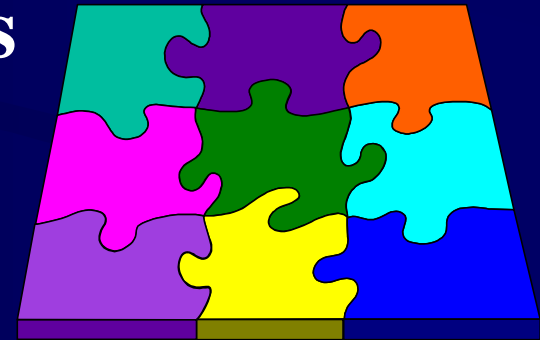


New Mexico ITS: Planning, Deployment, & Integration

**By Joseph M. Maestas,
Planning & Program Management Engineer
FHWA, New Mexico Division**

New Mexico ITS: Overview

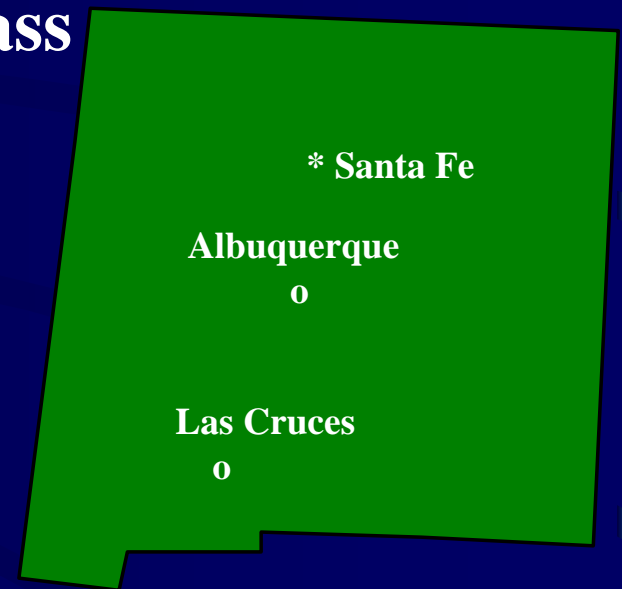
- State Characteristics
- Transportation Facts
- ITS Program Highlights
 - Training
 - Statewide/Rural
 - Multi-State coordination
 - Urban
 - Commercial Vehicle Operations (CVO)



New Mexico

“The Land of Enchantment”

- Over 121, 000 square miles
 - fifth largest State by land mass
- 1.82 million population (2000)
 - 36th most populous (+20%)
 - 1/3 in Albuquerque
- Three Urban Areas
- 23 Native American Tribes
- 3/4 of State between 4500' & 6500 ' elev.
- Economy: Mining, farming/ranching & tourism



New Mexico Map



October 4, 2001

ITS Rocky Mountain Annual Meeting

Boise, Idaho

New Mexico: Transportation Facts

- **Total Public Road Mileage: 59,473 miles**
 - 2958 miles on NHS
 - 1000 miles of Interstate Highway
 - 5123 miles on Indian Reservations
- **Total VMT ('00) : 22.7 billion**
- **International Airport: Albuquerque**
- **Federal Program: \$231.3 million (FY '01)**

New Mexico ITS: Training Provided

- **Awareness Seminar**
- **Using the National ITS Architecture for Deployment**
- **Software Acquisition**
- **CVO Technology Applications & Project Management**
- **Telecommunications Overview**
- **Standards: Overview, C2C, DMS, & ATSC**

New Mexico ITS: Statewide Strategic Plan

- **Identified & Consulted with Stakeholders**
- **Conducted Inventory/Identified Needs**
- **Set Goals with Prioritized Needs**
- **Integrated with Ongoing Efforts**
 - **NMSHTD Districts 3 & 4**
- **Developed Architecture**
 - **35 market packages**

New Mexico ITS: Statewide Strategic Plan

- **Prioritized Needs (Ranked)**
 - **Improve incident management & coordination**
 - **Improve traffic congestion mitigation**
 - **Provide real-time information of roadway, traffic, and weather conditions**
 - **Improve roadway closures/detours info'**

New Mexico ITS: Statewide Strategic Plan

- **Developed Deployment Plan**
 - 20-year
 - Projects prioritized
 - Short, mid, & long term time frames
- **Budget Estimates**
 - Planning, design, & construction
 - Implementation (initial capital costs)
 - Operations & maintenance

New Mexico ITS:



Statewide Strategic Plan

- **Deployment Plan**

- **Short term: 2002-2006**

- **Maintenance, incidents, & road closure system**
 - **Road weather information system**
 - **CCTV cameras, DMS, highway advisory radio**
 - **Advanced metro' travel management system**
 - **511 traveler information system**
 - **Emergency response radio system**
 - **Total cost: \$70,410,000**

New Mexico ITS: Statewide Strategic Plan

- **Deployment Plan**
 - **Mid-term: 2007-2011**
 - **Statewide signal system upgrade**
 - **Install AVL in emergency vehicles**
 - **Install WIMs at POEs**
 - **Install tourist information kiosks**
 - **Install animal crossing warning devices**
 - **Total cost: \$59,790,000**

New Mexico ITS: Statewide Strategic Plan

- **Deployment Plan**
 - **Long Term: 2012-2021**
 - **Expand network of CCTV cameras & DMSs**
 - **Install AVL on school buses and CVs**
 - **Automate C&M op's (e.g. snowplow AVL)**
 - **Develop special events plan and traffic control & information systems**
 - **Total cost: \$86,040,000**

Rural ITS (RITS) Project

- Initial Pilot Project in NMSHTD District 4
- Northeast New Mexico
- Key Commercial & Tourist Corridors
 - I-25 and I-40
- Only 4% of NM's Population
- Eventual Statewide Implementation



RITS Project

- **Consultant: Castlerock**
- **Phase I (Complete)**
 - **Inventory**
 - **Needs assessment**
 - **Regional architecture**
 - **Implementation report**
 - **Cost: \$190k**

RITS Project

- **Phase II (P,S,& E Development)**
 - Traffic operations center
 - Gate closure closed circuit TVs
 - Highway advisory radio network
 - Pager activated school crossing warning
 - Variable speed advisory system
 - Mobile smart traffic trailers
 - Cost: \$450k

Multi-State ITS Coordination

- **December 14, 2000 Meeting (Albuquerque, NM)**
- **AZ, CO, NM, OK, & TX participated**
- **Objectives: Share Information & Coordinate Regional ITS Integration**
- **Report: “Recommendations for Continued Communication of Southwest States Towards Common Deployment of ITS”**

Rural ITS: Deployment & Integration

- **Condition Acquisition & Reporting System (CARS)**
- **511 Traveler Information**
 - Integrate with CARS
- **Rural Transit Initiative**
 - **Ridership & Financial Tracking (RFT) System**
 - Used with ITS card technology
 - Welfare-to-work program

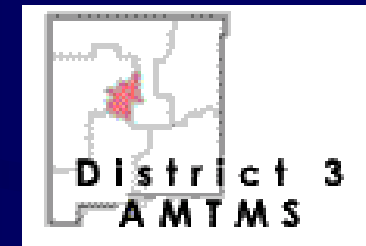
New Mexico ITS: Urban - Albuquerque

- **Traffic Signal Interconnect**
- **Incident Management**
 - courtesy patrol deployed
 - expanded EM coordination w/ protocol
- **ITS Regional Architecture Development**
- **ITS Subcommittee within MPO**



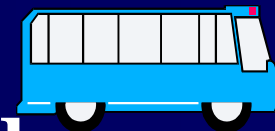
New Mexico ITS: Urban - Albuquerque

- **Advanced Metropolitan Travel Management System (AMTMS)**
 - **Planning, Coordination, & PS&E:**
 - Advanced Traffic Management Systems (ATMS)
 - Advanced Traveler Information System (ATIS)
 - Emergency Management System (EMS)
- **Smart Corridors**
 - Rio Bravo & Paseo Del Norte
- **I-25/I-40 Interchange Construction Applications**



New Mexico ITS: Urban - Albuquerque

- **SOLAR - Sun Transit On-Board Locating & Reporting System**
 - Phase I: Software for on line reservation and scheduling for paratransit clients; dispatch and supervisory support; automatic vehicle locators (AVL), and mobile data terminals (MDTs)
 - Phase II: AVL on fixed route buses.
- **Annunciators for Visually Impaired**
 - Location & bus stop by GPS



New Mexico ITS: Urban - Santa Fe

- Peer-to-Peer Review
- Traffic Signal Control System
 - interconnect & optimization
 - future traffic operations center
- Smart Corridor Application
 - Cerrillos Road reconstruction
- Telecommunications



New Mexico ITS: Urban - Las Cruces

- **Signal Interconnect & Pre-Emption**
 - police, fire, & transit
 - all intersections (90+)
- **ADA Paratransit Communications Technologies**
 - evaluate and demo' technology for client/operator communication

New Mexico ITS: Commercial Vehicle Operations (CVO)

- **Partners:**
 - Alliance for Transportation Research
 - NM Dept. of Public Safety, Motor Trans. Div.
 - Federal Motor Carrier Safety Administration
 - Federal Highway Administration
- **Approved Business Plan (Fall '98)**
- **Participation in HELP, Inc.**
- **Expand PrePass Credential Administration**



New Mexico ITS: Commercial Vehicle Operations (CVO)

- **Increase ASPEN Utilization**
- **SAFER Data to Assist in Inspections**
- **Completed CVISN Program Plan**
 - **Goal: Level 1 Functionality**
- **Santa Teresa Int'l Border Crossing**
 - **Electronic credentialing & automated trip permit issuance**
 - **Border Technology Deployment Center**

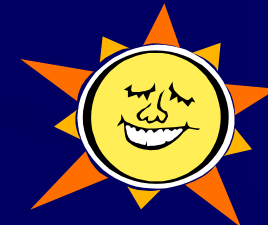


New Mexico ITS: Border Technology Deployment Center

- **Status: Phase I - Feasibility Study (Cost: \$534,770)**
- **Objectives:**
 - **Provide Evaluation, Testing, Integration, Verification, and Validation of New Border Crossing Technologies**
 - **Refine technologies and operational concepts**
 - **Train personnel to apply technologies**
- **New Mexico State University (Las Cruces, NM)**
 - **Physical Science Laboratory**
- **ITS Earmarks**
 - **FY 2000: \$780,921; FY 2001: \$396,807**

New Mexico ITS: Summary

- **Much Planning Still Underway**
- **Institutional Issues Being Addressed**
- **Decision Makers Becoming Informed**
- **Partnerships Developing**
 - within and between States
- **Urban ITS Applications**
 - “Proving Ground”
 - Most of Deployment
- **Much Progress in Statewide/Rural ITS**





Thank You

and

Enjoy the Meeting!!!