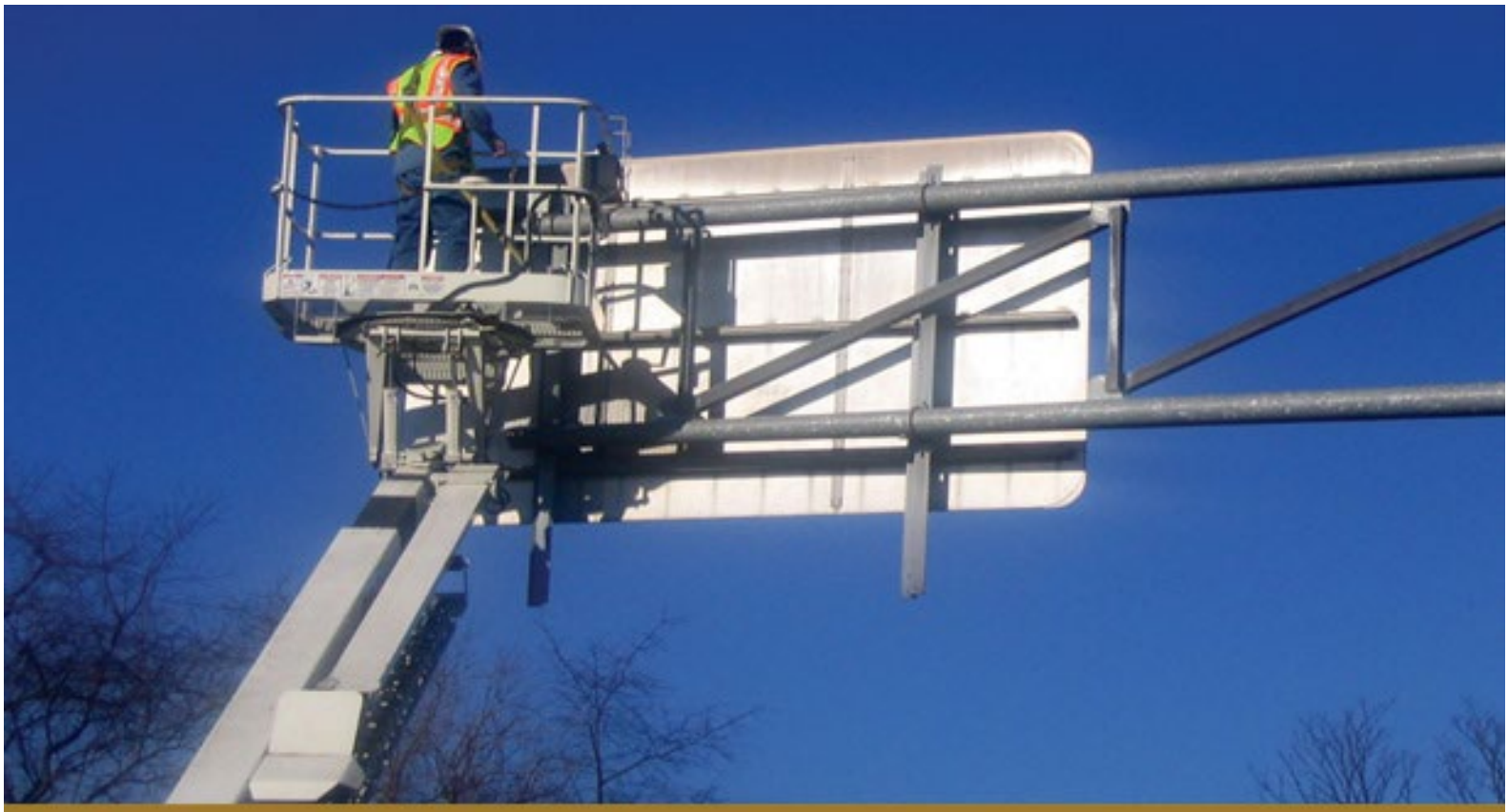

Delaware Department of Transportation

Sign Inspection Program Version 3.10.0 User Manual

July 2016

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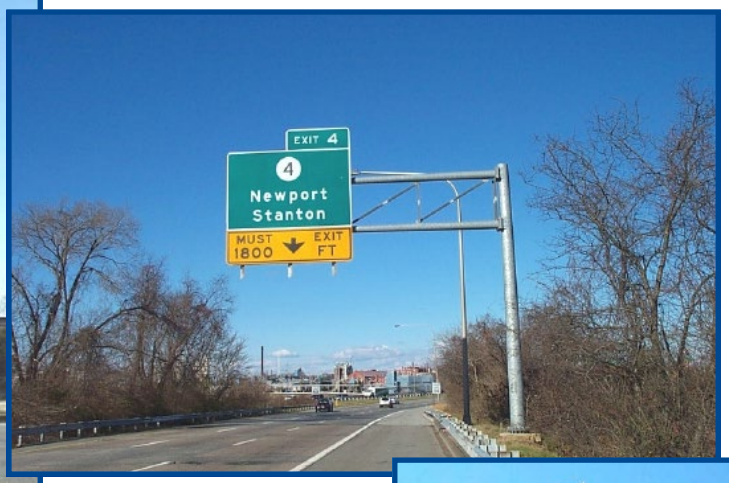

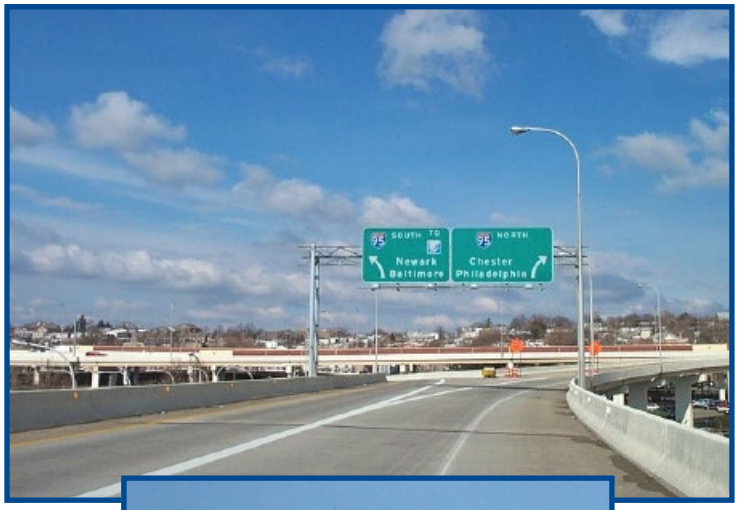

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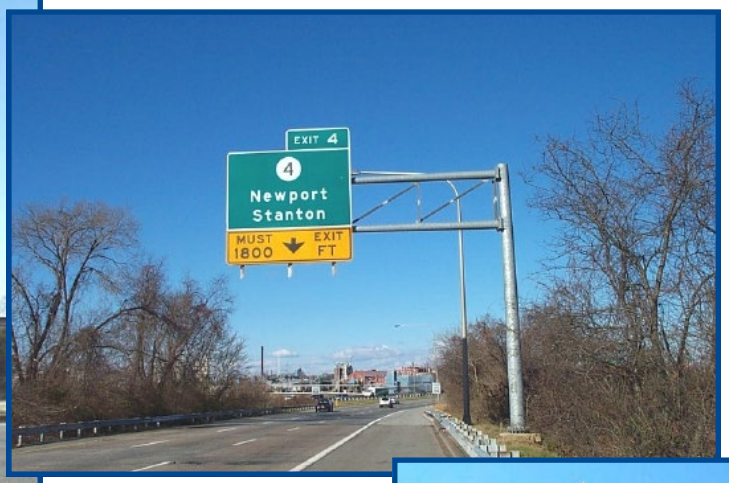
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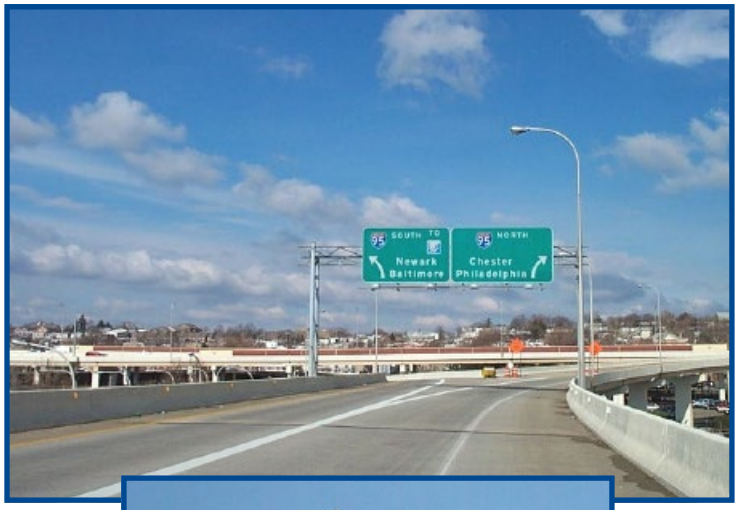
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INTRODUCTION

The Sign Inspection Program has been designed to collect data electronically in the field, manage the data collected, check the data for quality control and produce the final sign structure reports. The program is written with Microsoft's Visual Basic 6 and uses a Microsoft Access 2002 database. The user of the program creates and maintains a main database in which all sign structures are stored. The program can create a field database from the main database, consisting of the selected structures that will be field inspected. This field database can then be placed on a laptop or tablet computer and taken in the field for use during the inspection. After the field inspection has been completed, the project manager can review the structure data in the field database and then merge this field data back into the main database. The project manager can then print out the reports.

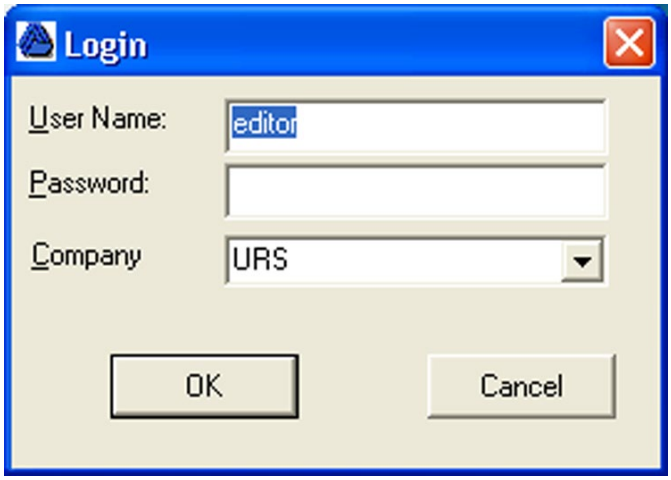
The database for the Sign Inspection Program consists of an Access database and a documents directory. The documents directory consists of one subdirectory for each sign structure, that holds photo, word, excel and/or PDF files that are associated with that structure. The database can hold multiple inspections for each sign structure, each identified by the date of the inspection. As the documents are added to the database, the inspection date is added to each file name.

When a new inspection for a sign structure is created, all database records from the previous inspection are copied and marked not saved in order to create the new inspection. These new database records are so marked as a guide to the field inspectors and later the project manager. Initially as the inspector brings up each form during the inspection, he will note that the form is marked as not saved. The inspector then verifies and makes the necessary revisions to the data on the form and then saves that form. Saving the form removes the not saved mark from the data records associated with that form. Later the project manager can review the forms for the inspected structure and verify that each form was reviewed and saved by the inspector.

It is important to maintain the integrity of the main database, as this is the source of all the sign data. The project manager charged with maintaining the database should make sure that the database is backed up and periodically cleaned and compacted. A password has been applied to the database to prevent unauthorized opening of it in Access. The program has different levels of user permissions that are password protected. The project manager through the use of these passwords, limit the ability of users to edit the database. The use of the Merge tool is also important to maintaining the database. The project manager can use this tool to copy structures to another database for use by field inspectors or others in the office. The project manager can then review these other databases for integrity before using the Merge tool to copy the data back to the main database.

Login Dialog Box

Description: The Login Dialog Box requires a User Name, Password and Company name to be entered before one can start the program. The ability to view, create, edit and administer the database through the program is based on the privileges assigned to that User Name.



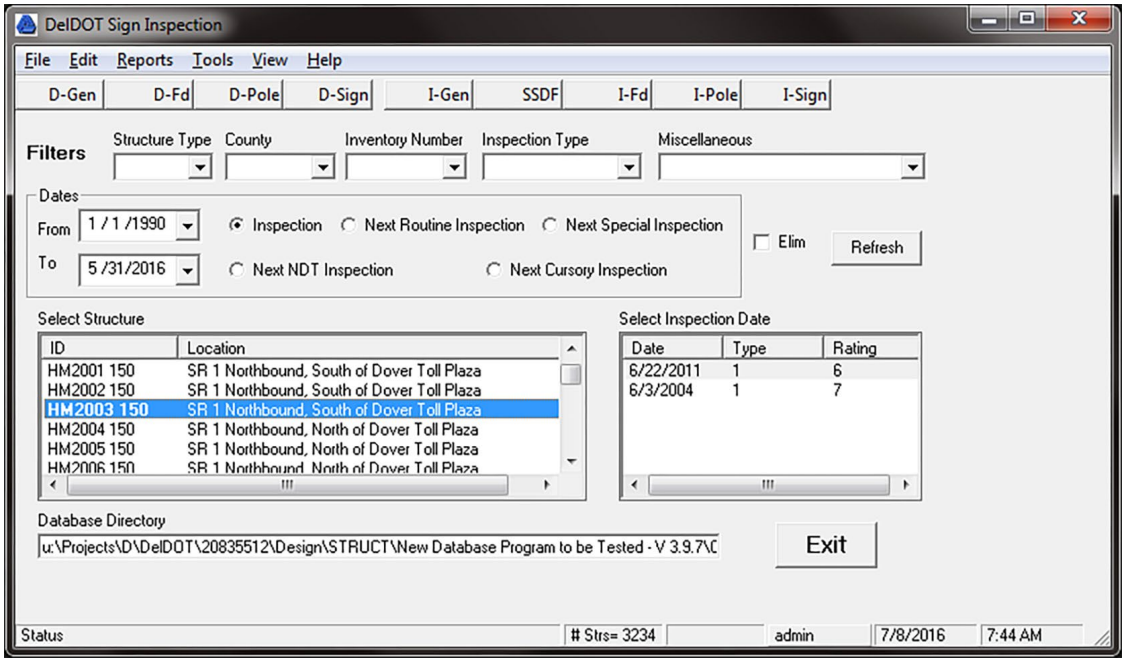
DELDOT SIGN INSPECTION DIALOG BOX

Select Structure

Description: This table lists the Structure ID numbers and their locations.

Database Directory

Description: This field lists the path location of the structure database and associated documents directory where pictures and NDT reports are stored.



Select Inspection Date

Description: This table lists the inspection date(s) for the Structure selected in the Select Structure table.

Filters

Description: The structures listed in the Select Structure table can be filtered by the following:

1. Structure Type – This pull down menu allows the user to filter the structures according to the Structure Type.
2. County – This pull down menu allows the user to filter the structures according to the county in which they are located.
3. Inventory Number – This pull down menu allows the user to filter the structures based on the first digit of the four digit Inventory Number.
4. Inspection Type – This pull down menu allows the user to filter the structures according to the type of inspection performed.
5. Miscellaneous – This pull down menu allows the user to filter the structures according to previously defined elements within the database.

If any of the filter fields are left blank, then all of the structures defined by that field will be listed in the Select Structure table. For example, if the County filter field is blank, then the structures in all counties will be listed. After selecting the filters, the user must click the Refresh button in order to update the list of structures in the Select Structure table.

Dates

Description: The structures listed in the Select Structure table can be filtered by inspection dates. The user should first select a date range by selecting a From and a To date.

Tip: By placing the pointer inside the Dates frame and using a right-click, the user has the option to select from two predefined date ranges: All Dates and Current Date.

Next, the user shall select one of the five option buttons to determine the type of inspection:

1. Inspection – All inspections within the date range.
2. Next Routine Inspection – All structures whose next scheduled Routine Inspection falls within the date range.
3. Next Special Inspection – All structures whose next scheduled Special Inspection falls within the date range.
4. Next NDT Inspection - All structures whose next scheduled NDT Inspection falls within the date range.
5. Next Cursory Inspection – All structures whose next scheduled Cursory Inspection falls within the date range.

Last, the user must click the Refresh button in order to update the list of structures in the Select Structure table.

Elim

Description: Selecting this check box and then the Refresh button will list all structures that have been eliminated.

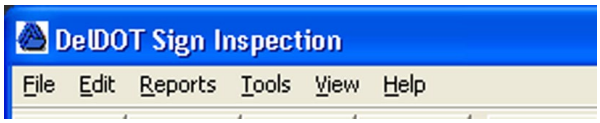
Status Bar

Description: The Status bar along the bottom of the Main form has five sections, left to right:

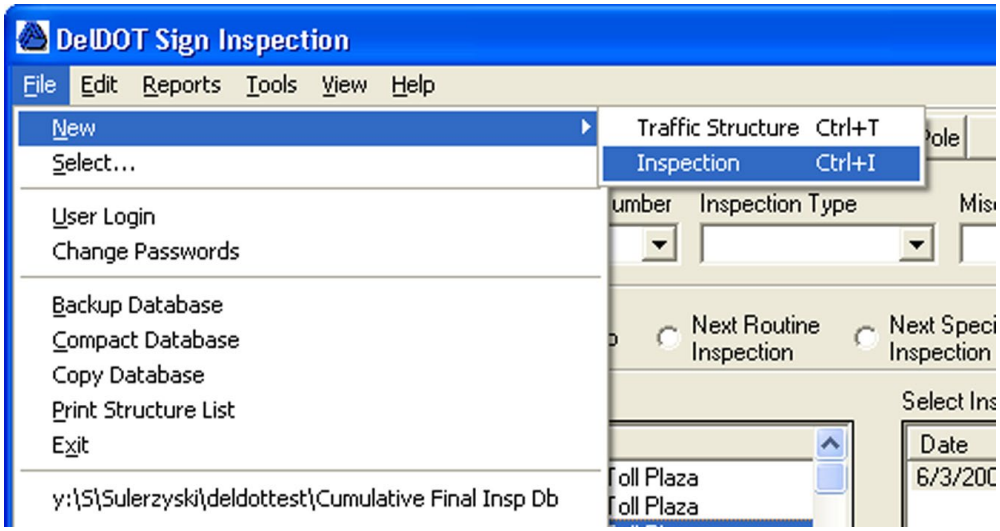
1. Displays information while the program is processing.
2. Displays the number of structures currently listed.
3. Displays the word "Locked" if the current structure has been locked from further editing. If the user has the proper privilege, clicking this section will change the structure from locked to unlocked (blank) and vice versa.
4. Displays the username of the user currently logged in. Clicking this section will bring up the login box and allow you to login as a different user.
5. Displays current date.
6. Displays current time.

Pull-Down Menus

Description: The Main dialog box has six pull down menus:



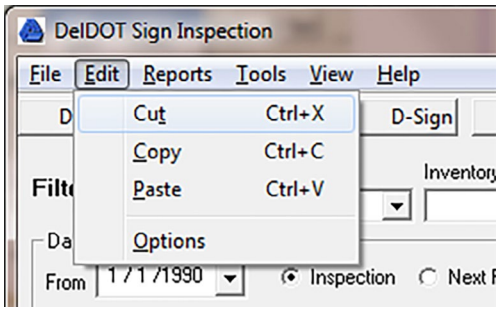
Description: The File pull-down menu:



1. New
   a. Traffic Structure – Bring up New Structure dialog box to create a new structure.
   b. Inspection – Bring up New Inspection dialog box to create a new inspection for the currently selected structure.
2. Select – Bring up Set Database Directory dialog box to select an existing database to open or to create a new database.
3. User Login – Bring up the User Login dialog box.
4. Change Passwords – Bring up Change Passwords dialog box.
5. Backup Database – Create a backup of the database.
6. Compact Database – Compact and repair the database.
7. Copy Database – Make copy of database and documents directory.
8. Print Structure List – Prints a list of the structures listed in the Select Structure table to the default printer.
9. Exit – Exit program.
10. List of recently opened databases – Select to open.

Edit

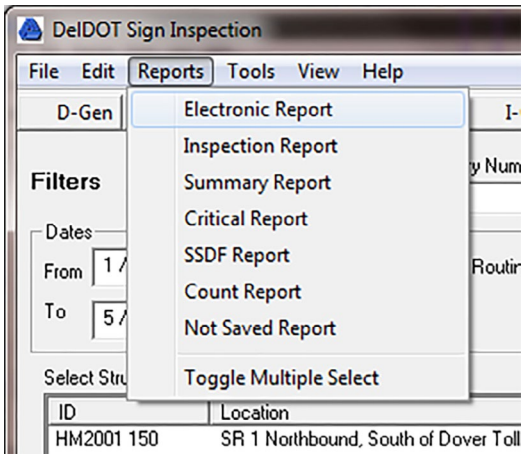
Description: Edit pull-down menu:



1. Cut – Cut to clipboard.
2. Copy – Copy to clipboard.
3. Paste – Paste from clipboard.
4. Options – Set default applications for opening up NDT reports.

Reports

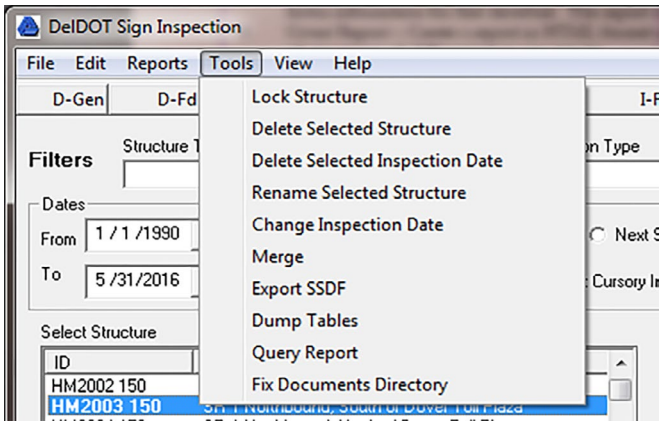
Description: Reports pull-down menu:



1. Electronic Report – Create a report in HTML format and display it in the Internet Explorer for the selected structure and inspection date. The Electronic Report includes all the structure data, inspection data and photographs for that structure. The report can then be printed or saved.
2. Inspection Report – Create a report in HTML format and display it in the Internet Explorer for the selected structure and inspection date. The Inspection Report is a customized report that includes all the inspection data and photographs for that structure. The report can then be printed or saved.
3. Summary Report – Create a report in HTML format and display it in the Internet Explorer for the selected structure and inspection date. The Summary Report is a customized single page report for that structure. The report can then be printed or saved.
4. Critical Report – Create a report in HTML format and display it in the Internet Explorer for the selected structure and inspection date. The Critical Report is a customized one page report for that structure. The report can then be printed or saved.
5. SSDF Report – Create a report in HTML format and display it in the Internet Explorer for the selected structure and inspection date. The SSDF Report is a customized one page report providing the sign structure deficiency factor information for that structure. The report can then be printed or saved.
6. Count Report – Create a report in HTML format and display it in the Internet Explorer that shows the number of structures of different types per county.
7. Not Saved Report – Create a report in HTML format and display it in the Internet Explorer to list all structures with forms that have not been saved. When a new inspection is created all forms for that inspection are marked "Not Saved". During the inspection, the inspector will save each form as he performs the inspection.
8. Toggle Multiple Select – Selecting this option allows you to select multiple structures in the Select Structure table and create reports for all of them at the same time.

Tools

Description: Tools pull-down menu:

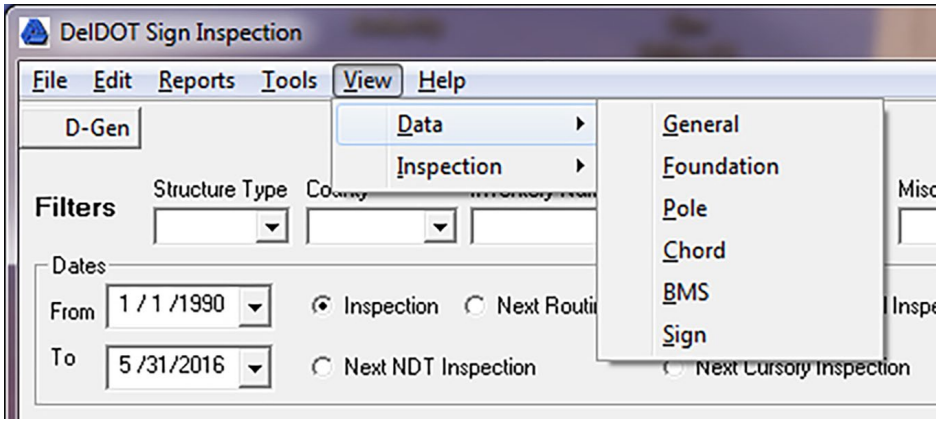


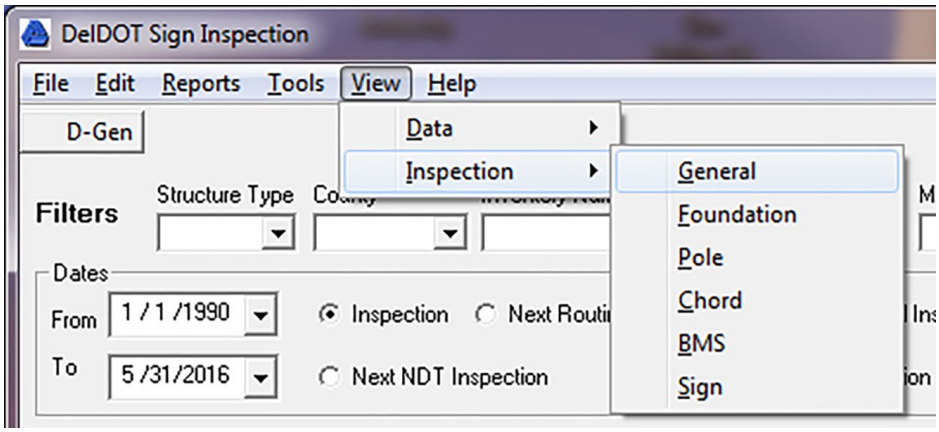
1. Lock/Unlock Structure – Toggle to lock or unlock the selected structure for editing.
2. Delete Selected Structure – Delete selected structure from the database.
3. Delete Selected Inspection Date – Delete selected inspection date for selected structure.
4. Rename Selected Structure – Rename selected structure.
5. Change Inspection Date – Change the selected inspection date for the selected structure.
6. Merge – Open the Merge dialog box in order to copy structure data from one database to another.
7. Export SSDF - The Export SSDF tool will create a comma delimited file with the SSDF data for the selected structure(s). This file can be opened in Excel for sorting or reporting.
8. Dump Tables – Open Dump dialog box to dump out the database tables to delimited text files.

9. Query Report - The Query Report generator tool allows the user to query Structure Data and/or Inspection Data for the structure(s) selected.
    - Select the Filters and Refresh to list the structures the user desires.
    - Select a structure. If the user wishes to select multiple structures, Select Toggle Multiple Select from the Reports menu, then use the shift key and select multiple structures.
    - Check the boxes for the data the user wishes to export. Then select the Export button.
    - The user will be prompted for a file name, after which the file will open in Excel. If it does not, look in c:\temp for the file and then open in Excel. The file is in csv format and can be saved to Excel format if desired.
10. Fix Documents Directory – The program automatically creates one subdirectory under the documents directory for each structure in the database where pictures and NDT reports are stored. This routine will delete any directories that do not have a structure in the database and will create a directory for any structure in the database that doesn't already have a directory.

View

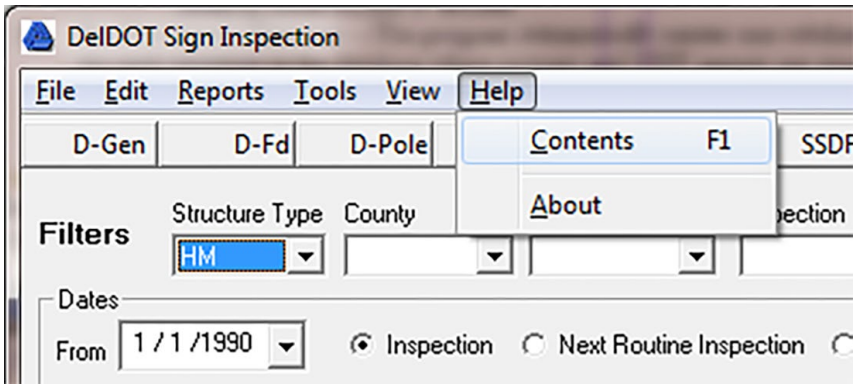
Description: View pull-down menus are used to display data and inspection dialog boxes for the selected structure and inspection date. The available dialog boxes depend on the structure type selected.





Help

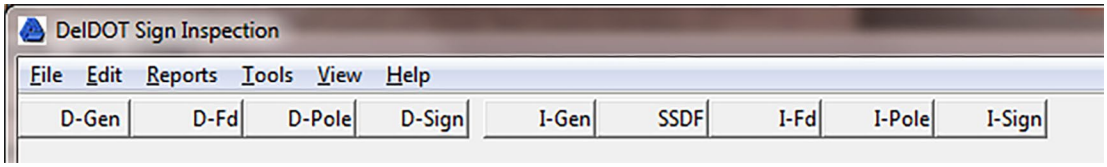
Description: Help pull-down menu:



1. Contents – Displays Help menu.
2. About – Display program version number and copyright.

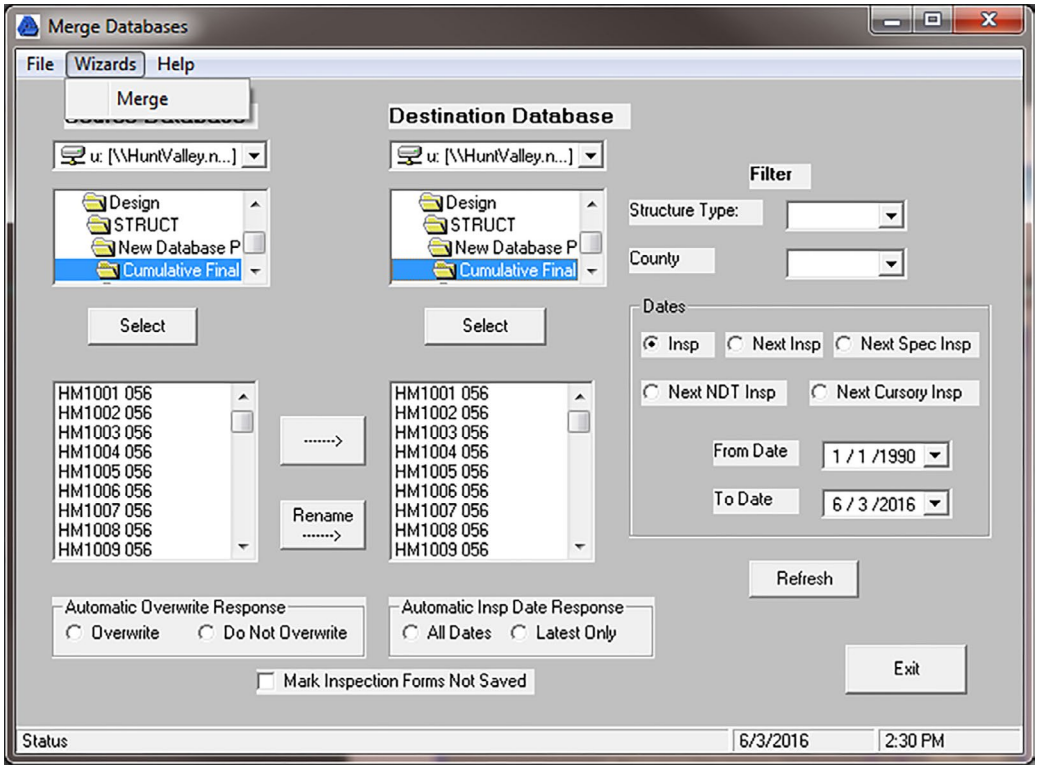
Button Bar

Description: Button bar buttons are used to display data (prefix D-), SSDF (not applicable for Traffic Signal Supports) and inspection (prefix I-) dialog boxes for the selected structure and inspection date. The available buttons depend on the structure type selected.



Merge Dialog Box

Description: Merge/copy structure data from one database to another. This could be used to merge data collected in the field to the office database or to copy data from the office database to a database for field use.



Pull Down Menu

1. File – Close the merge dialog box
2. Wizards/Merge - Instead of making all the necessary selections in the Merge Database window to merge structures from one database to another, this wizard will walk you through all of the necessary steps one by one. You will be prompted for a specific input/selection after which you can select the forward arrow to move to the next input/selection prompt. On the last input/selection window you can select the Merge button to start the merge.
3. Help/Contents - Displays Help Menu

Source Database

Description: Select database from which structure data will be copied.

Destination Database

Description: Select database to which structure data will be copied.

Filter

Description: The structures listed under Source and Destination Databases can be filtered by the following:

1. Structure Type – This pull down menu allows the user to filter the structures according to the Structure Type.
2. County – This pull down menu allows the user to filter the structures according to the county in which they are located.

The user must click the Refresh button in order to update the lists of structures.

Dates

Description: The structures listed under Source and Destination Databases can be filtered by inspection dates. The user should first select a date range by selecting a From and a To date.

Tip: By placing the pointer inside the Dates frame and using a right-click, the user has the option to select from two predefined date ranges: All Dates and Current Date.

Next, the user shall select one of the five option buttons to determine the type of inspection:

1. Inspection – All inspections within the date range.
2. Next Routine Inspection – All structures whose next scheduled Routine Inspection falls within the date range.
3. Next Special Inspection – All structures whose next scheduled Special Inspection falls within the date range.
4. Next NDT Inspection - All structures whose next scheduled NDT Inspection falls within the date range.
5. Next Cursory Inspection – All structures whose next scheduled Cursory Inspection falls within the date range.

Last, the user must click the Refresh button in order to update the lists of structures.

Automatic Overwrite Response

Description: Select the Overwrite option if you wish the program to automatically overwrite the data in the Destination database if that structure exists there. Select the Do Not Overwrite option if you wish the program to not copy the data to the Destination database if that structure exists there. If neither option is selected, you will be prompted for each structure that already exists in the Destination database.

Automatic Insp Date Response

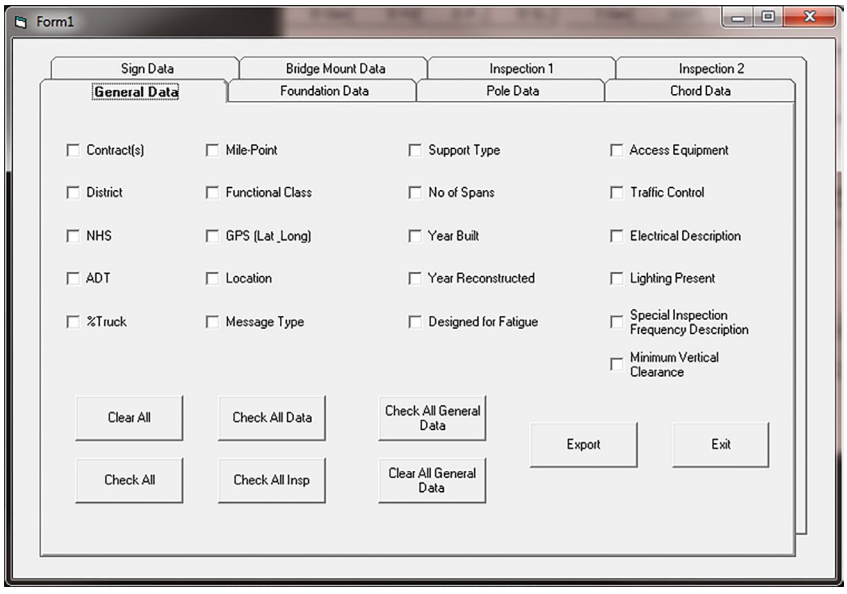
Description: Select All Dates if you wish the program to automatically copy data for all inspection dates. Select the Latest Date if you wish the program to automatically copy the data for only the latest inspection date. If neither option is selected, you will be prompted for each structure.

Mark Inspection Forms Not Saved

Description: This option is normally not used. This option will mark each data record of the copied structure inspection as "Not Saved". When the forms for this structure are displayed, a note will appear in the lower right corner indicating the form has not been saved. Marking each data record of a structure as "Not Saved" is normally done when a new inspection for a structure is created.

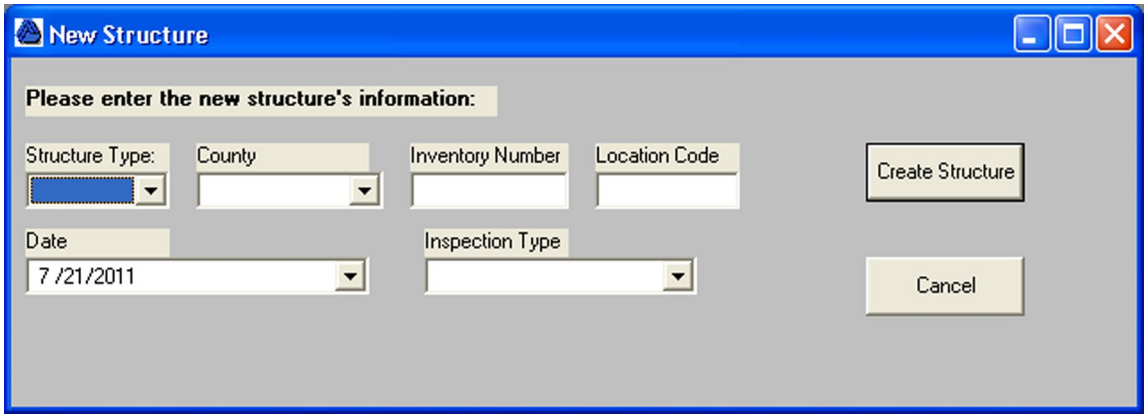
Query Report Dialog Box

Description: This is used to query Structure Data and/or Inspection Data for the structure(s) selected.



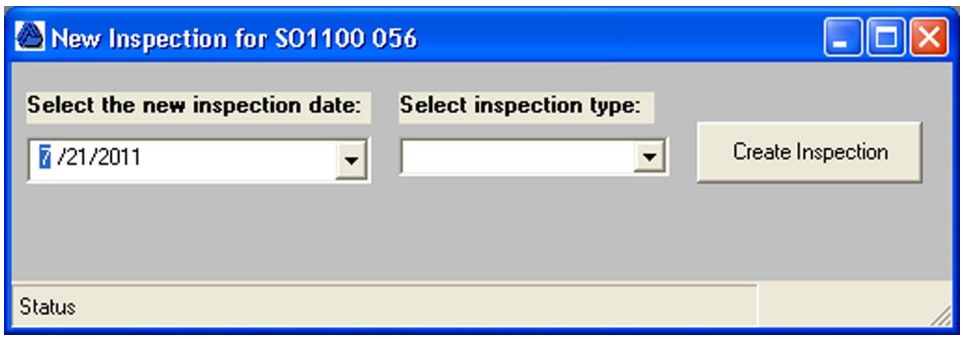
New Structure Dialog Box

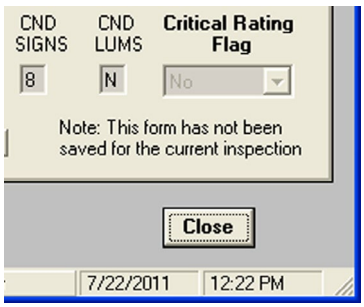
Description: This is used to create a new structure in the current database.



New Inspection Dialog Box

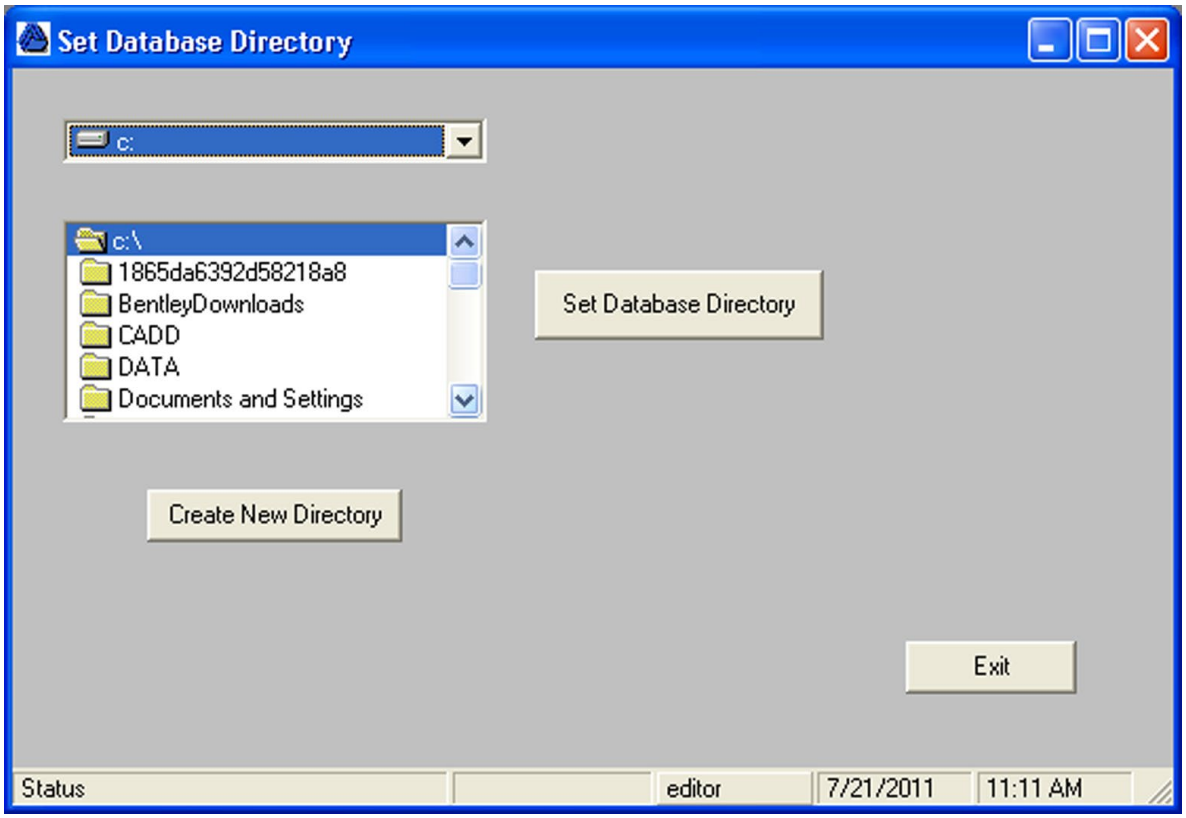
Description: Used to create a new inspection for the current structure in the current database. The program copies every data record for the latest inspection to create the new inspection. Each data record is marked as "Not Saved". As the inspector performs his inspection and saves each form, the "Not Saved" mark is removed. When a form is displayed that has not been saved a note indicating this is displayed in the lower right corner.





Set Database Directory Dialog Box

Description: Used to open an existing database or to create a new database.



Set Database Directory Button

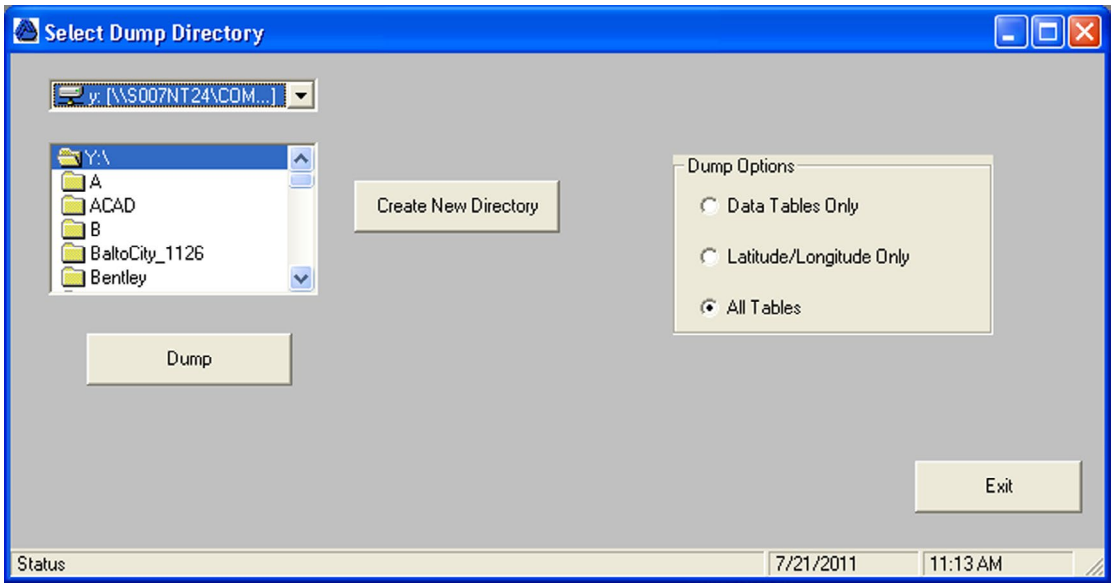
Description: Locate directory where the database exists and then click the Set Database Directory button. The Login dialog box will then be displayed. If the Documents subdirectory does not exist, the program will create one.

Create New Directory Button

Description: Locate the directory where you would like to create a new directory to store the database and then click the Create New Directory button. The program will create a new database and Documents subdirectory. The Login dialog box will then be displayed.

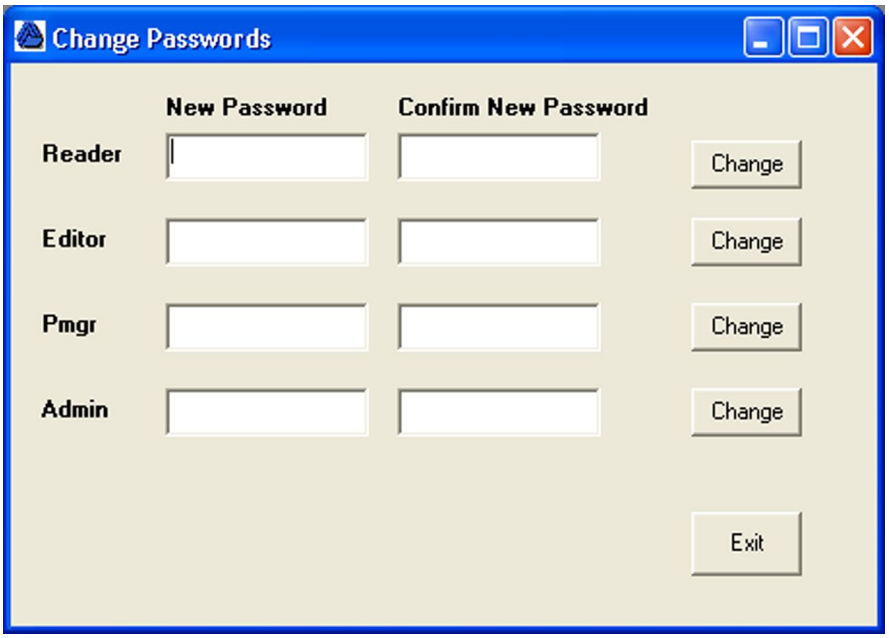
Dump Directory Dialog Box

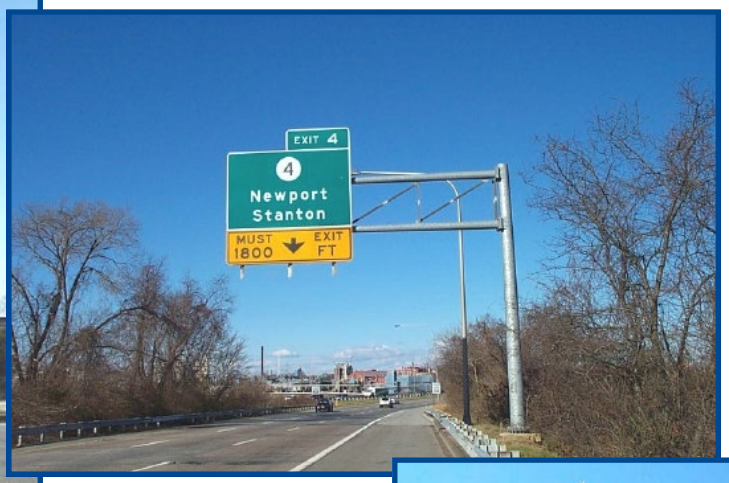
Description: Used to dump tables from the database into delimited text files.



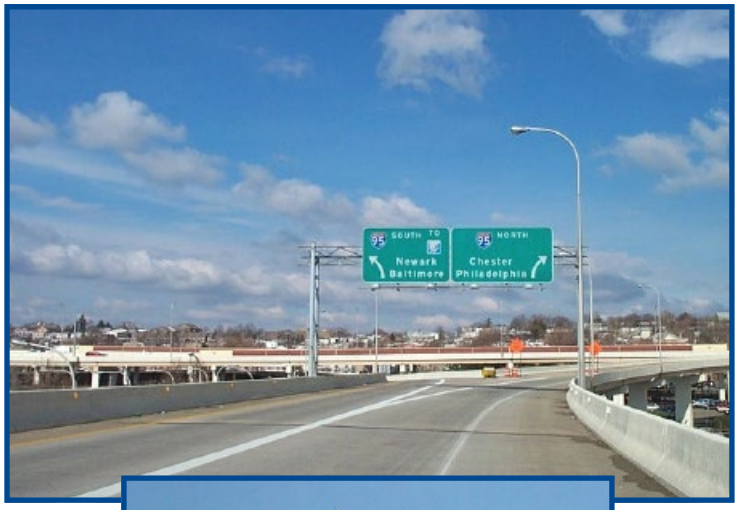
Change Passwords Dialog Box

Description: Used to change passwords, available to Admin only.




EXIT 4
4
Newport
Stanton
MUST
1800
EXIT
FT

E-ZPass
DEDICATED
LANE
USE FLASHING
NO CASH


95
SOUTH TO
Newark
Baltimore
95
NORTH
Chester
Philadelphia

95
SOUTH
Del. Mem. Bridge

CREATING STRUCTURE ID NUMBERS

Creating a New Structure in the Database

1. Structure ID Numbers are composed of the following four components:

a) Structure Type
   1) HM = High Mast Light
   2) SB = Bridge Mounted Sign Structure
   3) SC = Cantilever Sign Structure
   4) SO = Overhead Sign Structure
   5) TS = Traffic Signal Support

   Cameras mounted on pole supports should be inventoried as follows:

   - If the camera(s) is mounted onto a pole with a cantilevered section, then the structure will be inventoried as a Traffic Signal Support (TS).
   - If the camera(s) is mounted directly on top of the pole, then the structure will be inventoried as a High Mast Light (HM).

   Firehouse and School Signal Poles will be inventoried as Traffic Signal Supports (TS).

b) County

   Choose the county in which the structure is located:

   1) New Castle = 1
   2) Kent = 2
   3) Sussex = 3

c) Inventory Number

   This is a four digit number that identifies the structure. The first three digits are numeric, while the fourth digit can be alpha-numeric or blank. The inspector should contact DelDOT's Engineer in charge for the structure's Inventory Number.

   The Inventory Number for Traffic Signal Supports is the Intersection Number normally found on the intersection's Traffic Control Box.

   The inventory number for Firehouse and School Signal Poles will begin with 900 for each county (e.g. 1900, 2900 or 3900). Any other non-standard poles will be inventoried with a "900" number. The inspector should contact DelDOT's Engineer in charge for the structure's Inventory Number.

d) Location Code

   The location code is determined in the following manner:

   1) For Sign Structures, the location code is the DelDOT Maintenance Roadway ID Number found on DelDOT's website.
   2) For High Mast Lighting structures, the location code is the DelDOT Maintenance Roadway ID Number found on DelDOT's website. The highest ranking Roadway ID should be used.

This is a four digit number with the first three digits being numeric while the fourth digit can be alpha-numeric or blank. The inspector should contact DelDOT's Engineer in charge for the structure's Location Code.

3) For Traffic Signal Supports, the location code is the pole's location on the intersection (e.g. NE, SW, NNE, etc.) based on a compass reading taken in the field.

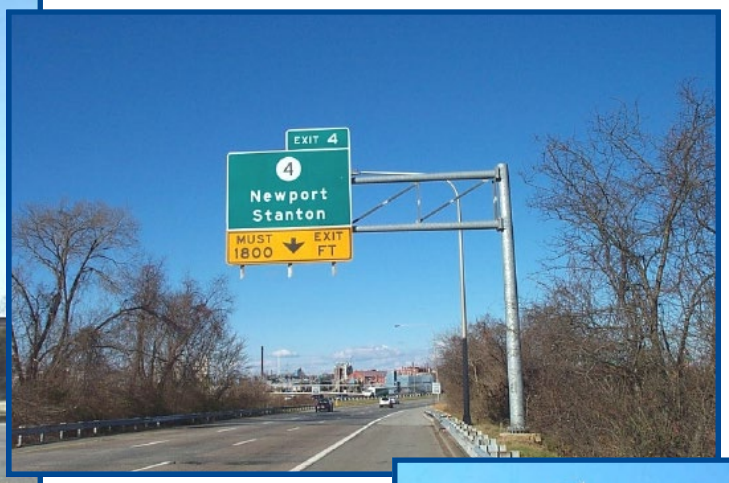
If multiple supports at an intersection are in the same location, then a lettering or numbering system (e.g. A, B, C, or 1, 2, 3, etc.) can be used to identify each pole.

Structure ID Number Conventions in Database

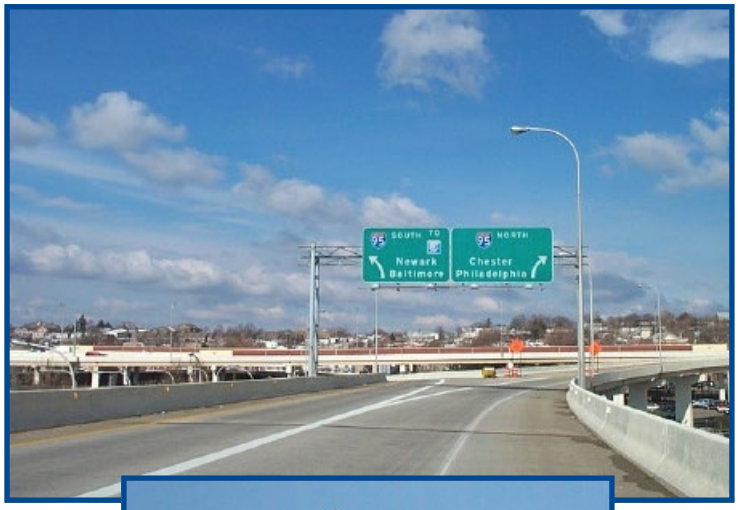
1. Sign Structures: SC1000A0000, where
   SC = Cantilever Sign Structure
   1 = County Number (1 for New Castle, 2 for Kent, 3 for Sussex)
   000A = Inventory Number (Fourth Digit to be Alpha-Numeric or Blank)
   0000 = Location Code which is the DelDOT Maintenance Roadway ID
   (Fourth Digit to be Alpha-Numeric or Blank). Roadway ID found on DelDOT's website.

2. High Mast Lights: HM1000A0000, where
   HM = High Mast Light
   1 = County Number (1 for New Castle, 2 for Kent, 3 for Sussex)
   000A = Inventory Number (Fourth Digit to be Alpha-Numeric or Blank)
   0000 = Location Code which is the DelDOT Maintenance Roadway ID
   (Fourth Digit to be Alpha-Numeric or Blank). Roadway ID found on DelDOT's website.
   Use highest ranking Roadway ID.

3. Traffic Signal Supports: TS1000ANNE, where
   TS = Traffic Signal Support
   1 = County Number (1 for New Castle, 2 for Kent, 3 for Sussex)
   000A = Inventory Number, which is the Intersection Number normally found on the intersection's Traffic Control Box. (Fourth Digit to be a letter or blank)
   NNE = North-Northeast Pole, which is the Location Code (or SSE, SE, SW, NW, etc.)


EXIT 4
4
Newport
Stanton
MUST
1800
EXIT
FT

E-ZPass
DEDICATED
LANE
USE FLASHING
NO CASH


95
SOUTH TO
Newark
Baltimore
95
NORTH
Chester
Philadelphia

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SOUTH
Del. Mem. Bridge

SIGN STRUCTURE DEFICIENCY FORMULA

PURPOSE

The objective of this document is to present DelDOT's prioritization procedure for overhead sign and high mast lighting structure maintenance and design needs. A brief discussion of the prioritization process will be provided along with description of various deficiency factors and their rating criteria. Computation procedures will be included to show how the sign structure deficiency formula is generated. Last, an overview of ranking and implementation procedures for the sign structure prioritization process will be discussed.

BACKGROUND

In 2001 DelDOT had decided to start inspecting all overhead sign, high mast lighting and traffic signal support structures throughout the state. The decision to create an inspection program came as a result of the Federal Highway Administration's (FHWA) recommendation (not a requirement). The FHWA was encouraging all State DOT's to inspect their overhead sign structures as a result of a number of failures that had occurred throughout various areas of the country in the late 1990's. Since 2001, DelDOT has completed one full round of inspections and by the end of calendar year 2011, the second round will have been completed.

During the first round of inspections, a significant amount of structures were found to be, either, severely deteriorated or had fatigue related issues (cracking) that needed to be addressed. The fatigue related issues were more prominent and included the following:

- Cracking of anchor bolts in 4-bolt cantilever sign structures
- Excessive cracking in aluminum overhead sign structures
- Cracking in pole-baseplate connection of cantilevered sign structures
- Cracking at chord-chord splice connection plates
- Cracking at truss-chord connections or truss to pole connections
- Cracking and almost complete failure of clamped chord-pole connection types
- Cracked lap splices in high mast light structures

The deterioration issues that surfaced included heavily corroded anchor bolts, concrete foundation spalling and cracking and general corrosion along the steel structures themselves. In addition to the deterioration and fatigue problems, there were also various traffic impact issues that had come up throughout the years. Upon completion of the first round of inspections it became evident that, not only do we need to continue with a full-fledge inspection program, but that some sort of maintenance program needed to be created as well in order to keep these structures in safe operating condition. After a few failed attempts in generating a sign structure maintenance contract or adding work to Bridge Management's Structural Maintenance Contracts, it became evident that a systematic procedure needed to be developed.

A working group consisting of representatives from DelDOT's Bridge Management Section worked together to create a process for state owned overhead sign and high mast lighting structures that would prioritize maintenance and design needs. A consensus was made to model a prioritization process after DelDOT's Bridge Deficiency Ranking procedure which involved the creation of a Sign Structure Deficiency Formula (SSDF). During this process, it was also determined that span-wire and cantilever types of traffic signal support structures would be omitted from the SSDF. The main reasoning for this was due to the fact that DelDOT typically widens roadways or reconfigures the geometry of intersections before span-wire traffic support structures reach the end of their "design life". Also, these structures were typically found to have little to no deterioration or fatigue issues during the two rounds of inspections. Cantilevered traffic

signal support structures were omitted due to their ease and low cost to replace. The working group discussions resulted in the selection of various deficiency factors, each with individual rating criteria, to be entered into the formula. Prior to choosing the deficiency factors, the deficiency groups were first defined and they are discussed next.

DEFICIENCY GROUP FACTOR DISTRIBUTION

The factors that were incorporated into the formula are grouped into three main categories: Condition Index, Functional Importance and Design Index. The factors are assigned points based on their degree of deficiency and importance. The main obstacle to overcome dealt with how much importance to assign to each of the three groups. After various discussions, field visits and evaluation of the information and data available, it became evident that the deficiency formula needed to rely more on the condition index group factors and that the design index factors should be weighted the least.

The total number of points available is 100 with 60 points coming from Condition Index factors, 25 points allotted for the Functional Importance portion and 15 points stemming from the Design Index factors. The grouping for the three categories is depicted in Figure 1 below. Now that the deficiency groups have been identified, explanations of individual deficiency factors will be presented.

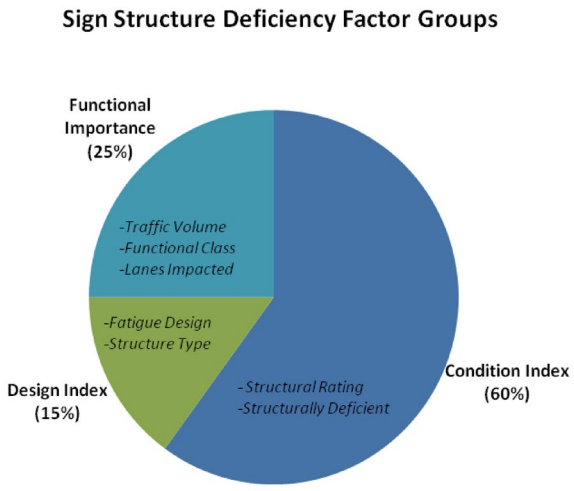


Figure 1

DEFICIENCY FACTOR DESCRIPTIONS

Structural Rating Factor – The SSDF uses a numerical rating for the condition of a particular sign or high mast lighting structure on a scale from 0-9. This condition rating is assigned during the routine inspection for each structure and is identified on the inspection report and determined by the following procedure. First, separate ratings for the Foundation, Pole and Chord are assigned during the inspection based upon these guidelines. Then the lowest of these three separate ratings will be the Structural Rating for that inspection. The rating takes into account various factors and types of deterioration that may be present. Some of the types of deterioration that may affect the structure rating of an overhead sign or high mast lighting structure include the following:

- cracking of concrete foundation
- spalling of concrete foundation
- corrosion of foundation anchor bolts
- corrosion of steel structural members

- cracking of steel support members and/or connections
- loose, missing or sheared connection bolts
- excessive deflection or settlement of structure
- damaged members due to traffic impact

Factors that may also affect the rating include the location and severity of any concrete cracking, spalling, corrosion and fatigue damage that is observed during the inspections. The Structural Rating Guidelines can be found in Appendix A of this document.

Structurally Deficient Factor – The term "Structurally Deficient" is related to the National Bridge Inspection Standards (NBIS). A structure is Structurally Deficient if the condition rating of the Foundation, Pole, or Chord is found to be in poor condition as defined by the Structural Rating Guidelines of Appendix A. Essentially, any overhead sign or high mast lighting structure with a Structural Rating of a 4 or lower is considered Structurally Deficient.

Highway Functional Classification Factor – Functional classification groups streets and highways according to the character of service they are intended to provide. This classification recognizes that individual roads and streets do not serve travel independently. The functional classification also gives an indication of importance of the road. For example, the Interstate is part of the Strategic Highway Corridor Network (STRAHNET), which is important to the defense of the United States.

Lanes Impacted Factor – This factor accounts for the number of lanes that would be affected in the event of an overhead sign structure or high mast light failure. This is sort of a risk based factor that allows us to assign points based on the likelihood that a failure would result in vehicular/motorist damage or injury.

Traffic Volume Factor – The amount of traffic for a particular roadway gives an indication as to the importance for maintaining a safe and efficient transportation network for goods and services. Average Daily Traffic (ADT) estimates are performed by DelDOT on a yearly basis and this has been included in the SSDF for each of DelDOT's overhead sign and high mast light structures to account for this importance.

Structure Type Factor – Through the course of both rounds of inspections, it has become apparent that there are some structure types that are inherently more problematic than others. Certain structure geometries, configurations and connections lend themselves to an increased risk of fatigue related issues – that is they have a lower fatigue resistance. Most of these details are not typically utilized by the department for new structures, however, we have a significant amount of existing structures in which these details are present and are of concern.

Fatigue Design Factor – Prior to the "2001 AASHTO Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals" overhead sign, high mast lighting and traffic signal support structures were not designed for fatigue. The 2001 specifications included fatigue design provisions that came as a result of various failures throughout the country and more in-depth research that focused on the behavior of these types of structures. The research identified certain dynamic loading phenomenon that was specific for these structures. It also assigned fatigue detail categories for different types of connections that were typically used that assigned fatigue resistances for the different connections. This factor assigns points to the SSDF if the structure was not designed to the fatigue provisions (prior to 2001).

DEFICIENCY POINTS DISTRIBUTION

Point values are assigned to each of the individual factors, which give the ability to assign relative importance among all the factors. The point distribution for the factors are shown in Figure 2 below. The Sign Structure Deficiency Formula calculates the point assignment for each of the factors and calculates the total number of deficiency points for each Sign Structure based on the input data for all the factors. Then the structures are ranked based upon their number of deficiency points – this is done utilizing an excel spreadsheet.

Sign Structure Deficiency Point Distribution

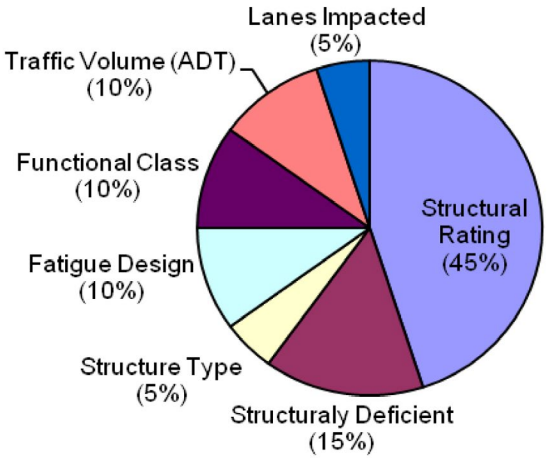


Figure 2

COMPUTATION PROCEDURE FOR DEFICIENCY FACTOR POINTS

Structural Rating Points – 0 to 45 points

NBI Condition Rating (* lowest rating)	Points
0	45
1	43
2	41
3	37
4	32
5	24
6	15
7	10
8	5
9	0

** The NBI Condition Rating to be used is the lowest rating of the Foundation, Pole, Chord or Bridge Mounted Sign condition ratings*

Structurally Deficient Points – 0 to 15 points

Structurally Deficient *	Points
No	0
Yes	15

** A structure is deemed "Structurally Deficient" when the NBI Condition Rating for either the Foundation Pole, Chord or Bridge Mounted Sign is a 4 or lower.*

Functional Classification Points – 2 to 10 points

Functional Class	Points
Local	2
Collector	5
Arterial	8
Interstate	10

Lanes Impacted Points – 0 to 5 points

# of Lanes Impacted if Structure Fails	Points
0-1 lanes	0
2 lanes	1
3 lanes	2
4 lanes	3
5 lanes	4
> 5 lanes	5

Traffic Volume Points – 1 to 10 points

Average Daily Traffic	Points
0 - 4,999	1
5,000 - 9,999	2
10,000 - 14,999	3
15,000 - 19,999	4
20,000 - 29,999	5
30,000 - 44,999	6
45,000 - 59,999	7
60,000 - 79,999	8
80,000 - 100,000	9
> 100,000	10

Structure Type Points – 1 to 5 points

Structure or Detail Type	Points
≥ 4-Pole Overhead Sign Structure	1
≥ 8-Anchor Bolt High Mast Light	
Bridge Mounted Sign Structure	
2-Pole Overhead Sign Structure	2
6-Anchor Bolt High Mast Light	
Clamped Chord-Pole Connection (Tri-Chord 2-Pole Overhead Sign Structure)	
Galvanized / Painted Steel Sleeve Joint High Mast Light	
Aluminum Sign Structure	3
> 4-Anchor Bolt Cantilever Sign Structure	
4-Anchor Bolt High Mast Light	4
4-Anchor Bolt Cantilever Sign Structure	5
Weathering Steel Telescoping Sleeve Joint High Mast Light	
Clamped Chord-Pole Connection (2-Chord 2-Pole Overhead Sign Structure)	

Fatigue Design Points – 0 to 10 points

Designed for Fatigue	Points
Not Designed to Fatigue Provisions	10
Designed to Fatigue Provisions	0

IMPLEMENTATION OF THE DEFICIENCY FORMULA

Each of the factors listed above will be reviewed and adjusted as necessary during the routine inspection. Then, at the end of each inspection season (December) the deficiency point ranking list will be re-run and some field verification would then be made. The goal is to have run the Sign Structure Deficiency Formula and have a final ranking list at the beginning of each calendar year, utilizing the updated condition and data information from the inspection. This will generate a sign structure priority list, ranking all the overhead sign and high mast lighting structures amongst each other in order to determine which structures the department should focus their attention on. All of the information will be compiled in the Deficiency Formula spreadsheet. The deficiency points are calculated by the spreadsheet, and the list will be sorted by deficiency points in descending order.

The Sign Structure Deficiency Ranking List will be distributed to Bridge Design by March 1 of each year. Working from the top of the list - Bridge Design and Bridge Management will investigate each structure and determine whether the deficiencies can be addressed by one of the three following mechanisms: Maintenance Forces, Maintenance Contracts, or Bridge Design Contracts. It may be possible for a structure to have multiple deficiencies that could be addressed by more than one of the three mechanisms. The number of structures selected for each year will be determined by resource and budgetary constraints. The list of selected structures becomes the work plan for Bridge Design and the Maintenance Districts for the next fiscal year.

CONDITION RATING CODES

Code	Description
N	NOT APPLICABLE
8	EXCELLENT OR NEW CONDITION – no problems noted.
7	GOOD CONDITION – some minor problems.
6	SATISFACTORY CONDITION – structural elements are sound, but show some minor defects, deterioration or decay. There may be a single loose bolt.
5	FAIR CONDITION – all primary structural members are sound but may have minor section loss, cracking, spalling, decay or settlement. There may be multiple loose bolts. The pole may lean slightly.
4	POOR CONDITION – advanced section loss, deterioration, spalling, decay, or structural cracking. There may be missing bolts or nuts, significant corrosion or minor collision damage.
3	SERIOUS CONDITION – loss of section, deterioration, spalling, decay, or settlement have seriously affected primary structural components. Local failures are possible. There may be a fatigue crack in a bolt or weld. The pole has a significant lean.
2	CRITICAL CONDITION – major structural defects, advanced deterioration, advanced or excessive fatigue cracks. There may be loose or broken components that could fall onto the roadway. The structure has sustained major collision damage.
1	IMMINENT FAILURE CONDITION – major deterioration or cracks, major collision damage, or excessive leaning or vibrations affecting structural stability that could cause the structure to collapse.
0	FAILED OR REMOVED CONDITION – the structure has been taken out of service.

STRUCTURAL RATING GUIDELINES - FOUNDATION

Description of Deterioration or Defect	Work Action	NBI Rating
FAILED CONDITION - Out of service and beyond corrective action	**Structure has failed or is in near-failure state**	**0**
"IMMINENT" FAILURE CONDITION - Severe deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability and are beyond repair. Fatigue cracking has occurred in the base metal of primary structural members.	**Structure is permanently removed and gets completely replaced**	**1**
50% or more of the anchor bolts are transversely cracked	Remove & Replace Structure	
CRITICAL CONDITION - Major deterioration, loss of section or spalling have seriously affected primary structural components. Multiple Fatigue cracks in primary structural steel weld connections or shear cracks in concrete may be present. Significant deflection, distortion or buckling of any of the primary structural members exists due to fatigue cracking or the advanced deterioration. Local failures are possible. Remove structure from service until the structure can be repaired.	**Structure shall be taken down and corrective action can put structure back in service. Do Nothing is not an option. (refer to Note #1)**	**2**
Major corrosion of anchor bolts w/ section loss resulting in >50% reduction in the cross-sectional area of the bolt group	Repair or replace anchor bolts and foundation	
Major Spalling of Concrete Foundation w/ exposed reinforcing and causing moderate-major bearing loss (>50%)	Repair or replace foundation	
SERIOUS CONDITION - Major deterioration of primary structural elements. Fatigue cracks in primary structural steel members or shear cracks in concrete may be present, but are not causing any obvious signs of distortion, deflection or buckling of primary structural components.	**Structure requires immediate corrective action, but can be left in-place. Do Nothing is not an option. (refer to Note #1)**	**3**
25% - < 50% of the anchor bolts are transversely cracked	Sister the Cracked Bolts	
Major spalling of concrete foundation/pedestal w/ exposed reinforcing and/or causing major bearing loss (25-50%) (exposed rebar may have active corr. & section loss)	Rehab Concrete	
Major corrosion of anchor bolts w/ section loss resulting in >25-50% reduction in the cross-sectional area of the bolt group	Clean & Paint Deteriorated Bolt(s) and Sister the Deteriorated Bolt(s)	
POOR CONDITION - Advanced section loss, deterioration, spalling of primary structural connections or members exists. Multiple Fatigue cracks in secondary structural members may exist. Fatigue crack(s) in primary structural connections exist which do not require immediate corrective action.	**Structure is Structurally Deficient and may be programmed for replacement. (refer to Note#1)**	**4**
0 - 25% of the anchor bolts are transversely cracked	Sister Cracked Bolts	
Major spalling of concrete foundation/pedestal w. exposed reinforcing and/or causing moderate bearing loss (12.5-<25%) (exposed rebar may have active corr. & section loss)	Rehab Concrete	
Major concrete cracking (>1/4" - 1/2") w or w/o rust staining	Rehab Concrete	
Active corrosion of anchor bolts w/ section loss resulting in 12.5-25% reduction in the cross-section area of the bolt group	Clean & Paint Deteriorated Bolt(s) and Sister the Deteriorated Bolt(s)	

STRUCTURAL RATING GUIDELINES - FOUNDATION

Description of Deterioration or Defect	Work Action	NBI Rating
FAIR CONDITION - All primary structural elements are sound but may have minor section loss, cracking or spalling. Fatigue crack in a secondary structural member or connection may exist.	**Work Action consists of two options: Do Nothing or Work Action(s) Listed Below**	**5**
Crack detected across top surface of anchor bolt(s)	Do Nothing & Monitor w/ Increased Inspection	
Spalling of concrete foundation/pedestal w/ exposed reinforcing and/or causing minor bearing loss (exposed rebar may have active corr. & minor section loss)	Clean Exposed Rebar & Patch Concrete	
Moderate cracking of concrete foundation (>1/8" - 1/4") with or w/o rust staining	Epoxy Inject Crack	
Active corrosion of anchor bolts w/ minor section loss resulting in <12.5% reduction in cross-sectional area of the bolt group	Clean & Paint	
SATISFACTORY CONDITION - Structural elements show minor deterioration.	**Work Action consists of two options: Do Nothing or the Work Action Listed Below**	**6**
Delaminations w/ rust staining &/or spalling of concrete foundation w/ exposed reinforcing, but no bearing loss	Minor Patch	
Superficial cracking of concrete foundation (<1/16") w/ rust staining	Clean & Paint Concrete Surface	
Minor cracking of concrete foundation (1/16" - 1/8") w or w/o rust staining	Seal crack (Rout-n-Seal or Surface Seal)	
Surface rust or active corrosion on exposed anchor bolts w/o pitting or section loss	Clean and Paint	
GOOD CONDITION - Some minor problems	**No Work Action Required**	**7**
Superficial cracking of concrete foundation (<1/16") w/o rust staining and w/ or w/o efflorescence	N/A	
Superficial delaminations &/or spalling in the concrete foundation/pedestal w/o exposed reinforcing & w/o bearing loss	N/A	
VERY GOOD CONDITION - No problems noted.	**No Work Action Required**	**8**
Concrete foundation is free of defects	N/A	
No rust or active corrosion -- protective coating system is in-tact and functioning as intended	N/A	
EXCELLENT CONDITION (essentially a brand new structure)	**No Work Action Required**	**9**
Structure is brand new or new condition	N/A	

STRUCTURAL RATING GUIDELINES - POLE

Description of Deterioration or Defect	Work Action	NBI Rating
FAILED CONDITION - Out of service and beyond corrective action	**Structure has failed or is in near-failure state**	**0**
"IMMINENT" FAILURE CONDITION - Severe deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability and are beyond repair. Fatigue cracking has occurred in the base metal of primary structural members.	**Structure is permanently removed and gets completely replaced**	**1**
Major corrosion with measurable section loss of pole(s) resulting in > 50% reduction in the cross-sectional area of any single member or connection	Remove & Replace Structure	
Cracked Telescoping Sleeve Joints (> 1 location)	Remove & Replace Structure	
CRITICAL CONDITION - Major deterioration, loss of section or spalling have seriously affected primary structural components. Multiple Fatigue cracks in primary structural steel weld connections or shear cracks in concrete may be present. Significant deflection, distortion or buckling of any of the primary structural members exist due to fatigue cracking or the advanced deterioration. Local failures are possible. Remove structure from service until the structure can be repaired.	**Structure shall be taken down and corrective action can put structure back in service. Do Nothing is not an option. (refer to Note #1)**	**2**
Cracked Pole-Baseplate Connection w/ > 25% of the pole-baseplate locations	Grind Out and Re-Weld or Retrofit	
Cracked Stiffener Welds of Pole-Baseplate Connection w/ > 25% of the pole-baseplate locations	Grind Out and Re-Weld or Retrofit	
Cracked Hand-Hole Rim Welded Connection extending into base metal of pole	Arrest Crack and/or retrofit	
SERIOUS CONDITION - Major deterioration of primary structural elements. Fatigue cracks in primary structural steel members or shear cracks in concrete may be present, but are not causing any obvious signs of distortion, deflection or buckling of primary structural components.	**Structure requires immediate corrective action, but can be left in-place. Do Nothing is not an option. (refer to Note #1)**	**3**
Cracked pole-baseplate connection (≤25% of the locations)	Grind Out and Re-Weld	
Cracked Stiffener Welds of Pole-Baseplate Connection (≤25% of the pole-baseplate locations)	Grind Out and Re-Weld	
Cracked Hand-Hole Rim Weld	Grind Out and Re-Weld	
Cracked Telescoping Sleeve Joint (only one sleeve joint)	Fabricate & Install Clamp Failsafe Retrofit	
Major corrosion with section loss of pole(s) resulting in 25% - <50% reduction in cross-sectional area of any single member or connection	Apply Fiberglass Wrap or Retrofit Connection and/or Member	
POOR CONDITION - Advanced section loss, deterioration, spalling of primary structural connections or members exist. Multiple Fatigue cracks in secondary structural members may exist. Fatigue crack(s) in primary structural connections exist which do not require immediate corrective action.	**Structure is Structurally Deficient and may be programmed for replacement. (refer to Note#1)**	**4**
Cracked trussing-pole connection(s) (2 or more locations)	Grind Out & Re-Weld	
Bent pole trussing members >2 locations (could be a result of traffic impact)	Do Nothing & Monitor w/ Increased Inspection	
Major corrosion with measurable section loss of pole(s) resulting in <25% reduction in the cross-sectional area of any single primary member or connection	Clean & Spot Paint	

STRUCTURAL RATING GUIDELINES - POLE

Description of Deterioration or Defect	Work Action	NBI Rating
FAIR CONDITION - All primary structural elements are sound but may have minor section loss, cracking or spalling. Fatigue crack in a secondary structural member or connection may exist.	**Work Action consists of two options: Do Nothing or Work Action(s) Listed Below**	**5**
Cracked trussing-pole connection (only one location)	Grind Out & Re-Weld	
Bent pole trussing member(s) (<3 locations)	Do Nothing & Monitor	
Active corrosion with pitting or minor section loss of pole(s)	Clean & Spot Paint if just at Connections Hot-Dip Galvanize if it is more widespread	
SATISFACTORY CONDITION - Structural elements show minor deterioration.	**Work Action consists of two options: Do Nothing or the Work Action Listed Below**	**6**
Minor-Moderate surface rust of poles or trussing is prevalent, but no active corrosion causing pitting &/or section loss	Do Nothing is only option	
Minor-Moderate surface rust of baseplate, stiffeners or bottom 3' of pole(s) is prevalent, but no active corrosion causing pitting &/or section loss	Clean and Paint	
GOOD CONDITION - Some minor problems	**No Work Action Required**	**7**
Light-Minor surface rust of pole(s)	N/A	
VERY GOOD CONDITION - No problems noted.	**No Work Action Required**	**8**
No rust or active corrosion -- protective coating system is in-tact and functioning as intended	N/A	
EXCELLENT CONDITION (essentially a brand new structure)	**No Work Action Required**	**9**
Structure is brand new or new condition	N/A	

STRUCTURAL RATING GUIDELINES - CHORD

Description of Deterioration or Defect	Work Action	NBI Rating
FAILED CONDITION - Out of service and beyond corrective action	**Structure has failed or is in near-failure state**	**0**
"IMMINENT" FAILURE CONDITION - Severe deterioration or section loss present in critical structural components or obvious vertical or horizontal movement affecting structure stability and are beyond repair. Fatigue cracking has occurred in the base metal of primary structural members.	**Structure is permanently removed and gets completely replaced**	**1**
Major corrosion with measurable section loss of chord(s) resulting in > 50% reduction in the cross-sectional area of any single member or connection	Remove & Replace Structure	
Cracked Telescoping Sleeve Joints (> 1 location)	Remove & Replace Structure	
CRITICAL CONDITION - Major deterioration, loss of section or spalling have seriously affected primary structural components. Multiple Fatigue cracks in primary structural steel weld connections or shear cracks in concrete may be present. Significant deflection, distortion or buckling of any of the primary structural members exist due to fatigue cracking or the advanced deterioration. Local failures are possible. Remove structure from service until the structure can be repaired.	**Structure shall be taken down and corrective action can put structure back in service. Do Nothing is not an option. (refer to Note #1)**	**2**
Cracked stiffener welds of chord-pole connection at > 25% of the chord-pole connections	Grind Out and Re-Weld or Retrofit	
Cracked chord-chord or chord-pole connection w/ > 25% of the connections cracked (structure type doesn't matter)	Grind Out and Re-Weld or Retrofit	
SERIOUS CONDITION - Major deterioration of primary structural elements. Fatigue cracks in primary structural steel members or shear cracks in concrete may be present, but are not causing any obvious signs of distortion, deflection or buckling of primary structural components.	**Structure requires immediate corrective action, but can be left in-place. Do Nothing is not an option. (refer to Note #1)**	**3**
Cracked chord-chord or chord-pole connection w/ ≤25% of the connections for cantilevered or two chord overhead structures.	Grind Out and Re-Weld	
Cracked Telescoping Sleeve Joint (only one sleeve joint)	Fabricate & Install Clamp Failsafe Retrofit	
Major corrosion with section loss of chord(s) resulting in 25% - <50% reduction in cross-sectional area of any single member or connection	Apply Fiberglass Wrap or Retrofit Connection and/or Member	
POOR CONDITION - Advanced section loss, deterioration, spalling of primary structural connections or members exist. Multiple Fatigue cracks in secondary structural members may exist. Fatigue crack(s) in primary structural connections exist which do not require immediate corrective action.	**Structure is Structurally Deficient and may be programmed for replacement. (refer to Note#1)**	**4**
Cracked trussing-chord connection(s) (2 or more locations)	Grind Out & Re-Weld	
> 2 missing/sheared or broken chord-chord connection bolts	Replace Missing or Defective Bolts	
Bent chord trussing members >2 locations (could be a result of traffic impact)	Do Nothing & Monitor w/ Increased Inspection	
Cracked chord-chord or chord-pole connection(s) (≤25% of the connections for tri-chord overhead and box chord overhead structures)	Grind Out and Re-Weld	
Bent chord members (>1 location)	Do Nothing & Monitor w/ Increased Inspection	
Major corrosion with measurable section loss of chord(s) resulting in <25% reduction in the cross-sectional area of any single primary member or connection	Clean & Spot Paint	

STRUCTURAL RATING GUIDELINES - CHORD

Description of Deterioration or Defect	Work Action	NBI Rating
FAIR CONDITION - All primary structural elements are sound but may have minor section loss, cracking or spalling. Fatigue crack in a secondary structural member or connection may exist.	**Work Action consists of two options: Do Nothing or Work Action(s) Listed Below**	**5**
Bent chord member (only 1 location)	Do Nothing & Monitor	
Cracked trussing-chord connection (only one location)	Grind Out & Re-Weld	
Bent chord trussing member(s) (<3 locations)	Do Nothing & Monitor	
1-2 missing/sheared or broken chord-chord connection bolts	Replace Missing or Defective Bolts	
Active corrosion with pitting or minor section loss of chord(s)	Clean & Spot Paint if just at Connections Hot-Dip Galvanize if it is more widespread	
SATISFACTORY CONDITION - Structural elements show minor deterioration.	**Work Action consists of two options: Do Nothing or the Work Action Listed Below**	**6**
Minor-Moderate surface rust of chords or trussing is prevalent, but no active corrosion causing pitting &/or section loss	Do Nothing is only option	
GOOD CONDITION - Some minor problems	**No Work Action Required**	**7**
Light-Minor surface rust of chords	N/A	
VERY GOOD CONDITION - No problems noted.	**No Work Action Required**	**8**
No rust or active corrosion -- protective coating system is in-tact and functioning as intended	N/A	
EXCELLENT CONDITION (essentially a brand new structure)	**No Work Action Required**	**9**
Structure is brand new or new condition	N/A	

STRUCTURAL RATING GUIDELINES - NOTES

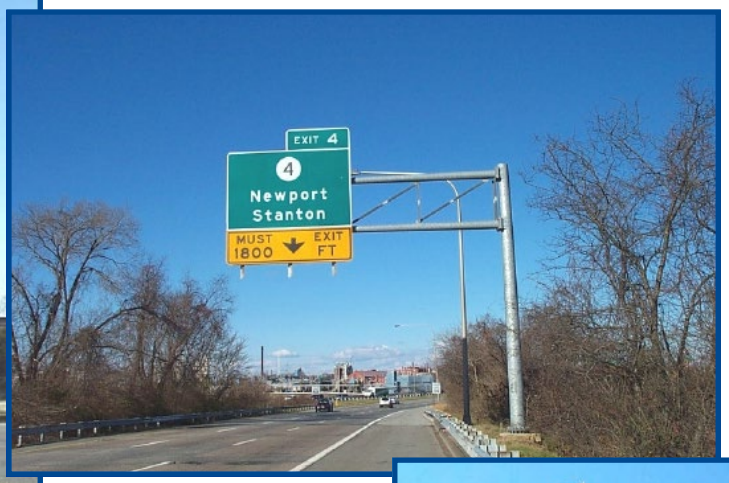
Notes:
1. Typically, Structures with fatigue related defects (cracking in steel) will remain as a '2,3 or 4' and will be programmed for replacement even if corrective action is taken and will be monitored w/ an increased inspection frequency. In general, condition related defects can be repaired and assigned a higher NBI rating. However, this will be confirmed by the BIE on a case-by-case basis.
2. Primary Structural Members include: chord, pole, anchor bolts and concrete foundation/pedestal
3. Primary Structural Connections include: chord-pole, pole-baseplate, stiffener-pole and stiffener-chord
4. Secondary Structural Members include pole trussing, chord trussing, and trussing gusset plates.
5. Secondary Structural Connections include: trussing-chord or pole connections, gusset plate-chord or pole connections and trussing-gusset plate connections
6. Sign panel defects/deterioration are not addressed in this chart, however Sign & Pavement Markings Section shall be notified.
7. Any deterioration/defects with the vertical sign panel supports, including connections, will be treated with Maximo Work Orders
8. Any structure being recommended for an NBI 4 or less will be field reviewed & verified by DelDOT's Bridge Inspection Engineer

MAXIMO CODES

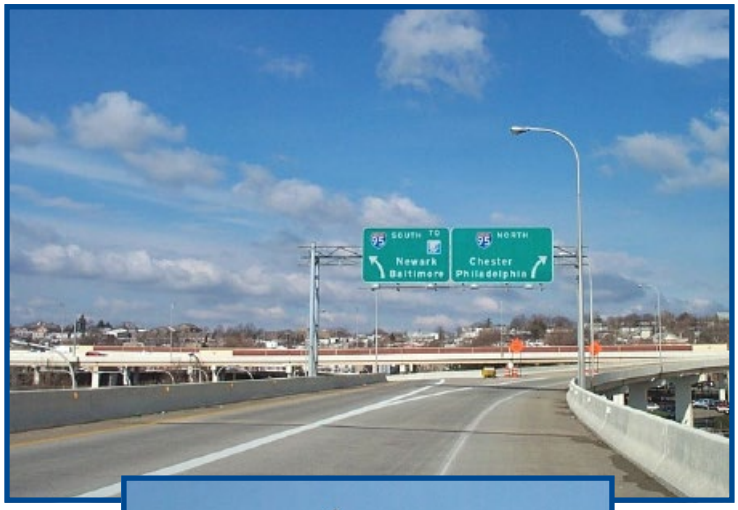
Function Code	Description	Unit of Measure
11300.1	Bridge - S101 - F1G - Grout Pad (Seal Cracks)	EA
11300.2	Bridge - S102 - F2G - Grout Pad (Remove)	EA
11300.3	Bridge - S111 - F1A - Anchor Bolt (Replace Bolt/Foundation)	EA
11300.4	Bridge - S112 - F2A - Anchor Bolt (Clean and Paint/Galvanize Bolt/Nut)	EA
11300.5	Bridge - S114 - F4A - Anchor Bolt (Replace Cover &/or Hardware/Tighten)	EA
11301.1	Bridge - S115 - F5A - Anchor Bolt (Properly Adjust Nut)	EA
11301.2	Bridge - S121 - F1C - Concrete (Seal Cracks)	LF
11302.3	Bridge - S122 - F2C - Concrete (Repair/Patch)	CY
11302.4	Bridge - S123 - F3C - Concrete (Repair/Stabilize Erosion)	CY
11302.5	Bridge - S124 - F4C - Concrete (Replace Foundation)	CY
11302.6	Bridge - S131 - F1F - Foundation (Repair Slope Protection/Provide Proper Drainage)	SY
11302.7	Bridge - S132 - F2F - Uncover Foundation/Remove Vegetation	EA
11303.1	Bridge - S201 - P1P - Steel (Repair/Replace/Relocate Pole)	LF
11303.2	Bridge - S202 - P2P - Timber (Repair/Replace/Relocate Pole)	LF
11303.3	Bridge - S203 - P3P - Re-Galvanize/Repair Pole	SF
11303.4	Bridge - S211 - P1S - Pole (Replace/Tighten Bolts)	EA
11303.5	Bridge - S212 - P1S - Pole (Repair/Re-Weld Connection)	EA
11303.6	Bridge - S221 - P1C - Replace/Tighten Pole Cap	EA
11303.7	Bridge - S231 - P1G -Pole (Install/Repair Guardrail)	LF
11303.8	Bridge - S241- P1B - Base Plate (Repair/Replace Base Plate)	EA
11303.9	Bridge - S242 - P2B - Base Plate (Re-Galvanize/Repaint Plate)	EA
11304.1	Bridge - S251 - P1T - Pole Trussing (Repair/Replace Trussing)	LF
11304.2	Bridge - S252 - P2T - Pole Trussing (Re-Galvanize/Repaint)	SF
11304.3	Bridge - S253 - P3T - Pole Trussing (Repair/Re-Weld Connection)	EA
11304.4	Bridge - S254 - P4T - Pole Trussing (Replace/Tighten Bolts)	EA
11305.1	Bridge - S301 - C1C - Repair/Replace Chord	LF
11305.2	Bridge - S302 - C2C - Chord (Re-Galvanize/Repaint)	SF
11305.3	Bridge - S311 - C1S - Chord Splice (Replace/Tighten Bolts)	EA
11305.4	Bridge - S312 - C2S - Chord Splice (Repair/Re-Weld Connection)	EA
11305.5	Bridge - S321 - C1T - Chord Trussing (Repair/Replace Trussing)	LF
11305.6	Bridge - S322 - C2T - Chord Trussing (Re-Galvanize/Repaint)	SF
11305.7	Bridge - S323 - C3T - Chord Trussing (Repair/Re-Weld Connection)	EA
11305.8	Bridge - S324 - C4T - Chord Trussing (Replace/Tighten Bolts)	EA
11305.9	Bridge - S331 - C1C - Replace/Tighten Chord Cap	EA

MAXIMO CODES

Function Code	Description	Unit of Measure
11306.1	Bridge - S341 - C1P - Chord-Pole Connection (Replace/Tighten Bolts & / or Clamps)	EA
11306.2	Bridge - S342 - C2P - Chord-Pole Connection (Repair/Re-Weld Connection)	EA
11307.1	Bridge - S401 - S1P - Replace Sign Panel	SF
11307.2	Bridge - S402 - S2P - Sign Panel (Replace Letters/Symbols)	EA
11307.3	Bridge - S403 - S3P - Sign Panel (Replace/Tighten Nuts, Screws, Bolts)	EA
11307.4	Bridge - S404 - S4P - Replace Sign Panel Framing	LF
11307.5	Bridge - S411 - S1B - Sign Panel Brakcets (Replace/Tighten Bolts)	EA
11307.6	Bridge - S421 - S1C - Tighten/Replace Clips	EA
11308.1	Bridge - S501 - L1B - Replace Bulbs/Sensors	EA
11308.2	Bridge - S511- L1C - Luminaire Support (Repair/Replace/Tighten Connection)	LF
11308.3	Bridge - S521 - L1L - Replace/Repair Luminaire	EA
11308.4	Bridge - S531 - L1S - Traffic Signal Support Connection (Repair/Replace/Tighten)	EA
11309.1	Bridge - S601- E1C - Hand-Hole Cover (Replace/Tighten Cover & / or Screws)	EA
11309.2	Bridge - S611 - E1W - Conceal/Hide Electrical Wires	LF
11309.3	Bridge - S612 - E2W - Electrical Wiring (Repair/Replace Wiring)	LF
11309.4	Bridge - S613 - E3W - Electrical Wiring (Replace, Repair Conduit, and/or Junction Box)	LF
11309.5	Bridge - S614 - E4W - Electrical Wiring (Repair, Replace, and/or Tighten Connection)	EA
11310.1	Bridge - S701 - B1V - Vertical Members (Repair/Replace Member)	LF
11310.2	Bridge - S702 - B2V - Vertical Members (Replace or Tighten Nuts/Bolts)	EA
11310.3	Bridge - S711 - B1H - Horizontal Members (Repair/Replace Member)	LF
11310.4	Bridge - S712 - B2H - Horizontal Members (Replace or Tighten Nuts/Bolts)	EA
11310.5	Bridge - S721 - B1A - Repair/Retrofit Anchorage	EA
11310.6	Bridge - S722 - B2A - Tighten Bolts at Anchorage	EA


EXIT 4
4
Newport
Stanton
MUST
1800
EXIT
FT

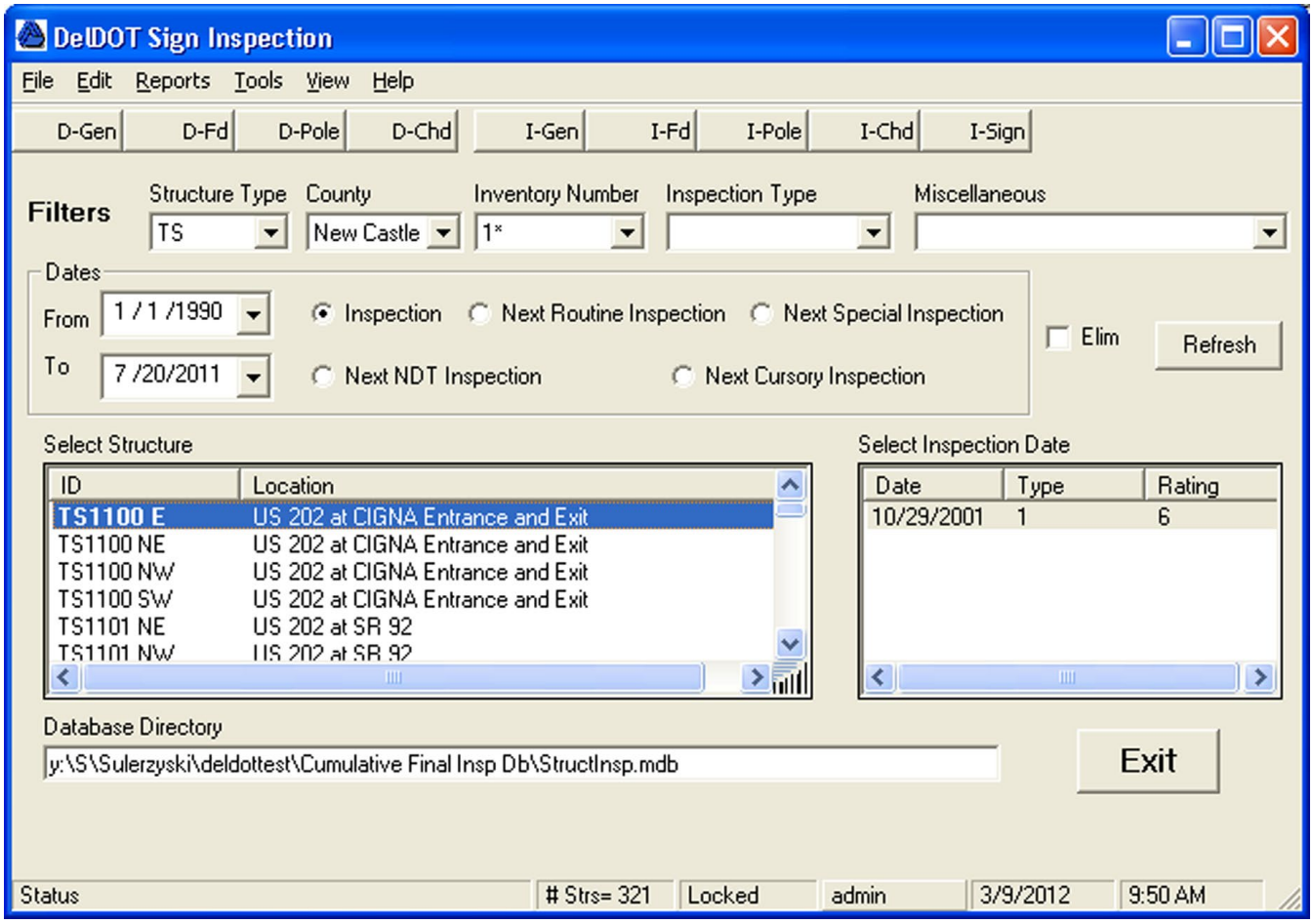
E-ZPass
DEDICATED
LANE
USE FLASHING
NO CASH


95 SOUTH TO
Newark
Baltimore
95 NORTH
Chester
Philadelphia

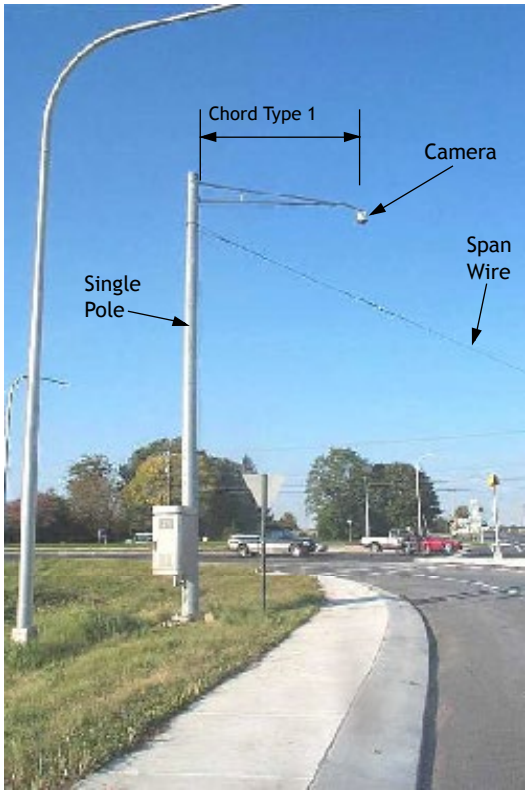
95 SOUTH
Del. Mem. Bridge

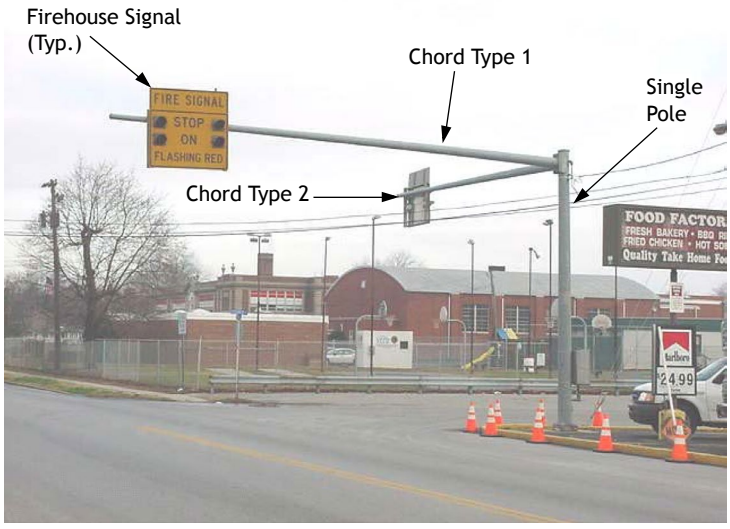
TS - TRAFFIC SIGNAL SUPPORTS

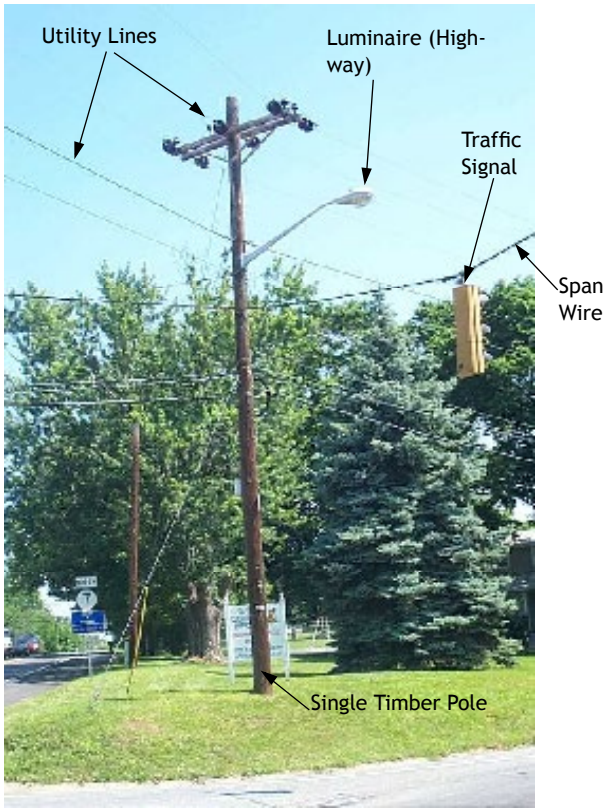
STRUCTURE DATA



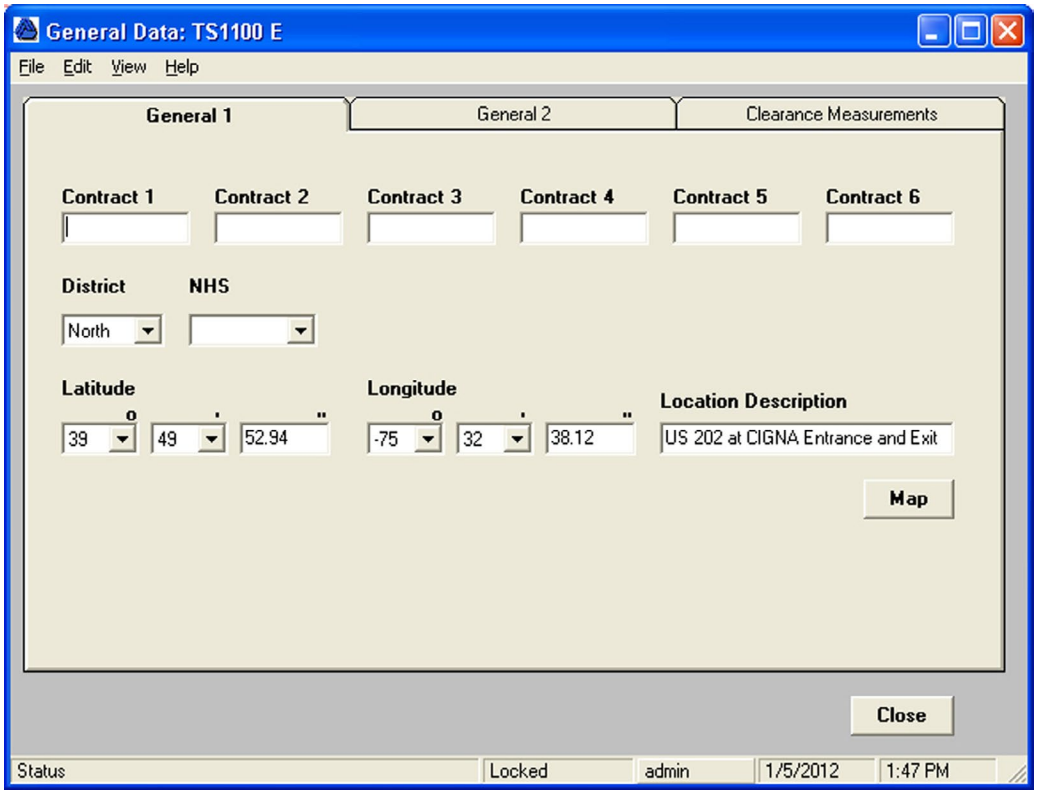
Span Wire
Traffic Signal (Typ.)
Single Pole
Traffic Control Box with ID Number


Chord Type 1
Camera
Span Wire
Single Pole


Firehouse Signal (Typ.)
Chord Type 1
Single Pole
Chord Type 2
FIRE SIGNAL
STOP
ON
FLASHING RED


Utility Lines
Luminaire (High-way)
Traffic Signal
Span Wire
Single Timber Pole

GENERAL DATA - GENERAL 1



Contract 1 to Contract 6

Description: This is an alpha-numeric field used to record up to six DelDOT Contract Numbers associated with the construction and/or rehabilitation of the structure.

Coding: None

District

Description: From the pull down menu, select the district in which the structure is located.

Coding: 1 = North PA Line to the C & D Canal
2 = Central C & D Canal to the Sussex County Line
3 = South All of Sussex County

NHS

From the pull down menu, indicate whether or not the structure is located on a National Highway System (NHS).

Latitude

Description: Enter the latitude of the structure in degrees, minutes and seconds to 1-meter accuracy. All of the Traffic Signal Structures at a particular intersection shall have the same GPS data.

The GPS data shall preferably be taken at the intersection's traffic control box. If not, then it shall be taken at one of the traffic signal pole supports.

Coding: The degrees and minutes may be chosen from the pull down menu. The seconds must be entered manually.

Longitude

Description: Enter the longitude of the structure in degrees, minutes and seconds to 1-meter accuracy. All of the Traffic Signal Structures at a particular intersection shall have the same GPS data.

The GPS data shall preferably be taken at the intersection's traffic control box. If not, then it shall be taken at one of the traffic signal pole supports.

Coding: The degrees and minutes may be chosen from the pull down menu. The seconds must be entered manually.

Location Description

Description: This is an alpha-numeric field used to describe the location of the structure. The location should provide the name of a State Route or Interstate and an intersecting feature.

For Example:
I-95 NB at Milepost 4.9
SR 141 at Exit 4
South College Avenue at Delaware Avenue

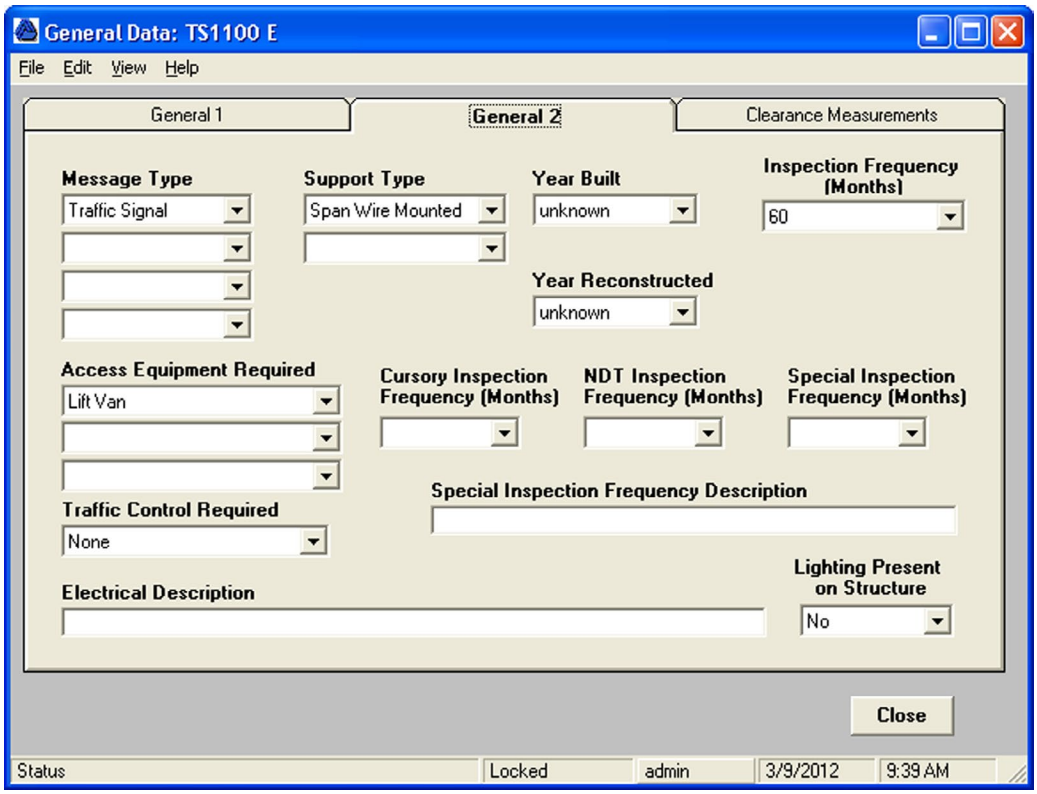
Coding: None

Map

Description: Click the button to map the location of the structure based on its GPS data.

Coding: None

GENERAL DATA - GENERAL 2



Message Type

Description: From the pull down menus, select up to four types of messages that are directly or indirectly connected to the structure.

Coding: 1 = Standard Signs
2 = Variable Message
3 = Ring – Type Light
4 = Stadium – Type Light
5 = Traffic Signal
6 = Firehouse Signal
7 = School Signal
8 = Signal Sign(s)
9 = Camera
10 = Directional/Lane Control
11 = Luminaire (Highway Lighting)
12 = Utility Lines
13 = Railroad Crossing Signal(s)
14 = Flashers
15 = Other
16 = Not Applicable
17 = Overheight Sensors

Support Type

Description: From the pull down menus, select up to two types of supports that describe how each **primary message type** is connected to the structure. Primary message types include Traffic Signal, Firehouse Signal, School Signal, Signal Sign(s), Camera, Directional/Lane Control, and Flashers.

Coding: 1 = Cantilever
2 = Butterfly
3 = Overhead Span
4 = Bridge Mounted
5 = Sign Bridge Cantilever
6 = Pole Mounted
7 = Span Wire Mounted
8 = Other

Year Built

Description: From the pull down menu, select the year that the structure was originally constructed. If the year is not available, select "Unknown".

Coding: None

Year Reconstructed

Description: From the pull down menu, select the latest year that the structure was rehabilitated. If the year is not available, select "Unknown".

Coding: None

Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure inspection in months.

Coding: None

Access Equipment Required

Description: From the pull down menu, select up to three different types of equipment required in order to perform the inspection.

Coding: 1 = Lift Van
2 = Bucket Truck
3 = Snooper
4 = Crane Truck
5 = Railroad Permit/Equipment
6 = None

Cursory Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure's cursory inspection in months.

Coding: None

NDT Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure's NDT inspection in months.

Coding: None

Special Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure's special inspection in months.

Coding: None

Special Inspection Frequency Description

Description: This is an alpha-numeric field used to comment on the type of special inspection required for the structure and reason why it was performed.

Coding: None

Traffic Control Required

Description: From the pull down menu, select the traffic control equipment or DelDOT Traffic Control Case required to perform the inspection.

Coding: 1 = Cones
2 = Signs
3 = Lane Closure(s)
4 = Case No. 16
5 = Case No. 26
6 = Case No. 27
7 = Case No. 28
8 = Case No. 29
9 = None
10 = Cones & Signs
11 = Case No. 20
12 = Case No. 16 (modified)
13 = Case No. 20 (modified)
14 = Case No. 26 (modified)
15 = Case No. 27 (modified)
16 = Case No. 28 (modified)
17 = Case No. 29 (modified)
18 = Case No. 36
19 = Case No. 36 (modified)
20 = Case No. 14
21 = Case No. 14 (modified)
22 = Case No. 3
23 = Case No. 3 (modified)
24 = Case No. 2
25 = Case No. 2 (modified)
26 = Case No. 34
27 = Case No. 34 (modified)

Electrical Description

Description: This is an alpha-numeric field used to record general comments regarding the electrical items on or around the structure.

For timber utility poles that are also traffic signal poles, the utility company's pole ID number should be entered here also. (ex., D P & L numbers, etc.)

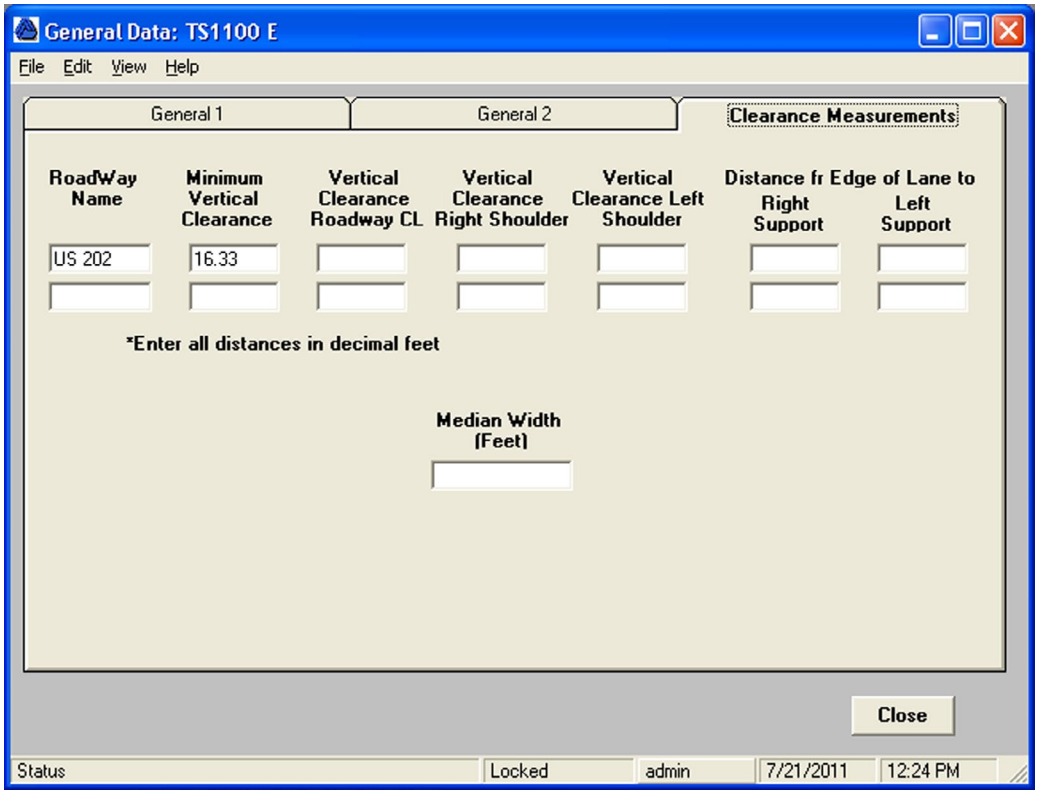
Coding: None

Lighting Present on Structure

Description: From the pull down menu, select whether or not lighting is present on the structure. If highway luminaire lighting is attached to the structure, this item should be coded "Yes".

Coding: 1 = Yes
2 = No
3 = Not Visible

GENERAL DATA - CLEARANCE MEASUREMENTS



Note : Clearances can be entered for up to two roadways. Each roadway can have its own set ofclearances.

Roadway Name

Description: This is an alpha-numeric field used to record the name of the roadway where the measurements have been taken.

Coding: None

Minimum Vertical Clearance

Description: Enter the Minimum Vertical Clearance, in decimal feet, from the roadway to the primary message type closest to the road. If the primary message type is not located over a traveled roadway, this field should be left blank.

Coding: None

Vertical Clearance - Roadway CL

Description: Enter the vertical clearance, in decimal feet, from the centerline of roadway to the primary message type. If the primary message type is not located over a traveled roadway, this field should be left blank.

This field is not applicable for strain poles.

Coding: None

Vertical Clearance - Right Shoulder

Description: Enter the vertical clearance, in decimal feet, from the roadway's right shoulder to the primary message type. If the primary message type is not located over a traveled roadway, this field should be left blank.

This field is not applicable for strain poles.

Coding: None

Vertical Clearance - Left Shoulder

Description: Enter the vertical clearance, in decimal feet, from the roadway's left shoulder to the primary message type. If the primary message type is not located over a traveled roadway, this field should be left blank.

This field is not applicable for strain poles.

Coding: None

Distance fr Edge of Lane to - Right Support

Description: Enter the horizontal distance, in decimal feet, from the edge of the right travel lane to the centerline of the structure's foundation. If the **Distance fr Edge of Lane to – Left Support** measurement is entered, this field should be left blank.

This field is not applicable for strain poles.

Coding: None

Distance fr Edge of Lane to - Left Support

Description: Enter the horizontal distance, in decimal feet, from the edge of the left travel lane to the centerline of the structure's foundation. If the **Distance fr Edge of Lane to – Right Support** measurement is entered, this field should be left blank.

This field is not applicable for strain poles.

Coding: None

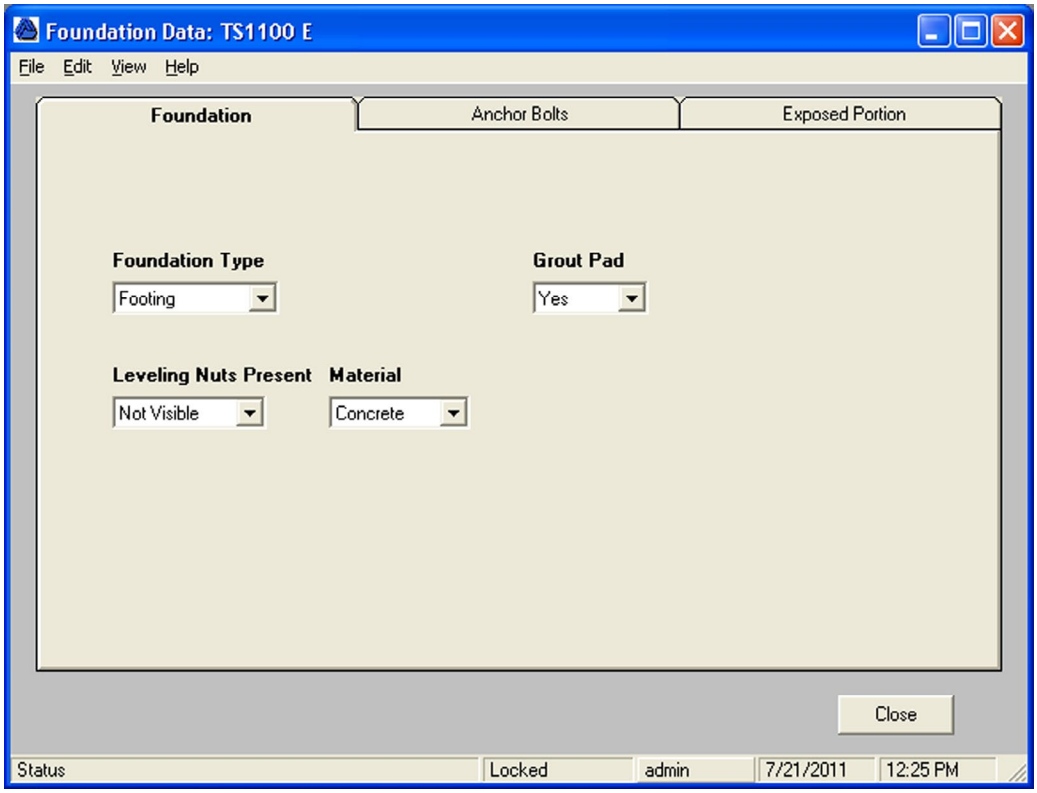
Median Width (Feet)

Description: Enter the horizontal distance, in decimal feet, between the inside edges of adjacent travel lanes. This field is only applicable if the Traffic Signal Support is located in a median area; otherwise, this field should be left blank.

This field is not applicable for strain poles.

Coding: None

FOUNDATION DATA - FOUNDATION



Foundation Type

Description: From the pull down menu, select the type of exposed foundation present for the structure. If the foundation is buried and cannot be determined, this field should be coded "Unknown".

If the structure's vertical pole extends into the ground, as in the case of a timber utility pole, this field should be coded "Not Applicable".

Coding: 1 = Footing
2 = Caisson
3 = Bracket (Examples: Attachment to a Bridge Girder or Retaining Wall)
4 = Other
5 = Not Applicable
6 = Unknown

Grout Pad

Description: From the pull down menu, select whether or not a grout pad exists between the base plate and the top of the foundation. If the foundation is buried and the presence of a grout pad cannot be determined, "Not Visible" should be coded. If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Yes
2 = No
3 = Not Visible

Leveling Nuts Present

Description: From the pull down menu, select whether or not there are leveling nuts present underneath the base plate. If the foundation is buried or there is a grout pad present such that the presence of leveling nuts cannot be determined, "Not Visible" should be coded. If the Foundation Type is coded "Not Applicable", this field should be left blank.

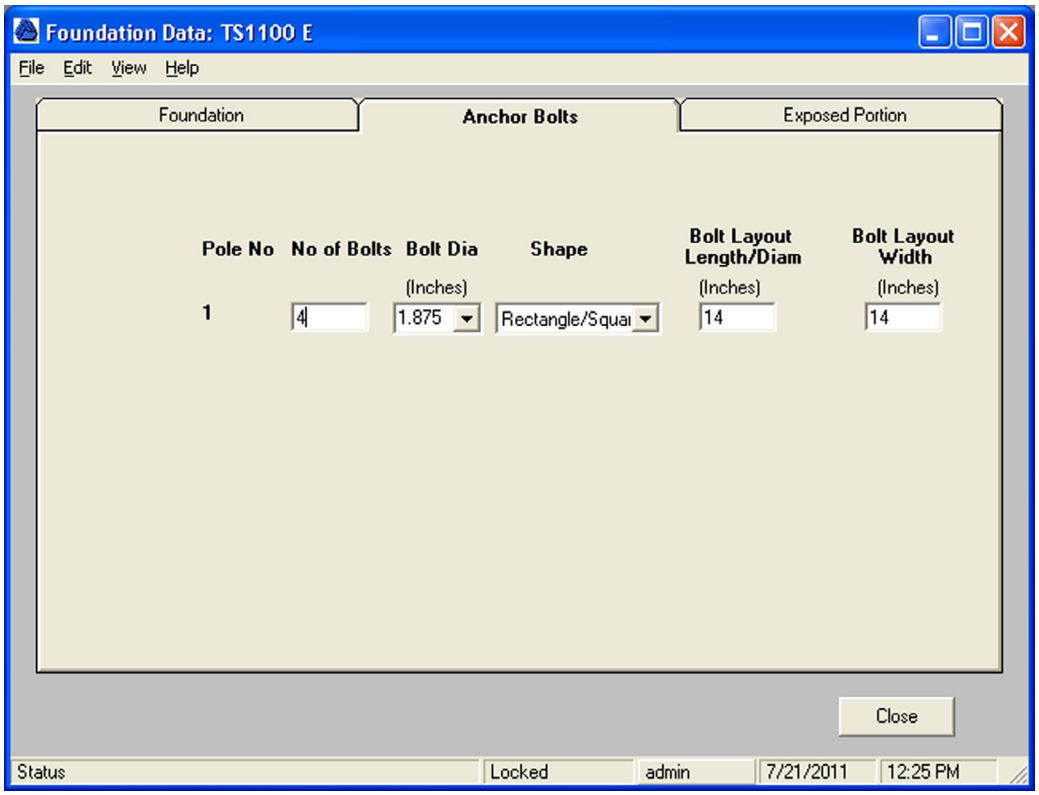
Coding: 1 = Yes
2 = No
3 = Not Visible

Material

Description: From the pull down menu, select the material that was used to construct the exposed foundation. If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Steel
2 = Concrete
3 = Aluminum
4 = Timber
5 = Weathering Steel
6 = Other

FOUNDATION DATA - ANCHOR BOLTS



Note: Information is entered only for one Foundation and one Pole.

No of Bolts

Description: Enter the number (Integer) of anchor bolts. If the number of anchor bolts cannot be determined or the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

Bolt Dia (Inches)

Description: From the pull down menu, select the diameter of the anchor bolts present at the foundation. If the diameter cannot be determined or the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

Shape

Description: From the pull down menu, select the shape of the anchor bolt layout. If the anchor bolt layout cannot be determined, this field should be coded "Unknown". If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

Bolt Layout - Length/Diam (Inches)

Description: Enter the length in the direction of traffic or diameter (in inches) of the anchor bolt layout. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

If the anchor bolt layout Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank.

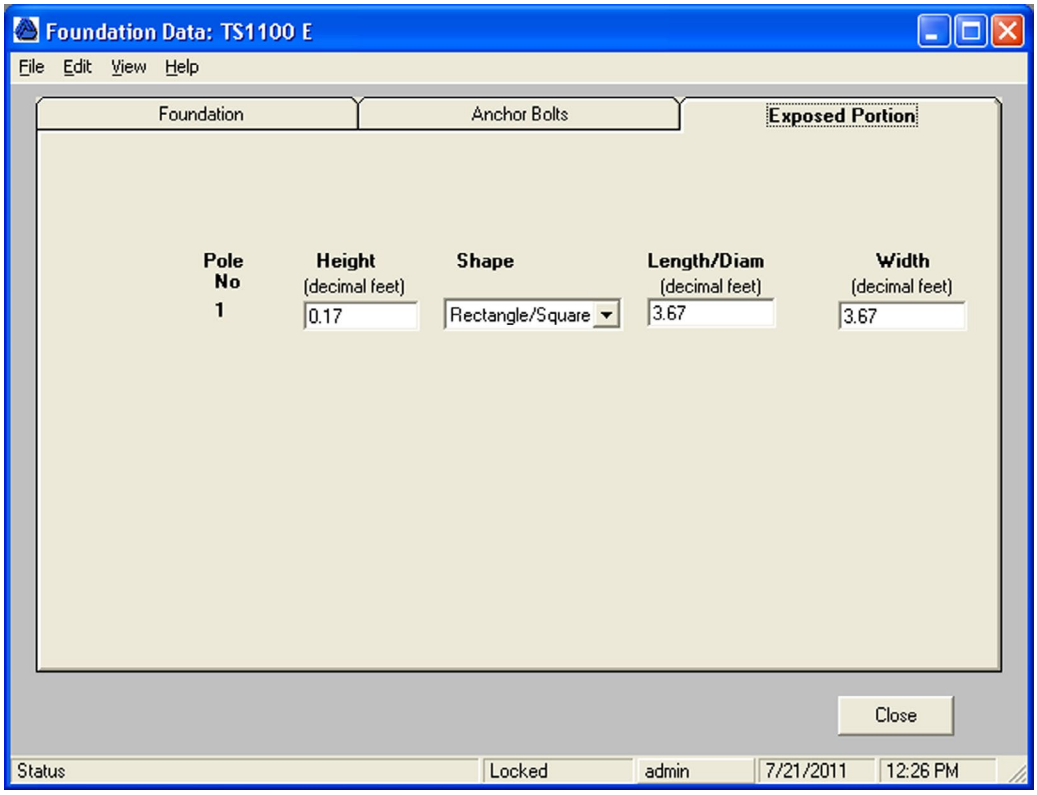
Coding: None

Bolt Layout - Width (Inches)

Description: Enter the width (in inches) of the anchor bolt layout. If the anchor bolt layout Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank. Note that this field is only activated for certain anchor bolt layout shapes.

Coding: None

FOUNDATION DATA - EXPOSED PORTION



Note: Information is entered only for one Foundation and one Pole.

Height (decimal feet)

Description: Enter the height (in decimal feet) above the ground of the exposed portion of the foundation. If the height above ground is not constant, an average value should be used. If the foundation is buried, 0 should be coded. If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

Shape

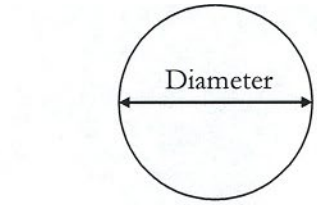
Description: From the pull down menu, select the shape of the exposed foundation. If the foundation's shape cannot be determined, this field should be coded "Unknown". If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

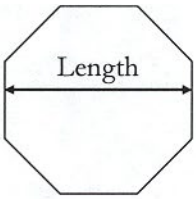
Length/Diam (decimal feet)

Description: Based on the plan illustrations below, enter the length in the direction of traffic or diameter (in decimal feet) of the exposed foundation. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in decimal feet.

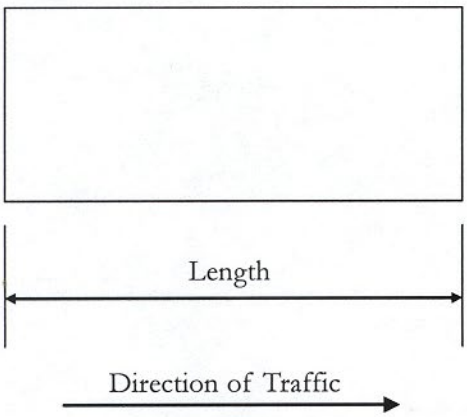
If the Foundation's Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank.



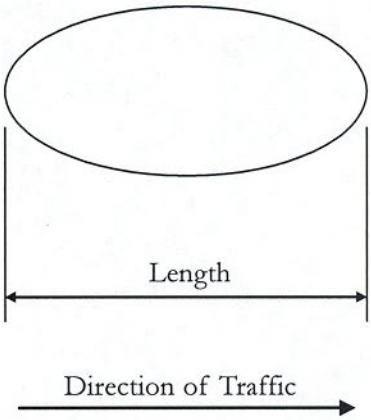
Circle or Fluted



Octagon
(Hexagon & Pentagon similar)



Rectangle/Square
(Trapezoid similar - use average values)



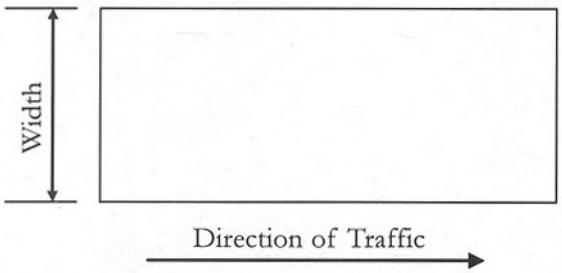
Ellipse

Coding: None

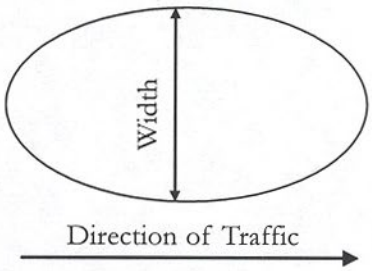
Width (decimal feet)

Description: Based on the plan illustrations below, enter the width (in decimal feet) of the exposed foundation.

If the Foundation's Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank. Note that this field is activated only for certain foundation shapes.



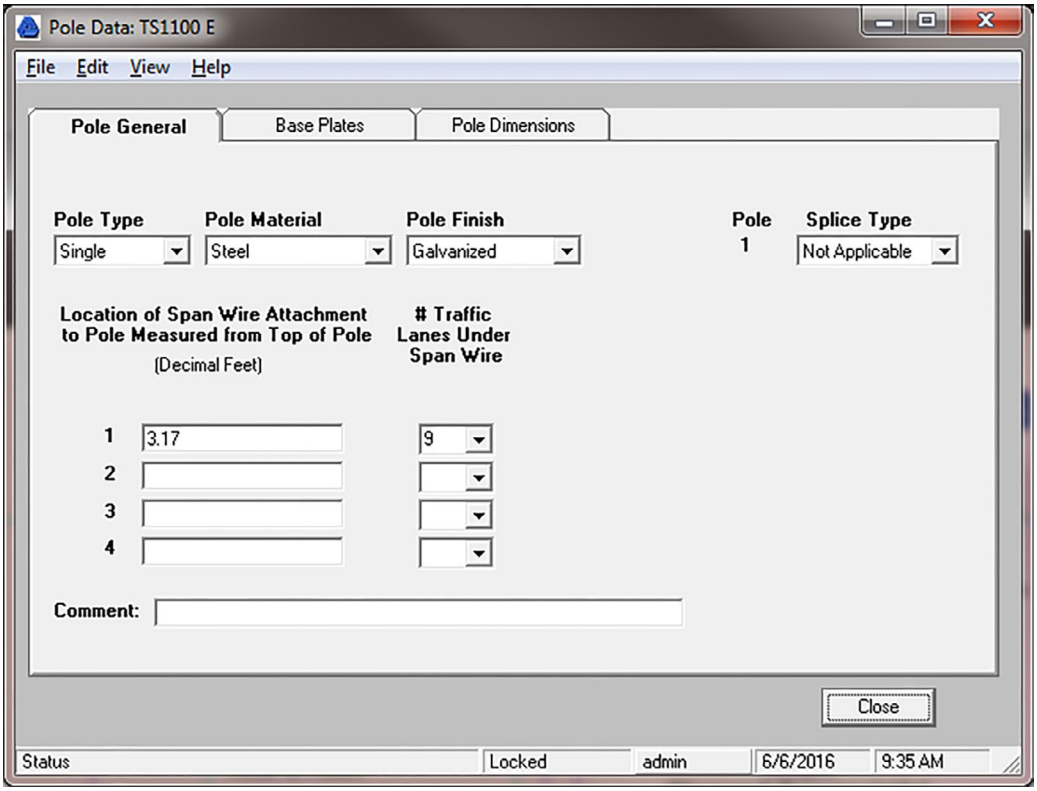
Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

Coding: None

POLE DATA - POLE GENERAL



Pole Type

Description: From the pull down menu, select the type of pole(s) present on the structure.

Coding: 1 = Single
2 = Double
3 = Single/Double
4 = Not Applicable

Pole Material

Description: From the pull down menu, select the material composition of the pole. If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Steel
2 = Concrete
3 = Aluminum
4 = Timber
5 = Weathering Steel
6 = Other

Pole Finish

Description: From the pull down menu, select the finish that was applied to the pole material. If the pole material is coded "Aluminum or Timber", the pole finish should be coded "Not Applicable".

If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Galvanized
2 = Painted
3 = Weathering Steel
4 = Other
5 = Not Applicable

Splice Type

Description: From the pull down menu, select the type of horizontal splice, if applicable, that is present on the pole. If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Welded
2 = Bolted
3 = Sleeved/Telescoping Joint
4 = Not Applicable

Location of Span Wire Attachment to Pole Measured from Top of Pole (decimal feet)

Description: Enter the location of up to four span wires that are attached to the pole. The location, in decimal feet, is measured from the top of the pole down to the span wire attachment to the pole.

If no span wires are attached to the pole, this field should be left blank.

Coding: None

Traffic Lanes Under Span Wire

Description: From the pull down menu, select the number of traffic lanes located under each span wire. This should be done for each span wire attached to the pole.

If no span wires are attached to the pole, this field should be left blank.

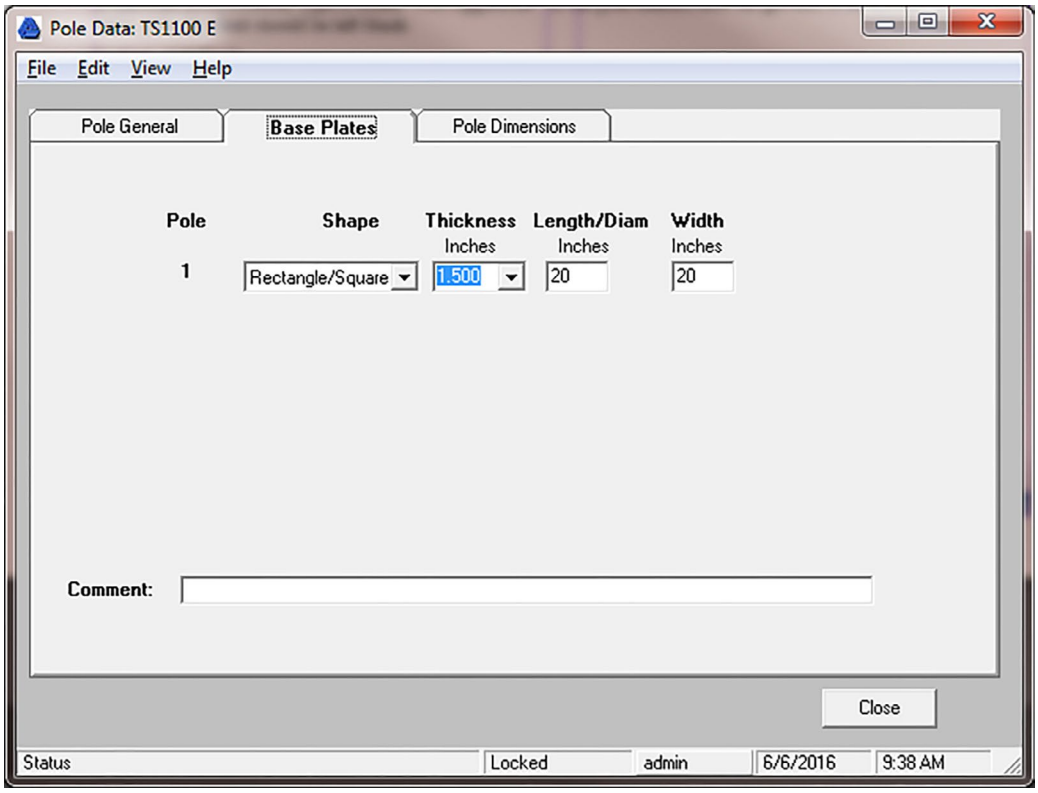
Coding: None

Comment:

Description: This field allows the inspector to enter any additional information.

Coding: None

POLE DATA - BASE PLATES



Shape

Description: From the pull down menu, select the shape of the base plate. If the base plate shape cannot be determined, this field should be coded "Unknown".

If the Pole or Foundation Type is coded "Not Applicable" or the pole extends into the ground, as in the case of a timber utility pole, this field should be left blank.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

Thickness - Inches

Description: From the pull down menu, select the thickness of the base plate in inches.

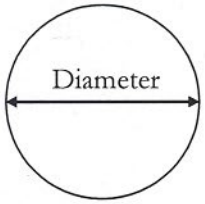
If the thickness cannot be determined, the Pole or Foundation Type is coded "Not Applicable" or the pole extends into the ground, as in the case of a timber utility pole, this field should be left blank.

Coding: None

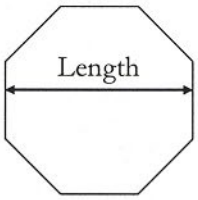
Length/Diam - Inches

Description: Based on the illustrations shown below, enter the length in the direction of traffic or diameter (in inches) of the base plate in plan. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

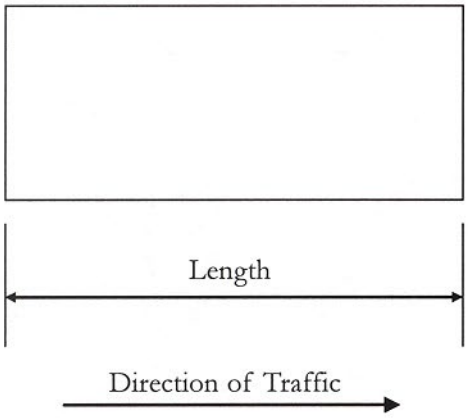
If the base plate shape is coded "Unknown" or the field is left blank, or the Pole or Foundation Type is coded "Not Applicable", this field should be left blank.



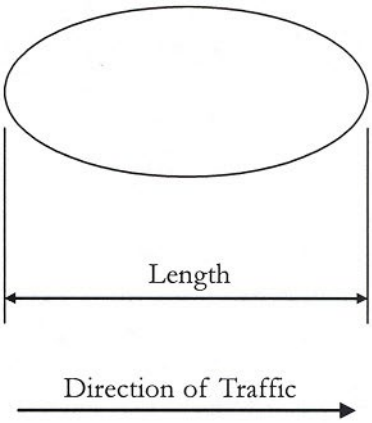
Circle or Fluted



Octagon
(Hexagon & Pentagon similar)



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

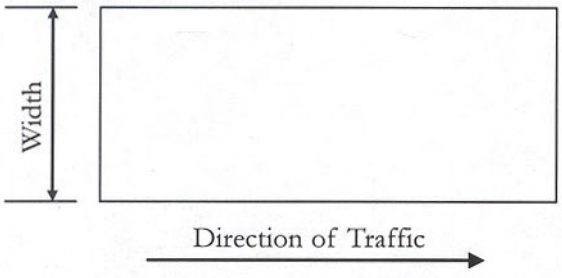
Coding: None

Width - Inches

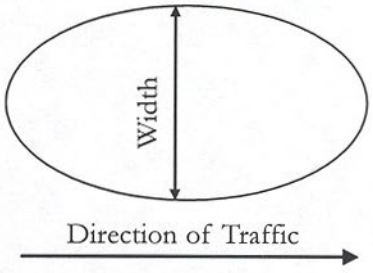
Description: Based on the illustrations shown below, enter the width (in inches) of the base plate in plan.

If the base plate shape is coded "Unknown" or the field is left blank, or the Pole or Foundation Type is coded "Not Applicable", this field should be left blank.

Note that this field is only activated for certain base plate shapes.



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

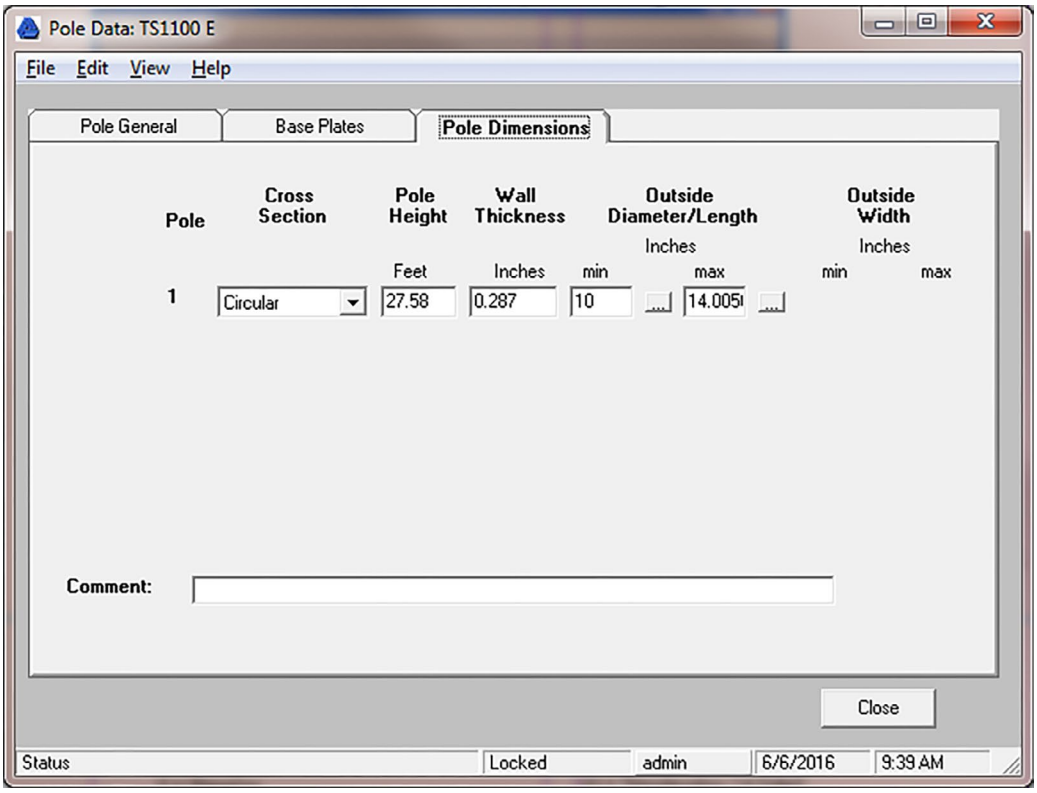
Coding: None

Comment:

Description: This field allows the inspector to enter any additional information.

Coding: None

POLE DATA - POLE DIMENSIONS



Cross Section

Description: From the pull down menu, select the cross section of the pole. If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Circular
2 = Box
3 = Angle
4 = Structural Tee
5 = W-Section
6 = Collar
7 = Other
8 = Pentagon
9 = Hexagon
10 = Octagon
11 = Fluted
12 = Ellipse
13 = Flat Bar
14 = Dodecagon (12 Sided)
15 = Channel
16 = Zee
17 = Hexadecagon (16 Sided)
18 = Tetradecagon (14 Sided)

Pole Height - Feet

Description: Enter, in decimal feet, the vertical height of the pole measured from the top of the base plate to the top of the pole. If the pole extends into the ground, as in the case of a timber utility pole, the measurement is taken from the top of the ground.

If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: None

Wall Thickness - Inches

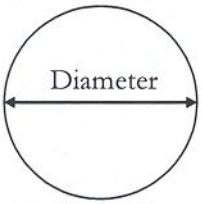
Description: Enter, in decimal inches, the average wall thickness of the vertical pole. If the pole section is solid or the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: None

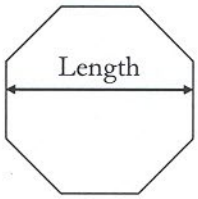
Outside Diameter/Length - Inches

Description: Based on the illustrations shown below, enter the minimum and maximum outside length in the direction of traffic or diameter (in decimal inches) of the pole's cross section. The program will calculate the minimum and maximum outside diameters automatically by clicking on the box next to the input field and entering the circumference in decimal inches.

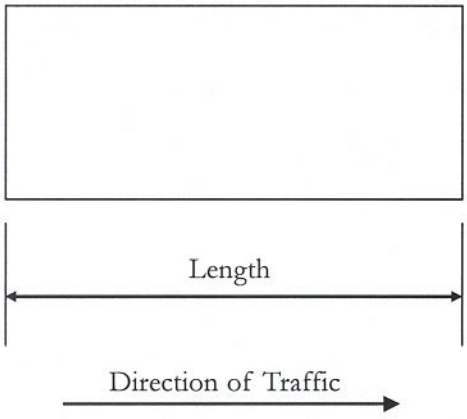
If the Pole Type is coded "Not Applicable", this field should be left blank.



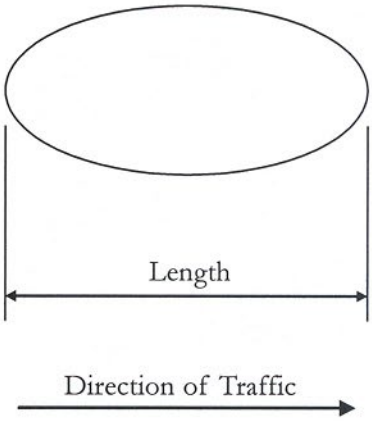
Circle or Fluted



Octagon
(Other Polygon shapes similar)



Rectangle/Square
(Trapezoid similar - use average values)



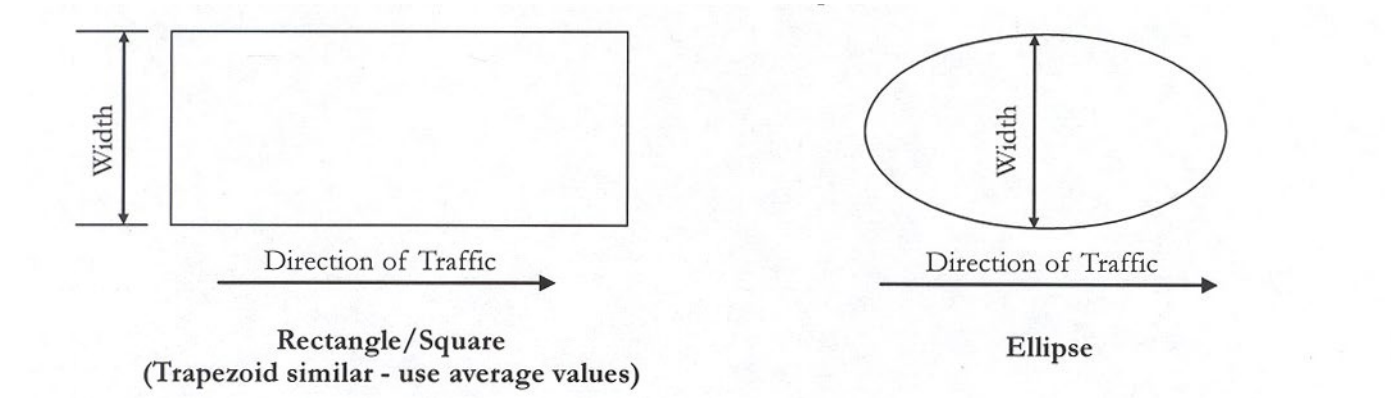
Ellipse

Coding: None

Outside Width - Inches

Description: Based on the illustrations shown below, enter the minimum and maximum outside width (in decimal inches) of the pole's cross section.

If the Pole Type is coded "Not Applicable", this field should be left blank. Note that this field is only activated for certain pole cross sections.



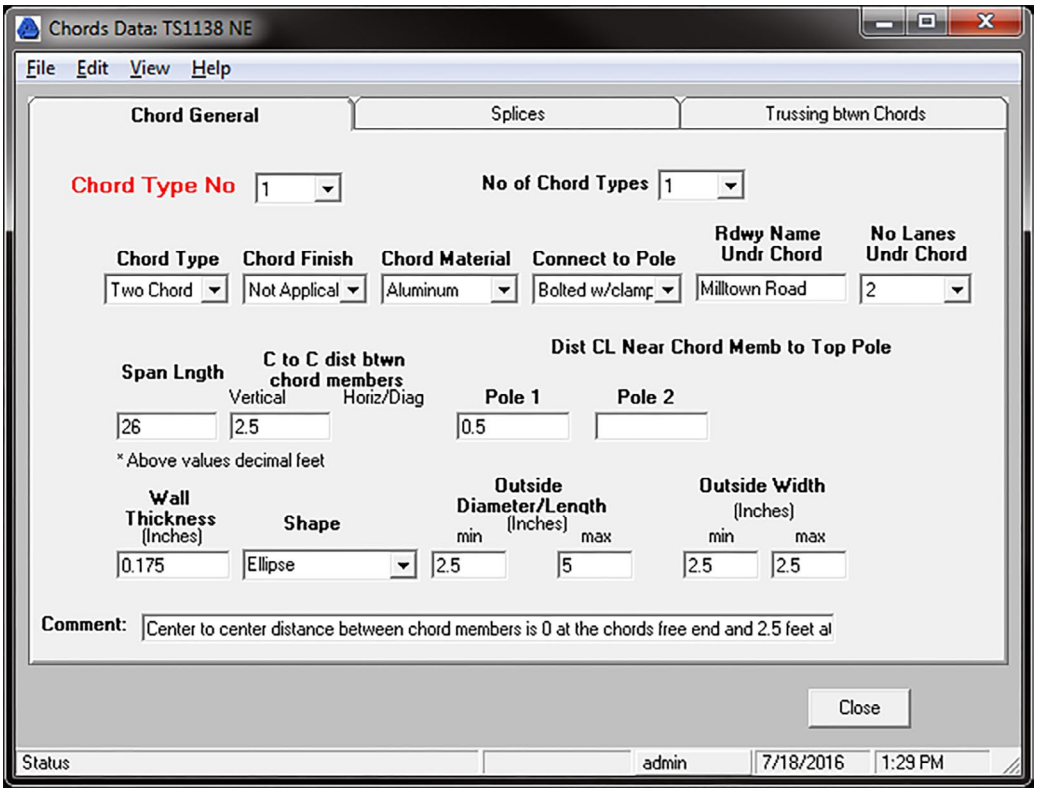
Coding: None

Comment:

Description: This field allows the inspector to enter any additional information.

Coding: None

CHORDS DATA - CHORD GENERAL



Chord Type No

Description: From the pull down menu, select the Chord Type configuration number for which data is being entered.

If **No of Chord Types** = 0, **Chord Type No** = 0.

For example, if **No of Chord Types** = 1, data need only be entered for **Chord Type No** 1.

For example, if **No of Chord Types** = 2, data needs to be entered for both **Chord Type No** 1 and **Chord Type No** 2.

Coding: None

No of Chord Types

Description: From the pull down menu, select the number of Chord Type configurations present on the structure. Data can be entered for up to two configurations.

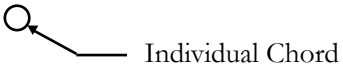
Coding: None

Chord Type

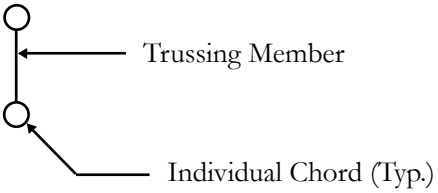
Description: From the pull down menu, select the cross section of the Chord Type configuration present on the structure.

If the chord does not span over a roadway, enter "Not Applicable".

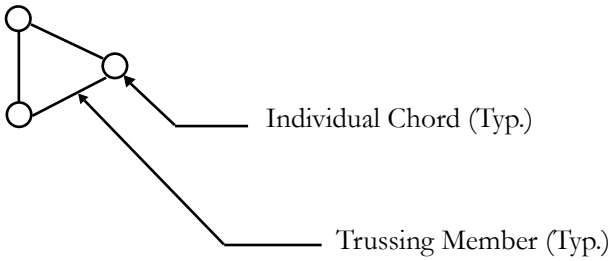
Coding: 1 = Single Chord



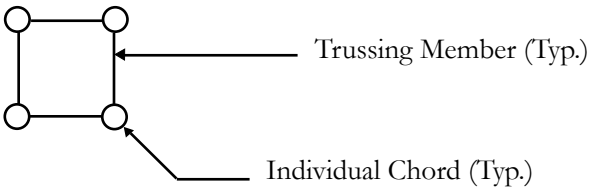
2 = Two Chord



3 = Tri-Chord



4 = Box (4 Chord)



5 = Other
6 = Not Applicable

Chord Finish

Description: From the pull down menu, select the finish that was applied to the chord(s). If the chord material is coded "Aluminum or Timber", the chord finish is coded "Not Applicable".

Coding: 1 = Galvanized
2 = Painted
3 = Weathering Steel
4 = Other
5 = Not Applicable

Chord Material

Description: From the pull down menu, select the material composition of the chord(s).

Coding: 1 = Steel
2 = Concrete
3 = Aluminum
4 = Timber
5 = Weathering Steel
6 = Other

Connect to Pole

Description: From the pull down menu, select the type of connection used to attach the chord(s) to the pole.

Coding: 1 = U-Bolts
2 = Welded
3 = Bolted
4 = Sleeved/Telescoping Joint
5 = Bolted w/clamps (common for the attachment of camera mast arms to poles)

Rdwy Name Undr Chord

Description: Enter the name of the roadway located underneath the chord.

If the chord does not span over a roadway, enter "Not Applicable".

Coding: None

No Lanes Undr Chord

Description: Enter the number of traffic lanes located underneath the chord.

If the chord does not span over a roadway, enter "0".

Coding: None

Span Lngth

Description: Enter, in decimal feet, the span length of the chord type configuration.

For a Cantilever structure, the span length is measured from the centerline of pole to the free end of the cantilever.

For an Overhead structure, the span length is measured from the centerline of pole(s) on one side to the centerline of pole(s) on the other side.

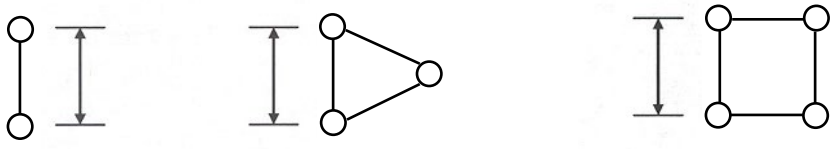
Coding: None

C. to C. dist btwn chord members - Vertical

Description: Enter, in decimal feet, the vertical distance between the centerline of the chords within the chord type configuration.

For a box (4 chord) type configuration, it is assumed that the vertical distance on either side of the box is the same.

If the chord type chosen is a Single Chord, this field does not appear.



Coding: None

C. to C. dist btwn chord members - Horiz/Diag

Description: Enter, in decimal feet, the horizontal or diagonal distance between the centerline of the chords within the chord type configuration.

For a tri-chord type configuration, the diagonal distance can be entered. It is assumed that the diagonal distances are all the same.

For a box (4 chord) type configuration, it is assumed that the horizontal distance between the top and bottom members is the same.

If the chord type chosen is a Single or Two Chord, this field does not appear.

Coding: None

Dist CL Near Chord Memb to Top Pole

Description: Enter, in decimal feet, the vertical distance from the top of each pole to the centerline of the chord closest to the top of the pole.

If one pole is present, the measurement should be entered only for **Pole 1.**

If two poles are present, the measurement at both **Pole 1** and **Pole 2** should be entered. **Pole 2** faces oncoming traffic, while **Pole 1** is in the back.

Coding: None

Wall Thickness (Inches)

Description: Enter, in decimal inches, the average wall thickness of the individual members within the configuration.

If more than one chord exists, it is assumed that all of the chords have the same average wall thickness.

Coding: None

Shape

Description: From the pull down menu, select the shape of the individual members within the configuration.

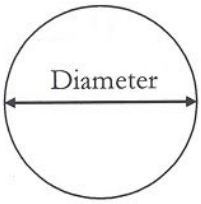
If more than one chord exists, it is assumed that all of the chords have the same shape.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

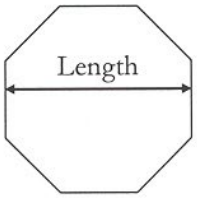
Outside Diameter/Length (Inches)

Description: Based on the illustrations shown below, enter the minimum and maximum outside length (height) or diameter (in decimal inches) of the individual chord cross sections. The program will calculate the minimum and maximum outside diameters automatically by clicking on the box next to the input field and entering the circumference in decimal inches.

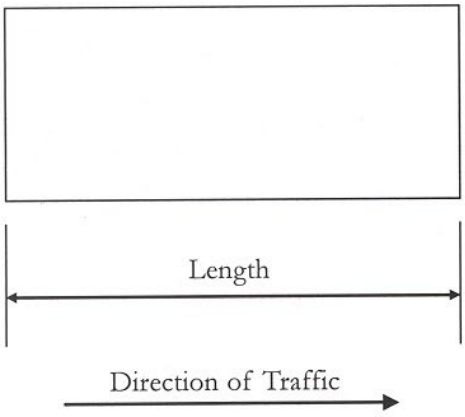
If more than one chord exists, it is assumed that all of the chords have the same outside length/diameter.



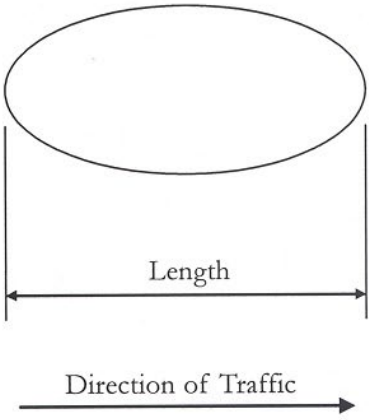
Circle or Fluted



Octagon
(Hexagon & Pentagon similar)



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

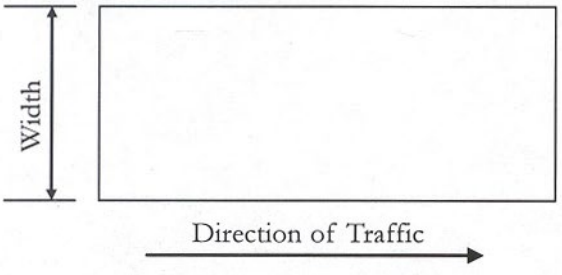
Coding: None

Outside Width (Inches)

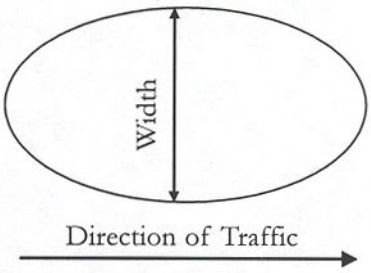
Description: Based on the illustrations shown below, enter the minimum and maximum outside horizontal width (in decimal inches) of the individual chord cross sections.

If more than one chord exists, it is assumed that all of the chords have the same outside width.

Note that this field is only activated for certain chord cross sections.



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

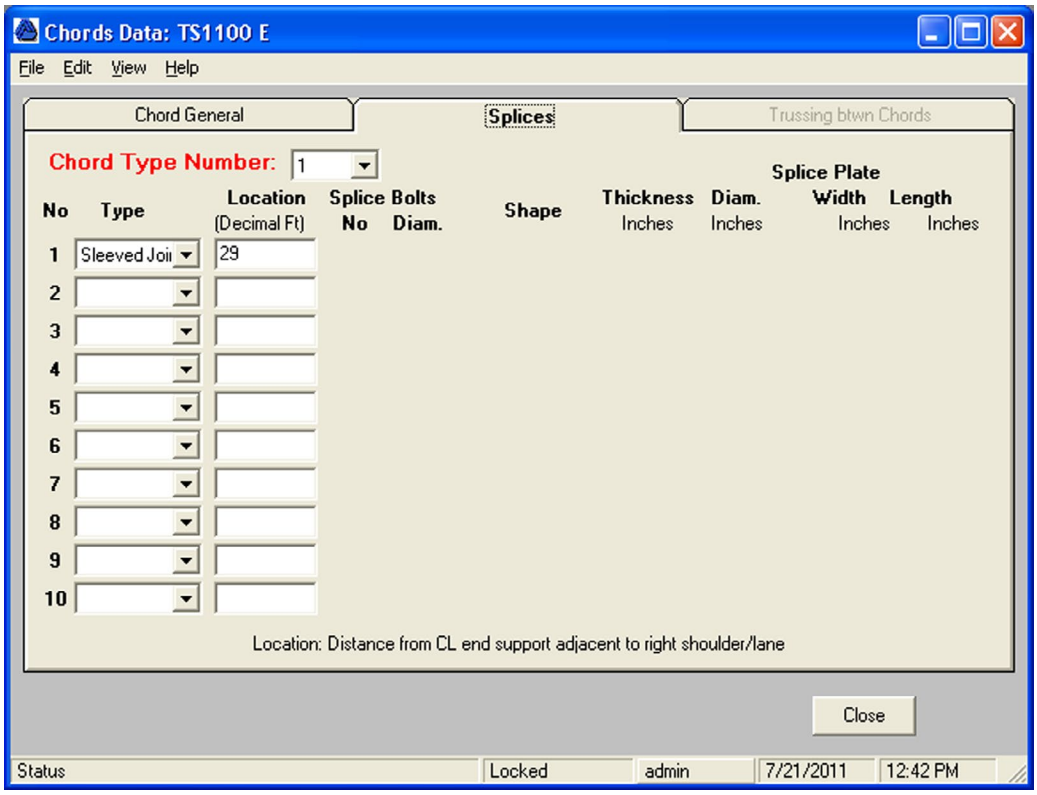
Coding: None

Comment:

Description: This field allows the inspector to record any observations concerning the Chord Type configuration. For example, if the individual chord dimensions vary on a configuration, then the chord dimensions entered can be identified for one chord and the other chord's dimensions may be noted in this field.

Coding: None

CHORDS DATA - SPLICES



Chord Type Number:

Description: From the pull down menu, select the Chord Type configuration number for which data is being entered.

If **No of Chord Types** from **Chord General** tab equals 0, this sheet is not activated.

Coding: None

Type

Description: From the pull down menus, select up to ten types of splices that are found along the chord.

If no splices are present, "Not Applicable" should be coded.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: 1 = Welded
2 = Bolted
3 = Sleeved/Telescoping Joint
4 = Not Applicable

Location (Decimal Ft)

Description: Enter, in decimal feet, the location of the splices along one of the individual chords.

For a Cantilever structure, the location of each splice is measured from the centerline of the pole support.

For an Overhead structure, the location of each splice is measured from the centerline of the pole support adjacent to the right shoulder/lane.

If no splices are present, this field should be left blank.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: None

Splice Bolts - No

Description: Enter the number of bolts that are present at each of the splices along one of the individual chords.

This field is only activated if bolted splice connections are present.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: None

Splice Bolts - Diam.

Description: From the pull down menu, select the diameter of the bolts that are present at each of the splices along one of the individual chords.

This field is only activated if bolted splice connections are present.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: None

Splice Plate - Shape

Description: From the pull down menu, select the shape of the splice plates at each of the splice locations along one of the individual chords.

This field is only activated if bolted splice connections are present.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

Splice Plate - Thickness (Inches)

Description: From the pull down menu, select the thickness (in inches) of a splice plate at the splice location.

This field is only activated if bolted splice connections are present.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

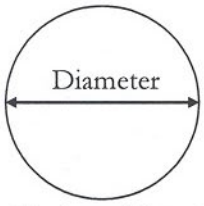
Coding: None

Splice Plate - Diam. (Inches)

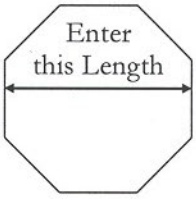
Description: Enter, in decimal inches, the diameter of a splice plate at the splice location. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

This field is only activated if bolted splice connections are present and certain splice plate shapes exist.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).



Circle or Fluted



Octagon
(Hexagon & Polygon similar)

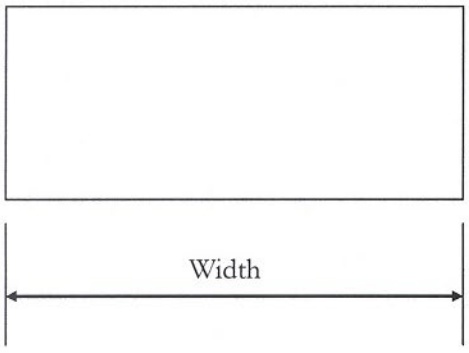
Coding: None

Splice Plate - Width (Inches)

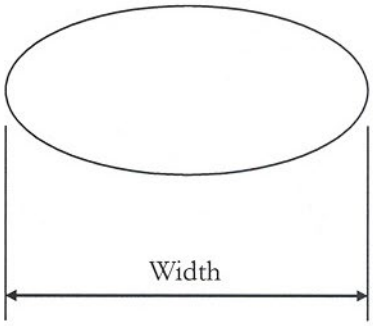
Description: Enter, in decimal inches, the horizontal width of a splice plate at the splice location.

This field is only activated if bolted splice connections are present and certain splice plate shapes exist.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

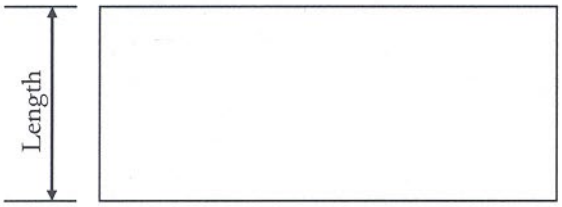
Coding: None

Splice Plate - Length (Inches)

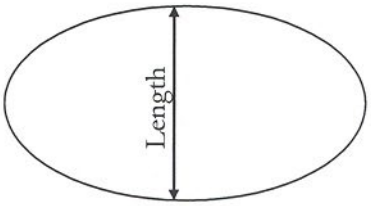
Description: Enter, in decimal inches, the length (vertical height) of a splice plate at the splice location.

This field is only activated if bolted splice connections are present and certain splice plate shapes exist.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).



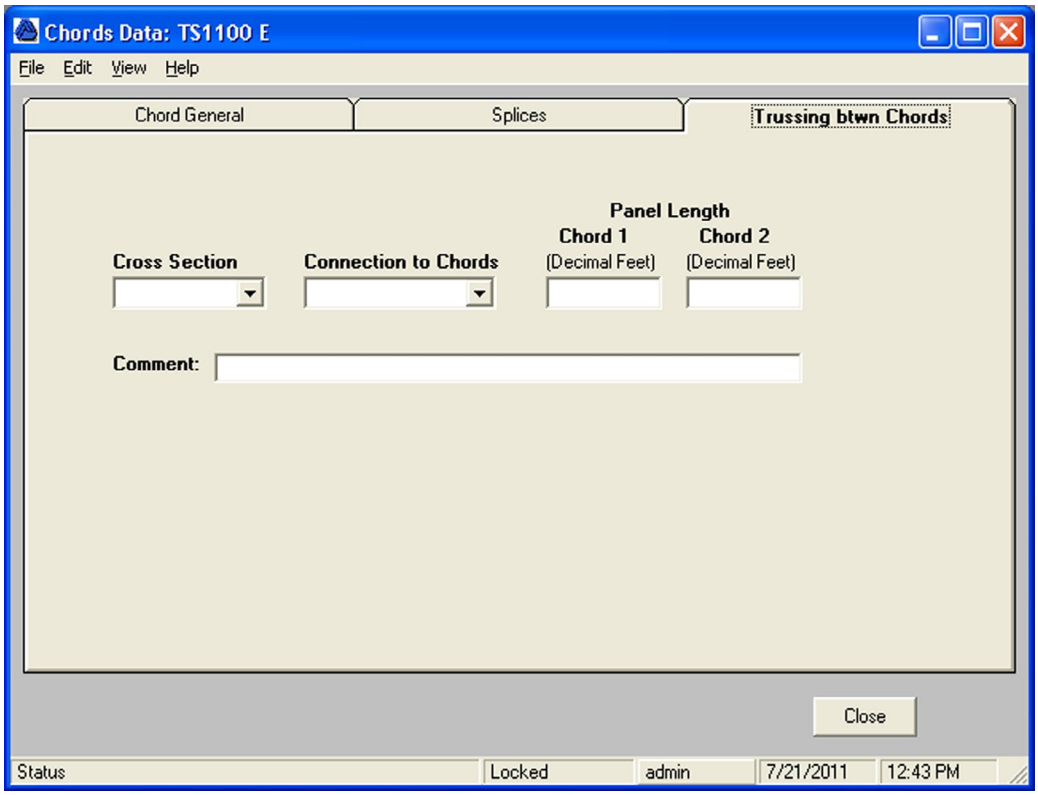
Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

Coding: None

CHORDS DATA - TRUSSING BTWN CHORDS



Note: This sheet is not activated if on the Chord General sheet, the Chord Type is coded "Single Chord".

Cross Section

Description: From the pull down menu, select the cross sectional shape of the trussing (secondary) members connected to the individual chords within the chord.

It is assumed that all of the trussing members on the chords have the same cross section.

If no trussing members are present, this field should be left blank.

Coding:
1 = Circular
2 = Box
3 = Angle
4 = Structural Tee
5 = W-Section
6 = Collar
7 = Other
8 = Pentagon
9 = Hexagon
10 = Octagon
11 = Fluted
12 = Ellipse
13 = Flat Bar
14 = Dodecagon (12 Sided)
15 = Channel
16 = Zee
17 = Hexadecagon (16 Sided)
18 = Tetradecagon (14 Sided)

Connection to Chords

Description: From the pull down menu, select the type of connection used to attach the trussing (secondary) members to the individual chords within the chord type configuration.

It is assumed that all of the trussing members have the same type of connection to the chords.

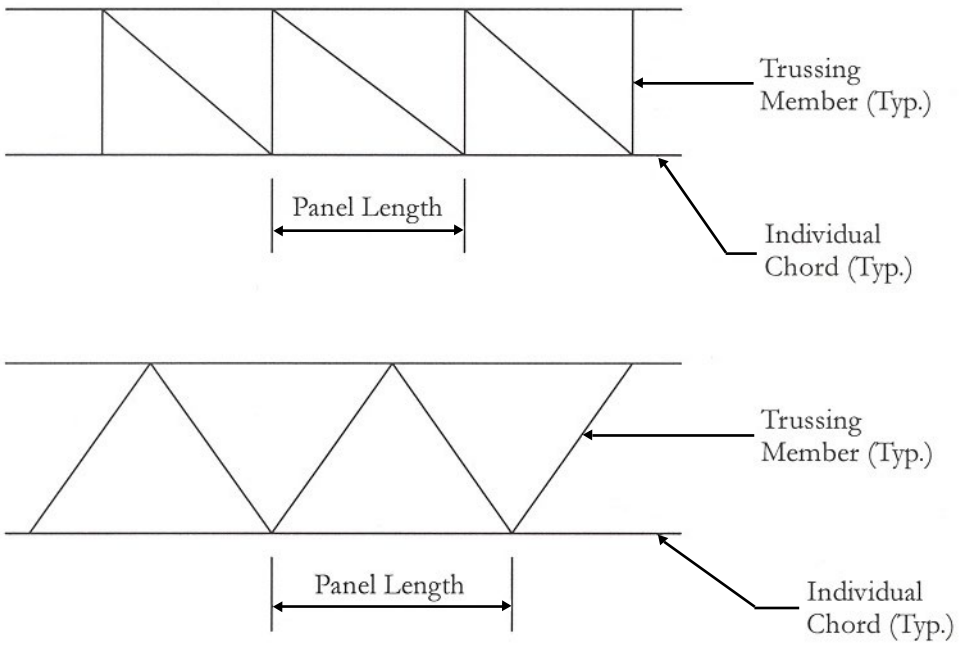
If the trussing members are attached to gusset plates that are attached to the chords, the connection of the gusset plates to the chords should be identified here.

If no trussing members are present, "Not Applicable" should be coded.

Coding:
1 = Welded
2 = Bolted
3 = Sleeved/Telescoping Joint
4 = Not Applicable

Panel Length - Chord 1/Chord 2 (Decimal Feet)

Description: Enter, in decimal feet, the typical panel length of the trussing (secondary) members within each of the chord type configurations.



Chord 1 is for Chord Type 1's configuration and Chord 2 is for Chord Type 2's configuration.

It is assumed that the panel length of the trussing members is the same throughout a chord.

If only one or no trussing (secondary) members are present within the chords, these field(s) should be left blank.

Coding: None

Comment:

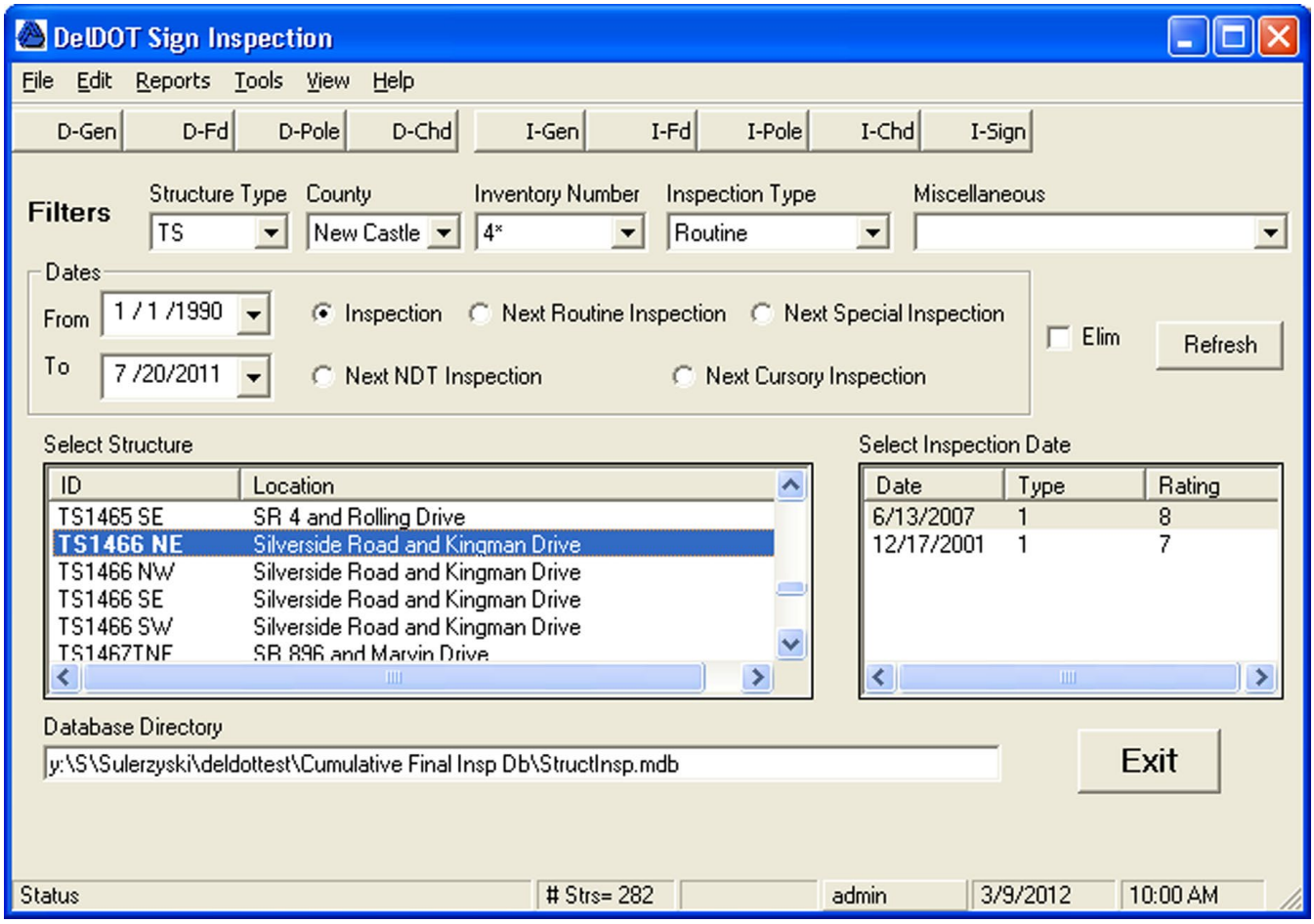
Description: A comment field is provided for the inspector to record any observations regarding the trussing (secondary) members measurements and/or connections.

For example, if only one or no trussing member is present, such that there is no panel length measurement, this can be stated here.

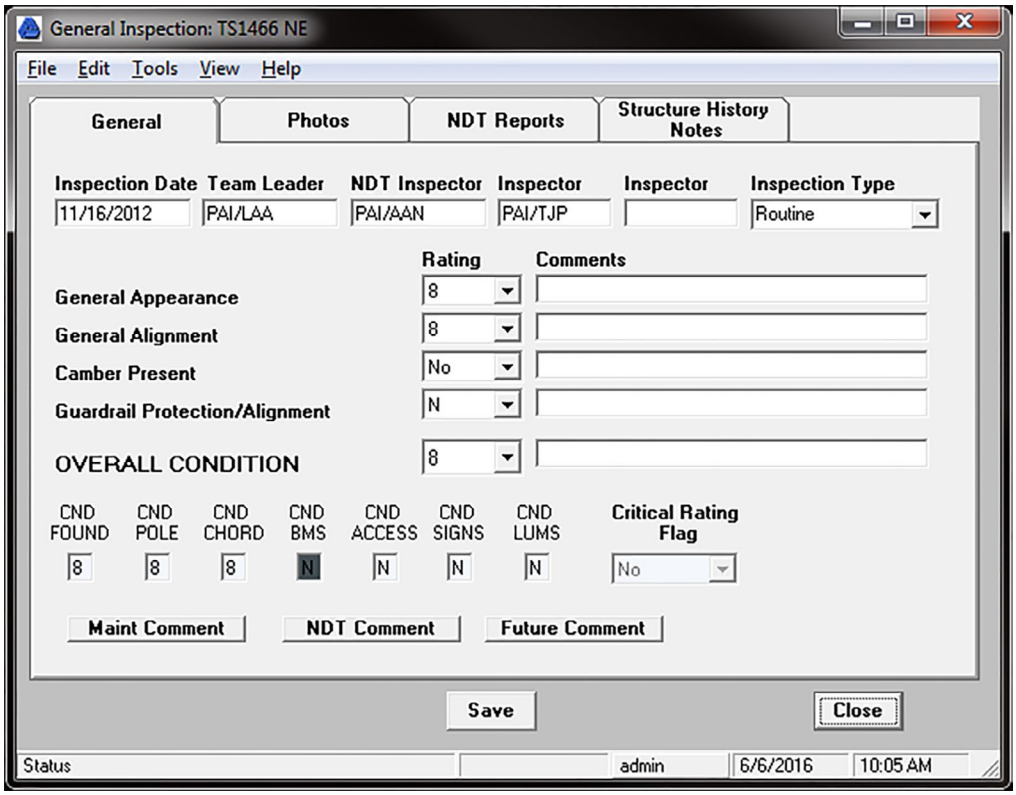
Coding: None

TS - TRAFFIC SIGNAL SUPPORTS

INSPECTION DATA



GENERAL INSPECTION - GENERAL



Inspection Date

Description: This field is used to record the completion date of the structure's inspection. An inspection date is created when the structure is initially inspected and at the structure's designated inspection cycle.

Coding: None

Team Leader

Description: Enter the initials of the firm performing the inspection followed by the initials of the Inspection Team Leader. Example: URS/NGD

Coding: None

NDT Inspector

Description: If applicable, enter the initials of the firm performing the Non-Destructive Testing (NDT) followed by the initials of the NDT inspector. Example: PAI/CHS

Coding: None

Inspector

Description: These fields allow for up to two additional field inspector names to be entered for the inspection of the structure. For each field, enter the initials of the firm performing the inspection followed by the initials of the field inspector. Example: URS/DDD

Coding: None

Inspection Type

Description: This field is used to identify the type of inspection being performed on the structure. The inspection type is created when the structure is initially inspected and at the structure's designated inspection interval.

Coding: 1 = Routine
2 = NDT
3 = Repair/Retrofit
4 = Impact Damage
5 = Alterations
6 = Special Inspection
7 = Removal
8 = Cursory

General Appearance - Rating/Comments

Description: From the pull down menu, select the **Rating** for the General Appearance of the structure. General observations of the appearance of the structure should be made while approaching the structure. The purpose of these initial observations is to familiarize the inspector with the structure. They may also point out a need to modify the inspection sequence or indicate areas requiring special attention.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

General Alignment - Rating/Comments

Description: From the pull down menu, select the **Rating** for the General Alignment of the structure. General observations of the alignment of the structure should be made while approaching the structure. The purpose of these initial observations is to detect any unusual movements of the structure as a whole that may have occurred. They may also point out problems with the location of the structure's supports or indicate areas requiring special attention.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

Camber Present - Rating/Comments

Description: From the pull down menu, select whether or not the structure exhibits vertical camber. The determination of camber should be made while approaching the structure.

The **Comments** field allows the user to record any observations.

Coding: 1 = Yes
2 = No
3 = Not Visible

Guardrail Protection/Alignment - Rating/Comments

Description: From the pull down menu, select the **Rating** of the Guardrail Protection and its Alignment for the structure. If no guardrail is present, the rating should be coded "N".

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

OVERALL CONDITION - Rating/Comments

Description: From the pull down menu, select the **Rating** for the Overall Condition of the structure. The rating is based on the inspector's assessment of the structure's individual components with emphasis placed on the primary elements.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

CND FOUND
Description: No entry is required for this field. The overall condition rating for the Foundation is summarized here.

CND POLE
Description: No entry is required for this field. The overall condition rating for the Pole is summarized here.

CND CHORD
Description: No entry is required for this field. The overall condition rating for the Chord(s) is summarized here.

CND BMS
Description: This field is not applicable.

CND ACCESS
Description: No entry is required for this field. The overall condition rating for the Access (walkway, platform, ladder, etc.) on the structure is summarized here.

CND SIGNS
Description: No entry is required for this field. The overall condition rating for the Sign panels attached to the structure is summarized here.

CND LUMS
Description: No entry is required for this field. The overall condition rating for the Luminaires (excludes highway luminaires) attached to the structure is summarized here.

Critical Rating Flag
Description: No entry is required for this field. The structure is flagged as either having a critical rating or not. When the **OVERALL CONDITION** rating is "3" or less, this field shows **Yes**. Otherwise, the field shows **No**.

Maint Comment
Description: Clicking on this button allows the inspector to view and/or edit the comment fields from the **Maintenance repairs done at the time of inspection** in the **Foundation, Pole, Chord, Access/Sign/Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

NDT Comment

Description: Clicking on this button allows the inspector to view and/or edit the comment fields from the **NDT testing done at the time of inspection** in the **Foundation, Pole, Chord, Access/Sign/Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

Future Comment

Description: Clicking on this button allows the inspector to view and/or edit the comment fields from the **Future maintenance required and/or repair recommendations** in the **Foundation, Pole, Chord, Access/Sign/Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **General** tab.

Coding: None

GENERAL INSPECTION - PHOTOS

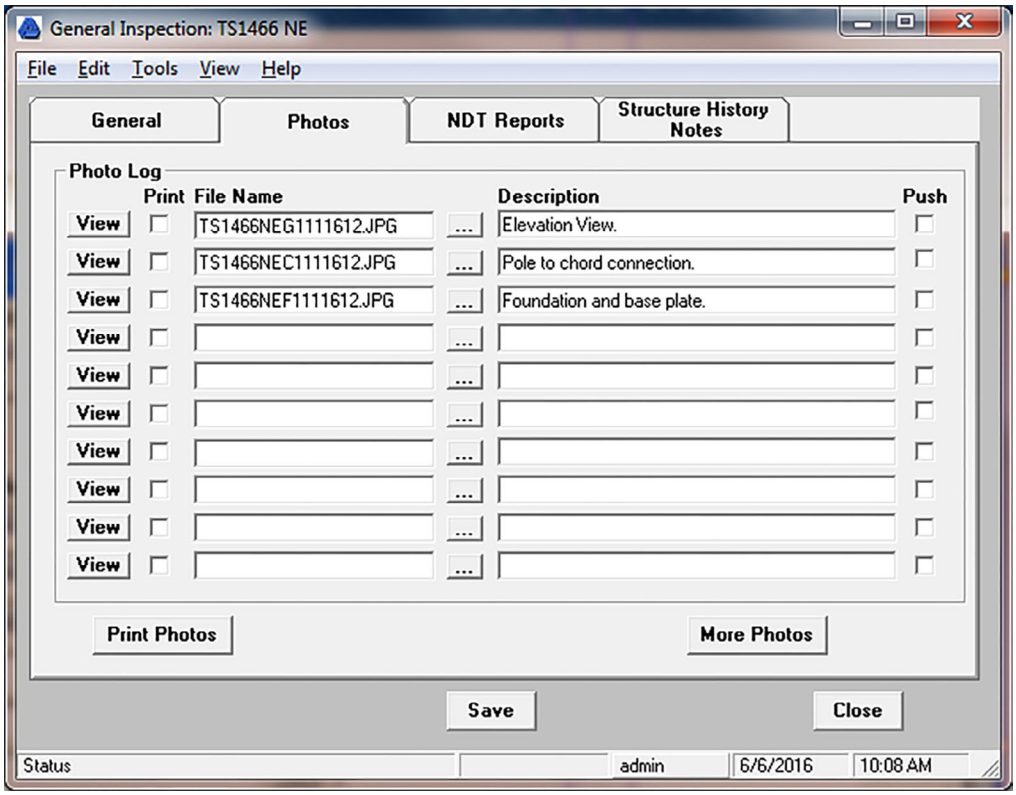


Photo Log

Description: This tab allows up to ten photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

Traffic Signal Supports will have **at least one standard photo** taken of the entire height of the structure. If possible, the photo should be taken in the direction of traffic.

Clicking on ... allows the user to view all of the files in the folder and select one to be placed in the respective **File Name** field.

Coding: None

View

Description: Clicking on the **View** button allows the user to view a particular photograph.

Coding: None

Print

Description: Placing a checkmark in these boxes allows the user to print the respective photographs using the **Print Photos** button.

Coding: None

File Name

Description: Each of these fields are used to enter one JPEG file name for each of the photographs.

Coding: The following shall be used for the JPEG file naming convention:

TS2134NE**G1**.jpg

TS1254SW**F1**.jpg

TS2134NE and TS1254SW are the structure ID's

There are five types of photos:
G = General (elevation views and views of sign panels)
F = Foundation Elements (erosion, footing, grout pad, anchor bolts)
P = Pole Elements (pole, base plate, joints/splices, trussing)
C = Chord Elements (chords, joints/splices, connections, trussing)
S = Walkway, Signing, and Luminaire Elements

Example: **F1** = foundation element photo number 1 (photos for each type will be numbered 1, 2, 3, 4, etc.)

Note: When the file is brought into the file name field, the inspection date is attached to the end of the file name.

Description

Description: These fields are used to enter captions for each of the photographs.

Coding: None

Push

Description: The **Push** button is used to incorporate photographs into the Critical Report. A checkmark will appear in the box when it is clicked on. This checkmark will push or forward the photograph(s) into the critical report. When the critical report for the structure is printed out, all pushed photographs will also be printed out.

Coding: None

More Photos

Description: Clicking on the **More Photos** button creates another **Photos** tab that allows up to ten additional photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

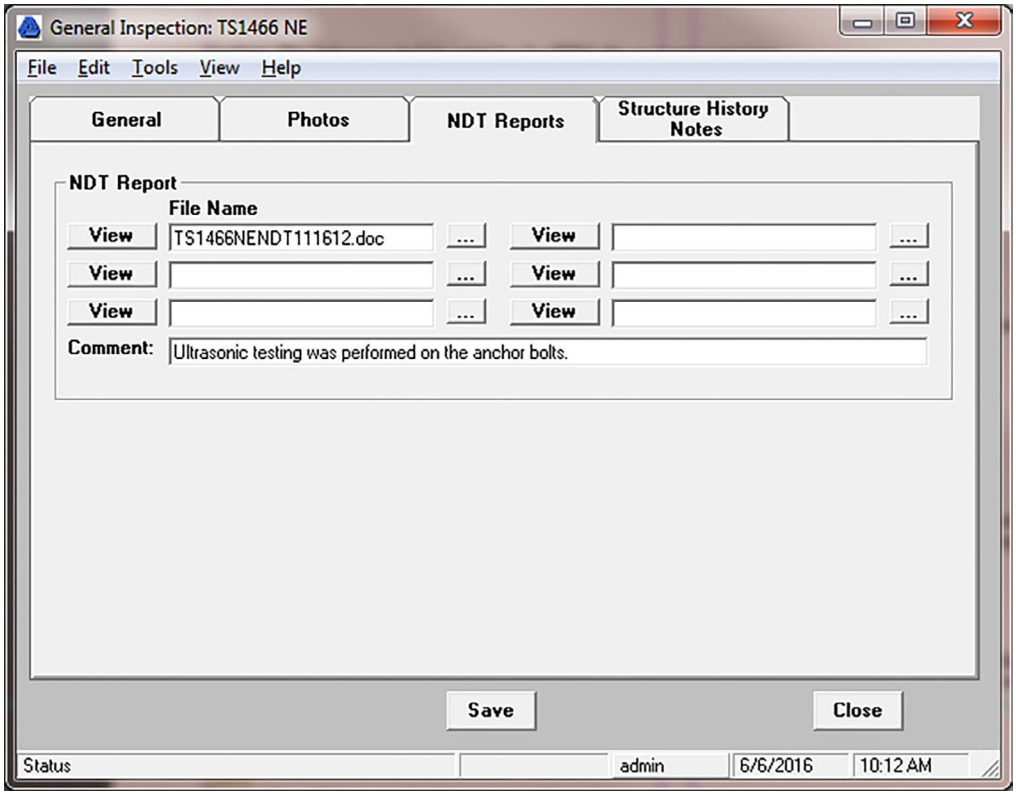
Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **Photos** tab.

Coding: None

GENERAL INSPECTION - NDT REPORTS



NDT Report

Description: This tab allows up to six NDT reports to be stored in a folder labeled with the structure's ID number. The NDT reports should be saved in a Microsoft Word or Excel format.

Clicking on ... allows the user to view all of the files in the folder and select one to be placed in the respective **File Name** field.

Coding: None

View

Description: Clicking on the **View** button allows the user to view a particular NDT report.

Coding: None

File Name

Description: Each of these fields are used to enter the file name of one Microsoft Word or Excel document for each of the NDT reports.

Coding: The following shall be used for the NDT report file naming convention:

Examples: TS2134NE**NDT**.doc or TS2134NE**NDT**.xls.

For multiple NDT reports, the following should be used:

TS2134NENDTA.doc
TS2134NENDTB.doc
TS2134NENDTC.doc

Note: When the file is brought into the file name field, the inspection date is attached to the end of the file name.

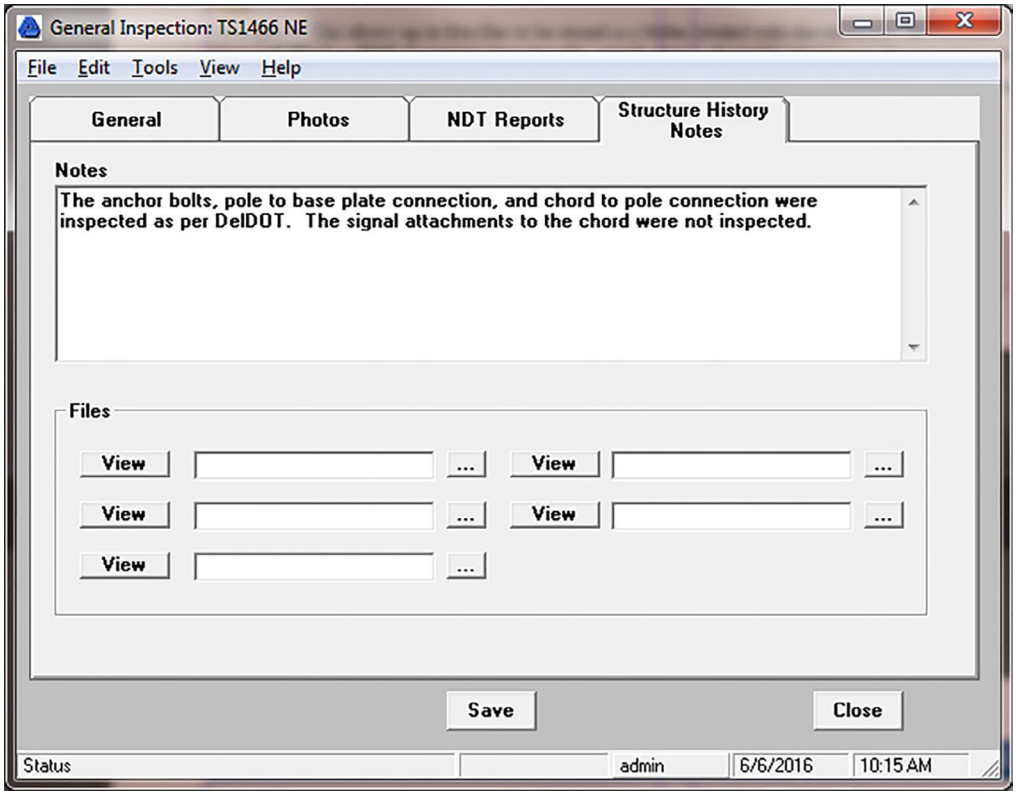
Comment:
Description: This field allows the user to enter any comments regarding the non-destructive testing performed and the subsequent results.

Coding: None

Save
Description: Clicking on the **Save** button allows the user to save all the information in the **NDT Reports** tab.

Coding: None

GENERAL INSPECTION - STRUCTURE HISTORY NOTES



Notes
Description: This memo field allows the user to describe specific details about the structure or the inspection for future reference.

Coding: None

Files
Description: This allows up to five files to be stored in a folder labeled with the structure's ID number. These files may be Microsoft Word or PDF documents that describe specific details about the structure or the inspection for future reference.

Clicking on ... allows the user to view all of the files in the folder and select one to be placed in the respective **Files** field.

Coding: None

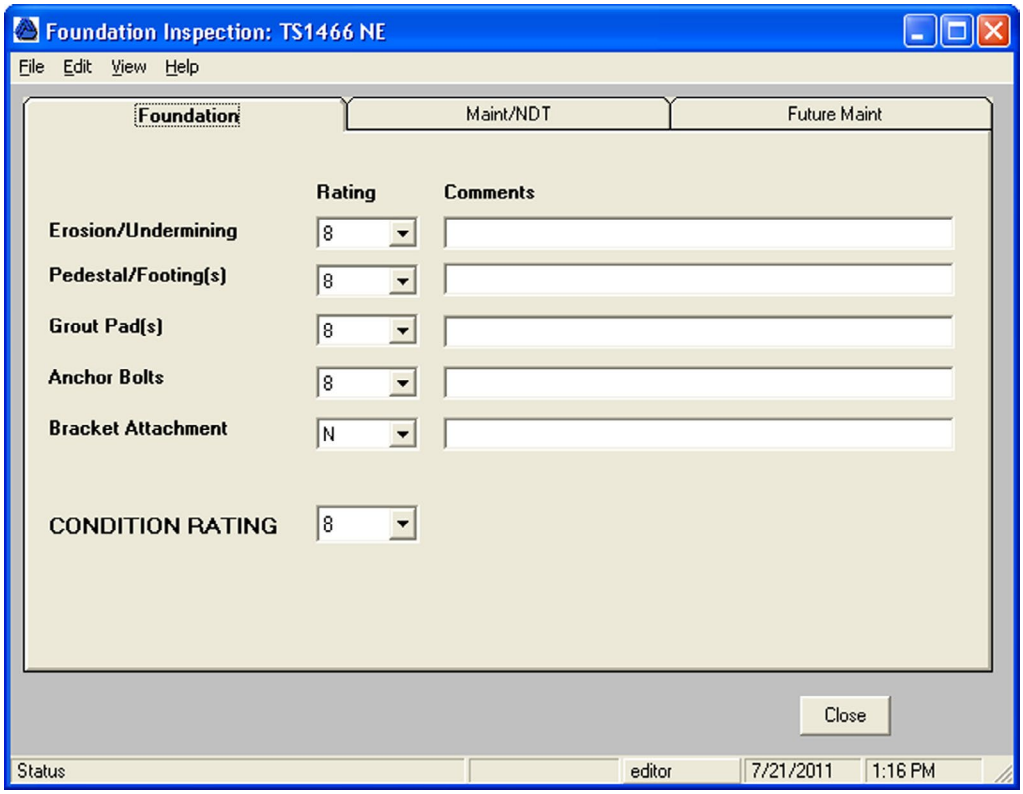
View
Description: Clicking on the **View** button allows the user to view a particular file.

Coding: None

Save
Description: Clicking on the **Save** button allows the user to save all the information in the **Structure History Notes** tab.

Coding: None

FOUNDATION INSPECTION - FOUNDATION



Erosion/Undermining
Description: The area surrounding the foundation should be inspected for any signs of erosion and/or undermining.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Pedestal/Footing(s)
Description: This element involves the inspection of the exposed portion of the foundation type identified. If the foundation type is identified as a **Bracket**, this element should be coded "N" and a condition rating given for the element **Bracket Attachment**.

From the pull down menu, select the **Rating** for the element. If the foundation type is buried, a condition rating should be given based on any signs of distress observed at the foundation's location.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Grout Pad(s)

Description: This element involves the inspection of the grout pad(s) located between the underside of the base plate and the top of the foundation.

From the pull down menu, select the **Rating** for the element. If a grout pad is not present or visible, the condition rating should be coded "N".

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Anchor Bolts

Description: This element involves the inspection of the anchor bolts, anchor bolt nuts and washers, and leveling nuts.

From the pull down menu, select the **Rating** for the element. If the anchor bolts are buried, a condition rating should be given based on any signs of distress observed.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

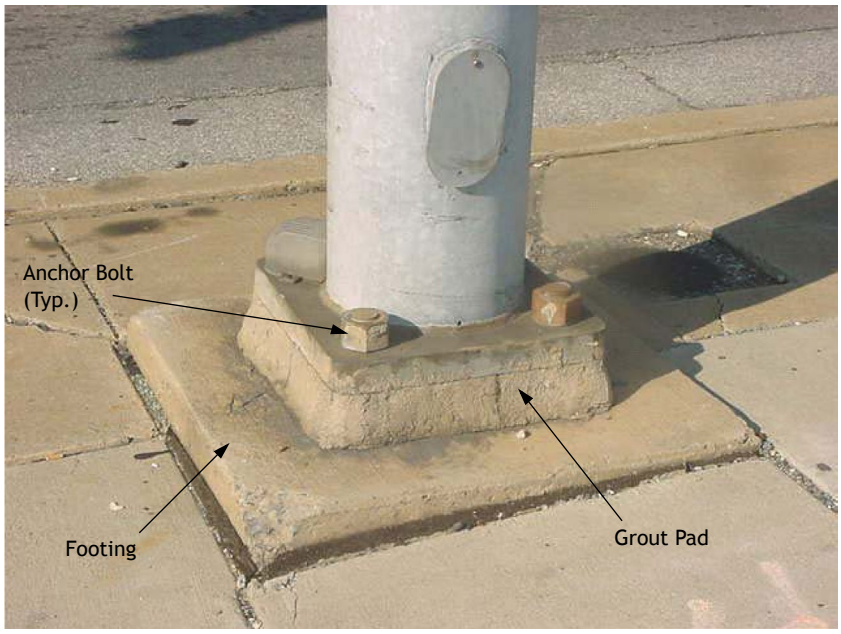
Bracket Attachment

Description: This element involves the inspection of the bracket support for the pole that is attached to a bridge girder, retaining wall, etc. The entire bracket configuration, including its connection to the structure should be considered.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.



CONDITION RATING

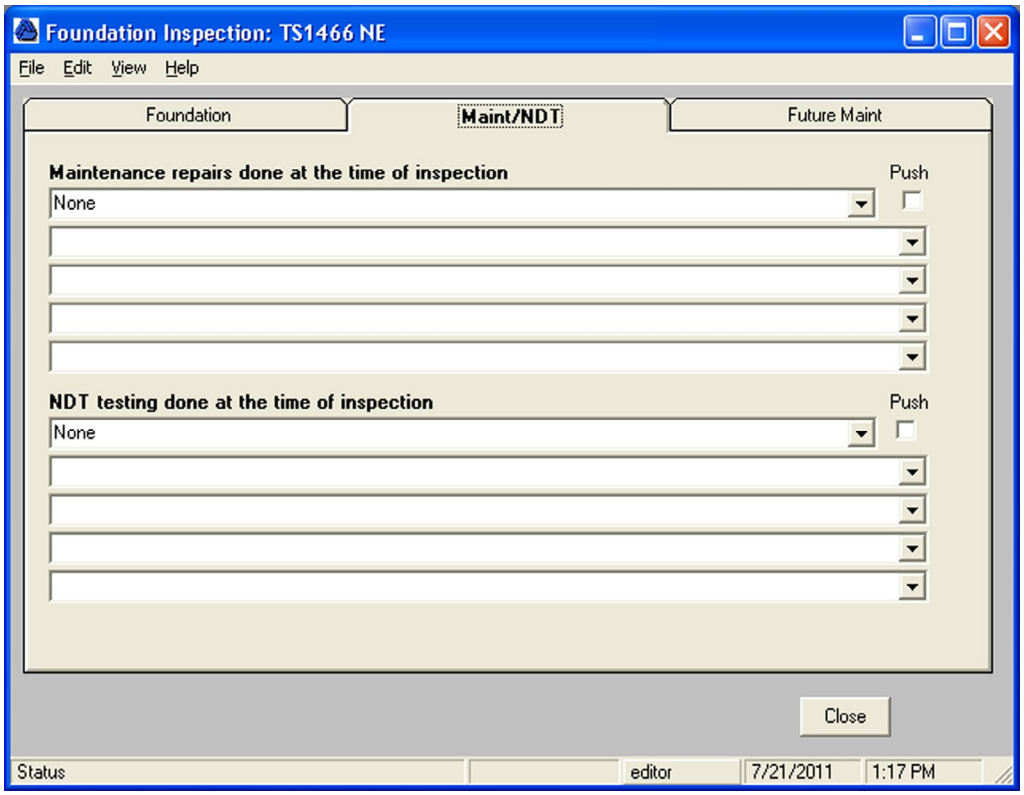
Description: This numerical condition rating should characterize the general condition of the foundation. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the foundation.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the foundation, then the element can be considered a "weak link" in the structure, and the rating of the foundation should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Foundation.

Coding: See **Condition Rating Codes** section of this manual.

FOUNDATION INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the elements of the Foundation during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

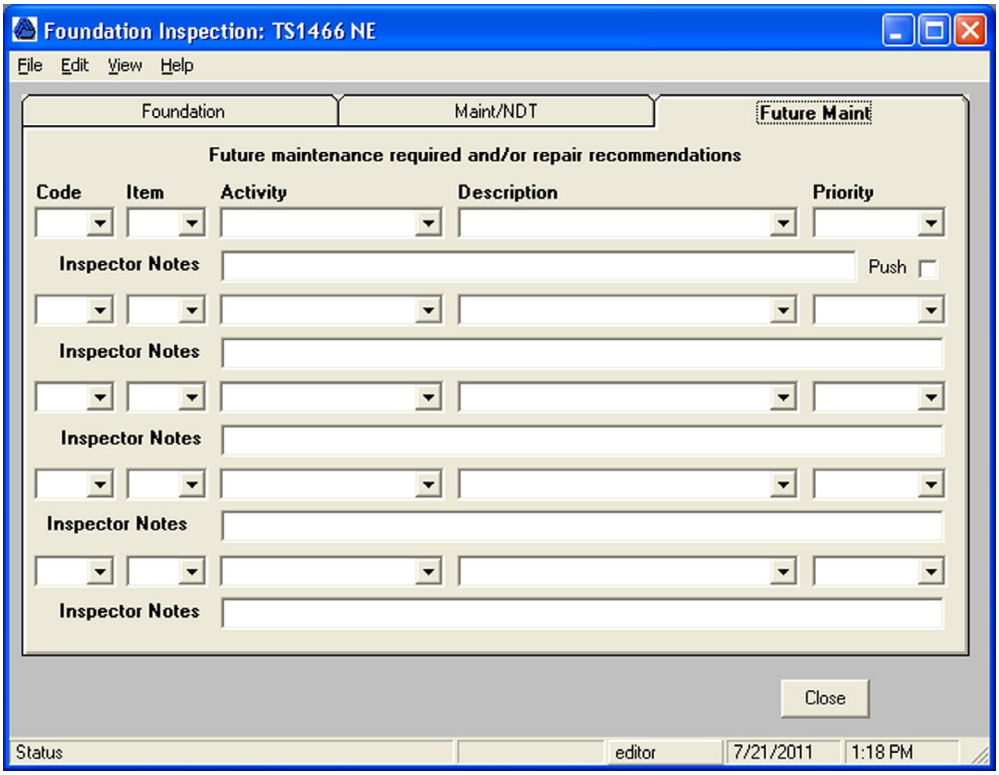
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the elements of the Foundation during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

FOUNDATION INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the elements of the Foundation.

If no maintenance repairs are recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition, that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended, could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure.

L = Low Priority (within 60 months)
Minor deficiencies exist, and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the structure's elements and the structure itself.

Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

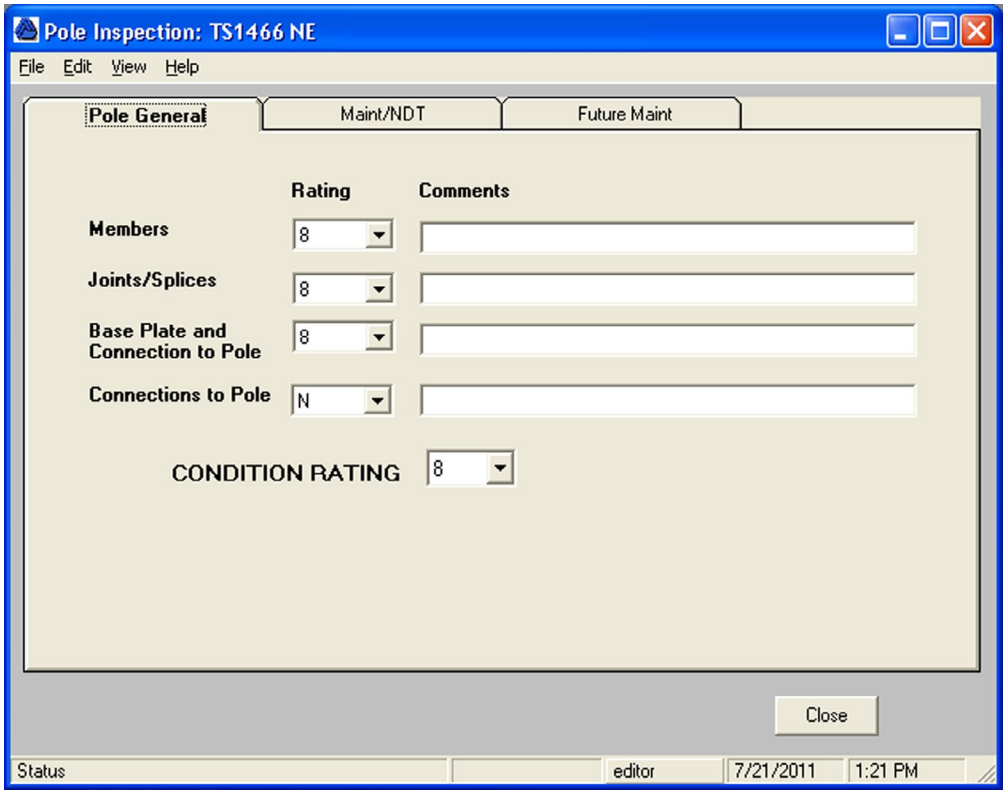
Inspector Notes

Description: A field is provided for the inspector's comments regarding the future maintenance or repair. recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

POLE INSPECTION - POLE GENERAL



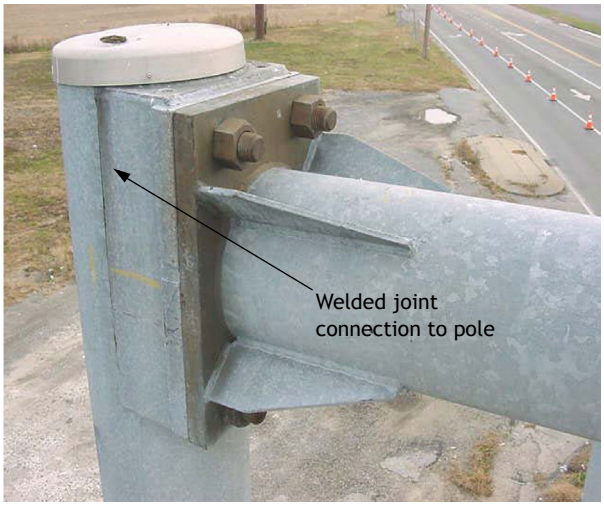
Members

Description: This element involves the inspection of the pole itself, including the applied finish. Also included with this element are hand holes and top caps attached to the pole.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.



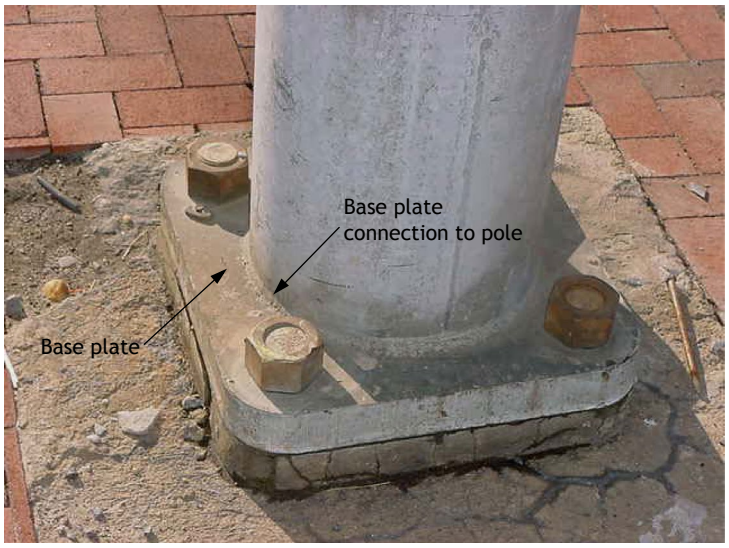
Joints/Splices

Description: This element involves the inspection of joint connections to the pole and the pole's horizontal splices.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.



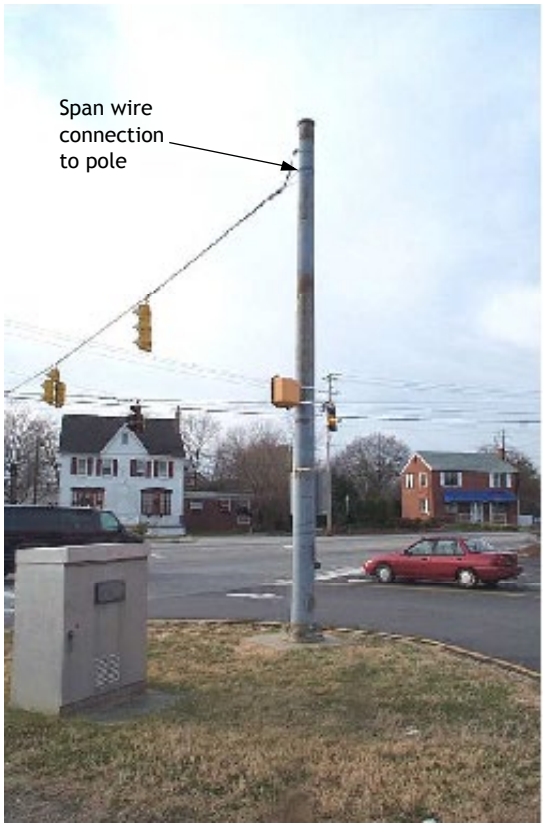
Base Plate and Connection to Pole

Description: This element involves the inspection of the base plate and its connection to the pole, including the applied finish.

From the pull down menu, select the **Rating** for the element. If the base plate is buried, a condition rating should be given based on any signs of distress observed.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.



Connections to Pole

Description: This element involves the inspection of **span wire connection(s)** to the pole. This could also include a camera or traffic signal mounted directly to the pole.

If the **Message Type** is not attached to a span wire or mounted directly to the pole, this rating is coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

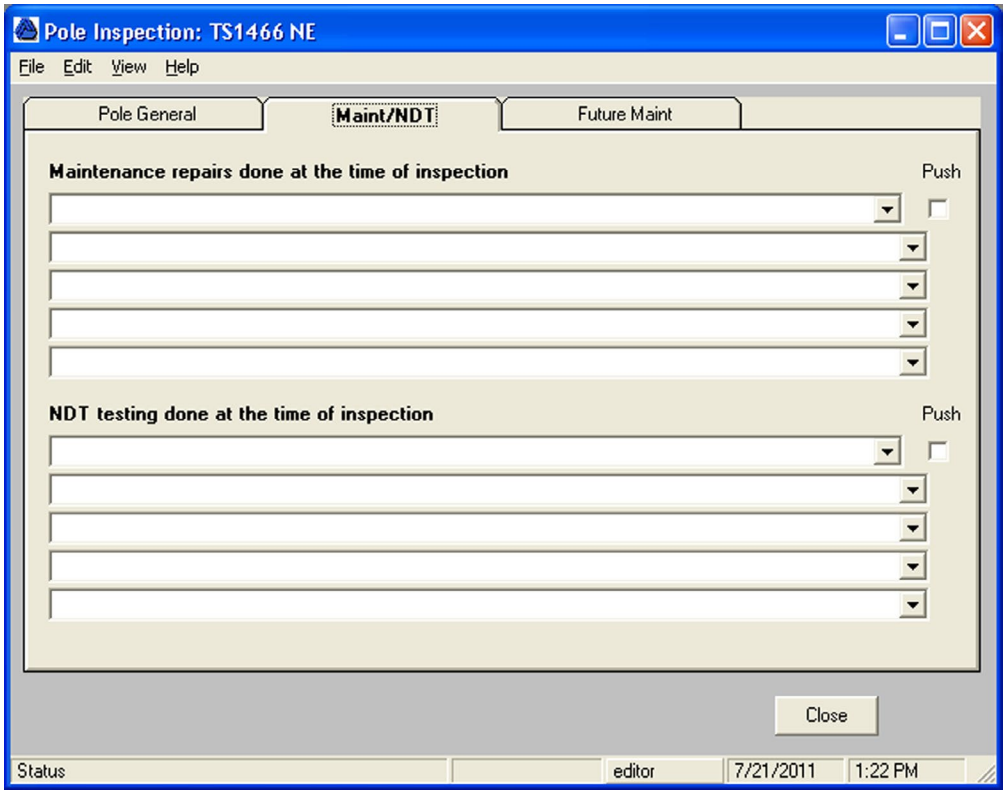
Description: This numerical condition rating should characterize the general condition of the pole component. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the component.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the member, the element can be considered a "weak link" in the structure, and the rating of the pole should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Pole.

Coding: See **Condition Rating Codes** section of this manual.

POLE INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menu, up to five minor maintenance repairs that were performed on the elements of the Pole during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

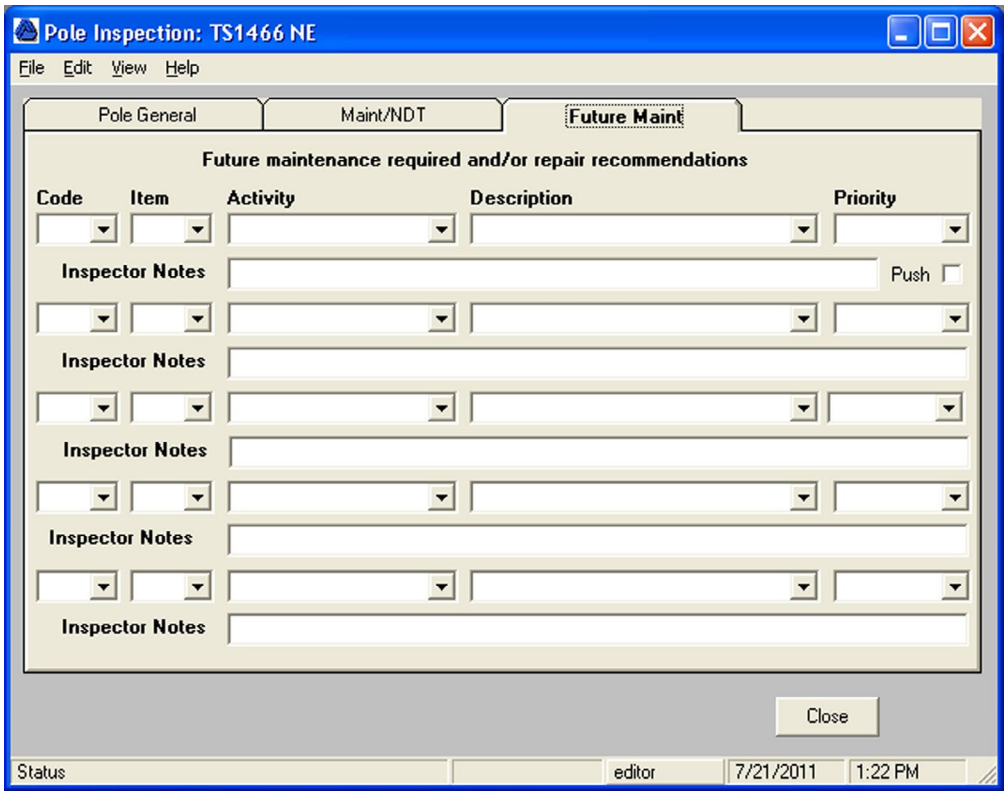
Description: Enter or select from the pull down menu, up to five non-destructive tests that were performed on the elements of the Pole during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

POLE INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the elements of the Pole.

If no maintenance repairs are recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the structure's elements and the structure itself.

Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

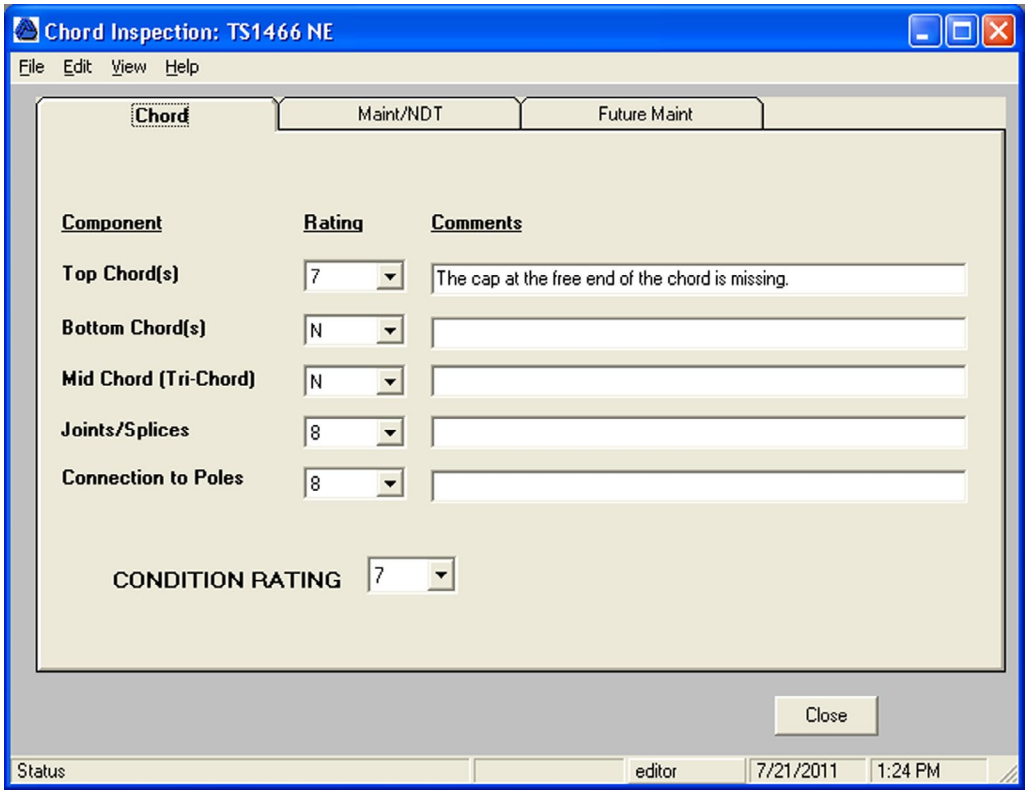
Inspector Notes

Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

CHORD INSPECTION - CHORD



Top Chord(s)

Description: This element involves the inspection of the top chord(s) within the chord type configuration, including the applied finish. Also included with this element are hand holes and caps attached to the top chord(s).

If the chord type chosen is a **Single Chord**, this element should have a condition rating.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Bottom Chord(s)

Description: This element involves the inspection of the bottom chord(s) within the chord type configuration, including the applied finish. Also included with this element are hand holes and caps attached to the bottom chord(s).

If the chord type chosen is a **Single Chord**, the condition rating should be "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Mid Chord (Tri-Chord)

Description: This element involves the inspection of the mid-chord within a Tri-Chord type configuration, including the applied finish. Also included with this element are hand holes and caps attached to the mid-chord.

If the Chord Type chosen is not a **Tri-Chord**, the condition rating should be "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Joints/Splices

Description: This element involves the inspection of joint connections and splices found along the individual chords within the chord type configuration.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Connection to Poles

Description: This element involves the inspection of the connections of the individual chords within a chord type configuration to their respective pole supports.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

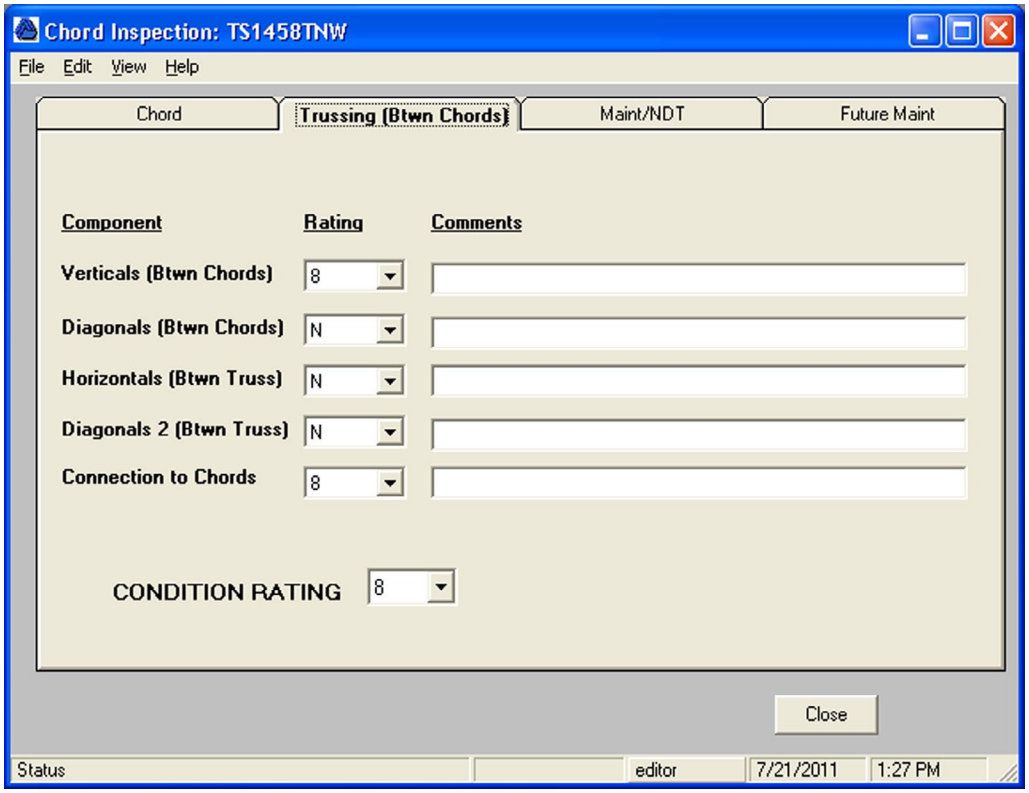
Description: This numerical condition rating should characterize the general condition of the chord. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the chord type.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the chord type, then the element can be considered a "weak link" in the structure, and the rating of the chord type should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Chord Type configuration.

Coding: See **Condition Rating Codes** section of this manual.

CHORD INSPECTION - TRUSSING (BTWN CHORDS)



Note: This tab does not appear for a single chord type configuration.

Verticals (Btwn Chords)

Description: This element involves the inspection of the vertical trussing members located between the individual chords of a plane truss within the chord type configuration, including the applied finish.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Diagonals (Btwn Chords)

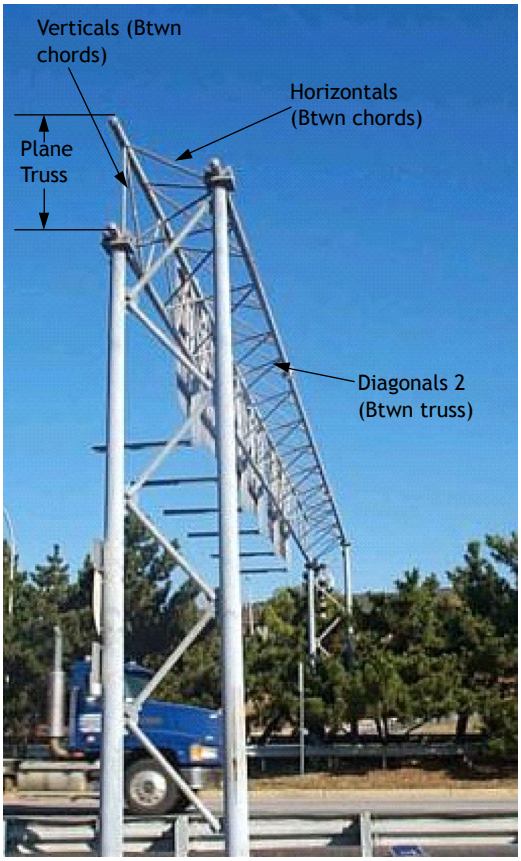
Description: This element involves the inspection of the diagonal trussing members located between the individual chords of a plane truss within the chord type configuration, including the applied finish.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.



Horizontals (Btwn Truss)

Description: This element involves the inspection of the horizontal trussing members located between two plane trusses (4 chord type) or between one plane truss and a chord (Tri-Chord type), including the applied finish.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Diagonals 2 (Btwn Truss)

Description: This element involves the inspection of the diagonal trussing members located between two plane trusses (4 chord type) or between one plane truss and a chord (Tri-Chord type), including the applied finish.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Connection to Chords

Description: This element involves the inspection of the connections of the trussing members within a chord configuration to the individual chords.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

Description: This numerical condition rating should characterize the general condition of the trussing members. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

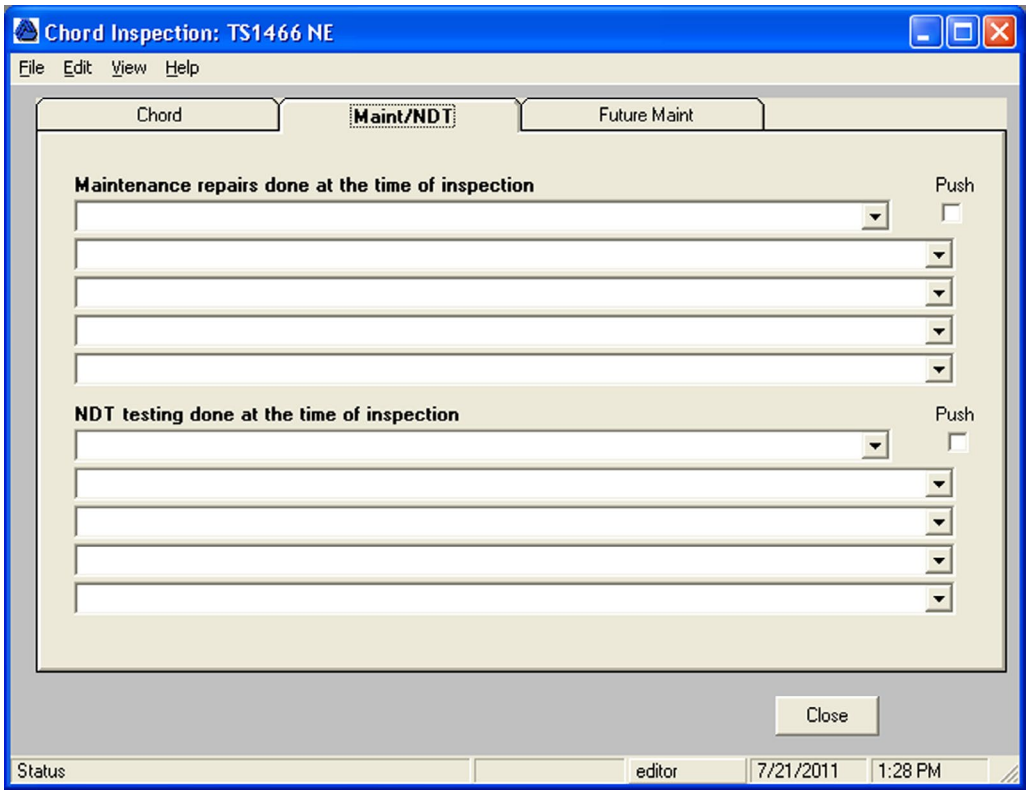
However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the member, then the element can be considered a "weak link" in the structure, and the rating of the trussing members should be reduced accordingly.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the overall condition of the trussing members.

Coding: See **Condition Rating Codes** section of this manual.

CHORD INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the chord and/or trussing elements during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

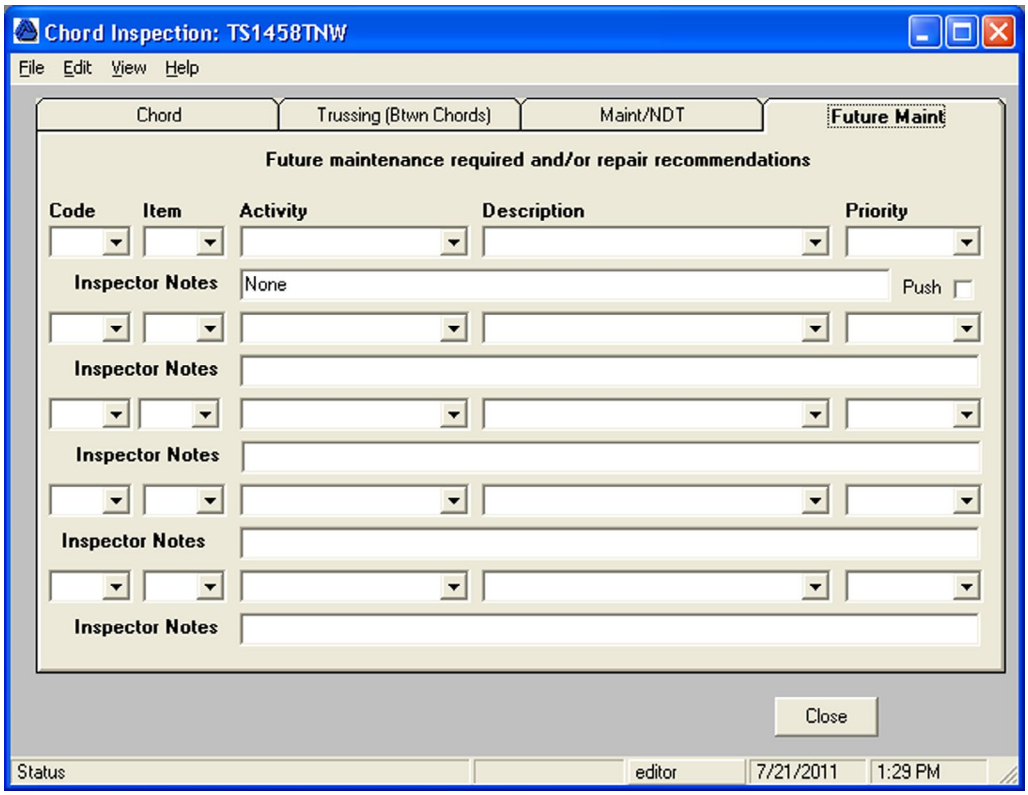
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the chord and/or trussing elements during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

CHORD INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the chord and/or trussing.

If no maintenance repairs are recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the structure's elements and the structure itself.

Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

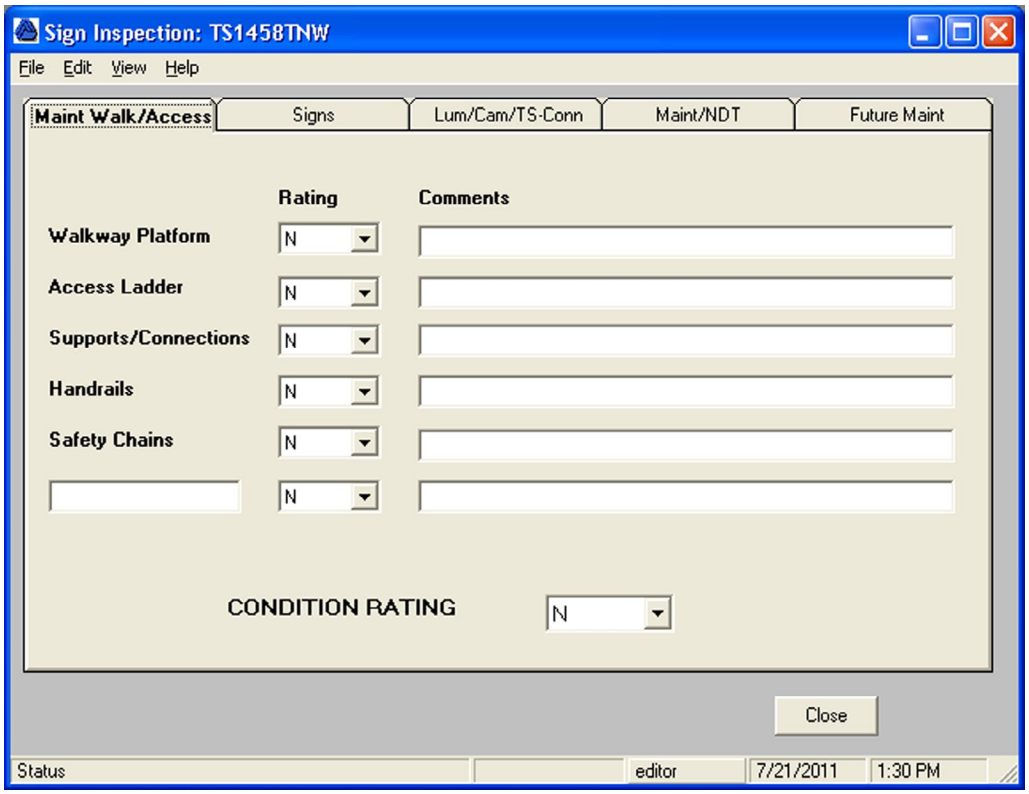
Inspector Notes

Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

SIGN INSPECTION - MAINT WALK/ACCESS



Walkway Platform

Description: This element involves the inspection of the walkway platform present on the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Access Ladder

Description: This element involves the inspection of access ladders present on the structure. This also includes ladder rungs that may be attached directly to the pole.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Supports/Connections

Description: This element involves the inspection of the supports for the maintenance walkway and their connections to the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Handrails

Description: This element involves the inspection of the safety handrails attached to the walkway platform and safety railing around access ladders, including connections.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Safety Chains

Description: This element involves the inspection of safety chains present on the walkway platform and access ladders.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Blank Field

Description: A blank field is provided for the user to enter another element for the Maintenance Walkway/Access system.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

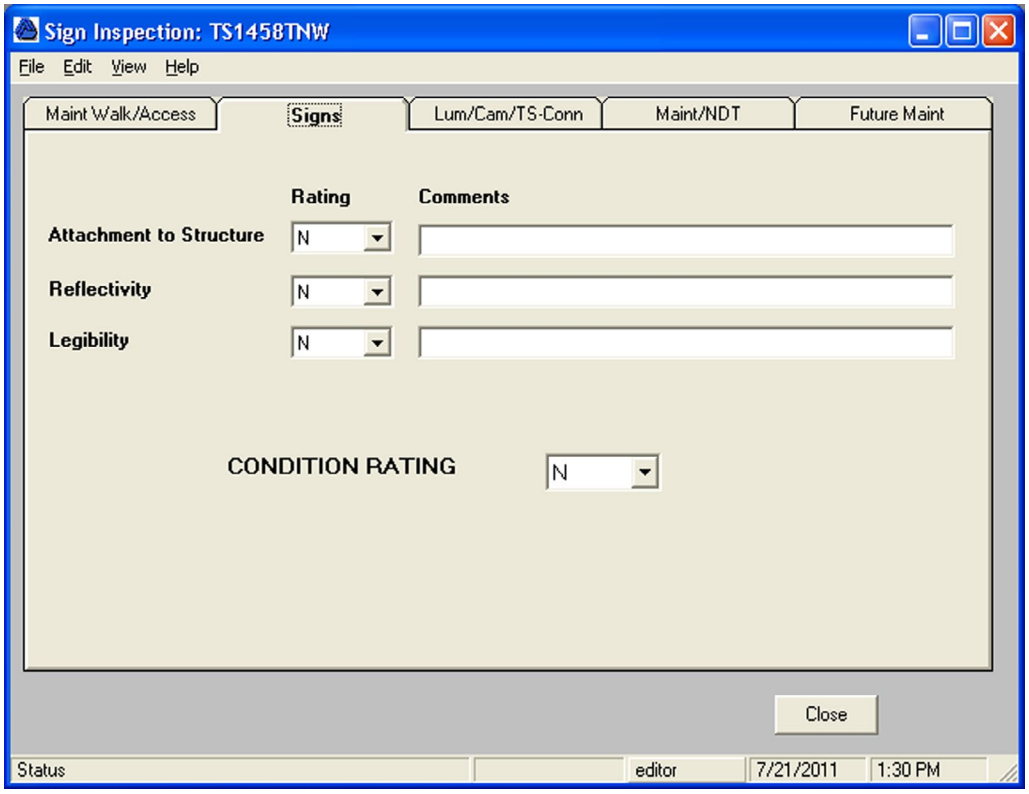
Description: This numerical condition rating should characterize the general condition of the Maintenance Walkway/Access system. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the member, then the element can be considered a "weak link", and the rating of the Maintenance Walkway/Access system should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Maintenance Walkway/Access system. If a Maintenance Walkway/Access system is not present on the structure, all of the elements and the condition rating should be coded "N".

Coding: See **Condition Rating Codes** section of this manual.

SIGN INSPECTION - SIGNS



Attachment to Structure

Description: This element involves the inspection of the sign(s) attachment to its supports. The sign(s) may be attached to a chord or span wire.

If no signs are present, the **Rating** should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Reflectivity

Description: This element involves the condition inspection of the signs reflective background and foreground.

If no signs are present, the **Rating** should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Legibility

Description: This element involves the condition inspection of the lettering and numbering present on the signs.

If no signs are present, the **Rating** should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

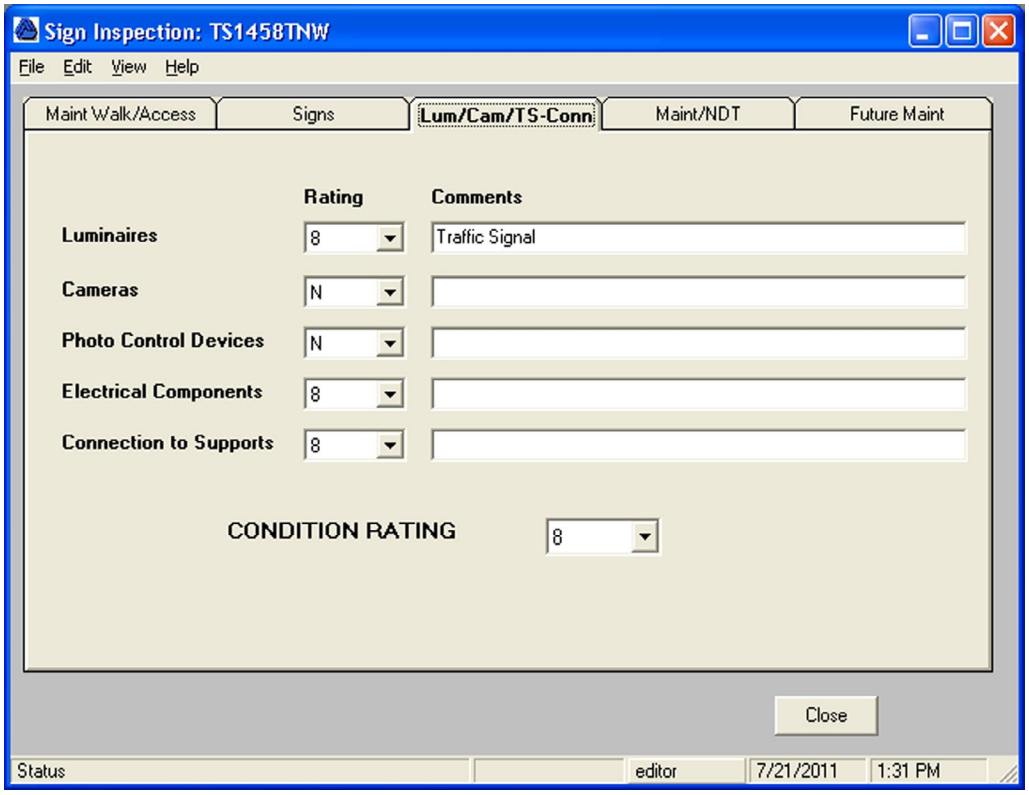
Description: This numerical condition rating should characterize the general condition of the Signs and their connections. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the serviceability of the member, then the element can be considered a "weak link", and the rating of the Signs and their connections should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Signs and their connections. If elements of the Signs component are not present on the structure, the elements should be coded "N".

Coding: See **Condition Rating Codes** section of this manual.

SIGN INSPECTION - LUM/CAM/TS-CONN



Luminaires

Description: This element involves the inspection of the lighting present on the structure. This element is not applicable for highway lighting attached to the structure, but is applicable to traffic signals attached to chords or mast arms.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Cameras

Description: This element involves the inspection of the camera mounted on the pole or mast arm.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Photo Control Devices

Description: This element involves the inspection of photo control devices present on the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Electrical Components

Description: This element involves the inspection of visible electrical components associated with luminaires, cameras and photo control devices. This includes conduits, connections to devices, etc.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Connection to Supports

Description: This element involves the inspection of the connection of traffic signals to chords and luminaires, cameras and photo control devices to their respective supports.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

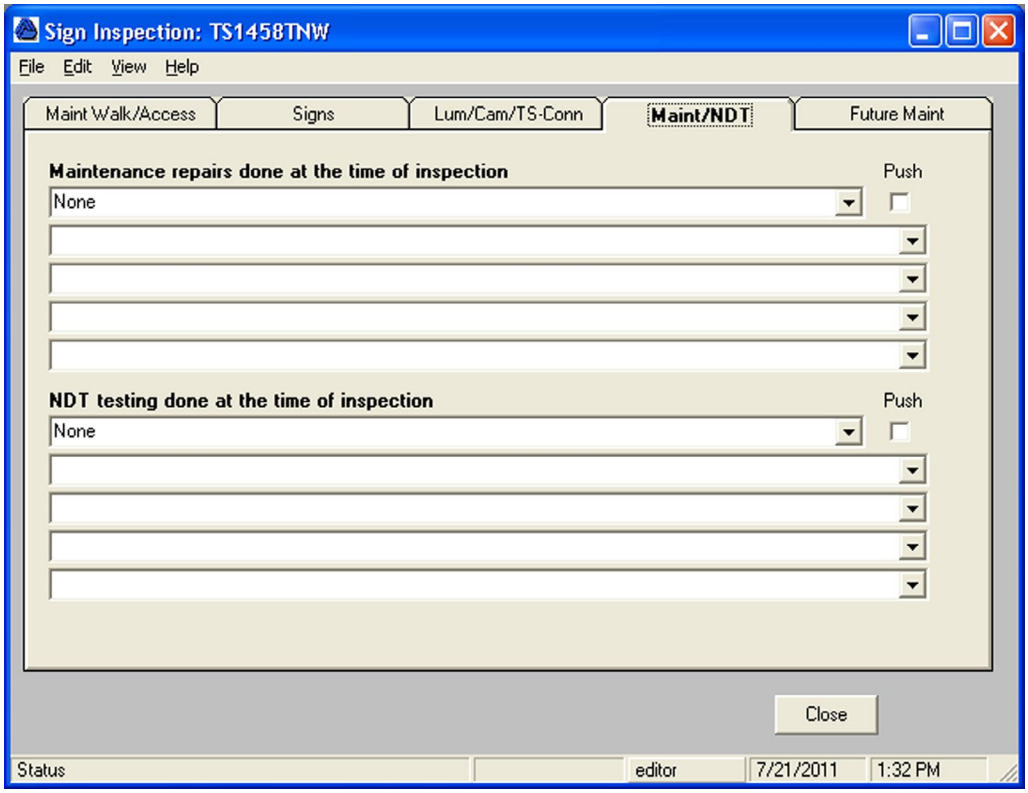
Description: This numerical condition rating should characterize the general condition of the Luminaire/Camera/Traffic Signal. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the serviceability of the member, then the element can be considered a "weak link", and the rating of the Luminaire/Camera/Traffic Signal should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Luminaire/Camera/Traffic Signal. If elements of the Luminaire/Camera/Traffic Signal are not present on the structure, the elements should be coded "N".

Coding: See **Condition Rating Codes** section of this manual.

SIGN INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the elements of the Maint Walk/Access, Signs and Lum/Cam/TS-Conn during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

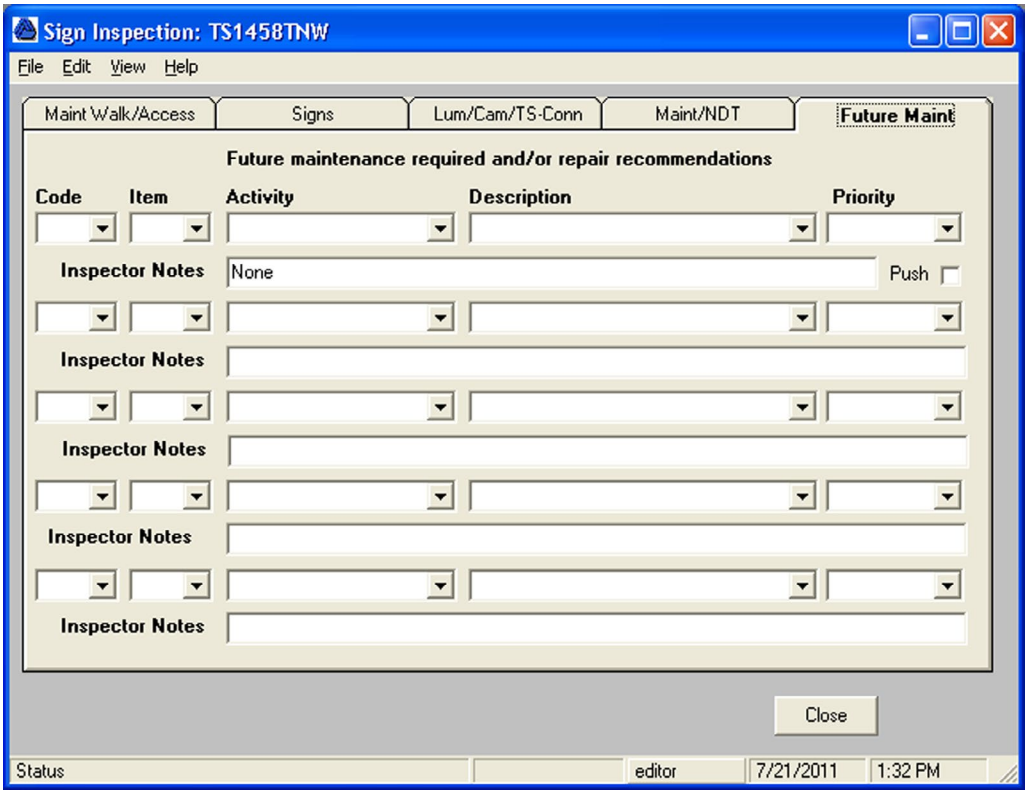
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the elements of the Maint Walk/Access, Signs and Lum/Cam/TS-Conn during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

SIGN INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the elements of the Maint Walk/Access, Signs and Lum/Cam/TS-Conn.

If no maintenance repairs are recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure's components.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the component's elements.

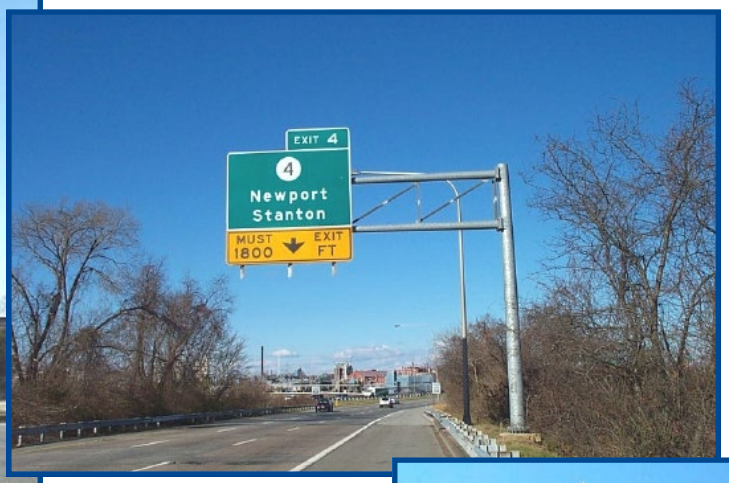
Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

Inspector Notes

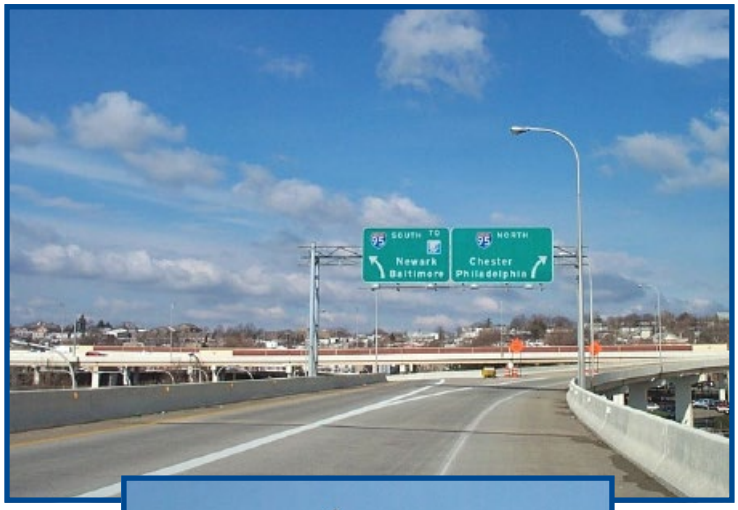
Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.


EXIT 4
4
Newport
Stanton
MUST
1800
EXIT
FT

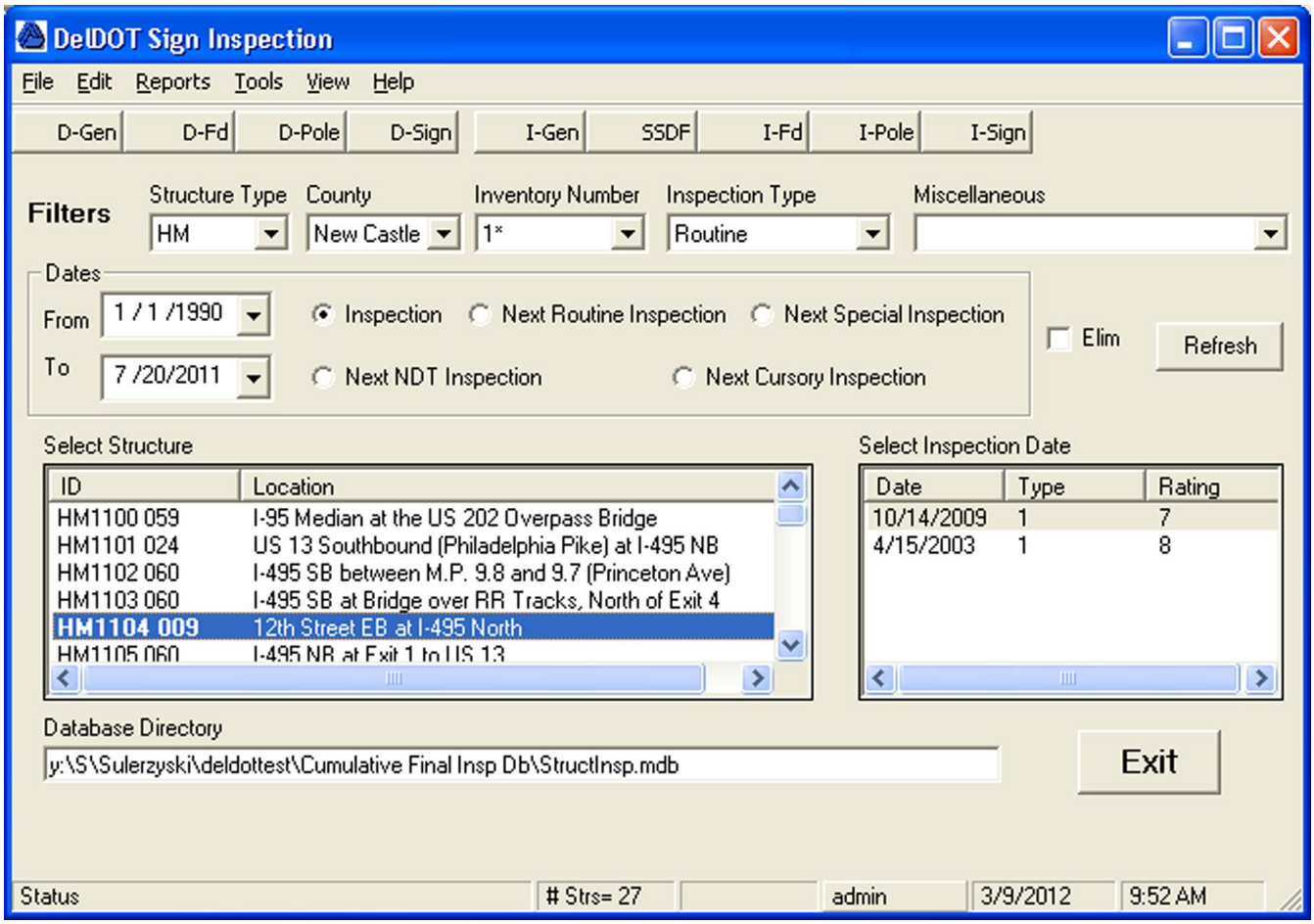
E-ZPass
DEDICATED
LANE
USE FLASHING
NO CASH


95 SOUTH TO
Newark
Baltimore
95 NORTH
Chester
Philadelphia

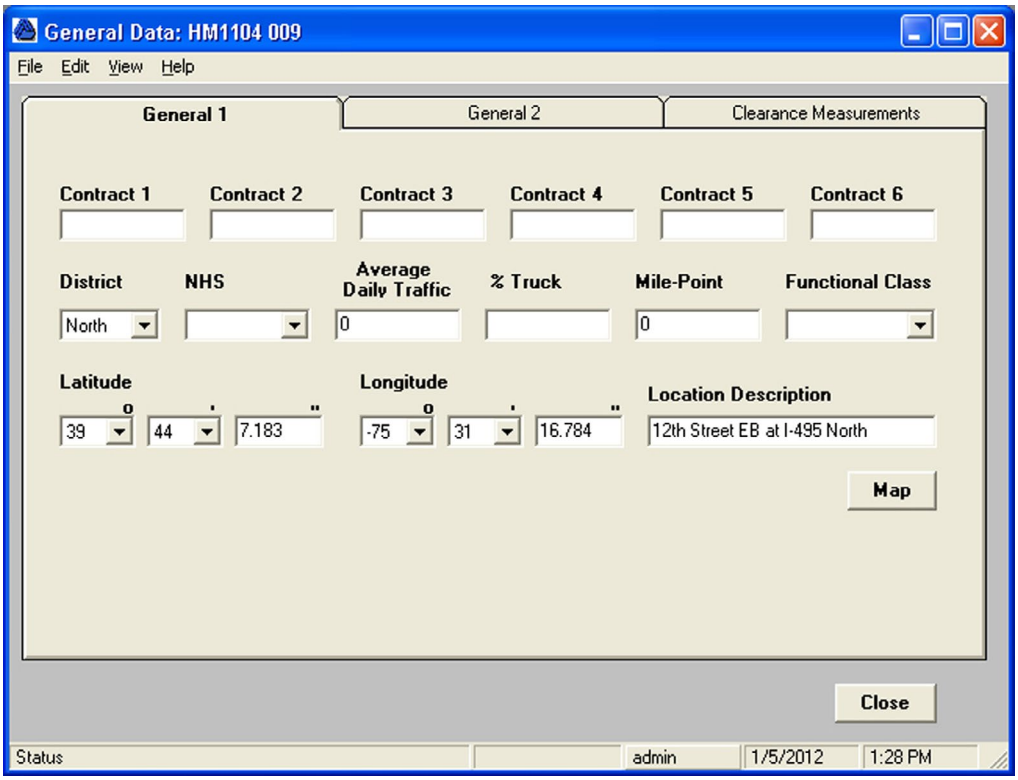
95 SOUTH
Del. Mem. Bridge

HM - HIGH MAST LIGHTING

STRUCTURE DATA



GENERAL DATA - GENERAL 1



Contract 1 to Contract 6

Description: This is an alpha-numeric field used to record up to six DelDOT Contract Numbers associated with the construction and/or rehabilitation of the structure.

Coding: None

District

Description: From the pull down menu, select the district in which the structure is located.

Coding: 1 = North PA Line to the C & D Canal
2 = Central C & D Canal to the Sussex County Line
3 = South All of Sussex County

NHS

From the pull down menu, indicate whether or not the structure is located on a National Highway System (NHS).

Average Daily Traffic

To be inputted by consultant using most recent DelDOT Traffic Summary Book.

% Truck

To be inputted by consultant using most recent DelDOT Traffic Summary Book.

Mile-Point

To be provided by DelDOT and inputted by consultant.

Functional Class

To be inputted by consultant using most recent DelDOT Traffic Summary Book.

Latitude
Description: Enter the latitude of the structure in degrees, minutes and seconds to 1-meter accuracy. The GPS data shall be taken at the structure's support.

Coding: The degrees and minutes may be chosen from the pull down menu. The seconds must be entered manually.

Longitude
Description: Enter the longitude of the structure in degrees, minutes and seconds to 1-meter accuracy. The GPS data shall be taken at the structure's support.

Coding: The degrees and minutes may be chosen from the pull down menu. The seconds must be entered manually.

Location Description
Description: This is an alpha-numeric field used to describe the location of the structure. The location should provide the name of a State Route or Interstate and an intersecting feature.

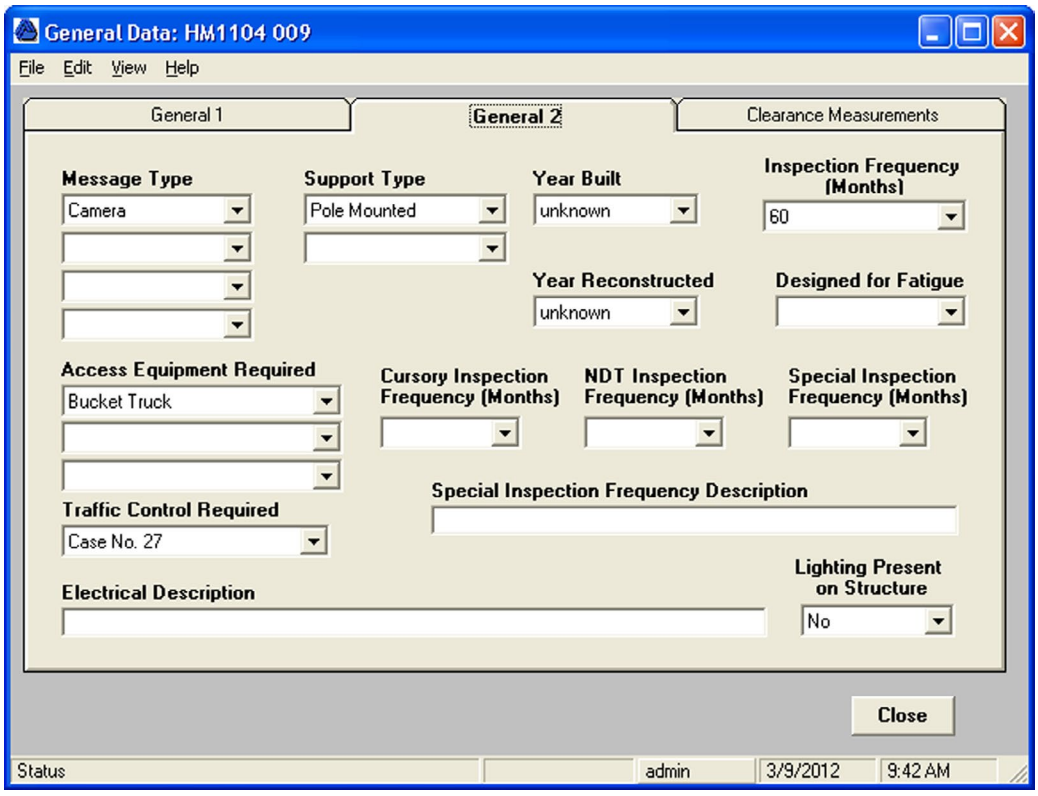
For Example: I-95 NB at Milepost 4.9
SR 141 at Exit 4
South College Avenue at Delaware Avenue

Coding: None

Map
Description: Click the button to map the location of the structure based on its GPS data.

Coding: None

GENERAL DATA - GENERAL 2



Message Type

Description: From the pull down menus, select up to four types of messages that are directly or indirectly connected to the structure.

Coding:
1 = Standard Signs
2 = Variable Message
3 = Ring – Type Light
4 = Stadium – Type Light
5 = Traffic Signal
6 = Firehouse Signal
7 = School Signal
8 = Signal Sign(s)
9 = Camera
10 = Directional/Lane Control
11 = Luminaire (Highway Lighting)
12 = Utility Lines
13 = Railroad Crossing Signal(s)
14 = Flashers
15 = Other
16 = Not Applicable
17 = Overheight Sensors

Support Type

Description: From the pull down menus, select up to two types of supports that describe how each **Primary Message Type** is connected to the structure. Primary message types include Ring – Type Light, Stadium – Type Light and Camera.

Coding:
1 = Cantilever
2 = Butterfly
3 = Overhead Span
4 = Bridge Mounted
5 = Sign Bridge Cantilever
6 = Pole Mounted
7 = Span Wire Mounted
8 = Other

Year Built

Description: From the pull down menu, select the year that the structure was originally constructed. If the year is not available, select "Unknown".

Coding: None

Year Reconstructed

Description: From the pull down menu, select the latest year that the structure was rehabilitated. If the year is not available, select "Unknown".

Coding: None

Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure inspection in months.

Coding: None

Designed for Fatigue

To be input by DelDOT.

Access Equipment Required

Description: From the pull down menus, select up to three different types of equipment required in order to perform the inspection.

Coding:
1 = Lift Van
2 = Bucket Truck
3 = Snooper
4 = Crane Truck

5 = Railroad Permit/Equipment
6 = None

Cursory Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure's cursory inspection in months.

Coding: None

NDT Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure's NDT inspection in months.

Coding: None

Special Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure's special inspection in months.

Coding: None

Special Inspection Frequency Description

Description: This is an alpha-numeric field used to comment on the type of special inspection required for the structure and reason why it was performed.

Coding: None

Traffic Control Required

Description: From the pull down menu, select the traffic control equipment or DelDOT Traffic Control Case required to perform the inspection.

Coding:
1 = Cones
2 = Signs
3 = Lane Closure(s)
4 = Case No. 16
5 = Case No. 26
6 = Case No. 27
7 = Case No. 28
8 = Case No. 29
9 = None
10 = Cones & Signs
11 = Case No. 20
12 = Case No. 16 (modified)
13 = Case No. 20 (modified)
14 = Case No. 26 (modified)
15 = Case No. 27 (modified)
16 = Case No. 28 (modified)
17 = Case No. 29 (modified)
18 = Case No. 36
19 = Case No. 36 (modified)
20 = Case No. 14
21 = Case No. 14 (modified)
22 = Case No. 3
23 = Case No. 3 (modified)
24 = Case No. 2
25 = Case No. 2 (modified)
26 = Case No. 34
27 = Case No. 34 (modified)

Electrical Description

Description: This is an alpha-numeric field used to record general comments regarding the electrical items on or around the structure.

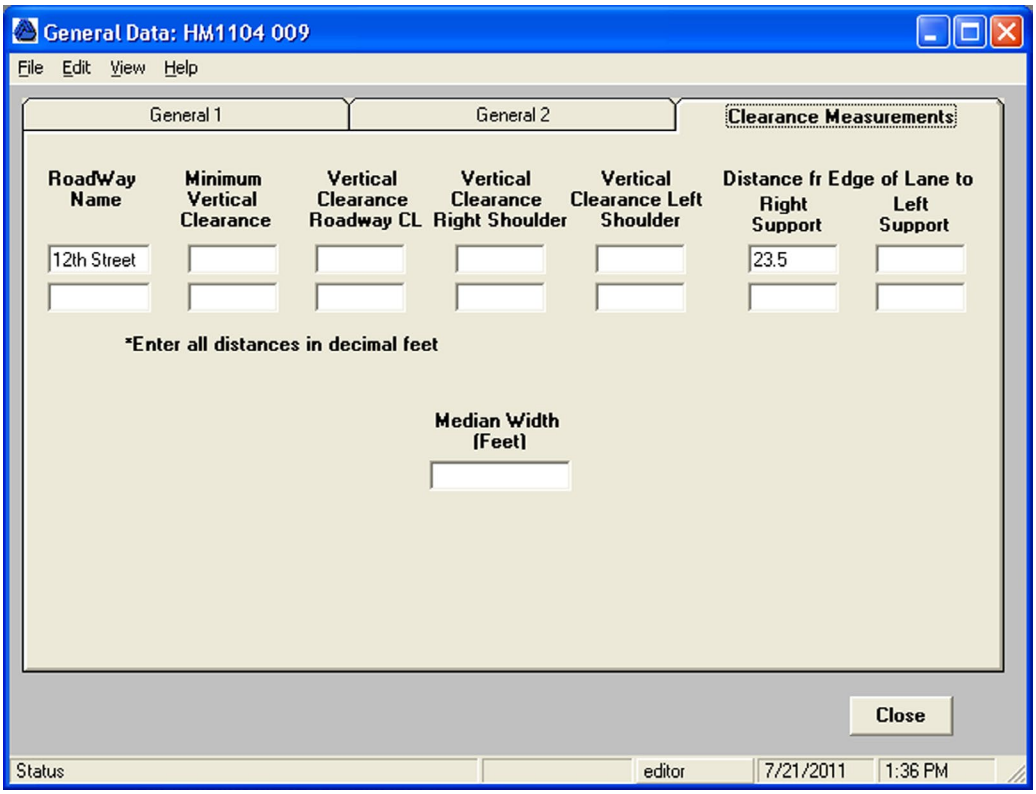
Coding: None

Lighting Present on Structure

Description: From the pull down menu, select whether or not lighting is present on the structure. If highway luminaire lighting is attached to the structure, this item should be coded "Yes".

Coding: 1 = Yes
2 = No
3 = Not Visible

GENERAL DATA - CLEARANCE MEASUREMENTS



Note: Clearances can be entered for up to two roadways. Each roadway shall have its own set of clearances.

Roadway Name

Description: This is an alpha-numeric field used to record the name of the roadway where the measurements have been taken.

Coding: None

Minimum Vertical Clearance

Description: This field is not applicable.

Vertical Clearance - Roadway CL

Description: This field is not applicable.

Vertical Clearance - Right Shoulder

Description: This field is not applicable.

Vertical Clearance - Left Shoulder

Description: This field is not applicable.

Distance fr Edge of Lane to - Right Support

Description: Enter the horizontal distance, in decimal feet, from the edge of the right travel lane or shoulder to the centerline of the structure's foundation. If the measurement is taken from the right shoulder, note this under the

Roadway Name. If the **Distance fr Edge of Lane to – Left Support** measurement is entered, this field should be left blank.

Coding: None

Distance fr Edge of Lane to - Left Support

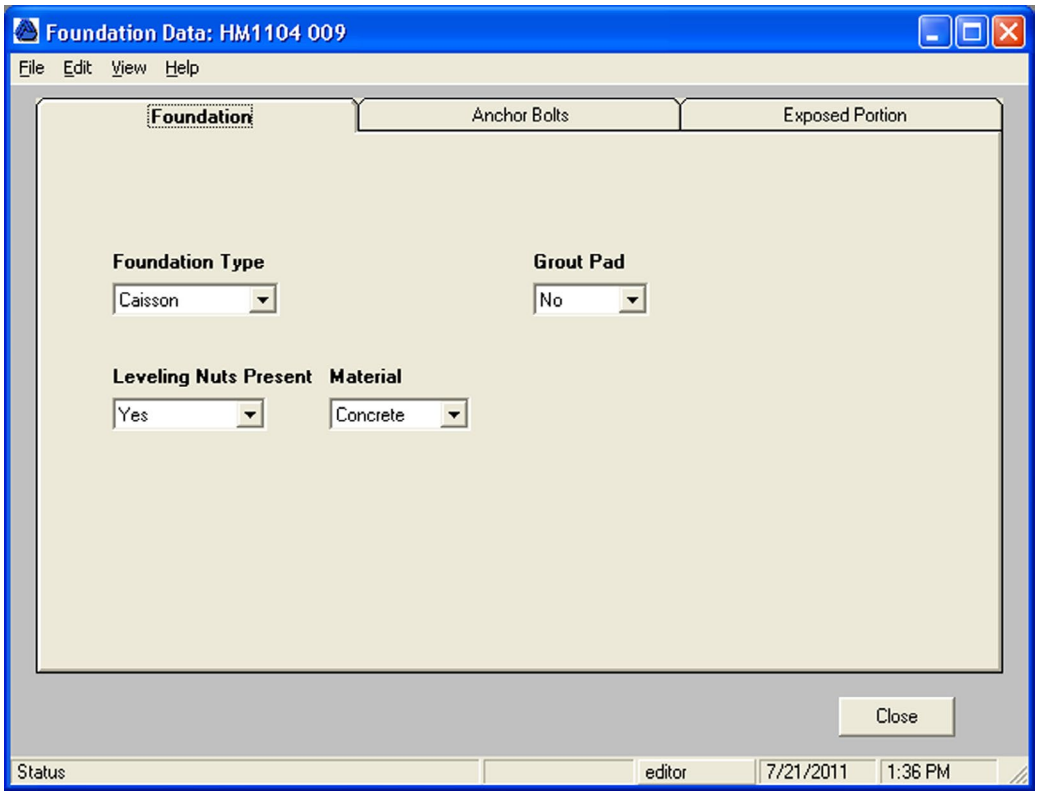
Description: Enter the horizontal distance, in decimal feet, from the edge of the left travel lane or shoulder to the centerline of the structure's foundation. If the measurement is taken from the left shoulder, note this under the Roadway Name. If the **Distance fr Edge of Lane to – Right Support** measurement is entered, this field should be left blank.

Coding: None

Median Width (Feet)

Description: This field is not applicable.

FOUNDATION DATA - FOUNDATION



Foundation Type

Description: From the pull down menu, select the type of exposed foundation present for the structure. If the foundation is buried and cannot be determined, this field should be coded "Unknown".

If the structure's vertical pole extends into the ground, as in the case of a timber utility pole, this field should be coded "Not Applicable".

Coding: 1 = Footing
2 = Caisson
3 = Bracket (Examples: Attachment to a Bridge Girder or Retaining Wall)
4 = Other
5 = Not Applicable
6 = Unknown

Grout Pad

Description: From the pull down menu, select whether or not a grout pad exists between the base plate and the top of the foundation. If the foundation is buried and the presence of a grout pad cannot be determined, "Not Visible" should be coded. If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Yes
2 = No
3 = Not Visible

Leveling Nuts Present

Description: From the pull down menu, select whether or not there are leveling nuts present underneath the base plate. If the foundation is buried or there is a grout pad present such that the presence of leveling nuts cannot be determined, "Not Visible" should be coded. If the Foundation Type is coded "Not Applicable", this field should be left blank.

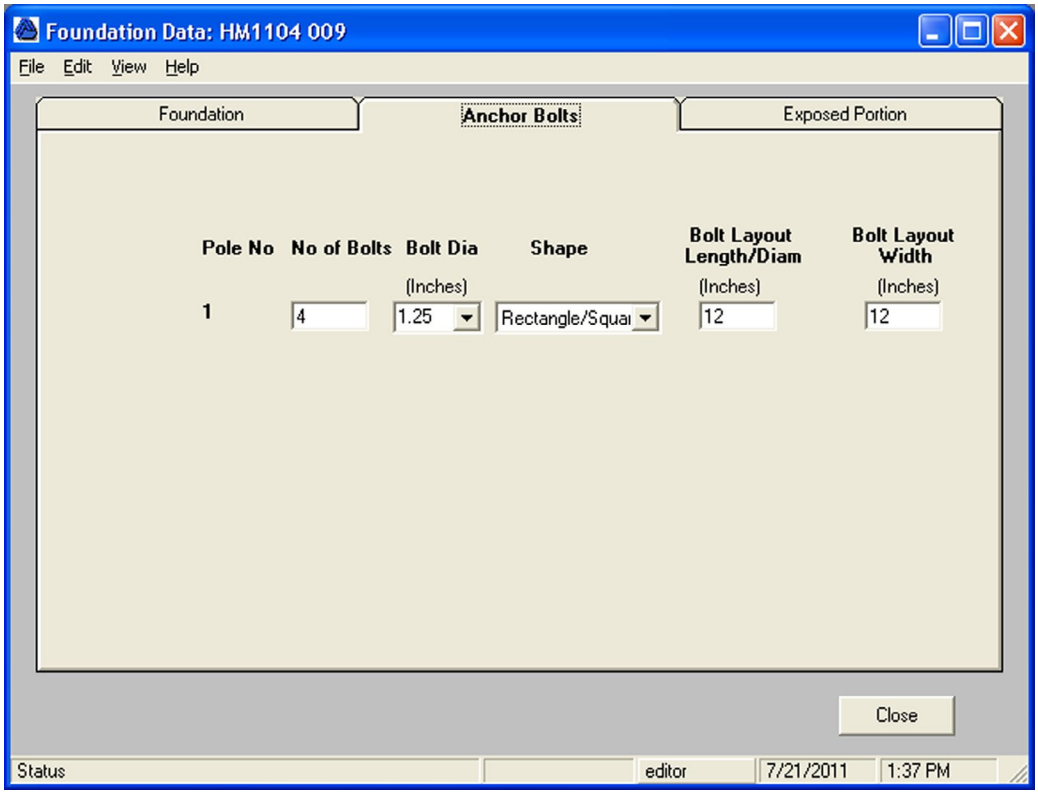
Coding: 1 = Yes
2 = No
3 = Not Visible

Material

Description: From the pull down menu, select the material that was used to construct the exposed foundation. If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Steel
2 = Concrete
3 = Aluminum
4 = Timber
5 = Weathering Steel
6 = Other

FOUNDATION DATA - ANCHOR BOLTS



Note: Information is entered only for one Foundation and one Pole.

No of Bolts

Description: Enter the number (Integer) of anchor bolts. If the number of anchor bolts cannot be determined or the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

Bolt Dia (Inches)

Description: From the pull down menu, select the diameter of the anchor bolts present at the foundation. If the diameter cannot be determined or the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

Shape

Description: From the pull down menu, select the shape of the anchor bolt layout. If the anchor bolt layout cannot be determined, this field should be coded "Unknown". If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted

8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

Bolt Layout - Length/Diam (Inches)

Description: Enter the length in the direction of traffic or diameter (in inches) of the anchor bolt layout. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

If the anchor bolt layout Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

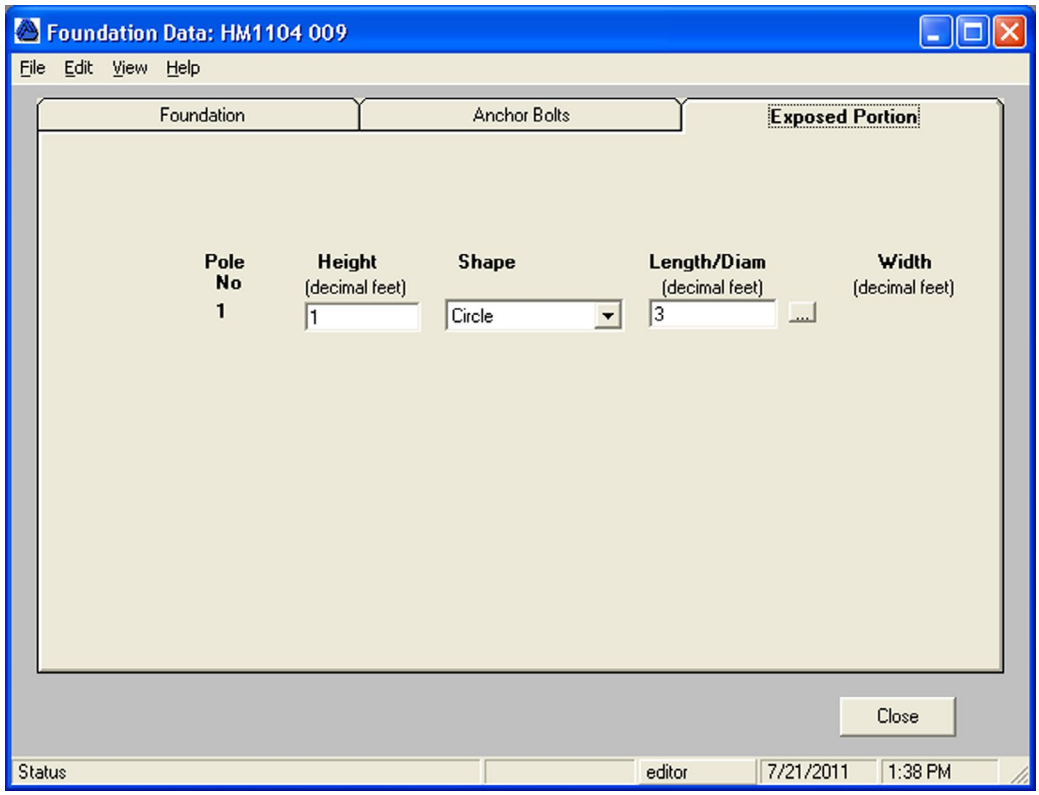
Bolt Layout - Width (Inches)

Description: Enter the width (in inches) of the anchor bolt layout.

If the anchor bolt layout Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank. Note, this field is only activated for certain anchor bolt layout shapes.

Coding: None

FOUNDATION DATA - EXPOSED PORTION



Note: Information is entered only for one Foundation and one Pole.

Height (decimal feet)

Description: Enter the height (in decimal feet) above the ground of the exposed portion of the foundation. If the height above ground is not constant, an average value should be used. If the foundation is buried, 0 should be coded.

If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

Shape

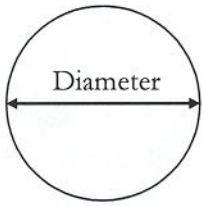
Description: From the pull down menu, select the shape of the exposed foundation. If the foundation's shape cannot be determined, this field should be coded "Unknown". If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

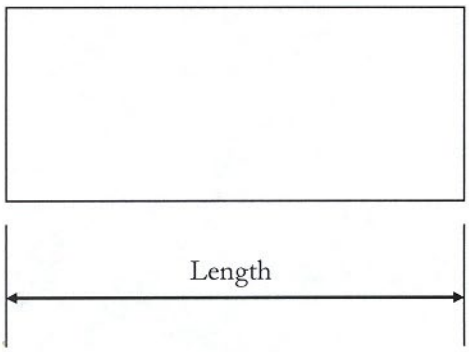
Length/Diam (decimal feet)

Description: Based on the plan illustrations below, enter the length in the direction of traffic or diameter (in decimal feet) of the exposed foundation. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in decimal feet.

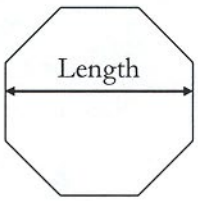
If the Foundation's Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank.



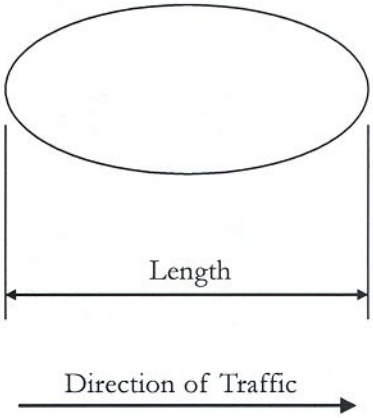
Circle or Fluted



Rectangle/Square
(Trapezoid similar - use average values)



Octagon
(Hexagon & Pentagon similar)



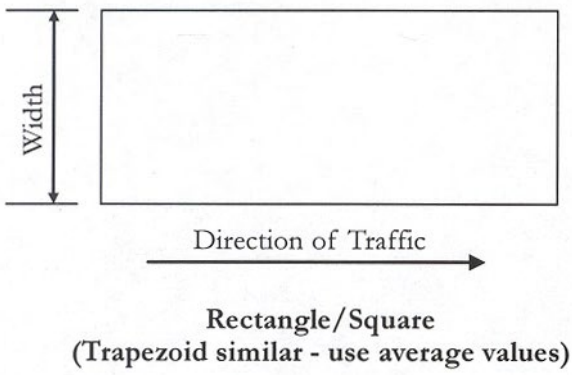
Ellipse

Coding: None

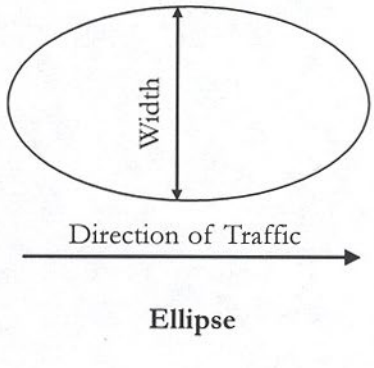
Width (decimal feet)

Description: Based on the plan illustrations below, enter the width (in decimal feet) of the exposed foundation.

If the Foundation's Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank. Note that this field is activated only for certain foundation shapes.



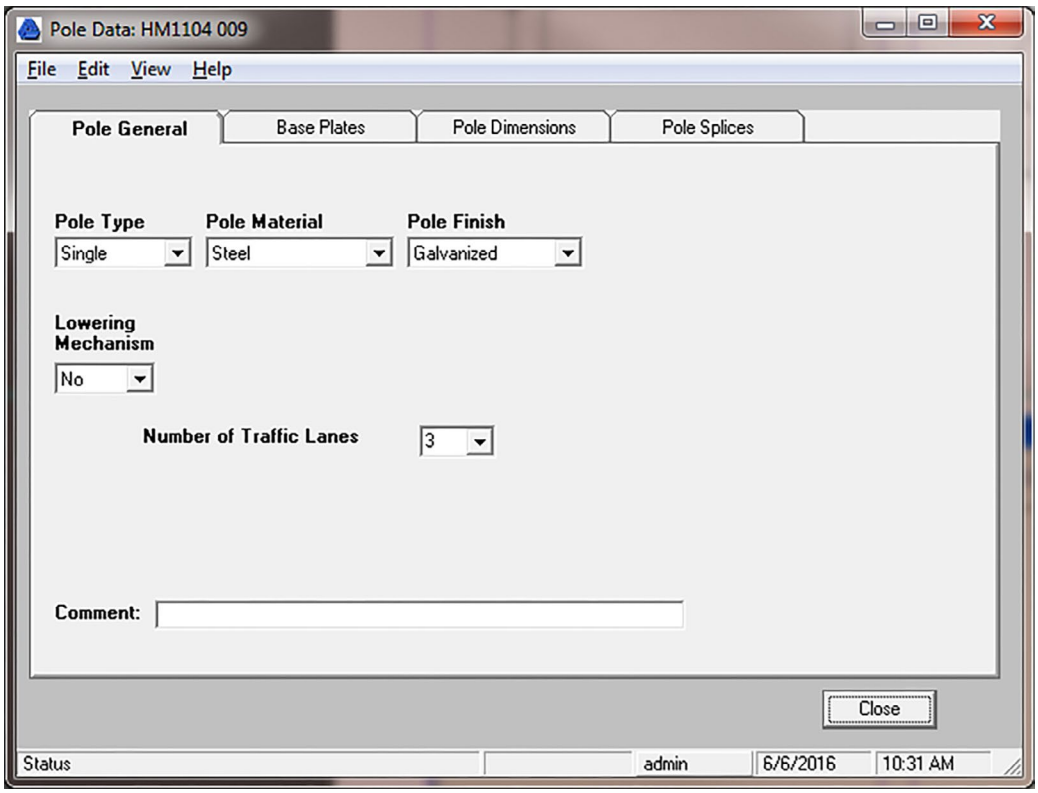
Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

Coding: None

POLE DATA - POLE GENERAL



Pole Type
Description: From the pull down menu, select the type of pole(s) present on the structure.

Coding: 1 = Single
2 = Double
3 = Single/Double
4 = Not Applicable

Pole Material
Description: From the pull down menu, select the material composition of the pole. If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Steel
2 = Concrete
3 = Aluminum
4 = Timber
5 = Weathering Steel
6 = Other

Pole Finish
Description: From the pull down menu, select the finish that was applied to the pole material. If the pole material is coded "Aluminum or Timber", the pole finish should be coded "Not Applicable". If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Galvanized
2 = Painted
3 = Weathering Steel
4 = Other
5 = Not Applicable

Lowering Mechanism
Description: From the pull down menu, select whether or not the pole can be lowered to the ground. If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Yes
2 = No
3 = Not Visible

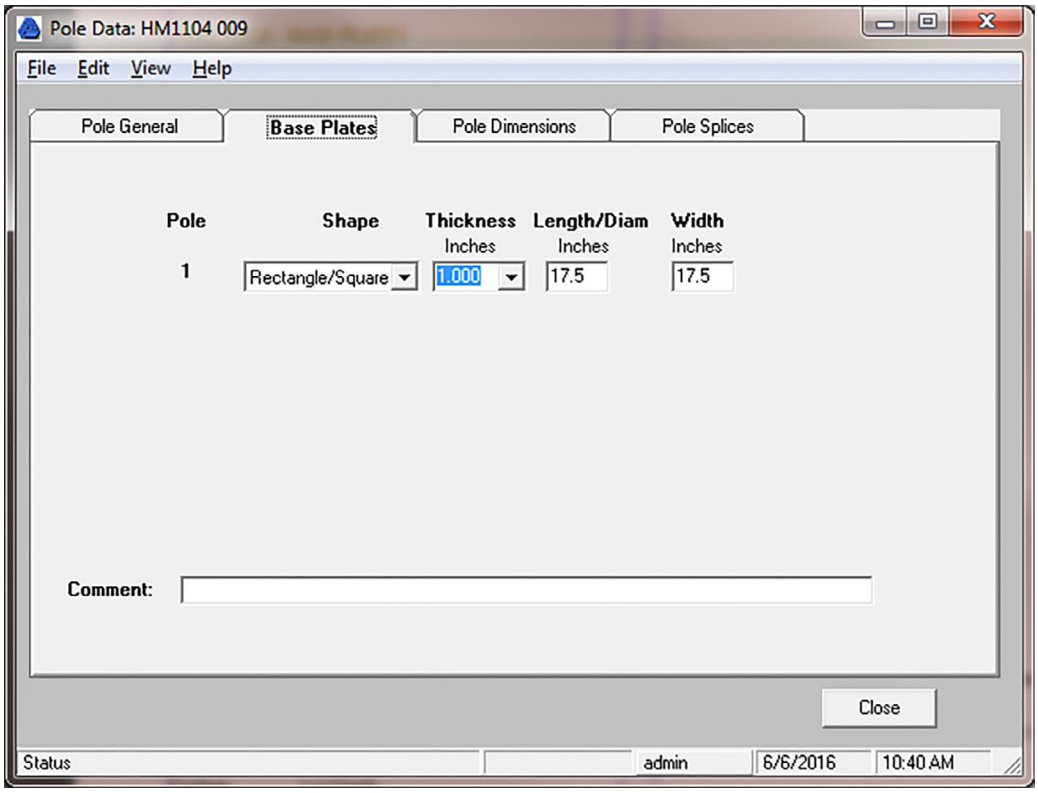
Number of Traffic Lanes
Description: From the pull down menu, select the maximum number of traffic lanes that would be affected in the event of the failure of the high mast light.

Coding: None

Comment:
Description: This field allows the inspector to enter any additional information.

Coding: None

POLE DATA - BASE PLATES



Note: Information is entered only for one Pole.

Shape

Description: From the pull down menu, select the shape of the base plate. If the base plate shape cannot be determined, this field should be coded "Unknown".

If the Pole or Foundation Type is coded "Not Applicable" or the pole extends into the ground, as in the case of a timber utility pole, this field should be left blank.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

Thickness - Inches

Description: From the pull down menu, select the thickness of the base plate in inches.

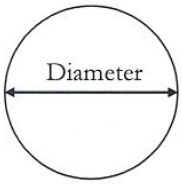
If the thickness cannot be determined, the Pole or Foundation Type is coded "Not Applicable" or the pole extends into the ground, as in the case of a timber utility pole, this field should be left blank.

Coding: None

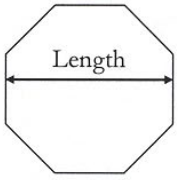
Length/Diam - Inches

Description: Based on the illustrations shown below, enter the length in the direction of traffic or diameter (in inches) of the base plate in plan. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

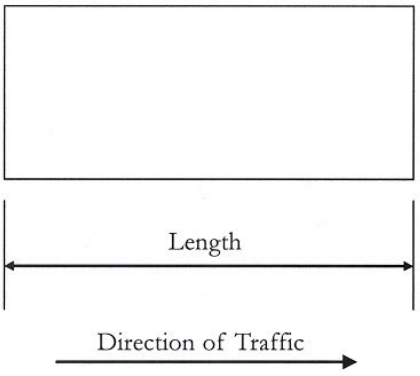
If the base plate shape is coded "Unknown" or the field is left blank, or the Pole or Foundation Type is coded "Not Applicable", this field should be left blank.



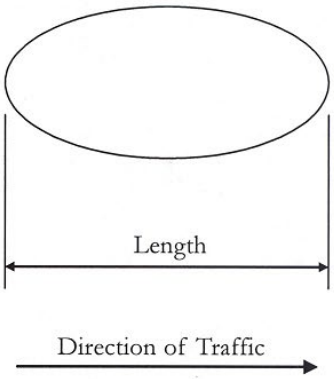
Circle or Fluted



Octagon
(Hexagon & Pentagon similar)



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

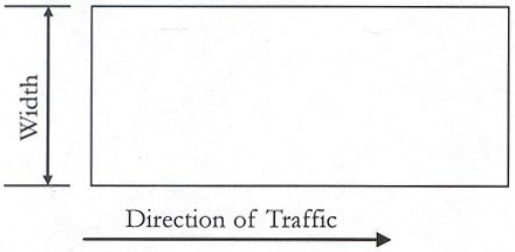
Coding: None

Width - Inches

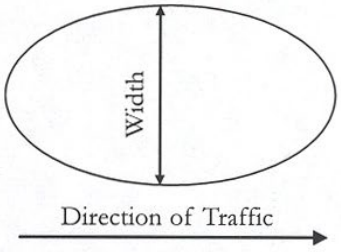
Description: Based on the illustrations shown below, enter the width (in inches) of the base plate in plan.

If the base plate shape is coded "Unknown" or the field is left blank, or the Pole or Foundation Type is coded "Not Applicable", this field should be left blank.

Note that this field is only activated for certain base plate shapes.



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

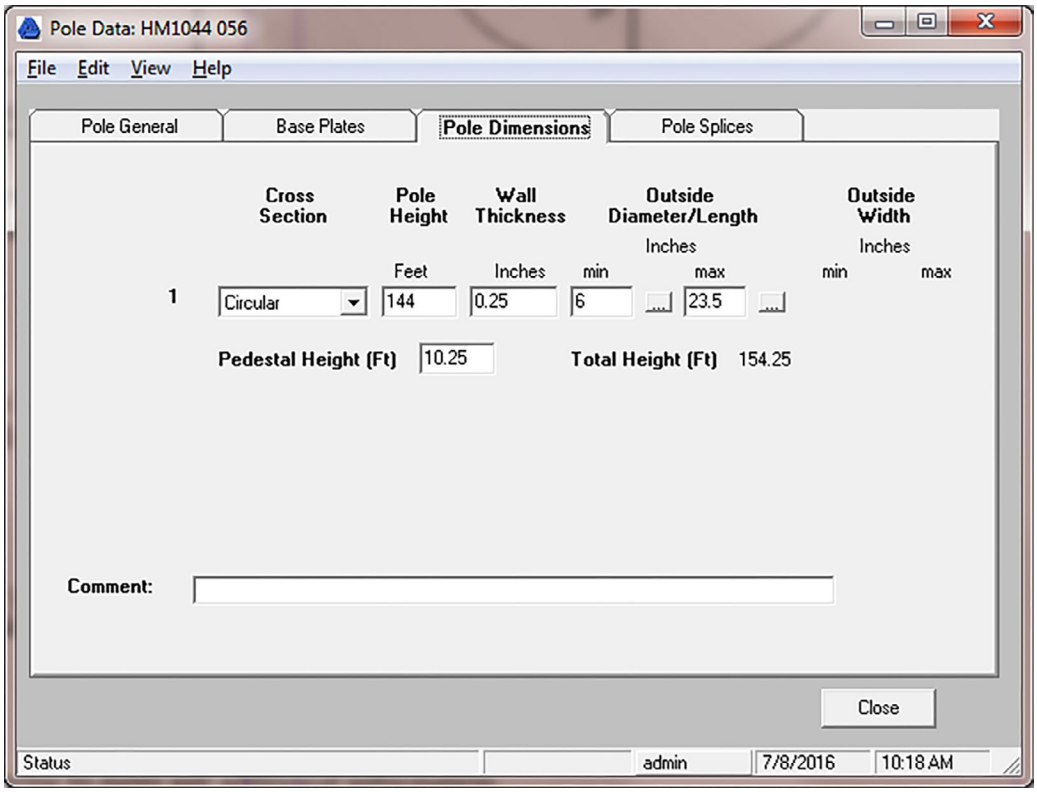
Coding: None

Comment:

Description: This field allows the inspector to enter any additional information.

Coding: None

POLE DATA - POLE DIMENSIONS



Cross Section

Description: From the pull down menu, select the cross section of the pole. If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Circular
2 = Box
3 = Angle
4 = Structural Tee
5 = W-Section
6 = Collar
7 = Other
8 = Pentagon
9 = Hexagon
10 = Octagon
11 = Fluted
12 = Ellipse
13 = Flat Bar
14 = Dodecagon (12 Sided)
15 = Channel
16 = Zee
17 = Hexadecagon (16 Sided)
18 = Tetradecagon (14 Sided)

Pole Height - Feet

Description: Enter, in decimal feet, the vertical height of the pole measured from the top of the base plate to the top of the pole. If the pole extends into the ground, as in the case of a timber utility pole, the measurement is taken from the top of the ground.

In the case of a high mast light that can be lowered to the ground, the pole height is measured from the top of the pole to the top of the pedestal.

If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: None

Wall Thickness - Inches

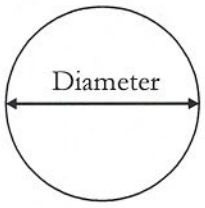
Description: Enter, in decimal inches, the average wall thickness of the vertical pole. If the pole section is solid or the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: None

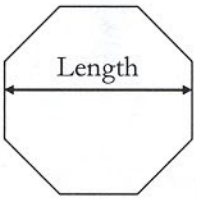
Outside Diameter/Length - Inches

Description: Based on the illustrations shown below, enter the minimum and maximum outside length in the direction of traffic or diameter (in decimal inches) of the pole's cross section. The program will calculate the minimum and maximum outside diameters automatically by clicking on the box next to the input field and entering the circumference in decimal inches.

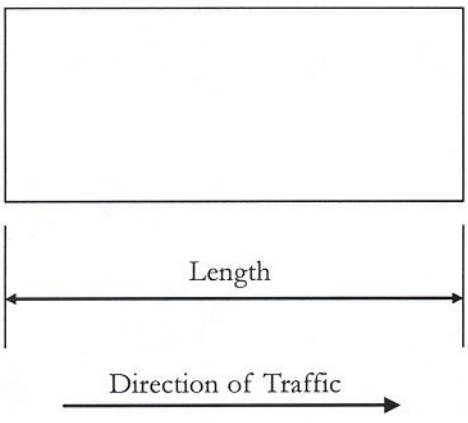
If the Pole Type is coded "Not Applicable", this field should be left blank.



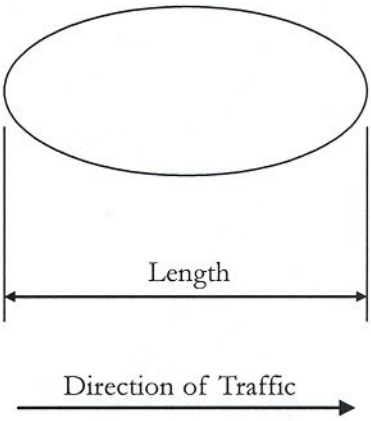
Circle or Fluted



Octagon
(Other Polygon Shapes similar)



Rectangle/Square
(Trapezoid similar - use average values)



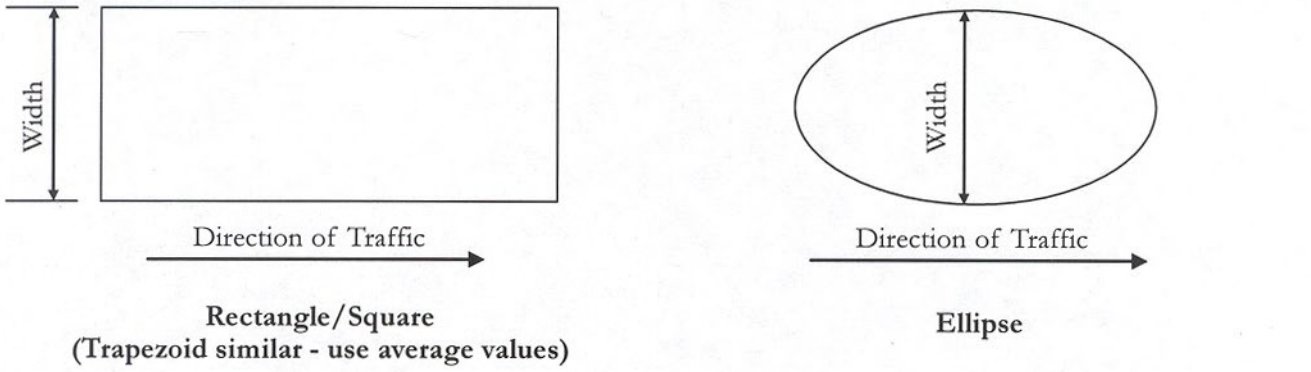
Ellipse

Coding: None

Outside Width - Inches

Description: Based on the illustrations shown below, enter the minimum and maximum outside width (in decimal inches) of the pole's cross section.

If the Pole Type is coded "Not Applicable", this field should be left blank. Note that this field is only activated for certain pole cross sections.



Coding: None

Pedestal Height (Ft)

Description: Enter, in decimal feet, the height of the pedestal measured from the top of the base plate to the top of the pedestal/bottom of pole. This field will only appear if the pole has a lowering mechanism.

Coding: None

Total Height (Ft)

Description: No entry is required. The program automatically calculates the total pole height by adding together the pole height and the pedestal height. This field will only appear if the pole has a lowering mechanism.

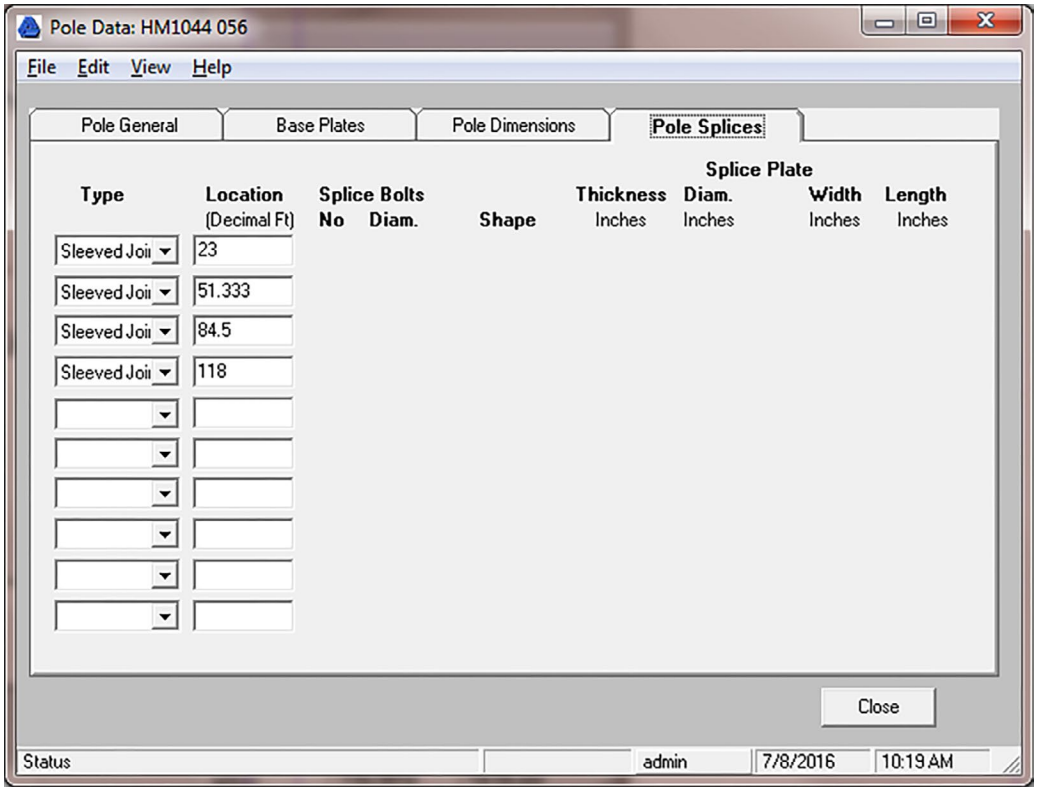
Coding: None

Comment:

Description: This field allows the inspector to enter any additional information.

Coding: None

POLE DATA - POLE SPLICES



Type

Description: From the pull down menus, select up to ten types of splices that are found along the height of the pole.

If no splices are present, "Not Applicable" should be coded.

Coding: 1 = Welded
2 = Bolted
3 = Sleeved/Telescoping Joint
4 = Not Applicable

Location (Decimal Ft)

Description: Enter, in decimal feet, the location of the splices along the height of the pole. The location is measured from the top of the base plate adjacent to the concrete foundation.

If no splices are present, this field should be left blank.

Coding: None

Splice Bolts - No

Description: Enter the number of bolts that are present at each of the splices along the pole.

This field is only activated if bolted splice connections are present.

Coding: None

Splice Bolts - Diam.

Description: From the pull down menu, select the diameter of the bolts that are present at each of the splices along the pole.

This field is only activated if bolted splice connections are present.

Coding: None

Splice Plate - Shape

Description: From the pull down menu, select the shape of the splice plates at each of the splice locations along the pole.

This field is only activated if bolted splice connections are present.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

Splice Plate - Thickness (Inches)

Description: From the pull down menu, select the thickness (in inches) of a splice plate at the splice location.

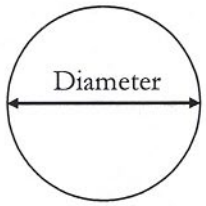
This field is only activated if bolted splice connections are present.

Coding: None

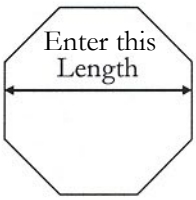
Splice Plate - Diam. (Inches)

Description: Enter, in decimal inches, the diameter of a splice plate at the splice location. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

This field is only activated if bolted splice connections are present and certain splice plate shapes exist.



Circle or Fluted



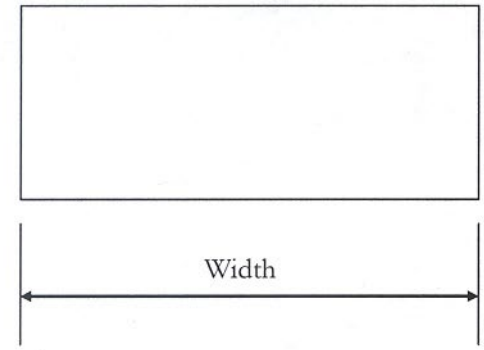
Octagon
(Hexagon & Pentagon similar)

Coding: None

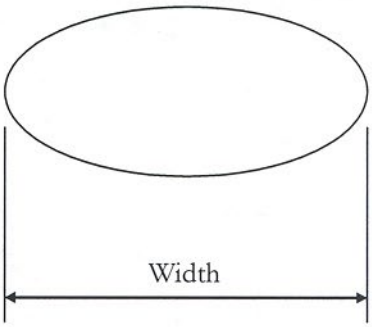
Splice Plate - Width (Inches)

Description: Enter, in decimal inches, the width of a splice plate at the splice location.

This field is only activated if bolted splice connections are present and certain splice plate shapes exist.



Rectangle/Square
(Trapezoid similar - use average values)

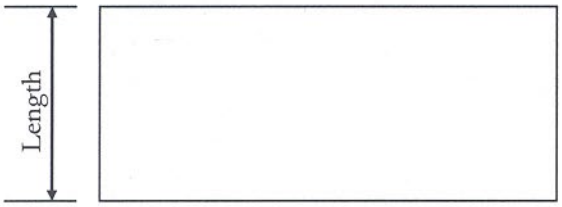


Ellipse

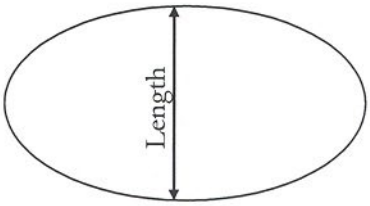
Coding: None

Splice Plate - Length (Inches)

Description: Enter, in decimal inches, the length (in the direction of traffic) of a splice plate at the splice location. This field is only activated if bolted splice connections are present and certain splice plate shapes exist.

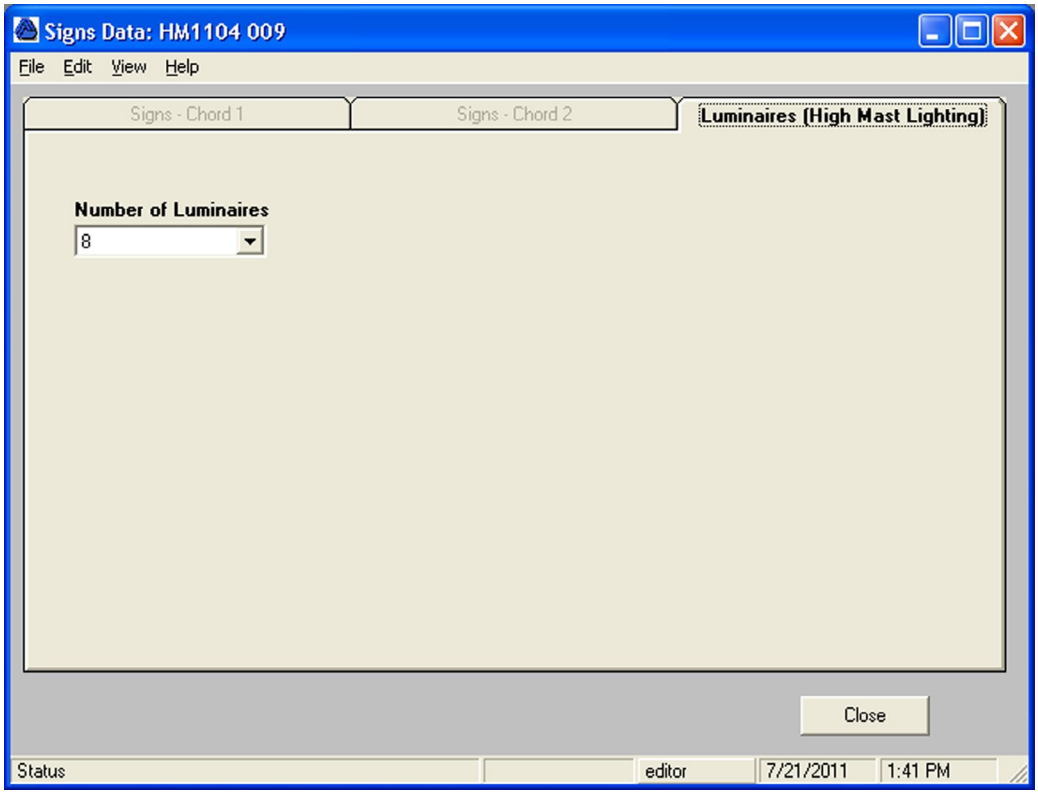


Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

SIGNS DATA - LUMINAIRES (HIGH MAST LIGHTING)



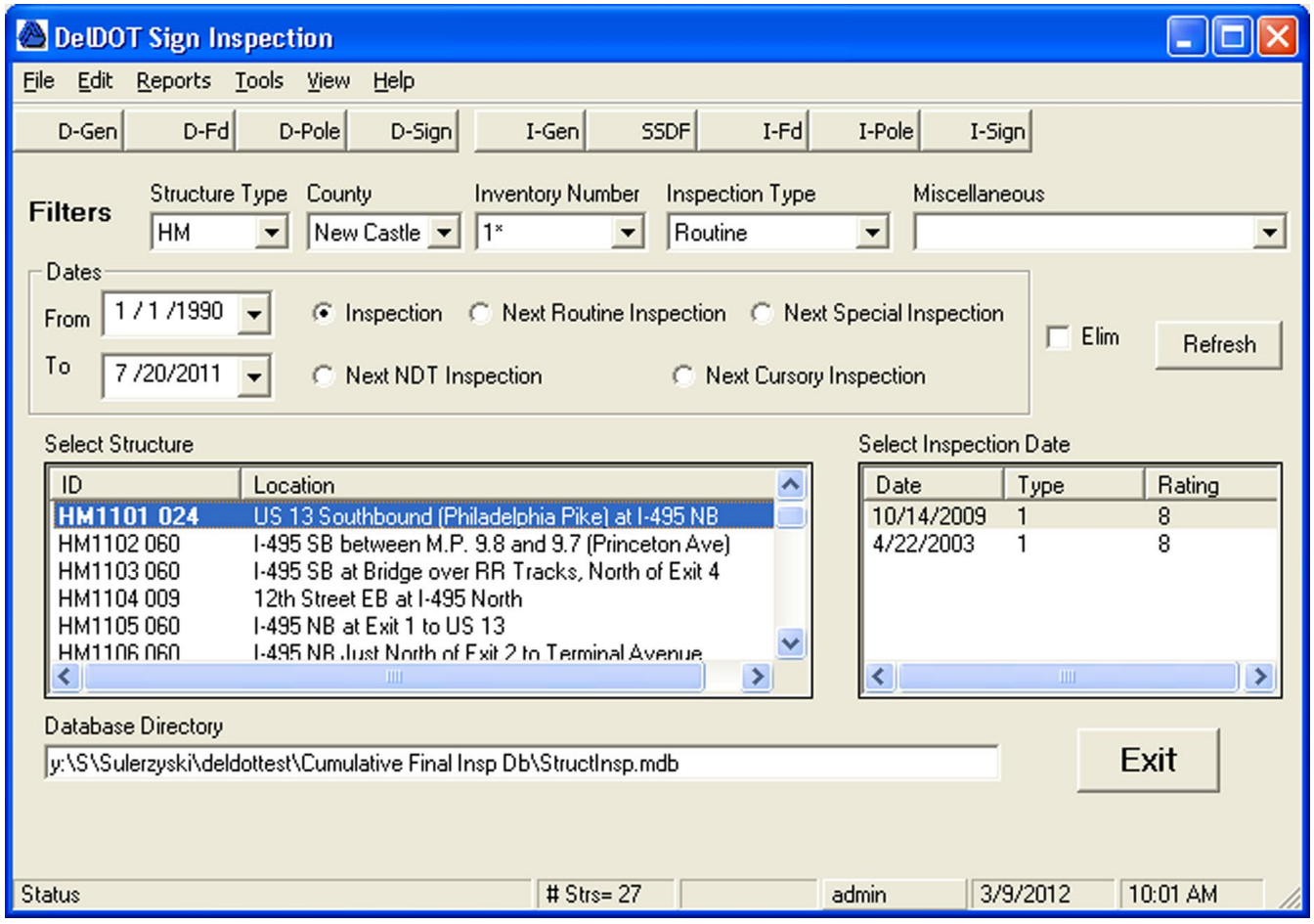
Number of Luminaires

Description: From the pull down menu, select the number of luminaires that are attached to the structure.

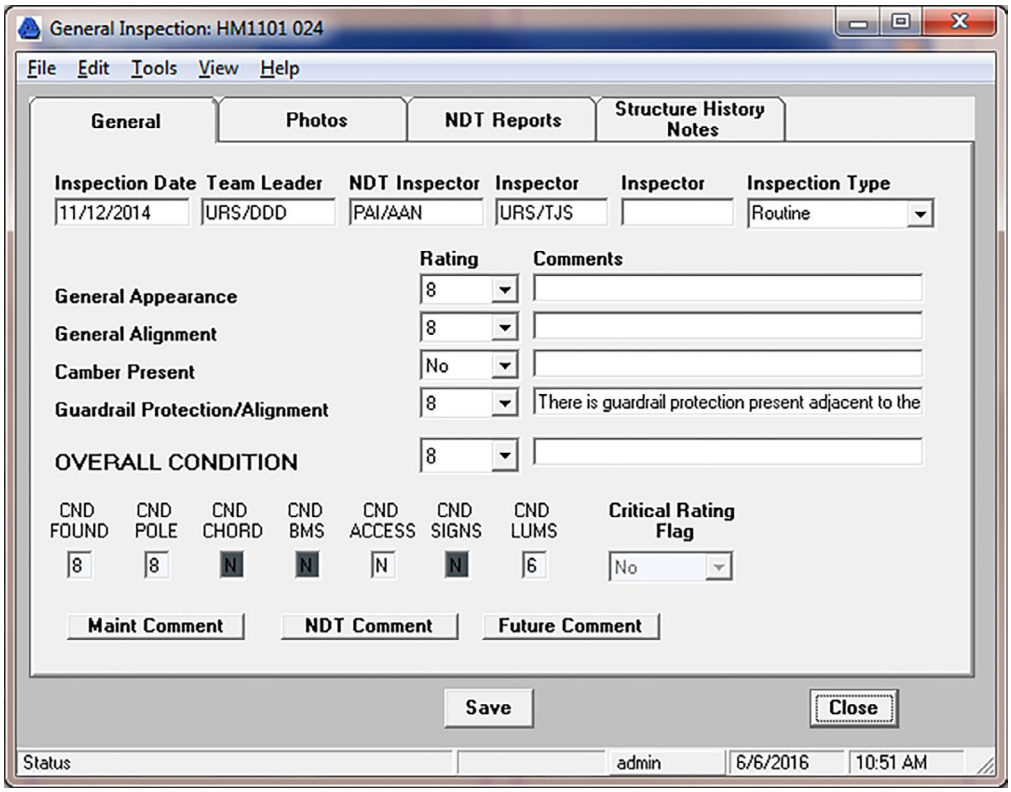
Coding: None

HM - HIGH MAST LIGHTING

INSPECTION DATA



GENERAL INSPECTION - GENERAL



Inspection Date

Description: This field is used to record the completion date of the structure's inspection. An inspection date is created when the structure is initially inspected and at the structure's designated inspection cycle.

Coding: None

Team Leader

Description: Enter the initials of the firm performing the inspection followed by the initials of the Inspection Team Leader. Example: URS/NGD

Coding: None

NDT Inspector

Description: If applicable, enter the initials of the firm performing the Non-Destructive Testing (NDT) followed by the initials of the NDT inspector. Example: PAI/CHS

Coding: None

Inspector

Description: These fields allow for up to two additional field inspector names to be entered for the inspection of the structure. For each field, enter the initials of the firm performing the inspection followed by the initials of the field inspector. Example: URS/DDD

Coding: None

Inspection Type

Description: This field is used to identify the type of inspection being performed on the structure. The inspection type is created when the structure is initially inspected and at the structure's designated inspection interval.

Coding: 1 = Routine
2 = NDT
3 = Repair/Retrofit
4 = Impact Damage
5 = Alterations
6 = Special Inspection
7 = Removal
8 = Cursory

General Appearance - Rating/Comments

Description: From the pull down menu, select the **Rating** for the General Appearance of the structure. General observations of the appearance of the structure should be made while approaching the structure. The purpose of these initial observations is to familiarize the inspector with the structure. They may also point out a need to modify the inspection sequence or indicate areas requiring special attention.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

General Alignment - Rating/Comments

Description: From the pull down menu, select the **Rating** for the General Alignment of the structure. General observations of the alignment of the structure should be made while approaching the structure. The purpose of these initial observations is to detect any unusual movements of the structure as a whole that may have occurred. They may also point out problems with the location of the structure's supports or indicate areas requiring special attention.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

Camber Present - Rating/Comments

Description: This field should be coded "No".

Coding: 1 = Yes
2 = No
3 = Not Visible

Guardrail Protection/Alignment - Rating/Comments

Description: From the pull down menu, select the **Rating** of the Guardrail Protection and its Alignment for the structure. If no guardrail is present, the rating should be coded "N".

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

OVERALL CONDITION - Rating/Comments

Description: From the pull down menu, select the **Rating** for the Overall Condition of the structure. The rating is based on the inspector's assessment of the structure's individual components with emphasis placed on the primary elements.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

CND FOUND
Description: No entry is required for this field. The overall condition rating for the Foundation is summarized here.

CND POLE
Description: No entry is required for this field. The overall condition rating for the Pole is summarized here.

CND CHORD
Description: This field is not applicable.

CND BMS
Description: This field is not applicable.

CND ACCESS
Description: No entry is required for this field. The overall condition rating for the Access (walkway, platform, ladder, etc.) on the structure is summarized here.

CND SIGNS
Description: This field is not applicable.

CND LUMS
Description: No entry is required for this field. The overall condition rating for the Luminaires (excludes highway luminaires) attached to the structure is summarized here.

Critical Rating Flag
Description: No entry is required for this field. The structure is flagged as either having a critical rating or not. When the **OVERALL CONDITION** Rating is "3" or less, this field shows **Yes**. Otherwise, the field shows **No**.

Maint Comment
Description: Clicking on this button allows the inspector to view and/or edit the comment fields from the **Maintenance repairs done at the time of inspection** in the **Foundation, Pole, Chord, Access/Sign/Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

NDT Comment
Description: Clicking on this button allows the inspector to view and/or edit the comment fields from the **NDT testing done at the time of inspection** in the **Foundation, Pole, Chord, Access/Sign/Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

Future Comment
Description: Clicking on this button allows the inspector to view and/or edit the comment fields from the **Future maintenance required and/or repair recommendations** in the **Foundation, Pole, Chord, Access/Sign/Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

Save
Description: Clicking on the **Save** button allows the user to save all the information in the **General** tab.

Coding: None

GENERAL INSPECTION - PHOTOS

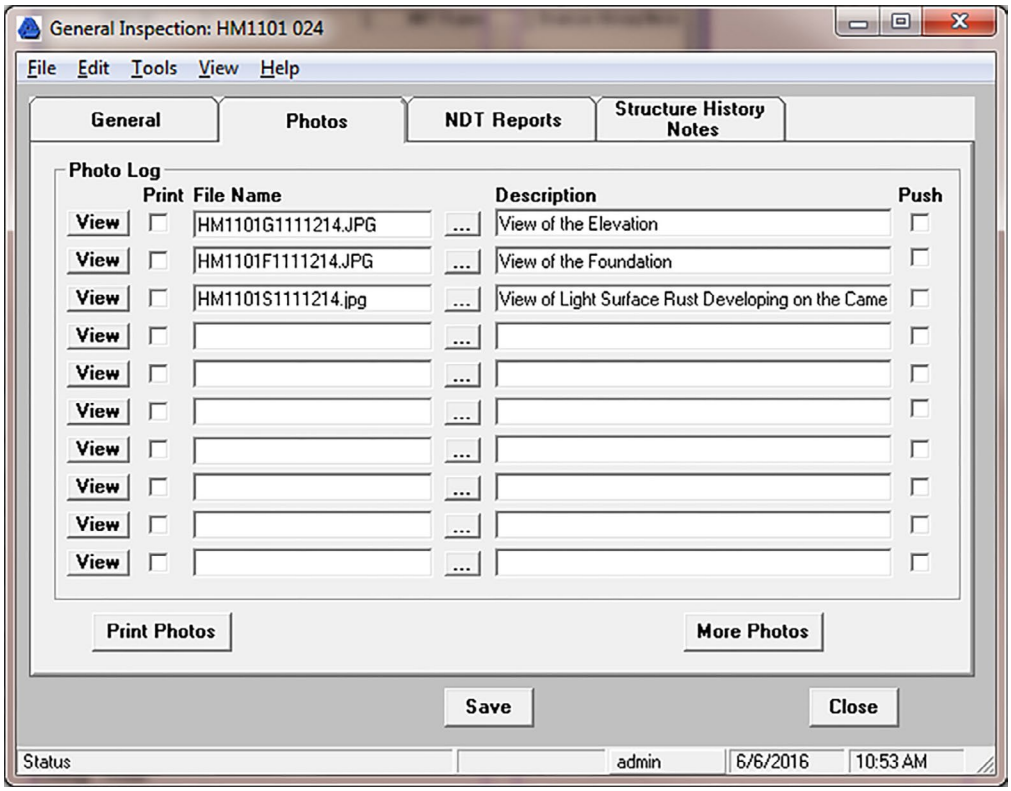


Photo Log

Description: This tab allows up to ten photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

High Mast Lights will have **at least one standard photo** taken of the elevation with the base in view and the highest ranking road on the interchange in the background for identification.

Clicking on ... allows the user to view all of the files in the folder and select one to be placed in the respective **File Name** field.

Coding: None

View

Description: Clicking on the **View** button allows the user to view a particular photograph.

Coding: None

Print

Description: Placing a check mark in these boxes allows the user to print the respective photographs using the **Print Photos** button.

Coding: None

File Name

Description: Each of these fields are used to enter one JPEG file name for each of the photographs.

Coding: The following shall be used for the JPEG file naming convention:

HM1101**G1**.jpg
HM2102**F1**.jpg
HM1101 and HM2102 are the structure ID's

There are four types of photos:

G = General (elevation views)
F = Foundation Elements (erosion, footing, grout pad, anchor bolts)
P = Pole Elements (pole, base plate, joints/splices, trussing)
S = Walkway and Luminaire Elements

Example: **F1** = foundation element photo number 1 (photos for each type will be numbered 1, 2, 3, 4, etc.)

Note: When the file is brought into the file name field, the inspection date is attached to the end of the file name.

Description

Description: These fields are used to enter captions for each of the photographs.

Coding: None

Push

Description: The **Push** button is used to incorporate photographs into the Critical Report. A checkmark will appear in the box when it is clicked on. This checkmark will push or forward the photograph(s) into the critical report. When the critical report for the structure is printed out, all pushed photographs will also be printed out.

Coding: None

More Photos

Description: Clicking on the **More Photos** button creates another **Photos** tab that allows up to ten additional photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

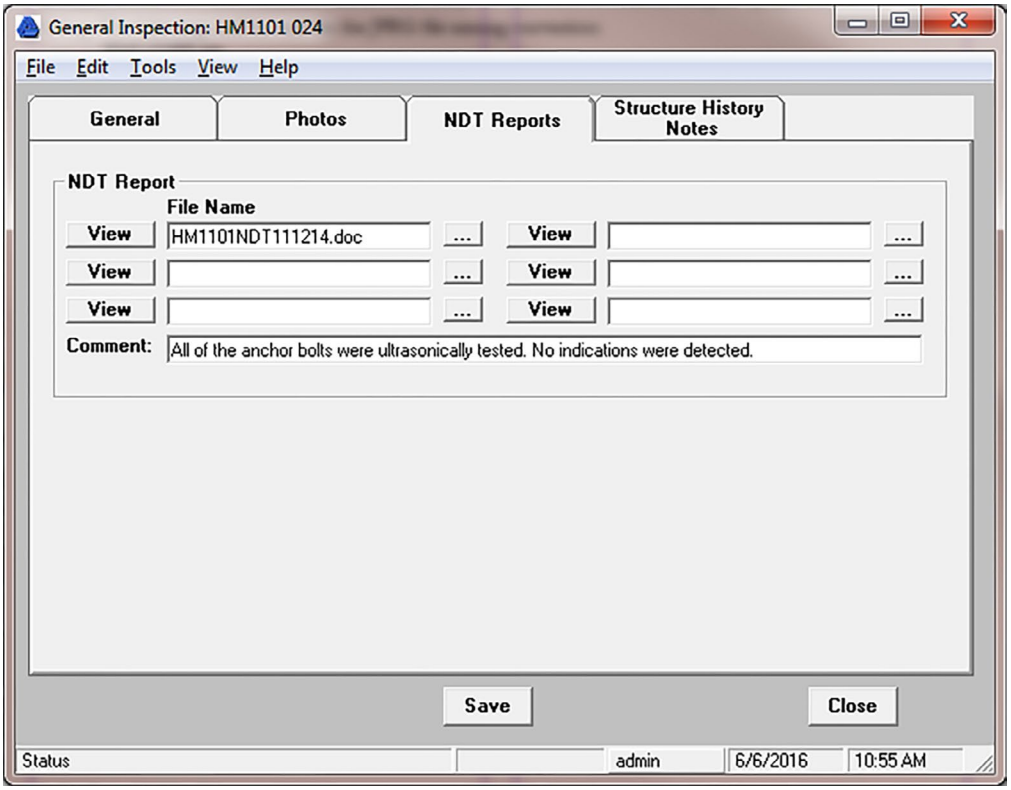
Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **Photos** tab.

Coding: None

GENERAL INSPECTION - NDT REPORTS



NDT Report

Description: This tab allows up to six NDT reports to be stored in a folder labeled with the structure's ID number. The NDT reports should be saved in a Microsoft Word or Excel format.

Clicking on ... allows the user to view all of the files in the folder and select one to be placed in the respective **File Name** field.

Coding: None

View

Description: Clicking on the **View** button allows the user to view a particular NDT report.

Coding: None

File Name

Description: Each of these fields are used to enter the file name of one Microsoft Word or Excel document for each of the NDT reports.

Coding: The following shall be used for the NDT report file naming convention:

Examples: HM1016**NDT**.doc or HM1016**NDT**.xls.

For multiple NDT reports, the following should be used:

HM1016NDTA.doc
HM1016NDTB.doc

Note: When the file is brought into the file name field, the inspection date is attached to the end of the file name.

Comment:

Description: This field allows the user to enter any comments regarding the non-destructive testing performed and the subsequent results.

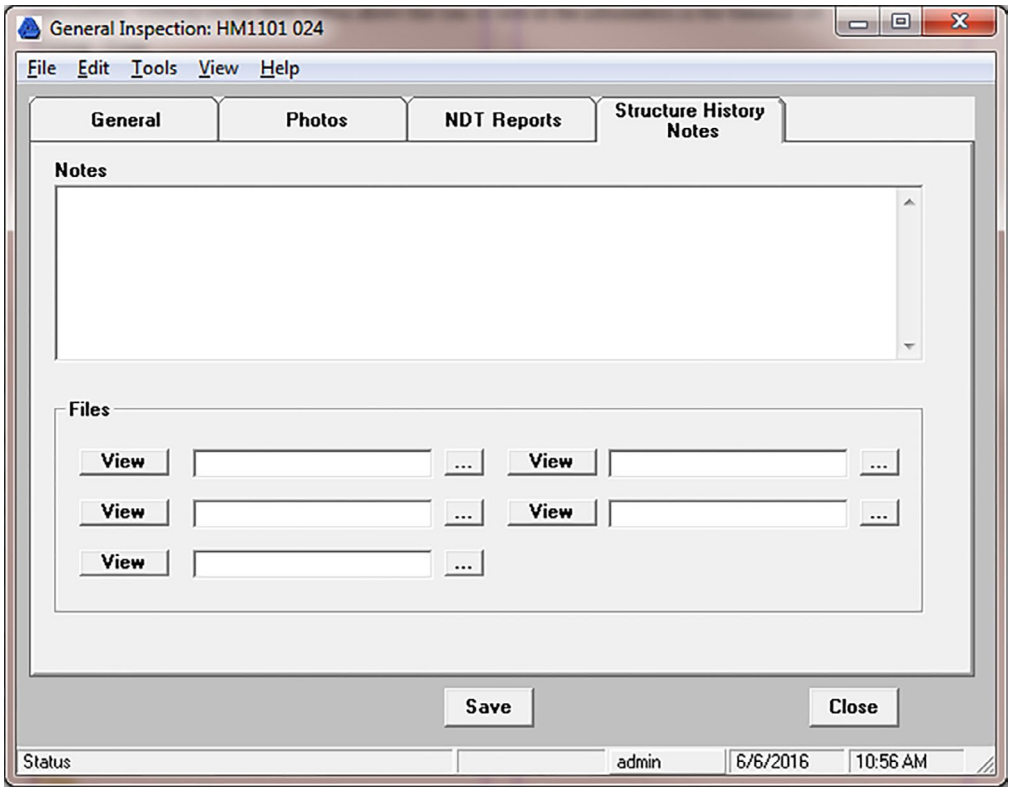
Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **NDT Reports** tab.

Coding: None

GENERAL INSPECTION - STRUCTURE HISTORY NOTES



Notes

Description: This memo field allows the user to describe specific details about the structure or the inspection for future reference.

Coding: None

Files

Description: This allows up to five files to be stored in a folder labeled with the structure's ID number. These files may be Microsoft Word or PDF documents that describe specific details about the structure or the inspection for future reference.

Clicking on ... allows the user to view all of the files in the folder and select one to be placed in the respective **Files** field.

Coding: None

View

Description: Clicking on the **View** button allows the user to view a particular file.

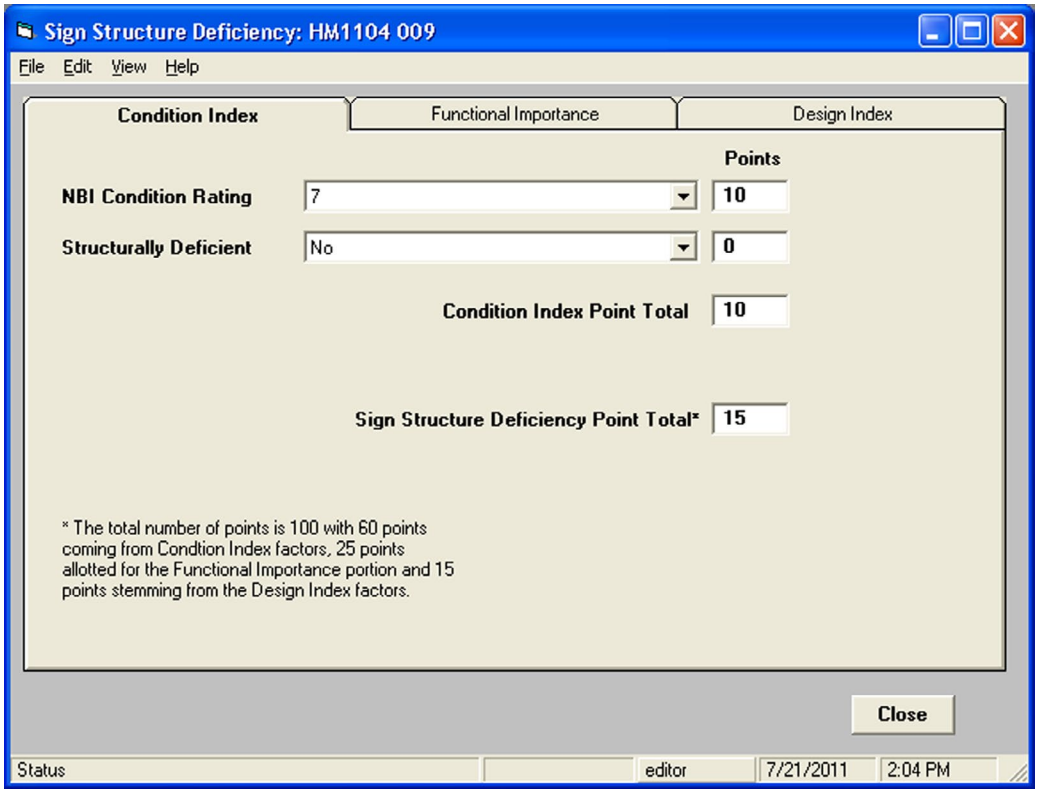
Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **Structure History Notes** tab.

Coding: None

SIGN STRUCTURE DEFICIENCY FACTOR (SSDF) - CONDITION INDEX



NBI Condition Rating

Description: No entry is required for these two fields. The NBI Condition Rating is the lowest rating of the Foundation or Pole condition ratings.
The program automatically assigns a point value from the table below:

Structural Rating Points – 0 to 45 points

NBI Condition Rating	Points
0	45
1	43
2	41
3	37
4	32
5	24
6	15
7	10
8	5
9	0

Coding: None

Structurally Deficient

Description: No entry is required for these two fields. A structure is deemed "Structurally Deficient" when the NBI Condition Rating for either the Foundation or Pole is a 4 or lower.
The program automatically assigns a point value from the table below:

Structurally Deficient Points – 0 to 15 points

Structurally Deficient	Points
No	0
Yes	15

Coding: None

Condition Index Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the NBI Condition Rating Points and the Structurally Deficient Points.

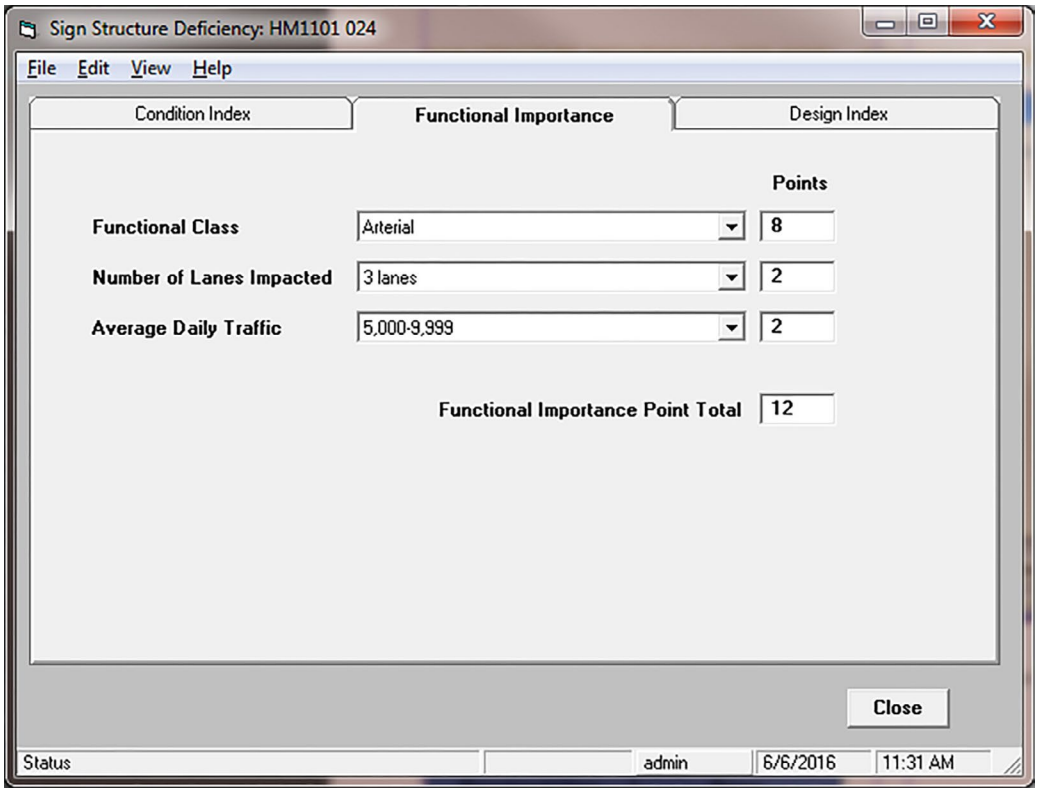
Coding: None

Sign Structure Deficiency Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the Condition Index Point Total, the Functional Importance Point Total and the Design Index Point Total.

Coding: None

SIGN STRUCTURE DEFICIENCY FACTOR (SSDF) - FUNCTIONAL IMPORTANCE



Functional Class

Description: No entry is required for these two fields. The functional class for the structure is summarized here. The program automatically assigns a point value from the table below:

Functional Classification Points – 2 to 10 points

Functional Class	Points
Local	2
Collector	5
Arterial	8
Interstate	10

Coding: None

Number of Lanes Impacted

Description: No entry is required for these two fields. The number of traffic lanes impacted if the structure fails is summarized here.

The program automatically assigns a point value from the table below:

Lanes Impacted Points – 0 to 5 points

# of Lanes Impacted if Structure Fails	Points
0-1 lanes	0
2 lanes	1
3 lanes	2
4 lanes	3
5 lanes	4
> 5 lanes	5

Coding: None

Average Daily Traffic

Description: No entry is required for these two fields. The average daily traffic for the structure is summarized here. The program automatically assigns a point value from the table below:

Traffic Volume Points – 1 to 10 points

Average Daily Traffic	Points
0 - 4,999	1
5,000 - 9,999	2
10,000 - 14,999	3
15,000 - 19,999	4
20,000 - 29,999	5
30,000 - 44,999	6
45,000 - 59,999	7
60,000 - 79,999	8
80,000 - 100,000	9
> 100,000	10

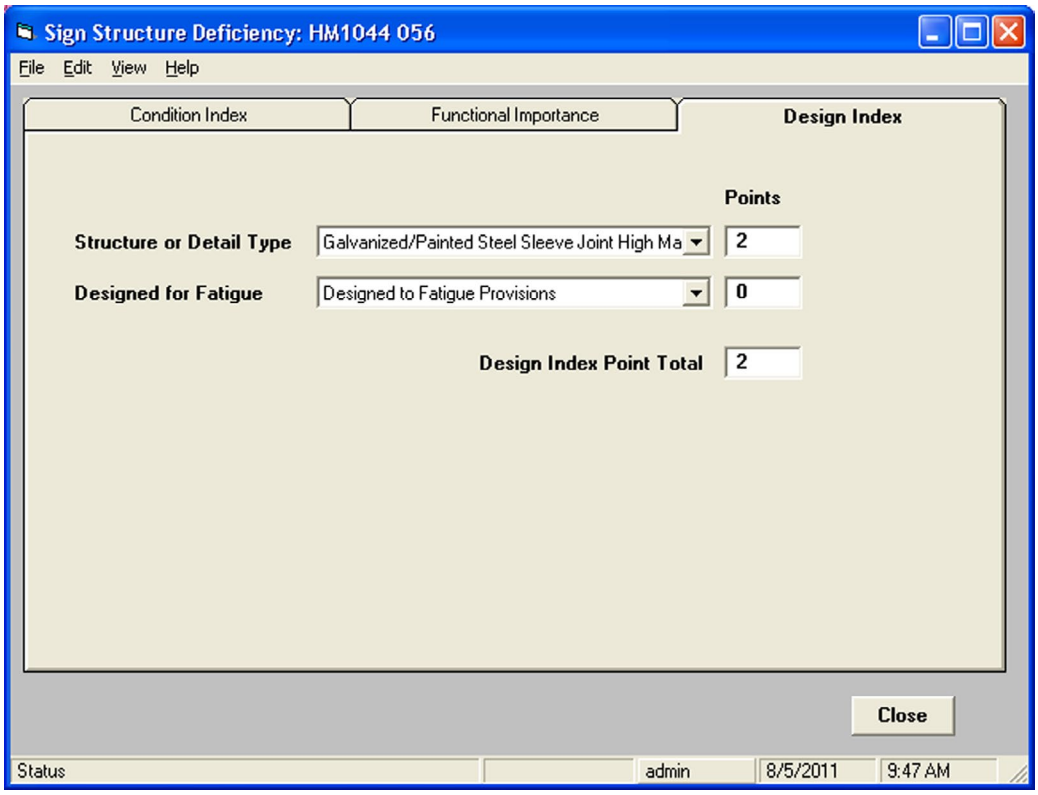
Coding: None

Functional Importance Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the Functional Class Points, the Number of Lanes Impacted Points and the Average Daily Traffic Points.

Coding: None

SIGN STRUCTURE DEFICIENCY FACTOR (SSDF) - DESIGN INDEX



Structure or Detail Type

Description: No entry is required for these two fields. The structure or detail type is summarized here.

The program automatically assigns a point value from the table below:

Structure Type Points – 1 to 5 points

Structure or Detail Type	Points
≥ 4-Pole Overhead Sign Structure	1
≥ 8-Anchor Bolt High Mast Light	
Bridge Mounted Sign Structure	
2-Pole Overhead Sign Structure	2
6-Anchor Bolt High Mast Light	
Clamped Chord-Pole Connection (Tri-Chord 2-Pole Overhead Sign Structure)	
Galvanized / Painted Steel Sleeve Joint High Mast Light	
Aluminum Sign Structure	3
> 4-Anchor Bolt Cantilever Sign Structure	
4-Anchor Bolt High Mast Light	4
4-Anchor Bolt Cantilever Sign Structure	5
Weathering Steel Telescoping Sleeve Joint High Mast Light	
Clamped Chord-Pole Connection (2-Chord 2-Pole Overhead Sign Structure)	

Coding: None

Designed for Fatigue

Description: No entry is required for these two fields. The determination of whether or not the structure was designed to fatigue provisions is summarized here.
The program automatically assigns a point value from the table below:

Fatigue Design Points – 0 to 10 points

Designed for Fatigue	Points
Not Designed to Fatigue Provisions	10
Designed to Fatigue Provisions	0

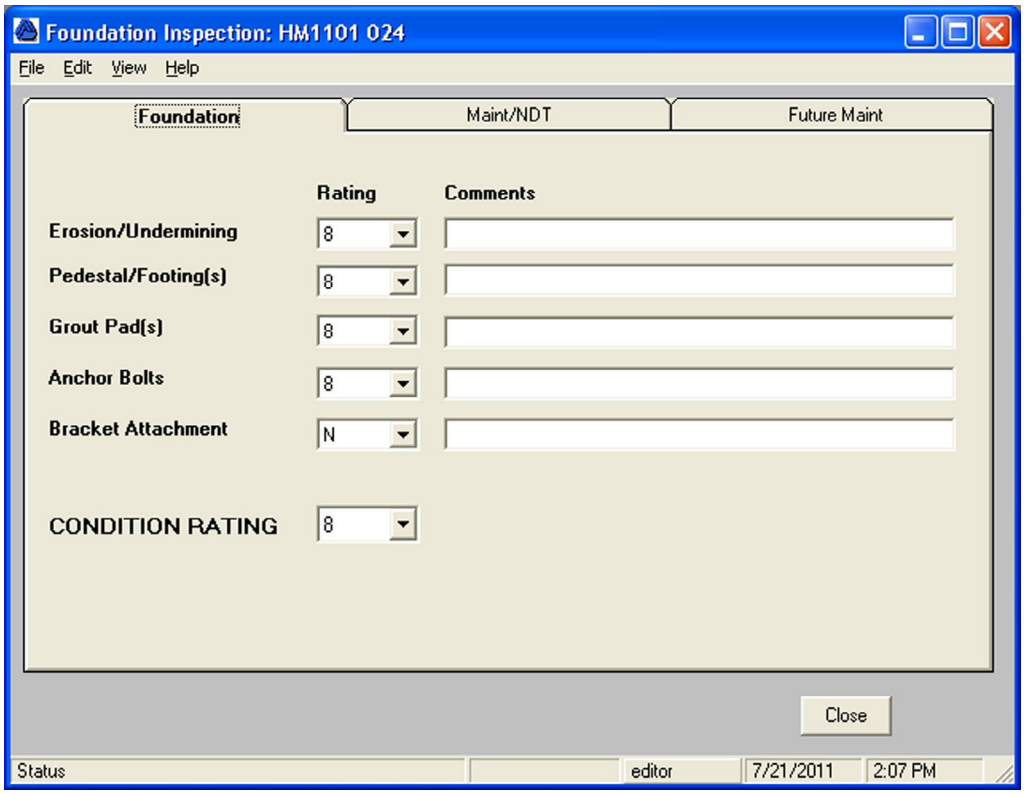
Coding: None

Design Index Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the Structure or Detail Type Points and the Designed for Fatigue Points.

Coding: None

FOUNDATION INSPECTION - FOUNDATION



Erosion/Undermining

Description: The area surrounding the foundation should be inspected for any signs of erosion and/or undermining.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Pedestal/Footing(s)

Description: This element involves the inspection of the exposed portion of the foundation type identified. If the foundation type is identified as a **Bracket**, this element should be coded "N" and a condition rating given for the element **Bracket Attachment**.

From the pull down menu, select the **Rating** for the element. If the foundation type is buried, a condition rating should be given based on any signs of distress observed at the foundation's location.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Grout Pad(s)

Description: This element involves the inspection of the grout pad(s) located between the underside of the base plate and the top of the foundation.

From the pull down menu, select the **Rating** for the element. If a grout pad is not present or visible, the condition rating should be coded "N".

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Anchor Bolts

Description: This element involves the inspection of the anchor bolts, anchor bolt nuts and washers, and leveling nuts.

From the pull down menu, select the **Rating** for the element. If the anchor bolts are buried, a condition rating should be given based on any signs of distress observed.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Bracket Attachment

Description: This element involves the inspection of the bracket support for the pole that is attached to a bridge girder, retaining wall, etc. The entire bracket configuration including its connection to the structure should be considered.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

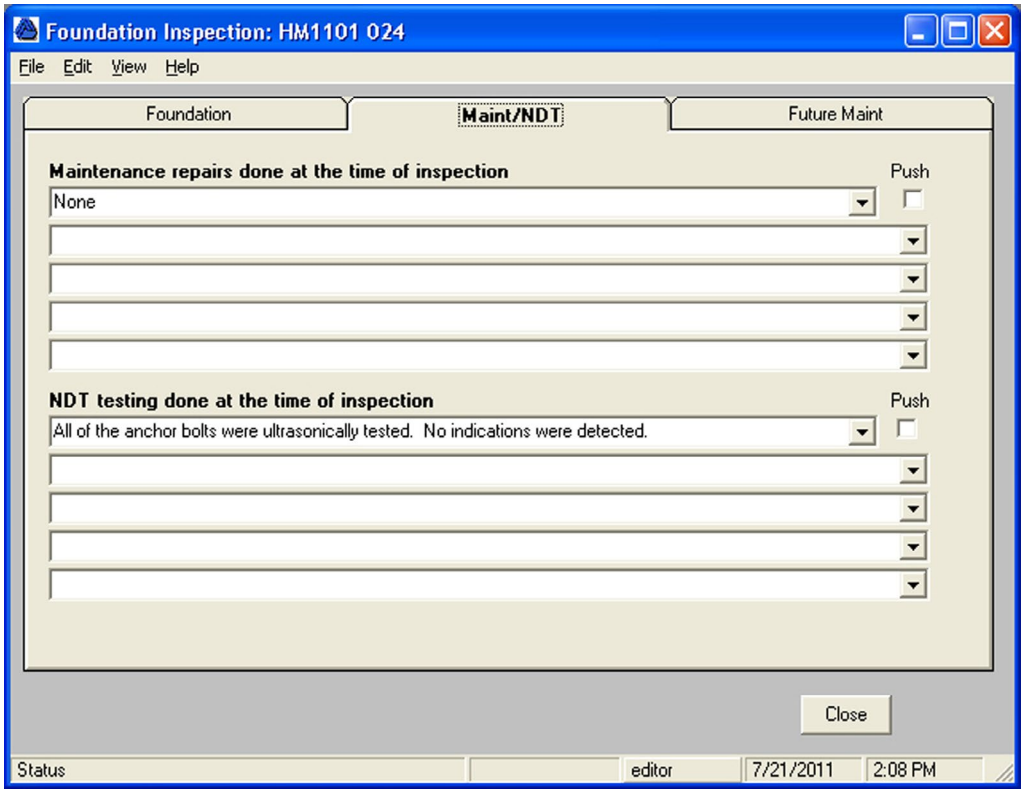
Description: This numerical condition rating should characterize the general condition of the foundation. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the foundation.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the foundation, then the element can be considered a "weak link" in the structure, and the rating of the foundation should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Foundation.

Coding: See **Condition Rating Codes** section of this manual.

FOUNDATION INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the elements of the Foundation during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

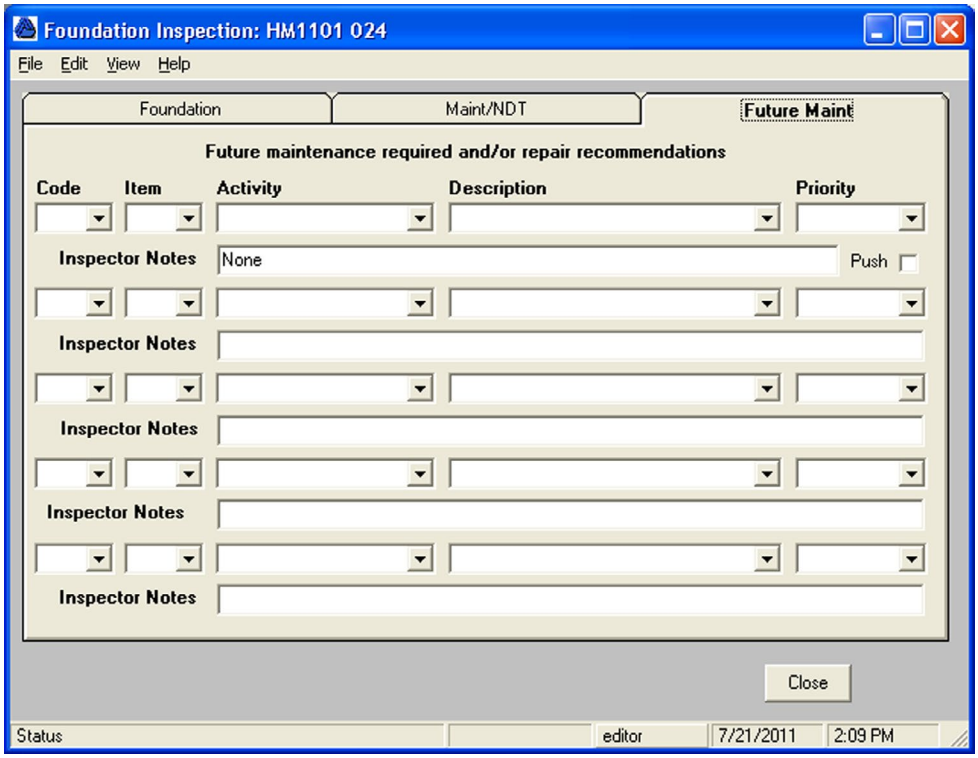
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the elements of the Foundation during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

FOUNDATION INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendation Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the elements of the Foundation.

If no maintenance repairs are recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition, that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended, could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the structure's elements and the structure itself.

Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

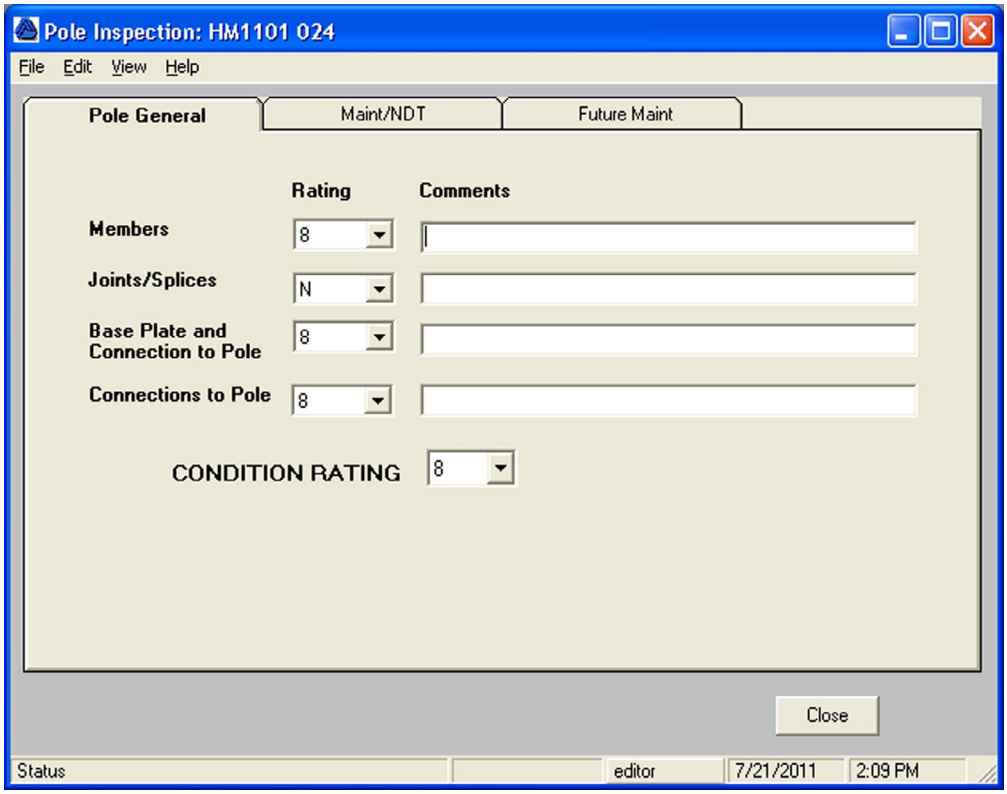
Inspector Notes

Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

POLE INSPECTION - POLE GENERAL



Members

Description: This element involves the inspection of the pole itself, including the applied finish. Also included with this element are hand holes and top caps attached to the pole.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Joints/Splices

Description: This element involves the inspection of joint connections to the pole and the pole's horizontal splices.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Base Plate and Connection to Pole

Description: This element involves the inspection of the base plate and its connection to the pole, including the applied finish.

From the pull down menu, select the **Rating** for the element. If the base plate is buried, a condition rating should be given based on any signs of distress observed.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Connections to Pole

Description: This element involves the inspection of connection(s) to the pole. These could include the connections of a camera or luminaire directly to the pole.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

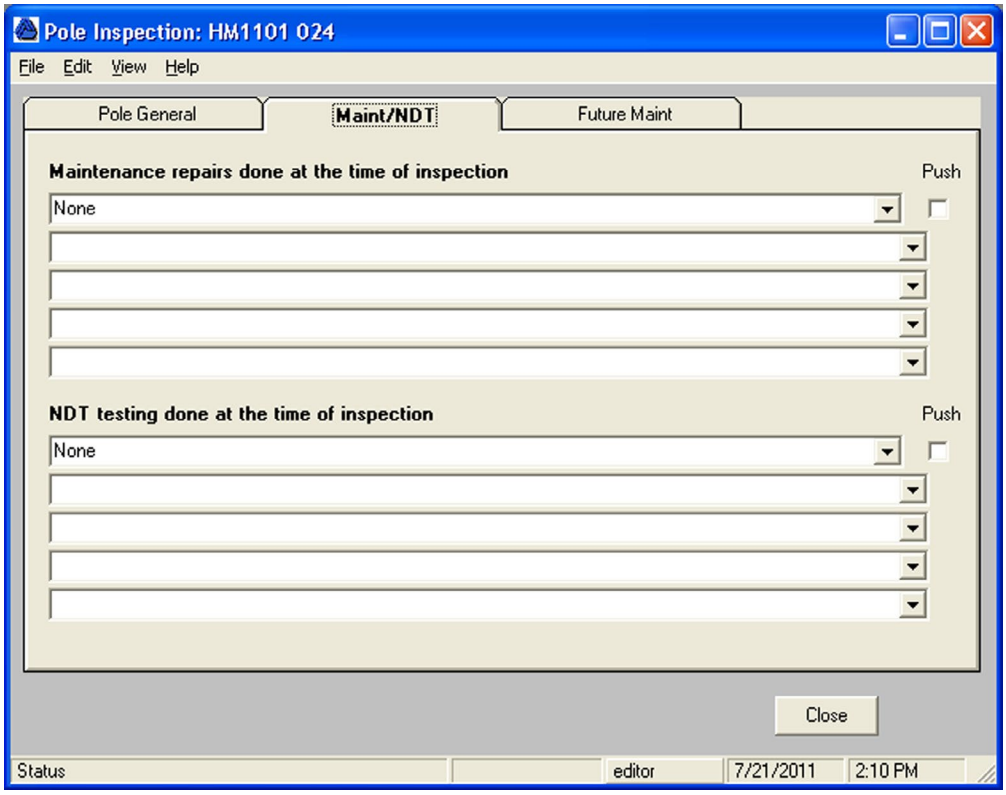
Description: This numerical condition rating should characterize the general condition of the pole component. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the members, the element can be considered a "weak link" in the structure, and the rating of the Pole should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Pole.

Coding: See **Condition Rating Codes** section of this manual.

POLE INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the elements of the Pole component during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

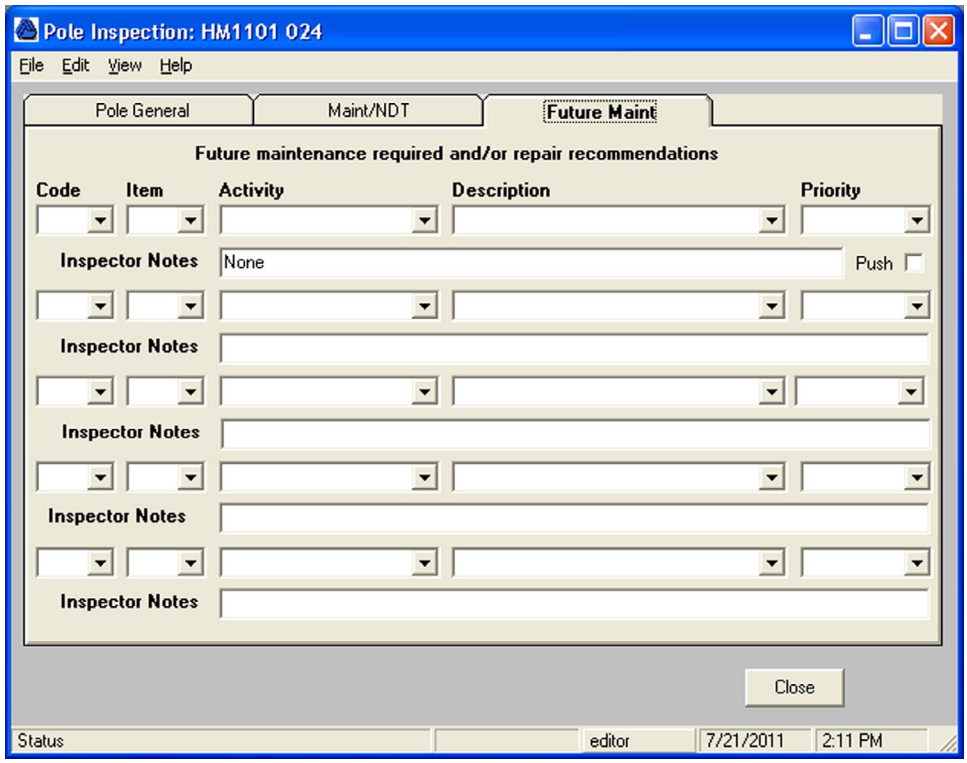
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the elements of the Pole component during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

POLE INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the elements of the Pole.

If no maintenance repairs are recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the structure's elements and the structure itself.

Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

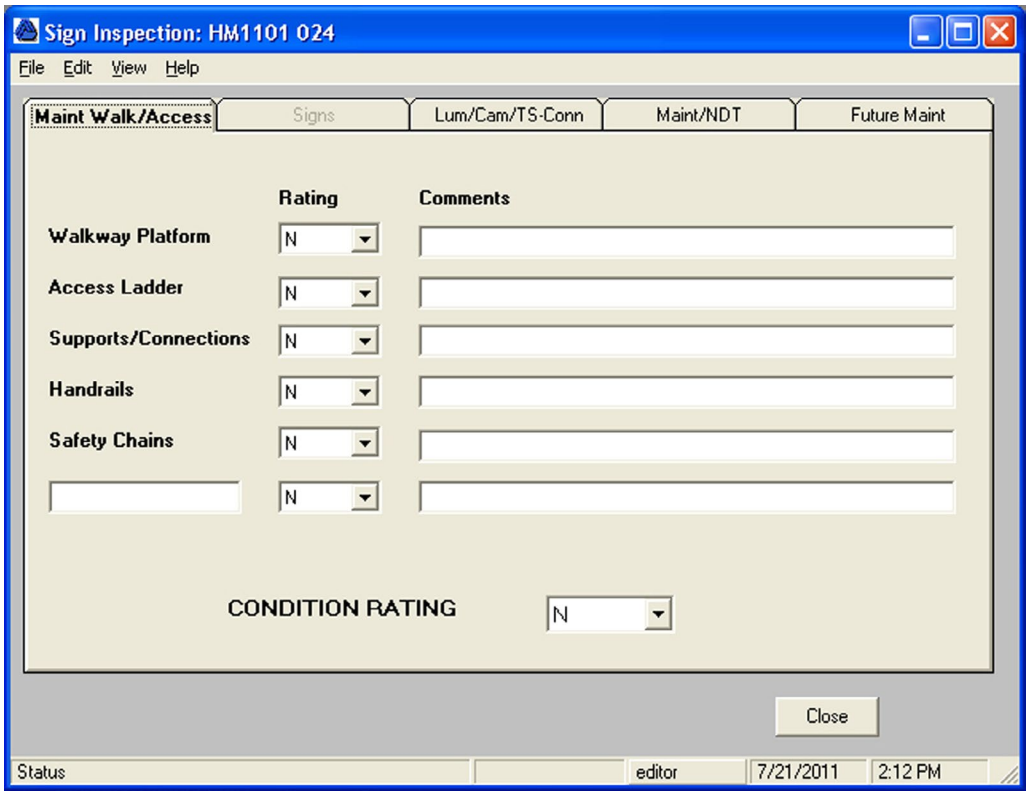
Inspector Notes

Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

SIGN INSPECTION - MAINT WALK/ACCESS



Walkway Platform

Description: This element involves the inspection of the walkway platform present on the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Access Ladder

Description: This element involves the inspection of access ladders present on the structure. This also includes ladder rungs that may be attached directly to the pole.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Supports/Connections

Description: This element involves the inspection of the supports for the maintenance walkway and their connections to the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Handrails

Description: This element involves the inspection of the safety handrails attached to the walkway platform and safety railing around access ladders, including connections.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Safety Chains

Description: This element involves the inspection of safety chains present on the walkway platform and access ladders.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Blank Field

Description: A blank field is provided for the user to enter another element for the Maintenance Walkway/Access system.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

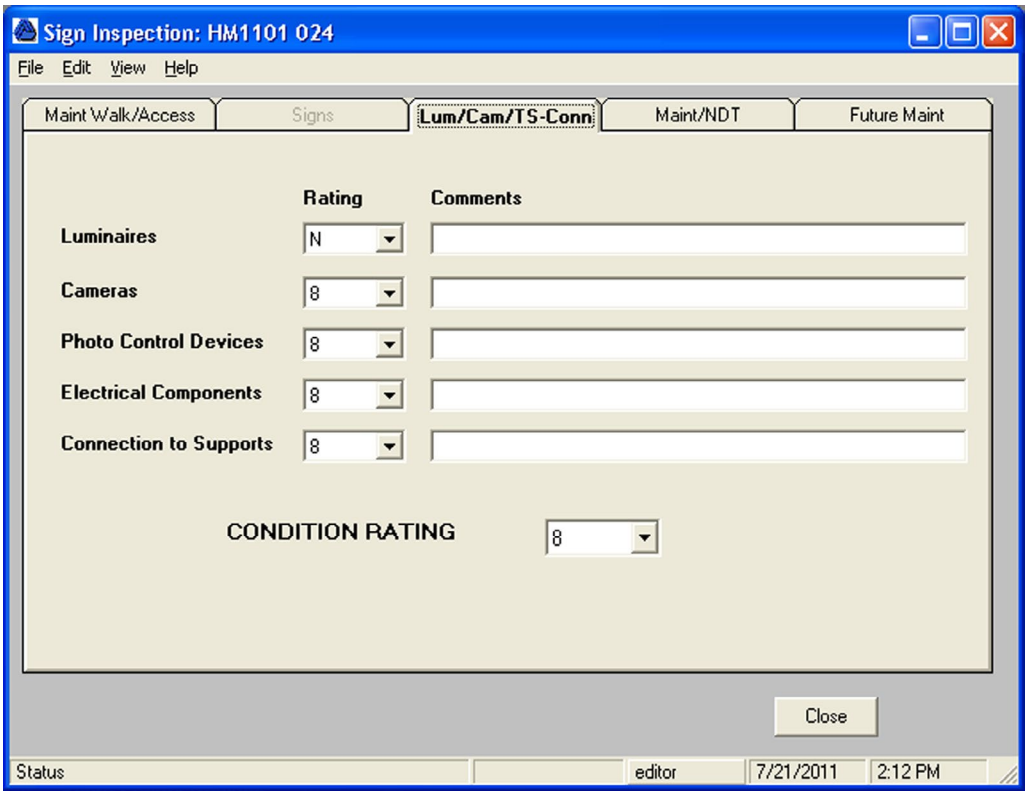
Description: This numerical condition rating should characterize the general condition of the Maintenance Walkway/Access system. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the Maintenance Walkway/Access system.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the members, then the element can be considered a "weak link", and the rating of the Maintenance Walkway/Access system should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Maintenance Walkway/Access system. If a Maintenance Walkway/Access system is not present on the structure, all of the elements and the condition rating should be coded "N".

Coding: See **Condition Rating Codes** section of this manual.

SIGN INSPECTION - LUM/CAM/TS-CONN



Luminaires

Description: This element involves the inspection of the lighting present on the structure. This element is not applicable for highway lighting.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Cameras

Description: This element involves the inspection of the camera mounted on the pole or mast arm.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Photo Control Devices

Description: This element involves the inspection of photo control devices present on the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Electrical Components

Description: This element involves the inspection of visible electrical components associated with luminaires, cameras and photo control devices. This includes conduits, connections to devices, etc.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Connection to Supports

Description: This element involves the inspection of the connection of the luminaires, cameras and photo control devices to their respective supports.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

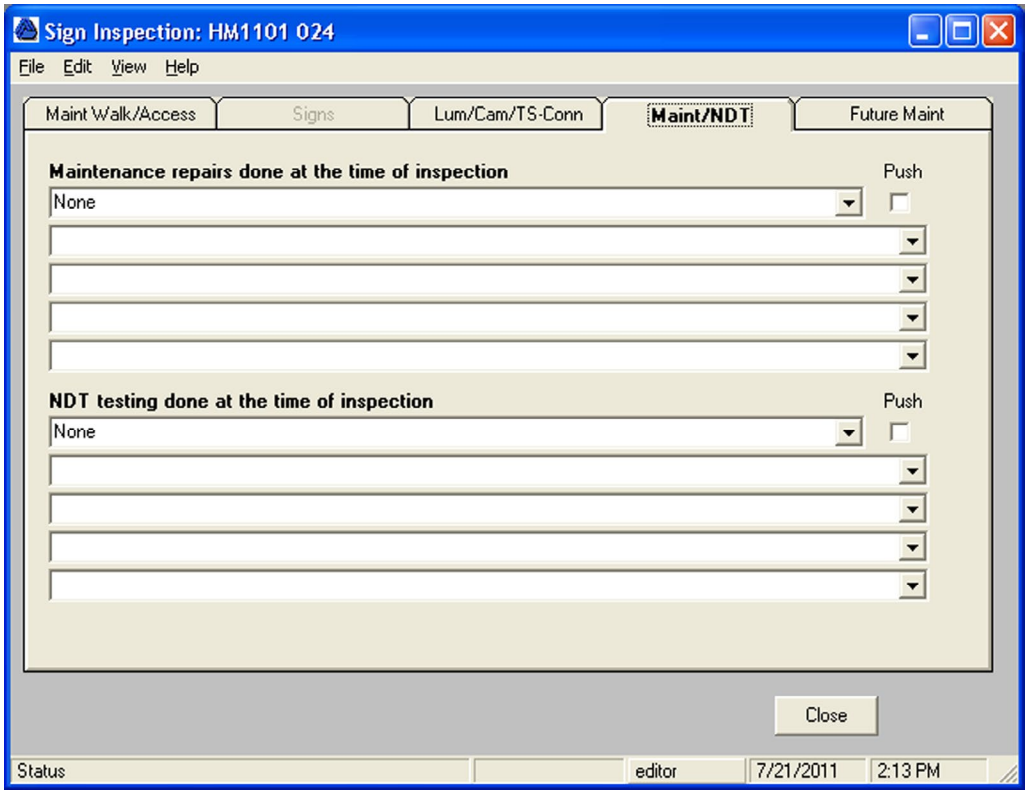
Description: This numerical condition rating should characterize the general condition of the Luminaire/Camera/Traffic Signal. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the serviceability of the members, then the element can be considered a "weak link", and the rating of the Luminaire/Camera/Traffic Signal should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Luminaire/Camera/Traffic Signal. If elements of the Luminaire/Camera/Traffic Signal are not present on the structure, the elements should be coded "N".

Coding: See **Condition Rating Codes** section of this manual.

SIGN INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the elements of the Maint Walk/Access and Lum/Cam/TS-Conn during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

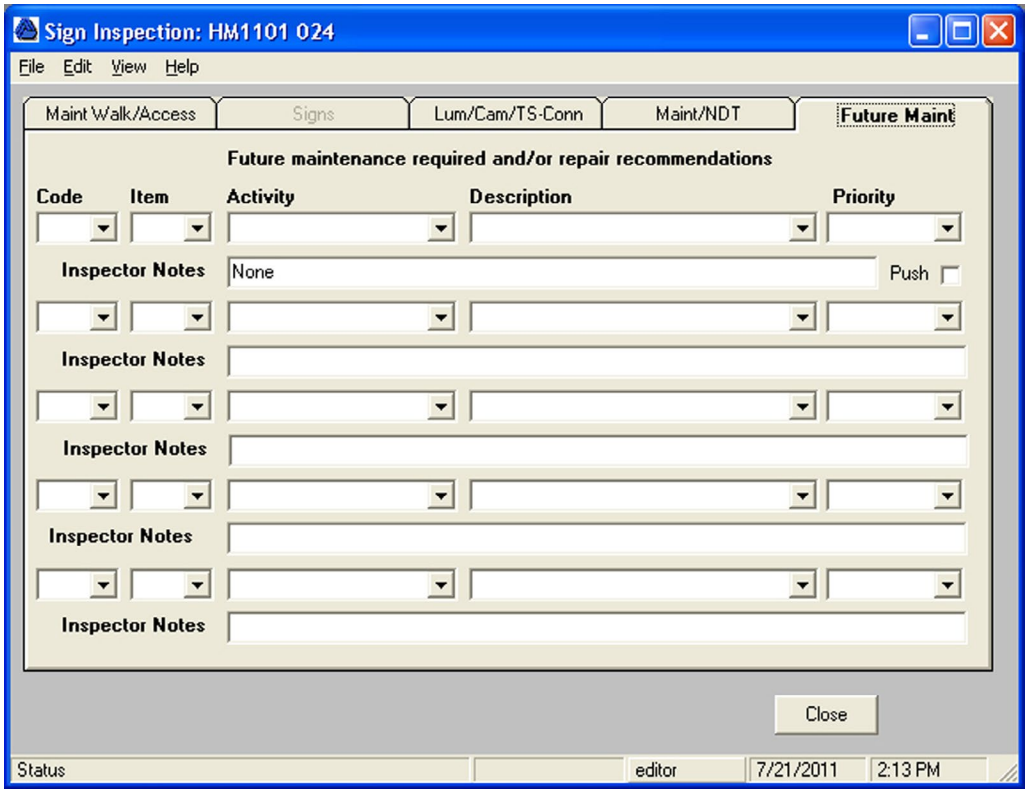
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the elements of the Maint Walk/Access and Lum/Cam/TS-Conn during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

SIGN INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the elements of the Maint/Access and Lum/Cam/TS-Conn.

If no maintenance repairs are recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure's component.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the component's elements.

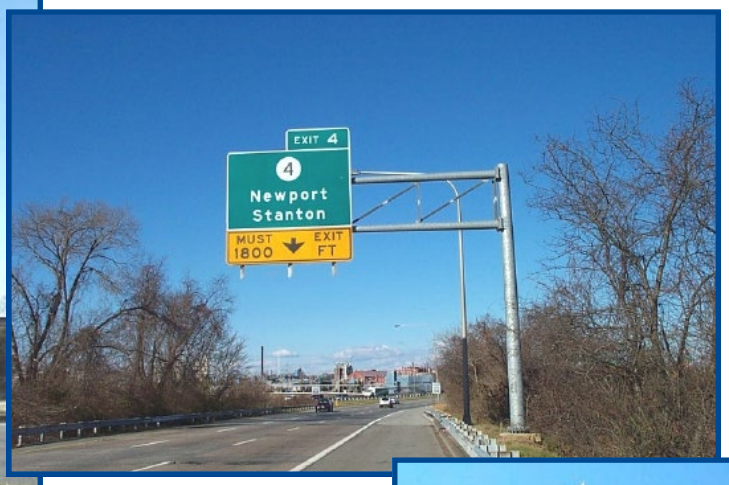
Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

Inspector Notes

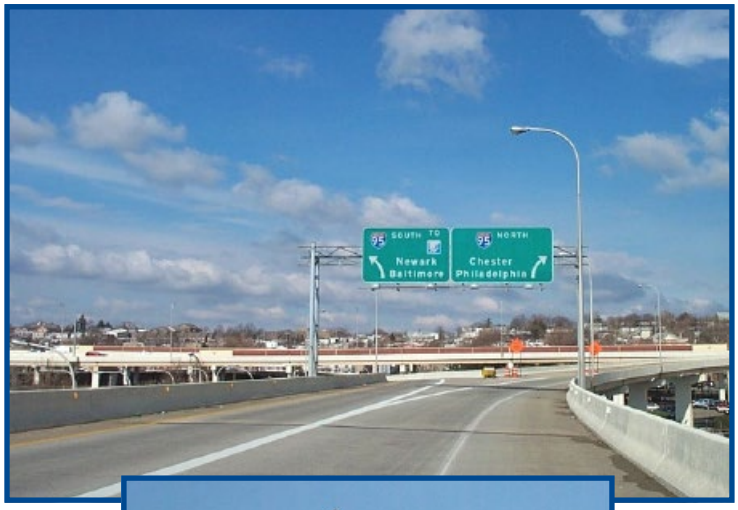
Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.


EXIT 4
4
Newport
Stanton
MUST
1800
EXIT
FT

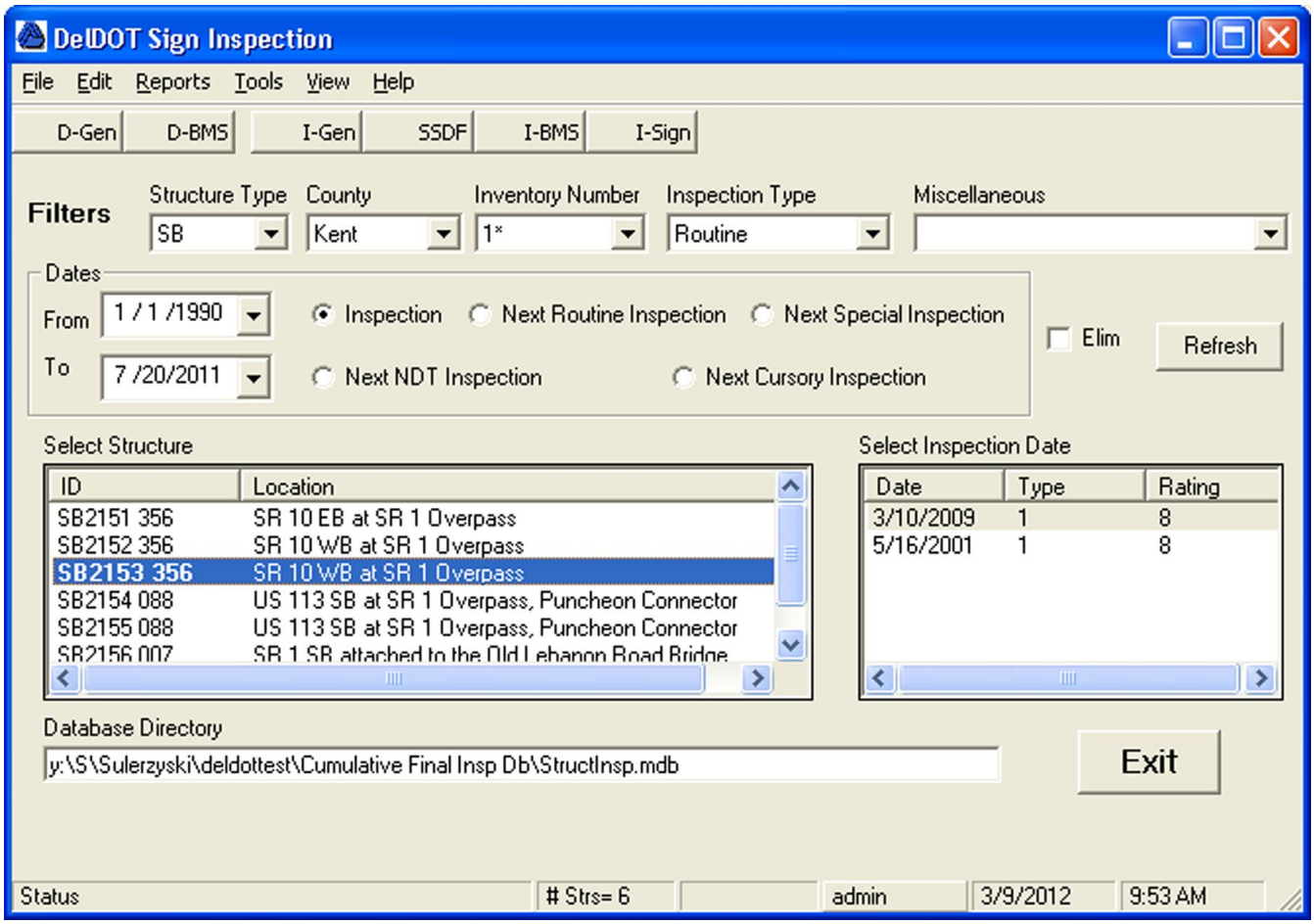
E-ZPass
DEDICATED
LANE
USE FLASHING
NO CASH


95 SOUTH TO
Newark
Baltimore
95 NORTH
Chester
Philadelphia

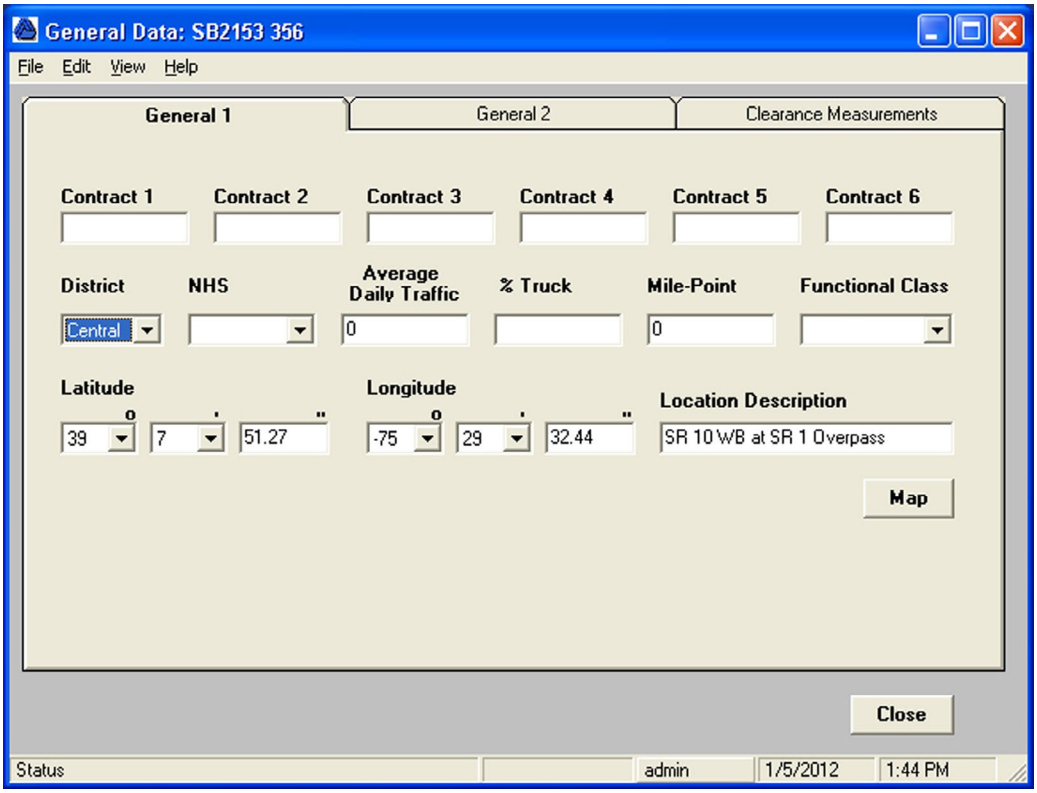
95 SOUTH
Del. Mem. Bridge

SB - BRIDGE MOUNTED SIGN

STRUCTURE DATA



GENERAL DATA - GENERAL 1



Contract 1 to Contract 6

Description: This is an alpha-numeric field used to record up to six DelDOT Contract Numbers associated with the construction and/or rehabilitation of the structure.

Coding: None

District

Description: From the pull down menu, select the district in which the structure is located.

Coding: 1 = North PA Line to the C & D Canal
2 = Central C & D Canal to the Sussex County Line
3 = South All of Sussex County

NHS

From the pull down menu, indicate whether or not the structure is located on a National Highway System (NHS).

Average Daily Traffic

To be inputted by consultant using most recent DelDOT Traffic Summary Book.

% Truck

To be inputted by consultant using most recent DelDOT Traffic Summary Book.

Mile-Point

To be provided by DelDOT and inputted by consultant.

Functional Class
To be inputted by consultant using most recent DelDOT Traffic Summary Book.

Latitude
Description: Enter the latitude of the structure in degrees, minutes and seconds to 1-meter accuracy. The GPS data shall be taken at one of the structure's support brackets.

Coding: The degrees and minutes may be chosen from the pull down menu. The seconds must be entered manually.

Longitude
Description: Enter the longitude of the structure in degrees, minutes and seconds to 1-meter accuracy. The GPS data shall be taken at one of the structure's support brackets.

Coding: The degrees and minutes may be chosen from the pull down menu. The seconds must be entered manually.

Location Description
Description: This is an alpha-numeric field used to describe the location of the structure. The location should provide the name of a State Route or Interstate and the structure that the sign is attached to.

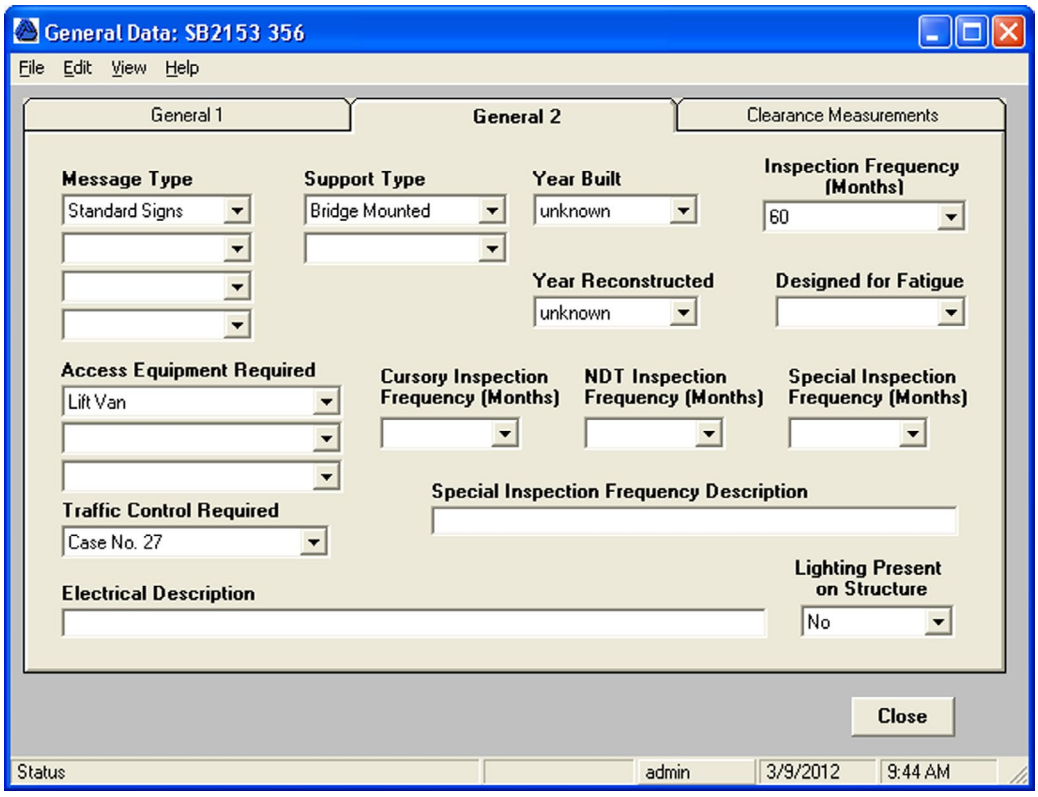
For Example: SR 48 EB attached to I-95 NB Bridge

Coding: None

Map
Description: Click the button to map the location of the structure based on its GPS data.

Coding: None

GENERAL DATA - GENERAL 2



Message Type

Description: From the pull down menus, select up to four types of messages that are directly or indirectly connected to the structure.

Coding:
1 = Standard Signs
2 = Variable Message
3 = Ring – Type Light
4 = Stadium – Type Light
5 = Traffic Signal
6 = Firehouse Signal
7 = School Signal
8 = Signal Sign(s)
9 = Camera
10 = Directional/Lane Control
11 = Luminaire (Highway Lighting)
12 = Utility Lines
13 = Railroad Crossing Signal(s)
14 = Flashers
15 = Other
16 = Not Applicable
17 = Overheight Sensors

Support Type

Description: From the pull down menus, select up to two types of supports that describe how each **primary message type** is connected to the structure. Primary message types include Standard Signs, Variable Message and Camera.

For this type of structure, the support type normally chosen is Bridge Mounted.

Coding:
1 = Cantilever
2 = Butterfly
3 = Overhead Span
4 = Bridge Mounted
5 = Sign Bridge Cantilever
6 = Pole Mounted
7 = Span Wire Mounted
8 = Other

Year Built

Description: From the pull down menu, select the year that the structure was originally constructed. If the year is not available, select "Unknown".

Coding: None

Year Reconstructed

Description: From the pull down menu, select the latest year that the structure was rehabilitated. If the year is not available, select "Unknown".

Coding: None

Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure inspection in months.

Coding: None

Designed for Fatigue

To be input by DelDOT.

Access Equipment Required

Description: From the pull down menus, select up to three different types of equipment required in order to perform the inspection.

Coding:
1 = Lift Van
2 = Bucket Truck
3 = Snooper

4 = Crane Truck
5 = Railroad Permit/Equipment
6 = None

Cursory Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure's cursory inspection in months.

Coding: None

NDT Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure's NDT inspection in months.

Coding: None

Special Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure's special inspection in months.

Coding: None

Special Inspection Frequency Description

Description: This is an alpha-numeric field used to comment on the type of special inspection required for the structure and reason why it was performed.

Coding: None

Traffic Control Required

Description: From the pull down menus, select the traffic control equipment or DelDOT Traffic Control Case required to perform the inspection.

Coding: 1 = Cones
2 = Signs
3 = Lane Closure(s)
4 = Case No. 16
5 = Case No. 26
6 = Case No. 27
7 = Case No. 28
8 = Case No. 29
9 = None
10 = Cones & Signs
11 = Case No. 20
12 = Case No. 16 (modified)
13 = Case No. 20 (modified)
14 = Case No. 26 (modified)
15 = Case No. 27 (modified)
16 = Case No. 28 (modified)
17 = Case No. 29 (modified)
18 = Case No. 36
19 = Case No. 36 (modified)
20 = Case No. 14
21 = Case No. 14 (modified)
22 = Case No. 3
23 = Case No. 3 (modified)
24 = Case No. 2
25 = Case No. 2 (modified)
26 = Case No. 34
27 = Case No. 34 (modified)

Electrical Description

Description: This is an alpha-numeric field used to record general comments regarding the electrical items on or around the structure.

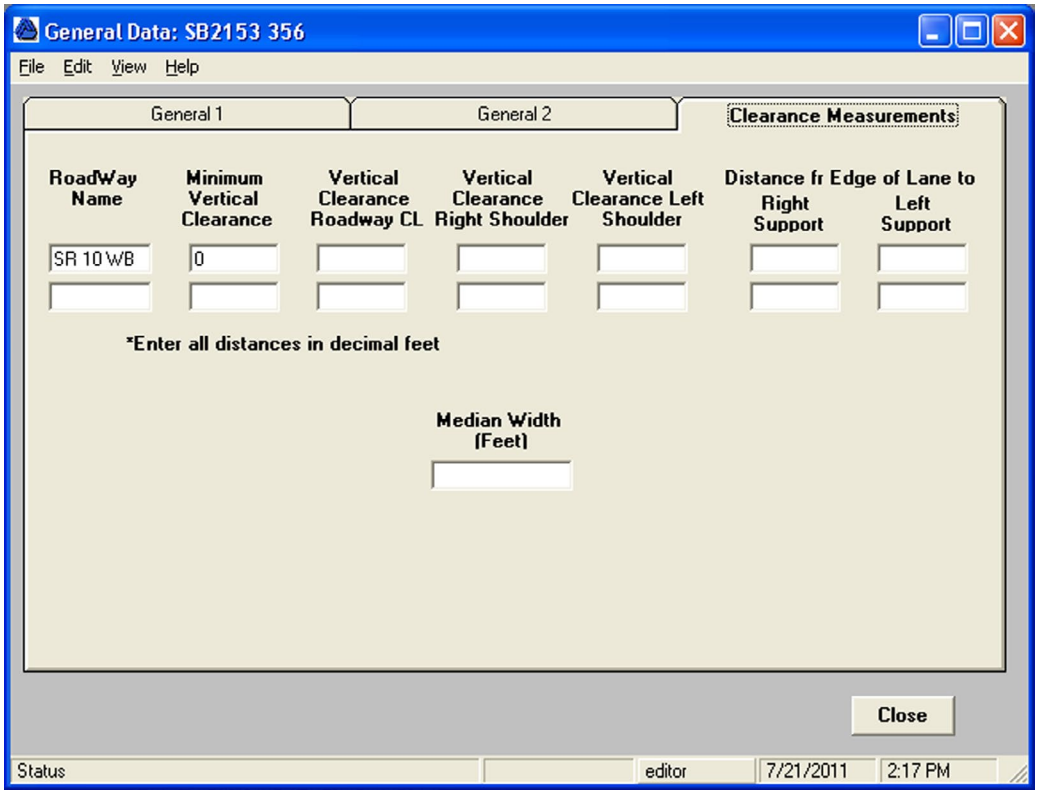
Coding: None

Lighting Present on Structure

Description: From the pull down menu, select whether or not lighting is present on the structure. If highway luminaire lighting is attached to the structure, this item should be coded "Yes".

Coding: 1 = Yes
2 = No
3 = Not Visible

GENERAL DATA - CLEARANCE MEASUREMENTS



Note: Clearances can be entered for up to two roadways. Each roadway can have its own set of clearances.

Roadway Name

Description: This is an alpha-numeric field used to record the name of the roadway where the measurements have been taken.

Coding: None

Minimum Vertical Clearance

Description: Enter the Minimum Vertical Clearance, in decimal feet, for the structure.

If the structure is attached to a bridge in such a manner that the bridge provides the minimum vertical clearance to the roadway, then enter 0 in this field. In addition, provide a comment to this effect in the **Inspection General - General Alignment** comment field in the Inspection Data portion of the program

If the structure is not located over a traveled roadway, this field should be left blank.

Coding: None

Vertical Clearance - Roadway CL

Description: This field is not applicable.

Vertical Clearance - Right Shoulder

Description: This field is not applicable.

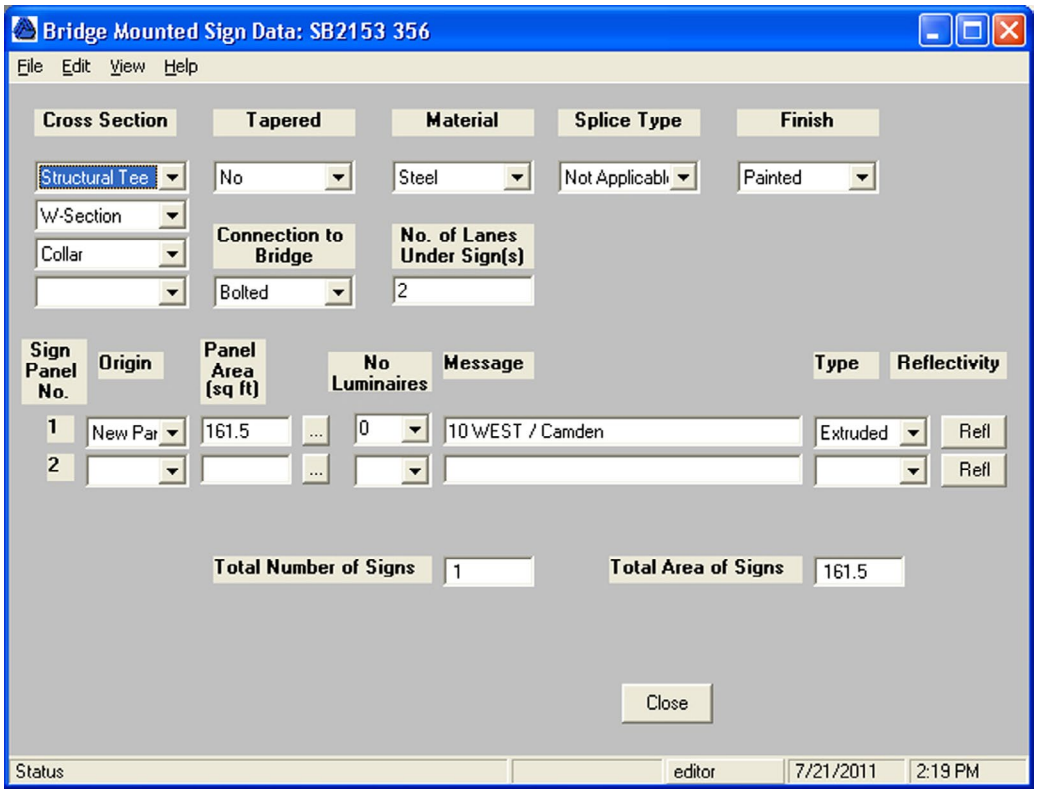
Vertical Clearance - Left Shoulder
Description: This field is not applicable.

Distance fr Edge of Lane to - Right Support
Description: This field is not applicable.

Distance fr Edge of Lane to - Left Support
Description: This field is not applicable.

Median Width (Feet)
Description: This field is not applicable.

BRIDGE MOUNTED SIGN DATA



Cross Section

Description: From the pull down menus, select up to four types of cross sectional shapes that comprise the frame work of the Bridge Mounted Sign.

Coding: 1 = Circular
2 = Box
3 = Angle
4 = Structural Tee
5 = W-Section
6 = Collar
7 = Other
8 = Pentagon
9 = Hexagon
10 = Octagon
11 = Fluted
12 = Ellipse
13 = Flat Bar
14 = Dodecagon (12 Sided)
15 = Channel
16 = Zee
17 = Hexadecagon (16 Sided)
18 = Tetradecagon (14 Sided)

Tapered

Description: From the pull down menu, select whether or not the members that comprise the frame work of the Bridge Mounted Sign are tapered.

Coding: 1 = Yes
2 = No
3 = Not Visible

Material

Description: From the pull down menus, select the material composition for the members of the Bridge Mounted Sign's frame work.

Coding: 1 = Steel
2 = Concrete
3 = Aluminum
4 = Timber
5 = Weathering Steel
6 = Other

Splice Type

Description: From the pull down menus, select the type of splice present on the members of the Bridge Mounted Sign's frame work.

Coding: 1 = Welded
2 = Bolted
3 = Sleeved/Telescoping Joint
4 = Not Applicable

Finish

Description: From the pull down menus, select the finish that was applied to the members of the Bridge Mounted Sign's frame work. If the material is coded "Aluminum or Timber", the finish should be coded "Not Applicable".

Coding: 1 = Galvanized
2 = Painted
3 = Weathering Steel
4 = Other
5 = Not Applicable

Connection to Bridge

Description: From the pull down menus, select the type of connection used to attach the Bridge Mounted Sign's frame work to the bridge or structure.

Coding: 1 = U-Bolts
2 = Welded
3 = Bolted
4 = Sleeved/Telescoping Joint
5 = Bolted w/Clamps

No. of Lanes Under Sign(s)

Description: Enter the number of traffic lanes located underneath the Bridge Mounted Sign(s).

Coding: None

Sign Panel No.

Description: Relevant information can be entered for up to two sign panels attached to the Bridge Mounted Sign's frame work.

Coding: None

Origin

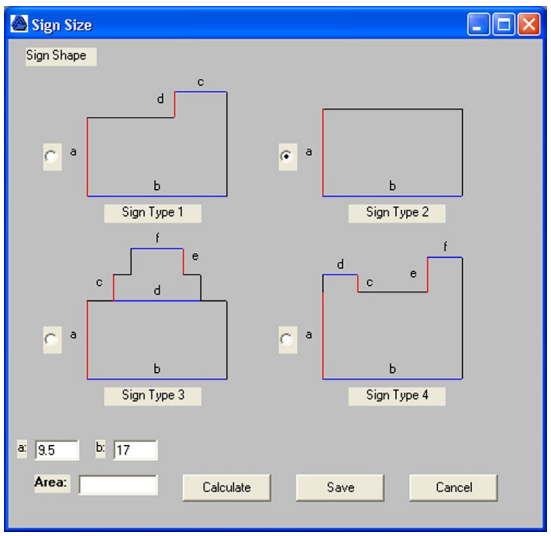
Description: From the pull down menus, select the origin of the sign panel. For example: is this the original sign, has it been added, is this a new sign panel that has replaced an existing one, or was this sign modified from the previous one.

Coding: 1 = Original
2 = Added
3 = New Panel
4 = Modified

Panel Area (sq ft)

Description: The program automatically enters the sign panel area in this field, based on the user's input data.

By clicking on the box next to the record field, the user should select the appropriate sign shape and enter the sign panel's dimensions in decimal feet. Clicking on the **Calculate** button allows the program to compute the sign panel area. The user should click the **Save** button in order to save both the sign panel dimensions and area.



Coding: None

No Luminaires

Description: From the pull down menu, select the number of luminaires present for each of the sign panels.

Coding: None

Message

Description: Enter in this field, the message(s) that exist on each of the sign panels, including the exit numbers.

Coding: None

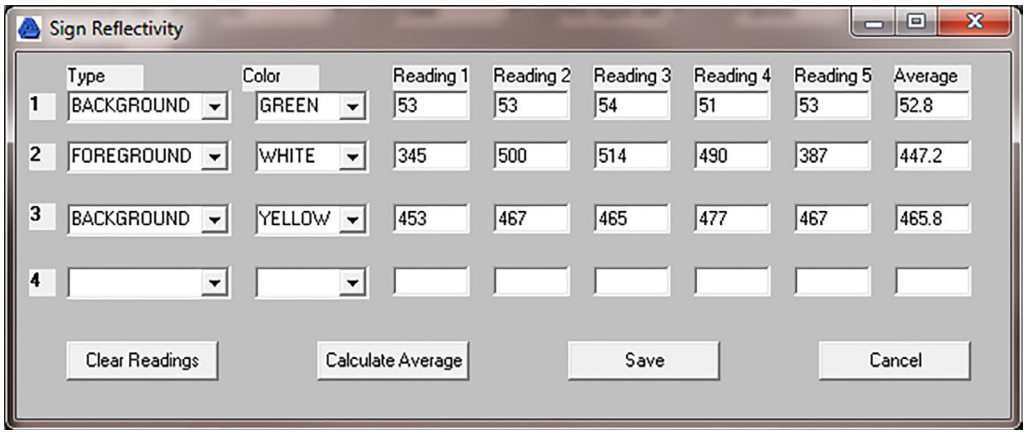
Type

Description: From the pull down menus, select the type of sign panel backing present.

Coding: 1 = Flat
2 = Extruded

Reflectivity

Description: By clicking on the **Refl** button, the user should enter the following reflectivity information for up to four different colors present on the sign panel:



Type - From the pull down menu, select whether or not the color is in the background or foreground.

Color - From the pull down menu, select one of the following colors: Yellow, White, Green, Brown, Blue or Red.

Reading 1 to Reading 5 - Enter five reflectivity readings taken in different areas on each color. For the color Brown, no reflectivity readings will be captured. However, it will be entered into the database as either a background or foreground color.

Average - The average of the five reflectivity readings is automatically calculated by the program by clicking on the **Calculate Average** button.

If the user clicks on the **Clear Readings** button, the program will clear for each Type the Color, Reading 1 to Reading 5, and the Average reading.

The program automatically stores all of the information entered, including the average reflectivity reading, for each color by clicking on the **Save** button.

Coding: None

Total Number of Signs

Description: No entry is required for this field. The program automatically enters the total number of sign panels present, based on the user's input data.

Coding: None

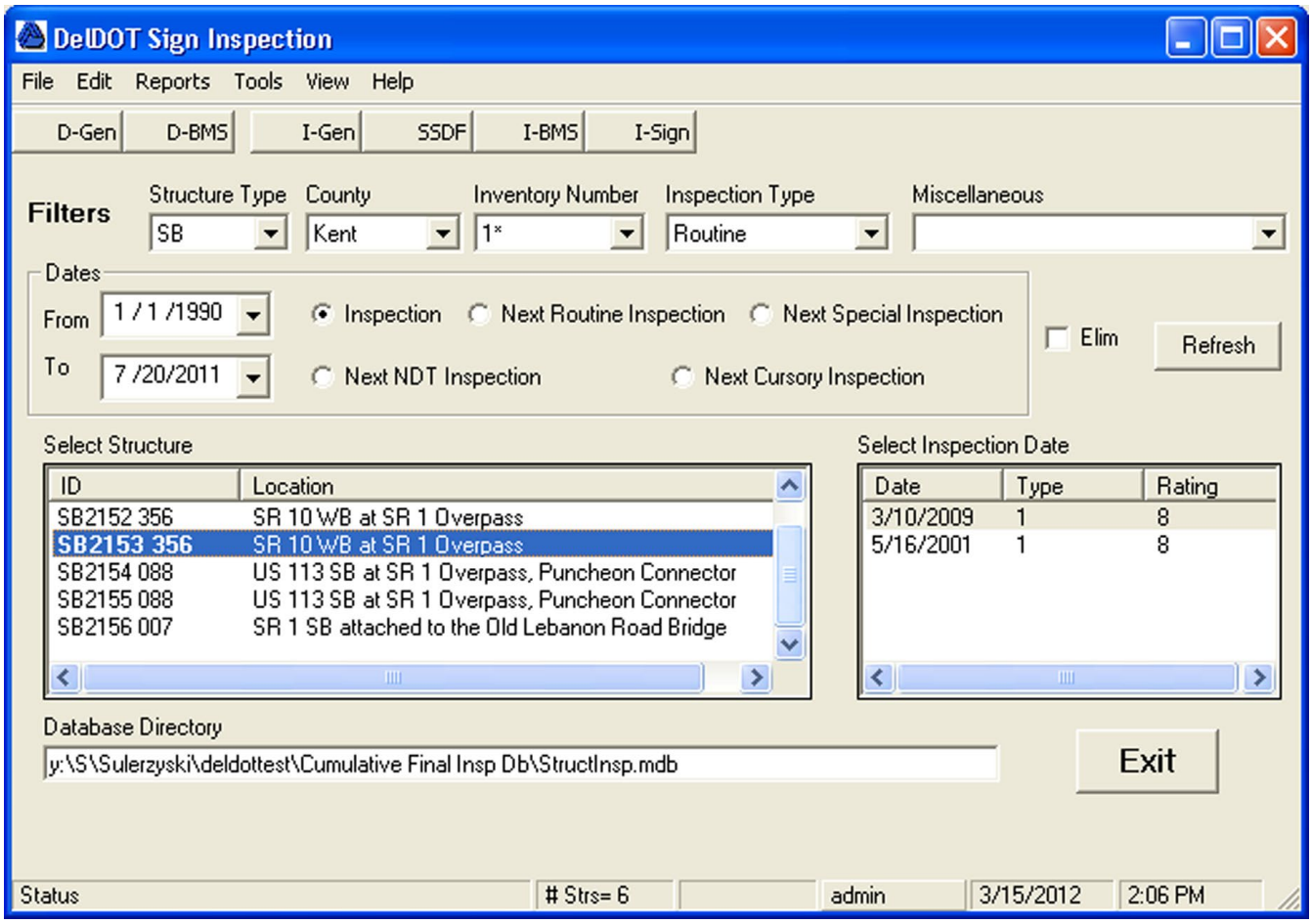
Total Area of Signs

Description: No entry is required for this field, the program automatically calculates the total area of all of the sign panels present, based on the user's input data.

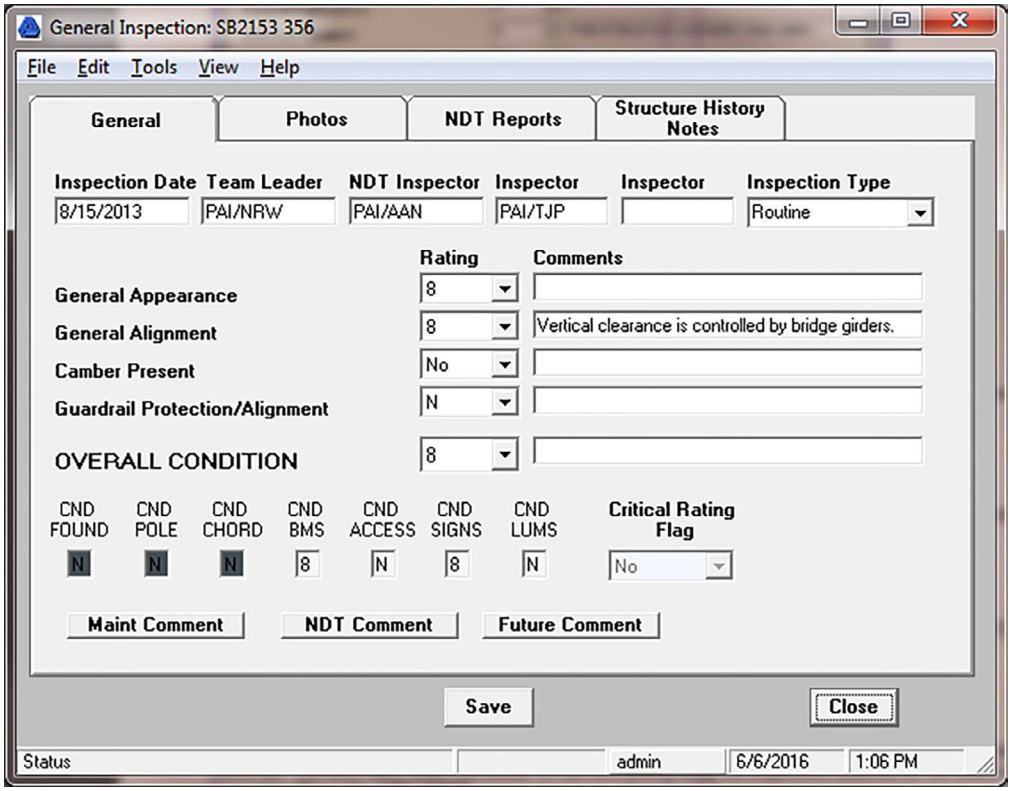
Coding: None

SB - BRIDGE MOUNTED SIGN

INSPECTION DATA



GENERAL INSPECTION - GENERAL



Inspection Date

Description: This field is used to record the completion date of the structure's inspection. An inspection date is created when the structure is initially inspected and at the structure's designated inspection cycle.

Coding: None

Team Leader

Description: Enter the initials of the firm performing the inspection followed by the initials of the Inspection Team Leader. Example: URS/NGD

Coding: None

NDT Inspector

Description: If applicable, enter the initials of the firm performing the Non-Destructive Testing (NDT) followed by the initials of the NDT inspector. Example: PAI/CHS

Coding: None

Inspector

Description: These fields allow for up to two additional field inspector names to be entered for the inspection of the structure. For each field, enter the initials of the firm performing the inspection followed by the initials of the field inspector. Example: URS/DDD

Coding: None

Inspection Type

Description: This field is used to identify the type of inspection being performed on the structure. The inspection type is created when the structure is initially inspected and at the structure's designated inspection interval.

Coding: 1 = Routine
2 = NDT
3 = Repair/Retrofit
4 = Impact Damage
5 = Alterations
6 = Special Inspection
7 = Removal
8 = Cursory

General Appearance - Rating/Comments

Description: From the pull down menu, select the **Rating** for the General Appearance of the structure. General observations of the appearance of the structure should be made while approaching the structure. The purpose of these initial observations is to familiarize the inspector with the structure. They may also point out a need to modify the inspection sequence or indicate areas requiring special attention.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

General Alignment - Rating/Comments

Description: From the pull down menu, select the **Rating** for the General Alignment of the structure. General observations of the alignment of the structure should be made while approaching the structure. The purpose of these initial observations is to detect any unusual movements of the structure as a whole that may have occurred. They may also point out problems with the location of the structure's supports or indicate areas requiring special attention.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

Camber Present - Rating/Comments

Description: This field should be coded "No".

Coding: 1 = Yes
2 = No
3 = Not Visible

Guardrail Protection/Alignment - Rating/Comments

Description: From the pull down menu, select the **Rating** of the Guardrail Protection and its Alignment for the structure. If no guardrail is present, the rating should be coded "N".

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

OVERALL CONDITION - Rating/Comments

Description: From the pull down menu, select the **Rating** for the Overall Condition of the structure. The rating is based on the inspector's assessment of the structure's individual components with emphasis placed on the primary elements.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

CND FOUND
Description: This field is not applicable.

CND POLE
Description: This field is not applicable.

CND CHORD
Description: This field is not applicable.

CND BMS
Description: No entry is required for this field. The overall condition rating for the Bridge Mounted Sign is summarized here.

CND ACCESS
Description: No entry is required for this field. The overall condition rating for the Access (walkway, platform, ladder, etc.) on the structure is summarized here.

CND SIGNS
Description: No entry is required for this field. The overall condition rating for the Sign panels attached to the structure is summarized here.

CND LUMS
Description: No entry is required for this field. The overall condition rating for the Luminaires (excludes highway luminaires) attached to the structure is summarized here.

Critical Rating Flag
Description: No entry is required for this field. The structure is flagged as either having a critical rating or not. When the **OVERALL CONDITION** Rating is "3" or less, this field shows **Yes**. Otherwise, the field shows **No**.

Maint Comment
Description: Clicking on this button allows the inspector to view and/or edit the comments fields from the **Maintenance repairs done at the time of inspection** in the **Foundation, Pole, Chord, Access/Sign/Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

NDT Comment

Description: Clicking on this button allows the inspector to view and/or edit the comments fields from the **NDT testing done at the time of inspection** in the **Foundation, Pole, Chord, Access/Sign/Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

Future Comment

Description: Clicking on this button allows the inspector to view and/or edit the comments fields from the **Future maintenance required and/or repair recommendations** in the **Foundation, Pole, Chord, Access/Sign/Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **General** tab.

Coding: None

GENERAL INSPECTION - PHOTOS

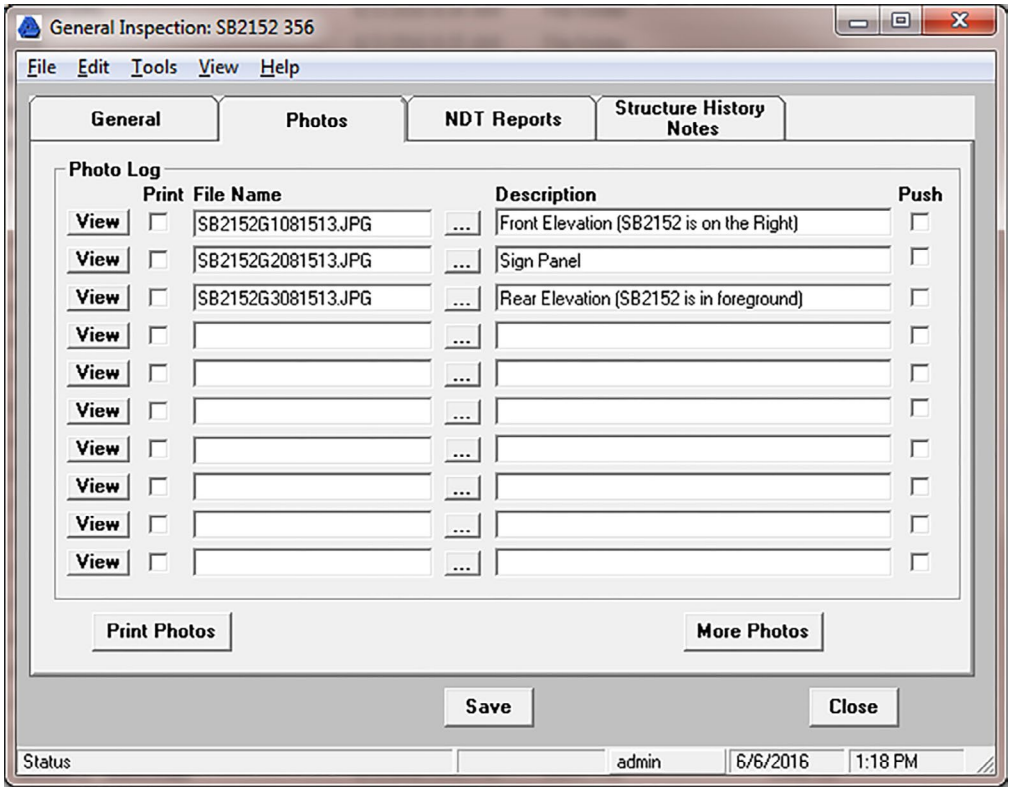


Photo Log

Description: This tab allows up to ten photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

Bridge Mounted Sign Structures shall have **at least two photographs** taken. One will be a legible front view of all sign panels with the roadway below. The other photograph should be a view of the back of the Sign(s) with the frame work and connections to the bridge or structure.

Clicking on allows the user to view all of the files in the folder and select one to be placed in the respective **File Name** field.

Coding: None

View

Description: Clicking on the **View** button allows the user to view a particular photograph.

Coding: None

Print

Description: Placing a checkmark in these boxes allows the user to print the respective photographs using the **Print Photos** button.

Coding: None

File Name

Description: Each of these fields are used to enter one JPEG file name for each of the photographs.

Coding: The following shall be used for the JPEG file naming convention:
SB2104**G1**.jpg
SB1352**G1**.jpg
SB2104 and SB1352 are the structure ID's

There are three types of photos:
G = General (elevation views and views of sign panels)
S = Walkway, Signing, and Luminaire Elements
BM = Bridge Mounted Elements

Example: **BM1** = bridge mounted element photo number 1 (photos for each type will be numbered 1, 2, 3, 4, etc.)

Note: When the file is brought into the file name field, the inspection date is attached to the end of the file name.

Description

Description: These fields are used to enter captions for each of the photographs.

Coding: None

Push

Description: The **Push** button is used to incorporate photographs into the Critical Report. A checkmark will appear in the box when it is clicked on. This checkmark will push or forward the photograph(s) into the critical report. When the critical report for the structure is printed out, all pushed photographs will also be printed out.

Coding: None

More Photos

Description: Clicking on the **More Photos** button creates another **Photos** tab that allows up to ten additional photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

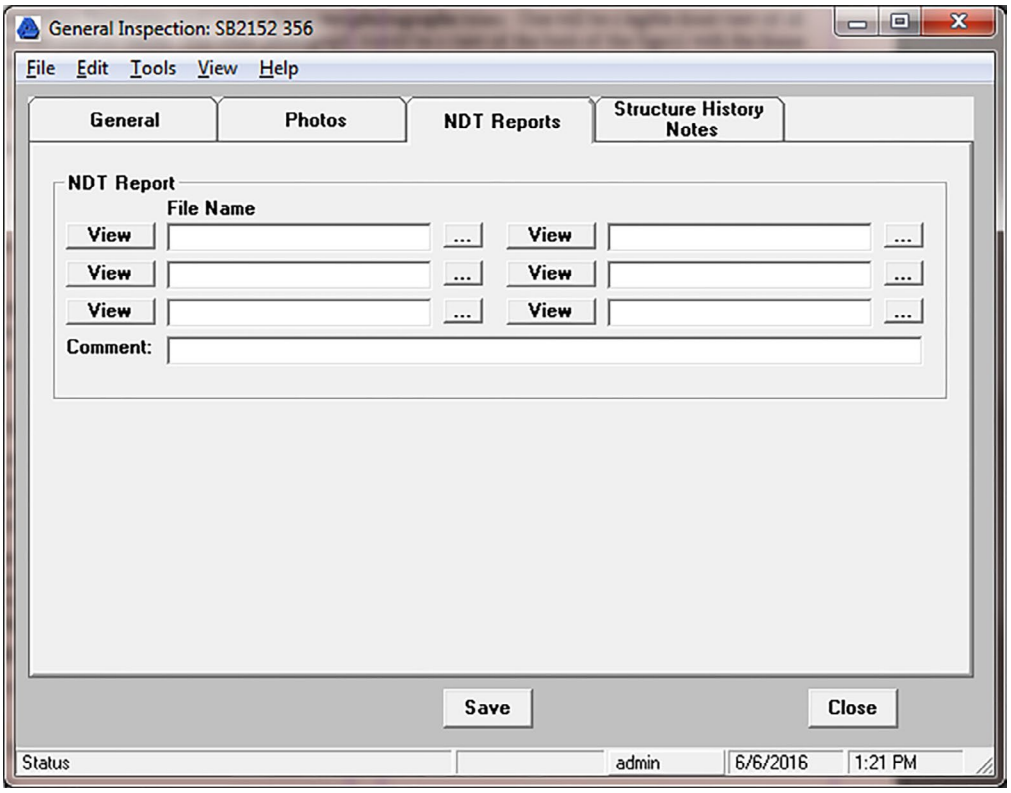
Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **Photos** tab.

Coding: None

GENERAL INSPECTION - NDT REPORTS



NDT Report

Description: This tab allows up to six NDT reports to be stored in a folder labeled with the structure's ID number. The NDT reports should be saved in a Microsoft Word or Excel format.

Clicking on ... allows the user to view all of the files in the folder and select one to be placed in the respective **File Name** field.

Coding: None

View

Description: Clicking on the **View** button allows the user to view a particular NDT report.

Coding: None

File Name

Description: Each of these fields are used to enter the file name of one Microsoft Word or Excel document for each of the NDT reports.

Coding: The following shall be used for the NDT report file naming convention:

Examples: SB1352**NDT**.doc or SB1352**NDT**.xls.

For multiple NDT reports, the following should be used:

SB1352NDTA.doc
SB1352NDTB.doc

Note: When the file is brought into the file name field, the inspection date is attached to the end of the file name.

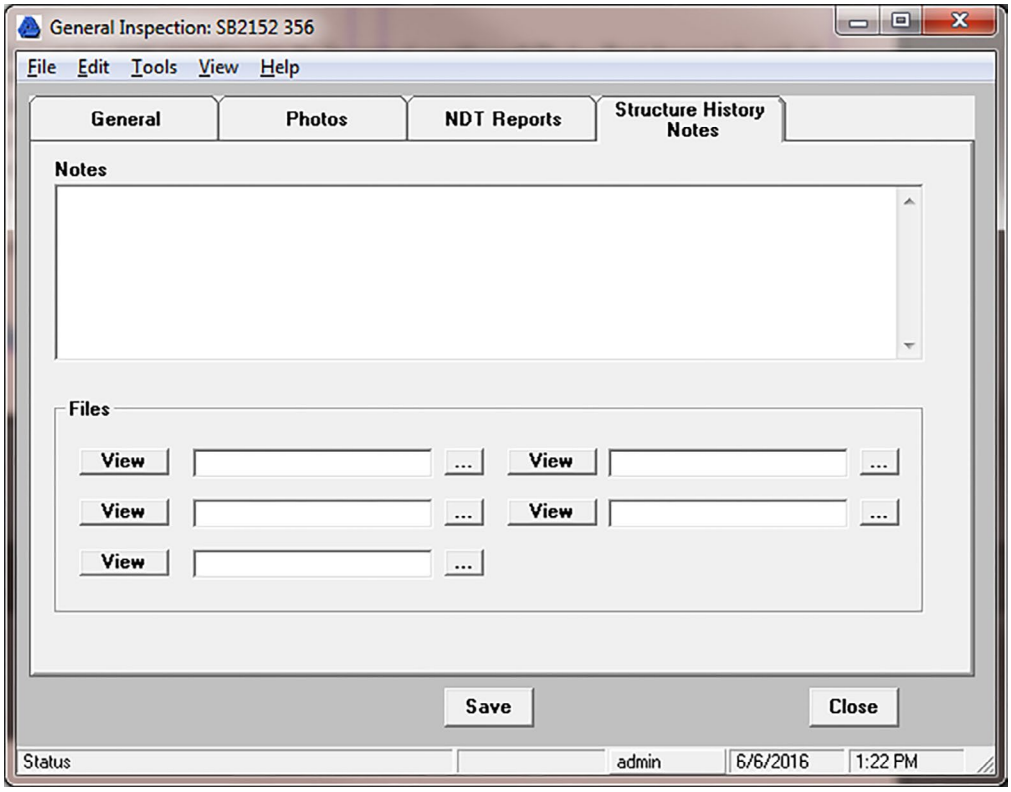
Comment:
Description: This field allows the user to enter any comments regarding the non-destructive testing performed and the subsequent results.

Coding: None

Save
Description: Clicking on the **Save** button allows the user to save all the information in the **NDT Reports** tab.

Coding: None

GENERAL INSPECTION - STRUCTURE HISTORY NOTES



Notes
Description: This memo field allows the user to describe specific details about the structure or the inspection for future reference.

Coding: None

Files
Description: This allows up to five files to be stored in a folder labeled with the structure's ID number. These files may be Microsoft Word or PDF documents that describe specific details about the structure or the inspection for future reference.

Clicking on ... allows the user to view all of the files in the folder and select one to be placed in the respective **Files** field.

Coding: None

View

Description: Clicking on the **View** button allows the user to view a particular file.

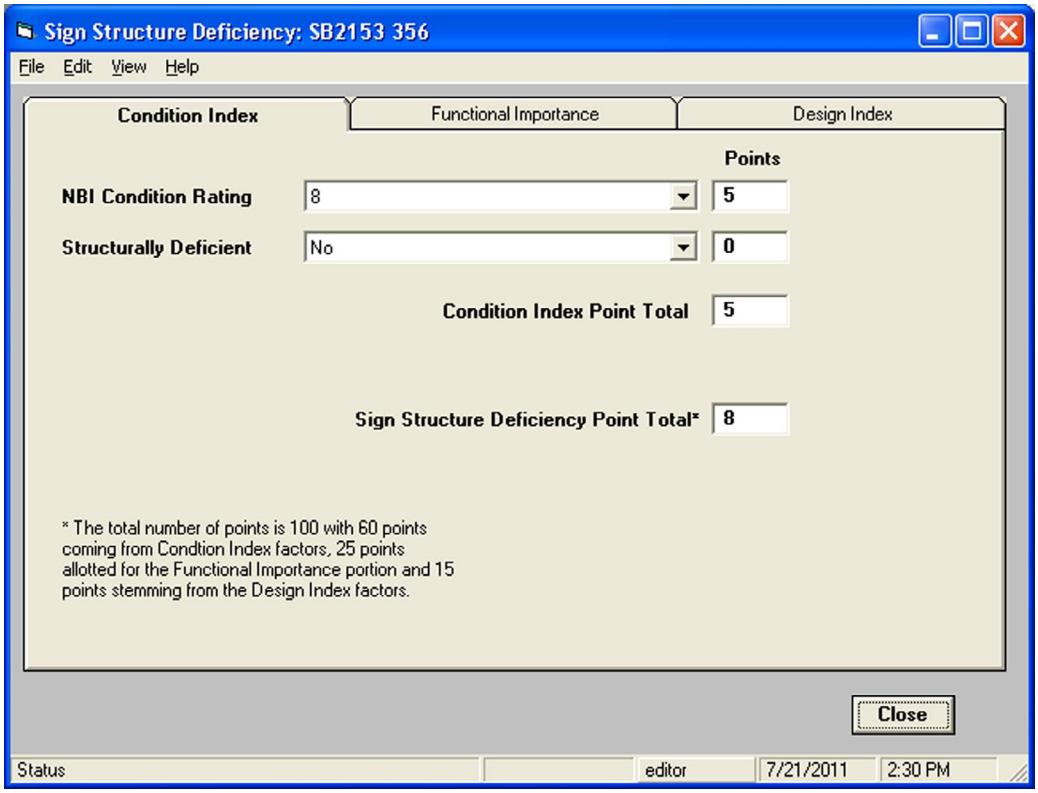
Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **Structure History Notes** tab.

Coding: None

SIGN STRUCTURE DEFICIENCY FACTOR (SSDF) - CONDITION INDEX



NBI Condition Rating

Description: No entry is required for these two fields. The NBI Condition Rating is the Bridge Mounted Sign (BMS) condition rating.
The program automatically assigns a point value from the table below:

Structural Rating Points – 0 to 45 points

NBI Condition Rating	Points
0	45
1	43
2	41
3	37
4	32
5	24
6	15
7	10
8	5
9	0

Coding: None

Structurally Deficient

Description: No entry is required for these two fields. A structure is deemed "Structurally Deficient" when the NBI Condition Rating for the Bridge Mounted Sign (BMS) is a 4 or lower.
The program automatically assigns a point value from the table below:

Structurally Deficient Points – 0 to 15 points

Structurally Deficient	Points
No	0
Yes	15

Coding: None

Condition Index Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the NBI Condition Rating Points and the Structurally Deficient Points.

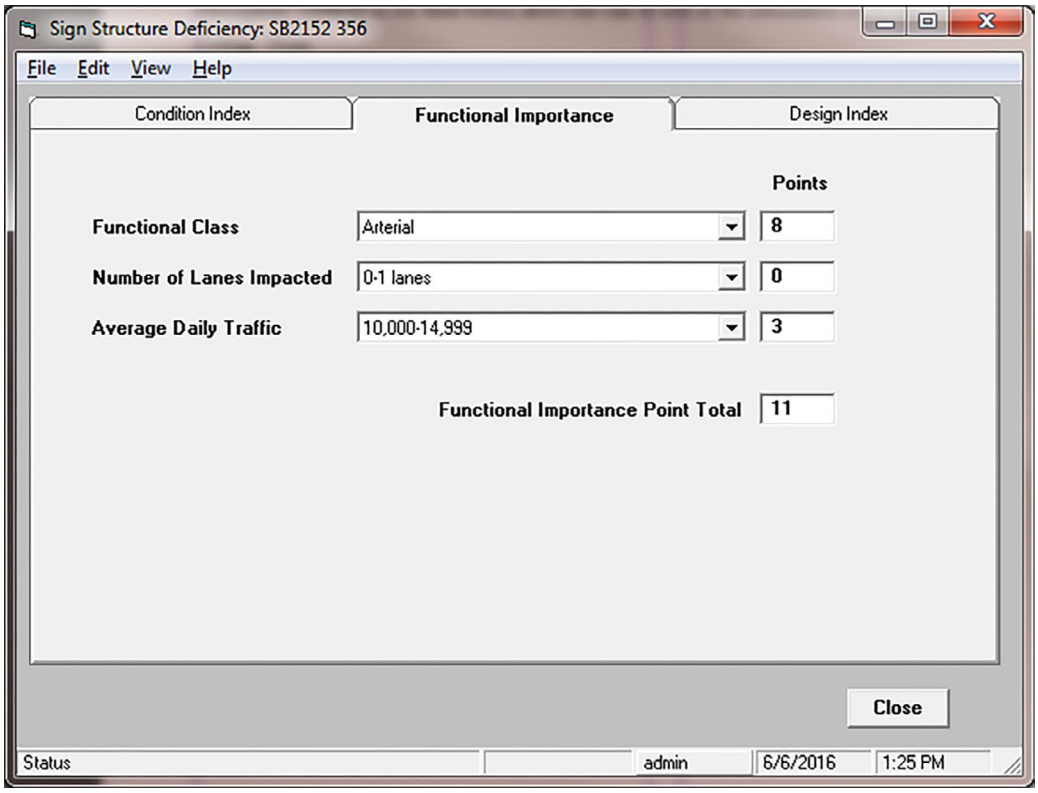
Coding: None

Sign Structure Deficiency Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the Condition Index Point Total, the Functional Importance Point Total and the Design Index Point Total.

Coding: None

SIGN STRUCTURE DEFICIENCY FACTOR (SSDF) - FUNCTIONAL IMPORTANCE



Functional Class

Description: No entry is required for these two fields. The functional class for the structure is summarized here. The program automatically assigns a point value from the table below:

Functional Classification Points – 2 to 10 points

Functional Class	Points
Local	2
Collector	5
Arterial	8
Interstate	10

Coding: None

Number of Lanes Impacted

Description: No entry is required for these two fields. The number of traffic lanes impacted if the structure fails is summarized here.

The program automatically assigns a point value from the table below:

Lanes Impacted Points – 0 to 5 points

# of Lanes Impacted if Structure Fails	Points
0-1 lanes	0
2 lanes	1
3 lanes	2
4 lanes	3
5 lanes	4
> 5 lanes	5

Coding: None

Average Daily Traffic

Description: No entry is required for these two fields. The average daily traffic for the structure is summarized here. The program automatically assigns a point value from the table below:

Traffic Volume Points – 1 to 10 points

Average Daily Traffic	Points
0 - 4,999	1
5,000 - 9,999	2
10,000 - 14,999	3
15,000 - 19,999	4
20,000 - 29,999	5
30,000 - 44,999	6
45,000 - 59,999	7
60,000 - 79,999	8
80,000 - 100,000	9
> 100,000	10

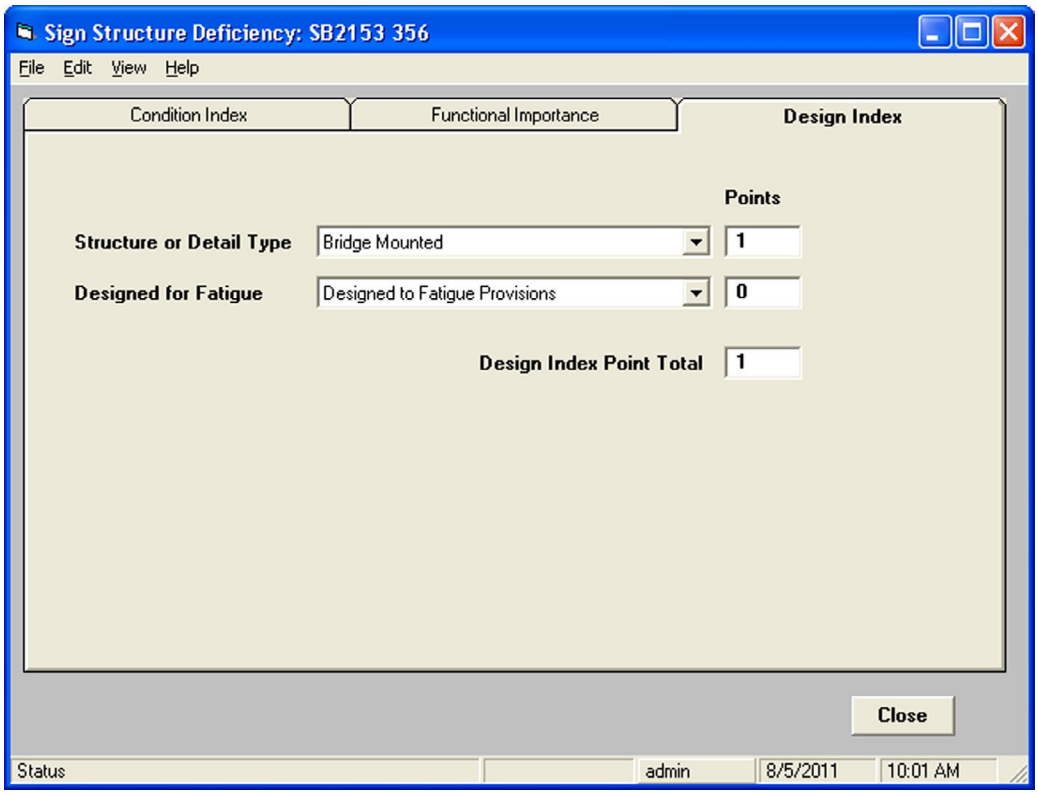
Coding: None

Functional Importance Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the Functional Class Points, the Number of Lanes Impacted Points and the Average Daily Traffic Points.

Coding: None

SIGN STRUCTURE DEFICIENCY FACTOR (SSDF) - DESIGN INDEX



Structure or Detail Type

Description: No entry is required for these two fields. The structure or detail type is summarized here.

The program automatically assigns a point value from the table below:

Structure Type Points – 1 to 5 points

Structure or Detail Type	Points
≥ 4-Pole Overhead Sign Structure	1
≥ 8-Anchor Bolt High Mast Light	
Bridge Mounted Sign Structure	
2-Pole Overhead Sign Structure	2
6-Anchor Bolt High Mast Light	
Clamped Chord-Pole Connection (Tri-Chord 2-Pole Overhead Sign Structure)	
Galvanized / Painted Steel Sleeve Joint High Mast Light	
Aluminum Sign Structure	3
> 4-Anchor Bolt Cantilever Sign Structure	
4-Anchor Bolt High Mast Light	4
4-Anchor Bolt Cantilever Sign Structure	5
Weathering Steel Telescoping Sleeve Joint High Mast Light	
Clamped Chord-Pole Connection (2-Chord 2-Pole Overhead Sign Structure)	

Coding: None

Designed for Fatigue

Description: No entry is required for these two fields. The determination of whether or not the structure was designed to fatigue provisions is summarized here.
The program automatically assigns a point value from the table below:

Fatigue Design Points – 0 to 10 points

Designed for Fatigue	Points
Not Designed to Fatigue Provisions	10
Designed to Fatigue Provisions	0

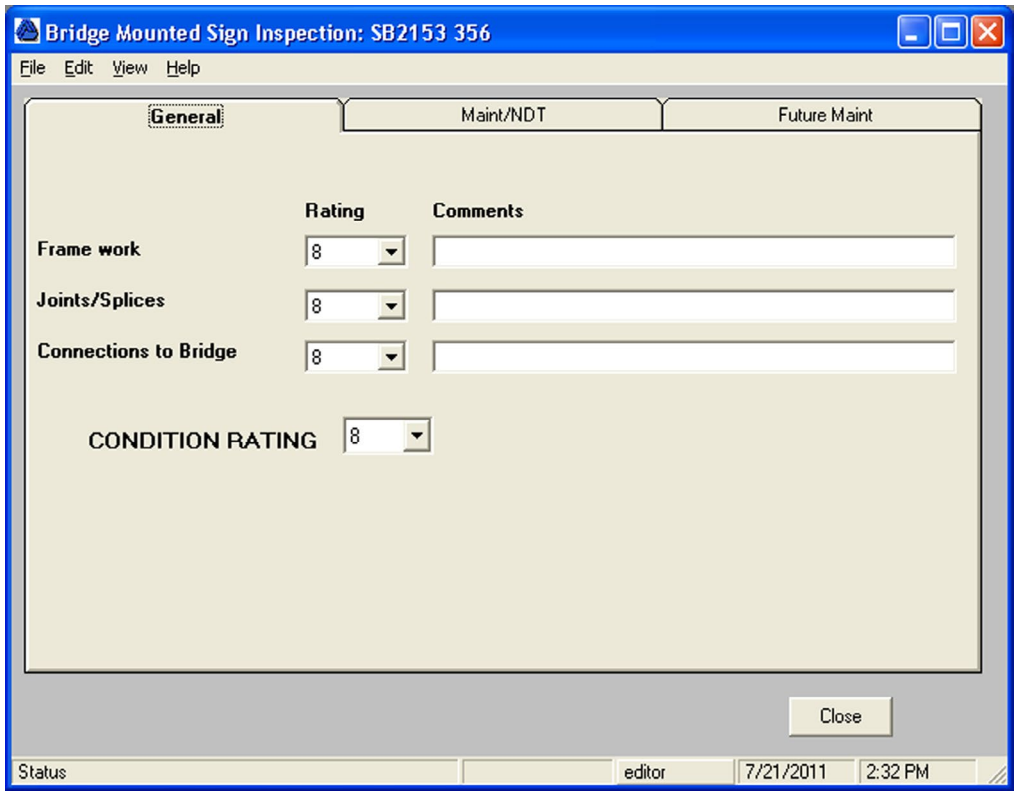
Coding: None

Design Index Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the Structure or Detail Type Points and the Designed for Fatigue Points.

Coding: None

BRIDGE MOUNTED SIGN INSPECTION - GENERAL



Frame Work

Description: This element involves the inspection of all of the members that comprise the Bridge Mounted Sign's frame work., including the applied finish.

From the pull down menu, select the **Rating** for the frame work.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

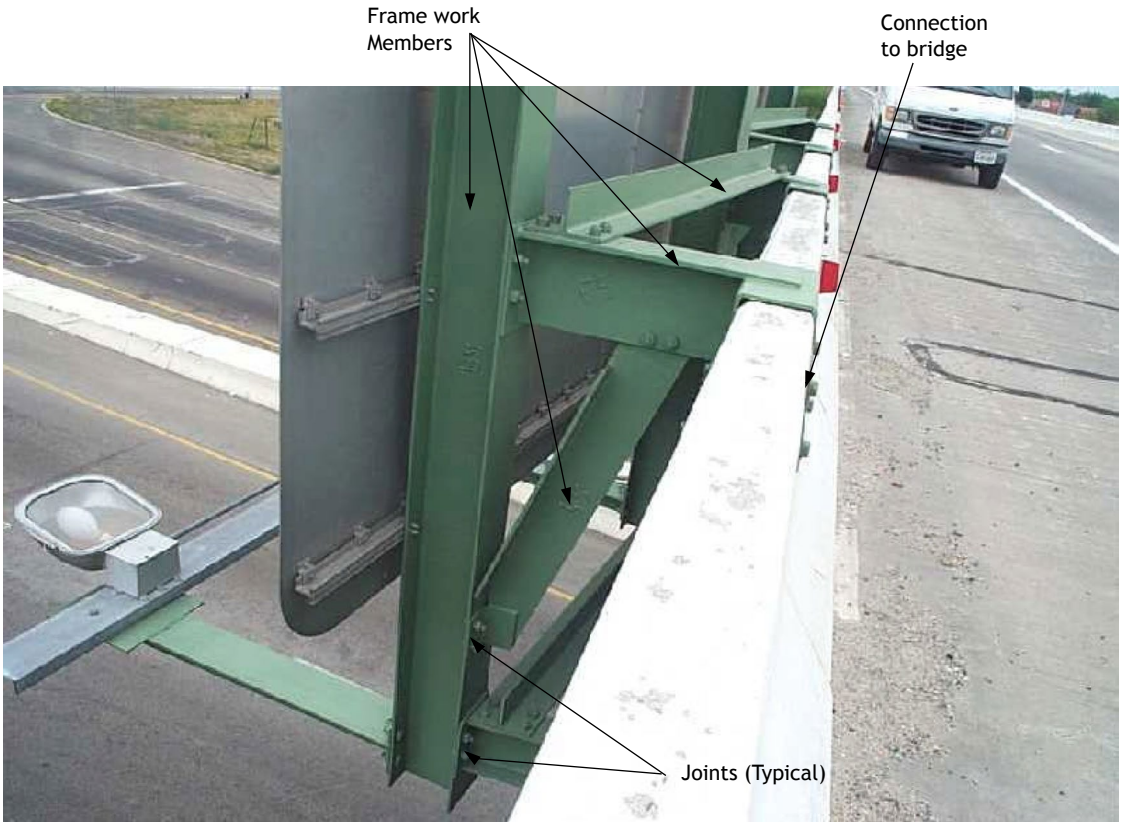
Joints/Splices

Description: This element involves the inspection of the member joints and member splices within the frame work.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.



Connections to Bridge

Description: This element involves the inspection of the frame work's connections to the bridge or structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

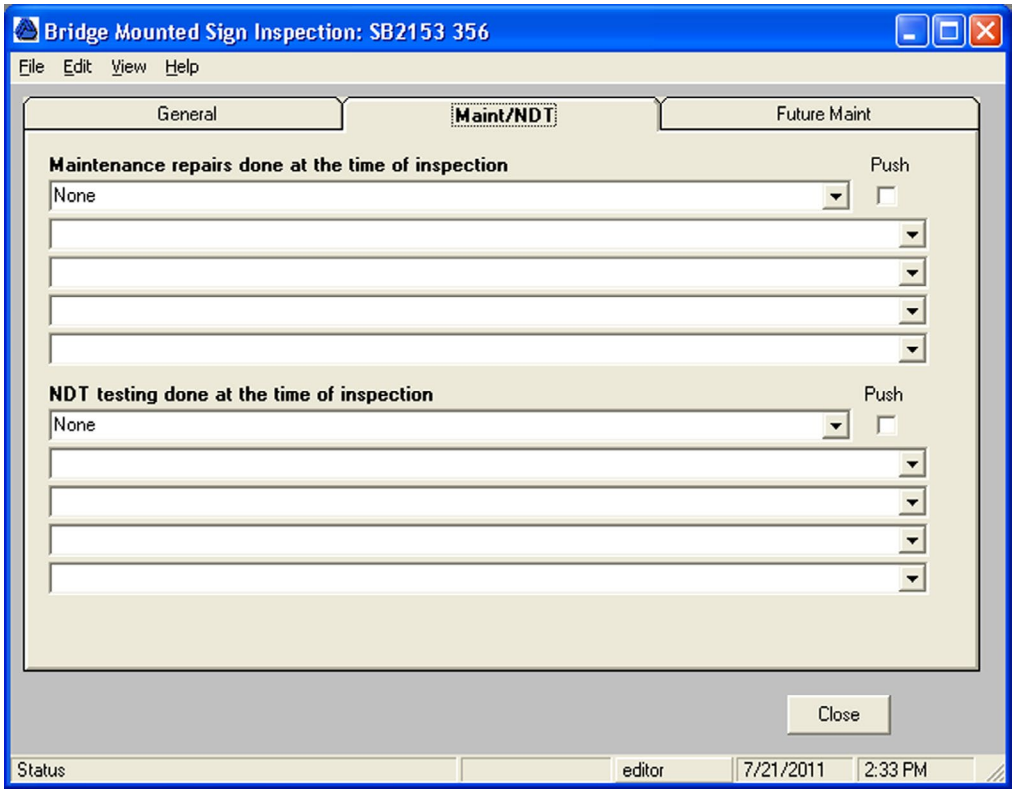
Description: This numerical condition rating should characterize the general condition of the Bridge Mounted Sign. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the members, the element can be considered a "weak link" in the structure, and the rating of the Bridge Mounted Sign should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Bridge Mounted Sign.

Coding: See **Condition Rating Codes** section of this manual.

BRIDGE MOUNTED SIGN INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the elements of the Bridge Mounted Sign during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comments** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

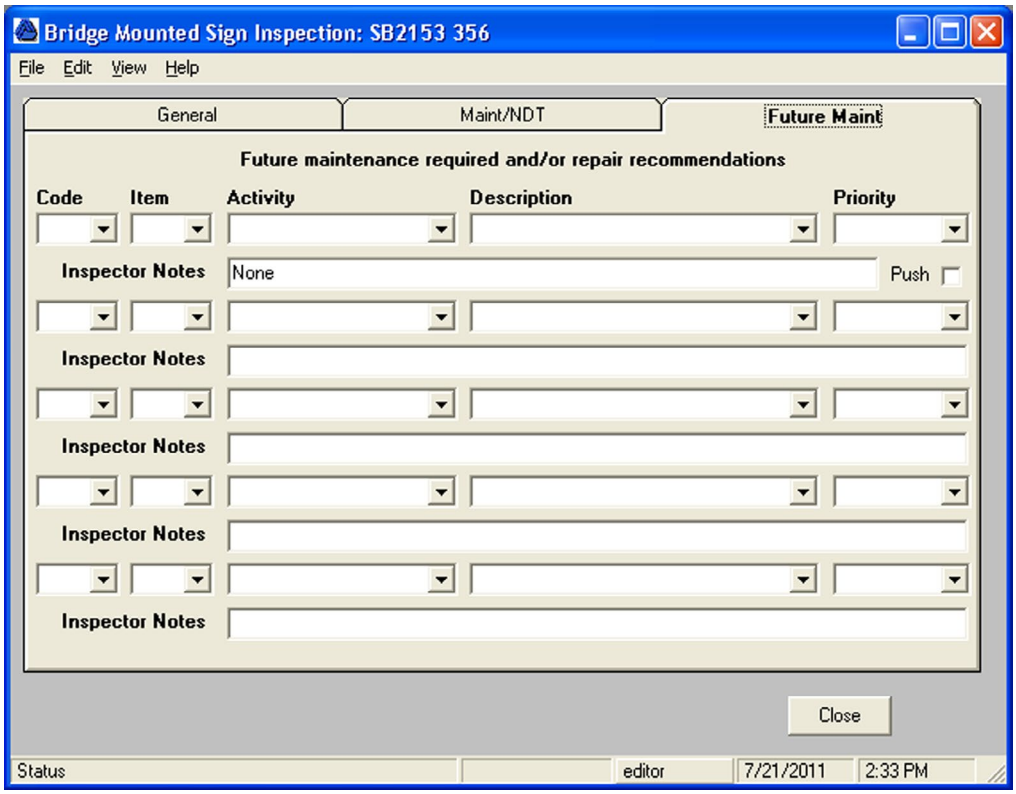
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the elements of the Bridge Mounted Sign during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comments** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

BRIDGE MOUNTED SIGN INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the elements of the Bridge Mounted Sign.

If no maintenance repairs are recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the structure's elements and the structure itself.

Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

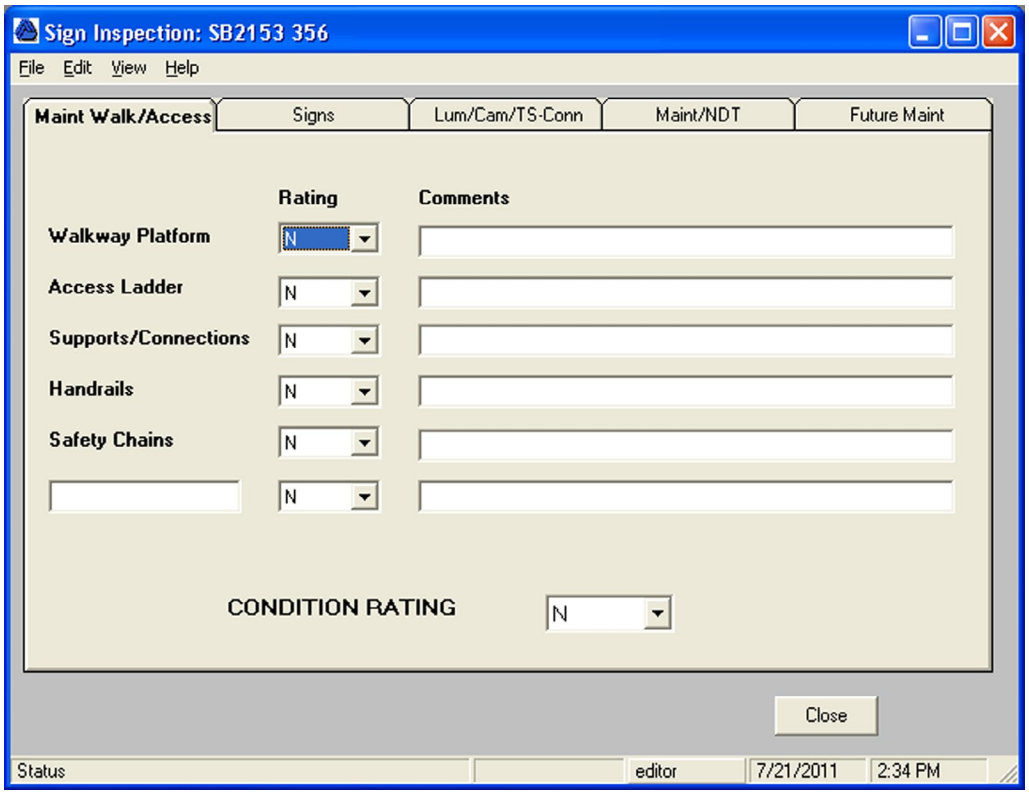
Inspector Notes

Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

SIGN INSPECTION - MAINT WALK/ACCESS



Walkway Platform

Description: This element involves the inspection of the walkway platform present on the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Access Ladder

Description: This element involves the inspection of access ladders present on the structure. This also includes ladder rungs that may be attached directly to the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Supports/Connections

Description: This element involves the inspection of the supports for the maintenance walkway and their connections to the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Handrails

Description: This element involves the inspection of the safety handrails attached to the walkway platform and safety railing around access ladders, including connections.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Safety Chains

Description: This element involves the inspection of safety chains present on the walkway platform and access ladders.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Blank Field

Description: A blank field is provided for the user to enter another element for the Maintenance Walkway/Access system.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

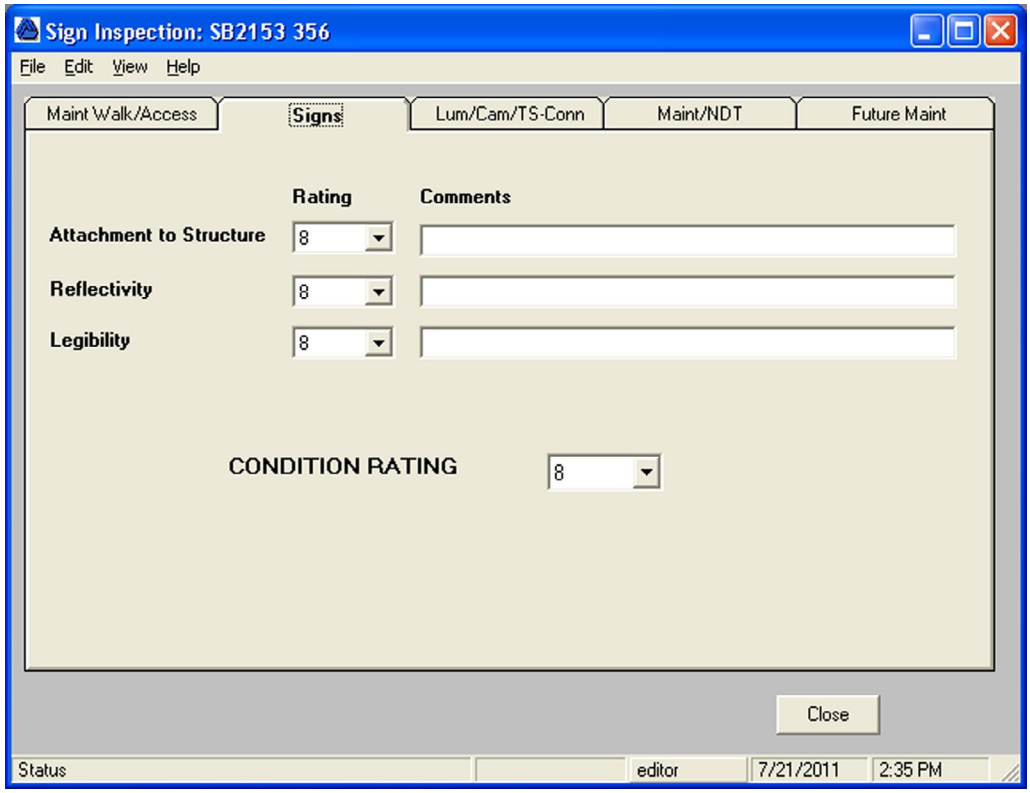
Description: This numerical condition rating should characterize the general condition of the Maintenance Walkway/Access system. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the Maintenance Walkway/Access system.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the members, the element can be considered a "weak link", and the rating of the Maintenance Walkway/Access system should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Maintenance Walkway/Access system. If a Maintenance Walkway/Access system is not present on the structure, all of the elements and the condition rating should be coded "N".

Coding: See **Condition Rating Codes** section of this manual.

SIGN INSPECTION - SIGNS



Note: This tab should also be used for the inspection of Variable Message Sign (VMS) boards.

Attachment to Structure

Description: This element involves the inspection of the sign panel(s) attachment to their supports.

If no sign panels are present, the **Rating** should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Reflectivity

Description: This element involves the condition inspection of the sign panels reflective background and foreground.

If no sign panels are present, the **Rating** should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Legibility

Description: This element involves the condition inspection of the lettering and numbering present on the sign panels.

If no sign panels are present, the **Rating** should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

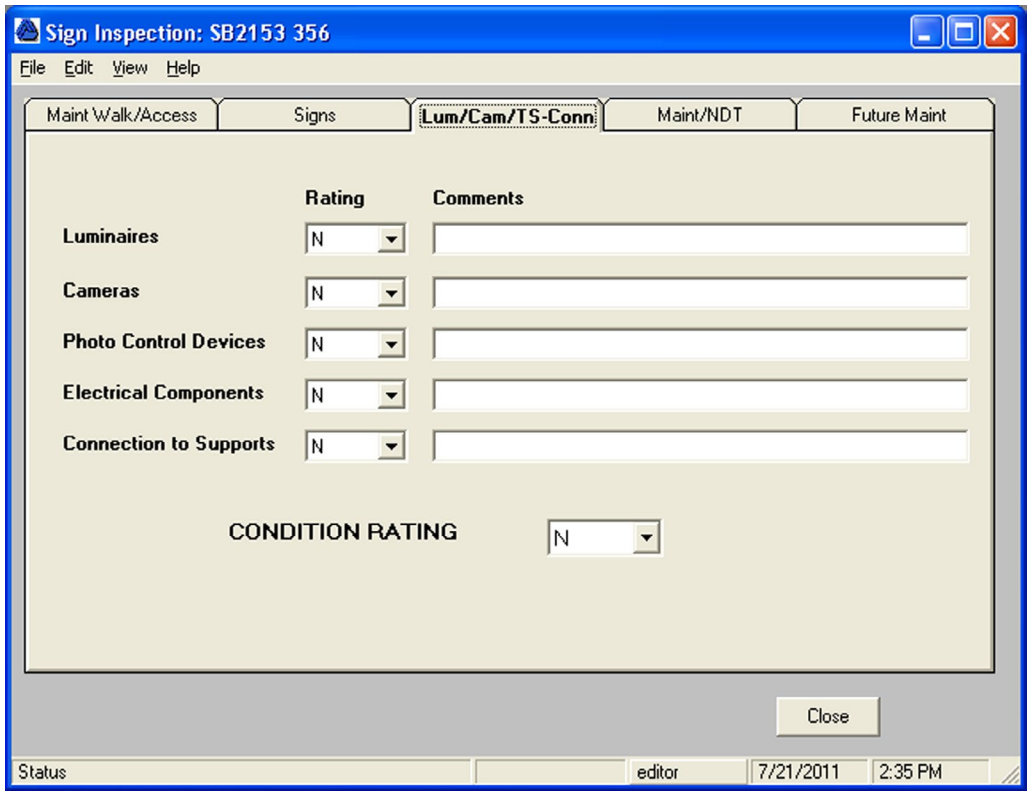
Description: This numerical condition rating should characterize the general condition of the Sign Panels and their connections. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the serviceability of the members, the element can be considered a "weak link", and the rating of the Sign Panels and their connections should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Sign Panels and their connections. If elements of the Signs are not present on the structure, the elements should be coded "N".

Coding: See **Condition Rating Codes** section of this manual.

SIGN INSPECTION - LUM/CAM/TS-CONN



Luminaires

Description: This element involves the inspection of the lighting present on the structure. This element is not applicable for highway lighting.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Cameras

Description: This element involves the inspection of the camera mounted on the structure or a mast arm.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Photo Control Devices

Description: This element involves the inspection of photo control devices present on the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Electrical Components

Description: This element involves the inspection of visible electrical components associated with luminaires, cameras and photo control devices. This includes conduits, connections to devices, etc.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Connection to Supports

Description: This element involves the inspection of the connections of the luminaires, cameras and photo control devices to their respective supports.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

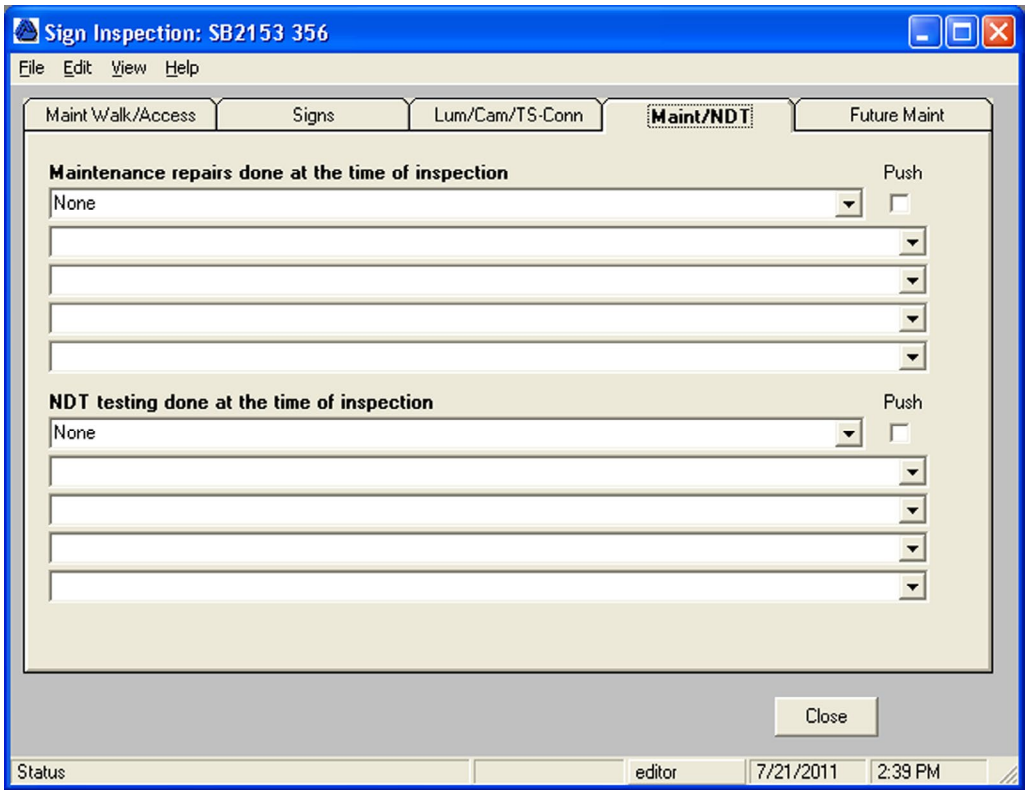
Description: This numerical condition rating should characterize the general condition of the Luminaire/Camera/Traffic Signal. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the serviceability of the members, then the element can be considered a "weak link", and the rating of the Luminaire/Camera/Traffic Signal should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Luminaire/Camera/Traffic Signal. If elements of the Luminaire/Camera/Traffic Signal are not present on the structure, the elements should be coded "N".

Coding: See **Condition Rating Codes** section of this manual.

SIGN INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the elements of the Maint Walk/Access, Signs and Lum/Cam/TS-Conn during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

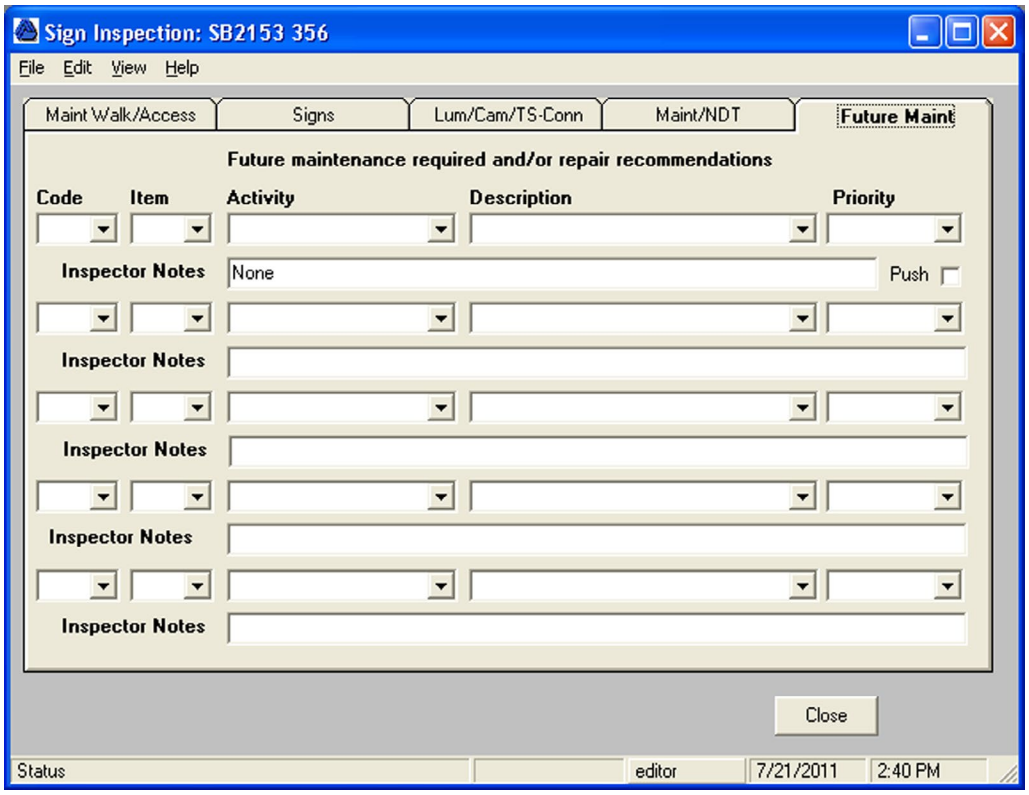
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the elements of the Maint Walk/Access, Signs and Lum/Cam/TS-Conn during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

SIGN INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the elements of the Maint Walk/Access, Signs and Lum/Cam/TS-Conn.

If no maintenance repairs are recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure's component..

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the component's elements.

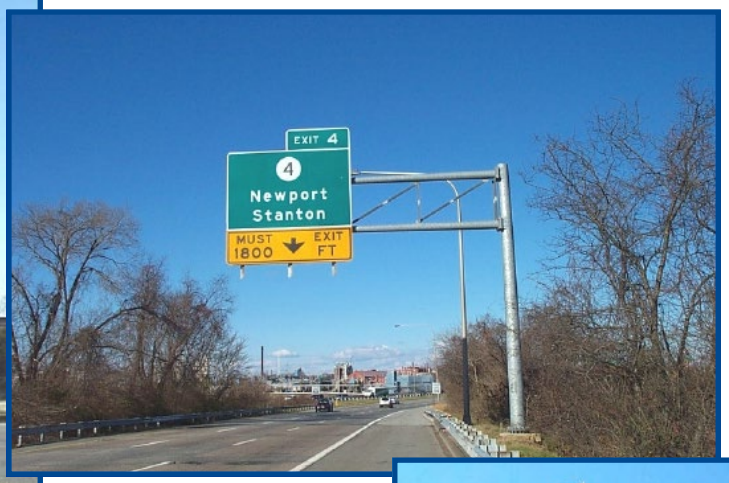
Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

Inspector Notes

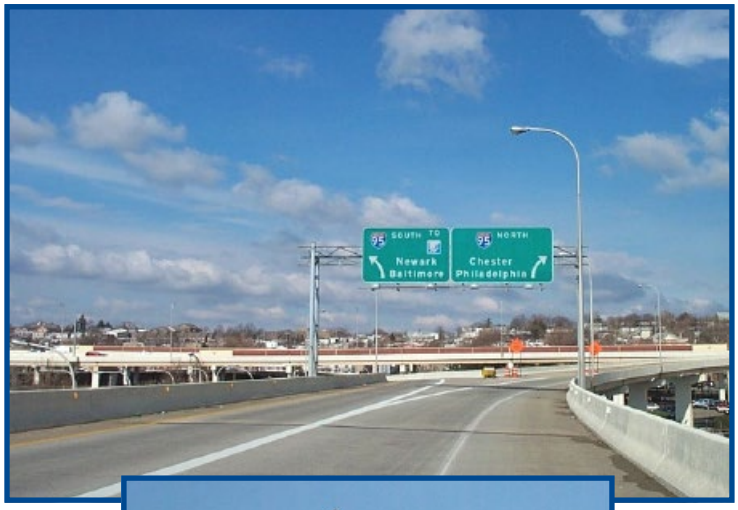
Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.


EXIT 4
4
Newport
Stanton
MUST
1800
EXIT
FT

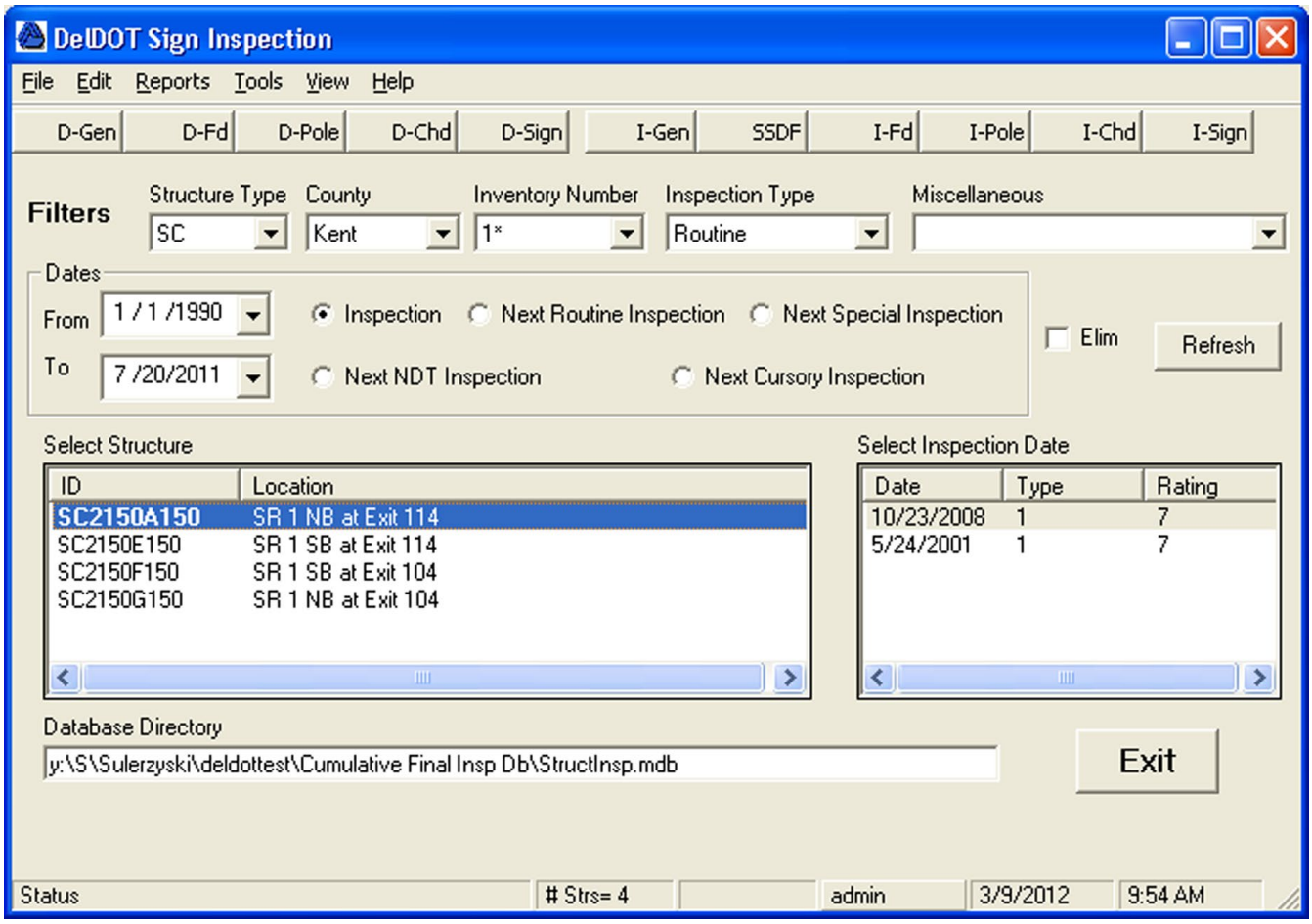
E-ZPass
DEDICATED
LANE
USE FLASHING
NO CASH


95 SOUTH TO
Newark
Baltimore
95 NORTH
Chester
Philadelphia

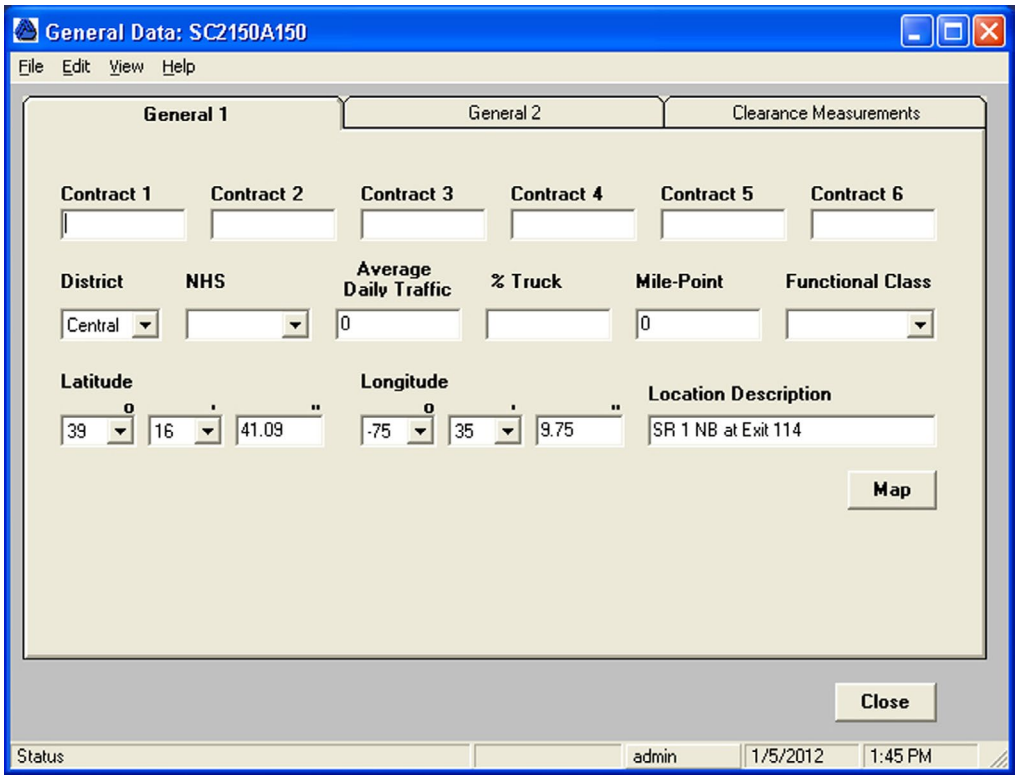
95 SOUTH
Del. Mem. Bridge

SC - CANTILEVER SIGN STRUCTURE

STRUCTURE DATA



GENERAL DATA - GENERAL 1



Contract 1 to Contract 6

Description This is an alpha-numeric field used to record up to six DelDOT Contract Numbers associated with the construction and/or rehabilitation of the structure.

Coding: None

District

Description: From the pull down menu, select the district in which the structure is located.

Coding:

1 = North	PA Line to the C & D Canal
2 = Central	C & D Canal to the Sussex County Line
3 = South	All of Sussex County

NHS

From the pull down menu, indicate whether or not the structure is located on a National Highway System (NHS).

Average Daily Traffic

To be inputted by consultant using most recent DelDOT Traffic Summary Book.

% Truck

To be inputted by consultant using most recent DelDOT Traffic Summary Book.

Mile-Point

To be provided by DelDOT and inputted by consultant.

Functional Class

To be inputted by consultant using most recent DelDOT Traffic Summary Book.

Latitude

Description: Enter the latitude of the structure in degrees, minutes and seconds to 1-meter accuracy.

The GPS data shall be taken at the foundation support in the direction of traffic. If the GPS data cannot be obtained, then it shall be taken at an offset to the support and noted.

Coding: The degrees and minutes may be chosen from the pull down menu. The seconds must be entered manually.

Longitude

Description: Enter the longitude of the structure in degrees, minutes and seconds to 1-meter accuracy.

The GPS data shall be taken at the foundation support in the direction of traffic. If the GPS data cannot be obtained, then it shall be taken at an offset to the support and noted.

Coding: The degrees and minutes may be chosen from the pull down menu. The seconds must be entered manually.

Location Description

Description: This is an alpha-numeric field used to describe the location of the structure. The location should provide the name of a State Route or Interstate and an intersecting feature.

For Example:

I-95 NB at Exit 4
SR 141 NB at US 202
South College Avenue at Delaware Avenue

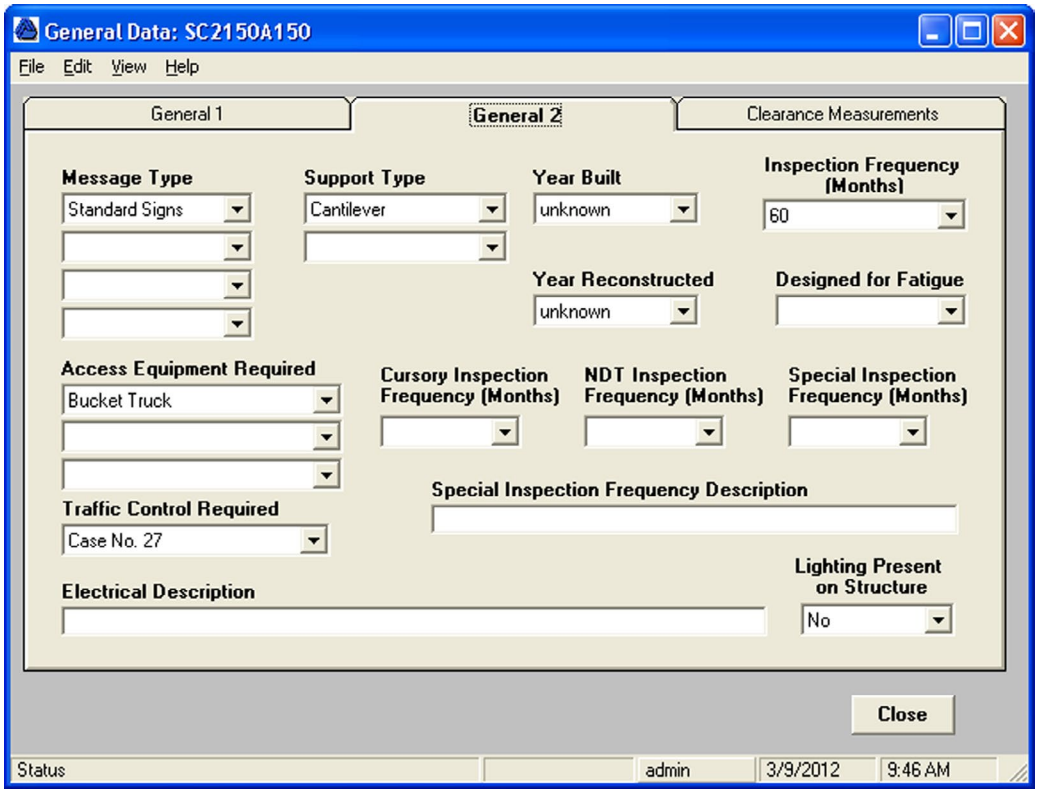
Coding: None

Map

Description: Click the button to map the location of the structure based on its GPS data.

Coding: None

GENERAL DATA - GENERAL 2



Message Type

Description: From the pull down menus, select up to four types of messages that are directly or indirectly connected to the structure.

Coding:
1 = Standard Signs
2 = Variable Message
3 = Ring – Type Light
4 = Stadium – Type Light
5 = Traffic Signal
6 = Firehouse Signal
7 = School Signal
8 = Signal Sign(s)
9 = Camera
10 = Directional/Lane Control
11 = Luminaire (Highway Lighting)
12 = Utility Lines
13 = Railroad Crossing Signal(s)
14 = Flashers
15 = Other
16 = Not Applicable
17 = Overheight Sensors

Support Type

Description: From the pull down menus, select up to two types of supports that describe how each **primary message type** is connected to the structure. Primary message types include Standard Signs, Variable Message and Camera.

Coding:
1 = Cantilever
2 = Butterfly
3 = Overhead Span
4 = Bridge Mounted
5 = Sign Bridge Cantilever
6 = Pole Mounted
7 = Span Wire Mounted
8 = Other

Year Built

Description: From the pull down menu, select the year that the structure was originally constructed. If the year is not available, "Unknown" should be coded.

Coding: None

Year Reconstructed

Description: From the pull down menu, select the latest year that the structure was rehabilitated. If the year is not available, "Unknown" should be coded.

Coding: None

Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure inspection in months.

Coding: None

Designed for Fatigue

To be input by DelDOT.

Access Equipment Required

Description: From the pull down menus, select up to three different types of equipment required in order to perform the inspection.

Coding:
1 = Lift Van
2 = Bucket Truck
3 = Snooper
4 = Crane Truck

5 = Railroad Permit/Equipment
6 = None

Cursory Inspection Frequency (Months)
Description: From the pull down menu, select the frequency of the structure's cursory inspection in months.

Coding: None

NDT Inspection Frequency (Months)
Description: From the pull down menu, select the frequency of the structure's NDT inspection in months.

Coding: None

Special Inspection Frequency (Months)
Description: From the pull down menu, select the frequency of the structure's special inspection in months.

Coding: None

Special Inspection Frequency Description
Description: This is an alpha-numeric field used to comment on the type of special inspection required for the structure and reason why it was performed.

Coding: None

Traffic Control Required
Description: From the pull down menu, select the traffic control equipment or DelDOT Traffic Control Case required to perform the inspection.

Coding:
1 = Cones
2 = Signs
3 = Lane Closure(s)
4 = Case No. 16
5 = Case No. 26
6 = Case No. 27
7 = Case No. 28
8 = Case No. 29
9 = None
10 = Cones & Signs
11 = Case No. 20
12 = Case No. 16 (modified)
13 = Case No. 20 (modified)
14 = Case No. 26 (modified)
15 = Case No. 27 (modified)
16 = Case No. 28 (modified)
17 = Case No. 29 (modified)
18 = Case No. 36
19 = Case No. 36 (modified)
20 = Case No. 14
21 = Case No. 14 (modified)
22 = Case No. 3
23 = Case No. 3 (modified)
24 = Case No. 2
25 = Case No. 2 (modified)
26 = Case No. 34
27 = Case No. 34 (modified)

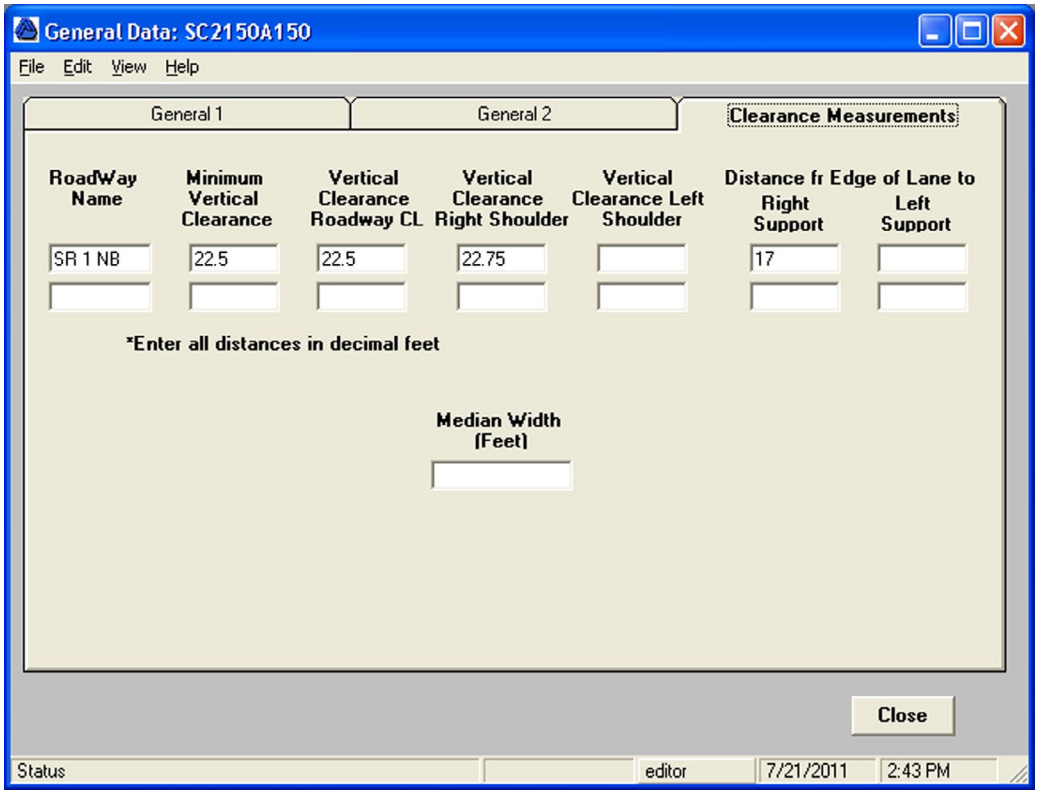
Electrical Description
Description: This is an alpha-numeric field used to record general comments regarding the electrical items on or around the structure.

Coding: None

Lighting Present on Structure
Description: From the pull down menu, select whether or not lighting is present on the structure. If highway luminaire lighting is attached to the structure, this item should be coded "Yes".

Coding:
1 = Yes
2 = No
3 = Not Visible

GENERAL DATA - CLEARANCE MEASUREMENTS



Note: Clearances can be entered for up to two roadways. Each roadway can have its own set of clearances.

Roadway Name

Description: This is an alpha-numeric field used to record the name of the roadway where the measurements have been taken.

Coding: None

Minimum Vertical Clearance

Description: Enter the Minimum Vertical Clearance, in decimal feet, for the structure.

Coding: None

Vertical Clearance - Roadway CL

Description: Enter the vertical clearance, in decimal feet, from the centerline of roadway to the underside of the structure at that location. If the structure does not span over a traveled roadway, this field should be left blank.

Coding: None

Vertical Clearance - Right Shoulder

Description: Enter the vertical clearance, in decimal feet, from the roadway's right shoulder to the underside of the structure at that location. If the structure does not span over the right shoulder, this field should be left blank.

Coding: None

Vertical Clearance - Left Shoulder

Description: Enter the vertical clearance, in decimal feet, from the roadway's left shoulder to the underside of the structure at that location. If the structure does not span over the left shoulder, this field should be left blank.

Coding: None

Distance fr Edge of Lane to - Right Support

Description: Enter the horizontal distance, in decimal feet, from the edge of the right travel lane to the centerline of the structure's right foundation.

In the case of a median support, if the **Distance fr Edge of Lane to – Left Support** measurement is entered, this field should be left blank.

If the structure has no right support, this field should be left blank.

Coding: None

Distance fr Edge of Lane to - Left Support

Description: Enter the horizontal distance, in decimal feet, from the edge of the left travel lane to the centerline of the structure's left foundation.

In the case of a median support, if the **Distance fr Edge of Lane to – Right Support** measurement is entered, this field should be left blank.

If the structure has no left support, this field should be left blank.

Coding: None

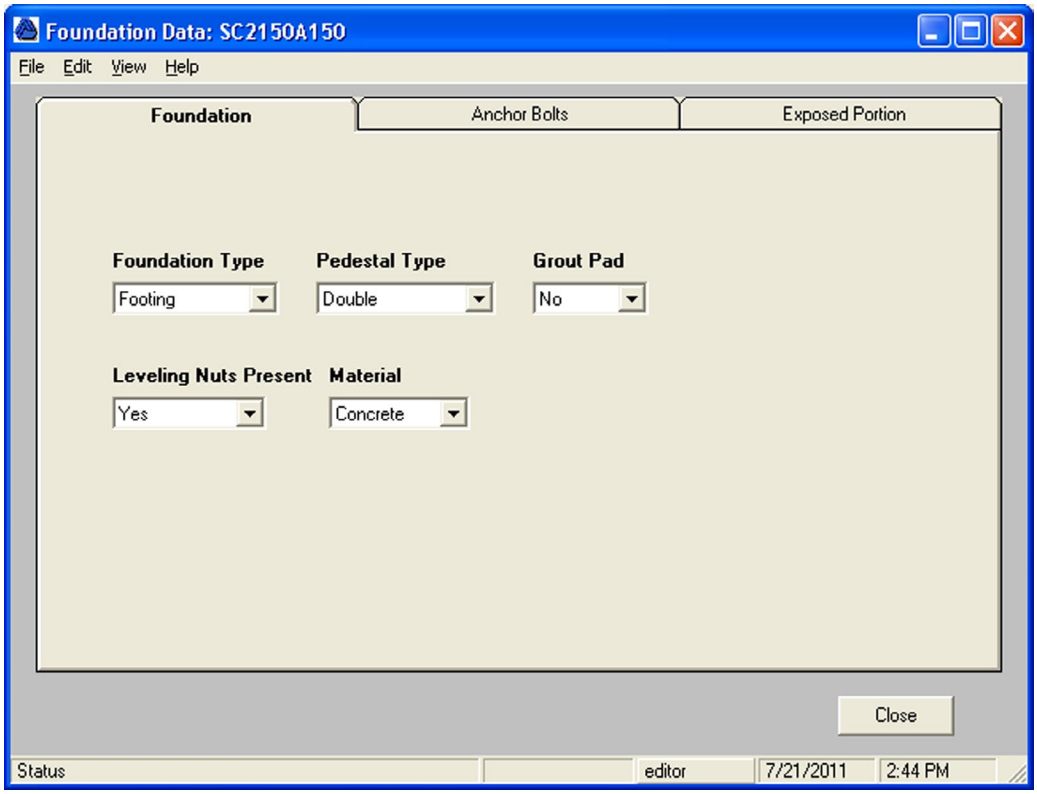
Median Width (Feet)

Description: Enter the horizontal distance, in decimal feet, between the inside edges of adjacent travel lanes.

This field is only applicable if the Cantilever Sign Structure is located in a median area; otherwise, this field should be left blank.

Coding: None

FOUNDATION DATA - FOUNDATION



Foundation Type

Description: From the pull down menu, select the type of exposed foundation present for the structure. If the foundation is buried and cannot be determined, this field should be coded "Unknown".

Coding: 1 = Footing
2 = Caisson
3 = Bracket (Examples: Attachment to a Bridge Girder or Retaining Wall)
4 = Other
5 = Not Applicable
6 = Unknown

Pedestal Type

Description: From the pull down menu, select the type of exposed pedestal foundation present.

A single pole support will have a "Single" pedestal foundation.

A double pole support may have a "Double" pedestal foundation, which means that each pole has its own exposed foundation. The double pole support may also have a "Single" pedestal foundation, which means that both poles are supported by the same exposed foundation.

A "Single/Double" pedestal foundation is applicable only for Overhead Sign Structures.

Coding: 1 = Single
2 = Double
3 = Single/Double

Grout Pad

Description: From the pull down menu, select whether or not a grout pad exists between the base plate(s) and the top of the foundation.

If the foundation is buried and the presence of a grout pad cannot be determined, "Not Visible" should be coded.

If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Yes
2 = No
3 = Not Visible

Leveling Nuts Present

Description: From the pull down menu, select whether or not there are leveling nuts present underneath the base plate(s).

If the foundation is buried or there is a grout pad present such that the presence of leveling nuts cannot be determined, "Not Visible" should be coded.

If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Yes
2 = No
3 = Not Visible

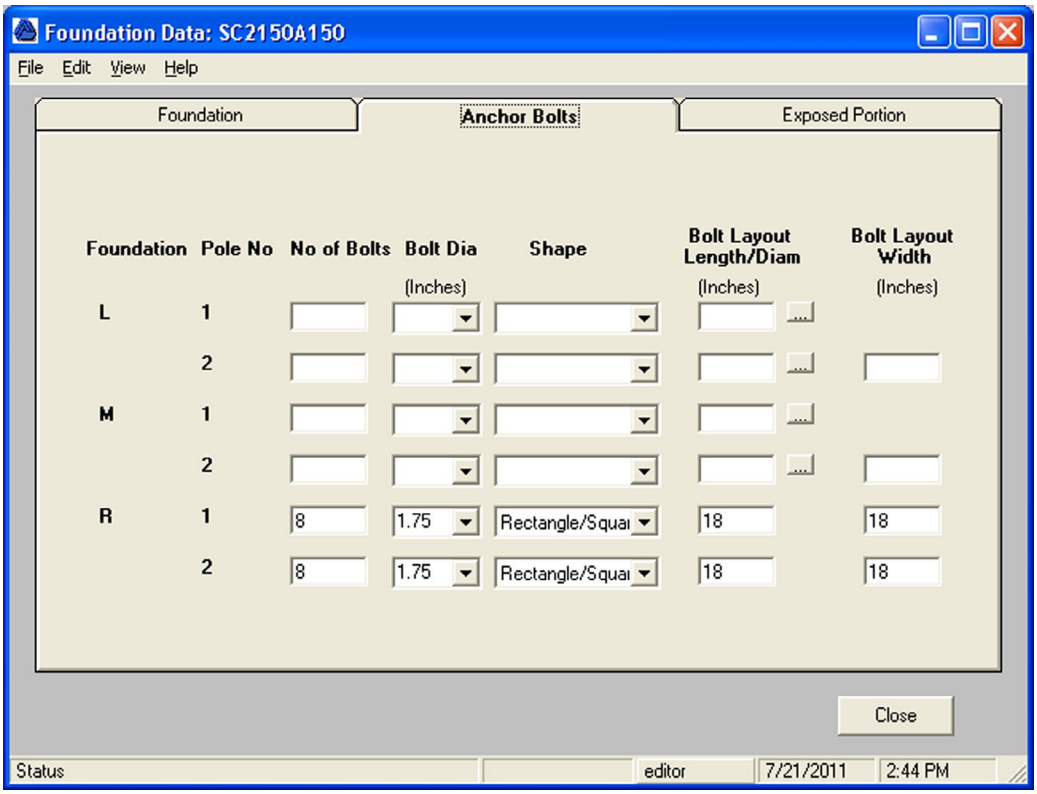
Material

Description: From the pull down menu, select the material that was used to construct the exposed foundation(s).

If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Steel
2 = Concrete
3 = Aluminum
4 = Timber
5 = Weathering Steel
6 = Other

FOUNDATION DATA - ANCHOR BOLTS



Foundation - L, M and R

Description: Anchor bolt information shall be entered for the applicable foundation.

The left foundation is labeled as Foundation "L".

The median foundation is labeled as Foundation "M".

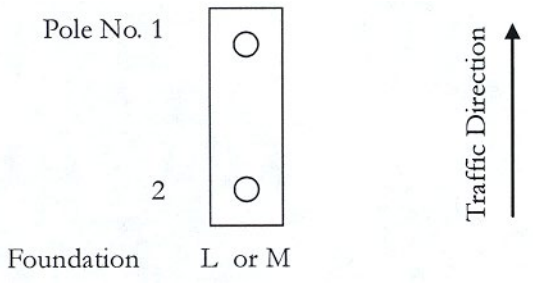
The right foundation is labeled as Foundation "R".

Pole No - 1 and 2

Description: Anchor bolt information can be entered for up to two pole supports.

If only one pole support is present, data for **Pole No 1** should be entered for the respective foundation.

If two pole supports are present, data for **Pole No 1** and **2** should be entered for the respective foundation. **Pole No 2** faces oncoming traffic, while **Pole No 1** is in the back.



No of Bolts

Description: Enter the number (integer) of anchor bolts for each pole support. If the number of anchor bolts cannot be determined or the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

Bolt Dia (Inches)

Description: From the pull down menu, select the diameter of the anchor bolts present at each pole support. If the diameter cannot be determined or the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

Shape

Description: From the pull down menus, select the shape of the anchor bolt layout. If the anchor bolt layout cannot be determined, this field should be coded "Unknown". If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

Bolt Layout - Length/Diam (Inches)

Description: Enter the length in the direction of traffic or diameter (in inches) of the anchor bolt layout. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

If the anchor bolt layout Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

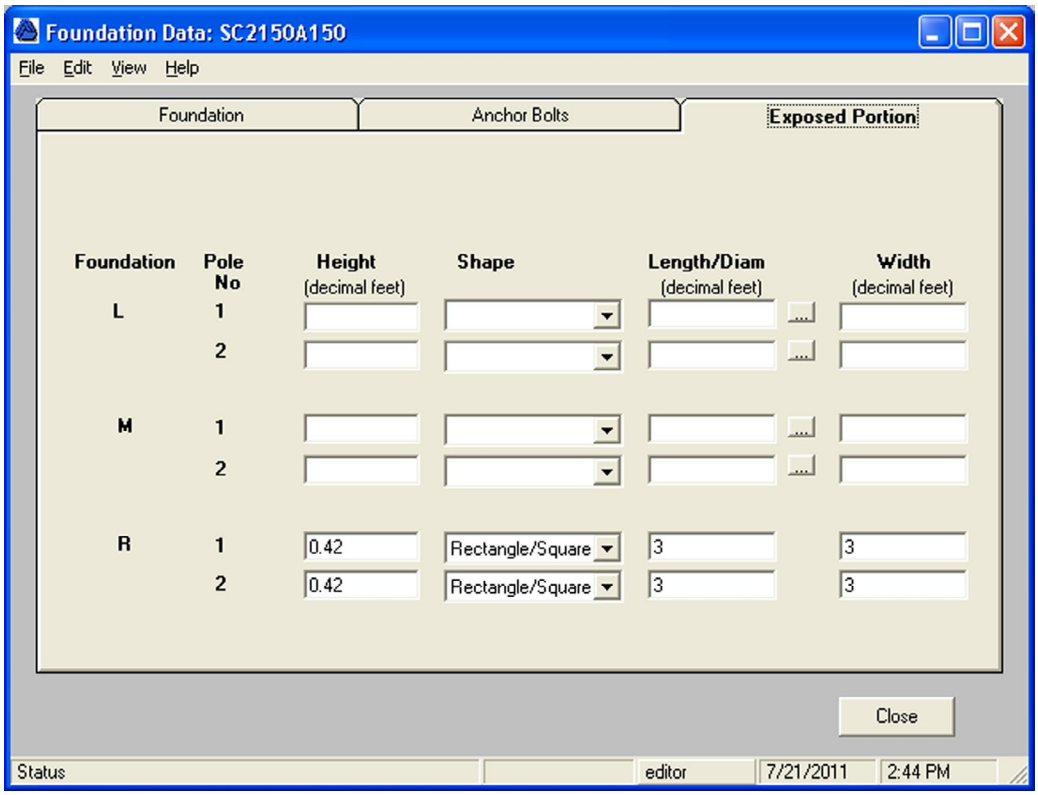
Bolt Layout - Width (Inches)

Description: Enter the width (in inches) of the anchor bolt layout.

If the anchor bolt layout Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank. Note that this field is only activated for certain anchor bolt layout shapes.

Coding: None

FOUNDATION DATA - EXPOSED PORTION



Foundation - L, M and R

Description: All relevant information shall be entered for the applicable foundation.

The left foundation is labeled as Foundation "L".

The median foundation is labeled as Foundation "M".

The right foundation is labeled as Foundation "R".

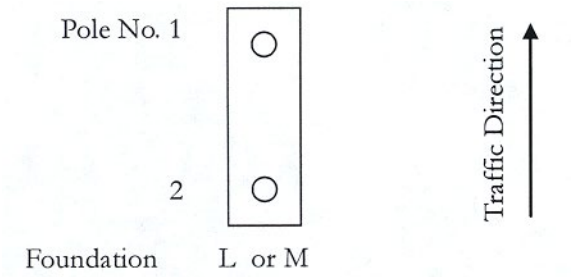
Pole No - 1 and 2

Description: Data can be entered for up to two foundations at one location.

If the **Pedestal Type** chosen is "Single" in the **Foundation** tab, **Pole No 1's** data should be entered for the respective foundation.

If the **Pedestal Type** chosen is "Double or Single/Double" in the **Foundation** tab, both **Pole No 1** and **2** data should be entered for the respective foundation.

Pole No 2 faces oncoming traffic, while **Pole No 1** is in the back.



Height (decimal feet)

Description: Enter the height (in decimal feet) above the ground of the exposed portion of each foundation. If the height above ground is not constant, an average value should be used. If the foundation is buried, 0 should be coded. If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

Shape

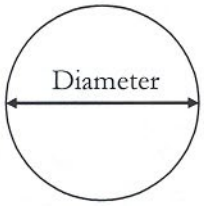
Description: From the pull down menu, select the shape of each exposed foundation. If the foundation's shape cannot be determined, this field should be coded "Unknown". If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

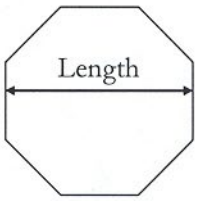
Length/Diam (decimal feet)

Description: Based on the plan illustrations below, enter the length in the direction of traffic or diameter (in decimal feet) of the exposed foundation. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in decimal feet.

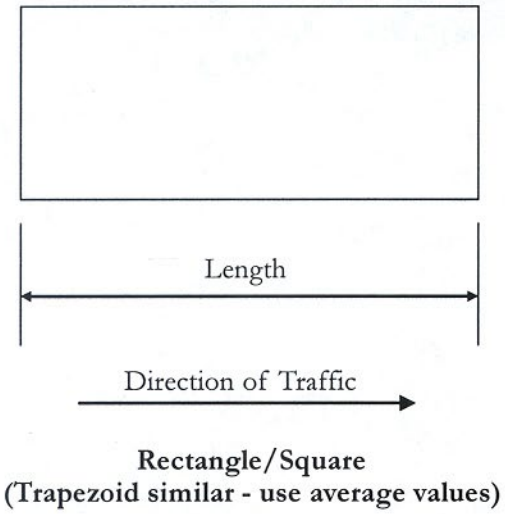
If the Foundation's Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank.



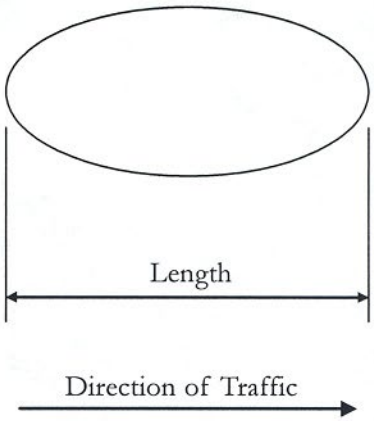
Circle or Fluted



Octagon
(Hexagon & Pentagon similar)



Rectangle/Square
(Trapezoid similar - use average values)



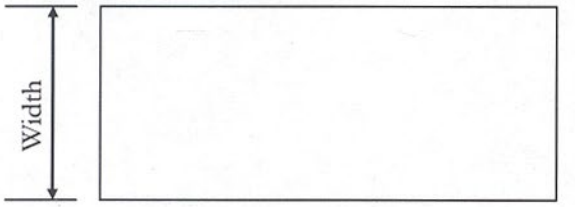
Ellipse

Coding: None

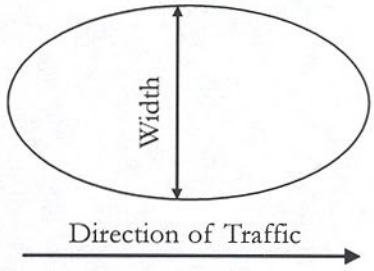
Width (decimal feet)

Description: Based on the plan illustrations below, enter the width (in decimal feet) of the exposed foundation.

If the Foundation's Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank. Note that this field is activated only for certain foundation shapes.



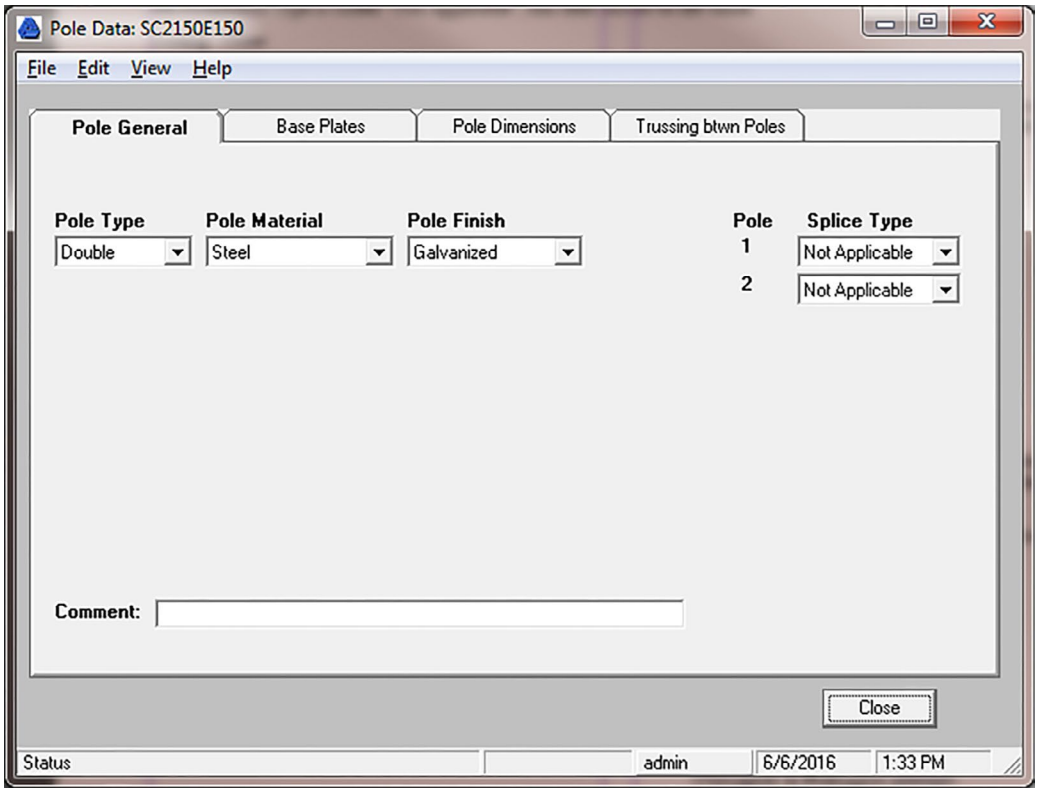
Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

Coding: None

POLE DATA - POLE GENERAL



Pole Type

Description: From the pull down menu, select the type of pole(s) present on the structure.

Coding: 1 = Single
2 = Double
3 = Single/Double
4 = Not Applicable

Pole Material

Description: From the pull down menu, select the material composition of the pole(s). If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Steel
2 = Concrete
3 = Aluminum
4 = Timber
5 = Weathering Steel
6 = Other

Pole Finish

Description: From the pull down menu, select the finish that was applied to the pole(s) material. If the pole(s) material is coded "Aluminum or Timber", the pole(s) finish should be coded "Not Applicable".

If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Galvanized
2 = Painted
3 = Weathering Steel
4 = Other
5 = Not Applicable

Splice Type

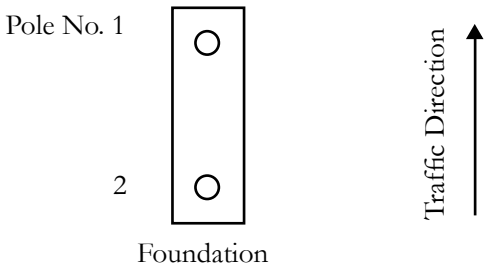
Description: From the pull down menu, select the type of horizontal splice, if applicable, that is present on the pole(s).

If the Pole Type chosen is **Single**, the field for Pole 1 is activated.

If the Pole Type chosen is **Double**, the field for Pole 1 and 2 is activated.

If the Pole Type is coded "Not Applicable", this field should be left blank.

Pole No 2 faces oncoming traffic, while **Pole No 1** is in the back.



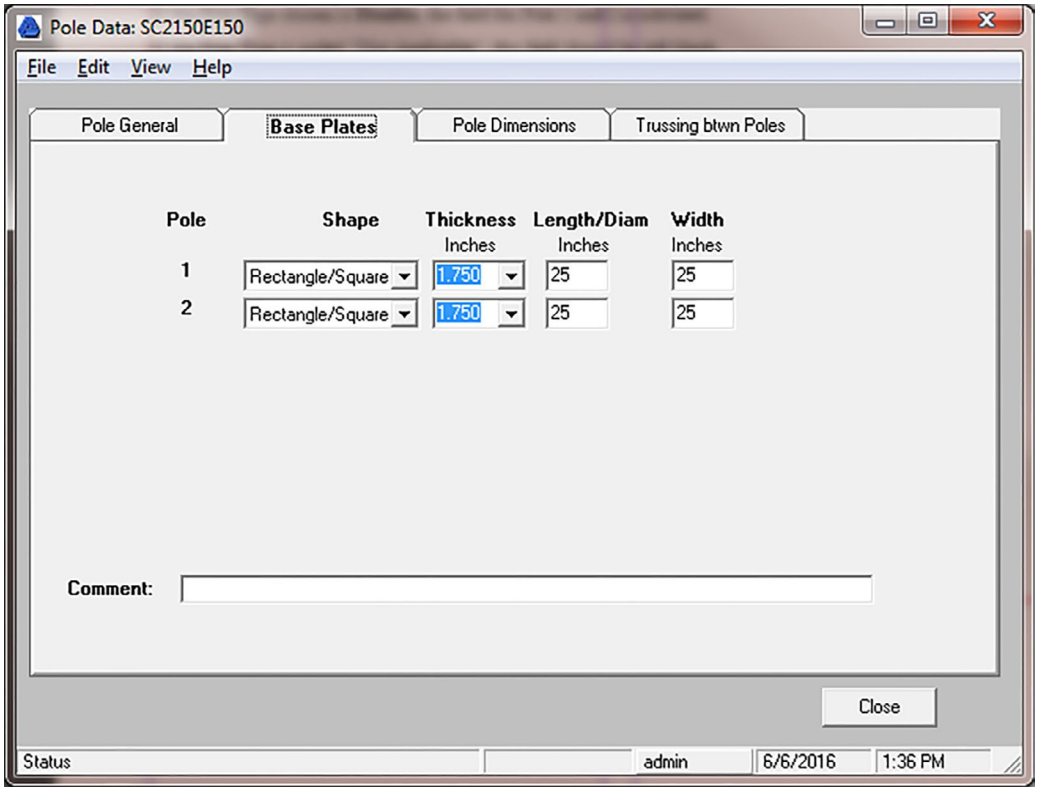
Coding: 1 = Welded
2 = Bolted
3 = Sleeved/Telescoping Joint
4 = Not Applicable

Comment:

Description: This field allows the inspector to enter any additional information.

Coding: None

POLE DATA - BASE PLATES



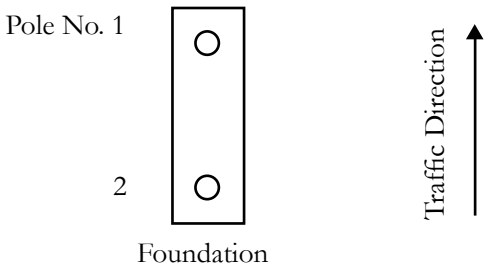
Pole - 1 and 2

Description: Data can be entered for individual base plates attached to one or two poles.

If the Pole Type chosen is **Single** in the **Pole General** tab, the fields for Pole 1 are activated.

If the Pole Type chosen is **Double** in the **Pole General** tab, the fields for Pole 1 and 2 are activated.

Pole No 2 faces oncoming traffic, while **Pole No 1** is in the back.



Shape

Description: From the pull down menu, select the shape of each base plate. If the base plate shape cannot be determined, this field should be coded "Unknown".

If the pole or foundation type is coded "Not Applicable" or the pole extends into the ground, as in the case of a timber utility pole, this field should be left blank.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

Thickness - Inches

Description: From the pull down menu, select the thickness of each base plate in inches.

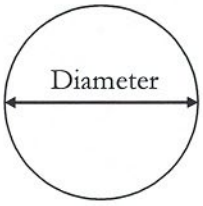
If the thickness cannot be determined, the Pole or Foundation Type is coded "Not Applicable" or the pole extends into the ground, as in the case of a timber utility pole, this field should be left blank.

Coding: None

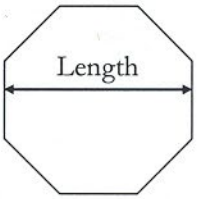
Length/Diam - Inches

Description: Based on the illustrations shown below, enter the length in the direction of traffic or diameter (in inches) of each base plate in plan. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

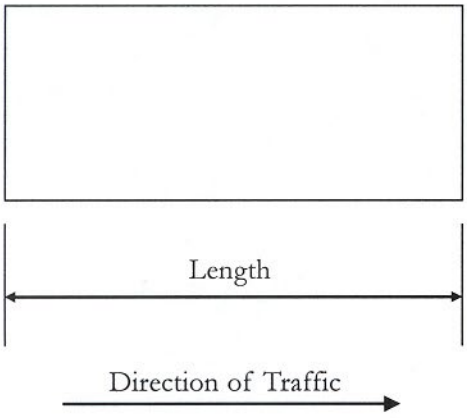
If the base plate shape is coded "Unknown" or the field is left blank, or the Pole or Foundation Type is coded "Not Applicable", this field should be left blank.



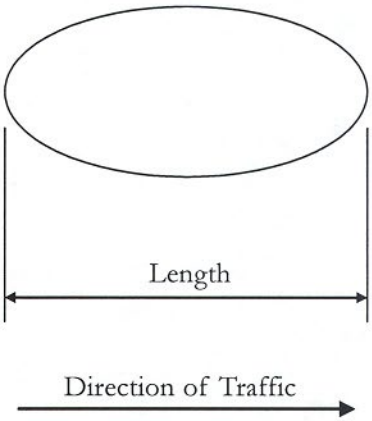
Circle or Fluted



Octagon
(Hexagon & Pentagon similar)



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

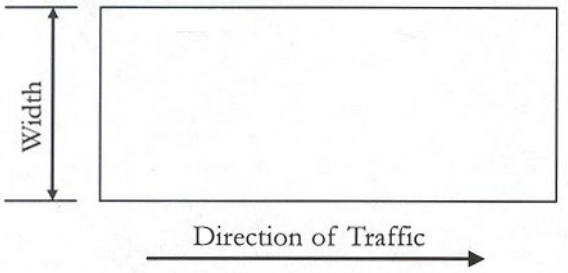
Coding: None

Width - Inches

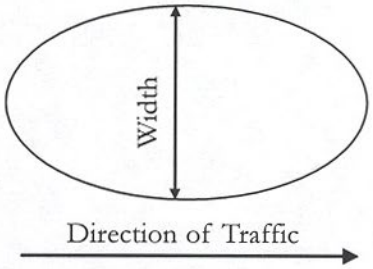
Description: Based on the illustrations shown below, enter the width (in inches) of each base plate in plan.

If the base plate shape is coded "Unknown" or the field is left blank, or the Pole or Foundation type is coded "Not Applicable", this field should be left blank.

Note that this field is only activated for certain base plate shapes.



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

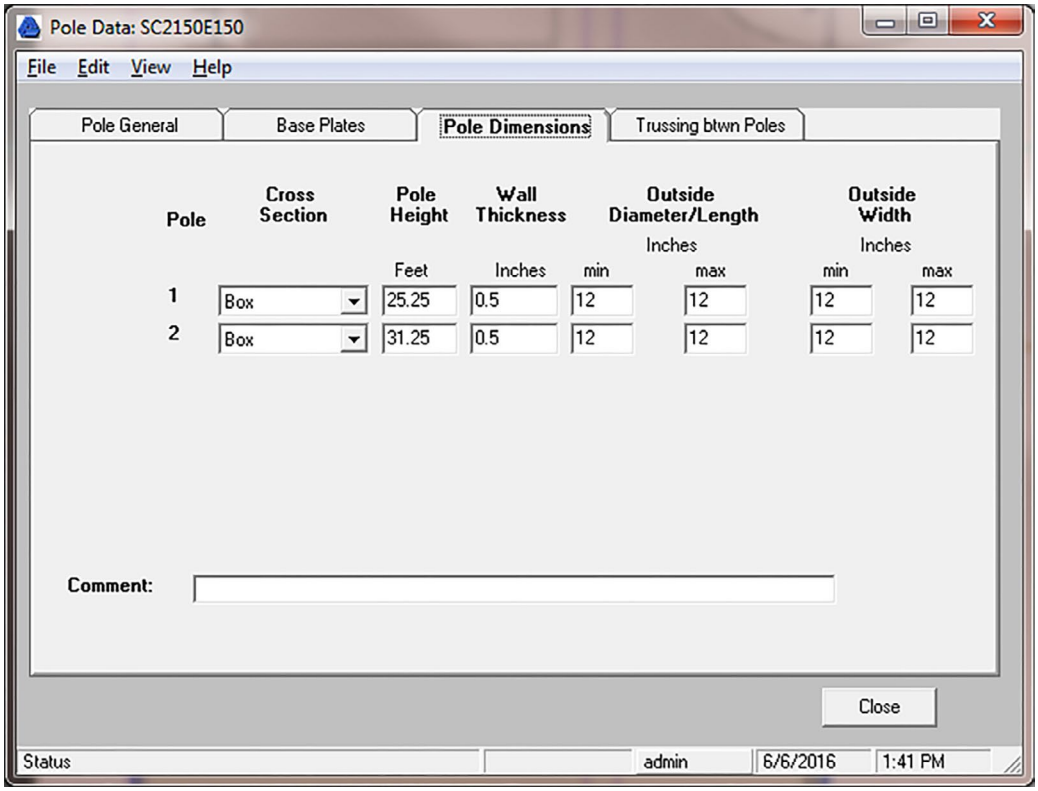
Coding: None

Comment:

Description: This field allows the inspector to enter any additional information.

Coding: None

POLE DATA - POLE DIMENSIONS



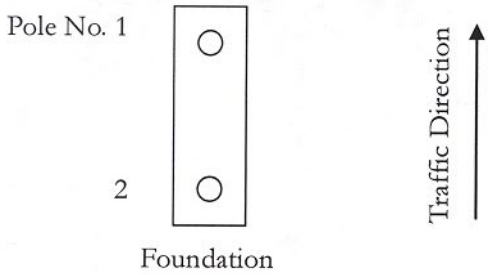
Pole - 1 and 2

Description: Data can be entered for one or two poles.

If the Pole Type chosen is **Single** in the **Pole General** tab, the fields for Pole 1 are activated.

If the Pole Type chosen is **Double** in the **Pole General** tab, the fields for Pole 1 and 2 are activated.

Pole No 2 faces oncoming traffic, while **Pole No 1** is in the back.



Cross Section

Description: From the pull down menu, select the cross section of each pole. If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Circular
2 = Box
3 = Angle
4 = Structural Tee
5 = W-Section
6 = Collar
7 = Other
8 = Pentagon
9 = Hexagon
10 = Octagon
11 = Fluted
12 = Ellipse
13 = Flat Bar
14 = Dodecagon (12 Sided)
15 = Channel
16 = Zee
17 = Hexadecagon (16 Sided)
18 = Tetradecagon (14 Sided)

Pole Height - Feet

Description: Enter, in decimal feet, the vertical height of each pole measured from the top of the base plate to the top of the pole. If the pole extends into the ground, as in the case of a timber utility pole, the measurement is taken from the top of the ground.

If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: None

Wall Thickness - Inches

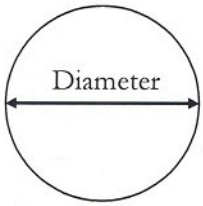
Description: Enter, in decimal inches, the average wall thickness of each vertical pole. If the pole section is solid or the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: None

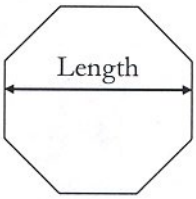
Outside Diameter/Length - Inches

Description: Based on the illustrations shown below, enter the minimum and maximum outside length in the direction of traffic or diameter (in decimal inches) of each pole's cross section. The program will calculate the minimum and maximum outside diameters automatically by clicking on the box next to the input field and entering the circumference in decimal inches.

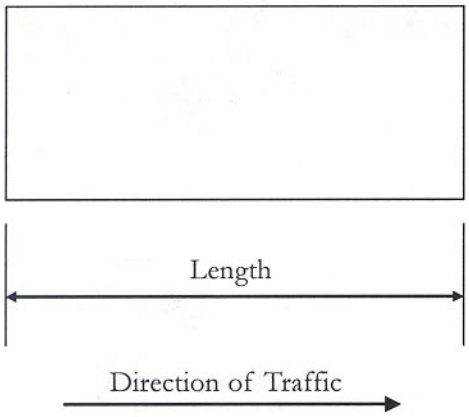
If the Pole Type is coded "Not Applicable", this field should be left blank.



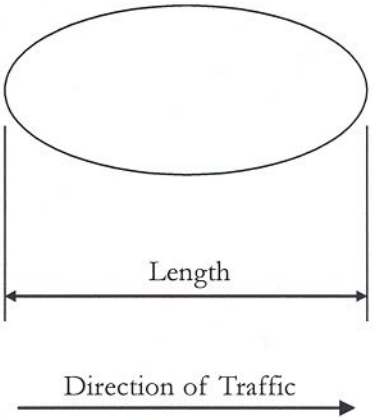
Circle or Fluted



Octagon
(Other Polygon Shapes similar)



Rectangle/Square
(Trapezoid similar - use average values)



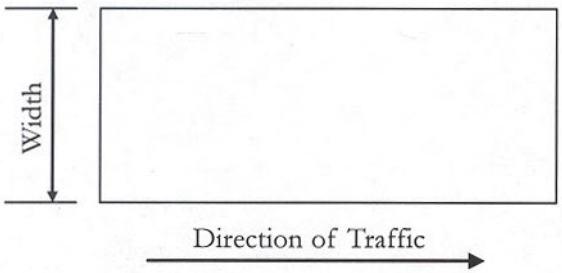
Ellipse

Coding: None

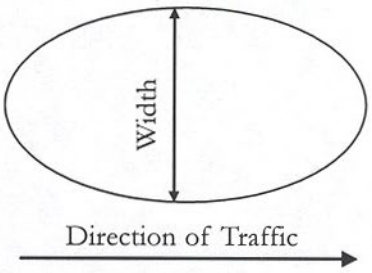
Outside Width - Inches

Description: Based on the illustrations shown below, enter the minimum and maximum outside width (in decimal inches) of each pole's cross section.

If the Pole Type is coded "Not Applicable", this field should be left blank. Note that this field is only activated for certain pole cross sections.



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

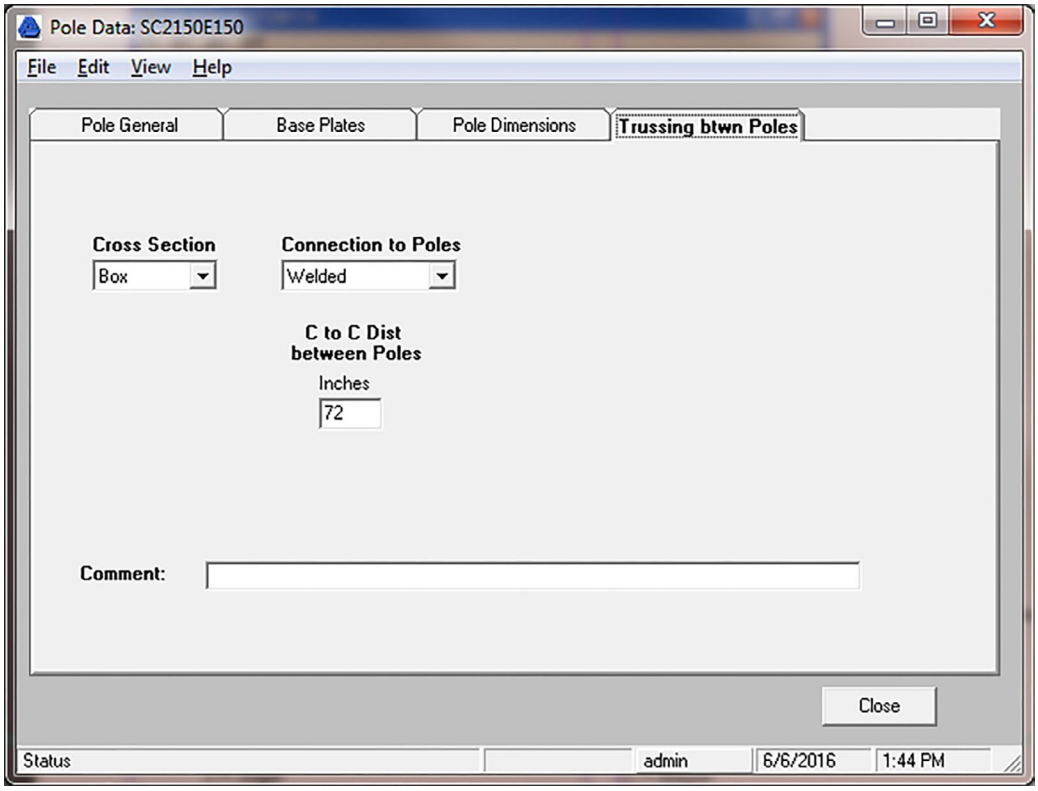
Coding: None

Comment:

Description: This field allows the inspector to enter any additional information.

Coding: None

POLE DATA - TRUSSING BTWN POLES



Note: This page is only activated if the Pole Type chosen is "Double" in the Pole General tab.

Cross Section

Description: From the pull down menu, select the cross section of the trussing (secondary) members between the vertical poles.

If there are no trussing members between the poles, this field should be left blank.

It is assumed that all of the trussing members have the same type of cross section.

Coding:
1 = Circular
2 = Box
3 = Angle
4 = Structural Tee
5 = W-Section
6 = Collar
7 = Other
8 = Pentagon
9 = Hexagon
10 = Octagon
11 = Fluted
12 = Ellipse
13 = Flat Bar
14 = Dodecagon (12 Sided)
15 = Channel
16 = Zee
17 = Hexadecagon (16 Sided)
18 = Tetradecagon (14 Sided)

Connection to Poles

Description: From the pull down menu, select the type of connection used to attach the trussing (secondary) members to the vertical poles.

It is assumed that all of the trussing members have the same type of connection to the poles.

If the trussing members are attached to gusset plates that are attached to the poles, the connection of the gusset plates to the poles should be identified here.

If no trussing members are present, "Not Applicable" should be coded.

Coding: 1 = Welded
2 = Bolted
3 = Sleeved/Telescoping Joint
4 = Not Applicable

C to C Dist between Poles

Description: Enter, in decimal inches, the distance between the centerlines of the vertical poles.

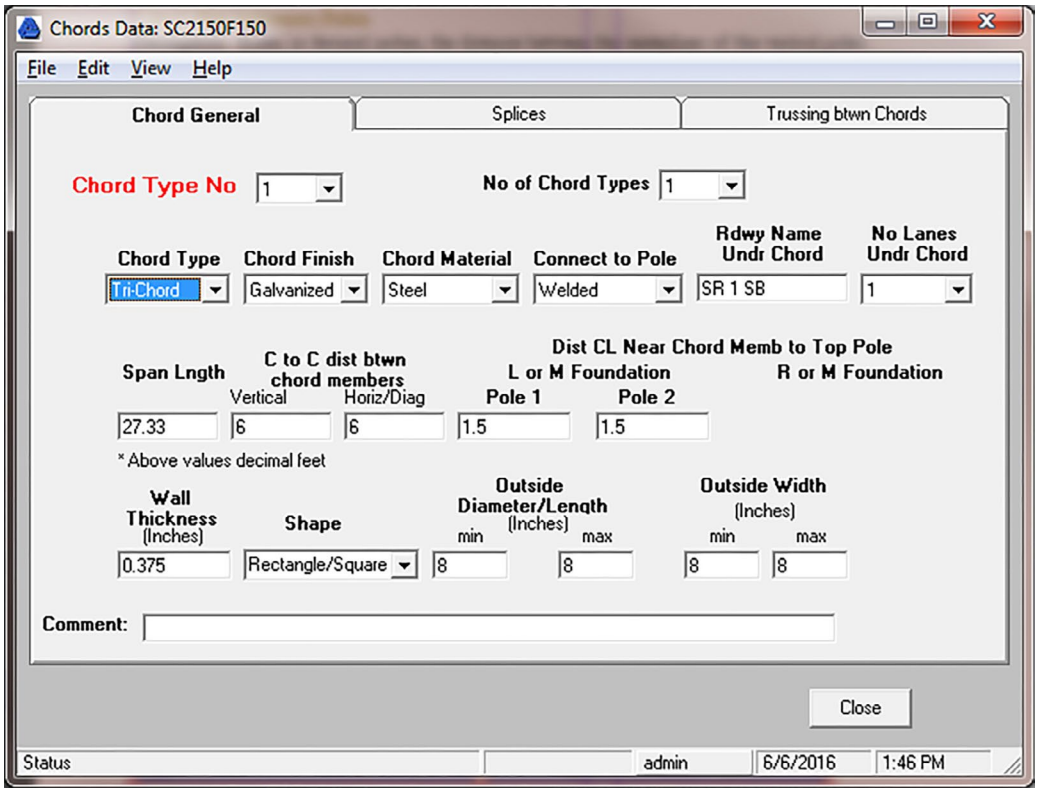
Coding: None

Comment:

Description: This field allows the inspector to enter any additional information.

Coding: None

CHORDS DATA - CHORD GENERAL



Chord Type No

Description: From the pull down menu, select the Chord Type configuration number for which data is being entered.

If **No of Chord Types** = 0, **Chord Type No** = 0.

If **No of Chord Types** = 1, data should be entered for **Chord Type No** 1.

If **No of Chord Types** = 2, data should be entered for both **Chord Type No** 1 and **Chord Type No** 2.

Coding: None

No of Chord Types

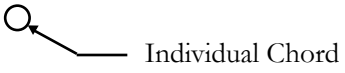
Description: From the pull down menu, select the number of Chord Type configurations present on the structure. Data can be entered for up to two configurations.

Coding: None

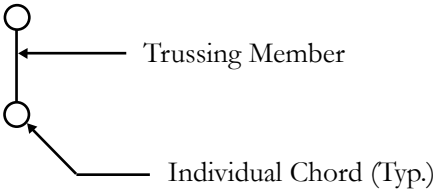
Chord Type

Description: From the pull down menu, select the cross section of the chord type configuration present on the structure.

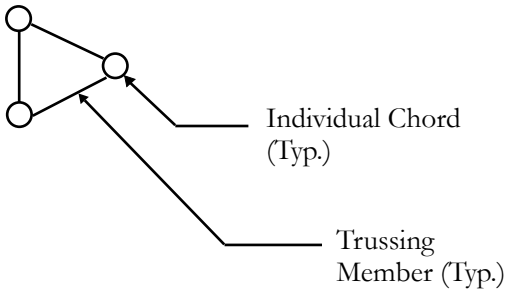
Coding: 1 = Single Chord



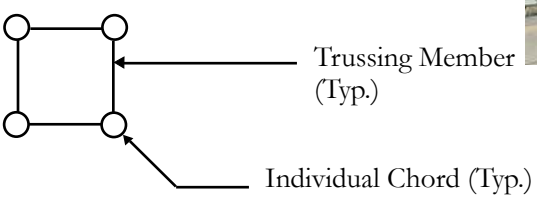
2 = Two Chord



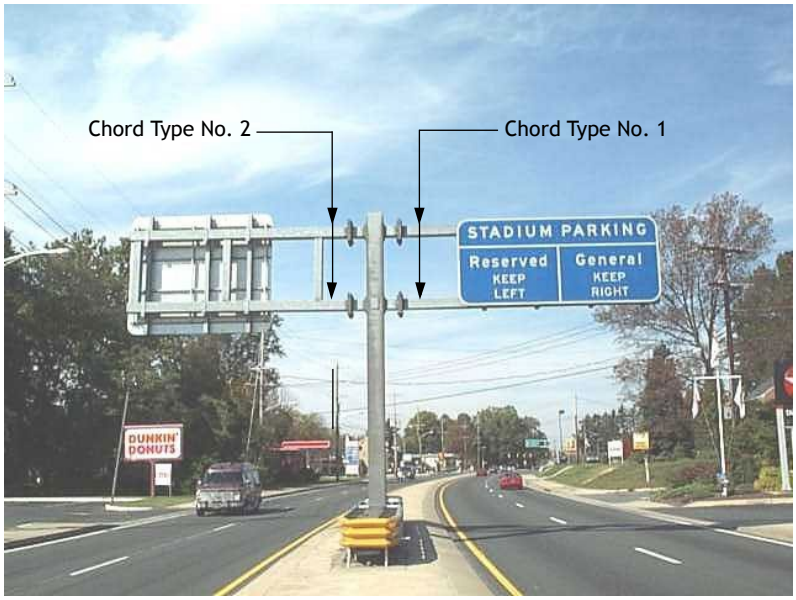
3 = Tri-Chord



4 = Box (4 Chord)



5 = Other
6 = Not Applicable



No. of Chord Types = 2

No. of Chord Types = 1

Chord Finish

Description: From the pull down menu, select the finish that was applied to the chord(s). If the chord material is coded "Aluminum or Timber", the chord finish should be coded "Not Applicable".

Coding: 1 = Galvanized
2 = Painted
3 = Weathering Steel

4 = Other
5 = Not Applicable

Chord Material

Description: From the pull down menu, select the material composition of the chord(s).

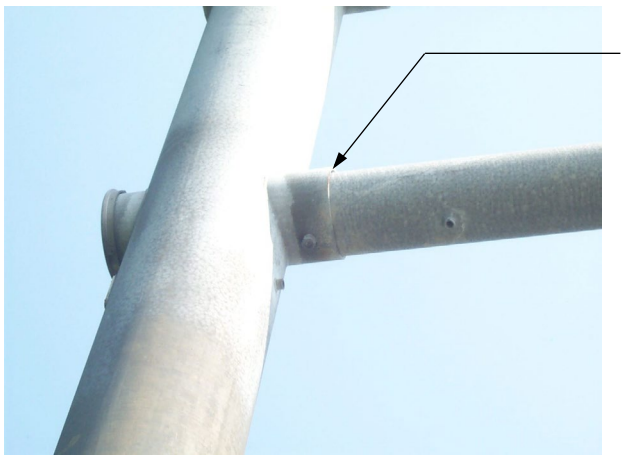
Coding: 1 = Steel
2 = Concrete
3 = Aluminum
4 = Timber
5 = Weathering Steel
6 = Other

Connect to Pole

Description: From the pull down menu, select the type of connection used to attach the chord(s) to the pole(s).

Coding: 1 = U-Bolts
2 = Welded
3 = Bolted

4 = Sleeved/Telescoping Joint



5 = Bolted w/Clamps

Rdwy Name Undr Chord

Description: Enter the name of the roadway located underneath the chord.

If the chord does not span over a roadway, enter "Not Applicable".

Coding: None

No Lanes Undr Chord

Description: Enter the number of traffic lanes located underneath the chord.

If the chord does not span over a roadway, enter "0".

Coding: None

Span Lngth

Description: Enter, in decimal feet, the span length of the chord type configuration.

For a Cantilever structure, the span length is measured from the centerline of pole(s) to the free end of the cantilever.

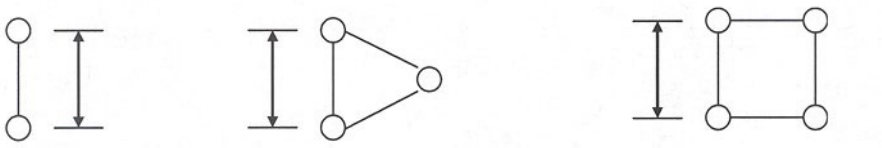
Coding: None

C to C dist btwn chord members - Vertical

Description: Enter, in decimal feet, the vertical distance between the centerline of the chords within the chord type configuration.

For a box (4 chord) type configuration, it is assumed that the vertical distance on either side of the box is the same.

If the chord type chosen is a Single Chord, this field does not appear.



Coding: None

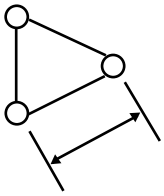
C to C dist btwn chord members - Horiz/Diag

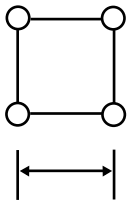
Description: Enter, in decimal feet, the horizontal or diagonal distance between the centerline of the chords within the chord type configuration.

For a Tri-Chord type configuration, the diagonal distance can be entered. It is assumed that the diagonal distances are all the same.

For a box (4 chord) type configuration, it is assumed that the horizontal distance between the top and bottom members is the same.

If the chord type chosen is a Single or Two Chord, this field does not appear.





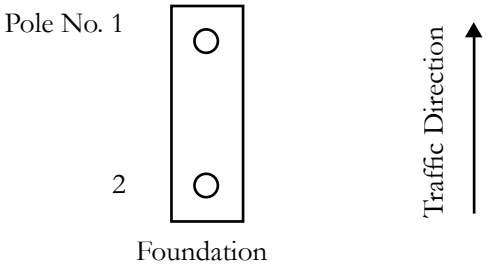
Coding: None

Dist CL Near Chord Memb to Top Pole - L or M Foundation

Description: Enter, in decimal feet, the vertical distance from the top of each pole to the centerline of the chord closest to the top of the pole.

If one pole is present, the measurement should be entered for **Pole 1.**

If two poles are present, the measurement at both **Pole 1** and **Pole 2** should be entered. **Pole No 2** faces oncoming traffic, while **Pole No 1** is in the back.



Coding: None

Dist CL Near Chord Memb to Top Pole - R or M Foundation

Description: These fields are not activated for a Cantilever Sign structure.

Coding: None

Wall Thickness (Inches)

Description: Enter, in decimal inches, the average wall thickness of the individual members within the configuration.

If more than one chord exists, it is assumed that all of the chords have the same average wall thickness.

Coding: None

Shape

Description: From the pull down menu, select the shape of the individual members within the configuration.

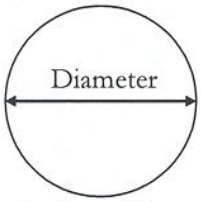
If more than one chord exists, it is assumed that all of the chords have the same shape.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

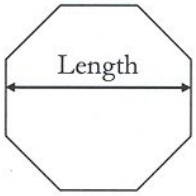
Outside Diameter/Length (Inches)

Description: Based on the illustrations shown below, enter the minimum and maximum outside length (height) or diameter (in decimal inches) of the individual chord cross sections. The program will calculate the minimum and maximum outside diameters automatically by clicking on the box next to the input field and entering the circumference in decimal inches.

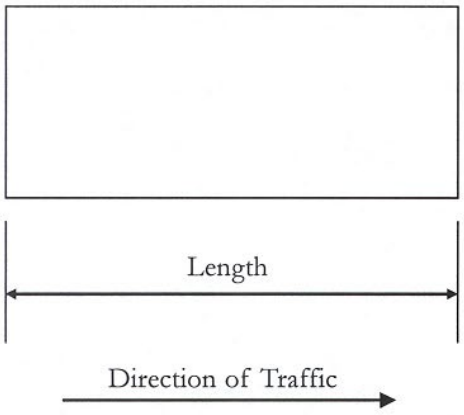
If more than one chord exists, it is assumed that all of the chords have the same outside length/diameter.



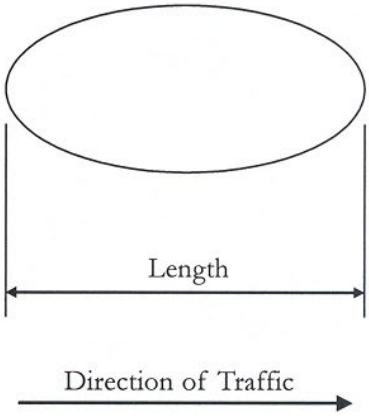
Circle or Fluted



Octagon
(Other Polygon shapes similar)



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

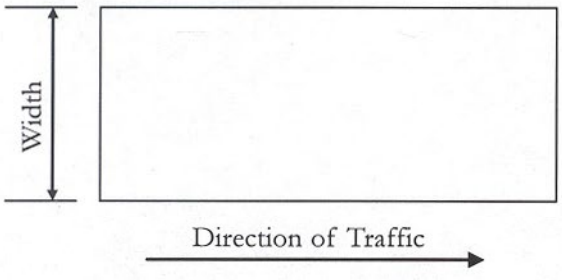
Coding: None

Outside Width (Inches)

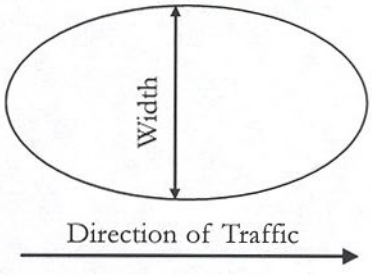
Description: Based on the illustrations shown below, enter the minimum and maximum outside horizontal width (in decimal inches) of the individual chord cross sections.

If more than one chord exists, it is assumed that all of the chords have the same outside width.

Note that this field is only activated for certain individual chord shapes.



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

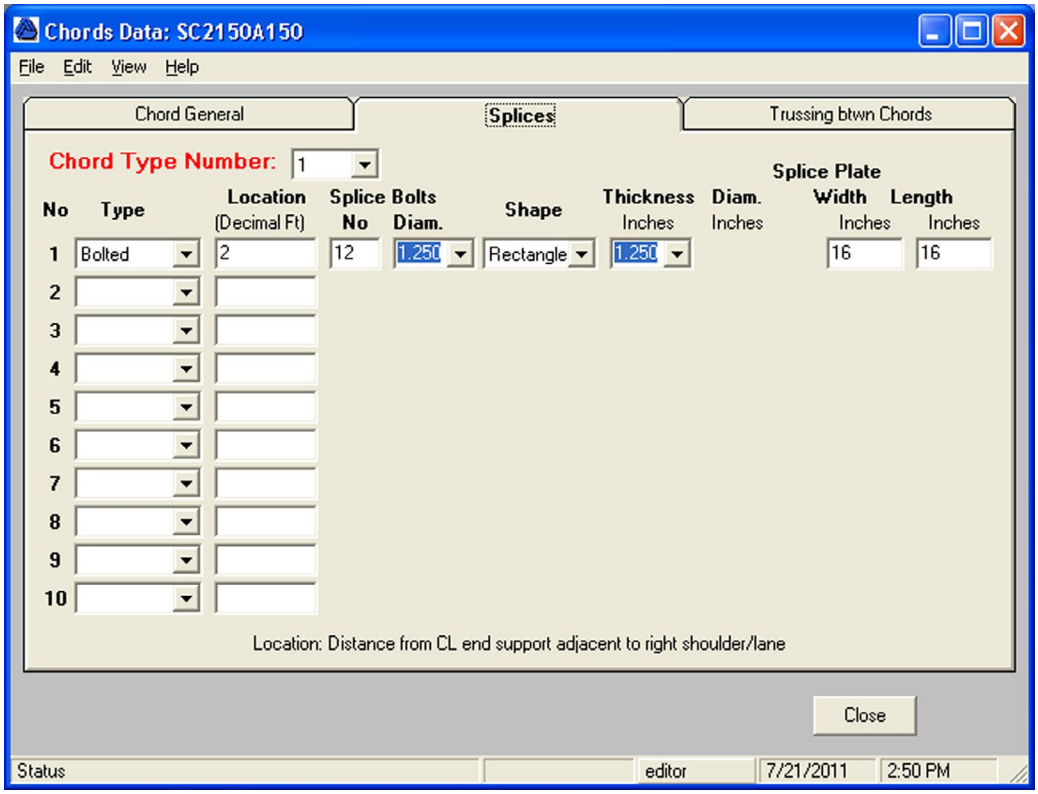
Coding: None

Comment:

Description: This field allows the inspector to record any observations concerning the Chord Type configuration. For example, if the individual chord dimensions vary on a configuration, then the chord dimensions entered can be identified for one chord and the other chord's dimensions may be noted in this field.

Coding: None

CHORDS DATA - SPLICES



Chord Type Number:

Description: From the pull down menu, select the Chord Type configuration number for which data is being entered.

If **No of Chord Types** from **Chord General** tab equals 0, this sheet is not activated.

Coding: None

Type

Description: From the pull down menus, select up to ten types of splices that are found along the chord.

If no splices are present, "Not Applicable" should be coded.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: 1 = Welded

2 = Bolted

3 = Sleeved/Telescoping Joint

4 = Not Applicable

Location (Decimal Ft)

Description: Enter, in decimal feet, the location of the splices along one of the individual chords.

For a cantilever structure, the location of each splice is measured from the centerline of the pole support(s).

If no splices are present, this field should be left blank.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: None

Splice Bolts - No

Description: Enter the number of bolts that are present at each of the splices along one of the individual chords.

This field is only activated if bolted splice connections are present.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: None

Splice Bolts - Diam.

Description: From the pull down menu, select the diameter of the bolts that are present at each of the splices along one of the individual chords.

This field is only activated if bolted splice connections are present.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: None

Splice Plate - Shape

Description: From the pull down menu, select the shape of the splice plates at each of the splice locations along one of the individual chords.

This field is only activated if bolted splice connections are present.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

Splice Plate - Thickness (Inches)

Description: From the pull down menu, select the thickness (in inches) of a splice plate at the splice location.

This field is only activated if bolted splice connections are present.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

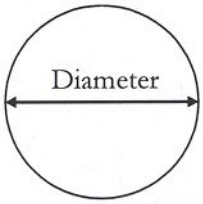
Coding: None

Splice Plate - Diam. (Inches)

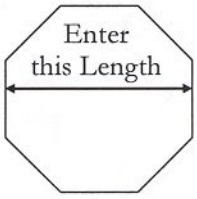
Description: Enter, in decimal inches, the diameter of a splice plate at the splice location. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

This field is only activated if bolted splice connections are present and certain splice plate shapes exist.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).



Circle or Fluted



Octagon
(Hexagon & Pentagon similar)

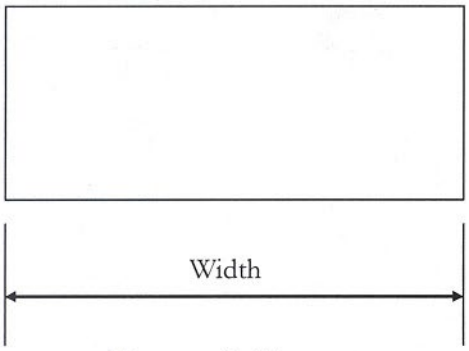
Coding: None

Splice Plate - Width (Inches)

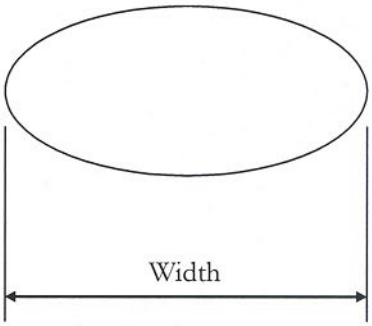
Description: Enter, in decimal inches, the horizontal width of a splice plate at the splice location.

This field is only activated if bolted splice connections are present and certain splice plate shapes exist.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

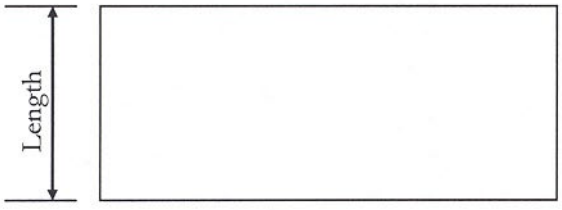
Coding: None

Splice Plate - Length (Inches)

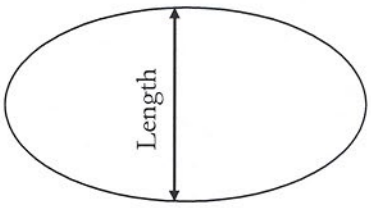
Description: Enter, in decimal inches, the length (vertical height) of a splice plate at the splice location.

This field is only activated if bolted splice connections are present and certain splice plate shapes exist.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).



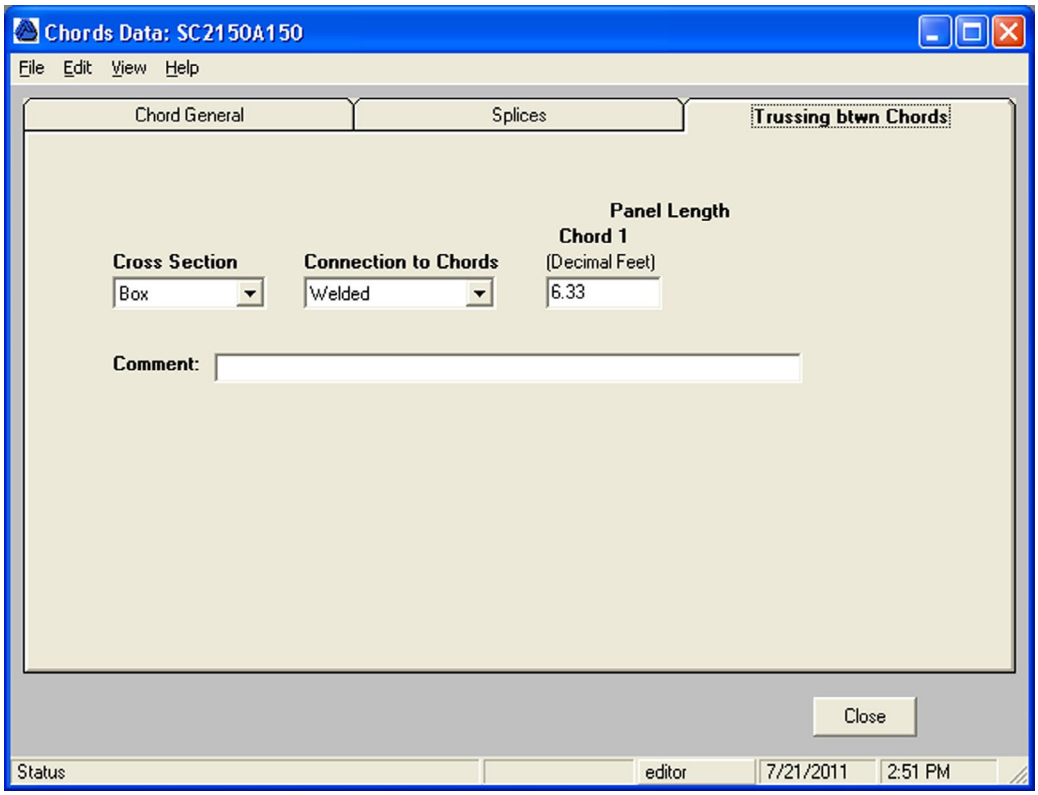
Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

Coding: None

CHORDS DATA - TRUSSING BTWN CHORDS



Note: This sheet is not activated if on the Chord General sheet the Chord Type is coded "Single Chord".

Cross Section

Description: From the pull down menu, select the cross sectional shape of the trussing (secondary) members connected to the individual chords within the chord.

It is assumed that all of the trussing members on the chords have the same cross section.

If no trussing members are present, this field should be left blank.

Coding:
1 = Circular
2 = Box
3 = Angle
4 = Structural Tee
5 = W-Section
6 = Collar
7 = Other
8 = Pentagon
9 = Hexagon
10 = Octagon
11 = Fluted
12 = Ellipse
13 = Flat Bar
14 = Dodecagon (12 Sided)
15 = Channel
16 = Zee
17 = Hexadecagon (16 Sided)
18 = Tetradecagon (14 Sided)

Connection to Chords

Description: From the pull down menu, select the type of connection used to attach the trussing (secondary) members to the individual chords within the chord type configuration.

It is assumed that all of the trussing members have the same type of connection to the chords.

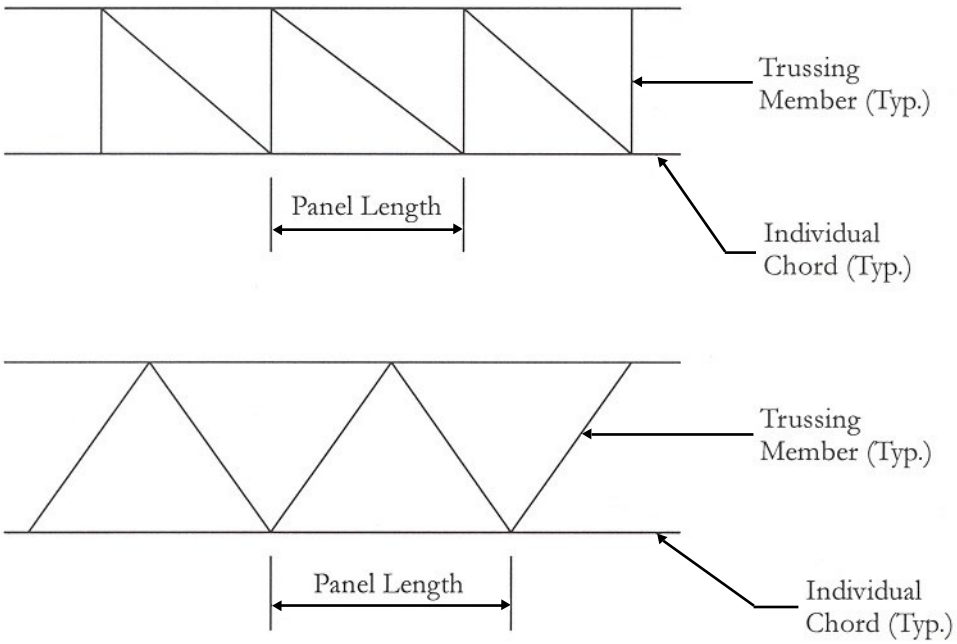
If the trussing members are attached to gusset plates that are attached to the chords, the connection of the gusset plates to the chords should be identified here.

If no trussing members are present, "Not Applicable" should be coded.

Coding: 1 = Welded
2 = Bolted
3 = Sleeved/Telescoping Joint
4 = Not Applicable

Panel Length - Chord 1/Chord 2 (Decimal Feet)

Description: Enter, in decimal feet, the typical panel length of the trussing (secondary) members within each of the chord type configurations.



Chord 1 is for Chord Type 1's configuration and Chord 2 is for Chord Type 2's configuration.

It is assumed that the panel length of the trussing members is the same throughout a chord.

If only one or no trussing (secondary) members are present within the chords, these field(s) should be left blank.

Coding: None

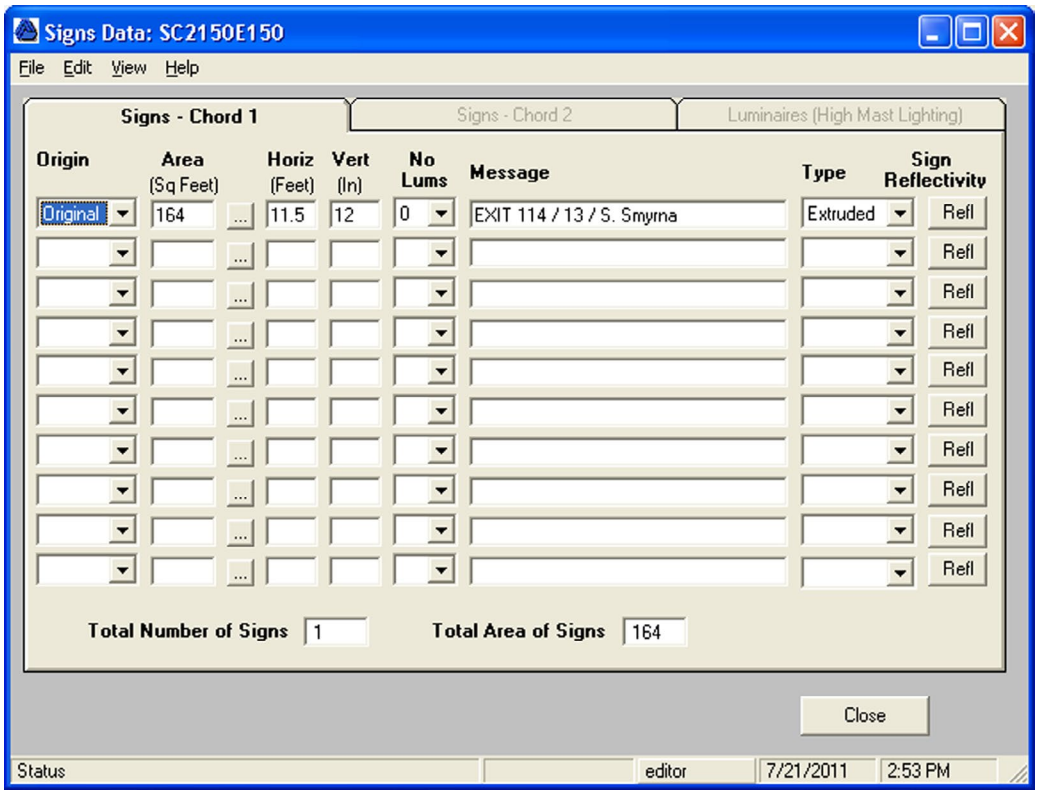
Comment:

Description: A comment field is provided for the inspector to record any observations regarding the trussing (secondary) members measurements and/or connections.

For example, if only one trussing member is present, such that there is no panel length measurement, this can be stated here.

Coding: None

SIGNS DATA - SIGNS-CHORD 1/CHORD 2



Note: This sheet is for the Sign Panels and/or Variable Message Sign (VMS) boards attached to Chord Type number 1.

If the No of Chord Type configurations in the Chord – Chord General tab equals 2, then the Signs – Chord 2 tab will also be activated and the appropriate data should be entered for Chord Type number 2.

Signs - Chord 1/Chord 2

Description: Relevant information can be entered for up to ten sign panels attached to the Cantilever Sign structure.

Coding: None

Origin

Description: From the pull down menu, select the origin of the sign panel. For example, is this the original sign, has it been added, is this a new sign panel that has replaced an existing one, or was this sign modified from the previous one.

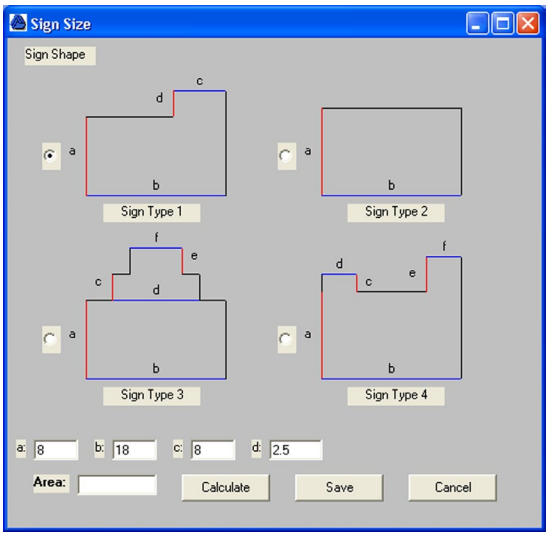
Coding: 1 = Original
2 = Added
3 = New Panel
4 = Modified

Area (Sq Feet)

Description: The program automatically enters the sign panel area in this field, based on the user's input data.

By clicking on the box next to the record field, the user should select the appropriate sign shape and enter the sign panel's dimensions in decimal feet. Clicking on the **Calculate** button allows the program to compute the sign panel area. The user should click the **Save** button in order to save both the sign panel dimensions and area.

Coding: None



Horiz (Feet)

Description: Enter, in decimal feet, the horizontal distance from the centerline of the pole support(s) to the nearest vertical edge of the sign panel that data is being entered for.

Coding: None

Vert (In)

Description: Enter, in decimal inches, the vertical distance from the centerline of the bottom chord to the bottom of the sign panel that data is being entered for.

Enter a negative value "-" if the centerline of the bottom chord is located below the bottom of the sign panel.

Coding: None

No Lums

Description: From the pull down menu, select the number of luminaires present for each of the sign panels.

Coding: None

Message

Description: Enter in this field, the message(s) that exist on each of the sign panels, including the exit numbers.

Coding: None

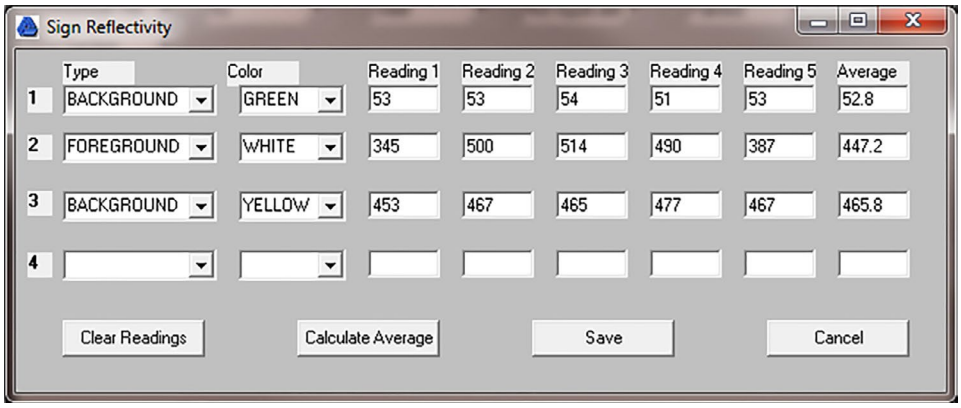
Type

Description: From the pull down menu, select the type of sign panel backing present.

Coding: 1 = Flat
2 = Extruded

Sign Reflectivity

Description: By clicking on the **Refl** button, the user should enter the following reflectivity information for up to four different colors present on the sign panel:



Type - From the pull down menu, select whether or not the color is in the background or foreground.

Color - From the pull down menu, select one of the following colors: Yellow, White, Green, Brown, Blue or Red.

Reading 1 to Reading 5 - Enter five reflectivity readings taken in different areas on each color. For the color Brown, no reflectivity readings will be captured. However, it shall be entered into the database as either a background or foreground color.

Average - The average of the five reflectivity readings is automatically calculated by the program by clicking on the **Calculate Average** button.

If the user clicks on the **Clear Readings** button, the program will clear for each Type the Color, Reading 1 to Reading 5, and the Average reading.

The program automatically stores all of the information entered, including the average reflectivity reading, for each color by clicking on the **Save** button.

Coding: None

Total Number of Signs

Description: No entry is required for this field. The program automatically enters the total number of sign panels present, based on the user's input data.

Coding: None

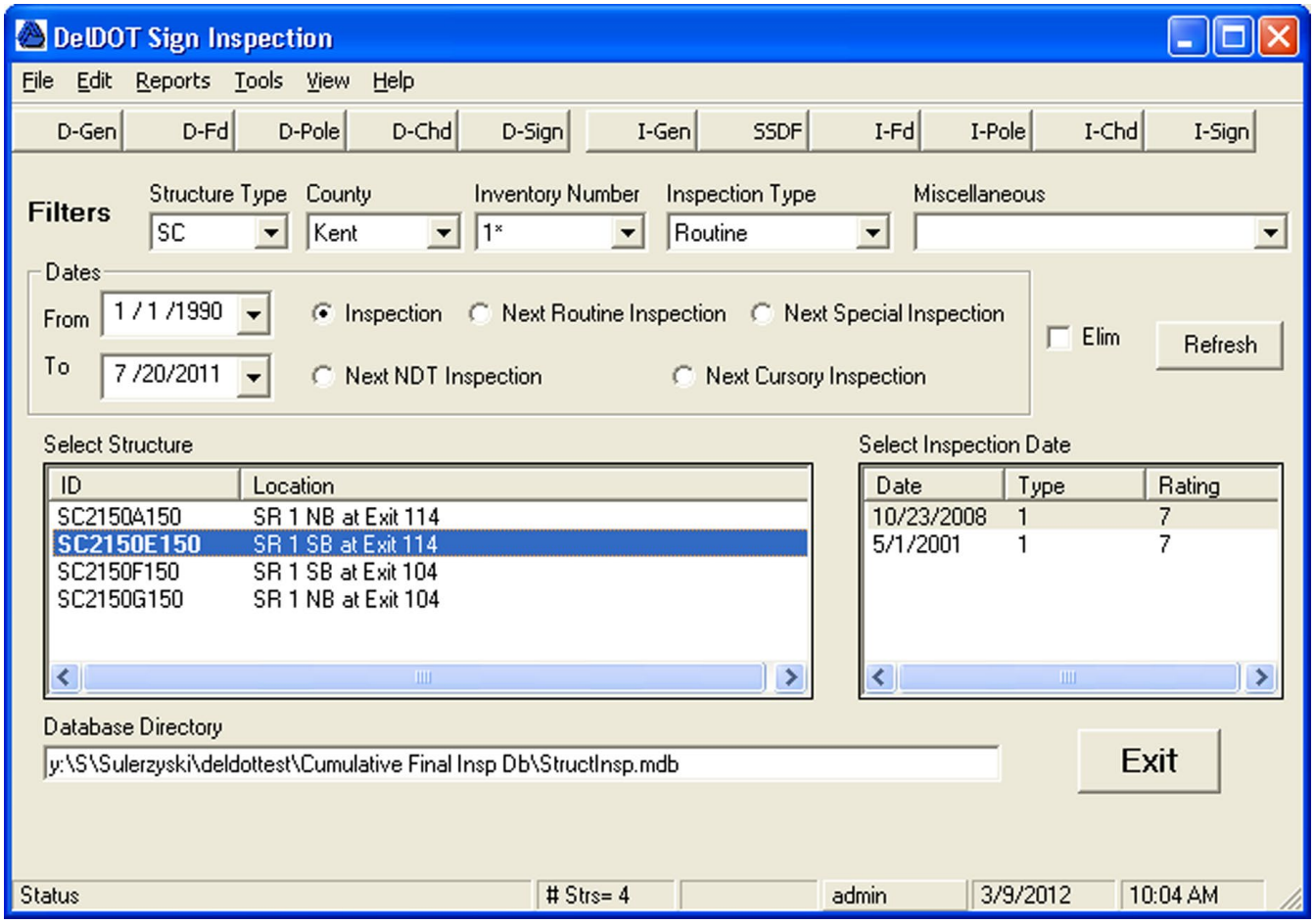
Total Area of Signs

Description: No entry is required for this field, the program automatically calculates the total area of all of the sign panels present, based on the user's input data.

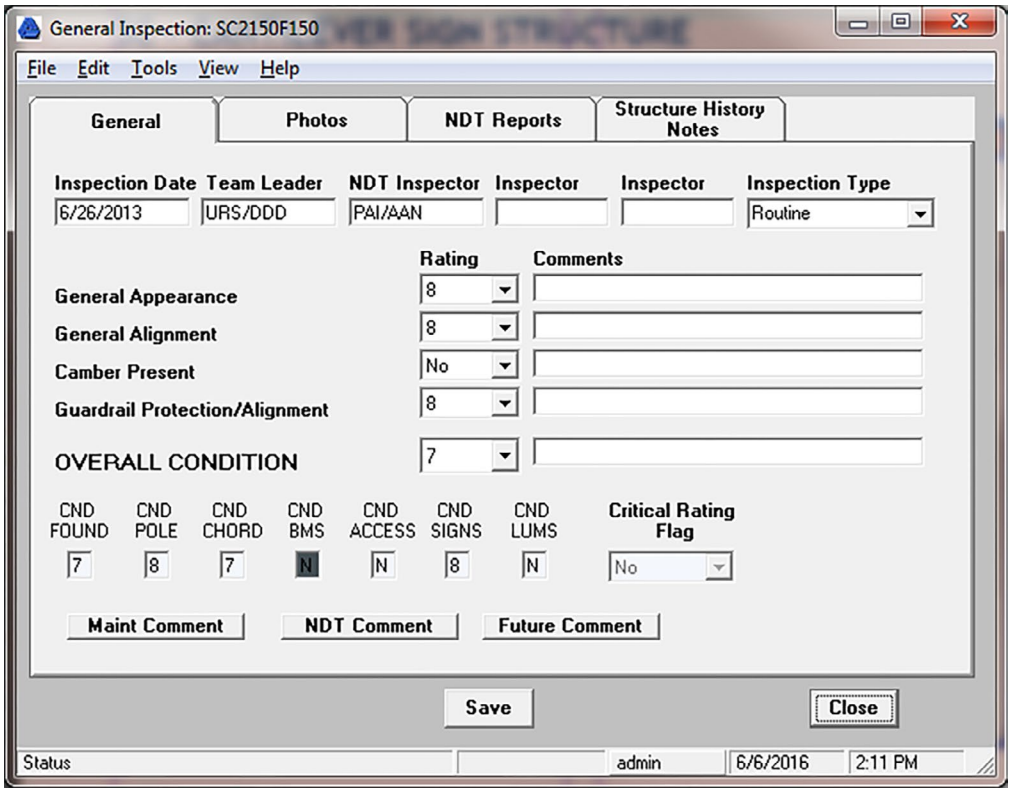
Coding: None

SC - CANTILEVER SIGN STRUCTURE

INSPECTION DATA



GENERAL INSPECTION - GENERAL



Inspection Date

Description: This field is used to record the completion date of the structure's inspection. An inspection date is created when the structure is initially inspected and at the structure's designated inspection cycle.

Coding: None

Team Leader

Description: Enter the initials of the firm performing the inspection followed by the initials of the Inspection Team Leader. Example: URS/NGD

Coding: None

NDT Inspector

Description: If applicable, enter the initials of the firm performing the Non-Destructive Testing (NDT) followed by the initials of the NDT inspector. Example: PAI/CHS

Coding: None

Inspector

Description: These fields allow for up to two additional field inspector names to be entered for the inspection of the structure. For each field, enter the initials of the firm performing the inspection followed by the initials of the field inspector. Example: URS/DDD

Coding: None

Inspection Type

Description: This field is used to identify the type of inspection being performed on the structure. The inspection type is created when the structure is initially inspected and at the structure's designated inspection interval.

Coding: 1 = Routine
2 = NDT
3 = Repair/Retrofit
4 = Impact Damage
5 = Alterations
6 = Special Inspection
7 = Removal
8 = Cursory

General Appearance - Rating/Comments

Description: From the pull down menu, select the **Rating** for the General Appearance of the structure. General observations of the appearance of the structure should be made while approaching the structure. The purpose of these initial observations is to familiarize the inspector with the structure. They may also point out a need to modify the inspection sequence or indicate areas requiring special attention.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

General Alignment - Rating/Comments

Description: From the pull down menu, select the **Rating** for the General Alignment of the structure. General observations of the alignment of the structure should be made while approaching the structure. The purpose of these initial observations is to detect any unusual movements of the structure as a whole that may have occurred. They may also point out problems with the location of the structure's supports or indicate areas requiring special attention.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

Camber Present - Rating/Comments

Description: From the pull down menu, select whether or not the structure exhibits vertical camber. The determination of camber should be made while approaching the structure.

The **Comments** field allows the user to record any observations.

Coding: 1 = Yes
2 = No
3 = Not Visible

Guardrail Protection/Alignment - Rating/Comments

Description: From the pull down menu, select the **Rating** of the Guardrail Protection and its Alignment for the structure. If no guardrail is present, the rating should be coded "N".

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

OVERALL CONDITION - Rating/Comments

Description: From the pull down menu, select the **Rating** for the Overall Condition of the structure. The rating is based on the inspector's assessment of the structure's individual components with emphasis placed on the primary elements.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

CND FOUND
Description: No entry is required for this field. The overall condition rating for the Foundation is summarized here.

CND POLE
Description: No entry is required for this field. The overall condition rating for the Pole is summarized here.

CND CHORD
Description: No entry is required for this field. The overall condition rating for the Chord(s) is summarized here.

CND BMS
Description: This field is not applicable.

CND ACCESS
Description: No entry is required for this field. The overall condition rating for the Access (walkway, platform, ladder, etc.) on the structure is summarized here.

CND SIGNS
Description: No entry is required for this field. The overall condition rating for the Sign panels attached to the structure is summarized here.

CND LUMS
Description: No entry is required for this field. The overall condition rating for the Luminaires (excludes highway luminaires) attached to the structure is summarized here.

Critical Rating Flag
Description: No entry is required for this field. The structure is flagged as either having a critical rating or not. When the **OVERALL CONDITION** Rating is "3" or less, this field shows **Yes**. Otherwise, the field shows **No**.

Maint Comment
Description: Clicking on this button allows the inspector to view and/or edit the comment fields from the **Maintenance repairs done at the time of inspection** in the **Foundation, Pole, Chord, Access/Sign/Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

NDT Comment
Description: Clicking on this button allows the inspector to view and/or edit the comment fields from the **NDT testing done at the time of inspection** in the **Foundation, Pole, Chord, Access/Sign/Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

Future Comment

Description: Clicking on this button allows the inspector to view and/or edit the comment fields from the **Future maintenance required and/or repair recommendations** in the **Foundation, Pole, Chord, Access/Sign/ Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **General** tab.

Coding: None

GENERAL INSPECTION - PHOTOS

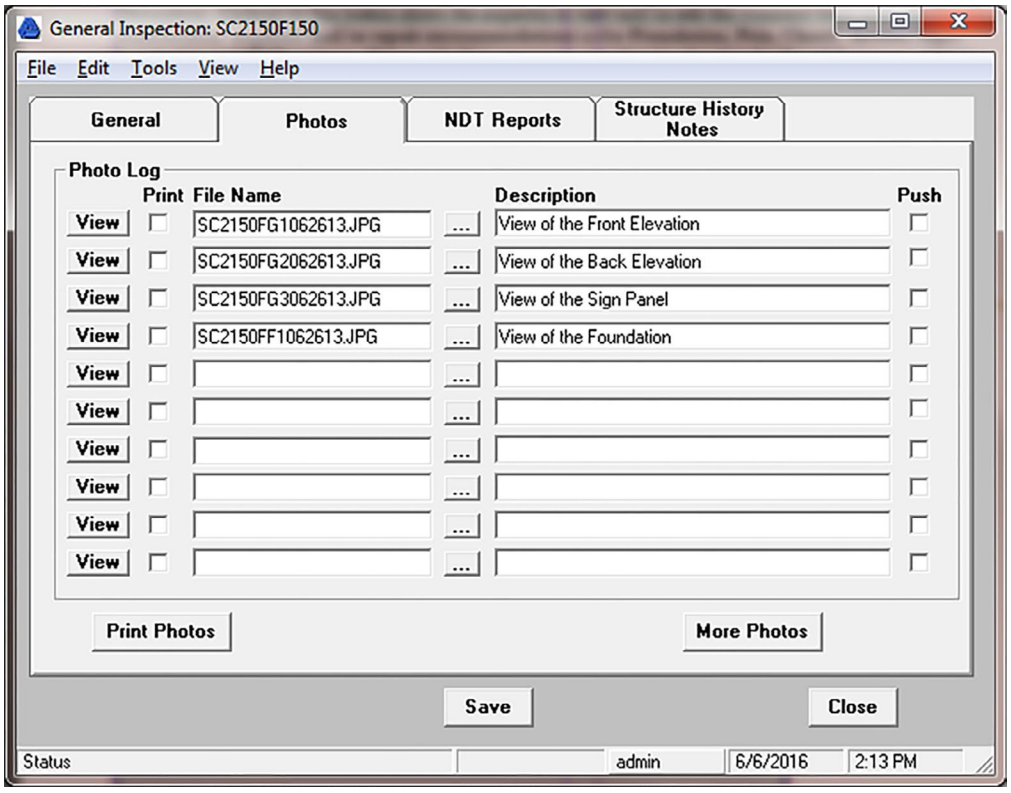


Photo Log

Description: This tab allows up to ten photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

Cantilever Sign Structures shall have a **minimum of two** identifying photos taken. One will be an overview of the structure while the other will be a legible view of the sign panel(s). One photo of the overview of the structure is permitted if the sign panel(s) in the photo are clearly legible.

Clicking on allows the user to view all of the files in the folder and select one to be placed in the respective **File Name** field.

Coding: None

View

Description: Clicking on the **View** button allows the user to view a particular photograph.

Coding: None

Print

Description: Placing a checkmark in these boxes allows the user to print the respective photographs using the **Print Photos** button.

Coding: None

File Name

Description: Each of these fields are used to enter one JPEG file name for each of the photographs.

Coding: The following shall be used for the JPEG file naming convention:
SC1035**G1**.jpg
SC2002A**G1**.jpg
SC1035 and SC2002A are the structure ID's

There are five types of photos:
G = General (elevation views and views of sign panels)
F = Foundation Elements (erosion, footing, grout pad, anchor bolts)
P = Pole Elements (pole, base plate, joints/splices, trussing)
C = Chord Elements (chords, joints/splices, connections, trussing)
S = Walkway, Signing, and Luminaire Elements

Example: **F1** = foundation element photo number 1 (photos for each type will be numbered 1, 2, 3, 4, etc.)

Note: When the file is brought into the File Name field, the inspection date is attached to the end of the file name.

Description

Description: These fields are used to enter captions for each of the photographs.

Coding: None

Push

Description: The **Push** button is used to incorporate photographs into the Critical Report. A checkmark will appear in the box when it is clicked on. This checkmark will push or forward the photograph(s) into the critical report. When the critical report for the structure is printed out, all pushed photographs will also be printed out.

Coding: None

More Photos

Description: Clicking on the **More Photos** button creates another **Photos** tab that allows up to ten additional photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

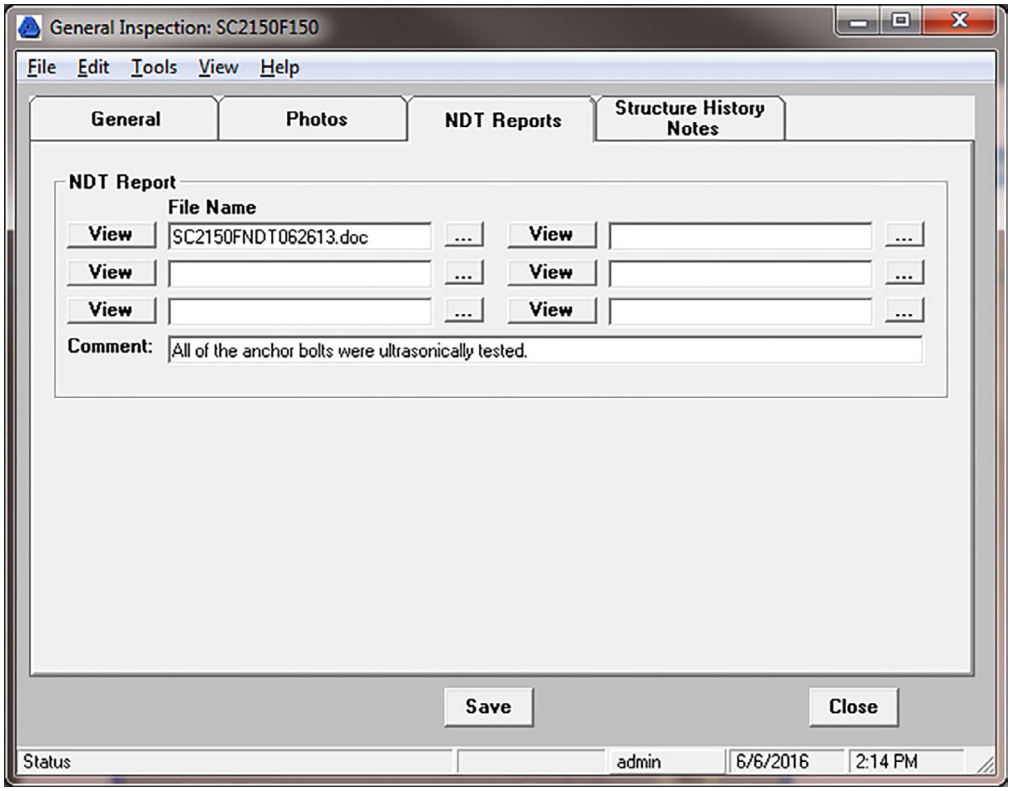
Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **Photos** tab.

Coding: None

GENERAL INSPECTION - NDT REPORTS



NDT Report

Description: This tab allows up to six NDT reports to be stored in a folder labeled with the structure's ID number. The NDT reports should be saved in a Microsoft Word or Excel format.

Clicking on ... allows the user to view all of the files in the folder and select one to be placed in the respective **File Name** field.

Coding: None

View

Description: Clicking on the **View** button allows the user to view a particular NDT report.

Coding: None

File Name

Description: Each of these fields are used to enter the file name of one Microsoft Word or Excel document for each of the NDT reports.

Coding: The following shall be used for the NDT report file naming convention:

Examples: SC2002A**NDT**.doc or SC2002A**NDT**.xls

For multiple NDT reports, the following should be used:

SC2002ANDTA.doc
SC2002ANDTB.doc

Note: When the file is brought into the File Name field, the inspection date is attached to the end of the file name.

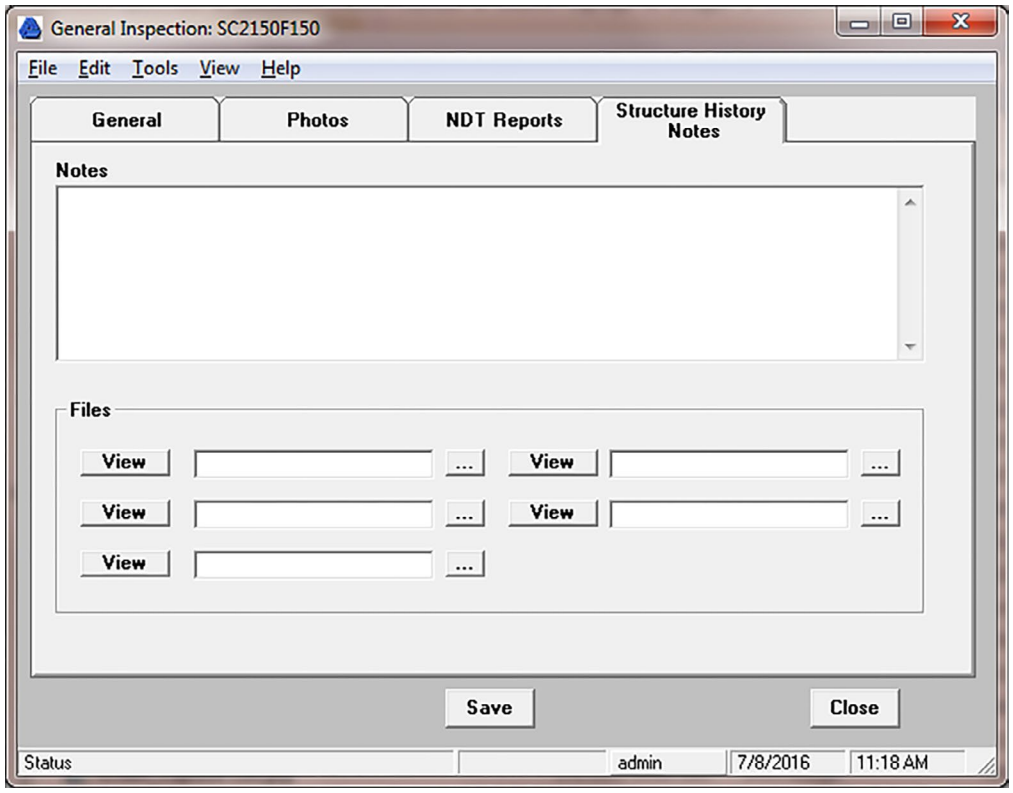
Comment:
Description: This field allows the user to enter any comments regarding the non-destructive testing performed and the subsequent results.

Coding: None

Save
Description: Clicking on the **Save** button allows the user to save all the information in the **NDT Reports** tab.

Coding: None

GENERAL INSPECTION - STRUCTURE HISTORY NOTES



Notes
Description: This memo field allows the user to describe specific details about the structure or the inspection for future reference.

Coding: None

Files
Description: This allows up to five files to be stored in a folder labeled with the structure's ID number. These files may be Microsoft Word or PDF documents that describe specific details about the structure or the inspection for future reference.

Clicking on ... allows the user to view all of the files in the folder and select one to be placed in the respective **Files** field.

Coding: None

View

Description: Clicking on the **View** button allows the user to view a particular file.

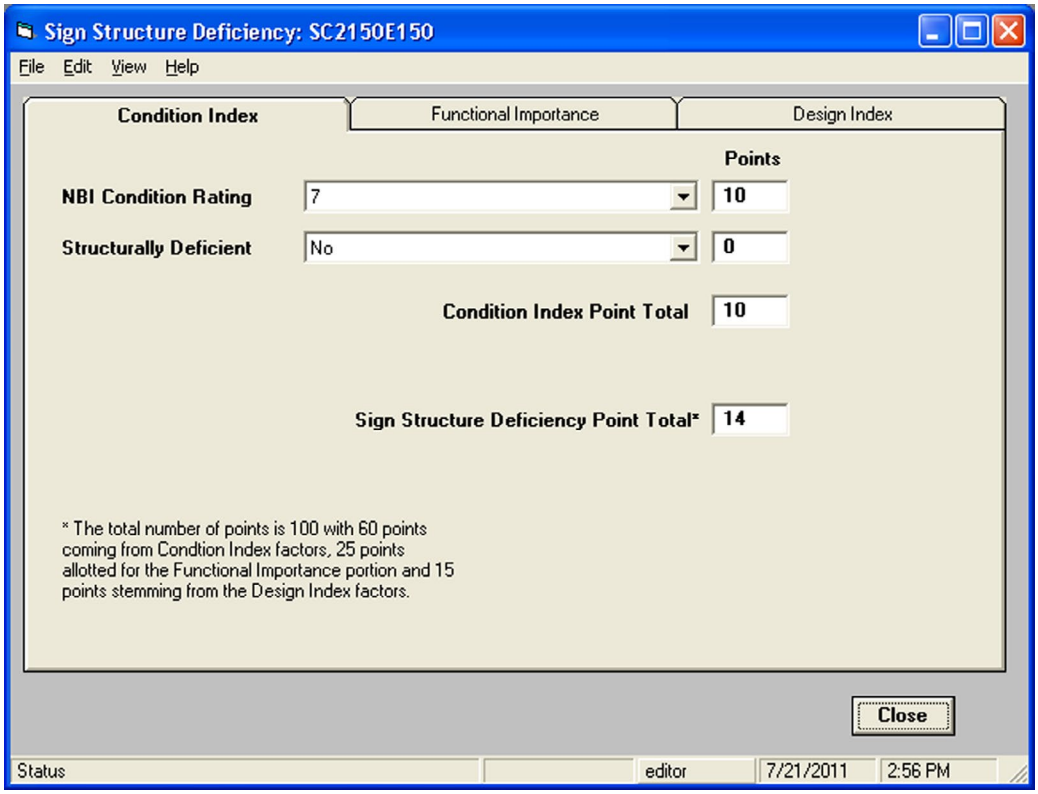
Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **Structure History Notes** tab.

Coding: None

SIGN STRUCTURE DEFICIENCY FACTOR (SSDF) - CONDITION INDEX



NBI Condition Rating

Description: No entry is required for these two fields. The NBI Condition Rating is the lowest rating of the Foundation, Pole or Chord condition ratings.
The program automatically assigns a point value from the table below:

Structural Rating Points – 0 to 45 points

NBI Condition Rating	Points
0	45
1	43
2	41
3	37
4	32
5	24
6	15
7	10
8	5
9	0

Coding: None

Structurally Deficient

Description: No entry is required for these two fields. A structure is deemed "Structurally Deficient" when the NBI Condition Rating for either the Foundation, Pole or Chord is a 4 or lower.
The program automatically assigns a point value from the table below:

Structurally Deficient Points – 0 to 15 points

Structurally Deficient	Points
No	0
Yes	15

Coding: None

Condition Index Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the NBI Condition Rating Points and the Structurally Deficient Points.

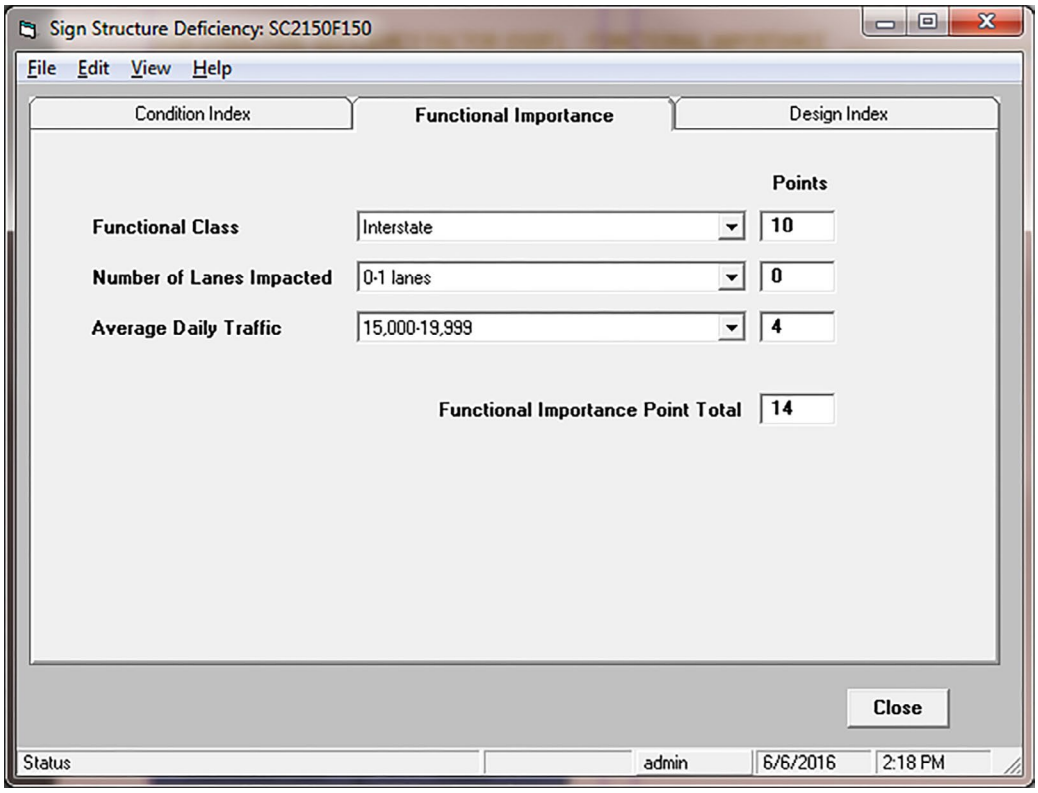
Coding: None

Sign Structure Deficiency Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the Condition Index Point Total, the Functional Importance Point Total and the Design Index Point Total.

Coding: None

SIGN STRUCTURE DEFICIENCY FACTOR (SSDF) - FUNCTIONAL IMPORTANCE



Functional Class

Description: No entry is required for these two fields. The functional class for the structure is summarized here. The program automatically assigns a point value from the table below:

Functional Classification Points – 2 to 10 points

Functional Class	Points
Local	2
Collector	5
Arterial	8
Interstate	10

Coding: None

Number of Lanes Impacted

Description: No entry is required for these two fields. The number of traffic lanes impacted if the structure fails is summarized here.

The program automatically assigns a point value from the table below:

Lanes Impacted Points – 0 to 5 points

# of Lanes Impacted if Structure Fails	Points
0-1 lanes	0
2 lanes	1
3 lanes	2
4 lanes	3
5 lanes	4
> 5 lanes	5

Coding: None

Average Daily Traffic

Description: No entry is required for these two fields. The average daily traffic for the structure is summarized here. The program automatically assigns a point value from the table below:

Traffic Volume Points – 1 to 10 points

Average Daily Traffic	Points
0 - 4,999	1
5,000 - 9,999	2
10,000 - 14,999	3
15,000 - 19,999	4
20,000 - 29,999	5
30,000 - 44,999	6
45,000 - 59,999	7
60,000 - 79,999	8
80,000 - 100,000	9
> 100,000	10

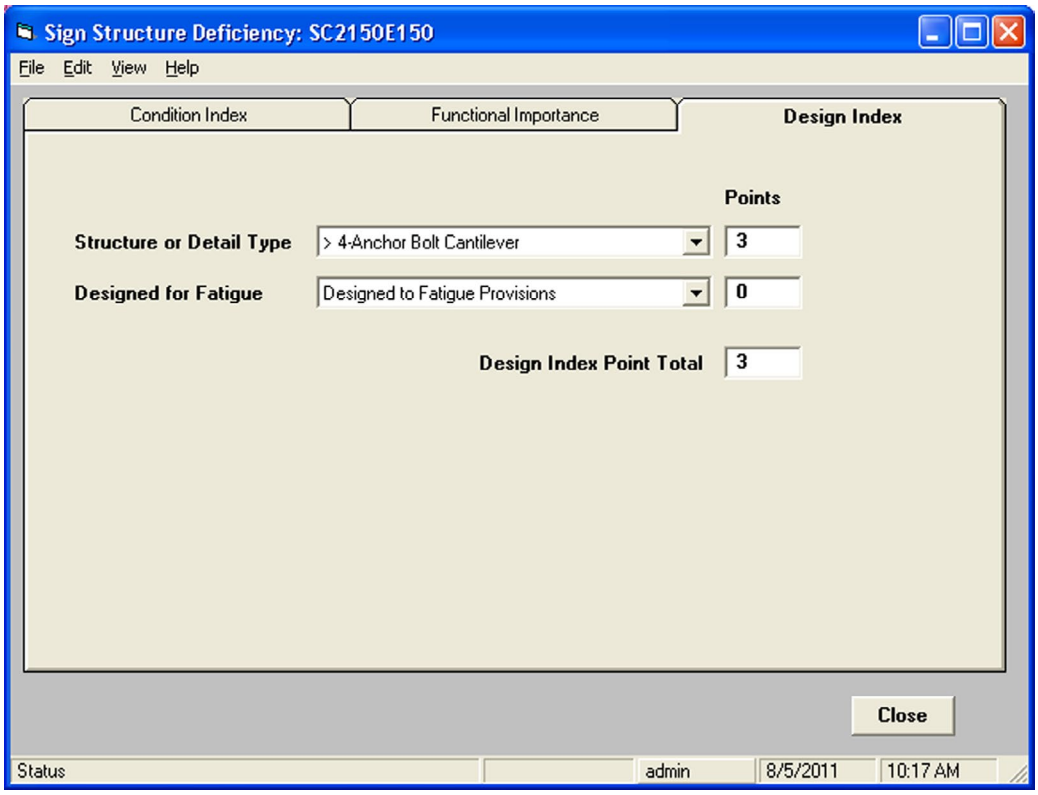
Coding: None

Functional Importance Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the Functional Class Points, the Number of Lanes Impacted Points and the Average Daily Traffic Points.

Coding: None

SIGN STRUCTURE DEFICIENCY FACTOR (SSDF) - DESIGN INDEX



Structure or Detail Type

Description: No entry is required for these two fields. The structure or detail type is summarized here.

The program automatically assigns a point value from the table below:

Structure Type Points – 1 to 5 points

Structure or Detail Type	Points
≥ 4-Pole Overhead Sign Structure	1
≥ 8-Anchor Bolt High Mast Light	
Bridge Mounted Sign Structure	
2-Pole Overhead Sign Structure	2
6-Anchor Bolt High Mast Light	
Clamped Chord-Pole Connection (Tri-Chord 2-Pole Overhead Sign Structure)	
Galvanized / Painted Steel Sleeve Joint High Mast Light	
Aluminum Sign Structure	3
> 4-Anchor Bolt Cantilever Sign Structure	
4-Anchor Bolt High Mast Light	4
4-Anchor Bolt Cantilever Sign Structure	5
Weathering Steel Telescoping Sleeve Joint High Mast Light	
Clamped Chord-Pole Connection (2-Chord 2-Pole Overhead Sign Structure)	

Coding: None

Designed for Fatigue

Description: No entry is required for these two fields. The determination of whether or not the structure was designed to fatigue provisions is summarized here.
The program automatically assigns a point value from the table below:

Fatigue Design Points – 0 to 10 points

Designed for Fatigue	Points
Not Designed to Fatigue Provisions	10
Designed to Fatigue Provisions	0

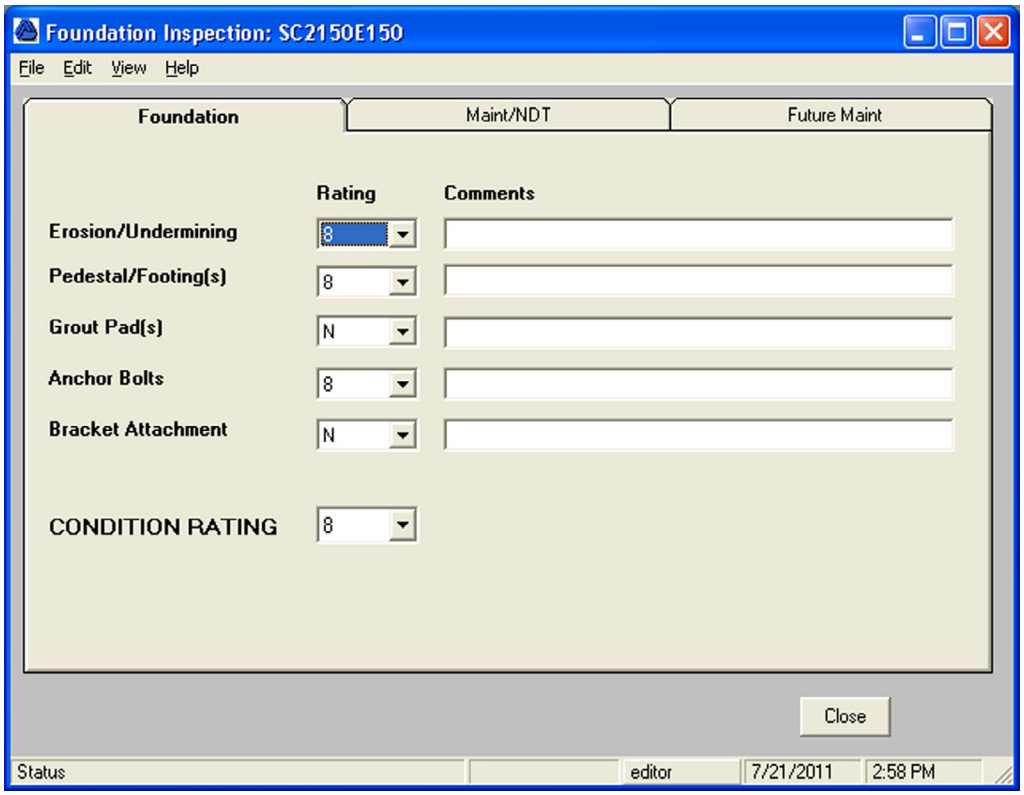
Coding: None

Design Index Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the Structure or Detail Type Points and the Designed for Fatigue Points.

Coding: None

FOUNDATION INSPECTION - FOUNDATION



Erosion/Undermining

Description: The entire area surrounding the foundation should be inspected for any signs of erosion and/or undermining.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Pedestal/Footing(s)

Description: This element involves the inspection of the exposed portion of the entire foundation type identified. If the foundation type is identified as a **Bracket**, this element should be coded "N" and a condition rating given for the element **Bracket Attachment**.

From the pull down menu, select the **Rating** for the element. If the foundation type is buried, a condition rating should be given based on any signs of distress observed at the foundation's location.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Grout Pad(s)

Description: This element involves the inspection of the grout pad(s) located between the underside of the base plate(s) and the top of the foundation(s).

From the pull down menu, select the **Rating** for the element. If a grout pad is not present or visible, the condition rating should be coded "N".

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Anchor Bolts

Description: This element involves the inspection of the anchor bolts, anchor bolt nuts and washers, and leveling nuts.

From the pull down menu, select the **Rating** for the element. If the anchor bolts are buried, a condition rating should be given based on any signs of distress observed.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Bracket Attachment

Description: This element involves the inspection of the bracket support for the pole(s) that are attached to a bridge girder, retaining wall, etc. The entire bracket configuration, including its connection to the structure, should be considered.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

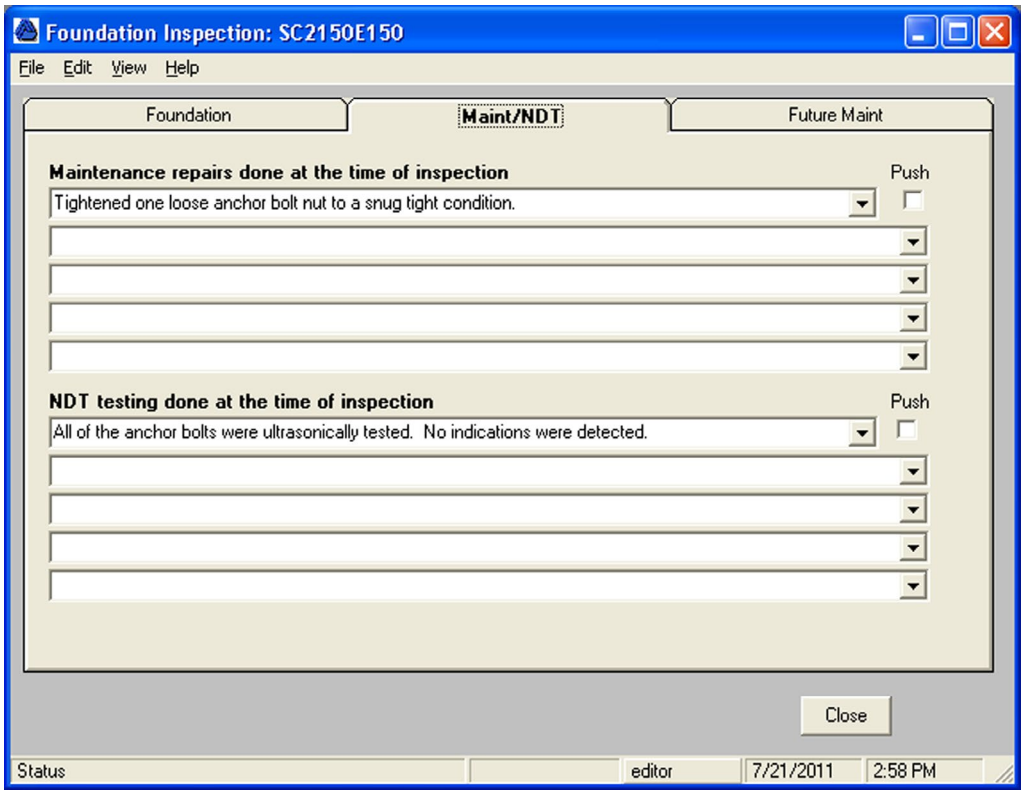
Description: This numerical condition rating should characterize the general condition of the entire foundation. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the foundation.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the foundation, then the element can be considered a "weak link" in the structure, and the rating of the foundation should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Foundation.

Coding: See **Condition Rating Codes** section of this manual.

FOUNDATION INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the elements of the Foundation(s) during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

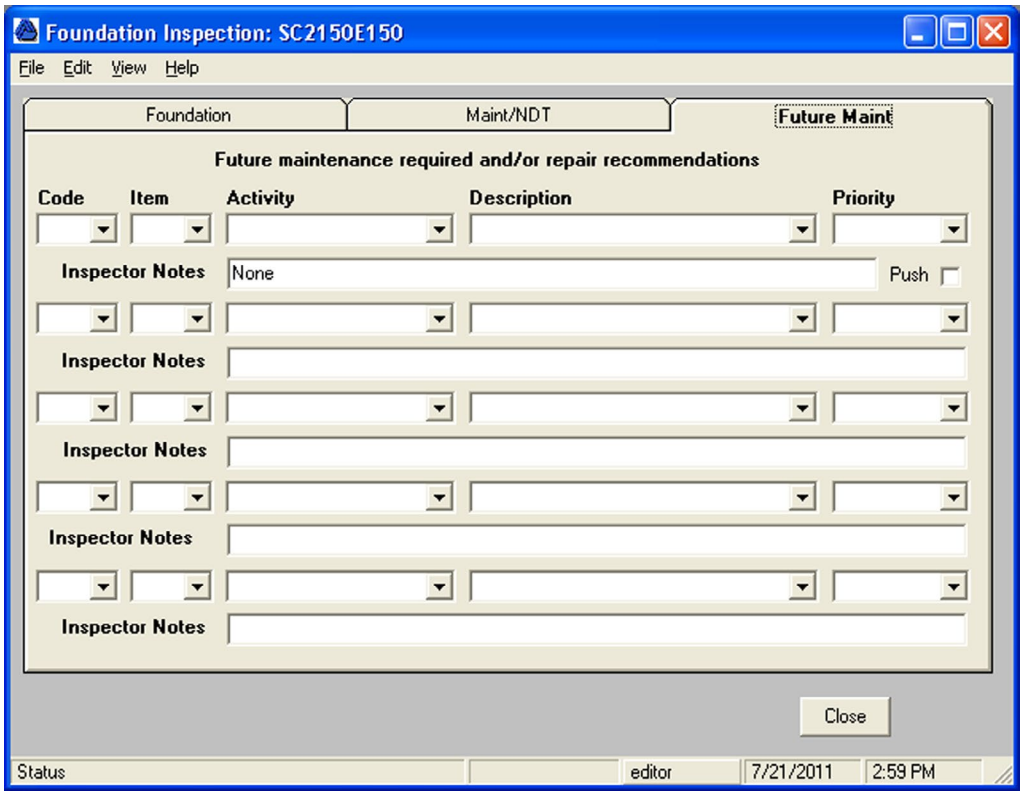
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the elements of the Foundation(s) during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

FOUNDATION INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the elements of the Foundation(s).

If no maintenance repairs were recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended, could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the structure's elements and the structure itself.

Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

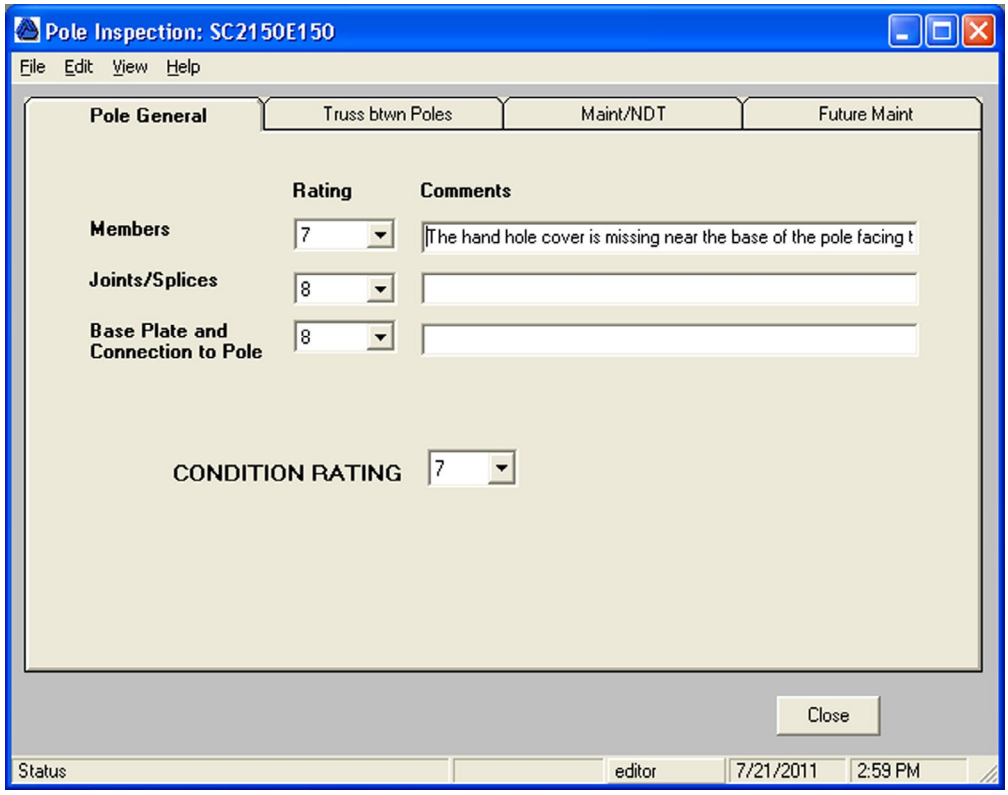
Inspector Notes

Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

POLE INSPECTION - POLE GENERAL



Members

Description: This element involves the inspection of each vertical pole, including the applied finish. Also included with this element are hand holes and top caps attached to the pole(s).

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Joints/Splices

Description: This element involves the inspection of joint connections to each pole and the poles horizontal splices.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Base Plate and Connection to Pole

Description: This element involves the inspection of each base plate and its connection to each pole, including the applied finish.

From the pull down menu, select the **Rating** for the element. If the base plate is buried, a condition rating should be given based on any signs of distress observed.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

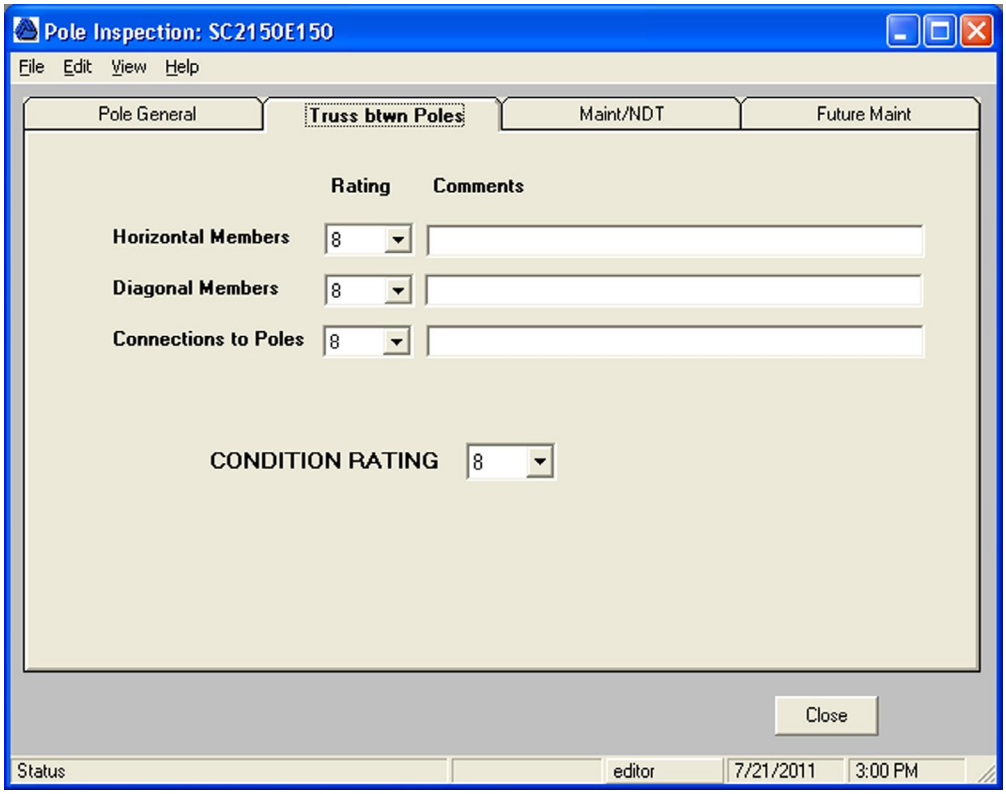
Description: This numerical condition rating should characterize the general condition of the Pole elements. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the elements.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the element, the element can be considered a "weak link" in the structure, and the rating of the Pole should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Pole.

Coding: See **Condition Rating Codes** section of this manual.

POLE INSPECTION - TRUSS BTWN POLES



This page is only activated if in the Structure Data portion of the program under Pole-Pole General, the Pole Type chosen is "Double".

Note: If no trussing members are present, all of the "Ratings" should be coded "N".

Horizontal Members

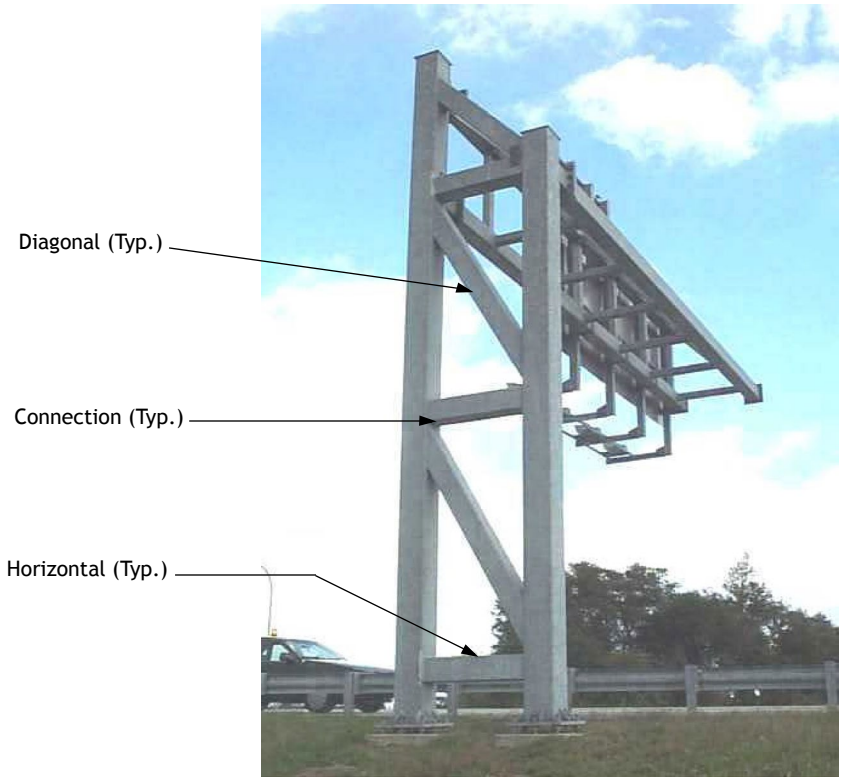
Description: This element involves the inspection of the horizontal trussing (secondary) members located between the vertical poles, including the applied finish.

If no horizontal members are present, the **Rating** should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.



Diagonal Members

Description: This element involves the inspection of the diagonal trussing (secondary) members located between the vertical poles, including the applied finish.

If no diagonal members are present, the **Rating** should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Connections to Poles

Description: This element involves the inspection of the connections of the trussing members to the vertical poles.

If the trussing members are attached to gusset plates that are attached to the poles, both connections should be inspected and rated.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

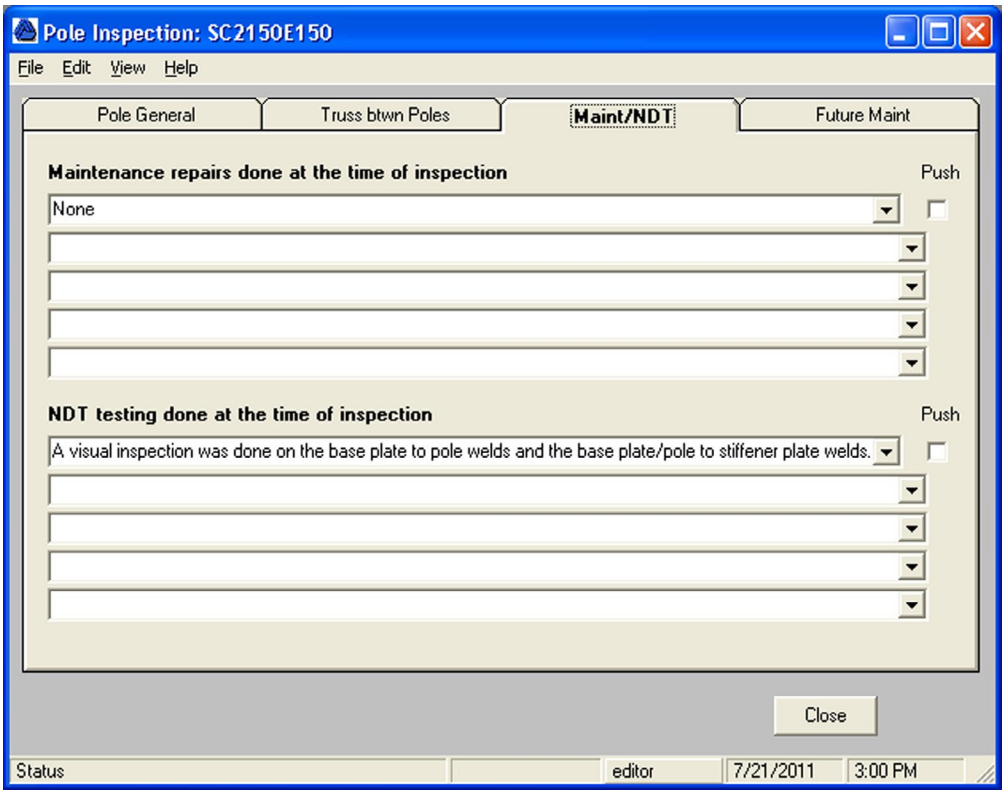
Description: This numerical condition rating should characterize the general condition of the Trussing Members and their connections to the poles. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the member, the element can be considered a "weak link" in the structure, and the rating of the Trussing Members should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Trussing Members and their connections to the poles.

Coding: See **Condition Rating Codes** section of this manual.

POLE INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the Pole and/or Trussing Elements during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

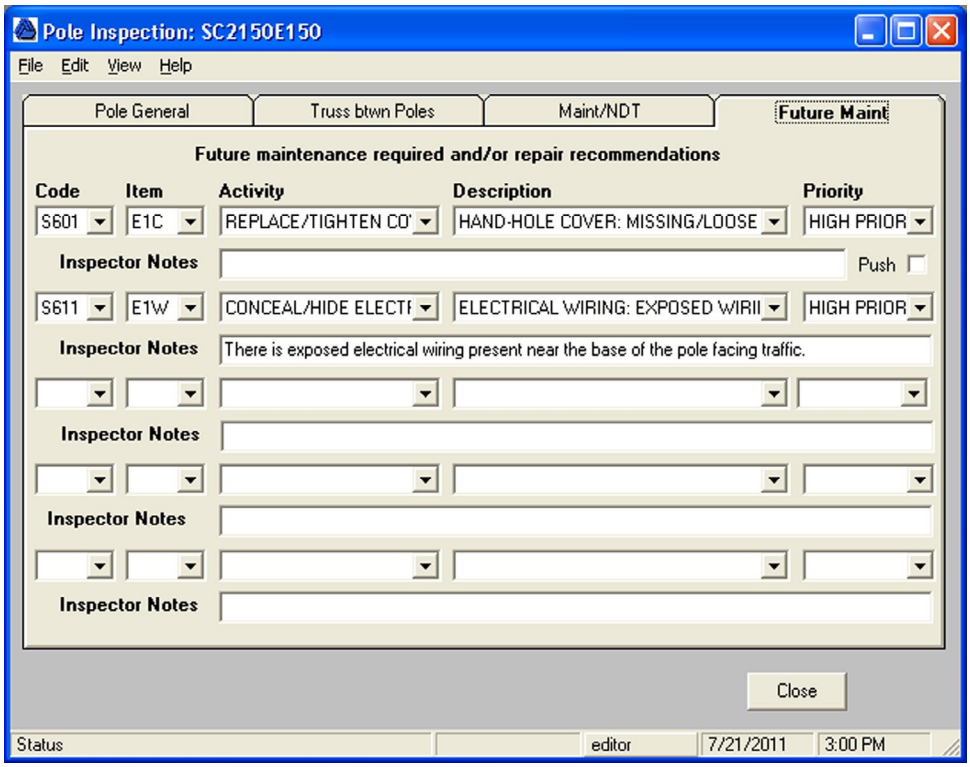
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the Pole and/or Trussing Elements during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

POLE INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the Pole and/or Trussing Elements.

If no maintenance repairs were recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the structure's elements and the structure itself.

Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

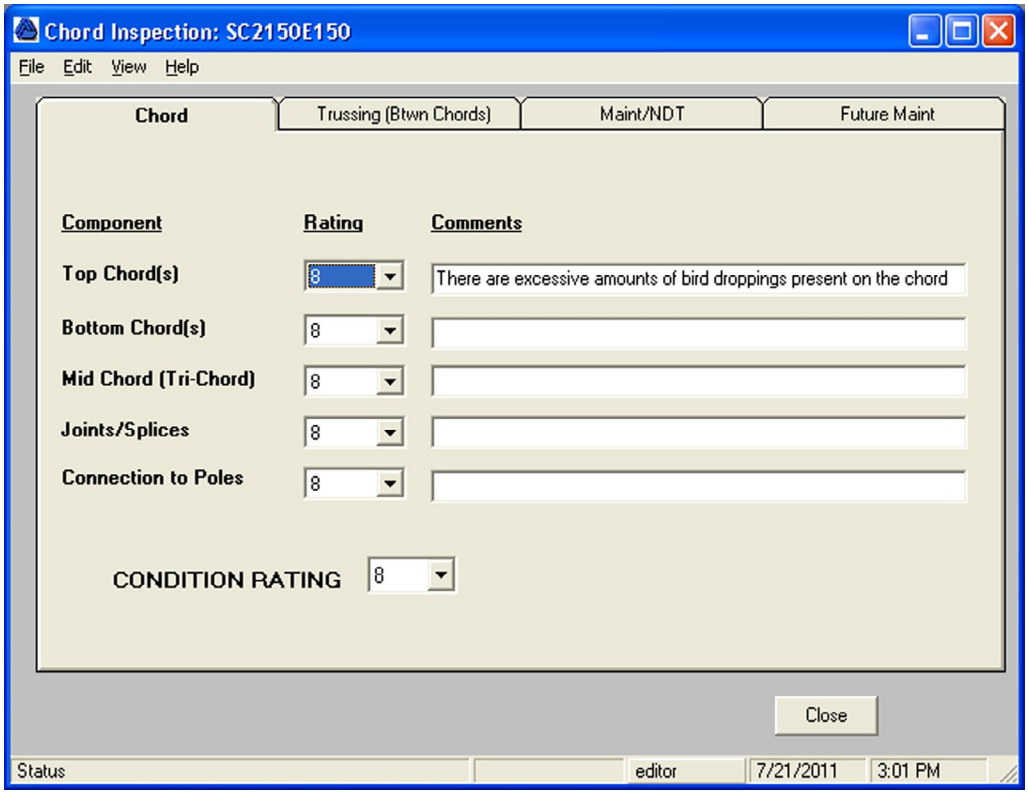
Inspector Notes

Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

CHORD INSPECTION - CHORD



Top Chord(s)

Description: This element involves the inspection of the top chord(s) within the chord type configuration(s), including the applied finish. Also included with this element are hand holes and caps attached to the top chord(s).

If the chord type chosen is **Single Chord**, this element should have a condition rating.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Bottom Chord(s)

Description: This element involves the inspection of the bottom chord(s) within the chord type configuration(s), including the applied finish. Also included with this element are hand holes and caps attached to the bottom chord(s).

If the chord type chosen is **Single Chord**, the condition rating should be "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Mid Chord (Tri-Chord)

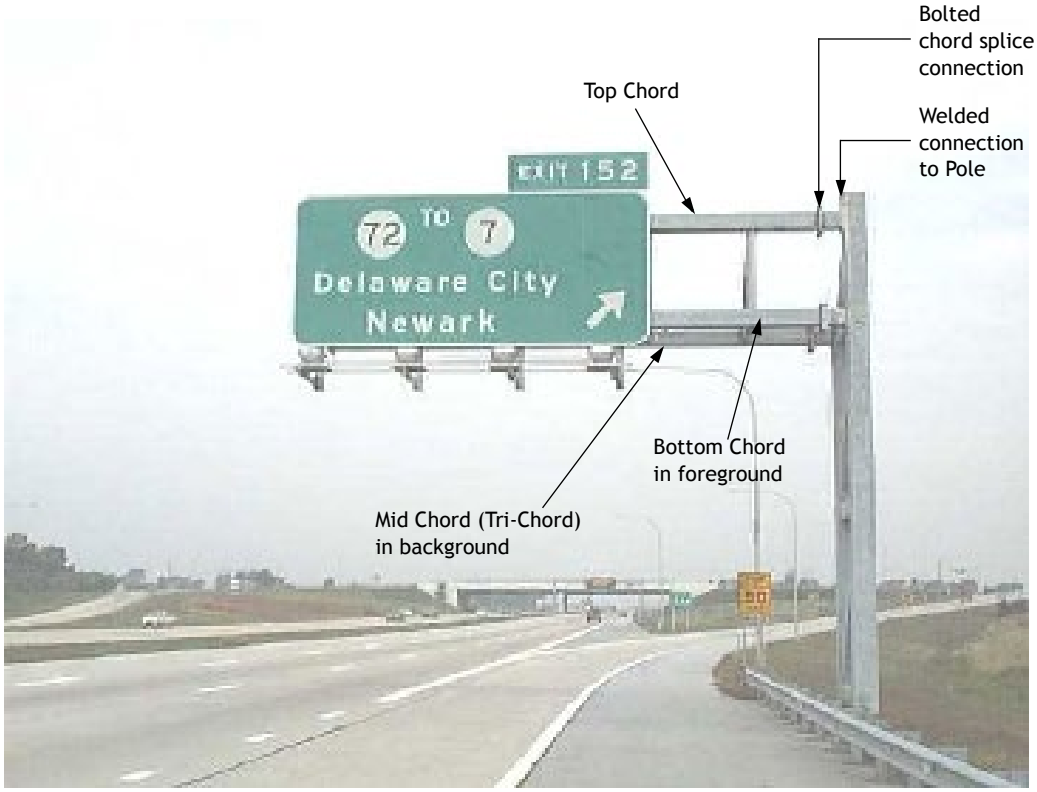
Description: This element involves the inspection of the mid chord within a Tri-Chord type configuration, including the applied finish. Also included with this element are hand holes and caps attached to the mid chord.

If the chord type chosen is not **Tri-Chord**, the condition rating should be "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.



Joints/Splices

Description: This element involves the inspection of joint connections and splices found along the individual chords within the chord type configuration.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Connection to Poles

Description: This element involves the inspection of the connections of the individual chords within a chord type configuration to their respective pole supports.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

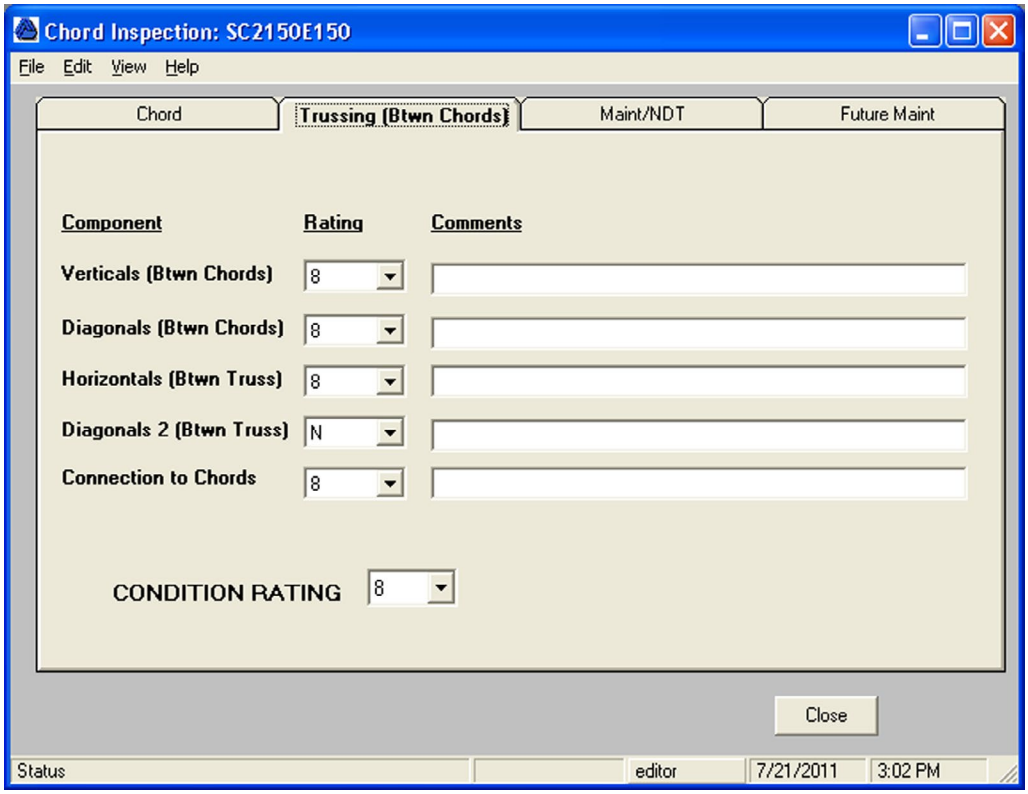
Description: This numerical condition rating should characterize the general condition of the chord. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the chord type.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the chord type, the element can be considered a "weak link" in the structure, and the rating of the chord type should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Chord Type configuration.

Coding: See **Condition Rating Codes** section of this manual.

CHORD INSPECTION - TRUSSING (BTWN CHORDS)



Note: This tab does not appear for a single chord type configuration.

Verticals (Btwn Chords)

Description: This element involves the inspection of the vertical trussing members located between the individual chords of a plane truss within the chord type configuration(s), including the applied finish.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Diagonals (Btwn Chords)

Description: This element involves the inspection of the diagonal trussing members located between the individual chords of a plane truss within the chord type configuration(s), including the applied finish.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Horizontals (Btwn Truss)

Description: This element involves the inspection of the horizontal trussing members located between two plane trusses (four chord type) or between one plane truss and a chord (Tri-Chord type), including the applied finish.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Diagonals 2 (Btwn Truss)

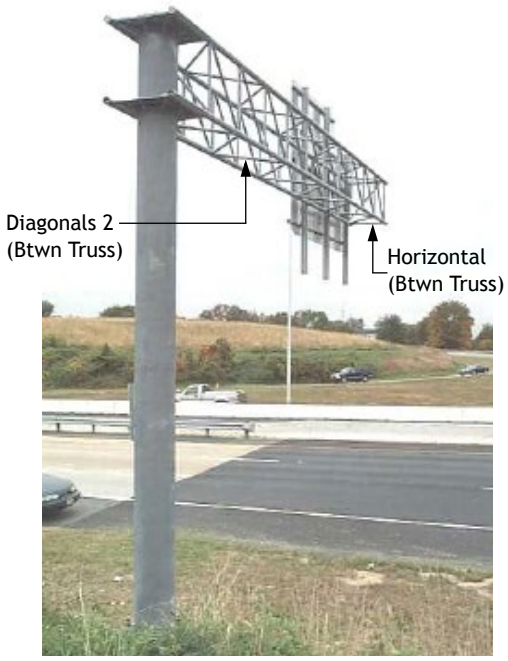
Description: This element involves the inspection of the diagonal trussing members located between two plane trusses (four chord type) or between one plane truss and a chord (Tri-Chord type), including the applied finish.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.



Connection to Chords

Description: This element involves the inspection of the connections of the trussing members within the chord configuration(s) to the individual chords.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

Description: This numerical condition rating should characterize the general condition of the Trussing Members and their connections to the individual chords. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

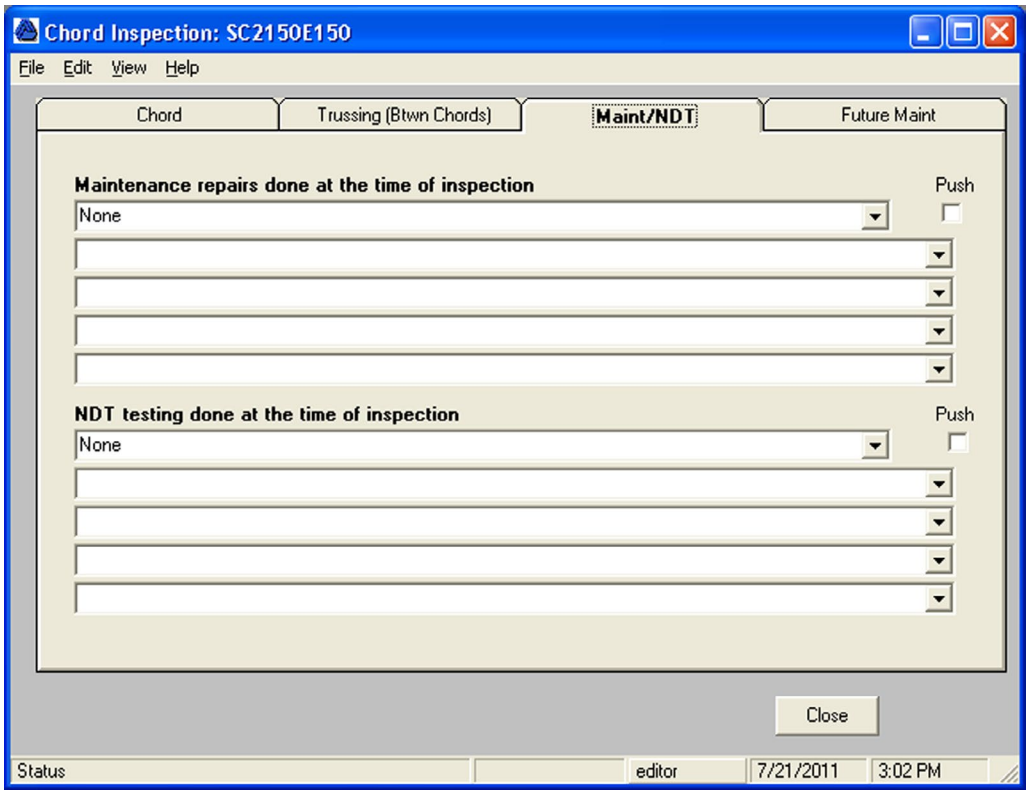
However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the member, the element can be considered a "weak link" in the structure, and the rating of the Trussing Members should be reduced accordingly.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the overall condition of the Trussing Members and their connections to the individual chords.

Coding: See **Condition Rating Codes** section of this manual.

CHORD INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the Chord and/or Trussing elements during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

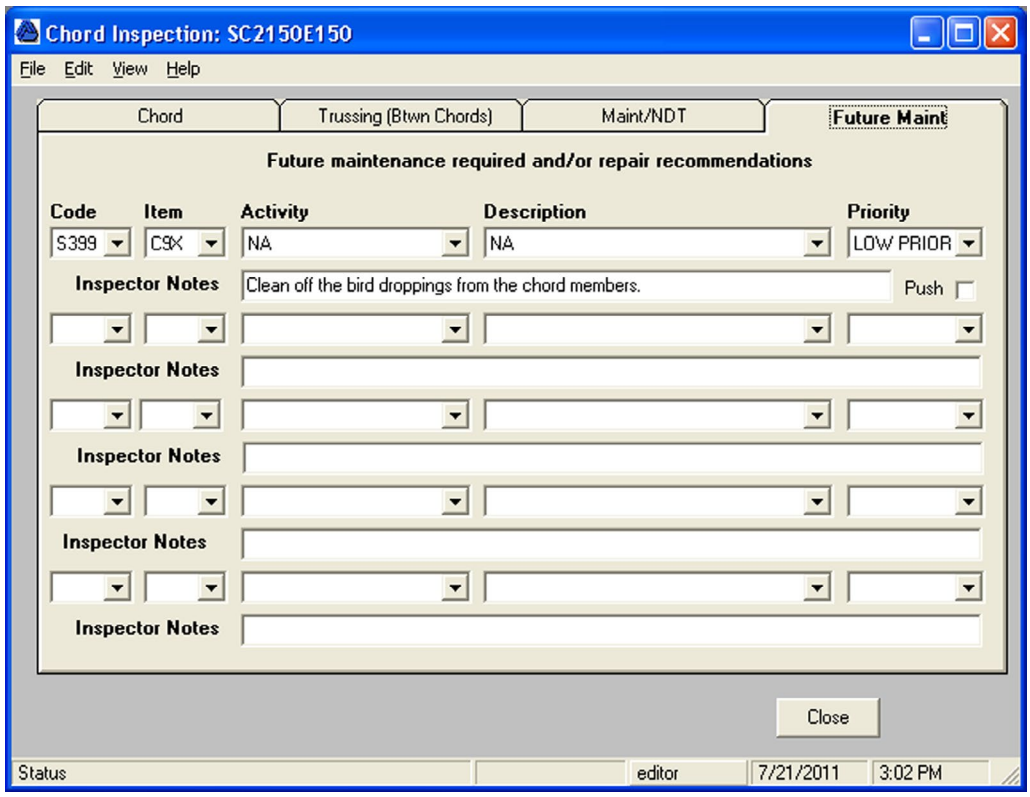
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the Chord and/or Trussing elements during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

CHORD INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the Chord and/or Trussing Elements.

If no maintenance repairs were recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the structure's elements and the structure itself.

Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

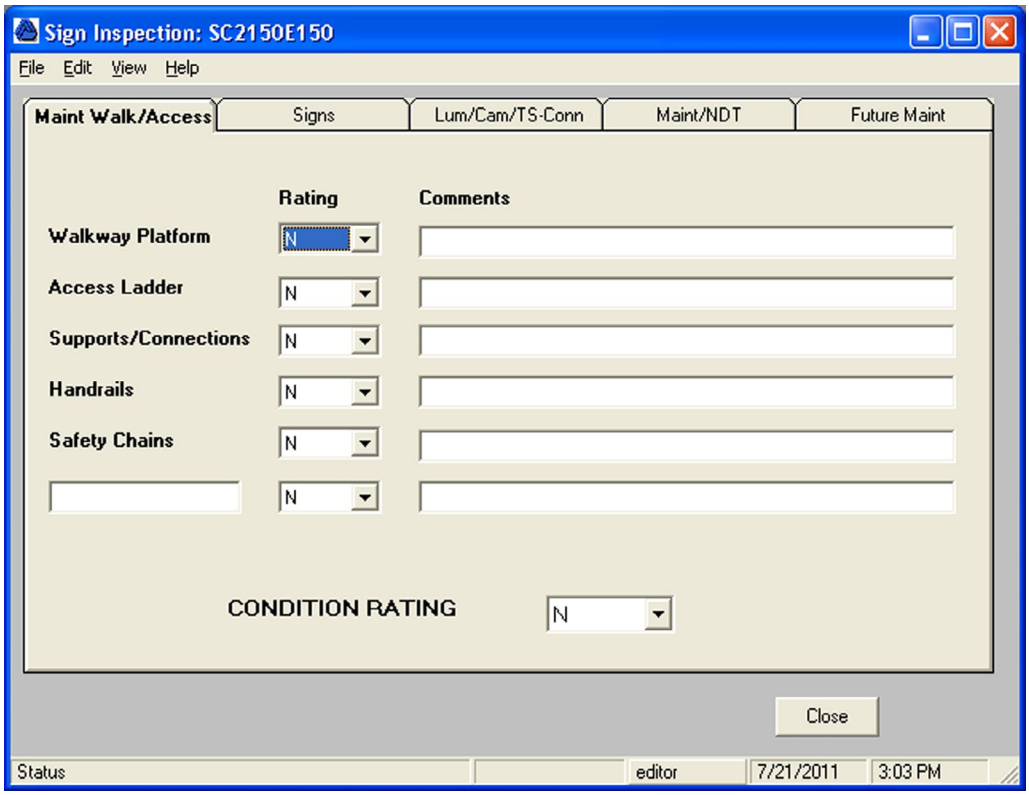
Inspector Notes

Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

SIGN INSPECTION - MAINT WALK/ACCESS



Walkway Platform

Description: This element involves the inspection of the walkway platform present on the structure.

From the pull down menu, select the **Rating** for the element.

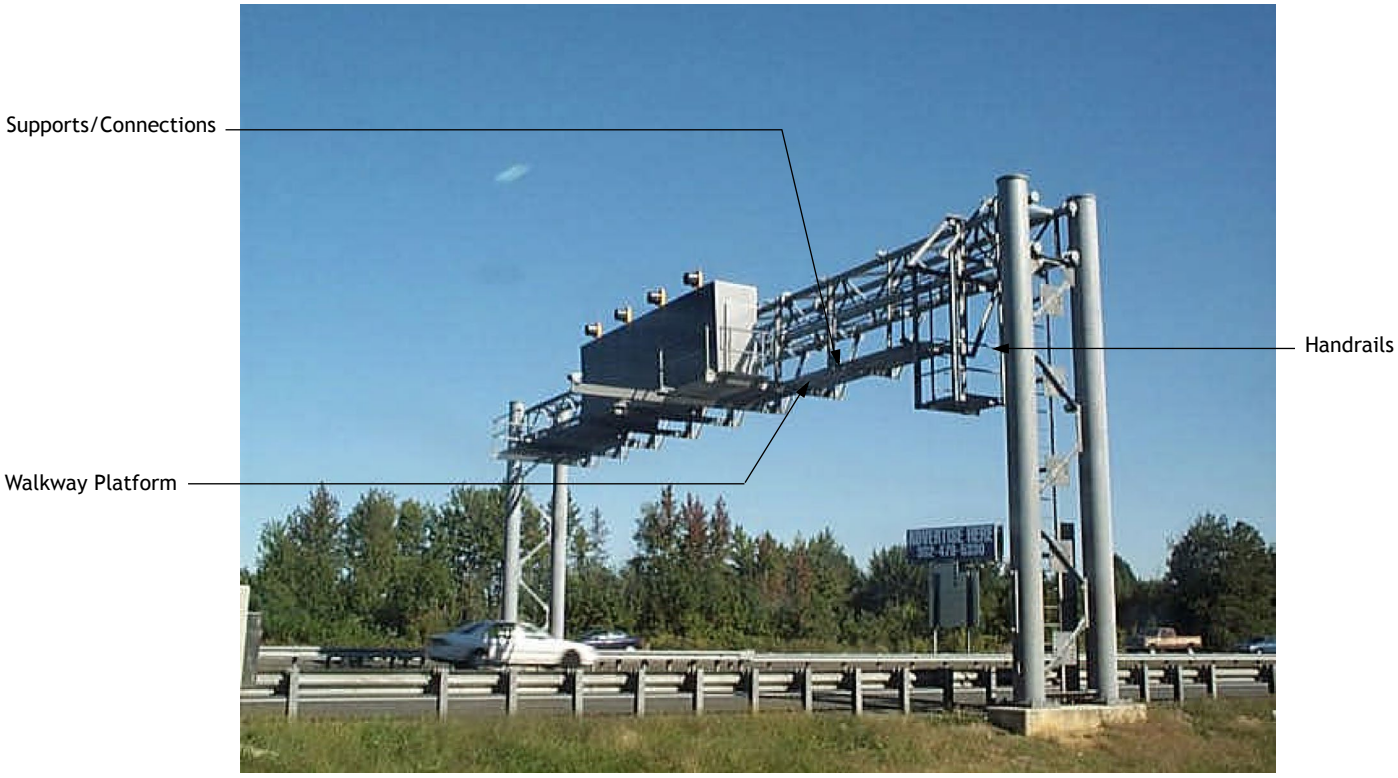
The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Access Ladder

Description: This element involves the inspection of access ladders present on the structure. This also includes ladder rungs that may be attached directly to the structure.

From the pull down menu, select the **Rating** for the element.



The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Supports/Connections

Description: This element involves the inspection of the supports for the maintenance walkway and their connections to the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Handrails

Description: This element involves the inspection of the safety handrails attached to the walkway platform and safety railing around access ladders, including connections.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Safety Chains

Description: This element involves the inspection of safety chains present on the walkway platform and access ladders.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Blank Field

Description: A blank field is provided for the user to enter another element for the Maintenance Walkway/Access system.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

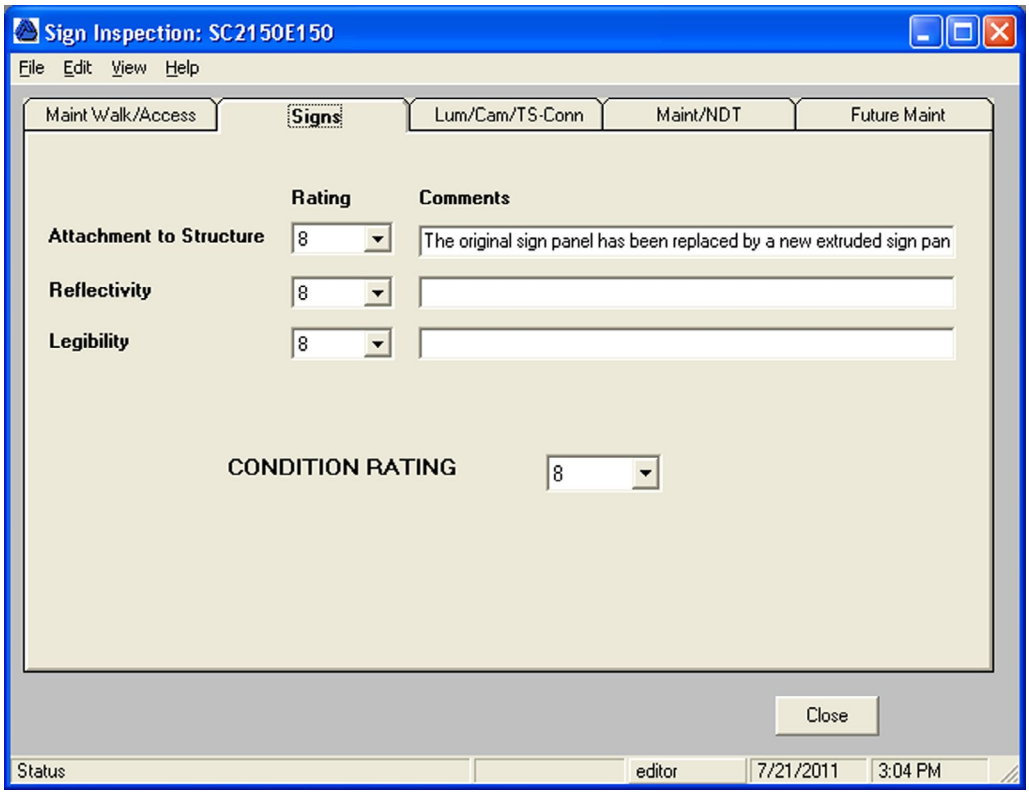
Description: This numerical condition rating should characterize the general condition of the Maintenance Walkway/Access system. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the Maintenance Walkway/Access system.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the element, then the element can be considered a "weak link", and the rating of the Maintenance Walkway/Access system should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Maintenance Walkway/Access system. If a Maintenance Walkway/Access system is not present on the structure, all of the elements and the condition rating should be coded "N".

Coding: See **Condition Rating Codes** section of this manual.

SIGN INSPECTION - SIGNS



Attachment to Structure

Description: This element involves the inspection of the sign panel(s) and variable message sign (VMS) board(s) attachment to their immediate supports and to the structure itself.

If no sign panels or VMS boards are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Reflectivity

Description: This element involves the condition inspection of the sign panel(s) reflective background and foreground.

If no sign panels are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

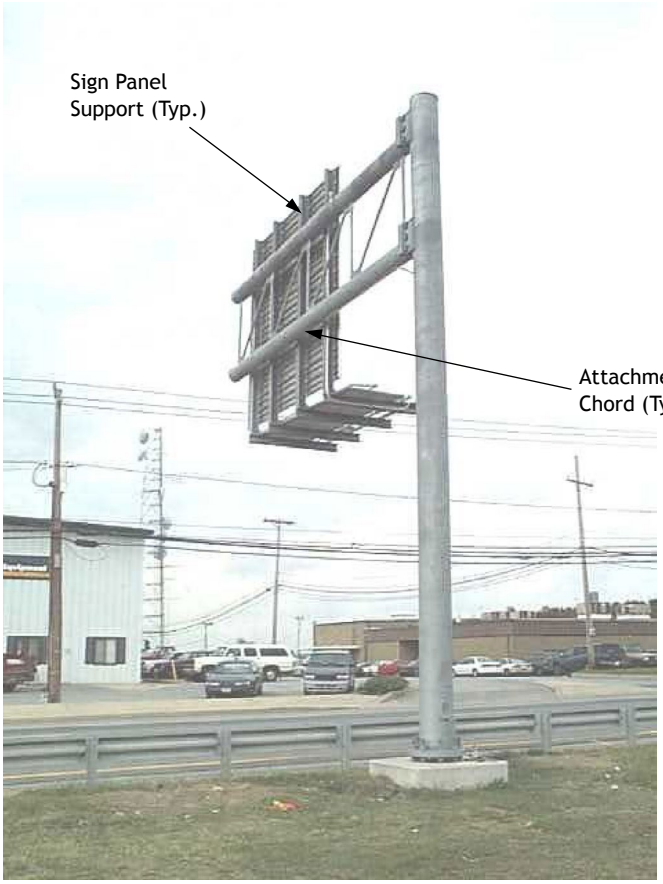
Legibility

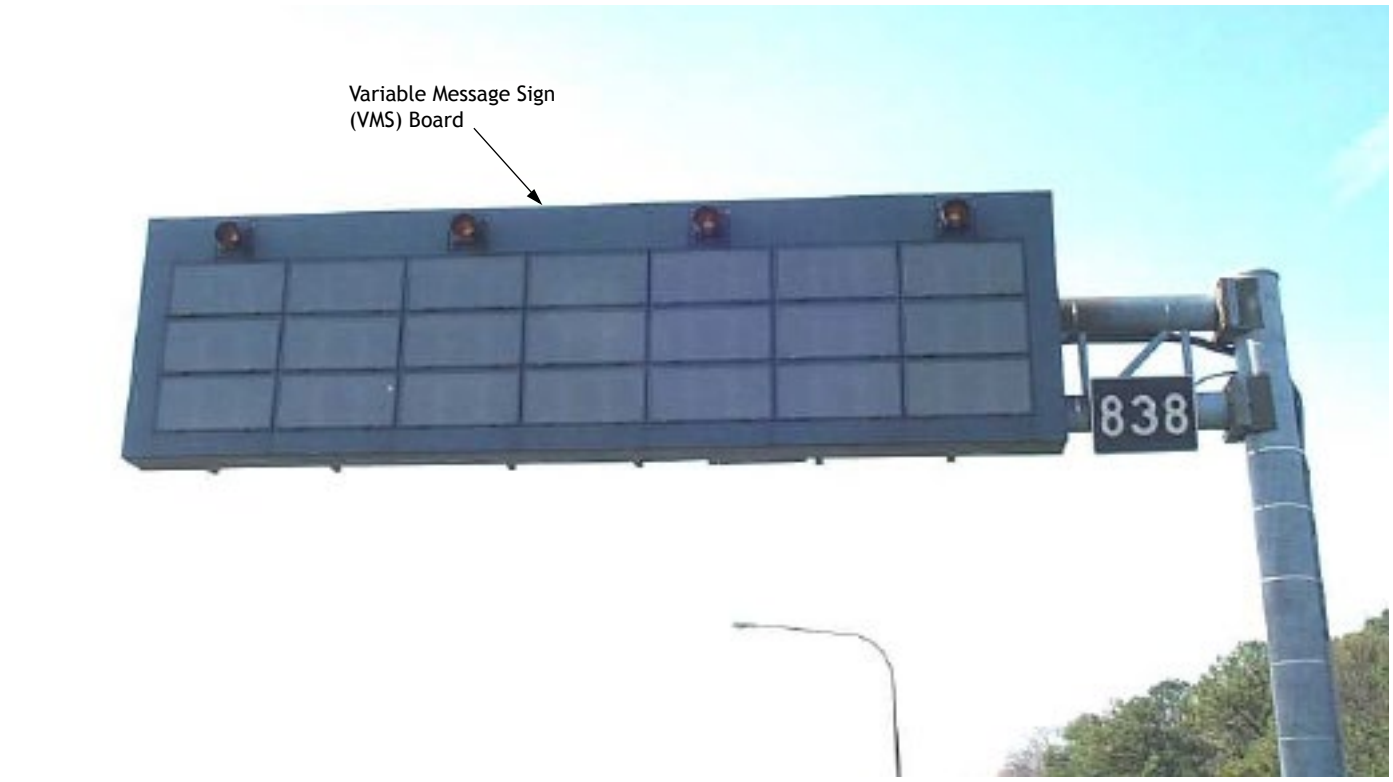
Description: This element involves the condition inspection of the lettering and numbering present on the sign panel(s).

If no sign panels are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

Sign panel
NORTH
TO
INTERSTATE
295
NTP
TURNPIKE
Del Mem Br
NJ - NY


Sign Panel
Support (Typ.)
Attachment to
Chord (Typ.)



The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

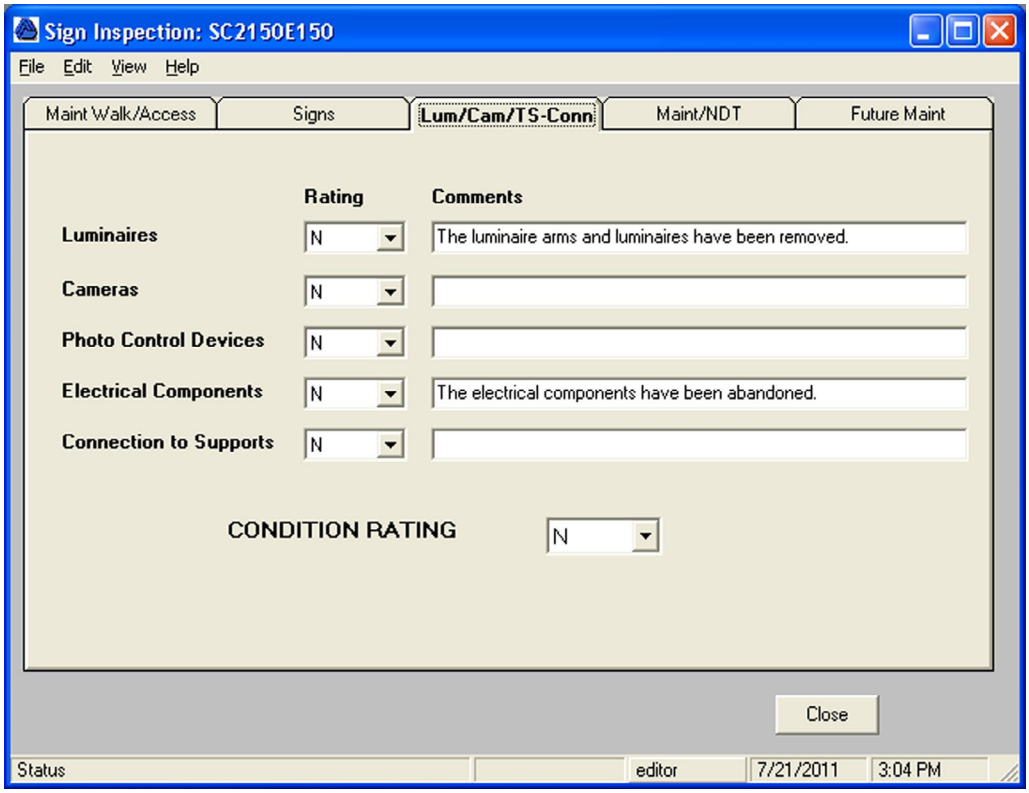
Description: This numerical condition rating should characterize the general condition of the Sign Panels, VMS Boards and their connections. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the serviceability of the element, then the element can be considered a "weak link", and the rating of the Sign Panels, VMS Boards and their connections should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Sign Panels, VMS Boards and their connections. If elements of the Signs are not present on the structure, the elements should be coded "N".

Coding: See **Condition Rating Codes** section of this manual.

SIGN INSPECTION - LUM/CAM/TS-CONN



Luminaires

Description: This element involves the inspection of the lighting present on the structure for the sign panel(s). This element is not applicable for highway lighting.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Cameras

Description: This element involves the inspection of the camera mounted on the structure or a mast arm.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Photo Control Devices

Description: This element involves the inspection of photo control devices present on the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Electrical Components

Description: This element involves the inspection of visible electrical components associated with luminaires, cameras and photo control devices. This includes conduits, connections to devices, etc.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Connection to Supports

Description: This element involves the inspection of the connections of the luminaires, cameras and photo control devices to their respective supports.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

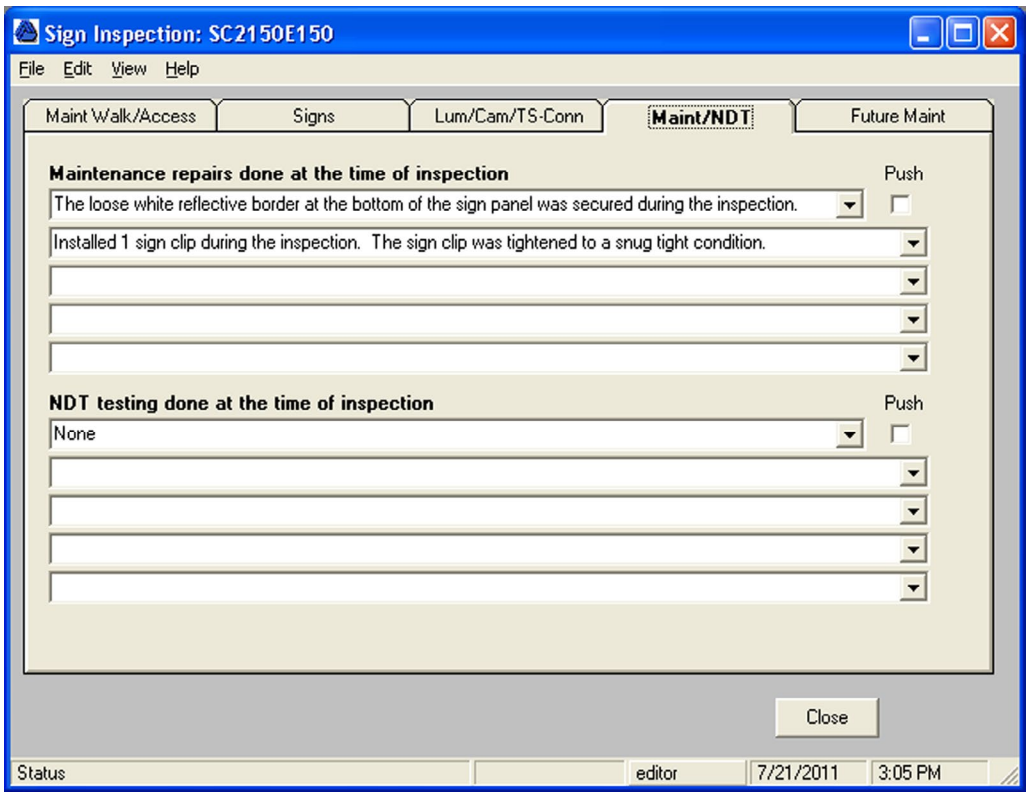
Description: This numerical condition rating should characterize the general condition of the Luminaire/Camera/Traffic Signal. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the serviceability of the element, then the element can be considered a "weak link", and the rating of the Luminaire/Camera/Traffic Signal should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Luminaire/Camera/Traffic Signal. If elements of the Luminaire/Camera/Traffic Signal are not present on the structure, the elements should be coded "N".

Coding: See **Condition Rating Codes** section of this manual.

SIGN INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the elements of the Maint Walk/Access, Signs and Lum/Cam/TS-Conn during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

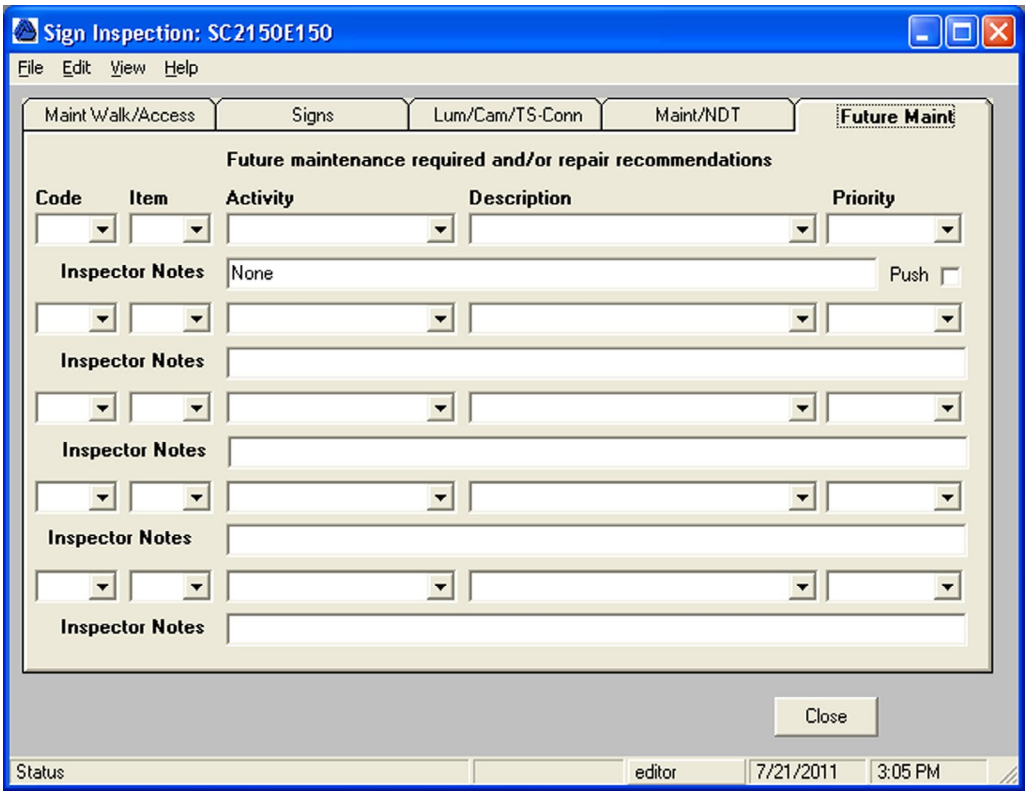
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the elements of the Maint Walk/Access, Signs and Lum/Cam/TS-Conn during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

SIGN INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the elements of the Maint Walk/Access, Signs and Lum/Cam/TS-Conn.

If no maintenance repairs were recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the structure's elements and the structure itself.

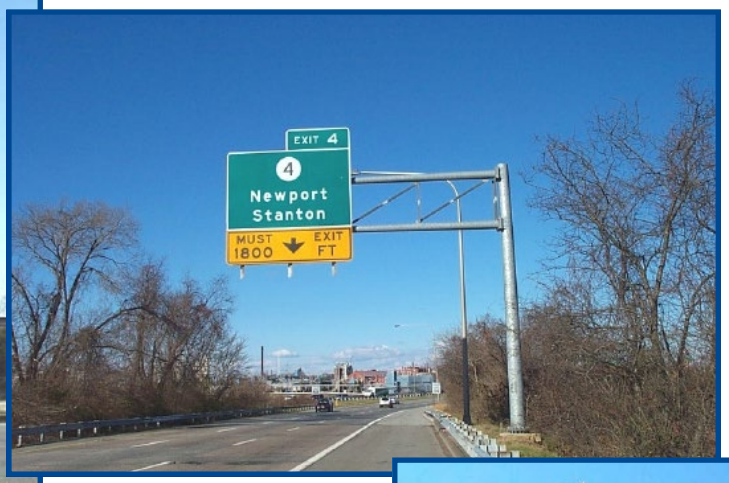
Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

Inspector Notes

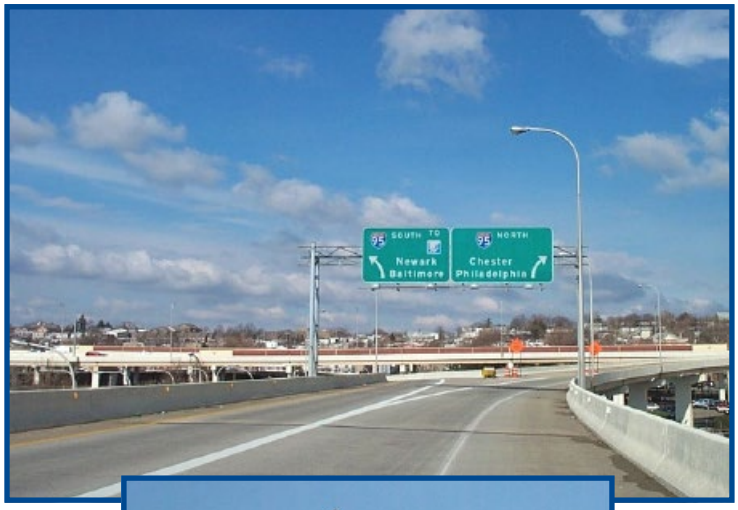
Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection-General** page. To activate the "push", click on the box and a checkmark will appear.


EXIT 4
4
Newport
Stanton
MUST
1800
EXIT
FT

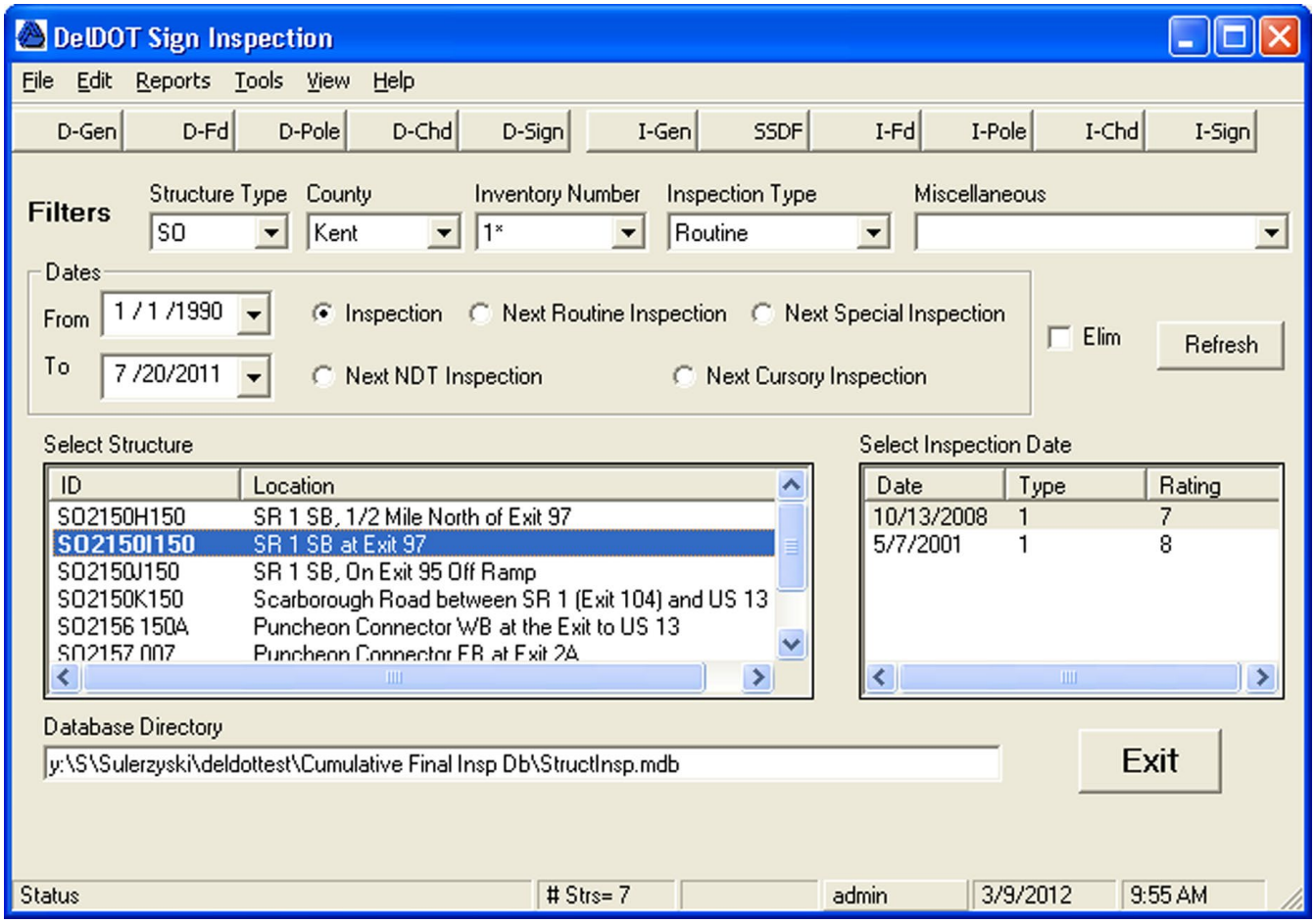
E-ZPass
DEDICATED
LANE
USE FLASHING
NO CASH


95
SOUTH TO
Newark
Baltimore
95
NORTH
Chester
Philadelphia

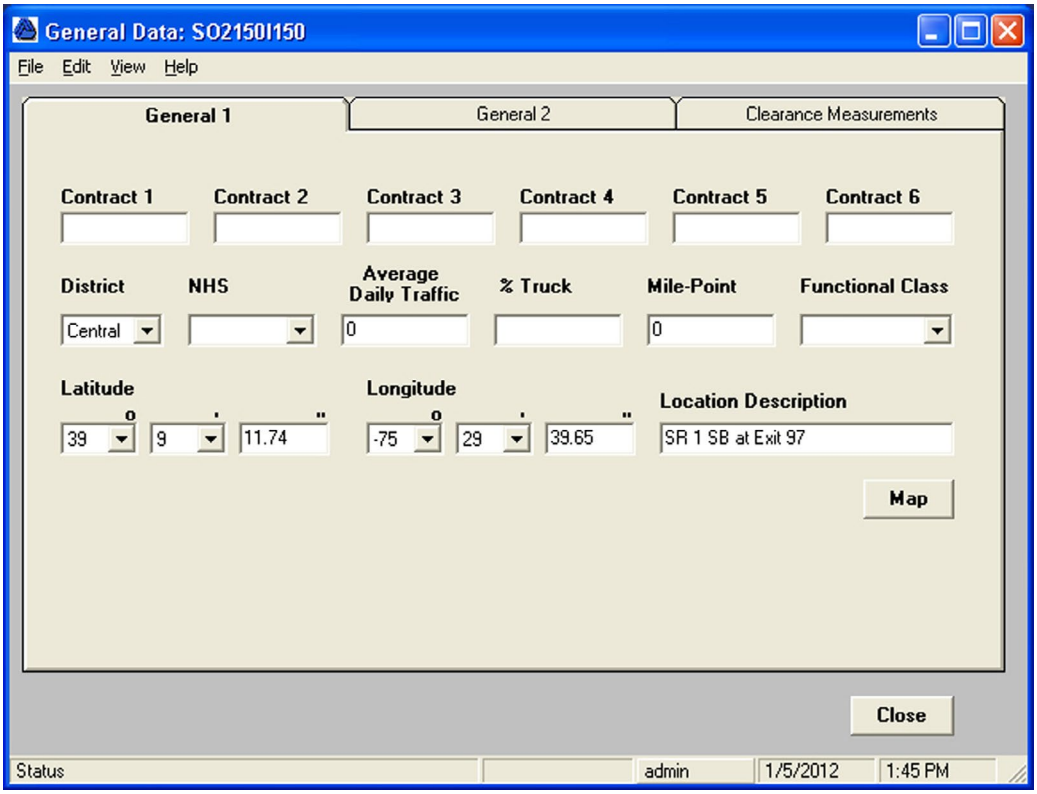
95
SOUTH
Del. Mem. Bridge

SO - OVERHEAD SIGN STRUCTURE

STRUCTURE DATA



GENERAL DATA - GENERAL 1



Contract 1 to Contract 6

Description: This is an alpha-numeric field used to record up to six DelDOT Contract Numbers associated with the construction and/or rehabilitation of the structure.

Coding: None

District

Description: From the pull down menu, select the district in which the structure is located.

Coding: 1 = North PA Line to the C & D Canal
2 = Central C & D Canal to the Sussex County Line
3 = South All of Sussex County

NHS

From the pull down menu, indicate whether or not the structure is located on a National Highway System (NHS).

Average Daily Traffic

To be inputted by consultant using most recent DelDOT Traffic Summary Book.

% Truck

To be inputted by consultant using most recent DelDOT Traffic Summary Book.

Mile-Point
To be provided by DelDOT and inputted by consultant.

Functional Class
To be inputted by consultant using most recent DelDOT Traffic Summary Book.

Latitude
Description: Enter the latitude of the structure in degrees, minutes and seconds to 1-meter accuracy.

The GPS data shall be taken at the support adjacent to the right shoulder in the direction of traffic. If GPS data cannot be obtained, then it shall be taken at the other support.

For a structure that spans over both directions of a highway, the GPS location shall be at the support in the Northbound or Eastbound direction.

Coding: The degrees and minutes may be chosen from the pull down menu. The seconds must be entered manually.

Longitude
Description: Enter the longitude of the structure in degrees, minutes and seconds to 1-meter accuracy.

The GPS data shall be taken at the support adjacent to the right shoulder in the direction of traffic. If GPS data cannot be obtained, then it shall be taken at the other support.

For a structure that spans over both directions of a highway, the GPS location shall be at the support in the Northbound or Eastbound direction.

Coding: The degrees and minutes may be chosen from the pull down menu. The seconds must be entered manually.

Location Description
Description: This is an alpha-numeric field used to describe the location of the structure. The location should provide the name of a State Route or Interstate and an intersecting feature.

For Example:

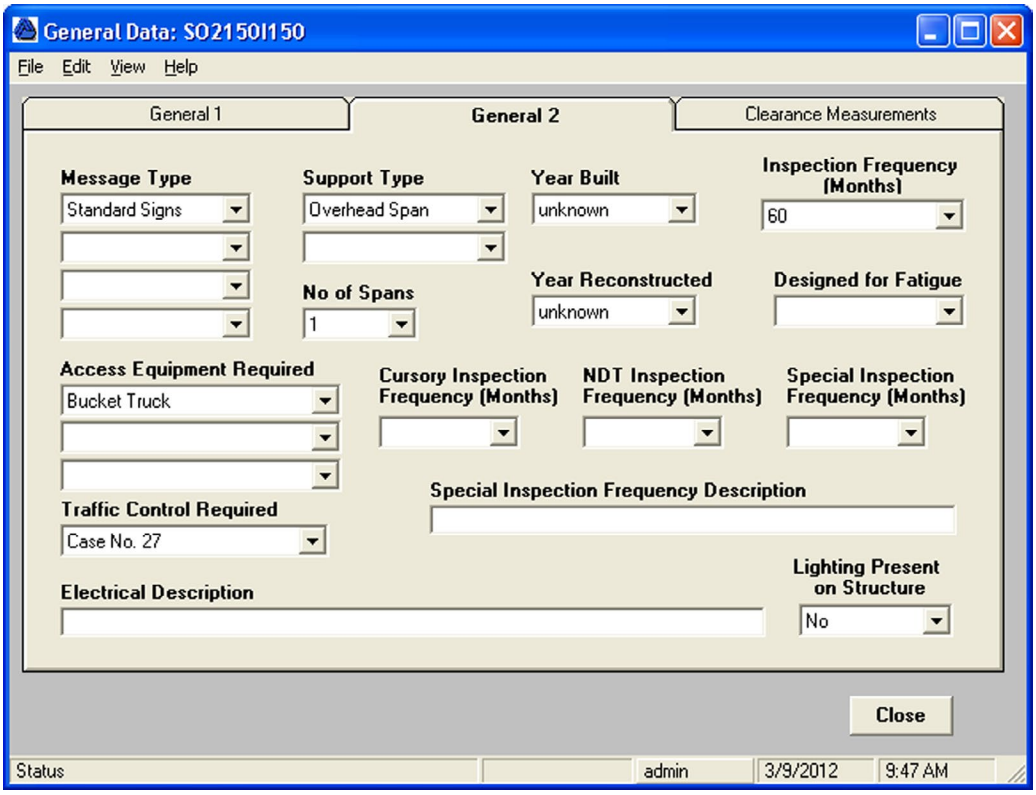
I-95 NB at Exit 4
SR 141 NB at US 202
South College Avenue at Delaware Avenue

Coding: None

Map
Description: Click the button to map the location of the structure based on its GPS data.

Coding: None

GENERAL DATA - GENERAL 2



Message Type

Description: From the pull down menus, select up to four types of messages that are directly or indirectly connected to the structure.

Coding:
1 = Standard Signs
2 = Variable Message
3 = Ring – Type Light
4 = Stadium – Type Light
5 = Traffic Signal
6 = Firehouse Signal
7 = School Signal
8 = Signal Sign(s)
9 = Camera
10 = Directional/Lane Control
11 = Luminaire (Highway Lighting)
12 = Utility Lines
13 = Railroad Crossing Signal(s)
14 = Flashers
15 = Other
16 = Not Applicable
17 = Overheight Sensors

Support Type

Description: From the pull down menus, select up to two types of supports that describe how each **primary message type** is connected to the structure. Primary message types include Standard Signs, Variable Message and Camera.

Coding:
1 = Cantilever
2 = Butterfly
3 = Overhead Span
4 = Bridge Mounted
5 = Sign Bridge Cantilever
6 = Pole Mounted
7 = Span Wire Mounted
8 = Other

Year Built
Description: From the pull down menu, select the year that the structure was originally constructed. If the year is not available, "Unknown" should be coded.

Coding: None

Year Reconstructed
Description: From the pull down menu, select the latest year that the structure was rehabilitated. If the year is not available, "Unknown" should be coded.

Coding: None

Inspection Frequency (Months)
Description: From the pull down menu, select the frequency of the structure inspection in months.

Coding: None

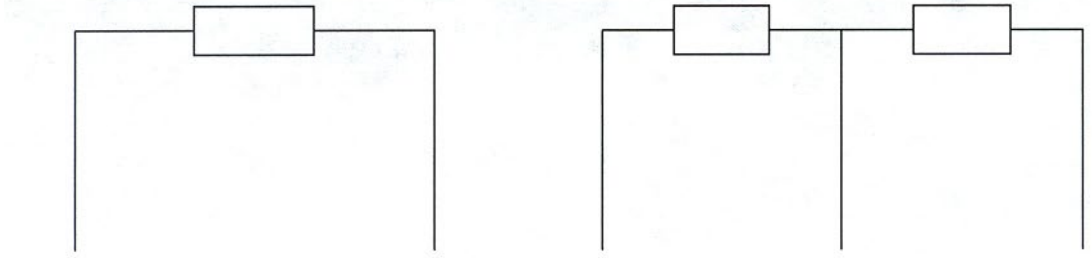
Designed for Fatigue
To be input by DelDOT.

No of Spans
Description: From the pull down menu, select the total number of spans for the sign structure.

A sign structure that spans a divided highway with a median pole support and pole supports on each side has two spans.

This field is not activated for Bridge Mounted or Cantilever Sign Structures.

Coding: None



One Span Two Span

Access Equipment Required
Description: From the pull down menus, select up to three different types of equipment required in order to perform the inspection.

Coding: 1 = Lift Van
2 = Bucket Truck
3 = Snooper
4 = Crane Truck
5 = Railroad Permit/Equipment
6 = None

Cursory Inspection Frequency (Months)
Description: From the pull down menu, select the frequency of the structure's cursory inspection in months.

Coding: None

NDT Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure's NDT inspection in months.

Coding: None

Special Inspection Frequency (Months)

Description: From the pull down menu, select the frequency of the structure's special inspection in months.

Coding: None

Special Inspection Frequency Description

Description: This is an alpha-numeric field used to comment on the type of special inspection required for the structure and reason why it was performed.

Coding: None

Traffic Control Required

Description: From the pull down menu, select the traffic control equipment or DelDOT Traffic Control Case required to perform the inspection.

Coding:
1 = Cones
2 = Signs
3 = Lane Closure(s)
4 = Case No. 16
5 = Case No. 26
6 = Case No. 27
7 = Case No. 28
8 = Case No. 29
9 = None
10 = Cones & Signs
11 = Case No. 20
12 = Case No. 16 (modified)
13 = Case No. 20 (modified)
14 = Case No. 26 (modified)
15 = Case No. 27 (modified)
16 = Case No. 28 (modified)
17 = Case No. 29 (modified)
18 = Case No. 36
19 = Case No. 36 (modified)
20 = Case No. 14
21 = Case No. 14 (modified)
22 = Case No. 3
23 = Case No. 3 (modified)
24 = Case No. 2
25 = Case No. 2 (modified)
26 = Case No. 34
27 = Case No. 34 (modified)

Electrical Description

Description: This is an alpha-numeric field used to record general comments regarding the electrical items on or around the structure.

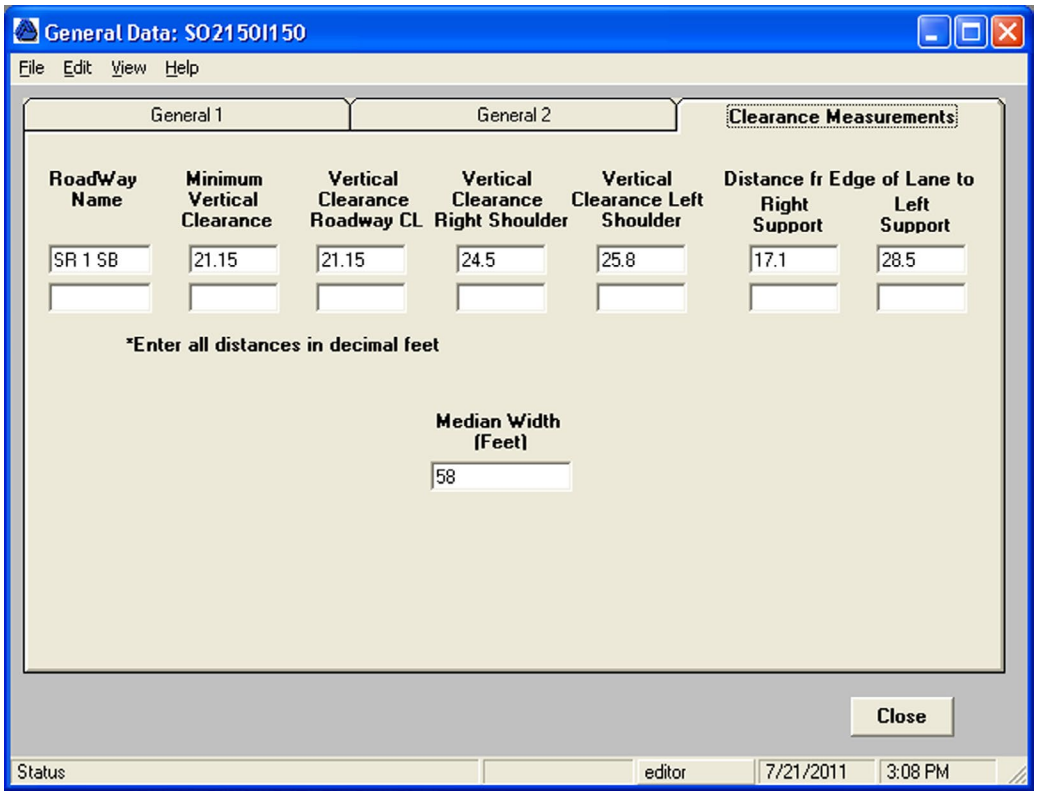
Coding: None

Lighting Present on Structure

Description: From the pull down menu, select whether or not lighting is present on the structure. If highway luminaire lighting is attached to the structure, this item should be coded "Yes".

Coding:
1 = Yes
2 = No
3 = Not Visible

GENERAL DATA - CLEARANCE MEASUREMENTS



Note: Clearances can be entered for up to two roadways. Each roadway can have its own set of clearances.

Roadway Name

Description: This is an alpha-numeric field used to record the name of the roadway where the measurements have been taken.

Coding: None

Minimum Vertical Clearance

Description: Enter the Minimum Vertical Clearance, in decimal feet, for the structure.

Coding: None

Vertical Clearance - Roadway CL

Description: Enter the vertical clearance, in decimal feet, from the centerline of roadway to the underside of the structure at that location. If the structure does not span over a traveled roadway, this field should be left blank.

Coding: None

Vertical Clearance - Right Shoulder

Description: Enter the vertical clearance, in decimal feet, from the roadway's right shoulder to the underside of the structure at that location. If the structure does not span over the right shoulder, this field should be left blank.

Coding: None

Vertical Clearance - Left Shoulder

Description: Enter the vertical clearance, in decimal feet, from the roadway's left shoulder to the underside of the structure at that location. If the structure does not span over the left shoulder, this field should be left blank.

Coding: None

Distance fr Edge of Lane to - Right Support

Description: Enter the horizontal distance, in decimal feet, from the edge of the right travel lane to the centerline of the structure's right foundation.

If the structure has no right support, this field should be left blank.

Coding: None

Distance fr Edge of Lane to - Left Support

Description: Enter the horizontal distance, in decimal feet, from the edge of the left travel lane to the centerline of the structure's left foundation.

If the structure has no left support, this field should be left blank.

Coding: None

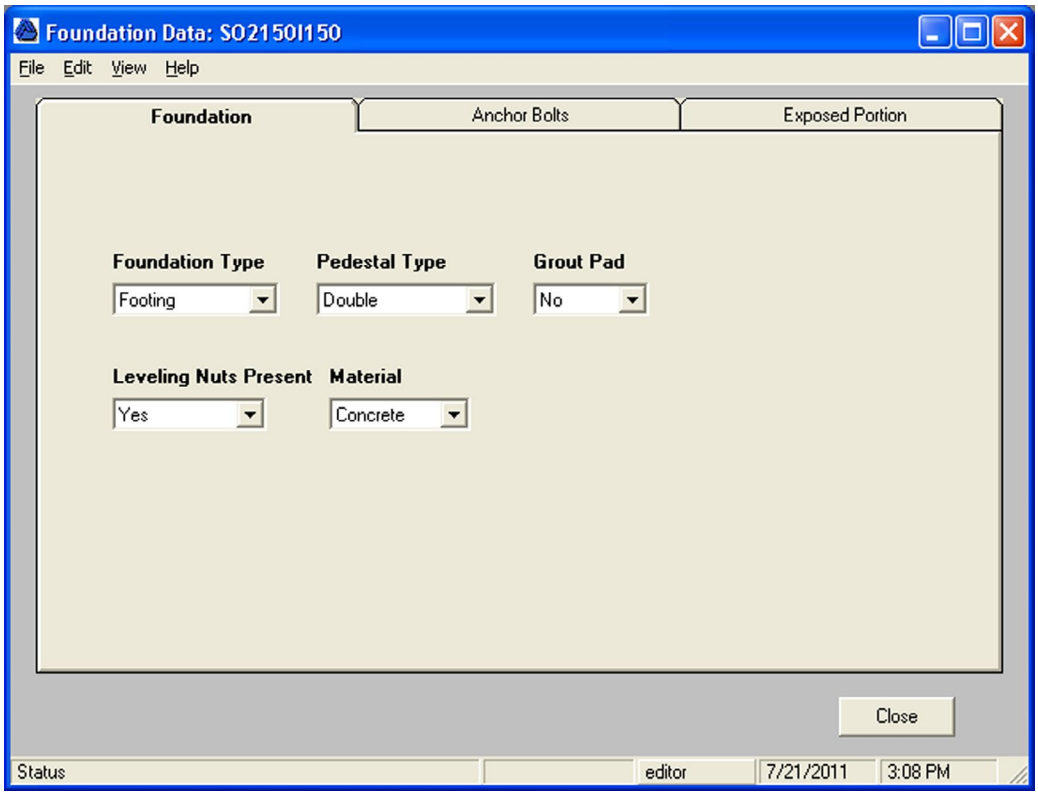
Median Width (Feet)

Description: Enter the horizontal distance, in decimal feet, between the inside edges of adjacent travel lanes.

This field is only applicable if one of the Overhead Sign Structure's pole supports is located in a median area; otherwise, this field should be left blank.

Coding: None

FOUNDATION DATA - FOUNDATION



Foundation Type

Description: From the pull down menu, select the type of exposed foundations present for the structure. If the foundation(s) is buried and cannot be determined, this field should be coded "Unknown".

It is assumed that all of the structure's foundations are the same type.

Coding: 1 = Footing
2 = Caisson
3 = Bracket (Examples: Attachment to a Bridge Girder or Retaining Wall)
4 = Other
5 = Not Applicable
6 = Unknown

Pedestal Type

Description: From the pull down menu, select the type of exposed pedestal foundation present.

A single pole support will have a "Single" pedestal foundation.

A double pole support may have a "Double" pedestal foundation, which means that each pole has its own exposed foundation. The double pole support may also have a "Single" pedestal foundation, which means that both poles are supported by the same exposed foundation.

A "Single/Double" pedestal foundation occurs if one of the structure's foundations is a "Single" pedestal foundation while another one is a "Double" pedestal foundation.

Coding: 1 = Single
2 = Double
3 = Single/Double

Grout Pad

Description: From the pull down menu, select whether or not a grout pad exists between the base plate(s) and the top of the foundation(s).

If the foundation is buried and the presence of a grout pad cannot be determined, "Not Visible" should be coded.

If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Yes
2 = No
3 = Not Visible

Leveling Nuts Present

Description: From the pull down menu, select whether or not there are leveling nuts present underneath the base plate(s).

If the foundation is buried or there is a grout pad present such that the presence of leveling nuts cannot be determined, "Not Visible" should be coded.

If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Yes
2 = No
3 = Not Visible

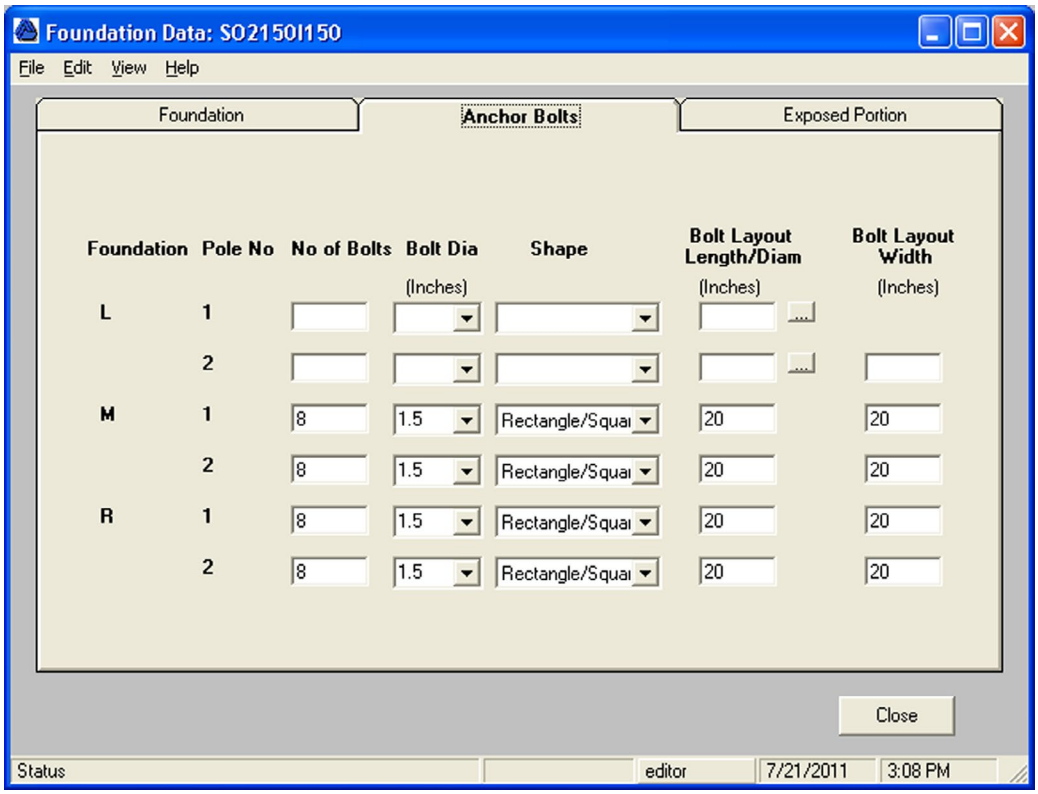
Material

Description: From the pull down menu, select the material that was used to construct the exposed foundation(s).

If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Steel
2 = Concrete
3 = Aluminum
4 = Timber
5 = Weathering Steel
6 = Other

FOUNDATION DATA - ANCHOR BOLTS



Foundation - L, M and R

Description: Anchor bolt information shall be entered for the applicable foundation.

The left foundation is labeled as Foundation "L".

The median foundation is labeled as Foundation "M".

The right foundation is labeled as Foundation "R".

Pole No - 1 and 2

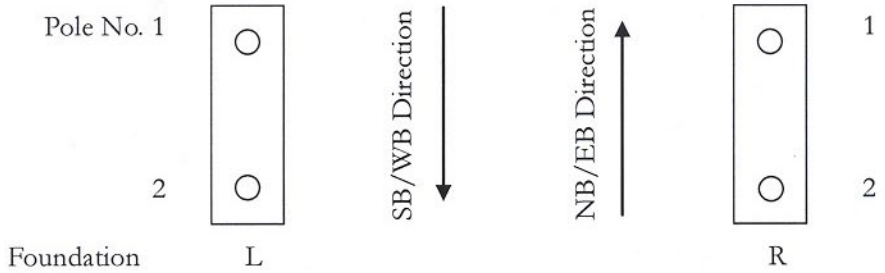
Description: Anchor bolt information can be entered for up to two pole supports at each foundation.

If only one pole support is present, data for **Pole 1** should be entered for the respective foundation.

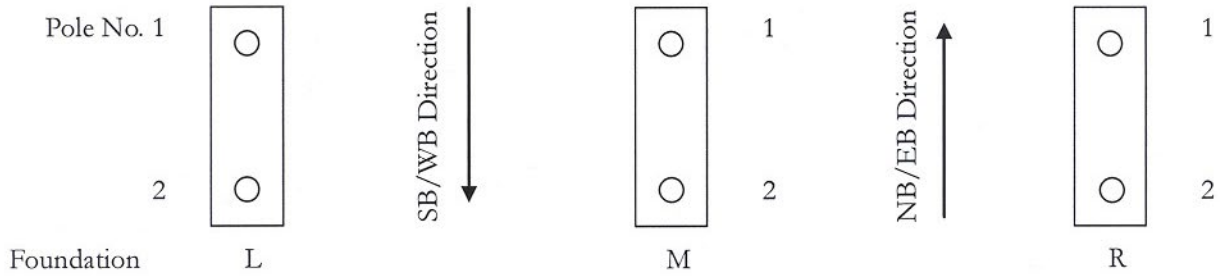
If two pole supports are present, data for **Pole 1** and **2** should be entered for the respective foundation.

See the diagrams below to determine the location of **Foundation L, M** and **R** as well as **Pole 1** and **2**.

Spanning One Way Traffic



Spanning Two Way Traffic



Spanning Both Traffic Directions

No of Bolts

Description: Enter the number (integer) of anchor bolts for each pole support. If the number of anchor bolts cannot be determined or the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

Bolt Dia (Inches)

Description: From the pull down menu, select the diameter of the anchor bolts present at each pole support. If the diameter cannot be determined or the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

Shape

Description: From the pull down menu, select the shape of the anchor bolt layout. If the anchor bolt layout cannot be determined, this field should be coded "Unknown". If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

Bolt Layout - Length/Diam (Inches)

Description: Enter the length in the direction of traffic or diameter (in inches) of the anchor bolt layout. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

If the anchor bolt layout Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

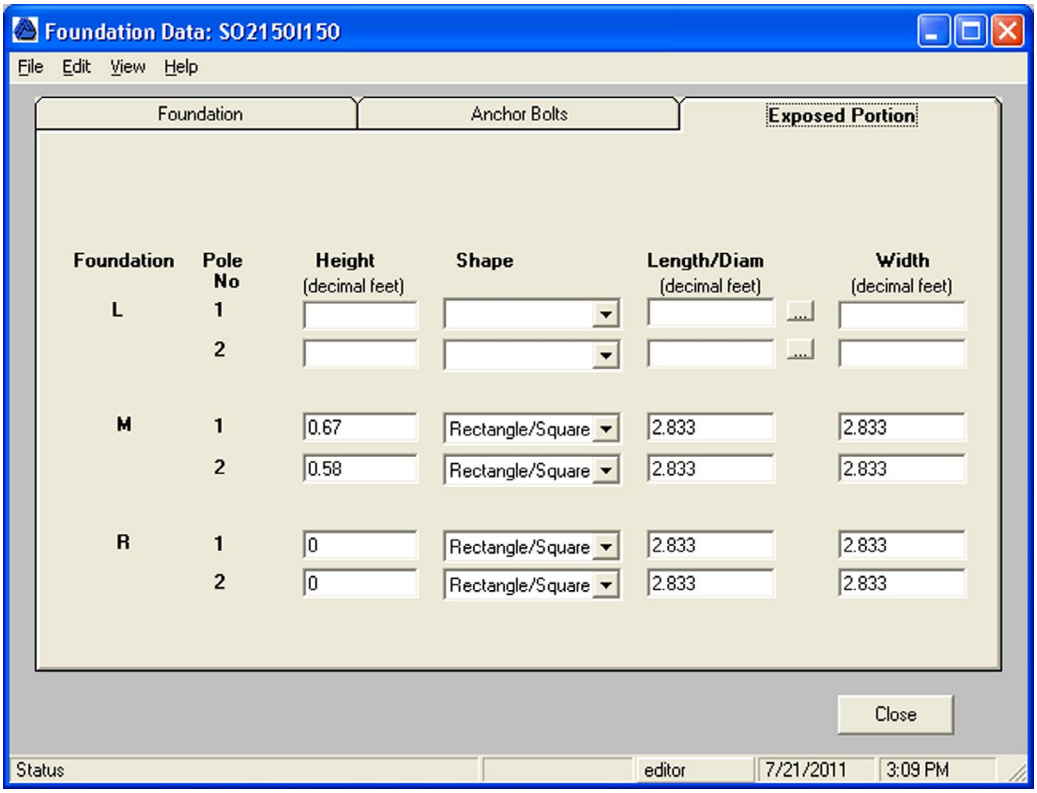
Bolt Layout - Width (Inches)

Description: Enter the width (in inches) of the anchor bolt layout.

If the anchor bolt layout Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank. Note that this field is only activated for certain anchor bolt layout shapes.

Coding: None

FOUNDATION DATA - EXPOSED PORTION



Foundation - L, M and R

Description: All relevant information shall be entered for the applicable foundation.

The left foundation is labeled as Foundation "L".

The median foundation is labeled as Foundation "M".

The right foundation is labeled as Foundation "R".

Pole No - 1 and 2

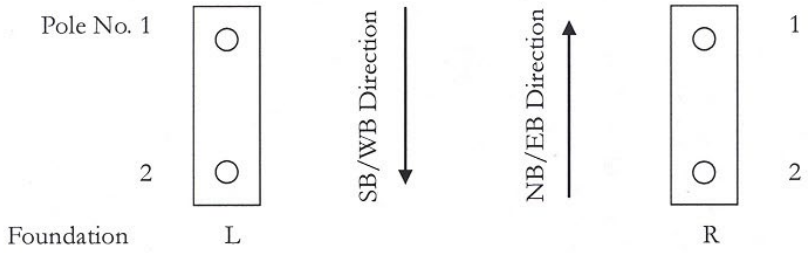
Description: Data can be entered for up to two foundations at one location.

If the **Pedestal Type** chosen is "Single" in the **Foundation** tab, **Pole No 1's** data should be entered for the respective foundation.

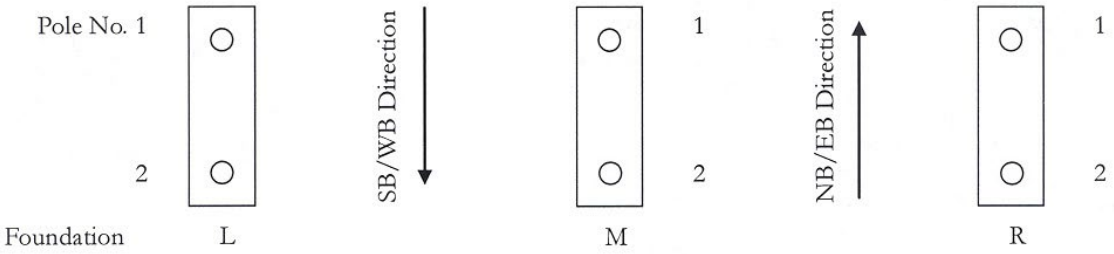
If the **Pedestal Type** chosen is "Double or Single/Double" in the **Foundation** tab, both **Pole No 1** and **2** data should be entered for the respective foundation.

See the diagrams below to determine the location of **Foundation L, M** and **R** as well as **Pole 1** and **2**.

Spanning One Way Traffic



Spanning Two Way Traffic



Spanning Both Traffic Directions

Height (decimal feet)

Description: Enter the height (in decimal feet) above the ground of the exposed portion of each foundation. If the height above ground is not constant, an average value should be used. If the foundation is buried, "0" should be coded. If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: None

Shape

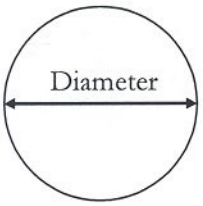
Description: From the pull down menu, select the shape of each exposed foundation. If the foundation's shape cannot be determined, this field should be coded "Unknown". If the Foundation Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

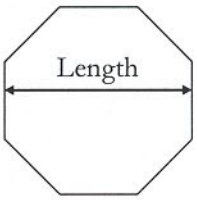
Length/Diam (decimal feet)

Description: Based on the plan illustrations below, enter the length in direction of traffic or diameter (in decimal feet) of each exposed foundation. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in decimal feet.

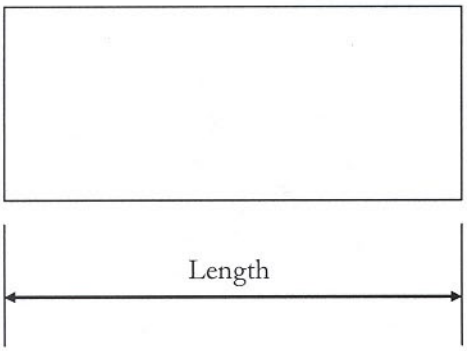
If the Foundation's Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank.



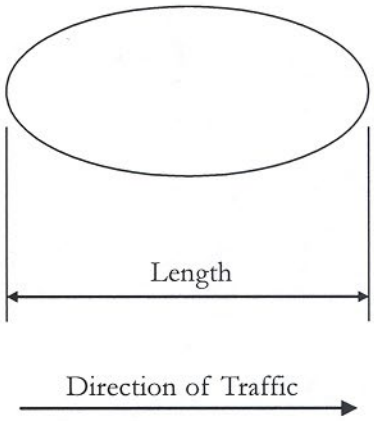
Circle or Fluted



Octagon
(Hexagon & Pentagon similar)



Rectangle/Square
(Trapezoid similar - use average values)



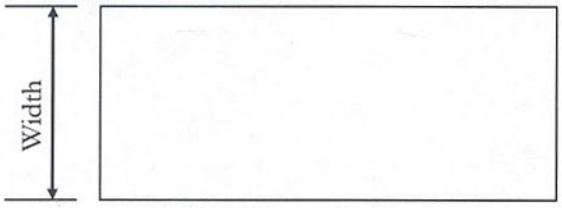
Ellipse

Coding: None

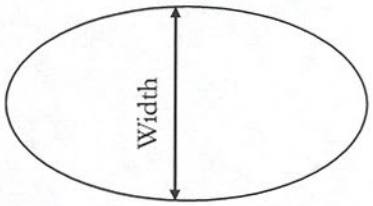
Width (decimal feet)

Description: Based on the plan illustrations below, enter the width (in decimal feet) of each exposed foundation.

If the Foundation's Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank. Note that this field is activated only for certain foundation shapes.



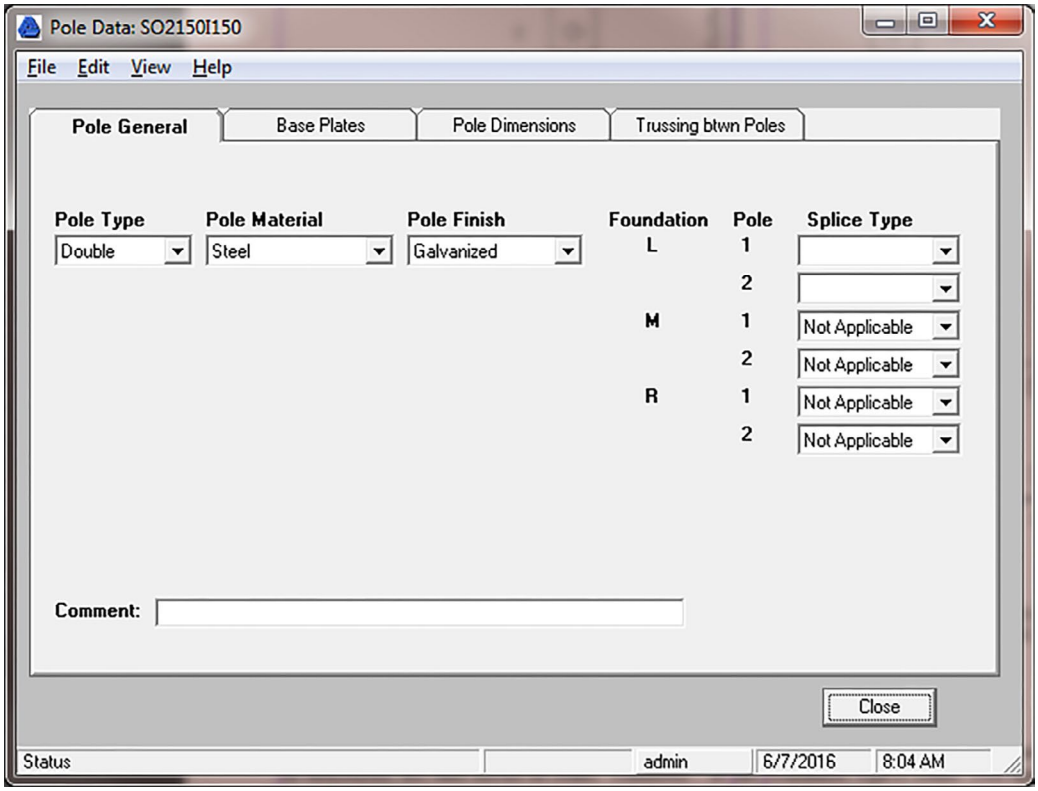
Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

Coding: None

POLE DATA - POLE GENERAL



Pole Type

Description: From the pull down menu, select the type of pole(s) present on the structure.

It is assumed that the **Pole Type** is the same at each foundation location.

Coding: 1 = Single
2 = Double
3 = Single/Double
4 = Not Applicable

Pole Material

Description: From the pull down menu, select the material composition of the pole(s). If the Pole Type is coded "Not Applicable", this field should be left blank.

It is assumed that the **Pole Material** is the same for all of the structure's poles.

Coding: 1 = Steel
2 = Concrete
3 = Aluminum
4 = Timber
5 = Weathering Steel
6 = Other

Pole Finish

Description: From the pull down menu, select the finish that was applied to the pole(s) material. If the pole(s) material is coded "Aluminum or Timber", the pole(s) finish should be coded "Not Applicable".

It is assumed that the **Pole Finish** is the same for all of the structure's poles.

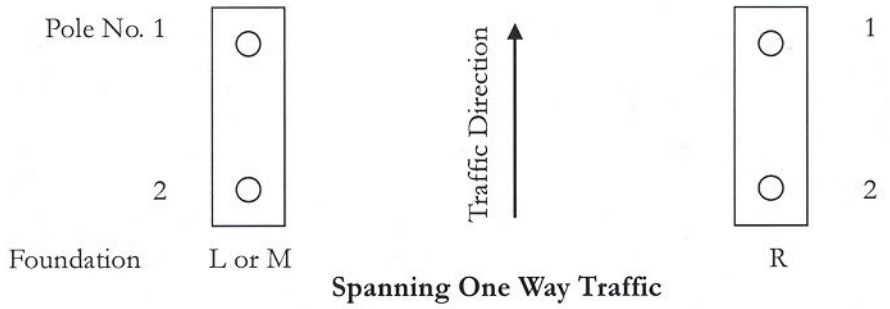
If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: 1 = Galvanized
2 = Painted
3 = Weathering Steel
4 = Other
5 = Not Applicable

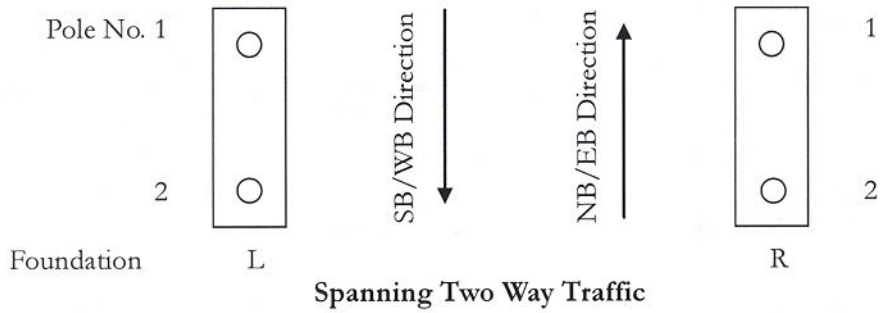
Foundation L (Pole 1,2), M (Pole 1,2) and R (Pole 1,2)

Description: The location of the structure's foundations with respect to the direction of traffic will determine which pole's **Splice Type** information will be entered.

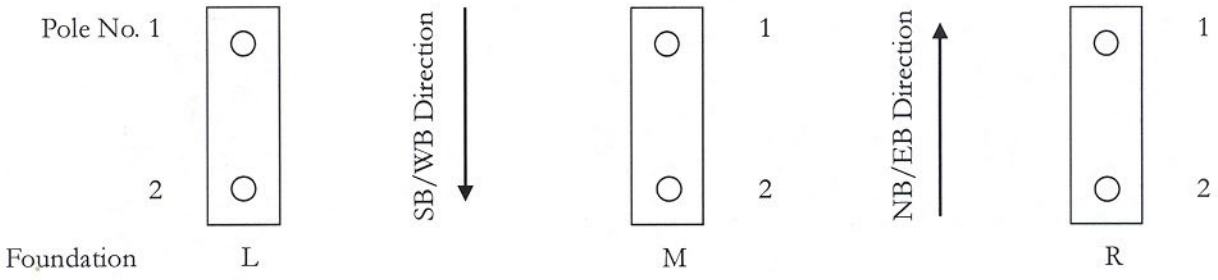
Use the diagrams below to determine the appropriate foundations and pole locations. If a single pole is present at a foundation, only Pole 1 is applicable.



Spanning One Way Traffic



Spanning Two Way Traffic



Spanning Both Traffic Directions

Splice Type

Description: From the pull down menu, select the type of horizontal splice, if applicable, that is present on the pole(s) at the appropriate foundation.

If the Pole Type chosen is **Single**, the field for Pole 1 is activated for each foundation.

If the Pole Type chosen is **Double**, the field for Pole 1 and 2 is activated for each foundation.

If the Pole Type is coded "Not Applicable", these fields should be left blank.

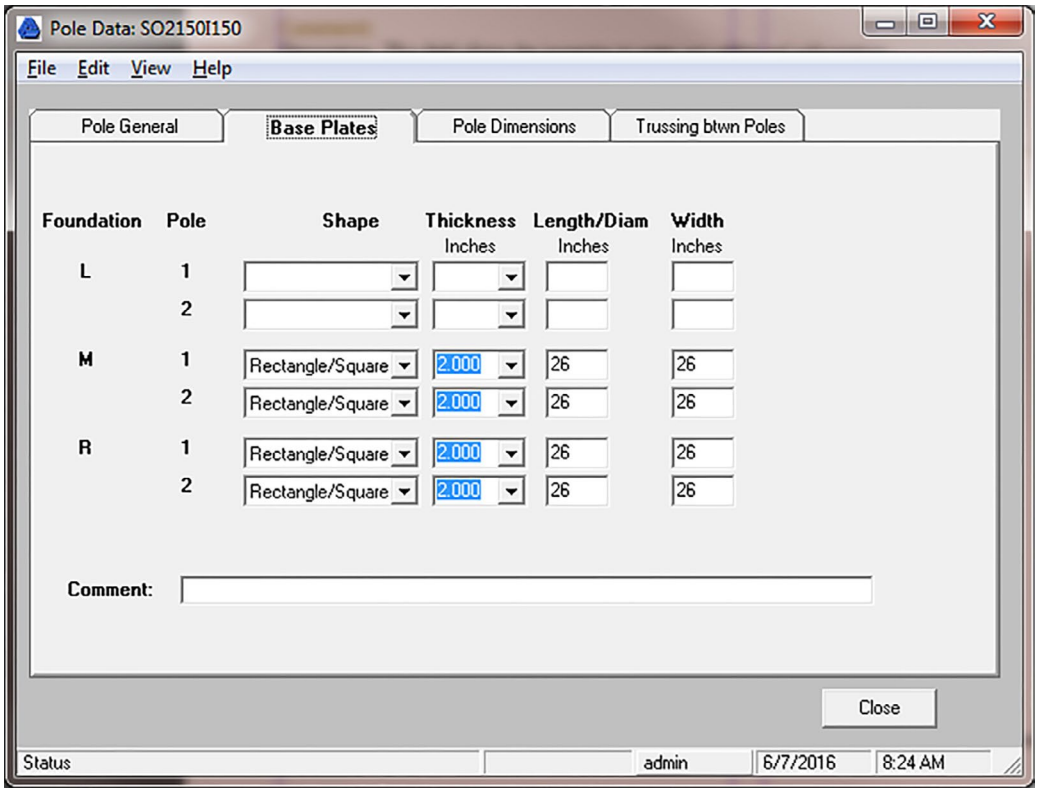
Coding: 1 = Welded
2 = Bolted
3 = Sleeved/Telescoping Joint
4 = Not Applicable

Comment:

Description: This field allows the inspector to enter any additional information.

Coding: None

POLE DATA - BASE PLATES



Foundation L, M and R

Description: The location of the structure's foundations with respect to the direction of traffic will determine which pole's **Base Plate** information will be entered.

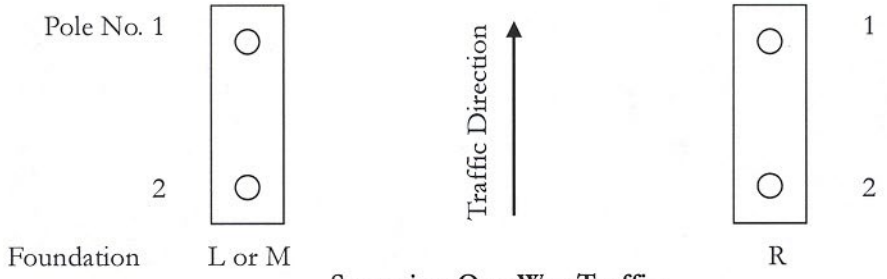
Pole - 1 and 2

Description: Data can be entered for individual base plates attached to one or two poles at each foundation.

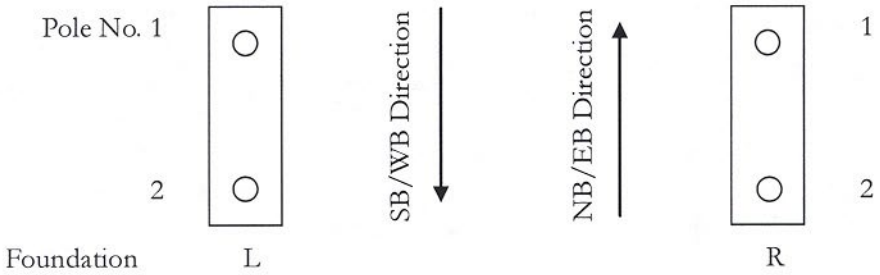
If the Pole Type chosen is **Single** in the **Pole General** tab, the fields for Pole 1 are activated for each foundation.

If the Pole Type chosen is **Double** in the **Pole General** tab, the fields for Pole 1 and 2 are activated for each foundation.

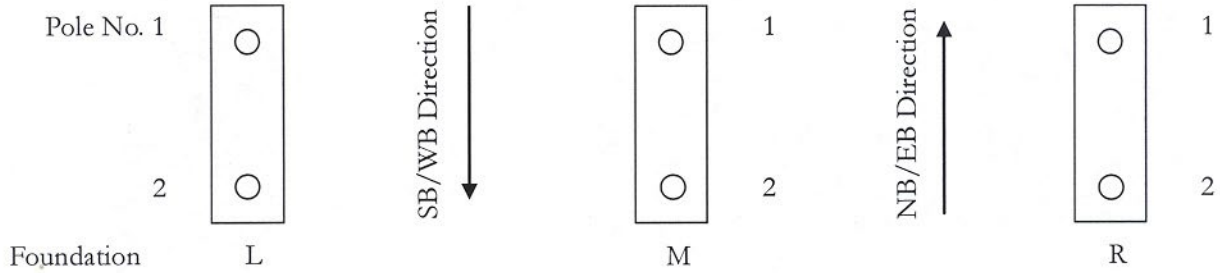
Use the diagrams below to determine the appropriate foundations and pole locations. If a single pole is present at a foundation, only Pole 1 is applicable.



Spanning One Way Traffic



Spanning Two Way Traffic



Spanning Both Traffic Directions

Shape

Description: From the pull down menu, select the shape of each base plate. If the base plate shape cannot be determined, this field should be coded "Unknown".

If the Pole or Foundation Type is coded "Not Applicable" or the pole extends into the ground, as in the case of a timber utility pole, this field should be left blank.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

Thickness - Inches

Description: From the pull down menu, select the thickness of each base plate in inches.

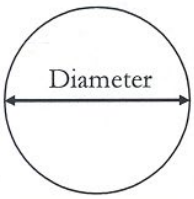
If the thickness cannot be determined, the Pole or Foundation Type is coded "Not Applicable" or the pole extends into the ground, as in the case of a timber utility pole, this field should be left blank.

Coding: None

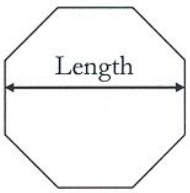
Length/Diam - Inches

Description: Based on the illustrations shown below, enter the length in the direction of traffic or diameter (in inches) of each base plate in plan. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

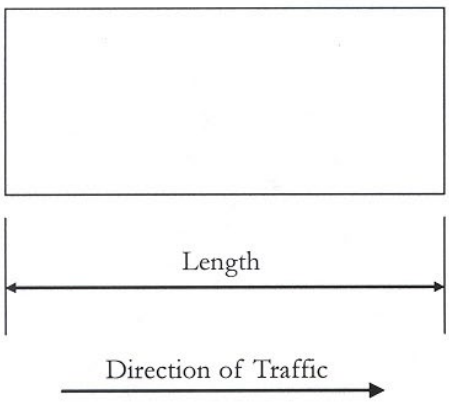
If the base plate shape is coded "Unknown" or the field is left blank, or the Pole or Foundation Type is coded "Not Applicable", this field should be left blank.



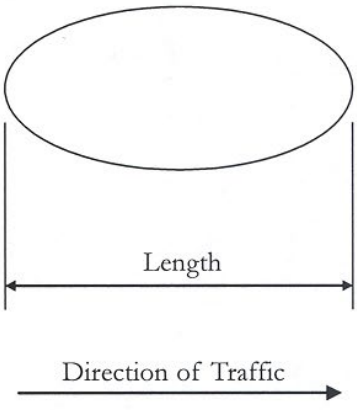
Circle or Fluted



Octagon
(Hexagon & Pentagon similar)



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

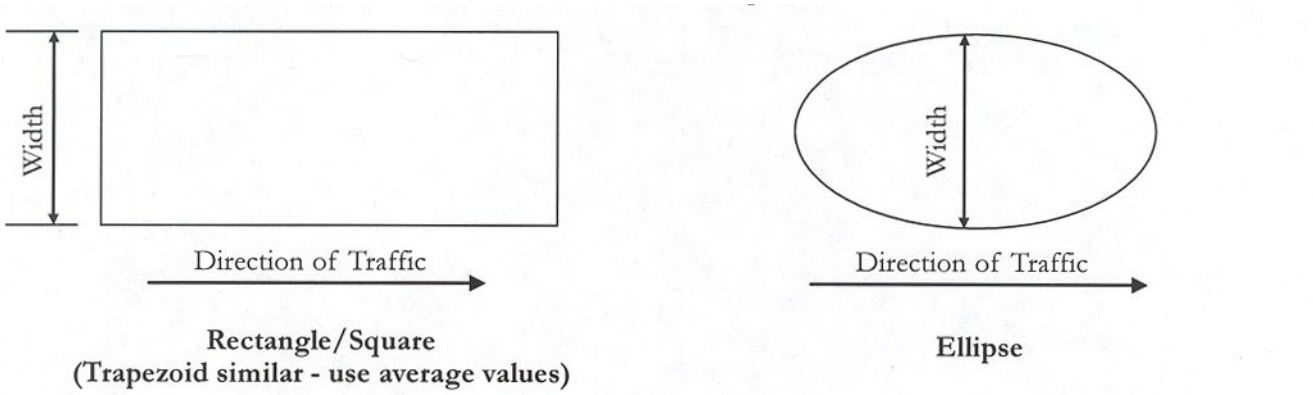
Coding: None

Width - Inches

Description: Based on the illustrations shown below, enter the width (in inches) of each base plate in plan.

If the base plate shape is coded "Unknown" or the field is left blank, or the pole or foundation type is coded "Not Applicable", this field should be left blank.

Note that this field is only activated for certain base plate shapes.



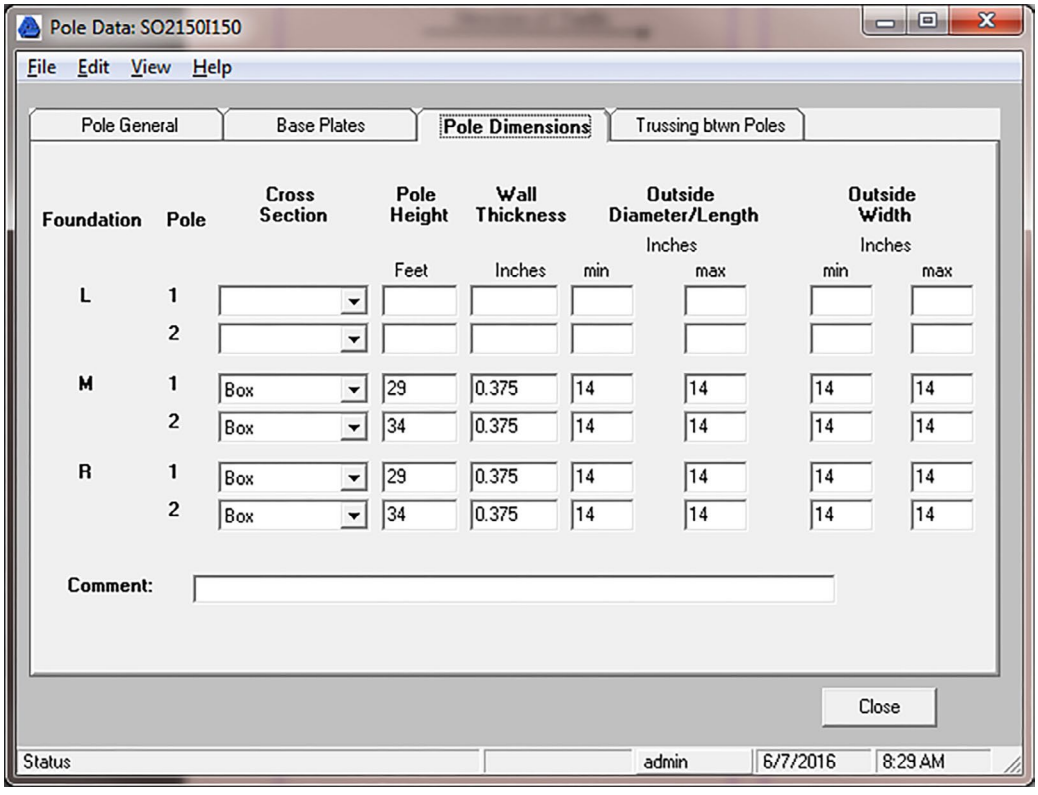
Coding: None

Comment:

Description: This field allows the inspector to enter any additional information.

Coding: None

POLE DATA - POLE DIMENSIONS



Foundation L, M and R

Description: The location of the structure's foundations with respect to the direction of traffic will determine which of the **Pole Dimension** information will be entered.

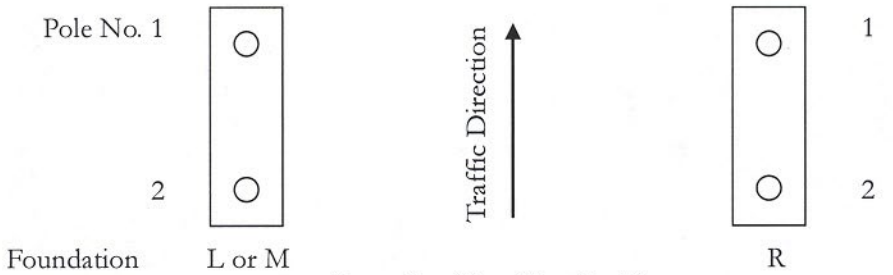
Pole - 1 and 2

Description: Data can be entered for one or two poles at each foundation.

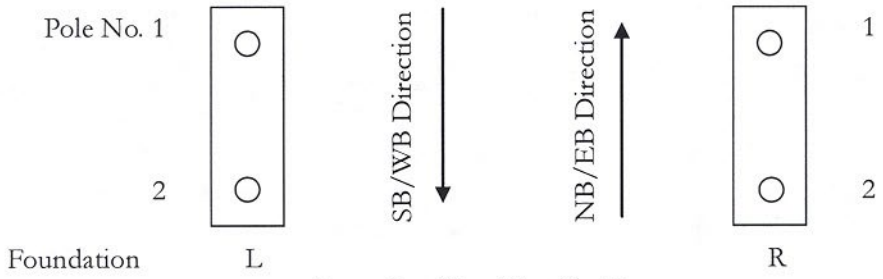
If the Pole Type chosen is **Single** in the **Pole General** tab, the fields for Pole 1 are activated for each foundation.

If the Pole Type chosen is **Double** in the **Pole General** tab, the fields for Pole 1 and 2 are activated for each foundation.

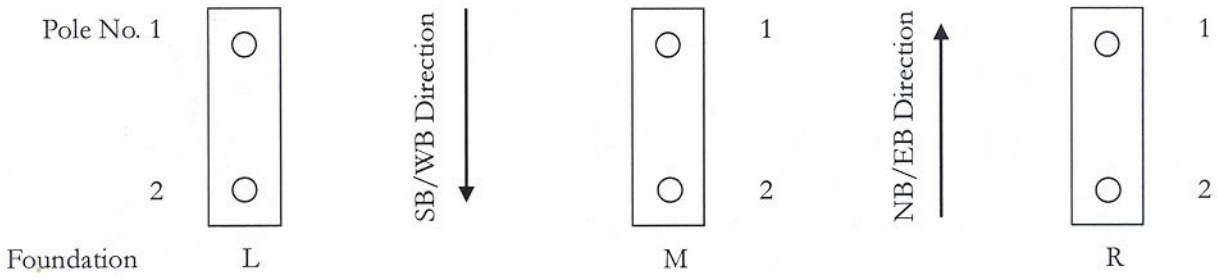
Use the diagrams below to determine the appropriate foundations and pole locations. If a single pole is present at a foundation, only Pole 1 is applicable.



Spanning One Way Traffic



Spanning Two Way Traffic



Spanning Both Traffic Directions

Cross Section

Description: From the pull down menu, select the cross section of each pole. If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding:
1 = Circular
2 = Box
3 = Angle
4 = Structural Tee
5 = W-Section
6 = Collar
7 = Other
8 = Pentagon
9 = Hexagon
10 = Octagon
11 = Fluted
12 = Ellipse
13 = Flat Bar
14 = Dodecagon (12 Sided)
15 = Channel
16 = Zee
17 = Hexadecagon (16 Sided)
18 = Tetradecagon (14 Sided)

Pole Height - Feet

Description: Enter, in decimal feet, the vertical height of each pole measured from the top of the base plate to the top of the pole. If the pole extends into the ground, as in the case of a timber utility pole, the measurement is taken from the top of the ground.

If the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: None

Wall Thickness - Inches

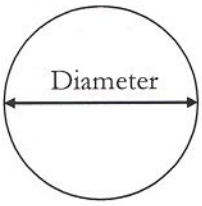
Description: Enter, in decimal inches, the average wall thickness of each vertical pole. If the pole section is solid or the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: None

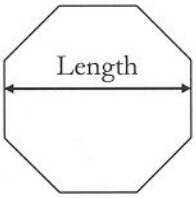
Outside Diameter/Length - Inches

Description: Based on the illustrations shown below, enter the minimum and maximum outside length in the direction of traffic or diameter (in decimal inches) of each pole's cross section. The program will calculate the minimum and maximum outside diameters automatically by clicking on the box next to the input field and entering the circumference in decimal inches.

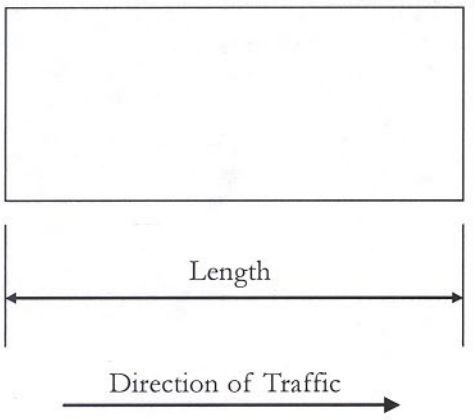
If the Pole Type is coded "Not Applicable", this field should be left blank.



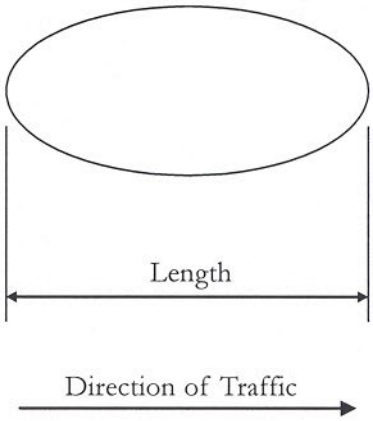
Circle or Fluted



Octagon
(Other Polygon Shapes similar)



Rectangle/Square
(Trapezoid similar - use average values)



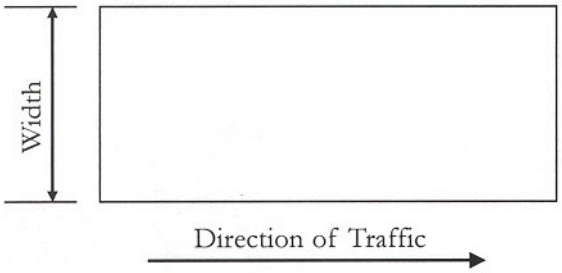
Ellipse

Coding: None

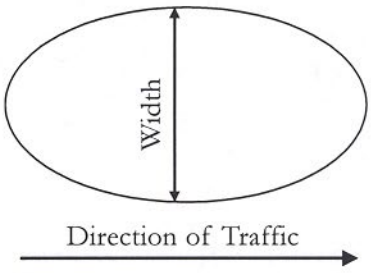
Outside Width - Inches

Description: Based on the illustrations shown below, enter the minimum and maximum outside width (in decimal inches) of each pole's cross section.

If the Pole Type is coded "Not Applicable", this field should be left blank. Note that this field is only activated for certain pole cross sections.



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

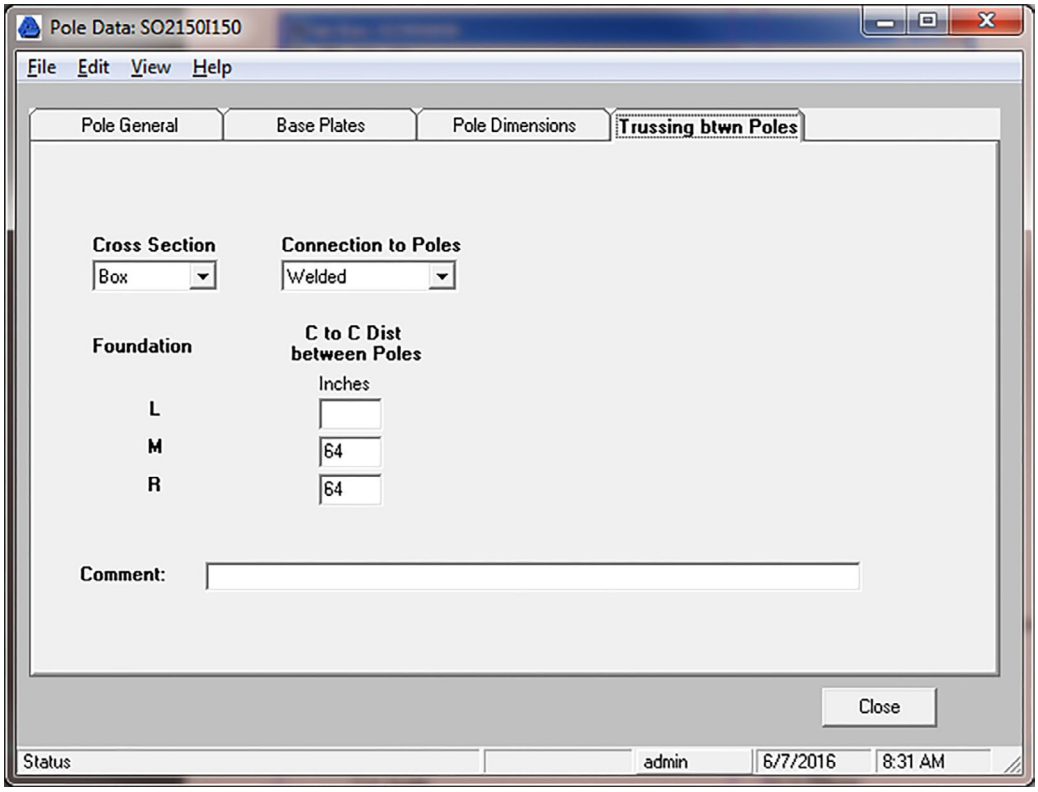
Coding: None

Comment:

Description: This field allows the inspector to enter any additional information.

Coding: None

POLE DATA - TRUSSING BTWN POLES



Note: This page is only activated if the Pole Type chosen is "Double" in the Pole General tab.

Cross Section

Description: From the pull down menu, select the cross section of the trussing (secondary) members between the vertical poles.

If there are no trussing members between the poles, this field should be left blank.

It is assumed that all of the trussing members have the same type of cross section.

Coding:
1 = Circular
2 = Box
3 = Angle
4 = Structural Tee
5 = W-Section
6 = Collar
7 = Other
8 = Pentagon
9 = Hexagon
10 = Octagon
11 = Fluted
12 = Ellipse
13 = Flat Bar
14 = Dodecagon (12 Sided)
15 = Channel
16 = Zee
17 = Hexadecagon (16 Sided)
18 = Tetradecagon (14 Sided)

Connection to Poles

Description: From the pull down menu, select the type of connection used to attach the trussing (secondary) members to the vertical poles.

It is assumed that all of the trussing members have the same type of connection to the poles.

If the trussing members are attached to gusset plates that are attached to the poles, then the connection of the gusset plates to the poles should be identified here.

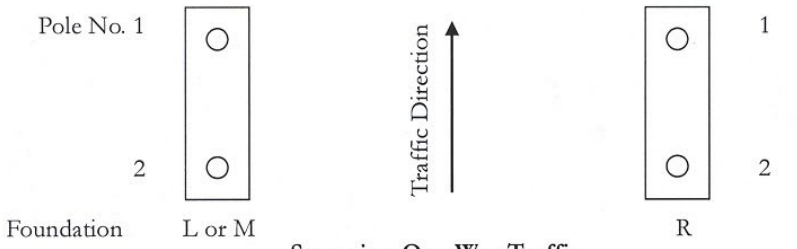
If no trussing members are present, "Not Applicable" should be coded.

Coding: 1 = Welded
2 = Bolted
3 = Sleeved/Telescoping Joint
4 = Not Applicable

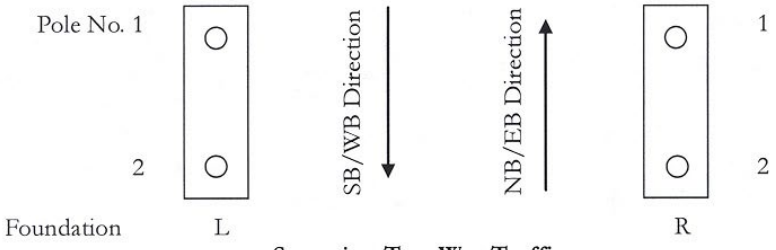
Foundation L, M and R

Description: The location of the structure's foundations with respect to the direction of traffic will determine which of the information will be entered.

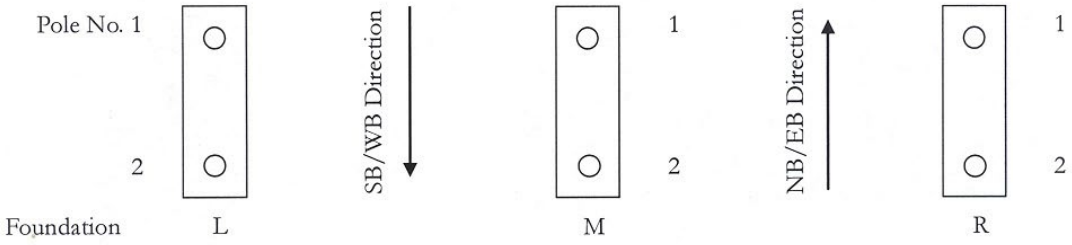
Use the diagrams below to determine the appropriate foundations.



Spanning One Way Traffic



Spanning Two Way Traffic



Spanning Both Traffic Directions

C to C Dist between Poles

Description: Enter, in decimal inches, the distance between the centerlines of the vertical poles at each foundation.

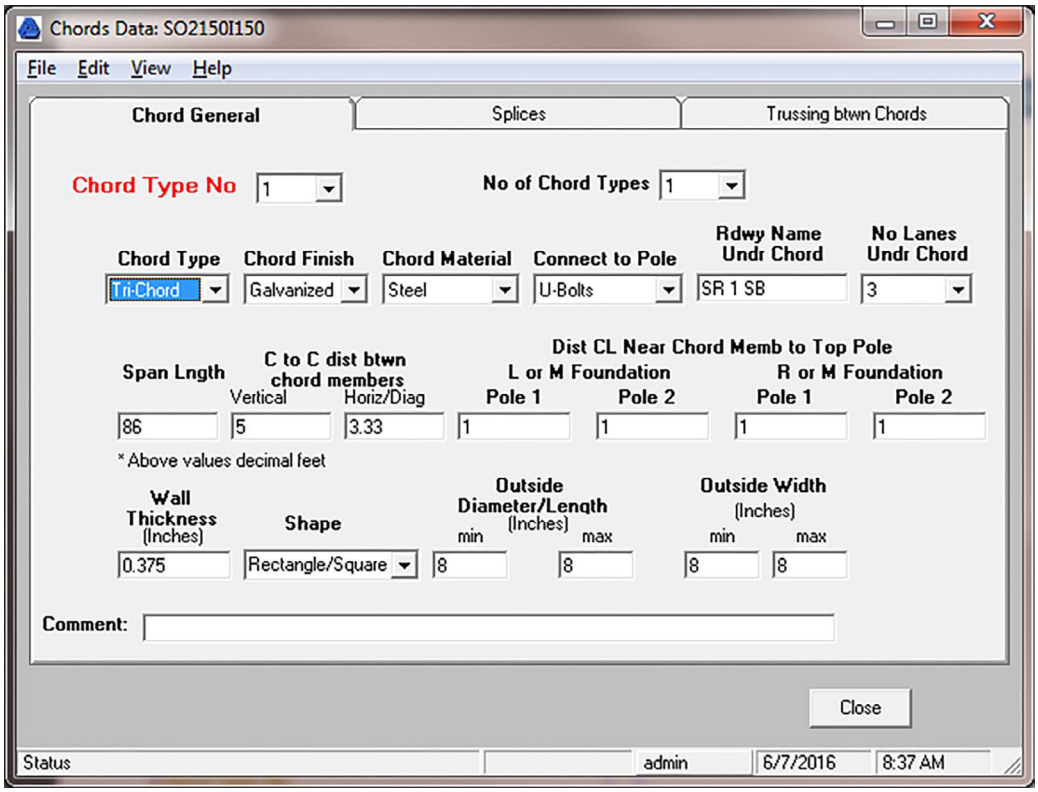
Coding: None

Comment:

Description: This field allows the inspector to enter any additional information.

Coding: None

CHORDS DATA - CHORD GENERAL



Chord Type No

Description: From the pull down menu, select the Chord Type configuration number for which data is being entered.

If **No of Chord Types** = 0, **Chord Type No** = 0.

If **No of Chord Types** = 1, data should be entered for **Chord Type No** 1.

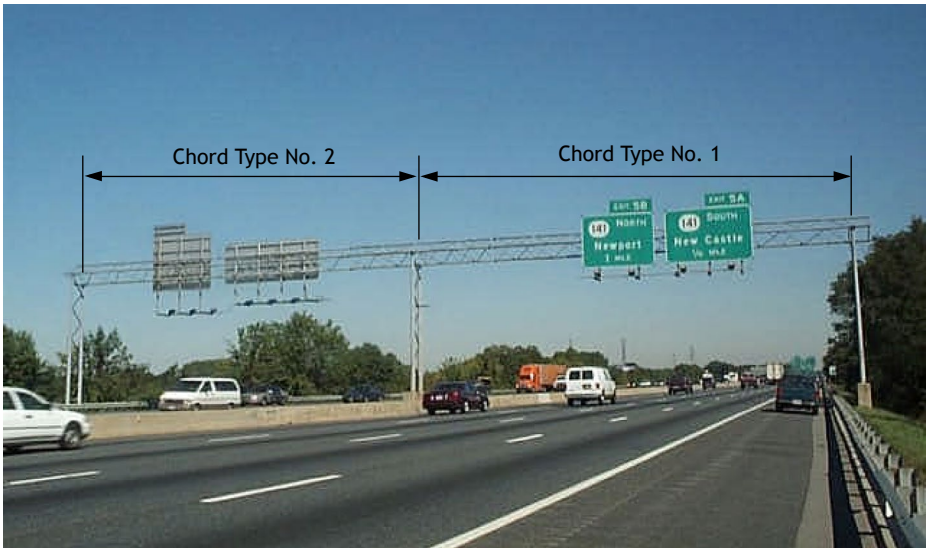
If **No of Chord Types** = 2, data should be entered for both **Chord Type No** 1 and **Chord Type No** 2.

Coding: None

No of Chord Types

Description: From the pull down menu, select the number of Chord Type configurations present on the structure. Data can be entered for up to two configurations.

Coding: None



No of Chord Types = 2

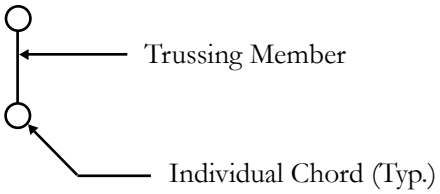
No of Chord Types = 1

Chord Type

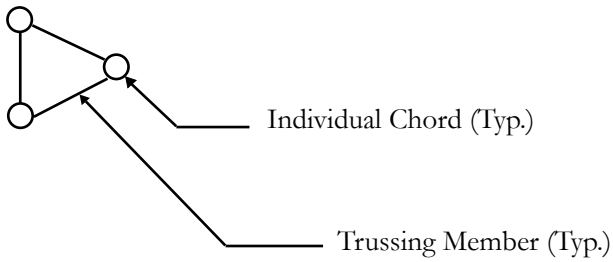
Description: From the pull down menu, select the cross section of the Chord Type configuration present on the structure.

Coding: 1 = Single Chord

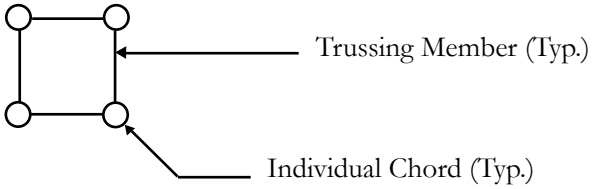
2 = Two Chord



3 = Tri-Chord



4 = Box (4 Chord)



5 = Other
6 = Not Applicable

Chord Finish

Description: From the pull down menu, select the finish that was applied to the individual chord(s). If the chord material is coded "Aluminum or Timber", the chord finish should be coded "Not Applicable".

Coding: 1 = Galvanized
2 = Painted
3 = Weathering Steel
4 = Other
5 = Not Applicable

Chord Material

Description: From the pull down menu, select the material composition of the individual chord(s).

Coding: 1 = Steel
2 = Concrete
3 = Aluminum
4 = Timber
5 = Weathering Steel
6 = Other

Connect to Pole

Description: From the pull down menu, select the type of connection used to attach the individual chord(s) to the pole(s).

Coding: 1 = U-Bolts
2 = Welded
3 = Bolted
4 = Sleeved/Telescoping Joint
5 = Bolted w/Clamps

Rdwy Name Undr Chord

Description: Enter the name of the roadway located underneath the chord.

If the chord does not span over a roadway, enter "Not Applicable".

Coding: None

No Lanes Undr Chord

Description: Enter the number of traffic lanes located underneath the chord.

If the chord does not span over a roadway, enter "0".

Coding: None

Span Lngth

Description: Enter, in decimal feet, the span length of the chord type configuration.

For an overhead structure, the span length is measured from the centerline of the outside pole supports on one side to the centerline of the outside pole supports on the other side.

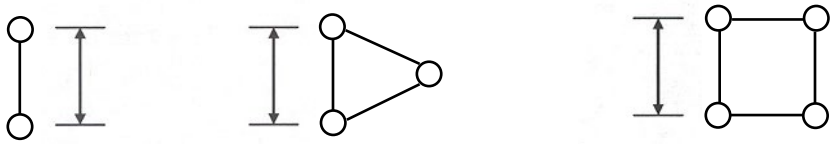
Coding: None

C to C dist btwn chord members - Vertical

Description: Enter, in decimal feet, the vertical distance between the centerline of the individual chords within the chord type configuration.

For a box (4 chord) type configuration, it is assumed that the vertical distance on either side of the box is the same.

If the chord type chosen is a Single Chord, this field does not appear.



Coding: None

C to C dist btwn chord members - Horiz/Diag

Description: Enter, in decimal feet, the horizontal or diagonal distance between the centerline of the individual chords within the chord type configuration.

For a Tri-Chord type configuration, the diagonal distance can be entered. It is assumed that the diagonal distances are all the same.

For a box (4 chord) type configuration, it is assumed that the horizontal distance between the top and bottom members is the same.

If the chord type chosen is a Single or Two Chord, this field does not appear.

Coding: None

Dist CL Near Chord Memb to Top Pole - L or M Foundation

Description: Enter, in decimal feet, at the **L** and/or **M foundation,** the vertical distance from the top of each pole to the centerline of the individual chord closest to the top of the pole. If the chord sits on top of the post support, 0 should be coded.

If one pole is present, the measurement should be entered for **Pole 1.**

If two poles are present, the measurement at both **Pole 1** and **Pole 2** should be entered.

Coding: None

Dist CL Near Chord Memb to Top Pole - R or M Foundation

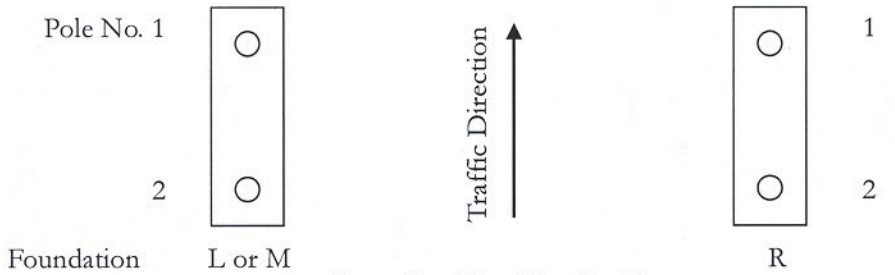
Description: Enter, in decimal feet, at the **R** and/or **M** foundation, the vertical distance from the top of each pole to the centerline of the individual chord closest to the top of the pole. If the chord sits on top of the pole support, 0 should be coded.

If one pole is present, the measurement should be entered for **Pole 1.**

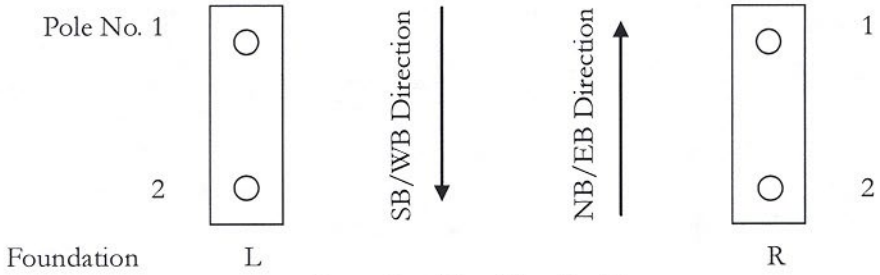
If two poles are present, the measurement at both **Pole 1** and **Pole 2** should be entered.

Coding: None

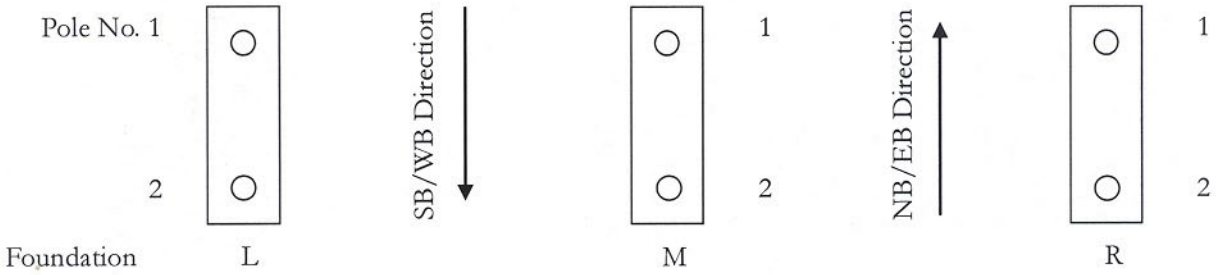
Use the diagrams below to determine the appropriate foundations and poles.



Spanning One Way Traffic



Spanning Two Way Traffic



Spanning Both Traffic Directions

Wall Thickness (Inches)

Description: Enter, in decimal inches, the average wall thickness of the individual members within the configuration.

If more than one chord exists, it is assumed that all of the chords have the same average wall thickness.

Coding: None

Shape

Description: From the pull down menu, select the shape of the individual members within the configuration.

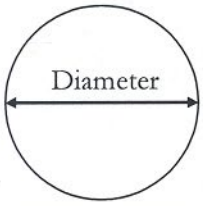
If more than one chord exists, it is assumed that all of the chords have the same shape.

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

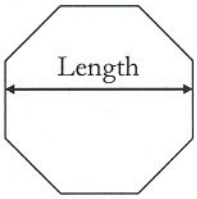
Outside Diameter/Length (Inches)

Description: Based on the illustrations shown below, enter the minimum and maximum outside length (height) or diameter (in decimal inches) of the individual chord cross sections. The program will calculate the minimum and maximum outside diameters automatically by clicking on the box next to the input field and entering the circumference in decimal inches.

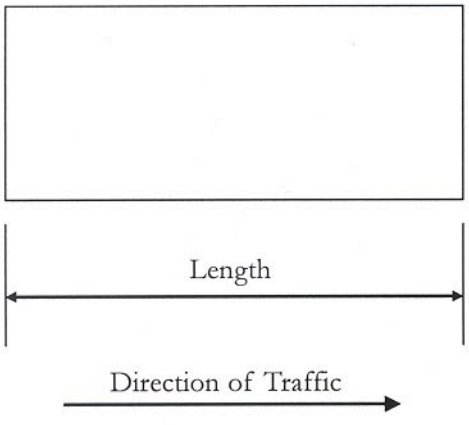
If more than one chord exists, it is assumed that all of the chords have the same outside length/diameter.



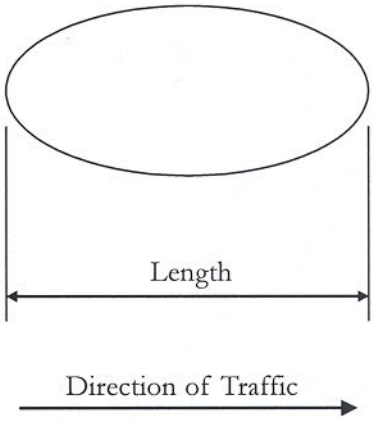
Circle or Fluted



Octagon
(Hexagon & Pentagon similar)



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

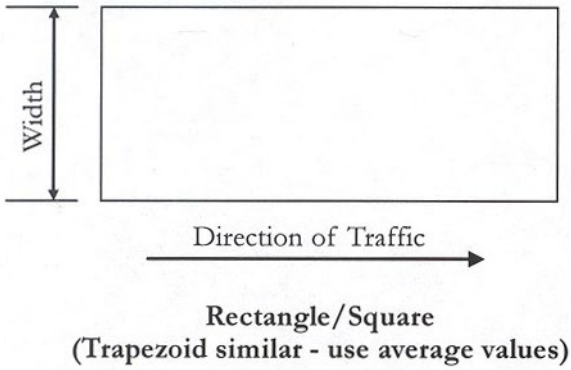
Coding: None

Outside Width (Inches)

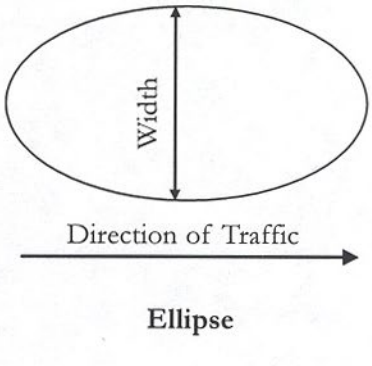
Description: Based on the illustrations shown below, enter the minimum and maximum outside horizontal width (in decimal inches) of the individual chord cross sections.

If more than one chord exists, it is assumed that all of the chords have the same outside width.

Note that this field is only activated for certain individual chord shapes.



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

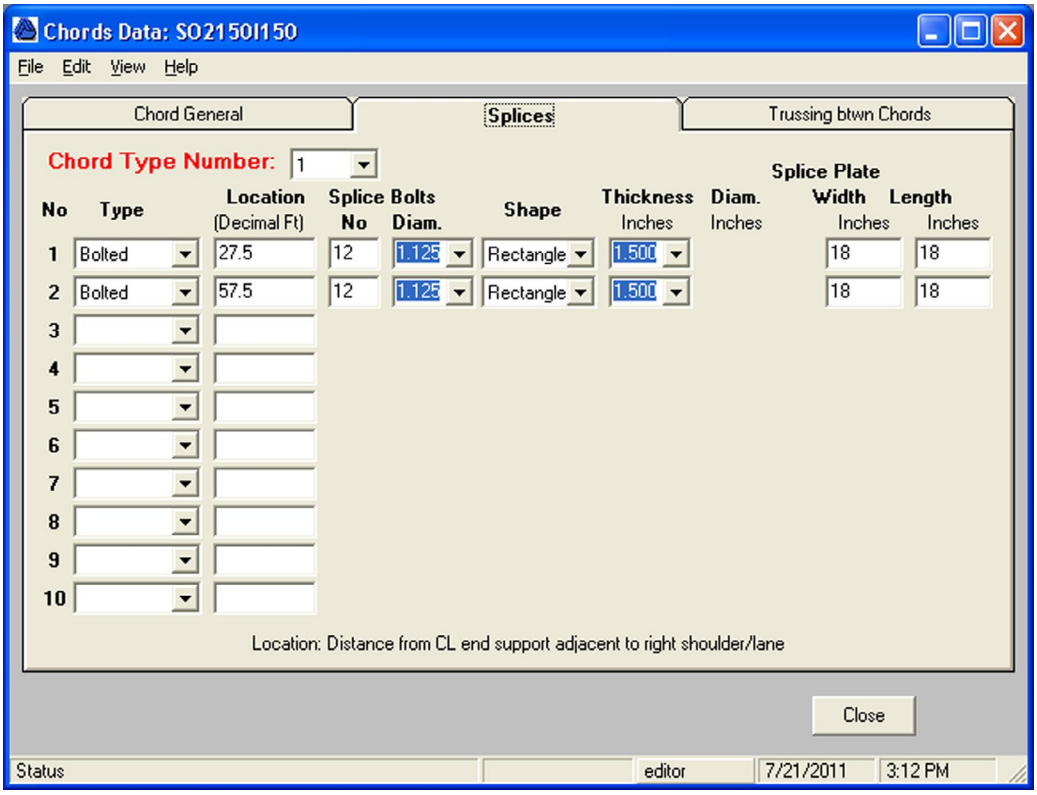
Coding: None

Comment:

Description: This field allows the inspector to record any observations concerning the Chord Type configuration. For example, if the individual chord dimensions vary on a configuration, then the chord dimensions entered can be identified for one chord and the other chord's dimensions may be noted in this field.

Coding: None

CHORDS DATA - SPLICES



Chord Type Number:

Description: From the pull down menu, select the Chord Type configuration number for which data is being entered.

If **No of Chord Types** from **Chord General** tab equals 0, this sheet is not activated.

Coding: None

Type

Description: From the pull down menus, select up to ten types of splices that are found along the chord.

If no splices are present, "Not Applicable" should be coded.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: 1 = Welded

2 = Bolted

3 = Sleeved/Telescoping Joint

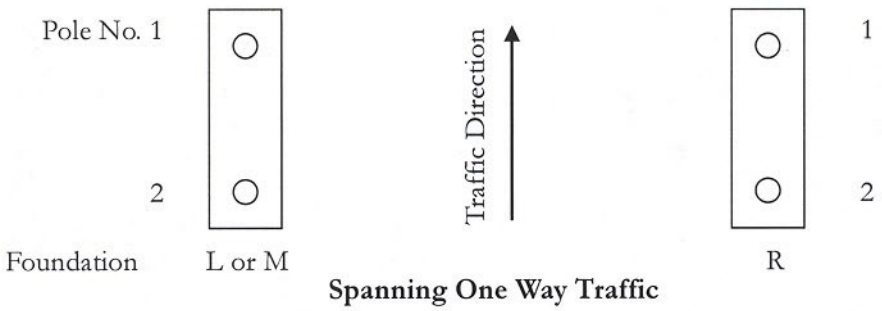
4 = Not Applicable

Location (Decimal Ft)

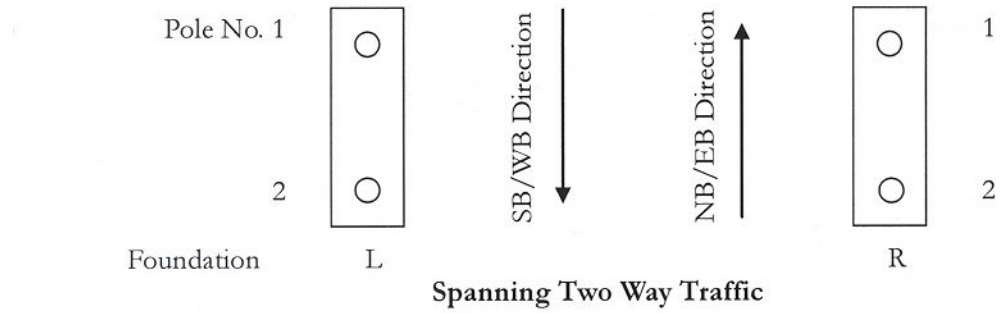
Description: Enter, in decimal feet, the location of the splices along one of the individual chords.

For an overhead structure, the location of each splice is measured from the centerline of the pole support(s) at the **R** foundation.

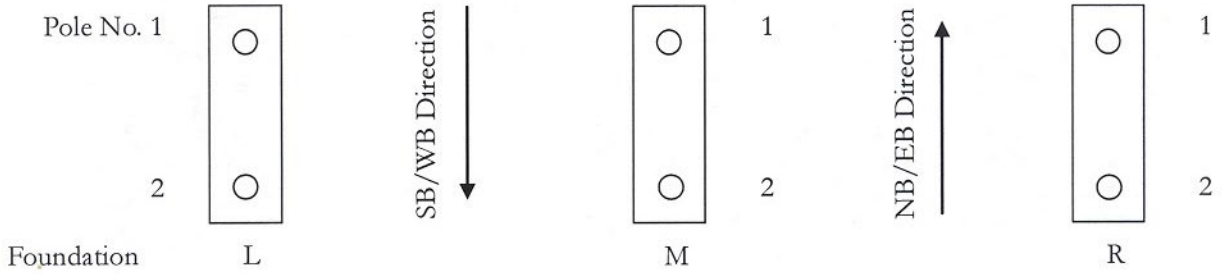
Use the diagrams below to determine the **R** foundation.



Spanning One Way Traffic



Spanning Two Way Traffic



Spanning Both Traffic Directions

If no splices are present, this field should be left blank.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: None

Splice Bolts - No

Description: Enter the number of bolts that are present at each of the splices along one of the individual chords.

This field is only activated if bolted splice connections are present.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: None

Splice Bolts - Diam.

Description: From the pull down menu, select the diameter of the bolts that are present at each of the splices along one of the individual chords.

This field is only activated if bolted splice connections are present.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: None

Splice Plate - Shape

Description: From the pull down menu, select the shape of the splice plates at each of the splice locations along one of the individual chords.

This field is only activated if bolted splice connections are present.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

Coding: 1 = Circle
2 = Rectangle/Square
3 = Hexagon
4 = Octagon
5 = Unknown
6 = Pentagon
7 = Fluted
8 = Ellipse
9 = Trapezoid
10 = Dodecagon (12 Sided)
11 = Octdecagon (18 Sided)

Splice Plate - Thickness (Inches)

Description: From the pull down menu, select the thickness (in inches) of a splice plate at the splice location.

This field is only activated if bolted splice connections are present.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).

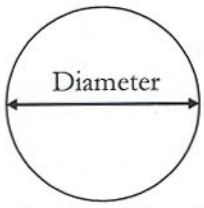
Coding: None

Splice Plate - Diam. (Inches)

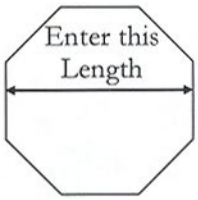
Description: Enter, in decimal inches, the diameter of a splice plate at the splice location. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

This field is only activated if bolted splice connections are present and certain splice plate shapes exist.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).



Circle or Fluted



Octagon
(Hexagon & Pentagon similar)

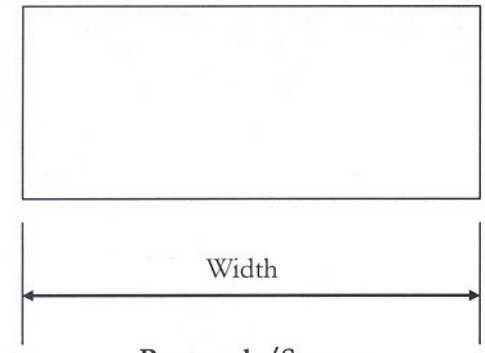
Coding: None

Splice Plate - Width (Inches)

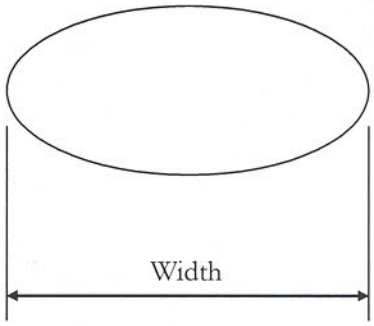
Description: Enter, in decimal inches, the horizontal width of a splice plate at the splice location.

This field is only activated if bolted splice connections are present and certain splice plate shapes exist.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

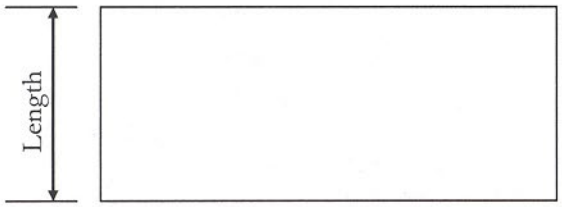
Coding: None

Splice Plate - Length (Inches)

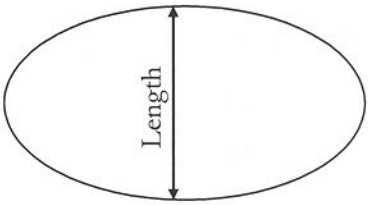
Description: Enter, in decimal inches, the length (vertical height) of a splice plate at the splice location.

This field is only activated if bolted splice connections are present and certain splice plate shapes exist.

It is assumed that within a chord type configuration, all of the individual chords have the same type of splice(s) at the same location(s).



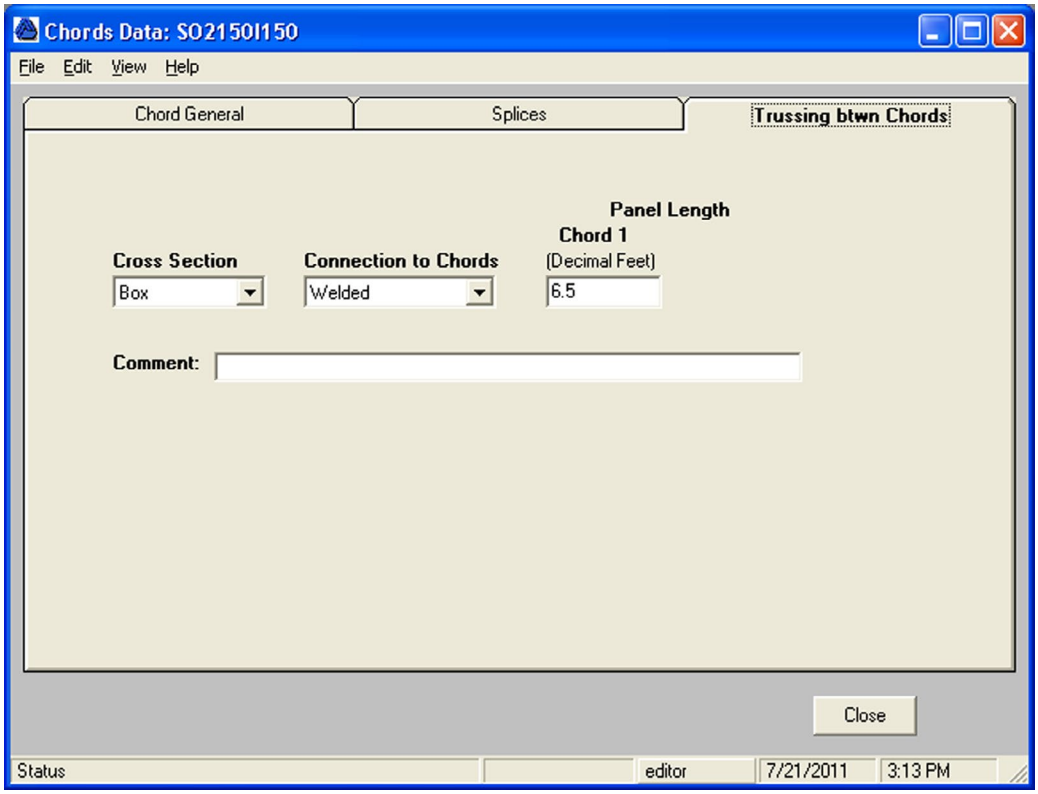
Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

Coding: None

CHORDS DATA - TRUSSING BTWN CHORDS



Note: This sheet is not activated if on the Chord General sheet the Chord Type is coded "Single Chord".

Cross Section

Description: From the pull down menu, select the cross sectional shape of the trussing (secondary) members connected to the individual chords within the chord.

It is assumed that all of the trussing members on the chords have the same cross section.

If no trussing members are present, this field should be left blank.

Coding:
1 = Circular
2 = Box
3 = Angle
4 = Structural Tee
5 = W-Section
6 = Collar
7 = Other
8 = Pentagon
9 = Hexagon
10 = Octagon
11 = Fluted
12 = Ellipse
13 = Flat Bar
14 = Dodecagon (12 Sided)
15 = Channel
16 = Zee
17 = Hexadecagon (16 Sided)
18 = Tetradecagon (14 Sided)

Connection to Chords

Description: From the pull down menu, select the type of connection used to attach the trussing (secondary) members to the individual chords within the chord type configuration.

It is assumed that all of the trussing members have the same type of connection to the chords.

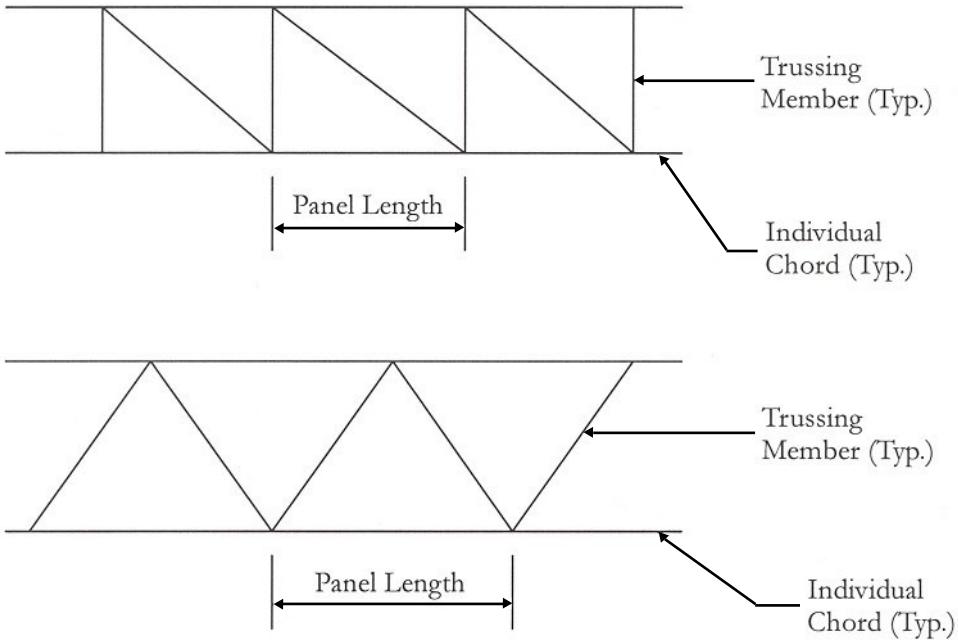
If the trussing members are attached to gusset plates that are attached to the chords, the connection of the gusset plates to the chords should be identified here.

If no trussing members are present, "Not Applicable" should be coded.

Coding: 1 = Welded
2 = Bolted
3 = Sleeved/Telescoping Joint
4 = Not Applicable

Panel Length - Chord 1/Chord 2 (Decimal Feet)

Description: Enter, in decimal feet, the typical panel length of the trussing (secondary) members within each of the chord type configurations.



Chord 1 is for Chord Type 1's configuration and Chord 2 is for Chord Type 2's configuration.

It is assumed that the panel length of the trussing members is the same throughout a chord.

If only one or no trussing (secondary) members are present within the chords, these field(s) should be left blank.

Coding: None

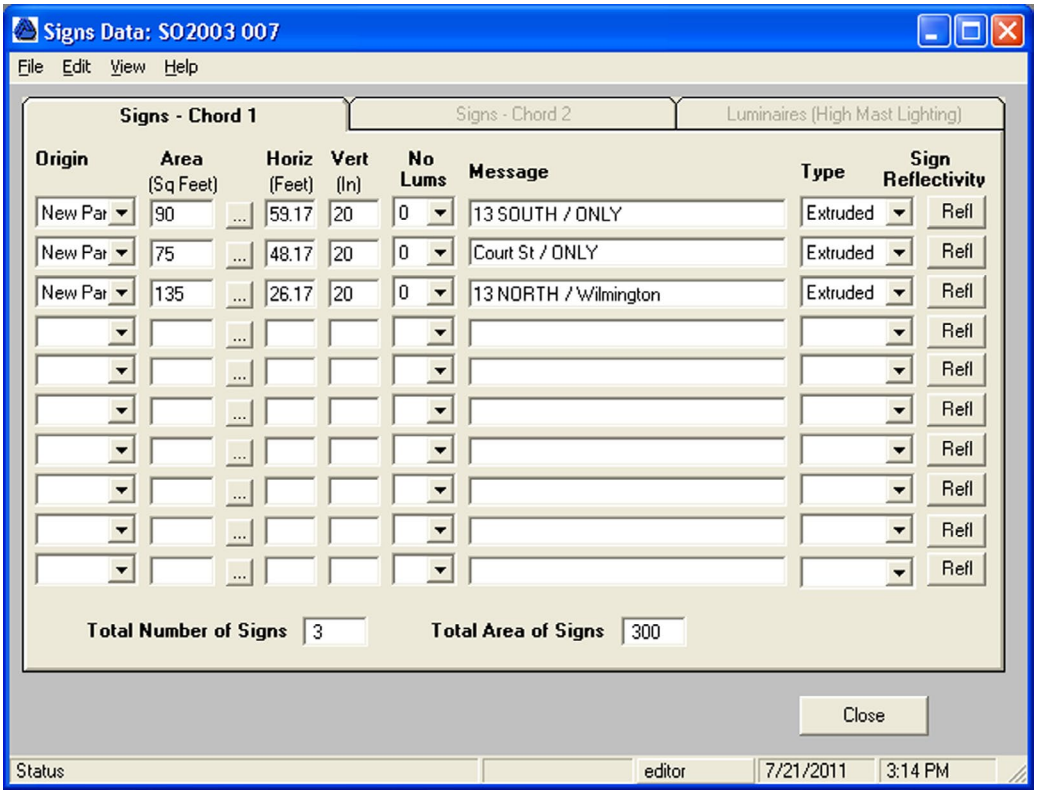
Comment:

Description: A comment field is provided for the inspector to record any observations regarding the trussing (secondary) members measurements, and/or connections.

For example, if only one trussing member is present, such that there is no panel length measurement, this can be stated here.

Coding: None

SIGNS DATA - SIGNS-CHORD 1/CHORD 2



Note: This sheet is for the Sign Panels and/or Variable Message Sign (VMS) boards attached to Chord Type number 1.

If the No of Chord Type configurations in the Chord – Chord General tab equals 2, then the Signs – Chord 2 tab will also be activated and the appropriate data should be entered for Chord Type number 2.

Signs - Chord 1/Chord 2

Description: Relevant information can be entered for up to ten sign panels attached to the Overhead Sign structure.

Coding: None

Origin

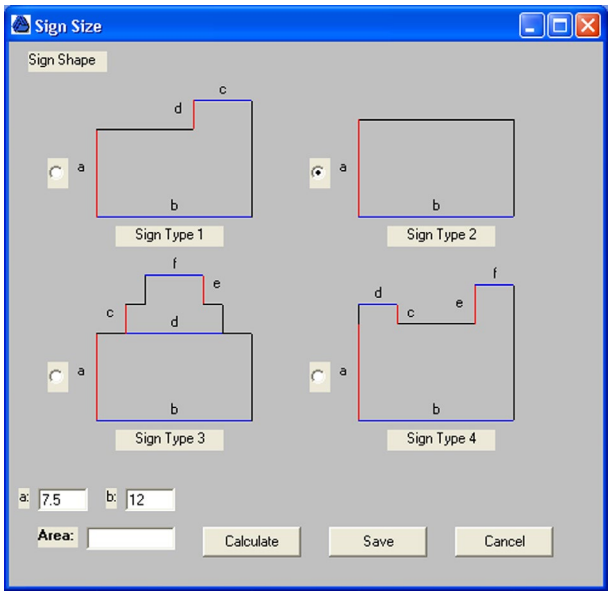
Description: From the pull down menu, select the origin of the sign panel. For example, is this the original sign, has it been added, is this a new sign panel that has replaced an existing one, or was this sign modified from the previous one.

Coding: 1 = Original
2 = Added
3 = New Panel
4 = Modified

Area (Sq Feet)

Description: The program automatically enters the sign panel area in this field, based on the user's input data.

By clicking on the box next to the record field, the user should select the appropriate sign shape and enter the sign panel's dimensions in decimal feet. Clicking on the **Calculate** button allows the program to compute the sign panel area. The user should click the **Save** button in order to save both the sign panel dimensions and area.

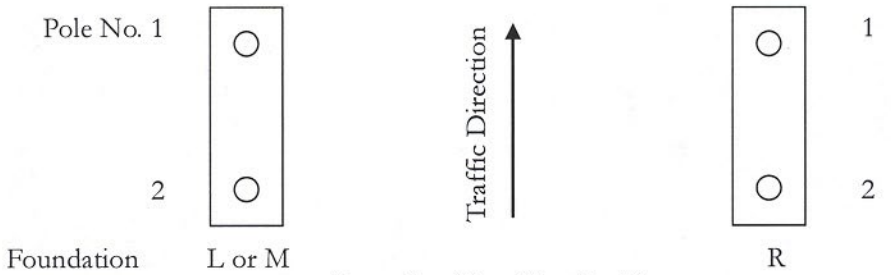


Coding: None

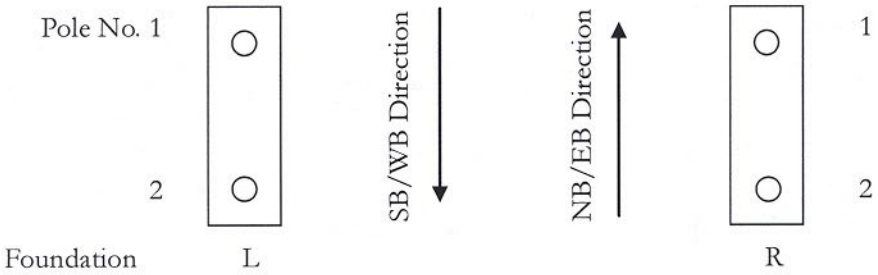
Horiz (Feet)

Description: Enter, in decimal feet, the horizontal distance from the centerline of the pole support(s) at the **R** foundation to the nearest vertical edge of the sign panel that data is being entered for.

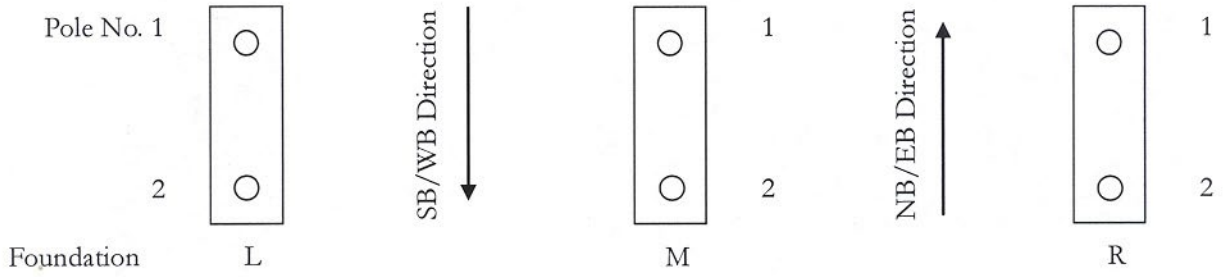
Use the diagrams below to determine the **R** foundation.



Spanning One Way Traffic



Spanning Two Way Traffic



Spanning Both Traffic Directions

If an Overhead Sign structure has only one chord type configuration and it spans over a divided highway such that there are sign panels facing both directions of traffic, then the measurement for the panels above each roadway can be taken from the pole support(s) adjacent to the right shoulder/lane in either direction.

Coding: None

Vert (In)

Description: Enter, in decimal inches, the vertical distance from the centerline of the bottom chord to the bottom of the sign panel that data is being entered for.

Enter a negative value "-" if the centerline of the bottom chord is located below the bottom of the sign panel.

Coding: None

No Lums

Description: From the pull down menu, select the number of luminaires present for each of the sign panels.

Coding: None

Message

Description: Enter in this field, the message(s) that exist on each of the sign panels, including the exit numbers.

Coding: None

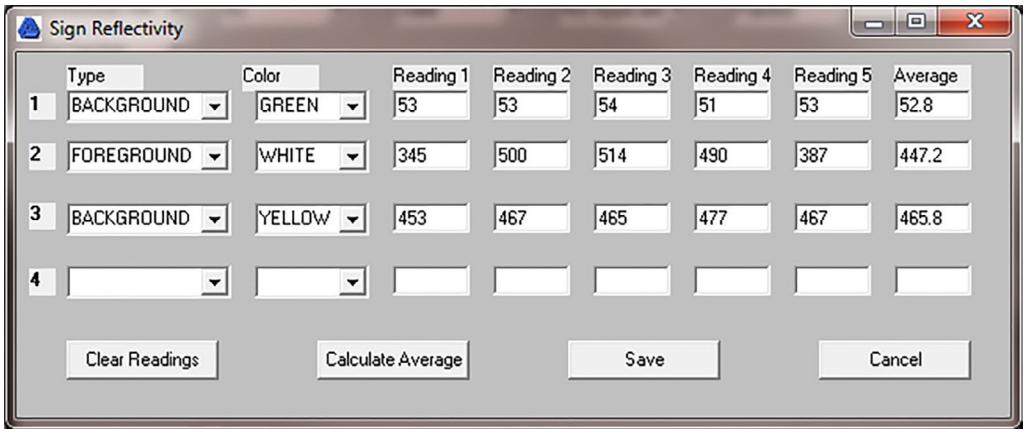
Type

Description: From the pull down menu, select the type of sign panel backing present.

Coding: 1 = Flat
2 = Extruded

Sign Reflectivity

Description: By clicking on the **Refl** button, the user should enter the following reflectivity information for up to four different colors present on the sign panel:



Type - From the pull down menu, select whether or not the color is in the background or foreground.

Color - From the pull down menu, select one of the following colors: Yellow, White, Green, Brown, Blue or Red.

Reading 1 to Reading 5 - Enter five reflectivity readings taken in different areas on each color. For the color Brown, no reflectivity readings will be captured. However, it shall be entered into the database as either a background or foreground color.

Average - The average of the five reflectivity readings is automatically calculated by the program by clicking on the **Calculate Average** button.

If the user clicks on the **Clear Readings** button, the program will clear for each Type the Color, Reading 1 to Reading 5, and the Average reading.

The program automatically stores all of the information entered, including the average reflectivity reading, for each color by clicking on the **Save** button.

Coding: None

Total Number of Signs

Description: No entry is required for this field. The program automatically enters the total number of sign panels present, based on the user's input data.

Coding: None

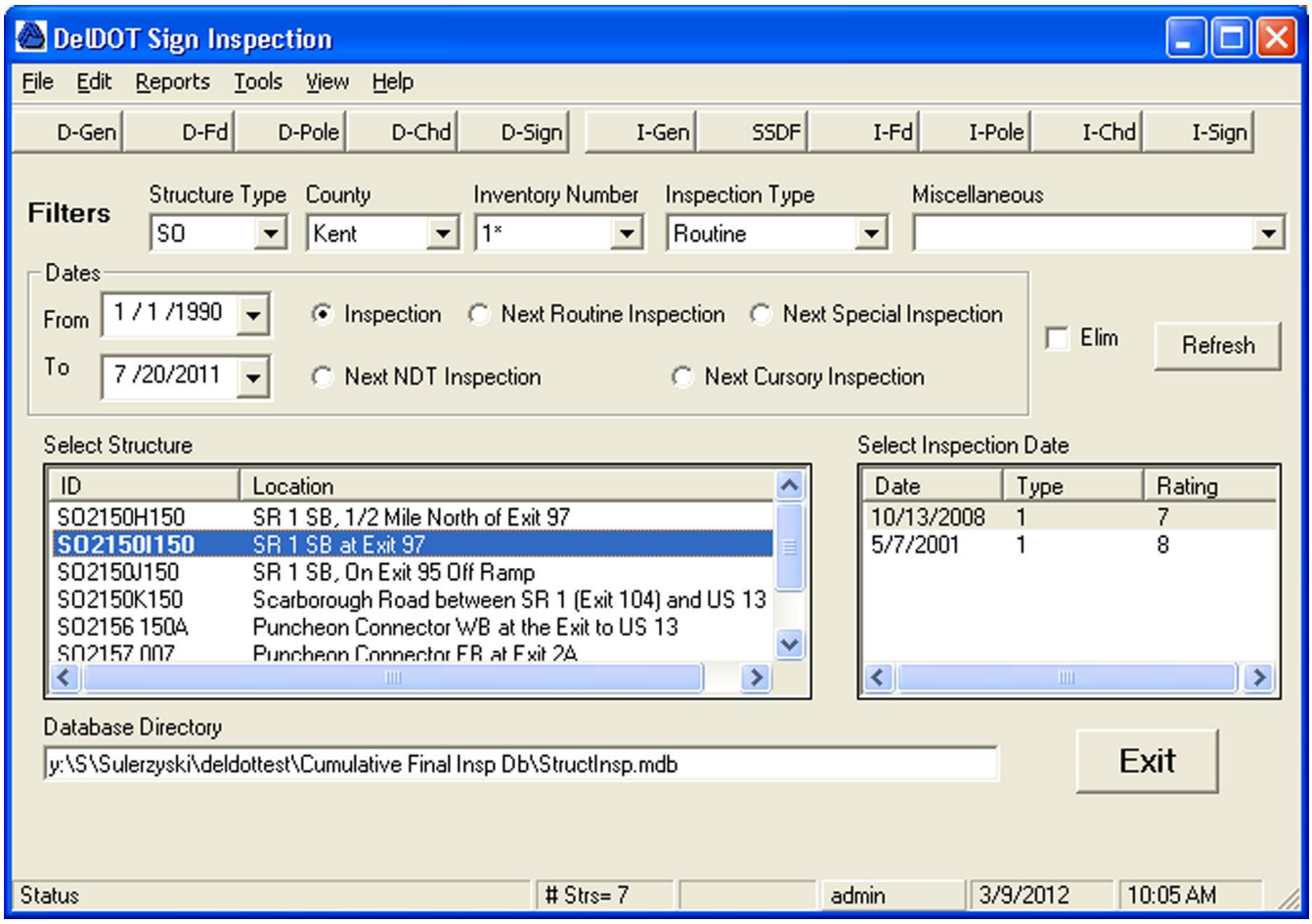
Total Area of Signs

Description: No entry is required for this field, the program automatically calculates the total area of all of the sign panels present, based on the user's input data.

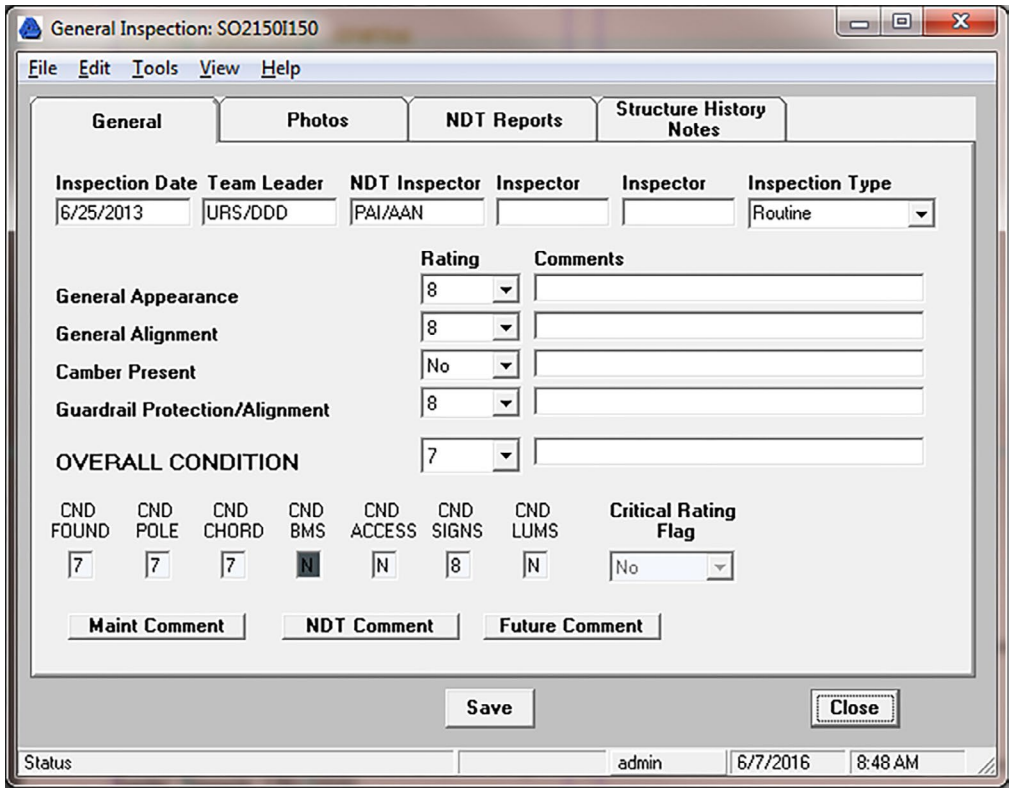
Coding: None

SO - OVERHEAD SIGN STRUCTURE

INSPECTION DATA



GENERAL INSPECTION - GENERAL



Inspection Date

Description: This field is used to record the completion date of the structure's inspection. An inspection date is created when the structure is initially inspected and at the structure's designated inspection cycle.

Coding: None

Team Leader

Description: Enter the initials of the firm performing the inspection followed by the initials of the Inspection Team Leader. Example: URS/NGD

Coding: None

NDT Inspector

Description: If applicable, enter the initials of the firm performing the Non-Destructive Testing (NDT) followed by the initials of the NDT inspector. Example: PAI/CHS

Coding: None

Inspector

Description: These fields allow for up to two additional field inspector names to be entered for the inspection of the structure. For each field, enter the initials of the firm performing the inspection followed by the initials of the field inspector. Example: URS/DDD

Coding: None

Inspection Type

Description: This field is used to identify the type of inspection being performed on the structure. The inspection type is created when the structure is initially inspected and at the structure's designated inspection interval.

Coding: 1 = Routine
2 = NDT
3 = Repair/Retrofit
4 = Impact Damage
5 = Alterations
6 = Special Inspection
7 = Removal
8 = Cursory

General Appearance - Rating/Comments

Description: From the pull down menu, select the **Rating** for the General Appearance of the structure. General observations of the appearance of the structure should be made while approaching the structure. The purpose of these initial observations is to familiarize the inspector with the structure. They may also point out a need to modify the inspection sequence or indicate areas requiring special attention.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

General Alignment - Rating/Comments

Description: From the pull down menu, select the **Rating** for the General Alignment of the structure. General observations of the alignment of the structure should be made while approaching the structure. The purpose of these initial observations is to detect any unusual movements of the structure as a whole that may have occurred. They may also point out problems with the location of the structure's supports or indicate areas requiring special attention.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

Camber Present - Rating/Comments

Description: From the pull down menu, select whether or not the structure exhibits vertical camber. The determination of camber should be made while approaching the structure.

The **Comments** field allows the user to record any observations.

Coding: 1 = Yes
2 = No
3 = Not Visible

Guardrail Protection/Alignment - Rating/Comments

Description: From the pull down menu, select the **Rating** of the Guardrail Protection and its Alignment for the structure. If no guardrail is present, then the rating should be coded "N".

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

OVERALL CONDITION - Rating/Comments

Description: From the pull down menu, select the **Rating** for the Overall Condition of the structure. The rating is based on the inspector's assessment of the structure's individual components with emphasis placed on the primary elements.

The **Comments** field allows the user to record any observations.

Coding: See **Condition Rating Codes** section of this manual.

CND FOUND
Description: No entry is required for this field. The overall condition rating for the Foundation(s) is summarized here.

CND POLE
Description: No entry is required for this field. The overall condition rating for the Pole(s) is summarized here.

CND CHORD
Description: No entry is required for this field. The overall condition rating for the Chord(s) is summarized here.

CND BMS
Description: This field is not applicable.

CND ACCESS
Description: No entry is required for this field. The overall condition rating for the Access (walkway, platform, ladder, etc.) on the structure is summarized here.

CND SIGNS
Description: No entry is required for this field. The overall condition rating for the Sign panels attached to the structure is summarized here.

CND LUMS
Description: No entry is required for this field. The overall condition rating for the Luminaires (excludes highway luminaires) attached to the structure is summarized here.

Critical Rating Flag
Description: No entry is required for this field. The structure is flagged as either having a critical rating or not. When the **OVERALL CONDITION** Rating is "3" or less, this field shows **Yes**. Otherwise, the field shows **No**.

Maint Comment
Description: Clicking on this button allows the inspector to view and/or edit the comment fields from the **Maintenance repairs done at the time of inspection** in the **Foundation, Pole, Chord, Access/Sign/Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

NDT Comment
Description: Clicking on this button allows the inspector to view and/or edit the comment fields from the **NDT testing done at the time of inspection** in the **Foundation, Pole, Chord, Access/Sign/Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

Future Comment
Description: Clicking on this button allows the inspector to view and/or edit the comment fields from the **Future maintenance required and/or repair recommendations** in the **Foundation, Pole, Chord, Access/Sign/Luminaire,** and **BMS** sections. These and other comments may then be placed in the **Saved Comment** field for inclusion into the Critical Report.

Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **General** tab.

Coding: None

GENERAL INSPECTION - PHOTOS

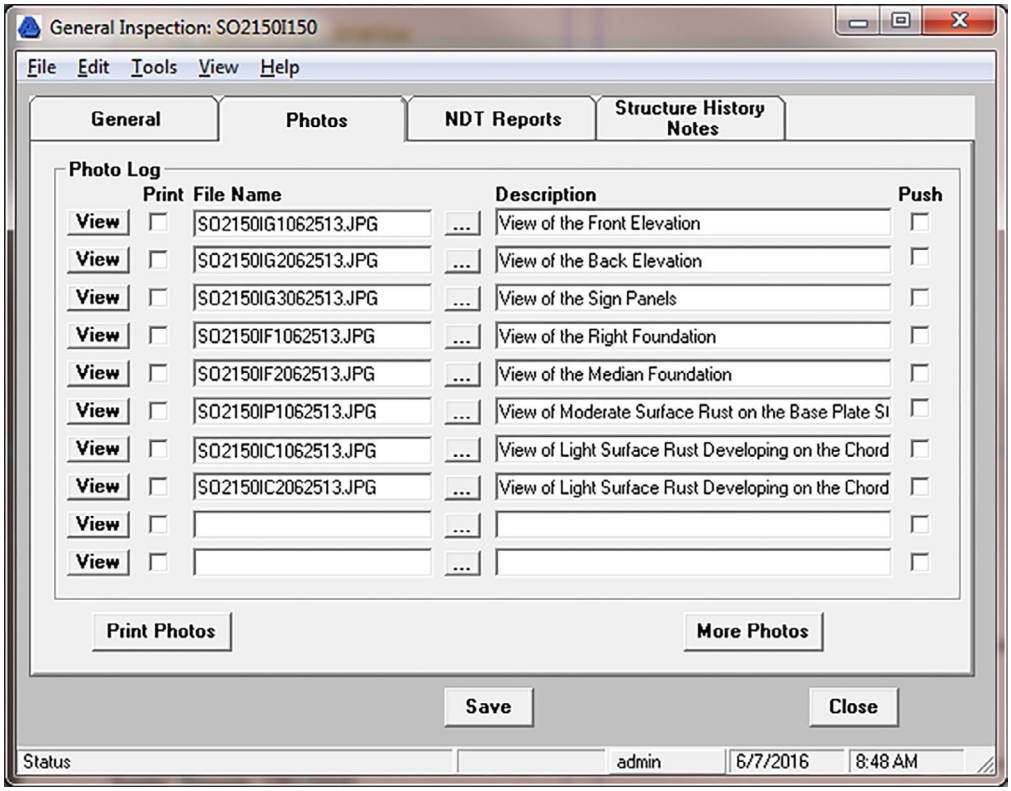


Photo Log

Description: This tab allows up to ten photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

Overhead Sign Structures shall have a **minimum of two** identifying photos taken. One will be an overview of the structure while the other will be a legible view of the sign panel(s). One photo of the overview of the structure is permitted if the sign panel(s) in the photo are clearly legible.

Clicking on ... allows the user to view all of the files in the folder and select one to be placed in the respective **File Name** field.

Coding: None

View

Description: Clicking on the **View** button allows the user to view a particular photograph.

Coding: None

Print

Description: Placing a checkmark in these boxes allows the user to print the respective photographs using the **Print Photos** button.

Coding: None

File Name

Description: Each of these fields are used to enter one JPEG file name for each of the photographs.

Coding: The following shall be used for the JPEG file naming convention:
SO1256**G1**.jpg
SO2150K**G1**.jpg
SO1256 and SO2150K are the structure ID's.

There are five types of photos:
G = General (elevation views and views of sign panels)
F = Foundation Elements (erosion, footing, grout pad, anchor bolts)
P = Pole Elements (pole, base plate, joints/splices, trussing)
C = Chord Elements (chords, joints/splices, connections, trussing)
S = Walkway, Signing, and Luminaire Elements

Example: **F1** = foundation element photo number 1 (photos for each type will be numbered 1, 2, 3, 4, etc.)

Note: When the file is brought into the File Name field, the inspection date is attached to the end of the file name.

Description

Description: These fields are used to enter captions for each of the photographs.

Coding: None

Push

Description: The **Push** button is used to incorporate photographs into the Critical Report. A checkmark will appear in the box when it is clicked on. This checkmark will push or forward the photograph(s) into the critical report. When the critical report for the structure is printed out, all pushed photographs will also be printed out.

Coding: None

More Photos

Description: Clicking on the **More Photos** button creates another **Photos** tab that allows up to ten additional photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

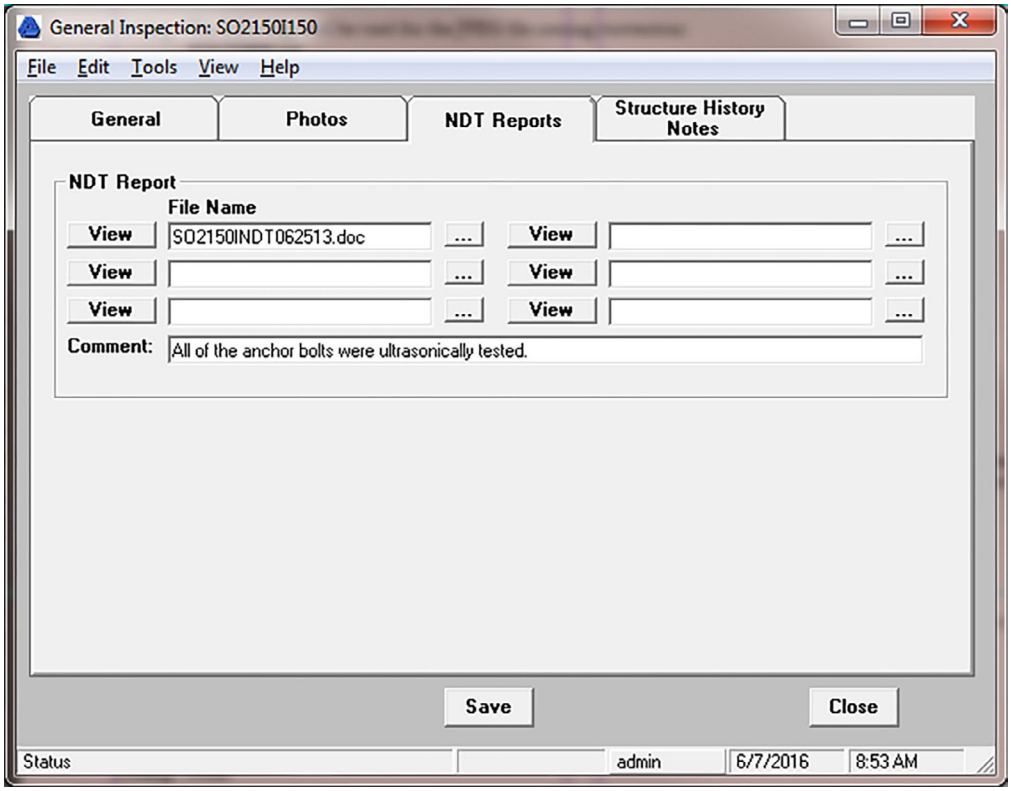
Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **Photos** tab.

Coding: None

GENERAL INSPECTION - NDT REPORTS



NDT Report

Description: This tab allows up to six NDT reports to be stored in a folder labeled with the structure's ID number. The NDT reports should be saved in a Microsoft Word or Excel format.

Clicking on ... allows the user to view all of the files in the folder and select one to be placed in the respective **File Name** field.

Coding: None

View

Description: Clicking on the **View** button allows the user to view a particular NDT report.

Coding: None

File Name

Description: Each of these fields are used to enter the file name of one Microsoft Word or Excel document for each of the NDT reports.

Coding: The following shall be used for the NDT report file naming convention:

Examples: SO2150K**NDT**.doc or SO2150K**NDT**.xls

For multiple NDT reports, the following should be used:

SO2150KNDTA.doc
SO2150KNDTB.doc

Note: When the file is brought into the File Name field, the inspection date is attached to the end of the file name.

Comment:

Description: This field allows the user to enter any comments regarding the non-destructive testing performed and the subsequent results.

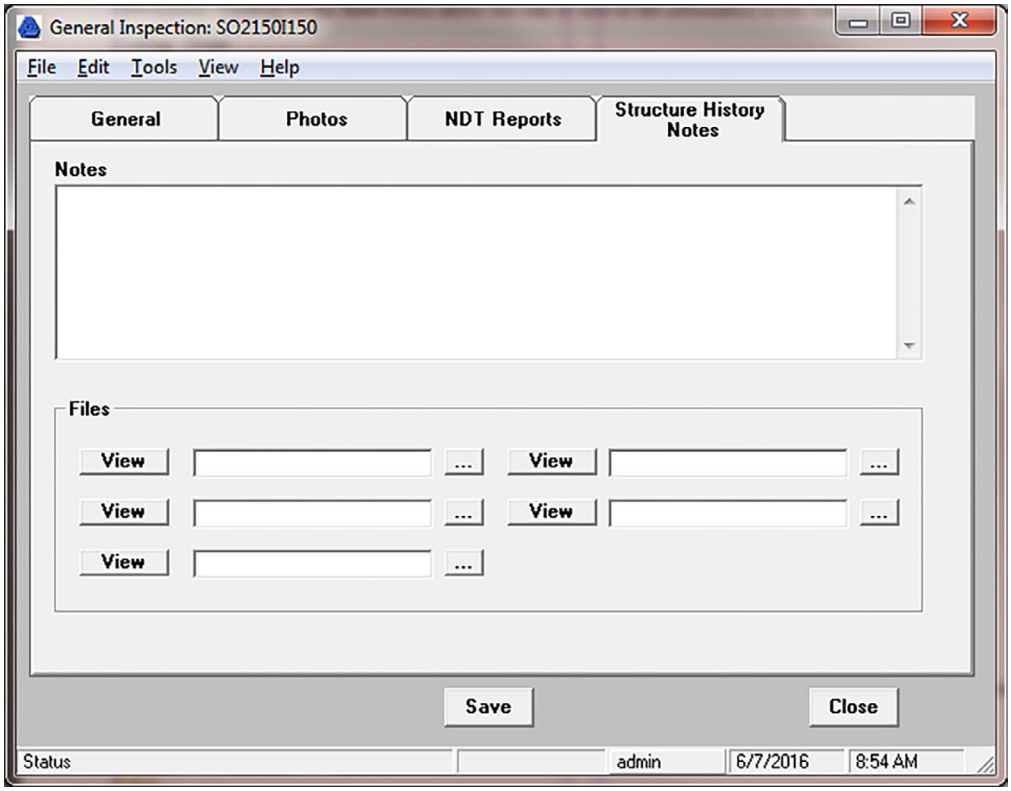
Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **NDT Reports** tab.

Coding: None

GENERAL INSPECTION - STRUCTURE HISTORY NOTES



Notes

Description: This memo field allows the user to describe specific details about the structure or the inspection for future reference.

Coding: None

Files

Description: This allows up to five files to be stored in a folder labeled with the structure's ID number. These files may be Microsoft Word or PDF documents that describe specific details about the structure or the inspection for future reference.

Clicking on ... allows the user to view all of the files in the folder and select one to be placed in the respective **Files** field.

Coding: None

View

Description: Clicking on the **View** button allows the user to view a particular file.

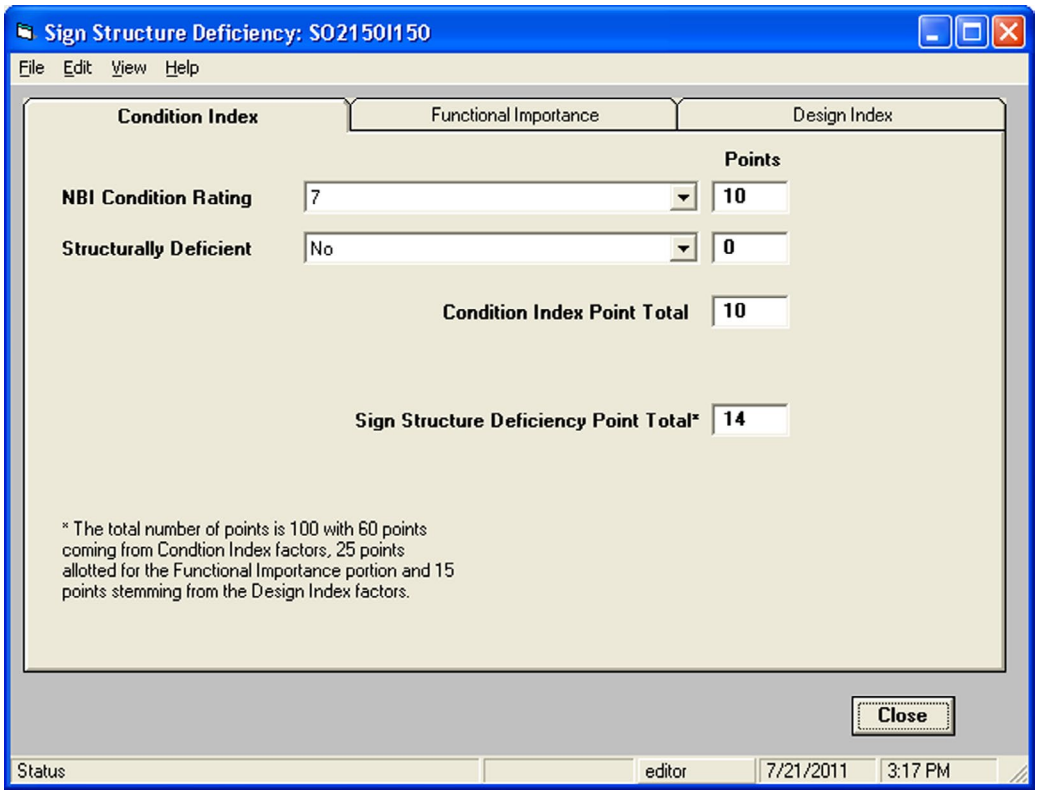
Coding: None

Save

Description: Clicking on the **Save** button allows the user to save all the information in the **Structure History Notes** tab.

Coding: None

SIGN STRUCTURE DEFICIENCY FACTOR (SSDF) - CONDITION INDEX



NBI Condition Rating

Description: No entry is required for these two fields. The NBI Condition Rating is the lowest rating of the Foundation, Pole or Chord condition ratings.
The program automatically assigns a point value from the table below:

Structural Rating Points – 0 to 45 points

NBI Condition Rating	Points
0	45
1	43
2	41
3	37
4	32
5	24
6	15
7	10
8	5
9	0

Coding: None

Structurally Deficient

Description: No entry is required for these two fields. A structure is deemed "Structurally Deficient" when the NBI Condition Rating for either the Foundation, Pole or Chord is a 4 or lower.
The program automatically assigns a point value from the table below:

Structurally Deficient Points – 0 to 15 points

Structurally Deficient	Points
No	0
Yes	15

Coding: None

Condition Index Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the NBI Condition Rating Points and the Structurally Deficient Points.

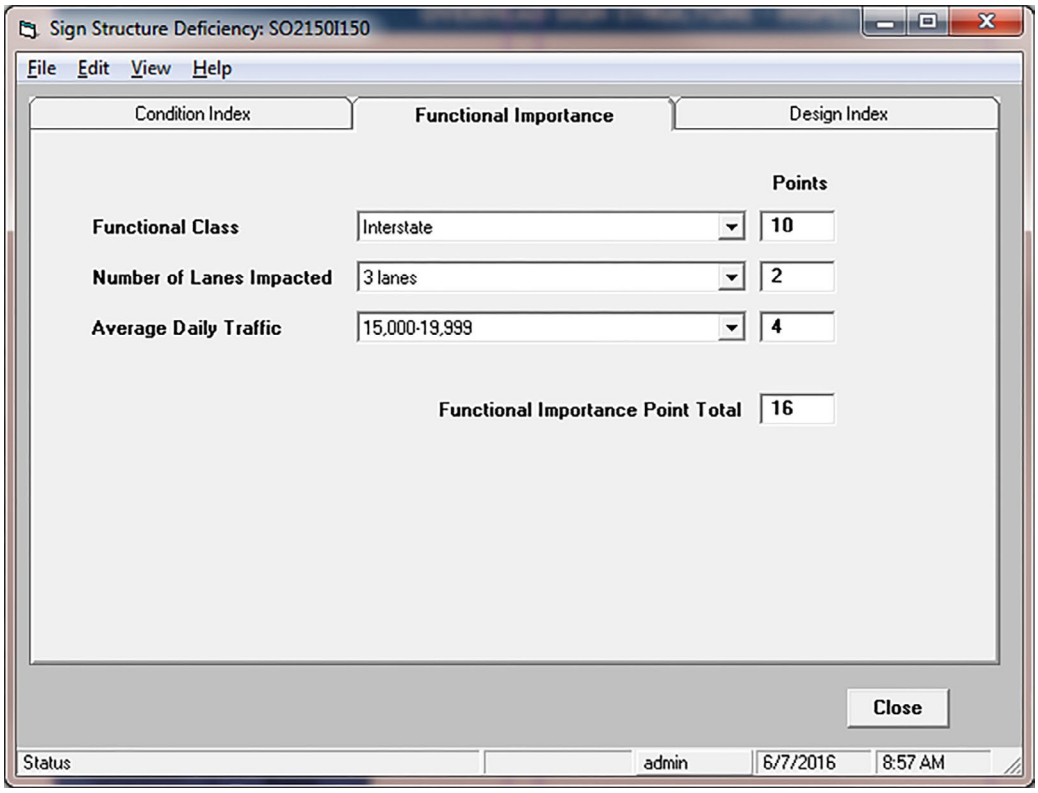
Coding: None

Sign Structure Deficiency Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the Condition Index Point Total, the Functional Importance Point Total and the Design Index Point Total.

Coding: None

SIGN STRUCTURE DEFICIENCY FACTOR (SSDF) - FUNCTIONAL IMPORTANCE



Functional Class

Description: No entry is required for these two fields. The functional class for the structure is summarized here. The program automatically assigns a point value from the table below:

Functional Classification Points – 2 to 10 points

Functional Class	Points
Local	2
Collector	5
Arterial	8
Interstate	10

Coding: None

Number of Lanes Impacted

Description: No entry is required for these two fields. The number of traffic lanes impacted if the structure fails is summarized here.

The program automatically assigns a point value from the table below:

Lanes Impacted Points – 0 to 5 points

# of Lanes Impacted if Structure Fails	Points
0-1 lanes	0
2 lanes	1
3 lanes	2
4 lanes	3
5 lanes	4
> 5 lanes	5

Coding: None

Average Daily Traffic

Description: No entry is required for these two fields. The average daily traffic for the structure is summarized here. The program automatically assigns a point value from the table below:

Traffic Volume Points – 1 to 10 points

Average Daily Traffic	Points
0 - 4,999	1
5,000 - 9,999	2
10,000 - 14,999	3
15,000 - 19,999	4
20,000 - 29,999	5
30,000 - 44,999	6
45,000 - 59,999	7
60,000 - 79,999	8
80,000 - 100,000	9
> 100,000	10

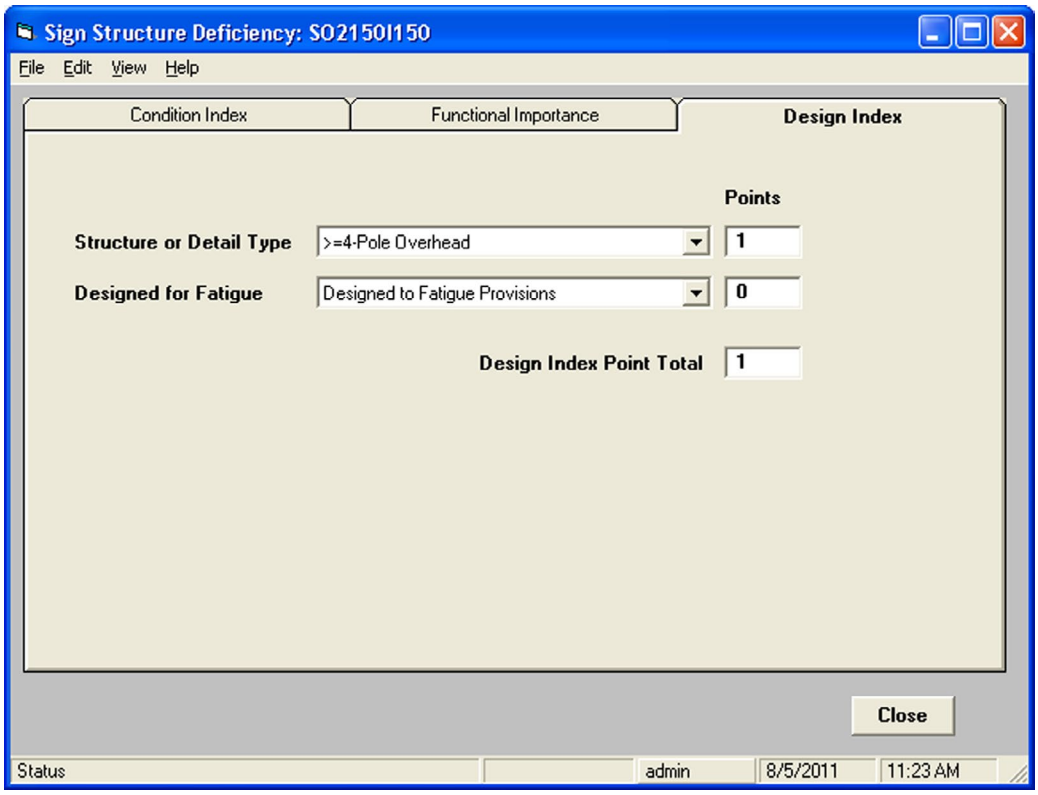
Coding: None

Functional Importance Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the Functional Class Points, the Number of Lanes Impacted Points and the Average Daily Traffic Points.

Coding: None

SIGN STRUCTURE DEFICIENCY FACTOR (SSDF) - DESIGN INDEX



Structure or Detail Type

Description: No entry is required for these two fields. The structure or detail type is summarized here.

The program automatically assigns a point value from the table below:

Structure Type Points – 1 to 5 points

Structure or Detail Type	Points
≥ 4-Pole Overhead Sign Structure	1
≥ 8-Anchor Bolt High Mast Light	
Bridge Mounted Sign Structure	
2-Pole Overhead Sign Structure	2
6-Anchor Bolt High Mast Light	
Clamped Chord-Pole Connection (Tri-Chord 2-Pole Overhead Sign Structure)	
Galvanized / Painted Steel Sleeve Joint High Mast Light	
Aluminum Sign Structure	3
> 4-Anchor Bolt Cantilever Sign Structure	
4-Anchor Bolt High Mast Light	4
4-Anchor Bolt Cantilever Sign Structure	5
Weathering Steel Telescoping Sleeve Joint High Mast Light	
Clamped Chord-Pole Connection (2-Chord 2-Pole Overhead Sign Structure)	

Coding: None

Designed for Fatigue

Description: No entry is required for these two fields. The determination of whether or not the structure was designed to fatigue provisions is summarized here.
The program automatically assigns a point value from the table below:

Fatigue Design Points – 0 to 10 points

Designed for Fatigue	Points
Not Designed to Fatigue Provisions	10
Designed to Fatigue Provisions	0

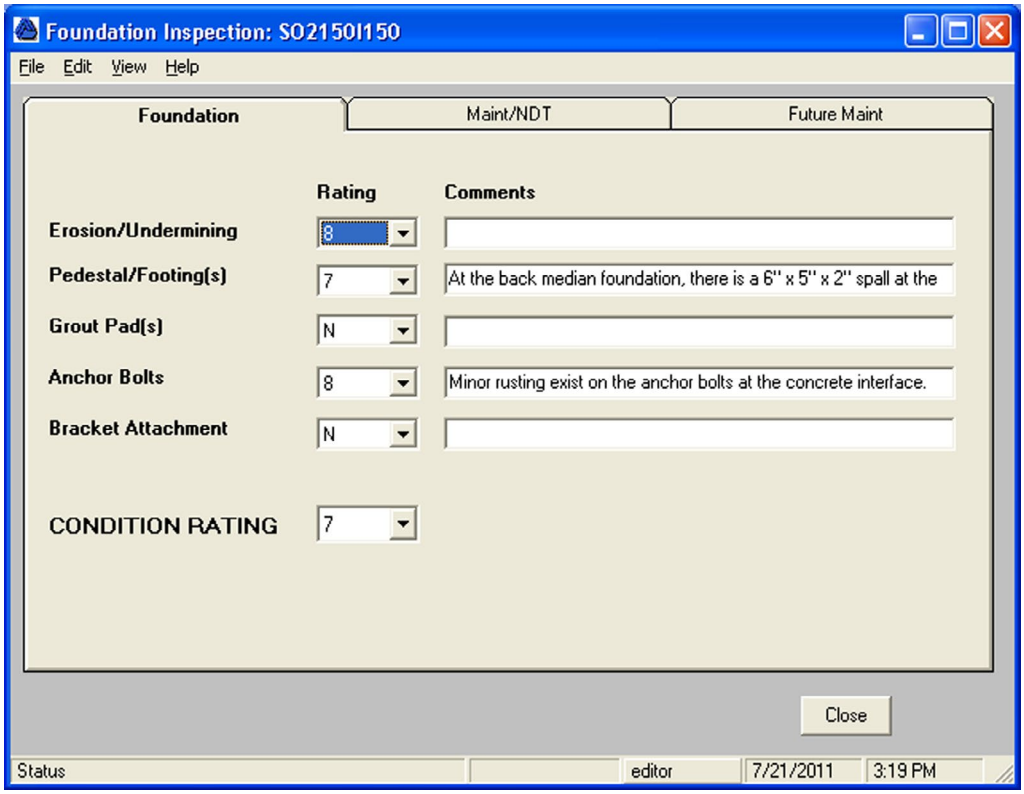
Coding: None

Design Index Point Total

Description: No entry is required for this field. The program automatically calculates the point total by summing the Structure or Detail Type Points and the Designed for Fatigue Points.

Coding: None

FOUNDATION INSPECTION - FOUNDATION



Erosion/Undermining

Description: The entire area surrounding the foundations should be inspected for any signs of erosion and/or undermining.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Pedestal/Footing(s)

Description: This element involves the inspection of the exposed portion of the entire foundation type identified. If the foundation type is identified as a **Bracket**, this element should be coded "N" and a condition rating given for the element **Bracket Attachment**.

From the pull down menu, select the **Rating** for this element on all of the foundations. If the foundation type is buried, a condition rating should be given based on any signs of distress observed at the foundation's location.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Grout Pad(s)

Description: This element involves the inspection of the grout pad located between the underside of the base plate and the top of the foundation at all foundation locations.

From the pull down menu, select the **Rating** for the element. If grout pads are not present or visible, then the condition rating should be coded "N".

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Anchor Bolts

Description: This element involves the inspection of the anchor bolts, anchor bolt nuts and washers, and leveling nuts at all of the foundations.

From the pull down menu, select the **Rating** for the element. If the anchor bolts are buried, a condition rating should be given based on any signs of distress observed.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Bracket Attachment

Description: This element involves the inspection of the bracket support(s) for the pole(s) that are attached to a bridge girder, retaining wall, etc. The entire bracket configuration, including its connection to the structure, should be considered.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

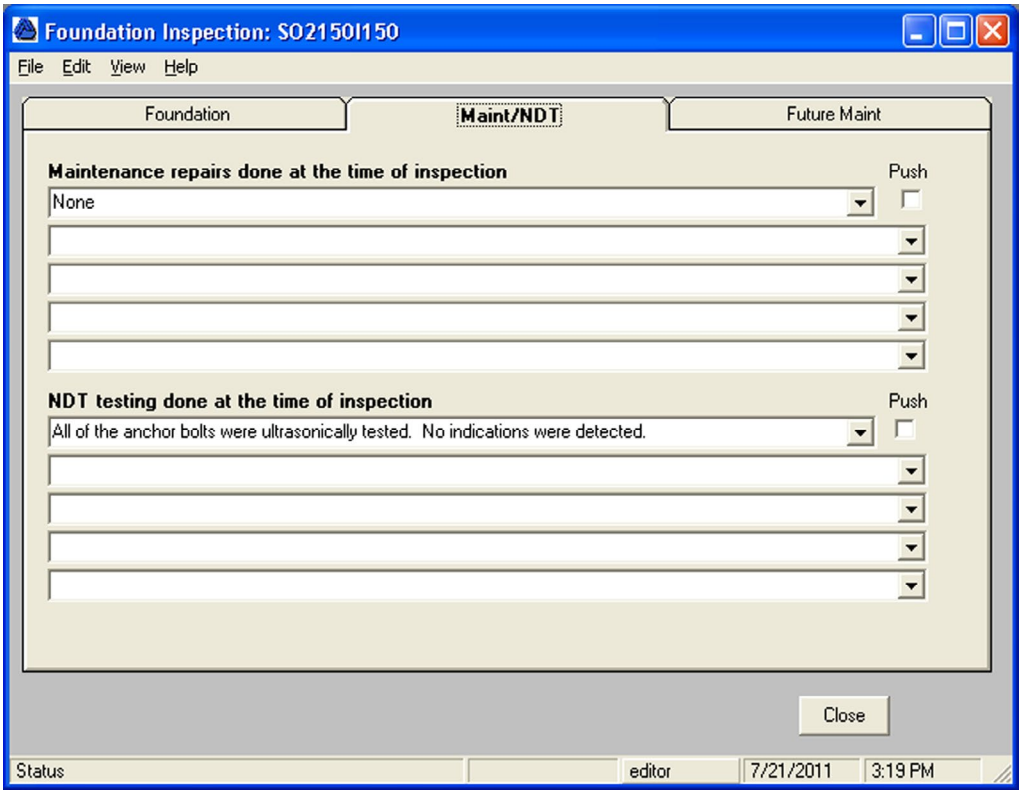
Description: This numerical condition rating should characterize the general condition of all of the foundations. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the foundations.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the foundations, then the element can be considered a "weak link" in the structure, and the rating of the foundations should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Foundations.

Coding: See **Condition Rating Codes** section of this manual.

FOUNDATION INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the elements of the Foundations during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection - General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

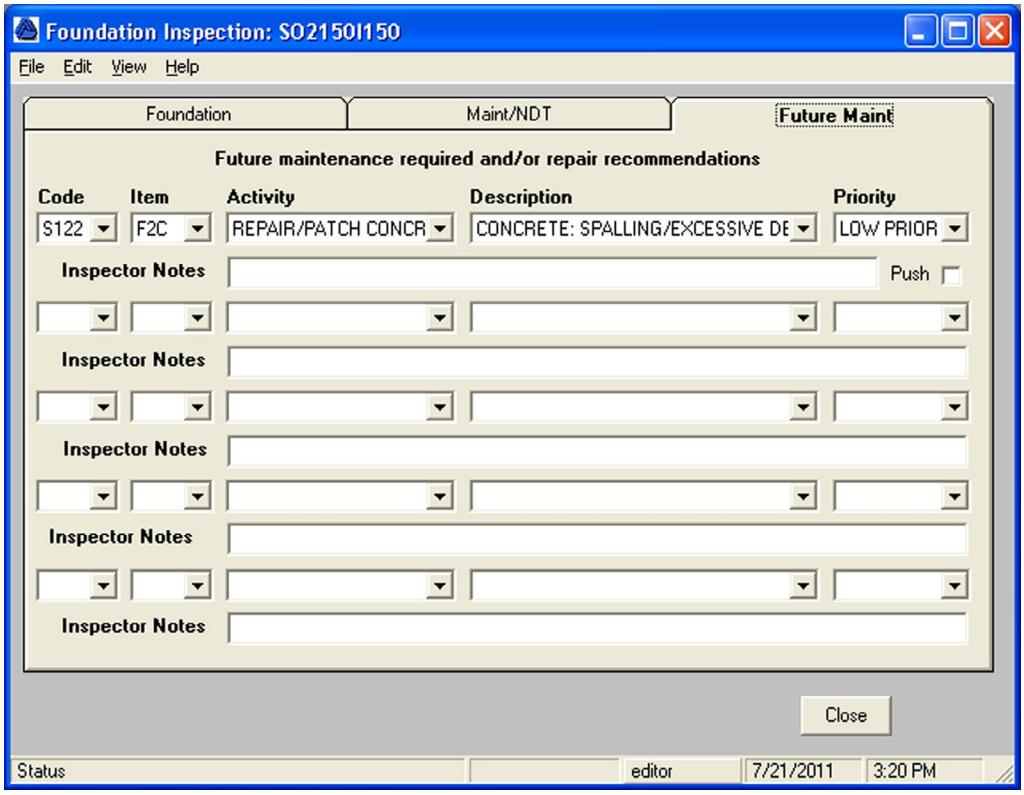
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the elements of the Foundations during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection - General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

FOUNDATION INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the elements of the Foundations.

If no maintenance repairs were recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended, could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the structure's elements and the structure itself.

Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

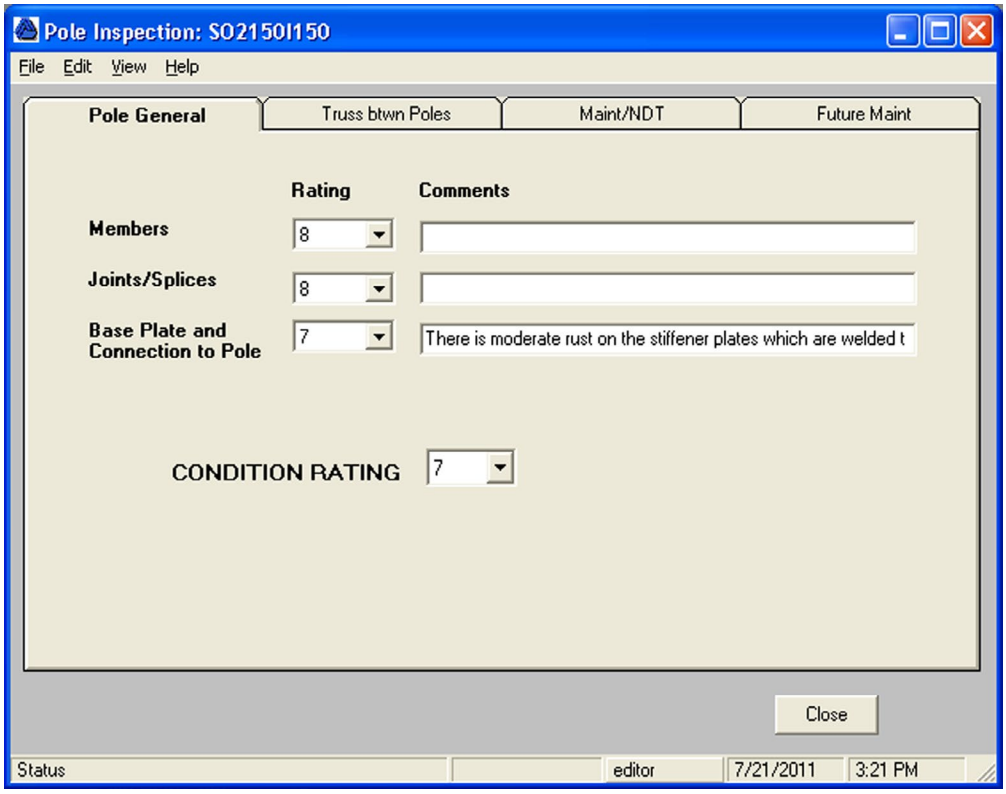
Inspector Notes

Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection - General** page. To activate the "push", click on the box and a checkmark will appear.

POLE INSPECTION - POLE GENERAL



Members

Description: This element involves the inspection of each vertical pole, including the applied finish. Also included with this element are hand holes and top caps attached to the poles.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Joints/Splices

Description: This element involves the inspection of joint connections to each pole and the poles horizontal splices.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Base Plate and Connection to Pole

Description: This element involves the inspection of each base plate and its connection to each pole, including the applied finish.

From the pull down menu, select the **Rating** for the element. If the base plates are buried, a condition rating should be given based on any signs of distress observed.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

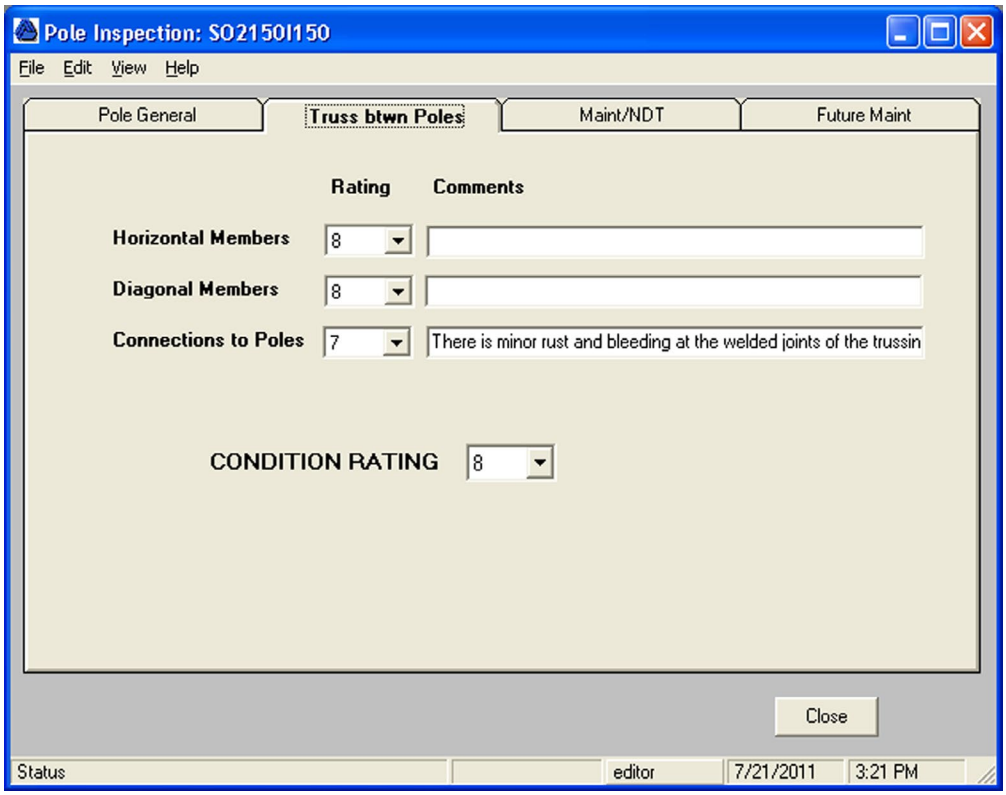
Description: This numerical condition rating should characterize the general condition of the Pole elements. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the elements.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the element, the element can be considered a "weak link" in the structure, and the rating of the Pole should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Pole.

Coding: See **Condition Rating Codes** section of this manual.

POLE INSPECTION - TRUSS BTWN POLES



This page is only activated if in the Structure Data portion of the program under Pole-Pole General, the Pole Type chosen is "Double or Single/Double".

Note: If no trussing members are present, all of the "Ratings" should be coded "N".

Horizontal Members

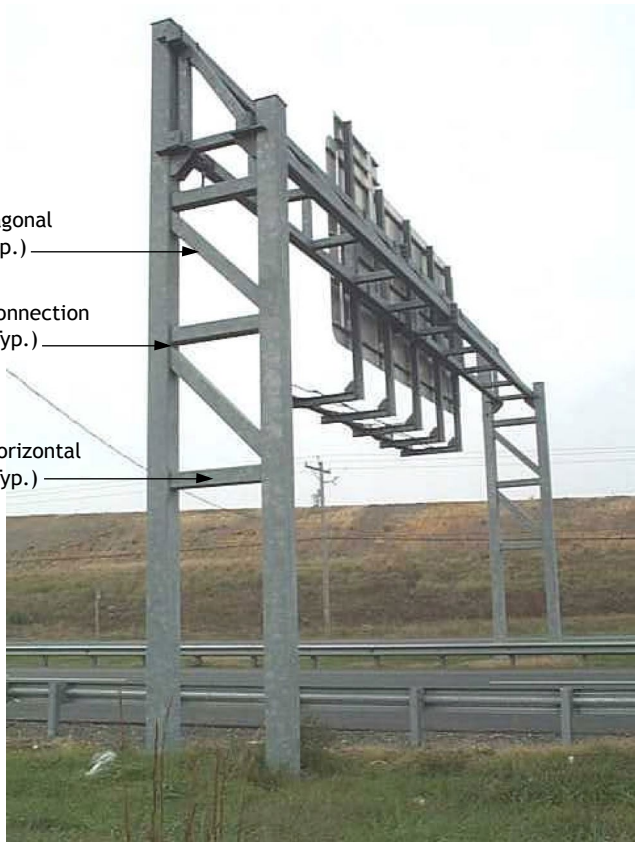
Description: This element involves the inspection of the horizontal trussing (secondary) members located between the vertical poles at each foundation, including the applied finish.

If no horizontal members are present, the **Rating** should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.



Diagonal Members

Description: This element involves the inspection of the diagonal trussing (secondary) members located between the vertical poles at each foundation, including the applied finish.

If no diagonal members are present, the **Rating** should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Connections to Poles

Description: This element involves the inspection of the connections of the trussing members to the vertical poles at each foundation.

If the trussing members are attached to gusset plates that are attached to the poles, then both connections should be inspected and rated.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

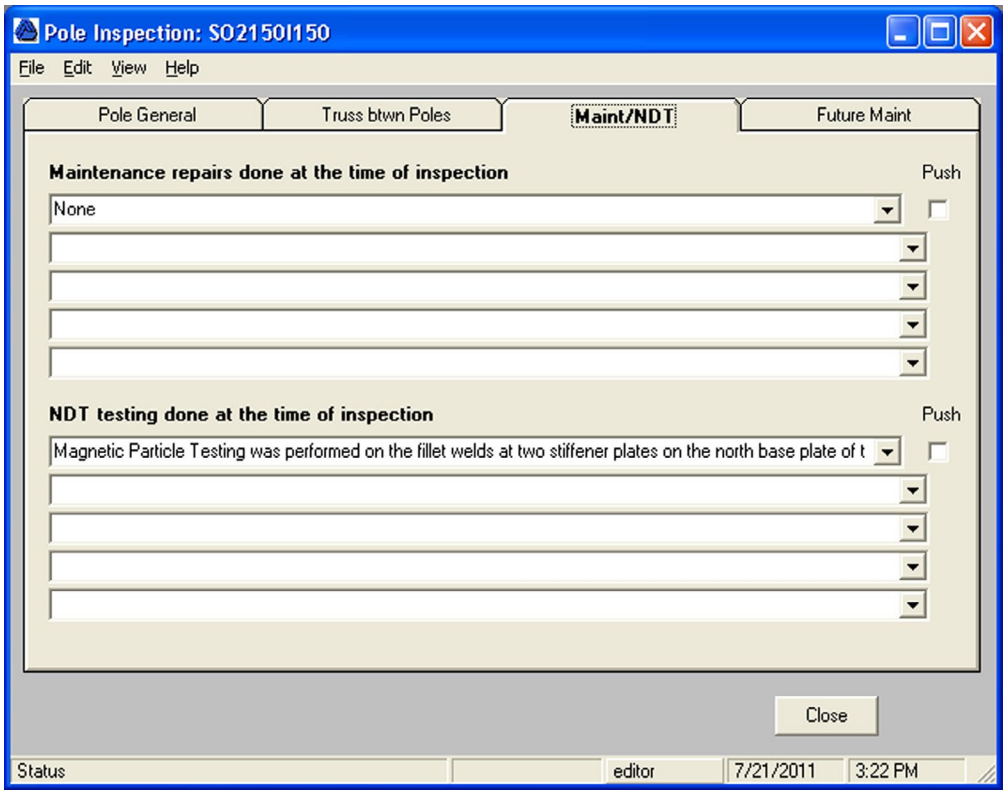
Description: This numerical condition rating should characterize the general condition of the Trussing Members and their connections to the poles. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the member, then the element can be considered a "weak link" in the structure, and the rating of the Trussing Members should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Trussing Members and their connections to the poles.

Coding: See **Condition Rating Codes** section of this manual.

POLE INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the Pole and/or Trussing Elements during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection - General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

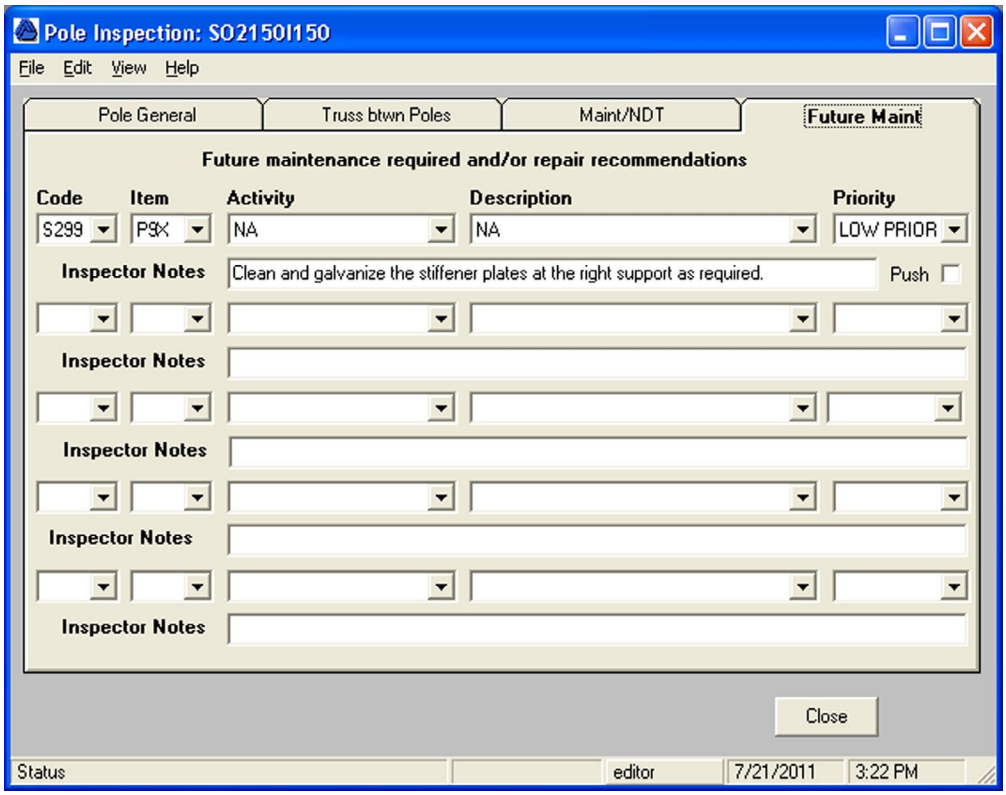
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the Pole and/or Trussing Elements during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection - General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

POLE INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the Pole and/or Trussing Elements.

If no maintenance repairs were recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the structure's elements and the structure itself.

Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

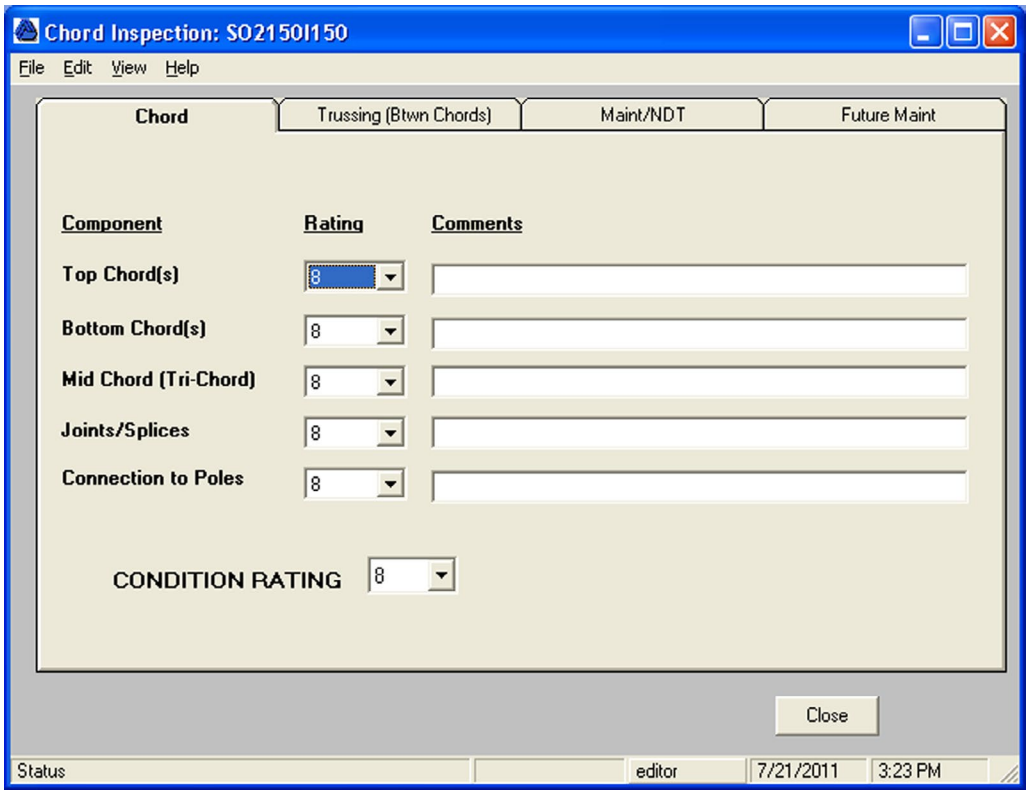
Inspector Notes

Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection - General** page. To activate the "push", click on the box and a checkmark will appear.

CHORD INSPECTION - CHORD



Top Chord(s)

Description: This element involves the inspection of the top chord(s) within the chord type configuration(s), including the applied finish. Also included with this element are hand holes and caps attached to the top chord(s).

If the chord type chosen is **Single Chord**, this element should have a condition rating.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Bottom Chord(s)

Description: This element involves the inspection of the bottom chord(s) within the chord type configuration(s), including the applied finish. Also included with this element are hand holes and caps attached to the bottom chord(s).

If the chord type chosen is **Single Chord**, the condition rating should be "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Mid Chord (Tri-Chord)

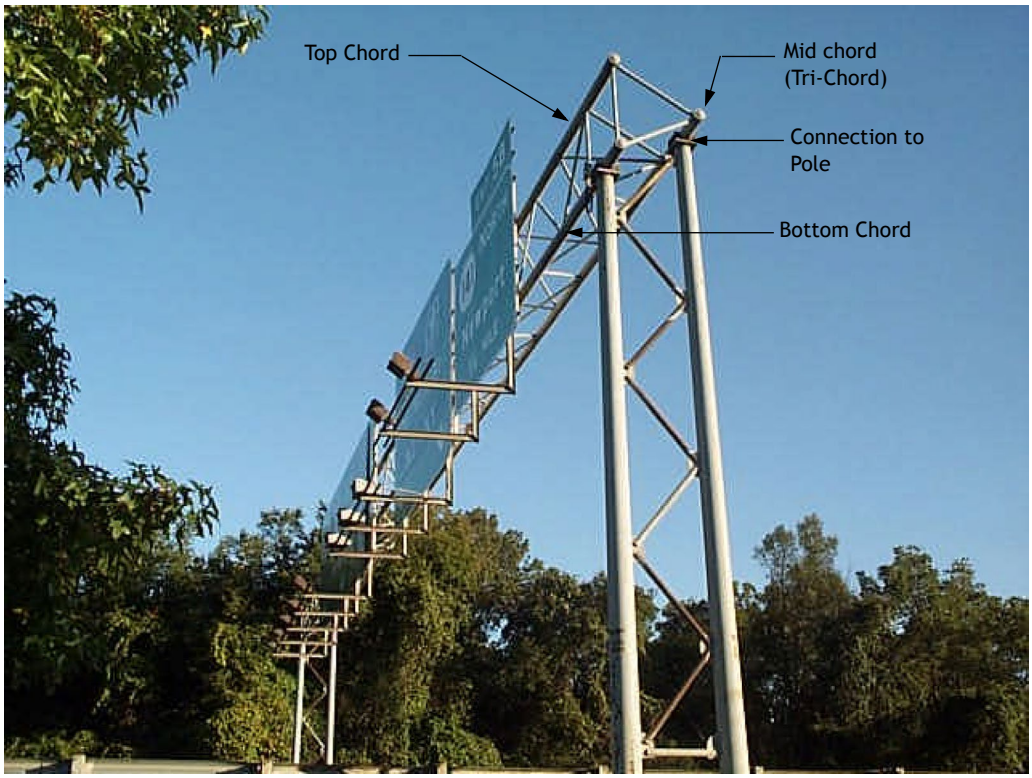
Description: This element involves the inspection of the mid chord within a Tri-Chord type configuration, including the applied finish. Also included with this element are hand holes and caps attached to the mid chord.

If the chord type chosen is not **Tri-Chord**, the condition rating should be "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.



Joints/Splices

Description: This element involves the inspection of joint connections and splices found along the individual chords within the chord type configuration(s).

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Connection to Poles

Description: This element involves the inspection of the connections of the individual chords within a chord type configuration to their respective pole supports.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

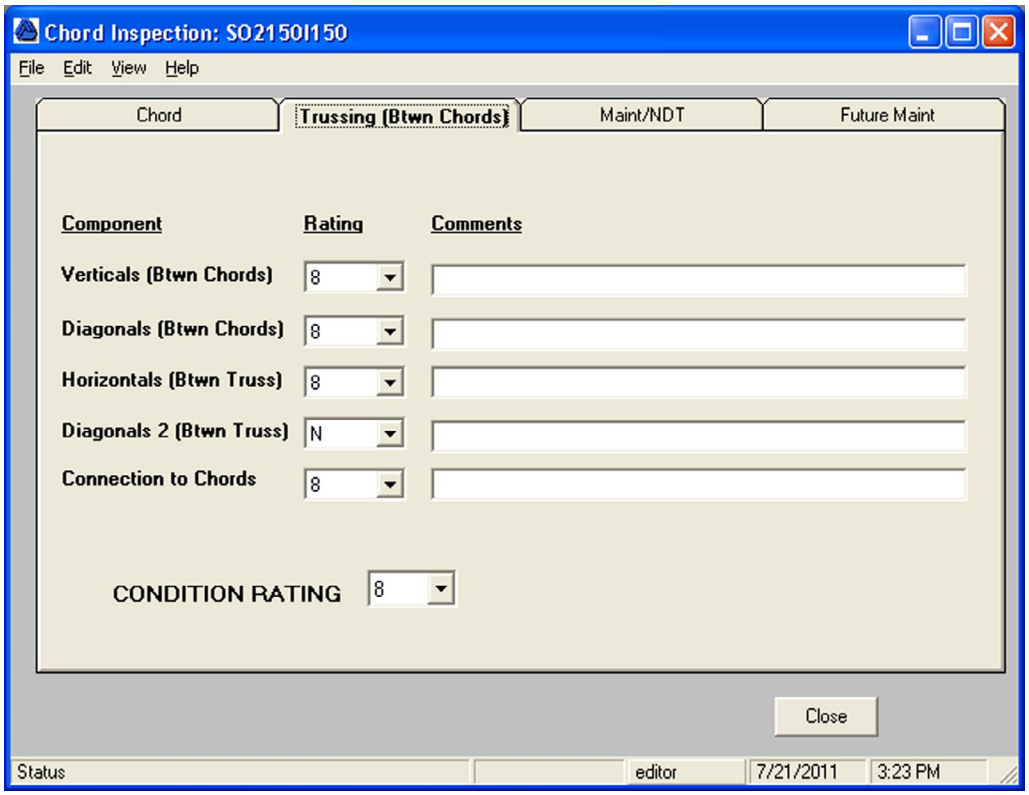
Description: This numerical condition rating should characterize the general condition of the chord. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the chord type.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the chord type, then the element can be considered a "weak link" in the structure, and the rating of the chord type should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Chord Type configuration.

Coding: See **Condition Rating Codes** section of this manual.

CHORD INSPECTION - TRUSSING (BTWN CHORDS)



Note: This tab does not appear for a single chord type configuration.

Verticals (Btwn Chords)

Description: This element involves the inspection of the vertical trussing members located between the individual chords of a plane truss within the chord type configuration(s), including the applied finish.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Diagonals (Btwn Chords)

Description: This element involves the inspection of the diagonal trussing members located between the individual chords of a plane truss within the chord type configuration(s), including the applied finish.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Horizontals (Btwn Truss)

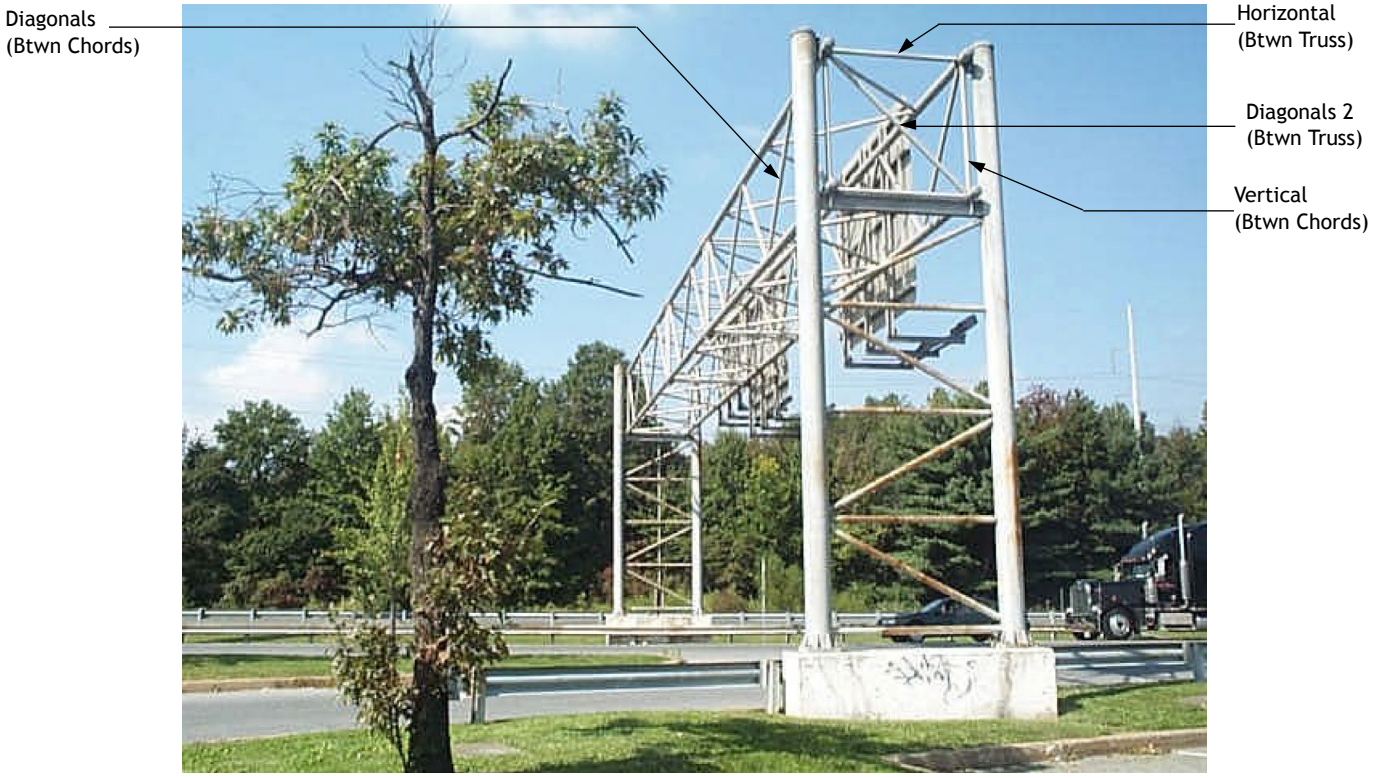
Description: This element involves the inspection of the horizontal trussing members located between two plane trusses (four chord type) or between one plane truss and a chord (Tri-Chord type), including the applied finish.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.



Diagonals 2 (Btwn Truss)

Description: This element involves the inspection of the diagonal trussing members located between two plane trusses (four chord type) or between one plane truss and a chord (Tri-Chord type), including the applied finish.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Connection to Chords

Description: This element involves the inspection of the connections of the trussing members within the chord type configuration(s) to the individual chords.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

Description: This numerical condition rating should characterize the general condition of the Trussing Members and their connections to the individual chords. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

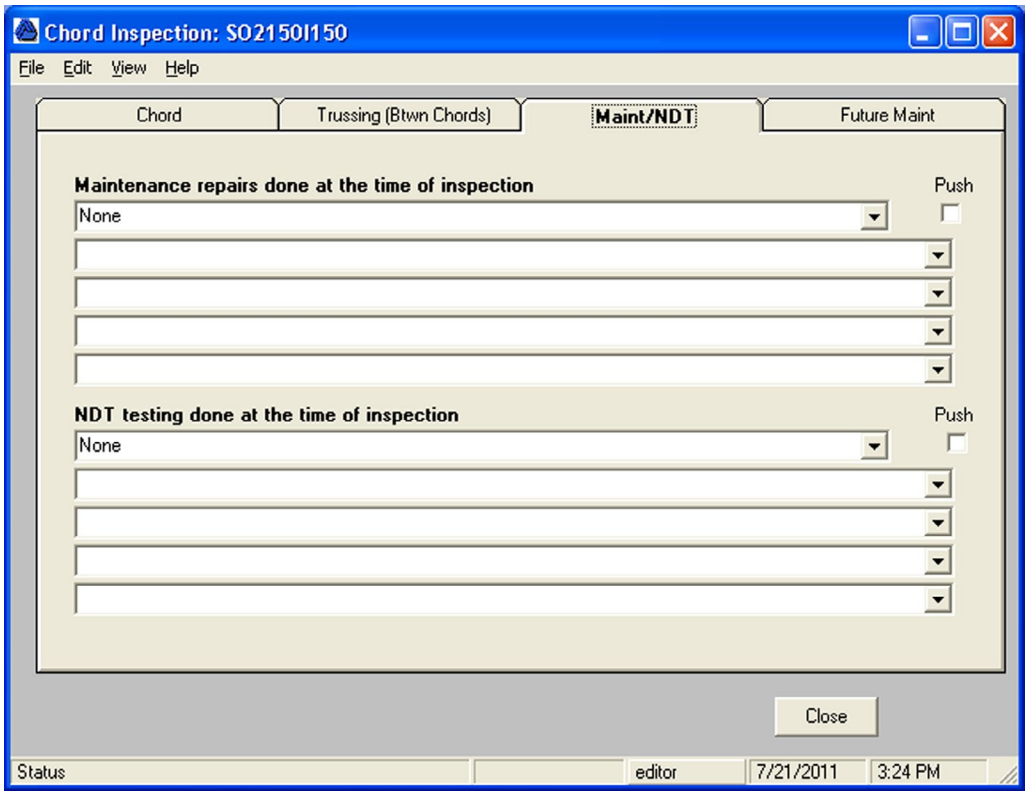
However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the member, then the element can be considered a "weak link" in the structure, and the rating of the Trussing Members should be reduced accordingly.

If no trussing members are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the overall condition of the Trussing Members and their connections to the individual chords.

Coding: See **Condition Rating Codes** section of this manual.

CHORD INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the Chord and/or Trussing elements during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection - General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

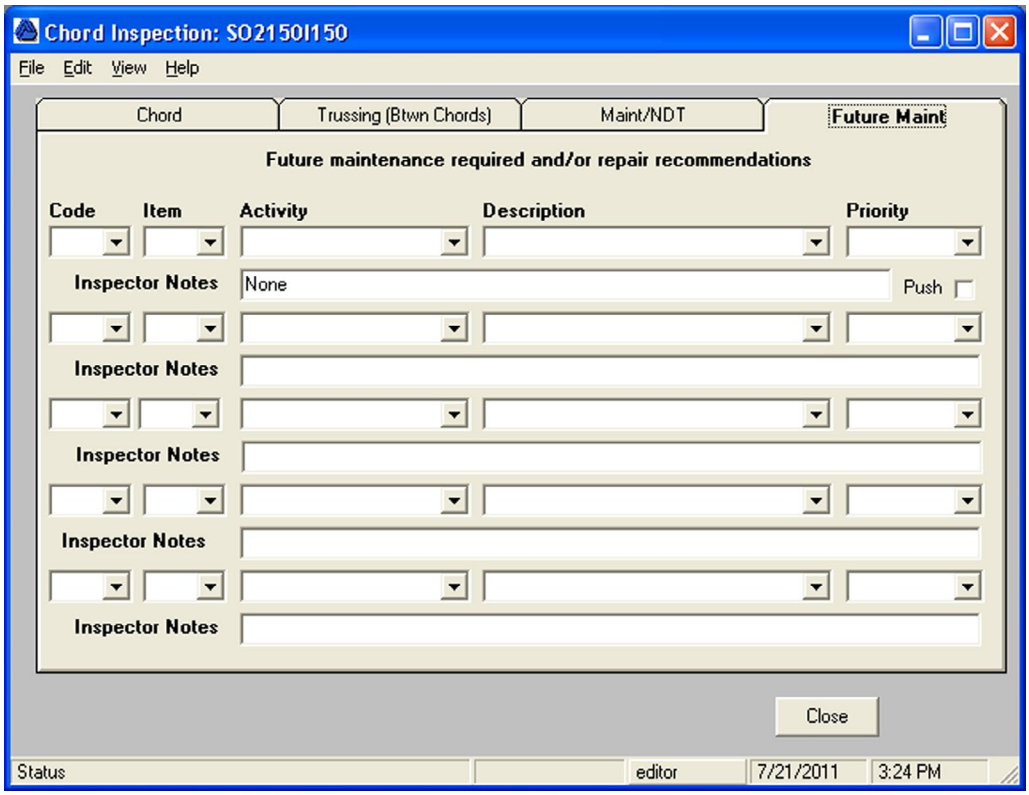
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the Chord and/or Trussing elements during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection - General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

CHORD INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the Chord and/or Trussing Elements.

If no maintenance repairs were recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the structure's elements and the structure itself.

Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

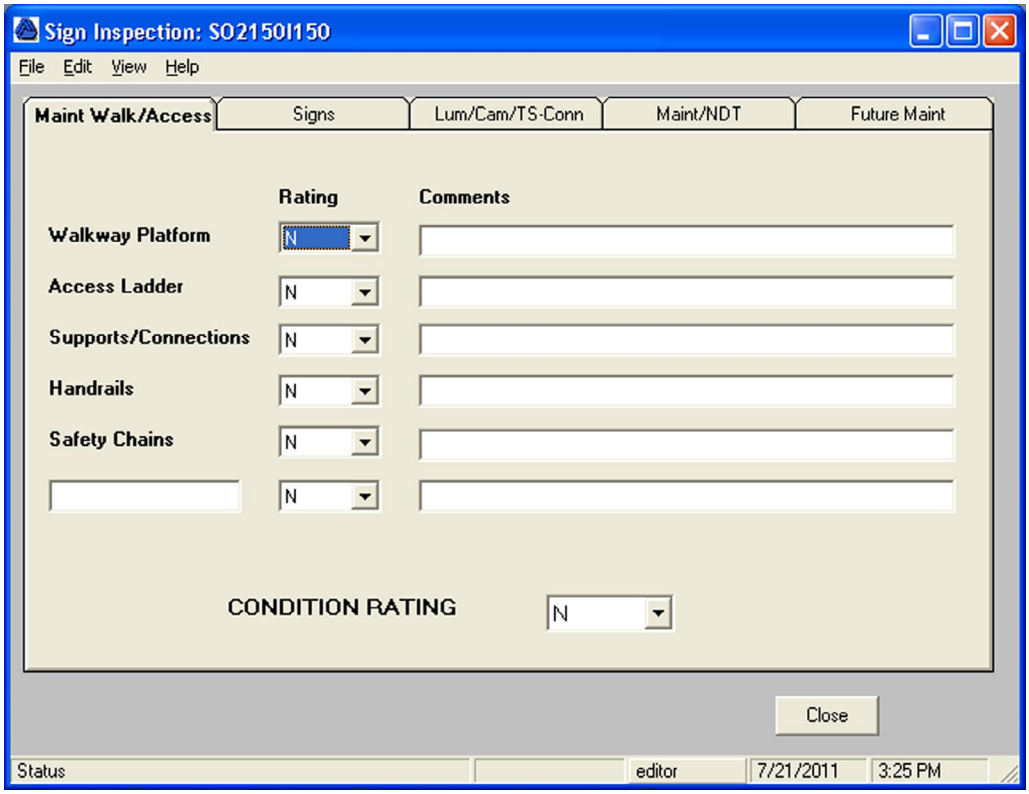
Inspector Notes

Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection - General** page. To activate the "push", click on the box and a checkmark will appear.

SIGN INSPECTION - MAINT WALK/ACCESS



Walkway Platform

Description: This element involves the inspection of the walkway platform present on the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

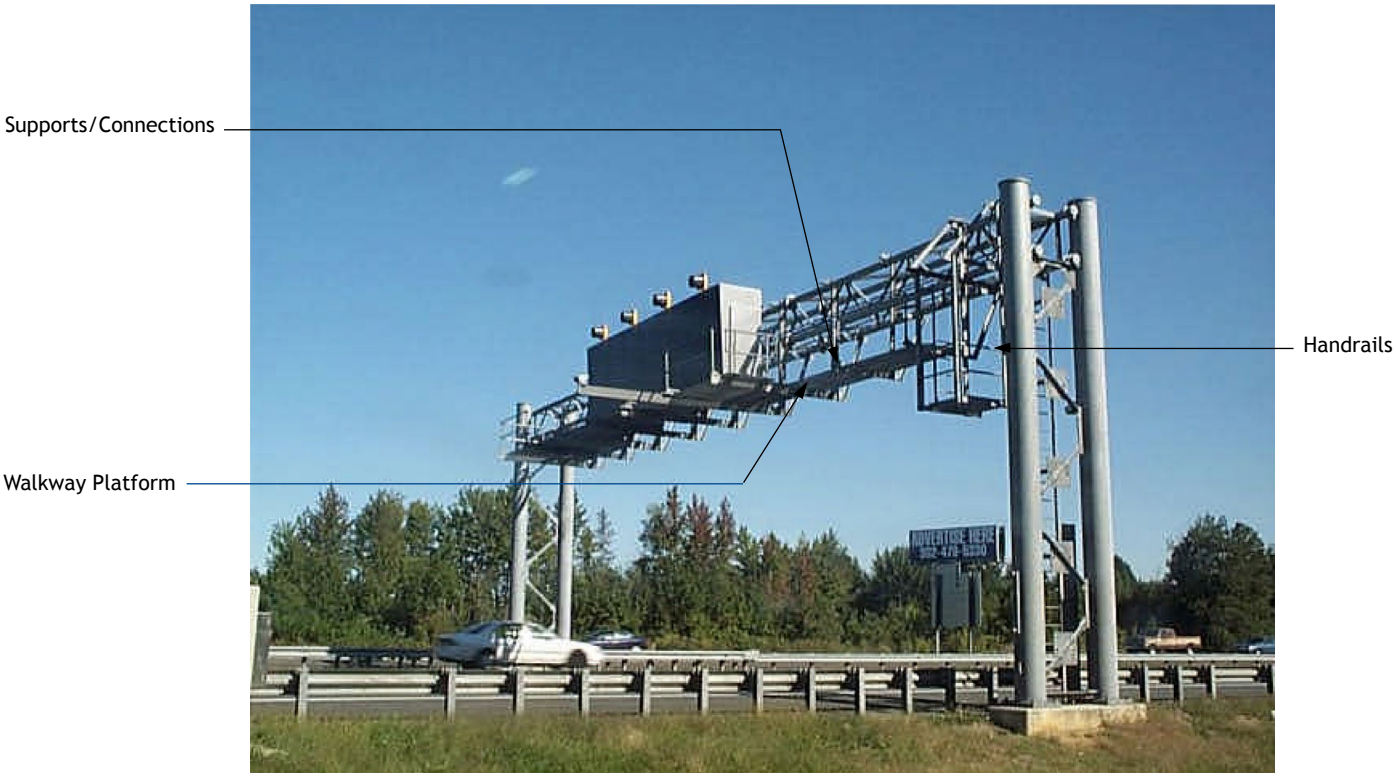
Coding: See **Condition Rating Codes** section of this manual.

Access Ladder

Description: This element involves the inspection of access ladders present on the structure. This also includes ladder rungs that may be attached directly to the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.



Coding: See **Condition Rating Codes** section of this manual.

Supports/Connections

Description: This element involves the inspection of the supports for the maintenance walkway and their connections to the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Handrails

Description: This element involves the inspection of the safety handrails attached to the walkway platform and safety railing around access ladders, including connections.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Safety Chains

Description: This element involves the inspection of safety chains present on the walkway platform and access ladders.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Blank Field

Description: A blank field is provided for the user to enter another element for the Maintenance Walkway/Access system.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

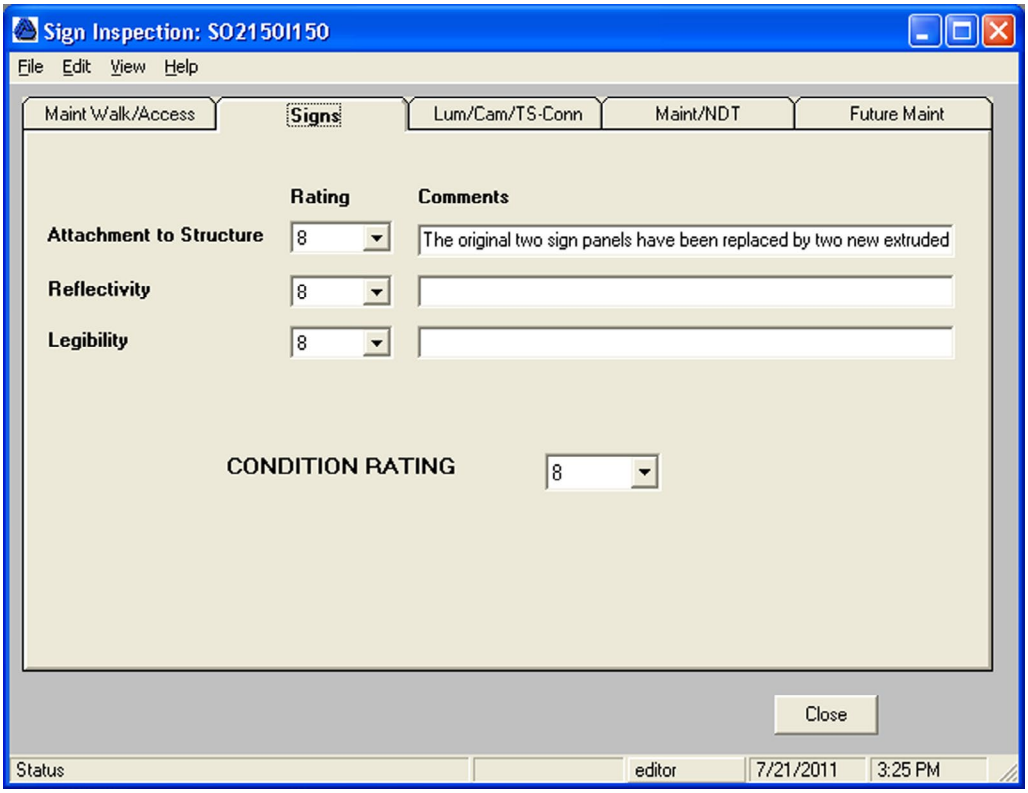
Description: This numerical condition rating should characterize the general condition of the Maintenance Walkway/Access system. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the Maintenance Walkway/Access system.

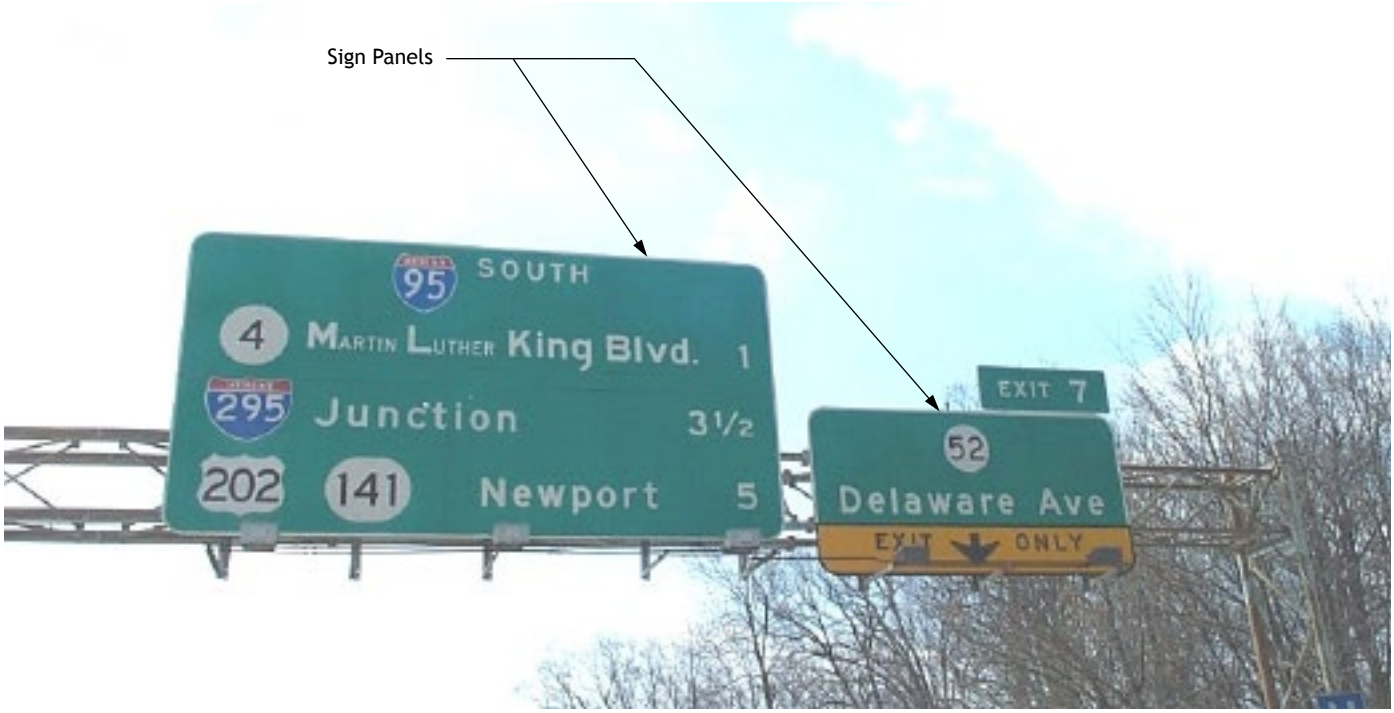
However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the load carrying capacity or serviceability of the element, then the element can be considered a "weak link", and the rating of the Maintenance Walkway/Access system should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Maintenance Walkway/Access system. If a Maintenance Walkway/Access system is not present on the structure, all of the elements and the condition rating should be coded "N".

Coding: See **Condition Rating Codes** section of this manual.

SIGN INSPECTION - SIGNS





Attachment to Structure

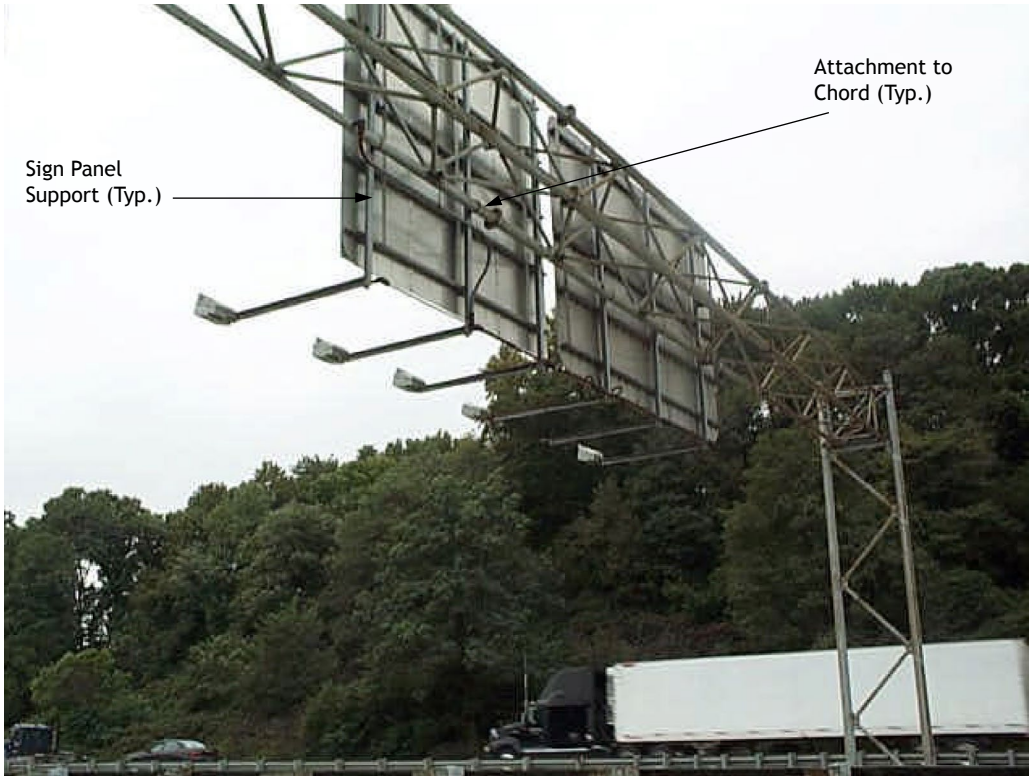
Description: This element involves the inspection of the sign panel(s) and variable message sign (VMS) board(s) attachment to their immediate supports and to the structure itself.

If no sign panels or VMS boards are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.



Reflectivity

Description: This element involves the condition inspection of the sign panel(s) reflective background and foreground.

If no sign panels are present, the condition rating should be coded "N".

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Legibility

Description: This element involves the condition inspection of the lettering and numbering present on the sign panel(s).

If no sign panels are present, the condition rating should be coded "N".

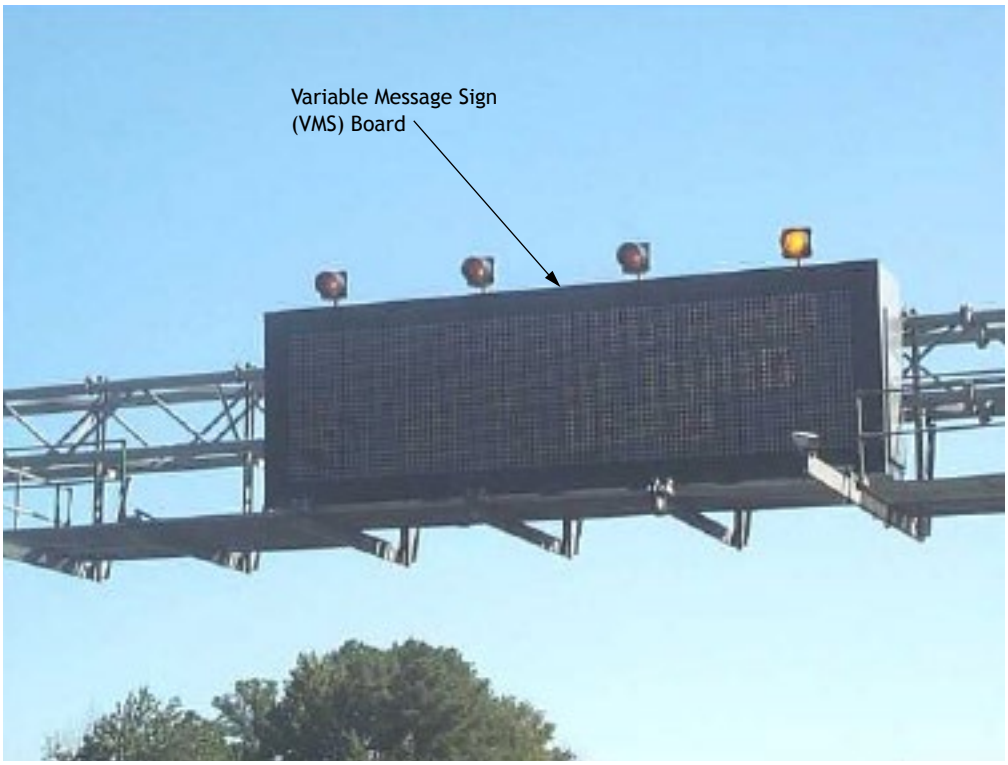
From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

Description: This numerical condition rating should characterize the general condition of the Sign Panels, VMS Boards and their connections. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

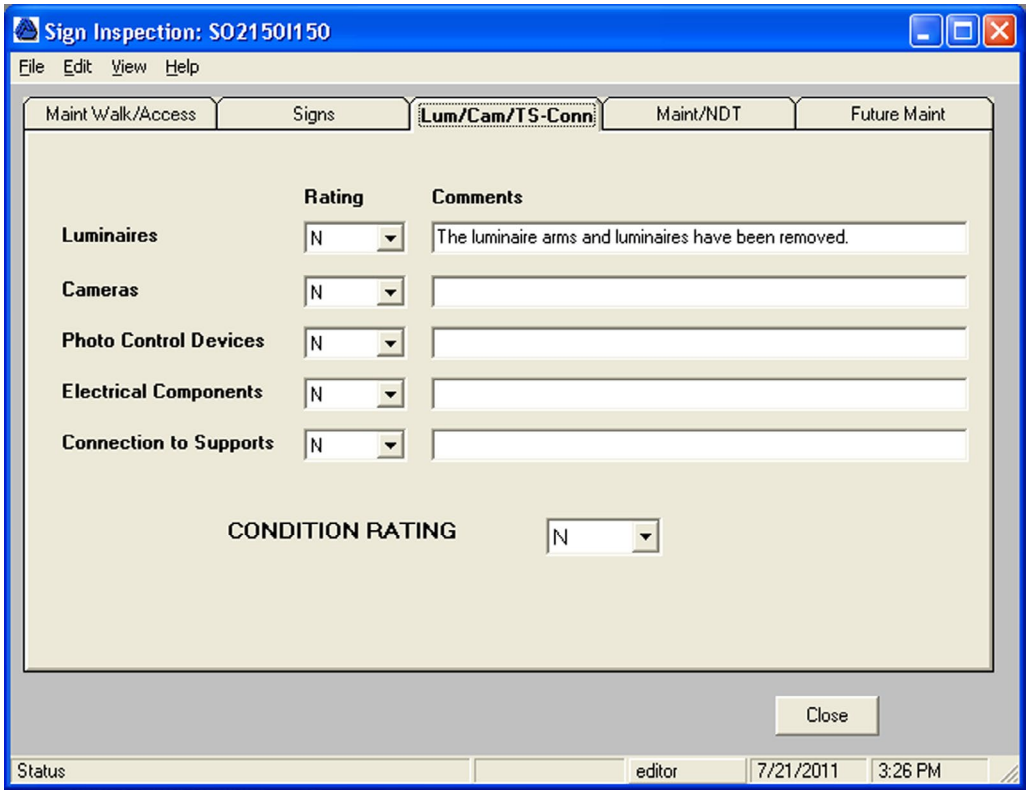


However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the serviceability of the element, then the element can be considered a "weak link", and the rating of the Sign Panels, VMS Boards and their connections should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Sign Panels, VMS Boards and their connections. If elements of the Signs are not present on the structure, the elements should be coded "N".

Coding: See **Condition Rating Codes** section of this manual.

SIGN INSPECTION - LUM/CAM/TS-CONN



Luminaires

Description: This element involves the inspection of the lighting present on the structure for the sign panel(s). This element is not applicable for highway lighting.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Cameras

Description: This element involves the inspection of the camera mounted on the structure or a mast arm.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Photo Control Devices

Description: This element involves the inspection of photo control devices present on the structure.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Electrical Components

Description: This element involves the inspection of visible electrical components associated with luminaires, cameras and photo control devices. This includes conduits, connections to devices, etc.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

Connection to Supports

Description: This element involves the inspection of the connections of the luminaires, cameras and photo control devices to their respective supports.

From the pull down menu, select the **Rating** for the element.

The **Comments** field allows the user to record field notes and deficiencies found during the inspection.

Coding: See **Condition Rating Codes** section of this manual.

CONDITION RATING

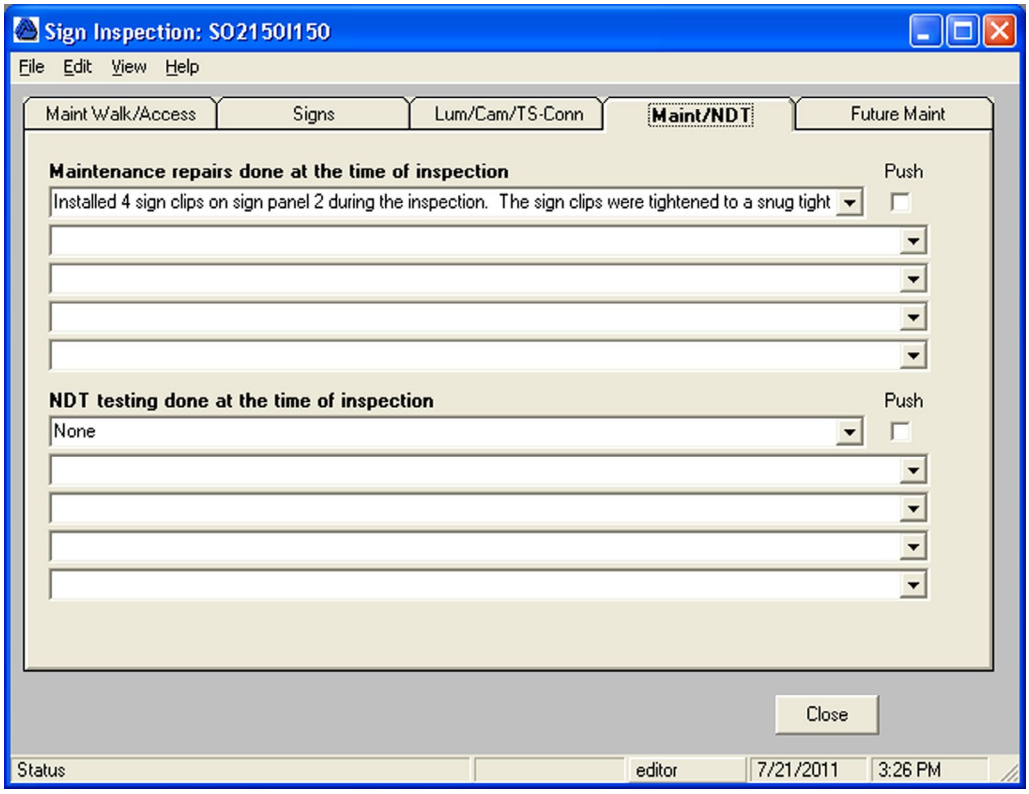
Description: This numerical condition rating should characterize the general condition of the Luminaire/Camera/Traffic Signal. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of the deterioration or disrepair and the extent to which it affects the overall performance of the members.

However, in some cases, a deficiency will occur on a single element or in a single location. If that one deficiency reduces the serviceability of the element, then the element can be considered a "weak link", and the rating of the Luminaire/Camera/Traffic Signal should be reduced accordingly.

From the pull down menu, select the **Rating** for the overall condition of the Luminaire/Camera/Traffic Signal. If elements of the Luminaire/Camera/Traffic Signal are not present on the structure, the elements should be coded "N".

Coding: See **Condition Rating Codes** section of this manual.

SIGN INSPECTION - MAINT/NDT



Maintenance repairs done at the time of inspection

Description: Enter or select from the pull down menus, up to five minor maintenance repairs that were performed on the elements of the Maint Walk/Access, Signs and Lum/Cam/TS-Conn during the inspection.

If no maintenance repairs were performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward a critical maintenance repair to the **Maint Comment** section of the **General Inspection - General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

NDT testing done at the time of inspection

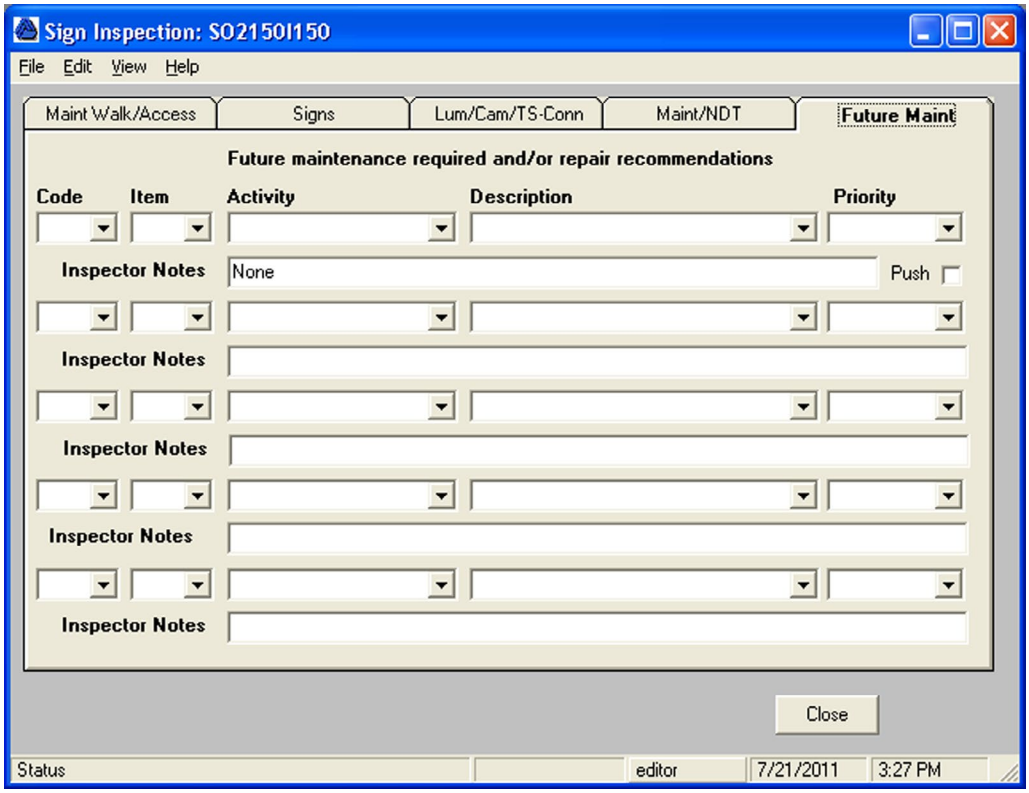
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the elements of the Maint Walk/Access, Signs and Lum/Cam/TS-Conn during the inspection.

If no NDT testing was performed, "None" should be entered in the first field record.

The **Push** button adjacent to the first field record is used to push or forward one non-destructive test to the **NDT Comment** section of the **General Inspection - General** page. To activate the "push", click on the box and a checkmark will appear.

Coding: None

SIGN INSPECTION - FUTURE MAINT



Future maintenance required and/or repair recommendations Code/Item/Activity/Description

Description: From the pull down menus, select up to five future maintenance or repair recommendations for the elements of the Maint Walk/Access, Signs and Lum/Cam/TS-Conn.

If no maintenance repairs were recommended, "None" should be entered in the **Inspector Notes** field record.

Coding: See **Maintenance Codes** section of this manual.

Priority

Description: From the pull down menu, select the priority code that describes the urgency of the maintenance or repair required.

Coding: C = Critical Priority (Immediately)
A condition that could cause a structure failure has been identified. Immediate attention is required.

H = High Priority (within 6 months)
Rehabilitation and/or replacement of the identified element(s) are required within 6 months after the inspection is completed. A condition that left unattended could cause adverse impacts to the structure and/or the traveling public.

M = Medium Priority (within 24 months)
Element(s) of the structure have been identified which require repair within 24 months after the inspection is completed. These conditions could affect the serviceability of the structure.

L = Low Priority (within 60 months)
Minor deficiencies exist and preventative maintenance is required within 60 months after the inspection is completed. The maintenance could extend the life of the structure's elements and the structure itself.

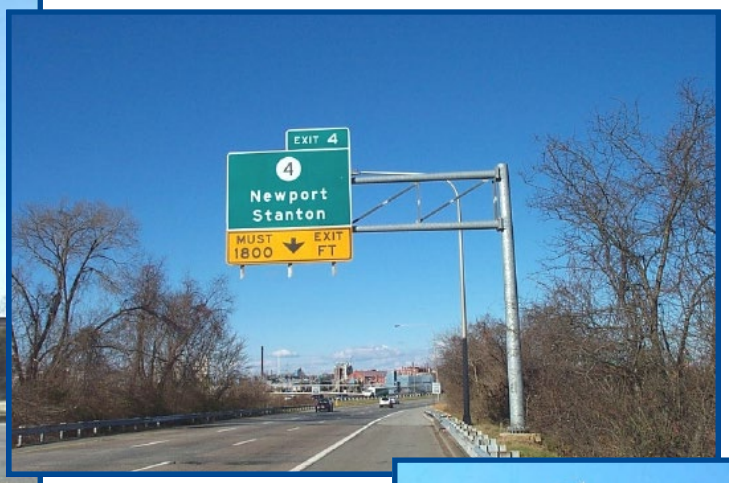
Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

Inspector Notes

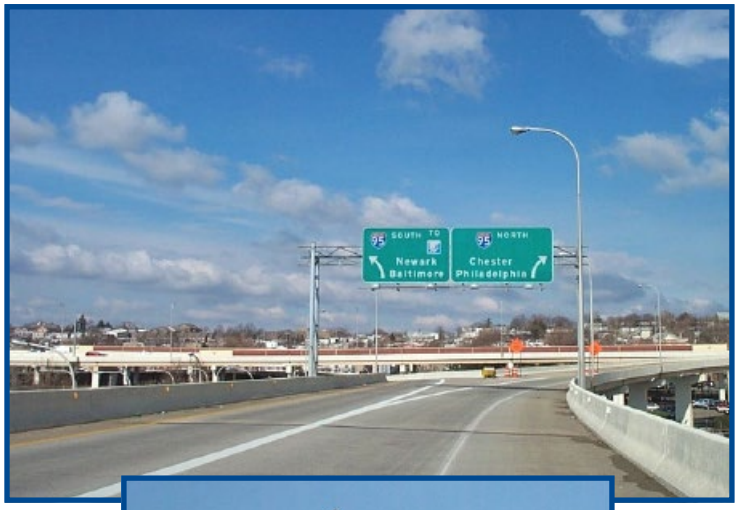
Description: A field is provided for the inspector's comments regarding the future maintenance or repair recommendations.

Coding: None

The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection - General** page. To activate the "push", click on the box and a checkmark will appear.

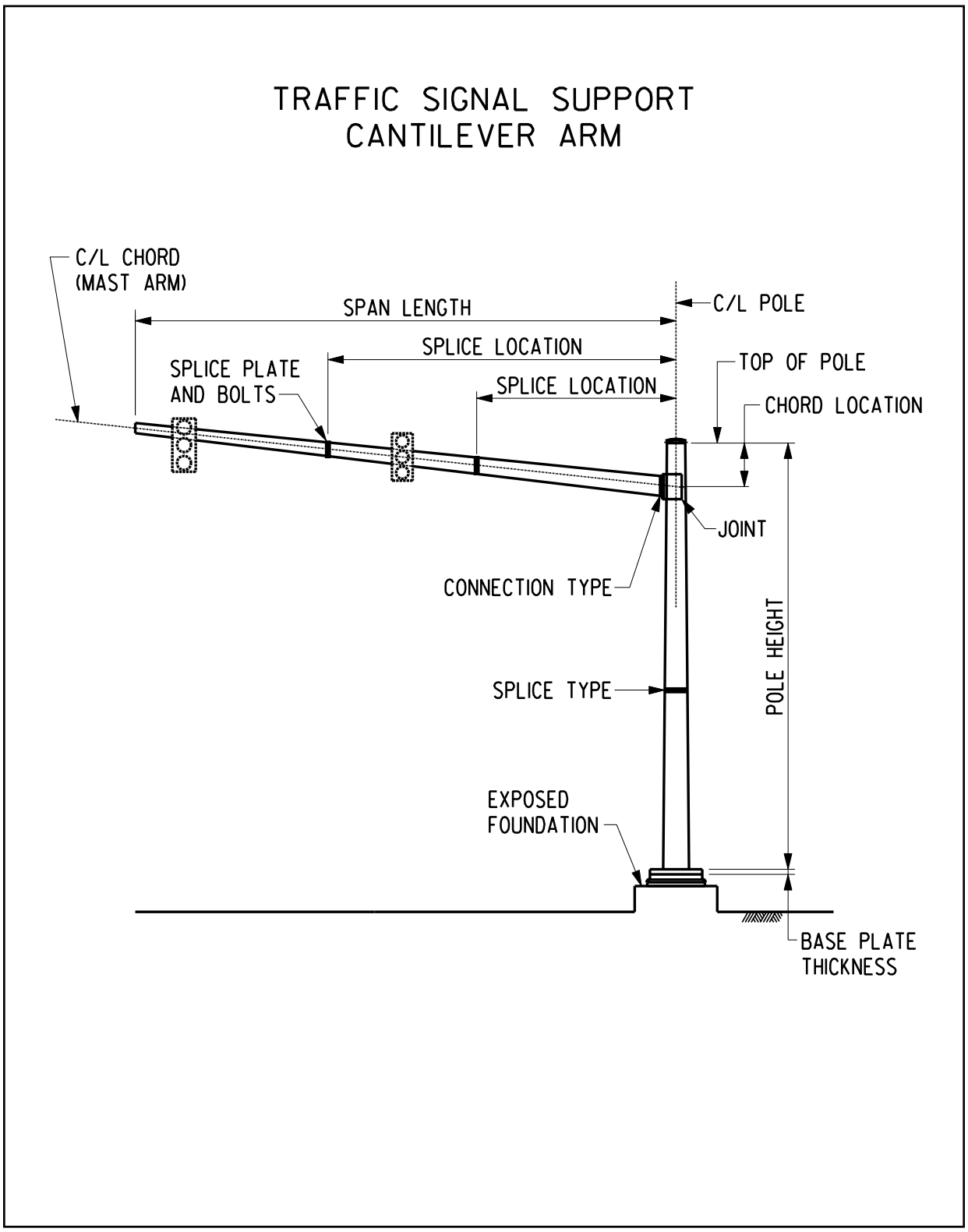

EXIT 4
4
Newport
Stanton
MUST
1800
EXIT
FT

E-ZPass
DEDICATED
LANE
USE FLASHING
NO CASH

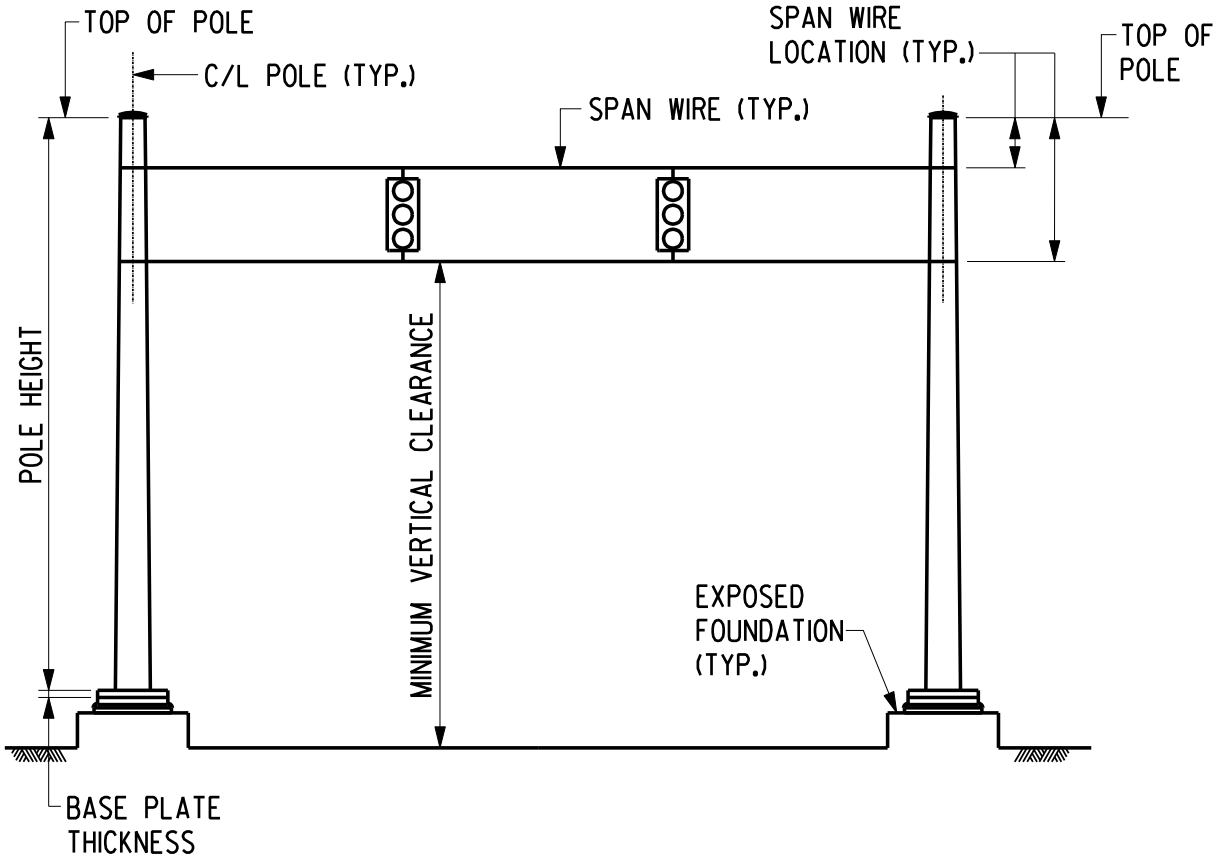

95 SOUTH TO
Newark
Baltimore
95 NORTH
Chester
Philadelphia

95 SOUTH
Del. Mem. Bridge

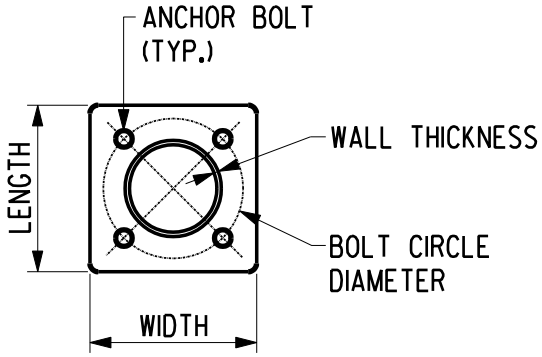
APPENDIX REFERENCE GUIDE FOR FIELD INSPECTION MEASUREMENTS



TRAFFIC SIGNAL SUPPORT
STRAIN POLE

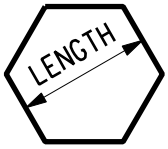


TRAFFIC SIGNAL SUPPORT
STRAIN POLE



ANCHOR BASE

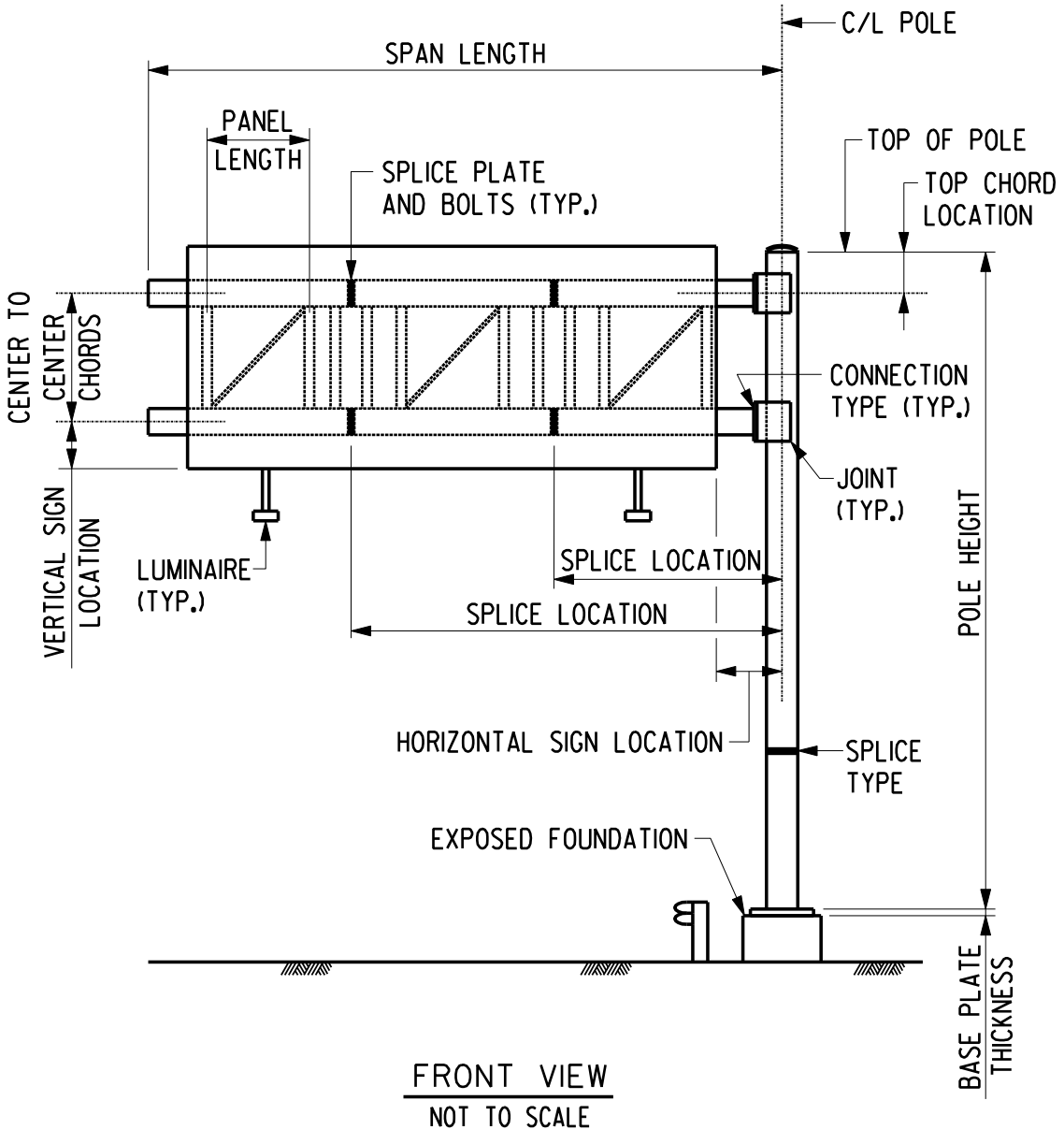
NOT TO SCALE



ELEMENT SECTION

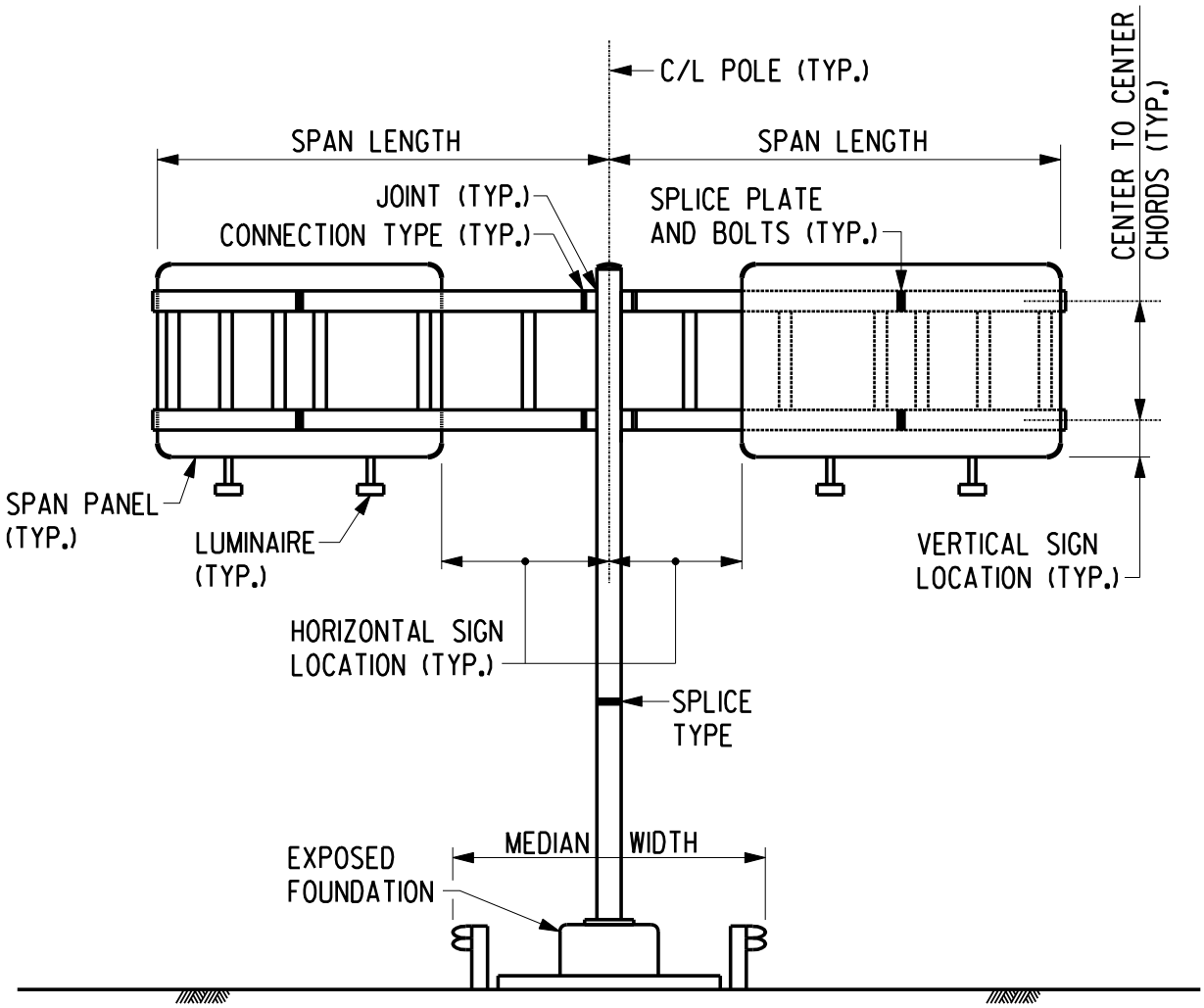
FOR ELEMENTS NOT RECTANGULAR
OR CIRCULAR IN SECTION

CANTILEVER SIGN STRUCTURE



FRONT VIEW
NOT TO SCALE

BUTTERFLY (DOUBLE CANTILEVER) SIGN STRUCTURE

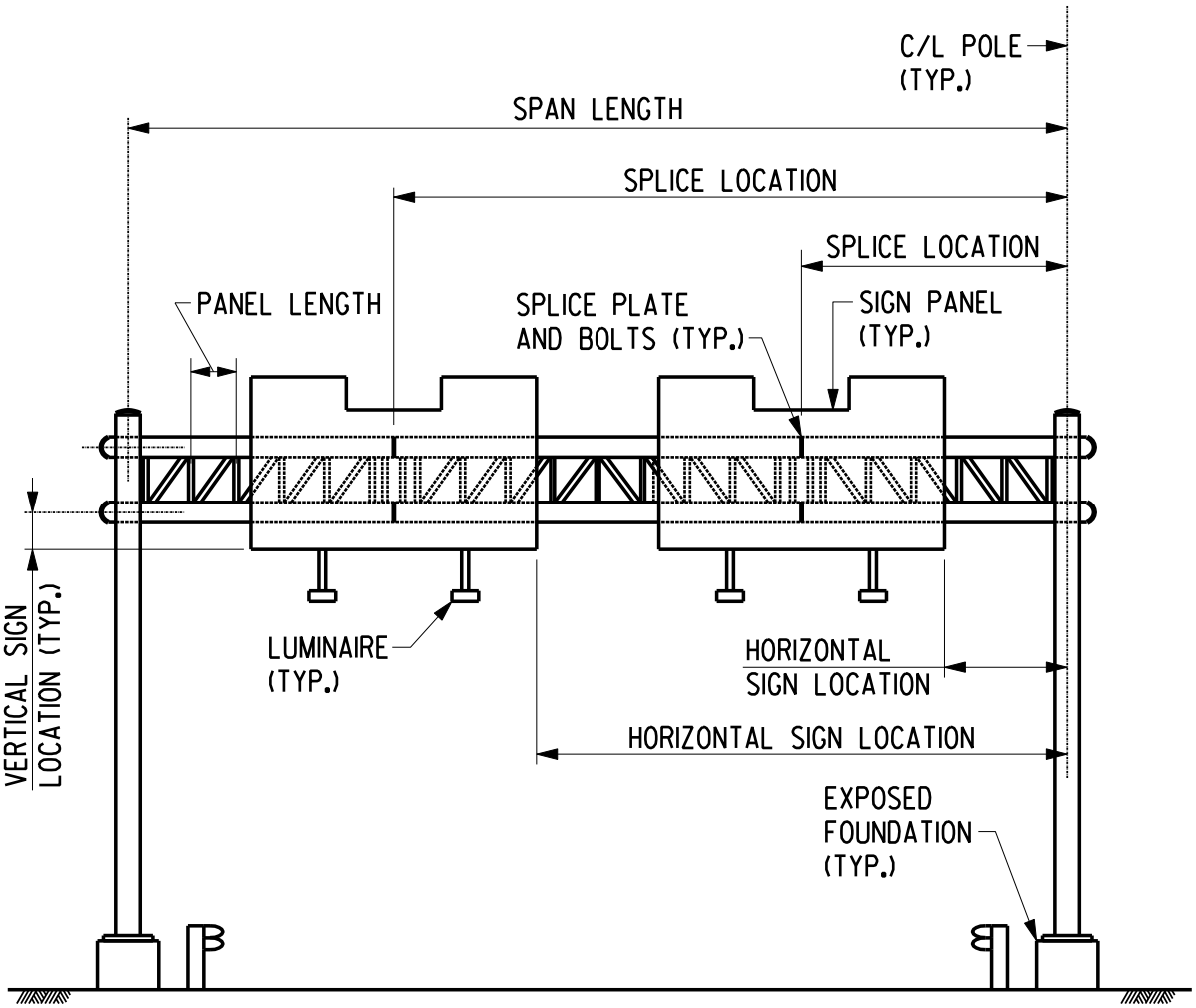


ELEVATION
NOT TO SCALE

NOTES:

1. MEASUREMENTS NOT SHOWN ARE SIMILAR TO ONES TO BE TAKEN FOR CANTILEVER SIGN STRUCTURE.

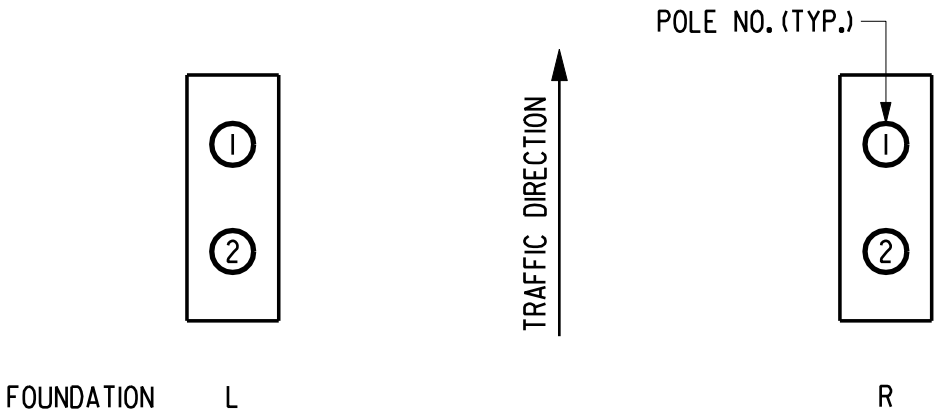
OVERHEAD SIGN STRUCTURE
(SPANNING ONE WAY TRAFFIC)



ELEVATION

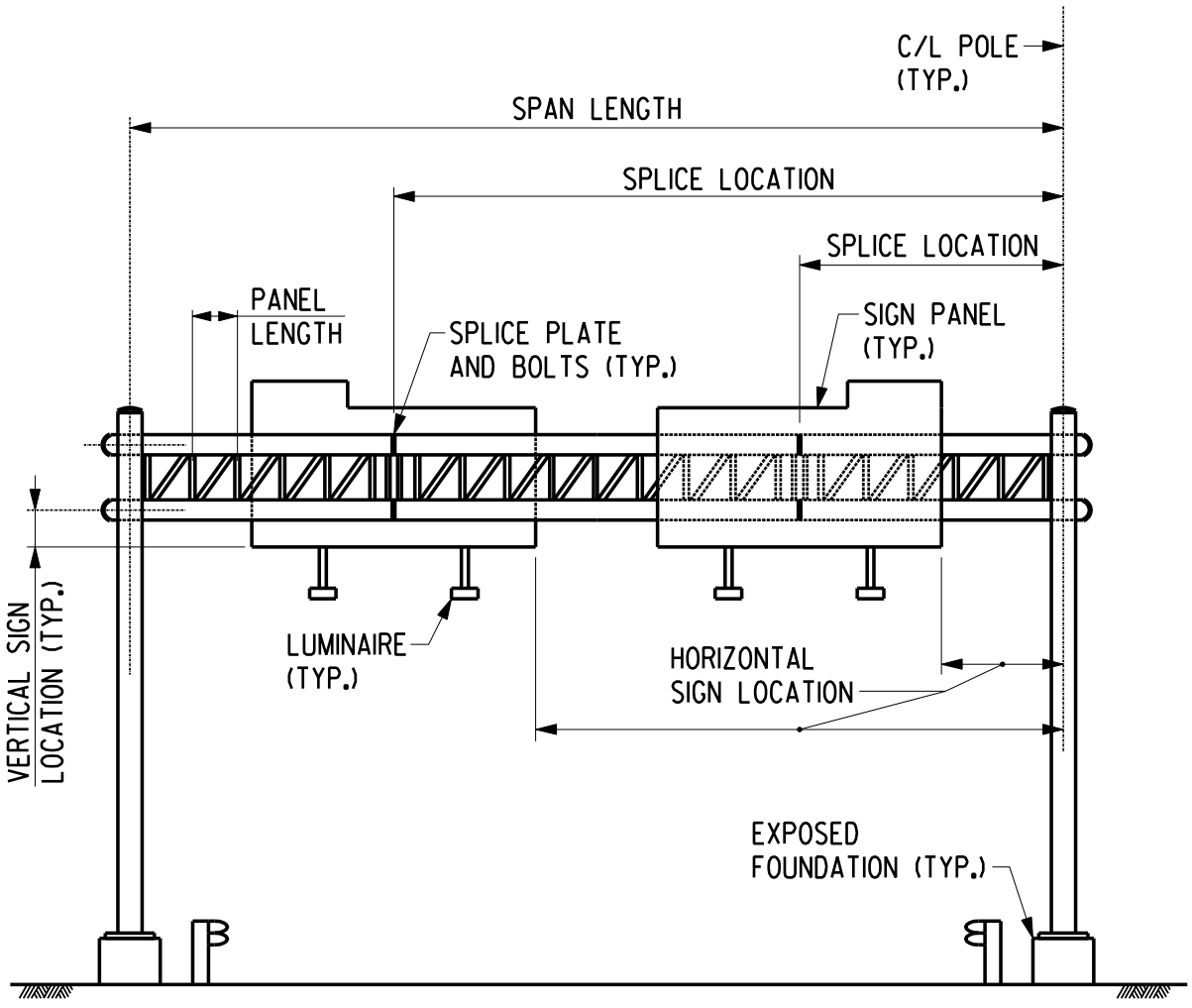
NOT TO SCALE

OVERHEAD SIGN STRUCTURE
(SPANNING ONE WAY TRAFFIC)



PLAN VIEW
NOT TO SCALE

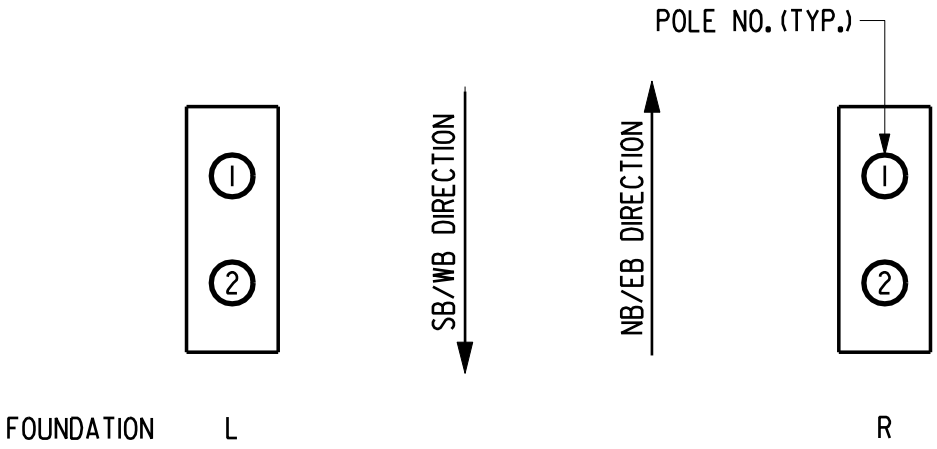
OVERHEAD SIGN STRUCTURE
(SPANNING TWO WAY TRAFFIC)



FOUNDATION: L R

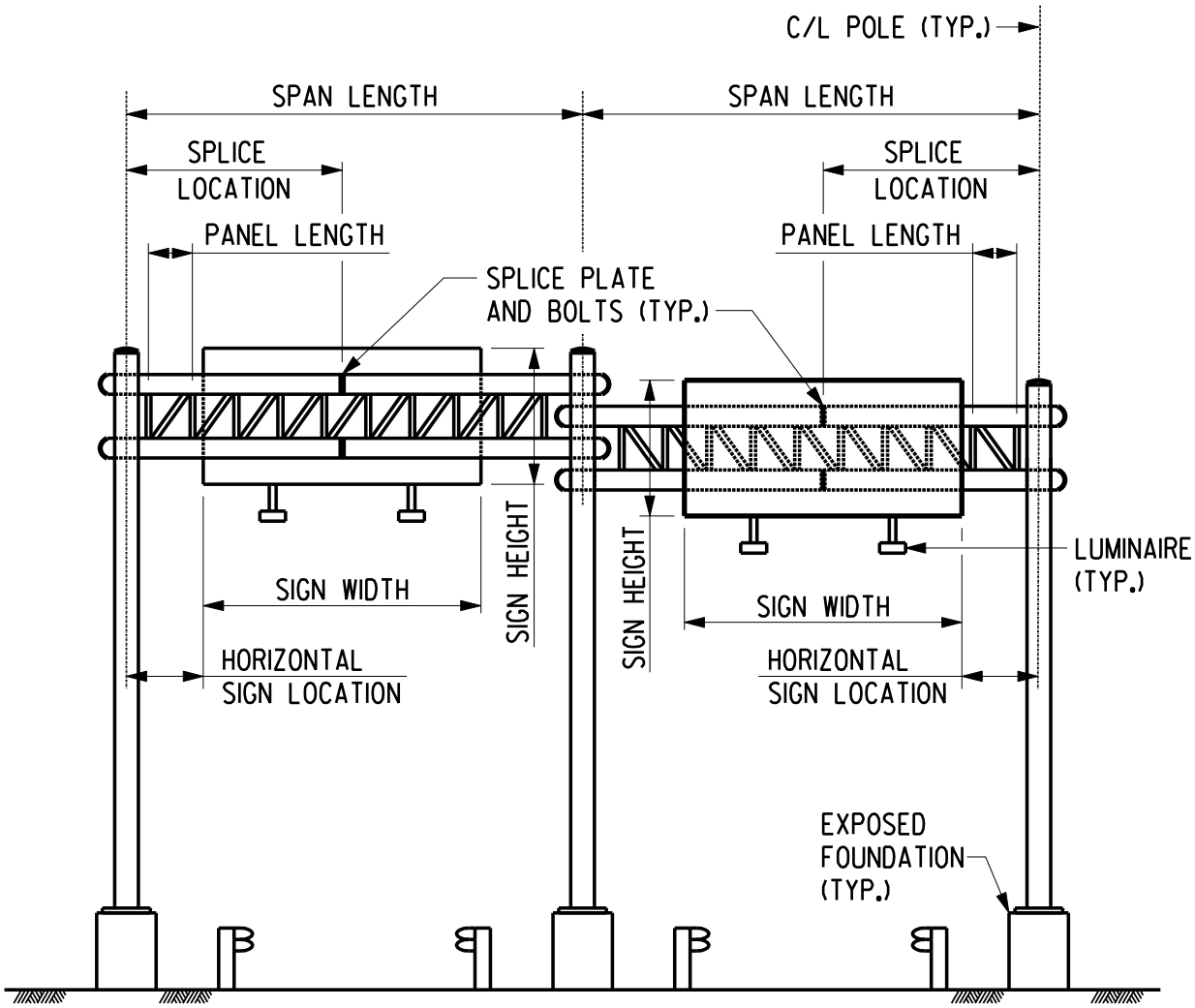
ELEVATION
NOT TO SCALE

OVERHEAD SIGN STRUCTURE
(SPANNING TWO WAY TRAFFIC)



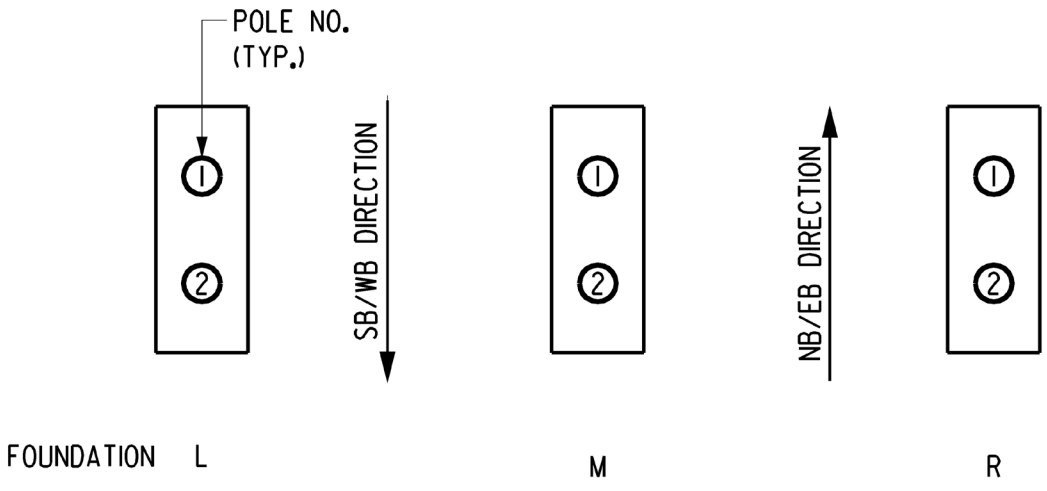
PLAN VIEW
NOT TO SCALE

OVERHEAD SIGN STRUCTURE
(SPANNING BOTH TRAFFIC DIRECTIONS)



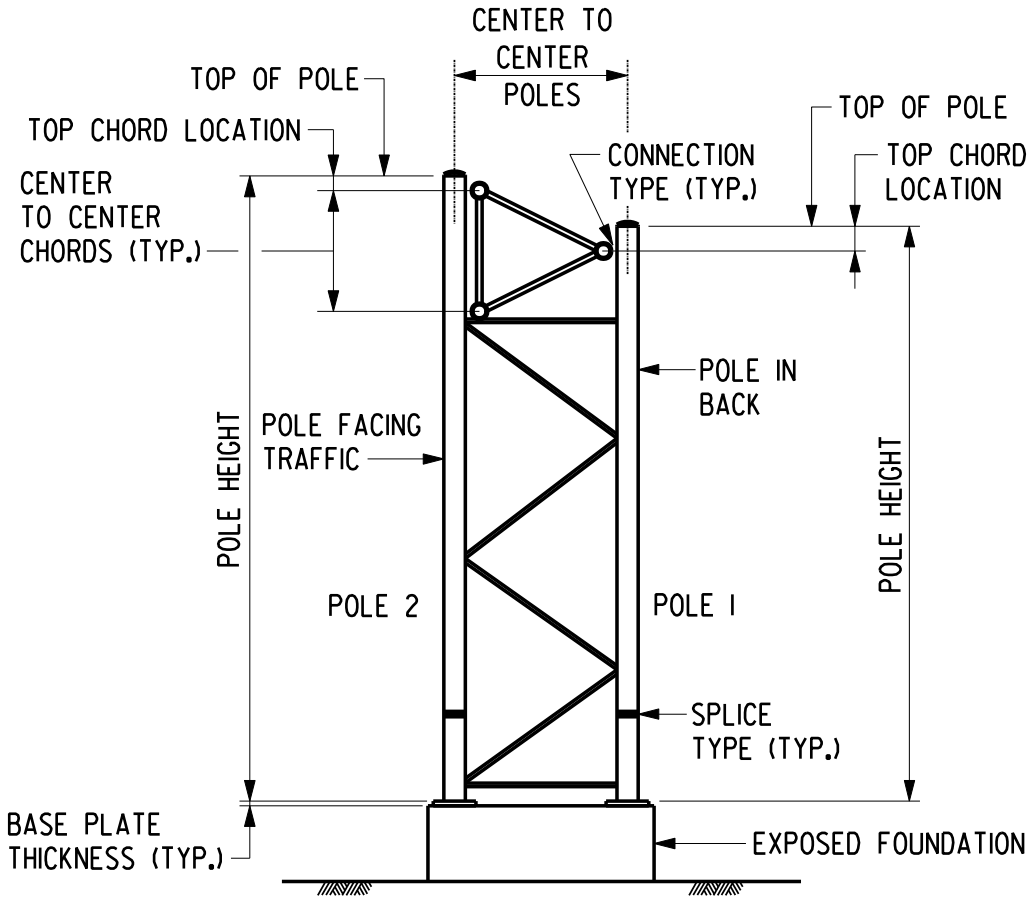
ELEVATION
NOT TO SCALE

OVERHEAD SIGN STRUCTURE
(SPANNING BOTH TRAFFIC DIRECTIONS)



PLAN VIEW
NOT TO SCALE

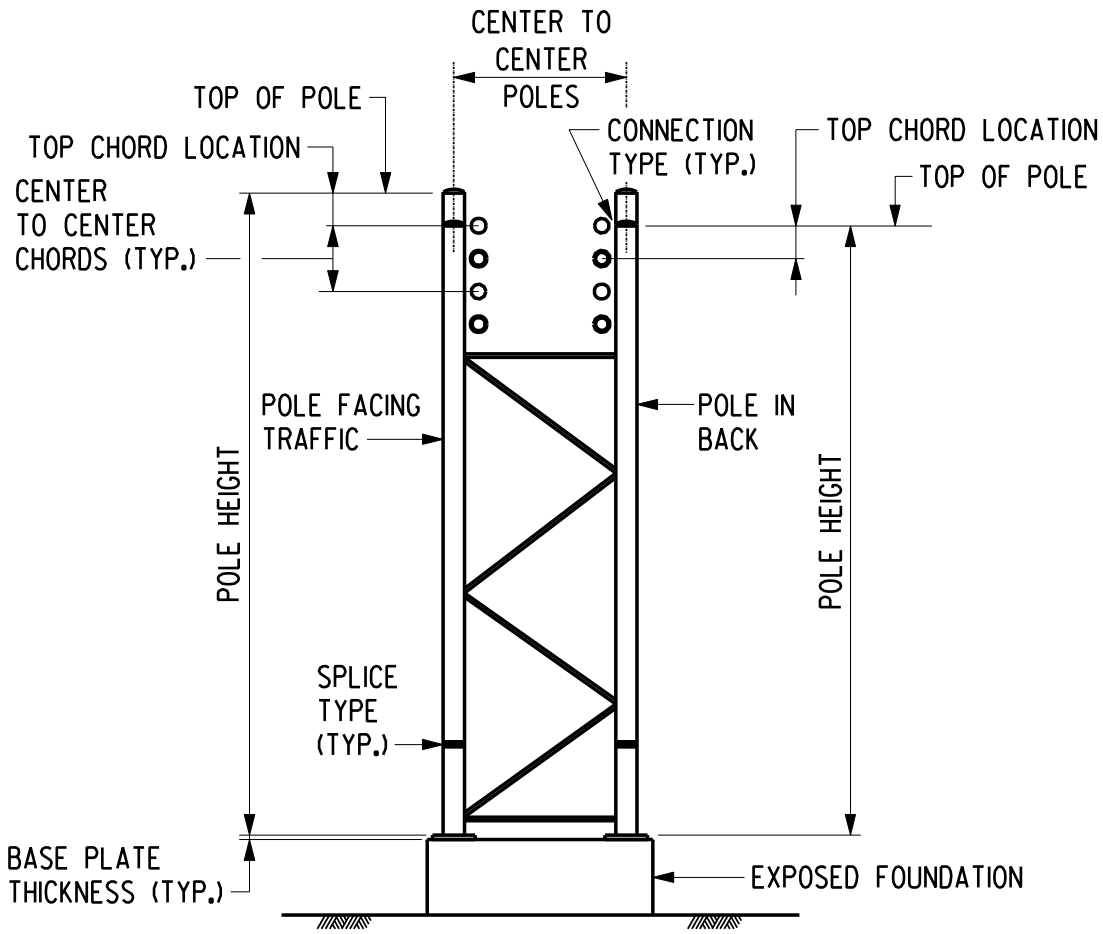
CANTILEVER/OVERHEAD SIGN STRUCTURE



SIDE VIEW
END POST FRAME

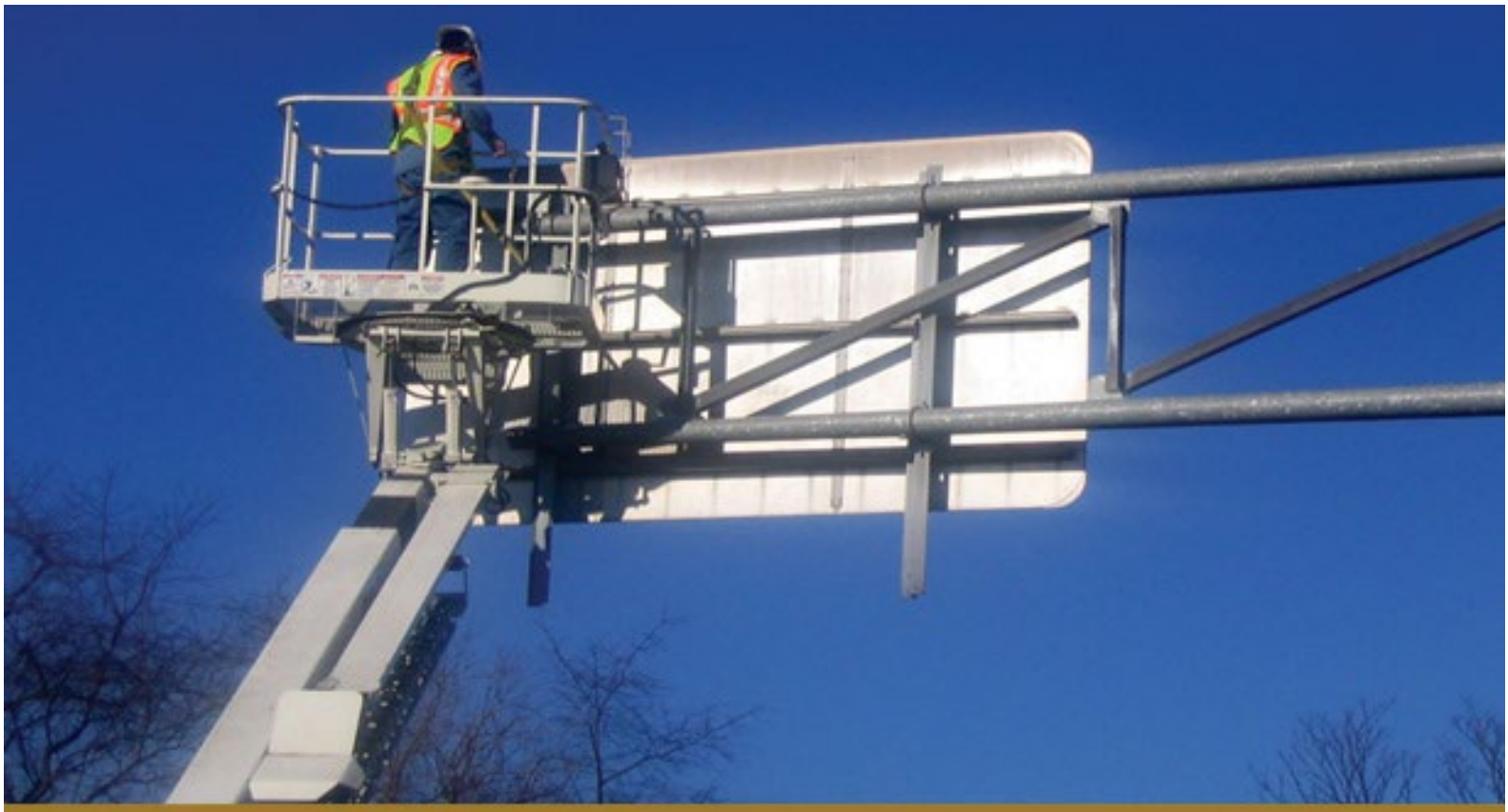
NOT TO SCALE

OVERHEAD SIGN STRUCTURE
(SPANNING BOTH TRAFFIC DIRECTIONS)



SIDE VIEW
MEDIAN POST FRAME

NOT TO SCALE



EXIT 93
Dover A F B
Main Gate
Visitors
40