

**Transportation
Reinvestment
Zone
Geographic Information
Systems
Tool**

Product 0-6538-P1

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for

Surveying and Science

Transportation Reinvestment Zone Geographic Information System Tool

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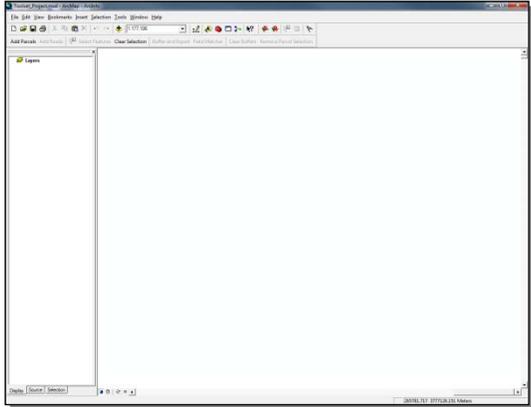
Introduction for TRZ GIS Prototype Tool

This User Manual addresses the development of a Transportation Reinvestment Zone Prototype Geographic Information Systems Tool. This Manual is divided into four sections.

1. Installation of software for VBA application and VB.net.
2. Operation of software.
3. Output of data for the TRZ Screening Tool.
4. Description of Scripts that can also be used with ArcGIS.

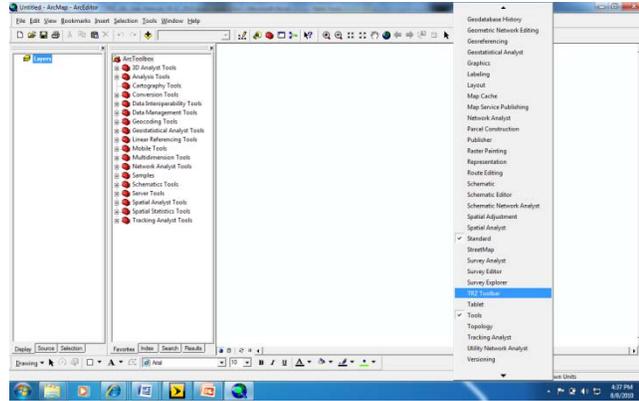
Purpose	The purpose of this section is to describe how to install the TRZ GIS Prototype Tool. The tool is imbedded into an ESRI ArcGIS 9.X MXD project file or is an executable installation of a TRZ GIS Prototype Toolbar.
Requirements	<p>The user of this software will need to have a copy of ESRI ArcGIS ArcVIEW, ArcEditor, or ArcInfo 9.X or higher.</p> <p>Demo data are available for testing, but two sets of data are required for this tool:</p> <ol style="list-style-type: none">1. Parcel dataset (polygon ESRI .shp format) that cover the TRZ and contain needed database information for TRZ Screening Tool. See TRZ Screening Tool for GIS database requirement.2. Roads dataset (vector ESRI .shp format) that represent the proposed TRZ.

Installation

Step	Action
1	<p>Open ESRI ArcGIS 9.X.</p> 
2	<p>For the VBA version open the MXD file Toolset_Project.MXD.</p> <p>The following tool bar will be added to ArcMap.</p> 
3	<p>For the VB, Net version run the Setup.exe from the VB.net directory. Select NEXT.</p>  <p>Select destination, then NEXT, then confirm installation NEXT. Then CLOSE when finished.</p>
4	<p>With the VB.Net you will need to add the Toolbar to your current ArcGIS Environment. Open ESRI ArcGIS 9.X or higher.</p>

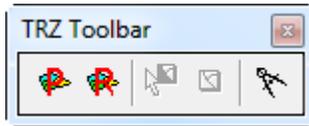
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Right Click on an open space on your toolbar. A list of tools will be displayed. Select TRZ Toolbar.

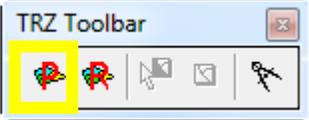
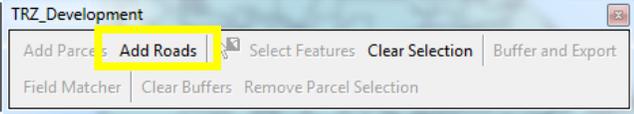
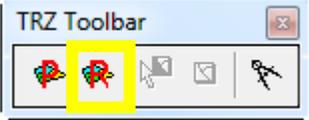


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The TRZ Toolbar will now be available for use in ArcGIS 9.X.



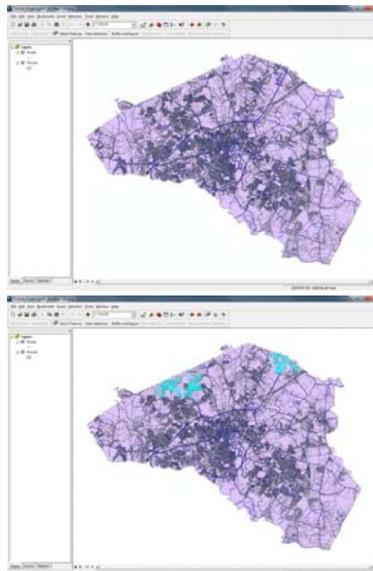
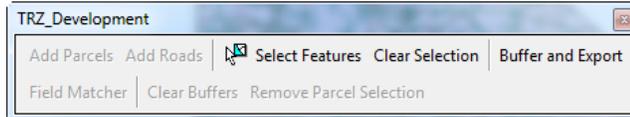
Input Data

Step	Action
1	<p data-bbox="548 302 1154 380">Begin by using the Add Parcels button to add a parcel dataset.</p> <p data-bbox="548 386 618 422">VBA</p>  <p data-bbox="548 554 651 590">VB.Net</p> 
2	<p data-bbox="548 770 1170 848">Add a Road Network by clicking the Add Roads button.</p> <p data-bbox="548 854 618 890">VBA</p>  <p data-bbox="548 1022 651 1058">VB.Net</p> 

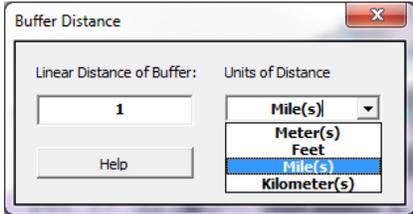
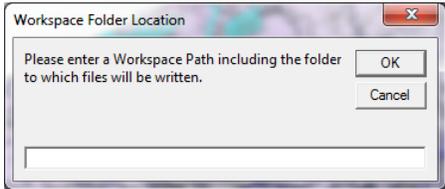
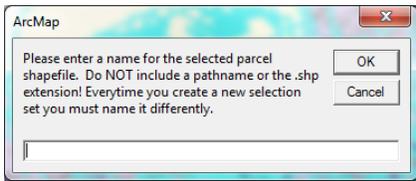
Operation

1

Once the Parcels and Roads have been added then use the Select Features tool to drag and select road segments. Multiple selections from different areas can be made by holding the shift key down while selecting roads.

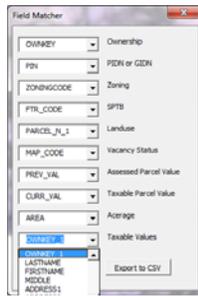


*Note if the road selection is done improperly the clear selection button will clear the selected roads and the user can begin again.

2	<p>Once the roads have been selected then click the buffer and export button to begin the analysis. The user can now input a buffer distance and proceed by clicking the buffer button on the buffer distance dialog box.</p>  <p>*Note if the buffer is not satisfactory the clear buffer button will remove the buffer and the user can then use the clear selection button to clear the selection and begin again.</p>
3	<p>The user then needs to define a workspace folder somewhere on the local machine. This can be put in the TEMP directory of the C:/ drive if needed. If the folder does not exist it will be created for you.</p> 
4	<p>The dialog boxes that open will provide instructions on saving the data created to the local machine.</p> 

Output Data

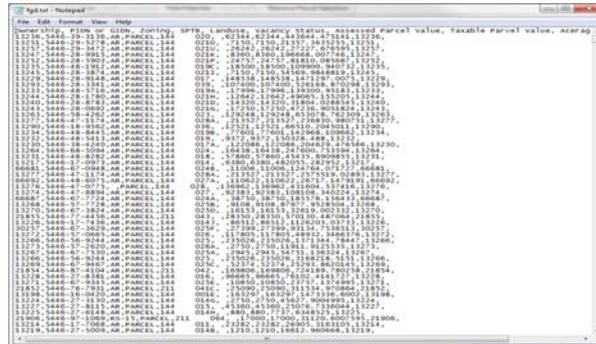
- 1 Once the parcels have been extracted, the field matcher dialog box will appear for the user to match fields within the parcels layer's attribute table to the references listed for TRZ development. This is important for the TRZ Screening Tool or next step in the creation of a TRZ. *NOTE: The Parcel dataset must have as a minimum the listed fields.



*If for some reason the field matcher dialog box is closed then simply press the Field Matcher button and the dialog box will reappear.

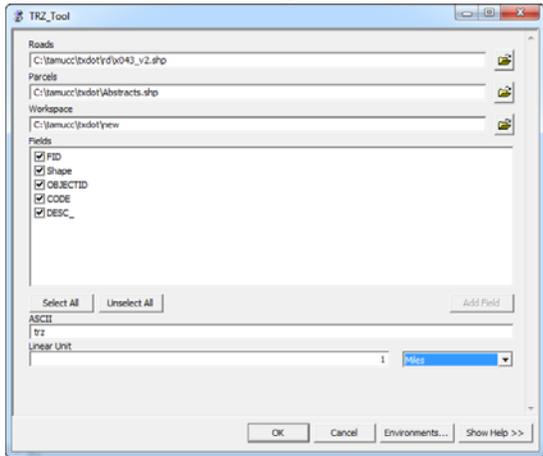
2

The final step is to click the Export to CSV button on the field matcher. The user then inputs another workspace directory and name for the CSV file. The CSV file can then be imported to Excel or used in the TRZ Screening Tool. Below is an image of the CSV data output.



Scripts

Two additional prototype software programs were written in Python and Java Scripts. They were created for advanced ArcGIS. The following section describes these tools. For more information on utilizing these tools users should open them using the Model Builder or a text editor. The Python tool can be strictly used inside ArcGIS similar to above. The steps are as follows.

Step	Action
1	Open ESRI ArcGIS 9.X.
2	Open your Toolbox by selecting the Toolbox icon. 
3	Right click inside an open area within the Toolbox and Add a Toolbox. Browse and located the TRZ Toolbox. Tbx.
4	Double click on the TRZ_tool in the Toolbox and update the TRZ_Tool parameters: 
5	It is now complete.