

Using Geographic Information Systems(GIS) to Improve Quality of Life for Highway Districts in Idaho.

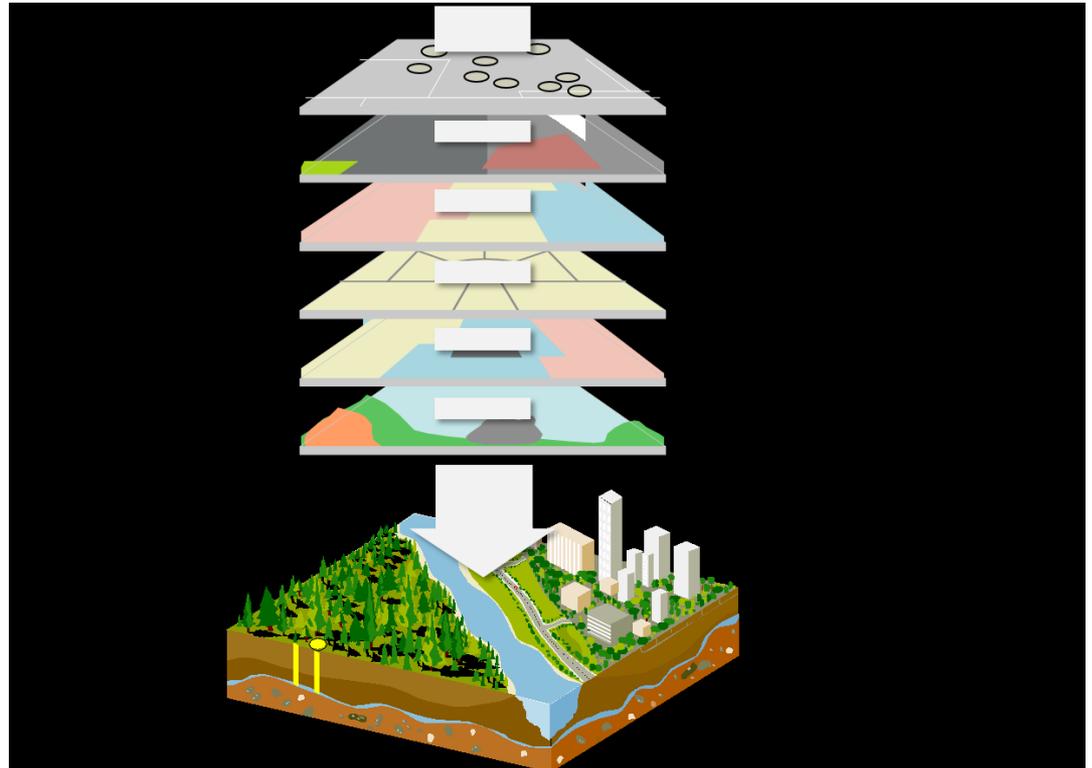
November 2019



YOUR *Safety* • • • ► YOUR *Mobility* • • • ► YOUR *Economic Opportunity*

What is GIS (and why do I care?)

- Communication
- Linking data with nothing in common
- Analysis that makes sense and better mirrors how the world works



GIS for Everyone



IPLAN



IPLAN

A collaborative information site brought to you by ITD

General ITD Information Web App
General Information App

Address - Highway District Finder Web App
Address - Highway District Finder App

AADT 1999 - Present Web App
AADT - Cumulative App

Roadway Characteristics Web App
Roadway Characteristics App

IPLAN is Idaho Transportation Department's (ITD) web-based portal linking directly to ITD's authoritative data sources; through which ITD staff, business partners, and others can access and publish geospatial information pertaining to transportation in Idaho.

Check out **ITD's OpenData Portal** to discover and download or access data directly as GeoJSON or GeoServices through the API.

Watch our videos to get started:

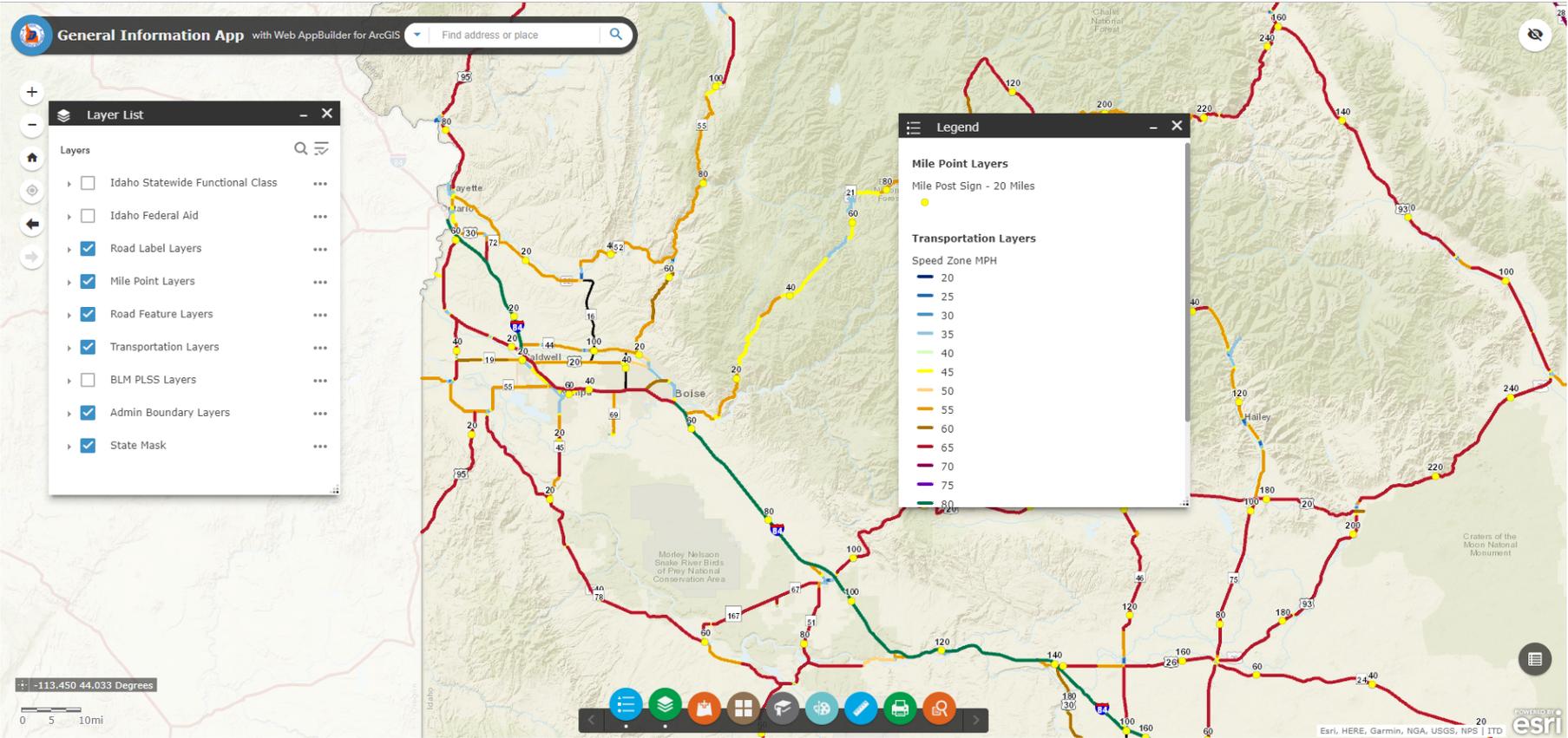
- o [IPLAN Training Videos and Manual](#)

For assistance in using **IPLAN**:

- o Request User Account or questions: Email [Site Administrator](#)



Public Information

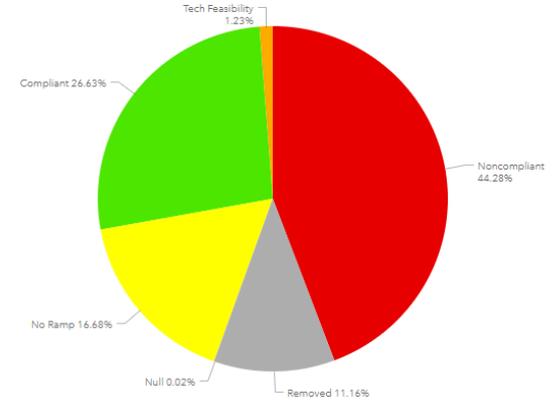
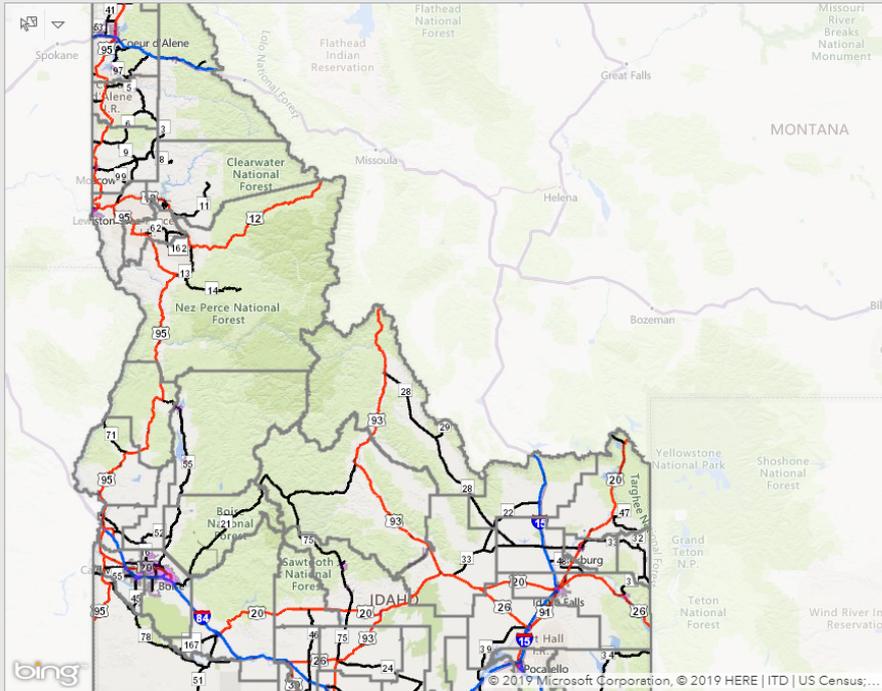


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Dashboards

ADA Ramp Overview Dashboard

Select by Jurisdiction
Select by ITD District
None
Select by County
None
Select by City
None
Select by Ramp Construction Year
None



Last update: a few seconds ago

Number of Ramps Selected
9,336

Last update: a few seconds ago

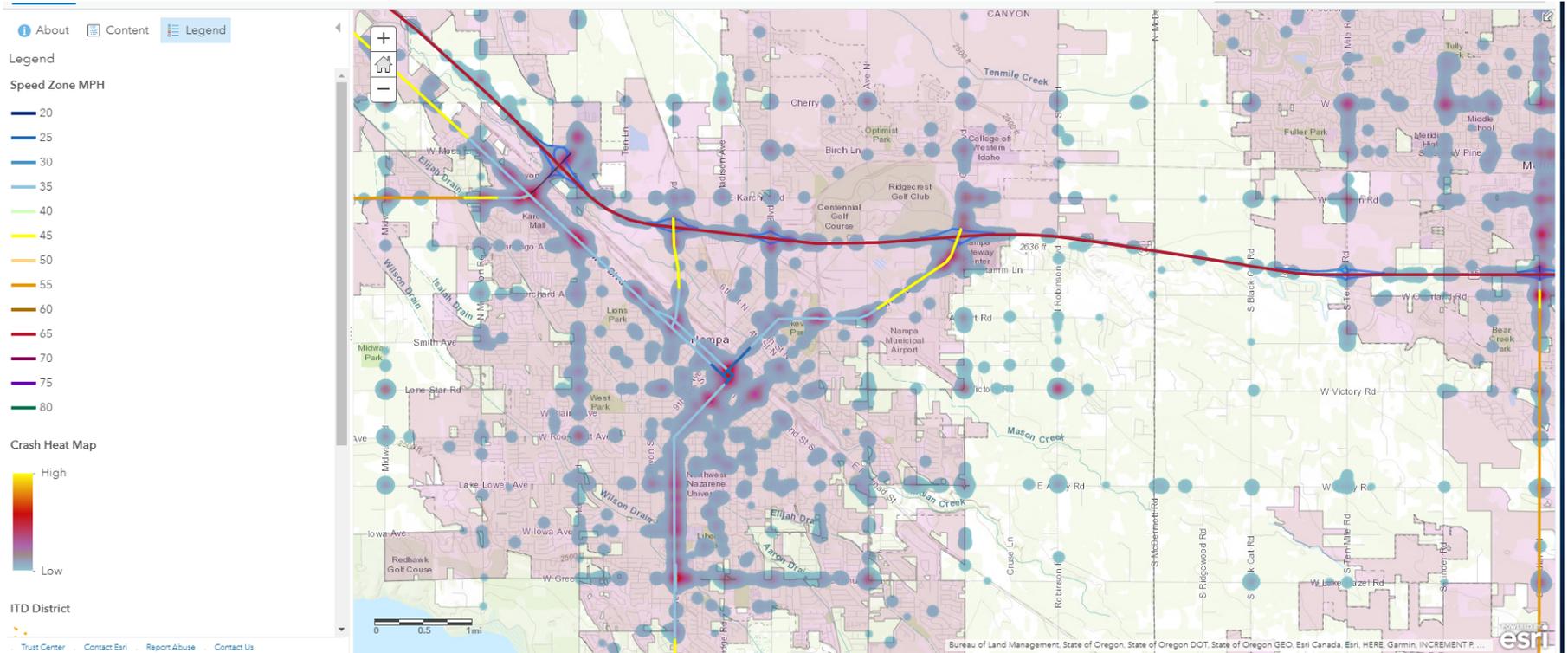
This Dashboard is designed to allow users to query and find trends in ADA ramp data around state highways in the state of Idaho.

Queries can be made by doing the following:

- Using the dropdown menus in the left tab which will query all ramps in the specified location
- Using the map in the center tab. In the upper left hand corner use the selection button and select what type of shape you would like to use to select features. Drag or draw this shape around the area you wish to look at and the ramps will be queried.
- Using the pie chart in the right tab. You can select any of the slices and this will change which ramps are displayed in the maps.



Overlays and Analysis



Overlay of crashes, projects, and speed-zones



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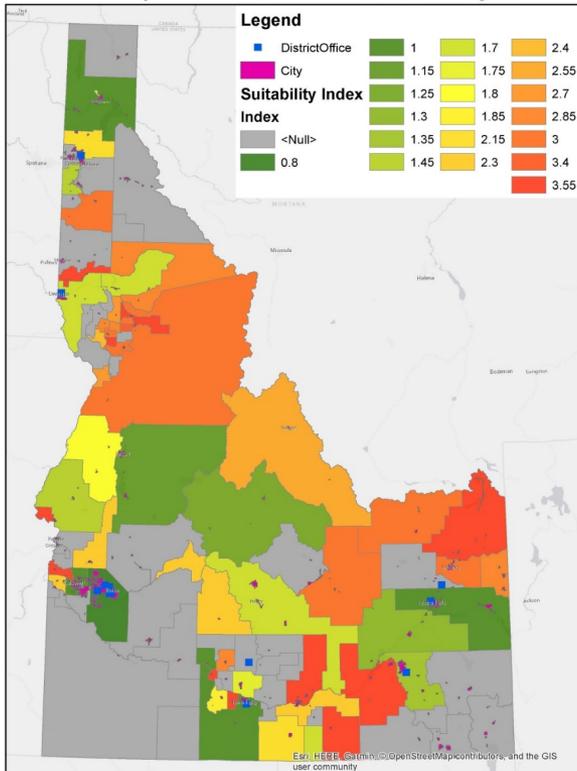
Impacts on Local Highway Districts

- Modernize Reporting
- Provide GIS to local bodies and citizens
- Less paper and more efficiency
- Moving from many sets of data closer to one unified set, with local input.
- Better flow of data
- Completely voluntary



LRI Modernization Pilot

Survey Results for LRI Innovation Project



- Technical Resources
- GIS experience
- Willingness
- Desire for Electronic Option



Current Workflow

- Manual and inefficient process involved printing and mailing large maps
- Two-three month reporting window
- Hand drawing leads to inaccuracy/confusion
- Lack of transparency and two-way communication
- Hasn't really changed in at least half a century



LRI Portal

Home Gallery Map Scene Groups Content Organization

Will

Q



Local Road Inventory Portal

ITD LRI Workflow Manager

Local Road Inventory Dashboard

The LRI is a collaborative program to gather and maintain information on Idaho's local, rural roads. Idaho Transportation Department (ITD) personnel collect road information from approximately 64 local Highway Districts and 33 county road and bridge departments, and then aggregate that information for further use. The key product of LRI is a summation of the number of miles of improved road that each local road agency maintains. LRI currently reports on approximately 27,000 miles of improved road.

The ITD Headquarters Geographic Information System (GIS) Section maintains the local road data statewide.

All roads in the LRI program are rural roads maintained either by a county road and bridge department or by a local highway district. For example, the Bingham County Road & Bridge Department maintains all the rural roads in Bingham County. In Custer County, the Custer County Road and Bridge department maintains some of the roads, while the Lost River Highway District maintains the rural roads in its jurisdiction. In some counties, multiple highway districts and a county road and bridge department maintain rural roads, each in their designated jurisdictions. Each of these local road agencies has a road foreman who coordinates road work and a governing board, such as a county commission or a board of directors.

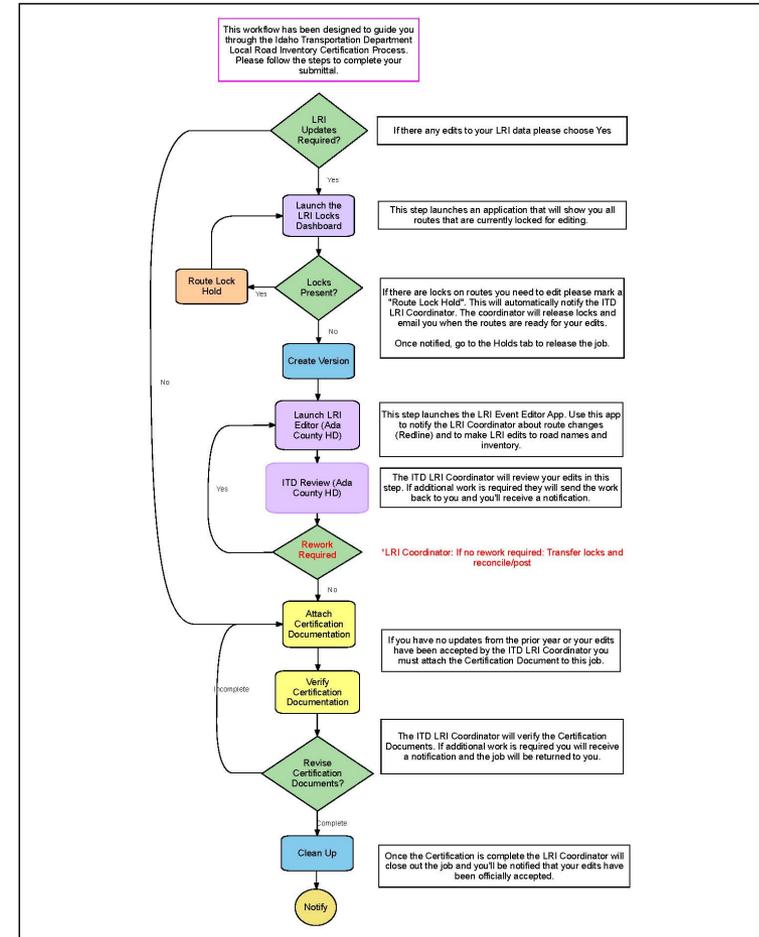
The LRI Portal is a web platform that handles users for an organization or in this case participants of a process. If you have a GIS portal we can collaborate between the two.



Workflow Manager(WMX)

Job Name	Assigned To	Job Type	Job Create Date
ADA_CO_HD_JOB_1	PortiaAdmin	Ada County Highway District LRI Submittal	8/15/19, 6:14 PM
ADA_CO_HD_JOB_2	PortiaAdmin	Ada County Highway District LRI Submittal	8/21/19, 3:43 PM
ADA_CO_HD_JOB_3	PortiaAdmin	Ada County Highway District LRI Submittal	8/21/19, 5:53 PM
ADA_CO_HD_JOB_4	ITDTestUser1	Ada County Highway District LRI Submittal	8/21/19, 5:55 PM
ADA_CO_HD_JOB_403	PortiaAdmin	Ada County Highway District LRI Submittal	8/21/19, 8:11 PM
ADA_CO_HD_JOB_6	PortiaAdmin	Ada County Highway District LRI Submittal	8/28/19, 2:47 PM
ADA_CO_HD_JOB_7	PortiaAdmin	Ada County Highway District LRI Submittal	8/28/19, 7:44 PM
ADA_CO_HD_JOB_8	Will.Thomson	Ada County Highway District LRI Submittal	8/28/19, 7:49 PM
ADA_CO_HD_JOB_9	PortiaAdmin	Ada County Highway District LRI Submittal	8/28/19, 7:52 PM
ADA_CO_HD_JOB_11	PortiaAdmin	Ada County Highway District LRI Submittal	8/28/19, 8:08 PM

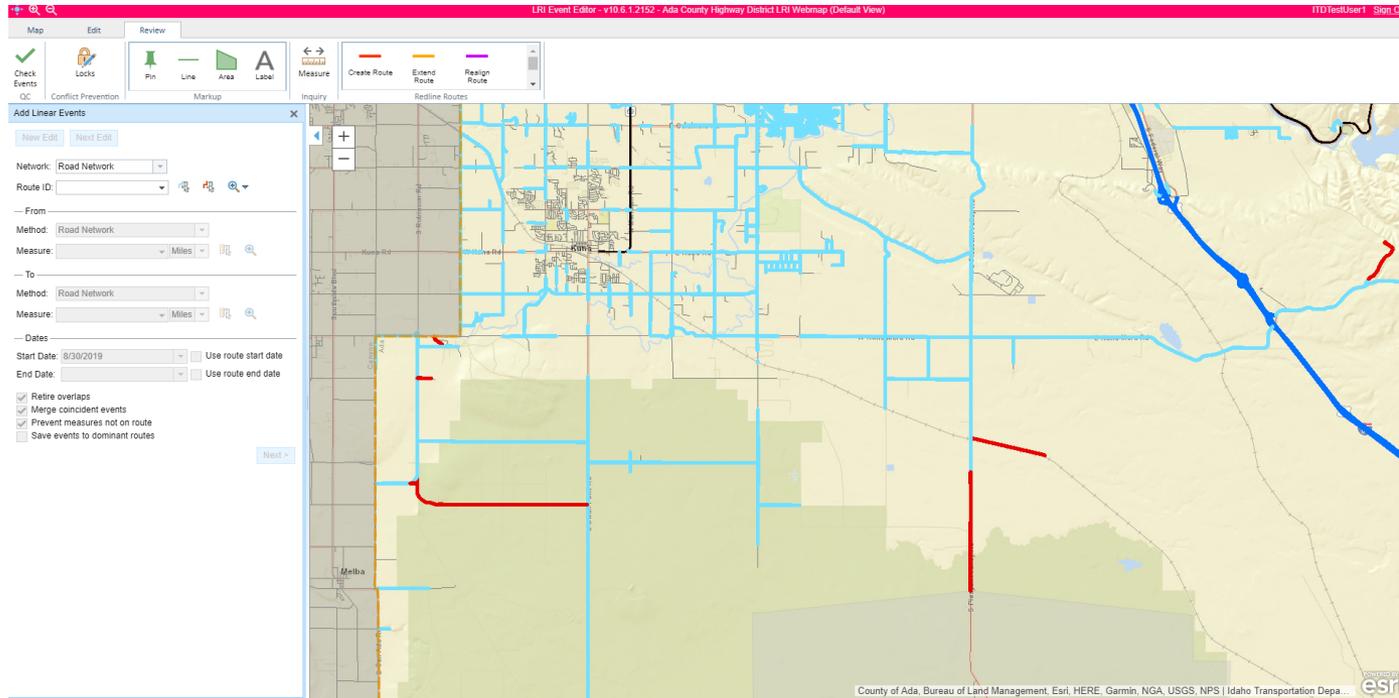
- Software that is used to mirror business processes in a web-based flowchart-like interface. Automates a number of things and allows for tracking of edits.



Untitled



Roadway Characteristic Editor(RCE) and Redlining



- Roadway Characteristic Editor is an online interface for editing attribute data along roads. Redlining is the process of marking changes to the road geometry. These changes to road geometry will be made by ITD staff.



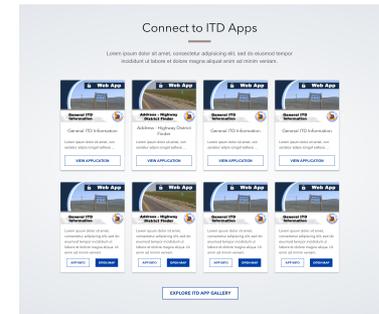
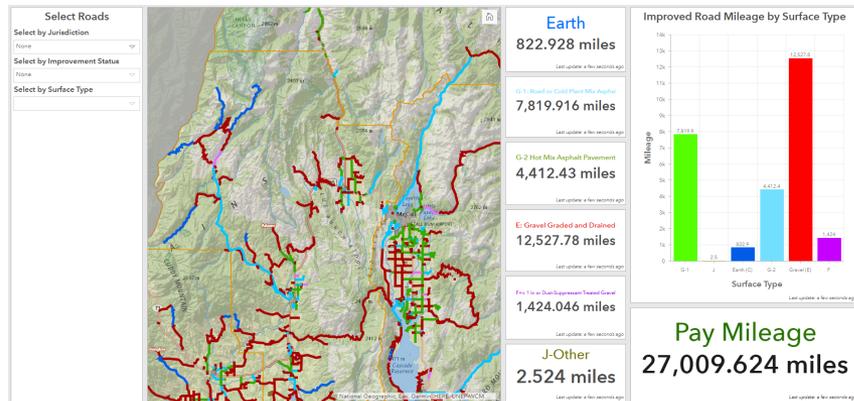
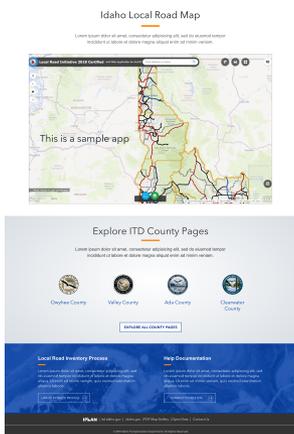
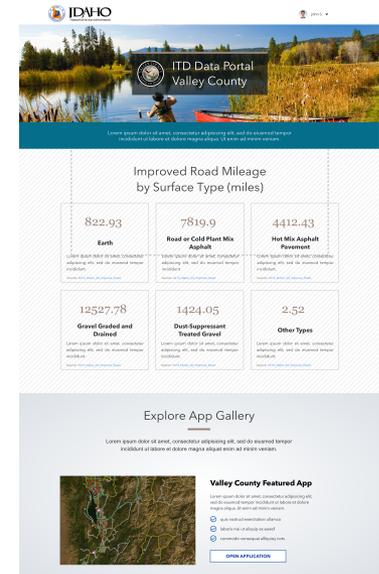
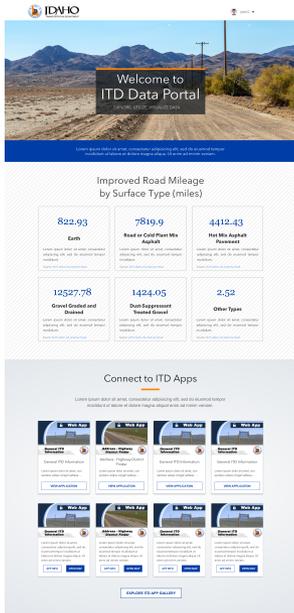
Benefits and Implications

- Integrated Data
- Year Round Editing
- Automated Communication
- Transparency into ITD process
- Accountability and Record keeping
- Scalable



ArcGIS Sites

- Configurable websites for each HD
- Can be used as a means to share data with your consumers
- Economies of scale



Benefits of the New System /Why GIS?

- This will be optional and your organization can still get as many paper maps you want.
- The LRI process is already map-based, this process will tie it to the actual data
- Many Local Highway Districts already use GIS staff or expertise to help with this process
- This can serve as the groundwork for local->state->federal data integration that is kept current. This will ensure two way street between the state and the locals and hopefully even the feds
- Better transparency and quicker communication

