Agenda

- Introducing the National Network for the Transportation Workforce
  - Presenter: Susan Gallagher, WRTWC Project Manager

- University Programs Round Table
  - Moderator: Steve Albert, Director, MSU Western Transportation Institute
  - Panel:
    - Kevin Chang, University of Idaho
    - Rhonda Young, University of Wyoming

- Audience Q & A
  - All
Background: Transportation Workforce Challenges

- Baby boomer retirements
- Lack of awareness and understanding of career opportunities
  ✓ Rapid pace of technological advancement
  ✓ New skill sets required of entry level hires
  ✓ Competition for competent staff
Background: Impetus for National Network

- Recognized need for strategic approach to transportation workforce development to meet challenges, including:
  - Need to increase awareness of existing programs
  - Need to coordinate successful practices at all levels
    - Grades 6-12, Community & Technical Colleges, University, Professional Development
  - Need to coordinate efforts and leverage resources across transportation, education, workforce, and labor communities
Background: Establishing a National Network

- 2014: Federal Highway Administration establishes 5 Regional Centers
- Combination of SAFETEA-LU and MAP-21 funding for 4 years
- Administered through FHWA Technology Partnership Program
West Region Transportation Workforce Center (WRTWC)

- Serves 10 western states:

- Western Transportation Institute at Montana State University (lead institution) in partnership with the Upper Great Plains Transportation Institute at North Dakota State University
Mission: National Network for the Transportation Workforce

The Regional Centers will serve as a resource to support, grow and maintain a skilled and career-ready transportation workforce in their respective regions.

The Centers are network rather than program focused and will engage existing regionally based programs, to catalyze new strategic partnerships and to communicate programs and best practices to educators, employers and those on the transportation career pathway.
Strategic Outcomes

- **One Stop Web Portal**
  - To training & education programs

- **Direct Connections**
  - Between key stakeholders to catalyze strategic partnerships

- **Better data**
  - On transportation workforce priorities in region

- **Better alignment**
  - Of education & training to skill gaps
The West Region Transportation Workforce by the Numbers

Regional Workforce Overview for Job Needs & Priorities Analysis
By Industry:

- Trucking
- Rail
- Pipeline
- Transit & Ground
- Maritime
- Highway
- Scenic
2012-22 Growth Rates in Transportation Industries, Western Region
Share of Employees by Transportation Industry, 2014

- Highway_2014
- Trucking_2014
- Transit_2014
- Maritime_2014
- Rail_2014
- Pipeline_2014
- Scenic_2014
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<th>Trucking</th>
<th>Transit and Ground Passenger</th>
<th>Maritime (including ports)</th>
<th>Rail</th>
<th>Pipeline</th>
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By Occupation:

*What is a Transportation Job??*

Occupations related to the planning, design, construction, operation, management and maintenance of transportation infrastructure; conveyances; systems; and modes that support the movement of people, materials, and goods.
Demand for Transportation Jobs with at Least 10,000 Positions
Western Region (2022)
Demand Comparison for Planning, Engineering, Design, Operations & Compliance Jobs in Western Region by Wage and Required Education

Size of bubble reflects number of jobs in region in 2022

- BA+
- Associate's degree
- Post secondary certificate
- High School
- Less than High School

- Urban & Regional Planners
- Marine Engineers & Naval Architects
- Civil Engineers
- Architectural & Civil Drafters
- Civil Engineering Technicians
- Cargo & Freight Agents
- Transit & Railroad Police
- Transportation Screeners
- Transportation Inspectors
- Traffic Technicians
- Transportation Attendants, Except Flight Attendants

Average Annual Salary in Western Region, 2015
## Career Pathway Example: Transportation Planning, Design, Engineering & Compliance Fields

<table>
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<tr>
<th>Required Education Level</th>
<th>Occupation</th>
<th>Average annual wage</th>
<th>Projected annual openings</th>
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<td><strong>Urban &amp; Regional Planners</strong></td>
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<td>Bachelors (4 years)</td>
<td><strong>Civil Engineers</strong></td>
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<td>Associates (2 years)</td>
<td><strong>Civil Engineering Technicians</strong></td>
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<td>High School + on-the-job-training</td>
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Stakeholder Engagement & Needs Assessment

Input on Job Needs & Priorities
Stakeholder Engagement

Education/Training Providers

- Universities
- Community/Technical Colleges
- Local and Tribal Technical Assistance Programs
- Grades 6-12
- Career and Technical Education network

Industry/Professional Organizations

- ITE, ASCE, ITSA
- AGC
- AASHTO
- APTA
- Trucking, rail associations
Key Stakeholders (con’t)

Transportation Agencies
- State Departments of Transportation
- Transit Agencies
- City and County Transportation Supervisors
- Metropolitan Planning Organizations

Labor & Workforce Organizations
- State Workforce Investment Boards
- State Economic Development Agencies
- Local Workforce Centers
What is Missing?

- Many “priority occupations” for transportation organizations are not classified as “transportation occupations”
- No BLS data on “new” or “blended” occupations
- What are the industry game changers?
“ITS is glaringly missing. We are supposedly moving to a connected vehicle and vehicle to infrastructure environment, and I would argue that we are not gearing up to be able to deal with it. We aren’t really thinking yet about what it is going to take to engineer and implement the technology associated with the next jump in transportation capability…We need to think about constructing a workforce that can keep this technology properly working & engineered so that we can deliver accurate, timely, and reliable services.”
What does the Future Hold?

Traditional

- Projected retirements
- Existing occupations
- Projected growth

Industry forecasts based on past trends

Futurecasting

- New technologies
- Streamlined organizations
- Organizational trends/new mandates

Industry game changers → new organizational competencies
University Round Table

Moderator: Steve Albert

Panel:
Kevin Chang, University of Idaho
Rhonda Young, University of Wyoming
Questions

- What are the most significant or pressing workforce development issues facing transportation agencies?
- What are the most needed skills for the coming decade?
- How do Connected Vehicle or other high tech deployments impact transportation skill needs?
- What are the unique training and education opportunities offered at your university?
- How might universities and transportation organizations work together to make transportation a more attractive career choice to “tech savvy” younger generations?
- How can Rocky Mountain region universities work more collaboratively to enrich student experience and career choice?