The Federal Highway Administration (FHWA) is currently considering the following list of potential enhancements to TNM, which are based on user comments and requests. To clarify proposed enhancements, additional comments are included in the bulleted lists under many proposed enhancements. It is expected that many of these items and future requests will be implemented in version 3.0 of TNM by means of the pooled fund study. As items are added to the TNM 3.0 development agenda, they will be evaluated for implementation based on cost and time to implement. Items deemed impractical to implement will be removed from the development agenda. Regarding font type face in this document, italics is used to indicate *data fields* that are in dialog boxes and tables; each word in a Window or Tab Name is capitalized; and MENU OPTIONS, BUTTONS, and FUNCTIONS are printed in Small Caps.

Function Enhancements

FN01 Eliminate the character limit on the length of the file path and the file name.

- Eliminate character limit on the total file path length, so that TNM can handle long paths and file names.

FN02 Calculate roadway noise and roadway + existing noise.

- TNM currently only considers roadway noise when determining if there is an impact. This type of assessment is not consistent with some state policies, which require that roadway + existing noise be considered when determining if there is an impact.

FN03 Provide vehicle speed data so that users can adjust the length of onramps so that trucks reach their full designated speed.

- Currently users must manually estimate the required onramp length needed in order for trucks to reach their full designated speed. Add a function to have TNM compute speeds along all onramp roadways and then enter these speeds in the Roadway Input Table. TNM would then prompt the user as follows: "Onramp final speeds for heavy trucks have been added to the Roadway Input Table. If necessary, increase onramp lengths to allow heavy trucks to accelerate to their full designated speeds and then re-compute speeds to confirm."

FN04 Allow wall barriers that are on the top of berms to affect the calculated results.

FN05 Make *Dwelling Units Benefited* a dynamically linked value for the calculation of *Cost (Barrier) / Dwelling Units Benefited*.

- Fix and re-introduce the function that calculates *Dwelling Units benefited* and *Cost (Barrier) / Dwelling Units Benefited* into BarrierAnalysis. This function was removed in previous versions because *Dwelling Units Benefited* was not being updated as barriers were being perturbed in the BarrierView. This value needs to change dynamically as barriers are being perturbed.

FN06 Account for single reflections in the main acoustics function, not just in the Parallel Barriers module.

- TNM does not account for single reflections in its regular (3D) calculations. Finalize TNM's single-reflection code to handle these reflections.

FN07 Implement a user-defined vehicle that allows for spectrum input and source height input.

FN08 Enable hyper-threading for computers with hyper-threaded, dual core, or multiple processors.

FN09 Include in TNM a set of Computer Aided Design (CAD) type tools, for example, Geographic Information Systems (GIS).

FN10 Implement terrain and topography via a grid file instead of using terrain lines.

- Instead of using terrain lines, implement a terrain and topography grid file methodology similar to NOISEMAP, where the program queries the grid for terrain height and models the intervening terrain between the source and the receiver.

FN11 Allow NMPLOT to add receiver locations in TNM.

- Allow NMPLOT to interact with TNM such that NMPLOT can create a new receiver location or a new user-defined grid.

Graphical User Interface (GUI) Display and View Enhancements

General Display

DV 01 When an input dialog box is in the background, make it active if a user clicks on a tab or the tab background.

DV 02 Show columns of key values when dialog boxes and tables are opened.

- Have the Barrier Design table open already wide enough to show the *Partial LAeq1h* without scrolling.
- Maximize the table widths in input dialog boxes in general.
- Have the Barrier Descriptions table open already wide enough to show the *Cost*. Narrow some columns so the user can see the full width when a vertical scroll bar is present.
- Allow the Barrier Segment Descriptions table to stretch to its full width after opening to eliminate the need to use the horizontal scroll bar. Also, show the *Total Cost of all Barriers* in the current barrier design in this table.
- Have the columns in the Receiver Input dialog box narrowed so that the user can see all columns without scrolling or stretching the window.
- Widen the Barrier Reviewed column in the Barrier Design table to allow longer barrier names. At the same time, narrow the *Calc*, *Goal*, *Height*, and *Partial LAeq1h* columns.
- In the SOUND-LEVEL RESULTS menu option, the Sound Levels table is slightly too wide to fit on the screen. Reduce the width of the very first column, *Receiver Name*, enough to allow the full width to be seen when a vertical scroll bar is present on the right edge.
- On input dialog boxes and on tables, allow adjustable column widths and hidden columns and save the settings for these as a user preference.

DV 03 Change the File dialog boxes (Open, Save, and Save As) to be consistent in look and functionality with MS-Windows standard File dialog boxes.

DV 04 Show barrier cost per segment in the Barrier Design table.

DV 05 In the Sound Level table, change *All Selected* to *All in this Barrier Analysis*.

DV 06 Allow Impact Criteria Level and Noise Reduction Goal to have decimal values.

- Allow impact criteria level and noise reduction goal values to be entered to the nearest 10^{th} dB.

DV 07 Replace the EXIT button with a CANCEL button in input dialog boxes.

DV 08 Make the user's guide and the technical manual accessible from the Help menu.

DV 09 Clarify information displayed in input dialog boxes.

- Indicate which parameters in the input dialog headers are for default data and which are for a specific object.
- Fix the text for Lden the header of the Roadway Input dialog box so that it says "Evening: 7pm-10pm" instead of "Evening: 7pm -".
- In the Roadway Input dialog box, change the text in the tab, *LAeq1h Hourly* to *LAeq1h Volumes*..
- In the Roadway Input dialog box and also in the Roadway Input table, change *Speed Constraint* to *Initial Speed*.

DV 10 Add pop-up text that will appear when the cursor hovers over tool bar buttons in order to indicate what the buttons do.
- Also increase the number of pop-up help windows.
- Allow pop-up text to stay visible when the TNM user is actually following the help advice.

DV 11 Add a button to execute the FULL VIEW option in applicable windows.

DV 12 Add a button in the Plan View and Barrier View to show the Sound Levels table.

DV 13 Add an option to display the full path name as well as the file name in main window banner.

View Windows (*e.g. Panel, Skew, etc.*)

DV 14 Add more object/point names in views.

- Allow the display of object names in views. Make their display an option as an additional column in the Show/Hide TNM Objects window.
- Allow the display of point name labels in the Parallel Barrier view.
- Show point names and numbers for the last point of all objects.

DV 15 Increase skew view capabilities.

- Allow users to step a skew line through an object in the Plan View. The skew line would remain perpendicular to the object segment and the Skew Section would automatically update.
- Allow users to drag/move a skew line to any position on the Plan View. The Skew Section would automatically update. This should also include the ability to click on a skew line endpoint and rotate and stretch the skew line.

DV 16 Make panning in the Parallel Barrier and Perspective Views more uniform.

- The Parallel Barrier and Perspective Views have a different pan increments relative to the screen size when the views are zoomed in compared to when they are zoomed out. Make the pan increment $1/10^{th}$ of the screen width at all zoom levels.

DV 17 Show all input objects in Skew Sections and Parallel Barrier Views.

DV 18 Display the width of roadways and berms in the Plan View.

- In the Plan View, show roadway widths to help users identify possible overlap with barriers. Use shading rather than lines to reduce clutter.
- Make sure the roadway width shows up in printing.
- Provide the ability to turn off this option.
- Do the same for berms using a different shading scheme.

DV 19 Enhance the coloring scheme of objects.

- Change the color of the ground zones so that they can be distinguished from roadways in the Plan View, e.g. brown for ground zones. Also, shade in the ground zone with a light transparent color.
- Shade in tree zones with a transparent light green in the Plan View to help distinguish them from terrain lines.
- Display barriers that are on-structure differently than regular barriers.
- Display the two vertical lines for ground zones in the Skew Section as brown and shade the region between them with a transparent brown.
- Shade in the area between the two vertical lines for tree zones with a light transparent green.
- Use different colors for different types of ground zones.

DV 20 When creating a new Skew Section window, there is a skew line identifier displayed in the Plan View's status bar. Display this identifier in the banner of the Skew Section window.

DV 21 Show the length of an object in the status bar while it is being drawn/digitized in the Plan View.

DV 22 Show the profile of a barrier in a new display (similar to a Roadway Profile View). Call the new display a Barrier Profile View.

- Show the vertical location of the barrier base and top for each segment along a barrier's length. Include the segment number/name.
- Add two new options in the Show/Hide TNM Objects window to allow skew lines and parallel barriers to be shown/hidden independently of terrain lines and barriers.

DV 23 Include an option in the Show/Hide TNM Objects window to show sound levels for receiver locations in the Plan View.

DV 24 Allow users to draw "guide lines" in graphic views.
- Allow the user to "draw" on the graphic views, for example, draw a line-of-sight on a skew section to see if the barrier breaks that line-of-sight.

DV 25 Improve the legibility of text in all views.
- Make the size of lettering independent of the zoom level in all views.
- Have user selectable font sizes and types for user defaults as well as for individual plots.

DV 26 Prevent the object model from being flipped upside down when it is being rotated in the Perspective View.

DV 27 Update the display of ground lines in the Skew Section to correctly account for roadways and barriers "on structure". Also account for intersections that occur partially off the screen.
- Make the ground line in Skew Sections match that used during calculations. Where the Skew Section includes roadways on structure, ignore these roadways in drawing the Skew Section's ground line. Where the Skew Section includes barriers on structure, ignore these as well. Also ignore the roadways that they shield. Where the Skew Section includes overlapping roadway surfaces, average/blend them together.
- When Skew Sections are generated, have TNM recognize intersections that are partly off the screen.

DV 28 Add the ability to change line weights and styles for TNM objects.

DV 29 Display the default ground type in the Ground Zone Input table.
- The default ground zone is not shown in the Ground Zone Input table. TNM needs to list the default ground zone somewhere in its tables.

DV 30 Fix the display of yellow line-of-sight color caused by the display overlapping red and orange line-of-sight colors.
- Line-of-sight color becomes yellow sometimes. This is caused by overlapping of red and orange line-of-sight colors.

DV 31 Set the display of contours to default to color gradients instead of contour lines.
- Reconfigure the contour function to give results in color gradients by default.

DV 32 Set the calculation of contours to default to a minimum grid spacing of 10 feet.

DV 33 Allow contour zones to have compound shapes, for example, a circular area with the center excluded from the calculations.
- Allow Boolean definition of contour zones, i.e., "this area but not that part of it".

GUI Run Development Enhancements

RD 01 Increase the spreadsheet functionality of dialog boxes and tables.
- Allow pasting of one cell into multiple cells where applicable.
- Add the ability to insert, append, and delete multiple rows.
- Add the ability to copy/paste between runs.

RD 02 In the Parallel Roadways Input dialog box, allow new values to be entered in the traffic data cells without having to first delete the old values. (This is the way that it works in the main Roadway Input dialog box.)
- Make editing traffic in the Parallel Roadways Input dialog box function the same as the main Roadway Input dialog box.

RD 03 Make overwriting existing results an option when calculating results for multiple runs so that runs with existing data will not be skipped.
- Add an option in the Calculation Manager, *Overwrite Existing Results* that will allow users to choose if the previous results are to be overwritten with the new results.

RD 04 Add a button in the Barrier Input dialog box to RESET TO DEFAULTS so that the selected barrier segment can be easily restored back to the default condition.
- Add a button at the top of the Barrier Input dialog box, RESET TO DEFAULTS, where a warning comes up and asks if the user really wants to reset to the default settings.

RD 05 Automatically break intersections or provide immediate feedback when an inconsistent intersection is created.

RD 06 Automate the creation of multiple lane roadways.
- Create a new tool for creating multiple lane roadways, which would include shoulders and medians.

RD 07 Increase the number of traffic data formats that can be used for entering traffic data for Ldn and Lden in the Roadways Input dialog box.
- Allow data to be entered hour-by-hour. Also have it output LAeq1h.
- Allow volumes to be entered instead of Average Daily Traffic (ADT) and percent volumes.
- Have both hourly and day-evening-night traffic data formats available.
- Continue to allow traffic data to be input as it is done in TNM v2.5.
- Allow the traffic data format for Ldn and Lden to be chosen in a set-up/default file.
- Allow the entry of vehicle mix in tenths of a percent for Ldn and Lden computations.
- Allow separate speeds for the percent day and percent night traffic data.

RD 08 Allow a single adjustment factor to be applied to all roadway segments for a specific receiver.

RD 09 Provide shortcut keys for more functions, for example allow the snap tool to be switched on/off via a keyboard shortcut.

RD 10 Disallow zero-height fixed barriers in the Barrier View.

- In the Barrier View, the user can shift fixed-height barriers to zero-height, even though TNM will never calculate this zero-height for fixed-height barriers.

RD 11 Improve support and functionality for digitizers. Provide a method to enter a minus sign so that Z-coordinate data can be entered by using the digitizer. Also, registering data that has already been entered should be "puck first" instead of "puck last".

- The 16-button digitizer puck has no minus sign to enter negative Z-coordinates. Therefore users with negative Z-coordinates cannot take advantage of entering Z-coordinates from the digitizer puck. Program the digitizer puck's "F" key to also act as a minus sign when entering Z-coordinates.
- Registering with typed coordinates is "puck first", while registering with data already entered is "puck last". Change the order with "data already entered" to "puck first".

RD 12 Make the Edit menu's functions more intuitive and efficient.

- Change DIVIDE AN OBJECT IN TWO to require selection of both segments that the user wants disconnected. Then this TNM function will be similar to COMBINE TWO OBJECTS.
- Make SELECT → EVERYTHING capture everything, whether visible on the screen or not.
- Implement copy/paste of full TNM input objects between TNM runs.
- Provide an option to delete all selected.
- Allow for the deletion of multiple roadway points from the Roadway input dialog box or from the Plan View.

RD 13 Change the label for the large minus sign in the input dialog boxes from DELETE to DELETE ENTIRE OBJECT.

RD 14 When closing a TNM run by using the CLOSE button warn the user if DXF objects remain unconverted and allow the user to abort the action if desired. (In Windows, the CLOSE button is the "X" button in the upper right hand corner of the main window.)

- When closing a run with unconverted DXF objects by using the CLOSE menu option, TNM correctly displays a DXF dialog box to confirm the action prior to closing. However, when closing a run by using Window's CLOSE button, this dialog box is not displayed.

RD 15 Provide functionality to import background maps, aerial photos, and other images in a manner similar to that used to import DXF files as backgrounds.

RD 16 In the Roadway Input dialog box, provide separate COPY ALL buttons for volume data, speed data, and for both.

- Allow separate COPY ALL buttons for volume data, i.e., one for vehicles per hour, one for speed, and one for both vehicles per hour and speed.

RD 17 Add dropdown menus that provide useful functions/actions for objects. The menus should be accessible by right clicking on the object.

- Add dropdown menus where appropriate. Edit functions would be useful. For example, in the Plan View, right-clicking on a roadway could bring up a list of menu choices to delete the object, reverse direction, or open the Roadway Input dialog box.

RD 18 Add buttons in the input dialog boxes to insert/append a single blank row in a manner similar to the menu options INSERT ROW and APPEND ROW.

RD 19 Associate flow control data with a roadway segment's start point after reversing the roadway's direction.

- When reversing a roadway's direction, TNM associates the segment information with the segment's endpoint, rather than its start point.

RD 20 Allow the function RE-NUMBER TNM POINTS to work for receivers in addition to other TNM objects.

RD 21 Allow parallel barrier designs to be deleted graphically. Currently they must be deleted by using the DELETE function under the PARALLEL BARRIER menu.

Printing, Saving, Import, and Export Enhancements

Printing

IO 01 Add a PRINT button in the Print Preview window to print directly from this window.
- TNM cannot print directly from Print Preview. Add a button in the Print Preview window to allow direct printing from there.

IO 02 Re-hide hidden rows after printing.
- In TNM 1.0b, when the user hid rows and then printed the table, the rows remained hidden in the window on the screen. In TNM 2.5, the rows are unhidden in the window after printing.

IO 03 Add the ability to print what is currently visible on the screen directly to the printer.

IO 04 Make the PRINT TABLES command print the results for the current barrier analysis rather than the results for the input heights case when used during a barrier analysis.
- When using the PRINT TABLES function during a barrier analysis, all of the results are for the input heights case, not for the active barrier analysis case.

IO 05 Add additional printing options: Print All Input Tables, Print All Results Tables, and Print All Parallel Barrier Tables.

IO 06 Enable direct printing of input error messages to the printer.
- TNM cannot print input error messages directly to the printer. To print them, the user must first press the Print Screen key on the keyboard to copy the input error to the clipboard and then must paste the clipboard contents into some other program for printing.

IO 07 Add tools to aid in printing graphic data.
- Allow all tables to be printed in portrait mode.
- Allow “exact scaling” for all graphic printouts.
- Provide options for font selection and font size.
- Provide a method to add user comments to the Print Preview window.
- Add PAN and ZOOM functions to the Print Preview window. The final panned/zoomed image should be the image that is sent to the printer.
- Provide a method to relocate or eliminate the legend box.

Saving

IO 08 Modify the REMEMBER AS function to save the new design/analysis under a new name rather than overwriting the current name.

- The REMEMBER AS function overwrites a previously "remembered" design/analysis, without warning. This can cause confusion as to what the design/analysis is when reopened.

IO 09 Automatically backup original TNM run files before overwriting with new data.

- After any input change, TNM requires the run to be saved to the old name before allowing the run to be saved to a new name.

IO 10 Allow user defaults to be saved in a personal initialization file. This file would automatically setup much of the information normally filled in by accessing the RUN IDENTIFICATION and GENERAL menu options under the SETUP menu.

IO 11 Add a menu option to save a contour DXF file with a user specified file name and directory. Also add an option to delete contour DXF files.

- NMPlot saves contours in the file TNM.DXF, in the TNM run's folder. Many users want to import this contour DXF file into their CAD program, but are not aware it's there. Add a menu item to save contour DXF files and to allow the user to name and locate this file where desired. Also add an option to delete these files.

IO 12 Change the naming of files like TNM.dxf to be either the case name or a user specified name. Also switch object files to Case Name.dat and Case Name.idx.

IO 13 Purge deleted TNM objects from the run's .dat and .idx files when the run is re-saved.

- When TNM objects are deleted from a run and the file is resaved, the file size of the .dat and .idx files do not decrease. Remove the deleted TNM objects from the .dat and .idx files when saving.

IO 14 Allow users to save and load individual TNM objects.

IO 15 Allow users to overwrite a previously existing run with a different run. Include a warning that the previously existing run's files will be overwritten if the action is not canceled.

IO 16 Allow users to overwrite previous barrier designs with new ones. Include a warning that the previous barrier design will be overwritten if the action is not canceled.

IO 17 Make saving a barrier design an option in the FILE menu instead of using the REMEMBER option in the BARRIER ANALYSIS menu.

Import / Export

IO 18 Save the input height of a barrier design when using the REMEMBER function.

- The input height of a barrier design is not saved when the REMEMBER function is used. Save the input height in the barrier design to allow its use for contours.

IO 19 When importing DXF objects, make the choice to import as OBJECTS or as BACKGROUND more obvious.

IO 20 Add a FILE menu option to export a graphical view (Plan View, Skew Section, etc.) to a user specified DXF file.

- It would be useful to be able to import TNM's input graphics data into CAD highway design files

IO 21 Improve TNM's ability to import large 3D DXF files.

IO 22 Update TNM's DXF import tools to handle current DXF file versions.

- TNM will not import all types of DXF files. Extend the DXF import function to handle current versions of the DXF format.

IO 23 Enhance the STAMINA import function to allow for the import of STAMINA names.

IO 24 Enhance TNM's DXF import tools to allow for the import of multiple DXF files.

IO 25 Provide a menu option to allow users to export data from the Notes tab and from the headers of the input dialog boxes.

IO 26 Export the same number of cells for each row in a table.

- When exporting tables, TNM systematically adds a single cell in some rows, thereby displacing row contents to the right and misaligning columns.

IO 27 When importing Stamina-2.0 input files, automatically check for variable values which are outside of TNM's accepted range. If a variable has a value that is outside of the accepted range, provide a method to adjust the value.

- TNM allows users to import Stamina-2 variable data that is inconsistent with the accepted data range in TNM's input dialog boxes. The user must search for and correct all out-of-bounds values manually. When importing Stamina-2.0 input files, have TNM automatically perform an input check and report its results to the user.

Diagnostics Enhancements

DE 01 During INPUT CHECKS, provide a warning if there are roadways with no traffic.
- Have TNM report which roadway segments have no traffic and then give the user a chance to cancel calculations during INPUT CHECKS.

DE 02 During INPUT CHECKS, provide a warning if there are berms that are selected for "on structure" analysis.

DE 03 When entering speed data, warn for or disallow unrealistic vehicle speeds.

DE 04 Provide a startup option that would require that users setup the default objects before they can start modeling their run. Allow this option to be turned off.
- Ask the user to input defaults for objects before coding. This could be disabled like the pop-up help option.

DE 05 During INPUT CHECKS, provide a warning if there is insufficient roadway detail for curved roadways.
- Include a test during the INPUT CHECK to determine if there is adequate definition of roadway vertical and horizontal curves. Display an error statement if the definition is inadequate.

DE 06 During INPUT CHECKS, check for large discontinuities within contour zones. This may occur near barriers or other shielding objects. If a large discontinuity is detected warn the user.
- Do not permit major discontinuities within a contour zone. Display a warning if a major discontinuity is found during an INPUT CHECK.
- Upon receiving a warning, the user may want to redesign the contour. See also DV 33.

DE 07 During INPUT CHECKS, provide a warning if a berm overlaps a receiver.

DE 08 During INPUT CHECKs, have TNM check only the traffic entry type (Lden, LAeq1h Hourly, etc.) that has been selected in the General dialog box.

Bug Fixes

BF01 Correct the updating between the Adjustment Factors tab in the Receivers input dialog box and the Receiver Adjustment Factors table.

- If a user enters an adjustment factor in the Receivers input dialog box, it appears immediately in the Receiver Adjustment Factors table, before the Apply button is pushed. This is not standard TNM behavior. Moreover, it has caused the following effect:

  If the user Exits the dialog box without applying the new adjustment factors, they incorrectly remain in the Receiver Adjustment Factors table. They are not present when the Receivers input dialog box is re-opened, but they are still in the table. The user must close the table and re-open it to get rid of them.

BF02 Do not invalidate receiver results that should still be valid.

- Do not invalidate calculated acoustical results for active receivers when more receivers are made active.
- Do not invalidate receivers when changing only the *name* field in the Parallel Analysis Location Input dialog box.

BF03 Do invalidate receiver results that should become invalid.

- Moving roadways and cross-sections in the Parallel Barrier View should invalidate receiver results.
- Changing between LAeq1h, Ldn, and Lden should invalidate receiver results.

BF04 Prevent abrupt program termination when using COMBINE TWO OBJECTS.

- TNM often crashes when using COMBINE TWO OBJECTS, sometimes when the two objects already touch, sometimes when they do not. TNM always crashes when using COMBINE TWO OBJECTS if the second object has only a single segment.

BF05 Eliminate database errors that are caused by using the function DELETE START POINT on a start point that was created by using the function ADD POINT WITHIN SEGMENT.

- DELETE START POINT creates a database error whenever the start point was added by using the ADD POINT WITHIN SEGMENT function.

BF06 Correct the scaling of non-critical objects imported in metric units from DXF files. (Critical objects are scaled correctly for both English and metric units.)

- TNM 2.0 imports critical TNM objects such as roadways correctly in both English and metric units. Objects such as labels, however, are not scaled properly when using metric units. Even though non-critical objects may be scaled incorrectly, TNM still generates correct results.

BF07 When barriers are being perturbed in the Barrier View, update results (sound levels, insertion loss, etc.) for all receivers including those that are hidden by HIDE ROWS. Currently, results for hidden receivers are only updated when the table is reopened.

BF08 Correct the association between “structure” barrier segments and the roadways that they shield. This association gets altered after using the menu options DIVIDE AN OBJECT IN TWO and then COMBINE TWO OBJECTS in order to divide and then recombine a roadway.

- After using the menu option DIVIDE AN OBJECT IN TWO, followed by COMBINE TWO OBJECTS, TNM mixes the pairing between “structure” barrier segments and the roadway segments that they shield.

BF09 Correct the SNAP function so that it always snaps to the exact X-, Y-, and Z-coordinates.

- When Skew Sections are generated, users often want to "snap" to a receiver, to guarantee that the receiver will appear in the resulting view. Sometimes TNM misses these receivers.
- Sometimes points snapped together are not correctly processed during INPUT CHECKS. They act as if they are not exactly the same. To get INPUT CHECK to accept their equality, the user must manually type in at least one of them by hand.

BF10 Always increment sequence numbers for input objects successively.

- Sometimes TNM skips sequence numbers for its input objects.

BF11 Prevent abrupt program termination when berms have zero-height

- Zero-height berms sometimes crash TNM calculations.

BF12 Prevent abrupt program termination when loading saved grid files.

BF13 Prevent abrupt program termination when importing Stamina files with a non-standard name for the receiver data block title.

- TNM only allows "RECEIVER" for the title of the STAMINA receiver data block. TNM crashes if another name is used.

BF14 Prevent abrupt program termination due to large X-, Y-coordinate values.

- Very large or negative X-, Y-coordinates sometimes crash TNM calculations.

BF15 Remove the ghosted scroll bar that remains on the Roadways input dialog box if the window is resized when the Traffic (Lden, LAeq1h, etc.) tab is active.

- Maximizing the Roadways input dialog box when the Traffic tab is the active tab creates a ghost of the previous window and partially covers the display of the newly maximized window.