

I-35 Capital Express Central Project

Austin Transportation Department
Staff Recommendations to Council

August 31, 2021



I-35 Capital Express Central

Prior Direction from Council

- City staff to engage with TxDOT in developing recommendation(s) to Council
- Assist TxDOT in amplifying public engagement efforts
- Engage with Downtown Austin Alliance (DAA) & other stakeholders to explore lidding opportunities



I-35 Information – Carver Library
Source: ATD I-35 Public Engagement

A Limited Access Freeway is Critical to Local/Regional Economy

- Existing I-35 Corridor is Strategically Important to Central Texas (ATX)
 - City of Austin has been an early investor in the in the My-35 Corridor Planning effort
 - Existing Corridor is vital to the economic stability of ATX Region
 - Maintaining a limited access freeway within corridor is critical for connectivity to raw materials, international ports and gateways, employment based up and down the corridor
- Eliminating I-35 as a freeway is not viable



I-35 Serves as a Major Freight Route for all of Central Texas
Source: NearMap

Existing Design is No Longer Sustainable

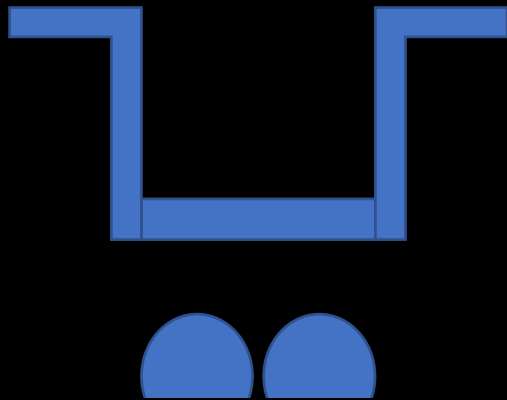


Crashes Close I-35 on Regular Basis
Source: KXAN May 30, 2021 / 06:52 AM CDT

- Existing I-35 Design is Obsolete
 - Safety – 40 pedestrians and cyclists killed in past 5-year period trying to cross main lanes or frontage roads of I-35 (additional 20 serious injured)
 - Mobility – I-35 remains one of the most congested freeways in Texas, largely due to substandard design
 - Barrier – I-35 creates a barrier to east/west connectivity
- A No-Build option is not sustainable

Considering Build Alternatives

SAME CAPACITY REGARDLESS OF DESIGN ALTERNATIVE



Managed lanes in deep tunnel
w/ lowered freeway above



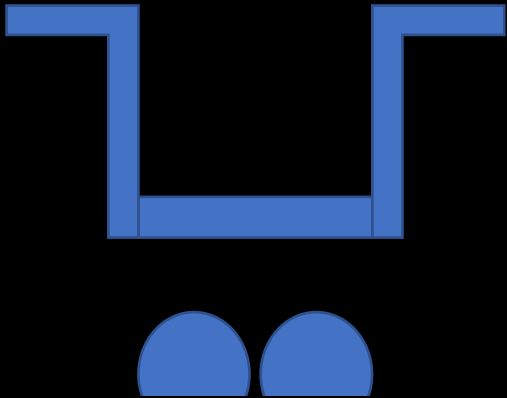
Managed lanes & freeway at same lower level,
frontage roads outside of cut

- Under Woodland/Airport Blvd.
- Over Woodland/Airport Blvd.

- Current build alternatives represent one operational concept with three design variations
- Deep tunnels are determined to not be feasible, remaining build options result in similar impacts
- Impacts are significant
142 to 147 displacements estimated just in central Austin
- City Staff and community are seeking design modifications that better meet City of Austin policies and needs

Staff Recommendation to Council:

SAME CAPACITY REGARDLESS OF DESIGN ALTERNATIVE



Managed lanes in deep tunnel
w/ lowered freeway above



Managed lanes & freeway at same lower level,
frontage roads outside of cut

- Under Woodland/Airport Blvd.
- Over Woodland/Airport Blvd.

Staff Proposal



Design modifications that better
meet City Policies & Needs

Managed lanes & freeway at same lower level,
frontage roads cantilevered over freeway
with possible operational efficiencies

- Under Woodland/Airport Blvd.
- Over Woodland/Airport Blvd.

National Standards and Technology

- Future I-35 Designs Should Include:
 - Latest national geometric design standards, focused on safety (AASHTO/NACTO)
 - Separation by lane purpose
 - Minimize impacts to adjacent land uses
 - Operationally informed design solutions
 - HOV
 - HOV/Toll or HOT Lane design
 - Transit
 - Circulation and Distribution (CD) lanes and ramping
 - Technology that allows for real-time facility management
 - Vehicle demand
 - Ability to adjust speeds
 - Incentivize use of higher occupancy vehicles and transit



Interchange Design, I-35 Frontage Rd at 51st St. Austin, TX
Source: NearMap

Separation by Lane Purpose & Minimize Footprint

- Separation by purpose
 - Through travel (main lanes)
 - Access to central employment centers (Circulation and Distribution – CD lanes)
 - Access to local land use (surface boulevard)
 - Design surface lanes as urban arterial
 - Signalization
 - Pedestrian activity
 - Streetscape
 - On-street parking
- Minimize impacts on adjacent land uses by narrowing design
 - Cantilever frontage roads over freeway below
 - Consider portal ramps and single-point intersections



Cantilevered Freeway, I-5 WA State
Source: NearMap

Separation by Lane Purpose & Minimize Footprint

- Separation by purpose
 - Through travel (main lanes)
 - Access to central employment centers (Circulation and Distribution – CD lanes)
 - Access to local land use (surface boulevard)
 - Design surface lanes as urban arterial
 - Signalization
 - Pedestrian activity
 - Streetscape
 - On-street parking
- Minimize impacts on adjacent land uses by narrowing design
 - Cantilever frontage roads over freeway below
 - Consider portal ramps and single-point intersections



Clyde Warren Freeway Portal Ramp, Dallas,
Source: NearMap



Express Lane Portal Design, Seattle, WA
Source: NearMap

Operationally Informed Design



HOV 2+ Toll Management, Dallas, TX
Source: NearMap

- HOV
 - Occupancy restriction
 - 2-lanes or 4-lanes
 - Preferential transit access
- HOV/Toll (HOT)
 - 4-lanes
 - Combined transit access
- Circulation & Distribution (CD)
- Transit Incentives
 - Ramping
 - Parking facilities
- Surface arterial design
 - Boulevard characteristics
 - Signalization controls speed
 - Pedestrian infrastructure
 - Possible on-street parking

Incorporate Management Technologies, Plan for New Modes

- Technology that allows for real-time management of facility
 - Vehicle demand management
 - Variable Speeds
 - Active congestion management
 - Incentivize use of higher occupancy vehicles and transit
- Emerging technology incentives
 - Low emission vehicles
 - Automation
 - Rubber tired high-capacity transit



Real-time Speed Management, I-5 WA State.
Source: NearMap

Incorporate Ability to Support Community Driven Urban Design Goals

- Crossing structures to promote E/W connectivity
 - Wide bridges/lids as part of base design
 - Enhanced Pedestrian/bicycle crossings
- Acknowledge role of freeway in creating division
- Corridor aesthetics program
 - Corridor theme
 - Community engaged design opportunities
 - Art as functional element of design
 - Art in public places



Example Freeway Lid with Pedestrian Crossing, SR 520 WA State.
Source: NearMap

Incorporate Ability to Support Community Driven Urban Design Goals

- Crossing structures to promote E/W connectivity
 - Wide bridges/lids as part of base design
 - Enhanced Pedestrian/bicycle crossings
- Acknowledge role of freeway in creating division
- Corridor aesthetics program
 - Corridor theme
 - Community engaged design opportunities
 - Art as functional element of design
 - Art in public places



Community Art Program, I-35 San Antonio, Tx. .
Source: Perceptivetravel.com

Staff Recommendation

- City Staff have been early participants in shaping I-35:
 - 2012 Bond for I-35 Corridor Development Funds
 - 51st Street Interchange
 - Regional STPMM Funding (\$1B in local funds)
 - Downtown “Rib” lighting installation
 - On-going participation as local agency
- Staff believe freeway replacement is needed
- Staff are working with TxDOT to make sure build alternatives reflect City goals & policies
- Request to Council:
 - Request further modification of alternatives being carried forward based on staff & community recommendations
 - Remain engaged as a partner through design process, advocate for design modifications based on operations and advanced design considerations
 - Politically engage at regional and state levels to preserve preferred outcomes



Source: GoogleMaps.com