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# TxDOT Website Analysis and Evaluation Project Executive Summary



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## Executive Summary

In April 2010, the Texas Department of Transportation (TxDOT) contracted with Sherry Matthews Advocacy Marketing (SMAM) to conduct a usability evaluation of TxDOT's current website. SMAM partnered with Design For Use to conduct the study.

The primary objectives for this evaluation were to measure the effectiveness of txdot.gov against the following criteria:

- Does the website adhere to the tenets of good design and navigation practices?
- Can a majority of users easily find what they are looking for on the site?
- Are the primary tasks that attract visitors to the site accomplished in a reasonable time and with a reasonable amount of effort?

Study findings and recommendations are intended to improve the overall user experience and address the website's navigation, informational hierarchy, content, and visual design. In an evaluation of this type, a representative group of website users should be able to complete most of the primary tasks without assistance and should respond positively to the website.



# Process

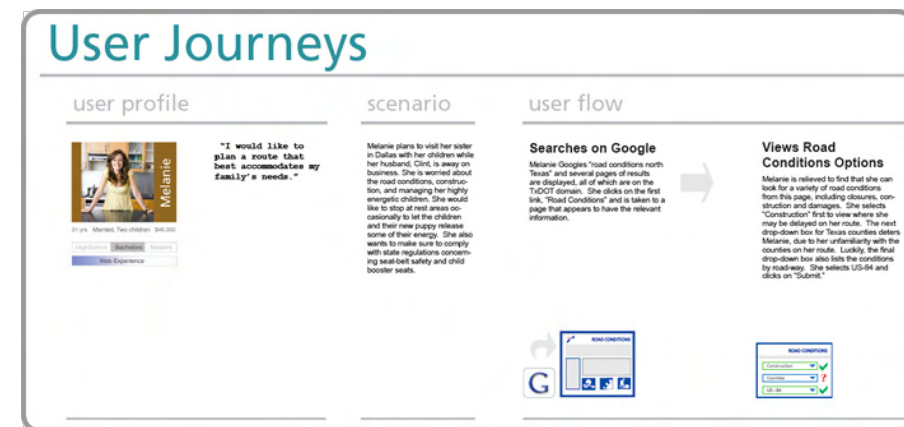
## Stakeholder Interviews

Design For Use met with stakeholders from TxDOT and Sherry Matthews Advocacy Marketing to determine the scope of the project, including:

- Main goals
- Success metrics
- Challenges and opportunities
- User groups and needs

## User Profiles and Journeys

- User profiles were created based on feedback from stakeholder summaries and website statistics (such as most frequent page views, most common search terms, and most downloaded forms) to represent broad categories of website visitors, such as the traveling public, natural disaster evacuees, TxDOT contractors and Texas lawmakers.
- Each of the seven user profiles represents a different group of people who use the TxDOT website to find information and accomplish specific tasks.
- The user journeys identify tasks and actions users might follow to accomplish their goals on the website.





## Website Audit

- A website audit was conducted by usability professionals from Design For Use to identify the strengths and weaknesses of the TxDOT website.
- The website was also compared to two other government transportation websites.
- Usability experts attempted to accomplish the same goals as the user needs determined by the profiles and journeys.
- Twelve key pages of the TxDOT website were evaluated against accepted best practices for user-friendly website design.

## Usability Study

- Twenty-six individual users were recruited and participated in a usability evaluation directed by a trained moderator. Over the course of 60-90 minutes, they completed a series of common tasks on the website, such as finding information on TxDOT projects, checking for updates on traffic and road construction, and viewing the schedules for meetings and hearings.
- The study identified and confirmed the major challenges many users experienced when trying to accomplish their goals.

TxDOT Website Audit - Site Audit Page 8

### Page-level Findings

**Home**

- [1] The homepage should be organized by tasks or actions, rather than a directory of links. Making the options under the "How do I..." drop down menu a more integral part of this page could offer concrete starting points for users. (A)
- [2] The user goal appears to be "find information on \_\_\_\_\_ topic." Action-oriented wordings of tasks like "How do I register my Vehicle" or "Find Traffic Alerts" would be more helpful.
- [3] Third-party sites under "Quick Links" should be marked explicitly, as they will take users away from the site. (C)
- [4] The hyperlinks should be treated differently than plain text, and a hover effect for links would reinforce clickability. For example, the linked and static text under "Quick Links" looks identical. (B)
- [5] The icons under "Modes of Travel" are obvious, but their purpose is not always clear. The user needs more context about what is contained behind these links. (D)
- [6] The graphical elements next to the "Quick Links" add an aesthetic element to the page, but do little to clarify the information found behind each of those links. (E)
- [7] The map of Texas appears to be static and not interactive. Making it larger with a hover effect on each district is recommended. (F)
- [8] The "What's New" section occupies real estate disproportionate to its link to more updates. (G)

TxDOT Website - Usability Evaluation Report Page 4

### Top Findings

Users can easily find the TxDOT site online due to its sound Search Engine Optimization (SEO)

**Finding:**

- Many users searched for "Texas road conditions" or "TxDOT road construction" and were able to get to the TxDOT site without prompting from the moderator.
- The navigation menus and link names generally align with page titles.

**Recommendation:**

- The Search Engine Optimization is sound and many users eventually found the TxDOT website through natural navigation from a search engine.



## What This Report Includes

- This executive summary combines key findings from both the website audit and the usability study to document the most compelling and important feedback for making website improvements.
- All research documents, including the stakeholder summary, user profiles, user journeys, website audit, and usability study, also are available for those interested in a more in-depth view of the evaluation process and more detailed findings.





# Findings and Areas for Improvement

## 1. TxDOT website is easy to find.

Users can easily find the TxDOT website due to the accurate key words used to describe the homepage (also known as Search Engine Optimization or SEO).

### Findings:

- Many users searched for “Texas road conditions” or “Texas construction” in Google or another external search engine and were able to quickly get to the TxDOT website without prompting.
- Keywords and descriptions on most pages align with the information found on the page.
- It is clear that TxDOT has taken significant steps to categorize the information on its website.
- The menus and link names generally align with page titles.

### Conclusions:

- TxDOT has done a good job making the website easy for users to find.
- The keywords align correctly with information found on most content pages; the Search Engine Optimization is sound.

The screenshot shows a Google search for "texas road conditions". The search results page displays the Google logo, the search query, and the number of results (About 1,870,000 results in 0.40 seconds). The search results include several entries from the Texas Department of Transportation website, such as "Road Conditions", "Texas Department of Transportation Home Page", "Road Conditions", "Texas Travel Information - Highway and Road Conditions, Weather ...", "Where to Find Texas Highway Road Condition Travel Information", "usroadconditions.com", and "Texas Traffic Information". Each result includes a brief description and the URL of the page.



## 2. The txdot.gov homepage can be overwhelming for some users.

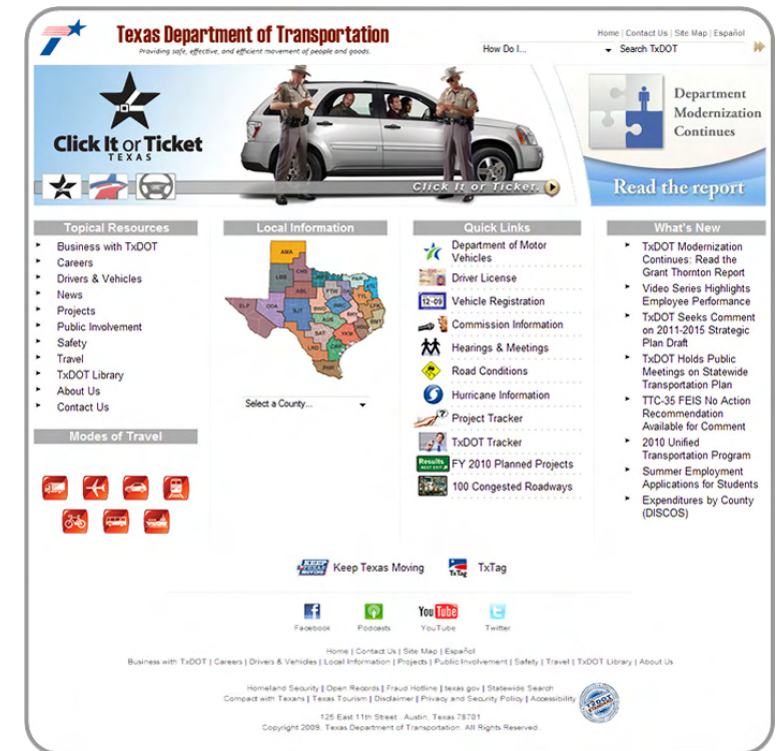
There are over 50 links and options for users to choose on TxDOT's homepage. This extensive number overwhelms many users.

### Findings:

- Most users indicated they were overwhelmed by the number of options available on the homepage.
- Due to the large volume of links, it often was confusing for users to decide which link to select. Users often defaulted to using the Search function to help them find information.
- Participants used the "Quick Links" navigation, but had little use for the "What's New" section.
- The district map is confusing and hard to manipulate; after clicking on the map, participants expected to be taken directly to county (rather than district) information.

### Recommendations:

- Organize the homepage by tasks and actions (such as relevant forms, tools, and events), rather than as a list of links.
- Given that it consistently was the most commonly used feature, make the "Quick Links" box a more prominent part of the homepage.
- Make the search box easier for users to quickly find.
- Making the options under the "How do I..." drop down menu a more integral part of this page would offer concrete starting points for users.
- Since the "What's New" section occupies real estate disproportionate to its usefulness, make it smaller and move it below the primary content.
- The current district map should be repositioned and made clickable by county. Also add hover text to indicate its clickability.







### 3. The left menu should be simplified.

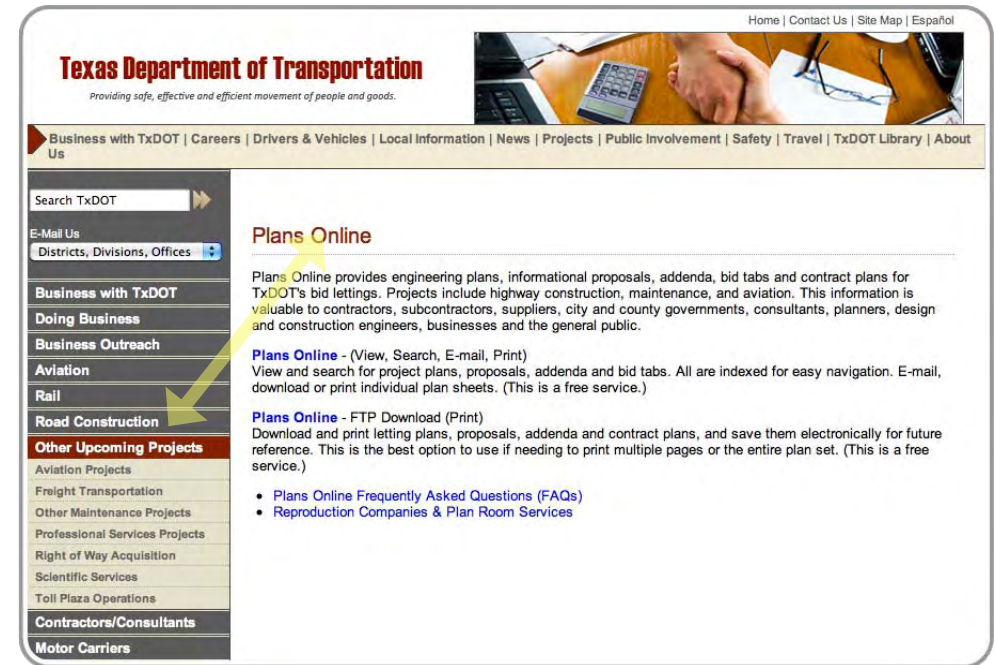
Left menu choices are inconsistent and should be simplified.

#### Findings:

- The large number of choices in the left menu makes it challenging for users to find information.
- The category overview page often duplicates links already available in the left menu.
- Participants relied on the left menu to move through the website, but were often confused when the menu changed (specifically with content shared by different parts of the website).
- The menu options do not always align with the information displayed in the main content area (see image).
- Some menu labels and language are formal and TxDOT-oriented, rather than user-focused.

#### Recommendations:

- Highlight common tasks, FAQs, or popular forms in the main content area to reduce the number of choices in the left menu.
- Organize the left menu by user priority; for example, place pages and items with the highest page views at the top of the menu.
- When a user selects an item from the left menu, the item should become more visually distinct from other menu items so the user can track his/her navigation.
- Change what appears in the main content area of the page to reflect the selection in the left menu.





#### 4. The transition to non-TxDOT websites should be consistent.

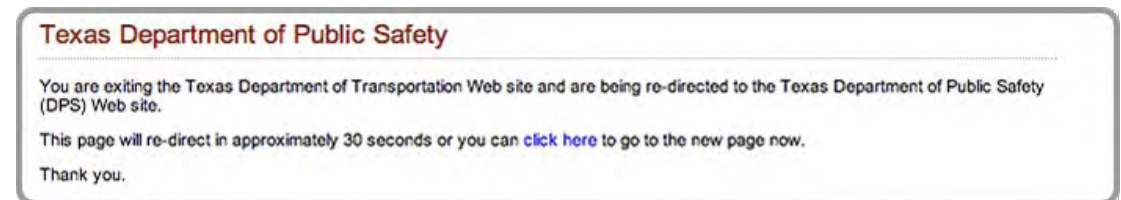
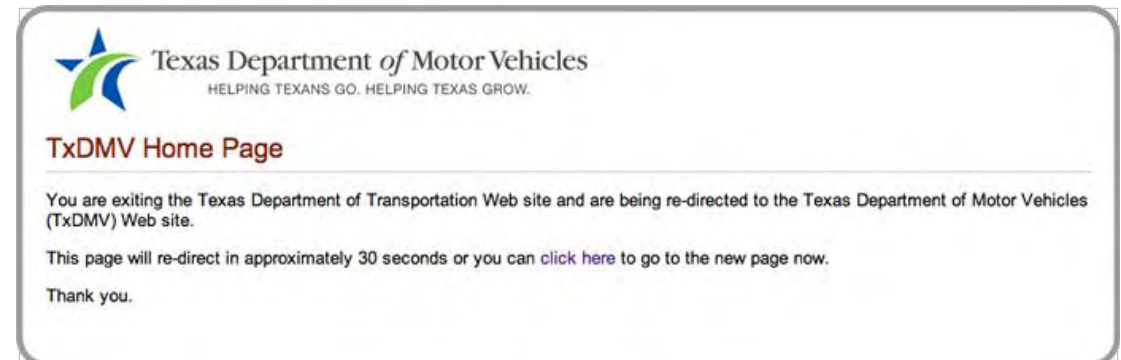
Currently there is no standard transition when a user is redirected to a non-TxDOT website, such as when users are linked to other state agency websites to renew their vehicle registration or driver license.

##### Findings:

- Users either do not notice or do not pay attention to the page that notifies them that they are leaving the TxDOT site (such as when going to DMV, DPS, or Twitter).
- Although TxDOT, DMV, and DPS serve different purposes, users were not concerned with understanding those differences.
- The intermediary page confirming the user wishes to leave TxDOT does not always appear; the transition to non-TxDOT sites should be consistent.

##### Recommendations:

- Remove intermediary pages that notify the user that they are leaving txdot.gov, and consider identifying outside sites by a simple icon or graphic.
- No explanation of the different state agencies is needed.
- TxDOT can continue to serve as a portal for users looking for DMV- and DPS-related information and tasks (driver license, registration, bill of sale, etc) by making it simple and easy for the public to accomplish these popular tasks.





### 5. The current visual design is text-heavy and there are screen resolution issues.

The website’s visual design and screen resolution can be improved to create a more contemporary site that is easy to navigate.

**Findings:**

- Many of the website’s pages rely heavily on written content or lists of links. Users have trouble finding pertinent information due to the amount of reading and searching required to accomplish a task.
- Currently, as a user expands or contracts their internet browser window size, the page content does not resize itself to fit in the browser window. Web standards indicate that website content should adjust as the browser size changes.

**Recommendations:**

- Using more images and including sub-headings within text would make it easier for users to scan the content.
- Redesign the website with a default resolution of 1024x768 pixels, which should degrade gracefully at lower resolutions. (An example and further explanation of this can be found at <http://www.w3.org/TR/WCAG-TECHS/G146.html>)
- With the exception of the homepage, the look and feel of the rest of the site — graphical elements, page layout, and colors — would benefit from a more contemporary look to help users more easily find what they are looking for.





## 6. The size of the website makes it challenging to organize and update.

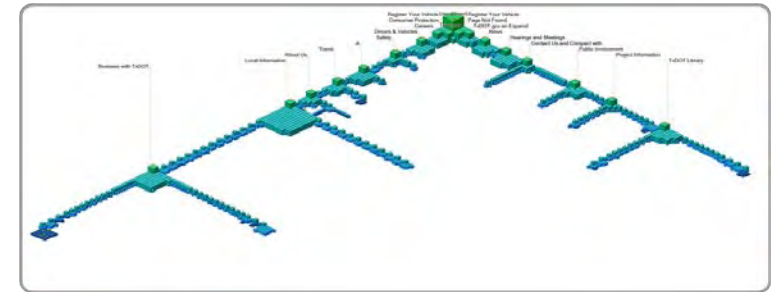
TxDOT's website is comprehensive, and it currently has more than 20,000 pages of content. The large number of pages makes it hard to update and organize the site.

### Findings:

- TxDOT's website is exceedingly broad and deep, covering an extensive amount of information. As a result, many content pages contain an excessive number of links, which is confusing for the user.
- There are many broken links leading to errors on the site. Identifying and fixing these links would be easier with the help of a Content Management System (CMS).
- There are several different visual designs currently in use that need to be updated (for example, TxDOT Expressway).
- Browsing the site alone cannot reveal all the information it contains, especially if the information is rarely accessed. This could be addressed by making the search function within the TxDOT site more robust. These tasks can be done more easily with a CMS.

### Recommendations:

- Implement a Content Management System (CMS) to manage the volume of content on the site, make updates more efficiently and remove out-dated material.
- The CMS should allow the TxDOT web team to publish updates to the website in a more timely matter, rather than going through Technology Services Division (TSD).
- A new scheme for content categories should be validated with a card sort exercise, which may help reclassify outlying information and narrow the breadth of the site.
- Consider conducting a content inventory to identify pages that can be combined or discarded.







## 7. The drop-down menus confused users.

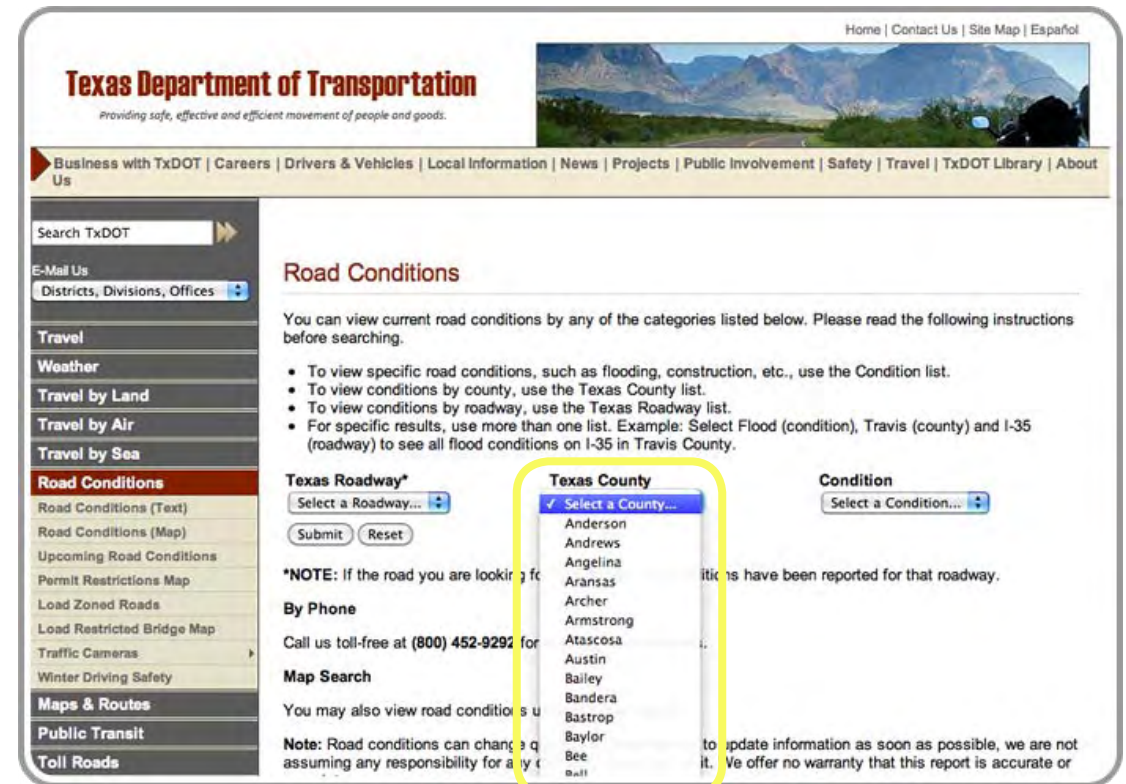
Drop-down options within tools and databases should be presented by county or city consistently.

### Findings:

- Online tools and databases (for example, Road Conditions, Project Tracker, Contact Us, TxDOT Expressway, Careers) are organized by either district, division, county, city, or roadway on various page throughout the site, which is confusing for the user.
- When presented with a drop-down list of counties, many users could not find the correct location they were looking for. For example, a common mistake for Austin-based users was the selection of “Austin” as their county instead of “Travis” when presented with the list of Texas counties from which to choose.
- The average website user does not understand the difference in categorization between TxDOT districts and divisions.

### Recommendations:

- Limiting the methods of finding local information would be helpful to the user (present either by county, city or roadway).
- Providing the county seat or largest city in parentheses next to the county name would improve the accuracy of the users’ search. (Example county drop-down: Travis (Austin), Harris (Houston)).







## Conclusion

Users come to txdot.gov with specific tasks they want to accomplish. The TxDOT website has a wealth of helpful information, and due to its comprehensive size, it is not always easy for users to navigate.

The website can be made more useful to the public by prioritizing and simplifying content, specifically in the following ways:

- Reducing the number of links on the homepage
- Highlighting navigation aids like the search function
- Allowing fewer menu choices throughout the website will actually help the public find the most relevant and useful information quickly.
- Adopting more consumer-focused language instead of TxDOT-specific terms and phrases (for example, on Project Tracker) will not only make website easier to get around, it will make TxDOT approachable and accessible.
- Using simple, easy-to-understand graphics and applying the default resolution of 1024x768 will make the site easier to use and look more visually pleasing.
- Implementing a content management system will ease the maintenance and organization of the website and allow TxDOT's web team to make timely updates and remove out-dated material in the most efficient way possible.