ALABAMA DEPARTMENT OF TRANSPORTATION

ALDOT BrM

User Manual

4/2/2018

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Foreword

General

The purpose of this manual is to introduce users to, AASHTOWare Bridge Management (BrM). This manual is designed to be a hands-on training tool. All instructions and operating procedures are explained by examples. It guides you through accessing the web-based application, entry and maintenance of inspection data, and printing of inspection forms and reports. For information on the specific guidelines for coding structures, refer to the ALDOT Bridge Inspection Manual.

ALDOT Users

ALDOT users can access BrM through the ALDOT Intranet at http://brm, or through the Internet at https://brm.dot.state.al.us/. The ALDOT BrM link is also posted on the Maintenance Bureau's Bridge Section page. To access this, go to the website www.dot.state.al.us. Select Maintenance from the Bureaus/Regions/Offices drop-down menu. Click on the Bridge link from the Sections area. From the Bridge Quick Links page, click on BrM User Links and select "ALDOT BrM Login".

County and Municipal Users

County and municipal users can access BrM through the Internet at https://brm.dot.state.al.us. The ALDOT BrM link is also posted on the Maintenance Bureau's Bridge Section page. To access this, go to the website www.dot.state.al.us. Select Maintenance from the Bureaus/Regions/Offices drop-down menu. Click on the Bridge link from the Sections area. From the Bridge Quick Links page, click on BrM User Links and select "ALDOT BrM Login".

Consultants

Consultants involved with bridge inspections in the State of Alabama shall be granted independent access to BrM through the Internet provided there is written consent from an owning bridge agency clarifying representation of said clients. These consultants can access BrM through the Internet at https://brm.dot.state.al.us/. The ALDOT BrM link is also posted on the Maintenance Bureau's Bridge Section page. To access this, go to the website www.dot.state.al.us. Select Maintenance from the Bureaus/Regions/Offices drop-down menu. Click on the Bridge link from the Sections area. From the Bridge Quick Links page, click on BrM User Links and select "ALDOT BrM Login".

BrM Help

If you encounter any problems, call the Bridge Section of the Maintenance Bureau at 334-242-6284.

Chapter 1: Logging in and Changing Your Password

Logging in to ALDOT BrM

From your browser, access the appropriate website as outlined in the Foreword of this manual. Enter your User ID and Password in the available fields and click **Login**.

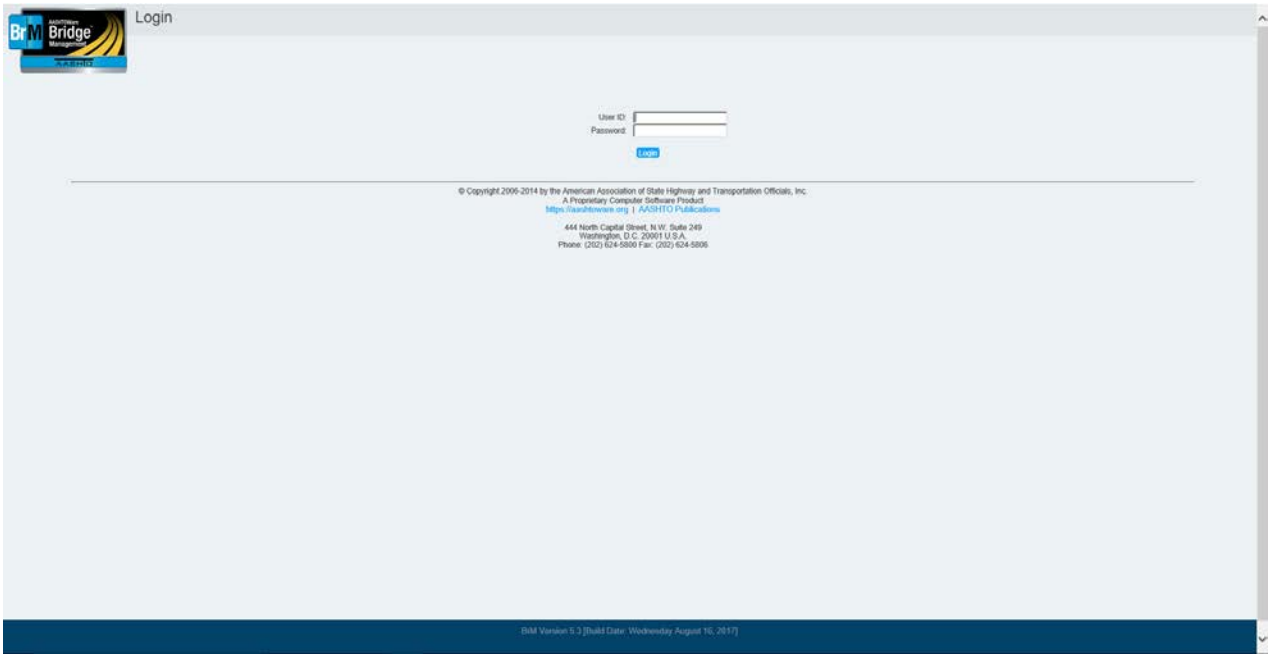


Figure 1-BrM login screen

Changing Your Password

Once logged in, you will see the screen below. The first time you log in you will need to change your password.

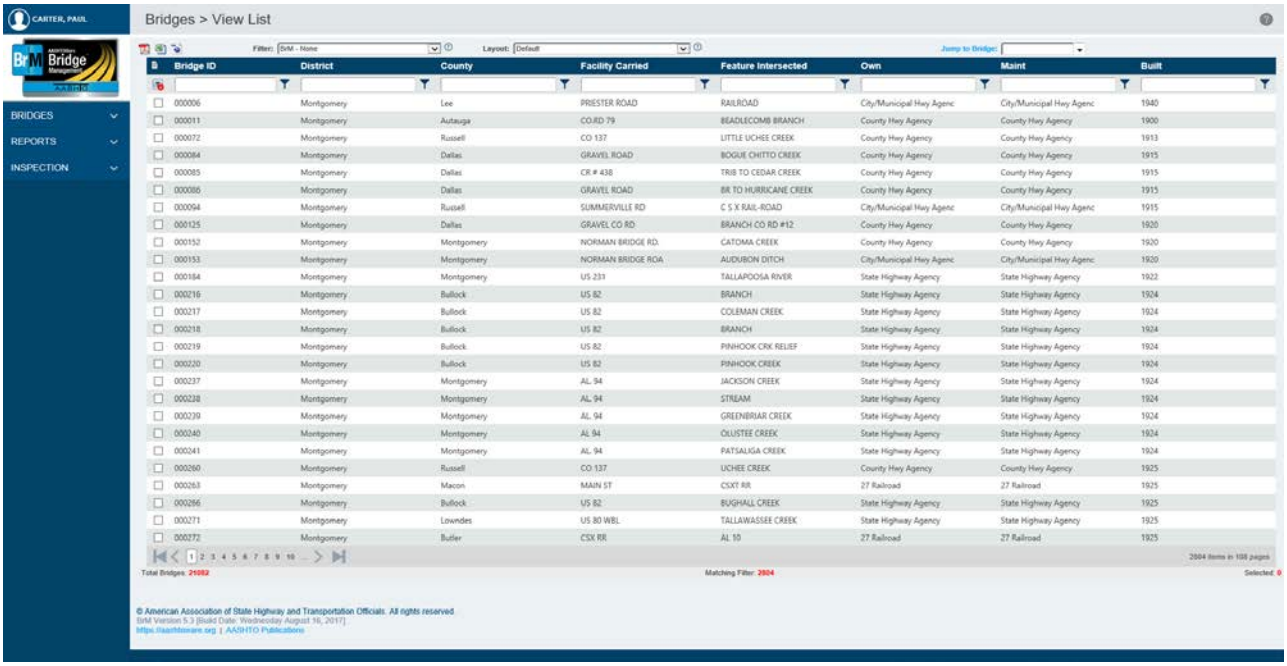


Figure 2 – BrM desktop

In the upper left-hand corner of the window you will see an icon with your name (last, first) next to it. Click on your name to expand a dropdown menu where there are three options.

Web Help – Click here to view a general BrM help guide.

User Profile – Click here to view your account information and to change your password.

Logout – Click here to quit BrM

To view your account information and change your password, click **User Profile** in the dropdown menu under your name. (see Figure 3).

Figure 3 – Click User Profile to access account information

On the Account screen shown in Figure 4, click **Change Password.**

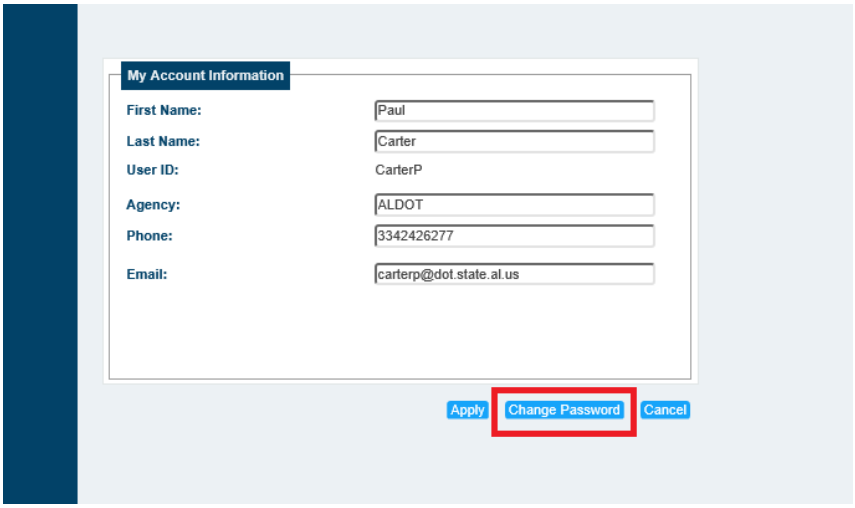


Figure 4 – Account Information screen

To change your password, enter your old and new passwords in the fields shown in Figure 5 and click **Apply**.

If for any reason you need to have your password reset, please contact the Bridge Section of the ALDOT Maintenance Bureau at 334-242-6284.

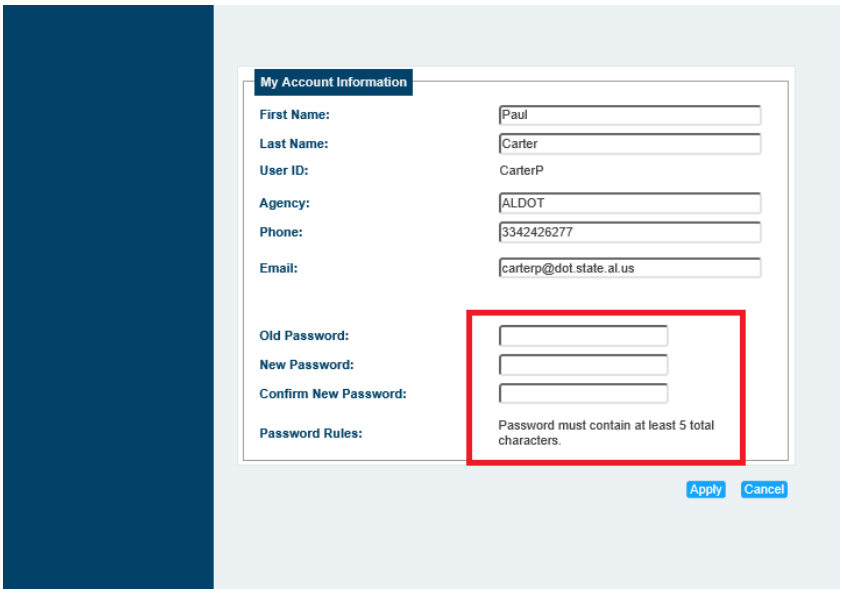


Figure 5 – Change your password using these fields

Chapter 2: Site Layout

The data in BrM is broken up into tabs, which run vertically down the left side of the screen, that expand to show various tasks that are associated with the tab. This chapter describes which tasks are contained within each tab. Tabs and tasks are highlighted in Figure 6.

Figure 6 – Information in BrM is divided into tabs and tasks

Tabs can be accessed by clicking on the name of the tab you wish to view. As shown in Figure 6, BrM has three tabs:

Bridges – Displays the Bridge List. This is also where you create a new inspection.

Reports – Allows you to generate inspection forms and other structure reports.

Inspection – Contains SI&A and inspection data for each bridge. This is where inventory data is entered and updated.

Each tab contains several tasks. Tasks are accessed the same way as tabs, by clicking the name of the task you wish to view or use. As shown in Figure 6, the Bridges Tab contains four tasks: View List, New Inspection, Validate**,** and Mapping. The View List Task contains several subtasks, which are explained in Chapter 3 of this manual.

Site Map

The following is a list of tasks contained in each of the tabs. More information about each task can be found in the following chapters of this manual:

Bridges

-View List

-New Inspection

-Validate

-Mapping

Reports

-Generate

-Edit Check

Inspection

-Condition

-Appraisal

-Inventory

-Schedule

-Work

-Multimedia

-Element Condition Ratings

-Bridge Notes

-Replacement Program

- Cross Sections

Chapter 3: Bridges Tab

This chapter details how to navigate and use the Bridges Tab.

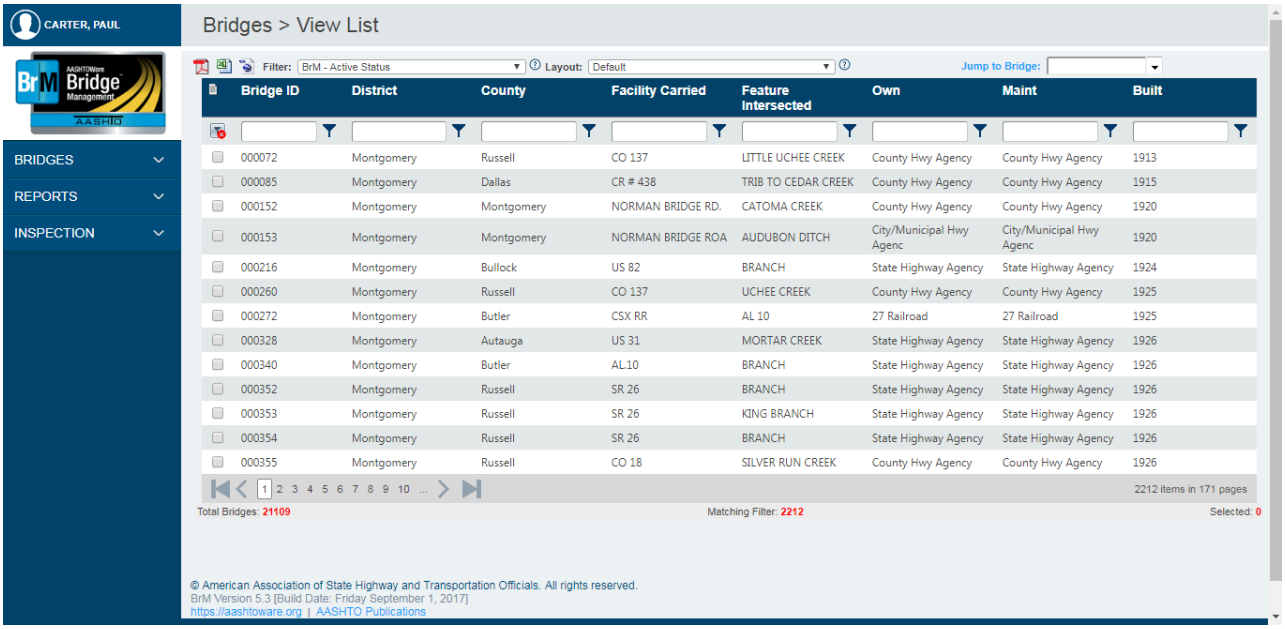


Figure 7 - Bridges Tab

3.1: View List Task – Sorting and Selecting a Structure

The first screen you see after logging in to BrM is the Bridges Tab, View List Task (see Figure 7). This task is used to sort, find, and select structures. This is also known as the Bridge List. The Bridge List has several controls across the top which allow you to:

- Choose a different layout.
- Choose a different filter.
- Jump to a particular structure.
- Select structures for various operations available from the Task List.
- Export structures in various formats.

The Bridge List has another control on the bottom of the page that allows the user to switch between pages if the list is longer than one page (see Figure 8). There is also information indicating how many bridges are in the database, how many bridges match the current filter, and how many bridges are selected.

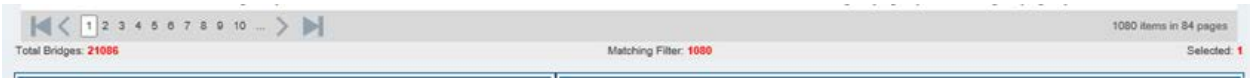


Figure 8 - Bottom of the Bridge List displays information about the bridges in the database

The View List Task has several subtasks (see Figure 9). Most of these subtasks focus on selecting or unselecting bridges and the way the page is displayed.

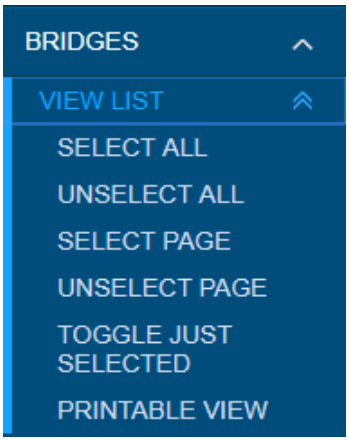


Figure 9 – View List Subtasks

- **Select All** - Selects all bridges on the Bridge List matching the current filter.
- **Unselect All** - Unselects all bridges that have been selected.
- **Select Page** - Selects all bridges displayed on the current page.
- **Unselect Page** - Unselects all selected bridges displayed on the current page.
- **Toggle Just Selected** - Shows only the bridges that are currently selected.
- **Printable View** - Opens a new window with a screen that gives the option to print the rows in the Bridge List.

The first time you log in to BrM, your Bridge List appears sorted in ascending order by Bridge ID (Bridge Identification Number, or BIN). There are several ways to manipulate the list.

- Layouts
- Filters
- Column Sorting
- Quick Filter

Layouts

Layouts are located in a drop-down menu at the top of the Bridge List (see Figure 10). These layouts are created and managed by the Maintenance Bureau, and cannot be edited by the user. They are used to display different information about your bridges together.

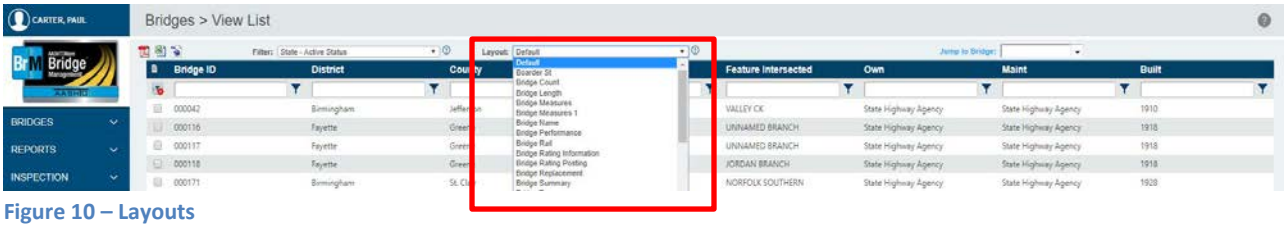


Figure 10 – Layouts

The Default Layout (Figure 11), for example, shows basic identification information on a set of structures:

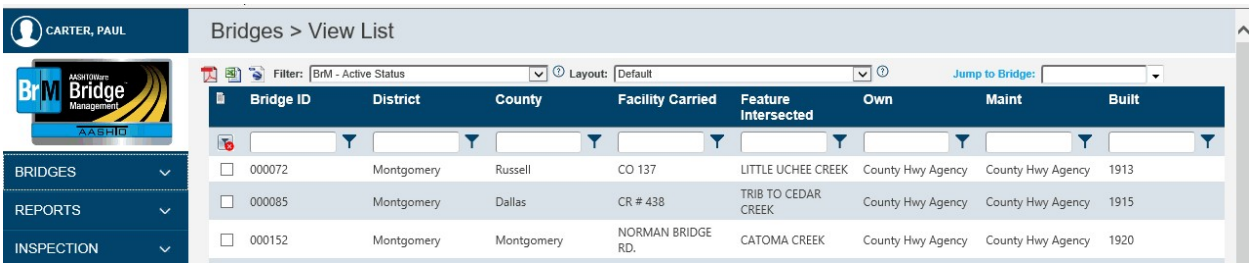


Figure 11 – The Default layout displays Bridge ID, Division, County, Facility Carried, Feature Intersected, Owner, Maintained By, and Year Built

Meanwhile, the Condition Summary Layout (Figure 12) shows location information and condition ratings for the same structures:

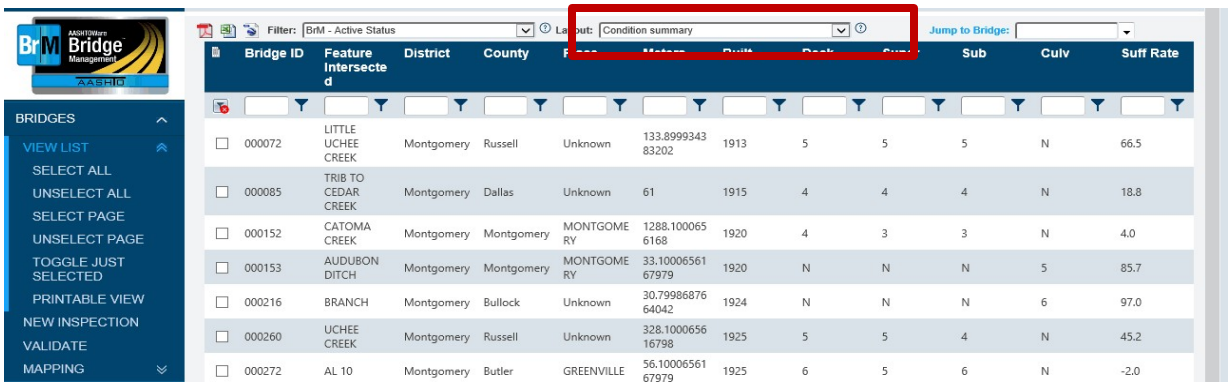


Figure 12 – The Condition Summary layout displays Bridge ID, Feature Intersected, Division, County, Place, Length, Year Built, Condition Ratings, and Sufficiency Rating

To change your layout, click the drop-down menu located above the Bridge List (highlighted in Figure 12) and choose the desired layout from the options listed. It should be noted that different layouts do not sort the bridges listed, but display different information for the same bridges.

Filters

Filters are also found in a drop-down menu above the Bridge List and are used to narrow down the structures in your inventory based on specific criteria. See Figure 13 for example filters. As with layouts, these filters are created and controlled by the Maintenance Bureau and cannot be changed by the user. The filters available vary based on the access given to each user.

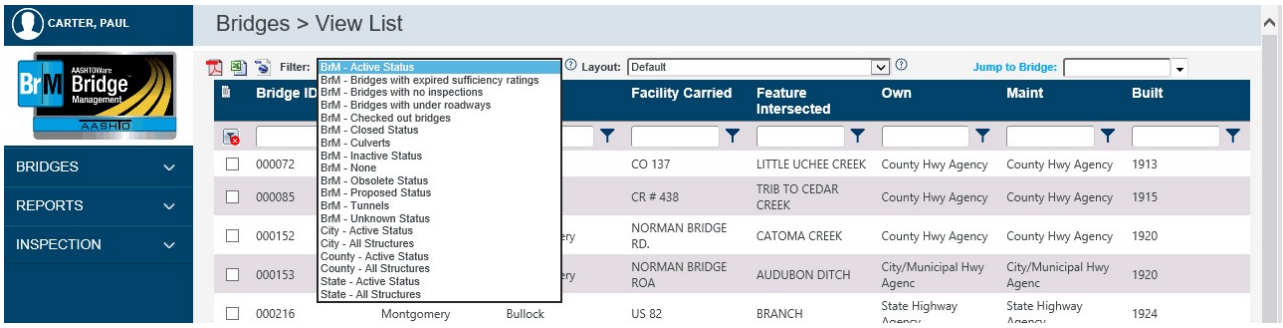


Figure 13 – Filters

The total number of bridges that match the filter shows next to **Matching Filter** at the bottom of the screen. See highlighted area in Figure 14.

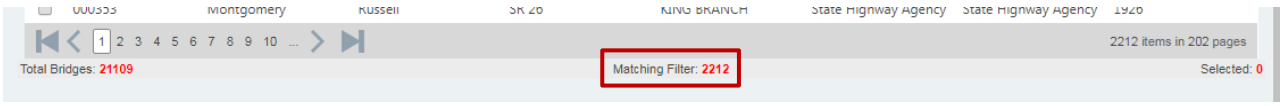


Figure 14 – Of the 21109 bridges in the database, 22112 match the selected filter

Column Sorting

You can also change the view of your Bridge List by sorting by any column displayed. Clicking a column name sorts all bridges in the current filter by that field in ascending order. Clicking the column name again sorts the bridges in descending order. Click the column name a third time to remove the sort. To add a secondary sort, click on another column header. You can sort by as many columns as needed, and the list sorts in the order you select the columns. The Bridge List in Figure 15 has been sorted by County and Facility Carried, as shown in the red box:

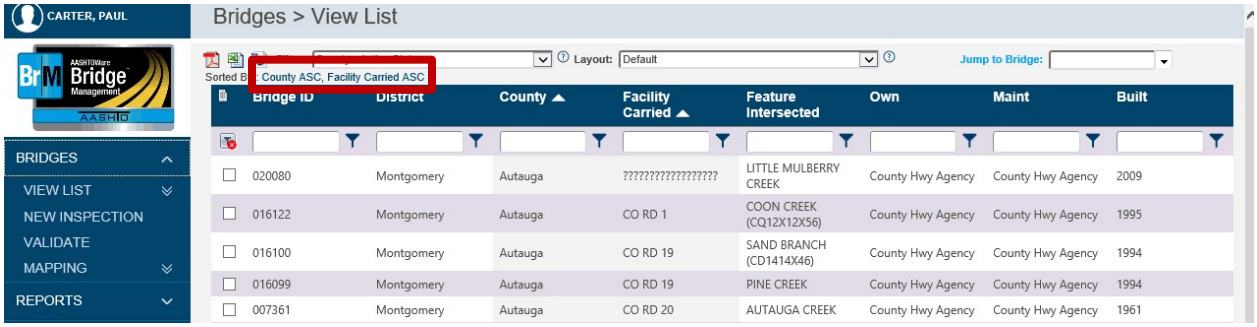


Figure 15 – Bridge List sorted by County name, then Facility Carried

Quick Filters

As mentioned previously, the filters available in the drop-down menu are created by the Maintenance Bureau. If you need to filter your bridges in a different way, there are dynamic quick filters available to you. As shown in the highlighted area of Figure 16, quick filters are found in the row below the column names:

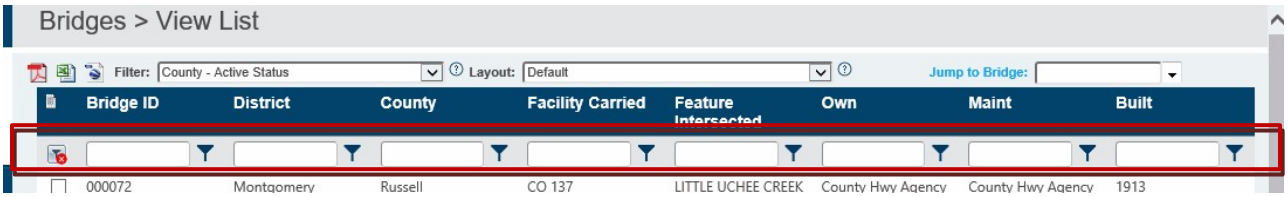


Figure 16 – Quick filters can help you sort your bridge list dynamically

To use the quick filter, type in the filter criteria in the applicable field, click the filter icon next to the text box, and choose the type of filter that applies to your search. Listed below are a few examples of common filter types:

Filter	Action
NoFilter	Removes filter from column
EqualTo	Returns only bridges where that column matches the search criteria exactly
NotEqualTo	Returns all bridges where that column does not match exactly
Contains	Returns all bridges where that column matches or contains the search criteria

Figure 17 shows how to use a quick filter to display the bridges in the Area built in 1925 or earlier.

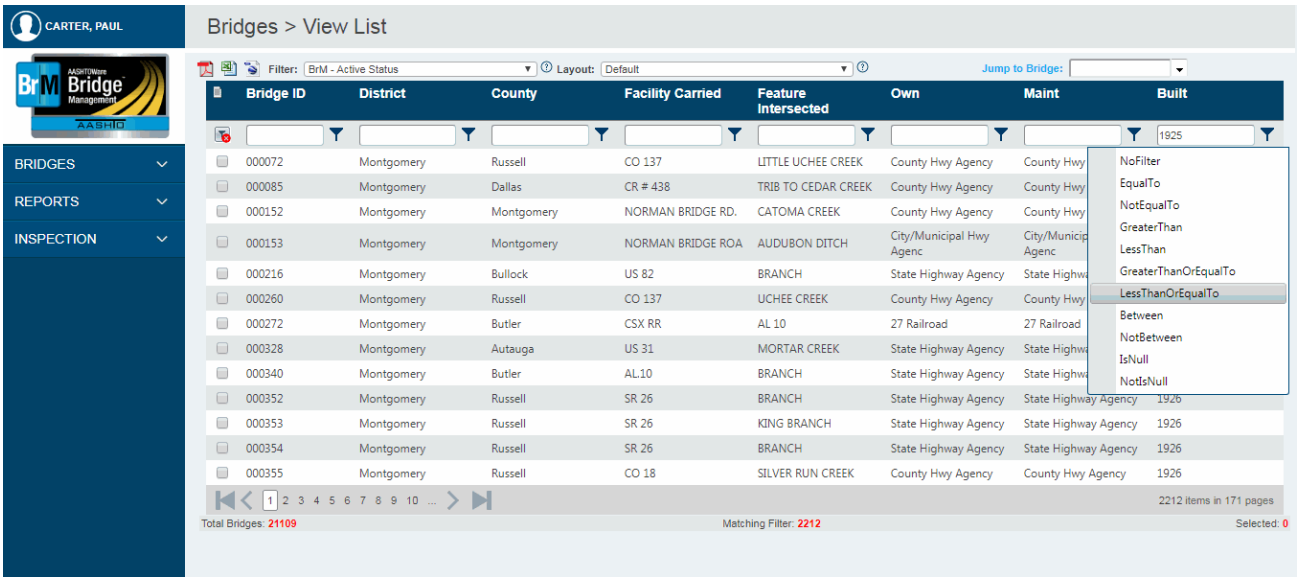


Figure 17 – A quick filter is used to select only bridges with a year built date before or equal to 1925

Once selected, only the bridges matching the filter criteria are displayed in the Bridge List. See the results in Figure 18.

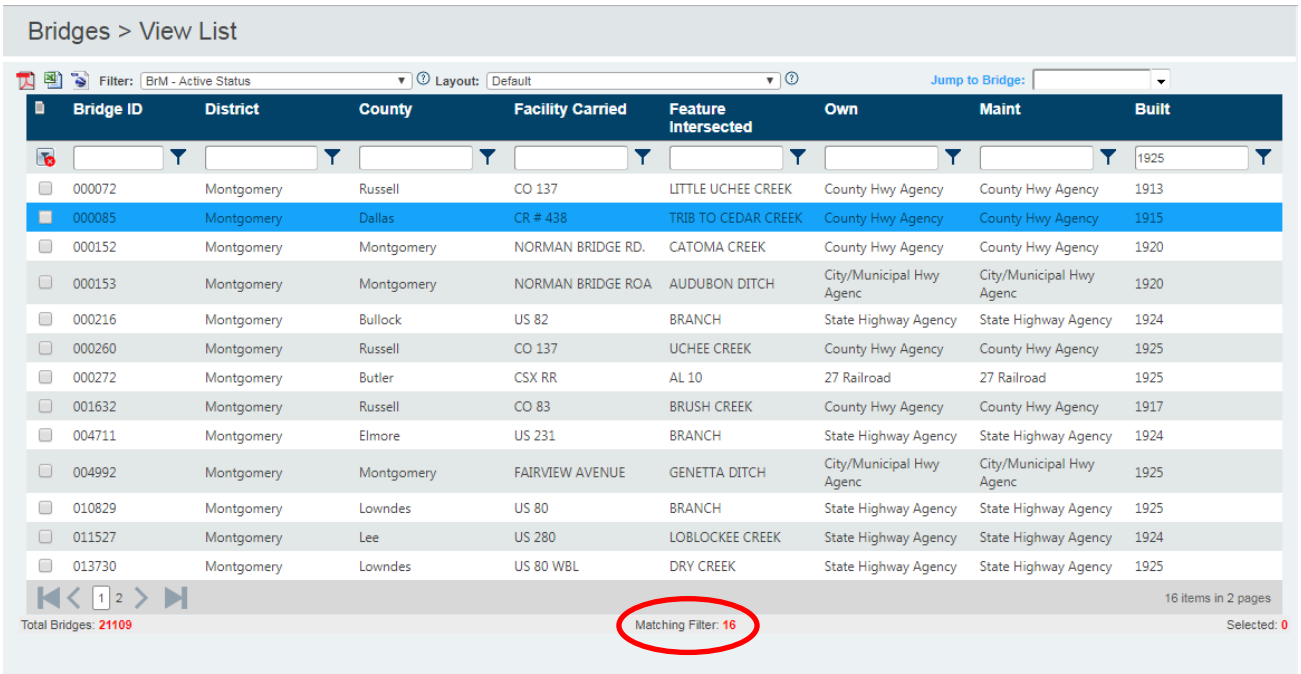


Figure 18 – This quick filter returned 16 structures of the original 2212

Multiple quick filters can be applied at the same time. In Figure 19, the list of bridges is narrowed down further to include only county-owned structures built in or before 1925.

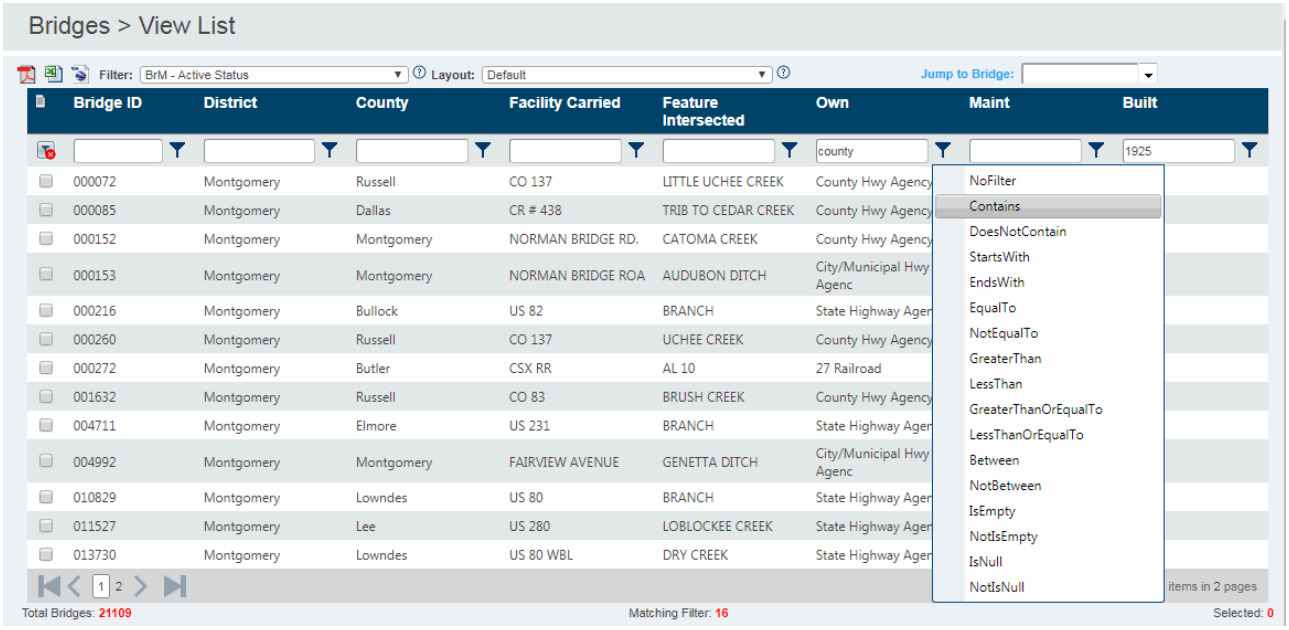


Figure 19 – An additional quick filter is added to call out county-owned structures

Once the additional quick filter is selected, only the bridges matching both filter criteria are displayed in the Bridge List. See the results in Figure 20.

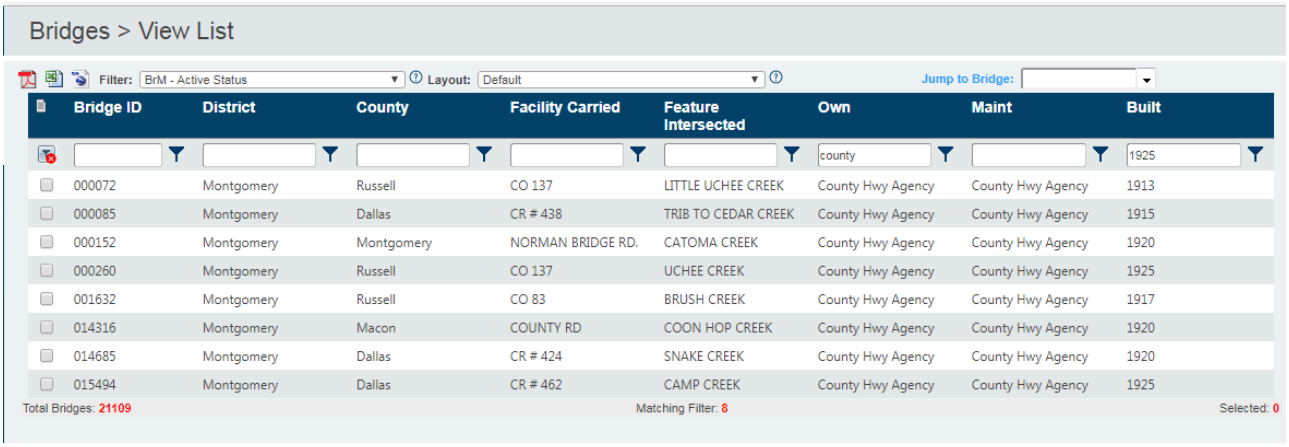


Figure 20 – Applying both filters shows only county-owned structures built in or before 1925; our list of 16 structures was reduced further to the 8 displayed on the screen

Quick filters can be cleared by clicking the “clear all quick filters” icon on the left side of the screen. Figure 21 displays the “clear all quick filters” icon (highlighted in the red box).

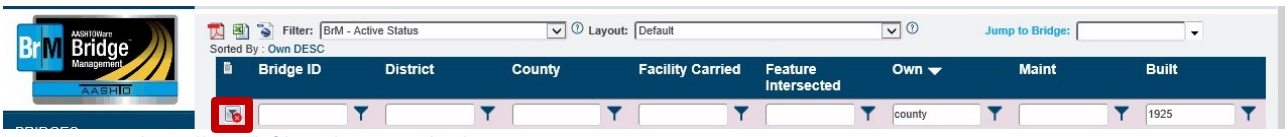


Figure 21 – Clear all quick filters by using this button

Jump to Bridge

You can also jump directly to any bridge in a filter by using the Jump to Bridge field in the upper right corner of your screen (highlighted in Figure 22). Type in the Bridge Identification number (BIN). Your bridge appears below the text box if available. Click on the BIN or press Enter on your keyboard when highlighted to jump to and select the bridge.

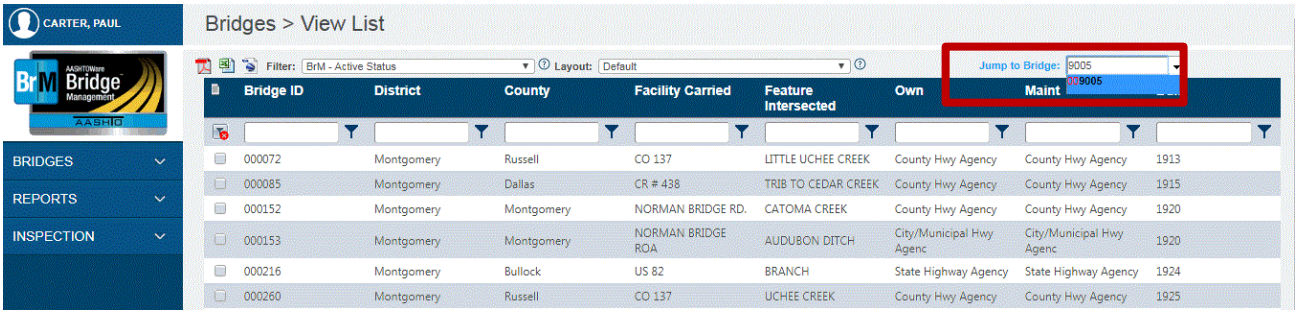


Figure 22 – Use the Jump to Bridge field to select a bridge; be sure to wait until the BIN appears before pressing Enter

After your BIN is selected on the Bridge List, the row becomes highlighted and additional information appears below the Bridge List. Figure 23 shows the highlighted row as well as inspection data and bridge photos for bridge 009005. Note that the Inspection panel in the lower right corner has tabs for quick views of Condition, Load Rating, Inventory, Roadway On, and Schedule information. The Photos panel in the lower left contains a drop-down menu to view Bridge photos, as well as inspection photos from previous inspections.

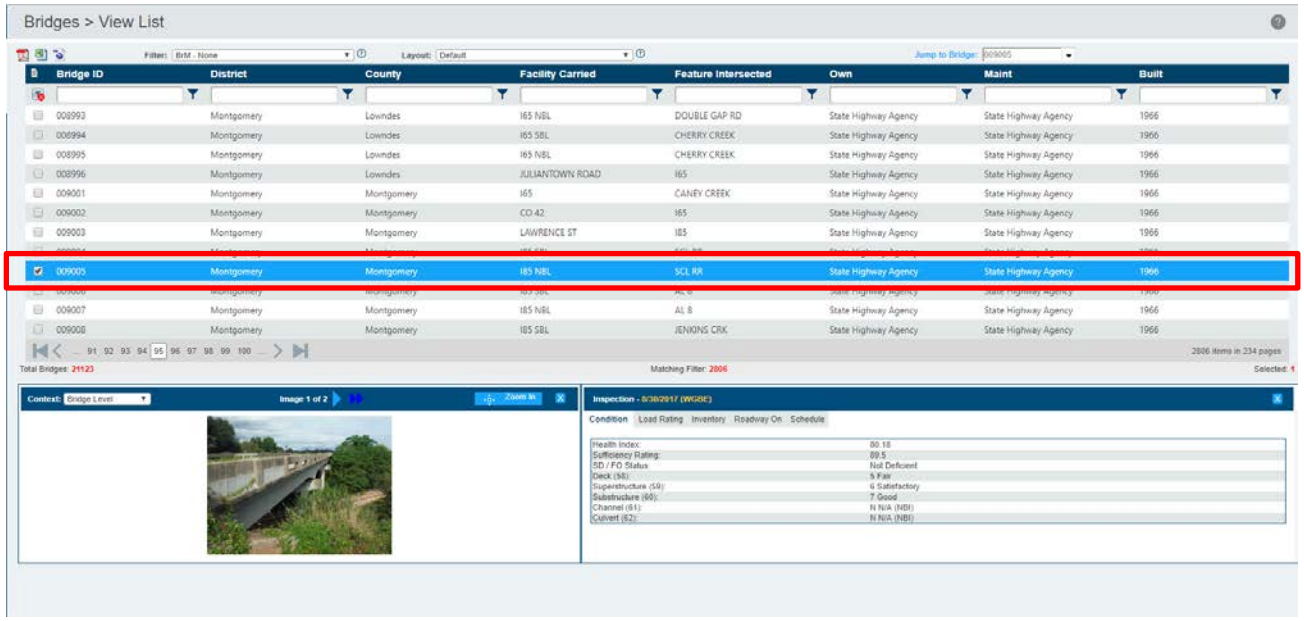


Figure 23 – If you use Jump to Bridge, your BIN appears on the Bridge List and is automatically selected

Exporting

You can export a list of bridges matching your current filter and layout using the buttons in the upper left corner of your screen. This export includes all selected structures. If no structure has been selected, all structures in the current filter are exported. The list can be exported to a PDF document, Excel spreadsheet, or a KML file. See Figure 24 for export buttons.

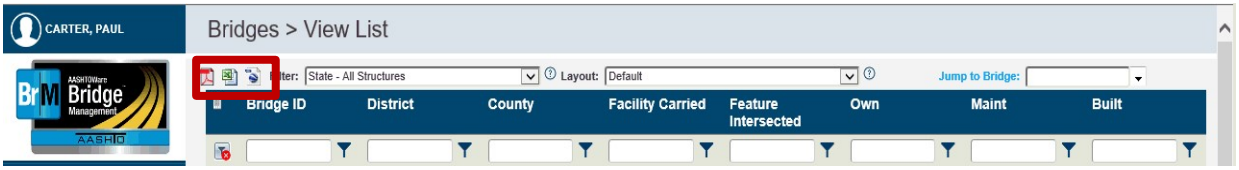
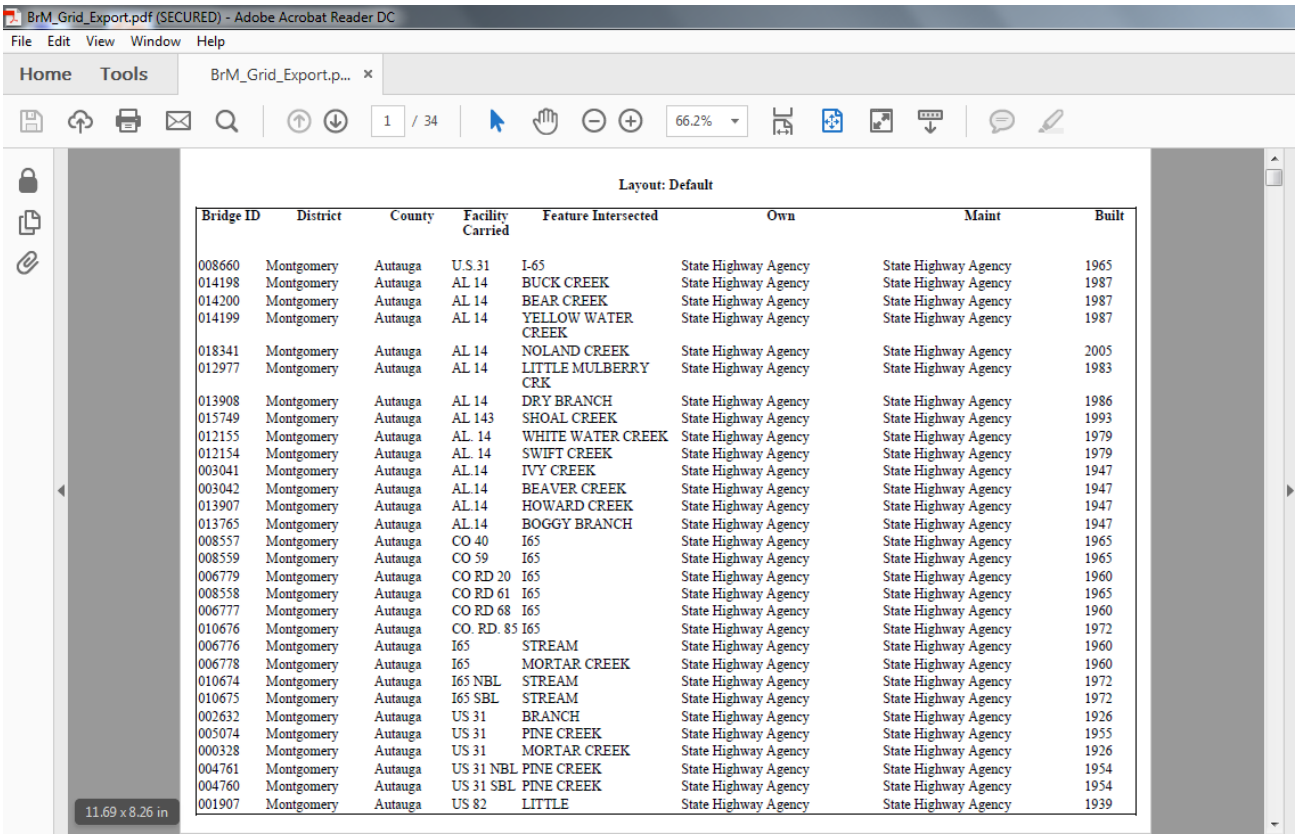


Figure 24 – Export a list of your bridges using these buttons

Figure 25 displays a PDF export of state-owned structures in the Montgomery Area, sorted by County and Facility Carried.



Layout: Default

Bridge ID	District	County	Facility Carried	Feature Intersected	Own	Maint	Built
008660	Montgomery	Autauga	U.S.31	I-65	State Highway Agency	State Highway Agency	1965
014198	Montgomery	Autauga	AL 14	BUCK CREEK	State Highway Agency	State Highway Agency	1987
014200	Montgomery	Autauga	AL 14	BEAR CREEK	State Highway Agency	State Highway Agency	1987
014199	Montgomery	Autauga	AL 14	YELLOW WATER CREEK	State Highway Agency	State Highway Agency	1987
018341	Montgomery	Autauga	AL 14	NOLAND CREEK	State Highway Agency	State Highway Agency	2005
012977	Montgomery	Autauga	AL 14	LITTLE MULBERRY CRK	State Highway Agency	State Highway Agency	1983
013908	Montgomery	Autauga	AL 14	DRY BRANCH	State Highway Agency	State Highway Agency	1986
015749	Montgomery	Autauga	AL 143	SHOAL CREEK	State Highway Agency	State Highway Agency	1993
012155	Montgomery	Autauga	AL. 14	WHITE WATER CREEK	State Highway Agency	State Highway Agency	1979
012154	Montgomery	Autauga	AL. 14	SWIFT CREEK	State Highway Agency	State Highway Agency	1979
003041	Montgomery	Autauga	AL.14	IVY CREEK	State Highway Agency	State Highway Agency	1947
003042	Montgomery	Autauga	AL.14	BEAVER CREEK	State Highway Agency	State Highway Agency	1947
013907	Montgomery	Autauga	AL.14	HOWARD CREEK	State Highway Agency	State Highway Agency	1947
013765	Montgomery	Autauga	AL.14	BOGGY BRANCH	State Highway Agency	State Highway Agency	1947
008557	Montgomery	Autauga	CO 40	I65	State Highway Agency	State Highway Agency	1965
008559	Montgomery	Autauga	CO 59	I65	State Highway Agency	State Highway Agency	1965
006779	Montgomery	Autauga	CO RD 20	I65	State Highway Agency	State Highway Agency	1960
008558	Montgomery	Autauga	CO RD 61	I65	State Highway Agency	State Highway Agency	1965
006777	Montgomery	Autauga	CO RD 68	I65	State Highway Agency	State Highway Agency	1960
010676	Montgomery	Autauga	CO. RD. 85	I65	State Highway Agency	State Highway Agency	1972
006776	Montgomery	Autauga	I65	STREAM	State Highway Agency	State Highway Agency	1960
006778	Montgomery	Autauga	I65	MORTAR CREEK	State Highway Agency	State Highway Agency	1960
010674	Montgomery	Autauga	I65 NBL	STREAM	State Highway Agency	State Highway Agency	1972
010675	Montgomery	Autauga	I65 SBL	STREAM	State Highway Agency	State Highway Agency	1972
002632	Montgomery	Autauga	US 31	BRANCH	State Highway Agency	State Highway Agency	1926
005074	Montgomery	Autauga	US 31	PINE CREEK	State Highway Agency	State Highway Agency	1955
000328	Montgomery	Autauga	US 31	MORTAR CREEK	State Highway Agency	State Highway Agency	1926
004761	Montgomery	Autauga	US 31 NBL	PINE CREEK	State Highway Agency	State Highway Agency	1954
004760	Montgomery	Autauga	US 31 SBL	PINE CREEK	State Highway Agency	State Highway Agency	1954
001907	Montgomery	Autauga	US 82	LITTLE	State Highway Agency	State Highway Agency	1939

Figure 25 – PDF export of State-owned structures in the Montgomery Area, sorted by County and Facility Carried

3.2: Creating a New Inspection

Before entering any inspection information about a structure, you first need to create an inspection.

To begin, select your bridge from the Bridge List by using the Jump to Bridge feature or any of the sorting methods previously discussed in Chapter 3.1 of this manual. Once your bridge is selected, click the New Inspection Task (highlighted in Figure 26).

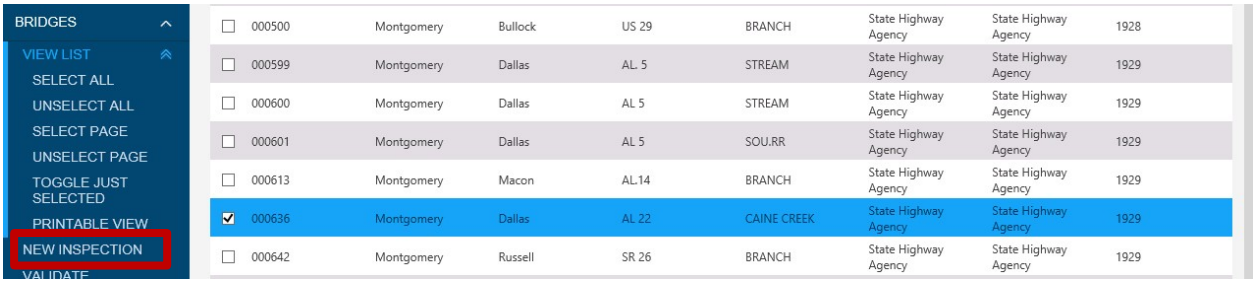


Figure 26 - Select Bridge, click New Inspection

The following screen shows information about your new inspection (Figure 27). Use this screen to select the Inspection Date, Primary Type of inspection, Inspector, and Types of Inspection Performed.

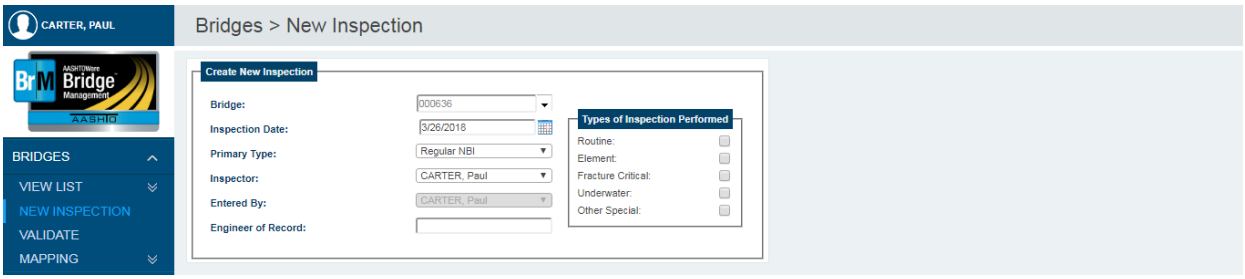


Figure 27 – New Inspection screen

The **Inspection Date** field will default to the date the inspection is being entered. Use the calendar icon to select the correct inspection date.

Use the **Primary Type** drop-down menu to select the primary type of inspection. This should be either Regular NBI, Interim, Fracture Critical, or Underwater.

Use the Inspector drop-down menu to select the inspector for this inspection. The Entered By field will default to the current user and cannot be changed. Please note that the Inspector and Entered By fields will not always match.

Use the checkboxes to the right to select all of the types of inspections performed:

Routine – Check this box if the new inspection is a Routine Inspection. This is the regular inspection performed every 24 months as required by FHWA.

Element Inspection – Check this box if the new inspection is an element-level inspection. All new inspections should include element inspections.

Fracture Critical – Check this box if the new inspection includes a Fracture Critical Inspection.

Underwater – Check this box if the new inspection includes an Underwater Inspection. This type of inspection is often performed independently of the NBI inspection.

Other Special – Check this box if the new inspection is an interim inspection, or if it is a Regular NBI inspection on a structure that also requires an interim inspection. These interim inspections are often conducted on under designed structures requiring posting or to monitor a low condition grade.

Figure 28 shows a new inspection entry in which a Routine and Element Inspection were performed. Note that the Inspection Date and Inspector fields have been updated as well. Click **Create** to create the inspection.

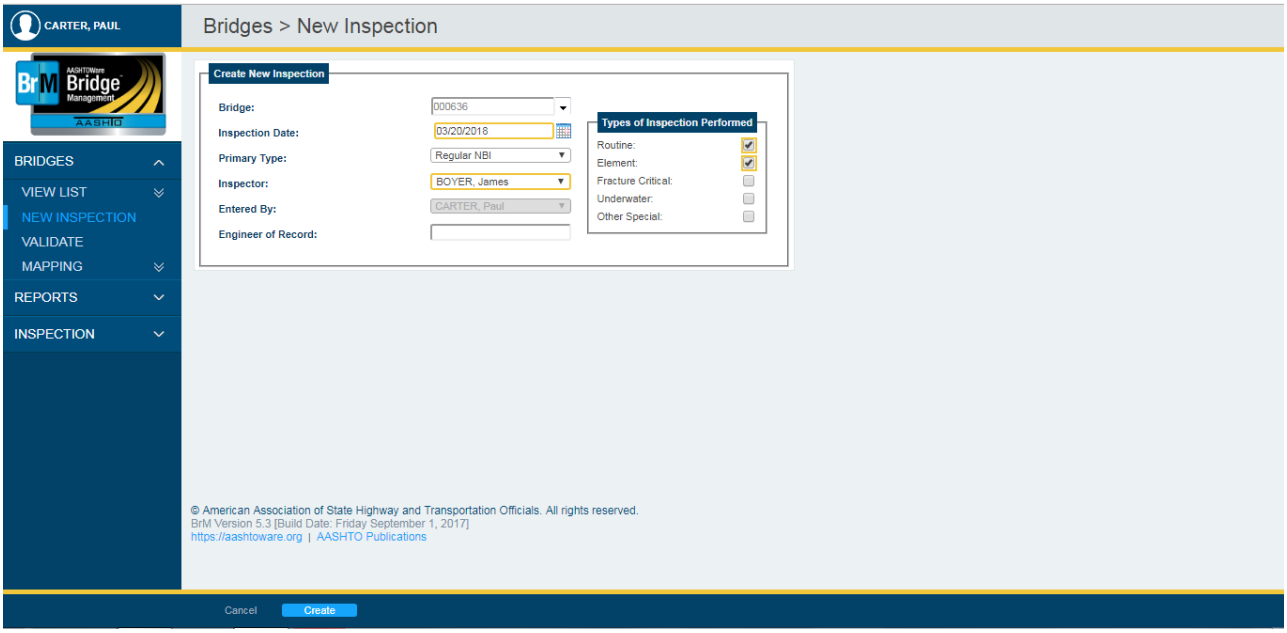


Figure 28 – Updated New Inspection screen

Once the new inspection has been created, you will be brought to the **Schedule** Task in the **Inspection** Tab (Figure 29).

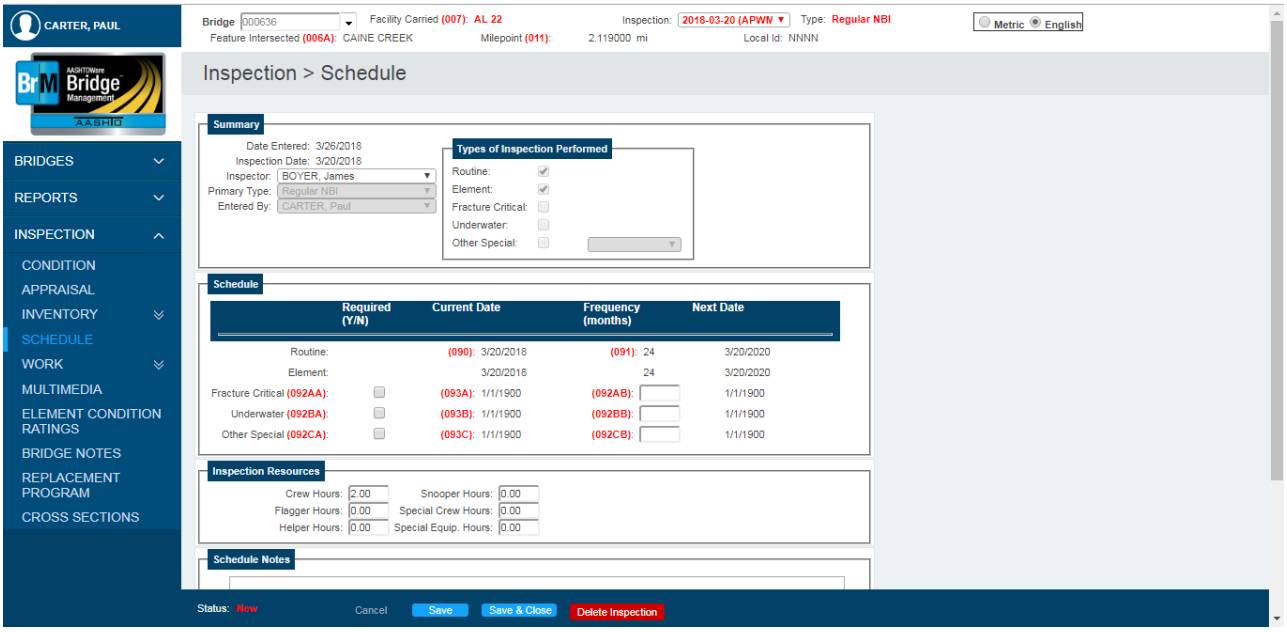


Figure 29 - Create New Inspection screen

The **Summary** panel shows the information entered on the previous screen.

The **Schedule** panel shows scheduling information about the bridge, including which types of inspections are required and the frequencies for each of those inspection types. Any changes to inspection types or frequencies as required by *ALDOT Guidelines for Operations* can be made on this screen. If this structure requires a Fracture Critical, Underwater, or Interim inspection, place a checkmark in the appropriate **Required (Y/N)** box and enter the inspection frequency in the **Frequency** field. The **Current Date** and **Next Date** are displayed for reference only.

The **Inspection Resources** panel includes information on crew and equipment hours required for an inspection. Be sure to edit this information if it has changed since the last inspection.

Click **Save** at the bottom of the screen to finish creating the inspection, then click the **Condition** Task to begin entering the rest of your inspection data. See Chapter 4 of this manual for more details about entering inspection information.

3.3: Validate Task

The Validate Task runs an FHWA edit check for the selected structure. From the Bridge List, select your structure and click on the Validate Task (highlighted in Figure 30).

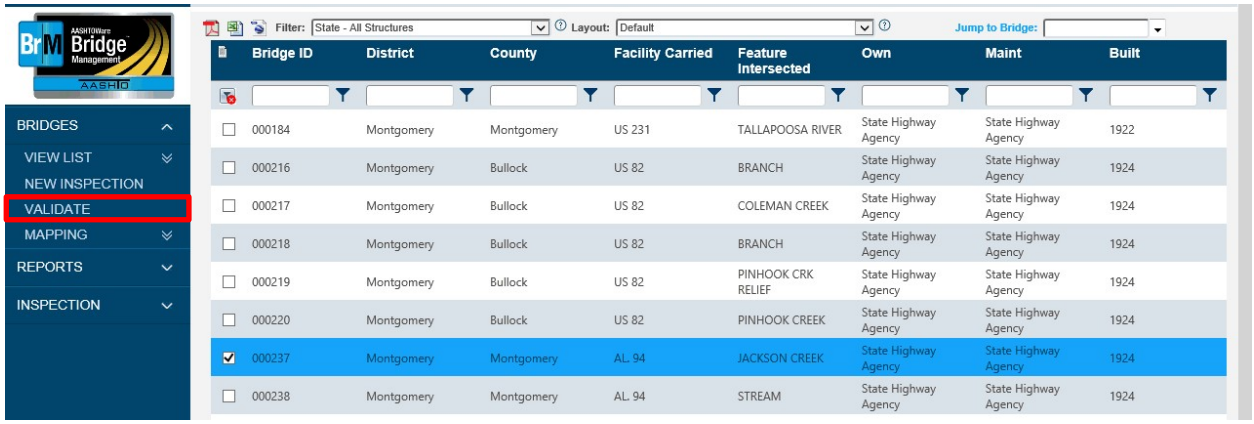


Figure 30 - Use the Validate Task to run an FHWA Edit Report for the structure

The next screen you see is the Validate Page. Confirm that the bridge you want to check appears in the **Validate** panel, and click **Validate selected bridges**. See Figure 31.

***Note* -** Be sure to only validate one structure at a time. If multiple bridges are selected, return to the View List Task and make sure the bridge you need to validate is the only bridge selected. If too many bridges are selected, the validate process will take too long and cause the BrM system to run very slowly for all users. **DO NOT** select **Validate all bridges**, as this runs an edit report for all bridges in your filter.

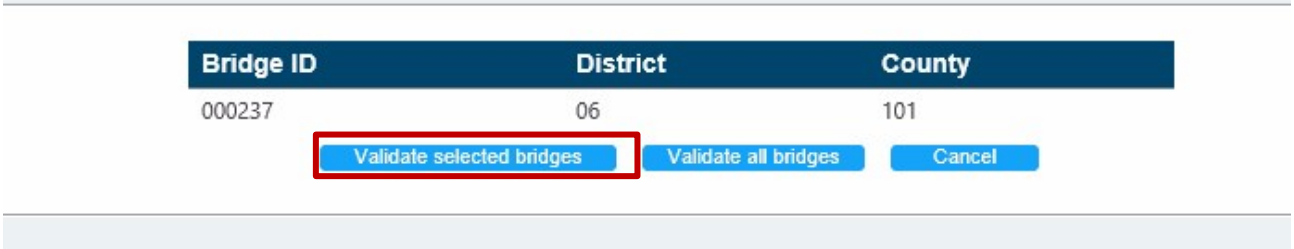


Figure 31 - Click Validate selected bridges

On the next screen, select the box next to your structure. If any errors exist, they appear in the **Validation Results** table shown in Figure 32. These results can be exported to a PDF or Excel file using the buttons outlined in Figure 32. Agencies are encouraged to validate their structures after any inspection is entered, and to correct any discrepancies immediately.

Figure 32 - Validation results table

3.4: Mapping Task

The Mapping Task is used to display the location of a structure or group of structures using Google Maps. From the Bridge List, select your structure(s) and click on the Mapping Task (see Figure 33).

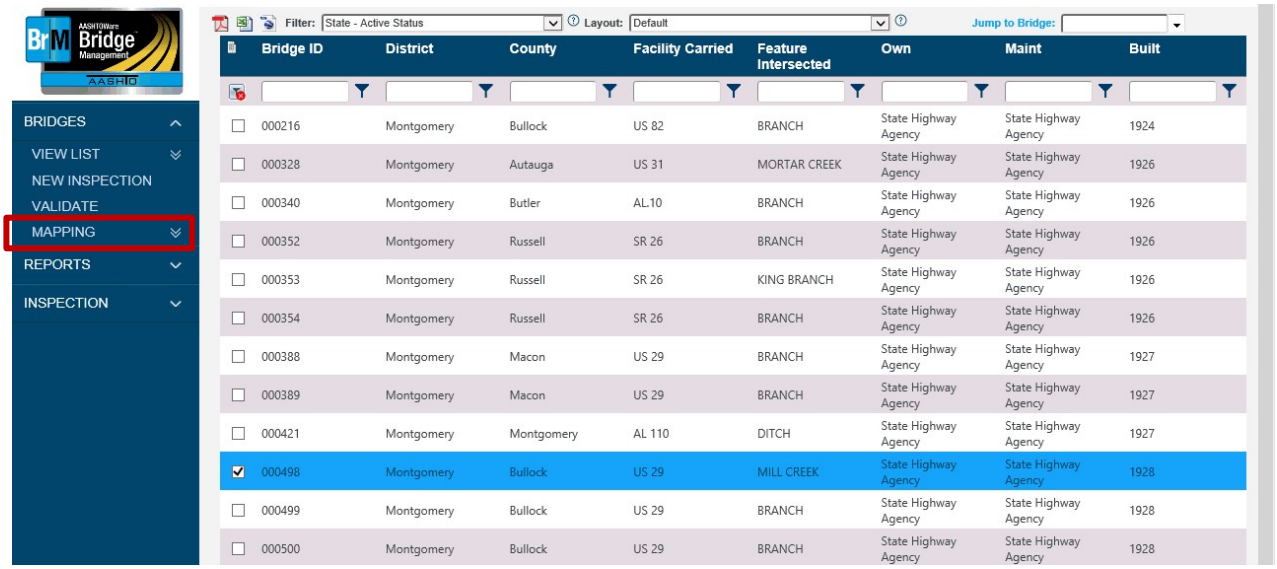


Figure 33 – Use the Mapping Task to see selected structures on a map

The selected structure(s) appear on a map as shown in Figure 34 below. The map can be adjusted or navigated using your mouse to pan and zoom. There are also zoom controls on the bottom right part of the screen. The Map and Satellite buttons in the upper left corner of the window can be used to toggle between a map view and a satellite view of the area.

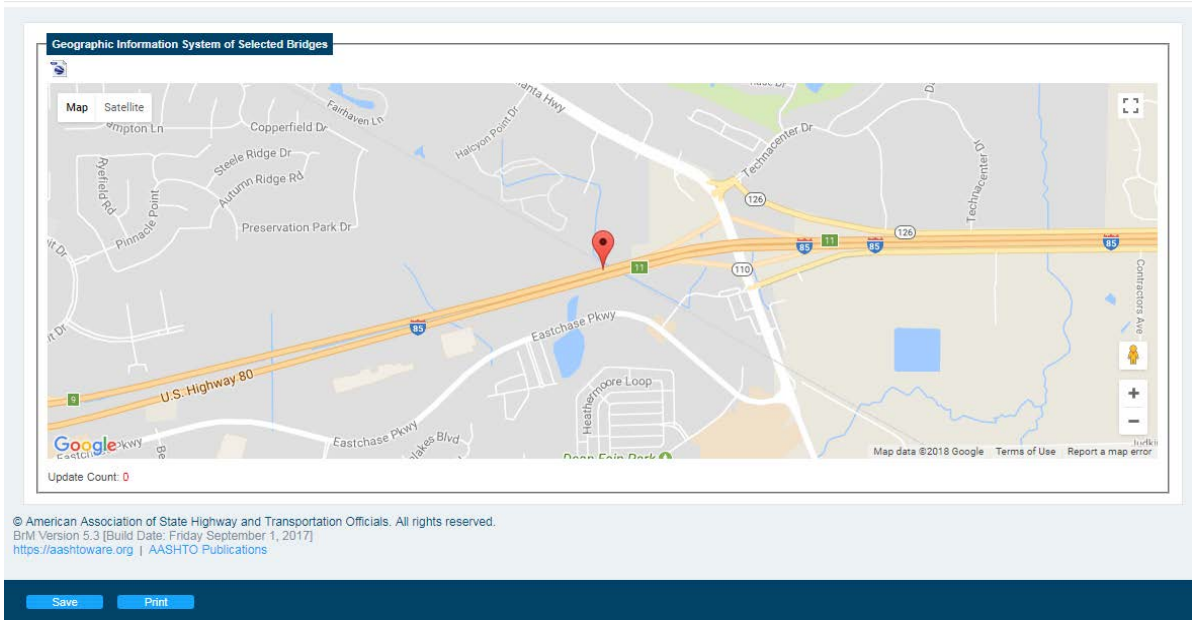


Figure 34 - Selected structures appear on an interactive map

As shown in Figure 35, the Pegman icon above the zoom controls (highlighted) can be used to display a Google Streetview of the area, if one exists. Drag and drop the icon onto the selected route and a Streetview map is displayed on the right side of the screen. Clicking a point displays a comment box for the point, as well as the Streetview map. These features are shown in Figure 36.

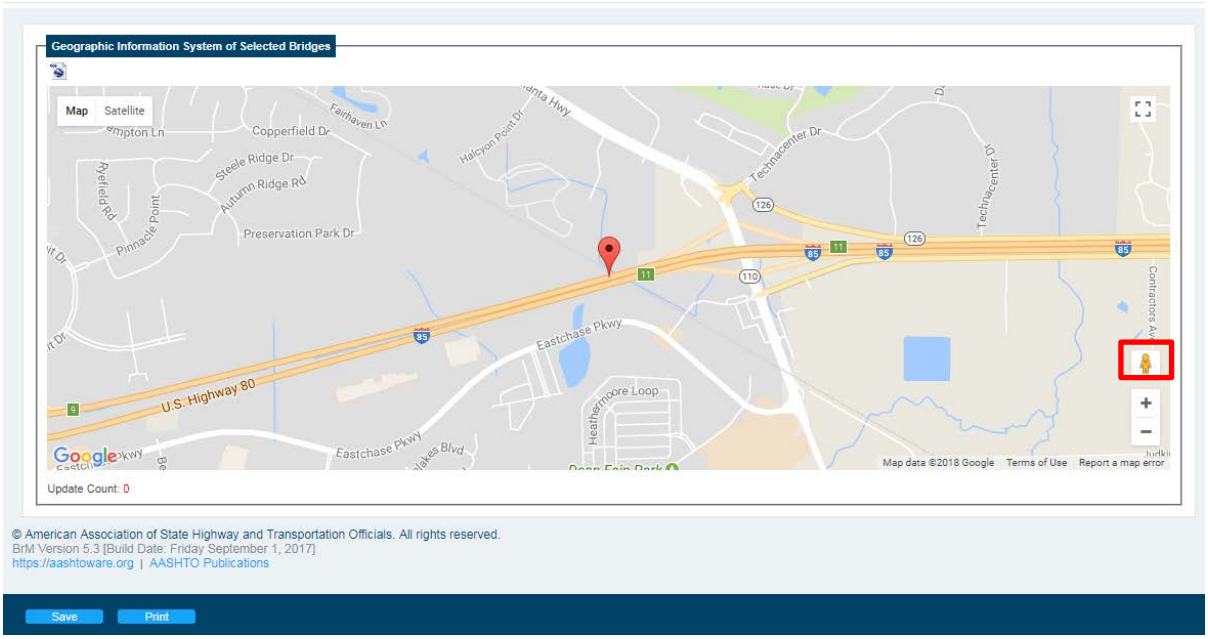


Figure 35 – Pegman highlighted in mapping feature

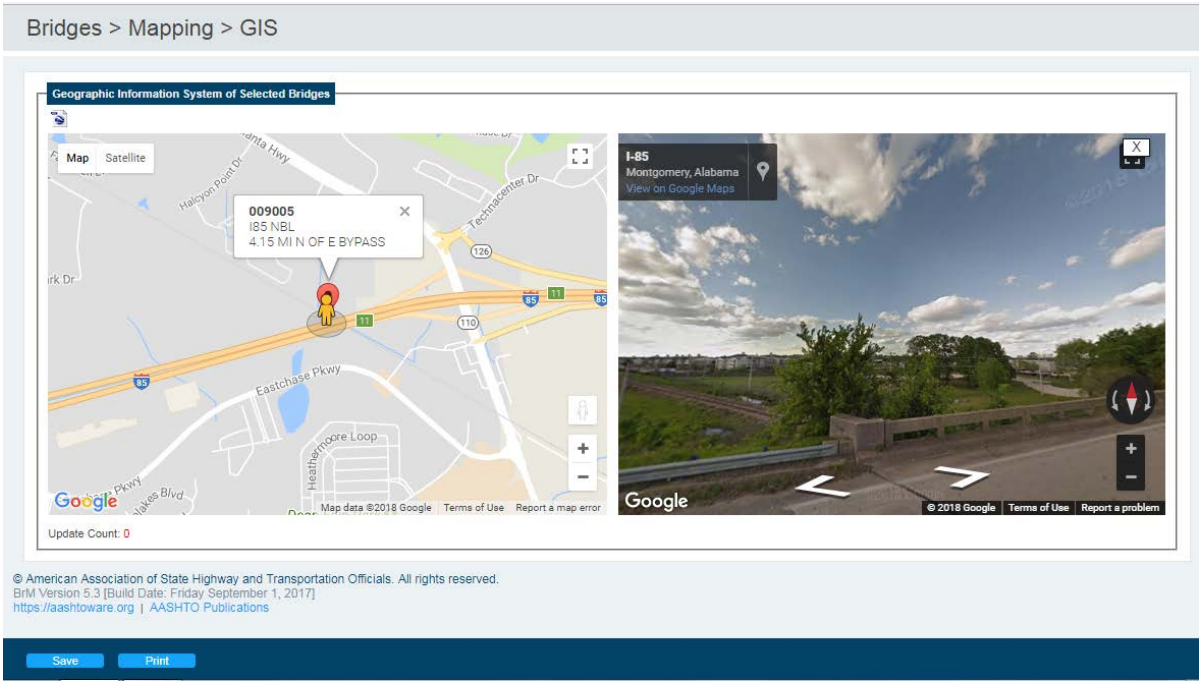


Figure 36 – Comment box and Streetview map of structure are displayed

Chapter 4: Inspection Tab

This chapter discusses the data and navigation of the Inspection Tab (Figure 36).

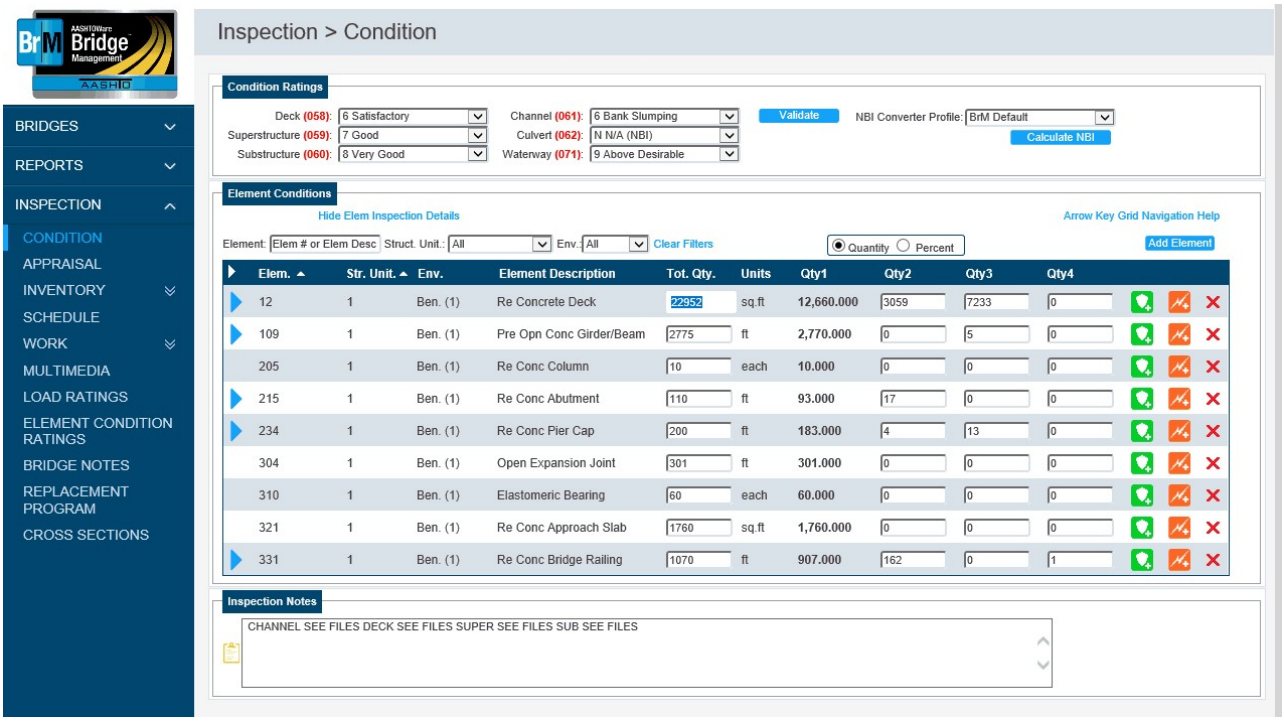


Figure 37 - Inspection Tab

4.1: Inspection Tab Overview

After selecting a bridge from the Bridges Tab, click on the Inspection Tab to view and enter additional information on the structure. Each task in this tab contains certain types of structure and inspection data. The tasks are listed below with a brief description of each:

- **Condition** – Contains condition ratings and element conditions for the selected bridge.
- **Appraisal** – Contains many Federal Appraisal Items, including those related to Structure Appraisal, Calculated Appraisal Ratings, Clearances, and NBI Load Ratings.
- **Inventory** – Contains additional Federal and State Items, and is broken down into five subtasks:
    - **Admin** – Contains identification information including Location, Age & Service, Operation, and Classification Information.
    - **Design** – Contains geometric design information including Deck, Spans, Length, and Structure Status.
    - **Roads** – Contains roadway information for all record types associated with the structure. This is where “under” record information is located.

  - **Identification** – Contains many State Items including Agency Identification, Inspection details, and Agency Load Rating information.
  - **State Items** – Contains additional State Items including Culvert, Paint, and Type.
- **Schedule** – Contains NBI scheduling information, including types, dates, and frequencies of inspection.
- **Work** – Contains information related to work candidates and accomplishments, and is broken down into several subtasks:
  - **Work Candidates** – Contains information on any work candidates.
  - **Project Information** – Contains bridge project planning information.
- **Multimedia** – Contains multimedia information, including photographs and documents.
- **Element Condition Ratings** – Displays Element and Condition Ratings for all past inspections.
- **Bridge Notes** – Contains General, Scour, Rating, Program, and EBIT notes about the bridge.
- **Replacement Program** – Displays information related to prioritizing bridges for replacement.
- **Cross Sections** – Contains structure details, original streambed elevations, and streambed cross section data to be displayed on scour plots.

Each task in the Inspection Tab displays a header (see Figure 38) which includes read-only identification information: Facility Carried, Feature Intersected, Mile point, and Local ID.

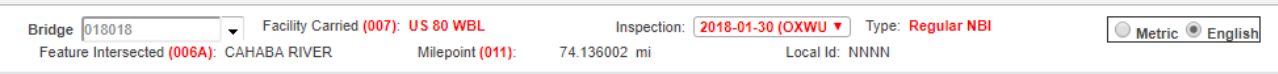


Figure 38 - Typical header for a task in the Inspection Tab

The **Bridge** field works just like **Jump to Bridge** on the View List Task. Type in the 6-digit BIN of a structure to jump directly to the task currently displayed for that bridge.

Some of the information on the task screen pertains to particular inspections, while other information pertains to the bridge itself. The **Inspection:** drop-down list in the header allows you to view data from previous inspections. The **Type:** field shows the primary type of the inspection selected. When the task is opened, the most recent inspection is shown by default. When entering data, you need to confirm the correct date is displayed in this drop-down. The header also includes radio buttons to select English or Metric units.

Many tasks also feature a footer (Figure 38):

Figure 39 - Typical footer for a task in the Inspection Tab

The footer contains the following buttons:

- **Status -** This field contains items in the drop-down menu but will not be used at this time.
- **Cancel –** Cancels all changes and resets the screen to its previously saved state.
- **Save –** Saves all changes.
- **Save & Close –** Saves all changes and returns you to the Bridges List.
- **Delete Inspection –** Is only visible on certain screens and deletes the selected inspection and all its related content from the database.

After changing any field in a task, the field and window display a yellow outline until changes are saved.

4.2: Condition Task

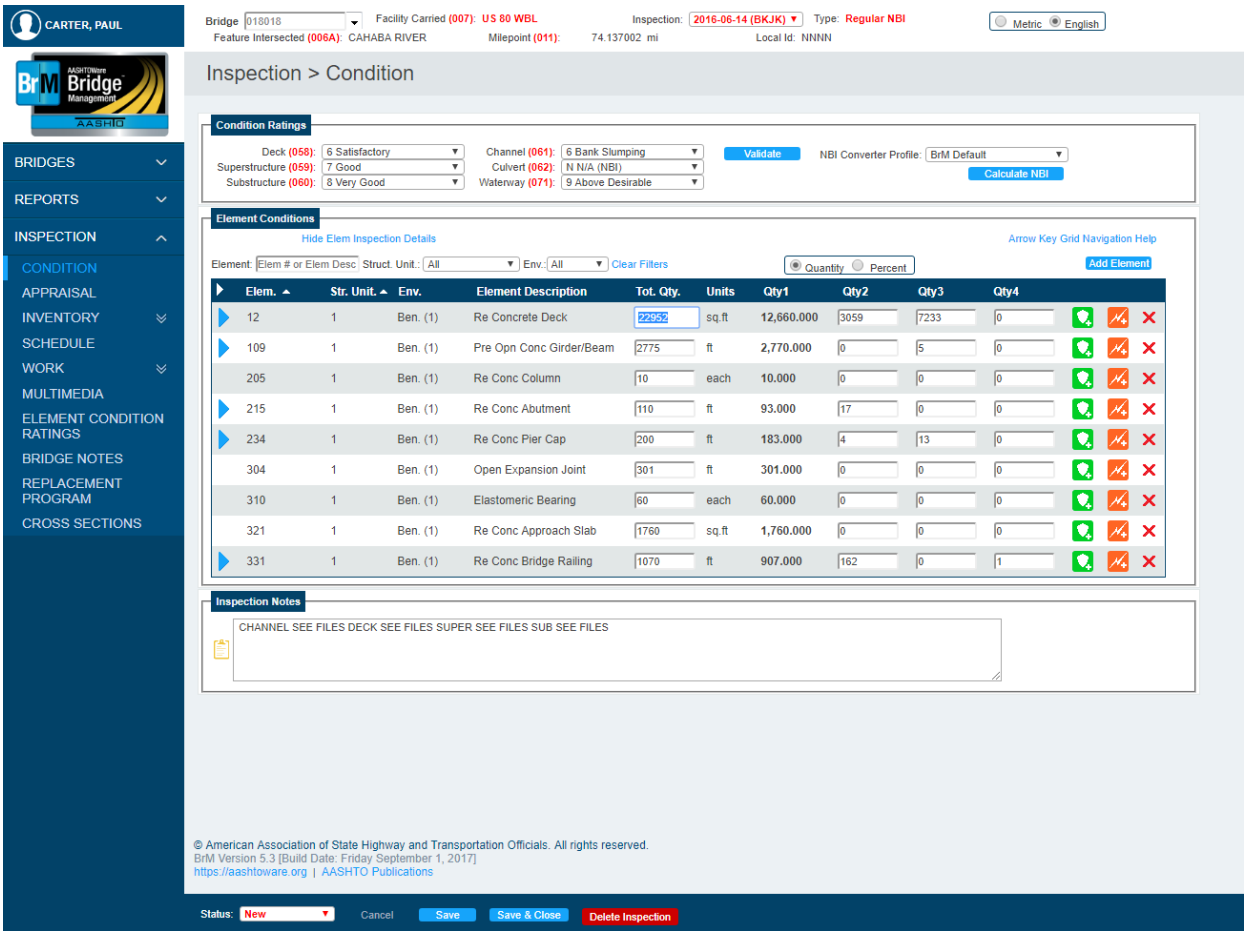


Figure 40 – Condition Task

The first task in the Inspection Tab is the Condition Task (shown in Figure 40). This task displays Condition Ratings, Element Conditions, and Inspection Notes. After creating a new inspection, this task should be updated using data from the BI-5 form. **Reminder**: new inspections must be created under the Bridges Tab, as described in Chapter 3.2: Creating a New Inspection.

Condition Ratings are shown for NBI Items 58, 59, 60, 61, 62, and 71.

Element Conditions are displayed in a grid showing the following information on each element:

- **Element Number** – The number corresponding to the AASHTO Bridge Element.
- **Structure Unit** – When your structure is initially created, BrM defaults to one structure unit. The majority of structures only need one structure unit, but there may be cases where it would be beneficial to break your structure into multiple units. An example of this is a very large structure with many spans. If you plan on using more than one structure unit, you must create the additional structure units in the Inventory-Design Subtask prior to adding any elements. For more information on structure units, see the *Introduction to Element Level Bridge Inspection Workbook*.

- **Environment** – The majority of structures in the state of Alabama fall into Environment 1-Benign. Those subjected to salt spray or road salt may need to use another environment. For more information about Environments, see the *Introduction to Element Level Bridge Inspection Workbook*.
- **Description** – A descriptive name given to the AASHTO Bridge Element.
- **Quantity** – The total quantity or count of the element.
- **Units** – The type of units associated with the element.
- **Qty. 1-4** – These refer to the Condition States for each element. When an element is added, the entire quantity is automatically placed in Qty. 1.

The Element Condition Grid also includes defects and protective systems, which are nested under their parent elements. To view these, click the arrow next to the element number, or you can click the arrow at the top left corner of the grid to expand all items. An element without an assigned defect or protective system does not have an arrow next to the element number.

The Element Condition Grid is equipped with options to filter and sort elements by the element number, element description, structure unit, and environment. After applying a filter to the element condition grid simply click **Clear Filters** to return all of the elements for the structure. To sort, click on the heading at the top the column you wish to arrange. Click once for ascending order, and twice for descending order. Clicking the heading a third time will return the grid to the default sorting arrangement.

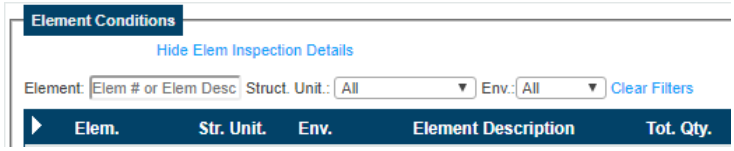


Figure 41 – Option to filter elements in the element condition grid

Element Conditions can be displayed by quantity or by percent using the radio buttons above the table. If previous inspections exist, you can click the **Inspection:** drop-down at the top of the screen and select another inspection to see previous condition ratings. To see a complete history of condition ratings for a bridge, see the **Element Conditions Ratings Task**.

General notes relating to this inspection are displayed in the **Inspection Notes** panel. Notes associated with specific elements are displayed directly below an element when it is selected. Notes associated with specific elements may be hidden by selecting the **Hide Elem Inspection Details** option. To display hidden notes, click in the same area only this time it will read **Show Elem Inspection Details** (Figure 41).

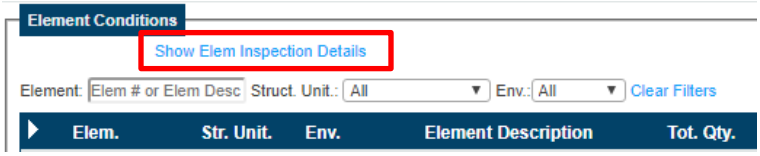


Figure 42 – Option to hide element inspection detail

The **Validate** button (highlighted in Figure 43) runs an FHWA edit check for the structure. After **all** inspection information has been entered for the current inspection, you can return to this task and click **Validate** to check for any errors in the data. For more information about validating a structure, see Chapter 3.3: Validate Task.

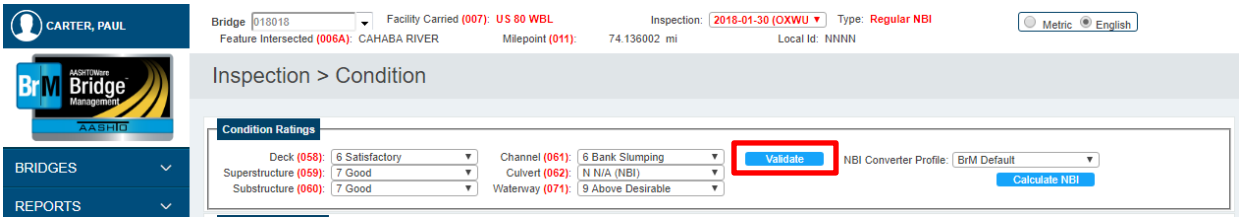


Figure 43 - Click Validate to check for errors after all inspection data has been entered

Entering Inspection Information

The information in the Condition Task needs to be updated after a new inspection is created. First, confirm the correct inspection date is displayed at the top of your screen as shown in Figure 43.

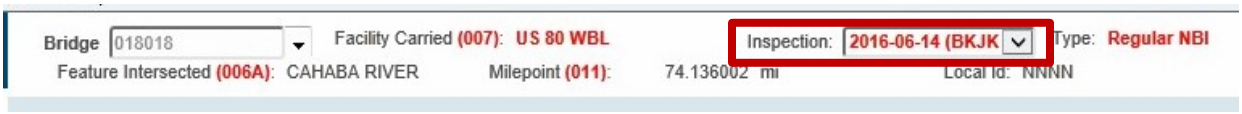


Figure 44 - Confirm the Inspection date is correct before entering any inspection information

Entering Inspection Data – First Inspection

If an inspection has not been entered for a bridge before, all of the information on this screen will need to be entered. As shown in Figure 45, Condition Ratings are displayed as "Unknown" until they are updated using the drop-down menus.

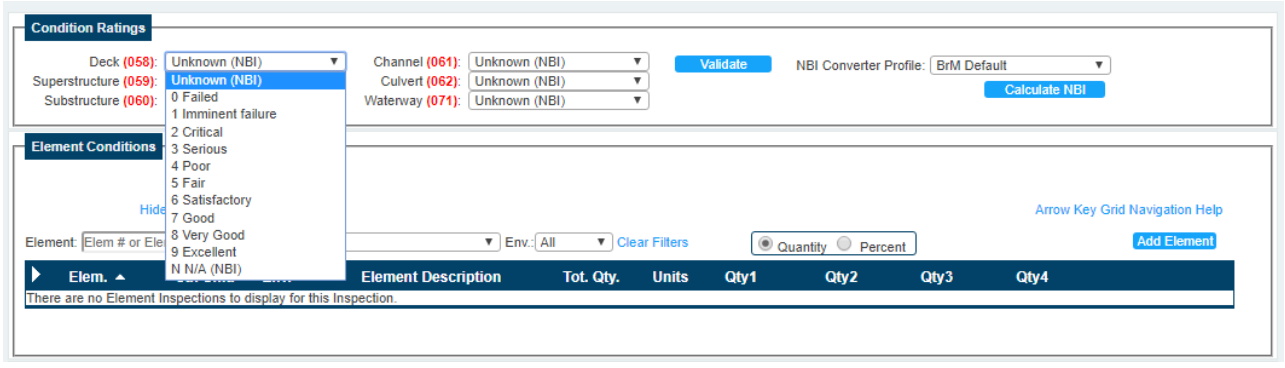


Figure 45 - Condition Ratings are updated using drop-down menus

To add elements to the structure, click **Add Element**. See highlighted area in Figure 45.

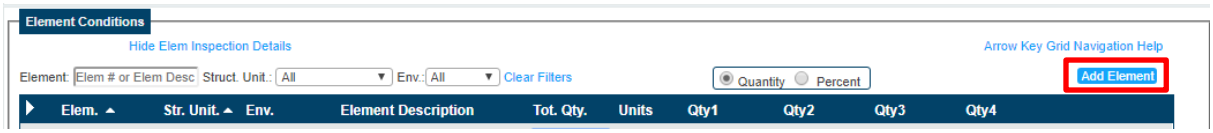


Figure 46 – Add elements

After clicking **Add New Element**, a dialog box appears, allowing you to enter your element details. Select your Element ID, Structure Unit, and Environment from the drop-down menus, enter your Quantity in the text field, and then click OK to add your element. See Figure 47.

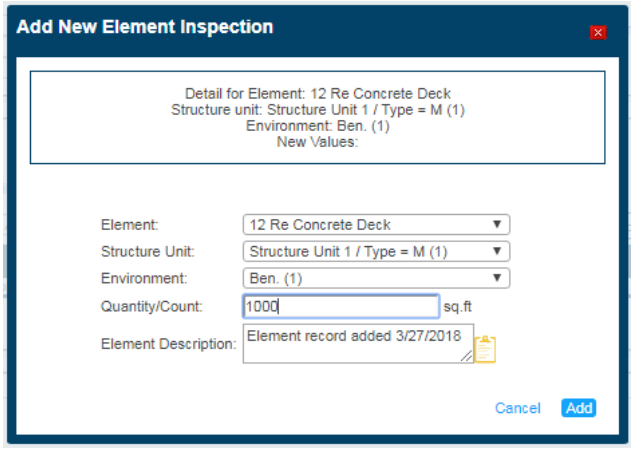


Figure 47 – Add Element detail dialog box

The new element is then added to the Element Condition Grid within the **Element Conditions** panel and the entire quantity is displayed in Qty. 1 as shown in Figure 48.

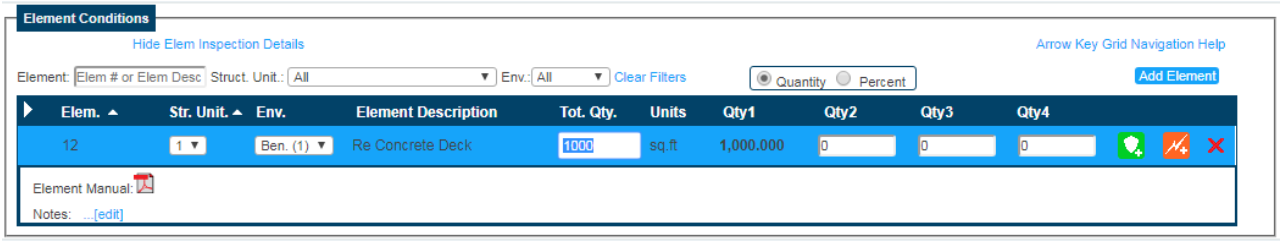


Figure 48 – A new element has been added to the grid

It is possible to assign portions of the total quantity to different condition states (Qty. 1 represents the quantity in condition state 1, Qty. 2 represents the amount in condition state 2, etc.). In order to move a quantity out of condition state 1, click in Qty. 2, Qty. 3, or Qty. 4 and enter the correct value. Qty. 1 is updated automatically as the other quantities are changed.

Qty. 1 is a read-only field that is calculated as the difference between the Total Qty. and the sum of Qty. 2, Qty. 3, and Qty. 4. Figure 49 shows 1000 square feet of reinforced concrete deck, with 200 square feet in condition state 2 and the rest in condition state 1.

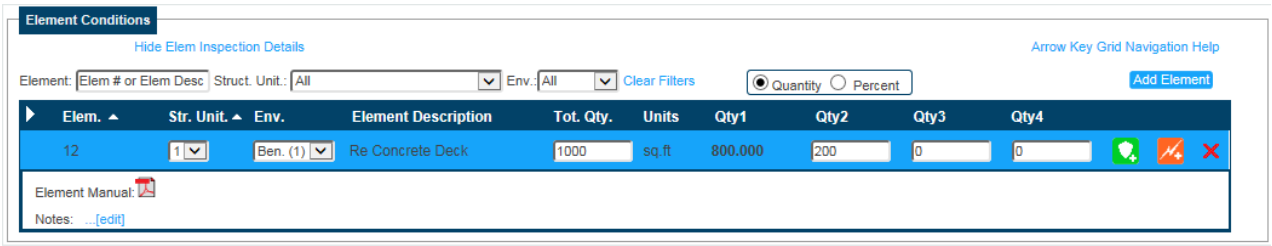


Figure 49 – When part of the element is moved to another condition state, the first condition state updates automatically

After an element has been added and selected, there are a couple of options that appear below the element. The **Notes** field can be used to add inspection notes for the specific element selected. Click '**edit**' and the **Notes** field will expand so that text may be entered. These notes are also displayed on the BI-5 form when printed. The PDF icon downloads the pages from the *Bridge Element Inspection Manual* corresponding to the element that is selected. It will open the page in a new tab or window within your internet browser. These options are outlined in Figure 50.

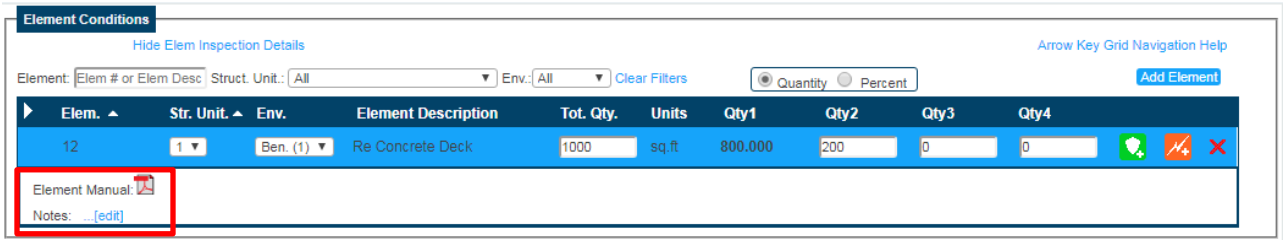


Figure 50 – PDF icon to download pages Element Inspection Manual for the selected element

For every element, there are three icons that are generated at the end of that element's line. The first two icons are used to add a defect or protective system to the element. The third icon ('X') will delete the element completely. These are highlighted in Figure 51.

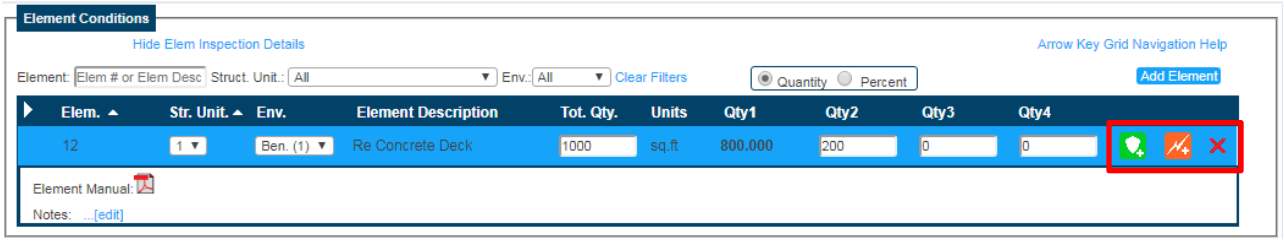


Figure 51 - Use these buttons to add a defect, protective system, or delete the element

Adding Defects

To add a defect to an element, click on the orange icon shown in Figure 51. A new **Add New Defect** dialog box appears, containing options for adding a new defect (see Figure 52). Next, select the appropriate defect from the **Element** drop-down menu. Note that the Parent Element has already been assigned and that the chosen defect is automatically put into the same Structure Unit and Environment as that Parent Element.

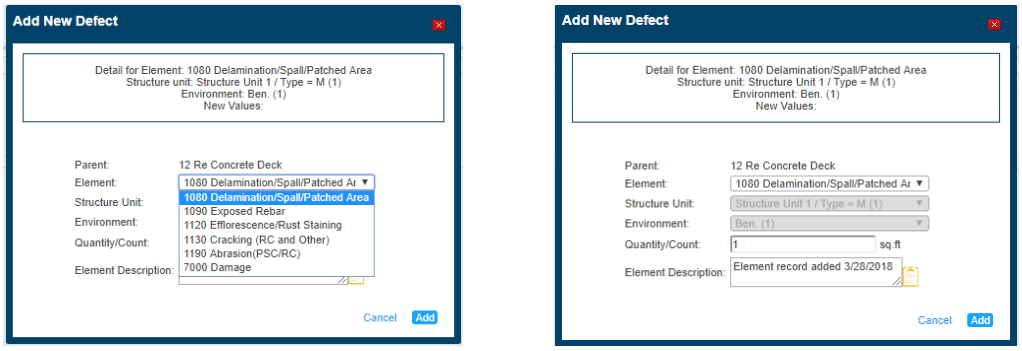


Figure 52 – Add Element Detail dialog box

Fill in the **Quantity/Count** field. It should be noted that the quantity in this field refers to the quantity of the defect, not the parent element. In this example, only 100 square feet of the deck displays cracking. Click **Add** and the defect appears nested under the parent element as shown in Figure 53.

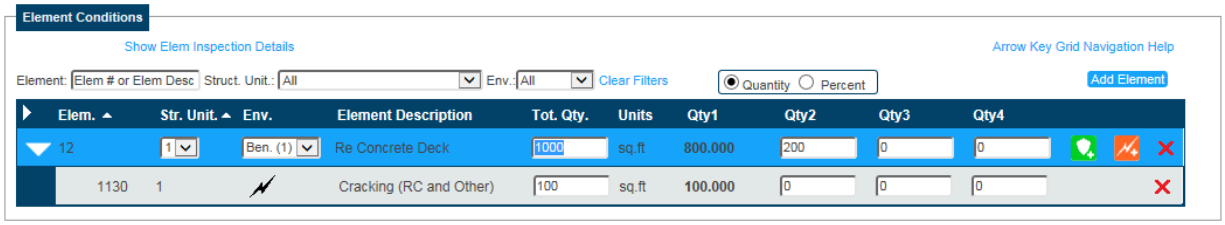


Figure 53 – New defect has been added to table; quantity must be moved to a lower condition state

BrM automatically places any new element or defect into condition state 1. It is up to the inspector to move the quantity into the appropriate condition state. Please note that a defect cannot have a quantity assigned to a condition state that is greater than the quantity assigned to that same condition state for the parent element. Figure 54 shows the reinforced concrete deck has 200 square feet in condition state 2, with 100 square feet due to cracking and 100 square feet due to spalling. With the defect selected and element details turned on, you can click on Show Condition States (outlined in Figure 54) to view the condition state definitions for the selected defect.

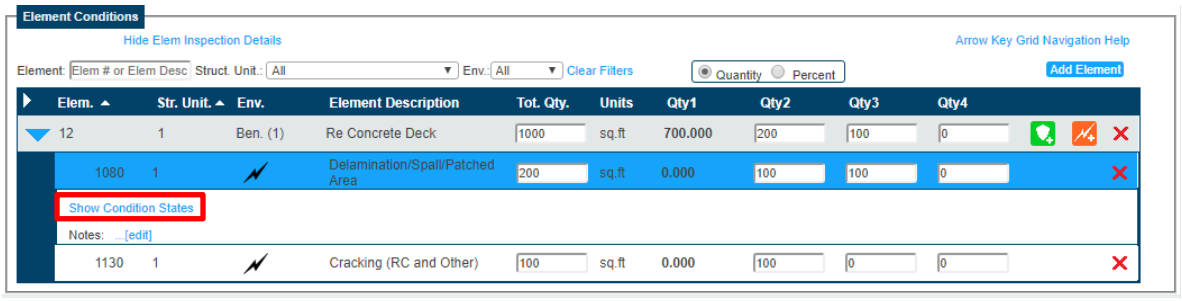


Figure 54 – Entire defect quantity has been moved out of condition state 1

Adding Protective Systems

To add a protective system to an element, click on the green icon at the end of that element's line (Figure 51). A new Add Element Detail dialog box then appears (Figure 55). Select the appropriate protective system from the Element drop-down menu.

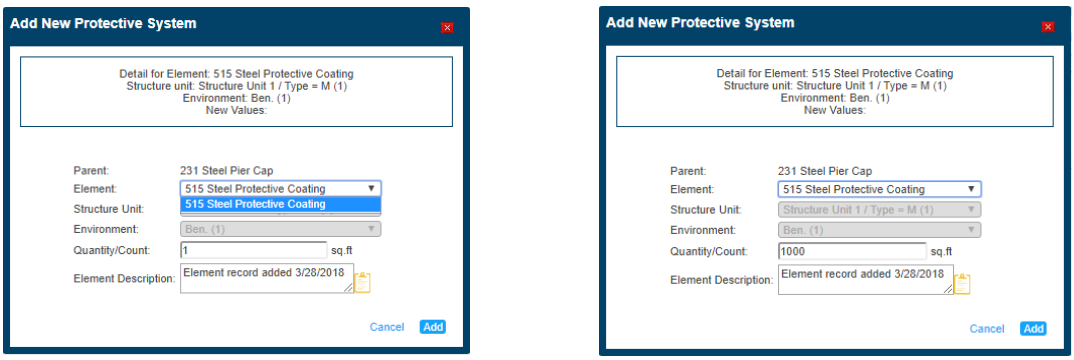


Figure 55 – Element ID drop-down contains all possible protective systems for available element

Fill in the **Quantity/Count** field, and click **Add**. As shown in Figure 56, your protective system appears nested under the parent element.

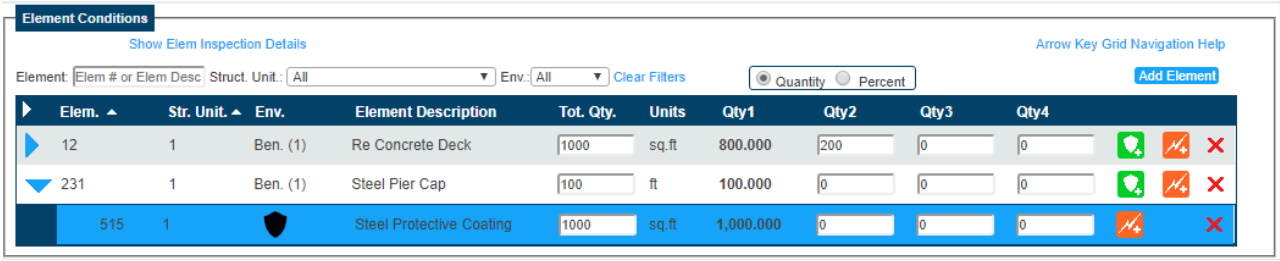


Figure 56 – New protective system has been added; entire quantity in Qty. 1

Again, please note that BrM automatically places any new protective system into condition state 1. It is up to the inspector to move the quantity into the appropriate condition state. Unlike defects, protective systems can exist in any of the condition states, and the quantities are not dependent on the state of the parent element. See Figure 57 for an example of a new protective system after condition states have been updated.

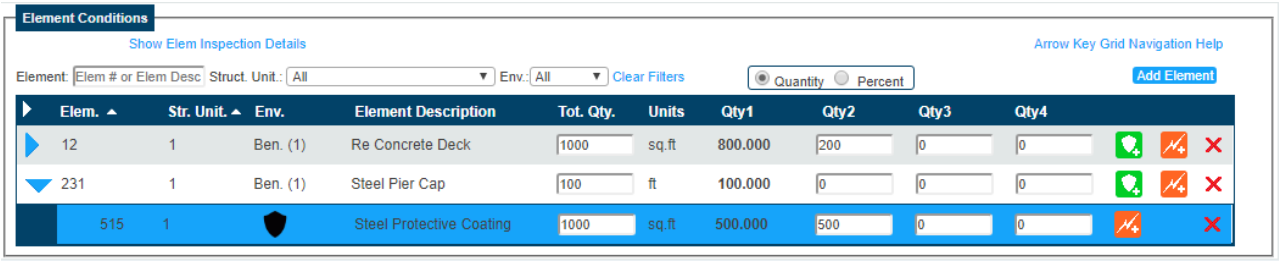


Figure 57 – New protective system after condition states have been updated

Adding Defects to Protective Systems

A defect can also be added directly to a protective system. First click on the orange icon at the end of the protective system's row**.** Next, select your defect from the **Element** drop-down menu and fill in the **Quantity/Count** field and click **Add**. Figure 58 displays the defect drop-down menu.

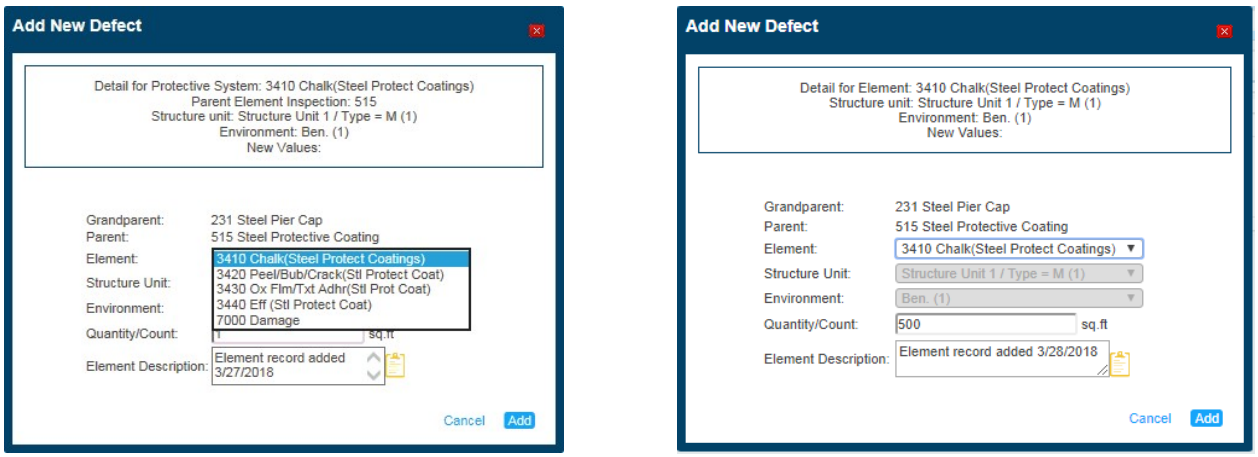


Figure 58 - Select Defect from drop-down

The defect appears nested under the protective system in the Element Condition Grid. Please note that BrM automatically places any new defect into condition state 1. It is up to the inspector to move the quantity into the appropriate condition state. With the defect selected and element details turned on, click on **Show Condition States** (outlined in Figure 59) to view the condition state definitions for that defect. Figure 59 displays the final view of the defect.

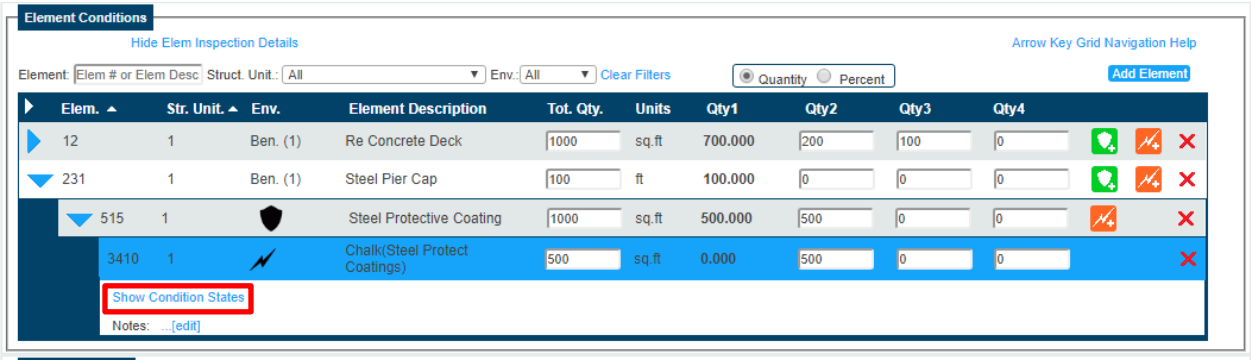


Figure 59 – Final view of defect

General notes relating to this inspection should be entered in the **Inspection Notes** panel (Figure 60). Click the yellow clipboard icon on the left side of the panel to open the **Notes Page** dialog box and enter your text. Press 'Apply' to close the dialogue.

Figure 60 - Inspection Notes panel

Entering Inspection Data-Previous Data Has Been Carried Forward

After creating a new inspection (as described in Chapter 3.2), the information on this page is populated with data from a previous inspection. This information needs to be updated based on the current inspection. **Condition Ratings** are updated using drop-down menus. An example of this menu is shown in Figure 61.

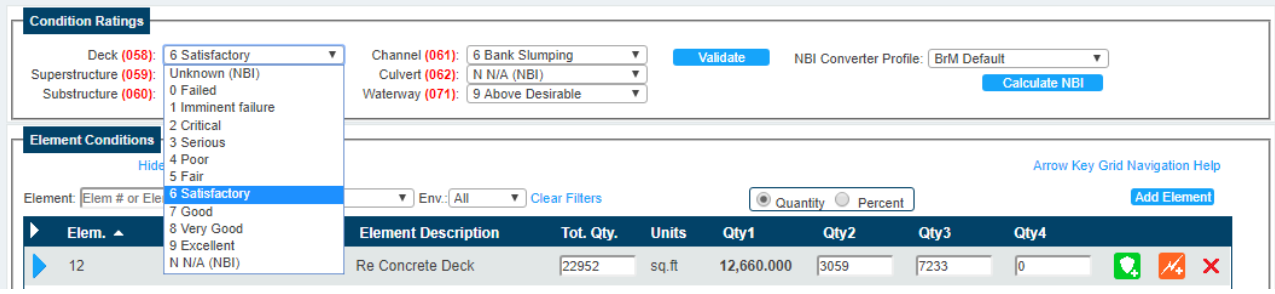
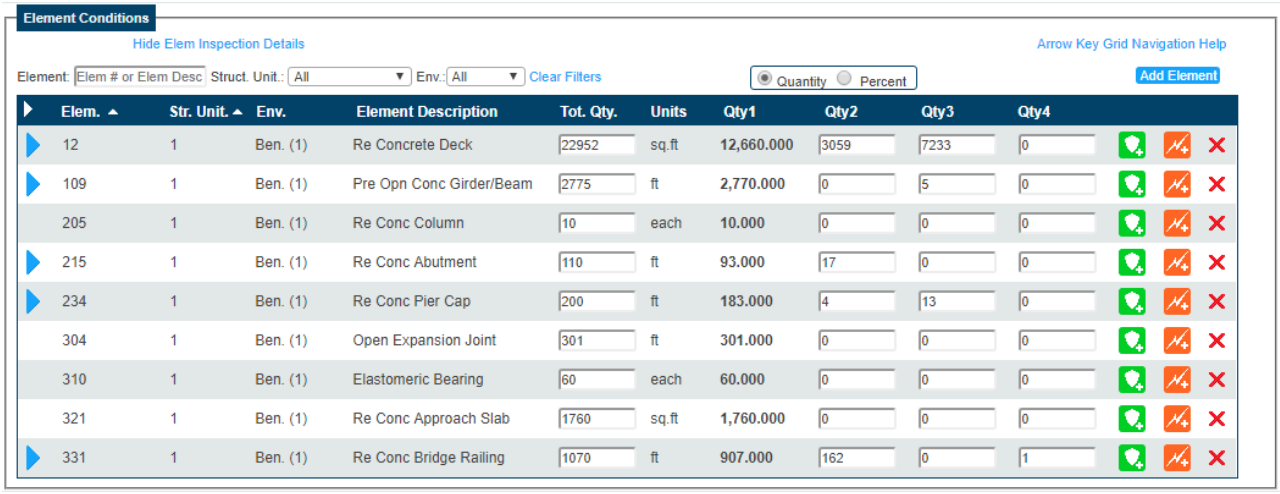


Figure 61 - Update Condition Ratings using drop-down men

Element Conditions are updated using the Elements Condition Grid shown in Figure 62.



Elem.	Str. Unit.	Env.	Element Description	Tot. Qty.	Units	Qty1	Qty2	Qty3	Qty4
12	1	Ben. (1)	Re Concrete Deck	22952	sq.ft	12,660.000	3059	7233	0
109	1	Ben. (1)	Pre Opn Conc Girder/Beam	2775	ft	2,770.000	0	5	0
205	1	Ben. (1)	Re Conc Column	10	each	10.000	0	0	0
215	1	Ben. (1)	Re Conc Abutment	110	ft	93.000	17	0	0
234	1	Ben. (1)	Re Conc Pier Cap	200	ft	183.000	4	13	0
304	1	Ben. (1)	Open Expansion Joint	301	ft	301.000	0	0	0
310	1	Ben. (1)	Elastomeric Bearing	60	each	60.000	0	0	0
321	1	Ben. (1)	Re Conc Approach Slab	1760	sq.ft	1,760.000	0	0	0
331	1	Ben. (1)	Re Conc Bridge Railing	1070	ft	907.000	162	0	1

Figure 62 - Update Element Conditions within table

To change the quantity of an element in condition state 2, 3, or 4, click in the corresponding field and type in the new value. The grid will automatically calculate and update the value of Qty. 1. The Element Condition Grid may also be navigated using the arrow keys or the Tab key on the keyboard. The left and right arrow keys will navigate the selection back and forth through the Qty. fields of an element, defect, or protective system while the up and down keys will navigate from one element to another.

When an element is selected, you can press the spacebar on your keyboard to view the defects or protective systems assigned to that element. You can also press Ctrl + Spacebar on your keyboard to expand all of the items in the grid at once. Please note that the up and down arrow keys will not navigate the selection to defects or protective systems. These must be selected with your cursor or by using the Tab key.

Pressing Tab will navigate the selection forward, and pressing Shift + Tab will navigate the selection backward. Click on 'Arrow Key Grid Navigation Help' in the upper right corner of the **Element Conditions** pane for additional information on navigating the Element Condition Grid using the keyboard.

Add or update notes about specific elements within the Element Condition Grid. Click the element row to view more information about the element, and update the Notes field as needed.

You can edit the structure unit or environment by selecting an element and using the dropdown menus as needed. To delete an element, click the "X" icon at the end of its row.

General notes relating to the inspection should be updated in the **Inspection Notes** panel (Figure 63). Click the yellow clipboard icon on the left side of the panel to open the **Notes Page** dialog box and update your text as needed. Press 'Apply' to close the dialogue.

Figure 63 - Inspection Notes panel

4.3: Appraisal Task

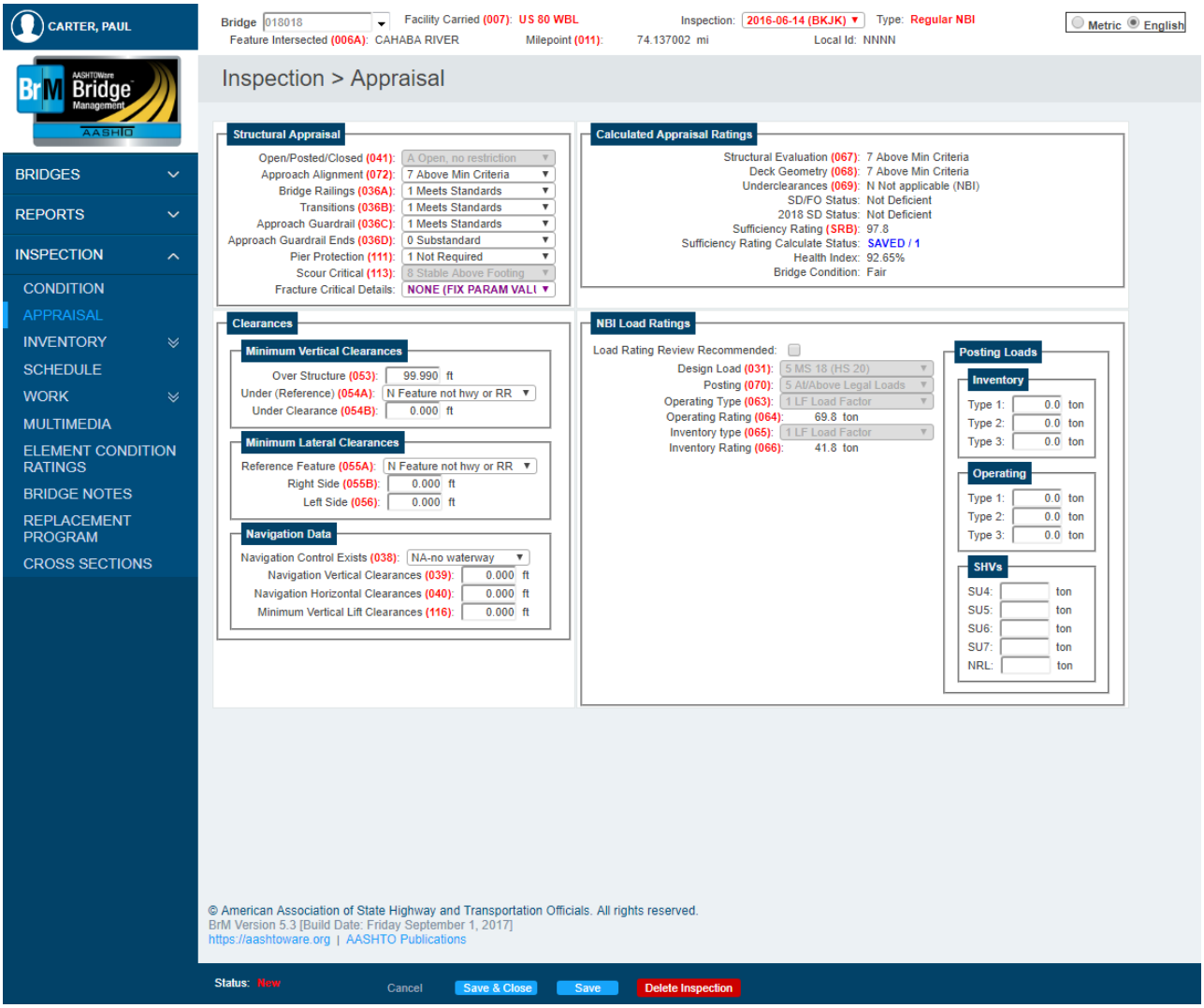


Figure 64 – Appraisal Task

The Appraisal Task (shown in Figure 64) includes Federal Items related to Structural Appraisal, Calculated Appraisal Ratings, Vertical and Lateral Clearance, Navigation Data, and NBI Load Rating. Most items in this task can be edited using drop-down menus or text boxes, while others are read-only. The read-only items are either updated by Maintenance Bureau personnel or calculated by the database. While entering a new inspection, the information in this task should be updated as needed using data from the BI-6 form.

4.4: Inventory-Admin Subtask

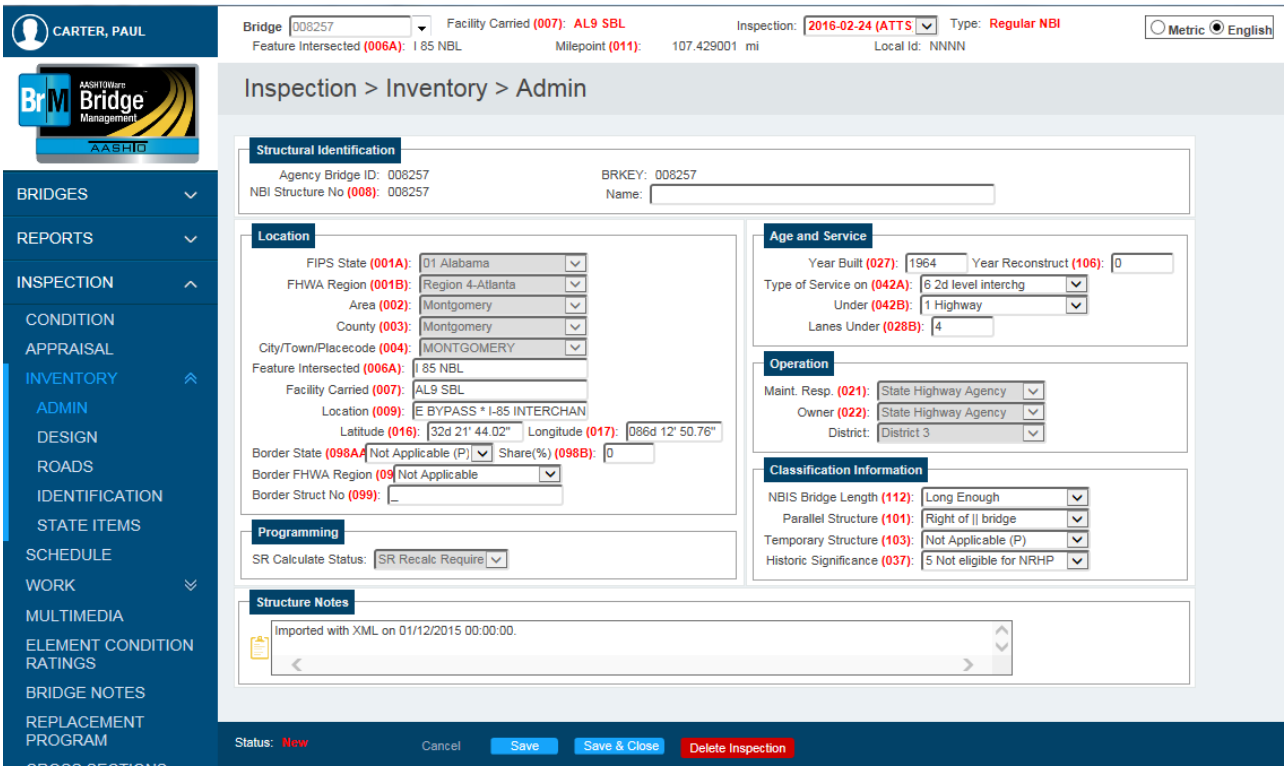


Figure 65 – Inventory-Admin Subtask

The Inventory-Admin Subtask (shown in Figure 65) includes Federal Items related to Location, Age & Service, Operation, and Classification. Most items in this task can be edited using drop-down menus or text boxes, while others are read-only. The read-only items are updated by Maintenance Bureau personnel. Most items on this page, once coded, are not likely to change over the life of the structure.

4.5: Inventory-Design Subtask

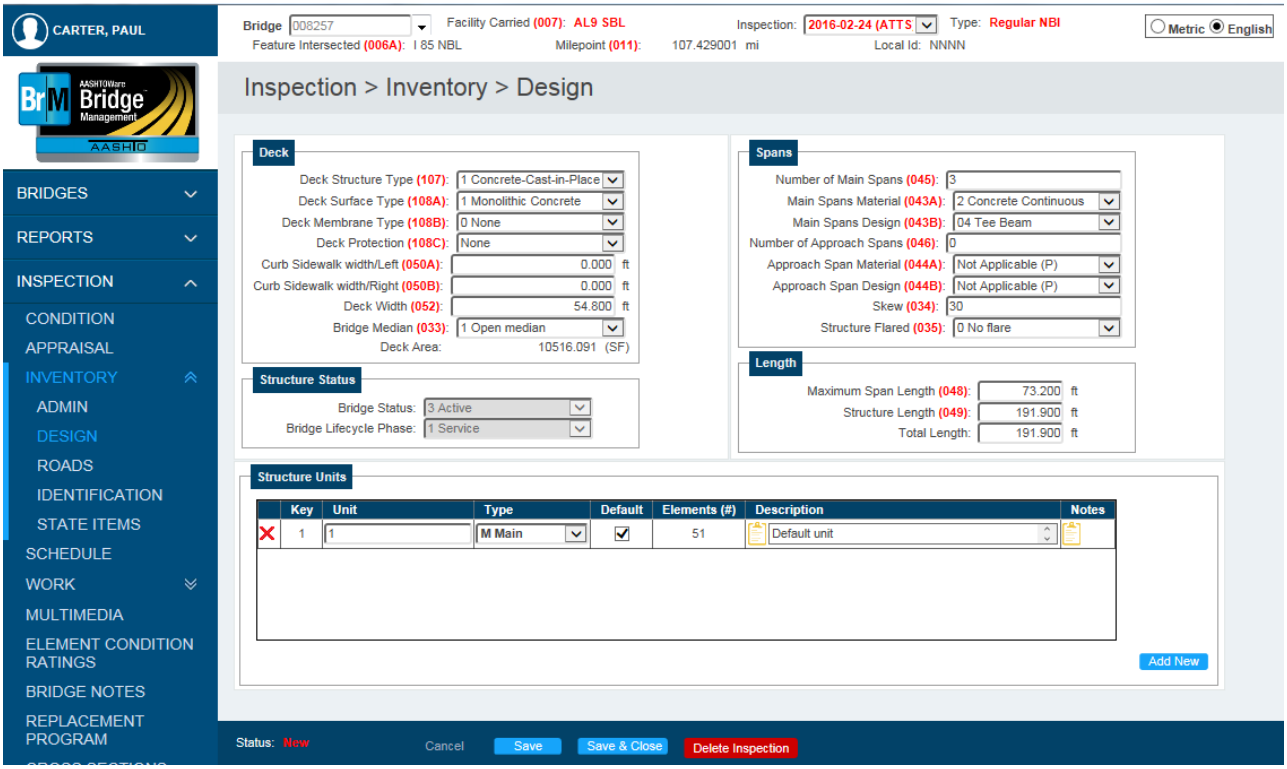


Figure 66 – Inventory-Design Subtask

The Inventory-Design Subtask (shown in Figure 66) includes Federal Items related to Deck and Span design. The items on this page can be edited using drop-down menus or by entering data in text boxes where appropriate. Most of the items on this page, once coded, are not likely to change over the life of a structure.

When your structure is initially created, BrM defaults to one structure unit. The majority of structures only need one structure unit, but there may be cases where it would be beneficial to break your structure into multiple units. An example of this would be a very large structure with many spans. If you plan on using more than one structure unit, you must create the additional structure units in the Structure Units subtask on this page prior to adding any elements in the Condition Task. For more information on structure units, see the Introduction to Element Level Bridge Inspection Workbook

4.6: Inventory-Roads Subtask

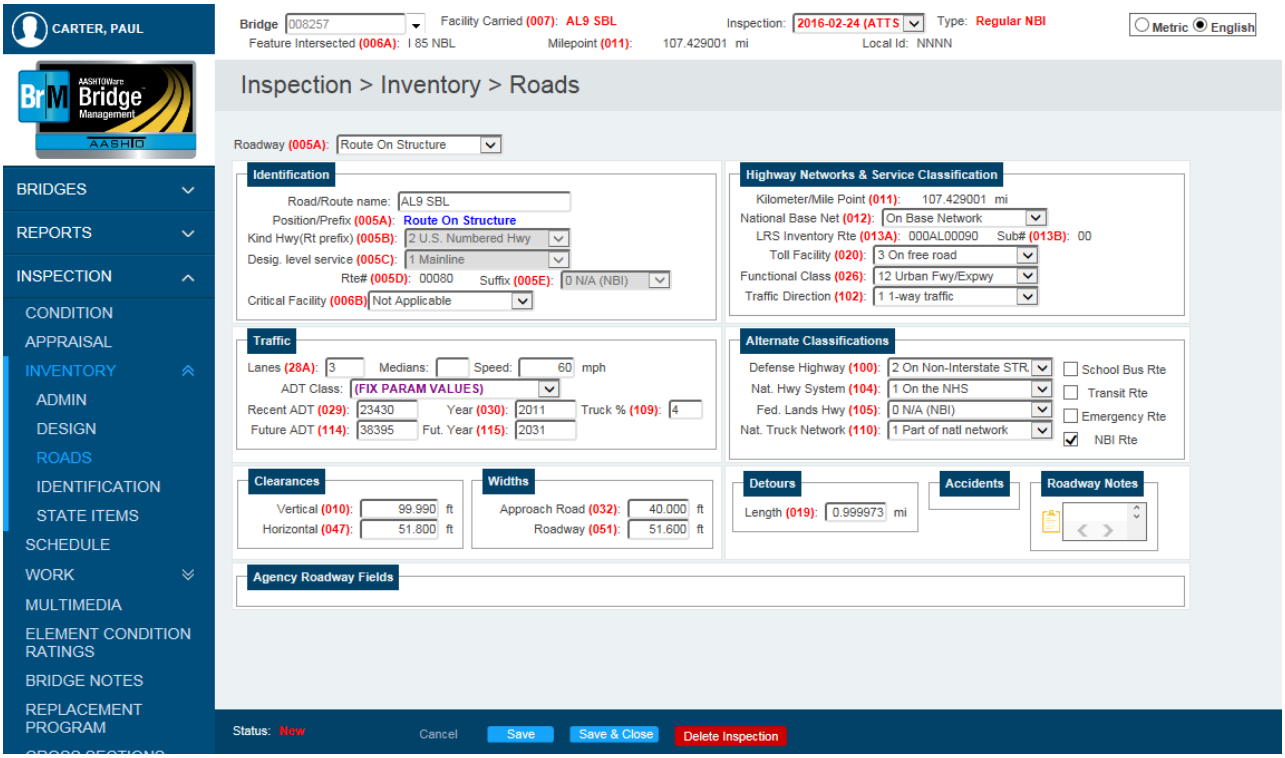


Figure 67 - Inventory-Roads Subtask

The Inventory-Roads Subtask (shown in Figure 67) includes Federal Items related to Identification, Traffic, Clearance, Width, and Highway Networks & Service Classification. Most of the items on this page, once coded, are unlikely to change throughout the life of a structure. Exceptions to this include items in the Traffic and Clearance panels, which should be updated after each routine inspection using data from the BI-6 form.

This subtask includes items for routes on and under the structure. Note the addition of a Roadway drop-down menu in the screen header. For bridges with under routes, you can click this drop-down menu to choose the on or under route you wish to view or edit. Under routes are created by Maintenance Bureau personnel when a structure is assigned a Bridge Identification Number (BIN)

4.7: Inventory-Identification Subtask

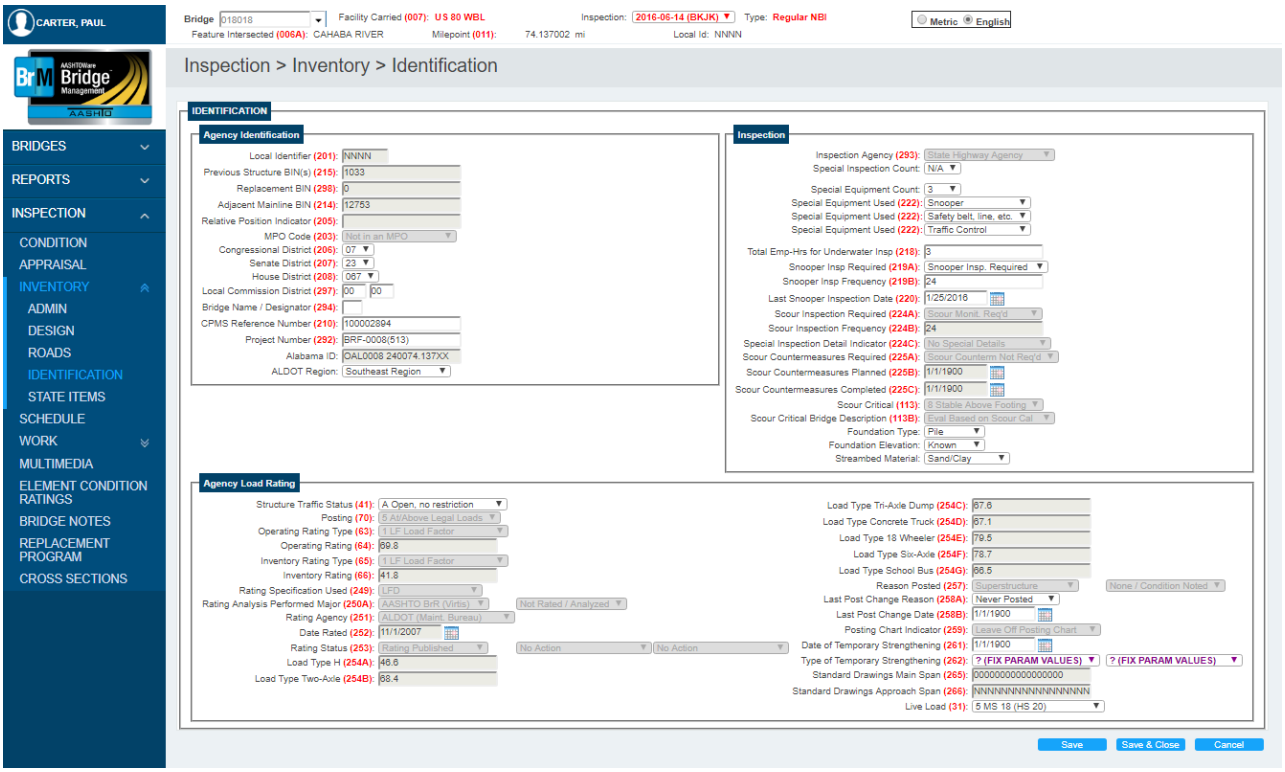


Figure 68 – Inventory-Identification Subtask

The Inventory-Identification Subtask (shown in Figure 68) includes mostly state items related to Agency, Inspection, and Load Rating. The Agency and Inspection items can be updated using drop-down menus and text boxes. Most of the load rating items are read-only and are updated by the Bridge Rating Section of the Maintenance Bureau. Some of the items in this task should be updated as needed after each routine inspection using data from the BI-6 form.

The **Inspection** panel contains a few unique items:

Special Inspection Count and **Special Equipment Count** are drop-down menus used to indicate the number of fields to display for Special Inspection Type (Item 92D) and Special Equipment Used (Item 222), respectively.

If your structure does not require any special inspections or special equipment, these fields should be set to N/A as shown in Figure 69.

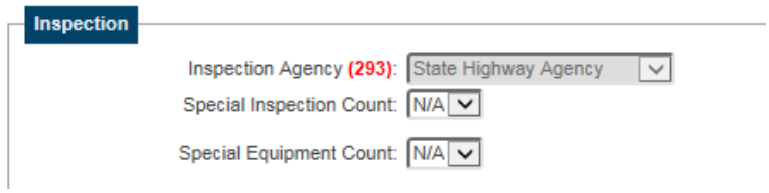


Figure 69 - This structure does not require any special inspections or special equipment

If your structure requires a special inspection and/or special equipment, code each **Count** field appropriately, and then use the fields provided to choose the type and/or equipment used during the inspection of the structure. See Figure 70.

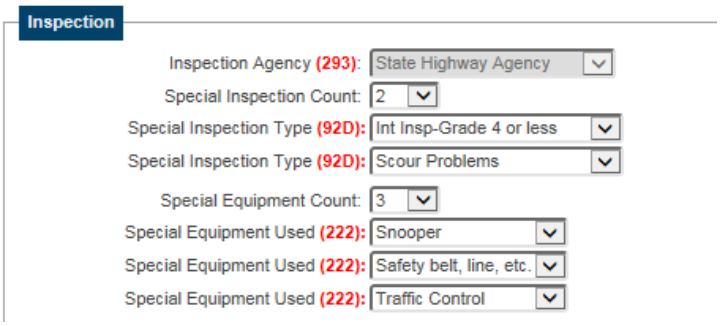


Figure 70 - This structure has 2 special inspection types and uses 3 types of special equipment

4.8: Inventory-State Items Subtask

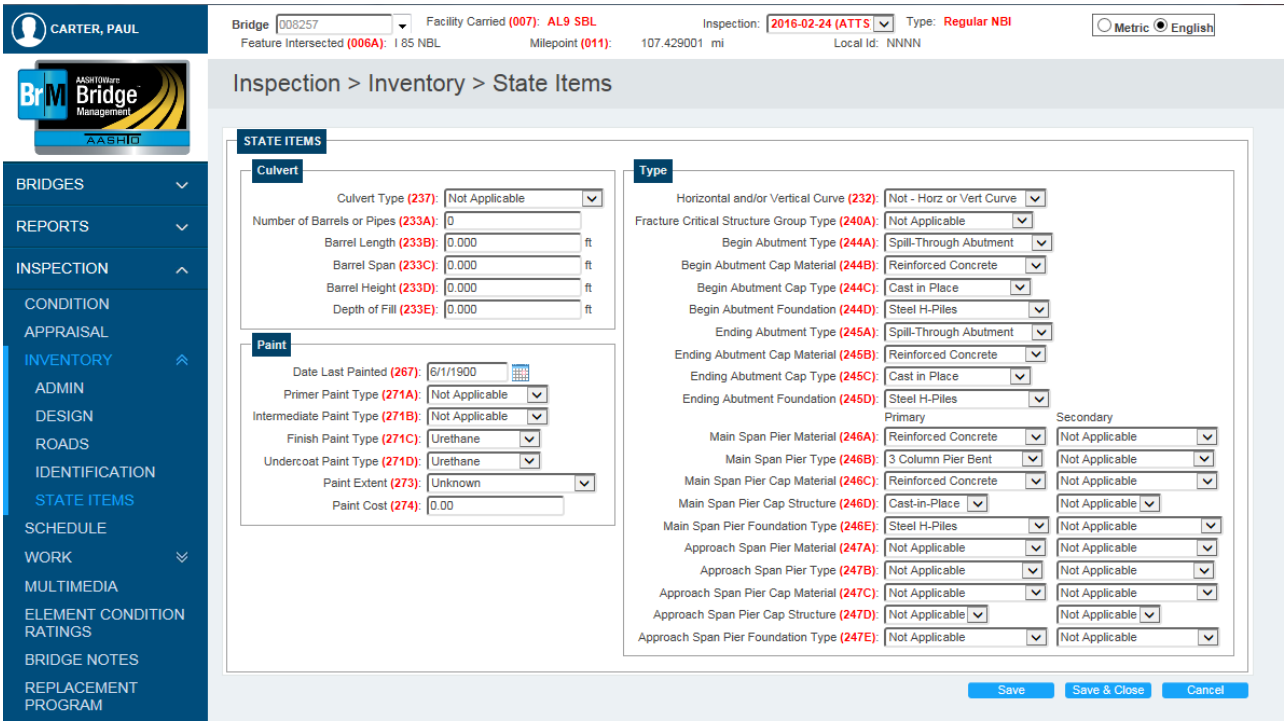


Figure 71 - Inventory-State Items Subtask

The Inventory-State Items Subtask (shown in Figure 71) includes State items related to Culverts, Paint, and Structure Type. Items on this page can be updated using drop-down menus and text fields. Most items on this page, once coded, are not likely to change over the life of the structure. An exception is the Paint panel, which should be updated each time the structure is painted.

4.9: Schedule Task

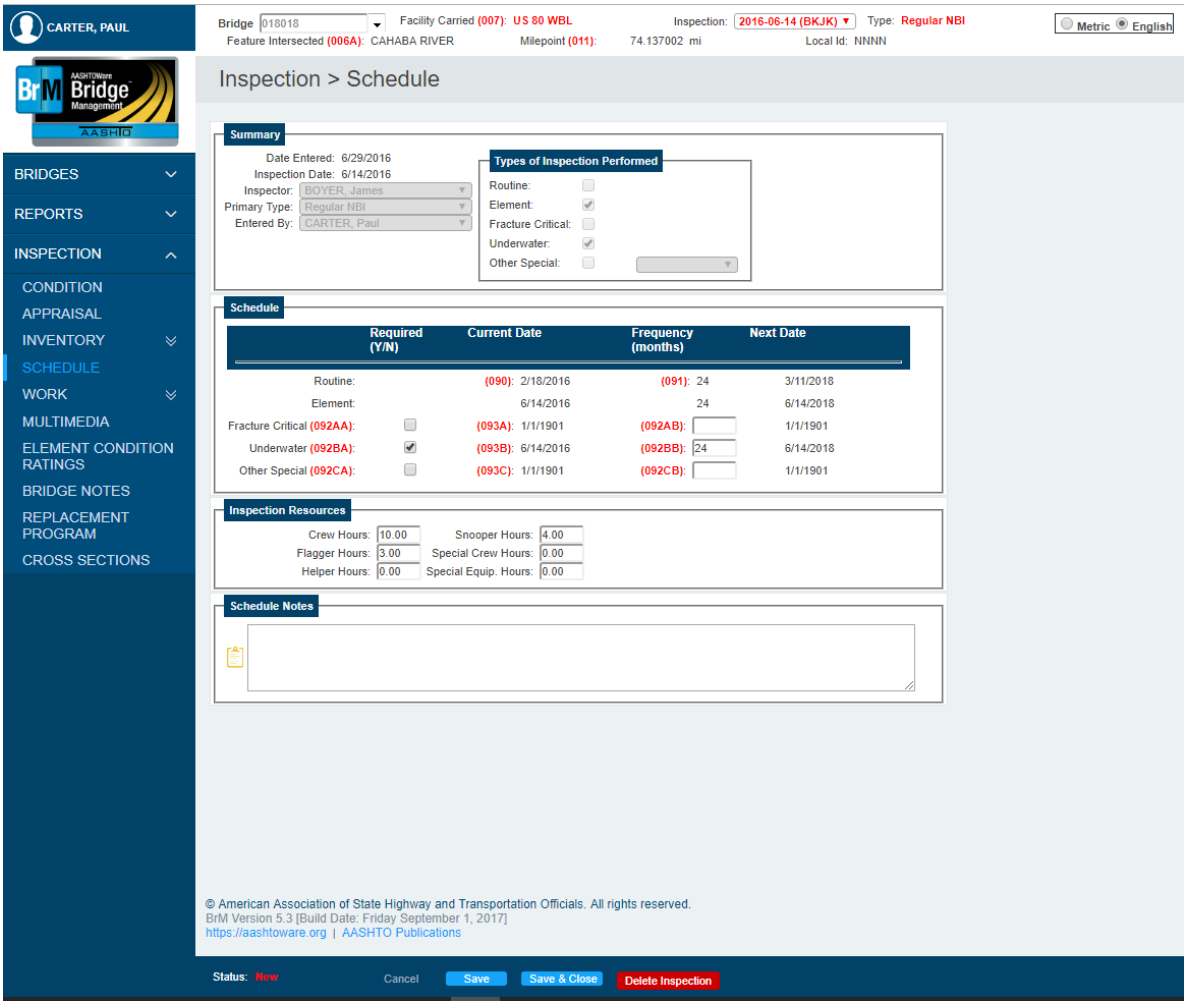


Figure 72 – Schedule Task

The Schedule Task (shown in Figure 72) displays information related to the types of inspections that a structure requires and when those inspections have been or should be completed.

The **Summary** panel shows information for the selected inspection such as: date and inspection type(s), the lead inspector, date the inspection was entered into BrM, and the user who entered it.

The **Schedule** panel displays which types of inspections are required for the structure and the frequencies for each of those inspection types. Any changes to the inspection types or frequencies as required by *ALDOT Guidelines for Operations* are done in this task. For example, if the structure now requires an interim inspection, this task should be updated by checking the box next to **Other Special** and adding a corresponding inspection frequency for Item 92CB. The **Previous Date** and **Next Date** are displayed for reference only.

Note - The Schedule Task should **NOT** be used to create a new inspection. If you need to create a new inspection, see Chapter 3.2: Creating a New Inspection.

4.10: Work-Work Candidates Subtask

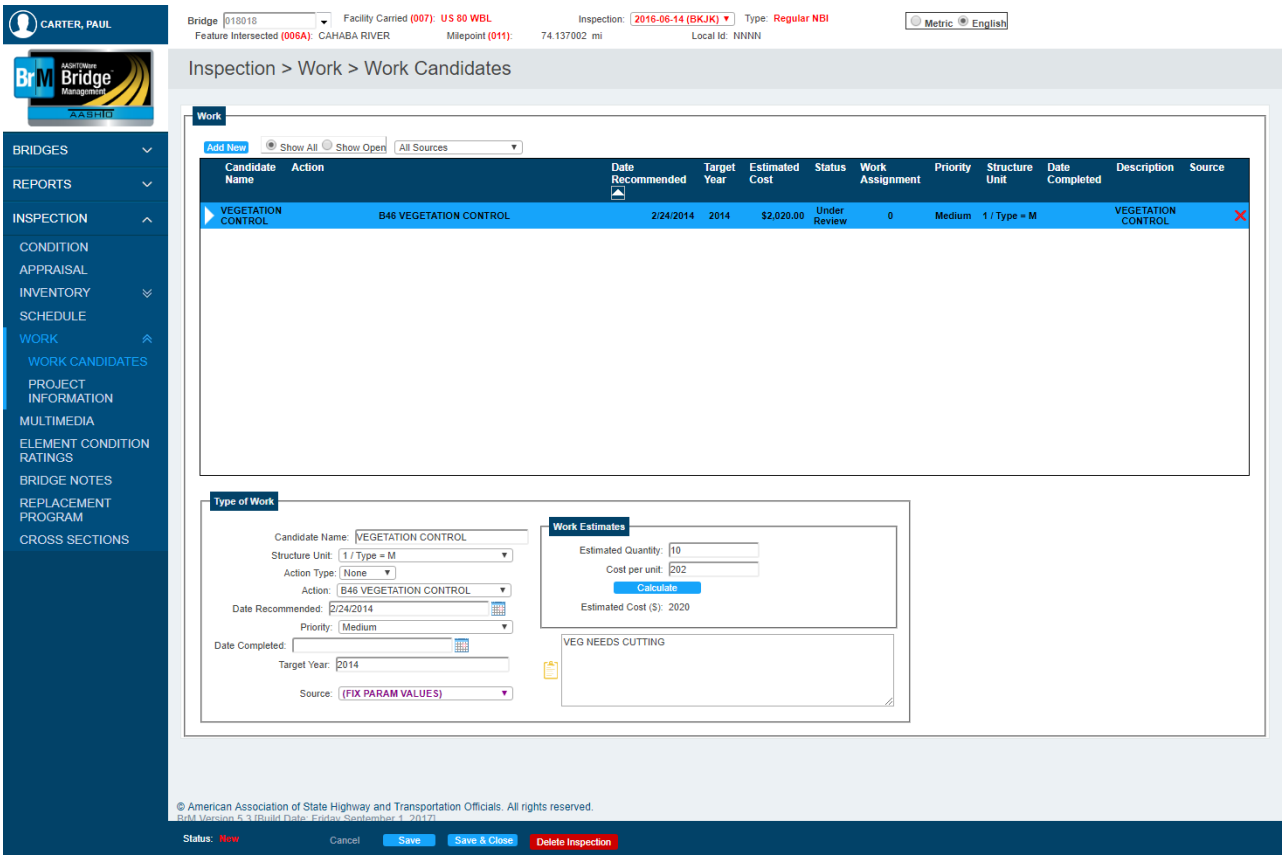


Figure 73-Work-Work Candidates Subtask

The Work-Work Candidates Subtask (shown in Figure 73) contains the maintenance actions that have been recommended for a structure and should be updated using data from the BI-9 form after each inspection. It displays the type of maintenance required, priority of the work, date the maintenance was recommended, estimated cost, and if the work has been completed.

All information from the previous inspection is carried forward on this task. The Show All and Show Open radio buttons can be used to toggle between all work candidates and work candidates that have not yet been completed.

Adding a New Work Candidate

In order to create a new work candidate, click Add New (highlighted in Figure 74).

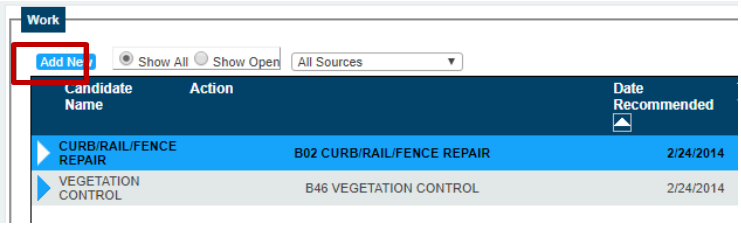


Figure 74 – Click Add New to add a new work candidate

Begin filling out the required information in the **Type of Work** panel by selecting the maintenance required from the **Action:** drop-down menu. See the BI-9 section of the *ALDOT Bridge Inspection Manual* for more information about Actions.

After selecting the type of work, set **Priority** of the action by using the drop-down menu. **Date Recommended** is automatically populated with the inspection date. If the date needs to be updated, use the calendar icon in this field (highlighted in Figure 75).

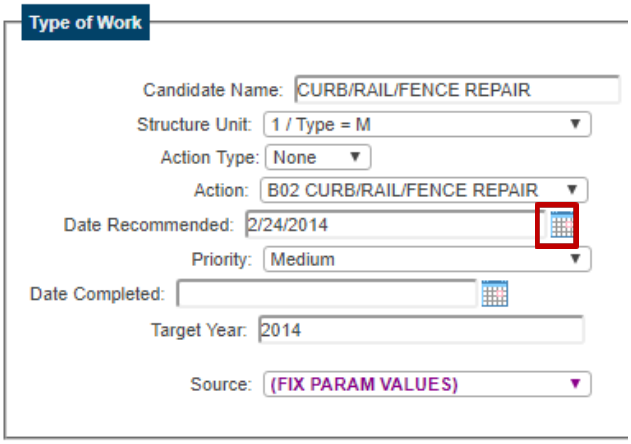


Figure 75 – Select the Action, Priority, and update the date recommended as needed

Next, enter the **Estimated Quantity**. After saving changes, the cost per unit and estimated cost are updated automatically. See Figure 76.

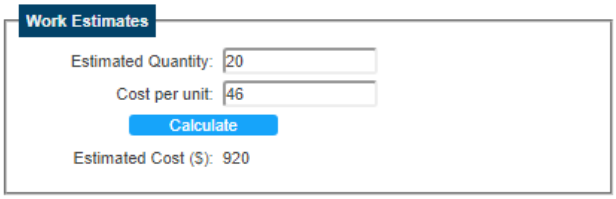


Figure 76 - Enter your estimated quantity to calculate the total estimated cost

Click Save to save the maintenance needed and the information now appears in the table in the **Work** panel at the top of your screen (see Figure 77).

Figure 77 - A new work candidate appears in the table above

Editing Existing Work Candidates

Work candidates can also be edited and deleted. As highlighted in Figure 78, clicking the blue arrow next to a candidate shows all of its information. The **Date Completed** field should be updated as work is accomplished. To delete a candidate, click the "**X**" icon at the end of the row.

Figure 78 - Click the blue arrow to select a candidate

4.11: Work-Project Information Subtask

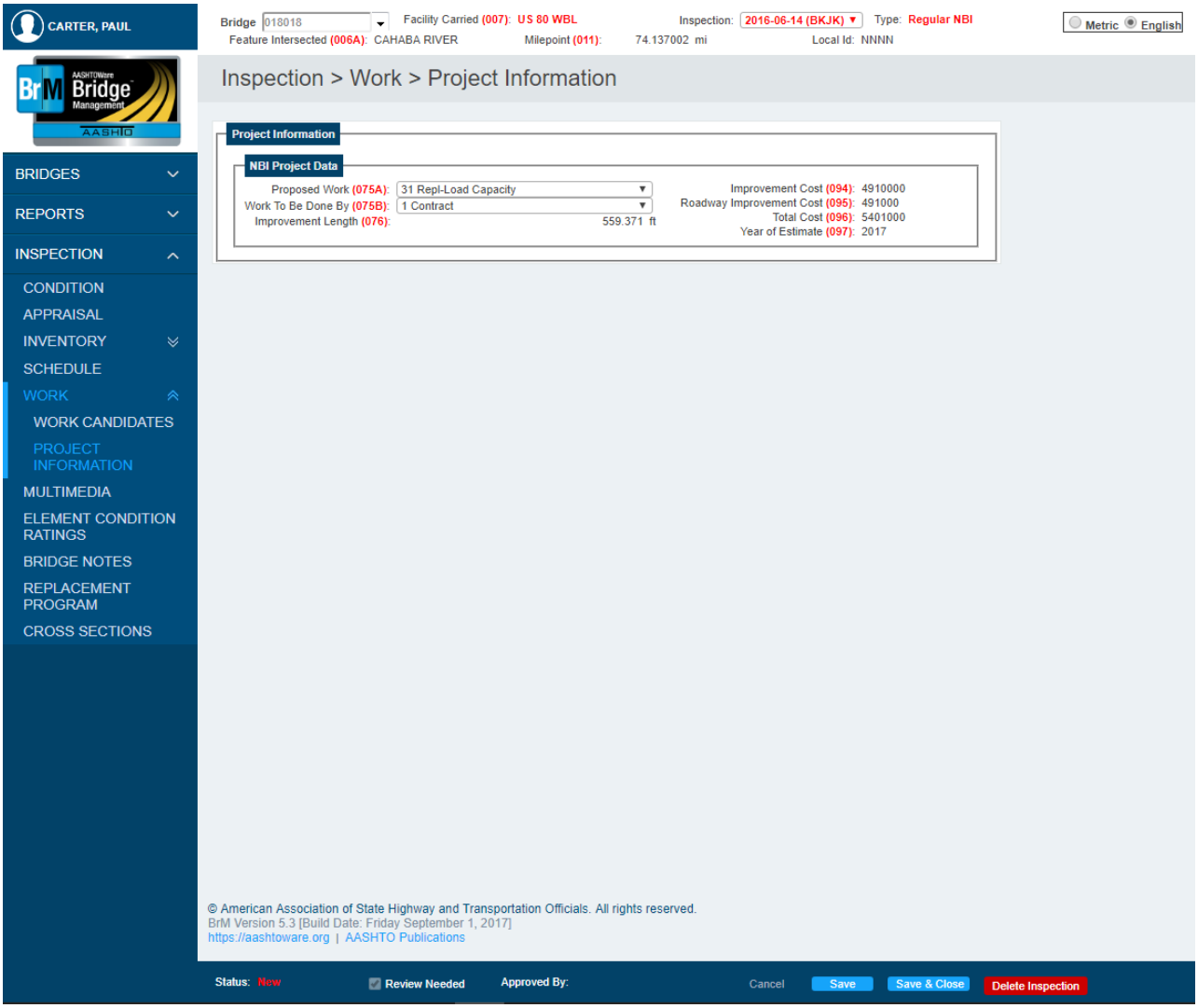


Figure 79 – Work-Project Information Subtask

The Work-Project Information Subtask (shown in Figure 79) includes Federal items pertaining to Type of Work and Cost Information. Proposed Work and Work To Be Done By fields in the NBI Project Data panel should be updated using the drop-down menus. All other fields in this panel are read-only because they are calculated by the database.

4.12 Multimedia Task

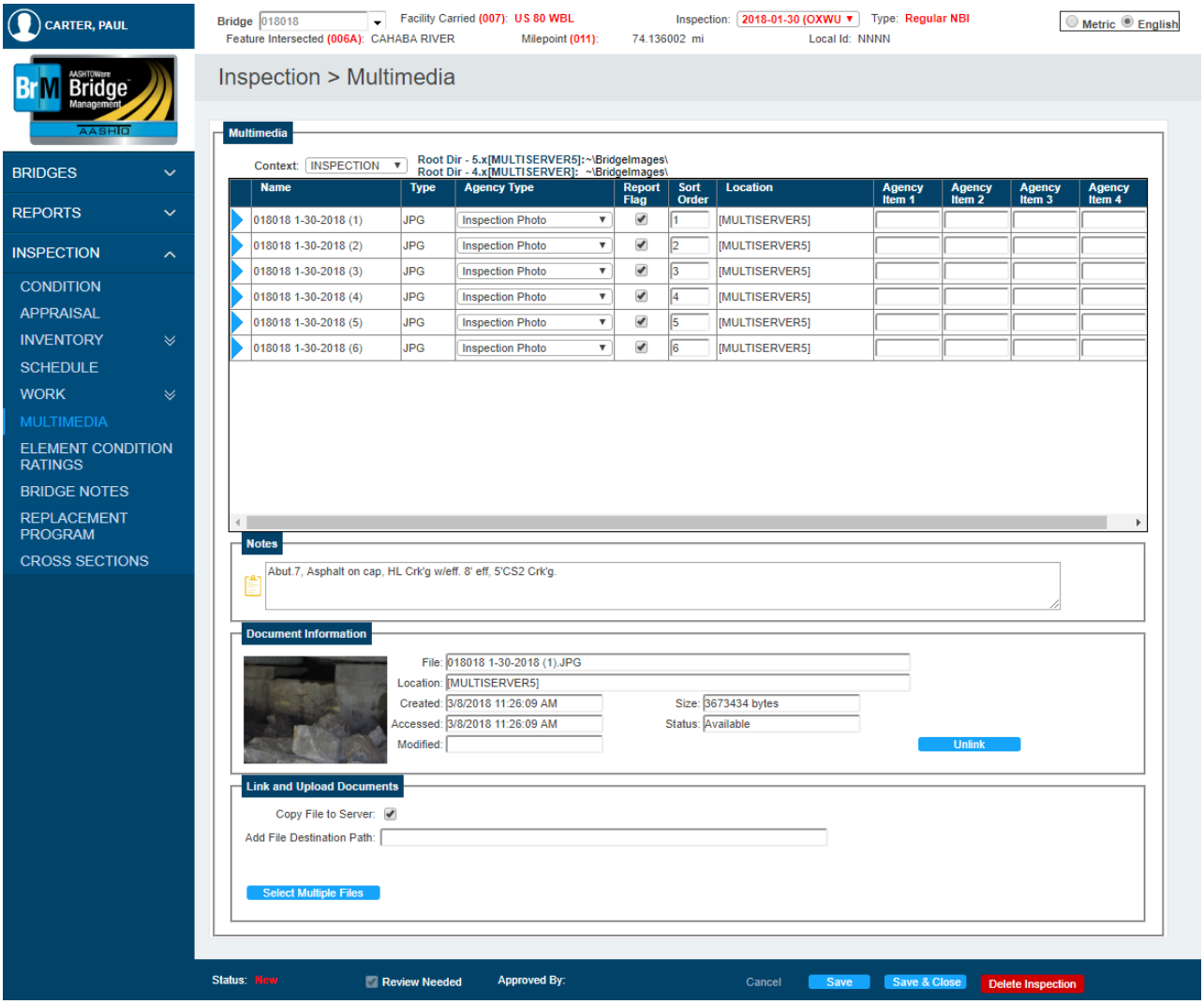


Figure 80 – Multimedia Task

The Multimedia Task (shown in Figure 80) stores and displays any multimedia files (inspection photos, design documents, and plans) associated with the selected structure. These files can be associated with the overall bridge or to a specific inspection. To view bridge photos, select Bridge from the Context drop-down menu. For inspection photos, select Inspection from the same drop-down menu, and then select the correct inspection from the Inspection menu in the task header.

Select a file by clicking the blue arrow next to the file name. You can now add or view descriptive notes as well as view a thumbnail of the photo. For a larger view of the file, click the thumbnail and a new tab will open in your browser displaying the file in full size

To Add Files

Note - Each file in the database must have a unique name assigned to it. In order to accommodate this, a naming convention has been established for your files. Before uploading **ANY** files, you must ensure that this convention is followed:

BIN, month, year, and a sequential number for that same date - BINMOYR##

For example, BIN 9005 was inspected on May 8, 2017. The first picture would be named 9005051701, and the second would be named 9005051702, etc.

It may be necessary for you to resize your pictures before uploading them into the database. Due to having a finite amount of storage on BrM's server, file sizes should be limited to 600 KB per file. This can be accomplished by adjusting the settings on your camera so that your photos are lower resolution or you can change the file sizes using your computer.

To change the file size of existing pictures, you must first create a new folder to store the compressed photos. Next select the photos you want to compress. See Figure 81.

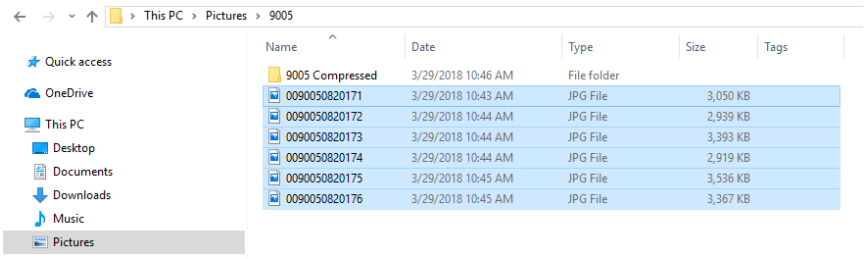


Figure 81 – Make a new folder and select photos to compress

As shown in Figure 82, right click on the selected photos and choose Send to → Mail Recipient.

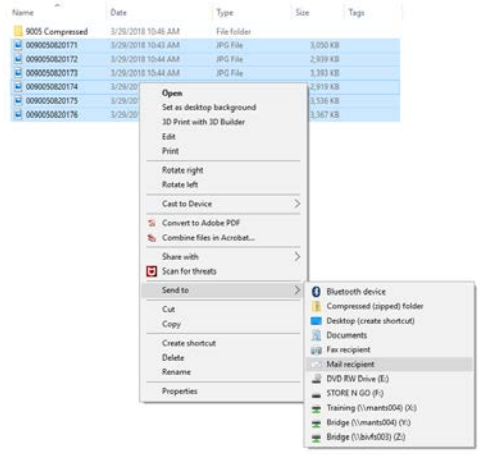


Figure 82 – Select Send to Mail Recipient

After selecting Mail Recipient an **Attach Files** dialogue box will appear. Choose medium from the **Picture Size** dropdown menu (shown in Figure 83) and click **Attach**.

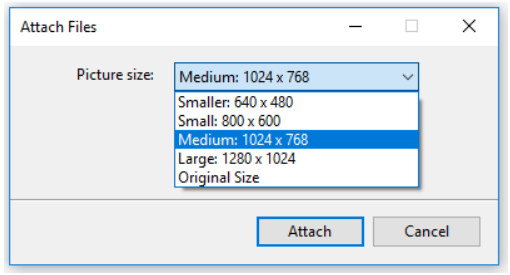


Figure 83 – Select medium as the file size

A new window will open from your computer's email application with the compressed photos attached. Select the attached photos and copy them into the folder that was previously made. See Figure 84.

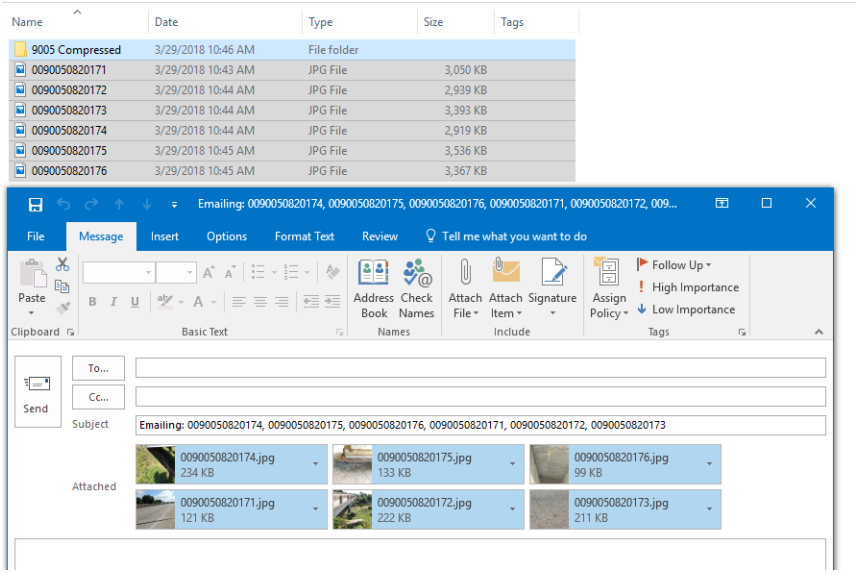


Figure 84 – Select the compressed photos and copy them into the folder

As shown in Figure 85, the file sizes were reduced to well below the 600 KB per file maximum.

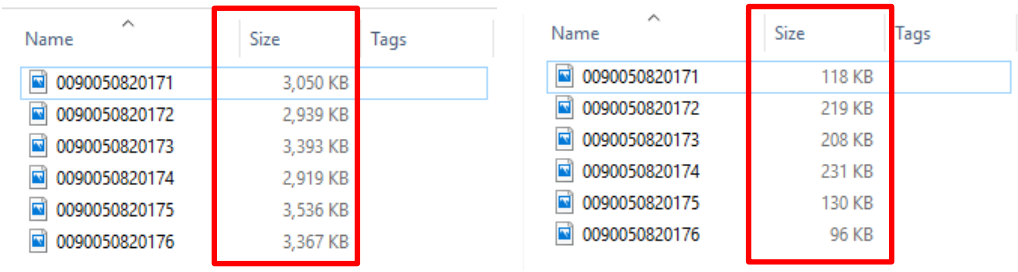


Figure 85 – Difference in photo file size

To add general bridge pictures, select Bridge from the Context drop-down menu. To add inspection photos, select Inspection from the same drop-down. By default, the most current inspection is selected in the task header. If your photos are from a different inspection, select the correct inspection from the drop-down menu. Click Select Multiple Files in the Link and Upload Documents panel to open your document library. Browse for the photo(s) you wish to upload, and click Open. Figure 86 displays multiple photo selections.

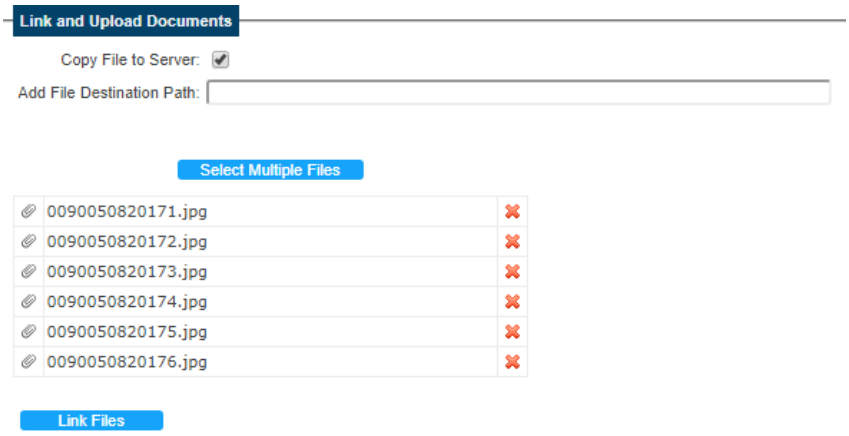


Figure 86 – Multiple photos have been selected

Confirm that these photos have the correct naming convention discussed above. You can remove any of the photos from this list by clicking the red "X". When you are ready to link the files, click **Link Files**.

Note - Files are not added to the bridge or inspection until **Link Files** has been selected.
Once linked, the files appear in the table and can be selected using the blue arrow next to the file name. You can now add descriptive notes as well as view a thumbnail of the photo. Select the **Report Flag** box if you would like the photo to be printed out with the inspection report.

Linked files cannot be removed from the database. They can, however, be unlinked from a bridge or inspection. To do this, select the desired file and click **Unlink**.

4.13: Element Condition Ratings Task

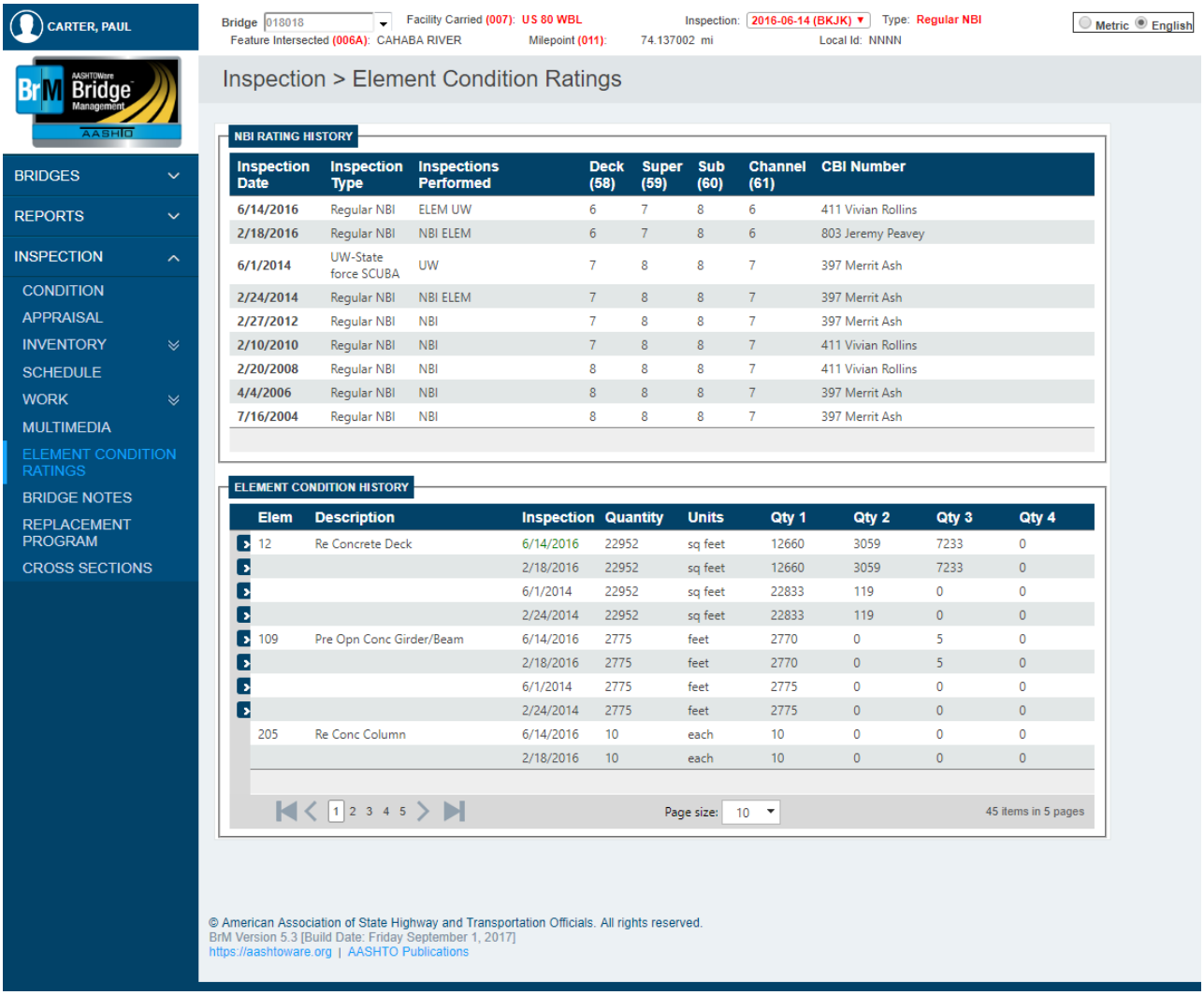


Figure 87 – Element Condition Ratings Task

The Element Condition Ratings Task (shown in Figure 87) displays NBI Rating History and Element Condition History for all previous inspections, beginning with the most recent inspection. The **NBI Rating** panel includes the inspection type(s), date, condition ratings, and the CBI who led the inspection. Both panels include controls for scrolling through multiple pages of history, when applicable.

4.14 Bridge Notes Task

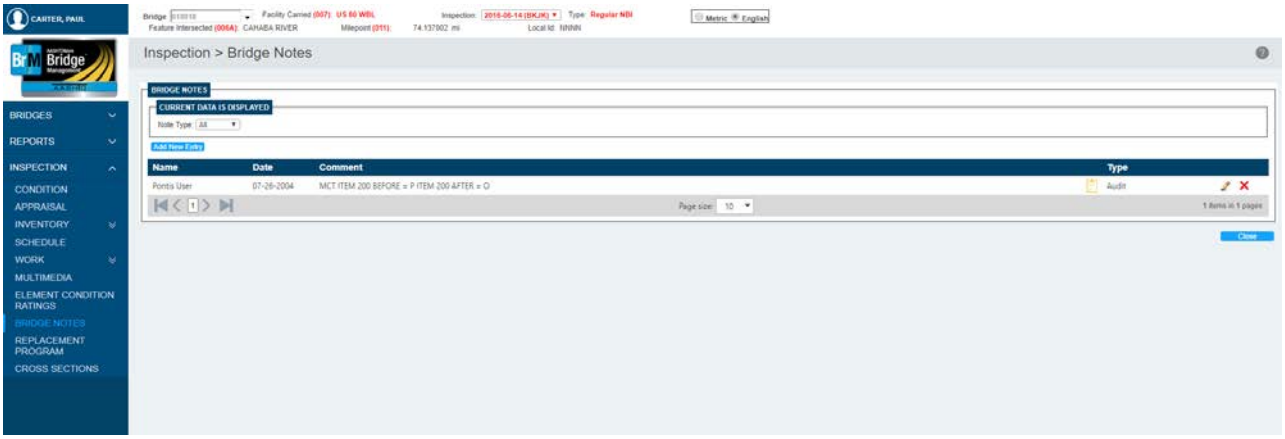


Figure 88 – Bridge Notes Task

The Bridge Notes Task (shown in Figure 88) serves as a general narrative (BI-13) for the bridge, and contains several types of notes, including Audit, General, EBIT, Program, Rating, and Scour. The **Notes** panel displays the name of the user who made the note, the date it was created, a preview of the note, and the note type. You can view an entire note by clicking the "clipboard" icon (see Figure 89). You can also edit a note by clicking the "pencil" icon, or delete the note by clicking the "X" icon (see Figure 90).

Note- Clicking the "X" icon automatically deletes the note without asking for a confirmation. It is not possible to "undelete" a note, so be very careful when using this option.

Any notes relating to a specific inspection should be entered in the inspection or element notes fields in the Condition Task (see Chapter 4.2: Condition Task).

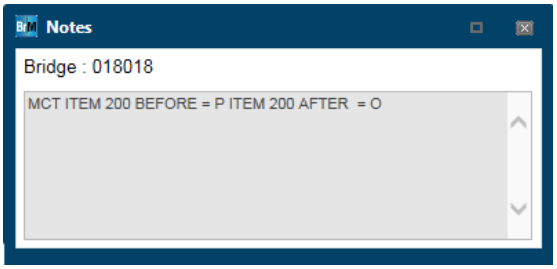


Figure 89– Dialog box appears with full note after clicking the "notepad" icon

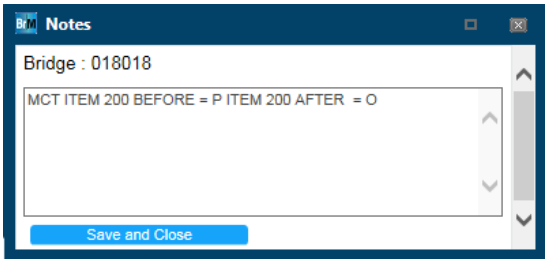


Figure 90 – Editable dialog box opens after clicking the "pencil" icon

To Add a New Note

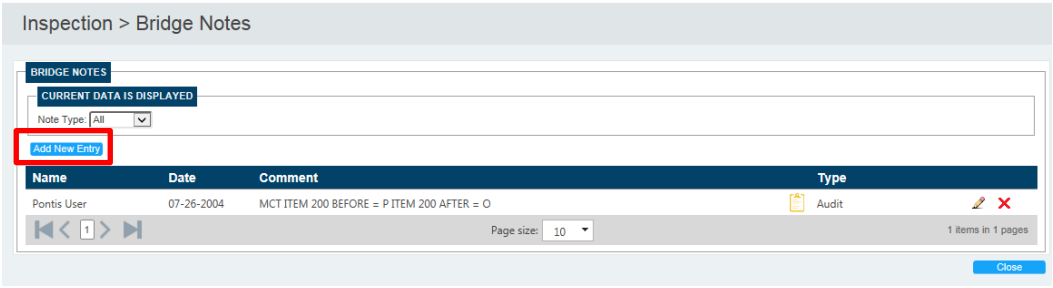


Figure 91 - Click Add Entry to add a new bridge note

Click **Add New Entry** (highlighted in Figure 91) to add a new bridge note. A new panel appears (see Figure 91). Select your **Note Type**, and enter your note into the space provided. This field limited to 1000 characters (Figure 92).

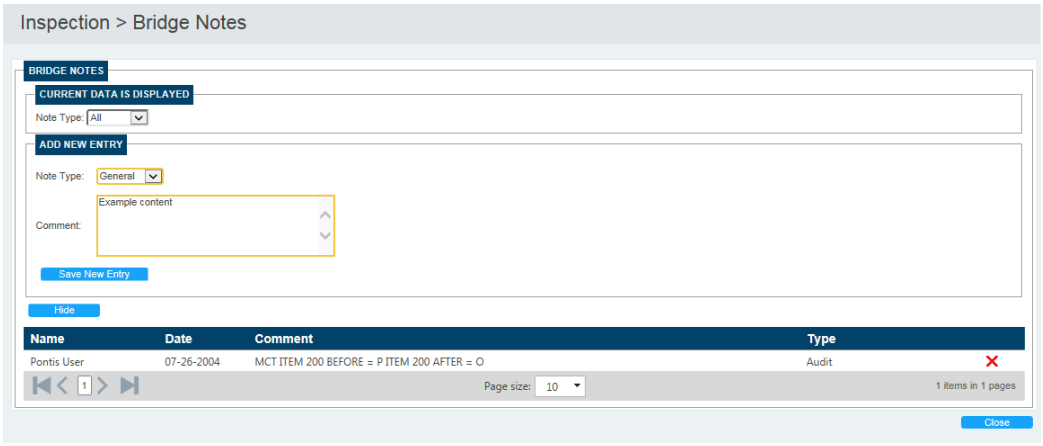


Figure 92 – Add New Entry panel; select a note type, enter comment in the space provided, and click Save New Entry

Click **Save New Entry**, and your note will appear in the notes list below (see Figure 93).

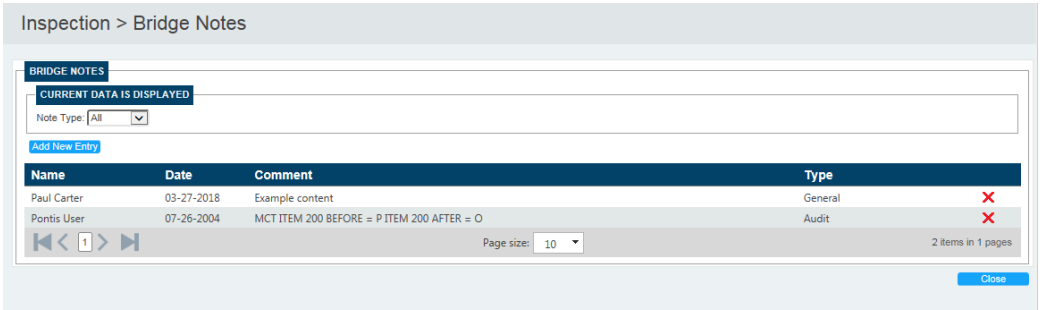


Figure 93 – New note displays in the notes tab

4.15 Replacement Program Task

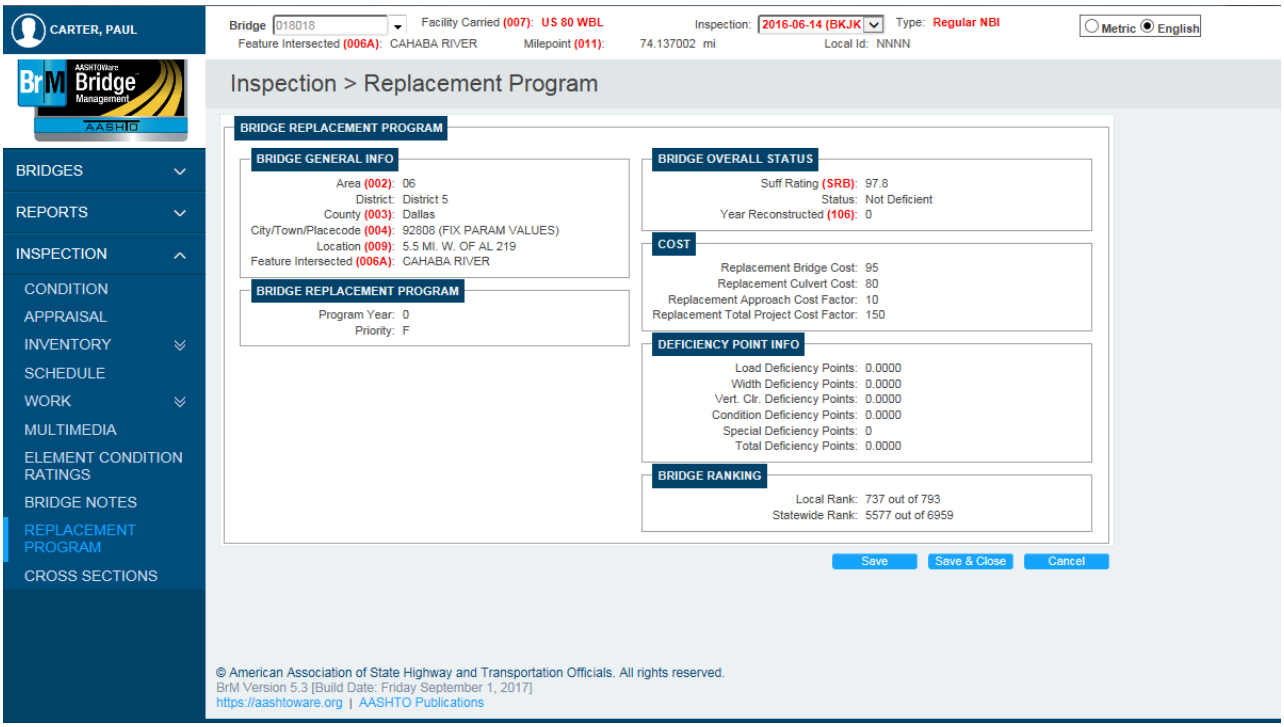


Figure 94 – Replacement Program Task

The Replacement Program Task (shown in Figure 94) is used to prioritize bridges for replacement. These items are read-only, and are updated by the Maintenance Bureau or the database.

4.16 Cross Sections Task

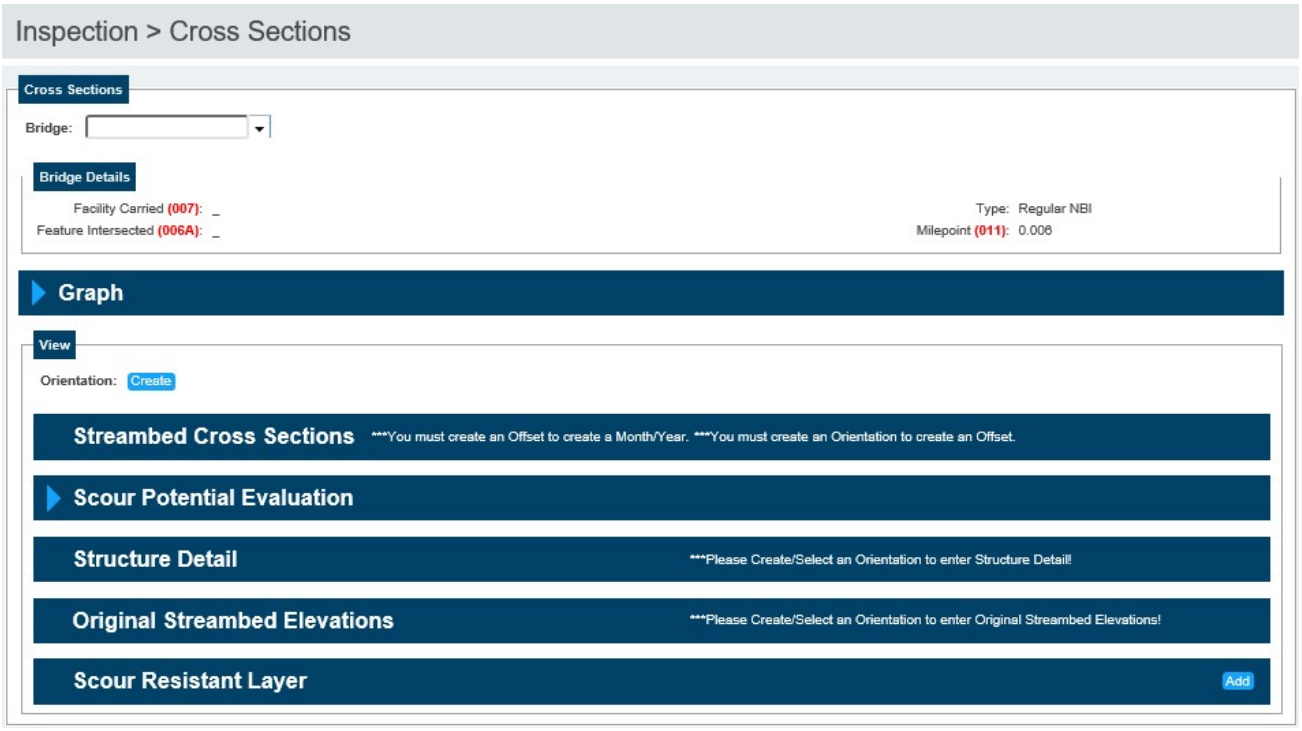


Figure 95 – Cross Sections Task

The Inspection > Cross Sections task (see Figure 95) allows the user to track and graph streambed cross sections relative to a structure and scour potential lines for the selected structure.
The following is a list of all panes on this screen and what should be done in each. A brief explanation of each is included.

Cross Sections

The **Cross Sections** task involves any information that is pertinent to the make-up of a structure. This panel consists of different **panes**. These panes include the **Graph** pane, **Streambed Cross Sections** pane, **Scour Potential Evaluation** pane, **Structure Detail** pane, **Original Streambed Elevations** pane, and **Scour Resistant Layer** pane.

Graph

The **Graph** pane contains the graph to view the details entered in the other panes below. The graph will update as information is entered in the other panes.

View

Cross section measurements are divided into views (left or right). For example, measurements may be taken on the left or upstream side of the structure and some on the right or downstream side. If the

structure is skewed, the structure details may differ between the two sides. Thus, views keep the upstream measurements grouped and graphed relative to their structure details, while the downstream measurements are kept with their details. You will need to create at least one view for a structure to use the cross-section module on it.

Streambed Cross Sections

The **Streamed Cross Sections** pane is where ground line measurements are recorded during each inspection. It is typically filled in by bridge inspectors.

Scour Potential Evaluation

The **Scour Potential Evaluation** pane is for recording calculated scour depths for analyzed flood events. If no scour potential evets are recorded, this pane will appear blue with an **Add** button.

Structure Detail

The **Structure Detail** pane allows the user to draw and define the structure. When the **Structure Detail** pane contains data, it turns the color of that line. The color of the line can be changed to meet preferences.

Original Streambed Elevations

Many structures have the original ground line data included in their plan sets. This data can be useful when considering the effects of scour over the lifetime of the structure. When data related to the **Original Streambed** is added, the pane will turn the color of the line on the graph. The color of the line can be changed to meet preferences.

Structure Detail

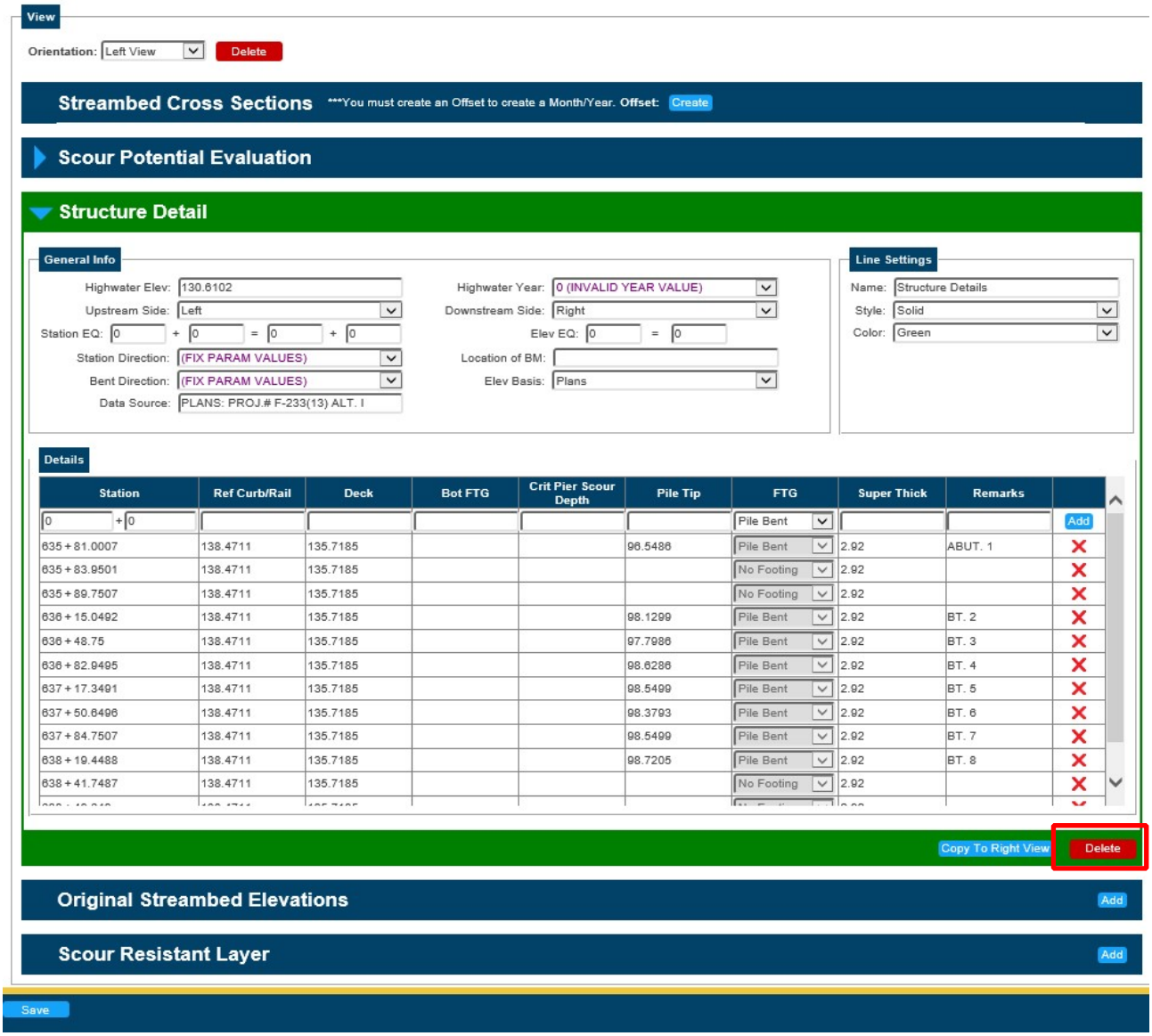


Figure 96 - Structure Detail Pane

The Structure Detail pane (shown in Figure 96) allows you to enter the Structure Detail data so the elevation view of the structure can be included in the **Graph**. You may view, add, change, or delete structure detail data from this screen.

The **General Info** panel displays bridge hydrology information including highwater elevation and year, as well a place to specify the upstream and downstream sides of the bridge

There are two valid views (left or right) that can be specified for each structure in the **Orientation** dropdown menu located in the top left of the **View** panel. For each view of a structure, the station equation, station direction, bent direction, data source, elevation equation, location of the bench mark, and the elevation basis can be entered. For each station along the structure, you may enter elevations for the top of reference curb/rails, top of deck, bottom of footings, critical pier scour depth, and pile tips. The type of footing and superstructure thickness along with any pertinent remarks regarding that station may also be entered. This information can be edited by selecting the field, or a line of information can be deleted using the ✕ icon on that row. You can delete entire view by clicking **Delete** (highlighted in red in Figure 96) in the bottom, right corner of the panel.

Note- Clicking **Delete** deletes the entire view. You will not be able to undo this.

The following is a list of all fields on this screen and what should be entered in each one. A brief explanation of each is included.

View Selection

Orientation:
This field (located in the top left of the panel) is used to identify the view of the structure detail information. The orientation of the bridge would be determined when traveling in the direction of the inventory route (increasing mile markers). The field contains the parameters below:

Left view - data is for the left side of the bridge (stations increasing in the direction of the route)

Right view - data is for the right side of the bridge (stations decreasing in the direction of the route)

General Info

Highwater Elevation:
This field shows the highest water elevation during the maximum known flood event at the bridge site.

Highwater Year:
This 4-digit field shows the year of the maximum known flood event at the bridge site.

Upstream Side:
This field specifies the upstream side of the structure. It is referenced in the inventory route direction. The field contains the parameters listed below:

Unknown – the upstream side is not known

Left – the upstream side is the left side of the bridge

Right - the upstream side is the right side of the bridge

Downstream Side:
This field specifies the downstream side of the structure. It is referenced in the inventory route direction. The field contains the parameters listed below:

Unknown – the downstream side is not known

Left – the downstream side is the left side of the bridge

Right - the downstream side is the right side of the bridge

Station EQ:
This field is used to capture a station equation which may be required to reference all horizontal information from a common reference point. If the beginning of the bridge was assumed to be at station 1 + 00.00 and plans were later discovered showing the beginning of the bridge at station 5 + 42.68, then a station equation could be used to correct the assumed station. This allows for the historical reference material (i.e., plans and pile driving records) to be referenced appropriately to the bridge plot. It is important to be aware that the station equation may be required for each section of data such as structure details, original streambed elevations, and streambed cross sections, so that they are all correlated by a common reference point. The station equations should be completed as required for the bridge to plot correctly.

Station Direction:
This field is used to capture the station direction determined when traveling in the direction of the inventory route (increasing mile markers). The field contains the parameters below:

Increasing

Decreasing

Bent Direction:
This field is used to capture the bent direction determined when traveling in the direction of the inventory route (increasing mile markers). The field contains the parameters below:

Increasing* The bent direction should always be increasing. *

Decreasing

Data Source:
This field captures the source of the structure detail information. The structure elevations may come from "design" plans, "as-built" plans, or a field survey.

Elev. EQ:
This field captures the elevation equation which may be used to reference all vertical information from a common reference plane for plotting. If the bridge details are initially plotted based on an assumed reference elevation and later plans are located which show the actual elevations, the initial assumed reference elevation can be equated to the actual elevation based on the information from the plans.

For example, a crew goes to the field to gather bridge detail information and they set a reference point with assumed elevations, such as 150.00 feet. Later, a different crew goes to gather streambed sounding information and they use the same reference point but assume an elevation of 100.00 feet. These plots can and must be put on a common reference line by keying an elevation equation. In this case, the elevation equation on the streambed soundings form would be 100.00 feet = 150.00 feet because the streambed soundings should be linked to the same elevation.

Be aware that an elevation equation may be required for each section of data such as structure details, original streambed elevations, and streambed cross sections, so that they are all correlated by a common reference point. The elevation equations should be completed as required for the bridge information to plot correctly.

Location of Benchmark (BM):
This field captures the location of the bench mark used for referencing the cross sections (ex. top of rail, from curb, from deck).

Elevation Basis:
This field captures the type of platform the elevations for the structure details are based on. The field contains the parameters below:

Assumption - Elevations are based on assumption. From some semi-permanent, fixed point, on or near the bridge, an elevation is assumed. All subsequent elevations for the structure are based on this "assumed" elevation.

US Geodetic Survey - Elevations are based on a U.S. Geodetic Survey bench mark or an Alabama Department of Transportation bench mark. This would be basically the same as elevations from the bridge plans except that plans might not be available on the structure, but a geodetic marker is conveniently close.

Plans - Elevations are taken from the bridge plans. In this case, the elevations are usually based on a permanent U.S. Geodetic Survey bench mark or an Alabama Department of Transportation bench mark, as referenced in the bridge plans.

Line Settings

You can choose the line style of the structure, such as the color and style that the lines will be in the graph by selecting the **Color** or **Style** drop-down menu in the **Line Settings** panel.

Details

Station:
This field captures the stations along the structure. Each station should be located at some changed condition (i.e., deck elevation change, substructure support location, or superstructure thickness change). The maximum value which can be entered into this field is 9999 + 99.999.

Ref Curb/Rail:
This field captures the elevation for the top of the reference point whether it is the curb, rail, or some other feature. A negative sign may be entered, if necessary. Note that the reference point is not plotted, but used to subtract sounding depths to obtain actual channel cross section elevations.

Deck:
This field captures the elevation for the top of deck of the structure. A negative sign may be entered, if necessary.

Bot FTG:
This field captures the elevation for the bottom of a spread, rock, or pile footing, if present. If there are two footings in a bent, such as for a two-column bent, the shallowest footing elevation should be entered. This field is seven digits long including three decimal places. A negative sign may be entered, if necessary. If the elevation of the bottom is unknown, leave it blank.

Crit Pier Scour Depth:
This field captures the elevation at which this foundation element could become unstable due to scour. If the elevation is unknown, leave it blank.

Pile Tip:
This field captures the pile tip elevation of the shallowest pile in a bent or under a pile footing, when present, and is seven digits long including three decimal places. A negative sign may be entered, if necessary. If the elevation is unknown, leave it blank.

FTG:
This field captures the type of foundation at each station entered. The data is used to graphically represent that particular type of foundation on the scour plot. The field contains the parameters below:

Drilled Shaft - If this is coded but a pile tip elevation is not, it is assumed that the elevation is unknown and the structure plot reflects this. If this elevation is known, it should be entered in the Pile Tip field.

No Footing - No footing at this station, however, some other change occurs such as a change in the deck elevation or the superstructure thickness. No elevation should be entered for the bottom of footing or pile tip categories.

Pile Bent - Pile bents not related to a spread footing. If this is coded but a pile tip elevation is not, it is assumed that the elevation is unknown and the structure plot reflects this. If this elevation is known, it should be entered in the Pile Tip field.

Pile Footing - Spread footing on piles. If this code is entered but a bottom of footing elevation or pile tip elevation is not, it is assumed that these elevations are unknown and the plot of the structure reflects this. If elevations are known, they should be entered in the Bot FTG and Pile Tip fields.

Spread Footing - Spread footing with no piles. If this code is entered but a Bottom of footing elevation is not, it is assumed that the elevation is unknown and the structure plot reflects this. If this elevation is known, it should be entered in the Bot FTG field.

Spread footing on Rock - Spread footing on rock. If this code is entered but a footing elevation is not, it is assumed that the elevation is unknown and the structure plot reflects this. If this elevation is known, it should be entered in the Bot FTG field.

Tower Bent - Tower bent. If this code is entered but a pile tip elevation is not, it is assumed that the elevation is unknown and the structure plot reflects this. If this elevation is known, it should be entered in the Pile Tip field.

Super Thick:
This field captures the thickness of the deck and superstructure to provide information for plotting the bottom of the girders.

Remarks:
This narrative field captures any pertinent remarks about the structure at the particular station.

To Add Structure Detail Information

If your structure has never had detail information entered, click **Create** next to "Orientation" in the **View** panel to create an Orientation. See Figure 96.

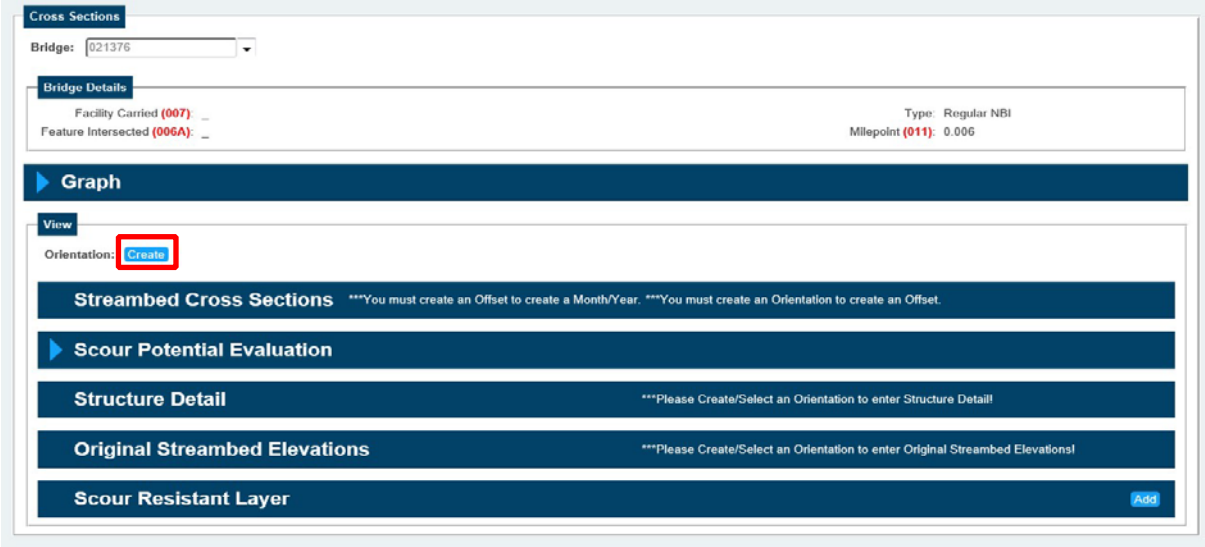


Figure 97 – Create a new view

Next, select the New Orientation view. There are only two valid views – left and right that can be specified for each structure in the drop-down menu located in the top left of the **View** panel. After selecting the orientation, click **Add** to the right of the orientation field. See Figure 98.

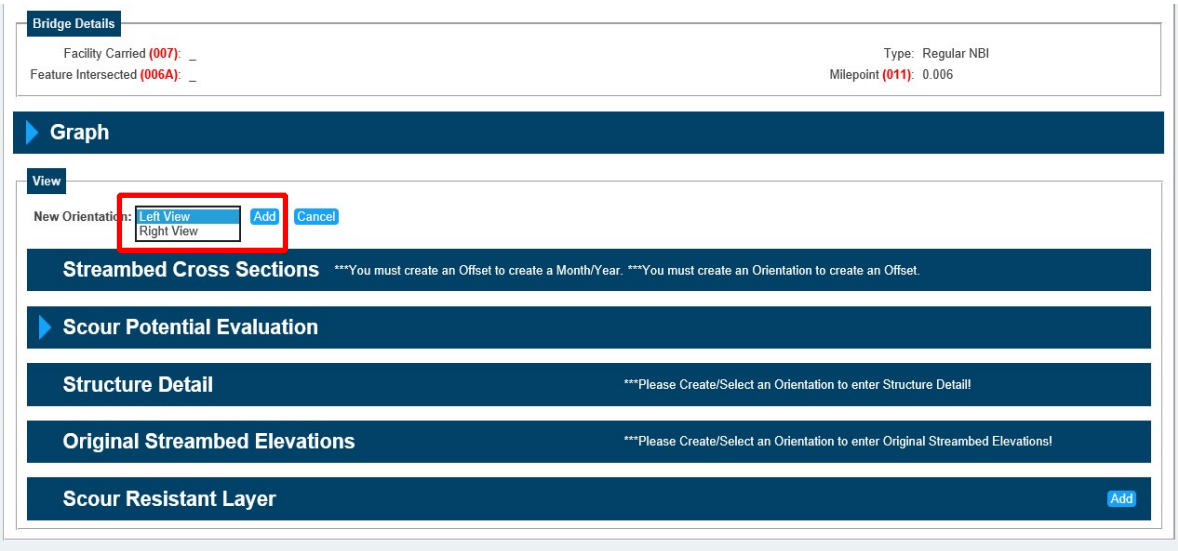


Figure 98 – Select Left or Right View and click Add

Click **Add** in the Structure Detail Pane to start entering the structure information. See Figure 99.

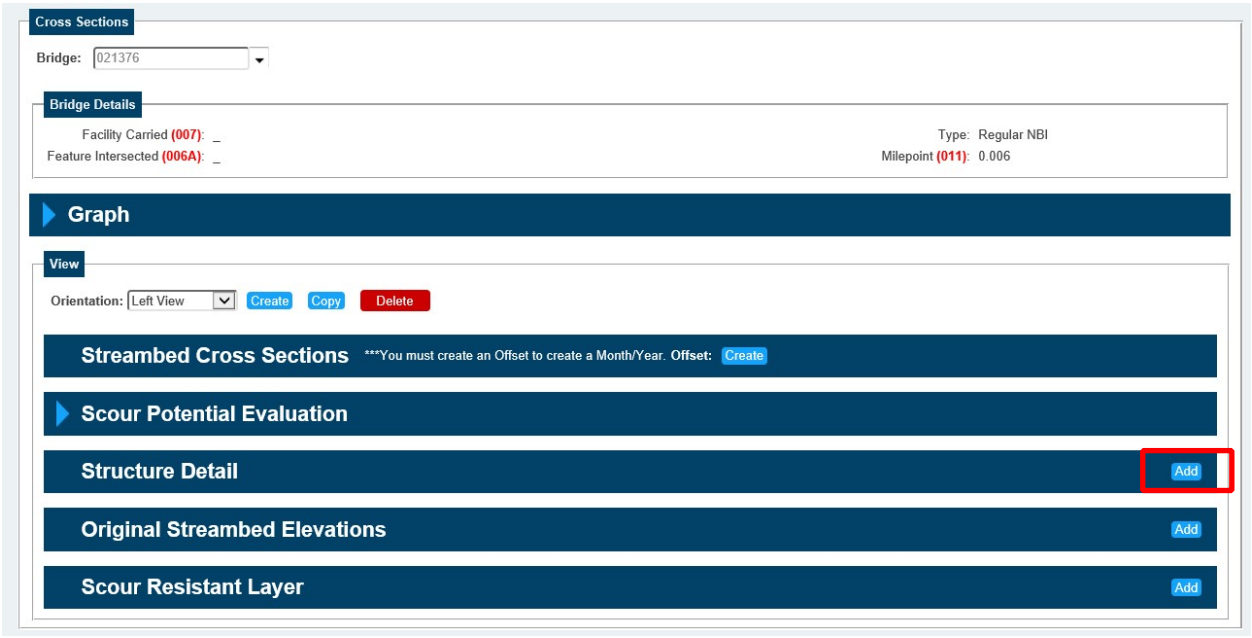


Figure 99 – Select Add on the structure detail pane

Once you click **Add**, the **Structure Detail** pane will then open. Fill out all required information in the **General Info** panel (this is highlighted in red in Figure 100).

You can choose the style and the color for the lines of the structure that will be in the graph by selecting the Color or Style drop-down menu in the **Line Settings** panel (this is highlighted in blue in Figure 100).

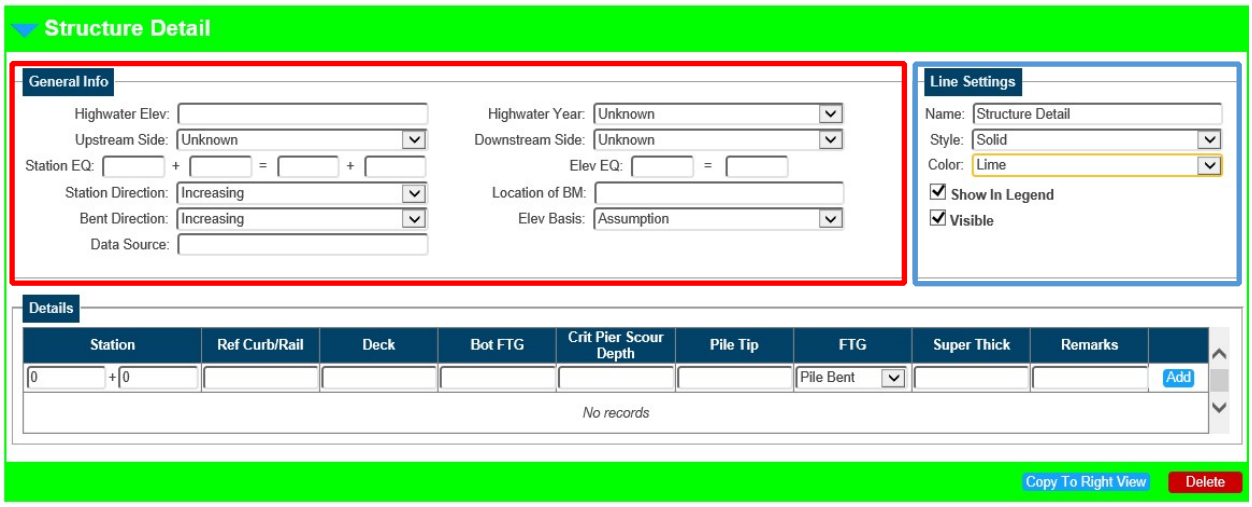


Figure 100 – General Info and Line Settings panels in Structure Detail pane

Next, fill all pertinent information in **Details** panel using the boxes below (highlighted in red in Figure 101), making sure to choose a footing type from the drop-down menu. You MUST click **Add** on the right of the **Detail** panel to submit that information and to be able to enter the next set of data. See the red arrow below in Figure 101. Repeat this step, adding as many lines as necessary, to finish the view.

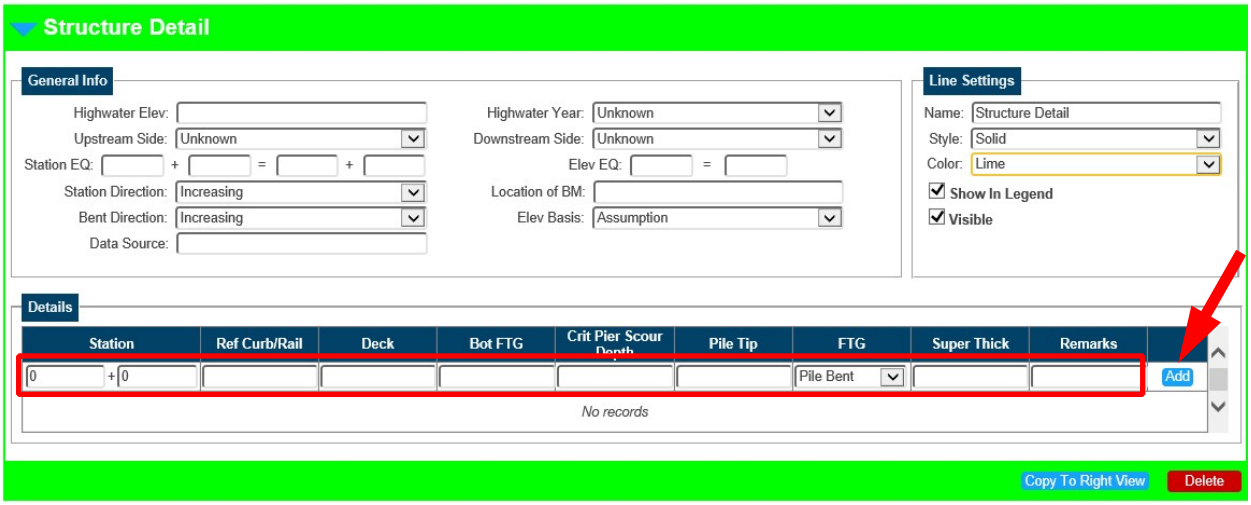


Figure 101 – Add data into Detail pane to draw structure detail

Note- Clicking **Delete** deletes the entire view. You will not be able to undo this.

After all records have been added, click **Save** (see arrow below in Figure 102)**.** The structure details will appear as shown in Figure 102. Note that the stations appear in order after saving. If the structure detail is similar on both sides of the structure, you may click "**Copy to Right** (or Left) **View**" (highlighted in red in Figure 102). This will automatically change the Orientation View to the opposite side of the structure with information already populated. Make any necessary edits and click **Save** again to save the new view.

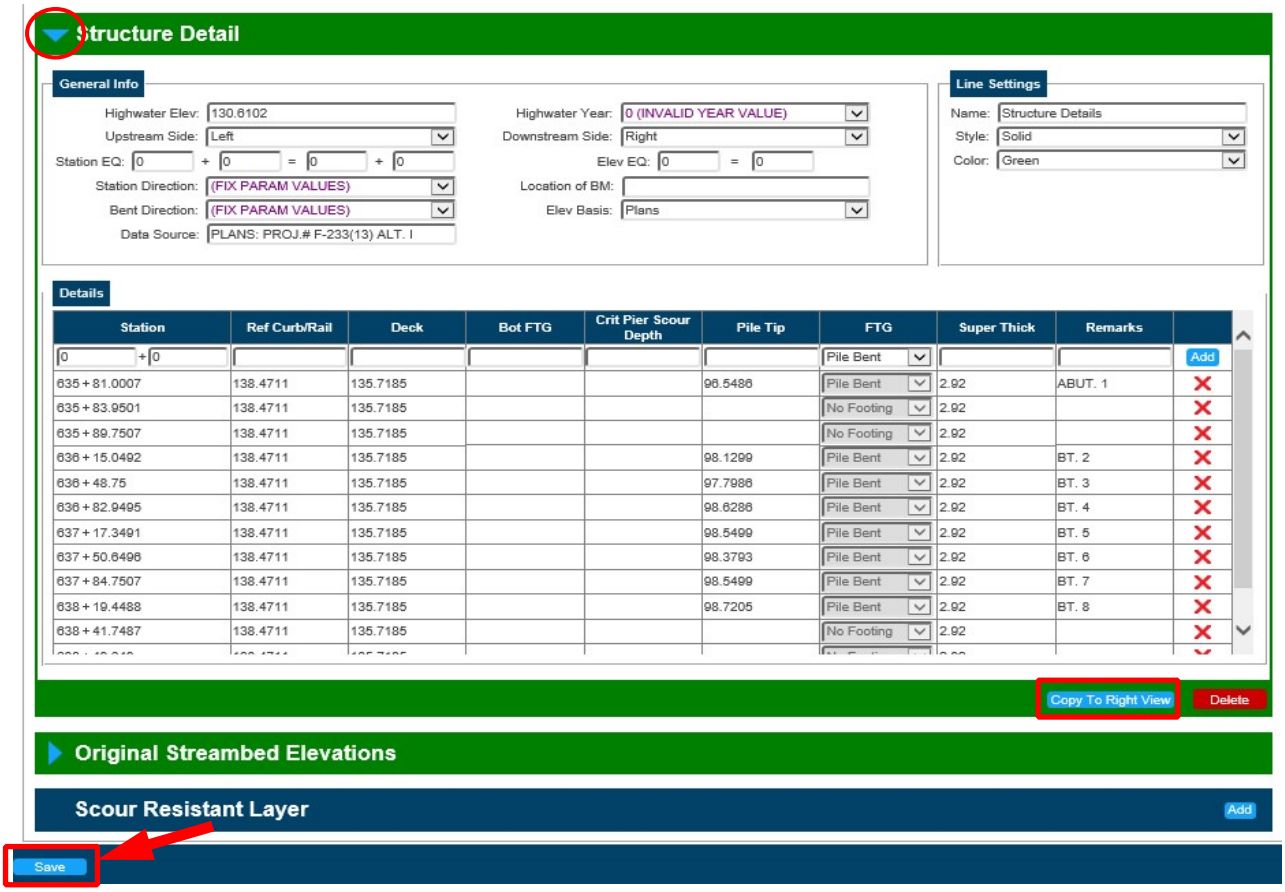


Figure 102 – Structure Detail pane

Once the Structure Detail has been completed, that pane can be closed, if desired, by clicking the light blue ▼ to the left of the words Structure Detail. See Figure 102.

The structure that was just created by entering the Structure Detail information can be seen by clicking the light blue arrow ▶ next to the word **Graph** (see the red highlight circle in Figure 103). To view the entire graph once the **Graph** pane is open, click the "Parameters" tab to close the **Graphs Parameters** box (see the yellow highlight box in Figure 103)

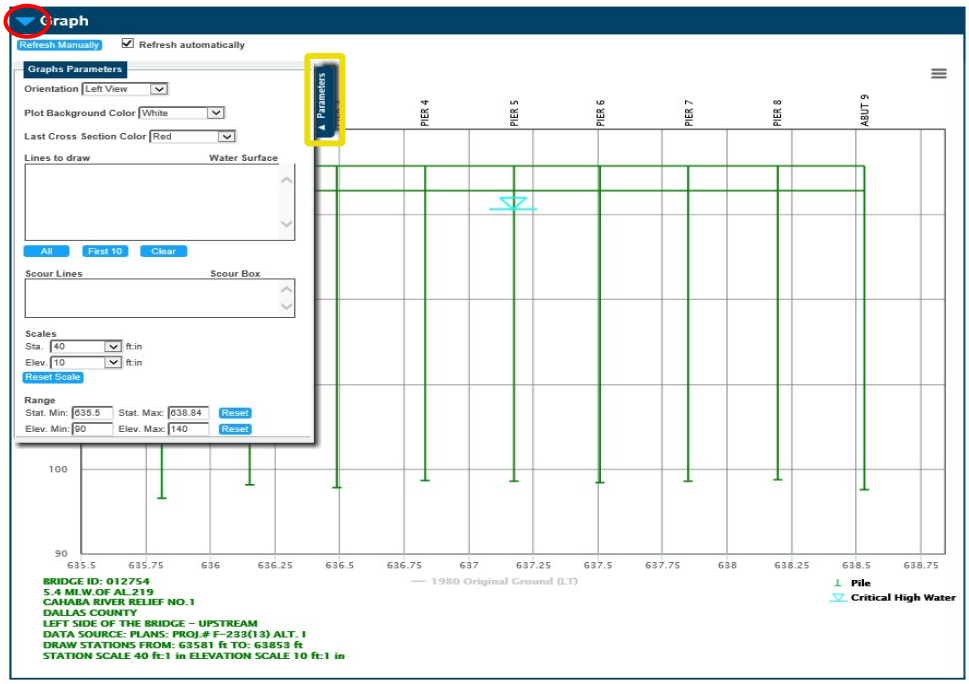


Figure 103 – Graph parameters box

Figure 103 shows the new Structure Detail Graph. More information will be given in detail on how to navigate the new Graph function later in the manual.

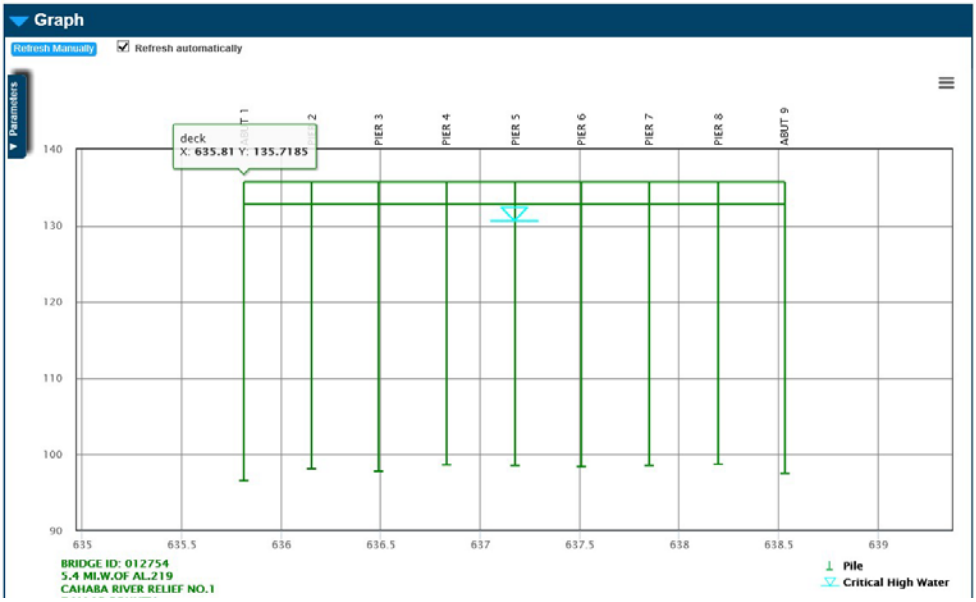


Figure 104 – Graph with structure detail plotted

Original Streambed Elevations

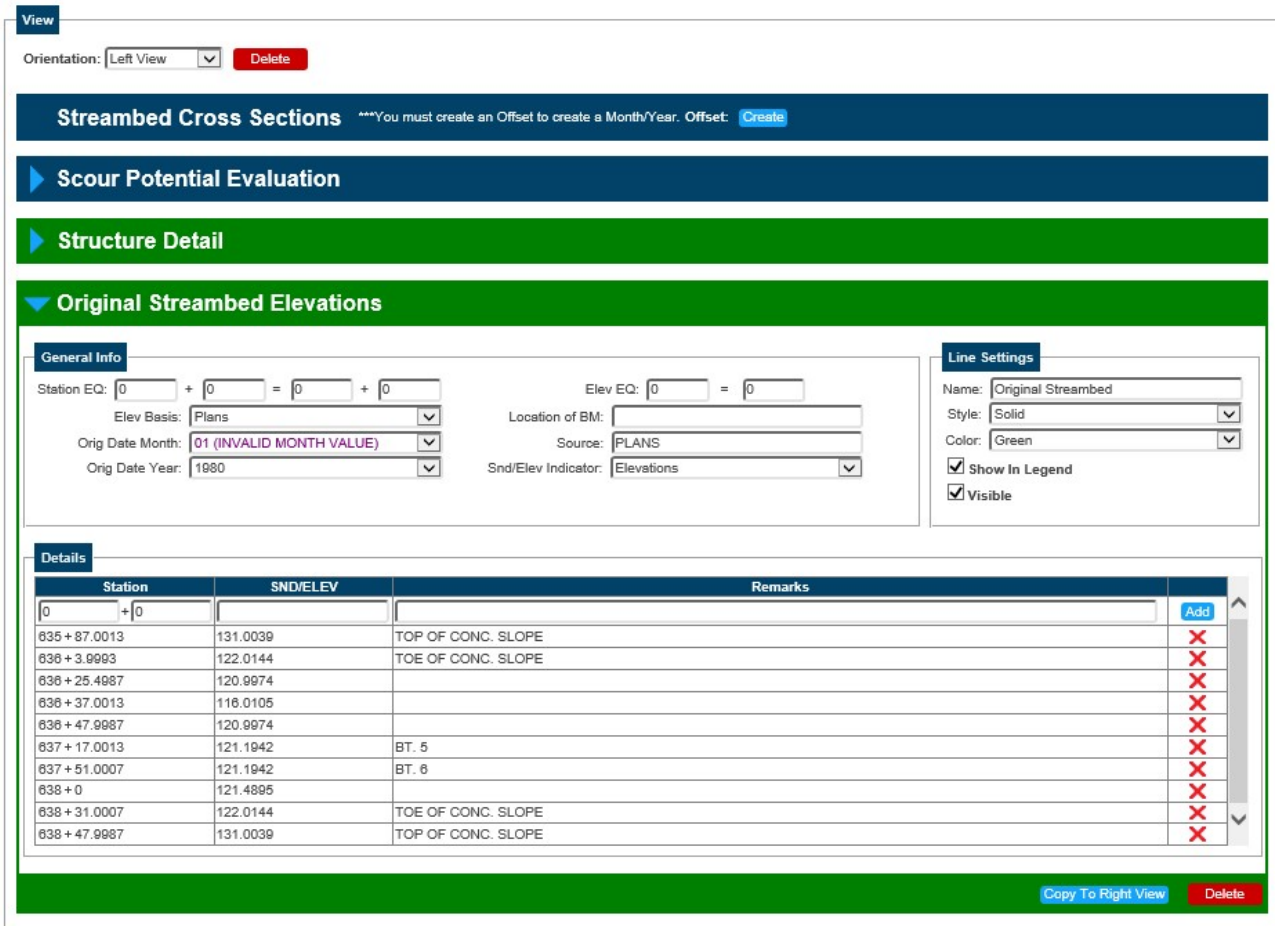


Figure 105 – Original Streambed Elevations pane

The Original Streambed Elevations pane (shown in Figure 105) allows you to enter the original streambed elevations so that a profile of the original streambed can be included on the scour plot. You may view, add, change, or delete the original streambed data from this screen. Again, there are only two valid views – left and right that can be specified for each structure in the drop-down menu located in the top left of the **View** panel.

For each view of the structure, the station equation, elevation basis, original streambed month and year, elevation equation, location of benchmark, and source of elevations can be entered as needed. There is also a sounding/elevation indicator that must be entered. This application allows you to enter either sounding measurements or true elevations. The sounding/elevation indicator field is used by the program to identify which type of measurements have been entered. If sounding data is entered, the sounding depth is subtracted from the corresponding curb/rail reference elevation contained in the structure detail information to obtain the true streambed elevation. For each station along the streambed, the station, sounding/elevation and any pertinent remarks should be entered.

This information can be edited by simply clicking in the field that needs to be edited, or a line of information can be deleted using the ✕ icon on that row. You can delete entire views by clicking **Delete** in the bottom right corner of the screen (highlighted in red in Figure 106).

Note- Clicking **Delete** deletes the entire view. You will not be able to undo this.

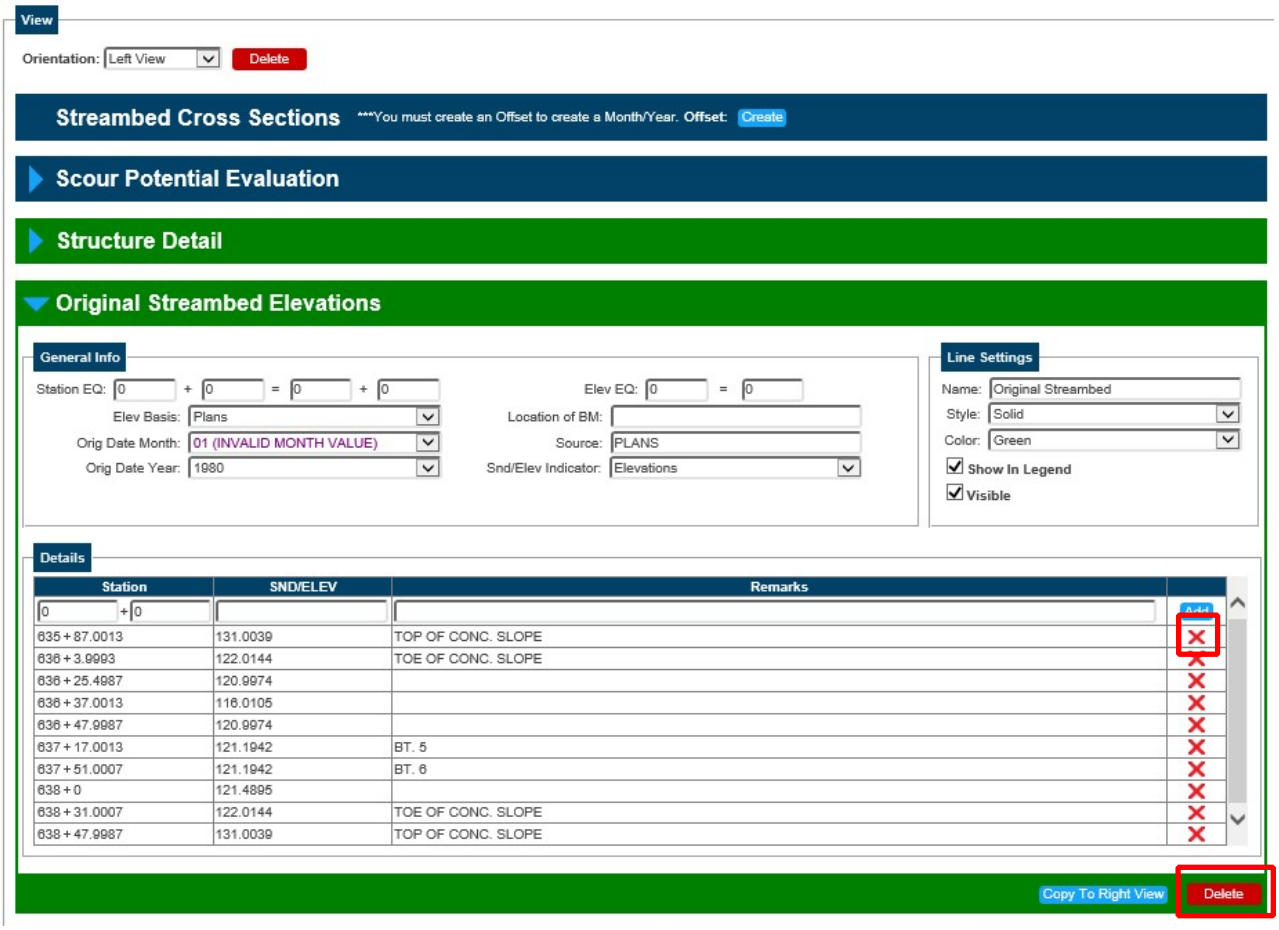


Figure 106 – Click 'X' to delete a row

The following is a list of the valid fields on the screen. A brief explanation of each is included.

View Selection

View:

This field is used to identify the view of the original streambed elevations. The view of the bridge would be determined when traveling in the direction of the inventory route (increasing mile markers). The field contains the parameters below:

Left view - data is for the left side of the bridge

Right view - data is for the right side of the bridge

General Info

Station EQ:
This field is used to capture a station equation which may be required to reference all horizontal information from a common reference point. If the beginning of the bridge was assumed to be at station 1 + 00.00 and plans were later discovered showing 5 + 42.68, then a station equation could be used to correct the assumed station so historical reference material (i.e., plans and pile driving records) could be referenced appropriately to the bridge plot. Be aware that the station equation may be required for each section of data such as structure details, original streambed elevations, and streambed cross sections, so that they are all correlated by a common reference point. The station equations should be completed as required for the bridge to plot correctly (i.e., original streambed stations must be within the same station range as those of the structure detail).

Elevation Basis:
This field captures the type of platform the elevations for the original streambed are based on. The field contains the parameters below:

Assumption - Elevations are based on assumption. From some semi-permanent, fixed point, on or near the bridge, an elevation is assumed. All subsequent elevations for the structure are based on this "assumed" elevation.

US Geodetic Survey - Elevations are based on a U.S. Geodetic Survey bench mark or an Alabama Department of Transportation bench mark. This would be basically the same as elevations from the bridge plans except that plans might not be available on the structure, but a geodetic marker is conveniently close.

Plans - Elevations are taken from the bridge plans. In this case, the elevations are usually based on a permanent U.S. Geodetic Survey bench mark or an Alabama Department of Transportation bench mark, as referenced in the bridge plans.

Orig Date Month:
This field captures the month of the original streambed elevation.

Orig Date Year:
This field captures the year of the original streambed elevation.

Elev EQ:
This field captures the elevation equation which may be used to reference all vertical information from a common reference plane for plotting. If the bridge details are initially plotted based on an assumed reference elevation and later plans are located which show the actual elevations, the initial assumed reference elevation can be equated to the actual elevation based on the information from the plans.
For example, a crew goes to the field to gather bridge detail information and they set a reference point with assumed elevations, such as 150.00 feet. Later, a different crew goes to gather streambed sounding information and they use the same reference point but assume an elevation of 100.00 feet. These plots can

and must be put on a common reference line by keying an elevation equation. In this case, the elevation equation on the streambed soundings form would be 100.00 feet equals 150.00 feet because the streambed soundings should be linked to the same elevation.
Be aware that an elevation equation may be required for each section of data such as structure details, original streambed elevations, and streambed cross sections, so that they are all correlated by a common reference point. The elevation equations should be completed as required for the bridge information to plot correctly (i.e., original streambed stations must be within the same elevation range as those of the structure detail).

Location of Benchmark (BM):
This field captures the location of the bench mark used for referencing the original streambed (i.e., top of rail, from curb, from deck).

Source:
This field captures the source of the original streambed elevations. This information may come from plans or the first streambed soundings taken at a structure.

Sounding/Elevation Indicator (SND/ELEV Indicator):
This field is used to indicate whether the recordings are actual elevations or soundings. This indicator is used by the program to determine the type of data that is being entered. The field contains the parameters below:

> **Elevations -** Elevation data give actual elevations of the points. This requires the inspector to calculate the elevation based on measurements. For example, if the measurements are taken with a rod and level, then the elevation of each reading would be calculated by subtracting the rod reading from the elevation of the level (height of the instrument).
>
> **Soundings -** Sounding data should be used if the data recorded are measurements taken from the bridge deck railing or some other reference feature using a weighted tape with no calculations made. This measurement is automatically subtracted from the curb/rail reference elevations recorded in the structure detail pane. For more information on the structure detail portion, refer to the Structure Scour/Hydrology Module Users Guide.

Line Settings

You can choose the line settings of the original streambed elevation line, such as the color and style that the lines will be in the graph by selecting the **Color** or **Style** drop-down menu in the **Line Settings** panel. You can also choose not to show this line in the **Graph** legend by clicking the check box to the left of “Show In Legend”. Additionally, you can choose the same option by clicking the check box to the left of where is says “Visible”. These last two options are below the line style and color options.

Details

Station:
This field captures the particular station at which a streambed elevation change occurs. The maximum value which can be entered into this field is 9999 + 99.999. Negative stations can be entered if needed.

Sounding/Elevation:
This field captures the sounding measurement or elevation for each station. Negative soundings may be entered, if needed. A value is required for this field if a station has been entered.

Remarks:
This narrative field captures any pertinent remarks that are related to that station.

To Enter a New Original Streambed Elevation

If your structure has never had original streambed information entered, select the appropriate orientation (Left or Right View) and click **Add** in the **Original Streambed Elevations** panel on the main screen of the Cross Sections Task (see Figure 107).

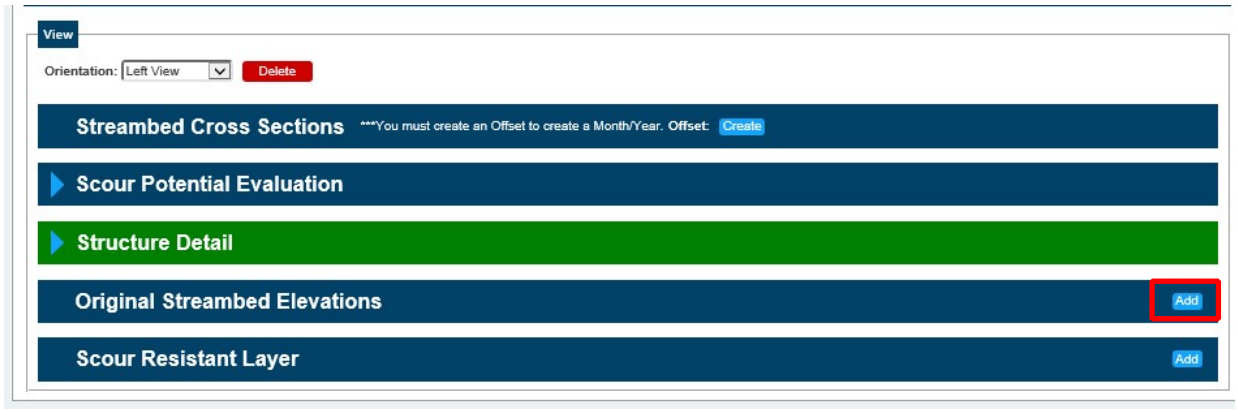


Figure 107 – Click Add to add new Original Streambed Elevations

Next, fill in the required information in the **General Info** panel (see red highlight box in Figure 108) and select the desired settings in the **Line Settings** panel (see blue highlight box in Figure 108).

Once the general information has been completed, fill in the Station, Sounding/Elevation, and any pertinent remarks for your first line of data in the **Details** panel below. You MUST click **Add** to the right of the **Details** panel to submit that information and to be able to enter the next set of data. See the red arrow below in Figure 108. Repeat this step, adding as many lines as necessary, to finish your view.

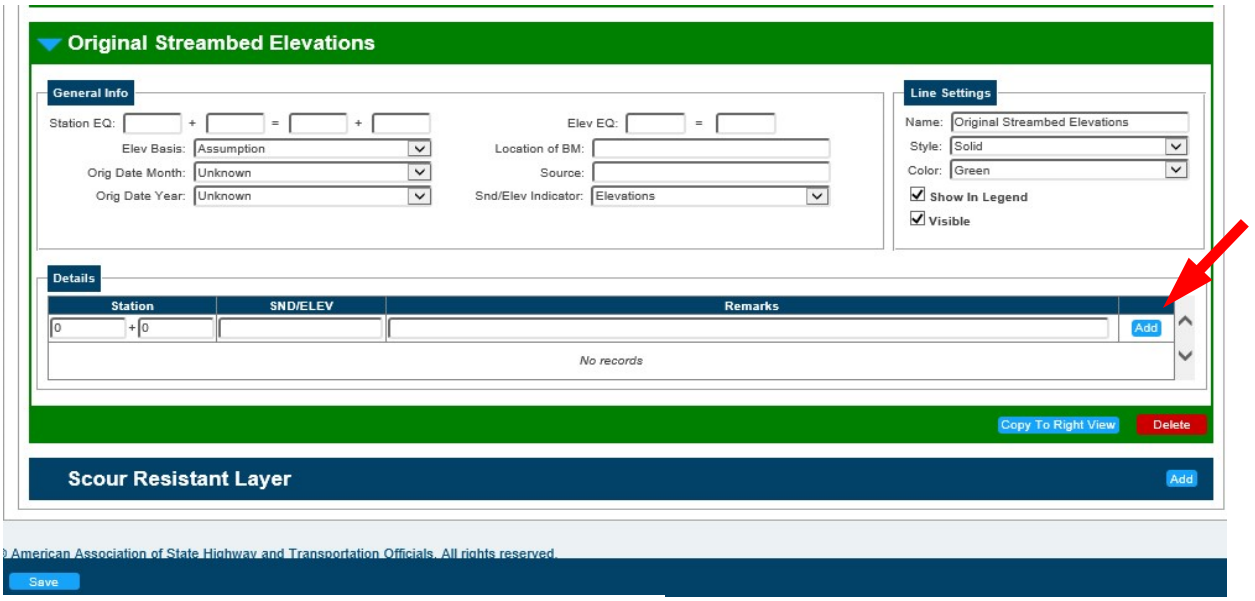


Figure 108 – Original Streambed Elevations pane

After all records have been added, click Save. Your completed view appears as shown in Figure 109. Note that the stations will appear in increasing order after saving.

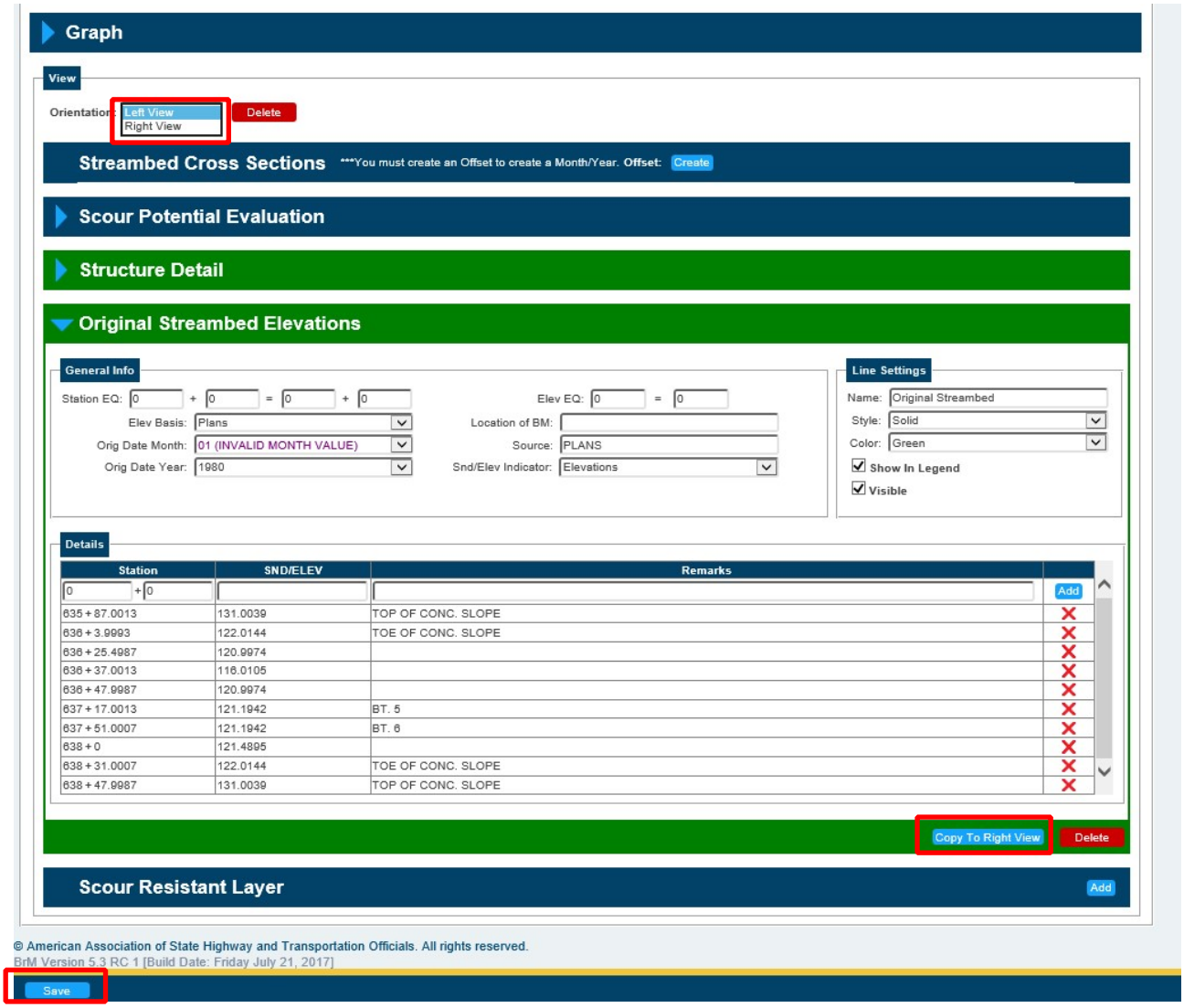


Figure 109 – Create additional views and save

Additional views can be created either by clicking "**Copy to Right** *(or Left)* **View"** or selecting the other side from the **Orientation:** drop-down menu and manually adding new Original Streambed Elevation information (See Figure 109).

Streambed Cross Sections

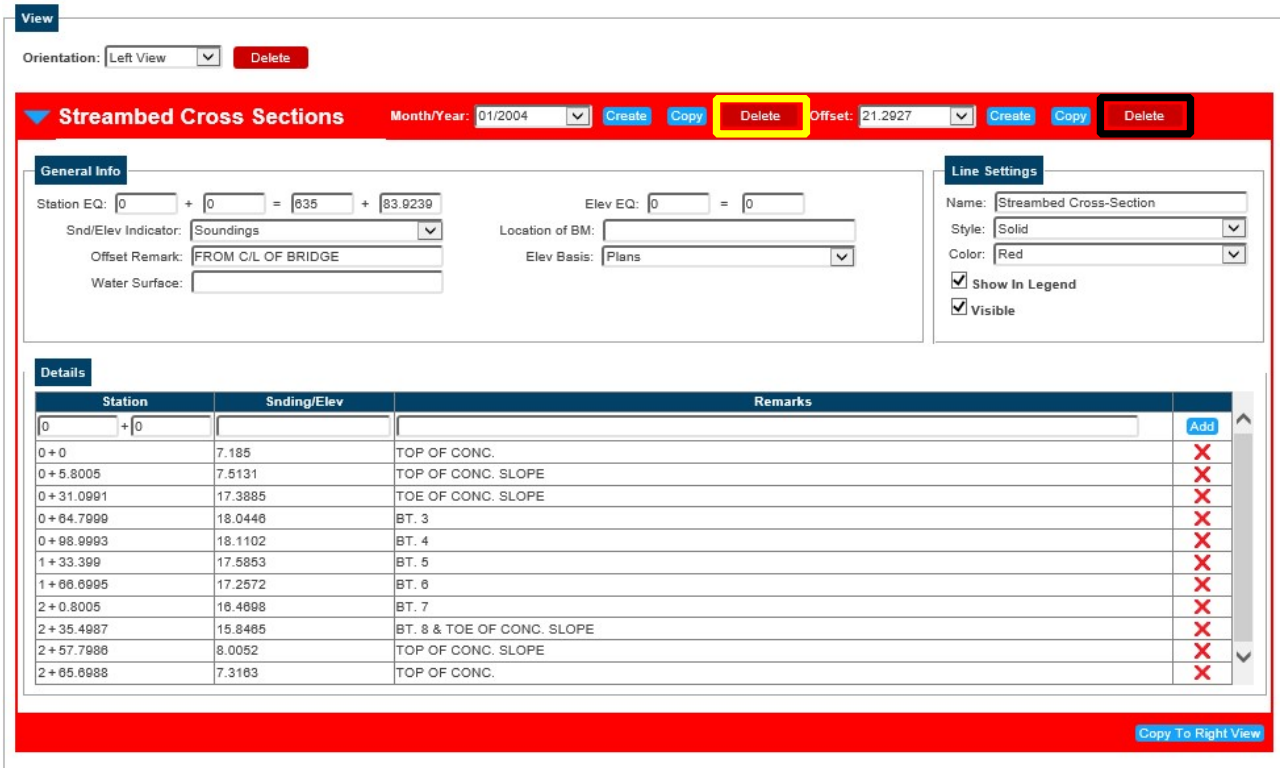


Figure 110 – Streambed Cross Sections pane

The Streambed Cross Section pane (shown in Figure 110) allows you to enter the Streambed Sounding data from the BI-4 form, so stream profiles can be included on the graph. You may view, add, change, or delete sounding data from this screen. In many cases, the same stations would be used each time a streambed sounding is taken. A routine to copy the data is included to reduce the need for keying this redundant data. Soundings are identified by the offset, sounding date and view. Therefore, a structure may have several sets of soundings depending on the number of offsets, dates, and views for the structure.

There are two valid views that can be specified for the structure – left or right. An unlimited number of soundings can be entered for each view based on the different offsets and sounding dates. For each possible combination, the station equation, offset remark, elevation equation, location of benchmark, and elevation basis can be entered. There is also a sounding/elevation indicator that must be entered. This application allows you to enter either sounding measurements or true elevations.

The sounding/elevation indicator field is used by the program to identify which type of data has been entered. If sounding data is entered, the sounding depth is subtracted from the corresponding curb/rail reference elevation contained in the structure detail information to obtain the true streambed elevation. For each sounding/elevation location along the structure, the station, the sounding or elevation, and any

remarks pertinent to that station should then be entered. This information can be edited by simply clicking in the field that needs to be edited, or a line of information can be deleted using the icon on that row.

You can delete entire views by clicking **Delete** in the top of the screen (highlighted in yellow in Figure 16).

Note - Clicking **Delete** (highlighted in the black box) automatically deletes all entries with that offset. There is no way of undoing this. DO NOT USE!

The following is a list of the valid fields on this screen. A brief explanation of each is included.

View Selection

View:
This field is used to identify the view in which the cross sections were taken. The view of the bridge would be determined when traveling in the direction of the inventory route (increasing mile markers). The field contains the parameters below:

Left view - data is for the left side of the bridge

Right view - data is for the right side of the bridge

Views are named by a combination of their **Orientation** and their **Offset** - for example, an agency might have two views: one at the left face of the structure and another a further 50 feet upstream. You must create at least one **Orientation** and one **Offset** to collect data. Most agencies choose to define the offset as the distance from the bridge centerline.

Offset:
This field is used to indicate the distance of the offset from where the streambed soundings were taken. The field is four characters long to record the offset distance to the nearest tenth of a meter or foot. For example, if the readings are taken from the left edge of the bridge deck, then this item should be recorded as one-half of the bridge deck width if the offset is from the centerline of the bridge.

Sounding Month/Year:
This field captures the month and the 4-digit year that the streambed soundings were taken.

General Info

Station EQ:
This field is used to capture a station equation which may be required to reference all horizontal information from a common reference point. If the beginning of the bridge was assumed to be at station 1 + 00.00 and plans were later discovered showing the beginning of the bridge at station 5 + 42.68, then a station equation could be used to correct the assumed station. This allows historical reference material (i.e. plans and pile driving records) to be referenced appropriately to the bridge plot. It is important to note that the station equation may be required for each section of data such as structure details, original streambed elevations, and streambed cross sections, so that they are all correlated by a common reference point. The station equations should be completed as required for the bridge to plot correctly.

Sounding/Elevation Indicator (SND/ELEV Indicator):
This field is used to indicate whether the recordings are actual elevations or soundings. This indicator is used by the program to determine the type of data that is being entered. The field contains the parameters below:

Elevations - Elevation data gives actual elevations of the points. This requires the inspector to calculate the elevation based on measurements. For example, if the measurements are taken with a rod and level, then the elevation of each reading would be calculated by subtracting the rod reading from the elevation of the level (height of the instrument).

Soundings - Soundings data should be used if the data recorded are measurements taken from the bridge deck railing or some other reference feature using a weighted tape with no calculations made. This measurement is automatically subtracted from the curb/rail reference elevations recorded in the bridge detail information of the scour module. For more information on the bridge detail portion of the scour module, refer to the *Structure Scour/Hydrology Module Users Guide*.

Offset Remark:
This is a narrative field used to describe the offset location. For example, a typical offset remark would relate an offset distance from the centerline of the bridge.

Water Surface:
This field captures the elevation of the water surface when the streambed cross sections were taken. If captured, this can be included as another layer on the graph.

Elev EQ:
This field captures the elevation equation which may be used to reference all vertical information from a common reference plane for plotting. If the bridge details are initially plotted based on an assumed reference elevation and later plans are located showing the actual elevations for the bridge, the initial assumed reference elevation can be equated to what the actual elevation is at that point based on the information from the plans.

If a crew goes to the field to gather bridge detail information and they set a reference point with assumed elevations, such as 150.00 feet, then a different crew gathers streambed sounding information and they use the same reference point but assume an elevation of 100.00 feet, these plots can and must be put on a common reference line by keying an elevation equation. In this case, the elevation equation on the streambed soundings form would be 100.00 feet equals 150.00 feet because the streambed soundings should be linked to the same elevation.

Be aware that an elevation equation may be required for each section of data such as structure details, original streambed elevations, and streambed cross sections, so that they are all correlated by a common reference point. The elevation equations should be completed as required for the bridge information to plot correctly.

Location of Benchmark (BM)
This field captures the location of the bench mark used for referencing the cross sections (i.e., top of rail, from curb, from deck).

Elevation Basis
This field captures the type of platform the elevations for the soundings are based on. The field contains the parameters below:

Assumption - Elevations are based on assumption. From some semi-permanent, fixed point, on or near the bridge, an elevation is assumed. All subsequent elevations for the structure are based on this "assumed" elevation.

US Geodetic Survey - Elevations are based on a U.S. Geodetic Survey bench mark or an Alabama Department of Transportation bench mark. This would be basically the same as elevations from the bridge plans except that plans might not be available on the structure, but a geodetic marker is conveniently close.

Plans - Elevations are taken from the bridge plans. In this case, the elevations are usually based on a permanent U.S. Geodetic Survey bench mark or an Alabama Department of Transportation bench mark, as referenced in the bridge plans.

Line Settings

You can choose the line setting of the original streambed elevation line, such as the color and style that the lines will be in the graph by selecting the **Color** or **Style** drop-down menu in the **Line Settings** panel. You can also choose not to show this line in the **Graph** legend by clicking the check box to the left of “Show In Legend”. Additionally, you can choose the same option by clicking the check box to the left of where is says “Visible”. These last two options are below the line style and color options.

Details

Station:
This field captures the station at which the sounding or elevation was taken. The maximum value which can be entered into this field is 9999 + 99.999.

Sounding/Elevation:
This field captures the sounding measurement or elevation for each station. Negative values may be entered, if needed. A value is required for this field if a station has been entered.

Remarks:
This narrative field captures any pertinent remarks that are related to that station.

To Add a New Streambed Cross Section

If your structure has never had sounding data entered, the screen displays a message asking you to select a view and click **Create** to add an offset. An offset must be created before you can add the cross-section data (see Figure 111).

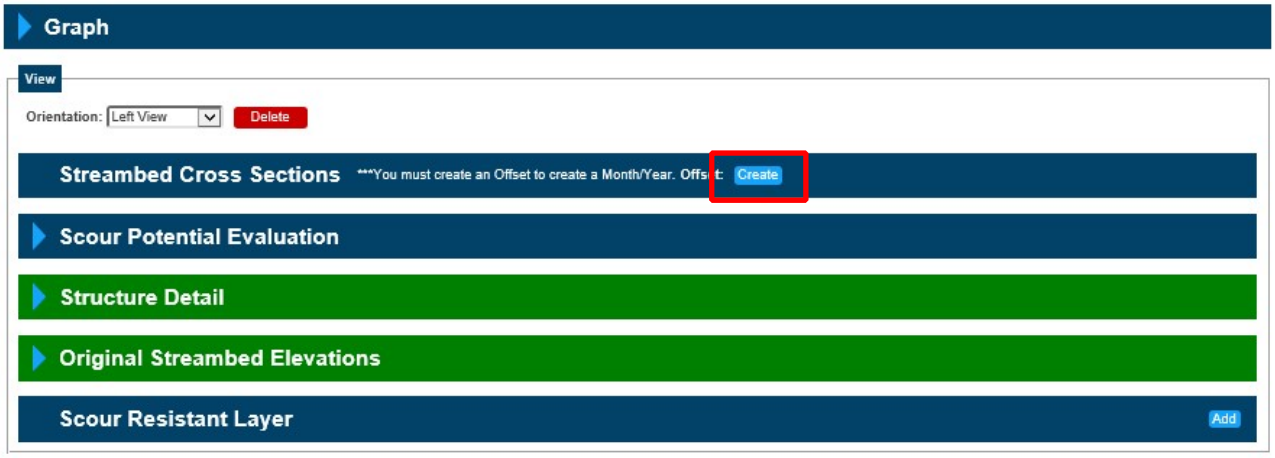


Figure 111 – Create a new Streambed Cross Section

You will then be prompted to enter the proper offset for the streambed cross section. After doing so, click **Add** (see Figure 112).

Figure 112 – Create an Offset

Next, click **Create** to add a Month/Year (see Figure 113).

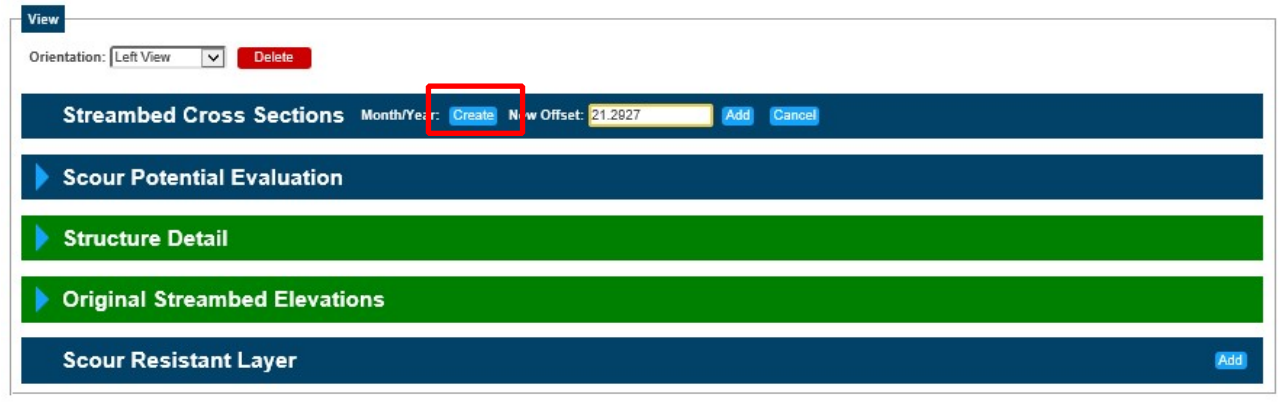


Figure 113 – Select a Month/Year

You will then need to select the date (Month & Year) that the soundings were taken.
Next, Click **Add** directly to the right of the date (see Figure 114) to create the new streambed cross section.

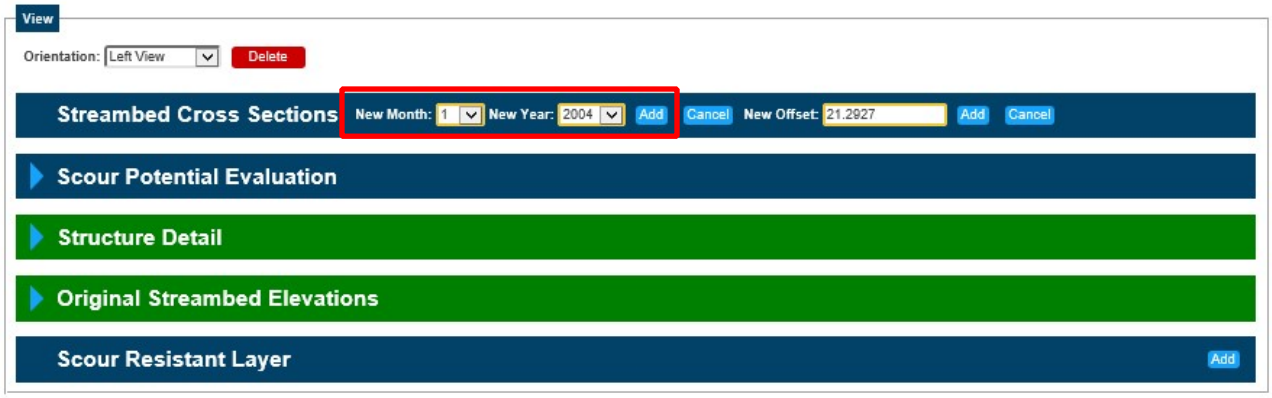


Figure 114 – Add Month/Year

Next, fill in the required information in the **General Info** panel and select the desired settings in the **Line Settings** panel.

Once the general information has been completed, fill all pertinent information in the **Details** panel using the boxes below. You MUST click **Add** to the right of the **Detail** panel to submit that information and to be able to enter the next set of data. Repeat this step, adding as many lines as necessary, to finish the view (see Figure 115)

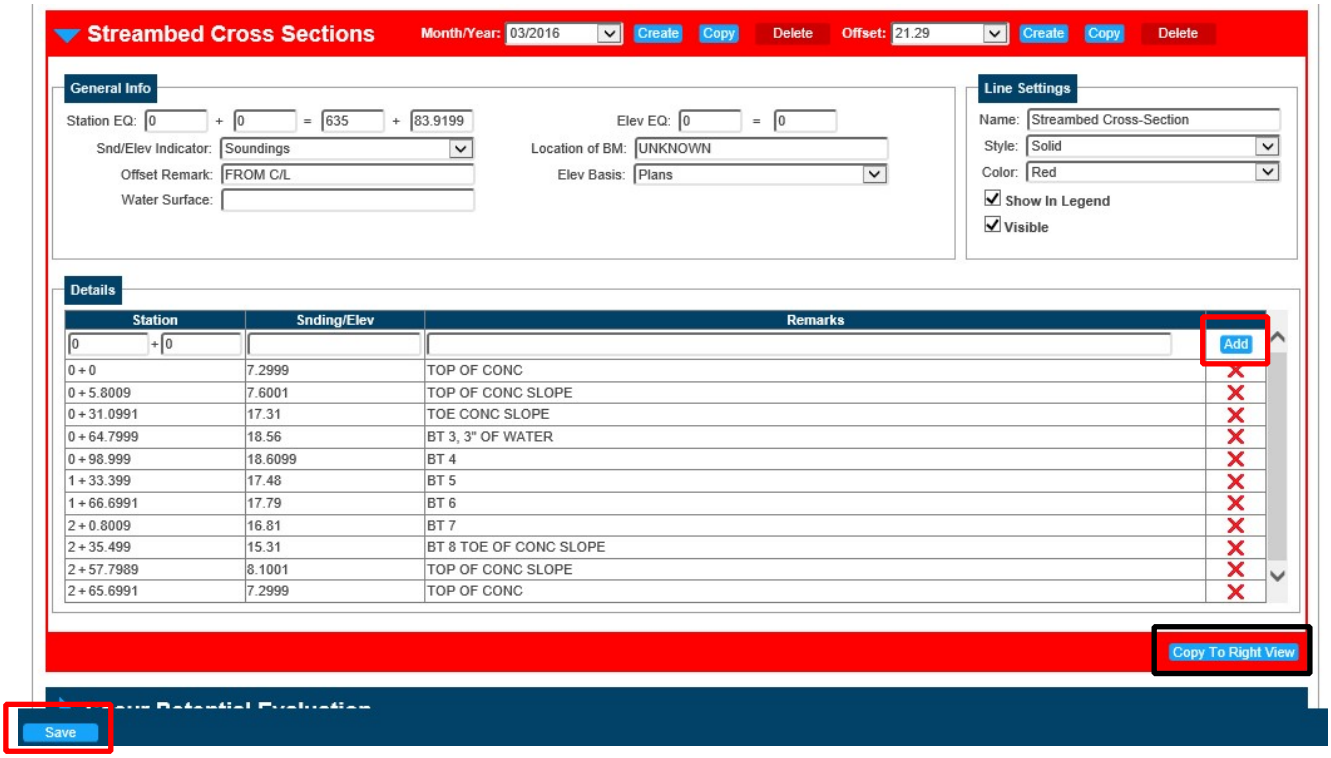


Figure 115 – Add and Save Streambed Cross Section data

After all records have been added, click **Save.** Note that the streambed cross-sections will appear in increasing order by their stations after saving. Additional views can be created either by clicking "**Copy to Right** (or Left) **View"** (see the black highlight box in Figure 115) or selecting the other side from the **View:** drop-down menu and manually adding a new streambed cross section. if you select the **Copy to Right** (or Left) **View**, this will automatically change the Orientation View to the opposite side of the structure with information already populated. Click **Save**.

From here you can make any changes necessary to reflect your current soundings data. Ensure that you click **Save** after any necessary edits are made to save the new view. After all sounding data has been entered for a structure, you can print and view your scour plots using the Graph panel.

To Add an Additional Streambed Cross Section

If streambed cross sections already exist for a structure, the **Streambed Cross Sections** pane will look similar to Figure 116. You will see the sounding data for the displayed Month/Year. If you need to add an additional set of streambed cross sections, you can either copy an existing set of soundings and modify it, or create and enter a new set of data. If you create a new set of data, you will have to fill in all **General Info, Line Settings,** and **Details.**

Copying Existing Cross Sections

In many cases, station points along a structure remain the same and are used to take measurements during each inspection. To enter a new set of streambed cross section data, you can choose to copy the most recent soundings and edit the data to create your new cross section.

First, select the view (Left or Right) that you would like to update. When a view is selected, the Month/Year should default to the most recent streambed cross section for that view. Click **Copy** to the right of the Month/Year field highlighted in black in Figure 116.

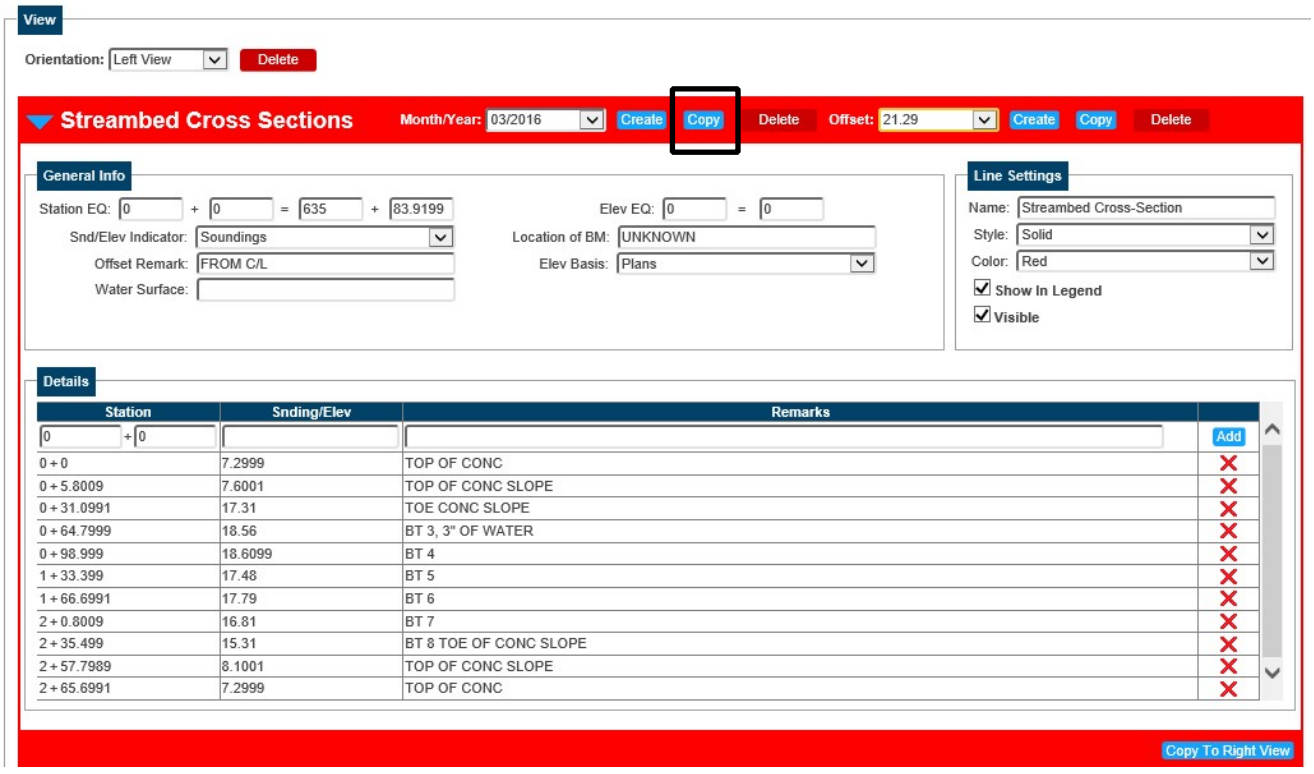


Figure 116 – Copy previous Streambed Cross Sections

After you click **Copy**, you will update the month and year to reflect the date of the current streambed cross section. Once your new streambed cross-section date is selected, click **Add** to the right of the Month/Year, highlighted in black in Figure 117. After adding this date, you will be able to add new stations as well as modify existing stations, soundings/elevations, and remarks from the previous entry.

After making all necessary edits, click **Save**. At this point you should select the other view (Left or Right) and repeat these steps to update the streambed cross section for the opposite view.

If you would like to take multiple measurements, one at the left face of the structure and another further upstream, you must create more than one **Offset** to collect data. Most agencies choose to define the offset as the distance from the bridge centerline.

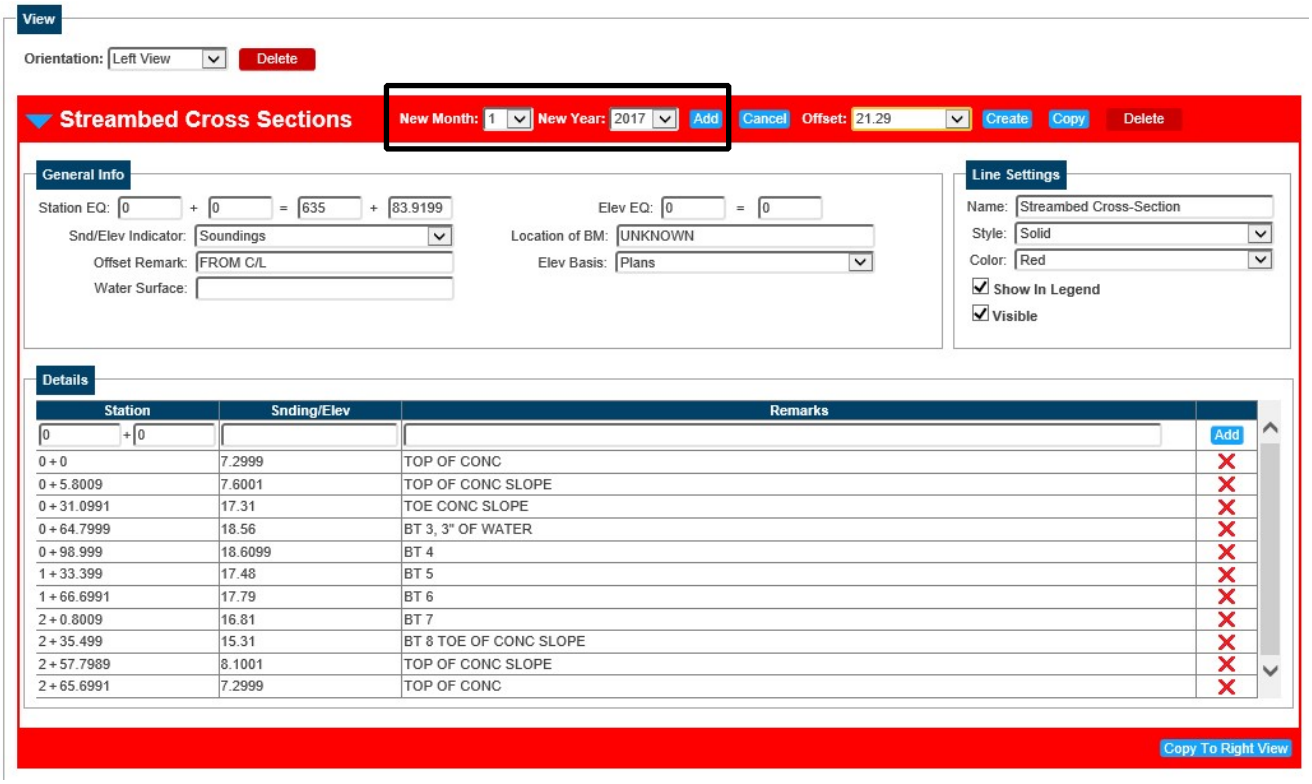


Figure 117- Select new Month/Year and click Add

To View Structure/Sounding Graph

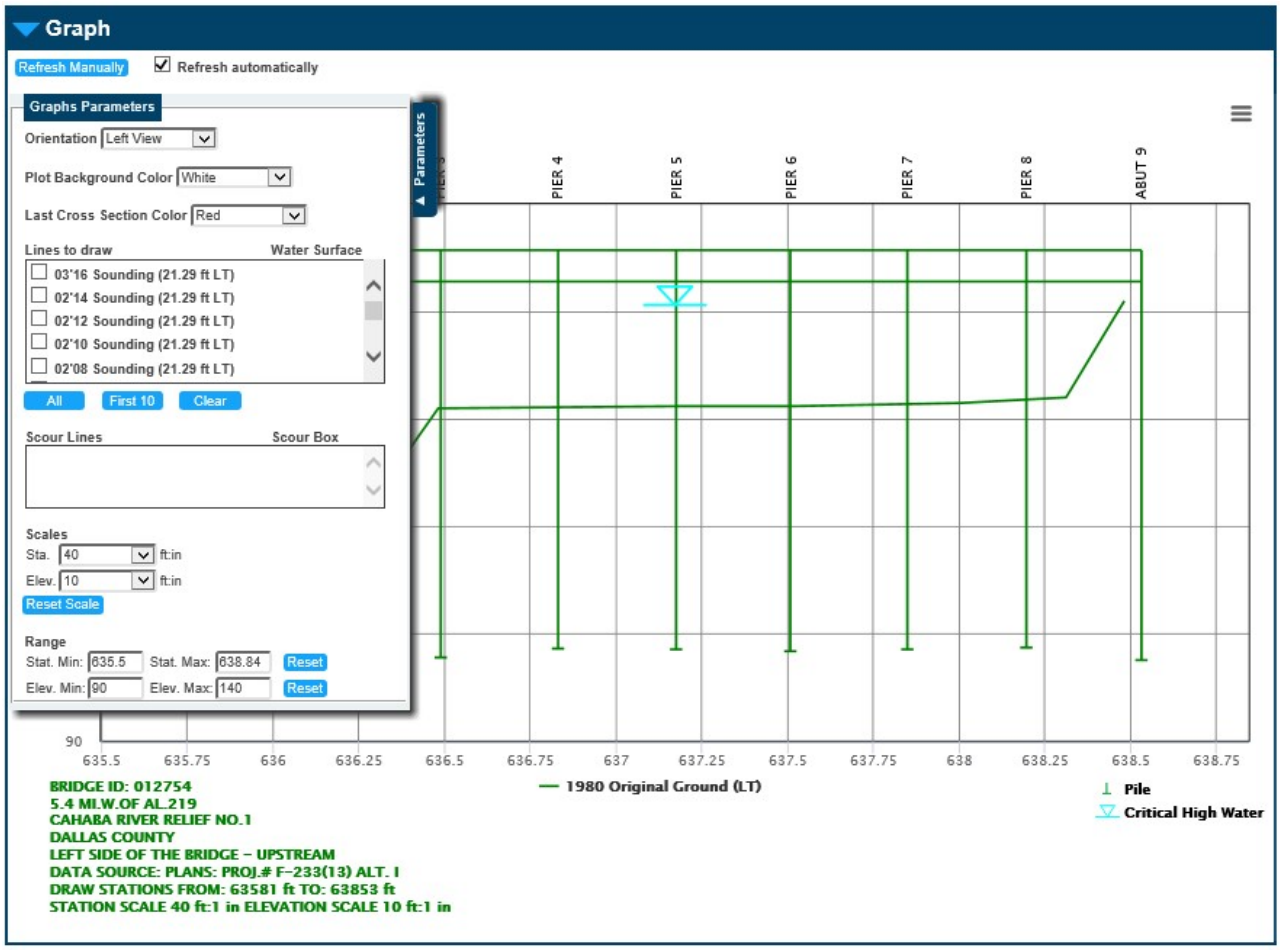


Figure 118 – Graph pane

The *Graph* pane contains the graph which will update as the details of the following panes are filled in. This pane (Shown in Figure 118) allows you to view the Structure Detail, Streambed Cross Section Lines, Scour Evaluation Lines & boxes, High Water Elevation, Water Surface Elevations, Bridge Identification information, as well as print or download your plots.

The following is a list of the valid fields on this screen. A brief explanation of each is included.

Graph Parameters

Refresh Manually and **Refresh Automatically**

The graph has two controls in the top-left corner which display permanently. **Refresh Manually** prods the graph to redraw, and checking the **Refresh automatically** checkbox will have the graph update as new data is entered. For extremely large structures, it may be faster to turn this refreshing property off. But checking the graph regularly will help the user to identify data errors before too much is entered.

Orientation
This field is used to select the orientation of the bridge you wish to display, whether it be the Left or Right View.

Background Color
Background Color changes the background of the graph, with the white setting looking more like paper or excel, while the black setting closer resembles a CAD application.

Last Cross Section Color
This selection allows you to change the color of the most recent sounding line so that it stands out from the rest of the sounding lines.

Lines to draw
The list of possible lines to draw are listed in chronological order with the most recent at the top. As the lines are selected, they will populate on the graph. If water surface elevations are selected, they too will display on the graph. There are additional buttons to aid with selecting multiple lines at a time, allowing the user to select All of the lines, the First 10 lines, or to Clear all the selections.

Water Surface
This portion of the field will show a box that you can check if a water surface elevation was entered for this sounding in the **Streambed Cross Sections** panel. If this box is checked it will show the location of that elevation on the plot.

Scour Lines
If scour evaluation lines are available, each event will be listed in the “Scour Lines” field. Scour Evaluation Lines are not available for all structures. If this box is checked it will show the **Scour Lines** on the plot.

Scour Box
If scour lines are available, each event will also show a box to include the **Scour Box** on the plot. If the box is checked, a box with the scour data appears at the bottom of the graph. You can only view the data for the first 20 piers in the scour box, to view data from particular piers, you may have to manually zoom in on certain parts of the structure.

Scale
The graph scales can also be manually adjusted. Select a *Stationing scale* or *Elevation scale* to adjust how the graph appears. Select **Reset Scale** to return the graph to an automatically selected scale.

Reset
If you narrow in on a specific station or elevation, you can press **Reset** to return to the full extents of the graph.

Manual Zoom

To manually zoom in on any part of the structure, left click your mouse in the graph area and drag it to create the field of view desired, then release the mouse. To return to the full extent view, click **Refresh Manually**.

Legend

The legend, located in the bottom middle and right side of the graph. The middle portion lists the different lines and their associated dates that are plotted. The right-side portion of the legend shows the different symbols that are plotted on the graph, such as foundation type and critical high-water mark.

Printing/Downloading

To print this view to scale, click the menu button in the top right corner of the panel and choose **Print chart**. If you want to download this view, click the menu button, and choose **Download PNG image**, **Download JPEG image**, or **Download PDF document**. See the red highlighted area in Figure 119.

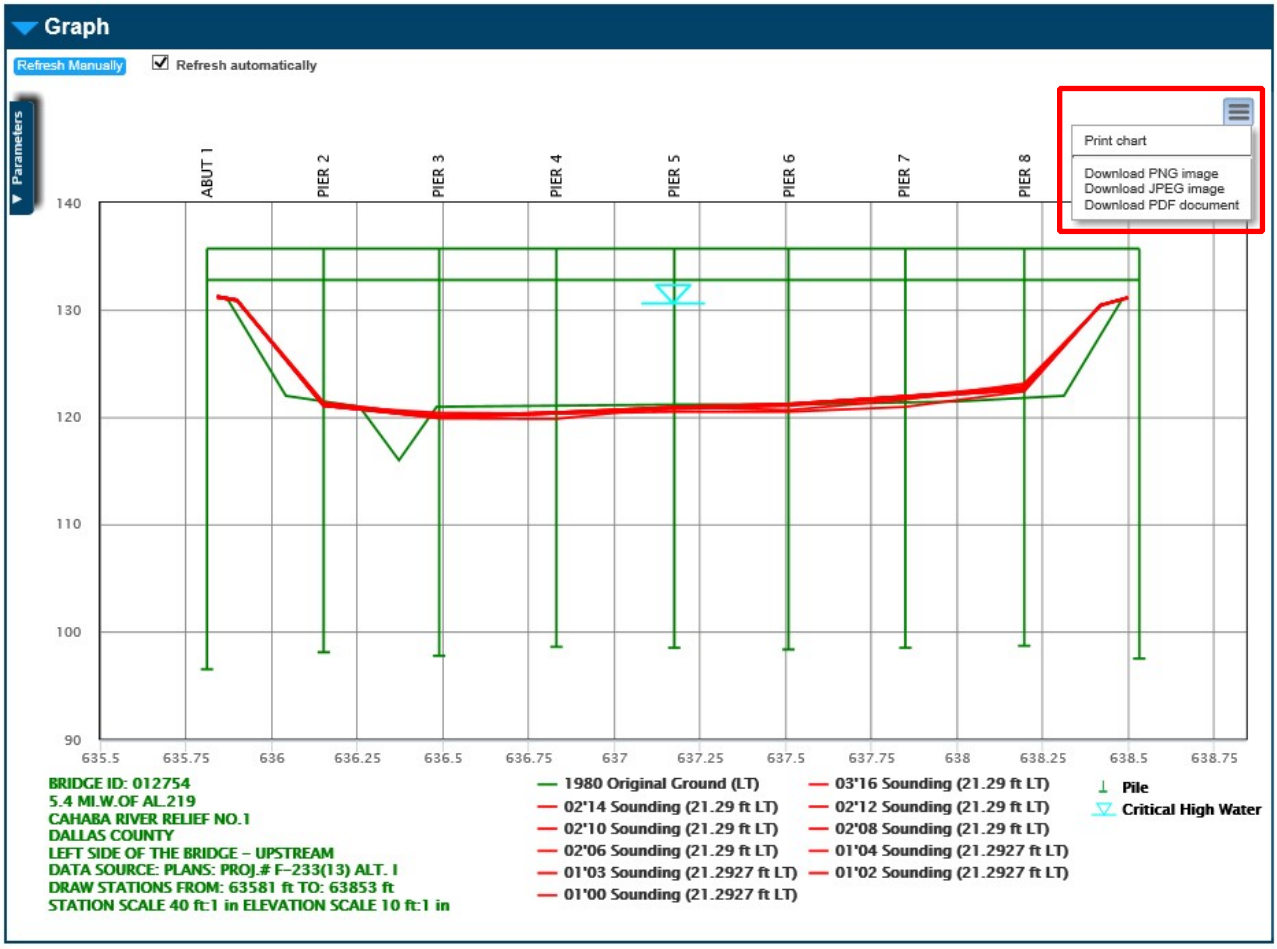


Figure 119 – Print Streambed Cross Sections

Chapter 5: Reports Tab

This chapter details the reports available in the Reports Tab. It includes a description of each report, as well as instructions for how each report is generated.

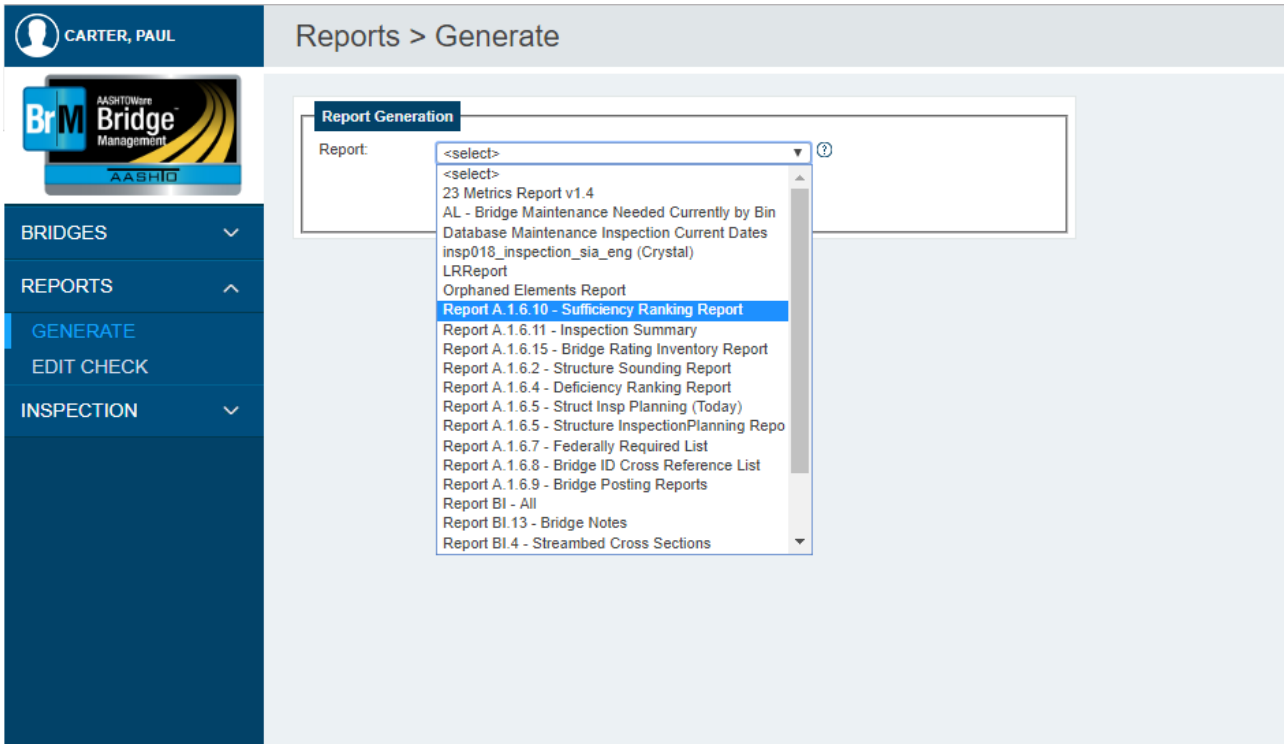


Figure 120 – Reports Tab

5.1: Reports Overview

The Reports Tab (Figure 120) allows you to obtain the different structure inspection forms or structure reports as needed. To access a report, click the **Generate** Task under the **Reports** Tab. Select the desired report from the drop-down menu shown in Figure 120. The following sections of this chapter include specific instructions for printing each report.

5.2: Inspection Forms

This task allows you to obtain different structure inspection forms. The available forms are the:

Streambed Cross Sections (BI-4) form

Inspection (BI-5) form

Structure Inventory and Appraisal (BI-6) form

Bridge Maintenance Needs (BI-9) form

Bridge Notes (BI-13) form

For more information about each form, see the *ALDOT Bridge Inspection Manual.*

Forms can be generated and printed for a particular structure or groups of structures. If you plan on printing forms for multiple structures at once, first select those structures from the Bridges Tab. See Chapter 3.1: View List Task for more about selecting a structure.

To access the standard inspection forms, click the **Generate** Task under the **Reports** Tab. Select the desired report from the drop-down menu and the **Report Generation** screen opens. Select a format as well as the structure(s) the form should print for.

BI-4 Streambed Cross Sections

The BI-4 Streambed Cross Sections form (Figure 121) was created for the collection of data in order to produce streambed cross sections to be included on the scour plots. This form must be completed during routine inspections.

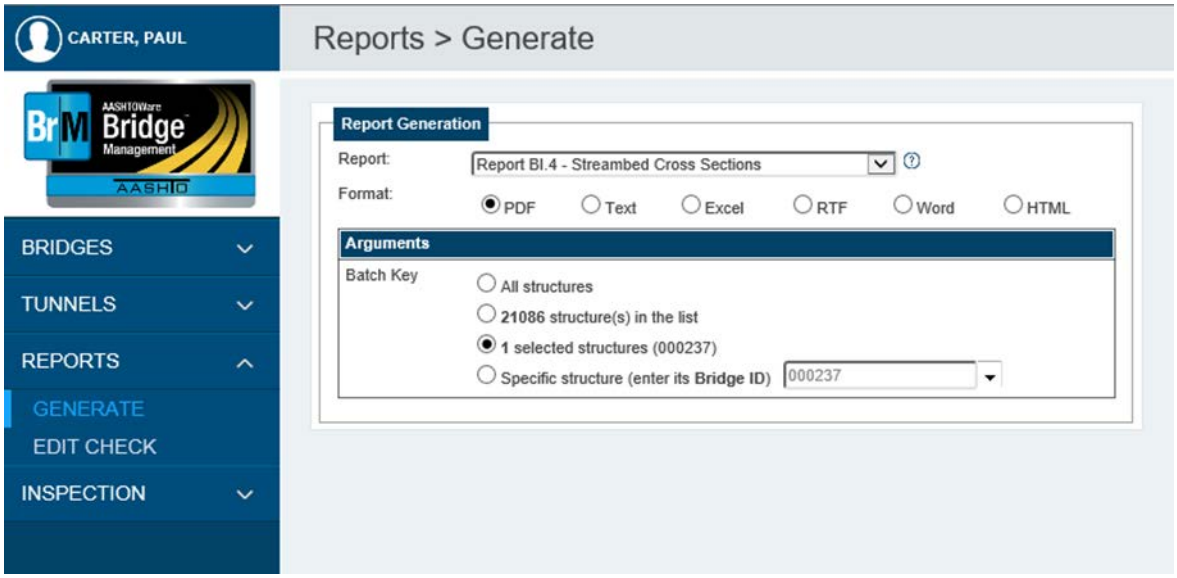


Figure 121 - BI-4 Streambed Cross Section Report Generation screen

Use the radio buttons at the top of your screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Next, select which structures the form should print for in the **Batch Key** field. You can choose to print forms for all structures in the inventory, all selected structures, the most recent structure selected, or another bridge. If you choose selected structures, the report includes all structures selected in the Bridges Tab prior to entering the Reports Tab. If you choose to print for another bridge, type the 6-digit BIN into the space provided.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing saving or printing as needed. To return to the previous page, click **Return to Report Generation**.

BI-5 Inspection

The BI-5 Inspection form (Figure 122) is the detail inspection sheet used by bridge inspectors for grading the condition of bridge elements during routine and interim inspections.

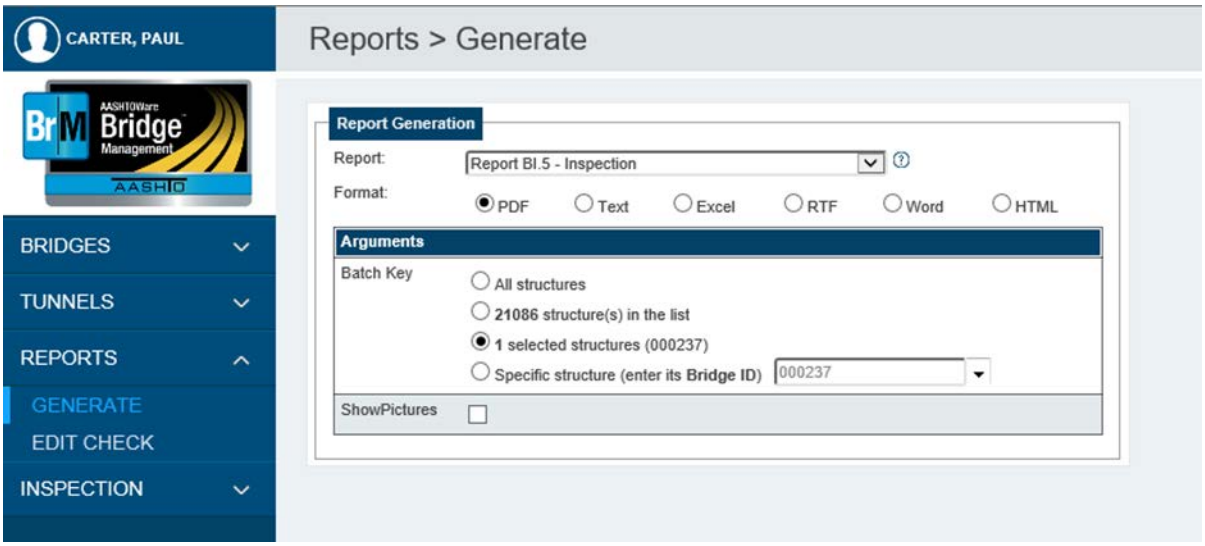


Figure 122 – BI-5 Inspection Report Generation screen

Use the radio buttons at the top of your screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Next, select which structures the form should print for in the **Batch Key** field. You can choose to print forms for all structures in the inventory, all selected structures, the most recent structure selected, or another bridge. If you choose selected structures, the report includes all structures selected in the Bridges Tab prior to entering the Reports Tab. If you choose to print for another bridge, type the 6-digit BIN into the space provided.

Check the **ShowPictures** box if you would like pictures of the structure to be included in the inspection form. These pictures will pull from those selected in the Multimedia Task of the Inspection Tab. For more information about selecting pictures, see Chapter 4.12: Multimedia Task.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing saving or printing as needed. To return to the previous page, click **Return to Report Generation**.

BI-6 Structure Inventory and Appraisal

The BI-6 Structure Inventory and Appraisal form (Figure 123) contains structure inventory and appraisal data collected during bridge inspections. Most of the information in this form, once coded, is not likely to change over the life of the structure but should be updated as needed during each routine inspection.

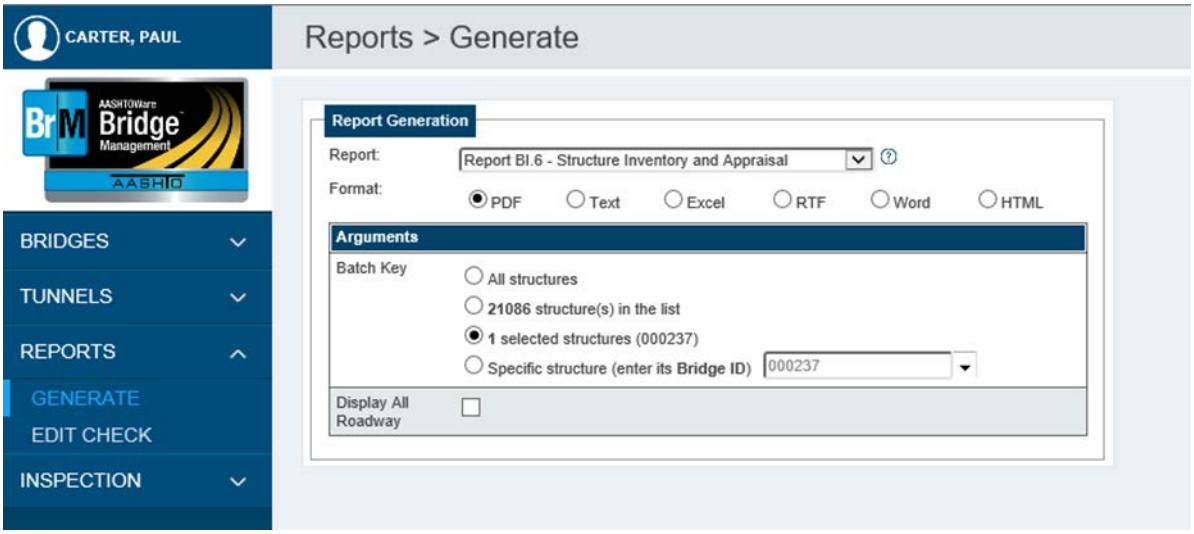


Figure 123 - BI-6 Structure Inventory and Appraisal Report Generation screen

Use the radio buttons at the top of your screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Next, select which structures the form should print for in the **Batch Key** field. You can choose to print forms for all structures in the inventory, all selected structures, the most recent structure selected, or another bridge. If you choose selected structures, the report includes all structures selected in the Bridges Tab prior to entering the Reports Tab. If you choose to print for another bridge, type the 6-digit BIN into the space provided.

By default, the BI-6 only prints for the "On" roadway type associated with the structure. If the structure includes "Under" roadways, check the **Display All Roadway** box to include all roadway types in the form.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing saving or printing as needed. To return to the previous page, click **Return to Report Generation**.

BI-9 Bridge Maintenance Needs

The BI-9 Bridge Maintenance Needs form (Figure 124) is used at each bridge inspection to record and quantify any maintenance needs present.

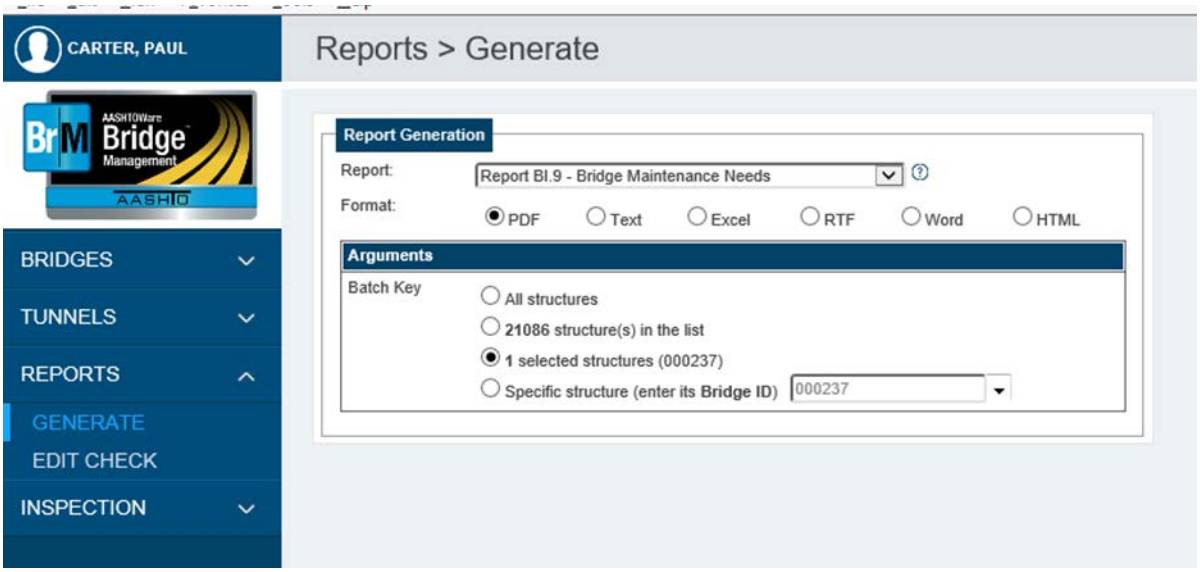


Figure 124 – BI-9 Bridge Management Needs Report Generation screen

Use the radio buttons at the top of your screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Next, select which structures the form should print for in the **Batch Key** field. You can choose to print forms for all structures in the inventory, selected structures, the most recent structure selected, or another bridge. If you choose selected structures, the report includes all structures selected in the Bridges Tab prior to entering the Reports Tab. If you choose to print for another bridge, type the 6-digit BIN into the space provided.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing saving or printing as needed. To return to the previous page, click **Return to Report Generation**.

BI-13 Bridge Notes

The BI-13 Bridge Notes form (Figure 125) serves as a general narrative for the bridge and is used to record any additional information about a structure that cannot be captured in another format.

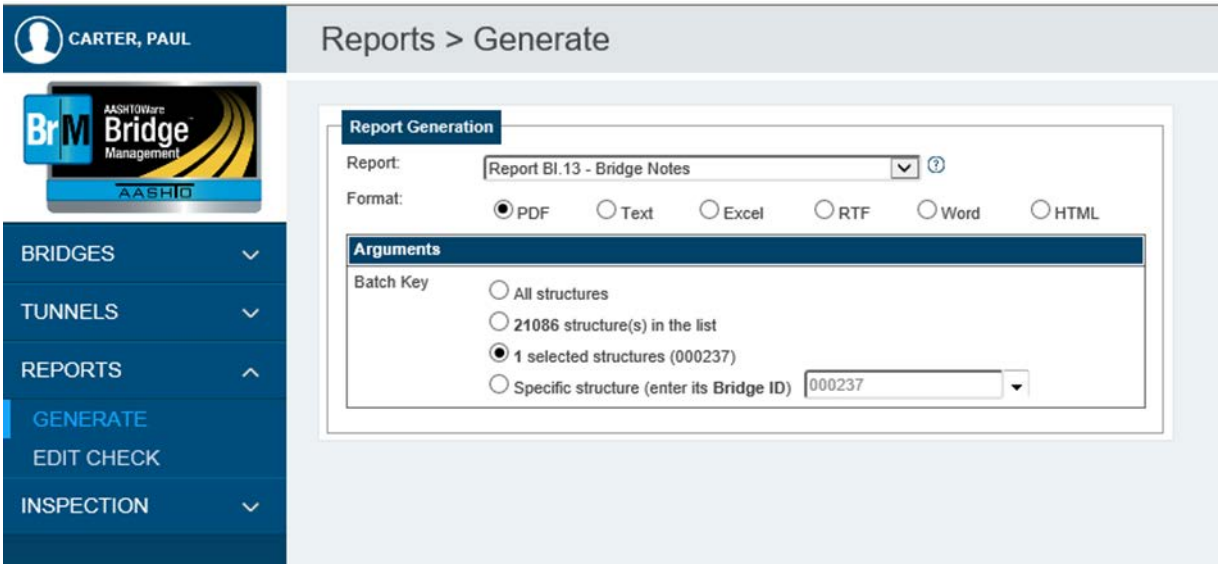


Figure 125 - BI-13 Bridge Notes Report Generation screen

Use the radio buttons at the top of your screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Next, select which structures the form should print for in the **Batch Key** field. You can choose to print forms for all structures in the inventory, all selected structures, the most recent structure selected, or another bridge. If you choose selected structures, the report includes all structures selected in the Bridges Tab prior to entering the Reports Tab. If you choose to print for another bridge, type the 6-digit BIN into the space provided.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing saving or printing as needed. To return to the previous page, click **Return to Report Generation**.

BI-All

The BI-All report (Figure 126) is used to generate multiple inspection forms for a given structure or group of structures at once.

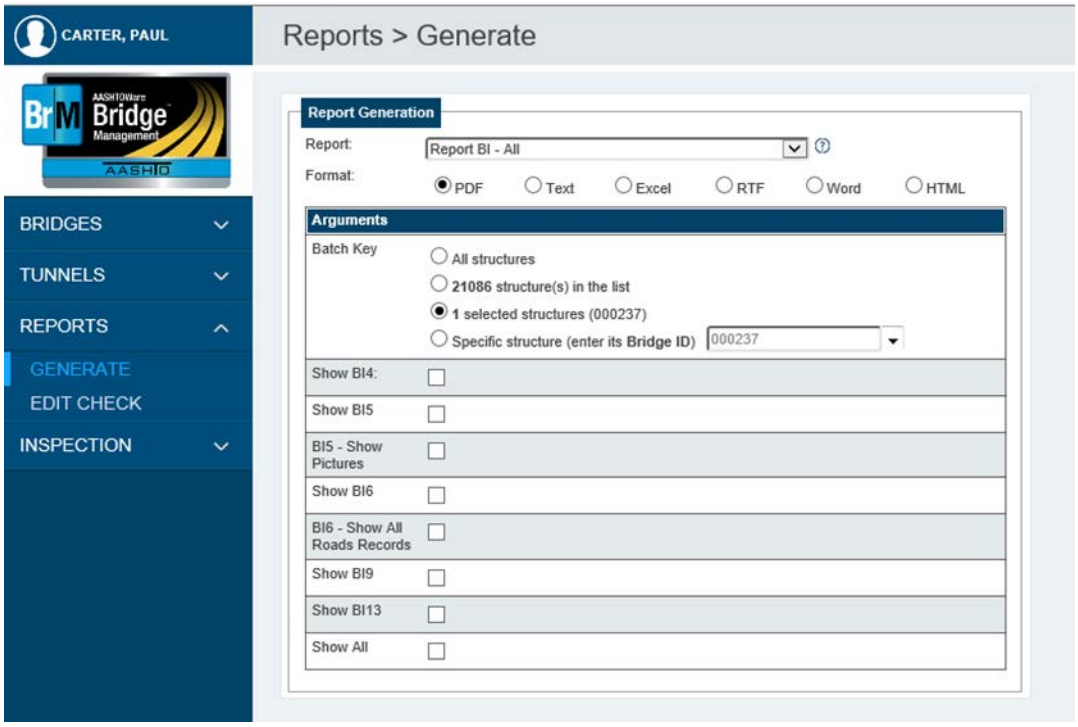


Figure 126 - BI All Report Generation Screen

Use the radio buttons at the top of your screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Next, select which structures the form should print for in the **Batch Key** field. You can choose to print forms for all structures in the inventory, all selected structures, the most recent structure selected, or another bridge. If you choose selected structures, the report includes all structures selected in the Bridges Tab prior to entering the Reports Tab. If you choose to print for another bridge, type the 6-digit BIN into the space provided.

Use the checkboxes to select which forms should print for the selected structure(s). If all forms are needed, click the **Show All** checkbox.

After selecting a format and a set of criteria, click **Generate Report**. The report will download, allowing saving or printing as needed. To return to the previous page, click **Return to Report Generation**.

5.3: Structure Reports

To access the standard structure reports, click the **Generate** Task under the **Reports** Tab and select the desired report from the drop-down menu. The **Report Generation** Screen opens, allowing you to select the report criteria, which vary by report. Individual report criteria are discussed later in this chapter. The following reports should be generated prior to a Bridge Inspection Compliance Review:

A.1.6.2 – Structure Sounding Report

A.1.6.5 – Structure Inspection Planning Report

A.1.6.7 – Federally Required Lists

A.1.6.8 – Bridge ID Cross Reference List

A.1.6.9 – Bridge Posting Report

A.1.6.15 – Rating Inventory Report

A.1.6.2 Structure Sounding Report

The Structure Sounding report (Figure 127) can be used to generate a listing of structures in the scour profile system. This report lists all of the structures that require scour inspections and whether or not they have bridge details entered into BrM.

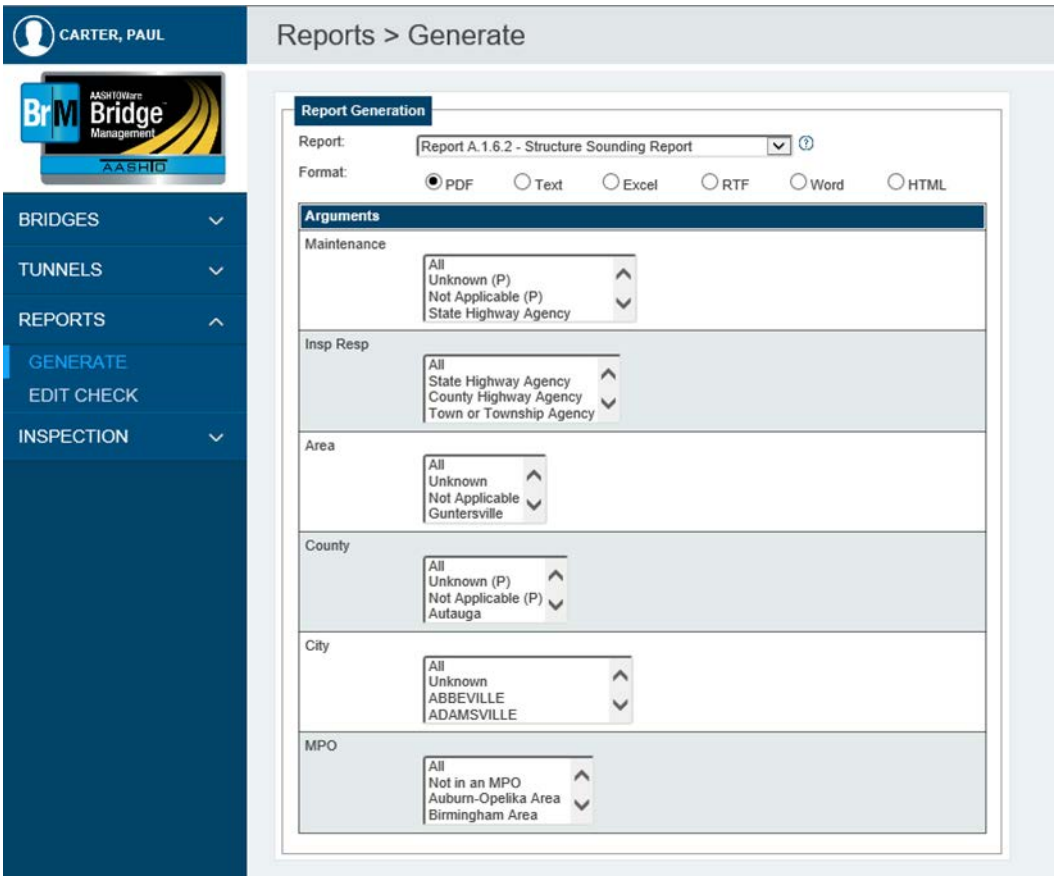


Figure 127 – Structure Sounding Report Generation screen

Use the radio buttons at the top of the screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).
Use the other fields on this screen to select a set of criteria for the report. Possible criteria for this report are listed below.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing you to save or print as needed. To return to the previous page, click **Return to Report Generation**.

Possible criteria for the Structure Sounding report are:

Maintenance:
This field specifies the maintenance responsibility (Item 21) of the structures for which the report is to be printed.

Insp Resp:
This field specifies the inspection responsibility (Item 293) of the structures for which the report is to be printed.

Area:
This field specifies the ALDOT Area location (Item 2) of the structures for which the report is to be printed. If this field is entered, then only the structures in the selected area print.

County:
This field specifies the county location (Item 3) of the structures for which the report is to be printed. This field lists all counties in the state in alphabetical order. If this field is entered, then only the structures in the selected county print.

City:
This field specifies the city location (Item 4) of the structures for which the report is to be printed. This field lists all cities in the state in alphabetical order and if entered, only the structures in the selected city will print.

MPO:
This field shows the MPO location (Item 203) of the structures for which the report is to be printed.

A.1.6.4 Deficiency Ranking Report

The Deficiency Ranking report (Figure 128) can be used to print a listing of structures by Deficiency Rank based on information in the NBI file. For each bridge in the owner's inventory it determines how close the structure comes to meeting minimum and desirable criteria for condition, load capacity, horizontal and vertical clearance, and a special category.

The deficiency points for each bridge are calculated and updated each night by BrM. Each bridge is also re-ranked each night based on new deficiency points. Points are also recalculated before generating the prioritization program. Only personnel in the Maintenance Bureau are authorized to update the special deficiency points.

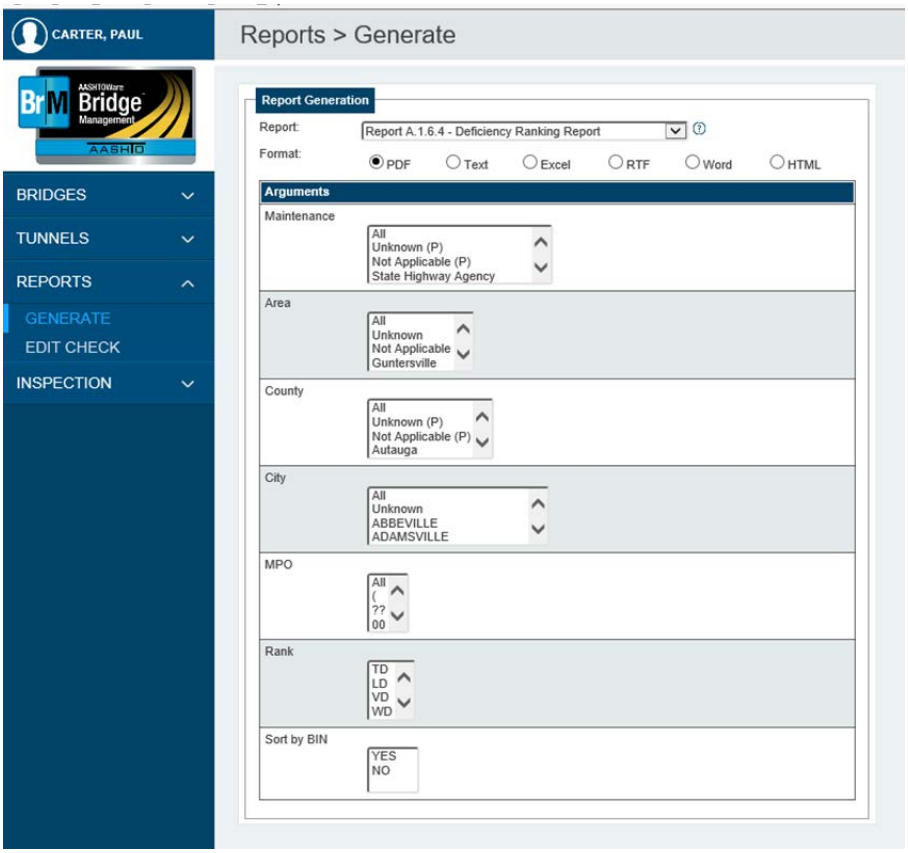


Figure 128 – Deficiency Ranking Report Generation screen

Use the radio buttons at the top of the screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Use the other fields on this screen to select a set of criteria for the report. Possible criteria for this report are listed below.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing you to save or print as needed. To return to the previous page, click **Return to Report Generation**.

Possible criteria for the Deficiency Ranking report are:

Maintenance:
This field specifies the maintenance responsibility (Item 21) of the structures for which the report is to be printed.

Area:
This field specifies the ALDOT Area location (Item 2) of the structures for which the report is to be printed. If this field is entered, then only the structures in the selected area print.

County:
This field specifies the county location (Item 3) of the structures for which the report is to be printed. This field lists all counties in the state in alphabetical order. If this field is entered, then only the structures in the selected county print.

City:
This field specifies the city location (Item 4) of the structures for which the report is to be printed. This field lists all cities in the state in alphabetical order. If this field is entered, then only the structures in the selected city print.

MPO:
This field specifies the MPO location (Item 203) of the structures for which the report is to be printed.

Rank:
This field specifies one weighting factor for each deficiency category of total deficiency (TD), load deficiency (LD), vertical clearance deficiency (VD), width deficiency (WD), condition deficiency (CD), and statewide deficiency (SD).

Sort by BIN:
This field specifies the order in which structures should be listed on the report. Select **YES** to sort by BIN, or select **NO** to sort by Rank.

A.1.6.5 Structure Inspection Planning Report (Today)

The Structure Inspection Planning report (Figure 129) can be used to print a list of structures that are due (current and past due) for inspection based on the current date. This report is used for inspection planning.

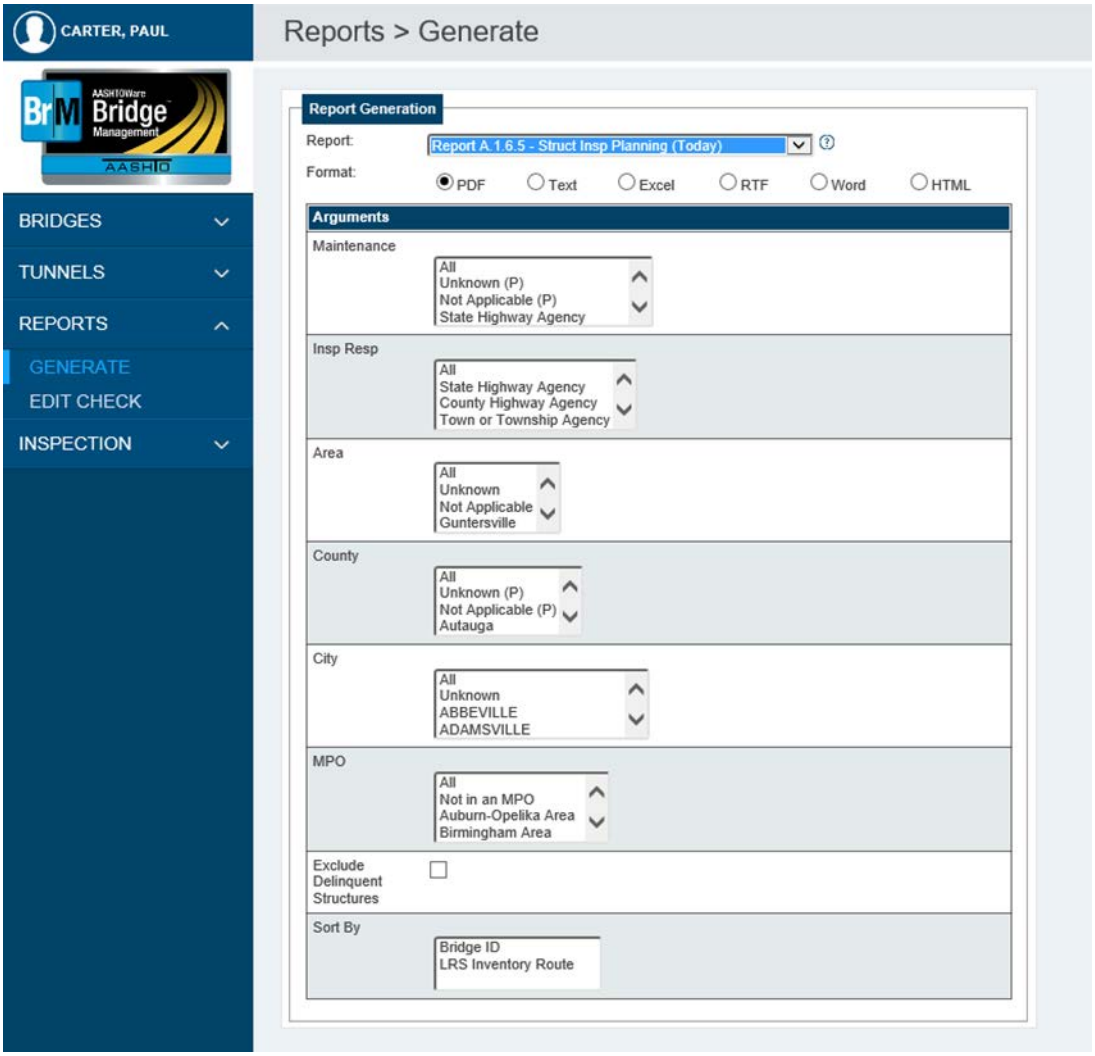


Figure 129 – Structure Inspection Planning Report Generation screen

Use the radio buttons at the top of the screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Use the other fields on this screen to select a set of criteria for the report. Possible criteria for this report are listed below.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing you to save or print as needed. To return to the previous page, click **Return to Report Generation**.

Possible criteria for the Structure Inspection Planning Report (Today) are:

Maintenance:
This field specifies the maintenance responsibility (Item 21) of the structures for which the report is to be printed.

Insp Resp:
This field specifies the inspection responsibility (Item 293) of the structures for which the report is to be printed.

Area
This field specifies the ALDOT Area location (Item 2) of the structures for which the report is to be printed. If this field is entered, then only the structures in the selected area print.

County:
This field specifies the county location (Item 3) of the structures for which the report is to be printed. This field lists all counties in the state in alphabetical order. If this field is entered, then only the structures in the selected county print.

City:
This field specifies the city location (Item 4) of the structures for which the report is to be printed. This field lists all cities in the state in alphabetical order. If this field is entered, then only the structures in the selected city print.

MPO:
This field specifies the MPO location (Item 203) of the structures for which the report is to be printed.

Exclude Delinquent Structures:
Clicking this checkbox will exclude all inspections that are currently overdue from being printed.

Sort By:
This field specifies which order you want the structure information in the report printed. By choosing an option in this field, the report prints structures in order of Bridge ID (BIN) or Local ID number.

A.1.6.5 Structure Inspection Planning Repo

The Structure Inspection Planning report (Figure 130) can be used to print a listing of structures due for inspection based on a selected date. This report allows a user to see which bridge inspections will be due each month up to the selected date. This report is used for long term inspection planning.

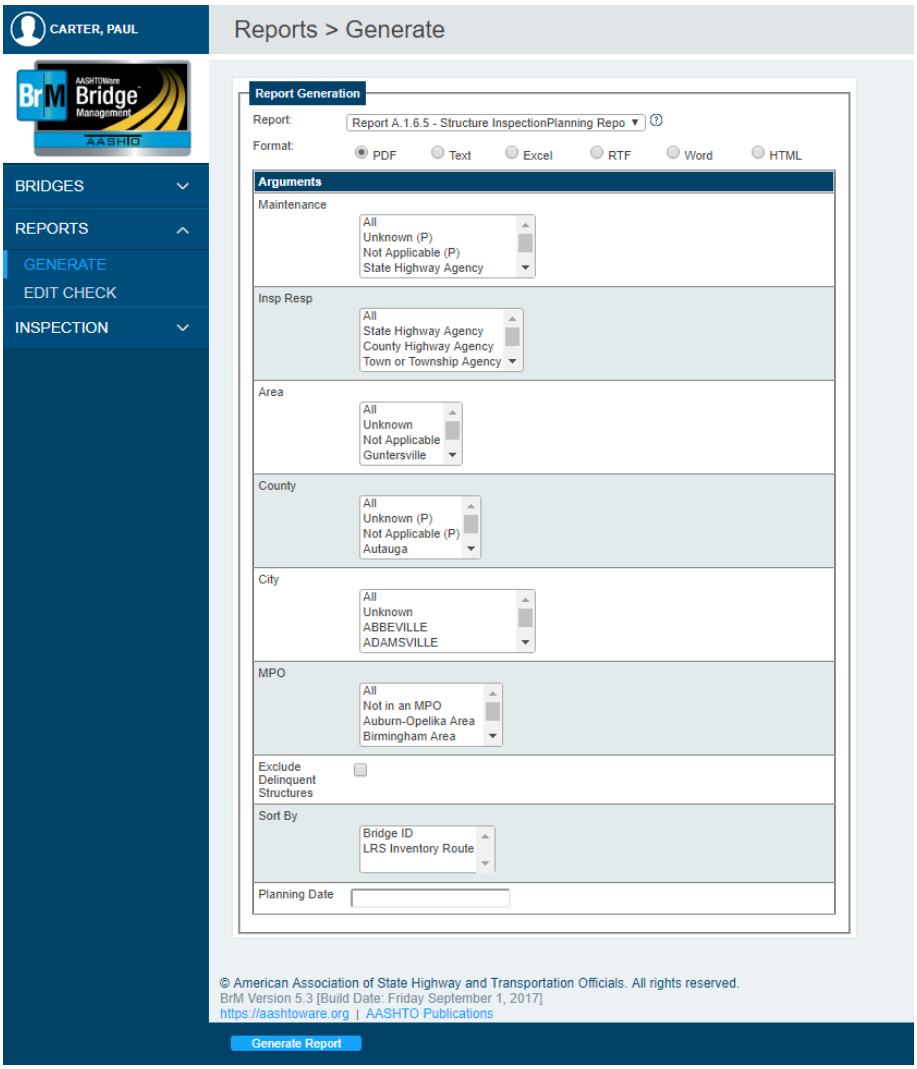


Figure 130 – Structure Inspection Planning Repo Report Generation screen

Use the radio buttons at the top of the screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Use the other fields on this screen to select a set of criteria for the report. Possible criteria for this report are listed below.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing you to save or print as needed. To return to the previous page, click **Return to Report Generation**

Possible criteria for the Structure Inspection Planning Report are:

Maintenance:
This field specifies the maintenance responsibility (Item 21) of the structures for which the report is to be printed.

Insp Resp:
This field specifies the inspection responsibility (Item 293) of the structures for which the report is to be printed.

Area
This field specifies the ALDOT Area location (Item 2) of the structures for which the report is to be printed. If this field is entered, then only the structures in the selected area print.

County:
This field specifies the county location (Item 3) of the structures for which the report is to be printed. This field lists all counties in the state in alphabetical order. If this field is entered, then only the structures in the selected county print.

City:
This field specifies the city location (Item 4) of the structures for which the report is to be printed. This field lists all cities in the state in alphabetical order. If this field is entered, then only the structures in the selected city print.

MPO:
This field specifies the MPO location (Item 203) of the structures for which the report is to be printed.

Exclude Delinquent Structures:
Clicking this checkbox will exclude all inspections that are currently overdue from being printed.

Sort By:
This field specifies which order you want the structure information in the report printed. By choosing an option in this field, the report prints structures in order of Bridge ID (BIN) or Local ID number.

Planning Date:
This field specifies the date of inspection. The report runs through the end of the selected month, but the date must be in MM/DD/YYYY format. For example, to see all structures due for an inspection through December 2018, the date 12/01/2018 should be entered. **This field is always required**

A.1.6.7 Federally Required List

The Federally Required List (Figure 131) can be used to generate lists of all bridges in special categories required by Federal Codes, FHWA, and ALDOT guidelines which must be available in the bridge file. The following lists are generated:

- Underwater
- Snooper or lift truck
- Special scaffold or special ladder
- Fracture critical
- Interim inspection (separate list for “on-NHS” and “off-NHS”)
- Posted
- Scour or hydraulic problems
- Deck condition rated 3 or less
- Superstructure condition rated 3 or less
- Substructure condition rated 3 or less
- Waterway adequacy rated 3 or less
- Culvert condition rated 3 or less
- Temporary structure indicated
- Deck condition rated 4 or less
- Superstructure condition rated 4 or less
- Substructure condition rated 4 or less

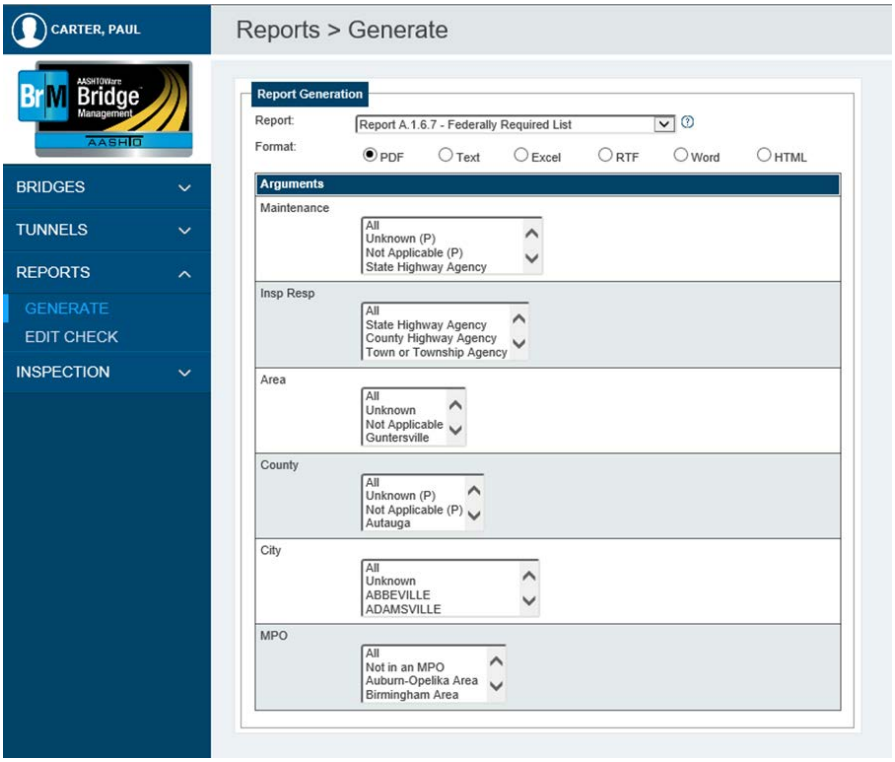


Figure 131 – Federally Required List Report Generation screen

Use the radio buttons at the top of the screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Use the other fields on this screen to select a set of criteria for the report. Possible criteria for this report are listed below.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing you to save or print as needed. To return to the previous page, click **Return to Report Generation**.

Possible criteria for the Federally Required List are:

Maintenance:
This field specifies the maintenance responsibility (Item 21) of the structures for which the report is to be printed.

Insp Resp:
This field specifies the inspection responsibility (Item 293) of the structures for which the report is to be printed.

Area:
This field specifies the ALDOT Area location (Item 2) of the structures for which the report is to be printed. If this field is entered, then only the structures in the selected area print.

County:
This field specifies the county location (Item 3) of the structures for which the report is to be printed. This field lists all counties in the state in alphabetical order. If this field is entered, then only the structures in the selected county print.

City:
This field specifies the city location (Item 4) of the structures for which the report is to be printed. This field lists all cities in the state in alphabetical order. If this field is entered, then only the structures in the selected city print.

MPO:
This field specifies the MPO location (Item 203) of the structures for which the report is to be printed

A.1.6.8 Bridge ID Cross Reference List

The Bridge ID Cross Reference List (Figure 132) can be used to print a report on the operational status of all structures. This report should be printed prior to submitting a BI-1 form to cross-reference existing BINs for structures up for replacement. It eliminates the generating of duplicate BINs and provides a listing of structures belonging to an agency.

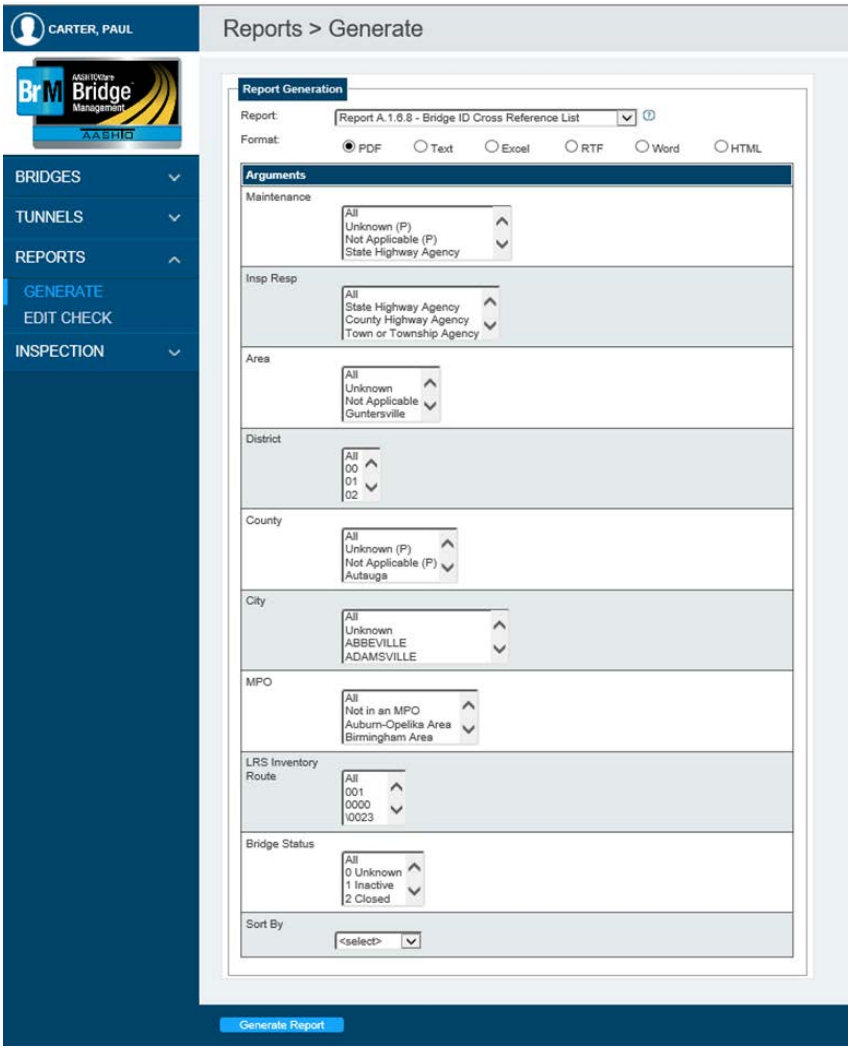


Figure 132 – Bridge ID Cross Reference List Report Generation screen

Use the radio buttons at the top of the screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Use the other fields on this screen to select a set of criteria for the report. Possible criteria for this report are listed below.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing you to save or print as needed. To return to the previous page, click **Return to Report Generation**

Possible criteria for the Bridge ID Cross Reference List include:

Maintenance:
This field specifies the maintenance responsibility (Item 21) of the structures for which the report is to be printed.

Insp Resp:
This field specifies the inspection responsibility (Item 293) of the structures for which the report is to be printed.

Area:
This field specifies the ALDOT Area location (Item 2) of the structures for which the report is to be printed. If this field is entered, then only the structures in the selected area print.

District:
This field specifies the ALDOT District location of the structures for which the report is to be printed. If this field is entered, then only the structures in the selected district print.

County:
This field specifies the county location (Item 3) of the structures for which the report is to be printed. This field lists all counties in the state in alphabetical order. If this field is entered, then only the structures in the selected county print.

City:
This field specifies the city location (Item 4) of the structures for which the report is to be printed. This field lists all cities in the state in alphabetical order. If this field is entered, then only the structures in the selected city print.

MPO:
This field specifies the MPO location (Item 202) of the structures for which the report is to be printed.

LRS Inventory Route:
This field specifies the LRS inventory route number (Item 13) of the bridges for which a report should be printed.

Bridge Status:
This field specifies the operational status of a structure. Available options are:

All - Include all operational statuses

1 Inactive - Structure not in-service (either removed or closed permanently)

3 Active - Structure is currently in-service and open to traffic

4 Proposed - Structure is planned, under design/construction, or otherwise not in-service

Sort By:
This field specifies which order you want the structure information in the report printed. By choosing an option in this drop-down menu, the report prints structures in order of Structure ID, Bridge ID (BIN), or Local ID number. **This field is always required**.

A.1.6.9 Bridge Posting Reports

The Bridge Posting report (Figure 133) allows the user to review the posting status of all structures in their inventory.

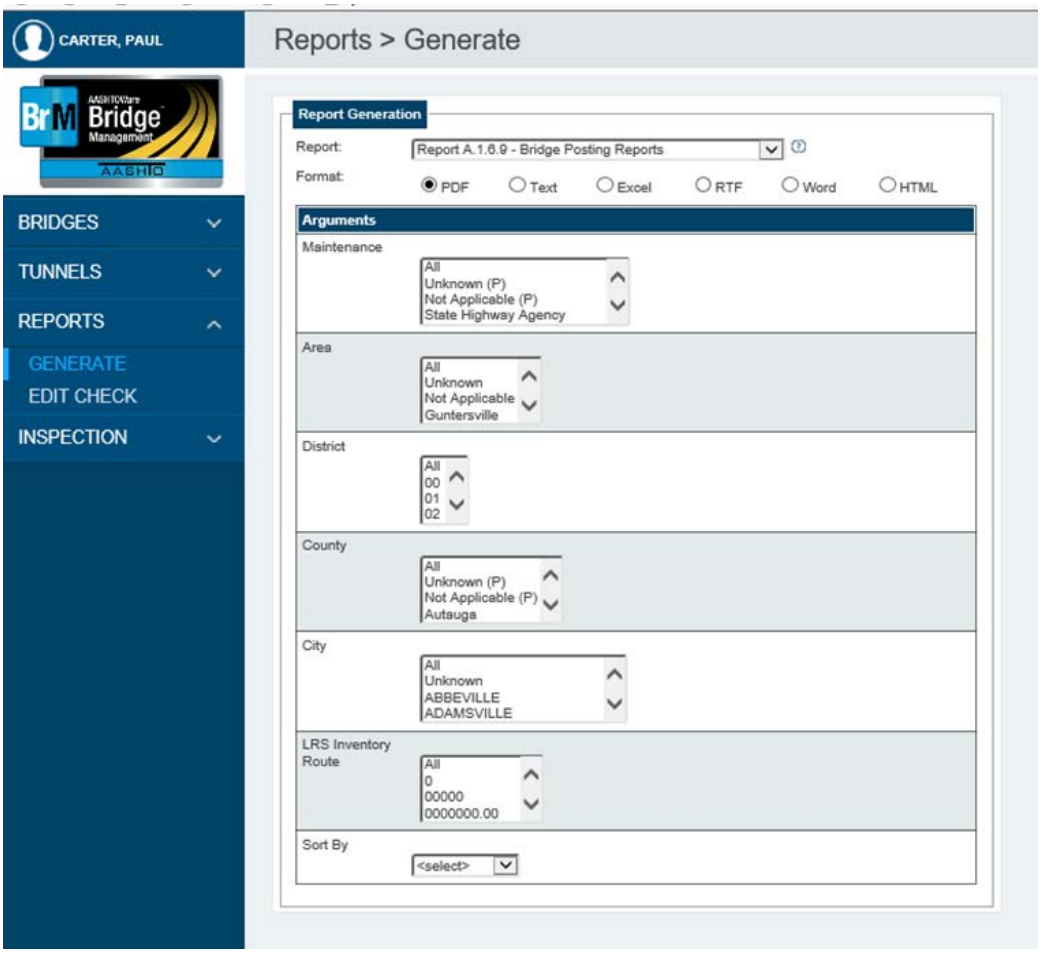


Figure 133 – Bridge Posting Reports Generation screen

Use the radio buttons at the top of the screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Use the other fields on this screen to select a set of criteria for the report. Possible criteria for this report are listed below.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing you to save or print as needed. To return to the previous page, click **Return to Report Generation**.

Possible criteria for the Bridge Posting Report are:

Maintenance:
This field specifies the maintenance responsibility (Item 21) of the structures for which the report is to be printed.

Area:
This field specifies the ALDOT Division/Area location (Item 2) of the structures for which the report is to be printed. If this field is entered, then only the structures in the selected area print.

District:
This field specifies the ALDOT District location of the structures for which the report is to be printed. If this field is entered, then only the structures in the selected district print.

County:
This field specifies the county location (Item 3) of the structures for which the report is to be printed. This field lists all counties in the state in alphabetical order. If this field is entered, then only the structures in the selected county print.

City:
This field specifies the city location (Item 4) of the structures for which the report is to be printed. This field lists all cities in the state in alphabetical order. If this field is entered, then only the structures in the selected city print.

LRS Inventory Route:
This field specifies the LRS inventory route number (Item 13) of the bridges for which a report should be printed.

Sort By:
This field specifies which order you want the structure information in the report printed. By choosing an option in this drop-down menu, the report prints structures in order of Structure ID, Bridge ID (BIN), or Local ID number. **This field is always required.**

A.1.6.10 Sufficiency Ranking Report

The Sufficiency Ranking report (Figure 134) allows the user to review the sufficiency ranking of all structures in their inventory. This report provides an inventory of bridge owner, location, sufficiency ranking, and status information. The sufficiency rating is primarily used to determine eligibility for federal funding and it also is used to assess the overall condition of a bridge.

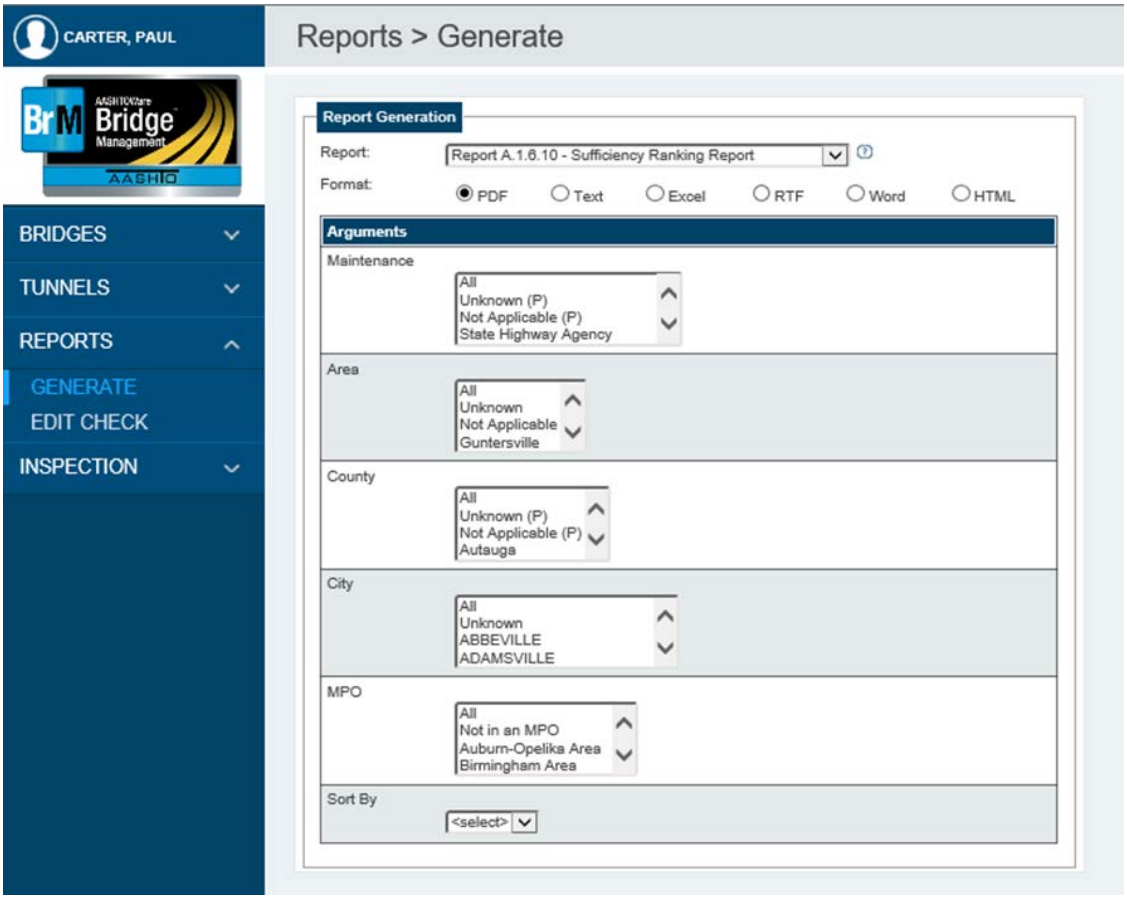


Figure 134 - Sufficiency Ranking Report Generation screen

Use the radio buttons at the top of the screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Use the other fields on this screen to select a set of criteria for the report. Possible criteria for this report are listed below.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing you to save or print as needed. To return to the previous page, click **Return to Report Generation**.

Possible criteria for the Sufficiency Status Report are:

Maintenance:
This field specifies the maintenance responsibility (Item 21) of the structures for which the report is to be printed.

Area:
This field specifies the ALDOT Area location (Item 2) of the structures for which the report is to be printed. If this field is entered, then only the structures in the selected area print.

County:
This field specifies the county location (Item 3) of the structures for which the report is to be printed. This field lists all counties in the state in alphabetical order. If this field is entered, then only the structures in the selected county print.

City:
This field specifies the city location (Item 4) of the structures for which the report is to be printed. This field lists all cities in the state in alphabetical order. If this field is entered, then only the structures in the selected city print.

MPO:
This field specifies the MPO location (Item 203) of the structures for which the report is to be printed.

Sort By:
This field specifies which order you want the structure information in the report printed. By choosing an option in this drop-down menu, the report prints structures in order of Structure ID, Bridge ID (BIN), or Local ID number. **This field is always required.**

A.1.6.11 Inspection Summary

The Inspection Summary report (Figure 135) can be used to print a Biennial Bridge Inspection Schedule Summary for inspection planning. This report allows the user to review the number of bridges to be inspected by category for each month. The report also provides information on the square footage of area to be inspected.

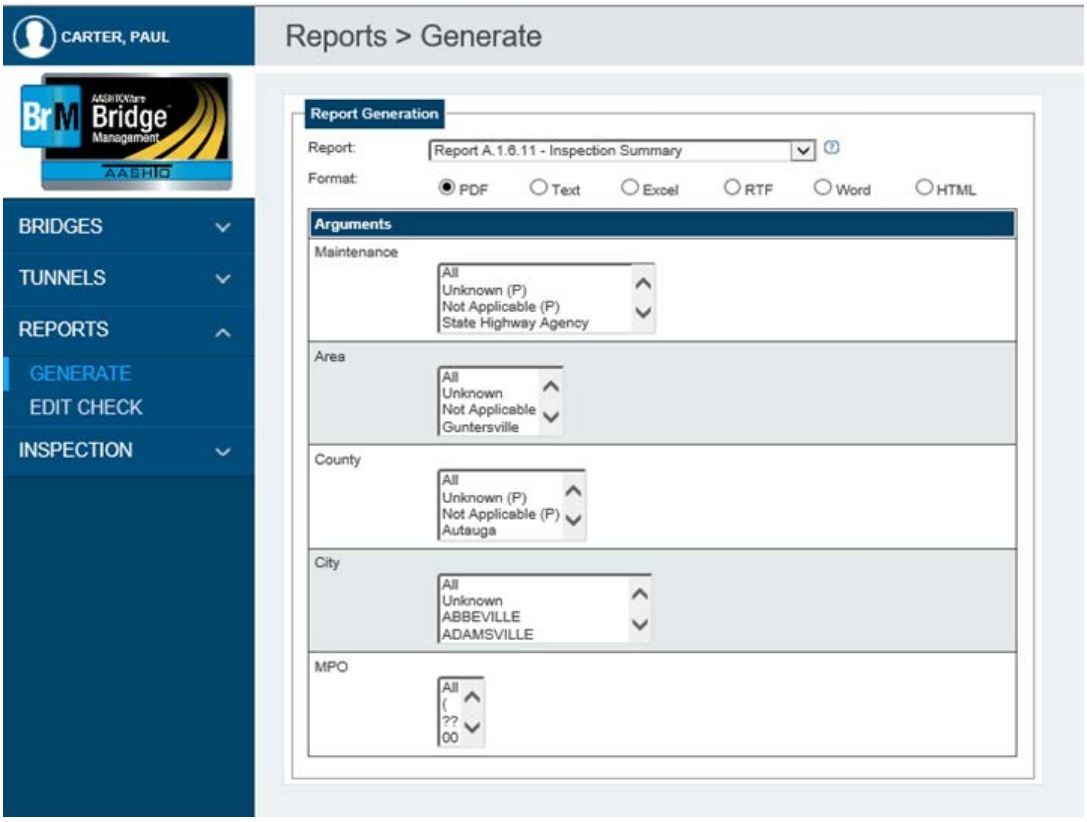


Figure 135 – Inspection Summary Report Generation screen

Use the radio buttons at the top of the screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Use the other fields on this screen to select a set of criteria for the report. Possible criteria for this report are listed below.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing you to save or print as needed. To return to the previous page, click **Return to Report Generation**.

Possible criteria for the Inspection Summary Report are:

Maintenance:
This field specifies the maintenance responsibility (Item 21) of the structures for which the report is to be printed.

Area:
This field specifies the ALDOT Area location (Item 2) of the structures for which the report is to be printed. If this field is entered, then only the structures in the selected area print.

County:
This field specifies the county location (Item 3) of the structures for which the report is to be printed. This field lists all counties in the state in alphabetical order. If this field is entered, then only the structures in the selected county print.

City:
This field specifies the city location (Item 4) of the structures for which the report is to be printed. This field lists all cities in the state in alphabetical order. If this field is entered, then only the structures in the selected city print.

MPO:
This field specifies the MPO location (Item 203) of the structures for which the report is to be printed

A.1.6.15 Bridge Rating Inventory Report

The Bridge Rating Inventory report (Figure 136) can be used to print a listing of structures and information related to their location, design and construction information, rating evaluation, as well as condition ratings.

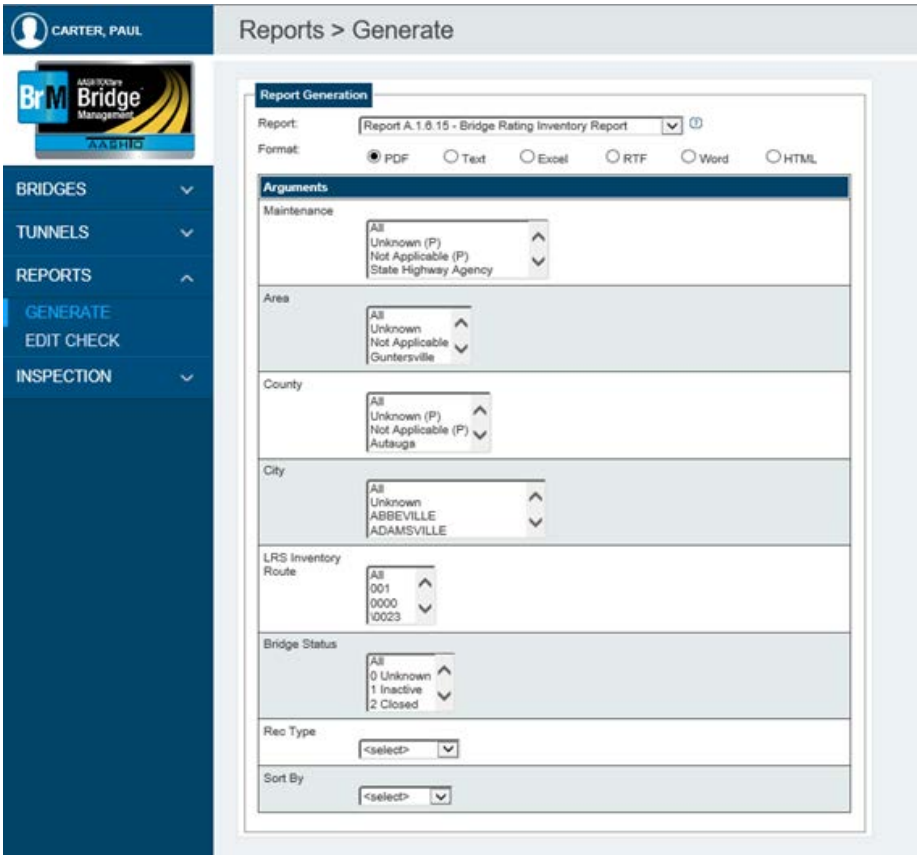


Figure 136 – Bridge Rating Inventory Report Generation screen

Use the radio buttons at the top of the screen to select a format. Reports can be printed in various formats (PDF, Text, Excel, RTF, Word, and HTML).

Use the other fields on this screen to select a set of criteria for the report. Possible criteria for this report are listed below.

After selecting a format and a set of criteria, click **Generate Report**. The report downloads, allowing you to save or print as needed. To return to the previous page, click **Return to Report Generation**.

Possible criteria for the Bridge ID Cross Reference List include:

Maintenance:
This field specifies the maintenance responsibility (Item 21) of the structures for which the report is to be printed.

Area:
This field specifies the ALDOT Area (Item 2) location of the structures for which the report is to be printed. If this field is entered, then only the structures in the selected area print.

County:
This field specifies the county location (Item 3) of the structures for which the report is to be printed. This field lists all counties in the state in alphabetical order. If this field is entered, then only the structures in the selected county print.

City:
This field specifies the city location (Item 4) of the structures for which the report is to be printed. This field lists all cities in the state in alphabetical order. If this field is entered, then only the structures in the selected city print.

LRS Inventory Route:
This field specifies the LRS inventory route number (Item 13) of the bridges for which a report should be printed.

Bridge Status:

This field specifies the operational status of a structure. Available options are:

All - Include all operational statuses

1 Inactive - Structure not in-service (either removed or closed permanently)

3 Active - Structure is currently in-service and open to traffic

4 Proposed - Structure is planned, under design/construction, or otherwise not in-service

Rec Type:
Use this field to indicate the type of routes to be included in the report. **This field is always required**. Available options are:

All Include all routes associated with the structures in the report.

Over-record - Include only the routes “on” the structures in the report.

Under-record - Include only the routes “under” the structures in the report.

Sort By:
This field specifies which order you want the structure information in the report printed. By choosing an option in this drop-down menu, the report prints structures in order of Structure ID, Bridge ID (BIN), or Local ID number. **This field is always required.**

5.4: FHWA Edit Report

This task generates an FHWA Edit Report, allowing a user to check for federal coding errors within their bridge inventory. To access this report, click the **Edit Check** Task under the **Reports** Tab. The **Report Generation** Screen opens, allowing you to select the report criteria.

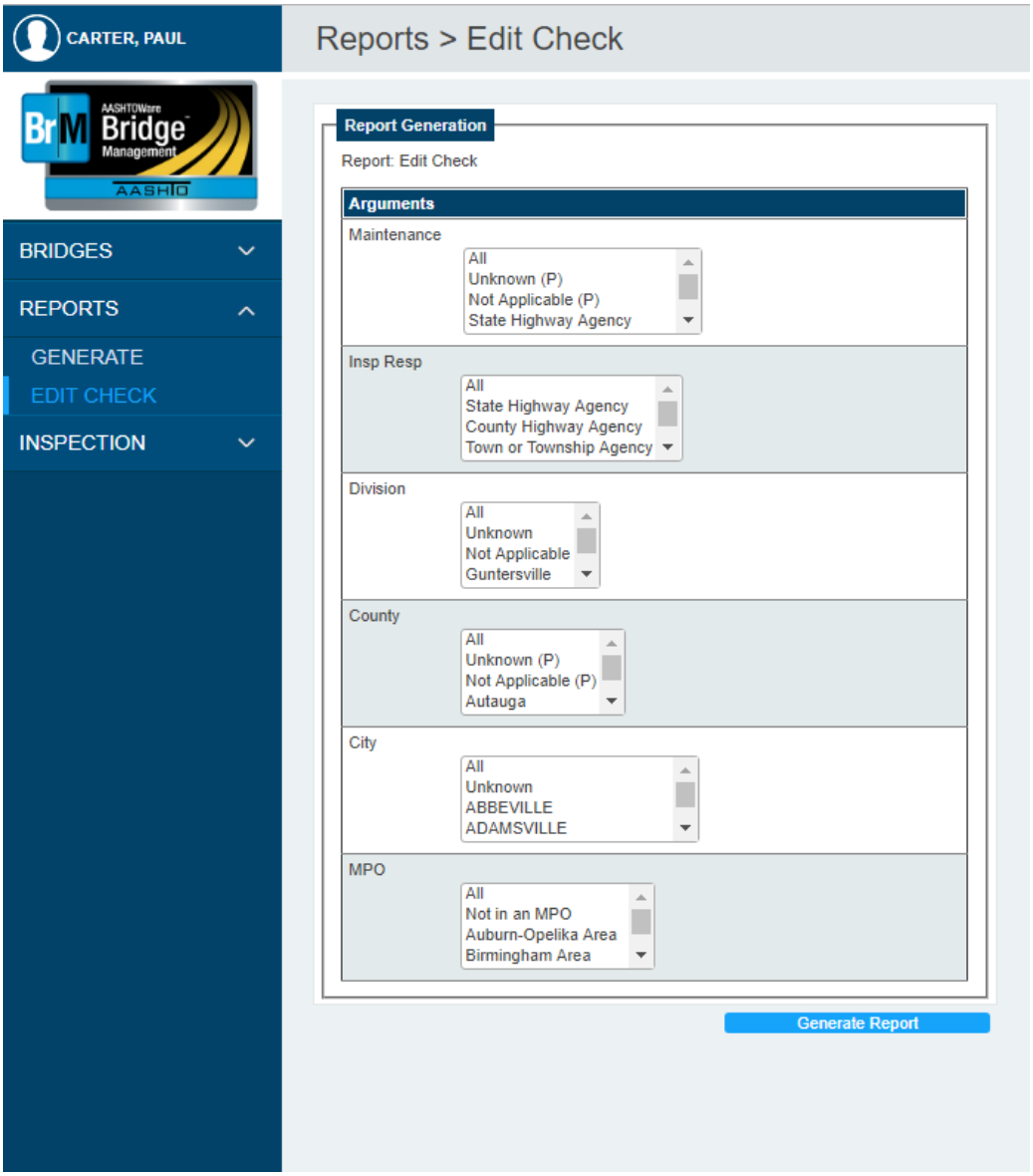


Figure 137: - FWHA Edit Report Generation Screen

Use the other fields on this screen to select a set of criteria for the report. Possible criteria for this report are listed below.

After selecting a set of criteria, click **Generate Report**. The report downloads, allowing you to save or print as needed. The FHWA Edit Report generates a PDF format only. To return to the previous page, click **Return to Report Generation**

Possible criteria for the FHWA Edit Report are:

Maintenance:
This field specifies the maintenance responsibility (Item 21) of the structures for which the report is to be printed.

Insp Resp:
This field specifies the inspection responsibility (Item 293) of the structures for which the report is to be printed.

Division:
This field specifies the ALDOT Area (Item 2) location of the structures for which the report is to be printed. If this field is entered, then only the structures in the area print.

County:
This field specifies the county location (Item 3) of the structures for which the report is to be printed. This field lists all counties in the state in alphabetical order. If this field is entered, then only the structures in the selected county print.

City:
This field specifies the city location (Item 4) of the structures for which the report is to be printed. This field lists all cities in the state in alphabetical order. If this field is entered, then only the structures in the selected city print.

MPO:
This field specifies the MPO location (Item 203) of the structures for which the report is to be printed