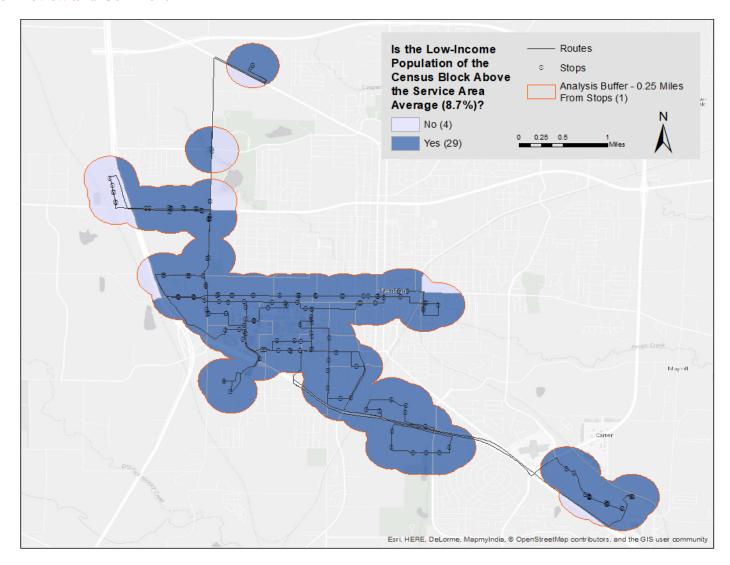
Census Block Groups <sup>A</sup>	Population	% Low- Income	Above Avg. Low-Income (Yes/No)	% Minority	Above Avg. Minority ( <u>Yes/No</u> )	% LEP Households (per census tract <sup>A</sup> )	Above Avg. LEP ( <u>Y</u> es/ <u>N</u> o)
481210213011	3241	44.6%	Y	23.0%	N	2.8%	N
481210213012	1005	34.6%	Y	61.9%	Y	2.8%	N
481210213031	2631	4.5%	N	25.2%	N	8.4%	Y
481210213042	1770	11.1%	Y	7.9%	N	5.2%	N
481210213052	2507	9.1%	Y	20.1%	N	0.8%	N

Source: Remix<sup>TM</sup> Analysis of data from the U.S. Census Bureau's ACS 2015 5-Year Estimates and TTI calculations

#### **Mapping**

Mapping demographic data allows transit planners to visualize the location of specific populations and how a given change in service may effect that population. Figure 2 summarizes information about DCTA's low-income population near the August 2017 service change. Figure 3 and Figure 4 present the same information for minority and LEP populations, respectively. Each map shows the population within 0.25 miles of a bus stop along the routes included in DCTA's August 2017 service change.

<sup>&</sup>lt;sup>A</sup> Census block groups codes contain census tract information. To determine which census tract LEP data relates to, remove the final digit from the census block group code.



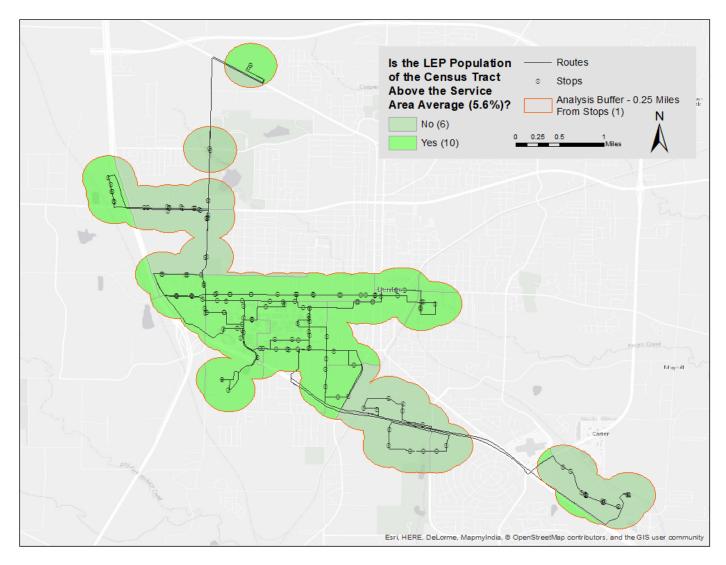
Source: U.S. Census Bureau ACS 2015 5-Year Estimates and TTI calculations

Figure 2. DCTA Low-Income Population Concentrations – August 2017 Service Change

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Source: U.S. Census Bureau ACS 2015 5-Year Estimates and TTI calculations

Figure 3. DCTA Minority Population Concentrations – August 2017 Service Change



Source: U.S. Census Bureau ACS 2015 5-Year Estimates and TTI calculations

Figure 4. DCTA LEP Population Concentrations – August 2017 Service Change

#### **Review Service Change per Service Performance and Design Standards**

Section four of DCTA's 2016 Title VI program states that the transit agency will follow a set of guidelines (service performance and design standards) for establishing/amending transit service. According to DCTA's 2016 Title VI program, these guidelines, "provide a framework for guiding decisions by which services are created, expanded, and evaluated. By providing a defined set of performance standards, DCTA staff and the Board will have consistent direction on how to allocate, prioritize, and deploy services."

DCTA organizes service and design standards in the following categories. Appendix B presents complete descriptions.

- Route classification.
- Desired spans of service.
- Desired minimum service frequency.
- Desired minimum route-level operating standards.
- Performance benchmarks.

- Fixed-route service design guidance.
- Demand response performance measures and standards.
- Community design preferences.
- Bus stop placement.
- Shelter and bench placement.

As implemented, DCTA's August 2017 service changes meet the requirements of the service performance and design standards by maintaining DCTA's established span of service, service frequency, and route-level standards while improving the directness and simplicity of the routes and supporting a major activity center. Assessment of the performance metrics outlined by the standards cannot be completed until the new routes have been in service long enough to generate adequate data.

#### **Conclusion**

According to the Title VI equity analysis findings, DCTA's August 2017 service changes effect areas of DCTA's service area with higher than average concentrations of low-income, minority, and LEP populations. However, the net effect on these populations is, according to forecasted ridership assumptions from Remix<sup>TM</sup>, a higher rate of transit use/access.

Furthermore, the August 2017 service change is in line with DCTA's service performance and design standards (pending review of performance metrics).

#### **Appendix A - Fare and Service Equity Analysis Process**

To conduct a Fare and Service Equity Analysis, DCTA uses the following process:

- 1. As soon as any change in fare or service is proposed, DCTA staff describes in detail the proposed change. The detailed description included what routes, schedules, and service indicators (level and/or quality of service) would be affected. Additionally, staff describes the need or impetus for change.
- 2. A determination is then made if the changes qualify as a major fare or service change under the Agency's Major Fare and Service Change Policy. In the future, a record will be kept of both determinations.
- 3. If the determination is yes, further analysis is required and public participation is warranted.
- 4. A comparison is made to determine the difference between the existing service and proposed service for those impacted by the change.
- 5. To analyze possible adverse effects, DCTA staff uses the following steps:
  - a. Determine the affected area.
  - b. Describe the demographic and ridership data and ridership data being used for the analysis and how they were collected.
  - c. Describe how the data will be used to determine if the proposed change will have an adverse effect.
  - d. Compare the location of the proposed change to the most recent demographic data on file. Is the affected area a minority, low-income, or LEP area according to the data?
  - e. Compare the ridership population that will be affected by the change as compared to the general ridership population. Could there be a potential disparate impact or disproportionate burden? Explain.
  - f. Analyze the data to describe the details and extent of the possible impacts.
    - i. Create maps showing the affected areas and demographic data along with route information.
    - ii. Create tables showing impacts of each type of change and the affected and overall ridership population.
    - iii. Determine whether the proportion of minorities and/or low-income population that is affected is significant when compared to the general population set using thresholds designed in each policy. If not, finalize the analysis and provide to the Board. If so, steps need to be taken to describe these negative effects and to develop alternative options that mitigate, avoid, or minimize these effects.
    - iv. Repeat the analysis for any alternative options.
    - v. Present the finding to the Board of Directors for review and acceptance.
- 6. The Public Participation Plan determines adequate comment period and appropriate communication and participation methods.
- 7. All comments are recorded and presented to the Board of Directors as part of the decision making process.

#### **Appendix B - Service Performance and Design Standards**

Service Performance and Design Standards February 23, 2012

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#### INTRODUCTION

The Denton County Transportation Authority (DCTA) originally adopted service standards on September 21, 2006. DCTA revisited the agency's Service Plan in 2010-2011 and seized the opportunity to develop new Service Performance and Design Standards to aid staff and the Board of Directors in the development of DCTA services and allocation of resources.

#### **PURPOSE**

This document provides a framework for guiding decisions by which services are created, expanded and evaluated. By providing a defined set of performance standards, DCTA staff and the Board will have consistent direction on how to allocate, prioritize and deploy services. Once approved, DCTA services will be compared against the Service Standards to determine whether or not individual existing services perform at acceptable levels and to evaluate the potential of possible service changes. In order for services to be successful, they must be provided at levels that meet the basic needs of passengers. Therefore, minimum acceptable levels of service are included to ensure that the level of service provided is capable of achieving the goals of the Service Plan

#### **ROUTE CLASSIFICATION SYSTEM**

Transit services are most effective when they are tailored to the design and needs of the communities they serve. For planning purposes, the following definitions of service types will be used to identify both the types of services currently provided by DCTA and those that might be provided by DCTA in the future:

- Regional Commuter Rail Services: This service is best characterized as a bidirectional passenger rail service with limited stops, fast travel times, and stations in major population centers or at major employment destinations.
- 2. Regional Express Bus Services: The A-train Midday Station Shuttle service is an example of DCTA's operation of premium commuter service, but regional express bus services may be appropriate in other locations in Denton County. This service type offers fast service during peak commute hours, focusing on linking cities or neighborhoods with high concentrations of workers traveling to a specific employment area or a major transit hub. Express bus services may take advantage of arterial and freeway HOV lanes, allowing them to provide a level of service that is comparable or in some cases better than automobile travel times.
- Regional Arterial Routes: DCTA does not currently operate any services that would
  be categorized as regional arterial routes, but this type of service could be considered
  within Denton County in the future. Characteristics of regional arterial routes are as
  follows:
  - All day service Regional arterial routes operate at least every 60 minutes during midday periods and 30 minutes during peak periods. The goal is to facilitate convenient transfers to/from feeder routes.
  - Major transit center connections Regional arterial routes should have a terminus at a major transit center (e.g., A-train or DART station) or a major regional

activity center. Routes should be designed to make timed transfers to and from major connecting services.

Longer stop spacing – Stops are limited to major residential developments, retail
centers and park-and-ride facilities to speed travel times for longer distance riders.

The goal is for regional arterial routes to operate quickly and be relatively competitive with automobile travel times.

- 4. Urban Area Trunk Routes: Trunk routes are typically relatively straight and operate along main roads, constituting a primary form of local fixed route bus service. Typically, trunk routes should operate every 15 to 30 minutes on weekdays, with a relatively long service span.
- 5. Community Circulators: Other local fixed-route bus services, typically operating at 30- or 60-minute headways (but with the potential for greater frequencies), are termed community circulator routes. Most of DCTA's existing Connect routes would be classified as community circulators. Except around universities, these are designed to provide policy level coverage service to neighborhoods that do not have the population density or employment or design characteristics to support trunk routes. Services are designed to adapt to the unique characteristics of the neighborhoods or cities they serve. Whenever possible, clockface operations and timed transfer at transit centers should be accommodated in route designs. This suggests very careful attention to the length of the route to ensure there is a reasonable match between the schedule cycle time and the route length.

Three types of community circulators are identified for Denton County.

- A. Neighborhood Circulators: These are traditional fixed route services. Because they do not compete effectively with private autos, neighborhood circulators should be established when higher levels of service cannot be effectively supported. They normally operate every 30 to 60 minutes and should operate on a clockface headway whenever possible.
- B. Feeders: Feeder buses are designed to "feed" trunk routes, commuter rail, and regional express bus services. Schedules are drawn to provide clockface headways. Feeder routes operate in urban and lower-density suburban neighborhoods and every effort should also be made to provide timed transfers with other routes at the transit centers served by feeders.
- C. University Circulators: These may look like traditional fixed routes, but have a specific market student, faculty and staff ridership and serve a location with significant parking constraints or costs. These routes normally operate at relatively good frequencies every 5 to 30 minutes and clockface headways are often not as critical.
- 6. On-Call Demand Response: These general public demand response services are provided in areas where traditional fixed-route services are not appropriate due to lack of transit supportive land uses and population densities. Connect RSVP is an example of this type of service.

#### MINIMUM SERVICE SPAN AND FREQUENCY

#### **Span of Service**

The time between the first and last trip operated on a route defines the span of service. In addition, service span specifies the minimum period of time service will operate at any point in the system. This gives customers confidence that direct and connecting service will be provided during the span hours. The table below details the span of service that should be provided by type of service.

Desired Minimum Service Span					
Route Type	Weekday	Saturday	Sunday		
Commuter Rail	5am - 9pm	10am - 11pm	N/A		
Regional Express Bus	5am - 7pm	N/A	N/A		
Regional Arterial Bus	5am - 9pm	N/A	N/A		
Urban Area Trunk Routes	5am - 9pm	9am - 6pm	N/A		
Community Circulators	5am - 9pm	9am - 6pm	N/A		
On-Call	6am - 9am, 3pm - 7pm	N/A	N/A		

#### Frequency

Service frequency has a major influence on transit ridership. Frequent service is costly to provide but is valued by regular and occasional customers. It is also regarded as an attractive characteristic by potential customers. The table below details the minimum service frequency that should be provided by type of service.

Desired Minimum Service Frequency						
	We	eekday				
Route Type	Peak	Midday	Saturday	Sunday		
Commuter Rail	25	105	105	N/A		
Regional Express Bus	20	60	N/A	N/A		
Regional Arterial Bus	30	60	60	N/A		
Urban Area Trunk Routes	30	30	60	N/A		
Community Circulators	30	30	60	N/A		

#### SERVICE PERFORMANCE STANDARDS

DCTA will monitor key system-wide performance statistics, using pre-established targets in order to measure organizational success. System service standards cover a wide range of subjects including ridership, safety, reliability, and customer satisfaction. While the table below includes standards specific to route types, these metrics will be aggregated by mode for reporting purposes.

#### Service Quality and Reliability Benchmarks

Quality/ Reliability Measures	System Service Standards				
Boarding Passengers per Revenue Hour	<ol> <li>Regional Commuter Rail Services – 35 passengers/hour</li> <li>Regional Express Bus Services – 20 passengers/hour</li> <li>Regional Arterial Routes – 15 passengers/hour</li> <li>Urban Area Trunk Routes – 25 passengers/hour</li> <li>Community Circulators         <ol> <li>Neighborhood/Feeder – 10 passengers/hour</li> <li>University – 25 passengers/hour</li> </ol> </li> <li>On-Call – 2.5 passengers/hour</li> </ol>				
Passengers per Mile	<ol> <li>Regional Commuter Rail Services – 1.25 passengers/mile</li> <li>Regional Express Bus Services – 1.0 passengers/mile</li> <li>Regional Arterial Routes – 1.0 passengers/mile</li> <li>Urban Area Trunk Routes – 2.2 passengers/mile</li> <li>Community Circulators         <ol> <li>Neighborhood/Feeder – 0.7 passengers/mile</li> <li>University – 2.2 passengers/mile</li> </ol> </li> </ol>				
Farebox Recovery	<ol> <li>Regional Commuter Rail Services - 20%</li> <li>Regional Express Bus Services - 25%</li> <li>Regional Arterial Routes - 15%</li> <li>Urban Area Trunk Routes - 20%</li> <li>Community Circulators         <ul> <li>Neighborhood/Feeder - 13%</li> <li>University - 90%</li> </ul> </li> <li>On-Call - 10%</li> </ol>				
On Time Performance	90% on-time performance for all services				
Passenger Complaints/ Boardings	The number of complaints shall not exceed 0.01% of the total boardings. The benchmark is 7.5 complaints/100,000 boardings.				
Accidents /Bus Miles Operated	Fewer than 2 accidents/100,000 revenue miles				
Maintenance	The benchmark is 1 road call/7,000 revenue miles.				
	At least $85\%$ of all regular fleet vehicles should be available for operations at all times				
	The ratio of spare vehicles to regular fleet vehicles should be less than at 20% $$				
	95% of vehicle inspections shall be completed on time				
Bus Trips Cancelled	No bus trips shall be cancelled. The benchmark is zero tolerance.				

#### **ROUTE-LEVEL PERFORMANCE MEASURES AND STANDARDS**

Productivity standards will be used to evaluate ridership, route efficiency, and reliability. The table below summarizes the fixed route operating standards. Four measures are proposed to measure the success characteristics of individual routes:

- Passengers per Revenue Hour. Calculated by dividing the number of passengers by revenue hours for a particular route. The metric provides a snapshot of overall performance and route efficiency.
- Service to Total Hours Ratio. With a goal to reduce vehicle-deadheading to/from a
  bus route or layover, it is important to understand service hours (or revenue hours) as a
  proportion of total service hours. Ratios for routes that are higher than those of other
  routes may point to operating issues such as schedules that cannot be cost-effectively
  broken into vehicle assignments or routes with distant or inefficient terminus points.
- On Time Performance. The reliability of route operations is also critical. Measuring
  an individual route's schedule adherence provides information regarding whether a
  customer can count on a bus being there as scheduled.
- Cost per Passenger. Cost per passenger is calculated by determining the cost of
  operating a route and dividing by the number of passengers. This ratio reflects the
  benefits of a given service (measured in customers) against the public cost of operating
  the service.

#### **Route-Level Operating Standards**

	Regional Commuter Rail Services	Regional Express Bus Services	Regional Arterial Routes	Urban Area Trunk Routes	Community Circulators	On-Call
Passengers per Hour	30	15	15	15	Neighborhood/Feeder: 8 University: 15	2.5
Service to Total Hours Ratio	1.0	1.3	1.3	1.15	1.15	1.15
On-Time Performance	90%	90%	90%	90%	90%	95%
Cost Per Passenger	\$20	\$10	\$4	\$5	\$5	\$30

#### POTENTIAL CORRECTIVE ACTIONS

Poor-performing services failing to meet productivity standards may be considered for a series of potential corrective actions, including schedule adjustments, route modifications, modified marketing strategies or elimination.

Schedule adjustments including frequency and service span reductions can improve productivity and cost effectiveness with minimal negative impacts.

Route modifications can help improve productivity and cost effectiveness in many cases. Ridership should be closely examined at the stop level to identify unproductive segments or service gaps. Route extensions or minor realignments may improve access to destinations. Route consolidations or short-turns may reduce duplicative or excess service.

Service elimination may be considered if ridership is consistently underperforming with minimal likelihood for sufficient future growth. All alternative means of maintaining service should be considered before proposing elimination. Elimination does not preclude restoration of service at a later time; however, proven ridership demand must exist before such a step is considered.

Service alternatives may be considered in low-density areas with moderate ridership potential. On-Call service may carry a small passenger market more cost-effectively than traditional fixed-route bus service.

#### SERVICE DESIGN STANDARDS

Service design standards are critical planning tools that are used to guide the expansion of service to new areas and potential markets.

Typically, transit agencies need to consider a full range of interrelated social, political and economic factors when they make major service decisions. While ridership is critically important, issues of equity and broader community impacts cannot be ignored. Several general design principles should guide the planning and operation of DCTA's fixed route transit services:

- 1. Directness. Routes should be as straight as the street pattern allows. These direct paths make for the most direct, likely the fastest, possible trip, and therefore tend to be useful to the more people than circuitous routes. Even if a trip requires changing buses, it is likely to be more direct and faster than a trip using circuitous service. One other factor is simply the human factor. Humans prefer to maintain orientation. Routes that follow circuitous pathways easily lose riders orientation implying to their subconscious that they are "lost in woods." Not only is this uncomfortable, but it reinforces the conception that the trip is taking longer than it actually should be.
- 2. Frequency. The elapsed time between consecutive buses on a route is one of the most important determinants of ridership. More frequent service attracts more passengers assuming a market is present. A very infrequent route requires customers to plan trips around the bus schedule. A very frequent route allows riders to travel whenever they want, without a schedule, allowing transit to approach the convenience that a road offers to a motorist: it is there exactly when customers want and need it.
  - Provision of service that operates every 15 minutes is an important psychological breakpoint. At frequencies of 15 minutes or better, many riders will not need to use the schedule, because they know that they can just wait for the bus and it will be along "soon." While frequency is expensive, it is also crucial to high ridership.
- 3. Consistency. A consistent pattern to the schedule is strongly recommended. While frequency may vary during the day according to demand, it should not vary with apparent randomness from one trip to the next. Whenever possible, routes should also have frequencies that divide evenly into an hour, such as every 10, 15, 30, or 60 minutes. These frequencies have two advantages:

- Customers can remember the schedule easily, because the same pattern of times is repeated each hour. If a route runs every 30 minutes, the customer can remember that the bus comes at: 10 and: 40 past each hour. By contrast, if the bus runs every 35 minutes, few customers can remember the schedule, and are, therefore, forced to consult a timetable or seek assistance from customer service in order to catch any trip that they don't use routinely. Irregularity will often convince customers that they have missed a bus, or that the bus is "always late"
- Using frequencies such as 15, 30, or 60 minutes offer greater ease in scheduling timed connections between routes that occur consistently in each hour. This is especially important for less frequent feeder routes because they rely on connections for much of their ridership. Timed connections permit passengers on these feeders to complete their trips much more quickly.
- 4. Simplicity. Straight routes are also easily associated with one or two major arterials. The naming, presentation, and planning of such routes should encourage the idea that the route is an integral part of the street. Simplification is a key value in creating networks that people can navigate easily to make many kinds of trips.
- 5. Walk Distances. Although opinions differ about how far one should be asked to walk to a transit stop, the industry experience overwhelmingly indicates that the vast majority of riders will walk up to ¼ mile. Each transit route should be seen, then, as serving a band ½ mile wide (up to ¼ mile to each side of the route), except where the road network prevents reasonably direct pedestrian access.
- 6. Minimum Bus Stop Design. All bus stops should be clearly marked with proper signage including the designated route number(s). Benches should be considered for individual stops where the average daily boardings exceed 15 passengers. Priority should be given to bus stops serving senior apartments, activity centers, and group residences designed for persons with disabilities.
- 7. Recovery Time. All route schedules should include a minimum of 10% recovery time to ensure on-time performance. When headway-based scheduling is being applied, good practice is to ensure recovery time of one headway at each end of the route to ensure the ability to operate buses at the design frequency. It should be noted this design parameter is intended to ensure schedule reliability, not necessarily to provide rest periods for operators. Best practices in transit scheduling recognize that transit operators can be afforded rest periods without adding to the number of buses necessary to maintain schedule reliability: buses continue to move and operators rest.

#### **DESIGN STANDARDS FOR FIXED ROUTE SERVICES**

This section identifies the specific service design standards that have been identified for each service category. The following table details the specific design and operating standards applicable to each fixed route classification.

#### Fixed Route Design Standards

	Regional Commuter Rail Services	Regional Express Bus Services	Regional Arterial Routes	Urban Area Trunk Routes	Community Circulators
Location Characteristics  Dwelling Units per Acre  Employees per Acre	Along major corridors	Along major corridors	>4 >1	>10 >7.5	Neighborhood/Fee der > 5 University > 10 Neighborhood/Fee der > 3 University > 10
Frequency of Service Weekday Commute Periods	15-30 min	30 min	30 min	10-20 min	As appropriate - typically no more
Midday & Weekend Periods Night Services	30-60 min	60 min	60 min	10-60 min 30-60 min	than every 60 min.
Travel Time Ratio to Autos*	1.1	1.3	1.3	1.75	3.0
Stop Spacing Urban Areas Suburban Areas Rural Areas	+5 miles +5 miles +5 miles	½ mile +5 miles +5 miles	1/2 mile 1/2 - 2 miles 2 -5 miles	½ mile ¼- ½ mile	½ mile ¼ mile As needed
Scheduling Practices	Meet Demand Clockface Timed Transfer	Meet Demand Clockface Timed Transfer	Meet Demand Clockface Timed Transfer	Meet Demand Clockface Timed Transfer	Meet Demand Clockface Timed Transfer
Target Route Speed – Average speed that the route should achieve	>30 mph	>25 mph	>20 mph	>10 mph	>12 mph
Guideline Amenities Along Route	Shelters at all stops	Shelters at all stops	Shelters where needed	Shelters where needed	At major transfer points and high boarding locations only

<sup>&</sup>quot;The travel time ratio to autos is compares the travel time for a bus to travel from one end of the route to the other end with the time the same trip can be accomplished during afternoon commute periods when traveling by auto.

#### COMMUNITY DESIGN STANDARDS IN SUPPORT OF SERVICE DESIGN STANDARDS

Recommended policies address issues of land use, circulation, and urban design. The coordination of these three aspects of form and function are essential in order to support increased transit ridership and preserve the livability of Denton County.

#### Land Use

The land use criteria are intended to measure the ability of land use policies to support the goals of this Long Range Transit Plan.

- Land uses should be mixed both horizontally and vertically. Vertical mixed use, with ground floor retail in developed areas and activity centers as identified through land use plans, can increase the vitality of the street and provide people with the choice of walking to desired services. Only a few communities in the county have the potential for this type of vertical integration, but development near A-train and future rail lines should emphasize vertical mixed uses. More important for the rest of Denton County, mixing uses horizontally can prevent desolate, single-use areas, and encourages increased pedestrian activity; scale of use and distance between uses are important to successful horizontal mixed-use development.
- Support and enhance major activity centers. Activity centers have a strong impact
  on transportation patterns as the major destinations in the city. They are generally
  characterized by their regionally important commercial, employment, and service uses.
  To make these places more transit-supportive they should be enhanced by land use
  decisions that locate new housing and complementary neighborhood-scale retail and
  employment uses to diversify the mix, creating an environment that maximizes
  transportation choice.
- Land use intensities should be at levels that will encourage use of transit and support pedestrian and bicycle activity. A general threshold for transit-supportive residential uses is 10 to 15 units per net acre for high-frequency bus transit. This density can be lower, however, if the urban environment supports pedestrian access to transit (a discussion of transit density requirements is included in Appendix H). Commercial and employment/education uses with high employment densities (e.g., UNT) support more transit use than do those with lower employment densities (e.g., industrial or warehousing). Extensive areas of retail tend to be auto-dominated if not scaled appropriately and mixed with other uses, such as Vista Ridge Mall in Lewisville or Rayzor Ranch in Denton. Non-residential uses with a Floor Area Ratio (FAR) of 0.5 provide a baseline that can support transit ridership. While there is little empirical research available to link employment density with transit ridership, the general "rule of thumb" is to maximize the intensity of development given market conditions and to make certain that the transit network provides high-quality service to areas with concentrations of employment uses and retail services.
- Parking requirements (and parking provision) should be compatible with compact, pedestrian and transit-supportive design and development.
   Requirements should account for mixed uses, transit access, and the linking of trips that reduce reliance on automobiles and total parking demand.

#### Circulation and Connectivity

Transit and transportation systems need to provide a balance of hierarchy and integration between and amongst modes. The circulation system facilitates access and safety for all travel modes, with particular attention to pedestrian and bicycle access, as these modes support transit ridership.

 The transportation and circulation framework should define compact districts and corridors that are characterized by high connectivity of streets to not

overly concentrate traffic on major streets and to provide more direct routes for pedestrians, good access to transit, and streets that are designed for pedestrians and bicycles, as well as vehicles. Of the various cities in the county, the street network in Denton is the best for transit operations because of the better connectivity of arterials.

- New residential developments should include streets that provide connectivity. Cul
  de sacs and walls around communities, which have been the norm in newer developing
  cities like Frisco, The Colony and Northlake are especially challenging for providing
  effective public transit.
- Transit improvement projects should be targeted at areas with transitsupportive land uses (existing and planned), in and around key destinations and projects that can increase pedestrian activity.

#### **Urban Design**

High quality urban design, including street and building design, can support increased transit use and pedestrian and bicycle activity. An important evaluation criterion is the extent to which the plans provide guidelines or standards to achieve the desired urban design character in a particular community.

- Streets should be designed to support use by multiple modes, including transit, bicycles, and pedestrians, through proper scaling and provision of lighting, landscaping, and amenities. Amenities must be designed to provide comfortable walking environments.
- Buildings should be human scaled, with a positive relationship to the street (including entries and windows facing onto public streets, and appropriate articulation, signage, etc.).
- The impact of parking on the public realm should be minimized by siting
  parking lots behind buildings or screening elements (walls or landscaping). Buildings
  should be close to the road so parking can be located on the side or in the rear.

#### PARATRANSIT PERFORMANCE REPORTING

#### **Purpose of Paratransit Performance Measures**

Performance measures as applied to paratransit services will incorporate many of the traditional measures of revenue hours/miles per vehicle/passenger. However, some agencies are broadening the way performance is measured, particularly because of the different nature of paratransit versus fixed-route services. Ride statistics such as total number of rides, number of rides denied, average miles per passenger trip and average ride time are being applied to gauge the impact of paratransit services in terms of improving transportation access. Paratransit providers are also beginning to measure their performance in terms of vehicle capacity, instead of the number of vehicles in their fleet, to reflect the mixed fleet used to deliver paratransit services.

Paratransit performance measures allow DCTA staff to:

 Track compliance with certain requirements of the ADA, including on-time performance, trip denials, and access to the reservation system;

- Assess system performance based on established criteria, and compare that to past
  measures of performance and target goals.
- Document outcomes and trends related to system efficiency and communicate these to the DCTA Board, NCTCOG, and member cities.

#### **Demand Response Performance Measures and Standards**

The following performance measures will be used to assess system productivity and ADA compliance. While there is general agreement on what to measure, there are few industry-accepted standards or target values (except those related the showing adequate capacity to avoid a pattern of trip denials).

- Cost per revenue hour. Annual operating costs divided by annual vehicle service
  hours. This measure highlights an agency's cost effectiveness, normalizing operating
  costs (primarily labor and fuel) to the number of hours the service is provided.
- Cost per trip. Annual operating costs divided by the number of trips provided. For ADA
  paratransit services, it is common to include rider companions and attendants in the
  number of trips (i.e. total boardings). This measure allocates operating costs on a per
  passenger basis which is often useful when analyzing growth trends or when comparing
  modes.
- Cost per revenue mile. Annual operating costs divided by annual vehicle service miles.
   This measure highlights cost effectiveness, normalized to service miles provided.
- Trips per hour. Annual boardings (again including attendants and companions)
  divided by annual vehicle service hours. This is a key performance indicator highlighting
  the number of passengers carried for a unit of service delivered. For Access, it reflects the
  level of shared rides and amount of slack time in a run.
- Revenue miles per trip. Annual vehicle service miles divided by the number of annual
  boardings. This measure can show variations or trends in trip length which is useful
  when examining factors contributing to the efficiency of a demand-response system
  (longer trips are harder to schedule with shared rides and create more deadhead time
  where the vehicle is operating without a passenger onboard).
- Percent of trips on time. Percent of all trips where the passenger is picked up within
  the allotted appointment time window. This measure is a key performance indicator,
  especially from the customer's perspective, indicating the reliability of the service.
- No-show/late cancellation rate. Defined as the percent of scheduled trips where the
  passenger is a no-show or failed to provide adequate notice that they cannot complete
  their trip. This measure shows how much unproductive vehicle and driver time is
  expended making unnecessary trips and not being available to transport other
  passengers.
- Advance cancellation rate. The percent of scheduled trips that were cancelled more
  than two hours prior to the scheduled pick up time. This measure shows the degree to
  which the scheduling system has to respond to customer changes, also negatively
  impacting an agency's ability to efficiently schedule vehicle utilization.
- Missed-trip rate: Scheduled trips that were not completed within an hour of the scheduled time because the Access vehicle failed to arrive at the scheduled pickup time.
   The measure is a key indicator of on-time performance and service efficiency.

- Average passenger trip length: The total number of passenger miles divided by the number of passenger trips. This measures the relative amount of longer trips which can result in longer deadhead times and/or fewer shared rides — resulting in lower productivity rates.
- Average passenger travel time. This indicator reflects the amount of time a
  passenger has to ride in the vehicle to complete his/her trip but is not typically monitored
  in the industry. The sampling of individual trips allows Access to make sure a customer
  does not spend an excessive amount of time in a vehicle (especially compared to the
  equivalent trip time for a fixed-route trip).
- Complaint rate: The number of complaints per 1,000 passenger trips. This measure shows trends in customer satisfaction levels. While the complaint rate shows the level of negative feedback from customers, a commendation rate shows the level of positive feedback.
- Farebox recovery ratio: The percentage of Access operating costs recovered by passenger fares. This is a measure of service efficiency.

#### **Access Performance Measures and Standards**

Access Performance Measure	Access Performance Standard		
Cost per service hour	\$75		
Cost per passenger	\$30		
Cost per service mile	\$5.50		
Passengers per hour	2.5		
Percent of trips on-time	90%		
No-shows	No Shows=<1.5%		
Missed Trips	<0.5%		
Advance cancellation rate	15%		
Complaint rate (per 100,000 trips)	15		
ADA Trip denials	None		
Farebox recovery ratio	10%		

#### **PASSENGER AMENITIES**

The following are guidelines for passenger amenities for fixed route bus services. The primary focus of the placement of any amenity is for the safety of the passenger and the transit operator. Regarding the bus stops, it is DCTA's intent to pattern practices after the well - established and proven Transit Cooperative Research Program, Report 19, <u>Guidelines for the Location and Design of Bus Stops</u> prepared by the Texas Transportation Institute and can be found online at <a href="http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp">http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp</a> rpt 19-a.pdf).

DCTA will strive to work with local jurisdictions to construct accessible sidewalks in areas where sidewalks are non-existent or difficult to navigate. Special care will be taken to ensure ADA access is available at DCTA stop locations whenever possible.

#### **Bus Stop Placement**

Stops should be located in the vicinity of demonstrated or potential ridership generators and where the stop can be safely placed. Safety issues always take precedence over issues of convenience.

Stops should be no closer than 700 feet to ensure the flow of traffic and adherence to the schedule. Actual stop spacing should be determined by usage and attractors. Stops should be located in areas where passengers can alight and board without physical or natural obstacles (e.g. light poles, storm water run-off), doors may be easily opened and closed and where a wheelchair lift can be easily and safely operated.

All stops should be placed in public right-of-way and have minimal impact on existing signs, stop locations and driveway locations. Care should be taken to ensure that the signs are easily visible by not only passengers but by bus operators.

When a permanent stop is out-of-service due to construction, a temporary stop may be placed at the next safest and convenient location. The same criteria for placing a permanent stop should be considered when placing a temporary stop. Generally, a temporary stop is used for six months or less. Extenuating circumstances may allow for this time period to be extended.

#### Signalized Intersections

In general, stops at signalized intersections should be placed nearside as to allow alighting and boarding without disrupting the flow of traffic. The exception to this is where there is an exclusive right turn lane which would prevent placing a stop nearside to the intersection. If this is the case, the stop should be located at the farside of the intersection, which allows for the bus to completely clear the intersection. Where the bus makes left turns, the stop should be far-side, giving enough room for the bus to clear the intersection and automobiles to clear the bus.

#### **DRAFT** for Review and Comment

#### **Unsignalized Intersections**

Far-side stops are preferred at unsignalized intersections for safety reasons. Far-side stops should be located no closer than approximately 80 feet from the intersection to allow for both the bus and automobiles to clear the intersection.

Mid-block stops may be necessary near unsignalized intersections. If this is the case, stops should be placed with consideration for allowing sight distance for both traffic and pedestrians. If possible, mid-block stops should be placed in conjunction with pedestrian cross-walks, although this may not always be the case.

#### **Bus Stop Amenities**

Bus stop amenities add to customer comfort, convenience and safety. As a rule, bus stops within the DCTA system should have 15 daily passengers boarding to maintain a bus bench and 25 daily passengers for a bus shelter. Both a shelter and bench should be equipped with a trash receptacle, which will be secured to prevent it from being tipped or blown over. Amenities will be placed in areas where lighting provides visibility for bus operators and safety for passengers. Consideration will be taken for the surrounding environment to ensure passenger safety and comfort. All bus stop amenities should be placed on public right-of-way and be approved by the appropriate city department. Placement on private property will be considered on a case-by-case basis and with written permission of the property owner.

#### Benches

Benches may be installed where sidewalk width allows and no physical constraints exist. The bench should be located where it does not impact or obstruct ADA access and should be on a level surface. It should be placed as close to the bus stop sign as possible and in a location where passengers are visible to the operator.

#### Shelters

Shelters may be placed in locations with 25 or more daily boardings or at transfer points. Shelters should be sited on level ground, with adequate drainage and light. Safety for passengers should be considered when placing a shelter. If a shelter is requested by a private party, then private party will be asked to participate in the cost of the shelter, if the shelter does not meet stated criteria. Shelter placement is also dependent upon the agreement of affected property owners and compliance with local government ordinance, building codes and ADA requirements.

#### Relocation & Removal of Bus Stops and Passenger Amenities

DCTA strives to be a responsible neighbor and will be responsive to bus stop adjustments where passenger safety, comfort and convenience are not compromised. When a request is made to remove or relocate a bus stop or passenger amenity, DCTA will strive to cooperate with the requesting party and/or owners of businesses and residences to ensure minimal inconvenience for all. DCTA will not remove or relocate bus stops or passenger amenities when the request appears to be motivated by bias on the basis of ethnicity, income level or social status of passengers utilizing the bus stop.

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### Appendix C - August 2017 Service Change



### Proposed Services Changes for August 28th, 2018

- UNT's transition to a new Transportation Master Plan
- Provides bus service capacity for additional 1,200 freshman parking storage at Victory Hall
- · Implementation of a Campus Circulator w/reduced on campus bus traffic
- · Introduction of 2 terminals on outer edge of campus: Fouts Field & Union Circle
- All DCTA and UNT "large bus" traffic will operate from the 2 terminal
- Routes 7 & 8 will reroute from Highland street to Eagle to support the new plan
- The proposed services changes have been agreed to by UNT leadership

### Discussed further changes for Jan, May & August, 2018

### Discussed next steps for long-term agreement for August, 2018

Achieve sustainable service efficiencies (UNT&DCTA routes)

Develop a service plan that is financeable, if possible, with existing funding sources

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### Risk Assessment

- The new service plan using 2 terminals will result in:
  - Forced transfers and longer walks in some cases
  - The circulator not fully mitigating the service demand at the two terminals forcing walking, biking or other modes of transportation
  - · Expect complaints until students adjust to new travel patterns
- Service reduction of Sam Bass which reflects low ridership demand may result in a few complaints – this is part of the ultimate plan to eliminate the route in August '18 as the area is already served by DCTA Route 1
- New routing of Eagle Point to Victory parking lot will likely cause damage.
   Assumption is the paving will be changed to concrete within I year
- Changes in Colorado express headways from 13 to 20 minutes based on ridership demand

# DCTA EAGLE POINT

- Route serves Victory Hall at Apogee and the Fouts Field terminals
- Ensures capacity will accommodate 1,200 additional freshman (car storage parking) at Victory Hall lot
- Service frequency is changed from 9 to 11 minutes
- Service recommendation eliminates unproductive portion of the route along Bonnie Brae and Prairie





# MEAN GREEN (Circulator)

- Operates from 7:15a to 5:30p
  - 10 minute frequency is based on 2 buses DCTA Eldorado 30ft bus
- Route will no longer go around Fouts Field only in front to the connection point to other routes
- After 5:30p, service is provided by Campus Cruiser
- DCTA recommends consolidating naming conventions with different stops served based on time of day

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## MEAN GREEN / Circulator

#### Current



### **Proposed**





# Campus Cruiser (Circulator)

- Operates Monday Thursday 5:30p to 10:30p
- No Campus Cruiser on Friday (E-Ride operated)
- Operates Saturday 8am to 6:30pm
  - · Service starts after Mean Green ends daily service
  - Recommend 15 minute frequency from 11 minutes based on ridership and cost savings
  - Reduce from 4 to 2 buses Monday to Thursday based on ridership demand
  - Operate I bus on Saturday like we do now
  - · Recommend combining the naming convention with Mean Green with different stops served based on time of day
  - Eliminates North Texan (NT will run to 10:30p) part of the route and keeps the circulator on campus

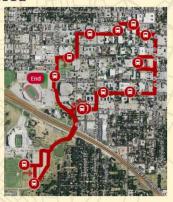


# CAMPUS CRUISER / Circulator

### Current

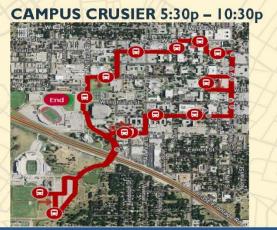


#### **Proposed**





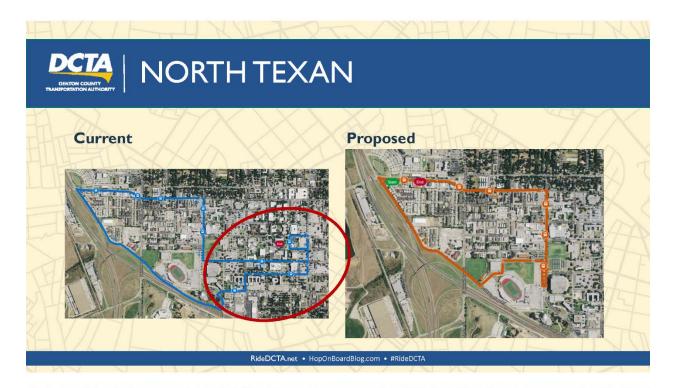






# **NORTH TEXAN**

- Operates from 7:15a to 5:30p on 7 minute headways
- Operates from 5:30p to 10:30p every 14 minutes
- Reduce from 4 to 2 buses until 5:30p then 1 bus until 10:30p (same service level because of shorter route)
- Relocates from Union to Fouts Field terminal
- Concern is this route used to go to the Union. Dropping at Fouts may cause complaints due to forced transfer and walking distance
- Eliminate of 2 vehicles





- Operates from 7:15a to 5:30p w/ 3 buses
- Operates from 5:30p to 8:30p w/ 2 buses
- Operates from 8:30p to 10:30p w/ I bus
- Connects to Fouts Field terminal instead of the GAB stop and no longer stops at EESAT or GAB



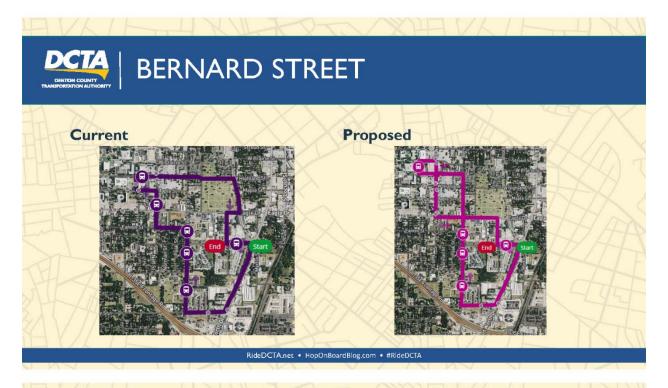


- Operates
  - 7:15a to 2:00p, 5 buses
  - 2:00p to 5:30p, 3 buses
  - 5:30p to 10:30p I bus
- The morning frequency operates every 6 minutes until 2pm and every 10 minutes until 5:30 and every 30 minutes thereafter
- Route connects to Union where it did originally
- · Savings of 6hrs of day of service





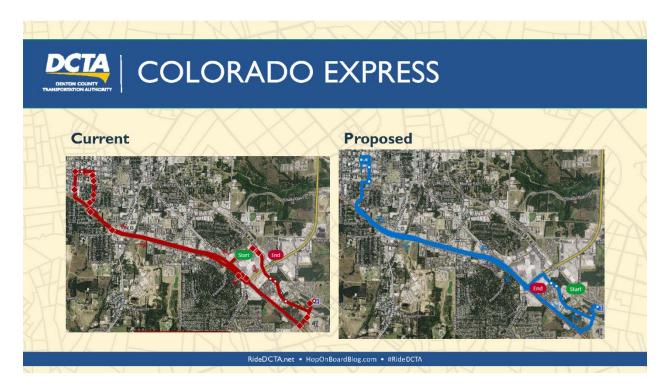
- Operates
  - 7:15am to 12:30p 3 buses (every 7 minutes)
  - 12:30p to 5:30p 2 buses (every 10 minutes)
  - 5:30p to 10:30p I bus (every 20 minutes)
- Only major routing change is moving on campus stop from Highland Street Garage to Union





# COLORADO EXPRESS

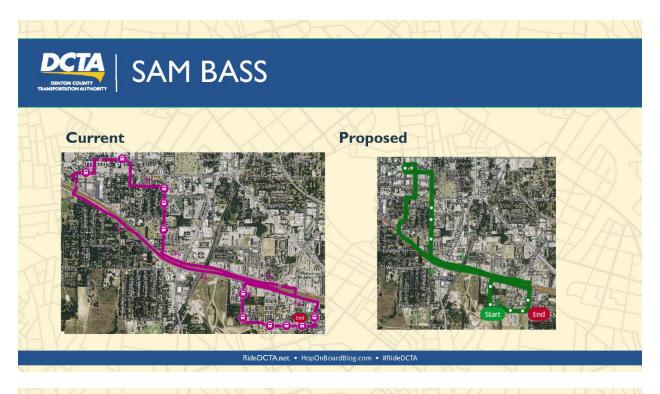
- Operates
  - 7:15a to 5:30p, 2 buses (every 20 minutes)
  - 5:30p to 10:30p, 1 bus (every 40 minutes)
- Reduces vehicles from 3 to 2 due to lower ridership demand
- Frequency will change from every 13 minutes to every 20 minutes
- Removes Golden Triangle Mall stop due to low ridership and available parking at MedPark Station

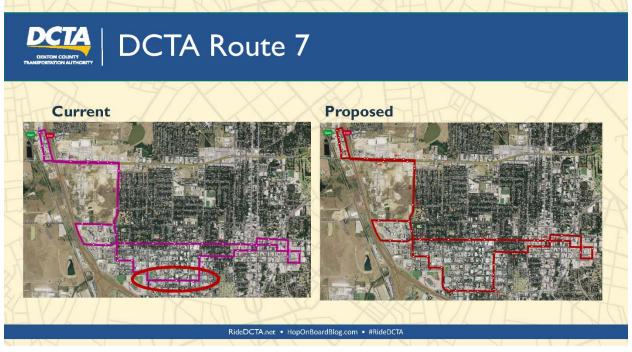




- Operates
  - 7:15a to 10:30p, reduce from 2 to 1 bus due to very low ridership
- Route returns to Union where it originally was before union construction
- Frequency will change from every 15 minutes to every 30 minutes
- We recommend this be the last school year to run Sam Bass due to low ridership w/elimination of the route August '18
- Route I comes thru the same area and can handle ridership once eliminated
- Reduction to 1 bus on Sam Bass

### **DRAFT for Review and Comment**







- Operates
  - 5:30a to 11:00p on 15 and 30 minute headways 4 buses peak, 2 buses off peak
- · Used to go down Highland, now uses Eagle Drive
- Benefit is both 7 & 8 connect Fouts Field and Union Circle Terminals every 15 minutes from Fouts to Union Circle in one direction





# Decisions Approved by UNT

- University accepts the risk of operating in the Victory Hall parking lot to make the route more efficient
- The University understands and is ok if complaints increasing due to transfers and long walks from Fouts Field terminal
- UNT agrees with the recommendation to reduce service levels on Sam Bass for FY18 and complete elimination of the route in FY19
- UNT agrees to the adjustment to the Colorado Express service
- UNT approves the Campus Circulator plan

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## Next Steps After August 28th

- · Develop UNT Pro forma to include capital and operating expenses
  - · Include long term financial needs
  - · Include student fee strategy
  - Include fleet sustainability plan
- Review UNT e-Ride service for potential management by DCTA for Jan, 2018
  - Options may include a combination of DCTA, Lyft, Taxi operated services
- Develop ILA for 10yr agreement by Dec, 2018
- Sign new ILA by Spring, 2018
- Review elimination of Sam Bass for Aug, 2018