

DALLAS CITY CENTER

MASTER ASSESSMENT PROCESS



BRIEFING DOCUMENT



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MASTER ASSESSMENT PROCESS



THE CHALLENGE: MOUNTING CONGESTION AND FUNDING CONSTRAINTS

As major metro areas in Texas continue rapid population growth, the state's urban highway system becomes more and more congested. Addressing that congestion effectively will require a comprehensive and transparent approach to confront a variety of factors including both statewide and local connectivity.

Twenty-first century planning, design, reconstruction and long-term maintenance of Texas urban highway corridors will depend upon collaboration and partnerships reaching beyond the independent capacity of the Texas Department of Transportation (TxDOT). According to the North Central Texas Council of Governments' (NCTCOG) 2040 Mobility Plan, the region "is expected to experience a 48 percent increase in population and 46 percent increase in employment. The transportation system is central to this growth because it allows for the efficient movement of people and goods. Without adequate transportation funding to ensure a high level of mobility, the region will face challenges in sustaining economic growth."

Voters emphasized the importance of highway funding with the passage of Proposition 7 in 2015, which raises money for infrastructure projects by dedicating a portion of sales tax revenue and diverting a percentage of the motor vehicle sales tax. This measure is expected to bring in approximately \$3 billion a year for transportation in addition to the approved Proposition 1 which passed in 2014. The money generated by both Proposition 7 and Proposition 1, however, may not be enough, as available funding is expected to only keep congestion at current levels. Other sources of funding are necessary to address critical high-volume freeway choke points that provide congestion relief crucial to municipal and regional businesses and the overall Texas economy. As recognized by NCTCOG's plan, the newly passed propositions are insufficient sources of money to address the growing regional problem even when combined with federal dollars. Creating sustainable partnerships will require significant local financial participation in addition to active collaboration. It is through these partnerships and collaboration that tremendous opportunities are realized.

Why Dallas?

Governor Greg Abbott recently initiated the Texas Clear Lanes program lead by the Texas Transportation Commission to identify and address the state's most congested chokepoints and to work with planners and engineers to get new roads planned, designed and built helping spur economic development and jobs creation. Located at the crossroads of several major highway chokepoints, Downtown Dallas has six freeways that fall into the top 25 of the 100 most congested roadways in Texas greatly impacting the North Texas freeway system and the local and state economies.

In fact, NCTCOG urges that the system's performance will decline even if their 2040 Mobility Plan recommendations are implemented; however, "if no improvements are made, by 2040, the average trip would take 98 percent longer to complete in congested conditions than in uncongested conditions." In addition to capacity and operational improvements, these highways are aging and portions need to be replaced to address maintenance and safety issues. Regardless of how critical it is to accomplish these improvements, it is not a simple fix within the context of a major urban city and innovative solutions must be found to realize Governor Abbott's vision for Texas.

To respond to the need for innovation, Dallas CityMAP was created.

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THE SOLUTION

Termed the Dallas City Center Master Assessment Process (CityMAP), CityMAP provides the opportunity for public input to communicate the development of options for informed collective decision-making for the major highways leading into the core of downtown Dallas. Seizing this opportunity, TxDOT initiated an effort focused on Dallas' urban core to help untangle some of North Texas' most congested and aging freeway infrastructure while addressing what stakeholders value most.

The CityMAP initiative is an assessment of the challenges, opportunities and redesign options for the aging interstate corridors and adjacent neighborhoods in and around downtown Dallas. TxDOT initiated the process in early 2015 to understand how congestion relief and city design can be considered comprehensively by engaging with community stakeholders, the City of Dallas and Dallas County. Providing an early advanced planning framing of the issues through a comprehensive look at the corridors—both inside and outside the right-of-way lines—CityMAP lays the groundwork for multi-partner decision-making on project prioritization, funding and construction.

Framing options through a comprehensive process will minimize public and local partner resistance, avoid costly planning and design delays, and allow TxDOT to test options early for community acceptance, operational performance, funding feasibility and partnership potential.

OPTIMIZING SYSTEM PERFORMANCE

CityMAP recognizes that the highway corridors at the core of Dallas are part of a system impacting the region and beyond. In fact, as indicated earlier, four of the corridors (I-30, I-35E, I-345, and I-45) assessed as part of CityMAP fall into the top 25 of the most congested roadways in Texas. If this congestion is not met with integrated solutions reflecting statewide, regional and local shared goals that seek a balance for mobility, livability and economic development, it will be stymied by a degrading quality of life as frustrations increase for the commuting public and adjacent neighborhoods.

Looking both inside and outside the right-of-way, CityMAP presents concepts, diverse ideas, possibilities for roadway design, and adjacent neighborhood and community development impacting the future of the Dallas core. In addition to linking the various corridor scenarios into systemwide combinations to test traffic impacts, CityMAP uses stakeholder-informed factors to evaluate each scenario for improved mobility, livability, and economic vitality. Based on stakeholder input, CityMAP includes the following scenarios: I-30 Canyon compressed footprint; taking a portion of the I-30 East Corridor below grade; relocating I-30; improving connections for I-35E Lowest Stemmons and The Southern Gateway; and modifying, removing or lowering I-345/I-45.

At-a-Glance sheets have been prepared to provide a snapshot of each scenario as part of this briefing.

OBSERVED TRAVEL PATTERNS

The Dallas CityMAP Team performed a survey of trips on the freeways in the vicinity of the Central Business District (CBD) to determine how motorists use the “spoke” system of corridors navigating to and through the “hub” of downtown Dallas. The survey determined that the radial spokes serve two important functions. A primary function for all routes is to serve the downtown area. However, an additional function is to distribute trips to each of the remaining routes. In most cases each approach route links a percentage of its trips approaching the CBD to two or three of the spoke routes departing the CBD.

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For each of the origins, downtown receives the highest or next highest percentage of origin trips. This indicates downtown Dallas as the destination. In each case, the direct through route, either north/south or east/west, also receives high trip share. This demonstrates the importance of each route to downtown and the CBD; and, the important role each of the corridors immediately adjacent to the CBD has to the Dallas freeway network.

Based on this information, it is clear that the Downtown Freeway System links the various parts of the city and the region to each other.

Observation stations were located close to the center of Dallas. Because of this, it can be assumed that through-downtown trips may be to other destinations in the city such as jobs along the I-35E/Stemmons Corridor or US 75/North Central Expressway, or some of them may be longer trips that leave Dallas. In order to study this from a regional/sub-regional perspective, the team also performed surveys to determine the percentage of trips that begin and end outside of the Dallas loop as defined by I-20, I-635, and Loop 12.

While these through trips exist, they are small in comparison to the number of trips which originate outside the loop and leave the freeway inside the loop. Only a small percentage of the trips on the radial routes are completely through in the sense that they have both an origin and a destination outside of this freeway loop.

Dallas' hub and spoke freeway system serves a multitude of travel patterns. The most prevalent remains direct access to the CBD and greater Downtown from the City, suburban neighbors, and the region.

SUMMARY OF THE RESULTS

The decision-making process for these transformative scenarios presented in CityMAP require parallel considerations of city infrastructure, private development, and funding outside of TxDOT. The results of CityMAP provide the opportunity to relate the scenarios with other considerations in order to guide partnerships for project prioritization, funding and implementation.

A synopsis of discoveries by scenario is presented in the following information graphic, also a part of this briefing.

HOW TO USE CITYMAP

CityMAP explored the "art of the possible" and stakeholder input guided scenario development. What emerged was the convergence of mobility/congestion relief, livability/quality of life and economic development. In this context, the CityMAP scenarios are supported by geometric implications, traffic analysis, economic analysis, urban design options and other factors. Those factors provide a comprehensive platform for decision-making.

CONSIDERATIONS

CityMAP provides a tremendous amount of information and analysis for each of the corridors. A critical first step in establishing a logical sequence of understanding the opportunities – for the respective corridors and their impact on the overall system – has already been made with the decision to construct the I-30/I-35E Horseshoe Project which is currently underway.

The graphics on page 6 show each corridor's relationship to one another. This is important because each corridor cannot be viewed in isolation; they are all interconnected.

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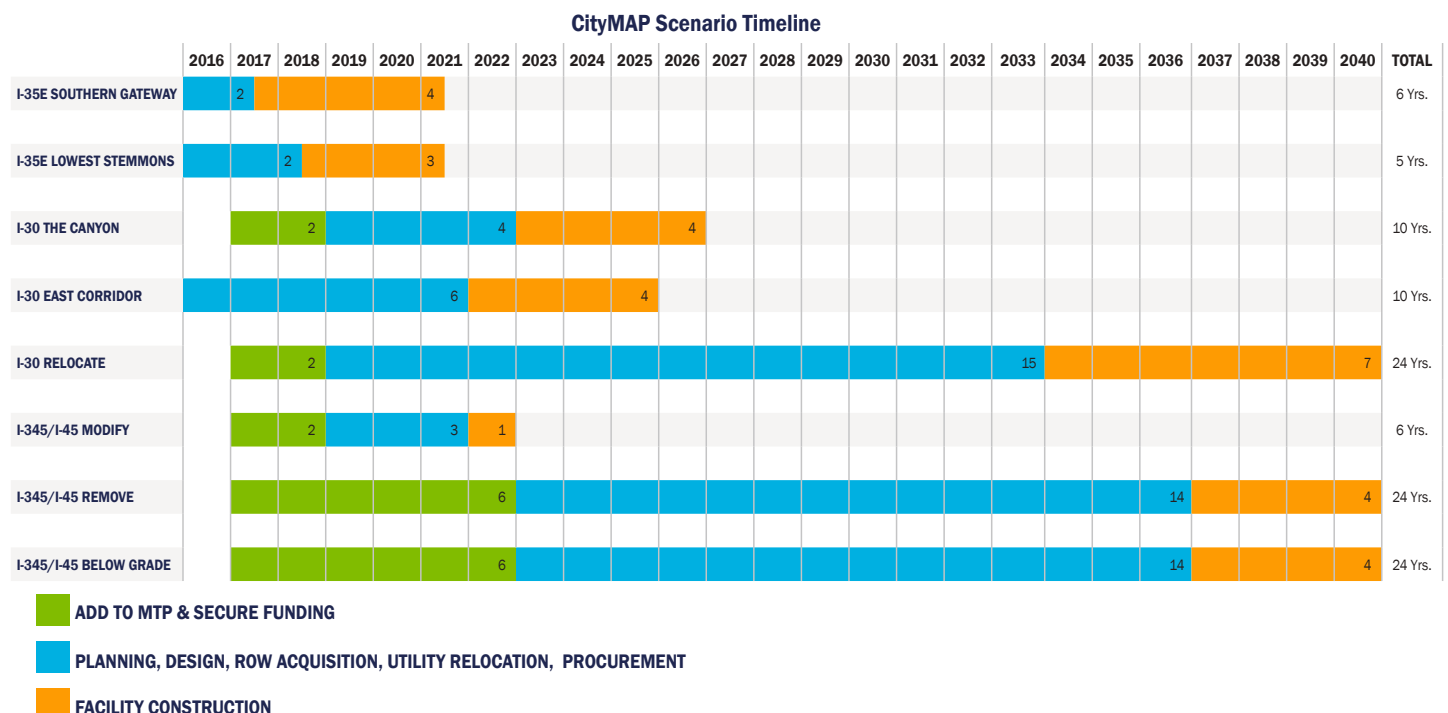
The scenarios for I-35E Lowest Stemmons and I-35E The Southern Gateway are logical extensions of the “Horseshoe” Project. CityMAP also provides several design scenarios for I-345/I-45 and I-30. Each scenario invariably impacts the others. Various combinations of scenarios add to the importance of using the CityMAP document for informed decision-making.

A logical first step in the decision-making process could be considering the viability of the I-30 Relocate scenario, which is arguably the most transformative and complex idea. The decision to relocate I-30 should be determined early in order to inform the I-30 Canyon and East Corridor projects. In addition, the I-30 Relocate scenario decision should be closely coordinated with other planned projects such as the Trinity Parkway and S.M. Wright/175. This coordination should also consider the I-30 Relocate alignment’s potential impacts on the new Riverfront Boulevard, DART D2, possible high-speed rail station, and several other major area investments.

Scenarios representative of stakeholder input for the I-345/I-45 corridor are also assessed in the CityMAP document. Determining which of the I-345/I-45 scenarios is preferred will add clarity to the ongoing I-30 Canyon and East Corridor project development process.

NEXT STEPS

The CityMAP scenarios and the factor analysis are not the final outcome. Rather, the scenarios provide a substantial starting point based on listening to stakeholders, conducting research and analysis, and developing conceptual designs. The next step will be to begin project priority discussions with local partner agencies from their review of CityMAP and continue the dialogue of integrated problem-solving. Based on the findings of the CityMAP study, it is recommended that agencies including the City of Dallas, Dallas County, DART, NCTCOG and TxDOT work together to develop project prioritization, sequencing (see table below), and funding packages that are supportive of stakeholder needs and desires.

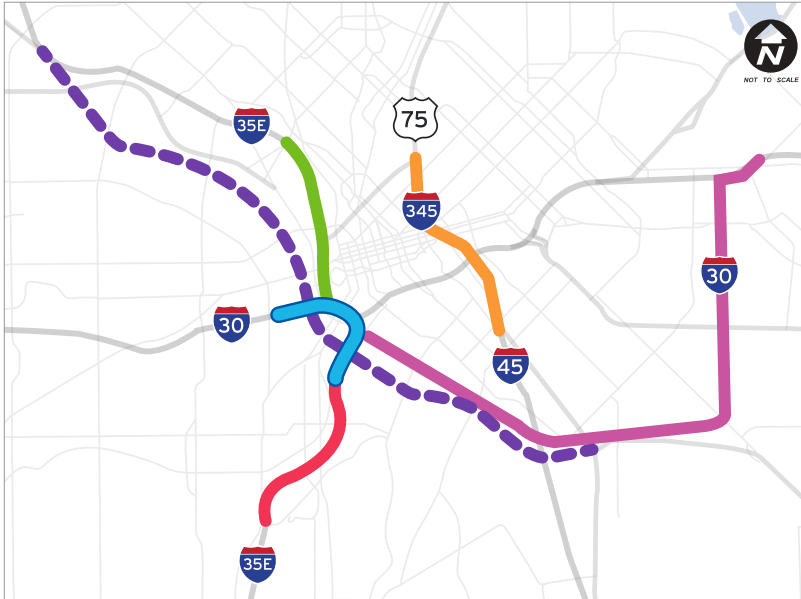


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System Based On I-30 Relocation Scenario



- I-30 Relocate Scenario
- I-345/I-45 Decision Point:
 - Modify Scenario
 - Remove Scenario
 - Below-Grade Scenario
- I-35E Lowest Stemmons Scenario
- I-35E Southern Gateway Scenario
- TxDOT Horseshoe Project Under Construction
- NTTA Trinity Parkway Project

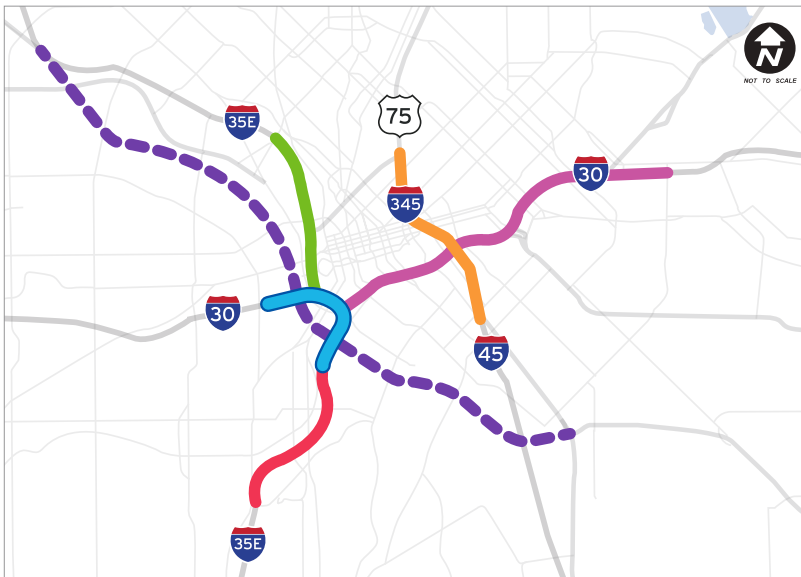
First-Order Decision: Is the I-30 Relocate Scenario Advanced?

- Impacts I-30 Canyon and I-30 East Corridor Scenarios
- Coordinate with S.M. Wright/US 175 Project

Second-Order Decision: How is I-345/I-45 Advanced?

- Modify Scenario, Remove Scenario, or Below-Grade Scenario

System Based On I-30 Canyon And East Corridor Scenarios



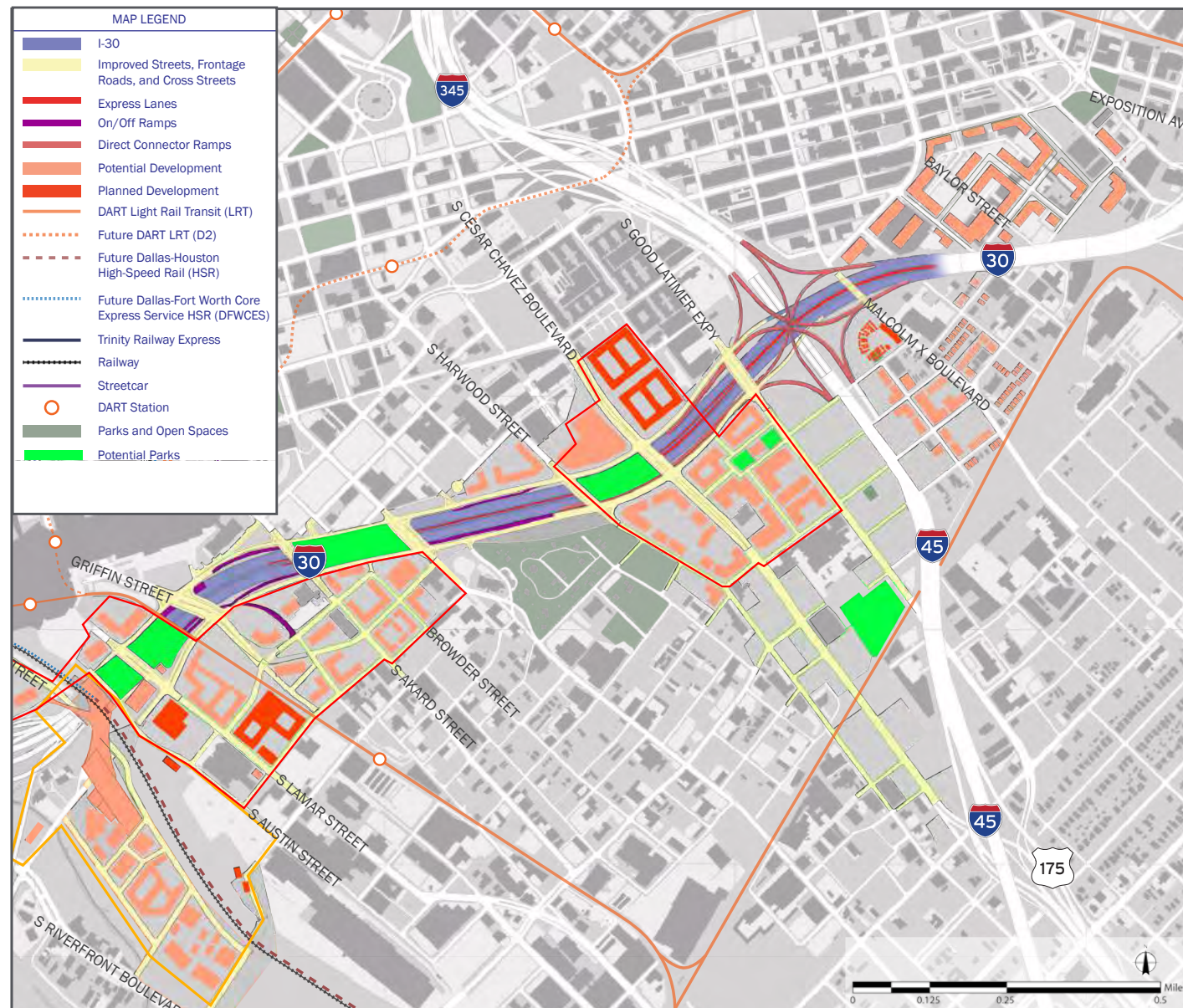
- I-30 Canyon and East Corridor Scenarios
- I-345/I-45 Decision Point:
 - Modify Scenario
 - Remove Scenario
 - Below-Grade Scenario
- I-35E Lowest Stemmons Scenario
- I-35E Southern Gateway Scenario
- TxDOT Horseshoe Project Under Construction
- NTTA Trinity Parkway Project

First-Order Decision: Advance the I-30 Canyon and I-30 East Corridor Scenarios?

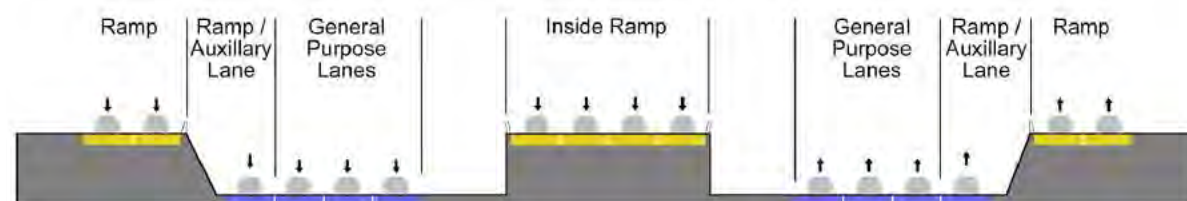
Second-Order Decision: How is I-345/I-45 Advanced?

- Modify Scenario, Remove Scenario, or Below-Grade Scenario

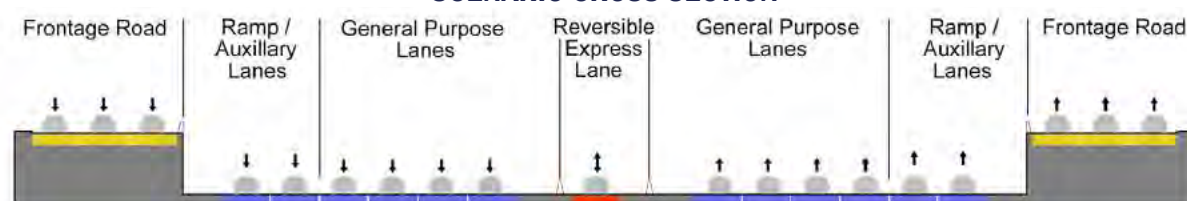
DALLAS CITYMAP | I-30 CANYON COMPRESSED SCENARIO | AT-A-GLANCE



EXISTING CROSS-SECTION



SCENARIO CROSS-SECTION



MOBILITY/CONGESTION RELIEF

Provides congestion relief (lane capacity increase) and safety improvements, as well as improved local network connectivity.

Implements features of Project Pegasus, including reconfiguring the Cesar Chavez interchange to a simple diamond interchange with connections to the I-30 express lanes and removing the collector-distributor system, adding continuous frontage roads and other changes that simplify ramps and access to downtown.

Increased connectivity enhances access to existing DART light rail stations at convention center and Cedars offering regional mobility options in addition to a future DART D2 light rail planned station.

I-30 reconstruction in the Canyon will necessitate coordination with Union Pacific Railroad at existing bridges and Texas Central Railway (TCR) regarding potential High Speed Rail (HSR) crossing of I-30.

Below-grade alignment would preclude future main-lane widening.

LIVABILITY/QUALITY OF LIFE

Creates complete street bridges that offer pedestrian and cycling linkages across I-30, improving neighborhood character and connections to the Farmers Market, Heritage Village, convention center and the Cedars neighborhood.

The scenario identifies three deck park opportunities connecting downtown to South Dallas. If local partners support and fund deck parks, significant redevelopment opportunities could be realized.

The proposed deck park linking the convention center and possible HSR station provides an opportunity for a front door into the convention center from the south.

ECONOMIC DEVELOPMENT/GROWTH

Builds on current development momentum at the Farmers Market and Southside at Lamar neighborhoods.

Offers the potential to stimulate significant redevelopment in the southern sector.

Assumes surplus right-of-way at reconfigured Cesar Chavez Boulevard would be sold at market value in public process to provide development opportunities.

Leverages transformative opportunities around the HSR station.

SCENARIO DETAILS

SCENARIO LIMITS: I-30 from Hotel Street to east of I-45

SCENARIO LENGTH: 1.6 mile +/-

SCENARIO FACILITY CAPITAL COST ESTIMATE

Under \$100M	\$100M - 499M	\$500M - 999M	\$1B - 2B	Over \$2B
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M = Million B = Billion

MOST CONGESTED ROADWAYS IN TEXAS RANK: 16

ANNUAL HOURS OF DELAY PER MILE: 441,769

ANNUAL COST OF DELAY: \$90.65 Million



POTENTIAL DECK PARK AT HARWOOD STREET

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

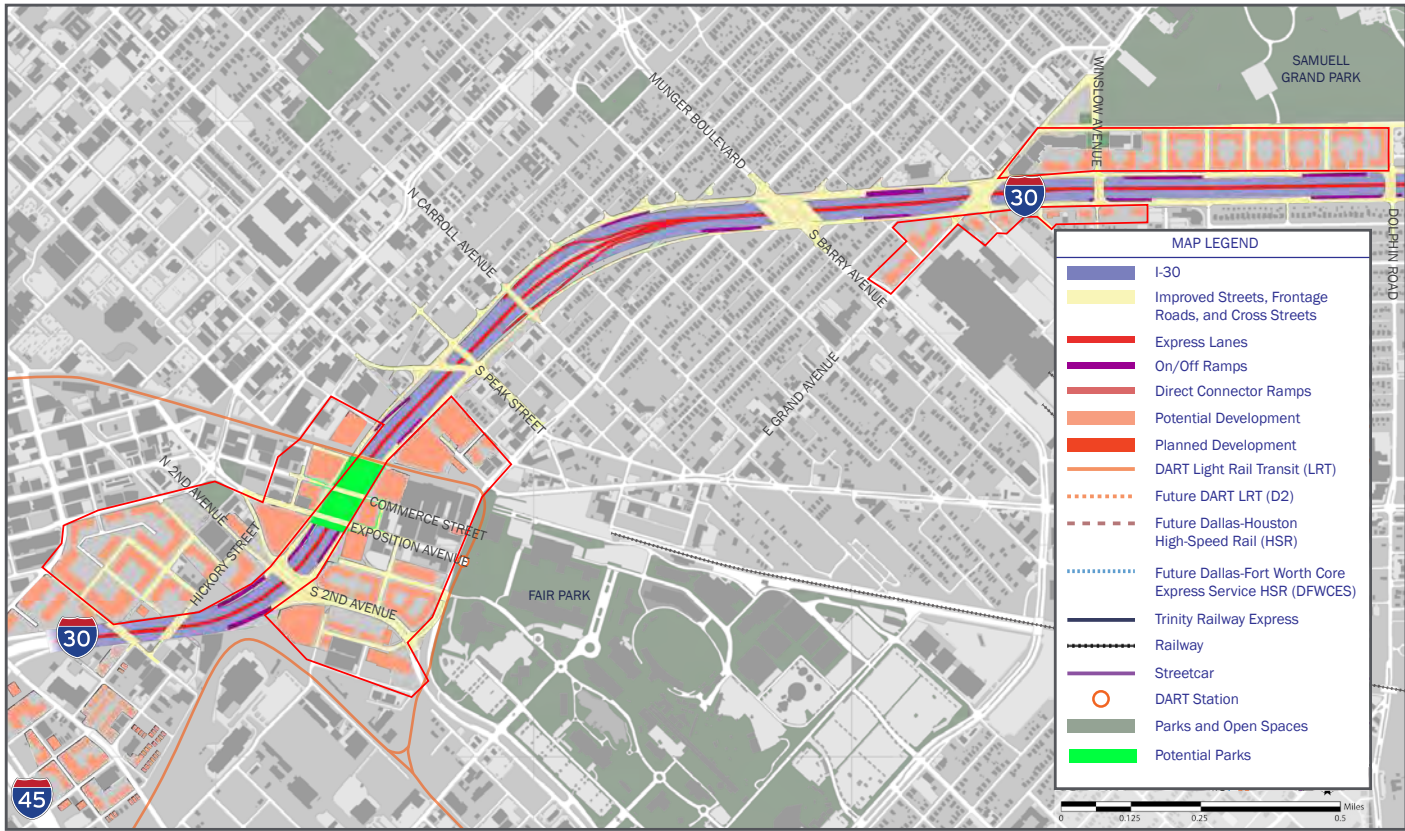


Scenario Timeline Estimate - 2017 thru 2026

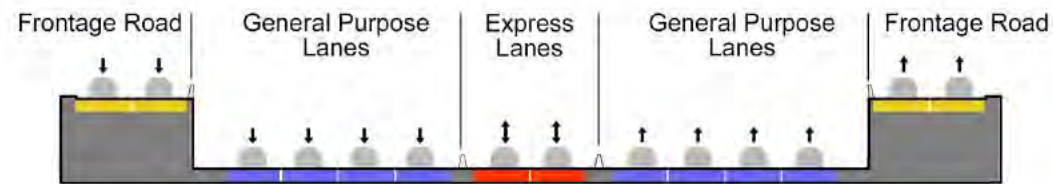
10 Years*

*Includes two-year period to add to Metropolitan Transportation Plan

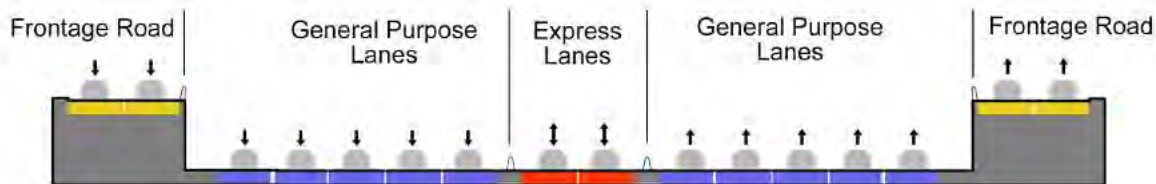
DALLAS CITYMAP | I-30 EAST CORRIDOR BELOW GRADE SCENARIO | AT-A-GLANCE



SCENARIO CROSS-SECTION 4-2R-4



SCENARIO CROSS-SECTION 5-2R-5



MOBILITY/CONGESTION RELIEF

Scenario examines two highway configurations. One version provides four general purpose lanes in each direction. The other has five general purpose lanes in each direction.

Adds missing frontage roads and cross-street connections where possible. Changes access routes to existing destinations in Deep Ellum and Fair Park.

Eliminates the contraflow high occupancy vehicle (HOV) lane and implements a 2 lane reversible express lane system. Existing configuration provides 4 general purpose lanes and 1 HOV lane in the peak direction with three lanes in the off-peak direction.

Increases capacity to mitigate congestion and reduces operational expense over today's facility.

LIVABILITY/QUALITY OF LIFE

Lowers the profile where it is elevated or at grade to allow a below-grade facility from east of I-45 to Dolphin Street.

Reconnects Fair Park to Deep Ellum and East Dallas neighborhoods, providing an opportunity to reinvigorate the historic cultural center of Dallas.

The scenario identifies a deck park opportunity at Fair Park. If local partners support and fund a deck park, significant redevelopment opportunities could be realized.

Requires a thorough understanding of the impacts of gentrification and historic preservation.

Includes careful and complementary development that improves livability along Samuell Grand Park.

ECONOMIC DEVELOPMENT/GROWTH

Creates job opportunities through the transformation of underutilized public and private properties.

Retain and grow Baylor-affiliated research facilities as a result of better connectivity.

Expands redevelopment character, including broader housing choices, as well as a meaningful context for the redevelopment of the former Ford plant and reinforcement of the Jubilee Neighborhood.

OVERALL TXDOT PROJECT DETAILS

PROJECT LIMITS:
I-30 from I-45 to Bass Pro Drive and US 80 from I-30 to FM 460

PROJECT LENGTH:
17 miles along I-30 and 11 miles along US 80

PROJECT COST ESTIMATE:
Facility Capital Cost (TxDOT) \$2 Billion

ADDITIONAL FACILITY CAPITAL COSTS BY OTHERS:
TBD

MOST CONGESTED ROADWAYS IN TEXAS RANK:
16

ANNUAL HOURS OF DELAY PER MILE:
441,769

ANNUAL COST OF DELAY:
\$90.65 Million

SCENARIO DETAILS (INCLUDED IN OVERALL TXDOT PROJECT)

SCENARIO LIMITS:
I-30 from east of I-45 to Dolphin Street

SCENARIO LENGTH:
2.6 miles

SCENARIO COST ESTIMATE:
Facility Capital Cost (TxDOT) \$735 Million

ADDITIONAL FACILITY CAPITAL COSTS BY OTHERS:
\$50 Million - \$150 Million

FACILITY DEVELOPMENT AND CONSTRUCTION DURATION



DALLAS CITYMAP | I-30 RELOCATE SCENARIO | AT-A-GLANCE



I-30 CONCEPT DRAWING Source: Adapted from a drawing by Patrick Kennedy



NEW BOULEVARD AT FARMERS MARKET

SCENARIO DETAILS

SCENARIO LIMITS: I-35E in Downtown to I-30 at Ferguson Road

SCENARIO FACILITY CAPITAL COST ESTIMATE

Under \$100M	\$100M - 499M	\$500M - 999M	\$1B - 2B	Over \$2B
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M = Million B = Billion

SCENARIO LENGTH: 10 miles +/-

SCENARIO TIMELINE



*Includes two-year period to add to Metropolitan Transportation Plan

MOBILITY/CONGESTION RELIEF

Transformational scenario features the complete relocation of I-30 between I-35E in Downtown Dallas and Ferguson Road near White Rock Creek, and potential removal of a segment of I-45 and I-345.

The new I-30 alignment, from west to east, would proceed from the I-35E on a route between Riverfront Boulevard and the Union Pacific Railroad and proceed southeastward to the planned interchange between I-45 and US 175. East of I-45, I-30 would consist of lanes added to US 175 and would operate with a joint designation (I-30/US 175). I-30 would diverge from US 175 through an interchange near South Second Avenue and Bruton Road, proceeding northward on the east side of White Rock Creek until rejoining the current

I-30 alignment near Samuell Boulevard just west of the I-30/ Ferguson Road Interchange.

Relocating I-30 would change long established travel patterns to Baylor Hospital and Fair Park and have impacts to the existing freeway network system as well a local roadway system in southern Dallas County.

The existing I-30 ROW would be reconstructed to include a major thoroughfare in a boulevard configuration. The accommodation of six traffic lanes in the former freeway right of way would leave ample room for a linear green, context-sensitive facility to include urban design amenities, pedestrian accommodations, bicycle facilities and other opportunities in response to community input.

LIVABILITY/QUALITY OF LIFE

The relocated I-30 would impact existing neighborhoods, businesses and significant natural areas along the White Rock Creek and Trinity River corridors. These impacts and alternative alignments would require substantial study.

The existing I-30 right of way would replace the existing freeway with a new boulevard connecting with the city street grid. This would allow improved walkability and neighborhood linkages.

Relocating I-30 would expand the potential of the downtown central business district that has been traditionally defined as the area “inside the loop” with potential expansion of the urban core south and east.

ECONOMIC DEVELOPMENT/GROWTH

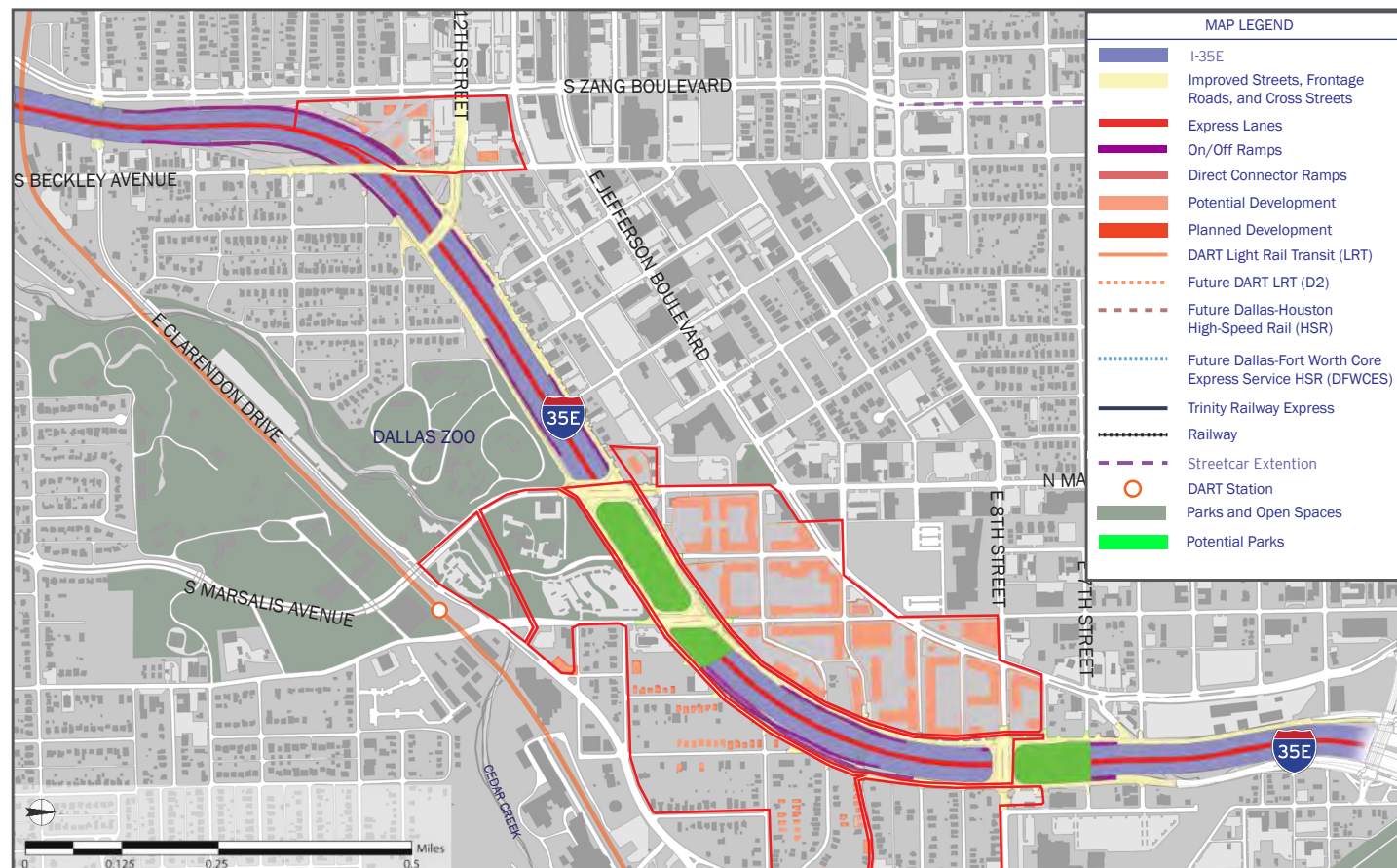
The repurposing of the I-30 Canyon by the Convention Center and Farmers Market would allow Dallas to have a new downtown center taking advantage of the DART light rail and potential HSR service. Structured parking could be depressed into the Canyon, topped with mixed use towers with street level lobbies and retail.

The relocation of I-30 would impact highway dependent uses along the current corridor. A major boulevard, in I-30’s place, would remain heavily trafficked conducive to retaining and attracting neighborhood retail and office uses.

The construction footprint of relocated I-30 would be minimized to reduce impacts to natural environment features.

Much of the highway would be elevated on structure and would not include frontage roads.

DALLAS CITYMAP | I-35E THE SOUTHERN GATEWAY SCENARIO | AT-A-GLANCE



MOBILITY/CONGESTION RELIEF

The I-35E and US 67 plans included in the CityMAP scenario are functionally equivalent to the current plans under development by TxDOT.

The addition of a general purpose lane in each direction and the addition of two reversible express lanes will provide congestion relief and accommodate increased development activity in the Southern Sector.

Improved roadway geometry at the “Zang Curve”, improved ramp design and improved shoulders are safety enhancements.

The scenario provides improved pedestrian and bicycle facilities across the freeway, linking neighborhoods with future development.

LIVABILITY/QUALITY OF LIFE

Scenario approach minimizes the footprint, keeping within the current ROW where possible.

Lowers the profile where it is at grade to below grade.

Connects the Dallas Zoo to retail/commercial along Jefferson Boulevard.

The scenario identifies three deck park opportunities. A preferred location has not been determined. If local partners support and fund a deck park, significant redevelopment opportunities would be realized.

Preserves and improves the 10th Street connection under I-35E, linking the 10th Street Historic District to the Jefferson Corridor.

ECONOMIC DEVELOPMENT/GROWTH

Opportunities to link the Oak Cliff Gateway and Transit Oriented Development (TOD) Tax Increment Financing (TIF) districts.

Opportunity to link existing educational institutions and facilities to future mixed-use development and existing residential neighborhoods.

OVERALL TXDOT PROJECT DETAILS

PROJECT LIMITS:

I-35E From Reunion Boulevard to US 67 US 67 from I-35E to I-20

PROJECT LENGTH:

11 miles

PROJECT COST ESTIMATE:

Facility Capital Cost (TxDOT) \$662 Million

ADDITIONAL FACILITY CAPITAL COSTS BY OTHERS:

TBD

MOST CONGESTED ROADWAYS IN TEXAS RANK:

22

ANNUAL HOURS OF DELAY PER MILE: 359,414

ANNUAL COST OF DELAY: \$46.44 Million

SCENARIO DETAILS

(INCLUDED IN OVERALL TXDOT PROJECT)

SCENARIO LIMITS:

I-35E From Colorado Boulevard to Clarendon Drive

SCENARIO LENGTH:

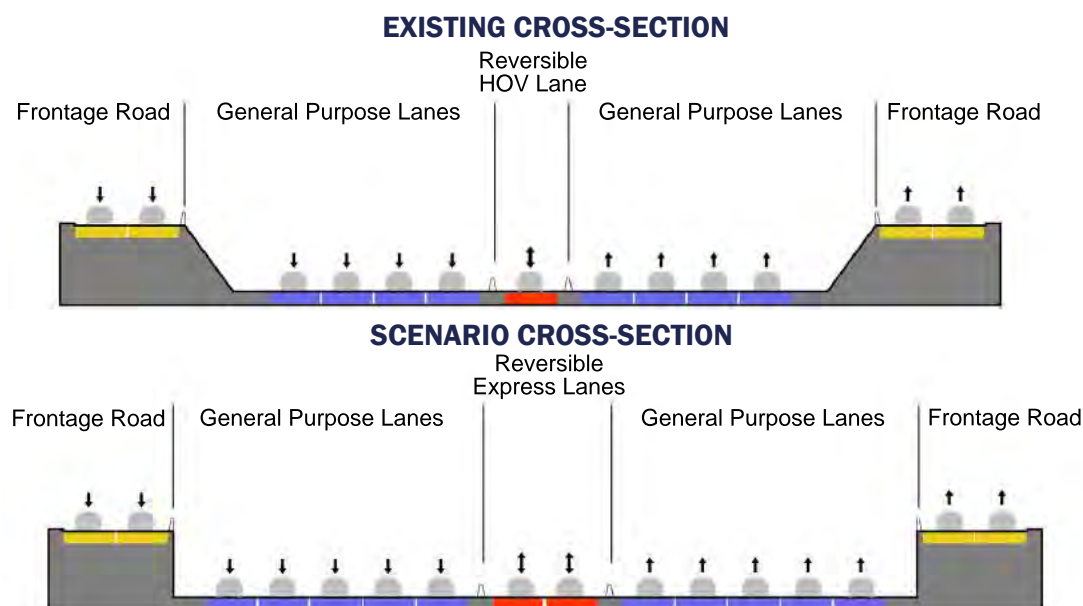
2 miles

SCENARIO COST ESTIMATE:

Facility Capital Cost (TxDOT) \$191 Million

ADDITIONAL FACILITY CAPITAL COSTS BY OTHERS:

\$50 Million - \$150 Million



FACILITY DEVELOPMENT AND CONSTRUCTION DURATION

Identify Need

Needs Assessment

Advanced Planning

Environmental &
Design Studies

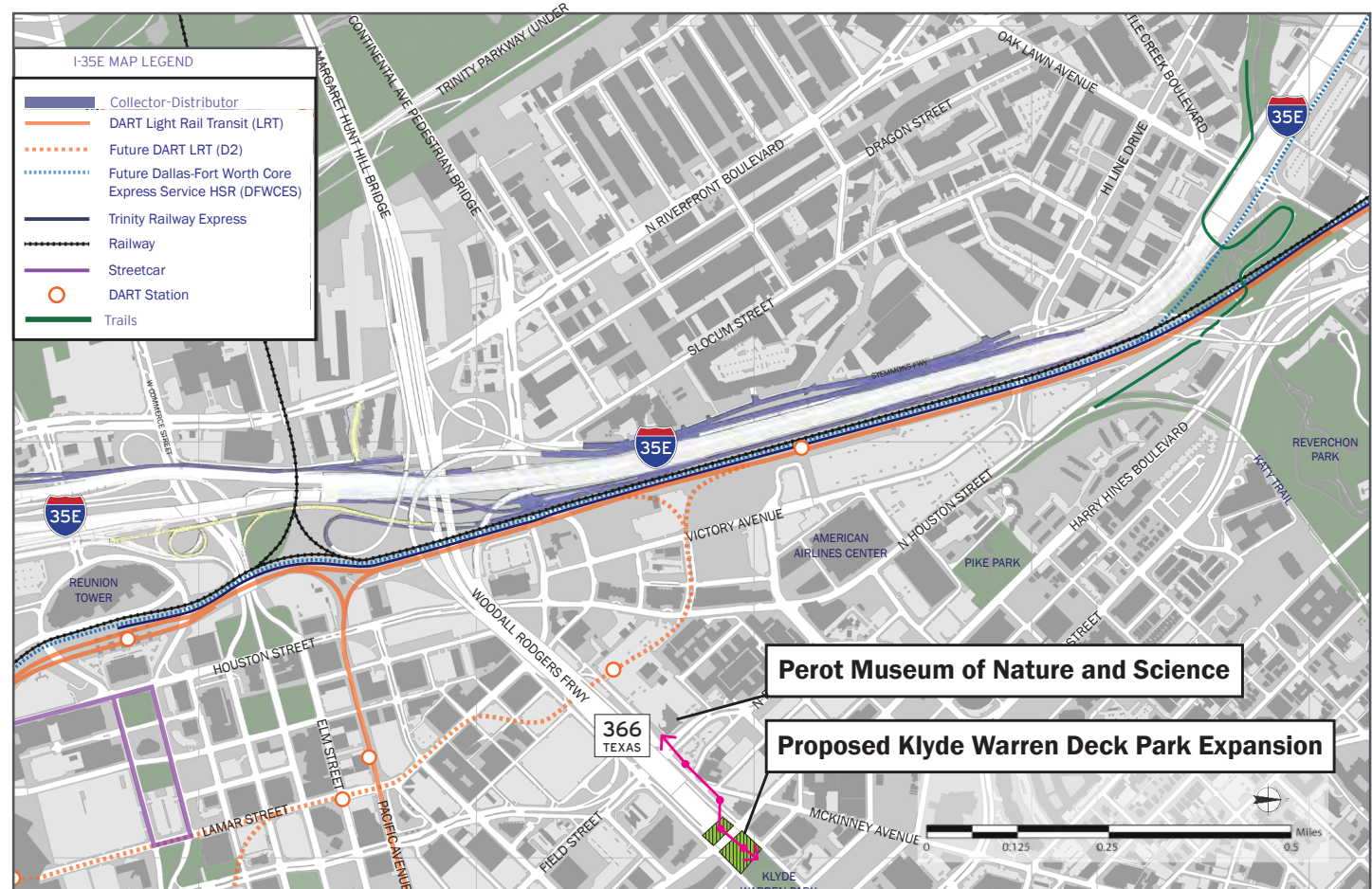
Detail Design
ROW, Utilities

Construction

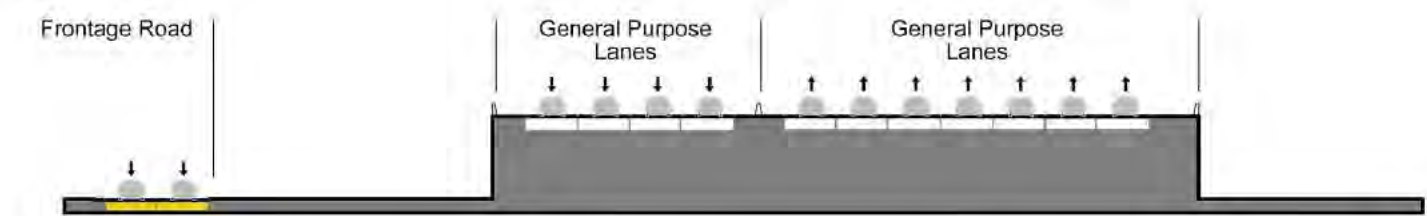
Scenario Timeline Estimate - 2016 thru 2021

6 Years

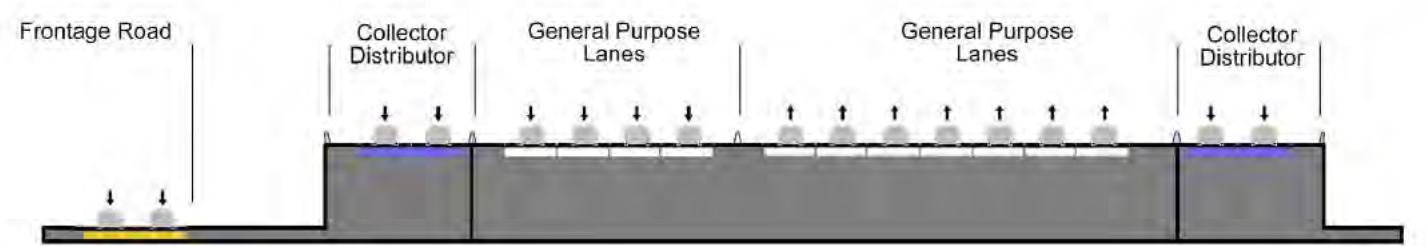
DALLAS CITYMAP | I-35E LOWEST STEMMONS SCENARIO | AT-A-GLANCE



EXISTING CROSS-SECTION



SCENARIO CROSS-SECTION



MOBILITY/CONGESTION RELIEF

The transportation network configuration of I-35E in this scenario reflects the current TxDOT plan to add collector-distributor roadways between Woodall Rodgers SH 366 and the Dallas North Tollway (DNT).

The Collector-Distributor (C-D) roadways would collect and distribute traffic between intersecting roads such as Woodall Rodgers, Lamar/Continental, Hi Line, the Dallas North Tollway and the freeway main lanes.

The direct freeway connection between westbound Woodall Rodgers and northbound DNT would be eliminated. Traffic from US 75 North Central Expressway and the CBD destined for northbound DNT would use existing thoroughfare routes.

The addition of northbound and southbound C-D roadways between Commerce Street/Woodall Rodgers and the direct connector ramps to DNT would eliminate many of the weaving maneuvers on both northbound and southbound I-35E and remove much of the daily congestion caused by weaving and merging traffic.

Overall, the addition of a C-D system would greatly improve this downtown section of I-35E and would capitalize further on the improvements now under construction with the Horseshoe Project.

LIVABILITY/QUALITY OF LIFE

The scenario focus is on improving pedestrian and bicycle linkages crossing I-35E at Oak Lawn Avenue, Hi Line Drive, DART Victory connection, Continental Avenue, Commerce Street and Reunion Boulevard.

The I-35E highway and the parallel the DART/ Trinity Railway Express (TRE) are dominant visual boundaries. Much of their profiles are elevated relative to crossing streets.

The scenario also includes the proposed Circuit Trail Connector project linking the Katy Trail to the Trinity Strand Trail with an elevated crossing over I-35E.

The highway operational improvements would require little to no additional ROW and would be less disruptive than a full highway reconstruction approach.

ECONOMIC DEVELOPMENT/GROWTH

The scenario location is experiencing significant growth in development, particularly in Victory and the Design District. Further growth is poised to occur along the new Riverfront

Boulevard at planned developments near Continental Avenue. These developments would have a strong orientation towards the planned Trinity Lakes and should increase pedestrian and bicycle activity.

TXDOT PROJECT/CITYMAP SCENARIO DETAILS

PROJECT/SCENARIO LIMITS:

From Reunion Boulevard to Oak Lawn Avenue

PROJECT/SCENARIO LENGTH:

1.9 miles

PROJECT/SCENARIO COST ESTIMATE:

Facility Capital Cost (TxDOT) \$100 Million

ADDITIONAL FACILITY CAPITAL COSTS BY OTHERS:

\$5 Million - \$20 Million

MOST CONGESTED ROADWAYS IN TEXAS RANK:

5

ANNUAL HOURS OF DELAY PER MILE:

602,114

ANNUAL COST OF DELAY:

\$62.89 Million

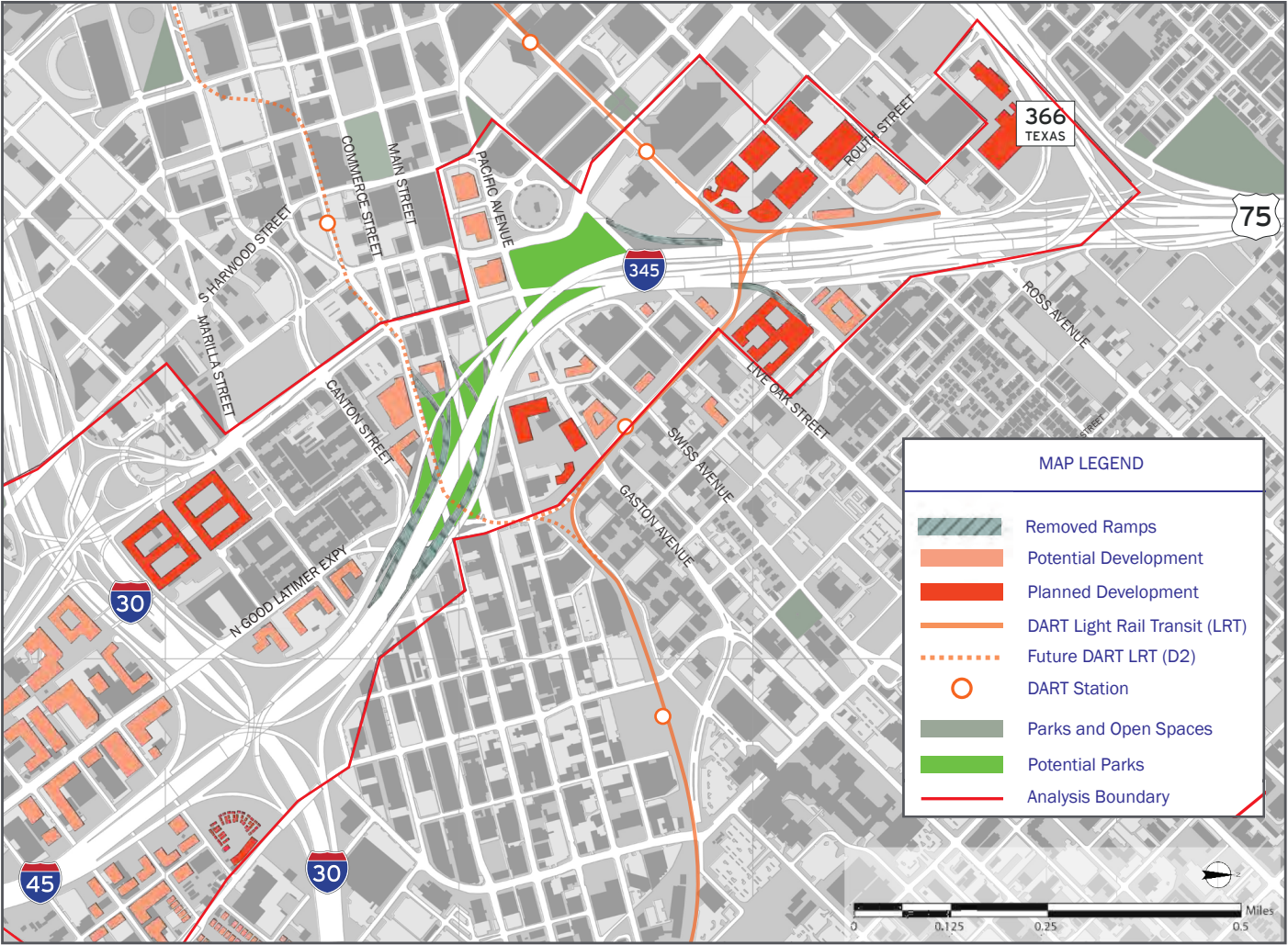


I-35E LOWEST STEMMONS at CONTINENTAL AVENUE

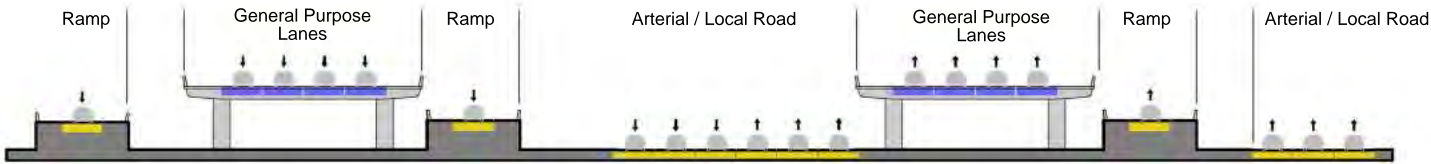
FACILITY DEVELOPMENT AND CONSTRUCTION DURATION



DALLAS CITYMAP | I-345/I-45 MODIFY SCENARIO | AT-A-GLANCE



EXISTING CROSS-SECTION



SCENARIO CROSS-SECTION



FACILITY DEVELOPMENT AND CONSTRUCTION DURATION



Scenario Timeline Estimate - 2017 thru 2022

6 Years*

*Includes two-year period to add to Metropolitan Transportation Plan

MOBILITY/CONGESTION RELIEF

The modify configuration is achieved by eliminating the ramp system that provides CBD access to and from Elm Street, Main Street and Commerce Street.

Another pair of outer ramps is eliminated in this scenario from northbound I-345 to Bryan Street and the southbound I-345 ramp to Live Oak Street.

The modify scenario also assumes that new I-45 ramps proposed in the S.M. Wright Phase IIB project are constructed prior to removing the ramps identified in the modify scenario. These new ramps allow I-45 highway access to downtown using Cesar Chavez Boulevard and Good Latimer Expressway from the south.

I-345 traffic to the CBD would seek alternate routes and use I-30 and I-45 exits to thoroughfares such as Elm, Main, Commerce and Cesar Chavez.

Thoroughfares in East Dallas, Deep Ellum, and the Cedars would all experience significant increases in traffic volumes.

Intersecting major arterial streets would likely experience peak-hour traffic queues and congestion delay.

LIVABILITY/QUALITY OF LIFE

The modify scenario would lessen the visual impact of I-345 north of the I-30/I-345 Interchange from Canton Street to Elm Street where I-345 "spreads out" to accommodate existing ramps.

The scenario allows for improved bicycle and pedestrian connections by removing fast moving vehicular traffic entering or exiting the street grid from the highway ramps.

Visibility is improved under the elevated I-345 where ramps are removed. Areas under I-345 and the land formerly used for ramps could be converted to a park connecting with the Carpenter Park planned between Live Oak and Pacific Avenue.

The ramp removal and improvements under I-345 will improve linkages between Deep Ellum and downtown.

Ramp removal would also allow Hawkins Street to be extended under I-345 to Canton Street in alignment with Farmers Market Way.

Minimizes disruption to small businesses and residents along corridor versus the remove or below grade scenarios during construction.

ECONOMIC DEVELOPMENT/GROWTH

Maintains current job commute route from Southern Dallas to jobs along US 75 and I-35E north of the CBD.

This area is experiencing significant development growth, particularly near Live Oak and near the Farmers Market.

The new park under I-345 would offer open space and amenities that would attract additional development.

SCENARIO DETAILS

SCENARIO LIMITS: From Hall Street to Lenway Street

SCENARIO LENGTH: 3.2 miles +/-

SCENARIO FACILITY CAPITAL COST ESTIMATE

Under 100M	100M - 499M	500M - 999M	1B - 2B	Over 2B
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M = Million B = Billion

MOST CONGESTED ROADWAYS IN TEXAS RANK: 23

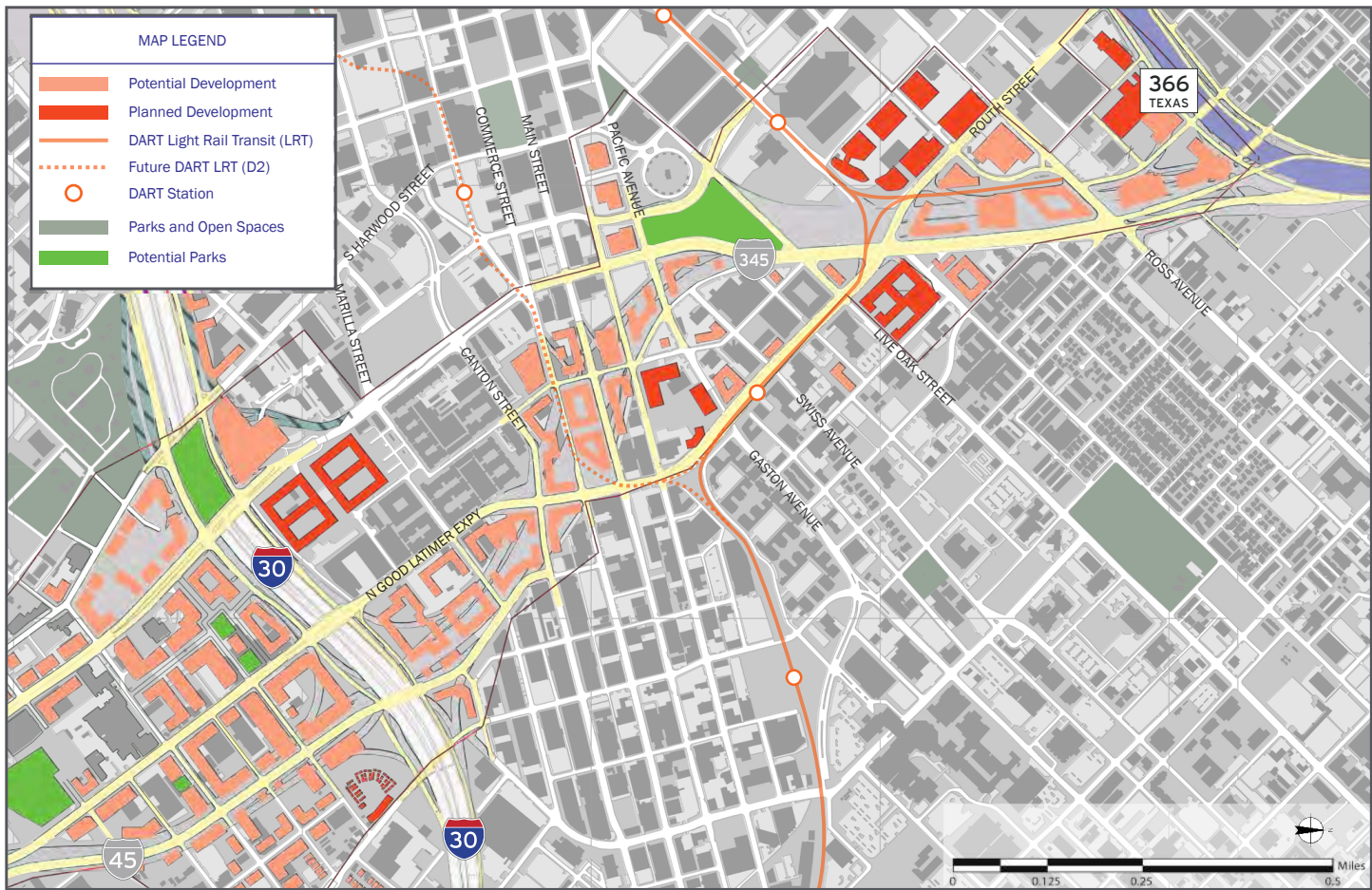
ANNUAL HOURS OF DELAY PER MILE: 354,695

ANNUAL COST OF DELAY: \$29.55 Million



POTENTIAL I-345 MODIFY

DALLAS CITYMAP | I-345/I-45 REMOVE SCENARIO | AT-A-GLANCE



MOBILITY/CONGESTION RELIEF

The scenario would completely remove I-345 including the full interchange with I-30.

I-45 would be completely removed north of Martin Luther King, Jr. Boulevard north to I-30. The I-45 main lanes would transition into and from Cesar Chavez Boulevard and ramps would connect to and from Good Latimer Expressway. These changes would provide surface street connections between the termination of I-45 and the CBD and US 75 in order to carry the traffic displaced from I-45 and I-345.

The full interchange with I-30 would be replaced with exit and entrance ramps to street grid.

Congestion delay experienced on the overall 2040 MTP network would increase, especially on the thoroughfare network.

Thoroughfares in East Dallas, Deep Ellum, and the Cedars would all experience a major increase in daily traffic volume.

The US 75/Woodall Rodgers Interchange would also see a major reconfiguration. The direct connector ramps between Woodall Rodgers and I-345/US 75 would be removed and the main lanes between the two facilities would be connected as the through route. Cesar Chavez would be connected with ramps to US 75.

With the removal of I-345, several streets in the CBD would be connected such as Hawkins Street extended to Canton Street in alignment with Farmers Market Way.

Intersecting major arterial streets would likely experience peak hour traffic queues and congestion delay.

LIVABILITY/QUALITY OF LIFE

Increases local street connectivity within the urban core, providing improved auto, transit, bike and pedestrian access.

Reknits historic neighborhood patterns around core of downtown, providing a finer grain urban development pattern and thus more varieties of redevelopment.

Provides opportunities for increased affordable housing options in the urban core, which would potentially reduce home-to-work commutes on regional highways.

ECONOMIC DEVELOPMENT/GROWTH

Changes regional network commuting patterns by shifting local through trips to I-35 to the west and to I-635 to the east.

Provides substantial additional development potential for mixed use office and residential based on potential use of former highway ROW for new development.

Necessitates assessment of potential impacts of gentrification and historic preservation as the removal of the elevated I-345 will bring together the different development patterns of Deep Ellum and the CBD.

SCENARIO DETAILS

SCENARIO LIMITS: From Hall Street to Lenway Street

SCENARIO LENGTH: 3.2 miles +/-

SCENARIO FACILITY CAPITAL COST ESTIMATE

Under \$100M	\$100M - 499M	\$500M - 999M	\$1B - 2B	Over \$2B
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M = Million B = Billion

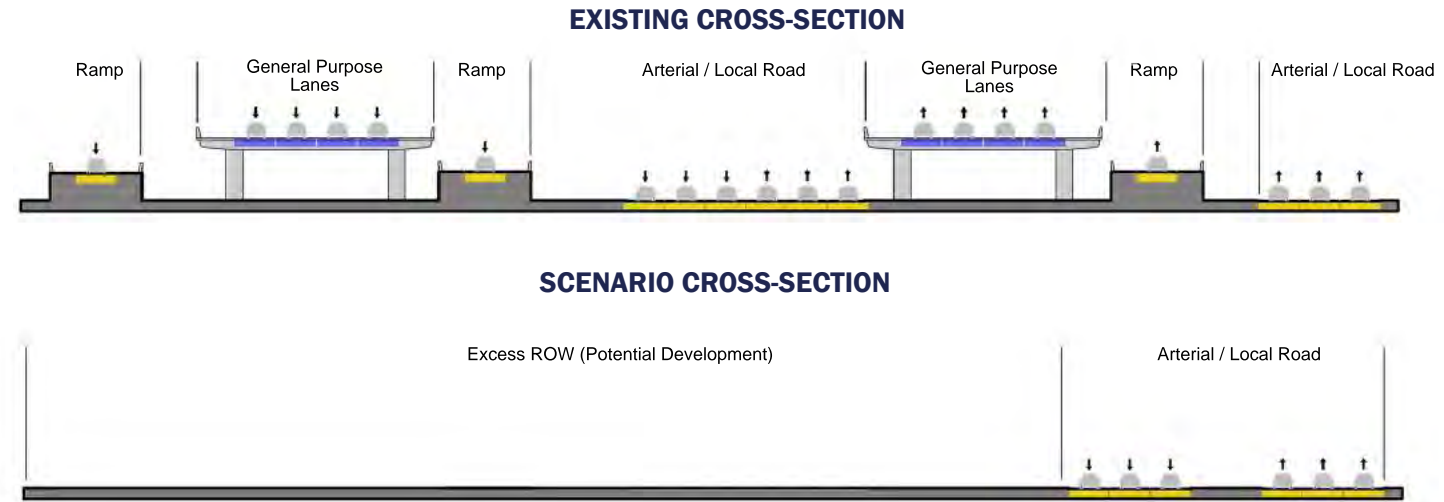
MOST CONGESTED ROADWAYS IN TEXAS RANK: 23

ANNUAL HOURS OF DELAY PER MILE: 354,695

ANNUAL COST OF DELAY: \$29.55 Million



POTENTIAL I-345 REMOVE



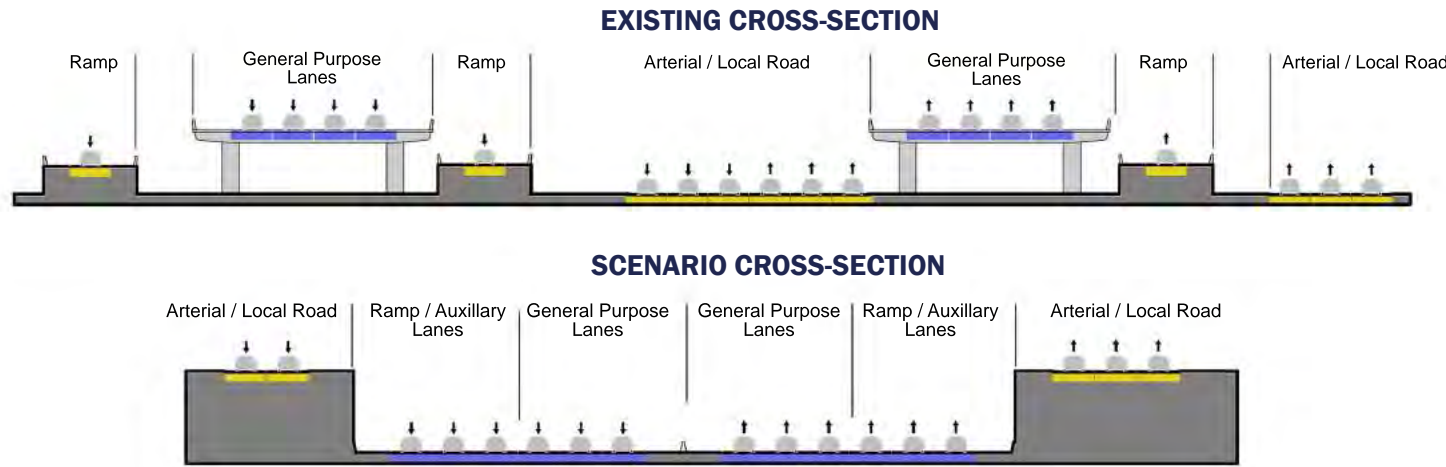
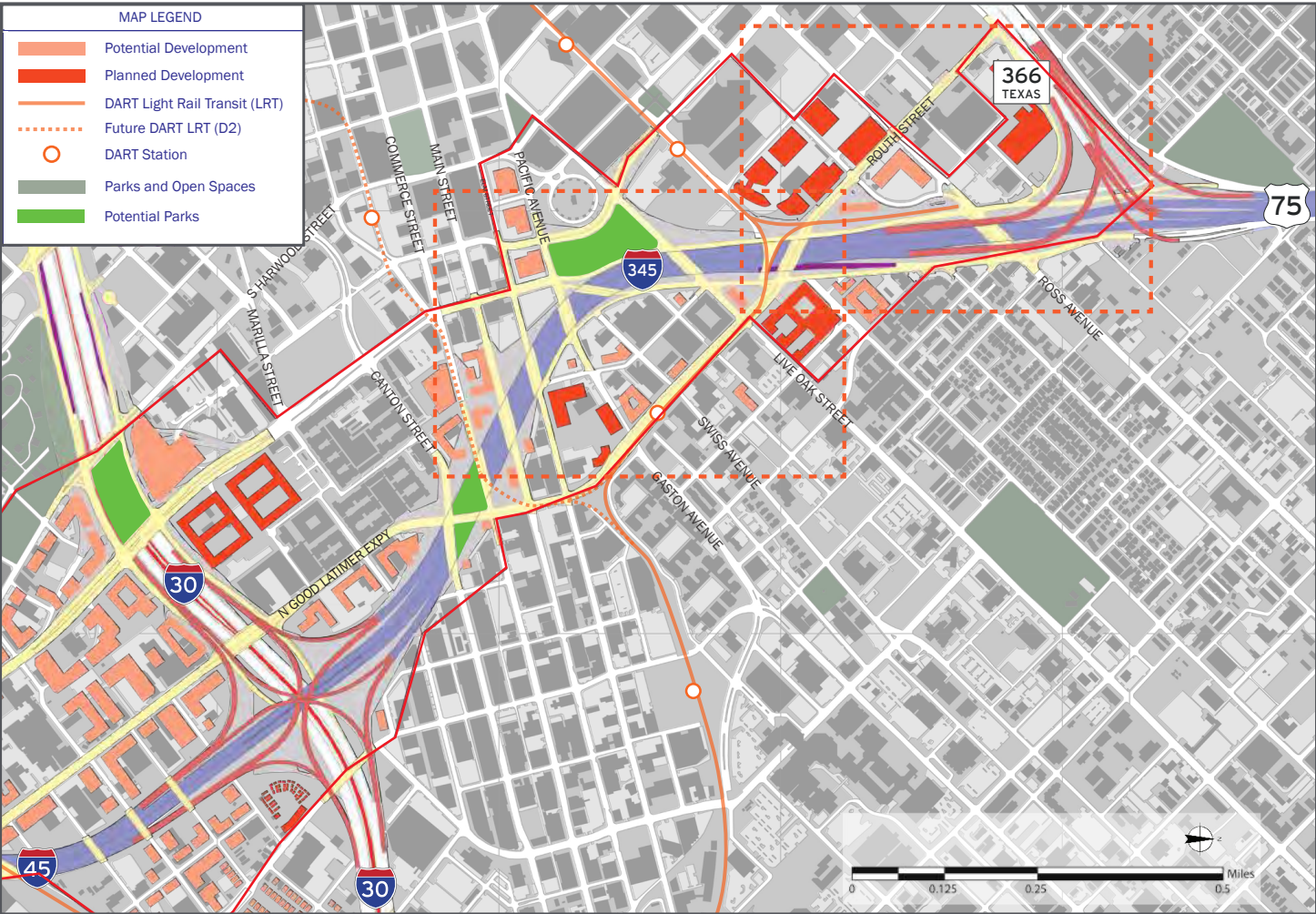
FACILITY DEVELOPMENT AND CONSTRUCTION DURATION



Scenario Timeline Estimate - 2017 thru 2040 ————— 24 Years*

*Includes six-year period to add to Metropolitan Transportation Plan

DALLAS CITYMAP | I-345/I-45 BELOW GRADE SCENARIO | AT-A-GLANCE



FACILITY DEVELOPMENT AND CONSTRUCTION DURATION



MOBILITY/CONGESTION RELIEF

I-45 would descend south of Martin Luther King Jr. Boulevard with the reconstructed facility going under S.M. Wright Boulevard which would be aligned to Cesar Chavez Boulevard.

The alignment would have a full-directional interchange with I-30, keeping I-30 at its current below grade location. I-345/I-45 mainlanes would be shifted from the top level to directly above I-30 and the direct connecting ramps would be above the I-345/I-45 mainlanes.

North from I-30, I-345 would connect to US 75 at its current location in the Woodall Rodgers Interchange. A full-directional interchange would be provided with Woodall Rodgers.

Between Pacific and US 75 flanking service roads would be added as the extension of Cesar Chavez Boulevard.

At Ross Avenue a partial diamond interchange, with a frontage road U-turn lane would connect Ross Avenue/I-345 to and from the south

Between the I-30 and Woodall Rodgers Interchanges, I-345 would have five lanes in each direction. Through both interchanges, two or three lane direct connectors would reduce the thru-lane count to three in each direction.

The reduction in direct freeway access to the CBD would shift some traffic to longer thoroughfare routes, but only at a minor change in thoroughfare level of service.

Congestion delay on the freeway system in the downtown area would increase slightly, but would increase by 10% to 18% on thoroughfares.

LIVABILITY/QUALITY OF LIFE

The scenario would create an express connection between I-30 and US 75 in a depressed alignment. This facility would have a much smaller footprint and would not be as visually intrusive as today's elevated structure.

The scenario would allow for improved pedestrian and bicycle connections by reducing the number of ramps entering or exiting the street grid from a below grade I-345 highway.

The city street grid would bridge over the below grade I-345. The scenario would provide complete street bridges linking Deep Ellum to downtown.

The scenario identifies a wide bridge between Canton Street and Commerce Street. This bridge would also include Good Latimer and DART D2 crossings. This bridge would allow for a possible deck park opportunity.

The below grade alignment would potentially allow for large portions of the corridor to be capped in the future for parks and other uses.

ECONOMIC DEVELOPMENT/GROWTH

Encourages more dense mixed use on east side of downtown; but in turn, requires a careful look at zoning and preservation policy from likely development intensification pressures on Deep Ellum.

Maintains more direct access for job commute trips from the Southern Dallas to jobs along US 75 and I-35E north of the CBD.

SCENARIO DETAILS

SCENARIO LIMITS: From Hall Street to Lenway Street

SCENARIO LENGTH: 3.2 miles +/-

SCENARIO FACILITY CAPITAL COST ESTIMATE

Under \$100M	\$100M - 499M	\$500M - 999M	\$1B - 2B	Over \$2B
M = Million B = Billion				

MOST CONGESTED ROADWAYS IN TEXAS RANK: 23

ANNUAL HOURS OF DELAY PER MILE: 354,695

ANNUAL COST OF DELAY: \$29.55 Million



POTENTIAL I-345 BELOW GRADE

*Includes six-year period to add to Metropolitan Transportation Plan

WORKING TOGETHER TO IMPROVE MOBILITY•LIVABILITY ECONOMIC DEVELOPMENT

For additional data and analysis refer to the complete CityMAP Report.

ECONOMIC ANALYSIS

For analysis areas depicted in the color coded areas on the adjacent map using I-345 Modify Scenario and High-Speed Rail at I-30 Canyon

 **\$3.1 BILLION**
NET NEW PROPERTY VALUE

 **\$105 MILLION**
NET NEW REVENUE TO CITY
AGGREGATED OVER 30 YEARS

 **25,000**
NEW RESIDENTS

 **51,000**
NEW JOBS



I-35E LOWEST STEMMONS

Connectivity analysis only.
Refer to adjacent map for keyed improved connection locations.

IMPROVED CONNECTIONS

- 1

I-35E at Oak Lawn Avenue
- 2

Proposed Circuit Trail Connector Project
- 3

I-35E at Hi Line Drive
- 4

I-35E at DART Victory Station
- 5

I-35E at Continental Avenue
- 6

I-35E at Commerce Street
- 7

I-35E at Reunion Boulevard
- 8

Klyde Warren Expansion

COST RANGE

\$→\$ \$100-499M

I-345

^MModify, ^RRemove, ^BBelow Grade

NET NEW PROPERTY VALUE



\$1.4B^M | \$2.5B^R | \$1.5B^B

NET NEW REVENUE TO CITY



\$51M^M | \$80M^R | \$50M^B

COST RANGE

\$→\$ < \$100M^M | \$100-499M^R | \$500-999M^B

POPULATION GROWTH



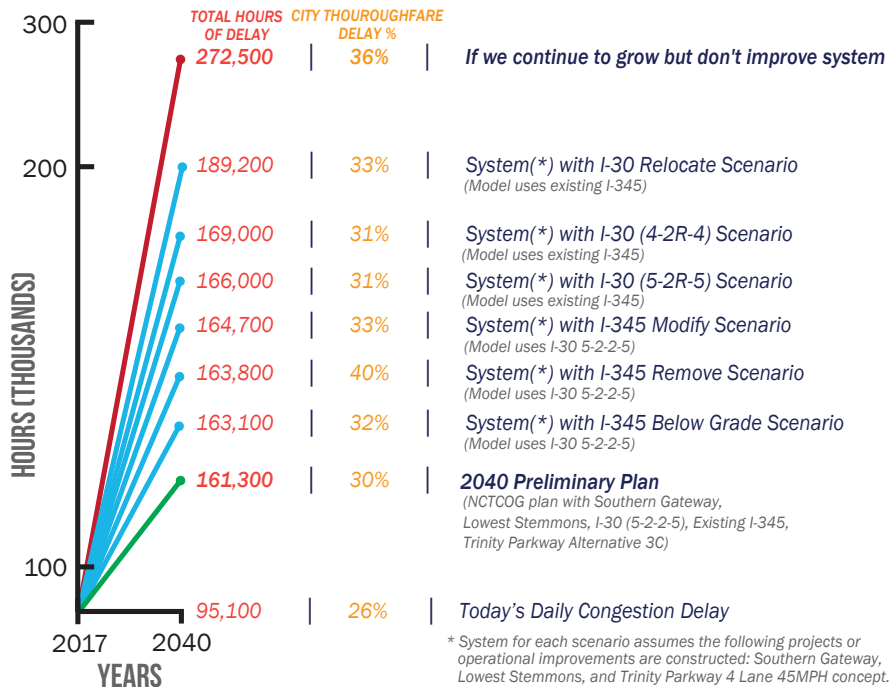
6,000^M | 12,000^R | 4,400^B

EMPLOYMENT GROWTH



23,000^M | 40,000^R | 29,000^B

WEEKDAY TOTAL HOURS OF CONGESTION DELAY



Congestion delay analysis is for freeway/toll road and thoroughfare system within transportation analysis study area.

I-35E SOUTHERN GATEWAY

NET NEW PROPERTY VALUE



\$167M

POPULATION GROWTH



1,700

NET NEW REVENUE TO CITY



\$6M

EMPLOYMENT GROWTH



1,000

COST RANGE

\$→\$ \$100-499M

NET NEW ROADWAY CAPACITY



25% INCREASE

I-35E SOUTHERN GATEWAY ANALYSIS AREA: 149 ACRES

I-345 ANALYSIS AREA: 513 ACRES

I-30 EAST CORRIDOR
ANALYSIS AREA: 174 ACRES

I-30 CANYON
ANALYSIS AREA WITH
HIGH-SPEED RAIL: 229 ACRES

I-30 EAST CORRIDOR

NET NEW PROPERTY VALUE



\$590M

COST RANGE

\$→\$ \$500-999M

POPULATION GROWTH



5,000

NET NEW REVENUE TO CITY



\$19M

EMPLOYMENT GROWTH



8,300

I-30 CANYON

NET NEW PROPERTY VALUE



\$969M-\$1.1B

COST RANGE

\$→\$ \$500-999M

POPULATION GROWTH



6,200-12,200

NET NEW REVENUE TO CITY



\$32M-\$35M

EMPLOYMENT GROWTH



10,700-20,300