

# Federal Railroad Administration (FRA) Consolidated Rail Infrastructure and Safety Improvement (CRISI) Program

*Developing a Home-Grown  
Multidisciplinary Rail Workforce*



# Why rail?

Every railroad job supports an additional 3.9 jobs in support industries.

Freight rail industry generates more than \$233 billion in economic output.

Passenger rail generates direct spending, economic activity, and tax revenues in communities.

# Unique Contexts and Partnerships



**CITT**  
CENTER FOR INTERNATIONAL  
TRADE AND TRANSPORTATION  
**CSULB**



THE UNIVERSITY OF  
**MEMPHIS**

**Southeast Transportation  
Workforce Center**



## **CALIFORNIA FREIGHT RAIL STATE MAP**

- Short Line/ Regional
- UP
- CN
- BNSF
- CPKC
- CSX
- NS
- Multiple Owners
- Amtrak
- GMXT



ASSOCIATION OF  
AMERICAN RAILROADS

## **TENNESSEE FREIGHT RAIL STATE MAP**

- Short Line/ Regional
- UP
- CN
- BNSF
- CPKC
- CSX
- NS
- Multiple Owners
- Amtrak
- GMXT



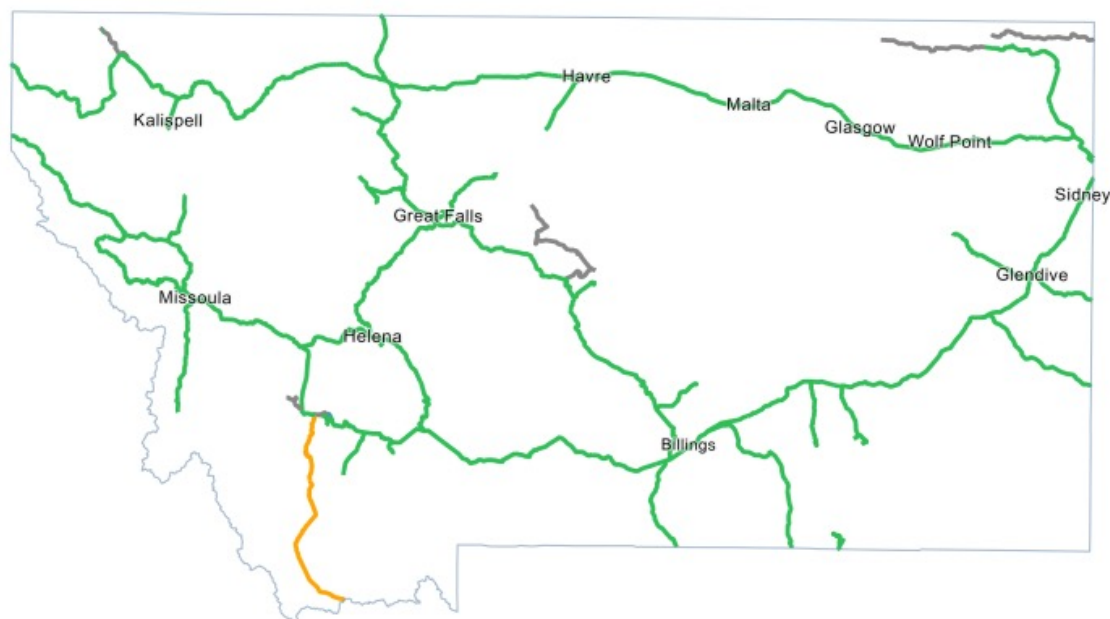
Western  
Transportation  
Institute

Innovation | Integration | Implementation



## MONTANA FREIGHT RAIL STATE MAP

- Short Line/ Regional
- UP
- CN
- BNSF
- CPKC
- CSX
- NS
- Multiple Owners
- Amtrak
- GMXT





# Needs Assessment – Key Takeaways

- ***Regional variability matters.*** Workforce needs and opportunities differ across contexts requiring tailored, place-based solutions.
- ***Workforce capacity is a limiting factor.*** Historic federal investments and planned rail expansions are outpacing the current availability of a skilled workforce, increasing the need for pipeline development.
- ***Evolving technology capabilities in the industry mean evolving skill requirements.*** Advances in automation, data analytics, alternative fuels, and advanced technologies are shifting demand toward more technical, interdisciplinary skillsets.
- ***Coordination between academic and industry stakeholders is crucial to addressing workforce challenges.*** Effective workforce development requires sustained collaboration among industry, academia, government, and community partners to build scalable and adaptable talent pipelines.



# CRISI Project - Goals



INCREASE  
FACULTY/TEACHER  
KNOWLEDGE OF RAIL  
TOPICS AND NEEDED  
WORKFORCE  
COMPETENCIES



INCREASE STUDENT  
EXPOSURE TO RAIL TOPICS  
AND DEVELOP STUDENTS'  
RAIL-SPECIFIC AND  
TRANSFERABLE SKILLSETS



INCREASE AWARENESS OF  
MULTIPLE CAREER  
PATHWAYS INTO RAIL



INCREASE TRAINING AND  
JOB PLACEMENT  
OPPORTUNITIES



PROMOTE REPLICATION  
AND ADAPTATION OF  
RESOURCES



# Multisector Working Group



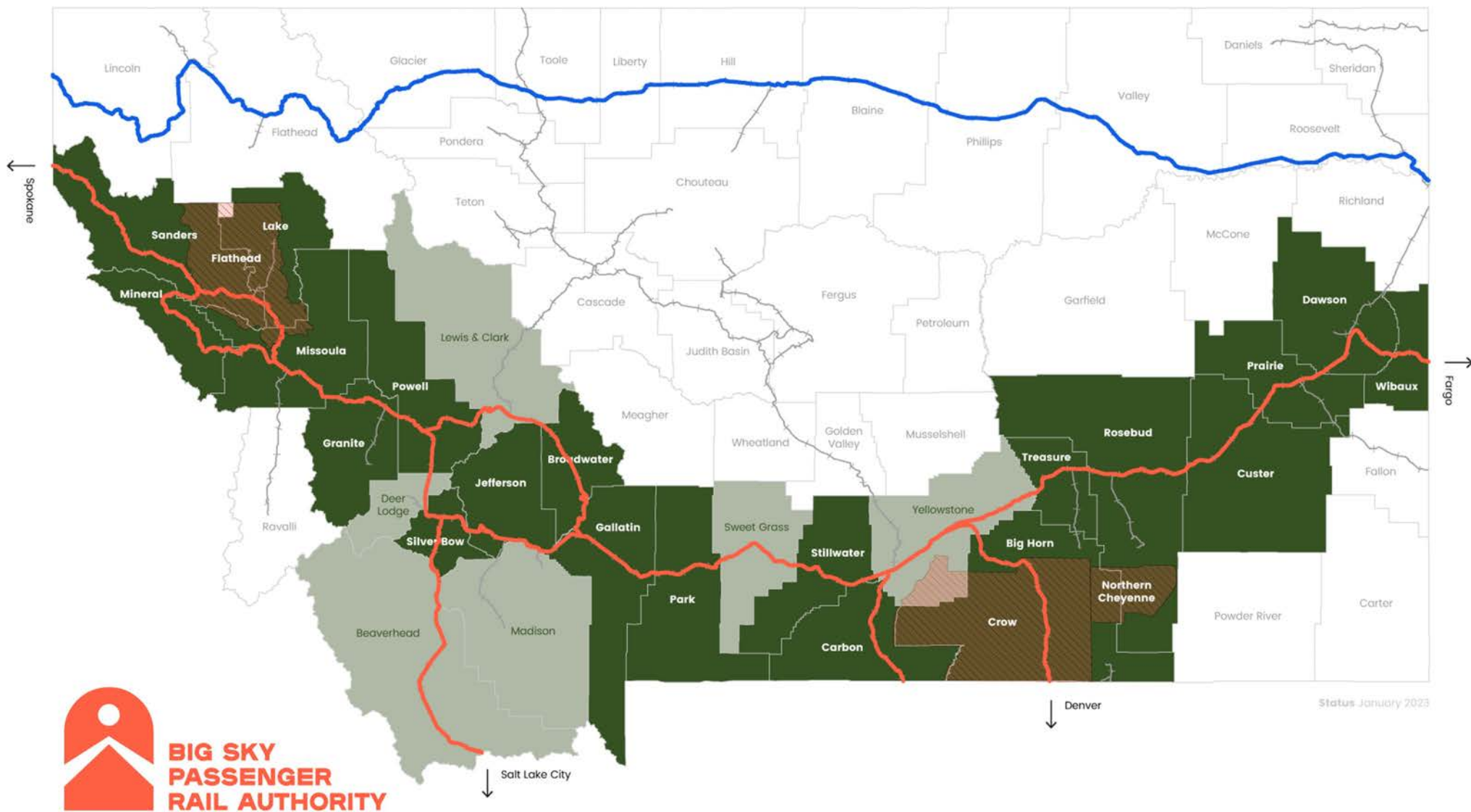
**IAM RAIL DIVISION**



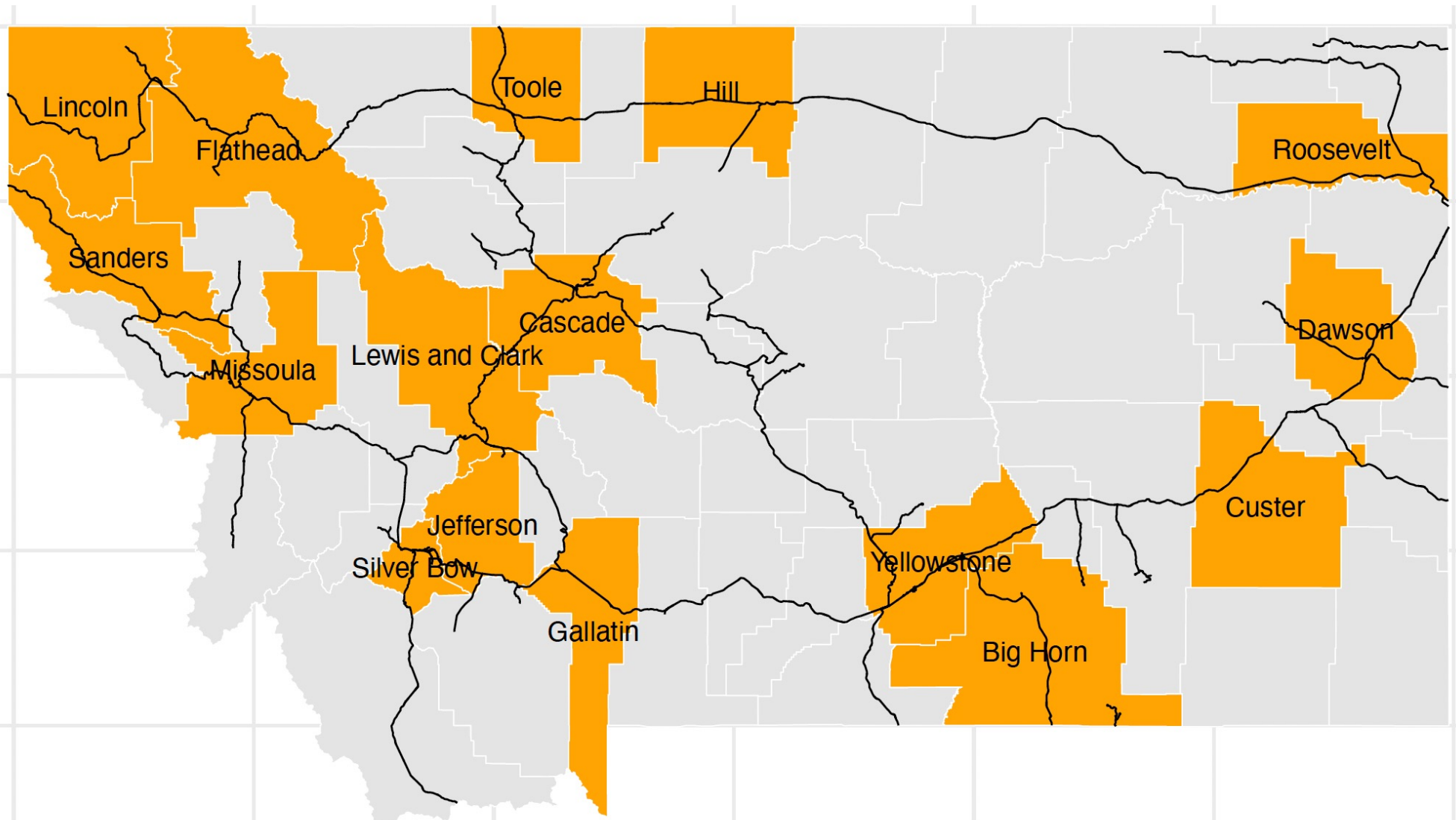
State Workforce Innovation Board  
SWIB

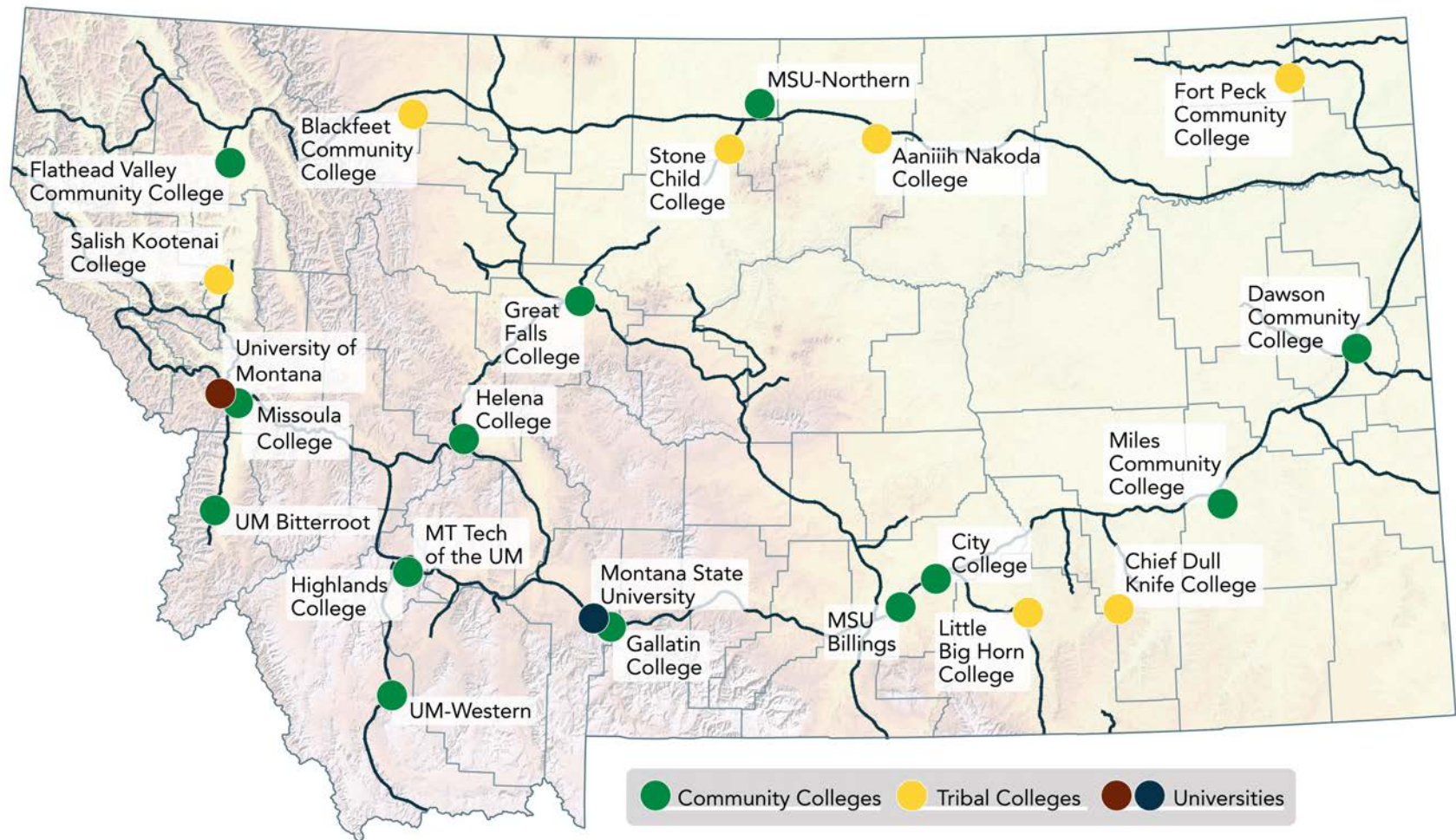












# CRISI Project – Strategies

- **Establish a Faculty Rail Fellows Program**, engaging K-12, community college, and university educators in developing hands-on, project-based learning modules aligned with industry needs.
- **Launch Summer Rail Academies** to introduce middle and high school students to rail careers, build early career awareness, and expand future hiring pools.
- **Document clear, multidisciplinary career pathways into rail**, spanning operations, engineering, technology, data, planning, and management.
- **Create a national coordination and knowledge-sharing hub**, enabling industry, labor, and education partners to access tools, lessons learned, and technical assistance to replicate successful models in other states and regions.

# CRISI Project – Next Steps



Conduct *Needs Assessment* & establish advisory groups (completed Spring 2026)



Convene Multisector Working Groups (Summer 2026)



Develop Project Implementation Plans (Fall 2026)



Launch Faculty Rail Fellows and Summer Rail Academies (2027-2030)



Career Pathways Documentation & Resource Sharing



# Education and Workforce Development Program

- Montana Department of Transportation (MDT)  
*“MDT as an Employer of Choice for Talent”*
- City of Bozeman and other Community Partners  
*“Community-engaged And Transformational Scholarship” (CATS) Program*

# Community-engaged And Transformational Scholarship Initiative



*CATS is an initiative to facilitate large-scale meaningful and impactful partnerships between Montana State University and surrounding communities through course-based project collaborations.*

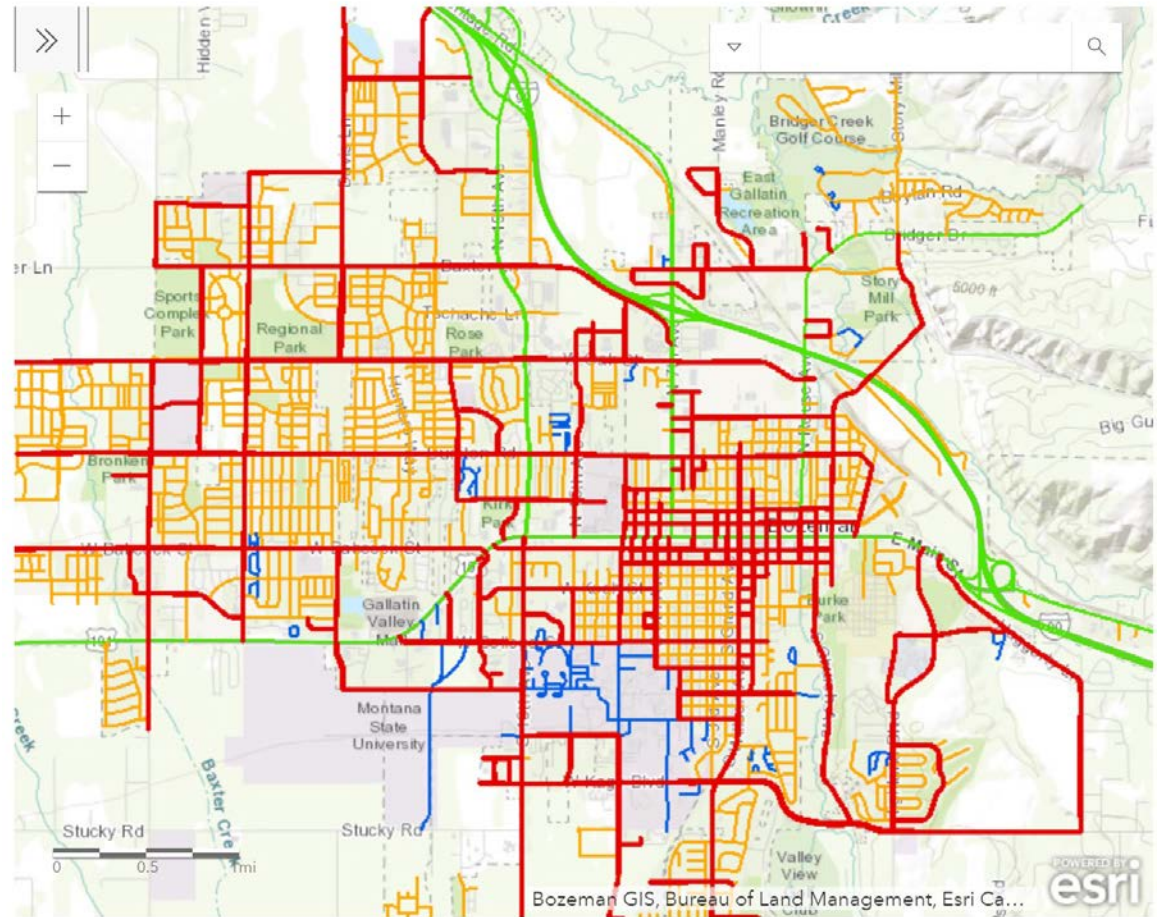


## ***The initiative delivers a simple model to:***

- Match community identified needs and community driven projects to university capacity and expertise
- Magnify engagement of students and faculty across departments and disciplines
- Work within existing institutional structures using an “opt-in” framework for engagement
- Afford students with valuable opportunities to apply their skills in real contexts while making positive impacts in their communities
- Provide access to new ideas, energy, and university capacity to local partners to solve pressing community-based needs



# Snowplow Route Optimization



EIND 499: Industrial Engineering Senior Design Capstone



## BOZEMAN CREEK SUSTAINABILITY + RESTORATION



Naturalized Riparian Area

Ecological Learning Opportunities

Connection From Babcock St.

Infiltration Garden

Lunch or Break Spot From Downtown Activities

## RIPARIAN AREA SUSTAINABILITY + RESTORATION



### Sustainability and Restoration

- » Riparian Area increased by 45%
- » Riparian Safety: Reduce direct engagement with stream to promote and maintain overall ecological health and site visibility
- » Reduces Urban Heat Island Effect by increasing ecological microclimate opportunities
- » Shaded seating provides vantage points to appreciate and admire the riparian area with a multi-stem Serviceberry canopy to soften building backdrop and edge



Ground Plane Vegetation vs. Tree Canopy

Ground Plane Vegetation  
Tree Canopy



## Contact

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