

ESTIMATED COSTS

The table below summarizes the construction costs for the short-, medium- and long-range improvements by type and responsible agency.

For more information, visit: www.fm1960mobility.com

Primary Funding Source	TXDOT			Harris County			City of Houston			METRO			Private Developers			TOTALS (in Millions)
	Item	Number	Unit Cost	Cost	Number	Unit Cost	Cost	Number	Unit Cost	Cost	Number	Unit Cost	Cost	Other Government Agencies		
Short Range																
Remove Traffic Signal	4	\$ 20,200	\$ 80,800													
Modify Traffic Signal	1	\$ 3,800	\$ 3,800													
Use Single Signal Controller	2	\$ 25,000	\$ 50,000													
Median Closure	4	\$ 21,200	\$ 84,800													
Left Turn Lane Extension	4	\$ 32,400	\$ 129,600													
Raised Medians			\$ 3,328,000													
Convert Through Lane to Turn Lane	1	\$ 8,000	\$ 8,000													
Add Guide Signs	2	\$ 1,700	\$ 3,400													
Add No Left Turn Sign	1	\$ 1,800	\$ 1,800													
Signal Coordination/EMS Devices/Overhead Street Name Signs/Signal Back Plates/Communications Synchronization	36	\$ 9,000	\$ 324,000													
Add Dual Lefts on Cross Street				1	\$ 46,400	\$ 46,400										
Add Left-Turn Lane on Cross Street				1	\$ 54,500	\$ 54,500										
Extend Existing Turn Bay on Cross Street				14	\$ 32,400	\$ 453,600										
Widen Cross Street to 4 lanes 400' - 600' from FM 1960				2	\$ 237,600	\$ 475,200										
Minor Driveway Modification																
Major Driveway Modification																
Add Bench at Bus Stop Location																
Add Shelter at Bus Stop Location																
TOTAL FOR SHORT RANGE IMPROVEMENTS			\$ 4,014,200			\$ 1,029,700									\$ 97,300	
Medium Range																
Add Right Turn Lane	3	\$ 106,600	\$ 319,800													
Right Turn Lane Extension	2	\$ 32,400	\$ 64,800													
Add Sidewalks	2	\$ 33,600	\$ 67,200													
Add Dual Lefts on Cross Street				2	\$ 46,400	\$ 92,800										
Add Right-Turn Lane to Cross Street				6	\$ 54,500	\$ 327,000										
Widen Cross Street to 4 lanes				5	\$ 237,600	\$ 1,188,000	1	\$ 2,509,100	\$ 2,509,100							
Major Driveway Modification																
Shared Driveway																
Connect Adjacent Properties																
Add Sidewalks from Bus Stop to Intersection																
TOTAL FOR MEDIUM RANGE IMPROVEMENTS			\$ 451,800			\$ 1,607,800									\$ 55,200	
Grade Separation	2	\$ 16,500,000	\$ 33,000,000													
New Roadway by Harris County				0.45 mi	\$ 4,400,000	\$ 1,980,000										
New Roadway by Developers																
TOTAL FOR LONG RANGE IMPROVEMENTS			\$ 33,000,000			\$ 1,980,000										
GRAND TOTAL			\$ 37,466,000			\$ 4,617,500									\$ 212,700	
															\$ 6,320,600	
															\$ 51.13	
															\$ 5.30	



Executive Summary
FM 1960 Access Management Study
 October 2004



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INTRODUCTION

This study was performed to evaluate the 7 mile FM 1960 corridor from Mills Road just west of SH 249 to Gatewick Drive just east of IH 45. The purpose of the study was to recommend access management tools that can be implemented to reduce traffic delay and improve mobility and safety.

The HNTB team, under contract with the Houston-Galveston Area Council, identified short-, medium- and long-range improvement recommendations for implementation.

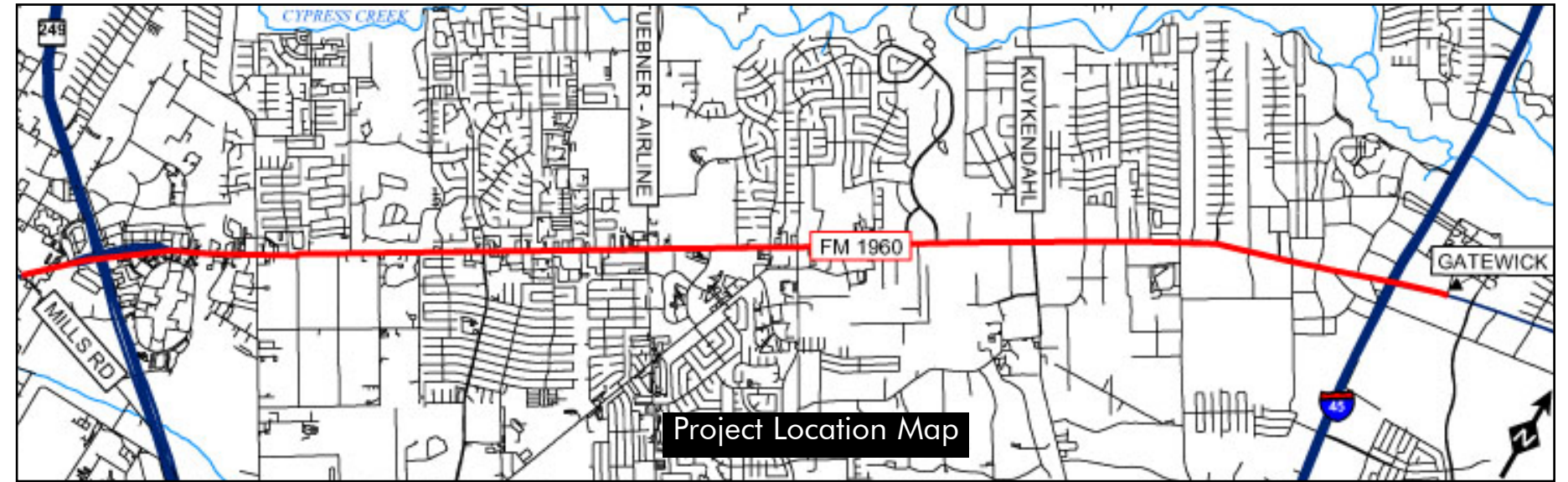
The study includes documentation of existing conditions, public involvement process, access management tools, recommended improvements, traffic analysis, implementation strategies and a vision for redevelopment through the Express (Smart) Street concept.



For more information, visit: www.fm1960mobility.com

Goals of the Study

- Improve mobility and reduce traffic delays
- Improve safety and reduce crashes
- Provide for an open public involvement process
- Identify opportunity for streetscape/landscape improvements by others
- Identify improvements that can be implemented in a timely manner



RECOMMENDATIONS

The short-range improvements centered on low cost access management techniques that could be implemented very quickly with little or no additional right-of-way, utility adjustments or coordination with adjacent property owners.

The medium-range improvements included other low cost access management techniques that potentially require additional right-of-way, utility coordination or, in some cases, coordination with adjacent land owners. More complex and costly solutions, such as grade separations and new roadways, were identified as long-range. A detailed list of improvements and costs can be found on the back of this document.

SHORT-RANGE IMPROVEMENTS

- Raised medians
- Channelized left-turn bays
- Minor driveway modifications
- Traffic signal improvements
- Signal synchronization
- Left and right turn lanes at cross street intersections
- Additional benches and upgraded shelters

MEDIUM-RANGE IMPROVEMENTS

- Right turn lanes
- Major driveway modifications
- Cross street improvements requiring right-of-way
- Connections between properties
- Sidewalks

LONG-RANGE IMPROVEMENTS

- Grade separations
- New parallel roadways

* Specific improvement types and locations can be found in Section 5 of the final report.

ANTICIPATED BENEFITS

Both the short- and medium-range improvements were analyzed with traffic modeling software to demonstrate the benefits of the improvements with respect to the existing conditions. The study documents the traffic benefits to average delay, stops, queue lengths and vehicle hours traveled.

IMPLEMENTATION STRATEGIES

An access management strategy should be straight forward, coordinated and consistently applied. This study recommends five key steps:

1. Approve, fund, and implement, by responsible agency, the short- and medium-range recommendations as early as possible
2. Create a FM 1960 area management district to:
 - Coordinate with local business and property owners
 - Inform and develop consensus for area improvements
 - Implement landscape and streetscape enhancements
3. Program long-range recommendations and take steps necessary to provide for implementation. This may include performing preliminary engineering and securing environmental clearances and right-of-way.
4. Seek input from Texas Department of Transportation and Harris County prior to the City of Houston Planning Department approving a new or redevelopment plat
5. Establish an Access Management Task Force, comprised of agency stakeholders, to address access management policies and guidelines for the region

ANTICIPATED BENEFITS

- Annual travel time savings of \$1.2 M (in PM Peak Hour)
- Annual crash cost savings of \$10M
- Annual reduction in hydrocarbons and carbon monoxide levels of 4%
- Annual reduction in nitrogen oxides of 3%

Study Partners

Houston-Galveston Area Council
in cooperation with

Harris County
Houston Northwest Chamber of Commerce
North Houston Association
Texas Department of Transportation

Consultant Team

HNTB Corporation
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