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Exploring New Technology:

## Results of the Oak Hill Parkway Virtual Open House Pilot



Texas A&M Transportation Institute

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Virtual Open House Pilot



## ACKNOWLEDGMENTS

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## **INTRODUCTION**

State planning and transportation agencies continually face the escalating problem of increasing needs, coupled with limited financial resources to meet those needs. In this difficult environment, the importance of meaningfully involving the public in the decisions that shape the future of our cities and regions becomes even more amplified. Proactively working with the public to gain buy-in from the early stages of the planning process is one of the most effective strategies to reduce project costs. The traditional process in which state planning and transportation agencies have engaged the public are becoming less and less effective as public meeting attendance has consistently decreased. As technology continues to shape the way that the public communicates with each other and their government, new communication methods must be evaluated to ensure meaningful engagement continues to occur. The onus falls on state planning and transportation agencies not only to continue to provide the traditional methods of engagement, but to look for new and innovative ways to gain increased public participation in the planning process.

The traditional methods of public engagement will always be an important part of the planning process, but discovering the effectiveness of emerging technologies in order to develop new best practices for public engagement is the charge of the future. The Oak Hill Parkway project in Austin, Texas, provided a unique opportunity to test a new and innovative method to engage the public. This pilot project tested the effectiveness of re-creating a traditional open house in a virtual or online setting in order to provide additional opportunities for engagement and to understand what role emerging technology will play in the engagement process.

This report documents the Oak Hill Parkway Virtual Open House (VOH) pilot effort conducted in May 2013.

This document consists of the following sections:

1. Project Overview and Objectives.
2. Site Overview.
3. Public Involvement Plan.
4. Description of Traditional and Virtual Open House.
5. Duties during the VOH.
6. Virtual Open House Development Background.
7. Traditional and Virtual Open House Data Results.
8. Analysis of Evaluation Data Results for the VOH.
9. Lessons Learned.

It also contains an appendix with user comments for the May 24 and May 28 open houses.

## **PROJECT OVERVIEW AND OBJECTIVES**

### **Project Background**

The Oak Hill Parkway project is a combined effort by the Central Texas Regional Mobility Authority (Mobility Authority), Texas Department of Transportation (TxDOT), Capital Metropolitan Transportation Authority (Capital Metro), and city of Austin to address traffic congestion in the Oak Hill corridor through the Oak Hill community. An environmental study is currently underway to determine the best options for increasing mobility in the area, and public participation is an integral part of this process.

The Oak Hill corridor, best known for the Y formed by the intersection of US 290 and SH 71 West, has long been identified as a heavily congested intersection in the Austin region. The corridor acts as a gateway to the Texas Hill Country and serves as a key route to Austin for the residents of Oak Hill, Lakeway, Bee Cave, Dripping Springs and other developing communities. The environmental study will consider the needs of drivers making local trips as well as drivers traveling across the state.

The project objective is “to work with neighbors and drivers to identify a long-term solution to mobility needs along US 290/SH 71 West” that:

- Respects the environment, improves mobility, and adds value to the Oak Hill community and surrounding area.
- Promotes sustainable growth by incorporating elements from the Green Mobility Challenge (see <http://www.greenmobilitychallenge.com> for more information).
- Is consistent with and supports community goals for enhancement of Oak Hill.
- Moves more people safely and reliably, not just more vehicles.

### **Purpose of the Project**

The purpose of the Oak Hill Parkway project is to:

- *Accommodate future growth.* The improvements for this intersection have been included in the Capital Area Metropolitan Planning Organization’s (CAMPO) Long Range Transportation Plan for over 25 years. This corridor has experienced high growth, and it is expected to continue to grow in the near future.
- *Alleviate congestion.* The intersection of US 290 and SH 71 is the gateway to western Travis County, attracting more than 60,000 cars and trucks a day. This project will help alleviate congestion in this busy corridor.
- *Improve safety.* Upgrading the corridor to a limited-access highway would improve traffic safety and reduce the incidence of at-grade and high-speed vehicle crashes.
- *Other reasons.* These include improving the quality of life for commuters and residents living in the corridor, improving connectivity in the surrounding neighborhoods, and providing reliable routes for transit and emergency vehicles.

## Project Scope and Schedule

TxDOT is currently conducting an environmental study for US 290 from Loop 1 (MoPac Expressway) to Ranch-to-Market Road 1826 in Travis County (approximately 3.6 miles):

- The study will also look at improvements to SH 71 from Silvermine Drive to US 290 in Travis County (approximately 1.2 miles).
- The study began in October 2012 and will consider a full range of reasonable alternatives for improving mobility in the corridor.

The environmental process follows the National Environmental Protection Act of 1969 (NEPA). The study includes extensive public and agency involvement and a discussion of the purpose and need for the project. The study will also present alternatives and analysis of each, including a no-build scenario, evaluation of potential impacts and description of the affected environment, and will result in a recommended alternative. The timeline of the Oak Hill Parkway project is shown in Figure 1.



Source: [www.oakhillparkway.com](http://www.oakhillparkway.com)

**Figure 1. Oak Hill Parkway Project Schedule. Project Delivery Method.**

The project is a corridor reconstruction effort and includes a Green Mobility Challenge. The Green Mobility Challenge is part of an effort to identify community values and incorporate them into project design. In July 2011, the Mobility Authority, in partnership with TxDOT, hosted the Green Mobility Challenge, a sustainable design competition to identify better ways of constructing, operating and maintaining future transportation projects. Ideas from the Green Mobility Challenge will be considered in the Oak Hill Parkway study.

The Oak Hill Parkway project team is using a context-sensitive solutions (CSS) process to implement a number of innovative concepts as part of the environmental study. Major project design components will be conceptualized, including bridges, retaining walls and possible sound walls, along with landscape treatments, hardscapes and possibly signature design elements to

unify the look and feel of the corridor. The general public has also been invited to share their opinions regarding the design of the project during the environmental study process.

### **Key Issues and Challenges for the Project**

As mentioned previously, this project has been a part of CAMPO's long-range transportation plan for 25 years. There are several challenges for this project, including both technical issues, such as right-of-way or environmental challenges, as well as social challenges. The primary issues for the project include sensitivity to environmental concerns and limited funding sources. Another challenge is that the topography of the area spatially constrains the corridor, resulting in limited options for improving the Y intersection.

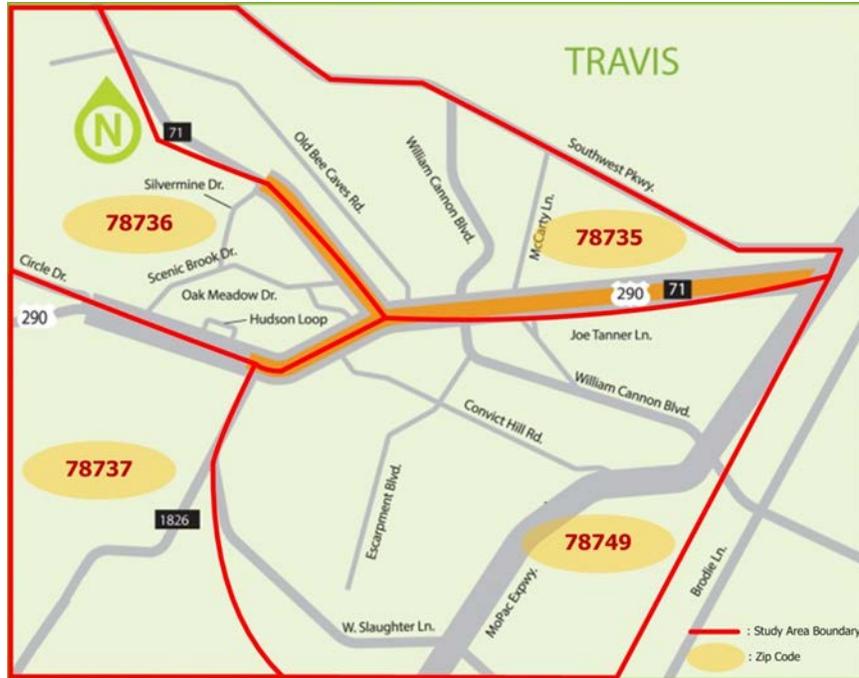
## **SITE OVERVIEW**

This section provides a geographic description of the project site and describes the community profile of the region.

### **Geographic Description of the Project Site**

The Oak Hill Parkway project site is located in southwest Travis County, approximately 8 miles southwest of downtown Austin. The project site comprises a Y area and includes the segment of US 290 from MoPac to RM 1826 and the segment of SH 71 from US 290 to Silvermine Drive. The project effort includes intersection improvements at William Cannon Drive, Joe Tanner Lane, US 290/SH 71 West, Convict Hill Road and RM 1826. A map of the project site is shown in Figure 2.

The project site is located in a suburban area with single-family homes, shopping malls and strip commercial centers. Shopping centers flank the Y intersection. The project corridor funnels traffic from the Hill Country and surrounding communities such as Dripping Springs and Bee Cave, and there are few alternative routes available. For the purposes of this evaluation, the study area is defined by the following zip codes: 78735, 78736, 78737 and 78749.



Source: <http://www.oakhillparkway.com/multimedia/index.php>

**Figure 2. Map of the Project Area.**

### Community Profile of the Region

#### *Household Characteristics*

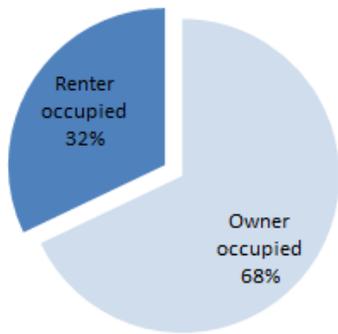
According to the 2010 U.S. Census, as summarized in Table 1 and Figure 3, there were 28,073 households in the study area. Of these households, 9,056 (32 percent) had children under the age of 18. The average household size was 2.50.

There were 29,682 housing units in the study area, of which 19,070 (68 percent) were owner occupied and 9,003 (32 percent) were occupied by renters. The vacancy rate was 5 percent.

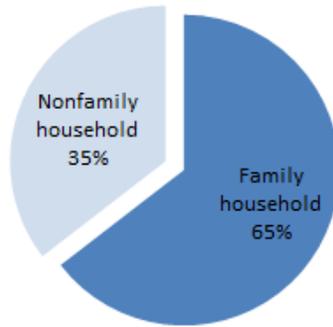
**Table 1. Household Type of Affected Community by Zip Code.**

Zip Code	Owner Occupied	Renter Occupied	Occupied	Vacant	Family Household	Nonfamily Household
78735	3,683 52%	3,469 48%	7,152 94%	451 6%	3,777 53%	3,375 47%
78736	2,337 86%	379 14%	2,716 91%	272 9%	1,866 69%	850 31%
78737	3,783 91%	387 9%	4,170 95%	213 5%	3,568 86%	602 14%
78749	9,267 66%	4,768 34%	14,035 95%	673 5%	8,907 63%	5,128 37%
Overall	19,070 68%	9,003 32%	28,073 95%	1,609 5%	18,118 65%	9,955 35%

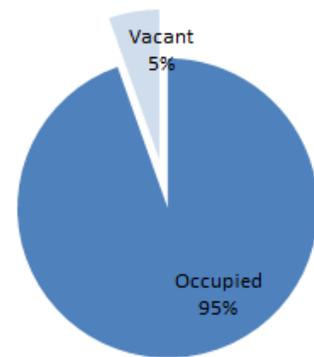
Source: 2010 U.S. Census



a) Owner versus Renter



b) Family versus Nonfamily



c) Occupied versus Vacant

Source: 2010 U.S. Census

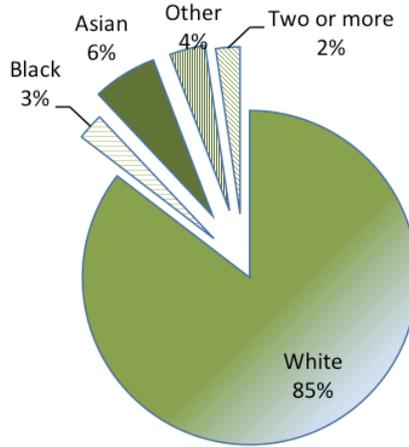
**Figure 3. Community Household Characteristics.**

The racial distribution of the study area was 58,721 (85 percent) White, 4,273 (6 percent) Asian, 2,377 (4 percent) other, 1,767 (3 percent) Black and 1,602 (2 percent) from two or more races (see Table 2 and Figure 4).

**Table 2. Race Variation of the Project Study Area by Zip Code.**

Zip Code	White	Black	Asian	Other	2 or More (Hispanic or Latino Origin)
78735	13,748 86%	112 1%	1,057 7%	769 5%	320 2%
78736	5,760 87%	13 0%	349 5%	270 4%	211 3%
78737	11,411 92%	149 1%	423 3%	286 2%	87 1%
78749	27,802 82%	1,493 4%	2,444 7%	1,052 3%	984 3%
Overall	58,721 85%	1,767 3%	4,273 6%	2,377 4%	1,602 2%

Source: 2010 U.S. Census



Source: 2010 U.S. Census

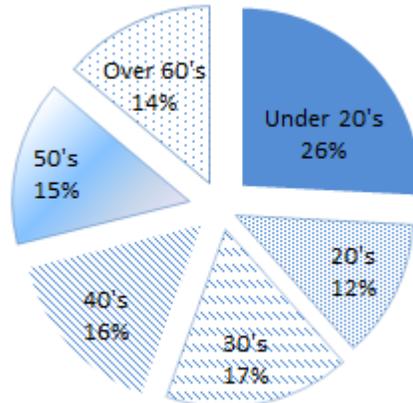
**Figure 4. Population Distribution by Race. Population and Age Distribution.**

Table 3 and Figure 5 show that the population was dispersed across all age groups, with a relatively high proportion of persons in their 20s (26 percent). According to the demographic assessment (Table 3), the study area had a population of 68,989. The study area population is comprised of 17,821 persons (26 percent) under the age of 20, 8,707 persons (12 percent) aged 20 to 29, 11,707 persons (17 percent) aged 30 to 39, 10,831 persons (16 percent) aged 40 to 49, 10,359 persons (15 percent) aged 50 to 59 and 9,564 persons (14 percent) 60 years of age or older. The median age of the study area population was 38.4.

**Table 3. Age Distribution of Residents in the Study Area.**

Zip Code	Under 20	20-29	30-39	40-49	50-59	60 and Over
78735	4,022 25%	2,243 14%	2,772 17%	2,147 13%	2,227 14%	2,595 17%
78736	1,234 19%	659 10%	1,055 16%	937 14%	1,418 22%	1,280 19%
78737	3,637 29%	747 6%	1,906 15%	1,943 16%	2,267 18%	1,955 16%
78749	8,928 26%	5,058 15%	5,974 18%	5,804 17%	4,447 13%	3,734 11%
Overall	17,821 26%	8,707 12%	11,707 17%	10,831 16%	10,359 15%	9,564 14%

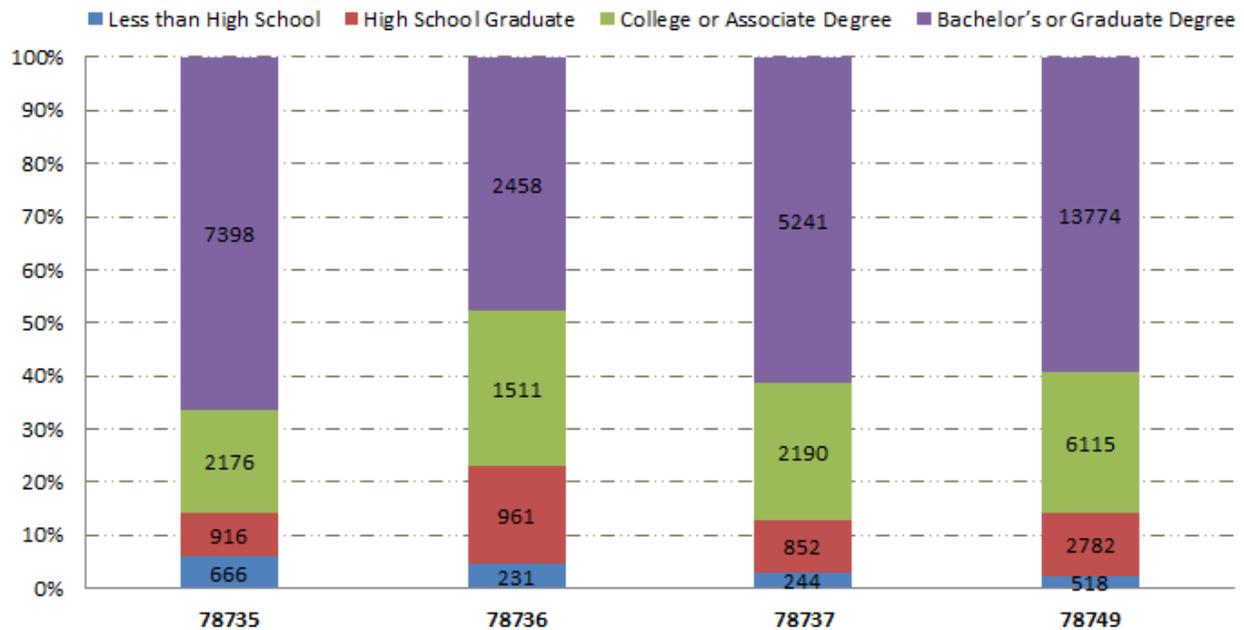
Source: 2010 U.S. Census



Source: 2010 U.S. Census

**Figure 5. Population Distribution by Age Cohort. Educational Attainment.**

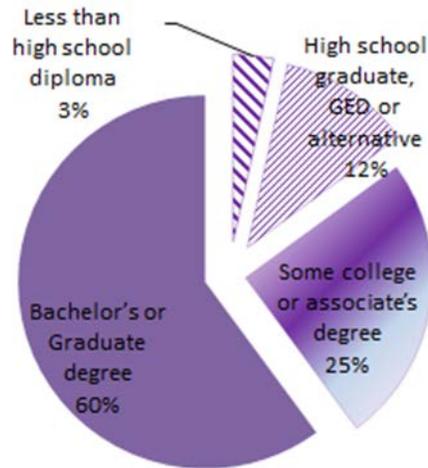
It is observed that 85 percent of people living in the study area had at least some college or a college degree, while 15 percent were high school graduates or lower. Figure 6 shows the breakdown of educational attainment by zip code.



Source: 2010 U.S. Census

**Figure 6. Educational Attainment of Study Area Zip Codes.**

Figure 7 shows the breakdown of educational attainment for the entire study area. Based on this figure, the residents living in the study area tend to be highly educated, with 60 percent having a bachelor or graduate-level degree.



**Figure 7. Educational Attainment for the Project Study Area.**

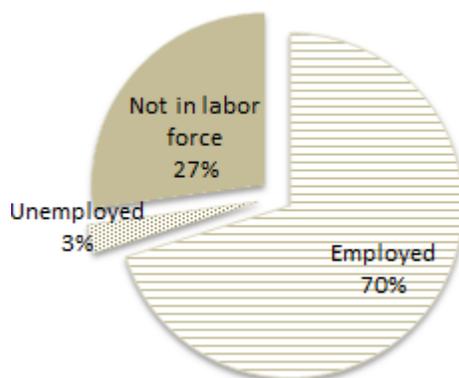
*Annual Median Household Income by Race*

Overall, the study area is highly affluent. The median income for a household in the study area was \$96,500 (Table 4), significantly higher than the average of the city (Figure 8). This household income correlates with the high level of educational attainment.

**Table 4. Median Household Income of the Affected Community (US\$ 2010).**

Zip Code	White	Black	Asian	Other	Hispanic	White, Not Hispanic
78735	\$71,580	\$78,264	\$104,245	\$44,013	\$47,909	\$74,964
78736	\$85,921	NA	\$128,490	NA	\$86,507	\$84,798
78737	\$116,012	\$230,179	\$209,926	\$102,692	\$71,618	\$118,189
78749	\$81,093	\$62,750	\$75,053	\$79,348	\$77,731	\$82,137
Overall	\$88,651	\$123,731	\$129,428	\$75,351	\$70,9415	\$90,022

*Source: 2010 U.S. Census*



Source: 2010 U.S. Census

**Figure 8. Employment Status (Population 16-64 Years Old).**

*Employment*

Table 5 and Figure 8 illustrate the employment status of the study area. In the study area, 1,422 people (3 percent) were reported as unemployed in the 2010 U.S. Census.

**Table 5. Employment Status of Study Area Residents by Zip Code.**

Zip Code	Employed	Unemployed	Not in Labor Force
78735	8,248 65%	314 3%	4,218 32%
78736	3,662 66%	203 4%	1,671 30%
78737	5,969 65%	255 3%	3,016 32%
78749	19,893 76%	650 3%	5,712 21%
Overall	37,772 70%	1,422 3%	14,617 27%

Source: 2010 U.S. Census

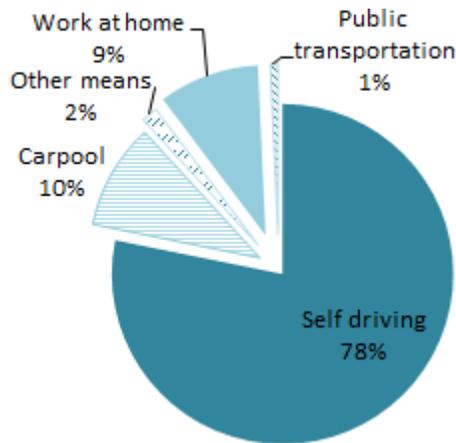
*Commuting Modes*

The commuting mode makeup of the study area was 28,840 (78 percent) driving alone, 3,702 (10 percent) carpooling, 3,516 (9 percent) working at home, and 832 (3 percent) using public transportation and other means. The distributions are shown in Table 6 and Figure 9.

**Table 6. Commuting Modes of Residents in the Study Area by Zip Code.**

Zip Code	Self-Driving	Car Pool	Other Means	Work at Home	Public Transportation
78735	6,058 76%	822 10%	109 1%	952 12%	26 1%
78736	2,540 74%	246 7%	95 3%	434 13%	115 3%
78737	4,510 76%	580 10%	52 1%	728 12%	21 1%
78749	15,732 79%	2,054 11%	309 2%	1,402 7%	105 1%
Overall	28,840 78%	3,702 10%	565 2%	3,516 9%	267 1%

Source: 2010 U.S. Census



Source: 2010 U.S. Census

**Figure 9. Commuting Modes for the Study Area (Workers 16 Years Old or Older). Summary of Community Profile.**

The study area is affluent and highly educated. The affected community represents a relatively low unemployment rate (3 percent). The population of the study area includes a high proportion of whites, and most people live in owner-occupied dwellings. These socio-economic and demographic characteristics of the study area indicate that this project might benefit from a technology-driven option for public participation.

**PUBLIC INVOLVEMENT PLAN**

**Agencies Involved/Key Project Stakeholders**

The agencies involved with the Oak Hill Parkway project include those named earlier as well as the Federal Highway Administration. Rodriguez Transportation Group (RTG) is the prime contractor for the consultant team. The project has benefited from a dedicated effort to include

the community in the project development process. The public involvement plan, developed by the Mobility Authority, includes a number of mechanisms to keep to the community informed and involved.

The main site for communications about the Oak Hill project is a website ([www.oakhillparkway.com](http://www.oakhillparkway.com)), maintained by the Mobility Authority. Social media tools include project-specific e-mail alerts and Twitter and Facebook accounts facilitated by TxDOT and the Mobility Authority.

### **Public Involvement Outreach Leader**

A consulting team led by RTG is responsible for the outreach effort.

### **Public Involvement Activities**

The public was invited to open houses and committees were formed to include members from neighborhoods along the corridor. Members and participants were invited to share their opinions regarding the design of the project during the environmental study phase.

### **Timeline of Public Outreach Efforts**

The following is a summary of the timeline of public outreach efforts for the Oak Hill Parkway project leading up to the May 23 traditional open house (TOH) and launch of the VOH:

- August 29, 2012: Envisioning Mobility Workshop.
- November 15, 2012: Public Scoping Meeting and Open House.
- January 31, 2013: Environmental Workgroup Meeting.
- February 18, 2013: E-Newsletter.
- February 19, 2013: Design Workgroup Meeting.
- March 19, 2013: Bike and Pedestrian Workgroup Meeting.
- May 2, 2013: E-Newsletter.
- May 16, 2013: Design Concept Preview Meeting.

### **Summary of Advertising for Public Engagement Efforts**

Advertising for the TOH and VOH were advertised concurrently leading up to the TOH and launch of the VOH on May 23, 2013. The TOH and VOH were advertised through traditional media outlets including newspaper press releases and local news coverage, as well as paid advertisements and posts on Facebook, Twitter and Google. The advertising efforts provided a heavier emphasis on the TOH leading up to May 23 and transitioned to heavier emphasis on the VOH at the conclusion of the TOH, during the period that the VOH was live (May 23 through June 3).

#### *Traditional Media Coverage for the Traditional and Virtual Open House*

A joint press release was drafted by the Mobility Authority and TxDOT, which included information about the TOH and VOH. Local news outlets that provided media coverage for the TOH and VOH included television (KXAN, YNN, FOX 7), print (*Community Impact*

*Newspaper, Oak Hill Gazette*), and radio (KLBJ) outlets. The estimated reach of the traditional media circulation was approximately 156,000 people.

#### *Local Community Websites*

In addition to media coverage, the TOH and VOH were advertised through several local community websites. The following is a summary of the sites that posted information about the Oak Hill Parkway project TOH and VOH:

- *TxDOT, Open House: Oak Hill Parkway—Texas Department of Transportation*: May 23, 2013—TxDOT will host an open house for the US 290/SH 71 West corridor between MoPac and RM 1826.
- *The Mobility Authority, Public Provides Feedback on Preliminary Oak Hill Parkway Design...*: May 24, 2013—Oak Hill Parkway Design Concepts at Open House. Opportunities for public involvement continue with virtual open house meetings...
- *Bike Austin, REMINDER: Oak Hill Parkway—Alternative Design Concepts...*: May 14, 2013—REMINDER: Oak Hill Parkway—Alternative Design Concepts Workshop #2...
- *Oak Hill Gazette, the Mobility Authority and TxDOT present options for long term...—Oak Hill Gazette*: May 22, 2013—The Central Texas Regional Mobility Authority and TxDOT presented nine transportation concepts for the ongoing Oak Hill Parkway project...

#### *Changeable Message Signs*

Changeable message signs were also used to advertise the TOH. The changeable message signs were located on both the eastbound and westbound sides of US 290 at the Y from May 20 through May 23, 2013. The changeable message signs read:

Oak Hill Pkwy Open House <FLASH> May 23 Small Mdl School 6-9 pm
--

#### *TOH Social Media Advertising: Twitter*

Twitter’s “promoted tweets” advertising was used to promote both the VOH and the TOH. Promoted tweets are targeted by metropolitan area and show up on Twitter users’ feeds even if they do not follow the Oak Hill Parkway project’s Twitter account (@OakHillParkway). For the Austin area, there is an audience of approximately 281,000 Twitter users. Also, traditional non-promoted tweets were shared in each of the project participants regular Twitter feed starting the week before the TOH.

*TOH Social Media Advertising: Facebook*

Facebook advertisements were used to promote the TOH. Advertisements were geo-targeted to the Oak Hill area and communities served by Oak Hill Parkway. Figure 10 provides an example of a Facebook advertisement promoting the TOH.



**Figure 10. Facebook Advertisement for the Traditional Open House.**

*TOH Social Media Advertising: Google Advertising*

Google advertisements were used briefly at the beginning of the TOH advertising campaign, but the Google advertisements did not generate as many clicks (number of times that a user clicks on an ad), so budget was shifted to Facebook and Twitter.

*VOH Social Media Advertising: Twitter*

Twitter’s promoted tweets advertising was used to promote the VOH. Promoted tweets with the direct URL for the VOH ([www.oakhillopenhouse.com](http://www.oakhillopenhouse.com)) in the tweet were tweeted on May 24, May 25, May 26, May 27 and May 28. In addition to promoted tweets, the Oak Hill Parkway, TxDOT Austin District, TxDOT and the Texas A&M Transportation Institute (TTI) Twitter accounts tweeted 39 tweets—between May 23, the day the VOH went live, and May 28, the second real-time chat session—that directly mentioned the VOH. Twenty-six of these 39 tweets included a direct link to the VOH. In addition, the 26 tweets that were directly linked to the VOH were re-tweeted at least 24 more times by other Twitter accounts. Figure 11 provides an example of a tweet from the Oak Hill Parkway Twitter account (@OakHillParkway), and Figure 12 provides an example of a re-tweeted tweet.



**Figure 11. Tweet from the Oak Hill Parkway Twitter Account with a Direct Link to the Virtual Open House.**



**Figure 12. Example of a Re-tweet with a Direct Link to the Virtual Open House**

*VOH Social Media Advertising: Facebook*

Facebook advertisements were used to promote the VOH as well. Advertisements were geo-targeted to the Oak Hill area and communities served by Oak Hill Parkway. Facebook ads with links directly to the VOH were placed on May 24, May 25, May 26, May 27 and May 28. Figure 13 provides an example of a Facebook advertisement.



**Figure 13. Facebook Advertisement for the Virtual Open House.**

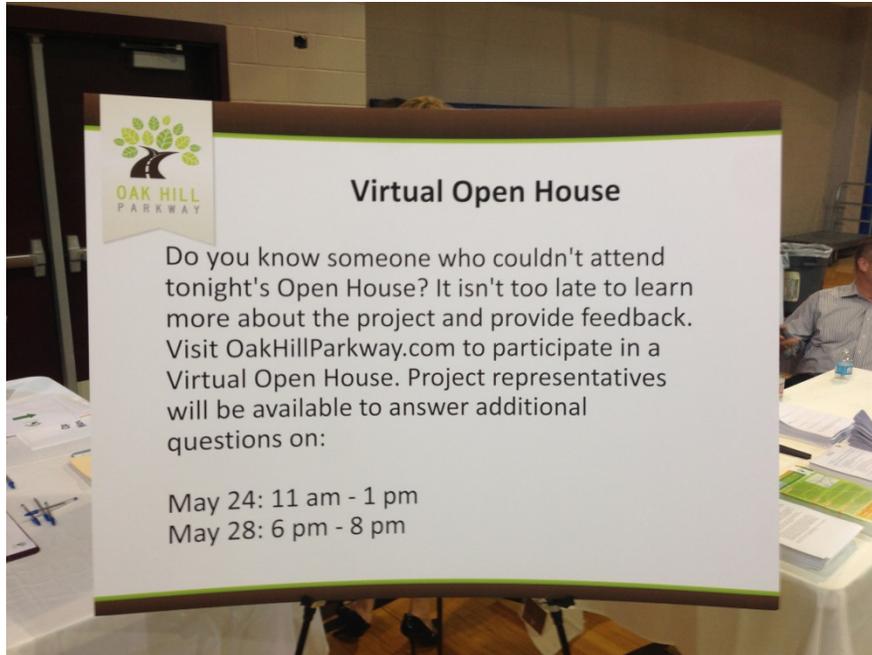
In addition to paid advertisements, TTI posted an advertisement for the VOH, which was shared by TxDOT, Young Professionals in Transportation and CapMetro’s official Facebook pages. Figure 14 provides a screenshot of this Facebook post.



**Figure 14. Texas A&M Transportation Institute Facebook Post Promoting the Virtual Open House.**

*Promotion of the Virtual Open House at the Traditional Open House*

In addition to external advertising, the VOH was also promoted at the TOH. A board with information about the VOH and directions on how to access the VOH was prominently displayed directly next to the sign-in table by the entrance/exit. Oak Hill Parkway staff also distributed a flyer promoting the VOH with other TOH materials upon entrance to the open house. Figure 15 provides a picture of the board promoting the VOH at the TOH.



**Figure 15. Board Promoting the Virtual Open House at the Traditional Open House.**

## **DESCRIPTION OF THE TRADITIONAL AND VIRTUAL OPEN HOUSE**

### **Objective of the Traditional Open House**

The TOH provided an in-person, hands-on experience to discuss design scenarios and construction options for Oak Hill Parkway. It featured stations for each option with display boards, schematic diagrams and specific details for each alignment. A representative from the project team was located at each station to answer questions about each design scenario and facilitate discussion about the Oak Hill Parkway project.

### **Format of the Traditional Open House**

The TOH was held on Thursday, May 23, 2013, from 6:00 to 8:00 p.m. at Clint Small Middle School in Austin, Texas. Interested parties signed in and were given information packets and a brief explanation of the layout of the stations. Participants were able to flow freely through the room to view each design scenario at their leisure.

### **Objective of the Virtual Open House**

The VOH provided users with an online, interactive experience that was designed to mimic the Oak Hill Parkway project's TOH as closely as possible. The opening page provided an overview of the VOH, and then visitors were asked to sign in. The website featured the same display boards and schematics presented at the TOH and included videos that explained each of the eight concepts under consideration for the Oak Hill Parkway project (7 newly developed concepts and a concept developed during a previous study of the corridor) as well as the no-build alternative.

In addition, in order to provide an interactive experience that more closely resembled the TOH, the VOH featured two separate real-time chat sessions where the materials presented were accompanied by the presence of an Oak Hill Parkway project representative via a real-time chat feature. The real-time chat feature enabled users of the VOH to ask questions directly of Oak Hill Parkway project representatives, as well as provide comments regarding the material presented to them.

The objective for offering the VOH was to compare participation to that obtained at the TOH. The hypothesis was that a VOH is more convenient and accessible because it can be viewed at any time and does not require special travel or childcare arrangements in order to participate.

### **Format of the Virtual Open House**

The VOH was live from May 23 to the conclusion of the official comment period for the Oak Hill Parkway project on June 3. On both May 24 from 11:00 a.m. to 1:00 p.m. and May 28 from 6:00 p.m. to 8:00 p.m., users were given the opportunity to participate in a real-time chat with Oak Hill Parkway project representatives. During the real-time chat sessions, VOH users were able to ask questions and provide comments directly to Oak Hill Parkway project representatives.

The format of the VOH is organized in the manner described in the following subsections.

#### *Landing Page*

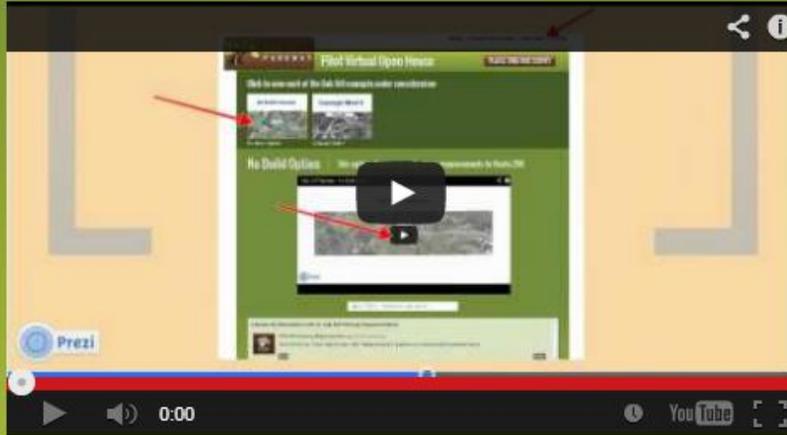
The VOH was styled to replicate the design of the Oak Hill Parkway project website. The landing page featured an introduction video that provided a brief overview of the Oak Hill Parkway project, an explanation of what the VOH intended to accomplish, instructions on how to use the VOH, rules that users had to follow in order to participate in the VOH, a project disclaimer that explained that the VOH was a pilot test, and, finally, directions on how to enter the VOH.

The landing page also provided a written explanation of the VOH's purpose, an overview of how to use the VOH, links to the Oak Hill Parkway project website, a link to join the Oak Hill Parkway's e-mail list, a project disclaimer that explained that the VOH was a pilot test, a link to background information, and frequently asked questions.

The top of the landing page featured a highly visible button that instructed users to "please register to visit" the VOH. Figure 16 provides a screenshot of the VOH landing page.

## Welcome to the Oak Hill Parkway Virtual Open House!

Watch the video below to get started



### This Site's Purpose

Thank you for visiting! This site is a pilot test for a virtual open house. A virtual open house provides an online forum for you to learn about possible improvements to the roads in your community. It is designed to make it more convenient for you to provide feedback or ask questions. Your state and local transportation agencies value your opinion, and are actively working to improve your experience. Start by watching the video above, registering for the site, and watching the concept videos we have developed. If you would like to provide your input or ask some questions, the box below all videos has a discussion area for you to join the discussion. We do ask that you please keep the discussion civil and on-topic.

### How to use the site

- Watch the virtual open house introduction video above.
- Register for the site and join in on the community discussion.
- Participate in a real-time chat discussion with an Oak Hill Parkway project representative during the following times:
  - Friday, May 24th from 11 am until 1 pm
  - Tuesday, May 28th from 6 pm until 8pm.
- Watch the videos for each concept and provide feedback, comment or ask questions of our Oak Hill Parkway project representative.
- If you have any questions about how the virtual open house works, ask in our virtual help desk below. You can also access the help desk in the virtual open house by clicking the virtual help desk link at the top of the page.
- Click the "Please Take Our Survey" button at the top of any concept page to provide your input on the effectiveness and usefulness of this technology.
- [Click here for the Oak Hill Parkway Project website](#)
- [Join our email contact list](#)

### New to the project?

- [Why are we doing this project?](#)
- [FAQs](#)

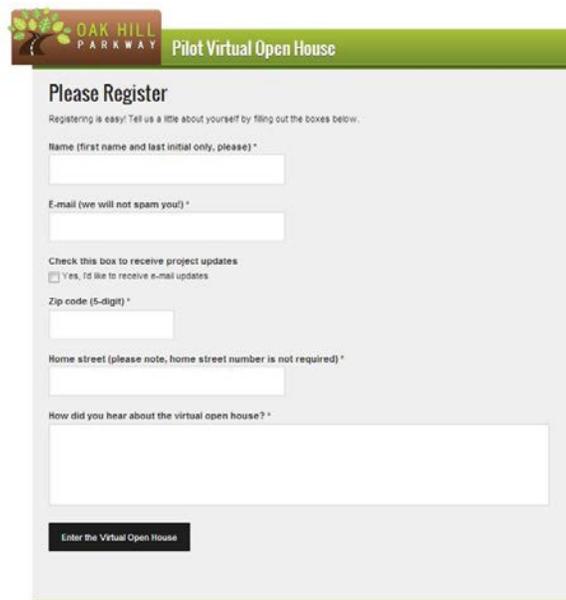
### Disclaimer

This site is part of a pilot project to assess the effectiveness of using online resources to enhance opportunities to participate in the transportation planning process. The information and concepts discussed on the site are draft concepts only. They are not intended as a final plan and are subject to change. Comments made on this site in the discussion area are encouraged but will not be part of the official record and documented in the Environmental Impact Statement for the project. For information on a formal comment and directions on how to submit one, please visit the Oak Hill Parkway project website by clicking [here](#). This site is designed as a tool to improve community engagement and project representatives will make every effort to relay information that is accurate and up-to-date. We ask that all participants behave in a courteous and respectful manner. Inflammatory, obscene, or off-topic language or behavior will not be tolerated and persistent disregard for proper behavior and stated rules will result in the revocation of a user's privileges and removal from the community discussion.

Figure 16. Screenshot of the Virtual Open House Landing Page.

### *Registration Page*

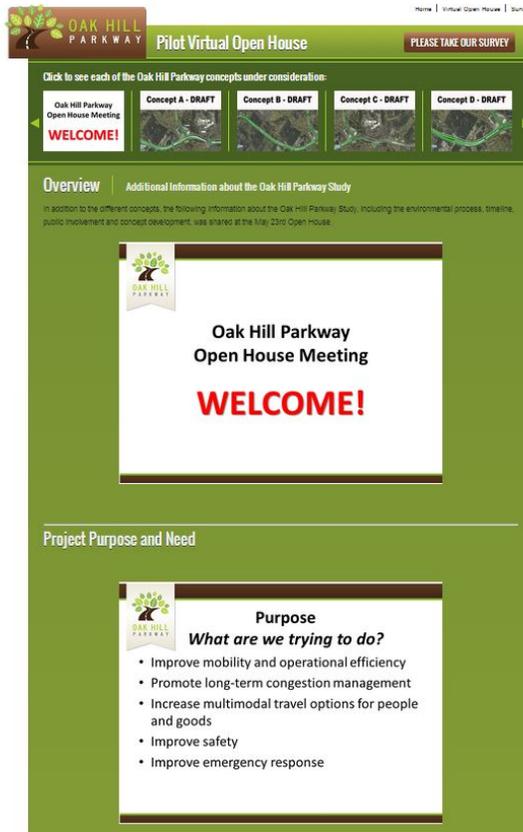
The registration page for the VOH asked users for their name (first name and last initial), e-mail address, whether they would like to receive e-mail updates, zip code, home street and how they heard about the virtual open house. The intent of the registration page was primarily to register users for the real-time chat feature. The motive for requiring users to register in order to enter the VOH was to deter users from providing feedback anonymously, with the assumption being that users would be more likely to provide constructive, rather than derogatory, feedback if they provided basic information about themselves. The registration page also enabled TTI to collect general information on what neighborhoods users lived in and how they heard about the VOH. Figure 17 provides a screenshot of the VOH registration page.



**Figure 17. Screenshot of the Virtual Open House Registration Page.**

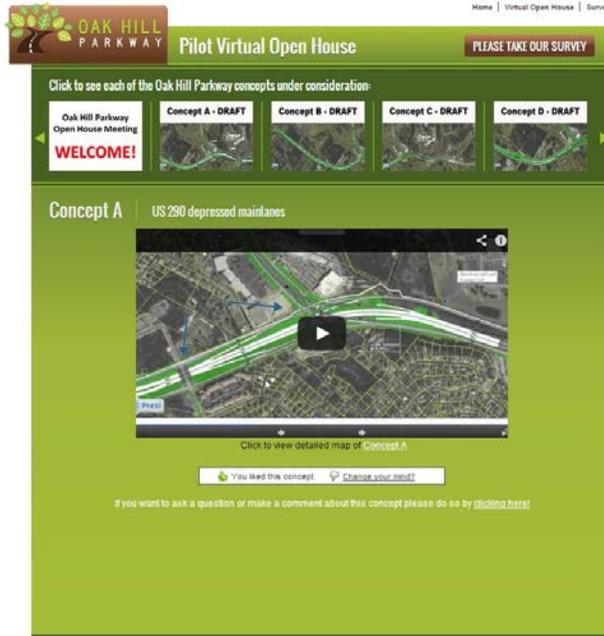
### *Virtual Open House—Concept Pages*

The VOH concept pages were where the Oak Hill Parkway project materials were disseminated to users. Upon entry, users landed on an Overview page. The Overview page featured images of all of the display boards presented at the Oak Hill Parkway TOH. The display boards featured in the VOH Overview page included the following topics: project purpose and need, survey results on project purpose and need, background on the environmental process for the Oak Hill Parkway project, project schedule, next steps for the Oak Hill Parkway study, background on the Green Mobility Challenge, a summary of public comments for each of the concepts under consideration for the Oak Hill Parkway project, and a summary of public involvement during the Oak Hill Parkway project. See Figure 18 for a screenshot of the VOH Overview page.



**Figure 18. Screenshot of the Virtual Open House Overview Page.**

The concept pages were organized as a row of thumbnails at the top of the VOH, with each of the eight concepts, the no-build alternative and the overview page featured as a linked thumbnail. When a user scrolled his or her mouse over a thumbnail, a brief description of that concept/page was provided, and the user could then click on a thumbnail, which would open the page for that concept. Figure 19 provides a screenshot of the VOH Concept A page.



**Figure 19. Screenshot of the Virtual Open House Concept A Page.**

Each concept page featured a video describing the concept. The videos for all eight concepts and the no-build alternative were developed in an identical manner. The videos featured complete schematics of each of the concepts with a voiceover that explained the specific details of each concept. While the details of each concept were being presented, the corresponding locations on the schematics were zoomed in on, and the mouse was used as a pointer to further illustrate the descriptions. Videos were uploaded to YouTube and embedded in the VOH in order to maximize user familiarity and ease of use. A link to a full PDF of the featured concept was also included directly below the video so users could view each concept in greater detail. Figure 20 provides a screenshot of a concept video.



**Figure 20. Screenshot of the Concept A Video with the Mouse Acting as a Pointer.**

Each concept page in the VOH also provided the user with the ability to “like” or “dislike” each concept based on the video that he or she had just watched by clicking on a “thumbs up” or “thumbs down” button located directly below the concept video. Users were not able to see the total number of likes and dislikes for each concept when they clicked their choice. They were only able to see that they had chosen an option and what that choice was. Figure 21 provides an example of this feature.



**Figure 21. Screenshot of the Like/Dislike Feature for Content Videos.**

### *Survey*

For evaluation purposes, the VOH also included an exit survey for the participants. The purpose of the exit survey was to capture information regarding how effective the VOH was overall and how effective the various features of the VOH were, and to capture a small amount of demographic information. Once users entered the VOH from the registration page, the top of the page featured a large, highly visible button that directed users to “please take our survey.” When users clicked this button, they were directed to a separate page where the survey was featured. The introduction video featured on the landing page also provided an explanation of why it was important for users to provide feedback regarding the VOH through the exit survey.

The exit survey consisted of 13 questions regarding the effectiveness of the VOH, using a Likert scale to measure user feedback; four questions regarding the technology that users used to participate in the VOH; and three demographic questions (age, race and income). Figure 22 provides a screenshot of the VOH exit survey. The exit survey page also featured a project disclaimer that explained that the VOH was a pilot test, with a link to the contact page on the Oak Hill Parkway project website.

Home | Virtual Open House | Survey

**OAK HILL PARKWAY** Pilot Virtual Open House

### Survey

As noted, this virtual open house is part of a pilot program. Your responses to the questions below will help determine whether this technology should be available in the future.

I enjoyed the virtual open house experience.  
 Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

I was able to easily navigate the virtual open house website.  
 Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

The material presented in the virtual open house was useful and informative.  
 Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

The material in the virtual open house was easy to access.  
 Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

The concepts presented were useful and informative.  
 Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

I was able to understand the proposed concepts.  
 Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

The graphics clearly explained the concepts.  
 Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

The videos clearly explained the concepts.  
 Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

The videos were an appropriate length.  
 Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

The video quality was good.  
 Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

The audio quality on the videos was good.  
 Strongly Agree  Agree  Neutral  Disagree  Strongly Disagree

**Figure 22. Screenshot of the Virtual Open House Exit Survey.**

### *Real-Time Chat Sessions*

On both May 24 from 11:00 a.m. to 1:00 p.m. and on May 28 from 6:00 p.m. to 8:00 p.m., users were given the opportunity to participate in a real-time chat with Oak Hill Parkway project representatives. During these sessions, Oak Hill Parkway project representatives were stationed at computers in order to reply directly to users, in real-time, regarding questions or comments that they had about the Oak Hill Parkway project concepts. Project team members were assigned to monitor and reply to specific concepts to ensure consistency of responses to the public comments posed. Figure 23 shows the command center during the real-time chat session.

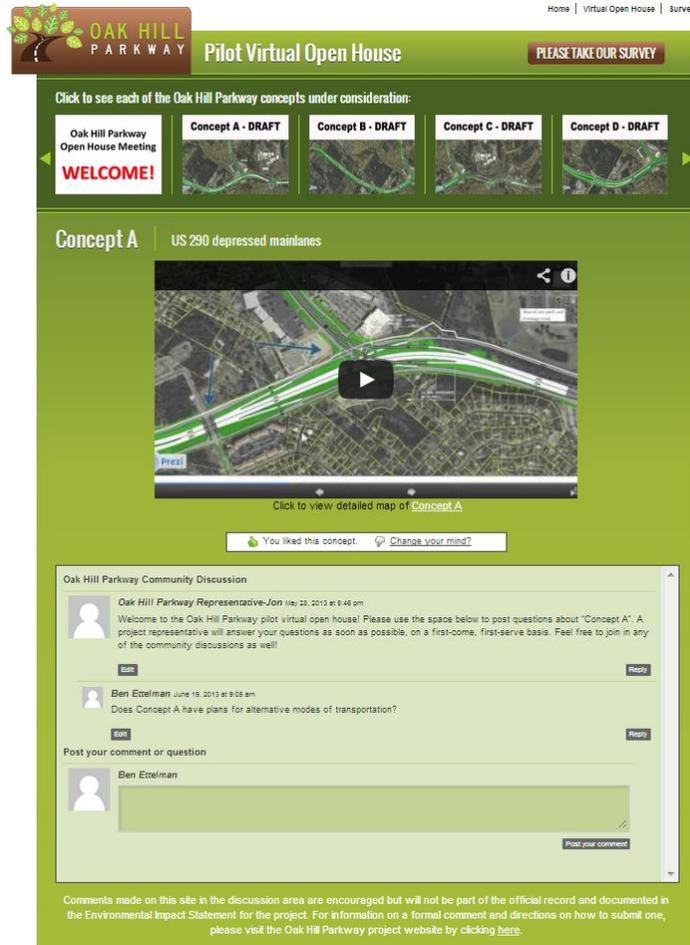


*Photo credit: TTI*

**Figure 23. Picture of the Command Center during a VOH Real-Time Chat Session.**

During the real-time chat sessions, a chat box was featured below the concept videos, and users were able to enter questions and comments directly into the chat box. A highly visible disclaimer was featured directly below the chat box advising users that the comments received during the VOH were encouraged but were not considered part of the official public record. The disclaimer also provided a link for users to follow in order to enter a comment into the official public record, if they desired. Figure 24 provides a screenshot of a VOH concept page during the real-time chat sessions.

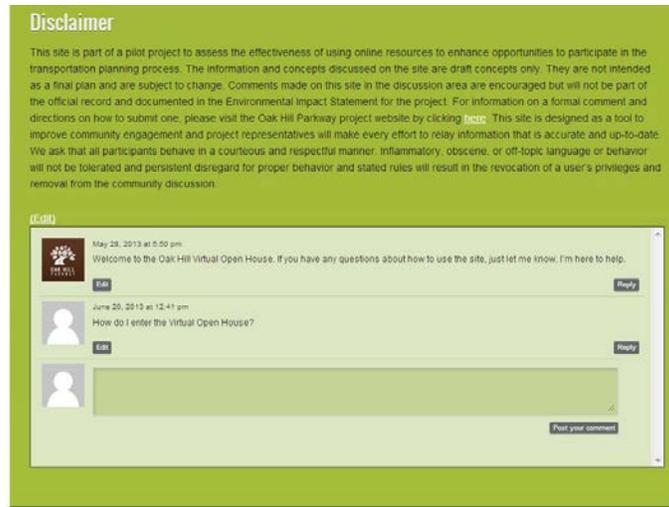
A complete summary of user and staff comments can be found in the appendix.



**Figure 24. Screenshot of the Virtual Open House Concept Page during a Real-Time Chat Session.**

### *Virtual Help Desk*

During the real-time chat sessions, a virtual help desk was featured at the bottom of the VOH landing page. The purpose of the virtual help desk was to provide users who were experiencing difficulty navigating the VOH with technical help. The presence of the virtual help desk was explained in the introduction video and was also featured in text on the landing page itself. Once users entered the VOH, a link to the virtual help desk was featured on the website navigation bar at the top of every page in the VOH. Figure 25 provides a screenshot of the virtual help desk at the bottom of the landing page.



**Figure 25. Screenshot of the Virtual Help Desk Available during a Real-Time Chat Sessions.**

### **VOH Command Center Setup**

In order to provide seamless communications during the virtual open house, TTI set up a command center so that the project representatives could all be in the same room while the real-time chat was taking place. The command center consisted of a large room with tables set up in a U shape, with all Oak Hill Parkway representatives and TTI staff sitting with laptops along the outside of the U. Real-time website analytics for the VOH were projected onto a screen in the front of the room so everyone in the room could monitor the number of attendees and other VOH statistics during the real-time chat sessions.

All representatives responsible for managing a content chat box were provided with a unique VOH login, which they were able to customize to include their name. For example, Oak Hill Parkway project representative Kelli Reyna’s name was displayed as “Oak Hill Parkway Representative—Kelli” in order to personalize the user experience in the VOH.

Each Oak Hill Parkway project representative was provided with digital copies of canned language to use for a variety of situations in order to increase staff efficiency and message consistency. To increase the efficiency in which representatives were able to respond to VOH users, language was developed as a team to answer questions that representatives felt might be asked more than once (environmental issues, trees, etc.) as well as to respond to potential disruptive VOH users who broke stated rules. In addition to canned language developed for specific topics and unruly VOH users, four standard statements were developed:

- A standard introduction that representatives entered at the start of the real-time chat sessions.
- A standard statement alerting users that 15 minutes remained before the real-time chat closed.

- A statement explaining that the VOH was closed was developed for the end of the real-time chat sessions.
- A canned message urging users to take the VOH exit survey.

## **DUTIES DURING THE VIRTUAL OPEN HOUSE**

The VOH was a joint effort of TxDOT, the Mobility Authority, the Oak Hill Parkway project consultant team and TTI. The agencies and consultants worked extremely well together in order to develop the content, framework and plan for the implementation of the VOH.

### **Oak Hill Parkway Representative Duties**

Oak Hill Parkway representatives were stationed at laptops in the command center. Ten representatives were assigned to one concept page each: eight concepts, the no-build alternative and the overview page. These ten representatives were primarily responsible for responding to any questions or comments entered in the chat box associated with their assigned concept. In addition to the Oak Hill Parkway project representatives stationed at each of the concepts and overview page chat boxes, approximately four unassigned representatives were tasked with providing support to the nine chat boxes. These representatives helped with monitoring the flow of comments/questions as they were entered to make sure that nothing was overlooked, and with formulating answers and responses to users' comments and questions.

### **TTI Staff Duties**

TTI staff provided technical support to Oak Hill Parkway project staff members to ensure that the chat functions worked properly and Internet connectivity did not interfere with the chat sessions. TTI staff also provided additional backup support to Oak Hill Parkway project staff stationed at each of the concept chat boxes to ensure that all comments/questions entered were addressed. This was especially important when user activity in concept chat boxes was heavy.

Additionally, one TTI staff member was tasked with supervising the virtual help desk. This staff member monitored the virtual help desk chat box and provided technical support for users, as necessary.

### **Number of Staff Needed to Pilot VOH Real-Time Chat Sessions**

There was 18 to 22 Oak Hill Parkway project representatives present at the pilot VOH real-time chat sessions. At a minimum, 14 representatives were required, one for each concept and the overview page, and four unassigned representatives for backup/support. There was five TTI staff members present at the pilot VOH real-time chat sessions. At a minimum, three staff members were required to staff the virtual help desk and provide backup/technical support.

### **Technical Implementation Issues**

The VOH initially experienced technical issues during the real-time chat sessions due to the large amount of bandwidth that was required for the Oak Hill Parkway project representatives and TTI staff to concurrently operate and monitor the chat boxes. During both sessions, staff connected to

the Internet using a combination of TTI wireless access points and TTI Ethernet ports. Planning to ensure that sufficient bandwidth is available is crucial to the success of the VOH real-time chat sessions.

## **VIRTUAL OPEN HOUSE DEVELOPMENT BACKGROUND**

The following is a brief overview of the background of the development of the VOH and its features.

### **Cost of Setting Up the Virtual Open House: Hardware/Software**

The Oak Hill Parkway VOH was developed using the Wordpress<sup>®</sup> web development platform, which costs a nominal fee based on acquiring a domain name for the site. The theme used to style the VOH was a custom theme built on the Genesis Framework and costs \$80. Note that the \$80 cost is a one-time fee for this software, which can be used to develop multiple websites. The software/platforms used to develop the concept videos included Prezi<sup>®</sup> Presentation Tool, a free version of the web-based software (paid options are available as well); oCam Screen Capture, a free downloadable software; iMovie, a video-editing software available on Macintosh computers; and YouTube, a free video-sharing website. Concept video presentations were created using Prezi, and each video was developed using oCam. The videos were combined with audio recorded on a digital recorder by Oak Hill Parkway representatives using iMovie. The final products were uploaded to a YouTube channel, which was created for the VOH and embedded directly into the VOH.

### **Cost and Time to Develop the Virtual Open House: Personnel/Staff**

The development of the pilot VOH was funded through the Texas Mobility Improvement Priorities project to demonstrate a way to expand the reach of traditional public engagement activities. Consequently, neither the agencies nor the Oak Hill Parkway project consultants funded the development of the VOH. However, the project consultants and agency staff each contributed staff time in the development of the concepts and the review of the website and videos.

TTI staff spent a considerable amount of time in researching the technology that would best meet the needs of the VOH and yet still be user friendly. TTI staff spent approximately 1,600 hours over four months developing the VOH, including designing the website, researching appropriate software/technology systems, preparing for and hosting the VOH command center, drafting and reviewing website text, recording videos, creating the overview presentation, and determining an appropriate evaluation methodology.

A large portion of this work was a one-time effort. For example, the framework of the VOH has been developed; therefore, subsequent efforts would not require as much research and testing. The framework can be readily adapted for a different project. If an agency were to develop a

similar VOH, significant roles and associated costs for web developers, content developers and project management should be considered.

### **Development Issues**

The VOH was not a standard website that could be developed using the basic features of most website templates/themes. The VOH required custom development and modifications to the theme that was used to build the site. This level of customization requires a skilled web developer who is comfortable with solving numerous development problems throughout the course of the development process.

## **TRADITIONAL AND VIRTUAL OPEN HOUSE DATA RESULTS**

### **Traditional Open House Data**

The Oak Hill Parkway TOH was held at Clint Small Middle School in Austin, Texas, on Thursday, May 23, 2013, from 6:00 p.m. to 8:00 p.m. TTI staff were present to collect observational attendance and demographic data, as well as conduct a brief exit survey, in order to compare data gathered from the TOH with data gathered from the VOH. The following is a summary of the results of data collection from the Oak Hill Parkway TOH.

#### *Traditional Open House Attendance Data*

Observational attendance data were informally gathered to record the public flow at the Oak Hill Parkway TOH. TTI staff was stationed at the entrance to the open house and recorded entry and exit counts in 15-minute increments.

Figure 26 provides the public flow data collected at the open house. Based on tally counts of entries, 81 people attended in-person, not including project representatives and staff. In addition, there was approximately 30 project staff present at the TOH not included in the attendance and demographic data collected.

The open house was scheduled from 6:00 p.m. to 8:00 p.m., but 11 people had already entered by 6:00 p.m. Table 7 shows that most people entered the open house between 6:00 and 6:45 p.m., 26 percent between 6:00 and 6:15 p.m., 17 percent between 6:15 and 6:30 p.m., and 17 percent between 6:40 and 6:45 p.m. The majority of people exited the open house after 7:00 p.m., 23 percent between 7:00 and 7:15 p.m., 18 percent between 7:15 and 7:30 p.m., 18 percent between 7:30 and 7:45 p.m., and 26 percent between 7:45 and 8:00 p.m.

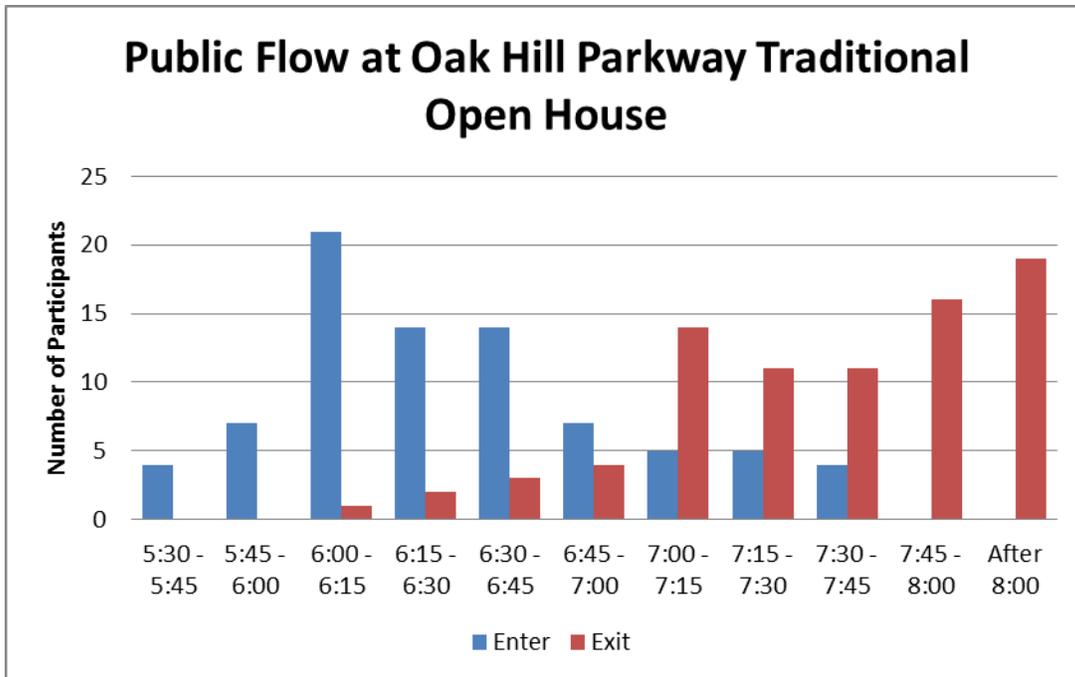


Figure 26. Public Flow at the Oak Hill Parkway Traditional Open House.

Table 7. Public Flow at the Oak Hill Parkway Traditional Open House.

	Enter		Exit	
	Count	Percent of Total	Count	Percent of Total
5:30 - 5:45	4	5%	0	0%
5:45 - 6:00	7	9%	0	0%
6:00 - 6:15	21	26%	1	2%
6:15 - 6:30	14	17%	2	3%
6:30 - 6:45	14	17%	3	5%
6:45 - 7:00	7	9%	4	6%
7:00 - 7:15	5	6%	14	23%
7:15 - 7:30	5	6%	11	18%
7:30 - 7:45	4	5%	11	18%
7:45 - 8:00	0	0%	16	26%
After 8:00	0	0%	19	31%

*Traditional Open House Demographic Data*

Data on gender, age and race were collected by observation at the Oak Hill Parkway TOH.

Table 8 shows the demographic data collected at the open house. The majority of attendees were observed to be male, approximately between 30 and 65 years of age, and white.

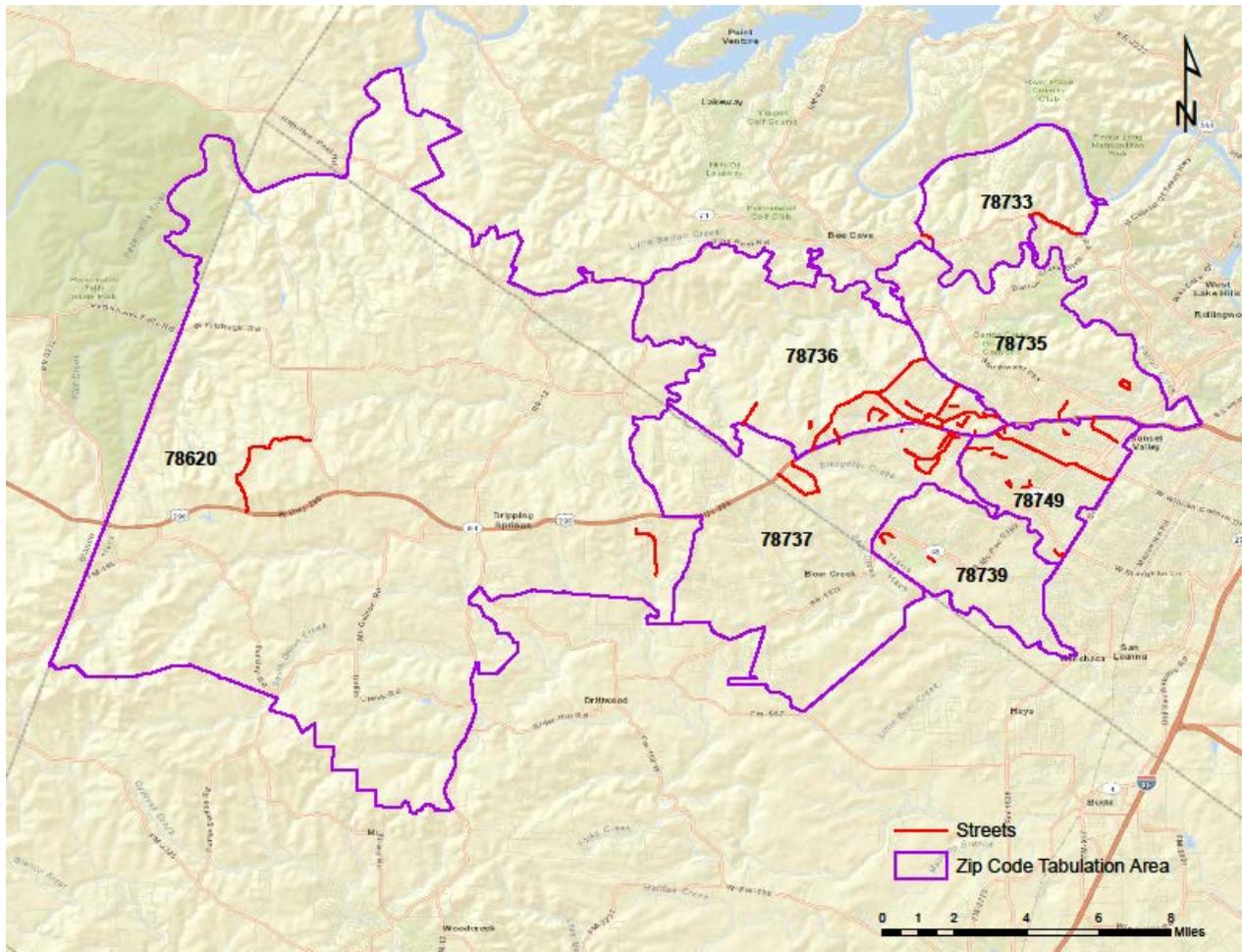
**Table 8. Observational Demographic Data from Oak Hill Parkway Traditional Open House.**

	Gender		Age Range			Race		
	Male	Female	Under 30	30 - 65	Over 65	White	Hispanic	Other
<b>Count</b>	51	30	9	39	32	69	5	4
<b>Percent of Total</b>	63%	37%	11%	49%	40%	88%	6%	5%

*Traditional Open House Exit Survey*

Participation in an exit survey was also requested of those attending the Oak Hill Parkway TOH. The exit survey was conducted by TTI staff, who intercepted the TOH participants as they left the event. Overall, 44 of the 81 participants took the time to complete the exit survey.

Based on information gathered through the surveys, nine area zip codes and 38 different home streets were represented at the TOH (see Figure 27).



**Figure 27. Location Streets of Traditional Open House Attendees.**

The TOH was widely publicized through a number of media outlets. In the survey, attendees were asked how they had heard about the open house and given several choices—website, radio, television, newspaper, neighborhood, friends, changeable message sign or other.

Table 9 shows that of the people surveyed, most people saw information posted about the open house on a changeable message sign, through other ways, or in the newspaper—32 percent, 30 percent and 18 percent, respectively. The changeable message signs were placed at eastbound and westbound US 290 at the Y from May 20 to 24, 2013.

**Table 9. TOH Exit Survey Results of Where Attendees Heard about the Traditional Open House.**

How did you hear about this open house?		
a) Website	4	8%
B) Radio	0	0%
C) Television	1	2%
D) Newspaper	9	18%
E) Neighborhood	4	8%
F) Friend	1	2%
G) Changeable Message Sign	16	32%
H) Other	15	30%

Other people said they heard about the open house through ways not included in the survey question, such as various e-mail lists, other community meetings and social media. The TOH was advertised in the *Austin American-Statesman* and the *Community Impact Newspaper*.

All attendees surveyed said the concepts presented were both useful and informative, and they understood what each concept was presenting. Most people, 77 percent, felt that the diagrams clearly explained the concepts. Several people suggested that the subtle differences between the alternatives be made clearer, especially for the lane configurations, the location of stop lights, and the elevation of the elements, and that there be less technical jargon in the description and key points of each alternative. Table 10 provides the exit survey results regarding the concepts presented.

**Table 10. Exit Survey Results Regarding Concepts Presented at the Traditional Open House.**

<b>Did you think that the concepts presented were useful and informative?</b>		
A) Yes	43	100%
B) No	0	0%
Comments: some lane configurations were difficult to understand, subtle differences could be made clearer		
<b>Did you understand the concepts presented?</b>		
A) Yes	44	100%
B) No	0	0%
<b>Did you think that the graphics clearly explained the concepts?</b>		
A) Yes	33	77%
B) No (anything specific?)	10	23%
Comments: difficult to differentiate items on map (stop lights; elevation), less jargon, better visuals, better explanation, highlight major differences		

The majority of people surveyed felt more informed about the Oak Hill Parkway project after the open house (Table 11).

**Table 11. Information Results.**

<b>Do you feel more informed about the project?</b>		
<b>A) Yes</b>	40	91%
<b>B) No</b>	4	9%

When asked if they preferred to come to an in-person open house or view the details over the Internet, 78 percent said they would rather come in-person because there is opportunity for hands-on interaction with project representatives and other attendees, better explanation of the concepts, and better visuals. Several people said they would like to have both options—traditional open house and Internet—because they could refer back to the concepts and ask more questions, if needed. Table 12 shows the overall breakout of the responses.

**Table 12. Open House Preferences.**

<b>If you have the option, would you prefer to come here in person or view the details over the Internet?</b>		
<b>A) In person</b>	35	78%
<b>B) Internet</b>	3	7%
<b>Both</b>	7	16%

*Other Observations for the Traditional Open House*

Each alternative had a separate station for attendees to read key points, view schematic diagrams, and ask questions of project representatives. Based on TTI observations, the “No Build” and “E-1” alternatives had the fewest amount of visitors.

Several people made complaints about the lack of parking and accessibility at the TOH. A school-sponsored event was scheduled at the same time as the TOH, which further limited the amount of parking and caused the location of the TOH to be changed at the last minute.

**Virtual Open House Data**

The VOH was live from May 23 through June 3, with two real-time chat sessions being held on May 24 from 11:00 a.m. to 1:00 p.m. and on May 28 from 6:00 p.m. to 8:00 p.m. The site URL was [www.oakhillopenhouse.com](http://www.oakhillopenhouse.com).

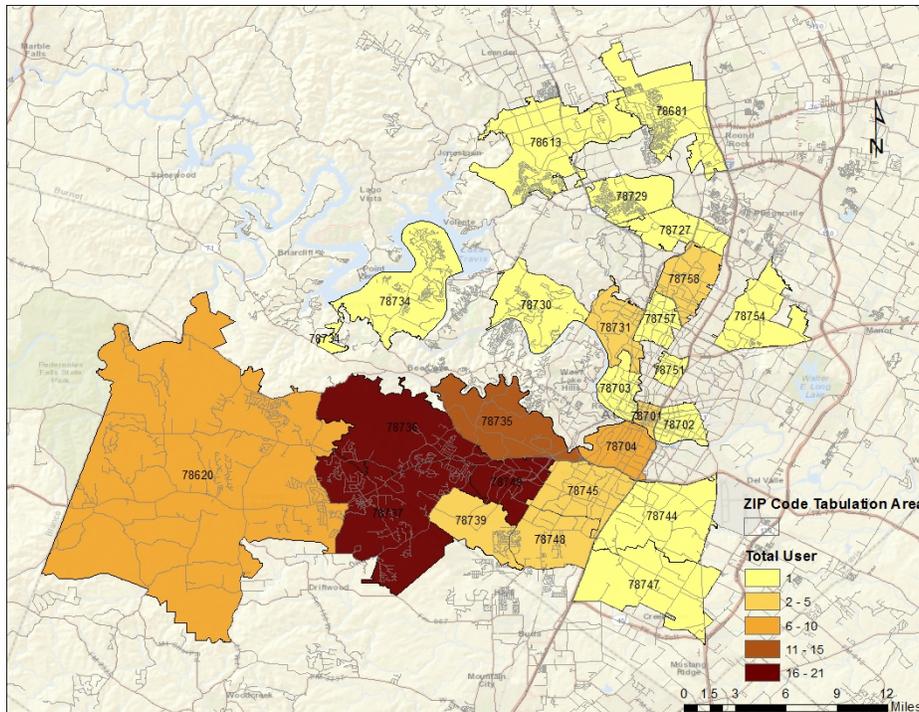
*Data Retrieved from Project-Specific Site Design*

The Oak Hill Virtual Open House was designed with the intention of capturing as much data as possible to evaluate the effectiveness of the pilot program. Some of these metrics were in the form of survey questions, and some were in the form of data that was captured in the back end of the VOH itself. The following subsections give a summary of the data retrieved through the VOH.

*Registration Page Data*

A total of 126 users registered for the VOH through the registration page throughout the duration that the VOH was live (May 23 through June 3). All registrants were asked for an e-mail address and a first name. Those that provided an e-mail address were asked to check a box if they would like to receive e-mail updates about the project. Of the 126 users that registered, 61 (48 percent) checked the box indicating that they were interested in receiving e-mail updates.

Registrants were also asked to indicate their home street and zip code. Figure 28 provides a map of all registrant-indicated home zip codes.



**Figure 28. Total Registered Users for the Virtual Open House with the Zip Code and Neighborhood or City.**

Additionally, registrants were asked to indicate where they had heard about the VOH. Registrants’ answers were grouped into the following categories and tallied: media, e-mail, Internet, social media, word of mouth, TxDOT/Mobility Authority/TTI staff, the TOH and other. Table 13 provides the results of registrants’ responses about where they heard about the VOH.

**Table 13. Sources Where Registered Users Heard about the Virtual Open House.**

Information Source	Total Users	% of Total
Media	31	24.6%
Email	21	16.7%
Internet	21	16.7%
Social Media	18	14.3%
Word of Mouth	16	12.7%
TxDOT/CTRMA/TTI Staff	10	7.9%
Traditional Open House	8	6.3%
Other	1	0.8%

*VOH Help Desk and Posted Comments and Questions*

The help desk was featured on the bottom of the VOH landing page with the purpose of providing real-time technical guidance for users who needed assistance using the VOH. The VOH also featured a link in the navigation bar at the top of each page that connected users back to the help desk, if necessary.

In addition to the help desk, each concept page and the overview page in the VOH featured a real-time chat box for users to ask questions and provide comments regarding the Oak Hill Parkway concept featured on that page during the days that the real-time chat sessions were held. Each chat box was staffed by an Oak Hill Parkway representative. Table 14 provides a summary of the number of comments and questions that users entered during the real-time chat sessions for the help desk, overview page and concept pages. Tables A1 through A5 in the appendix provide a complete summary of all comments and questions entered in the VOH.

**Table 14. Total Number of Comments and Questions Entered by Users during VOH Real-Time Chat Sessions.**

	May 24	May 28	TOTAL
Help Desk	2	0	2
Overview	7	7	14
Concept A	0	0	0
Concept B	3	0	3
Concept C	0	0	0
Concept D	4	0	4
Concept E1	0	0	0
Concept E2	0	0	0
No-Build Alternative	0	0	0
Option 1	0	0	0
2007 Alternative	2	0	2
<b>TOTAL</b>	<b>18</b>	<b>7</b>	<b>25</b>

*Like/Dislike Function*

While the VOH was live, May 23 through June 3, users had the option of providing instant feedback regarding each of the concepts by clicking the “like” or “dislike” button featured on each of the concept pages. A total of 51 users provided instant feedback. Table 15 provides a summary of the results of the total number of likes, dislikes and likes minus dislikes (net) provided by users.

**Table 15. Total Number of Likes, Dislikes and Net Likes for Each Concept Entered by Users during the Virtual Open House.**

	Likes	Dislikes	Total Likes and Dislikes	Likes - Dislikes (NET)
Concept A	30	7	37	23
Concept B	6	21	27	-15
Concept C	25	9	34	16
Concept D	8	21	29	-13
Concept E1	6	14	20	-8
Concept E2	9	12	21	-3
No Build	5	12	17	-7
2007 Alt.	10	15	25	-5
Option 1	15	5	20	10
<b>TOTAL</b>	<b>114</b>	<b>116</b>	<b>230</b>	

*VOH Exit Survey Results*

A total of nine registered users completed the exit survey after the VOH. The following tables describe the results of the survey. As shown in Table 16, when asked if users enjoyed the VOH experience, all but one answered positively. All nine survey takers responded positively when asked if the VOH website was easy to navigate. Most users felt the information presented in the VOH was useful and informative, which parallels the results from the exit survey given at the TOH. Only one VOH survey taker did not find the material useful. Most survey takers agreed the material presented in the VOH was easy to access and found the concepts presented to be useful and informative. They also agreed the concepts were clearly explained by the graphics and videos used in the VOH. Users were specifically asked about the videos used in the VOH—length, picture quality and audio quality. Most users agreed the length of the videos was appropriate to present the material and found the video and audio quality to be good. Based on the exit survey results, most users felt better informed about the Oak Hill Parkway project after participating in the VOH.

**Table 16. VOH Exit Survey Questions Using a Likert Scale.**

<b>VOH Exit Survey Questions</b>	<b>Strongly Agree</b>	<b>Agree</b>	<b>Neutral</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
I enjoyed the virtual open house experience.	4	4			1
I was able to easily navigate the virtual open house website.	4	3	2		
The material presented in the virtual open house was useful and informative.	2	6		1	
The material in the virtual open house was easy to access.	3	4	2		
The concepts presented were useful and informative.	2	5	1	1	
I was able to understand the proposed concepts.	1	5	3		
The graphics clearly explained the concepts.	1	5	1		1
The videos clearly explained the concepts.	1	6	1		1
The videos were an appropriate length.	1	4	2	1	1
The video quality was good.	1	5	2		1
The audio quality on the videos was good.	2	4	2		1
I feel better informed about the Oak Hill Parkway project.	4	3	1	1	
I would participate in another virtual open house.	6	2			1

Users were asked how they heard about the VOH. The results are shown in Table 17.

**Table 17. VOH Exit Survey Question—How Did You Hear about the VOH.**

How did you hear about the virtual open house?	
Answer Selection	Number of Users
Newspaper	1
<i>Austin Mobility News</i>	1
Television	1
Twitter	1
Project Website	2
Community Meeting/Email	1

Users accessed the VOH from both home and work, which correlates with the open session and live-chat times—in the evening and during the day. Table 18 shows where users accessed the website.

**Table 18. VOH Exit Survey Question—From Where Did You Access VOH.**

From where did you access the virtual open house?	
Answer Selection	Number of Users
Home	4
Work	4
Library	1

Users mainly accessed the VOH from their personal computer, and one accessed it from a tablet (Table 19). Two of the nine respondents said they did have some difficulties while in the VOH. A description of these technical issues is listed in Table 20.

**Table 19. VOH Exit Survey Question—How Did You Access VOH.**

How did you access the virtual open house?	
Answer Selection	Number of Users
Personal Computer (PC or Mac)	8
Tablet (iPad, Galaxy, etc.)	1

**Table 20. VOH Exit Survey Question—Did You Experience Technical Difficulties.**

Did you experience any technical difficulties? If yes, please describe.		
Answer Selection	Number of Users	Description
No	7	N/A
Yes	2	Easier to navigate on PC vs. iPad; Buttons on the VOH went missing; PDFs were slow to download

*Demographic Data*

Data describing race, age and household income were also asked in the VOH exit survey. Tables 21 through 23 show the results of those survey questions.

**Table 21. VOH Exit Survey Question—Race/Ethnicity.**

What is your race/ethnicity?	
Answer Selection	Number of Users
Caucasian	3
Hispanic/Latino	1
Other	3
Did not Answer	2

**Table 22. VOH Exit Survey Question—Age.**

What is your age group?	
Answer Selection	Number of Users
Over 65	1
55-64	2
35-44	1
25-34	3
Did not Answer	2

**Table 23. VOH Exit Survey Question—Income.**

What was your household income in 2012?	
Answer Selection	Number of Users
\$25,000 - \$49,000	1
\$50,000 - \$100,000	2
Over \$100,000	3
Don't Know/Refused	3

### **Data Retrieved from Google Analytics**

The Oak Hill Parkway Virtual Open House used Google Analytics to provide metrics to measure user traffic and participation in the VOH. Google Analytics is a free service that provides data on website user behavior and traffic, such as the number of users that visit a specific site, the location they came from on the Internet, the geographic location of users who visit a specific site, the amount of time users spend on the site, and what pages they visit most. In order to track the activity of users participating in the VOH, a tracking code was embedded into all of the pages of the VOH. This enabled Google to install tracking cookies on users' computers in order to provide a report providing data on the range of user activities while participating in the VOH. The following data was reported by Google Analytics.

#### *Visits and Unique Visitors*

A visit (also described as a session) is defined as a series of interactions by a user on a website within a given time frame (30 minutes is the default for Google Analytics). Users may visit several pages and interact with several aspects of a website, but this will only count as one visit as long as the session does not become inactive (website open and no activity) for 30 minutes or does not span over the start of a new day (triggered at 12:00 a.m.). If, for example, a user opens a webpage and leaves it inactive for 30 minutes after interacting with the site, and then returns and continues to browse after 30 minutes, this would count as two visits.

Unique visitors, on the other hand, are identified by unique visitor cookies that the site installs on the user's computer. If this cookie is left installed and the user visits the same webpage with the same browser on the same computer, it will only count as one unique visit, regardless of how much time has lapsed.

When analyzing how many users visited the VOH, the unique visitor metric more accurately reflects the number of individual people that participated in the VOH. The visit metric will likely overstate the total number of participants in the VOH.

Table 24 provides the total number of visits and unique visitors to the VOH for each day the site was live, as well as the total number of visits and unique visitors.

**Table 24. Total Number of Visits and Unique Visitors to the Virtual Open House May 23 through June 3.**

<b>Date</b>	<b>Visits</b>	<b>Unique Visitors</b>
<b>May 23</b>	21	18
<b>May 24</b>	187	161
<b>May 25</b>	72	65
<b>May 26</b>	19	16
<b>May 27</b>	57	53
<b>May 28</b>	168	156
<b>May 29</b>	111	106
<b>May 30</b>	28	27
<b>May 31</b>	20	19
<b>June 1</b>	9	7
<b>June 2</b>	14	13
<b>June 3</b>	19	18
<b>Total</b>	<b>725</b>	<b>659</b>

*Daily Page Views*

Page views are defined as an instance of a page being loaded by a browser. Note that repeated views of a single page are also counted. Google Analytics reported the number of total page views for the VOH for each day the site was live. The total number of page views was further disaggregated to the total number of page views per hour for each day the VOH was live.

Table 25 provides a summary of daily page views for the VOH, with the day and times of the real-time chat sessions bolded and highlighted in gray.

**Table 25. Daily Page Views per Day per Hour for the Virtual Open House.**

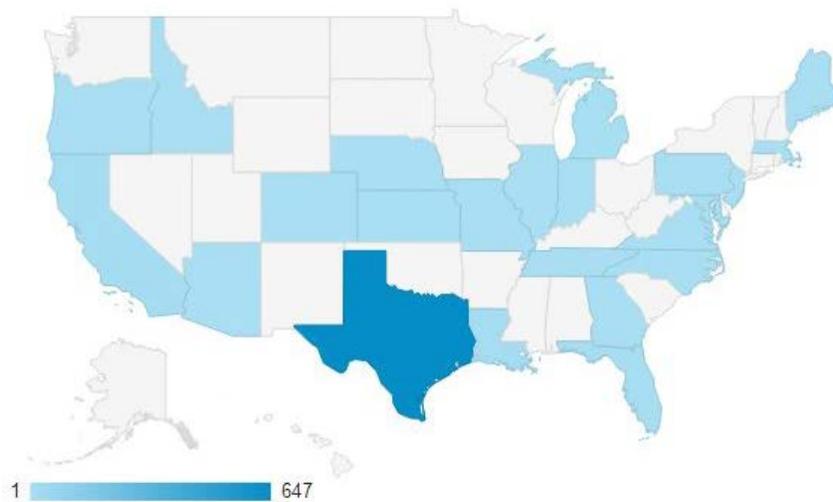
Pageviews for Virtual Open House, May 23 through June 3rd																									
	12:00 AM	1:00 AM	2:00 AM	3:00 AM	4:00 AM	5:00 AM	6:00 AM	7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM	Total Pageviews
May 23	0	0	0	0	0	0	0	0	0	1	2	1	9	0	0	1	0	1	0	0	2	19	17		54
May 24	27	19	4	1	0	1	0	10	8	50	161	351	144	33	35	4	15	19	0	11	2	25	33	24	977
May 25	15	10	0	0	0	0	0	2	22	26	4	6	6	2	23	18	20	0	1	0	24	1	1	17	198
May 26	0	0	0	0	0	0	0	1	1	0	2	4	17	12	24	27	26	0	1	0	0	0	3	1	119
May 27	3	1	1	0	0	0	0	1	19	46	35	3	12	1	0	0	1	2	3	0	1	2	1	0	132
May 28	0	0	19	0	0	3	5	87	59	52	65	15	20	2	12	12	2	94	228	132	8	3	65	24	907
May 29	0	0	0	0	0	0	10	4	3	4	15	87	26	18	30	13	30	4	2	1	3	6	3	0	259
May 30	1	1	0	0	0	1	0	0	2	20	2	2	5	7	16	0	10	16	14	1	0	0	3	31	132
May 31	0	1	2	0	4	3	1	2	4	0	3	0	1	2	1	5	2	0	0	7	0	0	0	12	50
June 1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	1	1	13	1	0	0	0	2	0	0	20
June 2	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	2	2	3	7	19	0	36
June 3	7	3	1	1	0	1	0	0	0	0	2	5	2	0	0	2	5	3	15	0	1	0	0	0	48
Average Pageviews/Hour	3.83	2.92	2.25	0.17	0.33	0.75	1.33	8.92	10.00	16.67	24.08	39.42	20.17	6.42	11.83	6.92	10.42	11.67	22.25	12.83	3.50	4.00	12.25	10.50	2932

*Visits by Geographic Location: State*

Google Analytics uses Internet Protocol (IP) addresses to provide aggregated geographic location data for each visit to the VOH. Table 26 provides all visits to the VOH by state. Figure 29 provides a map of these visits within the United States. Table 27 shows all the visits to the VOH by city within Texas.

**Table 26. VOH User Locations (State) by User Visits.**

State	Visits
Texas	647
Louisiana	18
California	14
Florida	10
Illinois	6
Massachusetts	4
Kansas	3
Michigan	3
Missouri	2
Virginia	2



**Figure 29. Map of VOH User Locations in the United States by User Visits.**

**Table 27. VOH User Locations (City) by User Visits.**

<b>City</b>	<b>Visits</b>
Austin	476
Houston	30
College Station	28
San Antonio	20
Dallas	13
Dripping Springs	9
Round Rock	7
Cedar Park	6
Georgetown	5
Marble Falls	5

*Average Visit Duration*

Average visit duration is defined as the average duration of time a user visits a site within a session. Sessions are containers of activity, including screen views, events, etc. By default, Google Analytics measures sessions in 30-minute intervals. Table 28 provides the average visit duration of all visits per day, throughout the VOH, with the days of the real-time chat sessions bolded and highlighted in gray.

*Bounce Rate*

Bounce rate is defined as the percentage of visits in which a user exited the VOH from the landing page without interacting with the page or advancing to other pages within the VOH. Table 28 provides the bounce rate for all visits per day, throughout the VOH.

*Pages per Visit*

Google defines pages per visit as the average number of pages viewed during a visit to a website. This metric provides insight into how “deeply” users explored a specific site (i.e., average page depth). Note that repeated views of a single page are counted in this metric. Table 28 provides the pages per visit for all visits per day, throughout the VOH.

**Table 28. Average Visit Duration, Bounce Rate and Pages per Visit for All User Visits to the Virtual Open House May 23 through June 3.**

Average Visit Duration, Bounce Rate and Pages per Visit for the VOH, May 23rd through June 3rd			
Date	Avg. Visit Duration	Bounce Rate	Pages/Visit
May 23	4:30	52.38%	2.57
May 24	9:28	52.41%	5.22
May 25	3:00	70.83%	2.75
May 26	11:56	26.32%	6.26
May 27	1:45	63.16%	2.32
May 28	8:24	51.19%	5.4
May 29	5:50	56.76%	2.33
May 30	7:48	46.43%	4.71
May 31	2:53	60%	2.5
June 1	1:45	88.89%	2.22
June 2	2:11	78.57%	2.57
June 3	4:00	36.84%	2.53
<b>Average</b>	<b>5:17</b>	<b>56.98%</b>	<b>3.45</b>

*New versus Returning Visits*

The number of new visits versus returning visits shows the number of the site’s users who were first-time users versus users who were returning after previous sessions. Table 29 provides the total number of new versus returning visits for the entire VOH.

**Table 29. New versus Returning Visits to the Virtual Open House May 23 through June 3.**

Visitor Type	Visits
New Visitor	595
Returning Visitor	130

*Mobile Statistics: Mobile Visits versus Non-mobile Visits*

Google Analytics provides data for users who are accessing a site via computer (laptop or desktop) versus a mobile device. Mobile devices include smartphones (iPhone, Android, Blackberry, etc.) and mobile tablets (iPad, Galaxy, Kindle, etc.). Table 30 provides a breakdown of user visits by mobile and non-mobile devices for the entire VOH, and a breakdown of user visits by mobile versus non-mobile devices for the days in which the real-time chat sessions were held (May 24 and May 28).

Table 30 provides a breakdown of the average number of pages per visit for mobile versus non-mobile devices for the entire VOH, and a breakdown of the average number of pages per visit by mobile versus non-mobile devices for the days in which the real-time chat sessions were held.

Table 30 provides a breakdown of the average visit duration for mobile versus non-mobile devices for the entire VOH, and a breakdown of the average visit duration by mobile versus non-mobile devices for the days in which the real-time chat sessions were held.

Table 30 also provides a breakdown of the bounce rate for mobile versus non-mobile devices for the entire VOH, and a breakdown of the bounce rate for mobile versus non-mobile devices for the days in which the real-time chat sessions were held.

**Table 30. Breakdown of Mobile versus Non-mobile Users of the Virtual Open House.**

<b>Mobile Statistics for VOH May 23 through June 3</b>				
<b>Mobile (Including Tablet)</b>	<b>Visits</b>	<b>Pages/Visit</b>	<b>Avg. Visit Duration</b>	<b>Bounce Rate</b>
<b>No</b>	468	5.18	0:08:58	47.01%
<b>Yes</b>	257	1.98	0:02:37	70.43%
<b>Mobile Statistics for VOH May 24</b>				
<b>Mobile (Including Tablet)</b>	<b>Visits</b>	<b>Pages/Visit</b>	<b>Avg. Visit Duration</b>	<b>Bounce Rate</b>
<b>No</b>	125	7.02	0:12:42	40.80%
<b>Yes</b>	62	1.6	0:02:55	75.81%
<b>Mobile Statistics for VOH May 28</b>				
<b>Mobile (Including Tablet)</b>	<b>Visits</b>	<b>Pages/Visit</b>	<b>Avg. Visit Duration</b>	<b>Bounce Rate</b>
<b>No</b>	116	6.88	0:10:45	43.97%
<b>Yes</b>	52	2.1	0:03:08	67.31%

*Traffic Sources*

Google Analytics provides data regarding where users were referred from or whether they entered the URL directly into the browser in order to access a site. Table 31 provides all traffic to the VOH while the site was live. The source/medium column provides the specific URL that referred the user to the VOH URL (www.oakhillopenhouse.com). Note that the “(direct) / (none)” designation denotes direct traffic or users who entered the VOH URL directly into their web browser, and “organic” denotes a search engine referral. Table 31 also provides a breakdown of pages per visit, average visit duration and the bounce rate for each of the traffic sources for the VOH.

**Table 31. All Sources of Traffic to the Virtual Open House May 23 through June 3.**

Rank	Source/Medium	Visits	Pages/Visit	Avg. Visit Duration	Bounce Rate
1	(direct) / (none)	284	3.05	0:05:46	58.45%
2	oakhillparkway.com / referral	199	7.13	0:11:48	39.20%
3	t.co (twitter) / referral	157	1.95	0:01:38	71.97%
4	facebook.com / referral	26	2.38	0:05:00	53.85%
5	impactnews.com / referral	16	6.5	0:10:23	37.50%
6	mobilityauthority.com / referral	14	4.14	0:05:26	50.00%
7	city-data.com / referral	6	1	0:00:31	33.33%
8	m.facebook.com / referral	6	1	0:00:09	83.33%
9	google / organic	4	15.25	0:41:55	25.00%
10	yahoo / organic	3	6.67	0:15:12	66.67%
11	us.mg.mail.yahoo.com / referral	2	1	0:00:00	100.00%
12	alert.scansafe.net / referral	1	1	0:00:00	100.00%
13	keyetv.com / referral	1	1	0:00:00	100.00%
14	shaggybevo.com / referral	1	1	0:00:17	0.00%
15	support.monkee-boy.com / referral	1	6	0:12:18	0.00%
16	trulia.com / referral	1	10	0:19:29	0.00%
17	us-mg4.mail.yahoo.com / referral	1	1	0:00:00	100.00%
18	us-mg6.mail.yahoo.com / referral	1	1	0:00:00	100.00%
19	us.mg206.mail.yahoo.com / referral	1	1	0:00:00	100.00%

Tables 32 and 33 provide the same data as above for the days in which the real-time chat sessions were held.

**Table 32. All Sources of Traffic to the Virtual Open House May 24.**

Rank	Source/Medium	Visits	Pages/Visit	Avg. Visit Duration	Bounce Rate
1	oakhillparkway.com / referral	81	8.32	0:15:24	38.27%
2	t.co (twitter) / referral	54	1.76	0:01:39	70.37%
3	(direct) / (none)	39	3.54	0:08:57	61.54%
4	impactnews.com / referral	4	7.75	0:09:11	50.00%
5	google / organic	3	2.67	0:03:22	33.33%
6	mobilityauthority.com / referral	3	7.67	0:05:07	33.33%
7	facebook.com / referral	2	3.5	0:10:56	0.00%
8	keyetv.com / referral	1	1	0:00:00	100.00%

**Table 33. All Sources of Traffic to the Virtual Open House May 28.**

Rank	Source/Medium	Visits	Pages/Visit	Avg. Visit Duration	Bounce Rate
1	(direct) / (none)	78	4.14	0:06:56	55.13%
2	oakhillparkway.com / referral	40	9.5	0:10:23	35.00%
3	t.co (twitter) / referral	24	2.88	0:04:35	66.67%
4	facebook.com / referral	18	2.5	0:05:45	55.56%
5	m.facebook.com / referral	2	1	0:00:28	50.00%
6	yahoo / organic	2	9.5	0:22:49	50.00%
7	city-data.com / referral	1	1	0:00:37	0.00%
8	google / organic	1	53	2:37:32	0.00%
9	impactnews.com / referral	1	14	0:36:06	0.00%
10	us-mg4.mail.yahoo.com / referral	1	1	0:00:00	100.00%

*Social Media Traffic*

Table 34 provides a breakdown of referral traffic (visits) for each day the VOH was live from both Twitter (mobile and web-based combined) and Facebook (mobile and web-based separated). Table 35 provides a comparison of the average pages per visit, average visit duration and bounce rate between all referrals to the VOH and all referrals from social media platforms (Twitter and Facebook [web-based and mobile based]).

**Table 34. Breakdown of Referral Traffic to the Virtual Open House from Twitter and Facebook.**

Date	Twitter (t.co)	Web-Based Facebook (facebook.com)	Mobile-Based Facebook (m.facebook.com)
May 23	3	0	0
May 24	54	2	0
May 25	39	0	0
May 26	0	1	0
May 27	33	0	0
May 28	24	18	2
May 29	3	0	0
May 30	1	0	0
May 31	0	0	0
June 1	0	0	0
June 2	0	4	4
June 3	0	1	0
<b>Total</b>	<b>157</b>	<b>26</b>	<b>6</b>

**Table 35. Comparison of All VOH Referrals versus Referrals from Social Media May 23 through June 3.**

Source	Visits	Pages/Visit	Avg. Visit Duration	Bounce Rate
All VOH Traffic	725	4.04	0:06:42	55.31%
t.co	157 (22%)	1.95	0:01:38	71.97%
facebook.com	26 (4%)	2.38	0:05:00	53.85%
m.facebook.com	6 (< 1%)	1	0:00:09	83.33%

*Virtual Open House Page Performance Data*

Google Analytics provides metrics to measure the performance of specific pages within a website. The metrics provided include unique page views (total times a page is viewed by a unique user based on a unique identification cookie installed on a device), entrance data (how often users entered the site directly to this page), exit percentage (the percentage of times users exited the site from this page), and the average time spent and bounce rate for each page.

Table 36 provides these data for each of the top 10 most viewed pages in the VOH for the period that the site was live.

**Table 36. Page Performance Statistics for the Virtual Open House May 23 through June 3.**

Page	Unique Page Views	Avg. Time on Page	Entrances	Bounce Rate	% Exit
/ (landing page)	674	0:04:52	661	56.13%	58.20%
/about-yourself/	150	0:00:57	1	0.00%	11.54%
/overview/	137	0:02:07	11	54.55%	12.97%
/concept-a/	115	0:02:21	11	45.45%	8.59%
/concept-b/	107	0:02:22	8	100.00%	14.20%
/concept-d/	85	0:02:22	4	25.00%	9.23%
/concept-c/	84	0:01:54	5	0.00%	2.27%
/2007-alternative/	65	0:02:20	2	100.00%	16.25%
/concept-e-1/	53	0:01:44	3	0.00%	7.58%
/option-1/	45	0:01:27	1	0.00%	15.09%

**Data Retrieved from YouTube Analytics**

YouTube provides analytical data on videos hosted and embedded on their site. All VOH concept videos were hosted on YouTube and embedded in the VOH. Table 37 provides viewing statistics for each concept video, including unique views (measured as unique by a tracking cookie installed on a user’s viewing device) and average view duration per day, for the duration of the VOH (May 23 through June 3).

**Table 37. YouTube Analytics for VOH Concept Videos.**

		Total/Avg. May 23 - June 3	Unique Views May 23	Unique Views May 24	Unique Views May 25	Unique Views May 26	Unique Views May 27	Unique Views May 28	Unique Views May 29	Unique Views May 30	Unique Views May 31	Unique Views June 1	Unique Views June 2	Unique Views June 3
<b>Introduction Video (5:37)</b>	<b>Views</b>	<b>309</b>	15	75	17	10	12	82	70	11	4	3	4	6
	<b>Avg. View Duration</b>	<b>2:33 (45.4%)</b>	2:02	2:39	2:08	4:17	2:17	2:40	2:29	1:45	4:39	1:22	2:03	2:17
<b>Concept A (2:48)</b>	<b>Views</b>	<b>81</b>	5	32	3	2	3	22	6	4	0	1	2	1
	<b>Avg. View Duration</b>	<b>2:05 (74.4%)</b>	2:14	2:25	1:13	2:33	2:01	2:17	2:39	2:04	0:00	3:56	1:02	2:47
<b>Concept B (3:12)</b>	<b>Views</b>	<b>68</b>	3	26	4	2	3	16	6	6	0	1	1	0
	<b>Avg. View Duration</b>	<b>1:50 (57.3%)</b>	3:01	2:26	1:42	2:40	1:32	2:57	2:31	2:35	0:00	1:35	1:10	0:00
<b>Concept C (3:11)</b>	<b>Views</b>	<b>57</b>	2	22	4	2	2	14	5	4	0	1	1	0
	<b>Avg. View Duration</b>	<b>1:33 (46.9)</b>	3:01	2:16	0:37	2:30	0:10	2:19	2:46	2:14	0:00	1:17	1:10	0:00
<b>Concept D (2:52)</b>	<b>Views</b>	<b>63</b>	6	22	3	2	3	15	6	4	0	1	1	0
	<b>Avg. View Duration</b>	<b>1:30 (52.3%)</b>	1:56	2:06	0:36	2:01	0:51	2:08	2:50	3:15	0:00	0:47	1:31	0:00
<b>Concept E1 (2:45)</b>	<b>Views</b>	<b>39</b>	3	13	2	2	3	9	4	3	0	0	0	0
	<b>Avg. View Duration</b>	<b>1:19 (47.9%)</b>	2:07	1:52	0:14	1:47	2:08	1:57	3:07	2:44	0:00	0:00	0:00	0:00
<b>Concept E2 (1:48)</b>	<b>Views</b>	<b>30</b>	3	6	2	2	3	8	3	3	0	0	0	0
	<b>Avg. View Duration</b>	<b>0:45 (41.7%)</b>	1:49	1:08	0:23	1:08	1:02	0:59	1:34	1:04	0:00	0:00	0:00	0:00
<b>2007 Alternative (3:03)</b>	<b>Views</b>	<b>37</b>	6	18	2	2	2	4	1	2	0	0	0	0
	<b>Avg. View Duration</b>	<b>1:46 (57.9%)</b>	2:35	2:57	3:00	3:02	1:53	2:22	2:55	2:38	0:00	0:00	0:00	0:00
<b>No-Build Alternative (1:38)</b>	<b>Views</b>	<b>29</b>	1	7	2	2	2	7	4	4	0	0	0	0
	<b>Avg. View Duration</b>	<b>0:53 (54.1%)</b>	1:41	1:16	1:19	1:04	0:47	1:25	1:37	1:30	0:00	0:00	0:00	0:00
<b>Option 1 (0:58)</b>	<b>Views</b>	<b>30</b>	1	10	2	2	2	7	3	2	1	0	0	0
	<b>Avg. View Duration</b>	<b>0:31 (53.4%)</b>	0:57	0:52	0:09	0:48	0:38	0:50	0:56	0:16	0:57	0:00	0:00	0:00

## **ANALYSIS OF EVALUATIVE DATA RESULTS FOR THE VIRTUAL OPEN HOUSE**

### **Google Analytics Measure of VOH Attendance**

One of the primary benefits of using Google Analytics (GA) as an evaluative data tool is that researchers can use the data to gauge the traffic to and from the VOH in a similar manner as the TOH. For the entire period the VOH was live, the VOH had 659 unique visitors (see Table 24). GA measures unique visitors by installing unique visitor cookies on each website user's computer. If this cookie is left installed and the user visits the same webpage with the same browser on the same computer, it will count one unique visit. The probability is that some of the individuals who visited the VOH may have either cleared their computer cookies or used more than one Internet browser, computer or device, so the 659 unique visitors may be slightly overstated. However, this still provides researchers with the most accurate reflection of individual visitors to the VOH. It is important to distinguish that the unique visitors metric only viewed the landing page. Examining the number of users that registered in order to enter the VOH is a better measure of how many individuals actually entered the VOH after they viewed the landing page.

Of the 659 unique visitors, 126 users registered to participate in the VOH. The VOH was designed to only allow users who registered access to the VOH, but technical problems allowed an unknown number of individuals to access the VOH without registering. In addition, some individuals entered the VOH content pages directly, bypassing the landing and registration pages altogether, shown by the unique page views for the various pages within the VOH (Table 36). This may be caused by technical issues with the design of the website as well as by individuals entering URLs of content pages directly (perhaps they received a direct link from a friend, etc.)

Overall, attendance at the VOH was incredibly robust during the 12 days that it was open, with a safe assumption being that an estimated 300 to 500 individual users visited at least the landing page of the VOH, where they were able to get information about the Oak Hill Parkway project.

Additionally, looking at unique visitors on the two days that the real-time chat sessions were held shows that there was a significant increase in visitors. On May 24, the day that the first real-time chat session was held, the total unique visitors to the VOH was 161. On May 28, the day of the second real-time chat session, there were 156 unique visitors to the VOH. The number of unique visitors on May 24 and 28 equals 48 percent of the total unique visitors to the VOH over the 12-day period it was live.

An additional GA metric to consider in order to understand how much activity occurred during the VOH, both while the real-time chat sessions were being held and when the passive VOH was live (all times other than the real-time chat sessions), is unique page views. Unique page views are calculated in a similar manner to unique visitors, with the total number of page views per unique visitor calculated. The benefit of the unique page views metric is that GA provides the

option to break down the number of unique page views by each hour of each day, during the entire period the VOH was live. Table 25 provides a summary of the unique page views per hour per day for the 12-day period the VOH was live. This metric provides an even more in-depth look at when the most activity occurred in the VOH. Not surprisingly, the hours that the two real-time chat sessions were held on May 24 and May 28 had the most page views.

On May 24, from 11:00 a.m. to 1:00 p.m., there were 495 total unique page views. On May 28, from 6:00 to 8:00 p.m., there were 360 unique page views. These two totals equal the most unique page views for any 2-hour period during the entire 12-day period the VOH was live (with the exception of the 10:00 to 11:00 a.m. period on May 24 where people were clearly queuing up for the start of the first real-time chat session). In total, the 4-hour period during the real-time chat sessions equal approximately 30 percent of the total unique page views during the entire 12-day period the VOH was live.

Based on the increase in unique visitors and page views during the days and times of the real-time chat sessions, it is clear that these interactive sessions were a major attraction that drew people to visit and participate in the VOH.

### **GA and YouTube Analytics Measures of VOH Participation**

GA also provides data that can measure not only how many individuals visited the VOH, but how effectively they engaged with the materials in the VOH. In addition, all concept videos were embedded in the VOH using YouTube, which provides viewer analytics for its videos as well. This provides the unique opportunity to understand how much users engaged with the VOH and the materials in the VOH.

GA provides the average visit duration and average number of pages per visit for all users of the VOH. Table 28 provides a breakdown of the data by each day the VOH was live. With the exception of Sunday, May 26, the days that the real-time chat sessions were held had the highest average visit duration (9:28 minutes on May 24 and 8:24 minutes on May 28) and the highest number of pages per visit (5.22 on May 24 and 5.4 on May 28). The high average visit duration (11:56 minutes) and pages per visit (6.26) on Sunday, May 26, could be a result of a small number of users (or possibly one) throwing the average off for that day, based on the small sample set on that day because Sunday had a small number of unique visitors as compared to May 24 (16 to 161 respectively).

It is important to distinguish that the average visit duration and pages per visit figures listed above are calculated by looking at all visits to the VOH, not just those users that decided to enter the VOH by registering and watching videos, commenting, etc. The average bounce rate for the entire period that the VOH was live was 56.98 percent, which means that over half of the people that came to the website immediately left without interacting with the site whatsoever. This bounce rate caused the average visit duration and pages per visit to go down, yet the overall average visit duration for the entire 12-day period that the VOH was live was still over 5 minutes,

with users visiting approximately 3.5 pages. This indicates a successful level of participation in the VOH.

The analytics provided by YouTube support the assertion gleaned from GA that attendance and participation increased on the days the real-time chat sessions were held. When comparing the average number of views of the introduction video on the landing page on days that the real-time chat sessions were held with all other days, there is a marked increase in the average number of views (78.5 on real-time chat days and 15.2 on all other days). This holds true for the concept videos as well. For example, for the Concept A video, the average views during the real-time chat days were 27, as compared to an average of 2.7 for all other days.

An examination of the average view duration of each embedded video in the VOH (how much of each video each user viewed on average, represented as a proportion of the entire video) shows a fairly low average view duration overall. In fact, the average view duration of all videos embedded in the VOH is only 53 percent (viewers only viewed 53 percent of videos on average). While users viewed almost 75 percent of the video for Concept A on average, they only viewed 42 percent of the video for Concept E1 (Table 37). The average length of all videos in the VOH was 2:47. This provides insight into the behavioral characteristics of the average VOH user, and informs the finding that the length of VOH videos must be shorter in order to increase the effectiveness of user participation.

#### *Google Analytics Statistics for Mobile Devices for the Virtual Open House*

The VOH was not optimized for viewing on mobile devices (no alternative site designs for tablets and smartphones), and the participation for mobile users clearly suffered as a result. This decreased level of participation can be measured by GA, which provides data regarding how many users accessed the VOH using a mobile device (either a smartphone or tablet). Overall, 257 of the 725 visits (35 percent) to the VOH during the entire period the site was live were made using mobile devices. This percentage held true during the days the real-time chat sessions were held (33 percent of all visits on May 24 and 31 percent on May 28). An examination of the measure of effectiveness for participation by looking at how long users visited the site (average visit duration) and how many pages users viewed on each visit (pages per visit) shows that mobile users did not participate in the VOH nearly as effectively as the non-mobile users of the VOH. For example, for the entire period the VOH was live, non-mobile users viewed 1.98 pages per visit and stayed on the site for an average of 2:37 minutes as compared to non-mobile users, who viewed 5.18 pages per visit and stayed on the site for an average of 8:58 minutes. For the days that the real-time chat sessions were held, the level of participation increased for non-mobile users (pages per visit increased to 7.02 and 6.88, and average visit duration increased to 12:42 and 10:45 minutes for May 24 and May 28, respectively), yet the level of participation for mobile users remained largely the same (pages per visit changed to 1.6 and 2.1, and average visit duration increased to 2:55 and 3:08 minutes for May 24 and May 28, respectively).

Perhaps the most telling statistic regarding the level of participation of mobile users is provided by GA in the form of the bounce rate. The bounce rate provides data on how many users enter a website and immediately leave without interacting with the site at all. During the entire period the VOH was live, the bounce rate for non-mobile users was 47 percent as compared to 70 percent for mobile users. This likely caused the proportion of mobile users to non-mobile users to be understated since it is likely mobile users left the VOH and reentered using a non-mobile device based on the fact that it was not mobile optimized. One of the users who completed the exit survey for the VOH confirmed this when explaining technical issues that the user had experienced (Table 30).

### *Social Media Statistics for VOH*

By tracking the referral traffic (websites where a user hit a link to go to the VOH) of visitors to the VOH, the behavior of users who found out about the VOH through social media platforms such as Twitter and Facebook can be tracked. The largest single referrer (location where a user hit a link to go to the VOH) besides the Oak Hill Parkway project website (oakhillparkway.com) was Twitter, which accounted for 22 percent of all of the visits to the VOH. In addition, Facebook referred approximately 4 percent of the visits to the VOH, equaling a total of 26 percent of all visits to the VOH being referred by social media platforms (Table 35).

An examination of the effectiveness of participation for users being referred to the VOH from Twitter shows a similar pattern to that for users who accessed the VOH using mobile devices. Users who came to the VOH from Twitter visited an average of 1.95 pages per visit and stayed in the VOH for an average of 1:38 minutes. The bounce rate for Twitter users was quite high as well, at 72 percent. This is well below the average for all of the user visits to the VOH (approximately four pages per visit, a 6:42-minute visit duration, and a bounce rate of 55 percent).

Facebook referrals fared slightly better than Twitter in how effectively users participated in the VOH but not by much. Facebook users visited an average of 2.38 pages per visit and had an average visit duration of 5:00 minutes. There were six visits from m.facebook.com (indicating mobile-based Facebook applications on tablets and smartphones), however, the level of participation was extremely poor, with an average of one page viewed per visit, a 9-second average visit duration, and an 83 percent bounce rate.

Our assumption is that the majority of social media users that were referred to the VOH were using mobile devices and participation in the VOH was poor based on the lack of mobile optimization. The low level of participation from mobile users and users referred from social media alike is a missed opportunity based on the fact that mobile users accounted for approximately a third of all VOH traffic and social media accounted for a quarter of the total visits to the VOH. This provides a solid case for the need for Internet-based public engagement tools for mobile devices.

## **LESSONS LEARNED**

### **Virtual Open House Provides Increased Accessibility and Participation**

Based on the high priority of this project in the community, there was a high level of attendance at the TOH. This shows that when the public realizes their input is important and can make a difference, traditional methods of engaging the public in the planning process can still serve as valid and legitimate techniques to seek public input and build public support and collaboration. However, the high levels of attendance and participation at the VOH shows the need for planning agencies to provide various opportunities for the public to continue to engage in the planning process to augment the prospect to gain additional public input and build public support.

The high number of users who accessed the VOH using mobile devices also provides a unique understanding of the way in which the public engages with and communicates information. Whereas TOHs still provide hurdles, such as the extra time spent traveling to and from the event, childcare considerations, etc., the VOH provides an option to participate without encountering these hurdles. The fact that a third of the users in the VOH used mobile devices suggests that not only is it appealing to participate without encountering the inconveniences of attending a TOH, but it is appealing to have the opportunity to participate while engaging in other daily activities. It is not the finding of this report that the VOH should replace the TOH, but rather that the VOH is a tool that is highly accessible and provides the opportunity to increase public participation.

### **VOHs Are Low-Hanging Fruit**

Not only does the VOH provide planning agencies with a unique opportunity to increase public participation in the planning process, but it does so in a fairly efficient manner. The level of effort and cost of developing and implementing the VOH are not barriers that make the re-creation of future VOHs a prohibitive notion. In fact, the implementation of a VOH is in many ways low-hanging fruit for planning agencies. The materials used to develop the Oak Hill Parkway VOH content videos—the heart of the dissemination of project information in the VOH—were developed using schematics that had already been developed by the project team. The majority of planning projects already develop a web presence with project websites and social media accounts, as per best planning practices. In addition, the majority of the software used to develop the VOH was free or extremely reasonably priced. The reality is that planning agencies can easily re-create VOHs for planning initiatives, as long as the project team is willing to and capable of committing manpower to the effort. It is important to note that the Oak Hill Parkway project team (TxDOT and the Mobility Authority) worked very well together and collaboratively supported the creation and implementation of the VOH. This high level of interagency coordination was vital to the success of the Oak Hill Parkway VOH and is vital to the potential re-creation of future VOHs.

### **Emerging Technology Will Catch On**

During the two real-time chat sessions, a lower total number of comments and questions were entered than expected. Users only entered 25 questions/comments in the chat boxes, yet there

were 855 page views during that four-hour period. One explanation for this occurrence is that because the VOH real-time chat sessions are a newly-implemented technology, the general awareness of the tool is still relatively low. The majority of interested parties may have submitted questions and comments through more well-known channels such as the TOH, e-mail, mail or the project website. It is likely that there are individuals who would have preferred to provide input via an interactive real-time chat session at a VOH, but were either unaware of its existence early on or were concerned that their comments would carry more weight in-person. These are concerns that will be alleviated as VOHs become part of the fabric of public engagement processes. It is likely that people who are already interested in the process will be more likely to acknowledge the usefulness of VOHs as they gain wide-scale adoption and familiarity. It is also likely that they will provide a more attractive option for individuals who have historically not been interested in participating to provide input. Best practices indicate that increased accessibility will lead to increased participation, so it is safe to assume that as this technology catches on, more of the public will begin to participate in planning processes.

### **Opportunities for Improvement**

The VOH pilot was largely considered a successful test of the effectiveness of providing an online or virtual version of a TOH experience. The ability to perform a pilot test of this technology provides an opportunity to learn what improvements could be made in order to enhance the experience and increase public participation.

#### *Mobile Optimization*

As mentioned earlier, the Oak Hill Parkway VOH was not mobile optimized. This provides an enormous amount of potential improvement for future VOHs. The number of users who accessed the VOH with mobile devices (33 percent) shows that providing an avenue for the public to participate while on the move is crucial to increasing public participation.

#### *Spanish Language*

The Oak Hill Parkway VOH provided only an English language option. Providing a Spanish language VOH is an opportunity to improve participation from a larger portion of the population as a whole. It is imperative that future VOHs provide language options to accurately reflect the public they intend to engage.

#### *Real-Time Chat Sessions on the Weekend*

The VOH real-time chat sessions were held during a lunchtime session (11:00 a.m. to 1:00 p.m.) and a standard evening session (6:00 to 8:00 p.m.). When examining the results of the traffic in GA, it was apparent that there was interest in viewing the VOH over the weekend in between the two real-time chat sessions. It has traditionally been assumed that hosting a public meeting on the weekend would result in poor attendance since people generally want to spend their weekends engaging in recreational activities. With the increased level of accessibility of the VOH, there may be an opportunity to provide the public with an alternative to forfeiting a lunch hour or weekday evening in order to participate in planning initiatives. With the potential for an

individual to quickly “get in, learn what they need to learn, ask what they need to ask, provide input, and get out,” it may be that a weekend is a better option than a lunch hour or evening during the busy week.

It should be noted that the VOH real-time chat sessions were held on the Friday before Memorial Day weekend, and the second real-time chat session was held the day after Memorial Day itself. The majority of the advertising for the VOH was focused on the first weekend it was open (Memorial Day weekend). While there were a large number of visitors, the overall participation may have been affected by being launched just prior to the holiday weekend. The real-time chat sessions may have also experienced lower levels of participation based on their being held the day directly before and after the holiday weekend.

#### *Google Analytics and Potential for Better Metrics for Analysis*

GA provided a readily available tool that produced a number of useful metrics to evaluate the effectiveness of the attendance and participation in the VOH. While much of the data was suitable for the VOH, GA is geared toward providing e-commerce websites with evaluative data to gauge how successful they are at converting web traffic into sales. There is the potential to develop customized internal counters into the VOH in order to measure attendance, pages per visit and site visit duration without having to rely on GA. One primary disadvantage to using GA is that it does not provide the data with which it produces its reports, to respect the privacy of web browsers. For example, capturing the IP addresses of visitors of VOHs would produce far more accurate evaluative data, which would be more useful to planning organizations.

#### *Concept Videos*

The concept videos for the Oak Hill Parkway VOH were developed using free software. The final products were adequate in quality, but users only watched about half of each video on average; therefore, it is an area that could be improved. Shortening the overall length has been mentioned previously as a potential area to improve. In addition to creating shorter videos, there is the potential to provide more interactive video options using the Prezi presentation software. This would allow users to interact with the materials in much the same way they interact with them at a TOH, looking specifically at the locations and areas within a plan that are of most interest to them. The concept videos provide the bulk of the information that is disseminated to users in the VOH, so focusing on producing the highest quality product with increased interactivity should be the goal for future VOHs.

Overall, the pilot Oak Hill Parkway VOH was a success. The endeavor provided an opportunity to engage more people in the transportation planning process. Improvements that are noted above will enhance the experience. There are several opportunities to build upon this success. Agencies can expect participation to increase as more people become accustomed to the VOH and are convinced that participating in a real-time chat with project personnel is an effective mechanism for providing feedback. .

## **APPENDIX—USER COMMENTS**

User comments from the VOHs held on May 24 and May 28, 2013, are summarized in the tables on the following pages. The comment tables are broken out by concept discussed.

**May 24 Open House**

**Table A1. General Overview.**

<b>Virtual Open House Moderated Session: May 24, 11:00 a.m.–1:00 p.m.</b>		<b>Overview Questions/Comments</b>						
<b>Time</b>	<b>Commenter</b>	<b>Original Comment/Question</b>	<b>Commenter</b>	<b>Oak Hill Parkway Rep. Response</b>	<b>Commenter</b>	<b>Commenter Response</b>	<b>Commenter</b>	<b>Commenter Response</b>
2013/05/24 at 10:58 a.m.	Oak Hill Parkway Representative —Randall	Welcome to the Oak Hill Parkway pilot virtual open house! A project representative will answer your questions as soon as possible, on a first-come, first-serve basis. Feel free to join in any of the community discussions as well!						
2013/05/24 at 11:24 a.m.	CMEC	The boards look good. The enviro constraints graphic loses resolution when you zoom in on an iPad. Are the Continuous Flow Intersection interim improvements addressed anywhere?	Oak Hill Parkway Representative —Sara	They are addressed in the No Build Alternative. You can see the video and ask any questions there. Thank you for your comment. Also, all of the concepts will be posted as pdfs after the open house on the Oak Hill Parkway website. The resolutions should be better on the pdfs.				

**Table A1. General Overview (Continued).**

<b>Time</b>	<b>Commenter</b>	<b>Original Comment/Question</b>	<b>Commenter</b>	<b>Oak Hill Parkway Rep. Response</b>	<b>Commenter</b>	<b>Commenter Response</b>	<b>Commenter</b>	<b>Commenter Response</b>
2013/05/24 at 11:39 a.m.	Linda F	Will any of the proposed Concepts A plus or minus Options provide higher throughput (more vehicles per hour) during rush hour than the others? Which and why? Thanks.	Oak Hill Parkway Representative —Randall	All of these are concepts at this point and we have not done detailed traffic analysis on them yet. In general, the concepts without direct connector ramps will not move traffic as efficiently at the “Y.” Thanks.				
2013/05/24 at 11:49 a.m.	gregg c	The story I saw on the news mentioned toll lanes, but I have not seen tolled lanes mentioned in any of the overviews. Was the news mistaken?	Oak Hill Parkway Representative —Kelli	Hey Gregg, you’re correct. Right now, we’re focused on finding concepts for the Oak Hill area that meet the purpose and need of the project. Multiple alternatives will be evaluated throughout this process including tolled, non-tolled and no-build options, but a determination has not been made, at this point.				

**Table A1. General Overview (Continued).**

<b>Time</b>	<b>Commenter</b>	<b>Original Comment/Question</b>	<b>Commenter</b>	<b>Oak Hill Parkway Rep. Response</b>	<b>Commenter</b>	<b>Commenter Response</b>	<b>Commenter</b>	<b>Commenter Response</b>
2013/05/24 at 12:03 p.m.	Oak Hill Parkway Representative —Randall	Before leaving, please take a moment to take our survey and let us know what you thought about the pilot virtual open house.						
2013/05/24 at 12:05 p.m.	Linda F	TxDOT has made studies about the traffic passing through Oak Hill and Y-intersection. When was the most recent and does it identify how many vehicles are coming from (a) inside Austin city limits, (b) from Travis County outside of Austin, (c) from Hayes County, (d) other, etc.?	Oak Hill Parkway Representative —Wade	Thank you for your question, Linda. We are working with CAMPO (Capital Area Metropolitan Planning Organization) to update their travel demand model. This update will include origin-destination information that will answer your question. The update should be available this fall.	Linda F	I'm glad to hear there is an update in the works. I have heard homes sales in the Austin and surrounding areas are moving fast during this sales season. That could have an impact, too.	Oak Hill Parkway Representative —Randall	Thanks for your input. Please stay involved in this process.

**Table A1. General Overview (Continued).**

<b>Time</b>	<b>Commenter</b>	<b>Original Comment/Question</b>	<b>Commenter</b>	<b>Oak Hill Parkway Rep. Response</b>	<b>Commenter</b>	<b>Commenter Response</b>	<b>Commenter</b>	<b>Commenter Response</b>
2013/05/24 at 12:07 p.m.	gregg c	Just to be clear, I indicated that I “liked” some of the concepts, and the use of the word “freeway” in the descriptions played a role in my decision. If those concepts are actually tied to toll roads at some point in the future, I would NOT be in favor of them. Tolling lanes for short distances (to get past what is now 3 or 4 traffic controlled intersections) would be ridiculous, especially when many of the local toll roads are now doing away with toll booths and requiring the purchase of TXtags. The use of toll lanes will cause a great deal of public resistance and will drive traffic that wants to avoid the toll roads into neighboring residential streets. I would rather see the road stay as is if tolled lanes are part of any plan.	Oak Hill Parkway Representative —Kelli	I understand. Tolling is a funding mechanism and may/may not be integrated into any of the concepts. We do not know if tolls will be an option; however, the same number of free lanes that exist today will exist in the future, regardless of how the project is funded. However, if you wish to change your opinion on any of the concepts, you can simply click the “change your mind” button under the video.				

**Table A1. General Overview (Continued).**

<b>Time</b>	<b>Commenter</b>	<b>Original Comment/Question</b>	<b>Commenter</b>	<b>Oak Hill Parkway Rep. Response</b>	<b>Commenter</b>	<b>Commenter Response</b>	<b>Commenter</b>	<b>Commenter Response</b>
2013/05/24 at 12:46 p.m.	Oak Hill Parkway Representative —Randall	Please be aware that there are only 15 minutes remaining to ask questions of the project representatives. The project representatives will answer as many questions as possible in that time. If your questions have not yet received an answer, you can either wait until the next open house, or submit a formal comment/question at the Oak Hill Parkway Website. Before leaving, please take a moment to take our survey and let us know what you thought about the pilot virtual open house.						

**Table A1. General Overview (Continued).**

<b>Time</b>	<b>Commenter</b>	<b>Original Comment/Question</b>	<b>Commenter</b>	<b>Oak Hill Parkway Rep. Response</b>	<b>Commenter</b>	<b>Commenter Response</b>	<b>Commenter</b>	<b>Commenter Response</b>
2013/05/24 at 12:48 p.m.	David W	I do not understand why so much money has to be spent year after year on why this needs to be done. I am not an educated person, but my dog knows this needs to be done and should have been done 5 years ago. There is so much traffic in the City, it is almost impossible to get around. Government agencies sitting on their butts and not taking action is what is wrong with Austin traffic. There are too many cars on the roads that are provided. I do not care the about the cost, just do this.	Oak Hill Parkway Representative —Randall	Thanks for your comment. Please encourage your neighbors to provide their input as well. Public input is a key component in developing a mobility solution that adds value to Oak Hill.				

**Table A1. General Overview (Continued).**

<b>Time</b>	<b>Commenter</b>	<b>Original Comment/Question</b>	<b>Commenter</b>	<b>Oak Hill Parkway Rep. Response</b>	<b>Commenter</b>	<b>Commenter Response</b>	<b>Commenter</b>	<b>Commenter Response</b>
2013/05/24 at 1:01 p.m.	Oak Hill Parkway Representative —Randall	Thank you for participating in the pilot virtual open house. The community discussion is now closed. If a project representative was unable to answer your question, you can submit it at the next virtual open house—occurring from 6-8 PM on May 28—or you may submit your question at the Oak Hill Parkway Website at any time. Please take our survey and let us know what you thought about the pilot virtual open house. Your feedback is very important to us. Thank you again for participating.						

**Table A2. Concept B Comments.**

Virtual Open House Moderated Session: May 24, 11:00 a.m.–1:00 p.m.		Concept B Questions/Comments		
Time	Commenter	Original Comment/Question	Commenter	Oak Hill Parkway Rep. Response
2013/05/24 at 10:49 a.m.	Oak Hill Parkway Representative— Larry	Welcome to the Oak Hill Parkway pilot virtual open house! Please use the space below to post questions about “Concept B.” A project representative will answer your questions as soon as possible, on a first-come, first-serve basis. Feel free to join in any of the community discussions as well!		
2013/05/24 at 11:21 a.m.	David R	Hi Folks, I posted an “official” comment this morning (but no longer have access to it) concerning changes to SH 71 between Scenic Brook and Hill Meadow Drive. If the virtual open house people would like to post that comment here or copy the comment back to me to post here via email, that would be OK with me.	Oak Hill Parkway Representative	From David R (official comment): I want to thank the EIS team for a very informative presentation at the United Methodist Church Thursday. I have participated in all the meetings and it’s clear the EIS team is equally engaged ;-) wink wink. You have been listening to the community and presented a range of ideas that reflected all voices that I heard and read. That said, I would like to encourage the team to post Wade Strong’s pdf files online ASAP for close scrutiny by the community at their leisure. I noticed that presentations B and C appeared to get the most support. However there appears to be a problem in one (“C”) where Old Bee Cave Road (OBCR) intersects with the frontage road near the HEB. That scenario and location appears to require eastbound travelers to exit the main lanes before William Cannon to ultimately make it back to OBCR.
2013/05/24 at 11:21 a.m. (continued)	David R	Thanks but that’s not the one. It’s one I sent this morning.	Oak Hill Parkway Representative	From David R (con’t, official comment): My memory is that it would be equally difficult for WB travelers to access OBCR. Scenario “B” offers more direct access. If you post the pdf presentations on line the community can review and discuss before the next meeting. I recognize “C” got a higher rating than “B” but I believe that issue was not addressed during the meeting and I think few recognized the difficulty, unlike the issue with Oak Park residents who noted the extra travel distance required when the main lanes return to grade west of Patton Ranch Road.

**Table A2. Concept B Comments (Continued).**

<b>Time</b>	<b>Commenter</b>	<b>Original Comment/Question</b>	<b>Commenter</b>	<b>Oak Hill Parkway Rep. Response</b>
2013/05/24 at 11:21 a.m. (continued)	Oak Hill Parkway Representative	From David R (con't official comment): That issue WAS raised and keeping the lanes elevated to where they merge with existing main lanes at Joe Tanner leave Oak Park residents no worse off than they are today. That's good. I also want to offer my appreciation that "B" offers a "boulevard" design opportunity just west of William Cannon that could be a real incentive to improve retail opportunities and redevelopment along that road section. Overall a very good presentation that was informative and responsive to community interests.	Oak Hill Parkway Representative—Larry	David—PDFs of each of the options should be accessible. Go to each option and just under the video there's a link titled "Click to view detailed map of Concept B" that will open the PDF. We'll post your comment momentarily.
2013/05/24 at 11:21 a.m. (continued)	Oak Hill Parkway Representative—Wade	PDFs will also be available from <a href="http://www.oakhillparkway.com">http://www.oakhillparkway.com</a> .	Oak Hill Parkway Representative	David our apologies. This is the comment we received this morning: From David R (official comment): concerning improvements to concept B: In Concept A it appears you show elevated lanes from NW of Scenic Drive over and past the Y. These were not liked by the Scenic Brook Neighborhood. In Concept B those direct connect "main lanes" are replaced by "frontage roads" but this forces all SH 71 traffic onto these four lanes at the expense of local traffic. While there is an improved intersection at Scenic Brook, there could well be congestion at that intersection. I remember the issues around vertical elevation changes along 71. A bridge structure at Scenic Brook did not provide adequate distance to come to grade before the Y.

**Table A2. Concept B Comments (Continued).**

<b>Time</b>	<b>Commenter</b>	<b>Original Comment/Question</b>	<b>Commenter</b>	<b>Oak Hill Parkway Rep. Response</b>
2013/05/24 at 11:21 a.m. (continued)	Oak Hill Parkway Representative	From David R (con't official comment): Consider this alternative: If a bridge structure were moved NW toward Silvermine say 1000 feet (?) to near Hill Meadow Drive, two "Texas turnarounds" under that structure would serve traffic in both directions and provide a means for Scenic Brook neighborhood traffic to make non-signalized movement and proceed to weave across "Y bound" traffic on 71 to return to Scenic Brook. There are three entrances to the strip mall where Doucet is located. One could be moved SE and/or the one at Hill Meadow Drive improved to maintain adequate egress for that shopping center and safe movement from the turnaround into that center. Access to the small shopping center between 71 and Williamson Creek might have to be moved NW and loop back to provide safe traffic movement but that is undeveloped land.	Oak Hill Parkway Representative	From David R (con't official comment): Before the Y, all boulevard lanes could merge with sufficient weaving distance for Scenic Brook Neighborhood traffic headed toward the Y the HEB to weave to the left lane and make a movement onto the NW bound lanes to enter the HEB shopping center. Moving the overpass the added distance NW would permit 71 to return to grade near or just SE of Scenic Brook. The desirable boulevard concept shown in Concept A would then be preserved in concept B in lieu of the challenging intersection at Scenic Brook or elevated lanes at the Y proper.
2013/05/24 at 11:21 a.m. (continued)	Oak Hill Parkway Representative—Larry	David-Thank you for this comment and your suggestions. We'll look at your concept in more detail and get back with you.	David R	Hi Larry, the links "work" but the files are so large they choke the browser. I've attempted to download the files but no joy. You may have to provide them as zip files for folks to download and open on their local version of Adobe reader.
2013/05/24 at 11:21 a.m. (continued)	Oak Hill Parkway Representative—Larry	David: We'll work on providing smaller PDF files. They were compressed from ~80 MB down to ~16MB. We'll try to compress further and have them posted early next week.		
2013/05/24 at 12:46 p.m.	Oak Hill Parkway Representative—Larry	Please be aware that there are only 15 minutes remaining to ask questions of the project representatives. The project representatives will answer as many questions as possible in that time. If your questions have not yet received an answer, you can either wait until the next open house, or submit a formal comment/question at the Oak Hill Parkway Website. Before leaving, please take a moment to take our survey and let us know what you thought about the pilot virtual open house.		

**Table A2. Concept B Comments (Continued).**

<b>Time</b>	<b>Commenter</b>	<b>Original Comment/Question</b>	<b>Commenter</b>	<b>Oak Hill Parkway Rep. Response</b>
2013/05/24 at 1:00 p.m.	Oak Hill Parkway Representative—Larry	Thank you for participating in the pilot virtual open house. The community discussion is now closed. If a project representative was unable to answer your question, you can submit it at the next virtual open house—occurring from 6-8 PM on May 28—or you may submit your question at the Oak Hill Parkway Website at any time. Please take our survey and let us know what you thought about the pilot virtual open house. Your feedback is very important to us. Thank you again for participating.		

**Table A3. Concept D Comments.**

Virtual Open House Moderated Session: May 24, 11:00 a.m.–1:00 p.m.		Concept D Questions/Comments		
Time	Commenter	Original Comment/Question	Commenter	Oak Hill Parkway Rep. Response
2013/05/24 at 10:50 a.m.	Oak Hill Parkway Representative—Heather	Welcome to the Oak Hill Parkway pilot virtual open house! Please use the space below to post questions about “Concept D.” A project representative will answer your questions as soon as possible, on a first-come, first-serve basis. Feel free to join in any of the community discussions as well!		
2013/05/24 at 10:58 a.m.	David R	My preferences are toward concept B with changes suggested at another time to improve access to Convict Hill Rd. neighborhoods and Scenic Brook neighborhood. However Concept D addresses many community desires expressed during the 2007 process. The difficulty I have with Concept D is that Hill Oak neighborhood would have to travel west almost to William Cannon to then turn left to go downtown. If the main lanes were elevated near Williamson Creek and McCarty Lane, the improvements to Joe Tanner currently under construction could be preserved and Hill Oaks Neighborhood access would not be diminished.	Oak Hill Parkway Representative—Heather	We thank you for your comment. Let me know if you have any questions regarding this concept.

**Table A3. Concept D Comments (Continued).**

<b>Time</b>	<b>Commenter</b>	<b>Original Comment/Question</b>	<b>Commenter</b>	<b>Oak Hill Parkway Rep. Response</b>
2013/05/24 at 11:15 a.m.	Brian M	Would the Convict Hill intersection be at current ground level? Would the frontage road be at current ground level also with only the express lanes below current ground level?	Oak Hill Parkway Representative—Heather	Yes, Convict Hill and the frontage roads would be at ground level with the express lanes depressed. Do you have any other questions regarding this concept?
2013/05/24 at 11:15 a.m. (continued)	Brian M	The only flyovers would be at the Y and then east on 290, correct?	Oak Hill Parkway Representative—Heather	US 290 express lanes would bridge over SH 71, Williamson Creek, and William Cannon. There are no direct connects from US 290 to SH 71.
2013/05/24 at 11:15 a.m. (continued)	Brian M	Thanks.	Oak Hill Parkway Representative—Heather	You're welcome. Let me know if you have any more questions.
2013/05/24 at 1:00 p.m.	Oak Hill Parkway Representative—Heather	Thank you for participating in the pilot virtual open house. The community discussion is now closed. If a project representative was unable to answer your question, you can submit it at the next virtual open house—occurring from 6-8 PM on May 28—or you may submit your question at the Oak Hill Parkway Website at any time. Please take our survey and let us know what you thought about the pilot virtual open house. Your feedback is very important to us. Thank you again for participating.		

**Table A4. 2007 Alternative Comments.**

Virtual Open House Moderated Session: May 24, 11:00 a.m.–1:00 p.m.		2007 Alternative Comments/Questions		
Time	Commenter	Original Comment/Question	Commenter	Oak Hill Parkway Rep. Response
2013/05/24 at 10:49 a.m.	Oak Hill Parkway Representative—James	Welcome to the Oak Hill Parkway pilot virtual open house! Please use the space below to post questions about the 2007 Alternative. A project representative will answer your questions as soon as possible, on a first-come, first-serve basis. Feel free to join in any of the community discussions as well!		
2013/05/24 at 11:38 a.m.	Connie Coppersmith	Will any homes/businesses/Oak Trees be affected by this project? In terms of eminent domain?	Oak Hill Parkway Representative—James	Hi Connie, this is for one concept. However, for the project as a whole, any of the build concepts would require additional property. Impacts to trees, homes, businesses will be an important consideration for developing alternatives from the concepts. Eminent Domain may or may not be used depending on the property acquisition process. Do you have any trees, homes, businesses that you are particularly interested in?
2013/05/24 at 11:52 a.m.	Nicole R	Will any of these concepts incorporate additional modes of transportation such as commuter rail? Or at least be developed in a way so that it could be an option for the future?	Oak Hill Parkway Representative—James	Hi Nicole. Yes, Capital Metro is a partner agency in the project development. We will be looking into express bus services, as well as potential park-and-rides. For more information about regional bus and rail services, please search for “Project Connect.”

May 28 Open House

Table A5. Overview Comments.

Virtual Open House Moderated Session: May 28, 6:00 p.m.–8:00 p.m.		Overview Questions/Comments						
Time	Commenter	Original Comment/Question	Commenter	Oak Hill Parkway Rep. Response	Commenter	Commenter Response	Commenter	Commenter Response
2013/05/28 at 5:47 p.m.	Oak Hill Parkway Representative— Randall	Welcome to the Oak Hill Parkway pilot virtual open house! A project representative will answer your questions as soon as possible, on a first- come, first-serve basis. Feel free to join in any of the community discussions as well!						
2013/05/28 at 6:19 p.m.	storye	Which concept currently has the most public support?	Oak Hill Parkway Representative— Randall	We are still reviewing the comments, and the comment period ends June 3, but at the workgroup preview on design on May 16, Concept C was the most popular.				
2013/05/28 at 6:30 p.m.	Steven Polunsky	Can you tell me how many people are currently logged in to this chat?	Oak Hill Parkway Representative —Randall	Right now, 16 people are logged in.	Steven Polunsky	Thank you.	Oak Hill Parkway Representative— Randall	You are welcome. There were more than 400 that logged on over the holiday weekend.

**Table A5. Overview Comments (Continued).**

<b>Time</b>	<b>Commenter</b>	<b>Original Comment/Question</b>	<b>Commenter</b>	<b>Oak Hill Parkway Rep. Response</b>	<b>Commenter</b>	<b>Commenter Response</b>	<b>Commenter</b>	<b>Commenter Response</b>
2013/05/28 at 6:52 p.m.	Michael f	Will healthy heritage trees be removed with all of the options? Will the project abide by Austin's heritage tree ordinance?	Oak Hill Parkway Representative—Randall	Impact to trees will be an important consideration for developing alternatives from the design concepts. The community has communicated the importance of protecting as many trees as possible while still improving mobility and safety along the US 290/SH 71 corridor. Design concepts are preliminary at this point and do not yet include detailed environmental, engineering or traffic analysis. Let me check on your second question.	Oak Hill Parkway Representative—Kelli	We are working with the City of Austin arborist to make sure we preserve as many trees as possible.		

**Table A5. Overview Comments (Continued).**

<b>Time</b>	<b>Commenter</b>	<b>Original Comment/Question</b>	<b>Commenter</b>	<b>Oak Hill Parkway Rep. Response</b>	<b>Commenter</b>	<b>Commenter Response</b>	<b>Commenter</b>	<b>Commenter Response</b>
2013/05/28 at 7:10 p.m.	Michael f	Which of these options provides the least amount of heritage trees removed? Will some healthy heritage trees be transplanted to preserve them?	Oak Hill Parkway Representative—Kelli	Unfortunately, we don't know that at this time. Since these are all still conceptual, it's hard to say, but there are a handful of trees that will stay in all concepts, such as the grandmother oak. If I had to venture a guess, I'd say the "no build" option will probably take out the least.				
2013/05/28 at 7:17 p.m.	Michael f	Will some healthy heritage trees be transplanted to preserve them?	Oak Hill Parkway Representative—Kelli	Potentially. We are working with the City of Austin arborist to determine this very thing. We are planning on transplanting trees on other projects, but it's too early to make that determination in this case.				
2013/05/28 at 7:36 p.m.	Michael f	What's the deadline to provide comments on these options?	Oak Hill Parkway Representative—Randall	June 3. Please let your friends know. We welcome all comments. Thanks.				