



Chinle-Many Farms and St. Michaels-Window Rock-Fort Defiance Multimodal Long Range Transportation Study



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Chinle and Many Farms Study Area Corridor Final Report

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TABLE OF CONTENTS

1	INTRODUCTION.....	1
1.1	Study Purpose.....	1
1.2	Study Objectives	1
1.3	Study Area.....	1
1.4	Project Management Team and Technical Advisory Committee	4
1.5	Stakeholders	4
2	PROJECT AREA DESCRIPTION	5
2.1	Chinle Chapter	5
2.2	Many Farms Chapter.....	5
2.3	Land Use.....	5
2.3.1	<i>Current Land Use and Activity Centers</i>	6
2.3.2	<i>Future Land Use</i>	8
2.4	Demographics and Socioeconomic	14
2.4.1	<i>Population and Employment</i>	14
2.4.2	<i>Major Employers</i>	14
2.4.3	<i>Tourism</i>	16
2.4.4	<i>Transportation Modes</i>	16
2.4.5	<i>Title VI Populations and Environmental Justice</i>	17
3	TRAFFIC AND ROADWAY ASSESSMENT.....	19
3.1	Summary of Completed Plans and Studies.....	19
3.2	Summary of Stakeholder Interviews.....	20
3.3	Street Inventory – Indian Reservation Road Program	26
3.3.1	<i>Laneage and Right-of-Way</i>	26
3.3.2	<i>Roadway Surface Type</i>	28
3.3.3	<i>Shoulder Condition</i>	28
3.4	Traffic Control.....	39
3.5	Functional Classification.....	39
3.6	Crash History.....	43
3.7	Existing Traffic and Level of Service	53
3.7.1	<i>Roadway Level of Service</i>	56
3.8	Access Management.....	57
3.9	Scenic Roads	58
3.10	Planned and Programmed Transportation Projects	61
3.11	Future Traffic Data	65
3.11.1	<i>Growth Rates</i>	65
3.12	Transit	69
3.12.1	<i>Current Routes and Stops</i>	69
3.12.2	<i>Ridership</i>	69
3.12.3	<i>Future Plans</i>	69
3.12.4	<i>Transit Needs</i>	70

3.12.5	School Bus Transportation Needs.....	73
3.13	Bicycle Facilities.....	73
3.13.1	Shoulder Conditions on US 191	73
3.14	Pedestrian Sidewalks, Crossings, and Paths.....	75
3.14.1	Pedestrian Access to Schools.....	75
3.15	Trails and Equestrian Paths	78
4	NEEDS AND DEFICIENCIES.....	81
4.1	General Transportation Needs	81
4.2	Roadway, Street Lighting, and Traffic Control Needs.....	83
4.2.1	Street Improvements – Paving and Repaving Needs.....	83
4.2.2	Street Improvements – Road Widening.....	84
4.2.3	New Road Connections / Frontage Roads	85
4.2.4	Street Lighting	85
4.2.5	Intersection Traffic Control	85
4.2.6	Signing Needs.....	86
4.2.7	Bridge Needs.....	86
4.2.8	Airport Access Needs.....	86
4.2.9	Transit Needs.....	86
4.3	Non-Motorized Transportation Needs	88
4.3.1	Pedestrian Needs.....	88
4.3.2	School Crossings	88
4.3.3	Sidewalks	88
4.3.4	Equestrian and Multiuse Trails	88
4.3.5	Bicycle Needs.....	89
5	CHINLE CHAPTER RECOMMENDED TRANSPORTATION PROJECTS	91
5.1	Tribal Road Projects.....	91
5.2	Pedestrian, Bicycle, and Trail Projects	109
6	MANY FARMS CHAPTER RECOMMENDED TRANSPORTATION PROJECTS	123
6.1	Roadway Projects	123
6.2	Recommended Pedestrian, Bicycle, and Trail Projects.....	136
7	US 191 PROJECTS.....	146
8	SCENIC ROAD PROJECTS	153
9	TRANSIT PROJECTS	155
10	EVALUATION CRITERIA AND PROJECT PRIORITIZATION	157
10.1	Criteria for Prioritizing Roadway Improvements	157

10.2 Project Prioritization – Short-Term Projects	157
10.3 Project Phasing – Mid-Term Projects	159
10.4 Project Phasing – Long-Term Projects.....	162
11 FUNDING SOURCES	164
APPENDIX A - TITLE VI AND ENVIRONMENTAL JUSTICE-PRELIMINARY ASSESSMENT.....	178
APPENDIX B - PUBLIC INVOLVEMENT SUMMARY REPORT 1.....	185
APPENDIX C - PUBLIC INVOLVEMENT SUMMARY REPORT 2.....	186
APPENDIX D - ILLUSTRATION OF BIA IRR INVENTORY SECTION NUMBER REFERENCE MAP	187
APPENDIX E - US 191 MP 444 TO 465 ROAD SAFETY ASSESSMENT.....	188

INDEX OF FIGURES

Figure 1 – Vicinity Map.....	2
Figure 2 – Chinle-Many Farms Study Area Corridor	3
Figure 3 – Existing Land Use – Study Area Corridor.....	7
Figure 4 – Study Area Employment.....	15
Figure 5 – Laneage and Right of Way.....	27
Figure 6 – Pavement Surface.....	29
Figure 7 – Shoulder Type.....	30
Figure 8 – Percent of Road Section Meeting Passing Sight Deficiencies.....	31
Figure 9 – BIA Roads with Deficient Curves and Stopping Sight Restrictions.....	33
Figure 10 – Roadbed Condition	35
Figure 11 – BIA Functional Classifications	42
Figure 12 – Crash Locations, 1999-2009	45
Figure 13 – Number of Motor Vehicle Crashes by year in the Chinle-Many Farms Study Area Corridor, 1997-2009.....	49
Figure 14 – Crash Trends by Month, Day of Week and Time of Day	50
Figure 15 – Traffic Volumes from BIA IRR Inventory.....	55
Figure 16 – Navajo Scenic Road System.....	60
Figure 17 – Navajo Nation CIP and TIP Projects	64
Figure 18 – 2030 Congested Road Segment	68
Figure 19 – Existing and Proposed Bus Stops	72
Figure 20 – Summary of Shoulder Conditions on US 191 within the Study Area Corridor	74
Figure 21 – Sidewalk Locations	76
Figure 22 – Example of a "Complete Street"	82
Figure 23 – Roadway Needs and Deficiencies.....	87
Figure 24 – Transit and Non-Motorized Transportation Needs and Deficiencies	90
Figure 25 - Chinle Chapter Recommended Tribal Roadway Projects	93
Figure 26 – MUTCD Bike Lane Sign	111
Figure 27 - Chinle Chapter Recommended Non-Motorized Projects.....	112
Figure 28 - Many Farms Chapter Recommended Tribal Roadway Projects	124
Figure 29 – Many Farms Recommended Non-Motorized Projects.....	137

INDEX OF TABLES

Table 1 – Land Use Issues, Goals and Objectives for Chinle and Many Farms Chapters	9
Table 2 – Chapter Capital Improvement Projects	13
Table 3 – Current Study Area Population	14
Table 4 – Employers	15
Table 5 – Recreational Visitors to Canyon De Chelly National Monument	16
Table 6 – Mode of Transportation for Workers 16 years and over.....	17
Table 7 – Racial Demographic Percentages	17
Table 8 – 2000 Title VI Population Percentages.....	18
Table 9 – Comments Received from Stakeholder Interviews.....	21

Table 10 – Road Sections with Passing Sight Deficiencies and Associated Head-on Collisions.....	32
Table 11 – BIA Geometric Design Standards.....	36
Table 12 – Geometric Design Deficiencies.....	38
Table 13 – Indian Reservation Roads - Functional Classification Definition.....	40
Table 14 – IRR Functional Classification.....	41
Table 15 – Number of Motor Vehicle Crashes (MVC), Injuries and Fatalities by Road ..	44
Table 16 – Light Conditions for MVCs on Selected Roads and Locations in Chinle and Many Farms, 1997 - 2009	47
Table 17 – Crash Locations, Severity and Types	51
Table 18 – Annual Average Daily Traffic Volumes – BIA Roads.....	53
Table 19 – Annual Average Daily Traffic Volumes – State Highways	54
Table 20 – Examples of Level of Service.....	56
Table 21 – Number of US 191 Access Points, By Milepost	58
Table 22 – State Highway Project in State Transportation Improvement Program, 2011-2014.....	61
Table 23 – Draft FY 2011 - 2048 Indian Reservation Roads Program Projects	62
Table 24 - Future Traffic Volumes and Levels of Service – BIA Roads.....	65
Table 25 - Future Traffic Volumes and Levels of Service - US 191	67
Table 26 - Transit Demand Forecast.....	71
Table 27 - Tribal Roadway and Intersection Projects – Chinle Chapter	94
Table 28 – Chinle Chapter Pedestrian, Bicycle, and Trail Projects.....	113
Table 29 - Tribal Roadway and Intersection Projects – Many Farms Chapter.....	125
Table 30 – Many Farms Chapter Pedestrian, Bicycle, and Trail Projects	138
Table 31 – US 191 Road Safety Assessment Recommendations	148
Table 32 - Recommended Projects on US 191 for Consideration by ADOT.....	150
Table 33 – Coordination of Projects with Scenic Byway CMP Recommendations.....	154
Table 34 – Proposed Transit Projects	156
Table 35 – Short-Term (2012-2015) Projects.....	158
Table 36 – Mid-Term (2016-2020) Projects.....	160
Table 37 - Long-Term (2021-2030 and beyond) Projects	163
Table 38 – Road Project Funding Sources.....	165
Table 39 - Funding for Safety Projects.....	169
Table 40- Funding Programs for Scenic Byway Projects	172
Table 41 - Funding for Pedestrian, Bicycle, and Equestrian Projects.....	173
Table 42 - Transit Funding Programs.....	174

ACRONYMS

AASHTO	American Association of State and Highway Transportation Officials
ADOT	Arizona Department of Transportation
ALISS	Accident Location Information Surveillance System
APTNA	Arkansas Public Transportation Needs Assessment
BIA	Bureau of Indian Affairs
BIADOT	Bureau of Indian Affairs Division of Transportation
BIA - NRO	Bureau of Indian Affairs - Navajo Regional Office
CIP	Capital Improvement Program
CDP	Census Designated Place
EMT	Emergency Medical Transport
FET	Fuel Excise Tax
FHWA	Federal Highway Administration
FY	Fiscal Year
HPMS	Highway Performance Monitoring System
IHS	Indian Health Service
IRR	Indian Reservation Road Program
LOS	Level of Service
MPD	Multimodal Planning Division
MVC	Motor Vehicle Crash
NAIPS	National Plan of Integrated Airport Systems
NPS	National Park Service
PAF	Population Adjustment Factor
PARA	Planning Assistance for Rural Areas
PLHD	Public Lands Highway Discretionary Program
PMT	Project Management Team
RIFDS	Road Inventory Field Data System
RNDF	Relative Need Distribution Factor
ROW	Right-of-Way
STIP	State Transportation Improvement Plan
STP	Surface Transportation Program
TAC	Technical Advisory Committee
TTIP	Tribal Transportation Improvement Program
TWLTL	Two Way Left Turn Lane

1 INTRODUCTION

1.1 Study Purpose

The Chinle-Many Farms study is part of the Chinle-Many Farms and St. Michaels-Window Rock-Fort Defiance Multimodal Long Range Transportation Study funded by the Arizona Department of Transportation (ADOT) Multimodal Planning Division's (MPD) Planning Assistance for Rural Areas (PARA) program. The PARA program receives funding support through the Federal Highway Administration's (FHWA) State Planning and Research program. PARA study projects assist non-metropolitan communities for the purpose of conducting transportation planning studies.

This study is comprised of two multimodal long range transportation plans, one for the Chinle-Many Farms study area corridor, and one for the St. Michaels-Window Rock-Fort Defiance study area corridor. "Multimodal" means multiple modes of transportation, including roads, transit, bicycle, pedestrian and equestrian transportation. Access to airports is also addressed. The plans recommend transportation improvements for five-, 10-, and 20-year planning horizons.

This final report is focused on transportation recommendations in the Chinle and Many Farms study area corridor. A Final Report has also been prepared for the St. Michaels-Window Rock-Fort Defiance study area corridor.

1.2 Study Objectives

Key study objectives are:

- Promote travel safety and mobility, enhance economic vitality, and improve community livability.
- Support communities' current and future planning for economic and community development.
- Address multimodal transportation needs for vehicular, pedestrian, and bicycle transportation.
- Address intermodal connections between vehicular, airport, and transit systems for commuter and emergency needs.

1.3 Study Area

The Chinle-Many Farms study area corridor is shown in its Arizona statewide context in **Figure 1**. It is located in the northeast corner of the state. The study area corridor is shown in **Figure 2**. The north-south boundaries for the Chinle-Many Farms study area corridor run parallel to US 191 from milepost 444 to milepost 465. The east-west study corridor boundaries extend for a width of approximately 6.4 miles, bisected by US 191.

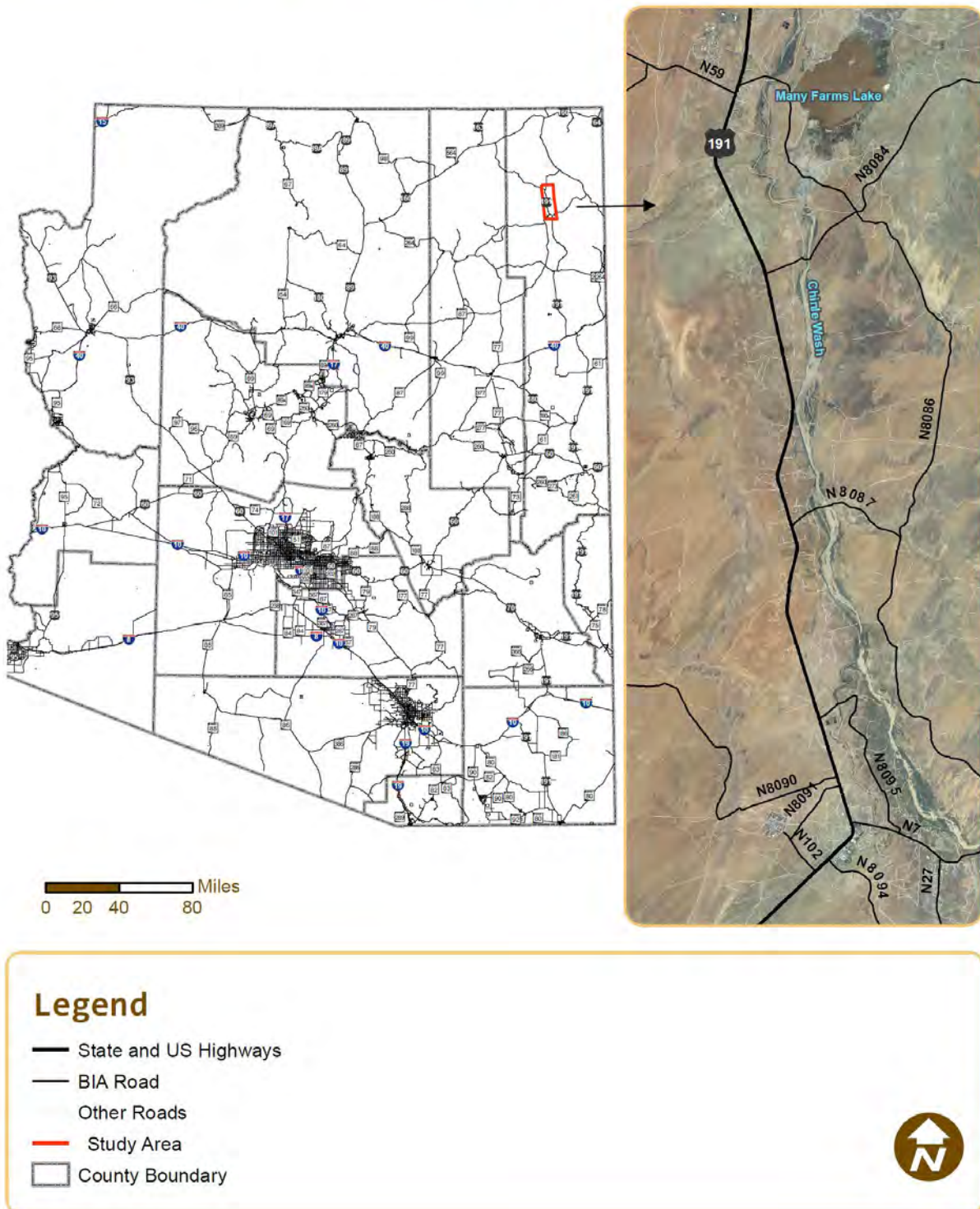
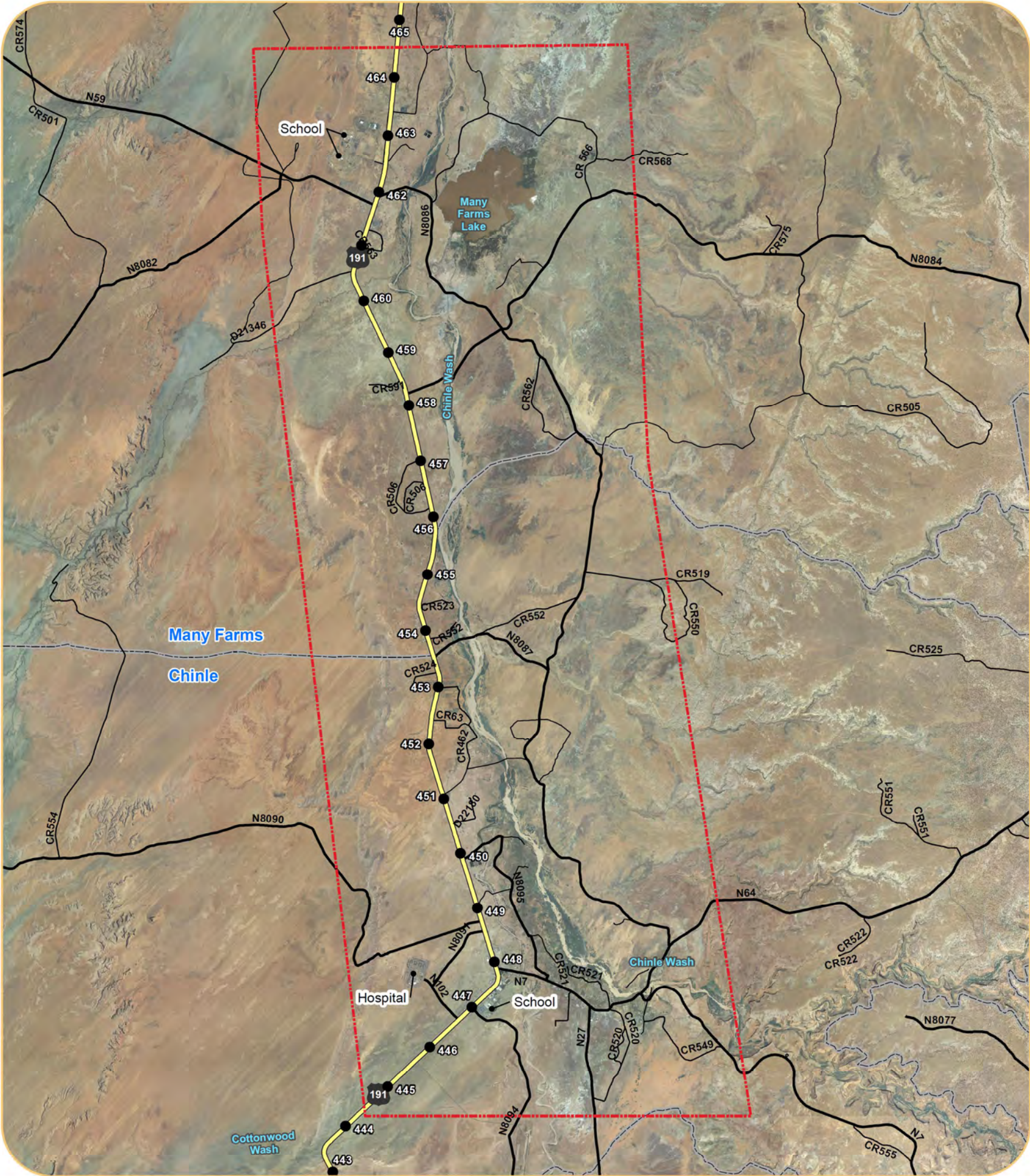


Figure 1 – Vicinity Map

CHINLE-MANY FARMS

Study Area



Legend

- US and State Highways
- BIA Roads
- Tribal/County Roads
- Study Area
- Mileposts
- Chapter Boundary

Note:
CR = County Route
N = Navajo (BIA) Route

Figure 2 – Chinle-Many Farms Study Area Corridor

1.4 Project Management Team and Technical Advisory Committee

A core Project Management Team (PMT) provided project direction and input to the study to its completion. A Project Management Team comprised of the Navajo DOT planners, and ADOT Project Manager, met monthly to discuss progress and issues and guide the project to completion.

In addition to the PMT, a broader-based Technical Advisory Committee (TAC) was formed comprised of agency stakeholder officials including Chapter representatives, Navajo DOT staff, ADOT staff, and others. The Committee held four meetings during the study time line to contribute technical advice into the planning process. Members of the TAC represented the following agencies:

- Navajo Division of Transportation
- Chinle Chapter
- Fort Defiance Chapter
- Many Farms Chapter
- Saint Michaels Chapter
- Navajo Transit System
- Bureau of Indian Affairs (BIA) Navajo Region
- BIA Western Navajo Agency
- Apache County
- Northern Arizona Council of Governments
- ADOT Multimodal Planning Division
- ADOT Holbrook District
- ADOT Communication and Community Partnerships
- ADOT Environmental Planning Group

1.5 Stakeholders

Stakeholders were identified and interviewed during the course of the study. They included representatives from the police and fire departments, school district transportation staff, Chapter representatives, and others. The stakeholders, because of their knowledge of transportation needs and the road system, provided a unique knowledge of transportation needs. Further information on these interviews is provided in **Section 3.2**.

2 PROJECT AREA DESCRIPTION

This chapter provides information on land use, demographic, and economic characteristics of the Chinle and Many Farms areas.

2.1 Chinle Chapter

The Chinle Chapter is situated in the central region of the Navajo Nation near the Canyon De Chelly scenic area. Chinle was noted for agriculture and grazing in the late 1800s and early 1900s; these trades are still practiced by the local Navajo farmers influencing nearby areas such as Many Farms and the Chinle Valley. One of the main tourist attractions is Canyon De Chelly, which was established as a National Monument by President Herbert Hoover on February 14, 1931. The Tsegi (canyon) has several Anasazi ruins, notably the White House, Mummy Cave, and Massacre Cave ruins. Spider Rock is also an attraction within the canyon. The Canyon De Chelly National Monument is within the boundaries of the Chinle Chapter, but is operated by the National Park Service.

2.2 Many Farms Chapter



Many Farms Lake

The Many Farms Chapter is located just north and adjacent to the Chinle Chapter. The Many Farms community began emerging in 1937 when the reservoir dam for irrigation was constructed. During this period the community had a few clusters of homes, a general store, and a schoolhouse. Many Farms Lake is one of the largest lakes within the Navajo Nation; it contains over 25,000-acre feet of water and related canals.

Recent development of the Many Farms Chapter has included Many Farms Boarding School campus, which consolidated the Chinle Boarding School and the Many Farms High School. This school compound, including the high school, accommodated the early stages of the Dine' College before it found its permanent home at the Tsaile, Arizona campus. Both the Chapter House and the preschool needed some renovation. The Chapter House needs an addition to accommodate chapter-based services. A multi-purpose center is planned for development at a future date.

2.3 Land Use

An understanding of land uses is important because land use influences travel patterns. Land

Economic development
can be enhanced by a
good transportation
system

use is integrated with transportation since land use decisions affect transportation systems and can increase viable options for people to access opportunities, goods, services, and other resources to improve the quality of their lives. In turn, multi-modal transportation decisions may have effects on existing and future land use demand, choices, and patterns. Coordinating land use and transportation planning and development is imperative to "smart growth" and sustainable development of communities.

This section provides an overview of existing and planned land use within the study planning area. Existing land uses are shown in **Figure 3** which also includes enlargement insets of the Chapter growth areas.

2.3.1 Current Land Use and Activity Centers

Commercial

In Chinle the Tseyi' Shopping Center, anchored by the Bashas supermarket, is located near the intersection of US 191 and N7. The 65,000 square-foot Tseyi' Shopping Center expanded three times since it opened in 1981, and it has the largest sales volume of any of the Navajo Nation shopping centers. Further expansion of the center would provide for additional space for Navajo-owned businesses.



Tseyi' Shopping Center

services, and cellular phone services.

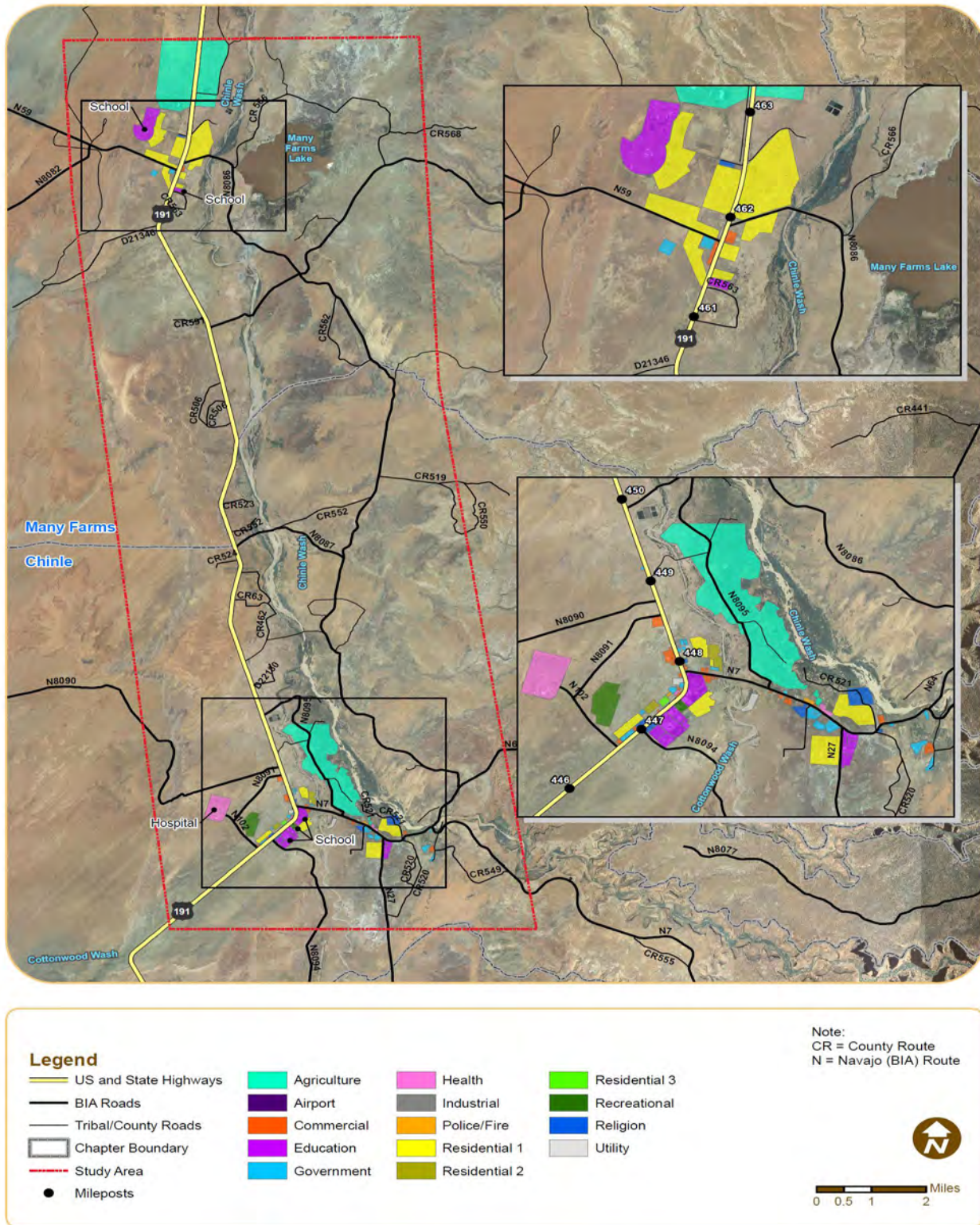
Across the highway (US 191), there is a Coca Cola plant, and a sand and gravel plant behind the Coca Cola plant.

Along US 191 and N7 there are restaurants, motels, gas stations, convenient stores, super markets, arts and crafts store, video shops, laundromats, insurance, gift shops, bank, tire sales and repair, septic

In Many Farms, there is a convenience store with gas station at the US 191 and N59 intersection.

Residential

There are ranchettes along US 191 between Chinle and Many Farms. These scattered home sites have their own direct access to the highway. There are by Navajo Housing Authority (NHA) subdivisions, Bureau of Indian Affairs (BIA) offices and schools off US 191, N7, N27 in Chinle and off of N59, US 191 and on Lake View Drive in Many Farms.



Sources: Navajo Division of Transportation and visual inspection

Figure 3 – Existing Land Use – Study Area Corridor

Health

The Chinle Comprehensive Health Care Facility is located on N102. The hospital was opened in August 1983 and is a major employer in the Chinle area.



Chinle Comprehensive Health Care Facility

Public Facilities

There are tribal, state, and federal government offices in Chinle along US 191 and N7. These uses are primarily office space. The Chapter House in Many Farms is located on N59 and the Chinle Chapter House is located on N7.

Grazing

The Navajo Nation practices open grazing of cattle, horses, and sheep in Chinle and Many Farms. There are animals along US 191 that sometimes graze into the right of way causing traffic accidents.

Agriculture

The Chinle and Many Farms Valley has been historically agricultural since 1937 when the reservoir dam for irrigation was constructed at Many Farms Lake. The Chinle Wash also conveys irrigation water for crops along the east side of US 191.

Recreation

Many Farms Lake is one of the largest lakes within the Navajo Nation. The lake is located east of US 191 and is a resource for fishing and hiking. Canyon De Chelly National Monument is a major tourism destination and recreation activities include scenic drives, hikes, ranger-led programs, canyon tours, and camping.

2.3.2 Future Land Use

Goals for future transportation, safety, tourism, and development from the *Chinle Chapter Economic Development Land Use and Strategic Plan* and *Many Farms Chapter Community Based Land Use Plan* are summarized in **Table 1**.

Chapter capital improvement projects were obtained from the Navajo Division of Community Development and are summarized in **Table 2**. These include development of a community and veterans cemetery in Chinle and a new Chapter House in Many

Farms. Other projects include a power line construction project in Chinle and a construction project on County Road C566 in Many Farms.

Table 1 – Land Use Issues, Goals and Objectives for Chinle and Many Farms Chapters

Issue	Goal	Objectives
Chinle Chapter		
Infrastructure	Provide adequate infrastructure to accommodate and stimulate economic growth	<ul style="list-style-type: none"> • Study and develop a street grid system that also incorporates development and expansion of infrastructure • Develop standards for building and expanding infrastructure • Identify a location for and develop a waste treatment facility • Enhance communications (land lines, cell towers, and internet capabilities) • Explore getting business sites “infrastructure ready” to attract businesses • Seek funding for infrastructure development
Business Development	Encourage and nurture startup businesses, business growth and business retention and expansion	<ul style="list-style-type: none"> • Provide access to resources that will help those who wish to develop and /or grow their businesses • Support current business activities that are compatible with existing uses in the community and that produce income and or contribute to the economy • Encourage and support family businesses • Support the sheep and livestock business • Encourage and support entrepreneurship
Commercial Development	Create a diverse business environment that provides commerce for the local community, region and visitors	<ul style="list-style-type: none"> • Support the development of retail businesses • Support regional commercial development • Create a historic business district at the old BIA compound complete with walking trails and vendor village • Support the development of a professional office park • Support the development of a medical office park • Develop an entertainment corridor • Support the development of a business district near the airport and provide a link to the town of Chinle • Enhance the UPS and/or FEDEX service

Issue	Goal	Objectives
Industrial development	Encourage industrial development that supports sound development of local resources while reducing the impact on the environment	<ul style="list-style-type: none"> Analyze the economic, social and environmental impacts of a trash facility. Analyze the economic, social and environmental impacts of a waste treatment facility.
Tourism Development	Sustain and enhance the economic utilization of Chinle's natural resources for tourism development	<ul style="list-style-type: none"> Explore and develop innovative tourist activities that preserve and enhance the unique qualities of the community Support the development of businesses that offer services to tourists and encourage businesses to be environmentally friendly (e.g. bed and breakfast near Spider Rock, restaurant overlooking Chinle and /or Canyon De Chelly, KOA campground)
Many Farms Chapter		
Transportation	Provide a safer transportation system	<ul style="list-style-type: none"> Provide better roads (improve dirt and paved roads) Provide better pedestrian connections including all weather access routes and sidewalks Provide public transportation for senior citizens Encourage ADOT to prioritize the expansion of US 191 and participate in long range planning Explore creating a frontage road for US 191
Safety	Have a safe community	<ul style="list-style-type: none"> Develop emergency response capabilities (police, fire station, EMS) Develop better traffic controls, especially near schools Get large animals out of right-of-way Develop a night watch program that includes a reward system
Tourism	Create Tourist Opportunities	<ul style="list-style-type: none"> Use location as a base for tourists to visit Canyon De Chelly, Monument Valley and Mesa Verde Develop a cultural center Develop motel and RV parks Provide horseback riding facility for tourists Develop an Indian Market with arts and crafts (pavilion for local artisans)

Issue	Goal	Objectives
Commercial/ Economic Development	Create more commercial development to provide employment opportunities and support economic development	<ul style="list-style-type: none"> • Develop businesses that provide needed services for the community • Provide a paved flea market • Develop office space that can be rented • Provide casino if possible
Industrial Development	Expand employment opportunities through industrial development	<ul style="list-style-type: none"> • Encourage industrial development such as sewing factories or computer parts assembly
Recreation	Expand recreational opportunities for community members and tourists	<ul style="list-style-type: none"> • Develop more recreational uses of Many Farms Lake • Create a golf course • Create a recreation center / multipurpose building • Develop a park for four-wheelers

Sources: Chinle Chapter Economic Development Land Use and Strategic Plan, October 2006 and Many Farms Chapter Community-Based Land Use Plan, September 2004

There are eight sites within the study area corridor designated for economic development in Chinle, they are:

1. Old Town Business District, commercial and tourism development site – located north of N7 less than one mile west of the entrance to Canyon De Chelly.
2. Davis Development, Inc., commercial and tourism development site – located on the west side of US 191 immediately north of the Tsegi Shopping Center.
3. Chinle Fairgrounds Business Center, commercial and tourism development site – located adjacent to the east side of N102 less than one mile southeast of the hospital.
4. Canyon De Chelly Gateway Park, tourism development site – this site is located at the entrance to and within the Canyon De Chelly National Monument just east of the Holiday Inn, immediately north of N7.
5. Chinle Office and Commercial Park, commercial and industrial development site – this site is located at the northeast corner of US 191 and N7.
6. Upper Red Clay Basin, commercial and tourism development site – this site is approximately one-half mile west of the Chinle Chapter House just south of N7.
7. Canyon De Chelly Commercial Corridor, commercial and tourism development site – This corridor is located along N7 along the south rim of Canyon De Chelly.

8. Airport Business Corridor, commercial and tourism development site – this site is located at the southern entrance to Chinle adjacent to US 191, on the east side of the street.

The *Chinle Economic Development Land Use and Strategic Plan* points to the significance of US 191, N7, N102, and N8094 to future development, and the importance of transportation to serve all road users on these routes.

Within the study area corridor, there were three sites in Many Farms proposed for future residential development, which are:

1. Carson Mesa proposed housing site – 14 home sites are proposed on both sides of N59. In addition to N59, unimproved dirt roads serve this area. As site plans are developed, road improvements to the access roads would need to be implemented.
2. Proposed housing subdivision, Central Many Farms – This housing site is located near the northwest corner of N59 and US 191. From N59, there is an east-west unimproved dirt road that accesses the site. There is also a road connection from the West Mesa subdivision to the west. As site plans are developed, road improvements to the access roads would need to be implemented.
3. Proposed Community Facilities, Chapter House Compound – Additional community facilities are proposed at the Chapter House compound, located near the southwest corner of N59 and US 191.

The *Many Farms Community Based Land Use Plan* indicates that N59 is and will continue to be an important route serving the community.

Table 2 – Chapter Capital Improvement Projects

Con- struc- tion Year	Chapter	Project Title	Cate- gory	Funding Sources	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)	2017 (\$000)	Total (\$000)	Project Location	Route	Mile- post
2012	Chinle	Planning, Design, Construction Community / Veterans Cemetery	Real Estate - Block	General Funds Chapter CIP Funds	24	0	0	0	0	0	24	South of Chinle Airport; 1.1 miles northeast of US 191	US 191	443.0 5
2012	Chinle	Planning, Design, Construction Porcupine Ridge Power line	Utilities- Power - Linear	CDBG NTUA	412	0	0	0	0	0	412	About 6 miles west of Chinle Hospital	N8090	9
2013	Many Farms	New Chapter House	Building- Commun- ity	N/A	400	400	0	0	0	0	800	Southwest of Junction of US 191 and N59	N59	0.15
N/A*	Many Farms	C566 Apache County Road	Transpor- tation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0	Starts at MP 1.05 of N8086; runs north of Many Farms Lake; and ends at MP 4.85 of N8084	N8084 and N8086	

*N/A = Not Available

Source: Navajo Division of Community Development, WIND System, Project Authorizations for Chinle and Many Farms Chapter,
<http://wind.enavajo.org/PublicRecords.aspx>, accessed 7/26/2011

2.4 Demographics and Socioeconomic

An analysis of population and economic data for both the Chinle and Many Farms Chapters was conducted and is summarized below.

2.4.1 Population and Employment

Population data was obtained from the 2000 and 2010 United States Census. The population estimates are summarized in **Table 3**. The census data was obtained for the Chinle and Many Farms Census Designated Places (CDP). CDPs are defined as closely settled, named, unincorporated communities that generally contain a mixture of residential, commercial, and retail areas similar to those found in incorporated places of similar sizes. The Census Bureau works with local areas to delineate boundaries for CDPs.

Table 3 – Current Study Area Population

Area	2000 Population	2010 Population	% Change in Annual Growth
Chinle	5,568	4,518	-2%
Many Farms	1,617	1,348	-2%
Total	7,185	5,866	-2%

Sources: 2000 Census: Profile of General Demographic Characteristics (SF4), 2010 Census: Profile of General Population and Housing Characteristics (2010 Demographic Profile Data)

As shown in **Table 3**, there is a 2% rate of decline in population between 2000 and 2010, with a total population of 7,185 in 2000 and 5,866 in 2010.

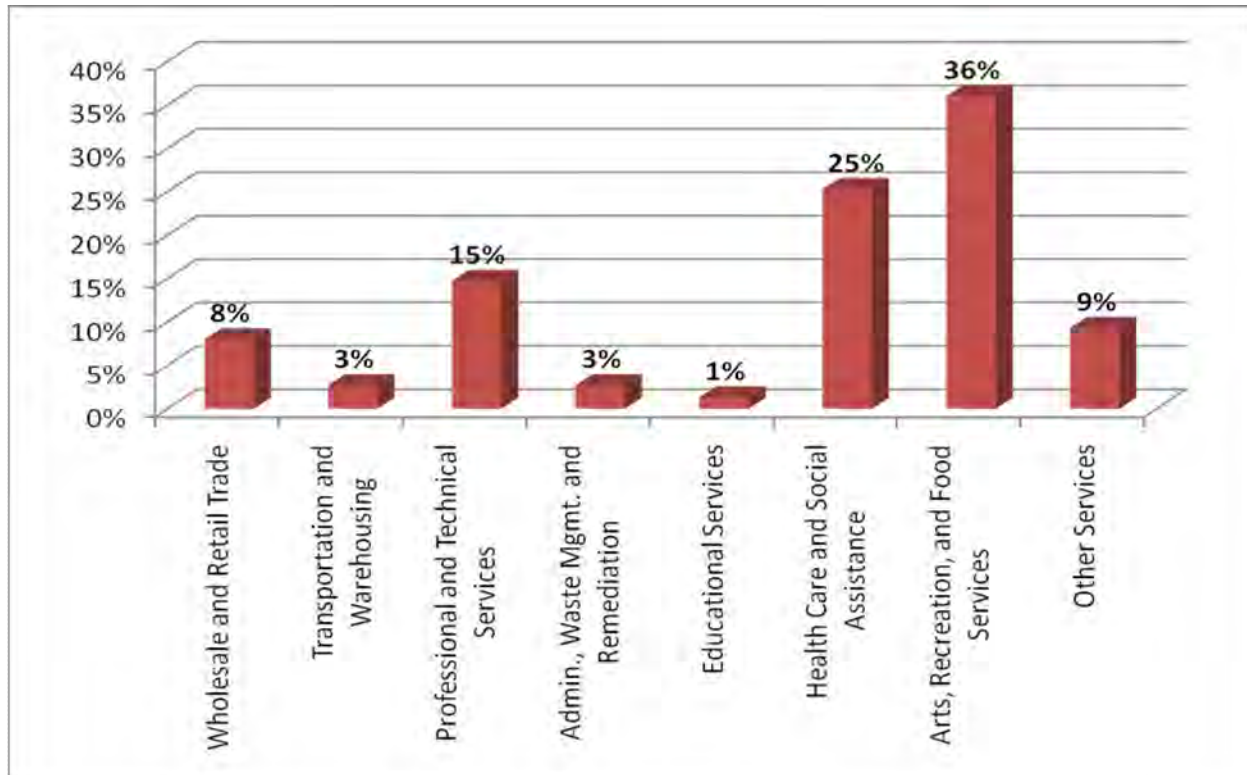


Coca-Cola Bottling Plant in Chinle

2.4.2 Major Employers

Employment data was obtained from the 2010 United States Census Longitudinal Employer-Household Dynamics (<http://lehdmapp.did.census.gov/>). **Figure 4** provides a breakdown of the different types of employment within the Chinle-Many Farms areas. **Table 4** provides the names of major employers in the area and number of employees, where available.

Figure 4 – Study Area Employment



Source: 2010 United States Census Longitudinal Employer-Household Dynamics (<http://lehdmap.did.census.gov/>)

Table 4 – Employers

Public Employers	How Many Persons are Employed?
Public Education	527
Bureau of Indian Affairs (BIA)	150
National Park Service	29
Navajo Nation	600
Coca-Cola Bottling	N/A
Navajo Tribal Utility Authority (NTUA)	44
Police and Fire	N/A
Private Employers	
Healthcare	N/A
Various Commercial Businesses	155 (Tsegi Shopping Center)

Source: 2010 United States Census Longitudinal Employer-Household Dynamics (<http://lehdmap.did.census.gov/>) and ArcGIS land use shapefile data

Source of employee data is Chinle Chapter website, <http://chinle.nndes.org/content.asp?CustComKey=69532&CategoryKey=69533&pn=Newsletter&DomName=chinle.nndes.org>

2.4.3 Tourism

The corridor study area is home to the Canyon De Chelly National Monument, which attracts hundreds of thousands of visitors each year. It is the fourth most visited park in Arizona, after the Grand Canyon, Glen Canyon National Recreation Area, and Lake Mead. Annual recreational visitors to Canyon De Chelly are summarized in **Table 5**. Another tourism resource is Many Farms Lake, which attracts outdoor enthusiasts. No tourism statistics are available for Many Farms Lake.



Entrance to Canyon De Chelly National Monument Visitor Center

Table 5 – Recreational Visitors to Canyon De Chelly National Monument

Year	Recreational Visitors
2000	848,348
2001	833,202
2002	772,620
2003	866,498
2004	936,007
2005	830,253
2006	826,635
2007	825,320
2008	835,860
2009	826,425
2010	827,247
2011 (January- April 2011)	235,778

Source: <http://www.nature.nps.gov/stats/park.cfm>

2.4.4 Transportation Modes

Data on types of transportation that workers are using in the Chinle and Many Farms areas were obtained from the 2000 Census Journey to Work Data. This data reflects how workers 16 years of age and older are traveling to work. **Table 6** summarizes this information and shows how the modes of travel compare to the state as a whole. The data shows that there are a higher percentage of walkers in both the Chinle and Many Farms area compared to the state of Arizona as a whole. There is a lower percentage of bicycle and transit usage compared to the state of Arizona as a whole.

Table 6 – Mode of Transportation for Workers 16 years and over

Mode of Transportation	Arizona	Chinle	Many Farms
Percent of Workers 16 and over			
Autos	89.5	77.9	91.2
Public Transportation	1.9	0.5	0.0
Bicycle	1.0	0.0	0.0
Walk	2.6	19.2	8.8

Source: 2000 Census, QT-P23: Journey to Work Data

Conversation with Chinle Chapter representatives indicated that there are workers from other surrounding areas, such as Ganado, that commute to Chinle for work.

2.4.5 Title VI Populations and Environmental Justice

Transportation projects that utilize United States federal aid are required to certify non-discrimination under the requirements of Title VI of the Civil Rights Act of 1964. Also, in 1997, the U.S. Department of Transportation issued the DOT Order to Address Environmental Justice in Minority Populations and Low-Income

Looking at the effects of new projects on minority populations will ensure that no discrimination occurs.

Populations to summarize and expand upon the requirements of Executive Order 12898 on Environmental Justice. In accordance with the intent of these federal requirements, analysis was completed to identify impacted populations within the study area and any affects to those populations by proposed transportation improvements.

According to the 2010 U.S. Census, the racial composition of both the Chinle and Many Farms areas is predominantly Native American as shown in **Table 7**.

Table 7 – Racial Demographic Percentages

Area	White Not Hispanic	African American	Native American	Asian	Native Hawaiian	Other	Two or More Races	Hispanic or Latino
Chinle	6%	0%	90%	0%	0%	0%	1%	3%
Many Farms	4%	0%	93%	0%	0%	0%	2%	1%

Source: 2010 Census DP-1

The Executive Order also requires the consideration of persons older than 60 years of age. According to the 2010 U.S. Census, approximately 11 percent of the population in Chinle and Many Farms combined is 60 years or older. Title VI population data for the year 2010 for both Chinle and Many Farms is shown in **Table 8**.

Table 8 – 2000 Title VI Population Percentages

Population Category	Chinle	Many Farms	Average
Females	53.3%	52.4%	52.9%
Males	46.7%	47.6%	47.2%
Minority Races	94.3%	96.1%	95.2%
Persons over age 60	10.7%	11.7%	11.2%

Source: 2010 Census DP-1

2.4.5.1 Study Recommendation Implications

Since the study area is entirely situated within Navajo lands, all areas have high percentages of impacted populations. Therefore, the transportation improvement projects recommended through this study may differentially affect community members of the Navajo Nation.

Appendix A, Title VI and Environmental Justice: Preliminary Assessment, identifies the recommended projects and provides an initial assessment of the potential effects, both positive and negative, that these projects may have on the community members. As the recommended projects are implemented, additional efforts will be conducted in order to identify activities that can avoid, minimize, or mitigate the impacts.

For this study, consideration was given to the Title VI and Environmental Justice factors to ensure that impacted populations were included in the study public participation process. Efforts were made to reach minority and low-income populations when advertising this study's public involvement meetings, which included two public meetings in the Chinle and Many Farms areas. Public outreach efforts are summarized in **Appendix B, Public Involvement Summary Report 1** and **Appendix C, Public Involvement Summary Report 2**.

3 TRAFFIC AND ROADWAY ASSESSMENT

This chapter presents data on current and future transportation conditions to identify needs and deficiencies of the transportation system.

3.1 *Summary of Completed Plans and Studies*

Several plans and studies that addressed transportation were reviewed in the preparation of this study. The documents are listed below.

ADOT Studies and Plans

- Arizona Bicycle Safety Plan
- Arizona Pedestrian Safety Plan
- Arizona Bicycle and Pedestrian Plan
- Arizona Rural Transit Needs Study
- Navajo Transit System Five Year Plan
- US 191 Corridor Profile Study
- State Transportation Improvement Plan

Area Transportation Plans and Studies

- Chinle Street Plan
- Chinle Chapter Economic Development Land Use and Strategic Plan
- 2009 Navajo Nation Long Range Transportation Plan
- Navajo Transit System Long Range Plan
- Many Farms Chapter Community Based Land Use Plan

Land Use and Economic Development Plans

- 2009-2010 Comprehensive Economic Development Strategy - the Navajo Nation

3.2 Summary of Stakeholder Interviews

Interviews with stakeholders were held to obtain information on transportation needs.

Stakeholders are defined as persons whose jobs involve the transportation system. These persons have knowledge of the transportation system gained from on the job experience, knowledge, and expertise. Input from these stakeholders carries more weight for this reason.

A summary of comments appears in **Table 9**. Interviews were completed with representatives of:

- Many Farms Chapter House
- Chinle Chapter House
- Chinle Unified School District Transportation Department
- BIA Maintenance
- ADOT Holbrook District
- Navajo Division of Transportation
- Navajo Transit System
- Navajo Division of Economic Development
- National Park Service
- Chinle Police District

Stakeholders include staff and representatives of:

- Chapter Houses
- Navajo DOT
- Bureau of Indian Affairs
- ADOT District
- School Districts
- National Park Service
- Navajo Transit System
- Police Department

Table 9 – Comments Received from Stakeholder Interviews

	Comment Summary		
Comment Category	Chinle Area	Many Farms Area	Study Area Corridor
Airport access	<ul style="list-style-type: none"> ▪ Provide pavement striping on section of N8094. ▪ Provide a pedestrian crossing sign where the trail crosses N8094. • Provide signal at the intersection of US 191 / N8094 if warranted. • Perimeter fencing along the road and around the airport. Animal crossings can be a problem. 		<ul style="list-style-type: none"> • Improved snow removal needed.
Animals on Roads	<ul style="list-style-type: none"> • Sand and tumbleweeds build up on the US 191 right-of-way fencing, allowing animals into the right-of-way. There is a need to back fence the area. • A fencing and cattle guard replacement project on US 191 will start soon. The old cattle guards were hard to clean. 		
Emergency Access	<ul style="list-style-type: none"> • There are emergency access concerns in the area - ADOT encourages use of local routes 		
New Pedestrian and Equestrian trails	<ul style="list-style-type: none"> • Provide equestrian trails in the Chinle area, particularly north of N7, and east of US 191. 	<ul style="list-style-type: none"> • Provide trails to Many Farms Lake. 	
	<ul style="list-style-type: none"> • Provide walking trail between Canyon De Chelly Visitor Center, Thunderbird Lodge, and Holiday Inn. 	<ul style="list-style-type: none"> • Provide trail at foot of the hill west of Many Farms High School. 	

Table 9 – Comments Received from Stakeholder Interviews (continued)

Comment Category	Comment Summary		
	Chinle Area	Many Farms Area	Study Area Corridor
Drainage and Flooding Issues	<ul style="list-style-type: none"> N8087- fix low water crossing. US 191 from Elementary School to Basha's 		<ul style="list-style-type: none"> US 191 acts like a dam, and there are flooding issues – BIA is planning a drainage study and ADOT will act as a partner.
			<ul style="list-style-type: none"> During monsoon season wash crossing can be impassible.
Frontage Roads		<ul style="list-style-type: none"> Provide a system of frontage roads in the Many Farms area. 	<ul style="list-style-type: none"> ADOT supports frontage roads, but not new access points to the right-of-way.
Intersection Needs	<ul style="list-style-type: none"> Provide turn lanes on US 191 near milepost 449 and milepost 450. 		
Street Lighting	<ul style="list-style-type: none"> Provide lighting on N7, either on one or both sides of the street. 	Provide street lighting between the Many Farms Public School and the High School turnoff	
Maintenance Issues	<ul style="list-style-type: none"> Sand and tumbleweeds encroach on the right-of-way fence. Funding has been cut for maintenance on BIA roads, resulting in a lack of funding to keep up with maintenance needs. Secondary roads are all dirt and are not always maintained. 		
New Road Connections		<ul style="list-style-type: none"> Provide new roads (and trails) to Many Farms Lake. Provide new frontage road connections. 	
New Developments	<ul style="list-style-type: none"> Make the Old Flea Market a permanent site. 	<ul style="list-style-type: none"> New commercial development is desired in the Many Farms area. 	
	<ul style="list-style-type: none"> Possible plan for Navajo Nation Shopping Center – 10-acre site along US 191. 	<ul style="list-style-type: none"> Development to support tourism and improve economic development. 	

Table 9 – Comments Received from Stakeholder Interviews (continued)

Comment Category	Comment Summary		
	Chinle Area	Many Farms Area	Study Area Corridor
Paving	<ul style="list-style-type: none"> • Pave N27. School District has been asking for paving on N27 for over 30 years. 	<ul style="list-style-type: none"> • In Many Farms, paving or resurfacing was requested on N59, N8086, N8084, N8085, and Lake View Road. 	
	<ul style="list-style-type: none"> • Gravel N27 by the Rodeo Grounds. • In Chinle, paving or re-surfacing was requested on N102, N8091, N27, N8086, N8094, N8095, and N8096. 		
Pedestrian Issues	<ul style="list-style-type: none"> • Use Safe Routes to School program to provide for sidewalks at Sunset Housing. • Provide flashing device for the school crosswalks. • Pedestrian crossings are needed on US 191 near the schools/ connect residential areas to schools. • Provide sidewalks to complete missing links of sidewalks between Canyon De Chelly and the Holiday Inn. 	<ul style="list-style-type: none"> • Provide a pedestrian overpass to Many Farms Public School. • Provide pedestrian trails to Many Farms Lake. 	

Table 9 – Comments Received from Stakeholder Interviews (continued)

Comment Category	Comment Summary		
	Chinle Area	Many Farms Area	Study Area Corridor
Road Widening	<ul style="list-style-type: none"> Pedestrian crossings are needed on N7 near US 191. Provide pedestrian trails to the Canyon De Chelly Visitor Center / Thunderbird Lodge/Holiday Inn. A pedestrian crossing is needed in front of Bashas in Chinle. 		
	<ul style="list-style-type: none"> Widen US 191 between Chinle and Many Farms. US 191 is congested during rush hour times and there are rear end and head on accidents. 		
Safety of People and Property	<ul style="list-style-type: none"> N102 (road to Chinle Hospital) is congested during the morning peak hour. Signal planned at US 191 /N102 should improve congestion. 		
	<ul style="list-style-type: none"> Request DPS to patrol more during bus run periods. 	<ul style="list-style-type: none"> Reduce speeds on US 191 through town. 	<ul style="list-style-type: none"> Provide speed monitors on US 191. Provide more patrols on this route. The Chinle Police requests more radar, traffic monitors, and speed monitors.
	<ul style="list-style-type: none"> N102 needs more speed limit signs. 		<ul style="list-style-type: none"> Reduce the speed limit on US 191 between Chinle and Many Farms.
School Bus Route Transportation Issues			<ul style="list-style-type: none"> More highway patrol officers are needed
	<ul style="list-style-type: none"> School bus pullouts are needed between Chinle and Many Farms. 		
	<ul style="list-style-type: none"> Widen the turnoff or entrance to the Chinle Junior High School. 	<ul style="list-style-type: none"> A pedestrian overpass is needed on US 191 near Many Farms Public School. 	<ul style="list-style-type: none"> By law, a bus has to pull off the road when five or more vehicles are following. Between Chinle and Many Farms this is difficult.
	<ul style="list-style-type: none"> Provide signage to warn drivers to stop when a school bus has its lights flashing. 		

Table 9 – Comments Received from Stakeholder Interviews (continued)

Comment Category	Comment Summary		
	Chinle Area	Many Farms Area	Study Area Corridor
Signage	<ul style="list-style-type: none"> Speed limit signs on road to Chinle Airport (N8094). 	<ul style="list-style-type: none"> Provide more destination signage to the airport, chapter house, public services, and tourism destinations. 	<ul style="list-style-type: none"> Provide more advance school bus stop signage on US 191.
	<ul style="list-style-type: none"> Provide signage to discourage drivers from passing a school bus when it has its lights flashing. 	<ul style="list-style-type: none"> Provide signage to discourage drivers from passing a school bus when it has its lights flashing. 	<ul style="list-style-type: none"> Replacement program for the signage, because graffiti and bullets through the signs are a big problem.
Signage, Continued	<ul style="list-style-type: none"> There should be warning signs regarding animal crossings on N 8094 (road to airport). 		<ul style="list-style-type: none"> Provide more destination signage to the airport, chapter house, public services, and tourism destinations.
Traffic Signal Installation	<ul style="list-style-type: none"> Provide a flashing signal at the airport turnoff, if warranted. A new traffic signal is planned at the intersection of US 191 and N102 to provide better access to the Chinle Hospital. 	<ul style="list-style-type: none"> Provide a traffic signal at the intersection of US 191 and N59 	
Transit	<ul style="list-style-type: none"> Navajo Transit System (NTS) indicated a desire to try local transit service again in the Chinle and Many Farms area. NTS has a plan of bus stop locations and transit center location. 		
Other Comments	<ul style="list-style-type: none"> There is a need for “Main Street” type improvements, such as sidewalks and bike paths. 		<ul style="list-style-type: none"> N64 is a good route and is paved.
	<ul style="list-style-type: none"> There are a number of commuters from other areas, e.g. Many Farms, Nazlini, Ganado, Tsaile, that travel to Chinle to work. 		<ul style="list-style-type: none"> There is lots of traffic at the Friday Flea Market in Chinle. Turnouts to streets are narrow in general.

3.3 Street Inventory – Indian Reservation Road Program

The Indian Reservation Road (IRR) Program Road Inventory is a basic requirement for transportation funding through the BIA IRR Program. The BIA IRR Inventory is vital since it is used in determining each BIA Region's road funding.

The Navajo Division of Transportation maintains a comprehensive database of all transportation facilities eligible for IRR funding. The inventory is approved by both the BIA and the Navajo Nation.

The BIA IRR Inventory or Road Inventory Field Data System (RIFDS) includes information such as route number, location length, width, surface type and needs, pavement ratings, class of road, adequacy of design standard, construction needs, and maintenance needs.

The following sections provide a brief overview of the BIA IRR Inventory data, including information about characteristics and needs of the roadway system in the study area corridor. Roads in the Inventory are divided into numbered sections, which are also shown graphically in **Appendix D**.

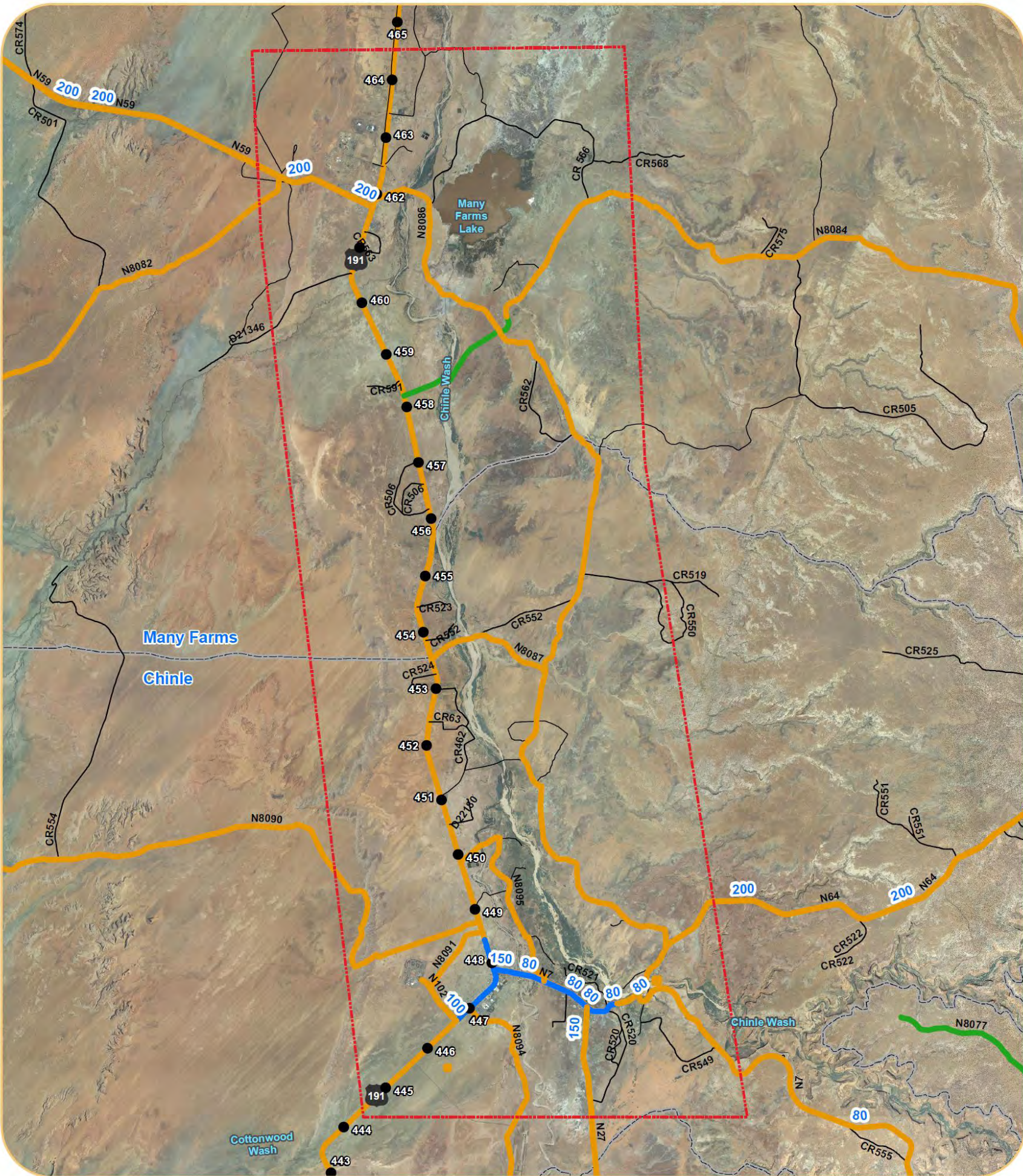
3.3.1 Laneage and Right-of-Way

In general, roads in the Chinle and Many Farms study area are two-lane roadways with the exception of sections of US 191 and N7. US 191 has a five-lane section consisting of four through lanes (two in each direction) and a center turn lane from approximately Milepost 447 to Milepost 448. A state project is planned in 2013 to extend the US 191 five-lane section south to N102 and install a traffic signal at the intersection of US 191 and N102.

Laneage and right-of-way widths (where available) are shown on **Figure 5**.

CHINLE-MANY FARMS

Laneage and Right-of-Way Width



Legend

- Tribal/County Roads
- Study Area
- Mileposts
- Chapter Boundary

BIA Road and State Highway Laneage

- 1 Lane
- 2 Lanes
- 4 Lanes
- Right-of-Way Width (Feet)

Note:
CR = County Route
N = Navajo (BIA) Route

0 0.5 1 2 Miles

Source: BIA IRR Inventory, 2010

Figure 5 – Laneage and Right of Way

3.3.2 Roadway Surface Type

The IRR Inventory categorizes roads in the study area corridor as four types:

- Bituminous Material (<2" thick)
- Bituminous Material (>=2" thick)
- Earth Road
- Proposed Roads - Not Open to Traffic

Figure 6 shows the pavement surface for roads in the IRR Inventory in the study area corridor. Paved roads are provided on N7, N59, N102, N64, part of N27, and US 191.

3.3.3 Shoulder Condition

Shoulder conditions are shown in **Figure 7**. Shoulder conditions include whether the roads have no shoulders, paved shoulders, or curb. Paved shoulders are provided on US 191, N59, and segments of N64 and N102. Curbed areas are located on segments of N7 and N27.

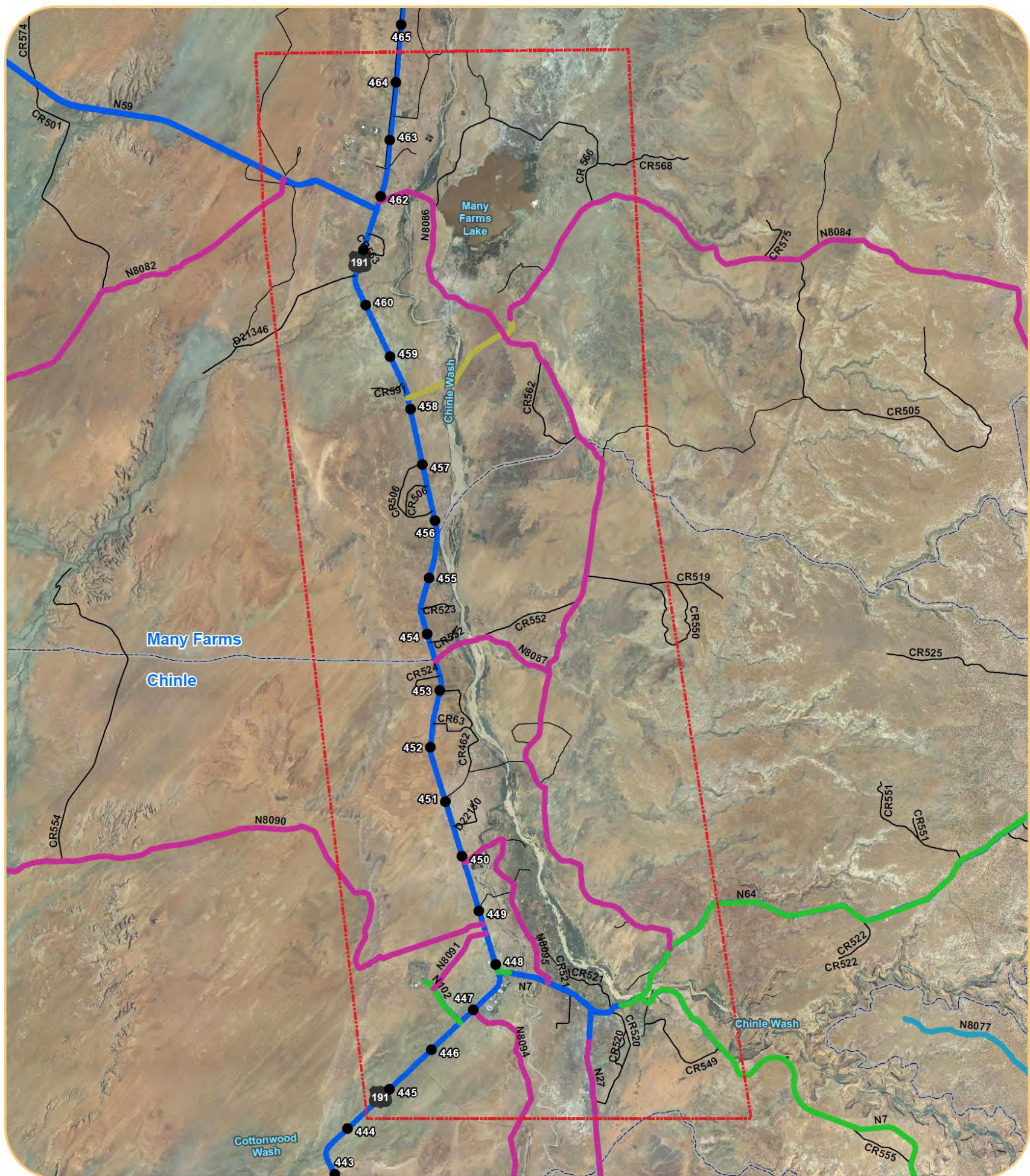
3.4 Roadway Deficiency Information in the Indian Reservation Road Program Inventory

The IRR Program has a number of categories that provide information on roadway deficiencies. These categories are:




Passing Sight Deficiencies – This category represents the percent (by length) of the section being inventoried that meets the passing sight distance requirements set out in the assigned BIA design standard. Each roadway section is categorized by a percentage range that meets or exceeds requirements.

In this study, roads with a small percent (lower than 50%) that met passing sight distance was reviewed with respect to crash history to determine if a passing section was justified. This involved determining if there was a history of head-on collisions. Eight BIA roads were examined, as summarized in **Table 10**. These road segments are shown in **Figure 8**. The results of the crash data review showed that there was not a history of head-on collisions at any of the locations.






Roadway Surface Type



Legend

- Tribal/County Roads
-  Study Area
-  Mileposts
-  Chapter Boundary

BIA Road and State Highway Surface Type

-  Proposed Roads Not Open to Traffic
-  Earth Road
-  Bituminous Material (<2" Thick)
-  Bituminous Material (>=2" Thick)
-  Primitive Two Track Jeep or Wagon Trail

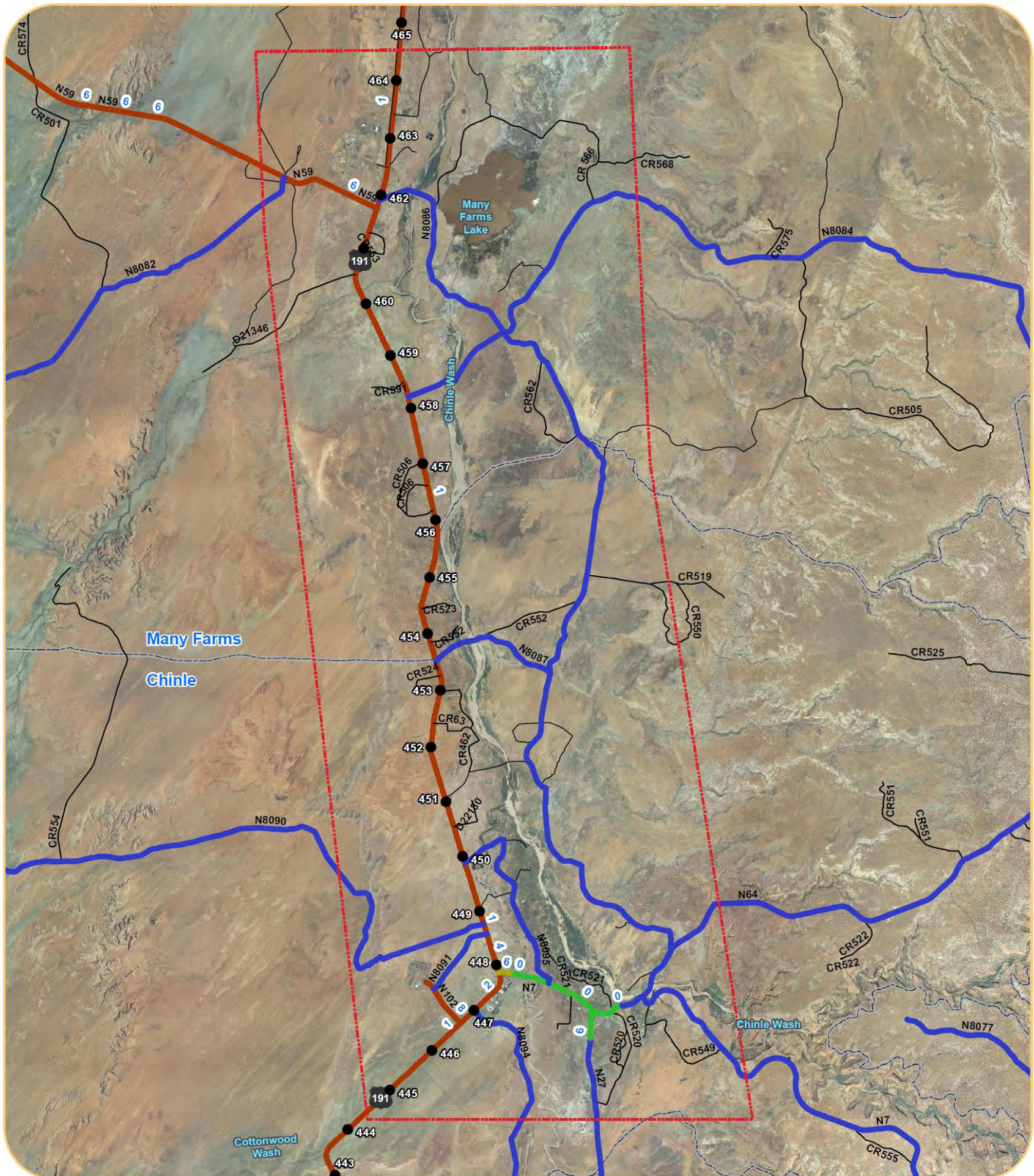
Note:
CR = County Route
N = Navajo (BIA) Route





Source: BIA IRR Inventory 2010

Figure 6 – Pavement Surface

Shoulder Type and Width



Legend

- Tribal/County Roads
 Study Area
 Mileposts
 Chapter Boundary

BIA Roads and State Highways Shoulder Type

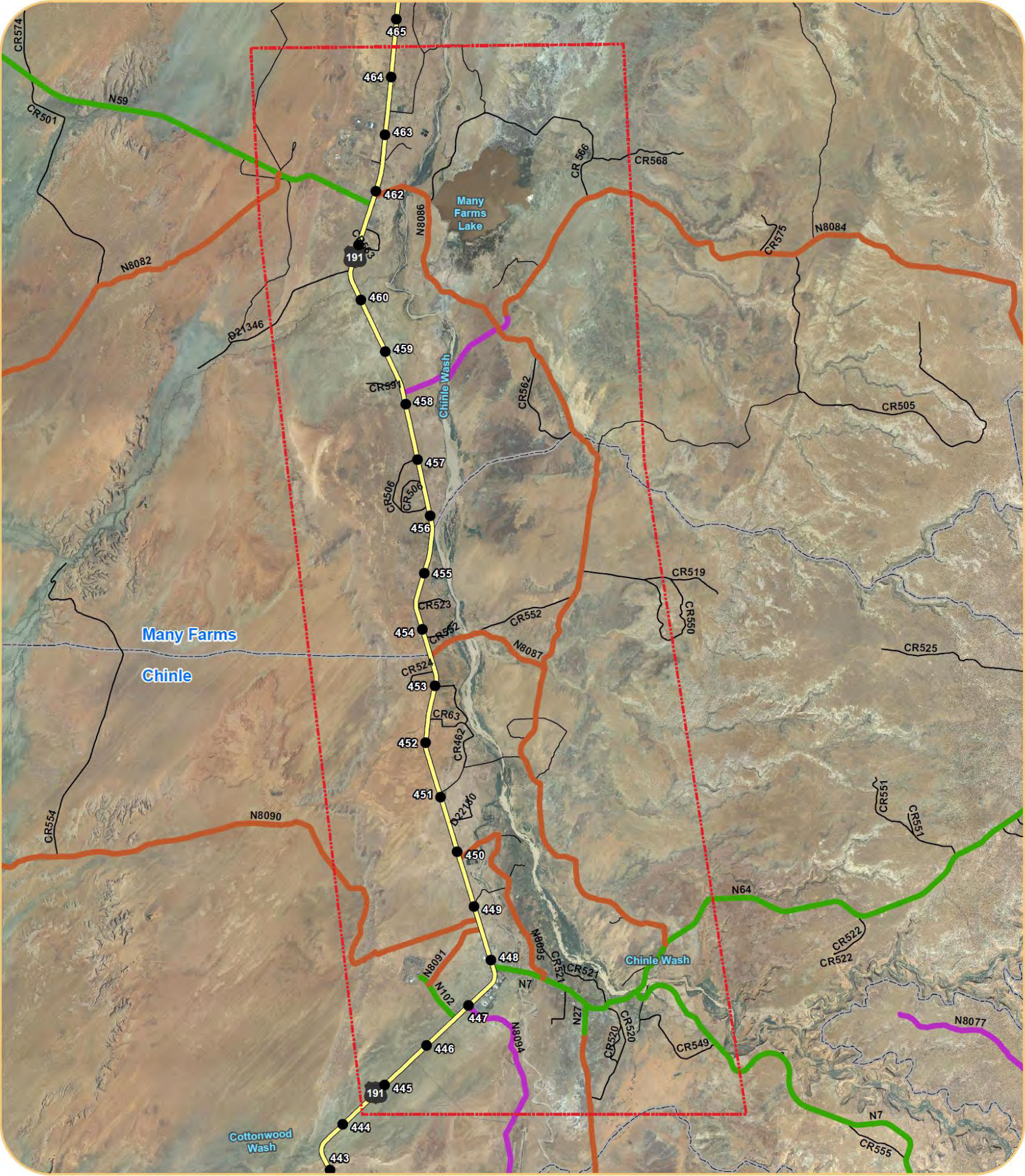
-  No Shoulder
-  Earth Shoulder
- Paved Shoulder
-  Curb (Urban Type)
-  ### Shoulder Width (Feet)

Note:
CR = County Route
N = Navajo (BIA) Route



Source: BIA IRR Inventory 2010

Figure 7 – Shoulder Type



Legend

- US and State Highways
- Tribal/County Roads
- Study Area
- Mileposts
- Chapter Boundary

BIA Roads Passing Sight Deficiency

% of Section Meets or Exceeds Requirements

- 0 - 9%
- 30 - 49%
- 90 - 100%

Note:
CR = County Route
N = Navajo (BIA) Route



0 0.5 1 2 Miles

Source: BIA IRR Inventory 2010

Figure 8 – Percent of Road Section Meeting Passing Sight Deficiencies

Table 10 – Road Sections with Passing Sight Deficiencies and Associated Head-on Collisions

Route	Sections	Percent Meeting Passing Sight Distance Requirements	Number of Head – on Collisions, 1997-2009
N27	183,186	30-49%	0
N8084	10,30,35	0-9%	0
N8084	40,60,66,80	30-49%	0
N8086	All	30-49%	0
N8087	10,30,34,36	30-49%	0
N8090	62	30-49%	0
N8090	66,80	30-49%	0
N8091	10,15	30-49%	0
N8094	23,26	0-9%	0
N8095	10,30,33,36	30-49%	0

Source: BIA IRR Inventory, 2010

Number of deficient curves – These data shows the number of curves with a degree of curvature that is sharper than allowed by BIA design standards. There were two locations in the study area which had deficient curves:

- N8090 – 14 deficient curves
- N8095 – 11 deficient curves

These areas are shown in **Figure 9**. In areas with curves sharper than allowable, it may be desirable to sign the curve at a lower speed, or place warning signs at the curves.

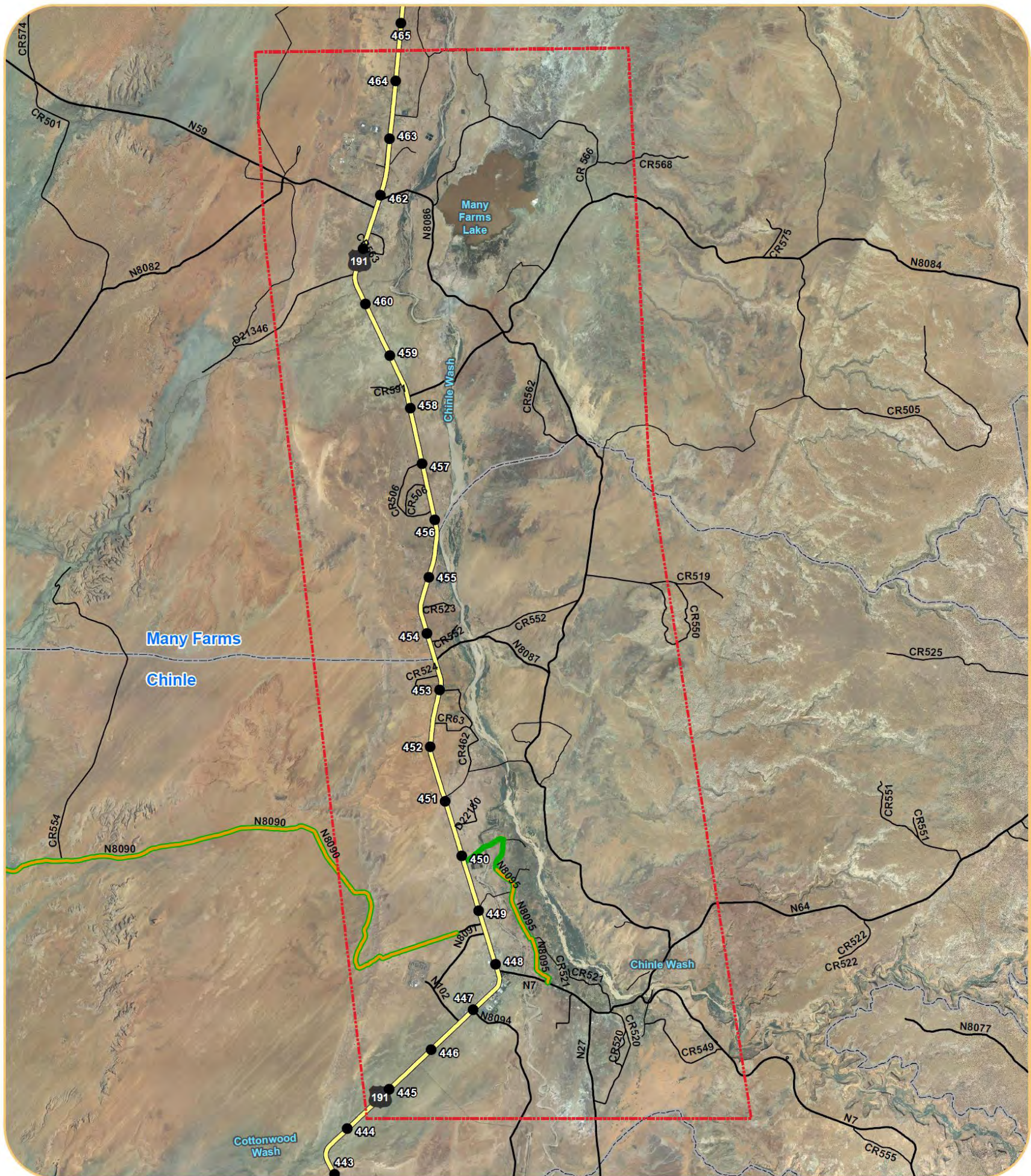
Numbers of stopping restrictions – These data are the actual number of instances where stopping sight distances, in the area being inventoried, are less than the minimums allowed under the BIA design standard. There were three locations which were inventoried as having less than minimum stopping sight distance:

- N8090 – Section 62– 16 locations
- N8095 – Section 33 – 5 locations
- N8095 – Section 36 – 8 locations

These segments are shown in **Figure 9**, which also shows areas with deficient curves. Both N8090 and N8095 had a very low incidence of reported crashes—N8095 had two crashes and N8090 had no reported crashes in the time period 1997-2009.

CHINLE-MANY FARMS

Roads with Deficient Curves and Stopping Restrictions



Legend

- US and State Highways
- BIA Roads
- Tribal/County Roads
- - - Study Area
- Mileposts
- Chapter Boundary
- BIA Roads with Deficient Curves
- BIA Roads with Stopping Sight Restrictions

Note:
CR = County Route
N = Navajo (BIA) Route



0 0.5 1 2 Miles

Source: BIA IRR Inventory 2010

Figure 9 – BIA Roads with Deficient Curves and Stopping Sight Restrictions

Roadbed Condition – These data describes the roadbed condition for the section of road being inventoried. Roads that were characterized as “bladed, unimproved road, poor drainage, poor alignment” were:

- N8086 – Sections 10,30,35,50
- N8087 – Sections 10,30,34,36
- N8095 – all sections

These areas are shown in **Figure 10**.

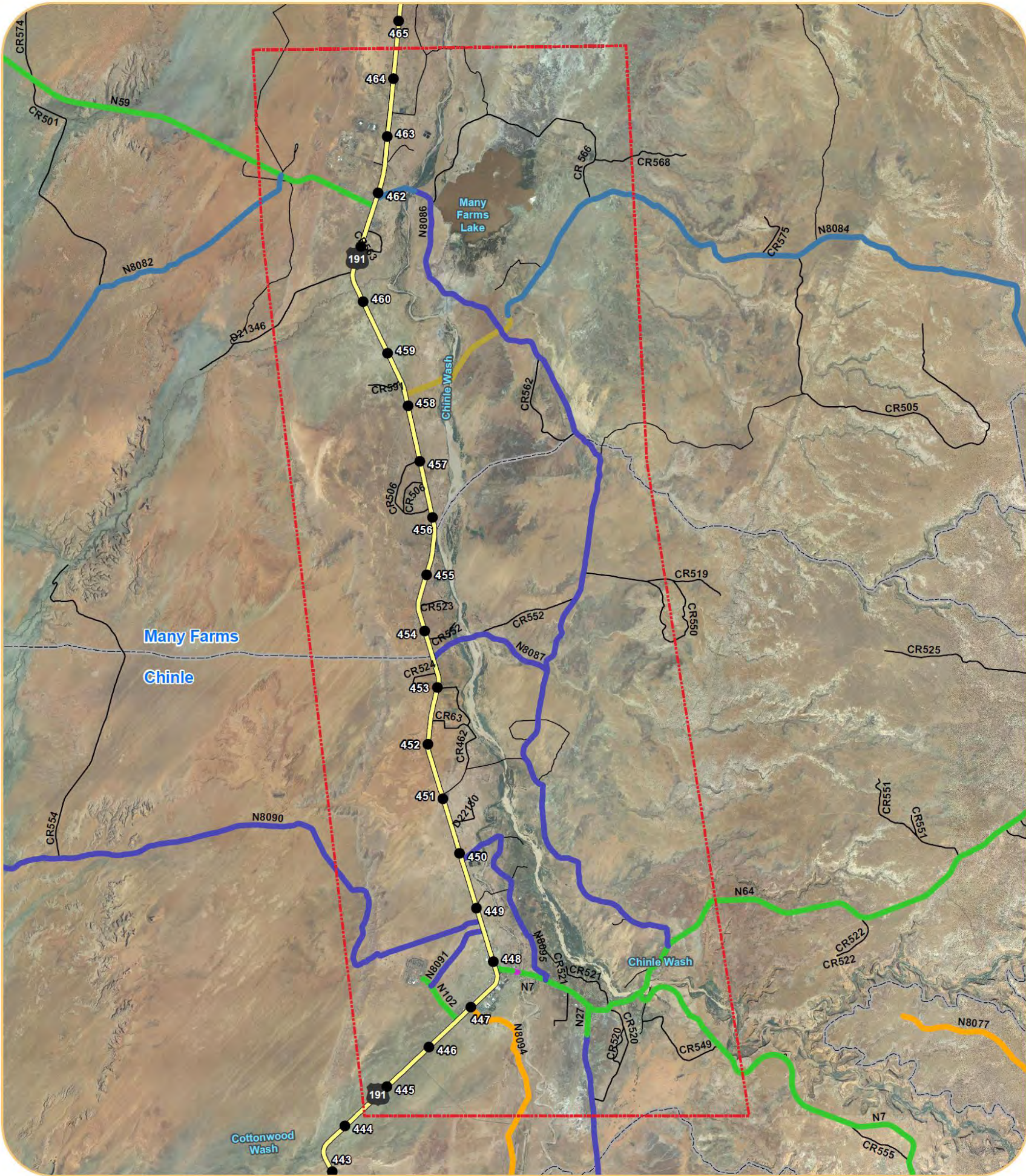
Highway Geometric Design Deficiencies - To meet the Navajo IRR program objectives, construction of roads, bridges, and other transportation facilities must be done to current acceptable BIA engineering standards for anticipated 20-year traffic volume.

Table 11 summarizes these standards.

A review of the BIA IRR Inventory data and projected traffic volumes indicates the geometric design deficiencies, as shown in **Table 12**. Many of the study area roads are in need of improvement in the areas of surface upgrades, shoulder widening or upgrades, or roadway widening to meet BIA design standards.

CHINLE-MANY FARMS

Roadbed Condition



Legend

- US and State Highways
- Tribal/County Roads
- Study Area
- Chapter Boundary
- Mileposts

BIA Road Roadbed Condition

- Proposed Road
- Primitive Trail
- Bladed Unimproved Road - Poor Drainage and Alignment
- Minimum Built-Up Roadbed with Inadequate Drainage and Alignment
- A Constructed Roadbed with Improvements Required
- A Roadbed Constructed to Adequate Standards

Note:
CR = County Route
N = Navajo (BIA) Route

0 0.5 1 2 Miles

Source: BIA IRR Inventory 2010

Figure 10 – Roadbed Condition

Table 11 – BIA Geometric Design Standards

Adequate Design Standard Number	Future ADT	Functional Classification	Needs Surface Upgrade	Needs Shoulder Widening	Needs Roadway Widening	Needs Shoulder Type Upgrade
1,2,3	N/A	1-Major Arterial	Surface Type<5	Shoulder Width<6 ft.	Roadway Width<66 ft.	Shoulder Type<3
4,5,6	>=400	2-Rural Minor Arterial	Surface Type<5	Shoulder Width<6 ft.	Roadway Width<36 ft.	Shoulder Type<3
7,8,9	<400	2-Rural Minor Arterial	Surface Type<4	Shoulder Width<4 ft.	Roadway Width<32 ft.	Shoulder Type<3
10,11,12	>=400 >250<400	4-Rural Major Collector	Surface Type<5 Surface Type<4	Shoulder Width<4 ft.	Roadway Width<32 ft.	Shoulder Type <3 for ADS10; <2 for ADS1 1; <1 for ADS1 2
	50-250	4-Rural Major Collector	Surface Type<3	Shoulder Width<4 ft.	Roadway Width<32 ft.	Shoulder Type <3 for ADS1 0; <2 for ADS1 1; <1 for ADS1 2
	<50	4-Rural Major Collector	Surface Type <1	Shoulder Width<4 ft.	Roadway Width<32 ft.	Shoulder Type <3 for ADS1 0; <2 for ADS1 1; <1 for ADS1 2
13,14,15	>400	5-Rural Local	Surface Type <4	Shoulder Width<2 ft.	Roadway Width<28 ft.	Shoulder Type <3 for ADS1 3; <2 for ADS1 4; <1 for ADS1 5;
	50-400	5-Rural Local	Surface Type <3	Shoulder Width<2 ft.	Roadway Width<28 ft.	Shoulder Type <3 for ADS1 3; <2 for ADS1 4; <1 for ADS1 5
	<50	5-Rural Local	Surface Type <1	Shoulder Width<2 ft.	Roadway Width<28 ft.	Shoulder Type <3 for ADS1 3; <2 for ADS1 4; <1 for ADS1 5

Table 11 – BIA Geometric Design Standards (continued)

Adequate Design Standard Number	Future ADT	Functional Classification	Needs Surface Upgrade	Needs Shoulder Widening	Needs Roadway Widening	Needs Shoulder Type Upgrade
16,17,18	>=400 >250<400	6-City Minor 7-City Collector 3-City Local	Surface Type <5 Surface Type <4	N/A	Roadway Width <50 for ADS 16, <(21-38) for ADS 17 or 18	N/A
	50-250	6-City Minor 7-City Collector 3-City Local	Surface Type <3	N/A	Roadway Width <50 for ADS 16, <(21-38) for ADS 17 or 18	N/A
	Under 50	6-City Minor 7-City Collector 3-City Local	Surface Type <1	N/A	Roadway Width <50 for ADS 16, <(21-38) for ADS 17 or 18	N/A

Source: 25 CFR Part 170, Table 1 – Adequate Standard Characteristics, 7/19/2004, page 43123.

Notes: Surface Type Codes: 6, 5, 4=Paved; 3=Gravel; 1=Earth;

Shoulder Type Codes: 4=Curb; 3=Paved; 2=Gravel; 1=Earth.

Table 12 – Geometric Design Deficiencies

Route Number	Needs Surface Upgrade	Needs Shoulder Widening	Needs Roadway Widening	Needs Shoulder Upgrade
	Section Number	Section Number	Section Number	Section Number
N7	10,50,52,54	10,50,52,54	15,30,40,50,52,54	50,52,54
N27	183, 186	183, 186	183, 186	183, 186
N59	-	-	230,240,245	-
N64	10	10	10	10
N102	10	-	-	-
N8082	10	10	10	10
N8084	10,30,35,40,60,66,80	10,30,35,40,60,66,80	10,30,35,40,60,66,80	10,30,35,40,60,66,80
N8086	10,30,35,50,70	10,30,35,50,70	10,30,35,50,70	10,30,35,50,70
N8087	10,30,34,36	10,30,34,36	10,30,34,36	10,30,34,36
N8090	62,66,80	62,66,80	62,66,80	62,66,80
N8091	10,15	10,15	10,15	10,15
N8094	23,26	23,26	23,26	23,26
N8095	10,30,33,36	10,30,33,36	10,30,33,36	10,30,33,36

Source: BIA IRR Inventory 2010, analysis by Kimley- Horn and Associates

3.4 Traffic Control

In general, traffic in the study area corridor is controlled using stop signs. In Chinle there is a traffic signal at the US 191 / N7 intersection. A traffic signal is planned at the intersection of US 191 and N102.



US 191 at the N7 Intersection




3.5 Functional Classification

Roadway functional classification groups roads that have similar design and traffic characteristics. One functional class differs from another according to the degree of access and mobility. Collector and local streets provide land access and carry local traffic to the neighborhoods and distribute traffic to the arterials. Arterial streets provide mobility over long distances with minimal access to adjoining properties.

Functional classification is used in planning, design, and to allocate federal funding.

However, the basic idea is the same regardless of the method of measurement: more important roads or more critical needs deserve the most attention. In the context of roads, that usually means more funding. The functional classification definitions are summarized in **Table 13**.

Table 13 – Indian Reservation Roads - Functional Classification Definition

Name / Class	Description	Example
Major arterial / Class 1	Major arterial roads providing an integrated network with characteristics for serving traffic between large population centers, and having average daily traffic volumes of 10,000 vehicles per day or more with more than two lanes of traffic.	 <p>N7, near US 191</p>
Rural Minor arterial / Class 2	Rural minor arterial roads serving traffic between large population centers. May also link smaller towns and communities to major resort areas that attract travel over long distances and generally provide for relatively high overall travel speeds with minimum interference to through traffic movement.	 <p>N27</p>
Rural Major collector / Class 4	Rural major collector road is collector to rural local roads.	 <p>N8094, east of US 191</p>

Source: Indian Reservation Roads Coding Guide and Instructions for the IRR Inventory, 2007

Navajo Nation roadways are functionally classified in the IRR Program Inventory.

Table 14 summarizes the IRR functional class of each roadway that is functionally classified in the study area corridor. The road classifications are shown graphically in **Figure 11**.

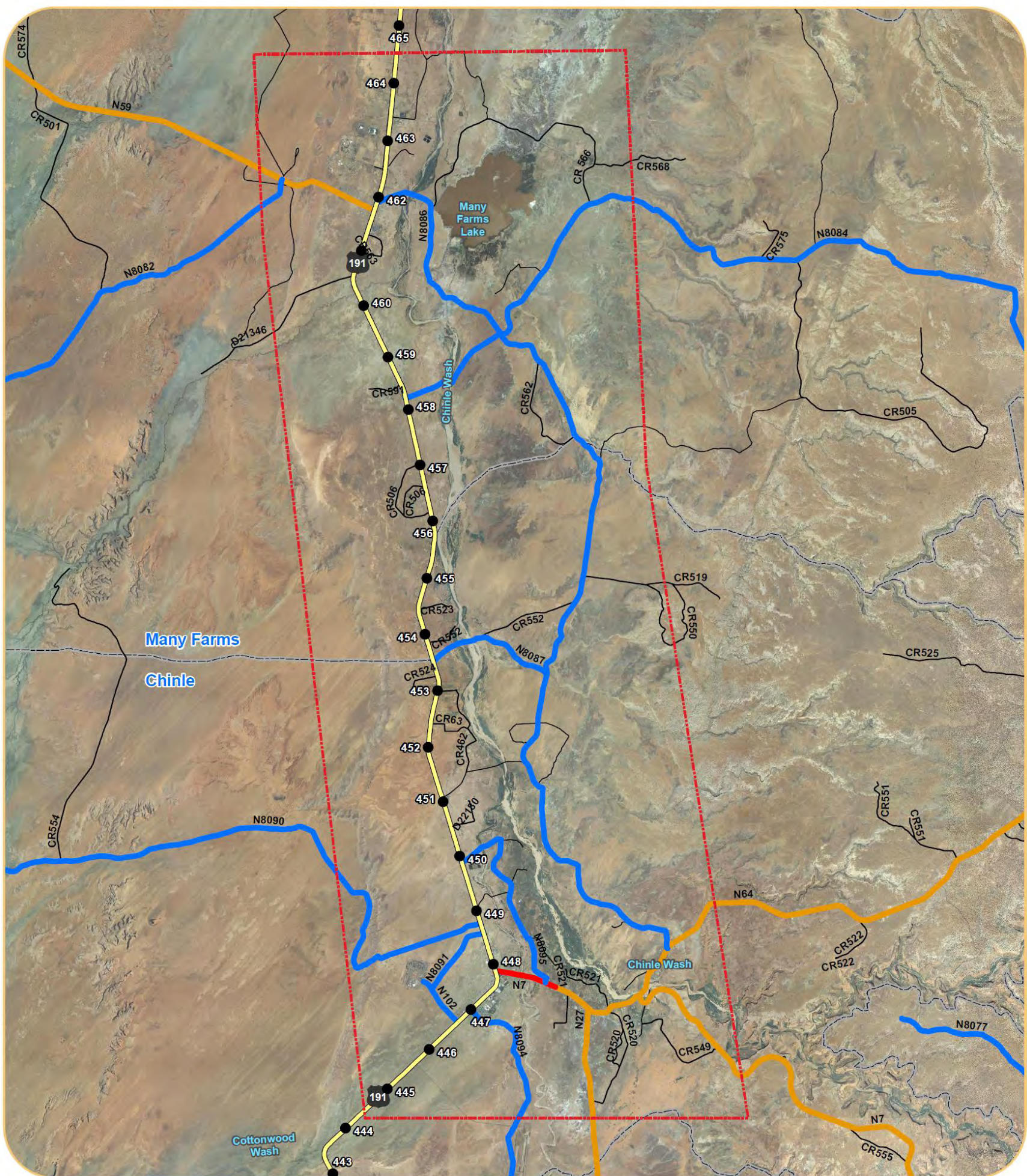
It should be noted that US 191 is designated as an Arizona major collector with the segment through Chinle designated a minor arterial and IRR Class 1.

Table 14 – IRR Functional Classification

Road Name	Section Numbers	IRR Program Functional Classification
N7	10,15,30,40	Major Arterial
N7	42,44,46,48,50,52,54	Rural Minor Arterial
N27	183,186,190,193,196,200	Rural Minor Arterial
N59	230,240,245	Rural Minor Arterial
N64	10	Rural Minor Arterial
N102	10	Rural Major Collector
N8082	10	Rural Major Collector
N8084	10,30,35,40,60,66,80	Rural Major Collector
N8086	10,30,35,50,70	Rural Major Collector
N8087	10,30,34,36	Rural Major Collector
N8090	62,66,80	Rural Major Collector
N8091	10,15	Rural Major Collector
N8094	23,26	Rural Major Collector
N8095	10,30,33,36	Rural Major Collector






Source: Indian Reservation Road Program Inventory, 2010

Functional Classification



Note:
CR = County Route
N = Navajo (BIA) Route

Legend

-  US and State Highways
-  Tribal/County Roads
-  Study Area
-  Chapter Boundary
-  Mileposts

BIA Roads Functional Classification

- Major Arterial
- Rural Minor Arterial
- Rural Major Collector



0 0.5 1 2 Miles

Source: BIA IRR Inventory 2010

Figure 11 – BIA Functional Classifications

3.6 Crash History

Motor vehicle crash (MVC) data were available from the Navajo Police Department and the ADOT Accident Location Information Surveillance System (ALISS). Data were available for 816 MVCs in the Chinle/Many Farms study area during the 13-year period from 1997 through 2009. Data for 238 of the Chinle/Many Farms crashes were extracted from the Navajo Police database and 578 of the crashes from the ALISS database.

Table 15 provides an overview of the number of MVCs and associated injuries and fatalities by road for the study area corridor. Two-thirds of all crashes and three-quarters of all crash-caused injuries and fatalities occurred on US 191. Twenty-one percent of all crashes, 16 percent of crash injuries and eight percent of crash fatalities occurred on N7. In total, these two roads accounted for about 88 percent of the crashes, 90 percent of the crash injuries, and 82 percent of the crash fatalities in the study area. **Figure 12** shows the location of crashes between 1999 and 2009, based on the Navajo Police Department database.



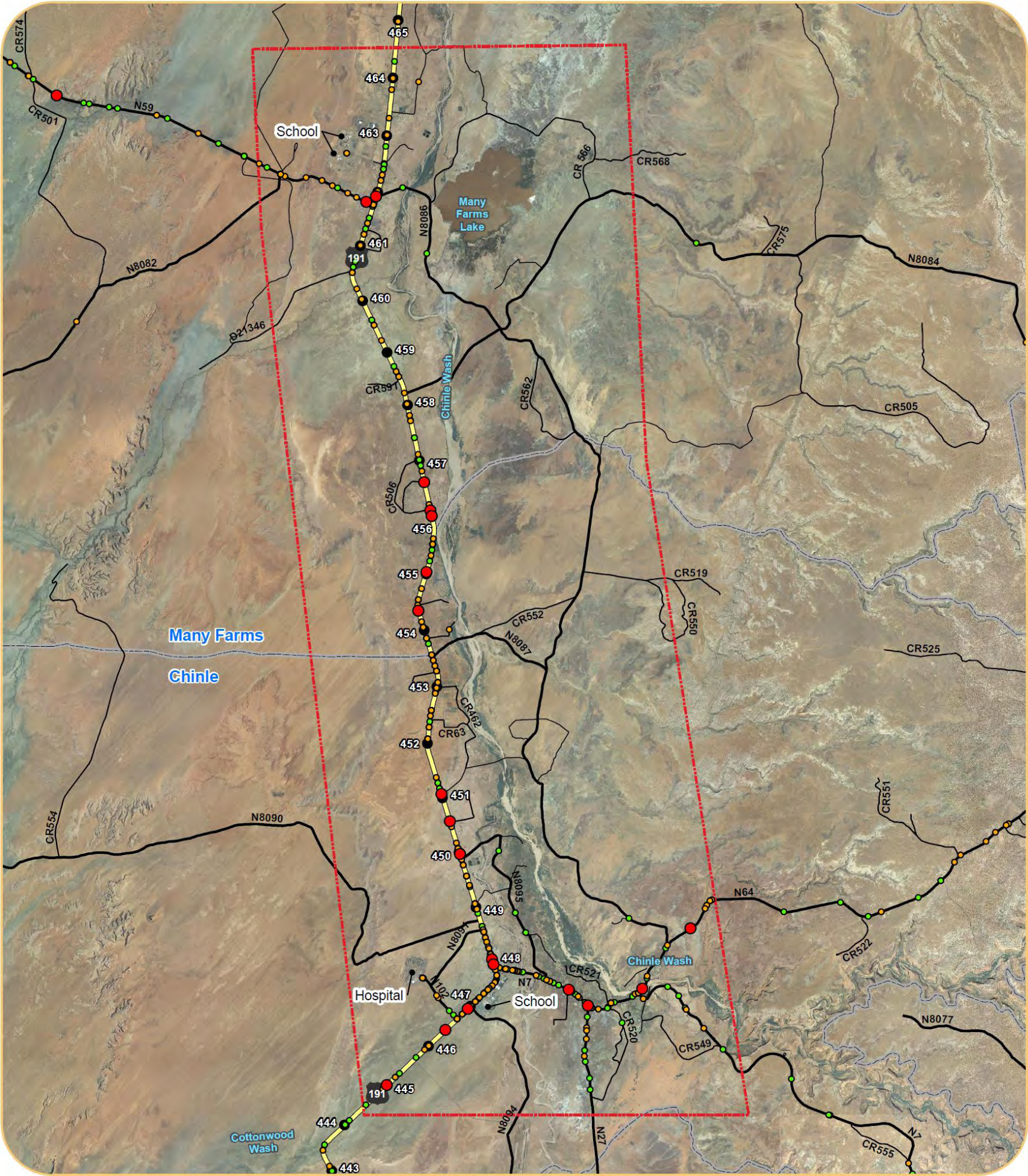
There were a large proportion of animal / vehicle crashes in the study area corridor. This photo, taken off of US 191 near Many Farms, shows how wind and tumbleweeds encroach on the right-of-way fence, which allows livestock to enter the road.

Table 15 – Number of Motor Vehicle Crashes (MVC), Injuries and Fatalities by Road

Road	# of MVCs	% of All MVCs	# of Injuries	% of All Injuries	# of Fatalities	% of All Fatalities
N7	171	21.0	109	15.8	4	8.2
N27	18	2.2	9	1.3	2	4.1
N59	30	3.7	22	3.2	2	4.1
N64	20	2.4	19	2.8	3	6.1
N102	13	1.6	9	1.3	0	0
N191	543	66.6	516	74.6	36	73.5
N203	2	0.2	3	0.4	0	0
N462	1	0.1	0	0	0	0
N520	1	0.1	0	0	0	0
N552	1	0.1	1	0.1	0	0
N8082	3	0.4	6	0.9	0	0
N8084	3	0.4	1	0.1	0	0
N8085	1	0.1	4	0.6	0	0
N8086	4	0.5	0	0	0	0
N8090	2	0.2	1	0.1	0	0
N8094	1	0.1	2	0.3	2	4.1
N8095	2	0.2	0	0	0	0
Totals	816	100	692	100	49	100

Note: Shaded areas indicate roads with high motor vehicle crashes and fatalities

Source: ALISS and Navajo Police Department, analysis by Kimley-Horn and Associates



Legend

- US and State Highways
- BIA Roads
- Tribal/County Roads
- Chapter Boundary
- Study Area
- Mileposts

Crashes (1999-2009)

- Property Damage
- Injuries
- Fatalities

Note:
CR = County Route
N = Navajo (BIA) Route



0 0.5 1 2 Miles

Source: Navajo Police Department

Figure 12 – Crash Locations, 1999-2009

This study reviewed characteristics of the crashes based on data in the accident reports for each accident. A summary of these crash characteristics are summarized as follows.

Driver State of Origin - The study area is a major tourist destination, which leads to the question of whether a large percentage of the crashes involve drivers from outside the study area. The ALISS database provides the driver's license state of origin for many crashes. Only 42 of 1,196 (3.5%) drivers whose license state of origin was reported were from outside Arizona. Although drivers from other parts of Arizona are not identified in the database, it would appear, based on the out-of-Arizona driver data that a high percentage of the drivers involved in study area crashes are local.

Pedestrians and Bicyclists / Pedalcyclists - There were 15 crashes involving 17 pedestrians. Seven of the pedestrians were fatally injured and the remaining 10 suffered some injury. Four of the pedestrian crashes occurred on N7; one on N59; and the remaining 10 on US 191. Seven of the US 191 crashes occurred in the Chinle urban area and three occurred between Chinle and Many Farms. Five of the pedestrians had been drinking. Three of these five were fatally injured. The one pedalcyclist crash reported occurred in Many Farms.

Weather and Road Conditions - Adverse weather and road conditions can be causal factors for MVCs. Weather was clear, with no other conditions shown for 86% of the crashes, and the road was dry, with no other factors listed, for 74% of the crashes. Weather might have been a factor for 14% of the crashes, and road condition might have been a factor for 26% of the crashes. Somewhat surprising is the fact that wind and dust do not seem to play a major factor in MVCs.

Light Conditions - Light conditions can be an important factor in MVCs. Typically, it is more difficult to see factors impacting the safety of the road at night and during dawn/dusk conditions. **Table 16** shows the light conditions for MVCs in the urban portions of the Chinle-Many Farms study area. Crashes archived in the ALISS database provide information about light conditions. Crashes archived in the Navajo Police Department database do not include information about light conditions. However, night time conditions were estimated using the astronomical definition of twilight for Chinle, which occurs when the sun is 12 degrees below the horizon. This time occurs about one hour before sunrise and one hour after sunset. Dawn/dusk were assumed to be the hour between twilight and sunrise or sunset. The almanac of date/time matches was specific for Chinle.

Note that the number of nighttime and dawn/dusk crashes in Many Farms on US 191 and N59 (49%) were higher than on US 191 and N7 in Chinle (33%), although on N7 between US 191 and the Holiday Inn, about 38% of the crashes occurred during nighttime or dawn/dusk.

Table 16 – Light Conditions for MVCs on Selected Roads and Locations in Chinle and Many Farms, 1997 - 2009

Road/Location	Total MVCs	Daylight MVCs	Dawn/Dusk MVCs	Nighttime MVCs
US191 in Chinle (total)	221	155	10	56
At N7	59	45	4	10
Other Locations	141	104	4	33
US 191 In Many Farms	71	31	3	37
N7 (total)	170	106	7	57
MP 0 - 2.3	157	97	7	53
MP 2.3 - 5.0	13	9	0	4
N59	30	14	4	12

Note: Shaded areas indicate roads with high motor vehicle crashes and fatalities

Source: ALISS and Navajo Police Department, analysis by Kimley-Horn and Associates

Crash Location by Road - Information regarding crash locations will be important in the development of road improvement needs. **Table 17** provides data for the number of crashes, vehicles involved, injuries, and fatalities for several sections of road within the study area. It also provides data on the number of crashes involving intersections or driveways, running off the road, and emergency medical transport (EMT). Data for the last two fields were not available for crashes that were documented only in the Navajo Police Department database.

Not surprisingly, US 191 in Chinle and Many Farms and N7 experienced high numbers of intersection and driveway related MVCs. US 191 between Chinle and Many Farms experienced larger percentages of running off the road crashes and more severe crashes as evidenced by the large number of crashes requiring EMT.

Types of Crashes - The type of crash (Collision Manner) is described as a single vehicle or if involving multiple vehicles, how the interaction among the vehicles can be described, e.g. head-on, backing, angle. Typically, single vehicle crashes involve running off the roadway or hitting some object on the roadway, such as animals. Single vehicle crashes account for more crashes than all of the other crash types combined. Rear end crashes, the second most common crash type, frequently involve following too close and driver inattention. Rear end crashes often occur at intersections. **Table 17** provides information on types of crashes by location.

Crash Causes - There are many causal factors, including drivers' actions that lead to crashes. A review of the data indicates that driver inattention, speed, failure to yield right-of-way, and improper lane changes were significant factors leading to MVCs in the study area. Driving under the influence, particularly of alcohol, is an important factor in MVCs.

Often the crash cause is not well identified in the data. For example, there were more than 120 animal crashes in the 814 total MVCs in the study area; however, animals on the road were shown to be a causal factor for only 23 crashes.

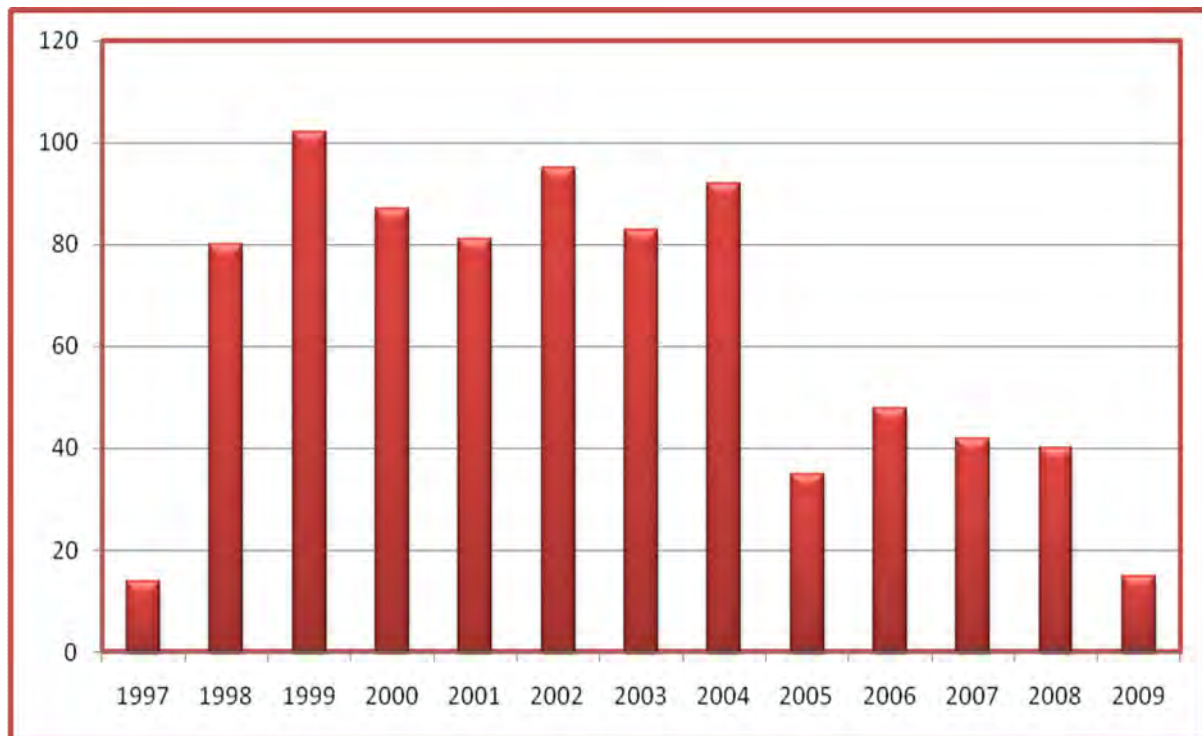
Harmful Crash Events - Harmful crash events are the aspect of a MVC that results in physical harm or property damage. Data on first harmful events, i.e. the first event that causes physical harm or property damage, was reviewed. Sometimes there is a second harmful event. For example, a vehicle might overturn, which is a harmful event, but then it might hit a guard, a second harmful event. Collisions with other vehicles account for 60 percent of the first harmful events. Collisions with animals account for about 20 percent of the first harmful events, with vehicle overturning resulting in about 12 percent of the first harmful events. Note that only about 600 first harmful events have been identified for the 814 crashes in the database.

Motor Vehicle Crash Time Data - Understanding when MVCs occur can provide valuable insight as to why they occur. Crash peaks at the beginning and end of the work day can mean there is a relationship between work traffic and the number of MVCs. Weekend peaks might be associated with recreational travel. A reduction in yearly trends might mean safety improvements have been effective or crash reporting procedures have changed.

Figure 13 shows the number of crashes by year over the 13-year period. The number of MVCs reported beginning in 2005 is about one-half of those reported in earlier years. Causes that have been suggested to explain the drop in crashes are:

- More coordination between Navajo Division of Transportation and ADOT, especially with respect to measures to reduce animal crashes.
- Less travel because of the economy, which led to fewer crashes.

Fatalities - There were 48 fatal crashes in the study area, 35 occurred on the US 191, 12 on BIA routes and one (1) on County road. High fatalities occurred on US 191 in Chinle between MP 447.9 - MP 448.8, between Chinle and Many Farms from MP 448.8 - MP 458.2 and in Many Farms from MP 460.5 - MP 464.4. Four fatalities occurred on N7 from US 191 intersection to MP 2.8, two on N27 at N7 intersection, two on N59 from US191 intersection to MP 2.5, and three on N64 from N7 intersection to MP 2.1. See **Table 17**.



Source: ALISS and Navajo Police Department, analysis by Kimley - Horn and Associates

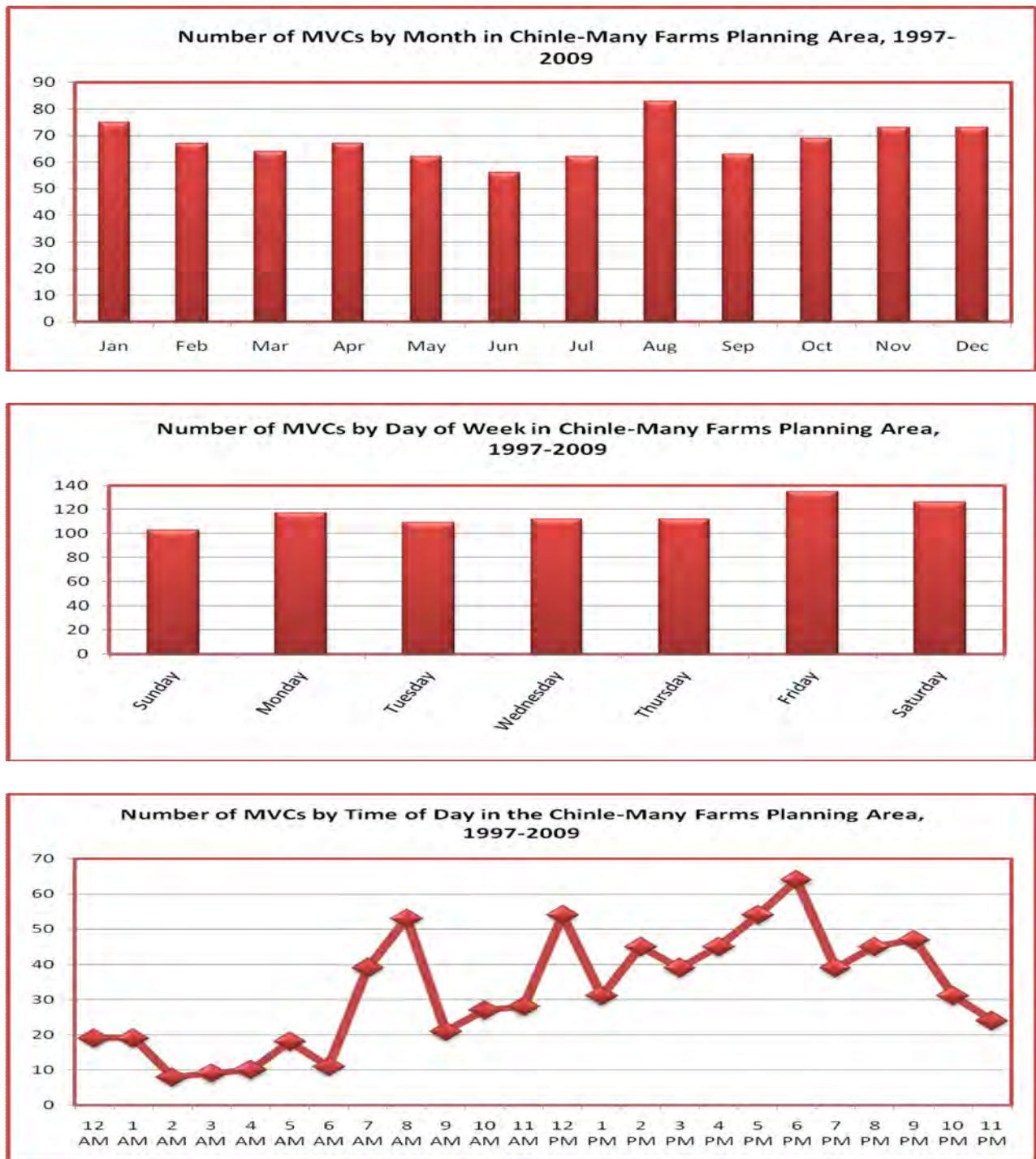
Figure 13 – Number of Motor Vehicle Crashes by year in the Chinle-Many Farms Study Area Corridor, 1997-2009

Other crash time data findings, depicted in **Figure 14** are:

Monthly crashes - The month minimum point for MVCs occurs in June, while the maximum occurs in August, only two months later. The August peak might be explained by recreational travel, but June would also be an expected recreational travel month. Possibly some special events occur in August, resulting in the sharp peak. Chinle Fair and school starting may have contributed to the August MVC spike.

Weekday crashes - There is a slight peaking of MVCs on Friday and Saturday, suggesting a relationship between possibly more leisure and recreational-related vehicle travel on the weekends.

Time of Day for crashes - There is clear peaking of time of day MVCs during the hours that would be associated with travel to and from work and lunch hour travel. There is a general upward trend starting at 2 am and ending at the 9 pm hour, with spikes at 8 am, noon, and 6 pm.



Source: ALISS and Navajo Police Department, analysis by Kimley - Horn and Associates

Figure 14 – Crash Trends by Month, Day of Week and Time of Day

Table 17 – Crash Locations, Severity and Types

Road	MP Location	Number of MVCs	Number of Vehicles	Number of Injuries	Number of Fatalities	Number of Intersection / Driveway MVCs	Number of Run Off Road MVCs*	Collision with Animal	Collision with Pedestrians	Comment
US 191	445 - 446.5	26	39	35	2	9	2	6	0	Mainly single vehicle crashes. Potential speeding issues.
	446.5 - 446.8 N102	11	22	15	0	11	0	0	0	Primarily intersection or driveway crashes, single-vehicle and sideswipe.
	446.8 - 447.1	26	48	33	0	13	2	0	0	Half the crashes are intersection crashes, mainly angle crashes.
	447.1 - 447.7	34	65	34	1	17	0	1	0	Half of the crashes are intersection or driveway related.
	447.7 - 447.9 N7 Intersection Area	56	112	42	1	49	1	0	0	Intersection and driveway crashes Single vehicle, left turn, and rear end crashes.
	447.9 - 448.8	73	136	31	4	39	3	6	7	Highest number of pedestrian crashes. Access management, speeding issues.
	448.8 - 450.5	59	91	53	2	9	5	20	1	Animal fencing issues.
	450.5 - 452.2	41	59	38	6	11	10	5	0	61% single vehicle crashes,
	452.2 - 455.8	85	124	93	7	5	17	22	1	Animal fencing issues.
	455.8 - 458.2	30	49	53	6	8	7	2	1	57%single vehicle crashes.
	458.2 - 460.5	30	37	33	1	1	9	9	0	87% single vehicle crashes – relatively high proportion of animal crashes (30%),
	460.5 - 464.4 Many Farms	70	100	45	5	19	7	20	0	Animal fencing issues. Access management concerns,
N7	0 -0.2 US 191 Intersection Area	31	56	33	1	18	0	3	3	Three pedestrian crashes. 58% intersection or driveway crashes. 68% of crashes were single vehicle. Access management concerns.
	0.2 -1.0	61	115	17	0	32	2	8	0	52% intersection or driveway crashes. 48% single vehicle Access management concerns. 13% animal crashes. Animal fencing issues.
	1.0 -1.7	29	46	20	1	12	3	6	1	72% of crashes are single vehicle crashes. 21% animal crashes.
	1.7 - 2.1 N27 Intersection Area	25	43	29	1	16	3	3	1	64% of crashes are intersection or driveway crashes. 60% of crashes are single vehicle crashes.
	2.1 - 2.8	20	33	10	1	11	3	0	0	55% are intersection or driveway related, 65% are single vehicle.
	2.8 - 5.0	5	5	3	0	0	0	0	0	No crash trends.

Table 17 – Crash Locations, Severity and Types (continued)

Road	MP Location	Number of MVCs	Number of Vehicles	Number of Injuries	Number of Fatalities	Number of Intersection / Driveway MVCs	Number of Run Off Road MVCs*	Collision with Animal	Collision with Pedestrians	Comment
N27	35.3 - 37.3	13	24	4	0	4	2	0	0	62% were single vehicle crashes.
	37.3 at N7 Intersection	5	8	2	2	4	0	0	0	No crash trends.
N59	0 - 2.5	30	46	22	2	7	3	8	1	67% were single vehicle crashes. Animal fencing issues.
N64	N7 Intersection	7	9	5	0	7	0	1	0	All were intersection or driveway related and single vehicle crashes.
	0 - 2.1	13	18	13	3	0	0	0	0	92% of crashes are single vehicle crashes.
N102	0 - 0.95	11	19	9	0	3	0	1	0	No crash trends.
	0.95 US 191 Intersection	2	4	0	0	2	0	0	0	No crash trends.
N203	0 - 0.68	2	3	3	0	2	0	0	0	No crash trends.
CR462	0.01	1	1	0	0	0	0	0	0	No crash trends.
CR520	1.66 - 2.1	1	1	0	0	0	0	0	0	No crash trends.
CR552	0 - 0.5	1	1	1	0	0	0	0	0	No crash trends.
N8082	0 - 0.5	2	2	1	0	0	0	0	0	No crash trends.
N8084	0 - 5.0	2	2	1	0	0	0	0	0	No crash trends.
	22.20 N64 Intersection	1	1	2	0	0	0	0	0	No crash trends.
N8085	0 - 1.0	1	1	1	0	0	1	0	0	No crash trends.
N8086	0 - 1.0 near N64 intersection	1	2	0	0	0	0	0	0	No crash trends.
	15.6 - 17.6 near US 191 Intersection	3	3	0	0	0	1	0	0	No crash trends.
N8094	0 - 0.8	1	1	2	2	0	1	0	0	No crash trends.
N8095	0 - 2.4	2	2	0	0	0	0	0	0	No crash trends.

Source: ALISS and Navajo Police Department, analysis by Kimley- Horn and Associates

*No data in these fields from the Navajo Police Department

3.7 Existing Traffic and Level of Service

Traffic volume data is important because it shows how busy a road is and it can help justify transportation project needs.

Daily traffic volumes for the Chinle and Many Farms areas were collected from two sources: the BIA IRR Program database and the ADOT Highway Performance Monitoring System (HPMS) database. These data are shown in **Table 18** and shown graphically in **Figure 15**.

Traffic Volume data can show congested areas and help justify improvements.

Table 18 – Annual Average Daily Traffic Volumes – BIA Roads

Road Name	Section Number	ADT Year	ADT Count	2011 ADT	2011 LOS
N7	10	2007	12,780	13,833	B
N7	15	2007	12,780	13,833	B
N7	30	2007	11,287	12,217	B
N7	40	2007	10,386	11,242	B
N7	42	2000	8,806	10,949	B
N7	44	2007	8,806	9,532	B
N7	46	2000	7,161	8,904	B
N7	48	2000	7,161	8,904	B
N7	50	2000	7,161	8,904	C
N7	52	1996	4,988	6,713	C
N7	54	2000	1,024	1,273	B
N27	183	1999	730	926	B
N27	186	1999	730	926	B
N27	190	1999	2,854	3,620	B
N27	193	1999	2,854	3,620	B
N27	196	1999	2,854	3,620	B
N27	200	1999	2,854	3,620	B
N59	230	2000	1,580	1,965	B
N59	240	2000	1,580	1,965	B
N59	245	1995	3,751	5,149	C
N64	10	1997	3,437	4,535	C
N102	10	1998	4,142	5,358	C
N8082	10	2004	60	69	B
N8084	10	0	0	0	-
N8084	30	0	0	0	-

Table 18 – Annual Average Daily Traffic Volumes – BIA Roads (continued)

Road Name	Section Number	ADT Year	ADT Count	2011 ADT	2011 LOS
N8084	35	0	0	0	-
N8084	40	2001	101	123	B
N8084	60	2001	101	123	B
N8084	66	2001	101	123	B
N8084	80	2001	101	123	B
N8086	10	2001	76	93	B
N8086	30	2001	76	93	B
N8086	35	2001	185	226	B
N8086	50	2001	185	226	B
N8086	70	1999	455	577	B
N8087	10	2005	263	296	B
N8087	30	2001	213	260	B
N8087	34	2001	213	260	B
N8087	36	2001	213	260	B
N8090	62	1998	89	115	B
N8090	66	1999	527	668	B
N8090	80	1999	527	668	B
N8091	10	2001	243	296	B
N8091	15	2001	243	296	B
N8094	23	0	0	0	-
N8094	26	1997	332	438	B
N8095	10	2000	445	553	B
N8095	30	2000	445	553	B
N8095	33	2000	445	553	B
N8095	36	2000	445	553	B

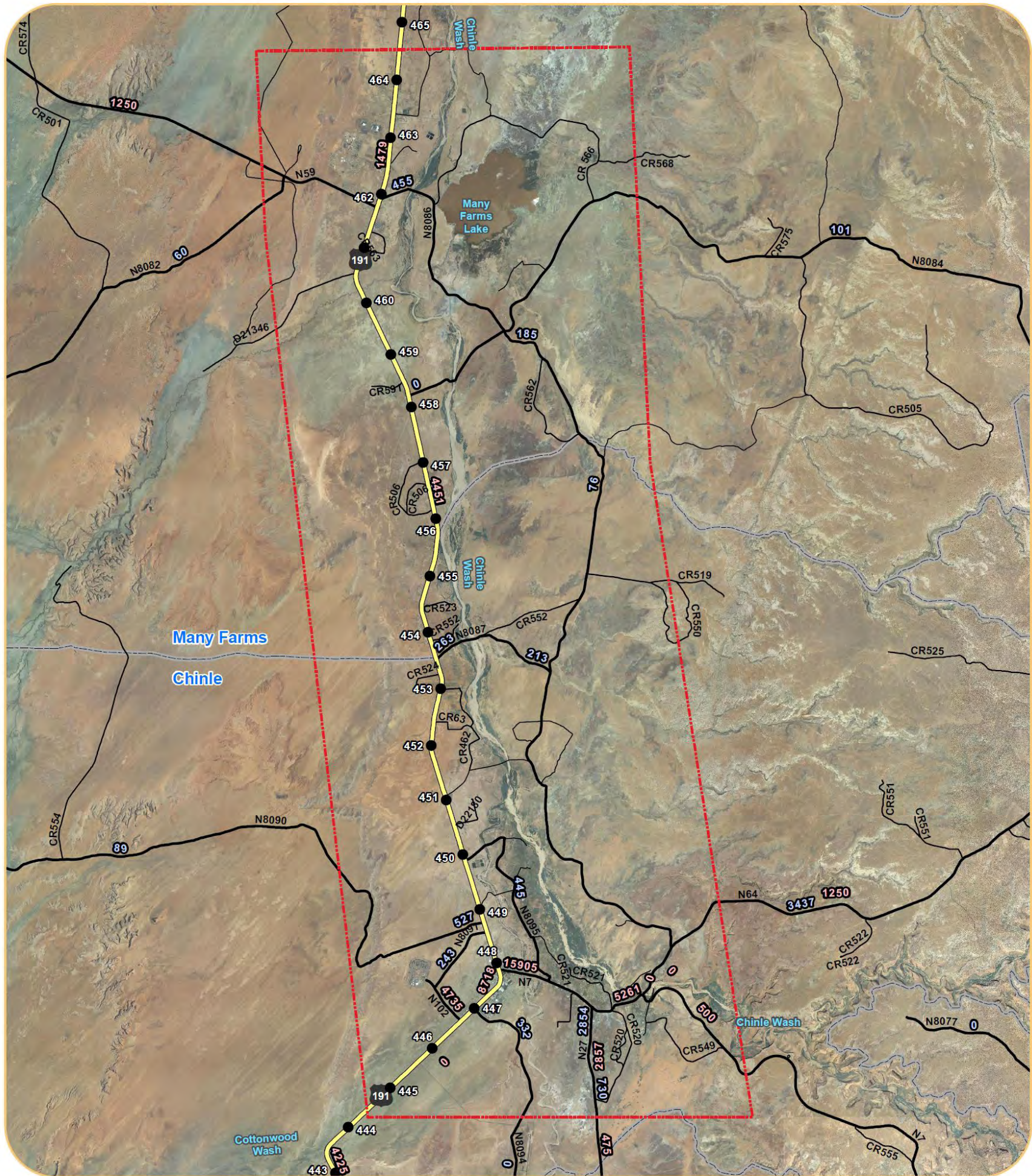
Source: BIA IRR 2010 Inventory, Level of Service analysis by Kimley-Horn

Traffic counts for locations on US 191 were obtained from ADOT and are shown in **Table 19**.

Table 19 – Annual Average Daily Traffic Volumes – State Highways

Road Name	Section	ADT Year	ADT Count	2011 ADT	2011 LOS
US 191	MP 444 to N102	2008	4,225	4,484	B
US 191	N102 to N7	2008	8,781	9,318	B
US 191	N7 to 4/2 Lane Transition	2008	4,451	4,723	A
US 191	4/2 Lane Transition to N59	2008	4,451	4,723	B
US 191	N59 to MP 465	2008	1,479	1,570	A

Source: ADOT HPMS Database, LOS analysis by Kimley-Horn

**Legend**

- US and State Highways
- BIA Roads
- Tribal/County Roads
- Study Area
- Chapter Boundary
- Mileposts

- # BIA Average Daily Traffic (years vary)
- # ADOT Annual Average Daily Traffic (2008)

Note:
CR = County Route
N = Navajo (BIA) Route



0 0.5 1 2 Miles

Source: BIA IRR 2010 Inventory




Figure 15 – Traffic Volumes from BIA IRR Inventory

3.7.1 Roadway Level of Service

Roadway traffic operations are defined and categorized by the delay experienced by an average driver. The operations are categorized by a grading system called level of service (LOS), which is a letter designation ranging from A (no delay) to F (severe congestion). These levels are illustrated in **Table 20**.

Existing LOS of major roads in the study area corridor are summarized in **Table 18** for BIA routes and **Table 19** for US 191. All of the roadways are currently operating at an acceptable LOS.

Table 20 – Examples of Level of Service

Level of Service	Examples of Road Conditions
A-B	 <p>SR 264 looking east from N12 south</p>
C-D	 <p>SR 264 looking east, approaching N12 north intersection in vicinity of Bashes</p>
E-F	 <p>Traffic during Thursday afternoon rush hour at N12 north/SR 264 intersection</p>

Source: Kimley- Horn and Associates

3.8 Access Management

Access management is a set of techniques that state and local governments can use to control access to highways, major arterials, and other roadways. Access management can increase the capacity of these roads, manage congestion, and reduce crashes. Techniques include:

Access management can increase safety and reduce congestion.

- Increasing spacing between signals and interchanges;
- Driveway location, spacing, and design;
- Use of exclusive turning lanes;
- Median treatments, including two-way left turn lanes (TWLTL) that allow turn movements in multiple directions from a center lane and raised medians that prevent movements across a roadway;
- Use of service and frontage roads; and
- Land use policies that limit right-of-way access to highways.

Navajo Nation Access Management

The Navajo Nation currently does not have an access management policy or program in place. The Navajo Division of Transportation and the Bureau of Indian Affairs - Navajo Regional Office (BIA-NRO) agree that access management is an important transportation planning issue. Currently the Navajo Department of Transportation and BIA work with the State DOT district engineers to comply with the state highway access permitting policies and requirements. Access permitting agreements are negotiated between the State DOTs and Navajo Nation departments; and the BIA is required to be included in the communication with both parties.

BIA Access Management

The BIA access management includes control of over-size and overweight vehicles as well as utility crossing and roadway access permitting.

Arizona Access Management

Access permitting is currently carried out pursuant to Arizona Revised Statute 28-7053, (<http://www.azleg.gov/FormatDocument.asp?inDoc=/ars/28/07053.htm&Title=28&DocType=ARS>) which prohibits unauthorized encroachments in state highways. For an encroachment to be lawful, it must be authorized by the State DOT Director. The Director has adopted administrative rules (regulations) governing encroachments.

These rules are published as Arizona Administrative Code, R17-3-501 Highway Encroachments and Permits, (http://www.azsos.gov/public_services/Title_17/17-03.pdf) which includes access connections to state highways. The rule states that each encroachment requires a permit. Permits for driveways (encroachments) onto a state highway may be granted by ADOT's Engineering Districts, a delegation from the Director.

Currently the number of driveways between mileposts on US 191 can be summarized In **Table 21** as follows:

Table 21 – Number of US 191 Access Points, By Milepost

US 191 Milepost Range	Driveways on West side of Road	Driveways on East side of Road	Comments
444-445	0	0	
445-446	0	0	
446-447	8	2	
447-448	14	9	Relatively high numbers of intersection/driveway crashes in these areas
448-449	7	8	All driveway access between Chinle and Many Farms are very narrow thus vehicles have to slow way down to turn, dangerous maneuvering, need widening.
449-450	4	4	
450-451	2	1	
451-452	4	2	
452-453	3	5	
453-454	9	2	
454-455	6	1	
455-456	4	2	
456-457	2	2	
457-458	1	3	
458-459	1	5	
459-460	2	2	
460-461	2	5	
461-462	12	7	27% of crashes were intersection or driveway related.
462-463	1	3	
463-464	3	4	

Source: Kimley-Horn and Associates, analysis based on aerial review

The areas between mileposts 447 to 448 and 461 to 462 have the highest numbers of intersecting driveways.

3.9 Scenic Roads

The Tse'nikani Scenic Road was established on US 191, from Milepost 467, near Many Farms, north to Milepost 510.4 at the junction with US 160, near Mexican Water. It was established as an Arizona Byway in 1995. The *Draft Corridor Management Plan* for the byway provided the following goals that affect the study area corridor.

Consider extending the scenic byway designation to Chinle.

Goal #1: Maintain and improve roadway conditions to safely accommodate residents and travelers.

Action Items:

- Add a pullout at MP 466.0/MP 467.0; tourists often stop here to take photographs.
- Widen gate at cattle guard at MP 466.3.
- Develop more signs to identify amenities along the corridor.
- The adopt-a-highway program does not seem to provide the necessary maintenance for this area. More funding may be needed to initiate additional means to keep the roadway clean.
- Right-of-way fences should be respected. Signs and education to promote keeping these intact should be initiated.



Goal #2: Promote economic opportunity and tourism management.

Action Items:

- Develop a visitor center along the corridor.
 - Support development projects (i.e. Many Farms truck stop near lake).
 - Support and encourage arts and crafts and food vendors but grouped together in areas where safe pull off and parking can be provided.
- Consider guided tours including hiking, rock climbing, camping, and jeep tours.
 - **Consider extending the byway designation to Chinle.**

It should be noted that if the byway is extended to Chinle, it will be very close to the Dine Biitah Scenic Byway, shown in **Figure 16**.

3.10 Planned and Programmed Transportation Projects

Planned and programmed projects were obtained from two main sources: the Arizona Statewide Transportation Improvement Program, Fiscal Year 2011-2014 and the Draft Navajo Nation Indian Reservation Road Program 38 Year Plan, Fiscal Years 2012-2049. These projects are shown in **Table 22** and **Table 23**, respectively. Projects in the Transportation Improvement Program (TIP) and Capital Improvement Program (CIP), for draft fiscal years 2012-2049 are shown in **Figure 17**.

Table 22 – State Highway Project in State Transportation Improvement Program, 2011-2014

Route	Location	Project Description	Cost (\$ million)	Funding	Fiscal Year
191	MP 448	Chinle to Many Farms- Replace and Install Fencing and Cattle Guards, 14 miles	\$1.65 M	STP*	2011
191	MP 446	Roadway Widening	\$2.375	STP*	2013

* STP= Surface Transportation Program

Source=State Transportation Improvement Program (STIP), Fiscal Year 2011-2014

Table 23 – Draft FY 2011 - 2048 Indian Reservation Roads Program Projects

Area	FY	Route No.	Project Number*	Project Name/Description	Comment	Length (miles)
Chinle	2013	N27	N27(2-2)1,2,&4	Nazlini North to Chinle, Bridge, Grade and Drain and Paving	D- Surveying Data Needed W- Within existing ROW	4.2
	2022	N27	N27(2-3)1,2,&4	Nazlini North to Chinle Bridge, Grade and Drain and Paving	D- Surveying Data Needed W- Within existing ROW	5.3
	2015	N27	N27(4-2)4	Chinle Streets Chip Seal	D- Surveying Data Needed W- Within existing ROW	0.45
	2015	N7	N7(3-1)/N7A(1-1)4	Chinle Streets Chip Seal	D- Surveying Data Needed W- Within existing ROW	2.46
	2041	N8086	N8086(1)2,3	Many Farms to Chinle, Grade and Drain and Gravel	A- ROW Needed B- Environmental Assessment Needed C- Archeological Clearance Needed D- Surveying Data Needed	8.8
	2042	N8086	N8086(2)2,3	Many Farms to Chinle, Grade and Drain and Gravel	A- ROW Needed B- Environmental Assessment Needed C- Archeological Clearance Needed D- Surveying Data Needed	8.8
	2015	N8095 / N8081	N8095(1) / N8081(1)1,2,&3	Chinle Valley Road, Grade and Drain and Gravel	A- ROW Needed B- Environmental Assessment Needed C- Archeological Clearance Needed D- Surveying Data Needed	1

Table 23 – Draft FY 2011 - 2048 Indian Reservation Roads Program Projects (continued)

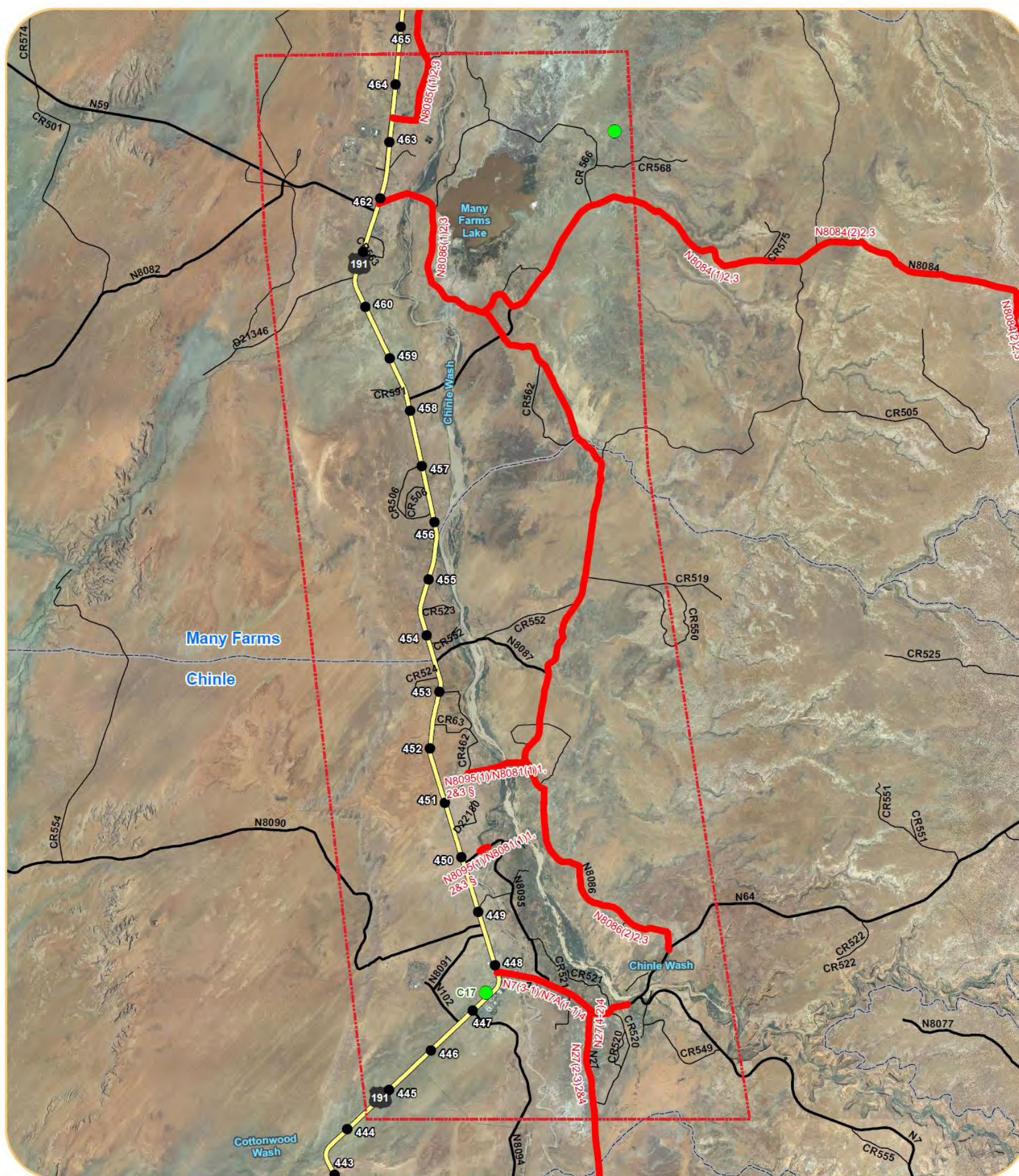
Area	FY	Route No.	Project Number*	Project Name/Description	Comment	Length (miles)
Many Farms	2020	N8084**	N8084(1)1,2,3	Many Farms US 191 to Windmill Grade and Drain and Gravel	A- ROW Needed B- Environmental Assessment Needed C- Archeological Clearance Needed D- Surveying Data Needed	4.0
	2022	N8084**	N8084(2)1,2,3	Many Farms US 191 to Windmill Grade and Drain and Gravel	A- ROW Needed B- Environmental Assessment Needed C- Archeological Clearance Needed D- Surveying Data Needed	6.0
	2024	N8084**	N8084(3) 2,3	Many Farms US 191 to Windmill Grade and Drain and Gravel	A- ROW Needed B- Environmental Assessment Needed C- Archeological Clearance Needed D- Surveying Data Needed	6.0
	2045	N8085	N8085(1)2,3	N27 to N7 Nazlini Grade and Drain	A- ROW Needed B- Environmental Assessment Needed C- Archeological Clearance Needed D- Surveying Data Needed	4.9

Source: Navajo Division of Transportation

*= numbers in parentheses indicate the project phase, numbers to the right of the parentheses indicate the type of work, e.g., 1=bridge, 2=grade and drain, 3=gravel, 4=paving
Source: Data in this table was obtained from the GIS shapefiles "FTTIP.shp" and "CTTIP.shp" and the "Draft FY 2011-2048 38 Year Plan - Indian Reservation Road Program (hr-121510)"

** Noted as project needing to be moved to FY 2012-2015 TTIP

CIP and TIP Project Map



Legend

-  US and State Highways
  2012 CTTIP
-  BIA Roads
  CIP 2010
-  Tribal/County Roads
-  Chapter Boundary
-  Study Area
-  Mileposts

Note:
CR = County Route
N = Navajo (BIA) Route



Source: Navajo Division of Transportation

Figure 17 – Navajo Nation CIP and TIP Projects

3.11 Future Traffic Data

3.11.1 Growth Rates

A number of sources use a 2% annual growth rate in estimating future traffic for all Navajo-BIA roads. These include the *Navajo Nation Long Range Transportation Plan*, and the *2008 Navajo Region Road Inventory Field Data Module (RIFDS)*. Similarly, ADOT also estimates and uses a 2% annual traffic growth rate for all state routes on the Navajo and Hopi reservations.

Table 24 summarizes the future traffic volumes and levels of service assuming a 2% compound annual growth rate for BIA routes. **Table 25** summarizes US 191 traffic growth and LOS through 2030. The analysis indicates that the current laneage will provide adequate capacity through 2030 on all routes, although a road segment on BIA 7 will be at LOS D in 2030, as shown in the shaded row in **Table 24**. This road segment is shown in **Figure 18**.

Table 24 - Future Traffic Volumes and Levels of Service – BIA Roads

Road Name	Section Number	ADT Year	ADT Count	2011 ADT	2015 ADT	2020 ADT	2030 ADT	2015 LOS	2020 LOS	2030 LOS
N7	10	2007	12,780	13,833	14,974	16,532	20,153	B	B	C
N7	15	2007	12,780	13,833	14,974	16,532	20,153	B	B	C
N7	30	2007	11,287	12,217	13,225	14,601	17,798	B	B	C
N7	40	2007	10,386	11,242	12,169	13,435	16,378	B	B	B
N7	42	2000	8,806	10,949	11,852	13,085	15,951	B	B	B
N7	44	2007	8,806	9,532	10,318	11,391	13,886	B	B	B
N7	46	2000	7,161	8,904	9,638	10,641	12,971	B	B	B
N7	48	2000	7,161	8,904	9,638	10,641	12,971	B	B	B
N7	50	2000	7,161	8,904	9,638	10,641	12,971	C	C	D
N7	52	1996	4,988	6,713	7,267	8,023	9,780	C	C	C
N7	54	2000	1,024	1,273	1,378	1,522	1,855	B	B	B
N27	183	1999	730	926	1,002	1,106	1,349	B	B	B
N27	186	1999	730	926	1,002	1,106	1,349	B	B	B
N27	190	1999	2,854	3,620	3,918	4,326	5,273	B	C	C
N27	193	1999	2,854	3,620	3,918	4,326	5,273	B	C	C
N27	196	1999	2,854	3,620	3,918	4,326	5,273	B	C	C
N27	200	1999	2,854	3,620	3,918	4,326	5,273	B	C	C
N59	230	2000	1,580	1,965	2,126	2,348	2,862	B	B	B
N59	240	2000	1,580	1,965	2,126	2,348	2,862	B	B	B
N59	245	1995	3,751	5,149	5,574	6,154	7,502	C	C	C
N64	10	1997	3,437	4,535	4,909	5,420	6,607	C	C	C

Table 24 - Future Traffic Volumes and Levels of Service – BIA Roads (continued)

Road Name	Section Number	ADT Year	ADT Count	2011 ADT	2015 ADT	2020 ADT	2030 ADT	2015 LOS	2020 LOS	2030 LOS
N102	10	1998	4,142	5,358	5,800	6,403	7,806	C	C	C
N8082	10	2004	60	69	75	82	100	B	B	B
N8084	10	0	0	0	0	0	0	B	B	B
N8084	30	0	0	0	0	0	0	B	B	B
N8084	35	0	0	0	0	0	0	B	B	B
N8084	40	2001	101	123	133	147	179	B	B	B
N8084	60	2001	101	123	133	147	179	B	B	B
N8084	66	2001	101	123	133	147	179	B	B	B
N8084	80	2001	101	123	133	147	179	B	B	B
N8086	10	2001	76	93	100	111	135	B	B	B
N8086	30	2001	76	93	100	111	135	B	B	B
N8086	35	2001	185	226	244	270	329	B	B	B
N8086	50	2001	185	226	244	270	329	B	B	B
N8086	70	1999	455	577	625	690	841	B	B	B
N8087	10	2005	263	296	321	354	431	B	B	B
N8087	30	2001	213	260	281	310	378	B	B	B
N8087	34	2001	213	260	281	310	378	B	B	B
N8087	36	2001	213	260	281	310	378	B	B	B
N8090	62	1998	89	115	125	138	168	B	B	B
N8090	66	1999	527	668	723	799	974	B	B	B
N8090	80	1999	527	668	723	799	974	B	B	B
N8091	10	2001	243	296	321	354	432	B	B	B
N8091	15	2001	243	296	321	354	432	B	B	B
N8094	23	0	0	0	0	0	0	B	B	B
N8094	26	1997	332	438	474	524	638	B	B	B
N8095	10	2000	445	553	599	661	806	B	B	B
N8095	30	2000	445	553	599	661	806	B	B	B
N8095	33	2000	445	553	599	661	806	B	B	B
N8095	36	2000	445	553	599	661	806	B	B	B

Source: BIA IRR Inventory 2010, analysis by Kimley-Horn

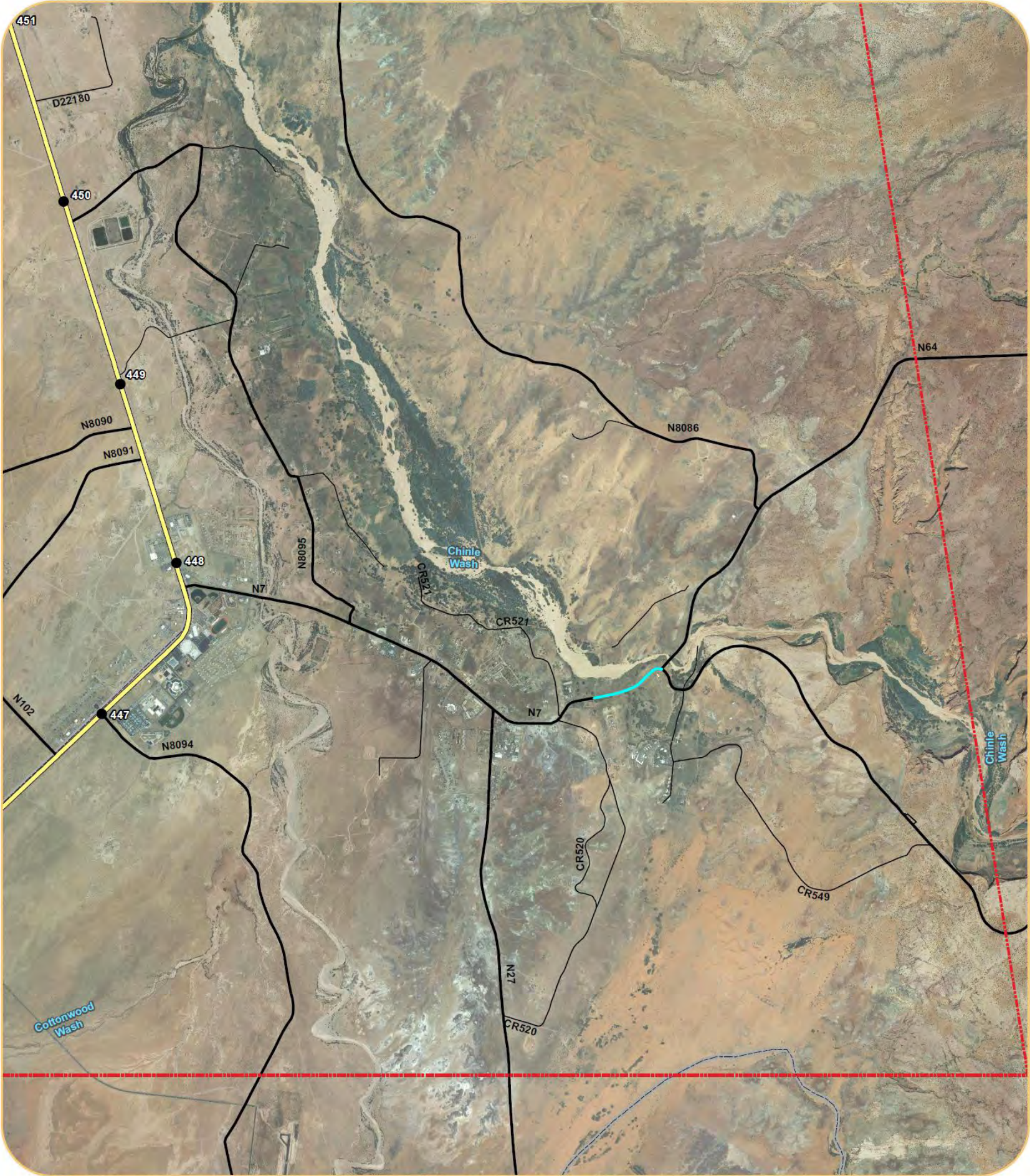
Table 25 - Future Traffic Volumes and Levels of Service - US 191

Road Name	Section	ADT Year	ADT Count	2011 ADT	2015 ADT	2020 ADT	2030 ADT	2015 LOS	2020 LOS	2030 LOS
US 191	MP 444 to N102	2008	4,225	4,484	4,853	5,358	6,532	B	B	B
US 191	N102 to N7	2008	8,781	9,318	10,087	11,136	13,575	B	B	B
US 191	N7 to 4/2 Lane Transition	2008	4,451	4,723	5,113	5,645	6,881	A	A	B
US 191	4/2 Lane Transition to N59	2008	4,451	4,723	5,113	5,645	6,881	B	B	C
US 191	N59 to MP 465	2008	1,479	1,570	1,699	1,876	2,287	A	A	A

Source: ADOT, analysis by Kimley-Horn

CHINLE-MANY FARMS

Congested Road Segment



Source: Kimley-Horn and Associates

Figure 18 – 2030 Congested Road Segment

3.12 Transit

The Navajo Transit System operates service throughout the Nation. The system is set up to operate much like an inter-city bus service on fixed routes that link Navajo Nation growth centers. There are 13 transit routes, of which two routes serve the Chinle and Many Farms areas.

3.12.1 Current Routes and Stops

The following routes serve the Chinle and Many Farms areas:

Route 3 – Kayenta / Tsaile / Fort Defiance

Route 3 provides transit service to Shonto, Kayenta, Many Farms Chinle, Fort Defiance, and Window Rock. There is one morning run which begins in Shonto at approximately 5 am, and ends at Fort Defiance at 10 am. In the afternoon, there is another bus run that begins in Window Rock at 3:15 pm and ends at Shonto at 8 pm. Transit stops in the Chinle and Many Farms area are:

- Many Farms - Mustang Store
- Chinle - Tseyi Shopping Center
- Chinle - Elementary School
- Chinle - IHS
- Chinle 7-2-11 Baldwin Mini-Mart
- Chinle - Chevron Store

Route 8 – Chinle / Ganado

Route 8 provides transit service to the Chinle and Ganado area. There is one run in the morning and one run in the late afternoon. Stops in the Chinle area are:

- | | |
|---|--|
| ▪ Chinle - Fleet Management | ▪ Chinle - Cellular One Complex |
| ▪ Chinle - Bashas Parking Lot | ▪ Chinle - Chapter House |
| ▪ Chinle - Motor Vehicle Division | ▪ Chinle - BIA |
| ▪ Chinle - IHS Hospital | ▪ Chinle - School Admin Bldg. |
| ▪ Chinle - Mustang Store (when requested) | ▪ Chinle - Chevron Station |
| ▪ Chinle - NTUA | ▪ Chinle - Police Dept. |
| ▪ Chinle - Bashas Parking Lot | ▪ Chinle - LDS Church (when requested) |

3.12.2 Ridership

Ridership data was obtained from the *Arizona Rural Transit Needs Study* and from the Navajo Transit System website. In 2006, ridership on the system was 35,700 passengers. In 2010, ridership grew to over 88,000 passenger trips.

3.12.3 Future Plans

A new Navajo Transit Bus Maintenance and Administration Center opened in March 2012 in Fort Defiance. This facility will serve as a central hub for the Nation's growing

bus fleet and includes areas for administration, office and clerical, vehicle repair, storage, and a fueling island.



Source: <http://grnbrg.com/nts/info.html>

Rendering of Navajo Transit Bus Maintenance and Administration Center

3.12.4 Transit Needs

Transit Dependent Populations

For many trips in the study area corridor, there are few alternatives to the automobile. Segregation of land uses and nearly universal automobile availability has resulted in dispersed land uses that are difficult to reach without an automobile, as well as little or no alternate modes of travel. Not only is there little public transportation service available, the distances between origin and destination and lack of facilities for pedestrians and bicyclists makes walking or riding a bicycle impractical and/or unsafe. In most cases, about the only viable alternative to driving somewhere is riding there with someone else.

Transit Demand for Transit Dependent Population

A transit demand forecast based on projected population growth within the study area is shown in **Table 26**. The 2010 census data were used to calculate the 2010 population of elderly, disabled, and living below the poverty level within the study area corridor. The Arkansas Public Transportation Needs Assessment (APTNA) model was used to estimate the 2010 transit demand based on the 2010 population. The APTNA method, which is used in both the RTP and ADOT's Rural Transit Needs Study (May 2008) to project transit demand, uses the following trip rates:

- An elderly person age 60 and over would make about 6.79 one-way passenger trips annually;
- A person with disabilities under age 60 would make about 4.49 one-way passenger trips annually (census data reported this for under age 64); and
- A person living in poverty under age 60 would make about 20.50 one-way passenger trips annually (census data reported this for under age 64).

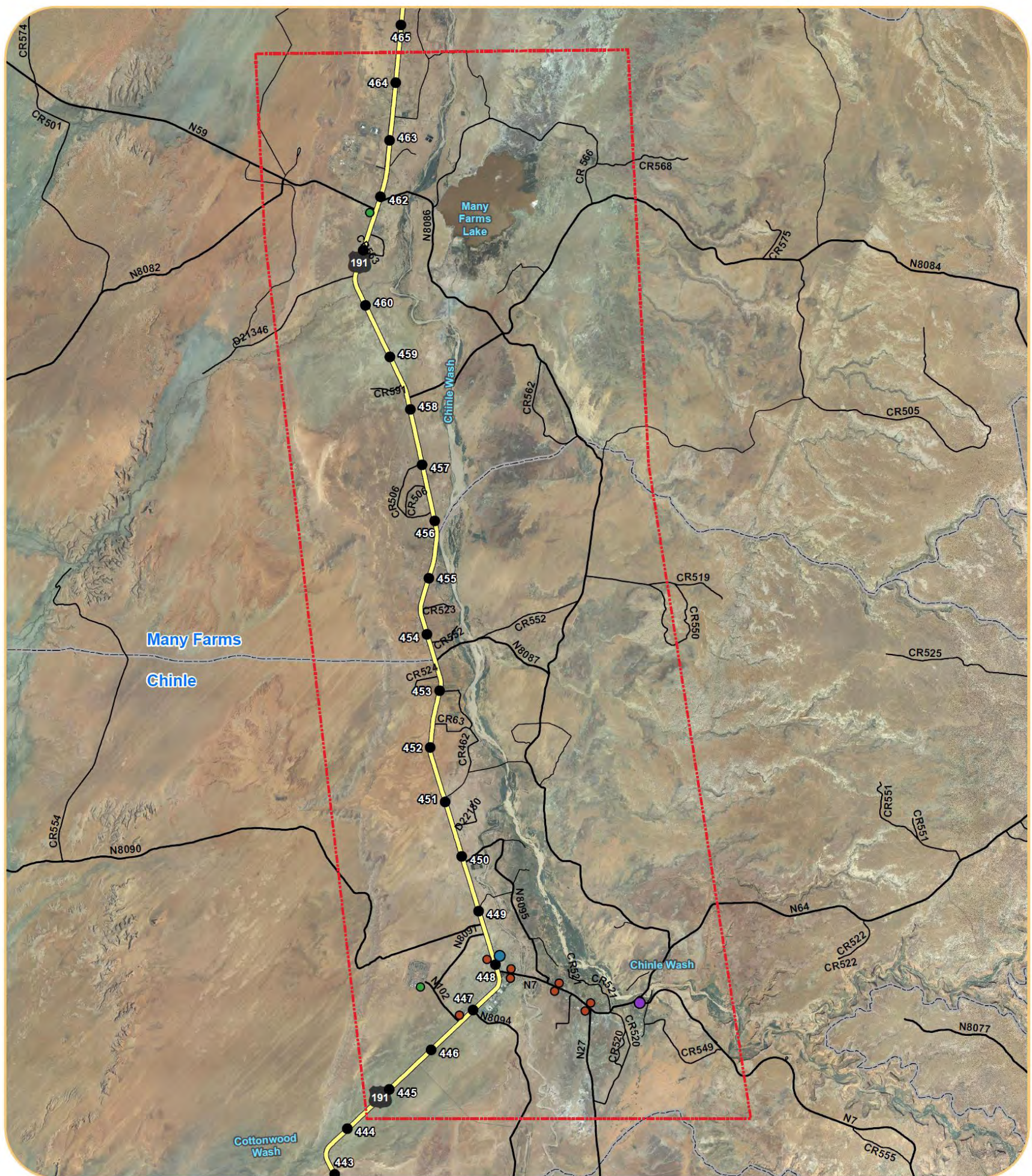
Table 26 - Transit Demand Forecast

Transit Demand Variables	Area	2010	2010 Transit Demand, One-way Passenger Trips Annually
Persons over Age 60*	Chinle	483	3,280
	Many Farms	158	1,073
	Total	641	4,353
Persons with a disability under age 64 **	Chinle	915	4108
	Many Farms	184	826
	Total	1,099	4,934
Persons Living below the poverty level under age 64**	Chinle	1922	39,401
	Many Farms	423	8672
	Total	2,345	48,073

*Source: 2010 Census, analysis by Kimley-Horn

**Source: 2000 Census, analysis by Kimley-Horn

Using these trip rates, it was determined that the 2010 transit demand estimate for the study area corridor is 48,073 passenger trips annually. Discussion with the Manager of the Navajo Transit System indicated that transit service from Chinle to Ganado was tried about three years ago; however, it did not attract sufficient ridership. He suggested trying a local transit service again, and provided a summary of potential bus stop locations. **Figure 19** shows location of existing and planned bus stops in the study area corridor, based on input from the Navajo Transit System. The planned bus stops would include bus shelters, where feasible. The transit system has bus shelters in storage that can be placed at the bus stops. They are designed with mesh wires that should help to reduce the incidence of graffiti. In remote areas, the stops are marked with bus stop signs only. **Figure 19** also shows the location of a proposed transit center in Chinle. The goal of the transit center, according to the *Navajo Transit System Five-Year Plan (2009)*, is to serve as a meeting place for riders as well as an office/operating location for drivers to begin and end the route. The facility would consist of a modest modular office. In addition to a meeting point for riders, the office would also be equipped with some maintenance parts/materials that would allow the driver to do minor maintenance and paperwork.



Legend

- US and State Highways
- BIA Roads
- Tribal/County Roads
- - - Study Area
- Mileposts
- Chapter Boundary

Bus Stop

- Existing Bus Stop
- Proposed Bus Pullout with Shelter
- Proposed Transit Center
- Proposed Bus Turnaround

Note:
CR = County Route
N = Navajo (BIA) Route



0 0.5 1 2 Miles

Source: Navajo Transit System

Figure 19 – Existing and Proposed Bus Stops

3.12.5 School Bus Transportation Needs

Discussions with stakeholders indicated the following needs to support school bus travel:

- Need for bus pullouts and advance signing on US 191.
- Need for paving of bus routes. School bus routes are located on the following roads:
 - N8086
 - N8084
 - CR505
 - CR519
 - N8085
 - CR566
 - CR506
 - N8095
 - N8090
 - N27
 - N8094
 - CR463
 - CR552
 - N8082

3.13 Bicycle Facilities

There are no signed bike routes in the Chinle and Many Farms area.

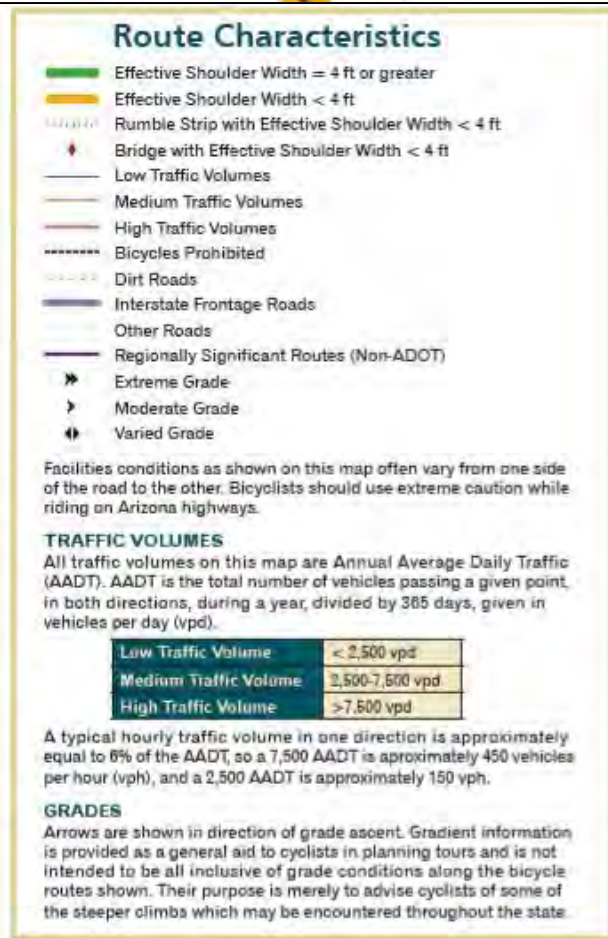
The project team reviewed the BIA IRR data to determine roads that might be suitable to be signed as bike routes. The American Association of State Highway and Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities* (1999) gives the following guidelines for bike lane widths:

- For roadways with no curb and gutter – minimum width should be four feet.
- The recommended width of a bike lane is five feet from the face of the curb or guardrail to the bike lane stripe.

Shoulder types and widths are shown in **Figure 7** (earlier in the report). Paved shoulders are provided on US 191, N59, and segments of N64, and N102.

3.13.1 Shoulder Conditions on US 191

All ADOT highways not designated as “bicycles prohibited” are open to bicycle use. **Figure 20** shows that US 191 has an effective shoulder width of less than four feet. Text on the map indicates that facilities conditions as shown on this map often vary from one side of the road to the other. Bicyclists should use extreme caution while riding on Arizona highways. Discussion with the ADOT State Bicycle Coordinator indicated that although typically the ADOT policy is not to install bicycle route signs, there are locations where a jurisdiction has entered into an agreement with ADOT and paid for bicycle route sign installation and maintenance. Bicycle route signs can also include destination information.



Source: Bicycle User Map, referenced on 7/26/2011 from <http://www.azbikeped.org/maps.htm>

Figure 20 – Summary of Shoulder Conditions on US 191 within the Study Area Corridor

3.14 Pedestrian Sidewalks, Crossings, and Paths

A connected sidewalk and pathway system will encourage walking and provide links to destinations in Chinle and Many Farms area. Sidewalks on BIA and ADOT routes are shown in **Figure 21**. Sidewalks are located on sections of N7 and US 191.

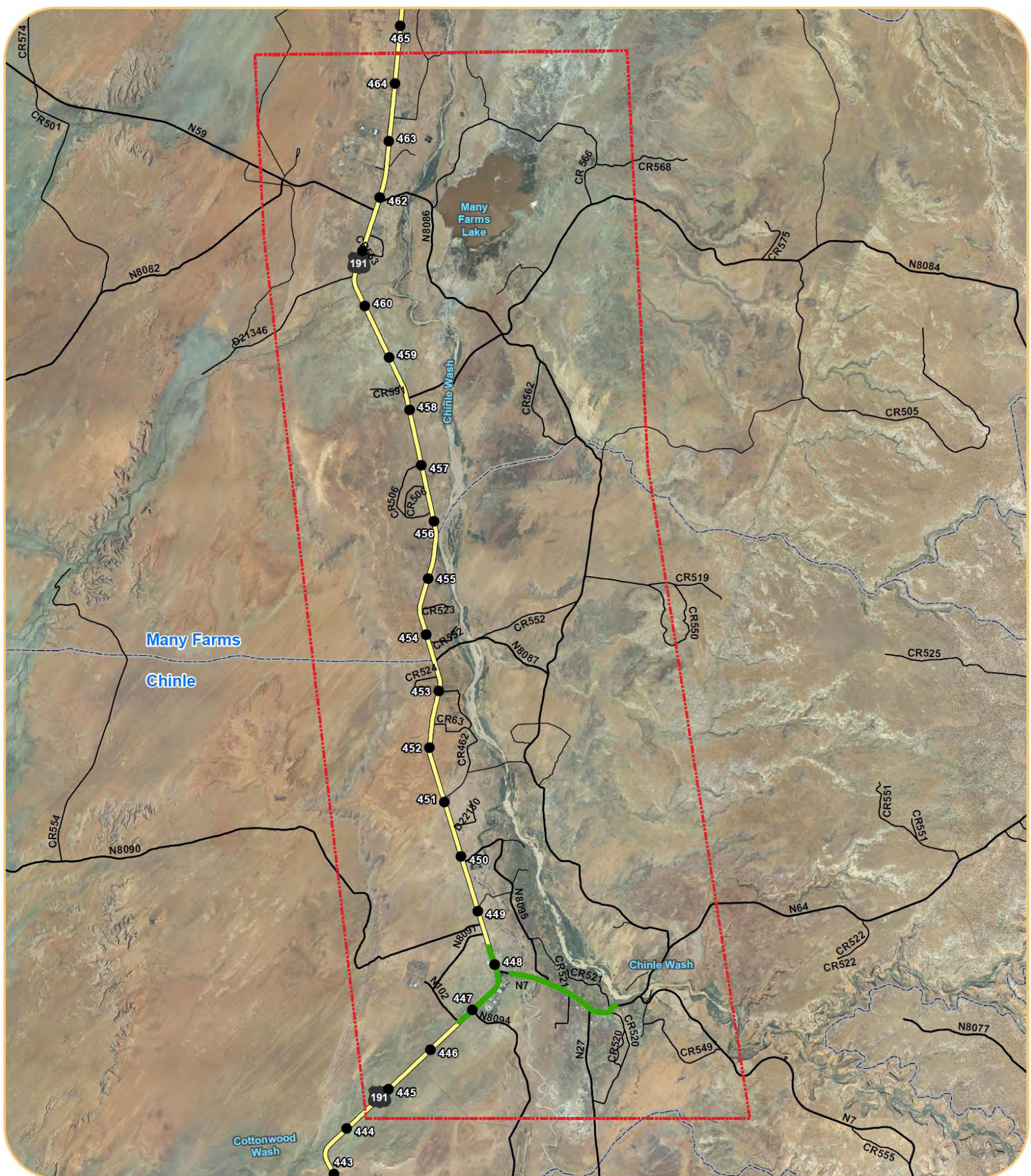
A sidewalk project was completed in July 2011 by the National Park Service (NPS) which included paving improvements and a short sidewalk extension near the Visitor Center. Originally the NPS concept was to extend sidewalks from the Canyon De Chelly Visitor Center to N7, where the current sidewalk terminates near the Holiday Inn (see the photo below). However, because of funding constraints, the new sidewalks extend a short distance from the Visitor Center. A project need will be to complete the sidewalk system from the Canyon De Chelly Visitor Center to N7, which end just east of the Holiday Inn in Chinle. This would also support economic development plans for future commercial development along N7.



View east of N7 near the Holiday Inn showing the end of the sidewalks on both sides of the street.

3.14.1 Pedestrian Access to Schools

Providing safe access to schools is a key pedestrian consideration for all the communities in this study area corridor. Both Chinle and Many Farms have schools located near major roads. Discussion with stakeholders in both the Chinle and Many Farms area indicated a number of needs regarding school crossings and pedestrian needs:



Legend

- US and State Highways
- Sidewalk
- BIA Roads
- Tribal/County Roads
- - - Study Area
- Mileposts
- Chapter Boundary

Note:
CR = County Route
N = Navajo (BIA) Route



0 0.5 1 2 Miles

Source: BIA IRR 2010 Inventory

Figure 21 – Sidewalk Locations



Pedestrian crosswalk in Chinle (N7) with striping that has been worn away.

- Improved school crossings are needed. These could potentially include higher visibility crosswalks with advance warning and flashers, (High-Intensity Activated crossWalk (HAWK) beacon crossings, pedestrian overpasses, or high visibility crosswalks. Improved crossings are needed on US 191 in Chinle, N7, and US 191 in Many Farms. A HAWK beacon is a traffic signal used to stop road traffic and allow pedestrians to cross safely. The purpose of a HAWK beacon is to allow protected pedestrian crossings, stopping road traffic only as needed. Unlike an

ordinary traffic signal, the HAWK beacon only lights when activated by a pedestrian who wishes to cross. The HAWK beacon first flashes yellow, then displays steady yellow, and finally steady red over a period of several seconds, allowing pedestrians to cross.

- Sidewalks are needed for students to reach the schools. Specific needs are:
 - ✓ Sidewalks along Lake View Road – Lake View Road connects residential areas to schools and to US 191. A sidewalk would provide better pedestrian access in this area.



Providing sidewalks along Lake View Drive will provide better access to the Many Farms High School and Chinle Boarding School

- ✓ Sidewalks to connect residential areas north of US 191 with schools and school crossings in Chinle.
- ✓ New sidewalk connections on N27, in coordination with paving improvements.

3.14.2 Pedestrian Safety Needs from ADOT Pedestrian Safety Plan, 2009

The ADOT Pedestrian Safety Action Plan analyzed segments of state highways with relatively high levels of pedestrian crashes. Within the study area corridor, one road segment was identified as having a high level of pedestrian crashes—US 191 between Milepost 446.6 and MP 448.2. This is the area where US 191 transitions from a four-lane to a five-lane section. The study recommended evaluation of the following potential countermeasures:

- Evaluate Crossing Opportunities - determine if signalized crossings should be installed.
- Remove Vegetation Overgrowth
- Evaluate Need for Sidewalk / Walkway Improvements along US 191
- Evaluate Need for a Raised Median

Reduced speeds through the areas may also increase safety.

3.15 Trails and Equestrian Paths

This section discusses conceptual plans for equestrian trails that were discussed in stakeholder interviews and with Navajo Division of Transportation staff. Suggestions for trails were made by the Chapter House representatives, the National Park Service, and the Navajo Division of Transportation Planners.

Chinle Area: The Chinle area is the gateway to the Canyon De Chelly National Monument, and attracts thousands of visitors each year. Many of these visitors stay at local hotels near the Monument and walk or drive to the Canyon De Chelly Visitor Center. In addition, the Canyon De Chelly Monument provides recreational opportunities for residents of the area. Interviews with stakeholders have indicated that it may be beneficial to provide a walking / interpretive trail from the Canyon De Chelly Visitor Center to the Thunderbird Lodge and Holiday Inn on N7.

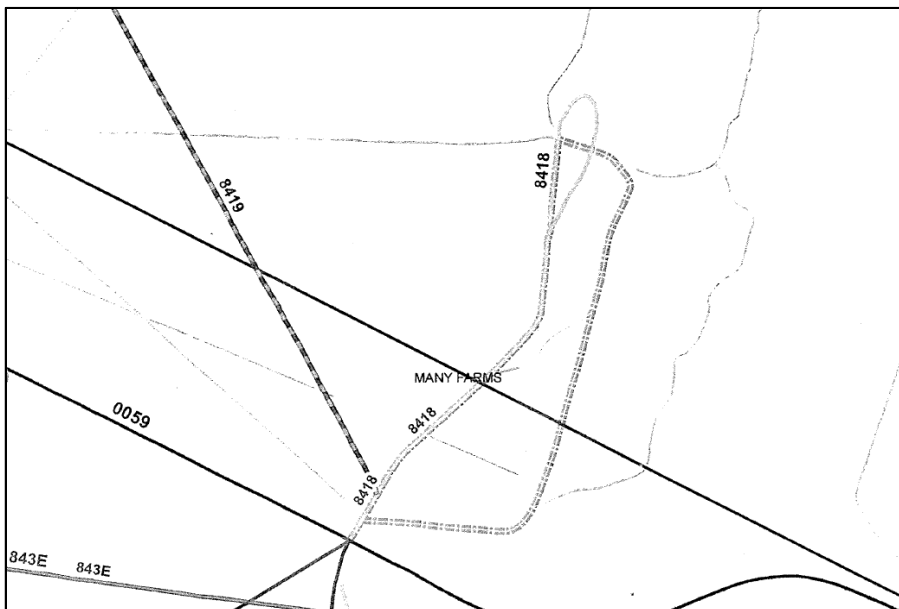
The residential area north of N7 and east of US 191 has a number of equestrians who ride regularly and could benefit from equestrian paths that link residential areas to commercial areas and Canyon De Chelly.

Many Farms Area: Discussion with the Chapter House representatives indicated that they would like to see more trails to serve Many Farms Lake, a major recreational site in the area, as well as trail connections to the high school area.



View of Many Farms Lake, looking north. Trails are needed to better serve this area.

Another need was a trail along N8418 at the foot of the hill west of the Many Farms High School.



Dashed line shows a planned trail improvement along N8418 at the foot of the hill west of the High School (Source: Many Farms Chapter)

3.16 Airports and Airport Access

Chinle Municipal Airport is a public airport located three miles southwest of the central business district of Chinle. The airport has one asphalt paved runway. It is a general aviation airport. According to ADOT the airport had 2,400 annual operations in 2010 (landings and takeoffs). There are 5 aircraft based at the airport (parked at the airport by owners). This airport serves primarily medical air transport.

Access to the airport is via N8094. This road has been recently paved and is in good condition; however the road needs striping near the airport. The good condition of the road will enhance economic development plans for the area near N8094 and US 191.



N8094 which serves the Chinle Airport

Discussion with the Navajo Nation Aviation Planner indicated that key needs and deficiencies with respect to the Chinle Airport and surrounding area are:

- There is an old wagon trail that crosses the access road to the airport. It is used by hikers and runners. There needs to be a pedestrian crossing sign where the trail crosses.
- There should be warning signs regarding animal crossings.
- Snow removal can be a problem on the access road. This is particularly critical for medical transport from the Chinle Hospital to the airport. Currently, a Memorandum of Understanding is being reviewed for maintenance between the Navajo Nation, Apache County, and the BIA.
- Striping is needed on a segment of N8094
- Destination and speed limit signage is needed. Graffiti is a problem.
- Perimeter fencing is needed along the road and around the airport. Animal crossings can be a problem.

The Navajo Nation has requested funding for an update of Airport Master Plans for Window Rock and Chinle Airports. Both airports are part of the National Plan of Integrated Airport Systems (NPIAS).

4 NEEDS AND DEFICIENCIES

The needs analysis was developed through a process which considered:

- Stakeholder / public input
- Traffic analysis
- Crash data analysis
- Project team observations

This chapter provides an overview of transportation needs including general transportation needs and roadway, pedestrian, bicycle, equestrian, transit, and airport access needs.

4.1 General Transportation Needs

General needs and deficiencies in the study area were:

1. Enhance the quality of life in the Chinle and Many Farms area by promoting a safe, well designed transportation system that promotes a sense of community through transportation that recognizes the safety needs of motorists, transit users, bicyclists, and pedestrians of all ages and abilities. At the national level, there is emphasis on providing more bicycle and pedestrian facilities along roadways to create “complete streets”. Complete streets are designed to function for all users to safely and effectively move along and across a complete street (see www.completestreets.org). An example of a complete street is shown in **Figure 22**.
Elements of a complete street in an urban area can include sidewalks, bike lanes (or wide paved shoulders), special bus lanes, comfortable and accessible transit stops, frequent crossing opportunities, median islands, accessible pedestrian signals, curb extensions, and more. A complete street in a rural area may have different elements, but should achieve the same goal.
2. Provide transportation improvements that will enhance economic development and tourism.
3. Destination signing to both public services and tourism destinations.
4. Rural addressing system – police and fire department representatives both expressed needs for better street addresses and street names signs.
5. Extend the Tse’nikani Scenic Road limits south to Chinle. Consider providing a continuous scenic route to link the Tse’nikani Scenic Road to the Dine Tah Scenic Road to provide a more continuous scenic road system to encourage visitor travel. Other considerations include linking the scenic road to the Monument Valley Scenic Road in Kayenta and extending the scenic byway further south to the Beautiful Valley area. A rest area was also a need requested by the Technical Advisory Committee. There are very few respite areas for truckers in this region, and tourist information can be provided at the rest stop.

6. Finding ways to make signs graffiti resistant or to discourage graffiti was mentioned by a number of stakeholders.
7. Back fencing, or reinforcing the fencing behind the ADOT right-of-way fence, is needed along the US 191 since the right-of-way fences frequently build up with sand and tumbleweeds. A fencing and cattle guard replacement project on US 191 between Chinle and Many Farms began in 2011. This project should help to reduce the incidence of animal crashes on US 191, but back fencing will make this improvement more lasting.
8. Improvements on US 191 to address safety including widening, access management improvements, turn lanes, wider shoulders, bus pullouts, and other safety improvements.
9. Provision of emergency access routes as an alternative to US 191.
10. Provision of paved roads and trails to provide better access to Many Farms Lake. Provide road connections to planned docks. Better access to Many Farms Lake can enhance tourism and economic development.
11. Help in obtaining a grant writer to obtain funding for improvements.

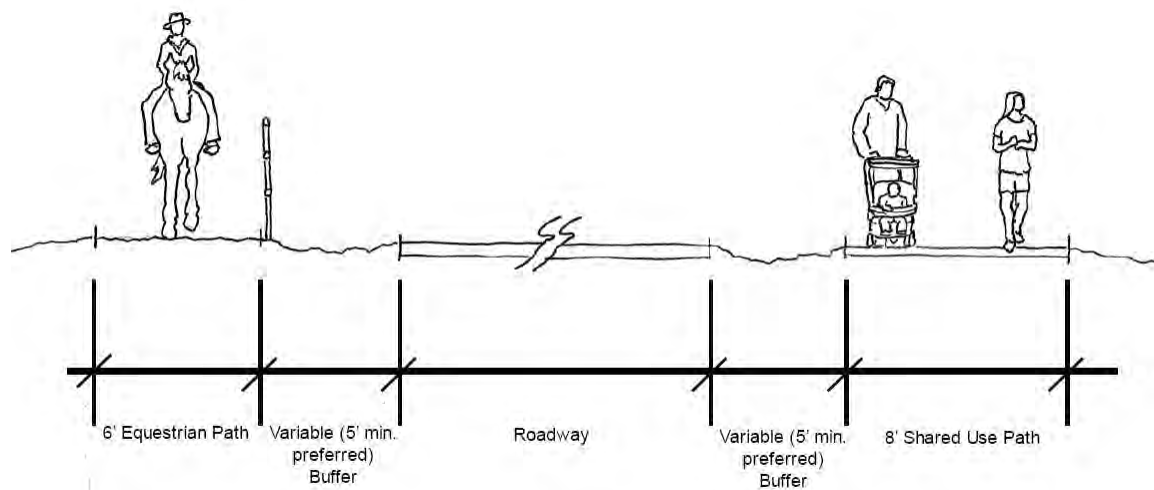


Figure 22 – Example of a "Complete Street"

4.2 Roadway, Street Lighting, and Traffic Control Needs

Roadway needs are summarized in **Figure 23**. A brief overview of those needs is summarized as follows:

4.2.1 Street Improvements – Paving and Repaving Needs

Poor road conditions can lead to wear and tear on vehicles and can damage tires, suspension systems, and wheel alignment. Braking to avoid potholes or to slow for washboarded pavements conditions can also provide additional wear for the brake system. In addition, pothole related accidents can result in injuries.



Resurfacing this relatively small segment of Lake View Road in Many Farms will provide better access to church, schools, and residential areas.

Key needs included:

- Providing gravel or paving on roads serving as bus routes. On lower volume routes, providing a gravel surface is recommended as a first step towards paving. **Figure 23** summarizes resurfacing needs.
- Paving routes that can serve as emergency access routes. These routes include N8091, N8095, and N27. Providing better paved road connections will also support economic development plans.
- Providing gravel surfaces on current unpaved roads serving Many Farms Lake will support economic development plans for the Lake.
- Repaving a segment of Lake View Road in Many Farms that intersects with US 191. This road segment provides access to residences, church, and schools.
- Resurfacing roads as indicated by a review of the BIA IRR Inventory data and design standards, which included sections of BIA routes N7, N27, N64, N102, N8082, N8084, N8086, N8087, N8090, N8094, and N8095. Shoulder upgrades were also recommended on many of these routes, with the exception of N102.

4.2.2 Street Improvements – Road Widening

There were a number of comments from stakeholders regarding the need to widen US 191 to four lanes between Chinle and Many Farms. Vehicles and school bus activity causes delays and increases the potential for rear-end collisions. The traffic analysis did not indicate a four-lane facility was warranted through 2030. However, in the interim, improvements such as right- and left-turn lanes, wider shoulders, bus pullouts, provision of raised medians, through Chinle and Many Farms, speed control, and other improvements can reduce delays and improve safety, and should be considered by ADOT for implementation.

Recommendations from previous planning studies that involve US 191 are:

The 2009 Navajo Nation Long Range Plan

Short-Term Plans:

- Chinle: Street lights at the hospital access road (N102).

Long-Term Plans:

- Chinle: Five-lane widening, access management design, roadway widening to the flea market for safety improvement: raised medians, and limited access/turnoffs between MP 446 – MP 449.
- Street lights on US 191 from airport access to N8090.
- Chinle: Amenities such as bicycle paths and sidewalks will support tourism and create a livable community atmosphere.
- Many Farms: Five-lane widening from junction N59/US 191 to High School turnoff.

The 2000 US 191 Corridor Profile Study recommended:

- MP 444-446.5 - Rebuild roadway including sub-base and improve drainage.
- MP 446.5-448.5 - Widen to a five-lane cross section to accommodate local growth.
- MP 448.5-471.5 - Add paved shoulders to meet current AASHTO standards and to accommodate bicycles. This includes the installation of edge line rumble strips.
- Entire Corridor - Install delineators along shoulder, install centerline rumble strips on two-lane sections, and review passing distances based on existing speed limits.

Other recommendations were:

- Chinle - Construct raised medians to control access, provide refuge for pedestrians, and add to the aesthetic quality of the urban environment.
- Entire Corridor- Development of an Access Control Plan for both rural and urban portions of US 191. This would include the specification of permitted access points, acceleration and deceleration lane lengths, and necessary provisions for domestic and wild animal control fences.
- US 191 - Recommend as a state-designated scenic byway.

Review of the IRR BIA inventory indicated that many routes needed widening to meet lane width standards. These routes included sections of BIA routes N7, N27, N59, N64, N8082, N8084, N8086, N8087, N8090, N8091, N8094, and N8095. Sections of these routes, with the exception of N59 also need shoulder widening. In the long term, future widening of N7 to four lanes near the Canyon de Chelly entrance may be indicated, particularly if development and growth occurs in this area.

4.2.3 New Road Connections / Frontage Roads

An important need in the Chinle area is the provision of alternate routes to US 191. Paving N8095 will also provide a better alternative travel route. West of US 191, providing a paved connection on N8091 will provide an alternate route to US 191 and will also provide travel options for commuters to the hospital.

Paving N27 and providing a connection between N27 and N8094 will improve traffic circulation and access.

The Many Farms Chapter has planned a system of frontage roads throughout the area adjacent to US 191 to provide better access. **Figure 23** shows the location of proposed frontage roads within the study area corridor. There are also other frontage roads planned outside of the study area corridor. Other proposed street connections were requested by stakeholders in order to provide alternative access in the Chinle area. An initial need is to advance the planning of the frontage roads system through adding the proposed frontage roads to the BIA IRR Inventory system.

Another step will be to coordinate the location of the frontage roads which intersect US 191 with ADOT. ADOT staff supports consolidating access points, and have indicated that they would not approve new road connections on US 191 in the study area.

4.2.4 Street Lighting

Street lighting was requested by both the Chinle and Many Farms Chapters. In Many Farms, a key concern was providing street lighting on US 191 through Many Farms (between Milepost 461 and 463). This was supported by the crash analysis which showed that a higher percent of nighttime and dawn/dusk crashes occurred in Many Farms as compared to the US 191 corridor as a whole. N59 also had a relatively high proportion of nighttime/dawn/dusk crashes (53% of the total crashes).

In Chinle, street lighting was requested on N7. On N7 between US 191 and the Holiday Inn (approximately Milepost 2.3), about 38% of the crashes occurred during nighttime or dawn/dusk.

4.2.5 Intersection Traffic Control

Traffic signals were requested on US 191 at N102 in Chinle and at N59 in Many Farms. A traffic signal is planned to be installed at the US 191 / N102 intersection in the spring of 2012. N102 serves the traffic from the Chinle Comprehensive Health Care Facility

and the stop-controlled intersection with US 191 gets congested currently during peak periods when workers are going to or coming from work.

4.2.6 Signing Needs

The need for destination signing was observed during field reviews and was also noted as a concern by stakeholders. Destination signing can provide needed guidance to public services, the Chinle Airport, and recreational areas. A number of stakeholders have voiced concerns that graffiti and shooting through signs is a problem, because signs become impossible to read, and it causes greater costs for sign replacement and labor. Although graffiti resistant coating can be specified on signs, the coating still must be cleaned to remove the graffiti. Advance signing for bus stops was also expressed as a need, as was the need for speed limit signs on N8094.

4.2.7 Bridge Needs

Stakeholders indicated that new bridge or bridge improvements were needed at three locations over the Chinle Wash, shown in **Figure 23**.

4.2.8 Airport Access Needs

Key airport access needs included provision of more destination signage on US 191 on the northbound and on N8094 and providing striping on N8094, where required.

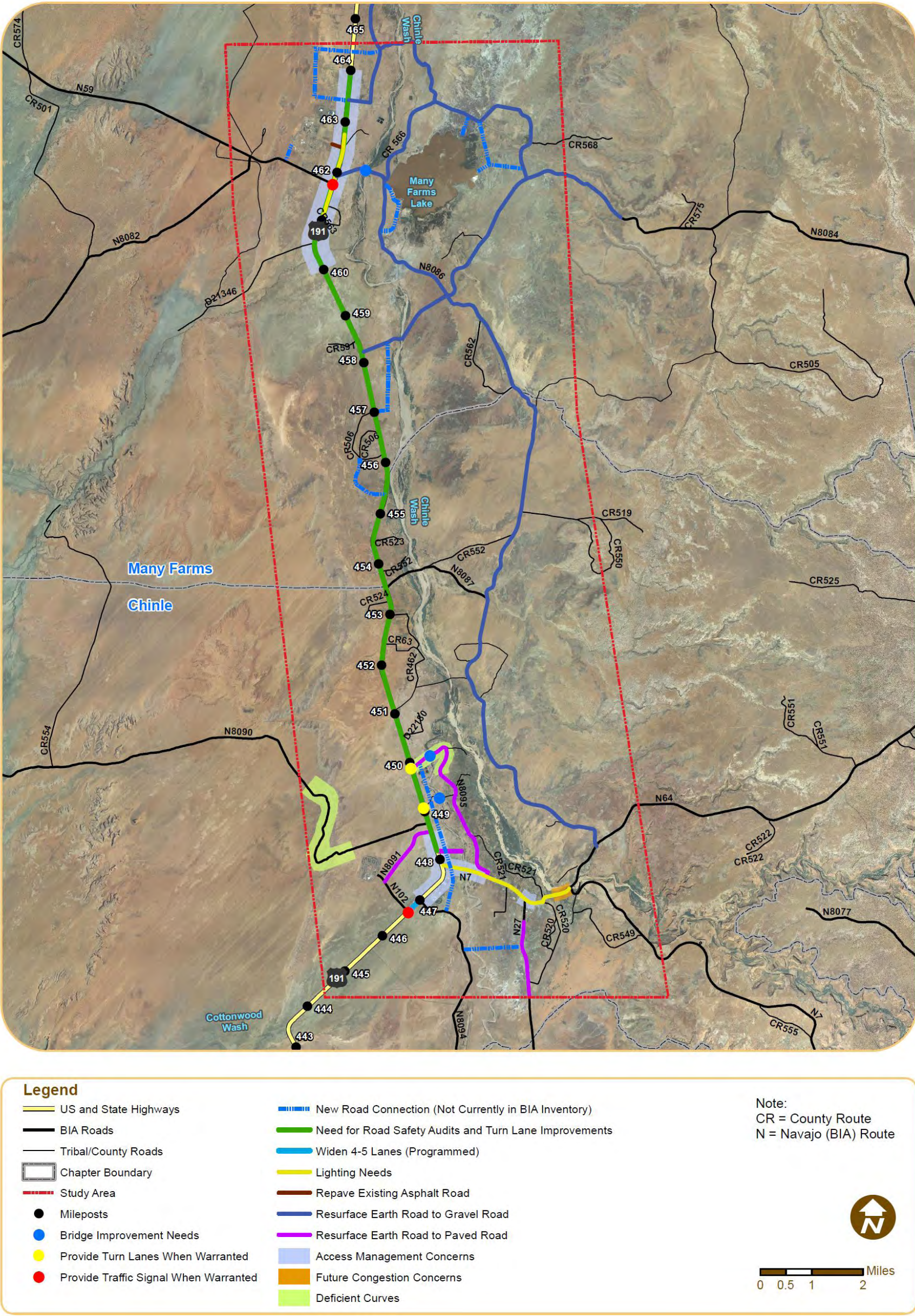
4.2.9 Transit Needs

Provision of local transit service was a key need. Bus pullouts and advance signing for pullouts are needed to reduce delays and reduce the potential for rear-end collisions. School district staff provided input that delays and potential hazards occur when buses have to stop on the streets, rather than in bus pullouts. Signing is needed to alert drivers of the need to stop when a bus has its red flashing lights on. Transit needs are shown in **Figure 24**.

Implementation of local transit service is planned by Navajo Transit System. Also planned is construction of a transit center and bus stops to support the service.

CHINLE-MANY FARMS

Roadway Related Needs and Deficiencies



Source: Local, Community, Stakeholder and Project Team Input

Figure 23 – Roadway Needs and Deficiencies

4.3 Non-Motorized Transportation Needs

As emphasized by Navajo DOT at the start of this study effort, conveniently and safely designed walkways to improved trails do not exist for pedestrians to shop, visit, or exercise to improve health in the study area corridor. Non-motorized transportation needs include pedestrian and equestrian needs. These needs and their locations are shown in **Figure 24** which also includes enlargement insets of the Chapter growth areas. Also brief description of these needs is provided below.

4.3.1 Pedestrian Needs

The Chinle and Many Farms area have a number of schools that have direct access to US 191. Ensuring safe access to the schools is a critical concern. Pedestrian needs include improved school crossings, sidewalks, and trails.

4.3.2 School Crossings

A critical need is to upgrade school crossings in both Chinle and Many Farms. Observations have shown that the markings are faded and not very visible. Studies should be conducted to determine if the number of pedestrians meet warrants for HAWK beacon signals at any of the crosswalk locations. Other options include high visibility crosswalks, overpasses, and additional school crossing signage with flashers.

A pedestrian bridge was requested as a need in the Many Farms area, to make it safer for children to cross US 191 to the Many Farms Elementary School.

Speed control should also be considered through these areas.

4.3.3 Sidewalks

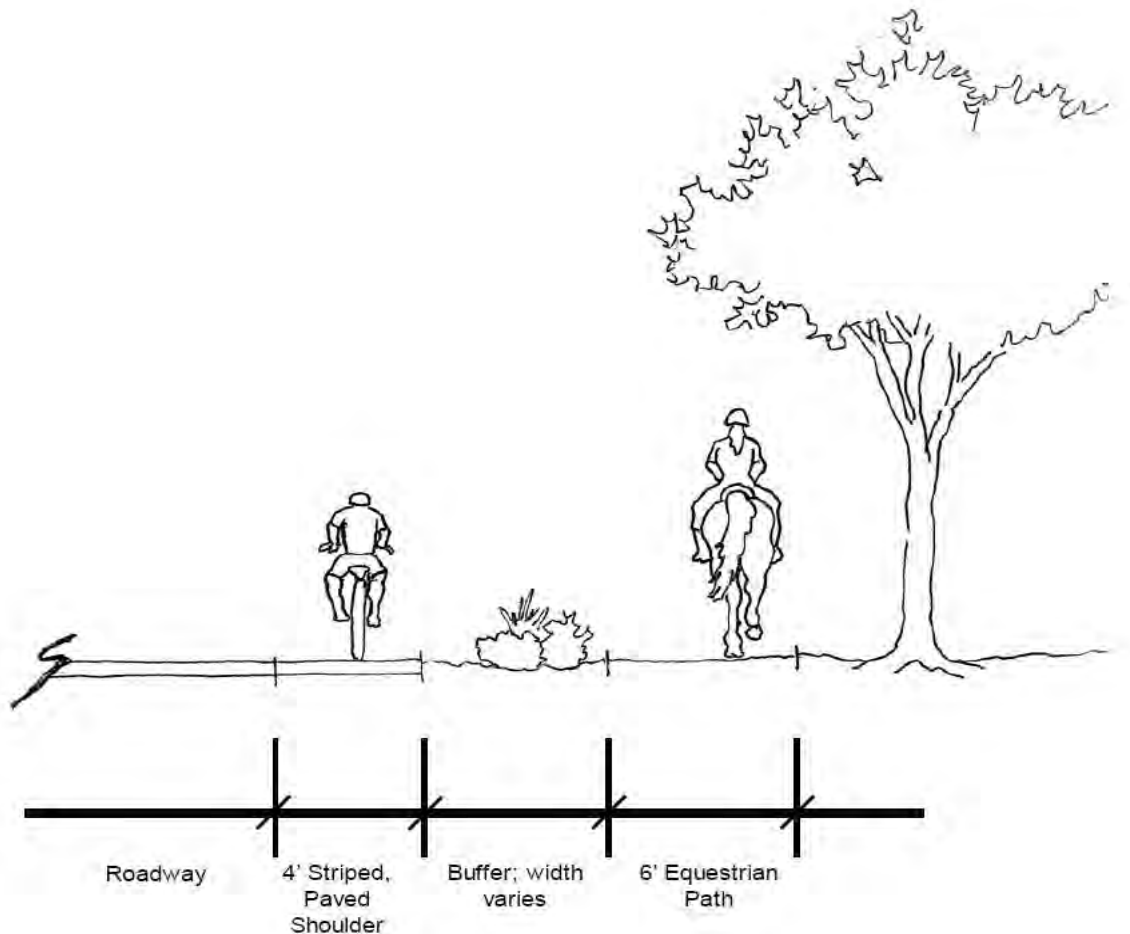
There is a need to extend the sidewalk on N7 east to the Canyon De Chelly Visitor Center. A sidewalk on N102 will connect the hospital with residential areas. Other sidewalk needs include extending the sidewalks on N27.

In Many Farms, a sidewalk on Lake View Road would connect residential areas to the Many Farms Boarding School campus. Sidewalks on N59 are needed to connect residential areas, the Chapter House, and US 191.

4.3.4 Equestrian and Multiuse Trails

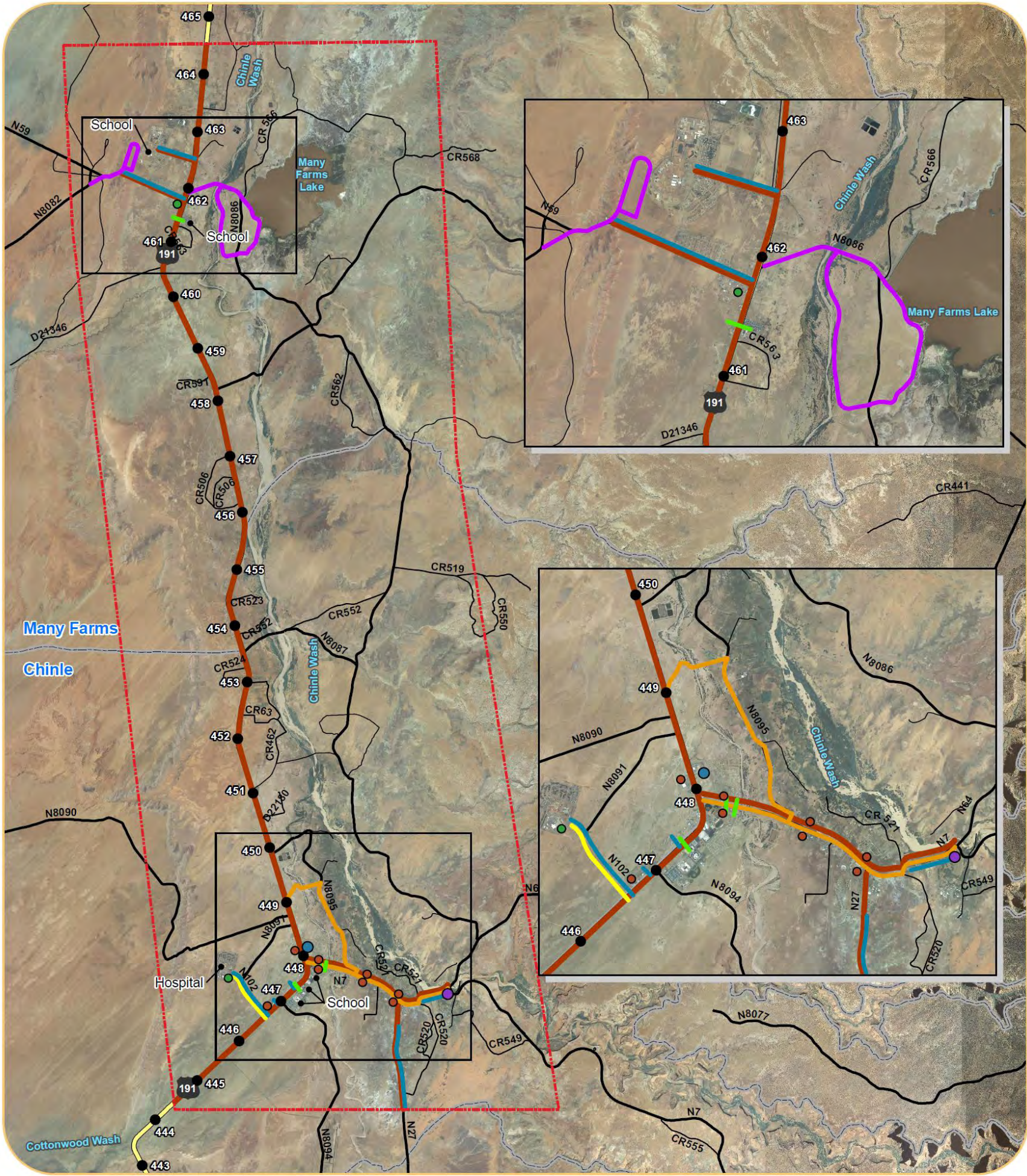
The Chinle area is the gateway to the Canyon De Chelly National Monument which attracts thousands of visitors each year. Many of these visitors stay at local hotels near the Monument and walk or drive to the Canyon De Chelly Visitor Center. In addition, the Canyon De Chelly Monument provides recreational opportunities for residents of the area. Key needs include provisions of a multiuse trail to support both pedestrian and equestrian trips on N7. Interviews with stakeholders have indicated that it may be beneficial to provide a walking / interpretive trail from the Canyon De Chelly Visitor Center to the Thunderbird Lodge and Holiday Inn area.

In Many Farms, the Many Farms Lake is an important recreational site. Discussion with Chapter House representatives indicated that they would like to see more trails to serve Many Farms Lake, and to serve future development of docks. Another Chapter need was a trail along N8418 at the foot of the hill west of the Many Farms High School. An example of an equestrian path near a road is shown below.



4.3.5 Bicycle Needs

There are very few routes with shoulders that are suitable to serve as bicycle routes. In Chinle, N102 has a paved shoulder that can be striped as a bicycle lane. US 191 is a continuous through route through both Chinle and Many Farms, and a wider shoulder would provide a long continuous bicycle route. N7 serves a variety of land uses and provides access to Canyon De Chelly, and should have provision of wider shoulders for bicycle routes in the future. N27 is also a key route serving multiple residents. In Many Farms, bicycle routes are needed to serve residential areas on N59 and Lake View Road. As more roads are paved, provisions for paved shoulders should be included in the design and construction.



Legend

- US and State Highways
- BIA Roads
- Tribal/County Roads
- Chapter Boundary
- Study Area

- Mileposts
- Existing Bus Stop
- Proposed Bus Pullout with Shelter
- Proposed Transit Center
- Proposed Bus Turnaround

- Pedestrian/School Crossing Needs
- Sidewalk Needs
- Shared-use Paths
- Equestrian Paths
- Widen Shoulders to Provide Bike Lane
- Stripe Shoulder for Bike Lane

Note:
CR = County Route
N = Navajo (BIA) Route



0 0.5 1 2 Miles

Source: Local, Community, Stakeholder, and Project Team Input

Figure 24 – Transit and Non-Motorized Transportation Needs and Deficiencies

5 CHINLE CHAPTER RECOMMENDED TRANSPORTATION PROJECTS

5.1 Tribal Road Projects

Key objectives of the road projects proposed are:

1. Provide better accessibility and emergency access.
2. Improve the condition of the street system through paving and repaving projects. This will reduce maintenance costs for the traveling public, and provide a safer traveling environment.
3. Providing new road connections to provide better access and stimulate economic development; and
4. Improving safety through the provision of street lighting.

The projects were developed through a study planning process that included stakeholder interviews, public input through public meetings, and traffic analysis, including an analysis of crash data.



It is recommended that all new road projects be designed as “Complete Streets” whenever possible. According to the National Complete Streets Coalition, Complete Streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and transit riders of all ages and abilities must be able to safely move along and across a Complete Street.

N7, Chinle

Although this study chapter focuses on roadway needs, later chapters will show how bicycle, pedestrian and equestrian improvements will be integrated into the roadway system, and are coordinated with roadway projects presented in this chapter.



This street in Sierra Vista, Arizona, has a bike lane as well as a multiuse path for pedestrians and bicyclists

The Chinle Chapter is located in the central region of the Navajo Nation near the Canyon De Chelly National Monument. Proposed projects on tribal roads to meet roadway needs in the Chinle Chapter study area corridor are summarized in **Table 27** and shown graphically in **Figure 25**.

Each of these projects is described in more detail in the Project Information Sheets that follow. The location of the project appears as a yellow line (if the project can be depicted through a line drawing). The Project Information Sheets include a brief description, project justification, planning level construction cost estimate, potential funding sources, and comments (primarily relating to whether the project is currently programmed or potential design constraints). Costs for programmed projects were taken from the *FY 2012 Tribal Transportation Improvement Plan*. Planning level cost estimates for projects that are not currently programmed were developed for each project type.

CHINLE CHAPTER

Recommended Tribal Roadway Projects

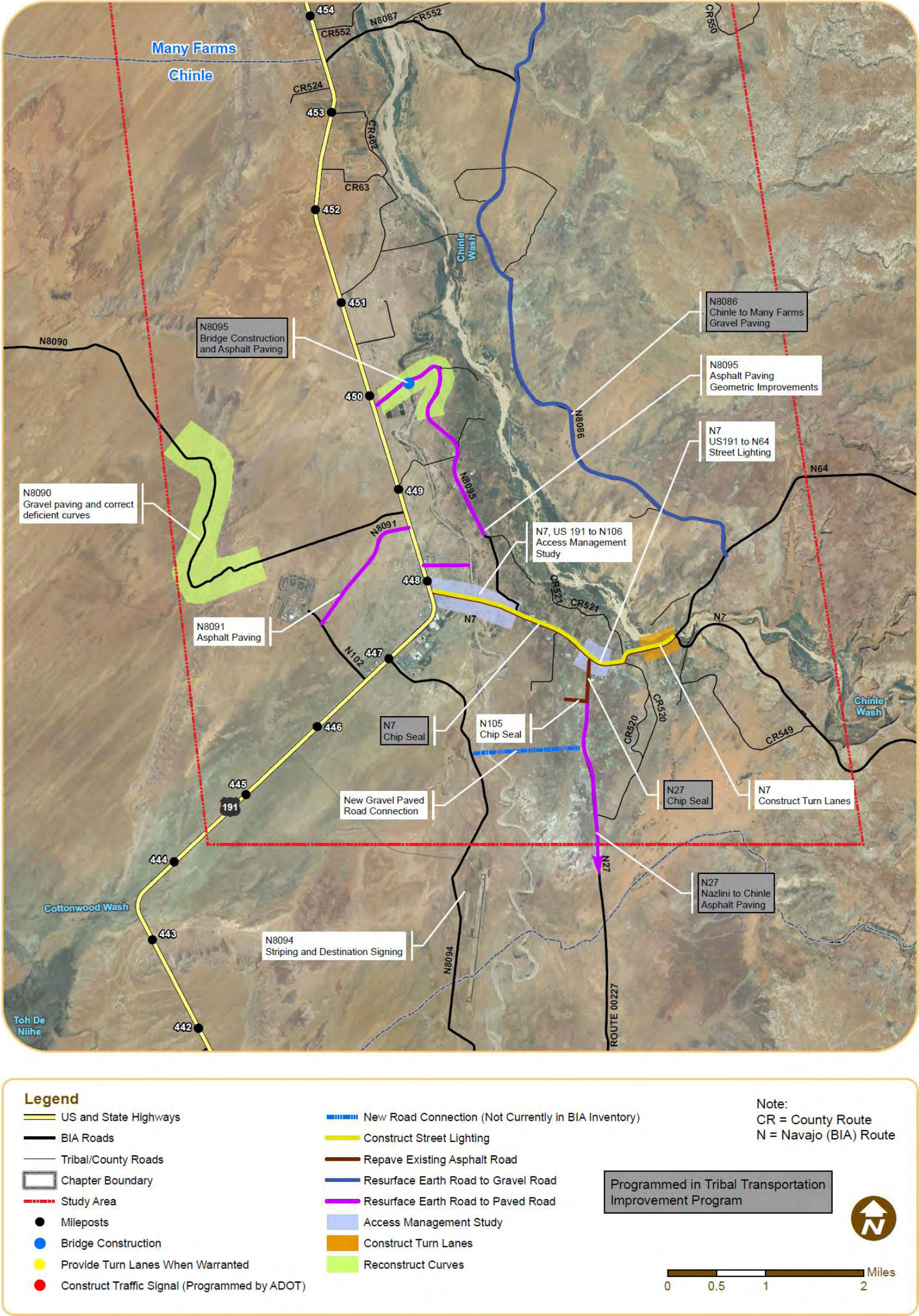


Figure 25 - Chinle Chapter Recommended Tribal Roadway Projects

Table 27 - Tribal Roadway and Intersection Projects – Chinle Chapter

Route Number or Name	Project Number *	Project Limits	Project Description	Comment^	Length (miles)	Estimated Cost (millions)	Additional Information
N7	None	US 191 to Milepost 2.3	Construct street lighting	A, B, C, D	2.30	\$0.92	Not programmed
N7	None	N64 to 4-lane section	Add accelerating/decelerating lanes at major turn offs.	A, B, C, D	0.10	\$0.20	Not programmed
N7	N7(3-1) / N7A(1-1)4	US 191 to N64	Chip Seal	D, W	2.46	\$0.03	Scheduled in 2015 – Navajo TIP
N7	None	US 191 to N106	Access Study and preliminary design	D	0.35	\$0.05	Not Programmed
N27	N27(2-2)1,2&4	Nazlini North to Chinle	Grade, drain, and surfacing (pavement) construction	D, W	4.20	\$8.00	Scheduled in 2013– Navajo TIP
N27	N27(2-3)1,2&4	Nazlini North to Chinle	Grade, drain, and surfacing (pavement) construction	D, W	5.30	\$10.17	Scheduled in 2022
N27	N27(4-2) 4	N7 to 0.45 miles south	Chip Seal	D, W	0.45	\$0.05	Scheduled in 2015 – Navajo TIP
N105	None	N27 to 0.21 miles west	Chip Seal	D, W	0.21	\$0.01	Not programmed
N8086	N8086(2) 2,3	Chinle to Many Farms US 191 to N64	Grade, drain and gravel paving	A, B, C, D	8.80	\$10.56	Scheduled in 2042
N8090	None	US 191 to 4.4 miles west of US 191	Grade, drain and gravel paving. Construct curves to design standards.	A, B, C, D	4.40	\$4.07	Not programmed
N8091	None	N102 to US 191	Grade, drain, and surfacing (pavement) construction	A, B, C, D	1.4	\$2.18	Not programmed

Route Number or Name	Project Number *	Project Limits	Project Description	Comment^	Length (miles)	Estimated Cost (millions)	Additional Information
N8095	N8095 (1) / N8081 (1)1,2&3	Grade, drain, and gravel paving and bridge construction	Bridge construction and paving for approach to bridge	A, B, C, D	1.00	\$2.14	Scheduled in 2015 – Navajo TIP
N8095	None	US 191 to N7	GDS – Grade, Drain, and Surfacing (pavement) construction	A, B, C, D	3.3	\$5.13	Not programmed
New east – west road between N8094 and N27	None	N8094 to N27	Feasibility study and design to determine location, drainage, and ROW requirements for proposed gravel / paved road	A, B, C, D	1.0	\$0.10	Not programmed Road needs to be added to IRR Inventory

*Referenced to Tribal Transportation Improvement Program

^ A = ROW Needed; B = Environmental Assessment Needed; C = Archaeological Clearance Needed; D = Surveying Data Needed; U – Utility Relocation Needed; W = Within Existing ROW

Chinle Chapter Project Information Sheet – N7 Street Lighting

Route Number	N7
Project Location	US 191 to 2.3 miles east of US 191
Project Description	Construct street lighting, 2.3 miles
Project Justification	Street lighting will improve safety on this corridor
Cost Estimate	\$0.92M
Potential Funding Sources	IRR Construction Funds Navajo Fuel Excise Tax Public Lands Highway Discretionary Program State and Community Safety Grant Program IHS Injury Prevention Program
Comments	Not programmed. Right-of-way is narrow in this area, so additional ROW may be required



Chinle Chapter Project Information Sheet – N7 Road Widening

Route Number	N7
Project Location	N7, N64 to existing 4-lane section
Project Description	Add accelerating / decelerating lanes at major turnoffs
Project Justification	Improve safety and circulation
Cost Estimate	\$0.20M
Potential Funding Sources	IRR Construction Funds Navajo Fuel Excise Tax Public Lands Discretionary Program
Comments	Not currently programmed



N7 looking east, showing transition from 4 lanes to 2 lanes



Chinle Chapter Project Information Sheet – N7 Chip Seal

Route Number	N7
Project Location	US 191 to N64
Project Description	Chip seal, 2.46 miles
Project Justification	Improved safety
Cost Estimate	\$0.03M
Funding Source	IRR Construction Funds
Comments	Scheduled in 2015



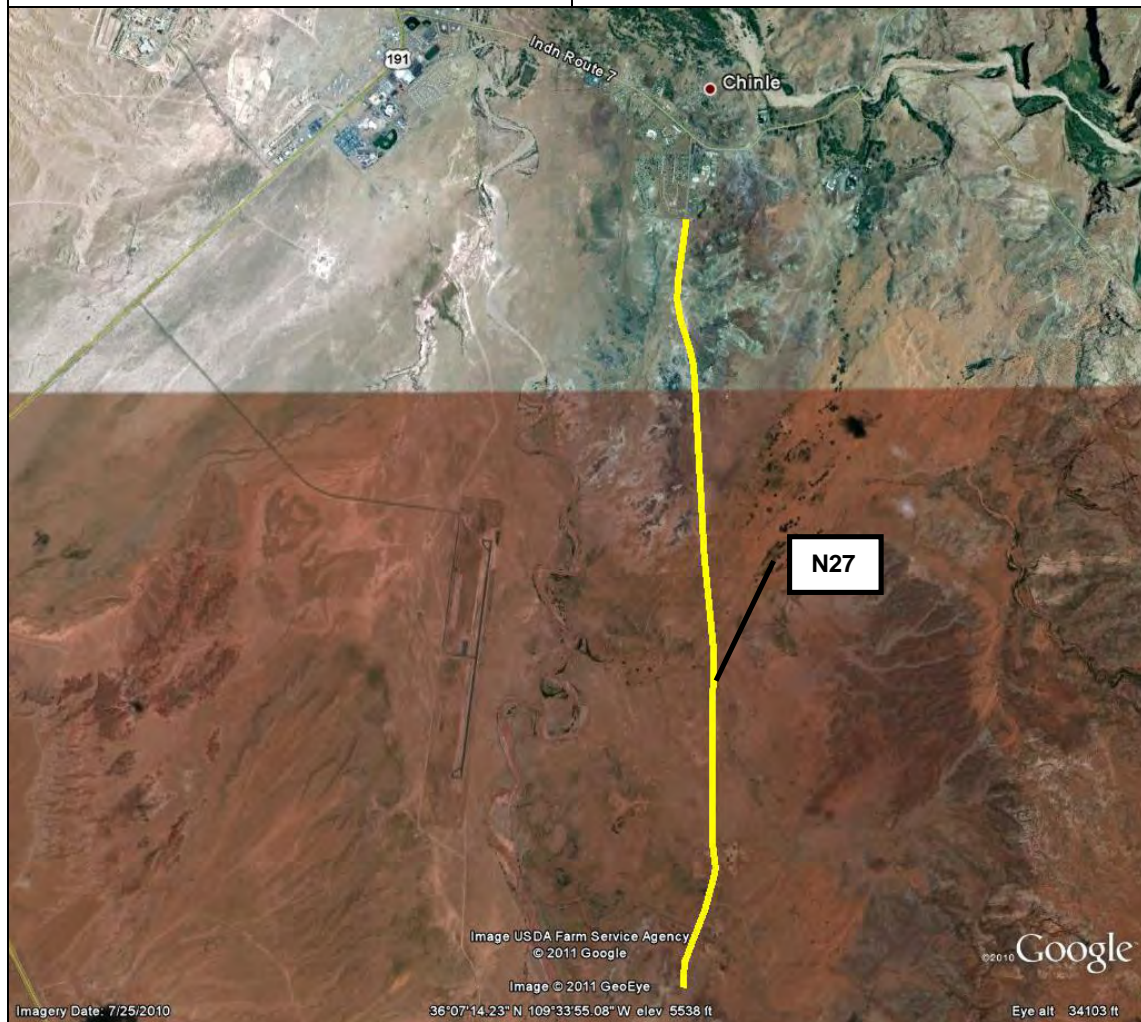
Chinle Chapter Project Information Sheet – N7 Access Study

Route Number	N7
Project Location	N7, US 191 to N106, 0.35 miles
Project Description	Access Management Study to determine cost, impacts and strategies for medians, turn lanes, driveway consolidation, and other access management related improvements. This would include a preliminary design.
Project Justification	Improved safety
Cost Estimate	\$0.05M
Potential Funding Sources	Public Lands Highway Discretionary Program Project Development Activity Funds
Comments	Not programmed



Chinle Chapter Project Information Sheet – N27 Asphalt Paving

Route Number	N27
Project Location	Nazlini to Chinle
Project Description	Grade, drain and surfacing construction for 5.3 miles
Project Justification	Paving this road will improve north-south connectivity between Chinle and Nazlini
Cost Estimate	\$8.0M
Potential Funding Sources	IRR Construction Funds
Comments	Scheduled in 2013: N27(2-3)1,2,4



Chinle Chapter Project Information Sheet – N27 Chip Seal

Route Number	N27
Project Location	N7 to 0.45 miles south of N27
Project Description	Chip seal
Project Justification	Paving this road will improve driving conditions for community members
Cost Estimate	\$0.05M
Potential Funding Sources	IRR Construction Funds
Comments	Scheduled in 2015: N27(4-2)4



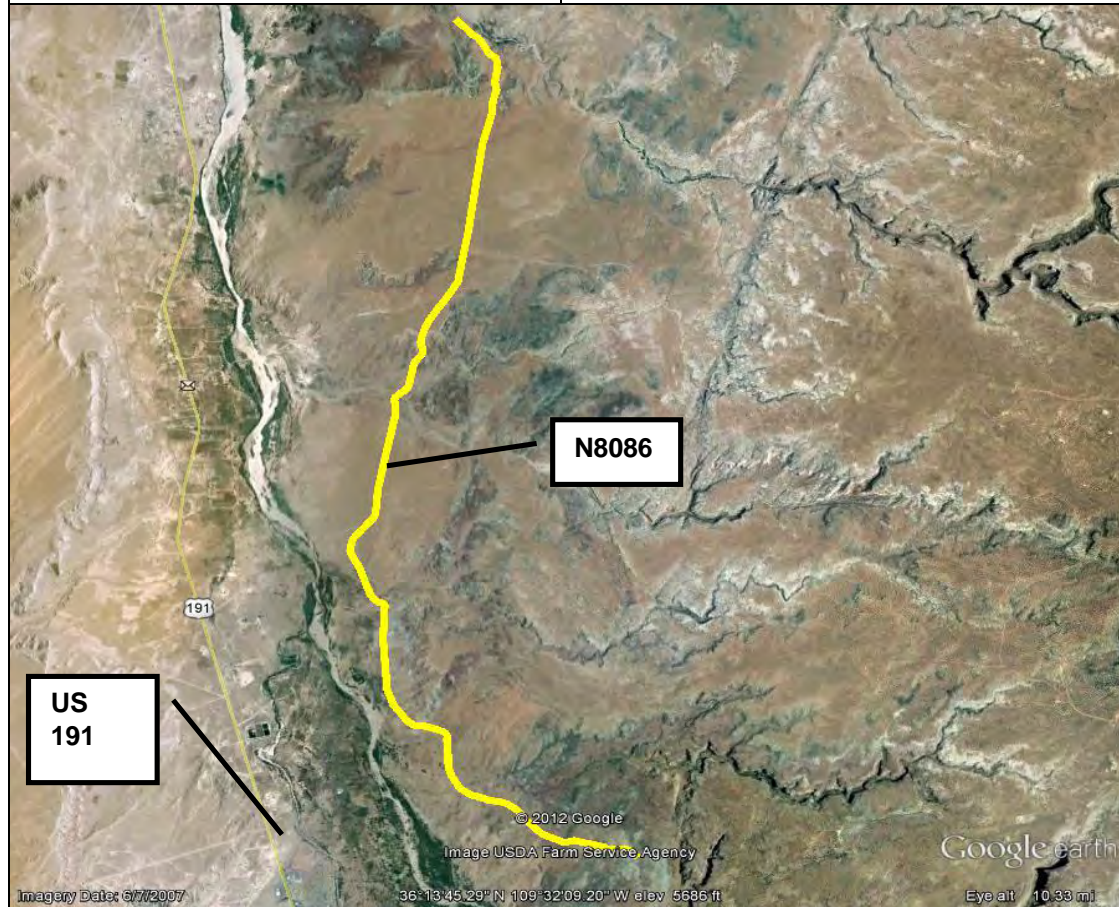
Chinle Chapter Project Information Sheet – N105 Chip Seal

Route Number	N105
Project Location	N105, N27 to 0.2 miles west of N27
Project Description	Chip Seal, 0.21 miles
Project Justification	This road, which serves residences, is in poor condition.
Cost Estimate	\$0.01M
Potential Funding Sources	IRR Construction Funds Navajo Fuel Excise Tax Public Lands Highway Discretionary Program
Comments	Not programmed.



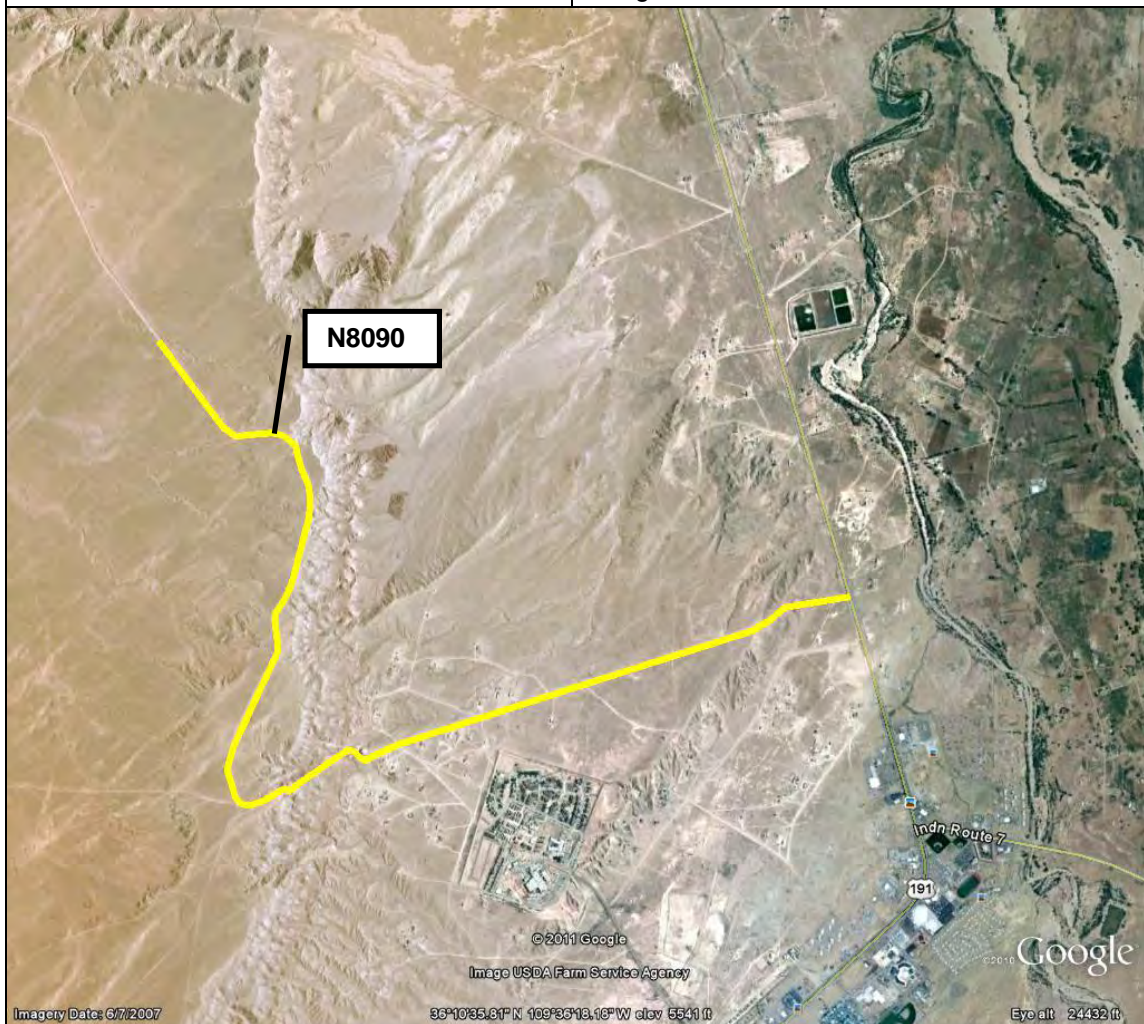
Chinle Chapter Project Information Sheet – N8086 Gravel Paving

Route Number	N8086
Project Location	US 191 to N64
Project Description	Grade, drain and gravel, 17.4 miles
Project Justification	This route will provide alternate access to US 191 and improve driving conditions.
Cost Estimate	\$10.56M
Potential Funding Sources	IRR Construction Funds Navajo Fuel Excise Tax Indian Community Development Block Grant Program Public Lands Highway Discretionary Program
Comments	Scheduled in 2042: N8086(2)2,3



Chinle Chapter Project Information Sheet – N8090 Gravel Paving

Route Number	N8090
Project Location	N8090, US 191 to 4.4 miles west of US 191
Project Description	Grade, drain, and gravel paving, 4.4 miles. Construct curves to design standards.
Project Justification	Provide connectivity to Rough Rock. Correct deficient curves.
Cost Estimate	\$4.07M
Potential funding sources	IRR Construction funds Navajo Fuel Excise Tax Public Lands Highway Discretionary Program
Comments	Not programmed. Steepness of curves are a design constraint



Chinle Chapter Project Information Sheet – N8091 Asphalt Paving

Route Number	N8091
Project Location	N102 to US 191
Project Description	Grade, drain and provide asphalt paving, 1.4 miles
Project Justification	Provide better emergency access and a paved detour route to US 191. This route will also provide an alternate route to the Chinle hospital. Paving and raising this road can help solve drainage/flood problems in Chinle by intercepting and diverting runoff that causes current flooding problem on US191.
Cost Estimate	\$ 2.18M
Potential funding sources	IRR Construction funds Navajo Fuel Excise Tax Public Lands Highway Discretionary Program
Comments	Not programmed



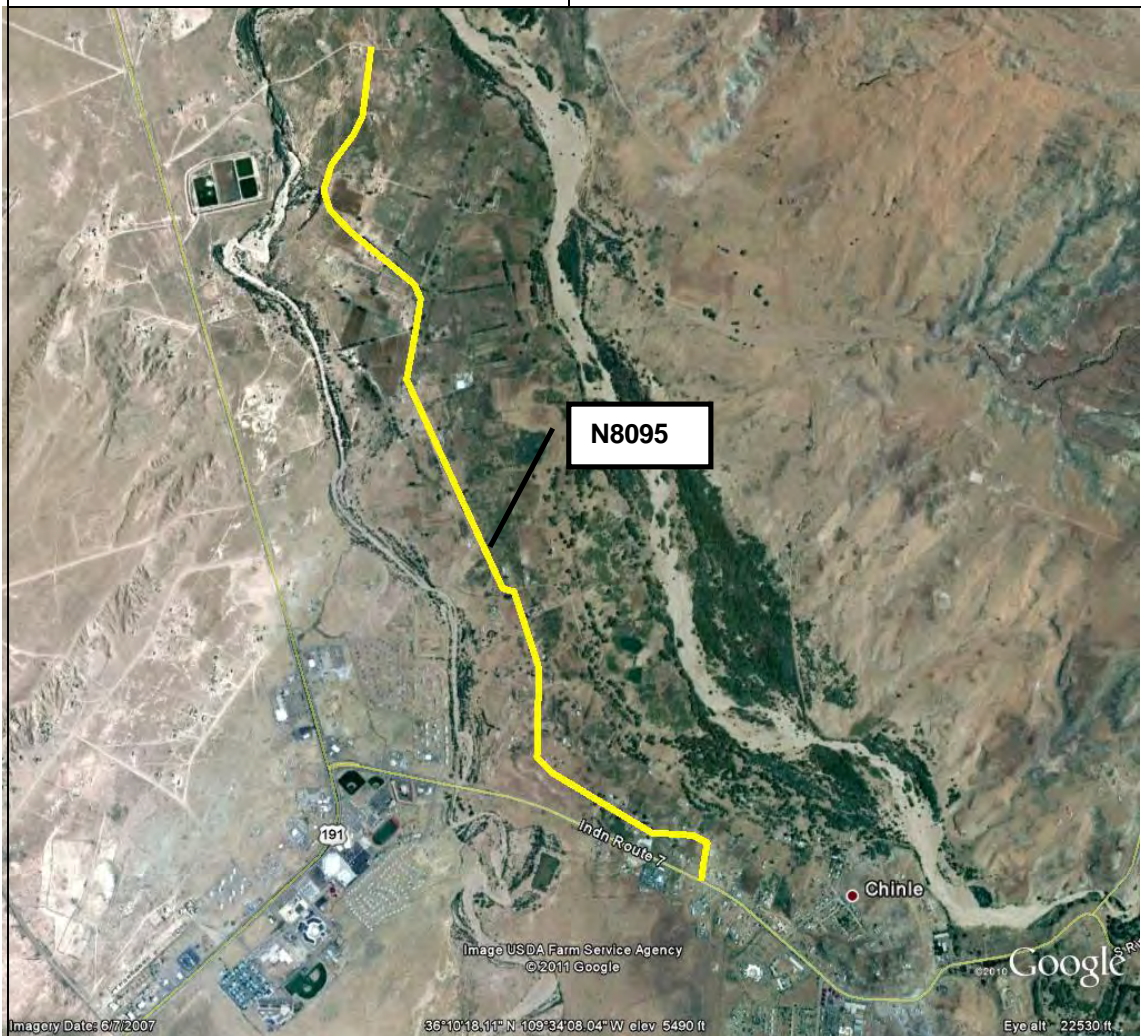
Chinle Chapter Project Information Sheet – N8095 Bridge Construction

Route Number	N8095
Project Location	US 191 to 1 mile north east of US 191
Project Description	Construct bridge and approaches
Project Justification	Improves access, particularly during rain storms
Cost Estimate	\$2.14M
Potential Funding Sources	IRR Construction Funds
Comments	This project is scheduled in 2015: N8095/N8081(1)1,2&3



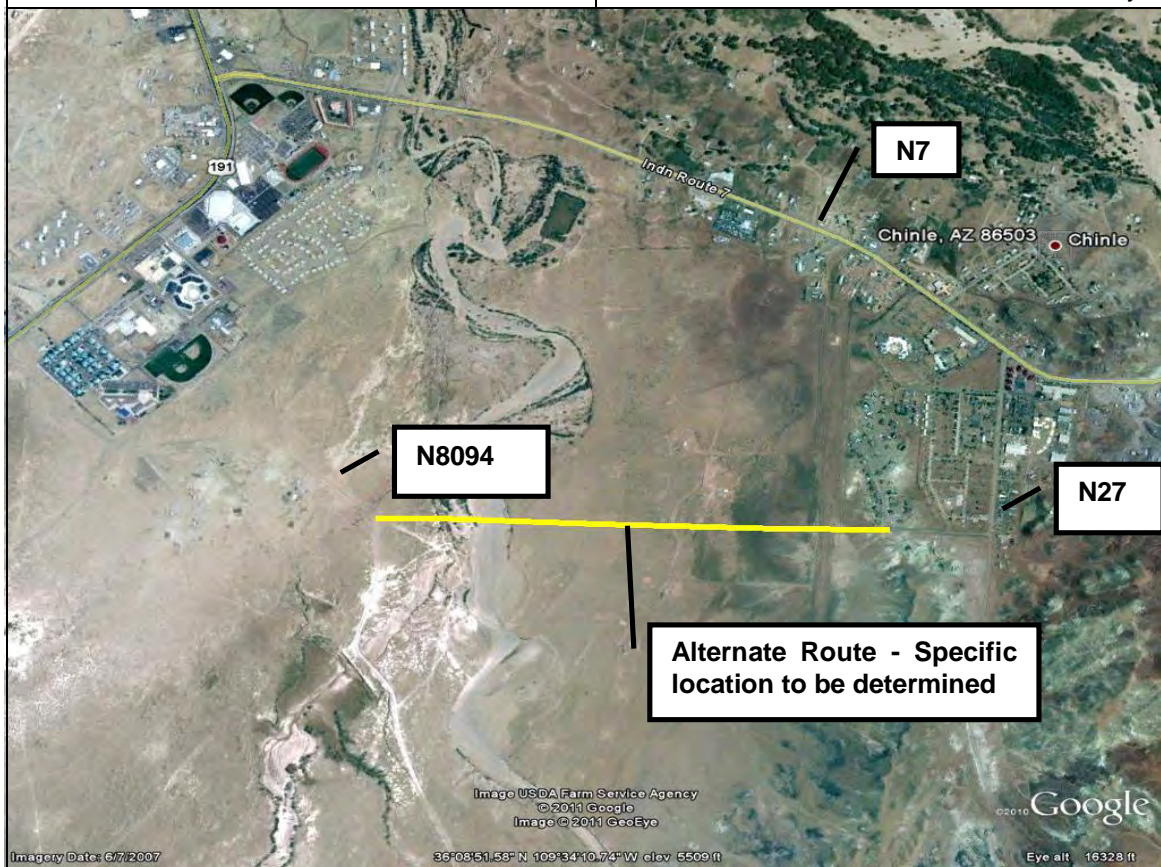
Project Information Sheet – N8095 Asphalt Paving

Route number	N8095
Project Location	N8095, US 191 to N7
Project Description	Grade, drain and surfacing, 3.3 miles
Project Justification	Improved access and provide alternative route to US 191
Cost Estimate	\$ 5.13M
Potential Funding Sources	IRR Construction Funds Navajo Fuel Excise Tax Public Lands Highway Discretionary Funds
Comments	Not programmed



Chinle Chapter Project Information Sheet – Feasibility Study – New East-West Route

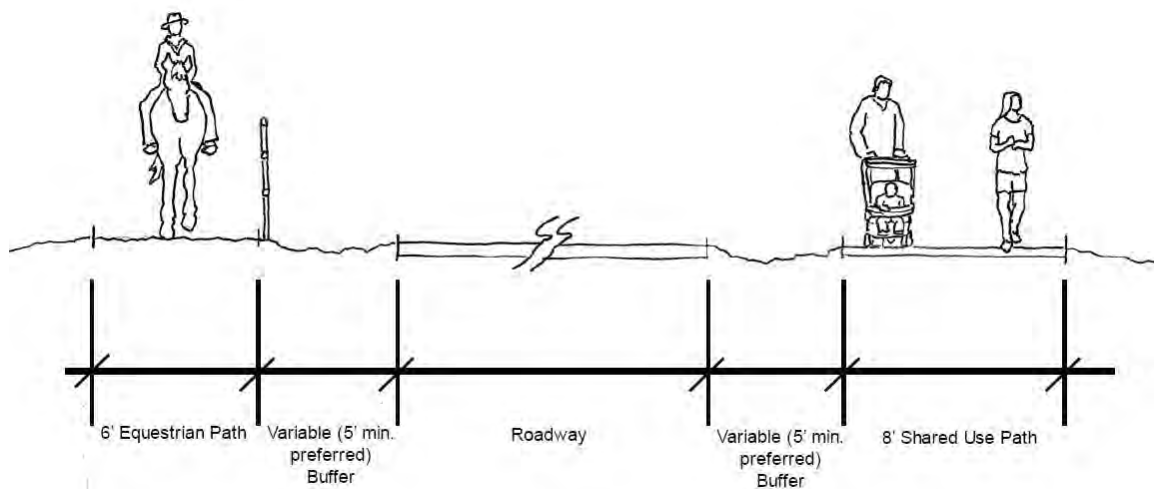
Route Number	To be determined – new east-west road
Project Location	New access road from N8094 to N27 (location to be determined by cost and feasibility)
Project Description	A Feasibility Study is required to determine justification for and preliminary design of new two lane road, approximately 1 mile
Project Justification	Provide better access to schools and residential areas, provide alternate access to N7.
Cost Estimate	\$0.10M
Potential funding sources	IRR Construction Funds
Comments	Cost will depend on specific location. This road would serve as a collector street. It would need to be added to the IRR Inventory.



5.2 Pedestrian, Bicycle, and Trail Projects

This section describes pedestrian, bicycle and trail projects for the study area corridor that is within the Chinle Chapter. The projects were developed to provide transportation alternatives to driving. Brief overviews of the types of projects proposed are discussed below.

Shared Use Paths – Paved shared-use paths are designed to accommodate pedestrians, slow-speed bicyclists (e.g., children riding to and from school), and wheeled devices such as strollers. Bicyclists travelling at higher speeds (e.g., in excess of 10 to 15 mph) should not utilize the paved shared-use path, but should utilize the adjacent roadway and paved shoulder or bike lane. Signage or pavement markings on the shared-use paths may be considered, such as speed limit signs or pavement markings that encourage bicycles to maintain low speeds. An 8-foot wide shared use path is recommended to accommodate multiple types of users.



Example of Shared Use Path in Doney Park, Arizona

Equestrian Trails –To address the needs of the equestrian community, equestrian trails are proposed in both Chinle and Many Farms. The soft surface paths are proposed to consist of surface materials suitable for horses. Paved asphalt pathways are not suitable for equestrian use, since they provide little traction for horseshoes causing horses to slip. Allowing other users to utilize the equestrian paths is undesirable, particularly the mixing of bicyclists and equestrians. The AASHTO Guide for the Development of Bicycle Facilities (AASHTO Guide) states that a common problem is that bicyclists are often not aware of the need for additional operating space and slower speeds near horses. In addition, horses track mud and debris across the path, and may leave deposits that are unpleasant for bicyclists and pedestrians. A six-foot wide equestrian path is recommended in Chinle to accommodate equestrian users due to limited ROW.

Sidewalks - Sidewalks are proposed in areas with existing curb and gutter, or in areas where physical features, constrained right-of-way, or access considerations prohibit construction of a shared-use path separated from the roadway. ADOT standard (C-05.20) “typical” sidewalk is five feet wide, which is what is recommended for sidewalk projects on the study area corridors.

Bike Lanes – Shoulder widening and bike lanes are proposed on N7 and US191, which are major streets with higher traffic volumes and a speed limit of 25 mph or greater. On these roads, existing shoulders can be marked and signed as bike lanes. Recommended bicycle lane width per the AASHTO Guide is as follows:

- 4 feet (1.2m): minimum width of bike lane on roadways with no curb and gutter
- 5 feet (1.5m): minimum width of bike lane when adjacent to parking, from the face of the curb or guardrail

In Chinle, N102 and N27 have shoulder widths of 8 feet and 6 feet, respectively, according to the IRR Inventory data. These routes can be signed and striped for bicycle routes. N7, from US191 to N64, is a candidate bicycle route because it connects homes, schools, businesses, and government offices, however; this road will need to have the road shoulders widened to accommodate bicycle lanes.

Bike Lanes Sign (R3-17) and Manual of Uniform Traffic Control Device (MUTCD) (<http://mutcd.fhwa.dot.gov/>) guidance is illustrated on the following page.

Per the 2009 MUTCD, Bike Lane signs are not mandatory, but are recommended. Figure 7 is an example of a bike lane signage from the MUTCD.



Figure 26 – MUTCD Bike Lane Sign

Source: MUTCD Figure 9B-2

Section 9B.04 Bike Lane Signs and Plaques (R3-17, R3-17aP, R3-17bP)

Standard:

- 01 The BIKE LANE (R3-17) sign and the R3-17aP and R3-17bP plaques (see Figure 9B-2) shall be used only in conjunction with marked bicycle lanes as described in Section 9C.04.

Guidance:

- 02 If used, Bike Lane signs and plaques should be used in advance of the upstream end of the bicycle lane, at the downstream end of the bicycle lane, and at periodic intervals along the bicycle lane as determined by engineering judgment based on prevailing speed of bicycle and other traffic, block length, distances from adjacent intersections, and other considerations.

In summary, projects in the Chinle Chapter study area corridor were developed to address the need for sidewalks, pedestrian crossings, bicycle lanes, and equestrian trails. Projects are recommended to link residential areas to schools, employment centers, shopping, and Canyon De Chelly. Providing more options to travel without using a motor vehicle will reduce household costs, improve health, and reduce air pollution. Proposed projects are summarized in **Table 28** and shown graphically in **Figure 27**.

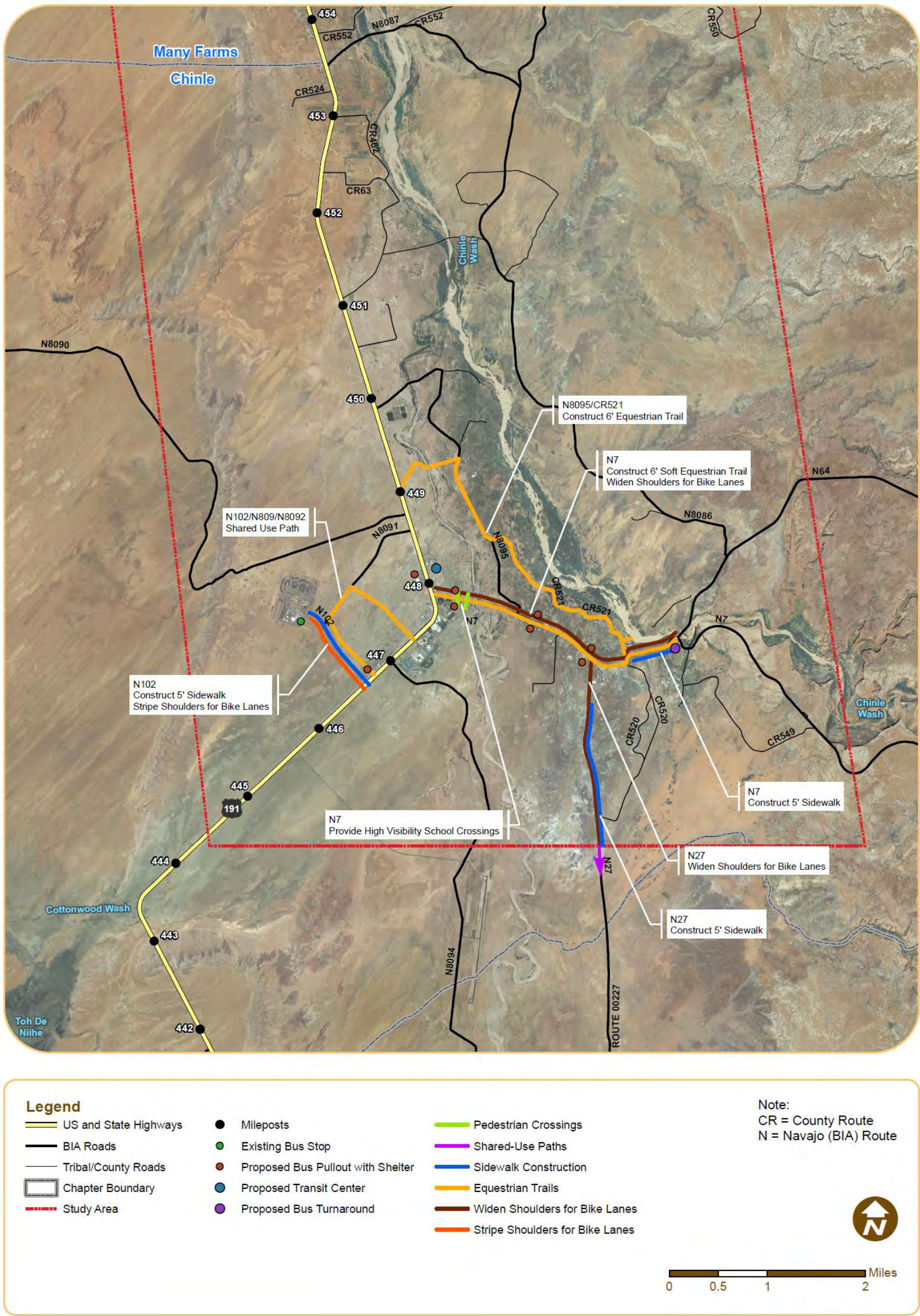


Figure 27 - Chinle Chapter Recommended Non-Motorized Projects

Table 28 – Chinle Chapter Pedestrian, Bicycle, and Trail Projects

Route Number or Name	Project Name / Description	Length (Miles)	Construction Type	Estimated Cost (millions)	Additional Information
Sidewalk Construction					
N7	Sidewalk construction, N7 MP2.4 – MP2.8	0.41	5-foot sidewalks	\$0.11	This project would complete sidewalk system on N7
N102	Sidewalk construction, US 191 to north terminus at hospital	0.93	5-foot sidewalks	\$0.27	Would link Chinle Comprehensive Health Care Facility to residential areas
Shared Use Path					
N102/N8091 /N8092	Shared use path construction	2.00	8-foot sidewalks	\$0.69	
Pedestrian Crossings					
N7	high visibility crosswalk construction on N7	N/A	Striping and signage	\$0.02	
Equestrian Trails					
N7	Soft path construction, N7 from US 191 to N64	2.58	6-foot soft path	\$0.29	Right-of-way limited on N7
N8095/CR521	Soft path construction, N8095 and CR521	5.00	6-foot soft path	\$0.57	
Bicycle Lanes					
N7	Bicycle lane construction, N7 from US 191 to N64	2.58	Widen shoulders, stripe and sign bike lane	\$0.71	IRR Inventory indicates no shoulders, so right-of-way will need to be obtained to construct this
N27	Sign and stripe bicycle lanes, N27 from N7 to N102-5	0.43	Stripe and sign bike lane	\$0.03	IRR Inventory indicates 6 foot shoulders
N102	Sign and stripe bicycle lanes, N102 from US 191 to terminus at Chinle Comprehensive Health Care facility	0.93	Stripe and sign bike lane	\$0.06	IRR Inventory indicates 8 foot shoulders

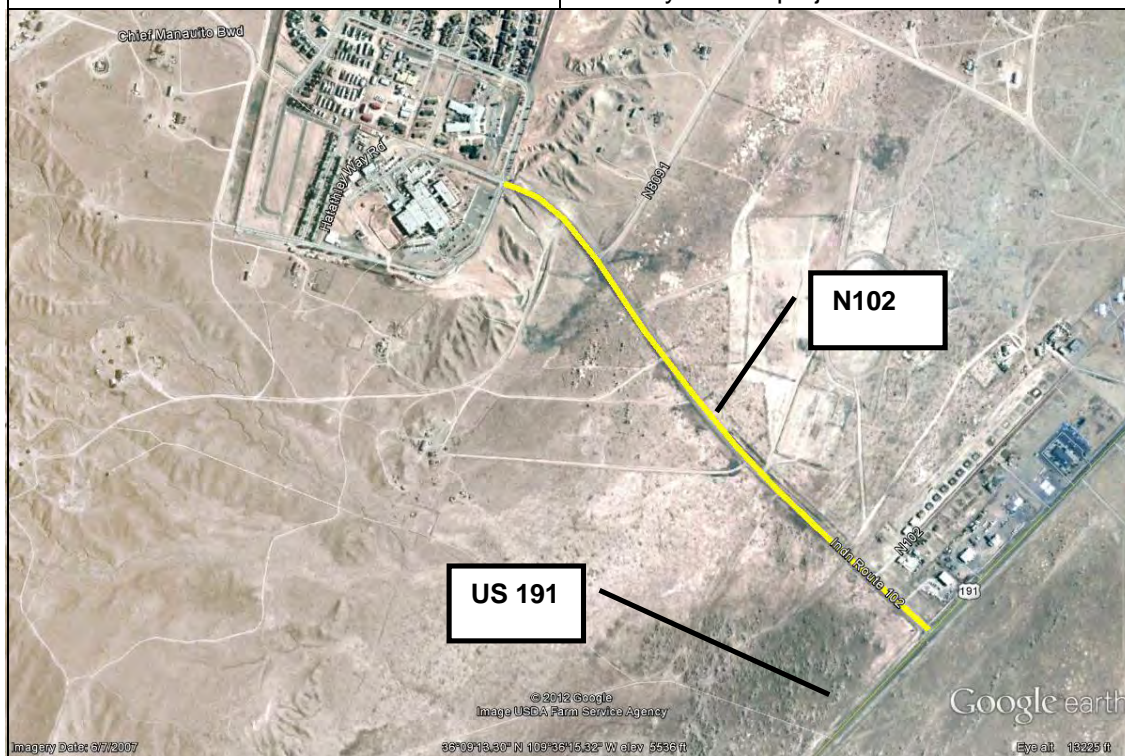
Chinle Chapter Project Information Sheet – N7 Sidewalk Construction

Route Number	N7
Project Location	MP 2.4 - MP 2.8, 0.41 miles
Project Description	Construct 5 foot wide sidewalks, both sides
Project Justification	This project will provide better walking conditions for residents and visitors to Canyon de Chelly. It also completes a missing link in the sidewalk system on N7.
Cost Estimate	\$ 0.11M
Potential Funding Sources	Transportation Enhancement Grant
Comments	Not currently programmed.



Chinle Chapter Project Information Sheet – N102 Sidewalk Construction

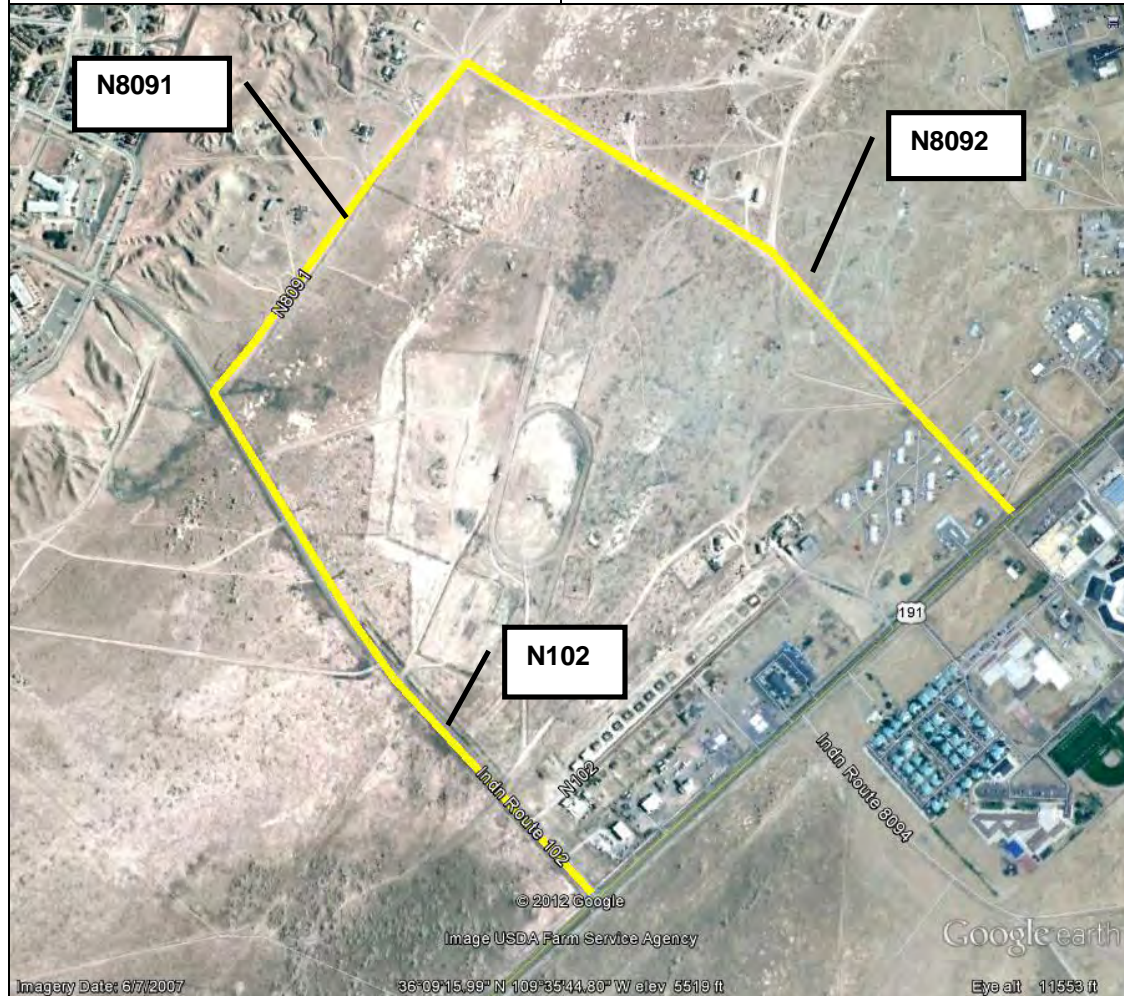
Route Number	N102
Project Location	N102, US 191 to north terminus at Chinle Comprehensive Health Care Facility, 0.93 miles
Project Description	Construct 5 foot wide sidewalks
Project Justification	Connects Health Care Facility with housing areas
Cost Estimate	\$0.27M
Potential Funding Sources	Transportation Enhancement Grant
Comments	Not currently programmed. This will provide more travel options for residents and Chinle Comprehensive Health Care Facility employees. This project can be coordinated with bicycle lane project on N102.



Chinle Chapter Project Information Sheet - N102/N8091/N8092

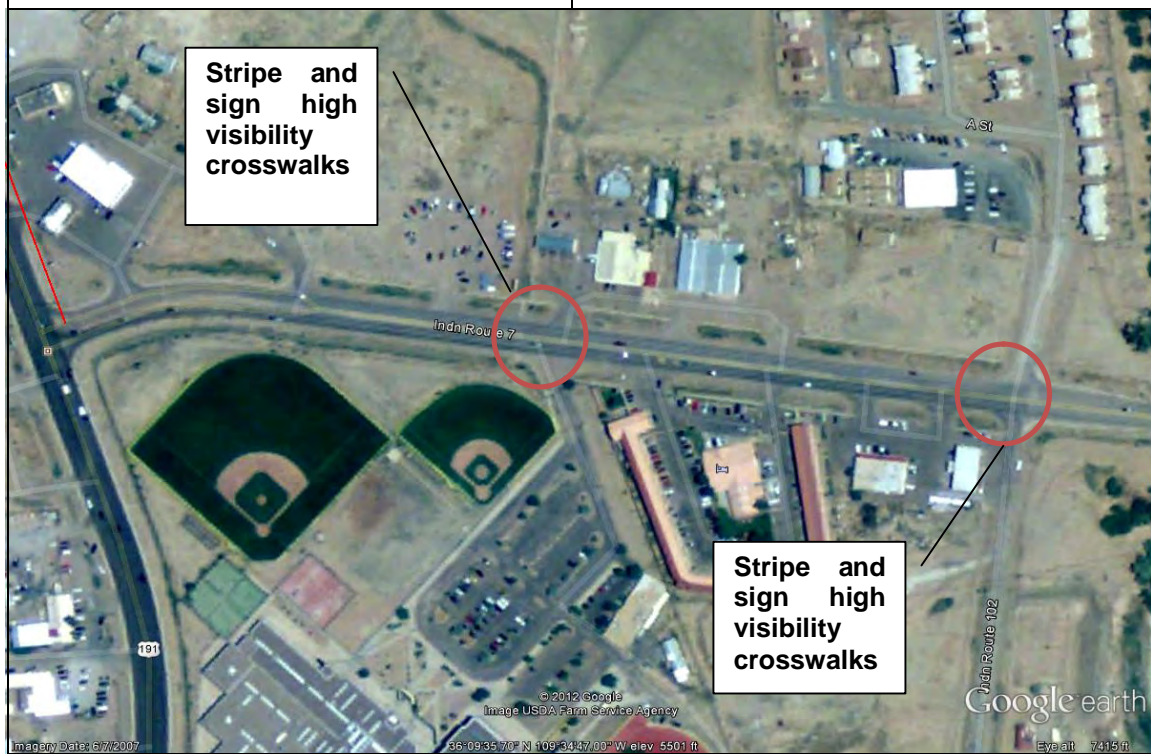
Shared Use Path Construction

Route Number	N102/N8091/N8092
Project Location	N102/N8091/N8092
Project Description	Shared use paths for access to Chinle Fairgrounds, 2.0 miles
Project Justification	This project will provide path connections to the Chinle Fairgrounds from US 191. It will improve accessibility during the Chinle Fair.
Cost Estimate	\$0.69M
Potential Funding Sources	Safe Routes to School Transportation Enhancement Grant IHS Injury Prevention Program
Comments	Not currently programmed.



Chinle Chapter Project Information Sheet – N7 Crosswalks Construction

Route Number	N7
Project Location	N7, two locations east of US 191
Project Description	Construct high visibility crosswalks
Project Justification	Improved safety for students crossing this busy street.
Cost Estimate	\$0.02M
Potential Funding Sources	Transportation Enhancement Grant IHS Injury Prevention Program Safe Routes to School
Comments	Not currently programmed.



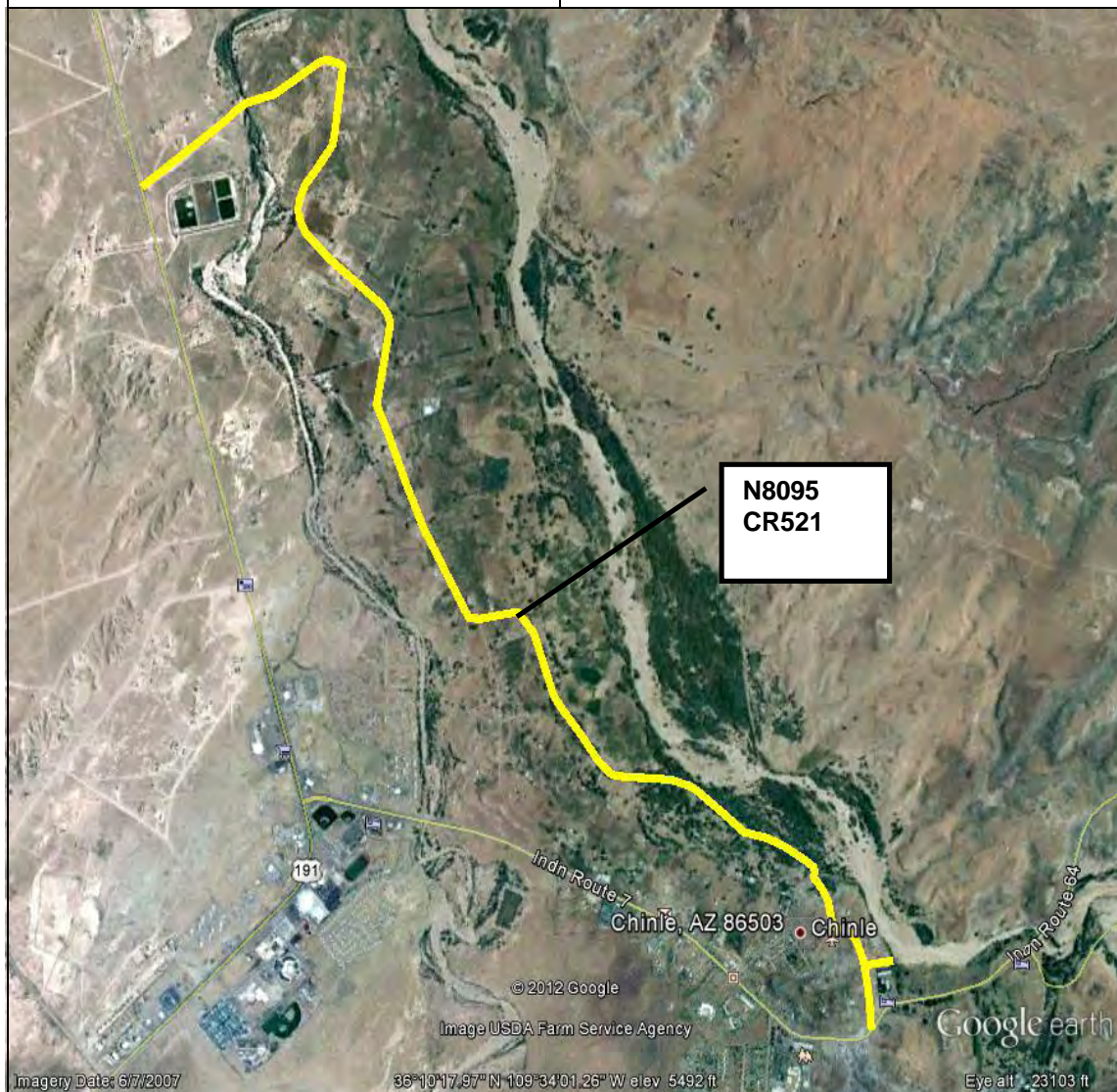
Chinle Chapter Project Information Sheet – N7 Equestrian Trail Construction

Route Number	N7 Equestrian Trail
Project Location	US 191 to N64, 2.58 miles
Project Description	Construct a 6-foot soft path
Project Justification	Provide soft path for equestrian users that will link residential areas to Canyon De Chelly
Cost Estimate	\$0.29M
Potential Funding Sources	Southwest Conservation Corps (labor for constructing trail)
Comments	Not currently programmed. Right-of-way limited on N7.



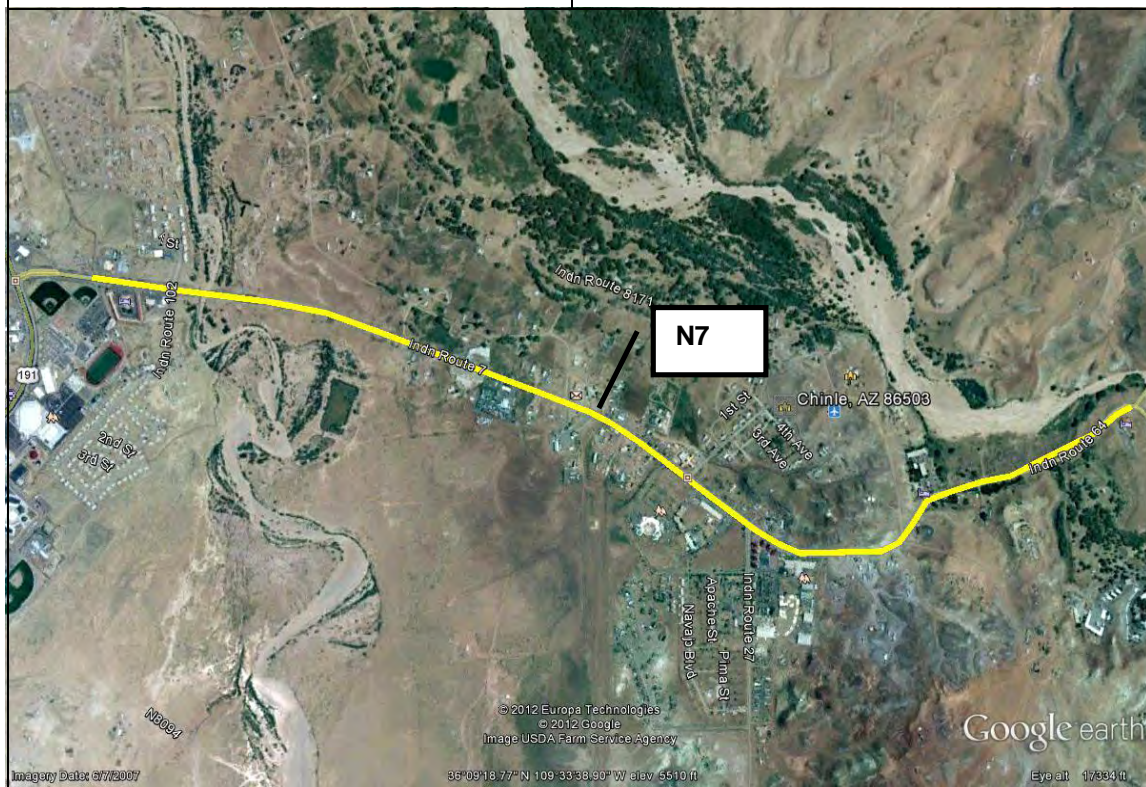
Chinle Chapter Project Information Sheet – N8095/CR521 Equestrian Trail Construction

Route Number	N8095/CR521 Equestrian Trail
Project Location	US 191 to N7, 5.0 miles
Project Description	Construct a 6-foot soft path
Project Justification	Provide soft path for equestrian users
Cost Estimate	\$0.57M
Potential Funding Sources	Southwest Conservation Corps (labor for constructing trail)
Comments	Not currently programmed.



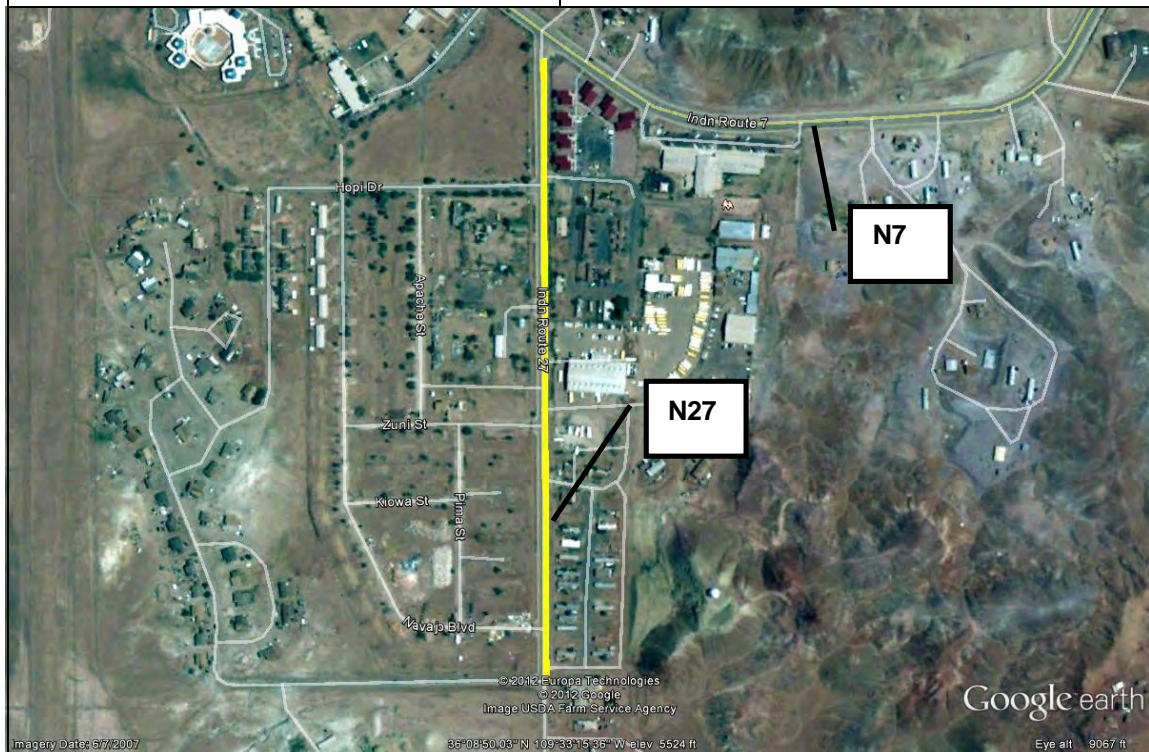
Chinle Chapter Project Information Sheet – N7 Bicycle Lanes

Route Number	N7 Bicycle Lanes
Project Location	US 191 to N64, 2.58 miles
Project Description	Widen shoulders, stripe and sign for 5 – foot bike lane
Project Justification	Bicycle lanes will provide more travel options of residents and visitors
Cost Estimate	\$0.71M
Potential Funding Sources	Transportation Enhancement Grant
Comments	Not currently programmed. IRR Inventory indicates zero shoulder width



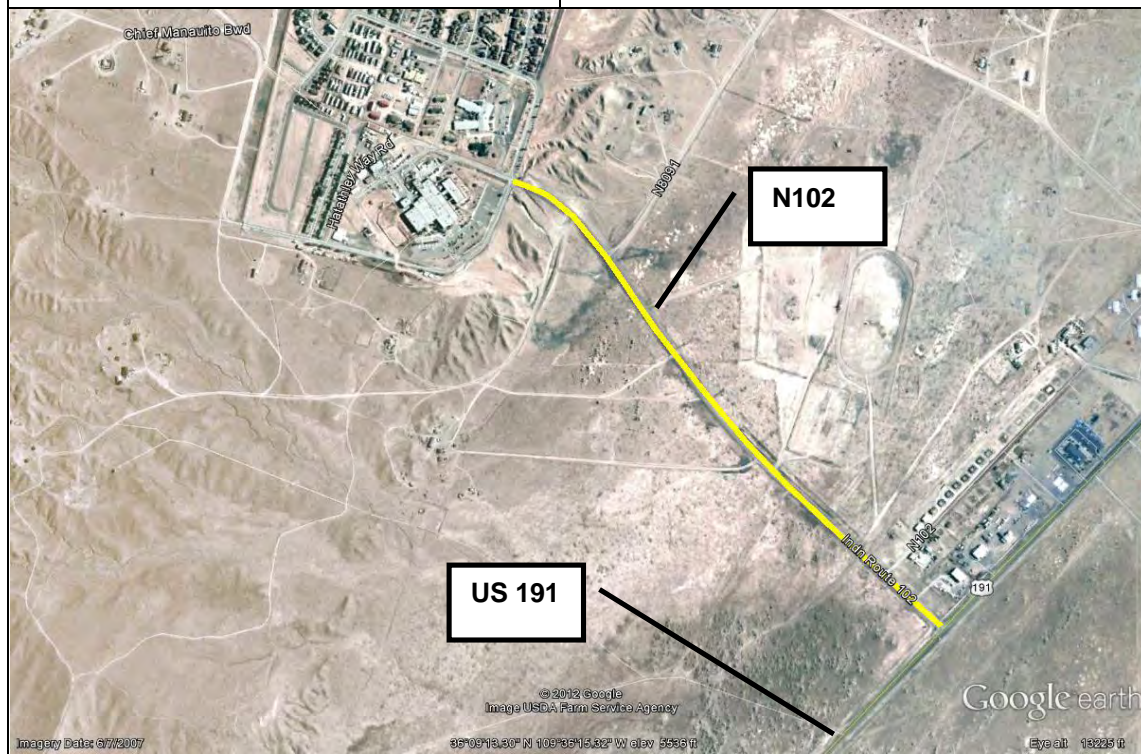
Chinle Chapter Project Information Sheet – N27 Bicycle Lane Construction

Route Number	N27
Project Location	N27, N7 to N102-5, 0.43 miles
Project Description	Stripe and sign shoulders for bicycle lanes
Project Justification	Bicycle lanes will encourage biking from residential areas to offices on N27.
Cost Estimate	\$0.03M
Potential Funding Sources	Transportation Enhancement Grant
Comments	IRR Inventory indicates 6-foot shoulders.



Chinle Chapter Project Information Sheet – N102 Bicycle Lane Construction

Route Number	N102
Project Location	N102, US 191 to terminus at Chinle Hospital, 0.93 miles
Project Description	Stripe and sign bicycle lane
Project Justification	Connects major destination with housing areas. This will provide more travel options for residents and hospital employees
Cost Estimate	\$0.06M
Potential Funding Sources	Transportation Enhancement Grant
Comments	Not currently programmed.



6 MANY FARMS CHAPTER RECOMMENDED TRANSPORTATION PROJECTS

6.1 Roadway Projects

Key needs on tribal roads within the Many Farms study area corridor include:

- Providing paved roads to ensure better access to Many Farms Lake. This will help to enhance tourism and economic development.
- Improving existing paved roads that are in poor condition.
- Paving routes that serve as alternate routes to US 191, which will improve emergency access.
- Improving roads that are school bus routes.
- Providing a frontage road system throughout the Many Farms area to US 191. These projects were based on input from the Many Farms Chapter. There are also other frontage roads planned outside of the study area corridor.

Recommended roadway projects on tribal roads within the study area corridor for the Many Farms Chapter area are summarized in **Table 29** and shown graphically in **Figure 28**.

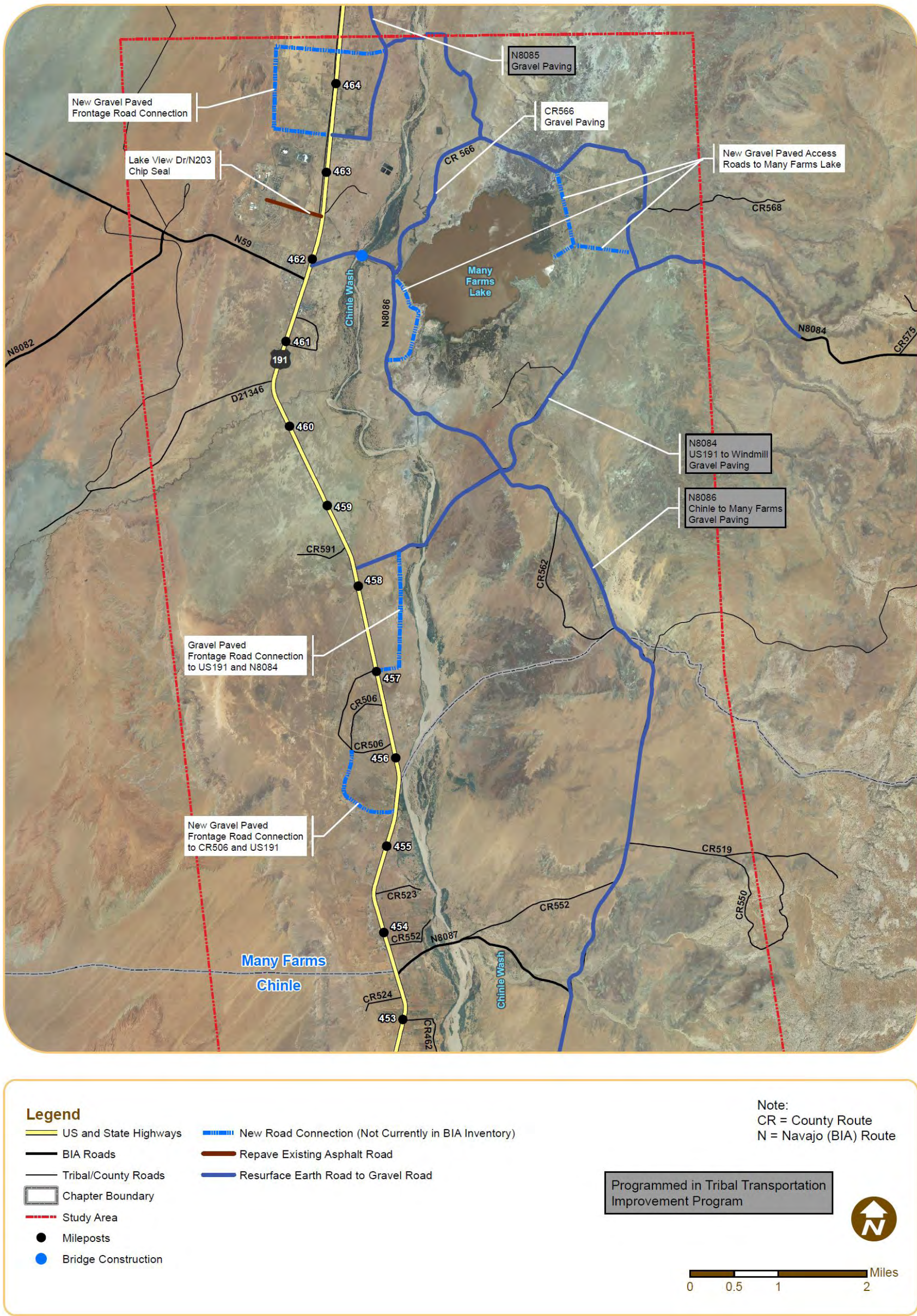


Figure 28 - Many Farms Chapter Recommended Tribal Roadway Projects

Table 29 - Tribal Roadway and Intersection Projects – Many Farms Chapter

Route Number or Name	Project Number *	Project Limits	Project Description	Comment^	Length (miles)	Estimated Cost (\$millions)	Additional Information
N8084	N8084(1)1,2,3	US 191 to Windmill	Grade, drain and gravel paving	A, B, C, D	4.0	\$9.58	Scheduled in 2020
N8084	N8084(2)1,2,3	US 191 to Windmill	Grade, drain and gravel paving	A, B, C, D	6.0	\$12.00	Scheduled in 2022
N8084	N8084(3)2,3	US 191 to Windmill	Grade, drain and gravel paving	A, B, C, D	6.0	\$9.00	Scheduled in 2024
N8085	N8085(1)2,3	US 191 to north 4.9 miles	Grade, drain and gravel paving	A, B, C, D	4.90	\$4.01	Scheduled in 2045
N8086	N8086(1) 2,3	Chinle to Many Farms N64 to US 191	Grade, drain and gravel paving	A, B, C, D	8.8	\$10.56	Scheduled in 2041
Lake View Drive and N203	None	US 191 to 0.7 miles west of US 191	Chip Seal	D	0.7	\$0.04	Not programmed
Many Farms Lake Access Roads	None	3 locations	Add to BIA IRR Inventory and gravel paving	Roads must be added to BIA inventory	3.0	\$2.77	Not programmed
Unnamed frontage road connection to US 191 and N8085	None	US 191 to N8085	Grade, drain and gravel paving	A, B, C, D	2.8	\$2.59	Not programmed
Pave frontage road connection from US 191 to N8084	None	US 191 to CR506	Grade, drain and gravel paving	A, B, C, D	1.2	\$1.14	Not programmed

Route Number or Name	Project Number *	Project Limits	Project Description	Comment^	Length (miles)	Estimated Cost (\$millions)	Additional Information
Pave frontage road connection from US 191 to CR506	None	US 191 to N8084	Grade, drain and gravel paving	A, B, C, D	1.2	\$1.12	Not programmed
CR 566	None	N8086 to N8084	Grade, drain and gravel paving	A, B, C, D	5.3	\$4.90	Not programmed

*Referenced to Tribal Transportation Improvement Program

^ A = ROW Needed; B = Environmental Assessment Needed; C = Archaeological Clearance Needed; D = Surveying Data Needed; U – Utility Relocation Needed; W = Within Existing ROW

Many Farms Chapter Project Information Sheet – N8084 Gravel Paving

Route Number	N8084
Project Location	N8084, US 191 to Windmill
Project Description	Grade, drain and gravel paving 16 miles of N8084
Project Justification	This three phase project will improve access to Many Farms, Many Farms Lake, and Windmill
Cost Estimate	See below
Potential Funding Sources	IRR Construction Funds Navajo Fuel Excise tax Public Lands Highway Discretionary Program
Comments	Scheduled to start in 2020. Project includes: N8084(1)1,2,3 - \$9.58M N8084(2)1,2,3-\$12.00M N8084(3) 2,3- 9.00M



Many Farms Chapter Project Information Sheet – N8085 Gravel Paving

Route Number	N8085
Project Location	US 191 north 4.9 miles
Project Description	Grade and drain, 4.9 miles
Project Justification	Provide alternate route to US 191 and provides better access to community members and farm areas.
Cost Estimate	\$4.01M
Potential Funding Sources	IRR Construction Funds Navajo Fuel Excise tax Public Lands Highway Discretionary Program
Comments	Scheduled in 2045: N8085(1)2,3



Note: aerial image shows south end of project that is within study area corridor boundaries

Many Farms Chapter Project Information Sheet - N8086 Gravel Paving

Route Number	N8086
Project Location	US 191 to N64
Project Description	Grade, drain and gravel, 8.8 miles
Project Justification	This 2-phase project will provide better north-south connectivity between Chinle and Many Farms
Cost Estimate	\$10.56M
Potential Funding Sources	IRR Construction Funds Navajo Fuel Excise tax Public Lands Highway Discretionary Program
Comments	Scheduled in 2041 and 2042. This description encompasses project numbers: N8086(1)2,3 - \$10.56M



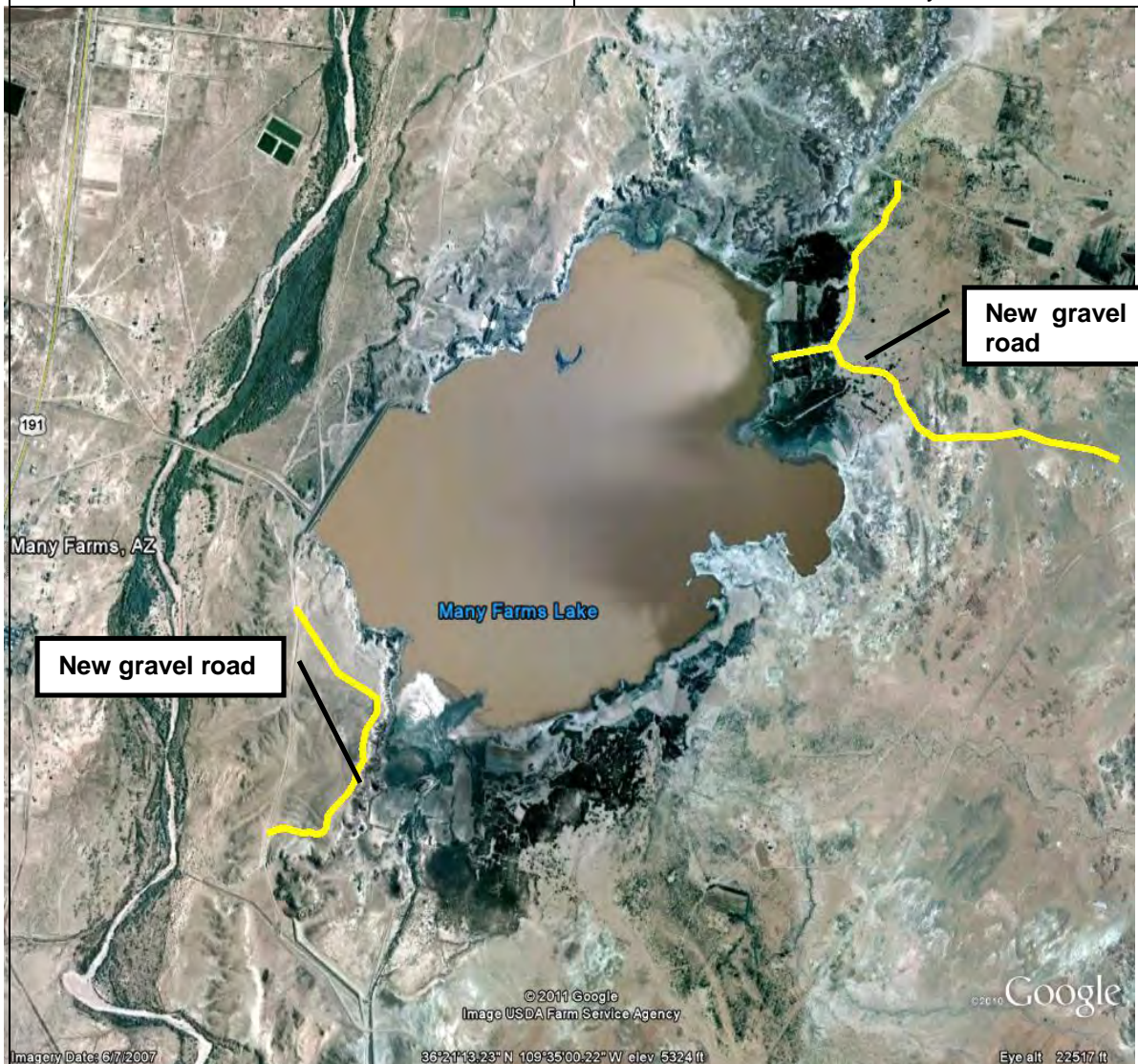
Many Farms Chapter Project Information Sheet – Lake View Drive and N203 Chip Seal

Route Number / Name	Lake View Drive and N203
Project Location	Lake View Drive and N203, US 191 to 0.68 miles west of US 191
Project Description	Chip seal road, 0.68 miles
Project Justification	This section of road is in poor condition and serves a residential area, church, and high school.
Cost Estimate	\$0.04M
Potential Funding Sources	IRR Construction funds Navajo Fuel Excise Tax Indian Community Development Block Grant Program
Comments	Not programmed



Many Farms Chapter Project Information Sheet – Many Farms Lake Access Roads

Route Number	New road connections to Many Farms Lake
Project Location	Unnamed road
Project Description	Grade, drain and construct gravel paving, 3.0 miles
Project Justification	Better access to Many Farms Lake will stimulate tourism and economic development
Cost Estimate	\$2.77M
Potential Funding Sources	Navajo Fuel Excise Tax Public Lands Highway Discretionary Program
Comments	Not programmed Exact road locations need to be determined and added to the BIA Inventory.



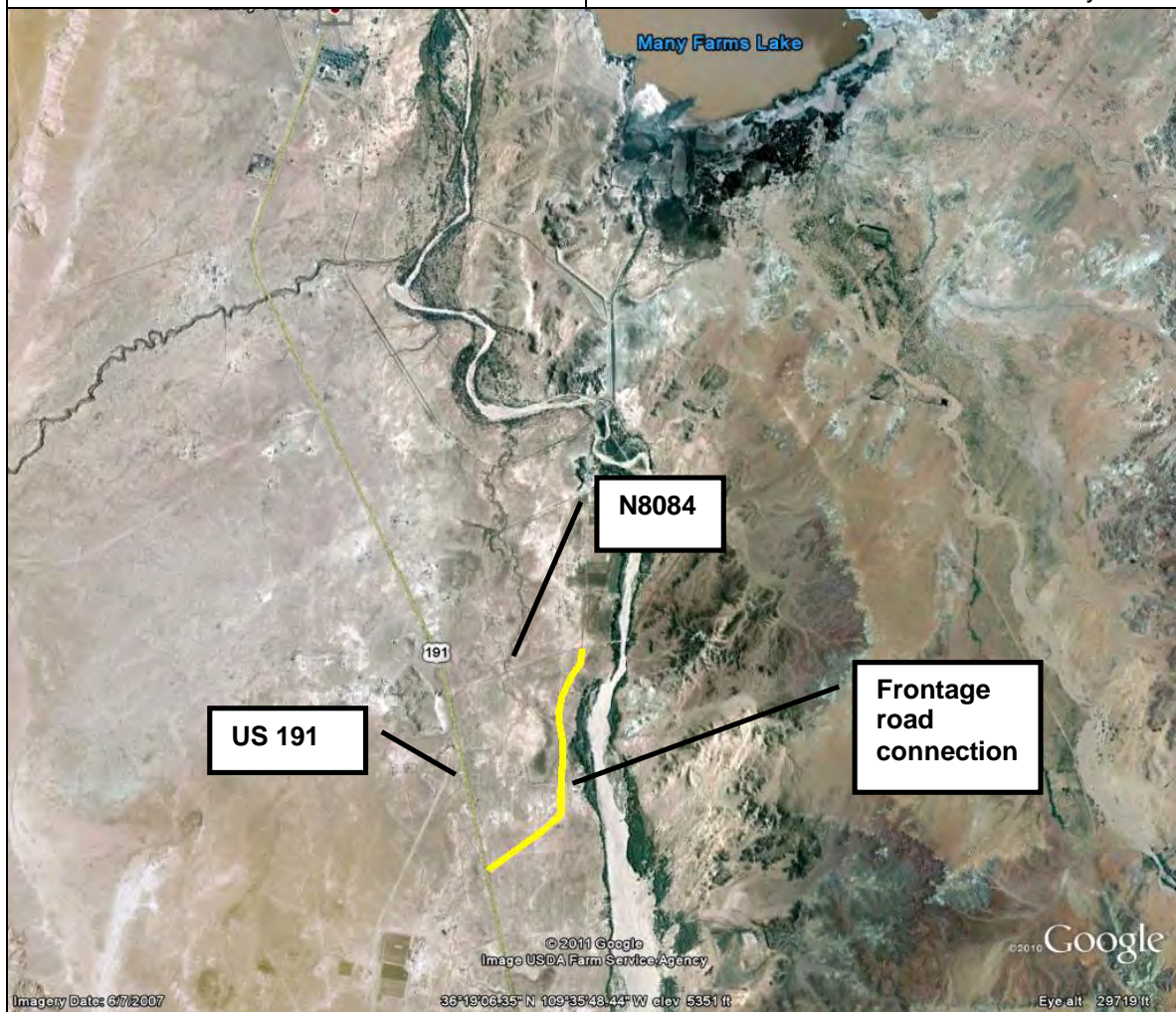
Many Farms Chapter Project Information Sheet – Gravel Frontage Road Connections to US 191

Route Number	Unnamed road
Project Location	Connection to US 191 and N8085
Project Description	Gravel frontage road connection, 2.8 miles
Project Justification	Improved local access to farming areas
Cost Estimate	\$2.59M
Potential Funding Sources	Navajo Fuel Excise Tax Public Lands Highway Discretionary Program
Comments	Not programmed. The road connections would use existing access points to US 191. The roads need to be added to the IRR Inventory



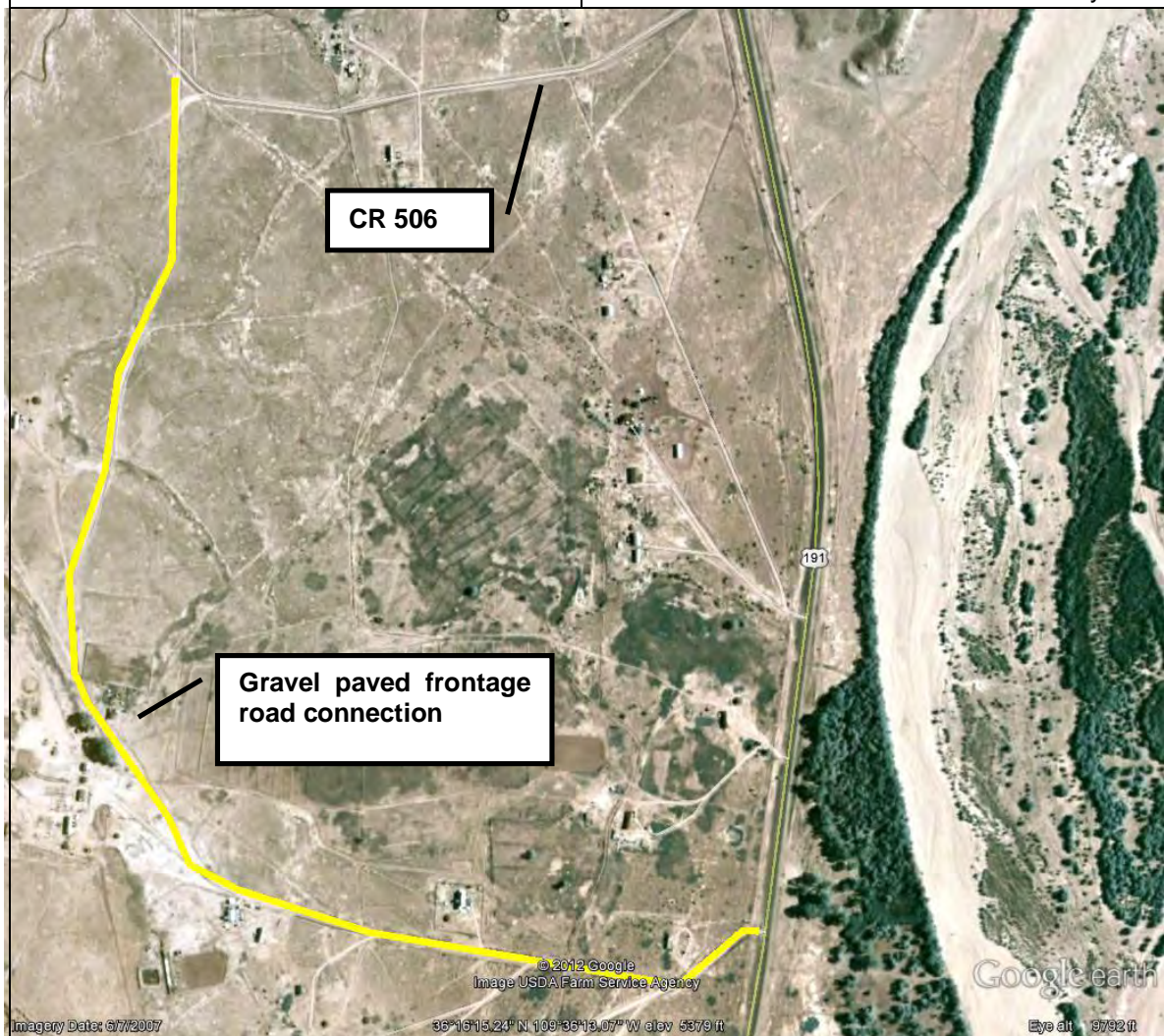
Many Farms Chapter Project Information Sheet - Gravel Frontage Road Connection

Route Number	Unnamed Frontage Road
Project Location	Gravel paved frontage road connecting south at N8084
Project Description	Grade, drain and gravel paving, 1.23 miles
Project Justification	An gravel paved frontage road will improve access in Many Farms area
Cost Estimate	\$1.14M
Potential Funding Sources	Navajo Fuel Excise Tax Public Lands Highway Discretionary Program
Comments	Not programmed. The road connections would use existing access points to US 191. The roads could be added to the IRR Inventory



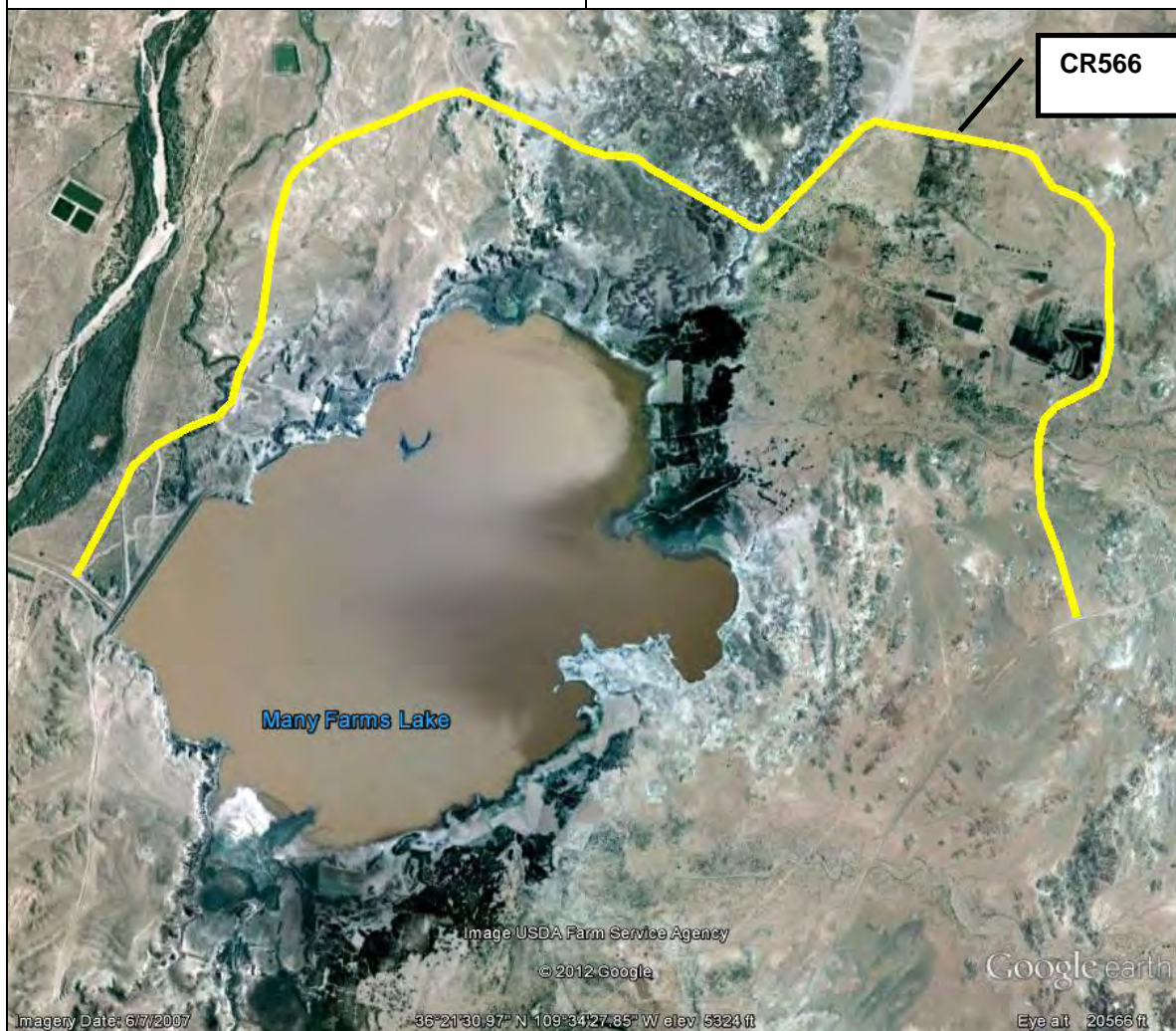
Many Farms Chapter Project Information Sheet - Gravel Frontage Road Connection to CR 506

Route Number	Unnamed Frontage Road
Project Location	Unnamed road connection to US 191 and CR 506, 1.2 miles
Project Description	Grade, drain and gravel paving, 1.2 miles
Project Justification	An gravel paved frontage road will improve access in Many Farms area
Cost Estimate	\$1.12M
Potential Funding Sources	Navajo Fuel Excise Tax Public Lands Highway Discretionary Program
Comments	Not programmed. The road connections would use existing access points to US 191. The roads should be added to the IRR Inventory.



Many Farms Chapter Project Information Sheet - Gravel Paving CR566

Route Number	CR566
Project Location	Construct gravel paving on CR 566, 5.3 miles
Project Description	Grade, drain and gravel paving, 5.3 miles
Project Justification	This road will provide better access to Many Farms Lake
Cost Estimate	\$4.90M
Potential Funding Sources	IRR Construction Funds Navajo Fuel Excise Tax Public Lands Highway Discretionary Program
Comments	Not programmed.

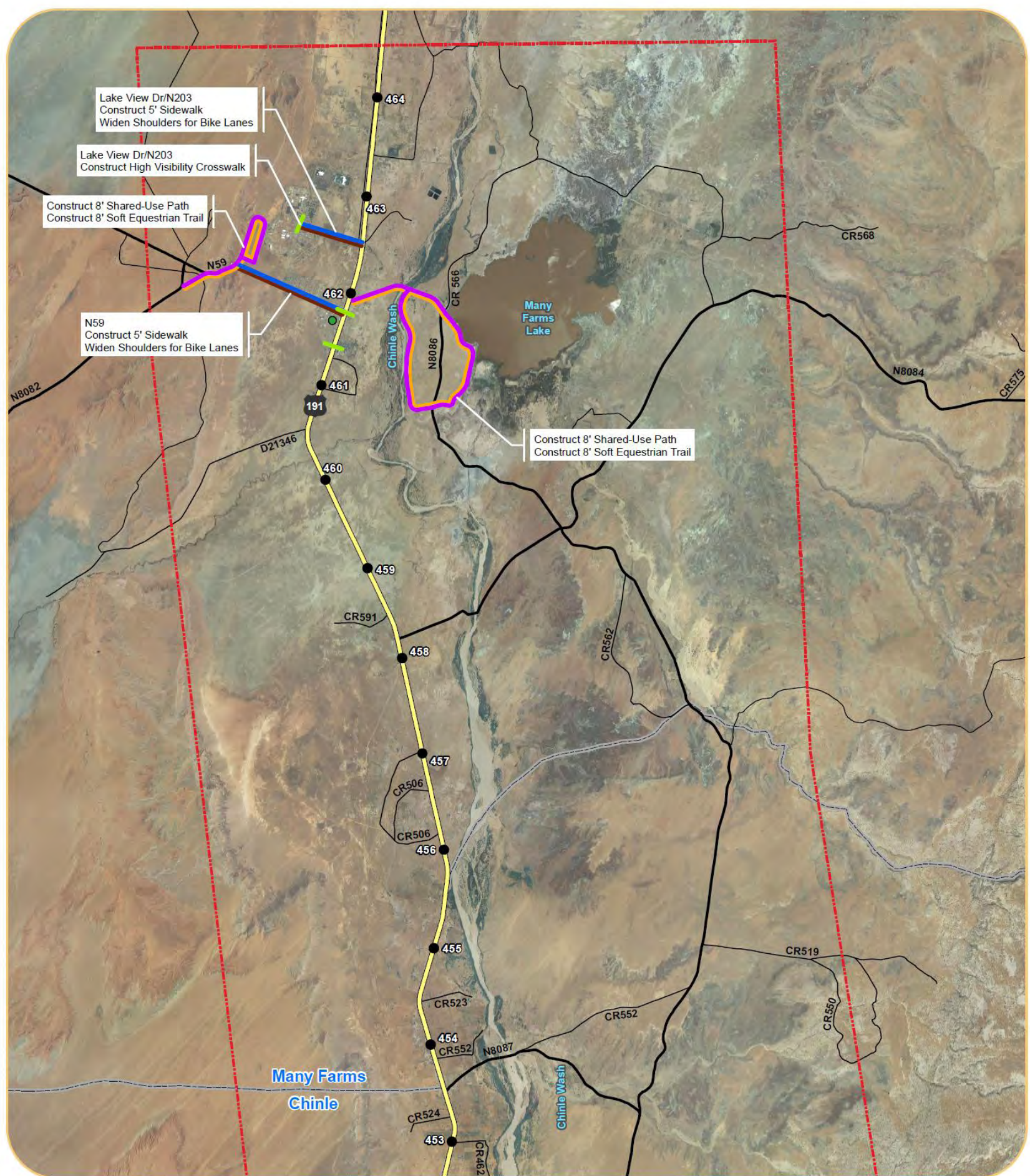


6.2 Recommended Pedestrian, Bicycle, and Trail Projects

Emphasis areas in developing pedestrian, bicycle and trail projects for the Many Farms Chapter study area corridor are:

- Providing equestrian and shared use paths to the Many Farms Lake area.
- Providing bicycle and pedestrian paths along major routes in the Many Farms area, including N59 and Lake View Drive.
- Providing improved pedestrian crossings for students. Pedestrian crossing projects on US 191 are discussed under State roadway projects in **Chapter 7**.

Recommended projects are summarized in **Table 30** and in **Figure 29**. Individual project sheets which follow provide more detail about each recommended project.



Legend

- US and State Highways
- BIA Roads
- Tribal/County Roads
- Chapter Boundary
- Study Area

- Mileposts
- Existing Bus Stop
- Proposed Bus Pullout with Shelter
- Proposed Transit Center
- Proposed Bus Turnaround

- Pedestrian Crossings
- Shared-Use Paths
- Sidewalk Construction
- Equestrian Trails
- Widen Shoulders for Bike Lanes

Note:
CR = County Route
N = Navajo (BIA) Route



0 0.5 1 2 Miles

Figure 29 – Many Farms Recommended Non-Motorized Projects

Table 30 – Many Farms Chapter Pedestrian, Bicycle, and Trail Projects

Route Number or Name	Project Name / Description	Length (miles)	Construction Type	Estimated Cost (millions)	Additional Information
Sidewalk Projects					
N59	Sidewalk construction, N59 from US 191 to N8082	1.05	5-foot sidewalks	\$0.30	Assumes sidewalks on both sides of street. This project can be coordinated with bicycle lane project.
Lake View Drive / N203	Sidewalk construction, Lake View Drive / N203 from US191 to Loop Drive	0.64	5-foot sidewalks	\$0.13	Assumes sidewalks on both sides of street. This project can be coordinated with bicycle lane project.
Pedestrian Crossing					
Lake View Drive/ Loop Drive	High Visibility Crosswalk construction	N/A	Signing and striping crosswalk	\$0.01	
Shared Use Paths and Equestrian Trails					
Trail	Shared use path and equestrian trail between N59 and school	2.0	8'-shared use path and 8' soft path	\$0.98	
Many Farms Lake	Shared use path and equestrian path construction	3.2	8'-shared use path and 8' soft path	\$1.4M	
Bicycle Lanes					
N59	Stripe and sign bicycle lane, N59 from US 191 to N8082	1.05	Stripe and sign bike lane	\$0.07	IRR Inventory indicates 6 - foot shoulders. This project can be coordinated with sidewalk project.
Lake View Drive	Sign and stripe bicycle lanes, Lake View Drive from US191 to Loop Drive	0.64	Stripe and sign bike lane	\$0.12	Shoulder width varies- estimate assumes some shoulder widening. This project can be coordinated with sidewalk project.

Many Farms Chapter Project Information Sheet – N59 Sidewalk Construction

Route Number	N59
Project Location	N59, US 191 to 1.05 miles west of US 191
Project Description	Construct 5-foot wide sidewalks
Project Justification	Sidewalks will provide a safer walking environment and link residential areas to schools and the Many Farms Chapter House
Cost Estimate	\$0.30M
Potential Funding Sources	Transportation Enhancement Grant
Comments	Not currently programmed. This project can be coordinated with the proposed bicycle lane project.



Many Farms Chapter Project Information Sheet – Lake View Drive / N203 Sidewalk Construction

Route Number or Name	Lake View Drive/N203
Project Location	Lake View Drive, US 191 to Loop Drive
Project Description	Construct 5 foot wide sidewalks, 0.64 miles
Project Justification	Sidewalks will provide a safer walking environment for students
Cost Estimate	\$0.13M
Potential Funding Sources	Safe Routes to School Transportation Enhancement Grant
Comments	Not currently programmed.



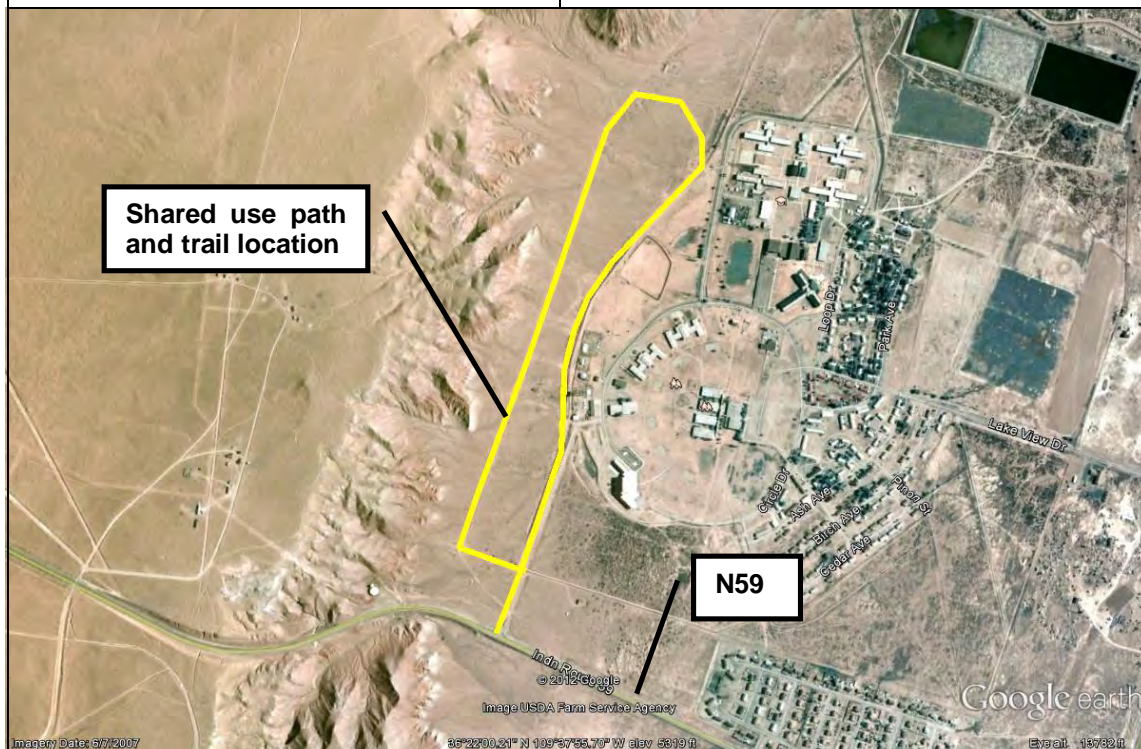
Many Farms Chapter Project Information Sheet – Lake View Drive / Loop Drive High Visibility Crosswalks

Route Number	Lake View Drive / Loop Drive
Project Location	Lake View Drive / Loop Drive intersection
Project Description	Construct high visibility school crossing
Project Justification	This project is needed to provide a safer crossing for pedestrians and students.
Cost Estimate	\$0.01M
Funding Sources	Safe Routes to School Transportation Enhancement Grant IHS Injury Prevention Program
Comments	Not currently programmed



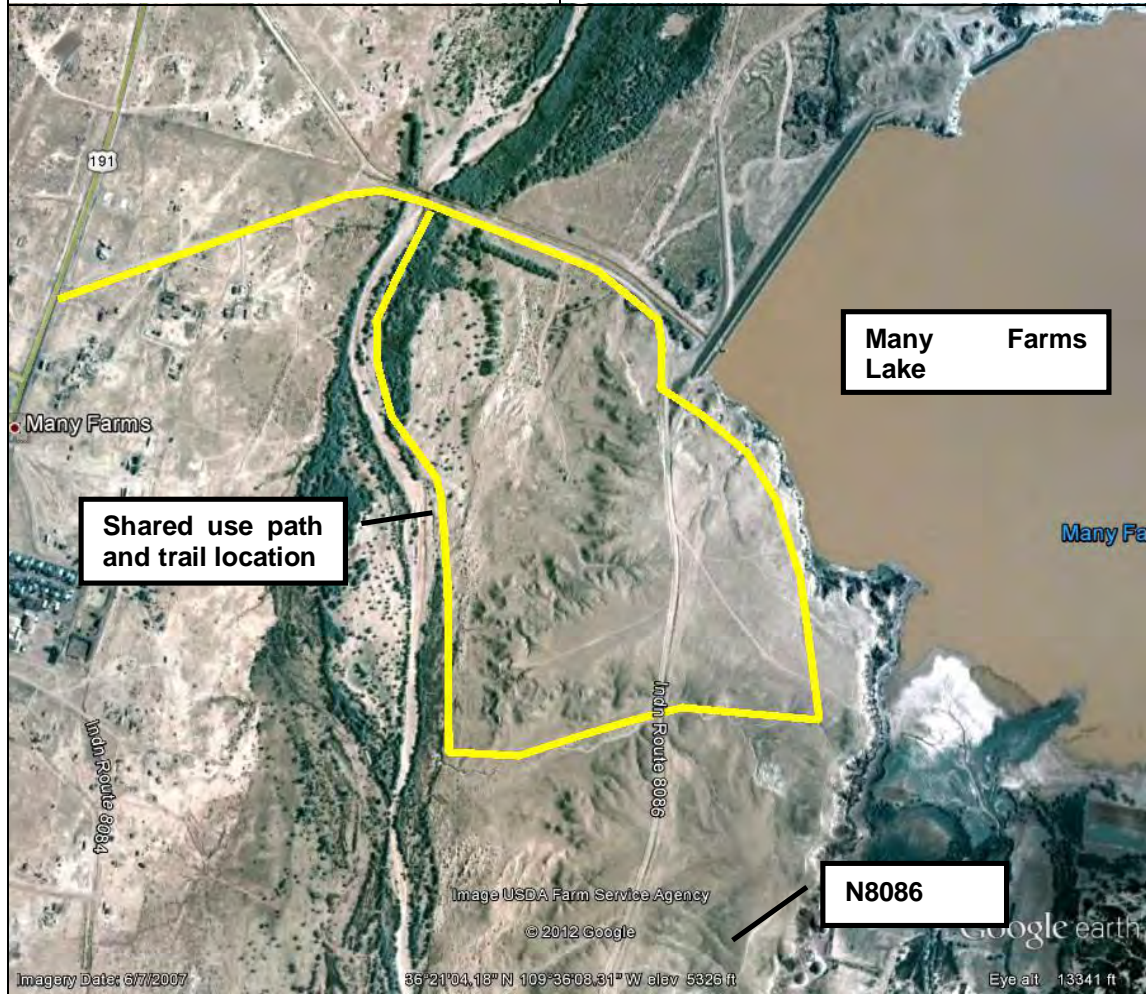
Many Farms Chapter Project Information Sheet – Shared Use Path and Equestrian Trail

Route Number or Name	Trail
Project Location	North of N59
Project Description	Construct shared use path for walkers and bicyclists, and soft path for equestrians, 2 miles
Project Justification	Provide more opportunities for recreation and provides a path/trail to school
Cost Estimate	\$0.98M
Potential Funding Sources	Safe Routes to School Transportation Enhancement Grant Southwest Civilian Corps (volunteer labor for path)
Comments	Not currently programmed. Proposed sidewalk project on N59 will link to this trail / path



Many Farms Chapter Project Information Sheet – Shared Use Path and Equestrian Trail

Route Number or Name	Shared Use Path and Trail
Project Location	Us 191 to Many Farms Lake, crossing N8086
Project Description	Construct shared use path for walkers and bicyclists, and soft path for equestrians, 3.2 miles
Project Justification	Provide more opportunities for walking, riding and biking to Many Farms Lake
Cost Estimate	\$1.4M
Potential Funding Sources	Transportation Enhancement Grant Southwest Civilian Corps (volunteer labor for path)
Comments	Not currently programmed.



Many Farms Chapter Project Information Sheet – N59 Bicycle Lanes

Route Number	N59
Project Location	N59, US 191 to 1.05 miles west
Project Description	Stripe and sign shoulders for bicycle lanes
Project Justification	Provide a bicycle route to connect residential areas to schools and Chapter House
Cost Estimate	\$0.07M
Potential Funding Sources	Transportation Enhancement Grant
Comments	Not programmed. IRR Inventory indicates 6-foot shoulders in this area.



N59, looking west



Many Farms Chapter Project Information Sheet – Lake View Drive / N203 Bicycle Lanes

Route Number or Name	Lake View Drive / N203
Project Location	Lake View Drive, US 191 to Circle Drive
Project Description	Widen shoulders and stripe for bike lanes, 0.64 miles
Project Justification	Sidewalks will provide a safer walking environment for students
Cost Estimate	\$0.12M
Potential Funding Sources	Safe Routes to School, Transportation Enhancement
Comments	Not currently programmed. Shoulder width varies, so cost estimate assumes shoulder widening. This project could potentially be programmed with the sidewalk project.



7 US 191 PROJECTS

US 191 is a key transportation route through Chinle and Many Farms. Although this study is focused on tribal routes, many comments were received from stakeholders, TAC members, and the public regarding improvement needs on US 191. Safety is the major concern on US 191. Many needs were expressed to improve its safety, most frequently:

- Widen US 191 to four through lanes within the study area.
- Widen shoulders; construct turn lanes and larger driveway turnouts.
- Provide bus pullouts and a rest area for truckers.
- Provide more accommodations for pedestrians, including school crossings, pedestrian beacon signals (or pedestrian bridges), paths along US 191, and high visibility crosswalks near schools and shopping areas.
- Provide a traffic signal at US 191/ N59 in Many Farms (a roundabout was also brought up by members of the public).
- Provide medians and more access management through the Chinle area.

Recommendations from previous planning studies relating to US 191 within the study area corridor:

The 2009 Navajo Nation Long Range Plan

Short-Term Plans:

- Chinle: Street lights at the hospital access road (N102).

Long-Term Plans:

- Chinle: Five-lane widening, access management design, roadway widening to the flea market for safety improvement: raised medians, and limited access/turnoffs between MP 446 – MP 449.
- Street lights on US 191 from airport access to N8090.
- Chinle: Amenities such as bicycle paths and sidewalks will support tourism and create a livable community atmosphere.
- Many Farms: Five-lane widening from junction N59/US 191 to High School turnoff.

The 2000 US 191 Corridor Profile Study recommended:

- MP 444-446.5 - Rebuild roadway including sub-base and improve drainage.
- MP 446.5-448.5 - Widen to a five-lane cross section to accommodate local growth.
- MP 448.5-471.5 - Add paved shoulders to meet current AASHTO standards and to accommodate bicycles. This includes the installation of edge line rumble strips.
- Entire Corridor - Install delineators along shoulder, install centerline rumble strips on two-lane sections, and review passing distances based on existing speed limits.

Other recommendations were:

- Chinle - Construct raised medians to control access, provide refuge for pedestrians, and add to the aesthetic quality of the urban environment.
- Entire Corridor- Development of an Access Control Plan for both rural and urban portions of US 191. This would include the specification of permitted access points, acceleration and deceleration lane lengths, and necessary provisions for domestic and wild animal control fences.
- US 191 - Recommend as a state-designated scenic byway.

In February 2012, a Road Safety Assessment (RSA) was conducted on US 191 between Chinle and Many Farms. Recommendations from that assessment are summarized in **Table 31**. The Road Safety Assessment is provided in **Appendix E**.

Projects recommended for consideration by ADOT based on the needs indicated above are summarized in **Table 32**.

Table 31 – US 191 Road Safety Assessment Recommendations

Issues	Recommendations
Lane departure crashes	<ul style="list-style-type: none"> • Install paved shoulders with edge line rumble strips (seek inclusion in ADOT's statewide shoulder widening project). • Refresh pavement markings, to include installation of center line raised pavement markers. • Install center line rumble strips. • Delineate horizontal curves with flexible delineators, chevrons, and curve warning signs as appropriate e.g., mileposts 451.8, 454.4, 455.3, 458.3, 460.3 (may qualify for statewide flexible delineator project).
Pedestrian crashes	<ul style="list-style-type: none"> • Evaluate the need for HAWK pedestrian signal(s) near high school/elementary school and/or near Basha's. • Install pedestrian crossing warning signs in Many Farms in the vicinity of N59 in addition to existing school warning signs. • Evaluate Many Farms Elementary School for school crosswalk and 15 mph zone. • Install pedestrian countdown signals at N7. Evaluate existing street lighting in Chinle for proper illumination and uniform light pattern for pedestrian safety.
Livestock in right-of-way	<ul style="list-style-type: none"> • Fencing and cattle guard project should take care of most of this problem. • Education and enforcement measures to be implemented by the Navajo Nation. • Determine responsible agency for N59 cattle guards and fencing.
Rear end crashes	<ul style="list-style-type: none"> • Evaluate intersections for the need for turn lanes (e.g., C462, C463, C506, C523, C552, C553, N8081, N8084/N507, N8086, and N8087). • Install advance intersection signing at major intersections: <ul style="list-style-type: none"> ○ Intersection Ahead warning signs ○ Route shields/street name signs • Install cattle guard delineation
Appropriateness of speed limit (currently 65 mph between Chinle and Many Farms, 45 mph in Chinle)	<ul style="list-style-type: none"> • Install solar-powered speed feedback signs in Many Farms • Evaluate use of photo enforcement for speeding in Many Farms • Check beacons on warning signs at Many Farms Elementary are flashing at appropriate times • Conduct speed studies to determine appropriate speed limits in Chinle and Many Farms.
Signing	<ul style="list-style-type: none"> • Install <i>Bus Stop Ahead</i> signs where needed. • Evaluate location of northbound <i>Right Lane Ends</i> sign in Chinle and relocate as needed. • Replace missing signs and remove unused sign posts. • Replace "tagged" signs. • Remove "private" signs placed on sign posts, and consider education and enforcement measures to deter in future. • -Install a Keep Right sign on N7 median approaching the US191 intersection.
Bridge at Black Mt. Wash	<ul style="list-style-type: none"> • Re-stripe for no passing zone on bridge. • Install guardrail delineation. • Replace existing Type 3 object markers and install new object markers on left side. • Replace BCT end treatment with energy absorbing terminal.
N59 Intersection	<ul style="list-style-type: none"> • Evaluate for need for street lighting. • Relocate stop bar closer to the intersection (MUTCD allows it to be as close as 4 feet from the edge of through lane).
Other Intersections	<ul style="list-style-type: none"> • Recommend installing stop signs and stop bars. • Install 360-degree delineators on sign posts. • Evaluate the need for two-way passing zones at intersections.
Left turn crashes at N7	<ul style="list-style-type: none"> • Install left turn yield on green ball sign. • If sign doesn't address issue, consider protected only left turn phasing. •

Table 31, Con't – US 191 Road Safety Assessment Recommendations

Maintenance	<ul style="list-style-type: none">• Maintain drains and sidewalks which tend to get clogged with debris, mud, and rocks.• Street light on west side, north of N7 is out and needs replacing.
Northeast corner of N7 intersections	<ul style="list-style-type: none">• Recommend pursuing Transportation Enhancements grant to install landscaping and gateway signing.
Crash reporting	<ul style="list-style-type: none">• Recommend coordinating with ADOT traffic Records to overcome obstacles that limit distribution of police crash reports to ADOT
Education and Enforcement	<ul style="list-style-type: none">• Seat belt use campaign• Increase efforts related to driving and walking under influence of alcohol• Livestock in right-of-way

Table 32 - Recommended Projects on US 191 for Consideration by ADOT

Related Chapter Area	Project	Description	Length (miles)	Additional Information
Chinle	Five-lane extension and raised median construction	Design and construct Raised median and five-lane extension from N102-N8090	2.0	Access management is needed in the developing area.
Chinle	Airport Access street lighting construction	Street lights at Airport Access/N8094	N/A	To improve access's night visibility and safety.
Chinle	Street lighting evaluation, MP 446.6-448.2	Evaluate existing street lighting in Chinle for proper illumination and uniform light pattern for pedestrian safety.	1.6	To improve visibility and pedestrian safety.
Chinle and Many Farms	Shoulder, striping, signing, and marking Improvements, MP 446-463	<ul style="list-style-type: none"> -Install paved shoulders with edge line rumble strips. -Refresh pavement markings, to include installation of center line raised pavement markers. -Install center line rumble strips. 	21	<p>Night visibility was a concern raised by chapter members.</p> <p>It was further explored in the RSA</p> <p>RSA suggestion to seek inclusion in ADOT's statewide shoulder widening project.</p>
Chinle and Many Farms	Horizontal curve delineation improvements	-Delineate horizontal curves with flexible delineators, chevrons, and curve warning signs as appropriate. (e.g. MP 451.8, 454.4, 455.3, 458.3, 460.3)	To be determined	Project may qualify for statewide flexible delineator project.
Many Farms	Traffic signal construction, US 191 / BIA 59 Intersection	-Design and construct traffic signal when warranted. In the interim, relocate stop bar closer to intersection, and evaluate need for street lighting.	N/A	Navajo Nation has to agree to pay electric bills for signal under an Intergovernmental agreement. Stop bar relocation is an RSA recommendation.
Chinle and Many Farms	Bus pull out construction	Design and construct bus pull outs	N/A	Locations mentioned at the public meeting are MP 452 and 460.3
Chinle and Many Farms	Rest area construction	Design and construct rest area	N/A	Requested by Many Farms Chapter representatives
Chinle	Bridge Improvements at Black Mountain Wash	<ul style="list-style-type: none"> -Re-stripe for no passing zone on bridge. -Install guardrail delineation. -Replace existing Type 3 object markers & install new object markers on left side. -Replace BCT end treatment with energy absorbing terminal. 	N/A	RSA Recommendation

Related Chapter Area	Project	Description	Length (miles)	Additional Information
Chinle	US 191 / N7 signal improvements	Install pedestrian countdown signals and Install "Left Turn Yield On Green Ball" sign (R10-12)	N/A	RSA recommendation
Chinle and Many Farms	Driveway turnout improvements, MP 444-465	Design and construct wider driveway turnouts and cattle guards. Add delineators to cattle guards.	N/A	This would be a joint ADOT/ BIA project.
Chinle and Many Farms	US 191 Road widening, MP 448.3 to 465	Widen road from 2 to 4 through lanes	16.3	A long term project. Traffic growth rates have been increasing and should be monitored by ADOT
Chinle and Many Farms	Speed monitor installation	Install solar speed monitors (2 locations)	N/A	Locations mentioned were between MP 460-463 and MP 453. Coordinate with speed studies noted below.
Chinle and Many Farms	Signage Improvements	<ul style="list-style-type: none"> - Install <i>Bus Stop Ahead</i> signs where needed. - Evaluate location of northbound <i>Right Lane Ends</i> sign in Chinle (MP 448.27) and relocate as needed. - Replace missing signs and remove unused sign posts. - Replace "tagged" signs. - Remove "private" signs placed on sign posts. - Install advance intersection signing at major intersections. - Install a <i>Keep Right</i> sign on N7 approaching the US 191 intersection. - Install 360 degree delineators on sign posts. 	N/A	RSA recommendation
Chinle and Many Farms	Pedestrian crosswalk striping and signing improvements	Provide high visibility crosswalk striping at US 191 / N7 Intersection and US 191/ N59 intersection, and across from Chinle School	N/A	Requested by Chapter representatives
Chinle	Shared use path construction, MP 446.6 - 448.2	Construct shared use path along US 191	1.6	ADOT Pedestrian Safety Action Plan Recommendation
Chinle	Gateway Improvements US 191/N7 Northeast corner	Landscaping and Gateway Signage	N/A	RSA recommendation

Related Chapter Area	Project	Description	Length (miles)	Additional Information
Chinle and Many Farms	Pedestrian Beacon Study	HAWK Pedestrian Beacon Signal Warrant Study – 3 locations	N/A	Across from Chinle Elementary school (MP 447.5 and north end of Tsegi Shopping Plaza), and across from Many Farms Elementary Schools. Many Farms Chapter representatives have requested a pedestrian bridge across US 191 from the Elementary School.
Many Farms	School Crosswalk Study	Evaluate Many Farms Elementary School for school crosswalk and 15 mph zone.	N/A	RSA recommendation
Many Farms	Pedestrian signage improvements	Install pedestrian crossing warning signs in Many Farms in the vicinity of N59 in addition to existing school warning signs	N/A	RSA recommendation
Chinle and Many Farms	Speed studies, MP 444 - 465	Conduct speed studies to determine appropriate speed limits	N/A	RSA recommendation
Many Farms	Speed control improvements	<ul style="list-style-type: none"> - Install solar-powered speed feedback signs in Many Farms - Evaluate use of photo enforcement for speeding in Many Farms - Check beacons on warning signs at Many Farms Elementary are flashing at appropriate times 	N/A	RSA recommendation
Chinle and Many Farms	Turn lane and passing zone evaluation, MP 444 - 465	Evaluate intersections for turn lanes and passing zones (e.g., C462, C463, C506, C523, C552, C553, N8081, N8084/N507, N8086, and N8087)	N/A	RSA recommendation

8 SCENIC ROAD PROJECTS

Proposed scenic road projects are based on input from the Navajo Nation Scenic Byway Coordinator and from information contained in the *Tse'nikani Scenic Road Draft Corridor Management Plan*.



The Tse'nikani Scenic Road was established on US 191, from Milepost 467, near Many Farms, north to Milepost 510.4 at the junction with US 160, near Mexican Water. It was established as an Arizona Byway in 1995. The scenic road designation does not currently extend to the study area corridor; however, extending the corridor south to Chinle is one of the Corridor Management Plan recommendations. It should be noted that if the byway is extended to Chinle, it will be very close to the Dine Tah Scenic Road. The Navajo Scenic Roads Program intends to eventually seek national designation for a Trail of the Ancients Scenic Road, which would automatically combine the Dine Tah and Tse'nikani scenic byways (among others). A national designation would potentially increase tourist traffic to the study areas.

Recommendations from the Draft *Corridor Management Plan* for the byway (currently north of the Chinle and Many Farms study area corridor), and how they are addressed in this plan are summarized in **Table 33**.

Source: *Tse'nikani Scenic Road Draft Corridor Management Plan*

Table 33 – Coordination of Projects with Scenic Byway CMP Recommendations

Recommendation	Addressed in this study?	How is the recommendation addressed?
Add a pullout at MP 466.0/MP 467.0; tourists often stop here to take photographs.	No	This location is north of the study area corridor. Technical Advisory Committee members have suggested a rest stop on the PARA study corridor
Develop more signs to identify amenities along the corridor.	Yes	More destination signage is recommended on N7
Right-of-way fences should be respected. Signs and education to promote keeping these intact should be initiated.	N/A	ADOT has scheduled a cattle guard and fencing project on US 191
Develop a visitor center along the corridor.	No	A visitor center has been proposed in Chinle on N7 but no site has been selected.
Support development projects (i.e. Many Farms truck stop near lake).	Yes	More access roads are proposed to Many Farms Lake
Support and encourage arts and crafts and food vendors but grouped together in areas where safe pull off and parking can be provided.	No	This recommendation is proposed for the area north of the study area corridor.
Consider extending the byway designation to Chinle.	Yes	This was supported for Technical Advisory Committee for this study

9 TRANSIT PROJECTS

Provision of transit service is a need in the Chinle and Many Farms area. Transit projects proposed for this project were based on projects listed in the *Navajo Transit Five Year Plan* (May, 2009), and discussion with the Manager of the Navajo Transit System.

Proposed transit projects are summarized in **Table 34**.

A major project, suggested by Navajo Transit System staff, would be reinstitute transit service in the Chinle and Many Farms area. Details of the service are to be determined; however it would likely be an intercity service connecting Chinle and Many Farms to other cities or towns within the Nation. Also suggested is a transit center in Chinle. The goal of the transit center, according to the Navajo Transit System Five-Year Plan, is to serve as a meeting place for riders as well as an office/ operating location for drivers to begin and end their routes. The facility would consist of a modest modular office. In addition to a meeting point for drivers, the office would also be equipped with some maintenance parts/materials that would allow the driver to do minor maintenance and paperwork.

Table 34 – Proposed Transit Projects

Project Name	Project Limits	Comment	Estimated Cost Millions (\$)
Local Transit Service – Navajo Transit Service	Chinle and Many Farms	Specific route to be determined by the Navajo Transit System	To be determined
Install Transit Shelters, nine locations	8 transit shelters proposed in Chinle and one transit shelter location proposed in Many Farms	Location to be determined, depending on route	To be determined
Design and Construct Transit Center	Chinle	Location to be determined	\$0.052

10 EVALUATION CRITERIA AND PROJECT PRIORITIZATION

10.1 Criteria for Prioritizing Roadway Improvements

The transportation projects that were identified in the previous chapters will address critical needs through 2030 and beyond. These projects were further prioritized into the following categories:

Short-term, lower cost projects – In general, short-term projects are those needed to address current needs and deficiencies, for which funding can reasonably be identified. Short term projects also include currently programmed projects in the 2012 Tribal Transportation Improvement Plan (TTIP).

Mid-term projects – These are higher cost projects that have higher priorities due to safety or connectivity. Mid-term projects also include projects that can be linked to projects currently programmed in the mid-term time frame.

Long-term projects – These are higher cost projects that may need additional lead time to obtain funding, or can be linked to long-range projects currently planned. These projects also include currently planned long-term projects.

To guide this implementation, project phasing was accomplished through a process which involved organizing projects into three planning horizons:

1. Short-term – 2012 to 2015
2. Mid-term – 2016 to 2020
3. Long-term – 2021 to 2030 and beyond

The following sections provide more details for each prioritization category as well as tables summarizing the projects within each category.

10.2 Project Prioritization – Short-Term Projects

Short term projects are those identified for implementation within the next three years (by 2015). Some of these projects are already included in the *2012 Tribal Transportation Improvement Plan* (TTIP). Others could reasonably be funded through existing sources or would need committed funds in order to be built. Implementation of these short term projects would greatly improve connectivity and multimodal options for residents and visitors.

Table 35 summarizes the short term projects.

Table 35 – Short-Term (2012-2015) Projects

Chapter	Route Number or Name	Project Number*	Project Limits	Project Description	Length (miles)	Estimated Cost (millions)	Comments
Roadway / Intersection Projects							
Chinle	N7	N7 (3-1) / N7A (1-1)4	US 191 to N64	Chip Seal	2.46	\$0.03	Scheduled in 2015 – Navajo TIP
Chinle	N27	N27(2-2)1,2&4	Nazlini north to Chinle	Grade, drain and surfacing (pavement) construction	4.20	\$8.00	Scheduled in 2015 – Navajo TIP
Chinle	N27	N27(4-2)4	N7 to 0.45 miles south of N7	Chip seal	0.45	\$0.05	Scheduled in 2015 – Navajo TIP
Chinle	N8095	N8095(1) / N8081 (1)1,2&3	US191 to one mile northeast of US191	Grade, drain and gravel paving and bridge construction	1.00	\$2.14	Scheduled in 2015 – Navajo TIP
Pedestrian Crossings							
Chinle	N7	None	N/A	Construct high visibility crosswalks on N7	N/A	\$0.02	
Many Farms	Lake View Drive / Loop Drive	None	N/A	Construct high visibility crosswalks at intersection	N/A	\$0.01	
Transit Projects							
Chinle and Many Farms	Local transit service	None	Chinle and Many Farms	Implement transit service to Chinle and Many Farms	N/A	Cost to be determined by Navajo Transit	

10.3 Project Phasing – Mid-Term Projects

Mid-term projects are summarized in **Table 36**. Mid-term projects are those that may be implemented within the next ten years, but may not be within the current TTIP. These projects have a reasonable expectation of funding by 2020, and address safety, paving concerns, need for alternate routes, and multimodal improvements. These projects would need committed funds in order to be built.

Table 36 – Mid-Term (2016-2020) Projects

Chapter	Route Number or Name	Project Number*	Project Limits	Project Description	Length (miles)	Estimated Cost (millions)	Comments
Roadway Projects							
Chinle	N7	None	US 191 to 2.3 miles east of US 191	Construct street lighting	2.30	\$0.92	Not programmed
Chinle	N7	None	US 191 to N106	Access study and Design	0.35	\$0.05	Not programmed
Chinle	N105	None	N27 to 0.21 miles west	Chip seal	0.21	\$0.01	Not programmed
Many Farms	N8084	N8084(1)1, 2,3	US 191 to Windmill	Grade, drain and gravel paving	4.00	\$9.58	Scheduled in 2020
Many Farms	Lake View Drive/N203	None	US 191 west 0.7 miles	Chip seal	0.70	\$0.04	Not programmed
Many Farms	Many Farms Lake Access Roads	None	Exact locations to be determined	Grade, drain and gravel paving	3.00	\$2.77	Not programmed
Many Farms	Frontage Road Connection to CR 506	None	US 191 to CR 506	Grade, drain and gravel paving	1.20	\$1.12	Not programmed
Many Farms	CR 566	None	N8086 to N8084	Grade, drain and gravel paving	5.30	\$4.90	Not programmed
Sidewalk Construction							
Chinle	N7	None	N7, MP 2.4- MP 2.8	Sidewalk Construction	0.41	\$0.11	Not programmed
Chinle	N102	None	US 191 to Chinle Health Care Facility	Sidewalk Construction	0.93	\$0.27	Not programmed
Many Farms	N59	None	US 191 to N8082	Sidewalk construction	1.05	\$0.30	Not programmed
Many Farms	Lake View Drive/N203	None	US 191 to Loop Drive	Sidewalk construction	0.64	\$0.13	Not programmed
Shared Use Paths							
Chinle	N102/N8091/ N8092	None	N/A	Shared use path construction	2.00	\$0.69	Path will connect residential areas to schools
Many Farms	Trail	None	Between N59 and school	Shared use path and equestrian trail construction	2.00	\$0.98	Cost also includes an equestrian trail

Table 36 – Mid-Term (2016-2020) Projects (Continued)

Chapter	Route Number or Name	Project Number*	Project Limits	Project Description	Length (miles)	Estimated Cost (millions)	Additional Information
Shared Use Paths							
Many Farms	Trail	None	Many Farms Lake area	Shared use path and equestrian trail construction	3.20	\$1.40	Not programmed
Equestrian Trails							
Chinle	N7	None	US 191 to N64	Soft path	2.58	\$0.29	Not programmed
Chinle	N8095/CR521	None		Soft path	5.00	\$0.57	Not programmed
Bicycle Lanes							
Chinle	N7	None	US 191 to N64	Widen shoulder and stripe and sign bike lane	2.58	\$0.71	Not programmed
Chinle	N27	None	N7 to N102-5	Stripe and sign bike lane	0.43	\$0.03	Not programmed
Chinle	N102	None	US 191 to terminus at hospital	Stripe and sign bike lane	0.93	\$0.06	Not programmed
Many Farms	N59	None	US 191 to N8082	Stripe and sign bike lane	1.05	\$0.07	Not programmed
Many Farms	Lake View Drive	None	US 191 to Loop Drive	Stripe and sign bike lane	0.64	\$0.12	Not programmed
Transit Projects							
Chinle and Many Farms	N/A	None	N/A	Install transit shelters, 9 locations	N/A	To be determined based on location	Locations to be determined by Navajo Transit
Chinle	N/A	None	N/A	Design and Construct Transit Center	N/A	\$0.05	location to be determined by Navajo Transit

10.4 Project Phasing – Long-Term Projects

Long-term projects are those that are recommended for implementation in the period from 2021 to 2030 and beyond. Some of these projects are scheduled to correspond with projects already programmed. Other projects are more costly and will require a longer lead time to obtain funding. These projects are summarized in **Table 37**.

Table 37 - Long-Term (2021-2030 and beyond) Projects

Chapter	Route Number or Name	Project Number	Project Limit	Project Description	Length (miles)	Estimated Cost (millions)	Additional Information
Roadway Projects							
Chinle	N7	None	N64 to 0.5 miles west of N64	Add acceleration /deceleration lanes	0.1	\$0.20	Not programmed
Chinle	N27	N27 (2-3)1,2&4	Nazlini north to Chinle	Grade, drain and surfacing (pavement) construction	5.3	\$10.17	Scheduled in 2022
Chinle and Many Farms	N8086	N8086(1) 2,3	US191 to N64	Grade , drain and gravel paving	8.8	\$10.56	Scheduled in 2041
Chinle and Many Farms	N8086	N8086(2) 2,3	US191 to N64	Grade, drain and gravel paving	8.8	\$10.56	Scheduled in 2042
Chinle	N8090	None	US191 to 4.4 miles west of US191	Grade, drain and gravel paving. Construct curves to design standards.	4.4	\$4.07	Not programmed
Chinle	N8091	None	N102 to US 191	Grade , drain and surfacing (pavement) construction	1.4	\$2.18	Not programmed
Chinle	N8095	None	US191 to N7	Grade , drain and surfacing (pavement) construction	3.3	\$5.13	Not programmed
Many Farms	N8084	N8084(2)1, 2,3	US191 to Windmill	Grade, drain and gravel paving	6.0	\$12.00	Scheduled in 2022
Many Farms	N8084	N8084(3) 2,3	US191 to Windmill	Grade, drain and gravel paving	6.0	\$9.00	Scheduled in 2024
Many Farms	N8085	N8085(1)2, 3	US191 north 4.9 miles	Grade, drain and gravel paving	4.9	\$4.01	Scheduled in 2045
Many Farms	Unnamed road	None	US191 to N8084	Grade, drain and gravel paving	1.2	\$1.14	Not programmed
Many Farms	Unnamed road	None	US 191 to N8085	Grade, drain and gravel paving	2.8	\$2.59	Not programmed
New Roads							
Chinle	New east-west road	None	between N8094 and N27	Feasibility study and design	To be determined	\$0.10	Not programmed

11 FUNDING SOURCES

This chapter describes funding resources available to provide funding for the types of projects identified in the previous chapters. Financing a transportation program is complicated. It involves the potential for using many funding sources and multiple strategies. The funding sources are described for the following types of projects:

- Roadway (Table 38)
- Safety (Table 39)
- Scenic Byway (Table 40)
- Bicycle, Pedestrian and Equestrian (Table 41)
- Transit (Table 42)

A key funding source for roadway projects is the Indian Reservation Roads (IRR) Program. The IRR Program was established to provide for construction of public roads and bridges under Bureau of Indian Affairs (BIA) administration. The purpose of the IRR program is to provide safe and adequate transportation facilities including public road access to and within Indian reservations, Indian trust land, or Native American communities. Indian Reservation Roads by definition include BIA, state, county, and other local government public roads located within or providing access to an Indian reservation.

Funds for the IRR Program come from the Federal Highway Trust Fund administered by the Federal Highway Administration (FHWA). IRR funds are provided to the BIA Division of Transportation (BIADOT), which allocates the funds to the Regional Offices based on Tribal shares determined by a formula. The BIA Navajo Regional Office distributes IRR funds for projects once the FHWA approves the Navajo Nation's Tribal Transportation Improvement Program (TIP). An important feature of IRR funds is that they can be used to meet the match requirements of other federal programs.

State constitutional provisions restrict making state tax revenues, e.g. state gas, motor vehicle registration and vehicle license taxes, directly available to Tribes. However, most federally funded transportation programs are administered by the states, and Tribes are eligible for those funds. Certain federal funding processes are also coordinated through the regional Council of Government and for the Arizona portion of the Navajo Nation this is the Northern Arizona Council of Governments. Compensation from most federally-funded transportation programs is on a reimbursement basis.

There is a wide range of activities required to satisfy the transportation needs of the Navajo Nation. Funding for these activities is potentially available from multiple sources. The purpose of this section is to provide a brief description of some of the major funding sources and financing options and also to identify some of the principal contacts to learn more detail about the funding sources and requirements for acquiring the funds.

Table 38 – Road Project Funding Sources

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Navajo Fuel Excise Tax	Navajo Nation	This fund is used for both construction and maintenance activities on Nation roadways and other transportation infrastructure.	Based on the amount of taxes paid on fuel sold on the Reservation.	The fuel excise tax is a result of a compact with New Mexico, Utah and Arizona. Permits Tribe to collect fuel taxes paid by distributors based on fuel sold on Tribal lands. The NN is obligated to return partial of FET revenue to Arizona.	Nov of each year. Application is currently on hold	Darryl Bradley, Engineer Navajo DOT
IRR Construction	BIA-DOT Navajo Regional Office	Tribal transportation construction, safety programs or public transit capital projects. Can be used for transportation planning. Up to 25 percent of the funds can be used for roadway maintenance.	Varies	Funds are allocated to BIA Regional Office on a formula basis (RNDF and PAF)	TTIP has to be submitted to FHWA by Aug	Harold Riley, Acting Division Manager Division of Transportation BIA Navajo Region P.O. Box 1060 Gallup, NM 87305 P: (505) 863-8281 F: 505.863.8355 E: Harold.riley@bia.gov
IRR Flexible Financing Provisions	BIA-DOT Navajo Regional Office	Same as IRR Construction Program	Controlled by Tribe's IRR allocations	Tribal use of bonds, other debt financing instruments (e.g. bank loans & state infrastructure banks).	July annually	Harold Riley, Acting, Division Manager Division of Transportation BIA Navajo Region P.O. Box 1060 Gallup, NM 87305 P: (505) 863-8281 F: 505.863.8355 E: Harold.riley@bia.gov

Table 38- Road Project Funding Sources (Continued)

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
IRR Transportation Planning	BIAWRO	Tribal transportation planning.	2% of construction funding	Funds are allocated directly to Tribe based on a formula, and distributed on a project by project basis.	N/A	Harold Riley, Acting Division Manager Division of Transportation BIA Navajo Region P.O. Box 1060 Gallup, NM 87305 P: (505) 863-8281 F: 505.863.8355 E: Harold.riley@bia.gov
Surface Transportation Program (STP)	ADOT, NMDOT, UDOT, NWNMRPO and NACOG	Construction, transit, safety, Intelligent transportation systems, management systems, environmental, transportation planning and enhancement on roads with functional classifications of urban collector, major rural collector or higher.	Varies by year	Project is scoped and request for funding submitted to NACOG, NWNMRPO, and UDOT. Project is funded if it is added to RTIP and STIP.		Chris Fetzer, NACOG 928.774.1895, ext. 1142 cfetzer@nacog.org Robert Kuipers rkuipers@nwnmcog.com P:(505) 722-4327
TIGER Grant Program	US DOT	Highway or bridge projects eligible under title 23, United States Code; Public transportation projects eligible under chapter 53 of title 49, United States Code	Varies by Year	Discretionary Grant Program that funds large projects with significant impact to the Nation or region.	A pre-application is typically required by early October.	http://www.dot.gov/tiger/

Table 38- Road Project Funding Sources (Continued)

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Indian Community Development Block Grant Program	US Dept. of Housing and Urban Development	Infrastructure construction, e.g., roads, water and sewer facilities; and, single or multipurpose community buildings. Also for housing and economic development projects. There are also Imminent Threat Grants to provide solutions to a problem of an urgent nature	Nationally , single purpose grants were \$60M, Imminent threat grants up to \$3.9M	Single-purpose grants are competitively awarded- must primarily benefit low or moderate income persons	Mid-June annually	Southwest Office of Native American Programs Phoenix Office One North Central Avenue, Suite 600 Phoenix, AZ, 85004-2361 Telephone: (602) 379-7200 FAX: (602) 379-3101
Public Lands Highway Discretionary Program	FHWA	<p>PLHD funds are available for any kind of transportation project eligible for assistance under Title 23, United States Code, which is within, adjacent to, or provides access to Federal lands or facilities.</p> <p>PLHD funds are available for transportation planning, research, engineering, and construction of the highways, roads, and parkways, and of transit facilities within the Federal public lands.</p> <p>Priority given to requests that increase livability, e.g. increase transportation choices</p>	\$45M nationally	Apply through ADOT	1/6/2012	Cindi Ptak Office of Federal Lands Highway 202-366-1586 cindi.ptak@dot.gov
Transportation, Community, and System Preservation Program	FHWA	The program provides funding for planning and implementation grants, and research regarding the relationships among transportation, community, and system preservation plans and practices and identify initiatives.	\$29M nationally	The project must be on a federal aid highway	1/6/2012	Wesley Blount Office of Human Environment 202-366-0799 wesley.blount@dot.gov

Table 38- Road Project Funding Sources (Continued)

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Funding for Planning Studies						
Planning Assistance for Rural Areas (PARA) Program (formerly Small Area Transportation Study Program)	ADOT	Small Area Transportation Studies to develop short, medium and long range transportation plans.	Up to \$250,000 per study depending on the project area and scope of work.	Competitive applications for planning projects are submitted to ADOT on an annual basis.	Applications for planning projects are submitted to ADOT on an annual basis in early summer.	http://mpd.azdot.gov/mpd/systems_planning/PDF/PARA/PARAs.asp Justin Feek, Senior Transportation Planner PARA Program Manager Phone: 602.712.6196 jfeek@azdot.gov
PDAF – Project Development Activity Funds	ADOT	PDAF Project Development Activity Funds (subcategory of 12.6%) are intended to assist in project development. Eligible development activities include: Major investment or corridor studies Design concept reports Engineering and design studies Right-of-way acquisition Non-traditional studies These funds are limited to arterial projects.	Funding is limited to \$50,000 per applicant.	Application submitted to NACOG by April 1.	4/1/2012	NACOG Transportation/Transit Planning Attn: Chris Fetzer 119 East Aspen Avenue Flagstaff, AZ 86001 (928) 774-1895 cfetzer@nacog.org

Table 39 - Funding for Safety Projects

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Alcohol Impaired Driving	NHTSA & GOHS	Costs for high visibility enforcement; Costs of training and equipment for law enforcement, Costs of advertising and educational campaigns that publicize checkpoints, increase law enforcement efforts and target impaired drivers under 34 years of age, Costs of vehicle or license plate impoundment.	\$129 million per year nationally	GOHS submits application for funding. Tribe should work with GOHS for use of funds.		
Highway Safety Improvement Program (HSIP)	ADOT and NACOG	Elimination of safety hazards on any public road, public surface transportation facility; any publicly owned bicycle or pedestrian pathway or trail; or any traffic calming measure.	Set aside of \$600,000 for NACOG region (2010)	Project is scoped and request for funding submitted to NACOG. HSIP Local Government Coordinator provides assistance to local agencies throughout the process of identifying and developing the projects.	May 1st	http://www.azdot.gov/highways/traffic/TSS/HSIP/AzHSIP2010.pdf Mark Poppe, State Safety Engineer ADOT Traffic Safety Section E: mpoppe@azdot.gov P: (602) 712-8496
High Risk Rural Roads Program (HRRRP)	ADOT	A list of eligible projects examples include: <ul style="list-style-type: none"> • Intersection safety improvements • Pavement and shoulder widening • Installation of rumble strips • Railway-highway safety crossing improvements 		Construction and operational safety improvements are funded on rural major or minor collector or a rural local road that has fatal and incapacitating injury crash rates higher than the statewide average.	May 1st	http://www.azdot.gov/highways/traffic/TSS/HSIP/AzHSIP2010.pdf Mark Poppe, State Safety Engineer ADOT Traffic Safety Section E: mpoppe@azdot.gov P: (602) 712-8496

Table 39 - Funding for Safety Projects (Continued)

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Indian Highway Safety Program	BIA Highway Safety Office	Safe communities, Alcohol countermeasures, Occupant protection, Police traffic services (primarily enforcement), Emergency medical services, Traffic records, Motorcycle safety, Pedestrian and bicycle safety, Roadway safety, Speed control	Approx. \$4 million/year nationally	Competitive applications	Proposals submitted in the April time frame for following FY funding.	Paul Holley, Administrator Patricia Abeyta, Program Coordinator Phone- 505-563-5371
State & Community Highway Safety Grant Program	NHTSA & GOHS	Alcohol countermeasures, Occupant protection, Police traffic services (primarily enforcement), Emergency medical services, Traffic records, Motorcycle safety, Pedestrian and bicycle safety, Roadway safety, Speed control, school bus safety, training, and accident reconstruction.	Approx. \$2.5 million/year for Arizona	Competitive proposals submitted to the GOHS	Competitive proposals submitted to the GOHS during April and May	
Injury Prevention Program	IHS	Build Tribal capacity for preventing any type of identified injury problem facing a tribal government. Develop, implement, and evaluate proven or promising injury prevention intervention programs. Projects include, but are not limited to, programs designed to reduce alcohol-related injuries, e.g. supporting initiatives to reduce drinking and driving. Other projects include seat belt promotion campaigns, pedestrian safety, child passenger safety,	\$75,000 maximum per project	Work with IHS Office to obtain project funding.	N/A	Siona Willie Area Injury Prevention Specialist Navajo Area Indian Health Service P.O. Box 9020 Window Rock, AZ 86515 Email: siona.willie@ihs.gov Phone: 928-871-1335

Table 39 - Funding for Safety Projects (Continued)

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Road Safety Assessment	ADOT Traffic Safety Section	The RSA program will conduct Road Safety assessments on state, local and tribal road facilities. An RSA is defined as a formal examination of user safety of a future or existing roadway by an independent multidisciplinary audit team, which includes qualified experienced members.	Not available	Submit application	On-going	Mike Blankenship, P.E. Phone: 602-712-7601 Road Safety Assessment Program Manager Fax: 602-712-3243 1615 West Jackson St., Mail Drop 065R Email: mblankenship@azdot.gov Phoenix, AZ 85007-3217

Another reference source for funding programs that address tribal traffic safety issues is the Tribal Traffic Safety Funding Guide which was developed through the Arizona Transportation Research Center - Research Program. The guide summarizes the various transportation safety programs and can be obtained through the ATRC website at http://www.azdot.gov/TPD/ATRC/publications/project_reports/PDF/AZ592s.pdf

Table 40- Funding Programs for Scenic Byway Projects

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
National Scenic Byway Program	Federal Highway Administration	<p>There are 8 categories:</p> <ul style="list-style-type: none"> • State and Tribal Programs • Corridor Management Plan • Safety Improvements • Byway Facilities – includes construction of facility for pedestrians and bicyclists, rest area, turnout, shoulder, overlook, or interpretive facility • Access to Recreation • Resource Protection • Interpretive Information • Marketing Program <p>This Program provides discretionary funds for projects along highways designated as National Scenic Byways, All-American Roads, State scenic byways or Indian Tribe scenic byways. This Program can fund bicycle facilities along highways.</p> <p>New this year, priority is given to projects that create new jobs</p>	Varies by year	Competitive grant application	January	<p>http://www.bywaysonline.org/grants/</p> <p>Navajo Nation Scenic Byway Coordinator Geri Arviso Navajo Tourism PO Box 663 Window Rock, AZ 86515 928-871-6436 gabinettneekirk@yahoo.com</p> <p>Gary Jensen, Team Leader FHWA Headquarters P: (202) 366-2048 E: gary.jensen@dot.gov</p> <p>Meesa Otani, Environmental Coordinator FHWA AZ Division P: 602-382-8976 E: meesa.otani@dot.gov</p>

Table 41 - Funding for Pedestrian, Bicycle, and Equestrian Projects

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Transportation Enhancement	ADOT and NACOG	<p>Facilities, safety and educational activities for pedestrians and bicycles.</p> <p>Scenic and historic highway programs including tourist and welcome center facilities.</p> <p>Landscaping and other scenic beautification.</p> <p>Historic preservation.</p> <p>Rehabilitation of historic transportation buildings, structures, or facilities.</p> <p>Control and removal of outdoor advertising.</p> <p>Archeological planning and research.</p> <p>Environmental mitigation related to highway runoff or reduction of wildlife mortality due to motor vehicle collisions.</p> <p>Establishment of transportation museums.</p>	\$15+ million per year for Arizona	<p>Applications and estimates are submitted to NACOG.</p> <p>The Nation and NACOG work together to refine the proposal, which must be submitted to ADOT in September.</p> <p>ADOT uses a selection committee to select the projects to be approved for funding.</p>	September of each year	<p>Tammy Flaitz, ADOT http://www.azdot.gov/highways/SWProjMgmt/enhancement_scenic/enhancement/Index.asp</p> <p>and Chris Fetzer, NACOG 928.774.1895, ext. 1142 cfetzer@nacog.org</p>
Safe Routes to School Program		<p>The program accomplishes this by providing funds for schools and communities to implement infrastructure projects (such as sidewalk improvements, trails, and traffic calming) and non-infrastructure programs (such as education campaigns, law enforcement efforts, and prize giveaways).</p> <p>This program provides reimbursable funds for elementary/middle schools to implement projects to encourage children to walk and bicycle to school.</p>	Varies	Competitive application. Grant writing seminars are provided periodically	Generally first half of school year	<p>Brian Fellows, SRTS Program Coordinator telephone: 602.712.8010 fax: 602.712.3347 bfellows@azdot.gov</p>

Table 41 - Funding for Pedestrian, Bicycle, and Equestrian Projects (Continued)

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Southwest Conservation Corps	Southwest Conservation Corps	Although not a funding source, this non-profit organization engages and trains youth and completes conservation projects for the public benefit	N/A	Contact Southwest Conservation Corps to partner on a project	N/A	Ancestral Lands Acoma, NM (505) 552-4074 Four Corners 701 Camino del Rio Suite 101 Durango, CO 81301 (970) 259-8607

Table 42 - Transit Funding Programs

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Section 5310, Elderly/Disabled Transit Program	ADOT	<p>Private non-profit, Tribes and public agencies that provide transportation to the elderly and disabled. 90% federal funds and 10% local match funds are used annually for the purchase of van type vehicles statewide.</p> <p>In addition, a new federal class of grant called "mobility management" is available to assist agencies and communities with their coordination efforts.</p>	Approximately \$3.9 million statewide annually	Application-based process, initially screened through COG	<p>Regional application workshops –</p> <p>Co-hosted by ADOT and NACOG</p> <p>1/10/2012 and 1/26/2012</p> <p>(by webinar)</p> <p>Applications due Feb/March 2012 (schedule set by NACOG)</p>	<p>http://www.azdot.gov/MPD/Community_Grant_Services/Section5310.asp</p> <p>Dan Harrigan, ADOT Coordinated Mobility Program Manager at DHarrigan@azdot.gov or (602) 712-8232</p> <p>Jason Kelly, NACOG Mobility Management Planner at jkelly@nacog.org or (928) 830-0127.</p>
Section 5311, Rural Public Transportation Program	ADOT	Funds may be used for public transit services operating: a) within small urban and rural communities, b) among small urban and rural communities, and c) between small urban and rural communities and Urbanized Areas (cities of 50,000 or more).	Approximately \$9.1 million in FY2010 statewide	<p>Application based program, must :</p> <ul style="list-style-type: none"> • Attend an application workshop • Submit application • Participate in a panel interview with ADOT and transit experts • Meet budget levels recommended by ADOT 	December, 2011	<p>http://www.azdot.gov/MPD/Community_Grant_Services/Section5311.asp</p> <p>Matt Carpenter, ADOT NACOG Transportation/Transit Planning</p> <p>Attn: Chris Fetzter</p> <p>119 East Aspen Avenue</p> <p>Flagstaff, AZ 86001</p> <p>(928) 774-1895</p> <p>cfetzter@nacog.org</p>

Table 42 - Transit Funding Programs (Continued)

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Section 5311(c) – Rural Public Transportation on Indian Reservation Program	Federal Transit Administration	This program provides operating assistance for local governments and Indian Tribes to provide transit for the general public. Capital assistance may also be provided under this program. NACOG annually reviews applications for consistency with the Regional Transit Development A Tribe can apply for multiple years of funding, up to four years.	\$25,000 maximum per planning grant.	Application–based program, submitted to Federal Transit Administration.	December, 2011	http://www.azdot.gov/MPD/Community_Grant_Services/Section5311.asp Matt Carpenter, ADOT MCarpenter@azdot.gov NACOG Transportation/Transit Planning Attn: Chris Fetzer 119 East Aspen Avenue Flagstaff, AZ 86001 (928) 774-1895 cfetzer@nacog.org
Section 5316, Job Access/Reverse Commute Program	ADOT	JARC grant program is to assist in developing new or expanded transportation services that connect welfare recipients and other low income persons to jobs and other employment related services.	Approximately \$630,000 in FY 2011 for rural areas and \$350,000 for small urbanized areas.	Application based program through ADOT.	Regional application workshops – Co-hosted by ADOT and NACOG 1/10/2012 and 1/26/2012 (by webinar) Applications due Feb/March 2012 (schedule set by NACOG)	http://www.azdot.gov/MPD/Community_Grant_Services/Section5316.asp Dan Harrigan, ADOT dharrigan@azdot.gov Jason Kelly, NACOG Mobility Management Planner at jkelly@nacog.org or (928) 830-0127.

Table 42 - Transit Funding Programs (Continued)

Program	Administering Agency	Uses of Funds	Funding Level	Program Details	Application Deadline	Contact
Section 5317- New Freedom Transit Program	ADOT	Funds are available to support the capital and operating costs of new public transportation services targeted toward people with disabilities or public transportation alternatives that go beyond those required by the ADA.	Projections for FY 2011 statewide funding for rural areas are expected to exceed \$285,000, and \$170,000 for small urbanized areas.		Regional application workshops – Co-hosted by ADOT and NACOG 1/10/2012 and 1/26/2012 Applications due Feb/March 2012 (schedule set by NACOG).	http://www.azdot.gov/MPD/Community_Grant_Services/Section5317.asp Dan Harrigan, ADOT dharrigan@azdot.gov Jason Kelly, NACOG Mobility Management Planner at jkelly@nacog.org or (928) 830-0127.
Rural Transit Assistance Program	ADOT	This is a free training, technical assistance, and outreach program funded by the Federal Transit Administration	N/A	Each Section 5311 grantee agency (Navajo Transit is one) has an ongoing training program. Regularly offered training may include Passenger Service & Safety, CPR, Basic First Aid, Defensive Driving.	N/A	Sara Allred Rural Transit Assistance Program ADOT Multimodal Planning Division 206 S 17th Ave MD 340B Phoenix, AZ 85007 602-712-4498 602-712-3046 FAX
Transit Planning Funding Resources						
Section 5304 – Statewide Transportation Planning Program	ADOT	Section 5304 funds are apportioned to the states for use in rural transit planning and research. Other eligible uses, at the state's discretion, include statewide planning and technical assistance activities.	The Federal Transit Administration appropriated \$328,654 to ADOT in FY2007.	Application-based program. Applicants must provide a minimum 20% match. A limit of \$30,000 is available per project.		

APPENDIX A

TITLE VI AND ENVIRONMENTAL JUSTICE-PRELIMINARY ASSESSMENT

Table A1 – Title VI and Environmental Justice: Preliminary Assessment

Chapter	Route Number or Name	Project Number	Project Limits	Project Description	Impacted Population	Potential disproportionate and/or adverse impact(s)	Considerations that dictated this recommendation over alternative actions
SHORT TERM PROJECTS							
Roadway / Intersection Projects							
Chinle	N7	N7 (3-1) / N7A (1-1)4	US 191 to N64	Chip Seal	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to street accessibility during construction	Provide improved safety and reduced vehicle maintenance costs
Chinle	N27	N27(2-2)1,2&4	Nazlini north to Chinle	Grade, drain and surfacing (pavement) construction	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to street accessibility during construction	Provide improved safety and reduced vehicle maintenance costs
Chinle	N27	N27(4-2)4	N7 to 0.45 miles south of N7	Chip seal	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to street accessibility during construction	Provide improved safety and reduced vehicle maintenance costs
Chinle	N8095	N8095(1) / N8081 (1)1,2&3	US191 to 1 mile northeast of US191	Grade, drain and gravel paving and bridge construction	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to street accessibility during construction	Provide improved safety and reduced vehicle maintenance costs
Pedestrian Crossings							
Chinle	N7	None	N/A	Construct high visibility crosswalks on N7	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to street accessibility during construction	Provide improved safety to pedestrians
Many Farms	Lake View Drive / Loop Drive	None	N/A	Construct high visibility crosswalks at intersection	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to street accessibility during construction	Provide improved safety to pedestrians
Transit Projects							
Chinle and Many Farms	Local transit service	None	Chinle and Many Farms	Implement transit service to Chinle and Many Farms	Minority and low-income populations including: Chinle and Many Farms residents and area visitors	Change to routes and service	Provide transit connections to these areas of the Nation

Chapter	Route Number or Name	Project Number	Project Limits	Project Description	Impacted Population	Potential disproportionate and/or adverse impact(s)	Considerations that dictated this recommendation over alternative actions
MID TERM PROJECTS							
Roadway Projects							
Chinle	N7	None	US 191 to 2.3 miles east of US 191	Construct street lighting	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to right-of-way during construction	Improved safety
Chinle	N7	None	US 191 to N106	Access study and Design	Minority and low-income populations including: Chinle residents and area visitors	None	Improved safety
Chinle	N105	None	N27 to 0.21 miles west	Chip seal	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to street accessibility during construction	Provide improved safety and reduced vehicle maintenance costs
Many Farms	N8084	N8084(1)1,2,3	US 191 to Windmill	Grade, drain and gravel paving	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to street accessibility during construction	Reduced dust, improved safety.
Many Farms	Lake View Drive/N203	None	US 191 west 0.7 miles	Chip seal	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to street accessibility during construction	Provide improved safety and reduced vehicle maintenance costs
Many Farms	Many Farms Lake Access Roads	None	Exact locations to be determined	Grade, drain and gravel paving	Minority and low-income populations including: Many Farms residents and area visitors	Increased traffic through area, increased noise and air pollution	Reduced dust, improved safety.
Many Farms	Frontage Road Connection to CR 506	None	US 191 to CR 506	Grade, drain and gravel paving	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to street accessibility during construction	Reduced dust, improved safety.
Many Farms	CR 566	None	N8086 to N8084	Grade, drain and gravel paving	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to street accessibility during construction	Reduced dust, improved safety.

Chapter	Route Number or Name	Project Number	Project Limits	Project Description	Impacted Population	Potential disproportionate and/or adverse impact(s)	Considerations that dictated this recommendation over alternative actions
Sidewalk Construction							
Chinle	N7	None	N7, MP 2.4-MP 2.8	Sidewalk Construction	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to sidewalk area accessibility during construction	Improved safety for pedestrians
Chinle	N102	None	US 191 to Chinle Health Care Facility	Sidewalk Construction	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to sidewalk area accessibility during construction	Improved safety for pedestrians
Many Farms	N59	None	US 191 to N8082	Sidewalk construction	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to sidewalk area accessibility during construction	Improved safety for pedestrians
Many Farms	Lake View Drive/N203	None	US 191 to Loop Drive	Sidewalk construction	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to sidewalk area accessibility during construction	Improved safety for pedestrians
Shared Use Paths							
Chinle	N102/N8091/N8092	None	N/A	Shared use path construction	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to path area accessibility during construction	Improved safety for pedestrians, bicyclists
Many Farms	Trail	None	Between N59 and school	Shared use path and equestrian trail construction	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to path area accessibility during construction	Improved safety for pedestrians, bicyclists, and equestrians
Shared Use Paths							
Many Farms	Trail	None	Many Farms Lake area	Shared use path and equestrian trail construction	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to path area accessibility during construction	Improved safety for pedestrians, bicyclists, and equestrians
Equestrian trails							
Chinle	N7	None	US 191 to N64	Soft path	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to path accessibility during construction, impacts to right-of-way	Improved safety for equestrians and pedestrians

Chapter	Route Number or Name	Project Number	Project Limits	Project Description	Impacted Population	Potential disproportionate and/or adverse impact(s)	Considerations that dictated this recommendation over alternative actions
Chinle	N8095/CR521	None		Soft path	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to path accessibility during construction, impacts to right-of-way	Improved safety for equestrians and pedestrians
Bicycle Lanes							
Chinle	N7	None	US 191 to N64	Widen shoulder and stripe and sign bike lane	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to street accessibility during construction, impacts to right-of-way	Improved safety for bicyclists
Chinle	N27	None	N7 to N102-5	Stripe and sign bike lane	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to street accessibility during construction	Improved safety for bicyclists
Chinle	N102	None	US 191 to terminus at hospital	Stripe and sign bike lane	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to street accessibility during construction	Improved safety for bicyclists
Many Farms	N59	None	US 191 to N8082	Stripe and sign bike lane	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to street accessibility during construction	Improved safety for bicyclists
Many Farms	Lake View Drive	None	US 191 to Loop Drive	Stripe and sign bike lane	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to street accessibility during construction	Improved safety for bicyclists
Transit Projects							
Chinle and Many Farms	N/A	None	N/A	Install transit shelters, 9 locations	Minority and low-income populations including: Chinle and Many Farms residents and area visitors	Temporary constraint to bus stop location	Provide shade and shelter for transit riders
Chinle	N/A	None	N/A	Design and Construct Transit Center	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to bus stop location	This center would be used for minor maintenance, bus driver layovers and a likely a stop-it would assist in scheduling the bus route.

Chapter	Route Number or Name	Project Number	Project Limits	Project Description	Impacted Population	Potential disproportionate and/or adverse impact(s)	Considerations that dictated this recommendation over alternative actions
LONG RANGE PROJECTS							
Roadway Projects							
Chinle	N7	None	N64 to 0.5 miles west of N64	Add acceleration /deceleration lanes	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to street accessibility during construction	Not programmed
Chinle	N27	N27 (2-3)1,2&4	Nazlini north to Chinle	Grade, drain and surfacing (pavement) construction	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to street accessibility during construction	Scheduled in 2022
Chinle and Many Farms	N8086	N8086(1) 2,3	US191 to N64	Grade , drain and gravel paving	Minority and low-income populations including: Chinle and Many Farms residents and area visitors	Temporary constraint to street accessibility during construction	Reduced dust, improved safety.
Chinle and Many Farms	N8086	N8086(2) 2,3	US191 to N64	Grade, drain and gravel paving	Minority and low-income populations including: Chinle and Many Farms residents and area visitors	Temporary constraint to street accessibility during construction	Reduced dust, improved safety.
Chinle	N8090	None	US191 to 4.4 miles west of US191	Grade, drain and gravel paving. Construct curves to design standards.	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to street accessibility during construction	Provide improved safety and reduced vehicle maintenance costs
Chinle	N8091	None	N102 to US 191	Grade , drain and surfacing (pavement) construction	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to street accessibility during construction	Provide improved safety and reduced vehicle maintenance costs
Chinle	N8095	None	US191 to N7	Grade , drain and surfacing (pavement) construction	Minority and low-income populations including: Chinle residents and area visitors	Temporary constraint to street accessibility during construction	Provide improved safety and reduced vehicle maintenance costs
Many Farms	N8084	N8084(2)1, 2,3	US191 to Windmill	Grade, drain and gravel paving	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to street accessibility during construction	Reduced dust, improved safety.

Chapter	Route Number or Name	Project Number	Project Limits	Project Description	Impacted Population	Potential disproportionate and/or adverse impact(s)	Considerations that dictated this recommendation over alternative actions
Many Farms	N8084	N8084(3) 2,3	US191 to Windmill	Grade, drain and gravel paving	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to street accessibility during construction	Reduced dust, improved safety.
Many Farms	N8085	N8085(1)2,3	US191 north 4.9 miles	Grade, drain and gravel paving	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to street accessibility during construction	Reduced dust, improved safety.
Many Farms	Unnamed road	None	US191 to N8084	Grade, drain and gravel paving	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to street accessibility during construction	Reduced dust, improved safety.
Many Farms	Unnamed road	None	US 191 to N8085	Grade, drain and gravel paving	Minority and low-income populations including: Many Farms residents and area visitors	Temporary constraint to street accessibility during construction	Reduced dust, improved safety.
New Roads							
Chinle	New east-west road	None	between N8094 and N27	Feasibility study and design	Minority and low-income populations including: Chinle residents and area visitors	Need for new right-of-way, construction impacts	Better access and connectivity, improved emergency access

APPENDIX B

PUBLIC INVOLVEMENT SUMMARY REPORT 1

Note: Appendices B (Stakeholder Database), D1 (Meeting Materials – Many Farms Meeting) and D2 (Meeting Materials – St. Michaels Meeting) are not included in this report.



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Public Involvement Summary Report

Chinle-Many Farms and St. Michaels-Window Rock-Ft. Defiance Multimodal Long Range Transportation Study

First Phase Public Involvement – November 2011

ADOT MPD Task Assignment 23-11 ADOT Project No. PG TD0728

TABLE OF CONTENTS

Introduction	1
Planning Efforts	2
Public Outreach Efforts	3
Public Meetings & Comments	4
Appendices	19

List of Tables

Table 1: Public Outreach	3
Table 2: Public Comments – Chinle/Many Farms Study	4
Table 3: Public Comments – St. Michaels/Fort Defiance Study	11
Table 4: Project Criteria Rankings – Chinle/Many Farms Study	14
Table 5: Project Criteria Rankings – St. Michaels/Fort Defiance Study	15
Table 6a: Transportation Needs Rankings – Chinle/Many Farms Study	15
Table 6b: Transportation Needs Rankings – Chinle/Many Farms Study	16
Table 7a: Transportation Needs Rankings – St. Michaels/Fort Defiance Study	16
Table 7b: Transportation Needs Rankings – St. Michaels/Fort Defiance Study	17
Table 8: Three Most Important Needs – Chinle/Many Farms Study	18
Table 9: Three Most Important Needs – St. Michaels/Fort Defiance Study	18

Arizona Address: PO Box 336, Flagstaff, AZ 86002

Texas Address: 40 East Valley Spring Road, Wimberley, TX 78676



public involvement



citizen outreach



stakeholder facilitation



conflict resolution

INTRODUCTION

As the Navajo Nation continues to grow, comprehensive transportation planning is necessary for sustainable development and to meet the needs of area residents, businesses and visitors. The Navajo Division of Transportation (Navajo DOT), the Arizona Department of Transportation (ADOT) and Navajo Chapters have initiated a multimodal transportation study to identify long-term improvements in two areas: Chinle to Many Farms Corridor Study Area; and St. Michaels to Window Rock to Fort Defiance Corridor Study Area.

The study will analyze and identify improvements for all modes of transportation within the corridor areas, including vehicular, pedestrian, bicycle, and equestrian, as well as connections between vehicular, airport and transit systems for commuter and emergency needs. Particular attention will be paid to safety, mobility, livability, and economic and community development.

The study, funded through the ADOT Planning Assistance for Rural Areas (PARA) Program, is being conducted in two phases. The first phase will document current and future conditions and needs, which is the focus of this Public Involvement Summary Report. The second phase will focus on evaluation criteria and specific plans for improvements.

The project team will take public comments and concerns into consideration when developing evaluation criteria and specific plans for improvements. The plans will be presented at a second round of public meetings in January or February 2012. Ultimately, the long-range studies will recommend transportation improvements to be implemented in five, 10 and 20-year timeframes.

This Public Involvement Summary Report provides a recap of planning efforts and public involvement activities and includes information provided and comments received during the first phase of public involvement, including comments heard during an in-person reconnaissance/flier delivery trip, comments received via email, spoken comments from public meeting participants and written comments.

PLANNING EFFORTS

Public Involvement Plan

Prior to planning the public meetings, the project team developed a Public Involvement Plan (PIP) to map out the team's approach and define the roles of project team members. The PIP defined public involvement objectives and outlined public involvement program elements. The PIP also identified public outreach mechanisms, public meeting formats and public involvement program evaluation criteria. The PIP is considered a living document and should be revised and/or updated as is necessary and appropriate as the project progresses.

See Appendix A for the Public Involvement Plan.

Stakeholder Database

A stakeholder database was developed through internet and phone research, review of existing databases and face-to-face contact with individuals throughout the two corridor study areas. The database is used to distribute public meeting announcements and project updates via email, fax and mail. The database currently includes 325 contacts and will continue to be updated as the project progresses.

See Appendix B for a list of stakeholders by name and entity represented.

PMT and TAC Meetings

Public involvement team members attended Project Management Team (PMT) and Technical Advisory Committee (TAC) meetings in an effort to remain updated on project activities and also to work with the groups to plan public involvement program elements, public outreach efforts and public meeting materials, formats and logistics. Early in the process the project team decided to conduct two rounds of public meetings during the course of the two studies. Each round includes two meetings, one on each of the two corridor study areas.

PUBLIC OUTREACH EFFORTS

As identified in the Public Involvement Plan, the following outreach mechanisms were used to notify the public of the project and the first round of public meetings.

Table 1: Public Outreach

Outreach Mechanism	Location/Media	Date
In-person Announcements provided by Navajo DOT staff	Chinle Chapter Meeting	Sept. 23, 2011
	Many Farms Chapter Meeting	Oct. 10, 2011
	St. Michaels Chapter Meeting	Oct. 16, 2011
Announcement Requests (Navajo DOT staff were scheduled to attend and make the announcement in-person, but were unable to due to Chapter meeting schedule changes)	Fort Defiance Chapter Meeting	Oct. 13, 2011
News Release	Distributed by email and fax to area media by ADOT CCP, and to all stakeholders by Intrinsic staff	Oct. 4 & 25, 2011
Flier	Delivered in-person throughout the project area	Oct. 10 & 11, 2011
Newspaper Ads	<i>Gallup Independent</i>	Oct. 1, 2011
	<i>Navajo Nation Messenger</i>	Oct. 18, 2011
	<i>Navajo Times</i>	Oct. 27, 2011
Public Service Announcement	Distributed to area radio stations by ADOT CCP	Oct. 4, 2011
Comment Period Reminder Email	Distributed to all stakeholders by email and fax by Intrinsic staff	Nov. 16 & Dec. 8, 2011

See Appendix C for copies of outreach materials and a flier delivery report.

PUBLIC MEETINGS & COMMENTS

The public meetings were held on Wednesday, November 2, 2011, from 6 to 8 p.m. at the Many Farms Chapter House, and on Thursday, November 3, 2011, from 6 to 8 p.m. at the St. Michaels Chapter House. Forty-two people signed in at the Many Farms meeting, and 10 people signed in at the St. Michaels meeting. Mary Rodin provided the presentation at both meetings. Marco Sells provided Navajo interpretation at the Many Farms meeting, and Nona Baheshone provided Navajo interpretation at the St. Michaels meeting.

See Appendix D for the meeting handouts, comment forms, exhibits and presentations.

See sign-in sheets for the participants, included with public meeting notes in Appendix E.

Public Comments

In addition to taking spoken comments and questions during the public meetings, written comments and suggestions were encouraged with a deadline of December 2, 2011. Following the public meetings, the project team extended the written comments deadline to December 15, 2011. Stakeholders returned 17 comment forms for the Chinle/Many Farms study, and three comment forms for the St. Michaels/Fort Defiance study. Additionally, one stakeholder provided spoken comments via telephone, two emails were received during the comment period following the public meetings, and a few comments were received in-person during the flier delivery trip prior to the public meetings.

Table 2: Public Comments – Chinle/Many Farms Study

Comment Category	Chinle Area	Many Farms Area	Study Corridor Area	Comment Received
Animals on Roads	Livestock concerns at the US 191/N7 intersection.		Upgrade cattle guards – cattle still cross them.	Meeting
			Need to keep animals out of the road.	Meeting
			Animals in the road (US 191).	Meeting
			A livestock under crossing is needed.	Meeting
		Sheep/cattle pass near MP 461.	Need livestock under-crossings; cattle guards don't work (horses fall into them)	Form
			Provide and install improved design cattle-guards that deter livestock.	Form

Table 2: Public Comments – Chinle/Many Farms Study (continued)

Comment Category	Chinle Area	Many Farms Area	Study Corridor Area	Comment Received
New Pedestrian, Bicycle and Equestrian Trails			We need about three fence-overpasses [Cattle Passes] or box culverts for equestrians from Many Farms to Chinle.	Meeting
			Provide a bike path.	Meeting
			Bicycle and pedestrian lanes/shoulders.	Form
Drainage & Flooding Issues	There are several areas that flood right at the hospital turnoff, the airport turnoff, church north of Chinle, and at Bashas’.			Meeting
	There is flooding at approximately MP 451.3, between MP 448 and 449, and between MP 446 and 447.			Meeting
			Corridor area needs to be studies for flooding problems - have better drainage.	Form
			Design and size drainage pipe properly to prevent flooding of roads, businesses and access roads.	Form
			Flood control, surface runoff from the mesa floods these roads.	Form
Frontage Roads	Need frontage roads from M452 to 455.		Consider a frontage road.	Meeting
			Consider a bypass road for the semi trucks.	Meeting
			There is a need for frontage roads.	Meeting
			Too many turnouts now; frontage road for better access.	Form

Table 2: Public Comments – Chinle/Many Farms Study (continued)

Comment Category	Chinle Area	Many Farms Area	Study Corridor Area	Comment Received
Intersection Needs	Provide roundabout at N102/US 191 intersection.	A traffic signal or roundabout is needed at the intersection of US 191 and N59.	Add turning lanes for turns off of 191.	Meeting
	Traffic congestion concerns at the US 191/N7 intersection.		Construct turning lanes at major intersections (BIA & County Roads) between Chinle and Many Farms.	Meeting
	Near the US 191/N7 intersection, the Shell store needs their access closest to the intersection closed off. There are too many accesses to the store.			Meeting
	We need an intersection at the turnoff to Chinle hospital road.			Form
	The entrance to Shell station in Chinle (at intersection) needs to be closed off - accidents happen there when people turn there at a quick stop and the person behind them thinks they are going to drive up to the intersection.			Form
Street Lighting		Street lighting is needed on US 191 through Many Farms.	The community would like to have streetlights.	Meeting
		Lighting needs at 191/ N59.		Meeting
		More traffic lighting in Many Farms area.	There is no visibility at night.	Form
Maintenance Issues		N8082 is not maintained.	Bus routes are not maintained.	Meeting
		N8084 is wash-boarded and not maintained.	People cut fences.	Meeting

Table 2: Public Comments – Chinle/Many Farms Study (continued)

Comment Category	Chinle Area	Many Farms Area	Study Corridor Area	Comment Received
Maintenance Issues (continued)			Roads between homes need grading; people do it themselves.	Flier delivery
			Rural roads are not being maintained.	Flier delivery
			ROW cleaning/clearing; maintain ROW fence; maintain cattle-guards.	Form
New Road Connections		A new access has been established on US 191, just north of MP 464- make sure it remains open.		Meeting
	In Chinle need bypass route on north side between Chinle and Valley Store, and south side between Chinle and Nazlini.			Form
Paving		Paving is needed on N8084.		Meeting
		N8082 is not paved.		Meeting
		Pave N8086 – it is a school bus route.		Meeting
	Pave dirt road below hospital, road leading to hospital road.		Muddy, poor dirt roads – need upgrade to gravel or paving.	Form
	BIA roads need to be paved with additional routes in Chinle.		Pave or gravel top all heavily used roads, like N-18.	Form
			Pave or gravel top bus routes.	Form
Pedestrian Issues	A crosswalk is needed to the Tsegi Shopping Center.	School crossing is needed on US 191 approx. MP 461.5.	Bus stop signs for children crossing.	Meeting
	Near the US 191/N7 intersection, a pedestrian crosswalk, overpass, or HAWK [High-intensity Activated crosswalk, or a pedestrian hybrid beacon signal] signal is needed.	Crosswalk needs at 191/N59.	Need crosswalks for pedestrian safety.	Meeting

Table 2: Public Comments – Chinle/Many Farms Study (continued)

Comment Category	Chinle Area	Many Farms Area	Study Corridor Area	Comment Received
Pedestrian Issues (continued)		Provide a crosswalk at the end of Lake Drive.	Need overpasses for pedestrian safety.	Meeting
			Provisions for safe crossing for students and elders across US 191.	Phone
			New sidewalks/landscaping.	Form
			Need bridge crossing at all school crossings Many Farms, Elementary and Chinle Junior High and High Schools (like one in Ganado).	Form
Road Widening	Widen the shoulders at curves, MP 451 to 455 and MP 460 to 460.5.	Bridge over 191 at Black Mtn. Wash needs widening.	Consider a 4-lane highway between Chinle and Many Farms.	Meeting
	Provide passing lanes between MP 455.5 and MP 458.5.		Consider economic impacts of any right of way widening.	Meeting
	A passing lane is needed between MP 449 and 452.			Meeting
	Need turn lanes from M452 to 455.			Meeting
	Provide turnout lanes at the curve area (approx. MP 454.5).			Meeting
			Need to widen US 191 to 4 lanes between Chinle and Many Farms.	Phone
			Divided roads for future needs.	Form
			Need passing lanes to relieve congestion during rush hours.	Form

Table 2: Public Comments – Chinle/Many Farms Study (continued)

Comment Category	Chinle Area	Many Farms Area	Study Corridor Area	Comment Received
Safety	Dangerous curves around MP 452.	Trucks are speeding on US 191 in the Many Farms area (approximately MP 460-463).	Lower speed limit on 191.	Meeting
			Consider a weight limit or POE type booth to reduce the amount of big trucks.	Meeting
		Safety on US 191 and particularly near the curve area by the Valley Store.	Effect of semi-trucks on the roads- there seems to be a big increase in the number of trucks driving through Chinle on US 191.	Phone
		Bridge on 191 MP 460.	Add shoulders and fix sharp curves.	Form
			Truck route bypass Ganado, Chinle and Many Farms.	Form
			Rumble strips needed to alert motorists.	Form
			MVC's are the number one cause of injuries in the Chinle service unit; people are killed or severely injured when they hit animals, pedestrians or involved in single motor vehicle rollovers.	Form
School Transportation Issues	Congestion at Wildcat Gym after games.	Bus pullout on 191 by Black Mtn. Wash.	Bus turnouts to ease congestion.	Meeting
			School bus turnouts are needed on US 191.	Meeting
			Turnouts [bus/safety] are needed on US 191 every mile – charge a toll.	Meeting
Signage			Need more bus stop signs.	Form

Table 2: Public Comments – Chinle/Many Farms Study (continued)

Comment Category	Chinle Area	Many Farms Area	Study Corridor Area	Comment Received
Traffic Signal Installation	There is a need for another signalized intersection.	A traffic signal or roundabout is needed at US 191/N59.	Traffic signals are needed on US 191.	Meeting
	Relieve traffic congestion at the Tsegi Shopping Plaza.			Meeting
	A traffic signal is needed at the N102/US 191 intersection.			Meeting
			Build roundabouts instead of traffic signals.	Form
Transit	There is a transit stop just north of MP 452, but no pullout.	A bus pull off is needed on the east side of 191, approx. MP 460.3.	We need transit.	Meeting
Other Comments			The main concern should be 191.	Meeting
			Focus on improvements; we're paying taxes but not seeing improvements.	Flier delivery
			Study area needs to include north Many Farms Valley up to MP 470 Chinle Wash; improve N18 going up to Carson Mesa.	Form
			Using Navajo police and/or Arizona police, a coordination of enforcements and hefty fines to eliminate crossing of horses, cows and livestock on 191, especially at night.	Form
			Well-populated Many Farms Valley was not included in the study; emergency vehicles and school buses have difficulty commuting on these dirt roads.	Form

Table 3: Public Comments – St. Michaels/Fort Defiance Study

Comment Category	St. Michaels Area	Window Rock Area	Fort Defiance Area	Study Corridor Area	Comment Received
Animals on Roads				Safety, keep animals out of right of way.	Form
				New fence/cattle-guards.	Form
Paving	There are paving needs for the streets in the residential area on the west side of N12 (Shonto Blvd, Jeddito Drive and the intersecting streets).	There are paving needs on Window Rock Blvd/N100 and the other surrounding streets serving the government offices.			Meeting
		There are paving needs on Chee Dodge Drive, Manuelito Drive, Morgan Blvd, and other residential streets in that area.			Meeting
		These areas also need road improvements: Manuelito Drive, Tribal Hill Drive, Roswell Drive, Navajo Hill Drive, Bonito Apartment area.			Email
Intersection Needs				Build roundabouts at intersections.	Form

Table 3: Public Comments – St. Michaels/Fort Defiance Study (continued)

Comment Category	St. Michaels Area	Window Rock Area	Fort Defiance Area	Study Corridor Area	Comment Received
Pedestrian Issues				Pedestrian crossing starting at St. Michaels on the whole corridor.	Form
				Overcrossing in school areas, sidewalks, crossing markers on highway.	Form
Road Widening	4-lane route from Sawmill Junction to Ganado - Route 264.			Widen Road	Form
				Better safety turnouts.	Form
	We don't have any turn out lanes at this church and at Giant Service Station on 264 in St. Michaels.				Email
Safety	Address how to slow traffic on 264 in St. Michaels.				Email
Traffic Signal Installation	Consider a couple stop lights in order to slow down the traffic on 264 in St. Michaels.				Email
Traffic Control During Navajo Nation Fair		Better planning for the annual Navajo Nation Fair activities.			Form

Table 3: Public Comments – St. Michaels/Fort Defiance Study (continued)

Comment Category	St. Michaels Area	Window Rock Area	Fort Defiance Area	Study Corridor Area	Comment Received
Maintenance Issues		Repair roads in residential and business areas.			Meeting
		We've hauled in sand and gravel ourselves for the potholes.			Meeting
		Repair potholes in residential areas and Navajo Nation government offices.			Form
Frontage Road				Frontage road	Form
Other Comments	Address air brakes noise on 264 in St. Michaels.	Consider the housing areas for Employee Housing.			Email
New Road Connections	Window Rock Area				
	Alternate routes into Window Rock government offices.				Form
	Regarding another entry into the government area, the Employee Housing Program has a housing unit that is at the intersection of Chee Dodge and Morgan Blvd. What are the intentions of ADOT regarding the housing unit that is located there?				Email
	Regarding another entry into the government area, we have done studies regarding this second exit, but each time our office has tried to work in this additional exit, we were stopped by area residences citing "grazing land" Has ADOT looked into this yet?				Email

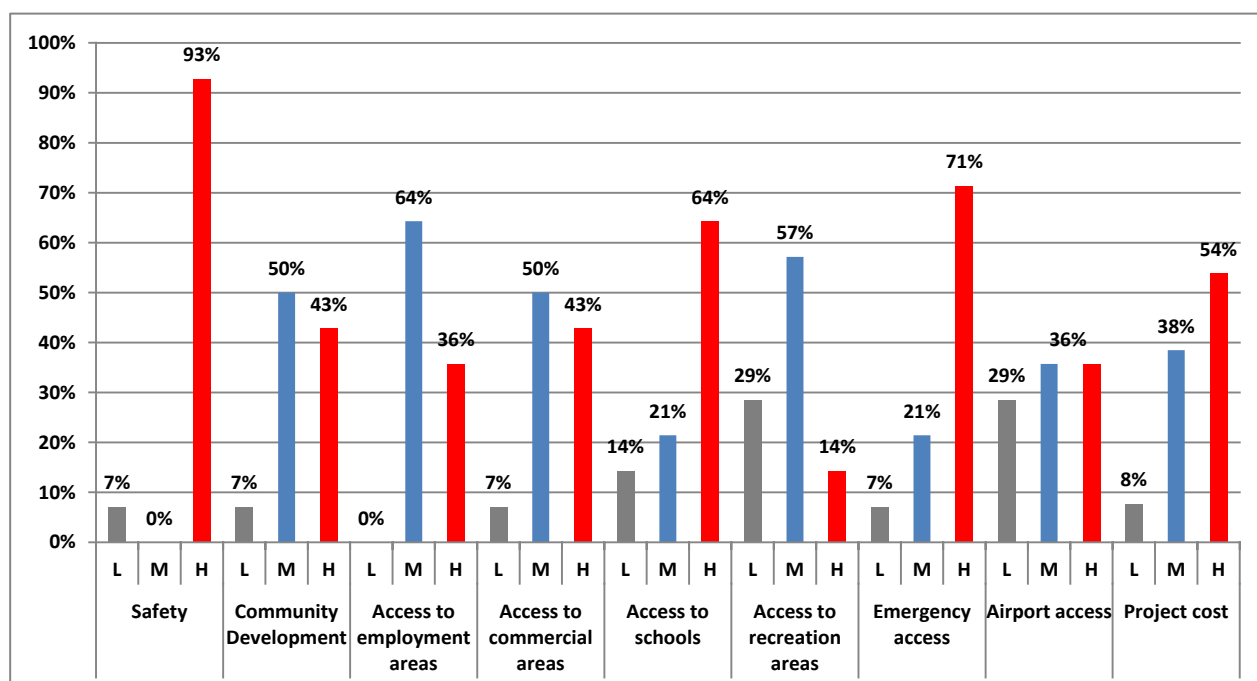
See Appendix E for public meeting notes.

Comment Forms

Comment forms were provided to public meeting attendees, and were available for download from the project web page. Emailed comment reminders to the project database included a link to the project web page and encouraged stakeholders to complete the forms. As stated above, stakeholders returned 17 comment forms for the Chinle/Many Farms study, and three comment forms for the St. Michaels/Fort Defiance study. Public comments included on the prepared forms related to needs and deficiencies have been included in the above tables.

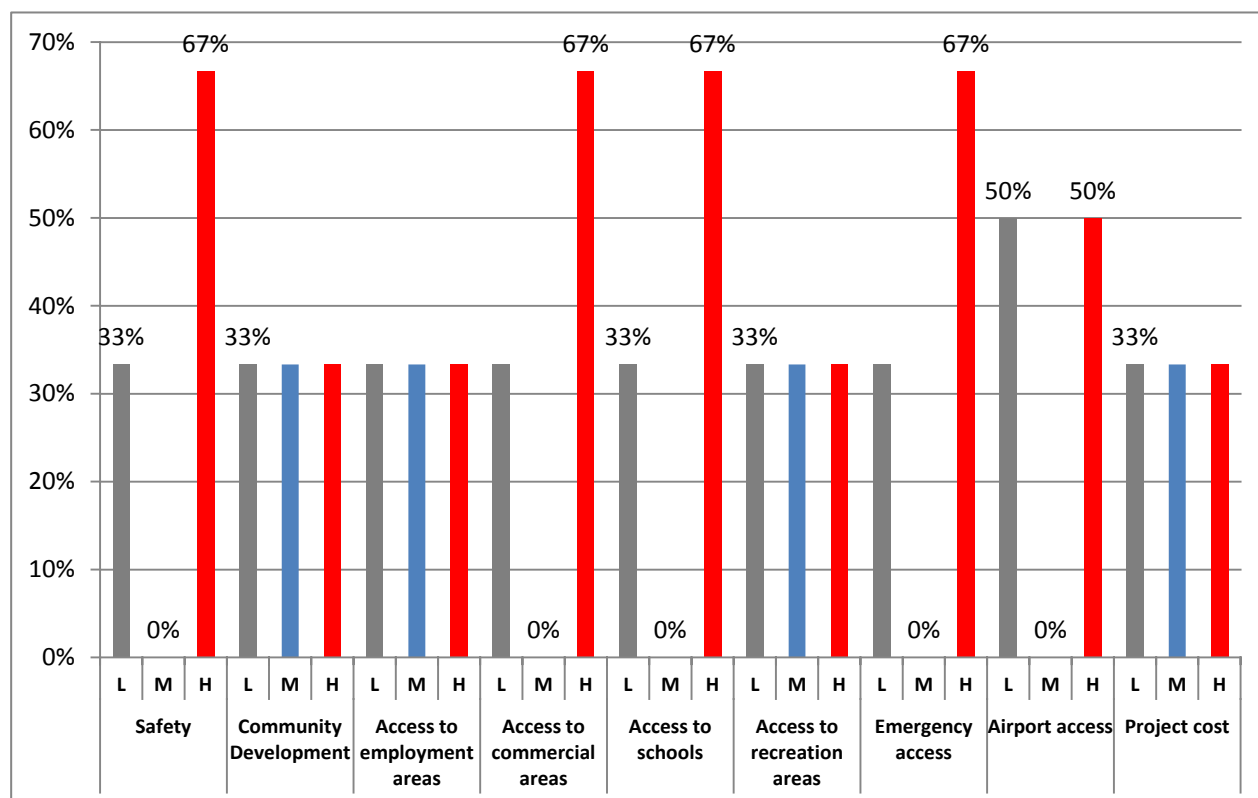
The comment forms provided a series of ranking questions related to project criteria and transportation related needs. The forms also asked participants to list the three most important transportation needs for each corridor area. Stakeholders' responses are summarized in the following tables.

Table 4: Project Criteria Rankings – Chinle/Many Farms Study



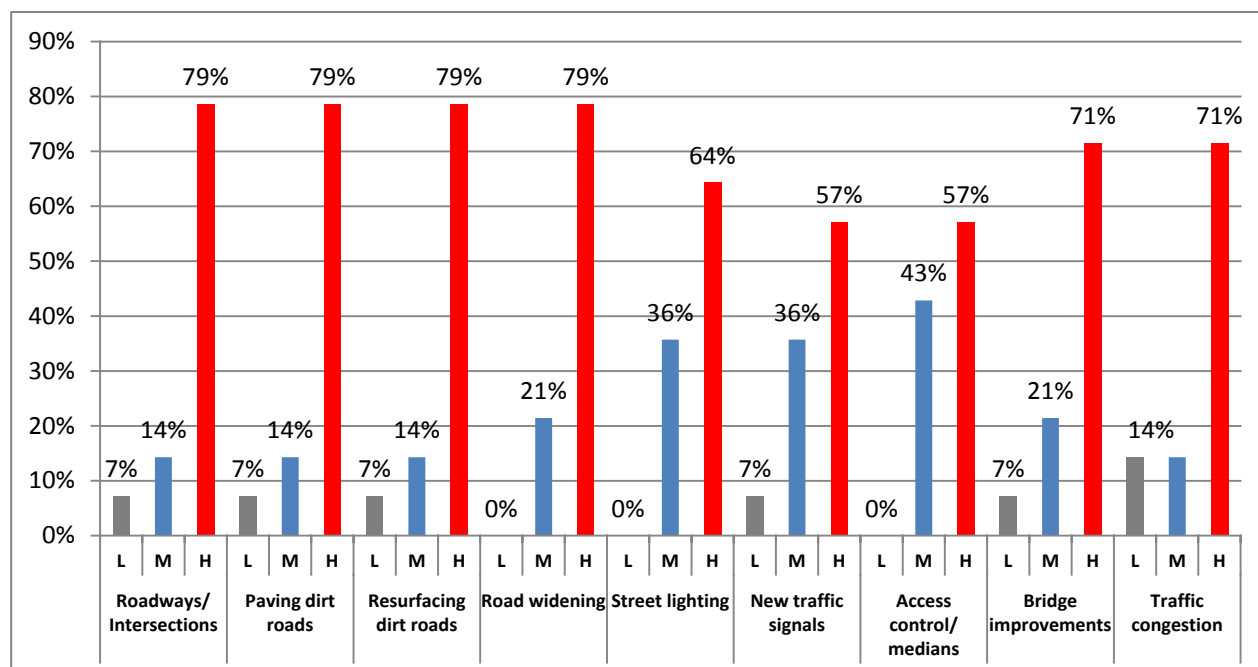
L=low priority; M=medium priority; H=high priority

Table 5: Project Criteria Rankings – St. Michaels/Fort Defiance Study



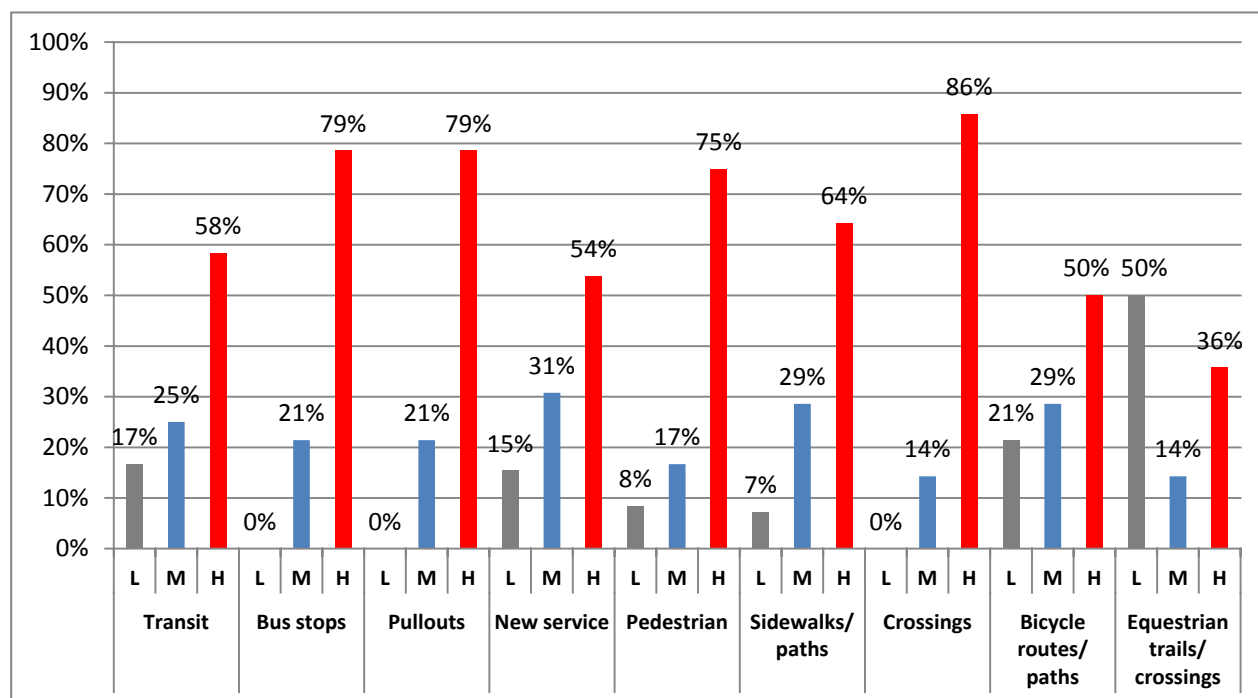
L=low priority; M=medium priority; H=high priority

Table 6a: Transportation Needs Rankings – Chinle/Many Farms Study



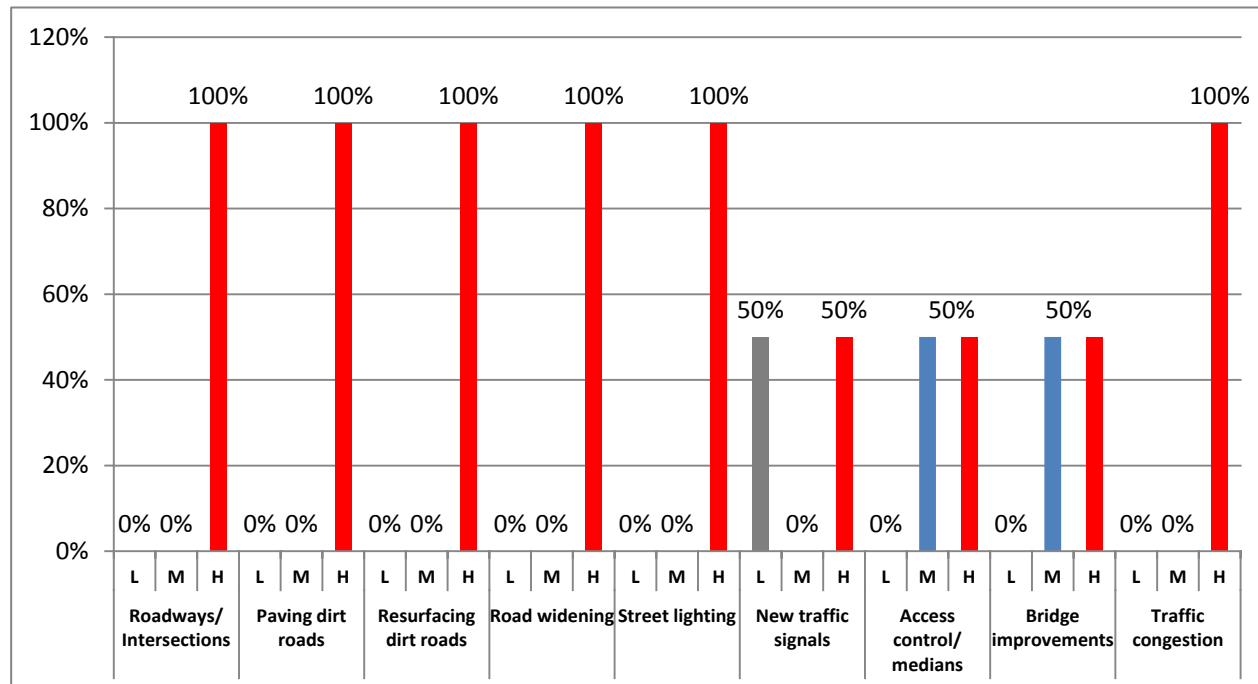
L=low priority; M=medium priority; H=high priority

Table 6b: Transportation Needs Rankings – Chinle/Many Farms Study



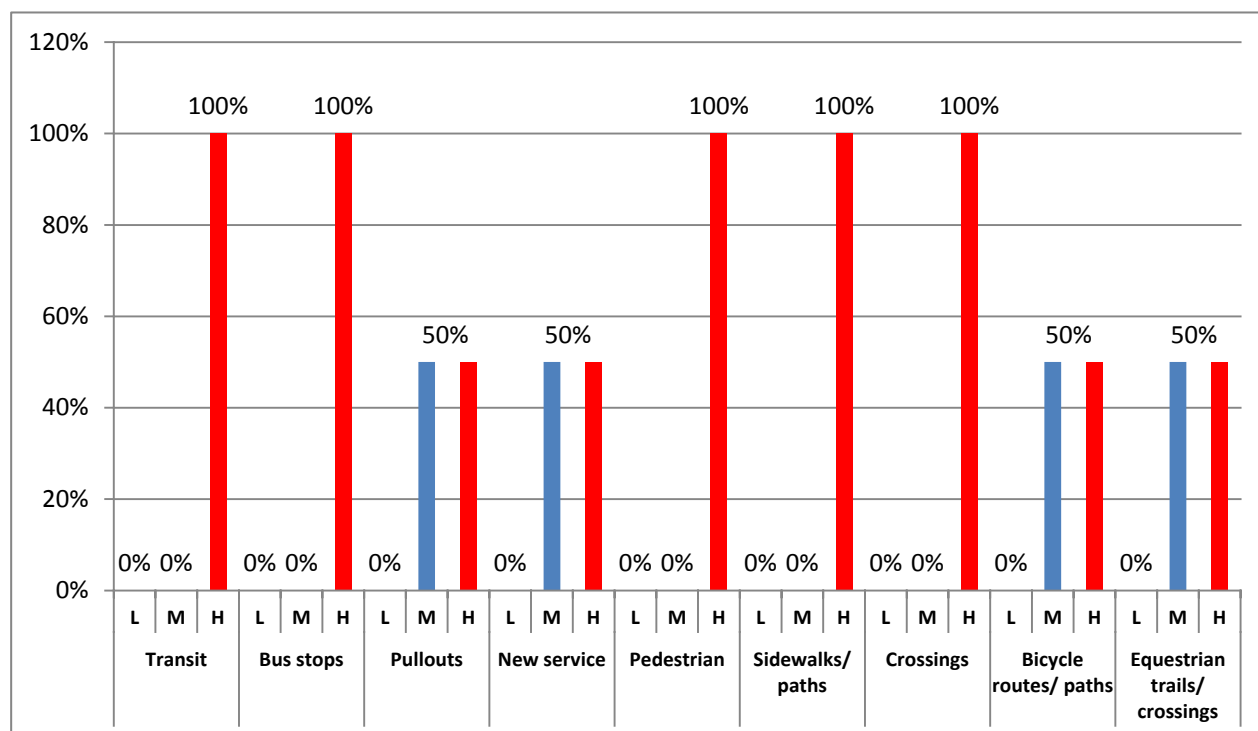
L=low priority; M=medium priority; H=high priority

Table 7a: Transportation Needs Rankings – St. Michaels/Fort Defiance Study



L=low priority; M=medium priority; H=high priority

Table 7b: Transportation Needs Rankings – St. Michaels/Fort Defiance Study



L=low priority; M=medium priority; H=high priority

Table 8: Three Most Important Needs – Chinle/Many Farms Study

<u>#1 Importance</u>	<u>#2 Importance</u>	<u>#3 Importance</u>
Public safety	Divided roads for future needs	Too many turnouts now; frontage road for better access
No passing lanes; congestion during rush hours	No livestock undercrossing, cattle guards not working (horses fall into these)	More traffic lighting in Many Farms area
Roadway design - no shoulders, sharp curves, no visibility at night	No 4-lane highway at high traffic areas, no safe turnout lanes	Muddy, poor dirt roads - need upgrade to gravel or paving
Pedestrian paths, crossings, graffiti, walkways, beautification	Livestock removal	Drunk driving
School bus pullout	Widening 191	Turning lanes and access onto 191
Very congested area; seems like there is a crash every day	Hit and runs	
Frontage road	School bus turnout	
Bus transport	Taxi cars	Buses
Increase of trucks on the road. They speed through and it is unsafe	livestock on the road causing damage and loss of lives	Maintaining all the roads, especially Indian Routes and BIA roads
Two-lane road/highway	Bicycle and pedestrian lanes/shoulders	Eliminate presence of horses, sheep and cows inside of right of way and on roads
Four lanes from Ganado, Chinle and Many Farms	Truck route bypass Ganado, Chinle and Many Farms	In Chinle need bypass route on north side between Chinle and Valley Store, and south side between Chinle and Nazlini
Pave or gravel top all heavily used roads, like N-18	Bus route	
Bus pullout on 191	Pave or gravel top bus routes	Pave dirt road below the hospital, the one leading to the hospital road
Freeway	Keep animals outside the fence	

Table 9: Three Most Important Needs – St. Michaels/Fort Defiance Study

<u>#1 Importance</u>	<u>#2 Importance</u>	<u>#3 Importance</u>
Safety, keep animals out of right of way	New fence/cattle-guards	Frontage road
Repair potholes in residential areas and Navajo Nation government offices	Alternate routes into Window Rock government offices	4-lane route from Sawmill Junction to Ganado - Route 264
Widen road	Better safety turnouts	Overcrossing in school areas, sidewalks, crossing markers on highway

See Appendix F for copies of completed comment forms.

APPENDICES

- A. Public Involvement Plan
- B. Stakeholder database
- C. Outreach materials
- D. Meeting materials
 - 1. Many Farms public meeting
 - 2. St. Michaels public meeting
- E. Public meeting notes
 - 1. Many Farms public meeting
 - 2. St. Michaels public meeting
- F. Written comments
 - 1. Chinle/Many Farms comments
 - 2. St. Michaels/Fort Defiance comments



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Public Involvement Summary Report

Chinle-Many Farms and St. Michaels-Window Rock-Ft. Defiance Multimodal Long Range Transportation Study

First Phase Public Involvement – November 2011

ADOT MPD Task Assignment 23-11

ADOT Project No. PG TD0728

Appendix A

Public Involvement Plan

Arizona Address: PO Box 336, Flagstaff, AZ 86002

Texas Address: 40 East Valley Spring Road, Wimberley, TX 78676



public involvement



citizen outreach



stakeholder facilitation



conflict resolution



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Public Involvement Plan

Chinle-Many Farms and St. Michaels-Window Rock-Ft. Defiance Multimodal Long Range Transportation Study

ADOT Task Assignment MPD 23-11

ADOT, Kimley-Horn and Associates, Bahozhoni Development, Navajo DOT

Submitted by Intrinsic Consulting, LLC
May 18, 2011

INTRODUCTION

Public involvement efforts are crucial to the success of the transportation study. Actively engaging the public is an important aspect of assuring the project's final improvements are locally acceptable and successful, as well as building local support for funding transportation improvements. The public involvement plan maps the team's approach and defines the roles of each participant.

Public Involvement Objectives

In support of the project goals, the Project Management Team strives to:

- Obtain valuable feedback from the community regarding issues and concerns that can be addressed in the study
- Engage key stakeholders in the process
- Stimulate attendance at public meetings through newspaper, radio and flier announcements, and by meeting with stakeholders one-on-one
- Provide information to the public regarding project progress
- Provide feedback on how public input influenced the final report
- Achieve public acceptance of the final report

Public Involvement Team

ADOT has contracted with Intrinsic Consulting, LLC, to facilitate public involvement on the project. The Intrinsic team assigned to the project includes:

Dexter Albert, Project Manager

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public involvement



citizen outreach



stakeholder facilitation



conflict resolution

PUBLIC INVOLVEMENT PROGRAM ELEMENTS

The Chinle-Many Farms and St. Michaels-Window Rock-Ft. Defiance Multimodal Long Range Transportation Study encompasses a 12-month period. Overall public involvement efforts support the project as follows.

Public Involvement Plan

The public involvement plan documents the anticipated public involvement process. The plan identifies major public involvement elements, assigns timeframes, and guides the public involvement process throughout the project. The plan should be revised and updated as necessary to respond to any significant changes or challenges as the overall project progresses.

Team Interaction

Intrinsic staff will attend monthly Project Management Team meetings to keep abreast of project developments and provide counsel and advice to the project team with regard to public involvement opportunities and cultural/context-sensitivity. Intrinsic will attend periodic TAC meetings: at a minimum two TAC meetings will be attended, one each prior to each round of public meetings.

Stakeholder Database

The public involvement program includes research to identify key stakeholders. Methods consist of internet and phone research, review of existing databases and face-to-face contact with individuals along the two study corridors. The database will be used to distribute public meeting announcements and project updates via email, fax and mail.

Project Reconnaissance

Personal interaction in tribal communities is key to the success of the public involvement efforts. Intrinsic will conduct a thorough reconnaissance trip throughout the project areas while distributing fliers for the first round of public meetings. During this trip, Intrinsic will develop community contacts to add to the database and, whenever possible, discuss the project with stakeholders. For the second round, Navajo DOT staff will be requested to distribute public meeting fliers.

Public Information

The public involvement process will include outreach tailored to the project areas and the general region. Informative tools are designed to distribute the public notices and community invitations to the public meetings. However, these communication tactics also can be employed at any point in the project, as needed, to share information from the project team with members of the public, and they can be as broad or as selective as necessary. Additionally, Intrinsic staff will monitor local media sources for project related publicity.

The following communication tools can be used to share information with the public, including public meeting notices and general project updates:

- In-person announcements at Chapter meetings
- Requests for additional nearby Chapters to make announcements
- News releases distributed to area media and all stakeholders by email and fax
- Fliers delivered in-person to area stakeholders and mailed to outlying areas
- Paid advertising, including the *Gallup Independent*, *Navajo Messenger* and *Navajo Times*; and PSAs and Navajo DOT radio show on KTNN

- Updates provided to Planning Committees, Agency Roads Committees and Agency Councils

Point of Contact

Intrinsic will act as the primary public involvement point of contact for the public throughout the project's duration. Intrinsic's contact information will be included in all public meeting outreach materials, and Intrinsic staff will coordinate with the Project Management Team to appropriately respond to public inquiries.

Public Meetings

Intrinsic will work with the Project Management Team to plan, prepare and conduct public meetings. The project is expected to include two rounds of public meetings; the first to present results of working paper #1 (current and future conditions); and the second to present results of working paper #2 (evaluation criteria and plan for improvements). Each round will include two separate meetings, one for each of the two combined studies. It is anticipated that the first round will include meetings in Many Farms and St. Michaels, and the second round will include meetings in Chinle and Fort Defiance. Meetings may be held at Chapter Houses or other local venues, such as schools. Prior to scheduling public meetings, Intrinsic will conduct research into local events to avoid conflicts. Research will include consultation with Chapter Coordinators, online research and other efforts as necessary. Once the date of public meetings is established, Intrinsic will prepare detailed outreach schedules, including dates for team reviews of outreach materials.

Outreach will include a news release distributed to the full stakeholder database, a flier posted throughout the communities and mailed to outlying areas, paid newspaper advertisements and announcements on KTNN. Intrinsic will conduct flier delivery for the first round only and requests that Navajo DOT staff assist with flier delivery for the second round. Additionally, it is recommended that Navajo DOT staff provide announcements at the regular monthly meetings of the affected Chapters. Nearby Chapters will be requested to do the same. Intrinsic recommends beginning outreach efforts approximately 30 days in advance of the public meetings. ADOT CCP will distribute news releases at least 30 days prior to the public meetings.

The format of the meetings will be an open house for the first 30 minutes, where agency representatives and the public have the opportunity to mingle with the project team. A Chapter Official will be requested to offer a welcome address. Navajo DOT and ADOT MPD will offer a project introduction, and Kimley-Horn will give a brief presentation on the project. Bahozhoni Development will provide Navajo translation at the public meetings, as needed. Group discussion/Q&A will follow the presentation to discuss needs, concerns, questions, etc. Kimley-Horn will develop electronic files of the needed technical exhibit and technical handout material content. Intrinsic will print the meeting exhibit display boards.

Intrinsic will prepare, with assistance from the project team, a meeting handout/agenda, sign-in sheets, name tags for team members, and comment sheets. Kimley-Horn will supply Adobe design files of headers/footers to use on outreach materials and handouts/agendas for the public meetings to ensure a consistent look and feel for graphics, boards, and handouts for each corridor study area. Members of the general public and stakeholder representatives can submit written comments at the meeting and will also have 30 days from the date of the meeting to submit written comments by mail, fax or email – spoken comments will also be accepted by telephone or in-person. One staff members from Intrinsic will attend the public meeting to act as the greeter and note-taker.

Public Involvement Summary Reports

Intrinsic will prepare Public Involvement Summary Reports after the 30-day comment period following each public meeting. The reports will include the following:

- A summary of outreach methods
- Copies and timing of all outreach materials
- Reconnaissance and flier-delivery reports showing the locations of posted fliers and recording any comments or questions received during the in-person field visits (for first round only)
- Phone log of comments and questions received at the Intrinsic office telephone line
- Copies of emails or other written communications received by Intrinsic from the public
- Copies of any publicity tracked by Intrinsic staff
- Public meeting comments
- A list by name and agency/business/organization of all project stakeholders included in the stakeholder database (the full, detailed database will be available separately upon request)
- Kimley-Horn will supply covers for the summary reports to provide a consistent look and feel for each corridor study area.

Public Involvement Program Evaluation

The public involvement team will measure and evaluate performance with regard to public involvement goals and objectives. Qualitative evaluation methods include:

- Comment sheets collected after each public meeting
- Remarks obtained via telephone and email
- Feedback obtained during informal meetings with community contacts
- Opinions gauged by project publicity, including news stories and editorial/opinion pieces in the media

Quantitative evaluation methods include:

- The scale of distribution lists
- The reach and frequency of project communications
- Attendance counts at public meetings
- Number of incoming calls and emails regarding the project

Additionally, the public involvement team will continually work hand-in-hand with the project team to advise on public involvement opportunities. The public involvement team also may recommend changes or adjustments to the public involvement plan or overall project approach as necessary and welcomes any such suggestions from the project team.

Quality Control

Quality control measures are built into the process by which the public involvement team conducts business. Quality control is assured by the following three-step process:

1. Any document originating from the public involvement team always goes through an internal review process. During this process, approval is obtained from a senior Intrinsic staff member before Step Two.
2. After internal approval is obtained, the document is sent to the Project Management Team for review and approval. Input and feedback, including suggested changes and clarifications, are welcome from the project team at this step. Special attention to technical information is recommended. Final approvals will be sought from Don Sneed and Rod Wigman (ADOT), Mary Rodin (Kimley-Horn), and Salisa Norstog (Navajo DOT). Intrinsic will aim for five-day team review periods on all materials.

3. Upon project team approval, the public involvement document is dispensed, released or otherwise distributed as planned. ADOT CCP will be responsible for distributing notices to media outlets, and Intrinsic will be responsible for distributing notices to all other stakeholders. Project Management Team members are encouraged to distribute notices to their contacts as well.



Arizona Office:

P: (928) 522-6015

F: (928) 522-6016

Texas Office:

P: (512) 847-7744

F: (512) 847-7745

www.intrinsicinfo.com

Public Involvement Summary Report

Chinle-Many Farms and St. Michaels-Window Rock-Ft. Defiance Multimodal Long Range Transportation Study

First Phase Public Involvement – November 2011

ADOT MPD Task Assignment 23-11

ADOT Project No. PG TD0728

Appendix C

Outreach Materials

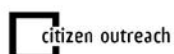
News Release

Flier

Newspaper Ads

Arizona Address: PO Box 336, Flagstaff, AZ 86002

Texas Address: 40 East Valley Spring Road, Wimberley, TX 78676





For Immediate Release: October 3, 2011

Contact: ADOT Media Relations

news@azdot.gov or 1-800-949-8057

Long-range transportation studies planned for Chinle to Many Farms & St. Michaels to Fort Defiance

WINDOW ROCK – The Navajo Division of Transportation, Arizona Department of Transportation and Navajo Chapters invite the public to attend public meetings regarding two long-range transportation studies:

- Chinle to Many Farms Transportation Corridor Study: Wednesday, November 2, 2011, from 6 to 8 p.m., Daylight Savings Time (MDT), at the Many Farms Chapter House (presentation starts at 6:30 p.m.)
- St. Michaels to Window Rock to Fort Defiance Transportation Corridor Study: Thursday, November 3, 2011, from 6 to 8 p.m. (MDT), at the St. Michaels Chapter House (presentation starts at 6:30 p.m.)

The Navajo DOT, Chapter Communities and ADOT are conducting the two studies concurrently. Interested community members and stakeholders are welcome to attend both public meetings considering ***the two meetings will not cover the same information***. At each public meeting, the project team will offer materials and presentations regarding each respective corridor study area, answer questions and seek public comments. Navajo interpretation will be available and light refreshments will be served.

As the Navajo Nation continues to grow, comprehensive transportation planning is necessary for sustainable development and to meet the needs of area residents, businesses and visitors. The two studies will analyze and identify improvements for all modes of transportation within the corridor areas, including vehicular, pedestrian, bicycle, and equestrian, as well as connections between vehicular, airport and transit systems for commuter and emergency needs. Particular attention will be paid to safety, mobility, livability, and economic and community development. Ultimately, the long-range studies will recommend transportation improvements to be implemented in five, 10 and 20-year timeframes.

The studies will be conducted in two phases. The first phase will document current and future conditions and needs, which will be the focus of this first round of public meetings. The second round of public meetings will be held in early 2012 during the second phase of the studies, which will focus on evaluation criteria and specific plans for improvements.

The two studies are funded through the ADOT Planning Assistance for Rural Areas (PARA) Program. For more information or to submit comments, please contact the ADOT Outreach Team, Attention "Navajo PARA Studies," care of Jason Hurd at Intrinsic: by phone, 928-522-6015 (Navajo speaker available); by fax, 928-522-6016; by email, jason@intrinsicinfo.com; or by mail, PO Box 336, Flagstaff, AZ 86002. Comments received by December 2, 2011, will be included in a Public Involvement Summary Report. More information, including detailed study area maps, can be found at: http://www.azdot.gov/MPD/Systems_Planning/NavajoChapter.asp.

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Wóshdęé' ~ You're Invited

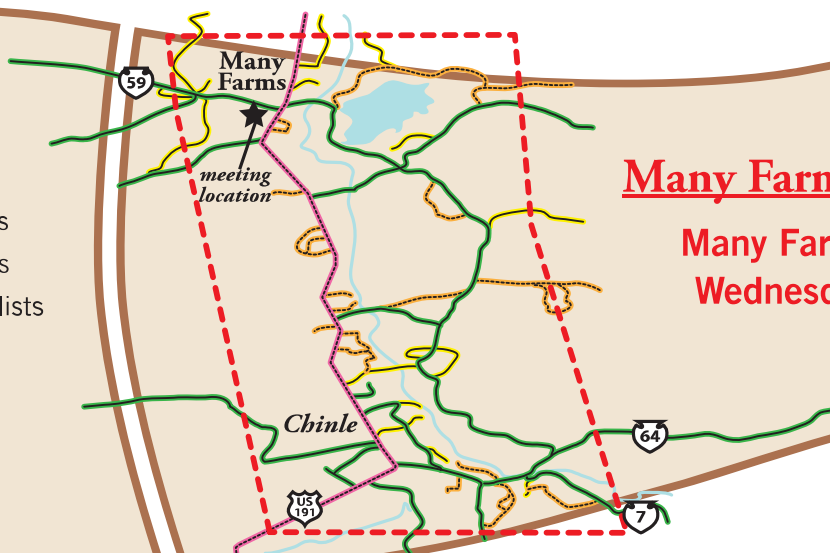
Navajo DOT invites you to attend public meetings



The Navajo Division of Transportation (Navajo DOT) and Arizona Department of Transportation (ADOT) have initiated two multimodal transportation studies to identify long-term improvements and meet the needs of the growing Navajo Nation.

Both studies will analyze needs for:

- Navajo/BIA roadways
- Drivers & commuters
- Pedestrians & bicyclists
- Trails & equestrians
- Transit systems
- Airport access
- Emergency access



Many Farms to Chinle Study

**Many Farms Chapter House
Wednesday, Nov. 2, 2011**

Navajo interpretation and light refreshments will be offered at both meetings.

**Both meetings
6 to 8 p.m.**

(Daylight Savings Time)
presentations start at 6:30 p.m.

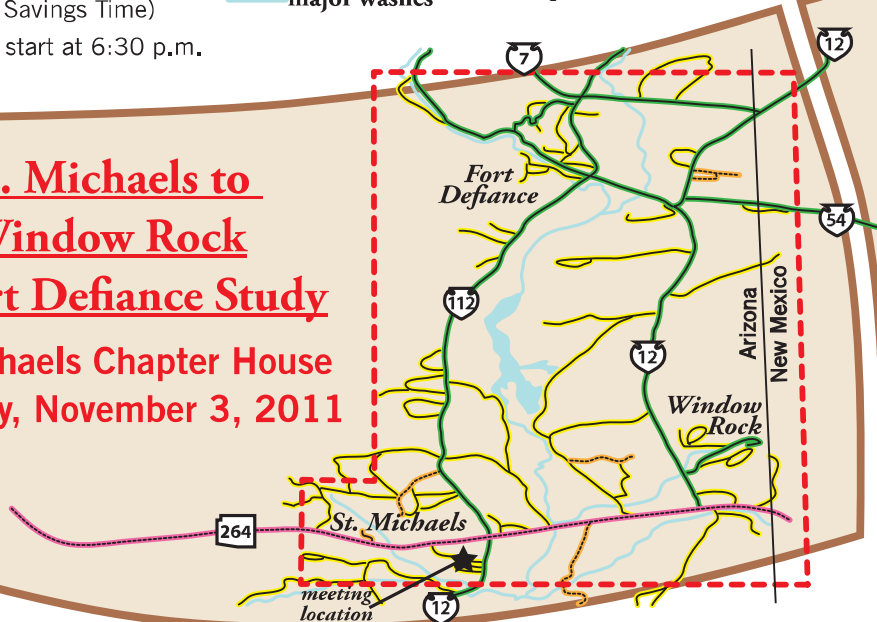
- BIA roads
- local roads
- major washes



- county roads
- US/state roads
- study areas

St. Michaels to Window Rock to Fort Defiance Study

**St. Michaels Chapter House
Thursday, November 3, 2011**



Both studies will focus on:

- Safety, mobility & livability
- Economic vitality
- Community development

Ultimately, the long-range studies will recommend multimodal transportation improvements to be implemented in five, 10 and 20-year timeframes.

*Please note:
The two meetings
will not cover the
same information.*



For more information or to submit comments, please contact the ADOT Outreach Team, Attention "Navajo PARA Studies," care of Jason Hurd at Intrinsic: by phone, **928-522-6015** (Navajo speaker available); by fax, **928-522-6016**; by email, jason@intrinsicinfo.com; or by mail, **PO Box 336, Flagstaff, AZ 86002**.



More information, including detailed study area maps, can be found at:
http://www.azdot.gov/MPD/Systems_Planning/NavajoChapter.asp



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Texas Office: P: (512) 847-7744 F: (512) 847-7745
www.intrinsicinfo.com

Flier Delivery Report

Date: October 10 & 11, 2011
Location: Project areas
Subject: Public Meetings scheduled for Nov. 2 & 3, 2011
Attendees: Jason Hurd, Intrinsic Consulting

On Monday and Tuesday, Nov. 2 & 3, 2011, Intrinsic staff visited with agencies, businesses and residents throughout the project areas. The purpose of the trip was to deliver public meeting fliers, discuss the project with stakeholders, and invite community members to attend the public meetings. Overall, people were generally appreciative to receive the information.

The following is a list of all locations visited by Intrinsic staff. In most cases, staff members spoke with the owner or manager of the business or office but in some cases an owner or manager was not available. Nearly all the businesses that were visited agreed to post the flier. The recipients are listed below, as well as comments received.

Many Farms

- Many Farms High School
- Conoco/Laundromat
- Boarding School
- Chapter House
 - Will deliver to Post Office when open
- Senior Center
- Wellness Center
- Head Start
- 7-2-11
- Water Resources

Chinle

- Best Western
- Shell
- Navajo Tribal Utility Authority, Chinle
- Laundromat by Bashas'
- NAU Distance Learning
- Bashas'
- Dine College
- Burger King
- Pic-N-Run
- Conoco
- Church's Chicken
- Chapter House
- Veteran's Affairs
- Navajo Land Department
- Navajo Labor Office
- Navajo Elections Office
- DNA Legal Services
- Local Governance Support Center
- Chinle Unified School District
 - Will deliver to all CUSD schools
- Canyon de Chelly Visitor Center
- Thunderbird Lodge
- Holiday Inn
- District Court
- Workforce Development
- Navajo Technical College
- Silver Coin Laundromat and Video
- Navajo Arts and Crafts Enterprises
- A&W
- Navajo Fire Department, Station 50
- ADOT MVD (closed)
- Giant

Arizona Address: PO Box 336, Flagstaff, AZ 86002

Texas Address: 40 East Valley Spring Road, Wimberley, TX 78676



public involvement



citizen outreach



stakeholder facilitation



conflict resolution

St. Michaels

- Navajoland Inn
- Denny's
- Giant
- Medical Clinic
- NAPCO gas/Laundromat
- Karigan Professional Building
- Head Start
- St. Michaels Indian School
- Post Office
- Chapter House

Window Rock

- Wellness Center
- Bashas'
- McDonalds
- Church's Chicken
- Texaco
- Navajo Parks & Recreation Dept.
- Navajo Nation Museum
- Navajo Arts and Crafts Enterprises
- Taco Bell/Pizza Hut
- Chevron
- DNA Legal Services
- FINA
- Post Office
- Navajo Police Dept.
- District Court
- Emergency Dispatch
- Navajo Dept. of Highway Safety
- Navajo Fire Department
- Navajo Division of Health
- Navajo Division of Community Services
- Navajo Division of Social Services
- Navajo Environmental Protection Agency
- Navajo Dept. of Justice
- Navajo Office of the Speaker
- Navajo Office of Broadcast Services
- Navajo Office of Council Delegates
- Navajo Office of Legislative Counsel
- Navajo Office of Legislative Services
- Navajo Office of Budget and Finance
- Navajo Executive Office
- Navajo Housing Authority
- Education Center
- Shop & Save
- Navajo Westerner/ACE Hardware
- Laundromat
- It's A Dollar
- Cocina de Dominguez
- Eight storefronts in plaza

Fort Defiance

- That's a Burger
- Post Office
- Chapter House
- Window Rock Unified School District
 - Will deliver to all WRUSD schools
- 7-2-11
- Laundromat
- Navajo Housing Authority (NHA)
- NHA Housing Management Division
- NHA Fleet Services
- Fort Defiance Indian Hospital
- Navajo Tribal Utility Authority (NTUA) HQ
- NTUA Fort Defiance District

Ganado

- Chevron
- Mustang
- Conoco
- Apache County office (closed)

Comments

- Roads between homes need grading; people are doing it themselves
- Focus on improvements; we're paying taxes but not seeing any improvements
- Rural roads are not being maintained
- Issues have been brought to chapters and county, but nothing happens



Arizona Department of Transportation



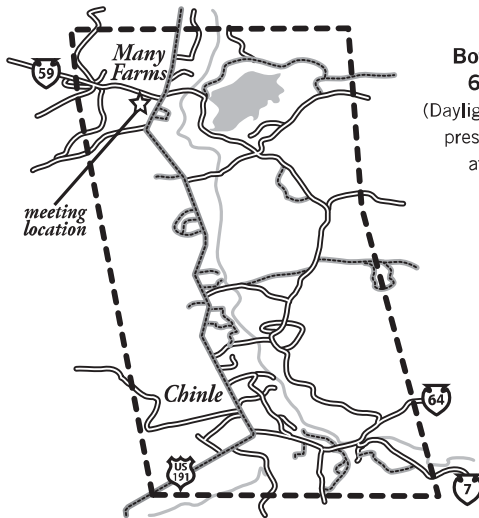
PUBLIC MEETINGS



Regarding two transportation studies to identify improvements to meet the needs of the growing Navajo Nation. The long-range studies will recommend multimodal transportation improvements to be implemented in 5, 10 and 20-year timeframes within each study area.

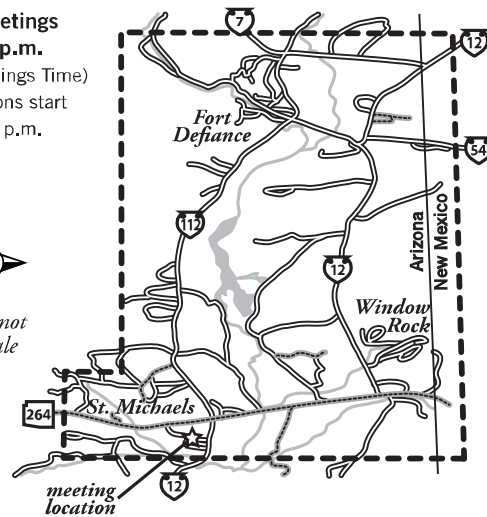
Many Farms to Chinle Study

Many Farms Chapter House
Wednesday, Nov. 2, 2011



St. Michaels to Window Rock to Fort Defiance Study

St. Michaels Chapter House
Thursday, November 3, 2011



Both meetings
6 to 8 p.m.
(Daylight Savings Time)
presentations start
at 6:30 p.m.



maps not
to scale

—— BIA & local roads - - - - US/state & county roads - - - - major washes - - - - study areas

Please note: The two meetings will cover different information.

Navajo interpretation and light refreshments will be offered at both meetings.

Both studies will analyze needs for Navajo/BIA roadways, drivers & commuters, pedestrians & bicyclists, trails & equestrians, transit systems, and airport and emergency access. Both studies will focus on safety, mobility & livability, economic vitality and community development.

For more information or to submit comments, please contact the ADOT Outreach Team, Attention "Navajo PARA Studies," care of Jason Hurd at Intrinsic:
by phone, **928-522-6015** (Navajo speaker available); by fax, **928-522-6016**;
by email, **jason@intrinsicinfo.com**; or by mail, **PO Box 336, Flagstaff, AZ 86002**.

More information, including detailed study area maps, can be found at:
http://www.azdot.gov/MPD/Systems_Planning/NavajoChapter.asp

Americans with Disabilities Act (ADA): This notice may be available in alternative format and persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Jason Hurd at (928) 522-6015. Requests should be made as early as possible to allow time to arrange the accommodation. This newspaper notice is available at **www.azdotenvironmental.com**.

Lynn Johnson – Holbrook District Engineer
Jennifer Toth – ADOT State Engineer



Don Sneed – ADOT Project Manager
ADOT Project No. PG TD0728



:40 RADIO PSA

Begin Date: Oct. 16, 2011

End Date: 5 p.m., Nov. 3, 2011

Contact: Jason Hurd, Public Involvement Manager

Intrinsic – 928-607-7156

Page 1 of 1

PUBLIC SERVICE ANNOUNCEMENT

THE NAVAJO DIVISION OF TRANSPORTATION INVITES YOU TO ATTEND PUBLIC MEETINGS REGARDING TWO SEPARATE MULTIMODAL LONG-RANGE TRANSPORTATION STUDIES:

- **THE FIRST PUBLIC MEETING IS FOR THE “CHINLE TO MANY FARMS CORRIDOR AREA STUDY,” ON WEDNESDAY, NOVEMBER 2, AT THE MANY FARMS CHAPTER HOUSE;**
- **AND THE SECOND MEETING, FOR THE “ST. MICHAELS TO WINDOW ROCK TO FORT DEFIANCE CORRIDOR AREA STUDY,” IS ON THURSDAY, NOVEMBER 3, AT THE ST. MICHAELS CHAPTER HOUSE.**

THE TWO MEETINGS, BOTH HELD FROM 6 TO 8 PM, DAYLIGHT SAVINGS TIME, WILL COVER DIFFERENT INFORMATION. FOR DETAILS, CALL 928-522-6015. THAT’S 928-522-6015. NAVAJO INTERPRETATION IS AVAILABLE.

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For more information, please contact:

- ♦ Public Involvement Manager, Jason Hurd at Intrinsic – (928) 607-7156 or jason@intrinsicinfo.com



Arizona Office:

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Public Involvement Summary Report

Chinle-Many Farms and St. Michaels-Window Rock-Ft. Defiance Multimodal Long Range Transportation Study

First Phase Public Involvement – November 2011

ADOT MPD Task Assignment 23-11

ADOT Project No. PG TD0728

Appendix E1

Public Meeting Notes Many Farms Meeting

Arizona Address: PO Box 336, Flagstaff, AZ 86002

Texas Address: 40 East Valley Spring Road, Wimberley, TX 78676



public involvement



citizen outreach



stakeholder facilitation



conflict resolution



Arizona Office: Texas Office:
P: (928) 522-6015 P: (512) 847-7744
F: (928) 522-6016 F: (512) 847-7745
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Meeting Notes

Chinle-Many Farms Multimodal Long Range Transportation Study

November 2, 2011

ADOT MPD Task Assignment 23-11 ADOT Project No. PG TD0728

The Navajo Division of Transportation (Navajo DOT), the Arizona Department of Transportation (ADOT) and Navajo Chapters have initiated two multimodal transportation studies to identify long-term improvements: Chinle to Many Farms Corridor Study Area; and St. Michaels to Window Rock to Fort Defiance Corridor Study Area. The two studies will analyze and identify improvements for all modes of transportation within the corridor areas, including vehicular, pedestrian, bicycle, and equestrian, as well as connections between vehicular, airport and transit systems for commuter and emergency needs. Particular attention will be paid to safety, mobility, livability, and economic and community development.

On Wednesday, November 2, 2011, Navajo DOT and ADOT held a public meeting at the Many Farms Chapter House to present the results of Working Paper #1, Current and Future Transportation Conditions, to the community and seek public input. Forty-two people signed in at the Many Farms meeting. See attached sign-in sheet for a list of those in attendance.

Following are questions and comments offered by the public at the meeting, as well as answers provided by the project team. Additionally, meeting participants marked up study area maps with comments, which are included below following the spoken comments.

SPOKEN COMMENTS/QUESTIONS

Q: Are we only talking about US 191?

A: We are looking at the area shown in the study including all roads, existing, planned, or future.

Q: Do we have money to do these projects?

A: This is a planning study, but part of the next phase will be to develop projects and phase them, and to identify funding opportunities. Also, one of the elements included in this study is a list of funding programs available to tribal governments. Depending on the issue to be addressed, different programs can be targeted. Navajo DOT or Chapters can seek that funding. Public input is important to the funding agencies, so please share your comments.



Q: You didn't mention a frontage road. Can that be considered?

A: Yes, we're aware of that need, particularly in the Many Farms areas.

C: Thank you to ADOT and NDOT for this meeting. Chinle agency is always the last to get this kind of planning and funding. We have to start speaking up for ourselves to plan for the future. We need to do some planning. The Chinle and Many Farms studies should be a priority. If you're using state funds, 191 will be the priority. We're planning the future for our children and grandkids. We might not see these things happen. This is the first time we have this opportunity. We need transit. We might even need a high speed train. We need developments. Maybe we'll even have a casino here some day. I even recommended one time that we have a Native American on the State Transportation Board, but they did not want that.

C: 191 across Black Mountain Wash bridge needs widening. People talk about widening 191, but the bridge needs to be wider too.

C: Last week people came and I made a comment on making bus stop signs for children crossing. From Cornfields all the way up to I-40 there are bus stop signs, but there are not any up here. Where my daughter gets on by Black Mountain Wash, they should have a bus pullout in that area. In the morning we hold traffic up when they get on the bus and in the evening too. The bus has to get off the road and it needs more room.

Q: Who sets the speed limit for 191? As the population grows, it should be slower. When people turn off, cars line up behind them.

A: ADOT sets the 191 speed limit. We'll make sure that gets into the recommendations.

C: They are putting cattle guards in. I've seen cattle cross the road even with the cattle guards. Is there a measurement [spacing between the bars] that needs to be followed there?

Q: At the "first curve" south of Chinle on 191, when people are rushing to get home at 5 p.m., a car will be parked to make a turn, and other vehicles will go around it and cause accidents. We need to expand the road [add turning lanes] a little so people can go around.

A: Please identify that location on the maps.

C: The project team should consider adding recommendations to widen the shoulders at curves, MP 451 to 455 and MP 460 to 460.5, and construct turning lanes at major intersections (BIA & County Roads) between Chinle and Many Farms.

C: [Charlotte Begaye, Many Farms Chapter Vice President] Many Farms Chapter initiated this project five years ago. Then the project was expanded to Chinle and St Michaels/Window Rock areas/Fort Defiance areas. This meeting is for your information and benefit. We need to hear your concerns.

C: Our population is increasing. N59 and 88 might become state roads and then we'll have economic development here. Consider a 4-lane highway between Chinle and Many Farms.

Q: What is the main reason for this study? Phoenix is getting all those overhead passes while reservation roads don't get improved. I work with the Chinle Regional Business Development Office. Economic development is going to affect us because of the road planning. Right of way widening will affect businesses along the road. Is that in the plan? We have businesses trying to develop in Nazlini and Fort Defiance, which will create traffic. Does the study include the road between Chinle and Fort Defiance? I have a couple concerns: ROW, trails on the plans, sand dunes, pedestrians – in Chinle I've seen somebody almost get hit crossing the road several times – are there plans to put crosswalks there? How much can painting the road [pavement markings] cost? Especially school crossing – they are not all marked. It's time we voice our concerns to ADOT.

A: The main reason Phoenix and Tucson get more improvements is because they voted for a \$0.01 sales tax to pay for those improvements. The rest of the state pays taxes at gas pumps for statewide improvements, so rural areas get some of that. But there is a lot of competition for that money. This particular study was requested by Navajo DOT working with the Chapter officials. The study does not look at the entire 191 corridor, just the areas the Chapters wanted us to focus on. There was a corridor study done in 2001, but it did not identify the need to convert 191 into a four lane highway. [The study was a Feasibility Study that evaluated pedestrian traffic, cross walks and pedestrian overpasses, and it did recommend a 4-lane divided highway.] But when populations start growing, we identify those needs as they occur. We are just a little half way through this study. When we are done, we'll see where all your comments and concerns come into it. One recommendation might be to put in a 4-lane highway if there are high traffic capacity areas that need it. The study should be final in April or May 2012. The studies will be forwarded to ADOT District office so they will be aware of the needs also. In regards to safety, one of the things we do at ADOT is conduct road safety assessments to look at those specific types of safety needs, such as pedestrian concerns at specific locations. We do also need to focus on the Navajo routes' needs.

C: Thank you for this opportunity for community input. I have concerns on the route from here [Many Farms] to Chinle. Instead of crosswalks for children and pedestrians, my suggestion would be overpasses right in the Chinle area. That might be a better thing to consider in school zones as well as shopping areas. In terms of driving 191, there are a lot of semi trucks. That is very dangerous. Elders drive less than 55 mph. What about a bypass road for the semi trucks? We don't know what kind of chemicals they carry. Bus turnouts, we all follow the busses on our way to work and we have to wait for them every time they pick up students. If they have turnouts it would ease congestion and be safer. In the Chinle area, there is a lot of congestion when it comes to banking, the post office, eating; there is a need for another signalized intersection. A lot of livestock gets hit. Who is in charge of cleaning that up? It is really sad. We need to figure out how to keep animals out of the road. Do you have these charts on the web site? [She pointed to display charts.] That would be good for people who cannot make it to these meetings.

A: We can post them on the web site.

C: The main concern should be 191. Big trucks are a concern. There should be a weight limit or a Navajo boundary booth [Port-of-Entry type]. Population is growing along 191 and the increasing traffic congestion needs to be addressed.

C: We need about three fence-overpasses [Cattle Passes] from Many Farms to Chinle where they cut the fences. At ceremonies during summer, they travel by horse. To cross 191 they cut the fence. They need a way to get through the fences without cutting them, such as box culverts.

C: The fuel excise tax brought in \$21-million. We give the state \$4-million off the top. That is not cool with me. We give ADOT 33% of what we manage to get off the reservation. We really need it. We have needs across the reservation: paving, gravel, etc. They say when you enter the reservation you can see it in the change in the width of the highway. We almost have to beg on our knees to get anything done on the reservation. There was a public hearing several years ago at the Chinle community center. [A public hearing was held for project: US 191 H640101L Jct N4 – Many Farms, Feasibility Study, in November 2006.] I don't know what happened to that. How will that be incorporated into this study? From the Wildcat Stadium stand in Chinle and beyond about 1000 feet to the hospital turnoff, they were planning to put in 5-lanes. [Referring to project: US 191 446.4 to 447.5 H543801C Chinle South. This project is at 60% design stage. Construction is anticipated to start May 2012.] They were also planning streetlights, but it never comes. [There is a traffic signal project: US 191 446.7 HX12001C Jct N102-3 & US 191; bids were received on November 4, 2011.] We've had public hearings already. This is supposed to be 5, 10, and 20 years, but it will probably all be 20 years. I am on the Resource and Development Committee for the Navajo Nation; my name is Leonard Pete. Dirt roads, local roads, we have oversight on them, but we haven't met with ADOT yet. When we get together to discuss IRR funding, there are twelve tribes in the region we have to compete with. 191 used to be local road. They didn't foresee the amount of traffic, especially 18-wheelers. Studies are not interested in the types of vehicles on 191; they just do ADT, not the type of vehicles. [Percent of trucks on ADOT highways are included in all studies and project assessments for each project.] The weight is not being controlled. This route is a shortcut to four corners and Colorado. Speed has been brought up, especially between Chinle and Many Farms. Bus stops. Frontage roads have been brought up. That was brought up at the past public hearing too. There are several areas that flood right at the hospital turnoff and the airport turnoff and this side of Chinle at that church, at Bashas' too. We can't push economic development when we have that flooding problem. There are right of way issues with the flooding too. [ADOT says any water that comes from outside ADOT right-of-way is not responsibility of ADOT to take care of.] We need to have better maps to look at the drainage problem. The community would like to have streetlights. [The Chinle South project referenced above includes new street lights.] I would like to have a response on the past hearing and study. Are we going to be able to expect anything in less than 10 years? [Yes, Fence and Cattle Guard project is underway; Chip Seal project coming this summer between Chinle and Many Farms; Traffic Signal project coming about March 2012; Chinle South coming in 2013; and Pavement Preservation project coming in 2015 between Chinle and Many Farms.]. Is this just a mirage? The Secretary of Interior came to Window Rock with the Director of Bureau of Indian Affairs and Bureau of Indian Education, Mr. Echo Hawk. I told him I don't have the title to the land, so how do you push economic development, how do you plan roads? Just to dig a hole, you have to get permission. We're going to do what we can for the younger generation.

C: [Charlotte Begaye, Many Farms Chapter Vice President] Thank you all for being here. We need to go through the whole process. We're here to hear your concerns and issues. We all know funding is limited. We have to be consistent and persistent and make things happen. This will take time. As a community we need to be positive, stick together and support each other. Chapter officials, Navajo DOT, ADOT, residents, legislators, all need to work together. This is long range planning. It's not just for a few, but the majority – we all have to come together for the benefit of community safety and well-being. We can't afford to be negative.

C: Thanks to the people for being here. I want to reiterate that input is needed. It's important for this study.

COMMENTS WRITTEN ON MAPS

Roadway Needs and Deficiencies Map:

- Provide roundabout at N102/US 191 intersection. [Traffic Signal project this summer and Chinle South project which includes widening US 191 to 5-lanes, sidewalks, and street lights in FY 13, so a Roundabout will probably not happen within the next 25 years or more.]
- traffic congestion at the Tsegi Shopping Plaza
- Traffic congestion and livestock concerns at the US 191 / N7 intersection
- A passing lane is needed between MP 449 and 452. [What this means is a 5-lane section to allow left and right turns with one through lane in each direction.]
- There can be congestion from traffic leaving Wildcat Gym after a game
- There is a transit stop just north of MP 452, but no pullout
- There are dangerous curves around MP 452
- Street lighting is need on US 191 between Chinle and Many Farms. [Street lights are usually not installed on rural roads. It will probably not meet warrants. I am thinking this comment was made due to poor visibility along the roadway? Installing recessed pavement markings at edge and center lines might be a better plan.]
- Provide passing lanes between MP 455.5 and MP 458.5
- There a reseeding area planned on the west side of US 191 between MP 457 and MP 460.5. [This reseeding plan is on Navajo Nation land outside off US 191 Right-of-Way. This information was probably provided for information only.]
- There are sand piles on the road approximately at MP 459.5. [The sand piles are due to work in progress. The sand will eventually be used somewhere possible as shoulder build-up or filling eroded areas.]
- A bus pull off is needed on the east side of US 191, approximately MP 460.3
- Comment that the curve area was dangerous for school buses approximately MP 460.5
- School crossing is needed on US 191 approximately MP 461.5
- A traffic signal or roundabout is needed at the intersection of US 191 and N59
- Street lighting is needed on US 191 through Many Farms
- A new access has been established on US 191, just north of MP 464-make sure it remains open
- Trucks are speeding on US 191 in the Many Farms area (approximately MP 460-463)
- Paving is needed on N8084

- School bus turnouts and traffic signals are needed on US 191. [In order to install traffic signals the intersection has to meet warrants. But, traffic signals can be installed if it improves traffic operations and other sources of funding are used. With all traffic signals the Navajo Nation has to agree to pay the electric bills under an IGA before ADOT will install traffic signals.]
- Widen major turnouts to US 191 on BIA and County roads. [This would also mean widen the Cattle Guards. This would require joint project with BIA and ADOT.]
- Turnouts [bus/safety] are needed on US 191 every mile – charge a toll. [FHWA will probably not approve of toll road.]
- Animals in the road (US 191)

Transit and Non-Motorized Needs Map:

- N8082 is not maintained or paved
- US 191 / N59- there are crosswalk needs and lighting needs
- Pave N8086 – it is a school bus route
- Provide a crosswalk at the end of Lake Drive
- N8084 is washboarded and not maintained. It is a bus route
- A livestock under crossing is needed
- Bus routes are not maintained
- Need turn lanes and frontage roads from M452 to 455
- Provide turnout lanes at the curve area (approximately MP 454.5)
- Provide a bike path
- People cut fences – there is a need for frontage roads
- There is flooding at approximately MP 451.3, between MP 448 and 449, and between MP 446 and 447
- Near the US 191/N7 intersection, a pedestrian crosswalk, pedestrian overpass, or HAWK [High-intensity Activated crosswalk, or a pedestrian hybrid beacon signal] signal is needed.
- Tourist use N7 to travel to Canyon de Chelly
- A traffic signal is needed at the N102/US 191 intersection
- Near the US 191/N7 intersection, the Shell store needs their access closest to the intersection closed off. There are too many accesses to the store.
- A crosswalk is needed to the Tsegi Shopping Center.



Welcome to the Public Meeting - Please sign in

Chinle to Many Farms Corridor Multimodal, Long-Range Transportation Study

Many Farms Chapter House - Wednesday, Nov. 2, 2011 - 6 to 8 p.m.

Name	Representing	Address and phone	Email or fax
Johua Gray			
Randy Routhier	ADOT	2407 E Navajo Blvd 9285245402	rrouthier@azdot.gov
Harvey Tamm	Community	POB 446 M/I= 86538/928-797-7034	
Winnifred Yoe		Box 508 Chinle	
Edward Yoe Sr			
James Jones Jr	Community	P.O. BOX 3313 Chinle AZ 86503	nrj1865032005@yahoo.com
Elia John	Manyfarms Community	P.O. Box 122 Manyfarms. Az 86538	
Paul Jombo	Manyfarms Community	P.O. Box 122 Manyfarms. Az 86538	
APR	Chinle Chapter	Chinle Chapter	
Tommy Bio	Community	Box #2207 Chinle	Tommy.Bio@hhs.gov

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Abee'bee' - Thank you for your participation!





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Chinle to Many Farms Corridor Multimodal, Long-Range Transportation Study
Many Farms Chapter House – Wednesday, Nov. 2, 2011 – 6 to 8 p.m.

Name	Representing	Address and phone 928-313-0731	Email or fax
James L. Jones		P.O. Box # 2154 Chinle AZ, 86033	
combs J		Many Farms	
Agnes To	Self	Many Farms	
BILLY BEGA		MANY FARMS	
Marlene Monce		Many Farms AZ	
Marian Shanthan		Chinle, AZ	
Wanda M		Box 1128 Chinle AZ 86033	
Francis M. Sr		" " "	
Rena M. Bony		Box # 2304 Chinle	
Ernest Wilson		Box 1027 MF	



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Many Farms Chapter House - Wednesday, Nov. 2, 2011 - 6 to 8 p.m.

Name	Representing	Address and phone	Email or fax
Mordin Kew			
Kristen	ADOT	2401 E. Navajo Blvd., Holbrook, AZ 86025	kyg221@azdot.gov
Alfred L. Grogan	Rough Rock	RRTP BOX DEE Chinle, AZ 86503	
Liane	Many Farms	Many Farms	
Jacey McCurtain	MANY FARMS	PO Box 694 MANY FARMS AZ 86538	jacey.mccurtain@ihs.gov
Kathryn Arth	Many Farms	Bx 1578 Chinle	
Dan Tsose	Chinle AZ	Box 3573 Chinle AZ	
Tommy Totsoni	Chinle AZ	Box 1718 Chinle AZ	
Donna Gilbert	Many Farms	P.O. Box 694 Many Farms, AZ 86538	donna.gilbert@ihs.gov
MIKE K. ETSITTY	CHINLE RBD	P.O. Box 565 CHINLE, AZ 86503	mketsitty@yahoo.com



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Many Farms Chapter House – Wednesday, Nov. 2, 2011 – 6 to 8 p.m.

Name	Representing	Address and phone	Email or fax
Abe Benally	MF Community	P.O. Box # 701, Chinle, AZ	
Marilyn Kewarungana	MF Community	P.O. Box # 394, Many Farms, AZ	morelnisck@yahoo
Katy Jazze	ADOT, Holbrook Dist.	240 E. Navajo Blvd., Holbrook, AZ 86025	kjazzie@azdot.gov
Don Sneed	ADOT-MPD	206 S. 17th. Ave., Phoenix, AZ 85020	dsneed@azdot.gov
Marco Sells	NDOT	Window Rock, AZ 86503	msells@navajodot.org
Charlotte Borge	MF Chapter U. President	PO Box 185, MF, AZ, 86538	(928) 781-3608
Jason Hurd	Intrinsic/ADOT	PO Box 336 Flag, AZ 86002 928-607-7156	jason@intrinsicinfo.com
Ron Curtis	ADOT	Box 1140 Ganado AZ 86505	rcurtis@azdot.gov
Brook Burrows	MF environmental Health	P.O. Box 4055 Chinle, AZ 86503	william.burrows@ihs.gov
Alfred L. Grogg	Window Rock/Navajo	RRTP-Box DEE Chinle, AZ 86503	

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Many Farms Chapter House – Wednesday, Nov. 2, 2011 – 6 to 8 p.m.

Name	Representing	Address and phone	Email or fax
Eugenia Clark	MF community	PO BOX 1795 Chinle AZ 86503	
Eugene Tso	Chinle commun	PO BOX 1366 Chinle AZ 86503	



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Arizona Office:

P: (928) 522-6015

F: (928) 522-6016

Texas Office:

P: (512) 847-7744

F: (512) 847-7745

www.intrinsicinfo.com

Public Involvement Summary Report

Chinle-Many Farms and St. Michaels-Window Rock-Ft. Defiance Multimodal Long Range Transportation Study

First Phase Public Involvement – November 2011

ADOT MPD Task Assignment 23-11

ADOT Project No. PG TD0728

Appendix E2

Public Meeting Notes St. Michaels Meeting

Arizona Address: PO Box 336, Flagstaff, AZ 86002

Texas Address: 40 East Valley Spring Road, Wimberley, TX 78676



public involvement



citizen outreach



stakeholder facilitation



conflict resolution



Arizona Office: Texas Office:
P: (928) 522-6015 P: (512) 847-7744
F: (928) 522-6016 F: (512) 847-7745
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Meeting Notes

St. Michaels-Window Rock-Fort Defiance Multimodal Long Range Transportation Study November 3, 2011

ADOT MPD Task Assignment 23-11 ADOT Project No. PG TD0728

The Navajo Division of Transportation (Navajo DOT), the Arizona Department of Transportation (ADOT) and Navajo Chapters have initiated two multimodal transportation studies to identify long-term improvements: Chinle to Many Farms Corridor Study Area; and St. Michaels to Window Rock to Fort Defiance Corridor Study Area. The two studies will analyze and identify improvements for all modes of transportation within the corridor areas, including vehicular, pedestrian, bicycle, and equestrian, as well as connections between vehicular, airport and transit systems for commuter and emergency needs. Particular attention will be paid to safety, mobility, livability, and economic and community development.

On Thursday, November 3, 2011, Navajo DOT and ADOT held a public meeting at the St. Michaels Chapter House to present the results of Working Paper #1, Current and Future Transportation Conditions, to the community and seek public input. Ten people signed in at the St. Michaels meeting. See attached sign-in sheet for a list of those in attendance.

Following are comments offered by the public at the meeting. Additionally, meeting participants marked up study area maps with comments, which are included below following the spoken comments.

SPOKEN COMMENTS/QUESTIONS

C: I've been a local resident of Window Rock for 40 years. During that time, I worked for the tribe for 38 years and we lived in Window Rock – it's disappointing not to see many people here at this meeting. We have tried to get our roads repaired. I live in the St. Michaels housing area. For 30 years we have asked to get those roads repaired. We've gone to chapters, resolutions have been presented, we've gone to Navajo DOT, the county, BIA, etc. No one in transportation will support us or repair our roads in Window Rock residential areas or in Fort Defiance. Even in government office areas. I personally went before Window Rock Transportation. They got millions of dollars and are building new offices and hiring people but not fixing our roads. I wrote letters and finally got a response asking for a resolution and I sent that to them, an older resolution already passed. Nothing was done. They said they can't help. Who will help us? Nothing has ever been done to assist us. We've hauled in sand and gravel ourselves for the potholes.



Nobody will come in with equipment to help us. I went to the Ft. Defiance Chapter meeting a couple weeks ago. Navajo DOT was on the agenda but didn't show up. We need your help. We need our roads fixed. The priority is the residential areas, the business areas. Someone needs to be responsible. We can't wait five years, ten years. We need immediate repairs.

COMMENTS WRITTEN ON MAPS

Roadway Needs and Deficiencies Map:

- There are paving needs for the streets in the residential area on the west side of N12 (Shonto Blvd, Jeddito Drive and the intersecting streets).
- There are paving needs on Window Rock Blvd/N100 and the other surrounding streets serving the government offices
- There are paving needs on Chee Dodge Drive, Manuelito Drive, Morgan Blvd, and other residential streets in that area.



Welcome to the Public Meeting ~ Please sign in

St. Michaels to Fort Defiance Corridor Multimodal, Long-Range Transportation Study
St. Michaels Chapter House – Thursday, Nov. 3, 2011 – 6 to 8 p.m.

Name	Representing	Address and phone	Email or fax
Wallace Hanley		Window Rock 928-871-5761	w_hanley@frontiernet.net
Ron Curtis	ADOT	Box 1140 Ganado AZ 8654 ⁹²⁸⁻³⁵⁷⁹	rcurtis@azdot.gov
Randy Routhier	ADOT	2407 E Navajo Blvd	rrouthier@azdot.gov
Clara Brauer		St Michaels Box 187	
Brian Upshaw			
SALISA NORSTOG	NDOT	POB 4620 WINDOW ROCK, AZ 86515	snorstog@navajodot.org
Margie RS Begay	NDOT-TT-Div Agency	POB 4620 Window Rock, AZ 86515	mbegay@navajodot.org
Jason Hurd	Intrinsic/ADOT	PO Box 336 Flag AZ 86002 ⁹²⁸⁻⁶⁰⁷⁻⁷¹⁵⁶	jason@intrinsicintercom
Don Sneed	ADOT-MPD	206 S. 17th Ave Phoenix, AZ 85007 602-712-6736	dsneed@azdot.gov
Nona Baheshone	Bahozhoni Development	6503 E Rafter River St Mesa, AZ 85215 602-363-6473	nbaheshone@bahozhoni.com



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Public Involvement Summary Report

Chinle-Many Farms and St. Michaels-Window Rock-Ft. Defiance Multimodal Long Range Transportation Study

First Phase Public Involvement – November 2011

ADOT MPD Task Assignment 23-11

ADOT Project No. PG TD0728

Appendix F1

Written Comments

Chinle/Many Farms

Arizona Address: PO Box 336, Flagstaff, AZ 86002

Texas Address: 40 East Valley Spring Road, Wimberley, TX 78676



public involvement



citizen outreach



stakeholder facilitation



conflict resolution

Your Input is Important!

Chinle to Many Farms Corridor Multimodal, Long-Range Transportation Study



Please take a moment to complete the following comment form. The project team will take your input into consideration as they refine transportation needs, and as they prepare Evaluation Criteria & Proposed Improvements to meet those needs.



1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: Corridor area needs to be studied for Flooding Problems - have better drainage

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			✓
b. Community development.....		✓	
c. Access to employment areas.....		✓	
d. Access to commercial areas.....		✓	
e. Access to schools.....			✓
f. Access to recreation areas.....		✓	
g. Emergency access.....			✓
h. Airport access.....		✓	
i. Project cost.....			✓
j. Other (please rank and explain).....			✓

Need more staff / Maintenance personal to up keep the roads.

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

a. Safety for Public -

b. Divided roads for future needs

c. too many turn out now - frontage roads - for better access.

4. Please share any additional comments:

Build roundabouts instead of traffic signals.
Street lights.
New side walkers / Landscaping

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			✓
i. Paving dirt roads.....			✓
ii. Resurfacing paved roads.....			✓
iii. Road widening.....			✓
iv. Street lighting.....		✓	
v. New traffic signals.....		✓	
vi. Access control/medians.....			✓
vii. Bridge improvements.....			✓
viii. Traffic congestion.....			✓
ix. Other (please rank and explain).....			✓

your slide - study Purpose: for a 5 yrs plan this area needs turn lanes at major BIA routes

	low	med	high
b. Transit.....			✓
i. Bus stops.....			✓
ii. Pullouts.....		✓	
iii. New service.....		✓	
iv. Other (please rank and explain).....			

	low	med	high
c. Pedestrian.....			✓
i. Sidewalks/paths.....			✓
ii. Crossings.....			✓
d. Bicycle routes/paths.....		✓	
e. Equestrian trails/crossings.....	✓		
f. Other (please rank and explain).....			

Ahee'hee'!

Please return by Friday, Dec. 2, 2011, to the ADOT Outreach Team, Attention "Navajo PARA Studies:" by phone, **928-522-6015** (Navajo speaker available); by fax, **928-522-6016**; by email, **jason@intrinsicinfo.com**; or by mail, **PO Box 336, Flagstaff, AZ 86002**. Please note: Completion of this comment sheet is completely voluntary and helps the project team keep an accurate record of attendees' comments. Under state law, any identifying information provided will become part of the public record and, as such, must be released to any individual upon request.



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Chinle to Many Farms Corridor Multimodal, Long-Range Transportation Study



Please take a moment to complete the following comment form.
The project team will take your input into consideration as they refine transportation needs, and as they prepare Evaluation Criteria & Proposed Improvements to meet those needs.



1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: Funding source and what ADOT plan is for 5 or 10 years to fund this road improvement.

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			✓
b. Community development.....			✓
c. Access to employment areas.....			✓
d. Access to commercial areas.....			✓
e. Access to schools.....			✓
f. Access to recreation areas.....		✓	
g. Emergency access.....			✓
h. Airport access.....			✓
i. Project cost.....			
j. Other (please rank and explain).....			

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

- No Passing, congestion of traffic during rush hours.
- No livestock under crossing, cattle guards not working, horse facilities.
- More traffic lighting in Many Farms Area.

4. Please share any additional comments:

- rumble strips on roads needed to alert motorists
- IS BIA roads needs to be paved with additional routes in Chinle
- Peoples lives and property are getting damage and hurt, need to improve this road.

Ahee'hee!

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			
i. Paving dirt roads.....			✓
ii. Resurfacing paved roads.....			✓
iii. Road widening.....			✓
iv. Street lighting.....			✓
v. New traffic signals.....			✓
vi. Access control/medians.....		✓	
vii. Bridge improvements.....			✓
viii. Traffic congestion.....			✓
ix. Other (please rank and explain).....			✓

livestock underpassing to keep animals off the road.

	low	med	high
b. Transit.....		✓	
i. Bus stops.....			✓
ii. Pullouts.....			✓
iii. New service.....			✓
iv. Other (please rank and explain).....			

	low	med	high
c. Pedestrian.....			✓
i. Sidewalks/paths.....			✓
ii. Crossings.....			✓
d. Bicycle routes/paths.....			✓
e. Equestrian trails/crossings.....			✓
f. Other (please rank and explain).....			

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Please take a moment to complete the following comment form. The project team will take your input into consideration as they refine transportation needs, and as they prepare Evaluation Criteria & Proposed Improvements to meet those needs.



1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: IDENTIFY FUNDING SOURCES + DON'T JUST PROVIDE A REPORT
KEEP THE PUBLIC INFORMED, ADDRESS PEOPLE IN NAVAJO LANGUAGE, DO AN EVALUATION

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			✓
b. Community development.....		✓	
c. Access to employment areas.....		✓	
d. Access to commercial areas.....		✓	
e. Access to schools.....	✓		
f. Access to recreation areas.....		✓	
g. Emergency access.....			✓
h. Airport access.....		✓	
i. Project cost.....		✓	
j. Other (please rank and explain).....			

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

- a. ROADWAY DESIGN - NO SHOULDERS, SHARP CURVES, NO VISIBILITY @ NIGHT.
- b. NO 4-LANE HIGHWAY @ HIGH TRAFFIC AREAS, NO SAFE TURN OUT LANES
- c. MUDDY, POOR DIRT ROADS - NEED UPGRADE TO GRAVEL OR PAVING

4. Please share any additional comments:

MVC'S ARE THE #1 CAUSE OF INJURIES IN THE CHINLE SERVICE UNIT, PEOPLE ARE KILLED OR SEVERELY INJURED WHEN THEY HIT ANIMALS, PEDESTRIANS, OR INVOLVED IN SINGLE MOTOR VEHICLE ROLLOVERS.

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			✓
i. Paving dirt roads.....			✓
ii. Resurfacing paved roads.....			✓
iii. Road widening.....			✓
iv. Street lighting.....			✓
v. New traffic signals.....			✓
vi. Access control/medians.....			✓
vii. Bridge improvements.....			✓
viii. Traffic congestion.....			✓
ix. Other (please rank and explain).....			

	low	med	high
b. Transit.....			✓
i. Bus stops.....			✓
ii. Pullouts.....			✓
iii. New service.....		✓	
iv. Other (please rank and explain).....			

	low	med	high
c. Pedestrian.....			✓
i. Sidewalks/paths.....		✓	
ii. Crossings.....			✓
d. Bicycle routes/paths.....			✓
e. Equestrian trails/crossings.....			✓
f. Other (please rank and explain).....			

NEED BUS STOP PULL OUTS THAT ARE PAVED + LIT FOR NIGHT TIME AS STUDENTS ARE PICKED UP OR DROPPED OFF.

IDENTIFY THE AREAS WHERE MOST MVC'S OCCUR, ADDRESS REDUCING INJURIES BY ROAD IMPROVEMENTS

Ahee'hee'!

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Please take a moment to complete the following comment form. The project team will take your input into consideration as they refine transportation needs, and as they prepare Evaluation Criteria & Proposed Improvements to meet those needs.



1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: _____

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			X
b. Community development.....		X	X
c. Access to employment areas.....		X	
d. Access to commercial areas.....			X
e. Access to schools.....		X	
f. Access to recreation areas.....		X	
g. Emergency access.....		X	
h. Airport access.....		X	
i. Project cost.....	X		
j. Other (please rank and explain).....			

Safety and aesthetics!

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

a. *pedestrian paths, crossings, multi-use walkways, aesthetic beautification*

b. *livestock removal*

c. *drunk driving*

4. Please share any additional comments:

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....		X	
i. Paving dirt roads.....			X
ii. Resurfacing paved roads.....		X	
iii. Road widening.....			X
iv. Street lighting.....			X
v. New traffic signals.....			X
vi. Access control/medians.....		X	
vii. Bridge improvements.....		X	
viii. Traffic congestion.....		X	
ix. Other (please rank and explain).....			

b. Transit.....

	low	med	high
i. Bus stops.....			X
ii. Pullouts.....			X
iii. New service.....			X
iv. Other (please rank and explain).....			

This goes w/ safety as well

c. Pedestrian.....

	low	med	high
i. Sidewalks/paths.....			X
ii. Crossings.....			X
d. Bicycle routes/paths.....			X
e. Equestrian trails/crossings.....			X
f. Other (please rank and explain).....			

A recreational walk/bike path all the way down 191. Navajo culture includes walking, running, exercising, so this would be very appropriate

Ahee'hee'!

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1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: bridge on 191 MP 460 + cheap, while also near MP 461

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			✓
b. Community development.....			✓
c. Access to employment areas.....			✓
d. Access to commercial areas.....			✓
e. Access to schools.....			✓
f. Access to recreation areas.....		✓	
g. Emergency access.....			✓
h. Airport access.....			✓
i. Project cost.....			✓
j. Other (please rank and explain).....			

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

- a. School bus pull out
- b. Widening 191
- c. turning lanes + access onto 191

4. Please share any additional comments:

Row cleaning/clearing
Maintain Row fence
Monitor at the highway
Have Navajo return our fuel
for money.

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			✓
i. Paving dirt roads.....			✓
ii. Resurfacing paved roads.....			✓
iii. Road widening.....			✓
iv. Street lighting.....		✓	
v. New traffic signals.....		✓	
vi. Access control/medians.....			✓
vii. Bridge improvements.....			✓
viii. Traffic congestion.....			✓
ix. Other (please rank and explain).....			

b. Transit.....

	low	med	high
i. Bus stops.....		✓	
ii. Pullouts.....			✓
iii. New service.....			✓
iv. Other (please rank and explain).....			

c. Pedestrian.....

	low	med	high
i. Sidewalks/paths.....			✓
ii. Crossings.....			✓
d. Bicycle routes/paths.....		✓	
e. Equestrian trails/crossings.....		✓	
f. Other (please rank and explain).....			

Ahee'hee'!

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Chinle to Many Farms Corridor Multimodal, Long-Range Transportation Study



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1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: _____

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....	<input checked="" type="checkbox"/>		
b. Community development.....	<input checked="" type="checkbox"/>		
c. Access to employment areas.....		<input checked="" type="checkbox"/>	
d. Access to commercial areas.....	<input checked="" type="checkbox"/>		
e. Access to schools.....	<input checked="" type="checkbox"/>		
f. Access to recreation areas.....	<input checked="" type="checkbox"/>		
g. Emergency access.....	<input checked="" type="checkbox"/>		
h. Airport access.....	<input checked="" type="checkbox"/>		
i. Project cost.....			<input checked="" type="checkbox"/>
j. Other (please rank and explain).....			

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

a. Very congested area
crash seems like everyday

b. Hit in runs

c. _____

4. Please share any additional comments:

Pull-outs
need more bus stops
Bus Stop Signs

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
i. Paving dirt roads.....	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
ii. Resurfacing paved roads.....			<input checked="" type="checkbox"/>
iii. Road widening.....			<input checked="" type="checkbox"/>
iv. Street lighting.....			<input checked="" type="checkbox"/>
v. New traffic signals.....			<input checked="" type="checkbox"/>
vi. Access control/medians.....			<input checked="" type="checkbox"/>
vii. Bridge improvements.....			<input checked="" type="checkbox"/>
viii. Traffic congestion.....			<input checked="" type="checkbox"/>
ix. Other (please rank and explain).....			

b. Transit.....

	low	med	high
i. Bus stops.....			<input checked="" type="checkbox"/>
ii. Pullouts.....			<input checked="" type="checkbox"/>
iii. New service.....			<input checked="" type="checkbox"/>
iv. Other (please rank and explain).....			

c. Pedestrian.....

	low	med	high
i. Sidewalks/paths.....			<input checked="" type="checkbox"/>
ii. Crossings.....			<input checked="" type="checkbox"/>

d. Bicycle routes/paths.....

	low	med	high
i. Sidewalks/paths.....			<input checked="" type="checkbox"/>

e. Equestrian trails/crossings.....

	low	med	high
i. Sidewalks/paths.....			<input checked="" type="checkbox"/>

f. Other (please rank and explain).....

Ahee'hee'!

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1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: _____

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			✓
b. Community development.....		✓	
c. Access to employment areas.....		✓	
d. Access to commercial areas.....			✓
e. Access to schools.....			✓
f. Access to recreation areas.....	✓		
g. Emergency access.....		✓	
h. Airport access.....			✓
i. Project cost.....			✓
j. Other (please rank and explain).....			

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

a. frontage roads

b. school bus turnout

c. _____

4. Please share any additional comments:

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			✓
i. Paving dirt roads.....		✓	
ii. Resurfacing paved roads.....			✓
iii. Road widening.....			✓
iv. Street lighting.....			✓
v. New traffic signals.....			✓
vi. Access control/medians.....		✓	✓
vii. Bridge improvements.....			✓
viii. Traffic congestion.....			✓
ix. Other (please rank and explain).....			

	low	med	high
b. Transit.....			✓
i. Bus stops.....			✓
ii. Pullouts.....			✓
iii. New service.....			✓
iv. Other (please rank and explain).....			

	low	med	high
c. Pedestrian.....			✓
i. Sidewalks/paths.....			✓
ii. Crossings.....			✓
d. Bicycle routes/paths.....		✓	
e. Equestrian trails/crossings.....		✓	
f. Other (please rank and explain).....			

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Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: We brought up different issues and they answered them.

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			✓
b. Community development.....		✓	
c. Access to employment areas.....			✓
d. Access to commercial areas.....			✓
e. Access to schools.....		✓	
f. Access to recreation areas.....			✓
g. Emergency access.....			✓
h. Airport access.....			✓
i. Project cost.....			✓
j. Other (please rank and explain).....			

Over pass - to schools at intersecting

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

- Bus transport
- taxi cars
- Buses

4. Please share any additional comments:

* We need an intersection at the turn up to Chinle Hospital road.

* The entrance to 'Shell' station in chinle (@ intersection) need to be closed off. Accidents happens when
Ahee hee! the person turns there at a quick stop. Person behind them will think

Please return by Friday, Dec. 2, 2011, to the ADOT Outreach Team, Attention "Navajo PARA Studies" then are going to drive up to the intersection.
 by phone, **928-522-6015** (Navajo speaker available); by fax, **928-522-6016**;
 by email, **jason@intrinsicinfo.com**; or by mail, **PO Box 336, Flagstaff, AZ 86002**. Please note: Completion of this comment sheet is completely voluntary and helps the project team keep an accurate record of attendees' comments. Under state law, any identifying information provided will become part of the public record and, as such, must be released to any individual upon request.

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			✓
i. Paving dirt roads.....			✓
ii. Resurfacing paved roads.....			✓
iii. Road widening.....			✓
iv. Street lighting.....			✓
v. New traffic signals.....			✓
vi. Access control/medians.....		✓	
vii. Bridge improvements.....			✓
viii. Traffic congestion.....		✓	
ix. Other (please rank and explain).....			

	low	med	high
b. Transit.....			✓
i. Bus stops.....			✓
ii. Pullouts.....			✓
iii. New service.....			
iv. Other (please rank and explain).....			

Need more Pullouts for bus. And need one safety pullout for Transit, and between Chinle - MF. (two)

	low	med	high
c. Pedestrian.....			
i. Sidewalks/paths.....			✓
ii. Crossings.....			✓
d. Bicycle routes/paths.....			✓
e. Equestrian trails/crossings.....	✓		
f. Other (please rank and explain).....			

In Chinle - Bicycle Routes alongside sidewalks.



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Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: _____

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			✓
b. Community development.....		✓	
c. Access to employment areas.....		✓	
d. Access to commercial areas.....		✓	
e. Access to schools.....		✓	
f. Access to recreation areas.....		✓	
g. Emergency access.....		✓	✓
h. Airport access.....	✓		
i. Project cost.....			✓
j. Other (please rank and explain).....			

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

- Increase of Trucks on the road. They speed thru & it is unsafe.
- Livestock on the road, causing damage & lives
- Maintaining the all roads esp. the Indian Routes & BIA roads

4. Please share any additional comments:

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			✓
i. Paving dirt roads.....			✓
ii. Resurfacing paved roads.....			✓
iii. Road widening.....		✓	
iv. Street lighting.....			✓
v. New traffic signals.....		✓	
vi. Access control/medians.....		✓	
vii. Bridge improvements.....		✓	
viii. Traffic congestion.....			✓
ix. Other (please rank and explain).....			

- Transit.....
 - Bus stops.....
 - Pullouts.....
 - New service.....
 - Other (please rank and explain).....

	low	med	high
b. Transit.....		✓	
i. Bus stops.....		✓	
ii. Pullouts.....		✓	
iii. New service.....	✓		
iv. Other (please rank and explain).....			

- Pedestrian.....
 - Sidewalks/paths.....
 - Crossings.....
- Bicycle routes/paths.....
- Equestrian trails/crossings.....
- Other (please rank and explain).....

	low	med	high
c. Pedestrian.....		✓	
i. Sidewalks/paths.....		✓	
ii. Crossings.....	✓		
d. Bicycle routes/paths.....	✓		
e. Equestrian trails/crossings.....	✓		
f. Other (please rank and explain).....			

Ahee'hee'!

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1. The project team has completed the project and is now in the final stages of the project.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

YES (they missed something) Did NOT attend 2009 Project Meeting on Nov 3, 2011

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety			X
b. Community development			X
c. Access to employment areas			X
d. Access to commercial areas			X
e. Access to schools			X
f. Access to recreation areas		X	
g. Emergency access		X	
h. Airport access	X		
i. Project cost		X	
j. Other (please rank and explain)			

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Mary Farms study corridor area?

a. Two-lane road/highway

b. Bicycle and pedestrian lanes/bikepaths

c. Eliminate horses, cows and other livestock from the right of way on roads

4. Please share any additional comments:

Using Navajo Nation Police and/or Arizona State Police a combination of enforcement and better fines to eliminate the loading of horses, cows, and other livestock on the right of way on roads.

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
i. Paving dirt roads	X		
ii. Resurfacing paved roads			X
iii. Road widening			X
iv. Street lighting		X	
v. New traffic signals		X	
vi. Access control/medians		X	
vii. Bridge improvements			X
viii. Traffic congestion	X		
ix. Other (please rank and explain)			
eliminate cattle crossings			X

	low	med	high
i. Bus stops			X
ii. Pullouts			X
iii. Flow control	X		
iv. Other (please rank and explain)			

	low	med	high
i. Pedestrian			X
ii. Crossings		X	
iii. Other (please rank and explain)			
iv. Other (please rank and explain)			

by email: jason@adotinfo.com or by mail: P.O. Box 336, Flagstaff, AZ 86002. Please note: ADOT is not responsible for the content of this document and does not warrant the accuracy of the information provided. Comments and other information provided will become part of the public record and, as such, must be released to any individual upon request.



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1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain:

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			✓
b. Community development.....			✓
c. Access to employment areas.....		✓	
d. Access to commercial areas.....		✓	
e. Access to schools.....			✓
f. Access to recreation areas.....		✓	
g. Emergency access.....			✓
h. Airport access.....			✓
i. Project cost.....		✓	
j. Other (please rank and explain).....			

(School) Student walk overpass

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			✓
i. Paving dirt roads.....		✓	
ii. Resurfacing paved roads.....			✓
iii. Road widening.....			✓
iv. Street lighting.....			✓
v. New traffic signals.....			✓
vi. Access control/medians.....			✓
vii. Bridge improvements.....			✓
viii. Traffic congestion.....			✓
ix. Other (please rank and explain).....			

Bus Routine gravel Roads
Local Res. Gravel Roads

	low	med	high
b. Transit.....			✓
i. Bus stops.....			✓
ii. Pullouts.....		✓	
iii. New service.....		✓	
iv. Other (please rank and explain).....			

Elder Transport To/From Hospital
Stores and other Business office

	low	med	high
c. Pedestrian.....			✓
i. Sidewalks/paths.....			✓
ii. Crossings.....			✓
d. Bicycle routes/paths.....		✓	
e. Equestrian trails/crossings.....		✓	
f. Other (please rank and explain).....			

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

- How lanes from Grand Canyon
- Truck Route By Pass in Grand Canyon Many Farms
- In Chinle need By Pass Route on North side Between Chinle and Valley Store and South side Between Chinle and

4. Please share any additional comments:

2021/12

Ahee'hee'!

Please return by Friday, Dec. 2, 2011, to the ADOT Outreach Team, Attention "Navajo PARA Studies:"

Looking for funding State Road
BIA Roads and County Roads

e. Equestrian trails/crossings.....	✓		
f. Other (please rank and explain).....			✓

Flood Control - Surface Run off
from the mesa floods then roads

Ahee'hee'!

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1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: Study Area need to include North Many Farms Valley up to Mile Post 470 Chinle Wash. Include improving BIA road N-18 going up to Canyon Mesa.

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			✓
b. Community development.....		✓	
c. Access to employment areas.....		✓	
d. Access to commercial areas.....		✓	
e. Access to schools.....			✓
f. Access to recreation areas.....	✓		
g. Emergency access.....			✓
h. Airport access.....	✓		
i. Project cost.....		✓	
j. Other (please rank and explain).....		✓	

Provide Signage
Restripe Roads Routinely
Maintain Road in winter

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

a. Pave or gravel top all heavily used dirt road like N-18

b. Bus route

c. _____

4. Please share any additional comments:

Well populated Many Farms north Valley was not included in the study area. Emergency vehicle and School bus often have difficulty commuting on these dirt roads

Ahee'hee'!

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5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....		✓	
i. Paving dirt roads.....			✓
ii. Resurfacing paved roads.....		✓	
iii. Road widening.....		✓	
iv. Street lighting.....		✓	
v. New traffic signals.....		✓	
vi. Access control/medians.....			✓
vii. Bridge improvements.....	✓		
viii. Traffic congestion.....			✓
ix. Other (please rank and explain).....			

Provide and install improved design cattle guard that deter livestock

	low	med	high
b. Transit.....	✓		
i. Bus stops.....		✓	
ii. Pullouts.....			✓
iii. New service.....		✓	
iv. Other (please rank and explain).....			

Design and Size drainage pipe properly to prevent flooding of Roads business and

	low	med	high
c. Pedestrian.. <u>Access Roads</u>	✓		
i. Sidewalks/paths.....	✓		
ii. Crossings.....			✓
d. Bicycle routes/paths.....	✓		
e. Equestrian trails/crossings.....	✓		
f. Other (please rank and explain).....			

Need bridge crossing at all school crossing Many Farms Elementary and Chinle Schools Jr high & high school (like one in Ganado)

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1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: *They did not elaborate on the adjoining BIA and County roads although they are within the survey boundary.*

2. Please rank the following project criteria as low, medium or high priorities:

	low	med	high
a. Safety.....		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
b. Community development.....		<input checked="" type="checkbox"/>	
c. Access to employment areas.....		<input checked="" type="checkbox"/>	
d. Access to commercial areas.....		<input checked="" type="checkbox"/>	
e. Access to schools.....		<input checked="" type="checkbox"/>	
f. Access to recreation areas.....	<input checked="" type="checkbox"/>		
g. Emergency access.....			<input checked="" type="checkbox"/>
h. Airport access.....		<input checked="" type="checkbox"/>	
i. Project cost.....			<input checked="" type="checkbox"/>
j. Other (please rank and explain).....			

5. Please rank the following transportation needs as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....	<input checked="" type="checkbox"/>		
i. Paving dirt roads.....			<input checked="" type="checkbox"/>
ii. Resurfacing paved roads.....	<input checked="" type="checkbox"/>		
iii. Road widening.....		<input checked="" type="checkbox"/>	
iv. Street lighting.....		<input checked="" type="checkbox"/>	
v. New traffic signals.....	<input checked="" type="checkbox"/>		
vi. Access control/medians.....			<input checked="" type="checkbox"/>
vii. Bridge improvements.....		<input checked="" type="checkbox"/>	
viii. Traffic congestion.....	<input checked="" type="checkbox"/>		
ix. Other (please rank and explain).....			

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

- Bus Pullout on 191*
- Pave or gravel top bus routes*
- Pave dirt road below the hospital one leading to the hospital road*

4. Please share any additional comments:

Looking for funding State, Road BIA Roads and County roads

	low	med	high
b. Transit.....	<input checked="" type="checkbox"/>		
i. Bus stops.....			<input checked="" type="checkbox"/>
ii. Pullouts.....			<input checked="" type="checkbox"/>
iii. New service.....			<input checked="" type="checkbox"/>
iv. Other (please rank and explain).....			

	low	med	high
c. Pedestrian.....		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
i. Sidewalks/paths.....		<input checked="" type="checkbox"/>	
ii. Crossings.....			<input checked="" type="checkbox"/>
d. Bicycle routes/paths.....	<input checked="" type="checkbox"/>		
e. Equestrian trails/crossings.....	<input checked="" type="checkbox"/>		
f. Other (please rank and explain).....			<input checked="" type="checkbox"/>

Flood Control - Surface Run off from the mesa flood these roads

Ahee'hee'!

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1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: _____

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			X
b. Community development.....			
c. Access to employment areas.....			
d. Access to commercial areas.....			
e. Access to schools.....			
f. Access to recreation areas.....		X	
g. Emergency access.....			
h. Airport access.....			X
i. Project cost.....			
j. Other (please rank and explain).....			

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

- Keep animals off the road
- Plow the roads when there is snow
-

4. Please share any additional comments:

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			
i. Paving dirt roads.....			
ii. Resurfacing paved roads.....			
iii. Road widening.....			X
iv. Street lighting.....			
v. New traffic signals.....			
vi. Access control/medians.....			
vii. Bridge improvements.....			
viii. Traffic congestion.....			
ix. Other (please rank and explain).....			

Put in a bike lane

	low	med	high
b. Transit.....			
i. Bus stops.....			
ii. Pullouts.....			
iii. New service.....			
iv. Other (please rank and explain).....			

	low	med	high
c. Pedestrian.....			
i. Sidewalks/paths.....			
ii. Crossings.....			
d. Bicycle routes/paths.....			X
e. Equestrian trails/crossings.....			
f. Other (please rank and explain).....			

Ahee'hee!

Please return by Friday, Dec. 2, 2011, to the ADOT Outreach Team, Attention "Navajo PARA Studies:" by phone, 928-522-6015 (Navajo speaker available); by fax, 928-522-6016; by email, jason@intrinsicinfo.com; or by mail, PO Box 336, Flagstaff, AZ 86002. Please note: Completion of this comment sheet is completely voluntary and helps the project team keep an accurate record of attendees' comments. Under state law, any identifying information provided will become part of the public record and, as such, must be released to any individual upon request.



Chinle to Many Farms Corridor Multimodal, Long-Range Transportation Study



Please take a moment to complete the following comment form.
The project team will take your input into consideration as they refine transportation needs, and as they prepare Evaluation Criteria & Proposed Improvements to meet those needs.



1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) X YES (they missed something)

a. If yes, please explain: They must've missed something. Nobody could cover everything

2. Please rank the following project criteria as low, medium or high priorities:

	low	med	high
a. Safety.....			X
b. Community development.....		X	
c. Access to employment areas.....	X		
d. Access to commercial areas.....	X		
e. Access to schools.....	X		
f. Access to recreation areas.....	X		
g. Emergency access.....		X	
h. Airport access.....	X		
i. Project cost.....		X	
j. Other (please rank and explain).....			

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

a. Livestock in the roadway

b. People on their cell phones while driving

c. Buses and others interrupting normal flow of traffic

4. Please share any additional comments:

I don't think its right that the high way patrol and the Navajo cops only come out a few days to bust people then they disappear for the rest of the time. They could help chase livestock off the road.

5. Please rank the following transportation needs as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			X
i. Paving dirt roads.....			X
ii. Resurfacing paved roads.....	X		
iii. Road widening.....		X	
iv. Street lighting.....		X	
v. New traffic signals.....			X
vi. Access control/medians.....	X		
vii. Bridge improvements.....	X		
viii. Traffic congestion.....		X	
ix. Other (please rank and explain).....			x

Horses, cows, sheep in the road way

	low	med	high
b. Transit.....		x	
i. Bus stops.....			X
ii. Pullouts.....		x	
iii. New service.....		X	
iv. Other (please rank and explain).....			x

Chinle school busses disrupt traffic for miles

	low	med	high
c. Pedestrian.....			x
i. Sidewalks/paths.....		x	
ii. Crossings.....		x	
d. Bicycle routes/paths.....		x	
e. Equestrian trails/crossings.....	x		
f. Other (please rank and explain).....			x

There are many hitch hikers on the road

Ahee'hee'!

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Your Input is Important!

Chinle to Many Farms Corridor Multimodal, Long-Range Transportation Study



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1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: _____

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			X
b. Community development.....			X
c. Access to employment areas.....			X
d. Access to commercial areas.....			X
e. Access to schools.....			X
f. Access to recreation areas.....			X
g. Emergency access.....			X
h. Airport access.....			X
i. Project cost.....			X
j. Other (please rank and explain).....			

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

- re construct Hwy 191 turn off widening the road and pave
- dirt roads
- Control all livestock out of the road R.O.W fence

4. Please share any additional comments:

Make four lane road between Chinle to Many Farm
Free WAY!!!

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			X
i. Paving dirt roads.....			X
ii. Resurfacing paved roads.....			X
iii. Road widening.....			X
iv. Street lighting.....			X
v. New traffic signals.....			X
vi. Access control/medians.....			X
vii. Bridge improvements.....			X
viii. Traffic congestion.....			X
ix. Other (please rank and explain).....			X

redo ROW Fence

- Transit.....
 - Bus stops.....
 - Pullouts.....
 - New service.....
 - Other (please rank and explain).....

	low	med	high
c. Pedestrian.....			
i. Sidewalks/paths.....		X	
ii. Crossings.....			X
d. Bicycle routes/paths.....		X	
e. Equestrian trails/crossings.....	X		
f. Other (please rank and explain).....			

Ahee'hee'!

Please return by Friday, Dec. 2, 2011, to the ADOT Outreach Team, Attention "Navajo PARA Studies:" by phone, **928-522-6015** (Navajo speaker available); by fax, **928-522-6016**; by email, **jason@intrinsicinfo.com**; or by mail, **PO Box 336, Flagstaff, AZ 86002**. Please note: Completion of this comment sheet is completely voluntary and helps the project team keep an accurate record of attendees' comments. Under state law, any identifying information provided will become part of the public record and, as such, must be released to any individual upon request.



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Chinle to Many Farms Corridor Multimodal, Long-Range Transportation Study



Please take a moment to complete the following comment form. The project team will take your input into consideration as they refine transportation needs, and as they prepare Evaluation Criteria & Proposed Improvements to meet those needs.



1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: _____

2. Please rank the following project criteria:

as low, medium or high priorities:

	low	med	high
a. Safety.....			✓
b. Community development.....			✓
c. Access to employment areas.....			✓
d. Access to commercial areas.....		✓	
e. Access to schools.....			✓
f. Access to recreation areas.....			✓
g. Emergency access.....			✓
h. Airport access.....		✓	
i. Project cost.....		✓	
j. Other (please rank and explain).....			

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

a. Free way

b. Keep animal outside the fence

c. _____

4. Please share any additional comments:

Thank you for improving the road.

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			✓
i. Paving dirt roads.....			✓
ii. Resurfacing paved roads.....			✓
iii. Road widening.....			✓
iv. Street lighting.....			✓
v. New traffic signals.....			✓
vi. Access control/medians.....			✓
vii. Bridge improvements.....			✓
viii. Traffic congestion.....			✓
ix. Other (please rank and explain).....			

b. Transit.....

	low	med	high
i. Bus stops.....		✓	
ii. Pullouts.....			✓
iii. New service.....			✓
iv. Other (please rank and explain).....			

c. Pedestrian.....

	low	med	high
i. Sidewalks/paths.....		✓	
ii. Crossings.....		✓	
d. Bicycle routes/paths.....		✓	
e. Equestrian trails/crossings.....	✓		
f. Other (please rank and explain).....			

Ahee'hee'!

Please return by Friday, Dec. 2, 2011, to the ADOT Outreach Team, Attention "Navajo PARA Studies:"

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Arizona Office:

P: (928) 522-6015

F: (928) 522-6016

Texas Office:

P: (512) 847-7744

F: (512) 847-7745

www.intrinsicinfo.com

Public Involvement Summary Report

Chinle-Many Farms and St. Michaels-Window Rock-Ft. Defiance Multimodal Long Range Transportation Study

First Phase Public Involvement – November 2011

ADOT MPD Task Assignment 23-11

ADOT Project No. PG TD0728

Appendix F2

Written Comments

St. Michaels/Ft. Defiance

Arizona Address: PO Box 336, Flagstaff, AZ 86002

Texas Address: 40 East Valley Spring Road, Wimberley, TX 78676



public involvement



citizen outreach



stakeholder facilitation



conflict resolution

Your Input is Important!

St. Michaels to Fort Defiance Corridor Multimodal, Long-Range Transportation Study



Please take a moment to complete the following comment form. The project team will take your input into consideration as they refine transportation needs, and as they prepare Evaluation Criteria & Proposed Improvements to meet those needs.



1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: _____

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			✓
b. Community development.....		✓	
c. Access to employment areas.....		✓	
d. Access to commercial areas.....			✓
e. Access to schools.....			✓
f. Access to recreation areas.....		✓	
g. Emergency access.....			✓
h. Airport access.....			
i. Project cost.....		✓	
j. Other (please rank and explain).....			

3. In your opinion, what are the three most important transportation-related needs in the ~~St. Michaels to Fort Defiance~~ study corridor area?

a. Safety - keep Animals out of Right-of-way

b. New fence / Cattle guard

c. Frontage roads

4. Please share any additional comments:

Build roundabouts @
Intersections

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			✓
i. Paving dirt roads.....			✓
ii. Resurfacing paved roads.....			✓
iii. Road widening.....			✓
iv. Street lighting.....			✓
v. New traffic signals.....	✓		
vi. Access control/medians.....		✓	
vii. Bridge improvements.....		✓	
viii. Traffic congestion.....			✓
ix. Other (please rank and explain).....			

b. Transit.....

	low	med	high
i. Bus stops.....			✓
ii. Pullouts.....		✓	
iii. New service.....		✓	
iv. Other (please rank and explain).....			

c. Pedestrian.....

	low	med	high
i. Sidewalks/paths.....			✓
ii. Crossings.....			✓
d. Bicycle routes/paths.....		✓	
e. Equestrian trails/crossings.....		✓	
f. Other (please rank and explain).....			

Ahee'hee'!

Please return by Friday, Dec. 2, 2011, to the ADOT Outreach Team, Attention "Navajo PARA Studies:"

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by email, **jason@intrinsicinfo.com**; or by mail, **PO Box 336, Flagstaff, AZ 86002**. Please note: Completion of this comment sheet is completely voluntary and helps the project team keep an accurate record of attendees' comments. Under state law, any identifying information provided will become part of the public record and, as such, must be released to any individual upon request.



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St. Michaels to Fort Defiance Corridor Multimodal, Long-Range Transportation Study



Please take a moment to complete the following comment form. The project team will take your input into consideration as they refine transportation needs, and as they prepare Evaluation Criteria & Proposed Improvements to meet those needs.



1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: _____

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			
b. Community development.....	X		
c. Access to employment areas.....	X		
d. Access to commercial areas.....	X		
e. Access to schools.....	X		
f. Access to recreation areas.....	X		
g. Emergency access.....	X		
h. Airport access.....	X		
i. Project cost.....	X		
j. Other (please rank and explain).....			

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			
i. Paving dirt roads.....			
ii. Resurfacing paved roads.....			
iii. Road widening.....			
iv. Street lighting.....			
v. New traffic signals.....			
vi. Access control/medians.....			
vii. Bridge improvements.....			
viii. Traffic congestion.....			
ix. Other (please rank and explain).....			

3. In your opinion, what are the three most important transportation-related needs in the ~~Chinle to Many Farms~~ study corridor area? *Window Rock*

- Repair pot holes in residential and Navajo Nation government offices*
- Alternate route into Window Rock government offices*
- 4 lane roads from Smith junction to Ganado - Route 264*

4. Please share any additional comments:

	low	med	high
b. Transit.....			
i. Bus stops.....			
ii. Pullouts.....			
iii. New service.....			
iv. Other (please rank and explain).....			

	low	med	high
c. Pedestrian.....			
i. Sidewalks/paths.....			
ii. Crossings.....			
d. Bicycle routes/paths.....			
e. Equestrian trails/crossings.....			
f. Other (please rank and explain).....			

Ahee'hee'!

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St. Michaels to Fort Defiance Corridor Multimodal, Long-Range Transportation Study



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The project team will take your input into consideration as they refine transportation needs, and as they prepare Evaluation Criteria & Proposed Improvements to meet those needs.



1. Tonight's presentation focused on current and future transportation needs.

Did the project team miss anything? (circle one) NO (they got everything) YES (they missed something)

a. If yes, please explain: _____

2. Please rank the following project criteria

as low, medium or high priorities:

	low	med	high
a. Safety.....			✓
b. Community development.....			✓
c. Access to employment areas.....			✓
d. Access to commercial areas.....			✓
e. Access to schools.....			✓
f. Access to recreation areas.....			✓
g. Emergency access.....			✓
h. Airport access.....			✓
i. Project cost.....			✓
j. Other (please rank and explain).....			✓

*ped - crossing starting @ St. Michaels
on the whole corridor.*

3. In your opinion, what are the three most important transportation-related needs in the Chinle to Many Farms study corridor area?

a. *Road be widen*

b. *better safety turnouts*

c. *overcrossing sch area, sidewalk
sch. crossing markings on highway*

4. Please share any additional comments:

*Better planning for the
annual Navajo Nation Fair
activities.*

5. Please rank the following transportation needs

as low, medium or high priorities:

	low	med	high
a. Roadways/Intersections.....			✓
i. Paving dirt roads.....			✓
ii. Resurfacing paved roads.....			✓
iii. Road widening.....			✓
iv. Street lighting.....			✓
v. New traffic signals.....			✓
vi. Access control/medians.....			✓
vii. Bridge improvements.....			✓
viii. Traffic congestion.....			✓
ix. Other (please rank and explain).....			

	low	med	high
b. Transit.....			✓
i. Bus stops.....			✓
ii. Pullouts.....			✓
iii. New service.....			✓
iv. Other (please rank and explain).....			

	low	med	high
c. Pedestrian.....			✓
i. Sidewalks/paths.....			✓
ii. Crossings.....			✓
d. Bicycle routes/paths.....			✓
e. Equestrian trails/crossings.....			✓
f. Other (please rank and explain).....			

Ahee'hee'!

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Jason Hurd

From: Romero Brown [navajoland_innsuites@citlink.net]
Sent: Thursday, December 08, 2011 11:31 AM
To: jason@intrinsicinfo.com
Cc: Bryan Wright; Matt Smith; Perry M Webb; Spencer Jones; Elder Callister
Subject: St. Michaels

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Jason:

My name is Romero Brown, a resident of St. Michaels. I built my motel and Denny's restaurant about 14 years ago here in St. Michaels bordering Highway 264. I am glad that we have not had any major accidents in front of our business establishment. Once this frontage road was made into four lanes a few years ago, vehicles have been going in front of our businesses over 55-65 mph. That is becoming dangerous and I am hoping that ADOT will address how to slow down the traffic. The semi trucks continues to use its air brakes and makes a lot of noise. That needs to be addressed.

In addition, I belong to the Mormon Church down the street and it is dangerous for our members to get on to this Highway 264 at the rate of speed of others. We don't have any turn out lanes at this church and at Giant Service Station. As you might know, we had some vehicle accidents within the last month with fatalities because of the high speed drivers going. Personally, I am afraid for our church members and my customers safety. For your information, there was a vehicle that crashed into the Mormon Church a few years ago. Luckily, no one was in the church building during that time. Thus, it is imperative that ADOT do a thorough study so that we may avoid any future accidents.

Perhaps, ADOT might consider a couple stop lights in order to slow down the traffic. That would be my suggestion and recommendation as a businessman and a church member. Thank you for your consideration.

Romero Brown, President/Owner
Navajoland Inn & Suites and Denny's
e-mail navajoland_innsuites@citlink.net
(928) 871-5690, (928) 871-5699 (fax)
WEBSITE: www.navajoland-innsuites.com

Jason Hurd

From: Oj [ojjim2000@yahoo.com]
Sent: Friday, December 09, 2011 10:11 PM
To: jason@intrinsicinfo.com
Subject: Navajo DOT Long-Range Transportation Studies - Comments Welcome

Follow Up Flag: Follow up
Flag Status: Flagged

Good Evening,

I reviewed your ideas and such regarding the Window Rock Area.

I do not see anything regarding the housing areas for Employee Housing.

Manuelito Drive, Tribal Hill Drive, Roswell Drive, Navajo Hill Drive, Bonito Apartment area, etc. I am sure you are aware that these areas also need road improvements.

In addition, I see that there is a slide regarding another entry into the government area. The Employee Housing Program as a housing unit that is at that intersection (Chee Dodge and Morgan Blvd.) what are the intentions of ADOT regarding the housing unit that is located there?

We have done studies and such regarding this second exit, however, all the times our office has tried to work in this additional exit, we were stopped by area residences siting "grazing land" Has ADOT looked into this yet?

I am sure that my Program Supervisor also has questions for you, therefore, please meet with our program to discuss further actions requested and what planning is occuring.

Thanks,

Orlando

APPENDIX C

PUBLIC INVOLVEMENT SUMMARY REPORT 2



Arizona Office: **Texas Office:**
P: (928) 522-6015 P: (512) 847-7744
F: (928) 522-6016 F: (512) 847-7745
www.intrinsicinfo.com

Public Involvement Summary Report

Chinle–Many Farms and St. Michaels–Window Rock–Ft. Defiance Multimodal Long Range Transportation Study

Second Phase Public Involvement – February–March 2012

ADOT MPD Task Assignment 23–11 ADOT Project No. PG TD0728

TABLE OF CONTENTS

Public Outreach Efforts.....2

Publicity.....2

Public Meetings & Comments3

Appendices9

List of Tables

Table 1: Public Outreach2

PUBLIC OUTREACH EFFORTS

The following outreach mechanisms were used to notify the public of the project and the second round of public meetings.

Table 1: Public Outreach

Outreach Mechanism	Location/Media	Date
News Release	Distributed by email and fax to area media by ADOT CCP, and to all stakeholders by Intrinsic staff	Jan. 30 & Feb. 21, 2012
Flier	Delivered in-person throughout the project area by Navajo DOT staff	Feb. 2 & 25, 2012
Comment Period Reminder Email	Distributed to all stakeholders by email and fax by Intrinsic staff	March 14, 2012

See Appendix A for copies of outreach materials.

PUBLICITY

The following articles appeared in area media announcing the public meetings:

- *Navajo Times*: “Open house meeting,” Jan. 26, 2012
- *The Tribune News*: “Long-Range Transportation Studies Are Underway on Navajo Nation,” Feb. 22, 2012
- *Navajo Times*: “Open house meeting,” Feb. 23, 2012

See Appendix B for copies of published materials.

PUBLIC MEETINGS & COMMENTS

The public meetings were held on Monday, February 27, 2012, from 6 to 8 p.m. at the Fort Defiance Chapter House, and on Tuesday, February 28, 2012, from 6 to 8 p.m. at the Chinle Chapter House. Twelve people signed in at the Fort Defiance meeting, and 15 people signed in at the Chinle meeting. Mary Rodin provided the presentation at both meetings.

See Appendix C for the meeting sign-in sheets.

Public Comments

In addition to taking spoken comments and questions during the public meetings, written comments and suggestions were encouraged with a deadline of March 28, 2012. Stakeholders returned one comment form for the St. Michaels/Fort Defiance study and one for the Chinle/Many Farms study. Additionally, two emails were received regarding the St. Michaels/Fort Defiance study and one email was received regarding the Chinle/Many Farms study. Lastly, Arizona State Senator Jack Jackson submitted a letter of support regarding both studies. Comments spoken at the public meetings follow, and written comments are available in Appendix D.

February 27, 2012. Public Meeting at Fort Defiance Chapter House

Comment: I'm from Window Rock. I have lived in the St. Michael's housing area for the past 30-40 years. That area and other housing areas all have problems with roads. They were paved 40-50 years ago and have never been repaved or touched since. We have pot holes that are dangerous to our vehicles. The Window Rock housing area - I have approached the BIA, Tribe, County and State and have never received a response on who will repair it. No one will repair it. Navajo DOT said they would repair it. I hope they will. They need to be paved not in five, ten or 20 years, but immediately. The tribe has billions of dollars and is improving the buildings over there. We have been trying for 30 years. We have Chapter resolutions and nothing has been done. The main roads have been repaired, state and some BIA roads. I am mostly concerned about Window Rock residential area that needs immediate repairs.

Navajo DOT Response: Thank you. I forwarded your request. On this plan, you see that this area - the St. Michaels housing area - we are proposing for median development. We are developing the construction listing. It will go before Agency Roads Committee in March to seek approval. That project will be on the list. But it

will take time to complete environmental studies and the other necessary studies. But it is on the long range plan, and all projects need to start there.

Question: Housing areas require archaeological clearances even though they are already developed?

NDOT Response: Yes, we have to find out if all the clearances were done. These projects were developed by the Navajo Housing Authority, so we have to find out if they have those documents in place already.

Comment: I represent the LDS Church. We have a facility on SR 264 next to the Giant (gas) station and Navajoland Inn. I understand this project is targeted toward tribal roads, but I want to request that ADOT consider a deceleration lane in front of our church. A number of tribal members attend church there on Sundays. And there are a lot of pedestrians in the area also. There was a fatal accident in front of the Giant station in November. Three years ago a vehicle careened into our building. We just want a buffer zone there. We have some new facilities going in east of the existing church in five to ten years. If we could create a median all the way across there, that would protect our members.

Comment: I'm with the community here. I was a chapter official. Then I was with the School Board in the 90s. We've been talking about these bus routes since then. It is still the same. The main one that we talked about was Blue Canyon Road. Just about every entity that comes in here studies that because of the wall, endangered species, archaeological - everything. We have quite a few people living up in Blue Canyon. How can you tell us you will build by showing it to us tonight? Blue Canyon has a lot of gravel in that area. They've been coming to us for years to get that road built. I work for the County now. This is an election year. Just about every person in Blue Canyon says it is the same thing again. Our roads are still the same. How would you put it together right now? It's not just that. Each part of these roads that you showed me, Mary, there is a lot of difference between them. A lot of people speed on the road to the hospital and Black Rock Road. It's really rough all the way to Lupton. When coming from Lupton, you will see it. You hit a speed bump. Two weeks ago they put up a sign about the bump. How can a road department just put up a sign that says there is a bump? Why can't we work together? How can ADOT work with the tribe? What's the reverse part of that? There are a lot of gravel pits all over. BIA came in with a stack of books. What blocked the gravel pits was the Mexican Spotted Owl. What gives that more rights than us? Owls fly - can't they be moved? The only new road is N54 through Coal Mine and that was a long time ago too. My main concern is roads. People tear up their vehicle every day. The road to St. Michaels is really rough. We need answers. You

should come to the Chapter meeting and explain this. A lot of community people are not here tonight.

Navajo DOT Response: Blue Canyon Road is on the construction listing. Archaeological and environmental assessments are done. It should be pretty soon, within next five to ten years to improve that road. On the 9073 project, I have more information I can look up for you.

ADOT Response: Regarding this particular study, each of the recommended projects will have an info sheet that identifies the need, improvements and cost, and also we'll provide information that is available about various funding programs that Navajo DOT and/or Chapter communities can pursue. All that information will be in the final report. It may need someone who can be a champion and take the lead and push these projects. ADOT is only responsible for state and US routes. Within the planning end of ADOT, we are working with tribal communities to provide technical assistance and guidance to assist tribal community staff to get them through the funding processes. There are a number of programs ADOT administers on behalf of the USDOT-FHWA. There are traffic safety improvement programs, as an example.

Comment: I'm glad we're having this meeting. I am a business man in St. Michaels – I own the motel and Denny's there. Before the road was improved, people drove the speed limit. Once it was widened, they started going about 65 mph. I propose you incorporate into your planning putting a stop light or something there to slow down the traffic. The LDS Church is developing the area near my motel. If there was a stop light intersection there, for use of the church and Frontier Communications, that would be very good. When we have service or a funeral at the church there, it is very dangerous with people going too fast.

-- End of Fort Defiance Chapter House Meeting Comments --

February 28, 2012, Public Meeting at Chinle Chapter House

Question: Please go over the schedule more.

KHA Response: The first half of the project was regarding current and future conditions, needs and deficiencies, that we learned through public involvement and working with the Technical Advisory Committee. The next stage of the project was developing projects to meet those needs. We have developed two working papers. The first one is on existing conditions and the next one is regarding the recommended projects that we are working on now. Each project will include details such as need, prioritization and potential funding sources. We'll develop a final

report summarizing the two working papers, and that will be the final report. All of the meeting minutes and working papers and documentation are available on the project web site.

Question: Right in this area here (pointing to map), will they put in something for utilities to cross under the road? The main problem is no road crossing for utilities. Once that road is wider, it will be harder to bring water and sewer across.

KHA Response: We are recommending paving the road right there. You would have to work with ADOT District staff to work on utility crossings. This is a long range project with projects for 5, 10 and 20 years. Each recommended project on the board will have an info sheet that includes estimated cost. Once the report is completed, Navajo DOT and Chapter communities can work together with ADOT to identify potential funding sources.

Question: Does the study include Piñon junction? That is where most of the Indians come from, so you need a wider road.

KHA Response: That is outside of the study area. Also, ADOT is conducting a Road Safety Assessment (RSA). They are identifying issues on US 191. We can make a note of any issues the community may have on state roads and we can request to include them in ADOT's report.

Comment: Just north of Bashas there is a windmill where the animals drink. Once you widen the road it will take longer for the animals to cross. We need to put the windmill on the west side of the highway. That needs to be considered for the animals. Also, straighten this out from the airport all the way to the airport (pointing to tribal roads near airport road, 8094 and N27), and maybe put an off ramp here to the hospital.

Question: Will you put in culverts for animals to go under 191?

KHA Response: This study is focused on the tribal road system, but if you want to tell us where, we can forward your comments regarding 191 to ADOT.

Question: Will that second orange road (pointing to equestrian trail on map) have street lights?

KHA Response: Probably not.

Question: Do sidewalks have to be so close to the highway? It is a safety issue. Bikers go through there from NHA housing.

KHA Response: In the more rural areas we are recommending shared use paths off of the roadway.

Question: Is there an overpass for Chinle School?

KHA Response: That is something we'll pass on to ADOT, either an overpass or some type of pedestrian crossing in that area.

Question: Have you talked to the people from here to Valley Store. It would be nice if it was against the mesa, because NTUA has power lines and utilities going down there.

KHA Response: We did have some people from that area at our first open house – their main concerns were safety, speeding, truck traffic, wider shoulders, and safety improvements in general.

Question: What about the banana curve, will it be a long curve or stay the same?

KHA Response: That area is not within this project's study area but it could possibly be part of ADOT's road safety study. We will mention it to them to consider as part of the safety assessment they are doing now.

Question: Could you go over more information about funding?

KHA Response: For each project we identify, we will include some options for funding sources. Depending on the type of project, such as pedestrian, equestrian, safety, etc, funding sources may differ. This is the first step in the process.

Question: How much money is out there for this type of thing, can you say?

ADOT Response: At this point it's difficult to say how much funding is available for a particular project. We have to consider if they are on tribal, BIA or state routes – each has a different process. The state has a 5-year construction program, for example and we can provide more information on it to you. Once projects are considered in the planning process, they need to be signed off on by a number of entities. Tribe, Chapter, Navajo Nation, BIA, etc, each project needs supporters to push it. Usually safety projects are a high priority for funding. The money comes from many different sources.

Question: State projects are funded by taxes?

ADOT Response: Most state projects are federally funded. I can provide more information to you on ADOT's 5-year plan and state transportation improvement program after the meeting. There are many different programs. The project sheets we'll develop for this study will include some options to look for funding.

Navajo DOT Response: IRR program funds the BIA roads and tribal roads. We got about \$55-million a year – to pave a two-lane highway is about \$2-million per mile; gravel is a little less than \$1-million per mile. The process is to go to the Chapter to get a resolution to the Agency Roads Committee (ARC) – each agency

has an ARC that oversees road projects and prioritizes projects each year, and they provide recommendations to the Navajo Nation Resources and Development Committee (RDC).

KHA Response: For safety program, enhancement program, they usually recommend projects at about \$350,000 each for traffic lights, street lights, etc.

Question: You mentioned safety is high priority, what are other priorities?

KHA Response: ADT helps prioritize projects, special funding – leverage – can make projects easier to fund; whether project is shovel-ready also impacts, if studies are all done, etc. State projects are also prioritized for maintaining existing roads. Sometimes ADOT will turn over jurisdictions to local entities if they want to maintain their local roads.

Question: Who approved for 8091 to be paved?

Navajo DOT Response: It is just a proposal right now in our study. These will be recommended to Navajo DOT, Chapters and RDC.

Question: What about widening 191?

KHA Response: That is a recommendation from community members and representative of both the Many Farms and Chinle Chapters. It will not be in five years. Congestion and safety factors will determine when there is the need to widen it. It might not even need to be widened 20 years from now. We did have traffic counts conducted on US 191 for this study.

Question: How does it rank as far as safety, statewide, compared to other state highways?

KHA Response: We didn't do a statewide comparison. We looked at what types of crashes occur in the area. That is also something ADOT is looking at with the RSA they are doing now. At the RSA meeting, they said the 191 crash rate is about average, but fatalities are much higher than the state average. You might see passing lanes before widening it to four lanes.

Question: The fencing/ROW toward Many Farms is wide enough to make it four lanes?

KHA Response: From here to Valley Store it is very narrow and would require more ROW to widen it and utilities would have to be moved.

Comment: I would like to see the road paved from the hospital to the airport access road.

-- End of Chinle Chapter House Meeting Comments --

APPENDICES

- A. Outreach materials
- B. Publicity
- C. Public meeting sign-in sheets
- D. Written comments



Arizona Office:

P: (928) 522-6015

F: (928) 522-6016

Texas Office:

P: (512) 847-7744

F: (512) 847-7745

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Public Involvement Summary Report

Chinle-Many Farms and St. Michaels-Window Rock-Ft. Defiance Multimodal Long Range Transportation Study

Second Phase Public Involvement – February-March 2012

ADOT MPD Task Assignment 23-11

ADOT Project No. PG TD0728

Appendix A

Outreach Materials

Arizona Address: PO Box 336, Flagstaff, AZ 86002

Texas Address: 40 East Valley Spring Road, Wimberley, TX 78676



public involvement



citizen outreach



stakeholder facilitation



conflict resolution



For Immediate Release: January 30, 2012

Contact: ADOT Media Relations

news@azdot.gov or 1-800-949-8057

Long-range transportation studies underway for Chinle to Many Farms & St. Michaels to Fort Defiance

WINDOW ROCK – The Navajo Division of Transportation, Arizona Department of Transportation and Navajo Chapters invite the public to attend the second round of public meetings regarding two long-range transportation studies:

- St. Michaels to Window Rock to Fort Defiance Transportation Corridor Study: Monday, February 27, 2012, from 6 to 8 p.m. at the Fort Defiance Chapter House (presentation starts at 6:30 p.m.)
- Chinle to Many Farms Transportation Corridor Study: Tuesday, February 28, 2012, from 6 to 8 p.m., at the Chinle Chapter House (presentation starts at 6:30 p.m.)

The Navajo DOT, Chapter Communities and ADOT are conducting the two studies concurrently. Interested community members and stakeholders are welcome to attend both public meetings considering ***the two meetings will not cover the same information***. At each public meeting, the project team will offer materials and presentations regarding each respective corridor study area, answer questions and seek public comments. Navajo interpretation will be available and light refreshments will be served.

As the Navajo Nation continues to grow, comprehensive transportation planning is necessary for sustainable development and to meet the needs of area residents, businesses and visitors. The two studies will analyze and identify improvements for all modes of transportation within the corridor areas, including vehicular, pedestrian, bicycle, and equestrian, as well as connections between vehicular, airport and transit systems for commuter and emergency needs. Particular attention will be paid to safety, mobility, livability, and economic and community development. Ultimately, the long-range studies will recommend transportation improvements to be implemented in five, 10 and 20-year timeframes.

The studies are being conducted in two phases. The first phase documented current and future conditions and needs identified during the public meetings held in the fall of 2011. The second phase will focus on evaluation criteria and specific plans for improvements at the public meetings in February.

The two studies are funded through the ADOT Planning Assistance for Rural Areas (PARA) Program. For more information or to submit comments please contact Don Sneed, ADOT Project Manager at [928-712-6736](tel:928-712-6736)/dsneed@azdot.gov or Salisa Norstog, Navajo DOT Principal Planner at [928-871-6498](tel:928-871-6498)/snorstog@navajodot.org. Comments received by March 28, 2012, will be included in a Public Involvement Summary Report. Detailed study information and area maps can be found at: http://www.azdot.gov/MPD/Systems_Planning/NavajoChapter.asp.

Americans with Disabilities Act (ADA): This notice may be available in alternate format and persons with a disability may request a reasonable accommodation, such as a sign language interpreter, by contacting Jason Hurd at 928-522-6015. Request should be made as early as possible to allow time to arrange the accommodation.

###

Wóshdęé' ~ You're Invited

Navajo DOT invites you to attend public meetings



The Navajo Division of Transportation (Navajo DOT) and Arizona Department of Transportation (ADOT) have initiated two multimodal transportation studies to identify long-term improvements and meet the needs of the growing Navajo Nation.

Both studies will analyze needs for:

- Navajo/BIA roadways
- Drivers & commuters
- Pedestrians & bicyclists
- Trails & equestrians
- Transit systems
- Airport access
- Emergency access

Many Farms to Chinle Study

**Chinle Chapter House
Tuesday, February 28, 2012**

Navajo interpretation and light refreshments will be offered at both meetings.



- county roads
- US/state roads
- - - study areas

**Both meetings
6 to 8 p.m.**

presentations start at 6:30 p.m.

- BIA roads
- local roads
- major washes



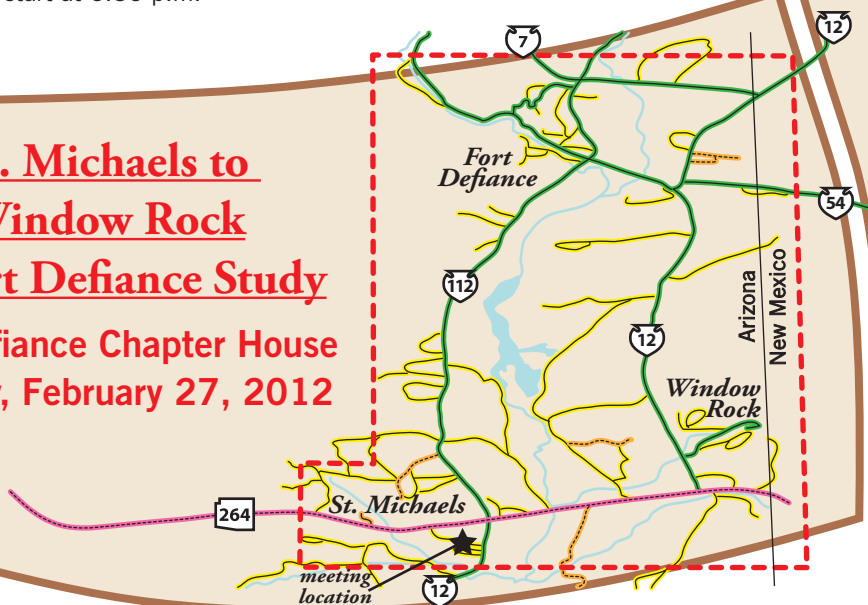
St. Michaels to Window Rock to Fort Defiance Study

**Fort Defiance Chapter House
Monday, February 27, 2012**

Both studies will focus on:

- Safety, mobility & livability
- Economic vitality
- Community development

Ultimately, the long-range studies will recommend multimodal transportation improvements to be implemented in five, 10 and 20-year timeframes.



*Please note:
The two meetings
will not cover the
same information.*



For more information or to submit comments, please contact Don Sneed, ADOT Project Manager at 928-712-6736/dsneed@azdot.gov or Salisa Norstog, Navajo DOT Principal Planner at 928-871-6498/snorstog@navajodot.org.



More information, including detailed study area maps, can be found at:
http://www.azdot.gov/MPD/Systems_Planning/NavajoChapter.asp



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Appendix B

Publicity

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Texas Address: 40 East Valley Spring Road, Wimberley, TX 78676



public involvement



citizen outreach



stakeholder facilitation



conflict resolution

Valley girls produce
23-1 record

B1



Higley wrestler
ranked No. 1 in Ariz.



G1

NAVAJO TIMES

WINDOW ROCK, NA

THE NEWSPAPER OF THE NAVAJO PEOPLE

VOL. II No. 04 • THURSDAY, JANUARY 26, 2012

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THURSDAY, JANUARY 26, 2012

AROUND THE CAPITAL

Election board meeting

The Navajo Board of Election Supervisors will conduct a regular meeting today at 9 a.m. at the Quality Inn, office complex conference room 107. Agenda includes reports on upcoming activities for the 2012 chapter elections. The public is invited. Information: 800-775-8683.

Human Rights Commission

The Navajo Nation Human Rights Commission will meet Feb. 3 at 10 a.m. at the DNA People's Legal Services conference room (State Route 264 and Navajo Route 12). Open to the public. Information: 928-871-7436 or www.nnhr.com. navajo-nsn.gov.

Open house meeting

An open house meeting on the St. Michaels-Window Rock-Fort Defiance multimodal long-range transportation study is scheduled Feb. 27 from 6-8 p.m. at Fort Defiance Chapter. The public is invited. Refreshments will be served. Information: Margie Begay or Salisa Norstog, 928-871-6498.



Scan to
get more
information

50 years ago

New Nav

BY BILL DONOVAN
SPECIAL TO THE TIMES

Delegate Dillon Platero, who is considering running for tribal chairman in the upcoming election, went before the Education Committee of the Navajo Tribal Council to give an update on the Navajo Times newsletter.

The tribe started the newsletter a year ago at the request of Platero.

"I hope that this plan will be include the 27 tribal colleges, two of which are here on the Navajo Nation, so we can provide training to mobilize the Navajo workforce," he said.

Shelly also said he likes Obama's statement of clean energy development while utilizing and developing our existing natural resources in the most efficient and environmentally friendly ways possible.

College Fair 2012

NOVA Corp., an information technology company owned by the Navajo Nation, is hosting College Fair 2012 on Friday from 9 a.m. to 5 p.m. at the Navajo Nation Museum. The event is free and open to Navajo high school seniors.

The fair is designed to give students a chance to talk with recruiters and admissions officers from 18 colleges and universities.

NOVA Corp. is dedicated to providing education opportunities for Navajos seeking to earn a degree in computer science, information technology, business, communications or engineering.

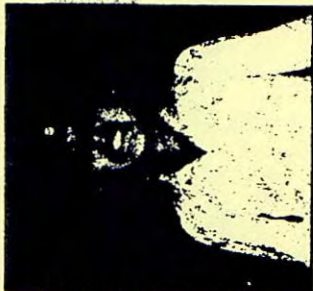
Founded in 2004, NOVA

Valley girls produce
23-1 record

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Higley wrestler
ranked No. 1 in Ariz.



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VOL. 11 NO. 04 • THURSDAY, JANUARY 26, 2012

PAGE C-4

THURSDAY, JANUARY 26, 2012

COMMUNITY CALENDAR

ABN District 5 meeting

BIRDSPRINGS, Ariz. - The Aze Bee Nahagha of Diné Nation District 5 meeting for Birdsprings, Leupp and Tolani Lake chapters will be held Saturday, Jan. 28, at 9 a.m. at the Birdsprings Chapter House.

3rd annual Warriors gourd dance

BIRDSPRINGS, Ariz. - The 3rd Annual Honoring Our Warriors Gourd Dance is scheduled May 19 at 11 a.m. at Jack Curley's residence (Navajo Route 6830, two miles east of Little Singer School). Head staff includes master of ceremonies, Rick Yazzie; whipman, LyDall Yazzie; host drum, Long Walk Descendants; head gourd dancer, Rick Gray; water boy, Jason Curley; and spoon keeper, Irene M. Curtis. Free event, BYO canopies and chairs. Singers, drums, dancers and non-food vendors welcome (food vending by committee only). Information: Jason Curley, 928-587-7253 or curley.jason@hotmail.com.

Open house meeting

CHINLE - An open house meeting on the Chinle-Many Farms multimodal long range transportation study is scheduled Feb. 28 from 6-8 p.m. at Chinle Chapter. Residents and the public are invited to this discussion. Individuals with a disability or those needing a sign language interpreter may contact Jason Hurd at 928-522-6015 to request accommodation. Refreshments will be provided. Information: Marco Sells or Salisa Norstog, 928-674-2136.

Double Spur 4-H meeting

CROWNPOINT - The Double Spur 4-H Club will meet at the Crownpoint Local Governance Center on Jan. 29 at 4 p.m. Individuals interested in learning about 4-H is welcome to attend. Information: Claudia Willetto, 505-786-4050 (after 7 p.m.).

Hero Twins workshop

FARMINGTON - The Hero Twins workshop for Navajo boys and young men ages 8-24 is scheduled March 3 from 9 a.m. to 4 p.m. at the San Juan College Henderson Fine Arts Center. Topics and activities include Diné math contest, hands-on science project, Diné jeopardy game, Diné health, Diné leadership and prizes. Onsite registration fee is \$10 per person (includes lunch) from 8-9 a.m. Information: www.missnavajocouncil.org.

Food handler classes

FORT DEFIANCE - The Fort Defiance Service Unit announces 2012 food handler training classes at Ganado and Kinlichee chapters as follows: Ganado Chapter, Feb. 6, March 6, April 3, May 1, June 5, Sept. 4, Oct. 2, Nov. 5, and Dec. 4. Dates for Kinlichee Chapter are July 3 and Aug. 7. Classes begin at 10 a.m., and are conducted in English (BYO interpreter if needed). Children must be 12 or older to attend. Information: 928-871-6349.

Women's support group

INSCRIPTION HOUSE, Ariz. - The Tohdenasshai Shelter Home offers a free women's support group talking circle at the Healing Hogan (next to Inscription House Health Center). Sessions meet from noon-3 p.m. on the second and third Tuesday of each month through March 20. Issues related to domestic violence and women will be discussed. Information: Lucinda Redhouse, 928-697-3636.

Fort Defiance veterans meeting

JEDDITO, Ariz. - The Fort Defiance Agency Veteran Organization will meet Feb. 12 at 10 a.m. at Jeddito Chapter.

Your News, Your Paper.

Long-Range Transportation Studies Are Underway On Navajo Nation

The Navajo Division of Transportation, Arizona Department of Transportation and Navajo chapters have scheduled the second round of public meetings regarding two long-range transportation studies.

The St. Michaels to Window Rock to Fort Defiance Transportation Corridor Study will be the subject of a meeting scheduled from 6 to 8 p.m. on Monday, Feb. 27, at the Fort Defiance Chapter House. The presentation will start at 6:30 p.m.

The Chinle to Many Farms Transportation Corridor Study will be the topic from 6 to 8 p.m. on Tuesday, Feb. 28, at the Chinle Chapter House. The presentation will start at 6:30 p.m.

The Navajo DOT, chapter communities and ADOT are conducting the two studies concurrently. Interested community members and stakeholders are welcome to attend both public meetings so that they have an opportunity to learn about and comment on

both studies. At each public meeting, the project team will offer materials and presentations regarding each respective corridor study area, answer questions and seek public comments. Navajo interpretation will be available and light refreshments will be served.

As the Navajo Nation continues to grow, comprehensive transportation planning is necessary for sustainable development, and to meet the needs of area residents, businesses and visitors. The two studies will analyze and identify improvements for all modes of transportation within the corridor areas, including vehicular, pedestrian, bicycle and equestrian, as well as connections between vehicular, airport and transit systems for commuter and emergency needs. Particular attention will be paid to safety, mobility, livability, and economic and community development. Ultimately, the long-range studies will recommend transportation improvements to be implemented in five, 10 and 20-year

timeframes.

The studies are being conducted in two phases. The first phase documented current and future conditions and needs identified during the public meetings held in the fall of 2011. The second phase will focus on evaluation criteria and specific plans for improvements at the public meetings in February.

The two studies are funded through the ADOT Planning Assistance for Rural Areas (PARA) Program. For more information or to submit comments, please contact Don Sneed, ADOT project manager, at (928) 712-6736 or dsneed@azdot.gov, or Salisa Norstog, Navajo DOT principal planner, at (928) 871-6498 or snorstog@navajodot.org. Comments received by March 28 will be included in a public involvement summary report.

Detailed study information and area maps can be found online at http://www.azdot.gov/MPD/Systems_Planning/NavajoChapter.asp.

Midweek
Edition
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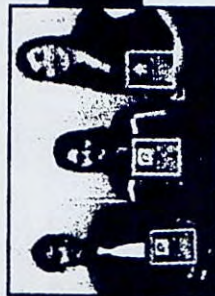
Wednesday
February 22, 2012
Volume 103 Number 80
Holbrook, Ariz. 86025

The
Tribune-News

Your News, Your Paper, Serving Central Navajo County.

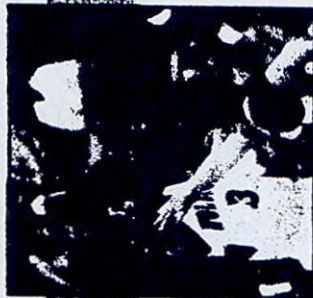
Canyon Records
celebrates 60 years

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Fall athletes,
coaches of the year

Ariz. state
basketball roundup



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NAVAJO TIMES

WINDOW ROCK, N.A.

THE NEWSPAPER OF THE NAVAJO PEOPLE

VOL. LI No. 08 • THURSDAY, FEBRUARY 23, 2012

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THURSDAY, FEBRUARY 23, 2012

AROUND THE CAPITAL

Election board meeting

The Navajo Board of Election Supervisors meets today at 9 a.m. at the Quality Inn office complex, conference room 107. Agenda includes reports on planning for the 2012 chapter elections. The public is invited to attend. Information: 800-775-8683.

Community issues training

The Gathering of Native Americans, a free community training event, will be held Monday through Thursday, Feb. 27-March 1, from 8 a.m. to 5 p.m. at the Navajo Nation Museum. Issues that negatively impact our communities such as substance abuse, domestic violence, child abuse, gang violence, bullying and suicide will be discussed. Includes daily door prizes (win a Pendleton shawl/robe, Kindle iReader, and gift cards). Sponsored by Tséhootsooí Medical Center Methamphetamine Suicide Prevention Initiative Project. Information: 928-729-3765 or 928-729-8541.

Open house meeting

The public is invited to an open house on the St. Michaels-Window Rock-Fort Defiance multimodal long-range transportation study on Monday, Feb. 27, from 6-8 p.m. at the Fort Defiance Chapter House. Information: Margie Begay or Sallsa Norstog, 928-871-6498.

Garden class

The University of Arizona Cooperative Extension will sponsor garden classes every Monday starting Feb. 27 from 6-8 p.m. at the Navajo Nation Department of Agriculture office. First class will be on traditional Navajo farming. Classes are free to the public. Information: 928-871-7686.

Human Rights Commission

The Navajo Nation Human Rights Commission will meet March 2 at 10

50 years ago

Border town

By BILL DONOVAN
SPECIAL TO THE TIMES

Much of the news this week centered on things happening in border communities outside the reservation, but each has significance to members of the Navajo Nation.

The big story was in Gallup, where the election for mayor is

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Chinle Ace store to open Monday

TSÉYI' BUREAU

CHINLE - The long-awaited Navajo Westerners Ace Hardware in Chinle will open quietly on Monday, Feb. 27, the company's president said Wednesday.

It will be a "soft opening" without much fanfare, noted Myron Lizer.

"We want to use this opportunity to work out the kinks and to allow our new associates not to be under any great pressure," Lizer explained, adding that the store will host a real grand opening some time in April.

"I know people are chomping at the bit to not have to go to Gallup any more," Lizer said, "and we are looking forward to serving the wonderful people of Chinle and Many Farms."

The store is in the Tséyi' Shopping Center on the north end toward the post office. It is scheduled to open at 8 a.m.

Meet your utility providers

SANTAFE - New Mexico Public Regulation Commission Vice

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invites
local
from
Chapt
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CAPITAL BRIEFS

Canyon Records
celebrates 60 years

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Fall athletes,
coaches of the year

Ariz. state
basketball roundup



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WINDOW ROCK, NA

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PAGE C-8

THURSDAY, FEBRUARY 23, 2012

COMMUNITY CALENDAR

Warriors gourd dance

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Chinle Chapter meeting

CHINLE - Chinle Chapter will hold a regular chapter meeting Sunday, Feb. 26, at 1 p.m. Information: 928-674-2052.

Chinle police recruiting

CHINLE - The Chinle Police District will conduct a police recruiting drive today at 9 a.m. at the Chinle Police District conference room on Navajo Route 7. Applicants should be prepared for physical fitness testing. Information: Officer Loretta Redhouse, 928-674-2111.

Open house meeting

CHINLE - An open house meeting on the Chinle-Many Farms multimodal long-range transportation study will be held

Tuesday, Feb. 28, from 6-8 p.m. at Chinle Chapter. Residents and the public are invited to this discussion. Information: Marco Sells or Salisa Norstog, 928-674-2136.

Garden class

CHINLE - The University of Arizona Cooperative Extension will sponsor free garden classes every Tuesday starting Feb. 28 from noon to 1 p.m. at the Chinle hospital. First class topic will be traditional Navajo farming. Information: Pamela Etsitty, 928-674-7521.

Free comedy show

CHINLE - In recognition of National Native HIV/AIDS Awareness Day, a free comedy show featuring James and Ernie, Dr. Kevin Foley, and Loren Anthony is scheduled March 20 in Chinle. Information: 928-674-5676.

Double Spur 4-H club meeting

CROWNPOINT - The Double Spur 4-H Club will meet at Crownpoint Chapter on Sunday, Feb. 26, at 4 p.m. Anyone interested in learning about 4-H is welcome. Information: Claudia Willetto, 505-786-4050 (after 7 p.m.).

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ADOT MPD Task Assignment 23-11

ADOT Project No. PG TD0728

Appendix C

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Arizona Address: PO Box 336, Flagstaff, AZ 86002

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public involvement



citizen outreach



stakeholder facilitation



conflict resolution



Welcome to the Public Meeting ~ Please sign in

St. Michaels to Fort Defiance Corridor Multimodal, Long-Range Transportation Study
Fort Defiance Chapter House – Monday, Feb. 27, 2011 – 6 to 8 p.m.

Name	Representing	Address and phone	Email or fax
Don Snude	ADOT-MP	912 E. BROWN 2065 17TH AVE. Phx, AZ 85007 / 602-712-6736	dsnude@azdot.gov ✓
SALISA SNORSTOG	NDOT-PLNG	P.O. BOX 4620 WINDOW ROCK, AZ 86515	snorstog@navajadot.org ✓
Jason Hurd	Intrinsic / ADOT	PO Box 336 Flagstaff, AZ 86002 86002	jason@intrinsicinfo.com ✓
Nona Baheshoni	Baheshoni Dev	PO Box 20073, Mesa, AZ. 85227	nbaheshoni@baheshoni.com ✓
Walecia Hanley	w/Rock Community	Rte 42 w/Rock, AZ 86525	w_hanley@frontiernet.net ✓
MATT SMITH	LDS CHURCH	458 N 3RD AVE HOUBROOK, AZ 86025	smithmccray@ldschurch.org ✓
Rodger Dehozy	F/D CHAPTER MEMBER	PO Box 2752 W/R. Az 928-550-2655	rdehozy@apacheco.us.com ✓
Ren Curtis	ADOT-GRANADO	Box 1140 Granado, AZ 86505	rcurtis@azdot.gov ✓
Romero Brown	LDS Church	P.O. Box 875, St. Michaels, Az	navajoland-insuits@earthlink.net ✓
Pauline Nantsoie	Community Member		



Please note: Completion of this sign-in sheet is completely voluntary and helps the project team keep an accurate record of attendees. Under state law, any identifying information provided will become part of the public record and, as such, must be released to any individual upon request.

Abee'hee' – Thank you for your participation!





Welcome to the Public Meeting ~ Please sign in

St. Michaels to Fort Defiance Corridor Multimodal, Long-Range Transportation Study
Fort Defiance Chapter House – Monday, Feb. 27, 2011 – 6 to 8 p.m.

Name	Representing	Address and phone	Email or fax
Sinental FRANCISCO	Self	1916 P.O. Box 1916 , Window Rock, AZ	
Loretta FRANCISCO	Self	PO Box 514, Window Rock, Az	

Please note: Completion of this sign-in sheet is completely voluntary and helps the project team keep an accurate record of attendees. Under state law, any identifying information provided will become part of the public record and, as such, must be released to any individual upon request.



Abee'hee' – Thank you for your participation!





Welcome to the Public Meeting ~ Please sign in

Chinle to Many Farms Corridor Multimodal, Long-Range Transportation Study
Chinle Chapter House – Tuesday, Feb. 28, 2012 – 6 to 8 p.m.

Name	Representing	Address and phone	Email or fax
Marco Sells	NDOT	(928) 674-2136	msells@navajodot.org ✓
DON KNEED	ADOT-MPD	206 S. 17th Ave, Phoenix, AZ 85007 602-712-6736	dkneed@azdot.gov ✓
Jason Hurd	Intrinsic/ADOT	PO Box 336 Flagstaff, AZ 86002 928-607-7156	jason@intrinsicinfo.com ✓
Zornie Davis			
Mary Gorman	Chinle Chapter		
Juanita Gorman			
Jason Yazzie	NDOT	928 283-3148	jyazzie@navajodot.org ✓
Yolanda Marshall	Navajo DOT	928.674.2136	ymarshall@navajodot.org ✓
Ron Elstitt	Community Member		
Ali S. Ali	Many Farms	PO Box 611 Phone: 928-781-3825 Many Farms, AZ 86538	ali.ali@irs.gov ✓



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Abee'hee' – Thank you for your participation!





Welcome to the Public Meeting ~ Please sign in

Chinle to Many Farms Corridor Multimodal, Long-Range Transportation Study
Chinle Chapter House – Tuesday, Feb. 28, 2012 – 6 to 8 p.m.

Q

Name	Representing	Address and phone	Email or fax
Brook Burrows	Many Farms/ Environmental Health	PO Box 694 Many Farms AZ 86538	burrows1983@gmail.com ✓
Ron Curtis	ADOT-	Box 1140 Garado	rcurtis@azdot.gov ✓
Arthur Hubbard Jr	Chinle	Box 565 Chinle	ahubbard-jr@yahoo.com ✓
Joe Davis	Chinle	Box 391 Chinle, AZ	n/a
Minnie K Davis	Chinle	"	"

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Abee'bee' – Thank you for your participation!





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F: (928) 522-6016

Texas Office:

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F: (512) 847-7745

www.intrinsicinfo.com

Public Involvement Summary Report

Chinle-Many Farms and St. Michaels-Window Rock-Ft. Defiance Multimodal Long Range Transportation Study

Second Phase Public Involvement – February-March 2012

ADOT MPD Task Assignment 23-11

ADOT Project No. PG TD0728

Appendix D

Written Comments

Arizona Address: PO Box 336, Flagstaff, AZ 86002

Texas Address: 40 East Valley Spring Road, Wimberley, TX 78676



public involvement



citizen outreach



stakeholder facilitation



conflict resolution

Your Input is Important!

St. Michaels to Fort Defiance Corridor Multimodal, Long-Range Transportation Study



Please take a moment to complete this comment form. The project team members will take your input into consideration as they finalize the listing of Proposed Improvements to meet the transportation needs within the study area.



1. Do you support the recommended improvement projects for each of the planning horizons of 5, 10, and 20 years? (circle one)

YES

NO

Not Sure

Please explain your answer: Immediate road repairs - pot holes, re-paving etc. urgently needed in Window Rock (St. Michaels Housing Area) housing area. Other housing areas are also in need of repairs Window Rock, St. Michaels & Ft. Defiance

2. Tonight's presentation focused on recommended transportation improvement projects. Did the project team miss anything? (circle one)

NO (they got everything)

YES (they missed something)

If yes, please explain: Various transportation repairs mentioned should be focused on & repaired etc.

3. Please share any additional comments.

Immediate repairs needed.

Wtaly 2-27-12

Ahee'hee'!

Please return by Wednesday March 28, 2012, to the ADOT Outreach Team, Attention "Navajo PARA Studies:" by email, jason@intrinsicinfo.com; by mail, **PO Box 336, Flagstaff, AZ 86002**; by fax, **(928) 522-6016**, toll free fax **888-278-0050**. Please visit the project website at www.azdot.gov/MPD/Systems_Planning/NavajoChapter.asp

Please note: Completion of this comment sheet is completely voluntary and helps the project team keep an accurate record of attendees' comments. Under state law, any identifying information provided will become part of the public record and, as such, must be released to any individual upon request.



Your Input is Important!

Chinle to Many Farms Corridor Multimodal, Long-Range Transportation Study



Please take a moment to complete this comment form. The project team members will take your input into consideration as they finalize the listing of Proposed Improvements to meet the transportation needs within the study area.



1. Do you support the recommended improvement projects for each of the planning horizons of 5, 10, and 20 years? (circle one)

YES

NO

Not Sure

Please explain your answer: Paramount to planning is the safety issue of vehicle-pedestrian-business access in the corridor. Secondly is the speed limits in the same sector mentioned, especially school crossings (inc. pedestrians). It is highly recommended to work with the Chinle Unified School District and businesses between MP 446-448 to secure funding for pedestrian overhead bridges/crossings. Furthermore, continuous flashing lights are recommended for school locales with "speeds" indicators to alert drivers.

2. Tonight's presentation focused on recommended transportation improvement projects. Did the project team miss anything? (circle one)

NO (they got everything)

YES (they missed something)

If yes, please explain: Did not attend hearing, but the TIP in process is important.

3. Please share any additional comments.

- (a) Recommend posted 65mph posted past MP 447 (T/O BIA 102) be changed to 45 mph for safety turnout reasons --- T/O's to residences as well as emergency transports to the Chinle Airport. Near accidents have occurred; thus, a similar request had been made of ADOT previously, but to date no activity. T/O's in that particularly area affect 17-20 drivers, between MPs 446-448.
- (b) Cattle guards need continuous monitoring. With heavy winds and sand storms, the crossings are filled with dirt, allowing free roaming animals to get into the right-of-way boundaries.
- (c) Maintenance of fencing is critical for the same reason as (b) and ROW issues.
- (d) Flashing lights at school crossing at/around MP 447.

Ahee'hee'!

Please return by Wednesday March 28, 2012, to the ADOT Outreach Team, Attention "Navajo PARA Studies:" by email, jason@intrinsicinfo.com; by mail, **PO Box 336, Flagstaff, AZ 86002**; by fax, **(928) 522-6016**, toll free fax **888-278-0050**. Please visit the project website at www.azdot.gov/MPD/Systems_Planning/NavajoChapter.asp

Please note: Completion of this comment sheet is completely voluntary and helps the project team keep an accurate record of attendees' comments. Under state law, any identifying information provided will become part of the public record and, as such, must be released to any individual upon request.



Jason Hurd

Subject: FW: St.Michaels to Window Rock to Fort Defiance Transportation Corridor Study

From: Marty George [<mailto:mgeorge@wrschool.net>]

Sent: Friday, February 24, 2012 5:30 PM

To: Donald Sneed

Cc: snorstog@navajodot.org.

Subject: St.Michaels to Window Rock to Fort Defiance Transportation Corridor Study

Good day! NNDOT & AZDOT,

I am a life-long resident of the St. Michaels community and would like to suggest, comment and make a grievance on this Corridor Study.

First, I want to say thank you for the work in progress and our roads are overdue to be worked on more. We need a better year-long road maintenance schedule like; the painting of the highway lines, upkeep of dilapidated road signs, cleaning of excessive mud/dirt clot curbs, overgrowth of shrubs & plants, the reduction of concrete curbs(they are to high on the road side between Window Rock & St. Michaels), the cleaning of cattle guards, & better and/or more lighting on certain areas of the highway.

We need businesses regulations for the safety & livability in the St. Michaels community and any future businesses along Hwy 264. We have been taking advantage of by a construction company coming in and operating at all hours of the day and night making loud noises with their construction vehicles. We need to have a NOISE ORDINANCE implemented ASAP!, so any construction or destruction company doesn't impose on the community. This company insists on disregarding the residence of St. Michaels and operates 24 hours a day at times. They have been dumping waste-water illegally on to our property; where the waste water in our gully is about 3 to 4 feet high and is slowly saturating the gully wall as this is being emailed. This saturation of waste water is resulting in the water seeping towards the side of Hwy.264. In the very recent days their waste water was seen trickling down Hwy.264 from their property entrance.

We sorely need the Transportation Departments to make the highway better equipped and implement a safety procedure during our annual fair in Window Rock. Such as 2 to 3 major crosswalk systems so pedestrians can cross the highway without getting hit. There is no crosswalk painted zones and/or speed reductions zones at times. And where there is a makeshift crosswalk it usually is dark and no one's in control of stopping the on-coming traffic so people can cross. This fair attracts people from all over the country and the world. These eyesores and neglected regions need to be fixed quick or tourist are not going to come back. Our Fair and Parade is a treasure to Arizona and the Navajo Nation(the largest Native American Reservation in the USA). Families, Grandparents, celebrities, Armed Forces, and Government Officials have come as far as Washington D.C. to participate in this fair. We need to have better accommodations so no one gets injured from the lack of supervision.

And last but not least, we need to have a better response times in the winter months when snow accumulates on the for mentioned highways. This meaning snowplowing response times, so our roads don't get over loaded with deep amounts of snow & ice. Their seems to be a little to nothing done in the past few years in removing the snow, not only here but across the major Reservation and Arizona County Highways. I have also noticed some county dirt roads not being turned into paved roads just off Hwy.264, which is needed badly due to this being school bus routes.

I would like to know your answers to these suggestions, comments and grievances.

Thanks for your cooperation in these matters, Marty George

Marty George

PO. Box 733

Window Rock, Arizona 86515

(928) 871-4628

mgeorge@wrschool.net

Recommended Transportation Improvement Projects

Mobility

The Navajo Transit System should look into a shuttle service that runs a local route allowing regular commuters and local transit ridership connection between Saint Michaels-Fort Defiance-Window Rock that use transit as an alternative to personal travel to and from their respective places of employment, especially, during early morning/late afternoon rush hours. There are several large employers in the area: Navajo Area Indian Health Service, Navajo Nation Oil and Gas, Navajo Division of Economic Development, Tséhootsooí Medical Center (former Fort Defiance Indian Hospital), Window Rock Unified School District, Navajo Tribal Utility Authority, especially, the Navajo Nation governance center, and housing in each community of Saint Michaels, Fort Defiance, and Window Rock. If a route were to be developed, pullout lanes and shelters for route stops need to be constructed at convenient locations, i.e., near residential housing, schools, and places of employment.

If everyone in the community would choose to carpool or use the bus in order to lower carbon dioxide emissions in support of climate change, and, simply change their mode of transportation, could possibly lessen the number of motor vehicle crashes, and help to protect the environment from global warming concerns.

Vehicle owners are feeling the pinch at the gas pumps when it comes to paying for gas to travel around the Navajo reservation. Hopefully, commuters can change their perspectives on limiting their vehicle usage when their only mode of transportation use is to and from their homes in order to get to their places of employment. The Navajo Nation government, state, and federal agencies need to develop an incentive to commuter travel, e.g., free ridership during maniac Monday commutes to and from work, or park-and-ride public parking areas for transit ridership.

During the Navajo Nation Fair, especially, there needs to be a study done to alleviate traffic congestion along Arizona State Highway 264 corridor between Window Rock and Saint Michaels. Non-fair goers need access to pass through on their way out and away from the traffic congestion during the Saturday/week-end parade. Not to mention the dispersal of parade participants that use vehicles in the parade procession and fair-goers in attendance during the parade. I realize that congestive traffic problems occur during this seasonal event, but, fair organizers need to develop a permanent solution in consideration of the safety of non-motorized fair goers, especially, the elders and those people that have accessibility needs thru motorized traffic.

Parking areas that are used during the Navajo Nation Fair within the fairground designated area go unused 360 days out of the year. These areas should be converted into park-n-ride public parking for commuters of the transit system. Furthermore, I would like to see a transit sub-station/commuter transfer station constructed within the fairground compound for transit bus users throughout the year. As individual motorists change their mode of transportation from automobile to public transportation reliance I believe this would alleviate some traffic congestion not only during fair time, but, also throughout the year. This could be an economic development future project in terms of commercial development adjacent to the east fairground entrance that ties in with the Basha's supermarket store access. Recreational land use improvements are needed as well to revitalize tourism. There needs to be a transportation link between fairgrounds, paved road access to Basha's parking lot, and AZ 264 (circulation route). Future traffic volume counts at strategic locations within the fairground compound, especially, the access to the Navajo Nation Special Diabetes Wellness Center and Window Rock Sports Center would generate adequate justification for transportation improvements for a transit sub-

station/commuter transfer station construction mentioned above. Bicycle facilities should be included at this transit sub-station/commuter transfer station for bicyclists and local commuters.

Economic and Community Development

At the 2nd Public Comment meeting held on February 27, 2012, it was mentioned by a business owner about constructing a traffic-light intersection near the Frontier communications office allowing access to the Mormon Church future development. I think that is not a good idea. This would only promote more traffic congestion and act as a “bottleneck” during heavy traffic. There is an existing yellow signage that indicates a slower speed warning, but, it is hardly noticeable. I recommend installing a caution warning light with this signage between mile markers 471 and 472 on the east-bound lanes to warn over-the-speed-limit personal motor vehicle owners to slow down to the proper speed limit when entering a populated area. I don’t think it is at the fault of speeding, rather, vehicles are trying to slow down from a decent in elevation from the “summit” along highway 264.

I often notice at the intersection in Saint Michaels (N112 & AZ 264) along the northeast corner fence line there are posted hand-made signs displaying community events information. I would suggest local government (Navajo Nation), to construct a community kiosk/electronic-billboard/public information center at the northeast corner along N112 and AZ 264 for the community to publicly display community events that is not overly distractive or unsightly.

Jason Hurd

Subject: FW: US191 Plans

From: Geri BinettneeKirk [<mailto:gabinettneekirk@yahoo.com>]
Sent: Wednesday, February 29, 2012 4:56 PM
To: Donald Sneed; mary.rodin@kimley-horm.com; snorstog@navajodot.org
Subject: US191 Plans

Good afternoon all,
I hope you all had an informational meeting last night at the Chinle Chapter. I am sorry I was unavailable to attend and participate in this discussion.

I was wondering, however, what the status of the development for US 191 would be? My understanding is that the US191 is going to be realigned closer to the Mesa. This location would be just north towards Many Farms from Chinle. An area referred to as Chinle Valley.

Please let me know what ADOT has planned for such a realignment. Thank you.

Geri A. BinettneeKirk, Senior Economic Development Specialist
Tourism Department, THE BEAUTIFUL NAVAJO, Division of Economic Development
Karigan Building, Suite 209F, Taylor Road, St. Michael's, Arizona 86511
Work: 928-871-7370 FAX: 928-810-8500 Cell: 505-906-3529

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DISTRICT 2



Arizona State Senate

COMMITTEES:

NATURAL RESOURCES &
TRANSPORTATION
VETERANS, MILITARY &
GOVERNMENT AFFAIRS
WATER, LAND USE &
RURAL DEVELOPMENT
FINANCE

March 21, 2012

Donald Sneed
Arizona Department of Transportation
Multimodal Planning Division
206 S 17th Ave
Phoenix, AZ 85007

Re: Navajo Chapter Corridor Area PARA Study – Public Involvement Comments

Dear Mr. Sneed:

I am submitting this letter in regard to the Chinle to Many Farms and St. Michaels to Window Rock to Ft. Defiance 2012 Multimodal Transportation Study that is currently underway. I commend the Navajo Chapters, Navajo DOT and ADOT's efforts to identify long-term improvements that are needed within the study corridor areas on the Navajo Nation.

Additionally, I support the residents of the Chapter communities by stressing the need for improved accessibility, paving and repaving of roads, new route connections, street lighting within the Chapter areas, as well as improved safety and traffic flow particularly on US 191 and SR 264. Furthermore, improved pedestrian and transit accommodations are increasingly needed for the Chapter residents.

Thank you for keeping me informed as this important stakeholder input process moves forward. It is my hope that this planning process leads to real improvements in these Navajo communities.

Sincerely,

A handwritten signature in black ink, appearing to read "Jack C. Jackson, Jr.", written over a circular stamp or seal.

Senator Jack C. Jackson, Jr.

APPENDIX D

ILLUSTRATION OF BIA IRR INVENTORY SECTION NUMBER REFERENCE MAP

APPENDIX E

US 191 MP 444 to 465 ROAD SAFETY ASSESSMENT

US 191 MP 444 to 465 Road Safety Assessment



**Prepared for:
ADOT Holbrook District
Navajo Division of Transportation**

Prepared by:



**Arizona Road Safety Assessment Program
Arizona Department of Transportation Traffic Safety Section
1615 West Jackson Street, Mail Drop 065R
Phoenix, Arizona 85007-3217
602-712-7601**

April 2012

Table of Contents

Project Request1

RSA Team.....1

RSA Process1

 Start-Up Meeting..... 2

 Evaluation of Crash Data 3

 Field Reviews 4

 Preliminary Findings Meeting..... 4

 Physical Roadway Characteristics 4

Site Review Observations and Initial Recommendations5

Suggested Improvements/Countermeasures15

Next Steps15

Appendix21

Project Request

The Road Safety Assessment (RSA) of US 191 from Chinle to Many Farms (milepost 444 to 465) was conducted at the request of the Navajo Division of Transportation (DOT) with concurrence from the ADOT Holbrook District. US 191 is a rural major collector in northeast Arizona; the segment being evaluated is highlighted in Figure 1. The reason for the RSA is to improve safety and decrease fatalities caused by motor vehicle crashes on this segment of US 191. A Long Range Transportation Study is being conducted for Chinle-Many Farms through ADOT's Planning Assistance for Rural Areas (PARA) program, and the Navajo DOT would like to incorporate RSA recommendations into this study.



Figure 1: Location Map

RSA Team

The independent, multi-disciplinary RSA team was led by Mike Blankenship, the Arizona RSA Program Manager. The RSA team included:

- Jerome Choy, P.E., ADOT Traffic Design
- Georgi Jasenovec, FHWA
- Salisa Norstog, Navajo DOT
- Stan Robbins, Apache County
- Marco Sells, Navajo DOT
- Greg Tsosie, Navajo Police-Chinle
- Jason Yazzie, Navajo DOT

RSA Process

A Road Safety Assessment is a formal examination of user safety of a roadway by an independent, multi-disciplinary team which includes members experienced and

knowledgeable in disciplines including traffic safety, planning, traffic design, law enforcement, and community health. RSAs have been shown to help promote safety by: identifying a range of safety issues; promoting awareness of safer transportation planning, design, construction, and maintenance practices; integrating multimodal interests; and, more directly considering the effect of human factors, enforcement and education activities, and emergency responder practices.

The RSA team conducted this assessment to the best of its abilities within the time allotted. The initial recommendations are based upon background information provided during the Start-up and Preliminary Findings Meetings, an evaluation of recent crash data, and both day and night field reviews, as discussed in the following paragraphs. The information gathered helped the RSA team identify potential opportunities to improve the safety performance of US 191. Potential opportunities were initially presented to the group at the Preliminary Findings Meeting. While attempts have been made to identify potential safety issues, the safety performance of the roadway remains the responsibility of the roadway owner and roadway users.

The RSA team is available to provide additional clarification as the ADOT Holbrook District and the Navajo DOT review and respond to this report and pursue countermeasures.

Start-Up Meeting

The assessment team met with the Navajo DOT and ADOT Holbrook District to discuss background information and the RSA schedule on February 28, 2012 at the Dennehotso Chapter House. This meeting was held in conjunction with an RSA Start-up Meeting for US 160 in Dennehotso. The RSA Agenda can be found in the **Appendix**. In addition to the RSA team, participants included: Mary Rodin, Kimley-Horn and Associates; Don Sneed, ADOT Multimodal Planning Division (MPD); Greg Tsosie, Navajo Police-Chinle; Chester Begay, Dennehotso Chapter President; Frank Yazzie, Dennehotso Land Use Planning; Antonita Nunes, Indian Health Services (IHS); Tish Ramirez, IHS; Richard Skaggs, IHS; Loretta Littlesalt, IHS; Randy Routhier, ADOT Holbrook District; Kee Thinn, Navajo Police-Kayenta; and Irene Clah, Dennehotso. Background information presented and discussed at the Start-up Meeting included the following:

- Heavy pedestrian activity in Chinle and moderate pedestrian activity in Many Farms
- McDonald's restaurant is planned for the west side of the Navajo Route 7 intersection, which will include a northbound left-turn lane
- Recent and upcoming road improvement projects include:
 - Completing installation of cattle guards and fencing (milepost 448.3 to 462.5)
 - Traffic signal at N102 (hospital access)
 - Chip seal with new striping, recessed pavement markers, and delineation on horizontal curves this summer (milepost 448.3 to 462), to be followed by pavement preservation project in 2016
 - Extending two way left-turn lane south from milepost 446.36 to 447.46 in 2013
 - Pavement preservation project (milepost 436 to 446) in 2016

Evaluation of Crash Data

For the crash data analysis, ten years of crash data (September 2001 through August 2011) was collected from the ADOT Information Technology Group's Safety Data Mart, which is ADOT's crash database. It should be noted that crashes on Tribal lands are typically under-reported to ADOT; these crash rates reflect only crashes reported to ADOT. Following is a summary of the crashes occurring during this time period.

According to ADOT data, 338 crashes occurred during the 10-year analysis period on the section of US 191 from milepost 444 to 465.

The severity of the 338 crashes is summarized below:

- 24 fatal crashes
- 9 incapacitating injury
- 35 non-incapacitating injury
- 101 possible injury
- 169 property damage only

The crash type frequency and percentage are summarized below:

- 73 rear-end (22%)
- 71 animal, including 65 livestock (21%)
- 43 rollover (13%)
- 30 angle (9%)
- 28 left-turn (8%)
- 20 sideswipe same direction (6%)
- 18 fixed object (5%)
- 10 pedestrian (3%)
- 9 head-on (3%)
- 8 sideswipe opposite direction (2%)

The light conditions of the 338 crashes are summarized below:

- 60% daylight
- 35% dark
- 5% dawn/dusk

The crash type breakdown of the 24 fatal crashes is as follows:

- 7 pedestrian
- 6 overturn
- 4 unknown single vehicle
- 2 head-on
- 1 rear-end
- 4 other/unknown multiple vehicle

The crash rate for this segment of US 191 over the 10-year period is 105 crashes per 100 million vehicle miles (MVM), compared to the average rate for ADOT rural major collectors, which is 109 crashes per 100 MVM. The fatal crash rate for this segment of US 191 is 7.5

fatal crashes per 100 MVM, compared to the average rate for ADOT rural major collectors, which is 4.4 fatal crashes per 100 MVM.

ADOT received police crash reports for 13 of the 24 fatal crashes. Of these 13, 7 indicated that alcohol was involved (54%). This is higher than the statewide average of 30% of fatal crashes involving alcohol.

Field Reviews

Daytime and nighttime field visits were conducted on Wednesday, February 29, 2012. The specific times of the site visits can be found on the RSA Agenda in the **Appendix**. The weather was cold, dry, and windy. Site reviews consisted of driving and walking the road and observing road users.

The RSA team noted several existing roadway features that appear to enhance safety in the study area, including:

- Fencing and cattle guards
- Future traffic signal, widening, and pavement preservation projects
- Street lighting in Chinle
- School bus pull-offs
- 15 mph school zone, school crosswalk, and crossing guard in Chinle at milepost 447.2
- Cattle guard delineation
- Tribal Police enforcement activities:
 - DUI
 - Seat belt and child restraint
 - Speed

Preliminary Findings Meeting

The RSA team presented the preliminary findings to Navajo DOT staff and others on Thursday, March 1 at the Chinle Chapter House. The ADOT Holbrook District was unable to participate. In addition to the RSA team members, participants included: Timothy Begay, Chinle Chapter; Don Sneed, ADOT MPD; Elta Warner, Apache County; Richard Skaggs, IHS; Loretta Littlesalt, IHS; Siona Willie, IHS; Loretta Redhouse, Navajo Police-Chinle, and Dempsey Harvey, Navajo Police-Chinle. Observations and recommendations for improvements were discussed during this meeting.

Physical Roadway Characteristics

US 191 is a two-lane rural major collector with a five-lane urban section in Chinle (milepost 447.5 to 448.2) and a four-lane section from milepost 446.7 to 447.5. US 191 bisects the Navajo Nation communities of Chinle and Many Farms. The posted speed limit is 65 mph, with 45 mph speed zones through Chinle and Many Farms. The intersection of US 191 and N7 in Chinle is signalized. The highway has street lighting in Chinle (milepost 446.7 to 448.2). Annual average daily traffic (AADT) volumes for 2009 were 4,200 vehicles per day (vpd) south of Chinle, 8,800 vpd in Chinle, 4,500 vpd between Chinle and Many Farms, and 1,500 vpd north of Many Farms.

Site Review Observations and Initial Recommendations

Lane Departure Crashes

Half of the 24 fatal crashes occurring on US 191 during the 10-year analysis period were lane departure crashes (2 head-on, 10 run-off-road crashes). There are no paved shoulders on this section of US 191, and there is some pavement edge deterioration (Figure 2). The pavement markings are faded in some locations (Figure 3). Many of the horizontal curves are not delineated, and many of the existing roadside delineators are worn and faded.



Figure 2: Lack of Paved Shoulder and Pavement Edge Deterioration



Figure 3: Faded Pavement Markings

Recommendations to consider for addressing lane departure crashes include:

- Provide paved shoulders with edge line rumble strips (seek inclusion in ADOT's statewide shoulder widening project)
- Refresh pavement markings, to include installation of center line recessed pavement markers
- Install center line rumble strips
- Delineate horizontal curves with flexible delineators, chevrons, and curve warning signs as appropriate (e.g. mileposts 451.8, 454.4, 455.3, 458.3, 460.3)

ADOT's Traffic Group has initiated a statewide flexible delineator project that this section of US 191 may qualify for. Figure 4 shows examples of the new flexible delineators installed along SR 90 near Bisbee.



Figure 4: New Flexible Delineators Along SR 90 near Bisbee

Pedestrians

The segment of US 191 from milepost 446.6 to 448.2 was identified in the ADOT Pedestrian Safety Action Plan as a high pedestrian crash location. Seven of the 24 fatal crashes (29%) occurring on US 191 during the 10-year analysis period were pedestrian crashes. Pedestrian fatal crashes are over-represented on this section of US 191; pedestrian fatalities in rural areas of Arizona typically account for an average of 11% of all rural fatal crashes, compared to 29% on this section of US 191.

Pedestrian activity on and along US 191 includes elementary, junior high, and high school students, hitchhikers, patrons of commercial establishments (Basha's, restaurants, convenience stores), and other community members. Many students were observed crossing US 191 north of the school crosswalk (milepost 447.1) and south of the N7 signalized intersection (milepost 447.8) in Chinle (Figure 5). There was also significant pedestrian activity in Many Farms, especially near N59 and the convenience store. There are school advance warning signs south of N59, but no pedestrian crossing warning signs for pedestrian activity in the vicinity of N59.

Pedestrians were also observed on and along US 191 during the night review (60% of the pedestrian crashes occurred at night). The existing street lighting in Chinle produces light and dark patterns on US 191. Lack of shoulders presents concerns for pedestrians walking along the road. Journey to work data from the 2000 Census shows that 19.2% of workers in Chinle walk to work, and 8.8% of workers in Many Farms walk to work, compared to 2.6% of workers statewide who walk to work. Figures 6 and 7 show additional examples of pedestrian activity.



Figure 5: Pedestrians Crossing Mid-Block in Chinle, South of N7 Signalized Intersection



Figure 6: Students Crossing with Crossing Guard in Many Farms



Figure 7: Hitchhikers in Chinle. Note Young Child Hitchhiking.

Recommendations to help address pedestrian safety include:

- Evaluate the need for pedestrian hybrid beacon(s) near the high school/elementary school and/or near Basha's in Chinle
- Install pedestrian crossing warning signs in Many Farms in the vicinity of N59 (in addition to the existing school advance warning signs south of N59)
- Evaluate the need for a school crosswalk at Many Farms Elementary School
- Install pedestrian countdown signals at the N7 intersection in Chinle
- Evaluate existing street lighting in Chinle for proper illumination and uniform light pattern designed for pedestrian activity

Livestock in Right-of-Way

Livestock crashes make up 19% of all crashes on this section of US 191. The RSA team observed several horses and sheep outside of the fencing and within the highway right-of-way in various locations (Figure 8). There are no cattle guards or fencing at the N59 intersection in Many Farms. The recently completed fencing and cattle guard project should help address

the issue of livestock in the right-of-way; however, based on the number of horses and sheep that the team observed during the RSA, the project hasn't completely eliminated the problem. The completion of the fencing and cattle guard project may provide a good opportunity to determine where livestock is getting into the right-of-way and who has ownership of those animals and who has responsibility for securing those locations. It is recommended that the Tribe consider education and enforcement measures to help address this issue. The Tribe should also determine the responsible agency for installing and maintaining cattle guards and fencing at the N59 intersection in Many Farms.



Figure 8: Horses Along the Roadside

Rear-end Crashes

Rear-end crashes are the highest frequency crash type along this corridor (22%), and 60% of the rear-end crashes occur outside of the Chinle and Many Farms areas, i.e. most of the rear-end crashes occurred in the 65 mph zones. One of these high speed rear-end crashes resulted in a fatality (at an intersection near milepost 450.5). There are numerous intersections and access points along US 191, and there are no turn lanes at any intersections outside of Chinle and Many Farms. Most of these intersections do not have any advance intersection signing. Without turn lanes and advance signing, intersecting roadways along high speed roadways can be difficult for approaching drivers to perceive and react to. ADOT PGP 329 states that Cross Road or Side Road signs may be installed if “the intersecting roadway cannot be readily discerned by approaching motorists on the highway in time for them to comfortably decelerate and turn off without exposing themselves or other highway traffic to undue hazard.” In addition, PGP 337 discusses conditions when advance street name signs might be installed, including intersecting roadway AADT of 150 or more.

Recommendations to address rear-end crashes include:

- Evaluate major intersections for the need for turn lanes (e.g. C462, C463, C506, C523, C552, C553, N8081, N8084 (formerly C507), N8086, and N8087)
- Install advance intersection signing (Intersection Ahead warning signs, route shields/street name signs) at major intersections (see above)
- Install cattle guard delineation

Some cattle guards have already been delineated (e.g. milepost 259.7 on west side of US 191), and it provides information at night on intersection location (Figure 9).



Figure 9: Delineated Cattle Guards Can Help Drivers Locate Intersections

Speeds

The Navajo Police Department (NPD) expressed concern over motorists speeding through Many Farms, and speed observations during the RSA verified that many motorists were driving well above the 45 mph speed limit. The NPD also pointed out that the flashing beacons on the school warning signs in Many Farms sometimes flash 24 hours a day instead of just during school hours.

The 45 mph speed limit for the urbanized segment of US 191 in Chinle may not be appropriate for the amount of pedestrian activity associated with the 3 schools and businesses along US 191 and the multiple driveways with the associated turn movements.

The 65 mph speed limit between Chinle and Many Farms may not be appropriate, considering the following factors:

- Number of intersections and access points (no turn lanes at any of these intersections)
- No paved shoulder/recovery area along roadside
- Faded markings and inconsistent curve delineation
- Pedestrian activity
- School bus stops
- Open range grazing
- Speed observations during the RSA show that many drivers are operating below the speed limit on this section between Chinle and Many Farms

This section of US 191 has a high fatal crash rate: 7.5 fatal crashes per 100 million vehicle-miles (MVM), compared to 4.4 fatal crashes per 100 MVM for comparable roads in the state (rural major collectors). Fifty (50) percent of the crashes occurring on US 191 involve injury or fatality; injury severity is typically correlated with higher speeds.

Recommendations related to speeds include:

- Install solar-powered speed feedback signs in Many Farms (Figure 10)
- Evaluate use of photo enforcement for speeding in Many Farms
- Check that the beacons on the school warning signs in Many Farms are flashing at the appropriate times
- Conduct speed studies to determine appropriate speed limits in Chinle and between Chinle and Many Farms, evaluating, in addition to 85th percentile speeds:
 - Crash history
 - Number of intersections and access points
 - Pedestrian activity
 - Number of school bus stops
 - Open range grazing
 - Lack of shoulders/roadside recovery area



Figure 10: Speed Feedback Sign Along SR 64 in Tusayan

Signing

Some of the school bus stops do not have advance warning signs. The current MUTCD states that “the School Bus Stop Ahead sign should be installed in advance of locations where a school bus, when stopped to pick up or discharge passengers, is not visible to road users for an adequate distance.”

The northbound Right Lane Ends sign in Chinle (milepost 448.27) appears to be too close to the taper (Figure 11). Some locations have sign posts with no signs (Figure 12). Some signs have graffiti on them, and “private” signs have been placed on some sign posts (Figure 13). A Keep Right sign is missing from the median on the westbound N7 approach to the US 191 intersection.



Figure 11: Right Lane Ends Sign at MP 448.27 Appears to be Too Close to Taper



Figure 12: Sign Posts with No Sign at MP 460.2



Figure 13: Graffiti on Signs, Private Signs on Sign Posts at N7 Intersection

Signing recommendations include:

- Install School Bus Stop Ahead signs where needed (coordinate with the Chinle Unified School District to obtain locations of bus stops)
- Evaluate location of northbound Right Lane Ends sign in Chinle (milepost 448.27) and relocate as needed
- Replace missing signs or remove unused sign posts
- Clean “tagged” signs or replace as needed
- Remove “private” signs placed on sign posts, and consider education and enforcement measures to deter this practice in the future
- Install a Keep Right sign on the N7 median approaching the US 191 intersection

Black Mountain Wash Crossing

The US 191 crossing of Black Mountain Wash (milepost 460.26) is narrow (24 feet) with guardrail within a foot of the edge lines (Figure 14). The southbound direction has a passing

zone. There is no guardrail delineation. The existing Type 3 Object Markers are faded, and there are no object markers on the left side for either the northbound or southbound approaches. The guardrail end treatments are BCTs.



Figure 14: Daytime and Nighttime Views of Black Mountain Wash Crossing

Recommendations for the Black Mountain Wash crossing include:

- Re-stripe for no passing zone on bridge
- Install guardrail delineation
- Replace existing Type 3 Object Markers and install new object markers on left sides
- Replace BCT end treatment with energy absorbing terminal

N7 Intersection

Fifteen (15) left-turn crashes occurred at the N7 intersection during the 10-year analysis period, accounting for 29% of the N7 intersection crashes. A team member from Chinle indicated that some drivers seem to be confused with the permissive left-turn phase at this intersection. It is recommended that a Left-Turn Yield on Green Ball sign be installed on the mast arm for the southbound approach. If this sign does not help address the frequency of left-turn crashes, protected-only left-turn phasing should be considered.

The northeast corner of the N7 intersection is an open lot that is used by vehicles passing between the intersection and the Shell convenience store, and is also used for parking (Figure 15). It is recommended that the Tribe pursue a Transportation Enhancements grant to install landscaping and gateway signing to the Canyon De Chelly National Monument on this lot.



Figure 15: Unimproved Northeast Corner of N7 Intersection

Other Intersections

The N59 intersection is a major intersection in Many Farms, but it does not have street lighting. The stop bar at this intersection is located 54 feet from the edge of the through lane and 33 feet from the edge of the southbound right-turn lane (Figure 16). This creates a longer crossing distance for motorists turning onto US 191, and does not optimize sight distance.



*Figure 16: Stop Bar at N59 is Located
54 Feet From the Through Lane*

Most intersections along US 191 do not have stop signs or stop bars. The intersections are difficult to locate at night. There are two-way passing zones at most intersections. Typically, passing at intersections should be discouraged, if not prohibited.

Intersection recommendations include:

- Evaluate the N59 intersection for street lighting
- Relocate the N59 stop bar closer to the intersection (the MUTCD recommends that stop bars be placed not less than 4 feet and not more than 30 feet from the edge of the traveled way)
- Install stop signs and stop bars where needed
 - Place stop bars close to intersection to improve sight distance
 - Install 360-degree delineators on stop sign posts
- Evaluate the need for two-way passing zones at intersections

Maintenance

Maintenance is needed for several clogged drains along US 191 near the N7 intersection, and for several Chinle sidewalk sections along US 191 that were covered with debris, mud, and rocks (Figure 17). A street light fixture on the west side of US 191, just north of N7, is burned out and needs to be replaced (Figure 18).



Figure 17: Clogged Drain Under Sidewalk and Sidewalk Covered with Debris in Chinle

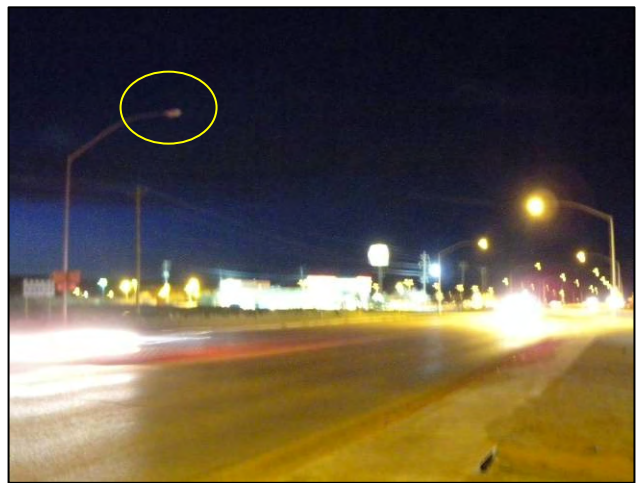


Figure 18: Light Just North of N7 Needs to be Replaced

Crash Reporting

The number of police crash reports submitted to ADOT for crashes occurring on this section of US 191 has decreased from an average of 56 per year (2002-2004) to an average of 13 per year (2009-2011). Of the 24 fatal crashes that occurred during the 10-year analysis period, ADOT had crash reports for only 13 of them. Discussions with the NPD indicated that the NPD is behind in submitting crash reports but is addressing the issue. The Highway Safety Improvement Program (HSIP) requires accurate and complete crash data for identifying and funding high crash locations. Information from crash reports is also used to determine appropriate countermeasures to implement to address crash patterns. It is recommended that the NPD coordinate with ADOT Traffic Records to make sure all police crash reports are entered into ADOT's crash database.

Education and Enforcement

The Navajo Nation is to be commended for having a primary enforcement seat belt law. National statistics indicate that 50 to 55 percent of vehicle occupants killed in rural crashes

were not wearing seat belts. When seat belts are used properly, they reduce the risk of fatal injury by 45 percent. Because rural areas tend to have lower seat belt use than urban areas, it is recommended that the Tribe consider initiating a seat belt use campaign, to include increased enforcement. Grants from the Governor's Office of Highway Safety can be used for this type of campaign.

The Tribe should also consider increasing educational and enforcement efforts related to driving and walking under the influence of alcohol. Fifty four (54) percent of the reported fatal crashes involved alcohol use, compared to the statewide average of 30 percent. As already mentioned, it is recommended that the Tribe consider education and enforcement measures to help address the issue of livestock in the right-of-way.

Funding Opportunities

Several funding and resource opportunities are available for traffic safety efforts. Safe Routes to School grants can be used for infrastructure, educational materials, etc. Transportation Enhancements grants can be used for sidewalks, multi-use paths, gateway signing, etc. ADOT staff listed below can provide assistance in applying for these funding programs.

- Highway Safety Improvement Program (HSIP)
 - Mona Aglan, ADOT, 602-712-7374, maglan@azdot.gov
 - Irene Higgs, ADOT (Local Agency), 602-712-7581, ihiggs@azdot.gov
- Transportation Enhancements Program
 - Tammy Flaitz, ADOT, 602-712-6258, tflaitz@azdot.gov
- Safe Routes to School Program
 - Brian Fellows, ADOT, 602-712-8010, bfellows@azdot.gov
- Governor's Office of Highway Safety, www.azgohs.gov/grant-opportunities

Suggested Improvements/Countermeasures

The following table summarizes the RSA team's observations and potential opportunities to improve safety. These suggested improvements/countermeasures are presented as options for consideration; the road owner may also identify other effective alternative improvements/countermeasures. While every attempt has been made to identify potential safety issues and provide countermeasures options, the safety performance of the roadway remains the responsibility of the roadway owner and roadway users.

Next Steps

The RSA Team requests that the road owner(s) prepare a written response that addresses the potential safety issues and countermeasures for consideration highlighted in the following table. This response can be sent to the RSA Program Manager and should identify how each of the safety issues will be addressed or give the basis for why they won't be addressed. The RSA Program Manager can provide an example response letter and the following table in a Word document to assist in the response. Send the response letter to:

Mike Blankenship
Arizona RSA Program
1615 W. Jackson St. MD065R
Phoenix, AZ 85007
mblankenship@azdot.gov

POTENTIAL SAFETY ISSUE	DESCRIPTION	COUNTERMEASURES FOR CONSIDERATION
Lane Departure Crashes	<ul style="list-style-type: none"> • Half of the 24 fatal crashes occurring on US 191 during the 10-year analysis period were lane departure crashes (2 head-on, 10 run-off-road crashes). • There are no paved shoulders on this section of US 191, and there is some pavement edge deterioration. • The pavement markings are faded in some locations. • Many of the horizontal curves are not delineated, and many of the existing roadside delineators are worn and faded. 	<ul style="list-style-type: none"> • Provide paved shoulders with edge line rumble strips (seek inclusion in ADOT's statewide shoulder widening project) • Refresh pavement markings, to include installation of center line raised pavement markers • Install center line rumble strips • Delineate horizontal curves with flexible delineators, chevrons, and curve warning signs as appropriate, e.g. mileposts 451.8, 454.4, 455.3, 458.3, 460.3 (may qualify for statewide flexible delineator project)
Pedestrians	<ul style="list-style-type: none"> • Seven of the 24 fatal crashes (29%) occurring on US 191 during the 10-year analysis period were pedestrian crashes. Pedestrian fatal crashes are over-represented on this section of US 191; pedestrian fatalities in rural areas of Arizona typically account for an average of 11% of all rural fatal crashes, compared to 29% on this section of US 191. • Pedestrian activity on and along US 191 includes elementary, junior high, and high school students, hitchhikers, patrons of commercial establishments (Basha's, restaurants, convenience stores), and other community members. • Many students were observed crossing US 191 north of the school crosswalk (milepost 447.1) and south of the N7 signalized intersection (milepost 447.8) in Chinle. • Pedestrians were observed on and along US 191 during the night review (60% of the pedestrian crashes occurred at night). The existing street lighting in Chinle produces light and dark patterns on US 191. • Lack of shoulders presents concerns for pedestrians walking along the road. 	<ul style="list-style-type: none"> • Evaluate the need for pedestrian hybrid beacon(s) near the high school/elementary school and/or near Basha's in Chinle • Install pedestrian crossing warning signs in Many Farms in the vicinity of N59 (in addition to the existing school advance warning signs south of N59) • Evaluate the need for a school crosswalk at Many Farms Elementary School • Install pedestrian countdown signals at the N7 intersection in Chinle • Evaluate existing street lighting in Chinle for proper illumination and uniform light pattern designed for pedestrian activity

	<ul style="list-style-type: none"> • The segment of US 191 from milepost 446.6 to 448.2 was identified in the ADOT Pedestrian Safety Action Plan as a high pedestrian crash location. • Journey to work data from the 2000 Census shows that 19.2% of workers in Chinle walk to work, and 8.8% of workers in Many Farms walk to work, compared to 2.6% of workers statewide who walk to work. 	
Livestock in Right-of-Way	<ul style="list-style-type: none"> • Livestock crashes make up 19% of all crashes on this section of US 191. • The RSA team observed several horses and sheep outside of the fencing and within the highway right-of-way in various locations. While the recently completed fencing and cattle guard project should help address the issue of livestock in the right-of-way, it is obvious that the project hasn't completely eliminated the problem. • There are no cattle guards or fencing at the N59 intersection in Many Farms. 	<ul style="list-style-type: none"> • The completion of the fencing and cattle guard project may provide a good opportunity for the Tribe to determine where livestock is getting into the right-of-way, who has ownership of those animals, and who has responsibility for securing those locations • The Tribe should implement education and enforcement measures to help address the livestock issue • The Tribe should determine the agency responsible for installing and maintaining cattle guards and fencing at the N59 intersection in Many Farms
Rear-end Crashes	<ul style="list-style-type: none"> • Rear-end crashes are the highest frequency crash type along this corridor (22%), and 60% of the rear-end crashes occur outside of the Chinle and Many Farms areas, i.e. most of the rear-end crashes occurred in the 65 mph zones. One of these high speed rear-end crashes resulted in a fatality (at an intersection near milepost 450.5). 	<ul style="list-style-type: none"> • Evaluate major intersections for the need for turn lanes (e.g. C462, C463, C506, C523, C552, C553, N8081, N8084 (formerly C507), N8086, and N8087) • Install advance intersection signing (Intersection Ahead warning signs, route shields/street name signs) at major intersections (see above) • Install cattle guard delineation
Speeds	<ul style="list-style-type: none"> • The Navajo PD expressed concern over motorists speeding through Many Farms, and speed observations during the RSA verified that many motorists were driving well above the 45 mph speed limit. It was also pointed out that the 	<ul style="list-style-type: none"> • Install solar-powered speed feedback signs in Many Farms • Evaluate use of photo enforcement for speeding in Many Farms

	<p>beacons on the school warning signs in Many Farms sometimes flash 24 hours a day.</p> <ul style="list-style-type: none"> • The 45 mph speed limit for the urbanized segment of US 191 in Chinle may not be appropriate for the amount of pedestrian activity associated with the 3 schools and businesses along US 191 and the multiple driveways with the associated turn movements. • The 65 mph speed limit between Chinle and Many Farms may not be appropriate, considering the following factors: <ul style="list-style-type: none"> • Number of intersections and access points (no turn lanes at any of these intersections) • No paved shoulder/recovery area along roadside • Faded markings and inconsistent curve delineation • Pedestrian activity • School bus stops • Open range grazing • Speed observations during the RSA show that many drivers are operating below the speed limit on this section between Chinle and Many Farms • Crash data: this section of US 191 has a high fatal crash rate: 7.5 fatal crashes per 100 million vehicle-miles (MVM), compared to 4.4 fatal crashes per 100 MVM for comparable roads in the state (rural major collectors). Fifty (50) percent of the crashes occurring on US 191 involve injury or fatality; injury severity is typically correlated with higher speeds. 	<ul style="list-style-type: none"> • Check that the beacons on the school warning signs in Many Farms are flashing at the appropriate times • Conduct speed studies to determine appropriate speed limits in Chinle and between Chinle and Many Farms, evaluating, in addition to 85th percentile speeds: <ul style="list-style-type: none"> • Crash history • Number of intersections and access points • Pedestrian activity • Number of school bus stops • Open range grazing • Lack of shoulders/roadside recovery area
Signing	<ul style="list-style-type: none"> • Some of the school bus stops do not have advance warning signs. • The northbound Right Lane Ends sign in Chinle (milepost 448.27) appears to be too close to the taper. • Some locations have sign posts with no signs. • Some signs have graffiti on them, and “private” signs have been placed on some sign posts. • A Keep Right sign is missing from the median on the 	<ul style="list-style-type: none"> • Install School Bus Stop Ahead signs where needed (coordinate with the Chinle Unified School District to obtain locations of bus stops) • Evaluate location of northbound Right Lane Ends sign in Chinle (milepost 448.27) and relocate as needed • Replace missing signs or remove unused

	westbound N7 approach to the US 191 intersection.	<p>sign posts</p> <ul style="list-style-type: none"> • Clean “tagged” signs or replace as needed • Remove “private” signs placed on sign posts, and consider education and enforcement measures to deter this practice in the future • Install a Keep Right sign on the N7 median approaching the US 191 intersection
Black Mountain Wash Crossing	<ul style="list-style-type: none"> • The US 191 crossing of Black Mountain Wash (milepost 460.26) is narrow (24 feet) with guardrail within a foot of the edge lines. • The southbound direction has a passing zone. • There is no guardrail delineation. • The existing Type 3 Object Markers are faded, and there are no object markers on the left side for either the northbound or southbound approaches. • The guardrail end treatments are BCTs. 	<ul style="list-style-type: none"> • Re-stripe for no passing zone on bridge • Install guardrail delineation • Replace existing Type 3 Object Markers and install new object markers on left sides • Replace BCT end treatments with energy absorbing terminals
N7 Intersection	<ul style="list-style-type: none"> • Fifteen (15) left-turn crashes occurred at the N7 intersection during the 10-year analysis period, accounting for 29% of the N7 intersection crashes. • A team member from Chinle indicated that some drivers seem to be confused with the permissive left-turn phase at this intersection. • The northeast corner of the N7 intersection is an open lot that is used by vehicles passing between the intersection and the Shell convenience store, and is also used for parking. 	<ul style="list-style-type: none"> • Install a Left-Turn Yield on Green Ball sign on the mast arm for the southbound approach. If this sign does not help address the frequency of left-turn crashes, protected-only left-turn phasing should be considered. • The Tribe should pursue a Transportation Enhancements grant to install landscaping and gateway signing on the northeast corner of the N7 intersection
Other Intersections	<ul style="list-style-type: none"> • The N59 intersection is a major intersection in Many Farms, but it does not have street lighting. The stop bar at this intersection is located 54 feet from the edge of the through lane and 33 feet from the edge of the southbound right-turn lane. This creates a longer crossing distance for motorists turning onto US 191, and does not optimize sight distance. • Most intersections along US 191 do not have stop signs or 	<ul style="list-style-type: none"> • Evaluate the N59 intersection for the need for street lighting • Relocate the N59 stop bar closer to the intersection (the MUTCD recommends that stop bars be placed not less than 4 feet and not more than 30 feet from the edge of the traveled way) • Install stop signs and stop bars where

	<p>stop bars. The intersections are difficult to locate at night.</p> <ul style="list-style-type: none"> • There are two-way passing zones at most intersections. Typically, passing at intersections should be discouraged, if not prohibited. 	<p>needed</p> <ul style="list-style-type: none"> • Place stop bars close to intersection to improve sight distance • Install 360-degree delineators on stop sign posts • Evaluate the need for two-way passing zones at intersections
Maintenance	<ul style="list-style-type: none"> • Maintenance is needed for several clogged drains along US 191 near the N7 intersection, and for several Chinle sidewalk sections along US 191 that were covered with debris, mud, and rocks. • A street light fixture on the west side of US 191, just north of N7, is out and needs replaced. 	<ul style="list-style-type: none"> • Maintain clogged drains and sidewalks covered with debris in Chinle • Replace street light on west side of US 191 just north of N7
Crash Reporting	<ul style="list-style-type: none"> • The number of police crash reports submitted to ADOT for crashes occurring on this section of US 191 has decreased from an average of 56 per year (2002-2004) to an average of 13 per year (2009-2011). Of the 24 fatal crashes that occurred during the 10-year analysis period, ADOT had crash reports for only 13 of them. • The Highway Safety Improvement Program (HSIP) requires accurate and complete crash data for identifying and funding high crash locations. Information from crash reports is also used to determine appropriate countermeasures to implement to address crash patterns. 	<ul style="list-style-type: none"> • The NPD should coordinate with ADOT Traffic Records to make sure all police crash reports are entered into ADOT's database
Education and Enforcement	<ul style="list-style-type: none"> • National statistics indicate that 50 to 55 percent of vehicle occupants killed in rural crashes were not wearing seat belts. When seat belts are used properly, they reduce the risk of fatal injury by 45 percent. Rural areas tend to have lower seat belt use than urban areas. • Fifty four (54) percent of the reported fatal crashes involved alcohol use, compared to the statewide average of 30 percent. 	<p>The Tribe should consider:</p> <ul style="list-style-type: none"> • initiating a seat belt use campaign, to include increased enforcement • increasing educational and enforcement efforts related to driving and walking under the influence of alcohol • education and enforcement measures to help address the issue of livestock in the right-of-way

Appendix

**ROAD SAFETY ASSESSMENT AGENDA
US 160 MILEPOST 416.4 TO 419.4 AND US 191 MILEPOST 444 TO 465
NAVAJO NATION AND ADOT HOLBROOK DISTRICT**

Monday, February 27, 2012

7:00 PM NIGHTTIME SITE VISIT US 160 *RSA Team*

Tuesday, February 28

9:00 AM ROAD SAFETY ASSESSMENT START-UP MEETING *All*
1. ROAD SAFETY ASSESSMENTS: OBJECTIVES, PROCEDURES *RSA Team*
2. BACKGROUND ON US 160 AND US 191 *Tribe, ADOT*
OVERVIEW, HISTORY, CHALLENGES, SPECIFIC CONCERNS
3. QUESTIONS AND ANSWERS *All*

- *The road safety assessment team will be led by Mike Blankenship, Arizona Road Safety Assessment Program Manager. The RSA Team includes Salisa Norstog (Navajo DOT), Jason Yazzie (Navajo DOT), Marco Sells (Navajo DOT), Margie Begay (Navajo DOT), Georgi Jasenovec (FHWA), Mary Rodin (Kimley Horn), Don Sneed (ADOT), Richard Skaggs (IHS), Esther Corbett (ITCA), and Jerome Choy (ADOT).*
- *For the start-up meeting, information will be provided by Salisa Norstog (Navajo DOT Principal Planner), Richard Skaggs (IHS District Injury Prevention Specialist), and Randy Routhier (ADOT Holbrook District Development Engineer).*

10:30 AM DAYTIME SITE VISIT SR US 160 *RSA Team*

1:30 PM WORK SESSION/ANALYSIS *RSA Team*

3:30 PM DAYTIME SITE VISIT SR US 160 *RSA Team*

Wednesday, February 29

8:00 AM DAYTIME SITE VISIT US 191 *RSA Team*

10:30 AM WORK SESSION/ANALYSIS *RSA Team*

1:30 PM DAYTIME SITE VISIT US 191 *RSA Team*

3:30 PM WORK SESSION/ANALYSIS *RSA Team*

7:00 PM NIGHTTIME SITE VISIT US 191 *RSA Team*

Thursday, March 1

9:00 AM PRESENTATION OF PRELIMINARY FINDINGS *All*

- *Findings Report to owners: March 29*
- *Owners' Response to findings: May 10*

11:30 PM ADJOURN

Feb. 28 meetings/work sessions will be held at the Dennehotso Chapter House. Feb. 29 and March 1 meetings/work sessions will be held at the Chinle BIA Conference Room.