

Attachment 1
Support Documentation

**SUPPORT DOCUMENTATION
FOR THE
RE-EVALUATION
OF THE
FINAL ENVIRONMENTAL IMPACT STATEMENT**

FOR

**State Highway 99
Grand Parkway
Segment H and I-1**

**FROM: US 59
TO: IH 10**

MONTGOMERY, HARRIS, LIBERTY and CHAMBERS COUNTIES, TEXAS

CSJs: 3510-07-003, 3510-08-001, 3510-09-001, 3510-09-002, 3510-10-001

**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION**

and

TEXAS DEPARTMENT OF TRANSPORTATION

January 2016

INTRODUCTION

This document supports a re-evaluation of the approved State Highway (SH) 99, Grand Parkway, Segment H and I-1 Final Environmental Impact Statement (FEIS) for the construction of a 37.4-mile new location, four-lane, controlled access toll road with intermittent frontage roads within a 400-foot right-of-way (ROW) from United States Highway (US) 59 North (N)/Interstate Highway (I) 69 to I-10 East (E) in Montgomery, Harris, Liberty and Chambers Counties, Texas (**Attachment 2**). The Federal Highway Administration (FHWA) and the Texas Department of Transportation (TxDOT) jointly approved the FEIS for the project in February 2014. A Record of Decision (ROD) was issued by FHWA on June 24, 2014.

The purpose of the re-evaluation is to describe the design modifications that have occurred since the issuance of the ROD. Furthermore, this re-evaluation will assess how the proposed realignment would affect the previous environmental impacts analysis and determine whether a new and comprehensive analysis of the entire project is needed. This re-evaluation complies with FHWA regulations (23 Code of Federal Regulations [CFR] 771.129).

The issuance of the ROD approved the Selected Alternative for a four-lane, controlled access toll road with intermittent frontage roads within a 400-foot ROW. As described in the ROD, the Selected Alignment provided the best opportunity to avoid and minimize impacts to the natural, social, and cultural environment while meeting the transportation need and purpose for the project. Approximately 1,996 acres of ROW was to be required for the Selected Alternative to accommodate the transportation facility, as well as utility line adjustments.

Public feedback and preference was taken into consideration throughout the development of the FEIS and has continued subsequent to the issuance of the ROD. In addition to public meetings and coordination meetings with regulatory agencies, GPA and TxDOT have met with affected property owners on various occasions to discuss potential realignments and held Meetings with Affected Property Owners (MAPO) on February 24, 2015 (see MAPO Summary Report). Based on discussions with the affected property owners and receipt of updated information of future developments, design modifications have occurred to the Selected Alternative.

The project revisions include proposed alignment shifts in the vicinity of the following locations: (1) future Community Drive, (2) the proposed CMC Rail Development near US 90, (3) a single parcel near FM 1413; (4) near the ExxonMobil Plant expansion, (5) the existing canal near SH 146 and FM 565. These alignment shifts will increase the amount of additional ROW by approximately 5 acres and the proposed new alignment is referenced as the "Proposed Realignment." The Proposed Realignment would require a total of 2,001 acres of ROW. Although the alignment shifts would require an additional 5 acres of ROW, the alignment shifts are located on approximately 480 acres of ROW not evaluated in the FEIS. **Table 1** presents the changes in ROW for each proposed alignment shift.

Table 1: Proposed Right-of -Way

Alignment Shift Area	Selected Alternative (ROD Approved) ROW (acres)	Proposed Realignment ROW (acres)
Future Community Drive	94	96
CMC Rail Development near US 90	138	139
Just south of 1413	92	92

Alignment Shift Area	Selected Alternative (ROD Approved) ROW (acres)	Proposed Realignment ROW (acres)
Vicinity of Exxon Mobile Plant	139	145
Canal near SH 146 and FM 565	8	8
Total	471	480

With the alignment shift, the majority of the ROW associated with the old alignment will still require acquisition; however, some parcels will have a different ROW requirement than identified in the FEIS/ROD. **Table 2** provides a list of affected parcels, including newly affected parcels and parcels with different ROW requirements, based on the Proposed Realignment (**Attachment 6**).

Table 2. Potential Realignment ROW

Parcel ID 2014	County	Total Parcel Acres	Selected Alternative Acres in ROW	Proposed Realignment Acres in ROW	Change (Acres)
167	Liberty	191.19	0.03	0.32	0.29
168	Liberty	1387.96	32.60	51.65	19.05
170	Liberty	718.45	55.24	54.78	-0.46
171	Liberty	369.66	39.12	33.52	-5.60
172	Liberty	14.47	0.64	10.65	10.01
173	Liberty	69.36	14.33	18.10	3.77
175	Liberty	426.40	5.27	0.00	-5.27
176	Liberty	216.32	18.27	0.15	-18.12
177	Liberty	111.55	1.84	0.00	-1.84
190	Liberty	15.54	0.00	0.15	-0.15
260	Liberty	81.67	21.53	21.63	0.10
261	Liberty	1.50	0.32	0.76	0.44
263	Liberty	11.60	2.35	3.54	1.19
265	Liberty	4.51	1.72	2.04	-0.32
267	Liberty	13.33	3.90	4.45	0.55
268	Liberty	33.71	7.62	8.20	0.58
269*	Liberty	5.11	2.07	2.74	0.67
270	Liberty	50.21	3.07	10.41	7.34
271	Liberty	48.66	11.08	4.19	-6.89
272	Liberty	4.62	.63	0.00	-.63
273	Liberty	3.07	.25	0.00	.25
275	Liberty	1.38	1.08	0.00	-1.08
277	Liberty	14.01	7.07	0.00	-7.07
278	Liberty	14.34	0.38	3.06	2.68
279	Liberty	32.41	0.00	6.84	6.84
280	Liberty	5.32	1.73	0.00	-1.73

Table 2. Potential Realignment ROW

Parcel ID 2014	County	Total Parcel Acres	Selected Alternative Acres in ROW	Proposed Realignment Acres in ROW	Change (Acres)
281	Liberty	11.60	5.16	0.00	-5.16
282	Liberty	.78	.44	0.00	-.44
283	Liberty	1.17	.62	0.00	-.62
284	Liberty	47.40	5.95	9.66	3.71
285	Liberty	14.30	4.02	0.00	-4.02
286	Liberty	0.63	0.08	0.63	0.55
287	Liberty	11.16	2.05	0.00	-2.05
288	Liberty	5.15	1.18	5.15	3.97
289	Liberty	4.14	3.85	4.13	0.28
292	Liberty	17.15	17.06	0.00	-17.06
296	Liberty	79.80	49.39	42.81	-6.58
297	Liberty	32.43	18.28	.03	-18.25
298	Liberty	73.69	8.30	22.51	14.2
299	Liberty	72.66	0.16	9.42	9.26
302	Liberty	20.60	.58	0.00	-.58
304	Liberty	188.15	25.06	25.16	0.1
305	Liberty	538.21	39.71	0.00	-39.71
306	Liberty	3121.61	147.90	147.14	-.76
307	Liberty	86.46	5.20	0.00	-5.20
308	Liberty	7.17	2.91	0.00	-2.91
309	Liberty	84.78	13.29	3.43	-9.86
310	Liberty	90.84	13.14	10.83	-2.31
311	Liberty	91.23	13.29	13.34	0.05
312	Liberty	159.09	11.26	12.1	.74
313	Liberty	9.69	1.30	1.71	0.41
314	Liberty	227.21	31.64	0.00	-31.64
315	Liberty	135.17	2.80	19.63	16.83
316	Liberty	19.14	1.07	0.00	-1.07
317	Liberty	12.54	.07	0.00	-.07
318	Liberty	4.96	.80	0.00	-.80
319	Chambers	15.60	.83	0.00	-.83
320	Chambers	5.24	.08	0.00	-.08
321	Chambers	5.60	.003	0.00	-.003
322	Liberty	14.10	3.42	0.00	-3.42
323	Liberty	.92	.23	0.00	-.23
324	Chambers	21.42	5.55	0.00	-5.55
325	Chambers	6.61	1.91	0.00	-1.91
326	Chambers	16.17	6.00	0.00	-6.00

Table 2. Potential Realignment ROW

Parcel ID 2014	County	Total Parcel Acres	Selected Alternative Acres in ROW	Proposed Realignment Acres in ROW	Change (Acres)
327	Chambers	10.38	.21	0.00	-.21
328	Chambers	93.19	29.28	7.11	-22.17
329	Chambers	67.85	2.27	2.48	0.21
330	Chambers	258.18	21.73	21.87	0.14
331	Chambers	132.93	21.64	22.11	0.47
332	Chambers	16.22	6.18	6.39	0.21
333	Chambers	5.93	0.29	0.21	-0.08
334	Chambers	9.26	5.14	5.07	-0.07
335	Chambers	11.18	1.02	1.02	0.00
336	Chambers	3.85	0.56	0.51	-0.05
337	Chambers	0.64	0.33	0.37	0.04
338	Chambers	1.10	0.22	0.20	-0.02
339	Chambers	28.27	0.30	0.38	0.08
340	Chambers	41.92	6.36	6.42	0.06
341	Chambers	39.78	5.47	1.10	-4.37
342	Chambers	36.14	6.00	6.43	0.43
343	Chambers	38.83	5.89	6.40	0.51
344	Chambers	69.58	13.28	14.55	1.27
345	Chambers	64.96	9.16	10.19	1.03
346	Chambers	80.73	11.50	11.73	0.23
347	Chambers	121.40	10.04	9.96	-0.08
348	Chambers	42.71	0.02	0.02	0.00
349	Chambers	10.74	10.42	9.89	-0.53
350	Chambers	22.76	5.86	6.76	0.90
351	Chambers	37.07	8.96	9.07	0.11
352	Chambers	40.71	6.78	7.02	0.24
353	Chambers	25.52	2.62	2.49	-0.13
414	Chambers	110.62	.72	0.00	-.72
428	Liberty	125.64	0.00	7.00	7.00
431	Liberty	98.76	0.00	17.00	17.00
432	Liberty	122.27	3.74	18.00	14.26
433	Liberty	3.57	0.28	0.37	0.09
434	Liberty	102.81	6.92	11.76	4.84
437	Liberty	291.76	0.00	13.72	13.72
438	Liberty	230.46	21.45	19.36	-2.09
439	Liberty	68.67	6.08	6.49	0.41
440	Liberty	74.04	6.15	7.52	1.37
441	Liberty	64.46	2.58	2.83	.25

Table 2. Potential Realignment ROW

Parcel ID 2014	County	Total Parcel Acres	Selected Alternative Acres in ROW	Proposed Realignment Acres in ROW	Change (Acres)
443	Liberty	.53	.54	0.00	-.54
451	Liberty	10.16	0.00	1.40	1.40
452	Liberty	0.94	0.00	0.68	0.68
453	Liberty	2.84	0.00	2.82	2.82
454*	Liberty	0.93	0.00	0.54	0.54
455	Liberty	0.93	0.00	0.66	0.66
456*	Liberty	0.94	0.00	0.79	0.79
459	Liberty	1.92	0.00	0.002	0.002
460	Liberty	15.00	0.00	0.01	0.01
461	Liberty	7.50	0.00	0.54	0.54
462	Liberty	7.50	0.00	0.37	0.37
463	Liberty	10.00	0.00	0.91	0.91
464	Liberty	16.41	0.00	9.41	9.41
465	Liberty	20.00	0.00	0.28	0.28
466	Liberty	15.00	0.00	0.46	0.46
467	Liberty	31.20	0.00	6.69	6.69
468*	Liberty	5.40	0.00	5.93	5.93

*Potential Displacement located on property

At each of the general locations where minor roadway design modifications are required, a desktop survey was performed to analyze possible environmental impacts. The desktop exercise included, but was not limited to: land use, waters of the U.S., floodplains, threatened and endangered species habitat, noise, socioeconomic resources, cultural resources, hazardous materials, and conformity with planning for Montgomery, Harris, Liberty and Chambers counties.

This re-evaluation examines all the environmental issues that were originally investigated and reported in the ROD. This examination has determined that the proposed realignment would result in no substantial change in project impacts to the natural resources and environmental issues shown in **Table 3**.

Table 3. Comparison Selected Alternative and Potential Realignment Impacts

Resource/Issue		Proposed Alternative Result in Change to Impacts (Y/N)	Selected Alternative (ROD Approved) Impacts	Proposed Realignment Impacts	Proposed Alternative Impacts Change Validity of Original NEPA Determination (ROD) (Y/N)
Land Use (acres) (H-GAC 2015 Q1 dataset)	Commercial	N	5	5	N
	Gov/Med/Education	N	0.02	0.02	N
	Industrial	Y	6	0	N
	Multiple	Y	65	70	N
	Parks/Open Space	Y	9	9	N
	Residential	Y	93	92	N
	Undevelopable	Y	198	209	N
	Vacant (includes agriculture)	Y	1,257	1,270	N
	Water	Y	6	13	N
	Pavement	Y	83	66	N
	Unknown	Y	274	267	N
Total ROW	Y	1,996	2,001	N	
Natural Resources (acres)	Non-Forested Wetland (ac)	Y	15.5	14.5	N
	Forested Wetlands (ac)	Y	26.5	23.5	N
	Ecologically Significant Streams Crossed	N	3 streams	3 streams	N

Resource/Issue		Proposed Alternative Result in Change to Impacts (Y/N)	Selected Alternative (ROD Approved) Impacts	Proposed Realignment Impacts	Proposed Alternative Impacts Change Validity of Original NEPA Determination (ROD) (Y/N)
	TES/SOC	N	Work within the ROW for the Selected Alternative will not affect any federally listed species.	The habitats and land use patterns are nearly identical between the ROD and proposed realignment, so the list of species will likely not change. The vegetation communities occurring within the realignment ROW consist primarily of cultivated agricultural land or forested areas dominated by loblolly pine. No suitable habitat for federally-listed species exists within the realignment ROW. A biological evaluation form addressing both federal and state listed species was completed for the areas of new ROW and coordination with TPWD was completed on Jan 21, 2016. The form and associated coordination is included in Attachment 15 .	N
	Wildlife Habitat (ac)	Y	664.8	686.8	N
	Floodway (ac)	N	43.26	45.17	N
	100-yr Floodplain (ac)	Y	194	181 See Table 3 .	N
	Prime Farmlands (ac)	Y	960	944	N

Resource/Issue		Proposed Alternative Result in Change to Impacts (Y/N)	Selected Alternative (ROD Approved) Impacts	Proposed Realignment Impacts	Proposed Alternative Impacts Change Validity of Original NEPA Determination (ROD) (Y/N)
Cultural Resources	Historic Resources	N	TxDOT determined that four historic-age resources were previously determined or recommended eligible for listing NRHP. Because detailed design plans are not yet available, it is not currently possible to evaluate effects to historic-age resources and additional investigations are to be completed further along in the development process.	Supplemental HRSR completed in September 2015 and submitted to TxDOT ENV through the TxDOT Houston District. Supplemental HRSR recommended that there were no historic resources on parcels investigated as a result of changes to the Area of Potential Affect resulting from design changes. TxDOT ENV will make final determination of eligibility and effects on the current design.	N
Cultural Resources	Archeological Resources	N	Eleven percent of the APE had previously been tested. These previous surveys did not locate any cultural resources within the current APE. Thirty-three percent of the APE was examined for cultural resources and did not locate any eligible sites. Over 56 percent of the area of potential effect APE was not tested – deferred until property acquisition.	Further investigation of potential Archeological resources in areas of design modifications will be conducted and coordinated with TxDOT ENV and THC prior to construction. Since ROE was not obtained for the entire APE, the areas not examined during the FEIS and the new areas associated with the re-evaluation will be examined by a qualified archaeologist as part of the developer's responsibility.	N

Resource/Issue	Proposed Alternative Result in Change to Impacts (Y/N)	Selected Alternative (ROD Approved) Impacts	Proposed Realignment Impacts	Proposed Alternative Impacts Change Validity of Original NEPA Determination (ROD) (Y/N)
Traffic Noise	N	<p>Impacts to 18 representative receivers, all representing a total of 38 residences and one business. Noise impact contours were determined to be 150 feet from ROW for NAC B (66 dB(A)) and 50 from ROW for NAC C (71 dB(A)).</p> <p>Noise barriers will not be feasible and/or reasonable and are not proposed subject to the completion of the project design, utility evaluation, and polling of adjacent owners.</p>	<p>The FEIS traffic noise analysis concluded that the Selected Alternative would result in traffic noise impacts with no feasible and reasonable noise abatement. Since the FEIS, the alignment has shifted at five locations. Of the five alignment shift areas, only the shift in associated with US 90 had additional potential receivers within the vicinity. A traffic noise analysis was completed for year 2039 for this alignment shift area following the same methodology of the FEIS. A total of nine receivers (seven additional and two original receivers) were evaluated for potential noise impacts. The results of the analysis are included in the Traffic Noise Technical Report (November 2015) and shown on Attachment 12.</p>	N
MTP/TIP Consistency	N	<p>The proposed action is consistent with the areas financially constrained 2035 RTP Update, as revised, and the 2013-2016 TIP. Both the RTP and the TIP were found to conform to the TCEQ SIP by FHWA on January 25, 2011 and November 1, 2012, respectively.</p>	<p>The proposed action is included in the 2013-2016 District Statewide Transportation Improvement Programs. The proposed action is included in the recently approved 2040 RTP (approved September 11, 2015). The new STIP pages are included as Attachment 9.</p>	N

Resource/Issue		Proposed Alternative Result in Change to Impacts (Y/N)	Selected Alternative (ROD Approved) Impacts	Proposed Realignment Impacts	Proposed Alternative Impacts Change Validity of Original NEPA Determination (ROD) (Y/N)
Socioeconomic/EJ	Residential Displacements	Y	76	81	N
	Commercial Displacements	N	19	19	N
	Churches Displacements	N	1	1	N
	Community Cohesion	N	Potential degradation of aesthetics and community character for residences adjacent to the facility; and temporary construction impacts.	No additional churches or schools will be displaced nor will the proposed realignment create any additional restrictions.	N
	EJ Issues	N	No disproportionate impact of a tolled versus non-tolled roadway in terms of minority and/or low-income populations.	No additional minority or low-income populations affected so conclusion remains valid.	N

Resource/Issue		Proposed Alternative Result in Change to Impacts (Y/N)	Selected Alternative (ROD Approved) Impacts	Proposed Realignment Impacts	Proposed Alternative Impacts Change Validity of Original NEPA Determination (ROD) (Y/N)
	Summary	N/A	The Selected Alternative would impact 13 census block groups with high minority populations.	<p>The proposed realignment would impact 14 census block groups with high minority populations; the additional block group is located in the vicinity of the US 90 shift. This additional block group is illustrated in Attachment 11.</p> <p>At this location, the interchange with US 90 would remain, although would be shifted to the northeast, as illustrated. Access to Cox Road (CR 491) would still be provided via a new connection from the southbound entrance ramp.</p> <p>For the alignment shift located near the Liberty County and Chambers County line (Block Group 3053), the proposed realignment would impact a greater portion of a census block group with high minority population (Block Group 3053), as illustrated in Attachment 11. No additional displacements would occur in Block Group 3053. Access for the Future Road #5C would be provided under the Grand Parkway.</p> <p>A Meeting for Affected Property Owners was held on February 24, 2015 which resulted in modifications to the Selected Alternative. A public meeting was held on June 9, 2015 where all property owners were notified of the meeting and the intent of the meeting was to present the design modifications.</p>	N/A
Water Wells	Public	N	7	7	N
	Private	N	0	0	N

Resource/Issue		Proposed Alternative Result in Change to Impacts (Y/N)	Selected Alternative (ROD Approved) Impacts	Proposed Realignment Impacts	Proposed Alternative Impacts Change Validity of Original NEPA Determination (ROD) (Y/N)
Hazardous Materials ¹	Regulated Sites	N	9	9	N
	Oil Wells	N	11	11	N

Note: 1. No additional regulated sites and oil wells would be impacted by the realignment. The exhibit included in **Attachment 10** illustrates the locations of the regulated facilities and the changes in alignment.

The 100-year floodplain within the Selected Alternative right-of-way was revised to account for all waterbody crossings within the 100-year floodplain. The FEIS presented approximately 159 acres of floodplain within the ROW, but did not account for several waterbody crossings. The corrected acres of floodplain within the ROW for the Selected Alternative are 194 acres. **Table 3** presents the revised acres for the Selected Alternative.

As shown in **Table 3**, the Proposed Realignment would reduce the acres of 100-year floodplains within the right-of-way by approximately 13 acres. The only change in acreage was associated with Luce Bayou, which is shown on Page 1 of **Attachment 8**.

In October 2015, the *Corridor Drainage Impact Report* was updated to assess the impacts associated with the Proposed Realignment. During the update the report, the study team coordinated with the Floodplain Administrator and County Engineer for both Liberty and Chambers Counties to discuss the project and project requirements.

Table 3: 100-year Floodplain within Alternative ROW

Waterbody	100-year Floodplain within ROW (Acres)	
	FEIS Selected Alternative	Proposed Realignment
Caney Creek	31.7	31.7
Peach Creek	48.4	48.4
Church House Gully	0.8	0.8
East Fork San Jacinto	27.1	27.1
Luce Bayou	27.6	14.3
Cedar Bayou	31.3	31.3
West Prong Old River	11.5	11.5
Smith Gully	8.9	8.9
Hackberry Gully	6.5	6.5
Total	193.9	180.6

Conclusion

This re-evaluation does not involve any new resource features that were not examined in the ROD and would not introduce any new indirect or cumulative impacts to them (including, but not limited to those resources listed in **Table 3**) beyond what was reported in the ROD. The Grand Parkway Area of Influence (AOI) is undergoing rapid population and employment growth and is anticipated to continue through the year 2025 and beyond, regardless of when or if the Grand Parkway is constructed. However, the Segment H and I-1 Selected Alternative, as presented in the ROD, will compliment and reinforce the development pattern and effects. The Grand Parkway, combined with other local/regional development efforts, would serve to accommodate growth and development, either present or planned. In addition, a number of regulatory mechanisms are in place to offset or minimize the adverse effects of social and economic growth. Efforts have been made to avoid and minimize project effects to all resources at both the corridor and alignment development phases of the project, and measures would be implemented to mitigate the loss of resources, where practicable.

In accordance with 23 CFR 771.129 and the FHWA Technical Advisory T 6640.8A, Section XI, TxDOT, in coordination with FHWA, has prepared this re-evaluation of the Grand Parkway Segment H and I-1 project as it proceeds with “major approvals,” e.g., the USACE Section 404 permit. This detailed design has proceeded, and the environmental documentation for the project has been reviewed. Overall, there would be an increase in number of residential displacements and ROW acquisition, wildlife habitat acres impacted, but a decrease in industrial land use, wetland impacts, floodplains, and prime farmlands as compared to the ROD evaluation.

Resource agency coordination will continue as detailed schematics for the construction of Segment H and I-1 become available. Further investigation of potential NRHP-eligible resources in areas of design modifications will be conducted and coordinated with TxDOT ENV and THC prior to construction. Further investigation of potential Archeological resources in areas of design modifications will be conducted and coordinated with TxDOT ENV and THC prior to construction. TxDOT will continue coordination with the USACE regarding Section 404 permits; and TPWD should wildlife and habitat or sensitive natural resource areas be encountered during construction. All coordination and concurrences will occur prior to construction.