

TECHNICAL MEMORANDUM

Bush-Wellborn Crossing Market Research Survey

DRAFT Technical Memorandum:

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I. Background

This technical memorandum presents the results of a web-based survey conducted for the Texas Department of Transportation (TxDOT) Bryan District. The survey focused on concerns about the intersection of George Bush Drive and Wellborn Road in College Station, Texas. Researchers solicited opinions about existing concerns about the intersection, the importance of construction or design features in any future intersection improvements, change in travel habits during construction, and priority of elements throughout the construction process. The survey also sought respondents' specific suggestions for future intersection design and construction processes. Because the Bryan District supports an inclusive and robust public engagement process, the survey also included questions that assessed the respondents' satisfaction with the process and communication efforts thus far.

II. Goals of the Study

The Bush-Wellborn intersection improvement project, known as the Bush-Wellborn Crossing (BWV), is an effort to re-analyze the proposed improvements, the construction process and the methods that might be used to accommodate travel demands during construction. In 2016, TxDOT–Bryan District decided to review the project because funding had not yet been obtained, and other large nearby projects will mean the traffic affecting elements of the Bush-Wellborn intersection construction timeline will not begin until late-2021, at the earliest. An interagency contract between TxDOT and the Texas A&M Transportation Institute (TTI) began in August 2016 to review and make recommendations for construction options and to develop and implement additional public and stakeholder engagement efforts.

The challenge is how to improve the intersection while maintaining vehicular, pedestrian, bicycle, railroad safety and traffic flow without extensive loss of mobility, negative effects on the campus and nearby neighborhoods, and unreasonable additional costs to the project. Therefore, TTI and TxDOT are in the early stages of re-engaging multiple stakeholder groups to gather input about project design options; construction staging and closures; community and campus effects; mobility management during construction; and other innovative opportunities to improve this project.

The complexities of the interchange include throughput, accessibility to campus, nearby homes and businesses, and minimal visual and construction impacts to surrounding neighborhoods. Planning and construction must be phased to ensure the right mix of construction timing, disruption to the area, and maintaining the integrity and tradition of the Texas A&M University campus and surrounding community.

Project specific goals include:

- **Improve Safety**
 - Reduce potential for severe or fatal collisions
 - Minimize conflicts – trains, cars, bikes, and pedestrians
- **Improve Mobility**
 - Improve intersection operation
 - Improve system operation
 - Enhance signal operations
- **Minimize additional right-of-way needs**
- **Minimize overall cost**

- **Minimize noise, flooding, etc. other problems**
- **Landscape, walls, and structure aesthetics**
- **Connect the campus and surrounding community**

The development of this survey and the subsequent community engagement opportunities are reflected in the project design and outreach approaches, which contribute to achieving the project goals.

III. Survey Design

The survey instrument was designed collaboratively, with all members of the project team having an opportunity to provide input regarding content, wording, response options, and skip logic. The survey was designed to be completed by English speakers who are at least 18 years old.

Upon obtaining final approval of the draft survey instrument from all members of the project team including TxDOT, TTI programmed the web-based survey. The final self-administered questionnaire contained approximately 58 questions including 28 demographic and survey quality questions. The survey was available online, and was distributed and publicized at community engagement events; any respondent that wanted to participate, had the ability to do so.

Almost 5,000 surveys were initiated; more than 4,100 were ‘completed’ (completion was defined as providing a response to the 27 primary multiple choice questions) and 4,041 comments on three open questions were submitted. The high number of responses was attributed to the support of the community through traditional and social media, newsletters and email lists, and word of mouth. Of particular note was a newsletter prepared by the Association of Former Students (the Texas A&M University alumni group) that was followed by a significant spike in respondents.

IV. Sample Design

A. In-Person Meetings

The survey was launched April 18, 2017, and was open until July 31, 2017. The survey was promoted at a total of 41 interest group meetings. In addition, the project team manned tables in various locations on campus that allowed people to ask questions about the project and complete the survey. A complete summary of the meetings and other information opportunities are included in Appendix A.

B. News and Social Media

TTI, various local news outlets and other community and campus partners highlighted the upcoming proposed BWX enhancements and promoted the survey in a variety of locations (Exhibit 1).

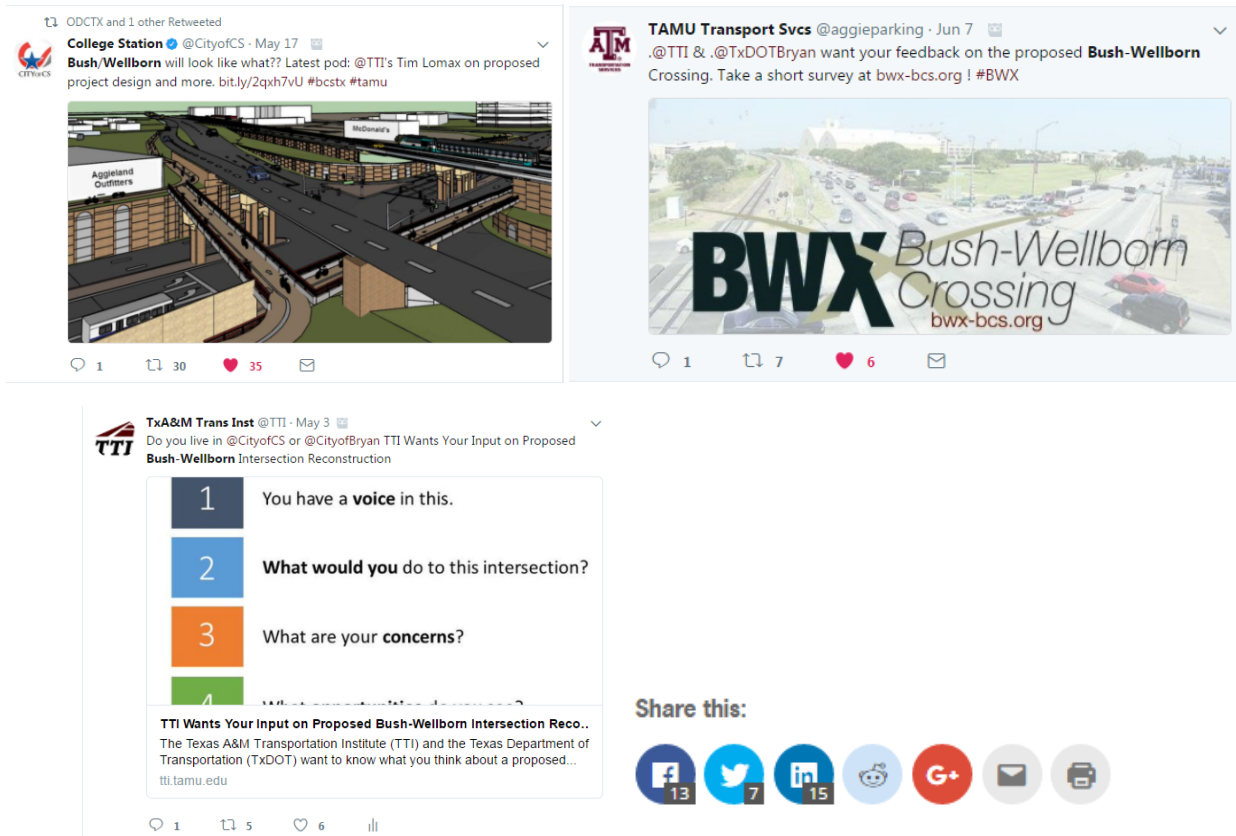
List of media coverage:

- August 2017: [Texas A&M Students Will Soon Return for the Fall.](#)
- May 2017: [Wellborn/George Bush Construction Would Carry Heavy Price for Some.](#)
- May 2017: [TxDOT, TTI Revisit Bush-Wellborn Intersection Plans.](#)
- May 2017: [Online Survey To Gauge Interest In Current Design Of New Interchange At Wellborn Road & George Bush Drive.](#)
- April 2017: [TxDOT Researches Solutions to Busy Intersection.](#)
- April 2017: [Transportation Planners Moving Forward with Overhaul for Busy CS Intersection.](#)
- March 2017: [Future Plans Call for Big Changes to Wellborn Road and George Bush Drive.](#)

Community Outreach Engagement Groups: For a complete list, see Appendix A

- Texas A&M University Association of Former Students.
- 12th Man Foundation.
- College Station Independent School District.
- City of College Station, and the City’s Neighborhood Association
- Texas A&M Mothers’ Clubs.
- Texas A&M University Transportation Services Advisory Committee.
- Bryan/College Station Chamber of Commerce.

Exhibit 1. Social Media Screenshots



Website post by TTI:

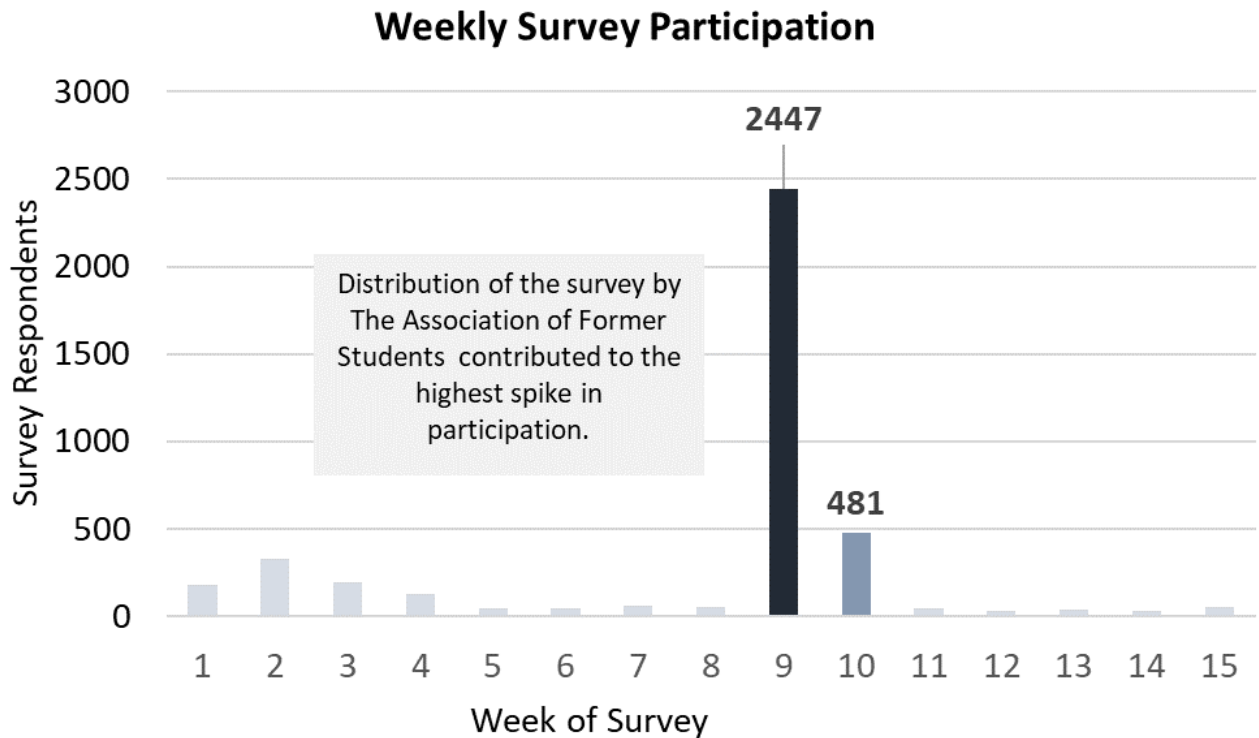
The story was posted on the TTI website at this link and shared through website visitors’ social media accounts:

<https://tti.tamu.edu/2017/04/21/tti-wants-your-input-on-proposed-bush-wellborn-intersection-reconstruction/>.

V. Survey Activity

Surveys were conducted over a 15-week period from April 18, 2017, through July 28, 2017. Exhibit 2 provides a summary of completed surveys by survey week.

Exhibit 2. Distribution of Completed Surveys by Week

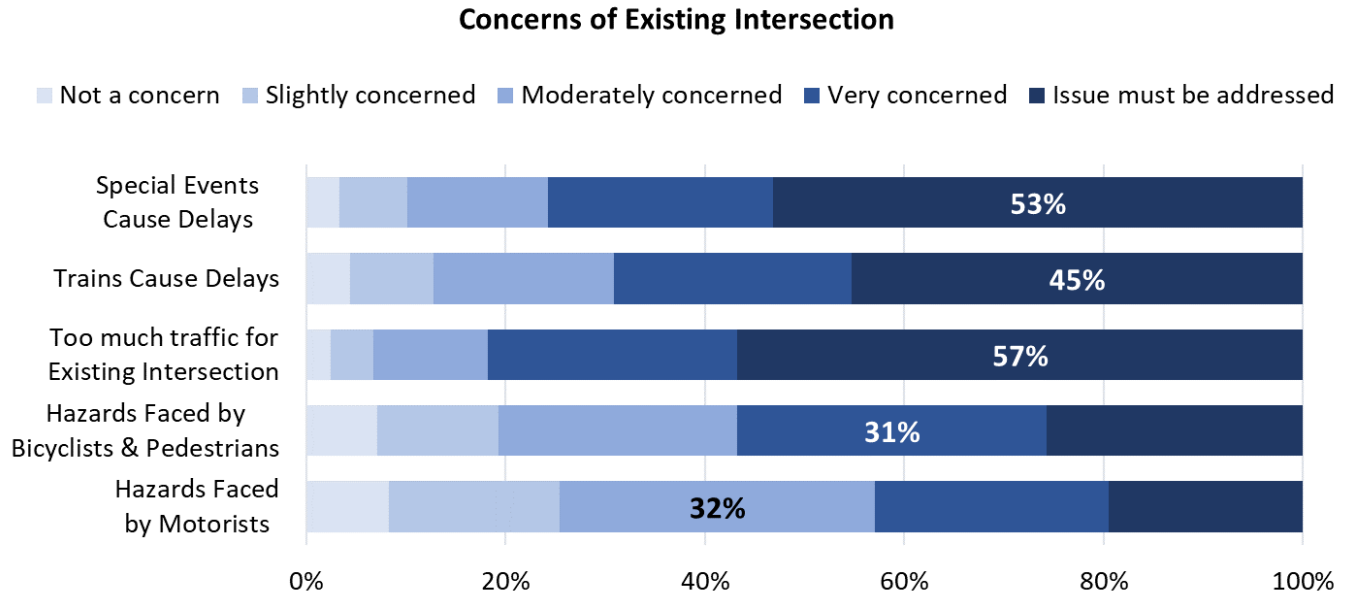


After data collection concluded, data editing began. This process involved reviewing the data for completeness, subjecting them to various logic checks, and coding the open comment questions for analytical purposes. The final analytical dataset contained 4,164 completed surveys. The median survey completion time was just under 7 minutes. The unusual spike in survey respondents during Week 9 was attributed to an article developed and pushed through social media outlets by the Texas A&M University Association of Former Students.

VI. Survey Results

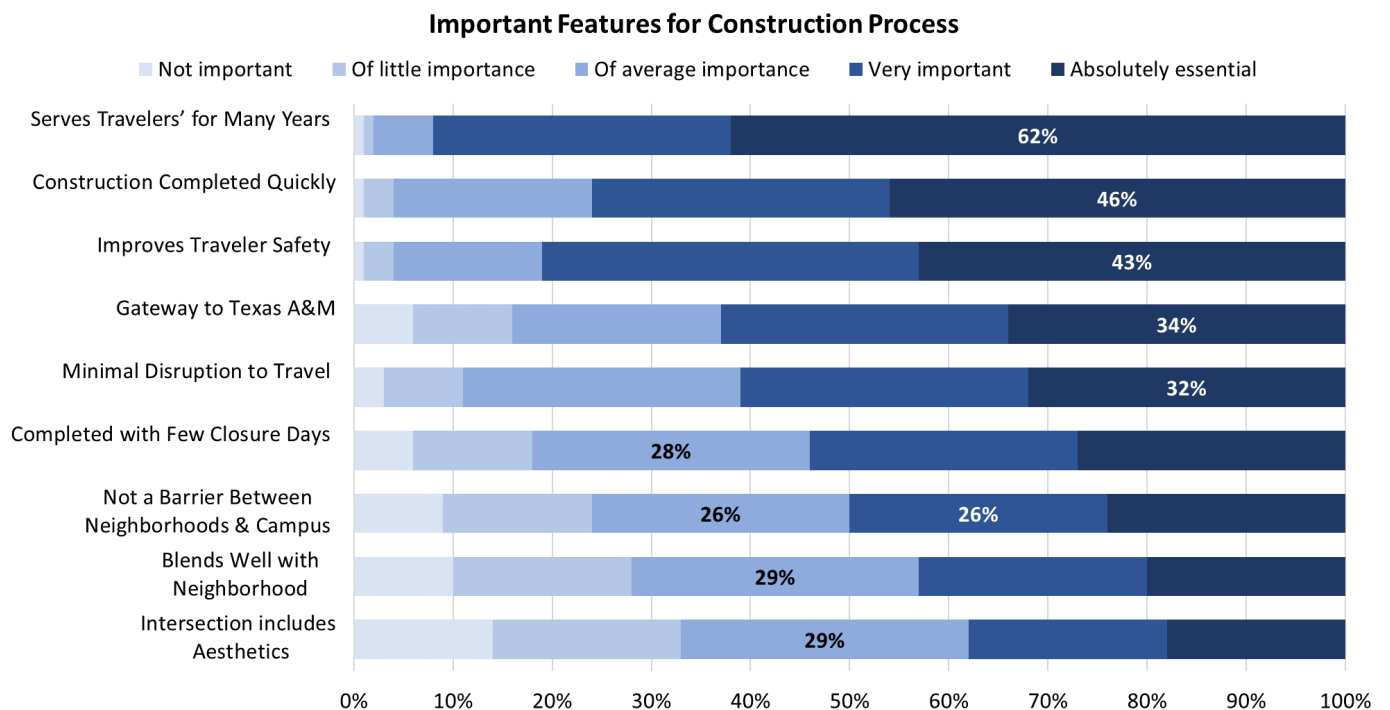
Respondents were presented with a series of intersection-related factors and asked to identify the strength of their concerns. Exhibit 3 indicates the majority of respondents (57 percent) felt the primary issue to be addressed was the amount of traffic moving through the intersection was greater than what the intersection was designed to handle. Slightly more than half of the respondents felt addressing delays from special events near the intersection was the next highest priority. Delay caused by trains was another high priority with 45 percent of respondents.

Exhibit 3. Level of Concern on Intersection-Related Factors



Researchers solicited respondents’ priorities for several design and construction options for the project. Nearly two-thirds (62 percent) of respondents felt that it was absolutely essential that the intersection should be designed to serve travelers’ needs for many years to come (Exhibit 4). This concern was the only factor characterized as “absolutely essential” by majority opinion. The improved safety of travelers, a quick construction process, a process with few closure days, little to no traffic disruption to the community, and a design that serves as a gateway to the A&M campus were noted as either very important or absolutely essential by more than half of survey respondents. Other survey options were identified as very important or absolutely essential by half or fewer of respondents: “The intersection includes aesthetics such as landscaping, lighting and/or public art” (38 percent), “The intersection blends well with the neighborhood” (43 percent), and “The intersection doesn't create a barrier between neighborhoods and campus” (50 percent).

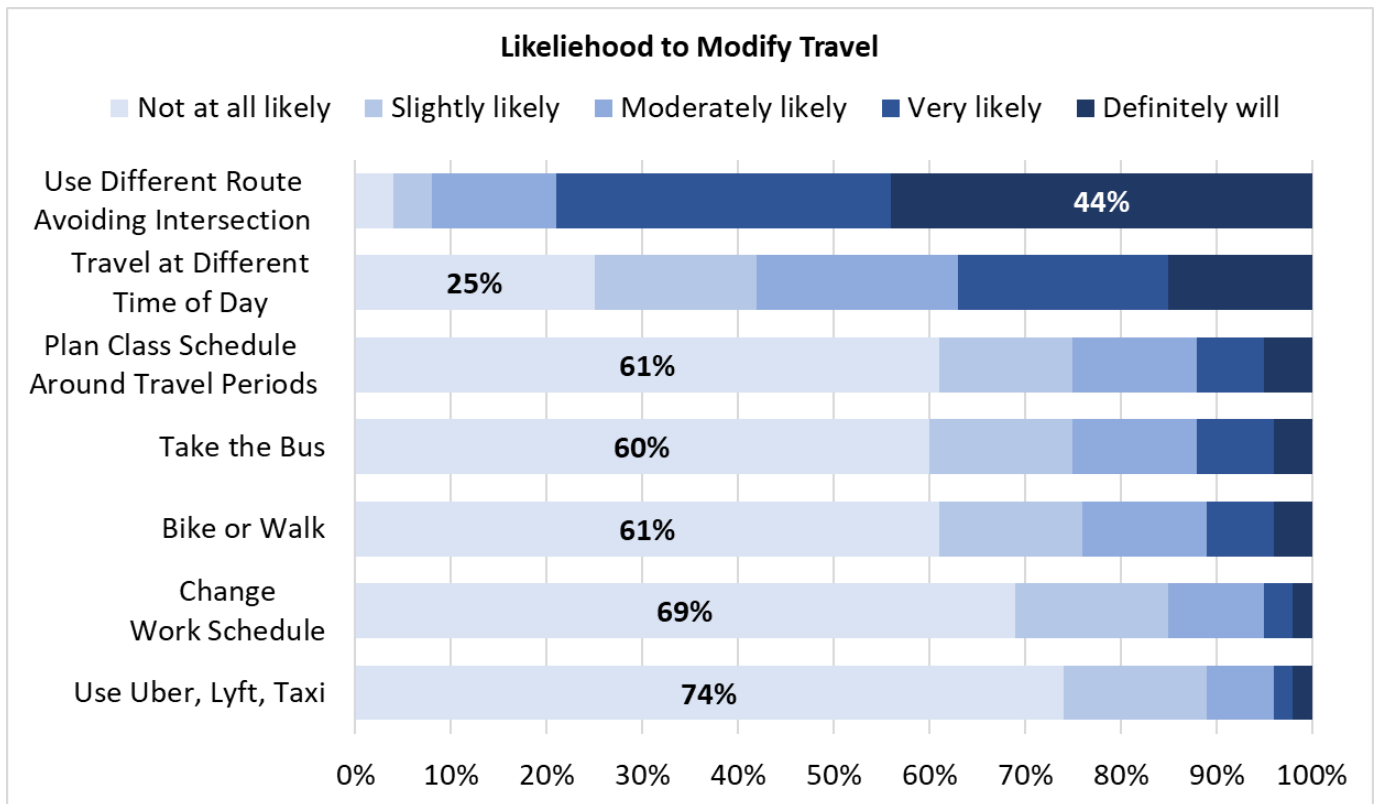
Exhibit 4. Importance of Intersection Construction of Design Features



A set of alternative travel choices were presented to respondents to gauge the baseline attitudes about the likelihood that travelers would modify their normal travel habits during the construction process (Exhibit 5).

- 79 percent of respondents were either very likely or definitely would travel on a different route that avoids the intersection. It should be noted that when the intersection is closed, 100 percent of travelers will use another route.
- Only 37 percent indicated travelling at another time of the day was an option.
- Large majorities of respondents were unable or not willing to engage in any of the other travel, class or work modifications during the construction process.

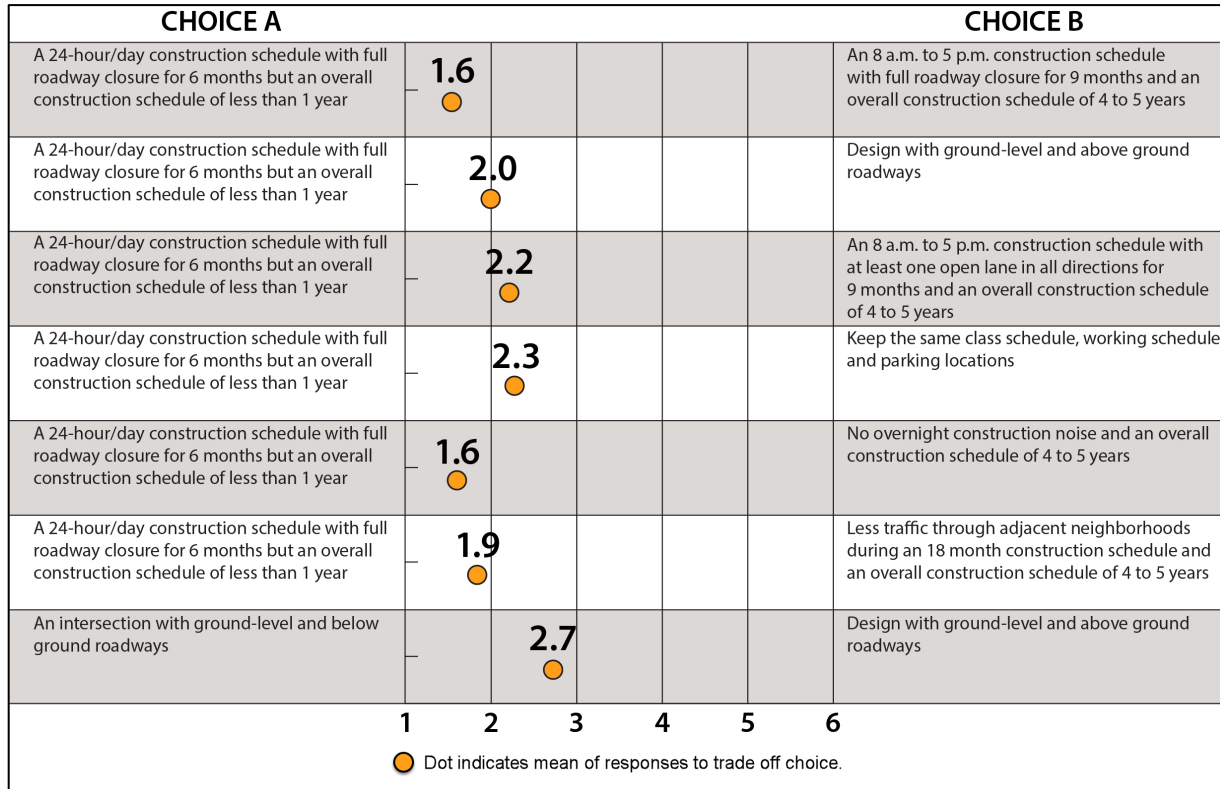
Exhibit 5. Likelihood to Engage in Travel Behavior Modifications



Respondents were told that the construction process will likely involve a set of trade-offs between speed of construction and disruption to normal travel during construction. If the project is built faster, there will be more traffic problems and other disruptions during construction. If the schedule is stretched out, there may be more opportunities to reduce the amount of disruption, but the construction may affect travelers for a longer period. Respondents were given a series of choice sets, and, using a six-point scale, asked to identify which of the choices (Choice A or Choice B) was more important to them. An average value close to 1 indicates more importance was placed on Choice A; a value close to 6 favors Choice B. Exhibit 6 reflects that respondents tended to place a greater importance on speed of construction (overall construction schedule of less than 1 year), in spite of more traffic problems and other disruptions during construction. The highest level of uncertainty (the mean is closest to the mid-point of the scale) is focused on the choice between “an intersection with ground-level and belowground-level roadways” and “design with ground-level and aboveground roadways,”

although Exhibit 7 below suggests a preference for below ground designs; as seen from the open-ended question responses.

Exhibit 6. Evaluation of Trade-Offs



Open Response Questions

A more direct approach to receive feedback about the current design and issues faced by the community, was accomplished with three open-ended questions. Respondents were asked to provide ideas about:

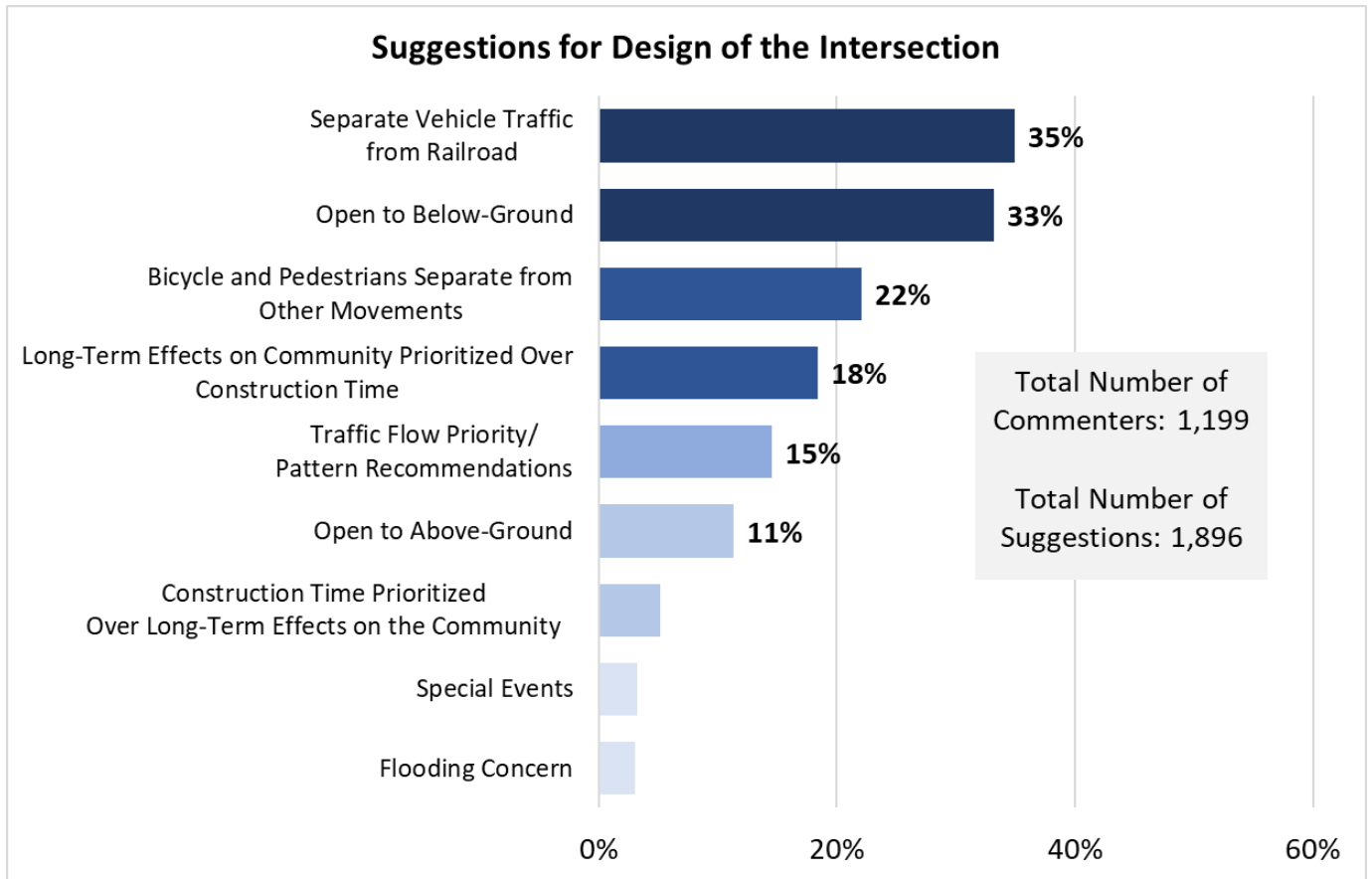
- Intersection design.
- Construction process.
- Other comments or suggestions about the project.

Analysis of these responses is qualitative and therefore more subjective. Researchers organized comments to each open-ended question to identify the main concerns of commenters. Some of the surveys included more than one suggestion; each was put into the appropriate category. The survey results below focus on the commenters’ suggestions rather than characterizing all the suggestions from a commenter into a single primary response category.

Intersection Design

The 1,896 design suggestions from almost 1,200 respondents (Exhibit 7) most frequently referred to the importance of separating vehicle traffic from the railroad and developing a design that is below ground level. Separating bicycles and pedestrians from all other traffic movements was the other suggestion mentioned by more than one in five commenters. At least 18 percent of commenters thought the design should prioritize the long-term effects of the intersection design rather than construction time; while five percent of commenters had the emphasis on construction schedule over long-term effects – mirroring the data in Exhibit 4.

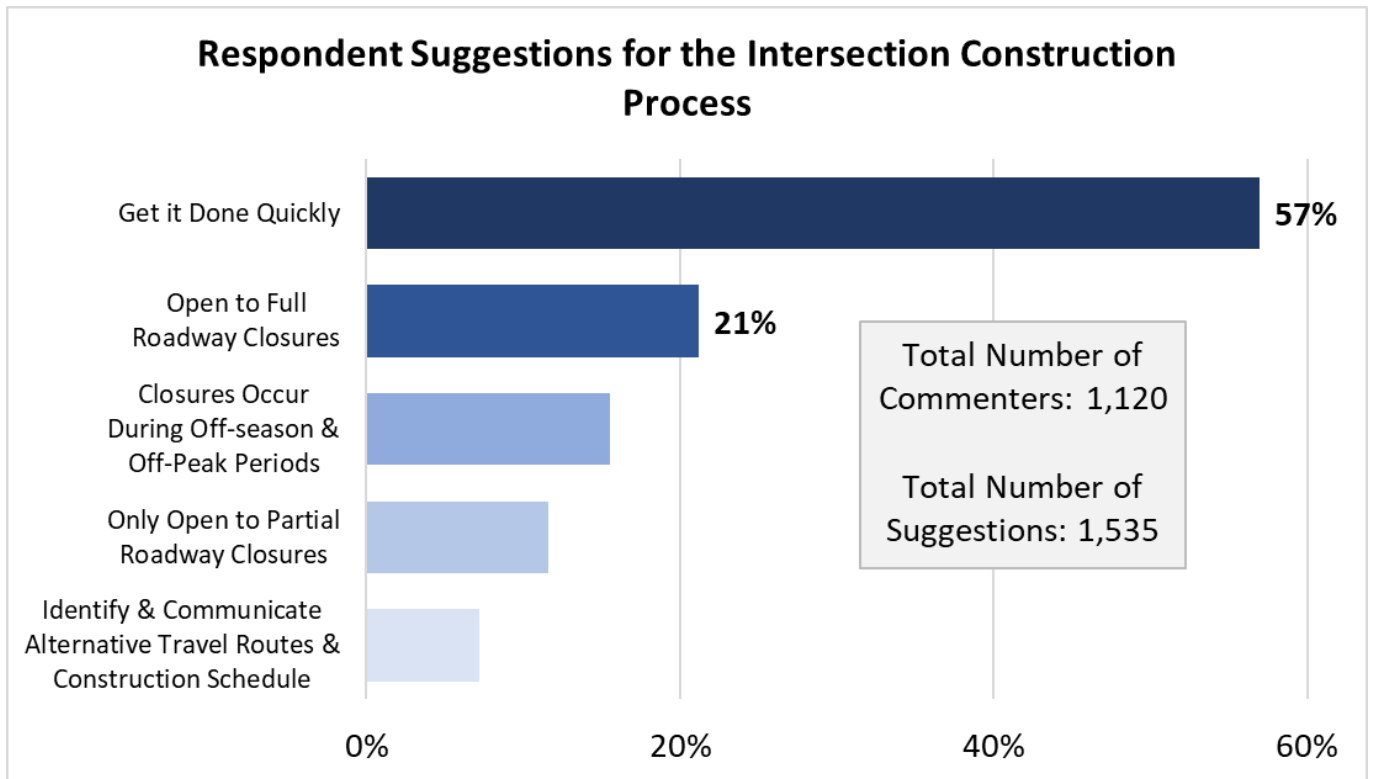
Exhibit 7. Suggestions for the Intersection Design



Construction Process

How the project is constructed and the mobility management during construction is a different issue than the ultimate design; Exhibit 8 summarizes the 1,535 suggestions offered by 1,120 commenters for the process. Over half of all commenters expressed the need to get the construction done as soon as possible. To achieve a quick construction process, 21 percent of commenters were open to full road closures and 12 percent of commenters were open to partial closures. Around 16 percent of commenters expressed the need for closures to occur away from football season or during off-peak travel periods, and 7 percent of commenters want the construction schedule and alternative travel routes to be effectively communicated to the public. A relatively small percentage of the open-ended comments indicated ideas or concerns about the construction effects.

Exhibit 8. Suggestions for the Intersection Construction Process

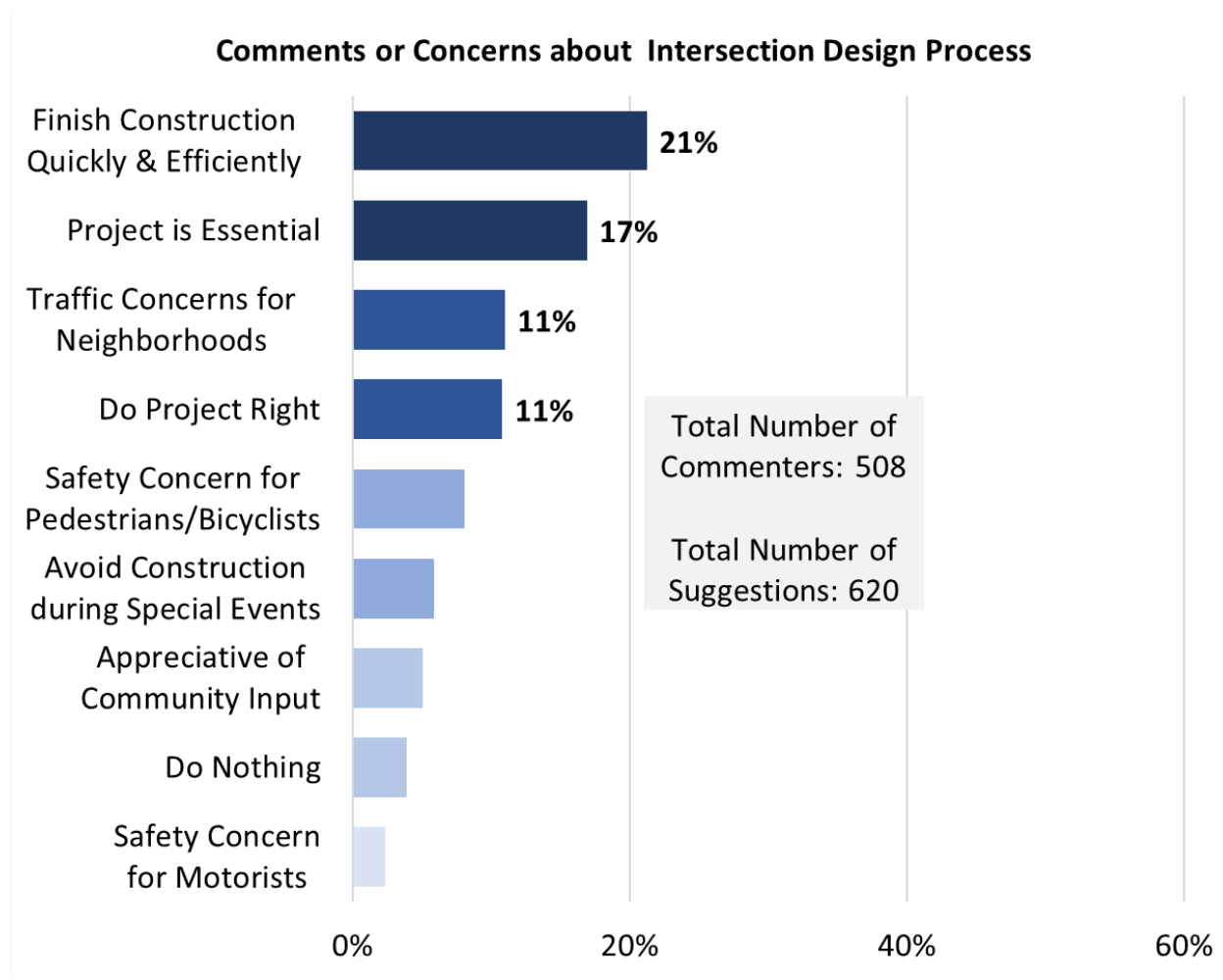


Other Comments

Commenters were offered an open opportunity to express any other suggestions or concerns they had about the intersection design (Exhibit 9). A significant number of comments to this “Other Comments” question re-iterated concerns expressed in previous questions. Some of the ideas received in this question included suggestions that were outside the scope of the project, such as ‘move the railroad.’ The remaining suggestions fell into the following categories

- 21 percent expressed the need to finish construction as quickly and efficiently as possible.
- 17 percent of the commenters felt the project is essential, while only four percent suggested a ‘do-nothing’ option should be considered or pursued.
- While commenters feel the project is necessary, more than 10 percent are concerned about the effect of traffic on neighborhoods and surrounding areas and the need to do the project right the first time.
- Interestingly, in this open-ended question, five percent of the respondents mentioned a public engagement process response – typically phrased as appreciating the outreach effort and opportunity to comment.

Exhibit 9. Other Comments or Concerns About the Intersection Design?



Respondents were asked to provide some basic demographic information. Similar data were collected from the American Community Survey (1) for 2015 and 2010 in three areas to provide some context for survey responses:

- the area southeast of the intersection,
- south College Station,
- Brazos County.

It should also be noted that some survey respondents live outside of Brazos County. They may attend events, commute to work or use the intersection to go through the campus. These individuals will also be affected by the construction, but are not included in any of the demographic comparisons.

Exhibit 10 displays the demographic summary; maps of the census tracts are in Appendix C. The southeast area was selected because these residents could experience some of the most significant construction effects such as noise, light, etc. Residents in south College Station might experience some of the greatest travel effects.

The area near the intersection and Brazos County have a higher percentage of Hispanic and African-American populations than are represented in survey responses. The nearby area has a higher percentage of younger residents (18 to 24 year olds) than the survey respondent group, while south College Station and Brazos County are somewhat older than the survey respondents. Although there are a substantial number of 'missing' income responses, the neighborhood and Brazos County appear to have a lower income profile than the respondents, while south College Station residents are wealthier. The survey respondents and all the comparison populations are about equally gender weighted.

Exhibit 10. Demographic Data for Survey Results and Selected 2015 and 2010 Census Tracts

Demographics	Survey	Neighborhoods Southeast of Intersection		South College Station		Brazos County	
Year	2017	2015	2010	2015	2010	2015	2010
Total Population	NA	11,802	11,513	39,331	34,083	205,271	185,426
<i>Ethnicity</i>							
Hispanic	9%	18%	13%	13%	13%	24%	22%
Not Hispanic	78%	82%	87%	87%	87%	76%	78%
<i>Race</i>							
White	81%	65%	77%	84%	86%	74%	75%
Vietnamese	<1%	0.5%	0.2%	1%	0.3%	0.4%	1%
Native Hawaiian	<1%	-	-	-	-	-	-
Guamanian or Chamorro	<1%	-	-	-	-	-	-
Black, African American	2%	15%	16%	6%	5%	11%	11%
Korean	<1%	2%	1%	2%	1%	1%	1%
American Indian or Alaska Native	1%	0.2%	0.2%	0.1%	0.0%	0.3%	0.3%
Asian Indian	1%	2%	0.0%	1.4%	1.3%	1%	1%
Chinese	<1%	9%	2%	3%	1%	2%	1%
Filipino	<1%	0.3%	-	0.6%	0.6%	0.3%	0.3%
Japanese	<1%	0.1%	-	0.2%	0.1%	0.1%	0.0%
<i>Age</i>							
18–24	37%	49%	47%	20%	27%	29%	32%
25–34	23%	19%	18%	14%	14%	15%	14%
35–44	11%	6%	6%	14%	12%	10%	10%
45–54	10%	5%	5%	10%	10%	9%	9%
55–64	7%	4%	4%	10%	7%	8%	7%
65+	2%	5%	6%	8%	5%	8%	7%
<i>Gender</i>							
Male	44%	49%	49%	50%	50%	51%	51%
Female	44%	51%	50%	50%	50%	49%	49%
Transgender	<1%	-	-	-	-	-	-

Demographics	Survey	Neighborhoods Southeast of Intersection			South College Station		Brazos County	
	Year	2017	2015	2010	2015	Year	2017	2015
<i>Income (*ACS Data is for Household)</i>								
Less than \$ 10,000	19%	25%	26%	8%	11%	15%	18%	
\$10,000–\$14,999	4%	11%	12%	3%	4%	6%	6%	
\$15,000–\$24,999	4%	14%	16%	8%	8%	12%	14%	
\$25,000–\$34,999	5%	13%	11%	8%	7%	11%	9%	
\$35,000–\$49,999	8%	16%	11%	13%	13%	13%	12%	
\$50,000–\$74,999	15%	10%	12%	17%	17%	15%	15%	
\$75,000–\$99,999	9%	6%	5%	13%	14%	10%	9%	
\$100,000 - \$149,999	11%	2%	6%	17%	13%	10%	9%	
\$150,000 - \$199,999	4%	1%	-	7%	21%	4%	4%	
\$200,000 or more	6%	1%	1%	6%	5%	4%	3%	

*Note: American Community Survey (1) reports income for households.

VII. Discussion and Directions

The purpose of this survey was to gather details from Bryan/College Station area residents as well as those with close ties to the Texas A&M University community regarding their thoughts about a major transportation construction project in the region. The survey was successful in that regard, collecting over 4,100 usable responses and over 4,000 additional open-answer comments. Analysis of these data reveals some key guidance points that can help the project planning team, as well as other local organizations, implement the project in a manner that will accomplish project goals and do so in a way that is consistent with public opinion and minimize the impact on local travel.

Project Design

From the perspective of public concern, a majority of respondents felt that the current amount of traffic moving through the intersection was greater than what the intersection was designed to safely handle, and is often exacerbated by trains and special events. These issues – too much traffic, not enough separation from the railroad or between travel modes – must be addressed by the project improvements.

With regard to project design, nearly two-thirds of respondents felt that, above all other construction or design issues, it was essential that the intersection should be designed to serve traveler needs for many years to come. The ‘overpass or underpass’ issue was not framed as an ‘either-or’ issue; some design ideas are a combination of both elements. But the three-to-one ratio favoring below ground concepts suggests a clear preference for designs that do not extend much above ground level. But there is interest in seeing more specifics about what an above ground option would entail. The comments also suggest confusion about ‘under’ and ‘above.’ For example, some respondents describe the Wellborn/University intersection as an ‘overpass’ and ‘above ground.’

The data strongly support an around-the-clock construction schedule that shuts the intersection for six months but minimizes the overall project schedule to less than one year. The desire to get it done quickly was favored against several options of slower, less intensive construction schedules and less invasive construction sequences. Rapid construction was also one of the most often mentioned

suggestions for the intersection construction process, and relatively few respondents indicated their concerns for construction effects (i.e., dust, noise, light, etc.) should outweigh the construction of an improved intersection.

Mobility Management During Construction

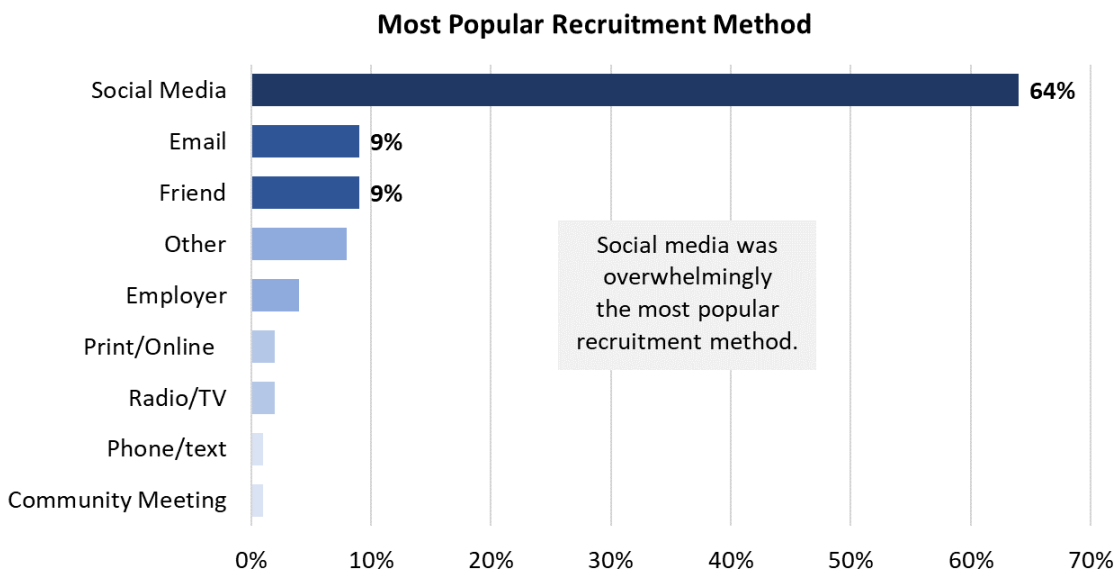
Major transportation construction projects such as the Bush-Wellborn Crossing have the potential to significantly disrupt regional travel patterns. In response to this disruption, as seen in Exhibit 5, nearly eight of ten respondents stated that they were either very likely to or definitely would travel on a different route that avoids the intersection during the construction phase. The other traditional mobility management techniques – traveling in different modes, at different times of day, or using alternative work or class schedules – were not seen as viable by many respondents. This suggests that the design effort should attempt to minimize the amount of roadway closure, but there also must be an education and trip planning effort so that residents are prepared for the construction and traffic conditions. Moving 70,000 daily vehicles (the 2016 average daily traffic count) to other routes, but with relatively little change in the time of day that travel occurs, the travel destinations or modes, is not possible. A combination of actions such as changing course offerings, providing more support for alternative work arrangements, increasing transit capacity or bike/pedestrian path options should be logical components of the eventual plan, as well as community information campaigns about the methods they can use to improve their commute and other trips.

Evaluation of Survey and Public Engagement Process

The survey, webpage and community meetings begun in Spring 2017 built on the extensive effort to plan and design the project for more than a dozen years. As the project moves along, results from this and other surveys will provide valuable input to help guide the project design and construction efforts.

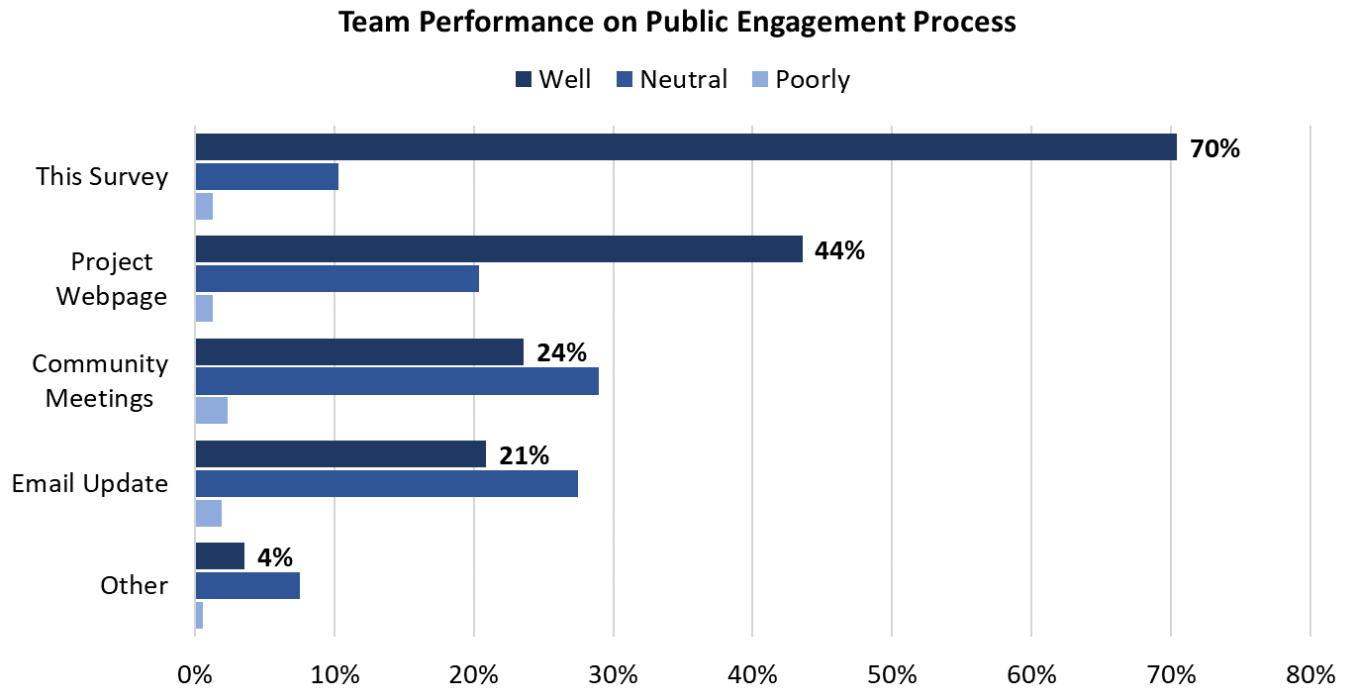
Respondents were asked to indicate how they heard about the survey; nearly two-thirds (64 percent) responded by referencing a social media source (Exhibit 11). The low percentage of other mentions does not mean the project team will abandon all other methods, but it does highlight the need for a social media presence to gain visibility, input, and ultimately consensus during the next phase of the project.

Exhibit 11. Recruitment Method



When asked how the project team performed various public engagement methods for the Bush-Wellborn Crossing, 70 percent of respondents stated that the team did well in implementing the survey (Exhibit 12). This reflection was the only majority opinion depicted in Exhibit 12. The project webpage, although relatively new at the time the survey was administered, was seen as a good element by almost half of respondents. Nearly a quarter of respondents indicated their support of community meetings and almost a third were neutral. This could be because they had not yet attended a community meeting. A third of respondents indicated email updates were not applicable. This could be because during the survey period, regular email updates were not being sent. These will increase as the project progresses.

Exhibit 12. Project Team Performance on Various Public Engagement Methods



Respondents were asked to rate the importance of each public engagement method to understand what efforts were successful throughout the process and to help design the next phases. The survey was noted by 41 percent of respondents to be very important to the public engagement method (Exhibit 13). Respondents also felt strongly about the need for a project webpage, email updates and community meetings.

Exhibit 13. Importance of Various Public Engagement Methods

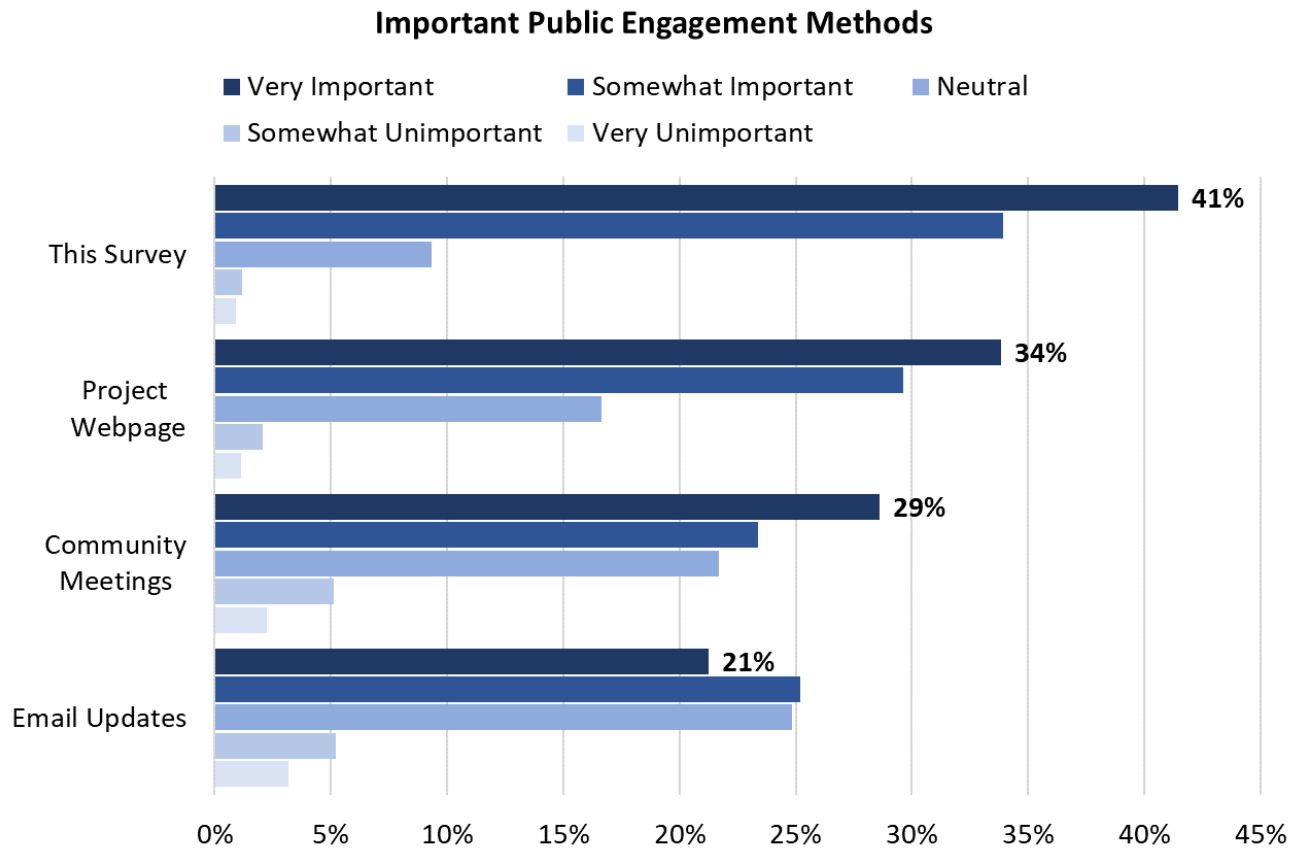
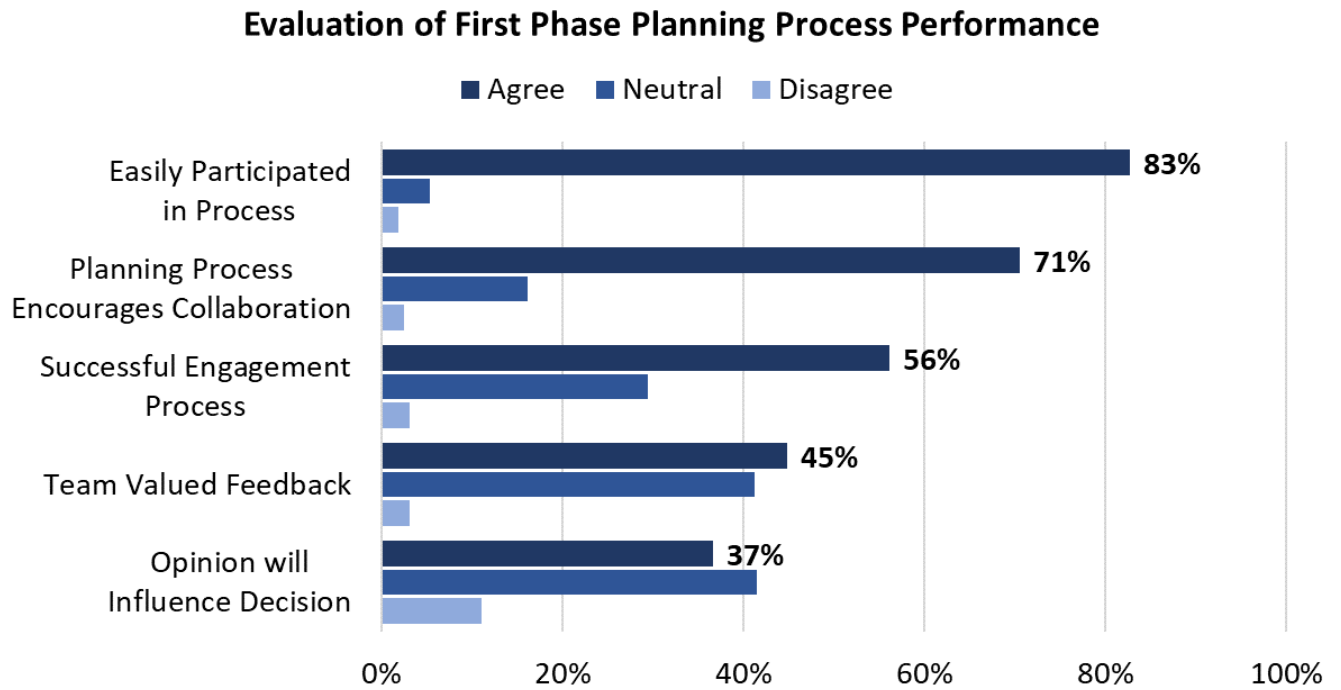


Exhibit 14 summarizes the reaction to this phase of the project development process. This is an important benchmark at this point, but the more important responses will be at the end of the construction process, or even several years after the project opens. At this stage, the majority felt the engagement process was successful and invited feedback without undue amount of trouble. Because this stage of the project has been active a relatively short time, it is perhaps understandable that 41 percent of respondents are hesitant about whether their opinions in the survey will influence the decision-making process.

Exhibit 14. Evaluation of First Phase Planning Process Performance



¹ American FactFinder. *American Community Survey*. United States Census Bureau. <https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>. Accessed Oct. 6, 2017.

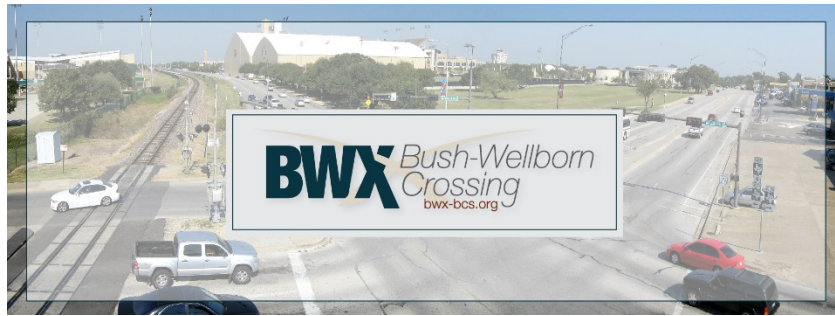
APPENDIX A
List of Community Outreach Engagement Meetings
BWX List of Informational Meetings—Total Attendees 1,104

Meeting	Meeting Location	Attendees
City of College Station MPO Technical Committee	Brazos Transit District	15
College Station City Council—Mobility Committee	College Station Municipal Court Building	15
Bryan/College Station Chamber of Commerce Transportation Committee	Chamber of Commerce Building	20
Texas A&M University Vice President for Finance and Administration	Jack K. Williams Building—Texas A&M University Campus	2
City of College Station MPO Policy Committee Meeting	Brazos County Commissioners Court	20
Texas A&M University Traffic Congestion Bi-Monthly Meeting	Transportation Services Office- Texas A&M University	15
College Station Planning and Zoning Commission	College Station Council Chambers	20
Texas A&M University Finance and Administration Division Heads	Jack K. Williams Building—Texas A&M University Campus	27
Meeting with the Corps of Cadets—Discussion with Col. Glenn Starnes	Col. Starnes Office—Texas A&M University	2
Texas A&M University Student Affairs Meeting—Dr. CJ Woods	Dr. CJ Woods' Office—Koldus Building, Texas A&M University	1
Texas A&M University Transportation Services Advisory Committee (TSAC)	Rudder Tower 701—Texas A&M University	25
BWX Communicators/Stakeholder Kickoff Meeting	Gibb Gilchrist Building 102—Texas A&M University	20
Texas A&M University Student Leader Communications Meeting	Dr. Pugh's House—Texas A&M University	40
Texas Department of Transportation Active Transportation Public Hearing (Informational)	Bryan City Council Chambers	8
Texas A&M University Student Senate Meeting	Koldus 144—Texas A&M University	50
Texas A&M University Student Senate Leadership Meeting	Dr. Pugh's House—Texas A&M University	15
Texas A&M University—Transportation Services Departmental Parking Representatives Meeting	Equestrian Center—Texas A&M University	167
Texas A&M University Facilities Managers Meeting	Equestrian Center	40
Texas A&M University System Office Project Update	Texas A&M University System Office	3

Meeting	Meeting Location	Attendees
Bryan Business Council Presentation	Bryan City Hall Room 305	15
City of College Station Bicycle, Pedestrian, and Greenways Committee	College Station City Hall	12
City of College Station Public Communications Staff	College Station City Hall	2
Campus Update Meeting with Local Fire Department, Police Department, Emergency Management	University Police Department Room 126C—Texas A&M University	35
Outreach to A&M students in MSC Entry Hallway	Memorial Student Center—Texas A&M University	110
Brazos County Commissioners Meeting	Brazos County Courthouse	25
Blogcast recording with Jay Socol for City of College Station Website	College Station City Hall	N/A
The Eagle Newspaper Interview	The Eagle—College Station	N/A
Texas A&M University Sustainability and Environmental Management Committee Meeting	Gibb Gilchrist Building—Texas A&M University	20
Texas A&M University Council of Senior Business Administrators	Memorial Student Center 2401—Texas A&M University	50
Neighborhood Groups/Homeowners Association Meeting	City of College Station Council Chambers	23
Greater Brazos Valley Builders Association	Phillips Event Center	80
Lincoln Center Neighborhood Group	Lincoln Center	7
College Station Kiwanis Club	Paolo's Restaurant	6
College Station Noon Lions Club Meeting	The Hilton	100
College Station Fire Department	College Station Municipal Court	11
Bryan City Council Workshop Session	Bryan City Hall	20
BWX Utilities & Energy Services Consultation	Energy Services Building 101E—Texas A&M University	3
Texas A&M University Staff Council	Rudder Tower 601—Texas A&M University	30
Texas A&M University Recreation Center Annual Staff Retreat	Rec Center—Texas A&M University	30

APPENDIX B

Image for Sharing BWX-BCS Survey for Media Outlets and Sample Letter



Bush-Wellborn Intersection Improvement Project *Take the Survey*

The Texas A&M Transportation Institute (TTI) is working with the Texas Department of Transportation (TxDOT) to identify improvements needed at the Bush-Wellborn intersection.

Specific goals for the BWX, or Bush-Wellborn Crossing, include enhancing overall safety for the thousands of motorists, bicyclists and pedestrians passing through the area daily while minimizing congestion at this critical intersection.

It's a big challenge. Improvements proposed nearly a decade ago would require a minimum of two years of construction to complete, with the Bush-Wellborn intersection partially or fully closed for at least six months of that time.

TxDOT and TTI are partnering to explore ways to minimize this disruption, and community input will be a meaningful part of this effort. Over the next few months, TTI will be seeking comments, concerns, and suggestions from the community regarding the Bush-Wellborn improvements. This input will be considered as the intersection design, construction timeline and work zone mobility plans are reviewed.

Another round of community engagement will follow to share project design options; construction staging and closure options; the impact on businesses, adjacent neighborhoods the campus and the community; mobility strategies during construction; and other innovative opportunities.

Let us know what you think. A brief online survey is now available for you to share your suggestions and preferences before plans are drafted. All Texas A&M University Mothers' Clubs members are encouraged to complete the survey at <http://bwx-bcs.org>.

APPENDIX C

Maps for Census Tract Information

Exhibit C-1. Map of Tracts Identified as Neighborhoods Southeast of Intersection

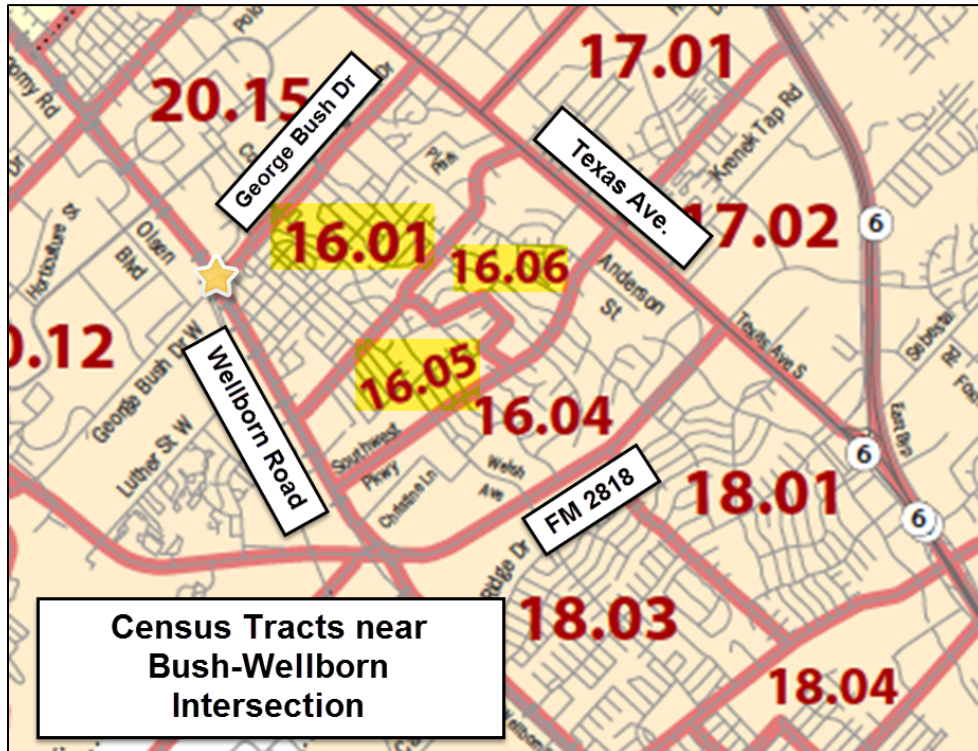


Exhibit C-2. Map of Tracts Identified as South College Station

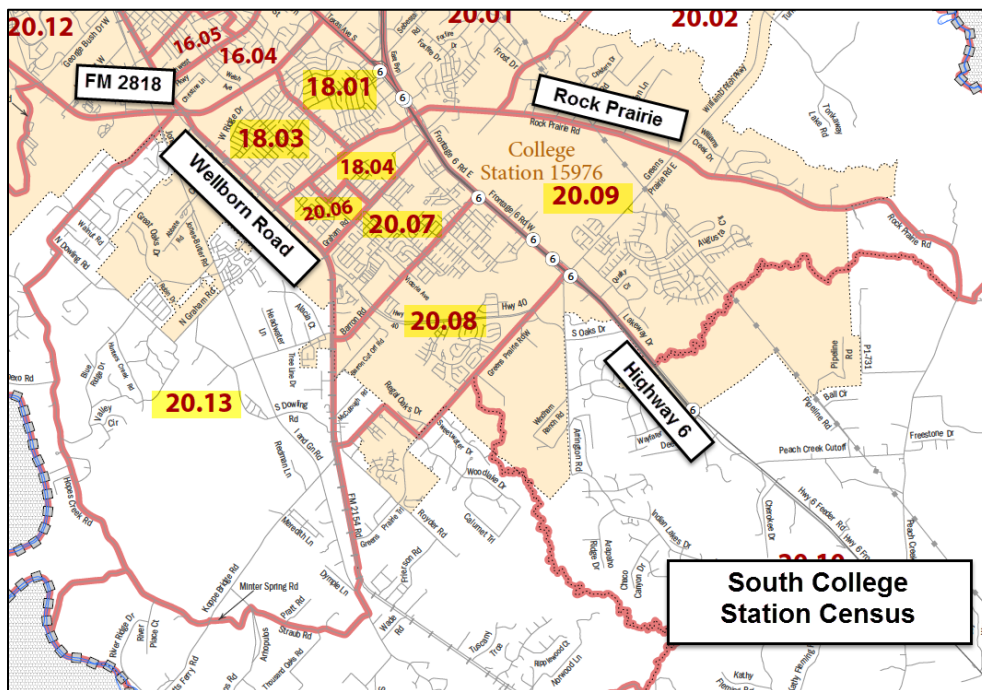
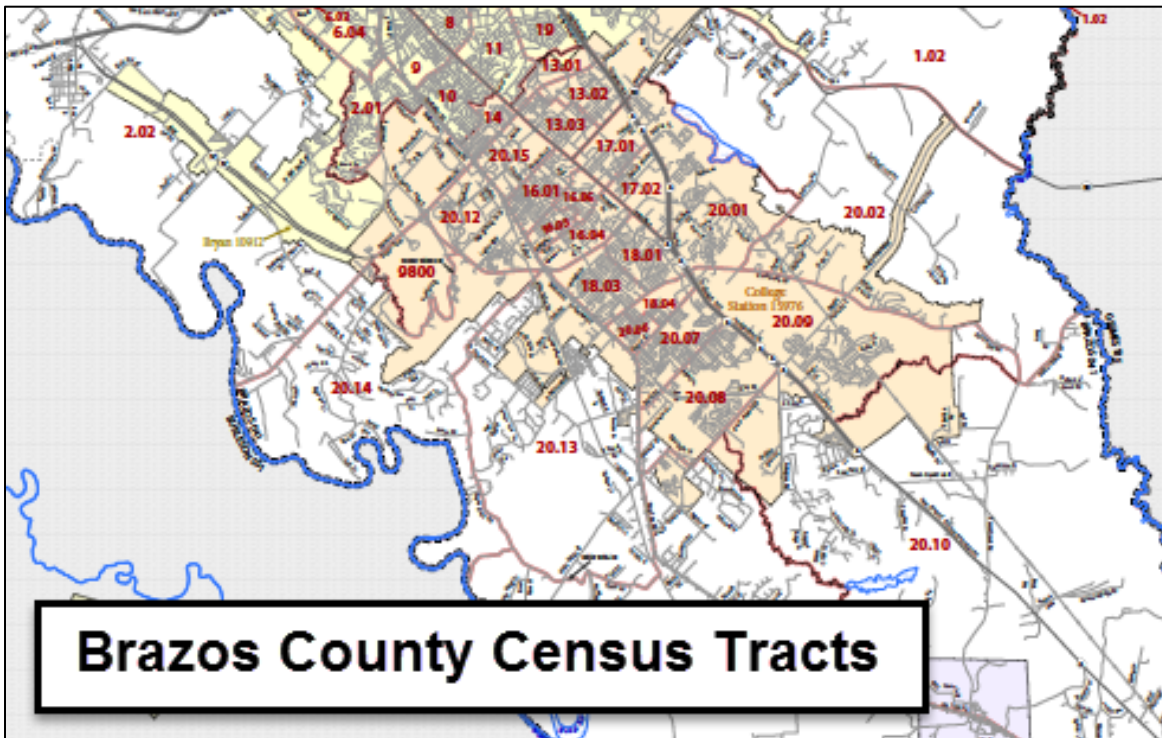


Exhibit C-3. Map of Brazos County Census Tracts



BUSH-WELLBORN CROSSING (BWV) QUESTIONNAIRE



The Texas A&M Transportation Institute is working with the Texas Department of Transportation to study the issues associated with the Bush-Wellborn intersection and possible improvements. We would like your input.



How strong are your concerns about the following factors in the existing intersection?
Please check the box that most closely expresses your opinion.

EXISTING INTERSECTION FACTORS	This is not a concern to me	I am slightly concerned about this	I am moderately concerned about this	I am very concerned about this	This issue must be addressed
The hazards faced by motorists					
The hazards faced by bicyclists/pedestrians					
There is too much traffic for the existing intersection design					
Trains cause delays					
Special events cause delays beyond what is normal					

How important are the following intersection construction or design issues?
Please check the box that most closely expresses your opinion.

FUTURE INTERSECTION ISSUES	Not important	Of little importance	Of average importance	Very important	Absolutely essential
The intersection improves safety for all travelers					
The construction is completed as quickly as possible					
The construction causes as little disruption to everyday travel as possible					
The construction is completed with few days of road closure					
The intersection serves as a gateway to the Texas A&M University campus					
The intersection serves travelers' needs for many years					
The intersection blends well with the neighborhood					
The intersection doesn't create a barrier between neighborhoods and campus					
The intersection includes aesthetics such as landscaping, lighting and/or public art					

How likely are you to change your travel habits or mode during construction?

Please check the box that most closely expresses your opinion.

TRAVEL HABITS OR METHOD	Not at all likely	Slightly likely	Moderately likely	Very likely	Definitely will
Travel at a different time of the day					
Take the bus					
Bike or walk					
Travel on a different route that avoids the intersection					
Change work schedule					
Plan class schedule around peak travel periods					

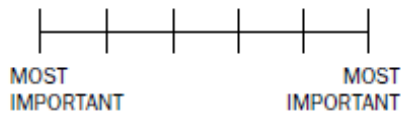
The construction process will likely involve a set of trade-offs between speed of construction and disruption to normal operation during construction:

- If the project is built faster, there will be more traffic problems and other disruptions during construction.
- If the schedule is stretched out, there may be more opportunities to reduce the amount of disruption, but the construction will affect travel for a longer period.

Place a mark on the slider scale that indicates which of the two choices is of greatest importance to you. (The design and schedule **have not been determined** – these choices are only presented to give you a way to communicate your preferences.)

A 24-hour/day construction schedule with full roadway closure for 6 months but an overall construction schedule of less than 1 year		An 8 a.m. to 5 p.m. construction schedule with full roadway closure for 9 months and an overall construction schedule of 4 to 5 years
A 24-hour/day construction schedule with full roadway closure for 6 months but an overall construction schedule of less than 1 year		An 8 a.m. to 5 p.m. construction schedule with at least one open lane in all directions for 18 months and an overall construction schedule of 4 to 5 years
A 24-hour/day construction schedule with full roadway closure for 6 months but an overall construction schedule of less than 1 year		An 8 a.m. to 5 p.m. construction schedule with at least one open lane in all directions for 9 months and an overall construction schedule of 4 to 5 years
A 24-hour/day construction schedule with full roadway closure for 6 months but an overall construction schedule of less than 1 year		Keep the same class schedule, working schedule and parking locations
A 24-hour/day construction schedule with full roadway closure for 6 months but an overall construction schedule of less than 1 year		No overnight construction noise and an overall construction schedule of 4 to 5 years
A 24-hour/day construction schedule with full roadway closure for 6 months but an overall construction schedule of less than 1 year		Less traffic through adjacent neighborhoods during an 18-month construction schedule and an overall construction schedule of 4 to 5 years

An intersection with ground-level and belowground roadways



Design with ground-level and aboveground roadways

What suggestions do you have for the intersection design?

Empty text area for suggestions on intersection design.

What suggestions do you have for the intersection construction process?

Empty text area for suggestions on intersection construction process.

Other comments or concerns:

Empty text area for other comments or concerns.

Nearest intersection to your home:

Empty text area for nearest intersection to home.

Nearest intersection to your work or school:

Empty text area for nearest intersection to work or school.

Please provide your email address, to receive project updates:

Empty text area for email address.

Please tell us about yourself so that we can evaluate how well our process represents the views of the community.

What gender do you identify with?

- Male
- Female
- Transgender
- Prefer not to answer

Are you of Hispanic, Latino or Spanish origin?

- No, not of Hispanic, Latino or Spanish origin
- Yes, Mexican, Mexican American or Chicano
- Yes, Puerto Rican
- Yes, Cuban
- Yes, another Hispanic, Latino or Spanish origin

What is your race/ethnicity?

- White
- Black, African American
- American Indian or Alaskan Native
- Asian Indian
- Chinese
- Filipino
- Japanese
- Korean
- Vietnamese
- Native Hawaiian
- Guamanian or Chamorro
- Other
- Don't Know

What is your age?

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65+

What is your annual income?

- Less than \$10,000
- \$10,000 - \$14,999
- \$15,000 - \$24,999
- \$25,000 - \$34,999
- \$35,000 - \$49,999
- \$50,000 - \$74,999
- \$75,000 - \$99,999
- \$100,000 - \$149,999
- \$150,000 - \$199,999
- \$200,000+

The following questions will be used to assess the effectiveness of and satisfaction with the Phase One Public Engagement Process.	How did you hear about the survey?	Email Phone/text Social Media	Print/Online advertisement Radio/Television Friend	Community meeting Employer Other (please specify) _____
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How do you feel about our performance in this planning process?	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I was able to participate in this survey without an undue amount of trouble.					
I am comfortable providing input in this survey platform.					
My opinions were heard and valued.					
This overall planning process encourages collaboration.					
My opinion in this survey will influence decision making.					
This engagement process, as a whole, is successful.					

Please rate the importance of the following public engagement methods to you for the Bush-Wellborn Crossing project.	N/A – NOT APPLICABLE					3 – NEURTAL						
	1 – VERY IMPORTANT					4 – SOMEWHAT UNIMPORTANT						
	2 – SOMEWHAT IMPORTANT					5 – VERY UNIMPORTANT						
	Is this an important feature to you?					How well did we perform at providing this?						
This Survey	N/A	1	2	3	4	5	N/A	1	2	3	4	5
Project Webpage	N/A	1	2	3	4	5	N/A	1	2	3	4	5
Community Meetings	N/A	1	2	3	4	5	N/A	1	2	3	4	5
Email Updates	N/A	1	2	3	4	5	N/A	1	2	3	4	5
Other characteristics of interest	N/A	1	2	3	4	5	N/A	1	2	3	4	5
This engagement process, as a whole, is successful.	N/A	1	2	3	4	5	N/A	1	2	3	4	5

How well do you feel we performed in the following public engagement methods for the Bush-Wellborn Crossing project.	N/A – NOT APPLICABLE					3 – NEURTAL						
	1 – VERY WELL					4 – POORLY						
	2 – WELL					5 – VERY POORLY						
	Is this an important feature to you?					How well did we perform at providing this?						
This Survey	N/A	1	2	3	4	5	N/A	1	2	3	4	5
Project Webpage	N/A	1	2	3	4	5	N/A	1	2	3	4	5
Community Meetings	N/A	1	2	3	4	5	N/A	1	2	3	4	5
Email Updates	N/A	1	2	3	4	5	N/A	1	2	3	4	5
Other characteristics of interest	N/A	1	2	3	4	5	N/A	1	2	3	4	5
This engagement process, as a whole, is successful.	N/A	1	2	3	4	5	N/A	1	2	3	4	5

How can we improve opportunities for public involvement? 	Please visit our website at www.bwx-bcs.org for more information. To request a meeting with our public outreach team, please send an email to bush-wellborn@tti.tamu.edu .
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