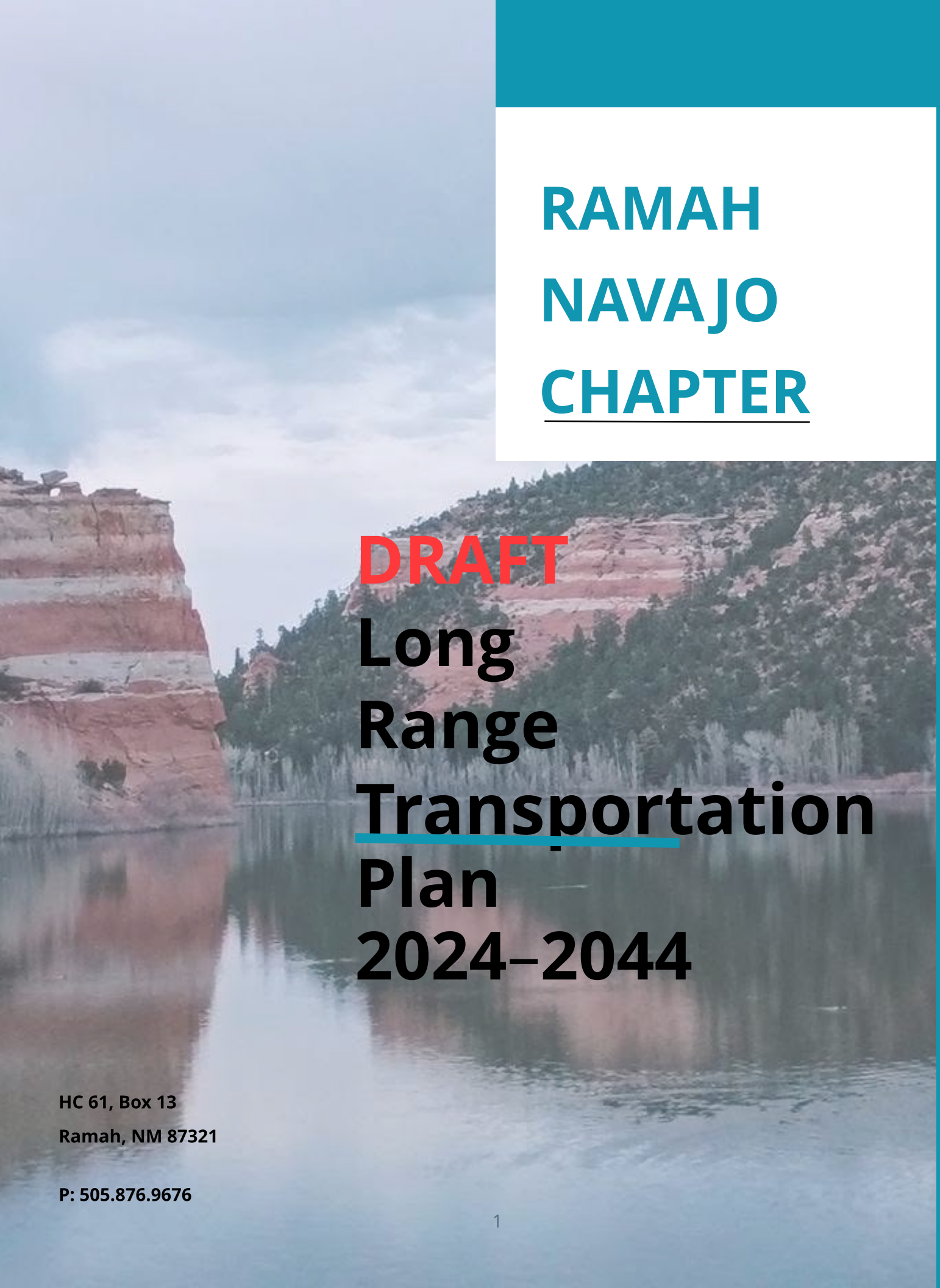


RAMAH NAVAJO CHAPTER

DRAFT

Long Range Transportation Plan 2024–2044

HC 61, Box 13

Ramah, NM 87321

P: 505.876.9676

CONTENTS

DRAFT

MAPS

TABLES

ABBREVIATIONS

DRAFT

AADT	annual average daily traffic
ADA	Americans with Disabilities Act
ADT	average daily traffic
BIA	Bureau of Indian Affairs
BIADOT	BIA Division of Transportation
CDP	Census Designated Place
CLUP	Comprehensive Land Use Plan
EA	environmental assessment
FAST	Fixing America's Surface Transportation
FLHP	Federal Lands Highways Program
FHWA	Federal Highway Administration
HTF	Highway Trust Funds
HUD	Department of Housing and Urban Development
ICIP	Infrastructure Capital Improvement Plan
IHS	Indian Health Service
ISTEA	Intermodal Surface Transportation Efficiency Act
HSIP	Highway Safety Improvement Projects
LGRF	Local Government Road Fund
LRTP	Long Range Transportation Plan
MPO	metropolitan planning organization
NAHASDA	Native American Housing Assistance and Self Determination Act
NBIS	National Bridge Inspection System

NHS	National Highway System
NMAS	New Mexico Airport System
NMDOT	New Mexico Department of Transportation
NSBP	National Scenic Byways Program
NTS	Navajo Transit Systems
NTTFI	National Tribal Transportation Facility Inventory
NWRTPO	Northwest Regional Transportation Planning Organization
RNC	Ramah Navajo Chapter
RNDOT	Ramah Navajo Department of Transportation
ROW	right-of-way
RTIPR	Regional Transportation Improvement Program Recommendation
RTPO	regional transportation planning organization
STIP	Statewide Transportation Improvement Program
TAP	Transportation Alternatives Program
TIF	Tribal Infrastructure Funds
TSR	Title Status Reports
TTIP	Tribal Transportation Improvement Plan
TTP	Tribal Transportation Program
USFS	US Forest Service
VMT	vehicle miles traveled
VPD	vehicles per day

1.0 COMMUNITY CHARACTERISTICS

DRAFT

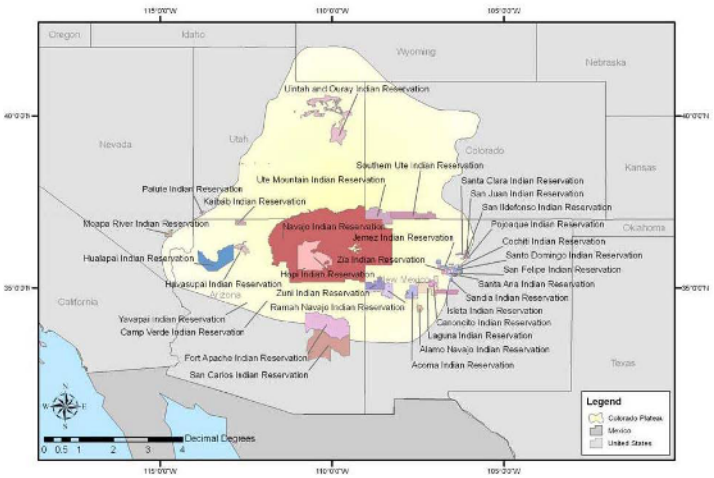
General information is drawn mostly from the 2016 Ramah Navajo Chapter Long Range Transportation Plan and Strategic Transportation Safety Plan and community information summaries.

Community Overview

Current Population:	Cibola County: 2,591
Pronunciation/Other Names:	Navajo: Tl'ohchini
Counties:	McKinley and Cibola
School District:	Ramah Navajo School Board, McKinley, Cibola
Bureau of Indian Affairs Region:	Southwest

1.1 Location

The approximately 170,000 acre land area encompasses the Census Designated Place (CDP) communities of Ramah and Pinehill in New Mexico. Ramah Navajo lands fall within Cibola and McKinley Counties.



Source: Federal Geographic Data Committee (2008). Map of Native American Reservations located on the Colorado Plateau. Retrieved from https://www.fgdc.gov/grants/2005CAP/projects/05HQAG0140_map/image_view_fullscreen.

DRAFT

1.2 Climate

At an elevation of 7,219 feet (2,200 meters), winters can be cold and snowy. Summers are warm with afternoon thunderstorms from mid-July through mid-September. The average snowfall is 40 inches per year with average precipitation (snow-melt and rain) averaging to approximately 16 inches per year. July is the warmest month of the year, with average highs of 84 degrees and lows of 52 degrees. December and January are the coldest months, with average lows of 14–15 degrees, and average highs of 44–45 degrees.

1.3 History

The Ramah Navajo Chapter, also called the Ramah Band of Navajos, established their homeland in West Central New Mexico hundreds of years ago. Today members reside on a checkerboard of Indian land east of Zuni Pueblo and approximately 100 miles from the main Navajo Nation reservation.

The Ramah Band of Navajos were among the more than 8,000 Navajos rounded up and force-marched across New Mexico in 1860 and imprisoned at Bosque Redondo for four years. Following their release, the Treaty of 1868 established the Navajo Nation reservation but did not include the Ramah Band of Navajo's homeland. These lands were made available as "open range" for homesteading by non-Indigenous settlers.

In 1972, the BIA established an independent Ramah Navajo Agency and placed that Agency not within the Navajo Regional Office but within the Albuquerque Area Regional Office.

Ever since the Ramah Navajo Agency was established, the Ramah Band of Navajos have worked with federal representatives in the Southwest Regional Office on a government-to-government basis.

1.4 Demographics

The Ramah Navajo Chapter extends across Cibola and McKinley Counties in New Mexico.

Population in 2022 by Race for Cibola County

White	18.1%
American Indian and Alaska Native	39.3%
Hispanic	38.4%
Other	4.2%

Source: https://censusreporter.org/profiles/05000US35006-cibola-county-nm/

Population in 2022 by Race for McKinley County

White	7.8%
American Indian and Alaska Native	74.1%
Hispanic	14.6%
Other	3.5%

Source: https://censusreporter.org/profiles/05000US35031-mckinley-county-nm/

1.5 Economy and Employment

Unemployment is a significant problem for Ramah Navajo Chapter members. The primary employers for RNC are the Ramah Navajo School Board and RNC offices. Some members travel to Gallup, Grants, or Zuni Pueblo for employment. Unemployment within the Ramah Navajo lands is estimated at 70% of adults over the age of 18 who are able to work. Exact employment figures specific to Ramah are not available, but labor force participation rates for American Indians and Alaska Natives living on tribal lands is 52.4%, compared to 62.2% among the general population; rates of unemployment are 10.5% and 5.7%, respectively.[1]

1. US Bureau of Labor Statistics, "A Profile of American Indians and Alaska Natives in the U.S. Labor Force," Monthly Labor Review, November 2023. "Note: American Indian and Alaska Native areas include federal American Indian reservations and off-reservation trust lands, joint-use federal American Indian reservations, Oklahoma tribal statistical areas, joint-use Oklahoma tribal statistical areas, Alaska Native village statistical areas, tribal designated statistical areas, state American Indian reservations, and state designated tribal statistical areas."

1.6 Long Range Transportation Plan and Transportation Safety Plan Summary

The transportation plan should be considered a "living document" adaptable to the changing needs and conditions of the Ramah Navajo Chapter community. An up-to-date transportation plan is a valuable reference tool when programming and budgeting future roadway improvement projects. However, regularly scheduled updates are crucial to the effective longevity of the plan and to the plan's utility in supporting funding requests. The priority list must be reviewed and modified as needed on an annual basis.

The overall plan must also be updated every five years, or following major land use changes. The 2024 Long Range Transportation Plan provides a foundation for economic development by identifying transportation needs associated with access to tribal services and enterprises. A large number of improvement projects need to be projected and documented to cover the next 20 years. Based on forecasts, improvement projects are grouped into three time periods: short range (0 to 5 years), mid-range (5 to 10 years), and long range (over 10 years), based on their relative urgency for completion. Road construction priorities are discussed in Section 4.7.

The Transportation Safety Plan component of the Long Range Transportation Plan (LRTP) was developed to identify unsafe conditions associated with the Tribe's transportation infrastructure and develop a clear plan for protecting the life and safety of community members, visitors, and guests. The plan will be used to provide safer travel options and conditions for motorists, bicyclists, and pedestrians traveling on or in the vicinity of tribal lands.

The plan used survey, crash analysis, and stakeholder interview data to identify transportation safety emphasis areas and outlined goals with associated strategies to improve safety conditions within each area.

Overall, road surface improvements are a focus of proposed improvements for RNDOT. These improvements are necessary to allow all-season travel for a community that often encounters routes made impassable by extreme weather. Adequate surfaces allow residents to reliably reach employment and services and allow crucial access for emergency vehicles. Other projects include a number of roadway safety audits on intersections at which there are safety concerns, guardrail installation projects, and cattle guard replacements.

1.7 Government[2]

The federal government recognizes the Ramah Navajo Community as a separate group, the Ramah Band of Navajo Indians, which has allowed the community's institutions to apply directly for funding from various federal sources, such as Workforce Services and Title IV programs.

The Ramah Navajo Chapter Office of Grants & Contracts, 638 Program, began in 1985 through Resolution Number RNC-0185118. The Ramah Navajo Chapter Office of Grants & Contract has since offered various essential services for the Ramah Band of Navajos. Today, the Office of Grants and Contracts is organized as nine departments that service the community.

The Ramah Navajo Chapter is the only Chapter that is under the Albuquerque BIA Southwest Regional Office and was never under the Navajo Regional Office. Historically, the Ramah Navajo Chapter has been treated by the BIA as a "tribal governing body" for purposes of grant and contract programs administered by the BIA and Indian Health Services.

The Ramah Navajo Chapter currently provides a variety of local government services under PL 93-638 contracts with FHWA and the BIA, including real estate, natural resources and agriculture, law enforcement, community resources, facilities management, property and procurement, and administration. These services and programs are entirely separate from those offered by the Navajo Nation to its other Chapters on the Navajo Reservation. All contracts currently operated by the Ramah Navajo Chapter are considered "mature" pursuant to the 1988 Amendments to the Indian Self-Determination and Education Assistance Act.

1.8 Land Ownership

The Ramah Navajo Chapter Government was established in 1955 and has a total of 154,553 acres of land that consist of Ramah Band Land, Navajo Tribal Trust Land, Individual Indian Allotment Land, Government Land, and Ramah Navajo Chapter Fee Lands, which is often referred to as a "checkerboard" land status.

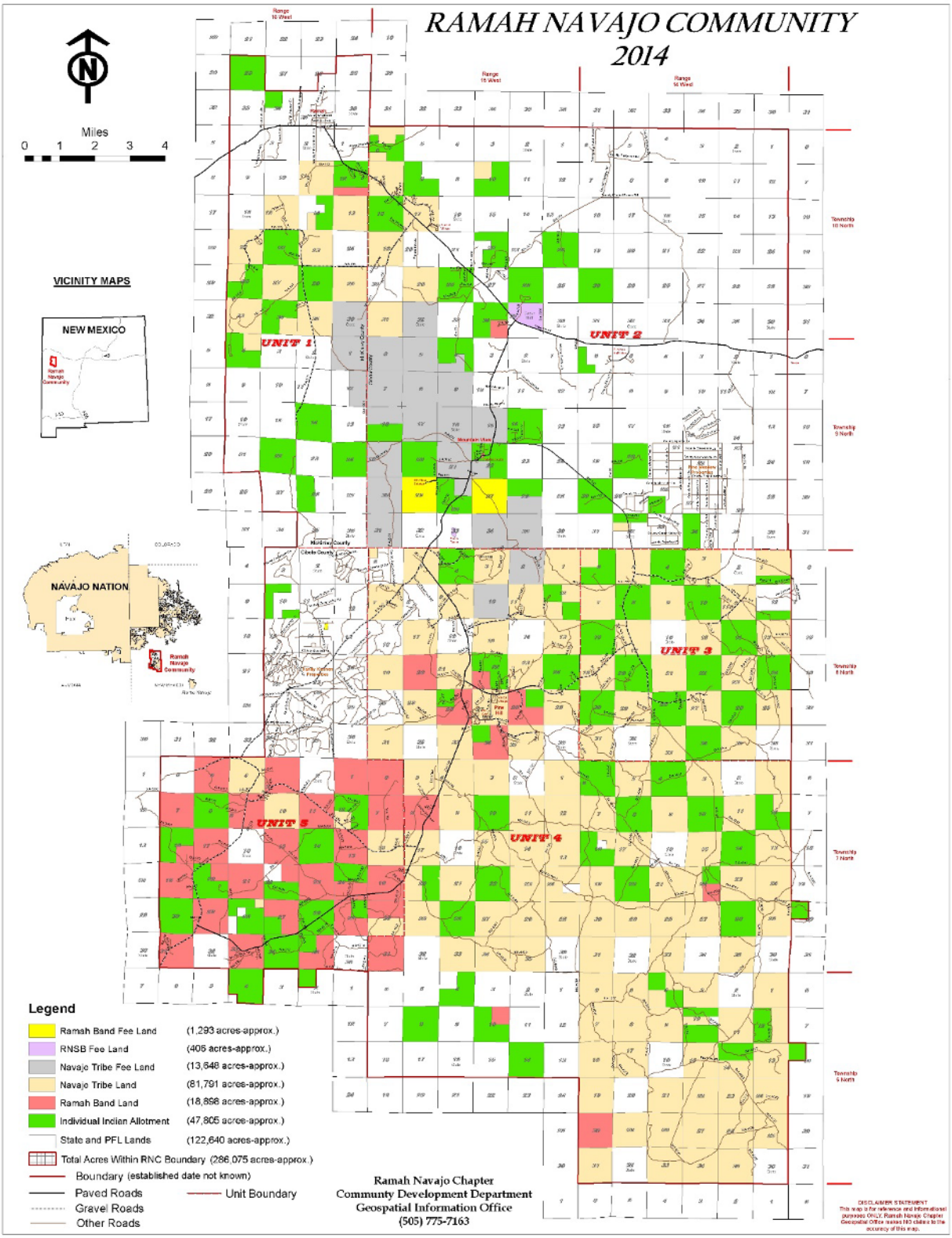
As an independent political entity, Ramah Navajo Chapter land ownership is separated from that of the larger Navajo Nation. The Ramah Navajo Chapter political boundary includes 286,075 square acres of land.

Within the political boundary there are 18,898 acres of Ramah Band Lands, 47,805

2. Material largely excerpted from "Ramah Band of Navajos History," Ramah Navajo Chapter Office of Grants and Contracts Pine Hill, Aug. 1, 2009, accessed Nov. 20, 2015, http://ramahnavajo.org/ramahbandofnavajos.html.

acres of Individual Indian Allotment Land, 1,293 acres of Ramah Navajo Chapter Fee Land, and 406 acres of Ramah Navajo School Board Fee Land. There are also 122,640 acres of State and PFL Lands, 81,791 acres of Navajo Nation Tribe Land, and 13,648 acres of Navajo Nation Tribe Fee Land that are not owned by the Ramah Navajo Chapter.

Table 1: Land Ownership Status Key Terminology	
Allotted Lands (a.k.a. allotments)	Parcels of land that were distributed by the federal government to individual Tribal members for agricultural development. The allotment process was discontinued by Congress in 1934, yet allotted lands are still owned by the federal government and are either held in trust for individual Indians by the federal government or are subject to statutory restrictions regarding the transfer of title.
Fee Land	Lands where the owner holds title to and controls the property. Generally, non-Indian owners may make decisions about the use of the land without Tribal oversight. Fee land was created within the Reservation when the federal government opened lands on the Reservation to homesteading by non-Indians or original allotted trust lands were transferred to fee status.
Tribal Trust Land	Land that has been set aside for the exclusive use and benefit of the Tribe but is owned by the United States in trust for the Tribe. The Tribe may use, lease, mortgage, or sell the Tribe's interests in this land only if the federal government consents.
Tribally Owned or Indian-Owned Fee Land	Land owned by the Tribe or an individual Tribal member or nonmember Indian.
Source: Bureau of Indian Affairs.	



Map 1. Ramah Navajo Land Ownership Status

Source: Ramah Navajo Chapter Community Development Department, 2016.

1.9 Existing Land Use/Facilities

DRAFT

Table 2: Ramah Navajo Chapter Area Facilities	
Commercial	
Pine Hill Market	1283 BIA Route 125 Pinehill, NM 87357
Educational	
Pine Hill K-12 School	25 BIA Route 140 Pinehill, NM 87357
Ramah Mid/High School	74 S. Bloomfield Avenue Ramah, NM 87321
Ramah Elementary School	17 Evans Circle Ramah, NM 87321
Ramah Navajo Head Start	Ramah Center, 32 Lewis St. Ramah, NM 87321
Health and Social Services	
Health Center	7 BIA Route 140 Pinehill, NM 87357
Institutional/Governmental	
Administration Building	19A BIA Route 140 Ramah, NM 87321
RNDOT Road Yard	1207 BIA Route 125
Ramah Post Office	Ramah, NM 87321 Ramah, NM 87321
Pinehill Post Office	BIA Rd #125 Pinehill, NM 87357
Public Safety	
Fire Station	37 BIA Route 140 Pinehill, NM 87357
Ramah Volunteer Fire Station	4 Tietjen Drive Ramah, NM 87321
Candy Kitchen & El Morro VFD	
Police Station	HCR 61, Box 13 Ramah, NM 87321
Ramah Navajo Dept. of Corrections	Rte. 2, Box 13 Ramah, NM 87321
Recreational	
El Morro National Monument	NM-53, Ramah, NM 87321
Fair and Rodeo Ground	19 Arena Drive Pinehill, NM 87357

Residential

The Tribe's residential areas are mainly clustered in the town of Ramah and near Pine Hill, Candy Kitchen, and Mountain View.

Commercial

Commercial and business activities are primarily concentrated in the Town of Ramah, Mountain View, Pine Hill, and Candy Kitchen.

The Pine Hill Market offers a grocery store and gas station.

Institutional/Governmental

The Tribal Administration Building includes office space for administrative functions such as the Executive Office, Human Resources, Development, and Records Management.

The Ramah Chapter House serves a gathering space for tribal meetings and other functions.

The Ramah Judicial Court of the Navajo Nation is located twenty miles southeast of Ramah.

The RNDOT Road Yard houses the offices of RNDOT and provides storage space for maintenance equipment for RNC roads.

RNC Road Maintenance Equipment

The Community Planning Department services include housing, bathroom, power line, USDA 504 Grant, and IHS waterline extension assistance, physical address verification, GIS/mapping services, website/ Facebook management, water, and administration.

Pinehill Post Office

Public Safety

The Tribe operates a Police Department and is served primarily by the Candy Kitchen Volunteer Fire Department. Detailed information on public safety is included in Appendix B. Strategic Transportation Safety Plan.

The Ramah Navajo Department of Corrections is located in Mountain View. The facility accommodates twenty male and eight female inmates, and includes temporary holding, intake and booking, visitation, medical examination, records storage, recreation, kitchen, and laundry facilities.

Recreational

El Morro National Monument is located approximately 2.5 miles east of the intersection of Route 125 and Highway 53. Historically, the area served as a watering hole for travelers, and Pueblo tribal members, as well as Spanish and American travelers, carved messages into the sandstone bluff. Admittance to the park is free, and facilities include a campground, visitor center, picnic areas, and hiking trails. About 35,000 people visit the monument each year.

Ramah Fair and Rodeo Grounds is the site of an annual fair and rodeo in Pine Hill. The fair includes events such as a carnival, rodeo, elder walk, talent show, dances, and craft show.

Educational

Most Ramah Navajo youth attend Pine Hill School, a public school. The school serves kindergarteners through the twelfth grade, and it also operates a Head Start program that provides an early childhood development curriculum.

Ramah Elementary *(above)* and Ramah Mid/High School (*below*) are public schools within Gallup-McKinley County Schools that also serve the community.

Health and Social Services

The Pine Hill Clinic provides outpatient services with RNC. It provides a pharmacy, dental care, EMT, wellness center, health promotion, and field health for community elders.

DRAFT

1.10 Respect for Cultural Resources

The Ramah Navajo Chapter ensures that Tribal lands are preserved, occupied, or developed in a manner that at all times considers and adheres to the best interests of the Tribe. The Ramah Navajo Department of Transportation (RNDOT) generally implements transportation and roads development projects for the Tribe.

The vision of the RNDOT is to enhance the educational, health, quality of life, and economic opportunities of the Ramah Navajo People by providing a safe and sustainable transportation system for the Chapter and the people who travel on the Ramah Navajo Chapter Road and Bridge System. Through the Office of Grants and Contracts, the RNDOT oversees the planning, design, construction, and maintenance of the Ramah Navajo Chapters transportation system.[3]

The RNDOT works with outside agencies on right-of-way issues as needed. The Planning Department provides updates and recommendations to local government on proposed development projects and land acquisitions. The RNDOT has been involved throughout the development of this LRTP. Transportation planning staff had the opportunity to review the interim draft of the LRTP and provided comments.

Protection and conservation of natural and cultural resources is administered by the Department of Trust Services, which consists of the Natural Resources Department and the Realty and Probate Services Departments.[4] The Natural Resources Department provides scientifically sound culturally related and community responsive stewardship services of the Natural Resources of the Ramah Navajo Community. The Realty and Probate Services Department uses sustainable yield standards and thriving management practices to regulate appropriate use and development of Indian Trust and allotment lands within the RNC lands.

1.11 Environmental Effects of Transportation

The process of combustion releases carbon dioxide into the atmosphere, which contributes to climate change. There are a number of ways individuals can reduce emissions:

- Buy a fuel efficient, low emission vehicle.
- Drive at a moderate speed, limit idling time, and remove any unnecessary weight from your vehicle.

3. "Ramah Navajo Department of Transportation," Ramah Navajo Chapter, November 25, 2015, http://ramahnavajo.org/trustservices.html.
4. "Ramah Navajo Department of Trust Services," Ramah Navajo Chapter, November 25, 2015, http://ramahnavajo.org/trustservices.html.

- Maintain your vehicle regularly, and use the recommended grade of motor oil.
- Maintain tire pressure at the appropriate level.
- Reduce driving by taking the bus, carpooling, riding a bike, walking, telecommuting, and combining errands.
- Use renewable fuels.

RNC does not have a high population density, so emissions are less concentrated than they would be in a more urban setting. Still, each of these strategies can have a positive environmental impact on air quality in New Mexico.

1.12 Scenic Byways

The National Scenic Byways Program (NSBP) provides funding to states and tribes to implement projects on highways designated as National Scenic Byways.[5] Scenic byways include highways of outstanding scenic, historic, cultural, natural, recreational, and archaeological qualities designated as National Scenic Byways, All-American Roads, America's Byways, State Scenic Byways, and Indian Tribe Scenic Byways.

New Mexico is home to 25 scenic byways, totaling more than 2,900 miles across a diverse landscape. Eight of the 126 America's Byways are in the State.[6] The America's Byways Program is part of the US Department of Transportation, Federal Highway Administration, and was established to help recognize, preserve, and enhance selected roads throughout the states. The US Secretary of Transportation recognizes these designated roads based on one or more intrinsic qualities — archaeological, cultural, historic, natural, recreational, or scenic.

Trail of the Ancients Scenic Byway

The Trail of the Ancients Scenic Byway passes through RNC lands. The Trail follows State Highway 53 within the Chapter boundaries, with entry points on State Highway 53 in Zuni, NM, heading east toward Ramah, and on BIA road 125, at Pinehill, NM, headed north to Highway 53. Trail of the Ancients highlights the long and intriguing occupation of the Four Corners Region by American Indian peoples. The route takes visitors to remote archaeological sites and significant cultural and historic sites in western New Mexico and southwestern Colorado. This 114-mile route across the broken, arid terrain of the Anasazi former civilization—known as

5. https://www.fhwa.dot.gov/hep/scenic_byways/.
6. "New Mexico True," Scenic Byways, Nov. 30, 2015, https://www.newmexico.org/scenic-byways/.

"Ancient ones" to the Navajo—is heavily laden with cliff dwellings, rock art, and pottery shards.[7]

Some highlights along the byway include El Malpais National Monument, El Morro National Monument, Ramah Navajo Chapter, Ramah Museum, Ramah Navajo Weavers Association, Ramah Farmers Market, Whooville Artist Collective, Ancient Way Café, Zuni Pueblo, Mesa Verde National Park, Chaco Culture National Historic Park, and Four Corners Monument.

Inscription Rock, El Morro National Monument
Source: "Grants Day Trips," New Mexico True, Nov. 30, 2015, https://www.newmexico.org/regions/northwest/grants-tours/#.VlzC902FPrc>.

1.13 Prior Planning Efforts

The following planning efforts have helped shape RNC's transportation network and contributed to improved safety on Ramah Navajo Chapter lands:

Ramah Navajo Chapter Long Range Transportation Plan. RNC prepared a long range transportation plan in 1999. The plan was intended to identify, evaluate, and determine current and future transportation needs for RNC, and it identified a variety of striping, drainage, signage, surface improvement, and road construction projects.

2009 Navajo Nation Long Range Transportation Plan. Navajo Nation prepared a long range transportation plan in 2009. Ramah Navajo Chapter is considered part of the Eastern Navajo Nation Agency. The plan identified transportation needs for the Navajo Nation including:

- Highway geometric design deficiencies
- Network connectivity needs
- Pavement deficiencies
- Safety needs
- Chapter House access needs
- Growth Centers street needs
- Community and economic development needs

7. "Travel Center," Trail of the Ancients, Colorado Department of Transportation, October 6, 2015, https://www.codot.gov/travel/scenic-byways/southwest/trail-ancients.

- Scenic byways, tourism, and recreation needs
- Intermodal transportation needs
- Other transportation needs
- Cultural and environmental considerations

New Mexico 2015 Highway Safety Plan. The New Mexico Department of Transportation's (NMDOT) Traffic Safety Division is responsible for creating the state's Highway Safety Plan. The 2015 Plan identifies six of the National Program Areas identified by the National Highway Transportation Safety Administration and FHWA: (1) alcohol / impaired driving, (2) occupant protection, (3) police traffic services, (4) traffic records, (5) motorcycle safety, and (6) pedestrian and bicyclist safety. For the plan, the state's overall goals were the following:

- Reduce the number of traffic fatalities from 342 in 2012 (2011–2013 average) to 330 by 2015
- Reduce fatalities per 100 million vehicle miles traveled (VMT) from 1.33 in 2012 to 1.30 by 2015
- Reduce urban fatalities per 100 million VMT from 0.80 in 2012 to 0.77 by 2015, and reduce rural fatalities per 100 million VMT from 1.74 in 2012 to 1.67 by 2015
- Reduce the number of serious injuries (Class A–incapacitating injuries) in traffic crashes from 1,655 in 2012 to 1,600 by 2015
- Reduce the rate of serious injuries from 6.48 in 2012 to 6.39 by 2015

New Mexico Comprehensive Transportation Safety Plan, 2010 Update. The Update identifies safety emphasis areas for the state based on crash data and other research. The identified safety emphasis areas are:

- Aggressive Driving and Speeding
- Alcohol-Related/Alcohol-Impaired Driving
- Emergency Services Response
- Fatigued and Distracted Drivers
- Intersection Crashes
- Lane Departure Crashes
- Native Americans
- Occupant Protection
- Public Information and Education

- Special Users
- Traffic Records
- Young Driver Crashes

The Native American emphasis area observes that traffic fatality rates for Native Americans in New Mexico are higher than those for other New Mexico residents. The plan notes that "improving traffic and crash information sharing between the State and the Native American community must be established as a priority." The two related strategies are:

> Strategy NA-1: Provide crash data analysis tools, training opportunities, and technical assistance to Native Americans.
>
> Strategy NA-2: Provide technical assistance to Native American Tribes, Pueblos, and Nations on roadway improvement strategies.

A 2012 update to the plan modified language regarding strategies to address intersection crashes, lane departures, and special user issues.

New Mexico 2040 Plan (2040 Plan). New Mexico's 2040 Plan, completed in September 2015, identifies future needs for its transportation system and provides strategic direction to achieve these goals. The Vision of the plan is "a safe and sustainable multimodal transportation system that supports a robust economy, fosters healthy communities, and protects New Mexico's environment and unique cultures." The 2040 Plan outlines five goals:

1. Operate with transparency and accountability.
2. Improve safety for all system users.
3. Preserve and maintain our transportation assets for the long term.
4. Provide multimodal access and connectivity for community prosperity.
5. Respect New Mexico's cultures, environment, history, and quality of life.

The 2040 Plan presents a Preservation First priority to preserve existing infrastructure and allocate limited funds to those routes that are critical to the state. Safety funds focus on vulnerable system users in the plan. The plan combines perspectives from regional stakeholders, multimodal transportation interests, and the public.[8]

8. "New Mexico 2040 Transportation Plan," New Mexico Department of Transportation, September 2015, November 23, 2015, http://dot.state.nm.us/content/dam/nmdot/planning/NM_2040_Plan.pdf.

New Mexico Transportation Plan: Northwest Regional Transportation Plan. The Plan was completed in October 2015. The New Mexico Department of Transportation has designated seven regional transportation planning entities to assist with administering federal funds and programs. The Ramah Navajo Chapter is within the Northwest New Mexico Council of Governments and is an affiliate member of the Council. RNC members routinely attend regular meetings of the Northwest Regional Transportation Planning Organization (NWRTPO). The Northwest Regional Transportation Plan focuses on planning for movement of people and goods in the northwest portion of New Mexico. Goals of the plan mirror the goals of the statewide 2040 Plan outlined above. Strategies were identified for each of the five goals, which echo those in the NMDOT 2040 Plan:

1. Operate with transparency and accountability
    a. Employee excellence and customer service
    b. Partnerships and coordination
    c. Financial stewardship
    d. Access to integrated, high-quality data and information
2. Improve safety for all system users
    a. Data-driven process—reduce fatalities and serious injuries through data-driven, innovative, and proactive processes that include examination of safety hot spots and systemic safety concerns.
3. Preserve and maintain our transportation assets for the long term
    a. Asset management
    b. Support investment decisions based on life-cycle cost
    c. Priority tiers and minimum standards
    d. Address legacy challenges (disinvestment in existing infrastructure)
4. Provide multimodal access and connectivity for community prosperity
    a. Operations and demand management first
    b. Strategic investment in key corridors
    c. Land use—transportation coordination
    d. Changing demographics
5. Respect New Mexico's cultures, environment, history, and quality of life
    a. Operations and demand management first

b. Require and respect local plans

c. Environmentally friendly practices

d. Recreation and tourism

The Plan emphasizes that projects identified on the local level should be consistent with the regional and statewide plans, and that local plans clearly identify specific priorities.[9] The NWRTPO annually prepares a Regional Transportation Improvement Program Recommendation (RTIPR), and the Council recommends that RNC submit local concerns or proposed state projects for inclusion in the RTIPR.

9. "Northwest Regional Transportation Plan," Northwest New Mexico Council of Governments.,October 2015, November 23, 2015, http://www.nwnmcog.com/regional-transportation-planning-organization-rtpo.html,

DRAFT

2.0 TRANSPORTATION SYSTEM

According to the updated road inventory conducted by QK4, Ramah Navajo consists of 515.0 miles of paved, gravel, and dirt roads. Severe weather conditions often make many of these roads impassable.

2.1 Roadway Inventory

The primary objective of the National Tribal Transportation Facility Inventory (NTTFI) is to collect current, accurate, uniform, and verifiable data on all TTP roads for the purpose of updating the Regional Office road inventory database, documenting valuable information for roadway planning and management activities. The NTTFI is used by the BIA Division of Transportation (BIADOT) to compute Regional Office and Tribal allocations of TTP program funds (Highway Trust Funds) using the applicable formula. While the impact of the number of miles in the inventory on funding allocations has lessened, it is still good strategy to keep an updated inventory.

The TTP inventory provides information regarding the physical characteristics and condition of each road. The inventory typically includes the following major categories:

- Identification (including length, class, location, etc.)
- Traffic (existing and future)
- Roadway section (grades, curves, and sight distances)
- Alignment condition
- Roadway conditions (surface, drainage, railroad crossings)
- Inventory status (including date of update)

For inventory purposes, the minimum criterion for an “improved road” is a graded road with drainage improvements (e.g., side ditches and culverts at cross-drainages).

Inventory Revisions

Listed below are recommended Road System Guidelines intended to assist tribes, regional directors, and engineers in deciding which roads should be on the BIA road system for future updates. These are not rules (as special circumstances may apply), and deviations from the guidelines should be accompanied by an explanation of the special circumstances.[10]

10. April 4, 1994, Memorandum from the Deputy Commissioner of the Indian Affairs, recommending BIA Road System Guideline.

1. A road that serves only a single residence or land use is a private driveway, not a public road, and should not be on the BIA road system. A road serving only three or fewer closely grouped residences or land uses should be considered a common private driveway.

2. Roads primarily used for a single purpose should not be included in the BIA road system such as:

a. Logging roads for timber sale, administrative, or fire access only and that are not open to the public or used for such purposes as recreation, wood cutting, gathering, fishing, or hunting.

b. Ranch roads and agricultural roads to fields, pump houses, headgates, or dams or positioned along canals that are not open for other purposes such as fishing, boating, or hunting.

c. Administrative roads to power plants, sewage treatment plants, or water towers that are not open to the public for other uses.

d. Tribal roads to a single-purpose tribal enterprise such as a fish hatchery, sawmill, manufacturing plant, cemetery, or other single use that are not open to the public.

3. The proportion of state and county road miles to BIA road system road miles within a Reservation should be at least equal to the proportion of fee land to trust land within that particular Reservation. BIA should not participate in state or county road construction projects on a Reservation unless the local governments meet their own road construction responsibilities.

4. Where state/county road systems are substantially under guideline #3, efforts to correct the imbalance and/or secure state/county funding for BIA road construction projects should be documented, with copies to the Regional Office and Central Office Division of Transportation. This also applies to cases where the state/county established a road system but fails to meet construction needs on that system.

5. Use Class 11 trails to separate pedestrian (especially school) traffic and bicycle traffic from vehicular traffic.

6. The following are to be considered when evaluating what is “vital to the economic development” of tribes:

a. Connects active center of population

b. Promotes development of natural resources

c. Contributes to industrial activity

d. Contributes to economic development

e. Provides jobs for the community

f. Contributes to law and order

g. Removes isolation

h. Provides access to education

i. Provides access to hospital facilities

j. Contributes to accident prevention

k. Provides access for emergency services

2.2 Roadway Classifications

Roads are classified based on the functions they perform with regard to the movement of traffic and access to property. Within the TTP system there are two types of road classifications: State Highway Classifications and BIA/Tribal Road Classifications. Both the state and the BIA/Tribal systems use functional classification as the basis for classifying their roads.

Generalized Functional Classification Definitions

Functional classification is the grouping of roads, streets, and highways into integrated systems, each ranked by its relative importance and the function it is intended to serve relative to mobility and land access. It also identifies the role each street or highway should play in channeling the flow of traffic through a rural and/or urban environment in a logical and efficient manner. The three general functional classification categories are arterial, collector, and local roads. At one extreme, the arterial's function is to move through-traffic at high speeds over long distances with limited land access to adjacent property; cross-traffic is discouraged. Definitions of these general functional classifications, along with desirable characteristics, are provided below.

Freeways and Expressways primarily serve long-distance travel between major communities. Freeways provide the greatest mobility, with strictly controlled access allowed only at interchanges. No direct property access is allowed. Expressways also serve regional traffic with access permitted primarily at major intersections, although interchanges can be built for particularly high-volume intersections. Occasional direct property access may be permitted when there are no other options for providing access.

Arterials carry relatively large volumes of traffic through the state and to major trip destinations such as employment or commercial centers. Arterials fall into two categories, principal and minor. Principal (major) arterials include US and Interstate

highways and State highways that serve urban areas with a population greater than 50,000. Minor arterials are routes that provide interstate and intercounty service to cities and towns with populations of less than 25,000 and other traffic generators capable of attracting travel over long distances. Principal arterials usually have four traffic lanes (two lanes in each direction), provide storage for left turns at most intersections, and are separated by a median or continuous left turn lane. Minor arterials may have only two traffic lanes and should include a storage lane for left turns at major intersections. A minimum right-of-way width of 60 to 100 feet is needed for roads with more than four lanes. However, right-of-way should be based on preferable dimensions of each roadway element.

Collectors primarily serve intra-county and regional travel, rather than statewide travel, and have shorter travel distances than arterials. They also provide a balance between mobility and land access by customarily permitting access to all abutting properties. As with arterials, there are two categories of collectors: major and minor. Major collectors provide service to any county seat or community not served by an arterial road, and they serve other traffic generators of intra-county importance such as regional parks, consolidated schools, agricultural areas, and shipping points. Minor collectors are spaced at intervals consistent with population density, collect traffic from local roads, and provide access to all developed areas within a reasonable distance of a major collector or higher classified road. A minimum right-of-way width of 80 to 100 feet is desirable for a collector.

Local Roads comprise the balance of the road network and carry low-volume, low-speed traffic. The primary function of a local road is to provide access to individual parcels of property. Local roads usually serve residential areas and may also serve scattered business and industry sites that generate modest traffic. A minimum right-of-way of 60 to 80 feet is desirable for a local road.

State Highway Classification

The functional classification of roads has been used by state highway departments for many years for a variety of important highway functions such as assigning jurisdictional responsibility, determining cost allocations, allocating funds to local units of government, and establishing appropriate design standards. Prior to the enactment of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), it became apparent that the federally mandated functional classifications completed nearly 20 years ago, although routinely updated by the states, were no longer consistent among the states and needed to be reclassified before the establishment of the National Highway System (NHS). As a result, Congress included Section 1006(c) in ISTEA, which required the states to reclassify roads and streets within the state, under the oversight of the Federal Highway Administration,

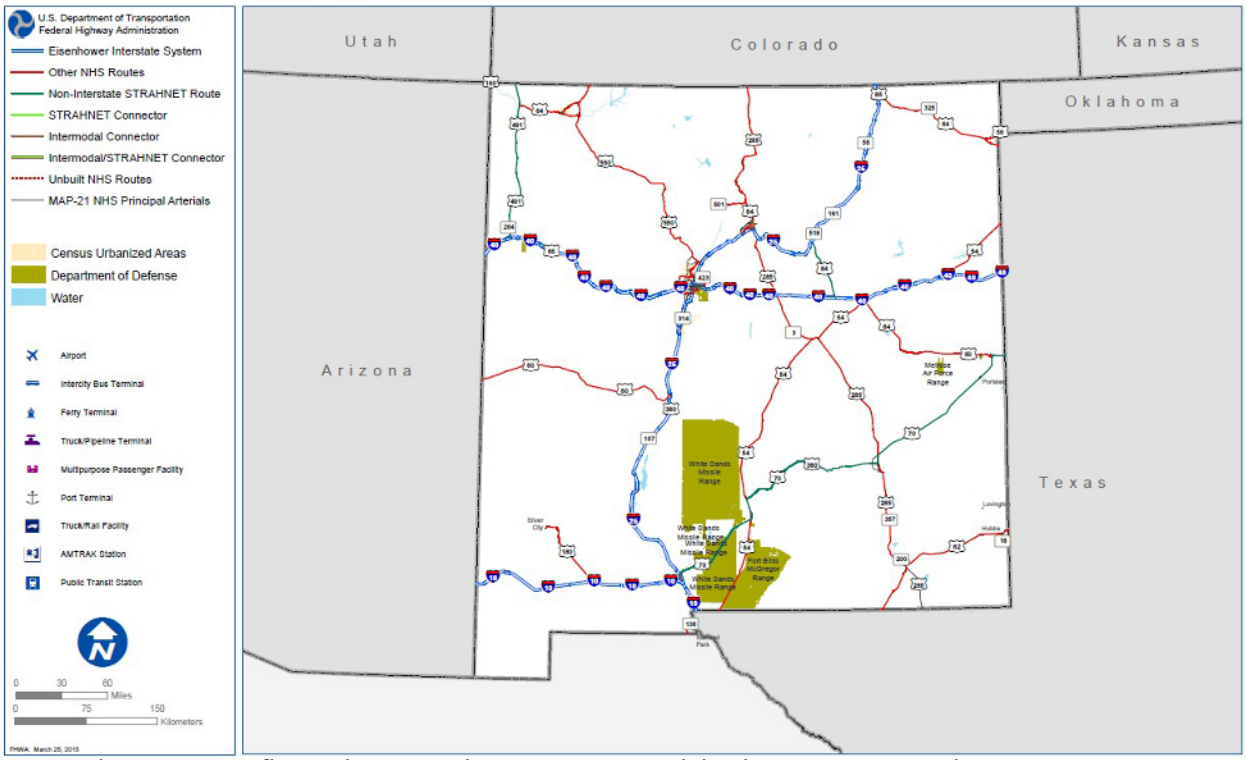
by September 20, 1996.

The state highway system includes all of the highways that NMDOT owns, operates, and maintains. Some of New Mexico's state highways are NHS routes, which means that they are considered routes "important to the nation's economy, defense, and mobility."[11]

2.3 Right-of-Way Status

Right-of-way (ROW) refers to real property and rights therein used for the construction, operation, or maintenance of a transportation or related facility. Construction cannot begin unless the ROW is certified.

Map 2. National Highway System - New Mexico



Source: http://www.fhwa.dot.gov/planning/national_highway_system/nhs_maps/new_mexico/nm_newmexico.pdf

11. "National Highway System," US Department of Transportation, Federal Highways Administration, April 14, 2016, http://www.fhwa.dot.gov/planning/national_highway_system/.

Table 3: Potential Agency or Governmental Roles and Responsibilities When Establishing a Tribal Project Agreement	
Land	**Roles and Responsibilities**
Trust Land	Tribe: Drafts Project Agreement, provides review copies for cooperating agencies, and executes the Project Agreement with cooperating agencies. BIA Regional Office: Processes right-of-way: reviews ROW applications and certifications; approves ROW documents; processes grants and acquisitions of ROW requests for allocated lands; responds to information requests; files Affidavit of Completion Forms; performs custodial functions related to storing ROW documents; ROW appraisal and negotiation; provides Title Status Reports (TSRs), Grants of Easement, and files ROW documents; reviews and approval. FHWA: Ensures ROW process is complete.
Restricted Fee Land	Tribe: Drafts Project Agreement, provides review copies for cooperating agencies, and executes the Project Agreement with cooperating agencies. BIA Regional Office: Processes ROW: reviews ROW applications and certifications; approves ROW documents; processes grants and acquisitions of ROW requests for allocated lands; responds to information requests; files Affidavit of Completion Forms; performs custodial functions related to storing ROW documents; ROW appraisal and negotiation; provides Title Status Reports (TSRs), Grants of Easement, and files ROW documents; reviews and approval. FHWA: Ensures ROW process is complete.
Fee Land	Tribe: Drafts Project Agreement, provides review copies for cooperating agencies, and executes the Project Agreement with cooperating agencies. FHWA: Ensures ROW process is complete.
State Owned	State DOT: Obtains necessary ROW and ensures utility relocation (both at State's expense). Tribe: Drafts Project Agreement, provides review copies for cooperating agencies, and executes the Project Agreement with cooperating agencies. FHWA: Ensures ROW process is complete.
County or Local Agency Owned Roads	Tribe: Drafts Project Agreement, provides review copies for cooperating agencies, and executes the Project Agreement with cooperating agencies. County/Local Agency: Obtains necessary ROW and ensures utility relocation (both at County's expense). FHWA: Ensures ROW process is complete.

2.4 Road Maintenance

Road maintenance on RNC land is performed by the RNC, NMDOT, and Cibola County. While in the past McKinley County has performed some maintenance on a one-mile portion of Canyon Road going to the Timberlake Subdivision by the county line, McKinley County currently does not maintain any roads within Chapter boundaries.

RNC Road Maintenance

The BIA is obligated by CFR 25, Part 170, to maintain the BIA road system to a safe and satisfactory standard based on the availability of funds and the road's as-built condition. Typically, the agency road engineers/managers work with the Tribes in establishing a road maintenance program to determine the type and level of maintenance to be performed on BIA roads within each Reservation based on the agency's road maintenance budget.

BIA Ramah Agency has been historically responsible for maintenance of RNC routes, but starting in 2015, RNC Office of Grants and Contracts began administration of road maintenance services and facilities on BIA routes through a Public Law 93-638 contract. RNC is a part of the Albuquerque BIA Southwest Regional Office service area. Road maintenance responsibilities of the RNC include:

- Road maintenance program administration
- Preservation and maintenance of routes
- Maintenance, repair, and replacement of drainage structures along roadways and driveways
- Snow and ice removal
- Installation, repair, and replacement of permanent traffic control devices
- Maintenance of Tribal Transportation Program bridges
- Vegetation mowing, brush and tree clearing, and litter removal
- Maintenance of guardrail, right-of-way fencing, and cattle guards
- Repairs due to washouts and slides and disaster response
- Maintenance and management of road equipment, shop buildings, and maintenance yard

Maintenance funds are limited, and BIA deferred maintenance on many Ramah Navajo routes for a number of years. Maintenance was frequently cited as a concern of residents in public meetings and in the LRTP community survey responses. As RNC has taken on primary responsibility for road maintenance, it

determines roads priorities in consultation with the RNC Transportation Committee, RNC BIA Agency, BIA Southwest Region, FHWA, and NMDOT. Maintenance priorities are frequently determined by weather and/or road conditions that inhibit access to employment centers, community services, and health facilities. Emergency road conditions have highest priority. Other priorities are determined based on surface type and use, or by season and the associated snow and ice Maintenance Management Plan.

NMDOT Road Maintenance

NMDOT's Maintenance Department provides routine maintenance on NMDOT routes along NM53 and from the Ramah Patrol Yard out of District 6.

Cibola County Road Maintenance

Cibola County maintains five Cibola County routes within RNC boundaries. Most maintenance performed is standard maintenance, unrelated to storm damage. Prior to the creation of the RNDOT, the County frequently fielded calls from RNC members requesting maintenance help on nearby routes. If such calls come in now, the County refers them to RNC offices.

2.5 Traffic Control

Traffic control devices include all signs, signals, markings, and devices placed on or adjacent to a street or highway by a public body having authority to regulate, warn, or guide traffic. Most intersections within Chapter lands have stop signs, but there are no traffic signals.

The *Manual on Uniform Traffic Control Devices* is the publication that sets forth the basic principles governing the design and usage of traffic control devices. The manual was prepared by a national committee that included state, county, and municipal representation.

2.6 Bridges

The TTP bridge inventory involves gathering, maintaining, and distributing all information as required for the National Bridge Inventory database. This includes information such as route number, bridge location and type, length, width, surface type, bridge sufficiency ratings, and bridge number. This database is an important tool in identifying existing bridges with the most significant repair and/or replacement needs.[12]

12. Transportation Planning Activity Guidelines, US Department of Transportation Federal Highway Administration Indian Reservation Roads Program, https://www.planning.dot.gov/focus_tribal.asp.

FHWA, in consultation with the states, has assigned a sufficiency rating (SR) to each bridge (greater than 20 ft.) inventoried. Formula rating factors are as outlined in the current Recording and Coding Guide for Structures Inventory and Appraisal (SI&A) of the Reservation's Bridges.

The FHWA states: “A Structurally Deficient (SD) bridge is one that (1) has been restricted to light vehicles only, (2) is closed, and/or (3) requires immediate rehabilitation to remain open. A Functionally Obsolete (FO) bridge is one in which the deck geometry, load carrying capacity (comparison of the original design load to the State legal load), clearance, or approach roadway alignment no longer meets the usual criteria for the system of which it is an integral part.”

The Fixing America’s Surface Transportation (FAST) Act (Pub. L. No. 114-94) requires inspection of all public bridges, including tribal bridges, and data must be reported for inclusion in FHWA’s National Bridge Inspection System (NBIS). To be eligible for rehabilitation or replacement, a bridge must be structurally deficient and/or functional obsolete, with a sufficiency rating of 80 or less for rehabilitation, or 50 or less for replacement.

2.7 Mail Service

Two US Post Offices serve RNC:

- 3347 Bond Street, Ramah, NM 87321
- 125 Campus Drive, Pinehill, NM 87357

All mail to RNC is distributed through the above post office facilities. Courier service delivery (e.g., FedEx and UPS) is available to Tribal addresses.

2.8 School Bus Routes

There are two school districts that serve youth and provide busing within Chapter lands: Ramah Navajo School Board, Inc., Gallup-McKinley County Schools, and Cibola County Schools.

Some students attend Pine Hill School, a BIA school that offers a K–12 program. The Ramah Navajo School Board, Inc., founded the school in 1970. The school is fully accredited by the State of New Mexico and the NCA, and more than 750 students have graduated from its high school.[13] Pine Hill School provides busing for approximately 200 students. The school owns eight buses and operates six routes. The number of students per route varies from 15 to 16 students on the low range to a high range of about 60 students on the Yucca route. The mileage covered by the routes ranges from 12 to 96 miles daily. Generally, there are no designated stops

13. "RNSB History," Pine Hill Schools, Dec. 10, 2015, http://rnsb.k12.nm.us/rsnb-history/.

along the bus routes since students are picked up and dropped off at their residence, where they are usually met by a parent/guardian. The exception is during rainy or snowy weather when the roads in residential areas become too muddy or slick for buses to drive in safely and parents have to drive to the main road to drop off and pick up students.

Ramah Elementary and Ramah Mid/High School are public schools within Gallup-McKinley County Schools. Gallup-McKinley County Schools have a state-approved agreement with Cibola County to provide busing to 260 students attending Ramah Elementary and Ramah Mid/High School. Gallup McKinley County Schools have contracted services from Lamson Transportation to operate four bus routes along the Candy Kitchen area on BIA Route 122. As a result of an agreement with Pine Hill School, buses from Gallup-McKinley County Schools do not enter Pine Hill. With the exception of the special education bus route, which covers a span of 100 miles per day, most routes cover an average span of 70 miles per day that equal an approximate 45-minute ride in the morning and afternoon.

Located in a rural setting, several students have to travel approximately 15 miles on unpaved roads in poor condition to reach the nearest bus route since District buses drive only on paved roads. In response, the District participates in the statewide Per Capita Feeder Program. In the Program, parents receive a mileage rate of reimbursement for utilizing feeder routes to connect with existing school bus routes or to provide service where regular school bus transportation is impractical because of distance, road conditions, or scarcity of population.[14]

2.9 Public Transportation

Navajo Transit System (NTS) provides public transportation for the Navajo Nation.[15] Currently, NTS offers service to 41 out of 110 Navajo chapters. Because of funding constraints, the large service area, and limitations on the kinds of routes that NTS buses can traverse, NTS does not reach some areas where service is desired.

Despite a strong need for transit on RNC and to neighboring communities to access employment, shopping, and service destinations, there are currently no routes that go to Ramah Navajo Chapter. Access to transit is necessary to help address the high unemployment rate on RNC land and isolation experienced by RNC elders without a personal vehicle.

14. “Manual of Procedures PSAB Supplement 19 Transportation,” PSAB Supplement 19, Albuquerque Public Schools, Dec. 9, 2015, http://www.aps.edu/finance/accounting/new-mexico-manual-of-procedures-for-public-schoolaccounting- and-budget-psab/Supplement 19-Transportation.pdf.
15. Navajo Transit System, “About Us,” Feb. 11, 2016, http://www.navajotransit.com/about-us.html.

While there is limited transportation available to elders for nonemergency medical appointments through Safe-Ride Services, the need for transportation options for seniors extends well beyond this.

2.10 Existing Traffic Volume

Traffic volume counts are the most common measure of roadway use and are a required component of most traffic engineering analyses. The traffic volume study estimates the annual average daily traffic (AADT) volumes and peak-hour traffic of any routes affecting traffic within a Reservation and public roads within the TTP system. This data is used to update the road inventory files, determine capacity deficiencies, and identify potential roadway improvement projects.

Short duration counts are designed to provide roadway segment-specific traffic count information on a cyclical basis. Average daily traffic (ADT) is defined as the sum of all traffic, in terms of vehicles per day (VPD), passing a specific point during a given time (in whole days), greater than one day and less than one year, divided by the number of days in that period. Except for permanent count stations maintained by various highway agencies, the ADT for most locations is estimated based on counts taken over a relatively short time.

For most routes on RNC land, the most recent traffic counts were done in 2007. New Mexico DOT last calculated counts on NM 53 in 2011. Annual average daily traffic projected for 2012–2014 showed decreasing traffic, falling from 1,226 in 2012 to 1,178 in 2014. Congestion is not reported to be a significant local issue.[16]

Traffic Count Data Summary

Route Number	Section Number	Existing ADT	ADT Year	Percent Trucks	Projected ADT	Traffic Count	Seasonal Factor	ADT Source	ADT Latitude	ADT Longitude
0125	210	1,110	2007	4	1,648	1,110	1.0000		35.0531	-108.3958
0184	10	776	2003	4	1,152	776	1.0000		34.8900	-108.4070

2.11 Airports[17]

Aviation is an important part of New Mexico's transportation infrastructure, providing its citizens and businesses access to critical services, such as air ambulance services, firefighting, agricultural spraying, law enforcement, military training, business travel, air cargo services, pilot training, and tourism.

The New Mexico Airport System (NMAS) is composed of 61 publicly owned public

15. "TIMS Road Segments by Posted Route/Point with AADT Info," May 27, 2015, accessed Jan. 11. 2016, http://www.dot.state.nm.us/content/dam/nmdot/Data_Management/NM_AADT_Listing.pdf.
16. "New Mexico Airport System Plan Update," New Mexico Department of Transportation, Nov. 30, 2015, http://nmasp.airportstudy.com/files/2014/10/NMSP-chpt1-04152015.pdf.

use aviation facilities, including 55 airports, four heliports, one seaplane base, and one proposed airport. The locations of the NMAS facilities are depicted on the map below. System facilities are located within 30 of New Mexico's 33 counties. Additionally, NMDOT groups counties into districts for administrative purposes.

Ramah Navajo Chapter is just under 20 miles by road, or approximately 20 minutes, from Zuni–Black Rock Airport, an 88 acre general aviation facility that is publicly owned by the Pueblo of Zuni, located within McKinley County.[43] Zuni–Black Rock Airport has two 4,807 x 50 foot and 1,465.2 x 15.2 foot asphalt runways in fair condition.

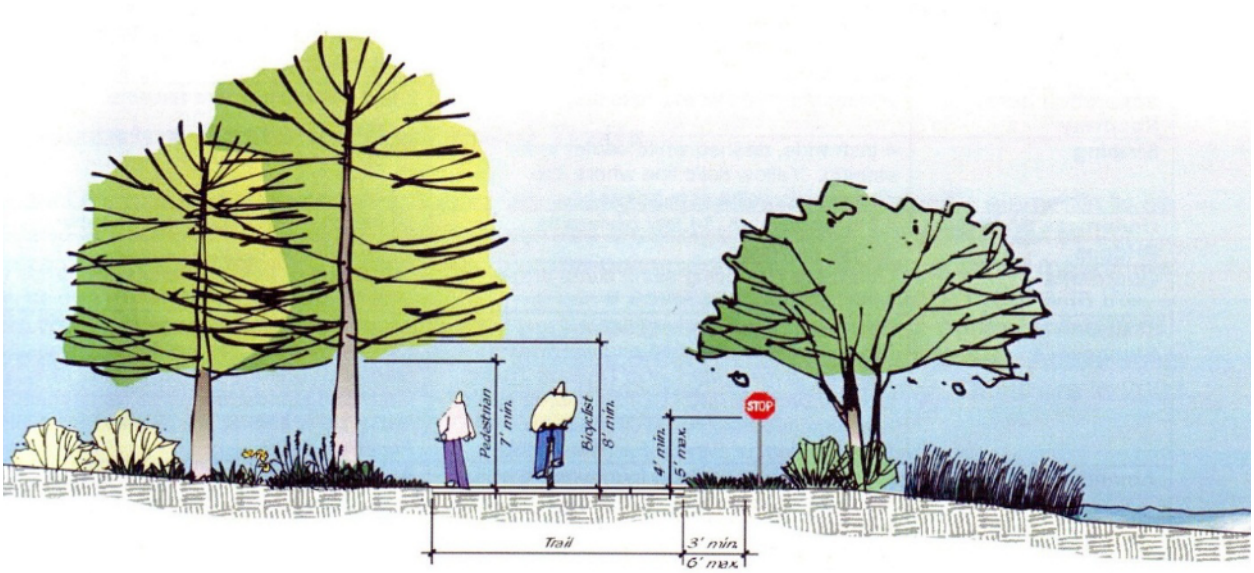
2.12 Trail and Path System

There are currently no designated trails and few sidewalks on RNC lands. RNC has interest in establishing designated trails in various locations on RNC land.

Through the course of the 20-year planning period, Ramah Navajo may wish to consider a more extensive network of routes for pedestrians and bicyclists. If so, the Chapter should consider preparation of a Trails Plan. This section outlines planning and design considerations should the Chapter wish to develop a more established trail and path network.

Potential Goals for a Trail and Path System on the RNC Lands

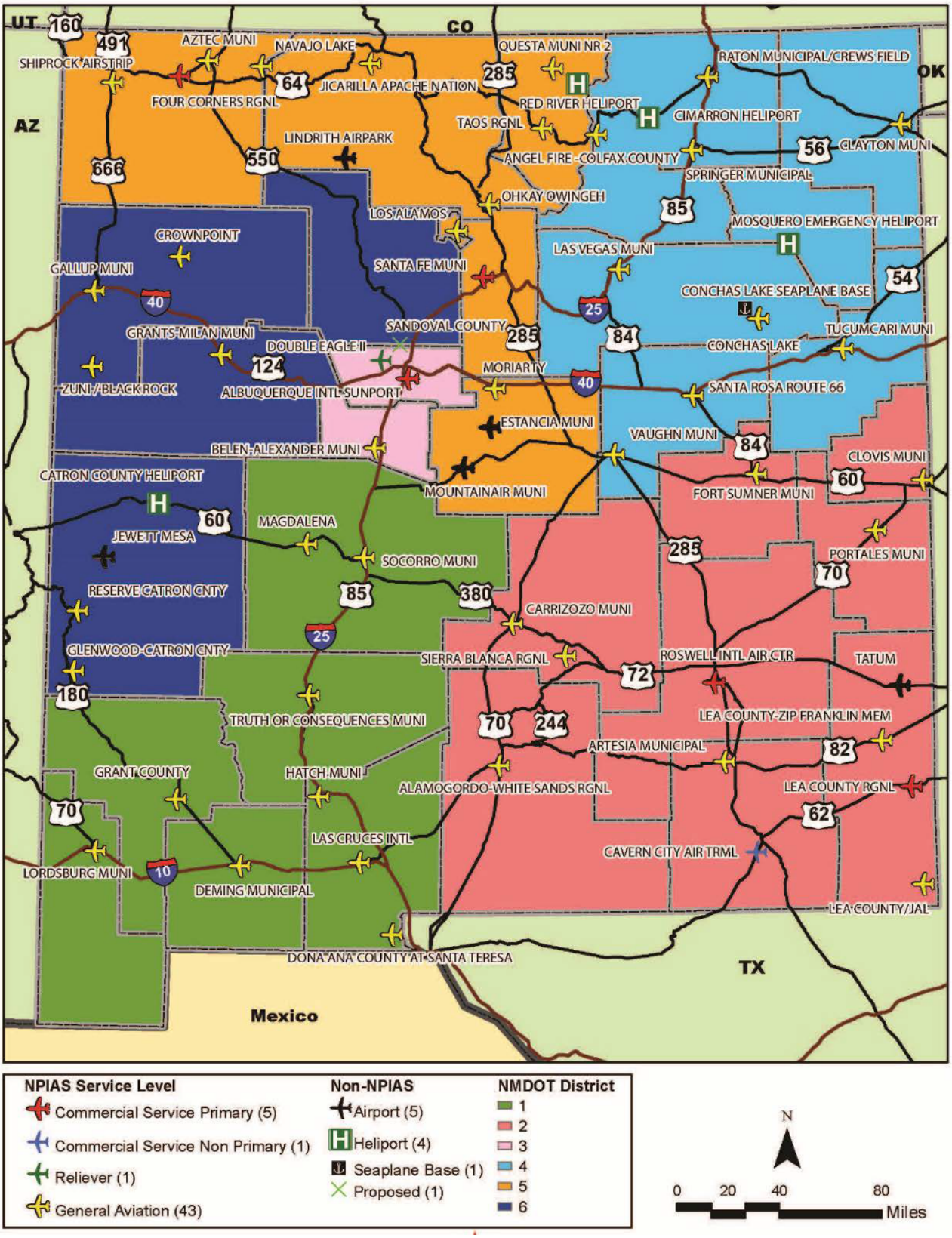
Community Wellness and Recreation. The system should provide Ramah members and residents with safe, diverse, well-marked, and attractive options for



17. "Black Rock Airport (ZUN) Information," Airportdata, Nov. 30, 2015, http://www.airport-data.com/airport/ZUN/.

DRAFT

Map 3: New Mexico Public Use Airports



traveling between and among community destinations and for [illegible] outdoor fitness and recreation.

Transportation System Expansion, Enhancement and Diversification. The system should complement the existing network of roads and bridges with safe, accessible, intermodal options for movement within and across RNC lands.

Tourism-Focused Economic Development. The system should increase revenue and employment opportunities by expanding the number and diversity of recreational and interpretive opportunities—both guided and unguided—for visitors to RNC.

Chapter-Focused Trail Identification, Documentation, and Protection. The system should be designed to protect and enhance cultural values of the Ramah Navajo Chapter.

Pedestrian and Bicycle Facilities. Careful planning involving a wide variety of stakeholders should precede any future construction of cycling or mixed-use paths. Pathways may be adjacent to roadways, separated from the roadway but running parallel to the route, or crossing areas not part of the road network. The most favorable locations for offstreet facilities are often found along parkways, streams, and park and recreation areas. An off-street path is preferred if it provides better connections, is more scenic, is a more efficient transportation route than an on-street facility, and does not pose a hazard at intersections. These paths should be wide enough to accommodate the expected type of use.

Guidelines for Developing a Trail and Path System

When planning for cycling and pedestrian facilities, users can be grouped into at least three groups, with appropriate facilities provided for each:

Group A – Skilled Cyclists. Skilled cyclists are experienced riders who usually prefer riding on roads, which often feel safer and more efficient than off-street paths. They are interested in using off-street paths only if the paths allow for separation between bicyclists and pedestrians, are designed to allow for higher speeds, and offer a more direct route than the nearest alternative on-street route.

Group B – Less Skilled, Youthful, or Family Cyclists. Group B cyclists are uncomfortable in traffic. They may be cycling either for recreation or transportation, traveling at slower speeds, taking shorter trips, and may not be able to handle steeper grades. They may also require frequent rest stops.

Most parents discourage younger, less experienced cyclists from cycling on roads. When properly designed, bike paths can provide more appropriate routes for this group. Paths designed to bypass highways and busy streets and provide direct

connections between parks, open space, schools, recreation centers, shopping, and other youth-oriented destinations are especially useful.

Family cyclists often have young children in trailers, in bike seats, or following on small bikes. Residential streets, bike lanes, or sidewalks often provide linkages to off-street bike paths. When these linkages are not feasible, these cyclists often drive to trail head parking to access a path.

Group C – Pedestrians. Walkers, joggers, skateboarders, in-line skaters, and roller skaters are the "slower speed" users of sidewalks and paths. They generally can, and often do, change their speed and direction suddenly, leaving bicyclists insufficient time to react to avoid collisions.

Typical Primary Multipurpose Off-Street Trail Cross Section

The following is a description of the two types of trails typically constructed in communities. All trails should be designed and constructed to current ADA standards.

Primary Multipurpose, Off-Street Trails. Paved multi-purpose, off-street trails form the major trail spines. They accommodate a variety of trail users, including walkers, joggers, recreational cyclists, and occasional commuter cyclists within the same trail corridor. The preferable location of these trails is along drainage ways or other linear features, connecting parks, open space areas, recreational facilities, and major destination nodes. Environmentally sensitive areas should be avoided. Primary trails that must be located adjacent to roadways should incorporate a 50-foot easement where feasible and appropriate. A 3-foot-wide soft-surface shoulder on one side of the trail should be provided for joggers and walkers who prefer a softer surface. Figure 8 illustrates the cross-section of a primary multipurpose off-street trail and includes trail widths, trail shoulders, and clearance requirements.

Secondary Multipurpose, Off-Street Trails. Secondary trail links should be provided through development areas to the primary trail system, as well as to parks and open space areas that are not on the primary system. These paved multipurpose, off-street trails are integral to the circulation and open space system of the development. Like primary trails, secondary trails should be located in an open space corridor and accommodate a variety of trail users, including walkers, joggers and bicyclists. Secondary trails that must be located adjacent to roadways should incorporate a 30-foot easement where feasible and appropriate.

2.13 Transportation Safety

RNC completed a Strategic Transportation Safety Plan in conjunction with work on the 2016 LRTP. The Transportation Safety Plan outlines potential safety partners for

RNC, provides an overview of existing transportation safety-related efforts by agencies and other organizations (including a profile of available police, fire, and other emergency services), provides an overview of available crash data, and outlines transportation safety emphasis areas for RNC, along with appropriate strategies to address those emphasis areas.

3.0 LAND USE PLANNING

Land use planning allows the Tribe to establish policies consistent with its goals and objectives applicable to the community concerning natural resource protection, environmental constraints, recreation, open space, and the land needs derived from the population, housing, economic development and transportation objectives. These policies guide planning for future development.

RNC has developed a Comprehensive Land Use Plan (CLUP). The plan provides a framework for the location and type of future development on RNC lands. It includes and reflects community goals and priorities, providing background on existing conditions as well as a clear path forward that includes a land use map.

Some basic principles govern the development of a land use plan:

- **Existing uses.** One of the main factors that motivate people to engage in community planning is the desire to protect what they perceive as valuable. A land use plan helps communities identify valued resources for protection going forward.

- **Use compatibility.** Land use planning evolved simultaneously with its implementation tool, zoning, which is based on the principle of separating land uses into compatible districts. Today, the most basic principles of compatibility separate industrial uses from residential ones, for the protection of each of those categories of use, and generally also separate residential uses from intense commercial uses.

- **Land demand.** A starting point in land use planning is often land demand projection, typically focusing on developed land needs. Land use planning documents project the future population and then determine how much land will be necessary to house that population. Governmental, industrial, and commercial needs are based on the Tribe's goals and objectives and economic development opportunities.

- **Environmental opportunities and constraints.** Environmental analysis helps to determine which areas are most appropriate for future development and which areas should be protected.

- **Cultural resources.** Identification of locations or types of valued cultural resources in the plan helps protect these resources for future generations.

- **Transportation influences.** Transportation significantly influences land use patterns. An example of this is the compatibility of particular land uses with types of roads.

- **Agricultural Preservation.** If protecting agricultural land is a priority, preservation of agricultural land becomes a major principle of land use planning.

3.1 Land Use Designations

Residential. This designation identifies areas primarily made up of and planned for housing units. It encompasses the majority of single-family housing units currently located on Chapter lands. While the basic character is single-family dwellings, a mixture of duplexes and apartment complexes may also occur within this designation.

Many communities today plan for housing to help ensure that there will be housing opportunities for all people. Housing must fit into some sort of land-use plan. Those living in housing will depend on a transportation system to provide access to work, shopping, and services.

Mixed Use. The specific purpose of a mixed-use designation is to encourage residential uses in conjunction with commercial activities and to create more flexibility.

Cemetery. This designation is for an area set apart for containing graves, a burial ground, or graveyard and for traditional burial ceremonies.

Conservation and Open Space. This designation identifies an area that is not developed and is expected to remain in a natural state. It is for the protection of natural resources as well as preservation of wildlife habitat.

Public and Governmental. The specific purposes of public and governmental land use is to provide an area for schools, cultural facilities, public safety facilities, government offices, public buildings in parks, recreation areas, medical offices, and other public uses which are beneficial to the community.

Commercial. The commercial designation provides appropriately located areas consistent with the economic development plans of the Tribe. This area offers opportunities to strengthen the Tribe's economic base and provide employment close to home for residents.

Park and Recreation. This designation provides for the orderly and attractive grouping of recreational-oriented service establishments. This designation also includes public buildings in parks and recreation areas.

Agricultural. Land allocated to farming and nonfarming uses, routine and ongoing agricultural activities.

Other designations may apply to the Chapter, such as forest, grazing, and/or restricted areas. This should be addressed as part of the comprehensive plan.

DRAFT

4.0 TRANSPORTATION PLAN

The Transportation Plan chapter builds on the data gathered in development of the previous section and looks forward toward meeting the needs of the Ramah Navajo Chapter over the next 20 years. To accomplish this, planners engaged in public involvement, incorporated the RNC's goals, and considered the Tribe's future infrastructure development, travel demand, and trip generators (the reasons people drive along RNC roads). The transportation priorities identified in this section grew from this foundation.

4.1 Public Involvement

In accordance with the Federal Register, vol. 69, no. 137, Monday, July 19, 2004, Rules and Regulations (codified at 25 Code of Federal Regulations (CFR) Part 170), §170.413, BIA or the Tribe must solicit public involvement. Public involvement occurs throughout the transportation planning process.

RNDOT in consulation with Lenea Corporation, posted a series of six public meetings at the Ramah Navajo Chapter House to determine community priorities. The meetings on January 11, 2023, 1 p.m.-3 p.m., and January 12, 2023, 10 a.m.-12 p.m., and 1 p.m.-3 p.m., were attended. A stakeholder questionnaire was distributed, and the following community concers were recorded:

SAFETY CONCERNS

Unsafe roadways and intersections
Poor pavement conditions
Rt 125
Rt 122
Birdspring Loop
Trail
Water ponding on 122 in Mountain View

CONGESTION

Congested roads and intersections morning and afternoon
RNC to DPS
Campus roads 4-way intersection
Pedestrian, bicycle, transit, trails:
Sidewalk at RNC
Signs
Pinehill Market / school crossing
Mountain View pedestrian crossing

FUTURE DEVELOPMENT

Across from RNC

ACCIDENT LOCATIONS

BIA125 / 53 junction
BIA 125 / 122 near misses

PARTNERSHIP OPPORTUNITIES

McKinley, Cibola Counties
Other DOT, agency

Public involvement documentation is included in Appendix J.

4.2 Tribal Goals

Mission

The mission of the Ramah Navajo Chapter Office of Grants and Contracts is to nurture the well-being and growth of our community and its people by promoting and carrying out comprehensive community services, programs, and opportunities; promoting and advocating self-determination; maintaining and enhancing respect of our Navajo traditional values, cultural heritage, and family; and encouraging continuous growth toward self-sufficient community. Through this transportation plan and transportation safety plan, the RNC seeks to create a framework for a transportation system that connects people, goods, and services safely; provide opportunity for economic development; protect the Chapter's cultural traditions and environment; and preserve natural resources, quality of life, and the health and education of tribal members.

Goals

The Ramah Navajo transportation goals include several key components. The transportation system should provide:

- A safe transportation network for Chapter members and the public
- Clear route guidance using current signage system components and standards
- All season access to the tribal programs and community destinations
- System connectivity to provide an efficient network of routes on Chapter lands
- Improvement of deteriorated roadway conditions within RNC planning boundaries

- A sustainable transportation network, optimizing available resources and working toward a high quality of life and economic security for RNC members

4.3 Community Needs and Priorities

During the development of the Long Range Transportation Plan (LRTP) for the Ramah Navajo Chapter, many of the community's priorities focused on the road conditions throughout the Chapter. Individuals appeared to relate the overall road conditions (including surface type) directly to their safety. This is primarily due to the community's rural setting. Reliable access to basic necessities (food), health services, emergency response, schools, and work is crucial to maintain members' well-being, quality of life, and safety.

The following items are listed in order of importance extracted from both the online surveys and public meeting comments:

1. Need for improvements to existing surfaces / improved access to residents
2. Maintenance/repair of existing roads
3. Need for improved signage

The locations that were referenced the most by community members, listed in order of importance are:

1. Pine Hill Area – Housing Subdivision, RN 140 / RN 125 Intersection
2. Mountain View Area
3. Range 3 – RN 122 / RN 145 and vicinity due to large number of families located in this area with extreme road conditions during inclement weather

Other safety concerns in the surveys were related to intoxicated drivers, animal collisions, and distracted drivers, with little emphasis on improved sidewalks and bike paths. The Ramah Navajo Community is situated in a very rural setting with scattered home sites and families located in designated "range" units. Historically, Navajo families are nomadic and tend not to be located within "residential housing units," so there was less focus on "children playing on roads" or having speed bumps. Sidewalks, bike paths, and curb/gutter improvements are limited to the two small towns of Mountain View and Pine Hill.

Although not specifically called out in the surveys, the safety studies to be conducted throughout the Ramah Chapter will consider improved bus stops so kids aren't in danger as they access buses, bicyclist safety enhancements to include the importance of increasing the use of bike helmets, and other related pedestrian and bicyclist improvements.

4.4 Future Development Plans

As mentioned in section 3.0, RNC has begun the process of updating the CLUP. In the interim, there are no significant projects underway. When the CLUP is completed, the document could have significant impacts on transportation planning on the Chapter lands, as traffic demand changes based on type and location of future facilities. The LRTP and Strategic Safety Plan should be updated as necessary based on future development plans outlined in the CLUP.

Zuni Mountain Trails Project. The Zuni Mountain Trails Project involves a proposal for construction of a network of over 200 miles of primarily mountain bike trails on Forest Service lands north of the Ramah Navajo Chapter. The US Forest Service (USFS) has performed an environmental assessment (EA) and is in the process of finalizing the document. The Navajo Nation has been involved in the process since the beginning of the project, and 13 chapters of the Navajo Nation—including the Ramah Navajo Chapter—are included on the project mailing list. USFS has received input from the Navajo Nation on the EA, and one alternative was created based on concerns about proposed trails in the vicinity of Hogback Ridge. USFS indicates that Ramah Navajo has not provided comments on the EA. A decision on the alternatives is expected in late summer or early fall, with an objection period to follow. Given the project location north of the reservation, it does not appear that if constructed, the project would have a notable impact on transportation on RNC lands.[18]

State and Regional Transportation Projects. There are few state or regional transportation projects planned on Ramah Navajo Chapter lands. NMDOT is considering pursuit of safety studies along NM 53 from Zuni to El Morro and at the intersection of NM 53 and South Bloomfield Avenue to determine whether a stop sign is needed.

4.5 Projected Travel Demand

Travel demand is a measure of the number of people (or vehicles) that travel to and from all the various possible locations within and outside of a given area. Levels of service are characterized by American Association of State Highway and Transportation Officials (AASHTO) as follows:[19]

18. Arnold Wilson, "Zuni Mountain Trails Project," telephone interview with WHPacific, Jan. 1, 2016.
19. *Highway Capacity Manual* (Washington, DC: Transportation Research Board, National Research Council, 2000).

LOS A Completely free flow conditions.

LOS B Free flow of traffic; however, the presence of other vehicles is noticeable. There is a slight decrease in maneuverability on the roadway.

LOS C Denser traffic presents a noticeable influence on operations. Maneuverability is lessened, and travel speeds are reduced in some cases. Minor disruptions can cause serious decreases in service.

LOS D Maneuverability is severely restricted due to traffic congestion, and travel speed is reduced due to the volume of traffic.

LOS E Operations are at or near capacity for the roadway, with vehicles operating with minimum spacing for maintaining uniform flow. Disruptions cause queues to form and level of service to deteriorate further.

LOS F Represents forced or breakdown flow, with operations at capacity and queues formed at breakdown locations. Brief periods of movement are followed by stoppages.

As discussed in 2.10, for most routes on RNC land, the most recent traffic counts were done in 2007. New Mexico DOT last calculated counts on NM 53 in 2011. Annual average daily traffic projected for 2012–2014 showed decreasing traffic, falling from 1,226 in 2012 to 1,178 in 2014. Congestion is not reported to be a significant local issue. Given current conditions and reported planned development, it appears that road surface conditions and safety considerations are more likely to drive future transportation needs than congestion on RNC routes.[20]

4.6 Trip Generation

The most reliable way to estimate the traffic generated by a proposed development is to reference trip generation rates observed at an existing development of similar land use and building type. For this purpose, the Institute of Transportation Engineers (ITE), *Trip Generation*, 9th edition (2012) manual was consulted.[21]

The following table illustrates ADT rates for land use categories often found on American Indian Reservations.

Future Ramah development would be expected to have an impact on traffic volume and may require revisiting how well the network is accommodating demand.

20. "TIMS Road Segments by Posted Route/Point with AADT Info," May 27, 2015, accessed Jan. 11, 2016, http://www.dot.state.nm.us/content/dam/nmdot/Data_Management/NM_AADT_Listing.pdf.
21. ITE, *Trip Generation*, 9th ed. (Washington, DC: ITE, 2012).

Table 4: ADT Rates for Land Use Categories	
Land Use	ADT Rate
Residential	9.52 trips/day/dwelling
Community Center	33.82 trips/day/1000 sq. ft.
Light Industrial	6.97 trips/day/1000 sq. ft.
Commercial (Shopping Center)	42.70 trips/day/1000 sq. ft.
Commercial (Convenience Market)	737.99 trips/day/1000 sq. ft.
Commercial (Fast Food Rest. w/ Drive Through)	496.12 trips/day/1000 sq. ft.
Government Office	68.93 trips/day/1000 sq. ft.
US Post Office	108.19 trips/day/1000 sq. ft.
Health Clinic	31.45 trips/day/1000sq. ft.
Campground / RV Park	.27 trips/peak hour (4–6)/occupied camp sites
City Park	1.89 trips/day/acre
Elementary School	15.43 trips/day/1000 sq. ft.
Middle / Junior High School	13.78 trips/day/1000 sq. ft.
High School	12.89 trips/day/1000 sq. ft.
Casino / Video Lottery Establishment	13.43 trips/peak hour (4–6)/ 1000 sq. ft.
Source: ITE, *Trip Generation*, 9th ed. (2012).	

As identified in section 4.2, the following goals have guided RNC's effort on this LRTP and Safety Plan:

- A safe transportation network for Chapter members and the public
- Clear route guidance using current signage system components and standards
- All season access to the tribal programs and community destinations
- System connectivity to provide an efficient network of routes on Chapter lands
- Improvement of deteriorated roadway conditions within RNC planning boundaries

- A sustainable transportation network, optimizing available resources and working toward a high quality of life and economic security for RNC members

These goals helped to shape the development of the project evaluation matrix. The matrix rewards projects that help to meet these goals through a continuum of point values. Projects that best help to meet these goals—such as projects with significant safety benefits or that improve access for a large number of RNC residents—were awarded more points to reflect those impacts.

Projects recommended for development reflect the criteria and goals above.

4.7 Proposed Projects

The recommended 20-year transportation plan for Ramah Navajo Chapter consists of an integrated set of roadway improvements and construction projects needed to meet current and projected goals. The proposed projects are listed in the order of priority as identified by RNC. The prioritization of the projects and any additional projects or deletion of the following projects will be upon the approval of the Chapter.

Transportation safety projects are identified as such.

Projects are scheduled for the short term (0–5 years), midterm (5–10 years) and long term (over 10 years).

Costs listed are planning level estimates by project type.

4.7.1 Short-Term Projects (0-5 years)

Project Name	RN 125 South - Phase I		
Improvement Type	Pavement Full Reconstruction		
Project Description	Complete reconstruction of MP 12.8 to 16.8 - first 4.0 miles south of Pine Hill		
Coordinates	Beg: 34°53'20"N/ 108°25'4"W	End: 34°50'8"N/ 108°26'36"W	
Unit	4	Score	42
Estimated Cost	$9,410,000	Phasing	Short

Project Name	RN 125 South - Phase 2		
Improvement Type	Pavement Full Reconstruction		
Project Description	Complete reconstruction of MP 16.8 to 18		
Coordinates	Beg: 34°50'8"N/ 108°26'36"W	End: 34°49'13"N/ 108°27'8"W	
Unit	4	Score	42
Estimated Cost	$2,582,000	Phasing	Short
Project Name	RN 125		
Improvement Type	Pavement Full Reconstruction		
Project Description	Complete reconstruction of MP 0 to 4.4, starting at SR 53		
Coordinates	Beg: 34°58'31"N/ 108°25'46"W	End: 34°56'35"N/ 108°25'56"W	
Unit	2, 4, 5	Score	41
Estimated Cost	$3,738,000	Phasing	Short

4.7.2 Mid-Term Projects (5-10 years)

Project Name	RN 125 South - Phase 3		
Improvement Type	Pavement Full Reconstruction		
Project Description	Complete reconstruction of MP 18 to 26		
Coordinates	Beg: 34°49'13"N/ 108°27'8"W	End: 34°48'9"N/ 108°33'12"W	
Unit	4	Score	45
Estimated Cost	$14,560,000	Phasing	Medium
Project Name	RN 122 - Phase 3		
Improvement Type	Pavement Full Reconstruction		
Project Description	RN 122 - Full Reconstruction		
Coordinates	Beg: 34°54'0"N/ 108°22'45"W	End: 34°54'16"N/ 108°25'13"W	
Unit	2, 3, 4	Score	42
Estimated Cost	$2,129,000	Phasing	Medium

DRAFT

Project Name	RN 145 - Phase 1		
Improvement Type	Earth to Gravel		
Project Description	Upgrade surface to gravel. Raise roadbed 3 to 4, add equalizer pipes for water conveyance		
Coordinates	Beg: 34°53'57"N/ 108°17'59"W	End: 34°54'27"N/ 108°17'21"W	
Unit	3	Score	38
Estimated Cost	$858,000	Phasing	$858,000
Project Name	RN 139 Drainage		
Improvement Type	Drainage		
Project Description	Change pipes to box lift near intersection of RN 139 and RN 227		
Coordinates	34°55'34"N/ 108°22'5"W		
Unit	4	Score	36
Estimated Cost	$113,000	Phasing	Medium
Project Name	RN 195		
Improvement Type	Earth to Gravel		
Project Description	Improve to gravel surface beginning and ending on RN 125		
Coordinates	Beg: 34°47'37"N/ 108°31'25"W	End: 34°47'34"N/ 108°31'54"W	
Unit	5	Score	32
Estimated Cost	$527,000	Phasing	Medium
Project Name	RN 125 / RN 122 (MV) Intersection Roadway Safety Audit		
Improvement Type	Roadway Safety Audit		
Project Description	Perform Roadway Safety Audit / Intersection Improvements near RN 122 in Mountain View		
Coordinates	35°0'10"N/ 108°24'24"W		
Unit	2	Score	38
Estimated Cost	$15,000	Phasing	Medium

DRAFT

Project Name	RN 125 / RN 140 Intersection Roadway Safety Audit		
Improvement Type	Roadway Safety Audit		
Project Description	Perform Roadway Safety Audit / Intersection Improvement at intersection of RN 125		
Coordinates	34°57'11"N/ 108°26'29"W		
Unit	4	Score	36
Estimated Cost	$15,000	Phasing	Medium
Project Name	RN 125 / RN 122 (PH) Intersection Roadway Safety Audit		
Improvement Type	Roadway Safety Audit		
Project Description	Perform Roadway Safety Audit; Excessive speeding around curve for southbound RN 125 traffic		
Coordinates	34°57'11"N/ 108°26'29"W		
Unit	4	Score	36
Estimated Cost	$15,000	Phasing	Medium
Project Name	RN 125 / RN 122 (PH) Intersection Roadway Safety Audit		
Improvement Type	Roadway Safety Audit		
Project Description	Perform Roadway Safety Audit / Intersection Improvement at intersection of RN 125 and RN 122 in Pine Hill		
Coordinates	34°54'16"N/ 108°25'13"W		
Unit	4	Score	35
Estimated Cost	$15,000	Phasing	Medium
Project Name	NM-53 / BIA 135 Intersection Roadway Safety Audit		
Improvement Type	Roadway Safety Audit		
Project Description	Perform Roadway Safety Audit at NM-53/BIA 135		
Coordinates	35°4'6"N/ 108°24'41"W		
Unit	2	Score	35
Estimated Cost	$15,000	Phasing	Medium

DRAFT

Project Name	RN 125 / RN 139 Intersection Roadway Safety Audit		
Improvement Type	Roadway Safety Audit		
Project Description	Perform Roadway Safety Audit / Intersection Improvement at intersection of RN 125 and RN 139		
Coordinates	34°55'29"N/ 108°25'11"W		
Unit	4	Score	34
Estimated Cost	$15,000	Phasing	Medium
Project Name	NM-53 / BIA 125 Intersection Roadway Safety Audit		
Improvement Type	Roadway Safety Audit		
Project Description	Perform Roadway Safety Audit at NM-53/BIA 125		
Coordinates	35°3'12"N/ 108°23'44"W		
Unit	2	Score	34
Estimated Cost	$15,000	Phasing	Medium
Project Name	RN 128 Safety Project A: Guardrail Installation		
Improvement Type	Guardrail		
Project Description	Install guardrail on RN 128 near RN 144		
Coordinates	Beg: 34°50'58"N/ 108°31'48"W	End: 34° 54.321'N/ 108° 20.305'W	
Unit	3	Score	32
Estimated Cost	$81,000	Phasing	Medium
Project Name	RN 128 Safety Project B: Guardrail Installation		
Improvement Type	Guardrail		
Project Description	Install guardrail on RN 128 near RN 125		
Coordinates	Beg: 34°48'32"N/ 108°33'4"W	End: 34°48'24"N/ 108°33'6"W	
Unit	5	Score	32
Estimated Cost	$334,000	Phasing	Medium

DRAFT

Project Name	RN 122 Safety Project: Guardrail Installation		
Improvement Type	Guardrail		
Project Description	Install guardrail on RN 122 near RN 238		
Coordinates	Beg: 34°54'35"N/ 108°21'8"W	End: 34°54'45"N/ 108°20'56"W	
Unit	3	Score	32
Estimated Cost	$201,000	Phasing	Medium
Project Name	RN 125 Safety Project: Guardrail Installation		
Improvement Type	Guardrail		
Project Description	Install guardrail on RN 125 near RN 175		
Coordinates	Beg: 34°56'43"N/ 108°26'4"W	End: 34°56'35"N/ 108°25'56"W	
Unit	3, 4	Score	32
Estimated Cost	$147,000	Phasing	Medium
Project Name	Pine Hill Area ADA Compliance Study		
Improvement Type	ADA Compliance Study		
Project Description	Perform ADA compliance study near Pine Hill School		
Coordinates	n/a		
Unit	4	Score	32
Estimated Cost	$15,000	Phasing	Medium
Project Name	NM-53 / BIA 130 Intersection Roadway Safety Audit		
Improvement Type	Roadway Safety Audit		
Project Description	Perform Roadway Safety Audit at NM-53/BIA 130		
Coordinates	35°5'44"N/ 108°26'47"W		
Unit	2	Score	31
Estimated Cost	$15,000	Phasing	Medium

Project Name	Mountain View ADA Compliance Study		
Improvement Type	ADA Compliance Study		
Project Description	Perform ADA Compliance Study in Mountain View		
Coordinates	n/a		
Unit	2	Score	29
Estimated Cost	$15,000	Phasing	Medium
Project Name	Roadway Signage Inventory		
Improvement Type	Signage Inventory		
Project Description	Assess current signage on RNC and identify needs for improvement		
Coordinates	35°0'10"N/ 108°24'24"W		
Unit	n/a	Score	28
Estimated Cost	$15,000	Phasing	Medium
Project Name	Gravel Road Assessment		
Improvement Type	Assessment/Gravel & Full Reconstruction		
Project Description	All Gravel Roads on Ramah Navajo Inventory		
Coordinates	n/a	n/a	
Unit		Score	
Estimated Cost	TBD	Phasing	Medium

4.7.3 Long-Term Projects (10+ years)

Project Name	RN 122 - Phase 2		
Improvement Type	Gravel Reconstruction		
Project Description	Surface improvements: RN 122 - Gravel Application		
Coordinates	Beg: 34°58'44"N/ 108°20'47"W	End: 34°54'0"N/ 108°22'45"W	
Unit	2, 3, 4	Score	40
Estimated Cost	$1,971,000	Phasing	Long

DRAFT

Project Name	RN 122 - Phase 1		
Improvement Type	Chip Seal		
Project Description	Surface improvements: RN 122 - Replace Chip Seal		
Coordinates	Beg: 35°0'10"N/ 108°24'24"W	End: 34°58'44"N/ 108°20'47"W	
Unit	2, 3, 4	Score	37
Estimated Cost	$408,000	Phasing	Long
Project Name	RN 135		
Improvement Type	Earth to Gravel		
Project Description	Improve to gravel surface		
Coordinates	Beg: 35°4'6"N/ 108°24'41"W	End: 35°5'6"N/ 108°22'57"W	
Unit		Score	36
Estimated Cost	$1,470,000	Phasing	Long
Project Name	RN 139		
Improvement Type	Earth to Gravel		
Project Description	Improve to gravel surface beginning west of RN 292 and extending to junction with RN 122		
Coordinates	Beg: 34°55'52"N/ 108°22'48"W	End: 34°55'38"N/ 108°20'19"W	
Unit	3, 4	Score	36
Estimated Cost	$2,005,000	Phasing	Long
Project Name	RN 112		
Improvement Type	Earth to Gravel		
Project Description	Surface improvement: improve to gravel surface from FR 157 to terminus. Improve RN 112 from earth to gravel surface. 1.2 miles is the combination of both roads.		
Coordinates	Beg: 35°7'29"N/ 108°28'11"W	End: 35°7'38"N/ 108°27'9"W	
Unit	2	Score	33
Estimated Cost	$795,000	Phasing	Long

DRAFT

Project Name	RN 128		
Improvement Type	Gravel Reconstruction		
Project Description	Improve gravel surface		
Coordinates	Beg: 34°52'19"N/ 108°31'56"W	End: 34°47'7"N/ 108°34'20"W	
Unit	4	Score	32
Estimated Cost	$2,094,000	Phasing	Long
Project Name	RN 140		
Improvement Type	Gravel Reconstruction		
Project Description	Improve gravel surface		
Coordinates	Beg: 34°53'20"N/ 108°25'4"W	End: 34°53'19"N/ 108°24'21"W	
Unit	4	Score	32
Estimated Cost	$253,000	Phasing	Long
Project Name	RN 120		
Improvement Type	Gravel Reconstruction		
Project Description	Surface improvement: apply gravel on road segment maintained by RNDOT extending northeast from the cattle guard at Cibola County Line for one mile to the Intersection of BIA 120 and BIA 125		
Coordinates	Beg: 34°57'11"N/ 108°26'29"W	End: 34°56'32"N/ 108°27'9"W	
Unit	4	Score	31
Estimated Cost	$318,000	Phasing	Long
Project Name	RN 130		
Improvement Type	Gravel Reconstruction		
Project Description	Improve gravel surface		
Coordinates	Beg: 35°5'44"N/ 108°26'47"W	End: 35°4'31"N/ 108°30'10"W	
Unit	1, 2	Score	29
Estimated Cost	$1,094,000	Phasing	Long

DRAFT

Project Name	RN 143		
Improvement Type	Earth to Gravel		
Project Description	This project is intended only for the southern portion where the base course ends and proceeds south easterly from 145/143 for about ¾ mile. Needs base course, earthwork, drainage and signage and has exposed basalt which can become impassable		
Coordinates	Beg: 34°53'51"N/ 108°19'40"W	End: 34°53'12"N/ 108°19'17"W	
Unit	3	Score	29
Estimated Cost	$508,000	Phasing	Long
Project Name	RN 145 - Phase 2		
Improvement Type	Earth to Gravel		
Project Description	Upgrade surface to gravel. Raise roadbed 3 to 4, add equalizer pipes for water conveyance		
Coordinates	Beg: 34°56'13"N/ 108°16'48"W	End: 34°55'9"N/ 108°16'10"W	
Unit	3	Score	26
Estimated Cost	$1,005,000	Phasing	Long
Project Name	RN 129		
Improvement Type	Earth to Gravel		
Project Description	Improve to gravel surface beginning at RN 128 and extending to RN 125		
Coordinates	Beg: 34°50'37"N/ 108°31'51"W	End: 34°48'56"N/ 108°28'36"W	
Unit	5	Score	22
Estimated Cost	$2,521,000	Phasing	Long

DRAFT

Project Name	RN 179		
Improvement Type	Earth to Gravel		
Project Description	Improve to gravel surface beginning at RN 143 and southwest 0.64 miles		
Coordinates	Beg:34°54.732'N/108°19.853'W	End: 34° 54.321'N/ 108° 20.305'W	
Unit	3	Score	20
Estimated Cost	$438,000	Phasing	Long

Project Name	RN 184		
Improvement Type	Overlay		
Project Description	Improve paved surface		
Coordinates	Beg: 34°53'19"N/ 108°24'25"W	End: 34°53'56"N/ 108°24'24"W	
Unit	4	Score	19
Estimated Cost	$255,000	Phasing	Long

Project Name	RN 211		
Improvement Type	Earth to Gravel		
Project Description	Improve to gravel surface beginning at RN 125 and extending to RN 139		
Coordinates	Beg: 34°55'24"N/ 108°25'9"W	End: 34°55'39"N/ 108°24'50"W	
Unit	4	Score	19
Estimated Cost	$419,000	Phasing	Long

Project Name	RN 175		
Improvement Type	Earth to Gravel		
Project Description	Improve to gravel surface beginning at RN 125 and extending just past RN 4057		
Coordinates	Beg: 34°56'23"N/ 108°25'44"W	End: 34°56'52"N/ 108°25'25"W	
Unit	4	Score	18
Estimated Cost	$559,000	Phasing	Long

DRAFT

Project Name	RN 216		
Improvement Type	Earth to Gravel		
Project Description	Upgrade surface to gravel: RN 216		
Coordinates	Beg: 34°56'6"N/ 108°17'6"W	End: 34°56'22"N/ 108°17'33"W	
Unit	3	Score	17
Estimated Cost	$445,000	Phasing	Long

Project Name	RN 190		
Improvement Type	Earth to Gravel		
Project Description	Improve to gravel surface beginning near end of RN 328 and extending to junction with RN 144		
Coordinates	Beg: 34°50'5"N/ 108°28'5"W	End: 34°49'15"N/ 108°28'23"W	
Unit	5	Score	16
Estimated Cost	$693,000	Phasing	Long
Project Name	RN 127 - Phase 2		
Improvement Type	Earth to Gravel		
Project Description	Upgrade surface to gravel (southern section)		
Coordinates	Beg: 34°55'42"N/ 108°17'56"W	End: 34°55'19"N/ 108°17'34"W	
Unit	3	Score	15
Estimated Cost	$444,000	Phasing	Long
Project Name	RN 113		
Improvement Type	Pavement Application		
Project Description	Surface improvement		
Coordinates	Beg: 35°5'25"N/ 108°30'41"W	End: 35°0'44"N/ 108°30'22"W	
Unit	1	Score	14
Estimated Cost	$727,000	Phasing	Long

DRAFT

Project Name	RN 127 - Phase 1		
Improvement Type	Earth to Gravel		
Project Description	Upgrade surface to gravel (northern section)		
Coordinates	Beg: 34°50'99"N/ 108°29'35"W	End: 34°50'69"N/ 108°28'89"W	
Unit	3	Score	14
Estimated Cost	$559,000	Phasing	Long
Project Name	RN 215		
Improvement Type	Earth to Gravel		
Project Description	Upgrade surface to gravel: RN 215		
Coordinates	Beg: 34°56'17"N/ 108°16'53"W	End: 34°55'57"N/ 108°16'13"W	
Unit	3	Score	11
Estimated Cost	$540,000	Phasing	Long
Project Name	RN 227		
Improvement Type	Earth to Gravel		
Project Description	Improve to gravel surface beginning at RN 180, extending to RN 139		
Coordinates	Beg: 34°55'34"N/ 108°22'5"W	End: 34°54'25"N/ 108°23'26"W	
Unit	4	Score	6
Estimated Cost	$1,457,000	Phasing	Long
Project Name	RN 259/5010/106/105		
Improvement Type	Earth to Gravel		
Project Description	Improve four sections to gravel surface: RN 259 from RN 144 to junction with RN 5010, and RN 5010 from junction with RN 259 to junction with RN 106; RN 106 from junction with RN 5010 to junction with RN 105; RN 105 from junction with RN 106 to junction with RN 144.		
Coordinates	Beg: 34°51'0"N/ 108°29'21"W		
Unit	5	Score	13
Estimated Cost	$1,578,000	Phasing	Long

DRAFT

Project Name	Replace Cattle guards (300) - Safety		
Improvement Type	$10,000 for (2) 14' sections		
Project Description	Replace damaged cattle guards		
Coordinates	n/a		
Unit	n/a	Score	39
Estimated Cost	$3,620,000	Phasing	Long
Project Name	NM-53 / BIA 137 Intersection Roadway Safety Audit		
Improvement Type	Roadway Safety Audit		
Project Description	Perform Roadway Safety Audit at NM-53/BIA 137		
Coordinates	Beg: 35°4'9"N/ 108°24'46"W		
Unit	2	Score	19
Estimated Cost	$15,000	Phasing	Long
Project Name	School Bus Stop Roadway Safety Audit		
Improvement Type	Roadway Safety Audit		
Project Description	Perform school bus stop safety audit		
Coordinates	n/a		
Unit	n/a	Score	18
Estimated Cost	$15,000	Phasing	Long

Table 5: Tribal Transportation Program Transportation Improvement Program Summary of Projects

Project Name	2025	2026	2027	2028	Total
Ramah Vision Zero Safety Action Plan SS4A	$200,000	$0	$0	$0	**$200,000**
LGRF HW2LLP60023 BIA Route 195 Contract No. D19242	$895,117	$0	$0	$0	**$895,117**
LGRF HW2LP60024 BIA Route 145 Contract No. D19243	$575,000	$0	$0	$0	**$575,000**
Planning - TTP, 2% Planning	$1,000,501	$200,000	$200,000	$200,000	**$1,600,501**
BIA 125 Traffic Calming Measure for Mountain View	$384,283	$0	$0	$0	**$384,283**
Road Safety Audit Studies (10)	$125,000	$125,000	$0	$0	**$250,000**
Maintenance - TTP	$500,000	$500,000	$500,000	$500,000	**$2,000,000**
Raise Grant Project	$23,567,934	$0	$0	$0	**$23,567,934**
LGRF HW2LP60043 NM 53 and BIA Route 125 Contract No. D200087	$768,414	$0	$0	$0	**$768,414**
Administration - TTP	$5,365,037	$160,000	$160,000	$160,000	**$5,845,037**
BIA Route 125 and BIA Route 128 Guardrail Project	$754,250	$0	$0	$0	**$754,250**
Total	**$34,135,537**	**$985,000**	**$860,000**	**$860,000**	**$36,840,537**

4.8 Transportation Project Funding

The FAST Act was extended by Continuing Resolution through the end of FY21 and was replaced by the Bipartisan Infrastructure Law (BIL) in FY22. With the signing into law of the latest transportation bill, the Bipartisan Infrastructure Law (BIL) in November 2021, multiple new and expanded programs are available to tribes for funding infrastructure and transportation projects. The Federal Highway Administration (FHWA) has developed a website for the BIL here: https://www.fhwa.dot.gov/bipartisan-infrastructure-law/.

Also available are two documents, the first being the "Transportation Funding Opportunities for Tribal Nations" booklet released by the FHWA that focuses on transportation related programs available to tribes through the BIL. The second is the "Bipartisan Infrastructure Law Tribal Playbook" released by the White House through Build.gov that speaks to not only transportation programs but also other infrastructure programs and funding opportunities available through the BIL of interest to tribes.

4.8.1 BIA Road Construction and Maintenance Funding

The BIA Division of Transportation's mission is to provide for and assist tribes in the development of their capacity to plan, construct, and maintain safe and efficient transportation networks. Funding for transportation is dynamic as available resources fluctuate and administrative priorities change. This section provides background on BIA's current funding mechanisms.

BIA Construction Funding

Federal Lands Highways Program (FLHP) funds can be used for transportation planning, research, engineering and construction of highways, roads, parkways, and transit facilities within public lands, National Parks, and Indian Reservations. In addition, FLHP funds can be used as the state/local match for most types of federal aid highway funded projects.

BIA Road Maintenance Funding

Road maintenance funds are appropriated by Congress and allocated to the BIA separately from the Federal Highway Trust Funds (HTF) used for initial construction. Road maintenance funds are used to provide an optimal level of road maintenance based on the road condition and the availability of funds. As noted above, maintenance responsibility has been transferred to RNC as of 2015.

If roadways funded and constructed with HTF are not properly maintained, then future HTF road construction funds can be withheld. This situation might occur if

maintenance funding is limited such that adequate repairs and upkeep of the roadway are not possible.

FAST allows 25% of the annual TTP Tribal shares (not including the 2 percent planning funds), or $500,000, to be used for maintenance. A Tribe may use these funds only to maintain roads on the TTP inventory.

BIA Bridge Funding

As discussed in section 2.6, RNC has only two bridges, and neither was identified as a current transportation priority. However, a description of the Tribal Transportation Bridge Program is a required component of the Long Range Transportation Plan. Under MAP-21, the program formerly known as the Indian Reservation Roads Bridge Program (IRRBP) changed to the TTP Bridge Program. Under the FAST Act, up to 3% of TTP funds is available each year for improving deficient bridges. Federally recognized Indian tribes may submit an application at any time for eligible tribal transportation bridges for planning, design, engineering, preconstruction, inspection, or to replace, rehabilitate, seismically retrofit, or paint a bridge. Funds may also be used for anti-icing, de-icing, or to implement countermeasures, including multiple pipe culverts. To be eligible, a bridge must have an opening of at least 20 feet, be classified as a tribal transportation facility, and be structurally deficient or functionally obsolete.

Bridges that were constructed, rehabilitated, or replaced in the past ten years will be eligible only for seismic retrofit or installation of scour countermeasures. To be eligible for replacement, the bridge must have a sufficiency rating of less than 50. A bridge would be eligible for replacement if the total life cycle cost for bridge rehabilitation exceeds the costs to replace. To be eligible for rehabilitation, the bridge must be considered deficient for reasons of structural deficiency or functional obsolescence and have a sufficiency rating of less than or equal to 80. Funding for successful TTP bridge applications is distributed on a quarterly basis.

4.8.2 Other Road Construction Funding Sources

Apart from BIA, there are several other potential funding sources for road construction projects. The State of New Mexico and the US Department of Transportation are potential sources.

State of New Mexico

NMDOT is the designated state agency that receives and administers Federal and State transportation funds. Most transportation projects are identified through the Statewide Transportation Improvement Program (STIP), which includes most capital and noncapital transportation projects and regionally significant projects. The New

Mexico STIP is typically a four-year fiscally constrained plan for transportation improvements. The STIP must be consistent with the statewide transportation plan. Projects in the STIP must be identified through the local regional transportation planning organization (RTPO) or metropolitan planning organization (MPO).

For Ramah, this organization is the Northwest RTPO (NWRTPO), which covers McKinley, Cibola, and San Juan Counties. Project ideas are brought to the NWRTPO, refined, and assessed for general feasibility.

Projects then are discussed by the NWRTPO Committee and evaluated using the Regional Transportation Improvement Recommendations process. Projects are ranked by the Policy and Technical Advisory Committee, and NWRTPO assists communities with funding applications for potential inclusion of projects in the STIP.

NMDOT also administers the Transportation Alternatives Program (TAP), which funds projects such as pedestrian and bicycle facilities, non-driver access to transit facilities, safe routes to school projects, and recreational trail projects. NWRTPO can assist with application for these funds.

The State of New Mexico provides capital outlay funds through the state legislature. Typical capital outlay projects include:

- Planning, designing, constructing, equipping, and furnishing community centers, senior centers, fire stations, libraries, courthouses and other buildings
- Purchasing vehicles, such as for fire departments, senior centers, or police departments
- Street improvements
- Park renovations or equipment
- Acequia improvements
- Water and wastewater systems
- Improvements to existing buildings to comply with the Americans with Disabilities Act of 1990
- Construction or renovations to state institutions of higher education
- Construction or improvements to buildings on tribal lands

NWRTPO can also assist with application for these funds. This is a competitive program and depends on the state's generated revenue. Projects should be listed on the Tribe's Infrastructure Capital Improvement Plan (ICIP) priority list.

New Mexico FUNDIT[22] provides an access point to a variety of funding agencies.

Eligible projects include business, community, and infrastructure development planning as well as capital projects, housing (where there is a critical shortage), and downtown revitalization. NWRTPO can assist with application to FUNDIT.

The Local Government Road Fund (LGRF) is a matching fund program that includes four elements:

- Cooperative Program
- County Arterial Program
- School Bus Route Program
- Municipal Arterial Program

Applications for transportation project funding should be submitted to the district engineer, and projects are selected by the NM State Transportation Commission.

Highway Safety Improvement Projects (HSIPs) are administered by NMDOT. Currently, funds are overobligated through FY2017, but funds will be available again in FY2018. It is very advantageous to submit supporting accident data with applications for funding through this program.

NMDOT Tribal Infrastructure Funds (TIF) are available for planning, design, and construction of transportation projects. Projects must be listed on the Tribe's ICIP priority list.

NMDOT administers FHWA's Safe Routes to Schools program, which funds projects for sidewalk improvements, ADA compliance, bus shelters, and other projects that support safe access to schools.

4.9 Plan Implementation

This transportation plan reflects the current requirements for transportation facilities to satisfy the community's needs and is based upon the existing conditions and anticipated future development within the community and tribal priorities. The plan should not be viewed as a static document but rather should be regarded as a dynamic document capable of being modified to meet changing social and economic development demands.

Primary implementation tasks include establishment of a Tribal Transportation Improvement Plan (TTIP) reflecting community priorities, monitoring performance as required by the emerging FHWA requirements, establishing procedures for development roads, and periodically updating and reviewing community priorities as identified in this plan.

22. https://gonm.biz/business-resource-center/edd-programs-for-business/finance-development/fundit/.

4.9.1 Tribal Transportation Improvement Plan

A TTIP is a multiyear financially constrained list of proposed transportation projects to be implemented within or providing access to Tribal lands during the next three to five years. Developed from the Tribal priority list, the TTIP is consistent with the Tribal Long-Range Transportation Plan and must contain all TTP-funded projects. The TTIP may also contain information regarding other federal, state, county, municipal, and Tribal transportation projects initiated by or developed in cooperation with the Tribal Government. Only those projects approved for funding by the sponsoring governmental entity may be included in the TTIP. It is reviewed and updated as necessary. The only entity that can change the TTIP is the Tribal Government.

Examples of transportation projects include but are not limited to new road construction, road reconstruction or resurfacing, road sealing, bridge construction, transit facilities, bike and pedestrian enhancements, and highway safety.

The TTIP identifies the implementation year of each project. The development of the TTIP establishes Tribal priorities for TTP and other transportation projects and is the Tribal Government's voice in selecting the year in which projects are programmed. It is also a useful tool for tracking transportation projects programmed by other government agencies (the Federal Transit Administration, Federal Highway Administration, Federal Aviation Administration, etc.) to ensure coordination with TTP transportation projects. By developing a TTIP, the Tribal Government is taking a proactive role in the transportation planning process and exercising its sovereignty over the programming of transportation projects on Tribal land.

The FHWA and BIA have until September of the current fiscal year to approve the TTIP (BIA will concur). Once the TTIP is processed by the federal agency, the document is forwarded to FHWA-FLH Headquarters Office in Washington, DC, where it is considered for approval. Once approved by FHWA, the TTIP becomes part of the official TTPTIP. The Tribe will then receive a signed copy of the TTPTIP. If some projects are not eligible, the Tribe will receive a "partial" TTIP approval.

FHWA provides copies of the approved TTPTIP to the FHWA division office for transmittal to the State transportation agency for inclusion in the State Transportation Improvement Program. Having a project listed on the STIP does not guarantee State funding.

The regional TTPTIP is included in the STIP developed by each state transportation agency without further action. If a TTP project lies within a metropolitan area, it must be included in the metropolitan area TIP without further action. The

timeframe for the annual update of TTIPs should be coordinated with the State transportation agencies within its service area. This will ensure that approved TTPTIP updates are included with the STIPs when they are printed and distributed.

Ramah's TTIP is expected to draw from the projects identified as community priorities in this plan, following the recommending time frames as feasible.

4.9.2 Performance Management

Performance management is increasingly important as agencies move toward requiring documentation of benefits arising from funds awarded. FHWA defines transportation performance management as "a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals."[23]

FHWA works with states, MPOs, and other entities to establish performance measures for pavement condition, bridge condition, traffic accidents and congestion, and other safety measures. As the establishment of performance goals is still in process, RNC should closely monitor performance measures rulemaking as relates to Tribal transportation, document ongoing transportation projects as required, and update this plan accordingly. Because crash data can provide a clear indication of the impact of a particular roads project, crash data is likely to be a preferred element of any future performance management requirements. In anticipation of this likelihood and to support funding requests for the many grant sources that favor project applications with supporting crash data, it is recommended that RNC aggressively pursue establishing a crash data collection and analysis system.

4.9.3 Development Roads Design and Financing

In the future, it is possible that roads will be constructed using funds from developers who will benefit from the road construction. Therefore, it is important that the Tribal Government establish policies and guidelines to monitor and control the construction of roads by developers. Should such an approach be found acceptable, the Tribe should adopt a process for approving these roads to ensure that they will be constructed to an adequate standard and properly maintained. This may include required contributions from homeowners toward maintenance of roads constructed for their use. The main elements of such a process are outlined below.

23. *Transportation Performance Management Brochure*, Federal Highway Administration, https://www.fhwa.dot.gov/tpm/resources/publications.cfm.

Design Standards

The first element in the process is to define expectations. When a development project is submitted for review, it should be given only conditional approval, subject to the roads and other infrastructure improvements being constructed to proper standards. Roads should be designed to meet minimum geometric and structural standards for the anticipated traffic volumes and classification of vehicle loads. Roadway design standards should be adopted by the Tribe and available to potential developers. RNC plans to use Rural Roadway Design Standards for Low Volume Roads for most development through the planning period. The Tribe may consider developing its own standards in the future.

Plan Submittal and Review

The second element in the approval process is the submittal and review of construction documents (e.g., plans and specifications). RNC should employ an experienced engineering consultant to review proposals and ensure that the plans are in accordance with minimum design standards. Plans and specifications should be approved for construction only when they are in conformance with minimum design standards based on anticipated traffic and loads.

Construction Monitoring

Another essential step in the process is the monitoring of the actual construction. Construction should be inspected periodically by a qualified representative of the Tribe to ensure that construction is proceeding in conformance with the approved plans. A final inspection should also be performed prior to accepting the responsibility for maintenance. To ensure proper construction, most jurisdictions require that the developer post a performance bond. The bond is held until the roadway has been accepted and all conditions for release have been met.

4.9.4 Plan Review and Updates

It is recommended that the Council adopt this plan and use it as the basis for programming and budgeting road construction funds. The plan should be reviewed by RNC, the Ramah BIA Office, and the BIA Southwest office on an annual basis to assess whether changes in community development may warrant a change in the project listing and/or prioritization. Changes in the project listing should be coordinated with, and accomplished within, the timeframes established by the funding agency so as not to hamper the implementation of the agency's road improvement program. The overall community transportation plan should be reviewed and updated every five years or following any major changes in RNC's land use plans, which are soon to be updated at the time of this report.

A key component in the continuation of the transportation planning process is annual coordination between RNC and the BIA regarding adjustments in road construction priorities, implementation schedules, road maintenance needs, priorities, and TTP program funding. It is recommended that this process be scheduled as an annual function with a formalized process.

By completing this transportation planning effort, RNC has helped to maximize diminishing resources for transportation projects and made important strides toward improving quality of life and transportation safety for RNC residents. Ongoing stewardship of this plan will help to ensure that these gains are solidified and that RNC's transportation network increasingly meets the needs of Chapter members.

DRAFT

APPENDICES