



## I-45 North Houston Highway Improvement Project

# TxDOT ANNOUNCES RECORD OF DECISION



### NHHIP Overview

The future of transportation is changing and the infrastructure in the nation's fourth largest city needs to change with it. Parts of the North Houston Highway Improvement Project (NHHIP) corridor have not changed since being constructed over 50 years ago. The NHHIP not only brings these highways up to current standards but also prepares for the future by improving resiliency to weather events and providing safer more efficient travel that could accommodate the transition to electric and self-driving vehicles. And, importantly, it will increase the opportunity for transit and high-occupancy vehicles as a mode choice for those traveling the NHHIP freeways. **For over 15 years, the NHHIP has been supported by the Houston-Galveston Metropolitan Planning Organization (MPO).** The MPO has committed \$490 million to the NHHIP and has consistently voted to include the project as an integral part of the region's transportation plans and air quality conformity determinations.

"The NHHIP is a potentially transformative project that can provide more options for both people and freight and provide flexibility for the future. For many years, TxDOT has been working with their partners to develop a project with significant, lasting benefits for the city."

"I appreciate TxDOT's continued engagement with the city throughout the design process and look forward to working with you to design a project with positive impacts for the community, the City of Houston, and the greater region."

- Mayor Sylvester Turner, City of Houston  
May 12, 2020 letter to  
Commissioner Laura Ryan  
Texas Transportation Commission

The NHHIP will indeed be transformational. And it should be recognized that these transformational benefits extend beyond the pavement. Components of the NHHIP are aimed directly at improving the quality of life in adjacent neighborhoods. **These benefits include better drainage and reduced flooding on adjacent properties, providing noise barriers for neighborhoods where none exist today, improving access and safety for pedestrians and bicyclists, and a number of other mitigation initiatives.** TxDOT estimates the value of these benefits total over \$100 million.

The Texas Department of Transportation (TxDOT) has proposed significant measures in the Final Environmental Impact Statement (FEIS) to avoid and/or minimize harm. Specifically, means to avoid, minimize, and mitigate effects from the Preferred Alternative were presented in the Final EIS and have been updated in response to

comments received and progress made since the completion of the Final EIS. Appendix A of the Record of Decision (ROD) is a summary of these measures. The purpose of the NHHIP is to implement an integrated system of transportation improvements that would:

- Bring I-45, I-10, and US 59/I-69 up to current design standards to improve safety and operations.
- Manage I-45 traffic congestion in the NHHIP area through added capacity, MaX lanes, options for single-occupancy vehicle (SOV) lanes, and improved operations.
- Improve mobility on I-45 between US 59/I-69 and Beltway 8 North by accommodating projected population growth and latent demand in the project area.
- Provide expanded transit and carpool opportunities.
- Improve the capabilities of I-45 as an emergency evacuation route.
- Improve storm water drainage on I-45.
- Support the projected significant increase in travel on the regional highways in the Houston-Galveston area.

**The NHHIP will address critical needs including updating the freeways to current design and safety standards, relieving traffic congestion, improving storm water drainage and improving the evacuation route.**

"While it is unfortunate that some residents and businesses will need to relocate during this process, I have been impressed with the sensitivity TxDOT has shown by going beyond its normal acquisition/relocation processes to ensure that those affected will be assisted on an individualized basis, with every effort being made to allow them to remain in their communities close to their churches and schools."

- Representative Garnet F. Coleman  
Texas House of Representatives, District 147  
December 18, 2020 letter to  
Chairman J. Bruce Bugg, Jr.  
Texas Transportation Commission



## NHHIP in the National Environmental Policy Act (NEPA) Process

Beginning in 2011, TxDOT began the process of developing and evaluating a full range of reasonable project alternatives as part of the detailed environmental study and review process. In 2017, one Proposed Recommended Alternative per project segment was identified in the Draft EIS. Based on feedback from the public and project stakeholders, the design of the NHHIP was revised in 2017 and 2018. In 2020, one Preferred Alternative per project segment was identified in the Final EIS. The ROD constitutes TxDOT's approval of the Preferred Alternative described in the Final EIS and now calls it the Selected Alternative. The ROD does not repeat all the information in the Final EIS, but instead incorporates it by reference.

**Although the ROD completes the NEPA process, TxDOT remains committed to continued engagement with the public and project stakeholders and will receive input as the NHHIP progresses in development.**

## NHHIP Mitigation for Environmental Justice

TxDOT has made a number of commitments to offset the adverse effects of the project on environmental justice populations related to relocation of residences and facilities, affordable housing, local access, pedestrian safety, traffic noise, air quality, and homelessness. In some of these areas, **there will be improvements over the existing conditions** such as new facilities for the residents of Clayton Homes and Kelly Village, restoration of local access in the area around the I-45/Loop 610 interchange, the opportunity for noise barriers, improved drainage, and improved safety (e.g., improved pedestrian and bicycle accommodations) on cross-streets in neighborhoods. **Overall, the proposed improvements to the existing freeway facilities will have benefits that extend to environmental justice populations including improved safety, expanded capacity for transit use, and improved drainage.** Taking into account proposed minimization and mitigation measures and added benefits, the proposed project will not result in disproportionately high and adverse effects to environmental justice populations.

*"While the NHHIP means several of our residents and businesses will be impacted, we have an opportunity to effect positive results by working together. Relocating the community is not our first option, but we have found a way together to get everything we need to preserve our heritage and create community cohesion. We can hold TxDOT accountable and leave the community better than ever before."*

*- Tanya Debose, Executive Director  
Independence Heights Redevelopment Corporation  
Houston Defender Newspaper December 3, 2020*

## NHHIP Mitigation for Housing and Community Impacts

TxDOT will offer direct financial assistance to affordable housing providers to support specific affordable housing initiatives. The eligible initiatives include construction of affordable single-family or multi-family housing, and support of programs that provide assistance and outreach related to affordable housing. This affordable housing mitigation commitment is budgeted for \$27 million and will be coordinated with local partners to administer these funds effectively. Assistance will be directed towards those neighborhoods most impacted by the NHHIP. It is important to note that **this \$27 million affordable housing commitment is separate and apart from, and is above and beyond the funding** for the acquisition, relocation and enhanced relocation services for the directly impacted residential properties.

Additionally, displaced residents will be offered enhanced relocation assistance in the form of individual advisory services for the purpose

of locating a replacement property. These services will be provided by qualified personnel employed by, or contracted with, TxDOT. In providing these services, TxDOT will consider language needs, mobility restrictions and other special provisions that might be needed to communicate these services to displaced residents. **These services are intended to guide the affected residents through the process** and facilitate the transition into their new residence.

*"The NAACP is thrilled to work with TxDOT on this project. It will not only improve the quality of life, provide sustainable housing and home ownership opportunities, but it helps populations who might not have ever realized that."*

*- Belinda Everette, Housing Committee Chair  
NAACP Houston Branch  
Houston Defender Newspaper December 3, 2020*

## NHHIP Mitigation for Air Quality

The Environmental Protection Agency (EPA) has identified nine compounds with significant contributions from mobile sources. TxDOT performed air quality modeling for these nine priority toxic constituents and found that emissions over the period 2018-2040 are decreasing even while vehicle miles traveled in the study area increases. This positive trend can be primarily attributed to improvements in fuel standards and vehicle engine technology.

Even with this positive trend in air quality, **TxDOT is proposing to fund ambient air monitoring for a minimum of five years near the right-of-way** at one location each in Segment 3 and Segment 2 during construction. Monitoring results will be compared to health-based National Ambient Air Quality Standards (NAAQS) limits and applicable air toxics health risk thresholds. TxDOT is consulting with the Texas Commission on Environmental Quality (TCEQ) and EPA on the development of this program, including risk controls, if needed.

Monitoring results will be provided on a publicly accessible website with an option for members of the public to receive monitor data notifications. Monitoring results will be compared to health-based NAAQS limits and EPA air toxics health risk thresholds.

TxDOT is also developing a program to provide weatherization and energy efficiency for qualifying low-income single-family residences. Weatherization refers to improvements to a residence to make it more resistant to certain outdoor elements.

## NHHIP Mitigation for Noise

In addition to noise walls that are warranted per governing criteria, **TxDOT is providing the opportunity for adjacent property owners in environmental justice areas to receive noise mitigation that did not otherwise qualify** under TxDOT's noise guidelines or Federal Highway Administration (FHWA) criteria. These walls, described as "aesthetic walls", will be similar to the noise barriers that TxDOT constructs in the Houston area. The proposed walls could also serve as visual barriers should the adjacent property owners want a visual screen between the property and the highway. TxDOT is proposing this mitigation to further offset adverse effects in environmental justice areas. These walls are proposed where they will be effective for noise mitigation (reduce traffic noise levels by at least 3 dB(A)) in locations in the TxDOT right-of-way where they will not restrict access to the property, not impede drainage, and otherwise be constructible. The proposed locations may change during the NHHIP's final design phase. As with noise barriers, the decision whether to construct the walls will be decided by a vote of the adjacent property owners.

### NHHIP Approach to Pedestrians and Bicyclists

TxDOT is proposing significant improvements to existing pedestrian and bicyclist elements at all crossings and connections within the NHHIP. These improvements were developed in partnership with the City of Houston Department of Public Works and Department of Planning. This partnership produced the design concept of a pedestrian-bike realm, which is comprised of all or a varying combination of three elements – a buffer space, bike lane and sidewalk – all separate from the vehicle travel lane and behind a protective curb on both sides of the cross-street. TxDOT and the city have identified the application of the pedestrian-bike realm on the 44 Downtown streets that cross the freeways in Segment 3. TxDOT will continue this partnership with the city for the application of the pedestrian-bike realm on the streets that cross the freeways in Segments 1 and 2. **The increased width provided by the pedestrian-bike realm will create a buffer between the bicyclist and pedestrian travelers and vehicle traffic, which is an important safety design feature.**



### NHHIP Approach to Storm Water Drainage, Floodplains and Flooding

The National Oceanic and Atmospheric Administration (NOAA) released updated rainfall depth information in December 2018 contained in Atlas 14. NOAA collected data for Atlas 14 in Texas through December 2017, which included rainfall from Hurricane Harvey. TxDOT will use the Atlas 14 rainfall data to design the NHHIP drainage improvements. The NHHIP drainage elements will accommodate the higher rainfall levels contained in Atlas 14.

In 2019, Harris County Flood Control District (HCFCD), in partnership with the Federal Emergency Management Administration (FEMA), started a multi-year effort to develop the next generation of flood mapping with the Harris County Modeling, Assessment and Awareness Project (MAAPnext) using Atlas 14. Once approved by FEMA, TxDOT will apply MAAPnext to the NHHIP drainage improvements.

**The project will collect, convey and detain, where necessary, the storm water runoff not only from the highways but also from adjacent properties** that are currently draining to the highways. This new infrastructure will help address many drainage issues in the vicinity of the project. TxDOT understands that the highway infrastructure is integrated into the overall drainage pattern of the city. We are working closely with the City of Houston and the HCFCD to identify opportunities to develop partnerships that will leverage the roles and responsibilities,

as well as the resources of each entity to deliver drainage improvements throughout the system. Working with our local partners, TxDOT is developing improvements that will reduce water elevations within the bayous so that more runoff can be accommodated and resiliency is built into the system. As an example, the city is developing two bypass channels along Buffalo Bayou in the central business district. TxDOT is working with the city and county to integrate these two bypass channels with the drainage improvements of NHHIP so that all improvements work together to accommodate more runoff during high intensity rainfall events.

“To put it mildly, I believe we can all agree that this is a once-in-a-generation investment that will shape the City of Houston for decades to come. This is our chance to rise to the challenge and chart a new course for transportation in the region.”

- Mayor Sylvester Turner, City of Houston  
May 12, 2020 letter to  
Commissioner Laura Ryan  
Texas Transportation Commission

### NHHIP Approach to Transit, Ridesharing and Future Technologies

**The NHHIP provides options to incentivize transit, promote ridesharing and accommodate future technologies** with the proposed four managed express (MaX) lanes (two lanes in each direction) on I-45 from Beltway 8 North to Downtown for use by transit vehicles, buses, carpools, and future autonomous vehicles. This improvement will replace the existing discontinuous reversible transit-HOV lane (open southbound in the AM peak hours and open northbound in the PM peak hours) with two-way, continuous 24-hour, seven-day-a-week operations. The proposed NHHIP MaX lanes will accommodate and complement Metropolitan Transit Authority of Harris County’s (METRO) transit bus service through added managed lane capacity, options for SOV lanes, and improved operations.

**The NHHIP is designed to enhance safety, manage congestion, incentivize transit and promote ridesharing, and improve mobility and operational efficiency** in the project area. Highway traffic congestion in the project area will increase if no improvements are made. TxDOT’s directive is to provide transportation solutions in a manner that provides citizens reliability irrespective of their mode choice. TxDOT’s policy directive is not to implement solutions that force modal change or restrict choice, but rather address mobility in an environment where citizens continue to have modal choices.

“NHA has been closely monitoring this project since it was conceived back in 2005 with the completion of the North Hardy Planning Study...From a safety standpoint, the NHHIP provides a solution to the nationally recognized bottleneck of I-45...As ranked by Popular Mechanics this August, I-45 is now the #1 most dangerous road in America with 56.5 fatal accidents per 100 miles of roadway. It is imperative that we take this opportunity to address the safety issues while we have the available funding.”

- Marlisa Briggs, President  
North Houston Association  
Transportation Commission Meeting, November 12, 2020

## NHHIP and the H-GAC (MPO) Planning Process

The NHHIP is the highway investment of a joint effort by TxDOT, METRO, and the MPO to identify and address the significant transportation needs of the North Hardy Corridor, the area between Downtown Houston and Bush Intercontinental Airport. A major transit investment outcome of this joint effort was METRO's extension of the light rail Red Line from Downtown north to the Northline Transit Center in 2013. With respect to the highway, the conclusions of the studies were that even with improved transit and extension of the Hardy Toll Road to Downtown Houston, additional capacity would be needed on I-45. The NHHIP addresses the needs of I-45 from I-10 to Beltway 8, as well as I-45, I-10, I-69 and SH 288 through and around Downtown Houston.

**The Transportation Policy Council (TPC)**, the policy making body of the MPO, **has consistently adopted the NHHIP throughout its development into the MPO's Regional Transportation Plans (RTPs) and the supporting Regional Air Quality Conformity Determinations.** Specifically, TPC has adopted the NHHIP in the MPO's 2025 RTP in 2005, the 2035 RTP in 2007, the 2040 RTP in 2015 and the 2045 RTP in 2019. Additionally, the TPC has committed funding to portions of the NHHIP, \$390 million in 2017 on Segment 3 and \$100 million on Segment 2. **This MPO commitment leverages the over \$4.6 billion committed by the Texas Transportation Commission.** Also, the TPC has adopted portions of the NHHIP in the region's four-year Transportation Improvement Plans (TIPs), specifically the 2017-2020 TIP in 2018, the 2019-2021 TIP in 2018 and the 2021-2024 TIP in 2020.

In 2020, TxDOT received FHWA's approval of the NHHIP Project Level Conformity Determination for the Final EIS. This determination is supported by and based on the MPO's adopted Regional Conformity Determination for the 2045 RTP. In addition to being adopted in the MPO's formal planning documents (RTPs, Conformity Determinations and TIPs) as described above, TxDOT's traffic analysis of the NHHIP is based on the MPO's travel demand models.

"We must utilize the funding available now to address these issues – we do not have the guarantee of funding in the future."

- Andrea French, Executive Director  
Transportation Advocacy Group (TAG) Houston  
Transportation Commission Meeting, November 12, 2020

## NHHIP Outreach & Engagement

Transportation is an essential part of daily life that connects people to nearly every activity of their lives. This requires an understanding of the relationship between different factors affecting people within their communities. This is why the input this project has received is so valuable. Through more than 300 public and stakeholder meetings over the last decade, TxDOT has received valuable feedback that it has incorporated into the alternative analysis and preliminary design of the NHHIP. Since 2011, TxDOT has held multiple rounds of public meetings to present options for the NHHIP and get direct input on the most viable alternatives. A public hearing held in May 2017 and online posting of documents provided opportunities to review and comment on the Recommended Alternative and Draft EIS. More than 460 individuals made comments on the Draft EIS.

Since the hearing, TxDOT has met with over 100 community groups, property owners, local elected officials and agencies, and other stakeholders to discuss concerns and take additional comments, all of which were considered in the development of the Final EIS. **Through meetings with the public including project area residents, stakeholders, business owners, and other interested parties, TxDOT has listened carefully and gathered numerous ideas and requests regarding the project.** Each has been considered and many received the proverbial "green light" and are now part of the plan. Others could not be incorporated into the design for safety reasons or because they did not meet the project's Purpose and Need directives while there are others that require further study during the detailed design phase to follow. Correspondingly, TxDOT prepared a series of white papers titled 'NHHIP Project Facts & Highlights' to help convey concise and key information regarding matters of high-priority to the public. The series of a total of 12 fact sheets are easily accessible on the project website at: [http://ih45northandmore.com/NHHIP\\_Project\\_Facts\\_And\\_Highlights.aspx](http://ih45northandmore.com/NHHIP_Project_Facts_And_Highlights.aspx). To learn more about the NHHIP, scan the QR code below and watch the *Changes for the Better* video.

In addition, TxDOT assembled a group of community leaders that meets regularly to go over details of TxDOT's mitigation plans. Specifically, the I-45 NHHIP Housing and Communities Focus Group reviews displacement and relocation plans, opportunities to leverage existing efforts, programs and resources, and other environmental justice issues. Additionally, the NHHIP Traffic Management Steering Committee was formed to support the exploration, planning, advancement and execution of strategies to support traffic management initiatives during construction. The primary goal of the committee comprised of TxDOT, City of Houston, H-GAC, Harris County Engineering, METRO, Central Houston Inc., and other key stakeholders in the corridor is to explore, plan, execute strategies to support sound, innovative and proactive traffic management initiatives for NHHIP construction to minimize adverse impacts to the community. **TxDOT has consistently exceeded federal requirements for public outreach and engagement.**

The Final EIS was made available for agency and public review on September 25, 2020 and sent to the EPA for filing the Notice of Availability, which appeared in the Federal Register on Friday, October 9, 2020. An additional notice was published in the Federal Register on October 30, 2020 extending the due date for public comments from November 9, 2020 to December 9, 2020. Over 400 written comments were received from agencies, elected officials, organizations, businesses, groups and individuals. All comment submittals received were reviewed and considered in the development of the ROD.

**As the NHHIP progresses in development, TxDOT remains committed to continued engagement and will incorporate input to make the project a success for adjacent communities and the traveling public.**

"This is not our grandfather's TxDOT of 1956. They have engaged the community and we can create a 21st century template in this area for every transportation department throughout America to emulate."

- Dr. Robert Muhammad, Transportation Committee Chair  
Southeast Management District  
Houston Defender Newspaper December 3, 2020

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For more information about the project please visit: <https://www.ih45northandmore.com>  
Also find out more at [txdot.gov](http://txdot.gov) and follow us on Facebook and Twitter/TxDOTHoustonPIO.

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