



HOUSTON-GALVESTON AREA COUNCIL

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December 08, 2005

Beth Whitehead
Environmental Planner
Michael Baker Jr., Inc.
16225 Park Ten Place - Suite 420
Houston - Texas 77084

Re: Approval Of Congestion Mitigation Analysis For
CMA of Grand Parkway Segments E – F-1 – F-2 & G

Dear Ms. Whitehead.

Houston-Galveston Area Council (H-GAC) being the designated Metropolitan Planning Organization (MPO) for Houston-Galveston Area is required to participate in the review and approval process for the Congestion Mitigation Analysis (CMA) on all the significant added-capacity projects in the region.

H-GAC received the CMA for the above captioned projects: Grand Parkway Segments E – F-1 – F-2 & G.

Our review suggests that the analysis is consistent with H-GAC's Congestion Management System (CMS) plan and procedures.

The analysis indicates that by Year 2025, the Level of Mobility (LOM) for Grand Parkway Segments E – F-1 – F-2 & G will sufficiently deteriorate to justify and consider adding capacity to the corridor. The study further suggests that although the indicated Transportation Control Measures (TCMs) within the analysis area have a degree of impact on Congestion Mitigation, but this effect is not enough to impend the added capacity justification.

You have indicated five committed and proposed TCM projects in your Analysis, namely:

- Add turn lanes, signal coordination and install arterial traffic management system along SH 6 between IH 10 and US 290
- Construct grade separated interchange at Jones Road, access management and intelligent transportation system (ITS) along FM 1960 between US 290 and SH 249

- Install arterial traffic management system along FM 2920 between US 290 and SH 249
- Install changeable lane assignment system at FM 160 & Kuykendahl Road; and FM 160 & Stuebner Airline Road: Construct grade separated interchange at Kuykendahl Road; and access management and intelligent transportation system (ITS) along FM 1960 between US 249 and IH 45
- Install arterial traffic management system along FM 2920 between SH 249 and Spring Cypress Road

It must be noted that these TCMs are deemed significant by this CMS process, since they have shown 3% to 5% congestion mitigation. As such H-GAC requires Letters of Commitment from the implementing agencies to execute these projects and possibly make them part of the overall final design within the corridor of these segments of Grand Parkway.

If you have any comments or need additional information, please do not hesitate to contact me at (713) 993-4564.

Sincerely.



Ilyas Choudry
Transportation Department H-GAC

**CONGESTION MITIGATION ANALYSIS (CMA)
STATE HIGHWAY 99 (GRAND PARKWAY)
SEGMENTS E, F-1, F-2, AND G**

**Prepared for:
Houston-Galveston Area Council**

**Prepared by:
Michael Baker Jr., Inc.**

December 2005

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I. FINDINGS

This document contains a Congestion Mitigation Analysis (CMA) for Segments E, F-1, F-2, and G of State Highway 99 (the Grand Parkway), from IH 10 to US 59, in Harris and Montgomery Counties, Texas. The CMA was formerly known as the Single-Occupant Vehicle (SOV) Analysis, which is required for added capacity projects that are subject to state and federal review and approvals.

Since the Grand Parkway is a new facility, CMA should be performed on the parallel facilities that are being relieved. The parallel facilities that would experience some level of relief by the construction of the proposed Grand Parkway are presented in Table 1 and broken down into the segment study areas.

TABLE 1: PARALLEL FACILITIES EXPECTED TO BENEFIT FROM THE CONSTRUCTION OF THE GRAND PARKWAY

Segment Study Area	Roadway	From	To
E	Katy Hockley Rd	IH 10	Roberts Rd
	Barker Cypress Rd	IH 10	US 290
	SH 6	IH 10	US 290
F-1	FM 1960	US 290	SH 249
	Louetta Rd	Telge Rd	SH 249
	Spring-Cypress Rd	Telge Rd	SH 249
	Cypresswood Dr	US 290	SH 249
	FM 2920	US 290	SH 249
	Boudreaux Rd	Telge Rd	SH 249
F-2	FM 1960	SH 249	IH 45
	Louetta Rd	SH 249	IH 45
	Spring-Cypress Rd	SH 249	IH 45
	Cypresswood Dr	SH 249	IH 45
	FM 2920	SH 249	Spring-Cypress Rd
	Boudreaux Rd	SH 249	Kuykendahl Rd
	Spring Stuebner Rd	Kuykendahl Rd	IH 45
G	FM 1960	IH 45	US 59
	Cypresswood Dr	IH 45	FM 1960

Source: H-GAC, 2005.

The CMA focuses on the congestion mitigation measures programmed for those facilities listed in the table. The analysis shows that Transportation Control Measures (TCM) will not significantly reduce congestion on roadways parallel to the Grand Parkway. The TCM improvements, which are described in the following section, will not have sufficient impact to improve Levels of Mobility without added capacity. Therefore, additional roadway capacity in the vicinity of the proposed

Grand Parkway corridor can be further investigated and is consistent with the Congestion Management System (CMS) Plan of the Houston-Galveston Area Council (H-GAC), and contingent to the considerations described herein.

II. BACKGROUND

The current CMS Plan for the Houston-Galveston area was adopted in October 1997 and revised in 1998 and 2004 (H-GAC, 1997). The CMS requires the performance of a CMA on significant added capacity roadway projects. CMA was formerly known as SOV Analysis. It is the stated policy of the CMS to apply cost-effective Travel Demand Management (TDM) and Transportation System Management (TSM) measures as the first component of all congestion reduction strategies. Added capacity roadway projects, such as the Grand Parkway, are justified only if cost-effective TDM and TSM strategies fail to reduce vehicular congestion to acceptable (or tolerable) levels.

III. PROJECT DESCRIPTION

The purpose of the proposed Grand Parkway project is to develop a interstate quality circumferential highway facility to provide access to radial freeways and serve as a third loop around the City of Houston. With a total length of over 180-miles, the development of the full Grand Parkway would require construction in a number of phases. As Segments of Independent Utility (SIUs), Sections E, F-1, F-2, and G are being developed at this time to address regional and local transportation needs. The study area for the Grand Parkway Environmental Impact Statements (EISs) are all located within Harris and Montgomery Counties, in the western and northern portion of the Houston metropolitan area. The project limits of this study extend from IH 10 (Katy Freeway) to US 59 (Eastex Freeway), approximately a 52-mile corridor that traverses suburban and rural areas. Approximately 40 miles are located in Harris County, and 12 miles are located in Montgomery County. The project would reduce the through radial traffic from the current freeway system (i.e., IH 10, US 290, SH 249, IH 45, and US 59) and provide a needed transportation service in the study area to help reduce regional and local traffic congestion.

The Grand Parkway was included in recent federal transportation legislation, including the 1995 National Highway System designation, established by the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA), the North American Free Trade Agreement (NAFTA), the Transportation Equity Act for the 21st Century (TEA-21), and the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). At the state level, the Grand Parkway is included in the current Statewide Transportation Improvement Program (STIP) for funding between 2006 and 2008. The Grand Parkway is also identified in the 2025 Regional Transportation Plan (RTP) (H-GAC, 2005). Segments E, F-1, F-2, and G are consistent with Harris and Montgomery County improvements programs and are included in the City of Houston's Major Thoroughfare and Freeway Plan. As such, the proposed action would serve to function as a critical link in the regional and local transportation system that would serve travel, economic, development, and commercial demands of the region. Construction of the proposed Grand Parkway in Segment E, F-1, F-2, and G would provide circumferential linkage between western and northern Harris County and southern Montgomery County, including linkage between IH 10,

US 290, SH 249, IH 45, and US 59. The lead agency for this project is the Texas Department of Transportation (TxDOT), and the funding source is the Federal Highway Administration (FHWA).

The proposed action has been designed as a 4-lane controlled access toll facility with intermittent frontage roads located within a 400-ft right of way (ROW). The 400-ft ROW can accommodate one of the following typical roadway sections: 4-lane section without frontage roads, 4-lane section with frontage roads, and 4-lane section with exit and entrance ramps.

The existing roadways under study have different configurations varying from 8-lane divided arterial urban sections to 2-lane undivided rural sections. Table 2 presents the configurations for the parallel facilities that would be affected by the construction of the Grand Parkway.

TABLE 2: CONFIGURATIONS FOR ROADWAYS PARALLEL TO THE PROPOSED GRAND PARKWAY

Segment Study Area	Roadway	From	To	Classification	Urban or Rural	No. of Lanes	Divided	Center Turn Lane	Signalization along Segment
E	SH 6	IH 10	US 290	Principal Arterial	Urban	6	No	Yes	Yes
	Katy Hockley Rd	IH 10	Roberts Rd	Collector	Rural	2	No	No	No
	Barker Cypress Rd	IH 10	US 290	Collector	Urban	2/4	Yes	Yes	Yes
F-1	FM 1960	US 290	SH 249	Principal Arterial	Urban	6	No	Yes	Yes
	Louetta Rd	Telge Rd	SH 249	Collector	Urban	4	No	Yes	Yes
	Spring-Cypress Rd	Telge Rd	SH 249	Collector	Rural	2	No	No	No
	Cypresswood Dr	Eldridge	SH 249	Collector	Urban	4	No	Yes	Yes
	FM 2920	US 290	SH 249	Collector	Rural	2/4	No	Yes	Yes
	Boudreaux Rd	Telge Rd	SH 249	Collector	Rural	2	No	No	No
F-2	FM 1960	SH 249	IH 45	Principal Arterial	Urban	6	No	Yes	Yes
	Louetta Rd	SH 249	IH 45	Collector	Urban	4	Yes	Yes	Yes
	Spring-Cypress Rd	SH 249	IH 45	Collector	Rural	2/4	No	No	Yes
	Cypresswood Dr	SH 249	IH 45	Collector	Urban	4	Yes	No	Yes
	FM 2920	SH 249	Spring-Cypress Rd	Collector	Rural	4	No	Yes	Yes
	Boudreaux Rd	SH 249	Kuykendahl Rd	Collector	Rural	2	No	No	Yes
	Spring Stuebner Rd	Kuykendahl Rd	IH 45	Collector	Rural	2	No	No	Yes
G	FM 1960	IH 45	US 59	Principal Arterial	Urban	6/8	No	Yes	Yes
	Cypresswood Dr	IH 45	FM 1960	Collector	Rural	4	Yes	No	Yes

Source: H-GAC, 2005.

IV. TRAFFIC AND LEVEL OF MOBILITY (LOM)

Four Levels of Mobility (LOM) used to define congestion were developed by the H-GAC Travel Modeling Committee in 1997 and approved by the Technical Advisory Committee (TAC). Table 3 illustrates these Levels of Mobility. Roadway segments, which fall above the Tolerable Level (i.e. volume/capacity (v/c) ratio ≥ 0.85), are considered congested and added-capacity solutions for these roadways are considered to be justified if TCM projects are not sufficient enough to improve LOM.

TABLE 3: SUMMARY OF LEVELS OF MOBILITY (LOM)

LOM	V/C Ratio
Tolerable	< 0.85
Moderate	≥ 0.85 < 1.00
Serious	≥ 1.00 < 1.25
Severe	≥ 1.25

Source: H-GAC, 2005.

H-GAC's modeling staff developed capacity tables using the standard Highway Capacity Manual (1994) procedures for different facility types and number of lanes. These Capacity Tables use a saturation flow rate, which is adjusted by using several traffic-related factors to obtain the capacity of the roadway. These factors are:

- ◆ Percent of Trucks;
- ◆ Percent of Left-Turns;
- ◆ Number of Lanes;
- ◆ Lane Utilization Factor;
- ◆ Peak Hour Factor;
- ◆ Peak Hour Directional Factors; and
- ◆ Traffic Signal Timing (Green/Cycle-Length Ratio or G/C Ratio).

These values were all incorporated into a transportation demand model developed by H-GAC for the Houston-Galveston area.

V. CONGESTION REDUCTION STRATEGIES

It is the stated policy of the CMS to apply cost-effective travel demand and TSM measures as the first component of all congestion reduction strategies. Added capacity roadway projects are justified only if cost-effective travel demand and TSM strategies fail to reduce vehicular congestion to acceptable levels. Where demand or system management projects

are feasible and cost-effective, project sponsors, or relevant implementing agencies and the MPO must commit to their implementation or incorporation into a proposed added-capacity project as a pre-condition to federal funding assistance. Project design, concept, and scope must also be consistent with any selected management strategies.

The proposed and committed TCMs in the vicinity of this project that are anticipated to have an effect on the Levels of Mobility are:

- ◆ The installation of a changeable lane assignment system on FM 1960 at the intersections of Kuykendahl Road and Stuebner Airline Road;
- ◆ The installation of an arterial traffic management system along segments of FM 2920;
- ◆ Construction of grade separated interchanges on FM 1960 at the intersections of Jones Road and Kuykendahl Road; and
- ◆ The installation of additional turn lanes, an arterial traffic management system, and signal coordination along SH 6.

A list of these and all other proposed projects within the study area is included in the following appendix and also in Appendix D.

Turn lanes and signal system modernization would be part of the future widenings of FM 1960, Louetta Road, Spring-Cypress Road, Barker Cypress Road, and Cypresswood Drive, which are already programmed. Bicycle and pedestrian paths in the area are not included in H-GAC's 2025 RTP; the suburban to rural nature of the corridor is to serve long distance trips, and bicycle and pedestrian paths are not beneficial. The corridor is outside of Houston's Metro service area, and bus service is not planned by any of the local agencies in the area.

VI. VI. ANALYSIS AND RESULTS

In addition to the major roadway improvements included in the 2025 RTP, TCM improvements are also planned for roadways parallel to the proposed Grand Parkway. These projects are less labor and capital intensive and usually involve techniques that cannot be measured in a regional model such as the HGAC model utilized for the DEIS. Therefore, an analysis was conducted using the HGAC planning software, TCM-Tool Box. This analysis tool calculates the reduction in v/c ratio (discussed in Section IV) for each TCM improvement. The year 2015 was analyzed as well as 2025 to determine the interim effect of the planned TCM projects within the traffic study area. The results of the 2015 analysis can be seen in Table 4 and the 2025 results are shown in Table 5.

TABLE 4: 2015 TRANSPORTATION CONTROL MEASURE IMPROVEMENTS AND ANALYSIS RESULTS

Segment Study Area	Roadway	From	To	TCM Roadway Improvements Included in the 2015 RTP	V/C Before TCM Project	V/C After TCM Project	% Reduction in V/C As Result of TCM Improvement
E	Katy Hockley Rd	IH 10	Roberts Rd	None	0.79	0.79	0%
	Barker Cypress Rd	IH 10	US 290	None	0.95	0.95	0%
	SH 6	IH 10	US 290	Add turn lanes, signal coordination, install arterial traffic management system	1.17	1.11	5%
F1	FM 1960	US 290	SH 249	Construct grade separated interchange at Jones Road, access management, intelligent transportation systems (ITS) TSM	0.93	0.88	5%
	Louetta Rd	Telge Rd	SH 249	None	1.13	1.13	0%
	Spring-Cypress Rd	Telge Rd	SH 249	None	0.45	0.45	0%
	Cypresswood Dr	US 290	SH 249	None	0.38	0.38	0%
	FM 2920	US 290	SH 249	Install arterial traffic management system	1.27	1.23	3%
	Boudreaux Rd	Telge Rd	SH 249	None	1.03	1.03	0%
F2	FM 1960	SH 249	IH 45	Installation of changeable lane assignment system at Kuykendahl and at Stuebner Airline Road; Construct grade separated interchange at Kuykendahl Rd, access management, ITS TSM	0.97	0.92	5%
	Louetta Rd	SH 249	IH 45	None	1.00	1.00	0%
	Spring-Cypress Rd	SH 249	IH 45	None	1.01	1.01	0%
	Cypresswood Dr	SH 249	IH 45	None	0.88	0.88	0%
	FM 2920	SH 249	Spring-Cypress Rd	Install arterial traffic management system	1.03	1.00	3%
	Boudreaux Rd	SH 249	Kuykendahl Rd	None	0.95	0.95	0%
	Spring Stuebner Rd	Kuykendahl Rd	IH 45	None	1.03	1.03	0%
G	FM 1960	IH 45	US 59	None	1.11	1.11	0%
	Cypresswood Dr	IH 45	FM 1960	None	1.43	1.43	0%

Source: H-GAC, 2005.

As shown Table 4, only three facilities parallel to the proposed Grand Parkway have planned TCM improvements. These projects are only expected to decrease the v/c ratio (congestion) by three to five percent. As discussed earlier, Level of Mobility (LOM) is a common term used to describe levels of congestion and this LOM is based on the v/c ratio. To improve LOM on a facility (from serious to moderate), a 25% decrease in v/c ratio is needed. For example, SH 6, from

IH 10 to US 290, has a v/c ratio of 1.17, or a serious LOM, before the TCM improvements. After the TCM projects are finished, the v/c ratio is expected to decrease five percent to 1.11. However, the LOM remains serious based on the HGAC volume to capacity table in Section IV.

TABLE 5: 2025 TRANSPORTATION CONTROL MEASURE IMPROVEMENTS AND ANALYSIS RESULTS

Segment Study Area	Roadway	From	To	TCM Roadway Improvements Included in the 2025 RTP	V/C Before TCM Project	V/C After TCM Project	% Reduction in V/C As Result of TCM Improvement
E	Katy Hockley Rd	IH 10	Roberts Rd	None	0.87	0.87	0%
	Barker Cypress Rd	IH 10	US 290	None	0.90	0.90	0%
	SH 6	IH 10	US 290	Add turn lanes, signal coordination, install arterial traffic management system	1.00	0.95	5%
F1	FM 1960	US 290	SH 249	Construct grade separated interchange at Jones Road, access management, intelligent transportation systems (ITS) TSM	1.23	1.17	5%
	Louetta Rd	Telge Rd	SH 249	None	0.71	0.71	0%
	Spring-Cypress Rd	Telge Rd	SH 249	None	0.50	0.50	0%
	Cypresswood Dr	US 290	SH 249	None	0.45	0.45	0%
	FM 2920	US 290	SH 249	Install arterial traffic management system	0.42	0.41	3%
	Boudreaux Rd	Telge Rd	SH 249	None	0.89	0.89	0%
F2	FM 1960	SH 249	IH 45	Installation of changeable lane assignment system at Kuykendahl and at Stuebner Airline Road; Construct grade separated interchange at Kuykendahl Rd, access management, ITS TSM	1.27	1.21	5%
	Louetta Rd	SH 249	IH 45	None	0.60	0.60	0%
	Spring-Cypress Rd	SH 249	IH 45	None	0.87	0.87	0%
	Cypresswood Dr	SH 249	IH 45	None	0.73	0.73	0%
	FM 2920	SH 249	Spring-Cypress Rd	Install arterial traffic management system	0.64	0.61	3%
	Boudreaux Rd	SH 249	Kuykendahl Rd	None	0.95	0.95	0%
	Spring Stuebner Rd	Kuykendahl Rd	IH 45	None	1.16	1.16	0%
G	FM 1960	IH 45	US 59	None	0.95	0.95	0%
	Cypresswood Dr	IH 45	FM 1960	None	1.16	1.16	0%

Source: H-GAC, 2005.

As shown in Table 5, only three facilities parallel to the proposed Grand Parkway have planned TCM improvements in the 2025 RTP. In addition, these projects are only expected to decrease the v/c ratio (congestion) by three to five percent. To improve LOM on a facility (from serious to moderate), a 25% decrease in v/c ratio is needed. For example, FM 1960, from US 290 to SH 249, has a v/c ratio of 1.23, or a serious LOM, before the TCM improvements. After the TCM projects are finished, the v/c ratio is expected to decrease five percent to 1.17. However, the LOM remains serious based on the HGAC volume to capacity table in Section IV.

Although TCM improvements are scheduled for only three facilities, the analysis shows there is merely a three to five percent improvement in v/c ratio as a result of these improvements. If these projects were applied to other facilities, the results of the analysis would yield similar results, further indicating the need for additional capacity in the vicinity.

VII. CONCLUSION

The analysis shown in Section IV indicates that only three facilities parallel to the proposed Grand Parkway have TCM projects, and these projects are not predicted to significantly improve congestion in 2015 or 2025.

Although additional TCM projects can be added to the area, the previous analysis concludes that these projects will have a minimal effect on v/c ratio.

APPENDIX A

TABLE 1-1: 2025 RTP PROJECTS FOR ROADWAYS PARALLEL TO THE PROPOSED SH 99/GRAND PARKWAY (SEGMENTS E, F-1, F-2, AND G)

Street	From Street	To Street	No.	Project ID	CSJ Number	Agency	County	Project Description	Cost	Status	Let Date
Principal Arterials											
SH 6	at Clay Rd	--	156	7851	--	TxDOT	Harris	Construct additional turn lanes in each direction at the intersection	\$1,700,000	Short	8/1/2004
SH 6	at FM 1093	--	215	10883	168505084	TxDOT	Harris	Improve traffic signals	\$222,800	Let	11/1/2003
SH 6	US 290	IH 10	239	11647	--	TxDOT	Harris	Widen to 8 lanes	\$28,500,000	Long	1/1/2023
SH 6	US 290	Logenbaugh	271	12193	--	TBD	Harris	Smart Street improvements	\$10,512,000	Long	1/1/2023
SH 6	Logenbaugh	IH 10	272	12194	--	TBD	Harris	Smart Street improvements	\$32,412,000	Long	1/1/2023
SH 6	IH 10	Westheimer	273	12196	--	TBD	Harris	Widen to 10 lanes	\$9,173,180	Long	1/1/2023
SH 6	Aspenglen Rd	US 290	370	12852	168505085	TxDOT	Harris	Planing, full depth repair, crack and spall repair, one course surface treatment, ACP overlay and pavement markings	\$3,000,000	Tip	4/1/2006
SH 6	At Westpark		375	13362	168506900	TxDOT	Fort Bend	Construct 4-lane grade separation	\$6,000,000	Short	9/1/2004
SH 6	0.644 km N of FM 529	0.483 km S of FM 529	25	311	168505056	TxDOT	Harris	Construct 6-lane grade separation with access roads at FM 529	\$6,714,000	Short	9/1/2010
SH 6	0.7 mi N of FM 1093	1.1 mi S of FM 1093	26	313	168505067	TxDOT	Harris	Construct 6-lane grade separation with access roads	\$18,714,925	Short	8/1/2008
SH 99	0.3 mi S of FM 1093	0.3 mi N of FM 1093	22	265	351004004	TxDOT	Fort Bend	Construct 4-lane overpass and 1 direct connector	\$25,000,000	Short	1/1/2008
SH 99	IH 45 N	Montgomery C/L at W End Spr Ck Brdg	27	314	351006001	TxDOT	Harris	Seg G-1: Construct 4-lane rural divided highway (possible toll road)	\$15,326,000	Short	7/1/2008
SH 99	US 290	SH 249	28	316	351006002	TxDOT	Harris	Seg F-1: Construct 4-lane divided rural section (possible toll road)	\$72,000,000	Tip	8/1/2008
SH 99	Franz Rd	US 290	31	328	351005002	TxDOT/HCTR A	Harris	Seg E: Construct 4-lane divided rural section w/ non-continuous frontage roads (possible toll road)	\$70,000,000	Tip	5/1/2008
SH 99	US 59 N	Harris C/L	37	367	351007003	TxDOT	Montgomery	Seg H: Construct 4-lane divided rural highway w/ wc at 2 bayous w/ non-continuous frontage roads (possible toll road)	\$37,313,000	Short	9/1/2015
SH 99	Harris C/L	FM 1093	100	6066	351004019	TxDOT	Fort Bend	Seg D: Widen to ultimate 6 lanes (possible toll rd)	\$19,000,000	Short	9/1/2008
SH 99	0.3 mi S of FM 1093	N of US 90A	101	6067	351004903	TxDOT	Fort Bend	Seg D: Construct 4 lanes (possible toll rd)	\$53,500,000	Short	9/1/2008
SH 99	Franz Rd	Fort Bend C/L	102	6069	351005010	TxDOT	Harris	Seg D: Construct 6 lanes w/ non-continuous frontage roads (possible toll rd)	\$22,000,000	Short	9/1/2007
SH 99	0.24 mi S of Highland Knolls Dr	Harris C/L	108	7033	351004021	TxDOT	Fort Bend	Construct grade separation	\$6,473,310	Let	4/1/2004
SH 99	Fort Bend C/L	0.15 mi S of IH 10	109	7034	351005009	TxDOT	Harris	Construct grade separation	\$11,329,098	Let	4/1/2004
SH 99	Franz Rd	IH 45 N	356	12789	--	TxDOT	Harris	Construct 6 lane rd (possible toll road)	\$302,198,783.52	Long	1/1/2023

TABLE 1-1: 2025 RTP PROJECTS FOR ROADWAYS PARALLEL TO THE PROPOSED SH 99/GRAND PARKWAY (SEG. E, F-1, F-2, AND G)

Street	From Street	To Street	No.	Project ID	CSJ Number	Agency	County	Project Description	Cost	Status	Let Date
FM 1960	at Drainage Ditch East of Fallbrook	--	216	10887	168501084	TxDOT	Harris	Replace washed out riprap under bridge and around columns	\$15,000	Let	10/1/2003
FM 1960	0.121 mi E of BF 1960A	0.21 mi W of Lake Houston Bridge	223	11097	168503083	TxDOT	Harris	Base repair, ultra thin bonded overlay and pavement markings	\$5,000,000	Let	5/1/2004
FM 1960	IH 45	US 59	268	12187	--	TBD	Harris	Smart Street improvements	\$43,800,000	Long	1/1/2023
FM 1960	Red Oak	IH 45	269	12191	--	TBD	Harris	Smart Street improvements	\$3,942,000	Long	1/1/2023
FM 1960	US 290	SH 249	270	12192	--	TBD	Harris	Smart Street improvements	\$22,338,000	Long	1/1/2023
FM 1960	US 290	SH 249	369	12850	168501086	TxDOT	Harris	Planing, full depth repair, crack and spall repair, one course surface treatment, ACP overlay, and pavement markings	\$3,500,000	Tip	4/1/2006
Collectors											
Boudreaux Rd	0.76 km W of SH 249	1.07 km E of SH 249	50	539	091271934	Harris County	Harris	Realignment of existing Boudreaux Rd (in sections) to match proposed SH 249 overpass	\$813,000	Short	3/1/2008
Boudreaux Rd	W of SH 249	E of SH 249	158	7892	--	Harris County	Harris	Construct transitions to intersection	\$1,067,000	Long	1/1/2023
Cypresswood Dr	Cypress-Rosehill	Eldridge	29	318	--	TBD	Harris	Construct new 4-lane roadway	\$4,470,000	Long	1/1/2018
Cypresswood North	Eldridge	FM 1960	358	12791	--	TBD	Harris	Widen from 4 to 6 lanes	\$63,108,620.45	Long	1/1/2023
FM 2920	Bauer Rd	SH 249	241	11688	--	TxDOT	Harris	Widen to 6 and 8 lanes	\$25,500,000	Long	1/1/2023
FM 2920	SH 249	Stuebner Airline	242	11689	--	TxDOT	Harris	Widen to 6 lanes in sections	\$13,500,000	Long	1/1/2023
FM 2920	IH 45	Kuykendahl	246	11976	--	TxDOT	Harris	Install vidvs, pan tilt cameras and dynamic message signs at major intersections	\$350,000	Short	9/1/2006
FM 2920	Kuykendahl	FM 2978	247	11978	--	TxDOT	Harris	Install aerial fiber	\$300,000	Short	9/1/2006
FM 2920	US 290	BU 290	258	12035	--	TBD	Harris	Smart Street improvements	\$3,504,000	Long	1/1/2023
FM 2920	Hempstead Hwy	Bauer Rd	304	12477	--	TBD	Harris	Widen to 4 lanes	\$25,371,118	Long	1/1/2023
FM 2920	SH 99	Stuebner Airline	305	12478	--	TBD	Harris	Widen to 6 lanes	\$5,955,500	Long	1/1/2023
FM 2920	US 290	SH 249 Bypass	306	12479	--	TBD	Harris	Smart Street improvements	\$39,042,000	Long	1/1/2023
FM 2920	SH 249 Bypass	SH 999	307	12481	--	TBD	Harris	Smart Street improvements	\$15,424,000	Long	1/1/2023
FM 2920	Stuebner Airline	IH 45	308	12482	--	TBD	Harris	Smart Street improvements	\$17,834,000	Long	1/1/2023
FM 2920	Falvel	IH 45	309	12484	--	TBD	Harris	Widen to 6 lanes	\$7,681,890	Long	1/1/2023
FM 2920	at ditch at Springwest Dr	--	371	12854	294102044	TxDOT	Harris	Reshape/sod existing ditch and riprap ditch bottom	\$71,000	Tip	11/1/2005
FM 2920 Ext	US 290	IH 10	240	11687	--	TxDOT	Waller	Extend 4 lane divided in sections	\$60,000,000	Long	1/1/2023
FM 2920 Ext	Harr/Wall Cl	BU 290	257	12034	--	TBD	Harris	Smart Street improvements	\$11,388,000	Long	1/1/2023

TABLE 1-1: 2025 RTP PROJECTS FOR ROADWAYS PARALLEL TO THE PROPOSED SH 99/GRAND PARKWAY (SEG. E, F-1, F-2, AND G)

Street	From Street	To Street	No.	Project ID	CSJ Number	Agency	County	Project Description	Cost	Status	Let Date
Katy Hockley Cutoff	Katy Hockley Rd	Morton Rd to US 290	120	7474	--	Harris County	Harris	Widen to 4-lane divided blvd	\$60,000,000	Long	1/1/2023
Louetta Ext	US 290	Spring-Cypress	313	12491	--	TBD	Harris	Smart Street improvements	\$13,496,000	Long	1/1/2023
Louetta Ext	US 290	Cypress-Rosshill	314	12493	--	TBD	Harris	Construct 4 lanes (partial new location)	\$12,610,710	Long	1/1/2023
Louetta Ext/Huffmeister	Barker Cypress	Spring-Cypress	315	12494	--	TBD	Harris	Construct and widen to 4 and lanes (partial new location)	\$6,782,670	Long	1/1/2023
Louetta Rd	Telge	Grant	36	347	--	TBD	Harris	Construct 4-lane divided	\$3,950,000	Long	9/1/2023
Louetta Rd	Cypress Rosehill	Barker Cypress	117	7468	--	Harris County	Harris	Construct 4-lane divided boulevard w/ curb & gutter, storm sewer	\$4,700,000	Long	1/1/2023
Louetta Rd	T. C. Jester	Kuykendahl	181	8049	--	Harris County	Harris	Widen 5-lane asphalt w/ ditches, to 7-lane asphalt	\$2,500,000	Long	1/1/2023
Louetta Rd	E. of Kuykendahl Rd	IH 45	182	8051	--	Harris County	Harris	Widen 5-lane asphalt w/ ditches, to 7-lane asphalt	\$8,000,000	Long	1/1/2023
Louetta Rd	SH 249	IH 45	316	12496	--	TBD	Harris	Smart Street improvements	\$24,341,000	Long	1/1/2023
Louetta Rd	Spring-Cypress	SH 249	317	12497	--	TBD	Harris	Smart Street improvements	\$9,881,000	Long	1/1/2023
Louetta Rd	IH 45 N	Hardy	345	12655	--	TBD	Harris	Widen from 4 to 6 lanes w/ bridges	\$4,182,454.55	Long	1/1/2023
Louetta/Cyf Ext	Waller C/L	US 290	291	12351	--	TBD	Harris	Smart Street improvements	\$25,305,000	Long	1/1/2023
Spring-Cypress Rd	SH 249	FM 2920	11	141	--	Harris County	Harris	Widen existing 2-lane asphalt pavement to 5-lane asphalt pavement with roadside and outfall ditches, turn lanes at intersections, bridges, and traffic signals	\$17,349,974	Let	10/1/2003
Spring-Cypress Rd	Barker Cypress	Huffmeister	136	7650	--	Harris County	Harris	Widen to 4-lane divided concrete	\$3,000,000	Short	3/1/2006
Spring-Cypress Rd	US 290	E of Barker Cypress	137	7651	--	Harris County	Harris	Widen to 4-lane concrete boulevard section with storm sewer drainage and traffic signals	\$7,757,000	Short	6/1/2006
Spring-Cypress Rd	Grant	Telge	179	8042	--	Harris County	Harris	Widen to 5 lane undivided asphalt w/ ditches	\$8,000,000	Short	9/1/2013

Source: H-GAC, 2005.

VIII. REFERENCES

Houston-Galveston Area Council (H-GAC)

1997 Congestion Management System, Houston-Galveston Area Council, October, Revised May 1998.

2005 2025 RTP Metropolitan Transportation Plan, adopted June 2005.

Transportation Research Board

1994 Highway Capacity Manual, Special Report 209, 3rd Edition, Washington D.C.