Agenda

• Regional Connectivity
• System Recommendations
  • Autonomous Vehicle
  • ATS Alignment
  • ATS Station Location
  • Shared-Use Parking Strategy
• Implementation
  • Transportation and Parking Management Authority (TPMA)
  • Ordinance Changes
  • Implementation Schedule
• Where do we go from here?
  • ATS Stations
  • Systems Technology
  • Governance Delineation at Midtown
  • Autonomous Systems in the Metroplex
Regional Connectivity
System Recommendations
Recommended ATS Vehicle

Group Rapid Transit

- **Vehicle Characteristics**
  - 12-21 passengers/vehicle
  - Electric Vehicle
  - No specialized track required

- **Operational Characteristics**
  - System Capacity: 840 persons/hour (15,120 persons/daily)
  - Expected headways: 1 minute
  - Maximum Speed: 30 mph

- **Implementation Cost**
  - Vehicle: $360K
  - Operations and Maintenance: $1.4M/year

*Implementation costs are estimates for planning purposes only. Estimates based on prior installations of similar systems and industry-expected costs in 2019.
Recommended ATS Alignment

- **Alignment Characteristics**
  - Elevated, 2.2 mile system
  - Internal circulator – dual loop
  - Utilize existing/planned thoroughfares

- **Key Advantages**
  - 70% of total area within 2 minute walk
    - Including LBJ frontage development
  - 99% of total area within 5 minute walk

- **Implementation Cost***
  - Right of Way: $8.5M/mile ($18.7M)
  - Utilities: $3M/mile ($6.6M)
  - Traffic Improvements: $1M/mile ($2.2M)
  - Construction: $1.5M/mile ($3.3M)
  - **Total Build:** $14M/mile ($30.8)

*Implementation costs are estimates for planning purposes only. Estimates based on prior installations of similar systems and industry-expected costs in 2019.
Recommended Alignment and Connections
Recommended ATS Alignment - Transition

- Impacts of transition from elevated to at-grade
  - 630’-750’ transition length
  - Through streets blocked during transition length
  - More ROW required for at-grade system
  - Pedestrian conflicts on street level
  - Operational conflicts at cross-streets/signals

*Implementation costs are estimates for planning purposes only. Estimates based on prior installations of similar systems and industry-expected costs in 2019.
Recommended ATS Station Locations

- **Station Characteristics**
  - Maximize connections to park
  - In median near intersection (on-line)
  - Off-line stations possible within developments
  - Activates streets between alignment and park

- **Implementation Cost**
  - Right of Way: $3M/station ($18M)
  - Construction: $5M/station ($30M)
  - Pedestrian Bridge: $1.5M/station ($9M)
  - **Total Build**: $9.5M/station ($57M)

*Implementation costs are estimates for planning purposes only. Estimates based on prior installations of similar systems and industry-expected costs in 2019.
Recommended Shared Parking Strategy

- **Number of Spaces**
  - Shared Plus (recommended mode split): 42,204 total, 20,904 new

- **Location Considerations**
  - Proximity to ATS station (< 1/10 mile preferred)
  - Access to road planned for vehicular circulation
  - Potential to interface with transit
  - Proximity to multiple uses/hubs

- **Implementation Cost**
  - Capital Cost (one-time):
    - Shared Plus: $600M—700M
    - Cost Savings: $1.3—1.4B
  - Maintenance Cost (annual at total build):
    - Shared Plus: $9M—10M
    - Cost Savings: $4M —5M

*Implementation cost are estimates for planning purposes only. Estimates based on prior installations of similar systems and industry-expected costs in 2019.
Implementation
TPMA

- **Combined System with both Transportation Demand Management and Parking Management Duties**
  - “Carrot” and “Stick” TDM approaches to achieve SOV reduction goals
  - Active parking supply management and paid parking programs
  - TDM coordinator position(s)

- **Public Private Partnership (P3)**
  - Flexibility in timing, scope, and investment
  - Benefits from private and public sector
  - RFP; strong and comprehensive contractual language
Ordinance Changes

- Creation of a District-Wide Parking Management Plan alongside TPMA
  - Overarching “master plan level” vision for district-wide parking and transportation demand management—created by TPMA and adopted by City
  - Used as a guide to consider development opportunities and parameters

- Parking Maximums
  - Exaction of parking maximums; elimination of parking minimums
  - New development required to utilize existing shared parking resources

Lloyd District in Portland, Oregon
Recommended Implementation Schedule

- **Shared-Use Parking**
  - Change parking requirements
  - Use of existing parking facilities to meet existing demand
  - Construct new facilities in predetermined locations as development occurs and demand increases

- **Autonomous Transit System**
  - Complete 2.2 mile build-out of ATS system
  - Initial regional connections established from start
Where do we go from here?
Governance Structure (TPMA)

❖ Establishment of TPMA

➢ Lead effort in parking/ development regulation updates
➢ Establish supervisory structure for district amenities
➢ Push ATS/parking into development
   ➢ Midtown Park
   ➢ Intelligent Transportation System (ITS) installation
   ➢ Miscellaneous amenities (security, marketing, etc.)
Regional People Mover Initiative

- Build individual autonomous networks across the Metroplex
  - Building from the Dallas Midtown model
  - Increasing last mile connections with regional transit
  - ATS installations supporting each other

Source: Last mile Transit Connections Concept Study; NCTCOG; 2016
Next Steps

- **Study Timeline**
  - April/May – Team to produce Final Report
  - May – Final Report Submitted

- **Final Public Meetings**
  - May 7, 2019- Presentation of Final Recommendations
Thank you to our Study Review Committee!
Dallas Midtown Parking Study

Karla Weaver, AICP – NCTCOG – Program Manager
  ➢ KWeeper@nctcog.org
Shawn Conrad – NCTCOG – Project Manager
  ➢ SConrad@nctcog.org
Casey Wagner, PE – Walker Consultants – Sr. Project Manager
  ➢ CWagner@walkerconsultants.com
Mallory Baker – Walker Consultants – Project Manager
  ➢ MBaker@walkerconsultants.com
Jeff Weckstein – Walker Consultants – Technical Consultant
  ➢ JWecKstein@walkerconsultants.com

Dallas Midtown ATS Study

Dan Lamers, PE – NCTCOG – Sr. Program Manager
  ➢ DLamers@nctcog.org
Kevin Feldt, AICP – NCTCOG – Program Manager
  ➢ KFeldt@nctcog.org
Brian Crooks – NCTCOG – Project Manager
  ➢ BCrooks@nctcog.org
Jeremy Wyndham, PE – Jacobs – Sr. Project Manager
  ➢ Jeremy.Wyndham@Jacobs.com
Marcus Ashdown, AICP – Jacobs – Project Manager
  ➢ Marcus.Ashdown@Jacobs.com
Amanda O’Neal – K Strategies – Public Involvement
  ➢ AOOneal@kstrategies.com