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16. Abstract

This user manual describes the procedure to install and use a prototype geographic information system (GIS)-based inventory of utilities within the Texas Department of Transportation (TxDOT) right-of-way (ROW) as well as a prototype Internet-based system for the capture and management of utility installation notice data. Additional information about the prototype model can be found in Report 2110-1: *A Data Platform for Managing Utilities along Highway Corridors* and Report 2110-S: *Utilities in the Right-of-Way: Inventory and Data Management*.

The utility data inventory procedure is designed to assist users in the process of developing an initial inventory of utilities that can be used as the foundation for a utility data management system. The installation notice procedure is designed to assist users in the process of collecting and managing data resulting from the submission of installation notice applications at TxDOT. The initial inventory and the installation notice procedures are modular and, as a result, they can be implemented and used in phases. Some utility installation notice procedure steps, particularly those related to locating proposed utility installations on a map in relation to existing utility installations, require the initial inventory of utilities to be in place. However, most other elements do not have a mapping component and, consequently, they do not require the initial inventory of utilities to be in place. This characteristic provides a high degree of flexibility concerning implementation phasing and scheduling.

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A DATA PLATFORM FOR MANAGING UTILITIES ALONG HIGHWAY CORRIDORS: USER MANUAL

by

Cesar Quiroga, Ph.D., P.E.
Associate Research Engineer
Texas Transportation Institute

Christopher Ellis, Ph.D.
Assistant Professor
Department of Landscape and Urban Planning
Texas A&M University

Sang-Young Shin
Graduate Research Assistant
Texas Transportation Institute

and

Robert Pina
Student Programmer
Texas Transportation Institute

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The Texas A&M University System
College Station, Texas 77843-3135

DISCLAIMER

The contents of this document reflect the views of the authors, who are responsible for the facts and the accuracy of the data presented herein. The contents do not necessarily reflect the official view or policies of the Federal Highway Administration or the Texas Department of Transportation. This document does not constitute a standard, specification, or regulation, nor is it intended for construction, bidding, or permit purposes. The engineer in charge of the project was Cesar Quiroga, P.E. (Texas Registration #84274).

NOTICE

The United States Government and the State of Texas do not endorse products or manufacturers. Trade or manufacturers' names appear herein solely because they are considered essential to the object of this report.

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LIST OF ACRONYMS, ABBREVIATIONS, AND TERMS

ASP .....Active Server Page

CD .....Compact disk

DGPS .....Differentially corrected global positioning system

DSN.....Data Source Name

ESRI.....Environmental Systems Research Institute

GIS .....Geographic information system

GPS .....Global positioning system

HTML .....Hypertext mark-up language

IIS.....Internet Information Server

JRE.....Java Runtime Environment

ODBC .....Open Database Connectivity

RAM .....Random access memory

ROW .....Right-of-way

SMTP .....Simple Mail Transfer Protocol

TLMS.....Texas Linear Measurement System

TSC1 .....Trimble Surveyor Controller

TxDOT.....Texas Department of Transportation

CHAPTER 1. INTRODUCTION

The purpose of this manual is to assist users in the process of developing a geographic information system (GIS)-based inventory of utilities within the Texas Department of Transportation (TxDOT) right-of-way (ROW) as well as an Internet-based system for the capture and management of installation notice utility data. This manual is divided in chapters as follows:

- Chapter 1: Introduction;
- Chapter 2: Utility Data Inventory Procedures; and
- Chapter 3: Utility Installation Notice Procedures.

In addition, there are two appendixes. Appendix A lists the contents of the companion Prototype Utility Platform compact disk (CD). Appendix B lists all active server pages (ASPs), hypertext mark-up language (HTML) files, and Javascript functions generated or customized for the prototype.

The utility data inventory procedure assists users in the process of developing an initial inventory of utilities to use as the foundation for a utility data management system. The installation notice procedure is designed to assist users in the process of collecting and managing data resulting from the submission of installation notice applications at TxDOT. The initial inventory and the installation notice procedures are modular, which should facilitate their future implementation and use. Some utility installation notice procedure steps, particularly those related to locating proposed utility installations on a map in relation to existing utility installations, require the initial inventory of utilities to be in place. Most other elements do not have a mapping component and, consequently, they do not require the initial inventory of utilities to be in place. This characteristic provides a high degree of flexibility concerning implementation phasing and scheduling.

The prototype developed is generic and could be implemented either at the district level or at the Austin headquarter level. The original design assumes that some activities such as utility data inventory and installation notice processing, which are distributed in nature, could take place at the district level. To ensure compatibility with the data collected and processed at different districts throughout the state, the data would need to conform to a set of minimum standards and data quality specifications. Other activities such as maintenance of the Internet-based installation notice system could take place using a centralized system in Austin.

CHAPTER 2. UTILITY DATA INVENTORY PROCEDURES

HARDWARE REQUIREMENTS

Global Positioning System (GPS) Equipment

The specifications of the GPS equipment used for conducting the research are as follows:

- twelve-channel Trimble Pro XR GPS/Beacon receiver,
- integrated GPS/Beacon antenna,
- two-Mbyte Trimble Surveyor Controller (TSC1) data collector,
- backpack carrying system,
- rechargeable system batteries, and
- battery charger and AC power supply.

Readers should be aware that the GPS equipment used in the research performed inefficiently when capturing attribute data associated with utilities that are stacked in the vertical direction and that use common anchoring points on the ground such as utility poles (both of which need related tables that the GPS equipment data dictionary software does not currently support). As Report 2110-1: A Data Platform for Managing Utilities along Highway Corridors documents with more detail, the researchers are recommending the development of a customized GPS-based data collection system that would allow field personnel to create database records directly and considerably reduce data processing in the office.

Computing Equipment

- desktop or laptop computer with at least a Pentium or higher Intel-based microprocessor and a hard disk;
- 32 Mbytes of memory;
- Windows 95, Windows 98, or Windows NT version 4.0 operating system; and
- RS-232 serial port.

SOFTWARE REQUIREMENTS

- Environmental Systems Research Institute (ESRI) ArcView 3.2,
- Microsoft Access 2000,
- Trimble GPS Pathfinder Office version 2.7 software, and
- Prototype Utility Platform compact disk (CD). This CD contains sample GIS files (in ArcView 3.2 format), utility database schema (in Access 2000 format), and a data dictionary (in Pathfinder 2.7 format).

Note: This manual assumes that users have a working knowledge of the hardware and software platforms needed to use the utility data platform. For brevity, the manual omits many details and steps that experienced users of the Trimble Pro XR system, ArcView 3.2, Access 2000, and Pathfinder 2.7 might consider "common knowledge." With ESRI's recent introduction of

ArcGIS, the researchers realized that many details and steps that are necessary with the ArcView 3.2 platform would most likely become obsolete under the new ArcGIS platform. The researchers therefore decided to focus on general architecture and associated procedures rather than spend a great deal of time and energy on developing very fine, detailed procedures that would need modification anyway during implementation.

PREPARING FOLDERS AND FILES

1. Copy the UtilitiesDB\GISData folder from the CD to a designated location on the computer hard drive. That folder contains empty copies of the following ArcView shape files: points.shp, lines.shp, highways.shp, and connectors.shp. The attribute tables associated with these files contain a basic set of attributes that users can populate with data collected in the field. Note: the ArcIMS\UtilitiesDB\GISData folder in the CD contains sample ArcView shape files, including files streams1.shp and streets2.shp that are used as background for the Internet-based utility permitting application.

2. Copy the UtilitiesDB\AccessDB folder from the CD to a designated location on the computer hard drive. That folder contains an empty copy of the Access 2000 database schema file. This database file stores all attribute data associated with utility features as well as highway and connector features. Note: the ArcIMS\UtilitiesDB\AccessDB folder in the CD contains a sample database schema file with utility data collected on SH 16 (Bandera Road) in San Antonio.

3. Copy the UtilitiesDB\Dictionary folder from the CD to a designated location on the computer hard drive. That folder contains a copy of the data dictionary needed to inventory utilities in the field using the Pro XR GPS receiver.

DATA COLLECTION PROCEDURE

Preparations

1. Equipment checklist
    a. GPS equipment with downloaded data dictionary.
    b. Binoculars (to read labels tagged to aerial utility facilities).

2. Location of buried utilities
    a. Locate or have buried utilities located before going to the field. If necessary, work through the local One Call Center or utility coordinating council/committee.
    b. Obtain copies of utility maps from utility companies.

3. Equipment setup
    a. Select appropriate data dictionary:
        i. Utility features: to inventory utility features.
        ii. Roadbed: to inventory highway centerline features. This project included a prototype inventory of SH 16 (Bandera Rd) between IH 410 and Loop

1604 in San Antonio using the new roadbed data model developed by TxDOT.

b. Select appropriate differential correction option.

In the Field

1. Inventorying utility point features:
   a. Utility point features are utility features that can be represented by a single location on the ground, e.g., utility poles, manholes, guys, and utility boxes.
   b. To start a new point feature, select **Util point feature**.
   c. Whenever possible and as safety permits, fill in the attribute data while collecting the GPS position. In this case, make sure the GPS antenna is as close to the point feature as possible while filling in the attribute data (Figure 2-1).
   d. If you choose to fill in the attribute data before collecting the GPS position, make sure the data collection unit is in Pause mode. When you are ready to start collecting GPS data, position the GPS antenna as close to the point feature as possible. To improve accuracy, make sure the unit collects GPS data for at least 30 positions.
   e. Because the Pro XR receiver does not support concatenated attribute data dictionaries, it was necessary to create several OtherUserX and DepthHghtX fields. These fields apply to utilities that are anchored to point features such as utility poles. If a utility pole supports more than one utility, e.g., an electric line, a telephone line, and a data communications line, users must generate three pairs of OtherUserX-DepthHghtX entries: one for the electric line anchor, the second for the telephone line anchor, and the third one for the data communications line.
   f. Keep in mind that the ID may be overwritten in the office to ensure that only non-duplicate ID values are assigned to utility features in the repository database.

Figure 2-1. Inventorying a Utility Pole.

2. Inventorying utility linear features:
    a. Linear features are plan view features that begin and end at point features. A linear feature is either a straight line (e.g., an aerial cable between two adjacent poles) or have vertices (e.g., an underground gas pipeline that 'meanders' between adjacent point features).
    b. To start a new linear feature, select **Util linear feature**.
    c. Make sure to fill in the attribute data before collecting the GPS position. For this step, make sure the unit is in Pause mode.
    d. To inventory linear features that span two or more point feature anchors (e.g., an electric cable supported by a series of utility poles) and follow a straight horizontal alignment between any two adjacent point feature anchors:
        i. Position the unit over the starting point, press Resume, collect one point, and press Pause.
        ii. For all intermediate points, press Resume, collect one point, press Segment, and then Pause. This procedure will carry over the feature attributes to the new segment feature.
        iii. For the last point, position the receiver over the ending point and press Resume to collect one position and then press Pause. To store the line feature, press Enter.
    e. To inventory linear features that do not follow a straight horizontal alignment, position the unit over the starting point, press Resume, and walk toward the ending point following the linear feature horizontal alignment (make sure the time interval, e.g., five seconds, is appropriate to record variations in the horizontal alignment). Keep in mind that if those variations are lower than the positional accuracy of the GPS data (e.g., ±two feet, 95 percent confidence level), the feature could be inventoried using straight alignments.
    f. To inventory stacked utilities that share the same footprint as the original linear feature (e.g., telephone lines and television lines that are anchored to electric poles and therefore share the same footprint as the original electric line) use the OtherUserX, MinDepthHghtX, and MaxDepthHghtX fields.

3. Inventorying ROW locator features:
    a. ROW locator features represent point features that can be used to determine the TxDOT ROW.
    b. To start a new ROW locator feature, select **ROW locator**.

4. Inventorying other road features (point features):
    a. Other road features represent point features that do not belong to any of the categories described previously. They are used mainly for documentation and completeness purposes.
    b. To start a new feature, select **Other road feature**.

5. Inventorying highway roadbed features:
    a. Highway roadbed centerlines represent roadway features (except ramps and connectors) on the ground. Roadbed centerlines are normally inventoried while

carrying the GPS receiver on board a probe vehicle. Note: The data dictionary for highway roadbed features is called Roadbed, not Utility features.
   b. To start a new highway roadbed centerline feature, select Highway.
   c. Make sure to fill in the attribute data before collecting GPS positions.
   d. Make sure to drive on the middle lane. If the number of lanes for a specific direction is even (e.g., two or four) locate the two middle lanes and drive on the lane located on the right side. Make sure to stay in the same lane of traffic until the GPS collection is complete.
   e. For consistency, always place the GPS antenna on the same spot (e.g., on the left side of the vehicle) aligned with the front seat.

6. Inventorying connector and ramp roadbed features:
   a. Connector and ramp roadbed centerlines represent ramps and connectors on the ground. Note: The data dictionary for ramps and connectors is called Roadbed, not Utility features.
   b. To start a new highway ramp or connector roadbed centerline feature, select Connector.

In the Office

1. Run the Pathfinder software to download all GPS files collected in the field.

2. Evaluate the need for GPS post-differential correction. Even if the GPS data have already been differentially corrected (DGPS) in real-time using an existing beacon, post differential correction can potentially improve the positional accuracy of the DGPS data. To post-differentially correct GPS data,
   a. Download the appropriate base file from the TxDOT ftp site: ftp://ftp.dot.state.tx.us/pub/txdot-info/isd/gps/
   b. Match the rover files to the base files and proceed with the differential correction process. Notice the corrected files have the same name as the "uncorrected" files, except that the extension is .cor instead of .ssf.

DATA REDUCTION PROCEDURE

The data reduction procedure follows the spatial model and database architectures described in Report 2110-1: A Data Platform for Managing Utilities along Highway Corridors. As a reference, Figure 2-2 shows the utility inventory data model.

Preprocessing

1. Exporting GPS data files in ArcView 3.2 format:
   a. Use the Export utility in Pathfinder to export GPS data files.
   b. Make sure the data export options are set as follows:
      i. Export setup: ArcView Shape file
      ii. Type of export: Positions and attributes
      iii. GIS coordinate system: Lat/Long, WGS 1984 format

iv. For point features, include horizontal precision, vertical precision, and point ID.
v. For linear features, include average horizontal precision, average vertical precision, and line ID.

2. It is possible to export features in a comma-delimited text format. However, the process is more cumbersome and requires additional steps for generating records in the database.

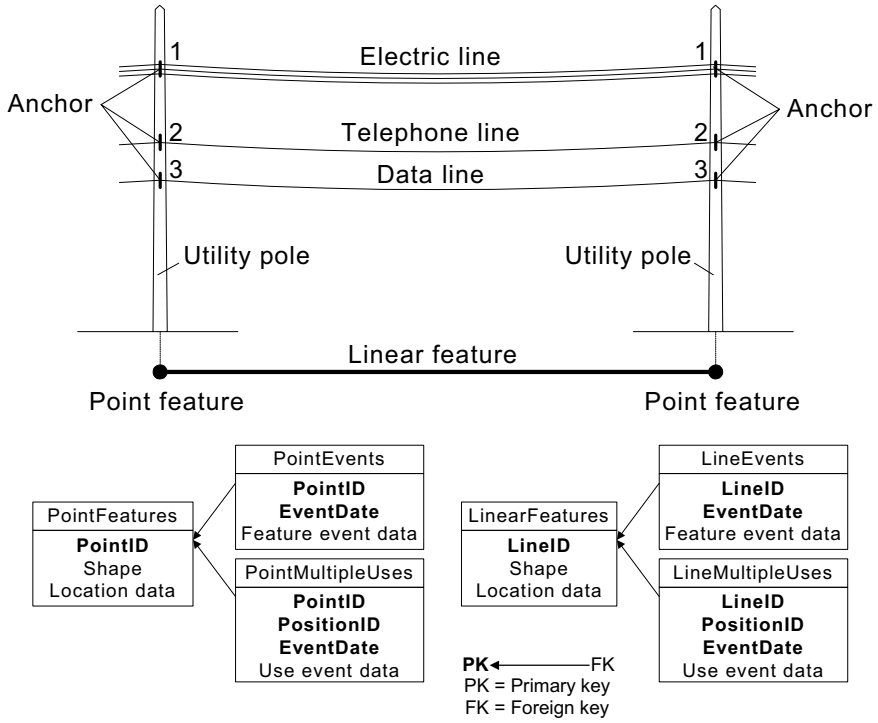


Figure 2-2. Aggregated Spatial and Database Model for Utility Features.

Creating Database Records

1. Creating utility point features:
    a. In ArcView:
        i. Open the field GPS data file and assign a unique PointID value to each record. Make sure already existing PointID values in the points.shp file and the Access database file are not used.
        ii. Using the geoprocessing wizard, merge the field GPS data file and the points.shp file. Make sure the first selected file is the points.shp file. After verifying the output data file contains all of the appropriate merged data, rename the original points.shp (or store in a backup folder) and rename the output data file as points.shp.
        iii. Because Pathfinder does not provide full compatibility with the ArcView points.shp file, it is necessary to manually populate some of the fields (such as MethodID, InventDate, Hor2Sigma, and Vert2Sigma) in the ArcView attribute table. Depending on the number of records affected, record population could take place one record at a time using the ArcView

interface or by opening the attribute table in a more powerful spreadsheet environment such as Excel. Note: Use of a customized data collection device could make the output data file fully compatible with ArcView (and Access), therefore eliminating the need for manual GPS data edits.

b. In Access:
   i. Open the schema.mdb file.
   ii. Import the points.dbf attribute table.
   iii. Create a new append query to append new records from the points.dbf attribute table into the PointFeatures table. Note: PointFeatures is a mirror image of the points.dbf attribute table and is a critical table in the Access database. The points.dbf attribute table contains more fields (UtilClass, Utilsubcls, Feature) for the purpose of producing color-coded maps in ArcView and ArcIMS.
   iv. Import the ArcView GPS data file attribute table.
   v. Create new records in tables PointEvents and PointMultipleUses. Depending on the number of records involved, you could create new records in one of two ways:
      1. Run append queries and manually edit the affected records in tables PointEvents and PointMultipleUses.
      2. Use form Point Feature Attributes (Figure 2-3). You can use this form to create and/or edit records in tables PointFeatures, PointEvents, and PointMultipleUses.

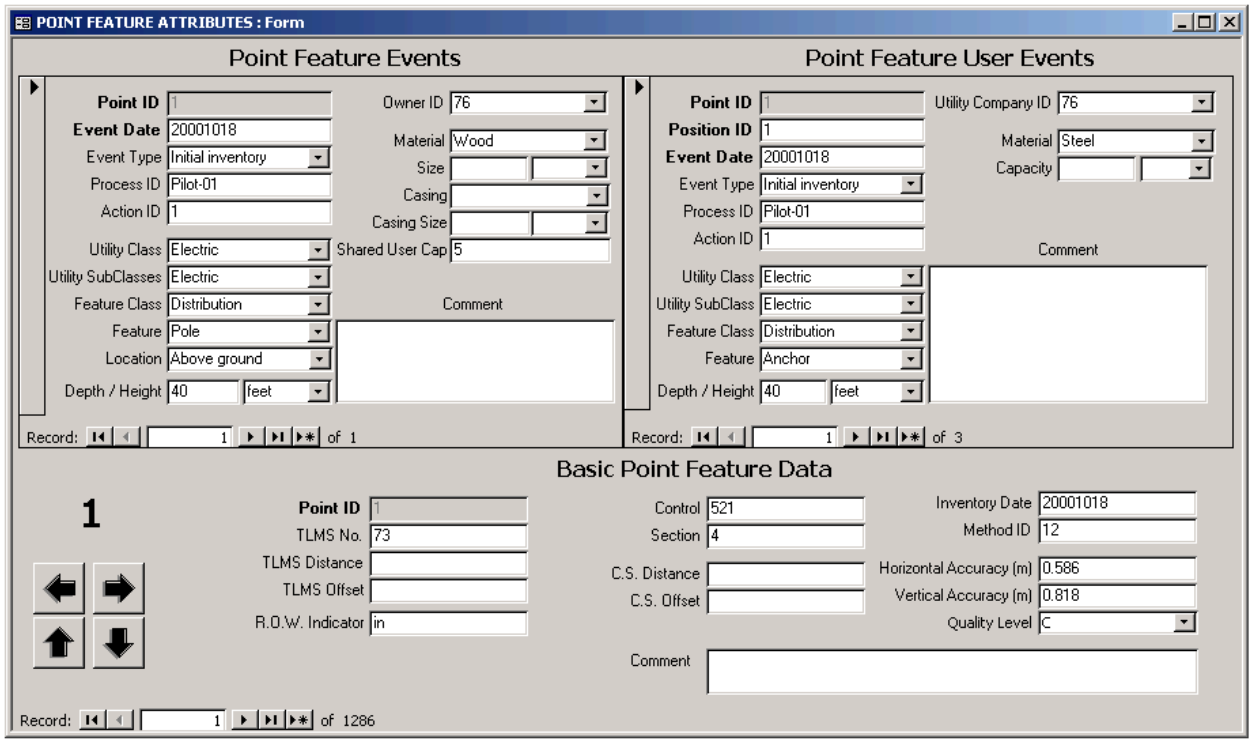


Figure 2-3. Access Form Point Feature Attributes.

2. Creating utility linear features:
    a. In ArcView:
        i. Open the field GPS data file and assign a unique LineID value to each record. Make sure already existing LineID values in the lines.shp file and the Access database file are not used.
        ii. Before merging the field GPS data file and the lines.shp file, make sure the field GPS data file contains "clean" features.
        iii. Add the existing points.shp and lines.shp layers to the view.
        iv. With the general snapping tool activated, snap linear features to corresponding point features in file points.shp.
        v. As needed, edit jagged linear features (usually found where the GPS unit was paused).
        vi. Using the geoprocessing wizard, merge the field GPS data file and the lines.shp file. Make sure the first selected file is the lines.shp file. After verifying that the output data file contains all of the appropriate merged data, rename the original lines.shp (or store in a backup folder), and rename the output data file as lines.shp.
        vii. Because Pathfinder does not provide full compatibility with the ArcView lines.shp file, it is necessary to manually populate some of the fields (such as MethodID, InventDate, Hor2Sigma, and Vert2Sigma) in the ArcView attribute table. Depending on the number of records affected, record population could take place one record at a time using the ArcView interface or by opening the attribute table in a more powerful spreadsheet environment such as Excel. Note: Use of a customized data collection device could make the output data file fully compatible with ArcView (and Access), therefore eliminating the need for manual GPS data edits.
    b. In Access:
        i. Open the schema.mdb file.
        ii. Import the lines.dbf attribute table.
        iii. Create a new append query to append new records from the lines.dbf attribute table into the LineFeatures table. Note: LineFeatures is a mirror image of the lines.dbf attribute table and is a critical table in the Access database. The lines.dbf attribute table contains more fields (UtilClass, Utilsubcls, Feature) for the purpose of producing color-coded maps in ArcView and ArcIMS.
        iv. Import the ArcView GPS data file attribute table.
        v. Create new records in tables LineEvents and LineMultipleUses. Depending on the number of records involved, create these records in one of two ways:
            1. Run append queries and manually edit the affected records in tables LineEvents and LineMultipleUses.
            2. Use form Line Feature Attributes (Figure 2-4). You can use this form to create and/or edit records in tables LineFeatures, LineEvents, and LineMultipleUses.

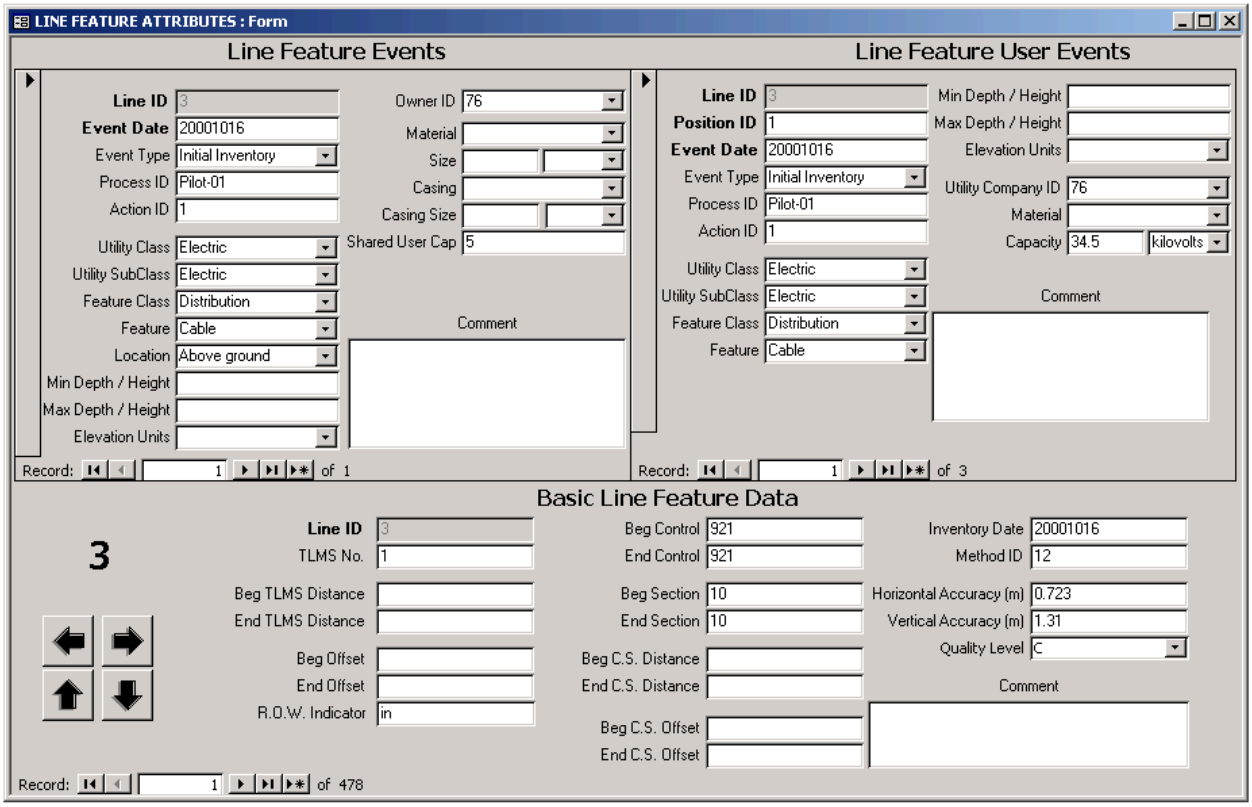


Figure 2-4. Access Form Line Feature Attributes.

3. Creating highway features: The researchers found it necessary to inventory highway features to complement the inventory of utilities. The procedure to generate linear features in ArcView and Access was very similar to the procedure to generate utility linear features. For completeness, the following outline summarizes the procedure to generate highway features:
    a. In ArcView:
        i. Open the field GPS data file and assign a unique TLMSNo value to each record. Make sure already existing TLMSNo values in the highways.shp file and the Access database file are not used.
        ii. Before merging the field GPS data file and the highways.shp file, make sure the field GPS data file contains "clean" features.
        iii. Add the existing highways.shp and connectors.shp files to the view.
        iv. Snap linear features to existing highway and/or connector features.
        v. As needed, edit jagged linear features and eliminate unnecessary vertices.
        vi. Using the geoprocessing wizard, merge the field GPS data file and the highways.shp file. Make sure the first selected file is the highways.shp file. After verifying the output data file contains all of the appropriate merged data, rename the original highways.shp (or store in a backup folder) and rename the output data file as highways.shp.
        vii. Because Pathfinder does not provide full compatibility with the ArcView highways.shp file, it is necessary to manually populate some of the fields (such as MethodID, InventDate, Hor2Sigma, and Vert2Sigma) in the

ArcView attribute table. Depending on the number of records affected, record population could take place one record at a time using the ArcView interface or by opening the attribute table in a more powerful spreadsheet environment such as Excel.

b. In Access:
    i. Open the schema.mdb file.
    ii. Import the highways.dbf attribute table.
    iii. Create a new append query to append new records from the highways.dbf attribute table into the Highways table. Note: Highways is a mirror image of the highways.dbf attribute table and it is a critical table in the Access database.

4. Creating connector features: The procedure is very similar to the procedure used to generate highway features. The only difference is that, in ArcView, file connectors.shp is used instead of file highways.shp. In Access, table Connectors is used instead of table Highways.

CHAPTER 3. UTILITY INSTALLATION NOTICE PROCEDURES

HARDWARE REQUIREMENTS

Server Computer

- RAM: 256 MB (Typical Installation, all ArcIMS components),
- Disk Space for the ArcIMS components: 110 Mbytes, and
- Operating System: Windows NT 4.0 for Intel, Service Pack 6a.

Client Computers

- Desktop or laptop computer with at least a Pentium or higher Intel-based microprocessor,
- 32 Mbytes of memory, and
- Windows 98 or Windows NT version 4.0 operating system.

SOFTWARE REQUIREMENTS

Server Computer

- Web server: Microsoft's Internet Information Server (IIS) 4.0 for NT Server.
- Web browser for ArcIMS Manager: Microsoft Internet Explorer 4.0 or more (automatically installed on most Windows NT-based computers).
- Servlet Engine: ServletExec for IIS from www.newatlanta.com (the project used this component) or Jrun for IIS from http://www.macromedia.com/software/jrun/.
- ArcIMS application server: ESRI ArcIMS 3.0 (www.esri.com).
- Java Runtime Environment (JRE): 1.2.2-004 with Java Plug-in (included in ArcIMS CD).
- File upload component for Active Server Pages (ASP) application: AspUpload from Persits Software, Inc. (www.persits.com).
- Microsoft Access 2000.

Client Computers

- Netscape Communicator 4.5 or Microsoft Internet Explorer 4.0,
- ESRI ArcView 3.2 (for GIS personnel at TxDOT), and
- Microsoft Access 2000 (for some users within TxDOT).

INSTALLATION PROCEDURE

Note: This manual assumes the manager of the server computer has system administration access and has a working knowledge of the web service management environment. The procedures described in this manual apply to the platform used by the researchers during the research project (which was experimental and pilot scale). The researchers designed the procedures to be as scalable and portable as possible, however, it is likely that some procedures may require adaptations to the enterprise Internet, GIS, and database platforms used by TxDOT.

Installing and Configuring ArcIMS

1. Installing the Servlet Engine: The installation process automatically designates a program file folder (e.g., C:\Program Files) and a working folder on the web server (e.g., D:\Inetpub).

2. Installing ArcIMS:
    a. Select the typical installation option.
    b. Installation folder: default setting or any folder you specify (e.g., C:\).
    c. Web server host name: the host name of the server computer (make sure to include the full domain name, e.g., "san-gis.tamu.edu").
    d. Select a folder for the ArcIMS website working folder. By default, the folder is located on the web server drive and is called ArcIMS (e.g., D:\ArcIMS).
    e. The installation process automatically creates four folders on the ArcIMS working folder (Figure 3-1):
        i. Axl: Location of ArcIMS project files (maps).
        ii. Manager: Location of ArcIMS program files.
        iii. Output: Location of ArcIMS outputs.
        iv. Website: Location of ArcIMS web applications.
    f. Locate the Servlet folder on the web server (e.g., D:\Inetpub\Servlets).

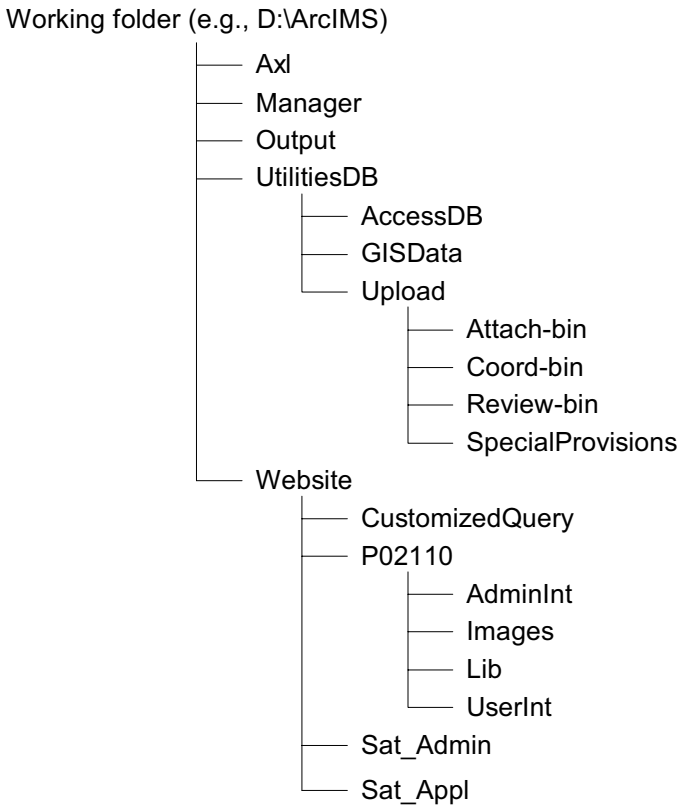


Figure 3-1. Server Folder Structure.

3. Configuring the web server:
    a. In the case of ServletExec for ISS: Copy the Com folder and the Esrimap_prop file from the web server folder (e.g., D:\Inetpub\ServLets) to the program file folder (e.g., C:\Program Files\New Atlanta\ServletExec ISAPI\Servlets). Note: This operation was necessary because of a bug in the servlet component installation software.
    b. Test the Servlet Connector.

4. Creating virtual folders:
    a. Use the Microsoft Management Console (Choose Start | Programs | Windows NT Option Pack | Microsoft Internet Information Server | Internet Service Manager) to generate three virtual folders: Website, Output, and Manager.
    b. To create the Website virtual folder,
        i. Highlight Default Website and click Action | New | Virtual Directory to display the New Virtual Directory Wizard.
        ii. In the alias field type "Website" and click Next.
        iii. Click Browse to select the physical "Website" folder (e.g., D:\ArcIMS\Website).
        iv. Check Allow Directory Browsing and click Finish.
    c. To create the Output virtual folder,
        i. Repeat steps b.ii – b.iv replacing "Website" with "Output."
    d. To create the Manager virtual folder,
        i. Repeat steps b.ii – b.iv replacing "Website" with "Manager."
        ii. Highlight the "Manager" virtual folder and click Action | Properties.
        iii. Click the File Security tab and click Edit to change the Anonymous Access and Authentication Control.
        iv. Make sure Anonymous access is checked. Uncheck Windows NT Challenge/Response and click OK.

Installing Components

1. IIS SMTP (Simple Mail Transfer Protocol):
    a. This component is a requirement for e-mail messages automatically from the web server.
    b. To install, under Windows NT Option Pack | Windows NT Option Pack Setup,
        i. Click the "Add/Remove" button.
        ii. Highlight "Internet Information Server (IIS)."
        iii. Click "Show Subcomponents."
        iv. Check "SMTP Service."

2. File upload component (AspUpload from Persits):
    a. This component is a requirement for uploading files (e.g., coordinate data files and drawing files) to the server. To install, double click on the setup file icon and follow the installation instructions.

Preparing Folders and Files

The following folders store and manage the database and utility data web interfaces (Figure 3-1):

1. UtilitiesDB\GISData:
    a. Copy the ArcIMS\UtilitiesDB\GISData folder from the CD. That folder contains sample copies of the following ArcView shape files: points.shp, lines.shp, highways.shp, connectors.shp, streets.shp, and streams.shp. For the research, the location of the folder on the web server was (D:\ArcIMS\UtilitiesDB\GISData). For implementation, the location of the folder should be outside the web server.

2. UtilitiesDB\AccessDB:
    a. Copy the ArcIMS\UtilitiesDB\AccessDB folder from the CD. That folder contains a sample copy of the Access 2000 database schema file. This database file is used to store all attribute data associated with utility features, highway features, and data used during the utility permitting process. For the research, the location of the folder on the web server was (D:\ArcIMS\Utilities\AccessDB). For implementation, the location of the folder should be outside the web server.

3. UtilitiesDB\Upload:
    a. Copy the ArcIMS\UtilitiesDB\Upload folder from the CD. This folder contains the following empty folders:
        i. Attach-bin: used to store drawings and other attachments,
        ii. Coord-bin: used to store uploaded coordinate data files,
        iii. Review-bin: used to store documents created by TxDOT during the installation notice review process, and
        iv. SpecialProvisions: used to store TxDOT special provision documents, further sub-divided into “general” and “revegetation.”

4. Website\P02110:
    a. Copy the ArcIMS\Website\P02110 folder from the CD. This folder contains a copy of the ASP and HTML files that are required to process utility permit applications online. The folder contains four subfolders:
        i. AdminInt,
        ii. Images,
        iii. Lib, and
        iv. UserInt.
    b. A number of ASP files generate automated e-mail messages. In situations where the system sends e-mails without an administrator’s input (e.g., to acknowledge receipt of a new application) the system uses a fictitious webmaster e-mail address (webmaster-email@TxDOT.domain). As appropriate, replace the fictitious address with a valid one in each of the following files:
        i. p02110\aRegMail.asp (line 105),
        ii. p02110\uRegMail.asp (line 62),
        iii. p02110\AdminInt\aProfMail.asp (line 105),
        iv. p02110\UserInt\uProfMail.asp (line 62),

v. p02110\UserInt\ApSum.asp (line 254),
vi. p02110\UserInt\AbMail.asp (line 243, 260).

5. Virtual folders:
    a. Four virtual folders are needed for handling the file uploading process: Attach-bin, Coord-bin, Review-bin, and SpecialProvisions (see step 3 above).
    b. Open the Microsoft Management Console (Choose Start | Programs | Windows NT Option Pack | Microsoft Internet Information Server | Internet Service Manager).
    c. Highlight Default Web Site and click Action | New | Virtual Directory to display the New Virtual Directory Wizard.
    d. Type "Attach-bin" for the alias and click Next.
    e. Click Browse to select the physical "Attach-bin" folder (e.g., D:\ArcIMS\UtilitiesDB\Upload\Attach-bin).
    f. Check Allow Directory Browsing and click Finish.
    g. Repeat Steps c – f replacing "Attach-bin" with "Coord-bin."
    h. Repeat Steps c – f replacing "Attach-bin" with "Review-bin."
    i. Repeat Steps c – f replacing "Attach-bin" with "SpecialProvisions."

Connecting Web Server to Database

1. Create an Open Database Connectivity (ODBC) ODBC Data Source Name (DSN) using the Data Sources (ODBC) | System DSN Windows NT utility:
    a. Under "Data Source Name," type in "TxDOTUtilDB." This alias is the same database alias used by the ASP pages.
    b. Navigate through the folder hierarchy until finding the database schema file (e.g., D:\ArcIMS\UtilitiesDB\AccessDB\Schema.mdb).

Initializing ArcIMS

1. Authoring map service:
    a. Name of map service file: Type in Sat_Img. This file is created in the ArcIMS\Axl folder.
    b. Layers: Add the following layers from the ArcIMS\UtilitiesDB\GISData folder: streams1, streets2, highways, connectors, lines, and points.
    c. Layer properties: Set the layer properties as follows:
        i. Streams1: color (RGB: 27, 226, 226; cyan), name ("Streams").
        ii. Streets2: color (RGB: 199, 199, 199; light-light gray), name ("Streets").
        iii. Connectors: color (RGB: 64, 64, 64; dark gray), name ("Roadbed: connectors").
        iv. Highways: color (RGB: 64, 64, 64; dark gray), name ("Roadbed: highways").
        v. Lines: unique symbols, field for values (UtilClass), size (2), color (see Table 3-1), name ("Utilities: lines").
        vi. Points: unique symbols, field for values (UtilClass), color (see Table 3-1), name ("Utilities: points").

d. Map service name: Type in Sat_Img (to maintain consistency with the file name). This name will be shown on the Map Services window in ArcIMS Administrator.
e. Virtual server type: Choose "ImageServer1."
f. Before designing a website, verify that the map service that has been created with Author is running (click on the Administer Site link).

Table 3-1. Utility Class Colors.

UtilClass	APWA color	RGB code
Electric	Red	255, 0, 0
Telecommunications	Orange	255, 153, 0
Chemical	Yellow	255, 255, 0
Water	Blue	0, 0, 255
Sewer	Green	0, 128, 0
WaterOther	Purple	128, 0, 128
Other	Black	0, 0, 0

2. Designing website:
   a. Use ArcIMS Designer to generate two web page folders needed to manage web mapping tool operations: Sat_Appl and Sat_Admin.
   b. To create the Sat_Appl web server folder:
      i. Name of website folder: Type in "Sat_Appl."
      ii. Web page title: Type in "San Antonio Sample Area."
      iii. ArcIMS host name: Host computer name (automatically assigned).
      iv. Map service: Under ImageServer1, select "Sat_Img."
      v. ArcIMS viewer: Choose "HTML Viewer."
      vi. Website location: Select default folder (e.g., D:\ArcIMS\Website).
      vii. Map extent: Select Extent to all MapServices.
      viii. Data source units: Choose "Degrees."
      ix. Scale bar unit: Choose "Feet."
      x. Toolbar functions: Select the toolbar functions shown in Figure 3-2. Some of those functions need customization (see step 3 below). Note: You can select more available toolbar functions if you think you will need those tools later on. The only effect will be a rearrangement of the online map toolbar layout.
   c. To create the Sat_Admin web server folder:
      i. Follow steps 2.b.i – 2.b.x replacing "Sat_Appl" with "Sat_Admin."

3. Customizing website:
   a. ArcIMS Designer creates default web pages that need to be customized to support web mapping tool operations. The customized web pages are included in the CD, and they have to be copied to the web server. Note: Make sure to copy the contents—files and subfolders—under the Sat_Appl and Sat_Admin folders following the procedure below. DO NOT copy the Sat_Appl and Sat_Admin folders themselves to prevent the deletion of critical files created by ArcIMS Designer that pertain to the specific ArcIMS installation.

i. To customize the Sat_Appl folder:
    1. Highlight the Sat_Appl folder from the CD (located under ArcIMS\Website) and select all subfolders (2) and files (31) under the Sat_Appl folder.
    2. Copy the selection to the Sat_Appl web server folder (e.g., D:\ArcIMS\Website\Sat_Appl).

ii. To customize the Sat_Admin folder:
    1. Highlight the Sat_Admin folder from the CD (located under ArcIMS\Website) and select all subfolders (2) and files (28) under the Sat_Admin folder.
    2. Copy the selection to the Sat_Admin web server folder (e.g., D:\ArcIMS\Website\Sat_Admin).

b. Copy the CustomizedQuery folder from the CD (located under ArcIMS\Website) to the Website web server folder (e.g., D:\ArcIMS\Website).

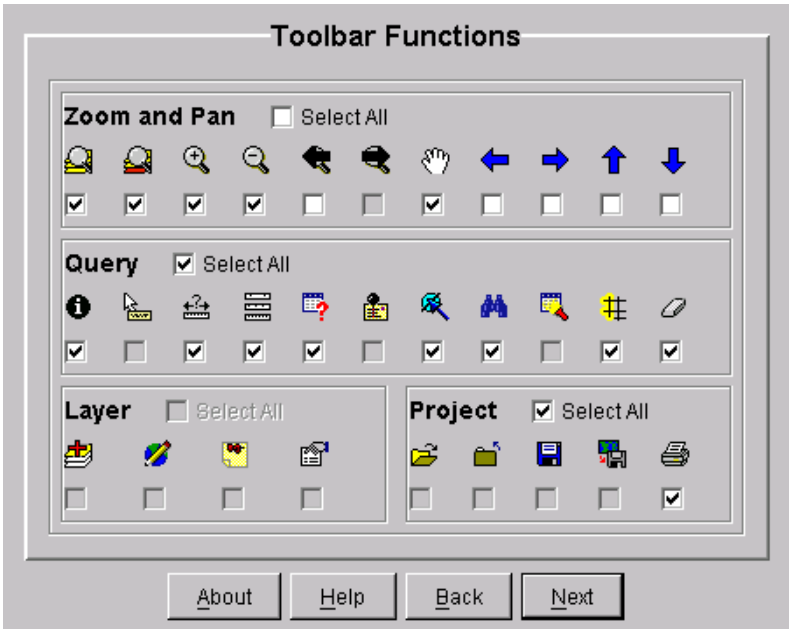


Figure 3-2. ArcIMS Toolbar Functions.

USER INTERFACES

The user interfaces developed for capturing spatial and attribute data associated with notices of installation follow the workflow shown in Figure 3-3. Because the needs and responsibilities of utility companies and TxDOT are different, the researchers developed separate interfaces for each. The Utility Company User Interface supports tracking an application from its initial submission through review, approval, and finally the submission of as-built coordinate data. The Administrative Interface supports the different phases of application review, verification, approval, and processing of completed applications.

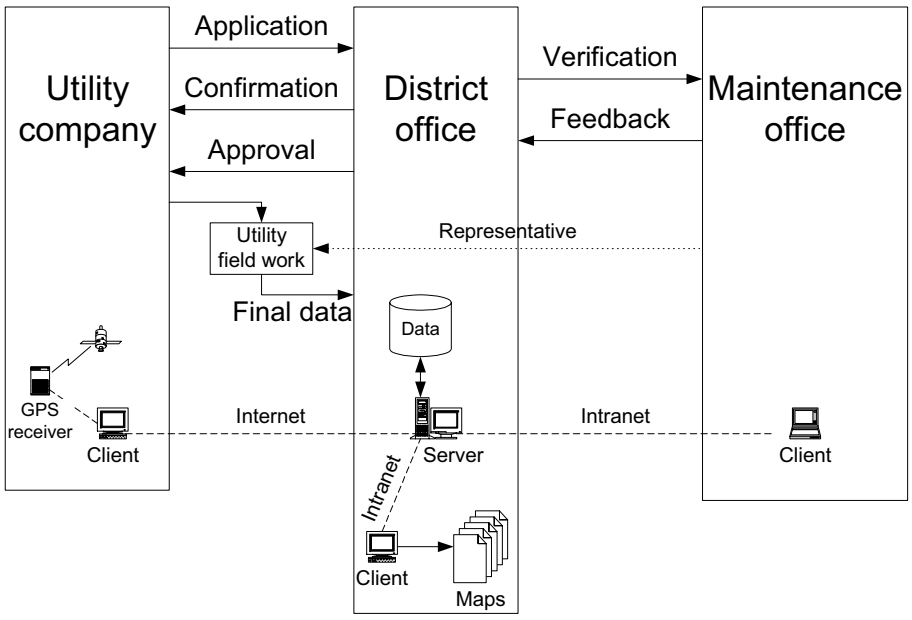


Figure 3-3. Notice of Installation Workflow.

UTILITY COMPANY USER INTERFACE

The utility company user interface supports all the needs and responsibilities of utility companies that wish to submit a notice of installation. The support includes submitting new applications, viewing pending applications, viewing archived applications, viewing TxDOT special provisions, managing user profile information, and looking up contacts within TxDOT or other utility companies. Figure 3-4 shows a functional diagram of the utility company interface.

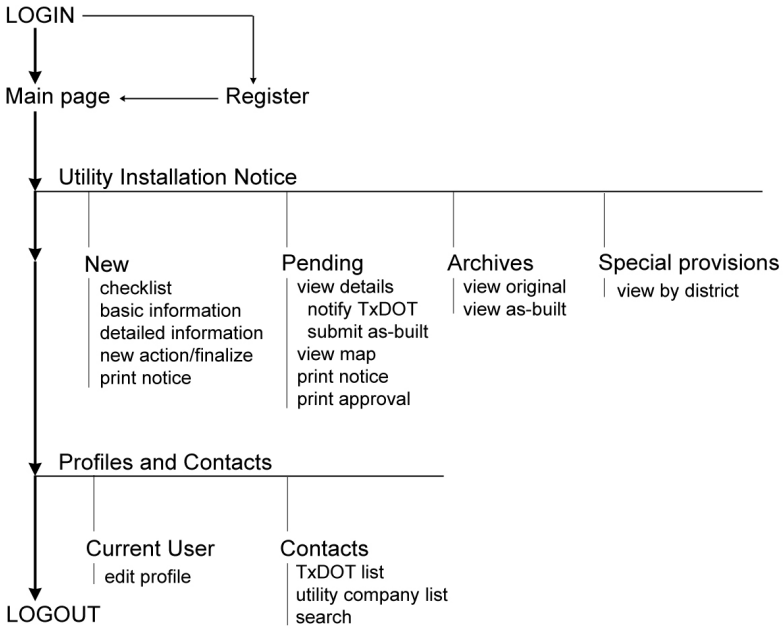


Figure 3-4. Functional Diagram of the Utility Company User Interface.

Logging into the System

In order to submit notices of installation, you must first register with the system. Registration allows the system to retrieve all your pending and completed applications. The numbered steps below walk you through the procedures for registering with the system (i.e., creating a user profile) and logging in.

1. Set Internet browser to enable per-session cookies:
    a. In Internet Explorer: Select "Allow per-session cookies (not stored)."
    b. In Netscape: Select "Accept all cookies" or "Accept only cookies that get sent back to the originating server."

2. Log into the system using your UserID and password. New users must register first as described in step 3 below (others skip to step 4).

3. Register as a new utility company user (Figure 3-5).

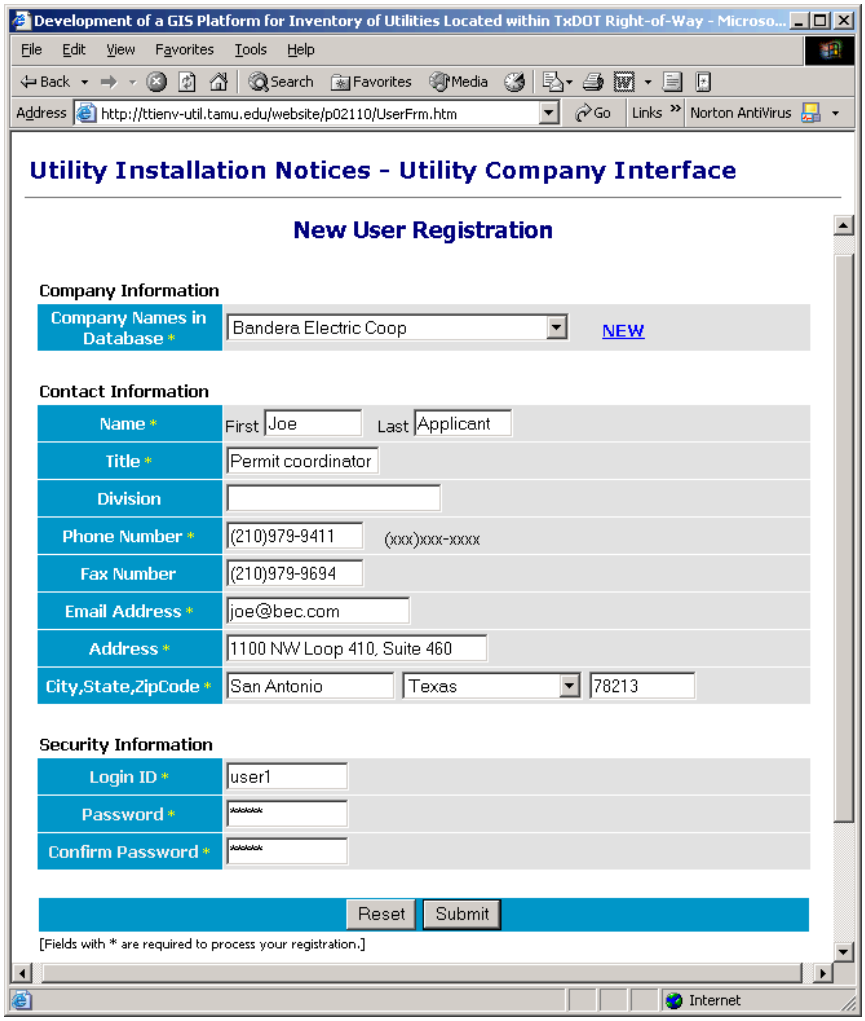


Figure 3-5. New Utility Company User Registration Page.

a. Choose any UserID | password combination you prefer, making sure the password is not the same as the UserID. The system will reject UserIDs that are already registered in the system.
b. Utility installation notice applications are tied to user IDs. Users only have access to application transactions created with their own UserID.

4. After logging into the system you will see the main navigation page (Figure 3-6) where you can enter new utility installation notice applications, review the status of pending applications, view archived notices, view TxDOT special provisions, and change your profile information, including UserID and password. Keep in mind that if you change your UserID, you will no longer be able to access utility installation notice applications you submitted with the old UserID.

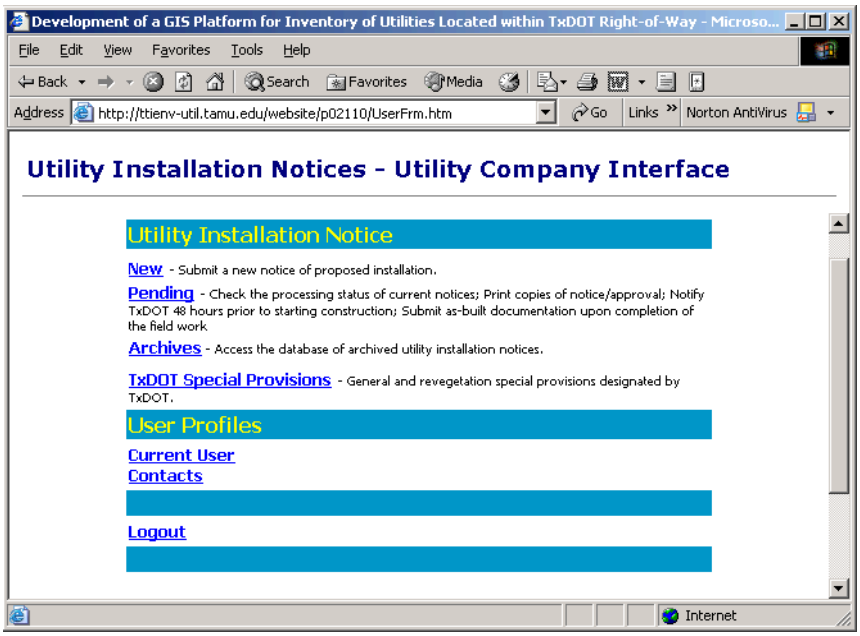


Figure 3-6. Main Page of Options after Logging into the System.

Entering a New Notice of Installation

The process of entering new installation notices includes a short sequence of data input screens that allow editing and review before submitting a notice of installation to TxDOT. The process results in a completed notice in a printable format similar to the existing TxDOT forms 1023 and 1082. Figure 3-7 shows a functional diagram of the installation notice application process.

1. Click on New after logging into the system.

2. Review checklist:
   a. The interface supports numerous actions (install, repair, remove, and so on) per installation notice application in a sequence. When you are finished filling out a single action, you will be prompted to fill out additional actions if desired. Provide information about each action separately.

b. Prepare coordinate data files for each action according to the following format:
    i. Coordinate data files must be text files with a .txt extension (e.g., ABC123.txt).
    ii. Do not include field headers on the first line of the text file.
    iii. The format must be comma-delimited containing the following field data: X-coordinate (longitude) and Y-coordinate (latitude). For example, for a coordinate data file representing points:

-98.651003,29.455003
-98.452002,29.351004
-98.450002,29.300007
-98.321101,29.299005
-98.311002,29.288009

For a coordinate data file representing three lines:

-98.651003,29.455003
-98.452002,29.351004
-98.450002,29.300007

-98.321101,29.299005
-98.311002,29.288009

-98.310009,29.290994
-98.320001,29.290343
-98.330005,29.290321

c. Prepare drawing files or other supplementary information for upload (optional). Drawings are graphics files you can submit as support to the utility installation notice application. Those files are not the same as, and are not intended to replace, coordinate data files. Examples of files you can upload include Microstation dgn files, AutoCAD dwg files, scanned files (bmp or jpg format), zipped files, and Word files.

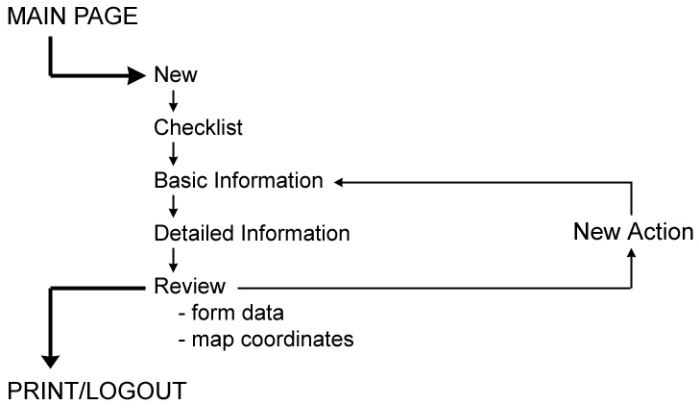


Figure 3-7. Functional Diagram of the Installation Notice Application Process.

3. Provide basic information about the application (Figure 3-8):
    a. Enter data related to the general location and proposed beginning and ending dates of the proposed utility installation.
    b. If needed to support the utility installation notice application, upload up to three associated drawing files (see 2.c above).
    c. Choose the utility class associated with the first utility installation notice action. By default, the basic information page and the page that follows (see 4 below) ask users to enter information about the first action. Subsequent pages give users the opportunity to enter information about additional actions.

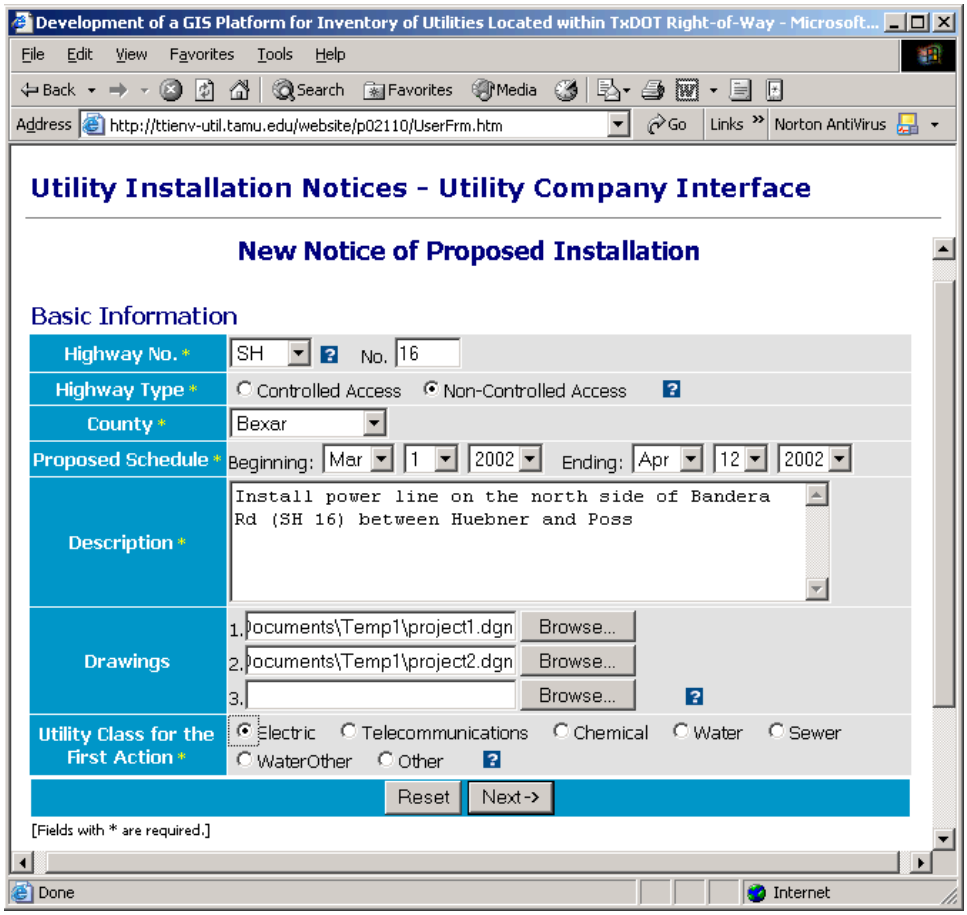


Figure 3-8. New Installation Notice Basic Information Page.

4. Provide detailed information (Figure 3-9):
    a. Enter detailed information about the first action, including utility subclass, feature characteristics, location, material, and a coordinate data file. Notice that the feature selected and the coordinate data file must be consistent, e.g., if the feature selected is a linear feature, the coordinate data file must describe one or more linear features (2.b.iii above).
    b. Select the appropriate check box depending on the facility configuration.
    c. Select "Single-user" if the proposed installation does not share the same footprint as other installations (e.g., a water pipe).

d. Select “Multiple-user: action affects facility supporting other installations” if the proposed work is on a facility that supports other installations (e.g., a utility pole).
e. Select “Multiple-user: action affects facility “anchored” to a supporting installation” if the proposed work is on a facility that is anchored to another installation (e.g., a telephone line that is anchored to a utility pole).

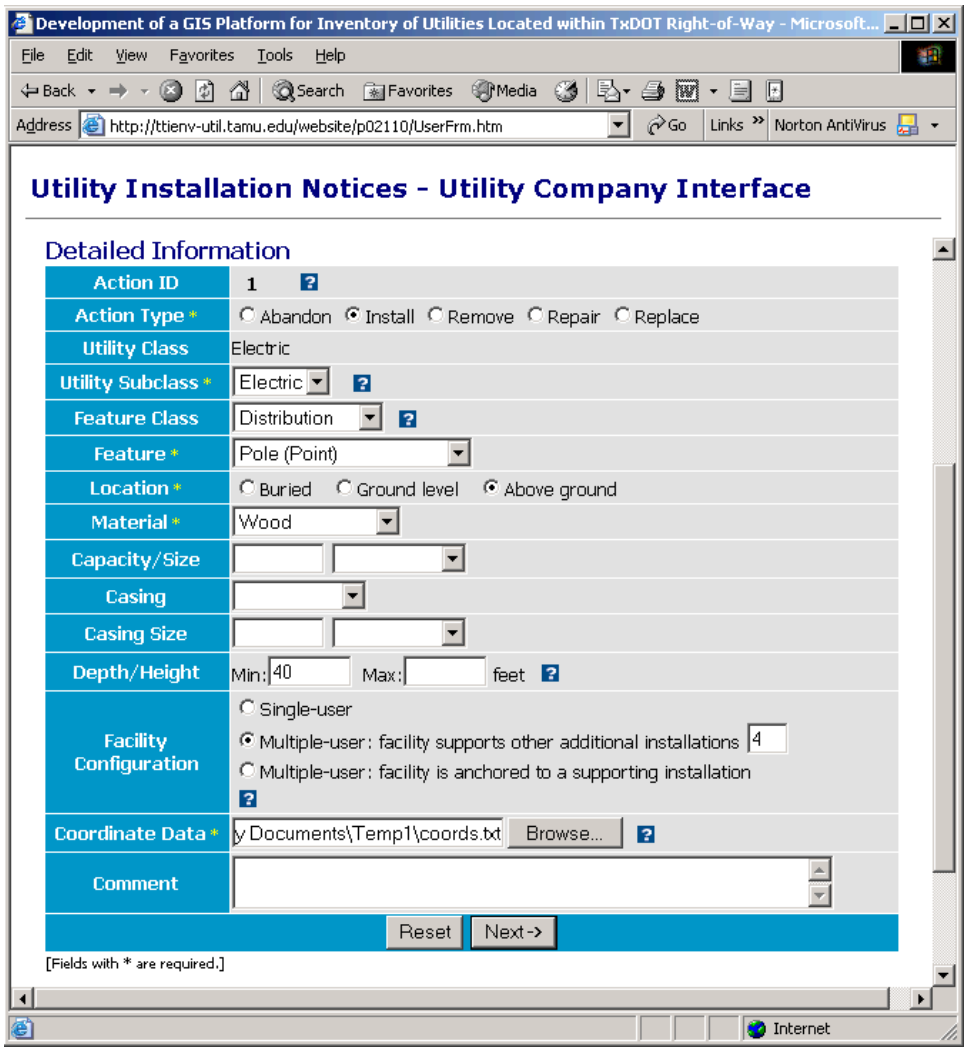


Figure 3-9. New Installation Notice Detailed Information Page.

5. Review action data:
   a. After entering detailed action data, the page that follows (Figure 3-10) shows an indexed view of that action. You can view/edit the details associated with the action (Figure 3-11) and view a map (Figure 3-12) of the location of the proposed installation (based on the coordinate data file uploaded).
   b. To enter data for another action,
      i. Choose the utility class for the next action.
      ii. Press the Add button to enter detailed action data.
      iii. Follow steps 4.a and 4.b above.

c. Follow steps 5.a and 5.b for all additional actions associated with the utility installation notice application. The interface follows a "shopping cart" concept that provides users with the capability to enter/edit as many actions as needed by the user.
d. Press the Submit button after entering action data.

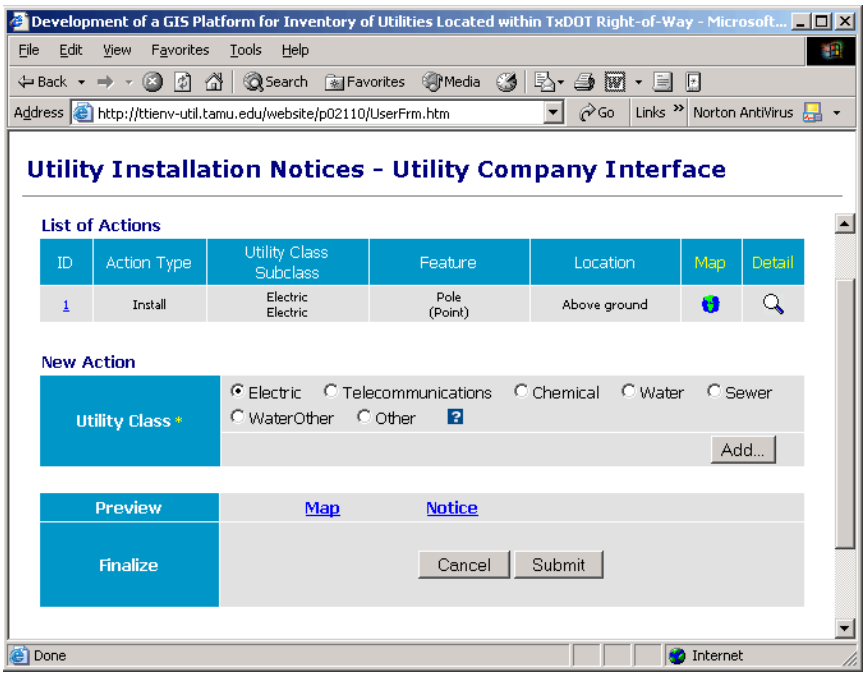


Figure 3-10. New Installation Notice Action Index Page.

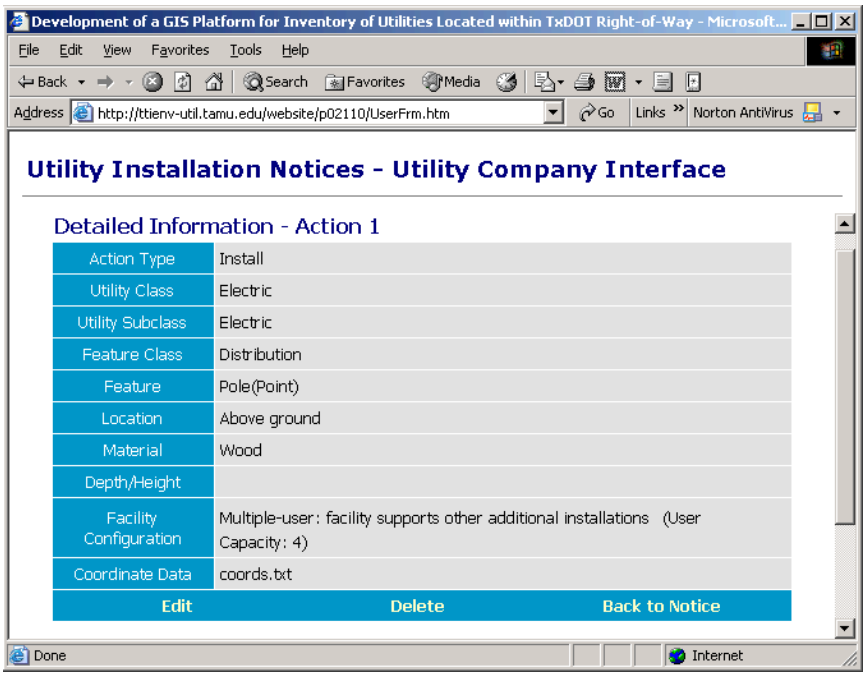


Figure 3-11. Details of Action 1 from Figure 3-10.

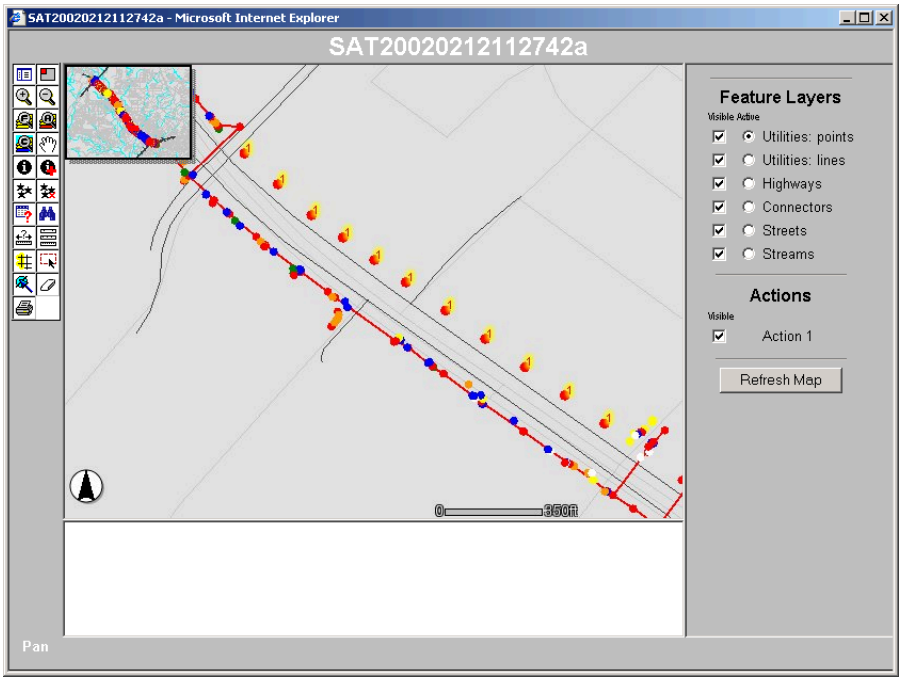


Figure 3-12. Map Showing Location Associated with Action 1.

6. Verify completed application:
   a. As needed, review basic and detailed utility installation notice application data for each action (Figure 3-10). In the Preview section, you can preview a map showing the location of all the actions associated with the current utility installation notice application (Figure 3-13).

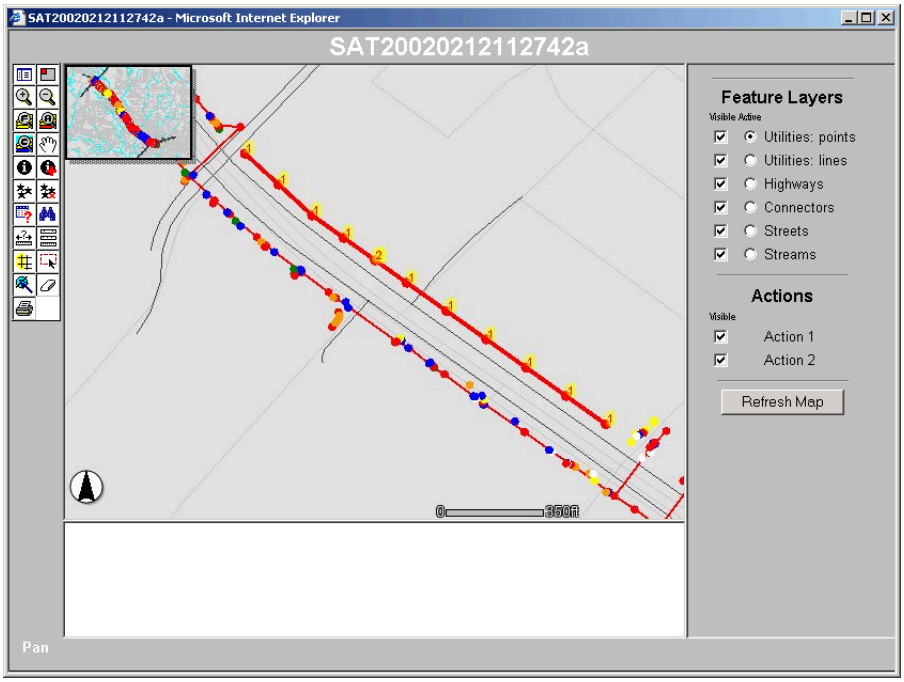


Figure 3-13. Map Showing Proposed Installation (All Actions).

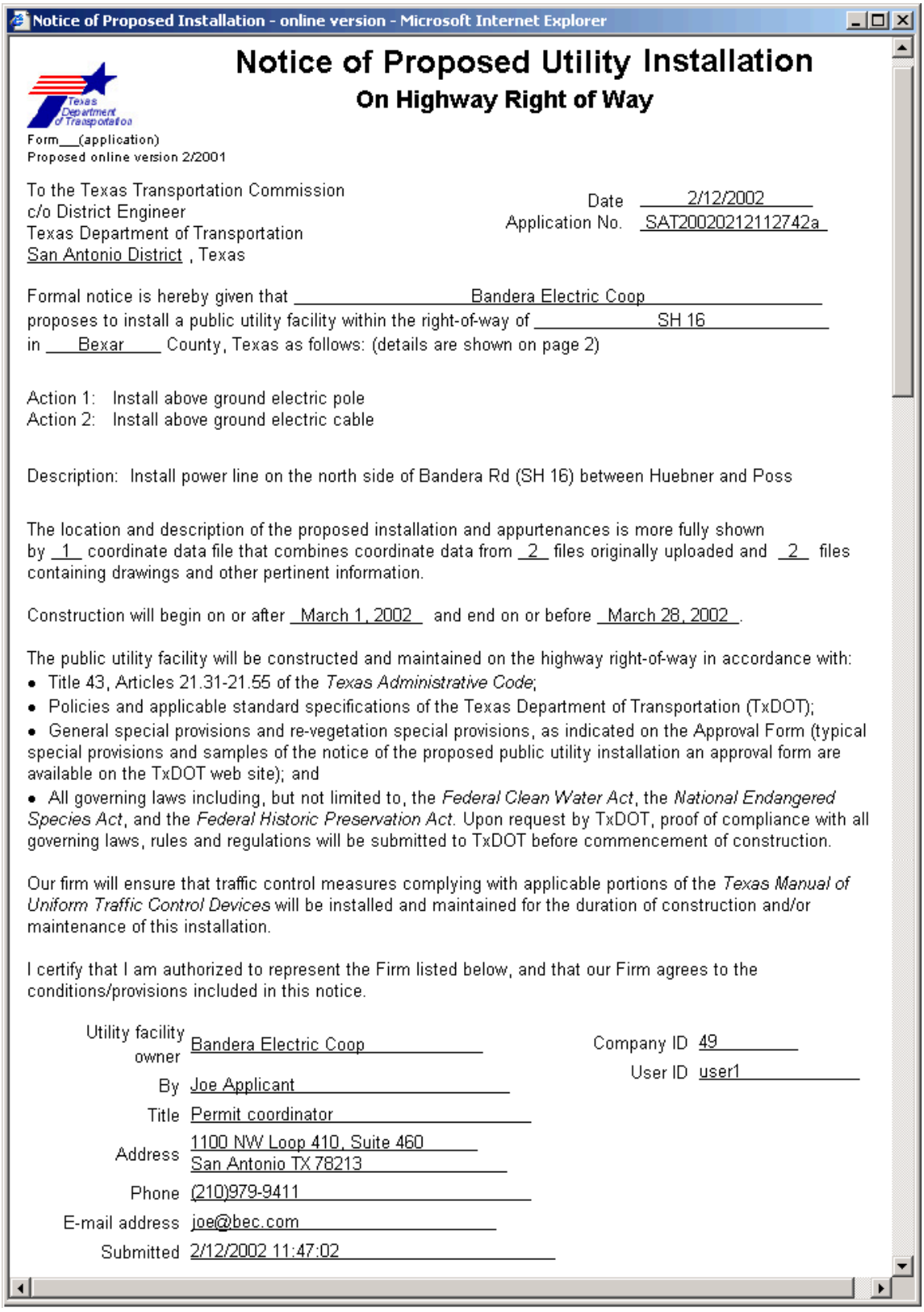
b. You can also preview (and print) a copy of the Notice of Proposed Utility Installation. At this point, the document is only a preview and does not have an application number associated with it.

7. Submit application:
    a. Once you are satisfied with the information included in the application, you can click on Submit (Figure 3-10). After submitting the new installation notice, you can print a copy of the official notice of proposed installation (Figure 3-14). This document, which you can access at any time, is intended to completely replace the current paper version. Notice the document includes a unique application number and a time stamp.
    b. After submitting an application, you will no longer be able to edit the application. However, after completing the fieldwork, provided TxDOT approves the application, you will have to provide as-built documentation, as described on the Viewing Pending Installation Notice Applications section below.
    c. The system will send you an automated e-mail message to acknowledge receipt of the installation notice application.

Viewing Pending Permit Applications

The system supports viewing of applications as they move through the approval and documentation process. You cannot modify an application after you have submitted it. However, after TxDOT approves an application, you can use the pending link for notifying TxDOT of the construction start date and for submitting as-built documentation. Figure 3-15 shows a functional diagram of the procedures to follow for viewing pending records.

1. After logging into the system, click on Pending (Figure 3-6):
    a. The system displays an index of pending utility installation applications and their current status. Throughout the review process, you may receive e-mail messages regarding specific issues about your application. At the very least, you should receive two e-mail messages: at the beginning, to acknowledge receipt of your application; and at the end, to approve (or deny) the installation application.
    b. If the application status is "Approved" you can print a copy of the Approval and your company can proceed with the utility installation work. Keep in mind that 48 hours before commencing the fieldwork, you must notify TxDOT.
    c. To notify TxDOT that you will be commencing the fieldwork, view the pending application (the status should indicate "Approved") and scroll to the bottom of the page. Press the Notify Construction Start button, give the date of beginning and other pertinent information and submit the notification. Note: Without TxDOT's approval, you cannot notify TxDOT of your construction plans. After notifying TxDOT, the status of the application becomes "Notified."
    d. After completing the fieldwork, you must submit as-built documentation to assist TxDOT in the process of updating current utility data maps and data. To submit as-built documentation:



Notice of Proposed Installation - online version - Microsoft Internet Explorer

Notice of Proposed Utility Installation

On Highway Right of Way

Texas Department of Transportation

Form__(application)
Proposed online version 2/2001

To the Texas Transportation Commission
c/o District Engineer
Texas Department of Transportation
San Antonio District , Texas

Date 2/12/2002
Application No. SAT20020212112742a

Formal notice is hereby given that Bandera Electric Coop
proposes to install a public utility facility within the right-of-way of SH 16
in Bexar County, Texas as follows: (details are shown on page 2)

Action 1: Install above ground electric pole
Action 2: Install above ground electric cable

Description: Install power line on the north side of Bandera Rd (SH 16) between Huebner and Poss

The location and description of the proposed installation and appurtenances is more fully shown by 1 coordinate data file that combines coordinate data from 2 files originally uploaded and 2 files containing drawings and other pertinent information.

Construction will begin on or after March 1, 2002 and end on or before March 28, 2002 .

The public utility facility will be constructed and maintained on the highway right-of-way in accordance with:

- Title 43, Articles 21.31-21.55 of the *Texas Administrative Code*;
- Policies and applicable standard specifications of the Texas Department of Transportation (TxDOT);
- General special provisions and re-vegetation special provisions, as indicated on the Approval Form (typical special provisions and samples of the notice of the proposed public utility installation an approval form are available on the TxDOT web site); and
- All governing laws including, but not limited to, the *Federal Clean Water Act*, the *National Endangered Species Act*, and the *Federal Historic Preservation Act*. Upon request by TxDOT, proof of compliance with all governing laws, rules and regulations will be submitted to TxDOT before commencement of construction.

Our firm will ensure that traffic control measures complying with applicable portions of the *Texas Manual of Uniform Traffic Control Devices* will be installed and maintained for the duration of construction and/or maintenance of this installation.

I certify that I am authorized to represent the Firm listed below, and that our Firm agrees to the conditions/provisions included in this notice.

Utility facility owner: Bandera Electric Coop
Company ID: 49
By: Joe Applicant
User ID: user1
Title: Permit coordinator
Address: 1100 NW Loop 410, Suite 460
San Antonio TX 78213
Phone: (210)979-9411
E-mail address: joe@bec.com
Submitted: 2/12/2002 11:47:02

Figure 3-14. Notice of Proposed Utility Installation Page.

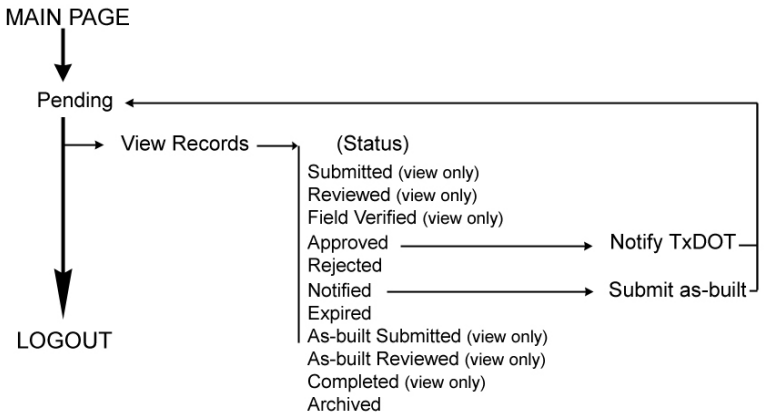


Figure 3-15. Functional Diagram of the Pending Application Process.

i. View the pending application.
ii. At the bottom of the screen, click on the Submit As-Built Documentation button. Note: Without TxDOT's approval, you cannot upload as-built documentation.
iii. Review the basic information and coordinate files. If there are changes to be made, press the Edit link next to the heading and make the change. When all information is correct, press Confirm As-Built Documentation. After submitting as-built documentation, the status of the application becomes "As-built submitted."
iv. TxDOT will notify you if there are inconsistencies in the as-built documentation. Otherwise, TxDOT approves the documentation and the status of the application becomes "As-built reviewed." After TxDOT GIS personnel update the utility base map based on the as-built documentation, the application becomes "Completed" and is ready for archival.

ADMINISTRATIVE INTERFACE

Processing utility installation notice applications follows existing workflow patterns as illustrated in Figure 3-3. The system supports each level of decision making by keeping track of an application's processing status and automatically alerting specified administrators when an application has reached a status for which they are responsible. The specified administrator then logs into the system (a link is provided within the e-mail for convenience), clicks on the appropriate processing link in the navigation bar, and processes the application. Figure 3-16 shows a typical processing workflow.

The interaction with the system depends on the level of responsibility assigned to each individual administrator. All TxDOT administrators can track individual applications throughout the process; however, the actions that individual administrators can trigger on individual applications depend on the specific level of responsibility assigned to that administrator.

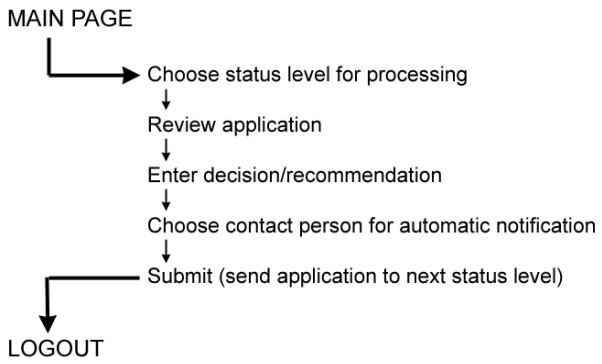


Figure 3-16. Functional Diagram of a Typical Installation Notice Review Process.

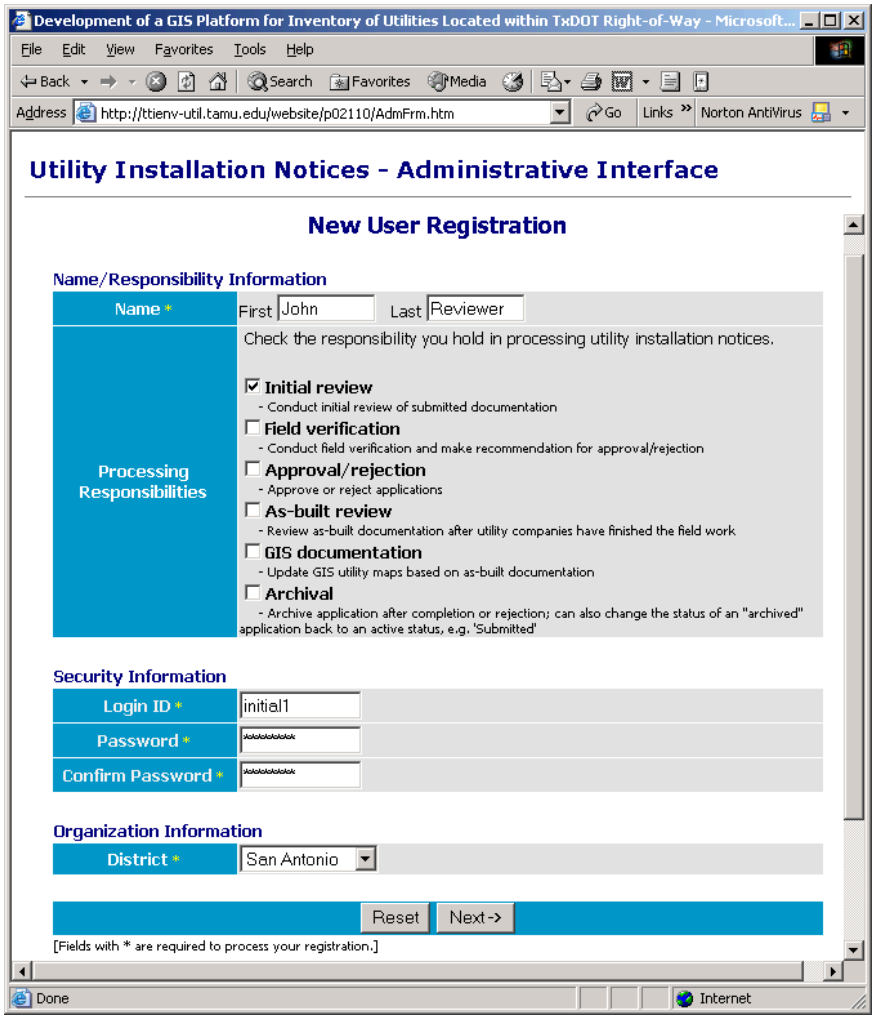
Logging into the System

1. Set the Internet browser to enable per-session cookies:
    a. In Internet Explorer: Select "Allow per-session cookies (not stored)." Note: If you are using Internet Explorer v.6, select "Always allow session cookies."
    b. In Netscape: Select "Accept all cookies" or "Accept only cookies that get sent back to the originating server."

2. Log into the system: The browser automatically navigates to the earliest installation notice processing level for which you have responsibility (see step 3.b below).

3. (For new users) Register as a new TxDOT user (Figure 3-17):
    a. Enter your name.
    b. Select appropriate level of responsibility (check all that apply: one administrator could be responsible for more than one processing level). For implementation, a "power" administrator at the district office could create user profiles for all officials that have some level of installation notice review responsibility within the district. Note: Each processing level needs to have at least one responsible administrator assigned to processing it. Possible responsibility levels include:
        i. Initial review,
        ii. Field verification,
        iii. Approval/rejection,
        iv. As-built review,
        v. GIS documentation, and
        vi. Archival.
    c. Select an appropriate UserID | password combination.
    d. Select the TxDOT district to which you are assigned.
    e. Select the area office or maintenance office to which you are assigned.
    f. Enter your contact information.

4. After logging into the system (Figure 3-18), you can process utility installation notice applications, change profile information, and review TxDOT and utility company contact information.



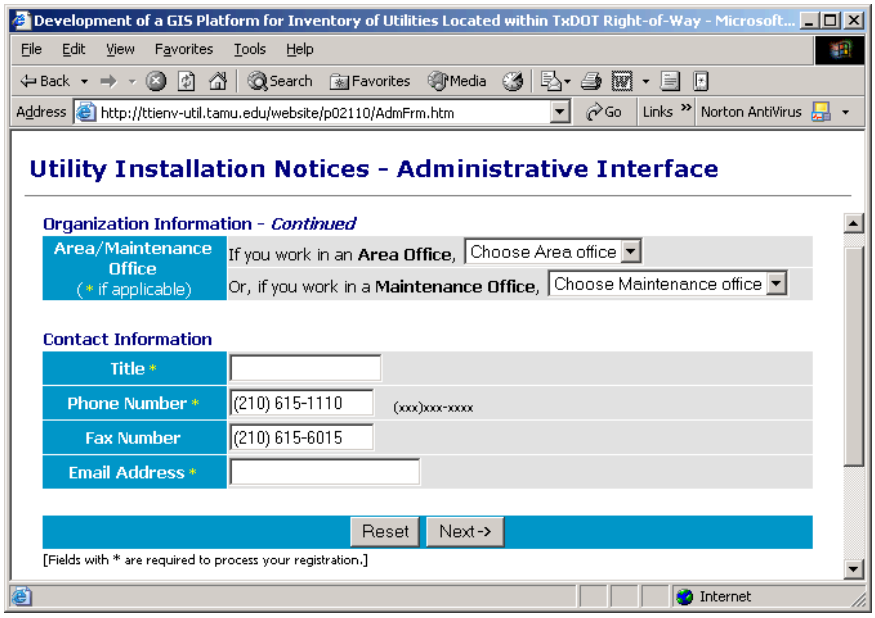


Figure 3-17. New TxDOT User Registration Pages.

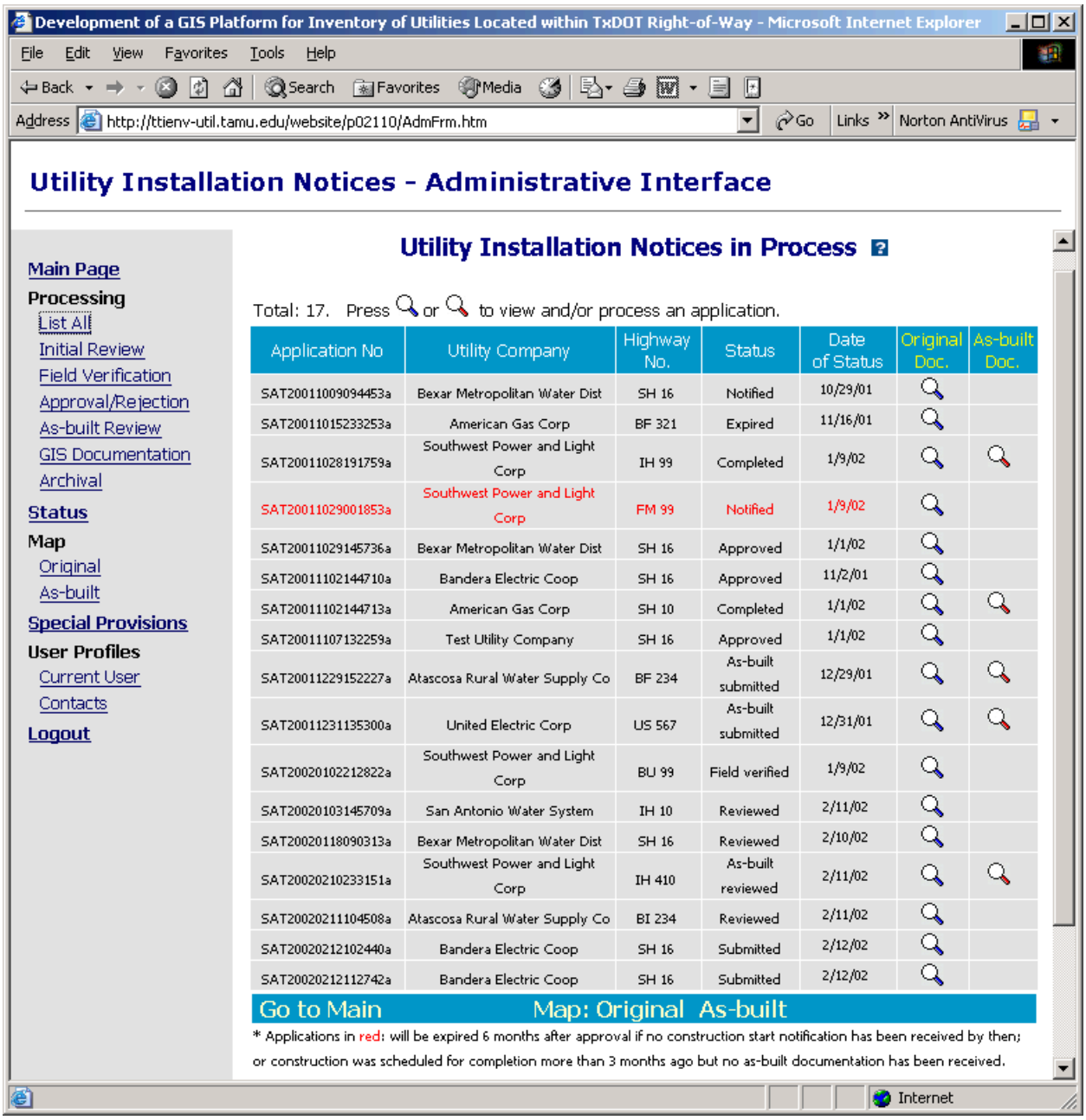


Figure 3-18. Sample Page Showing All Utility Installation Notice Applications.

Processing Utility Installation Notice Applications

1. **Submitted** applications that are ready for **initial review**: The initial review function supports initial processing of the permit applications upon submittal. Applications are verified for completeness and accuracy and routed for the appropriate follow-up action. Table 3-2 summarizes the decisions and resulting actions for the initial review of submitted applications.

Table 3-2. Summary of Decisions and Actions for Processing Initial Reviews.

Status	Decision	Action
Submitted	Hold	E-mail to utility company user.
	Field Verification	E-mail to next administrator. Status changes to Reviewed.
	Approval/Rejection	E-mail to next administrator. Status changes to Reviewed* (waived field verification).

a. On the main administrative page (Figure 3-18), click on Initial Review to view all new applications that have not yet been reviewed. By default, records are sorted by Application No. Note: Since the application number is composed of the date and time the application was submitted, the applications are also listed chronologically by date. You can also view the list of submitted applications by clicking on Submitted (under Status).
b. Click on a blue magnifying glass icon to view a record:
    i. As needed (Figure 3-19):
        1. Review the application for completeness and accuracy.
        2. Click on the name of the Combined Coordinate File to view the coordinate data uploaded by the applicant. You can also view a map showing the location of the proposed installation.
        3. View and print a copy of the Notice of Proposed Installation form.
        4. Click on Notes to add any supplementary notes to accompany the installation notice throughout the application process.
        5. If the application is not complete, press Hold/Contact Utility Company to send an e-mail message to the utility company. After submitting a message, the system returns to the main administrative page.
        6. If the application is complete, press Continue Initial Review.
    ii. Choose whether field verification is needed:
        1. Yes: The system sends an automated e-mail message to the designated individual in charge of field verification (normally a maintenance supervisor).
        2. No: The system skips field verification and sends an automated e-mail message to the designated individual in charge of approving/rejecting the application.

Figure 3-19. Initial Review Page.

2. **Reviewed** applications that are ready for **field verification**: The field verification function supports the field review of individual applications and recommendations for approval or rejection. Table 3-3 summarizes the decisions and resulting actions for field verification of submitted applications.

Table 3-3. Summary of Decisions and Actions for Processing Field Verifications.

Status	Decision	Action
Reviewed	Recommendation	E-mail to administrator. Status changes to Reviewed.

a. On the main administrative page (Figure 3-18), click on Field Verification. You can also view the list of reviewed applications by clicking on Reviewed (under Status).
b. Click on a blue magnifying glass icon to view a record:
    i. As needed, review the application and accompanying notes.
    ii. Press Field Verification to complete the field verification process. When the second field verification page opens (Figure 3-20):

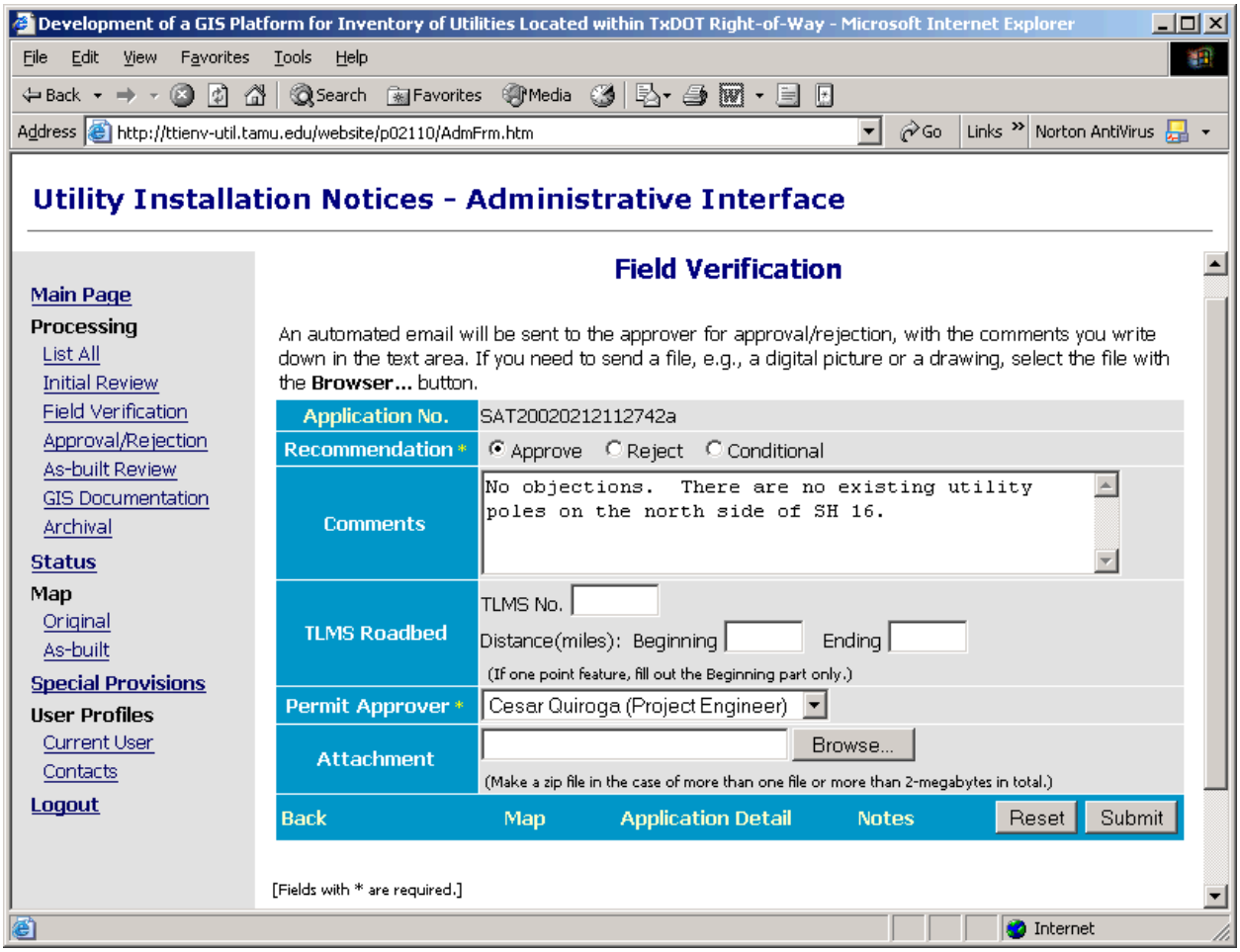


Figure 3-20. Field Verification Page.

1. Provide a recommendation for approval or rejection of the installation notice with a comment on any conditions affecting the decision.
2. (Optional) Enter the TLMS Number and the distance for beginning and ending points.
3. Choose an administrator in charge of approvals from the drop down list. An automated e-mail will be sent to this administrator upon submission.
4. Attach any additional files (e.g., digital photos) to the automated e-mail.
5. Submit the recommendation.

3. **Field verified** applications that are ready for **approval/rejection**: The approval/rejection function supports the approval or rejection of individual applications and specifications with respect to general or revegetation provisions. Table 3-4 summarizes the decisions and resulting actions for approval/rejection of submitted applications.

Table 3-4. Summary of Decisions and Actions for Processing Approval/Rejections.

Status	Decision	Action
Field verified or Reviewed*(waived field verification)	Reject	E-mail to utility company. Status changes to Rejected.
	Approve	E-mail to utility company. Status changes to Approved.

a. On the main administrative page (Figure 3-18), click on Approval/Rejection. Note: This listing can also contain applications that did not require field verification but are nonetheless ready for approval/rejection.
b. Click on a blue magnifying glass icon to view a record:
    i. As needed, review the application and accompanying notes.
    ii. If the decision is to reject the application, Press on the Reject button to record the reasons for rejecting the application and to send an automated e-mail rejection message to the applicant. The rejected file will be listed under Archival (and also under Status | Rejected).
    iii. If the decision is to approve the application:
        1. Press the Approve Button to fill out the installation notice approval form (Figure 3-21).
        2. Add any necessary comments to accompany the recommendation.
        3. Enter the TLMS Number and the distance for beginning and ending points (if not completed during field verification).
        4. Check all General Special Provisions that apply.
        5. Check all Revegetation Special Provisions that apply.
        6. Attach any additional files that apply.
        7. Choose the Maintenance Supervisor to be notified prior to starting construction.
        8. Choose and expiration date for the approved application.

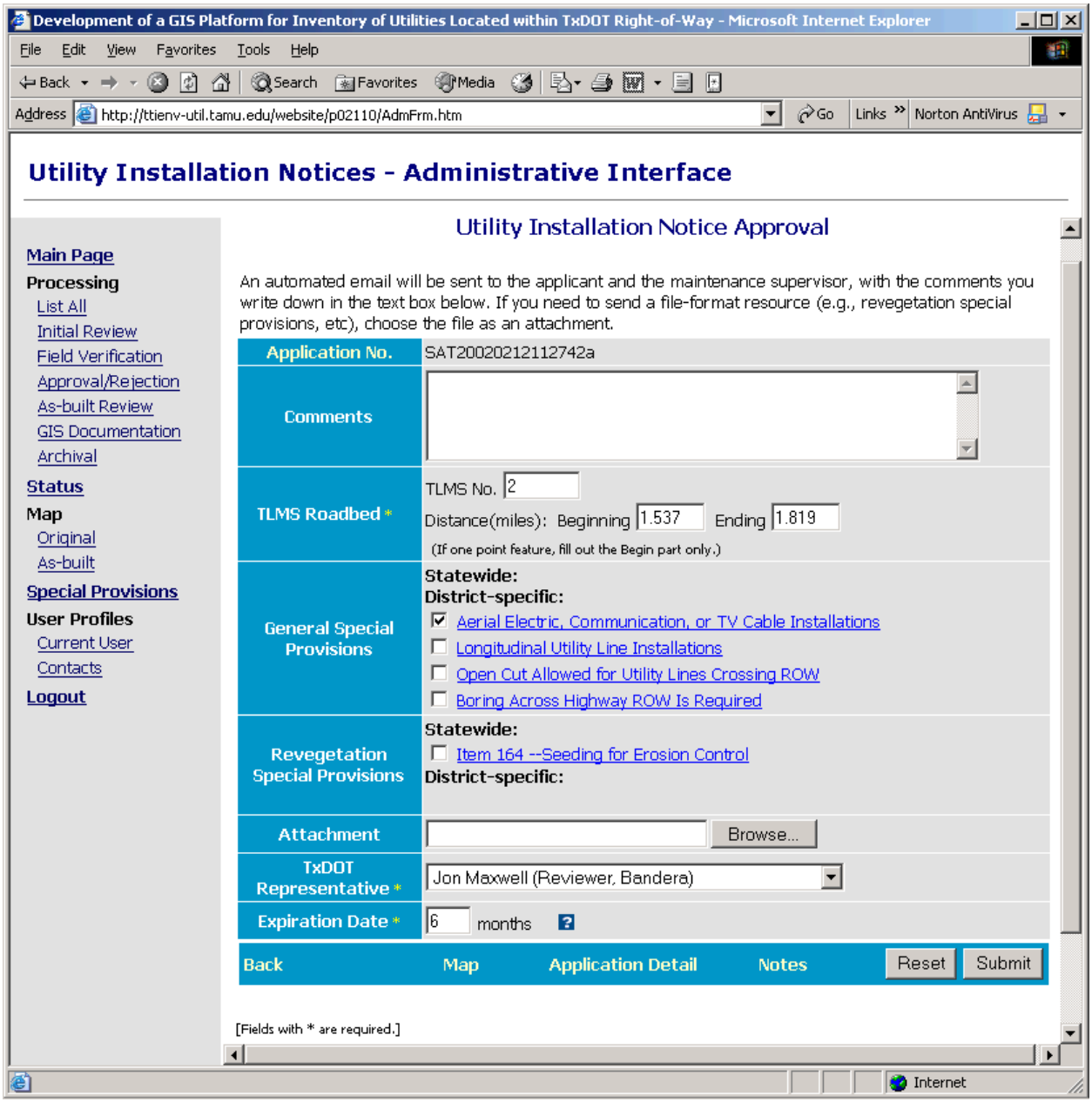


Figure 3-21. Approval/Rejection Page.

4. **Approved** applications for which utility companies have not submitted a construction start notification, **notified** applications for which utility companies have not submitted as-built documentation, or **expired** applications: You can monitor those applications through the status levels in the navigation bar (Figure 3-18):
    a. In the gray navigation bar to the left of the screen, click on Status.
        i. Click on Approved to view all applications for which construction start notification has not yet been submitted. Once a utility company has submitted a construction start notification, the application becomes Notified.

ii. Click on Notified to view all applications for which as-built documentation has not been submitted. Once a utility company has submitted as-built documentation, the application becomes "As-built submitted," and a new red magnifying glass icon appears next to the original documentation blue magnifying glass icon (Figure 3-18).
iii. Click on Expired to view all applications for which approval has been given but a construction starting date was not received by TxDOT within the designated period.

5. **Rejected** applications: You can find those applications under Archival (see step 8 below). If an administrator wishes to revive a rejected application, the application status may be changed to any processing status level by using the Archival interface.

6. **As-built submitted** applications that are ready for **as-built review:** The as-built documentation review function supports the review of as-built documentation submitted by utility companies upon completion of the proposed project. Table 3-5 summarizes the decisions and resulting actions for approval/rejection of submitted applications.

Table 3-5. Summary of Decisions and Actions for Processing As-Built Reviews.

Status	Decision	Action
As-built submitted	Hold	E-mail to utility company user. No status change.
	Complete review	E-mail to next administrator. Status changes to As-built Reviewed.

a. On the main administrative page (Figure 3-18), click on As-Built Review.
b. Click on a red magnifying glass icon to view a record. Clicking on a blue magnifying glass icon displays the original documentation submitted by the utility company.
    i. As needed, review the application and accompanying notes.
    ii. Depending on whether the as-built documentation is ready for GIS documentation (Figure 3-22):
        1. Press the Complete As-built Review button to finish the as-built documentation review process and to send an e-mail message to a designated individual in charge of GIS documentation.
        2. Press the Hold/Contact Utility Company button to send a message to the utility company contact indicating any missing or inaccurate information the utility company must furnish before the application can proceed to the GIS documentation.

Figure 3-22. As-Built Documentation Review Page.

7. **As-built reviewed** applications that are ready for **GIS documentation**: The GIS documentation function supports downloading coordinate data files and installation notice application information to update GIS utility maps. Table 3-6 summarizes the decisions and resulting actions for GIS documentation.

Table 3-6. Summary of Decisions and Actions for Processing GIS Documentation.

Status	Decision	Action
As-built Reviewed	Download/logout	No change in status.
	Documentation Done	Status changes to Completed. Application listed under Archival.

a. On the main administrative page (Figure 3-18), click on GIS Documentation.
b. Click on a red magnifying glass icon to view a record:
   i. As needed, review the application and accompanying notes.
   ii. Press the GIS Documentation button to download the coordinate data file and print attribute data (Figure 3-23).

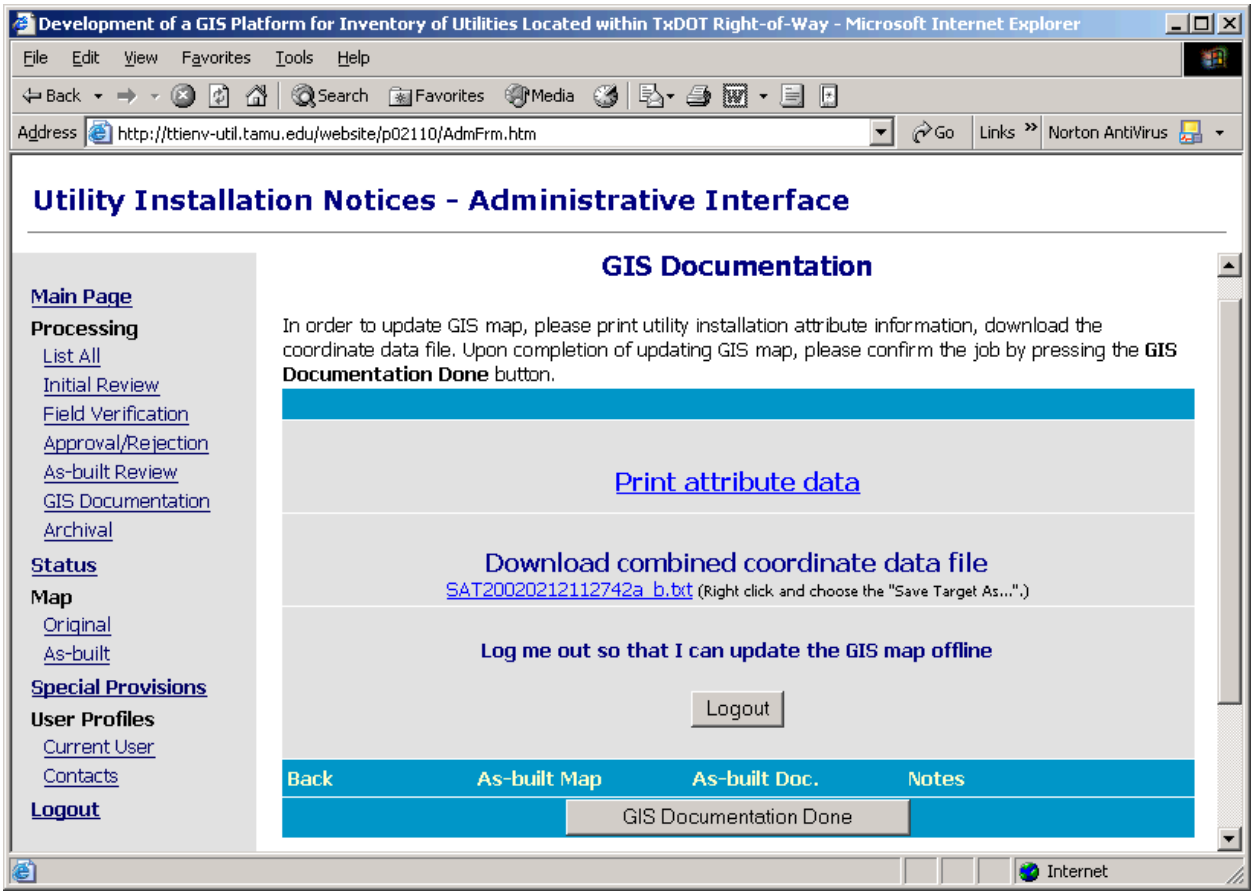


Figure 3-23. GIS Documentation Page.

1. Click on Print utility installation attribute information to download a printable copy of the associated attributed data.

2. Right click on the coordinate data file and choose Save Target As… to download the coordinate data file.
3. Press the Logout button to process the downloaded data and update the utility base map offline. After completing the update, you can log into the system again to finish the GIS documentation process.
4. Press GIS Documentation Done finish the process. The application status changes to Completed, and the application is listed under Archival.

8. **Completed** applications, **rejected** applications, and **expired** applications that are ready for **archival**: The archival function is the last step when no further processing is needed. The archival function also supports manual status changes for reprocessing when necessary (as long as the status is not Archived). Table 3-7 summarizes the decisions and resulting actions for archiving or reprocessing applications.

Table 3-7. Summary of Decisions and Actions for Archival or Reprocessing.

Status	Decision	Action
Completed	Reprocess	Change status level.
	Archive	Status changes to Archived.
Rejected	Reprocess	Change status level.
	Archive	Status changes to Archived.
Expired	Reprocess	Change status level.
	Archive	Status changes to Archived.

   a. On the main administrative page (Figure 3-18), click on Archival.
   b. Click on a red magnifying glass icon (for completed applications) or blue magnifying glass icon (for rejected or expired applications) to view a record:
      i. As needed, review the application and accompanying notes.
      ii. Press the Archival button to archive or change status level (Figure 3-24):
         1. For applications that need no further processing, choose Archived (default) as the status-to-be, include comments as needed, and press the Processing Done button.
         2. For applications that need re-processing, choose a status level at which re-processing should begin. Add comments (required) describing the reason for a status change and press the Processing Done button.

WEB MAPPING SUBSYSTEM CONTROLS

Figures 3-12 and 3-13 show samples of maps that users can display using the web mapping subsystem included in the prototype. Figure 3-25 shows the various map display controls used. Most controls are typical controls included in ArcIMS and are self-explanatory. The researchers developed a few specific map display controls, which may deserve some additional explanation. They are described below.

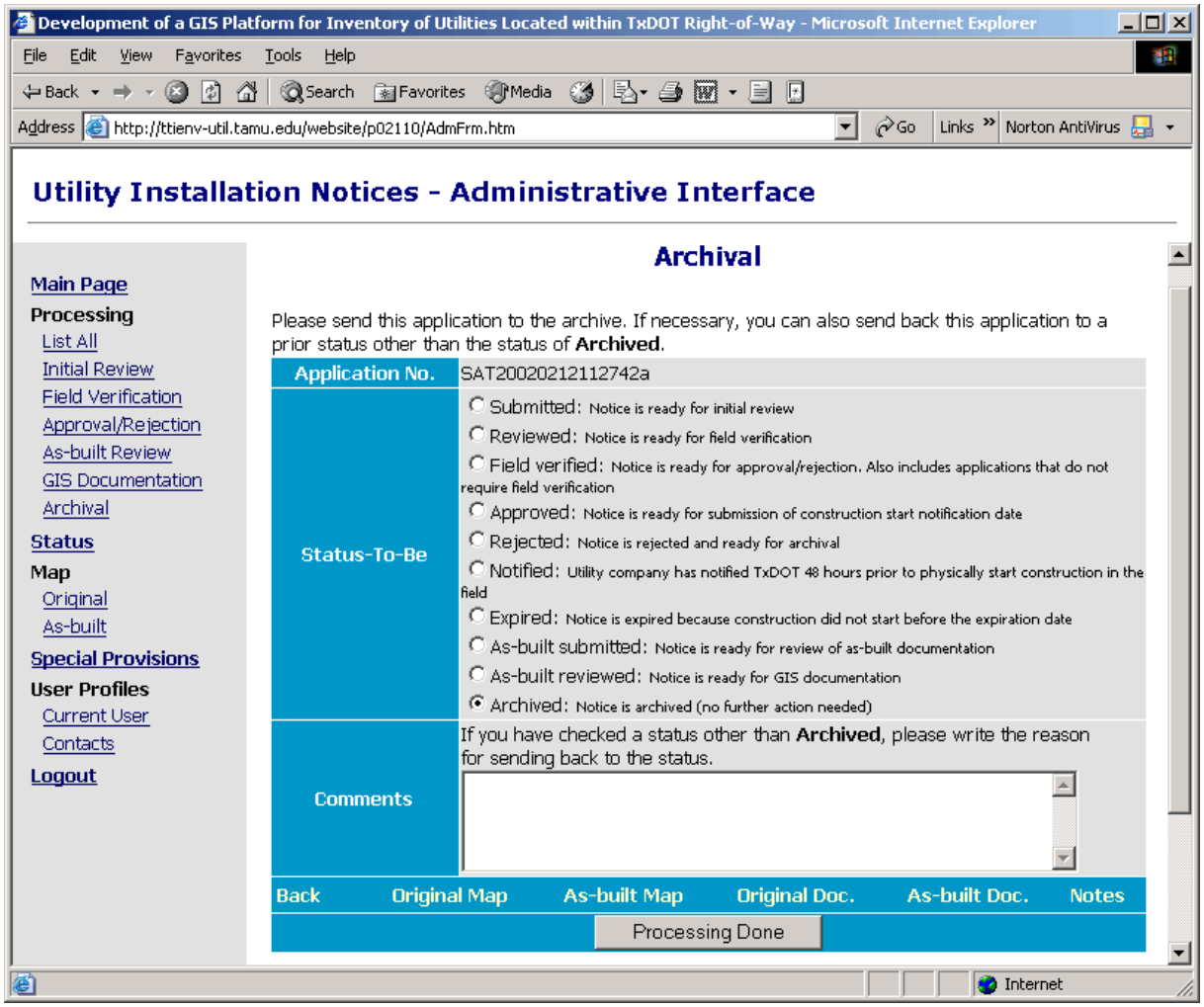


Figure 3-24. Archival and Status Change Page.

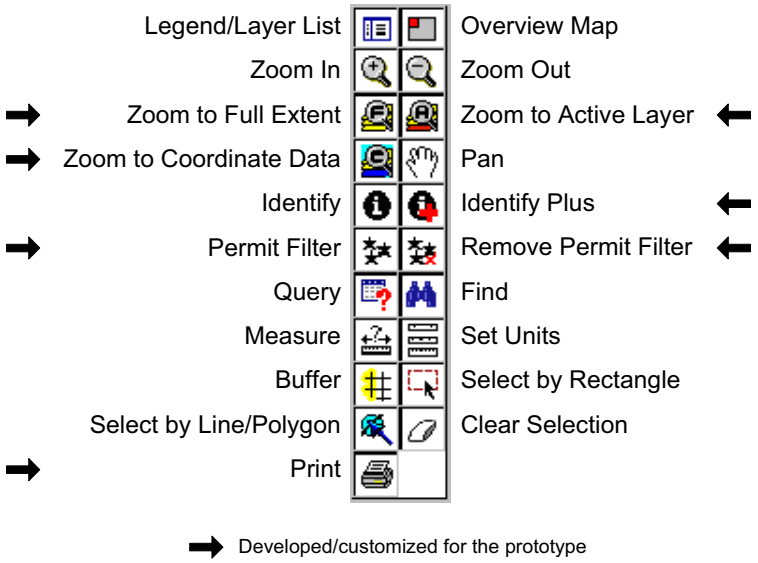


Figure 3-25. Web Mapping Subsystem Map Display Controls.

Zoom to Full Extent

This control enables users to zoom to the full extent of the map. The functionality is the same as the default ArcIMS control. The researchers customized the icon, however, to facilitate the use of the control.

1. Click on the control. The map zooms to the full extent of the map.

Zoom to Active Layer

This control enables users to zoom to the extent of the active layer. The functionality is the same as the default ArcIMS control. The researchers customized the icon, however, to facilitate the use of the control.

2. Click on the control. The map zooms to the extent of the active layer.

Zoom to Coordinate Data

This control enables users to zoom to the extent of all coordinate data points loaded on the map.

3. Click on the control. The map zooms to the extent of the coordinate data.

Identify Plus

This control is an extension of the default ArcIMS Identify tool. It supports the utility inventory model three-table database architecture and allows users to display all attribute data associated with individual utility point or linear features in a single form (Figure 3-26).

1. Select the appropriate feature layer (under Feature Layers) on the map table of contents.
2. Select the Identify Plus control and then select a feature on the map.

Permit Filter

This control is used to display locations and data associated with pending installation notice applications. When the control is activated, a query frame is displayed on the bottom of the online map window. Depending on the status option specified by the user, the prototype displays a listing of pending installation notice applications that currently have that status (Figure 3-27).

1. Select the Permit Filter control and then select a status option on the query frame. The frame displays a listing of pending installation notice applications.
2. Click on an installation notice hyperlink to highlight the record on the list and the map (Figure 3-28).
    a. To display a summary tabular view of the record, toggle the check box before highlighting the installation notice hyperlink.
    b. Click on the Unselect button to unselect any highlighted record.

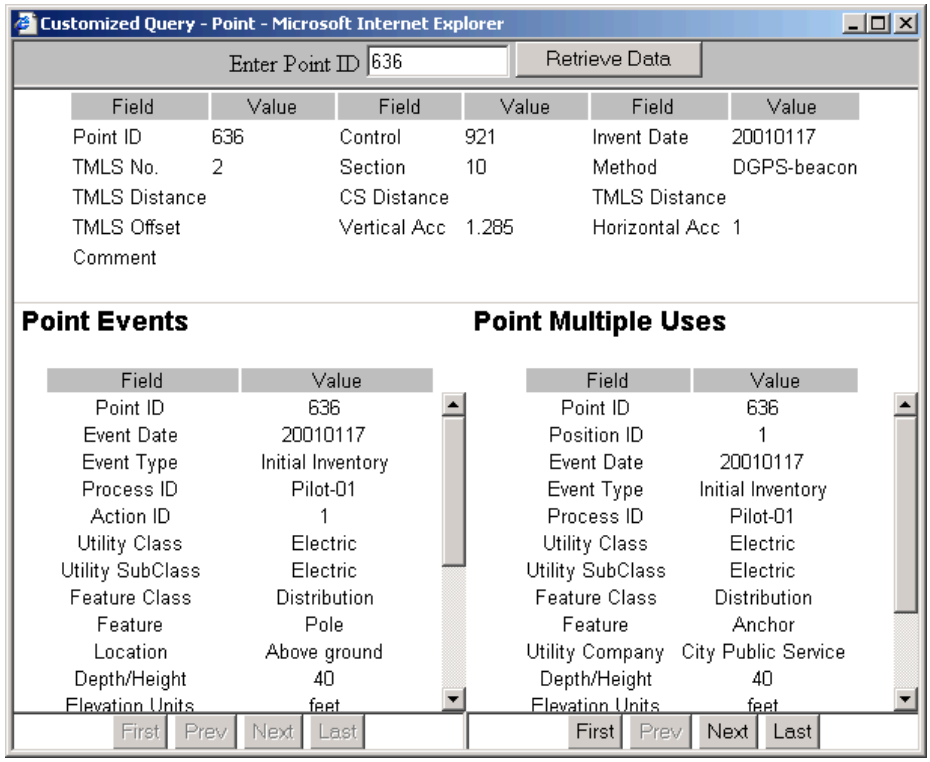


Figure 3-26. Identify Plus Query Results Page.

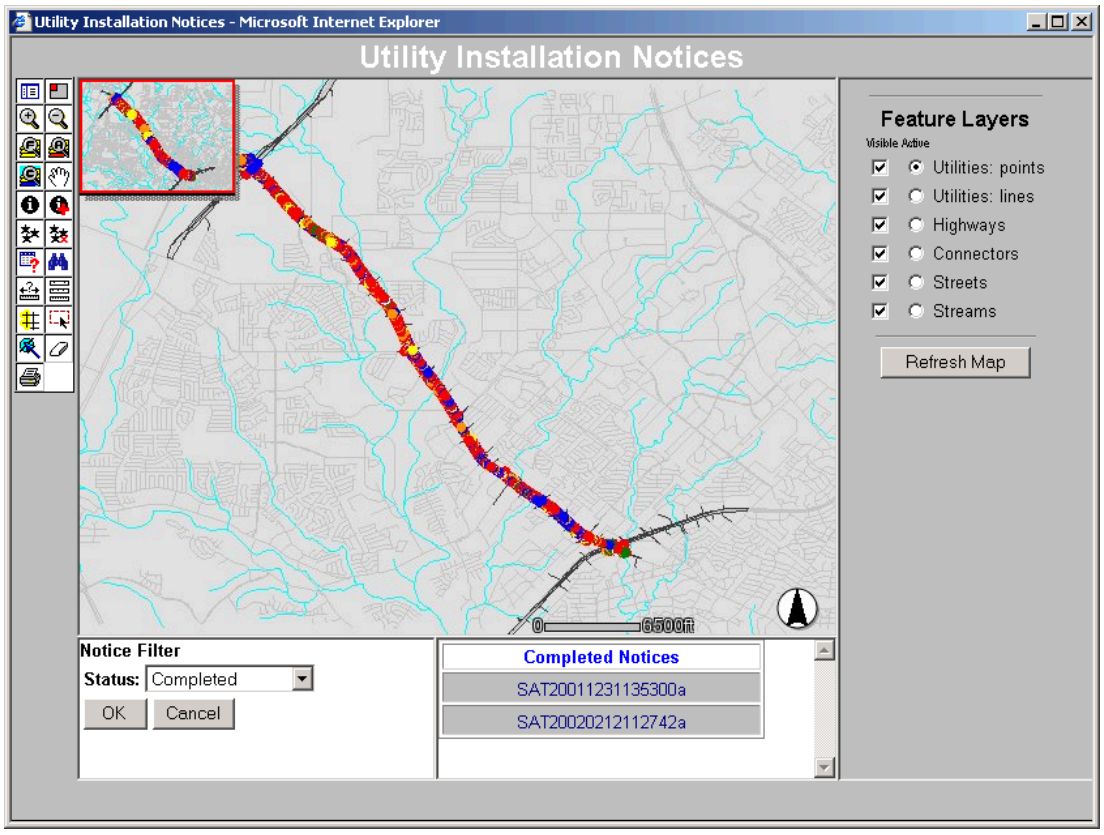


Figure 3-27. Permit Filter Query Form.

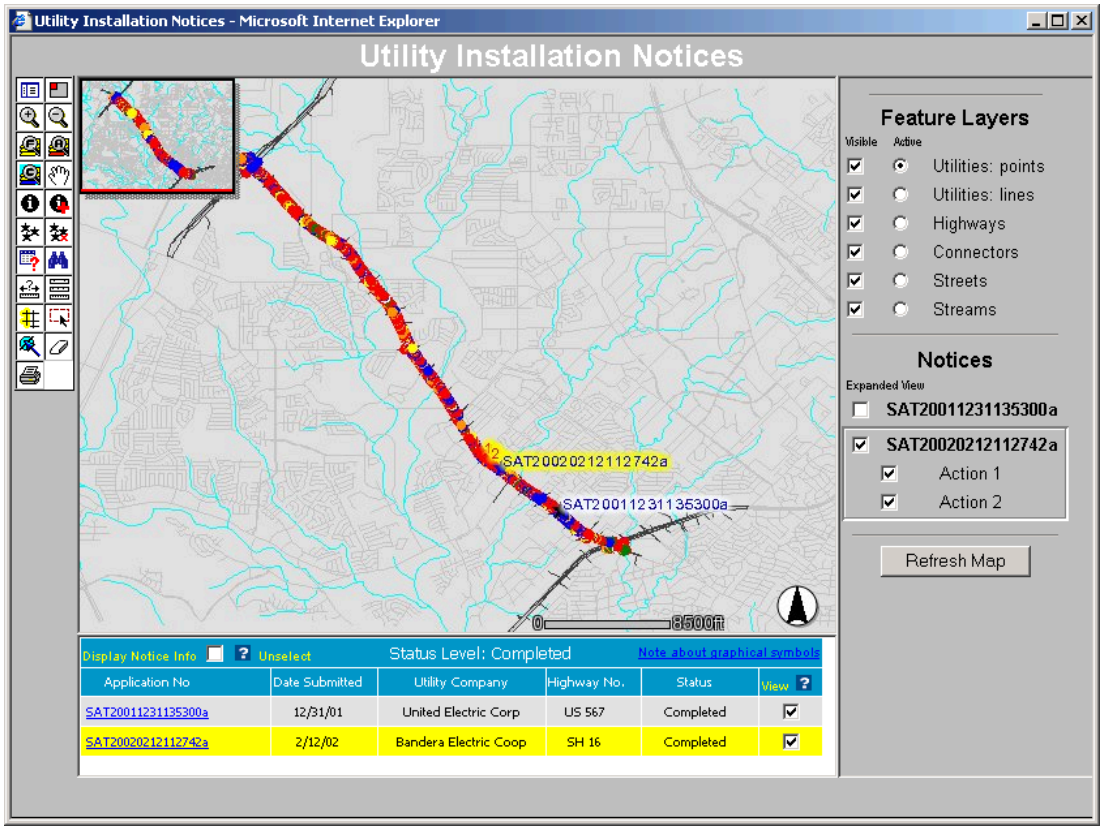


Figure 3-28. Permit Filter Query Results.

c. Toggle a check box under the View column to show the corresponding installation notice record on the map and on the table of contents.
d. To display any action associated with an installation notice application, toggle the check box in front of that action and click on the Refresh Map button. To list the actions, it may be necessary to toggle the expanded view in front of the installation notice application of interest (under Notices).

Remove Permit Filter

This control enables users to clear the contents of the query frame.

Print

This control is a modification of the default ArcIMS print control. It allows users to print utility maps with an expanded legend area that includes installation notice applications and the actions associated with each application.

APPENDIX A. PROTOTYPE UTILITY PLATFORM CD CONTENTS

Figure A-1 shows the structure of the Prototype Utility Platform CD. A short description of the main folders follows.

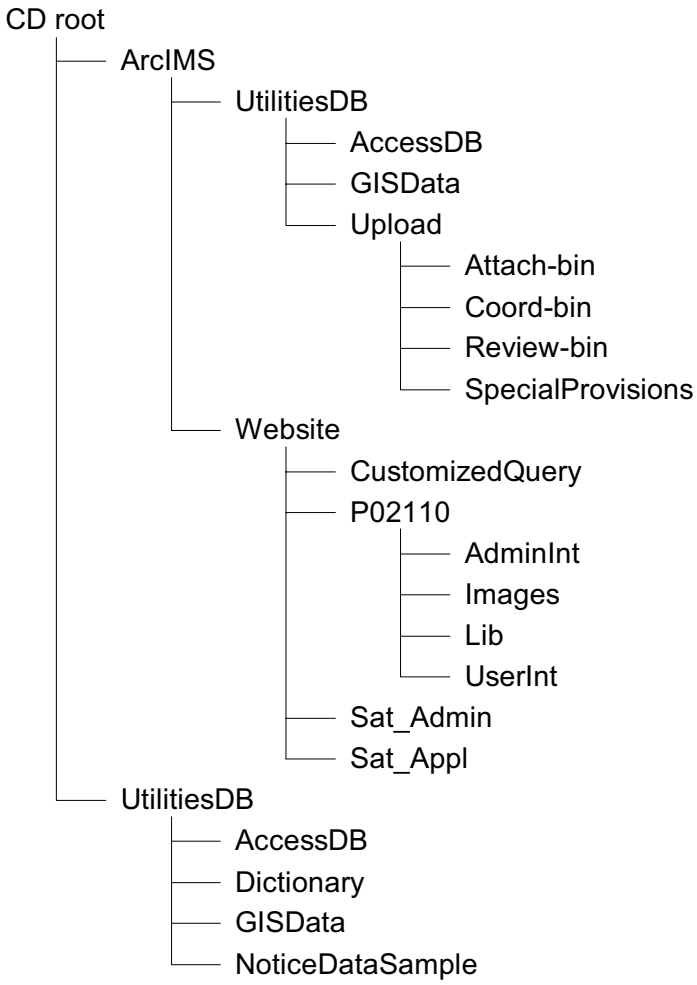


Figure A-1. Prototype Utility Platform CD Folder Structure.

- ArcIMS\UtilitiesDB\AccessDB: Contains a sample copy of Access 2000 database file with utility data collected on SH 16 (Bandera Rd) in San Antonio.
- ArcIMS\UtilitiesDB\GISData: Contains sample ArcView shape files, including files streams1.shp and streets2.shp that are used as background for the Internet-based utility permitting application.
- ArcIMS\UtilitiesDB\Upload: Contains the following empty folders: Attach-bin, Coord-bin, Review-bin, and SpecialProvisions.
- ArcIMS\Website\CustomizedQuery: Contains customized ArcIMS files for displaying attribute data.
- ArcIMS\Website\P02110: Contains a copy of the ASP and HTML files that are required to process utility permit applications online. The folder contains four subfolders: AdminInt, Images, Lib, and UserInt.

- ArcIMS\Website\Sat_Admin: Contains customized ArcIMS files for the administrative interface.
- ArcIMS\Website\Sat_Appl: Contains customized ArcIMS files for the utility company user interface.
- UtilitiesDB\AccessDB: Contains an empty copy of the Access 2000 database schema file.
- UtilitiesDB\Dictionary: Contains a copy of the data dictionary needed to inventory utilities in the field using the Pro XR GPS receiver.
- UtilitiesDB\GISData: Contains empty copies of the following ArcView shape files: points.shp, lines.shp, highways.shp, and connectors.shp.
- UtilitiesDB\NoticeDataSample: Contains sample coordinate data and Microstation files to upload while submitting a trial installation notice application.

APPENDIX B. ASP, HTML, AND JAVASCRIPT FUNCTION QUICK REFERENCE

ASP FILE LISTING

AbActChg.asp
Called by AbRev.asp
Calls AbActProc.asp
Description Form for editing as-built data.

AbActProc.asp
Called by AbActChg.asp
Calls AbRev.asp
Description Writes as-built data into the database.

AbBas.asp
Called by AbRev.asp
Calls AbBasProc.asp
Description Form for editing as-built basic notice data.

AbBasProc.asp
Called by AbBas.asp
Calls AbRev.asp
Description Writes as-built basic notice data to the database.

AbMail.asp
Called by AbRev.asp
Calls ApList.asp
Description Sends an automated e-mail to the TxDOT as-built reviewer.

AbRev.asp
Called by ApDetail.asp
Calls AbBas.asp, AbActChg.asp, AbUpload.asp, AbMail.asp
Description Form for editing as-built detailed data.

AbUpload.asp
Called by AbRev.asp
Calls AbUploadProc.asp
Description Form for uploading a combined as-built coordinate file.

AbUploadProc.asp
Called by AbUpload.asp
Calls AbRev.asp, AbUpload.asp
Description Uploads the combined as-built coordinate data files.

AdminMain.asp
Called by AdminMainFrm.asp
Calls
Description Main administrator's menu of system navigation links.

AdminMainFrm.asp
Called by aLoginProc.asp
Calls
Description Frame that displays the administrative interface.

AdmLogin.asp
Called by AdmFrm.htm
Calls aLoginProc.asp, aRegis1.asp
Description Administrative login page.

AdvancedIdEvents.asp
Called by AdvancedIdFrame.asp, AdvancedIdTop.asp
Calls AdvancedIdEvents1.asp, AdvancedIdEvents2.asp
Description Creates events frame.

AdvancedIdEvents1.asp
Called by AdvancedIdEvents.asp
Calls None
Description Displays feature events header.

AdvancedIdEvents2.asp
Called by AdvancedIdEvents.asp
Calls None
Description Displays feature events.

AdvancedIdFeatures.asp
Called by AdvancedIdEvents.asp
Calls AdvancedIdFrame.asp, AdvancedIdTop.asp
Description Display features.

AdvancedIdFrame.asp
Called by aimsNoticeCoord.js
Calls AdvancedIdTop.asp,
AdvancedIdFeatures.asp,
AdvancedIdEvents.asp,
AdvancedIdMultiple.asp,
RecordSelEventsStatic.asp,
RecordSelMultipleStatic.asp
Description Custom query tool main frame.

AdvancedIdMultiple.asp
Called by AdvancedIdFrame.asp, AdvancedIdTop.asp
Calls AdvancedIdMultiple1.asp, AdvancedIdMultiple2.asp
Description Creates multiple uses frame.

AdvancedIdMultiple1.asp
Called by AdvancedIdMultiple.asp
Calls None
Description Displays feature multiple uses header.

AdvancedIdMultiple2.asp
Called by AdvancedIdMultiple.asp
Calls None
Description Displays feature multiple uses.

AdvancedIdTop.asp
Called by AdvancedIdFrame.asp
Calls AdvancedIdFeatures.asp,
AdvancedIdEvents.asp,
AdvancedIdMultiple.asp,
RecordSelEventsStatic.asp,
RecordSelMultipleStatic.asp
Description Displays the top of custom query tool.
Creates interface for user to input feature ID.

aLoginErr.asp
Called by aLoginProc.asp
Calls AdmLogin.asp
Description Displays an error screen if the login or password are not on file.

aLoginProc.asp
Called by AdmLogin.asp
Calls AdminMainFrm.asp, aLoginErr.asp
Description Processes administrative login data and calls records to be processed.
Purges the system of aborted installation notice applications.
Processes expired notices.

aLogOut.asp
Called by AdminMain.asp, AdminNavig1.asp, AdminNavig2.asp
Calls AdmFrm.htm
Description Ends user session.

ApAct1.asp
Called by ApBas.asp
Calls ApAct2.asp
Description Initializes a new database record, writes basic data to the record.
Embeds a form for entering detailed data (first action).

ApAct12.asp
Called by ApActProcTbl.asp
Calls ApAct2.asp
Description Embeds a form for entering detailed data (additional actions).

ApAct2.asp
Called by ApAct1.asp, ApAct12.asp
Calls ApAct2Coord.asp, ApActProcTbl.asp
Description Writes detailed data to the database.
Embeds the summary table of actions.

ApAct22.asp
Called by ApActDel.asp
Calls ApActProcTbl.asp
Description Embeds the summary table of actions after deleting an action.

ApAct2Coord.asp
Called by ApAct2.asp
Calls
Description Combines uploaded coordinate files to make a single coordinate file.

ApActChg.asp
Called by ApActDetail.asp
Calls ApActChgProc.asp
Description Form for editing the current action.

ApActChgProc.asp
Called by ApActChg.asp
Calls ApAct2Coord.asp, ApActProcTbl.asp
Description Writes the current action data to the database.

ApActDel.asp
Called by ApActDetail.asp
Calls ApAct22.asp
Description Deletes the current action.

ApActDetail.asp
Called by ApActprocTbl.asp
Calls ApActChg.asp, ApActDel.asp, ApAct22.asp
Description Displays the details of the current action.

ApActProcTbl.asp
Called by ApAct2.asp
Calls ApSum.asp, ApAct12.asp, ApActDetail.asp, ApDel.asp
Description Displays a summary table of actions.

ApActTbl.asp
Called by ApAct1.asp, ApAct12.asp
Calls
Description Form for entering detailed data for the current action.

ApArchivList.asp
Called by UserMain.asp
Calls ApDetail.asp
Description Lists archived notices.

ApBas.asp
Called by ApMsg.htm
Calls ApAct1.asp
Description Form for filling out basic data for a new notice.

ApBasChg.asp
Called by ApAct1.asp
Calls ApBasChgProc.asp
Description Form for editing basic notice data.

ApBasChgProc.asp
Called by ApBasChg.asp
Calls ApAct2.asp
Description Writes basic notice data to the database.
Displays a summary of the basic notice data.
Embeds a form for entering first action detailed data.

ApDel.asp
Called by ApActProcTbl.asp
Calls UserMain.asp
Description Deletes the current notice.

ApDetail.asp
Called by ApList.asp
Calls AppNotif.asp, AbRev.asp
Description Displays detailed notice data.

ApDetailAb.asp
Called by ApList.asp
Calls
Description Displays detailed as-built notice data.

ApList.asp
Called by UserMain.asp
Calls ApDetail.asp, ApDetailAb.asp
Description Lists all pending notices.

AppAbMail1.asp
Called by AppAbRev.asp
Calls AdminMain.asp
Description Writes reviewed as-built documentation to the database.
Sends e-mail notification to GIS personnel.

AppAbMail2.asp
Called by AppAbRev.asp
Calls AdminMain.asp
Description Sends e-mail notification to the applicant requesting additional information for as-built documentation.

AppAbRev.asp
Called by AppDetailAb.asp
Calls AppAbMail1.asp, AppAbMail2.asp
Description Writes as-built documentation to the database if the application is complete, or writes the administrator's note regarding an incomplete as-built document to the database.

AppArchiv.asp
Called by AppDetail.asp, AppDetailAb.asp
Calls AppArchivProc.asp
Description Moves a notice to the archive database, or changes the notice status.

AppArchivProc.asp
Called by AppArchiv.asp
Calls AdminMain.asp
Description Updates the database after archiving a notice.

AppDecApprFrm.asp
Called by AppDecRev.asp
Calls AppDecApprTbl.asp
Description Form for entering approval decision.

AppDecApprMail.asp
Called by AppDecApprTbl.asp
Calls AdminMain.asp
Description Writes approval data to the database.
Sends e-mail notification of approval to the applicant.

AppDecApprTbl.asp
Called by AppDecApprFrm.asp
Calls AppDecApproMail.asp
Description Form for entering expiration data and special provisions.

AppDecRejMail.asp
Called by AppDecRev.asp
Calls AdminMain.asp
Description Writes rejection data to the database.
Sends e-mail notification of rejection to the applicant.

AppDecRev.asp
Called by AppDetail.asp
Calls AppDecApprFrm, AppDecApprTbl.asp, AppDecRejMail.asp
Description Embeds a review page for approval or rejects.

AppDetail.asp
Called by AppList1.asp, ..., AppList99
Calls AppInitRev.asp, AppFldRev.asp, AppDecRev.asp, AppAbRev.asp, AppGisDoc1.asp, AppArchiv.asp
Description Embeds a page displaying detailed notice data (original documentation).

AppDetailAb.asp
Called by AppList8.asp, ..., AppList99
Calls AppAbRev.asp, AppGisDoc1.asp, AppArchiv.asp
Description Embeds a page displaying detailed as-built notice data.

AppDetailAbTbl.asp
Called by AppDetailAbWin.asp
Calls
Description Displays detailed as-built notice data (view only).

AppDetailAbWin.asp
Called by AppAbRev.asp, AppGisDoc1.asp, AppArchiv.asp
Calls AppDetailAbTbl.asp
Description Opens a new window displaying detailed as-built data.

AppDetailTbl.asp
Called by AppDetailWin.asp
Calls
Description Displays detailed pending notice data.

AppDetailWin.asp
Called by AppInitRev.asp, AppFldRev.asp, AppDecRev.asp, AppAbRev.asp, AppGisDoc1.asp, AppArchiv.asp
Calls AppDetailTbl.asp
Description Opens a new window displaying detailed notice data.

AppFldMail.asp
Called by AppFldRev.asp
Calls AdminMain.asp
Description Writes field verification data to the database.
Sends e-mail notification of approval recommendation to the approver.

AppFldRev.asp
Called by AppDetail.asp
Calls AppFldMail.asp
Description Form for entering field verification data.

AppGISDoc1.asp
Called by AppDetailAb.asp
Calls AppGISDocPrn.asp, AppGISDoc2.asp
Description Provides a link to download as-built coordinate file for finalizing GIS documentation.

AppGISDoc2.asp
Called by AppGISDoc1.asp
Calls AdminMain.asp
Description Updates record status after GIS documentation.

AppGISDocPrn.asp
Called by AppGISDoc1.asp
Calls
Description Displays detailed data for updating GIS attributes.

AppInitCompl.asp
Called by AppInitRev.asp
Calls AppInitMail1.asp, AppInitMail2.asp
Description Routes the notice to an administrator for field verification or approval.

AppInitIncompl.asp
Called by AppInitRev.asp
Calls AdminMain.asp
Description Writes notes to the database and sends e-mail to the utility company requesting additional information for the application.

AppInitRev.asp
Called by AppDetail.asp
Calls AppInitCompl.asp, AppInitIncompl.asp
Description Displays detail data for the initial review.

AppList1.asp
Called by AdminMain.asp, AdminMainFrm.asp
Calls AppDetail.asp
Description Lists submitted notices.

AppList2.asp
Called by AdminMain.asp, AdminMainFrm.asp
Calls AppDetail.asp
Description Lists reviewed notices.

AppList3.asp
Called by AdminMain.asp, AdminMainFrm.asp
Calls AppDetail.asp
Description Lists field verified notices.

AppList4.asp
Called by AdminMain.asp, AdminMainFrm.asp
Calls AppDetail.asp
Description Lists approved notices.

AppList5.asp
Called by AdminMain.asp, AdminMainFrm.asp
Calls AppDetail.asp
Description Lists rejected notice.

AppList6.asp
Called by AdminMain.asp, AdminMainFrm.asp
Calls AppDetail.asp
Description Lists notified notices (construction notification has been given).

AppList7.asp
Called by AdminMain.asp, AdminMainFrm.asp
Calls AppDetail.asp
Description Lists expired notices.

AppList8.asp
Called by AdminMain.asp, AdminMainFrm.asp
Calls AppDetailAb.asp
Description Lists as-built submitted notices.

AppList9.asp
Called by AdminMain.asp, AdminMainFrm.asp
Calls AppDetailAb.asp
Description Lists as-built reviewed notices.

AppList10.asp
Called by AdminMain.asp, AdminMainFrm.asp
Calls AppDetailAb.asp
Description Lists completed notices.

AppList1057.asp
Called by AdminMain.asp, AdminMainFrm.asp
Calls AppDetail.asp
Description Lists completed, rejected, and expired notices as well as notices waiting for archival.

AppList11.asp
Called by AdminMain.asp, AdminMainFrm.asp
Calls AppDetail.asp
Description Lists archived notices.

AppList99.asp
Called by AdminMain.asp, AdminMainFrm.asp
Calls AppDetail.asp
Description Lists all notices in process (except for archived notices).

AppNotif.asp
Called by ApDetail.asp
Calls AppNotifProc.asp
Description Form for notifying TxDOT of the construction start date.

AppNotifProc.asp
Called by AppNotif.asp
Calls UserMain.asp
Description Writes notification data to the database (change the status to "Notified"). Sends e-mail notification to TxDOT regarding the construction start data.

AppProcDetail.asp
Called by AppDetail.asp, AppDetailAb.asp
Calls
Description Displays prior processing data by status.

aProfChg1.asp
Called by aProfSum.asp
Calls aProfChg2.asp
Description Form for updating an administrative user profile (form 1 of 3).

aProfChg2.asp
Called by aProfChg1.asp
Calls aProfChg3.asp
Description Form for updating an administrative user profile (form 2 of 3).

aProfChg3.asp
Called by aProfChg2.asp
Calls aProfMail.asp, AdminMain.asp
Description Form for updating an administrative user profile (form 3 of 3).

aProfMail.asp
Called by aProfChg3.asp
Calls
Description Sends an e-mail notification to the user regarding the updated profile.

aProfSum.asp
Called by AdminMain.asp, AdminNavig1.htm, AdminNavig2.htm
Calls aProfChg1.asp
Description Displays a summary of the user profile.

ApSum.asp
Called by ApActProcTbl.asp
Calls ApSumCoord.asp, PermitNotice.asp, UserMain.asp, uLogOut.asp
Description Displays data about post-submission processing procedures.

ApSumCoord.asp
Called by ApSum.asp
Calls
Description Makes a combined coordinate file from the individual coordinate files.

aRegChg1.asp
Called by aRegis3.asp
Calls aRegChg2.asp
Description Form for editing a new administrative user profile (1 of 3).

aRegChg2.asp
Called by aRegChg1.asp
Calls aRegChg3.asp
Description Form for editing a new administrative user profile (2 of 3).

aRegChg3.asp
Called by aRegChg2.asp
Calls aRegRedir.asp
Description Form for editing a new administrative user profile (3 of 3).

aRegis1.asp
Called by AdmLogin.asp
Calls aRegis2.asp
Description Form for a new administrator registration (1 of 3).

aRegis2.asp
Called by aRegis1.asp
Calls aRegis3.asp
Description Form for a new administrator registration (2 of 3).

aRegis3.asp
Called by aRegis2.asp
Calls aRegRedir.asp
Description Form for a new administrator registration (3 of 3).

aRegMail.asp
Called by aRegRedir.asp
Calls aLoginProc.asp
Description Sends an e-mail confirming the new registration to the TxDOT user.

aRegRedir.asp
Called by aRegis3.asp, aRegChg3.asp
Calls aRegMail.asp, aRegChg1.asp
Description Redirects the new administrator to the default processing page.

DownAttach.asp
Called by ApDetail.asp, ApDetailAb.asp, AppDetailTbl.asp, AppDetailAbTbl.asp
Calls
Description Opens a window that displays drawing files for download.

DownMisc.asp
Called by ApDetail.asp, ApDetailAb.asp, AppDetailTbl.asp, AppDetailAbTbl.asp
Calls
Description Opens a window that displays data provided by TxDOT personnel along the review process.

EmailDetail.asp
Called by EmailList1.asp, EmailList2.asp, EmailQuery.asp
Calls
Description Displays contact data of any user registered into the system.

EmailList1.asp
Called by EmailMain.asp
Calls EmailDetail.asp
Description Lists TxDOT users registered into the system.

EmailList2.asp
Called by EmailMain.asp
Calls EmailDetail.asp
Description Lists utility company users registered into the system.

EmailMain.asp
Called by UserMain.asp
Calls EmailList1.asp, EmailList2.asp, EmailQuery.asp
Description Finds any user registered with the system.

EmailQuery.asp
Called by EmailMain.asp
Calls EmailDetail.asp
Description Lists any user that meets the name search parameters.

LogDetail.asp
Called by LogList.asp
Calls
Description Displays the contents of a note.

LogList.asp
Called by AppDetail.asp, AppDetailAb.asp, AppInitRev.asp, AppFldRev.asp, AppDecRev.asp, AppAbRev.asp, AppGisDoc1.asp, AppArchiv.asp
Calls LogDetail.asp, LogWrit.asp
Description Lists all processing notes associated with a notice.

LogWrit.asp
Called by LogList.asp
Calls LogWritProc.asp
Description Form for administrators to write notes during the review process.

LogWritProc.asp
Called by LogWrit.asp
Calls LogList.asp
Description Writes data from a note to the database.

MapCurrentNoticePackager1.asp

Called by aimsNoticeCoord.js
Calls None
Description Retrieves uploaded coordinate file using the File System Object.
Retrieves current action's utility class and feature type from database.
Packages information and returns control to aimsNoticeCoord.js.

MapCurrentNoticePackager2.asp

Called by aimsNoticeCoord.js
Calls None
Description Retrieves OLE coordinate data from database using ODBC.
Retrieves current action's utility class and feature type from database.
Packages information and returns control to aimsNoticeCoord.js.

MapCurrentNoticePackager2Ab.asp

Called by aimsNoticeCoord.js
Calls None
Description Retrieves as-built OLE coordinate data from database using ODBC.
Retrieves current action's utility class and feature type from database, as-built.
Packages information and returns control to aimsNoticeCoord.js.

MapCurrentNoticePackager3.asp

Called by AimsNoticeCoord.js
Calls None
Description Retrieves all uploaded files using the File System Object.
Retrieves all action's utility class and feature type from the database.
Packages information and returns control to the aimsNoticeCoord.js.

MapGetDistrict.asp

Called by Utility
Calls None
Description Designed to retrieve the users district in any standalone environment, with modification.

MapNoticeDownAttach.asp

Called by Utility
Calls None
Description Downloads notice application attachments.

MapNoticeDownAttachAb.asp

Called by Utility
Calls None
Description Downloads as-built notice application attachments.

MapNoticeFilterDataPackager.asp

Called by aimsNoticeFilterCoord.js
Calls None
Description Retrieves OLE coordinate data from database using ODBC.
Retrieves current action's utility class and feature type from database.
Packages information and returns control to the aimsNoticeFilterCoord.js.

MapNoticeFilterDataPackagerAb.asp

Called by aimsNoticeFilterCoord.js
Calls None
Description Retrieves as-built OLE coordinate data from database using ODBC.
Retrieves current action's utility class and feature type from database, as-built.
Packages information and returns control to the aimsNoticeFilterCoord.js.

MapNoticeFilterList.asp

Called by aimsNoticeFilterCoord.js
Calls None
Description Displays the filtered list of notice applications.
Creates the interface to select and unselect permits.

MapNoticeFilterListAb.asp

Called by aimsNoticeFilterCoord.js
Calls None
Description Displays the as-built filtered list of notice applications.
Creates the interface to select and unselect permits.

MapNoticeFilterSelDetaila.asp

Called by aimsNoticeFilterCoord.js
Calls MapNoticeDownAttach.asp
Description Displays complete information on the selected filtered notice.
Creates interface to toggle notice view and the link to display additional information on notice.

MapNoticeFilterSelDetailaAb.asp

Called by aimsNoticeFilterCoord.js
Calls MapNoticeDownAttachAb.asp
Description Displays complete information on the selected as-built filtered notice.
Creates interface to toggle notice view and the link to display additional information on notice.

MapNoticeFilterSelFrm.asp

Called by aimsNoticeFilterCoord.js
Calls MapNoticeFilterSelFrm1.asp, MapNoticeFilterSelFrm2.asp
Description Creates the frame for the notice filter selection.

MapNoticeFilterSelFrmAb.asp
Called by aimsNoticeFilterCoord.js
Calls MapNoticeFilterSelFrm1Ab.asp, MapNoticeFilterSelFrm2Ab.asp
Description Creates the frame for the notice filter selection, as-built.

MapNoticeFilterSelFrm1.asp
Called by MapNoticeFilterSelFrm.asp
Calls MapNoticeFilterSelFrm2.asp
Description Displays all permit statuses in a dropdown.
Handles dropdown change event to update MapNoticeFilterSelFrm2.asp.

MapNoticeFilterSelFrm1Ab.asp
Called by MapNoticeFilterSelFrmAb.asp
Calls MapNoticeFilterSelFrm2Ab.asp
Description Displays the as-built permits statuses in a dropdown.
Handles dropdown change event to update MapNoticeFilterSelFrm2Ab.asp.

MapNoticeFilterSelFrm2.asp
Called by MapNoticeFilterSelFrm.asp, MapNoticeFilterSelFrm1.asp
Calls MapNoticeFilterList.asp
Description Displays the filter selected notices for the selected installation notice status.

MapNoticeFilterSelFrm2Ab.asp
Called by MapNoticeFilterSelFrmAb.asp, MapNoticeFilterSelFrm1Ab.asp
Calls MapNoticeFilterList.asp
Description Displays the filter selected as-built notices for the selected permit status.

PermitApproval.asp
Called by AppDetail.asp, AppDetailAb.asp, ApDetail.asp, ApDetailAb.asp
Calls
Description Displays an online version of a completed installation notice approval.

PermitNotice.asp
Called by AppDetail.asp, AppDetailAb.asp, ApDetail.asp, ApDetailAb.asp
Calls
Description Displays an online version of a completed utility installation notice.

PrnCoord.asp
Called by ApDetail.asp, ApDetailAb.asp, AppDetailTbl.asp, AppDetailAbTbl.asp
Calls
Description Opens a window that displays coordinate data.

PrnSpecProv.asp
Called by ApDetail.asp, ApDetailAb.asp, AppDetailTbl.asp, AppDetailAbTbl.asp, AppDecApprTbl.asp
Calls
Description Opens a window that displays special provisions.

ProfEdit.asp
Called by ProfTbl.asp
Calls ProfEditProc.asp
Description Form for updating the utility company user profile.

ProfEditProc.asp
Called by ProfEdit.asp
Calls uProfMail.asp
Description Writes the updated utility company user profile to the database.

ProfTbl.asp
Called by UserMain.asp
Calls ProfEdit.asp
Description Displays the details of a utility company user profile.

RecordSelEvents.asp
Called by AdvancedIdFrame.asp
Calls None
Description Creates event selector buttons.

RecordSelEventsStatic.asp
Called by AdvancedIdFrame.asp
Calls None
Description Creates event selector dummy buttons.

RecordSelMultiple.asp
Called by AdvancedIdFrame.asp
Calls None
Description Creates multiple uses selector buttons.

RecordSelMultipleStatic.asp
Called by AdvancedIdFrame.asp
Calls None
Description Creates multiple uses selector dummy buttons.

Responsibilities.asp
Called by AppList1.asp, ..., AppList99.asp, AppDetail.asp, AppDetailAb.asp
Calls
Description Opens a window describing the various responsibility levels.

SpecProvApList.asp
Called by SpecProvList.asp
Calls SpecProvStat.asp
Description Lists notices associated with a particular special provision.

SpecProvDel.asp
Called by SpecProvList.asp
Calls SpecProvList.asp
Description Deletes the selected current special provision.

SpecProvEdit.asp
Called by SpecProvList.asp
Calls SpecProvEditProc.asp
Description Form for entering a newer version of a special provision.

SpecProvEditProc.asp
Called by SpecProvEdit.asp
Calls SpecProvList.asp
Description Uploads a newer version of a special provision.

SpecProvList.asp
Called by SpecProvMain.asp
Calls SpecProvApList.asp, SpecProvEdit.asp, SpecProvDel.asp
Description Lists special provisions associated with a given TxDOT district.

SpecProvMain.asp
Called by AdminMain.asp, UserMain.asp
Calls SpecProvList.asp
Description Lists the 25 TxDOT districts with links to their associated special provisions.

SpecProvStat.asp
Called by SpecProvApList.asp
Calls SpecProvList.asp
Description Changes the status of an existing special provision.

SpecProvUpload.asp
Called by SpecProvList.asp
Calls SpecProvUploadProc.asp
Description Form for uploading a new special provision.

SpecProvUploadProc.asp
Called by SpecProvUpload.asp
Calls SpecProvList.asp
Description Uploads a new special provision.

Status.asp
Called by AppList1.asp, ..., AppList99.asp, AppDetail.asp, AppDetailAb.asp
Calls
Description Opens a window that displays status levels.

uLogin.asp
Called by UserFrm.htm
Calls uLoginProc.asp, uRegis1.asp
Description Utility company login page.

uLoginDecl.asp
Called by uRegMsg.asp
Calls uLogin.asp
Description Deletes the new user profile record if the user declines to register.

uLoginErr.asp
Called by uLoginProc.asp
Calls uLogin.asp
Description Displays an error screen if the login and/or password are not on file.

uLoginProc.asp
Called by uLogin.asp
Calls UserMain.asp, uLoginErr.asp
Description Executes the utility company login procedure.

uLogOut.asp
Called by
Calls ULogin.htm
Description Ends the session when the user logs out.

uProfMail.asp
Called by ProfEditProc.asp
Calls
Description Sends an e-mail notification regarding an updated utility company user profile.

uRegChg.asp
Called by uRegProc.asp
Calls URegChgProc.asp
Description Form for editing a new user profile.

uRegChgProc.asp
Called by URegChg.asp
Calls aRegChg3.asp
Description Updates the new user profile in the database.

uRegis1.asp
Called by uLogin.asp
Calls uRegProc.asp
Description Registration form for utility company users whose company is currently listed in the system.

uRegis2.asp
Called by uLogin.asp
Calls uRegProc.asp
Description Registration form for utility company users whose company is not currently listed in the system.

uRegMail.asp
Called by uRegRedir.asp
Calls uLoginProc.asp
Description Sends an e-mail confirming a new utility company user registration.

uRegMsg.asp
Called by uRegRedir.asp
Calls uRegMail.asp, uLoginDecl.asp
Description Displays a TxDOT disclaimer to newly registered utility company users.

uRegProc.asp
Called by uRegis2.asp, uRegis2.asp
Calls uRegRedir.asp
Description Writes the new utility company user registration to the database.

uRegRedir.asp
Called by uRegProc.asp, uRegChgProc.asp
Calls uRegMsg.asp, uRegChg.asp
Description Redirects a new utility company user to the disclaimer page or the profile editing form.

UserMain.asp
Called by uLoginProc.asp
Calls
Description Main utility company menu of system navigation links.

HTML FILE LISTING

ActionTypes.htm
Called by Various files
Calls
Description Opens a help window describing how to submit multiple actions in one application.

AdmFrm.htm
Called by Various files
Calls AdminTitle.htm, admLogin.asp
Description Frame for the login page of the administrative interface.

AdminNavig1.htm
Called by AdminMain.asp
Calls
Description Displays the left-side administrative navigation frame and job responsibility hyperlinks.

AdminNavig2.htm
Called by AdminMain.asp
Calls
Description Displays the left-side administrative navigation frame and installation notice status hyperlinks.

AdminTitle.htm
Called by AdmFrm.htm
Calls
Description Constructs the title frame of the administrative interface.

ApMsg.htm
Called by UserMain.asp
Calls ApBas.asp
Description Displays the preparation checklist for submitting a new notice of installation.

bottom.htm
Called by MapFrame.htm
Calls None
Description Originally generated by Esri's ArcIMS but modified.
Modified to complete the esthetics of the map.

CoordFiles1.htm
Called by Various files
Calls
Description Opens a help window for formatting and uploading coordinate data files.

CoordFiles2.htm
Called by Various files
Calls
Description Opens a help window for editing combined coordinate data files.

default.htm
Called by Application
Calls Viewer.htm
Description Originally generated by Esri's ArcIMS but modified.
Checks browser requirements.
Calls viewer.htm.

DpthHght.htm
Called by Various files
Calls
Description Opens a help window describing depth and height of utility facilities.

ExpirDate.htm
Called by Various files
Calls
Description Opens a help window explaining the expiration date of notices.

FacActConf.htm
Called by Various files
Calls
Description Opens a help window describing single/multiple user facility configurations.

FeatureClasses.htm
Called by Various files
Calls
Description Opens a help window describing utility feature classes.

HwyAccessTypes.htm
Called by Various files
Calls
Description Opens a help window describing the controlled-access highway definition.

HwySystems.htm
Called by Various files
Calls
Description Opens a help window describing highway classifications.

index.htm
Called by Various files
Calls AdmFrm.htm, UserFrm.htm
Description A temporary navigation page leading to either the administrative interface or the utility company user interface.

InitComplButtons.htm

Called by Various files
Calls
Description Opens a help window describing the definition of actions in the initial review.

MapFrame.htm

Called by Viewer.htm
Calls All JavaScript pages
Description Originally generated by Esri's ArcIMS but modified.
Includes JavaScript pages.
Calls proper function to handle of access coordinate data type.
Creates NoticeFilterNote layer.

MapNoticeFilterNote.htm

Called by MapNoticeFilterList.asp, MapNoticeFilterListAb.asp
Calls None
Description A pop-up information window that gives description of symbol representation and tool usage.

MapNoticeFilterViewNote.htm

Called by MapNoticeFilterList.asp, MapNoticeFilterListAb.asp
Calls None
Description A pop-up information window that gives description of the View Check Box toggle tool.

MapNoticeFilterNetscapeNote.htm

Called by MapNoticeFilterList.asp, MapNoticeFilterListAb.asp
Calls None
Description A pop-up information window that gives description Map Filter tool usage in Netscape.

ModeFrame.htm

Called by Viewer.htm
Calls None
Description Originally generated by Esri's ArcIMS but modified.
Modified to complete the map layout.
Displays the tool mode.

NoteCookies.htm

Called by Various files
Calls
Description Opens a help window describing how to set cookies.

PermitAttachments.htm
Called by Various files
Calls
Description Opens a help window describing the uploading process for drawing files.

toc.htm
Called by TOCFrame.htm
Calls None
Description Originally generated by Esri's ArcIMS but modified.
Displays the map layers and notice applications in TOCFrame.

toolbar.htm
Called by JavaScript functions
Calls None
Description Originally generated by Esri's ArcIMS but modified.
Displays and applies the functionality of custom tools.

top.htm
Called by viewer.htm
Calls None
Description Originally generated by Esri's ArcIMS but modified.
Displays map title.

UserFrm.htm
Called by Various files
Calls UserTitle.htm, uLogin.asp
Description Frames the login page of the utility company user interface.

UserTitle.htm
Called by UserFrm.htm
Calls
Description Constructs the title frame for the utility company user interface.

UtilitySubClasses.htm
Called by Various files
Calls
Description Opens a help window describing utility subclasses.

JAVASCRIPT FUNCTION LISTING

ActionColorAndLEGImageSel

Parameters	(idparam - Current Action Processed, UtilClass - Utility Class, MapFeatureType - Feature Type)
File	aimsNoticeCoord.js
Category	XML Tag Constructor
Description	Assigns utility class color to DQPXMLObjectStringColor for the XMLString and LEGActionShapeDirectory.

ActionXMLConstructor

Parameters	(idparam - Current Action processed, CoordFileParam - the Actions Coordinate Data)
File	aimsNoticeCoord.js
Category	XML Tag Constructor
Description	Parses the coordinate file into arrays and builds ArcXML tags.

ClearNoticeDisplayVariables

Parameters	(none)
File	aimsNoticeCoord.js
Category	Utility
Description	Clears variables used to create ArcXML tags.

CreateLineLabelXMLObject

Parameters	(idparam-Current Action processed)
File	aimsNoticeCoord.js
Category	XML Tag Constructor
Description	Creates coordinate line TEXTMARKERSYMBOL tags for the ArcXML request.

CreateLineXMLObject

Parameters	(X - Coordinate, Y - Coordinate, Idparam - Current Action processed)
File	aimsNoticeCoord.js
Category	XML Tag Constructor
Description	Inserts the X,Y coordinate pair for a line into ArcXML request tags.

CreatePointXMLObject

Parameters	(PermitNo - Permit No, PermitActionNo - Permit Action ID, X – x Coordinate, Y - y Coordinate, Idparam - Current Action processed)
File	aimsNoticeCoord.js
Category	XML Tag Constructor
Description	Creates coordinate point SIMPLEMARKERSYMBOL and TEXTMARKERSYMBOL tags for ArcXML request.

CurrentNoticeFilterString

Parameters	(none)
File	aimsNoticeFilterCoord.js
Category	Utility
Description	Returns the current notice filter criteria as a string.

displayAttributeData2

Parameters	(theReply – XML Reply)
File	aimsIdentify.js
Category	Event Handler
Description	Event handler for the Identify Plus tool.

DisplayCoordFile1

Parameters	(none)
File	aimsNoticeCoord.js
Category	XML Tag Constructor
Description	Opens MapCurrentNoticePackager1.asp in parent.BottomFrame.

DisplayCoordFile2

Parameters	(none)
File	aimsNoticeCoord.js
Category	XML Tag Constructor
Description	Opens MapCurrentNoticePackager2.asp in parent.BottomFrame.

DisplayCoordFile3

Parameters	(none)
File	aimsNoticeCoord.js
Category	XML Tag Constructor
Description	Opens MapCurrentNoticePackager3.asp in parent.BottomFrame.

DisplayNoticeFilterList

Parameters	(none)
File	aimsNoticeFilterCoord.js
Category	Utility
Description	Displays NoticeFilterList.asp in text frame.

DisplayNoticeFilterNetscapeNote
Parameters (none)
File aimsNoticeFilterCoord.js
Category Utility
Description Displays NoticeFilterNetscapeNote.htm in a pop-up window.

DisplayNoticeFilterNote
Parameters (none)
File aimsNoticeFilterCoord.js
Category Utility
Description Displays DisplayNoticeFilterNote.htm in a pop-up window.

DisplayNoticeFilterSel
Parameters (none)
File aimsNoticeFilterCoord.js
Category Utility
Description Displays MapNoticeFilterSelFrm.asp in text frame.

DisplayNoticeFilterViewNote
Parameters (none)
File aimsNoticeFilterCoord.js
Category Utility
Description Displays DisplayNoticeFilterViewNote.htm in a pop-up window.

ErrorHandler
Parameters (ErrorCode - Error Message)
File aimsNoticeFilterCoord.js
Category Utility
Description Displays an error message when errors are caught, to activate error message system set ErrorCode equal to true.

FilterNoticeArrayConstructor
Parameters (none)
File aimsNoticeFilterCoord.js
Category XML Tag Constructor
Description Creates and stores notice ArcXML tags.

FilterNoticeActionsArrayConstructor
Parameters (none)
File aimsNoticeFilterCoord.js
Category XML Tag Constructor
Description Creates and stores notice action ArcXML tags.

FilterNoticeSymbolXMLConstructor

Parameters	(InitPermitNo - NoticeNo, InitPermitNoIndex - NoticeIndex)
File	aimsNoticeFilterCoord.js
Category	XML Tag Constructor
Description	Creates notice number TEXTMARKERSYMBOL tags for ArcXML request.

FilterNoticeSymbolXMLConstructor2

Parameters	(InitPermitNo - NoticeNo, InitPermitNoIndex - NoticeIndex)
File	aimsNoticeFilterCoord.js
Category	XML Tag Constructor
Description	Creates expanded notice number TEXTMARKERSYMBOL tags for ArcXML request.

FilterNoticeSymbolXMLConstructor3

Parameters	(InitPermitNo - NoticeNo, InitPermitNoIndex - NoticeIndex)
File	aimsNoticeFilterCoord.js
Category	XML Tag Constructor
Description	Creates selected notice number TEXTMARKERSYMBOL tags for ArcXML request.

FilterNoticeSymbolXMLConstructor4

Parameters	(InitPermitNo - NoticeNo, InitPermitNoIndex - NoticeIndex)
File	aimsNoticeFilterCoord.js
Category	XML Tag Constructor
Description	Creates selected and expanded notice number TEXTMARKERSYMBOL tags for ArcXML request.

GetDistrict

Parameters	(none)
File	aimsNoticeCoord.js
Category	Utility
Description	Opens MapGetDistrict.asp in BottomFrame.

identifyplus

Parameters	(e – Event)
File	aimsIdentify.js
Category	Event Handler
Description	Event handler for the Identify Plus tool.

InitActionXMLConstructor

Parameters	(InitPermitNo - Notice No, InitPermitActionNo - Notice Action No, InitActionNo - Current Action, InitUtilClass - Current Utility Class, InitFeatureType - Feature Type, InitCoordArray - Coordinate Array)
File	aimsNoticeCoord.js
Category	XML Tag Constructor
Description	Calls ActionColorAndLEGImageSel and ActionXMLConstructor functions.

IsCoordLayerSelected

Parameters	(ICLSmouseX - User Click X ICLSmouseX - User Click X)
File	aimsNoticeFilterCoord.js
Category	Utility
Description	Evaluates whether a user clicked on a notice for Identify Plus tool.

LoadCurrentCoordExtendDataInArray

Parameters	(none)
File	aimsNoticeCoord.js
Category	XML Tag Constructor
Description	Stores the coordinate extent data in the proper arrays.

LoadFilterNoticeExtentDataInArray

Parameters	(none)
File	aimsNoticeFilterCoord.js
Category	XML Tag Constructor
Description	Stores the coordinate extent data in the proper arrays.

LoadNoticeDetails

Parameters	(PermitLayer - Permit Index)
File	aimsNoticeFilterCoord.js
Category	Utility
Description	Displays notice details when selected.

NoticeFilterMain

Parameters	(none)
File	aimsNoticeFilterCoord.js
Category	XML Tag Constructor
Description	Creates and stores ArcXML tags.

NoticeFilterUpdateMap
Parameters (QPermitStatus - filtered permit status)
File aimsNoticeFilterCoord.js
Category Event Handler
Description Calls functions to update new filter criteria.

NoticeFilterUpdateMap2
Parameters (none)
File aimsNoticeFilterCoord.js
Category Event Handler
Description Calls sendMapXML and TOCreload after control returns from MapNoticeFilterDataPackager.

PermitMiddleCoordAverage
Parameters (SumX - total x,
SumY - total y,
SumCount - Total)
File aimsNoticeCoord.js
Category Utility
Description Sets the middle coordinate average.

QueryNoticeExpansion
Parameters (SelectedNoticeIndex - Permit Index)
File aimsNoticeFilterCoord.js
Category Event Handler
Description Event handler for the expansion tool.

QueryNoticeSelected1
Parameters (NoticeNumber - Application Number)
File aimsNoticeFilterCoord.js
Category Event Handler
Description Notice is internally marked selected.
Calls sendMapXML, TOCreload, and DisplayNoticeFilterList functions.

QueryNoticeUnSelected
Parameters (none)
File aimsNoticeFilterCoord.js
Category Event Handler
Description Notice is internally marked unselected.
Calls sendMapXML, TOCreload, and DisplayNoticeFilterList functions.

RemoveNoticeFilter
Parameters (none)
File aimsNoticeFilterCoord.js
Category Event Handler
Description Removes notice filter.

SetAsBuiltExt
Parameters (none)
File AimsNoticeFilterCoord.js
Category Utility
Description Sets the DocTypeExt equal to “Ab” if data are as-built.

SetCoordDataExtent
Parameters (none)
File aimsNoticeCoord.js
Category Utility
Description Sets the coordinate data extent with max, min x and y coordinate values.

shouldCreateFilterAcetateLayer
Parameters (none)
File aimsNoticeFilterCoord.js
Category Utility
Description Evaluates whether a filter acetate layer needs to be created.

shouldCreateNoticeAcetateLayer
Parameters (none)
File AimsNoticeCoord.js
Category Utility
Description Evaluates whether a notice acetate layer needs to be created.

TestCoordDataExtent
Parameters (X - Coordinate,
Y - Coordinate,
counter1 - number of all x,y,
counter2 - number of action x,y,
idparam - Current Action processed)
File aimsNoticeCoord.js
Category Utility
Description Tests the coordinate data extent with max, min x and y coordinate values.

ToggleCurrentActionsVisibility
Parameters (ActionIndex – Index of Current Action)
File aimsNoticeCoord.js
Category Event Handler
Description Toggles the visibility of a notice action.

ToggleDisplayNoticePopUp
Parameters (none)
File aimsNoticeFilterCoord.js
Category Event Handler
Description Toggles whether should display notice pop-up window.

ToggleFilteredNoticeActionView
Parameters (coordLayer - Action Index)
File aimsNoticeFilterCoord.js
Category Event Handler
Description Toggles the visibility of a filtered notice action.

toggleFilteredNoticeView
Parameters (NoticeIndex)
File aimsNoticeFilterCoord.js
Category Event Handler
Description Toggles the visibility of a filtered notice.

ToggleFilteredNoticeExpansion
Parameters (PermitLayer - Notice Index)
File aimsNoticeFilterCoord.js
Category Event Handler
Description Toggles the expansion of a filtered notice.

toggleNoticeFilterNote
Parameters (none)
File aimsNoticeFilterCoord.js
Category Event Handler
Description Toggles whether should display notice filter note layer.

ZoomSelectedQueryNotice
Parameters (none)
File aimsNoticeFilterCoord.js
Category Event Handler
Description Zooms to selected query notice.