11473 - BRT should not be down Houston Avenue and should follow existing HOV ramp to keep neighborhood intact. Please clarify if interactive map is correct in the route being between Houston Ave and Hickory street.

15208 - Hardy toll road extension should be non-tolled to take stress off of I-45.
16328 - parkland should be preserved at it present location (white Oak Bayou)

I'm disappointed that although I read the Houston Chronicle & Galveston Daily News almost every day, I don't recall seeing any mention of the plan nor any request solicitation for comments. In the short time I've had to look at it, I noticed that in Chpt 6 seems to not consider industrial contributions to poor air quality in any way.
I also noticed in the safety plan doesn't not examine the cost/benefit of traffic enforcement in any quantitative way. I seem to recall that the Chronicle reported that the # of traffic tickets/capita has fallen ~50% while accidents up are ~40+%.

Hiram Clarke / Fort Bend-Houston Redevelopment Authority
TIRZ #25
Public Comment
Houston Galveston Area Council - 2045 Regional Transit Plan

The Hiram Clarke/Fort Bend Redevelopment Authority (TIRZ 25) consists of a district in the City of Houston located southwest of the Central City area and stretches to adjacent areas of Houston City limits location within the boundaries of Fort Bend County. Economic development activities include the launching and stimulation of commercial and residential development in the district bounded by South Main Street on the north, McHard Road on the south, Interstate 288 on the east and Hillcroft on the west.

Freeways, elevated expressways and toll roads bisect the area and disrupt the connectivity of commuter arterials and minor roadways, resulting in a fractured and discontinuous transportation network. As future construction and commercial development continues, there is a critical need for a viable multi-modal solution to the transportation needs of this district. We want to ensure the Southwest Corridor has inclusion and opportunity in the 2045RTP.

Specifically, we would like to see:
Multi-modal, affordable sources of transportation from Missouri City into the Medical Center
Rail expansion in entire district
Transportation innovation projects for Bus Rapid Transit (BRT)
Bicycle and pedestrian modes of transportation in district

The transportation funding in the H-GAC region should: 1) focus transportation investments in a way that improves equitable distribution of fund to areas that are historically do not receive their fair share of funding, especially communities of color and area of concentrated poverty 2) eliminate funding of highway lane miles expansion, and only road fund maintenance until such time that we determine that we can effective maintain the roads that we have 3) prioritize funding projects that reduce vehicle miles traveled especially high capacity transit with goal to reduce emissions 4) prioritize funding projects that encourage healthy active transportation options like walking and biking 5) prioritize projects that are shown to reduce serious and deadly crashes including complete street designs and intersection safety improvements 6) eliminate funding TxDOT projects though the competitive TIP process as they already have dedicate funding streams 7) encourage more flexible use of available funds to for walk, bike and transit projects
I am a resident of Taylor Lake Village in the Clearlake area and I am writing to share my concern about the current concept of focus areas, as presented in the draft 2045 regional active transportation plan. I believe the focus area concept will be counterproductive to any effort to improve active transportation options in the suburban and rural areas within H-GAC's jurisdiction and limit our access to funding, planning support, and more. According to the current version of the document, "H-GAC will use the Focus Areas as a factor to help determine where to invest staff time, resources and funding. The Focus Areas will be used to inform the decisions of the Transportation Policy Council (TPC), the Technical Advisory Committee (TAC), and the Pedestrian/Bicyclist Subcommittee, including as a potential criteria for TIP funding." (p.35)I understand the need for a metric to guide decisions and focus thought/planning, however, the focus area concept works against any potential improvements in suburban and rural areas within HGAC's region. Every metric it considers is, by definition, low in these areas - the suburbs and rural areas have lower residential and job densities, intersections are further apart, schools are more centralized, transit is limited or non-existent, crashes are different, and environmental justice challenges are less common. The mismatch between the focus area criteria and existing conditions in my area and the rest of the suburban and rural areas in the H-GAC region is disappointing and highlights a clear lack of attention to the needs of a large portion of your constituency. Effectively, this mismatch punishes these areas for decisions that were made in the past and limits the potential for future change. Furthermore, the concept as written has the potential to perpetuate the lack of active mode use in such areas, despite substantial latent demand and high levels of need from folks that cannot afford other options and have been forced further from existing transit/bike/ped access due to increasing housing costs and other structural inequities.
I am disappointed that the Clear Lake neighborhood is not among the selected focus areas as it has a larger recreational and commuter cycling community and some desperate needs for infrastructure that will keep them safe. Many of the adjacent cities are moving forward with projects to add multi-use paths or new bicycle lanes, but HGAC wields the power and authority to helps provide regional solutions and connectivity between these projects. The plan should do more to ensure that it can include local plans into its focus areas and that its criteria for selecting neighborhoods can take into account areas like Clear Lake that have an unrecognized need for cyclist/pedestrian infrastructure.

I am a recreational cyclist but also will bike to work when I can but would like to be able to more. I know at least 10 people who commute full time to work and I frequently see individuals who are walking or biking to work as their only mode of transportation. I have almost been hit several times and I know people who have been killed by cars in this area or hit by them even when they are biking or walking safely. The lack of public transportation in Clear Lake means that residents are not included in the criteria for use of public transportation. Does that mean we wouldn't use it if it wasn't here? No. I use to use the Bay Area Park and Ride and had to drive my car there because there is no safe way to get to it via bicycle. The empty grass lots around the park and ride location has been expanded to handle the greater number of cars. If people could reach the bus stop by bike without fearing for their lives, this would greatly benefit the area. Please do not build a qualification system that will eliminate Clear Lake from future funding opportunities and will overlook the opportunities to invest in projects there that can connect the other prioritized projects and therefore enhance regional mobility for pedestrians and cyclists.
As a parent and a cyclists I would love you all to include Clearlake in the funding for better roads and cycling lanes. It is scary to take my son out on the road because there isn't a barrier to protect us. Please re-evaluate this project and include Clearlake. It is one of the largest cycling communities in all Houston.
I am concerned that all the funding goes to one major group of people, Europeans. Diversity is absent from the planning beginning and duration. How do European firms know so much about such plans in advance that they
I cannot see why the Galveston Bay area of Seabrook and Clear Lake does not have more focus. Once 146 is complete adding a way to ride safely all the way to Texas City would be easy because the land is there. The old train track area on the west side of 146 would be perfect.
Please re-evaluate your focus areas to include the Clear Lake area as there is a large cycling community down here and the need for improved bicycling infrastructure is needed.
The La Porte area has suffered from a couple of cyclist's deaths' and countless near misses between motorized vehicles and pedestrians and other vulnerable road users. The dramatic increase in heavy truck traffic and increased number of vulnerable road users means that this area, along with Clear Lake and Seabrook require intense focus. Please consider adding these areas to the plan and future reviews. The growing number of 24-hour warehouses and commensurate increase in heavy truck traffic is posing increasing dangers to cyclists and pedestrians.
I take issue with the fact that the Active Transportation Plan is instituting Focus Area criteria that will be used for funding priority NOW when it even says that the criteria need to be improved. The Clear Lake Area is COMPLETELY lost in these focus areas even though from the maps provided it appears to rank similarly with other areas designated as "focus areas" like Conroe and Cleveland. The Clear Lake Area is basically punished for having not transit which is a HUGE problem. We need both traditional transit AND active transportation options. The area is so unsafe for bikes and peds because most of the ONLY routes to get across town are

basically highways and bike/ped infrastructure either has major gaps, is unsafe, or not even present. Because of this we don't even have the opportunity to compete on some of these metrics. This analysis will only widen the gap between places that currently already get a funding and those that don't like the Clear Lake Area. If this criteria for funding is approved as currently presented the Clear Lake Area will NOT fall within a focus area and will not be considered equally as other regions for TIP funding despite a clear need. Please remove "focus areas as potential criteria for TIP Funding" until the future improvements to the "Focus Area Analysis" has been completed and results presented to the community. It is also clear from the bike/ped infrastructure maps that those in charge have not been in the area to verify the condition of the infrastructure. Further, It punishes all suburban area for being lower density, having intersections that are further apart, and having centralized schools. This perpetuates the lack of active mode use in such areas, despite substantial latent demand and high levels of need from folks that can not afford other options and have been forced further from transit/bike/ped access due to increasing housing costs. Looking at the respondent geographic survey data, I find it disgraceful you were unable to engage the community further - the fact that the top tier is >10 respondents is shameful. Even so, it looks like the Clear Lake Area had some of the highest respondent rates.
This comment is related to the Active Transportation Plan. I endorse the analysis and the longterm look of data. I agree with using only crashes where intoxication was not involved, as these are behavioral issues which need to be addressed using a different set of tools. I do have concern over the crash analysis using 2009 to 2017 data. While using very long time frames to observe historical trends is beneficial, using this long of a timeframe for analysis is problematic. A 3 to 5-year time window of current data should be used for each iteration of the analysis. Using the shorter time frame will better reflect projects, operational and maintenance improvements that have occurred and may have corrected the potential safety issue. Additionally, land use and development changes are not reflected in this longer-term analysis. Bicycle and Pedestrian data is especially tricky since there is typically a statistically low occurrence of bicycle and pedestrian crashes. Crashes are random events and the analysis requires a large enough sample to determine patterns from which potential solutions can be implemented. Using the 3 E's Education, Enforcement and Engineering are all tools to solve safety problems. HGAC is taking the longterm approach of addressing education which can have the longest and largest benefit. Enforcement is a delicate balance since the public has concerns over priorities. For example, why are you giving out tickets for failure to come to a complete stop or jaywalking when there are real crimes. Engineering solutions are helpful but are costly and there are a lot of needs and even more opinions on priorities. 1. I would recommend using 3-5 years of current crash data where neither party is impaired for the bicycle and pedestrian safety component. 2. I would also recommend that once areas are identified that a detailed crash analysis using the actual crash narrative, not just a database analysis to determine the root causes of the potential safety concern. 3. I would recommend solutions that target the cause of the identified crashes. Unfortunately, many times this does not result in a ribbon cutting project but identifies education, enforcement and maintenance solutions. 4. Actual bicycle and pedestrian usage also needs to be a component. These should not be estimations or modeling but actual counts. 5. The goal would be to work towards a bicycle and pedestrian crash rate that encompasses the exposure of both the motorized

and non-motorized users. Frequency (# of crashes) do not account for the exposure or increase in use, population or other variables.
I understand the need to expand local bus routes however, there needs to be more. Buses don't reduce that much congestion because they are still driving along the flow of traffic caused by cars. Yes, there needs to be more connectivity in between cities and more bus routes may be the short-term answer but, we as a region are not keeping up with the population growth and the growing demand. We are falling behind. We should have more light rails and perhaps two heavy rails that connect Harris County and some of the neighborhood counties like Galveston and Ford Bend. The two heavy rails for example can be from North (Woodlands) to South (Galveston) and East (Baytown) to West (Katy). I know eminent domain may be an issue with long heavy rails but, we could maybe use existing railroads with a partnership with Union Pacific or build a rail on the HOV lane? Additionally: I really liked the idea of expanding the HOV lane to two lanes but, don't expand lanes anywhere else. I also like the idea of creating more bike and sidewalk infrastructure.
Houston area streets need to be safer for cyclists and pedestrians. Improved crosswalks and other infrastructure should be a priority in the coming years.
Dear Mr. Clark, Thank you for the opportunity to provide public comment on Houston-Galveston Area Council's (HGAC) draft of the 2045 Regional Transportation Plan (RTP) and Air Quality Conformity Documents. I am writing to express my strong support of LINK Houston's comments on the document. I am a 5th-year PhD student at Rice University. I moved to Houston in 2014 and absolutely love this area. What I hear constantly from my colleagues is a desire to be able to get to our destinations by public transit, cycling, or walking- mainly, a desire to get around without a car. Your priorities and choices will have long-ranging impacts that definitely play a role in my colleagues' decision to leave Houston after we graduate, or to stay and raise families here and continue contributing to the economy and community. As such, I support all of LINK Houston's comments and urge you to prioritize: • An accessible, frequent, and reliable public transit network inside Houston's core • Safe and accessible pedestrian and biking infrastructure • Mitigation of potential infrastructure impacts on communities
Per Metro staff's suggestion, I knew your plan and attended the April 24 meeting. Since I did not see much light rails, I would like to make a comment here. This region was devastated by Harvey since each agency plans and does its own way. People may move out of the region if the flooding issue is not solved (some have already gone). I sincerely hope your organization can help take wholistic approach. Since the

space is limited, you might want consider multiple-function infrastructures such as a highway under the grade serving traffic during normal weathers and flowing water during extreme precipitation. A similar ideal would be a tunnel for subway and flood channel (this has been built in Malaysia, refer to https://www.amusingplanet.com/2013/05/smart-tunnel-in-kuala-lumpur-storm.html). Super Bayou concept is also developed that take advantages of the vast bayou spaces in the bayou city for multiple-functions (refer to http://www.laengr.com/Super-Bayou.htm) Light rails with dedicated tracks can move people most efficiently at a min operation cost (without drivers such as skytrains in Vancouver BC) and a min environmental impact. The initial cost is high, but it is affordable if combining with flood control projects. In order to avoid traffic congestion along the interstate freeway (I10, I45 and I69) , light-rail is a preferred option to me if you want to move millions more people. Thank you!
The following are comments related to the mobility of the City of Cleveland, Texas: 1. Requesting SH 105 be widened from 2 to 4 lane divided by 2023. 2. Add additional bridge width to FM 2025 bridge at us 59 for turn lanes & install turn lanes on FM 2025 from US 59 to SH 573 before 2035. 3. Convert main lanes to freeway and construct two 2-lane frontage roads. 4. Reconfigure existing designed entrance and exit ramps for SH 105 and SH 321, changing designation from limited access (at intersection only) to improve access for private development. 5. Sidewalk and pedestrian crossing along 321, near Cleveland High School and Middle School 6. Convert I69 main lanes to freeway, construct two 2-lane frontage roads, and access / interchange flyover UP Railroad south of San Jacinto County Line.
Please consider investing in transportation options that are NOT more lanes on the freeway. Induced demand makes traffic worse after the additional lanes are added and increases Houston's sprawl. Please invest in public transportation options such as improved bus service and rail. These can carry far more people for far less space and help improve the urban fabric of our cities.
There should be more lanes for bikes and better sidewalks. More busses for same route instead of waiting for 30 minutes for one bus to make a loop. There should be more fight and planning on how a city could benefit with a train system much like New York subways or Washington DC. If you look at Japan, they use a lot of trains for commute and they hold one of the densest populations in a city..! I had the experience of traveling on a Bullet Train from Tokyo to Kyoto and it was about 2-hour commute whereas traveling from Houston to Rio Grande Valley is 6-7 hours by car. I think the city of Houston would benefit with a train system and reduce congestion of cars and help in the battle of being more Earth Friendly.
There is no public need in our region for expanding any of the transportation right of way. Nearly all of the system expansion projects are to subsidize and enable private interests to tear up land for development. We should be focused on building complete communities in our 134 towns and cities as well as the Census-Designated Places like The Woodlands. The Regional Transportation Plan should contain no right of way expansion.

Fw: Memorial Drive Reconstruction from East of Beltway 8 to East of Tallowood Drive, CSJ 0912-72-391 RE; Reference the following project numbers: 0912-72-391 TxDOT Houston District The Memorial Drive Drainage and Mobility Improvements Project sponsored by TxDOT/ TIRZ 17/ City of Houston/ Lockwood, Andrews and Newnam (LAN) Attn: TxDot and H-GAC and USACE and various agencies: The proposed Memorial Drive Drainage and Mobility Improvements Project will inflict more flooding misery on the residents of West Houston, who have not yet recovered from Hurricane Harvey. This Memorial Drive Drainage and Mobility Project will divert the Sam Houston Tollway Frontage Road trunkline that drains the Beltway 8 system one mile under Memorial Drive into Tributary W153. The proposed Memorial Drive Project will also divert the 175 acres of concrete jungle, the southeast quadrant of Beltway 8/ IH-10, from CityCentre and Town & Country Village, via West Bough and Memorial Drive, into Tributary W153. And this diversion is only the beginning. Other diversions are planned: Queensbury, Kimberly, West Bough, Town & Country Way, Tallowood, Attingham, Benignus, Frostwood, and Kingsride. Even the area north of IH-10 and west of Gessner will be channeled into Tributary W153 via a conduit under IH - 10. Tributary W153 already receives Fonn Villas and Memorial Green. TxDOT is funding 80% of the Memorial Drive Project with a Federal Grant. TIRZ 17 is contributing 20%, TxDOT is managing the project. TxDOT says, this is not a drainage project. This project is to make cosmetic improvements to Memorial Drive. So why spend approximately 22 million to make cosmetic improvements to Memorial Drive between Beltway 8 and Tallowood? TxDOT says, Rates of flow into Tributary W 153 will not increase. We will provide the residents of Memorial with 11 feet of Inline Detention. Inline Detention is a misnomer. Delayed Discharge is the preferred term. An unprecedented volume of water will enter two massive box culverts, big enough to drive a truck through, at Beltway 8 and flow under Memorial Drive east into Tributary W153. Just 15 minutes later, where Tributary W153 crosses Memorial Drive, this immense volume of flow will enter the private Somerset Place culvert and discharge under the Legend Lane bridge. TXDOT is telling the residents of Memorial Drive that they are getting a Delayed Discharge of 15 minutes and to be grateful for it. TxDOT is not disclosing volumes of flow or sources of flow. TxDOT wants to keep all the worried residents guessing. If TxDOT were to disclose the volume of flow to the targeted residents, the knowledge would throw them into a panic. And what of volume of flow? TxDOT says, we are not concerned with volumes of flow. Only rates of flow. This is not a drainage project. This project is to make cosmetic improvements to Memorial Drive. So why spend approximately 22 million to make cosmetic improvements to Memorial Drive between Beltway 8 and Tallowood?

If the TxDOT engineers will look at a survey of Tributary W153, they will realize that Tributary W153 is a shallow ravine which occupies an area of 3 acres south of Memorial Drive. Tributary W153 cannot contain a fraction of the storm water that TxDOT proposes to dump into it. If the Lockwood, Andrews, and Newnam (LAN) associates will do their due diligence and perform observations in the field, they will realize that the Army Corps is already using Tributary W153 for storm water storage. The Army Corps drains the Barker/ Addicks dams into Tributary W153. After the Tax Day flood, the Army Corps stored water in the Tributary W153 for 90 continuous days. The Army Corps does not impound storm water. The gates to the dams are raised 99% of the time. Only in an extreme rain event are the gates lowered briefly, and raised again as soon as the rain stops.

An FOIA to the Army Corps produced denials that any contact between USACE and TxDOT took place. A letter a couple of months ago produced another denial. No contact, and no discussion took place between USACE and TxDOT as how the two entities are going to manage shared use of the Tributary W153. The two entities cannot share Tributary W153 at the same time. But if they do both attempt to occupy the Tributary W153 at the same time, the outcome will produce extensive flooding throughout the W153

watershed. The outcome will be worse than Harvey, when 800 structures along Watershed W153 were flooded.
A Regional Drainage Study performed in 2012 documents significant deficiencies within the watershed. Flooding is partly due to the limited capacity of the Memorial Drive drainage infrastructure and overflow from W153 itself. At the peak of a major rain event, W153 becomes overwhelmed and overland flows into the Memorial Drive ROW from W153. The capacity of the Memorial Drive crossing at W153 is further reduced by the significant tailwater in W153. Additionally, the area south of Memorial Drive is inundated due to the Buffalo Bayou 100 year floodplain. Neither of these issues can be resolved by the local drainage improvements proposed as part of the Memorial Drive Project (City of Houston Technical Review Committee Meeting and Record of Decisions and Action Items, December 1, 2015).
This is the Drainage summary of the city engineers Thomas Artz and Revi Kaleyatodi and the TRC Committee after receiving the Memorial Drive Project presentation from LAN associate Muhammad Ali. The city engineers cited compelling reasons for disapproving the Memorial Drive Project: 1) Connection to Sam Houston Tollway Trunkline which drains the Beltway 8 system 2) In a major rain event, Tributary W153 becomes overwhelmed and overflows the Memorial Drive ROW 3) There is significant tailwater (Backflow) in Tributary W153 4) THE AREA SOUTH OF MEMORIAL DRIVE WILL BE INUNDATED. None of these issues can be resolved by the Memorial Drive Project. Ignoring the realities, the city engineers unanimously approved the Memorial Drive Project. The 100-year storm event City Criteria cannot be met due to Tributary W153's limited capacity and back water from Buffalo Bayou. A regional solution for the area is needed, but this is beyond the project's scope (Paragraph C. Item 4, City of Houston Technical Review Committee meeting and and Record of Decision and Action Items, December 1, 2015). Once again LAN invokes the Beyond The Scope defense, the same defense used by LAN allegedly in the class action lawsuits involving the Flint River Water Crisis. Allegedly, the Beyond the Scope defense is not working well for LAN in Michigan. THE MODEL OF EXISTING CONDITIONS SHOWS THAT THE STORM SEWER WEST OF WEST BOUGH IS SURCHARGED, THROUGHOUT ITS LENGTH. The lateral system on West Bough and in commercial areas north of Memorial cannot drain effectively causing overland flow to enter the ROW. (Page 40, paragraph 4.5.6. Memorial Drive Mobility and Drainage Improvements, Preliminary Engineering Report WBS No. N - T17000 - 0318B - 7 CIP No. T - 1717}. So what is the point of spending millions to bury two 10' x 10' box culverts under Memorial Drive the distance of one mile, if the culverts cannot drain west into the SURCHARGED Sam Houston Tollway Frontage Road trunkline? The physical laws will not allow the culverts to drain into the SURCHARGED trunkline. Instead the Sam Houston Tollway Frontage Road trunkline will drain east and discharge into Tributary W153. Likewise, the West Bough system (not yet implemented} will drain CityCentre and Town & Country Villlage into Tributary W153. Which brings us to our question: So why spend approximately 22 million to make cosmetic improvements to Memorial Drive between Beltway 8 and Tallowood?

Subject: Memorial Drive Reconstruction CSJ 0912-72-392 Memorial Drive Reconstruction from East of Beltway 8 to East of Tallowood Drive, CSJ 0912-72-391 RE; Reference the following project numbers: 0912-72-391 TxDOT Houston District The Memorial Drive Drainage and Mobility Improvements Project sponsored by TxDOT/ TIRZ 17/ City of Houston/ Lockwood, Andrews and Newnam (LAN) Attn: TxDot and H-GAC and USACE and various agencies: The proposed Memorial Drive Drainage and Mobility Improvements Project will inflict more flooding misery on the residents of West Houston, who have not yet recovered from Hurricane Harvey. This Memorial Drive Drainage and Mobility Project will divert the Sam Houston Tollway Frontage Road trunkline that drains the Beltway 8 system one mile under Memorial Drive into Tributary W153. The proposed Memorial Drive Project will also

divert the 175 acres of concrete jungle, the southeast quadrant of Beltway 8/ IH-10, from CityCentre and Town & Country Village, via West Bough and Memorial Drive, into Tributary W153. And this diversion is only the beginning. Other diversions are planned: Queensbury, Kimberly, West Bough, Town & Country Way, Tallowood, Attingham, Benignus, Frostwood, and Kingsride. Even the area north of IH-10 and west of Gessner will be channeled into Tributary W153 via a conduit under IH - 10. Tributary W153 already receives Fonn Villas and Memorial Green. TxDOT is funding 80% of the Memorial Drive Project with a Federal Grant. TIRZ 17 is contributing 20%, TxDOT is managing the project. TxDOT says, this is not a drainage project. This project is to make cosmetic improvements to Memorial Drive. So why spend approximately 22 million to make cosmetic improvements to Memorial Drive between Beltway 8 and Tallowood? TxDOT says, Rates of flow into Tributary W 153 will not increase. We will provide the residents of Memorial with 11 feet of Inline Detention.

Inline Detention is a misnomer. Delayed Discharge is the preferred term. An unprecedented volume of water will enter two massive box culverts, big enough to drive a truck through, at Beltway 8 and flow under Memorial Drive east into Tributary W153. Just 15 minutes later, where Tributary W153 crosses Memorial Drive, this immense volume of flow will enter the private Somerset Place culvert and discharge under the Legend Lane bridge. TXDOT is telling the residents of Memorial Drive that they are getting a Delayed Discharge of 15 minutes and to be grateful for it. TxDOT is not disclosing volumes of flow or sources of flow. TxDOT wants to keep all the worried residents guessing. If TxDOT were to disclose the volume of flow to the targeted residents, the knowledge would throw them into a panic. And what of volume of flow? TxDOT says, we are not concerned with volumes of flow. Only rates of flow. This is not a drainage project. This project is to make cosmetic improvements to Memorial Drive. So why spend approximately 22 million to make cosmetic improvements to Memorial Drive between Beltway 8 and Tallowood? If the TxDOT engineers will look at a survey of Tributary W153, they will realize that Tributary W153 is a shallow ravine which occupies an area of 3 acres south of Memorial Drive. Tributary W153 cannot contain a fraction of the storm water that TxDOT proposes to dump into it. If the Lockwood, Andrews, and Newnam (LAN) associates will do their due diligence and perform observations in the field, they will realize that the Army Corps is already using Tributary W153 for storm water storage. The Army Corps drains the Barker/ Addicks dams into Tributary W153. After the Tax Day flood, the Army Corps stored water in the Tributary W153 for 90 continuous days. The Army Corps does not impound storm water. The gates to the dams are raised 99% of the time. Only in an extreme rain event are the gates lowered briefly, and raised again as soon as the rain stops. An FOIA to the the Army Corps produced denials that any contact between USACE and TxDOT took place. A letter a couple of months ago produced another denial. No contact, and no discussion took place between USACE and TxDOT as how the two entities are going to manage shared use of the Tributary W153. The two entities cannot share Tributary W153 at the same time. But if they do both attempt to occupy the Tributary W153 at the same time, the outcome will produce extensive flooding throughout the W153 watershed. The outcome will be worse than Harvey, when 800 structures along Watershed W153 were flooded.

A Regional Drainage Study performed in 2012 documents significant deficiencies within the watershed. Flooding is partly due to the limited capacity of the Memorial Drive drainage infrastructure and overflow from W153 itself. At the peak of a major rain event, W153 becomes overwhelmed and overland flows into the Memorial Drive ROW from W153. The capacity of the Memorial Drive crossing at W153 is further reduced by the significant tailwater in W153. Additionally, the area south of Memorial Drive is inundated due to the Buffalo Bayou 100-year floodplain. Neither of these issues can be resolved by the local drainage

improvements proposed as part of the Memorial Drive Project (City of Houston Technical Review Committee Meeting and Record of Decisions and Action Items, December 1, 2015).
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None of these issues can be resolved by the Memorial Drive Project. Ignoring the realities, the city engineers unanimously approved the Memorial Drive Project.
The 100-year storm event City Criteria cannot be met due to Tributary W153's limited capacity and back water from Buffalo Bayou. A regional solution for the area is needed, but this is beyond the project's scope (Paragraph C. Item 4, City of Houston Technical Review Committee meeting and Record of Decision and Action Items, December 1, 2015). Once again LAN invokes the Beyond The Scope defense, the same defense used by LAN allegedly in the class action lawsuits involving the Flint River Water Crisis. Allegedly, the Beyond the Scope defense is not working well for LAN in Michigan. THE MODEL OF EXISTING CONDITIONS SHOWS THAT THE STORM SEWER WEST OF WEST BOUGH IS SURCHARGED, THROUGHOUT ITS LENGTH. The lateral system on West Bough and in commercial areas north of Memorial cannot drain effectively causing overland flow to enter the ROW. (Page 40, paragraph 4.5.6. Memorial Drive Mobility and Drainage Improvements, Preliminary Engineering Report WBS No. N - T17000 - 0318B - 7 CIP No. T - 1717}. So what is the point of spending millions to bury two 10' x 10' box culverts under Memorial Drive the distance of one mile, if the culverts cannot drain west into the SURCHARGED Sam Houston Tollway Frontage Road trunkline? The physical laws will not allow the culverts to drain into the SURCHARGED trunkline. Instead the Sam Houston Tollway Frontage Road trunkline will drain east and discharge into Tributary W153. Likewise, the West Bough system (not yet implemented} will drain CityCentre and Town & Country Villlage into Tributary W153. Which brings us to our question: So why spend approximately 22 million to make cosmetic improvements to Memorial Drive between Beltway 8 and Tallowood?
At last, here are the answers, which are several and complex: 1) THIS REALLY IS A DRAINAGE PROJECT. It drains the entire southeast quadrant formed by Beltway 8 and IH-10 under Memorial Drive the distance of one mile into Tributary W153. This is the primary purpose of the Memorial Drive Project: to transfer the storm water runoff from the commercial centers of CityCentre and Town &Country Village into Tributary W153.
2) West Memorial developers are demanding an outfall to Buffalo Bayou. The West Memorial developers have no justification for demanding an outfall to Buffalo Bayou. The West Memorial developers had a 13.5-acre property, the Methodist Hospital property on Memorial Drive near Gessner, which was to provide 280 feet of detention. The HCFCD had identified this property as suitable for detention. Midway developer Brad Freels, a Board Member of TIRZ 17, in an egregious Conflict of Interest, developed the property as a mixed use. The mixed-use concept did not go over well in West Memorial. The mixed-use property was not successful. Brad Freels remains on the TIRZ 17 Board, to the dismay of West Memorial residents. 3) The West Memorial developers categorically reject any suggestion that they install storm water mitigation on their own commercial properties. Drive through CityCentre and Town and Country Village. You will not see one cistern, not one. There is no storm water catchment system under

any one of the parking lots either. The multimillionaire and billionaire developers will not spend one dollar of their money on mitigation. They prefer to channel their storm water runoff into the surrounding residential neighborhoods. 4) The Beltway 8 bridge over Buffalo Bayou is deteriorating. The Sam Houston Tollway Frontage Road trunkline is discharging under the bridge, eroding the bridge pilings. The bridge supports are cracking, because they were shoddily built of an inferior material (ASR). The pilings are out of alignment. The Sam Houston Tollway Frontage Road trunkline is creating an erosion problem. The erosion created by the trunkline outfall has cost HCTRA over 4 million since 2008. 5) The West Houston Association, composed of the West Houston developers, is campaigning to add an additional two lanes to Beltway 8 over Buffalo Bayou, thus exacerbating the erosion problems of the existing outfall. 6) The flooding problems began by reconstructing the Katy Freeway in a Flood Plain that existed at Beltway 8 and IH-10 previously. The dilemma: What to do with the Buffalo Bayou watersheds? They are in the way. The W151 watershed is channeled into a conduit which passes beneath the Katy Freeway and under the Memorial City Shopping Mall. The choke point is directly under the Mall Food Court and causes Back Flow and flooding of North Gessner (HCFCD Implementation Study 2009). The 16 detention ponds were promised to the people to mitigate the flooding that would certainly be created by a 26-lane expanse of concrete. The people were pledged 16 detention ponds and received 4 - 5 ponds. Now TxDOT has an opportunity to compensate the people for the promised but never delivered detention ponds. TxDOT has jurisdiction over the Sam Houston Tollway Frontage Road trunkline. TxDOT is the only bureaucracy in this deal with billions. City of Houston is broke. LAN allegedly is being sued in multiple class action lawsuits. TIRZ 17 has only 22 million in its accounts, having spent multimillions on landscaping. If TxDOT wants to relocate the Sam Houston Tollway Frontage Road trunkline, TxDOT can do so. TxDOT can purchase land for the trunkline. TxDOT can easily afford to relocate the trunkline. TxDOT can pay the costs of maintenance and erosion. For TxDOT to attempt to pass the expenses of relocating the trunkline onto a small group of private residents is reprehensible. No neighborhood of private residents can handle a problem of this magnitude. TxDOT must do it. Either USACE must stop this flawed project engineered by LAN, OR else USACE must find another route to get fresh water to the Ship Channel. If USACE raises the gates and releases storm waters simultaneously with the diversion of storm water from the SE quadrant of B8/ IH-10 into W153, the result will be inundation of 800 residential structures.

Thank you for inviting the public to submit comments on HGAC's Regional Transportation Plan.

I'm a native Houstonian and, over the years, I've seen our region grow and evolve into a cosmopolitan destination. We've made a lot of progress, but I'm afraid that we are still on an unsustainable trajectory.

Commute times are growing. Traffic jams are a daily — even nightly — occurrence. Auto-related deaths and injuries are some of the highest in the nation. We are one of the most auto-dependent regions in the nation and have some of the highest transportation costs per capita. The lack of human-scaled infrastructure and multi-modal options mean you're pretty much forced to use a car for every single trip — it's a necessity just to live and function. Each time I decide to walk or bike to my local coffee shop instead of drive, I say three "Hail Mary's" for fear of getting hit by a car. People shouldn't have to live this way.

Our go-to cure for solving traffic congestion has been to build wider and bigger roads. Despite mounting repair and maintenance

backlogs, and in defiance of changing transportation needs, billions continue to be spent each year expanding our roads and highways and it's come at a huge cost. Is this auto-centric approach fiscally prudent, or are we using tomorrow's money to pay for yesterday's policies? Does it really improve our quality of life or does it ensure we're just sitting in a bigger traffic jam (e.g. Katy Freeway)? Are mega-highways and unsafe streets going to attract the young and talented to our region? Is our region prepared for an aging population who will, at some point, no longer drive on their own?

Interestingly enough, the most financially productive places are human-centered and community-driven. They are also wonderful places to live. I'll be honest, I've mulled the idea of moving to a city like Minneapolis, Denver and Portland, but familial ties keep me here. That's not the case for many, however, who can choose wherever they want to live. I believe that a focus on rebuilding our infrastructure to enable walking, cycling, and mass transit would bring health and economic benefits that far outweigh its price tag.

If we are truly invested in creating a better future for generations to come, I offer the following recommendations:
• Invest in transportation solutions that reduce the (need) for costly and disruptive highway expansion projects by focusing investments on public transportation, land-use policy, road pricing measures and technological measures that work to help drivers avoid peak-time traffic.
• Adopt fix-it-first policies that invest in repair and maintenance of existing road, transit and rail systems and stop the continued deference of these actions to future dates, further increasing a mounting maintenance and repair backlog of billions of dollars. Prioritizing highway expansion over the repair and maintenance of existing systems is using tomorrow's money to pay for yesterday's policies.
• Use the latest transportation data and require full cost-benefit comparisons for highway projects, including future maintenance and repair needs. This includes fully evaluating potential public-private partnerships.
• Revise transportation forecasting models and use up-to-date travel information, reflecting a range of potential future trends for housing and transportation and incorporating the potential impacts of shifts to other modes of transportation, including public transportation, rail, biking and walking, as well as newer options such as ridesharing, carsharing, and bike-sharing.
• Give priority funding to transportation projects that reduce growth in vehicle-miles traveled, to account for the public health, environmental and climate benefits as well as the reduced need to increase road capacity in the future.
• Invest in research and data collection to better track, and more aptly react, to ongoing shifts in how people travel.
Thanks for your time and I hope these suggestions are helpful. Have a great day and here's to building a better region for tomorrow.

The projects in the west side of Houston are extremely disappointing. Westheimer badly needs transit improvements and the signature bus service project needs to start in 1-2 years instead of waiting more than a decade.

The worst part about our roads on the west side is that we are stuck driving everywhere. Widening Dairy Ashford and Highway 6 are completely ridiculous ideas that will promote more congestion and vehicle dependence. When are we going to stop wasting money trying to accommodate more cars and traffic and start building a real transportation system?

Please focus on designing transportation solutions for humans, not cars. This means investment in walking, biking and public transportation options along with improvements to roadways for driving.
As a 40-year resident of Harris County, I am horrified at the many billions that METRO has already wasted on putting rail line and trains down in the streets, when bus lanes would have been a much cheaper alternative with higher capacity more easily achieved using long natural gas buses. How many more hours will citizens wait at the Rodeo or Astros world series parades, for trains that could have been replaced by faster cheaper buses to meet the demand? It is insane to love toy trains so much, that you lose all economic perspective. Bus lanes have the added advantage of being multi-use, meaning 2+ car-van vehicles could use them during specified times too. 1 mile of rail has cost nearly $ 150 million per mile in recent years, while the recent 249 Tomball expansion cost $150 million for 6 miles of 6-lane roadway that buses, vans, AND cars can use. Wasting billions of dollars on trains and dedicating expensive train corridors exclusively to trains is incredibly wasteful and thus dumb. Hobby Airport and the Galleria would be much better serviced with high capacity natural gas buses, than light rail trains. It's too bad leadership does not have the courage to 1) rip up all the track laid for light rail, 2) sell all the train cars, and 3) replace them with high capacity buses and multi-purpose bus lanes. That's what Houston smartly did in the early 20th century with the removal of the stupid trolley system, in favor of more buses. The toy train love affair by some misguided leaders and citizenry, has hurt us financially, and will continue to do so with every mile built. So sad, so pathetic, and so wasteful.
Would like to see a plan more focused on public transit and less development of new freeways and toll roads. For far too long we have built a culture of depending on our vehicles.
My concern as is so many of us living at Richmond, is the threat of rail. Is this still on going as a potential project? Please reply to my email.
1. Can we get traffic light systems that don't fail after rain. 2. We need a system requiring adequate wide sidewalks when bridges are redone (Over Brays Bayou).

Citizens' Transportation Coalition

H-GAC Draft 2045 Regional Transportation Plan comments

The 2045 RTP's stated strategy to Expand does not fit well within CTC's application *Principle 2. Invest scarce transportation dollars where the people are now*. The Corridor Based Investments also do not comply with Principle 2.

There are incongruencies among the plans referenced in the extensive appendices.

The High Capacity Transit Task Force Report recommends increasing funding for high capacity transit and decreasing funding for highways which aligns well with Principle 2.

Below are comments on a selected few Appendices.

Appendix B. Congestion Management Process Update of January 2015

Metropolitan Planning Organizations (MPOs) such as H-GAC are federal organizations which were created to fulfill the EPA's mandates for the Clean Air Act Amendment of 1990. Congestion Management projects were supposed to improve air quality. This was often a way to justify widening highways: widen the highway, and there will be less congestion. Previously TxDOT used the Congestion Management Air Quality (CMAQ) process as an excuse to build wider highways to relieve congestion. There were no statutorily mandated performance reports associated with CMAQ and many highway projects were placed under the CMAQ process for funding based on the vague idea that the greater lanes would improve traffic flow and reduce air pollution.

This has changed with MAP-21 and FAST legislation[1] which expanded the process to multi-modal forms of transportation.

The H-GAC RTP draft, 04-05-19 sets forth H-GAC's plans for a Congestion Management Process that conforms to MAP-21 and FAST.
http://2045rtp.com/documents/plan/2045-RTP-Executive-Summary.pdf

[1] "Changes under MAP-21 and FAST have integrated performance into many Federal surface transportation programs and required the United States Department of Transportation (USDOT) to establish a set of national measures on which State DOTs must report performance or condition.3 For the purpose of carrying out the Congestion Mitigation and Air Quality Improvement (CMAQ) Program, MAP-21 required USDOT to establish measures for State DOTs to use to assess traffic congestion and on-road mobile source emissions.4 To meet this requirement, FHWA finalized three performance measures (two congestion measures and one on-road mobile source emission reduction measure) in the National Performance Management Measures - Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program Final Rule5 (PM3 regulation). Two Subparts of 23 CFR part 490, promulgated through the PM3 regulation, establish the performance measures for the CMAQ Program required by MAP-21: Subpart G (Measures to Assess the CMAQ Program – Traffic Congestion) and Subpart H (Measure to Assess the CMAQ Program – On-road Mobile Source Emissions).
"A Guidebook for Preparing Performance Plans for Metropolitan Planning Organizations", FHWA, 2017.

CTC supports the broader view that the law has forced H-GAC to take of congestion management processes: the process requires performance reports. This helps the public argue that a highway expansion will not provide actual increased flow of traffic, which we did previously in IH-45 scoping meeting comments.

The 2045 RTP employs three strategies as implementation tools for the performance measures.

> MANAGE [System Management and Operations] ▪ Maximize the efficiency and effectiveness of the transportation system through data, technology, and policy solutions focused on reliability, continuity, and the transparent dissemination of information.
> MAINTAIN [Asset Management] ▪ Improve and preserve the condition of the existing transportation infrastructure at the lowest practical cost through the application of sound asset management techniques to ensure a state of good repair.
> EXPAND [Transportation Network Capacity] ▪ Add capacity across all modes of travel with a focus on the interconnections between different networks and services that provide users with greater choices.

Many projects considered by the 2045 RTP apply to more than one strategy. For example, widening projects would be considered "transportation and multimodal network expansion", but also include extensive "state of good repair" investments. The total expenditure of the three strategies combined is an estimated $132 billion. Figure 3-3 illustrates the investment by strategy. H-GAC RTP April 2019 draft ES-11-12.

CTC has some hope this categorization measures and mandatory performance reports will not just be used as an excuse to build new highways to the minimization or exclusion of other modes. We think that would pose a violation of FAST.

Interchange reconstruction is one of CTC's application metrics: Fix It First. We have applied this to interchanges for several major reconstruction projects.

Toll roads are part of this process. CTC has concerns with the funding of toll roads and the fare collections, but if there is sufficient accountability and sunshine, and if the lanes are shared as HOT lanes with public transit, toll roads are per se not unacceptable. The toll roads fund the space for the buses which could not pay for the space themselves.

Some projects will be exempted from performance reports; for interchanges there appear to be no good reason for this exemption. Projects are exempt from a CMP analysis if the proposed project solves a safety or bottleneck problem.

The criteria for determining whether a project is categorized as a safety or bottleneck project is described at the end of this section. Safety projects are enumerated, but CTC has always been critical of major highway reconstructions: the complex and expensive interchanges are often put off for years posing safety and air quality issues. Meanwhile, mainlanes are expanded causing yet further congestion and air pollution and safety risks at the interchanges.

A summary of performance plans is tabulated in the FHWA guidance, below. Having a performance ranking is a good and bad thing. Performance rankings are difficult to compare one to one.

Table 8. Example of Description of Projects in a CMAQ Performance Plan

Project Category	Description of Projects	Applicable Pollutant	Year Anticipated for CMAQ Obligation	NOx Benefit (kg/day)	VOC Benefit (kg/day)	CO Benefit (kg/day)	$PM_{2.5}$ Benefit (kg/day)	PM_{10} Benefit (kg/day)	Traffic Congestion Benefit? PHED	Traffic Congestion Benefit? NON - SOV
1. Transit projects	New bus vehicles to support new transit routes	Ozone	2018	**10.5**	**7.83**				**No**	**Yes – increase non-SOV travel**
2. Traffic flow improvement projects	Traffic signal synchronization for 5 different arterials.	Ozone	2019	**0.953**	**0.487**				**Yes – reduced peak hour delay**	**N/A**
3. Bicycle and Pedestrian projects	New bike lanes and improved crossings on 2 arterials	CO	2018			**2.127**			**No**	**Yes – increased use of non-SOV**
4. Traffic flow improvement projects	Traffic signal synchronization for 3 additional arterials.	Ozone	2020	**1.734**	**0.932**				**Yes – reduced peak hour delay**	**No**

MPOs must update the description of projects for iterations of the CMAQ Performance Plan with the State DOT Baseline Performance Period Report and State DOT Mid Performance Period Progress Report.[87] The updated description of projects may reflect any additional projects that became programmed for CMAQ funding, or that otherwise contribute to the achievement of traffic congestion targets, over the course of the performance period. The description of projects could also describe any changes to the projects, such as changes in scope and/or estimated emissions or congestion reductions.

A Guidebook for Preparing Performance Plans for Metropolitan Planning Organizations, FHWA, 2017, p 21.

Appendix E. H-GAC's Regional Safety Plan

The Executive Summary states that there is a crisis in road safety, but the Plan does not seem to express the urgency that is needed to address a crisis. In fact, it does not even express the urgency that the *Draft Regional Active Transportation Plan* expresses regarding safety. The first recommendation of The Active Transportation Plan (Appendix H in the 2045 RTP) is to prioritize safety.

Traffic Safety Improvement Strategies

The MPO Crash Reduction Targets listed in Table 6 (p.36) show "annual traffic crash and crash rate reductions for a five-year period, culminating in ***a two percent reduction by 2022***." This is an unacceptably low target and is not in alignment with the Active Transportation Plan's Safety Strategy #7 to "Increase the number of Vision Zero communities in the region through technical assistance and sharing best practices."

Many of the Implementation Actions and Goals are almost laughably unambitious. One example is: "Demonstrate to all road users the magnitude of the impact of impaired driving crashes" with the Action being, "Place signs along roadways showing the number of DWI/DUI crashes in high frequency crash locations," and the Goal is "1 sign per year".

The Regional Safety Plan was the product of several Councils and Committees and was undoubtedly watered down by the varying interests represented within those groups. The interests of the public would be better served by having more citizen representatives on those Councils and Committees. An example of this is the Technical Advisory Committee which does not really have a citizen interest group member. Citizen and Business interests are not the same and they should not be lumped together.

Appendix H. Draft Regional Active Transportation Plan

This is an impressive effort. The Focus Area Methodology is a useful, if imperfect, analysis to determine where to prioritize Active Transportation planning and project funding. The Environmental Justice Areas criterion is a much-needed attempt to promote equity. Another factor to add to the equity consideration might be to determine if any of the pedestrian or bicycle focus areas are in well-funded Tax Increment Finance Zones. For example, both Midtown and Downtown Houston, which have been determined to be Pedestrian Focus Areas, are located within TIRZs that have funneled large amounts of property taxes directly back into relatively small geographic areas for decades.

The writers of the Plan acknowledge that the Focus Area Methodology is a work in progress and ask important questions such as "Can we add more nuance to the transit criteria in a way that prioritizes high-frequency transit stops and doesn't punish areas without transit?" This is a good question. Similarly, an area with existing high intersection density is already primed to allow for better walking conditions in a manner that an otherwise comparable area with fewer intersections is not.

It's significant that the writers point out that ".. Focus Areas are not intended to be used in a vacuum, but instead should be considered alongside local planning efforts, community input, and other data." This is an important point. Two areas might have the same score derived from the Focus Area methodology, but could have vastly different conditions that give rise to those scores.

The analysis of the home zip codes of different types of unsafe drivers is fascinating and could be a key to figuring out how to change unsafe behaviors.

Appendix N. Regional Goods Movement Study from June 2013

CTC had submitted comments on the Texas Freight Mobility Plan 2017 – Draft in October 2017, and we reiterate several our comments here.

We support the optimization of delivery of goods throughout our region. CTC has a preference for rail due to its greater fuel efficiency, although the "last mile" requires flexible vehicles, and that largely means trucks. But we have issues regarding trucks per se and the trucking industry.

Several of CTC Principles apply to the Regional Goods Movement Study

CTC wishes to

- Promote freight and rail projects that will aid delivery and export of commerce and goods and service;
- Promote the upgrade and modernization of freight rail projects;
- Abate damage and harms to communities and property owners caused by transportation projects such as unlawful noise impacts and disruption of established communities and businesses by suboptimal project designs;
- Promote the use of better fuels, cleaner and more efficient, for trucks and rail

Trucks and truck-like vehicles. It is a CTC application principle that a metric must be fashioned to make sure trucks pay their fair share for direct use and externalities. Truck traffic is a significant cause of roadway congestion, and large trucks are the primary cause of roadway damage. Further, designing roadways bigger, wider, and stronger for trucks drives up construction costs. Truck permits and fees should be increased to capture a fair share of the costs caused by trucks. Of course, these fees should be passed on to those who use the truck's goods.

In recent years trucks have increasingly been used to transport hydrocarbons when pipeline construction could not keep up with the demand. These hydrocarbons are often transported from rural areas lacking adequate local or MPO funding to pay for the road damage and congestion trucks cause. While we are not opposed to the hydrocarbon industry, we do not think industries should be able to cause externalities that they do not pay for. We support surtaxes on the industries that cause such damage and to pay for safety appurtenances that are needed.

CTC thinks the trucking industry, our nation's largest employer, may become highly automated within 15 years, at least as to long haul. We do not think it is a good thing for so many people to lose their jobs. We do not know if the efficiencies will result in lower goods costs or actually improve safety and efficiency. While we prefer rail, there are not enough rail lines to provide the flexibility we need to transport goods and materials across the country.

Rail upgrades. CTC supports rail upgrades and track upgrades. We should invest, using modern funding mechanisms, in the advantages of freight rail. Each rail car takes as many as three trucks off Texas

highways, and one train can move one ton of cargo 436 miles on 1 gallon of fuel. Enabling more freight to move by rail will reduce congestion, improve safety on our roadways, reduce pollution, and minimize right-of-way requirements. But we do not know how to fund all of the upgrades and new rail crossings needed. Rail crossings can literally split communities and cause losses of productivity. We would also support modernization of scheduling programs. The trains were there first, and we must yield to their schedules. In several states, underpasses are mandated for car traffic. We currently have a few underpasses in Houston, but we need more to avoid impeding rail schedules and to help heal communities. Of course, flooding concerns should be evaluated.

Although we think rail safety should continue to be federally regulated, Texas voters authorized the Freight Rail Relocation & Improvement Fund in 2005, and it's time to fund it. This legislation might be amended to pay for local appurtenances such as underpasses.

CITY OF HOUSTON
Houston Public Works

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May 9, 2019

Mr. Alan Clark
Director of Transportation Planning
Houston-Galveston Area Council
P.O. Box 22777
Houston, TX 77227-2777

RE: 2045 Regional Transportation Plan – Public Comment

Dear Mr. Clark:

Houston Public Works (HPW) has reviewed the draft Houston-Galveston Area Council 2045 Regional Transportation Plan (RTP) and offers the following comments.

- **FM 526 & IH 10 Shared Use Path and Sidewalks (MPO ID 17074)**
  HPW recently submitted a TIP amendment request to modify the limit from Woodforest to Nola Ct. Please ensure that modification is reflected in the 2045 RTP.
- **Northwest Transit Connection (MPO ID 18024)**
  HPW requests that this project be moved outside of the TIP timeframe to allow for coordination between TxDOT/METRO/City of Houston for future transit improvements in the high capacity transit reserve identified in the US 290 Environmental Impact Statement (EIS).
- **Waugh Dr/Heights Blvd/Yale St (MPO ID 18142)**
  Update facility name to reflect "Waugh Dr/Heights Blvd/Yale St" rather than "CS" and correct initiative to reflect "Thoroughfare Development."
- **San Felipe (MPO ID 18094)**
  Correct initiative to reflect "Pedestrian/Bicycle."
- **Dairy Ashford Rd (MPO ID 2978)**
  Update Fiscal Year to 2025.
- **Richmond Ave (MPO ID 134)**
  Update Fiscal Year to 2025.
- **Hempstead Road (MPO IDs 11565, 11372, 11547, 11373, 13829, 11375, 11374)**
  As has been discussed with H-GAC and TxDOT, the City of Houston does not support the TxDOT proposal to move forward with any component of the proposed Hempstead Managed Lanes project. HPW requests on-going consultation regarding the scope of this project. The basis for City of Houston position on the proposed Hempstead Managed Lanes project is as follows.
  - The managed lanes included in the US 290 EIS were intended to be constructed prior to initiation of the major reconstruction of US 290 and serve as a reliever

route during US 290 construction. With completion of the US 290 project, that purpose is no longer valid.

- TxDOT has completed reconstruction of US 290 to include 5 mainlanes in each direction between IH-610 and SH 6. An adjacent, parallel access-controlled facility will increase single-occupant vehicle miles traveled at a time when the region is focused on increasing the availability and use of high capacity transit to reduce congestion and improve air quality.
- The EIS reserves 50 feet of right-of-way (ROW) for high capacity transit but that element is not addressed in the Hempstead Managed Lanes listing.
- Significant ROW acquisition is required for construction of the proposed frontage lanes and managed lanes. No commercial property will remain along the north/east side of the corridor.

Additionally, HPW has identified the following projects related to past planning efforts that can be removed from the 2045 RTP.

MPO ID	Facility	From Limit	To Limit
13616	BAYOU DR	BURNETT RD EXT	QUITMAN RD
12696	BISSONNET ST	DAIRY ASHFORD RD	SL 8
162	BOONE RD	ALIEF CLODINE	WESTPARK
14185	BUFFALO SPEEDWAY	FUQUA W	CITY LIMIT
13615	BURNETT ST	CHESTNUT ST	MAURY ST
14186	CALVALCADE RD	HOMESTEAD RD	LIBERTY RD
12709	CHIMNEY ROCK RD	OREM DR W	SL 8
10076	CITY OF HOUSTON	AT SOUTHWEST QUADRANT	
10077	CITY OF HOUSTON	VA	VA
10082	CITY OF HOUSTON	VA	VA
10086	CITY OF HOUSTON	VA	VA
10088	CITY OF HOUSTON	VA	VA
10089	CITY OF HOUSTON	VA	VA
10090	CITY OF HOUSTON	VA	VA
10091	CITY OF HOUSTON	VA	VA
13650	CITY OF HOUSTON	VA	VA
14187	FUQUA ST	SH 288	CULLEN BLVD

10039	HARRISBURG BLVD	AT HB&T RR	
13755	HIRAM CLARKE RD	SL 8	HIRAM CLARKE RD TERMINUS
86	HOLLISTER DR	CLAY RD	HAMMERLY
13666	KEEGANS BAYOU TRAIL	KIRKWOOD	HUNTINGTON ESTATES
115	MARTIN LUTHER KING BLVD	ALMEDA-GENOA	FUQUA
7677	OREM DR E	SH 288	CULLEN BLVD
14189	PARKER RD	WOODWICK	MESA
10063	QUITMAN ST	IH 45	STEVENS ST
18080	VA (FIBER OPTIC CABLE/COMM.)	VA	VA
351	WAYSIDE DR S	AIRPORT BLVD	OREM DR E
14190	WAYSIDE DR S	REED RD	AIRPORT BLVD
14191	WAYSIDE DR S	OREM	BW 8 S
165	WILCREST DR	MEMORIAL DR	BELLAIRE BLVD
10033	YORK ST	NAVIGATION BLVD	POLK ST

HPW appreciates the opportunity to review and comment on the draft 2045 RTP and looks forward to continued collaboration on regional transportation planning efforts in the Houston-Galveston region.

Should you have any questions, please feel free to contact Maureen Crocker at (832) 395-3222 or me at (832) 395-2461.

Sincerely,

Jeffrey S.Weatherford, P.E., PTOE
Director
Transportation & Drainage Operations

JW:MC:mc

Before the
Houston-Galveston Area Council

2045 Regional Transportation Plan

Comments of

Delta Troy Interests, Ltd.

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May 8, 2019

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Before the
Houston-Galveston Area Council

2045 Regional Transportation Plan

Comments of

Delta Troy Interests, Ltd.

Delta Troy Interests, Ltd. ("Delta Troy") hereby submits these Comments to the Houston-Galveston Area Council ("H-GAC") in response to the draft 2045 Regional Transportation Plan ("2045 RTP") recently released to the public.[1] In these Comments, Delta Troy explains that the 2045 RTP is a crucial planning effort for the region in light of the need for carefully considered transportation that is coordinated with ongoing and likely land development already taking place in the Houston-Galveston area. H-GAC plays a critical role in advancing the greater public interest as part of planning for the future of the region.

As described herein, Delta Troy requests that the 2045 RTP acknowledge the importance of private property rights, reflect a desire to minimize impacts on existing and planned land uses, reiterate H-GAC's commitment to safe transportation, and be very cautious about the use of eminent domain for proposals of uncertain viability. See Section III below. Delta Troy also describes its deep concerns with the specific passenger rail proposal being advanced by the Texas Central Railway ("TCR") and its affiliated entities to develop an unprecedented multi-

[1] H-GAC requested comments from the public in a meeting held on April 24, 2019 and also via the 2045 RTP website at http://www.2045rtp.com/public-comments.aspx.

billion dollar high-speed rail system between Dallas and Houston. Given the grave problems with the TCR proposal as currently configured, H-GAC should not express approval of it and, in fact, should recommend rejection of the TCR project. As currently proposed, the TCR project would raise serious safety risks, stifle economic development, hinder mobility across the west Houston region for decades, and prevent commuter rail along the northwest corridor. See Section IV below. The proposal has inexplicably been developed with no regard for preexisting planning efforts in the area, such as the Houston Major Thoroughfare Plan and Delta Troy's own platted and approved project near U.S. 290 just east of Waller.

I. Identity and Interest of Delta Troy.

Delta Troy owns approximately 993 acres of land (the "Property") in the extraterritorial jurisdiction of the City of Houston in northwestern Harris County, Texas. The Property was purchased by C.N. Papadopoulos in 1982 and conveyed to Delta Troy in 2002. The Property adjoins the north and south sides of U.S. Highway 290, a major highway between Houston and the City of Austin. It is currently leased for farming. However, as development has extended westward along the U.S. 290 corridor toward the Property, it became apparent several years ago that the highest and best use of the Property is a mixed-use development incorporating a variety of commercial and residential uses. Recognizing this, for many years Delta Troy has been proceeding with plans for the Georgetown Oaks master planned community on the Property.[2]

II. Georgetown Oaks.

In 2006, Delta Troy engaged a land planning consultant to begin preparing development plans for the site it owns in northwestern Harris County, and Delta Troy has expended years of effort to move the project forward, using principles of mixed-use development and including a

[2] The "Georgetown Oaks" name has only been utilized since 2016 but, as described in Section II of these Comments, the planning and preparations have been continuing since 2006.

town center.[3] The Georgetown Oaks community is to have a mixture of residential and non-residential uses.[4] The residential land uses include traditional single family, multifamily, and townhome parcels, while the non-residential uses include commercial tracts, a business park, an industrial/corporate campus, a church site, and an elementary school. See Exhibit B (attached).

Delta Troy has successfully obtained numerous governmental approvals for the Georgetown Oaks project over the last decade. In 2007, a General Plan for Georgetown Oaks was submitted and approved by the City of Houston Planning Commission. See Exhibit A at p. 4. The General Plan shows specific platted streets, drainage areas, land use patterns, and related aspects of the Community. These elements must comply with Chapter 42, the land development ordinance of the City of Houston. Although Georgetown Oaks is not within the city limits of Houston, it is within the Extra-Territorial Jurisdiction of Houston, meaning that land development must comply with Chapter 42.[5]

In 2011, Delta Troy was able to secure the enactment of legislation forming Harris County Municipal Utility District No. 524, which encompasses the Georgetown Oaks site and will facilitate its development by allowing the issuance of bonds to finance the construction of roads, utilities, and other infrastructure. Creation of this Municipal Utility District ("MUD") required passage of legislation through the Texas General Assembly.[6] MUD 524 was established for the Georgetown Oaks site as a result of House Bill 709 and Senate Bill 475, which were signed by the Governor on June 17, 2011.[7] A MUD is a political subdivision of the State of

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[3] See, e.g., Exhibit A (Delta Troy Comments to FRA) at p. 4.
[4] See, e.g., Exhibit A at p. 4.
[5] See, e.g., http://www.houstontx.gov/planning/Annexation/annexation.html.
[6] See Exhibit A at p. 5.
[7] See Exhibit A at p. 5. See also http://www.capitol.state.tx.us/BillLookup/History.aspx?LegSess=82R&Bill=HB709 and http://www.capitol.state.tx.us/BillLookup/Actions.aspx?LegSess=82R&Bill=SB475.

Texas that is authorized to provide water, sewage, drainage, and other utility-related services within the defined MUD boundaries.

Delta Troy has continued to work toward development of the Georgetown Oaks site over the past few years, with further refinements and details added to the project. Most recently, the updated Georgetown Oaks plan was filed with the Houston Planning Commission in October 2016, with approval granted in May 2017.[8] The approval did not include any conditions regarding the proposed TCR rail project; in fact, the "Platting Approval Conditions" do not even mention the TCR proposal.

A wide variety of other planning efforts have occurred. For example, officials from Delta Troy have discussed the need for frontage roads along U.S. 290 with the Texas Department of Transportation ("TxDOT") for many years.[9] Delta Troy has also met with the Gulf Coast Freight Rail District ("GCFRD") regarding rail station planning for a possible commuter rail line parallel to Hempstead Road (U.S. 290 business) and an existing Union Pacific Railroad Company ("UP") freight rail line on the southern edge of the Georgetown Oaks site. The GCFRD added a possible commuter rail station location at "Waller East" in response to the interest expressed by Delta Troy.[10]

Plans for the development of the Georgetown Oaks community have been publicly available for several years. The General Plans were publicly filed with the City of Houston Planning Commission, and that same Commission issued approvals for the General Plans. The establishment of MUD 524 required legislation, the Governor's signature, and statutory revisions under Texas law. As a result of all these efforts, Delta Troy has been ready and able to proceed

[8] See Exhibit A at page 5.
[9] See, e.g., Exhibit A at page 5.
[10] See, e.g., http://www.gcfrd.org/docs/Presentation.Stakeholder1.pdf (pages 8 and 11).

with the implementation of its development plans for the Property for several years, but it has been unable to do so due to the significant uncertainty associated with TCR's proposed rail line.

As a landowner who would be directly and severely impacted by the TCR rail proposal, Delta Troy is keenly interested in development of the 2045 RTP, including the policies and vision of the H-GAC as it envisions the future of transportation in the Houston-Galveston area.

III. General Policy and Goal Recommendations.

A. The 2045 RTP Should Include the Goal of Respecting Landowners' Rights and Pre-Existing Planning Efforts.

Rail transportation is not an end in itself, nor does its usefulness exist in a vacuum. Instead, rail transportation is merely a tool utilized to facilitate the movement of goods and people and, ultimately, to enable the Texas economy to remain strong and competitive so that all Texans can benefit from their hard work and the economic opportunities available here. The strength of the Texas economy depends greatly on the rights of landowners to hold, develop, and use their land. To the extent these landowner rights are abrogated, the economy suffers and Texans' opportunities are constrained. Texans will not plan for the future, make investments, and foster a competitive economy if they cannot be sure of their plans for the future and their rights to land that they own. Rail projects can bring great benefits as tools to support economic growth, but they can also stifle and prevent that very growth if they disrupt and upend landowners' plans for their own land. This disruption becomes extreme when expansive, new-build rail projects of significant size (like that proposed by TCR) are envisioned.

The need to respect landowners' current and planned use of their land is even more pronounced when those landowners have expended the time and effort to integrate their land uses and plans in local planning documents and otherwise obtained government approvals for moving forward, as Delta Troy has done for well over a decade with its Georgetown Oaks

project. In other words, new rail projects should follow existing community planning documents. If a land development project has already been included in existing local or regional planning, then a subsequent rail proposal should not be permitted to interfere, interrupt, or destroy those existing plans and project developments. For all these reasons, H-GAC should include in the 2045 RTP a commitment to respecting the rights of landowners and existing local and regional planning efforts.

B. H-GAC Should Not Recommend Financing for Private Transportation Projects That Are Not Developed in Cooperation with the Region.

The Draft 2045 RTP acknowledges that new high-capacity transit projects in the region "will require revenue sources that do not currently exist."[11] As part of the cooperative planning inherent in the H-GAC structure, any new high-capacity transit project should reflect the joint wishes of all members of the H-GAC. Indeed, the Draft 2045 states that the "region must 'speak with one voice' to lawmakers."[12] New high-capacity transportation should be planned in coordination with ongoing land use developments, approved land use developments, and other transportation providers to ensure that the region is not working at cross purposes.

For these reasons, H-GAC and the region as a whole should be careful regarding privately-promoted transportation projects that do not reflect the region's joint wishes and that were not planned in cooperation with other land use developments in the area. The H-GAC should not recommend financing or support for privately-promoted transportation projects that are developed in a "lone ranger" fashion in isolation from the region's wishes, needs, and ongoing land use decisions.

[11] Draft 2045 RTP, High Capacity Task Force Report at p. 7.
[12] Draft 2045 RTP, High Capacity Task Force Report at p. 7.

C. Proven Viability Should be Required Before Any Rail Project Proponent is Able to Use Eminent Domain.

The power to forcibly seize citizens' land is one of the most extreme powers of government. Even more extreme is when the government allows private entities to benefit from the authority of eminent domain. Freight rail transportation has a long and successful history in Texas and, as a consequence, railroads can utilize the power of eminent domain in Texas under certain circumstances. However, this eminent domain is sparingly used. Most freight rail corridors in the Houston-Galveston area largely pre-date the heavy population growth that has occurred here since the early 20th century, and only occasional minor rail construction occurs to augment these existing freight corridors. Given the valuable role of freight railroads in the Texas economy, this occasional use of eminent domain for relatively minor rail projects is a compromise between the rights of landowners and the broad public benefits of freight rail service as provided through longitudinal rail corridors. All Houston and Galveston area residents benefit from freight rail, both in the commodities shipped by rail – such as consumer products, chemicals, and other products that make the conveniences of modern life possible – and also in the fact that freight trains reduce the need for trucks on local roads.

H-GAC should be vigilant to maintain and support this carefully balanced compromise. The successful history of Texas freight rail and its judicious use of eminent domain should not be the basis for dramatically sweeping property seizures for an expansive new-build boutique passenger rail project of hundreds of miles in length and ultimately dubious viability. Current intercity passenger rail in Texas provides an infinitesimal percentage of all intercity trips. In the

entire state, intercity passenger rail ridership was only 409,000 in 2014[13] – or a little more than 1,000 persons per day – and this includes interstate travelers leaving from or arriving in Texas.

Given the extreme paucity of current intercity passenger rail in Texas, H-GAC should only recommend new-build passenger rail projects if they have substantiated funding sources and ridership projections. In short, new-build passenger rail projects should prove their viability before the power of eminent domain is made available to them. In contrast to the widespread public benefits of freight rail, the TCR boutique rail service would likely only serve a few passengers.

Whether or not TCR has the right of eminent domain is a significant public interest concern for the entire region given that TCR is a private entity that merely calls itself a railroad despite having no tracks, locomotives, passengers, or federal operating authority.[14] In fact, TCR has been involved in state court litigation regarding whether it is actually a railroad and qualifies to use eminent domain under state law.[15] Although actual eminent domain proceedings occur in court pursuant to established procedures, H-GAC may be asked or have input regarding whether the TCR project should be supported or recommended for the Houston-Galveston area. As described in these Comments, H-GAC should not recommend the TCR proposal as currently configured.

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[13] Texas Department of Transportation, 2016 Texas Rail Plan, Executive Summary at p. 6.

[14] TCR's request for federal operating authority was dismissed due to lack of jurisdiction in Texas Central Railroad and Infrastructure, Inc. et al. – Petition for Exemption – Passenger Rail Line Between Dallas and Houston, Tex. STB Docket No. 36025 (served July 18, 2016). TCR has petitioned the STB to reopen the proceeding, but there has not yet been a decision regarding whether reopening will occur.

[15] Miles v. Texas Central Railroad & Infrastructure, Inc. et al., Cause No. 16-037CV, Parcel TX-LE-066.320 (87th District Court) (Leon County, TX, Feb. 7, 2019). Delta Troy is not aware of the judge signing the relevant order in the Miles case, but the court coordinator's correspondence to the attorneys is attached as Exhibit C hereto. The correspondence states that the judge found that the subject TCR entities "are not a railroad or interurban electric railway company."

D. H-GAC Should Reiterate Its Commitment to Safety.

Transportation is of dubious value if it is not safely provided. When transportation is not safe, any benefits of that transportation would be obviated by the risks, injuries, and property damage that result from accidents. H-GAC has appropriately included safety as one of the goals in the Draft 2045 RTP.[16] With any sort of land-based transportation, safety is compromised if that transportation is developed and planned in isolation, without consideration for impacts on land use, other transportation systems, and potential conflicts with such land use and other transportation. In the Draft 2045 RTP, H-GAC should reiterate its commitment to safety, and acknowledge that transportation planning must be done in a cooperative manner to accommodate existing and likely future land uses.

IV. H-GAC Should Recognize the Serious Problems With the Current TCR Proposal.

As H-GAC is aware, TCR has recently been promoting a new-build high-speed rail passenger line between Dallas and Houston. This rail line would feature Japanese technology, be completely separated from the existing rail network, and would, according to TCR, transport millions of passengers every year. There is nothing inherently wrong with passenger rail, high-speed rail, or high-speed rail between Dallas and Houston. However, the current TCR proposal is seriously flawed in many respects, and H-GAC should not countenance the further pursuit of this deeply problematic proposal as currently configured. H-GAC input on the TCR proposal, whether in the 2045 RTP or elsewhere, is warranted so that that the greater public interest is represented in the face of the public relations effort of TCR and its private promoters and backers.

[16] Draft 2045 RTP, Executive Summary at p. 10.

A. History Has Shown that TCR's Representations are Questionable at Best.

TCR has been promoting its proposed rail line for several years, but the facts and details surrounding the proposal have never been fixed or certain. For example, TCR previously stated that its project would be 100% privately-funded: as part of the ongoing environmental review process, TCR asserted that "[a]s this is a privately developed project, **we are not seeking public funding**."[17] Similarly, the Congressional Research Service found that TCR asserted in October 2016 that "[t]his project is not backed by public funds."[18] However, the TCR website now admits that "**the project will explore….federal loan programs,**"[19] and commentators have begun addressing TCR's "fuzzy" definition of private funding.[20]

The timeline for rail development and operation has continued to lag behind TCR's statements. In the state-wide 2016 Rail Plan, the Texas Department of Transportation ("TxDOT") noted that "[c]onstruction is expected to commence in 2017."[21] Despite this plan, however, construction has not yet begun. Financing has also been a problem for TCR. A few years ago, TCR informed the federal Surface Transportation Board ("STB") that the proposal was estimated to cost "over $10 billion," with rail service to start in 2021.[22] However, the cost estimate was later estimated at $16.5 billion +/- $1.5 billion, with the rail service not anticipated

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[17] See Federal Railroad Administration, Draft Environmental Impact Statement, Appendix F, TCRR Constructability Report, Chapter 8, page 34 (emphasis added) (December 2017).
[18] See Congressional Research Service, The High-Speed Intercity Passenger Rail (HSIPR) Grant Program: Overview, R44654 at page 13 (Oct. 18, 2016).
[19] https://www.texascentral.com/rumors-vs-reality/project-financing/ (emphasis added).
[20] Nicholson, Eric, "Texas Central Railway's Fuzzy Definition of 'Privately Financed,'" DALLAS OBSERVER (Aug. 11, 2015), available at: http://www.dallasobserver.com/news/texas-central-railways-fuzzy-definition-of-privately-financed-7479867.
[21] Texas Department of Transportation, 2016 Texas Rail Plan, at p. 3-17.
[22] See STB Docket No. 36025, Texas Central Railroad and Infrastructure, Inc. et al. – Authority to Construct and Operate – Petition for Exemption From 49 U.S.C. § 10901 and Subtitle IV, Petition for Exemption (filed April 19, 2016) at page 4.

to begin until late 2023.[23] Just a few months ago, a news article in Texas used a cost figure of $20 billion and an in-service date of 2024.[24]

The cost escalation and delay problems that have plagued the TCR proposal indicate that H-GAC and all officials in the Houston-Galveston region should be very cautious regarding TCR's assertions and the entire project. California's experience with high-speed rail is instructive on this point, and shows that TCR's problems are typical of expansive new high-speed rail projects. When originally proposed in 2008, Phase 1 of the CHSR project (San Francisco to Los Angeles) was to be complete by 2021 and cost $33 billion.[25] Later, completion was pushed to 2033 and the estimated cost more than doubled to $77 billion.[26] State and federal audits of the CHSR project occurred.[27] Finally, California Governor Gavin Newsom recently stated that the state would not finish the project, but instead will focus on a much smaller segment.[28]

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[23] See Federal Railroad Administration, Draft Environmental Impact Statement, Appendix F, TCRR Constructability Report, Appendix A8 (December 2017) (revealing a price of $16.5 billion +/- $1.5 billion, and "revenue service" starting at the very end of 2023).
[24] Maresh, Michael, "Harris takes aim at high-speed rail project" PALESTINE HERALD-PRESS (Palestine, TX) (Feb. 8, 2019).
[25] California High-Speed Train, 2008 Business Plan (Nov. 2008), at pages 19-21; available at: http://www.hsr.ca.gov/docs/about/business_plans/BPlan_2008_FullRpt.pdf. See also Gutierrez, Melody, "California high-speed rail project facing more delays, higher costs" (March 9, 2018), available at: https://www.sfgate.com/politics/article/California-high-speed-rail-project-facing-more-12741787.php.
[26] California High-Speed Rail Authority, Draft Revised 2018 Business Plan, at page 33; available at: http://www.hsr.ca.gov/docs/about/business_plans/Draft_Revised_2018_Business_Plan.pdf.
[27] Vartabedian, Ralph, "Legislature approves first state audit of bullet train project since 2012" LOS ANGELES TIMES (Jan. 30, 2018). Ronayne, Kathleen, "High-speed rail project faces federal audit" Associated Press, THE MERCURY NEWS (San Jose, CA) (April 13, 2018).
[28] Shephardson, David, California will not complete $77 billion high-speed rail project: governor" REUTERS (Feb. 12, 2019), available at https://www.reuters.com/article/california-governor-rail/california-will-not-complete-77-bln-high-speed-rail-project-governor-idUSL1N2071FE.

B. As Currently Proposed, the TCR Project Would Materially Compromise Safety.

1. A "potentially fatal flaw" exists because the proposed TCR alignment would cause electromagnetic conflicts with adjacent freight rail.

The Texas legislature is currently considering House Bill 1986, which would amend the Texas Transportation Code. As part of this consideration, the House Transportation Committee recently heard testimony from Union Pacific Railroad Company ("UP"), which has extensive operations in the Houston-Galveston area and is, by some measures, the largest railroad in the United States. Rail freight transportation by UP through the Houston-Galveston region is critical to keeping businesses operating, the economy healthy, and the roadways free of trucks when possible. As UP says, "[o]ne train can take several hundred trucks off Texas's already congested highways."[29] Among other commodities, UP transports consumer products, chemicals, polymers and plastics, stone and gravel, petroleum products, and other commodities across Texas in its freight trains.[30] UP originated over 1.2 million rail cars in Texas during 2018, and terminated over 1.0 million rail cars in the state during the same year.[31]

The operation of a modern freight railroad such as UP, with hundreds of miles of track across the Houston-Galveston region, requires careful planning and communication to ensure that trains safely avoid not just each other, but also automotive traffic at grade crossings and maintenance crews keeping the tracks in good condition. The communication that ensures safe rail service is sometimes simply called "signaling," and it represents carefully calibrated

[29] Union Pacific in Texas, Exhibit D at p. 2.
[30] Union Pacific in Texas, Exhibit D at p. 1 (mentioning commodities such as Intermodal-Wholesale, Plastics, Stone and Gravel, and Industrial Chemicals as well as service to refineries).
[31] Union Pacific in Texas, Exhibit D at p. 1.

technology. As UP itself states:

> Union Pacific's rails are technological runways enhanced with GPS, specialized sensors and, in some areas, Positive Train Control (PTC). PTC is an advanced system designed to automatically stop a train before certain incidents occur, such as train-to-train collisions and derailments caused by excessive speed or movement through misaligned track switches.

See Union Pacific in Texas, Exhibit D at p. 1. The PTC requirement resulted from Congress' passage of the Rail Safety Improvement Act of 2008, which was signed into law on October 16, 2008. Public Law 110-432 (now found largely at 49 U.S.C. § 20157). PTC regulations were originally finalized in early 2010 by the Federal Railroad Administration and were later amended several times.[32] PTC is a landmark safety measure designed to increase safety on both freight and passenger railroads.

This brief background regarding UP operations is crucial to understanding UP's testimony to the House Transportation Committee, where UP expressed serious misgivings about the TCR proposal.[33] Most importantly, UP stated:

> Of greatest concern to Union Pacific, and a **potentially fatal flaw** to the proposed route, is the **inherent electromagnetic interference** between the low voltage current used by freight railroads and the high voltage current required for TCR's operation. Freight railroad signaling and traffic control systems – the systems that drive basic operating and safety functions, like gates at railroad crossings – **depend on the absolute integrity of low voltage current** that flows through our tracks.

See Union Pacific Testimony on HB 1986, Exhibit E at p. 1 (emphasis added). UP's concern stems from TCR's proposal to build its high-voltage electrically-powered passenger line immediately adjacent to the pre-existing UP freight rail line along U.S. 290 northwest of

[32] See FR 2598 (Jan. 15, 2010), 75 FR 59108 (Sept. 27, 2010), 77 FR 28285 (May 14, 2012), and 79 FR 49693 (Aug. 22, 2014). The regulations are primarily found at 49 CFR Parts 229, 234, 235, and 236.

[33] As part of its testimony, UP took pains to clarify that "[i]t may be possible that all of these concerns can be addressed. But four years after raising our concerns with Texas Central, we still have seen little attempt at resolution." Union Pacific Testimony on HB 1986, Exhibit E at p. 2.

Houston.[34] As stated by UP, "[t]his close proximity…..creates a high risk of electromagnetic interference."[35] This interference "could affect gates and lights at crossings."[36] UP raised these concerns with TCR more than four years ago, but "TCR has not shown any progress toward addressing this fatal flaw."[37]

2. Motorists' sightlines at intersections would be compromised.

UP also expressed serious concerns about TCR's proposed viaduct structure along Hempstead Road alongside the preexisting UP rail line. UP's engineers and safety experts determined that this viaduct structure could "reduce motorists' ability to see and react to oncoming trains along the entire Hempstead Highway corridor."[38] That is, the TCR viaduct structure would increase the risk of collisions between motorists and UP freight trains at grade crossings. Obviously, grade crossing gates, lights, and audible warnings are intended to prevent such collisions, but electromagnetic interference from TCR's high-voltage catenary system may prevent proper functioning of the grade crossing warning systems, as UP has warned.

3. Grade separation of the UP freight rail line would be hampered.

Potential grade crossing conflicts between UP freight trains and vehicular traffic could also be prevented by grade separation projects at the intersecting points. These projects are generally expensive and locating the funding sources is always a challenge. Nevertheless, they are an option if funding is available. Unfortunately, the current TCR proposal "could preclude the separation of road and railroad, even on the routes that Houston has identified as future

[34] The area where TCR proposes to construct immediately adjacent to UP is the full TCR route east of approximately Fry Road in the Cypress area. See, e.g., Federal Railroad Administration, Draft Environmental Impact Statement, Project Footprint, Segment 5, Sheets 507 to 529 (December 2017).
[35] Union Pacific Testimony on HB 1986, Exhibit E at p. 1.
[36] Union Pacific Testimony on HB 1986, Exhibit E at p. 1.
[37] Union Pacific Testimony on HB 1986, Exhibit E at p. 1.
[38] Union Pacific Testimony on HB 1986, Exhibit E at p. 1.

thoroughfares that will be needed to serve growing neighborhoods."[39] In other words, grade separation bridges would be prevented by the large viaduct proposed by TCR in such close proximity to Hempstead Road and the UP freight rail line.

4. TCR has not adequately addressed flooding risks.

Safety is a crucial component of any transportation project, and no one needs to remind Texans that water drainage and flooding are safety issues. Hurricane Harvey and its devastating effects on southeastern Texas occurred at the same time as environmental review of the TCR proposal, yet the TCR Draft Environmental Impact Statement makes no mention of the hurricane or the regulatory changes being considered in its aftermath. Construction of a new-build rail line of over 200 miles, much of which would be built on a landscaped berm, would dramatically affect water drainage in the Houston area, yet TCR has not adequately addressed flooding, drainage, and water flow issues.[40]

C. The TCR Proposal Would Hinder Economic Development and Mobility.

1. Freight rail access would be harmed.

The Houston-Galveston region is projected to add nearly four million new residents by 2045.[41] In conjunction with this population increase, businesses, industries, commercial development, and jobs will all see significant growth alongside residential development. These businesses and industries will need transportation options to survive and thrive in a competitive national and global marketplace. Freight rail is often the best transportation option, particularly for large, heavy, or hazardous commodities. Moreover, freight rail also has the added benefit of keeping the roadways free of trucks, reducing vehicle emissions, and increasing energy

[39] Union Pacific Testimony on HB 1986, Exhibit E at p. 1-2.
[40] See, e.g., Exhibit A at p. 21-26.
[41] Draft 2045 RTP at p. 4-1.

efficiency. Therefore, long-range development planning in the region must preserve and foster the use of freight rail.

Unfortunately, the current configuration of the TCR proposal would preclude freight rail access to existing and new industries locating in the booming area northwest of Houston. As stated by UP:

> the proposed [TCR] route would **prevent rail service to future businesses** because it would create a **permanent obstacle** that prohibits the freight railroad from reaching future industry. The area west of Houston is seeing tremendous growth in warehousing and industry. Those types of businesses frequently require rail transportation as an alternative option to trucks. TCR's failure to address future development in this area will be an **impediment to economic growth**, and will **increase truck congestion** in the region.

Union Pacific Testimony on HB 1986, Exhibit E at p. 2 (emphasis added). TCR proposes to construct a miles-long embankment through a large part of the west Houston area,[42] thereby precluding future freight rail service from UP to businesses and industries that may currently be located (or soon locate) on the "wrong side" of the embankment. As UP itself states, this embankment will be "an impediment to economic growth."

2. The project would hinder mobility across the entire west Houston area for decades.

a. Road capacity increases would be foreclosed.

Unfortunately, the current TCR proposal was developed without regard for preexisting plans, platted development projects, approved road corridors, and region-wide planning

[42] The area where TCR proposes to construct an embankment is its proposed route south of U.S. 290 business (Hempstead Road) and west of Fry Road, with a short section of viaduct in the middle. See, e.g., Federal Railroad Administration, Draft Environmental Impact Statement, Project Footprint, Segment 5, Sheets 493 to 499 and 504 to 506 (December 2017).

processes. Delta Troy described many of these preexisting planning efforts in comments submitted to the Federal Railroad Administration.[43]

A professional planning firm recently undertook a detailed analysis of the TCR proposal, with a focus on the relationship between the proposal and the 2018 Houston Major Thoroughfare Plan ("MTFP"). The planning firm discovered eleven locations just in the Georgetown Oaks area where the TCR proposal did not account for the roadways platted in the 2018 MTFP.[44] These eleven locations represent road extensions and new roadways that have been adopted in the MTFP to ensure an adequate transportation system in the west Houston area for the coming decades. As the Houston-Galveston area adds nearly four million new residents in the next 26 years, inevitable road capacity increases will be necessary, as H-GAC has recognized. See, e.g., Draft 2045 RTP at p. 5-6 ("The regional demographic and growth trends forecasted in the 2045 RTP clearly show the transportation network will need to grow to accommodate more people and vehicles in the future."). TCR's failure to account for these roadway plans would result in a serious mobility crisis in west Houston area if the TCR project moves forward.

A second example is warranted here. The current TCR proposal envisions a viaduct immediately adjacent to U.S. 290 for the entire TCR route east of Fry Road (in the Cypress area) toward Houston.[45] This viaduct would likely prevent future capacity increases along and adjacent to U.S. 290 for not just U.S. 290 itself, but also its intersections and interchanges. As the Houston area expands and grows significantly over the next several decades, the viaduct proposed by TCR immediately adjacent to U.S. 290 would hinder that capacity expansion.

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[43] See Exhibit A at p. 6-14.
[44] See Exhibit F attached hereto. The planning firm only evaluated the Georgetown Oaks area, meaning that many more similar "conflict" locations likely exist throughout the region.
[45] See, e.g., Federal Railroad Administration, Draft Environmental Impact Statement, Project Footprint, Segment 5, Sheets 507 to 529 (December 2017).

In brief, the berm and viaduct proposed by TCR would preclude movement across the entire west Houston region, which would be compounded by resistance to road-building through the Katy Prairie Conservancy land. As currently proposed, construction of the TCR system would funnel the growing traffic in the west Houston region onto a few roadways, exacerbating already problematic traffic conditions in that area.

b. The TCR proposal would likely prevent commuter rail along U.S. 290.

Commuter rail has long been a possibility along the U.S. 290 corridor to the northwest of Houston, which is a rapidly growing part of the metropolitan area.[46] However, UP has resisted the idea that commuter rail trains could use its busy freight rail line paralleling U.S. 290.[47] Reflecting this resistance, the Gulf Coast Rail District analyzed commuter rail adjacent and parallel to the UP rail line, but not actually on the UP tracks.[48] If TCR constructs its proposed viaduct immediately adjacent to the UP rail line, there may be no room remaining for the separate commuter rail right-of-way that is proposed for the same parallel alignment. H-GAC has already acknowledged this conflict in the Draft 2045 RTP, stating that commuter rail is retained as a future possibility "pending confirmation that [the] line remains feasible if TCHSR

[46] See, e.g., Draft 2045 RTP, High Capacity Task Force Report, Attachment 7 ("Capital Components of Priority Network") (showing proposed "U.S. 290 Commuter Line").
[47] See, e.g., Begley, Dug, "Officials narrowing options for commuter rail lines," HOUSTON CHRONICLE (July 8, 2014), available at https://www.houstonchronicle.com/news/transportation/article/Officials-narrowing-options-for-commuter-rail-5631622.php (after acknowledging UP's stated desire to keep its rail lines for freight only, journalist concludes that it is "clear….that commuter trains will not share any track with local freight railroads, or buy any of their land").
[48] Gulf Coast Rail District, Regional Commuter Rail Feasibility Study, Final Report at p. 8-14 (February 2015), available at http://www.gcrd.net/docs/CR_Feasibility_Final_Report_FEB_2015.pdf.

is constructed."[49] Commuter rail would provide service to many more Houston-area residents than the proposed TCR project. Commuter rail would have numerous stations in the region (not just one), be more accessible to more residents of the Houston-Galveston region, and create station-area development opportunities at numerous locations along its route.

D. TCR Has Not Explained its Funding, Substantiated its Ridership Projections, or Shown that its Proposal is Viable.

Irreversible harm to communities, wildlife, and the land itself would ensue if TCR were to begin constructing its proposed rail line but failed to finish it or abandoned it at some point after completion, as the California experience confirms more and more each day. The proposal is not a minor rail construction addition by an established railroad with a long history of successful service. In contrast, it is an epic, "significant and….first of its kind"[50] rail project proposed by an entity that has no current rail operations, no track record, and no ongoing revenue source. TCR proposes to build an entirely-new multi-billion dollar passenger rail project in a state with an extensive and deeply-ingrained "decentralized pattern of development and a limited transit network."[51] Given the decentralized land development in Texas, possible passenger rail corridors in Texas are not rated as highly as those in the northeastern United States or California.[52] Texas would first need to fundamentally change its land development patterns, focusing on transit-oriented development, and develop comprehensive local transit networks

[49] Draft 2045 RTP, High Capacity Task Force Report, Attachment 7 ("Capital Components of Priority Network").
[50] STB Docket No. 36025, Texas Central Railroad and Infrastructure, Inc. et al. – Authority to Construct and Operate – Petition for Exemption From 49 U.S.C. § 10901 and Subtitle IV, Petition for Exemption, Verified Statement of Timothy B. Keith, CEO of Texas Central Partners, LLC, page 5 (filed April 19, 2016).
[51] Texas Department of Transportation, 2016 Texas Rail Plan, at p. 3-14.
[52] Texas Department of Transportation, 2016 Texas Rail Plan, at p. 3-14.

before a multi-billion dollar intercity passenger rail system would have a chance of success.[53] Commuter rail along U.S. 290 would be one step toward that development.

Crucially, the TCR proposal is a privately-backed speculative endeavor, meaning that it has not been subject to the normal openness and free accessibility of information that occurs in government projects like the California High-Speed Rail system.[54] TCR has admitted that its motives with the rail proposal largely center around real estate development near the station locations, and not transportation.[55] In a refreshingly candid remark, TCR's real-estate partner responded to criticism about the rail proposal being merely a real estate venture being pushed by speculators looking to make money by saying that "I hope they do, because I'm one of them! I hope they're right about that."[56]

Coupled with the absence of meaningful intercity rail in Texas today, TCR's lack of history means that H-GAC and all area officials should require TCR to substantiate its funding and ridership projections before providing any encouragement to TCR. The uncertainty surrounding this proposal is already causing harms to landowners such as Delta Troy, and Texas officials should carefully evaluate the assertions and claims supporting the TCR proposal before the consequences of this epic, unprecedented project cause harms which are irreversible. Officials in the Houston and Galveston area should engage in a thorough vetting of the proposal

[53] Cf. Texas Department of Transportation, 2016 Texas Rail Plan, at page 3-14 ("Continued expansion of transit networks combined with Transit Oriented Development could lay the foundation for the success of high-speed rail.").
[54] The California rail proposal was also subject to a statewide referendum in 2008.
[55] See, e.g., Exhibit G attached hereto (TCR press release, Feb. 6, 2015) ("an independent development company" is the driving force behind the proposal, and TCR is planning development of areas "surrounding" the Dallas station location with Matthews Southwest, a "private real-estate development company").
[56] See Exhibit H attached hereto (article from D MAGAZINE, "Developer Says Bullet-Train Project Will 'Change the Way People Think About the Center of Dallas'") (April 26, 2017).

to prevent substantial and irreversible harms to landowners, citizens, the economy, governance, wildlife, and the land itself in Texas.

E. If the TCR Project Moves Forward, an Alternate Routing of the TCR Line Should Be Used.

As described in this Section IV, there are serious problems with the currently proposed TCR alignment as UP and others have recognized.[57] However, alternative alignments could alleviate these problems, such as a routing alongside Interstate 45. An alternative alignment would also enable the TCR service to end at a station in downtown Houston, thus maximizing its value to the region, rather than the northwest Houston station currently proposed. The commercial heart of the Houston region is downtown, which is also the center of the city's light rail system. A downtown station would enable a broad swath of the Houston area to have easy access to TCR service; otherwise, expensive additional transportation projects – such as Bus Rapid Transit[58] or a new light rail line – would be needed to reach the proposed northwest Houston station from downtown.

[57] Alternative alignments are being supported by groups such as Reroute the Route. See https://reroutetheroute.com.

[58] See, e.g., Begley, Dug, "Metro must make case for bus rapid transit without something to show voters," HOUSTON CHRONICLE (May 3, 2019), available at https://www.houstonchronicle.com/news/transportation/article/Metro-must-make-case-for-bus-rapid-transit-13815260.php?utm_source=newsletter&utm_medium=email&utm_campaign=HC_AfternoonReport&utm_term=news&utm_content=headlines.

V. Conclusion.

As described above, H-GAC plays a critical role in ensuring consideration of the greater public interest in planning decisions across the Houston-Galveston region. H-GAC should use the 2045 RTP to acknowledge the importance of private property rights, describe the need to minimize impacts on existing and planned land uses, reiterate its commitment to safe transportation, and be very cautious about the use of eminent domain for proposals of uncertain viability. H-GAC should also recommend rejection of the TCR project as currently proposed. Delta Troy appreciates the opportunity to submit these Comments regarding development of the 2045 RTP.

Respectfully submitted,

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May 8, 2019

TAB 1

LIST OF EXHIBITS

Exhibit A – Delta Troy's Comments to the FRA (March 9, 2018)

Exhibit B – Georgetown Oaks Development Plan

Exhibit C – Court coordinator's correspondence to the attorneys (February 08, 2019), in Miles v. Texas Central Railroad & Infrastructure, Inc. et al.

Exhibit D – Union Pacific in Texas

Exhibit E – UP Testimony on HB 1986

Exhibit F – TCR roadway conflict and impact map

Exhibit G – TCR Press Release (February 6, 2015)

Exhibit H – D MAGAZINE, "Developer Says Bullet-Train Project Will 'Change the Way People Think About the Center of Dallas'" (April 26, 2017)

EXHIBIT A

Before the
Federal Railroad Administration

Dallas to Houston High-Speed Rail

Draft Environmental Impact Statement

Comments of

Delta Troy Interests, Ltd.

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March 9, 2018

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Before the
Federal Railroad Administration

Dallas to Houston High-Speed Rail

Draft Environmental Impact Statement

Comments of

Delta Troy Interests, Ltd.

Delta Troy Interests, Ltd. ("Delta Troy") hereby submits these Comments to the Federal Railroad Administration ("FRA") in response to the Dallas to Houston High-Speed Rail Draft Environmental Impact Statement ("DEIS") issued by the FRA in December 2017.[1] As described herein, the analysis in the DEIS fails to comply with regulatory requirements, exhibits flawed reasoning, ignores key issues, relies upon a poor alignment preference, and otherwise includes numerous significant errors. Delta Troy respectfully requests that the FRA require the consideration of other alignments and the preparation of a replacement DEIS or a Supplemental Draft Environmental Impact Statement ("SDEIS"). A new DEIS or a SDEIS would also allow previously-ignored resources and requirements to be addressed in a new environmental analysis.

I. Summary of Argument.

The ability of citizens to meaningfully participate in the processes of government is enshrined in Constitutional due process rights, and it is one of the core tenets of American democracy. Additionally, federal government agencies are required by the National

[1] See 82 Federal Register 60723 (Dec. 22, 2017).

Environmental Policy Act ("NEPA") to thoughtfully take into account all relevant information in considering the environmental impacts of their decisions. Unfortunately, both of these bedrock principles have been lacking in the development and substance of the DEIS.

The DEIS consists of 5,647 pages, yet only two-and-a-half months have been allowed for comment. The insufficiency of the comment period, and the need for more time, have already been described by Delta Troy in a Request for Extension of Time that was filed on January 30, 2018. This request is attached as Exhibit 1 and incorporated herein. Even with this shortened time period, it is clear that the proposed TCR project would have a dramatic and negative impact on Delta Troy and the planned Georgetown Oaks community. See Section VI.

Moreover, the substance of the DEIS fails to meet several regulatory requirements. The DEIS fails to take into account numerous local government planning documents, such as the City of Houston Major Thoroughfare and Freeway Plan, and fails to address the conflicts between the proposed TCR project and such land use planning documents. See Section IV.A. The DEIS also fails to take into account reasonably foreseeable actions in the immediate area, like the Georgetown Oaks community, and the cumulative impacts of such actions in conjunction with the proposed TCR project. See Section IV.B. In reliance on the so-called Utility Corridor, the DEIS is misleading at best because the Utility Corridor has been justified as already significantly disturbed by an overhead transmission line and a Union Pacific Railroad rail line – but this is not true for the HC-4 Alternative across Delta Troy's property. See Section V. The DEIS fails to adequately consider a number of other environmental impacts from the preferred alternative, as described in Section VII. A particularly relevant impact largely ignored by the DEIS is the need to address Hurricane Harvey, which caused over 100 deaths in the U.S. and approximately $125 billion in damage – mostly in the Houston area and southeastern Texas.

The FRA should discard use of the Utility Corridor in the southern part of the TCR line and, instead, consider entering Houston via the BNSF Corridor, the I-45 Corridor, or some other route. See Section V. If the FRA continues to use the Utility Corridor with the HC-4 Alternative (which it should not, as described in these Comments), extensive additional mitigation is necessary due to the severe impacts on the Georgetown Oaks community site. See Section VIII.

The above-described omissions from the DEIS have seriously compromised the public commenting process. By failing to include all relevant information, the DEIS hampers the ability of citizens to meaningfully participate.[2] The pernicious impact of this failure is all the more pronounced due to the shortened time frame for comments. Delta Troy urges the FRA to order a replacement DEIS or, at a minimum, a Supplemental DEIS so that the deficiencies described herein can be addressed. When an agency is presented with information that its earlier environmental findings are incorrect, a supplemental analysis is warranted.[3]

II. Identity and Interest of Delta Troy.

Delta Troy owns approximately 993 acres of land (the "Property") in the extraterritorial jurisdiction of the City of Houston in northwestern Harris County, Texas. The Property was purchased by C.N. Papadopoulos in 1982 and conveyed to Delta Troy in 2002. The Property adjoins the north and south sides of U.S. Highway 290, a major highway between Houston and the City of Austin. It is currently leased for farming. However, as development has extended

[2] Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989) ("Publication of an EIS, both in draft and final form…provides a springboard for public comment.") (citations omitted). See also 40 CFR § 1500.1(b) ("NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken.").

[3] See, e.g., Wildlands v. United States Forest Service, 791 F. Supp.2d 979, 988-91(D. Or. 2011) (the agency abused its discretion when it failed to prepare a supplemental EA or EIS after it received new and significant information that the "not likely to adversely affect" determination was incorrect and the landscape management project would adversely affect northern spotted owls).

westward along the U.S. 290 corridor toward the Property, it became apparent several years ago that the highest and best use of the Property is a mixed-use development incorporating a variety of commercial and residential uses. Recognizing this, for many years Delta Troy has been proceeding with plans for the Georgetown Oaks master planned community on the Property.[4] The proposed TCR project would occur directly on and through the Georgetown Oaks community site.

III. Georgetown Oaks.

In 2006, Delta Troy engaged a land planning consultant to begin preparing development plans for the site it owns in northwestern Harris County, and Delta Troy has expended years of effort to move the project forward. See, e.g., Exhibit 2. The Georgetown Oaks community is to have a mixture of residential and non-residential uses. See, e.g., Exhibit 3. The residential land uses include traditional single family, multifamily, and townhome parcels, while the non-residential uses include commercial tracts, a church site, and an elementary school.

Delta Troy has successfully obtained numerous governmental approvals for the Georgetown Oaks project over the last decade. In 2007, a General Plan for Georgetown Oaks was submitted and approved by the City of Houston Planning Commission. See Exhibits 4 and 5. The General Plan shows specific platted streets, drainage areas, land use patterns, and related aspects of the Community. These elements must comply with Chapter 42, the land development ordinance of the City of Houston. Although Georgetown Oaks is not within the city limits of Houston, it is within the Extra-Territorial Jurisdiction ("ETJ") of Houston, meaning that land development must comply with Chapter 42.[5]

[4] The "Georgetown Oaks" name has only been utilized since 2016 but, as described in Section III of these Comments, the planning and preparations have been continuing since 2006.
[5] See, e.g., http://www.houstontx.gov/planning/Annexation/annexation.html.

In 2011, Delta Troy was able to secure the enactment of legislation forming Harris County Municipal Utility District No. 524, which encompasses the Georgetown Oaks site and will facilitate its development by allowing the issuance of bonds to finance the construction of roads, utilities, and other infrastructure. Creation of this Municipal Utility District ("MUD") required passage of legislation through the Texas General Assembly.[6] MUD 524 was established for the Georgetown Oaks site as a result of House Bill 709 and Senate Bill 475, which were signed by the Governor on June 17, 2011.[7] A MUD is a political subdivision of the State of Texas that is authorized to provide water, sewage, drainage, and other utility-related services within the defined MUD boundaries.

Delta Troy has continued to work toward development of the Georgetown Oaks site over the past few years, with further refinements and details added to the project. Most recently, the updated Georgetown Oaks plan was filed with the Houston Planning Commission in October 2016, with approval granted in May 2017.[8] The approval did not include any conditions regarding the proposed TCR rail project; in fact, the "Platting Approval Conditions" do not even mention the TCR proposal.

A wide variety of other planning efforts have occurred. For example, officials from Delta Troy have discussed the need for frontage roads along U.S. 290 with the Texas Department of Transportation ("TXDOT") for several years.[9] Delta Troy has also met with the Gulf Coast Freight Rail District ("GCFRD") regarding rail station planning for a possible commuter rail line

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[6] See Exhibit 6.
[7] See Exhibit 7. See also http://www.capitol.state.tx.us/BillLookup/History.aspx?LegSess=82R&Bill=HB709 and http://www.capitol.state.tx.us/BillLookup/Actions.aspx?LegSess=82R&Bill=SB475.
[8] See Exhibits 8, 9, and 10.
[9] See, e.g., Exhibit 11.

on the nearby Union Pacific Railroad ("UPRR") rail line. The GCFRD added a possible station location at "Waller East" in response to the interest expressed by Delta Troy.[10]

Plans for the development of the Georgetown Oaks community have been publicly available for several years. The General Plans were publicly filed with the City of Houston Planning Commission, and that same Commission issued approvals for the General Plans. The establishment of MUD 524 required legislation, the Governor's signature, and statutory revisions under Texas law.

As a result of these efforts, Delta Troy is ready and able to proceed with the implementation of its development plans for the Property, but it has been unable do so due to the significant uncertainty associated with TCR's proposed rail line.

IV. The DEIS Violates Several Regulatory Requirements.

A. The DEIS Violates 40 CFR §§ 1502.16(c) and 1506.2(d) Because It Fails to Take Into Account Relevant Regional and Local Land Use Plans.

The TCR proposal does not exist in vacuum. There are numerous ongoing planning and coordination efforts in the many counties and cities traversed by the proposed Build Alternative A preferred by the FRA, which includes the HC-4 Alternative in northwestern Harris County.[11] Unfortunately, the DEIS ignores many of the important ongoing and previous planning and coordination efforts that apply to land use along the preferred corridor and fails to discuss the likely conflicts between the proposed TCR project and such regional and local planning efforts. To address these deficiencies, a replacement DEIS or Supplemental DEIS is necessary so that the TCR proposal fully complies with 40 CFR § 1502.16(c), which requires "discussion of…[p]ossible conflicts between the proposed action and the objectives of Federal, regional,

[10] See, e.g., http://www.gcfrd.org/docs/Presentation.Stakeholder1.pdf (pages 8 and 11).
[11] The FRA expressed its preference at page ES-32 of the DEIS.

State, and local….land use plans, policies and controls for the area concerned." The creation of a new DEIS or a Supplemental DEIS will also enable compliance with § 1506.2(d), which requires environmental impact statements to "discuss any inconsistency of a proposed action with any approved State or local plan and laws….Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law." As described below, several plans were ignored or inadequately addressed in the DEIS.

1. Major Thoroughfare and Freeway Plan of the City of Houston.

The DEIS fails to acknowledge or address the Major Thoroughfare and Freeway Plans ("MTFP") for several counties and areas, including the MTFP of the City of Houston. The MTFP for Houston functions as the official plan of the Houston Planning Commission; it is revised and updated on a yearly basis. "The Planning Commission has the authority and has assumed the responsibility of creating and maintaining a MTFP applicable within the City of Houston's jurisdiction for the guidance of the development of the street and highway network for this area."[12] The City of Houston states that, in compiling the Plan, "the City listens to developers and neighborhoods about such issues as congestion, mobility and future development plans."[13] A professional land planner in the Houston area stated that the Houston MTFP is one of the two key documents that "set[s] the requirements for all new developments."[14]

[12] MTFP Policy Statement at 17. The MTFP is "generally accepted as the basic guideline for the implementation of major thoroughfare and highway improvements by other governmental agencies within the jurisdiction of the City of Houston, including district offices of the Federal Highway Administration (FHWA) and Texas Department of Transportation (TxDOT)." MTFP Policy Statement at 3. See http://www.houstontx.gov/planning/transportation/docs_pdfs/2015_PolicyStatement.pdf.
[13] http://www.houstontx.gov/planning/transportation/MTFP.html.
[14] See Exhibit 12 at page 2. See also Exhibit 12 at pages 4-5.

The DEIS's failure to consider the Houston MTFP is odd because the Ellis County Thoroughfare Plan was addressed.[15] It is claimed in the DEIS that consideration was given to "regional and local transportation plans and policies that guide transportation planning, funding and project implementation" (DEIS at 3.11-2), but the failure to even mention the Houston MTFP shows the erroneous nature of this claim.

MTFP documents are official local government planning documents. As such, the DEIS should have addressed them as required by 40 CFR §§ 1502.16(c) and 1506.2(d). See, e.g., Openlands v. United States DOT, 124 F. Supp.3d 796, 808-810 (N.D. Ill. 2015) (the court concluded that the EIS for a new expressway was arbitrary and capricious because the agencies did not address the inconsistency between the Illinois and Indiana metropolitan planning organizations' long-range plans and the proposed expressway).

This omission in the DEIS is all the more glaring because no high-speed rail line is envisioned through or anywhere near the Delta Troy property in either the City of Houston MTFP or the nearby Waller County MTFP.[16] The City of Houston MTFP also envisions widening or altering many roads in northwestern Harris County which would be crossed by the proposed TCR line, including Castle Road and Hempstead Road (Old Highway 290).[17] Consequently, the DEIS is inadequate because it fails to address the proposed project's conflict and inconsistency with the City of Houston MTFP.

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[15] DEIS at page 3.11-3 (listing local transportation plans that were considered).
[16] See, e.g., https://www.houstontx.gov/planning/transportation/MTFPMap/MTFP_Map16.pdf (Houston area Major Thoroughfare Plan 2016) and http://www.houstontx.gov/planning/transportation/MTFPMap/MTFP_MAP_17.pdf (Houston area Major Thoroughfare Plan 2017).
[17] DEIS, Appendix D, Project Footprint, Set 5 of 5, sheets 485 and 492. See Houston Major Thoroughfare Plan (2017); Houston Major Thoroughfare Plan (2016).

2. The Government-Approved Plans for the Georgetown Oaks Site.

As described above, plans for the Georgetown Oaks development have been publicly available since at least 2007. See Section III. These plans have been filed with and approved by the Houston Planning Commission. A new state law created a Municipal Utility District for Georgetown Oaks in 2011. However, the DEIS does not mention, address, or even acknowledge Georgetown Oaks and, crucially, the proposed TCR project conflicts greatly with the already-approved Georgetown Oaks community. See, e.g., Sections VI and VIII below. The DEIS should have addressed these conflicts as required by 40 CFR §§ 1502.16(c) and 1506.2(d).

The importance of the approved plans for Georgetown Oaks and other similar developments was described by a professional land planner in the Houston area, who stated that the lack of zoning in Houston means that "the existing plans and ordinances which govern the city's development [are] all the more significant."[18] This land planner also noted that the DEIS failed to mention numerous developments that, like Georgetown Oaks, have received approvals and are planned for the nearby area.[19]

3. The West Houston Plan 2050.

The DEIS fails to acknowledge or address the West Houston Plan 2050.[20] This plan was created by the West Houston Association ("WHA"), a group of property owners, major employers, community interests, and other stakeholders that have worked for 37 years to "to collectively address the problems and potentials associated with a rapidly growing area with major employment and residential growth virtually assured for the next ten years."[21] The WHA represents "a unique attempt by Houston's major land developers, financial interests, and large

[18] Exhibit 12 at page 2.
[19] Exhibit 12 at pages 2-3.
[20] See DEIS at page 3.13-3 to 3.13-6 (listing local land use plans that were considered).
[21] See https://westhouston.org/about-us/.

corporations to bring order and rational planning to the rapidly developing suburban areas on the west side of the City of Houston."[22]

The West Houston Plan 2050 is not a legally binding, official government planning document, but it is relevant for revealing the future envisioned by stakeholders in the area. Crucially, the West Houston Plan 2050 does not anticipate or foresee any new rail development along or near the "preferred" corridor described in the DEIS. However, it does envision other types of land development in the area.[23] To comply with 40 CFR §§ 1502.16(c) and 1506.2(d), the DEIS should have addressed the proposed TCR project's conflict and inconsistency with the West Houston Plan 2050.

4. The 2040 Houston-Galveston Regional Transportation Plan.

The DEIS mentions the 2040 Houston-Galveston Regional Transportation Plan ("RTP"), but does so in a selective and misleading manner. The 2040 Houston-Galveston RTP is created by the Houston-Galveston Area Council ("H-GAC").[24] H-GAC does not have regulatory authority, but it is "the regional organization through which local governments consider issues and cooperate in solving area wide problems."[25]

The DEIS refers to the 2040 Houston-Galveston RTP and repeatedly to the H-GAC.[26] Thus, the DEIS acknowledges the importance and relevance of the 2040 Houston-Galveston RTP. Among other things, the DEIS cites to the treatment of intercity rail in the 2040 Houston-Galveston RTP as support for the TCR proposal.[27] Specifically, the DEIS asserts that the "No

[22] See https://westhouston.org/about-us/.
[23] See https://westhouston.org/wp-content/uploads/2014/07/WHP2050update2010FINAL-Multpage.pdf.
[24] http://www.h-gac.com/taq/plan/2040/default.aspx.
[25] http://www.h-gac.com/about/default.aspx.
[26] DEIS at pages 3.11-1, 3, 4, 8, 66, 69, and 71; pages 3.13-7 and 35; page 3.16-4; etc.
[27] DEIS at page 3.13-35.

Build Alternative" would fail to meet the intercity rail component of the 2040 Houston-Galveston RTP.[28]

Crucially, however, the DEIS fails to recognize, acknowledge, or account for the Downtown Houston Station proposed in the 2040 Houston-Galveston RTP for Dallas-Houston intercity rail service.[29] Thus, the DEIS is misleading because it cites to the 2040 Houston-Galveston RTP as support for the TCR Dallas-Houston intercity rail proposal, but fails to address the Downtown Houston Station location in this same planning document. Consequently, the DEIS violates 40 CFR § 1506.2(d), which requires discussion of conflicts between the proposal and planning documents. See, e.g., Openlands, 124 F. Supp.3d 796, 808-809.

B. The DEIS Violates 40 CFR § 1508.7 and Related Requirements Because It Fails to Take Into Account the Reasonably Foreseeable Development of the Georgetown Oaks Community.

The significant environmental impacts that would result from the TCR project cannot be viewed in isolation. Governing regulations and applicable court decisions require consideration of the "cumulative" impact of the proposed TCR project in conjunction with other reasonably foreseeable projects in the area.[30] "An EIS….must….assess the impact the proposed project will have in conjunction with other projects in the same and surrounding areas….and must include past, present, and reasonably foreseeable future actions of any agency or person."[31]

As described above, Delta Troy has expended significant time, money, and effort for over a decade to develop its plans for the Georgetown Oaks site and obtain necessary government

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[28] See DEIS at page 3.13-35.
[29] See 2040 Houston-Galveston RTP, Appendix A at 21. http://www.h-gac.com/taq/plan/2040/default.aspx.
[30] See, e.g., 40 CFR §§ 1502.3, 1502.4(a), 1502.16(b), 1508.7, 1508.8, 1508.25, and 1508.27(b)(7).
[31] Theodore Roosevelt Conservation Partnership v. Salazar, 616 F.3d 497, 503 (D.C. Cir. 2010) (citations omitted).

approvals. The Georgetown Oaks plans have been publicly available for several years. The Houston area has been growing rapidly for many decades, and is expected to continue to do so. The DEIS itself estimates an increase of almost one million in the Harris County population between 2010 and 2040. See DEIS at 3.14-13. The 2040 Houston-Galveston RTP, cited repeatedly in the DEIS, anticipates significant growth in the northwestern region of the Houston area over the next few decades.[32]

Given the westward growth of the Houston area and Delta Troy's effort and government approval to develop the Georgetown Oaks community, the Georgetown Oaks development is "reasonably foreseeable" under 40 CFR § 1508.7 and related regulations.[33] According to one land planner in the Houston area, there are numerous approved developments, such as Georgetown Oaks, that are planned for the area of the TCR rail line but were ignored in the DEIS.[34] The DEIS should have considered the cumulative impact from the TCR proposal in conjunction with the development of the Georgetown Oaks site.[35] The failure to do so "is a significant oversight."[36]

The DEIS asserts that "research" was conducted to determine the existence of other past, present, and reasonably foreseeable actions,[37] but the failure to consider or even mention the Georgetown Oaks plan reveals that this research was wholly inadequate. Indeed, it appears as if

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[32] See 2040 Houston-Galveston RTP, Appendix A at 2-15, available at: http://www.h-gac.com/taq/plan/2040/default.aspx.
[33] Sierra Club v. Marsh, 976 F.2d 763, 767 (1st Cir. 1992) (An environmental impact is reasonably foreseeable if it is "sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision.") (citation omitted).
[34] Exhibit 12 at pages 2-3.
[35] Senville v. Peters, 327 F. Supp.2d 335, 348, 365, 369-370 (D. Vt. 2004) (EIS violated NEPA for many reasons including that it failed to discuss the potential cumulative impact of proposed road project in conjunction with several other planned highway improvements and also induced land development in the area).
[36] See Exhibit 12 at page 3.
[37] See DEIS at 4-11.

the DEIS focused almost entirely on public and quasi-public future road and transportation actions, wholly ignoring private land developments like Georgetown Oaks.[38] The fact that the Georgetown Oaks development may never require NEPA analysis at any stage is no reason to ignore it for cumulative effects purposes.[39]

The failure of the DEIS to consider the Georgetown Oaks project is surprising given that one of the seminal "cumulative effects" court decisions regarding NEPA in Texas found that "a tax zone with development incentives" and the granting of permits for a "large housing development" constituted reasonably foreseeable actions that should have been considered.[40]

The DEIS is also faulty because it excluded consideration of most environmental resources (water quality, noise and vibration, hazardous materials, floodplains, etc.) from its already-inadequate cumulative impacts analysis. As described on pages 4-13 to 4-17, the DEIS only considered 9 of the 23 environmental resources in its cumulative impacts analysis.[41] This limited review exacerbates the related failure to consider the Georgetown Oaks project as a "reasonably foreseeable" action. The DEIS should have included Georgetown Oaks in its cumulative impacts analysis, and this analysis would then have been required to expand the

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[38] See list of "reasonably foreseeable" future actions at pages 4-20 to 4-26 of the DEIS.

[39] Fritiofson v. Alexander, 772 F.2d 1225, 1245 (5th Cir. 1985) (The cumulative impacts analysis "should consider (1) past and present actions without regard to whether they themselves triggered NEPA responsibilities and (2) future actions that are 'reasonably foreseeable,' even if they are not yet proposals and may never trigger NEPA-review requirements.") (citation omitted).

[40] Fritiofson, 772 F.2d 1225, 1247 (Affirming district court decision that cumulative impacts analysis in Environmental Assessment was inadequate because, among other things, "[t]he record…is replete with evidence of other actions on West Galveston Island – past, present, proposed and future – that may affect the same area….Significant among these are the annexation by the city of parts of West Galveston Island and the creation of a tax zone with development incentives and the Corps' granting of permits to Homecraft for a large housing development on far West Galveston Island.").

[41] To support this scope reduction, the DEIS quotes from the AASHTO Practitioner's Handbook (April 2011). DEIS at 4-12. However, a review of the cited document fails to reveal the quotation.

scope of the cumulative impacts analysis to include additional environmental resources, including noise and vibration, floodplains, and aesthetic and visual.

C. The DEIS Fails to Sufficiently Acknowledge the Incompleteness of Field Surveys.

TCR is aware that Delta Troy exists. TCR requested permission to enter onto Delta Troy property to conduct surveying, but Delta Troy declined to provide the permission. Delta Troy is aware that many other landowners similarly declined to permit TCR entrance onto their property. Because of this lack of access, the DEIS relied repeatedly on inadequate field surveys for its conclusions.[42] Only occasionally did the DEIS acknowledge or subtly hint that it was unable to conduct adequate field surveys due to a lack of access. Regarding hazardous materials, the DEIS conceded that the "field reconnaissance did not meet Phase I Environmental Site Assessment (ESA) standards since entire corridor was not visually surveyed for hazardous material sites, which is a deviation from standard TXDOT hazardous material identification process."[43] Similarly, the DEIS acknowledged the limited field survey for endangered species.[44] The failure of the DEIS to acknowledge the lack of relevant information in other aspects of the environmental review means the DEIS does not fully evaluate the impacts of the proposed TCR project, thereby rendering the DEIS faulty under 40 CFR § 1502.22.

[42] See, e.g., DEIS at ES-11, ES-27, 3.4-5, 3.6-6, 3.6-39, 3.6-41, 3.6-66, 3.19-41, etc.
[43] DEIS at 3.5-5 to 3.5-6.
[44] See, e.g., DEIS at 3.6-7 ("Surveys have been and will be limited to potential listed target species habitat and properties for which right-of-entry has been obtained."). See also DEIS at 3.6-39.

V. The DEIS is Misleading at Best Because the Utility Corridor Has Been Justified as Already Significantly Disturbed by an Overhead Transmission Line and a UPRR Rail Line – But This is Not True for the HC-4 Alternative Across Delta Troy's Property.

The Utility Corridor has been presented and justified on the basis that the land contained therein is already substantially disturbed. This is incorrect for the HC-4 Alternative across Delta Troy's property. Moreover, the DEIS fails to include any alternatives to the Utility Corridor in the southern one-third of the entire proposed TCR route. This failure to consider reasonable alternatives not only violates regulatory requirements found at 40 CFR §§ 1502.2 and 1502.14, but also prevents commenting parties such as Delta Troy from being able to meaningfully participate in the development of the Final EIS. If there are no alternatives for all of Harris County, all of Waller County, and 90% of Grimes County, why would the citizens of those counties expend the effort to participate? Their Constitutional due process rights have already been taken from them, with the TCR alignment for one-third of the route apparently chosen before the DEIS was even issued.

Unfortunately, the environmental review process has not seriously considered the "No Build Alternative" as a meaningful option in this case as required under NEPA. The FRA's role is to issue railroad safety rules, including a Rule of Particular Applicability for the high-speed operations proposed by TCR.[45] Given what FRA has said, it appears unlikely that the FRA would not issue safety rules to govern any future TCR operations. Indeed, the FRA introduced the DEIS by stating that it would either (1) "issue a Rule of Particular Applicability," (2) "impose requirements or conditions by order(s) or waiver(s)," or (3) "take other regulatory action(s) to ensure the Project is operated safely."[46] Rightly or wrongly, the FRA did not

[45] See, e.g., 49 CFR § 236.1007(d).
[46] DEIS at ES-1.

consider rejection of the TCR proposal as a plausible option. Given this set of circumstances, the FRA must propose, and allow comment upon, true alternative routes for the citizens of Harris and Waller Counties (and 90% of Grimes County).

In 2015, the Corridor Alternatives Analysis Technical Report claimed that the "Utility Corridor would follow the Centerpoint Energy and Oncor Electric Delivery high-voltage electrical transmission lines (345 to 500 kilovolts (kV))."[47] This is not true. The Technical Report later contended that, entering Houston, the Utility Corridor "would follow and use the UPRR Eureka Subdivision into downtown Houston." This is also not true. The Georgetown Oaks community site is bisected by the proposed TCR route, yet this route is not following either the high-voltage electric transmission line or the UPRR line in passing through the middle of Delta Troy's property.[48] Moreover, the location proposed by TCR for the Houston Station is in the northwestern part of the city, not downtown. See DEIS at ES-4 and ES-30.

The misleading justifications for the Utility Corridor reveal the great need for alternative routings to be considered in this part of Harris County, yet no such alternatives were considered in the DEIS. As mentioned above, there is only a single "alternative" in the DEIS for the southern one-third of the entire TCR project route.

Delta Troy is not alone in being gravely concerned about the sequence of events that led to this exclusive focus on the Utility Corridor – which only provides one "alternative" throughout the entire southern one-third of the proposed TCR route. The President of the Waller

[47] Corridor Alternatives Analysis Technical Report, p. 6 (August 10, 2015).
[48] See DEIS, Project Footprint, Segment 5, Sheets 491 and 492. The Georgetown Oaks community is crossed by an underground natural gas pipeline of which there is no above-ground evidence.

County Sub-Regional Planning Commission expressed serious frustration with the premature focus on the Utility Corridor before detailed environmental impacts analysis.[49]

Several years ago, the FRA considered other possible corridors, including the UPRR Corridor, the BNSF Corridor, and the I-45 Corridor.[50] However, long before the DEIS was issued, the FRA eliminated these corridors for various reasons. The reasons supposedly supporting elimination of the UPRR Corridor are clearly not insurmountable, however, because the preferred "Utility Corridor" itself relies upon a UPRR rail line for part of its length.[51]

The FRA's single-minded focus on the Utility Corridor is all the more problematic given that the FRA did not consider various permutations and combinations of the Utility Corridor, the BNSF Corridor, the UPRR Corridor, and the I-45 Corridor. These corridors cross each other multiple times,[52] yet the FRA only considered one curious combination corridor – the "Utility Corridor with I-45 Alignment." This combination would have required a significant length of "greenfield" track to connect the two corridors.[53] This combination would have used the I-45 Corridor in the north and the Utility Corridor in the south.

The FRA never explained why it failed to consider the opposite – the Utility Corridor in the north and the I-45 Corridor in the south – even though such a route would have required a "greenfield" track of similar length. More glaring is the omission of a Utility-BNSF combination. The Utility Corridor crosses the BNSF Corridor in Grimes County, yet the FRA

[49] Exhibit 13 (Waller County letter to FRA, July 6, 2015; Waller County letter to Texas DOT, May 6, 2016). The 2016 letter to the Texas DOT mentions Delta Troy's planned development of its land on page 11 of the attachment.
[50] Corridor Alternatives Analysis Technical Report (August 10, 2015).
[51] Corridor Alternatives Analysis Technical Report, p. 6 and 12-13 (August 10, 2015).
[52] DEIS at page ES-5.
[53] Dallas to Houston High-Speed Rail, Scoping Report, p. 5 (April 2015).

did not consider a combination of the Utility Corridor in the north and the BNSF Corridor in the south.

All these curious decisions show the great need for further analysis of meaningful alternatives for the entire TCR route at the Draft EIS stage, including the location for the Houston Station. See, e.g., 40 CFR § 1502.14. **The FRA has stated that it is open to revisiting the preferred route and that it has "not identified a preferred alternative for the Houston Terminal Station at this time."** See DEIS at ES-32 and 2-21. Selection of another route and a Houston Station location should be done in tandem, because an alternate route into Houston would facilitate use of a downtown Houston Station rather than the ill-conceived northwest Houston site proposed in the DEIS. See Section VII.D.

VI. The Proposed TCR Project Would Have a Dramatic and Negative Impact on Delta Troy and the Georgetown Oaks Community.

The TCR project would devastate the planned Georgetown Oaks community by bisecting the site. As proposed in the DEIS, the HC-4 Alternative would permanently scar a significant portion of the community land, cause closure of or prevent development of approved roadways, create visual blight, depress property values, cause water retention problems, harm the job creation that would otherwise occur, and otherwise compromise if not prevent the other public goods that would come from the community. The DEIS recognizes that placing the TCR outside existing transportation infrastructure "would cause greater impacts to residential and commercial properties."[54] However, the DEIS failed to implement this understanding with respect to its preference for the HC-4 Alternative through the Georgetown Oaks community site, because this routing does not follow any transportation infrastructure in bisecting Georgetown Oaks.

[54] DEIS at 7-64.

The DEIS naively suggests that "[l]inear projects" like the TCR proposal "have a narrow footprint and typically do not substantially change the pattern, intensity and character of land use."[55] The DEIS also stated that "[m]any of the reasons for decreased property values around other transportation projects, such as noise and vibration impacts, would not apply to the electrified HSR design."[56] These facile suggestions ignore the inevitable severe impacts from 200 mile-per-hour trains running throughout the day on a thirty-foot high viaduct. "Simple, conclusory statements of 'no impact' are not enough to fulfill an agency's duty under NEPA." Foundation on Economic Trends v. Heckler, 756 F.2d 143, 154 (D.C. Cir. 1985).

Many of the negative impacts on Georgetown Oaks are encompassed in the mitigation discussion in Section VIII below. A summary of the negative impacts is also provided in the attached Exhibits 14 and 15. None of these issues have been addressed in the DEIS – which completely ignored Georgetown Oaks – and, therefore, the DEIS fails to comply with NEPA as described in 40 CFR §§ 1502.16(c), 1506.2(d), and 1508.7. Delta Troy would like to highlight a few of the more notable negative impacts below:

A. Socioeconomics and Community Facilities.

The DEIS is deficient in that it ignores the damaging effects of the proposed rail line on economic development in the area. As mentioned above, the Georgetown Oaks community is planned and approved, but implementation has been complicated and delayed due to the uncertainty caused by the TCR proposal. See Section III. The DEIS disregards this economic harm. In fact, the DEIS claims the TCR will aid economic development,[57] yet the DEIS does not address the deleterious effects of the proposed rail project on the jobs and economic development

[55] See DEIS at 3.13-35.
[56] See DEIS at 3.14-31.
[57] See, e.g., DEIS at 3-14.27 to 3.14-28.

that would otherwise occur as a result of the Georgetown Oaks community. Delta Troy obtained a professional opinion regarding the number of jobs that would be supported on-site at Georgetown Oaks at full build-out. Dr. Randall Jackson estimated that the Georgetown Oaks community could directly support over 16,000 jobs at full build-out, nearly 9,000 on the community parcel south of U.S. 290 and slightly over 7,000 north of U.S. 290.[58] If the TCR proposal is constructed across Delta Troy's property, job creation at Georgetown Oaks would inevitably be noticeably decreased from this estimated level due to the taking of a significant portion of the Georgetown Oaks southern parcel, the other harms from the rail line, and the reduction in adjacent property values that would result.

Property values would be reduced due to a variety of reasons, including noise, visual blight, blocked roads, and inaccessibility. One Houston-area land planner cautioned that noise, vibration, and closed roads "will likely limit what land uses will want to be located near the rail" and, consequently, "**there are no compatible land uses** other than those directly serving the maintenance or support of the rail itself."[59] The DEIS acknowledges that "transportation infrastructure can create a localized barrier between a residential community and social or community resources."[60] However, the DEIS fails to apply this understanding to the Georgetown Oaks community.

The Georgetown Oaks site is in the Waller School District, which has less financial resources than its neighbor to the east, the Cy-Fair ISD. Many schools in the Waller district need extensive rooftop replacement, and the Georgetown Oaks development would have added

[58] See Exhibit 16. Dr. Jackson is a professor at West Virginia University and director of that university's Regional Research Institute, which focuses on regional economic development issues.
[59] See Exhibit 12 at page 6 (emphasis added).
[60] DEIS at 3.14-22.

substantially to the finances available to the Waller School District. In contrast, the proposed TCR project would prevent full realization of the Georgetown Oaks plan, depress property values, and substantially reduce expected finances available to local public schools. The DEIS recognizes that the proposed TCR project could have tax base implications, but improperly limits the analysis to station areas only.[61]

B. Floodplains.

The DEIS is deficient in that it ignores the dramatic changes that are occurring in southeastern Texas as a result of Hurricane Harvey. This catastrophic event caused over 100 deaths and approximately $125 billion in damage – most of that in southeastern Texas. A Japanese-led business enterprise may not realize how life-changing Hurricane Harvey was for people in the Houston area and throughout southeastern Texas. In the aftermath of Hurricane Harvey, federal, state, and local government officials are studying the flooding that occurred during Hurricane Harvey in an attempt to develop measures to prevent such flooding events in the future. New water detention and flooding prevention laws, regulations, and policies will likely be dramatically different from those in effect today. Until the Army Corps of Engineers and other government agencies decide upon and implement these new laws and regulations, the DEIS is premature and based on a stale legal framework. The FRA should require a revised DEIS, or a Supplemental DEIS, once these new legal standards are announced.

Hurricane Harvey made landfall in Texas in late August 2017, almost four months before the DEIS was issued. However, the DEIS makes no mention of Hurricane Harvey. Given that the devastation of Hurricane Harvey was well-known several months before the DEIS was issued, the DEIS should have, at a minimum, acknowledged that the effects and regulatory

[61] DEIS at 3.14-31 to 3.14-32.

fallout from Harvey was not addressed in the DEIS. Governing regulations require the DEIS to state when relevant information about "reasonably foreseeable significant adverse impacts" is "incomplete or unavailable." See 40 CFR § 1502.22(b). For the purposes of this regulation, an impact is "reasonably foreseeable" if it has "catastrophic consequences, even if…[the] probability of occurrence is low." 40 CFR § 1502.22(b)(1). Under this regulation, the DEIS should have mentioned Hurricane Harvey.

Not only does the DEIS fail to mention Hurricane Harvey, but the "Floodplains" section of the DEIS does not mention hurricanes at all.[62] The failure to address Hurricane Harvey and hurricane-caused flooding warrants, at a minimum, a Supplemental DEIS. Under governing regulations, FRA must prepare a "supplement[]" to the "draft environmental impact statement[]" because Hurricane Harvey is a "significant new circumstance[] or information relevant to environmental concerns and bearing on the proposed action or its impacts." See 40 CFR § 1502.9(c)(1)(ii). As one federal court said less than two months ago, "preparation of an SEIS [Supplemental Environmental Impact Statement] is required where there is new information relevant to environmental concerns that was not previously considered."[63] The FRA should require a new DEIS, or a Supplemental DEIS, to address Hurricane Harvey and the altered legal framework that is now being developed.

[62] See DEIS, Section 3.8. Hurricanes are only addressed at length in the "Safety and Security" section of the DEIS. See Section 3.16.

[63] St. Johns Riverkeeper, Inc. v. United States Army Corps of Engineers, Case No. 3:17-cv-398, 2018 U.S. Dist. Lexis 8499 at *56 (M.D.Fla., Jan. 19, 2018) (finding no supplemental EIS is necessary because the Army Corps "has taken a 'hard look' at…the events of Hurricane Irma"). See also Foundation on Economic Trends v. Bowen, 722 F.Supp. 787, 790 (D.D.C. 1989) ("NIH is obligated to create a supplement to an EIS when new scientific developments in a biomedical field make an earlier EIS insufficient to evaluate adequately the environmental impact of the new developments.") (citation omitted).

C. Construction Staging Area.

TCR has proposed that a large construction staging area should be located on the Georgetown Oaks community site.[64] This construction staging area will cause extensive interference with the Georgetown Oaks community. The proposed staging area is currently undisturbed land, used only for farming. As such, it is inappropriate for staging under TCR's own guidelines. See, e.g., DEIS at 3.6-69 (TCR claimed it would use "previously disturbed areas for staging"). TCR also asserted that "adverse effects on floodplains…would be minimized by siting the majority of construction staging and access areas….outside of floodplains." See DEIS at 3.8-23. Again, this is not true for the Georgetown Oaks site, where the staging area is proposed to be on top of the water detention for Georgetown Oaks. See Exhibit 3. Drainage and detention should not be taken lightly by TCR or the FRA in the Houston area because the consequences can be catastrophic, as Harvey and other recent flooding events have shown (like the Tax Day Flood in 2016 and the Memorial Day Flood in 2015).

As approved by the City of Houston Planning Commission, Delta Troy has planned for water detention to occur on a significant portion of the community site that TCR wants to use for construction staging. Compare Exhibits 8, 9, and 10; with DEIS, Appendix G, Volume 2-1 (page 75) and Volume 4-1 (page 38).

The DEIS fails to mention or address this conflict between the approved Georgetown Oaks plans and the proposed TCR project, thereby violating 40 CFR §§ 1502.16(c) and 1506.2(d). More broadly, the conflict will delay, complicate, and otherwise harm the development of the Georgetown Oaks site, including all the public benefits that will come from that development. See Section VI.A. Delta Troy will be forced to curtail development until

[64] See, e.g., DEIS, Appendix D, Project Footprint, Sheet 492. See also DEIS, Appendix G, Volume 4-1, page 38; DEIS, Appendix G, Volume 2-1, page 75.

TCR relinquishes control of the construction staging area, which would likely be many years, because the staging area will prevent adequate water detention at Georgetown Oaks.

The DEIS admits that staging areas would utilize "impervious cover" and "would increase stormwater runoff peak flow rates and total runoff volumes during a rainfall event." DEIS at 3.8-26. The DEIS also admits that staging areas could cause the introduction of invasive species. DEIS at 3.6-49. Consequently, the construction staging area at Georgetown Oaks would cause untold harm to the development process there and also to any parts of the community that are already developed.

VII. The DEIS Fails to Adequately Consider a Wide Range of Other Impacts.

Despite its flaws, the DEIS makes clear in its 5,647 pages that the high speed rail project proposed by TCR would have grave environmental consequences. Even a cursory review of the DEIS Executive Summary reveals the following serious environmental impacts:

1. "Sedimentation and stormwater runoff from construction may also contain bacteria, nutrients, particles and other constituents attached to sediment or carried separately by stormwater which contribute to pollutant loading. Increased pollutant loading in runoff may impact surface water and groundwater quality." Page ES-10.

2. "[P]ermanent physical impacts would occur to groundwater wells during construction, including public water system wells, where the HSR would cross the location of the wells." Page ES-10.

3. "Operational impacts would result from stormwater runoff and operation activities, such as maintenance of culverts or bridges, fueling and train maintenance activities and obtaining water supplies for the operational facilities and trains." Page ES-10.

4. "Operation of the Build Alternatives would have permanent impacts on surface water quality including impaired stream segments." Page ES-10.

5. "The Build Alternatives would severely impact 15 (Build Alternatives C and F) to 19 (Build Alternatives B and E) residential sensitive receivers." Page ES-11.

6. "All Build Alternatives would result in temporary and permanent impacts to vegetation, direct loss of wildlife habitat, increases in habitat fragmentation and impediments to the movement of wildlife across the landscape." Page ES-13.

7. "[T]he permanent footprint and construction of access roads, stations, facilities, and where the Build Alternatives would be constructed on embankment or fill would prohibit the flow of water and result in a permanent impact." Page ES-14.

8. "HSR track and supporting facilities (e.g., permanent roads, parking areas, access/maintenance areas, terminals and non-vegetated embankments) would result in permanent impacts to floodplains." Page ES-15.

9. "Due to the size and expected electrical demand of the Build Alternatives, it is likely that statewide electricity reserves and electrical transmission capacity would be affected." Page ES-17.

10. "The Brazos Valley Station would be out of scale and not compatible with its surrounding landscape. Page ES-17.

11. "Build Alternative F would have the fewest permanent impacts to roadways at 147, and Build Alternative B would have the most at 246." Page ES-19.

12. "[B]etween 3,145 and 4,394 acres…..of special-status farmland would be permanently converted to transportation use." Page ES-20.

13. "The rural counties within the Study Area contain special-status farmland. These lands are a vital part of the Texas landscape and their potential conversion to non-agricultural uses represents a fundamental change that would be irreversible." Page 3.13-43.

14. "The impacts to children's health and safety would occur at five schools adjacent to construction laydown areas contained within the LOD of the Build Alternatives." Page ES-22.

15. "Road closures, detours and localized automobile congestion caused by construction could increase the response time for law enforcement, fire and emergency services personnel and school buses." Page ES-24.

In the remainder of this Section, Delta Troy will describe a variety of other environmental impacts that were insufficiently addressed in the DEIS.

A. Floodplains.

Drainage and detention are critical issues for the Houston area due to the significant rainfall, flat landscape, and impermeable soils. As described above, not only did the DEIS fail to address Hurricane Harvey, but it also did not even mention hurricanes in general in the

Floodplains section. See Section VI.B above. All relevant agencies have been forced to reconsider their standards in the aftermath of Hurricane Harvey, and there will inevitably be an impact on future development and drainage requirements in the Houston region from these revised standards. One land planner in the Houston area cautioned that, as a result of the coming regulatory changes:

> the information and plans for this [TCR] project's drainage and detention should be reevaluated and the permit application to the US Army Corps of Engineers delayed until further notice, until such a time in which the planned detention basins and culvert crossings are further analyzed and adequately sized to meet drainage requirements based on post-Harvey conditions.[65]

As proposed in the DEIS, the TCR project might require a larger physical footprint on the ground than currently envisioned "in order to prevent downstream impacts and provide adequate project drainage and detention volumes based on post-Harvey requirements."[66] Of course, a larger footprint would increase most if not all environmental impacts from the rail corridor, including but not limited to traffic impacts, road closings, economic harm, depressed land values, aesthetics and scenic resources, and natural resources.

B. Noise and Vibration.

The DEIS made some effort to address the impact of noise and vibration on sensitive land uses in the area of the proposed TCR rail line. See DEIS at 3.4-5. However, Delta Troy's land planner found this analysis "inadequate for a project of this magnitude" because it failed to take into account planned future land uses.[67] This is another instance of the DEIS failing to comply with the requirements to address local land use plans and the cumulative effects of reasonably foreseeable actions. See Sections IV.A and IV.B above.

[65] See Exhibit 12 at page 3.
[66] See Exhibit 12 at page 3.
[67] See Exhibit 12 at page 4.

C. Land Use.

Concerns for roadway connectivity are inadequate in the DEIS according to Delta Troy's land planner, who found that the DEIS failed to address Major Thoroughfare Plans (such as the Houston MTFP), the General Plans of master planned communities, or any road crossings for future roads (even if approved). See Exhibit 12 at pages 4-5. This land planner noted that the road closures proposed in the DEIS could greatly complicate local transportation for persons living or working near the rail corridor. See Exhibit 12 at page 5.

D. The Houston Station Location is Poorly Conceived.

The proposed TCR project would include a rail station in northwestern Houston, approximately seven miles from the central business district in downtown. See DEIS at ES-4 and ES-30. Many TCR passengers could be expected to be business, convention, or leisure travelers heading to downtown's collection of skyscrapers, office buildings, and hotels. From this perspective, a downtown station would be ideal. In contrast, the northwest Houston location specified in the DEIS is bounded on two sides by interstate highways, and otherwise is a low-rise area of light manufacturing, warehouses, a few small office buildings, a few apartments, and single family homes. It can be expected that virtually all passengers arriving at a northwest Houston station location would need to travel several miles further to reach their final destination.

Consequently, the northwest Houston location would cause traffic problems and related environmental impacts as the transportation needs of arriving and departing passengers clog adjacent roads. From this perspective, too, the downtown location would be much better – downtown Houston is the core of Houston's growing light rail transit system, which could be

used by both arriving and departing passengers. There is no light rail line that serves northwestern Houston or anywhere near the proposed northwest Houston station site.

E. New Floodplain Regulations May Be Imminent.

The City of Houston is voting on new flood control regulations on March 21, 2018.[68] If new regulations are adopted, the DEIS analysis of flooding and water detention issues will be stale. A new analysis and round of comments would be warranted if new regulations are issued.

VIII. Significant Additional Mitigation is Necessary if the Preferred Alternative is Implemented.

If the FRA continues to use the Utility Corridor with the HC-4 Alternative (which it should not, as described in these Comments), extensive additional mitigation is necessary due to the severe impacts on the Georgetown Oaks community site. The DEIS is inadequate because it fails to describe reasonable means to mitigate adverse environmental impacts of the proposed project, as required by 40 CFR § 1502.16(b). The additional necessary mitigation includes:

A. The TCR Line Should Be Located in a Tunnel Under Georgetown Oaks.

The proposed TCR project would cause major, permanent, and irreversible damage to property owned by Delta Troy and the already-approved Georgetown Oaks community. See Sections III and VI above. Major benefits that would be expected from Georgetown Oaks would be significantly curtailed due to the TCR project as proposed in the DEIS. See Section VI.A. Fortunately, much of the damage of the current TCR route could be avoided, and many of the benefits of Georgetown Oaks would still be realized, if the TCR project were placed in a tunnel underneath the Georgetown Oaks community. Such a tunnel would need to be designed and

[68] See, e.g., Schneider, Andrew; "Houston City Council Set to Vote On New Floodplain Regulations Next Month," (Feb. 21, 2018), available at: https://www.houstonpublicmedia.org/articles/news/2018/02/21/269320/houston-city-council-set-to-vote-on-new-floodplain-regulations-next-month/.

sited in such a way so that road crossings, utility crossings, and reasonable land development could occur on the ground surface above the tunnel. Use of an appropriately-designed tunnel would alleviate several of Delta Troy's concerns, and would render moot some of the other mitigation requests in this Section VIII. A tunnel would also allow TCR to avoid conflicts with the adjacent crossings of major transportation thoroughfares, namely U.S. 290, Hempstead Road, and the UPRR rail line. Delta Troy urges the FRA to require TCR to use a tunnel for the section of the HC-4 Alternative across the Georgetown Oaks community location.

B. Road Crossings Are Necessary.

The TCR line across the Delta Troy property is currently proposed as an overhead viaduct.[69] Delta Troy should be permitted to develop at least four east-west roads that would cross under or over the viaduct between U.S. 290 in the north and Hempstead Road in the south. TCR should be required to work with Delta Troy regarding these grade-separated crossings, and TCR should be required to pay for the cost of such crossings.

C. The East-West TCR Access Road South of U.S. 290 Should Be Prohibited.

TCR should be prevented from building the proposed east-west access road that would connect Binford Road to the TCR rail line on the south side of U.S. 290. See DEIS, Project Footprint, Segment 5, Sheet 491. This proposed access road would prevent direct connection from the east side of the Georgetown Oaks community to any frontage road along U.S. 290. There is an entirely separate TCR access road planned on the north side of U.S. 290; therefore, elimination of the access road on the south side of U.S. 290 would not prevent TCR from being able to reach the rail line in the immediate area.

[69] See DEIS, Project Footprint, Segment 5, Sheets 491 and 492.

The Texas DOT has allowed developers in other locations to construct frontage roads on their adjacent properties and access the main roadway at approved ramp locations. The proposed TCR project would eliminate this possibility for Delta Troy due to the TCR access road along the southern edge of U.S. 290 just east of Binford Road.

D. TCR Should Design its Bridge Over U.S. 290 to Enable Future Frontage Roads.

Although frontage roads exist along U.S. 290 for most of its route in the vicinity of Georgetown Oaks, they do not exist for a short distance east of Binford Road. This is the exact site of Georgetown Oaks. As development proceeds at Georgetown Oaks, frontage roads will be particularly valuable for facilitating the flow of traffic between U.S. 290 and the many homes, offices, businesses, and other destinations in Georgetown Oaks. As described above, the Texas DOT has permitted developers to add frontage roads to U.S. 290. Therefore, TCR should be required to design its bridge over U.S. 290 so that sufficient room exists under the bridge for a future frontage road on the north and south sides of U.S. 290.[70]

E. TCR Should Not Be Permitted to Close Local Roads.

TCR should be prevented from closing local roads, both existing and planned, in the area of the Delta Troy property. As mentioned above, the TCR rail line is proposed as a viaduct in the area of Delta Troy's property; however, it is unclear whether TCR intends to prevent all east-west grade-separated crossings of this viaduct (presumably underneath) by local roads. The DEIS indicates that the viaduct could be as low as four feet off the ground, and also that the "ROW would be fully access-controlled."[71] If grade-separated road crossings are prohibited, and road closings are anticipated, significant negative traffic impacts will be felt in the vicinity of the

[70] See DEIS, Appendix G, Volume 2-1, page 75 (showing location of TCR bridge over U.S. 290).
[71] See DEIS, Appendix F, Set 1 of 2, page 33 and 36.

Georgetown Oaks community as land development continues in the area.[72] Moreover, road closings would also complicate evacuation of the area in the event of a hurricane or similar event. The FRA should prohibit TCR from closing existing and planned roads in the area.

F. TCR Should Be Required to Augment its Flooding Prevention and Water Detention Measures.

Flooding and drainage issues are a significant concern in the Houston area due to the high average precipitation, the regular appearance of hurricanes, and the flat landscape. Even though TCR proposes a viaduct across the Delta Troy property, the proposed project would exacerbate flooding and water detention in the area due to the footprint of the viaduct, including access roads, and the construction process itself. Furthermore, the TCR project would eviscerate or complicate planned flooding control measures already included in the Georgetown Oaks plan. See Exhibit 3. The FRA should require TCR to develop flooding control measures and water detention to replace the planned measures that would be lost at Georgetown Oaks due to the TCR project. The measures required of TCR should be developed in light of the planned Georgetown Oaks project.

G. Utility Crossings Are Necessary.

The Georgetown Oaks community will need normal utilities like water lines, sewer lines, electricity, natural gas, storm water control, etc. The DEIS asserts that the proposed TCR right-of-way "would be fully access-controlled."[73] It is unclear if this means that TCR intends to prevent utility crossings of the right-of-way; if so, this would cause extensive additional expense for Delta Troy in duplicating utilities in the Georgetown Oaks community on both sides of the

[72] See, e.g., DEIS at 3.11-61 to 3.11-64 (listing some road modifications proposed for Waller County and Harris County).
[73] See DEIS, Appendix F, Set 1 of 2, page 33 and 36.

TCR right-of-way. The FRA should require TCR to permit and facilitate utility crossings of the right-of-way, including future utilities for the Georgetown Oaks community.

H. Noise Abatement Should Be Required.

Abatement of noise from adjacent transportation corridors is an important part of the Georgetown Oaks design. Delta Troy has already explored needed noise abatement from U.S. 290 for the Georgetown Oaks community, and the DEIS itself recognizes the need for noise and vibration protection measures.[74] However, the proposed TCR project would involve a tall viaduct through the Georgetown Oaks site, thereby creating the need for an expensive noise abatement wall through the center of the Georgetown Oaks community. The FRA should require TCR to install noise abatement measures through the Georgetown Oaks community.

I. Construction Staging Should Be Prohibited At Georgetown Oaks.

As described in Section VI.C, TCR has proposed a construction staging area on the Georgetown Oaks community site in contravention of the selection principles for such staging areas. This staging area would have significant impacts to the natural environment and Georgetown Oaks. Any contamination to the land at this location could permanently jeopardize the already-approved development of the Georgetown Oaks community. The FRA should require TCR to relocate this staging area to a different portion of the rail corridor, not on the Georgetown Oaks community property.

J. Vegetation Screening Should Be Required.

The TCR rail line would be visually damaging for the Georgetown Oaks community. TCR should be required to install vegetation screening for the line through Georgetown Oaks.

[74] DEIS at 3.14-31 ("To the extent that noise or vibration levels could negatively impact specific individual properties, mitigation measures, as described in Section 3.4.6.5, Noise and Vibration Mitigation, would be applied.").

IX. Conclusion.

Delta Troy respectfully requests that the FRA require a new DEIS or, at a minimum, a Supplemental DEIS so that the deficiencies in the DEIS can be remedied. Delta Troy also urges the FRA to discard the Utility Corridor, with the HC-4 Alternative, for the southern part of the TCR route. As the TCR approaches Houston, an alternative routing should be utilized, such as the BNSF Corridor or the I-45 Corridor.

Respectfully submitted,

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David E. Benz
Andrew L. Kolesar
Thompson Hine LLP
Suite 700
1919 M Street, N.W.
Washington, DC 20036
202.331.8800
202.331.8330 (fax)

Attorneys for Delta Troy Interests, Ltd.

March 9, 2018

Exhibits

Number	Brief Description
1	Delta Troy's Request for Extension of Time to the FRA (Jan. 30, 2018)
2	Correspondence between Clay Nance (Delta Troy counsel) and Harris County Public Infrastructure Department (Nov. 28, 2006 and Dec. 27, 2006)
3	Updated Design Concept for the Papadopoulos Tract (Georgetown Oaks) (April 7, 2016)
4	A General Plan for the Papadopoulos Tract (Georgetown Oaks), Being 992.8± Acres of Land (May 29, 2007)
5	Houston Planning Commission Approval (June 7, 2007)
6	Vicinity Map for Municipal Utility District No. 524 (March 2009)
7	"An Act Relating to the Creation of the Harris County Municipal Utility District No. 524," S.B. No. 475, signed by Gov. Perry (June 17, 2011)
8	A General Plan for Georgetown Oaks, Being 992.8± Acres of Land (Oct. 17, 2016)
9	Houston Planning Commission Staff Recommendation (May 11, 2017)
10	Houston Planning Commission Approval (May 11, 2017)
11	Correspondence from Clay Nance (Delta Troy counsel) to the Texas Department of Transportation regarding U.S. Route 290 (May 17, 2010)
12	Report of KGA Consulting, LLC regarding the Draft Environmental Impact Statement (Mar. 9, 2018)
13	Correspondence from Trey Duhon, President of the Waller County Sub-Regional Planning Commission, to the FRA (July 6, 2015) and to the Texas Department of Transportation (May 6, 2016)
14	Correspondence from Kerry R. Gilbert (on behalf of Delta Troy) to the FRA (Feb. 2, 2017)
15	Correspondence from Delta Troy to FRA (May 19, 2017)
16	An Economic Analysis of the Georgetown Oaks Development (Mar. 8, 2018)

Exhibit 1

January 30, 2018

Mr. Paul Nissenbaum
Associate Administrator for Rail Policy & Development
Federal Railroad Administration
1200 New Jersey Avenue S.E., MS-20
Washington, DC 20590

paul.nissenbaum@dot.gov

RE: Request for Extension of Time to Respond to the Draft EIS for Dallas to Houston High Speed Rail

Dear Mr. Nissenbaum:

The Draft Environmental Impact Statement ("Draft EIS") for the proposed Dallas to Houston High Speed Rail project sponsored by Texas Central Railroad (the "TCR Project") was released by the Federal Railroad Administration ("FRA") in mid-December 2017. The FRA has established a 60-day comment period, which is scheduled to close on February 20, 2018. See 82 Fed. Reg. 60723 (Dec. 22, 2017). Delta Troy Interests, Ltd. ("Delta Troy") hereby respectfully requests that FRA extend the current due date for comments from February 20, 2018 to August 20, 2018 (240 days total) in order to allow parties impacted by the TCR Project and the public sufficient time to review and analyze the Draft EIS which is 5,647 pages in length. A 60-day comment period is wholly inadequate given the character of the proposed TCR Project, the scope and complexity of the project, and the volume of material in the Draft EIS. This request is submitted pursuant to 49 C.F.R. § 1506.10(d) and the FRA's authority under the National Environmental Policy Act ("NEPA"). Support for this request is provided below.

The TCR Project is privately-sponsored and would travel through farms, natural areas, and residential areas in a 240-mile corridor between downtown Dallas and suburban Houston. In its private sponsorship, the TCR Project is similar to the 200-mile DesertXpress high-speed rail proposal between Victorville, CA and Las Vegas, NV, for which the FRA conducted an environmental review under NEPA a few years ago. In the DesertXpress case, the FRA allowed 56 days of comment on the Draft EIS, and an additional 46 days of comment on the Supplemental Draft EIS.[1] Given that the FRA allowed 56 days of comment for the DesertXpress Draft EIS, a much longer time period is warranted for comment on the TCR Project's Draft EIS for two important reasons.

[1] See DesertXpress High-Speed Passenger Train, Final EIS, Volume I: Report, Abstract, page 2 (March 2011).

First, the DesertXpress rail construction and operation was planned to occur nearly exclusively within the right-of-way of Interstate 15, thereby limiting impact on landowners and existing land uses.[2] The FRA considered two "action alternatives" for the proposed DesertXpress project: alternative A consisted primarily of rail segments "within the median" of Interstate 15, while alternative B consisted primarily of rail segments "within the fenced area" of Interstate 15.[3] In contrast, the TCR Project would cross farms, natural areas, and residential areas, and it would require the crossing or blocking of numerous existing roads. Consequently, the TCR Project would have a dramatically greater effect on landowners and the use of their property in the immediate vicinity of the proposed rail line.

Second, the DesertXpress Draft EIS consisted of a 976-page Volume I, 26 separate PDF appendices, and a total of 2,474 pages in all of Volume I and Volume II. In isolation, this seems to be an extensive amount of material, yet the TCR Project DEIS is noticeably larger – it includes 1218 pages in Volume I, an additional 50 separate PDF appendices, and a total of 5,647 pages. In other words, the TCR Draft EIS is well over twice the size of the DesertXpress Draft EIS. It would be unreasonable to expect interested parties to read, analyze, and develop meaningful responses to such a massive amount of information in the brief 60-day time period that currently applies, especially when the less disruptive DesertXpress project featured a 56-day comment period for a much smaller Draft EIS.

The private sponsorship of the TCR Project also differs substantially from the ongoing California High Speed Rail project, which is being developed by a state agency, the California High-Speed Rail Authority ("CAHSRA"). As a state agency, CAHSRA has engaged in extensive outreach to the public and is subject to various legal requirements regarding transparency, document availability, and similar issues. Moreover, the California project was approved in a statewide referendum several years ago. Despite these characteristics (which inherently enable public participation and engagement), the Draft EIS for the California High Speed Rail project was subject to a 180-day comment period at the programmatic stage.[4] In addition, individual, project-level segments of the California HSR project have been subject to a further comment

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[2] See, e.g., DesertXpress High-Speed Passenger Train, Final EIS, Volume I: Report, page 2-1 (March 2011) ("The Applicant proposes to construct nearly all of the fully grade-separated, dedicated double track, passenger-only railroad either in the median or immediately alongside Interstate 15 (I-15).").

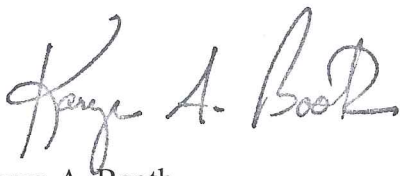
[3] See DesertXpress High-Speed Passenger Train, Final EIS, Volume I: Report, pages 2-1 to 2-2 (March 2011).

[4] See https://www.fra.dot.gov/Page/P0228 ("The Draft Program EIR/EIS was released in January 2004 for a 180-day comment period, which closed August 31, 2004.") See also FRA Record of Decision, California High-Speed Train System (signed Nov. 8, 2005) at page 4 (referring to a 7-month public comment period from January 27, 2004 to August 31, 2004).

period (often 60 days).[5] In aggregate, this two-tiered comment structure permitted a public commenting period of at least 240 days despite the fact that interested members of the public already benefit from the transparency inherent in the state-sponsorship of the California project. In contrast, the TCR Project is sponsored by a private entity that has not been forthcoming in providing information to the public.[6] Under these circumstances, a significant increase to the 60-day comment period for the Draft EIS for the proposed TCR Project is more than warranted.

For all the all above-mentioned reasons, Delta Troy respectfully requests that the deadline for comments on the TCR Draft EIS be extended from February 20, 2018 to August 20, 2018. Given the relatively brief period of time before the February 20th due date, Delta Troy also requests that the FRA issue a decision on this request as expeditiously as possible.

Sincerely,



Karyn A. Booth
Thompson Hine LLP
Attorneys for Delta Troy Interests, Ltd.

cc: Kevin Wright, Environmental Protection Specialist, FRA
DallasHouston@urs.com

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[5] See, e.g., California High-Speed Train Project Final EIR/EIS: Fresno to Bakersfield Section (April 2014), Summary, page S-4 ("The Authority and FRA circulated the Draft EIR/EIS for the Fresno to Bakersfield Section….for 60 days from August 15 to October 13, 2011.").

[6] See, e.g., Reply in Opposition to Both the Motion for Leave to File Response to Replies and the Response, filed by Delta Troy Interests, Ltd., in Texas Central Railroad and Infrastructure, Inc., et al. – Authority to Construct and Operate – Petition for Exemption – Passenger Rail Line Between Dallas, TX and Houston, TX, Surface Transportation Board Docket No. 36025 (filed July 11, 2016) (objecting to the dramatic scope of the redactions included in the Response filed by Texas Central Railroad on June 20, 2016, in which over 800 pages of a 888-page filing were redacted from public view).

Exhibit 2

HANCE SCARBOROUGH WRIGHT WOODWARD & WEISBART

A Registered Limited Liability Partnership
ATTORNEYS AND COUNSELORS AT LAW

CLAY NANCE
cnance@hswww.com

111 CONGRESS AVENUE.
SUITE 500
AUSTIN, TEXAS 78701
(512) 479-8888
(512) 482-6891 (FACSIMILE)

DALLAS TEXAS,
WASHINGTON, D.C.

Certified Mail 7002 2030 0001 5312 6581

November 28, 2006

Mr. Jorge Cedillo
Harris County Public Infrastructure Department
Engineering Division- Permits Group
10000 Northwest Fwy, Suite 130
Houston, Texas 77092

RE: Deltra Troy Interests, Ltd.
Papadopoulos Tract
Request for Sponsorship of Highway 290 Frontage Roads and Access Connections in Northwest Harris County

Dear Mr. Cedillo:

Thank you for the telephone conversation yesterday. On behalf of our client, Delta Troy Interests, Ltd., please take this correspondence as our request for Harris County's sponsorship of our client's Highway 290 frontage roads and access connections proposal that will be submitted to the Texas Department of Transportation-Houston District for approval.

The following is a discussion of our proposal, including a detailed description of our client's property, use of our client's property, our requested frontage roads, and our proposed access connection locations. Please note that we have met with TXDOT-Houston District officials, including District Engineer Gary Trietsch, on past occasions to discuss and develop our proposal.

A. Papadopoulos Tract

Delta Troy Interests owns approximately 1,100 acres of rural, undeveloped property located between the cities of Hockley and Waller in Precinct 3 of Harris County. The land is bordered by Hempstead Highway (Old Highway 290) to the south and FM 2920 to the north. Kickapoo Road borders our client's property to the east and Binford Road runs through the western portion of the property. Highway 290 splits the center of our client's property running in a northwest/southeast direction. This portion of Highway 290 does not include frontage roads on either side. There is a drainage ditch on each side of this portion of the highway running parallel to it. The drainage ditches are located in TXDOT's right-of-way. Finally, there are entrance/exit ramps connecting this portion of

Highway 290 with Kickapoo and Binford Roads. Please see the attached **Exhibit A**, an aerial map identifying the location of our client's property, which is outlined in red.

B. Use of Papadopoulos Tract

Delta Troy Interests' property is located in an area of Greater Houston that we believe will see a significant increase in development and population in the near future. In anticipation of the projected commercial and residential growth, our client engaged the assistance of land use planners to determine the best use of the above-described property. Due to its overall size and advantageous location along Highway 290, the land planners determined that a mixed use of our client's property would be ideal. Thus, development plans call for our client's property to be used for commercial, residential (multifamily and single family home sites) and recreational purposes. The development plans also include acreage for a church and elementary school. Please see the attached **Exhibit B**, which is the Conceptual Development Plan for the Papadopolous Tract prepared by Kerry R. Gilbert & Associates, Inc.

C. Proposed Frontage Roads

Delta Troy Interests proposes that frontage roads be built running parallel to the portion of Highway 290 that cuts through the center of its property from the Kickapoo Road intersection to the Binford Road intersection. Such frontage roads would be located on both sides of Highway 290 similar to the existing Highway 290 frontage roads running through the neighboring property located to the west of its property between the Binford Road intersection and the FM 2920 intersection. For a visual image of the proposed frontage roads running across our client's property, please see the attached **Exhibit B**. For a visual image of the existing Highway 290 frontage roads located to the west of the property, please see the attached **Exhibit A**.

TXDOT-Houston District officials indicated during our past meetings that the existing Highway 290 frontage roads located to the west of our client's property consist of two-12 foot wide lanes with an 8 foot wide outside shoulder. An estimated 50 feet of right-of-way on each side of Highway 290 would be necessary in order to construct the new frontage roads across our client's property. Please note that our client is certainly amenable to providing TXDOT with sufficient right-of-way lands in order to complete the project.

Additionally, Pat Henry of the TXDOT-Houston District indicated that if the proposed frontage roads were approved and constructed, the existing detention ponds might need to be adjusted. Please note that our client is open to discussions with TXDOT concerning the dedication of additional lands for drainage purposes (*i.e.*, detention ponds), if necessary.

D. Proposed Access Connections

Delta Troy Interests will also request TXDOT permits for access connections to "tie-in" the proposed frontage roads with the streets that will be constructed on our client's property. Specifically, our client is proposing one access connection to the northern frontage road, two access connections to the southern frontage road and one access connection to the entrance/exit ramp at the intersection of Highway 290 and Kickapoo Road. The approximate locations of the four proposed

access connections tying in the proposed Highway 290 frontage roads to the streets to be constructed on our client's property are identified in the attached **Exhibit B**.

Please note that our land planner positioned the approximate locations of the access connections in accordance with TXDOT minimum connection spacing requirements. Additionally, please note that our land planner has located additional points that are other possibilities for street access connections, as indicated by the blue symbols in **Exhibit B**. Our client is certainly open to adjusting the location of the proposed access connections, if necessary, in order to provide maximum safety for highway traffic and for users of the access driveways.

Given the fact that the portion of Highway 290 running across our client's property is classified as a Controlled Access Highway Facility, our client understands that access connections in this area are essentially treated as property rights owned by TXDOT and therefore further discussions with TXDOT concerning various issues, such as the purchase price of the access points, would be necessary.

We respectfully request Harris County's sponsorship of our proposal. We believe the proposed frontage roads and access connections would enhance the safety and operations of the Highway 290 corridor in the immediate area and therefore would be in the best interests of northwest Harris County and the State of Texas.

Thank you for your assistance in this project. Should you need additional information from us or have any other questions regarding this matter, please do not hesitate to contact me.

Sincerely,

Clay Nance

Enclosures

cc: Paul Hawkins, Harris County, Precinct 3 (w/ enclosures)
Christina Papadopoulos Papandreou, Delta Troy Interests, Ltd. (w/o enclosures)

HARRIS COUNTY
PUBLIC INFRASTRUCTURE DEPARTMENT
10000 Northwest Frwy. Suite 108
Houston, Texas 77092-8620
(713) 316-3545

27 December 2006

Mr. Clay Nance
Hance Scarborough Wright Woodward & Weisbart
111 Congress Avenue, Suite 500
Austin, Texas 78701

SUBJECT: Delta Troy Interests, Ltd.
Papadopolous Tract
TxDOT Sponsorship Letter

Dear Mr. Nance:

Harris County has reviewed your request for a sponsorship letter. As a condition of the issuance of the letter(s), a General Plan must be approved by the Houston Planning Commission. As each section is submitted, Harris County, upon request, will issue a sponsorship letter for the street(s) within that section that will tie into the State facility.

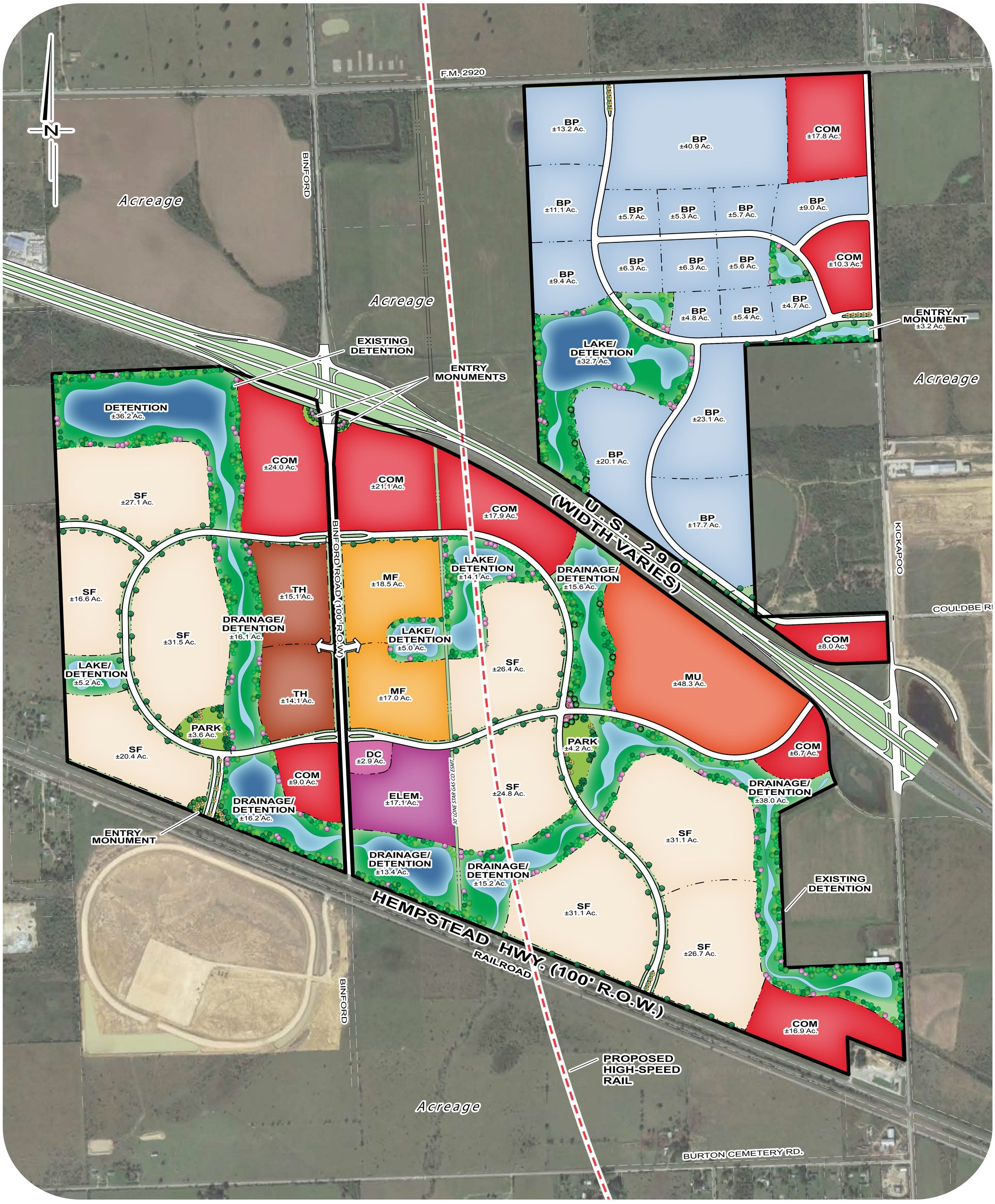
We appreciate the opportunity to review this preliminary proposal. If we may be of further assistance, please contact Jorge Cedillo or me.

Sincerely,

Wm. Reeves Gilmore
Assistant Director
Planning & Operations

CC: Raymond Anderson
Shannon Watson
Jorge Cedillo

Exhibit 3



LAND USE & ACREAGE ANALYSIS

LEGEND

RESIDENTIAL		**±300.4 Ac.**
SF	SINGLE FAMILY HOMES	±235.7 Ac.
MF	MULTI FAMILY RES	±35.5 Ac.
TH	TOWN HOMES	±29.2 Ac.
NON-RESIDENTIAL		**±357.6 Ac.**
COM	COMMERCIAL	±95.6 Ac.
MU	MIXED USE	±48.3 Ac.
BP	BUSINESS PARK	±193.7 Ac.
ES	ELEMENTARY SCHOOL	±17.1 Ac.
ES	DAYCARE	±2.9 Ac.
PARKS / RECREATION / OPEN SPACE		**±287.5 Ac.**
PARK	REC. CENTER & PARKS	±14.2 Ac.
	MONUMENTS AND LAKES (±6.4 Ac)	
	RECREATIONAL AREAS / PARKS (±7.8 Ac)	
	DRAINAGE / DETENTION`	±213.6 Ac.
	LANDSCAPE/OPEN SPACE/AMENITY LAKE	±59.7Ac.
CONSTRAINTS		**±47.4 Ac.**
	COLLECTOR STREETS	±44.3 Ac.
	PIPIELINES	±3.1 Ac
PROJECT TOTAL		**±992.9 Ac.**

OPTION D

a conceptual development plan for

PAPADOPOLOUS TRACT

± 1,113.0 ACRES OF LAND

prepared for

ANDREWS KURTH

BGE | KERRY R. GILBERT & ASSOCIATES

– Land Planning Consultants –
23501 Cinco Ranch Blvd., Suite A-250
Katy, Texas 77494

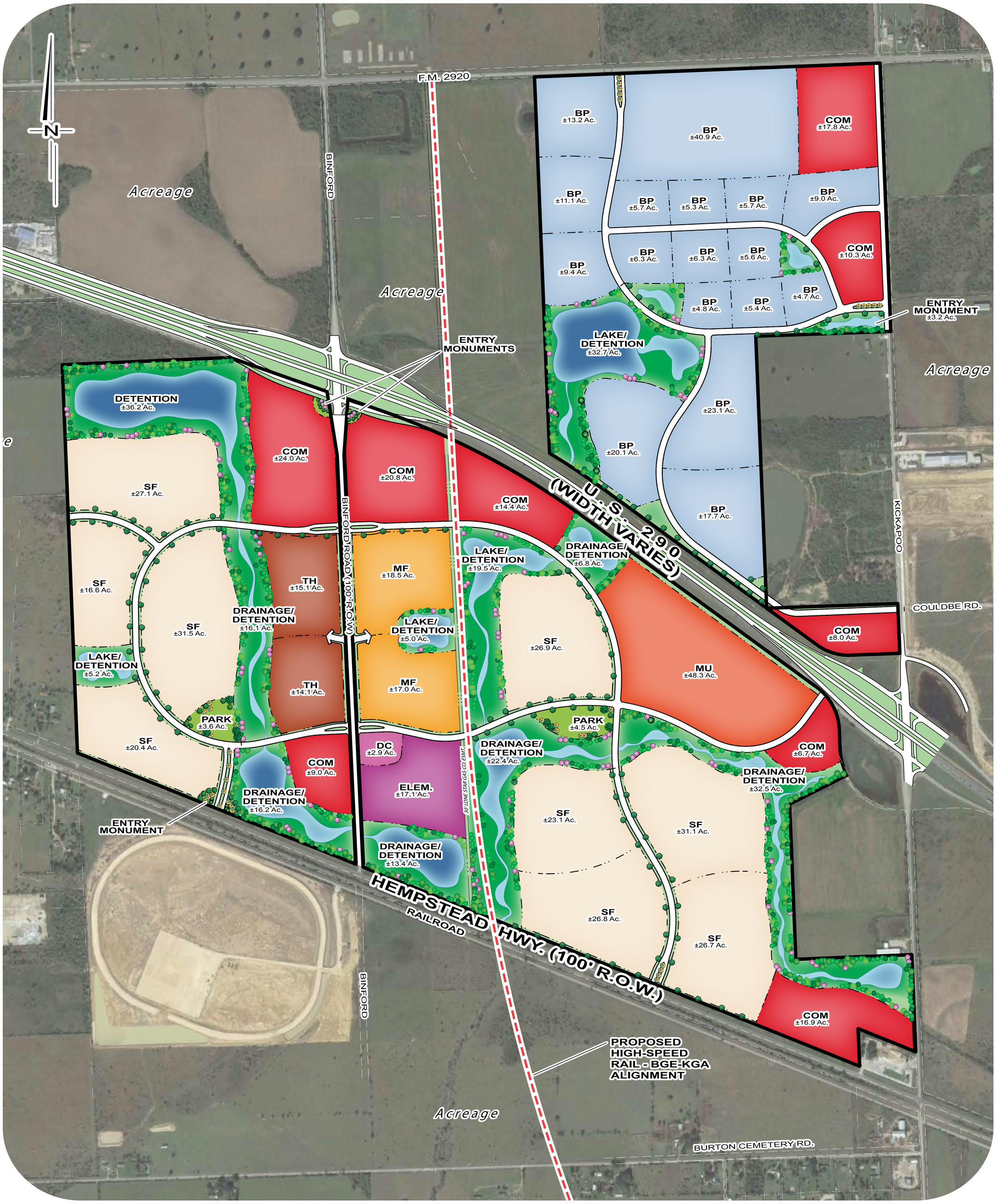
7000 North Mopac, Suite 330
Austin, TX 78731

2595 Dallas Parkway, Suite 204
Frisco, TX 75034

Tel: 281-579-0340

SCALE
0 200 400 800

April 7, 2016
KGA #I-170



LAND USE & ACREAGE ANALYSIS

LEGEND

RESIDENTIAL		**±294.9 Ac.**
SF	SINGLE FAMILY HOMES	±230.2 Ac.
MF	MULTI FAMILY RES	±35.5 Ac.
TH	TOWN HOMES	±29.2 Ac.
NON-RESIDENTIAL		**±353.8 Ac.**
COM	COMMERCIAL	±91.8 Ac.
MU	MIXED USE	±48.3 Ac.
BP	BUSINESS PARK	±193.7 Ac.
ES	ELEMENTARY SCHOOL	±17.1 Ac.
ES	DAYCARE	±2.9 Ac.
PARKS / RECREATION / OPEN SPACE		**±288.1 Ac.**
PARK	REC. CENTER & PARKS	±14.5 Ac.
	MONUMENTS AND LAKES (±6.4 Ac)	
	RECREATIONAL AREAS / PARKS (±8.1 Ac)	
	DRAINAGE / DETENTION`	±201.0 Ac.
	LANDSCAPE/OPEN SPACE/AMENITY LAKE	±72.6 Ac.
CONSTRAINTS		**±56.1 Ac.**
	COLLECTOR STREETS	±45.7 Ac.
	PIPIELINES	±3.1 Ac
	HIGH SPEED RAIL	±7.3 Ac
PROJECT TOTAL		**±992.9 Ac.**

OPTION E

a conceptual development plan for

PAPADOPOLOUS TRACT

± 1,113.0 ACRES OF LAND

prepared for

ANDREWS KURTH

BGE | KERRY R. GILBERT & ASSOCIATES

– Land Planning Consultants –
23501 Cinco Ranch Blvd., Suite A-250
Katy, Texas 77494

7000 North Mopac, Suite 330
Austin, TX 78731

2595 Dallas Parkway, Suite 204
Frisco, TX 75034

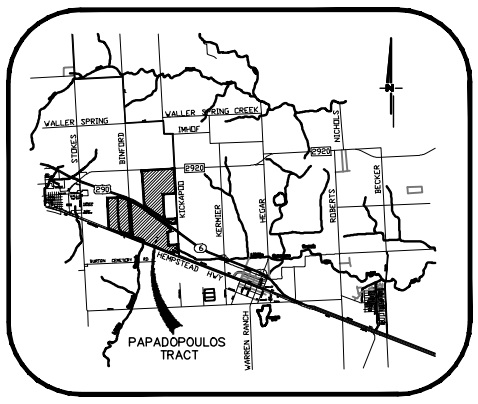
Tel: 281-579-0340

SCALE
0 200 400 800

April 7, 2016
KGA #I-170

Exhibit 4

KERRY R. GILBERT & ASSOCIATES, INC.



Vicinity Map
N.T.S.

Acreage

Madison Square

F.M. 2920

3339'

SF ±22.5 Ac.
SF ±24.3 Ac.
SF ±26.8 Ac.
SF ±21.4 Ac.
SF ±28.9 Ac.
SF ±28.0 Ac.
COM ±3.1 Ac.
LAKE / DETENTION ±29.1 Ac.
REC. CENTER ±3.0 Ac.
DETENTION ±11.3 Ac.
2565' To be dedicated for widening
3640'
1305'
77.66 acres 3382687.84 sq ft
TH ±23.4 Ac.
MF ±16.0 Ac.
MF ±18.8 Ac.
2631'
BINFORD
KICKAPOO
COULDBE RD.
1267'
480'
466'
R=533' L=358'
R=533' L=479'
R=613' L=263'
189'
620'
1100'
400'
1121'
939' To be dedicated for widening
383'
600'
1618'
2787'
L=660' R=7799'
L=2191' R=7479'
357
643'
526'
997
1623'
3753'
3954'
2595'
U.S. 290 (WIDTH VARIES)
HEMPSTEAD HWY. (100' R.O.W.)
RAILROAD
6198'
DETENTION ±23.6 Ac.
DETENTION ±9.1 Ac.
COM ±8.1 Ac.
COM ±9.2 Ac.
COM ±6.3 Ac.
COM ±6.3 Ac.
SF ±22.7 Ac.
SF ±20.8 Ac.
SF ±23.8 Ac.
SF ±16.1 Ac.
SF ±15.2 Ac.
SF ±21.5 Ac.
DETENTION ±14.6 Ac.
REC CENTER ±3.7 Ac.
LAKE / DETENTION ±4.8 Ac.
SF ±19.3 Ac.
DET. ±4.4 Ac.
TH ±9.7 Ac.
DETENTION ±10.1 Ac.
MF ±15.3 Ac.
SF ±28.6 Ac.
LAKE / DETENTION ±10.3 Ac.
CH ±9.1 Ac.
SCHOOL ±13.1 Ac.
DO ±1.6 Ac.
TH ±14.5 Ac.
SF ±28.8 Ac.
DRAINAGE ±1.8 Ac.
DETENTION ±19.5 Ac.
SF ±27.4 Ac.
MF ±15.8 Ac.
TH ±12.3 Ac.
DETENTION ±6.9 Ac.
COM ±16.0 Ac.
COM ±13.4 Ac.
REC CENTER ±3.5 Ac.
DETENTION ±6.9 Ac.
COM ±11.1 Ac.
SF ±39.7 Ac.
DETENTION ±36.3 Ac.
SF ±37.1 Ac.
COM ±11.9 Ac.
COM ±8.5 Ac.
To be dedicated for widening
Existing Drainage Eamt.
Acreage
Kickapoo Farms
BURTON CEMETERY RD.

GENERAL NOTE:

1.) ALL PUBLIC STREET RIGHT–OF–WAY ARE 60' UNLESS OTHERWISE NOTED.
2.) ALL CUL–DE–SAC RADII ARE 50' UNLESS OTHERWISE NOTED.

A GENERAL PLAN (S.P.O.) OF

PAPADOPOULOS TRACT

BEING 992.8± ACRES OF LAND

OUT of THE
HARRIS CO. SCH. LSD. 10 SURVEY, A-332
HARRIS COUNTY, TEXAS

OWNER: ABST 332 HARRIS CO SCH LDS 10
DELTA TROY INTERESTS

PLANNER:
KERRY R. GILBERT & ASSOCIATES, INC.

Land Planning Consultants
15810 Park Ten Place
Suite 160
Houston, Texas 77084
(281)579–0340

SCALE: 1" = 500'
0 250 500 1000

MAY 29, 2007
KGA# 1-170

DISCLAIMER AND LIMITED WARRANTY

THIS GENERAL PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF THE CITY OF HOUSTON ORDINANCE NO. 1999–262 IN EFFECT AT THE TIME THIS PLAT WAS PREPARED ALONG WITH ANY VARIANCE OR VARIANCES TO THE PROVISIONS OF THE AFOREMENTIONED ORDINANCE WHICH ARE SUBSEQUENTLY GRANTED BY THE CITY OF HOUSTON PLANNING COMMISSION. THIS GENERAL PLAN WAS PREPARED FOR THE LIMITED PURPOSE OF GUIDANCE IN THE PREPARATION OF ACTUAL ENGINEERING AND DEVELOPMENT PLANS. THIS LIMITED WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND NEITHER KERRY R. GILBERT & ASSOCIATES, INC., NOR ANY OF ITS OFFICERS, OR DIRECTORS, OR EMPLOYEES MAKE ANY OTHER WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED CONCERNING THE DESIGN, LOCATION, QUALITY, CHARACTER OF ACTUAL UTILITIES OR OTHER FACILITIES IN, ON, OVER, OR UNDER THE PREMISES INDICATED IN THE GENERAL PLAN.

KERRY R. GILBERT & ASSOCIATES, INC.

Exhibit 5

Houston Planning Commission

Platting Approval Conditions - Final CPC 101 Form

Agenda Item: 18

Action Date: 6/7/2007

Staff Recommendation: Approve subject to the conditions listed

subject to the conditions/requirements listed below

Subdivision Name/Data/Location	County	Approval Request	Ref #	Zip Code	Key Map	City/ETJ
Delta Troy Interests GP	Harris	GP	2007-1324	77484	283W	ETJ

Total acreage:	9923.8
Total number of lots:	0
Total number of multi-family units:	0
Total Reserve Acreage:	0

Developer: Delta Troy Interests, LP

Company: Kerry R. Gilbert & Associates

Conditions and requirements for approval

046. General Plan approval is for street patterns as shown on the plat only. (24)

046.1. Approval of the General Plan shall remain in effect for four years from the date of the Commission approval. Renewal of the GP shall occur when a section meeting the requirements of 42-24 (f) is recorded.

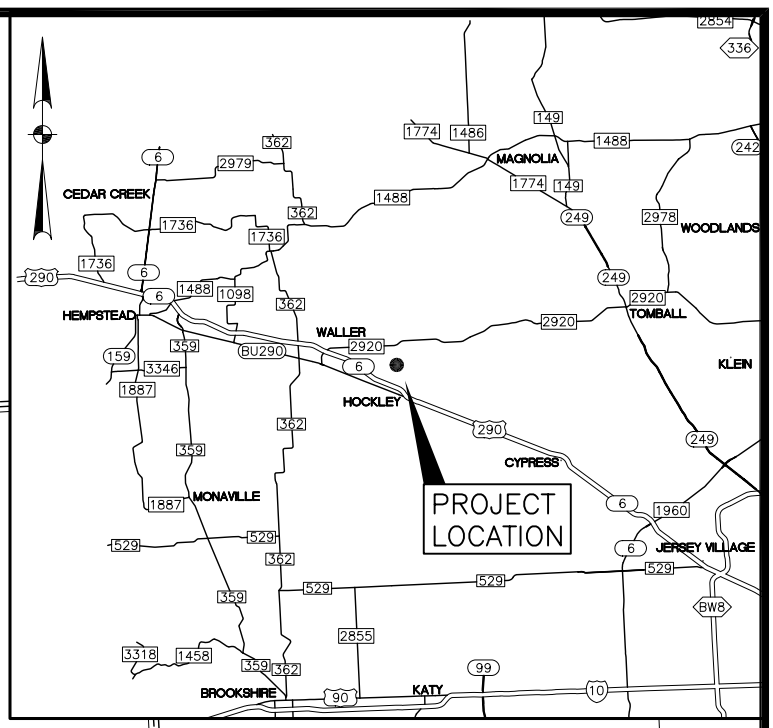
047. Make minor corrections and additions as indicated on the marked file copy.

143.1. Along a local street, there shall be an intersection with a local street, collector street or major thoroughfare at least every 1400 feet. (128)

Additional Comments:

Action Taken: Approve subject to the conditions listed

Exhibit 6



Kickapoo

HARTFORD

BINFORD

CITY LIMIT

WALLER SPRING

STOKES

KICKAPOO ROAD

FM 2920

H.C.M.U.D. No.524
BOUNDARY

BINFORD ROAD

IRONWOOD

CYPRESS

U.S. HIGHWAY 290

PINE
TREE

WALLER

TOMBALL

WALLER

STOKES

H.C.M.U.D. No.524
BOUNDARY

KERMIER

HEMPSTEAD HIGHWAY

OLD WASHINGTON RAILROAD

MATHIS

BURTON CEMETERY RD

HOUSTON CITY LIMIT

BURTON
CEMETERY

PUEBLO

TORREY

CHEROKEE

AZTEC

KICKAPOO ROAD

PREMIUM

Little Mound creek

BETKA

EXIHIBIT No.1
HARRIS COUNTY MUNICIPAL UTILITY DISTRICT NO. 524

VICINITY MAP

r.g.miller engineers
since 1966

12121 Wickchester Lane – Suite 200
Houston, Texas 77079
(713) 461-9600

TEXAS FIRM REGISTRATION NO. F-487

DATE: MARCH, 2009 N.T.S.

L:\DISCOVERY_PROJECTS\3372_1100_AC_PAPADOPOULOS_TRACT\CAD\EXHIBITS\VICINITY MAP.DWG MAR. 13, 2009-12:11pm PALACIOS

Exhibit 7

The State of Texas

Secretary of State

I, HOPE ANDRADE, Secretary of State of the State of Texas, DO HEREBY CERTIFY that the attached is a TRUE AND CORRECT copy of Senate Bill 475, signed by the Governor on June 17, 2011 and filed with this office on the same day.

Date Issued: June 30, 2011

Hope Andrade
Secretary of State

ST/js

Chapter 895

S.B. No. 475

AN ACT

relating to the creation of the Harris County Municipal Utility District No. 524; providing authority to impose a tax and issue bonds; granting a limited power of eminent domain.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF TEXAS:

SECTION 1. Subtitle F, Title 6, Special District Local Laws Code, is amended by adding Chapter 8354 to read as follows:

CHAPTER 8354. HARRIS COUNTY MUNICIPAL UTILITY DISTRICT NO. 524

SUBCHAPTER A. GENERAL PROVISIONS

Sec. 8354.001. DEFINITIONS. In this chapter:

(1) "Board" means the district's board of directors.

(2) "Commission" means the Texas Commission on Environmental Quality.

(3) "Director" means a board member.

(4) "District" means the Harris County Municipal Utility District No. 524.

Sec. 8354.002. NATURE OF DISTRICT. The district is a municipal utility district created under Section 59, Article XVI, Texas Constitution.

Sec. 8354.003. CONFIRMATION AND DIRECTORS' ELECTION REQUIRED. The temporary directors shall hold an election to confirm the creation of the district and to elect five permanent directors as provided by Section 49.102, Water Code.

Sec. 8354.004. CONSENT OF MUNICIPALITY REQUIRED. The

temporary directors may not hold an election under Section 8354.003 until each municipality in whose corporate limits or extraterritorial jurisdiction the district is located has consented by ordinance or resolution to the creation of the district and to the inclusion of land in the district.

Sec. 8354.005. FINDINGS OF PUBLIC PURPOSE AND BENEFIT. (a) The district is created to serve a public purpose and benefit.

(b) The district is created to accomplish the purposes of:

(1) a municipal utility district as provided by general law and Section 59, Article XVI, Texas Constitution; and

(2) Section 52, Article III, Texas Constitution, that relate to the construction, acquisition, or improvement of macadamized, graveled, or paved roads described by Section 54.234, Water Code, or improvements, including storm drainage, in aid of those roads.

Sec. 8354.006. INITIAL DISTRICT TERRITORY. (a) The district is initially composed of the territory described by Section 2 of the Act enacting this chapter.

(b) The boundaries and field notes contained in Section 2 of the Act enacting this chapter form a closure. A mistake made in the field notes or in copying the field notes in the legislative process does not affect the district's:

(1) organization, existence, or validity;

(2) right to issue any type of bond for the purposes for which the district is created or to pay the principal of and interest on a bond;

(3) right to impose a tax; or

(4) legality or operation.

[Sections 8354.007-8354.050 reserved for expansion]

SUBCHAPTER B. BOARD OF DIRECTORS

Sec. 8354.051. GOVERNING BODY; TERMS. (a) The district is governed by a board of five elected directors.

(b) Except as provided by Section 8354.052, directors serve staggered four-year terms.

Sec. 8354.052. TEMPORARY DIRECTORS. (a) On or after the effective date of the Act enacting this chapter, the owner or owners of a majority of the assessed value of the real property in the district may submit a petition to the commission requesting that the commission appoint as temporary directors the five persons named in the petition. The commission shall appoint as temporary directors the five persons named in the petition.

(b) Temporary directors serve until the earlier of:

(1) the date permanent directors are elected under Section 8354.003; or

(2) the fourth anniversary of the effective date of the Act enacting this chapter.

(c) If permanent directors have not been elected under Section 8354.003 and the terms of the temporary directors have expired, successor temporary directors shall be appointed or reappointed as provided by Subsection (d) to serve terms that expire on the earlier of:

(1) the date permanent directors are elected under Section 8354.003; or

(2) the fourth anniversary of the date of the

appointment or reappointment.

(d) If Subsection (c) applies, the owner or owners of a majority of the assessed value of the real property in the district may submit a petition to the commission requesting that the commission appoint as successor temporary directors the five persons named in the petition. The commission shall appoint as successor temporary directors the five persons named in the petition.

[Sections 8354.053-8354.100 reserved for expansion]

SUBCHAPTER C. POWERS AND DUTIES

Sec. 8354.101. GENERAL POWERS AND DUTIES. The district has the powers and duties necessary to accomplish the purposes for which the district is created.

Sec. 8354.102. MUNICIPAL UTILITY DISTRICT POWERS AND DUTIES. The district has the powers and duties provided by the general law of this state, including Chapters 49 and 54, Water Code, applicable to municipal utility districts created under Section 59, Article XVI, Texas Constitution.

Sec. 8354.103. AUTHORITY FOR ROAD PROJECTS. (a) Under Section 52, Article III, Texas Constitution, the district may design, acquire, construct, finance, issue bonds for, improve, and convey to this state, a county, or a municipality for operation and maintenance macadamized, graveled, or paved roads described by Section 54.234, Water Code, or improvements, including storm drainage, in aid of those roads.

(b) The district may exercise the powers provided by this section without submitting a petition to or obtaining approval from

the commission as required by Section 54.234, Water Code.

Sec. 8354.104. APPROVAL OF ROAD PROJECT. (a) The district may not undertake a road project authorized by Section 8354.103 unless:

(1) each municipality or county that will operate and maintain the road has approved the plans and specifications of the road project, if a municipality or county will operate and maintain the road; or

(2) the Texas Transportation Commission has approved the plans and specifications of the road project, if the state will operate and maintain the road.

(b) Except as provided by Subsection (a), the district is not required to obtain approval from the Texas Transportation Commission to design, acquire, construct, finance, issue bonds for, improve, or convey a road project.

Sec. 8354.105. COMPLIANCE WITH MUNICIPAL CONSENT ORDINANCE OR RESOLUTION. The district shall comply with all applicable requirements of any ordinance or resolution that is adopted under Section 54.016 or 54.0165, Water Code, and that consents to the creation of the district or to the inclusion of land in the district.

Sec. 8354.106. LIMITATION ON USE OF EMINENT DOMAIN. The district may not exercise the power of eminent domain outside the district to acquire a site or easement for:

(1) a road project authorized by Section 8354.103; or

(2) a recreational facility as defined by Section 49.462, Water Code.

[Sections 8354.107-8354.150 reserved for expansion]

SUBCHAPTER D. DIVISION OF DISTRICT INTO MULTIPLE DISTRICTS

Sec. 8354.151. DIVISION OF DISTRICT; PREREQUISITES. The district may be divided into two or more new districts only if the district:

(1) has no outstanding bonded debt; and

(2) is not imposing ad valorem taxes.

Sec. 8354.152. LAW APPLICABLE TO NEW DISTRICT. This chapter applies to any new district created by division of the district, and a new district has all the powers and duties of the district.

Sec. 8354.153. LIMITATION ON AREA OF NEW DISTRICT. A new district created by the division of the district may not, at the time the new district is created, contain any land outside the area described by Section 2 of the Act enacting this chapter.

Sec. 8354.154. DIVISION PROCEDURES. (a) The board, on its own motion or on receipt of a petition signed by the owner or owners of a majority of the assessed value of the real property in the district, may adopt an order dividing the district.

(b) The board may adopt an order dividing the district before or after the date the board holds an election under Section 8354.003 to confirm the district's creation.

(c) An order dividing the district:

(1) must:

(A) name each new district;

(B) include the metes and bounds description of the territory of each new district;

(C) appoint temporary directors for each new district, or provide that temporary directors are appointed in the manner provided by Section 8354.052(a); and

(D) provide for the division of assets and liabilities between the new districts; and

(2) is subject to a confirmation election in each new district.

(d) On or before the 30th day after the date of adoption of an order dividing the district, the district shall file the order with the commission and record the order in the real property records of each county in which the district is located.

Sec. 8354.155. CONFIRMATION ELECTION FOR NEW DISTRICT. (a) A new district created by the division of the district shall hold a confirmation and directors' election as required by Section 8354.003.

(b) The results of that election must be filed as required by Sections 49.102(e) and (f), Water Code.

(c) If the voters of a new district do not confirm the creation of the new district, the assets, liabilities, territory, and governance of the new districts revert to the original district.

Sec. 8354.156. MUNICIPAL CONSENT. Municipal consent to the creation of the district and to the inclusion of land in the district granted under Section 8354.004 acts as municipal consent to the creation of any new district created by the division of the district and to the inclusion of land in the new district.

Sec. 8354.157. TAX OR BOND ELECTION. Before a new district

created by the division of the district may impose a maintenance tax or issue bonds payable wholly or partly from ad valorem taxes, the new district must hold an election as required by this chapter to obtain voter approval.

[Sections 8354.158-8354.200 reserved for expansion]

SUBCHAPTER E. GENERAL FINANCIAL PROVISIONS

Sec. 8354.201. ELECTIONS REGARDING TAXES OR BONDS. (a) The district may issue, without an election, bonds and other obligations secured by:

(1) revenue other than ad valorem taxes; or

(2) contract payments described by Section 8354.203.

(b) The district must hold an election in the manner provided by Chapters 49 and 54, Water Code, to obtain voter approval before the district may impose an ad valorem tax or issue bonds payable from ad valorem taxes.

(c) The district may not issue bonds payable from ad valorem taxes to finance a road project unless the issuance is approved by a vote of a two-thirds majority of the district voters voting at an election held for that purpose.

Sec. 8354.202. OPERATION AND MAINTENANCE TAX. (a) If authorized at an election held under Section 8354.201, the district may impose an operation and maintenance tax on taxable property in the district in accordance with Section 49.107, Water Code.

(b) The board shall determine the tax rate. The rate may not exceed the rate approved at the election.

Sec. 8354.203. CONTRACT TAXES. (a) In accordance with Section 49.108, Water Code, the district may impose a tax other than

an operation and maintenance tax and use the revenue derived from the tax to make payments under a contract after the provisions of the contract have been approved by a majority of the district voters voting at an election held for that purpose.

(b) A contract approved by the district voters may contain a provision stating that the contract may be modified or amended by the board without further voter approval.

[Sections 8354.204-8354.250 reserved for expansion]

SUBCHAPTER F. BONDS AND OTHER OBLIGATIONS

Sec. 8354.251. AUTHORITY TO ISSUE BONDS AND OTHER OBLIGATIONS. The district may issue bonds or other obligations payable wholly or partly from ad valorem taxes, impact fees, revenue, contract payments, grants, or other district money, or any combination of those sources, to pay for any authorized district purpose.

Sec. 8354.252. TAXES FOR BONDS. At the time the district issues bonds payable wholly or partly from ad valorem taxes, the board shall provide for the annual imposition of a continuing direct ad valorem tax, without limit as to rate or amount, while all or part of the bonds are outstanding as required and in the manner provided by Sections 54.601 and 54.602, Water Code.

Sec. 8354.253. BONDS FOR ROAD PROJECTS. At the time of issuance, the total principal amount of bonds or other obligations issued or incurred to finance road projects and payable from ad valorem taxes may not exceed one-fourth of the assessed value of the real property in the district.

SECTION 2. The Harris County Municipal Utility District No.

524 initially includes all the territory contained in the following area: 990.804 acres in 5 non-contiguous tracts out of Sections 9, 10, 15, and 16 of Harris County School Land Survey, Abstract No 332, recorded in Vol 17, Pg 222 of the Deed Records of Harris County, Texas and including within Tracts 1, 2, 3, and 4 an unnamed 66 foot roadway as shown on the plat of said Harris County School Land being granted by Commissioners Award recorded in Vol 7448, Pg 181, HCDR; said roadway does not exist physically on the ground: (All bearings used herein are based on Highway Right-of-Way Maps provided by the Texas Department of Transportation)

Tract 1

A tract or parcel of land containing 255.572 acres (11,132,730 square feet) out of Lots 9, 10, 15, and 16 of Section 9 and Lots 1, 2, 7, & 8 of Section 16 of said Harris County School Land Survey, Abstract No 332, Harris County, Texas; said 255.572 acres being that same tract of land called 257.230 acres described by deed recorded in HCCF No M577056 ("Tract 1", therein) and conveyed to Delta Troy Interests, Ltd by deed recorded in X381657 and more particularly described by metes and bounds as follows:

COMMENCING at a State Department of Highways and Public Transportation Horizontal Control Monument located in the southerly right-of-way line of U.S. 290, 160.00 feet at right angles from the centerline, across from Engineers Station 109+27.74;

THENCE along said southerly right-of-way line, clockwise, following the arc of a 1855.86 foot radius curve-to-the-right, subtending a central angle of 03 degrees 20 min 18 seconds, through

an arc length of 108.13 feet (chord bearing of South 66 degrees 23 minutes 38 seconds East, 108.12 feet) to a 5/8 inch iron rod found marking the POINT OF BEGINNING and most northerly Northeast corner of the herein described tract, same being the East corner of that called 12.4147 acre tract of land conveyed to Peter S. Terpstra, Trustee by deed recorded in HCCF No 20060246633;

THENCE continuing along said right-of-way line and said curve, subtending a central angle of 06 degrees 36 minutes 09 seconds, through an arc length of 213.86 feet (chord bearing of South 61 degrees 25 minutes 25 seconds East, 213.74 feet) to a 5/8 inch iron rod set marking the end of said curve; said point being located in the southerly right-of-way line of U.S. 290, 202.32 feet at right angles from the centerline, across from Engineers Station 112+46.53;

THENCE continuing along said right-of-line line, following the arc of a 1963.86 foot radius curve-to-the-left (radius point of said curve falls along a bearing of North 31 degrees 52 minutes 42 seconds East), subtending a central angle of 12 degrees 31 minutes 54 seconds, through an arc length of 429.54 feet (chord bearing of South 64 degrees 23 minutes 15 seconds East, 428.68 feet) to a 5/8 inch iron rod set marking a point-of-tangency in the southerly right-of-way line; said point-of-tangency being located in the southerly right-of-way line of U.S. 290, 249.10 feet at right angles from the centerline, across from Engineers Station 116+72.65;

THENCE South 70 degrees 39 minutes 12 seconds East, along said right-of-way line, a distance of 382.15 feet to a 5/8 inch iron rod

set marking the Northerly end of cut-back corner at the southwest corner of the intersection of said U.S. 290 and Binford Road; said corner being located in the southerly right-of-way line of U.S. 290, 249.10 feet at right angles from the centerline, across from Engineers Station 120+54.80;

THENCE South 30 degrees 37 minutes 41 seconds East, along said cut-back, a distance of 95.73 feet to a 5/8 inch iron rod set marking the Southerly end of said cut-back and the most Easterly Northeast corner of the herein described tract; said corner being located in the southerly right-of-way line of U.S. 290, 310.37 feet at right angles from the centerline, across from Engineers Station 121+28.11;

THENCE South 09 degrees 03 minutes 59 seconds East, along the westerly right-of-way of said Binford Road (right-of-way varies at this point), a distance of 452.04 feet to a 5/8 inch iron rod set marking an angle point in said right-of-way line; a 1 inch iron pipe found bears South 03 degrees 41 minutes 58 seconds East, 35.93 feet from said angle point;

THENCE South 02 degrees 39 minutes 08 seconds East, along the westerly right-of-way line of said Binford Road (66' right-of-way) and crossing Lots 9 and 16 of said Section 9 and Lots 1 and 8 of Section 16, a distance of 3953.90 feet (call: 3954.35 feet) to a 5/8 inch iron rod set marking the Southeast corner of the herein described tract, same being the Northwest corner of the intersection of U.S. 290 (old)/State Highway 6 (aka Hempstead Highway) and said Binford Road; a 5/8 inch iron rod found bears North 68 degrees 08 minutes 01 seconds West, 4.54 feet from said

corner;

THENCE North 68 degrees 08 minutes 01 seconds West, along the Northerly right-of-way line of said U.S. 290 (old)/State Highway 6 (aka Hempstead Highway) and crossing Lots 8, 7, and 2 of said Section 16, a distance of 2899.51 feet (call: 2897.66 feet) to a 5/8 inch iron set marking the Southwest corner of the herein described tract, same being the Southeast corner of that called 30.213 acre tract of land conveyed to Michael L. Perry and Edna A. Perry by deed recorded in HCCF No U717338; a 5/8 inch iron rod found bears South 02 degrees 24 minutes 55 seconds East, 7.01 feet from said corner;

THENCE North 02 degrees 24 minutes 55 seconds West, along the Easterly line of said 30.213 acres, same being the Westerly line of Lot 2 of said Section 16 and of Lots 15, 10, and 7 of said Section 9, and with the Easterly line of that called 70.801 acre tract conveyed to A.J. Foyt, Jr. by deed recorded in HCCF No U071611 and that called 11.15 acre tract conveyed to L.J. Hakemack and wife, Ney Hakemack, by deed recorded in HCCF No P056681, a distance of 3736.61 feet (call: 3753.11 feet) to a point for corner at the Northwest corner of the herein described tract, same being the Southwest corner of the aforesaid 12.4147 acre Terpstra Tract;

THENCE North 87 degrees 11 minutes 26 seconds East, along the Southerly line of said 12.4147 acre tract, a distance of 1612.53 feet (call: 1623.36 feet) to the Point of Beginning and containing 255.572 Acres (11,132,730 square feet) of land.

Tract 2

A tract or parcel of land containing 440.146 acres (19,172,762 square feet) out of Lots 11-15 of Section 10 and Lots 1-12, 15, & 16

of Section 15 of said Harris County School Land Survey, Abstract No 332, Harris County, Texas; said 440.146 acres out of that same tract of land called 451.6392 acres described by deed recorded in HCCF No M577056 ("Tract 2-A", therein) and conveyed to Delta Troy Interests, Ltd by deed recorded in X381657 and more particularly described by metes and bounds as follows:

COMMENCING at a State Department of Highways and Public Transportation Horizontal Control Monument located in the southerly right-of-way line of U.S. 290, 160.00 feet at right angles from the centerline, across from Engineers Station 109+27.74;

THENCE South 70 degrees 39 minutes 12 seconds East, a distance of 1690.16 feet to a point-of-curvature in the former southerly right-of-way line of said U.S. 290; said point-of-curvature being located 160.00 feet at right angles from the centerline, across from Engineers Station 126+17.90;

THENCE along said former southerly right-of-way line, clockwise, following the arc of a 7479.44 foot radius curve-to-the-right (radius point of said curve falls along a bearing of South 19 degrees 20 minutes 48 seconds West), subtending a central angle of 03 degrees 05 min 32 seconds, through an arc length of 403.66 feet (chord bearing of South 69 degrees 06 minutes 26 seconds East, 403.61 feet) to a 5/8 inch iron rod set in the current Southerly right-of-way line of said U.S. 290 marking the POINT OF BEGINNING and the most Easterly Northwest corner of the herein described tract; said point being located 160.00 feet at right angles from the centerline, across from Engineers Station 130+30.21;

THENCE continuing along said right-of-way line and said curve, subtending a central angle of 13 degrees 42 minutes 56 seconds, through an arc length of 1790.44 feet (chord bearing of South 60 degrees 42 minutes 12 seconds East, 1786.17 feet) to a 5/8 inch iron rod set marking a point-of-tangency in said right-of-way line; said point being located in the southerly right-of-way line of U.S. 290, 160.00 feet at right angles from the centerline, across from Engineers Station 148+59.00;

THENCE South 53 degrees 50 minutes 44 seconds East, along said right-of-way line, a distance of 2795.16 feet (call: 2793.73 feet - TxDOT) to a 5/8 inch iron rod found marking a point-of-curvature in said right-of-way line;

THENCE along said southerly right-of-way line, clockwise, following the arc of a 532.96 foot radius curve-to-the-right, subtending a central angle of 51 degrees 31 min 30 seconds (call: 51 degrees 32 minutes 51 seconds - TxDOT), through an arc length of 478.76 feet (call: 479.28 feet - TxDOT) (chord bearing of South 28 degrees 04 minutes 59 seconds East, 463.29 feet) to a 5/8 inch iron rod found marking a point-of-tangency in said southerly right-of-way line;

THENCE South 02 degrees 19 minutes 14 seconds East (call: South 02 degrees 17 minutes 53 seconds East - TxDOT), along said southerly right-of-way line, a distance of 187.88 feet (call: 188.32 feet - TxDOT) to a 5/8 inch iron rod found marking a point-of-curvature in said southerly right-of-way line;

THENCE counter-clockwise continuing along said right-of-way line and a 612.96 foot radius curve-to-the-left, subtending a central

angle of 24 degrees 29 minutes 23 seconds (call: 24 degrees 34 minutes 06 seconds), through an arc length of 261.99 feet (call: 262.84 feet) (chord bearing of South 14 degrees 33 minutes 56 seconds East, 260.00 feet) to a 5/8 inch iron rod set for corner, same being the most Northerly corner of that called 1.939 acre tract of land conveyed to the State of Texas as a Drainage Easement for Highway Purposes by deed recorded in HCCF No R450176 out of that called 30 acre residue of that called 920.21 acre Schindler "First Tract" as described by deed recorded in Vol 2187, Pg 525, HCDR;

THENCE South 63 degrees 11 minutes 23 seconds West (call: South 63 degrees 08 minutes 01 seconds West), along the northwesterly line of said 1.939 acre tract, a distance of 620.23 feet (call: 620.08 feet) to a 5/8 inch iron rod set at the northwesterly corner of said 1.939 acre tract;

THENCE South 02 degrees 19 minutes 14 seconds East (call: South 02 degrees 17 minutes 53 seconds East), along the westerly line of said 1.939 acre tract, passing at a distance of 1102.28 feet (call: 1100.29 feet) a 1/2 inch iron rod found marking the Southwest corner of said 1.939 acre and 30 acre tract and the Northwest corner of that called 10.298 acre tract conveyed to MRJ Wood Products by deed recorded in HCCF No U232228, continuing along the westerly line of said 10.298 acre tract, a total distance of 1502.28 feet (call: 1500.29 feet) to a 5/8 inch iron rod set for corner, same being the southwest corner of said 10.298 acre tract;

THENCE North 87 degrees 40 minutes 46 seconds East (call: North 87 degrees 42 minutes 07 seconds East), along the southerly line of said 10.298 acre tract, a distance of 1121.41 feet to a 5/8 inch

iron rod set in the Westerly right-of-way line of Kickapoo Road marking the most Northerly Southeast corner of the herein described tract, same being the southeasterly corner of said 10.298 acre tract;

THENCE South 02 degrees 19 minutes 14 seconds East (call: South 02 degrees 17 minutes 53 seconds East), along the Westerly right-of-way line of said Kickapoo Road, a distance of 939.31 feet (call: 938.70 feet) to a 1 inch iron pipe found for corner, same being the Northeast corner of that called 2.401 acre tract conveyed to Leaman Building Materials by deed recorded in HCCF No X159580 ("Tract One");

THENCE North 68 degrees 08 minutes 01 seconds West, along the northerly line of said 2.401 acre tract, a distance of 597.94 feet (call: 600.00') to a 5/8 inch iron rod set for corner, same being the Northwest corner of said 2.401 acre tract;

THENCE South 02 degrees 19 minutes 14 seconds East, along the westerly line of said 2.401 acre tract and that called 1.804 acre tract also conveyed to said Leaman Building Materials in said HCCF No X159580 ("Tract Two"), a distance of 362.42 feet (call: 363.00 feet) to a 5/8 inch iron rod set in the northerly right-of-way line of U.S. 290 (old)/State Highway 6 (aka Hempstead Highway) marking the most Southerly Southeast corner of the herein described tract; a 1 inch iron rod found bears South 02 degrees 19 minutes 14 seconds East, 2.33 feet from said property corner; a 2 inch iron rod found marking the Northeast corner of the intersection of said Kickapoo Road and said U.S. 290 (old)/State Highway 6 (aka Hempstead Highway) bears South 68 degrees 08 minutes 01 seconds East, 670.29

feet from said property corner;
THENCE North 68 degrees 08 minutes 01 seconds West, along the northerly right-of-way line of said U.S. 290 (old)/State Highway 6 (aka Hempstead Highway), a distance of 5170.99 feet (call: 5167.61 feet) to a 5/8 inch iron rod set marking the Southwest corner of the herein described tract, same being the Northeast corner of the intersection of Binford Road and said U.S. 290 (old)/State Highway 6 (aka Hempstead Highway); a 5/8 inch iron rod set marking the Northwest corner of said intersection bears North 68 degrees 08 minutes 01 seconds West, 72.54 feet from which a 5/8 inch iron rod found bears North 68 degrees 08 minutes 01 seconds West, 4.54 feet;
THENCE North 02 degrees 39 minutes 08 seconds West, along the Easterly right-of-way of said Binford Road (66' right-of-way), a distance of 3983.74 feet (call: 3984.16 feet) to a 5/8 inch iron rod set marking an angle point in said Easterly right-of-way line;
THENCE North 03 degrees 59 minutes 00 seconds East, continuing along the Easterly right-of-way of said Binford Road (right-of-way varies at this point), a distance of 370.66 feet to a 5/8 inch iron rod set marking the Southerly end of cut-back corner at the southeast corner of the intersection of the aforesaid U.S. 290 (new) and said Binford Road; said corner being located in the southerly right-of-way line of U.S. 290, 326.25 feet at right angles from the centerline, across from Engineers Station 123+06.25;
THENCE North 56 degrees 39 minutes 54 seconds East, along said cut-back, a distance of 97.00 feet to a 5/8 inch iron rod set marking the most Northerly Northwest corner of the herein described

tract; said corner being located in the southerly right-of-way line of U.S. 290, 249.10 feet at right angles from the centerline, across from Engineers Station 123+65.05;

THENCE South 70 degrees 39 minutes 12 seconds East, along said right-of-way line, a distance of 107.61 feet to a 5/8 inch iron rod set marking a point-of-curvature in said right-of-way line; said point-of-curvature being located in the southerly right-of-way line of U.S. 290, 249.10 feet at right angles from the centerline, across from Engineers Station 124+72.67;

THENCE continuing along said right-of-line line, counter-clockwise, following the arc of a 1963.86 foot radius curve-to-the-left (radius point of said curve falls along a bearing of North 19 degrees 20 minutes 48 seconds East), subtending a central angle of 16 degrees 13 minutes 27 seconds, through an arc length of 556.10 feet (chord bearing of South 78 degrees 45 minutes 56 seconds East, 554.24 feet) to the POINT OF BEGINNING and containing 440.146 acres (19,172,762 square feet) of land.

Tract 3

A tract or parcel of land containing 10.536 acres (458,955 square feet) out of Lot 1 of Section 15 of said Harris County School Land Survey, Abstract No 332, Harris County, Texas; said 10.536 acres being that same tract of land called 10.5483 acres described by deed recorded in HCCF No M577056 ("Tract 3", therein) and conveyed to Delta Troy Interests, Ltd by deed recorded in X381657 and more particularly described by metes and bounds as follows:

BEGINNING at a 1/2 inch iron rod found marking the Northwest corner of the intersection of the northerly right-of-way line of U.S. 290

and the westerly right-of-way line of Kickapoo Road (66' right-of-way), same being the Southeast corner of the herein described tract;

THENCE North 87 degrees 42 minutes 07 seconds West, along the northerly right-of-way line of said U.S. 290, a distance of 468.34 feet to a 5/8 inch iron rod set marking a point-of-curvature in said northerly right-of-way line; a 3/8 inch iron rod found bears South 56 degrees 27 minutes 32 seconds East, 2.03 feet from said point-of-curvature;

THENCE clockwise along said northerly right-of-way line and following a 532.96 foot radius curve-to-the-right, subtending a central angle of 38 degrees 27 minutes 09 seconds, through an arc length of 357.68 feet (chord bearing of North 73 degrees 04 minutes 18 seconds West, 351.01 feet) to a 5/8 inch iron rod set marking a point-of-tangency in said northerly right-of-way line; said point-of-tangency being located in the northerly right-of-way line of U.S. 290, 160.00 feet at right angles from the centerline, across from Engineers Station 174+17.41;

THENCE North 53 degrees 50 minutes 44 seconds West, along said northerly right-of-way line, a distance of 595.14 feet (call: 596.40 feet) to a 5/8 inch iron rod set marking the Northwest corner of the herein described tract in the common line of Lot 16 of Section 10 and said Lot 1 of Section 15;

THENCE North 87 degrees 57 minutes 51 seconds East, along said common line, same being the centerline of the aforesaid unnamed 66' roadway, a distance of 1266.25 feet (call: 1266.84 feet) to a 5/8 inch iron rod set in the westerly right-of-way line of said Kickapoo

Road marking the Northeast corner of the herein described tract; a 1 inch iron pipe found marking the Southeast corner of the called 78.9245 acre Schindler tract bears North 02 degrees 15 minutes 05 seconds West, 33.00 feet for reference;

THENCE South 02 degrees 15 minutes 05 seconds East, along the westerly right-of-way line of said Kickapoo Road, a distance of 479.89 feet (call: 480.13 feet) to the POINT OF BEGINNING and containing 10.536 acres (458,955 square feet) of land.

Tract 4

A tract or parcel of land containing 283.558 acres (12,351,801 square feet) out of Lots 1, 2, 3, 6-11, 15, & 16 of Section 10 of said Harris County School Land Survey, Abstract No 332, Harris County, Texas; said 283.558 acres being out of that tract of land called 393.3575 acres described by deed recorded in HCCF No M577056 ("Tract 4-A", therein) and conveyed to Delta Troy Interests, Ltd by deed recorded in X381657 and more particularly described by metes and bounds as follows:

BEGINNING at a 5/8 inch iron rod set marking the Northeast corner of the herein described tract, same being the southwest corner of the intersection of Kickapoo Road and said FM 2920 (aka Waller-Tomball Road); a 1 inch iron pipe found bears South 02 degrees 15 minutes 05 seconds East, 0.99 foot from said property corner;

THENCE South 02 degrees 15 minutes 05 seconds East (call: South 02 degrees 17 minutes 53 seconds East), along the westerly right-of-way line of said Kickapoo Road (66' right-of-way), a distance of 2592.60 feet (HCCF No M798918; call: 2593.01 feet-HCCF No M577056) to a 5/8 inch iron rod set marking the most northerly

Southeast corner of the herein described tract, same being in the common line of Lots 8 and 9 of said Section 10 and being the Northeast corner of that called 78.9245 acre Schindler tract of land described in HCCF No M798918 and that called 23.6773 acre tract out of same conveyed to Michael McDonald and wife, Kimela McDonald, by deed recorded in HCCF No X611580; a 5/8 inch iron rod found bears North 87 degrees 33 minutes 33 seconds East, 2.99 feet from said corner;

Thence South 87 degrees 33 minutes 33 seconds West, along the common line of said Lots 8 and 9, same being the northerly line of said 78.9245 acre Schindler tract, a distance of 1316.56 feet (call: 1316.44 feet - HCCF No M798918) to a 1 inch iron pipe found for corner, same being the common corner of Lots 7, 8, 9, and 10 of said Section 10 and the Northwest corner of said 78.9245 acre Schindler tract; a capped iron rod found bears North 41 degrees 57 minutes 18 seconds East, 12.64 feet from said corner;

THENCE South 02 degrees 31 minutes 48 seconds East, along the common line of Lots 9, 10, 15, and 16 of said Section 10, same being the westerly line of said 78.9245 acre Schindler tract, passing at a distance of 2618.58 feet (call: 2617.89 feet- HCCF No M798918) a 1 inch iron pipe found marking the most Southwest corner of said 78.9245 acre Schindler tract, same being in the northerly line of the aforesaid unnamed 66' roadway, continuing a total distance of 2621.94 feet (call: 2631.01 feet) to a 5/8 inch iron rod set in the northerly right-of-way line of the aforesaid U.S. 290 marking the most southerly Southeast corner of the herein described tract;

THENCE North 53 degrees 50 minutes 44 seconds West, along the

northerly right-of-way line of said U.S. 290, a distance of 1915.33 feet (call: 1917.64 feet) to a 5/8 inch iron rod set marking a point-of-curvature in the northerly right-of-way line of U.S. 290, 160.00 feet at right angles from the centerline, across from Engineers Station 148+59.00;

THENCE along said northerly right-of-way line, counter-clockwise, following the arc of a 7799.44 foot radius curve-to-the-left, subtending a central angle of 04 degrees 50 min 53 seconds, through an arc length of 659.96 feet (chord bearing of North 55 degrees 16 minutes 11 seconds West, 659.76 feet) to the Southwest corner of the herein described tract, same being the Southeast corner of that called 107.6370 acre tract conveyed to Peter S. Terpstra by deed recorded in HCCF No 20070033123; a 3/8 inch iron rod found bears South 79 degrees 56 minutes 25 seconds West, 0.88 foot from said corner;

THENCE North 02 degrees 18 minutes 00 seconds West, crossing Lots 11, 6, and 3 of said Section 10 and along the easterly line of said 107.6370 acre tract, a distance of 3638.55 feet (call: 3639.80 feet) to a 5/8 inch iron rod set in the southerly right-of-way line of FM 2920 (aka Waller-Tomball Road - 100' right-of-way) marking the Northwest corner of the herein described tract, same being the Northeast corner of said 107.6370 acres; 5/8 inch iron rods found marking the northeast and northwest corners of a 10'x20' SWBT easement dedicated by instrument recorded in HCCF No H844991 bear South 87 degrees 42 minutes 00 seconds West, along said southerly right-of-way line at 379.81 feet and 399.81 feet, respectively, from said property corner;

THENCE North 87 degrees 42 minutes 00 seconds East, along said southerly right-of-way line, passing at 2940.90 feet a 5/8 inch iron rod found marking the northeast corner of a 20'x20' SWBT easement dedicated by instrument recorded in HCCF No H844992, continuing a total distance of 3341.68 feet (call: 3335.99 feet) to the POINT OF BEGINNING and containing 283.558 acres (12,351,801 square feet) of land.

Tract 5

Being 0.992 acre (43,220 square feet) out of Lot 1, Section 9 of Harris County School Land Survey, Abstract No 332 and being that called 1 acre conveyed to Leon Schindler and R.G. Schindler by deed recorded in Volume 2187, Page 525 of the Deed Records of Harris County, Texas; said 0.992 acre fronting 208.00 feet on Binford Road and being surrounded on three sides by that called 127.96 acre tract conveyed to Peter S. Terpstra, Trustee, by deed recorded in HCCF Nos 20060246634 & 20060246637; said 0.992 acre also being that same tract of land called 1 acre conveyed to Leon Schindler and R.G. Schindler by deed recorded in Vol 2187, Pg 525, HCDR ("Fourth Tract", therein) and called 0.9922 acre as described by deed recorded in HCCF No M577056 ("Tract 5", therein) and conveyed to Delta Troy Interests, Ltd by deed recorded in X381657 and more particularly described by metes and bounds as follows:

COMMENCING at a 5/8 inch iron rod found marking the Southerly end of cut-back corner at the northwest corner of the intersection of the aforesaid U.S. 290 (new) and Binford Road; said corner being located in the northerly right-of-way line of U.S. 290, 248.90 feet at right angles from the centerline, across from Engineers Station

118+23.58;

THENCE North 56 degrees 39 minutes 54 seconds East, along said cut-back, a distance of 97.00 feet to a point in the westerly right-of-way line of said Binford Road at the Northerly end of said cut-back;

THENCE North 03 degrees 59 minutes 00 seconds East, along the westerly right-of-way line of said Binford Road (right-of-way varies at this point), a distance of 370.87 feet to a 5/8 inch iron rod found marking an angle point in said westerly right-of-way line;

THENCE North 02 degrees 42 minutes 01 seconds West, along the westerly right-of-way line of said Binford Road (66' right-of-way), a distance of 1690.50 feet to a 1 inch iron pipe found marking the POINT OF BEGINNING and southeast corner of the herein described tract;

THENCE South 89 degrees 52 minutes 54 seconds West, crossing said Lot 1 of Section 9, a distance of 208.00 feet to a 5/8 inch iron rod set marking the southwest corner of the herein described tract; a 5/8 inch iron rod found bears North 14 degrees 12 minutes 39 seconds East, 2.36 feet from said corner;

THENCE North 02 degrees 42 seconds 01 seconds West (call: North 02 degrees 41 seconds 16 seconds West, crossing said Lot 1 of Section 9, a distance of 208.00 feet to a 5/8 inch iron rod set marking the northwest corner of the herein described tract;

THENCE North 89 degrees 52 minutes 54 seconds East, crossing said Lot 1 of Section 9, a distance of 208.00 feet to a 1 inch iron pipe found in the westerly right-of-way line of said Binford Road (66'

right-of-way) marking the northeast corner of the herein described tract;

THENCE South 02 degrees 42 minutes 01 seconds East (call: South 02 degrees 41 minutes 16 seconds East, along the westerly right-of-way line of said Binford Road, a distance of 208.00 feet to the POINT OF BEGINNING and containing 0.992 acre (43,220 square feet) of land.

SECTION 3. (a) The legal notice of the intention to introduce this Act, setting forth the general substance of this Act, has been published as provided by law, and the notice and a copy of this Act have been furnished to all persons, agencies, officials, or entities to which they are required to be furnished under Section 59, Article XVI, Texas Constitution, and Chapter 313, Government Code.

(b) The governor, one of the required recipients, has submitted the notice and Act to the Texas Commission on Environmental Quality.

(c) The Texas Commission on Environmental Quality has filed its recommendations relating to this Act with the governor, the lieutenant governor, and the speaker of the house of representatives within the required time.

(d) All requirements of the constitution and laws of this state and the rules and procedures of the legislature with respect to the notice, introduction, and passage of this Act are fulfilled and accomplished.

SECTION 4. (a) Section 8354.106, Special District Local Laws Code, as added by Section 1 of this Act, takes effect only if

this Act receives a two-thirds vote of all the members elected to each house.

(b) If this Act does not receive a two-thirds vote of all the members elected to each house, Subchapter C, Chapter 8354, Special District Local Laws Code, as added by Section 1 of this Act, is amended by adding Section 8354.106 to read as follows:

Sec. 8354.106. NO EMINENT DOMAIN POWER. The district may not exercise the power of eminent domain.

(c) This section is not intended to be an expression of a legislative interpretation of the requirements of Subsection (c), Section 17, Article I, Texas Constitution.

SECTION 5. Except as provided by Section 4 of this Act:

(1) this Act takes effect immediately if it receives a vote of two-thirds of all the members elected to each house, as provided by Section 39, Article III, Texas Constitution; and

(2) if this Act does not receive the vote necessary for immediate effect, this Act takes effect September 1, 2011.

S.B. No. 475

President of the Senate

Speaker of the House

I hereby certify that S.B. No. 475 passed the Senate on March 31, 2011, by the following vote: Yeas 31, Nays 0.

Secretary of the Senate

I hereby certify that S.B. No. 475 passed the House on May 25, 2011, by the following vote: Yeas 147, Nays 0, one present not voting.

Chief Clerk of the House

Approved:

17 JUN '11

Date

RICK PERRY

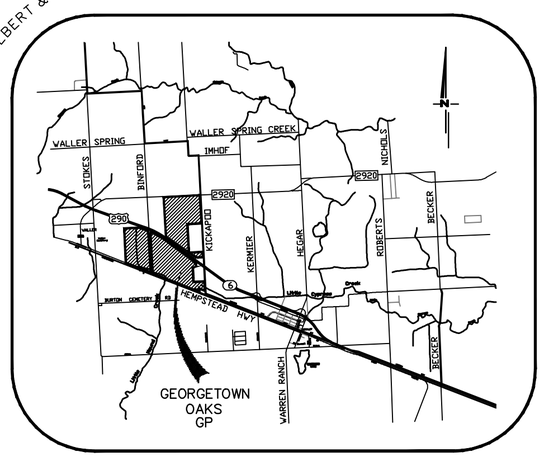
Governor

FILED IN THE OFFICE OF THE SECRETARY OF STATE
O'CLOCK
JUN 17 2011

Secretary of State

Exhibit 8

BGE | KERRY R. GILBERT & ASSOCIATES



Vicinity Map
N.T.S.

N

McGaughy, R.K. Trustee
Acreage

Madison Square

Thomas, Lavon B. & Et. Al.

F.M. 2920

3339'

100'

BP ±13.7 Ac.

BP ±40.7 Ac.

COM ±18.1 Ac.

Barker, Carolyn Kay

2595'

LI ±22.2 Ac.

LI ±30.0 Ac.

LI ±31.7 Ac.

BP ±14.5 Ac.

3640'

To be dedicated for widenning.

LAKE/ DETENTION ±4.0 Ac.

100'

1305'

Barker, Carolyn Kay

LAKE/ DETENTION ±30.5 Ac.

McDonald, Michael and Kimela

Prihoda, Paul W. Acreage

LI ±19.3 Ac.

LI ±19.9 Ac.

RGS Family Partnership

2631'

LI ±17.7 Ac.

Elin Holdings, LLC.

KICKAPOO RD.

BNP LLC. Daikon–Goodman Industrial Campus

1916'

2797'

1267'

596'

COM ±7.8 Ac.

480'

468'

R=533'
L=358'

R=533'
L=479'

188'

R=613'
L=263'

620'

1100'

400'

1121'

939'

To be dedicated for widenning.

363'

600'

Alcomat Inc.

VEC LP.

COM ±16.9 Ac.

DRAINAGE/ DETENTION ±27.4 Ac.

BP ±15.7 Ac.

BP ±18.6 Ac.

COM ±16.5 Ac.

Schindler, Raymond & Leon

290 / Kickapoo Partners LLC.

Terpstra, Peter S., Trustee
Acreage

BINFORD RD.

Terpstra, Peter S.
Acreage

Hakemack, LJ & Ney

Terpstra, Peter S., Trustee

U.S. 290
(WIDTH VARIES)

1623'

991'

357'

623'

543'

L=2191'
R=7479'

L=660'
R=799'

Foyt, AJ, JR.

Acreage

Cunningham Interests II, LTD.

DETENTION ±36.2 Ac.

SF ±27.0 Ac.

COM ±24.0 Ac.

COM ±28.8 Ac.

Existing Drainage Esmt.

3753'

100'

100'

SF ±16.6 Ac.

SF ±31.6 Ac.

TH ±15.1 Ac.

DRAINAGE/ DETENTION ±16.1 Ac.

To be dedicated for widenning.

To be dedicated for widenning.

MF ±19.6 Ac.

MU ±25.5 Ac.

LAKE/ DETENTION ±29.1 Ac.

MU ±30.0 Ac.

Perry, Michael L. & Edna A.

LAKE/ DETENTION ±5.2 Ac.

TH ±14.1 Ac.

3954'

3984'

MF ±16.6 Ac.

MU ±16.2 Ac.

PARK ±3.6 Ac.

100'

100'

DRAINAGE/ DETENTION ±18.3 Ac.

SF ±20.4 Ac.

DC ±2.0 Ac.

COM ±14.1 Ac.

ELEM. ±15.0 Ac.

DRAINAGE/ DETENTION ±17.9 Ac.

BP ±25.4 Ac.

BP ±23.8 Ac.

100'

DRAINAGE/ DETENTION ±16.2 Ac.

2898'

Existing Drainage Esmt.

Existing Drainage Esmt.

BP ±22.3 Ac.

BP ±25.7 Ac.

90'

HEMPSTEAD HWY. (100' R.O.W.)
RAILROAD

5168'

Vulcan Lands Inc.

BINFORD RD.

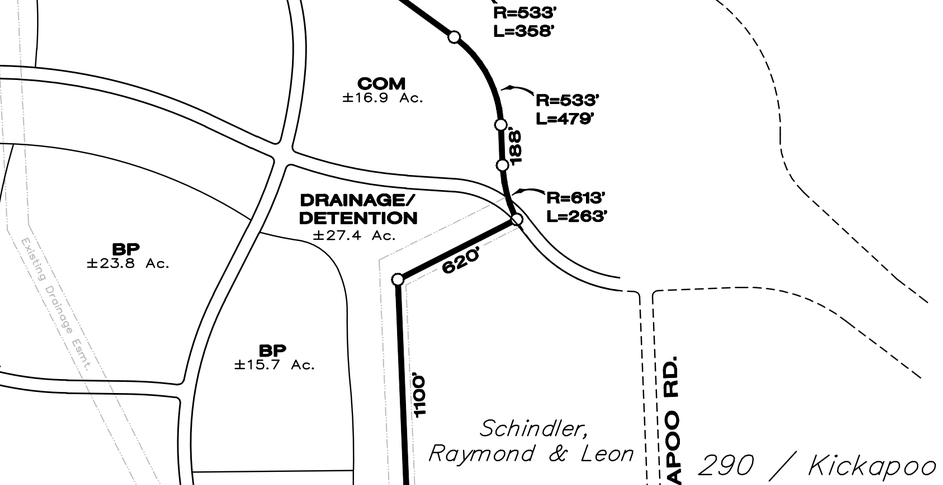
Vulcan Lands Inc.

Mangat Hardial S. & Mangat Surinder Kaur

GENERAL NOTE:

1.) ALL PUBLIC STREET RIGHT–OF–WAY ARE 60' UNLESS OTHERWISE NOTED.

2.) ALL CUL–DE–SAC RADII ARE 50' UNLESS OTHERWISE NOTED.



A GENERAL PLAN (S.P.O.) OF

GEORGETOWN OAKS

BEING 992.8± ACRES OF LAND

OUT of THE

HARRIS COUNTY SCHOOL LANDS 10 SURVEY, A-332

HARRIS COUNTY, TEXAS

OWNER:

DELTA TROY INTERESTS, LTD.

PLANNER:

BGE KERRY R. GILBERT & ASSOCIATES

- Land Planning Consultants -

23501 Cinco Ranch Blvd., Suite A-250

Katy, Texas 77494

Tel: 281-579-0340

SCALE: 1" = 500'

0 250 500 1000

OCTOBER 17, 2016

KGA# I-170

DISCLAIMER AND LIMITED WARRANTY

THIS GENERAL PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF THE CITY OF HOUSTON ORDINANCE NO. 1999–262 IN EFFECT AT THE TIME THIS PLAT WAS PREPARED ALONG WITH ANY VARIANCE OR VARIANCES TO THE PROVISIONS OF THE AFOREMENTIONED ORDINANCE WHICH ARE SUBSEQUENTLY GRANTED BY THE CITY OF HOUSTON PLANNING COMMISSION. THIS GENERAL PLAN WAS PREPARED FOR THE LIMITED PURPOSE OF GUIDANCE IN THE PREPARATION OF ACTUAL ENGINEERING AND DEVELOPMENT PLANS. THIS LIMITED WARRANTY IS MADE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, AND NEITHER BGE | KERRY R. GILBERT & ASSOCIATES, INC., NOR ANY OF ITS OFFICERS, OR DIRECTORS, OR EMPLOYEES MAKE ANY OTHER WARRANTIES OR REPRESENTATIONS, EXPRESS OR IMPLIED CONCERNING THE DESIGN, LOCATION, QUALITY, CHARACTER OF ACTUAL UTILITIES OR OTHER FACILITIES IN, ON, OVER, OR UNDER THE PREMISES INDICATED IN THE GENERAL PLAN.

BGE | KERRY R. GILBERT & ASSOCIATES

Exhibit 9

Houston Planning Commission

Meeting CPC 101 Form

Platting Approval Conditions

Agenda Item: 26
Action Date: 05/11/2017
Plat Name: Georgetown Oaks GP
Developer: Delta Troy Investments, Ltd.
Applicant: BGE|Kerry R. Gilbert Associates
App No/Type: 2017-0730 GP

Staff Recommendation:
Approve the plat subject to the conditions listed

Total Acreage:	992.8000	Total Reserve Acreage:	0.0000
Number of Lots:	0	Number of Multifamily Units:	0
COH Park Sector:	0	Street Type (Category):	Public
Water Type:	Existing Utility District	Wastewater Type:	Existing Utility District
Drainage Type:	Open Ditch	Utility District:	

County	Zip	Key Map ©	City / ETJ
Harris	77484	283T	ETJ

Conditions and Requirements for Approval

046. General Plan approval is for street patterns as shown on the plat only. (24)

046.1. Approval of the General Plan shall remain in effect for four years from the date of the Commission approval. Renewal of the GP shall occur when a section meeting the requirements of 42-24 (f) is recorded.

047. Make minor corrections and additions as indicated on the marked file copy.

143.1. Along a local street, there shall be an intersection with a local street, collector street or major thoroughfare at least every 1400 feet. (128)

162. Along a major thoroughfare, there shall be an intersection with a local street, collector street or major thoroughfare at least every 2600 feet. (127)

For Your Information:

The below comments were made by other agencies during this review period. These comments are not to be considered as conditions for approval. However, you may find these comments useful as other plan approvals and permits are sought.

PWE Utility Analysis: Approve
Harris County Flood Control District: Flood Control review - Show and label channels K166-02-00 and L120-00 -00 (top of banks, centerline). Also show and label HCFCD easement (see uploaded PDF).
Harris Engineer: This general plan is contingent upon review and approval of the Harris County Engineering Department prior to recording section plats.
Make corrections and additions as indicated by Harris County's marked file copy on City of Houston's plat tracker. (HC)
It appears that additional access roads are needed around GP boundary to conform with chapter 42.
TIA will be required before the review of site development plan. ROW, cutbacks and UVEs will be checked when Section Plats are submitted

PLANNING & DEVELOPMENT DEPARTMENT

Houston Planning Commission

Meeting CPC 101 Form

Platting Approval Conditions

Agenda Item: 26
Action Date: 05/11/2017
Plat Name: Georgetown Oaks GP
Developer: Delta Troy Investments, Ltd.
Applicant: BGE|Kerry R. Gilbert Associates
App No/Type: 2017-0730 GP

Staff Recommendation:
Approve the plat subject to the conditions listed

Questions concerning the informational comments should be directed to the agency's author. Planning and Development Department staff can assist you in getting the author's contact information. Call the "Planner of the Day" telephone number listed above.

Exhibit 10

Houston Planning Commission

Action CPC 101 Form

Platting Approval Conditions

Agenda Item: 26
Action Date: 05/11/2017
Plat Name: Georgetown Oaks GP
Developer: Delta Troy Investments, Ltd.
Applicant: BGE|Kerry R. Gilbert Associates
App No / Type: 2017-0730 GP

Total Acreage:	992.8000	Total Reserve Acreage:	0.0000
Number of Lots:	0	Number of Multifamily Units:	0
COH Park Sector:	0	Street Type (Category):	Public
Water Type:	Existing Utility District	Wastewater Type:	Existing Utility District
Drainage Type:	Open Ditch	Utility District:	

County	Zip	Key Map ©	City / ETJ
Harris	77484	283T	ETJ

Conditions and requirements for approval:

046. General Plan approval is for street patterns as shown on the plat only. (24)

046.1. Approval of the General Plan shall remain in effect for four years from the date of the Commission approval. Renewal of the GP shall occur when a section meeting the requirements of 42-24 (f) is recorded.

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162. Along a major thoroughfare, there shall be an intersection with a local street, collector street or major thoroughfare at least every 2600 feet. (127)

Commission Action:

Approve the plat subject to the conditions listed

HOUSTON PLANNING COMMISSION HOUSTON TEXAS
Action Date: 05/11/2017

Contact the City of Houston, Planning and Development Department with questions regarding the Planning Commission's action or the conditions or requirements for approval. Call 832-393-6600 and speak with the "Planner of the Day." The Planning and Development Office is located at **611 Walker Street, Sixth Floor, Houston, Texas 77002.**

For Your Information:

PLANNING & DEVELOPMENT DEPARTMENT

Houston Planning Commission

Action CPC 101 Form

Platting Approval Conditions

Agenda Item:	26
Action Date:	05/11/2017
Plat Name:	Georgetown Oaks GP
Developer:	Delta Troy Investments, Ltd.
Applicant:	BGE|Kerry R. Gilbert Associates
App No / Type:	2017-0730 GP

The below comments were made by other agencies during this review period. These comments are not to be considered as conditions for approval. However, you may find these comments useful as other plan approvals and permits are sought.

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Exhibit 11

HANCE SCARBOROUGH, LLP
ATTORNEYS AND COUNSELORS AT LAW

Clayton D. Nance
Attorney
cnance@hslawmail.com

May 17, 2010

Mr. Pat Henry
Director of Project Development
Texas Department of Transportation – Houston District
P.O. Box 1386
Houston, Texas 77251-1386

RE: U.S. Highway 290 Corridor Improvements Project
Comments on Final Environmental Impact Statement
Delta Troy Interests

Dear Mr. Henry:

Please take this correspondence as our comments on the Final Environmental Impact Statement (FEIS) for the U.S. Highway 290 Corridor Improvements Project.

Our comments concern the lack of new frontage roads planned for a portion of Phase III, Segment 12. Our client, Delta Troy Interests, Ltd., owns property in Segment 12 abutting the northern and southern boundaries of Highway 290. Binford Road splits the western portion of the property. Kickapoo Road borders the property to the east, and Hempstead Road borders the property to the south. FM 2920 borders the property to the north. Highway 290 splits the property. No frontage roads are located on either side of Highway 290 across our client's property.

The schematic design for Segment 12 in the Corridor Improvements Project does not include any frontage roads on either side of Highway 290 between the Binford Road and Kermier Road intersections. This is the only area along the entire 38-mile Corridor where nothing is proposed in regards to construction or expansion of frontage roads. Inclusion of new frontage roads in this area is warranted for multiple reasons.

It is undisputed that the expected population and industry growth in Segment 12 will have a drastic effect on traffic safety, traffic congestion, and the daily activities of local residents and businesses. Large-scale developments offering new residential areas, business centers, and civic facilities will be located in Segment 12 in the near future. The mixed land uses in Segment 12 will be similar to those that have arisen recently in the area of the Corridor immediately to the east. In fact, population and employment is projected to increase by 305 and 174 percent, respectively, within the next 25 years from the proposed Grand Parkway/SH 99 to the Waller County Line. (FEIS, Page 1-4). This alarming projection means traffic will increase substantially along Highway 290 in Segment 12. Traffic along the arterial roadways that provide connections from Highway 290 to collectors and local streets will also increase. If alterations to the design

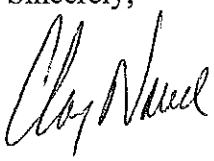
and capacity of the Highway 290 roadway system in this area are not incorporated into the Corridor Improvements Project, vehicular traffic will overwhelm the local roadways to the detriment of the public.

Widening the main lanes of Highway 290 in Segment 12 alone will not resolve these traffic issues. (FEIS, Page 2-13). New frontage roads along Highway 290 from Binford Road to Kermier Road are necessary to provide continuity in highway design, promote continuous traffic flow, and reduce congestion along the main lanes of Highway 290. New frontage roads along Highway 290 are also necessary to counter the burden on arterial roadways, collectors, and local streets from the escalating volume of traffic in this area. Equally important, new frontage roads in this area are consistent with the goals of the Corridor Improvements Project. (FEIS, Page 1-10).

The Corridor Improvements Project is a comprehensive overhaul of a major thoroughfare serving one of the most populous areas of this state. The final schematic design adopted for this project should include roadway design mechanisms that will benefit the public in the long term. Much-needed frontage roads in Segment 12 are in the public's best interests. The benefits to the public substantially outweigh the state's cost of implementing the new frontage roads. In fact, the cost of implementing the new frontage roads from Binford Road to Kermier Road is minimal compared to the estimated total cost of this project of $4.65 billion. TXDOT should take a progressive approach to meet this area's long-term demand for a safe and adequate roadway system by incorporating new frontage roads into this project.

The final schematic design for the Corridor Improvements Project should include new frontage roads along Highway 290 from Binford Road to Kermier Road. Thank you for your consideration.

Sincerely,



Clay Nance

Exhibit 12

KGA CONSULTING, LLC

1708 Spring Green Blvd., Suite 120-352 | Katy, Texas 77494 | (281) 682-5361 | kgaconsultingllc.com

March 9, 2018

USDOT Federal Railroad Administration
1200 New Jersey Avenue SE., MS-20
Washington, DC 20590

RE: Dallas to Houston High-Speed Rail

To whom it may concern:

Our firm, KGA Consulting, LLC on behalf of our client, Delta Troy Interests, Ltd., has been tasked with the review and analysis of the 2017 Dallas to Houston High-Speed Rail Draft Environmental Impact Statement (DEIS). Delta Troy owns a property in northwest Harris County along US 290 at Binford Rd. which would be impacted by the proposed rail alignment as presented in the DEIS. In February 2017, we filed a comment response letter to Mr. Michael Johnsen with the FRA voicing our concerns for the alignment passing through the center of the tract between Binford and Kickapoo Rd., now known as Georgetown Oaks, a master-planned development with residential, commercial, and business park uses. Since that time, we have received a renewed General Plan for the property from the Houston Planning Commission, which conflicts with the proposed rail corridor, temporary construction yard, and access road proposed on the site as illustrated in the DEIS appendices and plan sheets. These obstructions limit the location and availability of our proposed future land uses to develop as planned in a timely manner, and potentially impacts the ability for cross access through our development.

Work on the property now known as Georgetown Oaks was started over ten years ago, and included the submittal and approval of a General Plan in 2007 and the creation of a Municipal Utility District by the Texas Legislature in 2009 (signed by the governor in 2011), Harris County MUD #524. While the economic downturn did have some impact on the development schedule for the property, our client's goal was to set everything in motion when the economy improved and there was renewed development interest in the Waller-Hockley area. Given the prominent location of the tract with acreage on either side of US 290 with access to many existing thoroughfares, there is no doubt this property will develop into a significant center of activity. Neighboring properties are already developing into major manufacturing facilities and other business-campus type uses that our client is also proposing at Georgetown Oaks with additional commercial and residential components. The high speed rail project as described in the DEIS would be a significant detriment to the future development of the Georgetown Oaks property in numerous ways, none of which are easily mitigated or enhance the viability of the development.

In response to the information presented in the DEIS and the associated appendices, there are several issues and concerns we have in regards to the proposed alignment and the high-speed rail project as a whole. In our role as a land planning firm, we have over 30 years of experience in the planning and design of master planned communities, and have prepared numerous local and regional mobility studies to serve our clients at every scale. Based on the proposed alignment presented in the DEIS, we have several current and past clients, in addition to Georgetown Oaks which will be directly impacted by this project should it come to fruition.

These projects are all in different stages of the development process, some further along than others, but none of these developments were mentioned in the DEIS or any of the previous scoping reports as ongoing projects or a consideration when the consultants were doing their initial research. The concerns we have with the information and analysis presented in the DEIS, or lack thereof, focuses primarily on the issues with proposed future land use, drainage, noise/screening, and connectivity.

Land Use

In reviewing the DEIS, the discussion and analysis of land use affected by the high-speed rail alignment focused solely on the current land use. Within the document there was minimal discussion or analysis given to proposed future land uses for tracts or property which currently are undeveloped or being used for agricultural purposes. In the few sections that do mention land use, the report focuses on consistency with exhibits or maps prepared by regional agencies such as the local Councils of Governments (CoGs) for each representative area along the proposed alignment, but these agencies are rarely the ones governing the review and submittals of proposed developments. For Houston, HGAC prepares a number of studies and reports on their own or as part of a collaborative effort with its member municipalities, but the City of Houston is the governing body for all new developments within their city limits and extra-territorial jurisdiction, approx. 2,000 square miles.

Development within the Houston city limits and extra territorial jurisdiction is constant, and is one reason that the Houston Planning and Zoning Commission meets every two weeks to review and approve/deny proposed developments or redevelopments in accordance with the City's subdivision regulations and other pertinent ordinances governing development within the City. Houston is well known for being one of the largest cities in the nation without zoning, but that does not mean it does not have planning. While a lack of zoning could be considered a benefit or a hindrance from different perspectives, it makes the existing plans and ordinances which govern the city's development all the more significant and a necessity. Two of the chief documents with which we deal with on every development are Chapter 42, more commonly known as the Subdivision Ordinance, and the Houston Major Thoroughfare Plan. These documents set the requirements for all new developments and ensure current plans and growth will not hinder projects in the future, especially for something as significant as providing sufficient access.

For many developers in Houston, the first step towards starting a new development project is with the submittal of a General Plan to the City. This General Plan lays out proposed land uses and connectivity through a tract to ensure adequate access to the existing thoroughfare network and to accommodate any proposed new thoroughfares or collectors as required by the City's Major Thoroughfare Plan. In our review of the DEIS, there is no mention of correspondence or inquiry to municipalities like the City of Houston or the City of Dallas to ensure that the proposed High-Speed Rail alignment would not impact any developments which have submitted and received approval of a General Plan or equivalent submittal. The DEIS does list some similar resources for Ellis County and some other municipalities between Houston and Dallas, but not for either major metropolitan area anchoring the high speed rail project. For the alignment as shown through the Houston region, Harris and Waller Counties, we can definitively state that the proposed rail alignment would impact several projects which are not currently in active development, i.e. the construction of residential neighborhoods or other commercial/non-residential development, but are in the planning stages and have received approval of General Plans form the Houston Planning Commission or Waller County Commissioner's Court. These plans show the developer's intention to develop their respective properties in the future, but

many of which have only been considered in the DEIS under their current land use, agricultural or other less-intensive purposes. As listed in the DEIS in Section 3.11 and again in Section 5.3, 80 percent of the land use in the areas impacted by the rail are currently agricultural uses. This figure only considers the current land use and there is no discussion about the possibility that these fields and farms could someday develop into something none ag-related, especially for properties nearer to current active development or along major highways. For the more rural counties between Houston and Dallas, this is likely not an issue or an understated percentage, but is a significant oversight in the review process for the segments of the rail closer to Dallas and Houston and will impact planned developments which are at all different stages in the development process.

Drainage and Detention

Drainage, detention, floodplain amendments, and development regulations are going to be major topics of discussion for many years to come in Houston. For these reasons alone, the information and plans for this project's drainage and detention should be reevaluated and the permit application to the US Army Corps of Engineers delayed until further notice, until such a time in which the planned detention basins and culvert crossings are further analyzed and adequately sized to meet drainage requirements based on post-Harvey conditions. Should the HSR project move forward as currently engineered, the topics of sheetflow, detention requirements, and regional impacts are the primary issues that need to be fully understood and addressed. If any one of these issues are still withstanding, there is a possibility that future takings would be necessary to enlarge basins or to add additional drainage crossings in order to prevent downstream impacts and provide adequate project drainage and detention volumes based on post-Harvey requirements.

Noise and Screening

The discussion of potential noise concerns in the DEIS was given in relation to the number of sensitive receivers the HSR would impact within 1,300' of the proposed alignment. The metric used to determine whether a residence or other existing structure would be moderately or severely impacted is described as the amount of increase in noise in decibels due to the project's construction and operation over the existing noise conditions. Per the presented graphs and supporting information, any increase in noise less than 5 decibels was considered a moderate impact and an increase greater than 5 decibels considered a severe impact. The report does provide that additional assessment would be required at the time of the final project design to include mitigation measures such as sound barriers or building sound insulation where feasible in order to alleviate noise impacts on surrounding residences or structures.

In the DEIS, Section 3.4.3.1 specifies that the screening distances used in the evaluation of noise-sensitive land uses was 1,300' for the new HSR corridor in a rural area and 275' for vibration impacts based on FRA guidance manuals and general project assumptions. The issue with potential noise and screening concerns may not appear as a significant impact to surrounding properties when the analysis is based solely on current conditions where much of the affected land uses are agricultural. Once future land uses are considered, there are a number of residential and commercial/other non-residential developments planned directly in the path of the high-speed rail which would fall into these screening distances. Section 3.4.5.2.3 also suggests a screening distance of 1,000' from the center of the proposed maintenance facilities in order to mitigate operational noise impacts. Again, the report states there are no current noise-sensitive land uses within these distances, but no further research or analysis for future developments and land uses on these same properties. Once these factors are

considered in relation to future land uses and developments that were not a part of the DEIS analysis, noise concerns become a major issue in the potential growth areas surrounding Dallas and Houston. Another instance where the initial data gathering and correspondence is inadequate for a project of this magnitude and makes assumptions and recommendations on incomplete information in areas where future growth and development is not only likely, but is currently being planned and engineered on many of the subject properties the HSR alignment is proposed.

Screening and other mitigation measures are mentioned within the DEIS, but the discussion centers around the final design in which additional noise assessments would be conducted and a supplementary noise control plan would be created to alleviate impacts on affected properties. Some general information is provided regarding sound barriers or building insulation, but the problem is also presented that these measures can become visually intrusive. There is also no discussion revolving around how the tracks or sound attenuation would be managed for the portions of the track which are on elevated viaducts. Were all undeveloped parcels along the HSR alignment to remain so for the duration of the project this may not be an issue, but for the potential growth areas nearer to Dallas and Houston, these aesthetics and sound barriers become of paramount concern for all proposed developments as they could impact sales of homes or non-residential properties.

Connectivity and Thoroughfares

Another instance in which the DEIS falls short in their review and analysis is in the review and accommodation of published major thoroughfare plans for the more urban counties in which proposed thoroughfares and improvements are planned and alignments proposed in order to serve the surrounding areas as they develop. These maps are used as a guide for where major thoroughfares, collectors, and other roadways should be generally located to provide adequate connectivity and to prevent isolating developments or property in the future. The Houston Major Thoroughfare Plan is amended yearly and different sub areas of the plan are routinely studied and reviewed to accommodate projected growth and planned developments occurring in whichever region is undergoing further study that year. The Ellis County Thoroughfare Plan is listed as one of the data sources reviewed as part of the transportation section, but not the Houston Major Thoroughfare Plan, which is available in multiple formats online for download or viewing.

Beyond overlooking published major thoroughfare plans, most of the larger residential developments or master planned communities will include their primary roadways and collector streets in their General Plan submittals. This is done to illustrate to the review staff the proposed circulation and internal connectivity of a project to ensure all new developments have adequate access to existing and proposed thoroughfares. The plan and engineering sheets provided within the DEIS do not address future road crossings and only shows how the existing roads or private streets would be mitigated by road closure, rerouting, or taking the existing road over/under the HSR depending on the track arrangement at the specific location.

For areas in which the tracks are on the elevated viaduct, it could be feasible for new public roads to cross under the rail, given there is adequate height and all other regulatory street/transportation standards are met. The one issue in the viaduct design is the inclusion of maintenance service/access roads which are shown along the rail row on the plan profile sheets included in the DEIS appendices. One such access road runs through the southern portion of Georgetown Oaks from just south of the intersection of Binford Rd. and US 290 to the

southern end of the property at Hempstead Rd. The treatment of these access roads is not described in the DEIS, but if similar to other maintenance access roads, will not be for public use and likely to be fenced or some other form of separation in order to maintain the HSR's desired fully-sealed corridor. The same reason why many of the smaller rural roadways which currently cross the proposed rail alignment are listed to be closed or relocated/rerouted so as to not interfere with the rail. In some locations, where the rail is proposed to cross existing major thoroughfares, the existing roadway is proposed to be demolished and reconstructed so as to be elevated up and over the proposed rail. We assume these efforts would undertaken and funded as part of the overall HSR project, but we cannot find within the DEIS or any other report clarification which specifically states who this responsibility falls to. The difficulty with either approach of roadway crossings the HSR alignment is that there is no process set forth for the review or consideration of any new crossings.

The scenario for addressing new roads becomes a greater issue, and is another necessity to future growth and development which is overlooked in the DEIS. Local street connectivity and circulation is paramount for successful projects. For developments where the rail right-of-way divides a property, if no new roadways were allowed through the HSR ROW, the only means for a resident to reach the other side of a development is travel out of their way in order to cross the rail at an existing crossing in order to reach their destination. This adds cost, materials, and more vehicle miles traveled for anyone living, working, or traveling along/across the rail right-of-way. The primary goal of the HSR is to provide an alternative transportation option and to hopefully reduce the amount of automobile travel between Houston and Dallas. This may be a laudable goal, but if the project causes someone to take a circuitous path and travel significantly out of their way in order to reach a destination in their same development on the opposite side of the rail, has the project achieved its goal or merely inconvenienced a significant amount of people with no direct benefit from the rail?

The DEIS text lists the studies which were consulted and reviewed as part of their data collection and analysis, most of which project future growth in population and the expansion of the existing transportation network to service this need. Along with the lack of consideration for future land use, the topic of transportation appears to have been analyzed as a static measure. The current conditions of which properties are being used and access today are assumed to remain unchanged, while market trends and major growth corridors are having an effect spurring on new developments in areas that were not previously as desirable or marketable due to lack of access. The completion of the Grand Parkway segments around the northwestern side of Houston has created a wealth of opportunities for residential and commercial developments along its path as well as along the US 290 corridor due to the greater ease and accessibility to move people, goods, and services around Houston's periphery without having to travel further into one of the more central loops with added congestion and traffic volume.

Conclusions

Growth in areas surrounding Houston and Dallas is an inevitable certainty as both cities will continue to increase in population and development. It is not a matter of if development will occur, merely an issue of timing, as most developments are directly related to access and market trends. While the High Speed Rail may alleviate some congestion for people traveling between Dallas and Houston by the alternatives of driving IH-45 or flying between the two, the Draft Environmental Impact Statement as presented overlooks many important topics that would greatly impact many properties along its path.

Too much of the information and rationale presented in support of the HSR assumes no change

or static growth and development for two of the country's most rapidly growing metropolitan areas. The DEIS should not be shortsighted in measuring the positive or negative impact the project has over the course of its path or the life of the project. Many discussions and rationale for decisions presented, appear to be based on incomplete or cherry-picked information to support the project while other considerable sources or information are overlooked without discussion or argument. Items such as the Houston Major Thoroughfare Plan, which is easily available for viewing or download through numerous City of Houston departments, is completely not addressed or listed as a researched source document. Circulation and access are key issues with a City as large as Houston and with as much continuous development. These are the primary comments we receive on every plat and general plan we submit to ensure that owners or users of adjoining property, whether developed or undeveloped, have access to the property should the existing conditions for that property change.

The analysis in the DEIS only focuses on current conditions, and there is little to no evidence to show that governing bodies or review boards were consulted or sought out to provide insight into the proposed HSR alignment. Many of our clients and their respective properties which lie in the path of the HSR have had General Plans approved through the Houston Planning Commission and can easily researched through their agendas or the City's online mapping system to provide types of application, approval dates, and other relevant public information. None of which was discovered in the initial desktop research performed by the HSR consultants. From 30,000', looking at an aerial image can give some insight and valuable information about the limits of current development, but is not entirely helpful for a project of this size and scope without thorough investigation and research to understand what is being planned for those areas without visible development. What is a field of corn today along US 290 could be a major mixed use commercial retail center and business park or a master planned residential community. The potential noise and vibration generated throughout the day due to the frequent trips and desired design speed of the high speed rail coupled with the minimal rail crossings will likely limit what land uses will want to be located near the rail. In examining potential development along the rail corridor, there are no compatible land uses other than those directly serving the maintenance or support of the rail itself.

With the devastation of Hurricane Harvey and the other recent flood events still fresh in people's minds, how the High Speed Rail will affect local and regional drainage patterns is a considerable topic which should be further evaluated through the environmental review process. It is one topic of significant importance which should not be underestimated, as any impact can become compounded and the repercussions felt for a considerable length of time. Add into this discussion the topics of future land use, project drainage and detention, noise and screening, and the ability to address the growth and expansion of existing and proposed thoroughfares are all major items which are not adequately addressed in the current report and should be reevaluated.

The high speed rail does not benefit these projects in the planning and engineering stages of development, nor does it have any demonstrable benefit for any property not near a terminal station. The rail has little or no potential benefit of someone living in Hockley, Corsicana, or any other similar town along the route. They could use the rail as a travel alternative once they reached a terminal station, but otherwise affected landowners have a general nuisance through their property with no major public benefit. Rather, the high speed rail would only create negative impacts for those property owners adjacent to the rail and serve as a hindrance should they ever desire to develop their property beyond its current use. The DEIS states that 80

percent of the land use along the proposed rail alignment is for agricultural land uses, and the High Speed Rail is a good tool to ensure that these properties never have the chance to develop to any higher or better use.

Please feel free to contact my office should you require any clarification or additional information.

Sincerely,

Kerry Gilbert
President

Exhibit 13

WALLER COUNTY
SUB-REGIONAL PLANNING COMMISSION

July 6, 2015

Ms. Sarah Feinberg
Acting Administrator
Federal Railroad Administration
1200 New Jersey Ave, SE
Washington D.C. 20590

Via Certified Mail, Ret. Rec. Req.

Dear Ms. Feinberg,

I appreciate your April 27, 2015 letter responding to our request dated November 14, 2014, to begin formal coordination with the Federal Railroad Administration on the Dallas to Houston High Speed Rail Environmental Impact Statement (EIS). One of the two routes proposed for further analysis by Texas Central Rail, a private corporation and partner with you in this project, will create a new corridor through our planning area, creating significant local impacts.

It should be noted that your letter refers to our Commission as a "public stakeholder." This is incorrect. We are a political subdivision of the state of Texas, with planning authority made up of elected representatives *of* the public. We are not a public stakeholder, but rather a local government with jurisdictional planning authority. State and Federal law recognize this distinction, which is why there is a separate and distinct process of coordination set forth in statute to ensure conflicts with local governments are resolved.

In July of 2008, the Waller County Sub-Regional Planning Commission (WCSRPC) was formed for the purpose of planning the future development of our community, including the planning of transportation systems within our jurisdiction. Members of our Commission include elected representatives from as well as the County of Waller. As a statutorily created planning commission under Texas State Law[1], we have the unique authority and expertise to ensure that all projects within our jurisdiction, whether city, county, state or federal, work together for the benefit of the people of Waller County.

[1] Local Government Code, Chapter 391, Regional Planning Commissions

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Under Texas law, Section 391.009(c) requires all state agencies to "coordinate planning with commissions (WCSRPC) to ensure effective and orderly implementation of state programs at the regional level." This directive for state agencies, such as the Texas Department of Transportation, to coordinate their plans with WCSRPC does not conflict with their responsibility to plan for improved transportation from a statewide perspective, in fact, it enhances their efforts. By planning regional projects in close coordination with planning commissions such as ours, federal and state agencies can develop an efficient and safe transportation system that benefits the local communities as well as those passing through our jurisdiction.

The National Environmental Policy Act (NEPA)[2] also requires coordination[3] with local governments during the preparation of the environmental analysis of a project, such as the Dallas to Houston High Speed Rail (DHHDR). This places a specific duty on your agency to coordinate directly with our Commission.

Additionally, throughout NEPA and the Council on Environmental Quality (CEQ) regulations, there are specific requirements placed on the lead agency to ensure that impacts to local governments are thoroughly analyzed and conflicts with local plans resolved.[4] The purpose of the NEPA study is ***not*** to approve a federal action, but rather to identify how that action may impact the "human environment."[5] In essence, the purpose for this environmental study is to determine, in part, its impact to the WCSRPC community.[6] As the state designated planning authority for this area, it is necessary to coordinate with us to ensure you are fully informed of our current and future plans as well as the potential impacts your project will create in our area for the purposes of completing a legally sufficient environmental study.

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[2] 42 U.S.C. §4331 *et seq.*

[3] 43 U.S.C. §4331(a) "it is the continuing policy of the Federal Government, *in cooperation with State and local governments*, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, *in a manner calculated to foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.* (b) In order to carry out the policy set forth in this Act, *it is the continuing responsibility of the Federal Government to use all practicable means*, consistent with other essential considerations of national policy, *to improve and coordinate Federal plans*, functions, programs, and resources to the end that the Nation may —"

[4] See 40 C.F.R §1501.1(c) "Study, develop and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources as provided by section 102(2)(E) of the Act;"

See also 40 C.F.R. §1502.16, "It shall include discussions of: (c) Possible conflicts between the proposed action and the objectives of Federal, regional, State and local (and in the case of a reservation, Indian tribe) land use plans, policies and controls for the area concerned;" and,

See 40 C.F.R. § 1506.2(d) "To better integrate environmental impact statements into State or local planning processes, statements shall discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law."

[5] 42 U.S.C. § 4332(2)(C);

[6] NEPA requires you to assess the environmental impacts on the "locale" and not just from a regional perspective. 40 C.F.R §1508.27(a).

In the Scoping Report released April of this year for the DHHSR environmental study, you state the next step in the NEPA process is to prepare the Project's Purpose and Need statement and
identify a reasonable range of alternatives. Specifically, you point out the need to coordinate with our Commission prior to identifying the alternative alignments.

> *"**FRA will also undertake coordination** and consultation **with** federal and state agencies, **local government** and Metropolitan Planning Organizations (MPO). Tribal governments, and the Section 106 consulting parties **prior to identifying the alternative alignments to be evaluated in the Draft EIS**." (DHHSR Scoping Report, page 24)*

Although we would have preferred to coordinate with you early in the process to avoid potential conflicts with the two routes already identified to be carried forward, we are prepared to discuss these alternatives and their impact on our community as soon as possible. To this end, we renew our request to meet with you and have set aside the days of **August 3, 10, 17, or 24 of 2015** for these discussions. It is our hope that one of these dates will work with your schedule so we can begin working through these critical issues.

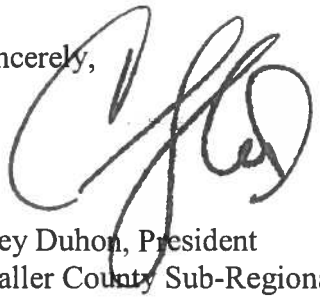
Although NEPA requires that local governments with jurisdiction or special expertise be invited to participate as a "cooperating agency," we are not requesting this involvement, nor would such a relationship be appropriate. As an elected body of the public, our discussions and decisions must be made in public meetings with a quorum present. Coordination is the appropriate vehicle for us to convey our plans and policies to you and to give you the opportunity to meaningfully work with us to resolve possible conflicts. More importantly, it is good business to do so. It would demonstrate the FRA's willingness to foster an open, strong and productive working relationship with our Commission.

Only a small portion of the proposed routes cross into our jurisdiction, which may be the reason your agency has not met with us to discuss potential conflicts with our existing infrastructure and future plans. However, the placement of a High Speed Rail corridor in the eastern part of our jurisdiction will have significant impacts on our community. Unfortunately, these impacts are not identified in your scoping report, nor do we anticipate that the public comment process can sufficiently convey these issues to you. Hence, it is important that we meet and share our concerns face to face.

Please let us know by Friday, July 24, 2015, which of these dates will be most convenient with your schedule, or, if necessary, please suggest a date in the near future that would be workable. It is important, however, that our viewpoint be fully discussed and concerns aired sooner rather than later in order to avoid delays in this process.

I look forward to hearing from you and meeting you and your team in person.

Sincerely,



Trey Duhon, President
Waller County Sub-Regional Planning Commission

WALLER COUNTY
SUB-REGIONAL PLANNING COMMISSION

May 6, 2016

VIA U.S. Mail. Return Receipt Requested

Mr. Dan Harmon
Interim Rail Division Director
Texas Department of Transportation
Rail Division
125 East 11th Street,
Austin, Texas 78701

RE: Discussion of Impacts in Waller County and the Federal Rail Administrations Failure to Analyze Potential Corridors for the Dallas to Houston High Speed Rail, Pursuant to the National Environmental Policy Act.

Dear Director Steavens,

Thank you for you and your staff's participation in our Waller County Sub-Regional Planning Commission's coordination meeting this past February 9, 2016. As a follow up to that meeting, this letter has been prepared to summarize the specific local impacts that the Dallas-Houston High-Speed Rail Project will have on our local businesses, community, and landowners. It is also intended to point out some of the key violations that have occurred in the preparation of the forthcoming Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA).

As discussed in the meeting, there is clear evidence that the Federal Rail Administration (FRA) has improperly selected one build alternative (Utility Corridor) and one alignment (HC-4) through Waller County without conducting the necessary comparative analysis of alternatives pursuant to NEPA. Specifically, we are requesting that your agency call upon the FRA to step back and conduct a programmatic EIS for the four build corridors (BNSF, UPRR, I-45, Utility) that met the "Purpose and Need" of the project identified in the Corridor Alternatives Analysis Technical Report (August 2015).

Doing so is the only way that the FRA can fulfill its responsibility to advance an alternative that resolves the conflicts the project creates in Waller County. (40 C.F.R. § 1501.2(c)). Some of these conflicts were brought to your attention during the meeting and are again noted in this letter. As was pointed out, the mere fact that you have improperly drawn a line for a preferred

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alignment has already harmed our community. Developers are forced to look outside of Waller County for housing and commercial sites to support the 4,000 plus jobs expected from the Daikin/ Goodman manufacturing site currently being constructed in our area. The expected growth and development opportunities that would greatly benefit every resident, especially our minority community, are being forced to consider other locations.

Members of our Commission have received a form letter dated January 7, 2016, from the U.S. Department of Transportation, Federal Rail Administration requesting we provide "information concerning environmental and land use constraints including current or proposed land development projects, city projects, or other issues of interest to Waller County within the study area."

It goes on to state: "This information will be used by FRA and AECOM in the assessment of impacts documented in the Draft EIS and the evaluation of **alignment alternatives**." Please note that there is only one build corridor and one alignment carried forward by the FRA for study pursuant to NEPA in Waller County. It is disingenuous to ask us at this late date for information that should have been considered at the corridor level stage of the analysis. However, we do hope that providing you this information will demonstrate the need to step back and prepare a programmatic corridor level EIS.

To that end, we would also appreciate it if you would ensure this letter is reviewed by the proper representatives performing the EIS, including Ms. Sarah Feinberg at the Federal Rail Administration, Mr. Tim Keith, CEO, Texas Central Partners, Ms. Melissa McNeely, Rail Projects Manager, Texas Department of Transportation and Lt Gen Joe Weber, Executive Director.

Let me also remind you that our Waller County Sub-Regional Planning Commission (Commission) is a formally created entity under the state of Texas Local Government Code 391. Members of our WCSRPC include the City of Waller, Prairie View, Pine Island, Hempstead, Pattison, Brookshire, Katy, Waller Independent School District and Hempstead Independent School District. We are not a "public stakeholder" as stated by the Federal Rail Administration.

The National Environmental Policy Act (NEPA) requires the Federal Rail Administration and your agency, as the joint lead agencies, to coordinate with our local government planning commission. At the same time, as a local government entity formed under Texas Code 391, the Texas Department of Transportation is required to coordinate with us under Section 391.009(c). As a statutorily created planning commission under Texas State law, we have the unique authority and expertise to ensure that all projects within our jurisdiction, whether city, county, state or federal, work together for the benefit of the people of Waller County.

As we discussed during the meeting, your agency and the FRA have failed to coordinate with our planning commission prior to selecting the Utility Corridor and H-4 alignment through Waller County. Had we met early in the process, as required under NEPA and requested numerous times by our Commission, we could have provided you and your staff with these important impacts creating a much more complete and sufficient analysis. We do, however, believe you

and your staff's participation in our first coordination meeting was a good first step in rectifying this deficiency, and we appreciate your willingness to discuss these issues with our Commission.

It is our expectation that as a result of these efforts, the FRA will provide us with a reasonable explanation as to why it failed to perform a corridor level analysis pursuant to NEPA, or, preferably with a decision that they will stop current work on the selected alignment Draft EIS in order to step back and prepare a proper corridor level EIS. At the end of our meeting we asked that you bring a representative from FRA to our next coordination meeting so that the federal agency has an opportunity to address our concerns. We would like to set a date for that meeting and ask that you contact us by Monday, May 23, 2016, with a meeting date for the month of June that works with your schedule and that of the FRA's.

Further, as of the writing of this letter, it has come to our attention that Texas Central Railroad and Infrastructure, Inc. and its affiliates (hereinafter collectively TCRI) have filed two petitions with the Surface Transportation Board (STB) requesting exemptions from certain railroad regulations, and they are seeking an expedited review and approval to commence land acquisition through the use of Eminent Domain prior to the determination of the final alignments and prior to the completion of a valid environmental analysis, all done without any notice to affected landowners, municipalities, and counties, and such expedite review foreclosing any opportunity for public comment. I am enclosing a copy of WCSRPC's Preliminary Comments in Opposition to Petition for Exemption and Petition for Clarification. This action offends basic tenets of due process and as such, we are also requesting, as a matter of coordination, that TXDOT officially oppose any such efforts to avoid policies and procedures that are intended to protect the general public and Texans' land from an abuse of authority and what would amount to an illegal condemnation of their property. Private property rights in Texas should be respected above all else.

Please let us know if you have any questions about the information provided. We look forward to working with you and setting our next meeting date.

Sincerely,

Trey Duhon
President

WALLER COUNTY
SUB-REGIONAL PLANNING COMMISSION

Discussion of Impacts in Waller County and the Federal Rail Administrations Failure to Analyze Potential Corridors for the Dallas to Houston High Speed Rail, Pursuant to the National Environmental Policy Act.

Contents:

A. The FRA Improperly Narrowed Corridor Alternatives

1. Federal Register Notice of Intent (NOI) to Prepare an Environmental Impact Statement for Dallas-Houston High Speed Passenger Rail Corridor

June 25, 2014, the Federal Railroad Administration (FRA) announced it would be preparing an Environmental Impact Statement (EIS) pursuant to the National Environmental Policy Act (NEPA), for a High Speed Passenger Rail Corridor between Dallas and Houston Texas (79 Fed. Reg. 36123). The proposed action that requires the FRA oversight and NEPA analysis is "for the impacts of constructing and operating a dedicated high-speed rail (HSR) system." The project was proposed by a private company, Texas Central High Speed Railway (TCR), which was formed in 2009, for the purpose of bringing HSR to Texas.

The Notice stated that the EIS would "evaluate route alternatives for passenger rail," and evaluate "alternatives for construction and operation of the Proposed Action consisting of a sealed HSR corridor."

The notice committed that the EIS would address environmental issues of concern, including:

a. Describing the purpose and need for the Proposed Action.
b. Describing the environment likely to be affected by the Proposed Action.
c. Identifying the reasonable alternatives that satisfy the purpose and need for the Proposed Action.
d. Describing the no-build or no-action alternative to serve as a baseline for comparison.
e. Describing the potential environmental impacts associated with the reasonable alternatives and mitigation to address significant impacts.

Additionally, FRA committed that as a part of the EIS, it would study "the impacts of various alternative HSR route alignments," including "shared corridors with other existing linear infrastructure corridors such as railroads, roads, and electric utility lines."

Prior to the FRA's announcement, there has been no analysis of potential rail corridors between Dallas and Houston pursuant to the National Environmental Policy Act. Although the Texas Rail Plan (2010) identified three potential corridors (BNSF, UPRR, I-45), no NEPA analysis was prepared in conjunction with this plan. Therefore, prior to the FRA's June 2014 announcement, no programmatic study had been prepared under NEPA to determine which of the numerous corridor alternatives would have the least impact on the human environment. This responsibility would need to be carried out by the Federal Rail Administration.

2. Scoping Report (April 2015)

The FRA initiated the scoping process for the purpose of defining and narrowing the scope of issues to be analyzed in the EIS. TCR had conducted its own screening process to determine the potential corridors that should be advanced for further analysis. The private company reviewed four primary corridors with nine variations. They evaluated the feasibility of each potential corridor based on "HSR design requirements, engineering and constructability challenges, and potential environmental constraints." (Scoping page 3).

The four primary corridors consisted of the three studied in the Texas Rail Plan and a new corridor identified by TCR, the Utility Corridor. TCR ultimately recommended to FRA two corridors (BNSF Option 1 and Utility) for further study, eliminating two of the State's Plan recommendations. FRA presented these two corridor options to the agencies and the public for input during the NEPA scoping process. (Scoping, page 4) (See also Attachment 1, Table 1)

Although NEPA requires coordination with local governments early in the process, no effort was made by TCR, FRA or the Texas Department of Transportation (Joint Lead Agency) to consider the local plans and policies of Waller County. No consideration or analysis was made as to how the local plans might restrict or impact the decision to carry forward or eliminate corridor alternatives for further study at this point in the FRA analysis process.[1]

Additionally, the discussion in the scoping report is incomplete. The Council on Environmental Quality (CEQ) regulations governing implementation of NEPA requires that three types of actions, alternatives and impacts be evaluated in the EIS. (40 C.F.R. § 1508.28). There was no consideration of these elements during the scoping phase. Had the FRA at least discussed these elements in the Scoping Report, their focus may have changed. At the very least, the public and decisionmakers would have had better information from which to form its position.

3. Corridor Alternatives Analysis Technical Report (August 2015)

After releasing the Scoping Report, the FRA initiated an "independent" analysis of the potential corridor alternatives, the results of which were published in the Corridor Alternatives Analysis Technical Report (CAATR), August 2015, just four months later. At this stage, the FRA considered seven distinct corridor alternatives and transportation options, including the two recommended by TCR. Presumably, one would have expected the FRA to compare the seven corridors pursuant to NEPA and the 23 environmental criteria required under the FRA's Procedures for Considering Environmental Impacts (64 Fed. Reg. 28545) since no NEPA analysis had been conducted prior on these corridors. However, they chose a different path, one that prioritized "meeting the economic viability determinations made by TCR," (CAATR page 2) as a basis for eliminating several of the viable and reasonable alternatives that deserved equal analysis pursuant to NEPA.

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[1] The Council on Environmental Quality (CEQ) regulations for NEPA requires that "Agencies shall integrate the NEPA process with other planning at the earliest possible time to insure that planning and decisions reflect environmental values, to avoid delays later in the process, and to head off potential conflicts." (40 C.F.R. § 1501.2) In cases where actions are planned by private applicants, the federal lead agency is to "consult early with appropriate State and local agencies and Indian tribes and with interested private persons and organizations when its own involvement is reasonably foreseeable." (40 C.F.R. § 1501.2(d)(2))

> *"This report reflects FRA's independent analysis and judgment in its capacity as the federal lead agency for the EIS. FRA undertook the Corridor Alternatives Analysis documented in this report in accordance with FRA procedures and generally accepted practices guiding the identification and evaluation of potential corridor-level alternatives. Because the Project is a private proposal by TCR, FRA's alternatives evaluation documented in this report is premised primarily on complying with TCR's technical requirements for the high-speed rail system and meeting the economic viability determinations made by TCR. FRA's additional screening criteria are directly related to FRA's role under NEPA: minimizing impacts to the natural and human environment."* (CAATR page 2, emphasis added)

Although the FRA makes mention of considering the environmental criteria they are required to review under their own procedures and NEPA, a close look at what they examined reveals they selectively chose impacts to consider, and did not equally apply the analysis to each alternative. (Attachment 1, Table 3)

Four of the seven alternatives were found to fulfill the "Purpose and Need" for the project. The "Purpose and Need" is defined as:

> *"supports the purpose to provide economically viable high-speed (200 mph) safe and compliant passenger rail service competitive with air travel (90 minute travel time from terminal to terminal) using the N700-I Tokaido Shinkansen in a fully sealed and grade-separated Corridor."* (CAATR page 9)

The BNSF, UPRR, I-45 and Utility Corridors were all found to meet the projects "Purpose and Need." At the very least, these should have been carried forward for a rigorous corridor level alternatives analysis as required by NEPA.

In fact, the FRA committed to doing so in the NOI to prepare the EIS. Factor "c," identified above, states that they will be "Identifying the reasonable alternatives that satisfy the purpose and need for the Proposed Action." It does not then add onto this statement, "and other factors the FRA determines appropriate." If it did, it would be an unlawful statement because it would expressly violate the purposes and requirements of NEPA.[2]

[2] Additionally, the CEQ regulations require that when narrowing the scope of the issues for detailed study, the agency shall, "Identify and eliminated from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3), narrowing the discussion of these issues in the statement to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere." (40 C.F.R. § 1501.7(3)) There is no discussion in the scoping or other reports as to why eliminating the other potential corridors from further study will not have a significant effect on the human environment. The FRA cannot answer this question because they did not examine the corridors from this perspective.

However, this is exactly the path the FRA pursued. Instead of a rigorous analysis of the four "build" corridor alternatives that met the purpose and need statement, the FRA conducted what it describes as a "Fine Screening Analysis." It compared the four build alternatives based on their "physical characteristics," "operational feasibility," and six "environmental constraints." The environmental constraints were:

1. Number of stream crossings
2. Acres of wetlands
3. Acres of floodplains
4. Number of historic properties and archaeological sites
5. Acres of parks and national Forest/national parks
6. Acres of managed habitat areas

There was no consideration of air quality, water quality, endangered and threatened species, land uses both existing and planned, impacts to the socioeconomic environment or minority populations, public health or safety, or many of the other 23 impacts required to be examined according to the FRA's environmental procedures. (Attachment 1, Table 2 and 3)

Based on the FRA's selective analysis during their fine screening process, they eliminated three of the primary build alternatives, leaving only one build corridor to examine pursuant to NEPA, the Utility Corridor. The Utility Corridor directly impacts Waller County.

One of the primary reasons for eliminating the 1-45 Corridor was it passed through the National Forest, managed by the U.S. Forest Service.[3] This decision, made without the required NEPA analysis, favors the federal landowner over the private landowner. It also favors saving trees over harming minority communities, conduct NEPA expressly prohibits. In fact, the primary purpose for NEPA is to ensure that potential impacts are compared equally and not selectively. The FRA's analysis improperly resulted in carrying forward "one" build alternative corridor that cuts through Waller County, a county whose population is 52% minority.[4]

At the very least, the FRA should have carried forward the four corridor alternatives for a side-by-side comparison as to their potential impacts weighing equally the 23 environmental criteria

[3] CAATR page 14: The I-45 Greenfield Corridor extends from north to south through the Sam Houston National Forest. The interstate right-of-way within the boundaries of the forest is narrow to maximize acreage within the forest. To widen the interstate right-of-way within the forest or locate the high-speed rail right-of-way adjacent to the interstate right-of-way would be anticipated to create significant impacts to recreation resources and managed habitat, as shown in Table 2. In comparison to the other potential corridor alternatives, the I-45 Greenfield Corridor has the potential for tremendous environmental impacts that would not be anticipated to result from any of the other potential corridor alternatives. Therefore, FRA eliminated the I-45 Greenfield Corridor from further consideration based on failure under the Environmental Constraints screening criterion.

[4] 40 C.F.R. § 1501.2(c) Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources as provided by section 102(2)(E) of the Act. By carrying forward only one build corridor through Waller County, there is no other alternative being studied that would resolve the conflicts this project is causing for the County and its residents.

set forth in their procedures. However, instead, they selectively chose from that list to narrow the alternative down to the one preferred by TCR at the beginning of the project – the Utility Corridor.

4. Alignment Alternatives Analysis Report (November 6, 2015)

November 6, 2015, the FRA released their Alignment Alternatives Analysis Report (AAAR), just three months after selectively choosing the Utility Corridor as the only path for the proposed rail. Here, they examined 21 potential alignments within the Utility Corridor. In some sections of the corridor, only one alignment was identified, and in others, such as that which travels through Waller County, five potential alignments were considered (Hockley Geographic Group).

Again, it would be reasonable to assume that at the very least the FRA would compare the five alignments within the one corridor in Waller County, through the lens of NEPA and the 23 environmental criteria of their NEPA procedures. Remarkably, they did not.

First, they considered whether each alignment met the "purpose and need," "alignment objectives," and "design guidelines." Four of the five alignments passed and were carried forward. Second, they considered 16 environmental concerns and incorporated cost and construction factors into the analysis to determine which of the four remaining alignments would be carried forward for analysis in the Draft EIS.

Understanding the methodology they used to eliminate alignments is challenging. They attempt to determine whether there is a "direct" or "indirect" impact for each environmental criterion. However, their application of "direct" and "indirect" impacts is quite different from that required under NEPA.[5]

FRA considered a "direct" impact if the action occurred in the 125 foot right of way (ROW). If a house resided inside this ROW, then the impact would be "direct" and recorded under the environmental criterion of "structures." If an impact was outside the 125 foot ROW, but within 1,000 feet of the centerline, then it would be an "indirect" impact. Presumably, anything beyond the 1,000 foot area had no impact. So, even though the action may cause a cumulative impact and may have an indirect effect well beyond the 1,000 foot area, it was not considered.

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[5] 40 C.F.R. § 1508.8"Effects" include: (a) Direct effects, which are caused by the action and occur at the same time and place. (b) Indirect effects, which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems. Effects and impacts as used in these regulations are synonymous. Effects includes ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative. Effects may also include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.

Additionally, the information they used to make these determinations was "desktop level research and data collection." (AAAR Page 24). There were no field surveys or coordination with local governments to gather this information. If the data was not in a computerized source they reviewed, then it was not counted.

Further, each environmental criterion was then reduced to a number to represent the degree of the desktop accessed impact and given a ratio number between 1 and 4. Based on this number and a similarly calculated cost and construction factor number, a determination was made as to which alignments would be carried forward. It was a mathematical calculation, not an actual assessment of the impact. In Waller County, this resulted in narrowing the alternatives to be carried forward and finally to be analyzed pursuant to NEPA to one alignment within one corridor. (Attachment 1, Table 4 & 5)

Interesting to note, is that while the FRA initially considered 16 environmental criteria at this stage, they dropped four of these from early screening consideration. They were "community facilities, historic properties, hazardous materials and U.S. Census block groups with over 50 percent poverty population." (AAAR Page 29). Their reasoning was that "they did not create any differentiation between the scoring of the potential route alternatives at this level of analysis. For example, this desktop level analysis did not identify any historic properties within the 125-foot buffer, (62.5 feet from the alignment centerline) although they are expected to be present."

Had they assessed these impacts closer, particularly those which fall within the category of social justice, and also looked beyond the 1,000 foot zone, they would have had to report to the public and decision makers that the impact to Waller County was significant. They would have also had to report that anywhere they placed the rail in Waller County was going to impact a community that was over 50% minority.

Had they properly compared the four build alternatives that met the purpose and need statement pursuant to NEPA, they would have had to compare and analyze whether the impact to minority communities was significant alongside their premature decision that the impact to the national forest was significant. It is conceivable that the public and other federal decisions makers would have called for a different preferred corridor.

The FRA should pull back now, and prepare a programmatic EIS that analyzes the four build alternatives pursuant to NEPA. Once this analysis is completed, then they should begin a segment-by-segment alignment analysis, also pursuant to NEPA.

B. The FRA is Preparing an EIS to Justify Decisions Already Made

The primary purpose of an EIS is an "action-forcing device" to be used to "plan actions and make decisions. It shall provide full and fair discussion of significant environmental impacts and shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment." (40 C.F.R. § 1502.1)

A record of decision issued by the FRA approving the rail project at the end of the EIS process will authorize the private company to begin the actions necessary to build the rail, including the condemnation of private land in Texas. A "No Build" decision would prevent the rail from being constructed. Until the Dallas to Houston High Speed Rail project receives this environmental clearance, no landowner should be harmed, impacted, or be forced to allow TCR to physically occupy his land.

A critical principle of NEPA is that the analysis should not be prepared for the purpose of justifying an outcome. The analysis needs to be unbiased, impartially prepared, equally weighing all the impacts in such a way as to ensure the purposes for the act are fulfilled – that man and nature exist in productive harmony. The CEQ regulations specifically prohibit the type of statement preparation the FRA has pursued.

> *40 C.F.R. § 1502.2 (f) Agencies shall not commit resources prejudicing selection of alternatives before making a final decision (Sec. 1506.1). (g) Environmental Impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made.*
>
> And;
>
> *40 C.F.R. § 1502.5 ... The statement shall be prepared early enough so that it can serve practically as an important contribution to the decisionmaking process and will not be used to rationalize or justify decisions already made (Secs. 1500.2(c), 1501.2, and 1502.0)*
>
> And;
>
> *40 C.F.R. § 1506.1 (a) Until an agency issues a record of decision as provided in Sec. 1505.2 (except as provided in paragraph (c) of this section), no action concerning the proposal shall be taken which would: (1) Have an adverse environmental impact; or (2)Limit the choice of reasonable alternatives.*
>
> *(b) If any agency is considering an application from a non-Federal entity, and is aware that the applicant is about to take an action within the agency's jurisdiction that would meet either of the criteria in paragraph (a) of this section, then the agency shall promptly notify the applicant that the agency will take appropriate action to insure that the objectives and procedures of NEPA are achieved.*
>
> *(c) While work on a required program environmental impact statement is in progress and the action is not covered by an existing program statement, agencies shall not undertake in the interim any major Federal action covered by the program which may significantly affect the quality of the human environment unless such action ... (3) will not prejudice the ultimate decision on the program. Interim action prejudices the ultimate decision on the program when it tends to determine subsequent development or limit alternatives."*

The FRA has violated these provisions. Instead of preparing a programmatic EIS analyzing the four build alternative corridors that passed the purpose and need test, the FRA has selected one corridor and a specific alignment within this corridor before conducting the required NEPA analysis.

Landowners near the Utility Corridor and selected alignment have been harmed. TCR is actively surveying the 1,000 foot impact area and landowners have been threatened with court action if they refuse to allow TCR access to the private land.

Development in Waller County has all but stopped as investor's are on hold waiting to see which parcels of land will be impacted. The FRA's actions to this point have had an adverse environmental impact, have limited the choice of reasonable alternatives, and have prejudiced the ultimate decision on the program.

The heart of the environmental impact statement is the discussion of alternatives. Because the FRA has improperly selected one build alternative, it has failed to provide the meaningful comparative assessment necessary for proper decisionmaking. "Based on the information and analysis presented in the sections on the Affected Environment (Sec. 1502.15) and the Environmental Consequences (Sec. 1502.16) it should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public." (40 C.F.R. § 1502.14)

There is nothing for decisionmakers and the public to "compare" the analysis to. The FRA is offering only one build alternative to be compared against "no action." How futile will the "affected environment" and "environmental consequences" discussion be to ensuring an informed decision? Of course, it is not futile if the intent from the beginning of the proposal was to build a High Speed Rail System in the Utility Corridor. This approach, whether intentional or not, is clearly unlawful under the provisions of NEPA.

Two of the four build corridor alternatives were eliminated because it would have required negotiations with freight rail companies, the BNSF and UPRR alternatives. However, the FRA has said they will consider reassessing these if restrictions on the Utility corridor make this necessary. (AAAR page 3). What this means is that negotiations with the freight rail companies are possible, and reasonable. The pro's and con's of doing so should be examined equally alongside the other two alternatives, not eliminated at the outset of the project and, therefore, improperly preferring that alternative originally identified and recommended by the private company.

So, the FRA eliminated two alternatives because it would be difficult to negotiate with Freight Rail companies, eliminated one alternative because it would impact the national forest, in favor of impacting primarily rural landowners. This decisionmaking process not only reveals the FRA's bias against rural landowners, but also their ignorance as to the unique land uses and irreversible and irretrievable commitment of resources in rural Texas.

C. Local Significant Impacts to Waller County and WCSRPC's Jurisdiction Must be Resolved

As has been noted above, the FRA has a duty through the EIS process to work to resolve the conflicts a proposed project will cause to local communities.

> *"Study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources as provided by section 102(2)(E) of the Act."* (40 C.F.R. § 1501.2(c))

The remedy provided through NEPA when conflicts cannot be resolved is to develop appropriate alternatives that avoid these conflicts. In the event this needs to be stated again, the FRA should have prepared a corridor level analysis pursuant to NEPA whereby it could have studied an alternative that resolved the conflicts imposed on Waller County.

Additionally, the FRA is required to discuss in the statement how the agency is going to reconcile the proposed action with the local plans.

> *"To better integrate environmental impact statements into State or local planning processes, statements shall discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned). Where an inconsistency exits, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law."* (40 C.F.R. § 1506.2(d))

Again the burden falls on the federal agency to "reconcile" its proposed action with the conflicts imposed on the community.

Numerous impacts and conflicts were discussed in the coordination meeting held last February that will need to be identified in the Draft EIS and the action the FRA will be taking to reconcile these conflicts. To date, there has been no effort by the FRA to contact our Commission in order to determine what reconciliation would be sufficient, even the FRA has been noticed of these concerns through the meeting with TXDOT.

Some of these issues are discussed below, but by no means covers every issue. This does provide some of the most critical and important impacts to our community we are currently aware of that need to be resolved prior to any further action on development of an EIS.

1. Emergency Services

Mr. Gary Ferguson, Director of the Waller Harris Emergency Services District No. 200 (District), spoke about how the High Speed Rail (HSR) will divide the district down the middle cutting off access to 25 roads. These roads are used for emergency vehicles that now service the District and provide an 8-minute response time. The HSR will disrupt this service and increase the response time to dangerous and unacceptable levels.

Also, the District is currently planning for an expected increase of residents due to the construction of the Daikon Goodman manufacturing plant. However, it is prevented from carrying out its planning responsibilities in a sufficient manner because the potential of a proposed HSR through the District creates too many unknowns. For instance, if the HSR path does go through the District, whether or not the train will be elevated above grade or raised up 12 to 18 feet with no underpasses, changes every element of the District plans. The District cannot properly move forward and plan sufficiently because of the FRA's actions.

The District is funded with ad valorem taxation and any diminution of value due to the HSR will cause a tax increase to cover expenses and budgets. Each fire department costs $4.5 million for the building, equipment and staffing. An ambulance costs $300,000 and staff is needed 24/7 for 365 days. New fire stations and emergency services will be needed should the HSR divide the District. However, currently the District cannot prepare for this and other needs because of the FRA's actions.

Right now, the District has 10 fire departments and will need more if the HSR is built. The District is also very concerned with catastrophic accidents that may occur from an HSR accident. Hundreds of ambulances, life flights, and emergency services will be needed and the District will not be able to handle this type of emergency. This will place an undue burden on the District. To date there has been no discussion with the FRA as to how they will resolve these conflicts.

2. Economic Development Impacts on the City of Waller

Mr. John Isom, Director of the City of Waller Economic Development Corporation discussed how the City of Waller was stunned when it discovered the HC-4 Route through the City's ETJ had been chosen with no opportunity for public input or comment.

The City of Waller has a population of approximately 2,400 people and is located in both Waller and Harris counties. The City is a general law city under the 5,000 threshold and is limited in growth strategies compared to home rule cities. This means it is important to maximize the development of the geographical area available to the city. The HC-4 Route passes through the City's extraterritorial jurisdiction and through the planned Waller Town Center.

HC-4 passes through the Delta Troy Interests, a 990-acre tract being held for housing and commercial development. HC-4 also passes within 4,000 feet of the Daikin/Goodman facility currently under construction, a heating and air conditioning, $410 million facility that will be 4.2 million square feet in size, the largest industrial facility under one roof in the State of Texas, and employ 4,000 people in 2016 and 6,000 by 2018.

The City is part of a Greater Houston Partnership task force to support Daikin/Goodman in their effort to bring their key suppliers to the Waller area. It is estimated that the suppliers will add another 2-4,000 employees. There is concern that the HSR will create a barrier between Waller and the Goodman facility and cause the city to lose much needed tax base from these suppliers.

The barrier will cause suppliers to locate to the east of the HSR in the unincorporated area, causing a proliferation of onsite water and wastewater facilities rather than using city utilities, resulting in a much less efficient usage of land and resources.

Goodman Manufacturing has stated their position on the HSR route HC-4 this way: *"..., we would be concerned with any route that disrupts Waller plans to provide Goodman employees (residents and non-residents) with support services such as housing and retail options."*

Waller Town Center (WTC) is a joint venture being marketed by Cullinan Properties, a national developer operating in Illinois, Missouri, Georgia, and Texas. The WTC is an integral part of the City's development strategies to reach retailers. The Texas Legislature created a municipal management district (MMD) specifically for this development. The 462-acre project is a $280 million investment that will include a power center, lifestyle walkable retail, entertainment, hotel/conference centers, medical facilities, and housing.

The City has a retail "leakage" of $352 million in our primary trade area and $584 million in our secondary trade area. The WTC is critical to the City's closing this leakage. This build out investment would double the City's property valuation and could potentially double the City's sales tax revenue. This would allow the City to decrease its tax rate while improving City services.

HC-4 slices through this entire planned WTC project impacting 500 housing units delaying our residential growth and retail development creating extremely significant negative impacts on the economic development plans for the City of Waller.

Waller City Council has opposed the HSR project in Resolution 2016-6, passed on January 25, 2016. The Resolution addresses the fact that HC-4 was selected without public comment as the single route through Waller County, splitting the WTC creating significant detrimental impacts on the City's retail strategy and destroying the economic value of the City, and negatively impacting both property values and development opportunities.

One more major impact will be on the Hewlett Packard Data Center facility, which houses 1,500 servers that will be within 1,000 feet of the HC-4 route. When notified of the route, HP's management team and legal department stated: *"Hewlett Packard Enterprise is currently not in a position to approve or disapprove the proposed route...However...the proposed route would appear to have very serious negative impacts on our property and our critical data center operations at the property. If we determine that is the case, then we would have no choice, but to vigorously oppose this proposed route."*

3. Waller ISD Impacts

Mr. Danny Twardowski, Superintendent, Waller Independent School District (WISD), stated how he and his Board were never contacted or notified about the route being chosen. In fact,

HC-4 splits the District in half. It is also located immediately behind one of the schools in WISD), which is totally unacceptable.

WISD encompasses 328 square miles in Region 4 of the District. It has 6,600 children and has added over 320 students in 2016 and over 700 in the past two years. WISD has a five to seven percent growth rate and is expected to double in size over the next 10 years.

For planning purposes of the District, we now need to know if the train track is going to be elevated, on grade, or subterranean. We need to know for our bus routes and safety of our students. The potential division of our District will cause our buses to travel many more miles, creating wear and tear on our equipment, which will need more maintenance and care.

WISD derives 45% of its funding from ad valorem taxation. Any diminution of property values will have a direct and negative impact on the future growth of our school district. With Daikin/Goodman coming to our community, those 6,000 employees will have children who will need to attend school and WISD would like for them to attend their District, but the District cannot make the appropriate plans for future growth and economic development around the HSR because of the many unknowns regarding the HSR. People are scared and are now not willing to move into the area for fear that the train will destroy their property values. This is a major issue for the school district and future planning. The FRA has already harmed the District by selecting this alignment without proper NEPA analysis.

Last November, WISD passed a Bond to build four new schools. Without knowing any details about the HSR, WISD cannot purchase land, make plans or know which routes to choose to transport their students. Some of their children are medically fragile and cannot be transported easily or for long periods of time. The HSR now creates significant issues that need to be resolved. WISD also plans on building a new satellite transportation facility, but without more information, cannot purchase land, make plans, or be as efficient with the public's tax dollars.

These conflicts must be resolved by the FRA before any additional environmental studies are released.

4. Other Community Impacts

Mr. T.J. Johnson, president of the Waller County Advocacy Group (WCAG) discussed numerous impacts on Waller County, which, according to government statistics, is one of the fastest growing counties in the nation. Impacts on the County include:

- **High Speed Ground Transportation Noise and Vibration Impact Assessment** by the FRA dated September, 2012 states that vibrations affect "sensitive" buildings like Concert Halls, television stations, recording studios, theaters and buildings like the Hewlett Packard facility where they house 1,500 servers. With up to 96 trains per day, this will cause significant impacts to HP, as well as, directly affect the viability and economic stability of the region. Ms. McNeely stated that the FRA was studying this very issue and would include it in the Draft Environmental Impact Statement. We ask

that HP be directly contacted so that impacts to their facility will be taken into account and any conflicts resolved prior to the final report being issued.

- **Quality of Life** issues include people living within noise and vibration distance, as well as, sight, particularly if the train track is elevated. Depending on location and height of track, there will be loss of disposable income for the increase in travel time because people will not want to live within five to ten miles of the train track causing them to spend more time driving longer distances. Mr. Johnson estimates quality of life spent driving behind the wheel of their vehicles will be reduced by 5,000 man-hours per year for residents in Waller County and cost an additional loss of disposable income up to $3 million.

- **Katy Prairie Conservancy** – provides essential habitat for migratory birds and is designated as a **Global Important Bird Area**. A 200 MPH train barreling past this migratory bird sanctuary is going to cause bird collisions and accidents. This is also where important **wetlands** exist that will be irectly affected by a HSR corridor.

- **Kickapoo Preserve** – a high-end development for 500 new homes for Daiken/Goodman employees has begun construction with a detention pond. The developer learned about the HC-4 route and has decided to stop all development until further knowledge of the train and its route is known. (See map).

- **Saddle Creek Forest, Plantation Forest, Oak Hallow, Remington Forest and Six Pines** – all developments for nearly 500 homes, 50 of which have already been built with four or five more in the works are all now cancelled because of the route. The HC-4 route travels right through the developments and destroys the economic viability of them and the value of everyone's property. Also, within these developments are four horse riding trails that the train will cross. This will destroy any viability of the equestrian facility and create dangerous situations for anyone riding in the area, especially children.

- **G & W Water** is the supplier of potable water for northern Waller county and southern Grimes County. They have funding approved and finalized to build a water tower and the train route falls directly on top of it.

- **Woodhaven Subdivision** was the area where three new schools were to be constructed, but that's on hold because of the HC-4 route.

5. **Waller County Economic Partnership**

Mr. Vince Yokum, Executive Director of the WCEP, a non-profit tasked with assisting the County to bring development, jobs and investment raised the following issues:

- Future road and thoroughfares through the northern portion of the County where the train is going to cut through. Dozens of roads are planned, but none will be able to be completed if the train cuts through stifling all development.

- Local Environmental Impact include the Spring Creek Watershed where five creeks will cross the track of the HSR. This watershed will be directly impacted by the train and the track depending on how it's built. Tropical Storm Allison proved that if any impediments to water flow occur through the watershed, the area will experience major flooding and damage to property if the track is not properly studied and engineered.

- Recreational and Sport duck hunting will be directly affected by any noise, vibration and possible 96 trains running through the area. The route cuts through the north end of one of the major wetlands in the region where duck hunting is vital to the economy and where water fowl and their hunting will be diminished, if not destroyed by a high speed train.

6. Economic Obsolescence

Mr. Don Garrett, a real estate broker, discussed the economic reality of a train coming through the community. He referred to this as Economic Obsolescence.

Using government studies, he explained how if anyone lived within 300 to 500 feet of the train, they're what he called the "Walking Wounded." In other words, the value of your land/home would be destroyed. The noise factor alone would do that. He likened it to living next to a freeway or in the flight path of an airport.

Mr. Garrett explained how bankers and appraisers heavily discount property values in situations like this, which destroys the market value of all properties. Because of this loss in value, ad valorem taxation will decrease causing WISD to lose $3.6 million in annual revenue, $1.8 million will be lost to the Municipal Management District discussed in No. 2 above, the City of Waller will lose $1.3 million and property tax collected by the county appraiser will be reduced by between $279,000 to $1.6 million annually from developments that will be ruined by the train passing through or near them. Nobody wants to see or hear a high speed train near their home or business.

The HSR will prevent the highest and best use of hundreds of properties throughout Waller and Harris Counties where the area is experiencing some of the fastest growth in the state. He requested the appraisers of the HSR look into what he calls Economic Obsolescence because it's going to cause people to lose value in their property, valuation of property to cause lower taxes collected and school districts, cities, emergency services and all public entities will lose income reducing the services that are provided to the citizens who pay the taxes.

7. Historical Impacts

Mr. Rick Welch and Tom Gleason discussed historical significant locations and objects and cultural resources within Waller County and the location where the rail is selected to traverse.

Mr. Welch told of Benaiah "Yankee" Jones, III, born in Massachusetts in 1795 and moved to Texas in the 1830's to early 1840's. He ended up in the area that is now northeast Waller County where he bought 1,100 acres. On this land, he built a stage coach Inn that became a

famous stage coach route that is still visible today in the Kickapoo Preserve. Jones and his family are also buried on the family cemetery located in the Kickapoo Preserve. HC-4 runs right over this land and very close, if not directly over this old Inn and Stage Coach site and cemetery.

When Kickapoo Preserve was established, they were required to perform an archeological survey, which produced the "Kickapoo Archeological Survey Report of April, 2010." For this report, the developer was required to obtain an Army Corps of Engineers Section 4 Permit. This report revealed four archeological sites and two pre-historic/historic sites considered for inclusion in the National Register of Historical Places.

Mr. Welch has historical maps indicating historical boundaries, roads, stage coach routes, written historic interviews of "old timers," and all the historical sites on the Kickapoo Preserve. These documents show where the sites were for historical Stage Coach Road that was created between the 1830's and 1840's that came from in the original town of Harrisburg (now Houston) and went northwest through Mr. Jones' land.

These are all historical sites that should not be destroyed by the HSR.

8. Public Safety

Mr. Tom Gleason discussed the Atmos Energy Turbine Powered Natural Gas Compression Station, which uses a jet engine to pressure up to a 30 inch natural gas pipeline between Waxahachie and Katy Texas. The pipeline is pressured up to 930 psi and was installed in 2006.

There have been at least three known accidental releases of natural gas:

May 24, 2007 – 18,000 lbs released,
May 30, 2007 – 20,000 lbs released, and
June 11, 2007 – unknown quantity

On August 9, 2011, there was a planned Emergency Shutdown Simulation that released thousands of pounds of gas that Mr. Gleason and other neighbors experienced over a mile away.

It turns out that Atmos has to perform emergency simulations twice a year creating potential hazardous situations, especially with an electric train traveling nearby. What would happen during one of these accidental or planned events should a train traveling 200 mph ignite the natural gas and cause a catastrophic accident?

This will cause an unprecedented catastrophe with tremendous loss of life, damage to private property and environmental destruction to Waller County or any other county should this occur.

The train adds the ignition source to an already volatile and potentially dangerous scenario that creates an unacceptable risk to the health, safety and welfare of our community and local residents, as well as, the passengers on the train should an explosion occur.

Summary

The FRA has failed to properly study the four build corridors that met the purpose and need test pursuant to NEPA, and by so doing caused considerable harm to Waller County and unresolved conflicts. Development in Waller County has all but stopped as investor's are on hold waiting to see which parcels of land will be impacted. Local governments have put plans on hold, jeopardizing properly preparing for their communities future. The FRA's actions to this point have had an adverse environmental impact, have limited the choice of reasonable alternatives, and have prejudiced the ultimate decision on the program.

The only way the FRA can properly resolve these conflicts is to start the process over by preparing a programmatic EIS that begins with a comparative analysis of the four build corridors pursuant to NEPA.

Attachment 1

USDOT – FRA Dallas to Houston High Speed Rail Corridor Refinement Process

Scoping Report, April 2015 (Table 1)

TCR Screening	BNSF 1	BNSF 2	BNSF 3	BNSF 4	I-45	I-45 /Hardy	Utility	Utility /I-45	UPRR
HSR Design Requirements	pass	unknown	unknown	unknown	unknown	unknown	pass	unknown	unknown
Engineering & Constructability	pass	unknown	unknown	unknown	unknown	unknown	pass	unknown	unknown
Potential Environmental Constraints	pass	unknown	unknown	unknown	unknown	unknown	pass	unknown	unknown
Carried Forward	Recommended by TCR						Recommended by TCR		

Conclusion: TCR recommends to FRA that the BNSF 1 and Utility Corridors move forward for further alternatives screening pursuant to the National Environmental Policy Act (NEPA).

Corridor Alternatives Analysis Technical Report, August 2015 (Table 2)

FRA begins independent review of potential reasonable alternatives and includes in the initial analysis other transportation options. None of these options were analyzed pursuant to NEPA.

Criteria	BNSF	UPRR	I-45	Utility	HSR &Conv. Rail	Direct Bus Service	I-45 Expansion
Previously Studied							
Texas Rail Plan (2010)	Yes	Yes	Yes	No	No	No	No
Studied Pursuant to NEPA	No	No	No	No	No	No	No
Coarse Screening Analysis							
Purpose and Need	Pass	Pass	Pass	Pass	Fail	Fail	Fail
					Not carried forward	*Not carried forward*	*Not carried forward*
Fine Screening Analysis							
Physical Characteristics	Fail	Fail	Fail	Pass			
Operational Feasibility	Fail	Fail	Fail	Pass			
Environmental Constraints							
Number of stream crossings	127	148	125	113			
Acres of wetlands	399	368	202	380			
Acres of floodplains	15	0	0	0			
Number of historic properties and archaeological sites	3	3	5	7			
Acres of parks and national Forest/national parks	35	1	433	1			
Acres of managed habitat areas	0	0	80	1			
Env. Constraints Conclusion	Pass	Pass	Fail	Pass			
Carried Forward				Pass			

FRA's Procedures for Considering Environmental Impacts as set forth in 64 FR 28545 (Table 3)

Environmental Impacts	BNSF	UPRR	I-45	Utility	Conv. Rail	Bus	I-45 Exp.
(1)Air Quality;	No	No	No	No	No	No	No
(2) Water quality;	No	No	No	No	No	No	No
(3) Noise and vibration;	No	No	No	No	No	No	No
(4) Solid waste disposal;	No	No	No	No	No	No	No
(5) Ecological systems;	No	No	No	No	No	No	No
(6) Impacts on wetlands areas;	Limited	Limited	Limited	Limited	No	No	No
(7) Impacts on endangered species or wildlife:	Limited	Limited	Limited	Limited	No	No	No
(8) Flood hazards and floodplain management;	Limited	Limited	Limited	Limited	No	No	No
(9) Coastal zone management;	No	No	No	No	No	No	No
(10) Use of energy resources;	No	No	No	No	No	No	No
(11) Use of other natural resources, such as water, minerals, or timber; The EIS shall assess in detail any irreversible or irretrievable commitments of these resources likely to be involved in each alternative.	No	Yes – National Forest	No	No	No	No	No
(12) Aesthetic and design quality impacts;	No	No	No	No	No	No	No
(13) Impacts on transportation: of both passengers and freight; by all modes, including the bicycle and pedestrian modes; in local, regional, national, and international perspectives; and including impacts on traffic congestion;	Regional not Local Impacts	Regional not Local Impacts	Regional not Local Impacts	Regional not Local Impacts	Regional not Local Impacts	Regional not Local Impacts	Regional not Local Impacts
(14) Possible barriers to the elderly and handicapped;	No	No	No	No	No	No	No
(15) Land use, existing and planned; The EIS should assess the impacts of each alternative on local land use controls and comprehensive regional planning as well as on development within the affected environment, including, where applicable, other proposed Federal actions in the area. Where	No	No	No	No	No	No	No

inconsistencies or conflicts exist, this section should describe the extent of reconciliation and the reason for proceeding notwithstanding the absence of full reconciliation.							
(16) Impacts on the socioeconomic environment, including the number and kinds of available jobs, the potential for community disruption and demographic shifts, the need for and availability of relocation housing, impacts on commerce, including existing business districts, metropolitan areas, and the immediate area of the alternative, and impacts on local government services and revenues; The need for and availability and adequacy of relocation housing should be assessed, using as a guide section 6 of Attachment 2 to DOT Order 5610.1C. The positive and negative consequences of each alternative on commerce in the community and its surrounding metropolitan area, specifically on existing business districts and the immediate project areas should be analyzed.	No	No	No	No	No	No	No
(17) Environmental Justice; The EIS should address environmental justice considerations as required by Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" and the DOT Order on Environmental Justice.	No	No	No	No	No	No	No
(18) Public health;	No	No	No	No	No	No	No
(19) Public safety, including any impacts due to hazardous materials;	No	No	No	No	No	No	No
(20) Recreational opportunities;	No	No	No	No	No	No	No
(21) Locations of historic, archeological, architectural, or cultural significance, including, if applicable, consultation with the appropriate State Historic Preservation Officer(s);	Yes	Yes	Yes	Yes	Yes	Yes	Yes

(22) Use of 4(f)-protected properties; and	Yes	Yes	Yes	Yes	Yes	Yes	Yes
(23) Construction period impacts	No	No	No	No	No	No	No

Alignment Alternatives Analysis Report, November 6, 2015

The FRA considered 21 alternative alignments along the Utility Corridor. In the section that impacts Waller County (Hockley Geographic Group), there were five different alignments considered at this stage.

Level I Screening (Table 4)

Hockley Geographic Group – Waller County -Utility Corridor	HC- Base	HC-1	HC-2	HC-3	HC-4
Consideration of NEPA Impacts	No	No	No	No	No
Purpose and Need	Yes	Yes	Yes	Yes	Yes
Alignment Objectives	Yes	Yes	Yes	Yes	Yes
Design Guidelines	Yes	No	Yes	Yes	Yes
Carried Forward	Yes		Yes	Yes	Yes

Level II Screening (Table 5)

Hockley Geographic Group Alignments	HC-Base	HC-2	HC-3	Hc-4
Consideration of NEPA Impacts	No	No	No	No
Environmental Criterion (up to 1000 ft)[1]				

[1] FRA originally considered 16 environmental criteria during this stage using "desktop level research and data collection." (AAAR Page 24). A "direct" impact was determined if it occurred within the Right of Way (ROW) of 125 feet, and an "indirect" impact was if it occurred outside the ROW, but within 1000 feet. There was no assessment beyond the 1000 foot area and no assessment of the significant impacts to the human environment. To further eliminate alignments, each impact was given a score which was to represent the degree of potential impact. They then further refined the alignments by incorporating cost and construction factors into the analysis. The lowest scores were carried forward.

Urban Land Cover	4.000	1.669	2.737	1.000
Parcel Takes	3.250	1.000	4.000	1.750
Parks	1.000	1.000	1.000	1.000
Prime Farmland	1.000	1.549	2.920	4.000
Wetlands	1.370	4.000	1.906	1.000
Waterways	3.786	4.000	1.000	2.714
Floodplains	4.000	2.339	1.966	1.000
Road Crossings	4.000	1.000	1.750	1.000
Infrastructure Adjacency	1.000	2.811	3.109	4.000
Minority Population	4.000	1.000	2.500	2.500
Cemeteries	1.000	1.000	1.000	1.000
Ecology	4.000	3.943	2.671	1.000
Total Score[2]	32.41	25.31	26.56	21.96
Carried Forward		Yes		Yes
Cost and Construction Screening				
TCR Cost Factor		.83		.60
TCR Construction Factor		.81		.48
Cost and Construction Average Factor		.71		.65
Carried Forward				Yes

[2] Four of the original 16 environmental evaluation criteria considered – community facilities, historic properties, hazardous materials and U.S. Census block groups with over 50 percent poverty population – for which data was collected, were removed from the screening analysis. FRA's reasoning was, "they did not create any differentiation between the scoring of the potential route alternatives at this level of analysis. For example, this desktop level analysis did not identify any historic properties within the 125-foot buffer (62.5 feet from the alignment centerline), although they are expected to be present." (AAAR Page 29)

Exhibit 14

BGE KERRY R. GILBERT & ASSOCIATES

Mr. Michael M. Johnsen
Lead Environmental Protection Specialist, FRA
1200 New Jersey Avenue SE., MS-20
Washington, DC 20590

February 2, 2017

Re: Georgetown Oaks, a +/- 993 Acre Development by Delta Troy Interests, Ltd.
Comments for FRA Review re: Dallas-Houston, Texas High-Speed Rail Project

Dear Mr. Johnsen:

On behalf of our client, Delta Troy Interests, Ltd., we, BGE|Kerry R. Gilbert & Associates, have reviewed the available information and published reports for the proposed Dallas to Houston High Speed Rail Project's possible alignment alternatives. In particular, the selected "Utility Corridor" Hockley-4 Alignment Alternative (HC-4) through northwest Harris County and southeast Waller County would cause significant negative impacts to a large tract of land owned by Delta Troy Interests, Ltd. (also known as the Georgetown Oaks Master Planned Community).

Background

The subject tract is approximately 993 acres located along US 290 and west of the town of Hockley at Binford and Kickapoo Roads, with acreage both north (±295 acres) and south (±698 acres) of US 290. In comparing the alignment descriptions located within the *Reports* to a Request to Survey exhibit provided to our clients by TCRI, the proposed alignment for the High Speed Rail will cross through the central portion of our client's southern acreage, and will be the tract where the rail crosses over the US 290 ROW from the south. This is also the approximate location of a 30' underground pipeline easement running north-south parallel to Binford Road and approximately 1,000' east of the roadway. The tract historically has been used for agricultural purposes but has had a General Development Plan submitted and approved in 2007 with an updated version submitted and approved in late 2016 to the City of Houston. In 2011, Delta Troy and the Texas Legislature created Municipal Utility District 524 to provide utilities, roads and drainage for this parcel's future development.

Impacts to Georgetown Oaks

In the exhibit provided by TCRI, the potential area to be surveyed and acquired as ROW for the high speed rail is delineated through the property owned by Delta Troy Interests, Ltd., but also includes additional areas outside the typical ROW dimension at intermittent locations with a number narrow strips leading from the rail back to a thoroughfare. The narrow strips to Binford Road and FM 2920 are presumably for access purposes, but in the areas

outlined and proposed to be surveyed outside what appears to be the typical dimension for the two sets of rails, there are no additional labels or text to suggest intended uses for these widened areas. Within the exhibit, there is one area highlighted outside of the rail ROW in a different color and designated as "Temporary Workspace," which encompasses approximately 80 acres between Binford Road and the proposed rail ROW just north of Hempstead Road. Due to the vagueness of this exhibit in relation to TCRI's intended uses in these areas outside of the established high speed rail ROW, it is difficult to anticipate all of the impacts this project will have on the subject property, but there are several hardships caused by the general location within the property and through the design descriptions as outlined in the *Screening Reports*. Some, but not all include:

A) The design and placement of two complex structures necessary to cross existing infrastructure affects the portion of Georgetown Oaks south of US 290. The first complex structure would be required to cross US 290, and an additional structure to traverse Hempstead Road and the Union Pacific Freight Rail corridor along the tract's southern-most boundary. In the *Step 1 and Step 2 Screening Reports*, there is no discussion or description of the actual designs, orientations, or acreage requirements for these structures, and thus no data is presented regarding any potential land or ROW takings additionally necessary to accommodate these structures beyond TCRI's proposed typical ROW cross section. This unknown factor places an additional burden on the future development of this parcel and how it will affect the future compatibility of adjacent land uses.

B) Land use compatibility is another major obstacle caused by the proposed location of high speed rail. One of the issues with this general complaint is the difficulty to fully assess these kinds of impacts given the nature of the project. Being one of the first high speed rail projects proposed in North America, there are no other case studies or equivalent examples to compare to and verify potential impacts of vibration, noise, trip frequency, general design/aesthetics, and numerous other factors that would negatively impact neighboring land uses. Other similar projects in Europe or Asia are also difficult for a true comparison given the varied differences in each locale's development patterns/styles, development density, and consumers. The proposed trip frequency of every 30 minutes in peak hours would cause most residential developers, whether single family or multifamily, to not want to locate next to the proposed rail, and the same argument could be heard for many non-residential uses including schools, day cares, restaurants, or office uses. In comparison, a typical development along a major highway, freight rail line, or pipeline easement(s) generally would require additional landscape or greenspaces to serve as buffers between the desired land use and the constraint/nuisance use, but this practice costs the developer additional land and reduces overall development density. For those uses that would locate adjacent to the rail, screening becomes an issue with berming or if the rail is proposed to be constructed on viaduct throughout our client's tract due to the structures and height requirements to cross US 290 and Hempstead Road/Union Pacific. The severity of these land use compatibility issues may not be as impactful when compared to a typical freight rail, but coupling the high speed rail's trip frequency, elevated rail structures, and design speed together will give cause for some potential property developers to seek other locations for their future developments.

C) Potential frontage roads along US 290 could also be significantly impacted or never constructed due to the locations and design for the high speed rail's US 290 crossing structure. While frontage roads along US 290 would be influential to the overall prosperity of the subject tract, TXDOT has no immediate plans in the foreseeable future to construct frontage roads along US 290 in this general area. If frontage roads were to be constructed to serve this tract, or any other similar to it, additional ROW along US 290 would be required from the developer along with the costs to construct the roadway. Depending on the design, footing, and span requirements of the rail's crossing structure, any future frontage roads, whether TXDOT or developer-funded, may not even be possible. There are no publicly available documents showing what these structures may look like or how they will function, so reciprocal access along US 290 is no certainty with the imposition of the high speed rail through this tract. In addition, one area shown on the Request to Survey Exhibit with a wider footprint is located just south east of the rail's US 290 crossing point. This expanded ROW is shown without any labels or notes signifying its intended or potential use, but would cause difficulty with the construction of potential frontage roads along the southern portion of US 290 on the subject tract between Binford and Kickapoo Roads.

D) Traffic for this region is currently handled through the existing thoroughfare network. Most thoroughfares in this area were created on a one-mile grid, with many segments still only proposed roadways with no established timeline for their construction. In order to avoid adding additional traffic on these thoroughfares, the proposed development plan for Georgetown Oaks relies on an internal circulation system of collectors and local streets to serve the community and the proposed uses. In addition to potentially impacting future frontage roads, the alignment of the high speed rail as presented could drastically limit the internal connectivity within the tract. Without knowing the availability, location, or number of potential cross-access points through the high speed rail's ROW puts the development at a disadvantage. At this stage of the development process, the General Plan is meant to serve as a guide for the future development of the tract, but the land uses and locations of roads shown are subject to change and be modified to meet the needs of the development. Maintaining the flexibility of design is paramount and the uncertainty caused by the imposition of the high speed rail alignment erodes this essential quality.

E) In conjunction with limiting internal connectivity opportunities, the high speed rail would drastically impact the ability to effectively implement and develop necessary development-wide utility and drainage infrastructure in a timely manner. It is unknown whether or not TCRI would allow for drainage channels and other utility infrastructure to be constructed concurrently through rail ROW with the construction of the high speed rail. If reciprocal agreements could not be reached, the phasing of the development and installation of critical drainage and utility facilities would need to be reevaluated and restructured to minimize potential time delays due to the high speed rail. The "Temporary Workspace" is also an issue in the location shown on the Request for Survey Exhibit as it would limit the west-east flow of drainage through the southern tract. The term limits on the "Temporary Workspace" are not defined and would likely cause development for Georgetown Oaks to be stalled until all TCRI work, facilities, and construction equipment are removed from the temporary work site. Without knowing the construction timeline for the high speed rail, the additional construction traffic and noise along Binford Road could deter future homebuyers in the first phases of Georgetown Oaks or cause any development on the subject property to be stalled until the rail construction is completed.

F) The location of the proposed high speed rail through the subject tract also has the potential to create small inefficient parcels of land which are difficult to develop. This hardship is created as a by-product of the inherent geometry required for the high speed rail to operate at its desired design speed and travel times. Immediately south of the US 290 crossing, the rail line transitions its direction from west to north for the Dallas-bound (or from the south to the east for those traveling into Houston), in what is known as "The Hockley Curve". Due to the desired design speed of 205 mph, all curves along the alignment require a minimum centerline radius of approximately 17,000', as published in *The Screening Reports*. A turning radius of this magnitude in order to change its ordinal travel direction cannot be accomplished in a small area and therefore has to have a sweeping turn through several properties. The result of which creates various triangular or other oddly-shaped parcels between the rail ROW and established property lines, or in our case, the existing pipeline easement. These irregular parcels are difficult to develop for a number of reasons, but the primary issue with these parcels is often a lack adequate width or depth to develop to typical development standards. The same issue comes up often in other master planned communities when major thoroughfares are proposed through an undeveloped tract. The main differences between accommodating a major thoroughfare and the proposed high speed rail are differences in required centerline radii (2000' for a major thoroughfare versus the ±17,000' required for the high speed rail), and the flexibility to adjust the alignment of a thoroughfare to maneuver around constraining or existing features or best suit the road alignment to the proposed development.

G) Generally, there is some risk in developing near an underground pipeline, but we do not know what added risks may be involved when a high speed rail line is added in. As in the earlier discussion with potential land use compatibility issues, this project is the first of its kind in the North American market, and there are no existing standards or similar case studies to research, especially any in which a high speed rail runs alongside an underground pipeline. Within the *Step 2: Screening Report*, additional construction and safety measures are mentioned as a requirement were the high speed rail to be constructed adjacent to underground pipelines or other utilities, but what those additional measures or safety requirements are is never stated in the text. There is no clear picture of how this special circumstance will be coordinated or accomplished between TCRI, the landowners, and the operators of the pipeline(s) which would be affected by the proposed alignment. This impact is difficult to quantify for many reasons but could be expected to increase the amount of materials, labor, and construction timeline for this portion of ROW given the close proximity of the rail and underground pipeline, further exacerbating potential delays to the start of the Georgetown Oaks development.

The detrimental impacts to the land, planning, and developmental timeline for Georgetown Oaks caused by the imposition of the high speed rail alignment across the property are significant, and the issues related here focus solely on the most prominent damages from a land planning perspective. Not only does the alignment cause a potential reduction in internal roadway connectivity and overall design flexibility, but the operation and maintenance of the rail line once constructed could limit or obstruct desirable land uses due to the nuisance(s) it creates. Delaying development for the master planned community is likely the most certain impact, and one that could be ongoing in case there were any developmental or construction delays with TCRI. Any and all of the impacts listed here have the ability to merge with one another or spur additional problems once construction was underway should the high speed rail come to pass.

Delta Troy's 2007 General Plan and the US 290 Corridor

In recent years, the primary activity on this tract has been farming and other agricultural means. However, Delta Troy Interests, Ltd. has also engaged in pre-development efforts to position this prime parcel into a future master-planned community. In 2007, our firm submitted a General Plan on behalf of Delta Troy Interests, Ltd. to the City of Houston, and was subsequently approved by the Houston Planning & Zoning Commission. The Plan consisted of a mixture of: 1) traditional single family residential, 2) multifamily and townhome development, 3) general commercial, and 4) more intensive commercial and mixed use opportunities at prominent locations throughout the development. In 2011, Delta Troy and the Texas Legislature created Municipal Utility District 524 to provide utilities, roads and drainage for this parcel's future development.

Development for the project was largely impacted by the economic downturn in 2008 and was postponed until renewed development interest in the region and a more suitable economy was achieved. This part of the US 290 Corridor has begun to see new interest as construction has already begun on a neighboring parcel for the Daikin Goodman manufacturing plant and corporate headquarters, known as the Daikin Technology Park. The "Daikin Effect" is purported to boost the local economy with the projected arrival of 6,000 new employees in 2017, create an influx of new supplier companies supporting Daikin Goodman's operations, and the introduction of new housing and retail opportunities. Georgetown Oaks is ideally positioned of all nearby land tracts to advance and help facilitate this local economic expansion due its proximity, being just west of the Daikin campus across Kickapoo Road.

Along with construction on the Daikin facility, the connection of the Grand Parkway has also had a significant impact on the region as there are now direct connections from US 290 south to IH10, and north to SH249, IH 45, and IH 59. When compared to the other loop roads around Houston, Beltway 8 and Loop 610 handle more traffic and are more congested than the Grand Parkway currently. For developments, goods, and people at or near the current outer stretches of Greater Houston, the Grand Parkway offers a more time-efficient and effective route to travel around Houston. Other master-planned residential and commercial/industrial developments have started in recent years and have promoted additional development interest in the region. Due to this anticipated area demand and to capitalize on the overall renewed interest in the Northwest US 290 region, an updated General Plan (now naming the entire parcel "Georgetown Oaks") was developed with specific changes to reflect the highest and best uses for the subject tract, as well as to complement surrounding and planned developments. The updated General Plan was submitted to the City of Houston Planning and Zoning Commission for review and comment, and was approved on October 27, 2016.

Conclusions

The *Reports* emphasize the goal of minimizing the total number of land owners impacted, however, the outcome for larger land parcels, such as the subject tract, is to become bisected by the rail. TCRI and its affiliates have set strict design guidelines and engineering metrics in order to meet their company's goal of an approximate 90-minute trip between Houston and Dallas on a train traveling ±205 miles per hour. From what we have seen in the published *Screening Reports* and assorted *Appendices/Technical Reports*, there is little or no flexibility for the train's ROW to achieve these goals, so the property and landowners along the proposed alignment must accommodate the high speed

rail at no small cost to themselves. From a regional perspective, the high speed rail will serve the urban centers of Houston and Dallas, with little or no benefit to the properties and individuals impacted by the project. Given other well-publicized efforts to remove "community dividing barriers" such as I-69 East of Downtown Houston (near the Houston George R. Brown Convention Center), or the Pierce Elevated, the erection of a new "barrier wall" such as the proposed high speed rail should be avoided.

The high speed rail alignment as presented places a heavy burden on the properties and landowners necessary to make the project happen. At this point, too much is unknown as to how the rail will ultimately impact individual properties, the Houston-Dallas region, and potentially the nation, and what the precedents set through this project will influence. The question becomes not only of "how" the high speed rail will affect property but also "how long" this project will influence development and planning decisions for the region. In the case of Georgetown Oaks, TCRI and the Dallas to Houston High Speed Rail Project will significantly impact and delay the planned development for the property.

Should you have any questions of us or require any additional information, please feel free to contact our offices for assistance.

Sincerely,

Kerry R. Gilbert
Director, Land Planning Services
BGE | Kerry R. Gilbert & Associates

Enclosure: TCRI ROW Survey Exhibit

Exhibit 15

Delta Troy Interests, Ltd

3939 Hartsdale Drive
Houston, TX 77063

Mr. Michael M. Johnsen
Lead Environmental Protection Specialist
Federal Railroad Administration
1200 New Jersey Avenue SE., MS-20
Washington, DC 20590

May 19, 2017

Re: Georgetown Oaks, a +/- 993 Acre Development by Delta Troy Interests, Ltd.
Comments for FRA Review re: Dallas-Houston, Texas High-Speed Rail Project

Dear Mr. Johnsen:

I am writing to you on behalf of Delta Troy Interests, Ltd., a Houston, Texas-based real estate development company. Our firm owns property located within the geographic area currently under study in your *Environmental Impact Statement for Dallas-Houston High Speed Passenger Rail Corridor*. Delta Troy and its consultants[i] have reviewed the available information and published reports for the train's proposed alignment alternatives. The chosen segment known as the "Utility Corridor" Hockley-4 Alignment Alternative (HC-4) through northwest Harris County and southeast Waller County would cause significant negative impacts to a large tract of land upon which we will build the future Georgetown Oaks Master Planned Community. While the HC-4 route may appear a reasonable alignment based on the studies conducted by Texas Central High Speed Railway (TCRI) and its consultants, we would respectfully recommend that the Federal Rail Administration and TXDOT choose a different alternative, as the HC-4 Alignment unduly burdens the Georgetown Oaks tract now ripe for development, and Harris County as a whole.

Background

The subject tract is approximately 993 acres located along US 290 and west of the town of Hockley at Binford and Kickapoo Roads, with acreage both north and south of US 290. Within this tract is an existing Atmos Energy pipeline easement east of Binford Road. The area just to the east of the easement is described in the November 25, 2015 *Step 2 Screening of Alignment Alternatives Report* as the location for high speed rail to cross US 290. In overlaying the proposed alignment (sourced from the *Reports* exhibits and presentation maps) with our records, we can confirm that the alignment closely follows the location of the existing easement. If the high speed rail route tracked this pipeline's north to south alignment, it would bisect the southern portion of Georgetown Oaks (east of Binford Road) and cause irreparable harm to the entire 993 acre planned development.[1] [Please also refer to the attached "Tracts to be Surveyed, *Harris County, TX*" map promulgated by Texas Central Railroad and Infrastructure. Inc].

In addition to the proposed ROW width necessary for the railroad tracks, and the additional, and as yet unknown [but estimated at 116.19 acres, or nearly 12% of our total acreage] amount of extra acreage needed for railroad support

facilities and new electrical power lines[2], this tract would also be encumbered with numerous other hardships. Some, but not all include:

A) The design and placement of the two complex structures necessary to cross to the southern portion of Georgetown Oaks: 1) at, and south of, US 290, as well as 2) near Hempstead Road (Union Pacific Freight Rail corridor). In the *Step 1 and Step 2 Screening Reports*, there is no discussion or description of the actual designs, orientations, or acreage requirements for these structures, and thus no data regarding any potential additional land or ROW takings needed beyond TCRI's proposed typical ROW. This unknown factor places an additional burden on the future development of this parcel. The information that can be gleaned from the "Tracts to be Surveyed" map shows a huge ROW taking between Binford Rd. and an area well to the east of the proposed rail line. This taking eliminates an important access path to US 290 from our property, and divorces thousands of square feet of prime frontage from the parcel (or nearly half of the US 290 frontage from the southern parcel, and some from Binford Rd.). This will severely impair our ability to develop prime retail and mixed use developments in this area. In addition, the placement of the structure at US 290 may also make prohibitively expensive, or render physically impossible, the construction of future frontage roads along US 290 in this rapidly developing area.[3]

B) Another hardship relates to the proposed alignment as it continues south through the acreage and approaches the southern boundary of the subject tract at the Hempstead Highway (Business US 290). Immediately south-southeast of this tract is where the high speed rail transitions its direction from west to north for the Dallas-bound, (or from the south to the east for those traveling into Houston). This radius is also known as "The Hockley Curve." Due to the large centerline radius required for high speed rail to maintain its 200 mph design speed, this sweeping turn will create various triangular or other oddly-shaped parcels without adequate width or depth, therefore making additional portions of the tract undevelopable.

C) The alignment would also cause significant harm to Georgetown Oaks by drastically limiting the connectivity of the proposed uses. Delta Troy's latest Land Plan relies heavily on the use of internal access and backage roads to join its various uses together into a cohesive workable plan. Placing a high speed rail line through the largest portion of the 993 acre parcel severely limits east to west access and causes other severe problems with regard to the creation, placement and use of shared utilities and drainage, as well as other Municipal Utility District functions. The current lack of frontage roads along this portion of US 290, coupled with Texas Central's plan to erect either a train track berm or viaduct, (or a mix of both), bisecting Delta Troy's property will render a majority of the tract undevelopable. The "Tracts to be Surveyed" map shows that the actual ROW width when going north to south, from US 290 to the Hempstead Highway, actually varies, and is much larger than the 100 ft width touted by TCRI. This enormous and overly expansive ROW area (shown in dashed yellow on the "Tracts to be Surveyed")

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1. *See: Federal Register Notice of Intent (NOI) to Prepare an Environmental Impact Statement (EIS) for Dallas-Houston High Speed Passenger Rail Corridor*. The NOI did not list a pipeline as an existing linear infrastructure "shared corridor" option for co-location with high speed rail. Only "railroads, roads, and electric utility lines" are mentioned**.** Federal Register, vol.79, no. 122, Wednesday, June 25, 2014. https://www.federalregister.gov/documents/2014/06/25/2014-14771/environmental-impact-statement-for-dallas-houston-high-speed-passenger-rail-corridor.
2. Ibid. The *Federal Register NOI* states that "the EIS will analyze the potential impacts of stations, power facilities, and maintenance facilities to support HSR Operations**.**" As of this date, no map showing locations of planned maintenance facilities, (including heavy and light maintenance facilities), signaling stations, power stations, additional electrical infrastructure, access roads, etc. has been publicly made available. There is no way to evaluate their impact on Georgetown Oaks. See also the "Tracts to be Surveyed, Harris County, TX," map produced by Texas Central Railroad and Infrastructure, Inc. (undated), which shows only a vague outline of proposed ROW takings.
3. Representatives from Delta Troy Interests, Ltd met with TXDOT Houston on January 14, 2013 regarding the status of future frontage roads near Binford and Kickapoo Roads. The agency had no objection to their eventual construction. Frontage roads are a driver of suburban economic development and TXDOT has recently added economic development as part of its mission statement. William Stockton of the Texas Transportation Institute states that "…there appears to be significant value in a program to provide spot (transportation) improvements as a part of local recruitment of new industries." and "…relatively small improvements could significantly improve a community's ability to attract a new industry." See William R. Stockton, P.E., "Assessment of the Role of TXDOT Projects in Promoting Economic Diversification," *Texas Transportation Institute*, Report 1718-1, Project Number 0-1718: 24, http://d2dtl5nnlpfr0r.cloudfront.net/tti.tamu.edu/documents/1718-1.pdf.

effectively destroys the southern portion of Georgetown Oaks for all intents and purposes. This southern 440 acre tract (between Binford and Kickapoo Roads) is Georgetown Oaks's "heart," and is the largest of the three parcels comprising our proposed 993 acre Master-Planned Community. TCRI's requisitioning and seizure of our most important land parcel effectively ruins its developability and value as well as the developability and value of the other two remaining parcels. The entire 993 acres is thus rendered inutile due to TCRI's ignoble plans for our private property.

D) Unfortunately, TCRI also has designs on our 284 acre northern parcel. TCRI demands ROW from the northern portion of Georgetown Oaks, (north of US 290) which contains no pipeline easement, and should thus be spared from any ROW takings based on the logic of TCRI's self-proclaimed "utility corridor" route. Unfortunately, TCRI intends to create a large detention pond on our property to serve themselves and possibly a neighboring landowner's tract (The Peter S. Terpstra Acreage). As with the southern portion, they will take prime US 290 frontage to accomplish this. Furthermore, TCRI seeks even more prime frontage, but this time along FM 2920 on the northern border of our property, in order to place an access road. This is again to benefit themselves and the Peter S. Terpstra tract to our west. This taking severely impairs our ability to develop the northern portion of the tract. We had planned to make this area a main entrance to our proposed business park (located adjacent to the new Daikin Goodman Campus, home of the largest tilt-wall building in North America).

E) Although apparently "temporary" in nature, TCRI also demands the long-term use of 79 acres of our property (not included in the yellow ROW area) for a "temporary workspace" staging area. This area is shown in blue on the "Tracts to be Surveyed" map. When we asked TCRI's corporate representative, Shaun McCabe (in a deposition, under oath) what the actual estimated timeframe would be for their use of the staging area, he stated "Less than five years."[4] He also noted that this area would be used "To facilitate the construction of the route," and when asked to clarify himself, he confirmed that the 79 acres would be used to build the route through Harris County, and not just for "construction activities on the Delta Troy property."[5]

F) These additional takings make our planning for the future extremely difficult due to the uncertainties and likely delays involved with TCRI's construction timetable, their inability to secure financing for their project, and the unknown and deleterious effects associated with their ROW takings on our development plan.

G) TCRI's demands are simply too high of a burden to place on one family land owner for the benefit of their private corporate goals. In fact, we have already been harmed due to their publication of and promotion of their preferred HC-4 route through northwest Harris County and through our property. In 2016, two different entities, the Waller School District, and Broad Motors of China, approached our group though their designated real estate brokers. Both entities expressed interest in purchasing property from our group. However, upon learning of the possibility of TCRI's bisection of our parcel, they both backed off due to the uncertainty and risk, and instead went elsewhere. Broad Motors opted to purchase a site immediately across the street from our southern parcel, despite that site's inferior location with respect to the Daikin Campus (vs any of our parcels fronting Kickapoo Rd), and despite the fact that they were not guaranteed the planning certainty of a master plan. Our family was harmed by not being able to kickstart our business park with the Broad Motors deal, and this incident transpired *before* any rail line has been built. From a marketing standpoint, it is now impossible for us to promote Georgetown Oaks without discussing the possible deleterious effect of TCRI's project on our land plan. The ultimate effect has been to push development to the east of the proposed HC-4 alignment; this benefits all landowners to the east, and harms all those to the west.

[4] Deposition of Shaun McCabe, December 8, 2016, P.143.

[5] McCabe Dep, 143, December 8, 2016.

Delta Troy's 2007 General Plan and the US 290 Corridor

In recent years, the primary activity on this tract has been farming and other agricultural means. However, Delta Troy Interests, Ltd. has also engaged in pre-development efforts to position this prime parcel into a future master-planned community. In 2007, Delta Troy submitted a General Plan to the City of Houston, and this Master Plan was subsequently approved by the Houston Planning & Zoning Commission.[6] The Plan consisted of a mixture of: 1) traditional single family residential 2) multifamily and townhome development 3) general commercial and 4) more intensive commercial uses at prominent locations along the major thoroughfares in and through the tract. In 2011, Delta Troy and the Texas Legislature created Municipal Utility District 524 to provide utilities, roads and drainage for this parcel's future development.

Development will begin on the project once a critical mass of global and local economic forces bring anticipated development activity throughout this part of the US 290 Corridor. This process has now begun with the creation of Daikin Goodman's $417 million manufacturing plant and corporate headquarters, known as the Daikin Technology Park.[7] The "Daikin Effect" will boost the local economy with the arrival of 6000 new employees in 2017, the influx of new supplier companies[8] supporting Daikin Goodman's operations, and the creation of new housing and retail opportunities.[9] Georgetown Oaks is the best positioned of all area land tracts to facilitate this local economic expansion due its proximity literally "next door" to the Daikin campus, and its large size, unified ownership, favorable terrain, ease of developability, and approved Plan that supports land uses complementary to the needs of the Daikin headquarters' employees and suppliers.

The "Daikin Effect" is one of several reasons behind the renewed interest and optimism in the northwest US 290 region starting from the Waller County Line and on into Cypress. Also significant are:

1) the recent connection of the Grand Parkway (SH 99) to US 290;
2) the growth of planned commercial and industrial corporate headquarters such as the Daikin-Goodman site, FedEx, and the proposed Oceaneering Headquarters near SH 99; and;
3) the demand for master-planned residential and retail communities started in recent years such as Fairfield, Stone Creek Ranch, and The Bridgelands.

Furthermore, the Houston Region is expected to grow its population from a current 6,656,947 persons to 10,500,000 persons by the year 2035.[10] Among the areas now hi-lighted as a "future growth center" for this larger population is the Northwest US 290 Corridor, between the Cities of Waller and Cypress.[11] Due to this anticipated area demand and overall renewed development interest in the Northwest US 290 region, we created a 2016 General Plan (now naming the entire parcel "Georgetown Oaks") to reflect the highest and best uses for the subject tract, as well as to complement surrounding and planned developments. We submitted the updated General Plan to the City of Houston on October 27, 2016, and received plat approval that same day.

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[6] The parcel is located within the City of Houston Extra Territorial Jurisdiction.

[7] Takahashi, Paul. "Exclusive: Class A apartment project planned near Daikin plant northwest of Houston." *The Houston Business Journal*, 12 August 2015.

[8] Daikin's Suppliers are estimated to add another 2,000 to 4,000 jobs to the area. See Letter of Waller County Judge Trey Duhon to TXDOT Interim Rail Division Director Dan Harmon, 6 May 2016, p.11. https://www.americanstewards.us/.../WCSRPC-TXDOT-Letter-Discussion-Attachment.

[9] Ibid. See also Mochizuki, Takashi and Pfanner, Eric. "Japan's Daikin to Build $410 Million Air-Conditioner Factory Near Houston." *The Wall Street Journal*, 6 January, 2015.

[10] Laguarta, Kirk, and Heckmann, Duane. "Houston MSA Population Predications." *2016 Land Advisors Houston Forecast*, 15 November 2016, p.58.

[11] Ibid., "Possible Growth Areas in the Future." p.61.

We believe that the unimpeded development of Georgetown Oaks will serve the Houston Region as the parcel:

1) can be a significant mixed use development featuring quality, master-planned residential, office, retail, and industrial uses;
2) is a potential site for an International Corporate Headquarters;
3) will be a future employment node where basic jobs and employment growth can thrive;
4) is an ideal location for out-of-state and out-of-country businesses to relocate to, given the area's low taxes, transportation amenities, and educated workforce, all in furtherance of a more diversified economy;
5) is a game changer for Northwest Houston by creating new industrial, office, retail, and residential amenities between Katy and Magnolia/ The Woodlands;
6) is a potential tax revenue generator to grow the tax base of Harris County, the Waller ISD, and the City of Houston;
7) will serve as a place to advance trade,[12] create jobs, attract investment capital, and diversify the regional economy due to its positive characteristics, relative ease of development and its comparative advantages to other properties; and
8) will make an ideal business expansion or relocation site for consideration by the Greater Houston Partnership's Economic Development and International Investment and Trade Committees.

Unfortunately, should the HC-4 Route come to pass, the plentiful rooftops, retail, and offices (along with their higher paying basic jobs) will not flourish at Georgetown Oaks, or anywhere to the west of, or near the actual alignment.[13] Keeping the HC-4 Alignment through northwest Harris County means favoring lower paying service jobs at the termini locations (such as restaurant, hotel, and temporary construction jobs) over the creation of plentiful high-paying basic jobs in suburban Houston. Any possible contribution from our area of northwest Harris county toward the correction of our nation's trade deficits will be reduced, and fewer quality jobs will be created. The "Daikin effect" will be neutered, and its associated growth and development confined to the east of that campus where the land is more difficult and expensive to develop due to its topography and associated floodplain issues.

<u>The Alignment Alternatives for High Speed Rail near Hockley: HC-4</u>

According to the *Step 1 and Step 2 Screening of Corridor/Alignment Reports*, the Hockley alignment alternatives were developed to:

1) alleviate issues such as cited property owner impacts at the Utility Corridor's preferred "HC-Base" / 290 @ Hegar Road crossing;
2) find options to deal with alleged tight curvature issues / requirements;
3) minimize the train's crossing requirements as they relate to the other existing infrastructure, including US 290, its frontage roads, and the Union Pacific freight line.

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[12] See Schneider, Andrew. "How Would A US Withdrawal from NAFTA Affect Houston?" *Houston Public Media*, 1 September 2016. Citing the benefits to Houston of NAFTA and global trade, as exemplified by the creation of the Daikin facility between Waller and Hockley: "The campus will import some components from Mexico, but all design, engineering, and final assembly will stay in Texas. It's an example of how NAFTA can work for a region, instead of against it."

[13] N.P. Inc, (also owned by our family) created the successful deed restricted business park called North Park Central in North Houston near Intercontinental Airport. During our development of, ownership of, and management of the park, global companies such as Cardinal Health, Tadano Crane, Mercedes-Benz, Goodman Air Conditioning, Cyclone, and Continental Airlines, among others, located within our development, and brought scores of quality basic jobs as well as a robust tax base to the area. We would like to bring similar benefits to this part of Houston should our development of Georgetown Oaks proceed unmolested by TCRI.

With regard to the train's entry into Northwest Houston, the reports' ultimate goals were to:

1) discern a path to cross over US 290 at an advantageous location, and then to :
2) **co-locate the high speed rail alignment along the existing and proposed high voltage transmission lines running towards the northwest.**

Note that the *Step 1: Screening of Corridor Alternatives* report (within the Environmental Section, Section 10.2.12) paid special attention to the fact that locating the railway near pipelines would require special "construction activities" in order to minimize danger and protect both the pipeline and the high speed rail passengers. Such alignments requiring "special construction approaches" "…would be "more costly to deliver and construction schedules would be extended."[14]

In contrast, the alternative eventually selected, **HC-4**, is:

1) **the longest alternative path in terms of distance;**
2) **the alternative with NO co-location along the high voltage transmission line corridor;**
3) **The route featuring the longest distance of pipeline co-location, thus requiring extensive "special construction activities;"[15]**
4) **the route creating the greatest number of "secondary impacts" to landowners, caused by the need to build and place electrical feeder lines into the train's ROW to service the numerous power substations.[16]**

This fourth issue is caused by the HC-4 Alignment's lack of proximity to a large electrical transmission line. The harmful impact on land parcels resulting from TCRI's creation of new feeder power lines (since they are not present along the HC-4 Alignment) must be explored in depth during the EIS process. Environmental matters include the negative aesthetic appeal, impaired use of property, and harmful electromagnetic waves caused by high voltage power lines.

These four factors appear detrimental to the selection of the HC-4 Alignment Alternative, since a longer route next to a pipeline would mean greater construction costs, ultimately longer travel times, and the burdening of additional land owners through the taking of more undeveloped, unencumbered land. As stated before, the only existing utility associated with the "Utility Corridor's" HC-4 Alignment is a 30 inch in diameter underground pipeline, and easement, which is itself much narrower in width than the electrical transmission line corridor (both the existing and the new proposed ERCOT / Center Point electrical line). The pipeline is also buried and out of sight, thus making it much easier to develop housing and commercial opportunities near to, or over such a pipeline easement, as opposed to near to, or under high voltage power lines.

The *Step 1 & 2 Reports'* HC-4 Sections also fail to mention the pipeline or any additional construction activities required to safeguard the two entities (high speed rail and the pipeline) co-locating with each other. This oversight may have resulted in the improper removal of the "slightly more expensive" (but probably actually cheaper) HC-2 Alignment

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[14] See *Texas Central High-Speed Railway Step 1 Screening of Corridor Alternatives Report, Dallas-Houston, Texas, High-Speed Rail Project*, March 22, 2015, "Group B: Engineering Considerations," p. 18.

[15] Ibid., 10.2.12, p. 130. "There is a significant difference between the alternatives when considering the number of miles of colocation with pipeline infrastructure. The IH-45 corridor alignments have the least length of colocation followed by the alignments of the BNSF and UPRR corridors. The BNSF Option 3 and the Utility Corridor Alignment have the greatest distance of (pipeline) colocation, respectively."

[16] Ibid**.,** "The Utility Corridor alignments, by design, parallel the electric line to the greatest extent possible. The proposed HSR system would be electrically powered, with traction power substations spaced about every 25 mi (40 km), so close proximity to a large line (parallel or crossing) would reduce the secondary impacts associated with the length of feeder lines to the right-of-way from the transmission lines."

from consideration, given that the scores of HC-4 (0.81) and HC-2 (0.83) were so close.[17] Furthermore, the analyses do not include the costs associated with building the electrical infrastructure (mostly present in the other alternatives) to service the train in the HC-4 portion of the "Utility Corridor," as well as the cost of the extra land / ROW needed to locate the new power lines on. According to TCRI, the alignment must co-locate near major power lines to provide the train's power supply. [18] If true, then the choice of HC-4 conflicts with TCRI's own expressed goals.

Given TCRI's stated goal of co-locating the train next to electrical transmission lines, many of the decisions taken to favor HC-4 over HC-Base in particular, (which is the straightest, shortest, and most direct route, featuring the most co-location with the transmission line)[19] seem questionable, and the data is difficult to affirm since much of the information, analyses, and conclusions stem from materials and research provided by TCRI's paid for and contracted with consultants.[20] In fact, p. 112-113 of the *Step 2 Report*, (which justify the choice of HC-4), minimize the actual real costs and construction challenges of route HC-4, and overemphasize the negatives aspects of HC Base, HC-1, HC-2 and HC-3. Furthermore, the choice of HC-4 contradicts recent statements made by Jeff Moseley[21] during a September 28, 2016 public forum hosted by Texas State Representative Mike Schofield, (R-Katy). During a discussion of eminent domain, Moseley stated that TCRI "want(s) to work" with "…landowners that are in this infrastructure zone, I-45 N, Burlington Northern, and High Powered Grid." He then stated: "These landowners already pretty much know that land's (sic) in an infrastructure zone. We have an electric train…we are going to use this zone and we will work with the landowners," hinting that such land would be easier to build on, buy or condemn if its value was already reduced by the presence of this "infrastructure."[22] Moseley failed to mention pipelines as a part of this useful "infrastructure," and also apparently does not understand that his group's preferred path into Houston, HC-4, contains no co-locatable infrastructure similar to what he cited at the forum.[23] The *Step 2 Report* echoes Moseley when it states that "Alignment alternatives adjacent to or generally following the high-voltage electrical transmission line were expected to have fewer property impacts, fewer environmental impacts, and reduced property rights acquisition costs and risks."[24] A buried pipeline should not be considered a "linear infrastructure utility" similar to a massive, visible from miles away, and above ground power line system. Landowners with such pipeline easements do not consider themselves within "an infrastructure zone" similar to a freight rail line or electrical line zone. A pipeline easement should not be part of any "shared corridor"[25] along with high speed rail.

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[17] See *Texas Central High-Speed Railway Step 2 Screening of Alignment Alternatives Report, Dallas-Houston, Texas, High-Speed Rail Project*, November 5, 2015, "Summary of Results," 6.3.1.12., p. 100.

[18] The *FAQ in the Step 1 Screening Report* states that: **"**A: The power needs of the high-speed rail traction power system will require that the electrical utility connection be a transmission level voltage i.e. >69,000V. By utilizing a transmission level utility supply, Texas Central can help manage and balance power needs elsewhere in the state. Our preferred route is adjacent to or nearby existing utility lines, thus minimizing the need for additional electrical infrastructure. This high-speed passenger train system being deployed in Texas is based on one of the most energy efficient passenger rail systems in the world but will rely on the availability and redundancy of power supply."

[19] Of all choices, HC-1 is the straightest in geometry, the shortest distance (25.1 miles), and has the highest amount of land next to the high voltage utility line (16.7 miles), but was dismissed due to 2 of its 3 curves only allowing for a maximum speed of 160 mph, vs. the preferred 200 mph. This left HC-Base as the next best route in terms of land co-located next to the high voltage utility line (5 miles), and the shortest distance overall (25.6 miles). Contrast this with HC-4, with 0 miles next to the electrical utility line, and an overall lengthy distance of 28.1 miles. HC-4 fails the "best route" test.

[20] The front pages of both the *Step 1 and Step 2 Reports* make clear that the *Reports* were written for TCRI's benefit, and not for the public's benefit, or for use in a NEPA analysis, or to be relied upon by affected landowners: ARUP and Freese and Nichols state: "This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party." (presumably including the FRA and TXDOT).

[21] At the time of the statement, a Texas Central Partners State VP of Government Affairs, based in Houston, TX, now resigned.

[22] *TX High Speed Rail Forum - Rep Schofield*, Sep. 28 2016, Part 6, https://www.youtube.com/watch?v=AJFzviZnngg.

[23] Ibid.

[24] *Step 2 Screening of Alignment Alternatives Report,* 5.2.1.1., p.35-36. *See also* an opinion piece by TCRI's Holly Reed, who recently stated that "…most of the proposed route already follows high-voltage power lines, significantly reducing impacts to homes and businesses." Reed, Holly, "Why conservatives should support high-speed rail in Texas." *The Washington Examiner, 13 December 2016.* This statement reinforces the view that TCRI's goal has always been to co-locate near power lines.

The Alignment Alternatives for High Speed Rail near Hockley: HC-3 and HC-4

In the reports, the HC-3 Alignment is dismissed from consideration for several reasons:

1) the alignment's impact on minority populations;[26]

2) limited adjacency to the transmission line corridor;

3) traversing through a planned development (Kickapoo Reserve – a primarily residential development), and;

4) the potential impact on the Daikin-Goodman industrial site.

In comparing the *Reports'* HC-3 Alignment analyses criteria to the *Reports*' HC-4 Alignment analyses criteria, there are two that match: 1) the HC-4 Alignment's impact on minority populations, and the 2) lack of proximity to the electrical transmission corridor along the HC-4 path. In addition, had TCRI's consultants moved beyond "desktop research"[27] and located Delta Troy's City of Houston General Plan filed and approved in 2007, or its infrastructure creating Texas Municipal Utility District 524, the HC-4 alignment would have also matched HC-3's third criterion --**traversing through a planned development**.[28] In addition, p. 112 of the *Step 2 Report* states unequivocally (and incorrectly) that "HC-4, which is farthest to the west, avoids the existing and *planned residential developments*." **As stated above, this is not true.** NEPA requires that local and regional planning entities such as the City of Houston be consulted during the EIS process; this did not occur with regard to Georgetown Oaks, or route HC-4.[29] TCRI and its consultants were either negligent in their research, or purposefully failed to acknowledge notice of our planned development. **In demonstrating the above facts, we request that the HC-4 Alignment be subject to the same scrutiny as the other Hockley alternatives, and be removed from consideration as the preferred alignment for this segment of the proposed high speed rail corridor**.[30] In addition, since NEPA (a federal statute) was not followed during the route analysis and selection process, we posit that this project NOT be eligible for low interest Federal RRIF and TIFIA loans.

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[25] *See: Federal Register Notice of Intent (NOI) to Prepare an Environmental Impact Statement (EIS) for Dallas-Houston High Speed Passenger Rail Corridor*. The NOI did not list a pipeline as an existing linear infrastructure "shared corridor" option for co-location with high speed rail. Only "railroads, roads, and electric utility lines" are mentioned**.** Federal Register, vol.79, no. 122, Wednesday, June 25, 2014. https://www.federalregister.gov/documents/2014/06/25/2014-14771/environmental-impact-statement-for-dallas-houston-high-speed-passenger-rail-corridor.

[26] HC-4 has the "Greatest impact on minority populations by percent," and "Substantial impacts to minority populations by count and low income families when compared to county level data." *Step 2 Screening of Alignment Alternatives Report, "*Summary Table HC-4*,"* p.60.

[27] See *Step 2 Screening* of *Alignment Alternatives Analysis Report*, November 6, 2015, p.24: "This analysis is based on desktop level research and data collection. No field surveys or site verification was conducted to complete this analysis."

[28] NEPA requires that the FRA undertake an Environmental Assessment Process, using 23 Criteria whenever there is a "proposed major FRA Action." Among these 23 criteria are ***"(15) Land use: Land use, existing and planned."*** "The EIS should assess the impacts of each alternative on local land use controls and comprehensive regional planning as well as on development within the affected environment, including, where applicable, other proposed Federal actions in the area. Where inconsistencies or conflicts exist, this section should describe the extent of reconciliation and the reason for proceeding notwithstanding the absence of full reconciliation. As required by 42 U.S.C. 4332(2)(D)(iv), the Program Office shall provide early notification to, and solicit the views of, any State or Federal land management entity with respect to any alternative which may have significant impacts upon such entity and, if there is any disagreement on such impacts, prepare a written assessment of such impacts and views for incorporation into the final EIS." See https://www.federalregister.gov/documents/1999/05/26/99-13262/procedures-for-considering-environmental-impacts.

[29] Ibid.

[30] At the October 13, 2016, Houston CCIM real estate forum*, Updates on the High Speed Rail*, Texas Central Partners' representative David Hagy stated that "There is only one way out of Houston…" and that "…that route has been chosen and finalized." This is factually incorrect (about the route) and is also a mischaracterization of the actual ongoing EIS process with regard to the Dallas-Houston High Speed rail project. There are many possible entry and exit points into and out of Houston as made clear by the *Step 1 and 2 Reports.* For example, the BNSF Corridor scored very highly, but was dismissed since TCRI did not want to pay an indemnity to the freight railroad company.

Step 2 Screening of Alignment Alternatives Report, November 5, 2015

Within the *Step 2: Screening of Alignment Alternatives* report, one section highlights projected engineering and construction costs, and within this discussion establishes that a longer alignment would not be as cost prohibitive when compared to conventional transit or mobility projects.[31] The *Report* noted that a longer alignment composed primarily of berms or embankments would be more cost effective than a shorter alignment with more viaduct and structured support. Where this tradeoff balances, or becomes no longer valid, cannot be determined since no definite figures or cost projections are given to compare one process to the other.

The *Reports* emphasize the goal of minimizing the number of land owners impacted, thus leading to preferred routes that pass through larger, mostly undeveloped parcels. This policy is presumably done to alleviate the need for viaduct construction through the more developed areas, and to also minimize the total number of existing utility and road crossings. However, the outcome for larger land parcels, such as the subject tract, is to severely damage the tract by bisecting it and drastically hindering any potential future development. The *Reports* fail to mention how access would be managed, or allowed, across such tracts with common ownership should the high speed rail be constructed in the future.

The limited information given does not bode well for Georgtown Oak's future development potential, as the *Step 2 Report* states: "After passing US 290, the alignment (HC-4) would begin to transition from viaduct to embankment for a majority of its length."[32] Embankments are favored by TCRI due to their cheaper construction cost vs. viaduct structures.[33] However, embankments also mean few, if any crossings, vs. viaduct, which allows for a greater number of crossings. In fact, to cross an embankment, a "local road" would either be "diverted," "closed," or "re-profiled" by elevating it above the train's embankment.[34] Due to the costs involved in elevating a road, it is likely that TCRI would resist that option, and instead prefer the cheaper alternative of total road closure. Thus, while berms and embankments are good for TCRI's financial goals, they are bad for a landowner's development plans.[35] This limited connectivity and its associated development difficulties are primary factors in other large tracts along the proposed alignments (such as the Rice University Tract, the Hegar Tract, and the Houston Oaks Country Club) successfully requesting to have the alignment(s) altered away from their property.[36] **We request that our parcel be given the same consideration shown to the other large parcels spared from the alignment path.**

While the *Step 2 Report* details preferred actions such as closing some minor public roads and restricting the number of transportation routes crossing the proposed high speed rail ROW, it does not list any provisions for the creation of new future crossings should the need arise. This omission becomes critically important should the train be built before development occurs on the Georgetown Oaks parcel. In all future development tracts, this practice will create a physical divide and effectively increase traffic in the few designated crossing areas. Such increased traffic would lead to longer travel times for all individuals having to travel out of their way via an indirect, circuitous path to destinations previously a quick trip down the road. This lack of access, along with the impairment and discouragement of development, the environmental impacts, plus numerous social justice challenges all resulting from high speed rail's imposition along HC-4

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[31] "It is important to note that the shortest route is not always the preferred alignment, " *Step 2 Screening of Alignment Alternatives Report,* 5.2.1.3, p.36.

[32] *Step 2 Screening of Alignment Alternatives Report*, 5.3.2.5 "Hockley Alternative 4 (HC-4)," p.59.

[33] "High viaduct bridges are more expensive to construct than low embankment sections..." *Step 2 Screening of Alignment Alternatives Report,* 5.2.1.3, p.36.

[34] *Step 2 Screening of Alignment Alternatives Report,* 5.2.1.4., p.37-38.

[35] "Alignment alternatives with fewer crossings would be more desirable due to reduced cost, construction duration, maintenance, and third party coordination." *Step 2 Screening of Alignment Alternatives Report*, 5.2.1.4. p.37-38.

[36] "ROW impacts to large (3970 acre) Rice University property." See *Step 2 Screening of Alignment Alternatives Report*, "Phase 2 Results," Table 35, p. 113, and "Bisects Rice University Property," "Appendix E, Phase 2 Alternative Alignment Figures and Tables," Table E-1, and Appendix A, "Hockley Group-Hockley" Map.

are not well discussed or considered in the published *Reports*. One can argue that HC-4's shortcomings were overlooked to justify it as a choice versus the other alternatives.

Arguably, there are major flaws in each of the Hockley and Houston area alignment alternatives. A solution to satisfy all landowners along the eventual, final designated route may not be possible. However, based on our analysis of the *Reports* and other data:

1) an entirely new route should be chosen, such as the use of ROW along the future Highway 36A (Praire Parkway) or;

2) the other Hockley Area alignment alternatives (HC Base, & HC 1,2,3) should be re-investigated and re-evaluated using accurate land use, financial, and environmental information.[37] or;

3) the No-Build Option should be chosen.

Yet, each of the proposed Hockley alignments suffer from major faults, and would all adversely affect existing and future populations between Waller and Cypress. In effect, the high speed rail tracks, in spite of the very few proposed crossing areas, will serve to wall off this rapidly growing part of Northwest Houston from the rest of the region. All land to the west of the tracks will depreciate. The tracks will be a physical barrier dividing communities and lowering the overall area tax base through the devaluation of land and the discouragement of commercial and residential areas near the tracks. Minority Communities near the train path will be denied the robust tax base, strong home values, and economic opportunities enjoyed by their neighbors to the northeast and southeast. They will also be disproportionately harmed by nuisances such as the electromagnetic fields brought into their neighborhoods by the train's power source.

Given well publicized efforts to remove "community dividing barriers" such as I-69 East of Downtown Houston (near the Houston George R. Brown Convention Center), or the Pierce Elevated, the erection of a new railroad track "barrier wall" in a developing, high growth area like the 290 Corridor appears retrograde.[38] This social justice deficiency is magnified by the fact that the miles-long embankment wall will be built for a private company's financial benefit. We believe that the HC-4 version of the "Hockley Curve" is not a viable alternative for the above discussed reasons. In addition, the cumulative effect of the future harmful economic and social damage resulting from the proposed HC-4 alignment is far greater than high speed rail's possible benefit to the Houston Region.[39] In its current alignment path, the train's economic benefit to the larger Houston Metro Area is de minimis.

The US 290 corridor between Waller and Cypress contains a diminishing resource key to the Houston Metro Area's future population and economic growth: namely, prime land, near a highway, that is suitable for future commercial, industrial and residential development. Altering the path of the train to best protect this resource is vital to safeguarding

[37] For example, HC-1 could be a viable alternative route if the train simply slowed down to 160 mph in 2 of 3 curves.

[38] Begley, Dug. "Massive I-45 Project Would Remove Pierce Elevated, Add Lanes." *The Houston Chronicle*, 22 April 2015.

[39] **For reasons unclear, and which merit investigation, the *Step 2 Report* changed the train's path from HC-Base to HC-4, despite HC-Base being the previously publicly published route, and despite HC-4's lack of any co-locatable electric line.** The public learned of this change just before Thanksgiving of 2015 (November 13, 2015). Seemingly overnight, the previously released alignment route maps became void, and all landowners along route HC-4 were surprised to find themselves in the path of high speed rail. Before mid-November 2015, US 290 area landowners had been assured that the route would enter Houston to the east of the City of Hockley. See Baddour, Dylan. "Feds Approve Texas High Speed Rail Corridor." *The Houston Chronicle*, 26 August 2015. See also *Step 1 Screening of Alignment Alternatives Report*, p, 74, and Figure 57, p. 75. "Just west of Cypress the Utility Corridor HSR alignments sweep south before turning north through a large radius curve suitable for high speed rail operations to cross US 290 just east of the town of Hockley. The Utility Corridor alignments head north following Hegar Rd. to minimize impacts to local development until they align with the Center Point transmission line between the towns of Hempstead and Magnolia…."

Houston's future. This singular fact should warrant a reexamination of the entire Hockley Segment to truly develop a "best alternative" using mandatory NEPA Criteria in the creation of the Draft EIS. We respectfully request that current EIS standards not be "loosened," that environmental reviews not be "expedited," and that "regulatory relief" not be granted to satisfy private investor aims as a part of any future Trump Administration Infrastructure Plan.[40] **A legal, transparent, and cooperative public EIS process with community involvement and input is necessary to ensure that not just the applicant's goals are served, but that all parties' legal rights are protected.**[41] Should you have any questions, or require any additional information, please feel free to contact our office. Thank you.

Sincerely,

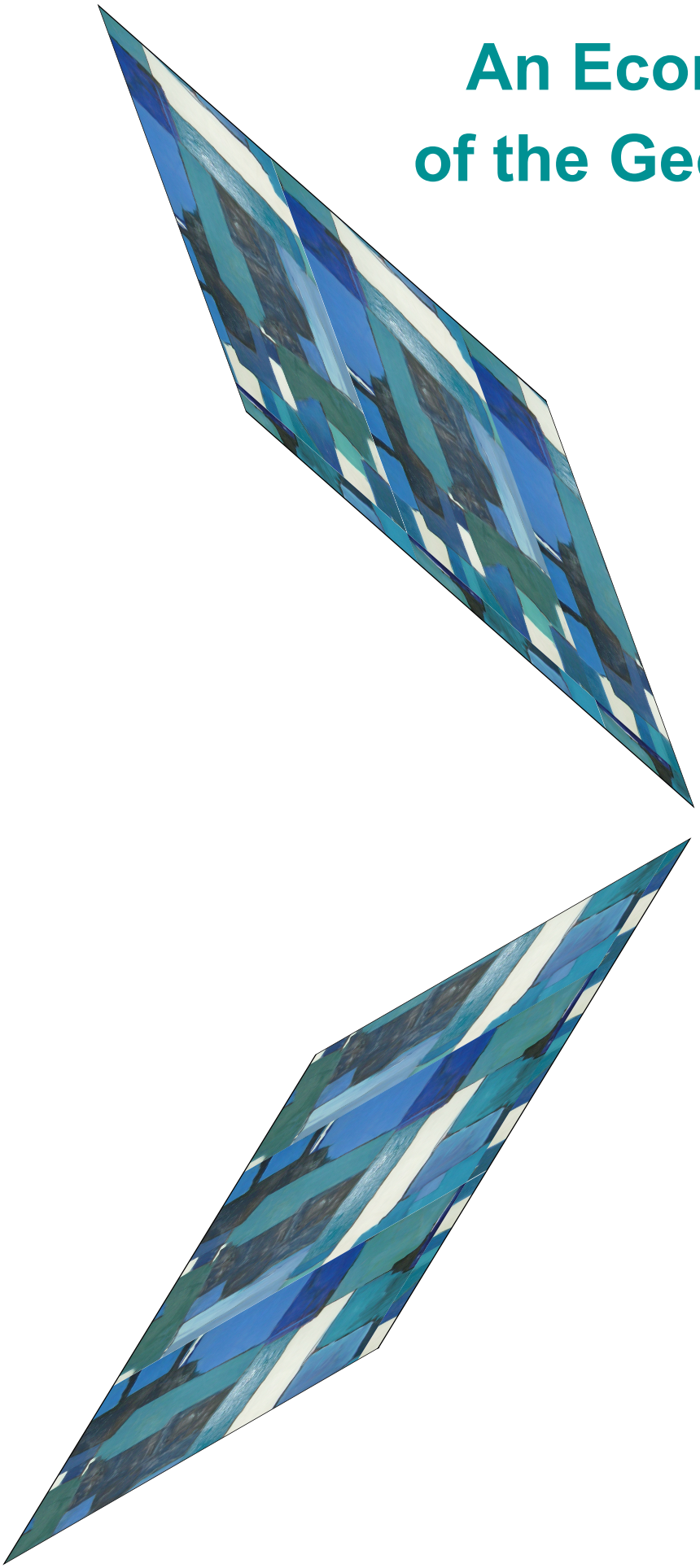
The Principals of Delta Troy Interests, LTD

[i] This Commentary was prepared using material from our consultant, BGE/Kerry R. Gilbert & Associates.

[40] Zanona, Melanie. "Texas high-speed rail project ramps up Washington lobbying efforts." *The Hill*, 20 March 2017. http://thehill.com/policy/transportation/324864-texas-high-speed-rail-project-ramps-up-washington-lobbying-efforts.

[41] For a view contrary to that of TCRI's on "regulatory reform," see *Wise, Lindsay and Tate, Curtis. "*Well-timed pitch to Trump administration propels Texas bullet train to top of mind," *Dallas News*, 10 March 2017. Shailen Bhatt, executive director of the Colorado Department of Transportation, cautions "…against easing regulations too much in the interest of moving projects along quickly to satisfy private investors. People say it takes us too long to deliver projects," Bhatt said. "The reason it takes us so long is we're preserving clean water, we're preserving clean air, we're preserving property rights. And that's why there's regulations. And yes, we can do things faster, but we're not going to build things like they do in China because we don't have a society like in China. https://www.dallasnews.com/news/transportation/2017/03/10/timed-pitch-trump-administration-propels-texas-bullet-train-top-mind.

Exhibit 16



An Economic Analysis of the Georgetown Oaks Development

Report submitted to Delta Troy Interests, Ltd

March 8, 2018

Report prepared by
EconAlyze LLC

An Economic Analysis of the Georgetown Oaks Development

Overview

This report presents estimates of the economic impacts of the proposed Georgetown Oaks property development. Master Plan details were provided by Delta Troy Interests, Ltd. Details included planned development by building type, classified as Office, Retail/Commercial, Warehouse/Light Industrial, Educational (elementary school and daycare center), Single Family dwellings, Town Home dwellings, and MultiFamily residences. EconAlyze combined the information provided on numbers of units and square footages by building type with published and purchased data and in-house software to develop the estimates presented here for construction related job and earnings impacts and on-site jobs accommodated upon project completion. A third and final component of the impacts assessment uses national average data to provide total employment and earnings impacts of building operations and maintenance expenditures upon project completion. Expectations are for project completion over roughly a ten-year period.

Total construction related expenditures impacts are estimated to result in more than nine million square feet of new building structures, and to support nearly 19 thousand jobs and a billion dollars of income during construction, mostly located in the Houston region. Upon completion, the development is expected to accommodate more than 16 thousand jobs, all on-site at Georgetown Oaks, with associated direct earnings estimate of more than $850 million. Operations and maintenance expenditures are expected to support an additional 600+ jobs in the economy overall.

The remainder of this report provides additional detail on the planned development and the impacts in tabular and graphical form, and elaborates on the assumptions, methods, and data on which the impacts estimates are based.

Georgetown Oaks

This section sketches the essential elements and assumptions of the development plan that contributed to the generation of impacts estimates. Details are grouped according to the land acreages north and south of 290. These data were supplied by Delta Troy.

NORTH SIDE of 290

The project on the north side of 290 will be the site of Retail/Commercial and Business Park (BP) and Light Industrial (LI) structures. Land devoted to retail/commercial structures is based on a general assumption of a ratio of 25% building coverage per acre of land.

Retail/Commercial

- 7.8 acre site = 84,942 sq. ft.
- 18.1 acre site = 197, 109 sq. ft.
- 1 acre site = 11, 000 sq. ft.

Business Park/Warehouse/Light Industrial (BP & LI)

- BP and LI (combined) = 227.8 acres or 9,922,968 sq. ft. total land area
  - 6.5 acres per building site with a typical 117,600 sq. ft. industrial building allows for 35 building sites
  - 35 sites x 117,600 sq. ft. = 4, 116,000 sq. ft. of business park/industrial buildings
    - Assume 10% of building square footage is devoted to office buildout
    - Yields 411,600 sq. ft. of office inside the various industrial buildings

SOUTH SIDE of 290, WEST OF BINFORD RD

Single Family (SF)

- 95 acres (361 houses @2784 sq. ft. each on 7500 sq. ft. lots)
- Approximately 3.8 lots per acre
  - Approximates a typical house for sale in nearby areas
- Yields 1,005,024 sq. ft. of single family houses

Town House (TH)

- 29.2 acres
- 7 townhouses per acre
- 204.4 townhouses @ 1800 sq. ft. each
- Yields 367920 sq. ft. of townhouses

Retail/Commercial

- 38.1 Acres

- 24 acres yield 261,360 sq. ft.
- 14.1 acres yield 153,549 sq. ft.

SOUTH OF 290, EAST OF BINFORD RD

Retail/Commercial

- 28.8 acres yield 313,632 sq. ft.
- 16.9 acres yield 184,041 sq. ft.
- 16.5 acres yield 179,685 sq. ft.

Multi Family (MF)

- 36.2 acres
- 3, 12-acre apartment sites
  - @ 270 units each
  - 810 apartments total
    - 250 units X 1200 sq. ft. each= 300,000 sq. ft.
    - 560 units X 670 sq. ft. each = 375,200 sq. ft.

Mixed Use (MU)

71.7 acres

- Following a typical mixed use model of 34 acres with 270,000 sq. ft. of restaurant and retail, and approximately 100,000 sq. ft. of office and multifamily yields:

  - 540,000 sq. ft. of mixed use retail/restaurant
  - 30,000 sq. ft. of mixed use office above retail
  - 60 multifamily units @ 1200 sq. ft. each
    - Yields 72,000 sq. ft. of mixed use multifamily

Educational

- Elementary School
  - 15 acres (assuming < 25% building to land ratio to accommodate fields, etc.)
    - 133,000 sq. ft. school building
- Day Care
  - 2 acres (assuming < 25% building to land ratio to accommodate fields, etc.)
    - 16,000 sq. ft facility

Corporate Campus HQ

- 131.5 acres
- Mid-rise corporate HQ style buildings
  - Assume 7,792.2 sq. ft. per acre of office / campus buildings
  - 7,792.2 x 131.5 = 1,024,674.3 sq. ft.

Construction Impacts

This section reports the impacts of Georgetown Oaks construction expenditures on the Texas economy. The impacts are totals by building type that are due to spending and respending throughout the Texas economy.

Impacts estimates are driven by square footages by building type, which are then converted to direct expenditures, drawing on data from the 2018 edition of *Economic Impacts of Commercial Real Estate* and the Craftsman 2018 National Building Cost Manual.[1] Direct expenditures totals are then distributed across industries using proprietary translator tools developed by EconAlyze, which in turn drive the IO-Snap impacts model.[2] The summary results are presented in Table 1. The expenditures associated with the construction of 9.36 million square feet across all building types will support a total of 18,744 full-time equivalent (FTE) over the course of the build-out. Earnings associated with these jobs are estimated to be $979 million. Retail and Office build-out account for the roughly two-thirds of the employment, in equal parts. Warehouse construction accounts for another 20%, and the remainder of employment impacts are attributed to residential and education building construction.

Table 1
Construction Impacts

Building Type	Employment (FTE)	Earnings ($M)	Sq. Ft.
Single Family	1,081.2	$57.21	1,005,024
Town Homes	353.2	$18.65	367,200
MultiFamily	710.9	$37.67	747,200
Retail	6,224.8	$322.54	1,925,208
Office	6,277.6	$327.94	1,466,274
Warehouse	3,785.5	$198.74	3,704,400
School/Daycare	311.2	$16.23	149,000
Total	**18,744.4**	**$978.97**	**9,364,306**

[1] Stephen Fuller, *Economic Impacts of Commercial Real Estate, 2018 Edition*, Prepared for and funded by the NAIOP Research Foundation. https://www.naiop.org/Research/Our-Research/Reports/Economic-Impacts-of-Commercial-Real-Estate-2018, last accessed March 8, 2018.

Craftsman 2018 National Building Cost Manual, edite4d by Ben Moselle. Carlsbad, CA: Craftsman Book Company. Published October 2017 for the year 2018. Available for purchase on-line at http://www.craftsman-book.com.

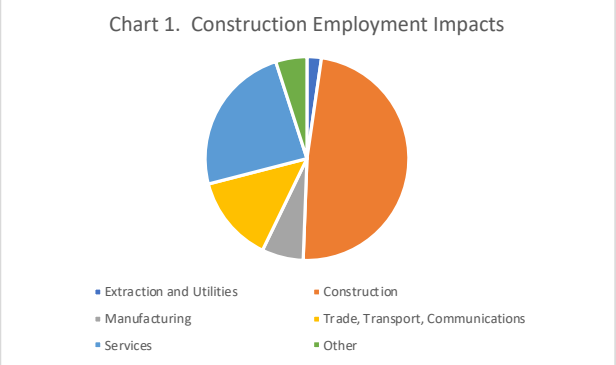
[2] IO-Snap, Input-Output State and National Analysis Program. https://www.io-snap.com/.

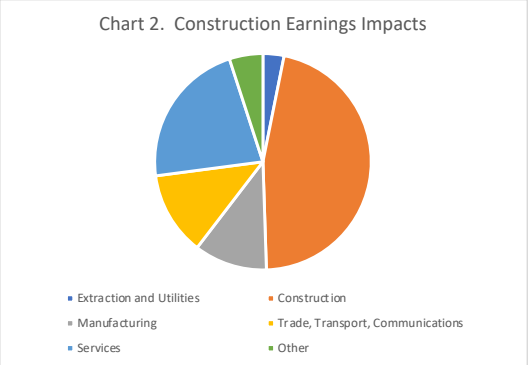
Employment and earnings are distributed across industry sectors as shown in Table 2 and Charts 1 and 2. Employment and earnings distributions are similar, with differences attributed to differences in wage structures across industries, i.e., wage shares in higher wage industry sectors will be larger than corresponding earnings shares.

As expected, the largest impacts are estimated to accrue to the construction sector, with an estimated 98% of these jobs on-site. Because services provision tends to be localized, the bulk of the service sector employment would be expected to be local to the Houston metro area. The remaining 28% of the employment impacts will be distributed across the state, with greatest concentrations in or near the Houston metro area. In the absence of additional supporting data and analysis, a Houston area estimate 80% – 85% of total construction impacts is not unreasonable.[3]

Table 2
Construction Impacts by Industry

Industry	Employment	Earnings
Extraction and Utilities	2%	3%
Construction	48%	46%
Manufacturing	7%	11%
Trade, Transport, Communications	14%	13%
Services	24%	22%
Other	5%	5%
Total	**100%**	**100%**





[3] Texas and national impacts multipliers reported by the NAIOP suggest that approximately Texas impacts of similar construction investments represent about 80% of the total impacts.

Jobs Accommodated

Once in place, these new structures will house ongoing employees related to office, retail, and warehousing activity. Based on national averages from the NAIOP, square footage by building type were converted to jobs and earnings estimates.[4] Table 3 presents these estimates for locations north and south of 290, and in total. Upon completion of the build-out and once in full operation, the annual office, retail, and warehousing related activity on-site is estimated to be 16, 288 FTE with associated total earnings of $855 million, with 45% of total employment north of 290 and 55% south of 290.[5] Respending of 80% of this total payroll could further support roughly 300 FTE off-site jobs and $330 million in income.

Table 3
Jobs Accommodated, North and South of 290

Building Type	Square Feet	Jobs (FTE)	Average Earnings	Total Payroll ($M)
Office	411,600	2,166	$69,520	$150.6
Warehouse	3,704,400	4,518	$40,819	$184.4
Retail	292,941	617	$33,062	$20.4
North Summary	4,408,941	7,301	$48,680	$355.4
Office	1,054,674	5,551	$69,520	$385.9
Retail	1,632,267	3,436	$33,062	$113.6
South Summary	2,686,941	8,987	$55,580	$499.5
Total	**7,095,882**	**16,288**	**52,487**	**$854.9**

Operations and Maintenance

Lastly, NAIOP national data relating existing building operations costs to commercial real estate buildings provide the basis for estimating the economic contributions from operations. Total operations impact, including all spending and respending impact, is estimated to be 617 FTE jobs with associated earnings estimated at $17.6 million. Although there are no available supporting data to provide precise estimates, the majority of these jobs can be expected to be nearby or on-site.

[4] The national square foot per jobs conversion factor for warehousing was modified to reflect local data based on similar nearby facilities. See https://www.bizjournals.com/houston/morning_call/2016/03/daikin-to-hire-more-than-expected-at-massive-new.html.
[5] This total excludes employment associate with residential construction and the staffing of the elementary school and daycare facility.

EconAlyze LLC

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Randall W. Jackson

Contacts:
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Randall.Jackson@mail.wvu.edu

Awards and Recognitions
Southern Regional Science Association Fellow
Benedum Distinguished Scholar Award, 2013
President, Southern Regional Science Association, 2011
Chair, North American Regional Science Association, 2007
The 2007 David E. Boyce Award for Distinguished Service to the

Present Appointments and Positions:
Director, Regional Research Institute, West Virginia University
Professor, Geology & Geography Department, West Virginia University

Adjunct Appointments:
Professor, Geography Department, The Ohio State University
Professor, Economics Department, West Virginia University
Professor, Division of Resource Management, West Virginia University
Professor, Economics Department, University of Pittsburgh, 2003-2010

Education:
Ph.D. (1983) Department of Geography, University of Illinois-Urbana
M.S. (1980) Department of Geography, University of Illinois-Urbana
B.S. (1976) Department of Geography, University of Utah

Research Interests:
- Regional economic development
- Technological change
- Regional economic models
- Industry dynamics
- Interregional trade
- Econometric/input-output modeling
- Energy and environmental systems simulation

Editorial Board
Current:
- *International Regional Science Review*
- *Letters in Spatial and Resource Sciences*
- *Regional Statistics*

Selected Publications:

Jackson RW and PV Schaeffer (Eds). *Regional Research Frontiers: Volumes 1 and 2.* Springer International Publishing AG 2017.

Sayago-Gomez JT, G Piras, **RW Jackson,** and D Lacombe. Impact Evaluation of Investments in the Appalachian Region: A Reappraisal, *International Regional Science Review*. DOI: 10.1177/0160017617713822.

Zhao X and **RW Jackson.** (2016) China's Inter-regional Trade of Virtual Water: A Multi-regional Input-Output Table Based Analysis. *Water Economics and Policy*. 2(2).

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Giarratani F, G Gruver and **RW Jackson** (2007). Clusters, Agglomeration, and Economic Development Potential: Empirical Evidence Based on the Advent of Slab Casting by U.S. Steel Minimills. *Econ Dev Qtrly,* 21(2): 148-164.

Jackson RW, WR Schwarm, Y Okuyama and S Islam (2006). A Method for Constructing Commodity by Industry Flow Matrices. *Annals of Regional Science*, 40(4): 909-920.

Jackson RW and AT Murray (2004). Alternate Input-Output Matrix Updating Formulations. *Economic Systems Research*, 16(2): 135-148.

Jackson RW and M Sonis (2001). On the Spatial Decomposition of Forecasts. *Geographical Analysis*, 33(1): 58-75.

Mikelbank BA and **RW Jackson** (2000). The Role of Space in Public Capital Research. *International Regional Science Review*, 23(3): 235-258.

Rey S and **RW Jackson** (1999). Interindustry Employment Demand and Labor Productivity in Regional Econometric+Input-Output Models. *Environment and Planning, A*, 31: 1583-1599.

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Jackson RW (1998). Regionalizing National Commodity-by-Industry Accounts. *Economic Systems Research*, 10(3): 223-238.

Jackson RW (1994). Object-Oriented Modeling in Regional Science: An Advocacy View. 73(4): 347-367.

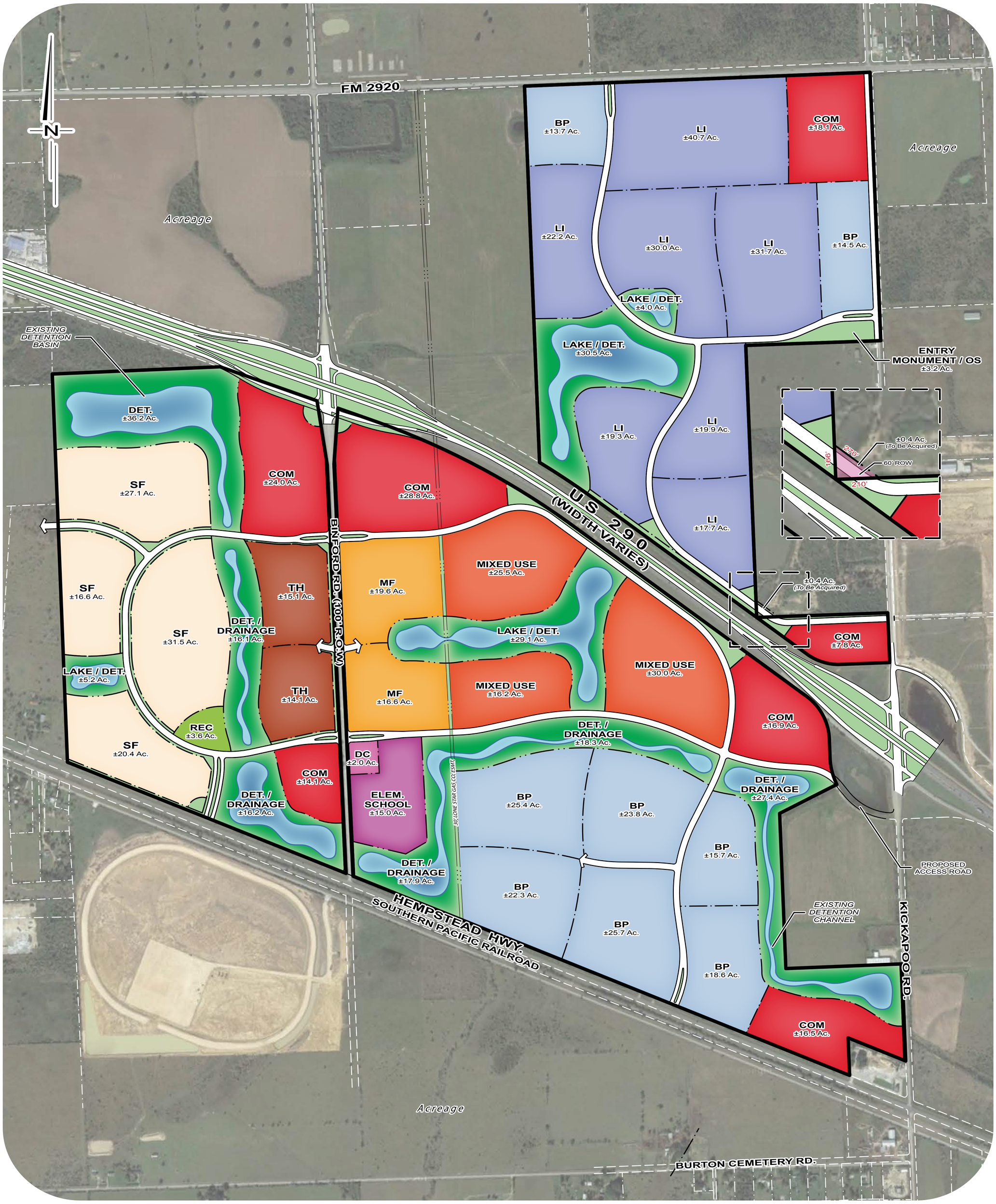
	Number of Awards	Own Funding	Award Totals
Federal/State Agencies	39	$3,451,988	$17,355,630
Private/ Foundations	20	$602,440	$670,780

Funded Research Grants:

Funding Agencies: National Science Foundation, U.S. Department of Agriculture, U.S. Department of Energy, U.S. Department of State, U.S. Economic Development Administration, National Energy Technology Laboratory, Appalachian Regional Commission, WV Division of Energy, Ohio Department of Transportation, Illinois Department of Commerce and Community Affairs, Alfred P. Sloan Foundation, The Nature Conservancy, Chicago World Fair Authority, The Ohio State University, Northern Illinois University, Dominion Resources.

Professional Memberships:
- Regional Science Association International
- International Input-Output Association
- Southern Regional Science Association
- Western Regional Science Association
- American Association of Geographers

EXHIBIT B



LAND USE & ACREAGE ANALYSIS

LEGEND

RESIDENTIAL		**±161.0 Ac.**
SF	STANDARD SINGLE FAMILY	±95.6 Ac.
TH	TOWNHOMES	±29.2 Ac.
MF	MULTI FAMILY	±36.2 Ac.
NON-RESIDENTIAL		**±556.1 Ac.**
COM	COMMERCIAL	±126.2 Ac.
MU	MIXED USE	±71.7 Ac.
ES	ELEMENTARY SCHOOL	±15.0 Ac.
DC	DAY CARE	±2.0 Ac.
BP	BUSINESS PARK	±159.7 Ac.
LI	LIGHT INDUSTRIAL	±181.5 Ac.
PARKS / RECREATION / OPEN SPACE		**±227.8 Ac.**
PARK	REC. CENTER & PARKS	±3.6 Ac.
	DRAINAGE / DETENTION	±200.9 Ac.
	PIPELINES	±2.3 Ac.
	LANDSCAPE/OPEN SPACE/AMENITY LAKE	±21.0 Ac.
CONSTRAINTS		**±47.7 Ac.**
	COLLECTOR STREETS	±47.7 Ac.
PROJECT TOTAL		**±992.6 Ac.**

OPTION F2

a conceptual development plan for

GEORGETOWN OAKS

± 992.6 ACRES OF LAND

prepared for

ANDREWS KURTH

BGE | KERRY R. GILBERT & ASSOCIATES

– Land Planning Consultants –
23501 Cinco Ranch Blvd., Suite A-250
Katy, Texas 77494

7000 North Mopac, Suite 330
Austin, TX 78731

2595 Dallas Parkway, Suite 204
Frisco, TX 75034

Tel: 281-579-0340

SCALE
0 200 400 800

SEPTEMBER 19, 2016
KGA #I-170

EXHIBIT C

Linda Shannon
Leon County District Court Coordinator
87th & 369th Judicial Districts
P.O. Box 39
Centerville, TX 75833

February 8, 2019

Dear Attorneys,

Please find enclosed a copy of the Judge's docket sheet with her ruling on Cause 16-0137CV, James Miles Vs Texas Central Railroad & Infrastructure, Inc., and Intervenor Integrated Texas Logistics, Inc. There are two separate entries noted on the docket on February 7, 2019, by Judge Evans. In the event your copy of the Judge's docket sheet is not legible, her docket reflects the following:

1st entry—Considered Motions for Summary Judgment (Plaintiff and Defendant's). Review of entire file, applicable law, Motions and responses. Defendant Texas Central Railroad & Infrastructure Inc., (TCRI) and Intervenor Integrated Texas Logistics, Inc., Motion for Partial Summary Judgment is Denied, so Ordered-Judge Deborah Oakes Evans.

2nd entry—Considered Defendant Texas Central Railroad & Infrastructure, Inc. and Intervenor Integrated Texas Logistics, Inc., Motion to Strike certain Summary Judgment evidence of Plaintiff, Plaintiff's exhibits I, P, T, U, V & W. Objections are sustained, and exhibits stricken. Defendants' counsel to prepare Order on exhibits. After ruling on the attached exhibits, Court grants Plaintiff's Summary Judgment finding Texas Central Railroad and Integrated Texas Logistics, Inc. are not a railroad or interurban electric railway company, Plaintiff's Motion for Summary Judgment is Granted, so Ordered-Judge Deborah Oakes Evans.

If you need anything else, please do not hesitate to call me.

Thank you,

Linda Shannon

Leon County District Court Coordinator
87th & 369th Judicial Districts

cc:
Blake Beckham
blake@beckham-group.com
Patrick McShan
patrick@backham-group.com
Monte James
mjames@jw.com
Robert Neblett
rneblett@jw.com

EXHIBIT D

UNION PACIFIC IN TEXAS

BUILDING AMERICA®

2018 FAST FACTS

Miles of Track	6,298
Annual Payroll	$652.6 million
In-State Purchases	$2.2 billion
Capital Investment	$777 million
Community Giving	$1.6 million
Employees	7,475
U.S. Jobs Supported*	67,275

**Each American freight rail job supports 9 jobs elsewhere in the U.S. economy. (Association of American Railroads)*

RAIL CARS ORIGINATED IN TEXAS

2014	1,214,180
2015	1,207,739
2016	1,161,107
2017	1,111,532
2018	1,226,592

RAIL CARS TERMINATED IN TEXAS

2014	1,175,305
2015	1,013,815
2016	944,032
2017	998,091
2018	1,063,851

TOP FIVE COMMODITIES SHIPPED

2018 BY VOLUME

1. INTERMODAL-WHOLESALE
2. PLASTICS
3. STONE AND GRAVEL
4. INDUSTRIAL CHEMICALS
5. AUTO PARTS

TOP FIVE COMMODITIES RECEIVED

2018 BY VOLUME

1. INTERMODAL-WHOLESALE
2. STONE AND GRAVEL
3. SAND
4. COAL
5. PLASTICS

DRIVING TEXAS GROWTH

With 6,298 track miles, Union Pacific trains crisscross Texas serving customers that drive economic development. From the oil fields in West Texas, to the refineries in the southeast, wind farms in the panhandle, border crossings in the south, and retail warehousing locations statewide, Union Pacific delivers the raw materials and finished goods keeping the Lonestar State growing.

Union Pacific plays a vital role in a number of Texas industries and invests significant private capital in improving safety, efficiency and growth opportunities. From 2014-2018, Union Pacific invested more than $3.8 billion to harden existing infrastructure and complete projects designed to keep Texas industries thriving. These projects include expansions at state-of-the-art intermodal facilities in San Antonio, Houston and the Dallas/Fort Worth Metroplex; improvements to automotive operations in Dallas, Mesquite and Laredo; a new rail car servicing facility in Spofford; and 14 miles of double track in and out of the Houston metro area.

UNION PACIFIC IN TEXAS

Union Pacific began construction in 2018 on Brazos Yard in Robertson County. At $550 million, this facility represents the largest single capital investment in the company's 155-year history. When complete, its 1,300-car per day capacity will make it one of the state's largest yards.

INNOVATIVE SOLUTIONS

Union Pacific's rails are technological runways enhanced with GPS, specialized sensors and, in some areas, Positive Train Control (PTC). PTC is an advanced system designed to automatically stop a train before certain incidents occur, such as train-to-train collisions and derailments caused by excessive speed or movement through misaligned track switches. PTC is installed on 100 percent of required Union Pacific rail lines; implementation efforts continue to ensure interoperability with other freight and passenger railroads operating on our tracks by 2020.

Union Pacific develops innovative services for its Texas customers. Union Pacific developed its Dallas-to-Dock service, an export solution for transporting plastic pellets by rail from the Gulf region to Dallas and on to ocean ports worldwide. Union Pacific also serves Prime Pointe, a 3,000-acre premier logistics center and convenient new hub for food and beverage shipments in greater Dallas.

Union Pacific's extensive network helps Texas act as an international gateway. Union Pacific trains securely interchange with Mexican railroads at locations in Brownsville, Laredo, Eagle Pass and El Paso along the state's southern border. Customers at Texas gulf coast ports rely on Union Pacific as they import international goods, and export Texas and other American-made products.

SERVING MORE THAN JUST CUSTOMERS

The benefits of Union Pacific's world-class franchise extend beyond its customers. Freight trains generate a carbon footprint that is an average of 75 percent less than trucks. One train can take several hundred trucks off Texas's already congested highways.

Union Pacific proudly supports Texas nonprofit organizations through its Community Ties Giving Program. In 2018, Union Pacific donated about $1.6 million to Texas charitable organizations, including Navasota Theatre Alliance, Playgrand Adventures and El Paso Zoological Society. Grants are awarded to programs meeting one of Union Pacific's philanthropic objectives: helping communities prevent and prepare for accidents and emergencies; fostering skills development for family-supporting jobs; and creating vibrant community spaces.

AMERICA'S PREMIER RAILROAD

One of America's most recognized companies, Union Pacific Railroad (NYSE: UNP) connects 23 states in the western two-thirds of the country by rail, providing a critical link in the global supply chain. From 2009-2018, Union Pacific invested approximately $34 billion in its network and operations to support America's transportation infrastructure. The railroad's diversified business mix includes Agricultural Products, Energy, and Industrial and Premium business groups. Union Pacific serves many of the fastest-growing U.S. population centers, operates from all major West Coast and Gulf Coast ports to eastern gateways, connects with Canada's rail systems and is the only railroad serving all six major Mexico gateways. Union Pacific provides value to its roughly 10,000 customers by delivering products in a safe, reliable, fuel-efficient and environmentally responsible manner.

CONTACT US

24-Hour Emergency Hotline – Response Management:
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Community Contacts:
www.up.com/aboutup/community/community_contacts

Media Contacts:
www.up.com/media/contacts

EXHIBIT E

BUILDING AMERICA®

Testimony on HB 1986

Chairman Raney, Representative Leman, Committee members:

Thank you for the opportunity to testify on House Bill 1986. My name is Brenda Mainwaring. I'm the Assistant Vice President of Public Affairs for Union Pacific Railroad.

HB 1986 relates to the compatibility of railroad operations. I am here to provide some technical perspective on that point.

The proposed high speed passenger rail between Houston and Dallas is not merely incompatible with freight rail. It may substantially interfere with Union Pacific's ability to serve the freight transportation needs of Texas. These are concerns that we raised with Texas Central more than four years ago, but they have not been addressed.

Union Pacific is the largest freight railroad in Texas. Annually, we transport millions of tons of goods for Texas companies and consumers. We are committed to serving the citizens of Texas and supporting the Texas economy, now and in the future. The Texas Central proposal could prevent us from serving the freight needs of Texas.

Of greatest concern to Union Pacific, and a potentially fatal flaw to the proposed route, is the inherent electromagnetic interference between the low voltage current used by freight railroads and the high voltage current required for TCR's operation. Freight railroad signaling and traffic control systems – the systems that drive basic operating and safety functions, like gates at railroad crossings - depend on the absolute integrity of low voltage current that flows through our tracks.

Texas Central proposes to operate a high-voltage system in the twenty-or-so feet between the edge of Union Pacific's right-of-way and Houston's Hempstead Highway. This close proximity along more than twenty miles of existing freight operations creates a high risk of electromagnetic interference. TCR has not shown any progress toward addressing this fatal flaw. It must be addressed before any construction begins.

We also are concerned about public safety. In addition to the electromagnetic interference that could affect gates and lights at crossings, TCR proposes to build massive structures in the very limited space between Union Pacific and Hempstead Highway. Our engineers and safety experts fear that these structures will reduce motorists' ability to see and react to oncoming trains along the entire Hempstead Highway corridor.

Unfortunately, Texas Central's project could eliminate the preferred safety solution, which is grade separation of road and rail traffic. Roadway authorities use grade separations to enhance safety and to alleviate traffic delays that result from economic and demographic growth. TCR's proposed rail line could preclude the separation of road and railroad, even on the routes that Houston has identified as future

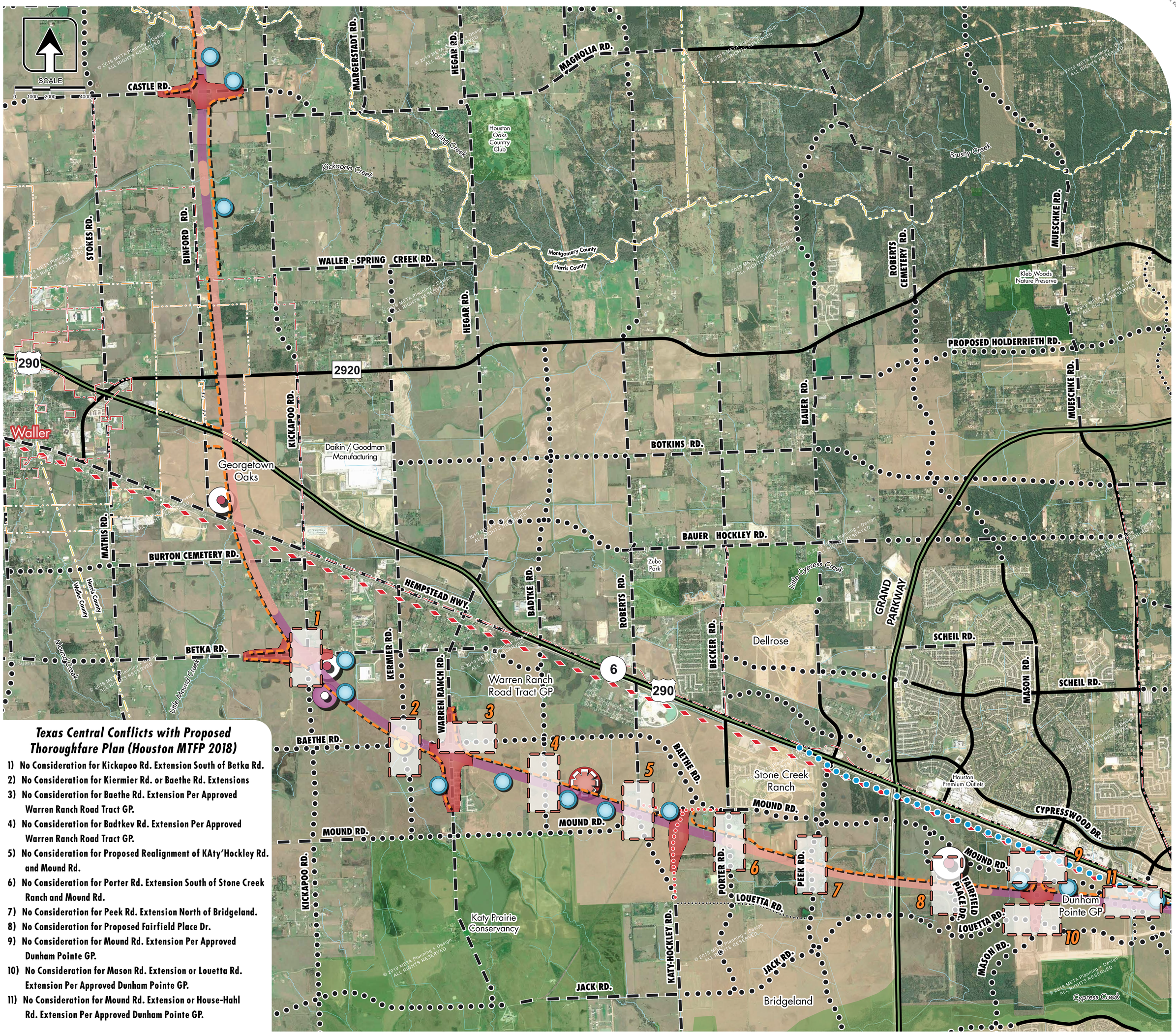
thoroughfares that will be needed to serve growing neighborhoods. This will be the case from the Beltway to the Grand Parkway along the Hempstead/290 corridor.

Finally, the proposed route would prevent rail service to future businesses because it would create a permanent obstacle that prohibits the freight railroad from reaching future industry. The area west of Houston is seeing tremendous growth in warehousing and industry. Those types of businesses frequently require rail transportation as an alternative option to trucks. TCR's failure to address future development in this area will be an impediment to economic growth, and will increase truck congestion in the region.

I want to be clear. It may be possible that all of these concerns can be addressed. But four years after raising our concerns with Texas Central, we still have seen little attempt at resolution. The proposal as it exists today is incompatible with freight rail operations. We are left with no option but to object to the project.

Thank you for your time.

EXHIBIT F



Texas Central Conflicts with Proposed Thoroughfare Plan (Houston MTFP 2018)

1) No Consideration for Kickapoo Rd. Extension South of Betka Rd.
2) No Consideration for Kiermier Rd. or Baethe Rd. Extensions
3) No Consideration for Baethe Rd. Extension Per Approved Warren Ranch Road Tract GP.
4) No Consideration for Badtkev Rd. Extension Per Approved Warren Ranch Road Tract GP.
5) No Consideration for Proposed Realignment of KAty'Hockley Rd. and Mound Rd.
6) No Consideration for Porter Rd. Extension South of Stone Creek Ranch and Mound Rd.
7) No Consideration for Peek Rd. Extension North of Bridgeland.
8) No Consideration for Proposed Fairfield Place Dr.
9) No Consideration for Mound Rd. Extension Per Approved Dunham Pointe GP.
10) No Consideration for Mason Rd. Extension or Louetta Rd. Extension Per Approved Dunham Pointe GP.
11) No Consideration for Mound Rd. Extension or House-Hahl Rd. Extension Per Approved Dunham Pointe GP.

META PLANNING + DESIGN
– Land Planning Consultants –
24275 Katy Freeway, Suite 200
Katy, Texas 77494
Tel: 281-810-1422

TEXAS CENTRAL RAIL AREA IMPACT MAP

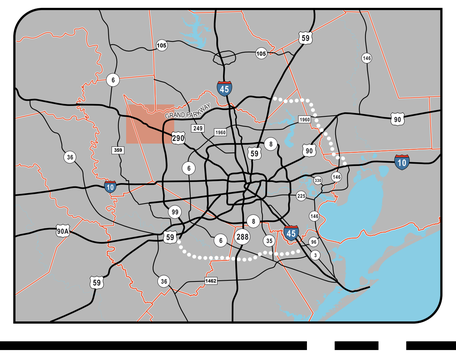
Jurisidictional Boundaries
- County Line
- City Limits
- ETJ Limits

Landmarks
- Parks
- Golf Course
- Airport
- Hospital

TCR Structure
- Proposed Viaduct
- Proposed Embankment

Major Thoroughfare System
- Freeway
- Existing Thoroughfare
- Existing Thoroughfare - To be Widened
- Proposed Thoroughfare
- Existing Railroad
- Proposed Hempstead Hwy
- Proposed Thoroughfare (Per TCR Const. Dwgs.)

TCR Symbology
- Train Maintenance Facility Site (Two Potential Sites Under Study)
- Support System / Utility Location
- Temporary Construction Yard
- Proposed TCR Access Road
- Existing Roadway - Elevated Crossing (Roadway over High Speed Rail)
- Existing Roadway - To be Removed
- Proposed Detention Basin
- Thoroughfare Conflict - Houston MTFP



META PLANNING + DESIGN

EXHIBIT G

Texas Central Railway Selects Two Possible Dallas Station Locations

- Sites include access to Dallas Central Business District and South Side
- Confirms related agreement with Matthews Southwest to serve as site developer in Dallas
- Station alignment allows for future connectivity to Arlington and Fort Worth

Dallas – February 6, 2015 – Texas Central Railway (TCR) today announced that it has selected two locations as potential candidate sites for the Dallas high-speed rail station. As part of the federally mandated National Environmental Protection Act (NEPA) process, TCR identified seven areas as possible station locations in Dallas. Today's announcement highlights two of the seven sites as TCR's preferred locations.

One candidate terminal site is currently undeveloped land located in the South Side on Lamar area and includes the 10 to 20 acres of land TCR estimates is needed for the terminal station, parking and space for future transit oriented development. The second candidate site would extend over Interstate 30 and includes a portion of the first candidate site as well as property next to the Dallas Convention Center.

TCR also confirmed that Texas Central Partners (TCP), an independent development company that will be responsible for the high-speed rail system's design, finance, construction, operation and maintenance, has reached an agreement with Matthews Southwest to serve as the development partner of the Dallas high-speed rail station and surrounding areas for transit oriented development. Matthews Southwest, led by Dallas area real estate developer Jack Matthews, is an award winning, full-service, private real-estate development company that has two decades of experience building various projects.

The location of either of the candidate Dallas high-speed rail stations will allow for future connectivity with the separate, public high-speed rail project currently under active consideration that would connect Dallas, Arlington and Fort Worth.

TCR has not yet announced a preferred station location in Houston. The project's NEPA process is still underway, and a variety of station locations are still under consideration, including an intermediate station serving Bryan/College Station and Huntsville.

Quotes

"After assessing no less than seven sites, running from Union Station at the north to I-45 at the South, and using criteria of connectivity, accessibility, visibility, cost, customer service, ease of parking and future economic development surrounding the station, we have determined that these two locations are best suited for our priority consideration. As we have seen in other cities around the world, the high-speed rail stations will become the focal point of development that provides connectivity to other forms of transportation. Either of these locations will allow for a high-speed rail station location and design that will become iconic to the Dallas skyline. TCR expects the final station

location selection process will require several weeks to complete based on close coordination with all parties involved in the NEPA process. We appreciate all the help we have received to date, and we will continue to rely on input from the community and coordinate closely with other interested stakeholders."

-- Richard Lawless, Chairman and CEO of TCR

"High-speed rail has proven to be transformational wherever it is deployed. These two candidate Dallas station locations will serve as a tremendous catalyst for growth in Dallas, specifically South Dallas, while also serving as a building block for high-speed rail connectivity into Arlington and Fort Worth. The selection of a final station location will be a first step towards the creation of a safe and efficient system that will connect generations of Texans who live and work in the state's largest and most vibrant metropolitan areas."

-- Jack Matthews, President of Matthews Southwest

"Jack Matthews has already made his mark on Dallas. From the revitalization of the Cedars area to the Omni Hotel and beyond, Jack's vision for Dallas is incredible. Either of these two potential station locations are ideally suited for Texas Central's high-speed rail station in Dallas. The project's partnership with Matthews Southwest ensures that we will be able to turn this vision into a reality. We are thrilled that the project now has such a highly-regarded partner in Dallas."

-- Judge Robert Eckels, President of TCR

"I am excited about high-speed rail moving ahead. Both options have the possibility of serving as catalysts for tremendous growth in the City, and I am extremely interested in seeing a deck over Interstate 30, bridging these two vibrant areas of our city and further enhancing what could be an iconic addition to the City of Dallas."

-- Mike Rawlings, Mayor of Dallas

"Since my time as mayor of Dallas, I have seen a real resurgence in downtown Dallas and in South Dallas. Either of these two station locations would complement and accelerate the growth in these areas, connecting Dallas residents not just to Houston, but also to other parts of their city that previously seemed far away or cut off from one another. The high-speed rail system will transform the state, and either of these station locations will be truly transformational for the city. It's a great and exciting time to live in Dallas, as we approach a time when many of our vibrant areas – Victory Park, Uptown, Deep Ellum, Cedars, Southside on Lamar, and the Trinity Groves area – are all accessible by vehicles, sidewalks and transit."

-- Ambassador Ron Kirk, former Mayor of Dallas and Senior Advisor to TCR

"This is a big day for all of us who want to bring high-speed rail to North Texas. Either of these locations will stimulate the revitalization of downtown Dallas and allow for the future expansion of a line to Fort Worth and Arlington. Both of those things were important to us in finding a location site, and I think we have achieved that today."

-- Ambassador Tom Schieffer, Senior Advisor to TCR

"Locating the high speed rail station in Downtown Dallas provides the greatest flexibility for travelers since they will have access to all of DART's bus and light rail network and the Trinity Railway Express commuter rail connecting to Ft. Worth. Just as it has in cities across the world, this convergence of transit choices in the city center should help attract development and create even more activity in downtown."

-- Gary Thomas, President/Executive Director of Dallas Area Rapid Transit

About TCR

Texas Central High-Speed Railway (TCR) is a private, Texas-based company, promoting the development of high-speed passenger rail between Houston and Dallas. The deployment of the same safe, efficient, comfortable and fast high-speed rail technology that boasts the world's safest record after more than 50 years of flawless operation in Japan will transform the way business travelers and families alike move between the state's largest metropolitan areas. Formed in 2010, a primary purpose of TCR is to secure environmental and technological regulatory approvals required to advance subsequent phases of the project.

About TCP

Texas Central Partners (TCP) is a private, Texas-based company that will develop the high-speed passenger railway and associated facilities. TCP and its affiliated entities will be responsible for the system's design, finance, construction, operation and maintenance. The proposed project will not request or require grants or operational subsidies backed by taxpayers for its eventual construction and operation.

About Matthews Southwest

Matthews Southwest (MSW) is a full-service private real-estate development company headquartered in Lewisville, Texas, with additional offices in Dallas, Texas; Calgary, Alberta; and Mississauga, Ontario. Since 1988, MSW has acquired, built and managed the development of hotel, office, mixed use, retail, residential, and industrial developments. MSW has development projects in the United States, Canada and Mexico. From conception to completion, MSW brings together financial resources and experienced management to form profitable relationships focused on creating projects of lasting excellence and enduring benefit.

EXHIBIT H

Developer Says Bullet-Train Project Will ‘Change the Way People Think About the Center of Dallas’

Jack Matthews foresees a mix of office, hotel, residential, and retail space on his Cedars acreage around the Dallas terminus.

BY GLENN HUNTER | PUBLISHED IN COMMERCIAL REAL ESTATE | APRIL 26, 2017 | 1:49 PM

One reason supporters like the proposed, 90-minute bullet train between Dallas and Houston is its potential to jump-start new real estate development. Indeed, The Real Estate Council in Dallas, which endorsed the high-speed rail project in January, said the $12 billion venture would be a “catalyst for a growing and robust” real estate market, and would attract new businesses and residents. “We feel pretty positive about it,” says Linda McMahon, TREC’s president and CEO.

As currently envisioned, the project’s Dallas terminus would be located in the Cedars district, south of Interstate 30, on 60 acres owned for five years or so by developer Jack Matthews, president of Matthews Southwest. Matthews—who’s also an investor in, and a board member for, the privately financed bullet-train project—says the station’s acreage lies between Lamar Street and Riverfront Boulevard, just south of the Kay Bailey Hutchison Convention Center.

There, he says, the plan is to “build the newest part of downtown” Dallas around the train station with a blend of office, residential, hotel, and retail space. Preliminary design work on the rail station has already begun, Matthews says, and design for the commercial real estate projects will follow as deals come together.

“Say a hotel wants to go in,” he says. “Some hotels might want us to build and develop the property. Or, we might sell the land to them, or do a joint venture. We’ve piqued the imagination of a lot of different people wanting to be involved.”

“We’re at the very beginning, but [there’s apt to be] a mix of everything, including a full mix of apartments, high rises, condos—to own, as well as to rent,” Matthews goes on. “Walk-ability will be

important, too. … We think [the development] will change the way people think about the center of Dallas."

As for critics who contend the bullet-train project is mainly a "commercial real estate venture" being pushed by private real estate speculators looking to make money, Matthews says, "I hope they do, because I'm one of them! I hope they're right about that."

LINK HOUSTON

April 30, 2019

Mr. Alan Clark
Director of Transportation Planning
Houston-Galveston Area Council
P.O. Box 22777, Houston, Texas 77227
Submitted by email to publiccomments@h-gac.com

RE: Draft 2045 REGIONAL TRANSPORTATION PLAN, April 2019

Dear Mr. Clark,

The following are LINK Houston's comments regarding Houston-Galveston Area Council's (H-GAC) draft of the 2045 Regional Transportation Plan (RTP) and Air Quality Conformity Documents. LINK Houston advocates for a robust and equitable transportation network so that all people can reach opportunity. The paradigm by which our region provides mobility in the near and long-term future will have a profound impact on community quality-of-life and influence people's ability and choice to affordably and safely access the rich opportunities our region offers by walking, biking, rolling, and riding public transit (e.g., bus, rail, vanpool, paratransit).

LINK Houston proffers concise comments regarding several elements of the draft RTP and appendices. We have organized our comments following the organization of the plan to assist H-GAC in incorporating our comments into the final plan.

Ch 1. Introduction

No specific discussion or comments.

Ch 2. Vision, Goal, Strategies, and Performance Measures

The vision and goals are acceptable. The strategies [manage, maintain, expand] are an adequate framework for categorizing projects. We are pleased that the safety goal's performance measures include reducing motor vehicle crashes involving people walking and biking.

1. Table 2-7 Major Added Capacity Improvements could leave the reader with a misunderstanding about how the regional plan expands transportation options. Meaning, the present tables note three highway projects costing less than $1bn and lists three items costing more than $1bn line for non-highway investments in local thoroughfares, transit, and walk/bike infrastructure. We strongly support the investments in local streets, transit, and walk/bike/roll. However, the paragraph following the table, at the top of page 2-10, lists several major highway and tollway projects that will also be constructed and that are not listed in Table 2-7. We suggest including several of the larger highway/tollway projects in Table 2-7 to more accurately reflect how the regional policy council is planning to expend resources to expand roadways as well. Having a complete picture of how investments are proposed to be made in the future will help the public and decision-makers to collaborate. This information may be further in the plan, but many people will primarily see only the higher-level summary.

Ch 3. Existing Infrastructure, Challenges and Issues

While H-GAC may not have considered LINK Houston a formal member of the High Capacity Transit Task Force (we did not exist when it was formed), we actively participated in the effort from our earliest days as an organization. H-GAC staff, specifically Thomas Gray, did an admirable job. Staff showed a willingness to temper model inputs and outputs per task force direction and based on community identified needs. This was best exemplified in how the transit Priority Network map was iterated to include more services on the east side of Houston and the eight-county region. We appreciate that the Priority Network map is included in several sections of the plan body and has its own appendix.

2. The challenges listed under active transportation, page 3-13, could include a statement about improving universal accessibility to enable people with a disability to access existing and new sidewalks to get places safely. Several cities and Houston METRO are working to improve accessibility as a recognized challenge due to historical development standards, aging infrastructure, and our aging population.
3. The Houston region's three 500-year rain events in as many years have revealed our extensive vulnerability, not to mention areas that routinely flood due to historical issues with infrastructure and water flow (e.g., Independence Heights in Houston). We strongly support H-GAC's continuing to investigate how to proactively exceed federal minimum requirements when it comes to flood resilience. City of Houston and Harris County have taken a lead by requiring new development to be 2' above 500-year event levels. H-GAC can conduct analysis and foster dialogue about mitigating our vulnerabilities regionally.
4. The performance target numbers for safety, page 3-29, point to Appendix P FAST Act Compliance and not Appendix E Regional Safety Plan. There should be more discussion about the regional safety plan's role in regard to the RTP and how the federally required performance measures differ from our local region's aspirations, as Allan Clark aptly described in several H-GAC settings. We suggest H-GAC also incorporate some brief overview of how the region is doing in regard to safety (the "why" for safety).
5. Our last suggestion is to edit Table 3-4 to explain what the rate of fatalities/injuries is based on, population(?) or vehicles miles traveled(?).

Ch 4. Regional Growth

The region's population will continue to grow, but where and how people will travel is a chicken and egg situation. Suburban development is exceptionally expensive to provide transportation access and results in very levels of single occupant vehicles trips. Does suburban development occur first and then transportation infrastructure is pressured to "catch-up?" Or, do transportation planners presume massive suburban outward expansion and therefore plan expensive large-scale highway and tollway projects to accommodate said growth? The truth is not entirely one or the other. It is likely that the suburban land development would slow/diminish if it were known transportation investment would not follow and would come at immense public expense.

The alternative is for transportation planners to proactively design multi-modal networks with nodes that have gravity to naturally incentivize more concentrated land development conducive to multi-modal travel en-masse – transit-oriented development on regional and local scales served by high capacity transit, local transit networks, and complemented by 24/7 high-occupancy vehicle network for vanpools and carpools. We do not need more general-purpose main lanes. The economy and development patterns would naturally adjust. The economic pain from this paradigm shift would be felt primarily by land developers with long-term bets on suburban sprawl wealth facilitated by public expenditure on highways for solo drivers.

This discussion is related to congestion, which is not to be hated. Freight and commercial traffic must have a way to reliably move goods and support jobs – yes – but the best way to achieve that is not solely through expanded highways. Personal travelers experiencing congestion while driving alone during peak periods is desirable because they are part of the problem. Congestion is a naturally occurring "cost" for urban areas and not entirely undesirable. The principles of latent demand and induced demand guarantee that we cannot build our way out of congestion, ever, in any scenario, likely on any corridor (IH-10 Katy Freeway was massively expanded to solve congestion and is more congested than IH-45 North, see Table 3-1). Congestion is motivation to diversify the mobility system.

Congestion is motivation to allow land use changes to occur, which can include a variety of tools by public stakeholders to preserve/promote affordable housing near education and job opportunities.

These are longer-term paradigm points that perhaps H-GAC cannot address in editing the draft RTP. We understand. We provide them for general awareness and as sound observations about how regional transportation planning occurs in a complex policy and economic environment. We support accommodating the growth documented in Chapter 4 Regional Growth but assert that different policy decisions can be made to more proactively influence where people live and how they travel in the greater Houston region.

6. H-GAC should add a figure 4-16 with a map of peak congestion with the HCT Vision Network OR (if that is not feasible) a map of peak congestion with the HCT Priority Network and roadway capacity improvements. This will ensure the HCT's work and the Priority Network are addressed in the regional growth chapter. Additional dialogue to discuss the HCT and the additional figure should be added. High capacity transit investments are key to sustainably managing growth and should be a highlight of Chapter 4's conclusion.

Ch 5. Recommendations and Fiscal Constraint

No specific discussion or comments.

Ch 6. Transportation Conformity (Air Quality)

LINK Houston defers to other stakeholders with expertise in air quality conformity for detailed comments.

7. Clean air is critical to health, especially for children and older adults. We suggest that the front matter for Chapter 6 incorporate some brief discussion about how conformity is about regional air quality compliance and does not guarantee local air quality in particular locations or communities. Why? The practice for modeling conformity is important but does not evaluate localized impacts of even major transportation projects. For example, the North Houston Highway Improvement Project draft EIS found the proposed project was conforming – at a regional level – but did not provide any detailed information about localized air conditions long-term in proximity to the project. We have shared this concern with the Texas Department of Transportation as an actively engaged stakeholder. We mention it here only as an example. H-GAC should incorporate a paragraph to explain that conformity of particular projects does not preclude positive and negative air quality changes in communities in proximity to major transportation projects.

Ch 7. Public Involvement

H-GAC conducted an adequate amount of public outreach throughout the planning process, most especially during the early stages of planning to solicit public opinion.

8. Figure 7-1 does not have the percentage for sidewalks/pedestrian infrastructure. Figure 7-1 lists commuter options twice, once with 7% and the other with 9%. Please check this figure to ensure the top ten priorities are correctly reflected.

Appendix H. Draft Regional Active Transportation Plan

LINK Houston was not a formal member of Pedestrian/Bicyclist Subcommittee during the development of the Regional Active Transportation plan. (We did not exist when the working group formed.) We were active participants in the process these past months and now do sit on the subcommittee. We support the plan as drafted. H-GAC staff and the working group did an admirable job analyzing where need exists in the region and establishing a framework by which to prioritize, or spur, investment.

Appendix I. Environmental Justice

This is an exhaustive and well-constructed report looking at the region with a Title IV environmental justice lens.

9. H-GAC should incorporate portions of this appendix into Chapter 3 Existing Conditions and Chapter 4 Regional Growth. The added material can explain what environmental justice is and why it matters. In addition, we recommend that H-GAC summarize findings about the pattern of transportation investment choices (distributional equity), considerations of system performance and equity, accessibility to vital services, and safety. Noting potential challenges in Chapter 3 Existing Conditions discussion of environmental justice could include this quote from page ES 8, "*Transportation projects in the inner-city that significantly expand the existing right-of-way will inevitably result in disproportionately high and adverse impacts on the protected population. Displacing the underserved population from accessible locations and their removal to less accessible localities may introduce fresh hardships and severely impact the quality of life of the affected citizens.*"

Appendix J. Resiliency

This appendix was generated in fall 2017 in a timely fashion post Hurricane Harvey. That is to be applauded.

10. A revised version could be created in the future to incorporate additional information now available, such as from the Greater Houston Flood Mitigation Consortium. Also, a revised document could address an aspect of resilience not discussed previously. The present document focuses on the ability to access transportation arteries (primarily highways) during flood events, a prime concern for evacuation, emergency response, and recovery activities. The missing discussion is to identify where existing transportation infrastructure is already adversely impacting communities, such as by undersized water conveyance structures resulting in community flooding. Transportation provides access to communities but can also be part of the problem itself. The Houston region needs to move beyond concern about historical liability and focus on collaborative solutions to existing issues and proactive policy solutions for future infrastructure and communities. Anytime an agency touches a facility to reconstruct or significantly alter infrastructure they must concurrently correct existing issues – most especially with flooding.

Appendix L. Intercity Buses (Locations, Service Summary)

11. This appendix could use a substantial update in the future. There is some interesting information about the Charles Wilson VA Shuttle operated by Brazos Transit District. However, overall there is insufficient information about who operates intercity bus in the region and the present and possible role of such services. The region receives significant services by Greyhound, Vonlane, Megabus, and a variety of Spanish-speaking focused providers. Several of the intercity bus routes by Greyhound and Vonlane are commuter focused and may replace trips otherwise made by a single occupant driver.

Appendix M. Enhance Travel and Tourism

12. This appendix could also use a substantial update in the future. Figure 1 is of poor quality and does not note many important travel and tourism destinations important for out-of-region and local tourism. A more effective discussion would highlight how multi-modal transportation networks, especially in the future with walk/bike and transit investments, can improve access to tourist activity centers and remove the need to make the trip using a personal or rented vehicle. This is especially important as Houston seeks to host events attracting international visitors. It is also important for this section to note that many of the jobs supported by tourism are low to moderate wage jobs filled by persons in our region who need safe, affordable access to the job site during non-traditional work hours (often early morning, mid-day, or late evenings) and seven days a week.

Conclusion

LINK Houston provides these comments as a non-profit stakeholder and active participant in transportation processes in the region. We believe every major infrastructure project using taxpayer dollars is an opportunity to improve quality of life – most especially for the communities immediately impacted by the said project – much more than simply continuing status quo and mitigating negative impacts of projects in pursuit of benefits to other communities. Transportation infrastructure will continue to influence access to opportunity and quality of life, including health and wellness in Harris County and the eight-county region. We hope that as H-GAC continues to

plan for our region's future there is a continued commitment to planning for creative, innovative, safe, and multi-modal affordable transportation options.

Thank you for the opportunity to provide comments on the draft Regional Transportation Plan.

Sincerely,

Jonathan P Brooks

Jonathan P. Brooks

Director of Policy and Planning
LINK Houston

Greater Northside Management District

615 North Loop East Site. 104., Houston, Texas 77022 (713) 229-0900 office

May 10, 2019

Alan Clark
Director of Transportation Planning
Houston-Galveston Area Council
P.O. Box 22777 Houston, TX 77227-2777
Submitted by email to publiccomments@h-gac.com

RE: Draft 2045 Regional Transportation Plan

Dear Mr. Clark,

The Greater Northside Management District (GNMD) appreciates the opportunity to provide comments on the Houston-Galveston Area Council (H-GAC) Draft 2045 Regional Transportation Plan (RTP). This plan covers specific projects in the District including: The North Houston Highway Improvement project (NHHIP) Interstate 45 (I-45), the Hardy Toll Road Downtown Connector, METRONext projects and our North Main Street Safe Access to Transit Enhancement Project.

North Houston Highway Improvement Project
We have been in communication with the Texas Department of Transportation (TxDOT) to express our concerns regarding the North Houston Highway Improvement Project (NHHIP). While some have been addressed, there are still some significant issues that need better solutions. We hope the following breakdown of comments will be taken into consideration before the RTP is finalized not only for the NHHIP but for other similar regional projects.

1. ***Minimize Right-of-Way (ROW) Impacts to Businesses and Homes***
We have serious concerns about the direct economic impact and displacement of businesses and residents especially as it relates to the taking of ROW.

2. ***Local Connectivity***
We recommend an approach that makes local connectivity a priority, along with traffic flow. We believe local connectivity must be considered in all highway projects.

3. ***Frontage Road Safety***
According to a recent analysis conducted by LINK Houston, Interstate Highway (I-45) has a disproportionate amount of bike and pedestrian crashes along frontage roads including the Crosstimbers intersection, which is currently ranked as the 13th most dangerous for people walking or biking. NHHIP is an opportunity to make it safer and utilize other safety features along the feeder and intersections. We recommend that frontage roads are designed using the City of Houston Design Standards and Complete Streets Policy.

4. ***Flooding***
We are requesting TxDOT mitigate for both existing and proposed impervious surfaces and design drainage for the 500-year storm event. Mitigation strategies should have community benefits, including multi-purpose drainage infrastructure, parks, and trails.

615 North Loop East Site. 104., Houston, Texas 77022 (713) 229-0900 office

5. Minimize Impacts to Parks and Greenspaces

We are requesting that TxDOT minimize impacts to the White Oak Bayou Greenway Trail including the visual impact from the Leonel Castillo Community Center. Opportunities should be in the plan to extend existing trails and link to future trails, according to the Houston Parks Board – Beyond the Bayous Plan.

Our expectation is that the TxDOT will review and address these concerns. We feel these are warranted and should be carefully considered as key public involvement components of the project as it is part of the H-GAC Regional Transportation Plan.

Hardy Toll Road Downtown Connector

We would request that the Hardy Toll Road Downtown Connector to be an asset to the community by including urban design strategies (e.g., better lighting and paint in underpasses) and multipurpose infrastructure (e.g., detention ponds that also serve as parks).

METRONext Projects

The METRONext Plan will help expand economic opportunity, improve community amenities and transit access throughout the Greater Northside and we are very supportive of the projects within the plan, including:

a. The Red Line Extension
b. The University Corridor BRT Line
c. I-45 North BRT Line
d. Boost Corridors

Some concerns we have are:

a. Minimize Right of Way (ROW) acquisition of the proposed Red Line Extension.
b. Include a Northside stop on the I-45 North BRT line and coordinate with TxDOT to make it safe for pedestrians to access it.
c. Gaps in bus routes, especially on Little York for Buses No. 6, 45 and 79 and 83.
d. Consider the relocation of the Tidwell Transit Center from Epsom Drive to the intersection of Jensen Drive and Tidwell Road.

North Main Street Safe Access to Transit Enhancement Project

The District applied for funding for the North Main Street Safe Access to Transit Enhancement Project in 2018. While it was not slated to be funded immediately, it has been added to the list of projects for the RTP. This project would provide important benefits in the proposed areas by providing safe and accessible access to major activity centers, schools, public transportation, and underserved communities.

This project seeks to enhance the existing METRO's red line light rail transit corridor by making the corridor feel safer for pedestrians. Improvements can enhance the quality of the pedestrian experience on the corridor and encourage even more people to walk and use transit. Due to public safety concerns along the corridor, the installation of safety lighting and associated improvements will help to improve safety, enhance economic development, and improve the quality of life for the community. As a proposed regional transit network, these benefits extend to the region as well.

Appendix D-Fiscal Constraint and Project Listing

Our North Main Street Safe Access to Transit Enhancement Project is currently compared and scored relative to major highway projects such as the widening of SH 99, SH 146, and several other FM and SH facilities. The project and others like it should not have to compete with projects on major state highways.

Greater Northside Management District

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The HGAC process for allocating federal funds is one of the only discretionary sources of transportation-related grant funding for the region. While there are non-discretionary allocations to transit providers (METRO), and highway funds (TxDOT), we would like to see a more balanced distribution of the discretionary funds. A review of the project listing shows a bias towards funding going to TxDOT, even though TxDOT receives significant other funding from both the State and the Federal government. We would suggest the ranking methodology be vastly simplified, transparent, aligned with regional performance measures, and established significantly ahead of a call for projects. Once the methodology has been updated it should be used on the most recent Transportation Improvement Program (TIP) call for projects to see if it has a desirable project ranking. Lastly, we would like to see a graph similar to "Expenditures by Strategy" but broken down by mode.

Appendix H – Draft Regional Active Transportation Plan

We highly appreciate the work that went into the Draft Regional Active Transportation Plan. We support the idea of using an evidence-based approach to identify the focus areas that have a higher need for active transportation. The District includes many historical areas that were built in a traditional development pattern that is very amenable to walkability and bikeability. As such, six (6) Pedestrian and seven (7) Bicycle focus areas were identified within the District. We wholeheartedly support increased attention in these focus areas and look forward to working together to identify projects to further improve walkability and bikeability further. Furthermore, we recommend a future funding methodology that is preferential to these focus areas.

The Greater Northside Management District and Board of Directors believe these projects will have a noted and lasting impact on our area. We appreciate the significant work that went into making the Draft 2045 RTP, and we especially appreciate the extensive outreach efforts by HGAC staff to organizations and the community at large to be included in the planning process.

We respectfully request your assistance in encouraging and creating innovative opportunities to improve the quality of life for the Greater Northside. We look forward to continuing to work with you to ensure the best transportation project for all concerned.

Sincerely,

Rebecca C. Reyna

Rebecca C. Reyna
Executive Director
Greater Northside Management
615 N. Loop East Ste. 104
Houston, Texas 77022
(713) 229-0900

Comments on the Draft 2045 RTP

By Oscar Slotboom, 15000 Philippine, Houston, TX. April 24, 2019

General Comments

- Fixed rail transit projects should be ELIMINATED from the plan or minimized. Buses can meet the transit demand for a much lower cost with much greater flexibility, especially with future technology such as platooned buses. Fixed rail transit is totally incompatible with automated transit vehicles, which may become available during the period of this plan.
- There needs to be a plan for a regional managed lane network. See attached map for potential routes.
- The 2045 RTP should focus most resources on highway and street capacity improvement. For transit, focus should be on a managed-lane network. Houston and Dallas-Fort Worth are excellent examples of how highway, tollway and managed-lane investments reduce congestion compared to peer regions which focus on rail transit.

Comments on Specific projects in Appendix D

MPOID		
18021 18022	SH99	Considering the existing traffic congestion, this section should be widened to 8 lanes (4x4), not 6 lanes as listed in the document.
15590 17232	SH99 @IH45N	The description appears to have errors. The SB-WB and EB-NB connectors already exist. The "left-turn" movements should be built first, especially NB-WB connector. The listed years (2030 and 2040) are too far in the future, and the high-traffic connections need to be built sooner.
18105 18106 18107 18108 18109 18110	IH10E	These projects are very expensive and I'm skeptical the cost can be justified in these rural areas. The concrete on this section of IH10 is still in very good condition (i.e. no spalling). Since these projects effectively replace most of IH10 main lanes, I think these projects should be done only when the IH10 main lane pavement starts to deteriorate. The projects are listed for 2041, which may be near the end of the pavement life, but perhaps these projects should be re-evaluated in 5-10 years depending on the pavement quality.
15454	IH45N	The direct connection ramp should be retained, in addition to the SPUI.
NHHIP		I support all the NHHIP projects. I prefer that the projects from Loop 610 to Beltway 8 start sooner than 2030, preferably much sooner.
	Hempstead Road Tollway	This should be planned in conjunction with Texas Central, if Texas Central is in fact built. To reduce costs for both Texas Central and Hempstead, consideration should be given to a design similar to the Hardy Toll Road between Loop 610 and Beltway 8, with the railroad and Hempstead at ground level and all cross streets going over or under.
18177	Gessner BRT	I am AGAINST this project. This project is ridiculously expensive ($2.9 billion) and transit demand in the corridor does not remotely justify the expense. I lived one block away from Gessner (8800 block of Langdon near Beechnut) from 2015 to 2018, and transit demand is easily served with buses. At the connection points at Beechnut and Bellaire, I don't recall ever seeing more than 10 people waiting for a bus, and around 5 is more typical at the busy stops.

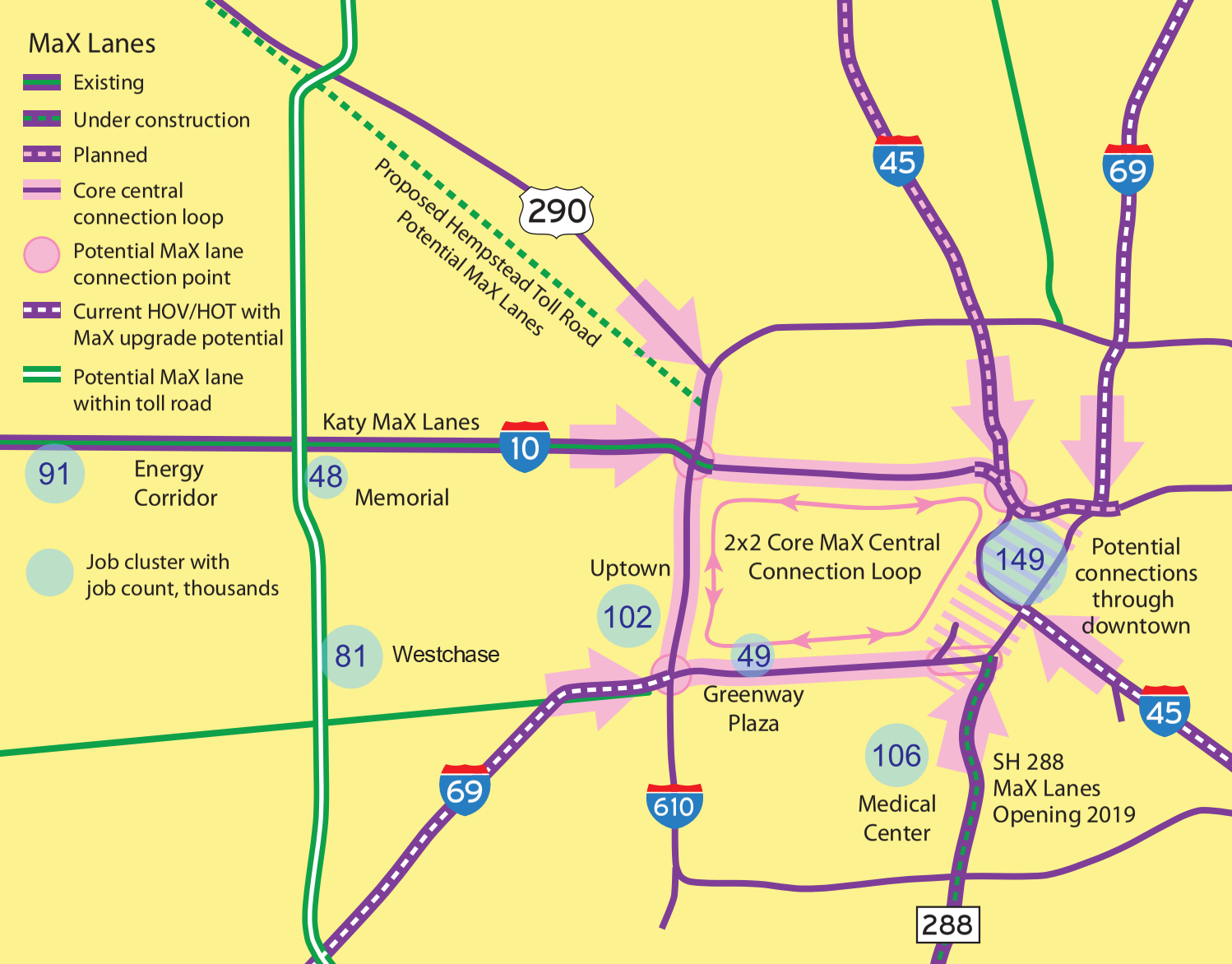
		I currently live at 15000 Philippine (about 0.5 mile from Gessner) and drive on Gessner regularly. There is currently no bus service, and due to low density and minimal transit-dependent populations in this area, transit demand is certain to be negligible on this section of Gessner! This project should be REMOVED and replaced with a more suitable and vastly less expensive option, such as signature bus service.
18086	Road diet	I'm generally against road diets, since they increase congestion. These projects seem especially objectionable due to the sky-high cost of $196 million. (It is unclear if this includes street reconstruction).
18189	IH45N	This project seems like it should be part of the NHHIP project.
18188	IH69S	This project should be replaced by a 4-lane (2x2) managed lane facility. See comments below in section "Needed Additions for Regional Managed Lane Network"
15247	LRT to Bush	This project should be REMOVED and replaced with express bus service on the planned NHHIP managed lanes. Trip time on LRT over this long distance will be unacceptably long, and ridership to airports is generally low. This $1 billion expense cannot be justified.
11764	Almeda line	This is a very low density area and cannot justify "guided rapid transit". This project should be REMOVED, and transit needs in the area should be served by buses.
18181	US 90A Commuter Line	The cost of $8.4 billion is ridiculously large, and cannot remotely be justified based on demand. Ridership will be reduced by the need to transfer to the Metro Red Line, which is very slow. This project should be REMOVED and replaced with much less expensive and more flexible bus service.
18180	Westpark Commuter Line	The cost is excessively high ($2.7 billion), and any transit needs can be met for a much lower cost by building a dedicated bus lane on the 50-foot-wide right-of-way. A bus lane will also be usable by automated transit vehicles, and buses can continue on the proposed Westpark BRT inside Beltway 8. It makes no sense to have two types of transit (BRT and commuter rail) on this corridor. It should be all BRT, and BRT should be built only where justifiable, which is surely not all the way to Fulshear.
77	Gessner	This project seems to be incompatible with the proposed BRT due to limited right-of-way. As noted above (item 18177), BRT on Gessner should be removed and replaced with improved bus service, which would be compatible with this project.
18174 18175	LRT to Hobby	We don't need two LRT lines to Hobby! In fact, we don't even need one. This is a ridiculous expense ($4.3 billion) for the minimal ridership to the airport. At least one LRT to Hobby should be removed, and preferably both.
18179 13867	US 290 Commuter line	This $4.1 billion expense cannot be justified. Bus service on the Hempstead Toll Road should be sufficient. If there is sufficient transit demand, a BRT can be built. A BRT is far less expensive, and the buses can continue to both downtown and Uptown on dedicated bus lanes. It makes no sense to force commuter rail users to transfer to buses to continue their trips to downtown or Uptown. Service should be 100% bus. This project for commuter rail should be REMOVED.
17090	SH288 ITS	At $12 million per mile, this is very expensive and may be overkill for this semi-rural area.

Needed Additions for Regional Managed Lane Network

System	See attached map for a general concept for a system
IH 10W Corridor between Loop 610 and downtown	The plan should include 4 managed lanes (2 each way) on IH10W between the West Loop and IH 45. This is needed due to traffic congestion in the corridor, and to connect the existing managed lanes west of Loop 610 and the planned managed lanes through downtown. This project should be scheduled to be completed around the same time as the NHHIP through downtown, which should be mid-2020s.
IH 69 Southwest Freeway Corridor	The plan should include 4 managed lanes (2 each way) inside the loop from Spur 527 to Loop 610, and potentially further southbound.
Connections	Where feasible and cost-effective, there should be dedicated connections between managed lane facilities.

Items not included in Appendix D which need to be included

West Loop between IH10W and IH69S	This is the most congested section of highway in the state of Texas and there appears to be nothing programmed to expand capacity! *This is the most serious omission in the document 2045 document.* Elevated express or collector/distributor lanes need to be built. There should be a minimum of 4 new lanes, and I think demand justifies 6 new lanes (3 each way).
North Loop between US 290 and IH 45 North	There is no improvement programmed for this section, even though congestion is already bad and becoming worse. It will be relatively easy to add two main lanes for a total of 10 main lanes. This should be programmed into the document for the near term, before 2030.
Sam Houston Tollway between IH45N and IH69S	This section is heavily congested and widening is justified. Express toll lanes should be considered, for a total lanes count of 5T-1ET-1ET-5T. At the very minimum, a feasibility study should be programmed into the 2045 document.
Intersection of IH 610 south loop at US 90A (South Main)	There is heavy demand for the movement from IH 610 westbound to US 90A southbound. Even though there are 3 left turn lanes, peak period backups are very large. This traffic movement needs a direct connector, probably with two lanes.
Beechnut at Beltway 8	This intersection is very congested, especially on the Beltway 8 frontage roads. To reduce frontage road congestion, tolls should be removed from the main lanes over Beechnut. Consideration should also be given for reversing the ramps on Beltway 8 between Bellaire and Beechnut.
Regional Intersection Improvement Program	There needs to be an ongoing program to improve congested intersections throughout the region. This would generally include dual left turn lanes and the addition or right-turn lanes to substantially improve intersection performance. The Dallas-Fort Worth region has had an ongoing intersection improvement program. There are probably over well over 100 intersections needing improvement, with improvements unique to each situation. For example, Gessner at Harwin is a problem spot in southwest Houston. It always tends to require two cycles to get through the intersection on Gessner at peak periods.


MaX Lanes
Existing
Under construction
Planned
Core central connection loop
Potential MaX lane connection point
Current HOV/HOT with MaX upgrade potential
Potential MaX lane within toll road
Job cluster with job count, thousands
Proposed Hempstead Toll Road
Potential MaX Lanes
290
45
69
Katy MaX Lanes
10
91
Energy Corridor
48
Memorial
2x2 Core MaX Central Connection Loop
Uptown
102
149
Potential connections through downtown
81
Westchase
49
Greenway Plaza
106
Medical Center
SH 288 MaX Lanes Opening 2019
610
288

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May 5, 2019

Houston-Galveston Area Council - Transportation Policy Council
Houston-Galveston Area Council - Technical Advisory Committee
Houston-Galveston Area Council Staff

Re: Comments on the 2045 Regional Transportation Plan

Dear Staff:

Public Citizen appreciates the opportunity to provide comment on the 2045 Regional Transportation Plan. I want to celebrate the Houston-Galveston Area Council for several points in the 2045 RTP, including a significant expansion of the Environmental Justice appendix (Appendix I), a new appendix dedicated wholly to Resiliency (Appendix J), as well as other appendices not found in the 2040 RTP. I want to commend H-GAC for the creation of a comprehensive document that touches on many issues of concern for residents in our region.

In the Houston-Galveston region, extreme rainfall and sea level rise will continue to create conditions that challenge our region's transportation. I was pleased to see climate addressed in Chapter 3: Existing Conditions as part of H-GAC's requirements through the FAST act, and the table provided within that section provides some helpful information regarding relative sea level rise, temperature rise, increased tropical activity, and increased severity of precipitation.

In the document, it is stated, for instance, that:

"sea level at Galveston has risen more than 26 inches, which is significantly greater than the global average. In the next 50 years, Gulf Coast sea levels are expected to rise by 1 to 6 feet.

"A 4-foot increase in relative sea levels would put a quarter of the region's interstates, 10 percent of rail lines, and nearly 75 percent of port facilities at risk."

Based on modeling presented in a 2018 report by Union of Concerned Scientists, over 10,000 homes in Texas will experience chronic flooding (2 times per month) by 2045, and over 82,000 homes will be at risk for chronic flooding by the end of the century.[1] That report shows homes in Chambers, Galveston, and Harris Counties will be impacted.

[1] https://www.statesman.com/news/20180622/study-rising-seas-may-routinely-flood-over-10000-texas-homes-by-2045

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Climate impacts from sea level rise and chronic flooding will alter how growth in the area occurs, in addition to the damage it will create to areas that are instrumental in our regions' goods movement.

While chronic flooding will likely be an issue in limited areas of our region, extreme weather events are becoming more prevalent across the world, and Houston is no exception. Coupled with development practices that create runoff, our transportation infrastructure and the movement of people and goods across our region are at risk from extreme precipitation events.

It's unclear whether the climate impacts listed in Chapter 3 are taken into account elsewhere throughout the document. Sea level rise is likely to change patterns of growth. Temperature rise will create challenges to maintaining infrastructure. How is that reflected in projected funding needs?

I'm glad to see that the Transportation Vulnerability Assessment is ongoing, and may help answer some of my questions.

While planning for resiliency by adapting to changing conditions is important, one of the ways that climate change needs to be addressed is through emissions reductions. Emissions reductions can occur through reductions in VMT, changes in vehicle efficiency, and changes in fuel source.

Projects like the bus rapid transit project can help reduce VMT, as could programs to educate the public on using transit or programs that support telecommuting or carpooling. Vehicle efficiency is tied to the CAFE standards, and at the present moment, these standards are being rolled back at the federal level.

Alternative fuels are another way in which carbon emissions and co-pollutants can be reduced. In 2018, Public Citizen released a report done by researchers at the University of Houston (attached) that looked at changes in fuel types and the implementation of emission reduction technologies and the impact on air quality, including ozone, and health benefits in the Houston-Galveston region.[2]

The 2018 report found that electrifying the fleet and implementing diesel emissions reduction technology could significantly reduce emissions, especially considering ERCOT's projections for growth in renewable power.

[2] https://www.citizen.org/wp-content/uploads/migration/public-citizen-air-quality-transportation-houston-report-october-2018.pdf

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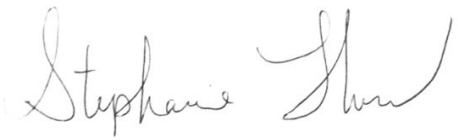
While that study did not account for any additional infrastructure in the Houston-Galveston region, the researchers found that even with additional cars and freight on the road, carbon dioxide emissions, as well as NOx emissions, could be reduced by about 95% through electrification and other emissions reductions technologies. Furthermore, implementing these technologies could prevent the deaths of over 200 people per year by reducing exposure to particulate matter pollution.

While there is much that remains to be seen about the widespread adoption of electric vehicles, current trends indicate that EV adoption is growing, which will influence the mobility patterns of Houstonians. In fact, the Houston area was selected by Electrify America for additional charging infrastructure. Alongside environmental mitigation funding available through the Volkswagen Settlement, there are opportunities for our region to lay a groundwork of charging infrastructure, including DC fast charge stations, that can help support the growth and adoption of electric vehicles. I hope to see H-GAC incorporate electric charging infrastructure as an important component of any long term regional transportation plan.

Given the health impacts of transportation on our region, I would like to see a deeper focus and integration on health impacts into the RTP. Health impacts can be monetized and incorporated into the metrics to determine whether a project best suits our region. Environmental justice also needs to be integrated as a metric, as well. Building wider roads and more roads should not be the only way to address the transportation needs of our region. Air Alliance Houston has made the recommendation to create an Environmental Justice subcommittee to the Technical Advisory Committee. We second that recommendation because it is critically important for there to be representation of environmental justice issues within transportation planning in our region.

Sincerely,



Stephanie Thomas, Ph.D.
Organizer and Researcher
Public Citizen

UNIVERSITY of HOUSTON

Evaluation of the air quality impacts of clean combustion technologies, emissions controls and fleet electrification in the Houston Metropolitan Area for the year 2040

Table of Contents

EXECUTIVE SUMMARY

Transportation is a major source of air pollution in the Houston Metropolitan Area (which for this report, we are considering as the 8-county region of Harris, Chambers, Liberty, and Montgomery, Waller, Fort Bend, Brazoria, and Galveston counties). Transportation-related pollution is predicted to worsen with growing population and regional port expansion. The population in the region is expected to grow by 50% by 2040, and on-road vehicle traffic, which includes trucks and passenger vehicles, is predicted to increase anywhere from 30%-80% by 2040. With an increase in both population and on-road vehicles, transportation-related emissions would likewise increase.

Pollution can be mitigated through control strategies, which include improved clean combustion technologies, tailpipe emissions controls, and fleet electrification. Regulatory Impact Assessments, which systematically evaluate benefits and costs of regulations, often include only short-term projections for these kinds of strategies. This report provides a detailed assessment of the impact of these control strategies for the year 2040, in order to understand how significant implementation of emission control strategies could help improve air quality in the Houston region.

This study evaluates the effects of fleet electrification, replacement/retrofit with new combustion technologies/emissions controls on regional air quality and health. Four emissions control scenarios, which represent a variety of combinations of emissions controls, were modeled to determine the impact of emissions control technology on both total emissions and on human health. These models were scaled to account for future increases in motor vehicle activity and population. The models also accounted for changes to the electric grid to account for the predicted retirement of coal plants.

Scenario 1: A "Business-As-Usual (BAU)" scenario represents present day emissions and fleet composition with no turnover. It was modeled to demonstrate the impact of policies that incite no major move toward emissions controls from combustion technology or electrification. In this scenario, where the fuel mix is approximately the same as today's mix but more cars and trucks are on the road, nitrogen oxides (NOx) emissions would increase by 56.9% and fine particulate matter (PM2.5) would increase by 61.1% relative to 2013 values.

Scenario 2: In a Moderate Electrification scenario, 33% of vehicles rely on clean combustion technology, 35% are electrified, and 32% reflect a similar mix to the 2013 region-wide fleet. Here, NOx emissions would be reduced by 47.2% and PM2.5 would be reduced by 45.8%.

Scenario 3: In an Aggressive Electrification Scenario, where 15% of vehicles rely on clean combustion technology, 70% would be electrified, and 15% would reflect a similar mix to the 2013 region-wide fleet, NOx emissions would be reduced by 75.3% and PM2.5 emissions would be reduced by 74.6%.

Scenario 4: A Complete Turnover Scenario represents a case where 65% of vehicles would rely on clean combustion technology, 35% would be electrified, and no vehicles would be on the road with a fuel mix similar to the 2013 region-wide fleet. In this scenario, emissions would be nearly eliminated: NOx would be reduced by 94.9% and PM2.5 emissions would be reduced by 94.8%.

This study demonstrates that fleet electrification and new technologies can improve regional air quality and human health endpoints.

KEY FINDINGS

- Control technologies have the potential to significantly reduce emissions.
- If all on-road vehicles implemented clean combustion technology or were electrified, emissions across the board would be reduced by over 90% from 2013 levels.
- The business-as-usual case demonstrated mild ozone reductions near highways, but those reductions were very limited. Overall, ozone increased over large populated areas in this scenario.
- The other scenarios where emissions control technologies were used saw slightly increased ozone concentrations near highways, but had significant reductions in ozone, particularly in densely populated areas.
- Implementing these control technologies would also significantly decrease both emergency room visits and mortality associated with exposure to ozone and PM2.5.
- The business-as-usual case, where no additional emissions control strategies were implemented, would lead to an additional 122 deaths.
- Complete turnover scenario, where the entire fleet utilizes emissions control or electrification, would result in 246 fewer deaths from ozone and PM2.5 exposure.
- The modeled health benefits of the Complete Turnover scenario, where every vehicle on the road is either electrified or using other emissions control strategies, would provide about $152 million in benefits from prevented mortality from reduced exposure to ozone and $1.99 billion in benefits from prevented mortality from reduced exposure to PM2.5.
- The business-as-usual scenario would result in over 1200 asthma cases per year, whereas the complete turnover scenario would result in 24,652 fewer asthma cases per year.
- The complete turnover scenario would prevent over 18,000 school loss days, whereas the business-as-usual scenario would cause 833 days of school loss.

BACKGROUND

The 2010 US Census ranked Houston as the 4th largest city nationally. The United States Environmental Protection Agency classifies Houston as a nonattainment area for ozone and as borderline attainment for fine particulate matter (PM2.5) as indicated by EPA's Green Book (https://www.epa.gov/green-book). The ozone nonattainment area includes city of Houston, in Harris County, as well as the bordering counties of Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller. Identifying the sources of particulate matter and ozone-forming pollutants is imperative in order to develop appropriate control policy to improve air quality and health endpoints within the region.

Given the region's urban nature, emissions from transportation serve as major sources of nitrogen oxides (NOx) and volatile organic compounds (VOCs). These compounds react in the presence of sunlight to form ozone. In addition to ozone precursors, vehicular traffic also emits particulate matter pollution like organic and elemental carbon (Roy et al., 2016; May et al., 2013a, b; Gordon et al., 2013; George et al., 2014, 2015).

Gasoline motor vehicles and diesel trucks dominate urban transportation in the United States. The 2013 H-GAC Regional Goods Movement Plan indicates that the population of the region is projected to grow by 50% in 2040 to 9.6 million, which will almost certainly result in increased motor vehicle activity. A couple of studies have been conducted to project future vehicular activity. A study by the Texas Transportation Institute projects the number of trucks in the 8-county area to increase by 40%-80% (TCEQ, 2015), and number of gasoline vehicles to increase by 30-50% by 2040. This study provides a forward-looking analysis to evaluate the air quality impacts of increased transportation activity, the effects of control technologies and strategies, and the corresponding impact of the studied parameters on health endpoints.

Several strategies exist to offset air quality impacts of increased transportation activity. Among them, accelerated fleet turnover is most well-known and implies a significant fraction of the motor vehicle fleet being replaced with newer technology to result in maximum emission reduction. These technologies include Gasoline Direct Injection and tailpipe emission control systems such as Selective Catalytic Reduction (SCR) for NOx emissions from both gasoline and diesel vehicles, and Diesel Particulate Filter (DPF) and Diesel Oxidation Catalysts (DOC) for PM2.5 and VOC emissions from diesel vehicles. Another alternative to reduce emissions is fleet electrification, the replacement of a certain fraction of the fleet with electric vehicles. Adding more electric vehicles into the fleet invariably results in an additional load on power generating infrastructure.

MOTIVATION

The effects of alternative strategies to reduce motor vehicle emissions needs to be investigated thoroughly using a Regulatory Impact Assessment framework. Such steps are usually taken by the United States Environmental Protection Agency (USEPA) whenever a new control rule is promulgated. The purpose of such studies is to consider the impacts of new control technologies and strategies on emissions in an air quality model to understand their effects and, using a health-effects model, to understand how the stricter standards or reduced emissions affect health endpoints. This is necessary since cleaner air will reduce mortality, morbidity, asthma cases and hospital visits (USEPA, 2017b). Examples of these sorts of investigations include the Cross-State Air Pollution Rule, CSAPR (USEPA, 2015) and the National Ambient Air Quality Standards for PM2.5 (USEPA, 2015). However, most of these analyses look only over a 10-year horizon. The Energy Information Administration (EIA)'s Annual Energy Outlook projects fuel consumption and other activity parameters far into the future, but do not account for emissions, their air quality impacts and changes in human health endpoints. Projections into a far-off year, such as 2040, can help in understanding the impacts of significant turnover in fleet composition and their effects on emission reduction, air quality and human health.

Most urban regions are typically VOC-limited, where ozone concentrations are primarily driven by VOC emissions. However, the Houston region has a unique distinction nationally by comprising both NOx and VOC-limited areas (Choi et al., 2012). Reducing only gasoline or diesel emissions may not be adequate to solve the problem of ozone pollution in Houston because the partial reduction of NOx emissions in many places can cause ozone concentrations to increase due to their NOx-saturated character. Therefore, we would need to account for substantial reductions in NOx emissions from both gasoline and diesel transportation sources to make the region NOx-limited, so that controlling NOx emissions can reduce ozone across the area.

Understanding ozone drivers over an urban region which has both NOx- and VOC-limited areas entails the use of fine resolution (~ 1 km) modeling. In a previous study (Pan et al., 2017b), we developed and evaluated a fine-resolution model to understand ozone concentrations and its key drivers over Houston for September 2013.

In this study, we extend the framework to understand motor vehicle emissions, fleet electrification and control strategies, and their associated air quality and health impacts.

In this space, this study executed the following tasks:

(1) Developed emissions scenarios for gasoline and diesel vehicles, corresponding to varying degrees of emission control, fleet electrification and fleet turnover.

(2) Implemented these emissions scenarios in a chemical transport model to understand their impacts on regional ozone and PM2.5, including its speciated components such as sulfate, nitrate, elemental and organic carbon. Calculated the change in concentrations of these species with respect to the base year of 2013 for each scenario.

(3) Calculated the changes in health endpoints for each scenario with respect to the base year.

METHODOLOGY

THE CHEMICAL TRANSPORT MODEL

The USEPA's Community Multiscale Air Quality (CMAQ) model (Byun and Schere, 2006) was used for this study. This is a chemical transport model which solves the continuity mass-balance equation, simulating the atmospheric processes of emission, advection, reaction, dry and wet deposition and chemistry for a given geographical region by discretizing the region into several horizontal, lateral and vertical grid cells. Our group has had extensive experience using this model, as is evident from several publications (e.g., Choi et al., 2009; Choi et al., 2010; Choi et al., 2012; Choi, 2014; Choi and Souri, 2015a, b; Czader et al., 2015a, b; Diao et al., 2016a, 2016b; Li et al., 2016; Pan et al., 2015, 2017a,b; Souri et al., 2016a, 2016b). We will be using a 1-km grid over the Houston area and surrounding counties, which include Brazoria, Chambers, Fort Bend, Galveston, Harris, Liberty, Montgomery, and Waller.

THE METEOROLOGICAL MODEL

The Weather Research and Forecasting (WRF) model (Skamarock et al., 2008) provided meteorological fields for this study. We have evaluated existing analysis datasets and decided to use the National Centers for Environmental Prediction's (NCEP) North American Regional Reanalysis (NARR) as input. The NARR data are based on an NCEP Eta 221 regional North American grid (Lambert Conformal) (additional information is available here: http://www.nco.ncep.noaa.gov/pmb/docs/on388/tableb.html) at 29 pressure levels. Its horizontal resolution is 32-km, and the frequency is 3-hourly.

THE EMISSIONS MODEL

The USEPA's National Emissions Inventory of 2011 (NEI2011) was processed using the USEPA's Sparse Matrix Operator Kernel Emissions (SMOKE) model (Houyoux et al., 2000), to produce model-ready emissions. SMOKE performs gridding, temporal allocation, and speciation lumping for a given chemical mechanism to prepare model-ready emissions. Additional details are online: https://www.cmascenter.org/smoke/. The procedures for this study involved merging the updated gasoline and diesel motor vehicle emissions from the Motor Vehicle Emissions Simulator (MOVES) model (USEPA, 2017a) into the base emissions inventory.

THE MOTOR VEHICLE EMISSIONS MODEL

This study used the USEPA's Motor Vehicle Emissions Simulator (MOVES) model (USEPA, 2017a), which calculates emissions from gasoline and diesel on-road vehicles as a function of speed, road type, and meteorological conditions. The model is instrumented to change motor vehicle population (VPOP) and vehicle miles traveled (VMT) for a future year, which we used to make projections for 2040. For this study, emissions from gasoline and diesel vehicles for the 8-county area were modeled. The emissions comprise of multiple modes. Rates per distance typically represent tailpipe (exhaust) emissions, while rates per vehicle represent evaporative and crankcase emissions. In addition, truck drivers often spend the night inside the vehicle's cabin, where the air conditioning is powered by the truck engine. This phenomenon is called hoteling and can give rise to significant nighttime emissions.

EMISSIONS CONTROLS AND FLEET TURNOVER

Fleet-average emissions are a function of (a) percentage reduction brought about by new controls and (b) fleet turnover which corresponds to the fraction of the fleet fitted with these new controls (typically newer vehicles/engines), represented as:

$$EF_i(2040) = EF_i(2013)[f_{replaced}(1 - f_{control}) + 1 - f_{replaced}] \quad (1)$$

Where $EF_i(2040)$ and $EF_i(2013)$ are the projected fleet-average emission factors for 2040 (future year) and 2013 (base year), respectively; f**control** represents the percentage reduction due to a control technology, while f**replaced** represents the fraction of the fleet that has been replaced or fitted with the new control technology, typically referred to as "fleet turnover". Examples of tailpipe emissions control technologies for NOx emissions include Selective Catalytic Reduction and NOx absorbers. Diesel Oxidation Catalysts reduce VOC emissions from diesel exhaust while Diesel Particulate Filters (DPFs) reduce PM2.5 emissions. Evaporative emissions, typically reported per vehicle, result from fuel volatilization.

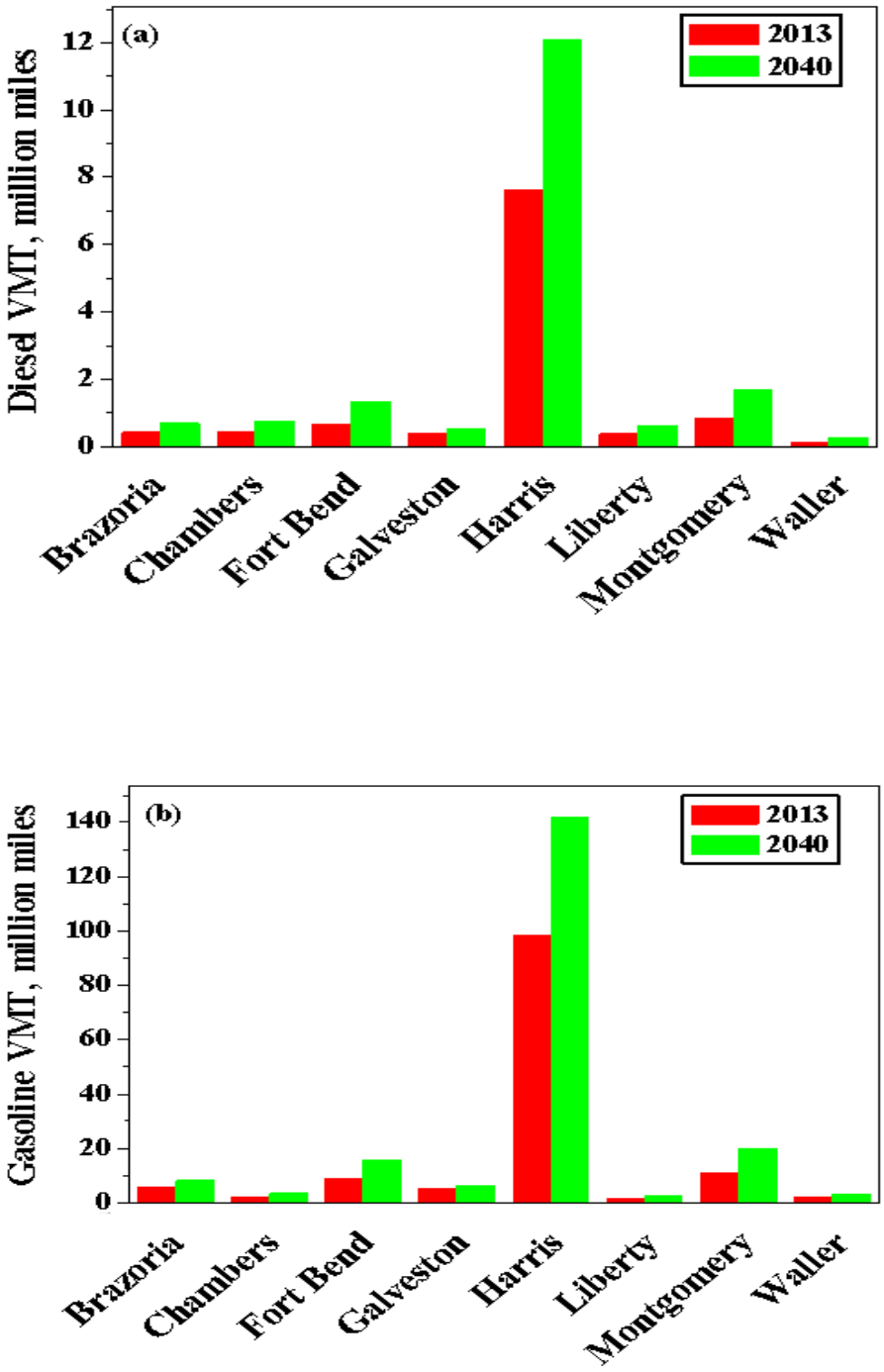


Figure 1: (a) Diesel and (b) gasoline vehicle miles traveled (VMT) projections. The scaling factors used in this study are the ratio of the 2040 and 2013 numbers.

FUTURE ACTIVITY PROJECTIONS

Projections for VPOP and VMT were taken from calculations performed by the Texas Transportation Institute (TTI) for the Texas Commission for Environmental Quality (TCEQ, 2015). The authors performed activity calculations from 1999, projected to 2050. The activity data for each vehicle type (e.g. gasoline passenger cars, pickup trucks, medium duty and heavy duty diesel trucks) were obtained through personal communication with Dennis Perkinson at TTI. Their findings project aggregate VMT to change by 30%-80% over the 8-county area. The aggregate activity was fractionated into 24 different gasoline and diesel vehicle types, from which two surrogate profiles for the 8-county area were developed, namely Houston and Beaumont. The gasoline-diesel split for VMT for the base year is 93%-7% for Houston and 82%-18% for Beaumont. The split changes marginally in favor of diesel in 2040, 92%-8% for Houston and 81%-19% for Beaumont. The higher diesel fraction over suburban Beaumont could be explained by the fact that diesel truck traffic is comparable across urban and suburban regions while gasoline activity is significantly higher in the urban, hence depressing the diesel fraction.

The Brazoria, Fort Bend, Galveston, Harris, Montgomery, and Waller counties were represented by Houston, while Chambers and Liberty were represented by Beaumont. These profiles were used to project gasoline and diesel VMTs in 2040, indicated in panels (a) and (b), with their specific scaling factors in (c). The projected gasoline VMTs are roughly one order of magnitude higher than diesel, due to the higher gasoline vehicles population. The gasoline and diesel projected scaling factors closely mirror the total VMT, indicating the change in VMT is more significant than that in the gasoline-diesel split. However, there is one subtle difference: the diesel scaling factor is slightly magnified, while the gasoline one is slightly depressed. For example in Harris County, the total VMT changes by a factor of 1.46, while the diesel VMT changes by 1.59 and gasoline by 1.45. This could be attributed to the marginal shift in favor of diesel (~9% increase). These VMT profiles were also used for county and fuel-specific vehicle population (VPOP) projections.

FUTURE MODELING SCENARIOS

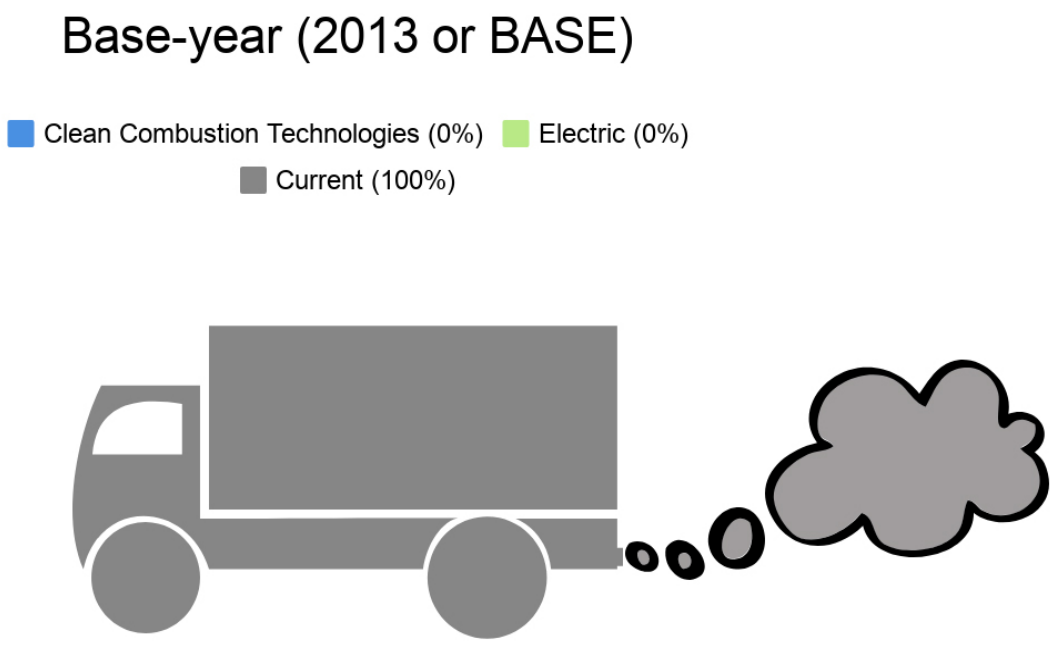
Several emissions scenarios were considered to account for the uncertainty in fleet turnover and electrification. In Table 1, "Clean Combustion Technologies" indicates the percentage of the fleet in 2040 that uses or is retrofitted with state-of-the-art combustion and emission control technologies, "Electric" represents the percentage of the fleet comprising electric vehicles, while "Current" represents the fraction carrying over from the base year of 2013 that is not retrofitted or replaced. The scaling factor represents the bracketed term in Equation (1), which is a function of both control technology efficiency and fleet turnover, applied to aggregate (distance, vehicle and hoteling) gasoline and diesel emissions. Activities were scaled using county and fuel specific information from Figure 1. The same scaling factors were used for VMT and hoteling activity projections.

The Business As Usual (BAU) case represents a "worst case" scenario, with no new technology vehicles incorporated into the fleet or the existing fleet is not retrofitted. The Moderate Electrification case is based on the assumptions of a Bloomberg New Energy Finance report (BNEF, 2016), which predicted that 35% of global vehicles would be electric by 2040. The Aggressive Electrification (AE) case assumes a fraction twice that of the ME case. Complete Turnover (CT) represents a scenario where the total fleet comprises either of state of the art technology or electric vehicles.

Table 1: Future projects scenarios based on varying fleet electrification and turnover.

Percentage Fleet Turnover			
Scenario	**Clean Combustion Technologies**	**Electric**	**Current**
Base-year (2013 or BASE)	0	0	100
Business as usual (BAU)	0	0	100
Moderate Electrification (ME)	33	35	32
Aggressive Electrification (AE)	15	70	15
Complete Turnover (CT)	65	35	0

PROJECTED SCENARIOS BASED ON VARYING FLEET ELECTRIFICATION AND TURNOVER



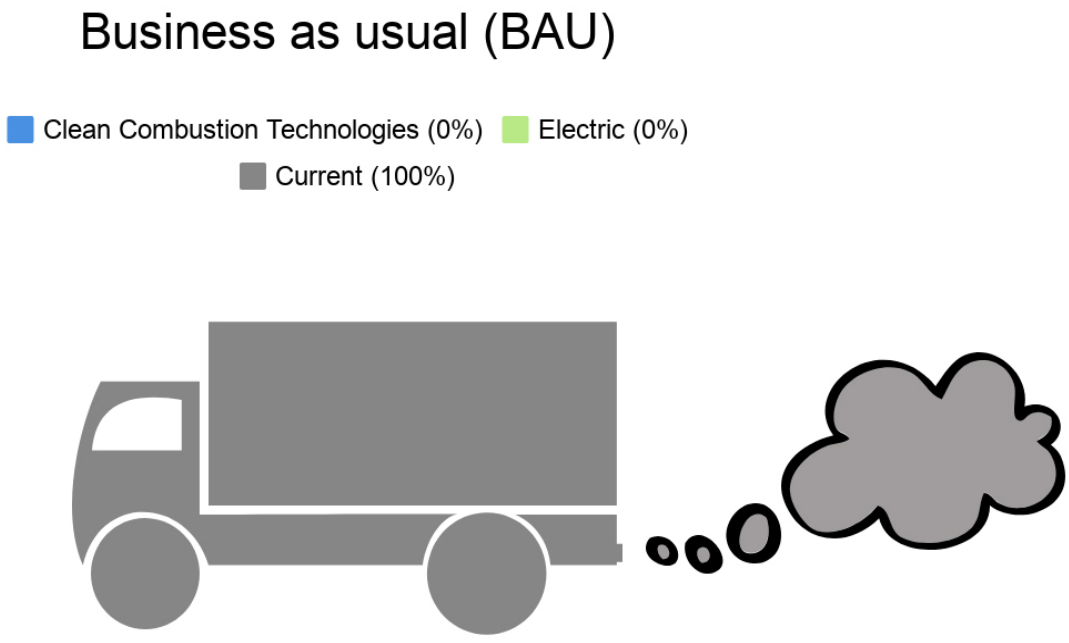


Figure 2: Emissions factor in each case.

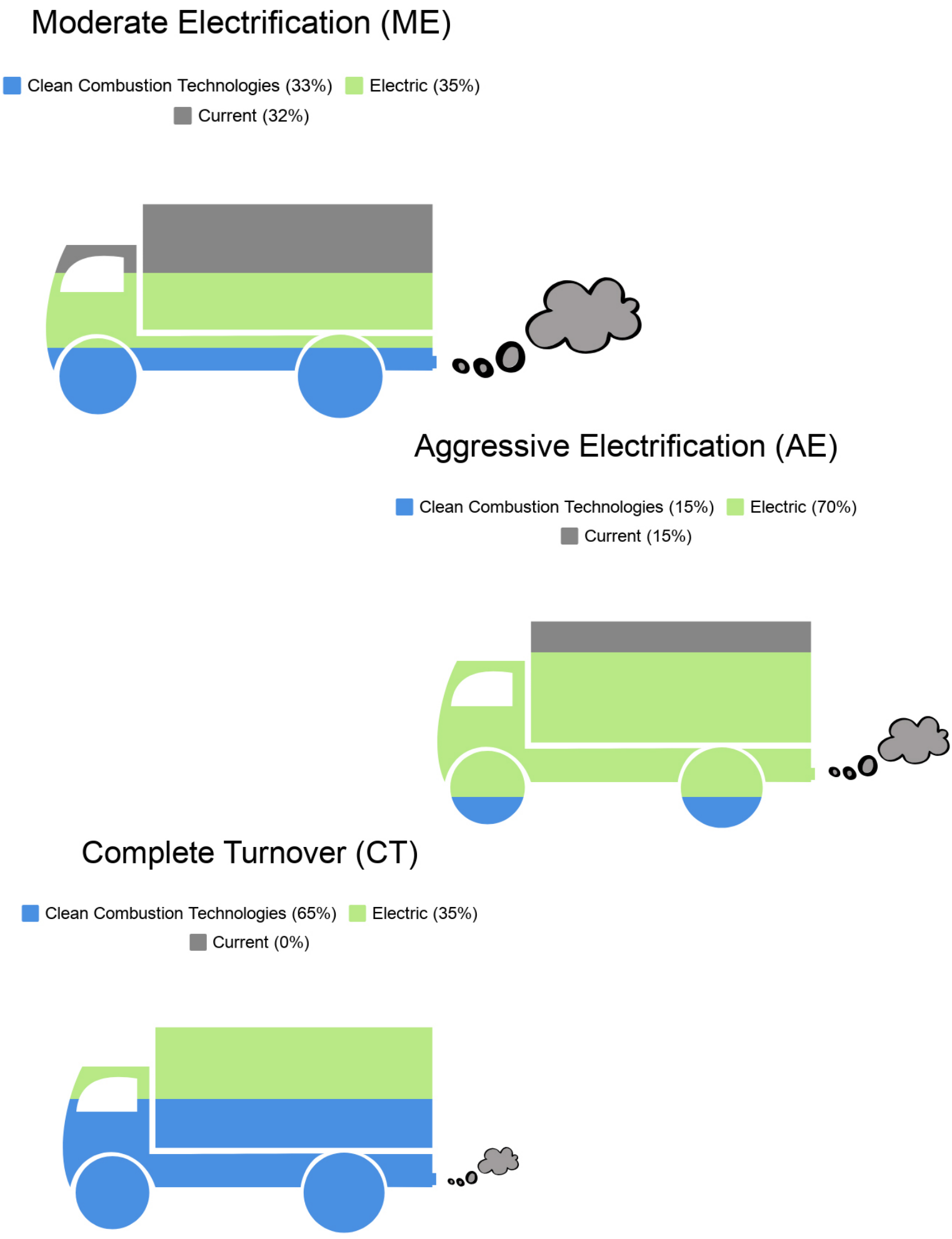


Figure 2: Emissions factor in each case.

ELECTRICITY LOAD DUE TO MOTOR VEHICLE ELECTRIFICATION

The added electricity required to power the motor vehicle fleet could potentially result in increased emissions from Electricity Generating Units (EGUs). However, several projections from the Electricity Reliability Council of Texas (ERCOT) (Borkar et al., 2016) have indicated that the projected electricity generation in 2040 will be in western Texas, resulting in no new emissions in the 8-county area. An example of the projected siting from the "Business As Usual" ERCOT scenario is shown in Figure 2; this scenario was used for the current study. The ERCOT projections indicate significant retirement of fossil-fired capacity in 2031 for southeastern Texas. We added no future capacity in our simulations but needed to account for capacity downsizing in order to represent a more realistic scenario in 2040.

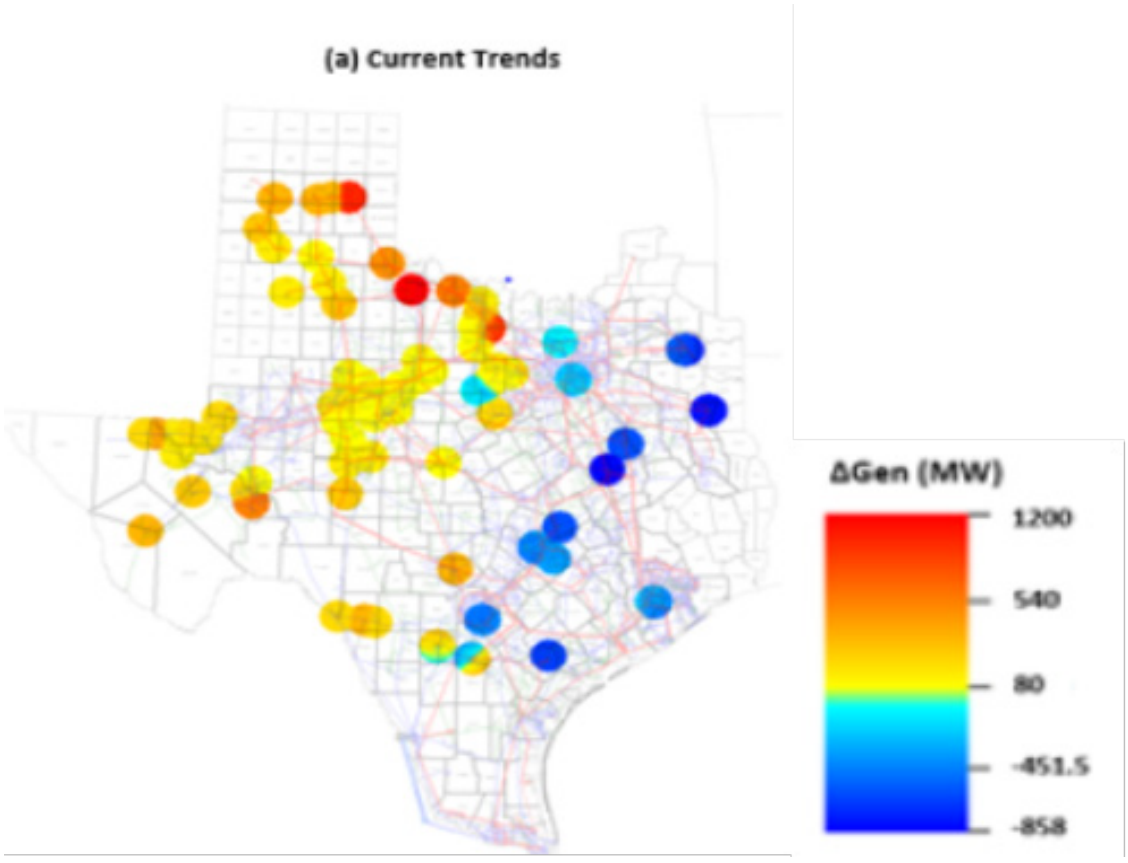
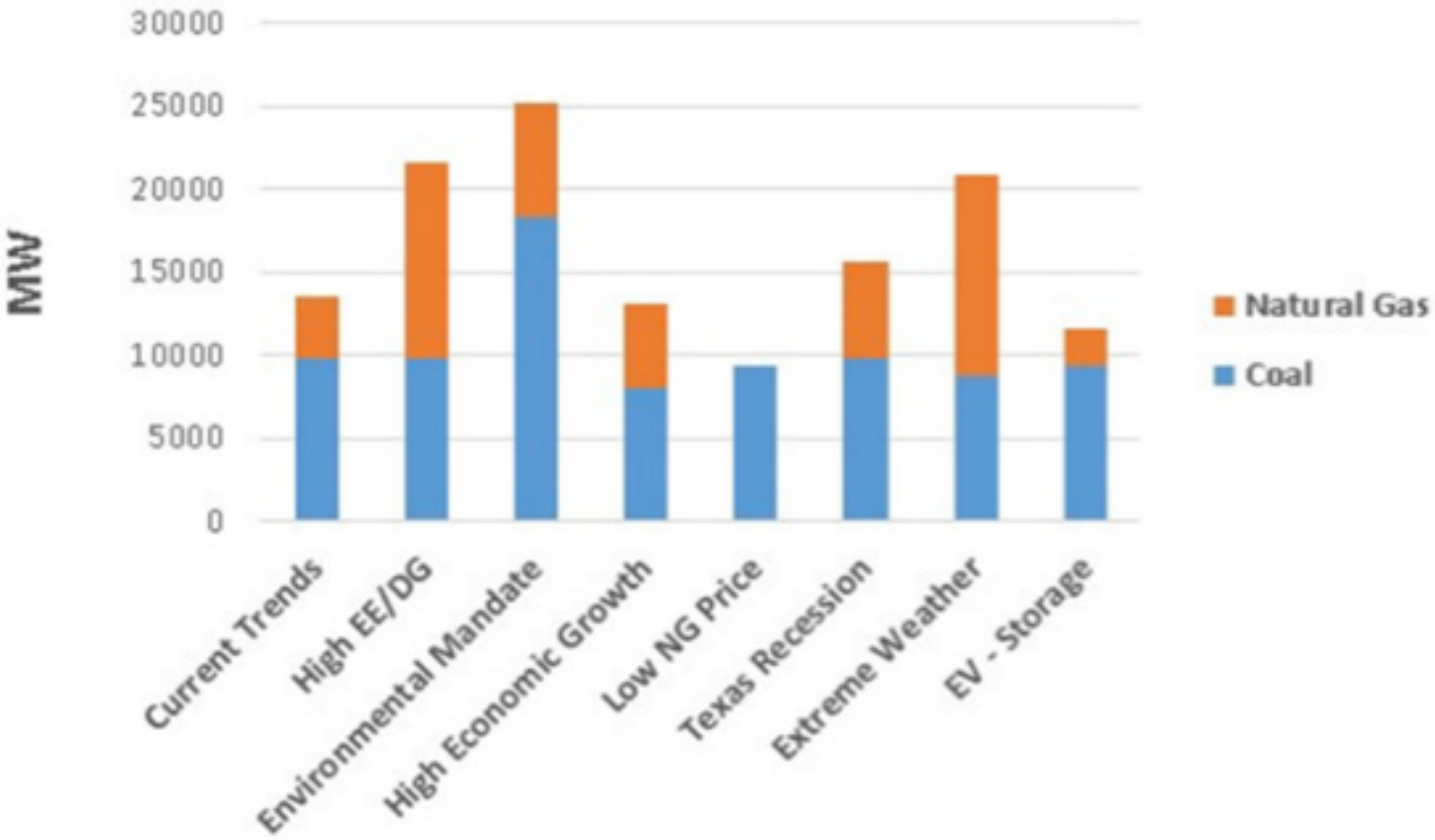


Figure 3: Map of generation capacity retirement across Texas in 2031 for ERCOT's Current Trends scenario (above), and capacity retirements for coal and natural gas for all of ERCOT's modeled scenarios (next page).



Future electricity capacity was estimated by assuming a linear decline in coal and gas generation over the 8-county area. For example, Figure 3 (previous page) indicates that around 500 MW will cumulatively retire in 2031. The panel on this page indicates the ratio of coal retirements to that of gas being 3:1. In other words, the coal-gas split is 75%-25%. Applying this to the Current Trends case, 375 MW of coal and 125 MW of natural gas capacity will cumulatively be retired by 2031.

Assuming a linear decline rate (recommended by Warren Lasher, personal communication, 2017) starting from 2013, the rate of decline for coal capacity is 375/18 = 21 MW/yr. Similarly, the decline rate for natural gas is ~ 7 MW/yr. Multiplying these numbers by 27 years (2040-2013) provides the predicted number of cumulative retirements by 2040.

Hence, cumulative coal retirement in 2040 = 21x27 =567, ~ 600 MW.

Cumulative natural gas retirement in 2040 = 7x27 = 189, ~ 200 MW.

Scaling factor for coal = [Coal (2013)-600]/Coal (2013) = 0.89 (~ 11% decrease)

Scaling factor for natural gas = [NG (2013)-600]/NG (2013) = 0.99 (1% decrease).

THE HEALTH IMPACTS MODEL

The U.S. EPA Environmental Benefits Mapping and Analysis Program (BenMAP) Community Edition version 1.3 (U.S. EPA, 2017b) was used to estimate health impacts and corresponding economic costs for each future scenario. This is a Geographic Information Systems (GIS)-based model that estimates changes in the incidence of adverse health effects and associated monetary value due to changing ambient air pollution concentrations (Fann et al., 2012). The air quality inputs of the model include a baseline scenario (2013) and the four emission control scenarios (BAU, AE, ME, and CT in Table 1). The health impact calculations in BenMAP are based on Concentration-Response (C-R) functions, also known as health impact functions. These functions define a mathematical relationship relating a decrease in adverse health effects with a concentration of air pollutants. A commonly used type is the log-linear format:

$$\Delta y=(1-e^{(-\beta\cdot\Delta x)})\times y\_0\times Pop \qquad (2)$$

Where Δy represents the change in the incidence of adverse health effects, β the concentration-response coefficient, Δx change in air quality (e.g. O_3 concentrations), y_0 the baseline incidence rates, and Pop the affected population.

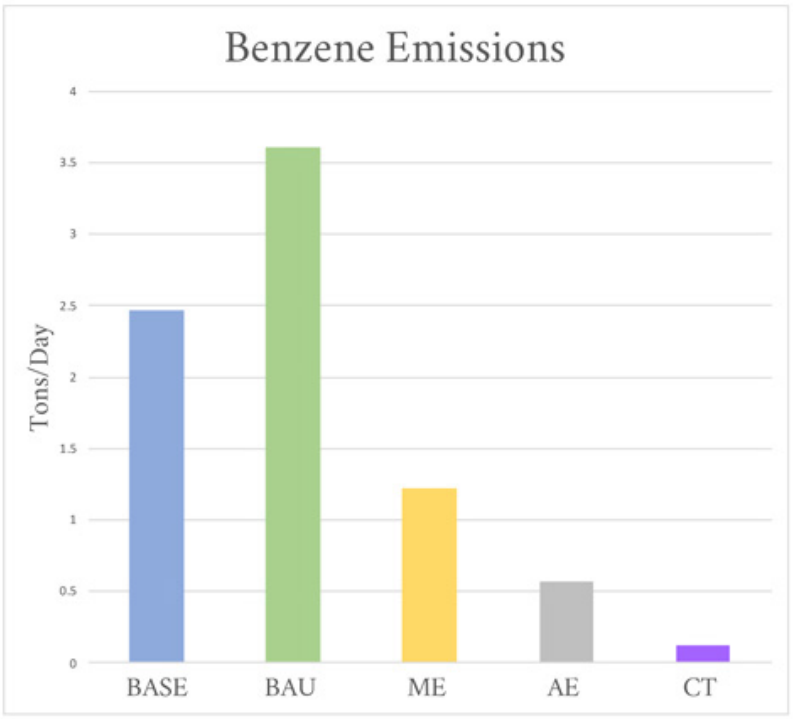
The relationship between changes in air pollutants concentrations and incidence of health outcome (i.e., β) have been assessed through several epidemiological studies. These studies have produced a number of C-R functions that have been incorporated into the BenMAP model. Additionally, the BenMAP model calculates the economic cost of avoided premature mortality using a "value of statistical life" (VSL) approach, which is the aggregate monetary value that a large group of people would be willing to pay to slightly reduce the risk of premature death in the population (U.S. EPA, 2017b). The economic costs for morbidities were estimated using the cost of illness, which includes direct medical costs and lost earnings associated with illness.

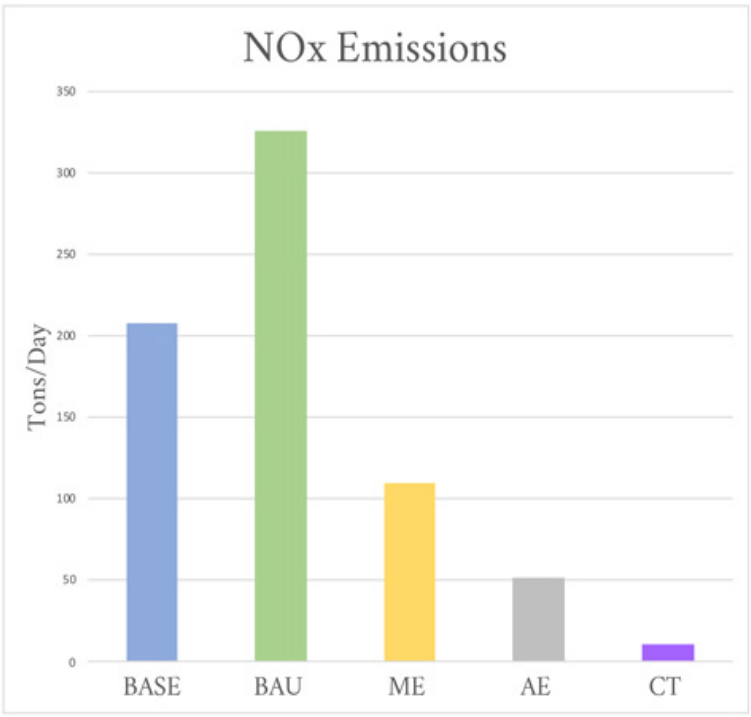
Table 2. Episode-average 8-county aggregate on-road mobile emissions in the BASE case and comparative changes for the future scenarios.

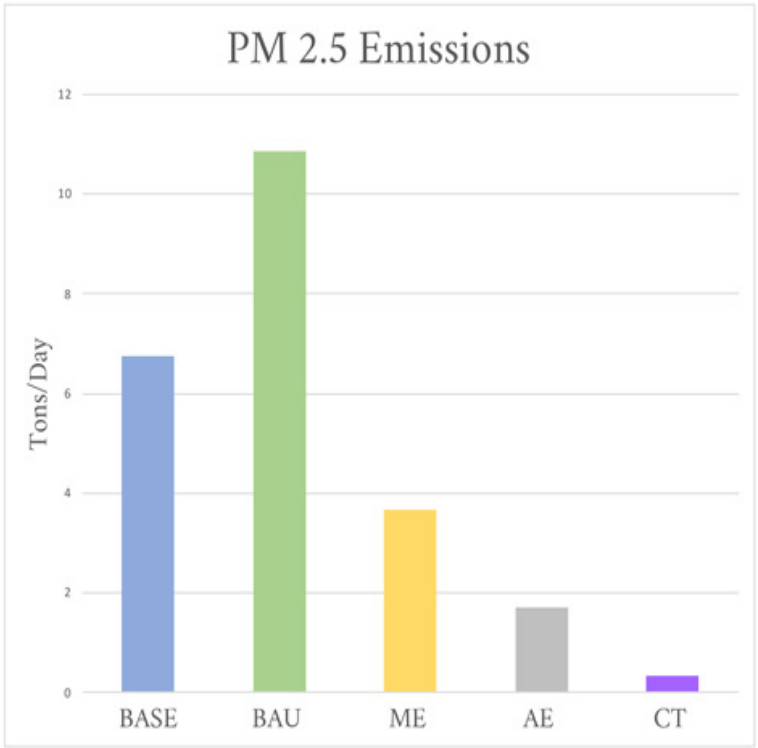
Species	BASE [tons/day]	Difference to BASE			
		Business as Usual (BAU) %	BAU [tons/day]	Moderate Electrification (ME) %	ME [tons/day]
CO	1220.64	48.6	1813.87	-50.0	610.32
NOx	207.51	56.9	325.58	-47.2	109.57
NH3	5.51	50.8	8.31	-49.2	2.80
SO2	1.69	50.9	2.55	-49.2	0.86
PM10	16.88	55.3	26.21	-47.7	8.83
PM2.5	6.75	61.1	10.87	-45.8	3.66
non-HAP TOGs	72.81	48.3	107.98	-50.1	36.33
Benzene	2.47	46.3	3.61	-50.8	1.22
Formaldehyde	1.66	60.5	2.66	-45.8	0.90
Acetaldehyde	1.15	54.3	1.77	-48.0	0.60
Acrolein	0.11	63.1	0.18	-45.1	0.06
1,3-butadiene	0.44	46.5	0.64	-50.7	0.22
Naphthalene	0.21	58.1	0.33	-46.8	0.11
N2O	3.19	44.5	4.61	-51.4	1.55
CO2	92967.76	52.4	141682.87	-48.7	47692.46
CH4	3.33	54.0	5.13	-46.8	1.77

Species	BASE [tons/day]	Difference to BASE			
		Aggressive Electrification (AE) %	AE. [tons/day]	Complete Turnover (CT) %	CT [tons/day]
CO	1220.64	-76.6	285.63	-95.2	58.59
NOx	207.51	-75.3	51.25	-94.9	10.58
NH3	5.51	-76.2	1.31	-95.1	0.27
SO2	1.69	-76.2	0.40	-95.1	0.08
PM10	16.88	-75.5	4.14	-94.9	0.86
PM2.5	6.75	-74.6	1.71	-94.8	0.35
non-HAP TOGs	72.81	-76.6	17.04	-95.2	3.49
Benzene	2.47	-77.0	0.57	-95.2	0.12
Formaldehyde	1.66	-74.5	0.42	-94.6	0.09
Acetaldehyde	1.15	-75.7	0.28	-94.9	0.06
Acrolein	0.11	-74.3	0.03	-94.7	0.01
1,3-butadiene	0.44	-76.9	0.10	-95.2	0.02
Naphthalene	0.21	-75.1	0.05	-94.9	0.01
N2O	3.19	-77.2	0.73	-95.3	0.15
CO2	92967.76	-76.0	22312.26	-95.0	4648.39
CH4	3.33	-73.9	0.87	-92.9	0.24

Figure 4: Visualizations of Table 2 emissions for selected pollutants: Benzene, PM 2.5, and NOx.







RESULTS:
EMISSION SCENARIOS AND CORRESPONDING CHANGES

Because the emissions inventories are "ground-zero" for a modeling study, comparison of pollutant emissions for each scenario provides insight into potential air quality changes. Table 2 (see page 21) compares projected emissions with the 2013 base case. The Business as Usual Case in 2040 exhibits significant increases in species emissions with respect to the 2013 base case due to the lack of control/retrofit imposition. The other cases show significant decreases in emissions, with 46%-51% for Moderate Electrification and above 93% for Complete Turnover, consistent with the assumptions used to develop these scenarios.

THE SIMULATION DOMAIN, EPISODE, AND MISCELLANEOUS DETAILS

The simulation domain comprises the 8-county area surrounding Houston at a 1-km resolution and is depicted in Figure 5. Simulations were run for September, using meteorology for 2013. Boundary conditions were obtained from a real-time air quality forecasting system over the United States using the above mentioned CMAQ model at a coarser 12 km resolution; additional details about this modeling system are online: http://spock.geosc.uh.edu.

Additionally, both VOC and PM2.5 emissions need to be speciated for use in the CMAQ model. This is because VOCs differ significantly in their formation to form ozone and secondary organic aerosol due to markedly different molecular structures (e.g. Carter, 1994; Presto et al., 2010; Tkacik et al., 2012, Roy et al., 2016). Additionally, PM2.5 comprises a large number of species with widely differing properties. For example, elemental carbon (EC) emissions from gasoline and diesel vehicles is a known global warming agent, while sulfate aerosol resulting from the chemistry of SO2 emissions acts to cool the atmosphere. The speciation was performed as per the Carbon Bond version 5 (CB05) chemistry mechanism (Yarwood et al., 2005), with speciation profiles being taken from the SPECIATE database (USEPA, 2016).

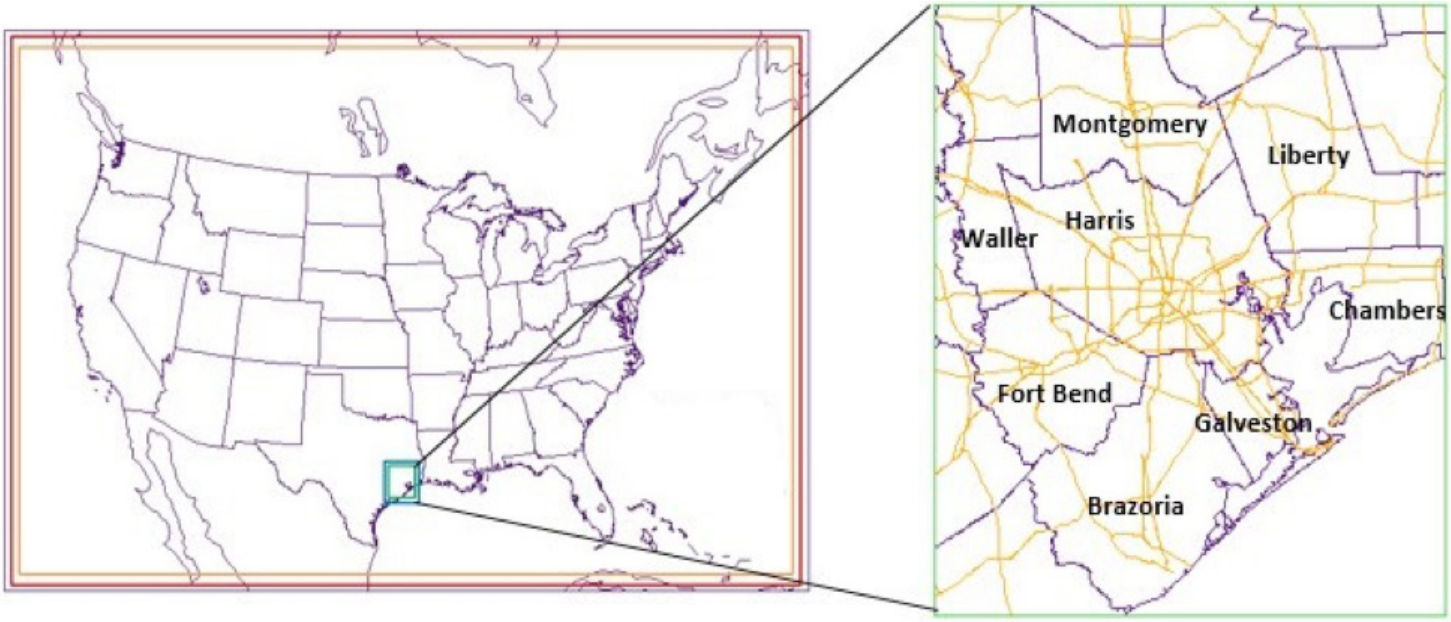


Figure 5: Horizontal domains of WRF and CMAQ at different grid resolution; the HGB 1 km is used in this study while the US 12 km is used to provide boundary conditions. For the zoomed-in plot on the right, roadways are represented in orange and county boundaries in purple.

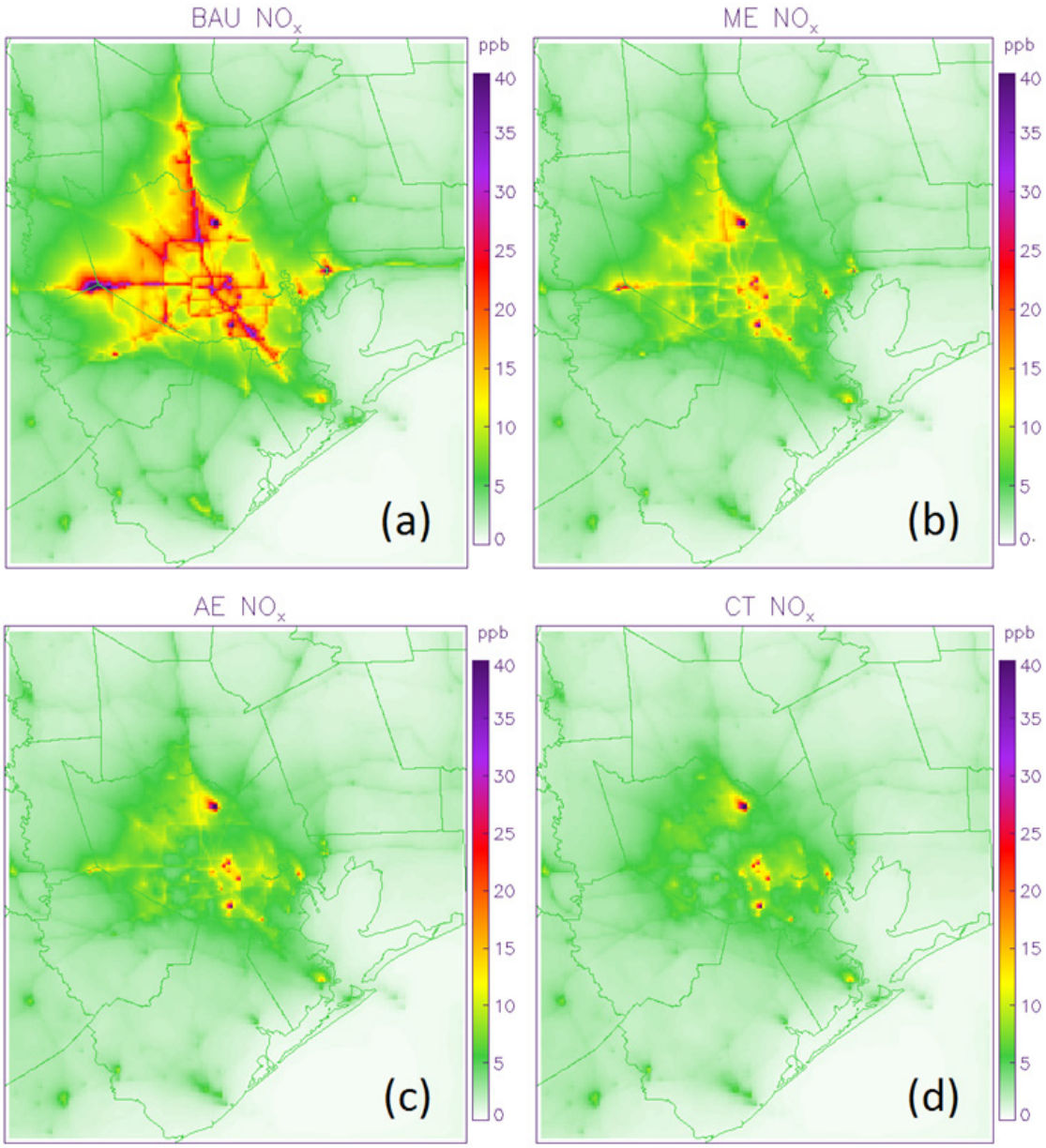


Figure 6: Simulated total NOx concentrations (parts per billion, ppb) for the year 2040 in each case: (a) BAU-Business As Usual, (b) ME – Moderate Electrification, (c) AE- Aggressive Electrification, and (d) CT – Complete Turnover.

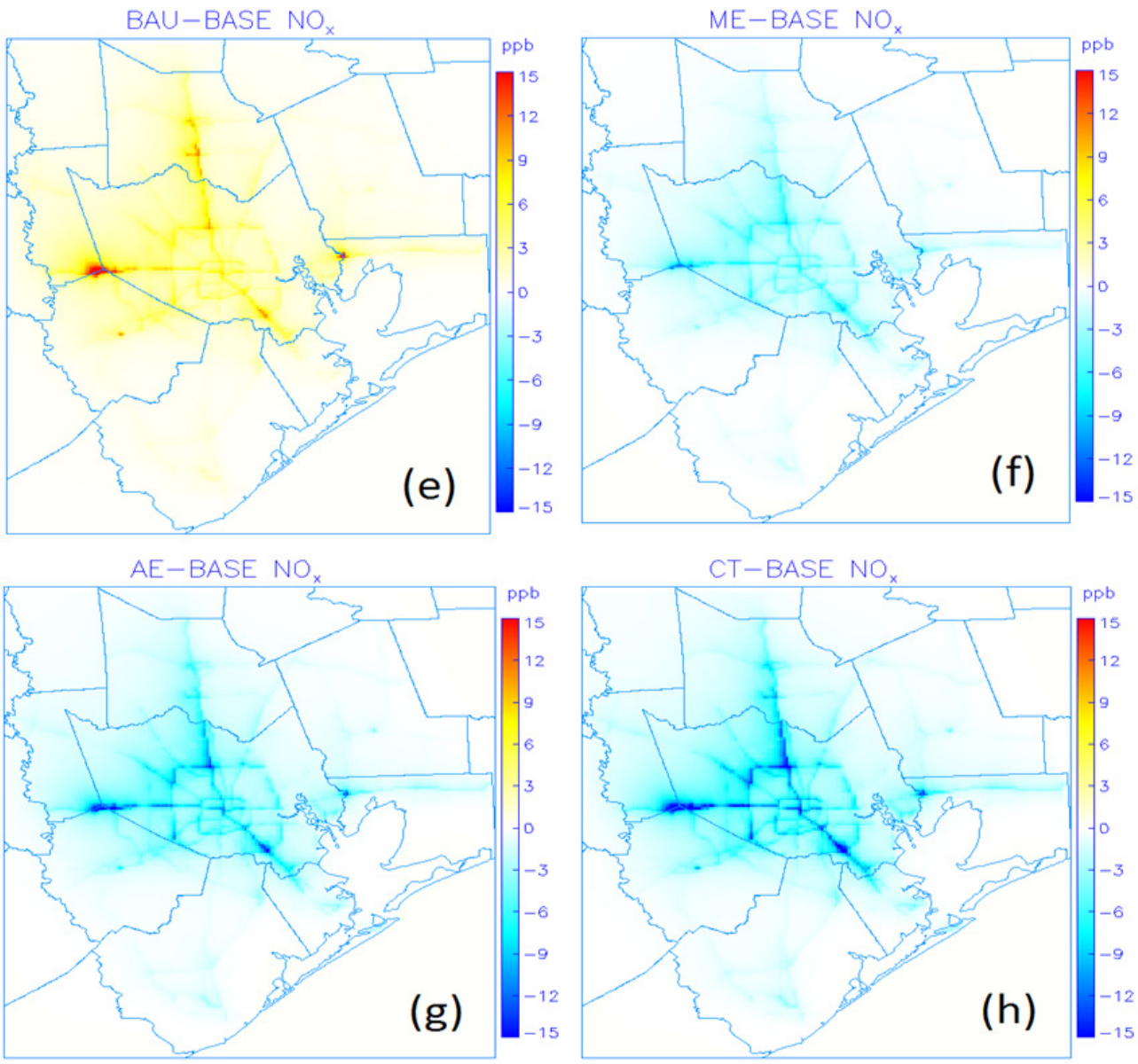


Figure 6: Simulated NOx concentration differences (parts per billion, ppb) from 2013 baseline to each 2040 case: (e) BAU-Business As Usual, (f) ME – Moderate Electrification, (g) AE- Aggressive Electrification, and (h) CT – Complete Turnover.

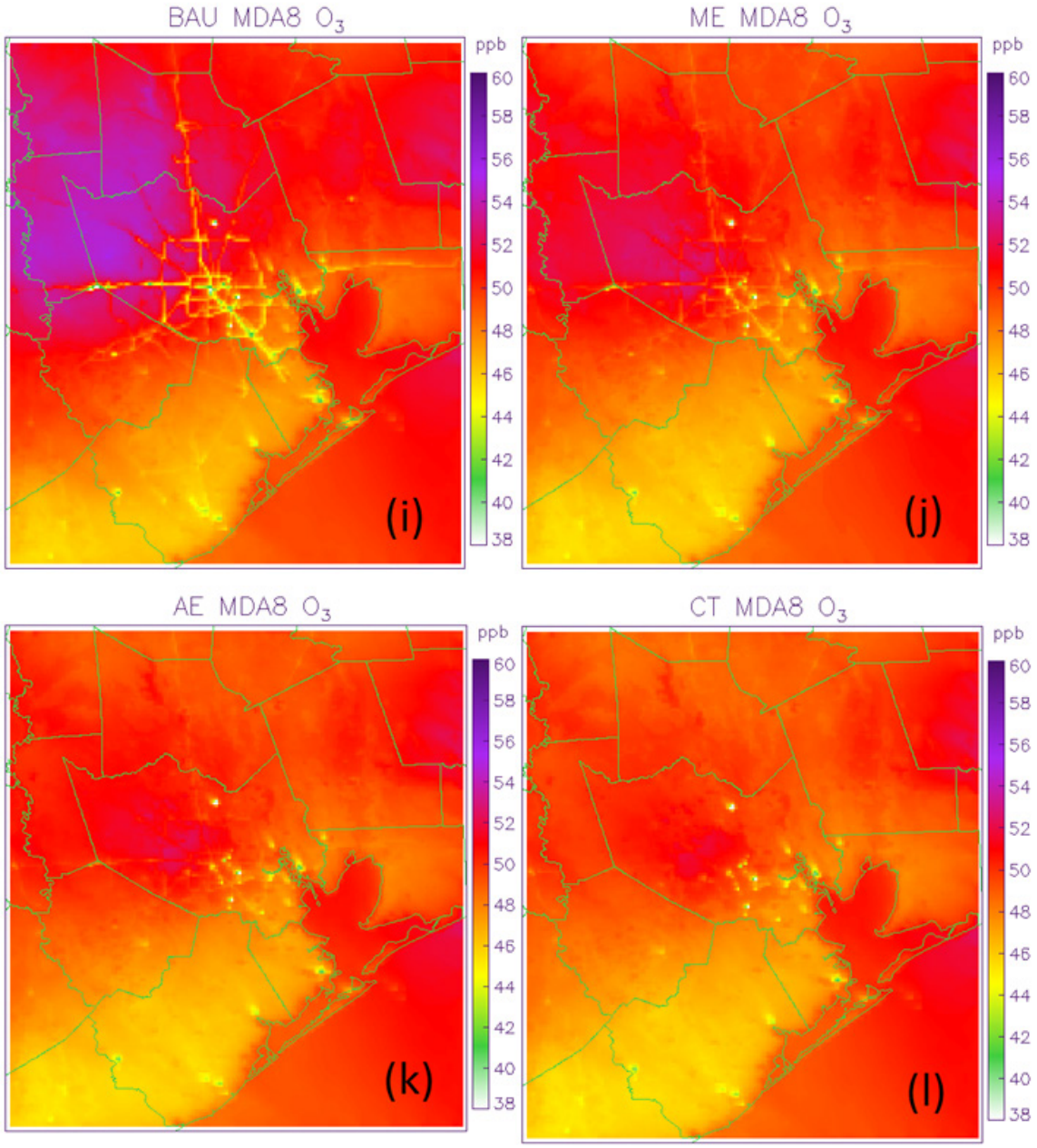


Figure 6: Simulated total Maximum Daily 8-hr Average (MDA8) ozone concentrations (parts per billion, ppb) for the year 2040 in each case: (i) BAU-Business As Usual, (j) ME – Moderate Electrification, (k) AE- Aggressive Electrification, and (l) CT – Complete Turnover.

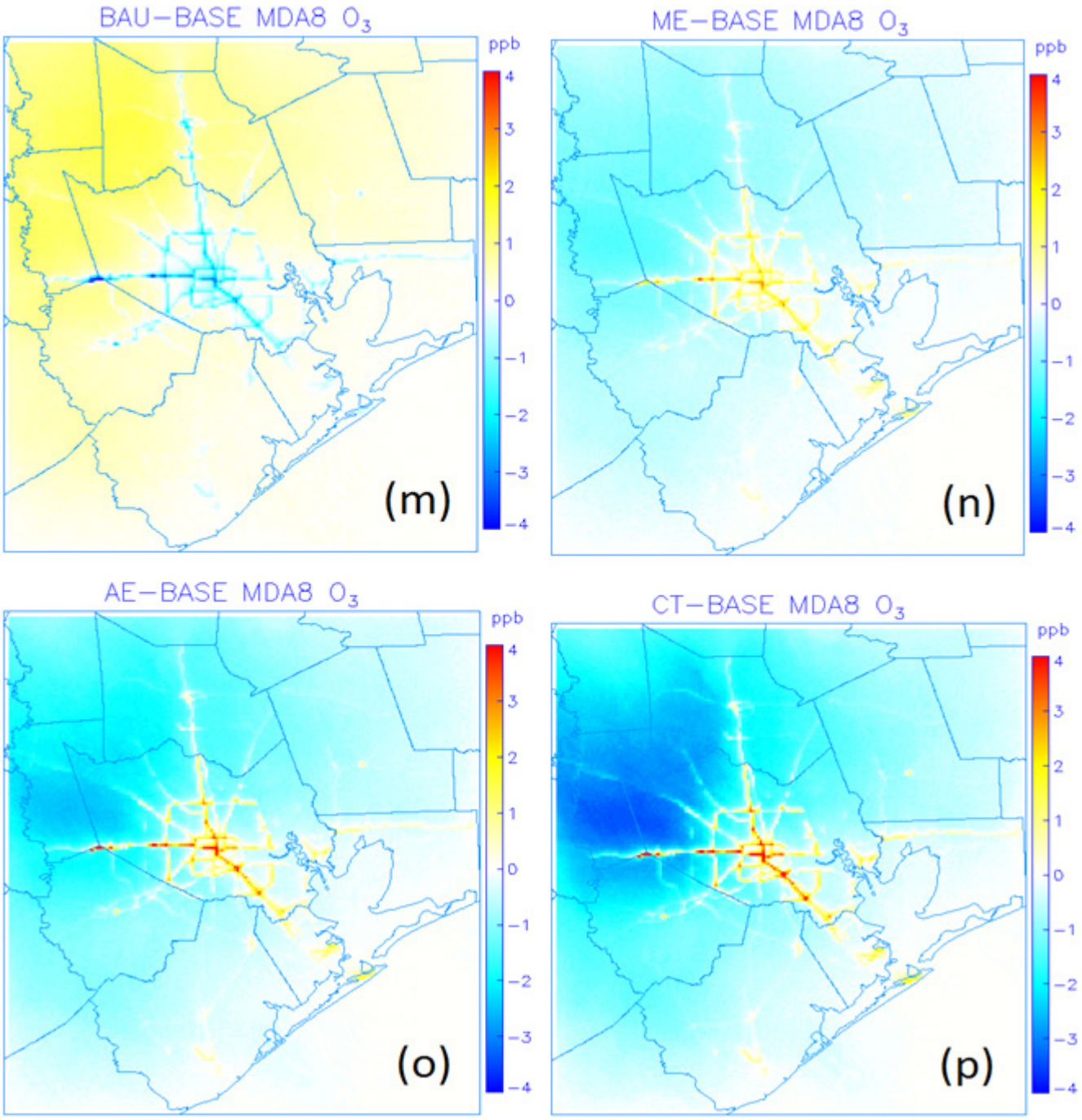


Figure 6: Simulated Maximum Daily 8-hr Average (MDA8) ozone concentration differences (parts per billion, ppb) from 2013 baseline to each 2040 case. (m) BAU-Business As Usual, (n) ME – Moderate Electrification, (o) AE- Aggressive Electrification, and (p) CT – Complete Turnover.

CMAQ SIMULATION RESULTS: OZONE AND NITROGEN OXIDES

Figure 6 plots CMAQ-simulated NOx and Maximum Daily 8-hr Average (MDA8) ozone concentrations for the different scenarios. Figures 6(a)-(d) plot absolute NOx concentrations, 6(e)-(h) differences of the future scenarios from base case, 6(i)-(l) absolute MDA8 O_3 and 6(m)-(p) differences with respect to the 2013 base case.

As expected, it is predicted in figures 6(a)-(d) that absolute NOx concentrations decrease with increasing fleet turnover, electrification, and emissions control.

For example, concentrations hotspots are predicted all over the highway loops over Houston for the BAU case which significantly decrease as we move towards the CT case. In other words, stringent emissions controls/retrofits accompanied with complete fleet turnover result in lower NOx emissions and consequently, lower NOx concentrations. However, figures 6(i)-(l) which plot ozone concentrations convey a different message. The Business as Usual case shows lowered MDA8 O_3 concentrations over the highway loops, and higher concentrations elsewhere. This can be explained by the fact that highways have significant NOx emissions and are therefore NOx-saturated. In such areas, O_3 and NOx concentrations are inversely correlated as illustrated by previous studies (e.g. Choi et al., 2012). Another interesting point in panel 6(i) illustrates increased ozone concentrations over regions northwest to the loop, due to ozone formation in the outflow of NOx-saturated areas. The outflow regions are NOx-limited and provide favorable conditions for ozone formation, as illustrated by Pan et al. (2015). With decreasing tighter controls, increased fleet turnover, and decreasing NOx concentrations, O_3 concentrations increase along the highway loop and decrease over the outflow. Similar facts are corroborated in figures 6(m)-(p), which show the effects of ozone impacts vis-à-vis the base 2013 case. It is predicted that ozone concentrations due to increased motor vehicle emissions decrease for the BAU case over the NOx-saturated areas by 1-3 ppb while increasing 1-2 ppb over the outflow. With increasing controls/turnover/retrofit and lower NOx emissions, O_3 concentrations increase by 1-2 ppb over the highways but decrease over the entire outflow surrounding the highway loop, as well as the areas enclosed by the loop. Of note is the CT case where there is a decrease of 3-4 ppb over the northwestern outflow, the same region where significant ozone increase was predicted for the BAU case.

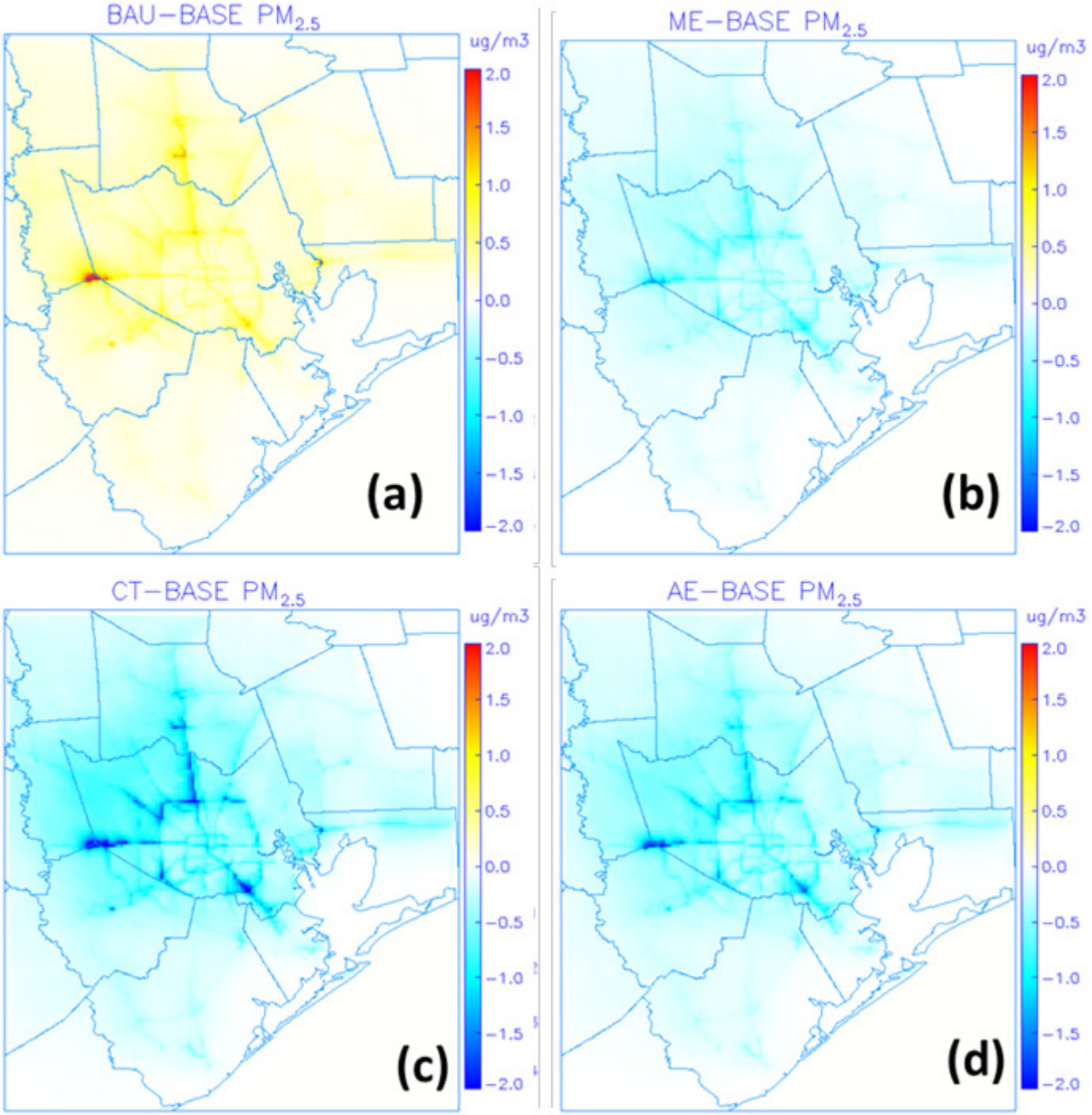


Figure 7: Spatial differences of monthly average PM2.5 surface concentrations, micrograms per meter cubed (μg/m³). (a) BAU-Business As Usual, (b) ME – Moderate Electrification, (c) AE- Aggressive Electrification, and (d) CT – Complete Turnover.

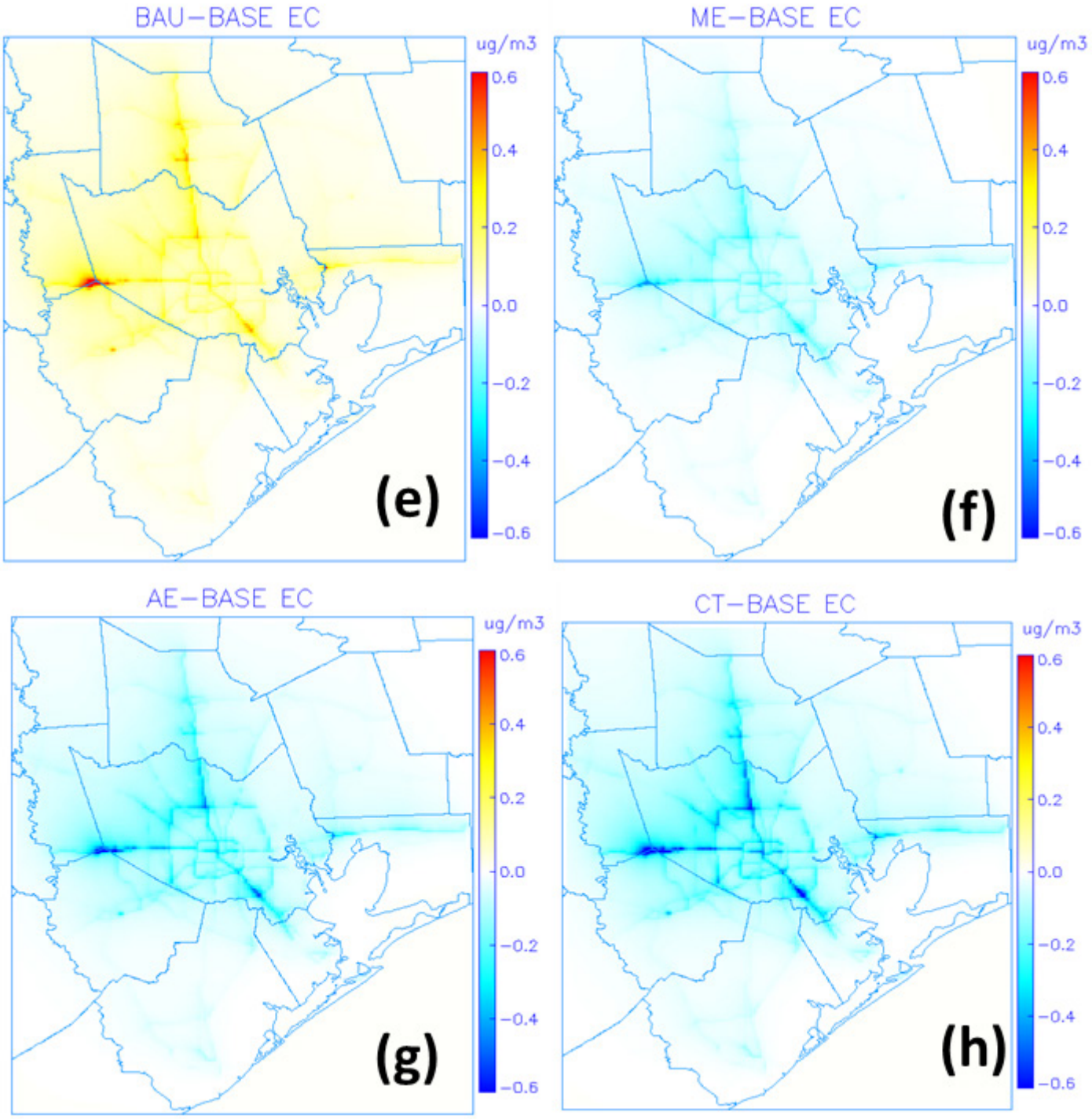


Figure 7: Spatial differences of monthly average elemental carbon surface concentrations, micrograms per meter cubed (μg/m³). (e) BAU-Business As Usual, (f) ME – Moderate Electrification, (g) AE- Aggressive Electrification, and (h) CT – Complete Turnover.

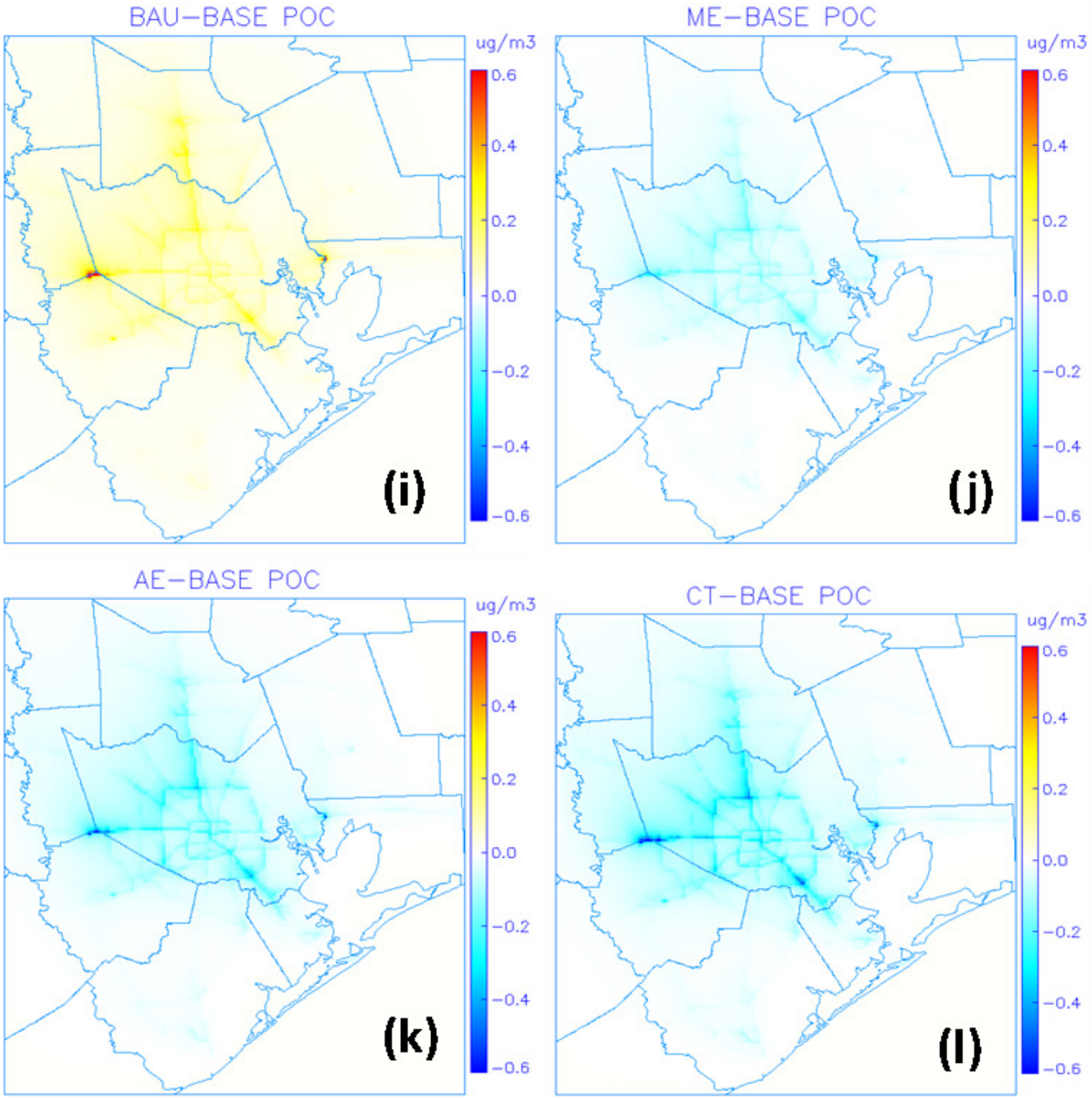


Figure 7: Spatial differences of monthly average particulate organic carbon surface concentrations, micrograms per meter cubed (μg/m³). (i) BAU-Business As Usual, (j) ME – Moderate Electrification, (k) AE- Aggressive Electrification, and (l) CT – Complete Turnover.

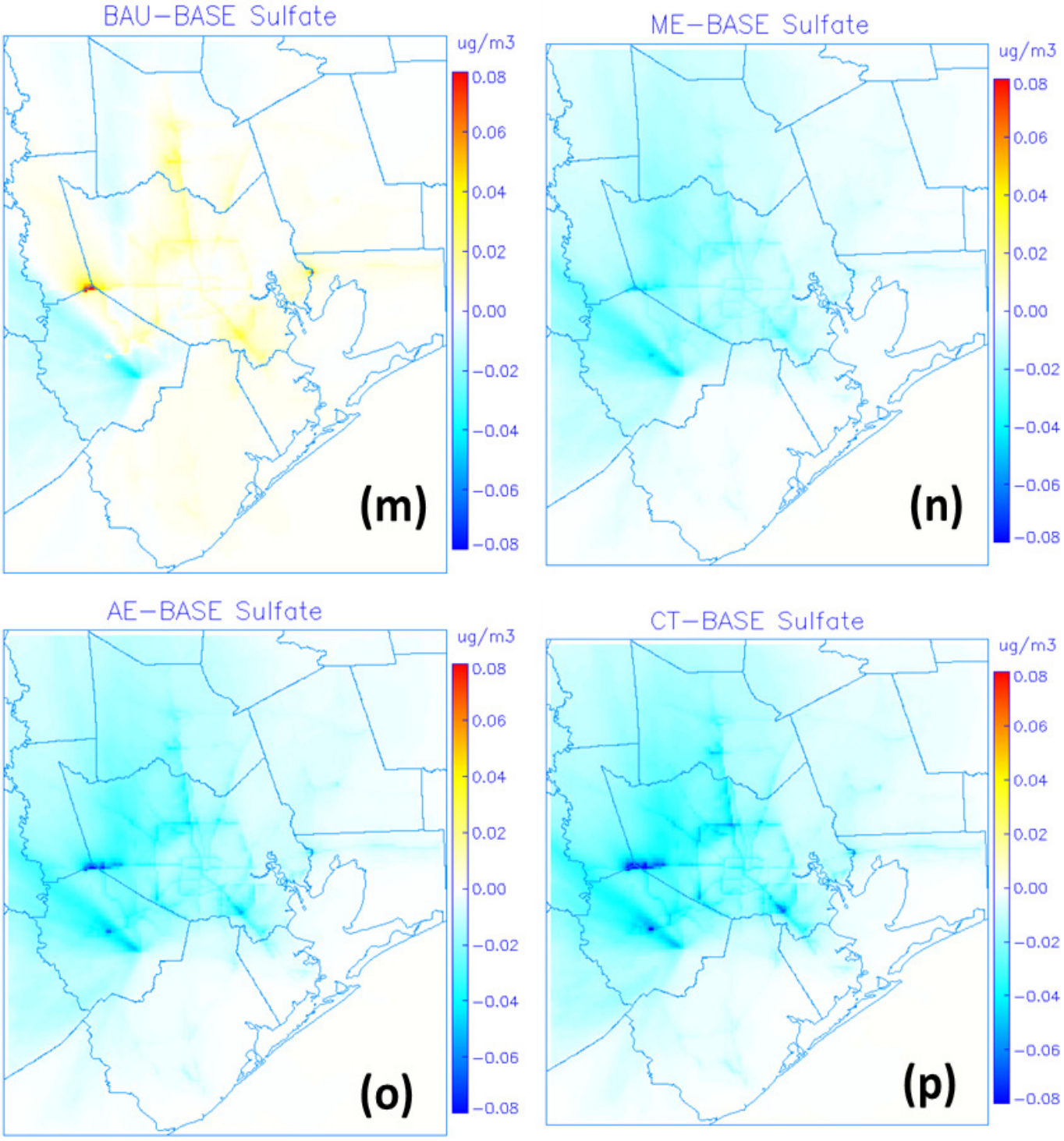
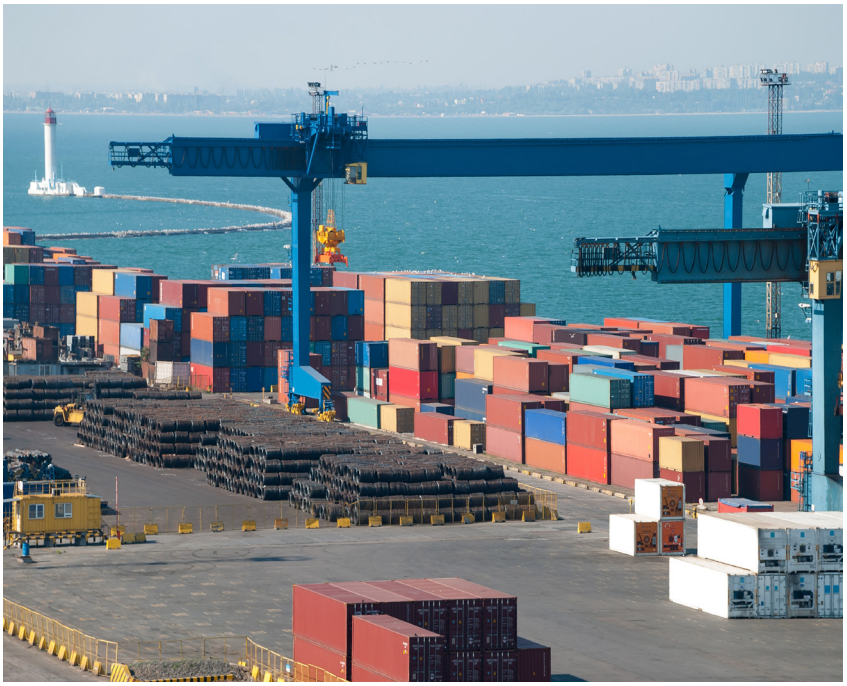


Figure 7: Spatial differences of monthly average sulfate surface concentrations, micrograms per meter cubed (μg/m³). (m) BAU-Business As Usual, (n) ME – Moderate Electrification, (o) AE- Aggressive Electrification, and (p) CT – Complete Turnover.

SPECIATED FINE PARTICULATE MATTER

Figure 7 plots the spatial differences between the projected control scenarios and the base 2013 case. The BAU case results in increasing PM2.5 concentrations by 1-2 $\mu g/m^3$ (figures 7(a)-7(d)), while the control scenarios bring about changes between 0.5-2 $\mu g/m^3$. The most dramatic changes occur on the highways, due to a reduction in motor vehicle emissions, as is corroborated in the plots for EC (figures 7 (e-h)) and OC (figures 7(i-l)). The changes in sulfate (figures 7 (m-p)) also mirror EC and OC, but one additional important point is the reduction in sulfate hotspots over areas with EGU emissions. This could be explained by the reduction in coal capacity over these areas.



HEALTH IMPACTS

This section presents health impacts related to the BAU, ME, AE and CT. Pollutant metrics include Maximum Daily 8-hr Average (D8HourMax) for O_3 and daily 24-hr mean (D24HourMean) for PM2.5, respectively. The USEPA's PopGrid program (U.S. EPA, 2017b) was implemented to allocate 2010 block-level U.S. Census population data to our BenMAP domain. Population information is classed into groups of race, ethnicity, genders, and age range. The BenMAP model contains county-level population growth rates for each year from 2000 through 2050.

We evaluated the health endpoint of "Mortality, All Cause" in this study. For O_3, we chose health impact functions based on the epidemiological studies by Bell et al. (2005), Zanobetti and Schwartz (2008), and Levy et al. (2005), and for PM2.5, we chose a study by Krewski et al. (2009). These studies were chosen as their analyses were based on a large geographic area (e.g., 116 U.S. cities in Krewski et al. (2009)). Hence, they are likely to be more representative and applicable to our analysis in the Houston area. Moreover, we also examined several O_3-induced morbidities (e.g., asthma exacerbation, emergency room visits) and associated benefits. Because the health impact functions for morbidities were derived from fewer cities or smaller time-scale sample sizes, the functions from several epidemiological studies were used to estimate the risk outcome.

We predict that the BAU case will result in an increased number of premature deaths with respect to 2013, but all of the control scenarios will result in prevented mortality with respect to the 2013, as illustrated in Figure 8. For PM2.5, the results indicate about 121 more premature deaths in the BAU case, and 109, 177, and 229 prevented premature deaths in the ME, AE, and CT cases, respectively. These findings coincide with trends in PM2.5 concentration, as depicted in panels (a)-(d) in Figure 7. The findings also roughly correspond to 61% enhancement of PM2.5 emissions in the BAU case, and 46%, 75%, and 95% reductions in emissions in the ME, AE, and CT cases. An interpretation of the results for O_3, however, is more complicated because the trends of O_3 change vary spatially (panels (m)-(p) of Figure 6). For instance, in the BAU case, BenMAP would predict an increase in adverse health effects in the downwind area because of increase in O_3 concentrations, while predicting a decrease of damage in the urban and major highways. In contrast, for the other scenarios with emissions reductions (i.e., the ME, AE, and CT cases), the gains in health endpoints in downwind areas are all greater than the losses over the urban highways, resulting in about 5, 11, and 17 prevented premature deaths, respectively. We may expect more health benefits if we extend the simulation domain to cover more places downwind. It should be noted that even in the case of an increase in O_3 concentrations over the urban highways, the reductions in air toxics emissions would occur, so their concentrations would lead to more health benefits. However, the health impact functions for these air toxics are not available in the current BenMAP model. The economic cost (benefit) values generally coincide with premature mortality results. Table 4 shows similar trends in O_3-induced morbidities and associated benefits. Thus, the emissions reductions scenarios would significantly reduce asthma exacerbation and school loss days, benefiting younger individuals.

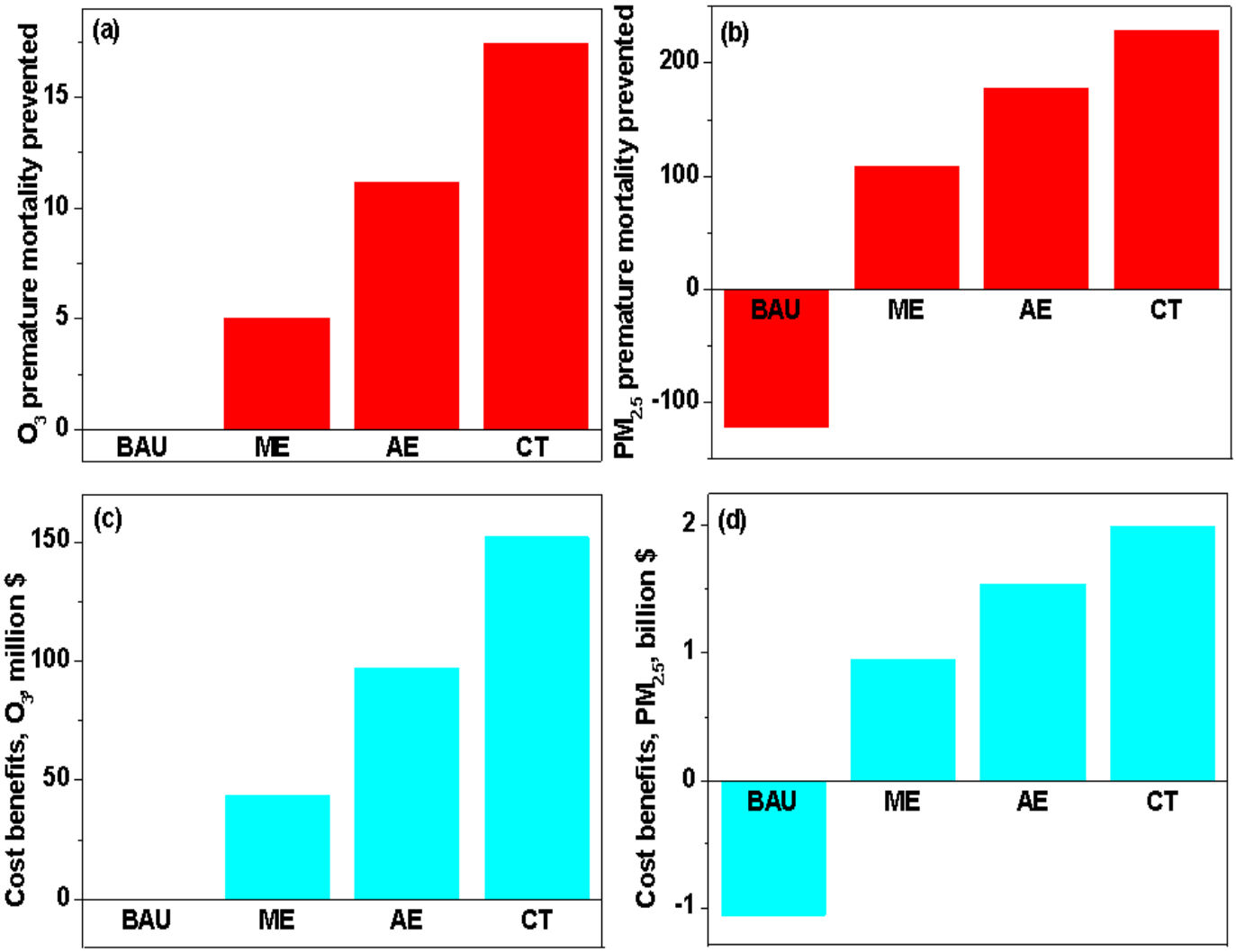


Figure 8. Estimates of avoided mortality and benefits from the changes in O_3 and PM2.5 concentrations in the 2040 scenarios. The age range is 0 to 99 for O_3 and 30 to 99 for PM2.5. In each plot, positive values indicate the number of premature deaths prevented because of control strategies and the associated benefits achieved, while the negative values in the BAU case indicate an increase in the number of premature deaths and economic losses.

Table 3: Estimates of avoided mortality and benefits from the changes in O_3 and PM2.5 concentrations in the future year scenarios. The age range is 0 to 99 for O_3 and 30 to 99 for PM2.5. Note: The BASE scenario is the baseline case (2013) in the BenMAP model, and the future year scenarios are the different control cases. Positive values indicate the number of premature deaths prevented because of control strategies and the associated benefits achieved, while the negative values in the BAU case indicate an increase in the number of premature deaths and economic losses.

Species	Scenarios	Premature Mortality Prevented	Benefits [Million Dollars, in 2015 currency year]
Ozone	Business As Usual	0	-0.33
	Moderate Electrification	5	43.57
	Aggressive Elecrtification	11	97.19
	Complete Turnover	17	151.99
PM 2.5	Business As Usual	-122	-1057.69
	Moderate Electrification	109	947.99
	Aggressive Electrification	177	1542.27
	Complete Turnover	229	1993.07

Table 4. Estimates of prevented O_3-induced morbidities and benefits in the future year scenarios.

Scenarios	Prevented Cases of Asthma exacerbation, one or more symptoms	Benefits [Million Dollars, in 2015 currency year]
Business As Usual	-1213	-0.076
Moderate Electrification	7534	0.475
Aggressive Electrification	16119	1.016
Complete Turnover	24652	1.554
	Prevented Emergency room visits, Asthma	
Business As Usual	-1	-0.001
Moderate Electrification	20	0.01
Aggressive Electrification	43	0.023
Complete Turnover	67	0.036
	School loss days, Prevented	
Business As Usual	-833	-0.088
Moderate Electrification	5,518	0.585
Aggressive Electrification	11,844	1.255
Complete Turnover	18,153	1.924
	Prevented Hospital admissions, All respiratory	
Business As Usual	0	-0.002
Moderate Electrification	4	0.133
Aggressive Electrification	8	0.294
Complete Turnover	13	0.459

SUMMARY, CONCLUSIONS, AND FUTURE WORK

Four emissions scenarios were considered to understand the effects of future control technologies, fleet turnover and electrification for both gasoline and diesel vehicles on air quality and health impacts over the 8-county area surrounding Houston, which is in nonattainment for ozone with respect to the new EPA standard of 70 ppb. For each case, the vehicular activities (Vehicle Miles Traveled, Vehicle Population and Hoteling hours) were scaled to reflect future population increases and vehicle usage. The cases considered included Business as Usual (projected increased activity with no new controls/retrofits/fleet turnover), Moderate Electrification (35% of the fleet assumed to be electric, 33% clean combustion technologies/retrofitted and 32% current vehicles), Aggressive Electrification (70% electric, 15% clean combustion technologies and 15% current) and Complete Turnover (65% clean combustion technologies, 35% electric). These turnover assumptions were applied to aggregate emissions from both gasoline and diesel vehicles. The emissions were modeled and speciated using the Motor Vehicle Emissions Simulator and the USEPA's SPECIATE database. They were temporally and spatially allocated to a 1-km grid using the Sparse Matrix Operator Kernel Emissions model. Using a fine resolution of 1-km helped to identify NOx-saturated and NOx-sensitive areas over the simulation domain.

The Business As Usual Case represented increased emissions with no controls. Consequently, ozone concentrations along highways decreased due to NOx-titration for this case. However, it resulted in significant ozone formation in the NOx-limited outflow over the regions bordering the I-610 highway loop in Houston. The emissions control cases all resulted in ozone increases along the highways, due to decreasing saturation. However, the emissions control cases resulted in ozone reduction both in the regions enclosed by the highways as well as the outflow. Simulated PM2.5 concentrations showed elemental and organic carbon hotspots along the highways, which decreased with increasing control and fleet turnover. One important point was the removal of sulfate hotspots in 2040 due to fossil fuel retirement.

Our health impact assessments indicated that while the Business As Usual case would lead to 122 additional premature deaths, the Moderate Electrification, Aggressive Electrification, and Complete Turnover scenarios prevented 114, 188, and 246 premature deaths, respectively. Further, the prevented morbidities and economic costs (benefits) generally mirrored premature mortality. These findings can potentially shed light on the effects of mobile emissions control strategies in other urban environments. Large urban cities can benefit significantly from reductions in PM2.5 pollution if local emissions from the transportation sector are controlled, while efficient O_3 pollution reductions primarily occur in downwind areas.

One advantage over the 8-county area is the significant retirement of fossil capacity and consequent replacement by renewables as indicated by Borkar et al. (2016). This can provide an impetus to clean electrification in Texas, but these efforts might not be replicable everywhere. For example, a significant fraction of the generation in states such as Pennsylvania and Ohio is by coal, and the added load due to electrification could exacerbate an existing nonattainment problem. Hence, several scenarios need to be investigated over the continental United States to understand the overall effects of fleet electrification and long-range transport of emissions.

This study assumes the added load because of motor vehicle electrification will be borne by the upcoming renewable electricity generating capacity. This is a bounding estimate as the renewable capacity might not be adequate to meet electrification demands, a fraction of which would then be needed to transfer to the fossil capacity. Hence, electricity demand needs to be wisely allocated to minimize emissions. Another uncertainty not considered in this study is changing climate in 2040, which would invariably affect emissions and future EGU load. Further modeling and analyses needs to be conducted on these points to get a clearer picture of motor vehicle electrification with load on residual fossil capacity in the light of changing climate.

This is a pilot study to show how the combined effects of a greening grid, emissions control, and fleet electrification can improve air quality and health indicators over the 8-county area surrounding Houston. There are several studies which can offshoot from this – one being the effects of truck stop electrification being studied in detail to identify the candidate stops for electrification, which can be extended to buses (especially school buses) to reduce idling hours and hence improve fuel consumption. The additional investigation can also be done to understand expenses per mile for newer gasoline and diesel vehicle vis-à-vis electric vehicles for different combustion, emissions control and battery technologies, and amalgamated with a change in health costs due to cleaner air, to understand the total monetary benefits/disadvantages of fleet electrification for vehicle owners.

AUTHOR BIOS

Dr. Yunsoo Choi received a Ph.D. in Atmospheric Chemistry (2007) from Georgia Institute of Technology, and B.S. in Chemistry (1994) from Hanyang University (in Korea) and M.S. in Physical Chemistry from Hanyang University (1996) and in Biophysical Chemistry (1999) from University of California in Irvine (1999). His Ph.D. topic is about the Spring and Summer transitions of ozone and its precursors over North America and photochemistry over Antarctica using Regional chEmical trAnsport Model (REAM: developed by Dr. Choi and his supervisor). After graduation, he worked as a Postdoctoral Research Scientist at California Institute of Technology/Jet Propulsion Laboratory, where he worked on the evaluation of satellite retrieval products. In February 2010, he joined NOAA Air Resource Laboratory as a staff scientist, where he worked on developing chemical and physical modules of Air Quality Forecasting system. After he shortly worked for NASA OMI satellite team for April-August of 2012 and joined the University of Houston as an assistant professor since the fall semester of 2012 and is an associate professor at the Department of Earth and Atmospheric Sciences of UH now. Over the period at UH, with his group members, he has established UH Air Quality Forecasting (UH-AQF) system to provide 48 hour forecasting results for ozone and particulate matters (PM) and their ingredients for local users, atmospheric scientists and air pollution policymakers including diverse end-users of the forecasting system (see the details, http://spock.geosc.uh.edu). He also initiated several Artificial Intelligence machine learning projects for diverse atmospheric sciences such as air quality forecasting, climate change (and future energy usage) and air pollution, energy land mapping for renewable energy, extracting surface air pollution data from remote sensing, and forecasting Hurricane's track and strength. His UH research group was/is working on diverse projects on atmospheric chemistry, air pollution, climate change, and disaster relief funded by the university, non-governmental, state, federal and overseas organizations.

Dr. Anirban Roy is currently working as an Air Resource Engineer with the California Air Resources Board headquarters in Sacramento. He holds a PhD in Mechanical Engineering from Carnegie Mellon University. His research broadly focuses on sustainable energy and transportation. He has looked at understanding the bias in receptor models for our current understanding of the gasoline-diesel split in contributions to organic carbon and evaluated the effects of control technologies and strategies on unconventional gas development emissions and subsequent air quality in the Marcellus Shale. During his postdoctoral stint at the University of Houston, he has evaluated the effects of temperature and driving conditions on gasoline exhaust VOC speciation, and briefly worked on using machine learning to fill in missing data in an air quality time series.

Ebrahim Eslami received his BSc in Civil Engineering from the Sharif University of Technology in Iran in 2008. He continued his research as a research flow at SINTEF in Norway in 2009 and 2010. Then he worked as an Engineer-in-Training in several construction companies in Iran between 2011 and 2014. He received his Master's in Environmental Engineering from the University of Tehran in 2016. Since 2016, he is a PhD candidate of Atmospheric Sciences at the University of Houston. His main interests are deep learning, health and cost impact of air pollution and advanced environmental data analysis.

Dr. Shuai Pan is currently a postdoctoral associate at Cornell University. He is working on assessing the impact of energy transitions on transportation emissions, air quality, and community health. He completed his Ph.D. in atmospheric science from the University of Houston. His Ph.D. work includes the investigation of ozone sensitivity to precursors' emissions and meteorology, deciphering ozone exceedance formation at coastal urban environment, and fine resolution (1 km) modeling. He received B.S. and M.S. in atmospheric science from Nanjing University of Information Science and Technology (NUIST), China, where he designed circuit boards for a flight mill and processed radar signals to study insect flight patterns.

ACKNOWLEDGEMENTS

This project was supported by a grant from the Healthy Port Communities Coalition and the Public Citizen Foundation titled "A Zero Emissions Alternative Goods Movement Vision for the Houston Region." The authors thank Dennis Perkinson at the Texas Transportation Institute for sharing future activity data, Stephanie Thomas and Tom Smith of Public Citizen, and Warren Lasher from ERCOT for their insightful comments and suggestions.

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HPCC

PUBLICCITIZEN

MAY 1 3 2019

May 7, 2019

Bob Kuter
1707 Yale St.
Houston, Tx 77008

To whom it may concern,

I Robert Kuter do hereby request that the following proposals to considered for the long ~~t~~term transportion needs of the greater Houston area.

Hub + Spoke intermodel transportion centers be built in order to reduce conjestion and pollution and to provide commuters a quicker commute.

- The propose metro rail line extenion plan of either the green or purple line be abandon for the time being. The state is close to deciding when to extend Spur 5 from the University of Houston to Hobby Airport and ~~be~~ points futher south. Metro is proposing BRT lines to the University of Houston. My proposal is to have a Intermodel station to be built ~~were~~ conecting the Metro's purple line, the BLT lanes to be constructed and a rail line (perferable Mono-Rail) or a BLT line that runs parralls to the Spur 5 highway and to be constructed at the same time to reduce costs.

Sincerly
Robert D. Kuter

CY-FAIR HOUSTON
Chamber *of* Commerce

May 7, 2019

MAY 13 2019

Mr. Alan Clark, MPO Director
Houston-Galveston Area Council
Transportation Policy Council
3555 Timmons Lane, Suite #120
Houston, TX 77027

RE: Letter of Support for Greenhouse Road Underpass @ US 290 TIP Application

Dear Mr. Clark and Members of the TAC & TPC Members,

On behalf of the Cy-Fair Houston Chamber of Commerce, we would like to thank you and the H-GAC staff for the approval of Greenhouse Road Underpass @ US 290 TIP Application to the 2045 RTP. This major thoroughfare connection is critical to accommodate the rapid growth that H-GAC has projected for the Cy-Fair and Cypress region as it absorbs new population equivalent to the current population of Denver within 3 miles of Greenhouse and 290.

We submit this letter of support for funding of the Greenhouse Road Underpass @ US 290. Our area is growing, and we have over 19,000 acres of vacant land within 2 miles of the Greenhouse and US 290 intersection.

This congestion issue is compounded by the parallel UPRR Class One railroad tracks which carries several trains a day. Each 2-mile long freight train that travels through the area can block traffic at up to 4 at grade crossings at any given time of day. The underpass would improve access, increase safety with linkages between the north and south side of SH 290 and improve economic development opportunities. This project would:

- Provide increased accessibility of police/fire/emergency medical services. Currently, the VFD facilities are all located on the north side of US 290. The immediate target market area is projected to grow to over 550,000 new population projected by H-GAC by 2035,
- Increase accessibility for families to the eight (8) area primary and secondary schools located within a 2-mile radius of the proposed underpass. There are schools located both on the north and south side of US 290.

We ask that you fund the Greenhouse Road Underpass @ US 290 TIP as soon as possible. Your consideration in this important matter is greatly appreciated!

Sincerely,

Keith Vrana, Chairman of the Board

Leslie Martone, President

The Cy-Fair Houston Chamber of Commerce SERVES our community by providing value to our businesses through ADVOCACY, LEADERSHIP, and GROWTH.

8711 Highway 6 North, Suite 120 | Houston, TX 77095 | phone.281.373.1390 | fax.281.373.1394
cyfairchamber.com

Texas Department of Transportation

1805 N. Timberland Dr., Lufkin, Texas 75901 | 936.633.4333 | WWW.TXDOT.GOV

April 26, 2019

Mr. Alan Clark
Dir. of Transportation Planning
Houston-Galveston Council of Governments
P.O. Box 22777
Houston, TX **77227-2777**

APR 3 0 2019

Dear Stakeholder,

The Lufkin District has been working hard to complete the environmental studies, surveys and draft schematic for the proposed US 59 Upgrade Shepherd to Cleveland (Future I-69). We are pleased to announce an upcoming public hearing to review the project details. Please find the enclosed Notice which provides information on the proposed project, locations to view project materials, and details about the upcoming public hearing.

We hope that you can attend. If you need additional information on the study or have any questions, please contact Jennifer Adams, I-69 Project Manager, at the letterhead address above, by email at Jennifer.Adams@txdot.gov or phone at (936) 633-4469. You can also visit the TxDOT website for more information on the US 59 Upgrade Shepherd to Cleveland and other Future I-69 projects under development at http://www.txdot.gov/inside-txdot/projects/studies/lufkin.html.

Sincerely,

Cheryl P. Flood, P.E.

Cheryl P. Flood, P.E.
District Engineer
Texas Department of Transportation, Lufkin District

Enclosure

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.

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Notice
Draft Environmental Assessment Available for Public Review
and
Public Hearing
US 59 UPGRADE SHEPHERD TO CLEVELAND
From FM 2914 to 0.65 mile south of SL 573
CSJs: 0177-02-057 and 0177-03-099
San Jacinto and Liberty Counties, Texas

The Texas Department of Transportation (TxDOT), as the lead agency, is proposing to upgrade existing US 59 by constructing frontage roads and overpasses from FM 2914 south of Shepherd in San Jacinto County to 0.65 mile south of SL 573 in Cleveland in Liberty County, Texas. This notice advises the public that a draft environmental assessment (EA) is available for public review and that TxDOT will be conducting a public hearing on the proposed project. The hearing will be held on Tuesday, May 14, 2019 at Shepherd High School Cafeteria, 1 Pirate Lane, Shepherd, Texas 77371. Displays will be available for viewing at 4:00 p.m. with the formal hearing starting at 6:00 p.m. The purpose of the hearing is to present the planned improvements and to receive public comment on the proposed project.

The proposed 6.62 miles long project would bring US 59 up to interstate standards by constructing northbound and southbound frontage roads with two 12-foot wide lanes and reconstructing the existing US 59 main lanes to include two 12-foot wide travel lanes in each direction with median barrier. The proposed project would become a controlled access freeway which means there would not be direct access to the main lanes. Access to the main lanes would be allowed via entrance and exit ramps. The proposed project would also include the construction of two overpasses with U-turns at Red Road and just south of the San Jacinto/Liberty County Line.

Existing right-of-way (ROW) width varies from typical width of 200 feet to 830 feet near the US 59/SL 573 intersection in Cleveland. The proposed ROW width varies from 321 feet to 544 feet through the project area. The proposed project would potentially displace five residences, one church, and 11 commercial structures. Information about the TxDOT Relocation Assistance Program, benefits and services for displacees, as well as information about the tentative schedules for ROW acquisition and construction can be obtained from the TxDOT district office at the address listed below. Relocation assistance is available for potentially displaced persons and businesses.

Wetlands are present within the proposed ROW and will be impacted by the proposed improvements. Therefore, TxDOT would be required to obtain authorization under Section 404 of the Clean Water Act from the United States Army Corps of Engineers. In accordance with Executive Order 11990, no practicable alternatives were identified that would avoid impacts to wetlands. The proposed project would also cross floodplains; therefore, coordination with the local floodplain administrator would be required. The project is subject to and will comply with Executive Order 11988, Floodplain Management.

The draft EA, maps showing the project location and design, tentative construction schedules, and other information regarding the project are on file and available for inspection Monday through Friday between the hours of 8:00 a.m. and 5:00 p.m. at the TxDOT Lufkin District Office, 1805 N. Timberland Dr., Lufkin, TX 75901, (936) 634-4433, and at www.txdot.gov, keyword search "US 59 Shepherd-Cleveland". This information also will be available for inspection at the hearing. Verbal and written comments from the public regarding the proposed project are requested and may be presented at the hearing, or submitted in person or by mail to the TxDOT Lufkin District Office. Comments must be received on or before May 29, 2019 to be part of the official hearing record.

The hearing will be conducted in English. Persons interested in attending the hearing who have special communication or accommodation needs, such the need for an interpreter, are encouraged to contact Rhonda Oaks, District Public Information Officer at (936) 633-4395 or at Rhonda.Oaks@txdot.gov. Requests should be made at least two days prior to the hearing. Every reasonable effort will be made to accommodate these needs.

If you have any general questions or concerns regarding the proposed project or the hearing, please contact Jennifer Adams, I-69 Project Manager, at (936) 633-4469 or at Jennifer.Adams@txdot.gov.

The environmental review, consultation, and other actions required by applicable Federal environmental laws for this project are being, or have been, carried-out by TxDOT pursuant to 23 U.S.C. 327 and a Memorandum of Understanding dated December 16, 2014, and executed by FHWA and TxDOT.

Aviso
Borrador de la Evaluación Medioambiental Disponible para Revisión Pública
y
Audiencia Pública
MEJORAS A LA CARRETERA US 59 DE SHEPHERD A CLEVELAND
DE FM 2914 a 0.65 millas al sur de SL 573
CSJs: 0177-02-057 y 0177-03-099
Condados San Jacinto y Liberty, Texas

El Departamento de Transportación de Texas (Texas Departamento of Transportación o TxDOT por sus siglas en inglés) como la agencia líder, propone mejorar la carretera US 59 existente por medio de la construcción de vías de acceso laterales y pasos a desnivel desde FM 2914 al sur de Shepherd, Condado San Jacinto hasta 0.65 millas al sur de SL 573 en Cleveland, Condado Liberty, Texas. Este aviso comunica al público que un borrador de evaluación medioambiental (EA) está disponible para revisión del público y que TxDOT estará conduciendo una audiencia pública respecto al proyecto propuesto. La audiencia se llevará a cabo el martes 14 de mayo, 2019 en la Cafetería de Shepherd High School, 1 Pirate Lane, Shepherd, TX 77371. Los despliegues informativos estarán disponibles para verse a las 4:00 p.m. y la audiencia formal empezará a las 6:00 p.m. El propósito de la audiencia es presentar la planeación de las mejoras y recibir comentarios del público con respecto al proyecto propuesto.

El proyecto propuesto de 6.62 millas de longitud hará que la carretera US 59, cumpla con los criterios de las carreteras interestatales a través de la construcción, en dirección norte y sur, de vías laterales de dos carriles de 12 pies de ancho, y, a través de la reconstrucción de los carriles principales existentes de US 59, para que incluya 2 carriles de circulación de 12 pies de ancho en cada dirección, con una barrera intermedia. El proyecto propuesto convertirá la carretera en una carretera de acceso controlado lo que significa que no habrá acceso directo a los carriles principales. El acceso a los carriles principales será permitido a través de rampas de entrada y salida. El proyecto propuesto también incluirá la construcción de dos pasos a desnivel con vueltas en U en Red Road y, justo al sur de la Línea Divisoria entre los Condados San Jacinto y Liberty.

La anchura del derecho de vía existente (right-of-way o ROW por sus siglas en inglés) varía entre una anchura típica de 200 pies a 830 pies cerca de la Intersección entre el US 59 y SL 573 en Cleveland. La anchura del ROW propuesto varía entre 321 y 544 pies a lo largo del área del proyecto. El proyecto propuesto potencialmente desplazaría 5 residencias, una iglesia, y 11 estructuras comerciales. La información acerca del Programa Estatal de Asistencia para Reubicación (Relocation Asistance Program) de TxDOT, beneficios y servicios para los desplazados, al igual que la información sobre los programas tentativos para la adquisición y construcción del ROW, pueden obtenerse de la oficina de distrito de TxDOT ubicada en la dirección escrita más abajo. La asistencia de reubicación está disponible para las personas y negocios que potencialmente sean desplazados.

Dentro del ROW propuesto existe la presencia de humedales que serán impactados por las mejoras propuestas. Por esto, se requerirá que TxDOT obtenga autorización bajo la Section 404 de el Clean Water Act del United States Army Corps of Engineers. En conformidad con la Orden Ejecutiva 11990, no se pudieron encontrar alternativas aplicables para evitar impactar los humedales. El proyecto propuesto también cruzará zonas de inundación; por esto, se requerirá la coordinación con el administrador local de las zonas de inundación. El proyecto queda sujeto a y cumplirá con la Orden Ejecutiva 11988 de Administración de Zonas de Inundación (Floodplain Management).

El borrador EA, los mapas mostrando la ubicación y diseño del proyecto, programas tentativos de construcción y otra información pertinente al proyecto están archivados y disponibles para su inspección de Lunes a Viernes entre las horas de 8:00 a.m. y 5:00 p.m. en la Oficina de Distrito en Lufkin de TxDOT, 1805 N. Timberland Dr., Lufkin, TX 75901, (936)634-4433 y en www.txdot.gov, palabra clave de búsqueda "US 59 Shepherd-Cleveland". Esta información también estará disponible para su inspección durante la audiencia. Se solicitan comentarios verbales y por escrito del público con respecto al proyecto y pueden ser presentados durante la audiencia, en persona, o por correo, enviándolos a la Oficina de Distrito de Lufkin de TxDOT. Los comentarios deben recibirse para el o antes del 29 de mayo del 2019 para que sean parte del archivo oficial de la audiencia.

La audiencia se conducirá en inglés. Se exhorta a las personas interesadas en asistir a la audiencia y que tengan necesidades especiales de comunicación o acomodo – tal como la necesidad de un intérprete–, a que se pongan en contacto con Rhonda Oaks al (936)633-4395 o a Rhonda.Oaks@txdot.gov. Las peticiones deben hacerse por lo menos dos días antes de la audiencia. Se hará cualquier esfuerzo razonable para satisfacer esas necesidades.

Si usted tiene cualquier pregunta o preocupación de carácter general respecto al proyecto propuesto o sobre la audiencia, por favor póngase en contacto con Jennifer Adams, Gerente del Proyecto I-69, al (936) 633-4469 o en Jennifer.Adams@txdot.gov.

La revisión medioambiental, consultas y otras acciones requeridas por la Ley Medioambiental Federal pertinente para este proyecto están siendo, o han sido, efectuadas por TxDOT conforme a 23 U.S.C. 327 y el Memorandum of Understanding fechado 16 de diciembre, 2014, y formalizado por FHWA y TxDOT.