UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region 6
1445 Ross Avenue, Suite 1200
Dallas, TX 75202-2733

September 13, 2011

Gregory S. Punske, P.E.
Federal Highway Administration
Texas Division
300 East 8th St., Room 826
Austin, TX 78701

Dear Mr. Punske,

In accordance with our responsibilities under Section 309 of the Clean Air Act (CAA), the National Environmental Policy Act (NEPA), and the Council on Environmental Quality (CEQ) regulations for implementing NEPA, the U.S. Environmental Protection Agency (EPA) Region 6 office in Dallas, Texas, has completed its review of the Draft Environmental Impact Statement (DEIS) prepared by the Federal Highway Administration (FHWA). FHWA and the Texas Department of Transportation (TxDOT) are proposing to construct a new location highway facility, approximately 38.2 miles long from US 59 (N) to IH 10 (E).

EPA rates the DEIS as "**EC-2**" i.e., EPA has "Environmental Concerns and Requests Additional Information in the Final EIS (FEIS)". The EPA's Rating System Criteria can be found here: http://www.epa.gov/oecaerth/nepa/comments/ratings.html. Detailed comments are enclosed with this letter which more clearly identify our concerns and the informational needs requested for incorporation into the Final EIS (FEIS). Responses to comments should be placed in a dedicated section of the FEIS and should include the specific location where the revision, if any, was made. If no revision was made, a clear explanation should be included.

EPA appreciates the opportunity to review the DEIS. Please send our office two copies of the FEIS and an internet link when it is sent to the Office of Federal Activities, EPA (Mail Code 2252A), Ariel Rios Federal Building, 1200 Pennsylvania Ave, N.W., Washington, D.C. 20004. Our classification will be published on the EPA website, www.epa.gov, according to our responsibility under Section 309 of the CAA to inform the public of our views on the proposed Federal action. If you have any questions or concerns, please contact John MacFarlane of my staff at macfarlane.john@epa.gov or 214-665-7491 for assistance.

Sincerely,

Rhonda Smith
Chief, Office of Planning
and Coordination

Enclosure

DETAILED COMMENTS ON THE
FEDERAL HIGHWAY ADMINISTRATION
DRAFT ENVIRONMENTAL IMPACT STATEMENT
FOR THE
TX-99/GRAND PARKWAY IMPROVEMENT PROJECT, SEGMENTS H AND I-1
MONTGOMERY, HARRIS, LIBERTY AND CHAMBERS COUNTIES, TX

BACKGROUND: The Grand Parkway Segments H and I-1 are part of a planned 180+ mile circumferential loop around the greater Houston metropolitan area. The Grand Parkway is divided into eleven segments, each in various stages of development. The first segment (segment D) began construction in 1989, while the last segment (segment B) is scheduled to begin construction in 2017. The Federal Highway Administration (FHWA) is proposing to construct this new location highway facility, approximately 38.2 miles long, from US 59 (N) to IH 10 (E).

The following comments are offered for your agency's consideration in completing the FEIS:

Although the DEIS contains detailed information on the planning process, the need and purpose, and the alternatives, it lacks full characterization of resources and analysis of impacts to those resources. Each resource should be fully analyzed with a systematic and detailed methodology. Impacts to various resources are quantified, but usually on a general level using a geographic information system (GIS). Very few resources are fully characterized so the reader can make an informed decision as to the value of that resource. Several resource sections do not make a comparative analysis of impacts between alternatives. The DEIS states, in most cases, that details will be included in the FEIS, however, the reader cannot make an informed decision on a preferred alternative with such a broad-based analysis.

Detailed Comments

Alternatives Analysis

As described in the Need and Purpose section, the proposed project is needed, among other reasons, to remedy discontinuous system linkage in the project area and to increase mobility. In the Alternatives Analysis section, an alternative is carried forward that is offset from Segment G. Segment G was issued a Record of Decision (ROD) on December 29, 2010. Reasonable Alternative (RA) A-2 clearly does not meet the criteria set forth in the Need and Purpose section. RA A-2 is offset from Segment G, which would hinder system linkage and mobility by forcing Grand Parkway vehicles onto US 59, causing them to merge with US 59 traffic, and then re-enter the Grand Parkway. As stated for Alternatives A-1, C-4, and C-7, this would be "confusing and difficult to negotiate". FHWA's NEPA and Transportation Decision-making manual states, "When developing a transportation project, project sponsors should consider how the end points of the action are determined, both for the improvement itself and for the scope of the environmental analysis. Whether the action has 'logical termini' or not is also a concern. Logical termini for project development are defined as rational end points for both a transportation improvement and a review of the environmental impacts." This section should more clearly explain the rationale for moving RA A-2 forward as reasonable although it is offset

from Segment G by almost four miles. Dismissing RA A-2 during the preliminary phase would decrease the overall reasonable alternatives by five, thus, decreasing the level of analysis, saving time and money.

Section 2.5.2, Recommended Alternative, states FM 1485 would be reconstructed from a two-lane roadway to a pair of one-way frontage roads with two travel lanes in each direction on either side of the Grand Parkway Segments H and I-1. The DEIS should state the reason behind this action and whether it is included in the Houston-Galveston Area Council (H-GAC) 2035 Regional Transportation Plan or TxDOT Houston District's 2011-2014 Statewide Transportation Improvement Plan (STIP). EPA recommends that the environmental impacts of reconstructing FM 1485 be included in the analysis.

Air Quality

The DEIS correctly notes that all segments of the Grand Parkway project (including segments H and I-1) are included in the roadway networks that have been used to demonstrate that short-term and long-term transportation plans for the Houston area conform to the air quality plan (State Implementation Plan) for the Houston area. Emissions for these segments have been accounted for and analyzed in the transportation conformity process, most recently the 2035 Regional Transportation Plan update, which was approved by FHWA Texas Division on January 25, 2011.

Water Quality

All Reasonable Alternatives cross streams and/or wetlands that recharge the underlying aquifer, while some of the alternatives destroy wells for public or private ground water systems. The aquifer underlying the study area is not a Sole Source Aquifer; however, all means of preventing spills and runoff during and after construction should be pursued to protect the aquifer. In some locations ground water is within 20 feet of the surface and a contaminant spill could infiltrate to the aquifer, potentially affecting the water quality of drinking water systems using ground water. EPA recommends implementing a Source Water Protection Plan for all public water systems and using best management practices for spills and runoff during and after construction and focusing on bridges over water bodies that recharge ground water.

According to the section, one stream listed on the 303(d) list would be affected by the project. Cedar Bayou is currently impaired for macrobenthic community and, in the past, for bacteria and depressed dissolved oxygen. The section should fully characterize and analyze the impacts to Cedar Bayou from the proposed project and state whether or not it will exacerbate the impairment status.

Waters of the U.S., including Wetlands and Vegetative Communities

Vegetation

This section combines waters of the U.S. and vegetation into one discussion. The vegetation discussion should be placed in a separate section to prevent any confusion.

The water oak-willow oak rare vegetation series (S3) was designated by the Texas Parks and Wildlife Department (TPWD) as a vegetation type that is in peril and should be protected. The DEIS should fully characterize the water oak-willow oak series and analyze the impacts from the reasonable alternatives. As there are impacts to the S3 series and to other bottomland hardwood and riparian areas, EPA recommends impacts be mitigated according to the TxDOT-TPWD Memorandum of Understanding. EPA recommends the TxDOT Houston District contact TPWD to discuss appropriate mitigation measures.

The acreage of vegetation that would be impacted by the proposed project is quantified, but the specific environmental impacts are not fully analyzed. The environmental effects of removing up to 700 acres of vegetation include sedimentation of receiving streams, erosion leading to the formation of ditches and ravines, habitat loss for endangered and non-endangered wildlife, loss of water percolation into underlying aquifers, increase in volume and velocity of stormwater runoff, increased flooding, etc.

Wetlands

Section 7.82 states "A Clean Water Act (CWA) Section 404 permit would be required by the U.S. Army Corps of Engineers (USACE) for the Recommended Alternative. Water quality certification from the Texas Commission on Environmental Quality (TCEQ) would also be necessary per Section 401 of the CWA prior to filling wetlands. No navigable waters of the U.S. exist in the project area; therefore, the need for a Section 9 permit from the U. S. Coast Guard (USCG) or a Section 10 permit from the USACE is not anticipated".

While it is true that a CWA Section 404 permit would be required to place fill in a water of the U.S., including wetlands, it is not necessarily true that no navigable waters exist in the project area. In this section, it should be clarified that the Rivers and Harbors Act of 1899 (RHA) navigable waters of the U.S. subject to Section 9 or 10 of the RHA are a subset of traditional navigable waters (TNWs) of the U.S. that may exist within the project area. Please see the current Rapanos Guidance dated December 02, 2008.

Sections 3.72 and 3.73 state "Potential wetland impacts were determined by reviewing color infrared aerial photographs, NWI maps, and published soil survey maps to determine the location of potential wetlands within the alternative project areas. All potential wetland areas were delineated on these maps, transferred to an aerial background image managed with GIS, and classified as agricultural, forested, or non-forested wetlands. The wetlands were also characterized as adjacent (within the 100-yr floodplain and potentially jurisdictional) or isolated. This process allowed the project team to avoid wetland impacts where possible and minimize those impacts that were unavoidable".

Although the DEIS attempts to identify potential wetlands using a desktop analysis, EPA recommends that the FEIS clearly state that no field verification or investigations took place in the DEIS analysis and that the wetland delineation has not been verified. Furthermore, EPA recommends the lead agency verify the wetland delineation and jurisdictional determination with the USACE once a preferred alternative is selected.

EPA recommends that the lead agency opt for a preliminary jurisdictional determination from the USACE and mitigate for all wetland and tributary impacts. Please see USACE Regulatory Guidance Letter No. 08-02 dated June 26, 2008.

Executive Summary section 4.14 states "Avoidance of floodways and floodplains during the development of the Build Alternatives was carefully balanced with avoidance of other sensitive resources in the project areas. All of the Build Alternatives would encroach on the following streams and their associated regulatory floodways and floodplains: Peach Creek, Caney Creek, East Fork San Jacinto, Luce Bayou, East Fork Cedar Bayou and Cedar Bayou. The number of water resource crossings varies from 18 (Alternative 6) to 24 (Alternatives 7 and 9). Alternative 10 would potentially impact 21 water resource crossings". It should be noted and clearly stated that this assessment of tributary crossings has not been verified. Furthermore, EPA recommends that the lead agency verify waters of the U.S. with the USACE. As stated above, this would be accomplished through a jurisdictional determination.

Table 4-24 illustrates that the Recommended Alternative #10 would result in adverse impacts to 269.09 acres of wetlands and 11.5 acres of other waters. This is a substantial adverse impact to the aquatic ecosystem in this area. EPA will review the higher level of detail provided in the FEIS to consider the possibility that aquatic resources of national importance would be impacted by this project.

Specific Recommendations:

- The lead agency should design the roadway to span the 100-year floodplain and riparian corridors of all tributaries located within the proposed ROW to meet the requirements of the 404 (b)(1) guidelines.

- The lead agency should carefully design the location of floodplain mitigation to avoid and minimize direct and secondary adverse impacts to waters of the U.S., including wetlands.

- The lead agency should identify all impacts associated with the road construction both within the ROW and outside the ROW.

- In summary, the lead agency should avoid and minimize adverse impacts to the aquatic ecosystem and provide compensatory mitigation for all unavoidable direct, secondary, and cumulative adverse impacts.

If there are questions regarding waterways and/or wetlands comments, please contact EPA, Region 6 wetlands staff member, Mr. Jim Herrington, at 254-774-6042.

Wildlife

The Texas General Land Office (GLO) and TPWD provide geographic spatial data for bird rookery areas. The GLO data shows that the closet mapped rookery is within five miles of Alternative C-2. Once a preferred alternative is chosen, EPA recommends the lead agency

conduct a rookery survey and provide the results in the FEIS to determine if there would be an impact to rookeries, as the birds utilizing the rookery would likely be migratory. Data should be shared with TPWD and GLO.

Community Impacts Assessment

Public meeting information is included in Appendix C. The information should include specifics in regards to outreach to EJ and limited English proficiency (LEP) communities about displacements or hardships. Many low-income and minority residents do not have easy access to a computer to learn about the project and do not attend meetings; therefore, they usually do not give input. EPA recommends that the FEIS better describe what efforts have or will take place to include EJ and LEP populations in the process.

Displacements are occurring in block groups containing minority and low-income residents, therefore, special efforts should be made to make these residents aware of the proposed project so they can be involved. The lead agency should ensure that language-appropriate communication is supplied to LEP and other minority and low-income populations. Examples of tools that could be utilized include supplying interpreters at public meetings and ensuring that English language documents are translated to other languages, and advertising in non-English newspapers and on non-English radio stations. Resources and tools regarding LEP populations can be found at the U.S. Department of Health and Human Services website: http://www.hhs.gov/ocr/civilrights/resources/specialtopics/lep/ and at the Federal Interagency Website for LEP: http://www.lep.gov/.

EPA recommends the FEIS consider the April 1997 Executive Order (EO) 13045 - Protection of Children from Environmental Health Risks and Safety Risks when evaluating project impacts. This EO requires that all Federal agencies "(a) shall make it a high priority to identify and assess environmental health risks and safety risks that may disproportionately affect children, and (b) shall ensure that its policies, programs, activities, and standards address disproportionate risks to children that result from environmental health risks or safety risks."

Soils and Farmlands

All Reasonable Alternatives would impact agricultural lands. Converting productive agricultural lands to transportation uses not only directly converts that land from arable land to impervious surfaces, but reduces the amount of food and fiber produced in this region. By reducing crops available for sale, farm revenues would be affected. By affecting farm revenues, farmers and their families are directly impacted. Farmers would also incur access issues and longer travel times when traveling to fields that are bisected by the proposed project. These issues should be fully analyzed in the FEIS.

Traffic Noise

Lake Houston Park is located to the south and abuts the recommended alternative. The park would fall under a Category B receiver and the noise abatement criterion is 67 dBA for

parks. The FEIS should address predicted noise levels and mitigation efforts at Lake Houston Park.

Greenhouse Gas Emissions and Climate Change

By statutes, Executive Orders, and agency policies, the Federal government is committed to the goals of energy conservation, reducing energy use, and eliminating or reducing greenhouse gas (GHG) emissions. Due to the proposed project's long-term utility and location in ozone non-attainment counties, EPA recommends the FEIS include a discussion of GHG emissions and climate change. For guidance, please see CEQ's "Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions" dated February 18, 2010.

By removing up to approximately 700 acres of upland and bottomland forests and other vegetation, a natural carbon sink is also being removed. According to some studies, a mature evergreen forest can sequester 6,000 pounds of carbon per acre per year.[1] The FEIS should include an analysis of the natural carbon removal process that would be lost if the proposed project is constructed and how that would contribute to the overall greenhouse gas emissions for the life of the project.

Indirect Impacts

Typically, after new development enters a financially depressed or semi-rural area, land values have a tendency to slowly increase over time. When land values increase, property tax increases follow, which may lead to rent increases. As rents increase, EJ populations may be forced to relocate. Section 5.3.3.1, Environmental Justice, should evaluate the impacts that new, induced development may have on Environmental Justice communities in the region.

Section 5.3.4, Soils and Farmlands, should compare the acreage of planned/induced development with prime farmland acreage, to determine the amount of potential prime farmland conversion. Indirect impacts to farmlands and landowners from induced development should be analyzed further in regards to loss of income from converted agricultural land.

According to the DEIS, indirect impacts to waters of the U.S., including wetlands and vegetation, are "minor" and "not substantial". According to the DEIS, induced, private development may cause the loss of up to 3,600 acres of wetlands and up to 27,000 acres of vegetation. Indirect impacts to waters of the U.S. and vegetation should be more fully analyzed in regards to the overall regional affect of filling creeks and wetlands and removing vegetation.

In addition to the direct loss of wetland and tributary functions, there are potential indirect adverse impacts to water quality and natural ecological functions from the construction of the roadway. The lead agency should identify all impacts at the proposed bridged crossings of tributaries and wetlands in the project area. Forested tributary crossings may be impacted by mechanized land clearing, excavation, grading, and filling to construct and maintain a bridge crossing. These adverse impacts should be accurately identified in the FEIS.

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[1] Johnsen, Kurt, et. al. "Carbon sequestration and southern pine forests." *Journal of Forestry* (2001). Online.

Areas outside the ROW that would be established to support construction of the roadway such as borrow and disposal sites, staging and storage areas, and concrete and aggregate plants, that could result in adverse impacts to waters of the U.S., should be identified in the FEIS as direct impacts. In the past, TxDOT has stated that these locations outside the ROW would be coordinated with contractors during the construction of the project. However, borrow material taken from outside the ROW to fill waters of the U.S. within the ROW are part of the project and should be identified and reviewed prior to the FEIS.

EPA does not support bulldozing and filling of waters of the U.S., including special aquatic sites located within the 100-year floodplain to construct roadways. Stormwater runoff from filled materials and urban blight from the roadway including exotic plant materials, fertilizers, pesticides, oil and grease, chemicals, and debris and trash would likely result in a long-term increase of pollution in waterways and wetlands.

Cumulative Impacts

This section should discuss the EarthQuest Resort, a $500 million theme park project which will be located off of US 59 between FM 1485 and FM 282 in New Caney, Texas. The project is being built on 500 wooded acres. This project seems to be imminent and would have substantial environmental impacts that would add to the cumulative impacts of the region and study area.

EPA is also concerned with the cumulative loss and further degradation of wetlands and stream corridors from the proposed roadway project. The proposed project impacts, when viewed in light of the total number of projects proposed and/or reasonably foreseeable within this portion of the watershed, may have a significant impact on aquatic resources in this region.

Mitigation and Permitting

The DEIS states "on-site mitigation is being considered only as an option at this time." On-site mitigation for transportation projects is not recommended due to the lack of suitable sites that would replace all lost wetland functions and values. When planning appropriate and practicable mitigation, EPA recommends that the lead agency identify environmentally preferable compensatory mitigation within the watershed(s) and ecoregion(s) where the project impacts occur. In general, floodplain mitigation in the form of detention basins is not appropriate wetland mitigation.

EPA also recommends that impacts to non-regulatory resources are mitigated. Removal of up to 700 acres of bottomland, upland, and riparian forests could remove and fragment important wildlife habitat, promote erosion and sedimentation, promote the establishment of non-native invasive vegetation, promote degradation of streams and wetlands, promote flooding, reduce migratory bird nesting habitat, reduce evapotranspiration, and reduce natural carbon sequestration. For impacts to wetlands and waterways, EPA requests that the Section 404 compensatory mitigation plan be submitted to the EPA Region 6 Wetlands section (6WQ-EM) for review when it is sent to the USACE.