



Delaware Department of Transportation



Sign Inspection Program Version 3.10.0 User Manual

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SIGN INSPECTION PROGRAM USER MANUAL

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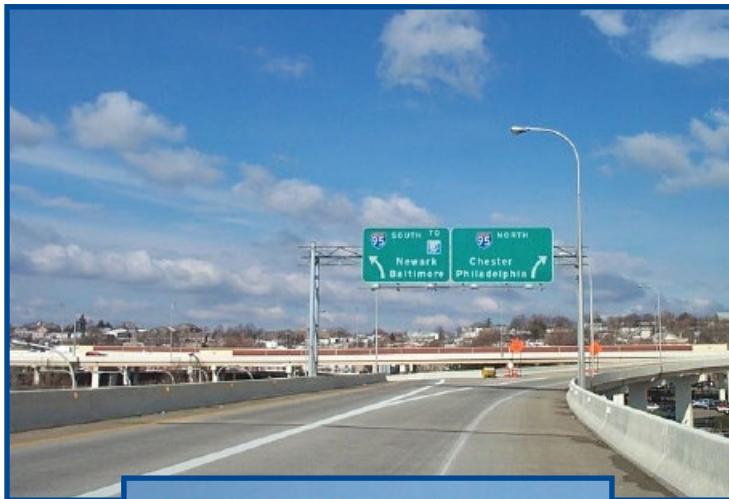
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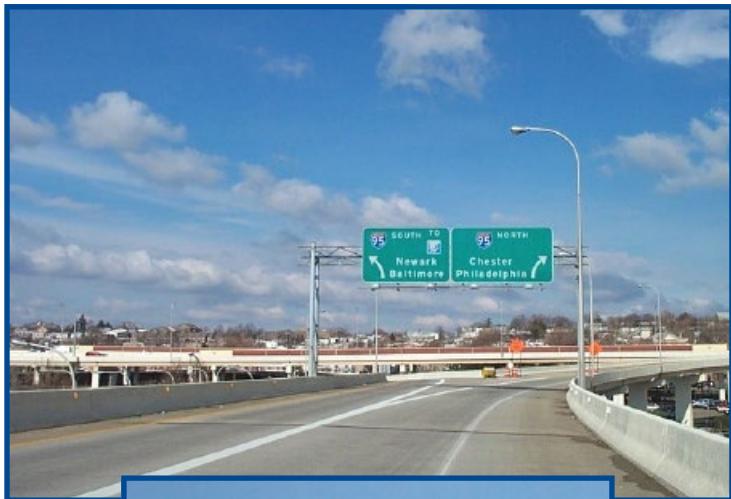
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SECTION I - INTRODUCTION



SIGN INSPECTION PROGRAM USER MANUAL

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.

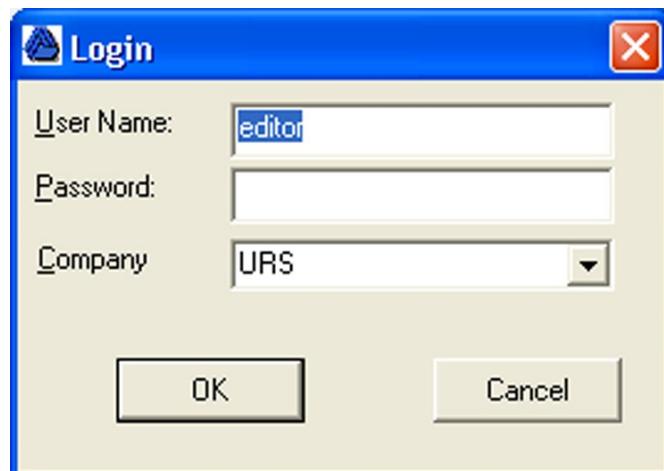
The database for the Sign Inspection Program consists of an Access database and a documents directory. The documents directory consists of one subdirectory for each sign structure, that holds photo, word, excel and/or PDF files that are associated with that structure. The database can hold multiple inspections 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.



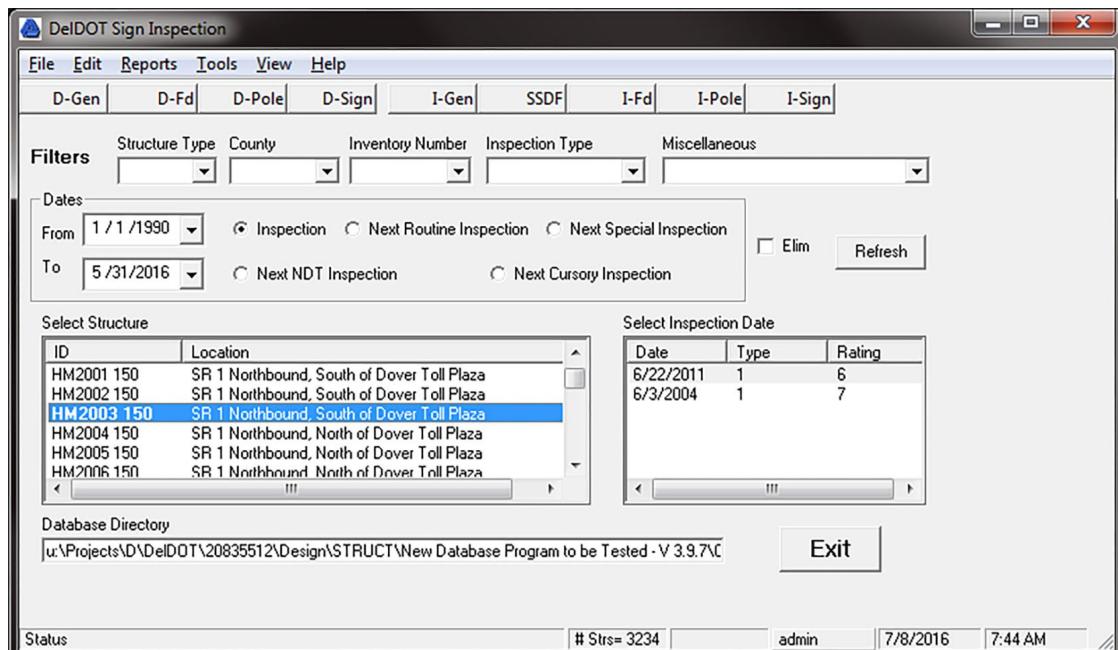
DELDOT SIGN INSPECTION DIALOG BOX

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:

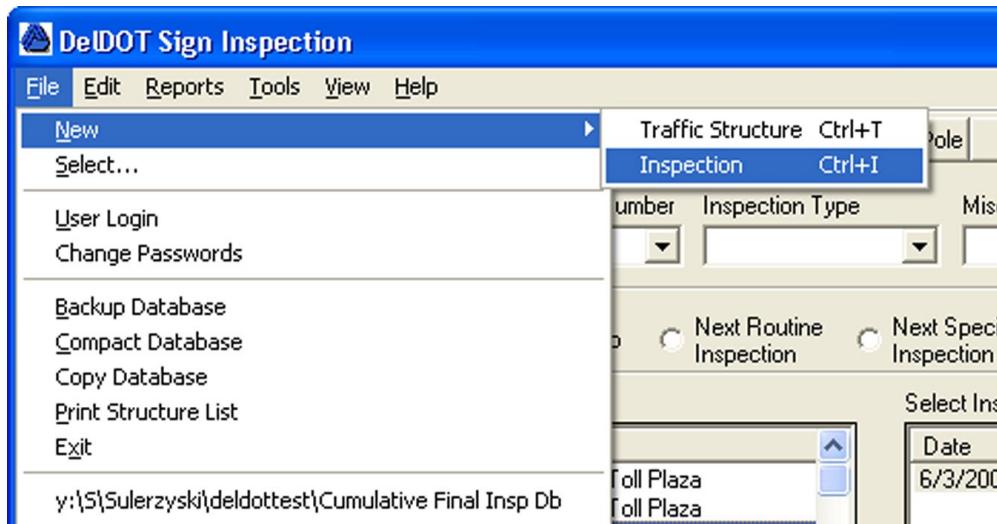
1. Displays information while the program is processing.
2. Displays the number of structures currently listed.
3. Displays the word “Locked” if the current structure has been locked from further editing. If the user has the proper privilege, clicking this section will change the structure from locked 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:



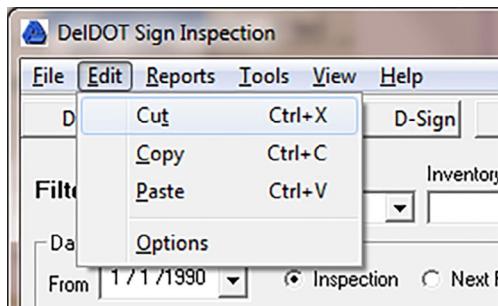
Description: The File pull-down menu:



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

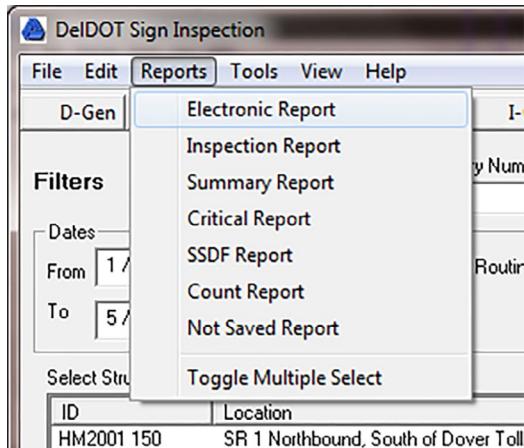
Description: Edit pull-down menu:



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

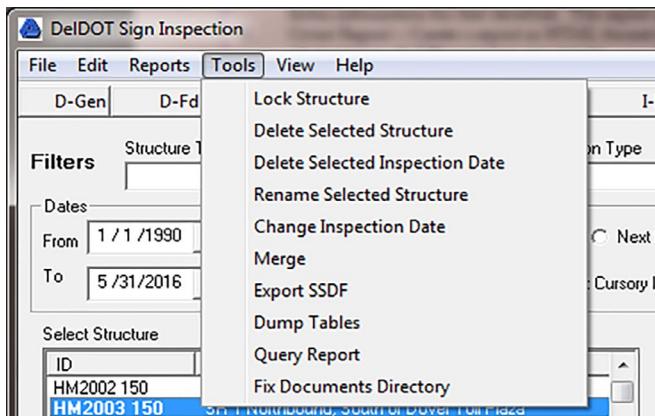
Description: Reports pull-down menu:



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:

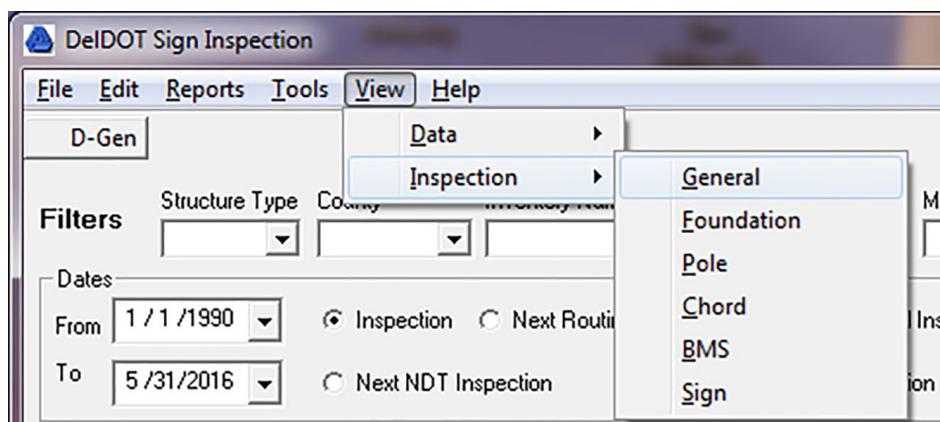
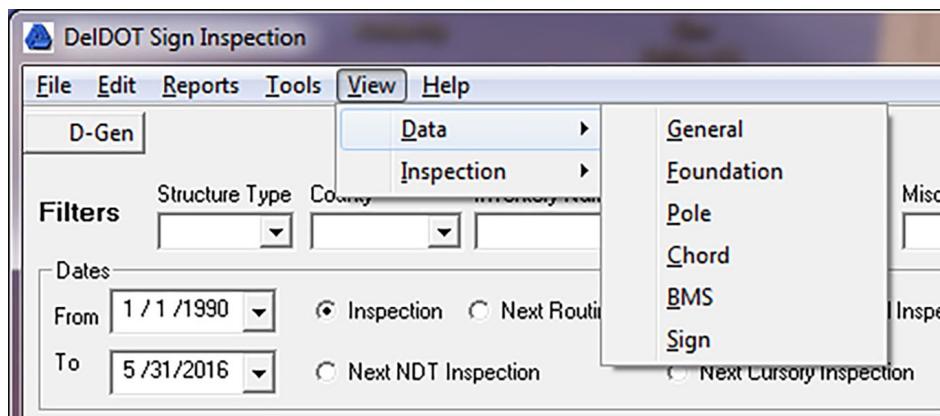


1. Lock/Unlock Structure – Toggle to lock or unlock the selected structure for editing.
2. Delete Selected Structure – Delete selected structure from the database.
3. Delete Selected Inspection Date – Delete selected inspection date for selected structure.
4. Rename Selected Structure – Rename selected 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.

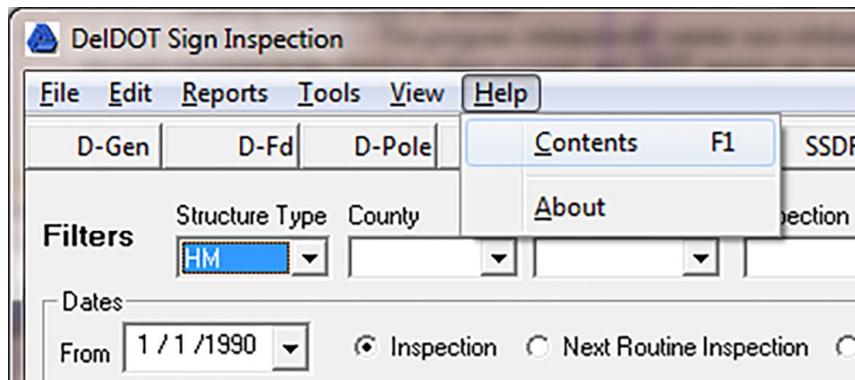
View

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

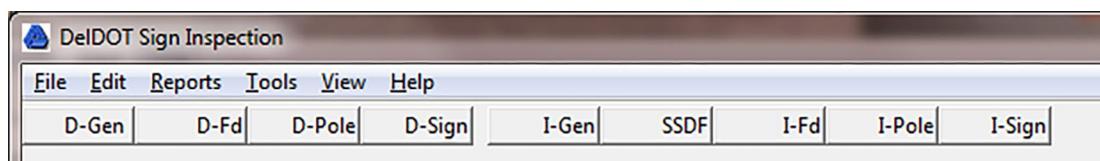
Description: Help pull-down menu:



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

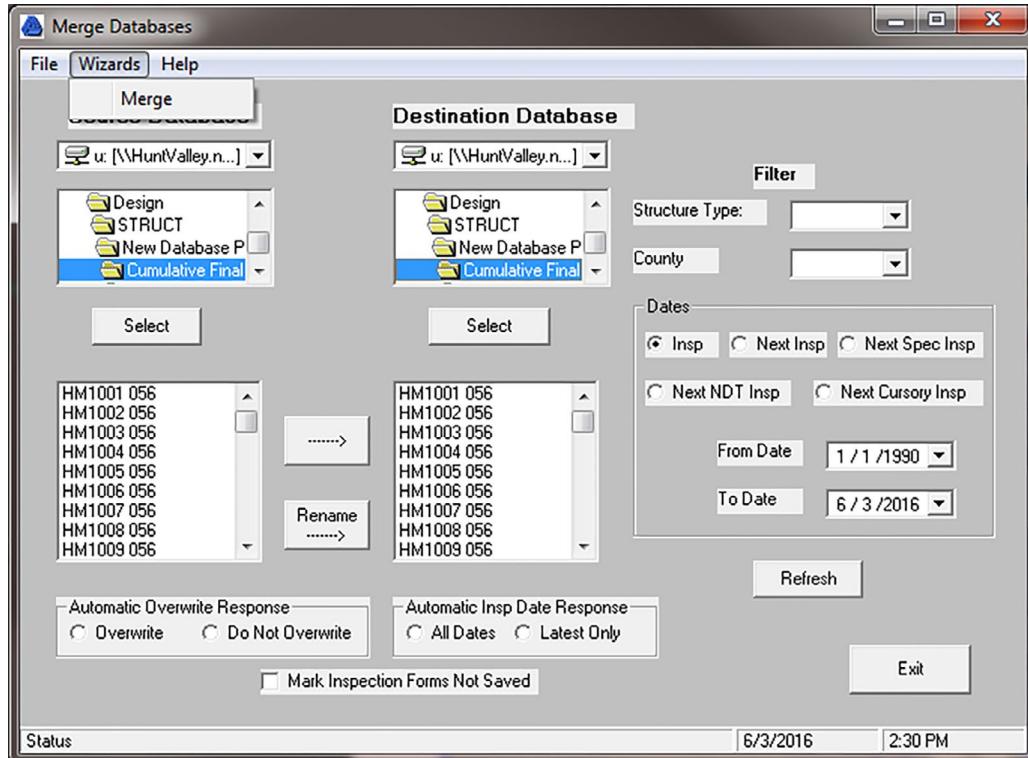
Button Bar

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

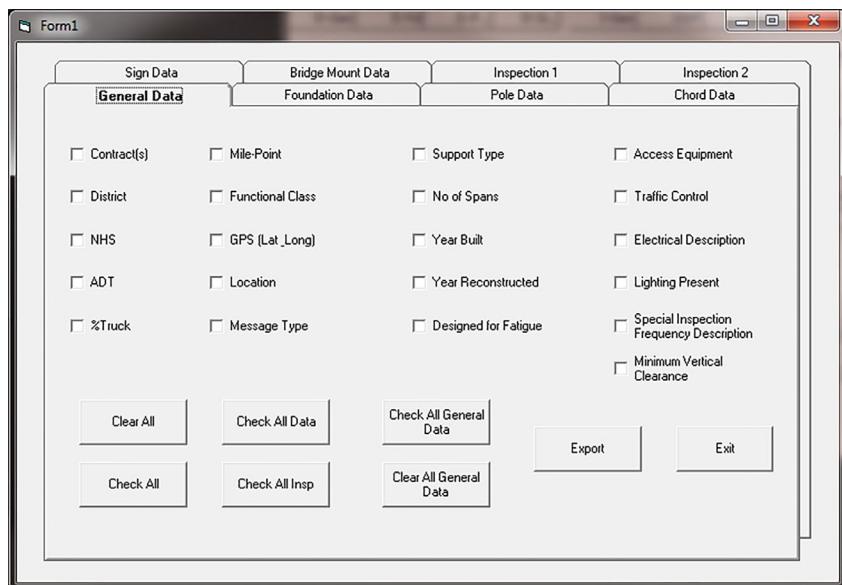
Description: Select All Dates if you wish the program to automatically copy data for all inspection dates. Select the Latest Date if you wish the program to automatically copy the data for only the latest inspection date. If neither option is selected, you will be prompted for each structure.

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.

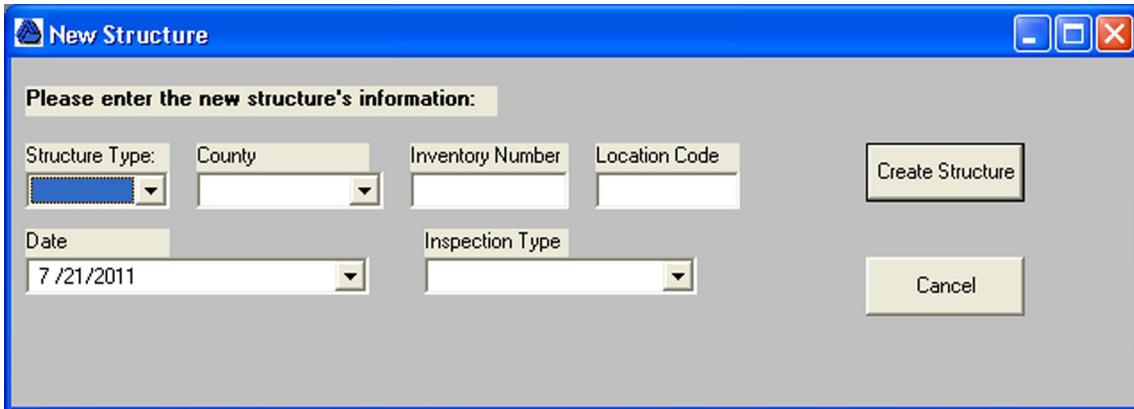
Query Report Dialog Box

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



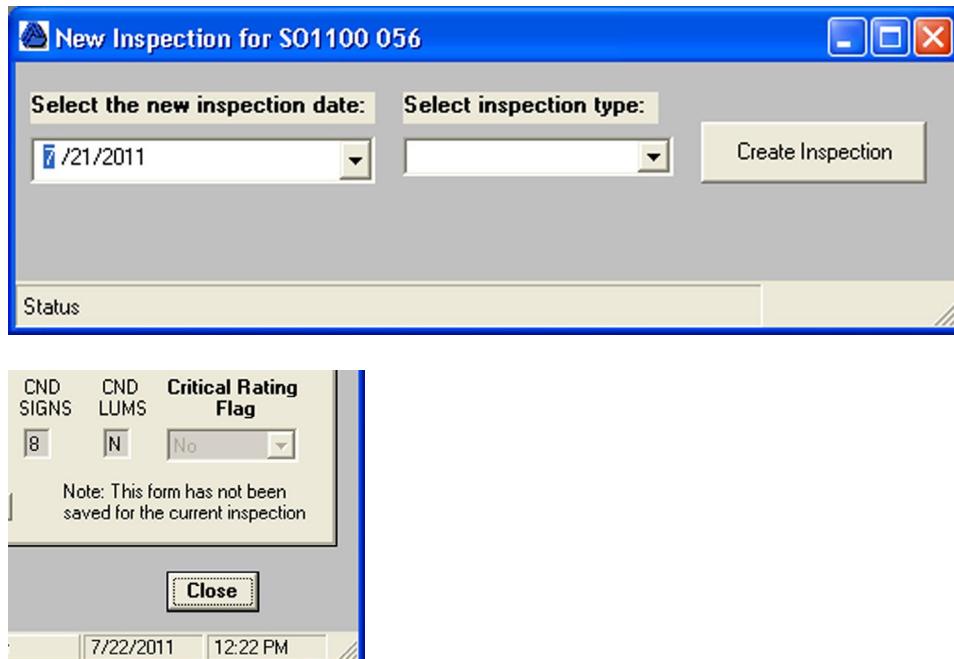
New Structure Dialog Box

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



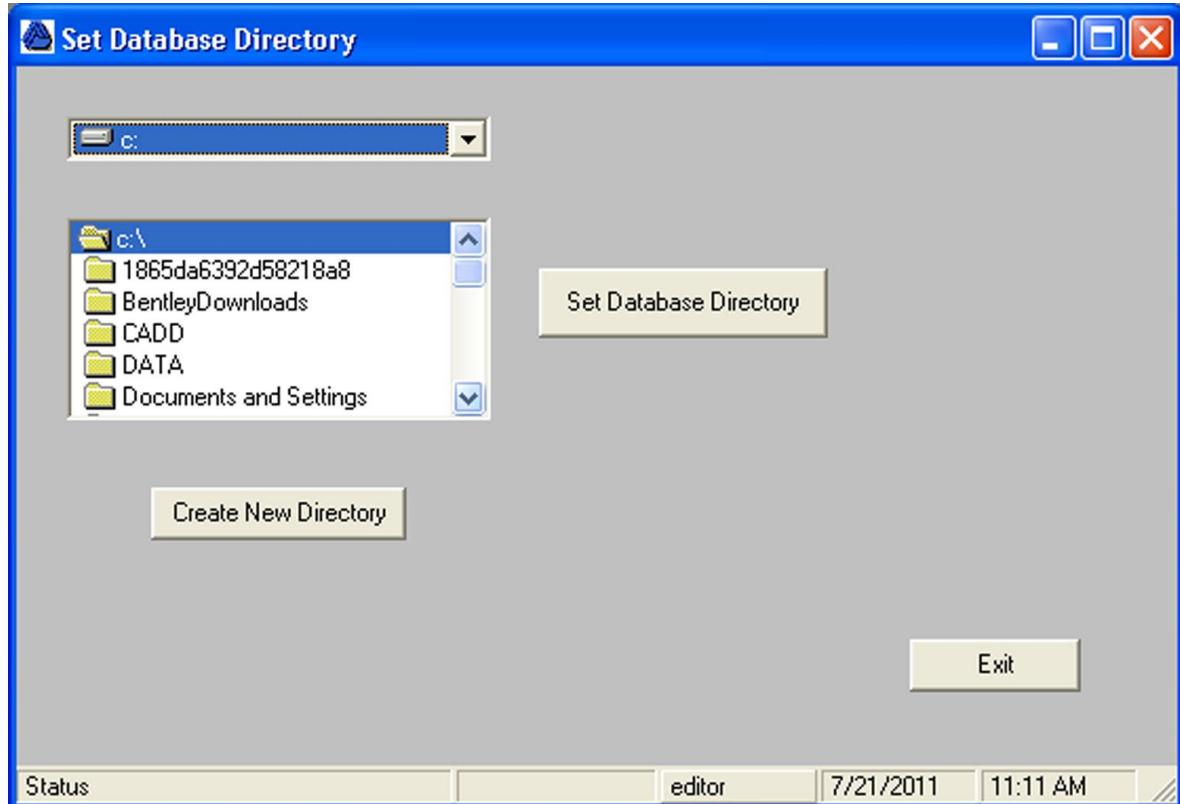
New Inspection Dialog Box

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**

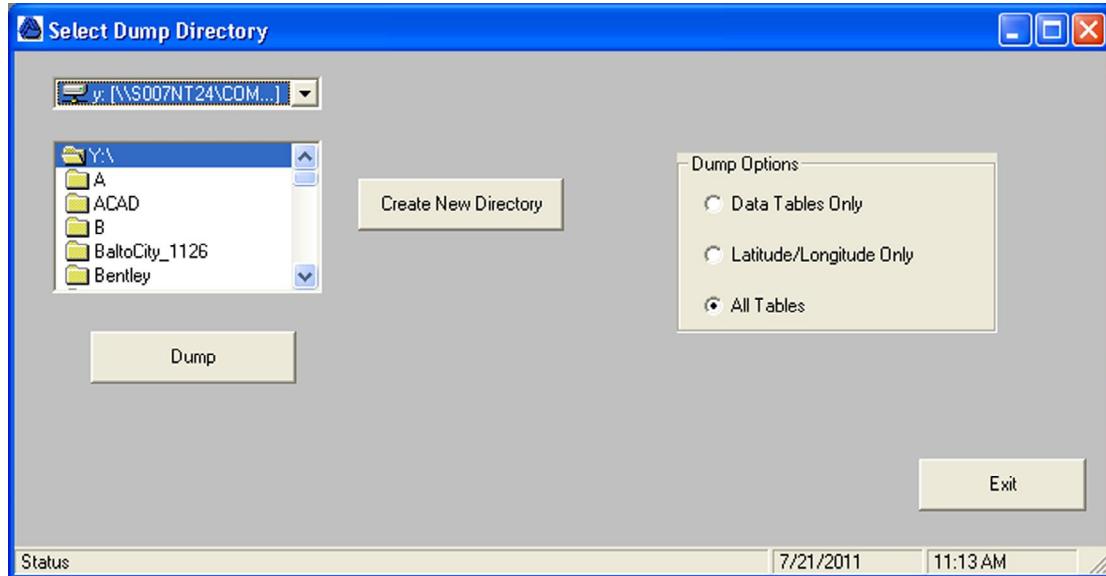
Description: Locate directory where the database exists and then click the Set Database Directory button. The Login dialog box will then be displayed. If the Documents subdirectory does not exist, the program will create one.

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.

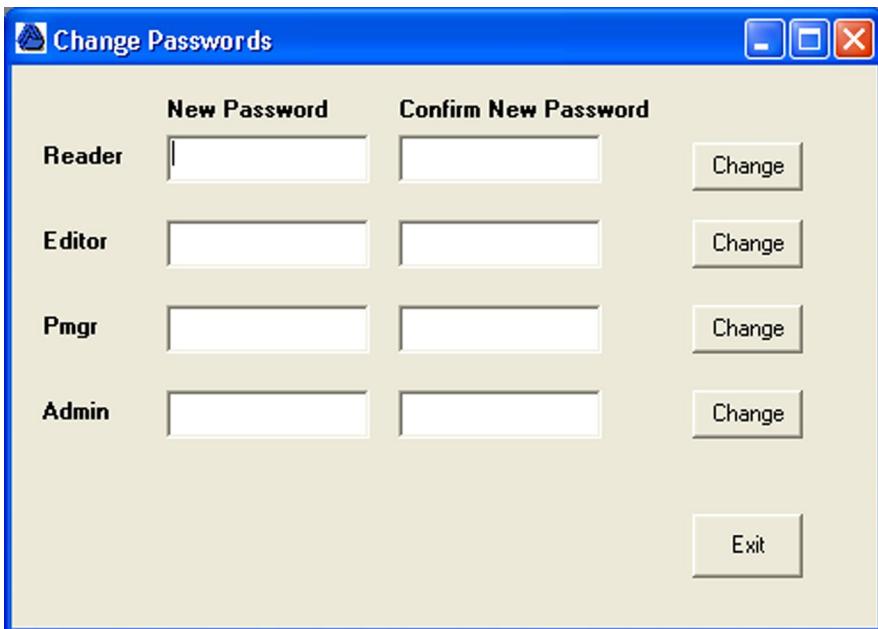
Dump Directory Dialog Box

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.



SECTION II - CREATING STRUCTURE ID NUMBERS



SIGN INSPECTION PROGRAM USER MANUAL

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

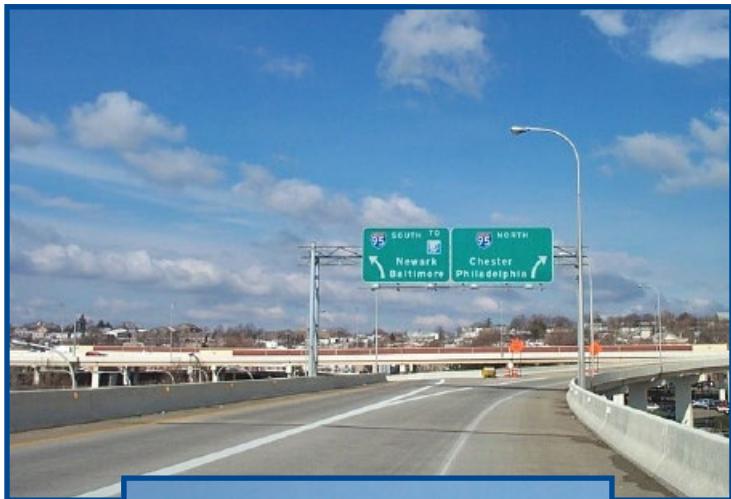
TS = Traffic Signal Support

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.)

SECTION III - SSDF / CONDITION RATING / MAXIMO CODES



SIGN INSPECTION PROGRAM USER MANUAL

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.

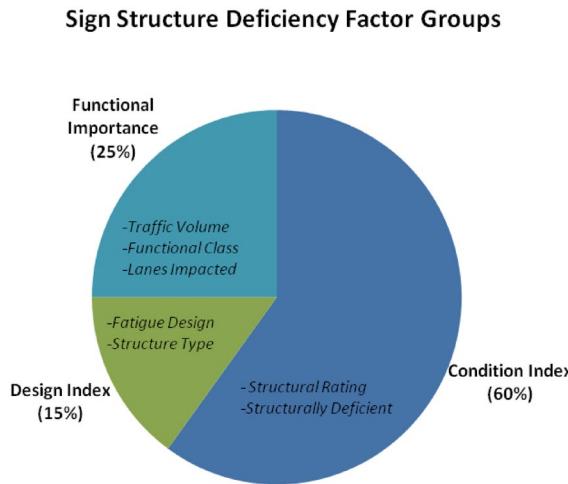


Figure 1

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

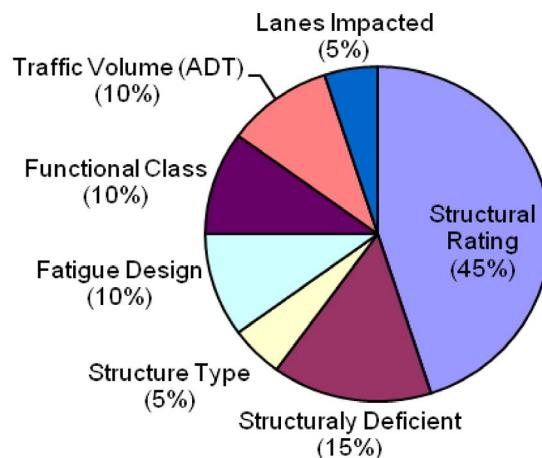


Figure 2

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

SIGN STRUCTURE DEFICIENCY FORMULA

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

SIGN STRUCTURE DEFICIENCY FORMULA

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	3
Aluminum Sign Structure	
> 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	4
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)	
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 Brackets (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

SECTION IV - TS - TRAFFIC SIGNAL SUPPORTS

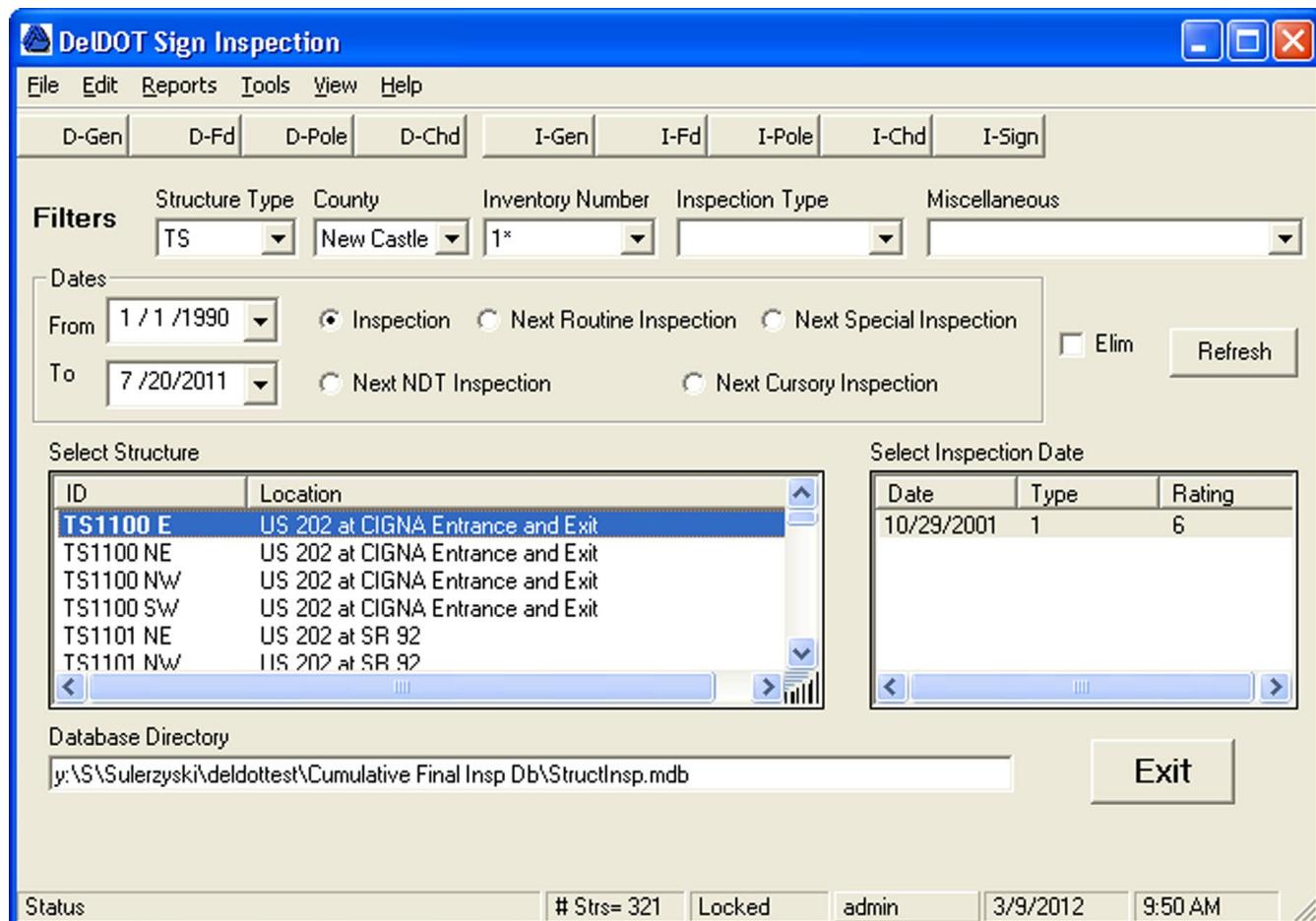




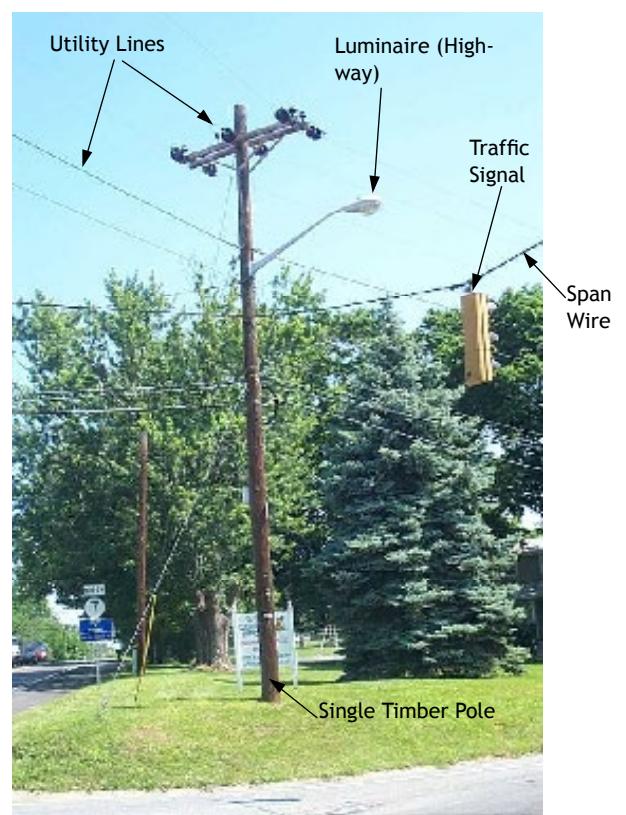
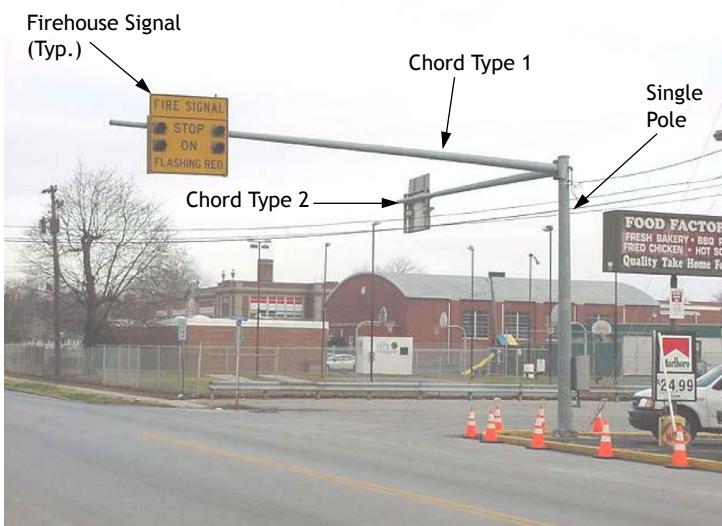
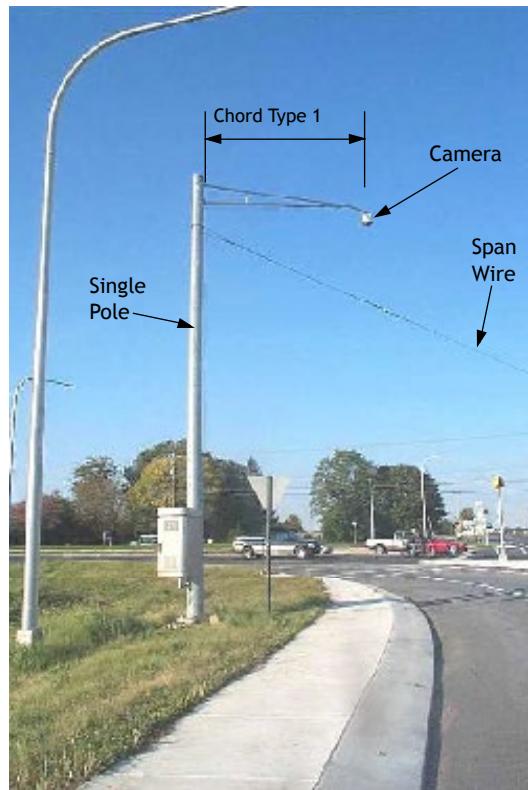
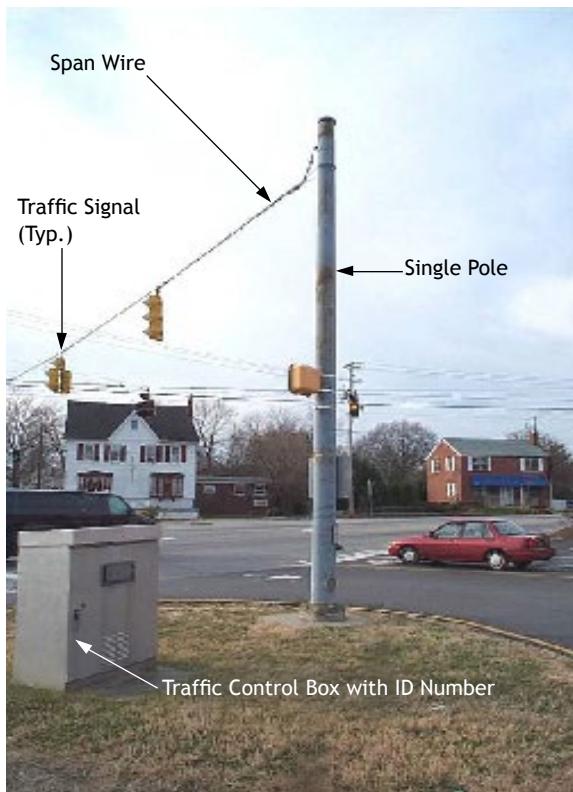
TRAFFIC SIGNAL SUPPORT (STRUCTURE DATA)

SIGN INSPECTION PROGRAM USER MANUAL

TS - TRAFFIC SIGNAL SUPPORTS STRUCTURE DATA



TRAFFIC SIGNAL SUPPORTS - STRUCTURE DATA



GENERAL DATA - GENERAL 1

General Data: TS1100 E

File Edit View Help

General 1 General 2 Clearance Measurements

Contract 1 Contract 2 Contract 3 Contract 4 Contract 5 Contract 6

District NHS

North Yes

Latitude Longitude Location Description

39° 49' 52.94" -75° 32' 38.12" US 202 at CIGNA Entrance and Exit

Map

Close

Status Locked admin 1/5/2012 1:47 PM

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.

TRAFFIC SIGNAL SUPPORTS - STRUCTURE DATA

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

The screenshot shows a Windows application window titled "General Data: TS1100 E". The window has a menu bar with File, Edit, View, and Help. There are three tabs at the top: "General 1", "General 2" (which is selected), and "Clearance Measurements".

The "General 2" tab contains the following fields:

- Message Type:** A dropdown menu showing "Traffic Signal".
- Support Type:** A dropdown menu showing "Span Wire Mounted".
- Year Built:** A dropdown menu showing "unknown".
- Inspection Frequency (Months):** A dropdown menu showing "60".
- Year Reconstructed:** A dropdown menu showing "unknown".
- Access Equipment Required:** A dropdown menu showing "Lift Van".
- Cursory Inspection Frequency (Months):** A dropdown menu.
- NDT Inspection Frequency (Months):** A dropdown menu.
- Special Inspection Frequency (Months):** A dropdown menu.
- Traffic Control Required:** A dropdown menu showing "None".
- Special Inspection Frequency Description:** A text input field.
- Electrical Description:** A text input field.
- Lighting Present on Structure:** A dropdown menu showing "No".

At the bottom of the window, there is a status bar with "Status" (Locked), "admin", "3/9/2012", "9:39 AM", and a network icon. A "Close" button is located at the bottom center.

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

The screenshot shows a Windows application window titled "General Data: TS1100 E". The menu bar includes File, Edit, View, Help, and a logo icon. Below the menu is a toolbar with three buttons. The main area has three tabs: "General 1", "General 2", and "Clearance Measurements", with "Clearance Measurements" selected. The "Clearance Measurements" tab contains a table with seven columns: Roadway Name, Minimum Vertical Clearance, Vertical Clearance Roadway CL, Vertical Clearance Right Shoulder, Vertical Clearance Left Shoulder, Distance fr Edge of Lane to Right Support, and Distance fr Edge of Lane to Left Support. Under "Roadway Name", the value "US 202" is entered. Under "Minimum Vertical Clearance", the value "16.33" is entered. The other five fields in the row are empty. Below the table is a note: "*Enter all distances in decimal feet". Underneath is a section labeled "Median Width (Feet)" with an empty input field. At the bottom right is a "Close" button. The status bar at the bottom shows "Status", "Locked", "admin", "7/21/2011", and "12:24 PM".

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, 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

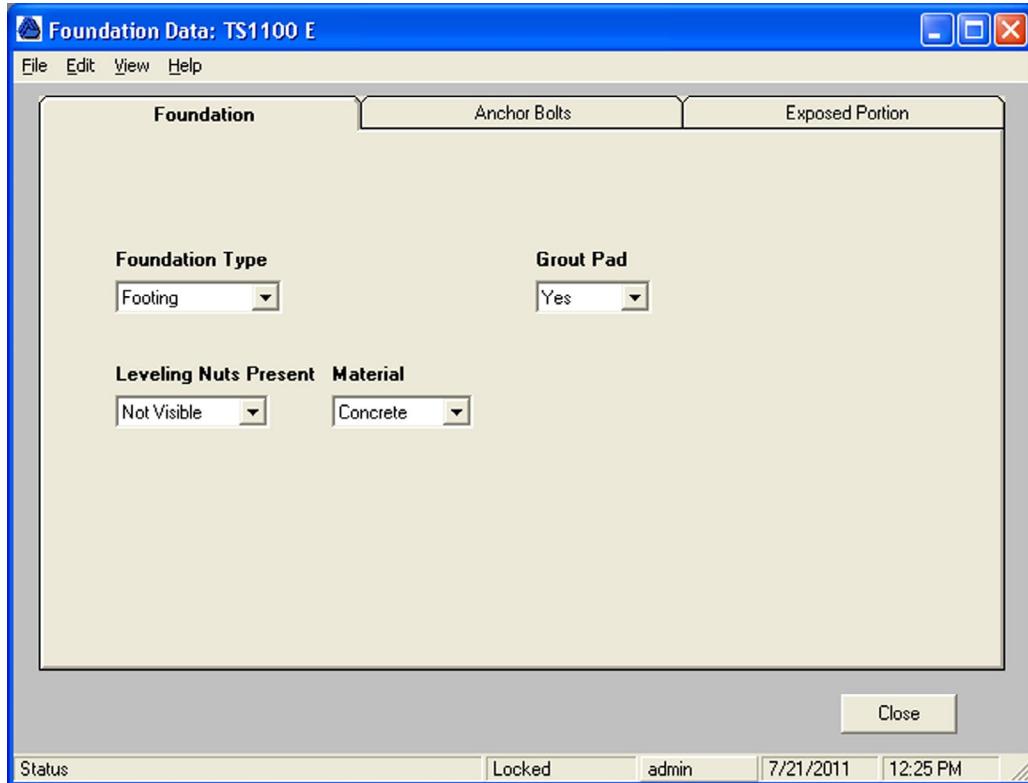
Median Width (Feet)

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

The screenshot shows a Windows application window titled "Foundation Data: TS1100 E". The window has a menu bar with File, Edit, View, Help, and a toolbar with three icons. The main area is divided into three tabs: "Foundation", "Anchor Bolts" (which is selected), and "Exposed Portion". The "Anchor Bolts" tab contains fields for "Pole No" (1), "No of Bolts" (4), "Bolt Dia" (1.875 inches), "Shape" (Rectangle/Square), "Bolt Layout Length/Diam" (14), and "Bolt Layout Width" (14). At the bottom of the window is a status bar showing Status, Locked, admin, 7/21/2011, 12:25 PM, and a series of icons.

Pole No	No of Bolts	Bolt Dia (Inches)	Shape	Bolt Layout Length/Diam (Inches)	Bolt Layout Width (Inches)
1	4	1.875	Rectangle/Square	14	14

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

Pole No	Height (decimal feet)	Shape	Length/Diam (decimal feet)	Width (decimal feet)
1	0.17	Rectangle/Square	3.67	3.67

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

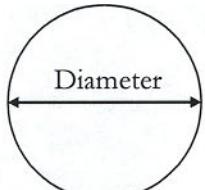
Description: From the pull down menu, select the shape of the exposed foundation. If the foundation's shape cannot be determined, this field should be coded "Unknown". If the Foundation Type is coded "Not Applicable", this field should be left blank.

- 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)

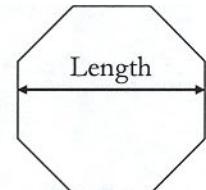
Length/Diam (decimal feet)

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.

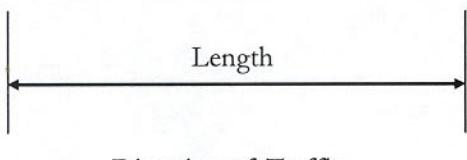
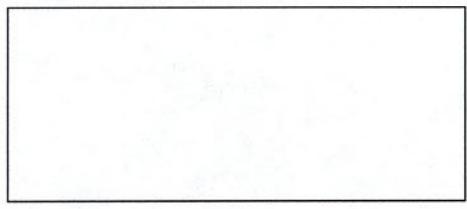
If the Foundation's Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank.



Circle or Fluted

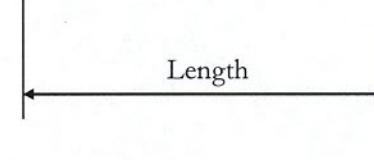
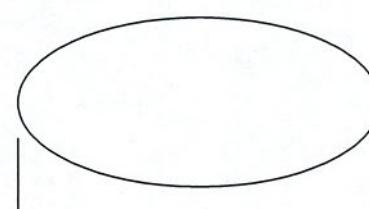


Octagon
(Hexagon & Pentagon similar)



Direction of Traffic →

Rectangle/Square
(Trapezoid similar - use average values)



Direction of Traffic →

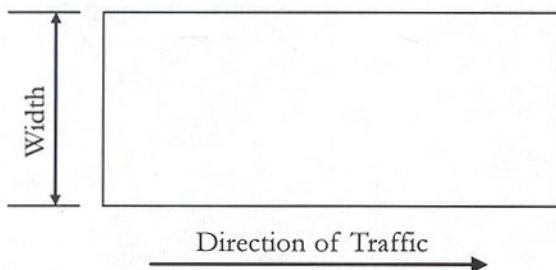
Ellipse

Coding: None

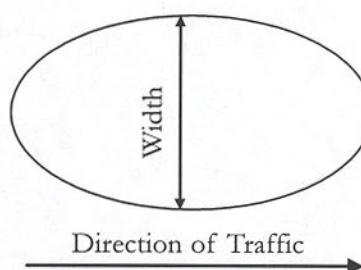
Width (decimal feet)

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.

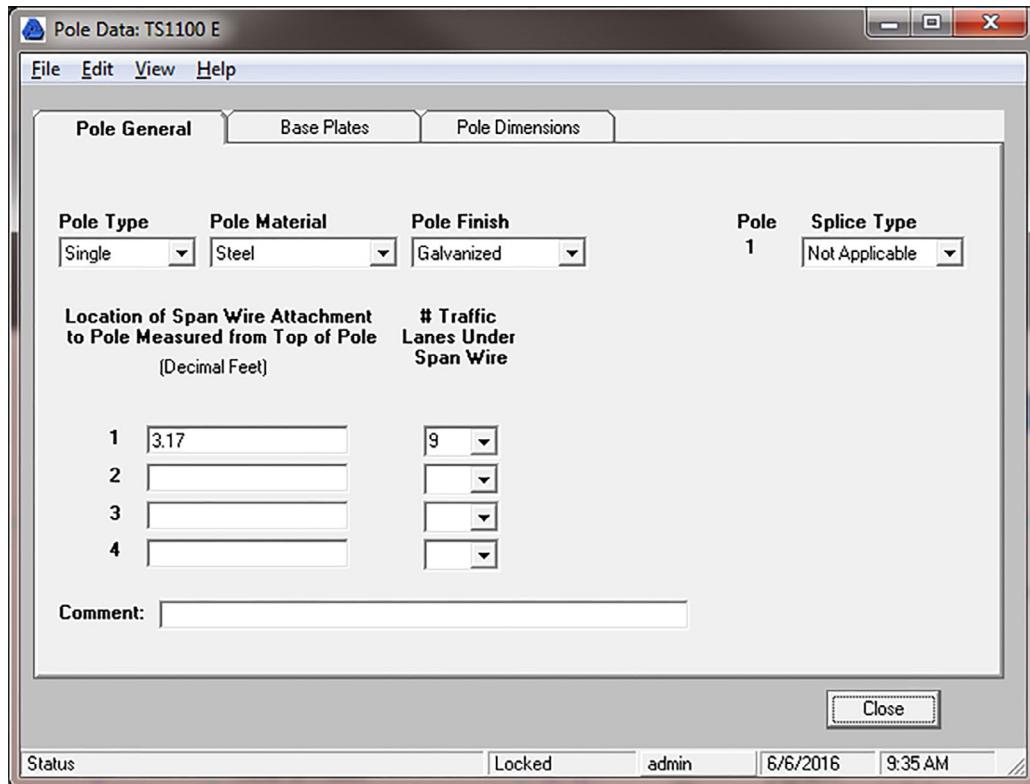


Rectangle/Square
(Trapezoid similar - use average values)



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.

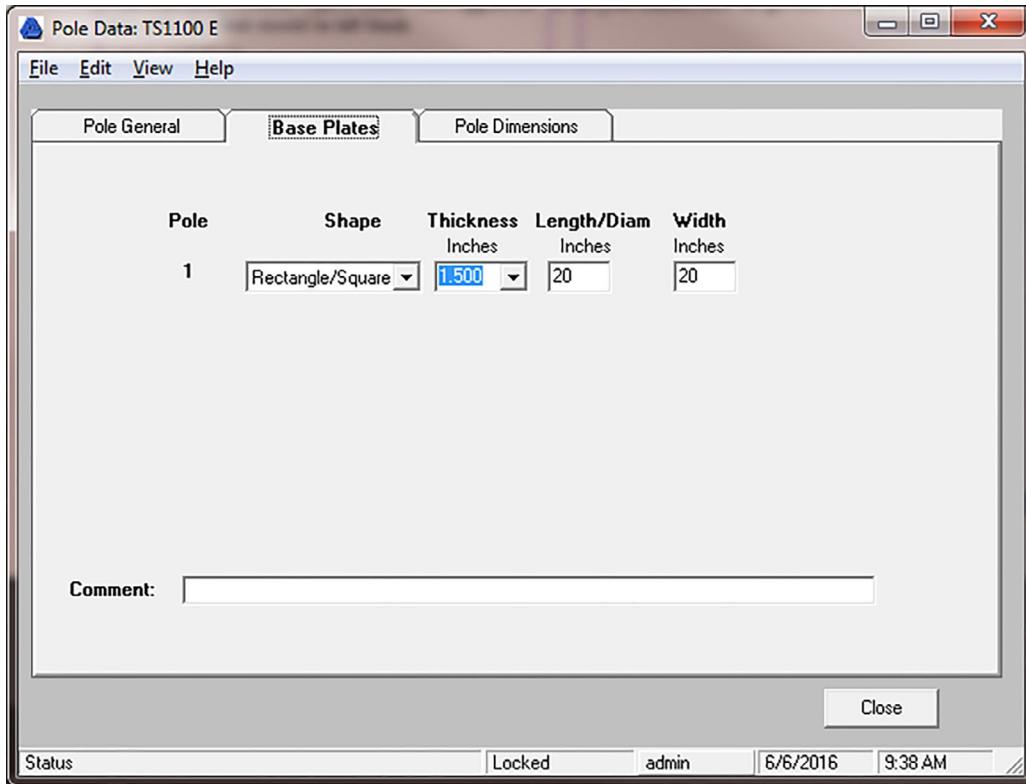
If no span wires are attached to the pole, this field should be left blank.

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.

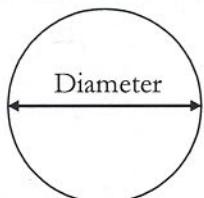
If the thickness cannot be determined, the Pole or Foundation Type is coded "Not Applicable" or the pole extends into the ground, as in the case of a timber utility pole, this field should be left blank.

Coding: None

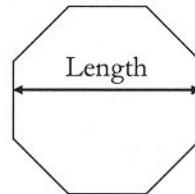
Length/Diam - Inches

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.

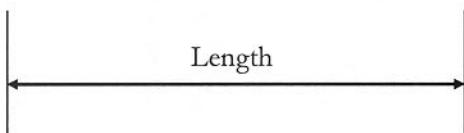
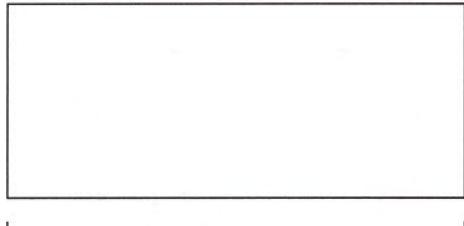


Circle or Fluted



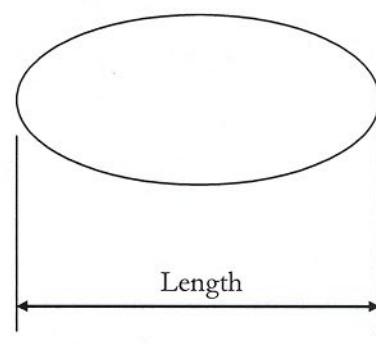
Octagon

(Hexagon & Pentagon similar)



Direction of Traffic →

Rectangle/Square
(Trapezoid similar - use average values)



Direction of Traffic →

Ellipse

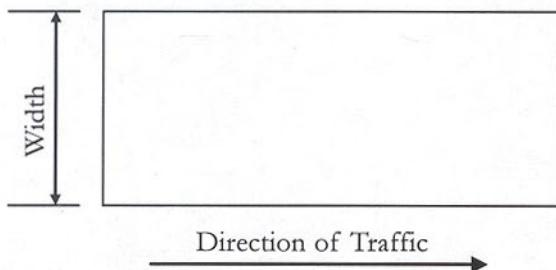
Coding: None

Width - Inches

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

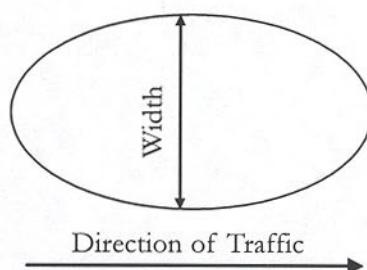
If the base plate shape is coded "Unknown" or the field is left blank, or the Pole or Foundation Type is coded "Not Applicable", this field should be left blank.

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



Direction of Traffic →

Rectangle/Square
(Trapezoid similar - use average values)



Direction of Traffic →

Ellipse

Coding: None

Comment:

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

Coding: None

POLE DATA - POLE DIMENSIONS

Pole	Cross Section	Pole Height	Wall Thickness	Outside Diameter/Length	Outside Width
1	Circular	27.58	0.287	10	14.005
		Feet	Inches	min	max
				inches	inches
				min	max

Comment:

Status: Locked admin 6/6/2016 9:39 AM

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

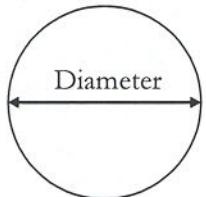
Description: Enter, in decimal inches, the average wall thickness of the vertical pole. If the pole section is solid or the Pole Type is coded “Not Applicable”, this field should be left blank.

Coding: None

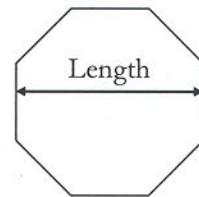
Outside Diameter/Length - Inches

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.

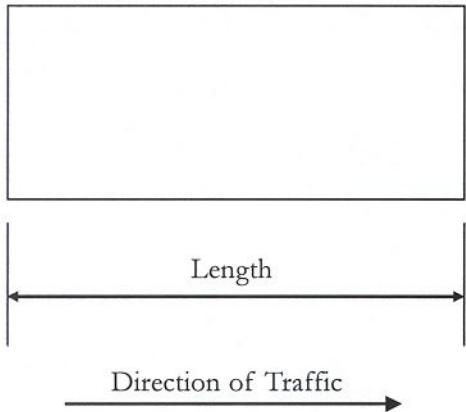


Circle or Fluted

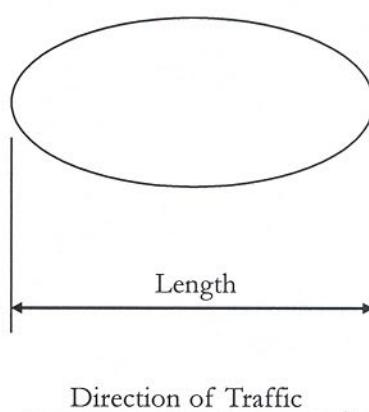


Octagon

(Other Polygon shapes similar)



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

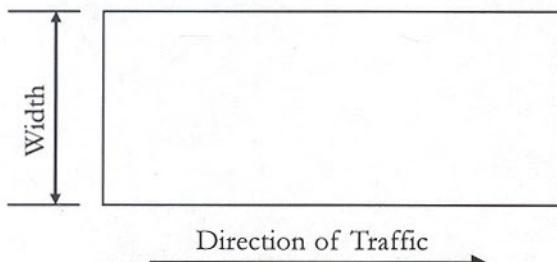
Coding: None

Outside Width - Inches

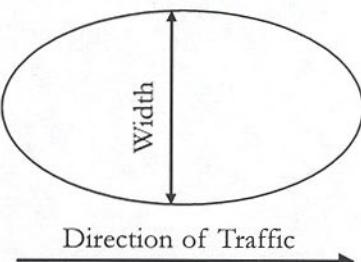
Description: Based on the illustrations shown below, enter the minimum and maximum outside width (in decimal inches) of the pole’s cross section.

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.

TRAFFIC SIGNAL SUPPORTS - STRUCTURE DATA



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

Coding: None

Comment:

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

Coding: None

CHORDS DATA - CHORD GENERAL

Chords Data: TS1138 NE

Chord General		Splices		Trussing btwn Chords	
Chord Type No	1	No of Chord Types	1	Rdwy Name Undr Chord	No Lanes Undr Chord
Chord Type	Two Chord	Chord Finish	Not Applicable	Chord Material	Aluminum
Connect to Pole	Bolted w/clamp			Rdwy Name Undr Chord	Milltown Road
Span Length	26	C to C dist btwn chord members	2.5	Dist CL Near Chord Memb to Top Pole	
Vertical	2.5	Horiz/Diag		Pole 1	Pole 2
Wall Thickness (Inches)	0.175	Shape	Ellipse	Outside Diameter/Length (Inches)	min 2.5 max 5
Outside Width (Inches) min 2.5 max 2.5					
Comment: Center to center distance between chord members is 0 at the chords free end and 2.5 feet at					
<input type="button" value="Close"/>					
Status: admin 7/18/2016 1:29 PM					

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

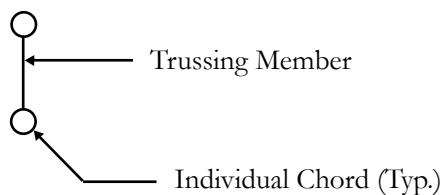
Description: From the pull down menu, select the cross section of the Chord Type configuration present on the structure.

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

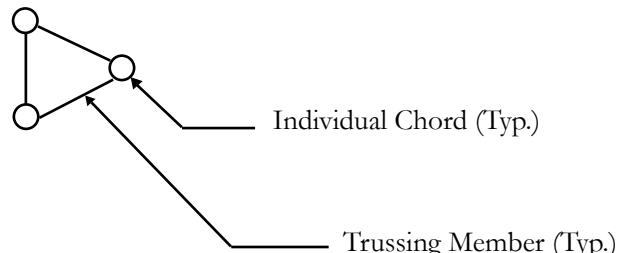
Coding: 1 = Single Chord



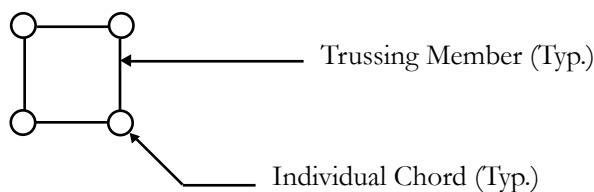
2 = Two Chord



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.

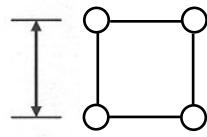
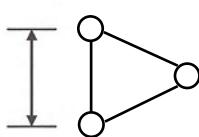
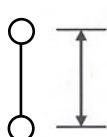
Coding: None

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

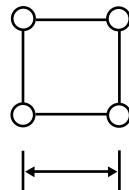
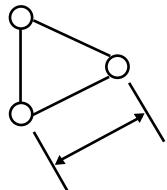
C. to C. dist btwn chord members - Horiz/Diag

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

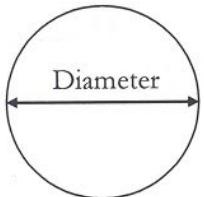
10 = Dodecagon (12 Sided)

11 = Octdecagon (18 Sided)

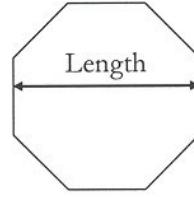
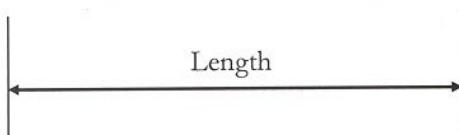
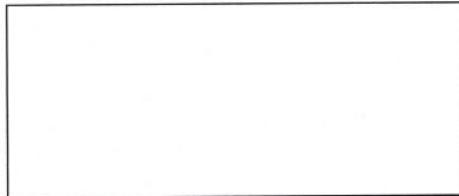
Outside Diameter/Length (Inches)

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.

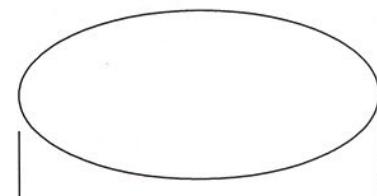
If more than one chord exists, it is assumed that all of the chords have the same outside length/diameter.



Circle or Fluted

Octagon
(Hexagon & Pentagon similar)

Direction of Traffic →

Rectangle/Square
(Trapezoid similar - use average values)

Direction of Traffic →

Ellipse

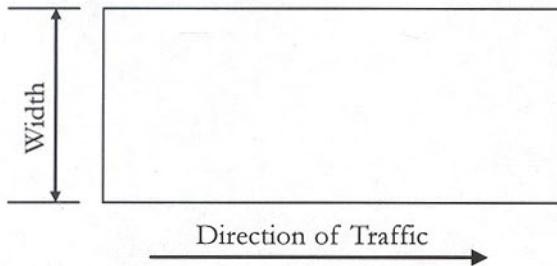
Coding: None

Outside Width (Inches)

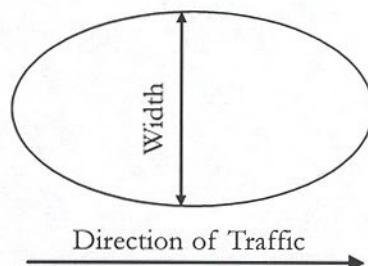
Description: Based on the illustrations shown below, enter the minimum and maximum outside horizontal width (in decimal inches) of the individual chord cross sections.

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)

Coding: None



Ellipse

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

No	Type	Location (Decimal Ft)	Splice Bolts		Shape	Splice Plate			
			No	Diam.		Thickness Inches	Diam. Inches	Width Inches	Length Inches
1	Sleeved Joint	29							
2									
3									
4									
5									
6									
7									
8									
9									
10									

Location: Distance from CL end support adjacent to right shoulder/lane

Close

Status: Locked admin 7/21/2011 12:42 PM

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).

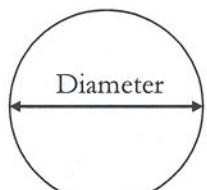
Coding: None

Splice Plate - Diam. (Inches)

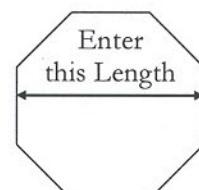
Description: Enter, in decimal inches, the diameter of a splice plate at the splice location. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

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)

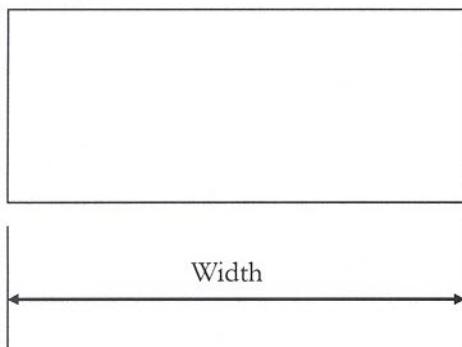
Coding: None

Splice Plate - Width (Inches)

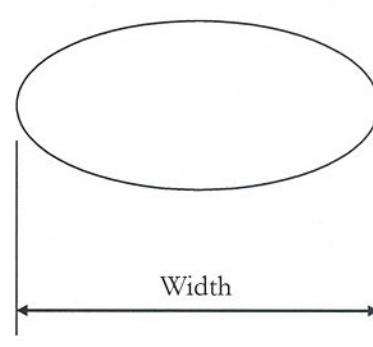
Description: Enter, in decimal inches, the horizontal width of a splice plate at the splice location.

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

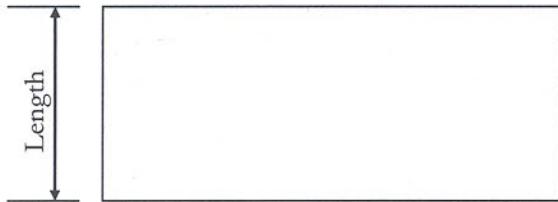
Coding: None

Splice Plate - Length (Inches)

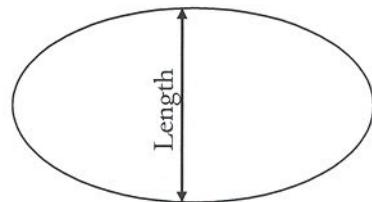
Description: Enter, in decimal inches, the length (vertical height) of a splice plate at the splice location.

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

The screenshot shows a Windows application window titled "Chords Data: TS1100 E". The main title bar has icons for minimize, maximize, and close. Below the title bar is a menu bar with "File", "Edit", "View", and "Help". The main area contains several input fields and dropdown menus:

- A top navigation bar with tabs: "Chord General", "Splices", and "Trussing btwn Chords" (which is currently selected).
- "Panel Length" section with "Chord 1" and "Chord 2" fields (Decimal Feet).
- "Cross Section" and "Connection to Chords" dropdown menus.
- A "Comment:" text input field.
- A "Close" button at the bottom right of the main panel.
- A status bar at the bottom with "Status", "Locked", "admin", "7/21/2011", "12:43 PM", and a network icon.

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

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.

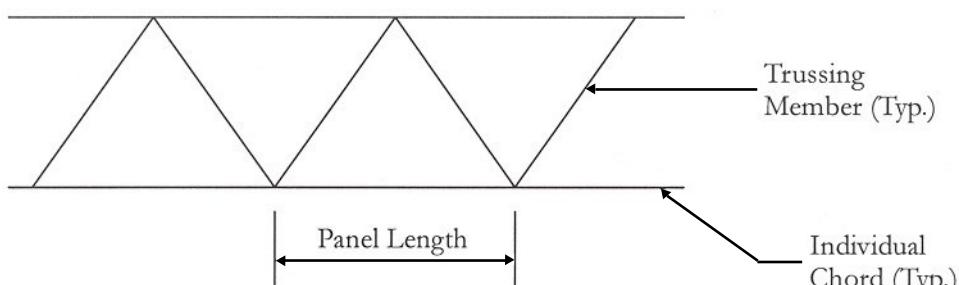
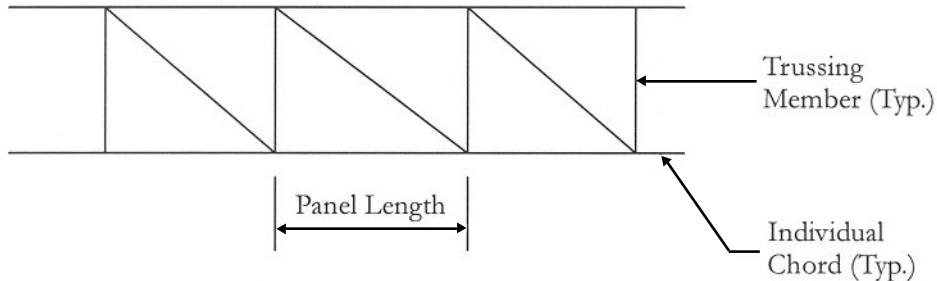
If no trussing members are present, "Not Applicable" should be coded.

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



TRAFFIC SIGNAL SUPPORT (INSPECTION DATA)

SIGN INSPECTION PROGRAM USER MANUAL

TS - TRAFFIC SIGNAL SUPPORTS INSPECTION DATA

DeIDOT Sign Inspection

File Edit Reports Tools View Help

D-Gen D-Fd D-Pole D-Chd I-Gen I-Fd I-Pole I-Chd I-Sign

Filters Structure Type County Inventory Number Inspection Type Miscellaneous

TS New Castle 4* Routine

Dates

From 1/1/1990 Inspection Next Routine Inspection Next Special Inspection Elim Refresh

To 7/20/2011 Next NDT Inspection Next Cursory Inspection

Select Structure

ID	Location
TS1465 SE	SR 4 and Rolling Drive
TS1466 NE	Silverside Road and Kingman Drive
TS1466 NW	Silverside Road and Kingman Drive
TS1466 SE	Silverside Road and Kingman Drive
TS1466 SW	Silverside Road and Kingman Drive
TS1467TNF	SR 89R and Marvin Drive

Select Inspection Date

Date	Type	Rating
6/13/2007	1	8
12/17/2001	1	7

Database Directory: y:\S\Sulerzyski\deldotest\Cumulative Final Insp Db\StructInsp.mdb

Status # Strs= 282 admin 3/9/2012 10:00 AM

Exit

GENERAL INSPECTION - GENERAL

The screenshot shows a Windows application window titled "General Inspection: TS1466 NE". The menu bar includes File, Edit, Tools, View, and Help. The main window has tabs: General, Photos, NDT Reports, Structure History Notes, and Notes. The General tab is selected. It contains fields for Inspection Date (11/16/2012), Team Leader (PAI/LAA), NDT Inspector (PAI/AAN), Inspector (PAI/TJP), and Inspector (empty). The Inspection Type is set to Routine. Below these are sections for General Appearance, General Alignment, Camber Present, and Guardrail Protection/Alignment, each with a Rating dropdown (set to 8) and a Comments field. An Overall Condition section also has a Rating dropdown (set to 8) and a Comments field. At the bottom left are checkboxes for CND FOUND, CND POLE, CND CHORD, CND BMS, CND ACCESS, CND SIGNS, and CND LUMS, all marked as 8. A Critical Rating Flag dropdown is set to No. At the bottom are buttons for Maint Comment, NDT Comment, Future Comment, Save, and Close. The status bar at the bottom shows Status, admin, 6/6/2016, 10:05 AM, and a file icon.

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.

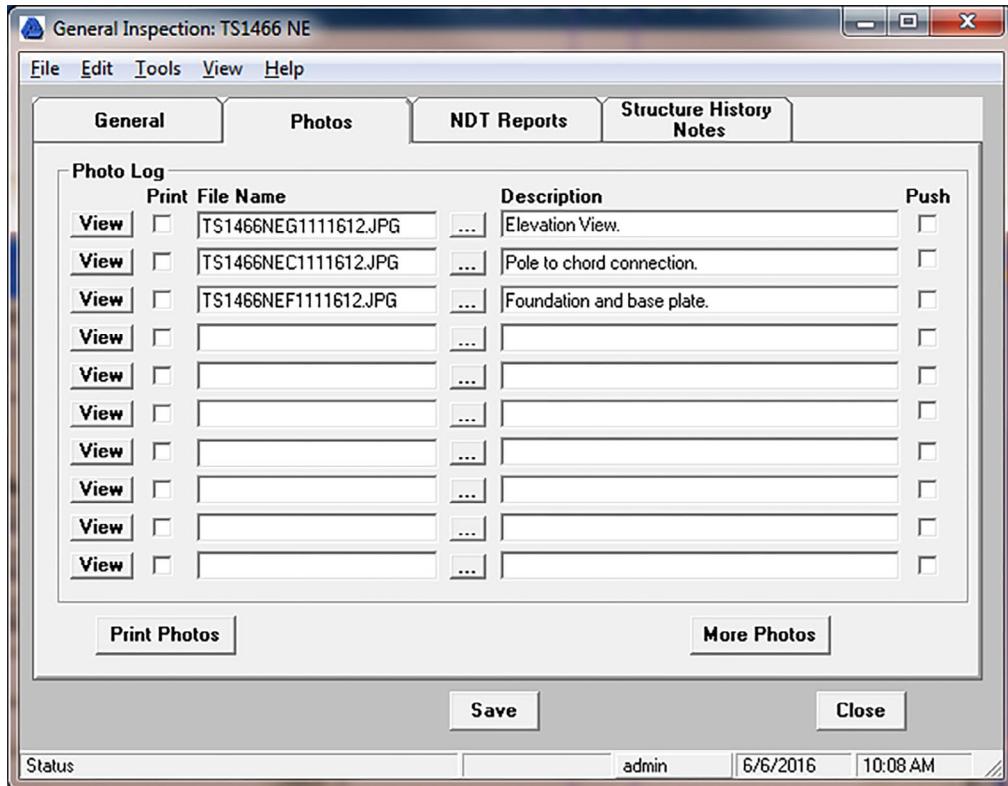
Coding: None

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:

TS2134NEG1.jpg

TS1254SWF1.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

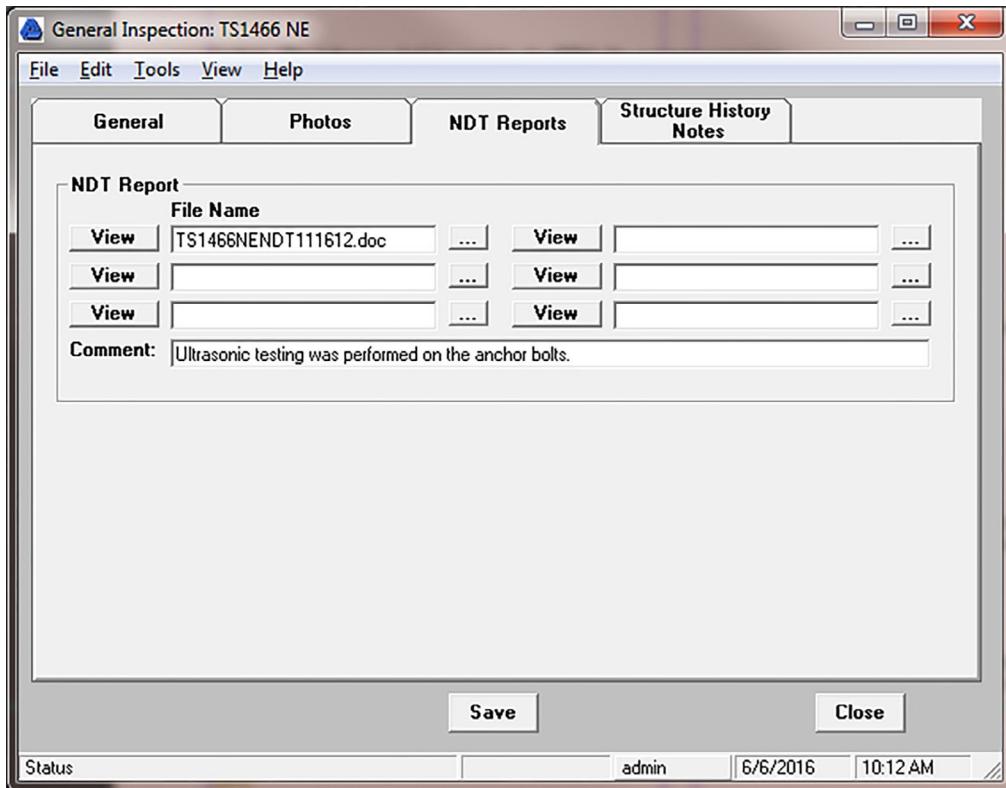
Description: Clicking on the **More Photos** button creates another **Photos** tab that allows up to ten additional photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

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: TS2134NENDT.doc or TS2134NENDT.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:

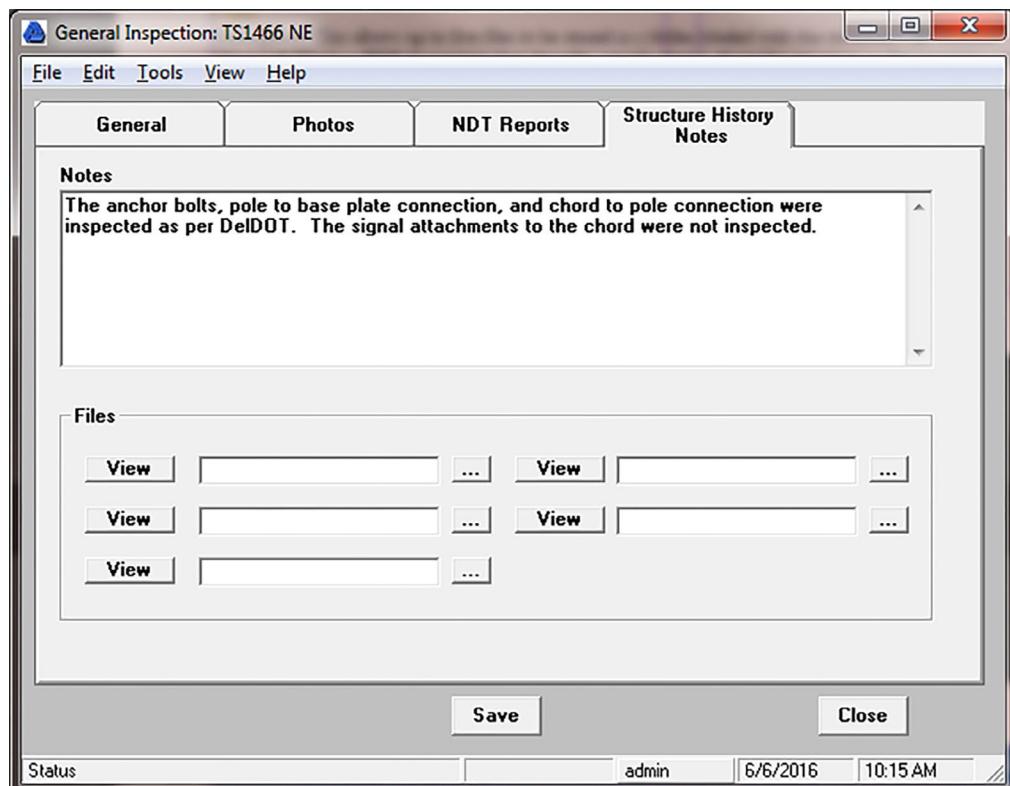
Description: This field allows the user to enter any comments regarding the non-destructive testing performed and the subsequent results.

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.

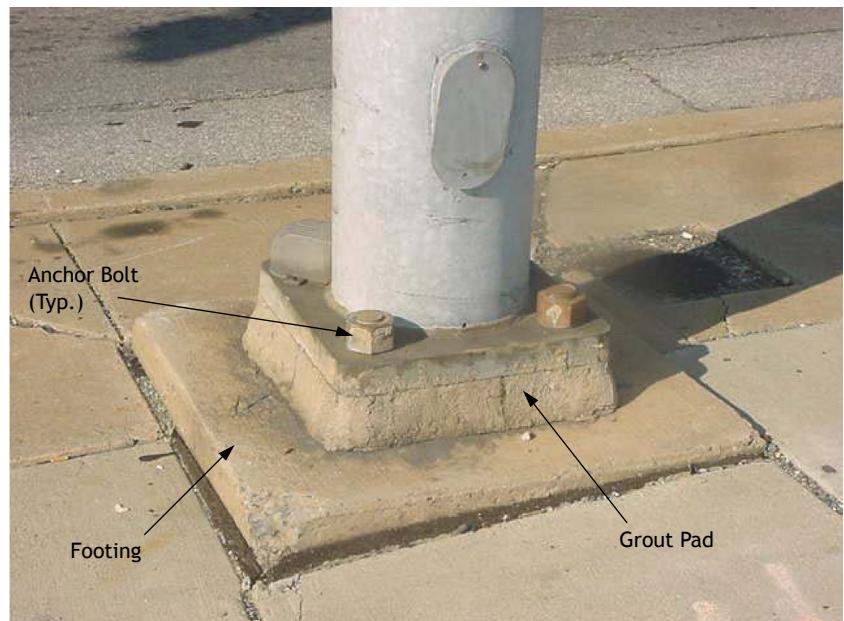
Bracket Attachment

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

The screenshot shows a Windows application window titled "Foundation Inspection: TS1466 NE". The window has a menu bar with "File", "Edit", "View", and "Help". Below the menu is a toolbar with three buttons. The main area contains three tabs: "Foundation", "Maint/NDT" (which is selected and highlighted in blue), and "Future Maint". Under the "Maint/NDT" tab, there are two sections: "Maintenance repairs done at the time of inspection" and "NDT testing done at the time of inspection". Each section has a dropdown menu with "None" as the first option and five additional empty dropdowns below it. To the right of each dropdown is a "Push" button with an unchecked checkbox. At the bottom of the window is a status bar showing "Status", "editor", "7/21/2011", and "1:17 PM".

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

Foundation Inspection: TS1466 NE

File Edit View Help

Foundation		Maint/NDT	Future Maint	
Future maintenance required and/or repair recommendations				
Code	Item	Activity	Description	Priority
<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>
Inspector Notes <input type="checkbox"/> Push				
<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>
Inspector Notes				
<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>
Inspector Notes				
<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>
Inspector Notes				
<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>
Inspector Notes				
<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>
Inspector Notes				
<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>
Inspector Notes				

Close

Status editor 7/21/2011 1:18 PM

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

	Rating	Comments
Members	8	
Joints/Splices	8	
Base Plate and Connection to Pole	8	
Connections to Pole	N	

CONDITION RATING 8

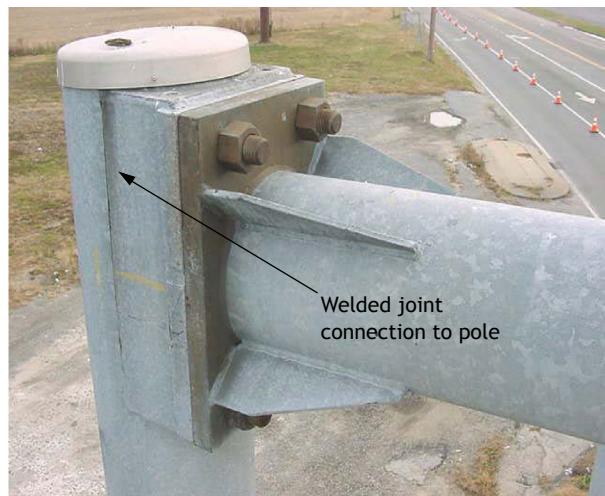
Members

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.



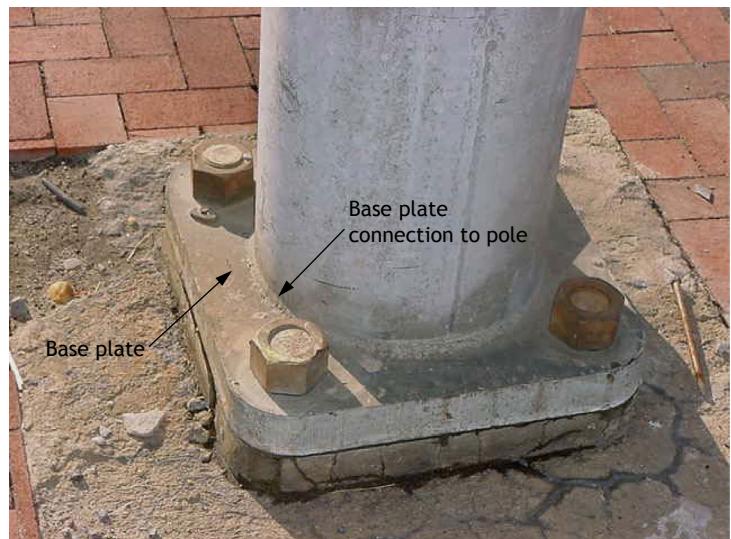
Joints/Splices

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

Pole Inspection: TS1466 NE

File Edit View Help

Maint/NDT

Pole General Future Maint

Maintenance repairs done at the time of inspection

NDT testing done at the time of inspection

Push Push

Close

Status editor 7/21/2011 1:22 PM

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

Pole Inspection: TS1466 NE

Pole General **Maint/NDT** **[Future Maint]**

Future maintenance required and/or repair recommendations

Code	Item	Activity	Description	Priority
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Inspector Notes				<input type="checkbox"/> Push
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Inspector Notes				
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Inspector Notes				
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Inspector Notes				
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Inspector Notes				
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Inspector Notes				

Close

Status editor 7/21/2011 1:22 PM

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)

11 - 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

Component	Rating	Comments
Top Chord(s)	7	The cap at the free end of the chord is missing.
Bottom Chord(s)	N	
Mid Chord (Tri-Chord)	N	
Joints/Splices	8	
Connection to Poles	8	

CONDITION RATING 7

Close

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)

Chord Inspection: TS1458TNW

Chord	Trussing (Btwn Chords)	Maint/NDT	Future Maint
Component	Rating	Comments	
Verticals (Btwn Chords)	8		
Diagonals (Btwn Chords)	N		
Horizontals (Btwn Truss)	N		
Diagonals 2 (Btwn Truss)	N		
Connection to Chords	8		
CONDITION RATING 8			

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)

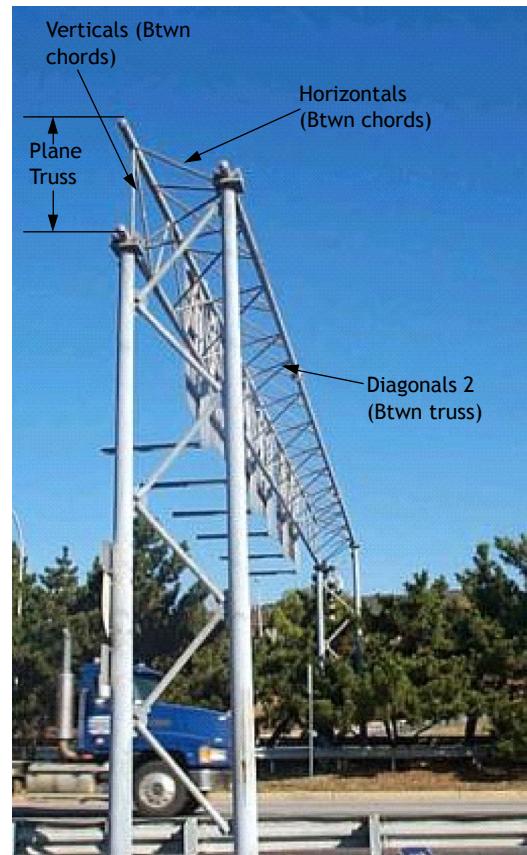
Description: This element involves the inspection of the horizontal trussing members located between two plane trusses (4 chord type) or between one plane truss and a chord (Tri-Chord type), including the applied finish.

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

Maintainance repairs done at the time of inspection

NDT testing done at the time of inspection

Push

Close

Status editor 7/21/2011 1:28 PM

Maintainance 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

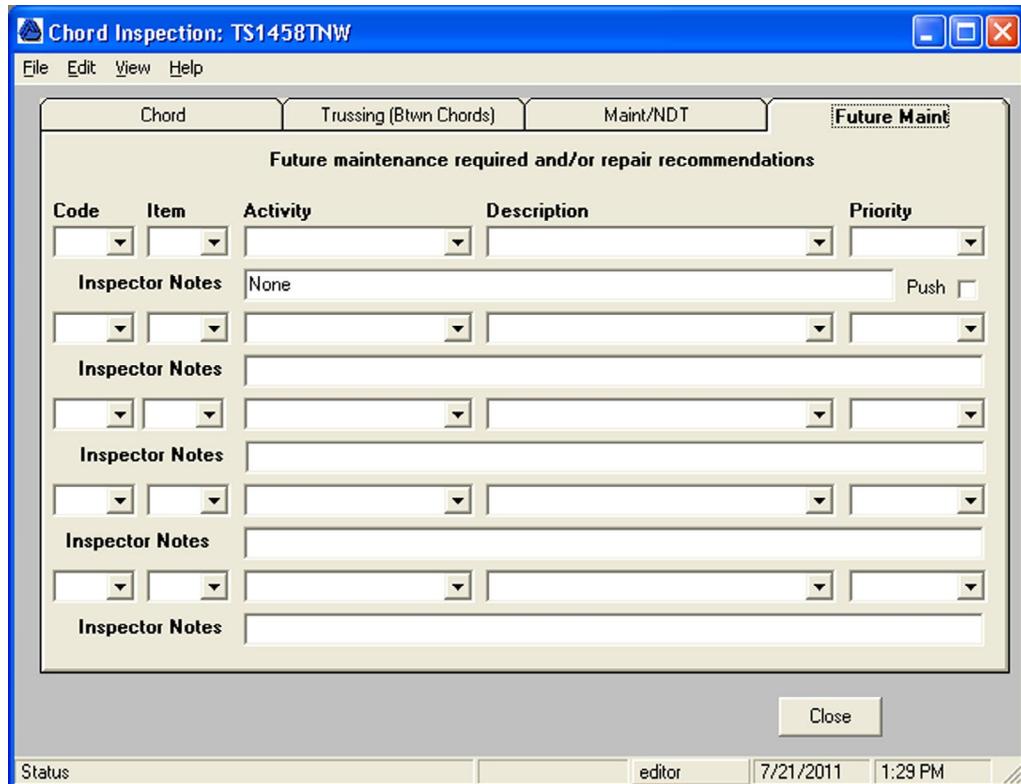
Description: Enter or select from the pull down menus, up to five non-destructive tests that were performed on the chord and/or trussing elements during the inspection.

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.

TRAFFIC SIGNAL SUPPORTS - INSPECTION DATA

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

	Rating	Comments
Walkway Platform	N	
Access Ladder	N	
Supports/Connections	N	
Handrails	N	
Safety Chains	N	
	N	

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

	Rating	Comments
Attachment to Structure	<input type="button" value="N"/>	[Comments Box]
Reflectivity	<input type="button" value="N"/>	[Comments Box]
Legibility	<input type="button" value="N"/>	[Comments Box]
CONDITION RATING	<input type="button" value="N"/>	

Close

Status editor 7/21/2011 1:30 PM

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

	Rating	Comments
Luminaires	8	Traffic Signal
Cameras	N	
Photo Control Devices	N	
Electrical Components	8	
Connection to Supports	8	

CONDITION RATING 8

Close

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

The screenshot shows a software application window titled "Sign Inspection: TS1458TNW". The window has a menu bar with "File", "Edit", "View", and "Help". Below the menu is a tab bar with five tabs: "Maint Walk/Access", "Signs", "Lum/Cam/TS-Conn", "Maint/NDT" (which is selected and highlighted in blue), and "Future Maint".

The main area contains two sections:

- Maintenance repairs done at the time of inspection:** A dropdown menu currently set to "None". To the right is a "Push" button with an unchecked checkbox.
- NDT testing done at the time of inspection:** A dropdown menu currently set to "None". To the right is a "Push" button with an unchecked checkbox.

At the bottom of the window is a status bar with the text "Status", "editor", "7/21/2011", "1:32 PM", and a small icon.

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

The screenshot shows a software application window titled "Sign Inspection: TS1458TNW". The window has a menu bar with "File", "Edit", "View", and "Help". Below the menu is a tab bar with "Maint Walk/Access", "Signs", "Lum/Cam/TS-Conn", "Maint/NDT", and "Future Maint". The "Future Maint" tab is currently active. The main area contains a table titled "Future maintenance required and/or repair recommendations". The table has columns for "Code", "Item", "Activity", "Description", and "Priority". There are six rows in the table, each with its own "Inspector Notes" field and a "Push" checkbox. At the bottom right of the main area is a "Close" button. The status bar at the bottom shows "Status", "editor", the date "7/21/2011", and the time "1:32 PM".

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.

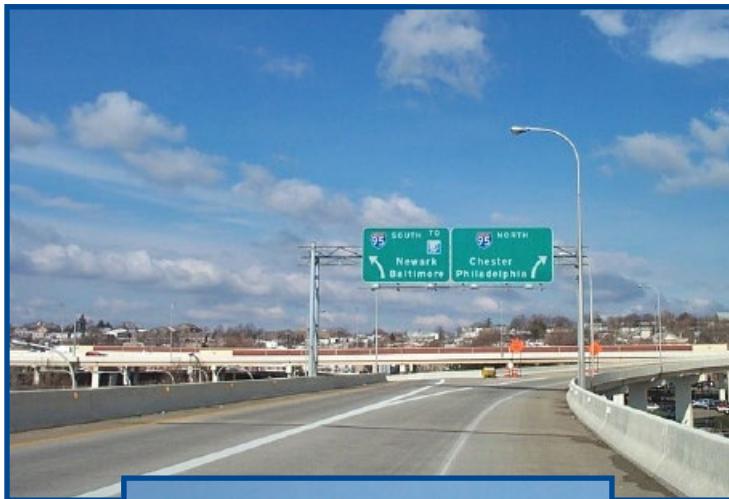
Inspector Notes

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.

SECTION V - HW - HIGH MAST LIGHTING



SIGN INSPECTION PROGRAM USER MANUAL

HM - HIGH MAST LIGHTING STRUCTURE DATA

DeIDOT Sign Inspection

File Edit Reports Tools View Help

D-Gen D-Fd D-Pole D-Sign I-Gen SSDF I-Fd I-Pole I-Sign

Filters Structure Type County Inventory Number Inspection Type Miscellaneous

HM New Castle 1* Routine

Dates

From 1/1/1990 Inspection Next Routine Inspection Next Special Inspection

To 7/20/2011 Next NDT Inspection Next Cursory Inspection

Elim Refresh

Select Structure

ID	Location
HM1100 059	I-95 Median at the US 202 Overpass Bridge
HM1101 024	US 13 Southbound (Philadelphia Pike) at I-495 NB
HM1102 060	I-495 SB between M.P. 9.8 and 9.7 (Princeton Ave)
HM1103 060	I-495 SB at Bridge over RR Tracks, North of Exit 4
HM1104 009	12th Street EB at I-495 North
HM1105 060	I-495 NR at Exit 1 to IIS 13

Select Inspection Date

Date	Type	Rating
10/14/2009	1	7
4/15/2003	1	8

Database Directory

y:\S\Sulerzyski\deidottest\Cumulative Final Insp Db\StructInsp.mdb

Exit

Status # Strs= 27 admin 3/9/2012 9:52 AM

GENERAL DATA - GENERAL 1

The screenshot shows a Windows application window titled "General Data: HM1104 009". The window has a blue header bar with standard window controls (minimize, maximize, close) and a menu bar with "File", "Edit", "View", and "Help". Below the menu is a tab bar with three tabs: "General 1" (selected), "General 2", and "Clearance Measurements". The main area contains several input fields:

- Contract 1 to Contract 6:** Six alpha-numeric input fields for contract numbers.
- District:** A dropdown menu set to "North".
- NHS:** A dropdown menu.
- Average Daily Traffic:** An input field containing "0".
- % Truck:** An input field.
- Mile-Point:** An input field containing "0".
- Functional Class:** A dropdown menu.
- Latitude:** Input fields for degrees (39), minutes (44), and seconds (7.183).
- Longitude:** Input fields for degrees (-75), minutes (31), and seconds (16.784).
- Location Description:** A text input field containing "12th Street EB at I-495 North".
- Map:** A button to view the location on a map.

At the bottom of the window are "Close" and "Status" buttons, and a status bar showing "admin", "1/5/2012", and "1:28 PM".

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

The screenshot shows a Windows application window titled "General Data: HM1104 009". The window has a menu bar with File, Edit, View, and Help. There are three tabs at the top: "General 1", "General 2" (which is selected), and "Clearance Measurements". The "General 2" tab contains the following fields:

Message Type	Support Type	Year Built	Inspection Frequency (Months)
Camera	Pole Mounted	unknown	60
Access Equipment Required	Cursory Inspection Frequency (Months)	NDT Inspection Frequency (Months)	Special Inspection Frequency (Months)
Bucket Truck			
Traffic Control Required	Special Inspection Frequency Description		
Case No. 27			
Electrical Description	Lighting Present on Structure		
	No		

At the bottom of the window, there is a "Close" button and a status bar showing "Status", "admin", "3/9/2012", and "9:42 AM".

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

General Data: HM1104 009

File Edit View Help

General 1		General 2		Clearance Measurements		
RoadWay Name	Minimum Vertical Clearance	Vertical Clearance Roadway CL	Vertical Clearance Right Shoulder	Vertical Clearance Left Shoulder	Distance fr Edge of Lane to Right Support	Distance fr Edge of Lane to Left Support
12th Street	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/> 23.5	<input type="text"/>
	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

*Enter all distances in decimal feet

Median Width (Feet)

Close

Status editor 7/21/2011 1:36 PM

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

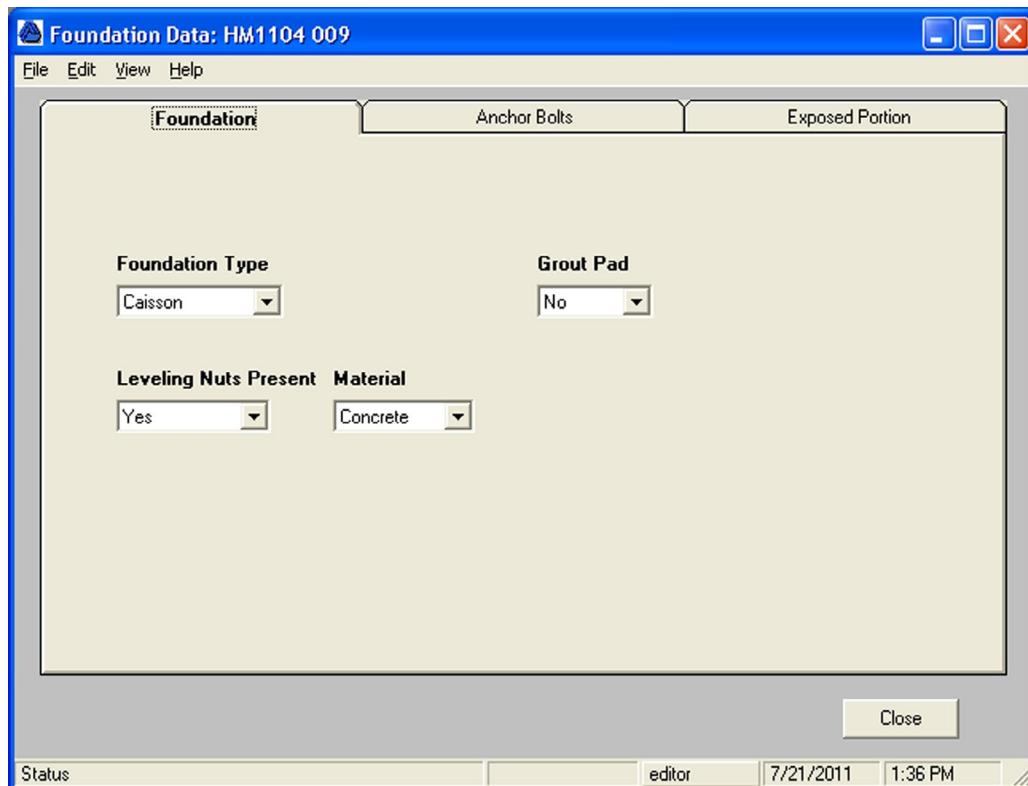
Description: Enter the horizontal distance, in decimal feet, from the edge of the left travel lane or shoulder to the centerline of the structure's foundation. If the measurement is taken from the left shoulder, note this under the Roadway Name. If the **Distance fr Edge of Lane to – Right Support**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

The screenshot shows a Windows application window titled "Foundation Data: HM1104 009". The window has a menu bar with "File", "Edit", "View", and "Help". Below the menu is a toolbar with three buttons: "Foundation", "Anchor Bolts" (which is selected), and "Exposed Portion". The main area contains a table with the following data:

Pole No	No of Bolts	Bolt Dia [Inches]	Shape	Bolt Layout Length/Diam (Inches)	Bolt Layout Width (Inches)
1	4	1.25	Rectangle/Square	12	12

At the bottom right of the window is a "Close" button. The status bar at the bottom shows "Status", "editor", "7/21/2011", and "1:37 PM".

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

Pole No	Height (decimal feet)	Shape	Length/Diam (decimal feet)	Width (decimal feet)
1	1	Circle	3	

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.

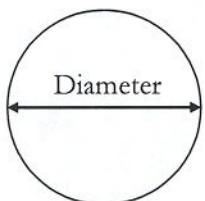
Coding: 1 = Circle

- 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)

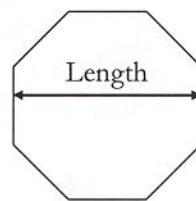
Length/Diam (decimal feet)

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.

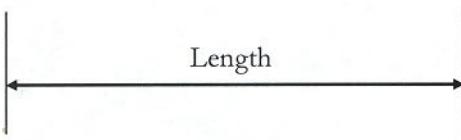
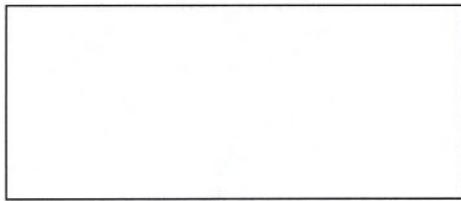
If the Foundation's Shape is coded “Unknown” or if the Foundation Type is coded “Not Applicable”, this field should be left blank.



Circle or Fluted

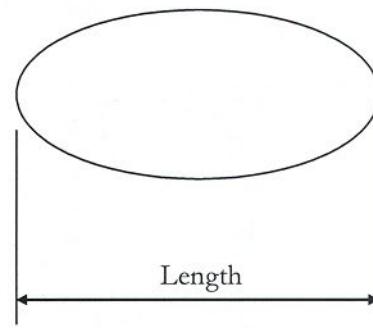


Octagon
(Hexagon & Pentagon similar)



Direction of Traffic →

Rectangle/Square
(Trapezoid similar - use average values)



Direction of Traffic →

Ellipse

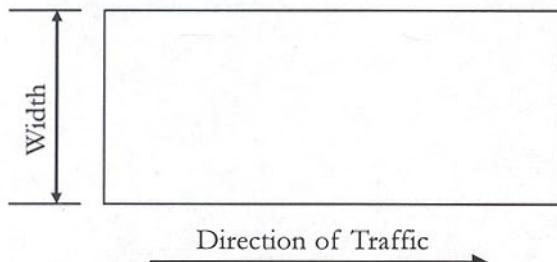
Coding: None

HIGH MAST LIGHTING - STRUCTURE DATA

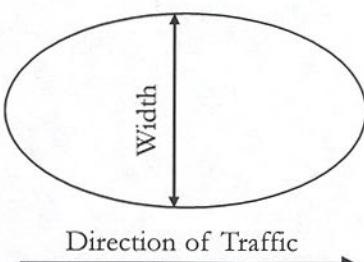
Width (decimal feet)

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

Screenshot of the "Pole Data: HM1104 009" application window. The window title is "Pole Data: HM1104 009". The menu bar includes File, Edit, View, and Help. The main interface has tabs: Pole General (selected), Base Plates, Pole Dimensions, and Pole Splices. Under "Pole General", the following settings are visible:

- Pole Type: Single
- Pole Material: Steel
- Pole Finish: Galvanized
- Lowering Mechanism: No
- Number of Traffic Lanes: 3
- Comment: [Empty text box]

The status bar at the bottom shows: Status, admin, 6/6/2016, 10:31 AM.

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

The screenshot shows a Windows application window titled "Pole Data: HM1104 009". The menu bar includes "File", "Edit", "View", and "Help". The tabs at the top are "Pole General", "Base Plates" (which is selected), "Pole Dimensions", and "Pole Splices". The main data entry area has the following fields:

Pole	Shape	Thickness Inches	Length/Diam Inches	Width Inches
1	Rectangle/Square	1.000	17.5	17.5

Below the table is a "Comment:" text input field and a "Close" button. At the bottom, there is a status bar showing "Status", "admin", "6/6/2016", and "10:40 AM".

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.

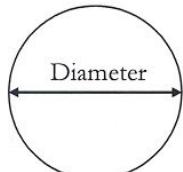
If the thickness cannot be determined, the Pole or Foundation Type is coded "Not Applicable" or the pole extends into the ground, as in the case of a timber utility pole, this field should be left blank.

Coding: None

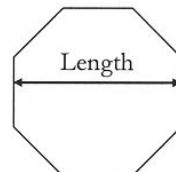
Length/Diam - Inches

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.

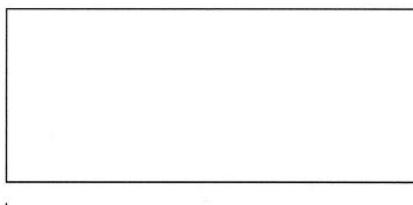
If the base plate shape is coded "Unknown" or the field is left blank, or the Pole or Foundation Type is coded "Not Applicable", this field should be left blank.



Circle or Fluted



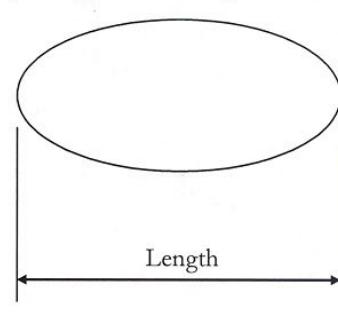
Octagon
(Hexagon & Pentagon similar)



Length

Direction of Traffic →

Rectangle/Square
(Trapezoid similar - use average values)



Length

Direction of Traffic →

Ellipse

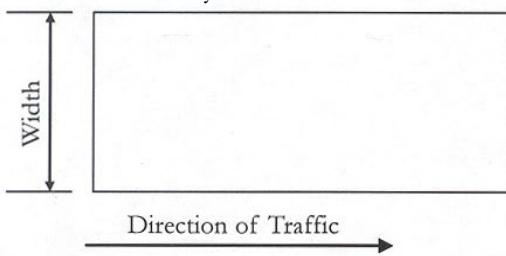
Coding: None

Width - Inches

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

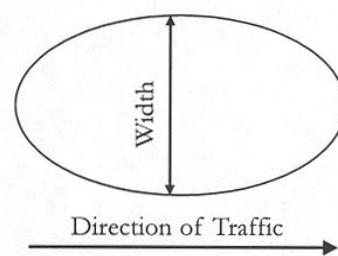
If the base plate shape is coded "Unknown" or the field is left blank, or the Pole or Foundation Type is coded "Not Applicable", this field should be left blank.

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



Direction of Traffic →

Rectangle/Square
(Trapezoid similar - use average values)



Direction of Traffic →

Ellipse

Coding: None

Comment:

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

Coding: None

POLE DATA - POLE DIMENSIONS

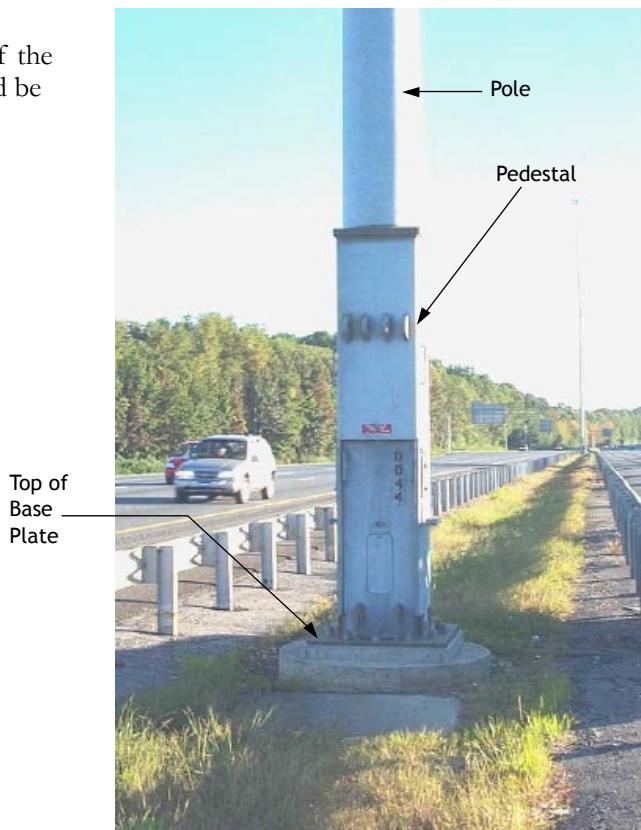
Pole Data: HM1044 056

Pole General		Base Plates		Pole Dimensions		Pole Splices	
Cross Section	Pole Height	Wall Thickness		Outside Diameter/Length		Outside Width	
	Feet	Inches		Inches		Inches	
1	Circular	144	0.25	6	23.5		
Pedestal Height (Ft)		10.25		Total Height (Ft)		154.25	
Comment: []							
Close							
Status		admin		7/8/2016		10:18 AM	

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

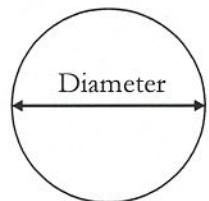
Description: Enter, in decimal inches, the average wall thickness of the vertical pole. If the pole section is solid or the Pole Type is coded "Not Applicable", this field should be left blank.

Coding: None

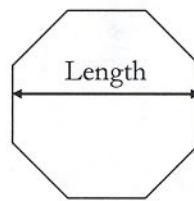
Outside Diameter/Length - Inches

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.

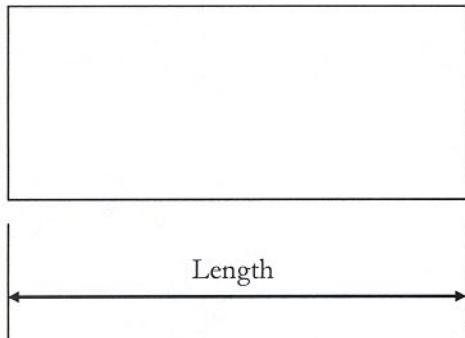
If the Pole Type is coded "Not Applicable", this field should be left blank.



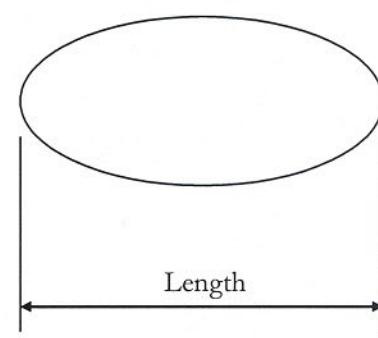
Circle or Fluted



Octagon
(Other Polygon Shapes similar)



Rectangle/Square
(Trapezoid similar - use average values)



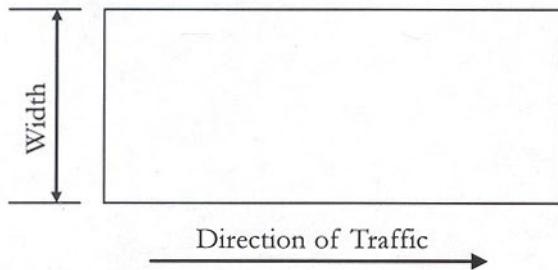
Ellipse

Coding: None

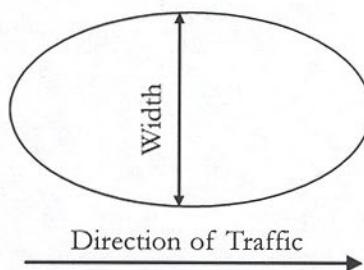
Outside Width - Inches

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.



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

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

Pole Data: HM1044 056

Pole General		Base Plates		Pole Dimensions		Pole Splices		
Type	Location (Decimal Ft)	Splice Bolts No	Diam.	Shape	Thickness Inches	Diam. Inches	Width Inches	Length Inches
Sleeved Joint	23							
Sleeved Joint	51.333							
Sleeved Joint	84.5							
Sleeved Joint	118							

Splice Plate

Close

Status: admin | 7/8/2016 | 10:19 AM

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.

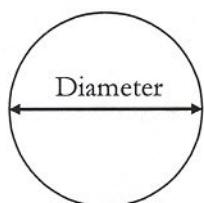
This field is only activated if bolted splice connections are present.

Coding: None

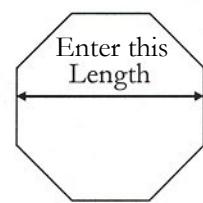
Splice Plate - Diam. (Inches)

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



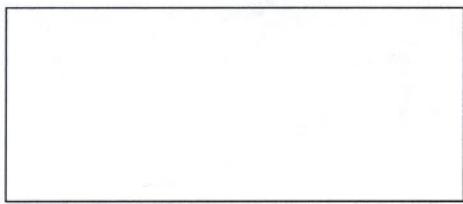
Octagon
(Hexagon & Pentagon similar)

Coding: None

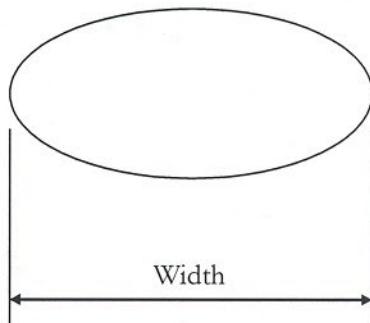
Splice Plate - Width (Inches)

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)



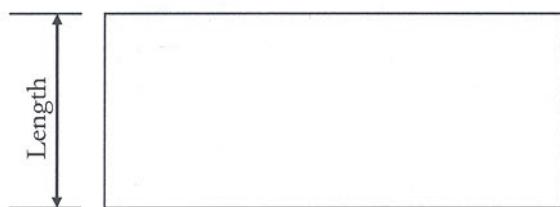
Ellipse

Coding: None

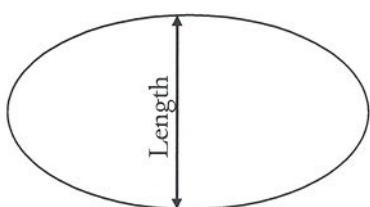
Splice Plate - Length (Inches)

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.



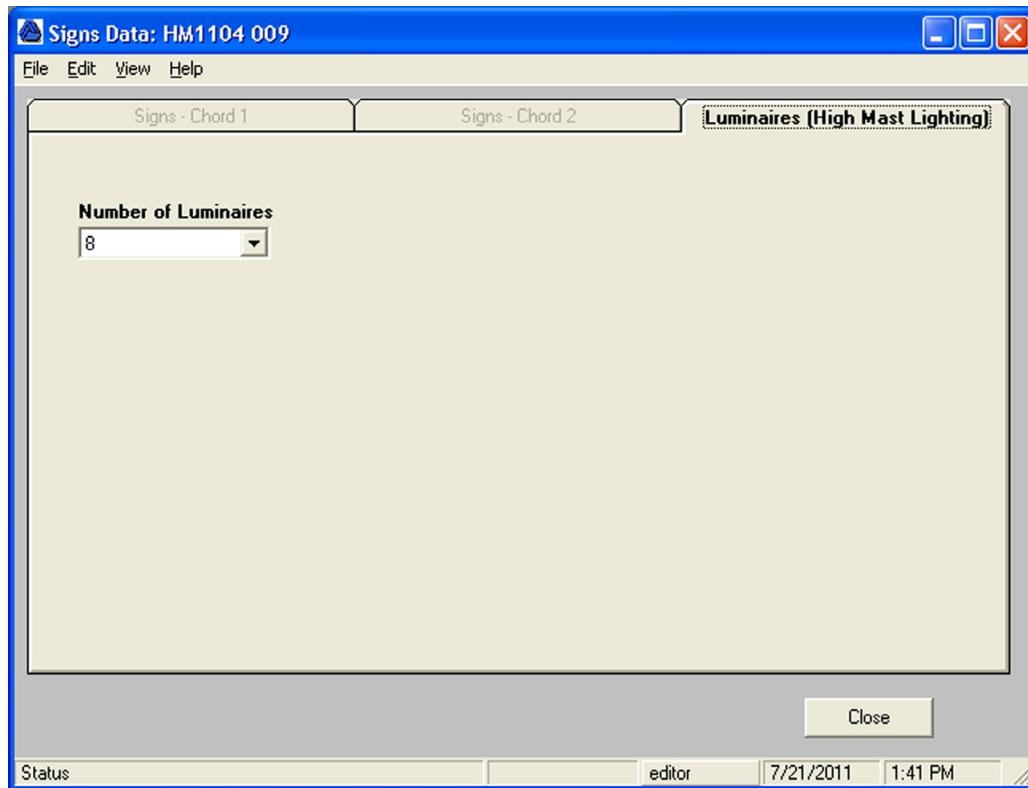
Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

Length

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

SIGN INSPECTION PROGRAM USER MANUAL

HM - HIGH MAST LIGHTING INSPECTION DATA

DeIDOT Sign Inspection

File Edit Reports Tools View Help

D-Gen D-Fd D-Pole D-Sign I-Gen SSDF I-Fd I-Pole I-Sign

Filters Structure Type County Inventory Number Inspection Type Miscellaneous

HM New Castle 1* Routine

Dates

From 1/1/1990 Inspection Next Routine Inspection Next Special Inspection

To 7/20/2011 Next NDT Inspection Next Cursory Inspection

Elim Refresh

Select Structure

ID	Location
HM1101 024	US 13 Southbound (Philadelphia Pike) at I-495 NB
HM1102 060	I-495 SB between M.P. 9.8 and 9.7 (Princeton Ave)
HM1103 060	I-495 SB at Bridge over RR Tracks, North of Exit 4
HM1104 009	12th Street EB at I-495 North
HM1105 060	I-495 NB at Exit 1 to US 13
HM1106 060	I-495 NR Just North of Exit 2 to Terminal Avenue

Select Inspection Date

Date	Type	Rating
10/14/2009	1	8
4/22/2003	1	8

Database Directory y:\S\Sulerzyski\deldottest\Cumulative Final Insp Db\StructInsp.mdb

Exit

Status # Strs= 27 admin 3/9/2012 10:01 AM

GENERAL INSPECTION - GENERAL

General Inspection: HM1101 024

File Edit Tools View Help

General Photos NDT Reports Structure History Notes

Inspection Date	Team Leader	NDT Inspector	Inspector	Inspector	Inspection Type
11/12/2014	URS/DDD	PAI/AAN	URS/TJS		Routine

	Rating	Comments
General Appearance	8	
General Alignment	8	
Camber Present	No	
Guardrail Protection/Alignment	8	There is guardrail protection present adjacent to the
OVERALL CONDITION	8	

CND FOUND	CND POLE	CND CHORD	CND BMS	CND ACCESS	CND SIGNS	CND LUMS	Critical Rating Flag
8	8	N	N	N	N	6	No

Main Comment | NDT Comment | Future Comment | Save | Close

Status: admin | 6/6/2016 | 10:51 AM

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

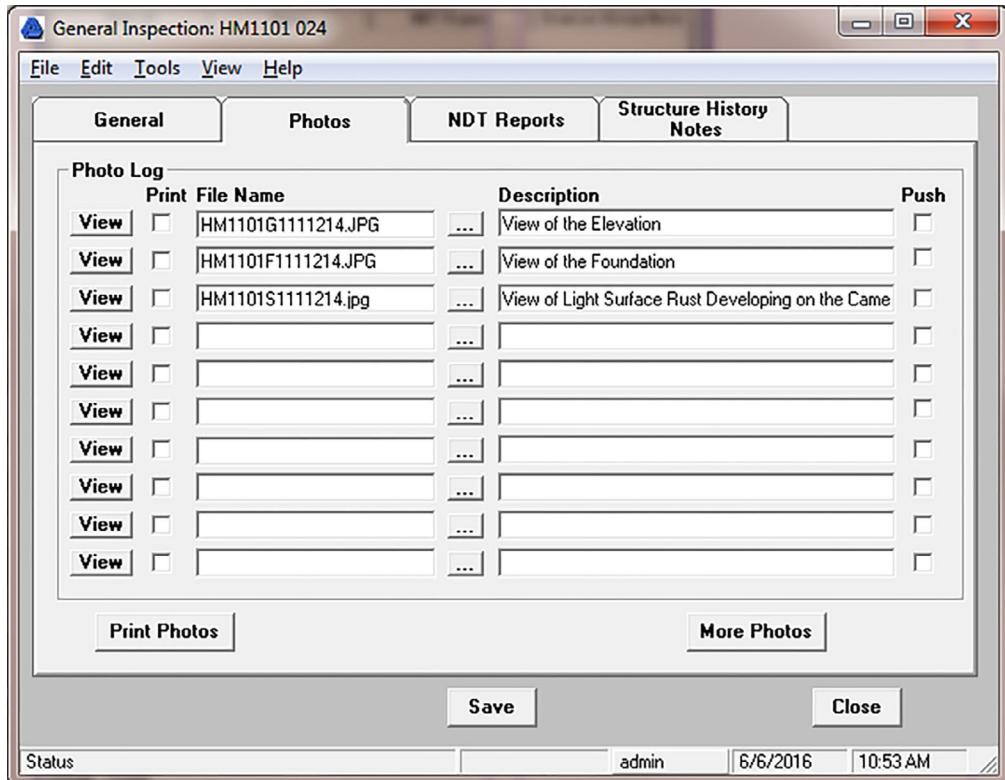
Save

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

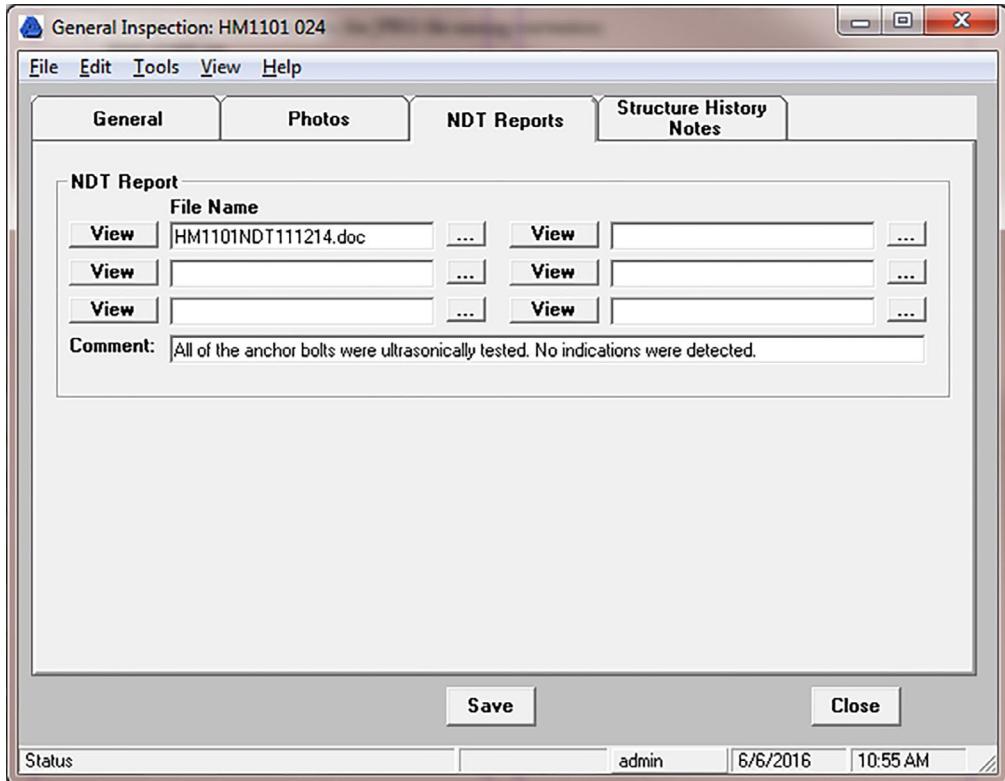
Description: Clicking on the **More Photos** button creates another **Photos** tab that allows up to ten additional photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

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: HM1016NDT.doc or HM1016NDT.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.

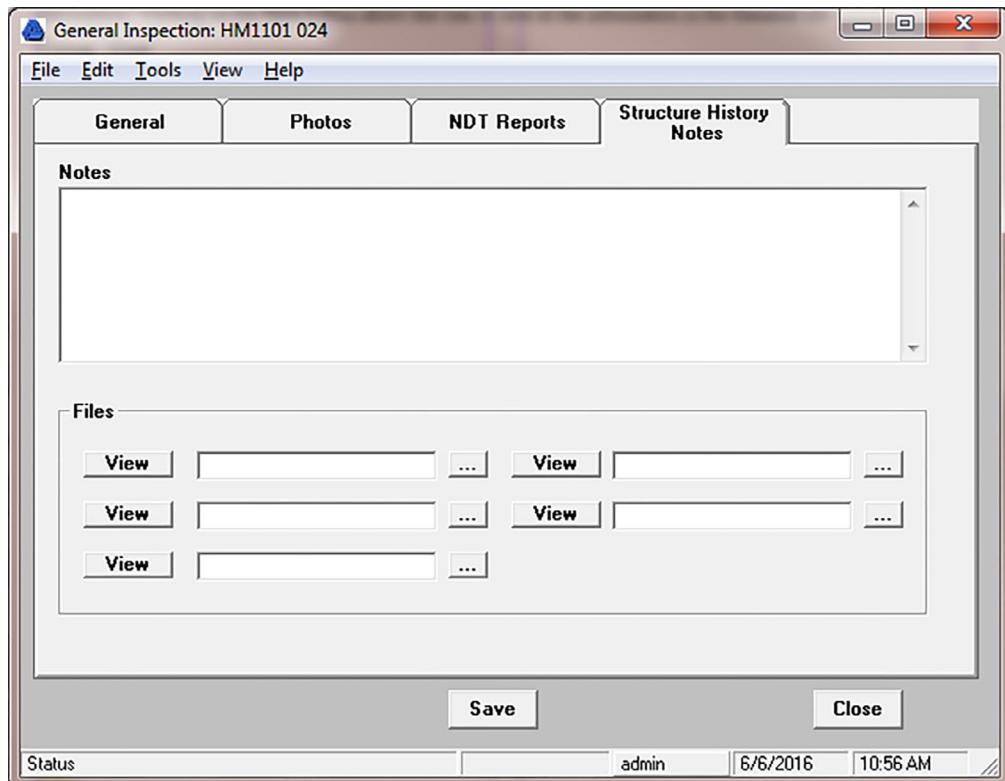
Coding: None

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

The screenshot shows a Windows application window titled "Sign Structure Deficiency: HM1104 009". The window has a menu bar with File, Edit, View, and Help. It contains three main sections: "Condition Index", "Functional Importance", and "Design Index".

Condition Index	Functional Importance	Design Index
NBI Condition Rating	7	10
Structurally Deficient	No	0
Condition Index Point Total		10
Sign Structure Deficiency Point Total*		15

A note at the bottom left states: "The total number of points 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." A "Close" button is at the bottom right, and a status bar at the bottom shows "Status editor 7/21/2011 2:04 PM".

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

Sign Structure Deficiency: HM1101 024

File Edit View Help

Condition Index	Functional Importance	Design Index
Points		
Functional Class	Arterial	8
Number of Lanes Impacted	3 lanes	2
Average Daily Traffic	5,000-9,999	2
Functional Importance Point Total 12		

Close

Status admin 6/6/2016 11:31 AM

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

Sign Structure Deficiency: HM1044 056

File Edit View Help

Condition Index Functional Importance Design Index

Points

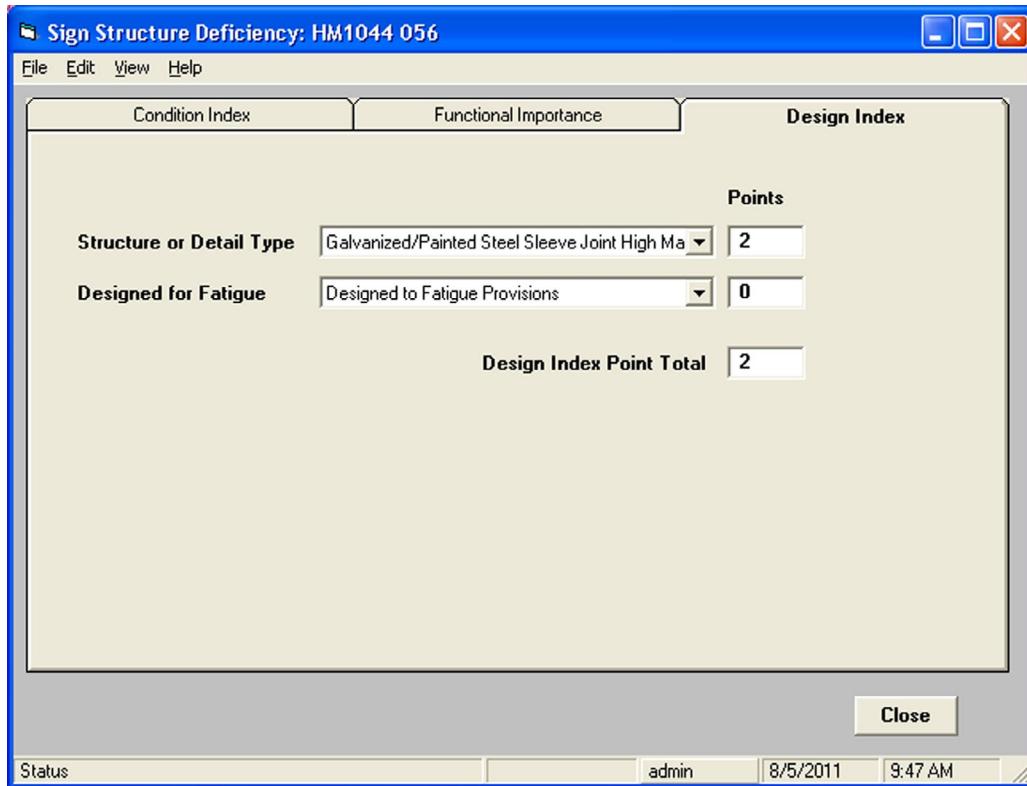
Structure or Detail Type: Galvanized/Painted Steel Sleeve Joint High Ma | 2

Designed for Fatigue: Designed to Fatigue Provisions | 0

Design Index Point Total: 2

Close

Status: admin | 8/5/2011 | 9:47 AM



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	3
Aluminum Sign Structure	
> 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

	Rating	Comments
Erosion/Undermining	8	
Pedestal/Footing(s)	8	
Grout Pad(s)	8	
Anchor Bolts	8	
Bracket Attachment	N	
CONDITION RATING	8	

Close

Status: editor 7/21/2011 2:07 PM

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

None

All of the anchor bolts were ultrasonically tested. No indications were detected.

NDT testing done at the time of inspection

All of the anchor bolts were ultrasonically tested. No indications were detected.

Close

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

Foundation Inspection: HM1101 024

Future maintenance required and/or repair recommendations

Code	Item	Activity	Description	Priority
Inspector Notes None Push <input type="checkbox"/>				
Inspector Notes				
Inspector Notes				
Inspector Notes				
Inspector Notes				

Close

Status editor 7/21/2011 2:09 PM

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

The screenshot shows a software application window titled "Pole Inspection: HM1101 024". The window has a menu bar with "File", "Edit", "View", and "Help". Below the menu is a toolbar with three buttons. The main area contains three tabs: "Pole General", "Maint/NDT" (which is selected and highlighted in blue), and "Future Maint". Under the "Maint/NDT" tab, there are two sections: "Maintenance repairs done at the time of inspection" and "NDT testing done at the time of inspection". Each section has a dropdown menu with "None" as the first option. To the right of each dropdown is a "Push" button, which is a small square with a downward-pointing arrow. At the bottom of the window is a status bar showing "Status", "editor", "7/21/2011", and "2:10 PM".

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	Priority
<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>
Inspector Notes None				<input type="checkbox"/> Push
<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>
Inspector Notes				
<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>
Inspector Notes				
<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>
Inspector Notes				
<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>
Inspector Notes				
<input type="button" value="Close"/>				

Status editor 7/21/2011 2:11 PM

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

	Rating	Comments
Walkway Platform	N	
Access Ladder	N	
Supports/Connections	N	
Handrails	N	
Safety Chains	N	
	N	

CONDITION RATING

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

Sign Inspection: HM1101 024

File		Edit	View	Help	Main Walk/Access		Signs		Lum/Cam/TS-Conn		Maint/NDT		Future Maint	
Luminaires	Rating			Comments										
Luminaires	N													
Cameras	8													
Photo Control Devices	8													
Electrical Components	8													
Connection to Supports	8													
CONDITION RATING		8												
Close														
Status				editor		7/21/2011		2:12 PM						

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

The screenshot shows a software application window titled "Sign Inspection: HM1101 024". The window has a menu bar with "File", "Edit", "View", and "Help". Below the menu is a toolbar with tabs: "Maint Walk/Access", "Signs", "Lum/Cam/TS-Conn", "Maint/NDT" (which is highlighted in blue), and "Future Maint". The main area contains two sections: "Maintenance repairs done at the time of inspection" and "NDT testing done at the time of inspection", each with five dropdown menus. To the right of each section is a "Push" button with a checkbox. At the bottom right of the window is a "Close" button. The status bar at the bottom shows "Status", "editor", "7/21/2011", and "2:13 PM".

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	Priority
Inspector Notes	None			<input type="checkbox"/> Push
Inspector Notes				
Inspector Notes				
Inspector Notes				
Inspector Notes				
Inspector Notes				

Close

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.

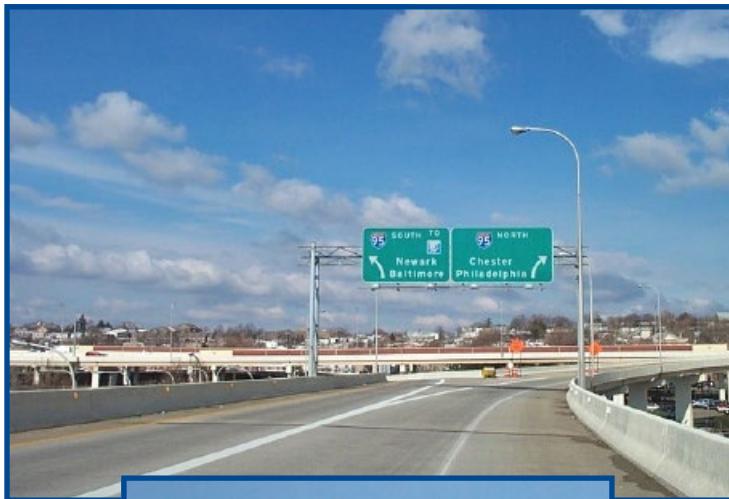
Inspector Notes

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.

SECTION VI - SB - BRIDGE MOUNTED SIGN





BRIDGE MOUNTED SIGN (STRUCTURE DATA)

SIGN INSPECTION PROGRAM USER MANUAL

SB - BRIDGE MOUNTED SIGN STRUCTURE DATA

DeIDOT Sign Inspection

File Edit Reports Tools View Help

D-Gen D-BMS I-Gen SSDF I-BMS I-Sign

Filters Structure Type County Inventory Number Inspection Type Miscellaneous

SB Kent 1* Routine

Dates

From 1/1/1990 Inspection Next Routine Inspection Next Special Inspection Elim Refresh

To 7/20/2011 Next NDT Inspection Next Cursory Inspection

Select Structure

ID	Location
SB2151 356	SR 10 EB at SR 1 Overpass
SB2152 356	SR 10 WB at SR 1 Overpass
SB2153 356	SR 10 WB at SR 1 Overpass
SB2154 088	US 113 SB at SR 1 Overpass, Puncheon Connector
SB2155 088	US 113 SB at SR 1 Overpass, Puncheon Connector
SR2156 007	SR 1 SR attached to the Old Lebanon Road Bridge

Select Inspection Date

Date	Type	Rating
3/10/2009	1	8
5/16/2001	1	8

Database Directory y:\S\Sulerzyski\deldottest\Cumulative Final Insp Db\StructInsp.mdb

Exit

Status # Strs= 6 admin 3/9/2012 9:53 AM

BRIDGE MOUNTED SIGN - STRUCTURE DATA

GENERAL DATA - GENERAL 1

The screenshot shows a Windows application window titled "General Data: SB2153 356". The window has a menu bar with File, Edit, View, and Help. Below the menu is a tab bar with "General 1" (selected), "General 2", and "Clearance Measurements". The "General 1" tab contains fields for "Contract 1" through "Contract 6", "District", "NHS", "Average Daily Traffic", "% Truck", "Mile-Point", "Functional Class", "Latitude", "Longitude", "Location Description", and a "Map" button. At the bottom of the window is a status bar showing "Status", "admin", "1/5/2012", and "1:44 PM".

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.

BRIDGE MOUNTED SIGN - STRUCTURE DATA

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

The screenshot shows a Windows application window titled "General Data: SB2153 356". The window has a menu bar with File, Edit, View, and Help. There are three tabs at the top: "General 1", "General 2" (which is selected), and "Clearance Measurements".

The "General 2" tab contains the following fields:

- Message Type:** Standard Signs (dropdown)
- Support Type:** Bridge Mounted (dropdown)
- Year Built:** unknown (dropdown)
- Inspection Frequency (Months):** 60 (dropdown)
- Year Reconstructed:** unknown (dropdown)
- Designed for Fatigue:** (dropdown)
- Access Equipment Required:** Lift Van (dropdown)
- Cursory Inspection Frequency (Months):** (dropdown)
- NDT Inspection Frequency (Months):** (dropdown)
- Special Inspection Frequency (Months):** (dropdown)
- Traffic Control Required:** Case No. 27 (dropdown)
- Special Inspection Frequency Description:** (text input field)
- Electrical Description:** (text input field)
- Lighting Present on Structure:** No (dropdown)

At the bottom right of the window is a "Close" button. The status bar at the bottom shows "Status", "admin", "3/9/2012", and "9:44 AM".

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

General Data: SB2153 356

File Edit View Help

General 1		General 2		Clearance Measurements			
RoadWay Name	Minimum Vertical Clearance	Vertical Clearance Roadway CL	Vertical Clearance Right Shoulder	Vertical Clearance Left Shoulder	Distance fr Edge of Lane to Right Support	Distance fr Edge of Lane to Left Support	
SR 10 WB	0						

*Enter all distances in decimal feet

Median Width (Feet)

Close

Status editor 7/21/2011 2:17 PM

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.

BRIDGE MOUNTED SIGN - STRUCTURE DATA

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

Bridge Mounted Sign Data: SB2153 356

Cross Section	Tapered	Material	Splice Type	Finish		
Structural Tee	No	Steel	Not Applicable	Painted		
W-Section	Connection to Bridge	No. of Lanes Under Sign(s)				
Collar	Bolted	2				
Sign Panel No.	Origin	Panel Area (sq ft)	No Luminaires	Message	Type	Reflectivity
1	New Par	161.5	0	10 WEST / Camden	Extruded	Ref
2						Ref
Total Number of Signs		1	Total Area of Signs		161.5	
<input type="button" value="Close"/>						

Status editor 7/21/2011 2:19 PM

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

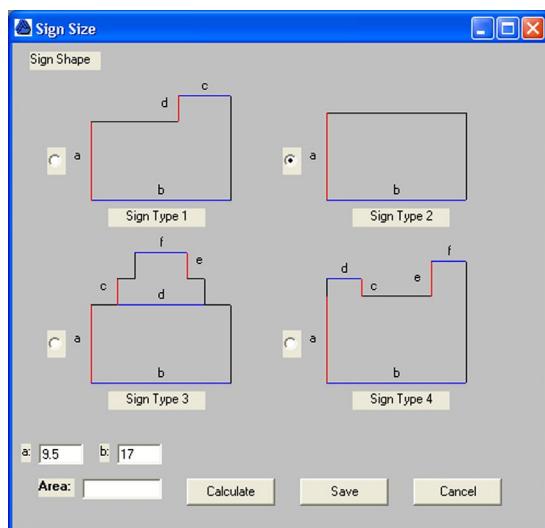
3 = New Panel

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	Color	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Average
1 BACKGROUND	GREEN	53	53	54	51	53	52.8
2 FOREGROUND	WHITE	345	500	514	490	387	447.2
3 BACKGROUND	YELLOW	453	467	465	477	467	465.8
4							

Buttons: Clear Readings, Calculate Average, Save, Cancel

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

SIGN INSPECTION PROGRAM USER MANUAL

SB - BRIDGE MOUNTED SIGN INSPECTION DATA

DeIDOT Sign Inspection

File Edit Reports Tools View Help

D-Gen D-BMS I-Gen SSDF I-BMS I-Sign

Filters Structure Type County Inventory Number Inspection Type Miscellaneous

SB	Kent	1*	Routine	
----	------	----	---------	--

Dates

From: 1/1/1990 Inspection Next Routine Inspection Next Special Inspection

To: 7/20/2011 Next NDT Inspection Next Cursory Inspection

Elim Refresh

Select Structure

ID	Location
SB2152 356	SR 10 WB at SR 1 Overpass
SB2153 356	SR 10 WB at SR 1 Overpass
SB2154 088	US 113 SB at SR 1 Overpass, Puncheon Connector
SB2155 088	US 113 SB at SR 1 Overpass, Puncheon Connector
SB2156 007	SR 1 SB attached to the Old Lebanon Road Bridge

Select Inspection Date

Date	Type	Rating
3/10/2009	1	8
5/16/2001	1	8

Database Directory: y:\S\Sulerzyski\deidottest\Cumulative Final Insp Db\StructInsp.mdb

Exit

Status: # Strs= 6 admin 3/15/2012 2:06 PM

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

View	Print	File Name	Description	Push
<input type="checkbox"/>	<input type="checkbox"/>	SB2152G1081513.JPG	Front Elevation (SB2152 is on the Right)	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	SB2152G2081513.JPG	Sign Panel	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	SB2152G3081513.JPG	Rear Elevation (SB2152 is in foreground)	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>			<input type="checkbox"/>

Print Photos More Photos Save Close

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 - INSPECTION DATA

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:

SB2104G1.jpg

SB1352G1.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

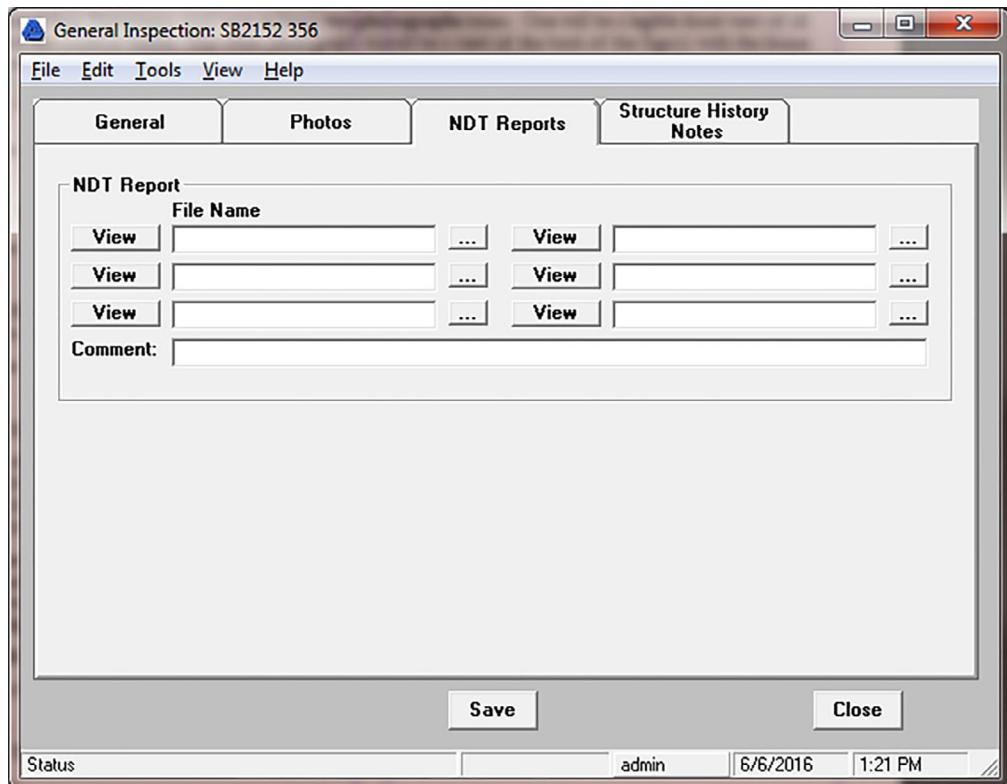
Description: Clicking on the **More Photos** button creates another **Photos** tab that allows up to ten additional photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

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: SB1352NDT.doc or SB1352NDT.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.

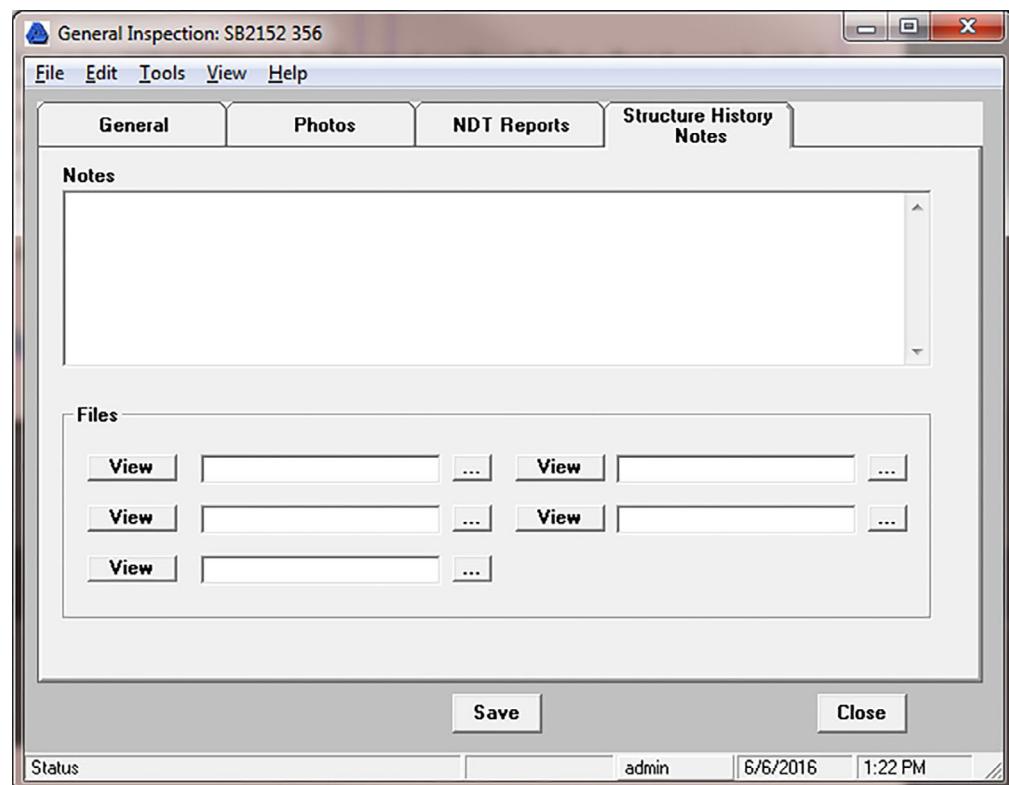
Coding: None

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

The screenshot shows a Windows-style dialog box titled "Sign Structure Deficiency: SB2153 356". The main area contains three input fields under the heading "Condition Index": "NBI Condition Rating" (set to 8), "Structurally Deficient" (set to No), and "Condition Index Point Total" (set to 5). Below these, a larger field labeled "Sign Structure Deficiency Point Total*" contains the value 8. A note at the bottom states: "The total number of points 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." At the bottom right is a "Close" button, and the status bar at the bottom shows "Status editor 7/21/2011 2:30 PM".

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

Sign Structure Deficiency: SB2152 356

File	Edit	View	Help
Condition Index	Functional Importance	Design Index	
Points			
Functional Class	<input type="text" value="Arterial"/>	8	
Number of Lanes Impacted	<input type="text" value="0-1 lanes"/>	0	
Average Daily Traffic	<input type="text" value="10,000-14,999"/>	3	
Functional Importance Point Total <input type="text" value="11"/>			
Close			
Status	admin	6/6/2016	1:25 PM

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.

BRIDGE MOUNTED SIGN - INSPECTION DATA

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

Sign Structure Deficiency: SB2153 356

File Edit View Help

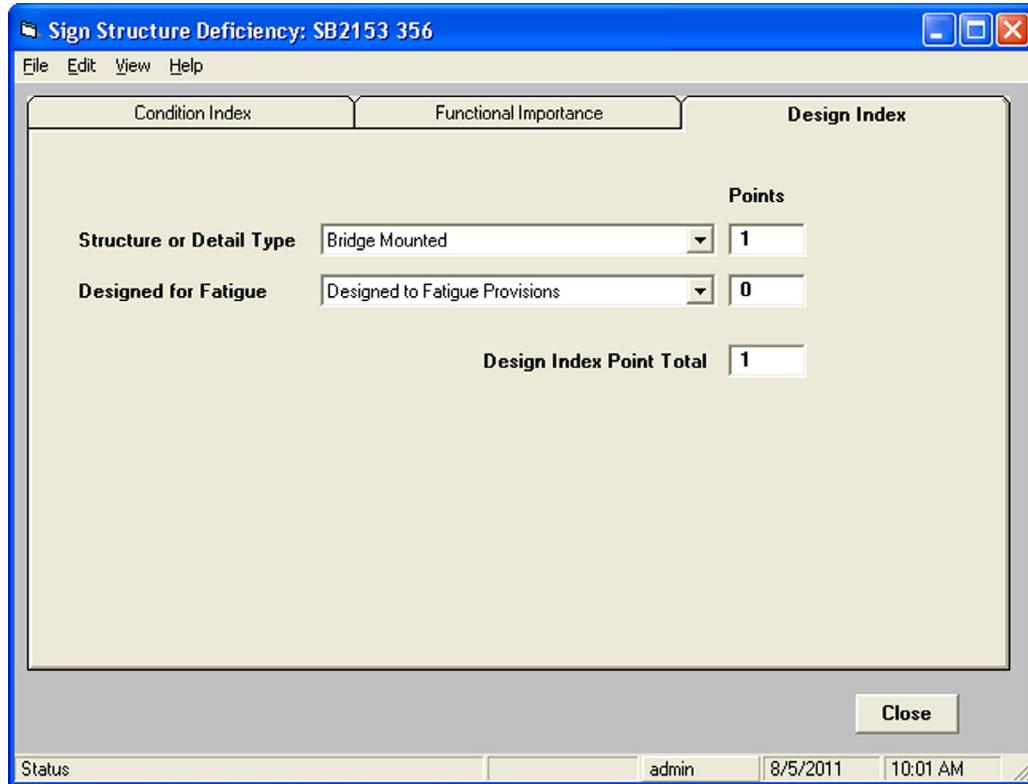
Condition Index Functional Importance Design Index

Points

Structure or Detail Type	Bridge Mounted	1
Designed for Fatigue	Designed to Fatigue Provisions	0
Design Index Point Total		1

Close

Status admin 8/5/2011 10:01 AM

**Structure or Detail Type**

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

BRIDGE MOUNTED SIGN - INSPECTION DATA

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

General

	Rating	Comments
Frame work	8	
Joints/Splices	8	
Connections to Bridge	8	

CONDITION RATING 8

Close

Status editor 7/21/2011 2:32 PM

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

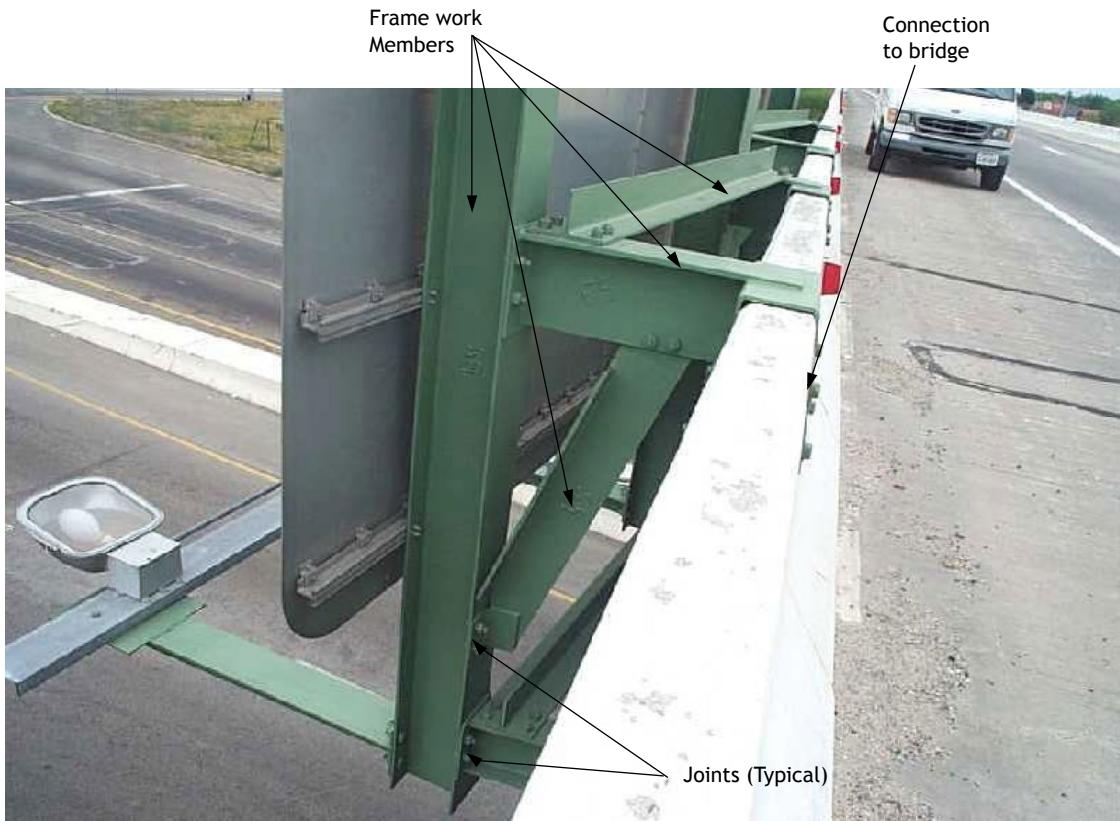
Description: This element involves the inspection of the member joints and member splices within the frame work.

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.

BRIDGE MOUNTED SIGN - INSPECTION DATA



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

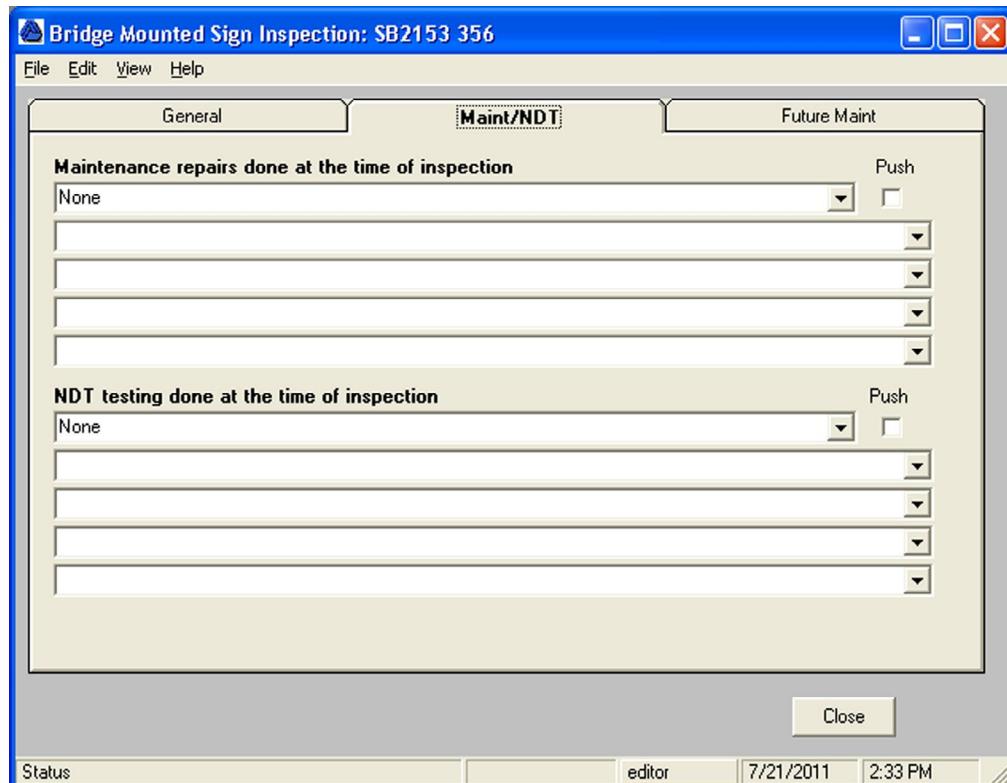
Description: This numerical condition rating should characterize the general condition of the Bridge Mounted Sign. It should not attempt to describe localized or isolated instances of deterioration or disrepair. Correct assignment of this condition rating must, therefore, consider both the severity of 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

Code	Item	Activity	Description	Priority
Inspector Notes: None <input type="checkbox"/> Push				
Inspector Notes:				
Inspector Notes:				
Inspector Notes:				
Inspector Notes:				

Close

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.

BRIDGE MOUNTED SIGN - INSPECTION DATA

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

The screenshot shows a Windows application window titled "Sign Inspection: SB2153 356". The window has a standard title bar with minimize, maximize, and close buttons. Below the title bar is a menu bar with "File", "Edit", "View", and "Help". The main area of the window contains five inspection items, each with a "Rating" dropdown and a "Comments" text field. The items are: "Walkway Platform", "Access Ladder", "Supports/Connections", "Handrails", and "Safety Chains". Below these items is a "CONDITION RATING" dropdown menu. At the bottom of the window is a status bar showing "Status", "editor", "7/21/2011", "2:34 PM", and a date/time icon. A "Close" button is located at the bottom right of the main window area.

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

The screenshot shows a software application window titled "Sign Inspection: SB2153 356". The "Signs" tab is active. The interface includes a menu bar with File, Edit, View, Help, and several tabs: Main Walk/Access, Signs (selected), Lum/Cam/TS-Conn, Maint/NDT, and Future Maint. Below the tabs are three rows of inspection items: "Attachment to Structure", "Reflectivity", and "Legibility", each with a "Rating" dropdown set to 8 and a "Comments" text input field. At the bottom is a "CONDITION RATING" dropdown set to 8. A "Close" button is located at the bottom right of the main panel.

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”.

BRIDGE MOUNTED SIGN - INSPECTION DATA

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

	Rating	Comments
Luminaires	<input type="button" value="N"/>	
Cameras	<input type="button" value="N"/>	
Photo Control Devices	<input type="button" value="N"/>	
Electrical Components	<input type="button" value="N"/>	
Connection to Supports	<input type="button" value="N"/>	

CONDITION RATING

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.

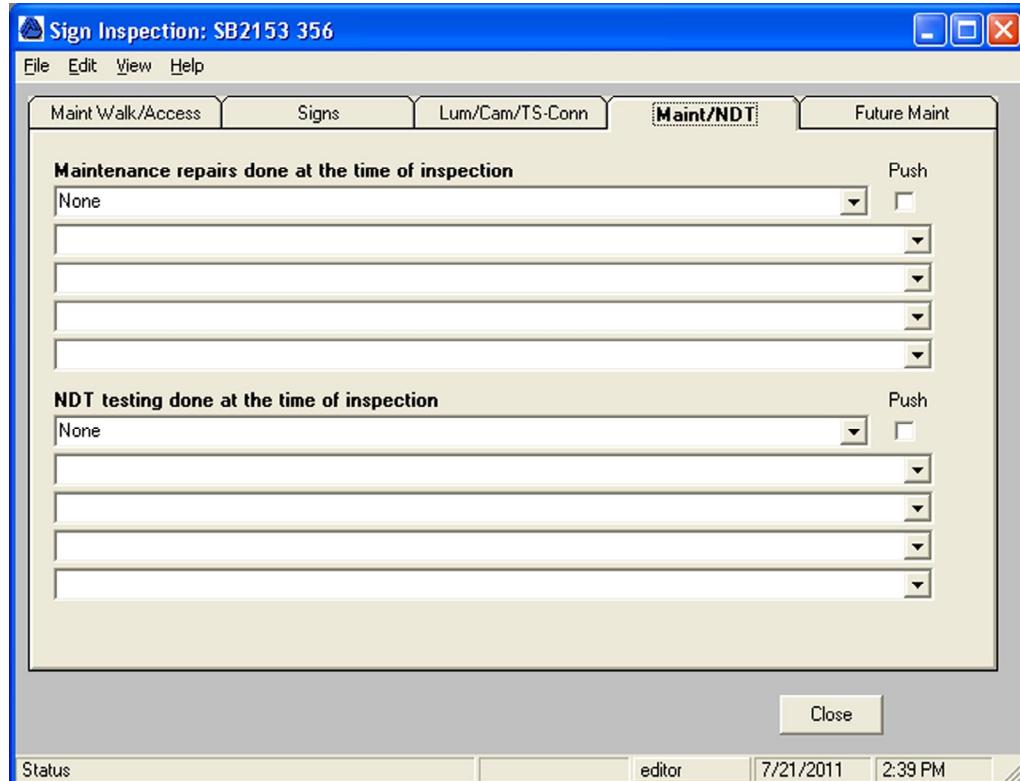
CONDITION RATING

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.

BRIDGE MOUNTED SIGN - INSPECTION DATA

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

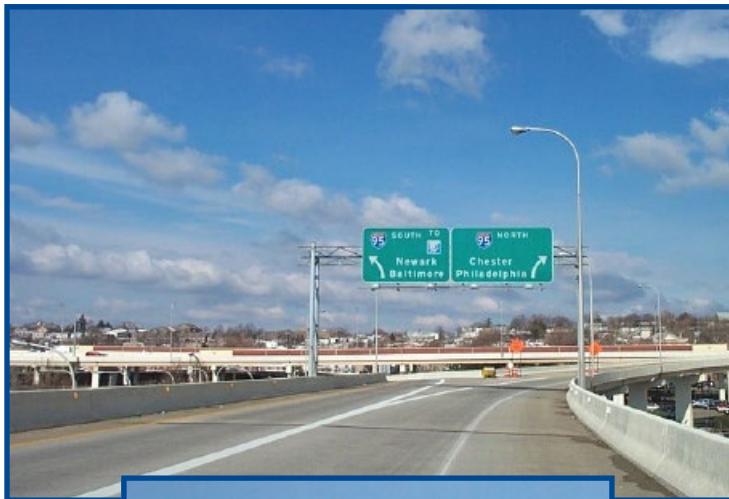
Inspector Notes

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.

SECTION VII - SC - CANTILEVER SIGN STRUCTURE



SIGN INSPECTION PROGRAM USER MANUAL

SC - CANTILEVER SIGN STRUCTURE STRUCTURE DATA

DeIDOT Sign Inspection

File Edit Reports Tools View Help

D-Gen D-Fd D-Pole D-Chd D-Sign I-Gen SSDF I-Fd I-Pole I-Chd I-Sign

Filters Structure Type County Inventory Number Inspection Type Miscellaneous

SC Kent 1* Routine

Dates

From 1/1/1990 Inspection Next Routine Inspection Next Special Inspection Elim Refresh

To 7/20/2011 Next NDT Inspection Next Cursory Inspection

Select Structure

ID	Location
SC2150A150	SR 1 NB at Exit 114
SC2150E150	SR 1 SB at Exit 114
SC2150F150	SR 1 SB at Exit 104
SC2150G150	SR 1 NB at Exit 104

Select Inspection Date

Date	Type	Rating
10/23/2008	1	7
5/24/2001	1	7

Database Directory: y:\S\Sulerzyski\deldottest\Cumulative Final Insp Db\StructInsp.mdb

Exit

Status # Strs= 4 admin 3/9/2012 9:54 AM

CANTILEVER SIGN STRUCTURE - STRUCTURE DATA

GENERAL DATA - GENERAL 1

The screenshot shows a Windows application window titled "General Data: SC2150A150". The window has a menu bar with File, Edit, View, and Help. Below the menu is a tab bar with "General 1" (selected), "General 2", and "Clearance Measurements". The "General 1" tab contains fields for Contract numbers (Contract 1 through Contract 6), District (Central), NHS (National Highway System), Average Daily Traffic, % Truck, Mile-Point, Functional Class, Latitude, Longitude, and Location Description. A "Map" button is also present. At the bottom are status bars for Status, admin, Date (1/5/2012), and Time (1:45 PM). A "Close" button is located at the bottom right.

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.

CANTILEVER SIGN STRUCTURE - STRUCTURE DATA

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

The screenshot shows a Windows application window titled "General Data: SC2150A150". The window has a menu bar with File, Edit, View, and Help. Below the menu is a tab bar with three tabs: General 1, General 2 (which is selected), and Clearance Measurements. The main area contains various input fields and dropdown menus. The fields include:

- Message Type: Standard Signs
- Support Type: Cantilever
- Year Built: unknown
- Inspection Frequency (Months): 60
- Year Reconstructed: unknown
- Designed for Fatigue: (dropdown menu)
- Access Equipment Required: Bucket Truck
- Cursory Inspection Frequency (Months): (dropdown menu)
- NDT Inspection Frequency (Months): (dropdown menu)
- Special Inspection Frequency (Months): (dropdown menu)
- Traffic Control Required: Case No. 27
- Special Inspection Frequency Description: (text input field)
- Electrical Description: (text input field)
- Lighting Present on Structure: No

At the bottom right is a "Close" button, and at the bottom left is a status bar showing Status, admin, 3/9/2012, and 9:46 AM.

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

CANTILEVER SIGN STRUCTURE - STRUCTURE DATA

GENERAL DATA - CLEARANCE MEASUREMENTS

The screenshot shows a software application window titled "General Data: SC2150A150". The window has a menu bar with "File", "Edit", "View", and "Help". Below the menu is a toolbar with three buttons. The main area contains three tabs: "General 1", "General 2", and "Clearance Measurements", with "Clearance Measurements" currently selected. The "Clearance Measurements" tab displays data for two roadways:

RoadWay Name	Minimum Vertical Clearance	Vertical Clearance Roadway CL	Vertical Clearance Right Shoulder	Vertical Clearance Left Shoulder	Distance fr Edge of Lane to Right Support	Distance fr Edge of Lane to Left Support
SR 1 NB	22.5	22.5	22.75		17	

A note at the bottom of the table says "*Enter all distances in decimal feet". Below the table is a section labeled "Median Width (Feet)" with an input field. At the bottom right of the window is a "Close" button, and at the bottom left is a "Status" bar showing "editor" and the date and time "7/21/2011 2:43 PM".

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

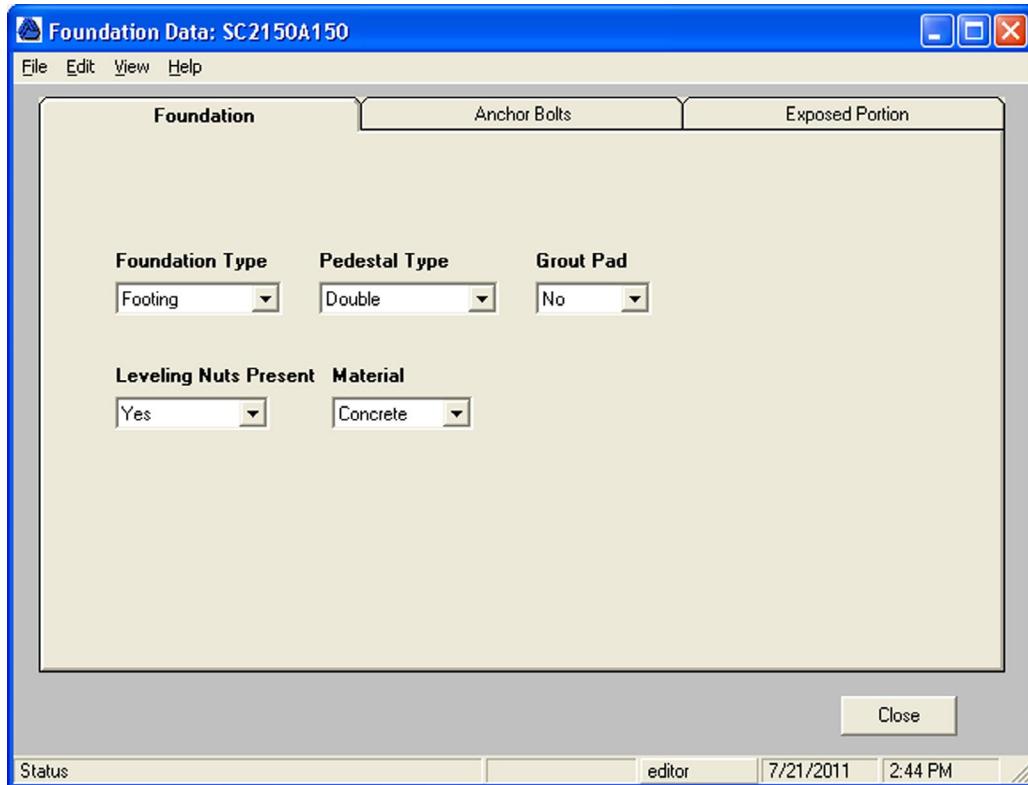
Median Width (Feet)

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 Data: SC2150A150

Foundation		Anchor Bolts		Exposed Portion		
Foundation	Pole No	No of Bolts	Bolt Dia (Inches)	Shape	Bolt Layout Length/Diam (Inches)	
L	1	<input type="text"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="text"/> ...	
	2	<input type="text"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="text"/> ...	
M	1	<input type="text"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="text"/> ...	
	2	<input type="text"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="text"/> ...	
R	1	<input type="text"/> 8	<input type="button" value="▼"/> 1.75	<input type="button" value="▼"/> Rectangle/Square	<input type="text"/> 18	<input type="text"/> 18
	2	<input type="text"/> 8	<input type="button" value="▼"/> 1.75	<input type="button" value="▼"/> Rectangle/Square	<input type="text"/> 18	<input type="text"/> 18

Close

Status editor 7/21/2011 2:44 PM

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”.

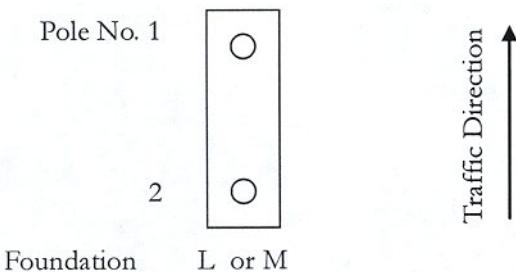
The right foundation is labeled as Foundation “R”.

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	Pole No	Height (decimal feet)	Shape	Length/Diam (decimal feet)	Width (decimal feet)
L	1				
	2				
M	1				
	2				
R	1	0.42	Rectangle/Square	3	3
	2	0.42	Rectangle/Square	3	3

Close

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

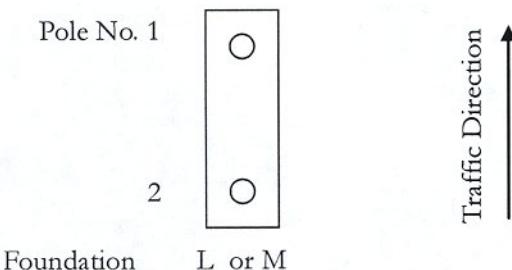
Description: Data can be entered for up to two foundations at one location.

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.

CANTILEVER SIGN STRUCTURE - STRUCTURE DATA



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

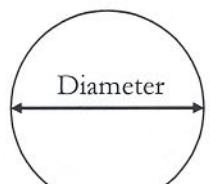
10 = Dodecagon (12 Sided)

11 = Octdecagon (18 Sided)

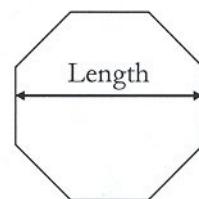
Length/Diam (decimal feet)

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.

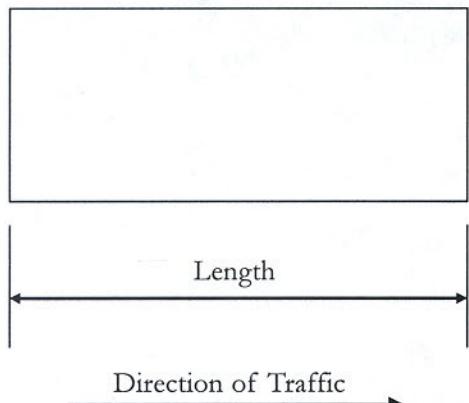


Circle or Fluted

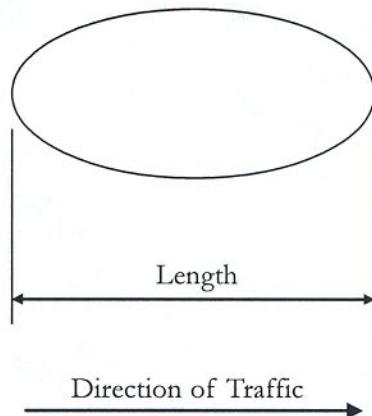


Octagon
(Hexagon & Pentagon similar)

CANTILEVER SIGN STRUCTURE - STRUCTURE DATA



Rectangle/Square
(Trapezoid similar - use average values)



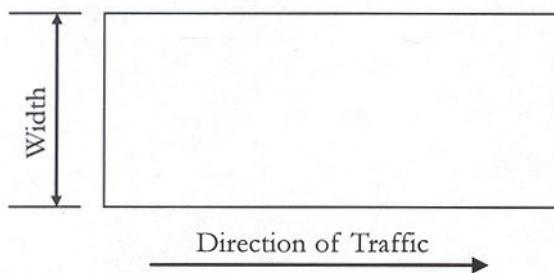
Ellipse

Coding: None

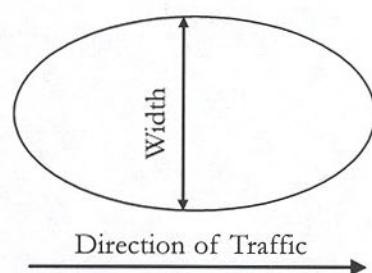
Width (decimal feet)

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.

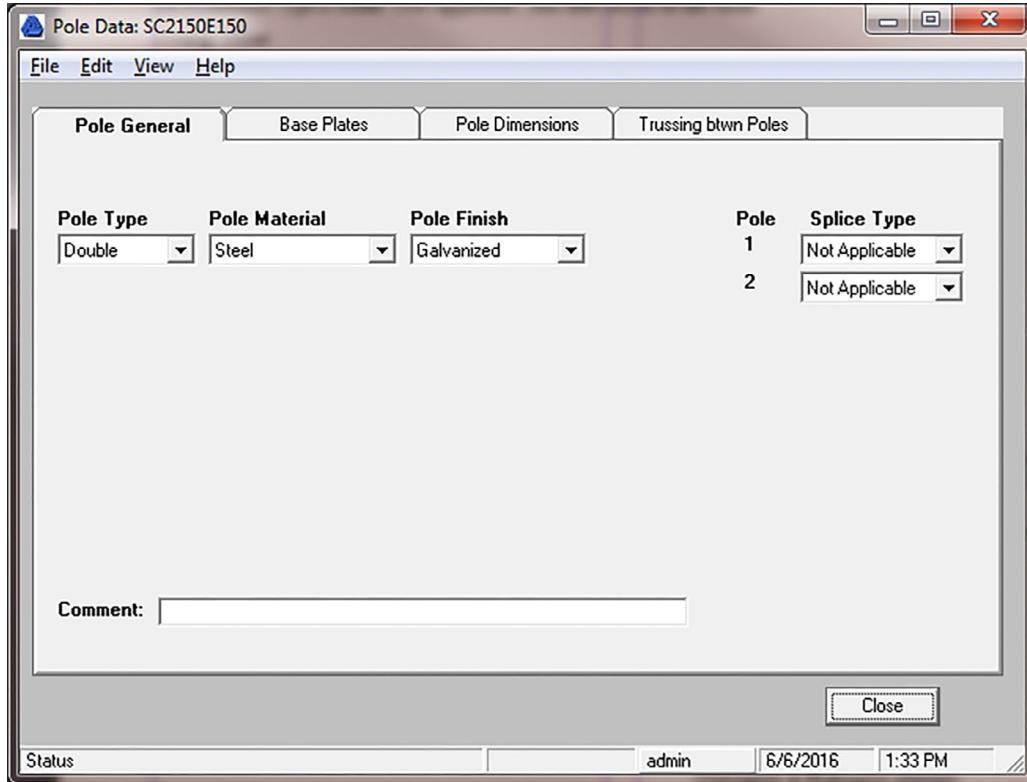


Rectangle/Square
(Trapezoid similar - use average values)



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.

CANTILEVER SIGN STRUCTURE - STRUCTURE DATA

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

Splice Type

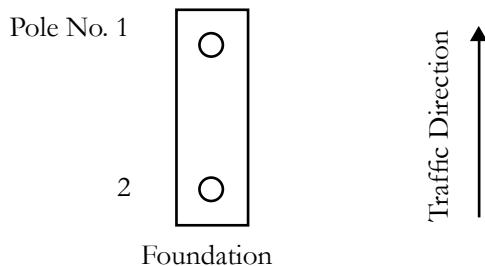
Description: From the pull down menu, select the type of horizontal splice, if applicable, that is present on the pole(s).

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 Data: SC2150E150

Pole	Shape	Thickness Inches	Length/Diam Inches	Width Inches
1	Rectangle/Square	1.750	25	25
2	Rectangle/Square	1.750	25	25

Comment:

Close

Status: admin | 6/6/2016 | 1:36 PM

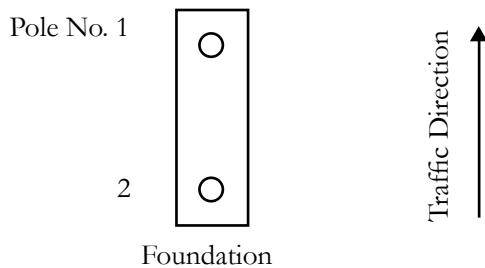
Pole - 1 and 2

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.

CANTILEVER SIGN STRUCTURE - STRUCTURE DATA

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.

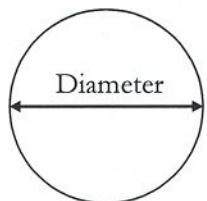
If the thickness cannot be determined, the Pole or Foundation Type is coded “Not Applicable” or the pole extends into the ground, as in the case of a timber utility pole, this field should be left blank.

Coding: None

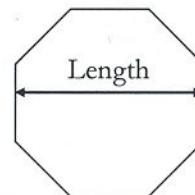
Length/Diam - Inches

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.

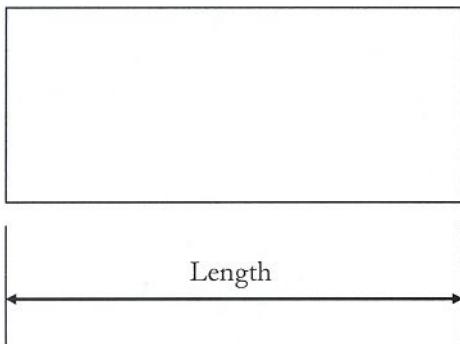


Circle or Fluted

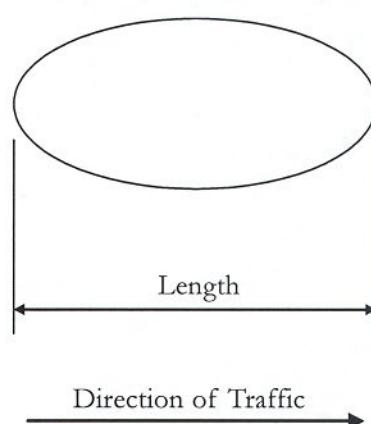


Octagon

(Hexagon & Pentagon similar)



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

Coding: None

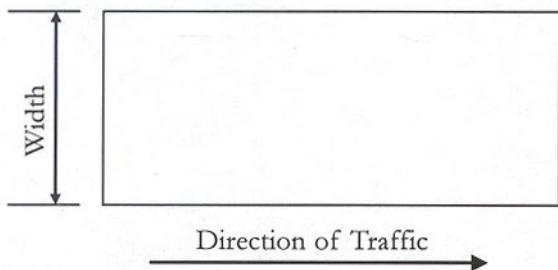
CANTILEVER SIGN STRUCTURE - STRUCTURE DATA

Width - Inches

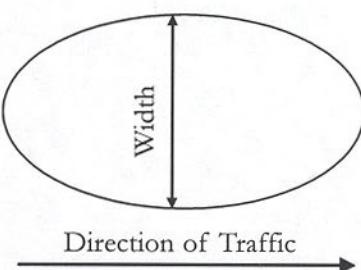
Description: Based on the illustrations shown below, enter the width (in inches) of each base plate in plan.

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

Screenshot of the "Pole Data: SC2150E150" application window. The window title is "Pole Data: SC2150E150". The menu bar includes File, Edit, View, and Help. The tabs at the top are Pole General, Base Plates, Pole Dimensions (which is selected), and Trussing b/w Poles. The main data entry area shows two poles (1 and 2) with their dimensions. Pole 1 has a height of 25.25 feet and 0.5 inches wall thickness. Pole 2 has a height of 31.25 feet and 0.5 inches wall thickness. The "Outside Diameter/Length" and "Outside Width" fields are in inches, with min and max values both set to 12 inches for both poles. A "Comment:" text input field is at the bottom, and a "Close" button is in the bottom right corner. The status bar at the bottom shows "Status", "admin", "6/6/2016", and "1:41 PM".

Pole	Cross Section	Pole Height	Wall Thickness	Outside Diameter/Length Inches	Outside Width Inches
1	Box	25.25	0.5	12	12
2	Box	31.25	0.5	12	12

CANTILEVER SIGN STRUCTURE - STRUCTURE DATA

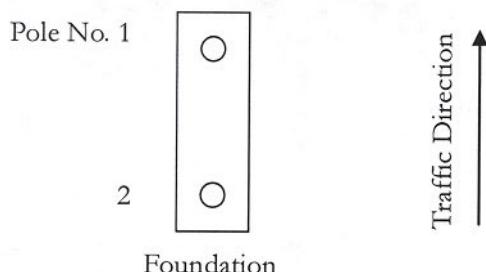
Pole - 1 and 2

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.

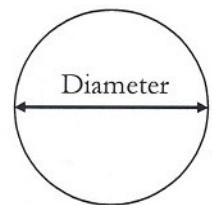
Coding: None

Outside Diameter/Length - Inches

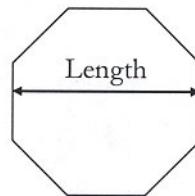
Description: Based on the illustrations shown below, enter the minimum and maximum outside length in the direction of traffic or diameter (in decimal inches) of each pole's cross section. The program will calculate the minimum and maximum outside diameters automatically by clicking on the box next to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

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

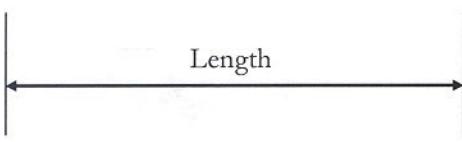
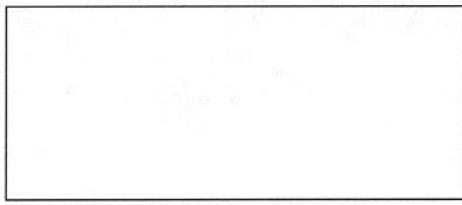
CANTILEVER SIGN STRUCTURE - STRUCTURE DATA



Circle or Fluted

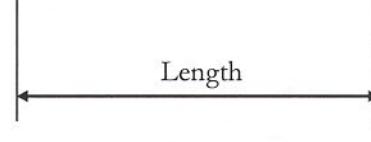
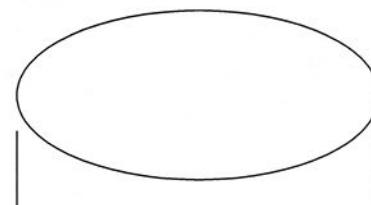


Octagon
(Other Polygon Shapes similar)



Direction of Traffic →

Rectangle/Square
(Trapezoid similar - use average values)



Direction of Traffic →

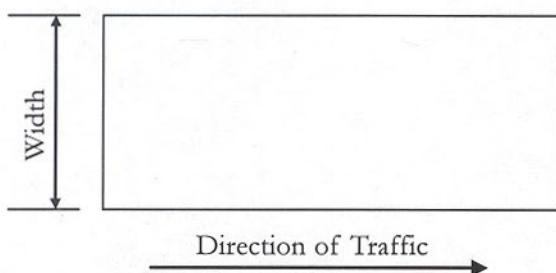
Ellipse

Coding: None

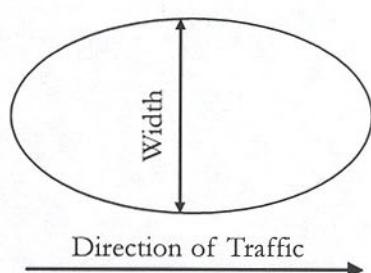
Outside Width - Inches

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

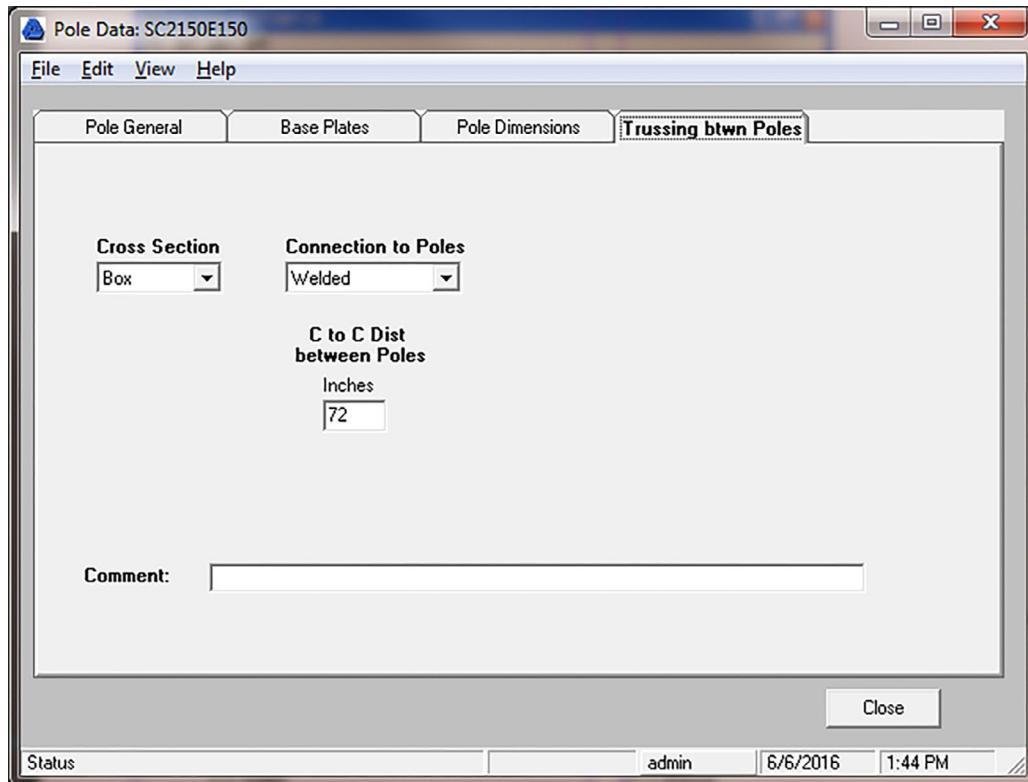
Coding: None

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

CANTILEVER SIGN STRUCTURE - STRUCTURE DATA

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

The screenshot shows the 'Chords Data: SC2150F150' application window. The 'Chord General' tab is selected. The 'Chord Type No' dropdown is set to 1, and the 'No of Chord Types' dropdown is also set to 1. Under 'Chord Type', 'Tri-Chord' is selected. 'Chord Finish' is 'Galvanized', 'Chord Material' is 'Steel', 'Connect to Pole' is 'Welded', and 'Rdwy Name Undr Chord' is 'SR 1 SB'. The 'No Lanes Undr Chord' dropdown is set to 1. In the 'Span Length' section, 'Vertical' is 27.33 and 'Horiz/Diag' is 6. In the 'Dist CL Near Chord Memb to Top Pole' section, 'Pole 1' is 1.5 and 'Pole 2' is 1.5. Below these, it says '* Above values decimal feet'. In the 'Wall Thickness (inches)' section, the value is 0.375. The 'Shape' dropdown is set to 'Rectangle/Square'. In the 'Outside Diameter/Length' section, both 'min' and 'max' fields are 8. In the 'Outside Width (Inches)' section, both 'min' and 'max' fields are 8. A 'Comment:' text input field is at the bottom left, and a 'Close' button is at the bottom right. The status bar at the bottom shows 'Status', 'admin', '6/6/2016', and '1:46 PM'.

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

CANTILEVER SIGN STRUCTURE - STRUCTURE DATA

No of Chord Types

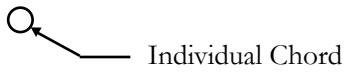
Description: From the pull down menu, select the number of Chord Type configurations present on the structure. Data can be entered for up to two configurations.

Coding: None

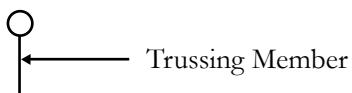
Chord Type

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

Coding: 1 = Single Chord

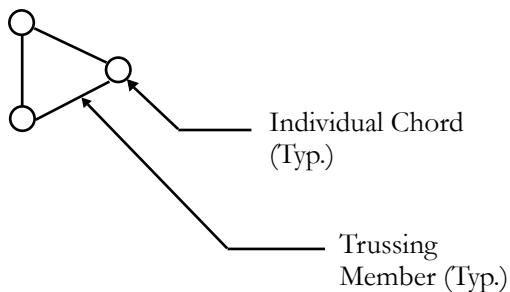


2 = Two Chord

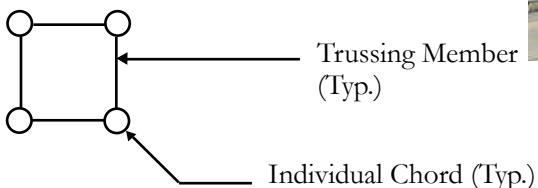


Individual Chord (Typ.)

3 = Tri-Chord

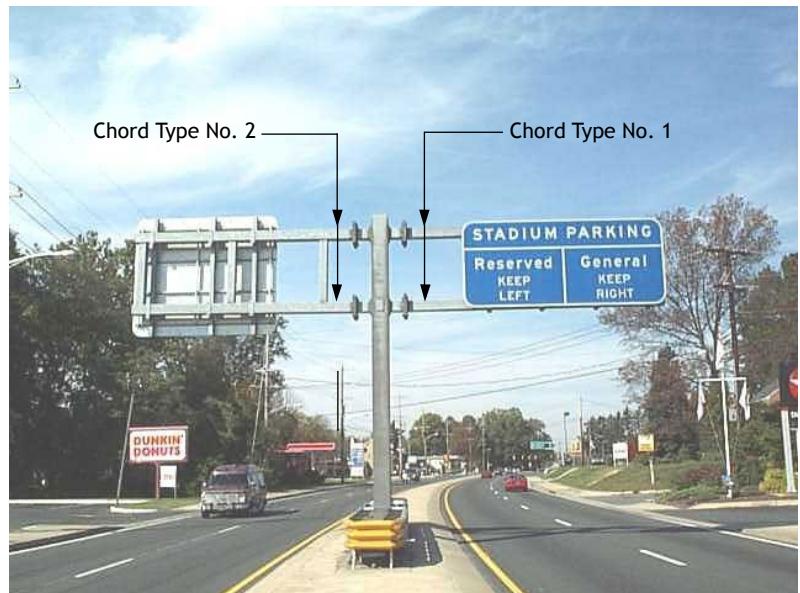


4 = Box (4 Chord)



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 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

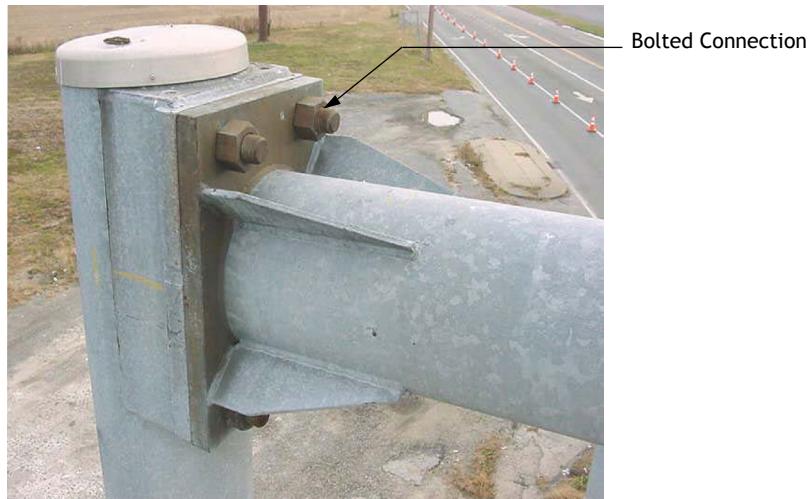
Connect to Pole

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

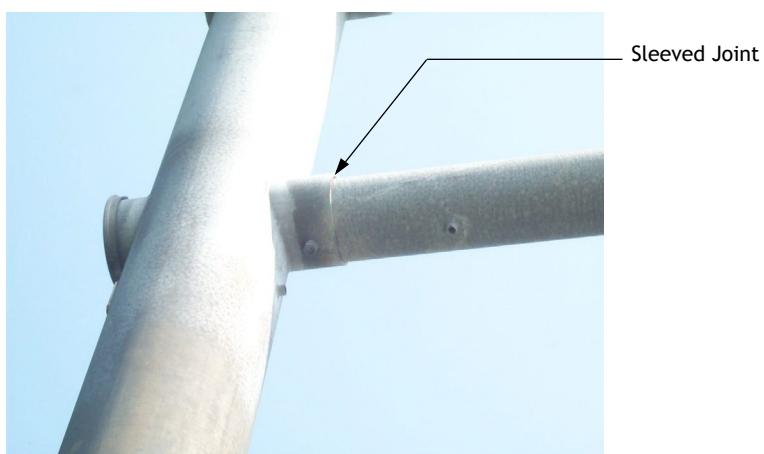
Coding: 1 = U-Bolts

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.

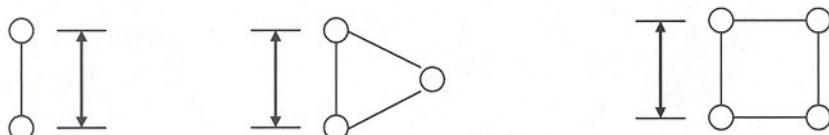
Coding: None

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.



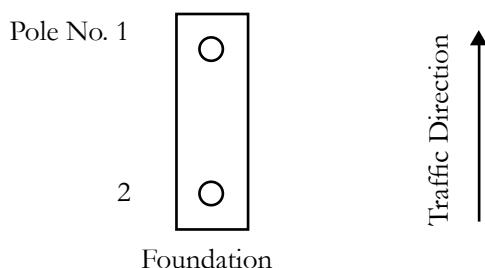
Coding: None

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)

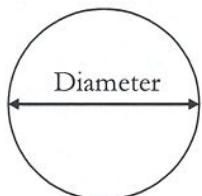
11 = Octdecagon (18 Sided)

Outside Diameter/Length (Inches)

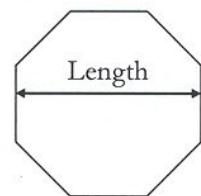
Description: Based on the illustrations shown below, enter the minimum and maximum outside length (height) or diameter (in decimal inches) of the individual chord cross sections. The program will calculate the minimum and maximum outside diameters automatically by clicking on the box next to the input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

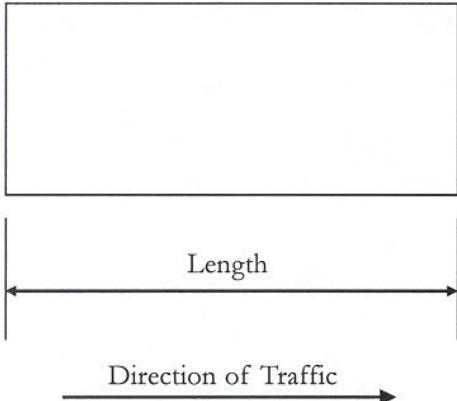
CANTILEVER SIGN STRUCTURE - STRUCTURE DATA



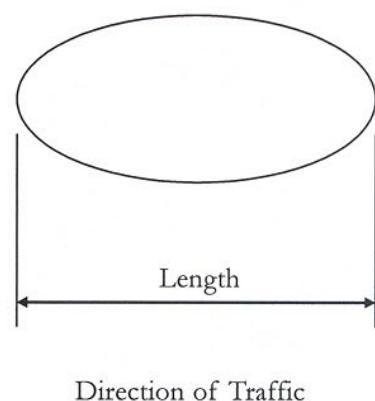
Circle or Fluted



Octagon
(Other Polygon shapes similar)



Rectangle/Square
(Trapezoid similar - use average values)



Ellipse

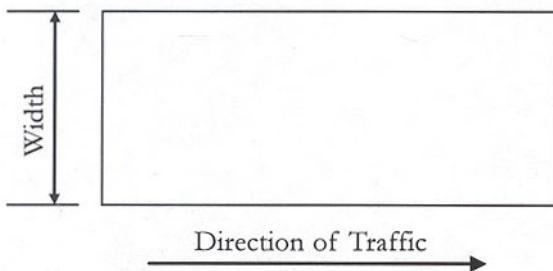
Coding: None

Outside Width (Inches)

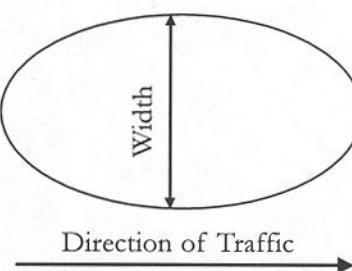
Description: Based on the illustrations shown below, enter the minimum and maximum outside horizontal width (in decimal inches) of the individual chord cross sections.

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

Chords Data: SC2150A150

Chord General			Splices		Trussing btwn Chords				
Chord Type Number:		1							
No	Type	Location (Decimal Ft)	Splice Bolts No	Diam.	Shape	Thickness Inches	Diam. Inches	Splice Plate Width Inches	Length Inches
1	Bolted	2	12	1.250	Rectangle	1.250		16	16
2									
3									
4									
5									
6									
7									
8									
9									
10									

Location: Distance from CL end support adjacent to right shoulder/lane

Close

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



CANTILEVER SIGN STRUCTURE - STRUCTURE DATA

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).

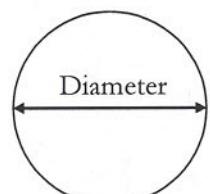
Coding: None

Splice Plate - Diam. (Inches)

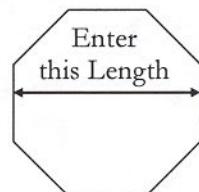
Description: Enter, in decimal inches, the diameter of a splice plate at the splice location. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

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)

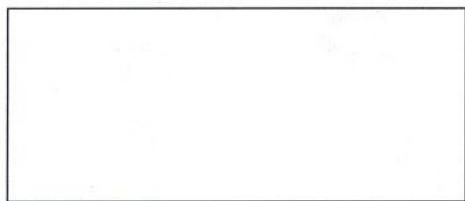
Coding: None

Splice Plate - Width (Inches)

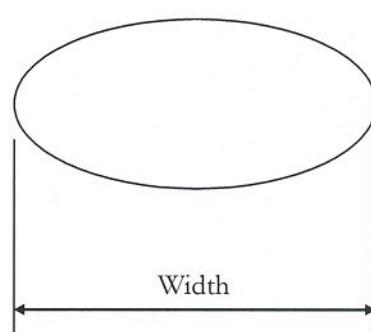
Description: Enter, in decimal inches, the horizontal width of a splice plate at the splice location.

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

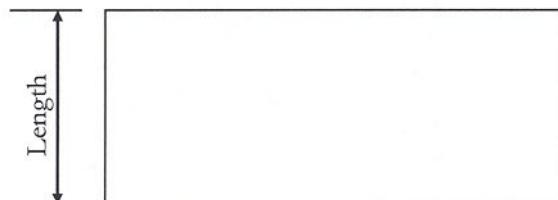
Coding: None

Splice Plate - Length (Inches)

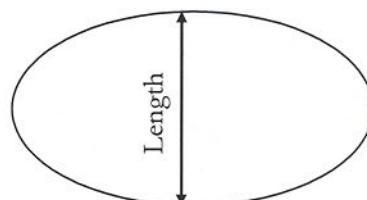
Description: Enter, in decimal inches, the length (vertical height) of a splice plate at the splice location.

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).



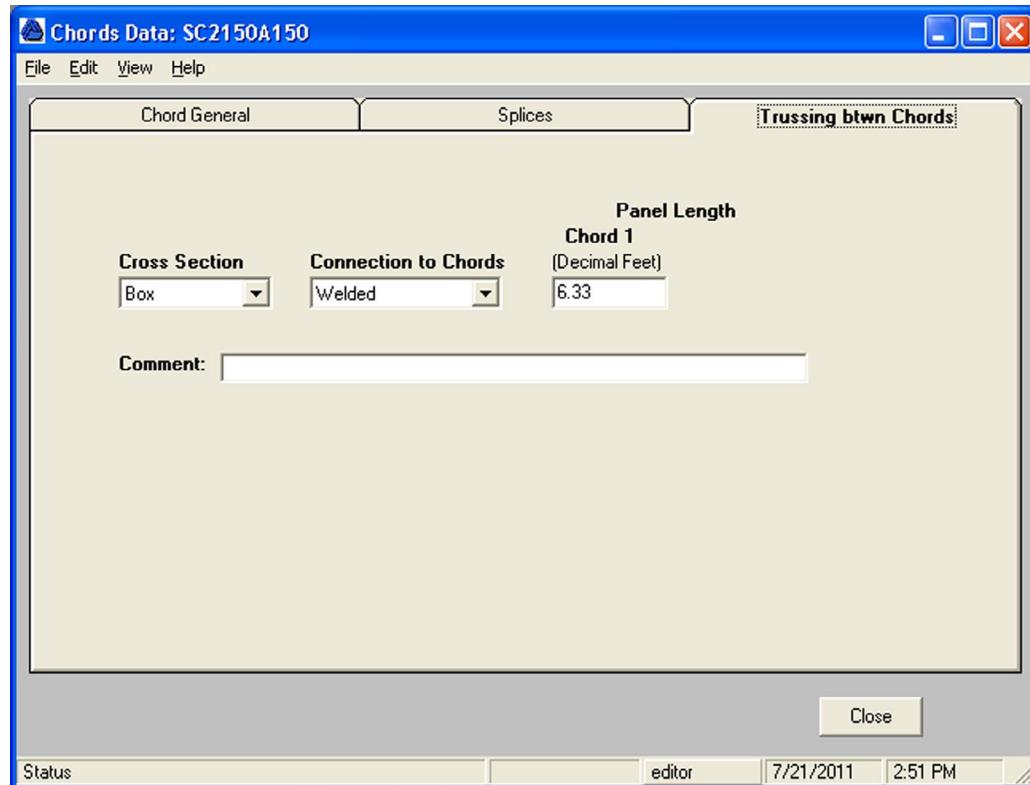
Rectangle/Square
(Trapezoid similar - use average values)



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

CANTILEVER SIGN STRUCTURE - STRUCTURE DATA

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

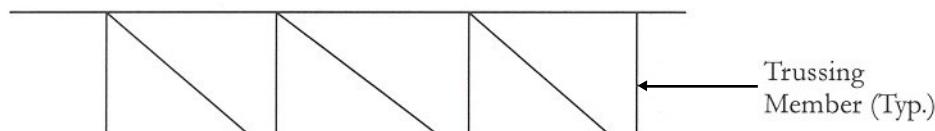
2 = Bolted

3 = Sleeved/Telescoping Joint

4 = Not Applicable

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

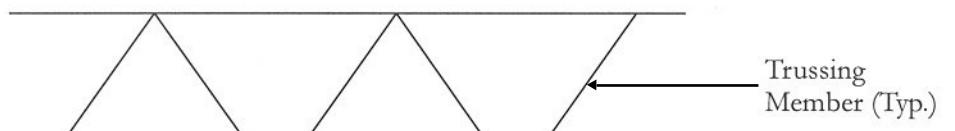
Description: Enter, in decimal feet, the typical panel length of the trussing (secondary) members within each of the chord type configurations.



Panel Length

Trussing Member (Typ.)

Individual Chord (Typ.)



Panel Length

Trussing Member (Typ.)

Individual Chord (Typ.)

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

CANTILEVER SIGN STRUCTURE - STRUCTURE DATA

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.

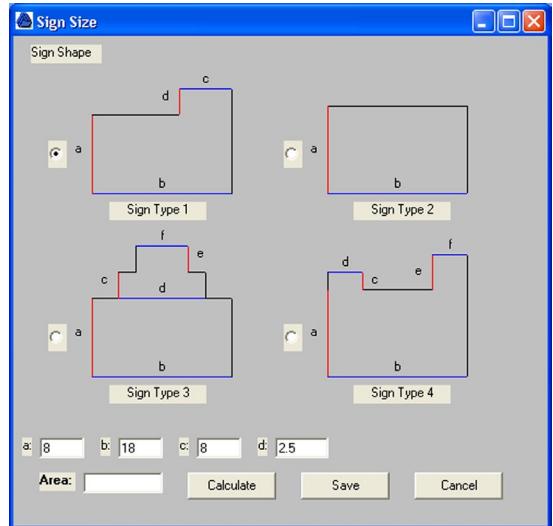
By clicking on the box next to the record field, the user should select the appropriate sign shape and enter the sign panel's dimensions in decimal feet. Clicking on the **Calculate** button allows the program to compute the sign panel area. The user should click the **Save** button in order to save 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	Color	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Average
1 BACKGROUND	GREEN	53	53	54	51	53	52.8
2 FOREGROUND	WHITE	345	500	514	490	387	447.2
3 BACKGROUND	YELLOW	453	467	465	477	467	465.8
4							

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

SIGN INSPECTION PROGRAM USER MANUAL

SC - CANTILEVER SIGN STRUCTURE INSPECTION DATA

DeIDOT Sign Inspection

File Edit Reports Tools View Help

D-Gen D-Fd D-Pole D-Chd D-Sign I-Gen SSDF I-Fd I-Pole I-Chd I-Sign

Filters Structure Type County Inventory Number Inspection Type Miscellaneous

SC Kent 1* Routine

Dates

From 1/1/1990 Inspection Next Routine Inspection Next Special Inspection Elim Refresh

To 7/20/2011 Next NDT Inspection Next Cursory Inspection

Select Structure

ID	Location
SC2150A150	SR 1 NB at Exit 114
SC2150E150	SR 1 SB at Exit 114
SC2150F150	SR 1 SB at Exit 104
SC2150G150	SR 1 NB at Exit 104

Select Inspection Date

Date	Type	Rating
10/23/2008	1	7
5/1/2001	1	7

Database Directory: y:\S\Sulerzyski\deldottest\Cumulative Final Insp Db\StructInsp.mdb

Exit

Status # Strs= 4 admin 3/9/2012 10:04 AM

CANTILEVER SIGN STRUCTURE - INSPECTION DATA

GENERAL INSPECTION - GENERAL

The screenshot shows a Windows application window titled "General Inspection: SC2150F150". The window has a menu bar with File, Edit, Tools, View, and Help. Below the menu is a tab bar with General, Photos, NDT Reports, Structure History, and Notes. The General tab is selected. Under the General tab, there are fields for Inspection Date (6/26/2013), Team Leader (URS/DDD), NDT Inspector (PAI/AAN), and two Inspector fields. An "Inspection Type" dropdown is set to "Routine". Below these are sections for "General Appearance", "General Alignment", "Camber Present", and "Guardrail Protection/Alignment", each with a rating dropdown (8) and a comments field. An "OVERALL CONDITION" section also has a rating dropdown (7) and a comments field. At the bottom left are checkboxes for CND FOUND, CND POLE, CND CHORD, CND BMS, CND ACCESS, CND SIGNS, and CND LUMS, all marked with a value of 8. A "Critical Rating Flag" dropdown is set to "No". At the bottom are buttons for Main Comment, NDT Comment, Future Comment, Save, and Close. The status bar at the bottom shows "Status", "admin", "6/6/2016", and "2:11 PM".

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

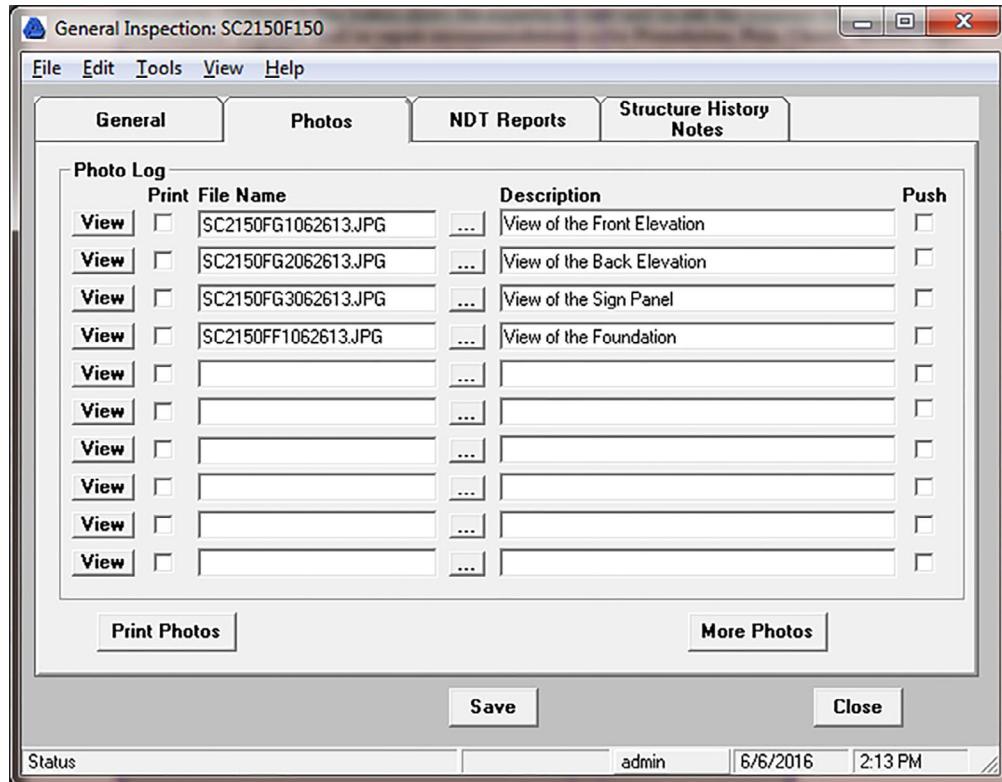
Description: Clicking on this button allows the inspector to view and/or edit the comment fields from the **Future maintenance required and/or repair recommendations** in the **Foundation, Pole, Chord, Access/Sign/Luminaire, and BMS** sections. These and other comments may then be placed in the **Saved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

CANTILEVER SIGN STRUCTURE - INSPECTION DATA

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:

SC1035G1.jpg

SC2002AG1.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

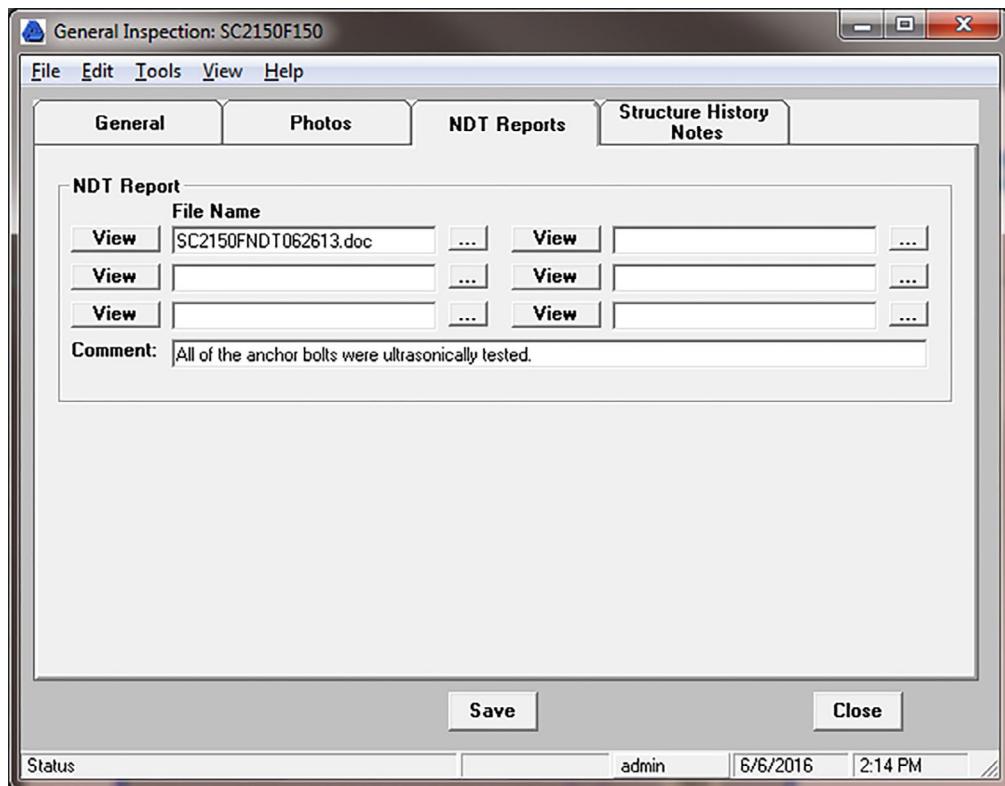
Description: Clicking on the **More Photos** button creates another **Photos** tab that allows up to ten additional photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

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: SC2002AN~~NDT~~.doc or SC2002AN~~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.

CANTILEVER SIGN STRUCTURE - INSPECTION DATA

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

The screenshot shows a Windows application window titled "General Inspection: SC2150F150". The window has a standard title bar with minimize, maximize, and close buttons. Below the title bar is a menu bar with File, Edit, Tools, View, and Help. The main area of the window contains four tabs: General, Photos, NDT Reports, and Structure History Notes. The "Structure History Notes" tab is currently selected and active. Within this tab, there is a section labeled "Notes" which contains a large memo field. Below the notes field is a section labeled "Files" which contains three separate file fields, each with a "View" button to the left. At the bottom of the window are two buttons: "Save" and "Close". A status bar at the very bottom displays the text "Status", the user "admin", the date "7/8/2016", and the time "11:18 AM".

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

CANTILEVER SIGN STRUCTURE - INSPECTION DATA

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

The screenshot shows a Windows application window titled "Sign Structure Deficiency: SC2150E150". The window has a menu bar with File, Edit, View, and Help. The main area contains three tabs: Condition Index, Functional Importance, and Design Index. Under Condition Index, there are two dropdown menus: "NBI Condition Rating" set to 7 with a maximum of 10, and "Structurally Deficient" set to No with a maximum of 0. Below these is a "Condition Index Point Total" field containing the value 10. At the bottom of the window, a note states: "The total number of points 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." A "Close" button is at the bottom right, and a status bar at the bottom shows "Status" and "editor" along with a timestamp of 7/21/2011 2:56 PM.

CANTILEVER SIGN STRUCTURE - INSPECTION DATA

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

The screenshot shows a software application window titled "Sign Structure Deficiency: SC2150F150". The menu bar includes File, Edit, View, and Help. Below the menu is a tab bar with Condition Index, Functional Importance (which is selected), and Design Index. The main area is titled "Points" and contains three dropdown fields:

- Functional Class:** Interstate (selected), Points: 10
- Number of Lanes Impacted:** 0-1 lanes (selected), Points: 0
- Average Daily Traffic:** 15,000-19,999 (selected), Points: 4

Below these fields is a summary box: **Functional Importance Point Total**: 14. At the bottom right is a **Close** button. The status bar at the bottom shows "Status", "admin", "6/6/2016", and "2:18 PM".

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.

CANTILEVER SIGN STRUCTURE - INSPECTION DATA

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

The screenshot shows a Windows application window titled "Sign Structure Deficiency: SC2150E150". The window has a menu bar with File, Edit, View, and Help. Below the menu is a tab bar with Condition Index, Functional Importance, and Design Index. The Design Index tab is selected. The main area contains two dropdown menus under "Points": "Structure or Detail Type" set to "> 4-Anchor Bolt Cantilever" with a value of 3, and "Designed for Fatigue" set to "Designed to Fatigue Provisions" with a value of 0. Below these is a "Design Index Point Total" field containing the value 3. At the bottom right is a "Close" button. The status bar at the bottom shows "Status", "admin", "8/5/2011", and "10:17 AM".

Structure or Detail Type

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

CANTILEVER SIGN STRUCTURE - INSPECTION DATA

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	3
Aluminum Sign Structure	
> 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

Foundation Inspection: SC2150E150

Foundation	Maint/NDT	Future Maint
Erosion/Undermining	Rating: 8	Comments:
Pedestal/Footing(s)	Rating: 8	Comments:
Grout Pad(s)	Rating: N	Comments:
Anchor Bolts	Rating: 8	Comments:
Bracket Attachment	Rating: N	Comments:
CONDITION RATING	Rating: 8	

Close

Status: editor | 7/21/2011 | 2:58 PM

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

The screenshot shows a software application window titled "Foundation Inspection: SC2150E150". The window has a menu bar with "File", "Edit", "View", and "Help". Below the menu is a toolbar with three tabs: "Foundation", "Maint/NDT" (which is selected), and "Future Maint". The main area contains two sections: "Maintenance repairs done at the time of inspection" and "NDT testing done at the time of inspection". Each section has a dropdown menu with a "Push" button to its right. The status bar at the bottom shows "Status", "editor", "7/21/2011", and "2:58 PM".

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

Foundation Inspection: SC2150E150

File Edit View Help

Foundation		Maint/NDT		Future Maint	
Future maintenance required and/or repair recommendations					
Code	Item	Activity	Description	Priority	
Inspector Notes		None		<input type="checkbox"/> Push	
Inspector Notes					
Inspector Notes					
Inspector Notes					
Inspector Notes					
Inspector Notes					
Close					

Status editor 7/21/2011 2:59 PM

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.

CANTILEVER SIGN STRUCTURE - INSPECTION DATA

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

Pole Inspection: SC2150E150

File Edit View Help

Pole General Truss btwn Poles Maint/NDT Future Maint

	Rating	Comments
Members	7	The hand hole cover is missing near the base of the pole facing t
Joints/Splices	8	
Base Plate and Connection to Pole	8	

CONDITION RATING 7

Close

Status editor 7/21/2011 2:59 PM

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.

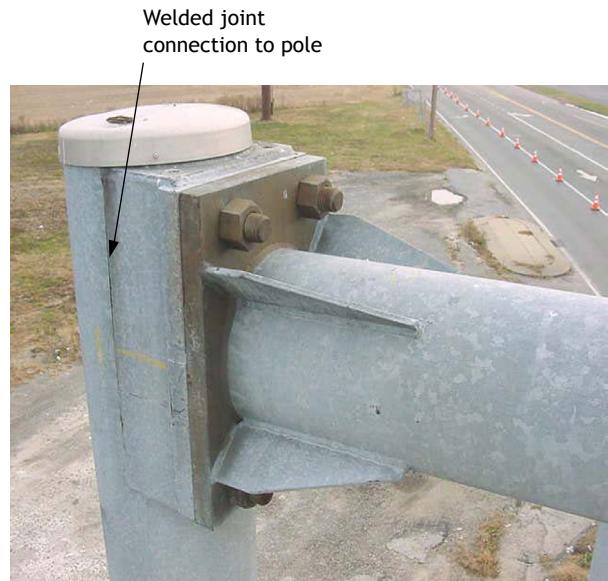
CONDITION RATING

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

Pole Inspection: SC2150E150

File Edit View Help

Pole General Truss btwn Poles Maint/NDT Future Maint

	Rating	Comments
Horizontal Members	8	<input type="text"/>
Diagonal Members	8	<input type="text"/>
Connections to Poles	8	<input type="text"/>
CONDITION RATING	8	<input type="text"/>

Close

Status editor 7/21/2011 3:00 PM

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

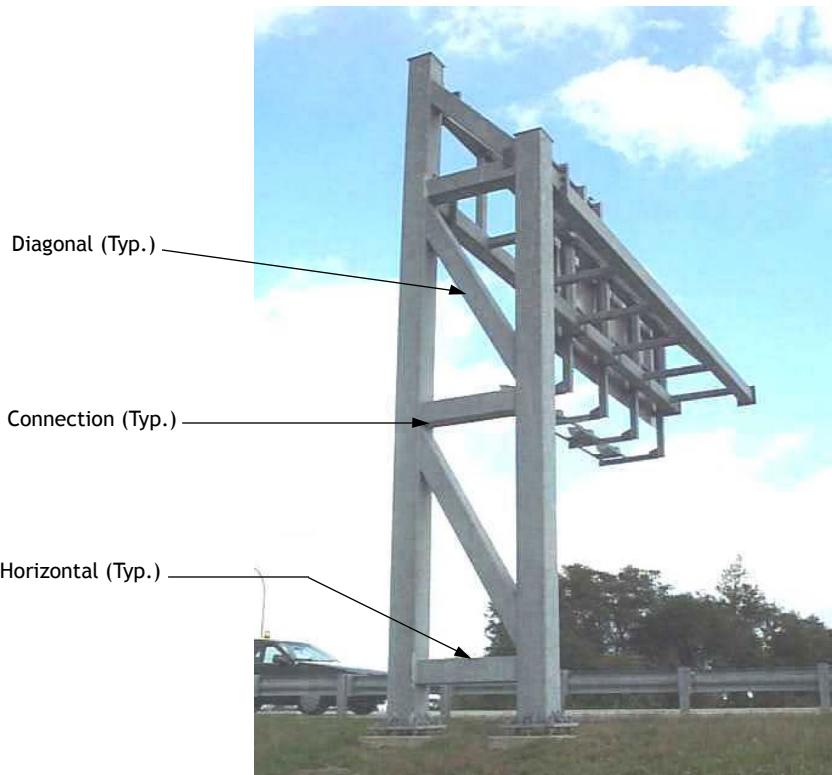
Description: This element involves the inspection of the horizontal trussing (secondary) members located between the vertical poles, including the applied finish.

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

Pole Inspection: SC2150E150

File Edit View Help

Maint/NDT

Maintenance repairs done at the time of inspection

Push

None

NDT testing done at the time of inspection

Push

A visual inspection was done on the base plate to pole welds and the base plate/pole to stiffener plate welds.

Close

Status editor 7/21/2011 3:00 PM

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

Pole Inspection: SC2150E150

File Edit View Help

Pole General	Truss b/w Poles	Maint/NDT	Future Maint	
Future maintenance required and/or repair recommendations				
Code	Item	Activity	Description	Priority
S601	E1C	REPLACE/TIGHTEN CO'	HAND-HOLE COVER: MISSING/LOOSE	HIGH PRIORITY
Inspector Notes		Push <input type="checkbox"/>		
S611	E1W	CONCEAL/HIDE ELECTRICAL	ELECTRICAL WIRING: EXPOSED WIRING	HIGH PRIORITY
Inspector Notes		There is exposed electrical wiring present near the base of the pole facing traffic.		
Inspector Notes				
Inspector Notes				
Inspector Notes				

Close

Future maintenance required and/or repair recommendations

Future Maintenance Required at 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

<u>Component</u>	<u>Rating</u>	<u>Comments</u>
Top Chord(s)	8	There are excessive amounts of bird droppings present on the chord
Bottom Chord(s)	8	
Mid Chord (Tri-Chord)	8	
Joints/Splices	8	
Connection to Poles	8	
CONDITION RATING		8

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)

<u>Component</u>	<u>Rating</u>	<u>Comments</u>
Verticals (Btwn Chords)	8	
Diagonals (Btwn Chords)	8	
Horizontals (Btwn Truss)	8	
Diagonals 2 (Btwn Truss)	N	
Connection to Chords	8	

CONDITION RATING 8

Close

Status editor 7/21/2011 3:02 PM

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)

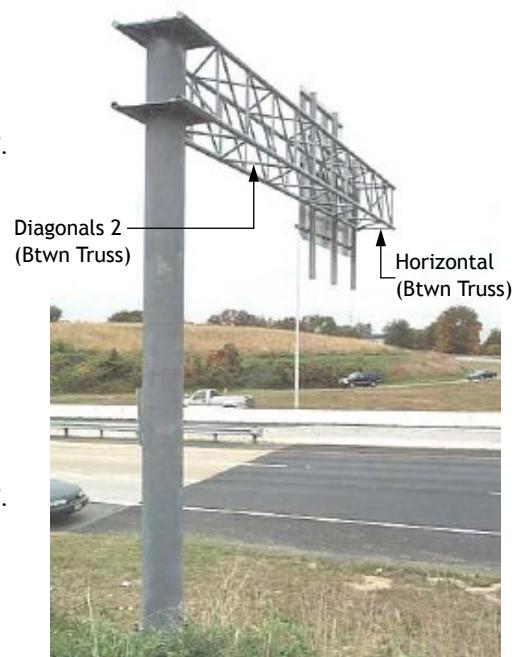
Description: This element involves the inspection of the diagonal trussing members located between two plane trusses (four chord type) or between one plane truss and a chord (Tri-Chord type), including the applied finish.

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.



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

Maintainance 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

CANTILEVER SIGN STRUCTURE - INSPECTION DATA

CHORD INSPECTION - FUTURE MAINT

The screenshot shows a Windows application window titled "Chord Inspection: SC2150E150". The menu bar includes File, Edit, View, and Help. Below the menu is a tab bar with four tabs: Chord, Trussing (Btwn Chords), Maint/NDT, and Future Maint. The Future Maint tab is selected, indicated by a blue border. The main area contains a section titled "Future maintenance required and/or repair recommendations". This section includes a table with columns: Code, Item, Activity, Description, and Priority. A dropdown menu under "Code" shows "S399". Under "Item", there are dropdown menus for "C9X" and "NA". The "Description" column shows "NA". The "Priority" column shows "LOW PRIORITY". Below the table are five rows, each labeled "Inspector Notes" followed by a text input field. The first row contains the note: "Clean off the bird droppings from the chord members." with a "Push" checkbox. The other four rows are empty. At the bottom right of the main area is a "Close" button. The status bar at the bottom shows "Status", "editor", "7/21/2011", and "3:02 PM".

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.

CANTILEVER SIGN STRUCTURE - INSPECTION DATA

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

	Rating	Comments
Walkway Platform	N	
Access Ladder	N	
Supports/Connections	N	
Handrails	N	
Safety Chains	N	
	N	

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.

CANTILEVER SIGN STRUCTURE - INSPECTION DATA



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.

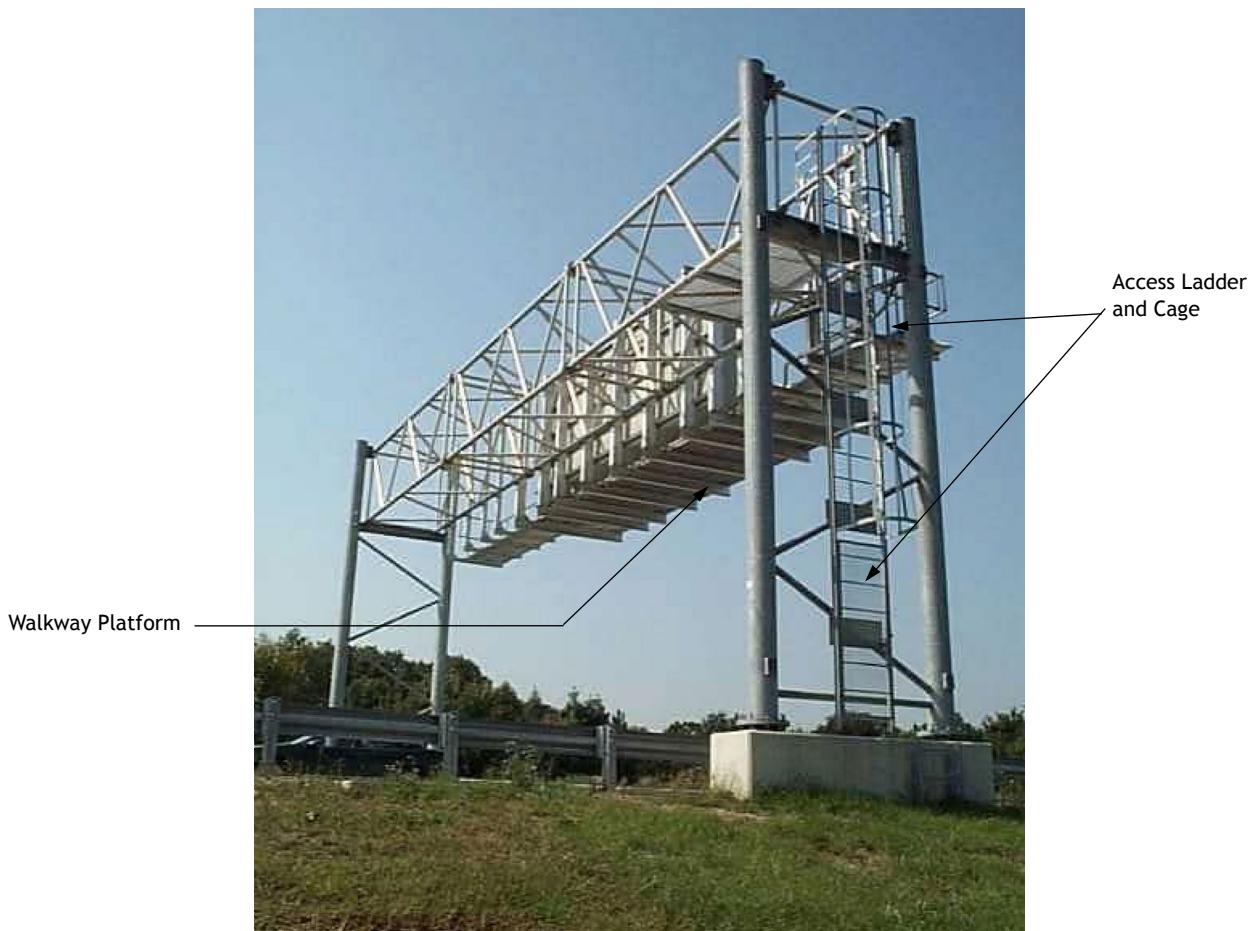
Blank Field

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

Sign Inspection: SC2150E150

File Edit View Help

Maint Walk/Access Signs Lum/Cam/TS-Conn Maint/NDT Future Maint

	Rating	Comments
Attachment to Structure	8	The original sign panel has been replaced by a new extruded sign pan
Reflectivity	8	
Legibility	8	

CONDITION RATING 8

Close

Status editor 7/21/2011 3:04 PM

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.

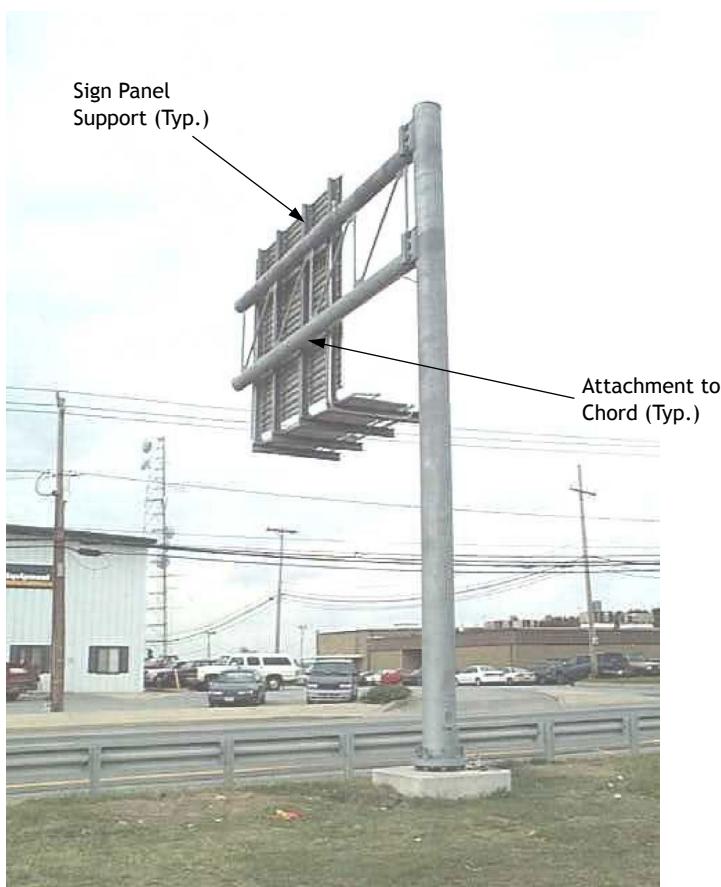
Legibility

Description: This element involves the condition inspection of the lettering and numbering present on the sign panel(s).

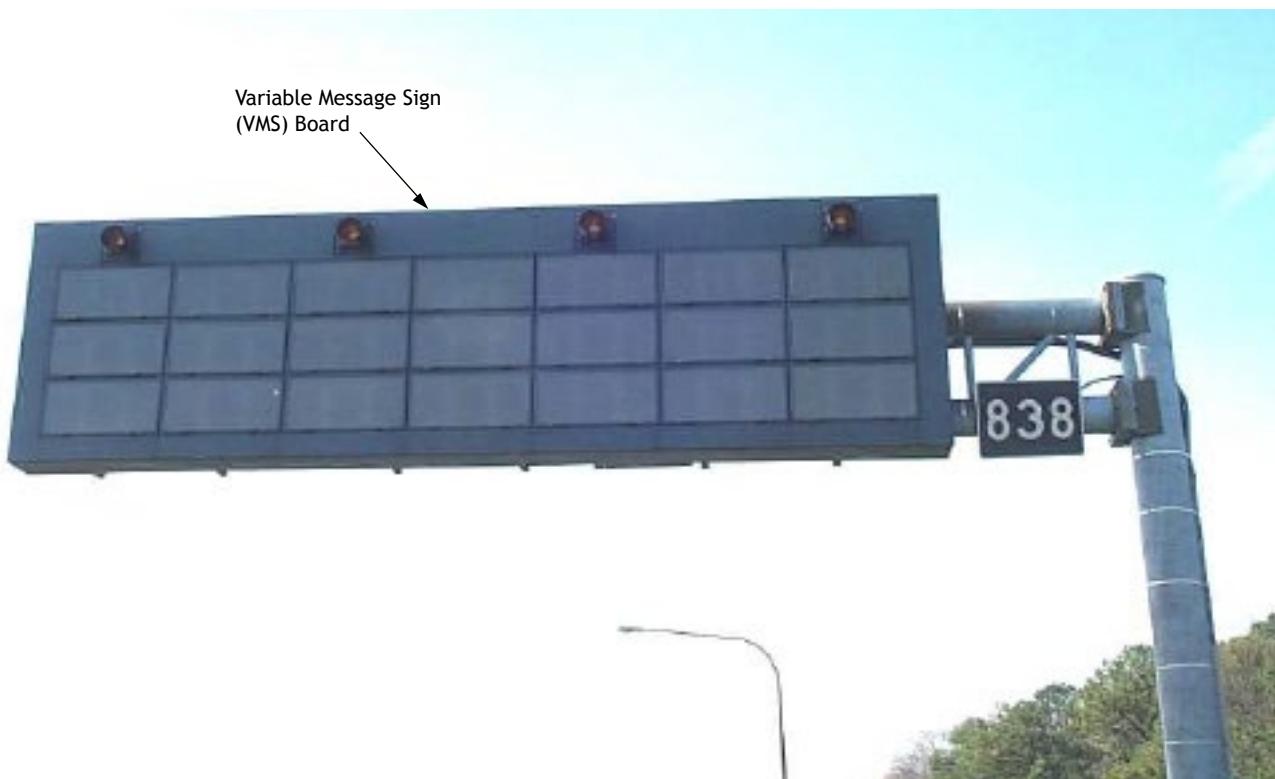
If no sign panels are present, the condition rating should be coded “N”.

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

CANTILEVER SIGN STRUCTURE - INSPECTION DATA



CANTILEVER SIGN STRUCTURE - INSPECTION DATA



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

Sign Inspection: SC2150E150

Main Walk/Access			Signs		Lum/Cam/TS-Conn		Maint/NDT		Future Maint	
Luminaires	Rating	N	Comments The luminaire arms and luminaires have been removed.							
Cameras	Rating	N								
Photo Control Devices	Rating	N								
Electrical Components	Rating	N	Comments The electrical components have been abandoned.							
Connection to Supports	Rating	N								
CONDITION RATING			N							
<input type="button" value="Close"/>										
Status	editor	7/21/2011	3:04 PM							

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.

CANTILEVER SIGN STRUCTURE - INSPECTION DATA

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

The screenshot shows a software application window titled "Sign Inspection: SC2150E150". The window has a menu bar with File, Edit, View, and Help. Below the menu is a tab bar with four tabs: "Maint Walk/Access", "Signs", "Lum/Cam/TS-Conn", and "Maint/NDT" (which is currently selected). To the right of the tabs are three buttons: Minimize, Maximize, and Close. The main area contains two sections: "Maintenance repairs done at the time of inspection" and "NDT testing done at the time of inspection". Each section has a "Push" button and a dropdown menu. In the "Maintenance repairs" section, the dropdown menu lists: "The loose white reflective border at the bottom of the sign panel was secured during the inspection." and "Installed 1 sign clip during the inspection. The sign clip was tightened to a snug tight condition.". In the "NDT testing" section, the dropdown menu lists: "None". At the bottom of the window is a toolbar with buttons for Status, editor, Date (7/21/2011), Time (3:05 PM), and a Close button.

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

CANTILEVER SIGN STRUCTURE - INSPECTION DATA

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

The screenshot shows a software application window titled "Sign Inspection: SC2150E150". The window has a menu bar with File, Edit, View, and Help. Below the menu is a tab bar with four tabs: "Maint Walk/Access", "Signs", "Lum/Cam/TS-Conn", and "Maint/NDT". The fifth tab, "Future Maint", is highlighted and has a blue border. The main area of the window is titled "Future maintenance required and/or repair recommendations". It contains a table with columns: "Code", "Item", "Activity", "Description", and "Priority". There are six rows in the table, each with dropdown menus for "Code" and "Item", a dropdown menu for "Activity", a dropdown menu for "Description", and a dropdown menu for "Priority". Below the table, there are three "Inspector Notes" fields, each with a dropdown menu for "Code" and "Item", a dropdown menu for "Activity", a dropdown menu for "Description", and a dropdown menu for "Priority". A "Push" checkbox is located next to the third "Inspector Notes" field. At the bottom of the window is a "Close" button and a status bar with the date and time: "Status editor 7/21/2011 3:05 PM".

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.

CANTILEVER SIGN STRUCTURE - INSPECTION DATA

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.

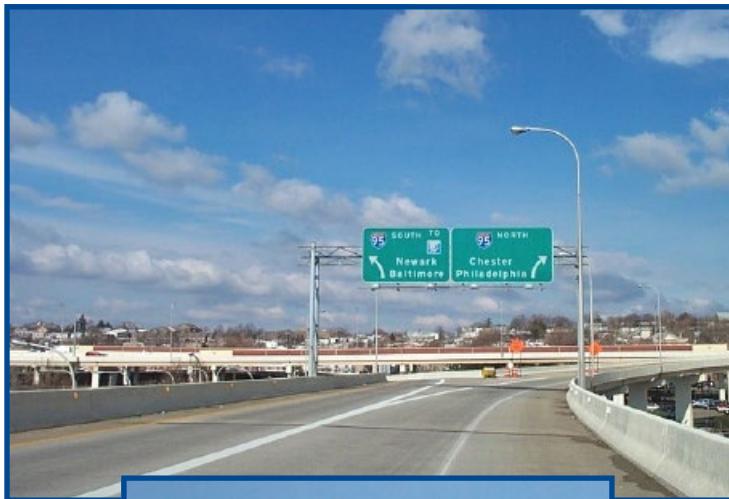
Inspector Notes

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.

SECTION VIII - SO - OVERHEAD SIGN STRUCTURE



SIGN INSPECTION PROGRAM USER MANUAL

SO - OVERHEAD SIGN STRUCTURE STRUCTURE DATA

DeIDOT Sign Inspection

File Edit Reports Tools View Help

D-Gen D-Fd D-Pole D-Chd D-Sign I-Gen SSDF I-Fd I-Pole I-Chd I-Sign

Filters Structure Type County Inventory Number Inspection Type Miscellaneous

SO Kent 1* Routine

Dates

From 1/1/1990 Inspection Next Routine Inspection Next Special Inspection

To 7/20/2011 Next NDT Inspection Next Cursory Inspection

Elim Refresh

Select Structure

ID	Location
SO2150H150	SR 1 SB, 1/2 Mile North of Exit 97
SO2150I150	SR 1 SB at Exit 97
SO2150J150	SR 1 SB, On Exit 95 Off Ramp
SO2150K150	Scarborough Road between SR 1 (Exit 104) and US 13
SO2156 150A	Puncheon Connector WB at the Exit to US 13
SO2157 007	Puncheon Connector FR at Exit 2A

Select Inspection Date

Date	Type	Rating
10/13/2008	1	7
5/7/2001	1	8

Database Directory

y:\S\Sulerzyski\deldottest\Cumulative Final Insp Db\StructInsp.mdb

Exit

Status # Strs= 7 admin 3/9/2012 9:55 AM

OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

GENERAL DATA - GENERAL 1

The screenshot shows a Windows application window titled "General Data: S02150I150". The window has a menu bar with File, Edit, View, and Help. Below the menu is a toolbar with three buttons. The main area contains three tabs: General 1 (selected), General 2, and Clearance Measurements. Under General 1, there are six fields labeled Contract 1 through Contract 6, each with a dropdown menu. Below these are fields for District (Central), NHS (dropdown menu), Average Daily Traffic (0), % Truck (dropdown menu), Mile-Point (0), and Functional Class (dropdown menu). Further down are fields for Latitude (39° 9' 11.74") and Longitude (-75° 29' 39.65"), and a Location Description field containing "SR 1 SB at Exit 97". A Map button is located below the location description. At the bottom right is a Close button, and at the very bottom is a status bar showing Status, admin, 1/5/2012, 1:45 PM, and a file icon.

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

General Data: SO21501150

General 1 **General 2** **Clearance Measurements**

Message Type Standard Signs	Support Type Overhead Span	Year Built unknown	Inspection Frequency (Months) 60
	No of Spans 1	Year Reconstructed unknown	Designed for Fatigue
Access Equipment Required Bucket Truck	Cursory Inspection Frequency (Months)	NDT Inspection Frequency (Months)	Special Inspection Frequency (Months)
Traffic Control Required Case No. 27	Special Inspection Frequency Description		
Electrical Description	Lighting Present on Structure No		

Close

Status: admin | 3/9/2012 | 9:47 AM

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.

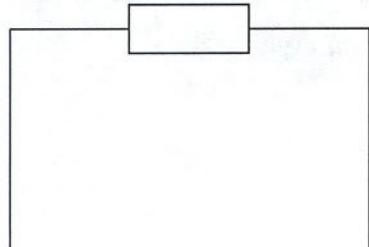
No of Spans

Description: From the pull down menu, select the total number of spans for the sign structure.

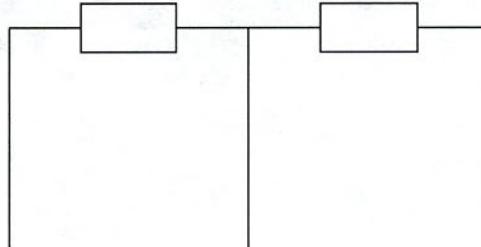
A sign structure that spans a divided highway with a median pole support and pole supports on each side has two spans.

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

OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

GENERAL DATA - CLEARANCE MEASUREMENTS

The screenshot shows a Windows application window titled "General Data: S02150J150". The menu bar includes File, Edit, View, and Help. The main area has three tabs: General 1, General 2, and Clearance Measurements. The Clearance Measurements tab is active, displaying data for two roadways:

RoadWay Name	Minimum Vertical Clearance	Vertical Clearance Roadway CL	Vertical Clearance Right Shoulder	Vertical Clearance Left Shoulder	Distance fr Edge of Lane to Right Support	Distance fr Edge of Lane to Left Support
SR 1 SB	21.15	21.15	24.5	25.8	17.1	28.5

A note at the bottom left says "*Enter all distances in decimal feet". Below the table is a field for "Median Width (Feet)" with the value "58". At the bottom right is a "Close" button.

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.

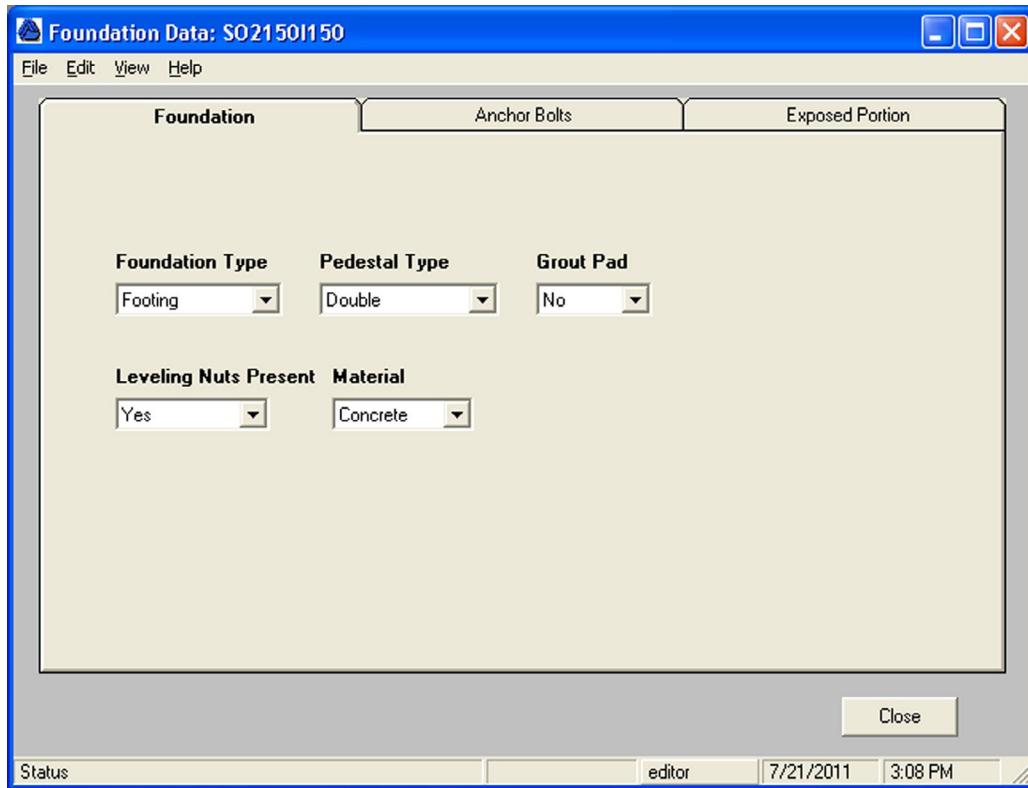
Coding: None

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 Data: S02150I150

		Foundation	Anchor Bolts		Exposed Portion	
Foundation	Pole No	No of Bolts	Bolt Dia	Shape	Bolt Layout Length/Diam	Bolt Layout Width
		(Inches)	(Inches)	(Inches)	(Inches)	
L	1	<input type="text"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="text"/>	<input type="button" value="..."/>
	2	<input type="text"/>	<input type="button" value="▼"/>	<input type="button" value="▼"/>	<input type="text"/>	<input type="button" value="..."/>
M	1	<input type="text"/> 8	<input type="button" value="▼"/> 1.5	<input type="button" value="▼"/> Rectangle/Square	<input type="text"/> 20	<input type="text"/> 20
	2	<input type="text"/> 8	<input type="button" value="▼"/> 1.5	<input type="button" value="▼"/> Rectangle/Square	<input type="text"/> 20	<input type="text"/> 20
R	1	<input type="text"/> 8	<input type="button" value="▼"/> 1.5	<input type="button" value="▼"/> Rectangle/Square	<input type="text"/> 20	<input type="text"/> 20
	2	<input type="text"/> 8	<input type="button" value="▼"/> 1.5	<input type="button" value="▼"/> Rectangle/Square	<input type="text"/> 20	<input type="text"/> 20

Status editor 7/21/2011 3:08 PM

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

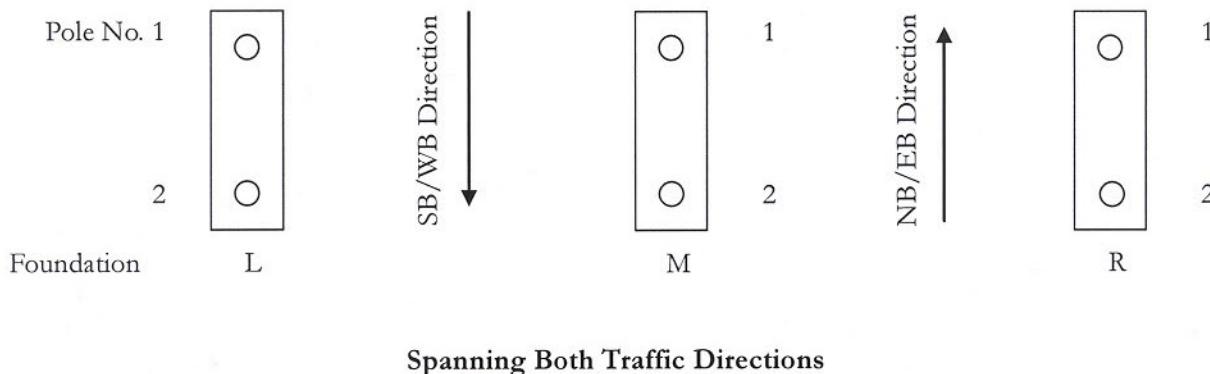
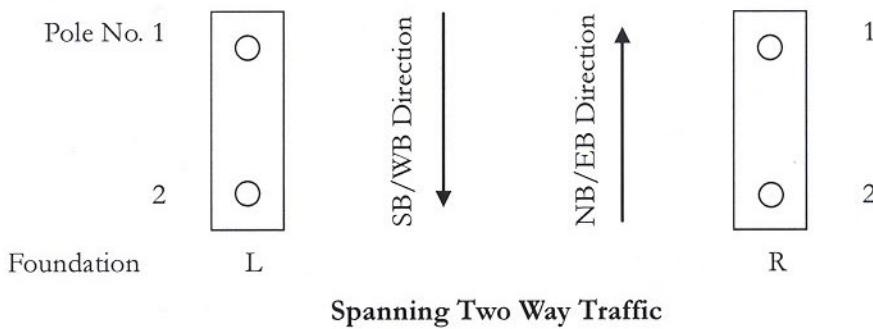
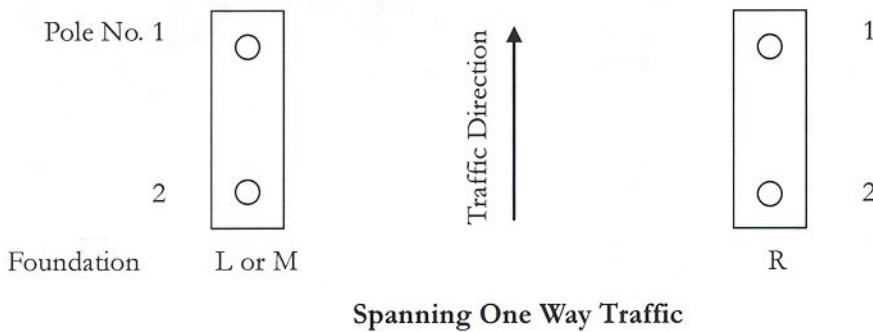
Description: Anchor bolt information can be entered for up to two pole supports at each foundation.

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**.

OVERHEAD SIGN STRUCTURE - STRUCTURE DATA



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		Anchor Bolts		Exposed Portion	
Foundation	Pole No	Height (decimal feet)	Shape	Length/Diam (decimal feet)	Width (decimal feet)
L	1	<input type="text" value="0.67"/>	<input type="button" value="Rectangle/Square"/>	<input type="text" value="2.833"/>	<input type="text" value="2.833"/>
	2	<input type="text" value="0.67"/>	<input type="button" value="Rectangle/Square"/>	<input type="text" value="2.833"/>	<input type="text" value="2.833"/>
M	1	<input type="text" value="0.58"/>	<input type="button" value="Rectangle/Square"/>	<input type="text" value="2.833"/>	<input type="text" value="2.833"/>
	2	<input type="text" value="0.58"/>	<input type="button" value="Rectangle/Square"/>	<input type="text" value="2.833"/>	<input type="text" value="2.833"/>
R	1	<input type="text" value="0"/>	<input type="button" value="Rectangle/Square"/>	<input type="text" value="2.833"/>	<input type="text" value="2.833"/>
	2	<input type="text" value="0"/>	<input type="button" value="Rectangle/Square"/>	<input type="text" value="2.833"/>	<input type="text" value="2.833"/>

Status editor 7/21/2011 3:09 PM

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

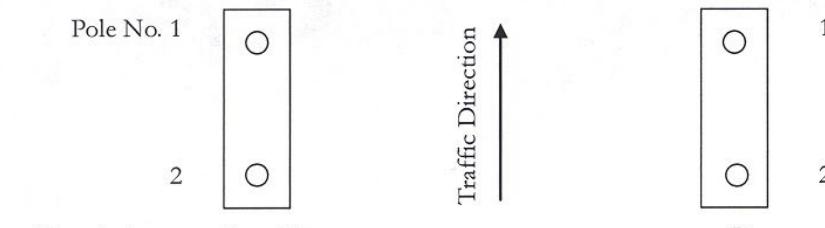
Description: Data can be entered for up to two foundations at one location.

If the **Pedestal Type** chosen is “Single” in the **Foundation** tab, **Pole No 1**’s data should be entered for the respective foundation.

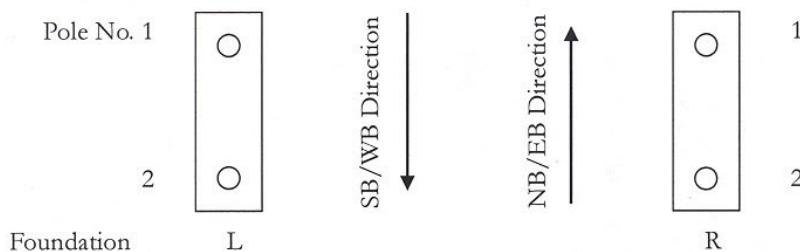
If the **Pedestal Type** chosen is “Double or Single/Double” in the **Foundation** tab, both **Pole No 1** and **2** data should be entered for the respective foundation.

See the diagrams below to determine the location of **Foundation L, M and R** as well as **Pole 1** and **2**.

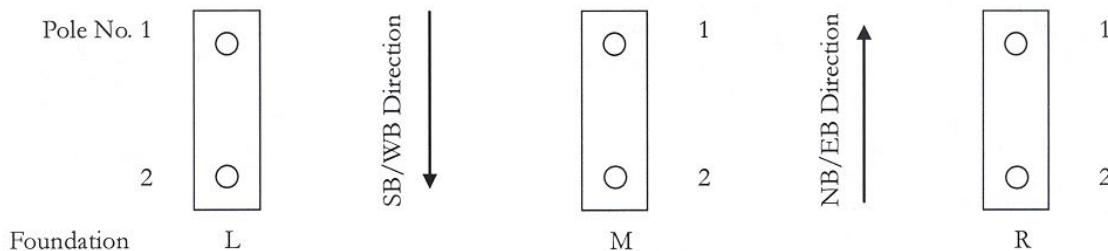
OVERHEAD SIGN STRUCTURE - STRUCTURE DATA



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)

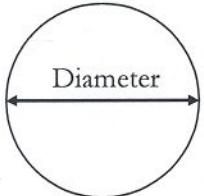
11 = Octdecagon (18 Sided)

OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

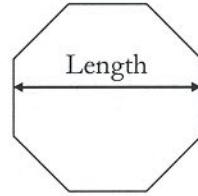
Length/Diam (decimal feet)

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.

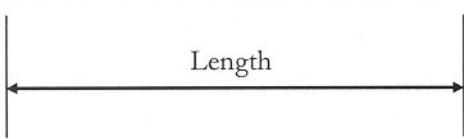
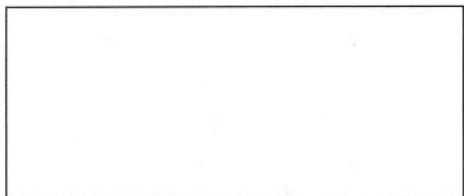
If the Foundation's Shape is coded "Unknown" or if the Foundation Type is coded "Not Applicable", this field should be left blank.



Circle or Fluted

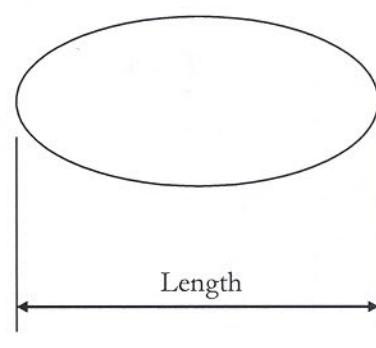


Octagon
(Hexagon & Pentagon similar)



Direction of Traffic →

Rectangle/Square
(Trapezoid similar - use average values)



Direction of Traffic →

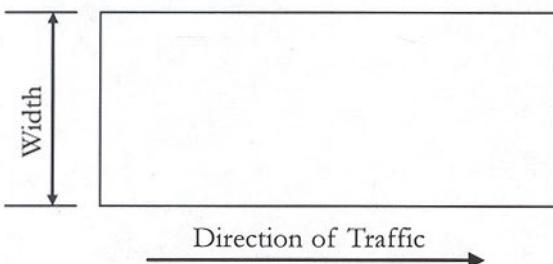
Ellipse

Coding: None

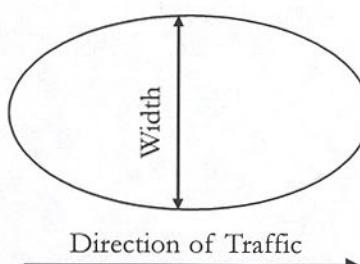
Width (decimal feet)

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.

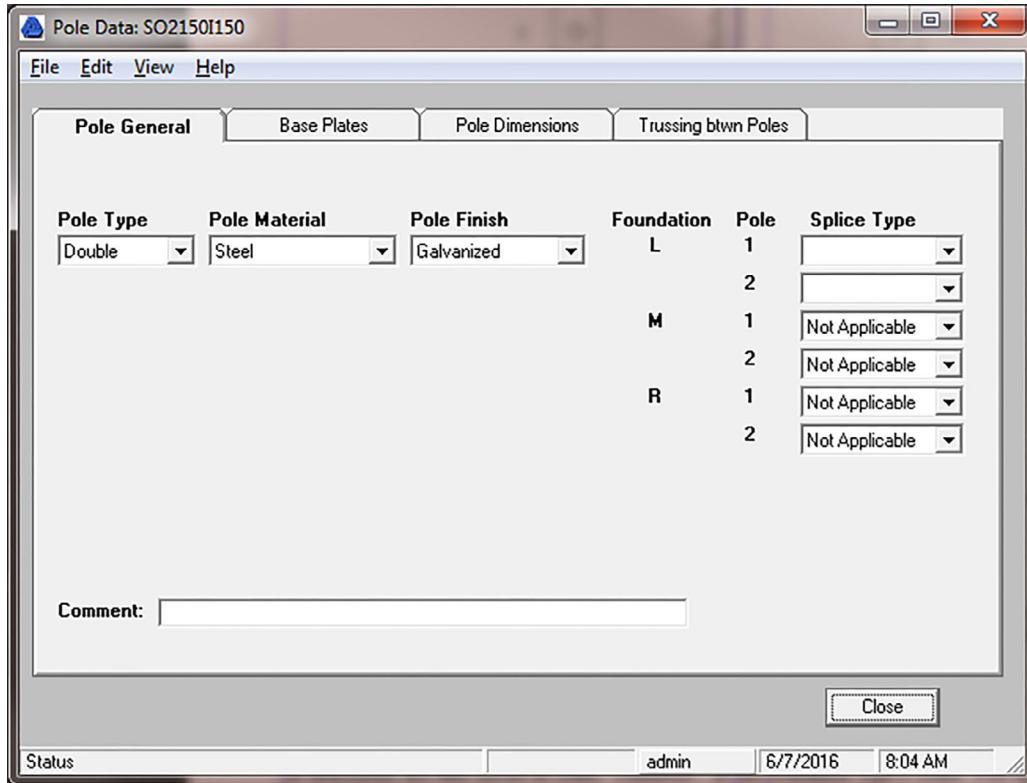


Rectangle/Square
(Trapezoid similar - use average values)



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”.

OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

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

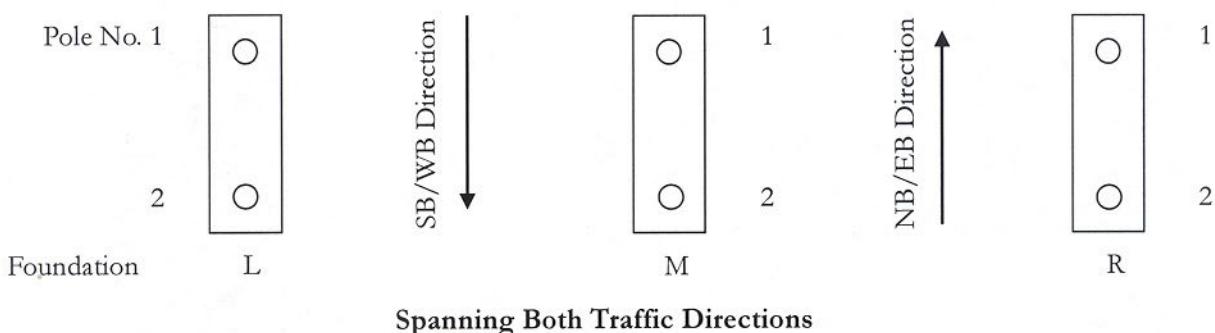
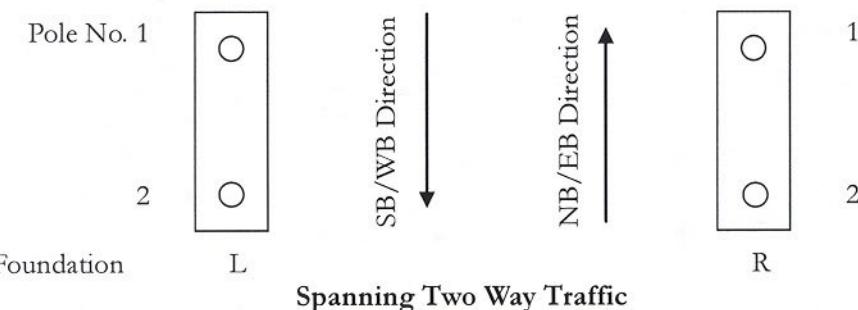
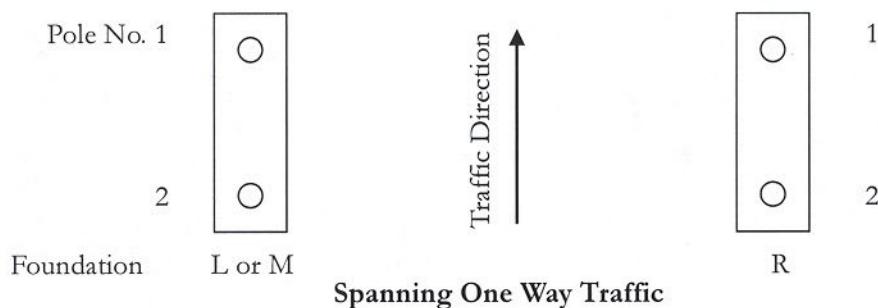
4 = Other

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.



OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

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	Pole	Shape	Thickness Inches	Length/Diam Inches	Width Inches
L	1	<input type="button" value=""/>	<input type="button" value=""/>	<input type="button" value=""/>	<input type="button" value=""/>
	2	<input type="button" value=""/>	<input type="button" value=""/>	<input type="button" value=""/>	<input type="button" value=""/>
M	1	Rectangle/Square <input type="button" value=""/>	2.000 <input type="button" value=""/>	26 <input type="button" value=""/>	26 <input type="button" value=""/>
	2	Rectangle/Square <input type="button" value=""/>	2.000 <input type="button" value=""/>	26 <input type="button" value=""/>	26 <input type="button" value=""/>
R	1	Rectangle/Square <input type="button" value=""/>	2.000 <input type="button" value=""/>	26 <input type="button" value=""/>	26 <input type="button" value=""/>
	2	Rectangle/Square <input type="button" value=""/>	2.000 <input type="button" value=""/>	26 <input type="button" value=""/>	26 <input type="button" value=""/>

Comment:

Status: admin | 6/7/2016 | 8:24 AM

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

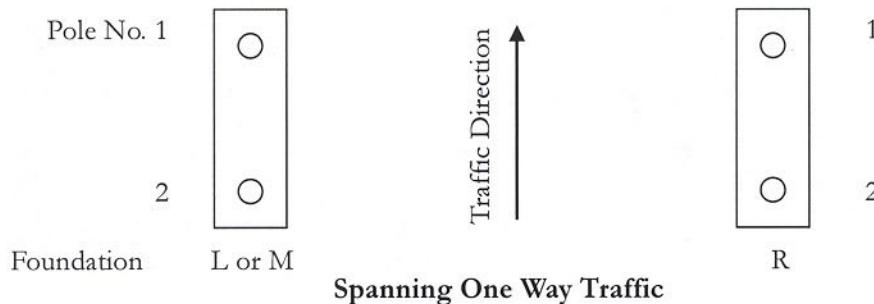
Description: Data can be entered for individual base plates attached to one or two poles at each foundation.

If the Pole Type chosen is **Single** in the **Pole General** tab, the fields for Pole 1 are activated for each foundation.

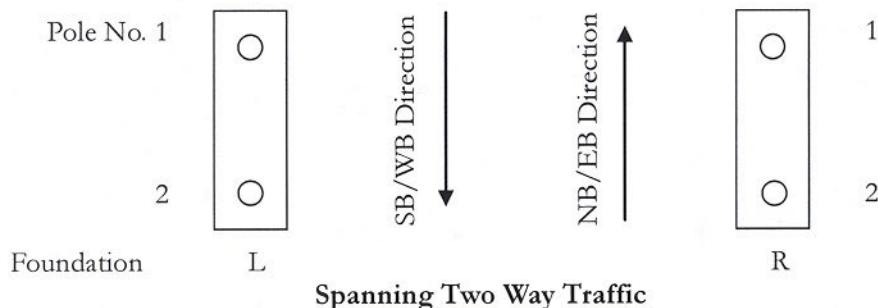
OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

If the Pole Type chosen is **Double** in the **Pole General** tab, the fields for Pole 1 and 2 are activated for each foundation.

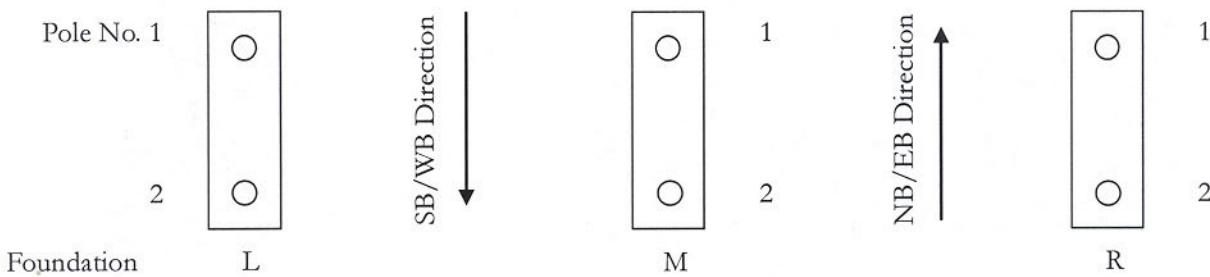
Use the diagrams below to determine the appropriate foundations and pole locations. If a single pole is present at a foundation, only Pole 1 is applicable.



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.

OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

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.

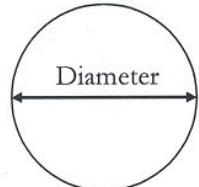
If the thickness cannot be determined, the Pole or Foundation Type is coded “Not Applicable” or the pole extends into the ground, as in the case of a timber utility pole, this field should be left blank.

Coding: None

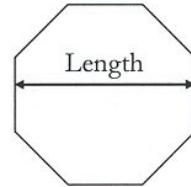
Length/Diam - Inches

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.

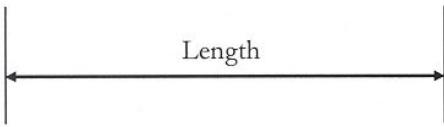
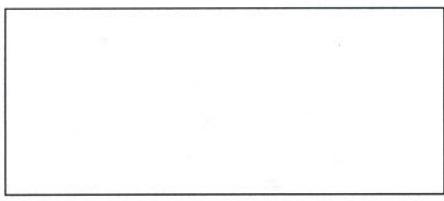
If the base plate shape is coded “Unknown” or the field is left blank, or the Pole or Foundation Type is coded “Not Applicable”, this field should be left blank.



Circle or Fluted

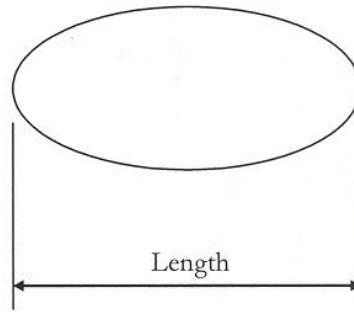


Octagon
(Hexagon & Pentagon similar)



Direction of Traffic →

Rectangle/Square
(Trapezoid similar - use average values)



Direction of Traffic →

Ellipse

Coding: None

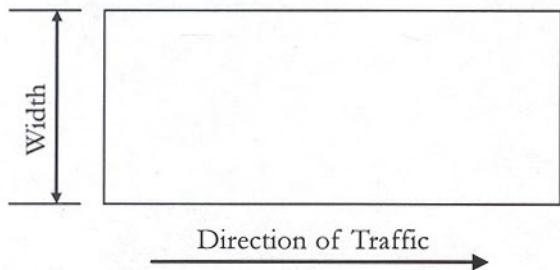
OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

Width - Inches

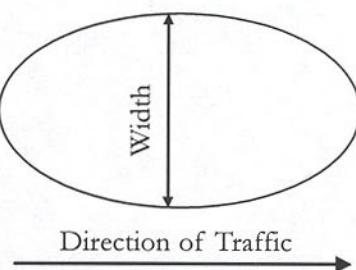
Description: Based on the illustrations shown below, enter the width (in inches) of each base plate in plan.

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

Screenshot of the "Pole Data: SO21501150" application window. The window title is "Pole Data: SO21501150". The menu bar includes File, Edit, View, Help, Pole General, Base Plates, Pole Dimensions (which is selected), and Trussing btwn Poles. The main area displays a table for entering pole dimensions. The columns are Foundation, Pole, Cross Section, Pole Height, Wall Thickness, Outside Diameter/Length (Inches), and Outside Width (Inches). The rows correspond to Left (L), Middle (M), and Right (R) poles, numbered 1 and 2. The "Cross Section" column includes dropdown menus for Box, H, I-Beam, and Square. The "Pole Height" and "Wall Thickness" columns have input fields for Feet and Inches, with minimum and maximum values. The "Outside Diameter/Length" and "Outside Width" columns have input fields for inches, also with minimum and maximum values. A "Comment:" text area is at the bottom, and a "Close" button is in the bottom right corner. The status bar at the bottom shows "Status", "admin", "6/7/2016", and "8:29 AM".

OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

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.

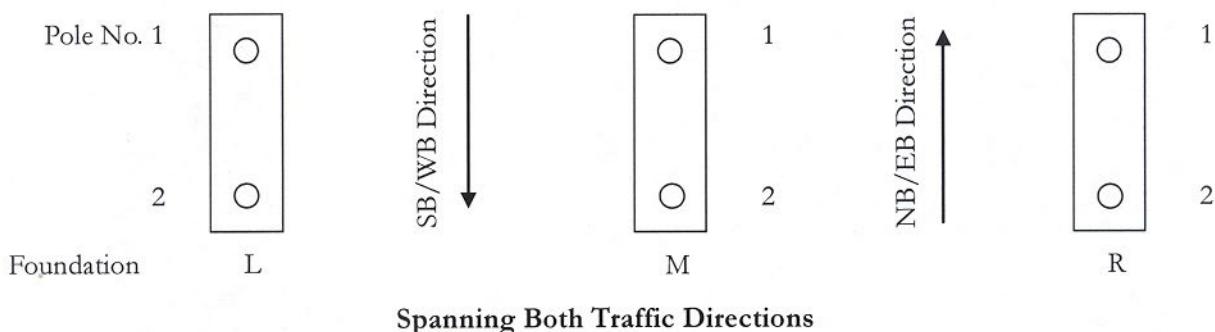
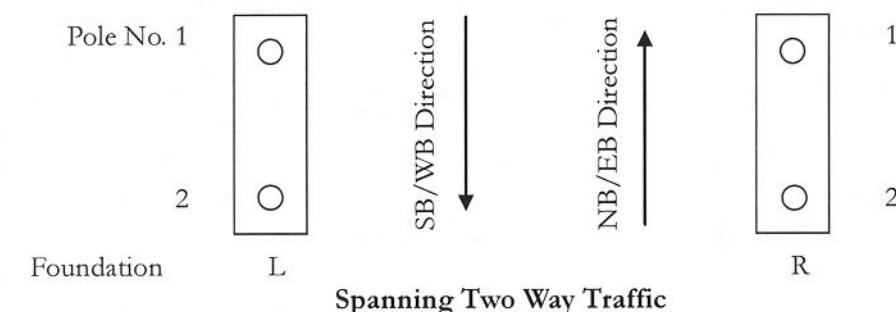
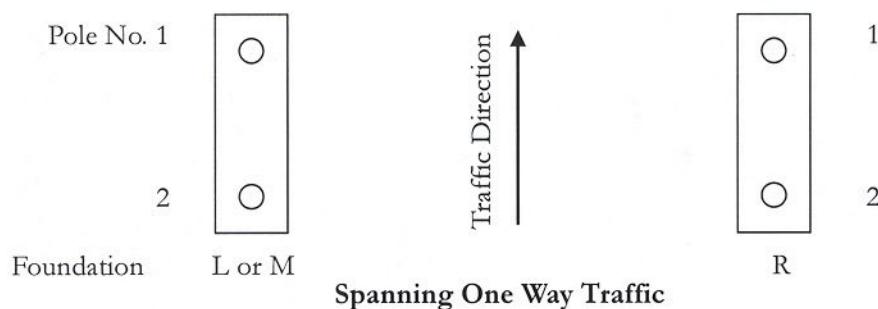
Pole - 1 and 2

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.



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

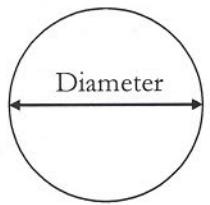
Description: Enter, in decimal inches, the average wall thickness of each vertical pole. If the pole section is solid or the Pole Type is coded “Not Applicable”, this field should be left blank.

Coding: None

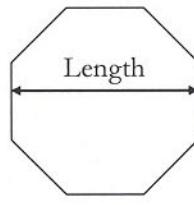
Outside Diameter/Length - Inches

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.

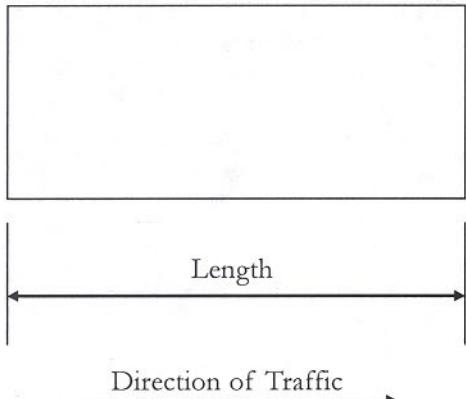


Circle or Fluted



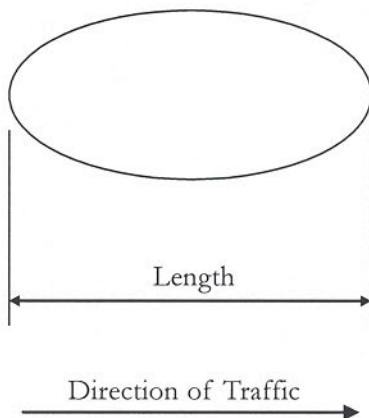
Octagon
(Other Polygon Shapes similar)

OVERHEAD SIGN STRUCTURE - STRUCTURE DATA



Rectangle/Square
(Trapezoid similar - use average values)

Coding: None

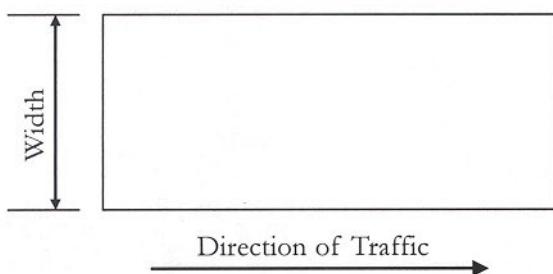


Ellipse

Outside Width - Inches

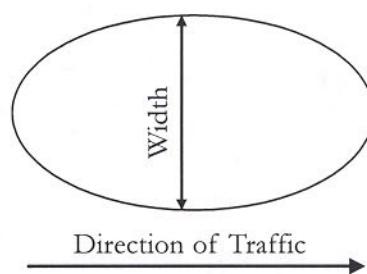
Description: Based on the illustrations shown below, enter the minimum and maximum outside width (in decimal inches) of each pole's cross section.

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)

Coding: None

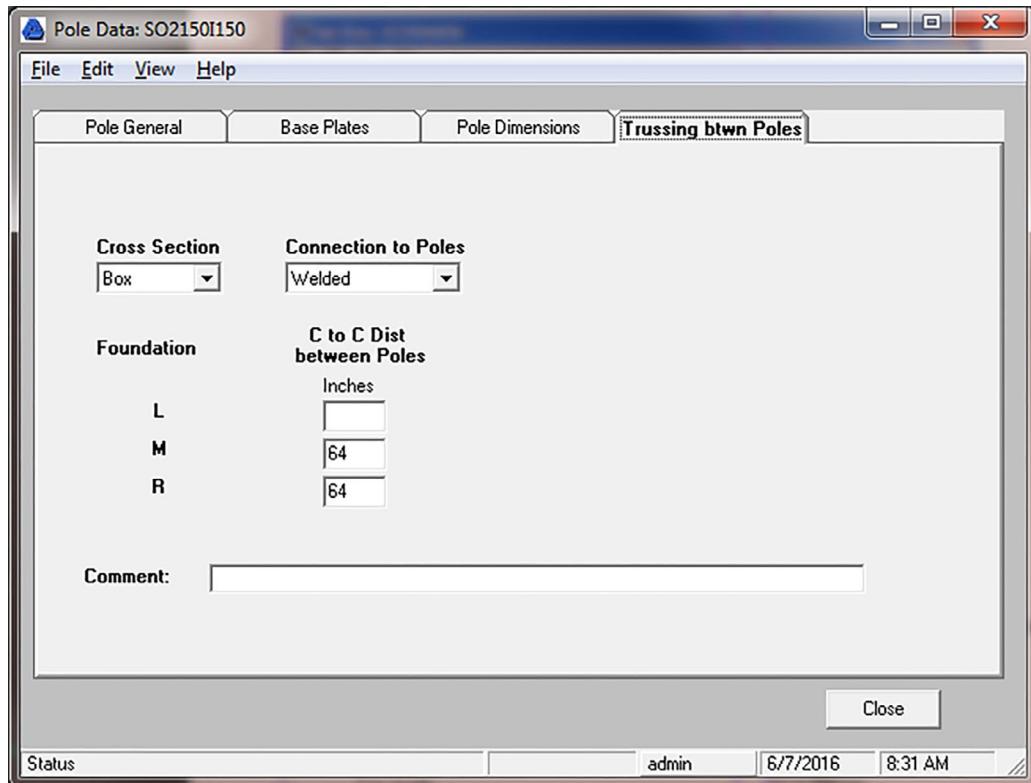


Ellipse

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

OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

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

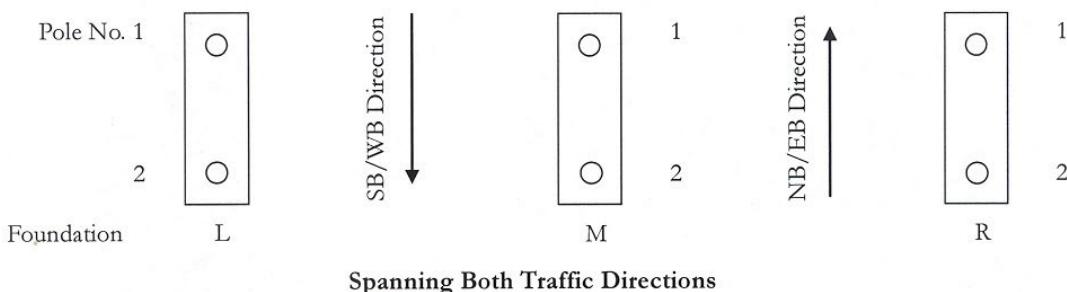
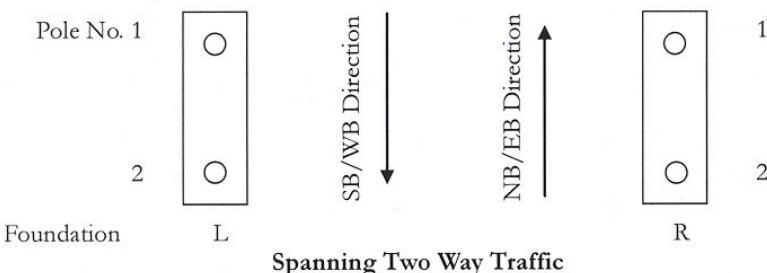
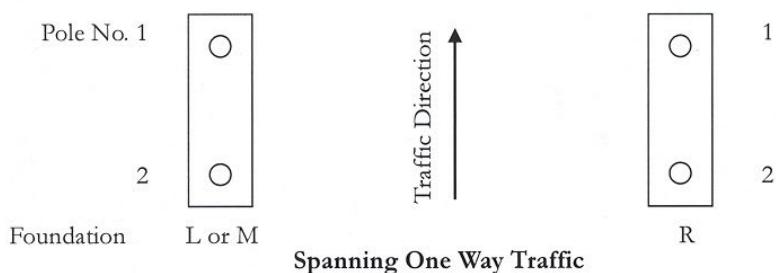
3 = Sleeved/Telescoping Joint

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.



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

Chords Data: SO2150I150

Chord General		Splices		Trussing btwn Chords	
Chord Type No	1	No of Chord Types	1	Rdwy Name Undr Chord	No Lanes Undr Chord
Chord Type	Chord Finish	Chord Material	Connect to Pole		
Tri-Chord	Galvanized	Steel	U-Bolts	SR 1 SB	3
Span Length	C to C dist btwn chord members	Dist CL Near Chord Memb to Top Pole			
Vertical	Horiz/Diag	L or M Foundation	Pole 1	Pole 2	R or M Foundation
86	5	3.33	1	1	1
* Above values decimal feet					
Wall Thickness (inches)	Shape	Outside Diameter/Length (inches)	Outside Width (Inches)		
0.375	Rectangle/Square	8	8	8	8
Comment: _____					
Close					
Status	admin	6/7/2016 8:37 AM			

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.

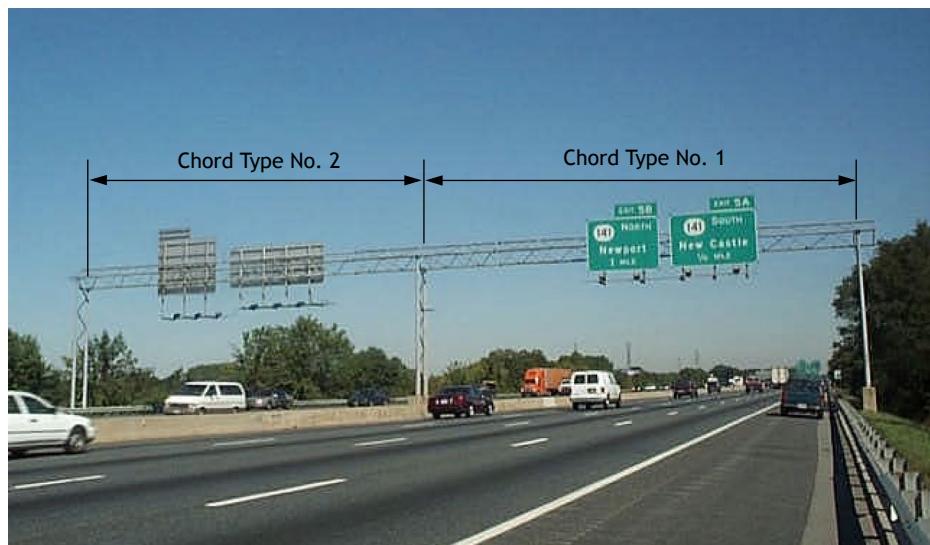
If **No of Chord Types** = 2, data should be entered for both **Chord Type No 1** and **Chord Type No 2**.

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

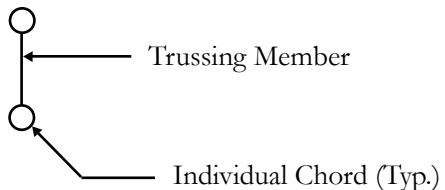
Chord Type

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

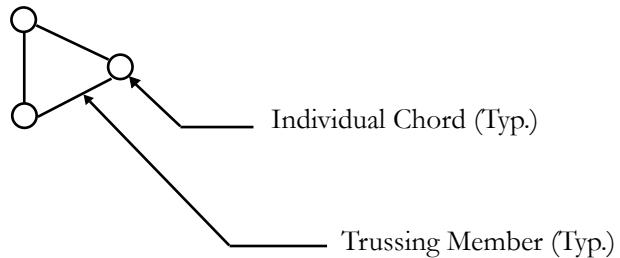
Coding: 1 = Single Chord



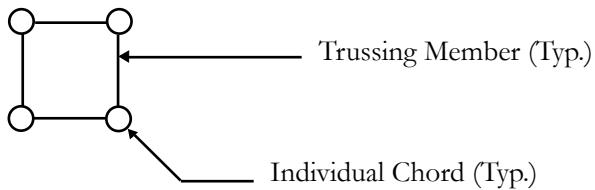
2 = Two Chord



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.

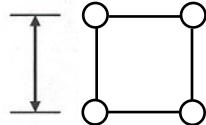
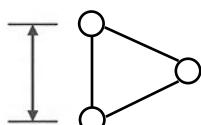
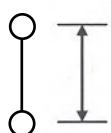
Coding: None

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

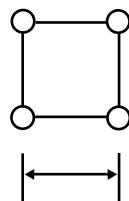
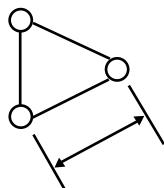
C to C dist btwn chord members - Horiz/Diag

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

OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

Dist CL Near Chord Memb to Top Pole - R or M Foundation

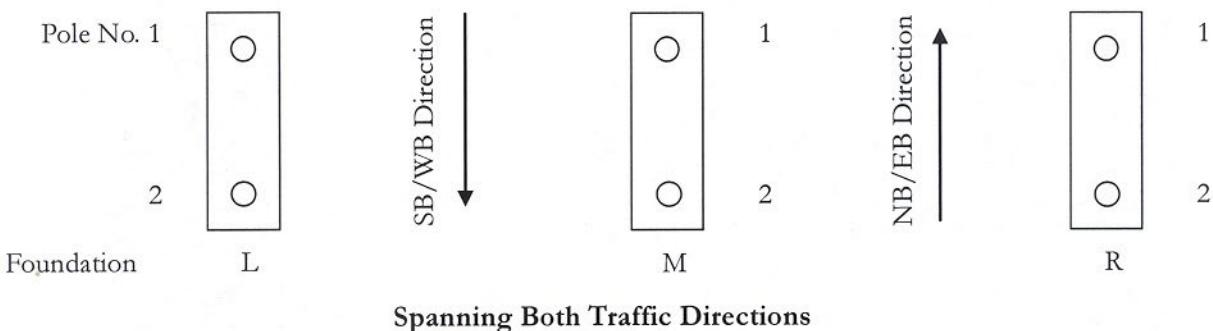
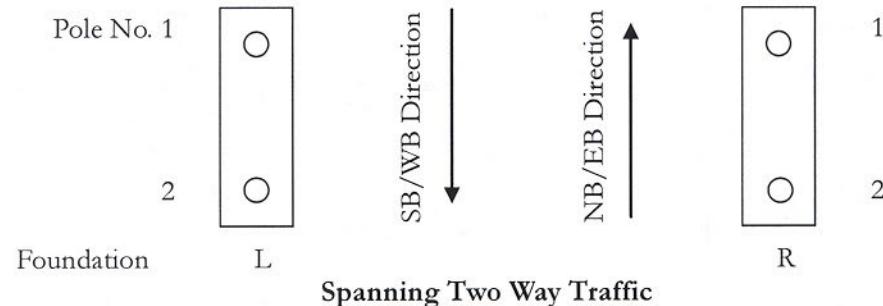
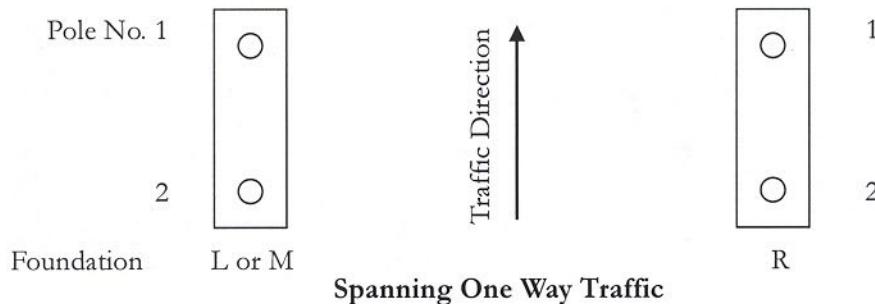
Description: Enter, in decimal feet, at the **R** and/or **M** foundation, the vertical distance from the top of each pole to the centerline of the individual chord closest to the top of the pole. If the chord sits on top of the pole support, 0 should be coded.

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.



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

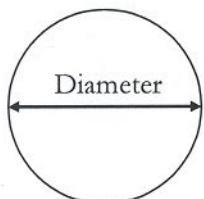
10 = Dodecagon (12 Sided)

11 = Octdecagon (18 Sided)

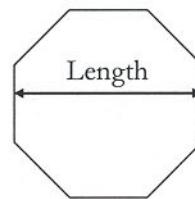
Outside Diameter/Length (Inches)

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.

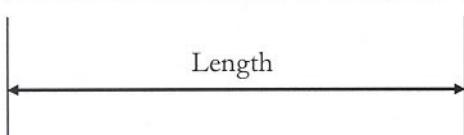
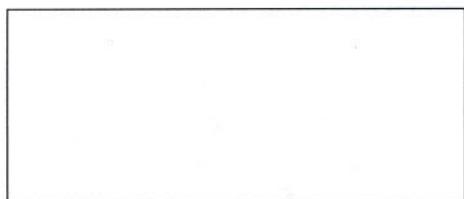
If more than one chord exists, it is assumed that all of the chords have the same outside length/diameter.



Circle or Fluted

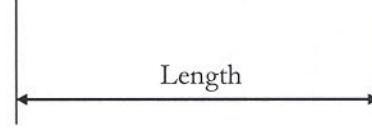
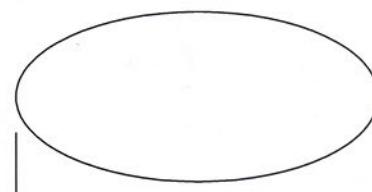


Octagon
(Hexagon & Pentagon similar)



Direction of Traffic →

Rectangle/Square
(Trapezoid similar - use average values)



Direction of Traffic →

Ellipse

Coding: None

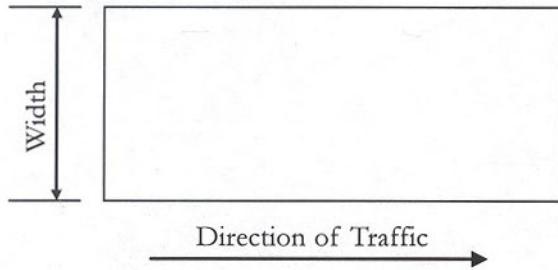
OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

Outside Width (Inches)

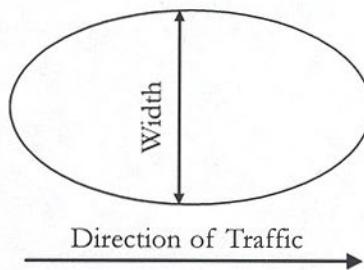
Description: Based on the illustrations shown below, enter the minimum and maximum outside horizontal width (in decimal inches) of the individual chord cross sections.

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

Chords Data: S02150I150

Chord General			Splices			Trussing btwn Chords			
Chord Type Number:		1							
No	Type	Location (Decimal Ft)	Splice Bolts No	Diam.	Shape	Thickness Inches	Diam. Inches	Splice Plate Width Inches	Length Inches
1	Bolted	27.5	12	1.125	Rectangle	1.500		18	18
2	Bolted	57.5	12	1.125	Rectangle	1.500		18	18
3									
4									
5									
6									
7									
8									
9									
10									

Location: Distance from CL end support adjacent to right shoulder/lane

Close

Status editor 7/21/2011 3:12 PM

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



OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

2 = Bolted



3 = Sleeved/Telescoping Joint



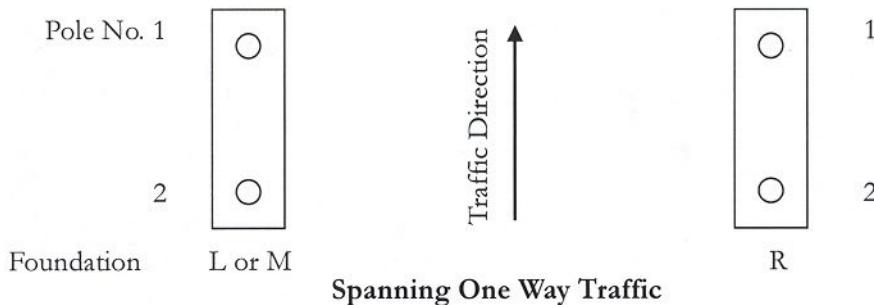
4 = Not Applicable

Location (Decimal Ft)

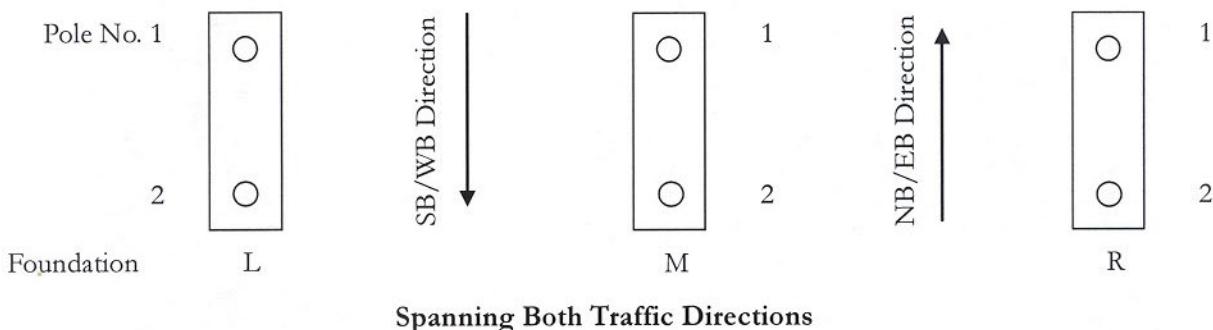
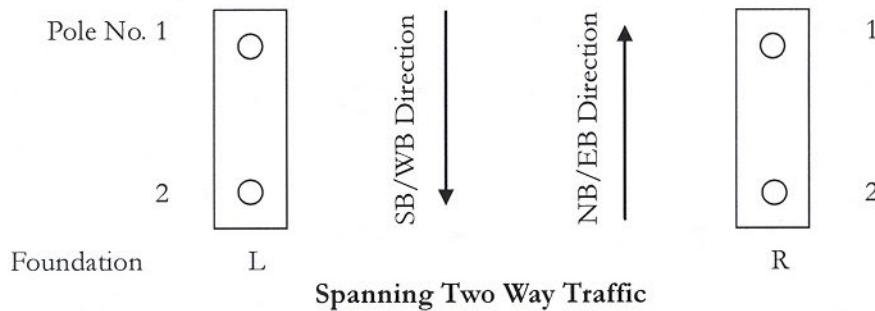
Description: Enter, in decimal feet, the location of the splices along one of the individual chords.

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.



OVERHEAD SIGN STRUCTURE - STRUCTURE DATA



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).

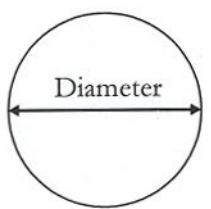
Coding: None

Splice Plate - Diam. (Inches)

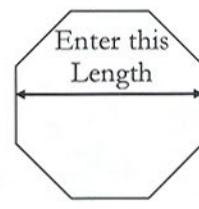
Description: Enter, in decimal inches, the diameter of a splice plate at the splice location. The program will calculate the diameter automatically by clicking on the box next to the input field and entering the circumference in inches.

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)

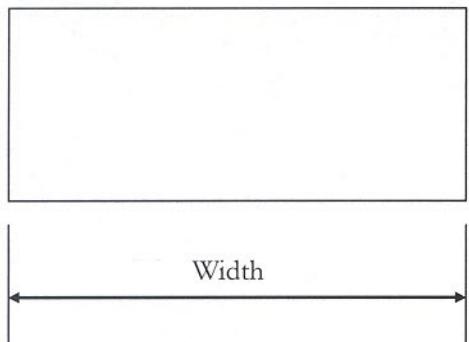
Coding: None

Splice Plate - Width (Inches)

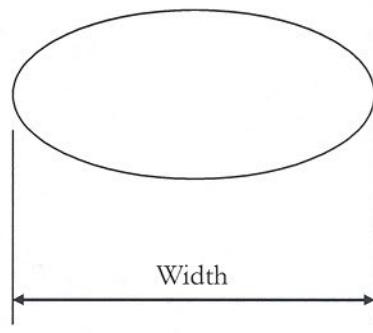
Description: Enter, in decimal inches, the horizontal width of a splice plate at the splice location.

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

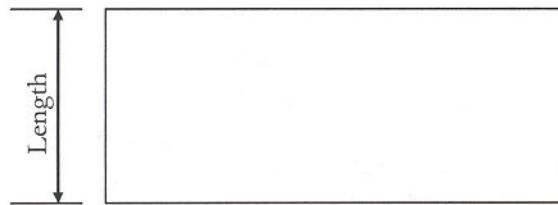
Coding: None

Splice Plate - Length (Inches)

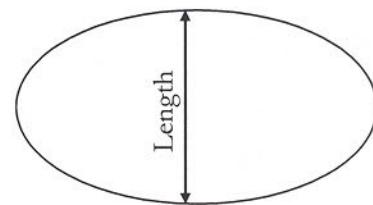
Description: Enter, in decimal inches, the length (vertical height) of a splice plate at the splice location.

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).



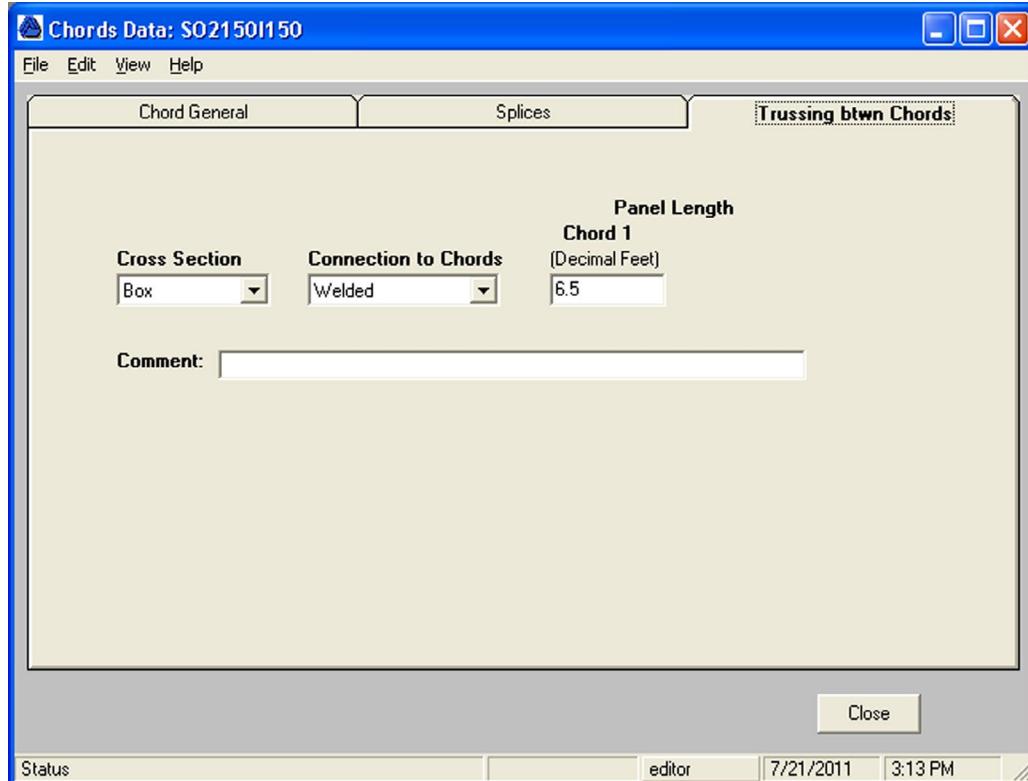
Rectangle/Square
(Trapezoid similar - use average values)



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

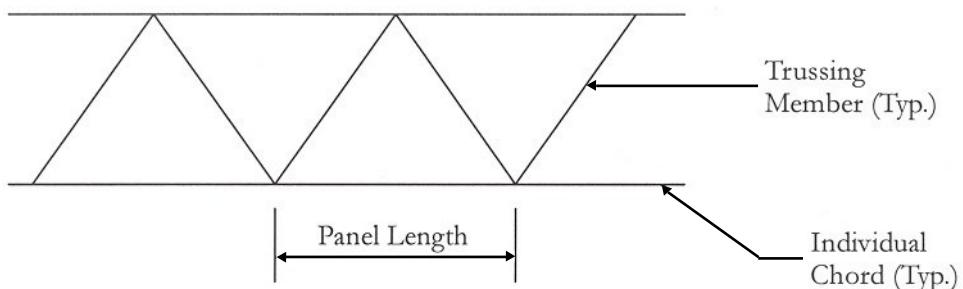
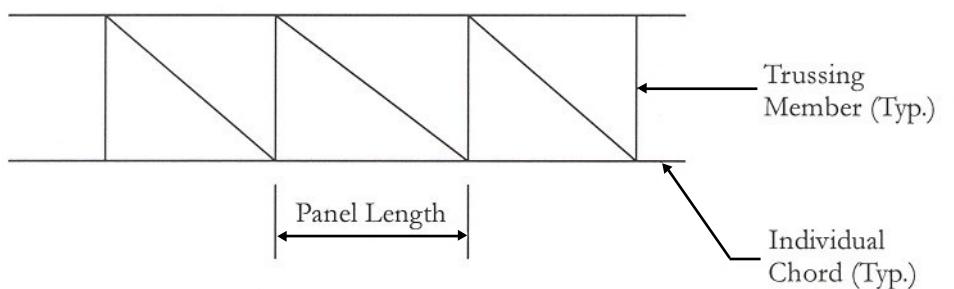
2 = Bolted

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

OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

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.



OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

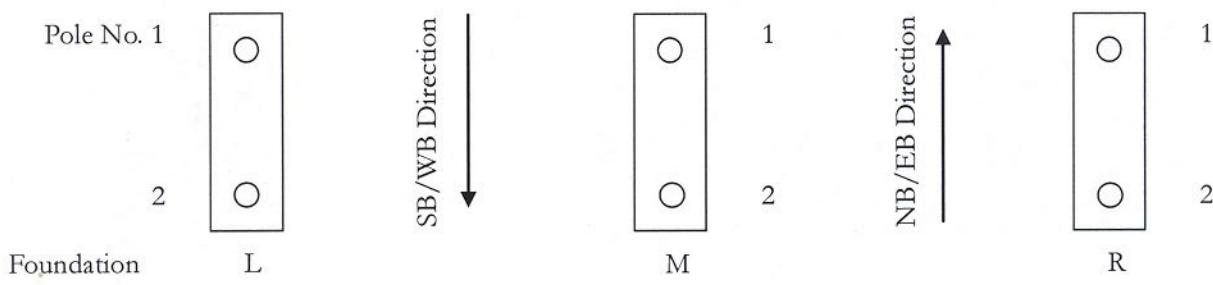
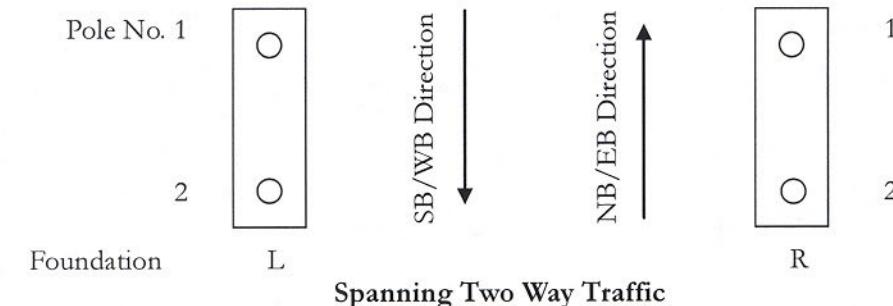
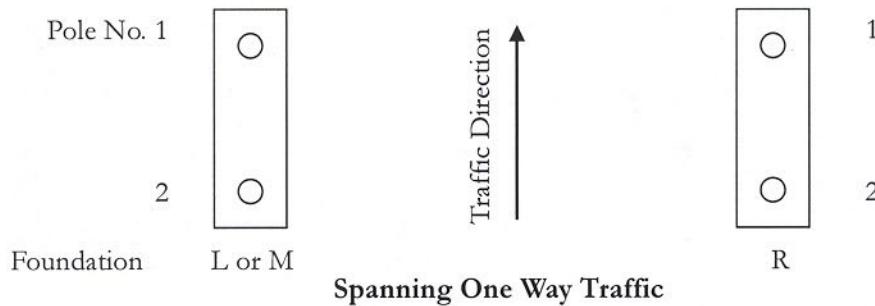
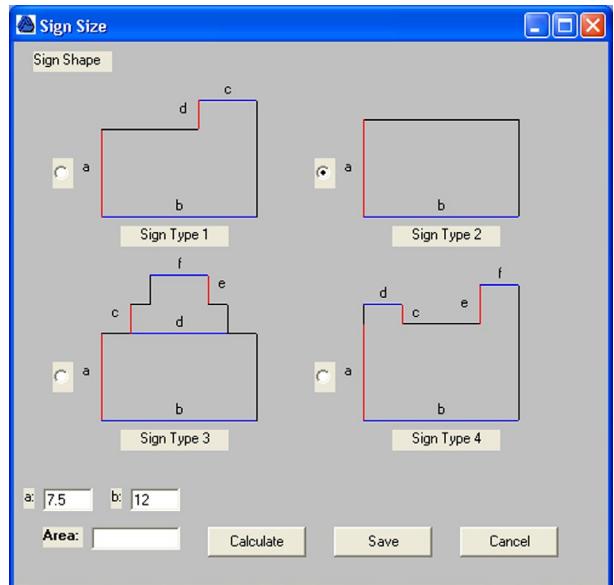
By clicking on the box next to the record field, the user should select the appropriate sign shape and enter the sign panel's dimensions in decimal feet. Clicking on the **Calculate** button allows the program to compute the sign panel area. The user should click the **Save** button in order to save 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.



OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

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	Color	Reading 1	Reading 2	Reading 3	Reading 4	Reading 5	Average
1 BACKGROUND	GREEN	53	53	54	51	53	52.8
2 FOREGROUND	WHITE	345	500	514	490	387	447.2
3 BACKGROUND	YELLOW	453	467	465	477	467	465.8
4							

OVERHEAD SIGN STRUCTURE - STRUCTURE DATA

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

SIGN INSPECTION PROGRAM USER MANUAL

SO - OVERHEAD SIGN STRUCTURE INSPECTION DATA

DeIDOT Sign Inspection

File Edit Reports Tools View Help

D-Gen D-Fd D-Pole D-Chd D-Sign I-Gen SSDF I-Fd I-Pole I-Chd I-Sign

Filters Structure Type County Inventory Number Inspection Type Miscellaneous

SO	Kent	1*	Routine	
----	------	----	---------	--

Dates

From: 1/1/1990 Inspection Next Routine Inspection Next Special Inspection Elim

To: 7/20/2011 Next NDT Inspection Next Cursory Inspection

Select Structure

ID	Location
SO2150H150	SR 1 SB, 1/2 Mile North of Exit 97
SO2150I150	SR 1 SB at Exit 97
SO2150J150	SR 1 SB, On Exit 95 Off Ramp
SO2150K150	Scarborough Road between SR 1 (Exit 104) and US 13
SO2156 150A	Puncheon Connector WB at the Exit to US 13
SO2157 007	Puncheon Connector FR at Exit 2A

Select Inspection Date

Date	Type	Rating
10/13/2008	1	7
5/7/2001	1	8

Database Directory: y:\S\Sulerzyski\deidottest\Cumulative Final Insp Db\StructInsp.mdb

Status: # Strs= 7 admin 3/9/2012 10:05 AM

GENERAL INSPECTION - GENERAL

The screenshot shows a Windows application window titled "General Inspection: SO21501150". The menu bar includes File, Edit, Tools, View, and Help. Below the menu is a tab bar with General, Photos, NDT Reports, Structure History, and Notes. The General tab is selected. A sub-header "Inspection Date Team Leader NDT Inspector Inspector Inspector Inspection Type" is followed by input fields: 6/25/2013, URS/DDD, PAI/AAN, and two empty text boxes. The "Inspection Type" dropdown is set to "Routine". Below this are sections for "General Appearance", "General Alignment", "Camber Present", and "Guardrail Protection/Alignment", each with a rating dropdown (8) and a comment text box. An "OVERALL CONDITION" section has a rating dropdown (7) and a comment text box. At the bottom left are buttons for "Main Comment", "NDT Comment", and "Future Comment". On the right, there's a "Critical Rating Flag" dropdown set to "No". Below the main area are status bars for "Status", "admin", "6/7/2016", and "8:48 AM".

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

OVERHEAD SIGN STRUCTURE - INSPECTION DATA

Save

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

Coding: None

GENERAL INSPECTION - PHOTOS

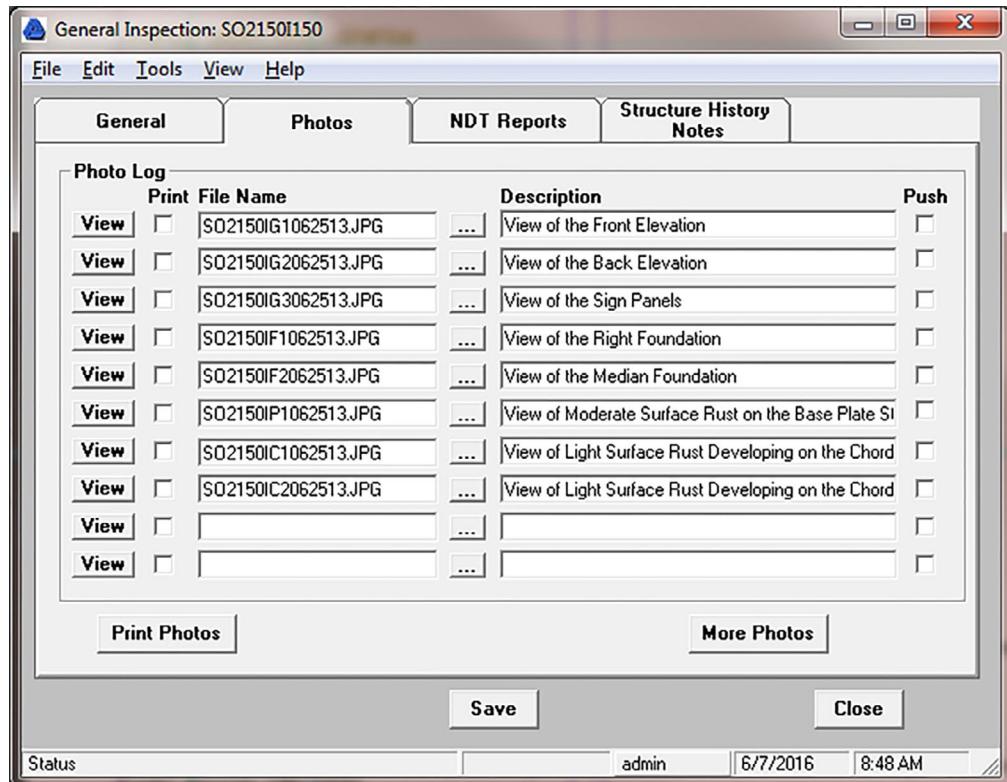


Photo Log

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

SO2150**KG1**.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

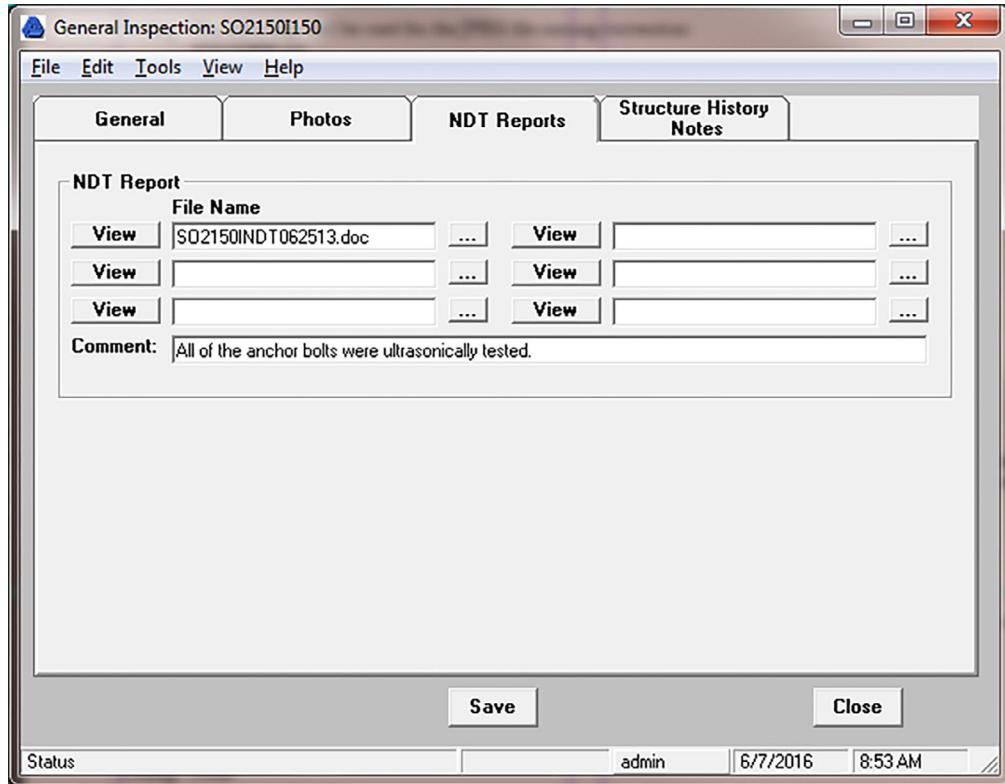
Description: Clicking on the **More Photos** button creates another **Photos** tab that allows up to ten additional photographs to be stored in a folder labeled with the structure's ID number. The photographs should be stored in a JPEG format with a medium resolution of 640 x 480.

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: SO2150KNDT.doc or SO2150KNDT.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.

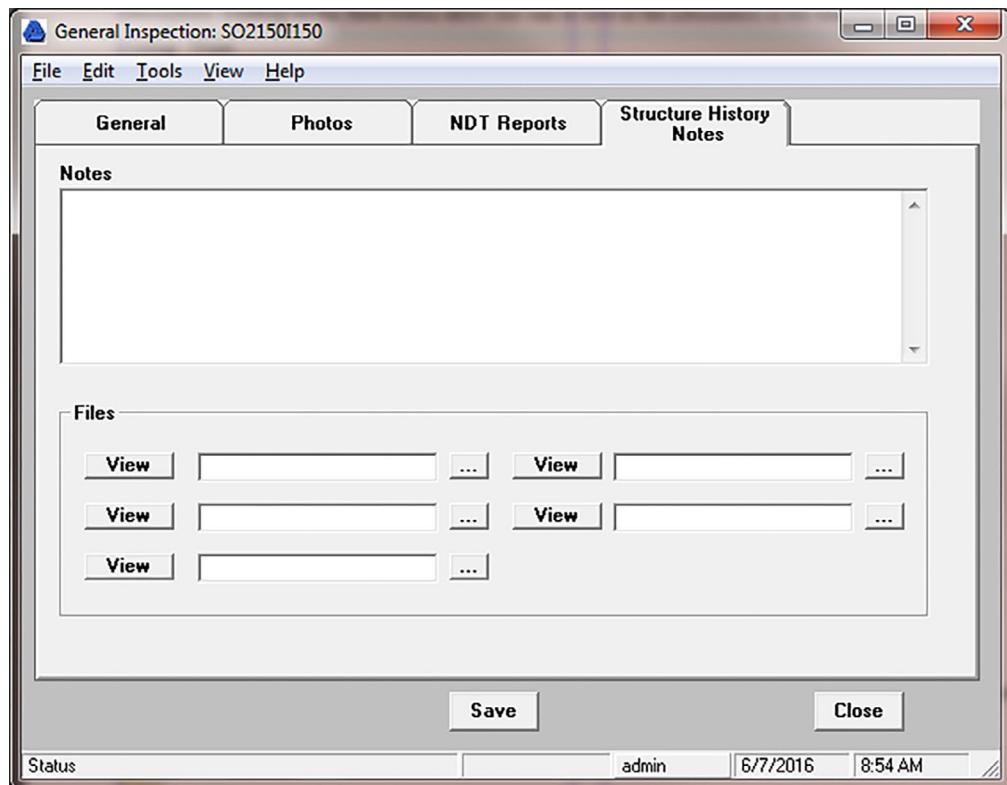
Coding: None

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

OVERHEAD SIGN STRUCTURE - INSPECTION DATA

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

The screenshot shows a Windows-style dialog box titled "Sign Structure Deficiency: S02150I150". The window has a standard title bar with minimize, maximize, and close buttons. Below the title bar is a menu bar with "File", "Edit", "View", and "Help". The main content area is divided into three sections: "Condition Index", "Functional Importance", and "Design Index". Under "Condition Index", there are two dropdown menus labeled "NBI Condition Rating" (set to 7) and "Structurally Deficient" (set to No). To the right of these dropdowns are two input fields labeled "Points" containing the values 10 and 0 respectively. Below these fields is a label "Condition Index Point Total" followed by an input field containing the value 10. At the bottom of the dialog box is a label "Sign Structure Deficiency Point Total*" followed by an input field containing the value 14. A note at the bottom left states: "* The total number of points 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." At the bottom right is a "Close" button. The status bar at the bottom of the window shows "Status", "editor", "7/21/2011", "3:17 PM", and a series of icons.

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

Sign Structure Deficiency: SO2150I150

Condition Index	Functional Importance	Design Index
Points		
Functional Class	Interstate	10
Number of Lanes Impacted	3 lanes	2
Average Daily Traffic	15,000-19,999	4
Functional Importance Point Total 16		
Close		
Status	admin	6/7/2016 8:57 AM

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.

OVERHEAD SIGN STRUCTURE - INSPECTION DATA

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

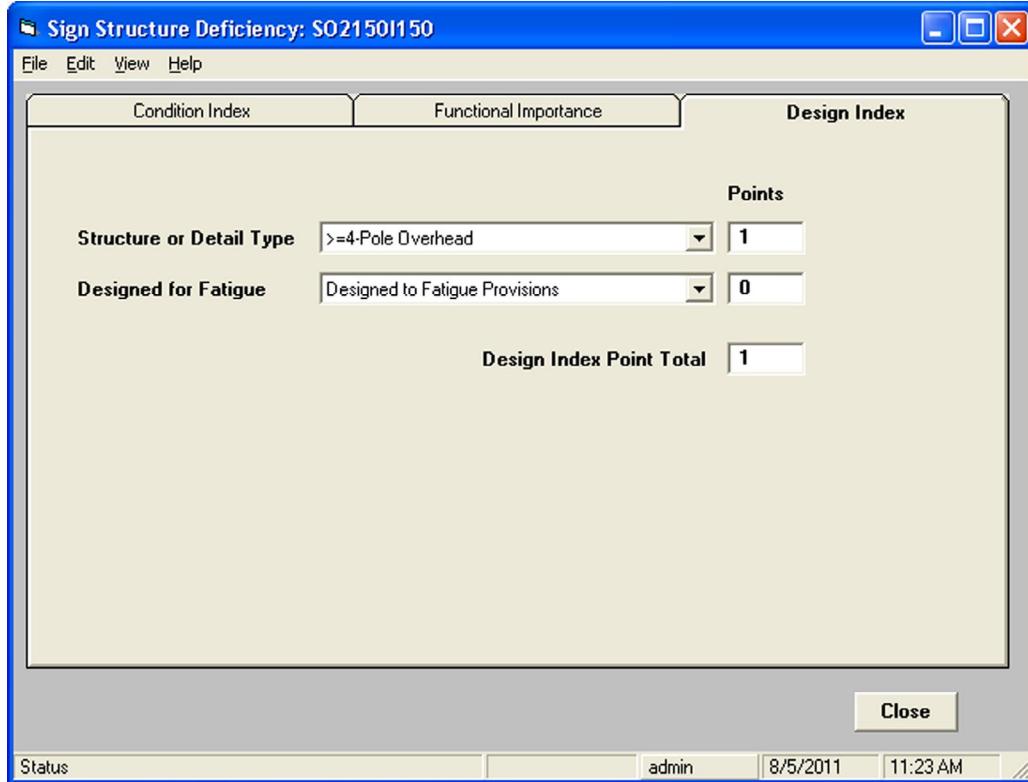
Coding: None

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.

OVERHEAD SIGN STRUCTURE - INSPECTION DATA

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	3
Aluminum Sign Structure	
> 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

None

All of the anchor bolts were ultrasonically tested. No indications were detected.

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	Priority
S122	F2C	REPAIR/PATCH CONCR	CONCRETE: SPALLING/EXCESSIVE DE	LOW PRIORITY
Inspector Notes: <input type="text"/> <input checked="" type="checkbox"/> Push				
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OVERHEAD SIGN STRUCTURE - INSPECTION DATA

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

Pole Inspection: SO2150I150

Pole General	Truss btwn Poles	Maint/NDT	Future Maint								
<table border="1"><thead><tr><th>Rating</th><th>Comments</th></tr></thead><tbody><tr><td>Members</td><td>8</td></tr><tr><td>Joints/Splices</td><td>8</td></tr><tr><td>Base Plate and Connection to Pole</td><td>7 There is moderate rust on the stiffener plates which are welded to the pole.</td></tr></tbody></table>	Rating	Comments	Members	8	Joints/Splices	8	Base Plate and Connection to Pole	7 There is moderate rust on the stiffener plates which are welded to the pole.			
Rating	Comments										
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Base Plate and Connection to Pole	7 There is moderate rust on the stiffener plates which are welded to the pole.										
CONDITION RATING	7										

Status editor 7/21/2011 3:21 PM

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

Pole Inspection: SO21501150

File Edit View Help

Pole General	Truss btwn Poles	Maint/NDT	Future Maint
	Rating	Comments	
Horizontal Members	8		
Diagonal Members	8		
Connections to Poles	7	There is minor rust and bleeding at the welded joints of the trussin	
CONDITION RATING 8			

Close

Status editor 7/21/2011 3:21 PM

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

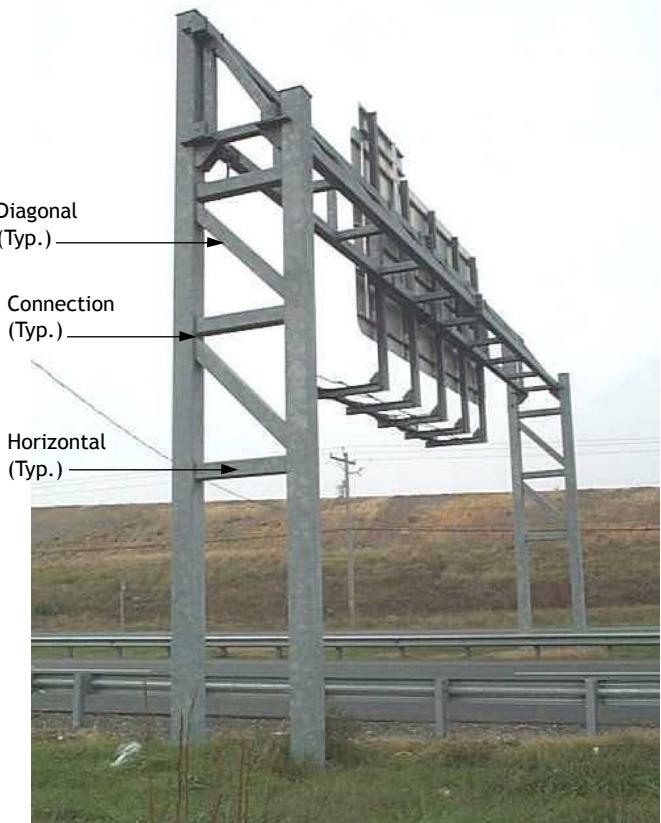
Description: This element involves the inspection of the horizontal trussing (secondary) members located between the vertical poles at each foundation, including the applied finish.

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

Pole Inspection: SO2150I150

File Edit View Help

Maint/NDT

Maintenance repairs done at the time of inspection

Push

None

NDT testing done at the time of inspection

Push

Magnetic Particle Testing was performed on the fillet welds at two stiffener plates on the north base plate of t

Close

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

Pole Inspection: SO2150I150

File Edit View Help

Pole General	Truss btwn Poles	Maint/NDT	Future Maint	
Future maintenance required and/or repair recommendations				
Code	Item	Activity	Description	Priority
S299	PSX	NA	NA	LOW PRIORITY
Inspector Notes Clean and galvanize the stiffener plates at the right support as required. <input type="checkbox"/> Push				
<input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/>				
Inspector Notes				
<input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/>				
Inspector Notes				
<input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/>				
Inspector Notes				
<input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/> <input type="button"/>				
Inspector Notes				
<input type="button" value="Close"/>				

Status editor 7/21/2011 3:22 PM

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

Component	Rating	Comments
Top Chord(s)	8	
Bottom Chord(s)	8	
Mid Chord (Tri-Chord)	8	
Joints/Splices	8	
Connection to Poles	8	

CONDITION RATING 8

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)

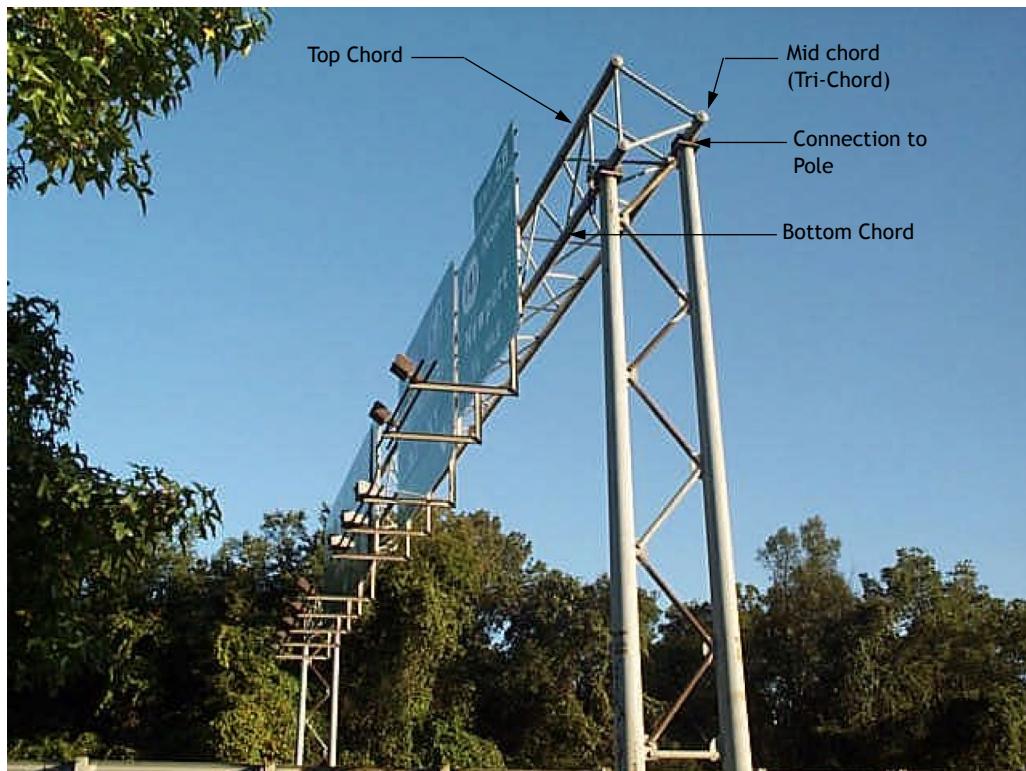
Description: This element involves the inspection of the mid chord within a Tri-Chord type configuration, including the applied finish. Also included with this element are hand holes and caps attached to the mid chord.

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)

Chord Inspection: S02150J150

Chord	Trussing (Btwn Chords)	Maint/NDT	Future Maint
Component	Rating	Comments	
Verticals (Btwn Chords)	8		
Diagonals (Btwn Chords)	8		
Horizontals (Btwn Truss)	8		
Diagonals 2 (Btwn Truss)	N		
Connection to Chords	8		
CONDITION RATING 8			

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

The screenshot shows a Windows application window titled "Chord Inspection: SO2150I150". The window has a menu bar with File, Edit, View, and Help. Below the menu is a toolbar with four buttons. The main area contains four tabs: Chord, Trussing (Btwn Chords), Maint/NDT (which is selected and highlighted in blue), and Future Maint. The Maint/NDT tab contains two sections: "Maintenance repairs done at the time of inspection" and "NDT testing done at the time of inspection". Each section has a dropdown menu with "None" as the first option and five additional empty dropdowns below it. To the right of each dropdown is a "Push" button with a small checkbox. At the bottom of the window is a status bar with "Status", "editor", "7/21/2011", "3:24 PM", and other icons.

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

Chord Inspection: SO21501150

Future maintenance required and/or repair recommendations

Code	Item	Activity	Description	Priority
Inspector Notes None				<input type="checkbox"/> Push
Inspector Notes				
Inspector Notes				
Inspector Notes				
Inspector Notes				

Close

Status editor 7/21/2011 3:24 PM

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.

OVERHEAD SIGN STRUCTURE - INSPECTION DATA

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

The screenshot shows a software application window titled "Sign Inspection: SO2150I150". The window has a menu bar with File, Edit, View, and Help. Below the menu is a tab bar with "Maint Walk/Access" (selected), Signs, Lum/Cam/TS-Conn, Maint/NDT, and Future Maint. The main area contains a table with columns "Rating" and "Comments". Rows include "Walkway Platform" (Rating: N, Comments: [empty]), "Access Ladder" (Rating: N, Comments: [empty]), "Supports/Connections" (Rating: N, Comments: [empty]), "Handrails" (Rating: N, Comments: [empty]), "Safety Chains" (Rating: N, Comments: [empty]), and an empty row (Rating: N, Comments: [empty]). At the bottom is a "CONDITION RATING" dropdown set to "N" and a "Close" button. The status bar at the bottom shows "Status", "editor", "7/21/2011", "3:25 PM", and a network icon.

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.



OVERHEAD SIGN STRUCTURE - INSPECTION DATA

SIGN INSPECTION - SIGNS

Sign Inspection: SO2150I150

File Edit View Help

Maint Walk/Access Signs Lum/Cam/TS-Conn Maint/NDT Future Maint

Rating	Comments
Attachment to Structure	8 The original two sign panels have been replaced by two new extruded
Reflectivity	8
Legibility	8

CONDITION RATING 8

Close

Status editor 7/21/2011 3:25 PM



Attachment to Structure

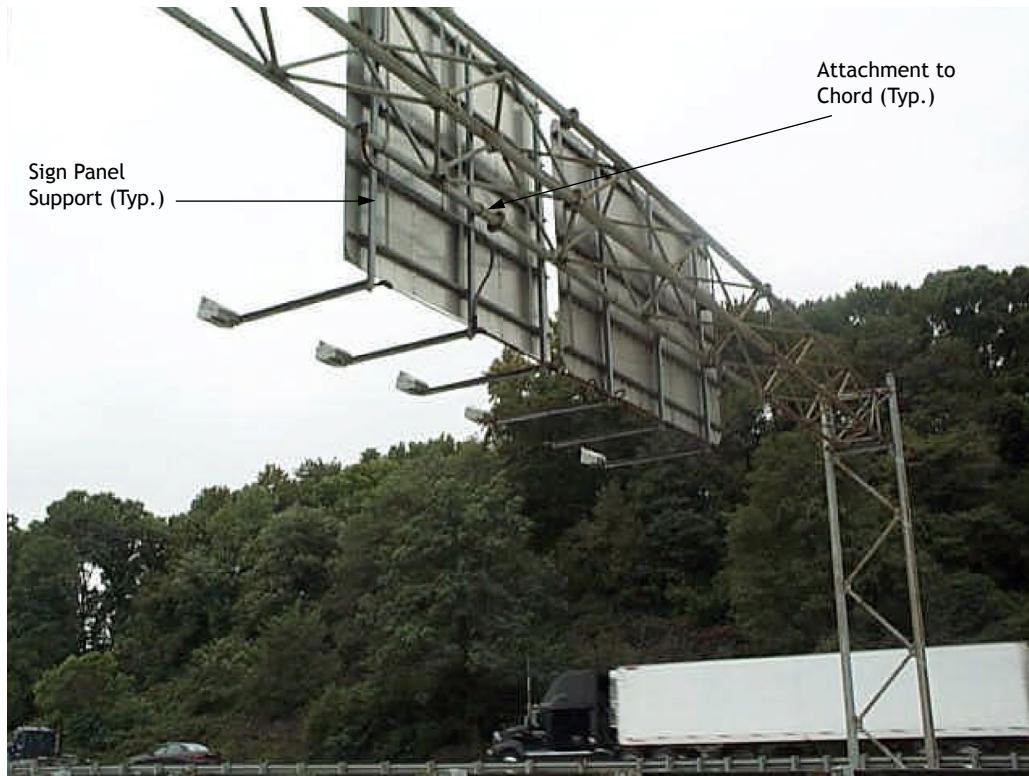
Description: This element involves the inspection of the sign panel(s) and variable message sign (VMS) board(s) attachment to their immediate supports and to the structure itself.

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

Sign Inspection: SO2150I150

			File	Edit	View	Help
Maint Walk/Access	Signs	Lum/Cam/TS-Conn	Maint/NDT	Future Maint		
Luminaires	Rating <input type="button" value="N"/>	Comments The luminaire arms and luminaires have been removed.				
Cameras	Rating <input type="button" value="N"/>	Comments				
Photo Control Devices	Rating <input type="button" value="N"/>	Comments				
Electrical Components	Rating <input type="button" value="N"/>	Comments				
Connection to Supports	Rating <input type="button" value="N"/>	Comments				
CONDITION RATING		Rating <input type="button" value="N"/>				
<input type="button" value="Close"/>						
Status	editor	7/21/2011	3:26 PM			

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

Maint/NDT

Maintenance repairs done at the time of inspection

Installed 4 sign clips on sign panel 2 during the inspection. The sign clips were tightened to a snug tight

NDT testing done at the time of inspection

None

Close

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

The screenshot shows a software application window titled "Sign Inspection: SO2150I150". The window has a menu bar with File, Edit, View, and Help. Below the menu is a tab bar with five tabs: Maint Walk/Access, Signs, Lum/Cam/TS-Conn, Maint/NDT, and Future Maint. The Future Maint tab is selected and highlighted in blue. The main area of the window contains a table titled "Future maintenance required and/or repair recommendations". The table has columns for Code, Item, Activity, Description, and Priority. There are six rows in the table, each with its own set of dropdown menus for the first four columns and a priority code dropdown for the fifth column. Below the table, there is a section labeled "Inspector Notes" with a "None" dropdown and a "Push" checkbox. At the bottom right of the window is a "Close" button.

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.

OVERHEAD SIGN STRUCTURE - INSPECTION DATA

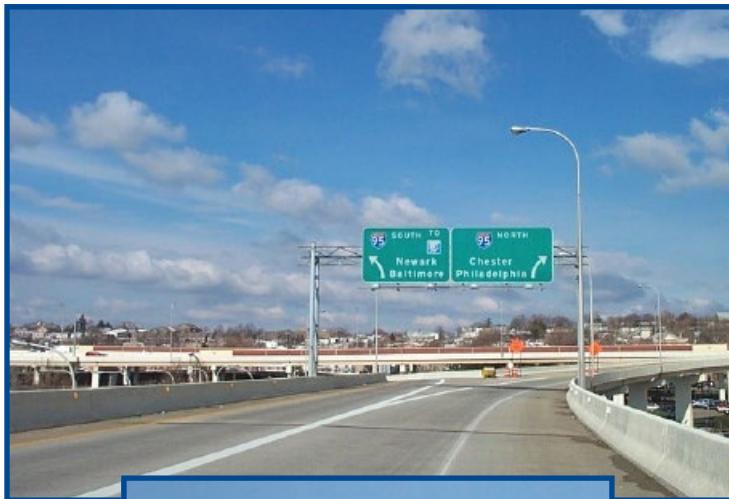
Note: If "None" is entered for the maintenance and/or repair recommendations, the Priority field should be left blank.

Inspector Notes

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

Coding: None

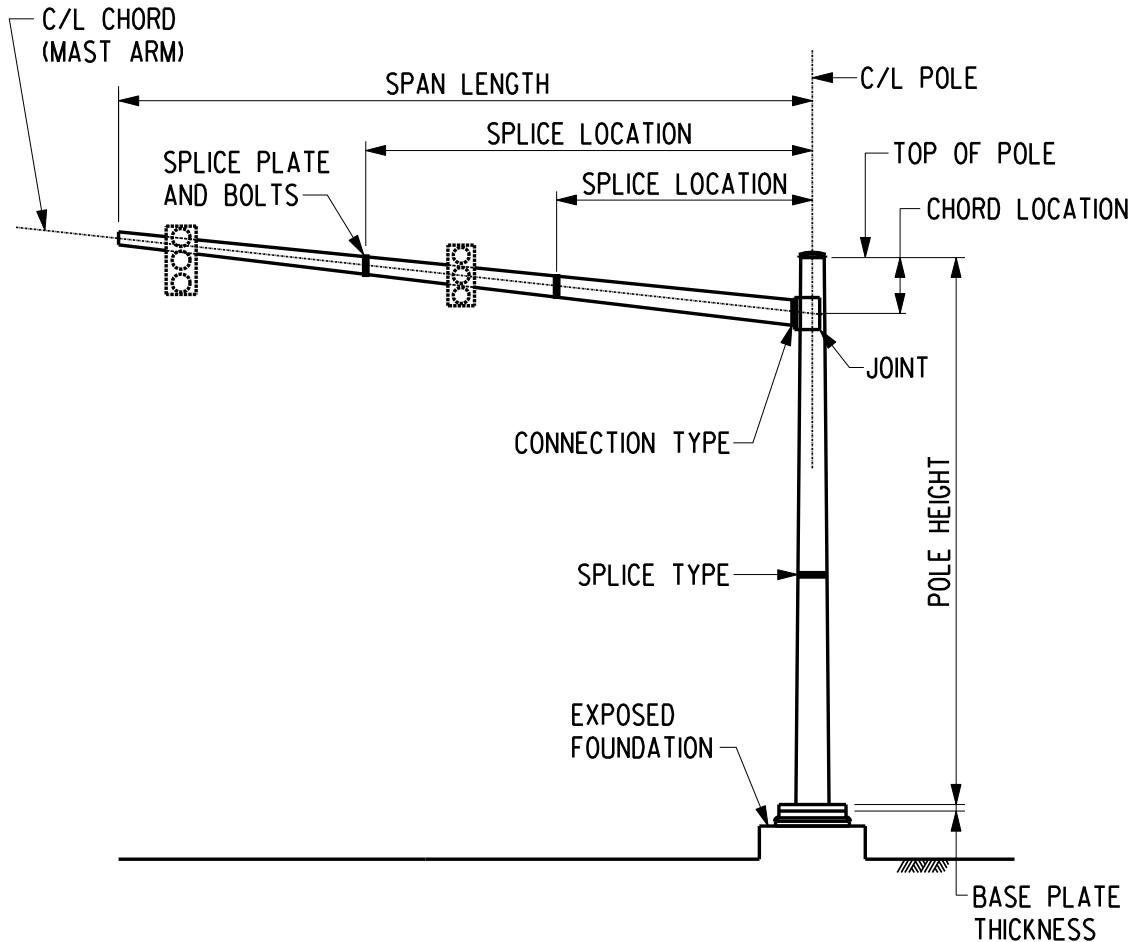
The **Push** button adjacent to the **Inspector Notes** field record is used to push or forward a critical repair recommendation to the **Future Comment** section of the **General Inspection - General** page. To activate the "push", click on the box and a checkmark will appear.



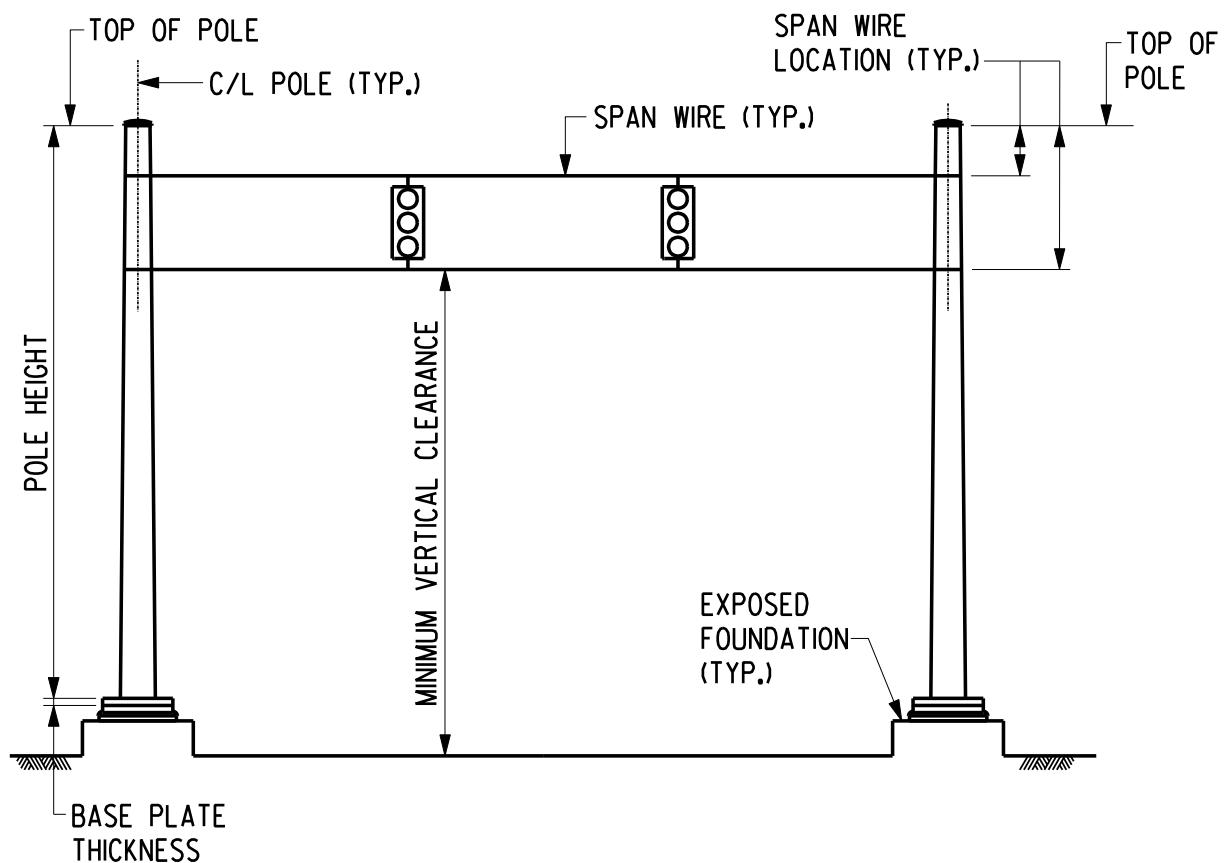
SIGN INSPECTION PROGRAM USER MANUAL

APPENDIX REFERENCE GUIDE FOR FIELD INSPECTION MEASUREMENTS

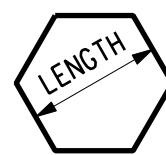
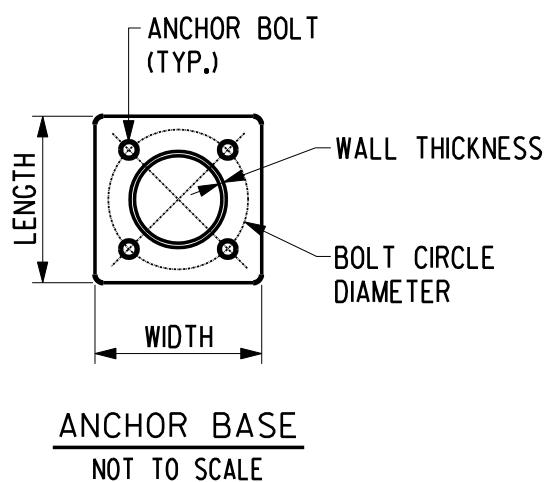
TRAFFIC SIGNAL SUPPORT CANTILEVER ARM



TRAFFIC SIGNAL SUPPORT STRAIN POLE

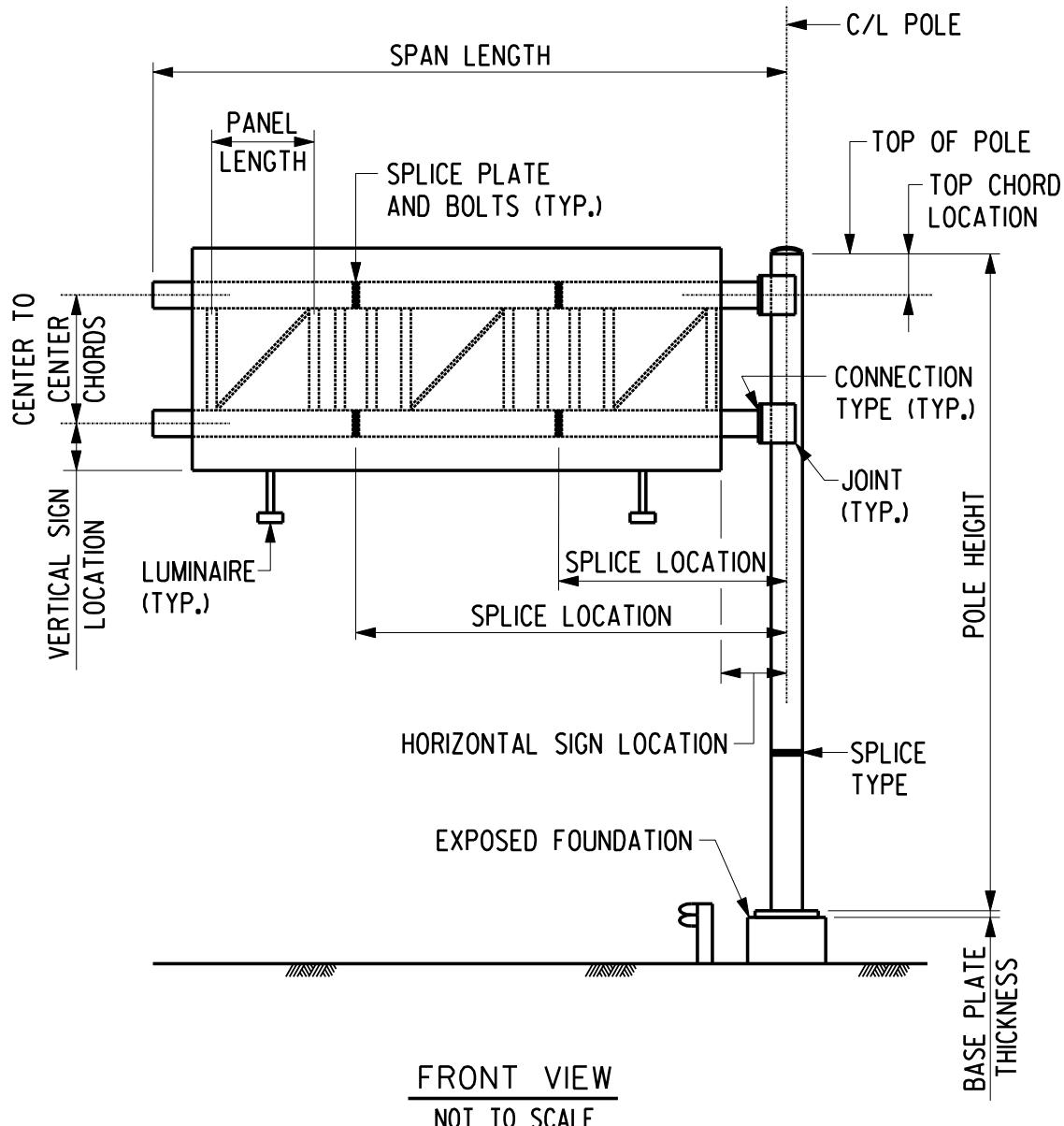


TRAFFIC SIGNAL SUPPORT STRAIN POLE

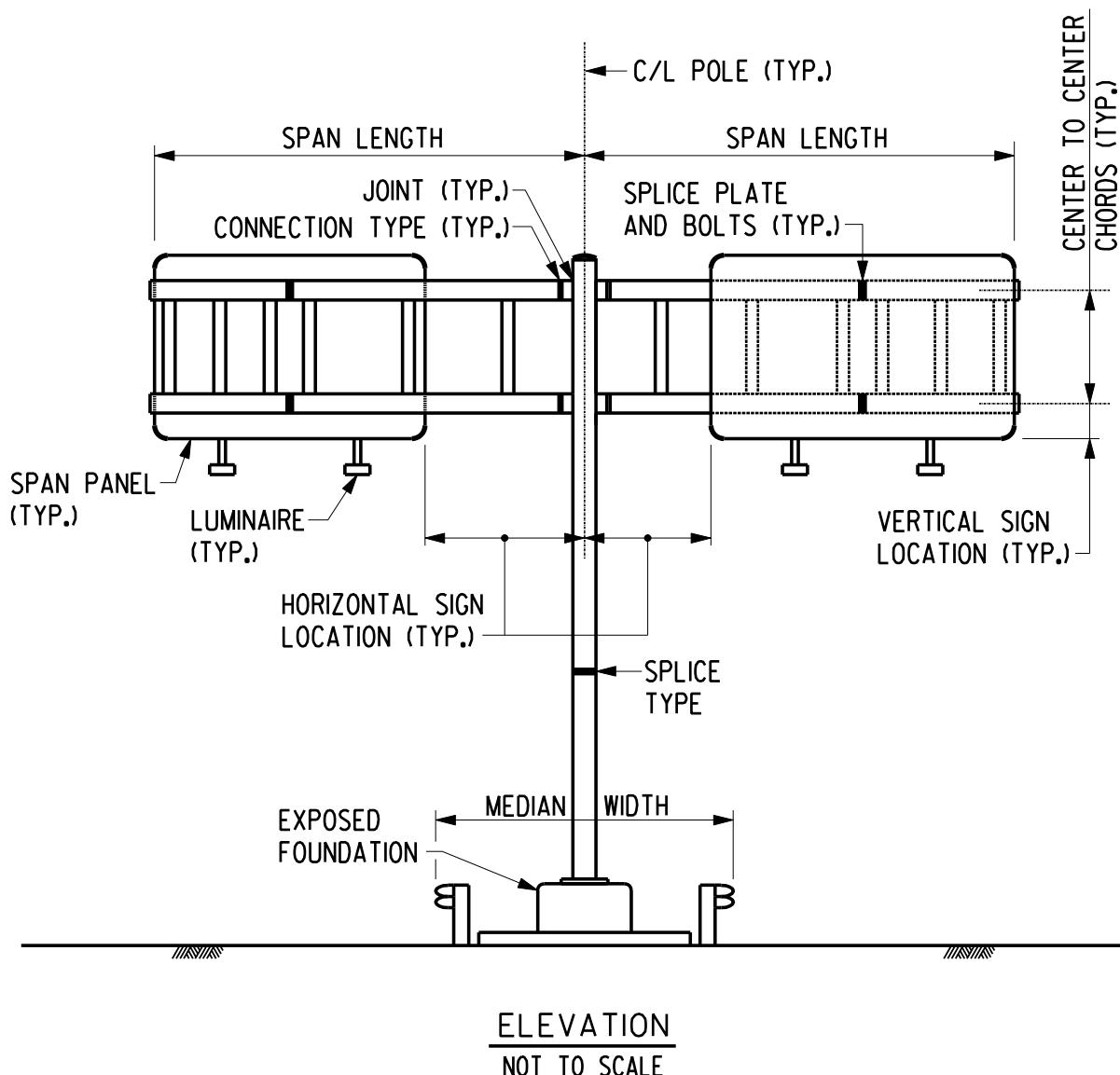


ELEMENT SECTION
FOR ELEMENTS NOT RECTANGULAR
OR CIRCULAR IN SECTION

CANTILEVER SIGN STRUCTURE



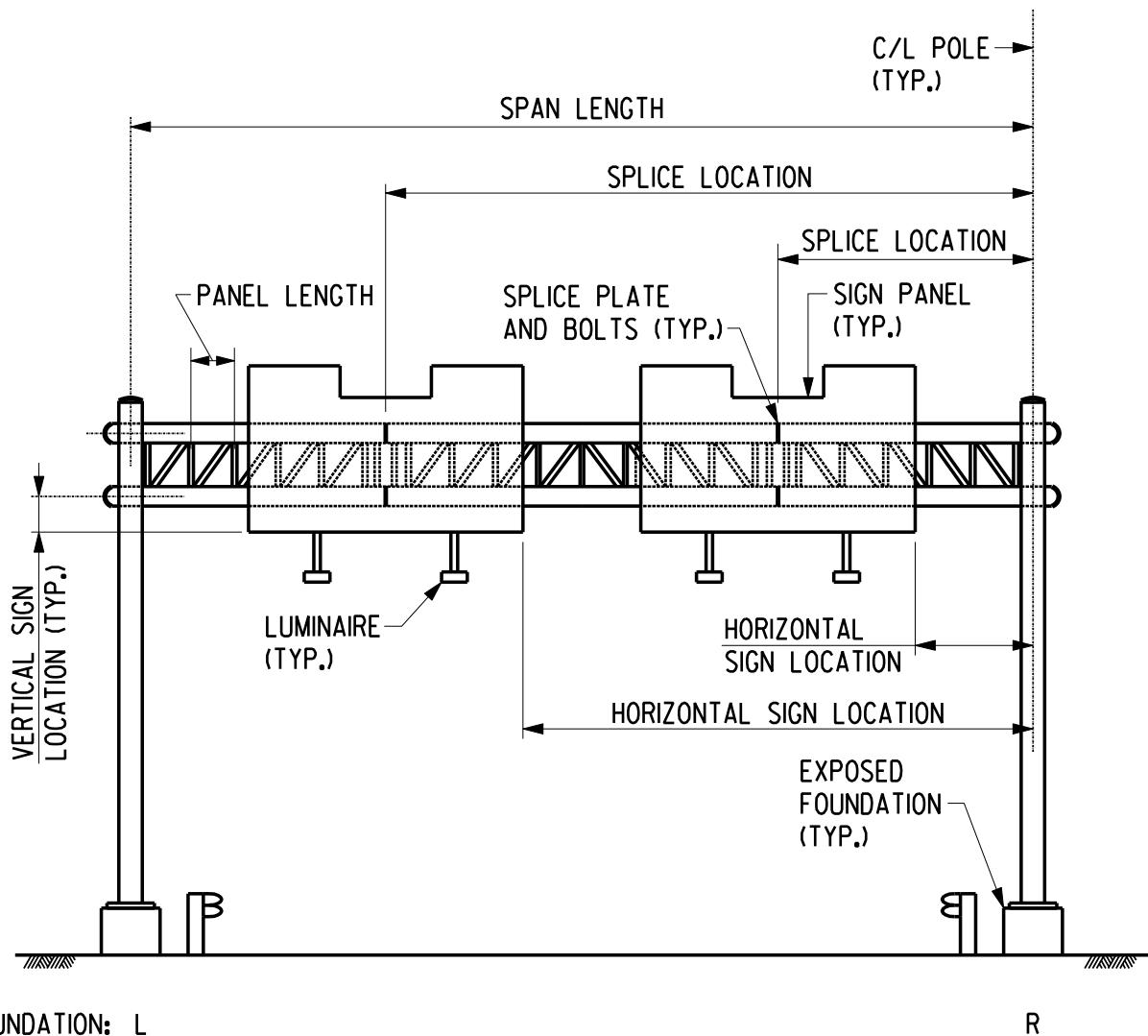
BUTTERFLY (DOUBLE CANTILEVER) SIGN STRUCTURE



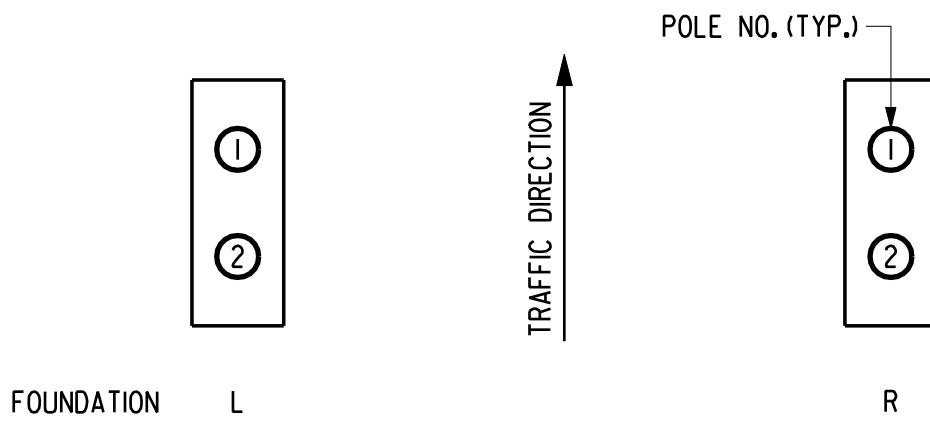
NOTES:

- I. MEASUREMENTS NOT SHOWN ARE SIMILAR TO ONES
TO BE TAKEN FOR CANTILEVER SIGN STRUCTURE.

OVERHEAD SIGN STRUCTURE (SPANNING ONE WAY TRAFFIC)

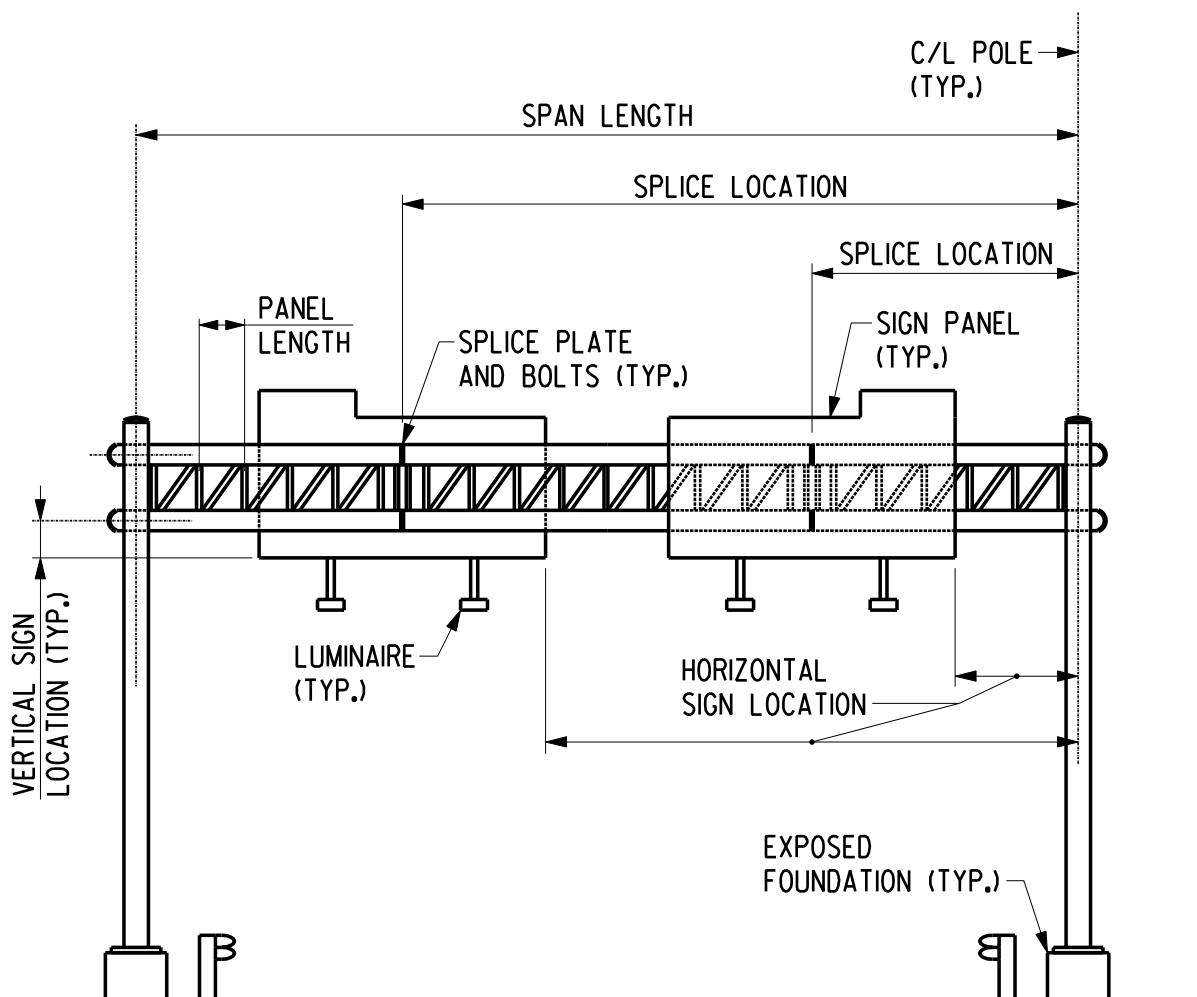


OVERHEAD SIGN STRUCTURE
(SPANNING ONE WAY TRAFFIC)



PLAN VIEW
NOT TO SCALE

OVERHEAD SIGN STRUCTURE (SPANNING TWO WAY TRAFFIC)

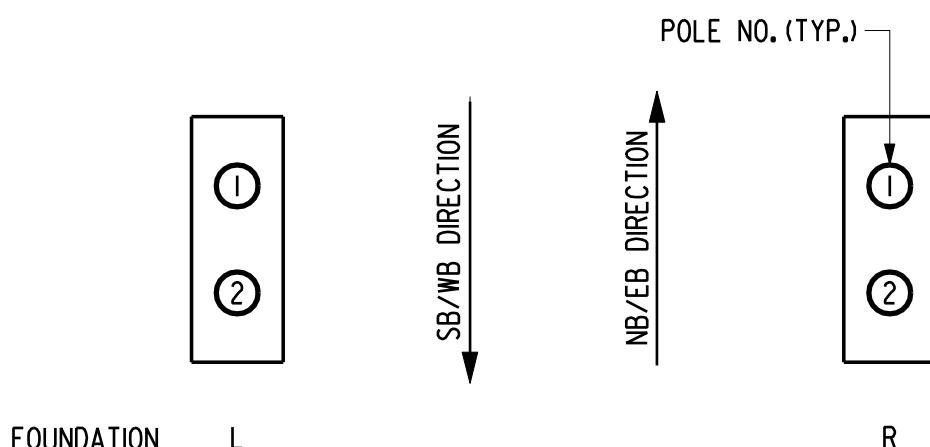


FOUNDATION: L

R

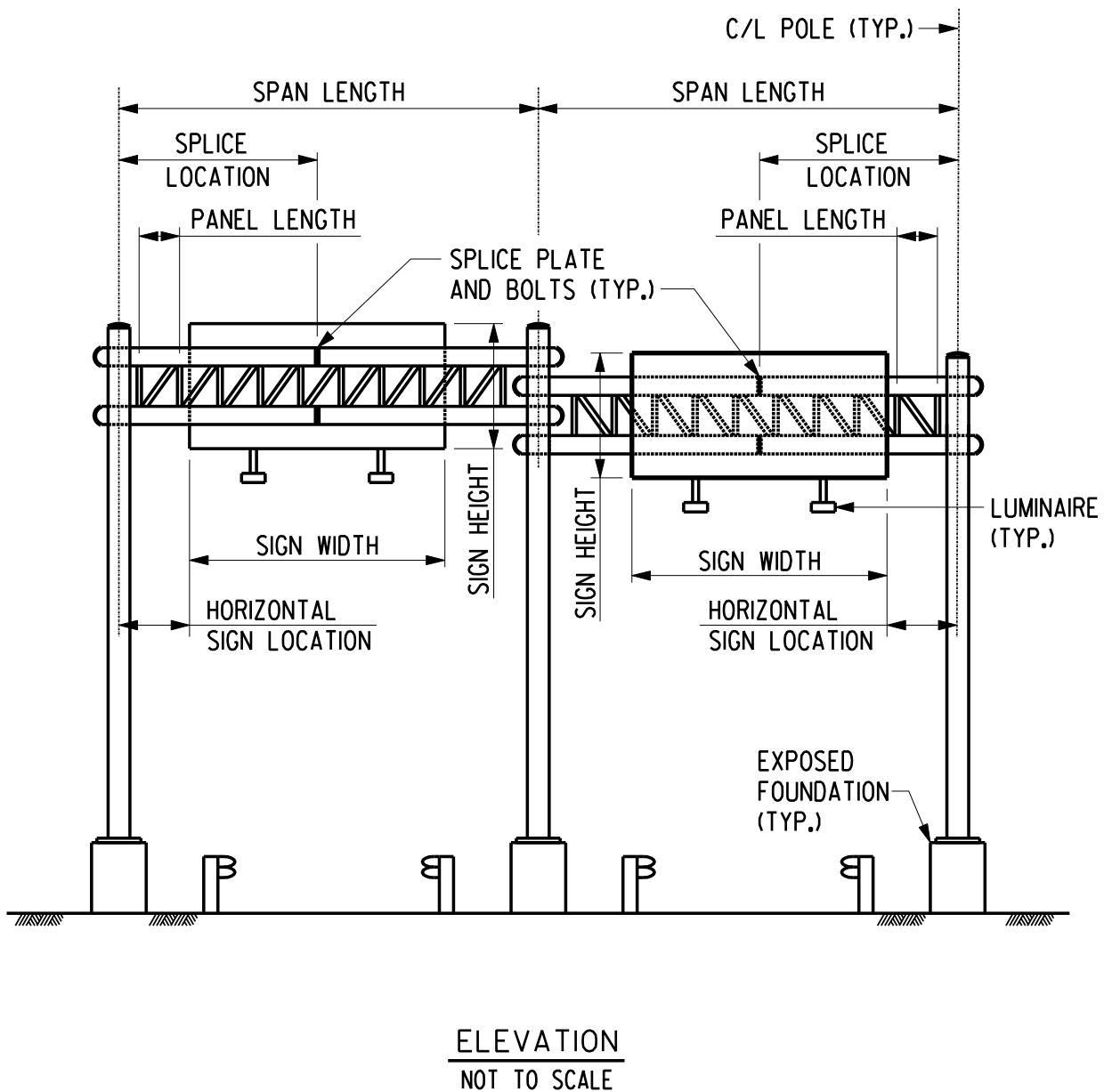
ELEVATION
NOT TO SCALE

OVERHEAD SIGN STRUCTURE
(SPANNING TWO WAY TRAFFIC)

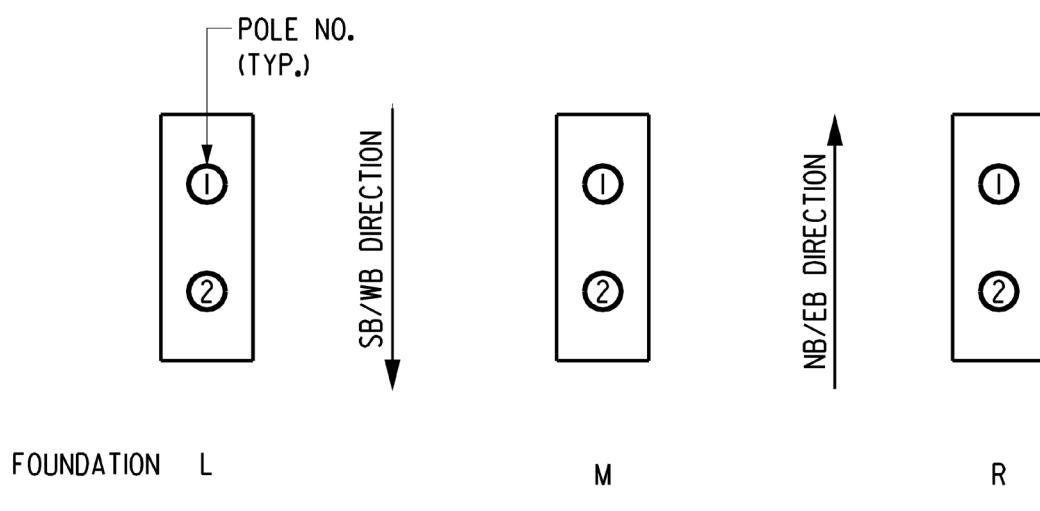


PLAN VIEW
NOT TO SCALE

OVERHEAD SIGN STRUCTURE (SPANNING BOTH TRAFFIC DIRECTIONS)

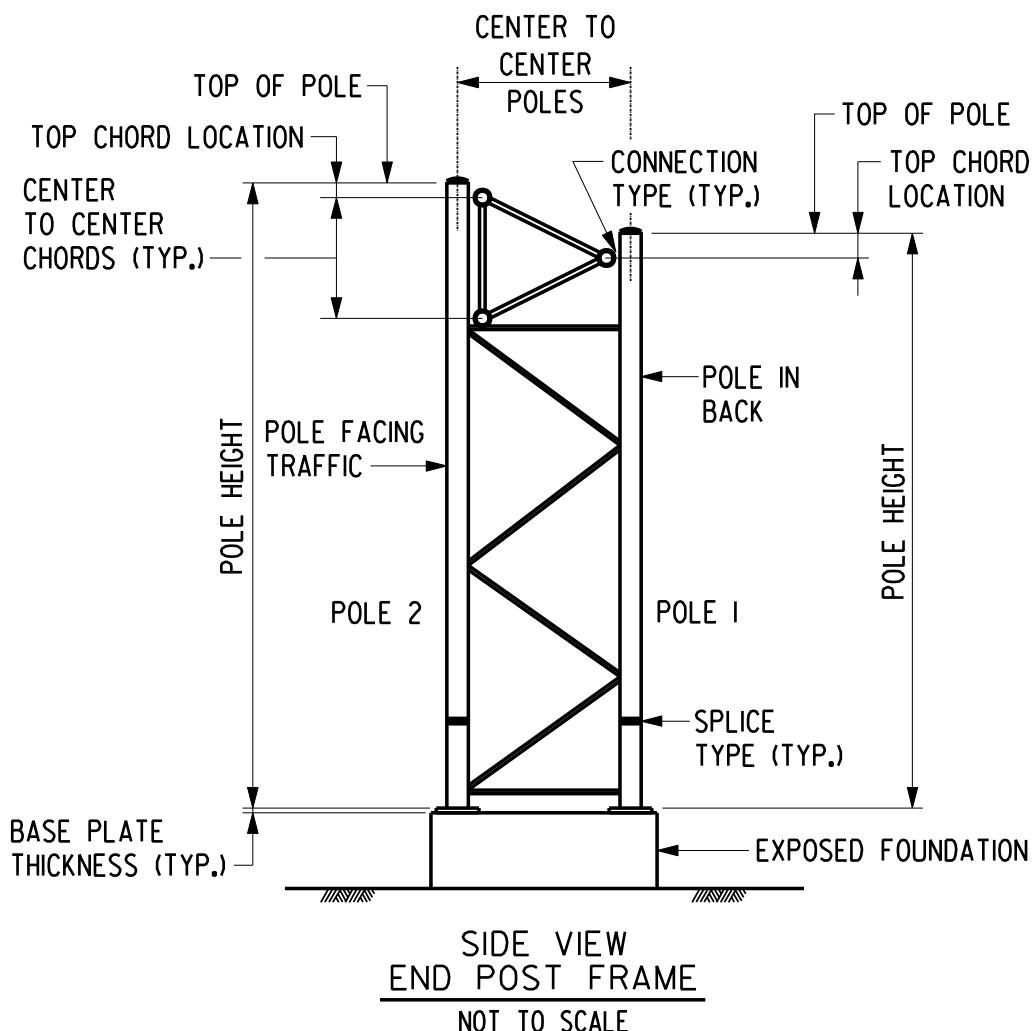


OVERHEAD SIGN STRUCTURE
(SPANNING BOTH TRAFFIC DIRECTIONS)

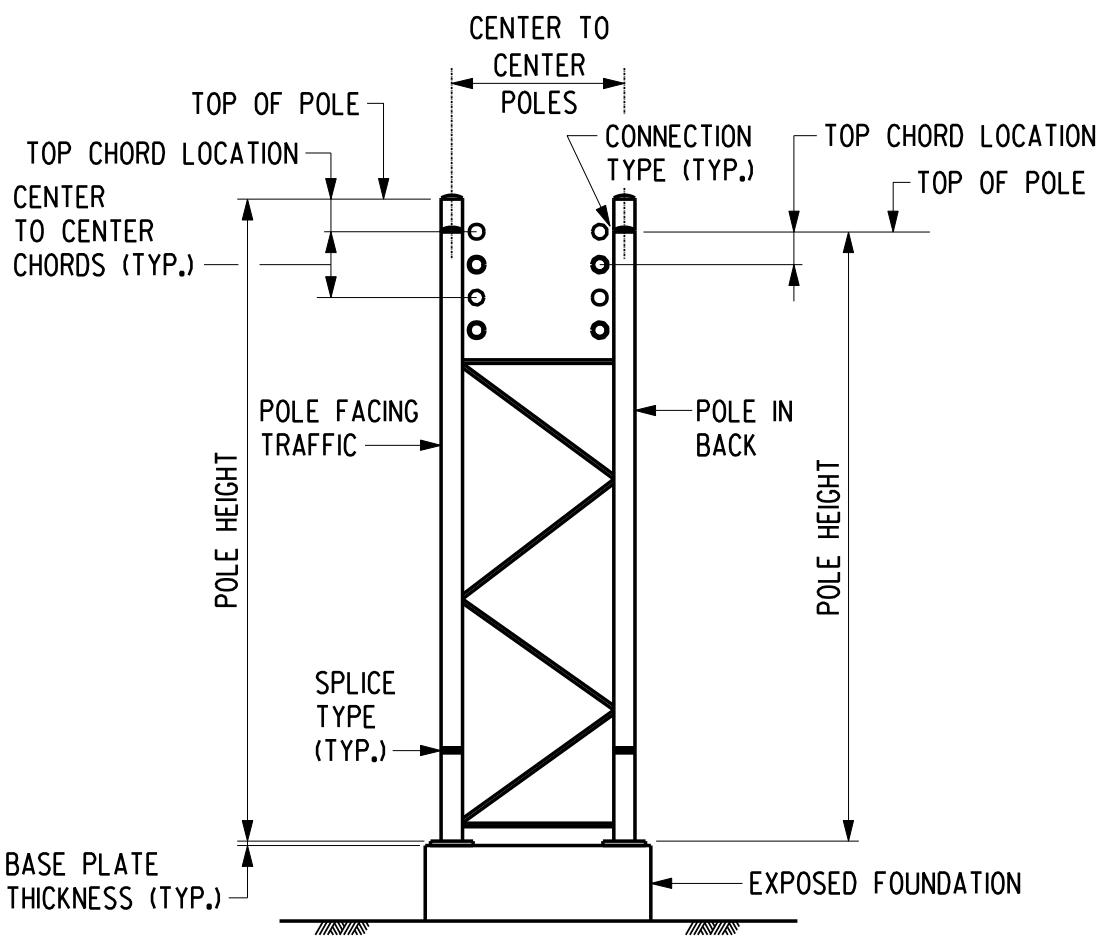


PLAN VIEW
NOT TO SCALE

CANTILEVER/OVERHEAD SIGN STRUCTURE



OVERHEAD SIGN STRUCTURE
(SPANNING BOTH TRAFFIC DIRECTIONS)



SIDE VIEW
MEDIAN POST FRAME
NOT TO SCALE

