

### Introduction

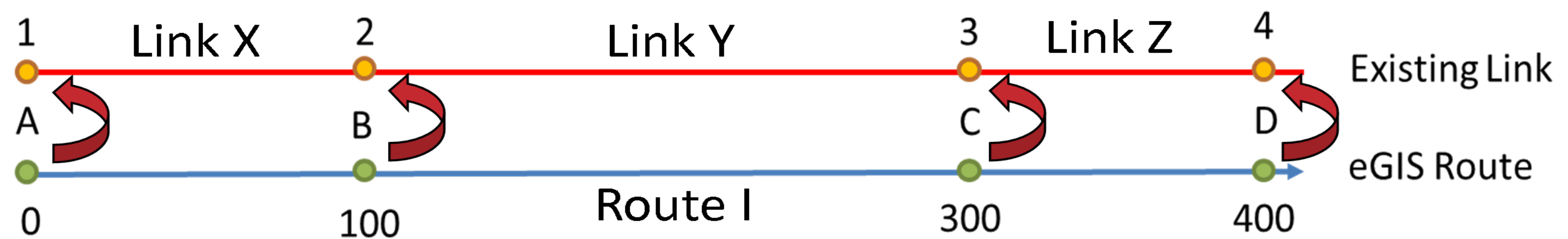
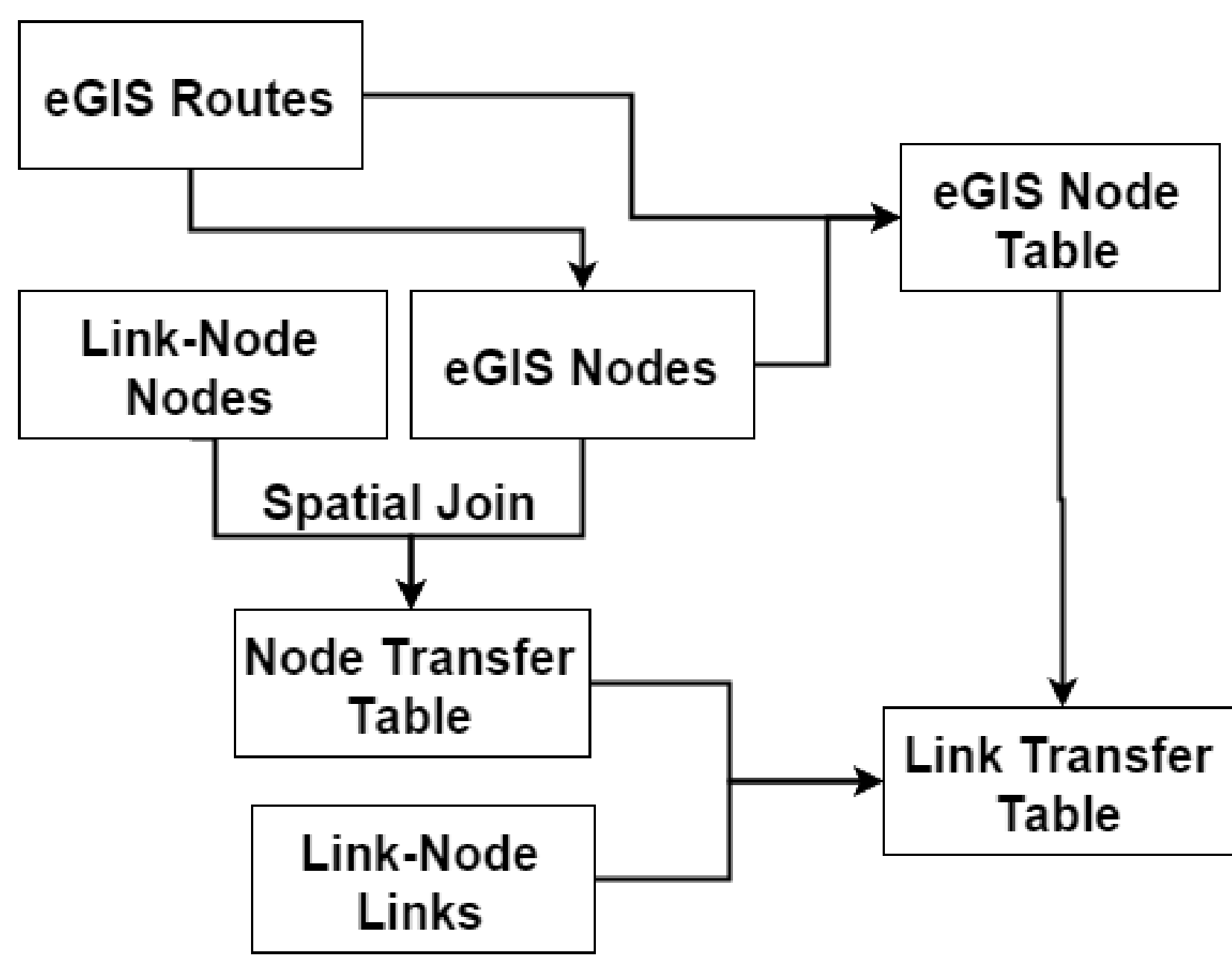
In order to conform to FHWA standards for Highway Performance Monitoring, ALDOT has created an Enterprise GIS system (eGIS) which includes a routable roadway network. Historic crashes are recorded with two linear referencing methods, route-milepost on state routes, and link-node on local roads. In order to preserve the link-node roadway data (Link-Node Linear Referencing Method) in the new eGIS framework, a methodology to transfer the Linear Referencing Method was developed.

### Objectives

- Develop a methodology to transfer the existing link-node LRM data to the eGIS framework
- Develop a methodology for Quality Assurance/Quality Control of data transfer techniques and create a web tool to facilitate QA/QC procedures and data dissemination
- Carry out QA/QC procedures using the web tool

### Methodology

#### Data Transfer Flow Chart



eGIS Route	From Node	From Measure	To Node	To Measure	Link-Node Link
I	A	0	B	100	X
I	B	100	C	300	Y
I	C	300	D	400	Z

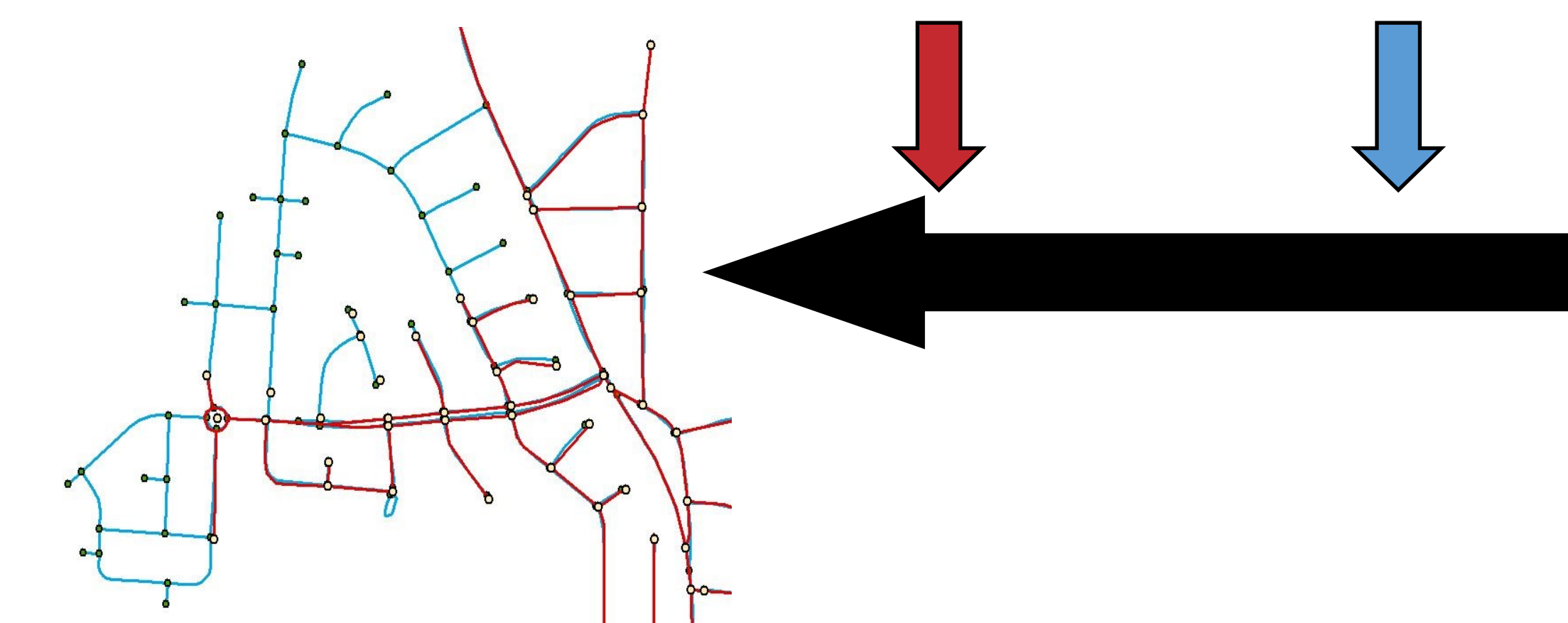
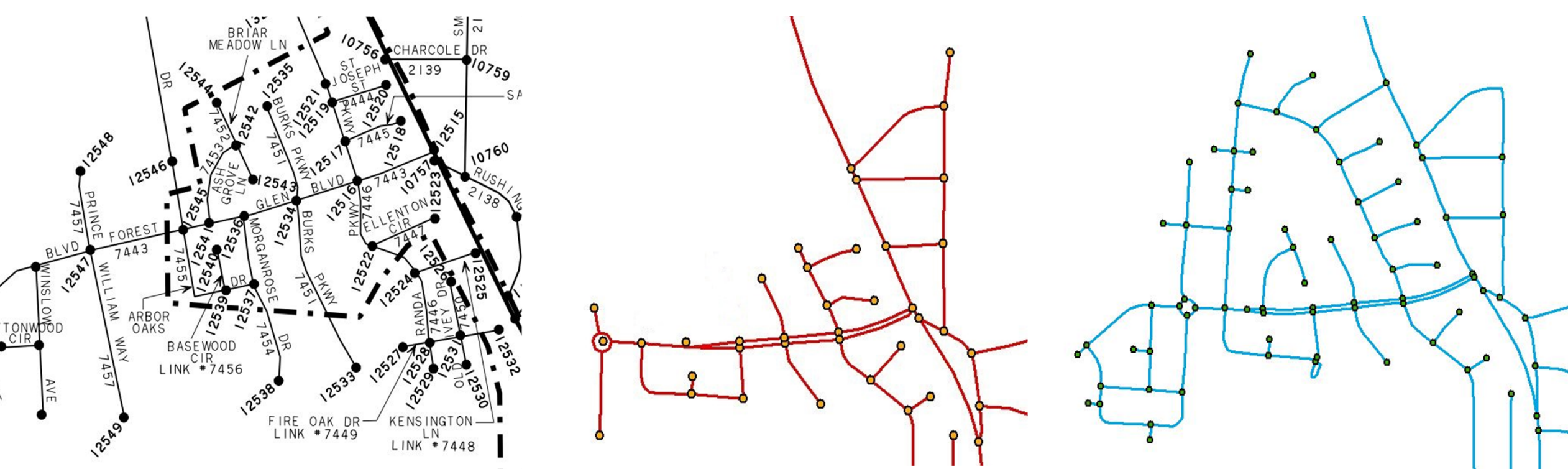
#### Node Transfer Table

eGIS Nodes were created at all intersections of eGIS Routes. A transfer table was created to correlate Link-node nodes to a Measure down an eGIS route through a spatial join with the existing Link-Node nodes.

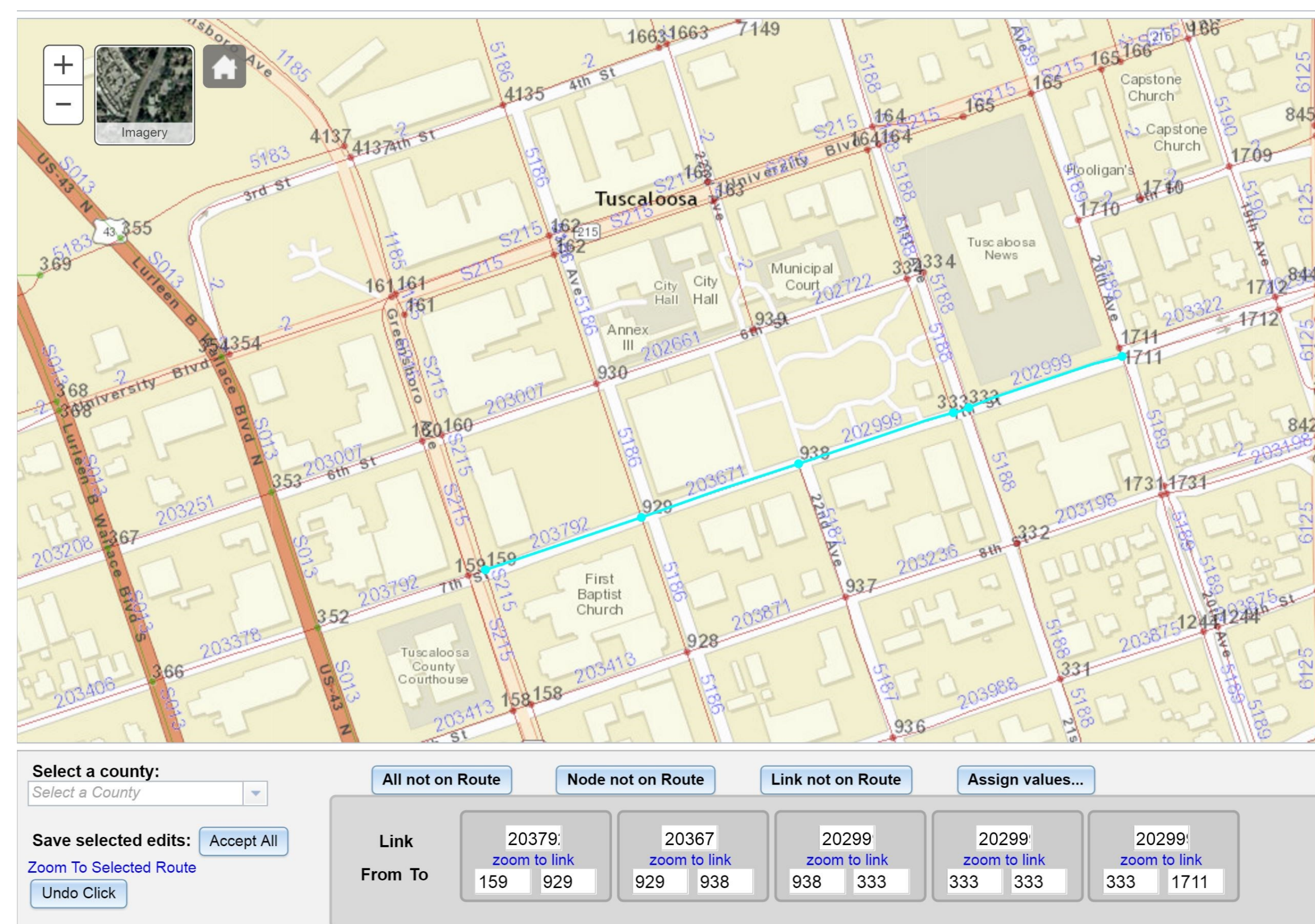
#### Link Transfer Table

A transfer table was created to correlate eGIS routes to link-node links using the Node Transfer Table as an intermediary. The Link Transfer Table contains FromNode and ToNode fields which identify a link between two nodes. By connecting the Link-Node links to nodes, the connection of Link-Node

#### PDF Data → Link-Node Data → eGIS Data



Incongruencies in the system add problems that cannot be solved programmatically. Additionally, not all data will be transferred correctly. For these reasons, a manual QA/QC web tool has been created to aid in this work. The user has the ability to select multiple links at a time and correct issues. Buttons help flag common problems which cannot be corrected at this time.



nodes in the Node Transfer Table is used to identify which eGIS route the nodes correspond to. This establishes a connection between eGIS route and Node-Link links, which allows crashes to transfer from the existing system to the new system.

### Results and Conclusion

- Link and Node Transfer Tables have been created
- Over 80% of state & interstate link and node data have been correctly transferred
- User guide has been created to facilitate QA/QC

### Future Work

- Optimize QA/QC web map & conduct QA/QC procedures on local roads
- Map new crashes to the eGIS system

### Acknowledgements

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