Presentation Outline

- Current Land Base/Population
- Ancestral Land Base/Population
- Significance of Jemez Trails
- Existing Planning Documents
- Trails & Bikeways Facility Plan Development
- NM 4 Multi-use Pedestrian Trail Project
- Technical/Regulatory Challenges
- Cultural/Environmental Considerations
- Community Outreach
Current Jemez Land Base/Population

- Current land base ~89,650 acres
- Pueblo of Jemez land grant: 43,481 acres
- Ojo Del Espiritu Santo: 36,516 acres
- Canada de Cochiti: 9,648 acres
- Ancestral lands: Ancestral domain, Valles Caldera, & Spiritual Peaks
- Current Population: 3,887
Ancestral Land Base/Population

- Ancestral homeland extends over an area of approximately 1,000 square miles (640,000 acres) within the greater Jemez Mountain District
- Jemez people entered the area by the late 1100s
- Jemez population was approximately 7,000 at time Spanish contact in 1541
Significance of Jemez Trails

- Trade routes
- Cultural activities
- Spiritual pilgrimages
- Hunting
- Gathering medicinal & ceremonial items
- Access to residences, schools, & community services
- Land surveys
- Boundary fence maintenance
- Running/health & wellness events

Valles Caldera National Preserve, New Mexico – Image from NPS website.
Existing Planning Documents

• Long-range Transportation Plan, 2018
• Transportation Safety Plan, 2018
• Safe Transportation Initiative (STI), 2018
  • Collaboration of Tribal Departments/Programs
• Tribal Transportation Improvement Plan (TTIP), 2019-2023
• Infrastructure Capital Improvement Plan (ICIP), 2021-2025
• Road Safety Audit, 2007
• Pedestrian safety is a high priority
Trails & Bikeways Facilities Plan Development

**Preliminary Planning**
- Establish Pedestrian Facility Planning Committee (PFPC)
  - Planning/Transportation, Public Health, Natural Resources, THPO, Injury Prevention, Realty/GIS, STI & Community Members/Cultural Leaders
- Determine Goals & Objectives
  - Document Pedestrian Trail Network
  - Pedestrian Safety/Health
  - Connectivity
  - Seek Funding to Design/Construct
- Research/Analyze Existing Plans/Data
Trails & Bikeways Facilities Plan Development

Preliminary Planning

• Gather Stakeholder Input
  • Visioning Sessions, Focus Groups, Interactive Workshop & Community Meetings

• Identify New Pedestrian Facilities & Improvements for Existing Facilities
  • Determine existing trails that can be included in the Plan
Trails & Bikeways Facilities Plan Development

Plan Development
• Prioritization and phasing plan
• Maps/graphics
• Pedestrian facility types/surfaces
• Preliminary cost estimates
• Facility features
• O&M activities, frequency and costs
• Performance measures – bicycle counts, meeting ADA standards
• Connectivity to other modes of transportation
• Environmental compliance requirements/right-of-way
• Potential funding sources

Plan Approval/Adoption
• Tribal Council approval/adoPTION
Trails & Bikeways Facility Plan Development

Design guidelines for pedestrian facilities

- 2019 FHWA - Bikeway Selection Guide
- 2017 FTA - Manual on Pedestrian and Bicycle Connections to Transit
- 2016 FHWA - Pursuing Equity in Pedestrian and Bicycle Planning
- 2016 Guidebook for Developing Pedestrian and Bicycle Performance Measures
- 2016 FHWA Small Town and Rural Multimodal Networks
- 2015 FHWA - Bicycle and Pedestrian Funding, Design, and Environmental Review: Addressing Common Misconceptions
- 2014 National Association of City Transportation Officials - Urban Bikeway Design Guide
- 2010 USDOT - Policy Statement on Bicycle and Pedestrian Accommodation Regulations and Recommendations
- 2010 Update of the AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities
- 2010 Institute of Transportation Engineers - Designing Urban Walkable Thoroughfares
- 2007 USDA/USFS - Trail Construction and Maintenance Notebook
- 2001/1999 FHWA - Designing Sidewalks and Trails for Access, Parts 1 & 2
Trails & Bikeways Facility Plan Development

Schedule & Cost

- Estimated 10 months to complete
  - Consistent facilitation by PFPC/Participation of Leadership/Community is crucial to staying on schedule
- Consultant Fee: $55K
- Proposals ranged between $55K and $200K
NM 4 Multi-use Pedestrian Trail Project
NM 4 Multi-use Pedestrian Trail Project
NM 4 Multi-use Pedestrian Trail Project

Decision-making
- New NM Administration
- Selection of priority trail project – highest safety risk

NMDOT Grant Application Process
- Meeting w/RTPO Planner, July 2018
- Submitted PFF; NMDOT Consultation; Presentations, Oct. 2018
- Submitted PPF/Application, Dec. 2018
- Notice of Award, May 2019

Potential Funding Sources
- Congestion Mitigation Air Quality Program (CMAQ)
- Recreational Trails Program (RTP)
- Transportation Alternatives Program (TAP)
NM 4 Multi-use Pedestrian Trail Project

Use of Photographs & Videos to Tell the Story/Demonstrate Need for Pedestrian Facilities

https://youtu.be/qtrU2HJKWnQ
NM 4 Multi-use Pedestrian Trail Project

Use of Data and Historical Documents to Tell the Story/Demonstrate Need for Pedestrian Facilities

- Jemez Police Dept. speeding citations
- NMDOT Crash Database: 11 accidents, 3 injuries, and 1 fatality on NM 4 between 2012 and 2016

<table>
<thead>
<tr>
<th>CITATION TYPE</th>
<th>FY 2015</th>
<th>FY 2016</th>
<th>FY 2017</th>
<th>FY 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speeding Citations</td>
<td>3,462</td>
<td>5,471</td>
<td>6,669</td>
<td>4,946</td>
</tr>
<tr>
<td>Seat Belt Citations</td>
<td>81</td>
<td>21</td>
<td>82</td>
<td>49</td>
</tr>
<tr>
<td>Unlicensed Driver</td>
<td>123</td>
<td>130</td>
<td>176</td>
<td>111</td>
</tr>
<tr>
<td>Unregistered Vehicle</td>
<td>86</td>
<td>98</td>
<td>165</td>
<td>162</td>
</tr>
<tr>
<td>Uninsured Vehicle</td>
<td>457</td>
<td>306</td>
<td>247</td>
<td>238</td>
</tr>
<tr>
<td>Total Moving Violations</td>
<td>4,298</td>
<td>6,172</td>
<td>7,572</td>
<td>5,344</td>
</tr>
</tbody>
</table>

- NM 4 Constructed in 1942
- Via use of Pueblo Land Condemnation Act
- State paid Jemez $3,134 for 74 acres of land to construct NM 4
NM 4 Multi-use Pedestrian Trail Project

Project Cost Estimate
- Contracted with engineering firm for CE
- Avoid budget shortfall
- Include Contingency

<table>
<thead>
<tr>
<th>Year</th>
<th>Length (ft.)</th>
<th>Total Construction Cost</th>
<th>1Conceptual Planning/Design Costs (12% of construction)</th>
<th>Conceptual CM Services Costs (10% of construction)</th>
<th>Total Conceptual Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$542,000</td>
<td>$542,000</td>
<td>$318,000</td>
<td>$1,396,405</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>6,600</td>
<td>$3,178,405</td>
<td>$318,000</td>
<td>$3,496,405</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3,460</td>
<td>$1,326,507</td>
<td>$132,000</td>
<td>$1,458,507</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>9,660</td>
<td>4,504,912</td>
<td>$542,000</td>
<td>$450,000</td>
<td>$5,496,912</td>
</tr>
</tbody>
</table>

1The Engineer’s Cost Estimate includes a breakdown of Planning/Design costs per Project Phase. The Pueblo is proposing to complete all Planning/Design Activities during Year 1.
NM 4 Multi-use Pedestrian Trail Project

Total estimated project cost: $5.5M
  • NMDOT: $4,696,561
  • TTP: $800,350

Fiscal Years 2020-2023
  • 2020: Preliminary engineering
  • 2021: Right-of-way & Intergovernmental agreement w/NMDOT (crosswalks)
  • 2022-2023: Construction & CM

Collaboration with NMDOT Planners
  • Pre-/post-pedestrian trail installation bicycle counts
## NM 4 Multi-use Pedestrian Trail Project

### Pueblo of Jemez Bicycle & Traffic Counts

#### Summary Statistics

<table>
<thead>
<tr>
<th>Route Name</th>
<th>Location Description</th>
<th>Beginning Count Date</th>
<th>Ending Count Date</th>
<th>Total Volume</th>
<th>Daily Volume</th>
<th>Direction</th>
<th>Daily Volume</th>
<th>Direction</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>NM 4 North of Sheep Springs Way, South of Clinic</td>
<td>7/31/2019 to 8/5/2019</td>
<td>324</td>
<td>65</td>
<td>N</td>
<td>159</td>
<td>S</td>
<td>75</td>
<td>N</td>
<td>23.15%</td>
<td>17.59%</td>
</tr>
<tr>
<td>NM 4 North of Sheep Springs Way, South of Clinic</td>
<td>7/31/2019 to 8/5/2019</td>
<td>29,898</td>
<td>14,947</td>
<td>N</td>
<td>14,951</td>
<td>S</td>
<td>2,435</td>
<td>N</td>
<td>8.14%</td>
<td>3.34%</td>
</tr>
<tr>
<td>NM 4 North of Civic Center, South of Library</td>
<td>7/31/2019 to 8/5/2019</td>
<td>466</td>
<td>255</td>
<td>N</td>
<td>211</td>
<td>S</td>
<td>88</td>
<td>N</td>
<td>18.88%</td>
<td>N</td>
</tr>
<tr>
<td>NM 4 North of Civic Center, South of Library</td>
<td>7/31/2019 to 8/5/2019</td>
<td>28,816</td>
<td>14,036</td>
<td>N</td>
<td>14,780</td>
<td>S</td>
<td>3,397</td>
<td>S</td>
<td>8.32%</td>
<td>9.21%</td>
</tr>
<tr>
<td>NM 4 North of Sheep Springs Way, South of Clinic</td>
<td>8/5/2019 to 8/16/2019</td>
<td>501</td>
<td>271</td>
<td>N</td>
<td>230</td>
<td>S</td>
<td>110</td>
<td>N</td>
<td>22.55%</td>
<td>7.91%</td>
</tr>
<tr>
<td>NM 4 North of Civic Center, South of Library</td>
<td>8/5/2019 to 8/16/2019</td>
<td>51,703</td>
<td>25,678</td>
<td>N</td>
<td>26,025</td>
<td>S</td>
<td>7,000</td>
<td>S</td>
<td>7.33%</td>
<td>4.60%</td>
</tr>
<tr>
<td>NM 4 North of Civic Center, South of Library</td>
<td>8/5/2019 to 8/16/2019</td>
<td>737</td>
<td>407</td>
<td>N</td>
<td>330</td>
<td>S</td>
<td>110</td>
<td>N</td>
<td>14.25%</td>
<td>14.13%</td>
</tr>
<tr>
<td>NM 4 North of Civic Center, South of Library</td>
<td>8/5/2019 to 8/16/2019</td>
<td>52,097</td>
<td>25,963</td>
<td>N</td>
<td>26,134</td>
<td>S</td>
<td>7,000</td>
<td>S</td>
<td>7.5%</td>
<td>4.70%</td>
</tr>
<tr>
<td>NM 4 North of Sheep Springs Way, South of Clinic</td>
<td>9/4/2019 to 9/10/2019</td>
<td>360</td>
<td>184</td>
<td>N</td>
<td>176</td>
<td>S</td>
<td>100</td>
<td>N</td>
<td>19.44%</td>
<td>17.24%</td>
</tr>
<tr>
<td>NM 4 North of Sheep Springs Way, South of Clinic</td>
<td>9/4/2019 to 9/10/2019</td>
<td>23,321</td>
<td>14,667</td>
<td>N</td>
<td>14,654</td>
<td>S</td>
<td>1,916</td>
<td>N</td>
<td>8.22%</td>
<td>12.24%</td>
</tr>
<tr>
<td>NM 4 North of Civic Center, South of Library</td>
<td>9/4/2019 to 9/10/2019</td>
<td>444</td>
<td>203</td>
<td>N</td>
<td>241</td>
<td>S</td>
<td>100</td>
<td>N</td>
<td>15.99%</td>
<td>8.82%</td>
</tr>
<tr>
<td>NM 4 North of Civic Center, South of Library</td>
<td>9/4/2019 to 9/10/2019</td>
<td>29,104</td>
<td>14,809</td>
<td>N</td>
<td>14,295</td>
<td>S</td>
<td>1,906</td>
<td>N</td>
<td>6.55%</td>
<td>10.03%</td>
</tr>
</tbody>
</table>
NM 4 Multi-use Pedestrian Trail Project
Technical/Regulatory Challenges

- Design Challenges
  - Drainage – 15 drainage basins
  - Driveways
  - Arroyos – pedestrian foot bridges
    Earthwork – cut and fill
  - ADA compliance – steep slopes
- Land availability – narrow roadways
- Right-of-way (NMDOT, BIA, Tribal)
- Facilities on National Tribal Transportation Facility Inventory
- Funding
Cultural/Environmental Considerations

- Community Support/Trust
  - Balance of cultural/traditional aspects with modern infrastructure
  - Homes located adjacent to trails – fences, unapproved driveways
- Closure of existing roads
- Facilities open to public, per Federal regulation
- Privacy
Community Outreach

- Previous Planning Efforts (LRTP, TSP, TTIP)
- Public Meetings
- Monthly Newsletter
- Informational Brochure
- Community Survey
- Door-to-door sharing of information and gathering input
- Community Meetings/Interactive Workshop
Questions?

Contact:
Sheri Bozic, Director
Planning & Development/Transportation Department
Pueblo of Jemez
Sheri.Bozic@jemezpueblo.org